Hearing Date: September 22, 2023
J:\MANDATES\2011\TC\11-TC-03 SDRWQCB Order No. R9-2010-0016\TC\TOC.docx

ITEM 3

TEST CLAIM

PROPOSED DECISION

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2.; C., F.4.d., F.4.e., and Attachment E., Section II.C.; Section D.; F.1.d.1., 2., 4., 7., F.1.h.; F.1.f.; F.2.d.3., F.2.e.6.e.; F.1.i., F.3.a.10.; F.3.b.4.a.ii.; F.3.d.1.-5.; G.1.-5.; K.3.a.-c.; Attachment E., Section II.E.2.-5.; and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6.

Adopted November 10, 2010

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

11-TC-03

County of Riverside, Riverside County Flood Control and Water Conservation District, and Cities of Murrieta, Temecula, and Wildomar, Claimants

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Received
November 10, 2011
Commission on
State Mandates

Exhibit A

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624 SOUTH GRAND AVENUE
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LOS ANGELES, CALIFORNIA 90017-3321
(213) 688-7715
FACSIMILE (213) 688-7716

WRITER'S DIRECT NUMBER
(213) 629-8788

WRITER'S E-MAIL ADDRESS
dburhenn@burhenngest.com

November 10, 2011

Via CSM Dropbox

Commission on State Mandates
980 Ninth Street, Suite 300
Sacramento, CA 95814

Re: Joint test Claim of Riverside County Local Agencies Concerning California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

To the Commission:

This firm represents the Riverside County Flood Control & Water Conservation District, the County of Riverside and the Cities of Murrieta, Temecula and Wildomar (collectively, "Claimants") with respect to the enclosed Joint Test Claim concerning California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016 ("Order"). The Claimants are Copermittees under this Order and have filed a Joint Test Claim because the state mandates that are the subject of this Test Claim apply near identically to all of the Claimants.

Enclosed are the Test Claim Forms of the Claimants (Sections 1-4), a Narrative Statement (Section 5), supporting Declarations (Section 6) and Documentation (Section 7). The Documentation includes a copy of the Order as well as the 2004 order that it superseded, as well as other relevant documents.

Thank you for your consideration of this matter. We anticipate supplementing Section 6 with at least one additional declaration shortly. As noted in the Test Claim forms, communications regarding this Test Claim should be directed to my attention.

Very truly yours,

David W. Burhenn

BURHENN & GEST LLP
624 SOUTH GRAND AVENUE
SUITE 2200
LOS ANGELES, CALIFORNIA 90017-3321
(213) 688-7715
FACSIMILE (213) 624-1376

RECEIVED
April 28, 2017
Commission on
State Mandates

WRITER'S DIRECT NUMBER
(213) 629-8788

WRITER'S E-MAIL ADDRESS
dburhenn@burhenngest.com

April 28, 2017

VIA DROPBOX

Ms. Heather Halsey
Executive Director
Commission on State Mandates
980 9th Street, Suite 300
Sacramento, CA 95814

Re: San Diego Region Water Permit – Riverside County, 11-TC-03
Response of Joint Test Claimants to Notice of Incomplete Joint Test Claim Filing

Dear Ms. Halsey:

I have been designated as Claimant Representative by all test claimants in the above-referenced Joint Test Claim and am therefore responding on behalf of the Riverside County Flood Control and Water Conservation District ("District"), the County of Riverside ("County") and the Cities of Murrieta, Temecula and Wildomar (collectively, the "Joint Test Claimants") to the Notice of Incomplete Joint Test Claim Filing dated March 8, 2017 ("Notice Letter"), which stated that the original joint test claim filing was incomplete on two grounds.

The Joint Test Claimants were originally informed that their test claim was deemed complete as of November 18, 2011. The Notice Letter required the Joint Test Claimants to undertake significant efforts, including locating old financial records and preparing new declarations, test claim forms and revisions to the Narrative Statement. The Joint Test Claimants thus incurred significant, unforeseeable costs to address the issues raised in the Notice Letter or risk having the test claim rejected for the reasons stated in therein. The Joint Test Claimants respectfully disagree as to the basis for the Notice Letter on grounds of law and equity, and reserve their right to contest the alleged deficiencies identified in the Notice Letter before the Commission on State Mandates.

Notwithstanding such reservation, and subject to it, the Joint Test Claimants submit with this letter the following new or revised documents:

(a) New Test Claim Forms;
(b) Revised Section 5 Narrative Statement; and
(c) New Section 6 Declarations.

As requested in the Notice Letter, the Joint Test Claimants are not re-attaching any supporting documentation.

The Notice Letter indicated that to cure the alleged deficiencies in the original test claim, the Joint Test Claimants were to provide:

1. "A revised test claim form from each co-claimant."

2. "Revised written narratives and declarations that provide a detailed description of the costs that are modified by the alleged mandate including the *actual* increased costs incurred by each co-claimant during the fiscal year for which the joint test claim was filed as well as the actual or estimated annual costs that will be incurred by each co-claimant to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the joint test claim was filed. In addition, please provide the statewide cost estimate (in this case the "statewide cost" is the cost for all of the local agency co-permittees, whether named or not, for the alleged new program or higher level of service imposed by the permit at issue) for increased costs to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the join test claim was filed."

Notice Letter, pp. 3-4, emphasis in original.

In response to item 1, and notwithstanding the addition in 2014 of 2 CCR § 1183.1(b), which necessitated designation of one claimant representative for joint test claimants, the Joint Test Claimants herewith file new test claim forms signed in Section 8 by the General Manager-Chief Engineer for the District, the Auditor-Controller for the County and the City Managers for the Cities of Murrieta, Temecula and Wildomar. The names, addresses and contact information for these individuals are set forth in Section 2 of the forms. Additionally, as noted above, I am designated as the Claimant Representative for all Joint Test Claimants in Section 3.

In response to item 2, both the Declarations and the Section 5 Narrative Statement (in revised sections following the description of each mandated activity) set forth actual increased costs incurred in the relevant fiscal years covered by the Joint Test Claim. Also, the Joint Test Claimants' best estimate of total statewide costs associated with the Joint Test Claim are set forth in Section VII of the Narrative Statement and are supported by the Declarations. New Sections I.A-C of the Narrative Statement sets forth various jurisdictional matters.

Neither the Department of Finance nor the Water Boards have yet commented to the Joint Test Claim. In light of that fact, and because the Joint Test Claimants wish to avoid further delays in consideration of the claim, we have included in the Narrative Statement a discussion of *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749. As you know, the Commission previously has requested special briefing on this important case. We have also updated other sections to reflect developments occurring since the Joint Test Claim was filed in 2011, to avoid having to correct the record at a later time.

In addition, item VI.M in the original Narrative Statement concerned the potential for increased costs to arise from the triggering of Section A.3 of Order No. R9-2010-0016. We have determined that no such costs were in fact incurred by the Joint Test Claimants during the term of the order and have accordingly removed this item from the Narrative Statement and the declarations.

The Joint Test Claimants wish to thank you for your courtesy in extending the deadline for the submission of this response. While the Joint Test Claimants are responding by the April 28 deadline, we respectfully submit that this deadline is not jurisdictional, both because the regulatory authority cited in the Notice Letter applies only to the initial determination of test claim completeness and because the Executive Director has discretion to extend the 30-day time period within which to cure a returned test claim and still allow the test claimant to preserve the original claim filing date.

Nevertheless, we believe that the information and evidence submitted herewith fully address the issues identified in the Notice Letter. If there are any further concerns or issues regarding these matters, please contact the undersigned or, if I am not available, my partner, Howard Gest, who may be reached at 213-629-8787 and hgest@burhenngest.com.

Thank you for your consideration of these matters.

Very truly yours,

David W. Burhenn

DB:dwb

1. TEST CLAIM TITLE

San Diego Region Stormwater Permit – County of Riverside, 11-TC-03

2. CLAIMANT INFORMATION

Riverside Co. Flood Control and Water Conservation District
Name of Local Agency or School District

Jason Uhley, PE
Claimant Contact

General Manager-Chief Engineer
Title

1995 Market Street
Street Address

Riverside, CA 92501
City, State, Zip

951-955-1201
Telephone Number

951-788-9965
Fax Number

juhley@rivco.org
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

David W. Burhenn
Claimant Representative Name

Partner
Title

Burhenn & Gest LLP
Organization

624 S. Grand Avenue, Suite 2200
Street Address

Los Angeles, CA 90017
City, State, Zip

213-629-8788
Telephone Number

213-624-1376
Fax Number

dburhenn@burhenngest.com
E-Mail Address

For CSM Use Only
Filing Date:

RECEIVED
November 10, 2011
Commission on State Mandates

Revised April 28, 2017

Test Claim #: 11-TC-03

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections (include statutes, chapters, and bill numbers) (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]), regulations (include register number and effective date), and executive orders (include effective date) that impose the alleged mandate .

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

☐ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

(Revised 6/2013)

8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Jason Uhley, P.E.
Print or Type Name of Authorized Local Agency or School District Official

General Manager-Chief Engineer
Print or Type Title

Signature of Authorized Local Agency or School District Official

April 24 2017
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

San Diego Region Water Permit - County of Riverside, 11-TC-03

County of Riverside
Name of Local Agency or School District

Paul Angulo, CPA
Claimant Contact

Auditor-Controller
Title

4080 Lemon Street, 11th Floor
Street Address

Riverside, CA 92502
City, State, Zip

951-955-3800
Telephone Number

951-955-3802
Fax Number

pangulo@rivco.org or jmarcy@rivco.org
E-Mail Address

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

David W. Burhenn
Claimant Representative Name

Partner
Title

Burhenn & Gest LLP
Organization

624 S. Grand Avenue, Suite 2200
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Los Angeles, CA 90017
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dburhenn@burhenngest.com
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Revised April 28, 2017
Test Claim #: 11-TC-03

Please identify all code sections (include statutes, chapters, and bill numbers) (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]), regulations (include register number and effective date), and executive orders (include effective date) that impose the alleged mandate .

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

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6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

(Revised 6/2013)

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Paul Angulo, CPA
Print or Type Name of Authorized Local Agency or School District Official

Auditor-Controller
Print or Type Title

Signature of Authorized Local Agency or School District Official

April 21, 2017
Date

* *If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

San Diego Region Stormwater Permit – County of Riverside 11-TC-03

City of Murrieta
Name of Local Agency or School District

Rick Dudley
Claimant Contact

City Manager
Title

1 Town Square
Street Address

Murrieta, CA 92562
City, State, Zip

951-461-6010
Telephone Number

951-698-9885
Fax Number

rdudley@murrietaCA.gov
E-Mail Address

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

David W. Burhenn
Claimant Representative Name

Partner
Title

Burhenn & Gest LLP
Organization

624 S. Grand Ave., Suite 2200
Street Address

Los Angeles, CA 90017
City, State, Zip

213-629-8788
Telephone Number

213-624-1376
Fax Number

dburhenn@burhenngest.com
E-Mail Address

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Please identify all code sections (include statutes, chapters, and bill numbers) (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]), regulations (include register number and effective date), and executive orders (include effective date) that impose the alleged mandate .

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

☐ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

(Revised 6/2013)

[redacted]

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Rick Dudley
Print or Type Name of Authorized Local Agency or School District Official

City Manager
Print or Type Title

Rick Dudley
Signature of Authorized Local Agency or School District Official

April 28, 2017
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

1. TEST CLAIM TITLE

San Diego Region Stormwater Permit -- County of Riverside 11-TC-03

2. CLAIMANT INFORMATION

City of Temecula
Name of Local Agency or School District

Aaron Adams
Claimant Contact

City Manager
Title

41000 Main Street
Street Address

Temecula, CA 92590
City, State, Zip

951-506-5100
Telephone Number

951-694-6499
Fax Number

aaron.adams@temecula.gov
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

David W. Burhenn
Claimant Representative Name

Partner
Title

Burhenn & Gest LLP
Organization

624 S. Grand Ave., Suite 2200
Street Address

Los Angeles, CA 90017
City, State, Zip

213-629-8788
Telephone Number

213-624-1376
Fax Number

dburhenn@burhenngest.com
E-Mail Address

For CSM Use Only

Filing Date:

RECEIVED
November 10, 2011
Commission on State Mandates

Revised April 28, 2017

Test Claim #: 11-TC-03

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections (include statutes, chapters, and bill numbers) (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]), regulations (include register number and effective date), and executive orders (include effective date) that impose the alleged mandate .

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

☐ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

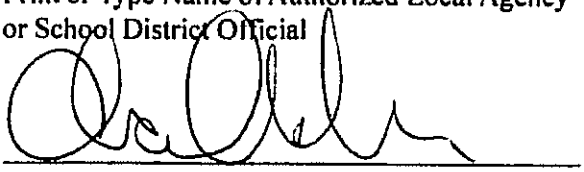
5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Aaron Adams
Print or Type Name of Authorized Local Agency or School District Official



Signature of Authorized Local Agency or School District Official

City Manager
Print or Type Title

April 25, 2017
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

1. TEST CLAIM TITLE

San Diego Regional Stormwater Permit - County of Riverside, 11-TC-03

2. CLAIMANT INFORMATION

City of Wildomar
Name of Local Agency or School District

Gary Nordquist
Claimant Contact

City Manager
Title

23873 Clinton Keith Rd., Suite 201
Street Address

Wildomar, CA 92595
City, State, Zip

(951) 677-7751
Telephone Number

(951) 698-1463
Fax Number

gnordquist@cityofwildomar.org
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

David W. Burhenn
Claimant Representative Name

Partner
Title

Burhenn & Gest LLP
Organization

624 S. Grand Ave., Suite 2200
Street Address

Los Angeles, CA 90017
City, State, Zip

(213) 629-8788
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For CSM Use Only

Filing Date: **RECEIVED** November 10, 2011 **Commission on State Mandates**

Revised April 28, 2017

Test Claim #: 11-TC-03

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections (include statutes, chapters, and bill numbers) (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]), regulations (include register number and effective date), and executive orders (include effective date) that impose the alleged mandate .

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

☐ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

(Revised 6/2013)

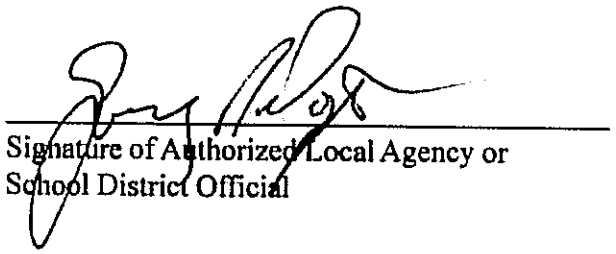
8. CLAIM CERTIFICATION

Read, sign, and date this section and insert at the end of the test claim submission. *

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Gary Nordquist
Print or Type Name of Authorized Local Agency or School District Official

City Manager
Print or Type Title



Signature of Authorized Local Agency or School District Official

April 26, 2017
Date

* *If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

Section 5

NARRATIVE STATEMENT

In Support of Joint Test Claims of Riverside County Copermittees Concerning San Diego RWQCB Order No. R9-2010-0016 (NPDES No. CAS 0108766), San Diego Region Stormwater Permit – County of Riverside, 11-TC-03

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NARRATIVE STATEMENT IN SUPPORT OF JOINT TEST CLAIMS

I. INTRODUCTION

On November 10, 2010, the California Regional Water Quality Control Board, San Diego Region ("RWQCB"), adopted a new storm water permit, Order No. R9-2010-0016 (NPDES No. CAS 0108766) ("the 2010 Permit"), regulating discharges from the municipal separate storm sewer systems ("MS4s") operated by a number of municipal entities in the Santa Margarita region of Riverside County, hereinafter referred to as "Copermittees."[1]

The 2010 Permit included numerous new requirements that exceed the requirements of federal law and were not included in the previous MS4 permit issued by the RWQCB, Order No. R9-2004-001 ("the 2004 Permit").[2] These new requirements represent unfunded State mandates for which the 2010 Permit permittees, which are the claimants herein, the Riverside County Flood Control and Water Conservation District ("District"), the County of Riverside ("County"), and the Cities of Murrieta, Temecula and Wildomar (collectively, "Claimants") are entitled to reimbursement under article XIII B section 6 of the California Constitution.

This Section 5 of the Test Claim identifies the activities that constitute unfunded mandates and sets forth the basis for reimbursement for such activities. The mandates for which Claimants seek a subvention of state funds are described in detail below, but encompass the following:

A. The requirement to address three categories of urban irrigation runoff that formerly were considered exempt non-stormwater discharges, contained in Section B.2;

B. The requirement to monitor for, report and address exceedances of non-stormwater action levels, contained in Sections C and F.4;

C. The requirement to monitor for, report and address exceedances of stormwater action levels, contained in Section D;

D. Requirements relating to the Priority Development Projects, local impact development and hydromodification, contained in Section F.1;

E. Requirements to track the construction and operation of post-construction best management practices ("BMPs"), contained in Section F.1;

F. Requirements relating to the control of pollutants from construction sites, contained in Section F.2;

G. Requirements relating to the development and implementation of BMPs for unpaved roads, contained in Sections F.1.i and F.3.a.10;

[1] Copies of the 2010 Permit plus all attachments and Fact Sheet are included in Section 7, filed herewith.

[2] A copy of the 2004 Permit is included in Section 7.

H. Requirements relating the inspection of monitoring of commercial/industrial sources, contained in Section F.3.b;

I. Requirements relating to the retrofitting of existing development, contained in Section F.3.d;

J. Requirements relating to the development and implementation of the Watershed Water Quality Workplan, contained in Section G;

K. Requirements relating to the JRMP Annual Report, contained in Section K.3, and also in Table 5 and in Attachment D;

L. Requirements to perform five special studies, contained in the Monitoring and Reporting Program, Attachment E to the 2010 Permit; and

M. Requirements that programs relating to development, construction, municipal facilities, industrial/commercial facilities, residential areas, retrofitting and education ensure that stormwater runoff not cause or contribute to a violation of a water quality standard and "prevent" illicit discharges into the MS4, contained in Sections F, F.1, F.2, F.3 and F.6.[3]

A. STATEMENT OF INTEREST OF JOINT TEST CLAIMANTS

This Test Claim is filed by Claimants District, County and the Cities of Murrieta, Temecula and Wildomar. The Claimants are filing this Test Claim jointly and, pursuant to Cal. Code Regs., tit. 2, § 1183.1, subd. (g), attest to the following:

1. The Claimants allege state-mandated costs resulting from the same Executive Order, *i.e.*, the 2010 Permit;

2. The Claimants agree on all issues of the Test Claim; and

3. The Claimants have designated one contact person to act as a resource for information regarding the test claim in Section 3 of their Test Claim forms.

4. All Test Claim forms have been executed, respectively, by the Auditor-Controller (on behalf of the County), the General Manager-Chief Engineer (on behalf of the District) and by City Managers (on behalf of the city Claimants). All such individuals are authorized to sign on behalf of their respective Claimants. Cal. Code Regs., tit. 2, § 1183.1, subd. (a)(5).

[3] The previous version of this Narrative Statement included a test claim item concerning Section A.3 of the 2010 Permit. However, no increased costs were incurred by the Claimants from this provision during the term of the 2010 Permit and, thus, it has been omitted from this Narrative Statement and the supporting declarations.

B. STATEMENT OF ACTUAL AND/OR ESTIMATED COSTS EXCEEDING $1,000

The Claimants further state that, as set forth below and in the attached Section 6 Declarations filed herewith in support, the actual and/or estimated costs from the state mandates set forth in this Test Claim exceed $1,000 for each of the Claimants. This Narrative Statement sets forth specific and estimated amounts expended by the Claimants as determined from the perusal of pertinent records and as disclosed in the Section 6 Declarations filed herewith. Such amounts reflect, in many cases, costs associated with the development of programs, and not their later implementation by the Claimants. The Claimants respectfully reserve the right to modify such amounts when or if additional information is received and to adduce additional evidence of costs if required in the course of the Test Claim.

C. THE TEST CLAIM WAS TIMELY FILED

The Test Claim was filed on November 10, 2011, within one year after adoption of the Permit. It was thus timely filed. Cal. Code Regs., tit. 2, § 1183.1, subd. (b).

II. BACKGROUND

This Test Claim concerns the choice made by the RWQCB, acting under its authority granted by California law, to impose requirements under the 2010 Permit that go beyond those required by the federal Clean Water Act ("CWA") and/or which exceed the "maximum extent practicable" ("MEP") standard applicable to MS4 permits under the CWA.

The RWQCB has authority to exceed the requirements of the CWA because, under both the CWA and the Porter-Cologne Water Quality Act, California Water Code § 13000 et seq., a regional board may impose additional requirements on a permittee covered by a federal National Pollutant Discharge Elimination System ("NPDES") permit, such as the 2010 Permit. *City of Burbank v. State Water Resources Control Board* (2005) 35 Cal. 4th 613, 619. As the California Supreme Court noted in *City of Burbank*,

> The federal Clean Water Act reserves to the states significant aspects of water quality policy (33 U.S.C. § 1251(b)), and it specifically grants the states authority to "enforce any effluent limitation" that is not *"less stringent"* than the federal standard (33 U.S.C. § 1370, italics added)."

City of Burbank, 35 Cal.4th at 627-28.

This Commission previously has found, in two test claims regarding MS4 permits issued by the Los Angeles RWQCB and the San Diego RWQCB, that those regional boards issued permit requirements that exceeded the requirements of federal law and regulation and represented unfunded state mandates. *In re Test Claim on: Los Angeles Regional Quality Control Board Order No. 01-192*, Case Nos.: 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21 ("LA County Test Claim"); *In re Test Claim on: San Diego Regional Water Quality Control Board Order No. R9-2007-0001*, Case No. 07-TC-09 ("San Diego County Test Claim").

The Commission's reasoning in the LA County Test Claim was reversed by the Los Angeles County Superior Court, which held that the appropriate test for determining the presence of a federal, as opposed to state, mandate was whether the provision at issue exceeded the MEP standard. The California Court of Appeal affirmed that decision. Subsequently, the California Supreme Court, in *Department of Finance v. Commission on State Mandates* (2016) 1 Cal. 5th 749, reversed, finding that the mandates in question were in fact state, not federal, in nature. *Department of Finance* is discussed in Section V.B below.

III. FEDERAL LAW

The 2010 Permit was issued, in part, under the authority of the CWA, 33 U.S.C. § 1251 *et seq*. The CWA authorizes the EPA, or states with an approved water quality program (such as California), to issue NPDES permits for discharges into waters of the United States. 33 U.S.C. § 1342. The CWA was amended in 1987 to include within its regulation of discharges from "point sources" to "waters of the United States" discharges to such waters from MS4s. 33 U.S.C. § 1342(p)(2). The CWA requires that MS4 permits:

(i) may be issued on a system or jurisdiction-wide basis;

(ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

(iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

33 U.S.C. § 1342(p)(3)(B).

The 2010 Permit is an example of a "Phase I" permit, which are required for MS4s serving larger urban populations, as is the case with the MS4 systems in the Santa Margarita region of Riverside County. In 1990, EPA issued regulations to implement Phase I of the MS4 permit program. 55 Fed. Reg. 47990 (November 16, 1990). The requirements of those regulations, as they apply to the provisions of the 2010 Permit relevant to this Test Claim, are discussed in further depth below.

IV. CALIFORNIA LAW

The CWA allows delegation of its NPDES permit powers to the states. 33 U.S.C. § 1342(b). Pursuant to that delegation, in 1972, California became the first state authorized to issue NPDES permits through an amendment of the existing Porter-Cologne Water Quality Act. California Water Code § 13370. The Porter-Cologne Act, adopted in 1969, pre-dated the CWA delegation by three years.

The Porter-Cologne Act's scope is broader than that of the CWA, as it applies not only to navigable surface waters of the United States (the scope of permits issued under the NPDES program) but to any "waters of the state," including "any surface water or groundwater, including

saline waters, within the boundaries of the state." Water Code § 13050(e). The 2010 Permit, in addition to being issued as an NPDES permit under the authority of the CWA, also was issued by the RWQCB as a "waste discharge requirement," pursuant to the authority of Article 4, Chapter 4, Division 7 of the California Water Code, commencing with California Water Code § 13260. *See also* California Water Code § 13263. Thus, the 2010 Permit may, and does, contain programs both authorized under the federal CWA and the state Porter-Cologne Act.

As discussed above, the California Supreme Court, in *City of Burbank*, has expressly held that a regional board has the authority to issue a permit that exceeds the requirements of the CWA and its accompanying federal regulations. *City of Burbank*, 35 Cal.4th at 618. The State Water Resources Control Board ("SWRCB"), which supervises all regional boards in the state, including the RWQCB, has acknowledged that since NPDES permits are adopted as waste discharge requirements, they can more broadly protect "waters of the State" rather than be limited to "waters of the United States," which do not include groundwater. *In re Building Industry Assn. of San Diego County and Western States Petroleum Assn.*, State Board Order WQ 2001-15.

V. STATE MANDATE LAW

A. Introduction

Article XIII B, section 6 of the California Constitution requires that the Legislature provide a subvention of funds to reimburse local agencies any time that the Legislature or a state agency "mandates a new program or higher level of service on any local government." The purpose of section 6 "is to preclude the State from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose." *County of San Diego v. State of California* (1991) 15 Cal.4th 68, 81.

The Legislature implemented section 6 by enacting a comprehensive administrative scheme to establish and pay mandate claims. Govt. Code § 17500 *et seq.*; *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 331, 333 (statute establishes "procedure by which to implement and enforce section 6").

"Costs mandated by the state" include "any increased costs which a local agency … is required to incur after July 1, 1980, as a result of any statute enacted on or after January 1, 1975, or any executive order implementing any statute enacted on or after January 1, 1975, which mandates a new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution." Govt. Code § 17514. Orders issued by any regional board pursuant to the Porter-Cologne Act come within the definition of an "executive order." *County of Los Angeles v. Comm'n on State Mandates* (2007) 150 Cal.App.4th 898, 920.

Govt. Code § 17556 identifies seven exceptions to reimbursement requirement for state mandated costs. The exceptions are as follows:

> (a) The claim is submitted by a local agency . . . that requested legislative authority for that local agency . . . to implement the program specified in the statute, and that statute imposes costs upon that local agency or school district requesting the legislative authority. . . .
>
> (b) The statute or executive order affirmed for the state a mandate that had been declared existing law or regulation by action of the courts.
>
> (c) The statute or executive order imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation. . . .
>
> (d) The local agency . . . has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.
>
> (e) The statute, executive order, or an appropriation in a Budget Act or other bill provides for offsetting savings to local agencies . . . that result in no net costs to the local agencies or . . . includes additional revenue that was specifically intended to fund the costs of the state mandate in an amount sufficient to fund the cost of the state mandate.
>
> (f) The statute or executive order imposes duties that are necessary to implement, reasonably within the scope of, or expressly included in, a ballot measure approved by the voters in a statewide or local election.
>
> (g) The statute created a new crime or infraction, eliminated a crime or infraction, or changed the penalty for a crime or infraction, but only for that portion of the statute relating directly to the enforcement of the crime or infraction.

In addition, the program or increased level of service must impose "unique requirements on local government" that "carry out a state policy". (*County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56; *see also County of Los Angeles, supra,* 150 Cal.App.4th at 907.)

None of these exceptions would bar reimbursement for the state mandates identified in this Test Claim. First, the exceptions identified in Govt. Code §§ 17556(a), (b), (e), (f) and (g) are not relevant to this Test Claim, and will not be discussed further. The exception identified in Govt. Code § 17556(c), relating to federal mandates, is expected to be raised in potential opposition to the Test Claim and will be discussed further below. Also, as will be demonstrated below, the requirements of the mandates in this Test Claim represent "unique requirements on local government" and not requirements that fall equally upon local governments and private parties, so as to obviate the need for a subvention of state funds under Article XIII B, section 6.

In particular, when a new program or level of service is in part federally required, California courts have held that where the state-mandated activities exceed federal requirements, those mandates constitute a reimbursable state mandate. *Long Beach Unified School Dist. v State of California* (1990) 225 Cal.App.3d 155, 172-73. Moreover, a "new program or higher level of service" imposed by the State upon a local agency as a result of a federal law or federal program is not necessarily a "federal mandate." In order to be a federal mandate, the obligation must be imposed upon the local agency by federal law itself. The test for determining whether the "new program or higher level of service" is a state mandate is whether the state has a "true choice" in the matter of implementation, *i.e.*, whether the state freely chose to impose that program on local municipalities as opposed to performing the obligation itself. *Hayes v. Comm'n on State Mandates* (1992) 11 Cal.App.4th 1564, 1593-94.

With respect to the provisions of Govt. Code § 17556(d), concerning the ability of a local agency to impose fees to recoup the cost of a state mandated program, with the passage of Proposition 26 in November 2010, it is clear that the costs associated with developing and implementing many programs called for in the 2010 Permit are not recoverable through fees. The impact of Proposition 26 on MS4 compliance efforts already is being seen. For example, in the City of Poway, an existing stormwater fee developed and used by that municipality to fund MS4 permit compliance programs was overturned and has been abandoned due to the passage of Proposition 26. *See* online news article, attached in Section 7. Proposition 26, enacted by the voters to amend Article XIII C of the California Constitution, defined virtually any revenue device enacted by a local government as a tax requiring voter approval, unless it fell within certain enumerated exceptions.

Article XIII C, section 2(d) provides that:

> No local government may impose, extend, or increase any special tax unless and until that tax is submitted to the electorate and approved by a two-thirds vote. A special tax shall not be deemed to have been increased if it is imposed at a rate not higher than the maximum rate so approved.

Article XIII C, section 1(d) defines "special tax" as

> … any tax imposed for specific purposes, including a tax imposed for specific purposes, which is placed into a general fund

Article XIII C, section 1(e) defines a "tax" as

> … any levy, charge, or exaction of any kind imposed by a local government, except the following:
>
> (1) A charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege.

(2) A charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product.

(3) A charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof.

(4) A charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property.

(5) A fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law.

(6) A charge imposed as a condition of property development.

(7) Assessments and property-related fees imposed in accordance with the provisions of Article XIII D.

The local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity.

In order not to be characterized as a tax subject to voter approval, a fee must fall within the express exemptions authorized by Article XIII C, section 1(e). The fee must be such that it recovers no more than the amount necessary to recover costs of the governmental program being funded by the fee. Further, the person or business being charged the fee, the payor, may only be charged a fee based on the portion of the total government costs attributable to burdens being placed on the government by *that payor* or an amount based on the *direct benefits* the payor receives from the program or facility being funded by the fee.

A fee or charge that does not fall within the seven exceptions listed in Article XIII C, section 1(e) is automatically deemed a tax, which must be approved by the voters. Any fee that does not fall within one of the one of the exceptions listed in Article XIII C, section 1(e) and that is imposed for a specific purpose, such as funding all or part of a program designed to comply with a municipality's obligation under an MS4 Permit, would constitute a "special tax." Article XIII A, section 4 and Article XIII C, section 2(d) would thus require it to be approved by 2/3 of the voters of the portion of the jurisdiction subject to the fee.

The 2010 Permit imposed new requirements establishing new and higher levels of service on the permittees thereunder, including the Claimants, and that were unique to the permittees' function as local government entities. As will be clear from a review of the mandated activities set forth below, all of the requirements relate to the Claimants' role as local governmental agencies. The provisions of the 2010 Permit set forth in this Test Claim are state mandates for which Claimants, as the permittees under the 2010 Permit, are entitled to reimbursement pursuant to Article XIII B, section 6 of the California Constitution.

The Commission has sole jurisdiction to determine whether a mandate constitutes a federal mandate pursuant to Govt. Code § 17556(c): "The commission shall not find costs mandated by the state, as defined in Section 17514, in any claim submitted by a local agency or school district, if, after a hearing, the commission finds any one of the following: (c) The statute or executive order imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation." Under the statutory scheme, it is the Commission, and not a regional board, that is exclusively charged with determining whether a "federal mandate" has been created in an MS4 permit. *Department of Finance, supra,* 1 Cal. 5th at 768-69; *County of Los Angeles, supra,* 150 Cal.App.4th at 917-18.

If the issue of what constitutes "MEP" is relevant to this Test Claim, this is an issue, like all others regarding the existence of a federal or state mandate, reserved to the Commission. The Commission has *sole authority* to determine what constitutes a state mandate, and if that determination requires the Commission to determine that a particular requirement effectuates, or goes beyond, the MEP standard, the Commission cannot defer to the RWQCB's assertion of what constitutes MEP, but must instead make that determination based on the law and the facts before it. *Department of Finance,* 1 Cal. 5th at 768; *County of Los Angeles,* 150 Cal.App.4th at 917-18.

The Commission of course can refer to the state's interpretation of what constitutes MEP. In that regard, a February 11, 1993 memorandum written by the SWRCB's Office of Chief Counsel regarding the "*Definition of 'Maximum Extent Practicable*" ("MEP Memo") (attached in Section 7 and excerpted in the Definitions Section of the 2010 Permit, Attachment C), concluded:

> On its face, it is possible to discern some outline of the intent of Congress in establishing the MEP standard. First, the requirement is to <u>reduce</u> the discharge of pollutants, rather than totally prohibit such discharge. Presumably, the reason for this standard (and the difference from the more stringent standard applied to industrial dischargers in Section 402(p)(3)(A), **is the knowledge that it is not possible for municipal dischargers to prevent the discharge of all pollutants in storm water**. (MEP Memo, p. 2, bolding added, underlining in original.)

The MEP Memo found that the following factors should be considered in making a determination on whether a BMP is consistent with the "MEP" standard: effectiveness, regulatory compliance, public acceptance, cost (whether the cost of BMPs being considered have a "reasonable relationship" to the pollution control benefit to be achieved) and technical feasibility. MEP Memo, pp. 4-5.

B. In *Department of Finance,* the California Supreme Court Established Definitive Guidance as to How the Commission Must Assess Requirements in MS4 Permits as State or Federal Mandates

Definitive guidance as to what constitutes a state, as opposed to a federal mandate in MS4 permits and the role that the Commission plays in that determination, was provided by the California Supreme Court in *Department of Finance.* In that case, the Court found that the requirements in the Los Angeles County MS4 permit to install trash receptacles at transit stops and to inspect various sites and facilities were state, not federal, mandates.

In determining what constituted a federal versus state mandate, the Supreme Court set forth this test:

> If federal law compels the state to impose, or itself imposes, a requirement, that requirement is a federal mandate. On the other hand, if federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a "true choice," that requirement is not federally mandated.

1 Cal. 5th at 765.

Department of Finance involved a challenge to the Commission's decision in the LA County Test Claim, which found that certain provisions in the LA County MS4 permit constituted state mandates and, concerning a provision requiring the installation and maintenance of trash receptacles at transit stops, required a subvention of state funds. The Commission similarly found, in the San Diego County Test Claim, that a number of provisions in the 2007 San Diego County MS4 permit constituted state mandates. That test claim is presently on appeal with the Court of Appeal, as discussed in Section IX.B below.

Significantly, the process used by the Commission to evaluate these test claims, an examination of federal statutory or regulatory authority for the MS4 permit provisions, at the text of previous permits, at evidence of other stormwater permits issued by the federal government and at evidence from the permit development process, was itself used and validated by the Supreme Court in *Department of Finance.* In affirming the Commission's decision on the LA County test claims, the Court explicitly rejected the argument which has been repeatedly raised by the State in Test Claim comments and court filings, *i.e.*, that the provisions at issue were simply expressions of the MEP standard required of stormwater permittees in the CWA,[4] and thus were purely federal mandated requirements, exempt from consideration as state mandates pursuant to Govt. Code § 17756(c).

1. The Supreme Court Applied Existing Mandates Case Law in Reaching Its Decision: The question posed by the Court was this:

[4] 33 U.S.C. § 1342(p)(3)(B)(iii).

> [H]ow to apply [the federal mandate] exception when federal law requires a local agency to obtain a permit, authorizes the state to issue the permit, and provides the state discretion in determining which conditions are necessary to achieve a general standard established by federal law, and when state law allows the imposition of conditions that exceed the federal standard.

1 Cal. 5th at 763.

Key to the Supreme Court's analysis was its careful application of existing mandate jurisprudence in determining a mandate was federal or state. The Court considered three key cases.[5] The first was *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, where the Supreme Court found that a state law requiring local governments to participate in the State's unemployment insurance program was in fact compelled by federal law, since the failure to do so would result in the loss of federal subsidies and federal tax credits for California corporations. The Court found that because of the "certain and severe federal penalties" that would accrue, the State was left "*without discretion"* and thus the State "'acted in response to a federal "mandate."'" *Department of Finance,* 1 Cal. 5th at 764, quoting *City of Sacramento,* 50 Cal.3d at 74 (emphasis in *Department of Finance*).

The second case was *County of Los Angeles v. Commission on State Mandates* (1995) 32 Cal.App.4th 805, in which the county alleged that a state requirement to provide indigent criminal defendants with funding for expert witnesses was a state mandate. The court disagreed, finding that because this requirement reflected a binding Supreme Court precedent interpreting the federal Constitution (*Gideon v. Wainwright* (1963) 372 U.S. 335), even absent the state law, the county still would have been bound to fund defense experts. Thus, the legislation "merely codified an existing federal mandate." 1 Cal. 5th at 764.

The Court finally considered *Hayes, supra,* where a state plan adopted under a federal special education law required local school districts to provide disabled children with certain educational opportunities. While the state argued that the plan was federally mandated, the *Hayes* court found that this was merely the "starting point" of its analysis, which was whether the "'manner of implementation of the federal program was left to the *true discretion* of the state.'" *Department of Finance,* 1 Cal. 5th at 765, quoting *Hayes* at 1593 (emphasis added by Supreme Court). *Hayes* concluded that if the State "'freely chose to impose the costs upon the local agency as a means of implementing a federal program then the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government.'" 1 Cal. 5th at 765, quoting *Hayes* at 1594.

From these cases, the Supreme Court distilled the "federally compelled" test set forth above, holding that "if federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a "true choice," that requirement is not federally mandated. 1 Cal. 5th at 765. The Court

[5] Because these are cases involving the scope of the Commission's actions, they are not attached.

also held that it is the State, not the test claimants, which has the burden to show that a challenged permit condition was mandated by federal law. *Id.* at 769.

Thus, the Commission must employ this test, allocating to the State the burden of proof, in its analysis of this Test Claim.

2. The Supreme Court Examined the Nature of CWA Stormwater Permitting and Determined That Water Boards Have Great Discretion in Establishing Permit Requirements: The Court reviewed the interplay between the federal CWA and California law set forth in the Water Code (1 Cal. 5th at 767-69) and determined that with respect to MS4 permits, the State had chosen to administer its own permitting program to implement CWA requirements (*citing* Water Code § 13370(d)). 1 Cal. 5th at 767.

The Court (at 1 Cal. 5th 767-68) found that the State's permitting authority under the CWA was similar to that in *Division of Occupational Safety & Health v. State Bd. Of Control* (1987) 189 Cal.App.3d 794. There, the State had the choice of being covered by federal occupational safety and health ("OSHA") requirements or adopting its own OSHA program, which had to meet federal minimums and had to extend its standards to State and local employees. In that case, state OSHA requirements called for three-person firefighting teams instead of the two-person teams that would have been allowed under the federal program. The Court of Appeal found that because the State had freely exercised its option to adopt a state OSHA program, and was not compelled to do so by federal law, the three-person team requirement was a state mandate.

The Supreme Court also distinguished the broad discretion provided to the State under the federal CWA stormwater permitting regulations with the facts in *City of Sacramento, supra,* where the State risked the loss of subsidies and tax credits if it failed to comply with federal law:

> Here, the State was not compelled by federal law to impose any particular requirement. Instead, as in *Hayes, supra* . . . the Regional Board has discretion to fashion requirements which it determined would meet the CWA's maximum extent practicable standard.

1 Cal. 5th at 768 (citation omitted). The Court held that the EPA regulations "gave the Board discretion to determine which specific controls were necessary to meet the [MEP] standard." *Id.*

3. The Court Rejected the Argument That the Commission Must Defer to the Water Boards' Determination of What Constitutes a Federal Mandate: The Supreme Court rejected one of the State's key arguments, that the Commission should have deferred to a regional board's determination of what in a stormwater permit constitutes a federal, versus state, mandate. 1 Cal. 5th at 768-69.

The Court first addressed the Water Boards' arguments that the Commission ignored "the flexibility in the CWA's regulatory scheme, which conferred discretion on the State and regional boards in deciding what conditions were necessary to comply with the CWA" and that the LA County MS4 permit "itself is the best indication of what requirements *would have been imposed* by the EPA if the Regional Board had not done so," such that the Commission "should have

deferred to the board's determination of what conditions federal law required." 1 Cal. 5th at 768 (emphasis in original).

The Court flatly rejected these arguments, finding that in issuing the permit, "the Regional Board was implementing both state and federal law and was authorized to include conditions more exacting than federal law required. [citation omitted]. It is simply not the case that, because a condition was in the Permit, it was, ipso facto, required by federal law." *Id.* The Court (at 1 Cal. 5th 768) cited as authority its decision in *City of Burbank, supra*, 35 Cal. 4th at 627-28, where it held that a federal NPDES permit issued by a water board (such as the 2010 Permit) may contain State-imposed conditions that are more stringent than federal law requirements.

The Court next addressed the Water Boards' argument that the Commission should have deferred to the regional board's conclusion that the challenged requirements in the LA County MS4 permit were federally mandated. Finding that this determination "is largely a question of law," the Court distinguished situations where the question involved the regional board's authority to *impose* specific permit conditions from those involving the question of who would *pay* for such conditions. In the former situation, "the board's findings regarding what conditions satisfied the federal [MEP] standard would be entitled to deference." 1 Cal. 5th at 768. But, the Court held,

> Reimbursement proceedings before the Commission are different. The question here was not whether the Regional Board had authority to impose the challenged requirements. It did. The narrow question here was who will pay for them. In answering that legal question, the Commission applied California's constitutional, statutory, and common law to the single issue of reimbursement. In the context of these proceedings, the State has the burden to show the challenged conditions were mandated by federal law.

Id. at 769.

The Court held that "the State must explain why federal law mandated these requirements, rather than forcing the Operators to prove the opposite." *Id.* In placing that burden on the State, the Court held that because article XIII B, section 6 of the Constitution established a "general rule requiring reimbursement of all state-mandated costs," a party claiming an exception to that general rule, such as the federal mandate exception in Govt. Code § 17556(c), "bears the burden of demonstrating that it applies." *Id.* at 769.

The Supreme Court concluded that the State's proposed rule of "requiring the Commission to defer to the Regional Board" would "leave the Commission with no role to play on the narrow question of who must pay. Such a result would fail to honor the Legislature's intent in creating the Commission." *Id.* Looking to the policies underlying article XIII B, section 6, the Court concluded that the Constitution "would be undermined if the Commission were required to defer to the Regional Board on the federal mandate question." *Id.*

The only circumstance under which the Court found that deference to the Water Boards' expertise would be appropriate was if a regional board had "found, when imposing the disputed permit conditions, that those conditions were the only means by which the [MEP] standard could

be implemented." 1 Cal. 5th at 768. As discussed below, there is no such finding in the 2010 Permit.

The Court noted that the "central purpose" of article XIII B is to rein in local government spending (citing *City of Sacramento,* 50 Cal.3d at 58-59) and that the purpose of section 6 "is to protect local governments from state attempts *to impose or shift the costs* of new programs or increased levels of service by entitling local governments to reimbursement" (citing *County of San Diego v. State of California* (1997) 15 Cal. 4th 68, 81), 1 Cal. 5th at 769, emphasis supplied). Requiring the State to establish that a permit requirement is federally mandated, the Court found, "serves those purposes." *Id.*

4. **Applying Its Test, the Court Upheld the Commission's Determination that Inspection and Trash Receptacle Requirements In The LA County MS4 Permit Were State Mandates:** Applying its "federally compelled" test, the Supreme Court reviewed and upheld the Commission's determination that the inspection and trash receptacle requirements in the LA County MS4 Permit were in fact state mandates.

First, with respect to the inspection requirements, the test claimants had argued that a requirement in the permit that MS4 operators inspect certain industrial facilities and construction sites was a state mandate. The Commission agreed and the Supreme Court upheld that determination, citing the grounds employed by the Commission.

The Court noted that there was no requirement in the CWA, including the MEP provision, which "expressly required the Operators to inspect these particular facilities or construction sites." 1 Cal. 5th at 770. While the Act did not mention inspections, the implementing federal regulations required inspections of certain industrial facilities and construction sites (not at issue in the test claim) but did not mention commercial facility inspections "at all." *Id.* The Court also agreed with the test claimants that state law gave the regional board itself "an overarching mandate" to inspect the facilities and sites. *Id.*

The Court further found that with respect to a requirement to inspect facilities covered by general industrial and general construction stormwater permits, "the State Board had placed responsibility for inspecting facilities and sites on the *Regional Board"* and that in fact the State Board was authorized to charge a fee for permittees, part of which "was earmarked to pay the Regional Board for 'inspection and regulatory compliance issues.'" *Id.* (emphasis in original). The Court further cited evidence before the Commission that the regional board had offered to pay LA County to inspect industrial facilities, an offer that made no sense "if federal law required the County to inspect those facilities." *Id.*

The Court, citing *Hayes, supra,* found that since the regional board had primary responsibility for inspecting the facilities and sites, it had "shifted that responsibility to the Operators by imposing these Permit conditions." 1 Cal. 5th at 771. The Court further rejected the State's argument that the inspections were federally mandated "because the CWA required the Regional Board to impose permit controls, and the EPA regulations contemplated that some kind of operator inspections would be required." *Id.* The Court held that the mere fact that federal regulations "contemplated some form of inspections, however, does not mean that federal law

required *the scope and detail* of inspections required by the Permit conditions." *Id.* (emphasis supplied).

Second, the Court upheld the Commission's determination that the requirement to place trash receptacles at transit stops was a state mandate. The Court found, as did the Commission, that while MS4 operators were required to "include a description of practices and procedures in their permit application," the permitting agency had "discretion whether to make those practices conditions of the permit." *Id.* As the Commission had previously found, the Court found that the State cited no CWA regulation which required trash receptacles at transit stops, and there was evidence that EPA-issued permits in other cities did not require trash receptacles at transit stops. *Id.* at 772. This latter fact, that "the EPA itself had issued permits in other cities, but did not include the trash receptacle condition," in the Court's view, "undermines the argument that the requirement was federally mandated." *Id.*

The Claimants respectfully submit that *Department of Finance* answers the question of whether the mandates identified in this Test Claim are federal or state in nature. As set forth below, each requirement represents the "true choice" of the RWQCB to impose the conditions at issue and to specify the means of compliance with general federal requirements. In some cases, the requirements are not even linked to federal law or regulation but rather to the RWQCB's concurrent state law powers under the Porter-Cologne Act. Nowhere in the 2010 Permit is there any RWQCB finding that the specific requirements at issue in this Test Claim were determined to be the only way in which the MEP standard could be achieved. As the Supreme Court held, a regional board cannot simply argue that the imposition of such requirements represents the board's imposition of the federal MEP standard, thus rendering those requirements as federal.

Under *Department of Finance,* and the other mandate jurisprudence cited above, the requirements in this Test Claim are state, not federal, mandates.

VI. STATE MANDATED ACTIVITIES

A. Removal of Categories of Irrigation Runoff from Non-Prohibited Non-Stormwater Discharges

Section B.2 of the 2010 Permit deleted three categories of irrigation runoff, "landscape irrigation," irrigation water" and "lawn watering," from categories of non-stormwater discharges not prohibited by the 2010 Permit, a new requirement that exceeded the plain requirements of federal regulations governing such discharges and representing a choice by the RWQCB to impose such requirements.

1. Applicable Requirements in the 2010 Permit

Section B.2

The 2010 Permit, in Section B.2, identified the following categories of non-stormwater discharges as exempt from the requirement to prohibit their entry into Claimants' MS4s:

a. Diverted stream flows;
b. Rising ground waters;
c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
d. Uncontaminated pumped ground water;
e. Foundation drains;
f. Springs;
g. Water from crawl space pumps;
h. Footing drains;
i. Air conditioning condensation;
j. Flows from riparian habitats and wetlands;
k. Water line flushing;
l. Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
m. Individual residential car washing; and
n. Dechlorinated swimming pool discharges.

[All footnotes omitted]

The 2004 Permit (in Section B.2) included "landscape irrigation, "irrigation water" and "lawn watering" among the exempted non-stormwater discharges. The 2010 Permit removed three categories, meaning that Claimants were required to develop and implement new programs to prohibit all discharges entering the MS4 from "landscape irrigation," irrigation water" and "lawn watering."

2. Requirements of Federal Law

The RWQCB provided no legal justification or authority for requiring Claimants to impose such an outright prohibition on irrigation waters, other than to cite alleged authority under the federal CWA regulations, in 40 CFR § 122.26(d)(2)(iv)(B). As discussed below, such regulation does not provide authority for the prohibition. Thus, the removal of these three categories of irrigation water discharges from the list of exempted discharges is not required anywhere by federal law.

The cited regulation, 40 CFR § 122.26(d)(2)(iv)(B)(1), provides that "the following categories of non-storm water discharges or flows shall be *addressed* where such discharges are identified by the *municipality* as sources of pollutants to waters of the United States: . . . landscape irrigation . . . irrigation water . . . [and] lawn watering." (emphasis added). This regulation thus provides that a municipality must "***address***" such categories of non-storm water discharges, but not that it must "prohibit" all such discharges regardless of the quality or quantity of the irrigation water. Further evidence of the fact that federal law does not require an outright prohibition of all such waters from entering the MS4 comes from the text of the 2004 Permit, which did not require that such discharges be "prohibited," and there has been no subsequent change in the CWA or federal regulations in this regard since then. *See* 2004 Permit, Section B.2.

Moreover, 40 CFR § 122.26(d)(2)(iv)(B)(1) only requires the addressing of such discharges where the ***municipality*** first identifies these discharges as specific sources of pollutants.

While the 2010 Permit Fact Sheet states that educational outreach materials utilized by the Copermittees identified these categories of runoff as a source and conveyance of pollutants to the MS4 (Fact Sheet, pp. 108-09), those materials were prepared as a preventative measure, to educate the public and prevent these discharges from becoming problematic, and did not represent a determination by Claimants that those discharges were a demonstrated problem within the watershed. In comments to the RWQCB during the development of the 2010 Permit, Claimants in fact stated that none of the municipalities had identified irrigation runoff as a source of pollutants requiring prohibition.[6] (*See* District Comment Letter dated September 7, 2010 and Attachment 6 (included in Section 7)). Thus, in adding this provision, the RWQCB relied on no actual determination of impairment within the jurisdiction of the Claimants.

Also, there is an important distinction between identifying a *particular discharger* as a source of pollutants and identifying *the entire category of discharge* as a source of pollutants. In the preamble to the federal regulations, the U.S. EPA makes clear that the permittees' illicit discharge program need not prevent discharges of the "exempt" categories into the MS4 "unless such discharges are specifically identified on a case-by-case basis as needing to be addressed." 55 Fed. Reg. at 47995. In other words, individual discharges within exempt categories must be addressed when the particular discharge is a source of pollutants to waters of the U.S. The federal regulations do not allow for removing entire categories of exempt non-storm water discharges. EPA confirmed this case-by-case approach in its Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems (November 1992) ("Part 2 Guidance Manual"), where it states:

> If an applicant knows . . . that landscape ***irrigation water from a particular site*** flows through and picks up pesticides or excess nutrients from fertilizer applications, there may be a reasonable potential for a storm water discharge to result in a water quality impact. In such an event, the applicant should contact the NPDES permitting authority to request that the authority order ***the discharger*** to the MS4 to obtain a separate NPDES permit (or in this case, the discharge could be controlled through the storm water management program of the MS4.)

Part 2 Guidance Manual at 6-33 (emphasis supplied) (attached in Section 7).

As evidenced by the Guidance Manual, the removal of these three irrigation water discharge categories from the list of exempted discharges is not required by federal law. Even if the Copermittees were to have identified a specific category or subcategory of non-storm water discharges as a potential source of pollutants in any particular instance (which has not happened), this does not mean that the RWQCB is required under federal law to prohibit that entire category of non-storm water discharges throughout all of the Copermittees' jurisdictions (as has been done in the 2010 Permit).

[6] The Fact Sheet also cites other support for the elimination of the exemption for irrigation water runoff, but this "evidence" relates to findings for other municipalities, or generally for the state, and not for the Copermittees. *See* Fact Sheet, pp. 109-10.

Also, not only does federal law not require that the discharge of all irrigation waters be "prohibited" (*i.e.*, it only requires them to be "addressed"), it further does not require that "all" types of "sources" of irrigation water be "addressed" in the event that one or more types or subtypes of irrigation water, under certain conditions, are determined by that municipality to be sources of pollutants. Finally, removing all landscape irrigation, irrigation water and lawn watering discharges from the list of exempted discharges, *i.e.*, in effect, requiring that no amount of irrigation runoff from any source (including from residences) enters the MS4, is not only not required by federal law, it is also impracticable. The "MS4" is defined to include street systems and associated gutters (*see* 2010 Permit, Attachment C, definition of "MS4"). Furthermore, such irrigation runoff that may flow into such gutters may not be significant enough to ever be discharged from the MS4 into receiving waters or contain pollutants in violation of any water quality standard. However such a prohibition requires the Claimants to prohibit that discharge regardless, and potentially conduct enforcement for every such de-minimis discharge. Irrigation runoff, such as that from lawns, invariably will flow into such gutters. Thus, it was not practicable for the Claimants to "effectively prohibit" such discharges from entering the MS4, given the potentially enormous task involved. By requiring such prohibition, the RWQCB exceeded the requirements of the CWA (33 U.S.C. § 1342(p)(3)(B)(ii)) and imposing a new non-federal requirement and/or higher level of service, representing a new state mandated program.

The Supreme Court's decision in *Department of Finance* supports the conclusion that this requirement was not a federal mandate. Here, the RWQCB mandated the removal of the irrigation streams from the list of exempt discharges without reference to the findings of the Claimants and in excess of the requirements of federal regulations. This mandate can be analogized to the trash receptacle requirements in *Department of Finance*, which were imposed on the LA County MS4 permittees without federal authority, beyond a vague requirement to address "practices for operating and maintaining public street, roads and highways." There, the Court found that the Commission correctly found no federal mandate due to the specific requirement to install and maintain trash receptacle. Here, the specific requirements imposed by the RWQCB also do not represent a federal mandate.

3. Requirements of 2004 Permit

The 2004 Permit included landscape irrigation, irrigation water and lawn watering in its list of exempted non-stormwater discharges. *See* 2004 Permit, Section B.2.

4. Mandated Activities

Section B.2 of the 2010 Permit required Claimants to perform activities that were not required under either federal law or the 2004 Permit. By removing landscape irrigation, irrigation water and lawn watering from the list of exempted non-storm water discharges, the RWQCB required that each Copermittee take steps to "prohibit" all discharges resulting from landscape irrigation, irrigation water and lawn watering of any type or quantity, from entering the Copermittees' MS4, *e.g.*, from entering the public streets, gutters, or any portion of the storm water conveyance system.

In response to this requirement, the District, using funding contributed by the Claimants through their Implementation Agreement, updated the Coordinated Monitoring Program ("CMP") to address the prohibition of the irrigation flows, which included procedures for response, and monitoring and analysis relating to such flows. Other program updates included revisions to the Jurisdictional Runoff Management Plan ("JRMP") template, training program and community outreach program. Claimants also incurred additional direct costs implementing these requirements. *See* Section 6 Declarations of the Claimants, Paragraph 5(a).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(a), Claimants incurred increased costs of $98,302.20 during Fiscal Year ("FY") 2010-11 and increased costs of $92,373.97 in FY 2011-12 to address these mandated requirements.

B. Requirement to Meet Non-Stormwater Action Levels or "NALs"

Sections C and portions of F.4 of the 2010 Permit (as well as the provisions of Section II.C of the Permit's Monitoring and Reporting Program ("MRP"), Attachment E) required Claimants to comply with new requirements relating to "Non-Stormwater Dry Weather Action Levels" or "NALs." These requirements included programmatic investigation, monitoring and reporting requirements, as well as action items stemming from a NAL exceedance.

1. Applicable Requirements in the 2010 Permit

Section C

NON-STORM WATER DRY WEATHER ACTION LEVELS

1. Each Copermittee, beginning no later than July 1, 2012, must implement the nonstormwater dry weather action level (NAL) monitoring as described in Attachment E of this Order.

2. In response to an exceedance of an NAL, the Copermittee(s) having jurisdiction must investigate and seek to identify the source of the exceedance in a timely manner. However, if any Copermittee identifies a number of NAL exceedances that prevents it from adequately conducting source investigations at all sites in a timely manner, then that Copermittee may submit a prioritization plan and timeline that identifies the timeframe and planned actions to investigate and report its findings on all of the exceedances. Depending on the source of the pollutant exceedance, the Copermittee(s) having jurisdiction must take action as follows:

a. If the Copermittee identifies the source of the exceedance as natural (nonanthropogenically influenced) in origin and in conveyance into the MS4; then the Copermittee must report its findings and documentation of its source investigation to the San Diego Water Board in its Annual Report.

b. If the Copermittee identifies the source of the exceedance as an illicit discharge or connection, then the Copermittee must eliminate the discharge to its MS4 pursuant to Section F.4.f and report the findings, including any enforcement

action(s) taken, and documentation of the source investigation to the San Diego Water Board in the Annual Report. If the Copermittee is unable to eliminate the source of discharge prior to the Annual Report submittal, then the Copermittee must submit, as part of its Annual Report, its plan and timeframe to eliminate the source of the exceedance. Those dischargers seeking to continue such a discharge must become subject to a separate NPDES permit prior to continuing any such discharge.

c. If the Copermittee identifies the source of the exceedance as an exempted category of non-storm water discharge, then the Copermittees must determine if this is an isolated circumstance or if the category of discharges must be addressed through the prevention or prohibition of that category of discharge as an illicit discharge. The Copermittee must submit its findings including a description of the steps taken to address the discharge and the category of discharge, to the San Diego Water Board for review in its Annual Report. Such description must include relevant updates to or new ordinances, orders, or other legal means of addressing the category of discharge, and the anticipated schedule for doing so. The Copermittees must also submit a summary of its findings with the Report of Waste Discharge.

d. If the Copermittee identifies the source of the exceedance as a non-storm water discharge in violation or potential violation of an existing separate NPDES permit (e.g. the groundwater dewatering permit), then the Copermittee must report, within three business days, the findings to the San Diego Water Board including all pertinent information regarding the discharger and discharge characteristics.

e. If the Copermittee is unable to identify the source of the exceedance after taking and documenting reasonable steps to do so, then the Copermittee must perform additional focused sampling. If the results of the additional sampling indicate a recurring exceedance of NALs with an unidentified source, then the Copermittee must update its programs within a year to address the common contributing sources that may be causing such an exceedance. The Copermittee's annual report must include these updates to its programs including, where applicable, updates to their watershed workplans (Section G.2), retrofitting consideration (Section F.3.d) and program effectiveness work plans (Section J.4).

f. The Copermittees, or any interested party, may evaluate existing NALs and propose revised NALs for future Board consideration.

3. NALs can help provide an assessment of the effectiveness of the prohibition of nonstormwater discharges and of the appropriateness of exempted non-storm water discharges. An exceedance of an NAL does not alone constitute a violation of the provisions of this Order. An exceedance of an NAL may indicate a lack of compliance with the requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions set forth in Sections A and B of this Order. Failure to timely implement required actions specified in this Order following an exceedance of an NAL constitutes a violation of this Order. Neither the absence of exceedances of NALs nor compliance with required actions following observed exceedances, excuses any non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s or any non-compliance with the prohibitions in Sections A and B of this Order. During any annual reporting period in which one or

more exceedances of NALs have been documented the Copermittee must report in response to Section C.2 above, a description of whether and how the observed exceedances did or did not result in a discharge from the MS4 that caused, or threatened to cause or contribute to a condition of pollution, contamination, or
nuisance in the receiving waters.

4. Monitoring of effluent will occur at the end-of-pipe prior to discharge into the receiving waters, with a focus on Major Outfalls, as defined in 40 CFR 122.26(B 5-6) and Attachment E of this Order. The Copermittees must develop their monitoring plans to sample a representative percentage of major outfalls and identified stations within each hydrologic subarea. At a minimum, outfalls that exceed any NALs once during any year must be monitored in the subsequent year. Any station that does not exceed an NAL, or only has exceedances that are identified as natural in origin and conveyance into the MS4 pursuant to Section C.2.a, for 3 successive years may be replaced with a different station.

5. Each Copermittee must monitor for the non-storm water dry weather action levels, which are incorporated into this Order as follows:

Action levels for discharges to inland surface waters: [table omitted]

Section F.4

d. **DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING**

Each Copermittee must conduct dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect illicit discharges and connections in accordance with Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016 in Attachment E of this Order.

e. **INVESTIGATION / INSPECTION AND FOLLOW-UP**

Each Copermittee must implement procedures to investigate and inspect portions of its MS4 that, based on the results of field screening, analytical monitoring, or other appropriate information, indicate a reasonable potential of containing illicit discharges, illicit connections, or other sources of pollutants in non-storm water.

> (1) Develop response criteria for data: Each Copermittee must develop, update, and use numeric criteria action levels (or other actions level criteria where appropriate) to determine when follow-up investigations will be performed in response to water quality monitoring. The criteria must include required nonstorm water action levels (see Section C) and a consideration of 303(d)-listed waterbodies and environmentally sensitive areas (ESAs) as defined in Attachment C.
>
> (2) Respond to data: Each Copermittee must investigate portions of the MS4 for which water quality data or conditions indicates a potential illegal discharge or connection.
>
> . . .
>
> (b) Field screen data: Within two business days of receiving dry weather field

> screening results that exceed action levels, the Copermittee(s) having jurisdiction must either initiate an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation must be included in the Annual Report.
>
> (c) Analytical data: Within five business days of receiving analytical laboratory results that exceed action levels, the Copermittee(s) having jurisdiction must either initiate an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation must be included in the Annual Report.

In addition, Claimants also incorporate the text of Section II.C of the MRP, Attachment E of the 2010 Permit.

2. Requirements of Federal Law

No federal statute, regulation, or policy requires that MS4 permits include monitoring, reporting and/or compliance obligations in connection with NALs or any other numeric action levels. In fact, nothing in the CWA nor the regulations thereunder requires the inclusion of numeric NALs in any fashion in an MS4 permit.

The language of the CWA, as well as the relevant authority discussing federal requirements for an MS4 NPDES Permit under the Act, confirm that no numeric limits, whether or not styled as "action levels," are *required* to be included within an MS4 permit. (*See, e.g., Defenders of Wildlife, supra*, 191 F.3d at 1163 and 1165 ["Industrial discharges must comply strictly with State water-quality standards," while "Congress chose not to include a similar provision for municipal storm-sewer discharges;" "the *statute unambiguously demonstrates* that Congress did not require municipal storm-sewer dischargers to strictly comply with 33 U.S.C. § 1311(b)(1)(C)."]; *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 874 ("*BIA*") ("With respect to municipal stormwater discharges, Congress clarified that the EPA has the authority to fashion NPDES Permit requirements to meet water quality standards without specific numeric effluent limits and to instead impose 'controls to reduce the discharge of pollutants to the maximum extent practicable.'"); *Divers' Environmental Conservation Organization v. State Water Resources Control Board* (2006) 145 Cal.App.4th 246, 256 ("In regulating stormwater permits the EPA has repeatedly expressed a preference for doing so by the way of BMPs, rather than by way of imposing either technology-based or water quality-based numerical limitations."); State Board Order No. 2000-11, p. 3 ("In prior orders this Board has explained the need for the municipal stormwater programs *and the emphasis on BMPs in lieu of numeric effluent limitations*.")(emphasis supplied); State Board Order No. 2006-12, p. 17 ["Federal regulations do not require numeric effluent limitations for discharges of stormwater."]; and State Board Order No. 91-03, pgs. 30-31 ("*We . . . conclude that numeric effluent limitations are not legally required.* Further we have determined that the program of prohibitions, source control measures and 'best management practices' set forth in the Permit constitutes effluent limitations as required by law.'")(emphasis supplied).

While NALs are not traditional "strict" numeric effluent limits, in that an exceedance of a NAL does not automatically constitute a permit "violation," numeric NALs are similar to strict numeric effluent limits in that they imposed new mandated requirements on Claimants to address exceedances of the NALs. If the Copermittees' non-stormwater discharges exceeded the NALs, Claimants were thereafter required to implement various measures to comply with the NALs, regardless of the feasibility of complying. Failure to address NAL exceedances, under the 2010 Permit, constituted a permit violation.

In light of these facts, the NAL mandates went beyond what is required to be imposed in an MS4 permit, and was therefore not a federal mandate. Having only general authority in the CWA regulations, the RWQCB made a "true choice" in deciding to impose these specific mandates, *Department of Finance, supra*, 1 Cal. 5th at 765; *Hayes, supra*, 11 Cal.App.4th at 1593, and the NAL requirements constituted a new program and/or higher level of service imposed by the state.

3. Requirements of 2004 Permit

No NAL-related requirements were contained in the 2004 Permit. The inclusion of such requirements in the 2010 Permit represents a new program and/or higher level of service imposed on Claimants.

4. Mandated Activities

Sections C and F.4.d and e, as well as Section II.C of the MRP, required Claimants to identify and perform field verification of major outfalls, perform water quality sampling at a representative percentage of major outfalls and identified stations in each hydrologic subarea, implement new followup investigations and source tracking activities triggered by each exceedance of dry weather NALs, conduct enforcement actions as appropriate to the source, prepare reports on the status and outcome of NAL exceedances, investigations and enforcement, and where necessary, update Copermittee compliance programs as necessary to address NAL exceedances.

In response to these requirements, the District, with funding contributed by the Claimants through the Implementation Agreement, retained a consultant to develop and finalize a sampling and analysis plan, develop a followup response program and procedures and laboratory coordination, conduct initial required NAL sampling and analysis on behalf of each Claimant and where necessary, coordinate development of model updates to compliance programs to address NAL exceedances. The Claimants incurred additional direct costs implementing these requirements. *See* Section 6 Declarations, Paragraph 5(b).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(b), the Claimants incurred increased costs to address the requirements of this mandate of $44,632.46 in FY 2010-11 and $46,089.89 in FY 2011-12.

C. Requirement to Meet Stormwater Action Levels or "SALs"

Section D of the 2010 Permit required Claimants to monitor their major MS4 outfalls into receiving waters for the presence of pollutants that exceeded SALs and, if such pollutants were detected, to address the exceedances.

1. Applicable Requirements in the 2010 Permit

Section D

STORM WATER ACTION LEVELS

1. The Copermittees must implement the Wet Weather MS4 Discharge Monitoring as described in Attachment E of this Order, and beginning three years after the Order adoption date, the Copermittees must annually evaluate their data compared to the Stormwater Action Levels (SALs). At each monitoring station, a running average of twenty percent or greater of exceedances of any discharge of storm water from the MS4 to waters of the U.S. that exceed the SALs for each of the pollutants listed in Table 4 (below) requires the Copermittee(s) having jurisdiction to affirmatively augment and implement all necessary storm water controls and measures to reduce the discharge of the associated class of pollutants(s) to the MEP. The Copermittees must utilize the exceedance information when adjusting and executing annual work plans, as required by this Order. Copermittees must take the magnitude, frequency, and number of constituents exceeding the SAL(s), in addition to receiving water quality data and other information, into consideration when prioritizing and reacting to SAL exceedances in an iterative manner. Failure to appropriately consider and react to SAL exceedances in an iterative manner creates a presumption that the Copermittee(s) have not reduced pollutants in storm water discharges to the MEP.

[table omitted]

2. The end-of-pipe assessment points for the determination of SAL compliance are major outfalls, as defined in 40 CFR 122.26(b)(5) and (b)(6) and Attachment E of this Order. The Copermittees must develop their monitoring plans to sample a representative percentage of the major outfalls within each hydrologic subarea. At a minimum, outfalls that exceed SALs must be monitored in the subsequent year. Any station that does not exceed an SAL for 3 successive years may be replaced with a different station. SAL samples must be 24 hour time-weighted composites.

3. The absence of SAL exceedances does not relieve the Copermittees from implementing all other required elements of this Order.

4. This Order does not regulate natural sources and conveyances into the MS4 of constituents listed in Table 5. To be relieved of the requirements to take action as described in D.1 above, the Copermittee must demonstrate that the likely and expected cause of the SAL exceedance is not anthropogenic in nature. This demonstration does not need to be repeated for subsequent exceedances of the same SAL at the same monitoring station.

5. The SALs will be reviewed and updated at the end of every permit cycle. The data collected pursuant to D.2 above and Attachment E can be used to create SALs based upon local data. The

purpose of establishing the SALs is that through the iterative and MEP process, outfall storm water discharges will meet all applicable water quality standards.

2. Requirements of Federal Law

Nothing in the CWA or the regulations thereunder requires the inclusion of SALs within an MS4 permit. In addition, there is no federal requirement that MS4 permits include monitoring, reporting or compliance obligations that are triggered by an exceedance of a SAL.

Contrary to any requirement to include a SAL-related mandate within an MS4 permit, the plain language of the CWA, as well as controlling case authority interpreting the Act, make clear that no form of SALs or any related mandates are required to be included within a municipal NPDES Permit by federal law. *See Defenders of Wildlife, supra*, 191 F.3d 1159, 1163 (**"Industrial discharges must strictly comply with State water-quality standards" while "Congress chose not to include a similar provision for municipal storm-sewer discharges.")** (emphasis supplied); *Divers' Environmental, supra*, 145 Cal.App.4th at 256 ("In regulating stormwater permits the EPA has repeatedly expressed a preference for doing so by the way of BMPs, rather than by way of imposing either technology-based or water quality-based numerical limitations."); *BIA, supra*, 124 Cal.App.4th at 874 ("With respect to municipal stormwater discharges, Congress clarified that the EPA has the authority to fashion NPDES Permit requirements to meet water quality standards ***without specific numeric effluent limits*** and to instead impose 'controls to reduce the discharge of pollutants to the maximum extent practicable.'") (emphasis supplied); State Board Order No. 2006-12, p. 17 (**"Federal regulations do not require numeric effluent limitations for discharges of stormwater.")** (emphasis supplied); and State Board Order No. 91-03, pgs. 30-31 ("***We . . . conclude that numeric effluent limitations are not legally required***. Further we have determined that the program of prohibitions, source control measures and 'best management practices' set forth in the Permit constitutes effluent limitations as required by law.'") (emphasis supplied).

Like NALs, SALs are not traditional "strict" numeric effluent limits that result in violations if exceeded, but are nonetheless similar to such limits in that they are new programs imposed on Claimants that are tied to achieving compliance with specific numeric limits. As with the NALs, if discharges from Copermittees' MS4s exceeded the SALs, Claimants were subject to additional and costly requirements, regardless of the feasibility or practicability of complying with the SALs. In short, all of these new requirements were tied to determining and achieving compliance with a set of numbers, none of which is required under federal law. Thus, like the NAL mandates, the SAL mandates went beyond what is required to be imposed in an MS4 permit, and the RWQCB had a "true choice" in deciding to impose the SAL mandates. *Department of Finance, supra,* 1 Cal. 5th at 765; *Hayes, supra*, 11 Cal.App.4th at 1593.

3. Requirements of 2004 Permit

No SAL-related requirements were in the 2004 Permit. The inclusion of such requirements in the 2010 Permit therefore represented a new program and/or higher level of service imposed on Claimants.

4. Mandated Activities

Section D of the Permit required Claimants to conduct end-of-pipe assessments to determine SAL compliance metrics at major outfalls during wet weather. Claimants were required to identify and perform field verification of major outfalls owned by them, perform water quality sampling at a representative percentage of major outfalls and identified stations in each hydrologic subarea, perform analysis and prepare reports on the status and outcome of SAL exceedances, and where necessary, update their compliance programs to address SAL exceedances.

In response to these requirements, the District, with funding contributed by the Claimants through the Implementation Agreement, retained a consultant to develop and finalize a sampling and analysis plan, develop a followup response program and procedures and laboratory coordination, conduct SAL sampling and analysis on behalf of each Claimant, utilize analysis and source identification results in develop annual updates to the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address SAL exceedances. The Claimants incurred additional direct costs implementing these requirements. *See* Section 6 Declarations, Paragraph 5(c).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(c), the Claimants incurred increased costs to address the requirements of this mandate of $24,932.46 in FY 2010-11 and $26,089.89 in FY 2011-12.

D. Priority Development Project and Hydromodification Requirements

Portions of Section F.1.d and Section F.1.h of the 2010 Permit required Claimants to develop and implement a program to ensure that new development and significant redevelopment, as those terms are defined in the 2010 Permit, comply with strict low impact development ("LID") and hydromodification prevention requirements, including development and implementation of a Hydromodification Management Plan ("HMP").

1. Applicable Requirements in the 2010 Permit

Section F.1.d

(1) Definition of Priority Development Project:

Priority Development Projects are:

. . .

(c) One acre threshold: In addition to the Priority Development Project Categories identified in section F.1.d.(2), Priority Development Projects must also include all other

> post-construction pollutant-generating new Development Projects that result in the disturbance of one acre or more of land by July 1, 2012. [footnote omitted]

(2) Priority Development Project Categories

Where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SSMP requirements.

> (a) New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site) including commercial, industrial, residential, mixed-use, and public projects. This category includes development projects on public or private land which fall under the planning and building authority of the Copermittees.

...

(4) Low Impact Development BMP Requirements

Each Copermittee must require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss.

> (a) The Copermittees must take the following measures to ensure that LID BMPs are implemented at Priority Development Projects:
>
> > (i) Each Copermittee must require LID BMPs or make a finding of technical infeasibility for each Priority Development Project in accordance with the LID waiver program in Section F.1.d.(7);
> >
> > (ii) Each Copermittee must incorporate formalized consideration, such as thorough checklists, ordinances, and/or other means, of LID BMPs into the plan review process for Priority Development Projects; and
> >
> > (iii) On or before July 1, 2012, each Copermittee must review its local codes, policies, and ordinances and identify barriers therein to implementation of LID BMPs. Following the identification of these barriers to LID implementation, where feasible, the Copermittee must take, by the end of the permit cycle, appropriate actions to remove such barriers. The Copermittees must include this review with the updated JRMP.
>
> (b) The following LID BMPs must be implemented at each Priority Development Project:
>
> ...
>
> > (iii) Projects with low traffic areas and appropriate soil conditions must

be constructed with permeable surfaces.

(7) Low Impact Development (LID) BMP Waiver Program

The Copermittees must develop, collectively or individually, a LID waiver program for incorporation into the SSMP, which would allow a Priority Development Project to substitute implementation of all or a portion of required LID BMPs in Section F.1.d(4) with implementation of treatment control BMPs and either 1) on-site mitigation, 2) an off-site mitigation project, and/or 3) other mitigation developed by the Copermittees. The Copermittees must submit the LID waiver program as part of their updated SSMP. At a minimum, the program must meet the requirements below:

(a) Prior to implementation, the LID waiver program must clearly exhibit that it will not allow Priority Development Projects to result in a net impact (after consideration of any mitigation) from pollutant loadings over and above the impact caused by projects meeting the onsite LID retention requirements;

(b) For each Priority Development Project participating, the Copermittee must find that it is technically infeasible to implement LID BMPs that comply with the requirements of Section F.1.(d)(4). The Copermittee(s) must develop criteria to determine the technical feasibility of implementing LID BMPs . Each Priority Development Project participating must demonstrate that LID BMPs were implemented as much as feasible given the site's unique conditions. Technical infeasibility may result from conditions including, but not limited to:

(i) Locations that cannot meet the infiltration and groundwater protection requirements in section F.1.c.(6) for large, centralized infiltration BMPs. Where infiltration is technically infeasible, the project must still examine the feasibility of other onsite LID BMPs;

(ii) Insufficient demand for storm water reuse;

(iii) Smart growth and infill or redevelopment locations where the density and/or nature of the project would create significant difficulty for compliance with the LID BMP requirements; and

(iv) Other site, geologic, soil, or implementation constraints identified in the Copermittees updated SSMP document.

Section F.1.h

HYDROMODIFICATION – LIMITATIONS ON INCREASES OF RUNOFF DISCHARGE RATES AND DURATIONS [footnote omitted]

Each Copermittee shall collaborate with the other Copermittees to develop and implement a Hydromodification Management Plan (HMP) to manage increases in runoff discharge rates and durations from all Priority Development Projects. The HMP must be incorporated into the SSMP

and implemented by each Copermittee so that estimated post-project runoff discharge rates and durations must not exceed pre-development discharge rates and durations. Where the proposed project is located on an already developed site, the pre-project discharge rate and duration must be that of the pre-developed, naturally occurring condition. The draft HMP must be submitted to the San Diego Water Board on or before June 30, 2013. The HMP will be made available for public review and comment and the San Diego Water Board Executive Officer will determine whether to hold a public hearing before the full San Diego Water Board or whether public input will be through written comments to the Executive Officer only.

(1) The HMP must:

(a) Identify a method for assessing susceptibility and geomorphic stability of channel segments which receive runoff discharges from Priority Development Projects. A performance standard must be established that ensures that the geomorphic stability within the channel will not be compromised as a result of receiving runoff discharges from Priority Development Projects.

(b) Identify a range of runoff flows [footnote omitted] based on continuous simulation of the entire rainfall record (or other analytical method proposed by the Copermittees and deemed acceptable by the San Diego Water Board) for which Priority Development Project post-project runoff flow rates and durations must not exceed pre-development (naturally occurring) runoff flow rates and durations by more than 10 percent, where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses. The lower boundary of the range of runoff flows identified must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks. The identified range of runoff flows may be different for specific watersheds, channels, or channel reaches. In the case of an artificially hardened (concrete lined, rip rap, etc.) channel, the lower boundary of the range of runoff flows identified must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks of a comparable natural channel (i.e.non-hardened, pre-development).

(c) Identify a method to assess and compensate for the loss of sediment supply to streams due to development. A performance and/or design standard must be created and required to be met by Priority Development Projects to ensure that the loss of sediment supply due to development does not cause or contribute to increased erosion within channel segments downstream of Priority Development Project discharge points.

(d) Designate and require Priority Development Projects to implement control measures so that (1) post-project runoff flow rates and durations do not exceed pre-development (naturally occurring) runoff flow rates and durations by more than 10 percent for the range of runoff flows identified under section F.1.h.(1)(b), where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses; (2) post-project runoff flow rates and durations do not result in channel conditions which do not meet the channel standard developed under section F.1.h.(1)(a) for channel segments downstream of Priority Development Project discharge points; and (3) the design of the project and/or control measures compensate for the loss of sediment supply due to development.

(e) Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from Priority Development Projects to meet the range of runoff flows identified under Section F.1.h.(1)(b).

(f) Include other performance criteria (numeric or otherwise) for Priority Development Projects as necessary to prevent runoff from the projects from increasing and/or continuing unnatural rates of erosion of channel beds and banks, silt pollutants generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

(g) Include a review of pertinent literature.

(h) Identify areas within the Santa Margarita Hydrologic Unit for potential opportunities to restore or rehabilitate stream channels with historic hydromodification of receiving waters that are tributary to documented low or very low Index of Biotic Integrity (IBI) scores.

(i) Include a description of how the Copermittees will incorporate the HMP requirements into their local approval processes.

(j) Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations and address potential hydromodification impacts.

(k) Include technical information, including references, supporting any standards and criteria proposed.

(l) Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.

(m)Include a description of monitoring and other program evaluations to be conducted to assess the effectiveness of implementation of the HMP. Monitoring and other program evaluations must include an evaluation of changes to physical (e.g., cross-section, slope, discharge rate, vegetation, pervious/impervious area) and biological (e.g., habitat quality, benthic flora and fauna, IBI scores) conditions of receiving water channels as areas with Priority Development Projects are constructed (i.e. pre- and postproject), as appropriate.

(n) Include mechanisms for assessing and addressing cumulative impacts of Priority Development Projects within a watershed on channel morphology.

(2) In addition to the control measures that must be implemented by Priority Development Projects per section F.1.h.(1)(d), the HMP must include a suite of management measures that can be used on Priority Development Projects to mitigate hydromodification impacts, protect and restore downstream beneficial uses and prevent or further prevent adverse physical changes to downstream channels. The measures must be based on a prioritized consideration of the following elements in this order:

(a) Site design control measures;
(b) On-site management measures;
(c) Regional control measures located upstream of receiving waters; and
(d) In-stream management and control measures.

Where stream channels are adjacent to, or are to be modified as part of a Priority Development Project, management measures must include buffer zones and setbacks. The suite of management measures must also include stream restoration as a viable option to achieve the channel standard in section F.1.h.(1)(a). In-stream controls used as management measures to protect and restore downstream beneficial uses and for preventing or minimizing further adverse physical changes must not include the use of nonnaturally occurring hardscape materials such as concrete, riprap, gabions, etc. to reinforce stream channels.

(3) As part of the HMP, the Copermittees may develop a waiver program that allows a redevelopment Priority Development Project, as defined in Section F.1.d.(1)(b), to implement offsite mitigation measures. A waiver may be granted if onsite management and control measures are technically infeasible to fully achieve post-project runoff flow rates and durations that do not exceed the pre-development (naturally occurring) runoff flow rates and durations.
Redevelopment projects that are granted a waiver under the program must not have post-project runoff flow rates and durations that exceed the pre-project runoff flow rates and durations. The estimated incremental hydromodification impacts from not achieving the pre-development (naturally occurring) runoff flow rates and durations for the project site must be fully mitigated. The offsite mitigation must be within the same stream channel system to which the project discharges. Mitigation projects not within the same stream channel system but within the same hydrologic unit may be approved provided that the project proponent demonstrates that mitigation within the same stream channel is infeasible and that the mitigation project will address similar impacts as expected from the project.

(4) Each individual Copermittee has the discretion to not require Section F.1.h. at Priority Development Projects where the project:

(a) Discharges storm water runoff into underground storm drains discharging directly to water storage reservoirs and lakes;
(b) Discharges storm water runoff into conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs and lakes; or
(c) Discharges storm water runoff into other areas identified in the HMP as acceptable to not need to meet the requirements of Section F.1.h by the San Diego Water Board Executive Officer.

(5) HMP Reporting and Implementation

(a) On or before June 30, 2013, the Copermittees must submit to the San Diego Water Board a draft HMP that has been reviewed by the public, including the identification of the appropriate limiting range of flow rates per section F.1.h.(1)(b).
(b) Within 180 days of receiving San Diego Water Board comments on the draft HMP, the Copermittees must submit a final HMP that addressed the San Diego Water Board's comments.
(c) Within 90 days of receiving a determination of adequacy from the San Diego Water Board, each Copermittee must incorporate and implement the HMP for all Priority Development Projects.

(d) Prior to acceptance of the HMP by the San Diego Water Board, the early implementation measures likely to be included in the HMP must be encouraged by the Copermittees.

(6) Interim Hydromodification Criteria

Immediately following adoption of this Order and until the final HMP required by this Order has been determined by the San Diego Water Board to be adequate, each Copermittee must ensure that all Priority Development Projects are implementing the hydromodification (aka Hydrologic Condition of Concern) requirements found in Section 4.4 of the 2006 Riverside County WQMP (updated in 2009) unless one of the following conditions in lieu of those specified in the WQMP are met:

(a) Runoff from the Priority Development Project discharges (1) directly to a conveyance channel or storm drain that is concrete lined all the way from the point of discharge to the ocean, bay, lagoon, water storage reservoir or lake; and (2) the discharge is in full compliance with Copermittee requirements for connections and discharges to the MS4 (including both quality and quantity requirements); and (3) the discharge will not cause increased upstream or downstream erosion or adversely impact downstream habitat; and (4) the discharge is authorized by the Copermittee.

(b) The Priority Development Project disturbs less than one acre. The Copermittee has the discretion to require a project specific WQMP to address hydrologic condition concerns on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

(c) The runoff flow rate, volume, velocity, and duration for the postdevelopment condition of the Priority Development Project do not exceed the pre-development (i.e. naturally occurring) condition for the 2-year, 24-hour and 10-year, 24-hour rainfall events. This condition must be substantiated by hydrologic modeling acceptable to the Copermittee.

Once a final HMP is determined to be adequate and is required to be implemented, compliance with the final HMP is required by this Order and compliance with the 2004 WQMP (updated in 2009) or the in-lieu interim hydromodification criteria set forth above no longer satisfies the requirements of this Order.

(7) No part of section F.1.h eliminates the Copermittees' responsibilities for implementing the Low Impact Development requirements under section F.1.d.(4).

2. Requirements of Federal Law

Nothing in the CWA, its regulations, or case law requires local agencies to develop programs to require LID practices as described in 2010 Permit Sections F.1.d.(4) and F.1.d(7), or to develop an HMP as described in 2010 Permit Section F.1.h., or to require projects that meet the requirements of 2010 Permit Sections F.1.d.(1) and F.1.d.(2) to implement the above described LID and HMP requirements. Indeed, the issue of whether similar requirements exceed the requirements of federal law, and represent reimbursable state mandates was considered by the Commission in the San Diego County Test Claim. In its decision, the Commission determined that "nothing in the federal regulation requires agencies to update local or model SSMPs." San

Diego County Test Claim, p. 51. In addition, the Commission determined that the hydromodification requirement constituted "a state-mandated, new program or higher level of service." *Id. Department of Finance* confirms that the imposition of these detailed requirements represents a state, not federal mandate. *See* discussion in Section V.B, above.

The CWA only requires MS4 permits to impose controls that reduce the discharge of pollutants to the MEP. MEP is not defined, but the CWA suggests management practices, control techniques, and system, design, and engineering methods as options for attaining the maximum reduction possible. 33 U.S.C. § 1342(p)(3)(B)(iii). When suggestions are no longer merely being suggested as options for consideration "but are required acts, [t]hese requirements constitute a higher level of service." San Diego County Test Claim at 51. The Commission's analysis was confirmed by the Supreme Court in *Department of Finance*: "[T]he State was not compelled by federal law to impose any particular requirement. Instead . . . the Regional Board had discretion to fashion requirements which it determined would meet the CWA's [MEP] standard." 1 Cal. 5th at 768.

Federal regulations (40 CFR § 122.26(d)(2)(iv)(A)(2)) require as part of an MS4 permit application a plan for developing, implementing and enforcing controls to reduce the discharge from MS4s that originate in areas of new development. Requiring post-construction controls to limit pollutant discharges originating in areas of new development may be within these requirements, but the specific LID and HMP requirements contained in the 2010 Permit are not required in the regulations. By adopting permit provisions that require Copermittees to implement LID requirements and to develop and implement an HMP, the RWQCB freely chose to impose requirements and related costs that were not federally mandated and that, when mandated by the state, constituted a new program or higher level of service.

In the San Diego County Test Claim, the Commission found that the LID and hydromodification requirements were not reimbursable, because the County of San Diego and the other permittees retained the ability to assess fees for new development. With the passage of California's Proposition 26 in November 2010, however, all costs associated with ***developing*** the LID and hydromodification programs may not be recoverable through fees. As discussed in Section V above, Proposition 26, which amends Article XIII C of the California Constitution, defines virtually any revenue device enacted by a local government as a "tax" requiring voter approval, unless it falls within certain enumerated exceptions.

In the San Diego County Test Claim, the Commission found that the LID and hydromodification requirements applicable to municipal projects were not reimbursable state mandates because the permittees were under no obligation to construct projects that would trigger these requirements. *Id.* at pp. 46, 52. The Commission cited the California Supreme Court's decision in *Department of Finance v. Commission on State Mandates (KHSD)* (2003) 30 Cal.4th 727. In *KHSD*, the Court held that certain hearing requirements imposed upon school districts did not constitute a reimbursable state mandate because they were a requirement of voluntary program the school districts had elected to participate in. The Court held that "activities undertaken at the option or discretion of a local government entity (that is, actions undertaken without any legal

compulsion or threat of penalty for nonparticipation) do not trigger a state mandate and hence do not require reimbursement." *Id.* at 742.

The Supreme Court relied on *City of Merced v State of California* (1984) 153 Cal.App.3d 777. In that case, the city elected to take property by eminent domain, under which it was required by then-recent legislation to compensate the owner for loss of "business goodwill." The city sought reimbursement from the state, arguing that this new statutory requirement was a reimbursable state mandate. The Court of Appeal concluded that the city's increased costs flowed from its optional decision to condemn the property, and, "whether a city or county decides to exercise eminent domain is, essentially, an option of the city or county, rather than a mandate of the state. . . .Thus, payment for loss of goodwill is not a state-mandated cost." 153 Cal.App.3d at 783.

The facts that dictated the Court's decision in *KHSD* are not present in the 2010 Permit. For one, the 2010 Permit was not a voluntary program, but one requiring Claimants to take immediate actions related to LID and hydromodification, including requirements that were not triggered by any voluntary action on the part of the Permittees. The 2010 Permit *required* Claimants to incur costs related to LID and hydromodification on municipal projects, such as recreational facilities, parking lots, streets, roads, highways. Moreover, the development and upkeep of these municipal land uses is not optional. These projects are integral to Claimants' function as municipal entities, and the failure to make necessary repairs, upgrades and extensions can result in public health and safety issues and expose Claimants to liability.

The rationale of *City of Merced* is likewise inapplicable. In that case, the city could have *chosen* to avoid the goodwill reimbursement by purchasing the property rather than taking it by eminent domain. Under the 2010 Permit, Claimants had no such option, as the permit required Claimants to incur new, additional costs on every qualifying municipal project.

Moreover, the California Supreme Court has rejected the applicability of *City of Merced* in circumstances beyond those present in *KHSD*. In *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, the Court considered similar regulatory requirements to those at issue in *KHSD*. The Court discussed its decision in *KHSD*, at length, and cautioned against future reliance on *City of Merced*, holding:

> [W]e agree with the District and amici curiae that ***there is reason to question an extension of the holding of City of Merced so as to preclude reimbursement under article XIII B, section 6 of the state Constitution and Government Code section 17514 whenever an entity makes an initial discretionary decision that in turn triggers mandated costs***. Indeed, it would appear that under a strict application of the language in *City of Merced*, public entities would be denied reimbursement for state-mandated costs in apparent contravention of the intent underlying article XIII B, section 6 of the state Constitution and Government Code section 17514 and contrary to past decisions in which it has been established that reimbursement was in fact proper. For example, as explained above, in *Carmel Valley, supra*, 190 Cal.App.3d 521, an executive order requiring that county firefighters be provided

> with protective clothing and safety equipment was found to create a reimbursable state mandate for the added costs of such clothing and equipment. (Id., at pp. 537–538.) The court in *Carmel Valley* apparently did not contemplate that reimbursement would be foreclosed in that setting merely because a local agency possessed discretion concerning how many firefighters it would employ—and hence, in that sense, could control or perhaps even avoid the extra costs to which it would be subjected. Yet, under a strict application of the rule gleaned from *City of Merced, supra*, 153 Cal.App.3d 777, such costs would not be reimbursable for the simple reason that the local agency's decision to employ firefighters involves an exercise of discretion concerning, for example, how many firefighters are needed to be employed, etc. We find it doubtful that the voters who enacted article XIII B, section 6, or the Legislature that adopted Government Code section 17514, intended that result, and hence we are reluctant to endorse, in this case, an application of the rule of *City of Merced* that might lead to such a result.

33 Cal.4th at 887-88 (emphasis supplied).

Thus, strict reliance on *City of Merced* is only appropriate in the very limited circumstances presented in *KHSD*. Those conditions are not present in the 2010 Permit, which imposes requirements on Claimants that are either wholly unrelated to voluntary action by Claimants, or are triggered by municipal projects that Claimants must implement with little to no discretion because they are integral to Claimants function as municipal entities. As set forth above, and in greater detail below, these requirements exceed federal law and represent reimbursable state mandates.

In addition, an additional specific requirement of Section F.1.h of the 2010 permit raises specific MEP issues. This requirement, contained in Section F.1.h.(2), required Claimants to not use "nonnaturally occurring hardscape materials such as concrete, riprap, gabions, etc. to reinforce stream channels" when employing in-stream controls used as management measures to protect and restore downstream beneficial uses and for preventing or minimizing further adverse physical changes. This requirement in particular is not practicable. As set forth in the Declaration of Jason Uhley Regarding Additional Factual Issues, ¶ 6 ("Uhley Declaration") (attached in Section 7) because in a majority of situations, such materials are necessary to protect lives and property in the process of reinforcing stream channels.

3. Requirements of 2004 Permit

The 2004 Permit, while containing provisions relating to PDPs, did not include the provisions relating to the one-acre construction site threshold or new development projects that create 10,000 square feet or more of impervious surface. The 2004 Permit also did not require Claimants to develop and implement LID permit requirements or an HMP.

4. Mandated Activities

To comply with the LID and hydromodification requirements in the 2010 Permit, the Claimants were required to develop and implement a number of new programs. The specific mandated activities are set forth above and included:

- Applying Standard Stormwater Mitigation Plan ("SSMP") requirements to an increased range of municipal projects implemented by the Claimants, which meet the requirements of to F.1.d(1) and F.1.d.(2).

- Requiring implementation of LID practices and development and implementation of an LID Waiver program, as described in F.1.d(4) and F.1.d(7), on municipal PDPs implemented by the Claimants. This will require creating a formalized review process for all PDPs, developing protocols for assessing each PDP for various required types of LID, training staff on the new protocols, assessing potential on- or off-site collection and reuse of storm water, amending local ordinances to remove barriers to LID implementation, maintaining or restoring natural storage reservoirs and drainage corridors, draining a portion of impervious areas into pervious areas, and constructing low-traffic areas with permeable surfaces. Projects that are subject to these requirements include municipal yards, recreation centers, civic centers, and road improvements, and any other municipal projects meeting the permit-specified thresholds or geographical criteria.

- Requiring development of an HMP, and implementation of those HMP requirements on municipal PDPs implemented by the Claimants pursuant to Part F.1.h. To comply with part F.1.h, the Copermittees must invest significant resources to hold public hearings, hold collaborative meetings, perform studies and develop an HMP, train staff and the public, and adopt the local SSMP. In addition, as noted above, Claimants are prohibited from using non-natural materials in reinforcing stream channels, a prohibition which is not practicable. Continued compliance with these sections will also require Copermittees to add requirements to municipal projects and will significantly increase the costs of design and construction.

In response to these requirements, the District, using funding contributed by the Claimants through the Implementation Agreement, developed a SSMP, an HMP with publicly available hydromodification modelling software, a BMP Design Manual, developed and provided training for the Claimants and the development community and revised the JRMP template. The Claimants incurred additional direct costs implementing these requirements. *See* Section 6 Declarations, Paragraph 5(d).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(d), the Claimants incurred increased costs to address the requirements of this mandate of $61,122.06 in FY 2010-11 and $685,201.78 in FY 2011-12.

E. BMP Maintenance Tracking Requirements

Provisions in Section F.1.f of the 2010 Permit required Claimants to develop and maintain a watershed-based database to track all projects that have a final approved SSMP and structural BMPs, including projects dating back to July 2005 (before the effective date of the 2010 Permit) and to inspect such BMPs on a routine basis.

1. Applicable Requirements in 2010 Permit

Section F.1.f

BMP MAINTENANCE TRACKING

(1) Inventory of SSMP projects: Each Copermittee must develop and maintain a watershed-based database to track and inventory all projects constructed within their jurisdiction, that have a final approved SSMP (SSMP projects), and its structural post-construction BMPs implemented therein since July, 2005. LID BMPs implemented on a lot by lot basis at single family residential houses, such as rain barrels, are not required to be tracked or inventoried. At a minimum, the database must include information on BMP type(s), location, watershed, date of construction, party responsible for maintenance, dates and findings of maintenance verifications, and corrective actions, including whether the site was referred to the local vector control agency or department.

(2) Each Copermittee must verify that approved post-construction BMPs are operating effectively and have been adequately maintained by implementing the following measures:

. . .

(b) Beginning on July 1, 2012, each Copermittee must verify that the required structural post-construction BMPs on the inventoried SSMP projects have been implemented, are maintained, and are operating effectively through inspections, self-certifications, surveys, or other equally effective approaches with the following conditions:

(i) The implementation, operation, and maintenance of all (100 percent) approved and inventoried final project public and private SSMPs (a.k.a. WQMPs) must be verified every five years;
(ii) All (100 percent) projects with BMPs that are high priority must be inspected by the Copermittee annually prior to each rainy season;
(iii) All (100 percent) Copermittee projects with BMPs must be inspected by the Copermittee annually;
(iv) At the discretion of the Copermittee, its inspections may be coordinated with the facility inspections implemented pursuant to

> section F.3. of this Order;
> (v) For verifications performed through a means other than direct Copermittee inspection, adequate documentation must be submitted to the Copermittee to provide assurance that the required maintenance has been completed;
> (vi) Appropriate follow-up measures (including re-inspections, enforcement, maintenance, etc.) must be conducted to ensure the treatment BMPs continue to reduce storm water pollutants as originally designed; and
> (vii) Inspections must note observations of vector conditions, such as mosquitoes. Where conditions are identified as contributing to mosquito production, the Copermittee must notify its local vector control agency.

2. Requirements of Federal Law

Nothing in the CWA, its regulations, or case law requires local agencies to develop, fund, and implement a retroactive BMP maintenance tracking database and inspection program. EPA regulations require MS4 permits to include "[a] description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers." 40 CFR § 122.26(d)(2)(iv)(A)(1). This general requirement did not mandate the actions required by Section F.1.f of the 2010 Permit. Like the general requirements in the CWA regulations reviewed by the Supreme Court in *Department of Finance,* this requirement cannot be bootstrapped into a federal mandate, given that the RWQCB exercised its "true choice" to impose the specific requirements in Section F.1.f of the 2010 Permit. 1 Cal. 5th at 765. *Accord, Long Beach Unified School Dist., supra,* 225 Cal.App.3d at 172-73 (when state exercises its discretion to impose requirements that exceed the express requirements of a federal law or program, it imposes a state mandate).

3. Requirements of 2004 Permit

The 2004 Permit contained no requirements found in the above-referenced provisions of Section F.1.f of the 2010 Permit. These requirements thus represented a new program and/or higher level of service.

4. Mandated Activities

- The Permittees were required to retroactively develop and populate a database of information for each SSMP project that has been built since 2005, including information on BMP types, locations, parties responsible for maintenance, date of construction, dates and findings of maintenance verifications and corrective actions. The retroactive component of this requirement will require the claimants to incur costs that cannot otherwise be recovered through fees.

- The Permittees were required to develop and implement a program to conduct inspections and/or BMP verifications on all SSMP projects.

To address these requirements, the District, through the cost-sharing mechanism in the Implementation Agreement among the Claimants, developed a template BMP tracking spreadsheet and an update of the JRMP template. The Claimants incurred additional direct costs implementing these requirements. *See* Section 6 Declarations, Paragraph 5(e).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(e), the Claimants incurred increased costs to address the requirements of this mandate of $58,475.07 in FY 2010-11 and $56,807.30 in FY 2011-12.

F. Construction Site Requirements

Provisions of Section F.2 of the 2010 Permit mandated Claimants to require (and at their own construction sites, to adopt) Active/Passive Sediment Treatment ("AST") at construction sites determined to be "an exceptional threat to water quality" based on various factors set forth in the 2010 Permit. The provisions also required Claimants to, during inspections of construction sites, review site monitoring data results if the construction site monitored its runoff.

1. Applicable Requirements in 2010 Permit

Section F.2.d

(3) Active/Passive Sediment Treatment (AST): Each Copermittee must require implementation of AST for sediment at construction sites (or portions thereof) that are determined by the Copermittee to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors must be considered by the Copermittee:

(a) Soil erosion potential or soil type;
(b) The site's slopes;
(c) Project size and type;
(d) Sensitivity of receiving water bodies;
(e) Proximity to receiving water bodies;
(f) Non-storm water discharges;
(g) Ineffectiveness of other BMPs;
(h) Proximity and sensitivity of aquatic threatened and endangered species of concern;
(i) Known effects of AST chemicals; and
(j) Any other relevant factors.

Section F.2.e

INSPECTION OF CONSTRUCTION SITES

Each Copermittee must conduct construction site inspections for compliance with its ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order. Priorities for inspecting sites must consider the nature and size of the construction activity, topography, and the characteristics of soils and receiving water quality.

. . .

(6) Inspections of construction sites must include, but not be limited to:

. . .

(e) Review of site monitoring data results, if the site monitors its runoff

2. Requirements of Federal Law

The CWA requires that MS4 permits shall require controls "to reduce the discharge of pollutants to the maximum extent practicable." 33 U.S.C. § 1342(p)(3)(B)(iii). The CWA regulations (40 CFR § 122.26(d)(2)(iv)(D)) provide that the proposed management program to be implemented by MS4 permittees include a "description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system." Nothing in the CWA or the implementing regulations requires the installation of AST technology at high priority construction sites, or the identification of such sites by permittees. The RWQCB's exercise of its discretion to specify these requirements represents a federal mandate. *Department of Finance*, 1 Cal. 5th at 768.

As also noted above, an NPDES permit can contain both federal and non-federal requirements. *City of Burbank, supra*, 35 Cal.4th at 618, 628. Where state-mandated activities exceed federal requirements, those mandates constitute a reimbursable state mandate. *Long Beach Unified School Dist., supra*, 225 Cal.App.3d at 172-73.

Moreover, as noted above, a "new program or higher level of service" imposed by the State upon a municipality as a result of a federal law or federal program is not necessarily a "federal mandate." The test for determining whether the "new program or higher level of service" is a state mandate is whether the state has freely chosen to impose that program on local municipalities as opposed to performing the obligation itself. *Department of Finance*, 1 Cal. 5th at 771; *Hayes*, 11 Cal.App.4th at 1593-94. This is the case with the requirement in Section F.2.e.6(e) for Claimants to review collected monitoring data. Such a requirement to review data is already delegated to the state (through the RWQCB) in the state General Construction Permit, a permit issued by the state and for which the state collects fees. By shifting the review function to Claimants, the state has created a state mandate pursuant to *Department of Finance* and *Hayes*.

3. Requirements of 2004 Permit

The requirements to install ASTs and to review monitoring data were not included in the 2004 Permit and represent a new program and/or higher level of service.

4. Mandated Activities

- Claimants were required to install AST technology at specified construction sites, potentially including municipal projects.

- Claimants were required, when they inspected construction sites, to review any collected monitoring data. This required Claimants to ensure that their inspection staff were trained at the same level as state inspectors, such as those from the RWQCB. It should be noted that Claimants cannot collect fees to cover the increased costs to train on and review this data, as the State already collects fees for such a service as part of the General Construction Permit.

To address these requirements, the District, through the cost-sharing mechanism in the Implementation Agreement, conducted training of Claimant staff and updated the JRMP template. The Claimants incurred additional direct costs implementing these requirements. *See* Section 6 Declarations, Paragraph 5(f).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(f), the Claimants incurred increased costs to address the requirements of this mandate of $3,825.77 in FY 2010-11 and $3,161.85 in FY 2011-12.

G. Unpaved Roads BMP Requirements

Sections F.1.i. and F.3.a.10 of the 2010 Permit required Claimants to develop and implement BMPs to address erosion and sediment and other impacts from the development and maintenance of unpaved roads. Claimants were also required to develop and implement BMPs for erosion and sediment control during maintenance of unpaved roads, maintain such roads to reduce erosion and sediment transport, re-grade the roads in specified manners or employ alternative equally effective BMPs and examine the feasibility of replacing existing culverts or design of new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology.

1. Applicable Requirements in 2010 Permit

Section F.1.i

UNPAVED ROADS DEVELOPMENT

The Copermittees must develop, where they do not already exist, and implement or require implementation of erosion and sediment control BMPs after construction of new unpaved roads. At a minimum, the BMPs must include the following, or alternative BMPs that are equally effective:

(1) Practices to minimize road related erosion and sediment transport;
(2) Grading of unpaved roads to slope outward where consistent with road engineering safety standards;
(3) Installation of water bars as appropriate; and
(4) Unpaved roads and culvert designs that do not impact creek functions and where applicable, that maintain migratory fish passage.

Section F.3.a.10

Copermittee Maintained Unpaved Roads Maintenance

(a) The Copermittees must develop, where they do not already exist, and implement or require implementation of BMPs for erosion and sediment control measures during their maintenance activities on Copermittee maintained unpaved roads, particularly in or adjacent to receiving waters.

(b) The Copermittees must develop and implement or require implementation of appropriate BMPs to minimize impacts on streams and wetlands during their unpaved road maintenance activities.

(c) The Copermittees must maintain as necessary their unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport;

(d) Re-grading of unpaved roads during maintenance must be sloped outward where consistent with road engineering safety standards or alternative equally effective BMPs must be implemented to minimize erosion and sedimentation from unpaved roads; and

(e) Through their maintenance of unpaved roads, the Copermittees must examine the feasibility of replacing existing culverts or design of new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology.

2. Requirements of Federal Law

The CWA regulations require that in the MS4 management program, there be a **"**description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems." 40 CFR § 122.26(d)(2)(iv)(A)(3). The unpaved roads requirements in the 2010 Permit, however, did not address discharges from the MS4, but rather all discharges (including sheet, non-point source discharges) from any unpaved roads, without any link to discharges from the MS4. As such, this requirement goes beyond the "four corners" of the 2010 Permit, which is expressly intended to address discharges from Claimants' MS4. *See* Section A of the 2010 Permit, whose prohibitions address only discharges "into and from MS4s."

Nothing in Sections F.1.i or F.3.a.10 limits the development and implementation of BMPs with respect to the maintenance of unpaved roads to those which would discharge into or from an MS4. In fact, as set forth in ¶7 of the Uhley Declaration, many unpaved roads within the Santa Margarita Region of Riverside County do not qualify as MS4s or do not discharge into the MS4 serving municipalities within that region. Thus, discharges of sediment from such roads are not discharges into or from the MS4. Because these provisions went beyond the basic scope of the 2010 Permit, and indeed the MS4 provisions of the CWA (which address discharges from MS4s, 33 U.S.C. § 1342(p)(3)(B)(ii)-(iii)), the requirements were imposed by the RWQCB apparently as a function of their authority under the state Porter-Cologne Act, which applies to all waters of the state. That imposition, while within the RWQCB's authority under Porter-Cologne, is not a federal mandate. Were it to be concluded that at least in part, the unpaved road BMP requirements related to MS4 discharges, the specific and detailed requirements set forth in the 2010 Permit represent

the exercise by the RWQCB of its "true choice" to impose such requirements. *Department of Finance,* 1 Cal. 5th at 765.

3. Requirements of 2004 Permit

The 2004 Permit does not address any requirements for the development and implementation of BMPs for unpaved roads, nor even identifies unpaved roads as a source of concern. As such, the requirements of Sections F.1.i and F.3.a.10 of the 2010 Permit represented new programs and/or higher levels of service.

4. Mandated Activities

Claimants were required under Section F.1.i. to develop and implement or require implementation of erosion and sediment control BMPs, including with respect to erosion and sediment transport, road grading to slope the grade outwards, installation of water bars as appropriate and design of unpaved roads and culverts that do not impact creek functions and maintain migratory fish passage. Claimants were required under Section F.3.a.10 to develop and implement BMPs for erosion and sediment control measures during maintenance of unpaved roads, to develop and implement BMPs to minimize impacts on streams and wetlands during unpaved road maintenance, maintain unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport, re-grade unpaved roads to slope outward where consistent with safety standards or adopt alternative equally effective BMPs to minimize erosion and sedimentation from unpaved roads, and to examine the feasibility of replacing existing culverts or design new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology.

To address these requirements, the District, through the cost-sharing mechanism in the Implementation Agreement, revised the JRMP template and SSMP to incorporate the road maintenance provisions. The Claimants incurred additional direct costs in implementing these requirements. *See* Section 6 Declarations, Paragraph 5(g).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(g), the Claimants incurred increased costs to address the requirements of this mandate of $465,662.82 in FY 2010-11 and $596,439.14 in FY 2011-12.

H. Industrial/Commercial Inspection Requirement

Section F.3.b.4(a)(ii) of the 2010 Permit provided that Claimants review facility monitoring data as part of an inspection program of commercial/industrial facilities if the facility monitored its runoff.

1. Applicable Requirements in 2010 Permit

Section F.3.b.4

Inspection of Industrial and Commercial Sites/Sources

Each Copermittee must conduct industrial and commercial site inspections for compliance with its ordinances, permits, and this Order. Mobile businesses must be inspected as needed pursuant to section F.3.b.(3).

(a) Inspection Procedures: Inspections must include but not be limited to:

. . .

(ii) Review of facility monitoring data, if the site monitors its runoff;

2. Requirements of Federal Law

The CWA regulations set forth the list of facilities required to be inspected pursuant to the Act, which are municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and industrial facilities that a municipality has determined to be contributing a substantial pollutant loading to the municipal storm sewer system. 40 C.F.R. § 122.26(d)(2)(iv)(C). Nothing in the CWA or its regulations addresses any requirement for Claimants, as Copermittees, to review stormwater monitoring data. Such a review requirement is, in fact, a shifting of responsibility from the state to the local agencies.

As noted above, one test for determining whether the "new program or higher level of service" is a state mandate, even where the underlying requirement may arise from federal law, is whether the state has freely chosen to impose that program on local municipalities as opposed to performing the obligation itself. *Hayes, supra*, 11 Cal.App.4th at 1593-94. The Supreme Court addressed this issue in *Department of Finance,* where it held that an LA County permit requirement that similarly shifted inspection requirements to the MS4 operators represented a state mandate. 1 Cal. 5th at 771. This is the case with the requirement in Section F.3.b.4(a)(ii) to review collected monitoring data. Such a requirement to review data is already delegated to the state (through the RWQCB) in the state General Industrial Permit, a permit issued by the state and for which the state collects fees. By shifting the review function to Claimants, the state has created a state mandate pursuant to *Department of Finance* and *Hayes.*

3. Requirements of 2004 Permit

The 2004 Permit, while it required inspections of various commercial and industrial facilities in Section H.2.d, did not require review of monitoring data. Such review represented an additional new program and/or higher level of service.

4. Mandated Activities

Section F.3.b.4(a)(ii) of the 2010 Permit required Claimants to, when they inspected industrial/commercial facilities, review any collected monitoring data. This required Claimants to ensure that their inspection staff were trained at the same level as state inspectors, such as those from the RWQCB. It should be noted that the Claimants could not collect fees to cover the increased costs to train on and review this data, as the State already collected fees for such a service as part of the statewide General Industrial Permit.

To address these requirements, the District, through the cost-sharing mechanism in the Implementation Agreement, provided various training updates and revised the JRMP template to incorporate these requirements. The Claimants also incurred additional direct costs to implement these requirements. *See* Section Declarations, Paragraph 5(h).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(h), the Claimants incurred increased costs to address the requirements of this mandate of $15,330.14 in FY 2010-11 and $15,384.24 in FY 2011-12.

I. Requirement to Develop Program to Retrofit Existing Development

Section F.3.d of the 2010 Permit required Claimants to develop and implement a new program, which is not required under federal law or previous permits, to retrofit existing development. The 2010 Permit required Claimants to identify areas of existing developments, including municipal developments, as candidates for retrofitting, evaluate and rank candidates according to pre-established criteria, prioritize work plans for implementation according to the evaluation, cooperate with landowners to encourage retrofit of private improvements, and track and inspect retrofitting projects. Permittees were required to invest significant staff time and other valuable resources into developing and implementing this new program.

1. Applicable Requirements of 2010 Permit

Section F.3.d

(1) The Copermittee(s) must identify and inventory existing areas of development (i.e. municipal, industrial, commercial, residential) as candidates for retrofitting. Potential retrofitting candidates must include but are not limited to:

(a) Areas of development that generate pollutants of concern to a TMDL or an ESA;
(b) Receiving waters that are channelized or otherwise hardened;
(c) Areas of development tributary to receiving waters that are channelized or otherwise hardened;
(d) Areas of development tributary to receiving waters that are significantly eroded; and
(e) Areas of development tributary to an ASBS or SWQPA.

(2) Each Copermittee must evaluate and rank the inventoried areas of existing developments to prioritize retrofitting. Criteria for evaluation must include but is not limited to:

(a) Feasibility;
(b) Cost effectiveness;
(c) Pollutant removal effectiveness, including reducing pollutants exceeding action level;
(d) Tributary area potentially treated;
(e) Maintenance requirements;
(f) Landowner cooperation;

(g) Neighborhood acceptance;
(h) Aesthetic qualities;
(i) Efficacy at addressing concern; and
(j) Potential improvements on public health and safety.

(3) Each Copermittee must consider the results of the evaluation in prioritizing work plans for the following year in accordance with Sections G.1 and J. Highly feasible projects expected to benefit water quality should be given a high priority to implement source control and treatment control BMPs. Where feasible, the retrofit projects may be designed in accordance with the SSMP requirements within sections F.1.d.(3) through F.1.d.(8) and the Hydromodification requirements in Section F.1.h.

(4) The Copermittees must cooperate with private landowners to encourage site specific retrofitting projects. The Copermittee must consider the following practices in cooperating and encouraging private landowners to retrofit their existing development:

(a) Demonstration retrofit projects;
(b) Retrofits on public land and easements that treat runoff from private developments;
(c) Education and outreach;
(d) Subsidies for retrofit projects;
(e) Requiring retrofit projects as enforcement, mitigation or ordinance compliance;
(f) Public and private partnerships; and
(g) Fees for existing discharges to the MS4 and reduction of fees for retrofit implementation.

(5) The known completed retrofit BMPs must be tracked in accordance with Section F.1.f. Retrofit BMPs on publicly owned properties must be inspected per section F.1.f . Privately owned retrofit BMPs must be inspected as needed.
. . .

2. Requirements of Federal Law

Nothing in the CWA, its regulations, or case law requires local agencies to develop, fund, and implement a retrofitting program. The only retrofitting requirement in the CWA regulations is one which requires MS4 permits to include "[a] description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible." 40 CFR § 122.26(d)(2)(iv)(A)(1). This requirement, however, applies only to structural flood control devices and does not apply to the type of comprehensive program required in Section F.3.d of the 2010 Permit.

The 2010 Permit Fact Sheet cited, in a footnote, the MS4 Permit Improvement guidance published by U.S. EPA. 2010 Permit Fact Sheet, p. 158, n.220. Such guidance, of course, has no legal or regulatory effect. Moreover, the provisions of this guidance did not specify any requirements except the assembling of an inventory of potential retrofitting sites and then evaluating and ranking such sites. Section F.3.d of the 2010 Permit, however, went further in

requiring Claimants to, among other things, consider the results of the evaluation in prioritizing work plans, to cooperate with private landowners to "encourage site specific retrofitting projects" and to track known completed retrofit BMPs. *Id.* The extensive retrofitting requirements in the 2010 Permit are analogous to, though more prescriptive than, the inspection and trash receptacle requirements found to be state mandates in the LA County permit. *Department of Finance*, 1 Cal. 5th at 770-72. The RWQCB, in imposing these specific requirements, was imposing a state mandate. *Id.* at 768.

3. Requirements in 2004 Permit

Nothing in the 2004 Permit required a retrofitting program. Thus, the retrofitting requirements found in Section F.3.d of the 2010 Permit represented a new program and/or higher level of service.

4. Mandated Activities

Section F.3.d imposed at least five new requirements on Claimants, requirements which were not required by federal law and represented state mandates for which Claimants are entitled to reimbursement. The costs of developing and implementing the retrofitting program for existing development for which Permittees should be reimbursed arise from the extensive list of requirements in the 2010 Permit. These requirements include:

- Identifying potential retrofitting candidates by researching and locating developments that contribute to a TMDL or ESA, that are channelized or hardened, that are tributary to receiving waters which are an ASBS, SWQPA, or are significantly eroded;

- Evaluating the feasibility, cost effectiveness, pollutant removal effectiveness, tributary area, maintenance requirements, landowner cooperation, neighborhood acceptance, aesthetic qualities, efficacy at addressing concern, and potential for improvement in public health and safety for each potential retrofitting candidate and then ranking each candidate accordingly;

- Prioritizing retrofit projects in the following year's municipal work plan and designing retrofit projects according to the SSMP requirements and hydromodification where feasible;

- Cooperating with and encouraging private landowners to undertake site-specific retrofit projects; and

- Tracking and inspecting retrofit BMPs.

To address these requirements, the Claimants, through the cost-sharing mechanism set forth in the Implementation Agreement, retained a consultant to develop a Retrofit Study and revised the JRMP template to incorporate these requirements. The Claimants incurred additional direct costs to implement these requirements. *See* Section 6 Declarations, Paragraph 5(i).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(i), the Claimants incurred increased costs to address the requirements of this mandate of $2,284.39 in FY 2010-11 and $190,178.22 in FY 2011-12.

J. Watershed Water Quality Workplan Requirements

Section G of the 2010 Permit required Claimants to develop and implement a Watershed Water Quality Workplan ("Watershed Workplan") to identify, prioritize, address and mitigate "the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed." 2010 Permit at 74.

1. Applicable Requirements in 2010 Permit

Section G

WATERSHED WATER QUALITY WORKPLAN

Each Copermittee must collaborate with other Copermittees to develop and implement a Watershed Water Quality Workplan (Watershed Workplan) to identify, prioritize, address, and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed.

1. Watershed Workplan Components

The work plan must, at a minimum:

> a. Characterize the receiving water quality in the watershed. Characterization must include assessment and analysis of regularly collected water quality data, reports, monitoring and analysis generated in accordance with the requirements of the Receiving Waters Monitoring and Reporting Program, as well as applicable information available from other public and private organizations. This characterization must include an updated watershed map.
>
> b. Identify and prioritize water quality problem(s) in terms of constituents by location, in the watershed's receiving waters. In identifying water quality problem(s), the Copermittees must, at a minimum, give consideration to TMDLs, receiving waters listed on the CWA section 303(d) list, waters with persistent violations of water quality standards, toxicity, or other impacts to beneficial uses, and other pertinent conditions.
>
> c. Identify the likely sources, pollutant discharges and/or other factors causing the highest water quality problem(s) within the watershed. Efforts to determine such sources must include, but not be limited to: use of information from the construction, industrial/commercial, municipal, and residential source identification programs required within the JRMP of this Order; water quality monitoring data collected as part of the

Receiving Water Monitoring and Reporting Program required by this Order, and dditional focused water quality monitoring to identify specific sources within the watershed.

d. Develop a watershed BMP implementation strategy to attain receiving water quality objectives in the identified highest priority water quality problem(s) and locations. The BMP implementation strategy must include a schedule for implementation of the BMPs to abate specific receiving water quality problems and a list of criteria to be used to evaluate BMP effectiveness. Identified watershed water quality problems may be the result of jurisdictional discharges that will need to be addressed with BMPs applied in a specific jurisdiction in order to generate a benefit to the watershed. This implementation strategy must include a map of any implemented and/or proposed BMPs.

e. Develop a strategy to monitor improvements in receiving water quality directly Workplan. The monitoring strategy must review the necessary data to report on the measured pollutant reduction that results from proper BMP implementation. Monitoring must, at a minimum, be conducted in the receiving water to demonstrate reduction in pollutant concentrations and progression towards attainment of receiving water quality objectives.

f. Establish a schedule for development and implementation of the Watershed strategy outlined in the Workplan. The schedule must, at a minimum, include forecasted dates of planned actions to address Provisions E.2(a) through E.2(e) and dates for watershed review meetings through the remaining portion of this Permit cycle. Annual watershed workplan review meetings must be open to the public and appropriately publically noticed such that interested parties may come and provide comments on the watershed program.

2. Watershed Workplan Implementation

Watershed Copermittee's must implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the San Diego Water Board.

3. Copermittee Collaboration

Watershed Copermittees must collaborate to develop and implement the accepted Watershed Workplan. Watershed Copermittee collaboration must include frequent regularly scheduled meetings. The Copermittees must pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-Copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4. . . .

4. Public Participation

Watershed Copermittees must implement a watershed-specific public participation mechanism within each watershed. A required component of the watershed-specific public participation mechanism must be a minimum 30-day public review of and opportunity to comment on the Watershed Workplan prior to submittal to the San Diego Water Board. The Workplan must include a description of the public participation mechanisms to be used and identification of the persons or entities anticipated to be involved during the development and implementation of the

Watershed Workplan.

5. Watershed Workplan Review and Updates

Watershed Copermittees must review and update the Watershed Workplan annually to identify needed changes to the prioritized water quality problem(s) listed in the workplan. All updates to the Watershed Workplan must be presented during an Annual Watershed Review Meeting. Annual Watershed Review Meetings must occur once every calendar year and be conducted by the Watershed Copermittees. Annual Watershed Review Meetings must be open to the public and adequately noticed. Individual Watershed Copermittees must also review and modify their jurisdictional programs and JRMP Annual Reports, as necessary, so that they are consistent with the updated Watershed Workplan.

2. Requirements of Federal Law

Nothing in the CWA or its implementing regulations required Claimants to prepare and implement the Watershed Workplan. The 2010 Permit Fact Sheet cites only to provisions in the regulations allowing for the establishment of watershed-based programs. *See, e.g.*, 40 CFR § 122.26(d)(2)(iv) ("Proposed programs may impose controls on a system-wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls.") However, these regulations do not require adoption of a workplan approach, which was specifically adopted by the RWQCB for the 2010 Permit. *See* 2010 Permit Fact Sheet at 166-67 ("Order No. R9-2010-0016 requires the watershed Copermittees to develop and follow a workplan approach towards assessing receiving water body conditions, prioritizing the highest priority water quality problems, implementing effective BMPs, and measuring water quality improvement in the receiving water.")

The imposition of the specific requirements set forth in Section G of the 2010 Permit represents the exercise of the RWQCB's choice to impose the workplan requirements. As such, they are state mandates. *Department of Finance*, 1 Cal. 5th at 765.

3. Requirements in 2004 Permit

While the 2004 Permit contained a requirement for permittees to develop and implement a Watershed SWMP (2004 Permit, Section K), the requirements of the 2010 Permit were significantly different and more demanding than in the earlier permit. Significant differences included the requirement to not only review monitoring data collected under the permit, but also data from "applicable information available from other public and private organizations;" to prioritize water quality problems "in terms of constituents by locations" not merely in the watershed generally; to identify likely sources, pollutant discharges and/or other factors causing the highest water quality problems within the watershed, including the requirement to conduct "additional focused water quality monitoring to identify specific sources within the watershed;" to develop a watershed BMP implementation strategy, including a schedule for implementing BMPs to abate specific receiving water quality problems; to develop a strategy to monitor improvements in receiving water quality directly resulting from BMP described in the Watershed Workplan; to "pursue efforts to obtain" interagency agreements with non-permittee MS4s to control contribution of pollutants "from one portion of the shared MS4 to another portion of the shared MS4 (the 2004

Permit only required a description of any such agreements); to offer a 30-day public review and comment period prior to submittal of the Watershed Workplan to the RWQCB; and, to hold an Annual Watershed Review Meeting, open to the public and "adequately noticed." *Compare* Sections G.1-G.5 of the 2010 Permit *with* Section K of the 2004 Permit.

These additional requirements were not just an incremental change to an existing program providing existing activities but rather represented a significant increase in the actual level and type of activities required of Claimants by the RWQCB. As such, it constituted a requirement for a "higher level of service" within the meaning of Article XIII B, section 6 of the California Constitution. *San Diego Unified School Dist., supra,* 33 Cal.4th at 877. The additional program elements described above therefore constitute unfunded mandates for which Claimants are constitutionally entitled to be reimbursed.

4. Mandated Activities

The above-cited provisions of Section G of the 2010 Permit required Claimants, in developing and implementing the Watershed Workplan, to:

-- Characterize watershed receiving water quality, including analyzing monitoring data collected under the 2010 Permit and from other public and private organizations;

-- Identify and prioritize water quality problems by constituent and by location, giving consideration to total maximum daily loads, waters listed as impaired pursuant to CWA section 303(d), and other pertinent conditions;

-- Identify likely sources causing the highest water quality problems within the watershed, including from monitoring conducted under the 2010 Permit and additional focused water quality monitoring to identify specific sources;

-- Develop a watershed BMP implementation strategy, including a schedule to implement BMPs to abate specific receiving water quality problems;

-- Develop a strategy to monitor improvements in receiving water quality stemming from implementation of BMPs described in the Watershed Workplan, including required monitoring in the receiving water;

-- Establish a schedule for development and implementation of the watershed strategy outlined in the Watershed Workplan, including the holding of annual watershed workplan review meetings open to the public;

-- Implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the RWQCB;

-- Cooperate among permittees to develop and implement the Watershed Workplan, including the requirement to pursue interagency agreements with non-permittee MS4 operators;

-- Implement a public participation mechanism within each watershed, including opportunity for public review and comment on the draft Watershed Workplan prior to its submission to the RWQCB; and

-- As part of the review and annual update of the Watershed Workplan, hold an Annual Watershed Review meeting open to the public and adequately noticed.

To address these requirements, the District, on behalf of the Claimants, retained a consultant through the cost-sharing mechanism in the Implementation Agreement to gather and analyze historic water quality monitoring data, develop, draft and submit the Watershed Workplan and revise the JRMP template. The Claimants incurred additional direct costs to implement these requirements. *See* Section 6 Declarations, Paragraph 5(j).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(j), the Claimants incurred increased costs to address the requirements of this mandate of $11,746.43 in FY 2010-11 and $21,513.94 in FY 2011-12.

K. Requirements Relating to JRMP Annual Report

Section K.3 of the 2010 Permit (including Table 5), and a checklist set forth in Attachment D, contained requirements relating to the preparation of an extensive JRMP Annual Report by Claimants covering implementation of jurisdictional activities, as well as extensive other requirements.

1. Applicable Requirements in 2010 Permit

Section K.3

Annual Reports

JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP) ANNUAL REPORTS

a. Each Copermittee must generate individual JRMP Annual Reports that cover implementation of its jurisdictional activities during the past annual reporting period. Each Annual Report must verify and document compliance with this Order as directed in this section. Each Copermittee must retain records in accordance with the Standard Provisions in Attachment B of this Order, available for review, that document compliance with each requirement of this Order. The reporting period for these annual reports must be the previous fiscal year.

b. Each Copermittee must submit its JRMP Annual Reports to the San Diego Water Board by October 31of each year, beginning on October 31, 2013.

c. Each JRMP Annual Report must contain, at a minimum, the following information, as applicable to the Copermittee:

> (1) Information required to be reported annually in Section H (Fiscal Analysis) of this Order;
> (2) Information required to be reported annually in Section J (Program Effectiveness) of this Order;
> (3) The completed Reporting Checklist found in Attachment D; and
> (4) Information for each program component as described in the following Table 5:

[Table 5 is not included, but can be found on pages 82-85 of the 2010 Permit. Also, Attachment D is not included, but is included in Section 7.]

2. Requirements of Federal Law

The CWA regulations, at 40 CFR § 122.42(c), require that MS4 permittees must submit an annual report by the anniversary of the date of the issuance of the permit. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition, consistent with § 122.26(d)(2)(iii); (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v); (4) A summary of data, including monitoring data, accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and, (7) Identification of water quality improvements or degradation.

While certain requirements in Section K.3 were mandated by the regulations, the provision considerably exceeded federal law. The regulations require that the annual report provide a "summary of data, including monitoring data" and a summary describing the number and nature of enforcement actions, inspections and public educations programs. Section K.3 (incorporating Table 5) required far more: that the report include detailed tracking of various elements, including descriptions of BMPs required at PDPs; the name and location of all PDPs granted a waiver from implementing LID BMPs; the total number and date of inspections conducted at each construction site; descriptions of high-level enforcement actions; a summary and assessment of BMP retrofits implement at flood control structures; a summary of inspection findings and follow-up activities for each municipal facility and area inspected, as well as the number and date; BMP violations and enforcement actions for each facility; tracking of inspections of commercial/industrial facilities by facility or mobile business, including number and date of inspections; BMP violations, number, date and types of enforcement actions; and, a description of each high-level enforcement action. Additionally, Claimants were required to describe efforts to manage runoff and stormwater pollution in common interest areas and mobile home parks, describe efforts to retrofit existing developments and efforts to encourage private landowners to retrofit existing development, provide a detailed list of all implement retrofit projects, any proposed retrofit or regional mitigation projects and timelines for future implementations. Additionally, Claimants were required to submit a checklist that required, among other things, the listing of active and inactive construction

sites, the number of development plan reviews and grading permits issued, as well as number of projects exempted from hydromodification requirements, the number of PDPs, the amount of waste removed from MS4 maintenance and the total miles of MS4 inspected.

Such additional requirements, and others, represented a higher level of service and/or new program constituted an unfunded state mandate. In fact, the RWQCB's Fact Sheet for the 2010 Permit cites Water Code § 13267 as additional authority for these requirements. 2010 Permit Fact Sheet, p. 174. The imposition of these additional requirements represents the "true choice" of the RWQCB and is, therefore a state mandate. *Department of Finance,* 1 Cal. 5th at 765, 768.

3. Requirements of 2004 Permit

The 2004 Permit did not contain the detailed requirements set forth in Section K.3.c. of the 2010 Permit, but rather, in the 2004 Permit's Standard Provisions section, simply recited the requirements of 40 CFR § 122.42(c). *See* 2004 Permit, Page B-6.

4. Mandated Activities

New requirements not in the 2004 Permit included the following: detailed tracking of various elements on a per-facility basis, including descriptions of BMPs required at PDPs; the name and location of all PDPs granted a waiver from implementing LID BMPs; the total number and date of inspections conducted at each construction site; descriptions of high-level enforcement actions; a summary and assessment of BMP retrofits implemented at flood control structures; a summary of inspection findings and follow-up activities for each municipal facility and area inspected, as well as the number and date; BMP violations and enforcement actions for each facility; tracking of inspections of commercial/industrial facilities by facility or mobile business, including number and date of inspections; BMP violations, number, date and types of enforcement actions; and, a description of each high-level enforcement action. Additionally, Claimants were required to describe efforts to manage runoff and stormwater pollution in common interest areas and mobile home parks, describe efforts to retrofit existing developments and efforts to encourage private landowners to retrofit existing development, provide a detailed list of all implemented retrofit projects, any proposed retrofit or regional mitigation projects and timelines for future implementations. Additionally, Claimants were required to submit a checklist that required, among other things, the listing of active and inactive construction sites, the number of development plan reviews and grading permits issued, as well as number of projects exempted from hydromodification requirements, the number of PDPs, the amount of waste removed from MS4 maintenance and the total miles of MS4 inspected.

To address these requirements, the District, through the cost-sharing mechanism in the Implementation Agreement, developed revisions to the JRMP and annual report templates. The Claimants incurred additional direct costs in implementing these requirements. *See* Section 6 Declarations, Paragraph 5(k).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(k), the Claimants incurred increased costs to address the requirements of this mandate of $132,166.33 in FY 2010-11 and $131,321.50 in FY 2011-12.

L. Special Studies Requirements

Attachment E to the 2010 Permit, the Monitoring and Reporting Program ("MRP") included requirements that Claimants conduct several "special studies" regarding waters within the Santa Margarita Region. These studies were not required by the CWA or its implementing regulations, and instead represented the RWQCB's choice and mandate that Claimants undertake such studies.

1. Applicable Requirements in 2010 Permit

Attachment E to 2010 Permit

E. Special Studies

1. The Copermittees must conduct special studies, including any monitoring and/or modeling required for TMDL development and implementation, as directed by the San Diego Water Board.

2. Sediment Toxicity Study

The Copermittees must develop and submit to the San Diego Water Board by April 01, 2012, a special study workplan to investigate the toxicity of sediment in streams and potential impact on benthic macroinvertebrate IBI scores. The Sediment Toxicity Special Study must be implemented in conjunction with the Stream Assessment Monitoring in II.A.2. The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board. The Sediment Toxicity Special Study must include the following elements:

> a. Sampling Locations: At least 4 stream assessment locations must be sampled, including 1 reference site and 1 mass loading site. Selection of sites must be done with consideration of subjectivity of receiving waters to discharges from residential and agricultural land uses.
>
> b. Frequency: At a minimum, sampling must occur once per year at each site for at least 2 years. Sampling must be done in conjunction with the stream assessment sampling required under Section II.A.2 of the Monitoring and Reporting Program of this Order.
>
> c. Parameters/Methods: At a minimum, sediment toxicity analysis must include the measurement of metals, pyrethroids and organochlorine pesticides. The analysis must include estimates of bioavailability based upon sediment grain size, organic carbon and receiving water temperature at the sampling site. Acute and chronic toxicity testing must be done using *Hyalella azteca* in accordance with Table 2.

d. Results: Results and a Discussion must be included in the Monitoring Annual Report (see III.A). The Discussion must include an assessment of the relationship between observed IBI scores under Section II.A.2 and all variables measured.

3. Trash and Litter Investigation

The Copermittees must develop and submit to the San Diego Water Board by September 01, 2012, a special study workplan to assess trash (including litter) as a pollutant within receiving waters on a watershed based scale. Litter is defined in California Government Code 68055.1g as "…improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or container constructed of steel, aluminum, glass, paper, plastic and other natural and synthetic, materials, thrown or deposited on lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing." A lead Copermittee must be selected for the Santa Margarita HU for the purposes of this Special Study. The Copermittees must implement the special study unless otherwise directed in writi9ng by the San Diego Water Board

The Trash and Litter Investigation must include the following elements:

a. Locations: The lead Copermittee must identify suitable sampling locations within the Santa Margarita HU.

b. Frequency: Trash at each location must be monitored a minimum of twice during the wet season following a qualified monitoring storm event (minimum of 0.1 inches preceded by 72 hours of dry weather) and twice during the dry season.

c. Protocol: The lead Copermittee for the Santa Margarita HU must use the "Final Monitoring Workplan for the Assessment of Trash in San Diego County Watersheds" and "A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region" to develop a monitoring protocol for the Santa Margarita HU.

d. Results and Discussion from the Trash and Litter Study must be included in the Monitoring Annual Report. The Results and Discussion must, at a minimum, include source identification, an evaluation of BMPs for trash reduction and prevention, and a description of any BMPs implemented in response to study results.

4. Agricultural, Federal and Tribal Input Study

The Copermittees must develop and submit to the San Diego Water Board by September 01, 2012, a special study workplan to investigate the water quality of agricultural, federal and tribal runoff that is discharged into their MS4 (see Finding D.3.c of the Order). The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board. The Agricultural, Federal and Tribal Input Special Study must include the following elements:

a. Locations: The Copermittees must identify a representative number of sampling stations within their MS4 that receive discharges of agricultural, federal, and tribal runoff that has not co-mingled with any other source. At least one station from each category must be identified.

b. Frequency: One storm event must be monitored at each sampling location each year for at least 2 years.

c. Parameters/Methods: At a minimum, analysis must include those constituents listed in Table 1 of the MRP (see II.A.1). Grab samples may be utilized, though composite samples are preferred. Copermittees must also measure or estimate flow rates and volumes of discharges into the MS4.

d. Results: Results and Discussion from the Agricultural, Federal and Tribal Input Study must be included in the Monitoring Annual Report.

5. MS4 and Receiving Water Maintenance Study

The Copermittees must develop and submit to the San Diego Water Board by April 01, 2012, a special study workplan to investigate receiving waters that are also considered part of the MS4 (see Finding D.3.c of the Order) and which are subject to continual vegetative clearance activities (e.g. mowing). The study must be designed to assess the effects of vegetation removal activities and water quality, including, but not limited to, modification of biogeochemical functions, in-stream temperatures, receiving water bed and bank erosion potential and sediment transport. The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board.

The MS4 and Receiving Water Maintenance Special Study must include the following elements:

a. Locations: The Copermittees must identify suitable sampling locations, including at least one reference system that is not subject to maintenance activities.

b. Parameters/Methods: At a minimum, the Copermittees must monitor pre and post maintenance activities for indicator bacteria, turbidity (NTU), temperature, dissolved oxygen and nutrients (Nitrite, Nitrate, Total Kjeldahl Nitrogen, Ammonia and Total Phosphorous). Copermittees must also measure or estimate flow rates and volumes.

c. Results and Discussion from the MS4 and Receiving Water Maintenance Study must be included in the Annual Monitoring Report. The Discussion must include relevance of findings to CWA Section 303(d) listed impaired waters.

2. Requirements of Federal Law

The federal CWA regulations, at 40 CFR § 122.26(d)(2)(iii), require NPDES permittees, such as Claimants, to conduct a monitoring program. Moreover, the regulations at 40 CFR § 122.42(c) requires that the operator of a large or medium MS4 system to submit an annual report by the anniversary of the date of the issuance of the permit for such system. The regulations provide that the report shall include: "(1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and

(d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation."

There is no authority, however, in the CWA or its implementing regulations for the RWQCB to require the special studies set forth in the MRP. Such studies represented the intent of the RWQCB to shift its investigatory responsibility to the Claimants. Under *Department of Finance*, this shifting of responsibility (in this case, not even federally based but state law-based under Porter-Cologne) represented a state mandate. 1 Cal. 5th at 771.

With regard to the Sediment Toxicity Study (required by Section E.2 of the MRP), such study bore no basis to conditions found in the Santa Margarita watershed covered by the 2010 Permit. As set forth in the comments of the District on the draft 2010 Permit, the primary focus of sediment toxicity monitoring across the state is on perennial streams and estuaries that have continual flows, such as the California Delta. (*See* District comments and Attachment 4 thereto, contained in Section 7). By contrast, most receiving waters in the Santa Margarita watershed are ephemeral and dry most of the year. Using the RWQCB's working definition of "MEP" (found in Attachment C, Definitions, in the 2010 Permit), where there is not commensurate value for the resources utilized, MEP is not being met. Additionally, the issue of sediment monitoring is of statewide interest, and should be conducted on a statewide basis by the SWRCB and/or the RWQCBs. By requiring Claimants to conduct such a study, the RWQCB was shifting its responsibility or the responsibility of the state to local agencies. Under *Department of Finance* and *Hayes*, such a shifting of a state obligation represents a state mandate.

With regard to the trash and litter study, the requirement in the MRP did not establish any link to discharges from the MS4, which is the purview of the 2010 Permit and the source of federal authority for this requirement. Instead, the study was linked only to the presence of trash and litter within the receiving waters of the watershed. Such trash and litter may have entered the receiving waters as the result of the wind, or may have been directly deposited there. The study does not, however, exclude such trash nor limit the study to trash contained in discharges from the MS4 into receiving waters. As such, it was a requirement not founded in federal law and is a mandate of the state.

With regard to the study of agricultural, federal and tribal inputs, the 2010 Permit Fact Sheet (without citing any federal justification) asserted that the purpose of the study was to determine whether there is information to back Claimants' assertion in their Report of Waste Discharge that discharges from such lands were affecting water quality in Claimants' MS4. 2010 Permit Fact Sheet, p. 197. Thus, the RWQCB was making Claimants sample MS4 discharges from *non-permittee* sources, a task that is nowhere required in the CWA or the implementing regulations. The CWA requires MS4 permittees to address pollutants that they discharge. Nothing in the CWA or the implementing regulations required MS4 dischargers to sample sources that are not within their jurisdictional control, which is the case for agricultural, federal and tribal lands waters that enter their jurisdictions.

The RWQCB had the ability to require such sampling pursuant to the Porter-Cologne Act, and in the Fact Sheet, the RWQCB specifically cited Water Code § 13267 as additional, separate authority for the MRP. 2010 Permit Fact Sheet, p. 188. This statute authorizes the RWQCB to obtain technical reports from any dischargers. Such authority is, of course *state*, and not *federal*. The RWQCB has the authority under that section to require the agricultural, federal and tribal sources to conduct the sampling sought in the special study. It *chose* not to do so, but instead applied the requirement to Claimants. As such, it was a clear unfunded state mandate for which Claimants are entitled to a subvention of funds. *Hayes, supra,* 11 Cal.App.4th at 1593-94.

With regard to the MS4 and Receiving Water Maintenance Study, the rationale for this study – that the MS4 and the "receiving water" can be the same water body – was based on a 2010 Permit finding (Finding D.3.C.), which states:

> Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Urban streams used in this manner are part of the municipalities' MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the urban stream is both an MS4 and receiving water.

2010 Permit, p. 11. This reading, however, both ignores the plain definition of "MS4" in the federal regulations (which is included into the 2010 Permit in the Definitions in Attachment C) and is contradicted by the ruling of the United States Court of Appeals for the Ninth Circuit in *NRDC v. County of Los Angeles,* 673 F.3d 880 (9th Cir. 2011), *reversed in part sub nom., Los Angeles County Flood Control Dist. v. NRDC,* __ U.S. __, 133 S. Ct. 710 (2013).

The definition of "MS4" in the 2010 Permit, Attachment C, stated that it is:

> A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designated or used for collecting or conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.26.

2010 Permit, Attachment C, page C-8. This definition made clear that natural waterbodies cannot serve as "receiving waters" as they are not "man-made channels," "storm drains" or other non-natural waterbodies. Also, such natural waterbodies are not "owned or operated" by a municipality, another qualification of an "MS4."

In *NRDC*, the Ninth Circuit held that "as a matter of law and fact," the MS4 is "separate and distinct" from a navigable water of the United States, i.e., a receiving water. *NRDC*, 673 F.3d at 899. The court held that such MS4s are in fact "point sources" that *discharge* into receiving waters, which are defined in the 2010 Permit to be "waters of the United States." 2010 Permit, Attachment C, p. C-10.

Since beneficial uses do not exist within MS4s (since they are not "waters of the United States"), there is no CWA rationale (if one ever existed, *see* discussion above regarding lack of authority for special studies) for this study. Claimants understand that the RWQCB could have required the study under the authority of the Porter-Cologne Act through Water Code § 13267, which as noted above, is cited as authority for the MRP in the Fact Sheet. However, this authority derives from state, and not federal, law.

The Permit also contained the requirement for conducting a fifth special study, a study into intermittent and ephemeral stream perennial conversions due to the flow of various flows into such streams. Permit Attachment E.6. After the effective date of the Permit, the Claimants negotiated with the RWQCB to replace the fifth special study and the remainder of the fourth study (for which a workplan had already been prepared) with a study of the impacts of the implementation of LID protections on downstream flows to Camp Pendleton and potential impacts on beneficial uses in downstream waters. This LID impacts study, as was true of all the other special studies, was not required by the CWA or its implementing regulations. The study had nothing to do with the requirements that the CWA establishes for MS4 permittees, *i.e.,* to control the discharge of pollutants from the MS4 to the MEP and to effectively prohibit the discharge of non-stormwater into the MS4 (*see* Section III above), but instead represented the RWQCB's interest in having Claimants investigate flow volumes and impacts on beneficial uses from LID BMPs. Such investigations were not authorized under the CWA, but were a function of the RWQCB's choice to require such work under state authority. As such, it was a state mandate. *Department of Finance,* 1 Cal. 5th 765.

3. Requirements of 2004 Permit

No special studies were required in the 2004 Permit.

4. Mandated Activities

These studies required Claimants to retain consultants to provide support in locating suitable waterbodies in which to conduct the studies, to develop and submit workplans, to conduct monitoring activities as specified in the MRP and the approved workplans, to conduct analysis of the monitoring results and to report the results of the analysis to the RWQCB in the final study reports. The County also incurred direct costs in association with this requirement. *See* Section 6 Declarations, Paragraph 5(l).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(l), the Claimants incurred increased costs to address the requirements of this mandate of $27,728.71 in FY 2011-12 and $103,789.60 in FY 2012-13.

M. Requirements that 2010 Permit Programs Ensure No Violations of Water Quality Standards and Other Requirements

Provisions in the 2010 Permit contained language that required Claimants, in developing and implementing programs required in Section F of the Permit, to meet various standards, including that of preventing discharges from the MS4 (or from certain projects) from "causing or contributing to a violation of water quality standards" or "preventing" illicit discharges or non-stormwater discharges While the CWA's implementing regulations require permittees, in some cases, to develop various programs designed to reduce pollutants in runoff, the 2010 Permit instead made specific reductions enforceable under the Permit, and appeared to subject Claimants to sanctions, including civil penalties and injunctive relief, for the programs' failure to achieve the goals. As such, these requirements go beyond the MEP requirement in the CWA, as the 2010 Permit does not limit the efforts of Claimants to achieving such goals to the MEP.

1. Applicable Requirements in 2010 Permit

Several provisions in Section F of the 2010 Permit, set forth below, required Claimants to develop and implement programs that will, *inter alia*, prevent stormwater runoff discharges "from causing or contributing to "a violation of water quality standards" as well as to prevent illicit discharges into the MS4. These requirements apply to development planning programs, programs for discharges from municipal, commercial/industrial and residential facilities and areas; the retrofitting of existing development; and, the education component. Section F of the 2010 Permit contains numerous specific requirements, some of which are set forth above as separate unfunded state mandates. This section focuses on the requirement that Claimants, through the development and implementation of these programs, must meet the absolute requirement of ensuring no violation of water quality standards and the prevention of illicit discharges. The language at issue is highlighted in *italics.*

Section F

Each Copermittee must implement all requirements of section F of this Order no later than July 1, 2012, unless otherwise specified. Upon adoption of this Order and until an updated JRMP is developed and implemented or July 1, 2012, whichever occurs first, each Copermittee must at a minimum implement its JRMP document, as the document was developed and amended to comply with the requirements of Order No. R9-2004-001.

Each Copermittee must develop and implement an updated JRMP for its jurisdiction no later than July 1, 2012. Each updated JRMP must meet the requirements of section F of this Order, . . . *effectively prohibit non-storm water discharges, and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards*. . . .

Section F.1

DEVELOPMENT PLANNING COMPONENT

Each Copermittee must implement a program which meets the requirements of this section and . . . *(2) prevents Development Project discharges from the MS4 from causing or contributing to a violation of water quality standards; (3) prevents illicit discharges into the MS4*; . . .

Section F.1.d.

STANDARD STORM WATER MITIGATION PLANS (SSMPS) – APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR PRIORITY DEVELOPMENT PROJECTS

On or before June 30, 2012, the Copermittees must submit an updated SSMP, to the San Diego Water Board's Executive Officer for a 30 day public review and comment period. . . .*The SSMP must meet the requirements of section F.1.d of this Order to . . . (2) prevent Priority Development Project runoff discharges from the MS4 from causing or contributing to a violation of water quality standards*. [footnote omitted]

Section F.2

CONSTRUCTION COMPONENT

Each Copermittee must implement a construction program which meets the requirements of this section, *prevents illicit discharges into the MS4, . . . and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards*.

Section F.3.a

MUNICIPAL

Each Copermittee must implement a municipal program for the Copermittee's areas and activities that meets the requirements of this section, *prevents illicit discharges into the MS4, . . . and prevents municipal discharges from the MS4 from causing or contributing to a violation of water quality standards.*

Section F.3.b

COMMERCIAL / INDUSTRIAL

Each Copermittee must implement a commercial / industrial program that meets the requirements of this section, *prevents illicit discharges into the MS4, . . . and prevents commercial / industrial discharges from the MS4 from causing or contributing to a violation of water quality standards.*

Section F.3.c

RESIDENTIAL

Each Copermittee must implement a residential program that meets the requirements of this section, *prevents illicit discharges into the MS4, . . . and prevents residential discharges from the MS4 from causing or contributing to a violation of water quality standards.*

Section F.3.d

RETROFITTING EXISTING DEVELOPMENT

Each Copermittee must develop and implement a retrofitting program that meets the requirements of this section. The goals of the existing development retrofitting program are to . . . *prevent discharges from the MS4 from causing or contributing to a violation of water quality standards. . . .*

Section F.6

EDUCATION COMPONENT

Each Copermittee must implement education programs to . . . (2) to measurably change the behavior of target communities and thereby . . . *eliminate prohibited non-storm water discharges to MS4s and the environment.*

2. Requirements of Federal Law

The CWA requires that municipalities, in developing and implementing MS4 permits, ensure that they "effectively prohibit non-stormwater discharges into the storm sewers" and that discharges of pollutants from MS4s are reduced to the "maximum extent practicable." 33 U.S.C. § 1342(p)(3)(B)(ii)-(iii). Thus, there are two separate requirements: the "effective prohibition" of non-stormwater discharges into the MS4 and the reduction of pollutants discharged from the MS4 to the MEP. The above-cited requirements of the 2010 Permit exceeded these statutory requirements. First, by requiring the "prevention" of non-stormwater discharges into the MS4, the Copermittees were required to go beyond merely "effectively prohibiting" such discharges. Second, with respect to ensuring the non-violation of water quality standards without regard to the MEP standard, the RWQCB was requiring a compliance standard not required of municipalities under federal law. *Defenders of Wildlife, supra,* 191 F.3d at 1165.

The MS4 regulations, not surprisingly, also do not require the absolute achievement of water quality standards as a matter of compliance with a particular MS4 permit. For example, with respect to development projects, 40 CFR § 122.26(d)(2)(iv)(A)(2) provides that permittees must develop and implement a management program which is to include a "description of planning procedures including a comprehensive master plan to develop, implement and enforce controls *to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plans shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is*

completed." (emphasis added.) Thus, regulatory focus is on reducing pollutants from MS4 discharges, not on ensuring that such discharges do not cause or contribute to a violation of water quality standards.

With regard to construction site impacts, the regulations (40 CFR § 122.26(d)(2)(iv)(D)) provide that the proposed management program include a "description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system." Again, there is no requirement that program ensure that the discharges do not cause or contribute to an exceedance of a water quality standard, but to "reduce pollutants in storm water runoff from constructions to the municipal storm sewer system."

With regard to municipal facilities, the regulations require, in 40 CFR § 122.26(d)(2)(iv)(A)(1), that the proposed management program include a "description of maintenance activities and a maintenance schedule for structural controls *to reduce pollutants* (including floatables) in discharges from municipal separate storm sewers." (emphasis added.) Further, 40 CFR § 122.26(d)(2)(iv)(A)(3) provides that the proposed management program include a "description for operating and maintaining public streets, roads and highways and procedures *for reducing the impact on receiving waters* of discharges from municipal storm sewer systems, including pollutants discharged as a result of de-icing activities." (emphasis added.) Finally, 40 CFR § 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include a "description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities." In all cases, the regulatory requirement is to *reduce* pollutants.

With regard to industrial/commercial facilities, 40 CFR § 122.26(d)(2)(iv)(C) provides that the proposed management program include a "description of a program to monitor and *control pollutants in storm water discharges* to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system." (emphasis added.) This regulation, in addition to speaking of the "control of pollutants" but not to the point of guaranteeing no violation of a water quality standard, also addresses discharges *to MS4s* from industrial facilities, not discharges *from* such facilities, which is the requirement set forth in Section F.3 of the 2010 Permit.

With regard to residential areas, 40 CFR § 122.26(d)(2)(iv)(A) provides that the permittees are to develop a proposed management program which includes a "description of structural and source control measures *to reduce pollutants from runoff* from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and

a proposed schedule for implementing such controls." Again, the regulatory requirement is to reduce pollutants, not to ensure that the runoff does not cause or contribute to a violation of a water quality standard, to prevent illicit discharges into MS4 systems.

There are no federal requirements, either in the CWA or in the regulations, requiring retrofitting of existing development (*see* further discussion in Section VI.I, above). In the 2010 Permit Fact Sheet, the RWQCB relied on the regulatory provisions for municipal, commercial, industrial and residential developments, pertinent provisions of which are cited above and none of which require programs that ensure no causing or contributing to violations of water quality standards. 2010 Permit Fact Sheet, p. 155.

Finally, with regard to the education component of the 2010 Permit, federal regulatory authority is somewhat diffuse, but in no sense authorizes the requirements contained in Section F.6 of the 2010 Permit. In 40 CFR § 122.26(d)(2)(iv)(A)(6), the regulation provides that the proposed management program include a "description of a program *to reduce to the maximum extent practicable*, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as *educational activities*, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities." (emphasis added.) The proposed management program is required, pursuant to 40 CFR § 122.26(d)(2)(iv)(B)(6) to include a "description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials." This regulation is silent on attainment of water quality standards. Finally, 40 CFR § 122.26(d)(2)(iv)(D)(4) requires the proposed management program to include a " description of appropriate educational and training measures for construction site operators." This regulation also does not require that discharges not cause or contribute to a vi8olation of water quality standards.

Nothing in federal law or regulation authorized the RWQCB to require Claimants to develop or implement programs that will prevent non-stormwater discharges from entering the MS4 or control pollutants in runoff from the MS4 such that they can guarantee that such discharges will not cause or contribute to a violation of a water quality standard. The only apparent justification offered by the RWQCB for this requirement in the Fact Sheet is 40 CFR § 122.44(d)(1)(i), which requires NPDES permits to contain limitations which "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." Under the holding in *Defenders of Wildlife, supra,* this regulation does not apply to MS4 permits, which operate under the MEP standard and not the requirement for strict compliance with water quality standards. Moreover, 40 CFR § 122.44 provides that the "following requirements" (including § 122.44(d)(1)(i)) apply only "when applicable." Under *Defenders of Wildlife*, the requirements of 40 CFR § 122.44(d)(1)(i) are, as a matter of law, not applicable to an MS4 permit such as the 2010 Permit, and do not provide authority to the RWQCB. *See also* 40 CFR § 122.44(k)(2), which authorizes the use of BMPs to

"control or abate the discharge of pollutants when . . . authorized under section 402(p) [the provision relating to MS4 permits] of the CWA for the control of storm water discharges."

See also Tualatin River Keepers, et al. v. Oregon Department of Environmental Quality (2010) 235 Ore. App. 132, where the court considered whether wasteload allocations from adopted TMDLs were required to be enforced as strict numeric effluent limits within a municipal NPDES permit. Petitioners argued that the Oregon Department of Environmental Quality had erred by issuing a permit that did not "specify wasteload allocations in the form of numeric effluent limits." *Id*. at 137. The Oregon court disagreed, finding that under the CWA, best management practices were considered to be a "type of effluent limitation," and that such best management practices were authorized to be used pursuant to the CWA, section 33 U.S.C. § 1342(p) as a means of controlling "storm water discharges." *Id*. at 141-42, citing 33 U.S.C. § 1342(p) and 40 CFR § 122.44(k)(2)-(3). This case demonstrates further that requirements for NPDES permits to meet water quality standards must, in the case of MS4 permits, be addressed through BMPs, not absolute adherence to such standards.

Under *Defenders of Wildlife*, the RWQCB could choose (here as an exercise of its state powers, *see NRDC, supra*) to impose the requirement to attain numeric effluent limits. But to do so would represent an affirmative *choice* by the RWQCB, not a requirement of federal law. As such, the cited requirements in the 2010 permit represent a state mandate as a new program and/or higher level of service. And, because the RWQCB made this choice, it was not imposing a federal mandate but rather a state mandate. *Department of Finance,* 1 Cal. 5th at 765.

Moreover, the requirements were themselves not practicable, as the power to actually reduce the discharge of pollutants in runoff to the level required by the 2010 Permit was, with the exception of municipal facilities, in the hands of and subject to the actions or inactions of third parties (developers, commercial/industrial site operators or residential homeowners). While the Claimants can implement programs to enforce requirements upon those third parties within their jurisdiction, Claimants cannot guarantee that each third party will comply with those programs and requirements. And, as set forth in the Uhley Declaration, the very variability of stormwater and urban runoff discharges makes it nearly impossible to assure compliance with all water quality standards at all times. Uhley Declaration, ¶¶11-12. The requirements thus exceeded the MEP standard, further evidence that they represented a state, and not federal, mandate.

3. Requirements of 2004 Permit

Nothing in the 2004 Permit required Claimants to ensure that discharges from construction, municipal, industrial, commercial or residential sources would not cause or contribute to a violation of water quality standards, or required the educational component of the 2004 Permit to so assure. For example, Section I of the 2004 Permit merely required that Copermittees implement the education component to "measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment." The 2004 Permit required that BMPs for industrial/commercial facilities be implemented "to reduce the discharge of pollutants in runoff to the MEP." 2004 Permit, Section H.2.c. The BMP programs for residential areas and municipal facilities were required to reduce pollutants "to the MEP." 2004 Permit, Sections

H.1c.(1); H.3.c. However, this requirement did not also mandate that permittees' programs attain this goal, or mentioned the violation of water quality standards.

In summary, the "guarantee" language found in the above-cited provisions in Section F of the 2010 Permit were new requirements of the RWQCB, constituting a new program and/or higher level of service.

4. Mandated Activities

The above-noted provisions of the 2010 Permit on their face require that Claimants develop and implement programs in Sections F in a manner that guarantees that those programs will prevent the discharge of pollutants at a level that could cause or contribute to a violation of any water quality standard as well as to prevent illicit discharges to the MS4. Such requirements went beyond federal law and regulation, including the MEP standard, and constituted a new and/or higher level of service. The costs of the design and implementation of such additional requirements were incorporated into programs required by the RWQCB in the 2010 Permit, including the NALs and SALs requirement, the priority development and HMP requirements, the AST requirements at construction sites, the unpaved road BMP and design requirements, the monitoring of construction sites, the existing development retrofit requirements and the water quality workplan requirements (described in Sections VI.B-D, F-J above). In addition, in the implementation of the Section F requirements, Claimants incurred additional direct costs. *See* Section 6 Declarations, Paragraph 5(m).

5. Actual Increased Costs of Mandate

As set forth in the Section 6 Declarations, Paragraph 5(m), the Claimants incurred as yet to be determined portions of the total increased shared costs for the above-described Permit requirements of $18,696.29 in FY 2010-11 and $271,720.61 in FY 2011-12, as well as additional direct costs of $533,377.36 in FY 2010-11 and $546,647.15 in FY 2011-12.

VII. STATEWIDE COST ESTIMATE

This Test Claim concerns a municipal stormwater permit applicable only to local agencies located in a portion of Riverside County within the jurisdiction of the RWQCB. Therefore, any statewide cost estimate must, by virtue of this limitation, apply only to costs incurred by such local agencies. The Claimants estimate that, for all requirements set forth in the 2010 Permit that are the subject of this Test Claim, increased costs in the amount of $1,446,317.50 were expended in FY 2010-11 and $2,438,936.90 in FY 2011-12, and an as yet undetermined share of $18,696.29 in FY 2010-11 and $271,720.61 in FY 2011-12. In addition, for the special studies requirement in the 2010 Permit (Section VI.L above), the statewide estimate of increased costs was $103,789.60 in FY 2012-13. *See* Section 6 Claimant Declarations, Paragraphs 5(a)-(m).

VIII. FUNDING SOURCES

The Claimants are not aware of any designated State, federal or non-local agency funds that are or will be available to fund the mandated activities set forth in this Test Claim. As set forth in the declarations contained in Section 6, some Claimants have access to a Riverside County stormwater fund, to fuel tax and community services revenue, to lighting and maintenance revenues and/or development/business registration fees and the District has access to a Benefit Assessment for stormwater costs. However, as also set forth in the declarations, these funding sources do not cover the entire cost of compliance with the provisions set forth in this Test Claim. Additionally, Claimants are subject to the limitations of Proposition 26 (*see* discussion in Section V, above), which limits their ability to recover costs through fees.

IX. PRIOR MANDATE DETERMINATIONS

A. Los Angeles County Test Claim

In 2003 and 2007, the County of Los Angeles and 14 cities within the county ("Los Angeles County claimants") submitted test claims 03-TC-04, 03-TC-19, 03-TC-19, 03-TC-20 and 03-TC-21. These test claims asserted that provisions of Los Angeles RWQCB Order No. 01-182 constituted unfunded state mandates. Order No. 01-182, like the 2010 Permit at issue in this Test Claim, was a renewal of an existing MS4 permit. The provisions challenged in these test claims concerned the requirement for the Los Angeles County claimants to install and maintain trash receptacles at transit stops and to inspect certain industrial, construction and commercial facilities for compliance with local and/or state storm water requirements.

The Commission, in a final decision issued on September 3, 2009, determined that the trash receptacle requirement was a reimbursable state mandate. *In re Test Claim on: Los Angeles Regional Quality Control Board Order No. 01-192*, Case Nos.: 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21. The Commission found that the portion of the test claims relating to the inspection requirement was a state mandate, but that the Los Angeles County claimants had fee authority sufficient to fund such inspections.

The Commission's decision was challenged by the Department of Finance, the State Water Resources Control Board and the Los Angeles Regional Water Quality Control Board in an action filed in superior court. In September 2011, the Los Angeles County Superior Court set aside the Statement of Decision issued by the Commission, ruling that the appropriate test for determining whether a requirement in the MS4 permit was a federal or state mandate was whether the requirement met the MEP standard. The Superior Court's ruling was affirmed by the California Court of Appeal on different grounds. In turn, the California Supreme Court reversed the Superior Court in *Department of Finance*, as discussed in Section V.B above. This case is presently before the Los Angeles County Superior Court.

B. San Diego County Test Claim

In 2007, the County of San Diego and 21 cities within the county (the "San Diego County claimants") submitted test claim 07-TC-09. This test claim asserted that several provisions of San

Diego RWQCB Order No. R9-2007-0001 constituted reimbursable state mandates. This order was the renewal of the existing MS4 permit for the San Diego County claimants.

On March 30, 2010, the Commission issued a final decision entitled *In re Test Claim on: San Diego Regional Water Quality Control Board Order No. R9-2007-0001,* Case No. 07-TC-09. In that decision, the Commission found the following requirements to be reimbursable state mandates:

1. A requirement to conduct and report on street sweeping activities;

2. A requirement conduct and report on storm sewer cleaning;

3. A requirement to conduct public education with respect to specific target communities and on specific topics;

4. A requirement to conduct mandatory watershed activities and collaborate in a Watershed Urban Management Program;

5. A requirement to conduct program effectiveness assessments;

6. A requirement to conduct long-term effectiveness assessments; and

7. A requirement for permittee collaboration.

The Commission also found requirements for hydromodification and low impact development programs to be state mandates, but determined that because local agencies could charge fees to pay for these programs, they were not reimbursable state mandates.

On January 5, 2012, the Commission's decision was overturned by the Sacramento County Superior Court and remanded to the Commission as the result of an action for writ of mandate brought by the State Department of Finance, the State Board and the San Diego RWQCB. The San Diego County claimants appealed to the California Court of Appeal, which has not yet heard argument on the appeal.

X. CONCLUSION

Important elements of the 2010 Permit represent significant and expensive mandates at a time when the budgets of all local agencies, especially those in Riverside County, have been dramatically impacted by the recession and many other demands. The Claimants believe that the mandates set forth in this Test Claim represent state mandates for which a subvention of funds is required pursuant to article XIII B, section 6 of the California Constitution. Claimants respectfully request that the Commission make such finding as to each of the programs and activities set forth herein.

SECTION 6

DECLARATIONS OF CLAIMANTS

In Support of Joint Test Claims of Riverside County Local Agencies Concerning San Diego RWQCB Order No. R9-2010-0016, San Diego Region Stormwater Permit – County of Riverside, 11-TC-03

DECLARATION OF STUART MCKIBBIN

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

I, Stuart McKibbin, hereby declare and state as follows:

1. I am Chief of the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District ("District"). In that capacity, I shared responsibility for the compliance of the District with regard to the requirements of California Regional Water Quality Control Board, San Diego Region ("RWQCB") Order No. R9-2010-0016 (the "Permit"), as they applied to the District.

2. I have reviewed sections of the Permit as set forth herein and am familiar with those provisions. I also am aware of the requirements of pertinent sections of Order No. R9-2004-001 ("2004 Permit") which was issued by the RWQCB in 2004 and as to which the District issued a notice of intent to comply, and am familiar with those requirements.

3. I also have an understanding of the District's sources of funding for programs and activities required to comply with the Permit. I also am aware of arrangements under which the District and other Copermittees under the Permit agreed to share certain costs of complying with the Permit.

4. I make this declaration based on my own personal knowledge, except for matters set forth herein based on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

5. Based on my understanding of the Permit and the requirements of the 2004 Permit, I believe that the Permit required the District to undertake the following new and/or upgraded activities and which are unique to local government entities and which were not required in the 2004 Permit:

a. Removal of Categories of Irrigation Runoff From Exempted Non-Stormwater Discharges: Section B.2 of the Permit removed from the list of discharges exempted from the prohibition against discharges of non-stormwater to the municipal separate storm sewer system ("MS4") the following categories of discharges: landscape irrigation, irrigation water, and lawn watering discharges. The removal of these three categories of exempted discharges required the creation of new public education and outreach materials, the potential need to amend ordinances to facilitate the required prohibition, tracking and response to reports of over-irrigation, enforcement and monitoring. It is my understanding and belief that using funds contributed from each Copermittee, including the District, through an Implementation Agreement, the District updated the Coordinated Monitoring Program ("CMP"), including procedures for response, monitoring and analysis relating to such flows and revised the Jurisdictional Runoff Management Plan ("JRMP") template, training programs and community outreach programs to address these requirements. I am informed and believe that in Fiscal Year ("FY") 2010-11, the District's calculated share of such shared costs was $1,714.18 and that during FY 2011-12, the District's calculated share of that cost was $1,461.61.

b. Non-Stormwater Dry Weather Action Levels: Sections C and F.4.d and e, as well as Section II.C of the Monitoring and Reporting Program ("MRP") of the Permit, required Copermittees, including the District, to perform water quality sampling at a representative percentage of major outfalls and identified stations in each hydrologic subarea, implement new follow-up investigations and source tracking activities triggered by each exceedance of dry weather non-stormwater action levels ("NALs"). These sections required the Copermittees, including the District, to perform field verification of major outfalls owned by the District, perform any required outfall sampling and analysis within the District's jurisdiction that was not

otherwise performed by the District on behalf of the District, conduct and implement any follow-up source identification investigations for NAL exceedances at District outfalls, conduct enforcement actions as appropriate to the source, prepare reports on the status and outcome of NAL exceedances, and investigations /enforcement, and where necessary, update District compliance programs as necessary to address NAL exceedances. It is my understanding and belief that using funds contributed from each Copermittee, including the District, through the Implementation Agreement, the District retained a consultant to develop a sampling and analysis plan, finalize the sampling and analysis plan, develop a follow-up response program and procedures, conduct initial required NAL sampling and analysis on behalf of each Copermittee, including the District, utilize analysis and source identification results in developing annual updates to the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address NAL exceedances. I am informed and believe that in FY 2010-11, the District's calculated share of such shared costs was $1,491.85 and that during FY 2011-12, the District's calculated share of that cost was $3,226.58.

c. Stormwater Action Levels: Section D of the Permit required the District to conduct end-of-pipe assessments to determine stormwater action level ("SAL") compliance metrics at major outfalls during wet weather. Under the Permit, the District was required to perform field verification of major outfalls owned by the District, perform any required outfall sampling and analysis within the District's jurisdiction that is not otherwise performed by the District on behalf of the District, and where necessary, update the District's compliance programs to address SAL exceedances. I am informed and believe that, using funds contributed from each Copermittee, including the District, through the Implementation Agreement, the District retained a consultant to develop a sampling and analysis plan, finalize the sampling and

analysis plan, conduct ongoing SAL sampling and analysis on behalf of each Copermittee, including the District, utilize analysis and source identification results in developing annual updates to the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address SAL exceedances. I am informed and believe that in FY 2010-11, the District's calculated share of such shared costs was $1,491.85 and that during FY 2011-12, the District's calculated share of that cost was $3,226.58.

d. Priority Development Projects ("PDPs") and Hydromodification Requirements: Section F.1.d of the Permit required Copermittees, including the District, to develop and implement low impact development ("LID") principles and structural features into District-owned PDPs, which beginning on July 1, 2012, included all District-owned projects that resulted in the disturbance of one acre or more of land, as well as new public development projects that created 10,000 square feet or more of impervious surface. The Permit further required the District to review each of its PDPs to implement LID best management practices ("BMPs"), including requiring specific types of LID Principles and LID BMPs or to make a finding of technical infeasibility, incorporate formalized consideration of LID BMPs into the plan review process and review its local codes, policies and ordinances for barriers to LID implementation and take actions to remove such barriers. Additionally, the District was required to develop an LID waiver program for incorporation into the Standard Stormwater Mitigation Plan ("SSMP"), to allow a District-owned PDP to substitute LID BMPs with implementation of alternatives such as treatment control BMPs and either an on-site or off-site mitigation project or other mitigation. Section F.1.h of the Permit required the Copermittees, including the District, to develop and implement a Hydromodification Management Plan ("HMP") to manage increases in runoff discharge rates and durations from all PDPs. To comply with part F.1.h, the Copermittees,

including the District, were required to hold and/or attend collaborative meetings and public hearings, perform studies and develop an HMP, train staff and educate the public and adapt the local SSMP. In addition, Section F.1.h(2) prohibited Copermittees, including the District, from using non-natural materials, including concrete, riprap or gabions, to reinforce stream channels as mitigation for a PDP. I am informed and believe that, using funds contributed from each Copermittee, including the District, through the Implementation Agreement, the District retained a consultant to perform the studies and analysis and a revised Standard Stormwater Mitigation Plan, an HMP with publically available hydromodification modelling software and a BMP Design Manual, developed and provided training for the Copermittees and the development community and revised the JRMP template. I am informed and believe that in FY 2010-11, the District's calculated share of such shared costs was $4,175.47 and that during FY 2011-12, the District's calculated share of that cost was $23,257.36. I am further informed and believe that the District incurred additional direct costs during FY 2010-11 and FY 2011-12 to address these requirements but that the District cannot at this time quantify those costs.

e. BMP Maintenance Tracking Requirements: Section F.1.f of the Permit required the Copermittees to develop and maintain a watershed-based database to track all projects with a final approved SSMP and structural post-construction BMPs, including those PDPs dating back to July 2005, and to inspect such projects on a routine basis. This program required the Copermittees to develop and populate a database of information for each SSMP project built since 2005, including information on BMP types, locations, parties responsible for maintenance, date of construction, dates and findings of maintenance verifications and corrective actions; to contact property owners for permission to inspect on-site BMPs; to develop and implement a program to conduct inspections and/or BMP verifications on all SSMP projects; and, to conduct

inspections. I am informed and believe that, using funds contributed from each Copermittee, including the District, through the Implementation Agreement, the District developed a template BMP tracking spreadsheet and updated the JRMP template to reflect these requirements. I am informed and believe that in FY 2010-11, the District's calculated share of such shared costs was $329.90 and that during FY 2011-12, the District's calculated share of that cost was $268.54.

f. Construction Site Requirements: Section F.2.d of the Permit required Copermittees, including the District, to implement active/passive sediment treatment ("AST") at District-owned construction sites or portions thereof that were determined to be an "exceptional threat" to water quality. Section F.2.e of the Permit required District inspectors at construction sites to review site monitoring data results, if the site monitored its runoff. These requirements would add costs to require AST to every District-owned construction site determined to pose such a threat to water quality and for enhanced inspection training. I am informed and believe that the District, using funds contributed from each Copermittee including the District through the Implementation Agreement, conducted training of Copermittee staff and updated the JRMP template with regard to such requirements. I am informed and believe that in FY 2010-11, the District's calculated share of such costs was $202.72 and that during FY 2011-12, the District's calculated share of that cost was $245.25. I am further informed and believe that the District may have incurred additional direct costs during FY 2010-11 and FY 2011-12 to address these requirements but that the District cannot at this time quantify those costs.

g. Maintenance of Unpaved Roads: Section F.3.a.10 of the Permit required the Copermittees, including the District, to develop and implement, or require implementation of, BMPs for erosion and sediment control on District-maintained unpaved roads, as well to develop and implement BMPs to minimize impacts on streams and wetlands during unpaved road

maintenance activities, to maintain unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport, to regrade unpaved roads to be sloped outward, or adopt alternative equally effective BMPs to minimize erosion and sedimentation and to examine the feasibility of replacing existing culverts or design new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology. I am informed and believe that the District, using funds contributed from each Copermittee including the District through the Implementation Agreement, revised the JRMP template and the SSMP to incorporate road maintenance provisions. I am informed and believe that in FY 2010-11, the District's calculated share of such costs was $126.30 and that during FY 2011-12, the District's calculated share of that cost was $186.69. I am further informed and believe that the District incurred additional direct costs during FY 2010-11 and FY 2011-12 to address these requirements but that the District cannot at this time quantify those costs.

h. Commercial/Industrial Inspection Requirement: Section F.3.b.4 of the Permit required the Copermittees, as part of their inspection of commercial/industrial facilities, to review facility monitoring data if the facility monitored its runoff. This provision required inspectors at commercial/industrial sites to spend greater time in the inspection or in analyzing data thereafter. Additionally, inspectors were required to be further trained so as to be able to read and interpret monitoring and sampling analysis data. I am informed and believe that the District, using funds contributed from each Copermittee including the District through the Implementation Agreement, provided training updates and revised the JRMP template to incorporate these requirements. I am informed and believe that in FY 2010-11, the District's calculated share of such costs was $125.30 and that during FY 2011-12, the District's calculated share of that cost was $230.87.

i. Retrofitting of Existing Development: Section F.3.d of the Permit required the Copermittees to develop and implement a retrofitting program for existing development, including requiring the identification and inventorying of existing development as candidates for retrofitting; the evaluation and ranking of the inventoried developments to prioritize retrofitting; consideration of the results of the evaluation in prioritizing workplans for the following year; tracking and inspecting completed retrofit BMPs; and implementing a program to encourage retrofit of private properties. I am informed and believe and therefore state that using funds contributed from the Copermittees, including the District, through the Implementation Agreement, the District retained a consultant to perform necessary studies and develop a Retrofit Study, and revised the JRMP template to incorporate these requirements. I am informed and believe that in FY 2010-11, the District's calculated share of such costs was $192.91 and that during FY 2011-12, the District's calculated share of that cost was $43,564.03. I am further informed and believe that the District may have incurred additional direct costs during FY 2010-11 and FY 2011-12 to address these requirements but that the District cannot at this time quantify those costs.

j. Watershed Water Quality Workplan ("Watershed Workplan"): Section G of the Permit required the Copermittees, including the District, to develop and annually update a Watershed Workplan. This required the Copermittees, including the District, to: characterize watershed receiving water quality, including analyzing monitoring data collected under the Permit and from other public and private organizations; identify and prioritize water quality problems by constituent and by location, giving consideration to total maximum daily load programs, waters listed as impaired pursuant to Clean Water Act section 303(d), and other pertinent conditions; identify likely sources causing the highest water quality problems within

the watershed, including from monitoring conducted under the Permit and additional focused water quality monitoring to identify specific sources; develop a watershed BMP implementation strategy, including a schedule to implement BMPs to abate specific receiving water quality problems; develop a strategy to monitor improvements in receiving water quality stemming from implementation of BMPs described in the Watershed Workplan, including required monitoring in the receiving water; establish a schedule for development and implementation of the watershed strategy outlined in the Watershed Workplan, including the holding of annual watershed workplan review meetings open to the public; implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the RWQCB; cooperate among Copermittees to develop and implement the Watershed Workplan, including the requirement to pursue interagency agreements with non-Copermittee MS4 operators; implement a public participation mechanism within each watershed, including opportunity for public review and comment on the draft Watershed Workplan prior to its submission to the RWQCB; and, as part of the review and annual update of the Watershed Workplan, hold an Annual Watershed Review meeting open to the public and adequately noticed. I am informed and believe that using funds contributed from each Copermittee, including the District, through the Implementation Agreement, the District hired a consultant to gather and analyze historic water quality monitoring data, develop draft and submit the Watershed Workplan and revise the JRMP template. I am informed and believe that in FY 2010-11, the District's calculated share of such costs was $1,287.66 and that during FY 2011-12, the District's calculated share of that cost was $4,798.33.

k. JRMP Annual Report Requirements: Section K.3.c (plus Table 5 in the Permit and Attachment D) of the Permit required, among other items, that the Copermittees, including the District, submit a JRMP report each year, beginning on October 31, 2013. The JRMP

requirements included the following: detailed tracking of various elements on a per-facility basis, including descriptions of BMPs required at PDPs; the name and location of all PDPs granted a waiver from implementing LID BMPs; the total number and date of inspections conducted at each construction site; descriptions of high-level enforcement actions; a summary and assessment of BMP retrofits implemented at flood control structures; a summary of inspection findings and follow-up activities for each municipal facility and area inspected, as well as the number and date; BMP violations and enforcement actions for each facility; tracking of inspections of commercial/industrial facilities by facility or mobile business, including number and date of inspections; BMP violations, number, date and types of enforcement actions; and, a description of each high-level enforcement action. Additionally, Copermittees, including the District, were required to describe efforts to manage runoff and stormwater pollution in common interest areas and mobile home parks, describe efforts to retrofit existing developments and efforts to encourage private landowners to retrofit existing development, provide a detailed list of all implemented retrofit projects, any proposed retrofit or regional mitigation projects and timelines for future implementations. Additionally, the Copermittees, including the District, were required to submit a checklist that required, among other things, the listing of active and inactive construction sites, the number of development plan reviews and grading permits issued, as well as number of projects exempted from hydromodification requirements, the number of PDPs, the amount of waste removed from MS4 maintenance and the total miles of MS4 inspected. I am informed and believe that using funds contributed from each Copermittee, including the District, through the Implementation Agreement, the District developed revisions to the JRMP and Annual Report templates to incorporate these requirements. I am informed and believe that in FY 2010-11, the District's calculated share of such costs was $633.25 and that

during FY 2011-12, the District's calculated share of that cost was $1,058.79. I am further informed and believe that the District incurred additional direct costs during FY 2010-11 and FY 2011-12 to address these requirements but that the District cannot at this time quantify those costs.

l. Special Studies: The Monitoring and Reporting Program of the Permit required Copermittees, including the District, to conduct special studies, including (1) a sediment toxicity study, (2) a trash and litter study, (3) a study of agricultural, federal and tribal discharges into the Copermittees' MS4s, (4) a MS4 and receiving water maintenance study and (5) an intermittent and ephemeral stream perennial conversion study. I am informed and believe that the District, using funds contributed by the Copermittees, including the District, conducted the first three studies, performed a work plan for the fourth study and then performed one additional study on the impacts of LID implementation, in return for not doing the remainder of the fourth study and the fifth study. I am informed and believe that using funds from each Copermittee, including the District, through the Implementation Agreement, the District retained a consultant to develop and perform these studies and to submit them to the Regional Board. I am informed and believe that in FY 2011-12, the District's calculated share of such costs was $7,047.68 and that during FY 2012-13, the District's calculated share of such costs was $26,399.42.

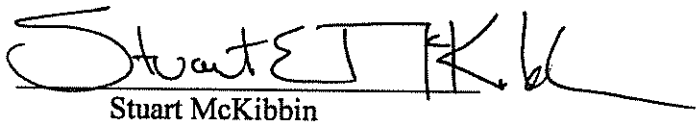
m. Requirements for Permit Programs to Ensure No Violations of Water Quality Standards and Other Standards: Sections F.1, F.1.d, F.2, F.3.a, F.3.b and F.3.c of the Permit required Copermittees, including the District, to implement programs to ensure that development project discharges, PDP discharges, construction site discharges, municipal discharges, commercial/industrial discharges and residential discharges did not cause or contribute to a violation of water quality standards and prevent illicit discharges into the MS4. Section F.3.d. of

the Permit required Copermittees, including the District, to develop and implement a retrofitting program to, among other things, prevent discharges from the MS4 from causing or contributing to a violation of water quality standards and to reduce the discharge of stormwater pollutants to the maximum extent practicable ("MEP"). Section F.6 of the Permit required Copermittees, including the District, to implement education programs to measurably change the behavior of target communities and thereby reduce pollutants in stormwater discharges and eliminate prohibited non-storm water discharges to MS4s and the environment. I am informed and believe and therefore state that these requirements were incorporated into the design and implementation of other programs required by the Permit and set forth above, including the NALs and SALs requirement, the priority development project and HMP requirements, the AST requirements at construction sites, the unpaved road BMP and design requirements, the monitoring of construction sites, the existing development retrofit requirements, and the water quality workplan requirements. I am informed and believe and therefore state that in total, the District incurred a yet to be determined share of calculated costs of $6,139.20 in FY 2010-11 and $78,741.68 in FY 2011-12 with respect to these requirements. I am further informed and believe that the District incurred additional direct costs during FY 2010-11 and FY 2011-12 to address these requirements but that the District cannot at this time quantify those costs.

6. I am informed and believe that there are no dedicated state or federal funds that are or will be available to pay for any of the new and/or upgraded programs and activities set forth in this Declaration. In 1991, the District established the Santa Margarita Watershed Benefit Assessment to fund its MS4 compliance activities. The Benefit Assessment paid for aspects of the District's compliance with the Permit. There was no increase in the fees generated by the Benefit Assessment over the course of the Permit. I am not aware of any other fee or tax

that the District would have the discretion to impose under California law to recover any portion of the cost of these programs and activities. I further am informed and believe that the only other source to pay for these new programs and activities is the District's general fund.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed April 27 2017 at Riverside, California.



Stuart McKibbin

DECLARATION OF DAVID GARCIA

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

I, DAVID GARCIA, hereby declare and state as follows:

1. I am an Engineering Project Manager within the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District ("District"). My job responsibilities include serving as the supervisor for the Santa Margarita River watershed with respect to municipal stormwater permitting issues. In that capacity for the District, I have first-hand and personal knowledge of monies spent by the District on behalf of itself and on behalf of permittees to address requirements under California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016 (the "Permit").

2. I have knowledge of sections of the Permit as set forth in the Section 5 Narrative Statement and the Section 6 Declarations of this Test Claim and how they are implemented by the permittees subject to the Permit (the "Permittees"), who are also the claimants under this Test Claim ("Claimants").

3. I have knowledge of financial records showing expenditures by the Claimants and have caused spreadsheets to be created reflecting those expenditures, which have been provided to Claimant representatives.

4. I make this declaration based on my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

5. The District was designated as Principal Permittee under the Permit, and in that role, coordinated joint responses to the Permit requirements set forth in this Test Claim, which

responses were paid for as shared costs by the Claimants under the Implementation Agreement entered into by and between the Permittees.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed April 27, 2017 at Riverside, California.

David Garcia

DECLARATION OF STEVEN HORN

COUNTY OF RIVERSIDE

I, Steven Horn, hereby declare and state as follows:

1. I am a Principal Management Analyst and NPDES Stormwater Program Administrator in the Executive Office of the County of Riverside ("County"). In that capacity, I shared responsibility for the compliance of the County with regard to the requirements of California Regional Water Quality Control Board, San Diego Region ("RWQCB") Order No. R9-2010-0016 (the "Permit"), as they applied to the County.

2. I have reviewed sections of the Permit as set forth herein and am familiar with those provisions. I also am aware of the requirements of pertinent sections of Order No. R9-2004-001 ("2004 Permit") which was issued by the RWQCB in 2004 and as to which the County issued a notice of intent to comply, and am familiar with those requirements.

3. I also have an understanding of the County's sources of funding for programs and activities required to comply with the Permit. I also am aware of arrangements under which the County and other Copermittees under the Permit agreed to share certain costs of complying with the Permit.

4. I make this declaration based on my own personal knowledge, except for matters set forth herein based on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

5. Based on my understanding of the Permit and the requirements of the 2004 Permit, I believe that the Permit required the County to undertake the following new and/or upgraded activities and which are unique to local government entities and which were not required in the 2004 Permit:

a. Removal of Categories of Irrigation Runoff From Exempted Non-Stormwater Discharges: Section B.2 of the Permit removed from the list of discharges exempted from the prohibition against discharges of non-stormwater to the municipal separate storm sewer system ("MS4") the following categories of discharges: landscape irrigation, irrigation water, and lawn watering discharges. The removal of these three categories of exempted discharges required the creation of new public education and outreach materials, potentially the need for amended ordinances to facilitate the required prohibition, tracking and response to reports of over-irrigation, enforcement and monitoring. It is my understanding and belief that using funds contributed from each Copermittee, including the County, through an Implementation Agreement, the Riverside County Flood Control and Water Conservation District ("District") updated the Coordinated Monitoring Program ("CMP"), including procedures for response, monitoring and analysis relating to such flows and revised the Jurisdictional Runoff Management Plan ("JRMP") template, training programs and community outreach programs to address these requirements. I am informed and believe that in Fiscal Year ("FY") 2010-11, the County's calculated share of such shared costs was $599.28 and that during FY 2011-12, the County's calculated share of that cost was $673.88. I am further informed and believe that the County incurred additional direct costs of approximately $76,776 in FY 2010-11 and $79,332 in FY 2011-12 to address these requirements.

b. Non-Stormwater Dry Weather Action Levels: Sections C and F.4.d and e, as well as Section II.C of the Monitoring and Reporting Program ("MRP") of the Permit, required Copermittees, including the County, to perform water quality sampling at a representative percentage of major outfalls and identified stations in each hydrologic subarea, implement new followup investigations and source tracking activities triggered by each exceedance of dry

weather non-stormwater action levels ("NALs"). These sections required the Copermittees, including the County, to perform field verification of major outfalls owned by the County, perform any required outfall sampling and analysis within the County's jurisdiction that was not otherwise performed by the District on behalf of the County, conduct and implement any follow-up source identification investigations for NAL exceedances at County outfalls, conduct enforcement actions as appropriate to the source, prepare reports on the status and outcome of NAL exceedances, and investigations / enforcement, and where necessary, update County compliance programs as necessary to address NAL exceedances. It is my understanding and belief that using funds contributed from each Copermittee, including the County, through the Implementation Agreement, the District retained a consultant to develop a sampling and analysis plan, finalize the sampling and analysis plan, develop a follow-up response program and procedures, conduct initial required NAL sampling and analysis on behalf of each Copermittee, including the County, utilize analysis and source identification results in developing annual updates to the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address NAL exceedances. I am informed and believe that in FY 2010-11, the County's calculated share of such shared costs was $508.39 and that during FY 2011-12, the County's calculated share of that cost was $1,489.01. I am further informed and believe that the County incurred additional direct costs of approximately $30,000 in FY 2010-11 and $30,000 in FY 2011-12 to address these requirements.

c. Stormwater Action Levels: Section D of the Permit required the County to conduct end-of-pipe assessments to determine stormwater action level ("SAL") compliance metrics at major outfalls during wet weather. Under the Permit, the County was required to

perform field verification of major outfalls owned by the County, perform any required outfall sampling and analysis within the County's jurisdiction that is not otherwise performed by the District on behalf of the County, and where necessary, update the County's compliance programs to address SAL exceedances. I am informed and believe that, using funds contributed from each Copermittee, including the County, through the Implementation Agreement, the District retained a consultant to develop a sampling and analysis plan, finalize the sampling and analysis plan, conduct ongoing SAL sampling and analysis on behalf of each Copermittee, including the County, utilize analysis and source identification results in developing annual updates the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address SAL exceedances. I am informed and believe that in FY 2010-11, the County's calculated share of such shared costs was $508.39 and that during FY 2011-12, the County's calculated share of that cost was $1,489.01. I am further informed and believe that the County incurred additional direct costs of approximately $10,000 in FY 2010-11 and $10,000 in FY 2011-12 to address these requirements.

d. Priority Development Projects ("PDPs") and Hydromodification Requirements: Section F.1.d of the Permit required Copermittees, including the County, to develop and implement low impact development ("LID") principles and structural features into County-owned PDPs, which beginning on July 1, 2012, included all County-owned projects that resulted in the disturbance of one acre or more of land, as well as new public development projects that created 10,000 square feet or more of impervious surface. The Permit further required the County to review each of its PDPs to implement LID BMPs, including requiring specific types of LID Principles and LID BMPs or to make a finding of technical infeasibility, incorporate formalized consideration of LID BMPs into the plan review process and review its local codes,

policies and ordinances for barriers to LID implementation and take actions to remove such barriers. Additionally, the County was required to develop an LID waiver program for incorporation into the Standard Stormwater Mitigation Plan ("SSMP"), to allow a County-owned PDP to substitute LID BMPs with implementation of alternatives such as treatment control BMPs and either an on-site or off-site mitigation project or other mitigation. Section F.1.h of the Permit required the Copermittees, including the County, to develop and implement a Hydromodification Management Plan ("HMP") to manage increases in runoff discharge rates and durations from all PDPs. To comply with part F.1.h, the Copermittees, including the County, were required to hold and/or attend collaborative meetings and public hearings, perform studies and develop an HMP, train staff and educate the public and adapt the local SSMP. In addition, Section F.1.h(2) prohibited Copermittees, including the County, from using non-natural materials, including concrete, riprap or gabions, to reinforce stream channels as mitigation for a PDP. I am informed and believe that, using funds contributed from each Copermittee, including the County, through the Implementation Agreement, the District retained a consultant to perform the studies and analysis and a revised Standard Stormwater Mitigation Plan, an HMP with publically available hydromodification modelling software and a BMP Design Manual, developed and provided training for the Copermittees and the development community and revised the JRMP template. I am informed and believe that in FY 2010-11, the County's calculated share of such shared costs was $1,459.76 and that during FY 2011-12, the County's calculated share of that cost was $10,722.87. I am further informed and believe that the County incurred additional direct costs of approximately $21,000 in FY 2010-11 and $579,957 in FY 2011-12 to address these requirements.

e. BMP Maintenance Tracking Requirements: Section F.1.f of the Permit required the County to develop and maintain a watershed-based database to track all projects with a final approved SSMP and structural post-construction BMPs, including those PDPs dating back to July 2005, and to inspect such projects on a routine basis. This program required the County to develop and populate a database of information for each SSMP project built since 2005, including information on BMP types, locations, parties responsible for maintenance, date of construction, dates and findings of maintenance verifications and corrective actions; to contact property owners for permission to inspect on-site BMPs; to develop and implement a program to conduct inspections and/or BMP verifications on all SSMP projects; and, to conduct inspections. I am informed and believe that, using funds contributed from each Copermittee, including the County, through the Implementation Agreement, the District developed a template BMP tracking spreadsheet and updated the JRMP template to reflect these requirements. I am informed and believe that in FY 2010-11, the County's calculated share of such shared costs was $115.33 and that during FY 2011-12, the County's calculated share of that cost was $123.81. I am further informed and believe that the County incurred additional direct costs of approximately $52,930 in FY 2010-11 and $52,930 in FY 2011-12 to address these requirements.

f. Construction Site Requirements: Section F.2.d of the Permit required Copermittees, including the County, to implement active/passive sediment treatment ("AST") at County- owned construction sites or portions thereof that were determined to be an "exceptional threat" to water quality. Section F.2.e of the Permit required County inspectors at construction sites to review site monitoring data results, if the site monitored its runoff. These requirements would add costs to require AST to every County-owned construction site determined to pose such a threat to water quality and for enhanced inspection training. I am informed and believe

that the District, using funds contributed from each Copermittee including the County through the Implementation Agreement, conducted training of Copermittee staff and updated the JRMP template with regard to such requirements. I am informed and believe that in FY 2010-11, the County's calculated share of such costs was $70.87 and that during FY 2011-12, the County's calculated share of that cost was $113.07. I am further informed and believe that the County incurred additional direct costs of approximately $720 in FY 2010-11 and $720 in FY 2011-12 to address these requirements.

g. Maintenance of Unpaved Roads: Section F.3.a.10 of the Permit required the Copermittees, including the County, to develop and implement, or require implementation of, BMPs for erosion and sediment control on County-maintained unpaved roads, as well to develop and implement BMPs to minimize impacts on streams and wetlands during unpaved road maintenance activities, to maintain unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport, to regrade unpaved roads to be sloped outward, or adopt alternative equally effective BMPs to minimize erosion and sedimentation and to examine the feasibility of replacing existing culverts or design new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology. I am informed and believe that the District, using funds contributed from each Copermittee including the County through the Implementation Agreement, revised the JRMP template and the SSMP to incorporate road maintenance provisions. I am informed and believe that in FY 2010-11, the County's calculated share of such costs was $43.81 and that during FY 2011-12, the County's calculated share of that cost was $86.07. I am further informed and believe that the County incurred additional direct costs of approximately $457,241 in FY 2010-11 and $584,132 in FY 2011-12 to address these requirements.

h. Commercial/Industrial Inspection Requirement: Section F.3.b.4 of the Permit required the County, as part of its inspection of commercial/industrial facilities, to review facility monitoring data if the facility monitored its runoff. This provision required inspectors at commercial/industrial sites to spend greater time in the inspection or in analyzing data thereafter. Additionally, inspectors were required to be further trained so as to be able to read and interpret monitoring and sampling analysis data. I am informed and believe that the District, using funds contributed from each Copermittee including the County through the Implementation Agreement, provided training updates and revised the JRMP template to incorporate these requirements. I am informed and believe that in FY 2010-11, the County's calculated share of such costs was $43.81 and that during FY 2011-12, the County's calculated share of that cost was $106.44. I am further informed and believe that the County incurred additional direct costs of approximately $11,535 in FY 2010-11 and $11,535 in FY 2011-12 to address these requirements.

i. Retrofitting of Existing Development: Section F.3.d of the Permit required the Copermittees, including the County, to develop and implement a retrofitting program for existing development, including requiring the identification and inventorying of existing development as candidates for retrofitting; the evaluation and ranking of the inventoried developments to prioritize retrofitting; consideration of the results of the evaluation in prioritizing workplans for the following year; tracking and inspecting completed retrofit BMPs; and implementing a program to encourage retrofit of private properties. I am informed and believe and therefore state that using funds contributed from the Copermittees, including the County, through the Implementation Agreement, the District retained a consultant to perform necessary studies and develop a Retrofit Study, and revised the JRMP template to incorporate these requirements. I

am informed and believe that in FY 2010-11, the County's calculated share of such costs was $67.44 and that during FY 2011-12, the County's calculated share of that cost was $20,085.31. I am further informed and believe that the County incurred additional direct costs of approximately $600 in FY 2010-11 and $600 in FY 2011-12 to address these requirements.

j. Watershed Water Quality Workplan ("Watershed Workplan"): Section G of the Permit required the Copermittees, including the County, to develop and annually update a Watershed Workplan. This required the Copermittees, including the County, to: characterize watershed receiving water quality, including analyzing monitoring data collected under the Permit and from other public and private organizations; identify and prioritize water quality problems by constituent and by location, giving consideration to total maximum daily load programs, waters listed as impaired pursuant to Clean Water Act section 303(d), and other pertinent conditions; identify likely sources causing the highest water quality problems within the watershed, including from monitoring conducted under the Permit and additional focused water quality monitoring to identify specific sources; develop a watershed BMP implementation strategy, including a schedule to implement BMPs to abate specific receiving water quality problems; develop a strategy to monitor improvements in receiving water quality stemming from implementation of BMPs described in the Watershed Workplan, including required monitoring in the receiving water; establish a schedule for development and implementation of the watershed strategy outlined in the Watershed Workplan, including the holding of annual watershed workplan review meetings open to the public; implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the RWQCB; cooperate among Copermittees to develop and implement the Watershed Workplan, including the requirement to pursue interagency agreements with non-Copermittee MS4 operators; implement a public

participation mechanism within each watershed, including opportunity for public review and comment on the draft Watershed Workplan prior to its submission to the RWQCB; and, as part of the review and annual update of the Watershed Workplan, hold an Annual Watershed Review meeting open to the public and adequately noticed. I am informed and believe that using funds contributed from each Copermittee, including the County, through the Implementation Agreement, the District hired a consultant to gather and analyze historic water quality monitoring data, develop draft and submit the Watershed Workplan and revise the JRMP template. I am informed and believe that in FY 2010-11, the County's calculated share of such costs was $450.17 and that during FY 2011-12, the County's calculated share of that cost was $2,212.28. I am further informed and believe that the County incurred additional direct costs of approximately $600 in FY 2010-11 and $600 in FY 2011-12 to address these requirements.

k. JRMP Annual Report Requirements: Section K.3.c (plus Table 5 in the Permit and Attachment D) of the Permit required, among other items, that the Copermittees, including the County, submit a Jurisdictional Runoff Management Program ("JRMP") report each year, beginning on October 31, 2013. The JRMP requirements included the following: detailed tracking of various elements on a per-facility basis, including descriptions of BMPs required at PDPs; the name and location of all PDPs granted a waiver from implementing LID BMPs; the total number and date of inspections conducted at each construction site; descriptions of high-level enforcement actions; a summary and assessment of BMP retrofits implemented at flood control structures; a summary of inspection findings and follow-up activities for each municipal facility and area inspected, as well as the number and date; BMP violations and enforcement actions for each facility; tracking of inspections of commercial/industrial facilities by facility or mobile business, including number and date of inspections; BMP violations, number, date and

types of enforcement actions; and, a description of each high-level enforcement action. Additionally, Copermittees, including the County, were required to describe efforts to manage runoff and stormwater pollution in common interest areas and mobile home parks, describe efforts to retrofit existing developments and efforts to encourage private landowners to retrofit existing development, provide a detailed list of all implemented retrofit projects, any proposed retrofit or regional mitigation projects and timelines for future implementations. Additionally, the Copermittees, including the County, were required to submit a checklist that required, among other things, the listing of active and inactive construction sites, the number of development plan reviews and grading permits issued, as well as number of projects exempted from hydromodification requirements, the number of PDPs, the amount of waste removed from MS4 maintenance and the total miles of MS4 inspected. I am informed and believe that using funds contributed from each Copermittee, including the County, through the Implementation Agreement, the District developed revisions to the JRMP and Annual Report templates to incorporate these requirements. I am informed and believe that in FY 2010-11, the County's calculated share of such costs was $221.39 and that during FY 2011-12, the County's calculated share of that cost was $488.16. I am further informed and believe that the County incurred additional direct costs of approximately $124,000 in FY 2010-11 and $124,000 in FY 2011-12 to address these requirements.

l. Special Studies: The Monitoring and Reporting Program of the Permit required Copermittees, including the County, to conduct special studies, including (1) a sediment County study, (2) a trash and litter study, (3) a study of agricultural, federal and tribal discharges into the Copermittees' MS4s, (4) a MS4 and receiving water maintenance study and (5) an intermittent and ephemeral stream perennial conversion study. I am informed and believe that the District,

using funds contributed by the Copermittees, including the County, conducted the first three studies, performed a work plan for the fourth study and then performed one additional study on LID implementation, in return for not doing the remainder of the fourth study and the fifth study. I am informed and believe that using funds from each Copermittee, including the County, through the Implementation Agreement, the District retained a consultant to develop and perform these studies and to submit them to the Regional Board. I am informed and believe that in Fiscal Year ("FY") 2011-12, the County's calculated share of such costs was $3,249.35 and that during FY 2012-13, the County's calculated share of that cost was $13,556.62 plus direct costs of approximately $3,000 for FY 2010-11 and approximately $3,000 for FY 2011-12.

m. Requirements for Permit Programs to Ensure No Violations of Water Quality Standards and Other Standards: Sections F.1, F.1.d, F.2, F.3.a, F.3.b and F.3.c of the Permit required Copermittees, including the County, to implement programs to ensure that development project discharges, PDP discharges, construction site discharges, municipal discharges, commercial/industrial discharges and residential discharges did not cause or contribute to a violation of water quality standards and prevent illicit discharges into the MS4. Section F.3.d. of the Permit required Copermittees, including the County, to develop and implement a retrofitting program to, among other things, prevent discharges from the MS4 from causing or contributing to a violation of water quality standards and to reduce the discharge of stormwater pollutants to the MEP. Section F.6 of the Permit required Copermittees, including the County, to implement education programs to measurably change the behavior of target communities and thereby reduce pollutants in stormwater discharges and eliminate prohibited non-storm water discharges to MS4s and the environment. I am informed and believe and therefore state that these requirements were incorporated into the design and implementation of other programs required

by the Permit and set forth above, including the NALs and SALs requirement, the priority development project and HMP requirements, the AST requirements at construction sites, the unpaved road BMP and design requirements, the monitoring of construction sites, the existing development retrofit requirements, and the water quality workplan requirements. I am informed and believe and therefore state that in total, the County incurred an as yet undetermined share of calculated costs of $3,152.63 in FY 2010-11 and $36,304.05 in FY 2011-12 plus direct costs of $512,865 in FY 2010-11 and $519,629 in FY 2011-12 in response to these requirements.

6. I am informed and believe that there are no dedicated state, federal or regional funds that are or will be available to pay for any of the new and/or upgraded programs and activities set forth in this Declaration. I am informed and believe that certain of the programs set forth above are funded in part by the proceeds of fuel taxes collected in the County and by community services association revenue. I am further informed and believe that such proceeds are not sufficient to fund all programs set forth in this declaration. I am not aware of any other fee or tax that the County would have the discretion to impose under California law to recover any portion of the cost of these programs and activities. I further am informed and believe that the only other available source to pay for these new programs and activities is the County's general fund.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed April 24, 2017 at Riverside, California.

Steven Horn

DECLARATION OF BOB MOEHLING

CITY OF MURRIETA

I, Bob Moehling, hereby declare and state as follows:

1. I am City Engineer for the City of Murrieta ("City"). In that capacity, I shared responsibility for the compliance of the City with regard to the requirements of California Regional Water Quality Control Board, San Diego Region ("RWQCB") Order No. R9-2010-0016 (the "Permit"), as they apply to the City.

2. I have reviewed sections of the Permit as set forth herein and am familiar with those provisions. I also am aware of the requirements of pertinent sections of Order No. R9-2004-001 ("2004 Permit") which was issued by the RWQCB in 2004 and as to which the City issued a notice of intent to comply, and am familiar with those requirements.

3. I also have an understanding of the City's sources of funding for programs and activities required to comply with the Permit. I also am aware of arrangements under which the City and other Copermittees under the Permit agreed to share certain costs of complying with the Permit.

4. I make this declaration based on my own personal knowledge, except for matters set forth herein based on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

5. Based on my understanding of the Permit and the requirements of the 2004 Permit, I believe that the Permit required the City to undertake the following new and/or upgraded activities and which are unique to local government entities and which were not required in the 2004 Permit:

a. Removal of Categories of Irrigation Runoff From Exempted Non-Stormwater Discharges: Section B.2 of the Permit removed from the list of discharges exempted from the prohibition against discharges of non-stormwater to the municipal separate storm sewer system ("MS4") the following categories of discharges: landscape irrigation, irrigation water, and lawn watering discharges. The removal of these three categories of exempted discharges required the creation of new public education and outreach materials, potentially the need for amended ordinances to facilitate the required prohibition, tracking and response to reports of over-irrigation, enforcement and monitoring. It is my understanding and belief that using funds contributed from each Copermittee, including the City, through an Implementation Agreement, the Riverside County Flood Control and Water Conservation District ("District") updated the Coordinated Monitoring Program ("CMP"), including procedures for response, monitoring and analysis relating to such flows and revised the Jurisdictional Runoff Management Plan ("JRMP") template, training programs and community outreach programs to address these requirements. I am informed and believe that in Fiscal Year ("FY") 2010-11, the City's calculated share of such shared costs was $839.98 and that during FY 2011-12, the City's calculated share of that cost was $1,262.12. I am further informed and believe that the City incurred estimated additional direct costs of $6,693.92 in FY 2010-11 and $6,693.92 in FY 2011-12 to address these requirements.

b. Non-Stormwater Dry Weather Action Levels: Sections C and F.4.d and e, as well as Section II.C of the Monitoring and Reporting Program ("MRP") of the Permit, required Copermittees, including the City, to perform water quality sampling at a representative percentage of major outfalls and identified stations in each hydrologic subarea, implement new followup investigations and source tracking activities triggered by each exceedance of dry

weather non-stormwater action levels ("NALs"). These sections required the Copermittees, including the City, to perform field verification of major outfalls owned by the City, perform any required outfall sampling and analysis within the City's jurisdiction that was not otherwise performed by the District on behalf of the City, conduct and implement any follow-up source identification investigations for NAL exceedances at City outfalls, conduct enforcement actions as appropriate to the source, prepare reports on the status and outcome of NAL exceedances, and investigations / enforcement, and where necessary, update City compliance programs as necessary to address NAL exceedances. It is my understanding and belief that using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to develop a sampling and analysis plan, finalize the sampling and analysis plan, develop a follow-up response program and procedures, conduct initial required NAL sampling and analysis on behalf of each Copermittee, including the City, utilize analysis and source identification results in developing annual updates to the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address NAL exceedances. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $712.58 and that during FY 2011-12, the City's calculated share of that cost was $2,788.77. I am further informed and believe that the City incurred estimated additional direct costs of $2008.18 in FY 2010-11 and $2008.18 in FY 2011-12 to address these requirements.

c. Stormwater Action Levels: Section D of the Permit required the City to conduct end-of-pipe assessments to determine stormwater action level ("SAL") compliance metrics at major outfalls during wet weather. Under the Permit, the City was required to perform field verification of major outfalls owned by the City, perform any required outfall sampling and

analysis within the City's jurisdiction that is not otherwise performed by the District on behalf of the City, and where necessary, update the City's compliance programs to address SAL exceedances. I am informed and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to develop a sampling and analysis plan, finalize the sampling and analysis plan, conduct ongoing SAL sampling and analysis on behalf of each Copermittee, including the City, utilize analysis and source identification results in developing annual updates the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address SAL exceedances. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $712.58 and that during FY 2011-12, the City's calculated share of that cost was $2,788.77. I am further informed and believe that the City incurred estimated additional direct costs of $2008.18 in FY 2010-11 and $2008.18 in FY 2011-12 to address these requirements.

d. Priority Development Projects ("PDPs") and Hydromodification Requirements: Section F.1.d of the Permit required Copermittees, including the City, to develop and implement low impact development ("LID") principles and structural features into City-owned PDPs, which beginning on July 1, 2012, included all City-owned projects that resulted in the disturbance of one acre or more of land, as well as new public development projects that created 10,000 square feet or more of impervious surface. The Permit further required the City to review each of its PDPs to implement LID BMPs, including requiring specific types of LID Principles and LID BMPs or to make a finding of technical infeasibility, incorporate formalized consideration of LID BMPs into the plan review process and review its local codes, policies and ordinances for barriers to LID implementation and take actions to remove such barriers. Additionally, the City

was required to develop an LID waiver program for incorporation into the Standard Stormwater Mitigation Plan ("SSMP"), to allow a City-owned PDP to substitute LID BMPs with implementation of alternatives such as treatment control BMPs and either an on-site or off-site mitigation project or other mitigation. Section F.1.h of the Permit required the Copermittees, including the City, to develop and implement a Hydromodification Management Plan ("HMP") to manage increases in runoff discharge rates and durations from all PDPs. To comply with part F.1.h, the Copermittees, including the City, were required to hold and/or attend collaborative meetings and public hearings, perform studies and develop an HMP, train staff and educate the public and adapt the local SSMP. In addition, Section F.1.h(2) prohibited Copermittees, including the City, from using non-natural materials, including concrete, riprap or gabions, to reinforce stream channels as mitigation for a PDP. I am informed and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to perform the studies and analysis and a revised Standard Stormwater Mitigation Plan, an HMP with publically available hydromodification modelling software and a BMP Design Manual, developed and provided training for the Copermittees and the development community and revised the JRMP template. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $2,046.07 and that during FY 2011-12, the City's calculated share of that cost was $20,082.94. I am further informed and believe that the City incurred estimated additional direct costs of $4,016.35 in FY 2010-11 and $4,016.35 in FY 2011-12 to address these requirements.

e. BMP Maintenance Tracking Requirements: Section F.1.f of the Permit required the City to develop and maintain a watershed-based database to track all projects with a final approved SSMP and structural post-construction BMPs, including those PDPs dating back to

July 2005, and to inspect such projects on a routine basis. This program required the City to develop and populate a database of information for each SSMP project built since 2005, including information on BMP types, locations, parties responsible for maintenance, date of construction, dates and findings of maintenance verifications and corrective actions; to contact property owners for permission to inspect on-site BMPs; to develop and implement a program to conduct inspections and/or BMP verifications on all SSMP projects; and, to conduct inspections. I am informed and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District developed a template BMP tracking spreadsheet and updated the JRMP template to reflect these requirements. I am informed and believe that in Fiscal Year ("FY") 2010-11, the City's calculated share of such shared costs was $161.66 and that during FY 2011-12, the City's calculated share of that cost was $231.89. I am further informed and believe that the City incurred estimated additional direct costs of $2,677.57 in FY 2010-11 and $2,677.57 in FY 2011-12 to address these requirements.

f. Construction Site Requirements: Section F.2.d of the Permit required Copermittees, including the City, to implement active/passive sediment treatment ("AST") at City- owned construction sites or portions thereof that were determined to be an "exceptional threat" to water quality. Section F.2.e of the Permit required City inspectors at construction sites to review site monitoring data results, if the site monitored its runoff. These requirements would add costs to require AST to every City-owned construction site determined to pose such a threat to water quality and for enhanced inspection training. I am informed and believe that the District, using funds contributed from each Copermittee including the City through the Implementation Agreement, conducted training of Copermittee staff and updated the JRMP template with regard to such requirements. I am informed and believe that in FY 2010-11, the

City's calculated share of such costs was $99.34 and that during FY 2011-12, the City's calculated share of that cost was $211.77. I am further informed and believe that the City incurred estimated additional direct costs of $1,338.78 in FY 2010-11 and $1,338.78 in FY 2011-12 to address these requirements.

g. Maintenance of Unpaved Roads: Section F.3.a.10 of the Permit required the Copermittees, including the City, to develop and implement, or require implementation of, BMPs for erosion and sediment control on City-maintained unpaved roads, as well to develop and implement BMPs to minimize impacts on streams and wetlands during unpaved road maintenance activities, to maintain unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport, to regrade unpaved roads to be sloped outward, or adopt alternative equally effective BMPs to minimize erosion and sedimentation and to examine the feasibility of replacing existing culverts or design new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology. I am informed and believe that the District, using funds contributed from each Copermittee including the City through the Implementation Agreement, revised the JRMP template and the SSMP to incorporate road maintenance provisions. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $61.40 and that during FY 2011-12, the City's calculated share of that cost was $161.21. I am further informed and believe that the City incurred estimated additional direct costs of $1,338.78 in FY 2010-11 and $1,338.78 in FY 2011-12 to address these requirements.

h. Commercial/Industrial Inspection Requirement: Section F.3.b.4 of the Permit required the City, as part of its inspection of commercial/industrial facilities, to review facility monitoring data if the facility monitored its runoff. This provision required inspectors at commercial/industrial sites to spend greater time in the inspection or in analyzing data thereafter.

Additionally, inspectors were required to be further trained so as to be able to read and interpret monitoring and sampling analysis data. I am informed and believe that the District, using funds contributed from each Copermittee including the City through the Implementation Agreement, provided training updates and revised the JRMP template to incorporate these requirements. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $61.40 and that during FY 2011-12, the City's calculated share of that cost was $199.36. I am further informed and believe that the City incurred estimated additional direct costs of $2,677.57 in FY 2010-11 and $2,677.57 in FY 2011-12 to address these requirements.

i. Retrofitting of Existing Development: Section F.3.d of the Permit required the Copermittees, including the City, to develop and implement a retrofitting program for existing development, including requiring the identification and inventorying of existing development as candidates for retrofitting; the evaluation and ranking of the inventoried developments to prioritize retrofitting; consideration of the results of the evaluation in prioritizing workplans for the following year; tracking and inspecting completed retrofit BMPs; and implementing a program to encourage retrofit of private properties. I am informed and believe and therefore state that using funds contributed from the Copermittees, including the City, through the Implementation Agreement, the District retained a consultant to perform necessary studies and develop a Retrofit Study, and revised the JRMP template to incorporate these requirements. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $94.53 and that during FY 2011-12, the City's calculated share of that cost was $37,617.93.

j. Watershed Water Quality Workplan ("Watershed Workplan"): Section G of the Permit required the Copermittees, including the City, to develop and annually update a Watershed Workplan. This required the Copermittees, including the City, to: characterize

watershed receiving water quality, including analyzing monitoring data collected under the Permit and from other public and private organizations; identify and prioritize water quality problems by constituent and by location, giving consideration to total maximum daily load programs, waters listed as impaired pursuant to Clean Water Act section 303(d), and other pertinent conditions; identify likely sources causing the highest water quality problems within the watershed, including from monitoring conducted under the Permit and additional focused water quality monitoring to identify specific sources; develop a watershed BMP implementation strategy, including a schedule to implement BMPs to abate specific receiving water quality problems; develop a strategy to monitor improvements in receiving water quality stemming from implementation of BMPs described in the Watershed Workplan, including required monitoring in the receiving water; establish a schedule for development and implementation of the watershed strategy outlined in the Watershed Workplan, including the holding of annual watershed workplan review meetings open to the public; implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the RWQCB; cooperate among Copermittees to develop and implement the Watershed Workplan, including the requirement to pursue interagency agreements with non-Copermittee MS4 operators; implement a public participation mechanism within each watershed, including opportunity for public review and comment on the draft Watershed Workplan prior to its submission to the RWQCB; and, as part of the review and annual update of the Watershed Workplan, hold an Annual Watershed Review meeting open to the public and adequately noticed. I am informed and believe that using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District hired a consultant to gather and analyze historic water quality monitoring data, develop draft and submit the Watershed Workplan and revise the JRMP template. I am informed

and believe that in FY 2010-11, the City's calculated share of such costs was $630.98 and that during FY 2011-12, the City's calculated share of that cost was $4,143.40.

k. JRMP Annual Report Requirements: Section K.3.c (plus Table 5 in the Permit and Attachment D) of the Permit required, among other items, that the Copermittees, including the City, submit a Jurisdictional Runoff Management Program ("JRMP") report each year, beginning on October 31, 2013. The JRMP requirements included the following: detailed tracking of various elements on a per-facility basis, including descriptions of BMPs required at PDPs; the name and location of all PDPs granted a waiver from implementing LID BMPs; the total number and date of inspections conducted at each construction site; descriptions of high-level enforcement actions; a summary and assessment of BMP retrofits implemented at flood control structures; a summary of inspection findings and follow-up activities for each municipal facility and area inspected, as well as the number and date; BMP violations and enforcement actions for each facility; tracking of inspections of commercial/industrial facilities by facility or mobile business, including number and date of inspections; BMP violations, number, date and types of enforcement actions; and, a description of each high-level enforcement action. Additionally, Copermittees, including the City, were required to describe efforts to manage runoff and stormwater pollution in common interest areas and mobile home parks, describe efforts to retrofit existing developments and efforts to encourage private landowners to retrofit existing development, provide a detailed list of all implemented retrofit projects, any proposed retrofit or regional mitigation projects and timelines for future implementations. Additionally, the Copermittees, including the City, were required to submit a checklist that required, among other things, the listing of active and inactive construction sites, the number of development plan reviews and grading permits issued, as well as number of projects exempted from

hydromodification requirements, the number of PDPs, the amount of waste removed from MS4 maintenance and the total miles of MS4 inspected. I am informed and believe that using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District developed revisions to the JRMP and Annual Report templates to incorporate these requirements. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $310.31 and that during FY 2011-12, the City's calculated share of that cost was $914.27. I am further informed and believe that the City incurred estimated additional direct costs of $2,677.57 in FY 2010-11 and $2,677.57 in FY 2011-12 to address these requirements.

l. Special Studies: The Monitoring and Reporting Program of the Permit required Copermittees, including the City, to conduct special studies, including (1) a sediment toxicity study, (2) a trash and litter study, (3) a study of agricultural, federal and tribal discharges into the Copermittees' MS4s, (4) a MS4 and receiving water maintenance study and (5) an intermittent and ephemeral stream perennial conversion study. I am informed and believe that the District, using funds contributed by the Copermittees, including the City, conducted the first three studies, performed a work plan for the fourth study and then performed one additional study on LID implementation, in return for not doing the remainder of the fourth study and the fifth study. I am informed and believe that using funds from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to develop and perform these studies and to submit them to the Regional Board. I am informed and believe that in Fiscal Year ("FY") 2011-12, the City's calculated share of such costs was $6,085.74 and that during FY 2012-13, the City's calculated share of that cost was $26,032.50.

m. Requirements for Permit Programs to Ensure No Violations of Water Quality Standards and Other Standards: Sections F.1, F.1.d, F.2, F.3.a, F.3.b and F.3.c of the Permit

required Copermittees, including the City, to implement programs to ensure that development project discharges, PDP discharges, construction site discharges, municipal discharges, commercial/industrial discharges and residential discharges did not cause or contribute to a violation of water quality standards and prevent illicit discharges into the MS4. Section F.3.d. of the Permit required Copermittees, including the City, to develop and implement a retrofitting program to, among other things, prevent discharges from the MS4 from causing or contributing to a violation of water quality standards and to reduce the discharge of stormwater pollutants to the MEP. Section F.6 of the Permit required Copermittees, including the City, to implement education programs to measurably change the behavior of target communities and thereby reduce pollutants in stormwater discharges and eliminate prohibited non-storm water discharges to MS4s and the environment. I am informed and believe and therefore state that these requirements were incorporated into the design and implementation of other programs required by the Permit and set forth above, including the NALs and SALs requirement, the priority development project and HMP requirements, the AST requirements at construction sites, the unpaved road BMP and design requirements, the monitoring of construction sites, the existing development retrofit requirements, and the water quality workplan requirements. I am informed and believe and therefore state that in total, the City incurred a yet to be determined share of calculated costs of $4,418.08 in FY 2010-11 and $67,994.14 in FY 2011-12 plus estimated direct costs of $10,710.27 in FY 20-10-11 and $10,710.27 in FY 2011-12 in response to these requirements.

6. I am informed and believe that there are no dedicated state or federal funds that are or will be available to pay for any of the new and/or upgraded programs and activities set forth in this Declaration. The City has access to funding obtained through County Service Area

152, which funds, in part, the obligations of the City under the Permit. The City also can collect some inspection fees during the new development process, but not for existing development. I am informed and believe that neither of these funding sources is sufficient to cover the cost of the programs and activities set forth in this Declaration. I am not aware of any other fee or tax that the City would have the discretion to impose under California law to recover any portion of the cost of these programs and activities. I further am informed and believe that the only other source to pay for these new programs and activities is the City's general fund.

I declare under penalty of perjury that foregoing is true and correct. Executed April 27, 2017 at Murrieta, California.

Bob Moehling

DECLARATION OF PATRICK A. THOMAS

CITY OF TEMECULA

I, Patrick A. Thomas, hereby declare and state as follows:

1. I am the Director of Public Works/City Engineer for the City of Temecula ("City"). In that capacity, I share responsibility for the compliance of the City with regard to the requirements of California Regional Water Quality Control Board, San Diego Region ("RWQCB") Order No. R9-2010-0016 (the "Permit"), as they apply to the City.

2. I have reviewed sections of the Permit as set forth herein and am familiar with those provisions. I also am aware of the requirements of pertinent sections of Order No. R9-2004-001 ("2004 Permit") which was issued by the RWQCB in 2004 and as to which the City issued a notice of intent to comply, and am familiar with those requirements.

3. I also have an understanding of the City's sources of funding for programs and activities required to comply with the Permit. I also am aware of arrangements under which the City and other Copermittees under the Permit agreed to share certain costs of complying with the Permit.

4. I make this declaration based on my own personal knowledge, except for matters set forth herein based on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

5. Based on my understanding of the Permit and the requirements of the 2004 Permit, I believe that the Permit required the City to undertake the following new and/or upgraded activities and which are unique to local government entities and which were not required in the 2004 Permit:

a. Removal of Categories of Irrigation Runoff From Exempted Non-Stormwater Discharges: Section B.2 of the Permit removed from the list of discharges exempted from the prohibition against discharges of non-stormwater to the municipal separate storm sewer system ("MS4") the following categories of discharges: landscape irrigation, irrigation water, and lawn watering discharges. The removal of these three categories of exempted discharges required the creation of new public education and outreach materials, potentially the need for amended ordinances to facilitate the required prohibition, tracking and response to reports of over-irrigation, enforcement and monitoring. It is my understanding and belief that using funds contributed from each Copermittee, including the City, through an Implementation Agreement, the Riverside County Flood Control and Water Conservation District ("District") updated the Coordinated Monitoring Program ("CMP"), including procedures for response, monitoring and analysis relating to such flows and revised the Jurisdictional Runoff Management Plan ("JRMP") template, training programs and community outreach programs to address these requirements. I am informed and believe that in Fiscal Year ("FY") 2010-11, the City's calculated share of such shared costs was $968.58 and that during FY 2011-12, the City's calculated share of that cost was $1,390.84. I am further informed and believe that the City incurred additional estimated direct costs of $10,696.67 in FY 2010-11 and $1,230.90 in FY 2011-12 to address these requirements.

b. Non-Stormwater Dry Weather Action Levels: Sections C and F.4.d and e, as well as Section II.C of the Monitoring and Reporting Program ("MRP") of the Permit, required Copermittees, including the City, to perform water quality sampling at a representative percentage of major outfalls and identified stations in each hydrologic subarea, implement new followup investigations and source tracking activities triggered by each exceedance of dry

weather non-stormwater action levels ("NALs"). These sections required the Copermittees, including the City, to perform field verification of major outfalls owned by the City, perform any required outfall sampling and analysis within the City's jurisdiction that was not otherwise performed by the District on behalf of the City, conduct and implement any follow-up source identification investigations for NAL exceedances at City outfalls, conduct enforcement actions as appropriate to the source, prepare reports on the status and outcome of NAL exceedances, and investigations / enforcement, and where necessary, update City compliance programs as necessary to address NAL exceedances. It is my understanding and belief that using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to develop a sampling and analysis plan, finalize the sampling and analysis plan, develop a follow-up response program and procedures, conduct initial required NAL sampling and analysis on behalf of each Copermittee, including the City, utilize analysis and source identification results in developing annual updates to the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address NAL exceedances. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $821.67 and that during FY 2011-12, the City's calculated share of that cost was $3,073.20. I am further informed and believe that the City incurred additional estimated direct costs of $9,073.20 in FY 2010-11 and $2,719.17 in FY 2011-12 to address these requirements.

c. Stormwater Action Levels: Section D of the Permit required the City to conduct end-of-pipe assessments to determine stormwater action level ("SAL") compliance metrics at major outfalls during wet weather. Under the Permit, the City was required to perform field verification of major outfalls owned by the City, perform any required outfall sampling and

analysis within the City's jurisdiction that is not otherwise performed by the District on behalf of the City, and where necessary, update the City's compliance programs to address SAL exceedances. I am informed and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to develop a sampling and analysis plan, finalize the sampling and analysis plan, conduct ongoing SAL sampling and analysis on behalf of each Copermittee, including the City, utilize analysis and source identification results in developing annual updates the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address SAL exceedances. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $821.67 and that during FY 2011-12, the City's calculated share of that cost was $3,073.20. I am further informed and believe that the City incurred additional estimated direct costs of $9,073.20 in FY 2010-11 and $2,719.17 in FY 2011-12 to address these requirements.

d. Priority Development Projects ("PDPs") and Hydromodification Requirements: Section F.1.d of the Permit required Copermittees, including the City, to develop and implement low impact development ("LID") principles and structural features into City-owned PDPs, which beginning on July 1, 2012, included all City-owned projects that resulted in the disturbance of one acre or more of land, as well as new public development projects that created 10,000 square feet or more of impervious surface. The Permit further required the City to review each of its PDPs to implement LID BMPs, including requiring specific types of LID Principles and LID BMPs or to make a finding of technical infeasibility, incorporate formalized consideration of LID BMPs into the plan review process and review its local codes, policies and ordinances for barriers to LID implementation and take actions to remove such barriers. Additionally, the City

was required to develop an LID waiver program for incorporation into the Standard Stormwater Mitigation Plan ("SSMP"), to allow a City-owned PDP to substitute LID BMPs with implementation of alternatives such as treatment control BMPs and either an on-site or off-site mitigation project or other mitigation. Section F.1.h of the Permit required the Copermittees, including the City, to develop and implement a Hydromodification Management Plan ("HMP") to manage increases in runoff discharge rates and durations from all PDPs. To comply with part F.1.h, the Copermittees, including the City, were required to hold and/or attend collaborative meetings and public hearings, perform studies and develop an HMP, train staff and educate the public and adapt the local SSMP. In addition, Section F.1.h(2) prohibited Copermittees, including the City, from using non-natural materials, including concrete, riprap or gabions, to reinforce stream channels as mitigation for a PDP. I am informed and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to perform the studies and analysis and a revised Standard Stormwater Mitigation Plan, an HMP with publically available hydromodification modelling software and a BMP Design Manual, developed and provided training for the Copermittees and the development community and revised the JRMP template. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $2,359.31 and that during FY 2011-12, the City's calculated share of that cost was $22,131.22. I am further informed and believe that the City incurred additional estimated direct costs of $26,048.51 in FY 2010-11 and $19,589.96 in FY 2011-12 to address these requirements.

e. BMP Maintenance Tracking Requirements: Section F.1.f of the Permit required the City to develop and maintain a watershed-based database to track all projects with a final approved SSMP and structural post-construction BMPs, including those PDPs dating back to

July 2005, and to inspect such projects on a routine basis. This program required the City to develop and populate a database of information for each SSMP project built since 2005, including information on BMP types, locations, parties responsible for maintenance, date of construction, dates and findings of maintenance verifications and corrective actions; to contact property owners for permission to inspect on-site BMPs; to develop and implement a program to conduct inspections and/or BMP verifications on all SSMP projects; and, to conduct inspections. I am informed and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District developed a template BMP tracking spreadsheet and updated the JRMP template to reflect these requirements. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $186.41 and that during FY 2011-12, the City's calculated share of that cost was $255.54. I am further informed and believe that the City incurred additional estimated direct costs of $2,057.61 in FY 2010-11 and $223.80 in FY 2011-12 to address these requirements.

f. Construction Site Requirements: Section F.2.d of the Permit required Copermittees, including the City, to implement active/passive sediment treatment ("AST") at City- owned construction sites or portions thereof that were determined to be an "exceptional threat" to water quality. Section F.2.e of the Permit required City inspectors at construction sites to review site monitoring data results, if the site monitored its runoff. These requirements would add costs to require AST to every City-owned construction site determined to pose such a threat to water quality and for enhanced inspection training. I am informed and believe that the District, using funds contributed from each Copermittee including the City through the Implementation Agreement, conducted training of Copermittee staff and updated the JRMP template with regard to such requirements. I am informed and believe that in FY 2010-11, the

City's calculated share of such costs was $114.55 and that during FY 2011-12, the City's calculated share of that cost was $233.37. I am further informed and believe that the City incurred additional estimated direct costs of $1,262.92 in FY 2010-11 and $208.88 in FY 2011-12 to address these requirements.

g. Maintenance of Unpaved Roads: Section F.3.a.10 of the Permit required the Copermittees, including the City, to develop and implement, or require implementation of, BMPs for erosion and sediment control on City-maintained unpaved roads, as well to develop and implement BMPs to minimize impacts on streams and wetlands during unpaved road maintenance activities, to maintain unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport, to regrade unpaved roads to be sloped outward, or adopt alternative equally effective BMPs to minimize erosion and sedimentation and to examine the feasibility of replacing existing culverts or design new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology. I am informed and believe that the District, using funds contributed from each Copermittee including the City through the Implementation Agreement, revised the JRMP template and the SSMP to incorporate road maintenance provisions. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $70.80 and that during FY 2011-12, the City's calculated share of that cost was $177.65. I am further informed and believe that the City incurred additional estimated direct costs of $780.73 in FY 2010-11 and $156.66 in FY 2011-12 to address these requirements.

h. Commercial/Industrial Inspection Requirement: Section F.3.b.4 of the Permit required the City, as part of its inspection of commercial/industrial facilities, to review facility monitoring data if the facility monitored its runoff. This provision required inspectors at commercial/industrial sites to spend greater time in the inspection or in analyzing data thereafter.

Additionally, inspectors were required to be further trained so as to be able to read and interpret monitoring and sampling analysis data. I am informed and believe that the District, using funds contributed from each Copermittee including the City through the Implementation Agreement, provided training updates and revised the JRMP template to incorporate these requirements. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $70.80 and that during FY 2011-12, the City's calculated share of that cost was $219.69. I am further informed and believe that the City incurred additional estimated direct costs of $780.73 in FY 2010-11 and $193.96 in FY 2011-12 to address these requirements.

i. Retrofitting of Existing Development: Section F.3.d of the Permit required the Copermittees, including the City, to develop and implement a retrofitting program for existing development, including requiring the identification and inventorying of existing development as candidates for retrofitting; the evaluation and ranking of the inventoried developments to prioritize retrofitting; consideration of the results of the evaluation in prioritizing workplans for the following year; tracking and inspecting completed retrofit BMPs; and implementing a program to encourage retrofit of private properties. I am informed and believe and therefore state that using funds contributed from the Copermittees, including the City, through the Implementation Agreement, the District retained a consultant to perform necessary studies and develop a Retrofit Study, and revised the JRMP template to incorporate these requirements. I am informed and believe that in FY 010-11, the City's calculated share of such costs was $109.00 and that during FY 2011-12, the City's calculated share of that cost was $41,454.62. I am further informed and believe that the City incurred additional estimated direct costs of $1,203.92 in FY 2010-11 and $36,688.28 in FY 2011-12 to address these requirements.

j. Watershed Water Quality Workplan ("Watershed Workplan"): Section G of the Permit required the Copermittees, including the City, to develop and annually update a Watershed Workplan. This required the Copermittees, including the City, to: characterize watershed receiving water quality, including analyzing monitoring data collected under the Permit and from other public and private organizations; identify and prioritize water quality problems by constituent and by location, giving consideration to total maximum daily load programs, waters listed as impaired pursuant to Clean Water Act section 303(d), and other pertinent conditions; identify likely sources causing the highest water quality problems within the watershed, including from monitoring conducted under the Permit and additional focused water quality monitoring to identify specific sources; develop a watershed BMP implementation strategy, including a schedule to implement BMPs to abate specific receiving water quality problems; develop a strategy to monitor improvements in receiving water quality stemming from implementation of BMPs described in the Watershed Workplan, including required monitoring in the receiving water; establish a schedule for development and implementation of the watershed strategy outlined in the Watershed Workplan, including the holding of annual watershed workplan review meetings open to the public; implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the RWQCB; cooperate among Copermittees to develop and implement the Watershed Workplan, including the requirement to pursue interagency agreements with non-Copermittee MS4 operators; implement a public participation mechanism within each watershed, including opportunity for public review and comment on the draft Watershed Workplan prior to its submission to the RWQCB; and, as part of the review and annual update of the Watershed Workplan, hold an Annual Watershed Review meeting open to the public and adequately noticed. I am informed and believe that using funds

contributed from each Copermittee, including the City, through the Implementation Agreement, the District hired a consultant to gather and analyze historic water quality monitoring data, develop draft and submit the Watershed Workplan and revise the JRMP template. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $727.58 and that during FY 2011-12, the City's calculated share of that cost was $4,565.99. I am further informed and believe that the City incurred additional estimated direct costs of $8,033.45 in FY 2010-11 and $4,043.32 in FY 2011-12 to address these requirements.

k. JRMP Annual Report Requirements: Section K.3.c (plus Table 5 in the Permit and Attachment D) of the Permit required, among other items, that the Copermittees, including the City, submit a Jurisdictional Runoff Management Program ("JRMP") report each year, beginning on October 31, 2013. The JRMP requirements included the following: detailed tracking of various elements on a per-facility basis, including descriptions of BMPs required at PDPs; the name and location of all PDPs granted a waiver from implementing LID BMPs; the total number and date of inspections conducted at each construction site; descriptions of high-level enforcement actions; a summary and assessment of BMP retrofits implemented at flood control structures; a summary of inspection findings and follow-up activities for each municipal facility and area inspected, as well as the number and date; BMP violations and enforcement actions for each facility; tracking of inspections of commercial/industrial facilities by facility or mobile business, including number and date of inspections; BMP violations, number, date and types of enforcement actions; and, a description of each high-level enforcement action. Additionally, Copermittees, including the City, were required to describe efforts to manage runoff and stormwater pollution in common interest areas and mobile home parks, describe efforts to retrofit existing developments and efforts to encourage private landowners to retrofit

existing development, provide a detailed list of all implemented retrofit projects, any proposed retrofit or regional mitigation projects and timelines for future implementations. Additionally, the Copermittees, including the City, were required to submit a checklist that required, among other things, the listing of active and inactive construction sites, the number of development plan reviews and grading permits issued, as well as number of projects exempted from hydromodification requirements, the number of PDPs, the amount of waste removed from MS4 maintenance and the total miles of MS4 inspected. I am informed and believe that using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District developed revisions to the JRMP and Annual Report templates to incorporate these requirements. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $357.81 and that during FY 2011-12, the City's calculated share of that cost was $1,007.52. I am further informed and believe that the City incurred additional estimated direct costs of $3,947.41 in FY 2010-11 and $895.20 in FY 2011-12 to address these requirements.

l. Special Studies: The Monitoring and Reporting Program of the Permit required Copermittees, including the City, to conduct special studies, including (1) a sediment toxicity study, (2) a trash and litter study, (3) a study of agricultural, federal and tribal discharges into the Copermittees' MS4s, (4) a MS4 and receiving water maintenance study and (5) an intermittent and ephemeral stream perennial conversion study. I am informed and believe that the District, using funds contributed by the Copermittees, including the City, conducted the first three studies, performed a work plan for the fourth study and then performed one additional study on LID implementation, in return for not doing the remainder of the fourth study and the fifth study. I am informed and believe that using funds from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to develop and perform these

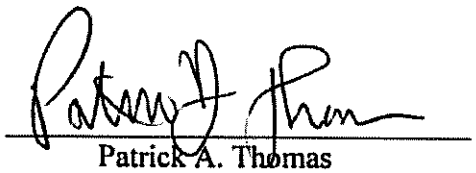
studies and to submit them to the Regional Board. I am informed and believe that in FY 2011-12, the City's calculated share of such costs was $6,706.43 and that during FY 2012-13, the City's calculated share of that cost was $27,806.58.

m. Requirements for Permit Programs to Ensure No Violations of Water Quality Standards and Other Standards: Sections F.1, F.1.d, F.2, F.3.a, F.3.b and F.3.c of the Permit required Copermittees, including the City, to implement programs to ensure that development project discharges, PDP discharges, construction site discharges, municipal discharges, commercial/industrial discharges and residential discharges did not cause or contribute to a violation of water quality standards and prevent illicit discharges into the MS4. Section F.3.d. of the Permit required Copermittees, including the City, to develop and implement a retrofitting program to, among other things, prevent discharges from the MS4 from causing or contributing to a violation of water quality standards and to reduce the discharge of stormwater pollutants to the MEP. Section F.6 of the Permit required Copermittees, including the City, to implement education programs to measurably change the behavior of target communities and thereby reduce pollutants in stormwater discharges and eliminate prohibited non-storm water discharges to MS4s and the environment. I am informed and believe and therefore state that these requirements were incorporated into the design and implementation of other programs required by the Permit and set forth above, including the NALs and SALs requirement, the priority development project and HMP requirements, the AST requirements at construction sites, the unpaved road BMP and design requirements, the monitoring of construction sites, the existing development retrofit requirements, and the water quality workplan requirements. I am informed and believe and therefore state that in total, the City incurred a yet to be determined share of calculated costs of $4,986.38 in FY 2010-11 and $70,362.94 in FY 2011-12 plus estimated direct

costs of $5,485.02 in FY 2010-11 and $5,938.16 in FY 2011-12 in response to these requirements.

6. I am informed and believe that there are no dedicated state, regional or federal funds that are or will be available to pay for any of the new and/or upgraded programs and activities set forth in this Declaration. The City can collect some inspection fees during the development process. I am informed and believe that such fees are not sufficient to cover the cost of the programs and activities set forth in this Declaration. I am not aware of any other fee or tax that the City would have the discretion to impose under California law to recover any portion of the cost of these programs and activities. I further am informed and believe that the only other source to pay for these new programs and activities is the City's general fund.

I declare under penalty of perjury that foregoing is true and correct. Executed April 25, 2017 at Temecula, California.



Patrick A. Thomas

DECLARATION OF DANIEL A. YORK

CITY OF WILDOMAR

I, DANIEL A. YORK, hereby declare and state as follows:

1. I am Assistant City Manager, Public Works Director, and City Engineer for the City of Wildomar ("City"). In that capacity, I shared responsibility for the compliance of the City with regard to the requirements of California Regional Water Quality Control Board, San Diego Region ("RWQCB") Order No. R9-2010-0016 (the "Permit"), as they apply to the City.

2. I have reviewed sections of the Permit as set forth herein and am familiar with those provisions. I also am aware of the requirements of pertinent sections of Order No. R9-2004-001 ("2004 Permit") which was issued by the RWQCB in 2004 and as to which the City issued a notice of intent to comply, and am familiar with those requirements.

3. I also have an understanding of the City's sources of funding for programs and activities required to comply with the Permit. I also am aware of arrangements under which the City and other Copermittees under the Permit agreed to share certain costs of complying with the Permit.

4. I make this declaration based on my own personal knowledge, except for matters set forth herein based on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

5. Based on my understanding of the Permit and the requirements of the 2004 Permit, I believe that the Permit required the City to undertake the following new and/or upgraded activities and which are unique to local government entities and which were not required in the 2004 Permit:

a. Removal of Categories of Irrigation Runoff From Exempted Non-Stormwater Discharges: Section B.2 of the Permit removed from the list of discharges exempted from the prohibition against discharges of non-stormwater to the municipal separate storm sewer system ("MS4") the following categories of discharges: landscape irrigation, irrigation water, and lawn watering discharges. The removal of these three categories of exempted discharges required the creation of new public education and outreach materials, potentially the need for amended ordinances to facilitate the required prohibition, tracking and response to reports of over-irrigation, enforcement and monitoring. It is my understanding and belief that using funds contributed from each Copermittee, including the City, through an Implementation Agreement, the Riverside County Flood Control and Water Conservation District ("District") updated the Coordinated Monitoring Program ("CMP"), including procedures for response, monitoring and analysis relating to such flows and revised the Jurisdictional Runoff Management Plan ("JRMP") template, training programs and community outreach programs to address these requirements. I am informed and believe that in Fiscal Year ("FY") 2010-11, the City's calculated share of such shared costs was $0 and that during FY 2011-12, the City's calculated share of that cost was $340.02. I am further informed and believe that the City incurred estimated additional direct costs of $16.59 in FY 2010-11 and $33.68 in FY 2011-12 to address these requirements.

b. Non-Stormwater Dry Weather Action Levels: Sections C and F.4.d and e, as well as Section II.C of the Monitoring and Reporting Program ("MRP") of the Permit, required Copermittees, including the City, to perform water quality sampling at a representative percentage of major outfalls and identified stations in each hydrologic subarea, implement new followup investigations and source tracking activities triggered by each exceedance of dry weather non-stormwater action levels ("NALs"). These sections required the Copermittees,

including the City, to perform field verification of major outfalls owned by the City, perform any required outfall sampling and analysis within the City's jurisdiction that was not otherwise performed by the District on behalf of the City, conduct and implement any follow-up source identification investigations for NAL exceedances at City outfalls, conduct enforcement actions as appropriate to the source, prepare reports on the status and outcome of NAL exceedances, and investigations / enforcement, and where necessary, update City compliance programs as necessary to address NAL exceedances. It is my understanding and belief that using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to develop a sampling and analysis plan, finalize the sampling and analysis plan, develop a follow-up response program and procedures, conduct initial required NAL sampling and analysis on behalf of each Copermittee, including the City, utilize analysis and source identification results in developing annual updates to the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address NAL exceedances. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $0 and that during FY 2011-12, the City's calculated share of that cost was $751.30. I am further informed and believe that the City incurred estimated additional direct costs of $16.59 in FY 2010-11 and $33.68 in FY 2011-12 to address these requirements.

c. Stormwater Action Levels: Section D of the Permit required the City to conduct end-of-pipe assessments to determine stormwater action level ("SAL") compliance metrics at major outfalls during wet weather. Under the Permit, the City was required to perform field verification of major outfalls owned by the City, perform any required outfall sampling and analysis within the City's jurisdiction that is not otherwise performed by the District on behalf of

the City, and where necessary, update the City's compliance programs to address SAL exceedances. I am informed and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to develop a sampling and analysis plan, finalize the sampling and analysis plan, conduct ongoing SAL sampling and analysis on behalf of each Copermittee, including the City, utilize analysis and source identification results in developing annual updates the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address SAL exceedances. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $0 and that during FY 2011-12, the City's calculated share of that cost was $751.30. I am further informed and believe that the City incurred estimated additional direct costs of $16.59 in FY 2010-11 and $33.68 in FY 2011-12 to address these requirements.

d. Priority Development Projects ("PDPs") and Hydromodification Requirements: Section F.1.d of the Permit required Copermittees, including the City, to develop and implement low impact development ("LID") principles and structural features into City-owned PDPs, which beginning on July 1, 2012, included all City-owned projects that resulted in the disturbance of one acre or more of land, as well as new public development projects that created 10,000 square feet or more of impervious surface. The Permit further required the City to review each of its PDPs to implement LID BMPs, including requiring specific types of LID Principles and LID BMPs or to make a finding of technical infeasibility, incorporate formalized consideration of LID BMPs into the plan review process and review its local codes, policies and ordinances for barriers to LID implementation and take actions to remove such barriers. Additionally, the City was required to develop an LID waiver program for incorporation into the Standard Stormwater

Mitigation Plan ("SSMP"), to allow a City-owned PDP to substitute LID BMPs with implementation of alternatives such as treatment control BMPs and either an on-site or off-site mitigation project or other mitigation. Section F.1.h of the Permit required the Copermittees, including the City, to develop and implement a Hydromodification Management Plan ("HMP") to manage increases in runoff discharge rates and durations from all PDPs. To comply with part F.1.h, the Copermittees, including the City, were required to hold and/or attend collaborative meetings and public hearings, perform studies and develop an HMP, train staff and educate the public and adapt the local SSMP. In addition, Section F.1.h(2) prohibited Copermittees, including the City, from using non-natural materials, including concrete, riprap or gabions, to reinforce stream channels as mitigation for a PDP. I am informed and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to perform the studies and analysis and a revised Standard Stormwater Mitigation Plan, an HMP with publically available hydromodification modelling software and a BMP Design Manual, developed and provided training for the Copermittees and the development community and revised the JRMP template. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $0 and that during FY 2011-12, the City's calculated share of that cost was $5,410.40. I am further informed and believe that the City incurred estimated additional direct costs of $16.59 in FY 2010-11 and $33.68 in FY 2011-12 to address these requirements.

e. BMP Maintenance Tracking Requirements: Section F.1.f of the Permit required the City to develop and maintain a watershed-based database to track all projects with a final approved SSMP and structural post-construction BMPs, including those PDPs dating back to July 2005, and to inspect such projects on a routine basis. This program required the City to

develop and populate a database of information for each SSMP project built since 2005, including information on BMP types, locations, parties responsible for maintenance, date of construction, dates and findings of maintenance verifications and corrective actions; to contact property owners for permission to inspect on-site BMPs; to develop and implement a program to conduct inspections and/or BMP verifications on all SSMP projects; and, to conduct inspections. I am informed and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District developed a template BMP tracking spreadsheet and updated the JRMP template to reflect these requirements. I am informed and believe that in FY 2010-11, the City's calculated share of such shared costs was $0 and that during FY 2011-12, the City's calculated share of that cost was $62.47. I am further informed and believe that the City incurred estimated additional direct costs of $16.59 in FY 2010-11 and $33.68 in FY 2011-12 to address these requirements.

f. Construction Site Requirements: Section F.2.d of the Permit required Copermittees, including the City, to implement active/passive sediment treatment ("AST") at City- owned construction sites or portions thereof that were determined to be an "exceptional threat" to water quality. Section F.2.e of the Permit required City inspectors at construction sites to review site monitoring data results, if the site monitored its runoff. These requirements would add costs to require AST to every City-owned construction site determined to pose such a threat to water quality and for enhanced inspection training. I am informed and believe that the District, using funds contributed from each Copermittee including the City through the Implementation Agreement, conducted training of Copermittee staff and updated the JRMP template with regard to such requirements. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $0 and that during FY 2011-12, the City's calculated

share of that cost was $57.05. I am further informed and believe that the City incurred estimated additional direct costs of $16.59 in FY 2010-11 and $33.68 in FY 2011-12 to address these requirements.

g. Maintenance of Unpaved Roads: Section F.3.a.10 of the Permit required the Copermittees, including the City, to develop and implement, or require implementation of, BMPs for erosion and sediment control on City-maintained unpaved roads, as well to develop and implement BMPs to minimize impacts on streams and wetlands during unpaved road maintenance activities, to maintain unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport, to regrade unpaved roads to be sloped outward, or adopt alternative equally effective BMPs to minimize erosion and sedimentation and to examine the feasibility of replacing existing culverts or design new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology. I am informed and believe that the District, using funds contributed from each Copermittee including the City through the Implementation Agreement, revised the JRMP template and the SSMP to incorporate road maintenance provisions. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $0 and that during FY 2011-12, the City's calculated share of that cost was $43.43. I am further informed and believe that the City incurred estimated additional direct costs of $6,000.00 in FY 2010-11 and $10,000.00 in FY 2011-12 to address these requirements.

h. Commercial/Industrial Inspection Requirement: Section F.3.b.4 of the Permit required the City, as part of its inspection of commercial/industrial facilities, to review facility monitoring data if the facility monitored its runoff. This provision required inspectors at commercial/industrial sites to spend greater time in the inspection or in analyzing data thereafter. Additionally, inspectors were required to be further trained so as to be able to read and interpret

monitoring and sampling analysis data. I am informed and believe that the District, using funds contributed from each Copermittee including the City through the Implementation Agreement, provided training updates and revised the JRMP template to incorporate these requirements. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $0 and that during FY 2011-12, the City's calculated share of that cost was $53.71. I am further informed and believe that the City incurred estimated additional direct costs of $217.53 in FY 2010-11 and $167.64 in FY 2011-12 to address these requirements.

i. Retrofitting of Existing Development: Section F.3.d of the Permit required the Copermittees, including the City, to develop and implement a retrofitting program for existing development, including requiring the identification and inventorying of existing development as candidates for retrofitting; the evaluation and ranking of the inventoried developments to prioritize retrofitting; consideration of the results of the evaluation in prioritizing workplans for the following year; tracking and inspecting completed retrofit BMPs; and implementing a program to encourage retrofit of private properties. I am informed and believe and therefore state that using funds contributed from the Copermittees, including the City, through the Implementation Agreement, the District retained a consultant to perform necessary studies and develop a Retrofit Study, and revised the JRMP template to incorporate these requirements. I am informed and believe that in FY 010-11, the City's calculated share of such costs was $0 and that during FY 2011-12, the City's calculated share of that cost was $10,134.37. I am further informed and believe that the City incurred estimated additional direct costs of $16.59 in FY 2010-11 and $33.68 in FY 2011-12 to address these requirements.

j. Watershed Water Quality Workplan ("Watershed Workplan"): Section G of the Permit required the Copermittees, including the City, to develop and annually update a

Watershed Workplan. This required the Copermittees, including the City, to: characterize watershed receiving water quality, including analyzing monitoring data collected under the Permit and from other public and private organizations; identify and prioritize water quality problems by constituent and by location, giving consideration to total maximum daily load programs, waters listed as impaired pursuant to Clean Water Act section 303(d), and other pertinent conditions; identify likely sources causing the highest water quality problems within the watershed, including from monitoring conducted under the Permit and additional focused water quality monitoring to identify specific sources; develop a watershed BMP implementation strategy, including a schedule to implement BMPs to abate specific receiving water quality problems; develop a strategy to monitor improvements in receiving water quality stemming from implementation of BMPs described in the Watershed Workplan, including required monitoring in the receiving water; establish a schedule for development and implementation of the watershed strategy outlined in the Watershed Workplan, including the holding of annual watershed workplan review meetings open to the public; implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the RWQCB; cooperate among Copermittees to develop and implement the Watershed Workplan, including the requirement to pursue interagency agreements with non-Copermittee MS4 operators; implement a public participation mechanism within each watershed, including opportunity for public review and comment on the draft Watershed Workplan prior to its submission to the RWQCB; and, as part of the review and annual update of the Watershed Workplan, hold an Annual Watershed Review meeting open to the public and adequately noticed. I am informed and believe that using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District hired a consultant to gather and analyze historic water quality monitoring data,

develop draft and submit the Watershed Workplan and revise the JRMP template. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $0 and that during FY 2011-12, the City's calculated share of that cost was $1,116.24. I am further informed and believe that the City incurred estimated additional direct costs of $16.59 in FY 2010-11 and $33.68 in FY 2011-12 to address these requirements.

k. JRMP Annual Report Requirements: Section K.3.c (plus Table 5 in the Permit and Attachment D) of the Permit required, among other items, that the Copermittees, including the City, submit a Jurisdictional Runoff Management Program ("JRMP") report each year, beginning on October 31, 2013. The JRMP requirements included the following: detailed tracking of various elements on a per-facility basis, including descriptions of BMPs required at PDPs; the name and location of all PDPs granted a waiver from implementing LID BMPs; the total number and date of inspections conducted at each construction site; descriptions of high-level enforcement actions; a summary and assessment of BMP retrofits implemented at flood control structures; a summary of inspection findings and follow-up activities for each municipal facility and area inspected, as well as the number and date; BMP violations and enforcement actions for each facility; tracking of inspections of commercial/industrial facilities by facility or mobile business, including number and date of inspections; BMP violations, number, date and types of enforcement actions; and, a description of each high-level enforcement action. Additionally, Copermittees, including the City, were required to describe efforts to manage runoff and stormwater pollution in common interest areas and mobile home parks, describe efforts to retrofit existing developments and efforts to encourage private landowners to retrofit existing development, provide a detailed list of all implemented retrofit projects, any proposed retrofit or regional mitigation projects and timelines for future implementations. Additionally,

the Copermittees, including the City, were required to submit a checklist that required, among other things, the listing of active and inactive construction sites, the number of development plan reviews and grading permits issued, as well as number of projects exempted from hydromodification requirements, the number of PDPs, the amount of waste removed from MS4 maintenance and the total miles of MS4 inspected. I am informed and believe that using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District developed revisions to the JRMP and Annual Report templates to incorporate these requirements. I am informed and believe that in FY 2010-11, the City's calculated share of such costs was $0 and that during FY 2011-12, the City's calculated share of that cost was $246.31. I am further informed and believe that the City incurred estimated additional direct costs of $16.59 in FY 2010-11 and $33.68 in FY 2011-12 to address these requirements.

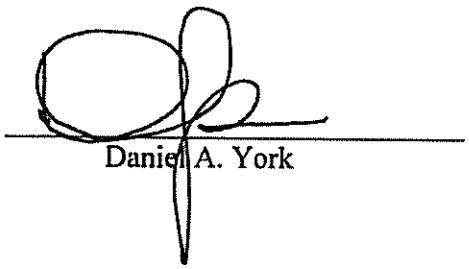
l. Special Studies: The Monitoring and Reporting Program of the Permit required Copermittees, including the City, to conduct special studies, including (1) a sediment toxicity study, (2) a trash and litter study, (3) a study of agricultural, federal and tribal discharges into the Copermittees' MS4s, (4) a MS4 and receiving water maintenance study and (5) an intermittent and ephemeral stream perennial conversion study. I am informed and believe that the District, using funds contributed by the Copermittees, including the City, conducted the first three studies, performed a work plan for the fourth study and then performed one additional study on LID implementation, in return for not doing the remainder of the fourth study and the fifth study. I am informed and believe that using funds from each Copermittee, including the City, through the Implementation Agreement, the District retained a consultant to develop and perform these studies and to submit them to the Regional Board. I am informed and believe that in FY 2011-

12, the City's calculated share of such costs was $1,639.51 and that during FY 2012-13, the City's calculated share of that cost was $6,994.48.

m. Requirements for Permit Programs to Ensure No Violations of Water Quality Standards and Other Standards: Sections F.1, F.1.d, F.2, F.3.a, F.3.b and F.3.c of the Permit required Copermittees, including the City, to implement programs to ensure that development project discharges, PDP discharges, construction site discharges, municipal discharges, commercial/industrial discharges and residential discharges did not cause or contribute to a violation of water quality standards and prevent illicit discharges into the MS4. Section F.3.d. of the Permit required Copermittees, including the City, to develop and implement a retrofitting program to, among other things, prevent discharges from the MS4 from causing or contributing to a violation of water quality standards and to reduce the discharge of stormwater pollutants to the MEP. Section F.6 of the Permit required Copermittees, including the City, to implement education programs to measurably change the behavior of target communities and thereby reduce pollutants in stormwater discharges and eliminate prohibited non-storm water discharges to MS4s and the environment. I am informed and believe and therefore state that these requirements were incorporated into the design and implementation of other programs required by the Permit and set forth above, including the NALs and SALs requirement, the priority development project and HMP requirements, the AST requirements at construction sites, the unpaved road BMP and design requirements, the monitoring of construction sites, the existing development retrofit requirements, and the water quality workplan requirements. I am informed and believe and therefore state that in total, the City incurred a yet to be determined share of calculated costs of $18,317.80 in FY 2011-12 plus estimated additional direct costs of $6,317.07 in FY 2010-11 and $10,369.72 in FY 2011-12 in response to these requirements.

6. I am informed and believe that there are no dedicated state or federal funds that are or will be available to pay for any of the new and/or upgraded programs and activities set forth in this Declaration. The City has access to funding obtained through County Service Area 152 ("CSA 152") and Lighting and Landscape Maintenance District 89-1C (LLMD 89-1C), which funds, in part, the obligations of the City under the Permit. The City also can collect some fees during the development and business registration process. I am informed and believe that these funding sources are not sufficient to cover the cost of the programs and activities set forth in this Declaration. I am not aware of any other fee or tax that the City would have the discretion to impose under California law to recover any portion of the cost of these programs and activities. I further am informed and believe that the only other source to pay for these new programs and activities is the City's general fund.

I declare under penalty of perjury that foregoing is true and correct. Executed April 26, 2017 at Wildomar, California.



Daniel A. York

RECEIVED
December 2, 2011
Commission on
State Mandates

DECLARATION OF TIM D'ZMURA

CITY OF WILDOMAR

I, TIM D'ZMURA, hereby declare and state as follows:

1. I am City Engineer and Director of Public Works for the City of Wildomar ("City"). In that capacity, I share responsibility for the compliance of the City with regard to the requirements of California Regional Water Quality Control Board, San Diego Region ("RWQCB") Order No. R9-2010-0016 (the "Permit"), as they apply to the City.

2. I have reviewed sections of the Permit as set forth herein and am familiar with those provisions. I also am aware of the requirements of pertinent sections of Order No. R9-2004-001 ("2004 Permit") which was issued by the RWQCB in 2004 and as to which the City issued a notice of intent to comply, and am familiar with those requirements.

3. I also have an understanding of the City's sources of funding for programs and activities required to comply with the Permit. I also am aware of arrangements under which the City and other Copermittees under the Permit have agreed to share certain costs of complying with the Permit.

4. I make this declaration based on my own personal knowledge, except for matters set forth herein based on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

5. Based on my understanding of the Permit and the requirements of the 2004 Permit, I believe that the Permit requires the City to undertake the following new and/or upgraded activities and which are unique to local government entities:

a. Removal of Categories of Irrigation Runoff From Exempted Non-Stormwater Discharges: Section B.2 of the Permit removes from the list of discharges exempted from the

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prohibition against discharges of non-stormwater to the municipal separate storm sewer system ("MS4") the following categories of discharges: landscape irrigation, irrigation water, and lawn watering discharges. Such discharges were exempted in the 2004 Permit. The removal of these three categories of exempted discharges will require the City to among other things, create new public education and outreach materials, expend City staff time to amend ordinances to facilitate the required prohibition, track and respond to reports of over-irrigation, enforce and monitor compliance of City residents and modify, monitor and more aggressively maintain City irrigation systems and landscaping. On information and belief, the City's cost to comply with these requirements will exceed $1,000 in each of fiscal years ("FYs") 2011-2012 and 2012-2013.

b. Non-Stormwater Dry Weather Action Levels: Sections C and F.4.d and e, as well as Section II.C of the Monitoring and Reporting Program ("MRP") of the Permit require Copermittees, including the City, to perform water quality sampling at a representative percentage of major outfalls and identified stations in each hydrologic subarea, implement new followup investigations and source tracking activities triggered by each exceedance of dry weather non-stormwater action levels ("NALs"). These sections will require the City, to perform field verification of major outfalls owned by the City, perform any required outfall sampling and analysis within the City's jurisdiction that is not otherwise performed by the District on behalf of the City, conduct and implement any follow-up source identification investigations for NAL exceedances at City outfalls, conduct enforcement actions as appropriate to the source, prepare reports on the status and outcome of NAL exceedances, and investigations / enforcement, and where necessary, update City compliance programs as necessary to address NAL exceedances. It is my understanding and belief that using funds contributed from each Copermittee, including the City, through their Implementation Agreement, the Riverside County

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Flood Control & Water Conservation District ("District") has performed an initial GIS screening of potential outfalls within the permit area for each of the copermittees, retained a consultant to develop a sampling and analysis plan; and over the remainder of Fiscal Year ("FY") 2011-2012 and throughout the Permit term will finalize the sampling and analysis plan, develop a follow-up response program and procedures, conduct initial required NAL sampling and analysis on behalf of each Copermittee, including the City, utilize analysis and source identification results in developing annual updates to the Watershed Workplan and Monitoring Reports, and where necessary coordinate development of model updates to compliance programs to address NAL exceedances. On information and belief, the cost to the City of complying with these requirements will exceed $1,000 in each of FYs 2011-2012 and 2012-2013 and potentially in later years of the Permit.

c. Stormwater Action Levels: Section D of the Permit requires the City to conduct end-of-pipe assessments to determine stormwater action level ("SAL") compliance metrics at major outfalls during wet weather. The City will be required to perform field verification of major outfalls owned by the City, perform any required outfall sampling and analysis within the City's jurisdiction that is not otherwise performed by the District on behalf of the City, and where necessary, update the City's compliance programs to address SAL exceedances. I understand and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District has performed an initial GIS screening of potential outfalls within the permit area for each of the Copermittees, including the City, retained a consultant to develop a sampling and analysis plan; and over the remainder of FY 2011-2012 and throughout the Permit term will finalize the sampling and analysis plan, conduct ongoing SAL sampling and analysis on behalf of each Copermittee, including the City, utilize analysis

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and source identification results in developing annual updates the Watershed Workplan and Monitoring Reports, and where necessary, coordinate development of model updates to compliance programs to address SAL exceedances. On information and belief, the cost to the City of these requirements will exceed $1,000 in each of FYs 2011-2012 and 2012-2013 and potentially in later years of the Permit.

d. Priority Development Projects ("PDPs") and Hydromodification Requirements: Section F.1.d of the Permit requires Copermittees, including the City, to develop and implement low impact development ("LID") principles and structural features into City-owned PDPs, which beginning July 1, 2012 will includes all City-owned projects that result in the disturbance of one acre or more of land, as well as new development projects that create 10,000 square feet or more of impervious surface, including public projects. This section further requires the City to review each of its PDPs to implement LID BMPs, including requiring specific types of LID Principles and LID BMPs or make a finding of technical infeasibility, incorporating formalized consideration of LID BMPs into the plan review process and reviewing its local codes, policies and ordinances for barriers to LID implementation and taking actions to remove such barriers. Additionally, the City is required to develop an LID waiver program for incorporation into the Standard Stormwater Mitigation Plan ("SSMP"), to allow a City-owned PDP to substitute LID BMPs with implementation of alternatives such as treatment control BMPs and either an on-site or off-site mitigation project or other mitigation. Section F.1.h of the Permit requires Copermittees, including the City, to develop and implement a Hydromodification Management Plan ("HMP") to manage increases in runoff discharge rates and durations from all PDPs. To comply with part F.1.h, the Copermittees, including the City, must hold and/or attend collaborative meetings and public hearings, perform studies and develop an HMP, train staff and

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educate the public and adapt the local SSMP. In addition, Section F.1.h(2) prohibits Copermittees, including the City, from using non-natural materials, including concrete, riprap or gabions, in reinforcing stream channels as mitigation for a PDP. None of these provisions were in the 2004 Permit. I am informed and believe that, using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District will hire a consultant to perform the studies and analysis and create a HMP that is intended to comply with the 2010 Permit. Additionally, the City will be required to implement the new SSMP requirements for LID and Hydromodification mitigation on an increased number of City projects. On information and belief, the cost to the City of complying with these requirements will exceed $1,000 in each of FYs 2011-2012 and 2012-2013 and potentially in later years of the Permit.

e. BMP Maintenance Tracking Requirements: Section F.1.f of the Permit requires the City to develop and maintain a watershed-based database to track all projects that have a final approved SSMP and structural post-construction BMPs, including those PDPs dating to July 2005, and to inspect such projects on a routine basis. These requirements were not part of the 2004 Permit. This program requires the City to develop and populate a database of information for each SSMP project that has been built since 2005, including information on BMP types, locations, parties responsible for maintenance, date of construction, dates and findings of maintenance verifications and corrective actions; to contact property owners for permission to inspect on-site BMPs; to develop and implement a program to conduct inspections and/or BMP verifications on all SSMP projects; and, to conduct inspections. On information and belief, the cost to the City of complying with these provisions will exceed $1,000 during each of FYs 2011-2012 and 2012-2013 and potentially in later years of the Permit.

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f. Construction Site Requirements: Section F.2.d of the Permit requires Copermittees, including the City, to implement active/passive sediment treatment at City- owned construction sites or portions thereof that are determined to be an "exceptional threat" to water quality. Section F.2.e of the Permit requires City inspectors at construction sites to review site monitoring data results, if the site monitors its runoff. The first requirement will add cost to every City-owned construction site that is determined to pose such a threat to water quality due to the requirement to adopt AST. The second requirement will require the City to ensure that its inspection staff is trained at a higher level than previously. These requirements were not contained in the 2004 Permit. On information and belief, the cost to the City of such requirements will exceed $1,000 in each of FYs 2011-2012 and 2012-2013 and potentially in later years of the Permit.

g. Maintenance of Unpaved Roads: Section F.3.a.10 of the Permit requires the Copermittees, including the City, to develop and implement, or require implementation of, BMPs for erosion and sediment control on City-maintained unpaved roads, as well to develop and implement BMPs to minimize impacts on streams and wetlands during unpaved road maintenance activities, to maintain unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport, to regrade unpaved roads to be sloped outward, or adopt alternative equally effective BMPs to minimize erosion and sedimentation and to examine the feasibility of replacing existing culverts or design new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology. These requirements were not contained in the 2004 Permit. The City will be required to assess its maintenance practices on City-maintained unpaved roads, which may require new activities or BMPs to be deployed for compliance with the 2010 Permit. On information and belief, the cost to the City of such

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requirements will exceed $1,000 in each of FYs 2011-2012 and 2012-2013 and potentially in later years of the Permit.

h. Commercial/Industrial Inspection Requirement: Section F.3.b.4 of the Permit requires the City, as part of its inspection of commercial/industrial facilities, to review facility monitoring data if the site monitors its runoff. This provision will involve greater time spent by inspectors at commercial/industrial sites or in analyzing data thereafter. Additionally, inspectors will have to be trained more highly so as to be able to read and interpret monitoring and sampling analysis data. These requirements were not in the 2004 Permit. On information and belief, the cost to the District of such requirements is expected to exceed $1,000 in each of FYs 2011-2012 and 2012-2013 and potentially in later years of the Permit.

i. Retrofitting of Existing Development: Section F.3.d of the Permit requires the Copermittees, including the City, to develop and implement a retrofitting program for existing development, including requiring the identification and inventorying of existing development as candidates for retrofitting; the evaluation and ranking of the inventoried developments to prioritize retrofitting; consideration of the results of the evaluation in prioritizing workplans for the following year; tracking and inspecting completed retrofit BMPs; and implementing a program to encourage retrofit of private properties. These requirements were not contained in the 2004 Permit. I am informed and believe that using funds contributed from the Copermittees, including the City, through the Implementation Agreement, the District has hired a consultant to perform the necessary studies and develop the retrofitting program for the Santa Margarita region. In addition to the cost to develop the program, the City will be required to implement the program on an ongoing basis. On information and belief, the cost to the City of these

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requirements will exceed $1,000 in each of FYs 2011-2012 and 2012-2013 and potentially in later years of the Permit.

j. Watershed Water Quality Workplan ("Watershed Workplan"): Section G of the Permit requires the Copermittees, including the City, to develop and annually update a Watershed Workplan. This requires the City to: characterize watershed receiving water quality, including analyzing monitoring data collected under the Permit and from other public and private organizations; identify and prioritize water quality problems by constituent and by location, giving consideration to total maximum daily load programs, waters listed as impaired pursuant to CWA section 303(d), and other pertinent conditions; identify likely sources causing the highest water quality problems within the watershed, including from monitoring conducted under the Permit and additional focused water quality monitoring to identify specific sources; develop a watershed BMP implementation strategy, including a schedule to implement BMPs to abate specific receiving water quality problems; develop a strategy to monitor improvements in receiving water quality stemming from implementation of BMPs described in the Watershed Workplan, including required monitoring in the receiving water; establish a schedule for development and implementation of the watershed strategy outlined in the Watershed Workplan, including the holding of annual watershed workplan review meetings open to the public; implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the RWQCB; cooperate among Copermittees to develop and implement the Watershed Workplan, including the requirement to pursue interagency agreements with non-Copermittee MS4 operators; implement a public participation mechanism within each watershed, including opportunity for public review and comment on the draft Watershed Workplan prior to its submission to the RWQCB; and as part of the review and annual update of the Watershed

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Workplan, hold an Annual Watershed Review meeting open to the public and adequately noticed. I am informed and believe that using funds contributed from each Copermittee, including the City, through the Implementation Agreement, the District plans to hire a consultant to develop the Watershed Workplan. In addition to the costs to develop the plan, the Copermittees, including the City will be required to either directly, or with the assistance of a consultant, conduct and administer annual updates to the workplan. These requirements were not contained in the 2004 Permit. On information and belief, the cost to the City of these requirements will exceed $1,000 in each of FYs 2011-2012 and 2012-2013 and potentially in later years of the Permit.

k. JRMP Annual Report Requirements: Section K.3.c (plus Table 5 in the Permit and Attachment D) of the Permit requires, among other items, that the Copermittees, including the City, submit a Jurisdictional Runoff Management Program ("JRMP") report each year, beginning on October 31, 2013. New requirements not in the 2004 Permit include the following: detailed tracking of various elements on a per-facility basis, including descriptions of BMPs required at PDPs; the name and location of all PDPs granted a waiver from implementing LID BMPs; the total number and date of inspections conducted at each construction site; descriptions of high-level enforcement actions; a summary and assessment of BMP retrofits implemented at flood control structures; a summary of inspection findings and follow-up activities for each municipal facility and area inspected, as well as the number and date; BMP violations and enforcement actions for each facility; tracking of inspections of commercial/industrial facilities by facility or mobile business, including number and date of inspections; BMP violations, number, date and types of enforcement actions; and, a description of each high-level enforcement action. Additionally, Copermittees, including the City, are required to describe

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efforts to manage runoff and stormwater pollution in common interest areas and mobile home parks, describe efforts to retrofit existing developments and efforts to encourage private landowners to retrofit existing development, provide a detailed list of all implemented retrofit projects, any proposed retrofit or regional mitigation projects and timelines for future implementations. Additionally, the Copermittees, including the City, are required to submit a checklist that requires, among other things, the listing of active and inactive construction sites, the number of development plan reviews and grading permits issued, as well as number of projects exempted from hydromodification requirements, the number of PDPs, the amount of waste removed from MS4 maintenance and the total miles of MS4 inspected. These requirements were not contained in the 2004 Permit. City staff will be required to enhance and expand its tracking mechanisms, and spend more time preparing annual reports. On information and belief, the cost to the City of these requirements will exceed $1,000 in FY 2012-2013 and potentially in later years of the Permit.

l. Special Studies: The Monitoring and Reporting Program of the Permit requires Copermittees, including the City, to conduct special studies, including a sediment toxicity study, a trash and litter study, a study of agricultural, federal and tribal discharges into the Copermittees' MS4s, a study regarding a study on MS4 and receiving water maintenance activities, and a study on intermittent and ephemeral streams converted to perennial streams. None of these studies was required by the 2004 Permit. These studies will require Copermittees, including the City, to locate suitable waterbodies, if any, to submit workplans, to conduct monitoring activities, to conduct analysis of the monitoring results and to report the results of the analysis to the RWQCB in the annual monitoring report. I am informed and believe that using funds from each Copermittee, including the City, through the Implementation Agreement, the

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District has hired a consultant to develop these studies, and will either directly or through the assistance of a consultant, conduct and report upon the studies. On information and belief, the cost to the City of these requirements will exceed $1,000 in each of FYs 2011-2012 and 2012-2013 and potentially additional years of the Permit.

m. Requirement to Prohibit Discharges Causing or Contributing to Violation of Water Quality Standards: Section A.3 of the Permit requires Copermittees, including the City, to ensure that discharges from MS4s operated by Copermittees, including the City, do not cause or contribute to the violation of water quality standards. The Section also requires Copermittees, including the City, in the event of a determination by a Copermittee or the RWQCB that stormwater MS4 discharges are causing or contributing to a violation of a water quality standard, to notify the RWQCB and to submit a report describing iterative BMPs that will be implemented to prevent or reduce the pollutants causing or contributing to the exceedance, and to thereafter modify its jurisdictional runoff management programs and monitoring programs to incorporate approved modified BMPs and to implement such BMPs. Copermittees, including the City, are required to repeat this procedure for continuing or recurring exceedances of the same water quality standards unless directed otherwise by the RWQCB's executive officer. Section A.3.c of the Permit further provides that the RWQCB may enforce any provision of the Permit while a Copermittee prepares and implements the report. On information and belief, the inclusion of Section A.3.c, which was not in the 2004 Permit, as well as a recent holding of the United States Circuit Court of Appeals for the Ninth Circuit that a similar prohibition in an MS4 permit issued to discharges in the County of Los Angeles imposed a separate prohibition not subject to the iterative BMP process, creates new potential liability for Copermittees, including the City. On information and belief, the cost for the City to comply with Section A.3, if the same were

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triggered, would exceed $1,000 in that FY and in succeeding FYs in the term of the Permit.

n. Requirements for Permit Programs to Ensure No Violations of Water Quality Standards and Other Standards: Sections F.1, F.1.d, F.2, F.3.a, F.3.b and F.3.c of the Permit require Copermittees, including the City, to implement programs to ensure that development project discharges, PDP discharges, construction site discharges, municipal discharges, commercial/industrial discharges and residential discharges do not cause or contribute to a violation of water quality standards and prevent illicit discharges into the MS4. Section F.3.d. of the Permit requires Copermittees, including the City, to develop and implement a retrofitting program to, among other things, prevent discharges from the MS4 from causing or contributing to a violation of water quality standards and to reduce the discharge of stormwater pollutants to the MEP. Section F.6 of the Permit requires Copermittees, including the City, to implement education programs to measurably change the behavior of target communities and thereby reduce pollutants in stormwater discharges and eliminate prohibited non-storm water discharges to MS4s and the environment. The 2004 Permit did not include these requirements. Copermittees, including the City, could be required to develop programs that are intended to guarantee that there are no exceedances of water quality standards, and to ensure that illicit discharges have been prevented. On information and belief, if the RWQCB or some other body were to order changes or enhancements to the City's Permit programs to meet the requirements of such provisions, the cost to the City to comply with these requirements would exceed $1,000 in the applicable FYs.

6. I am informed and believe that there are no dedicated state or federal funds that are or will be available to pay for any of the new and/or upgraded programs and activities set forth in this Declaration. The City has access to funding obtained through County Service Area

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152 ("CSA 152") and Lighting and Landscape Maintenance District 89-1C (LLMD 89-1C), which funds, in part, the obligations of the City under the Permit. The City also can collect some fees during the development and business registration process. I am informed and believe that these funding sources are not sufficient to cover the cost of the programs and activities set forth in this Declaration. I am not aware of any other fee or tax that the City would have the discretion to impose under California law to recover any portion of the cost of these programs and activities. I further am informed and believe that the only other source to pay for these new programs and activities is the City's general fund.

I declare under penalty of perjury that foregoing is true and correct. Executed November 30, 2011 at Wildomar, California.

Tim D'Zmura

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WARREN D. WILLIAMS
General Manager-Chief Engineer

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RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

SUPPLEMENTAL DECLARATION OF JASON UHLEY

RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

I, JASON UHLEY, hereby declare and state as follows:

1. I am Chief of the Watershed Protection Division of the Riverside County Flood Control & Water Conservation District ("District"). In that capacity, I share responsibility for the compliance of the District with regard to the requirements of California Regional Water Quality Control Board, San Diego Region ("RWQCB") Order No. R9-2010-0016 (the "Permit"), as they apply to the District.

2. I have reviewed sections of the Permit as set forth herein and am familiar with those provisions. I also am aware of the requirements of pertinent sections of Order No. R9-2004-001 ("2004 Permit") which was issued by the RWQCB to the District in 2004, and am familiar with those requirements.

3. I make this declaration based on my own personal knowledge, except for matters set forth herein based on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

4. In addition to the four special studies identified in Paragraph 5.j of my Declaration dated November 9, 2011, the Monitoring and Reporting Program in the Permit also requires the Copermittees under the Permit, including the District, to conduct a trash and litter

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special study. This special study was not required in the 2004 Permit. I am informed and believe that the tasks required to perform this special study, the funding arrangements, and the cost to the District, are the same as alleged in Paragraph 5.j of my Declaration dated November 9, 2011.

I declare under penalty of perjury that foregoing is true and correct. Executed November 30, 2011 at Riverside, California.

JASON E. UHLEY

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SUPPLEMENTAL DECLARATION OF PAT THOMAS

CITY OF MURRIETA

I, PAT THOMAS, hereby declare and state as follows:

1. I am City Engineer for the City of Murrieta ("City"). In that capacity, I share responsibility for the compliance of the City with regard to the requirements of California Regional Water Quality Control Board, San Diego Region ("RWQCB") Order No. R9-2010-0016 (the "Permit"), as they apply to the City.

2. I have reviewed sections of the Permit, including the Monitoring and Reporting Program, and am familiar with those provisions.

3. I make this declaration based on my own personal knowledge, except for matters set forth herein based on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

4. In addition to the four special studies identified in Paragraph 5.1 of my Declaration dated November 9, 2011, the Monitoring and Reporting Program in the Permit also requires the Copermittees under the Permit, including the City, to conduct a trash and litter special study. This special study was not required in the 2004 Permit. I am informed and believe that the tasks required to perform this special study, the funding arrangements, and the cost to the City, are the same as alleged in Paragraph 5.1 of my Declaration dated November 9, 2011.

I declare under penalty of perjury that foregoing is true and correct. Executed December 1st, 2011 at Murrieta, California.

Pat Thomas, City Engineer

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SUPPLEMENTAL DECLARATION OF GREG BUTLER

CITY OF TEMECULA

I, GREG BUTLER, hereby declare and state as follows:

1. I am Director of Public Works for the City of Temecula ("City"). In that capacity, I share responsibility for the compliance of the City with regard to the requirements of California Regional Water Quality Control Board, San Diego Region ("RWQCB") Order No. R9-2010-0016 (the "Permit"), as they apply to the City.

2. I have reviewed sections of the Permit as set forth herein and am familiar with those provisions. I also am aware of the requirements of pertinent sections of Order No. R9-2004-001 ("2004 Permit") which was issued by the RWQCB to the City in 2004, and am familiar with those requirements.

3. I make this declaration based on my own personal knowledge, except for matters set forth herein based on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

4. In addition to the four special studies identified in Paragraph 5.k of my Declaration dated November 9, 2011, the Monitoring and Reporting Program in the Permit also requires the Copermittees under the Permit, including the City, to conduct a trash and litter special study. This special study was not required in the 2004 Permit. I am informed and believe that the tasks required to perform this special study, the funding arrangements and the

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cost to the City, are the same as alleged in Paragraph 5.k of my Declaration dated November 9, 2011.

I declare under penalty of perjury that foregoing is true and correct.

Executed November 30, 2011 at Temecula, California.

Greg Butler

Section 7

DOCUMENTATION

In Support of Joint Test Claim of Riverside County Local Agencies Concerning San Diego RWQCB Order No. R9-2010-0033

Tab 1: San Diego RWQCB Order No. R9-2010-0016, Attachments and Fact Sheet

Tab 2: San Diego RWQCB Order No. R9-2004-0001

Tab 3: Statutory and Regulatory Provisions

Tab 4: Cases and Administrative Decisions

Tab 5: Declaration of Jason Uhley

Tab 6: Administrative and Miscellaneous Evidence

Tab 1

Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the San Diego Region

Adopted by the
California Regional Water Quality Control Board
San Diego Region
on
November 10, 2010

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
9174 Sky Park Court, Suite 100
San Diego, California 92123-4340

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STATE OF CALIFORNIA

ARNOLD SCHWARZENEGGER, Governor
LINDA S. ADAMS, Agency Secretary, California Environmental Protection Agency

California Regional Water Quality Control Board
San Diego Region

Grant Destache, *Vice Chair*	Industrial Water Use
Eric Anderson	Irrigated Agriculture
Wayne Rayfield	Water Quality
George Loveland	Water Supply
Marc Luker	Undesignated (Public)
Gary Strawn	Recreation / Wildlife
Bill Green	Water Quality

David W. Gibson, *Executive Officer*
James Smith, *Assistant Executive Officer*

This permit was prepared under the direction of

David T. Barker, P.E., *Supervising Water Resource Control Engineer, Surface Water Basins Branch*
Chiara Clemente, *Senior Environmental Scientist, Northern Watershed Unit*

by

Benjamin Isaac Neill, *Water Resource Control Engineer*
Chad Lörtscher Loflen, *Environmental Scientist*
Wayne Chiu, P.E., *Water Resource Control Engineer*

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Attachment A – Basin Plan Prohibitions
Attachment B – Standard Provisions, Reporting Requirements, and Notifications
Attachment C – Definitions
Attachment D – Scheduled Submittal Summary and Reporting Checklist Requirements
Attachment E – Receiving Waters And MS4 Discharge Monitoring And Reporting Program No. R9-2010-0016
Attachment F – Data

The California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board), finds that:

A. BASIS FOR THE ORDER

1. This Order is based on the federal Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act (Division 7 of the Water Code, commencing with Section 13000), applicable State and federal regulations, all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the State Water Resources Control Board (State Water Board), the Water Quality Control Plan for the San Diego Basin adopted by the San Diego Water Board (Basin Plan), the California Toxics Rule, and the California Toxics Rule Implementation Plan.

2. This Order reissues National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108766, which was first adopted by the San Diego Water Board on July 16, 1990 (Order No. 90-38), and then reissued on May 13, 1998 (Order No. 98-02). On May 26, 1998, the United States Environmental Protection Agency (USEPA), Region IX, objected to Order No. 98-02 due to concerns regarding Receiving Water Limitations (RWL) language. The USEPA concluded that the RWL language in the permit did not comply with the CWA and its implementing regulations. On April 27, 1999, the USEPA reissued the MS4 permit, which the San Diego Water Board adopted as Addendum No. 1 to Order No. 98-02 on November 8, 2000. On July 14, 2004, the San Diego Water Board adopted the third term MS4 permit, Order No. R9-2004-001. On January 15, 2009, the Riverside County Flood Control and Water Conservation District (RCFCD), as the Principal Copermittee, submitted a Report of Waste Discharge (ROWD) for reissuance of the municipal separate storm sewer system (MS4) Permit.

3. This Order is consistent with the following precedential Orders adopted by the State Water Board addressing MS4 NPDES Permits: Order 99-05, Order WQ-2000-11, Order WQ 2001-15, and Order WQO 2002-0014.[1]

[1] In July 2010, the court in Los Angeles County v. State Water Resources Control Board remanded the Los Angeles Water Board's MS4 permit underlying Order WQ 2009-0008 for procedural reasons occurring during the permit adoption process. The court did not evaluate or rule upon the substantive findings and reasoning set forth in Order WQ 2009-0008. The State Water Board rescinded and voided Order WQ 2009-0008 to comply with the court's order. While the San Diego Water Board may no longer cite Order WQ 2009-0008, the San Diego Water Board has independently considered whether the requirement to eliminate non-storm water discharges is subject to the MEP standard. The San Diego Water Board concludes that the MEP standard does not apply to non-storm water discharges for the same reasons expressed by the State Water Board.

4. The Fact Sheet / Technical Report for the Order No. R9-2010-0016, NPDES No. CAS0108766, Waste Discharge Requirements for Discharges from the MS4s Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the San Diego Region, includes cited regulatory and legal references and additional explanatory information and data in support of the requirements of this Order. This information, including any supplements thereto, is hereby incorporated by reference into these findings.

B. REGULATED PARTIES

Each of the persons in Table 1 below, hereinafter called Copermittees or dischargers, owns or operates an MS4, through which it discharges into waters of the United States (U.S.) within the San Diego Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 that contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the U.S.

Table 1. Municipal Copermittees

1. City of Murrieta	4. County of Riverside
2. City of Temecula	5. Riverside County Flood Control and Water Conservation District
3. City of Wildomar	

The Cities of Murrieta, Menifee and Wildomar also discharge into the waters of the U.S. in the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board), so are located partially within both the San Diego and Santa Ana Water Board boundaries. Water Code (WC) section 13228 provides a way to streamline the regulation of entities whose jurisdictions straddle the border of two or more Regions. WC section 13228 is implemented in this Order to ease the regulatory burden on Storm Water Agencies and Municipalities that lie in both the San Diego Water Board and the adjacent Santa Ana Water Board's jurisdiction. As allowed by California Water Code (CWC) §13228, the Cities of Murietta, Menifee, and Wildomar submitted written requests to be regulated for MS4 purposes under a permit adopted by only one Water Board. As authorized by CWC §13228 and pursuant to written agreements dated September 28, 2010 between the San Diego Water Board and the Santa Ana Water Board, the Cities of Murrieta and Wildomar are wholly regulated by the San Diego Water Board under this Order, including those portions of the Cities jurisdiction not within the San Diego Water Board's region. Similarly, the City of Menifee is wholly regulated by the Santa Ana Water Board under Order No. R8-2010-0033, including those portions of the City of Menifee within the San Diego Water Board's region.

C. DISCHARGE CHARACTERISTICS

1. Discharges from the MS4 contain waste, as defined in the CWC, and pollutants that adversely affect the quality of the waters of the State. The discharge from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA.

2. MS4 storm water and non-storm water discharges are likely to contain pollutants that cause or threaten to cause a violation of water quality standards, as outlined in the Basin Plan. Storm water and non-storm water discharges from the MS4 are subject to the conditions and requirements established in the Basin Plan for point source discharges.

3. The most common categories of pollutants in runoff include total suspended solids, sediment, pathogens (e.g., bacteria, viruses, protozoa), heavy metals (e.g., copper, lead, zinc and cadmium), petroleum products and polynuclear aromatic hydrocarbons, synthetic organics (e.g., pesticides, herbicides, and PCBs), nutrients (e.g., nitrogen and phosphorus fertilizers), oxygen-demanding substances (decaying vegetation, animal waste), detergents, and trash.

4. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and/or impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.

5. Pollutants in runoff can threaten and adversely affect human health. Human illnesses have been clearly linked to recreating near storm drains flowing to receiving waters. Also, runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.

6. Runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.

7. The Copermittees discharge runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within one of the eleven hydrologic units (Santa Margarita Hydrologic Unit) comprising the San Diego Region as shown in Table 2. Some of the receiving water bodies have been designated as impaired by the San Diego Water Board in 2009 pursuant to CWA section 303(d).

Table 2. Common Watersheds and CWA Section 303(d) Impaired Waters in the San Diego Region.

Hydrologic Area (HA) or Hydrologic Subarea (HSA) of the Santa Margarita Hydrologic Unit	Major Receiving Water Bodies	303(d) Pollutant(s)/Stressor or Water Quality Effect[2]
DeLuz Creek HSA (902.21)	De Luz Creek	Iron, Manganese, Nitrogen, Sulfates
Murrieta HSA (902.32)	Long Canyon Creek (tributary to Murrieta Creek)	Chlorpyrifos, E. Coli, Fecal Coliform, Iron, Manganese
Wolf HSA (902.52)	Murrieta Creek	Chlorpyrifos, Copper, Iron, Manganese, Nitrogen, Toxicity
Pauba HSA (902.51)	Redhawk Channel	Chlorpyrifos, Copper, Diazinon, E. Coli, Fecal Coliform, Iron, Manganese, Nitrogen, Phosphorus, Total Dissolved Solids
Gavilan HSA (902.22)	Sandia Creek	Iron, Sulfates
Gertrudis HSA (902.42)	Santa Gertrudis Creek	Chlorpyrifos, Copper, E. Coli, Fecal Coliform, Iron, Phosphorous
Lower Ysidora HSA (902.11)	Santa Margarita Lagoon	Eutrophic
Lower Ysidora HSA (902.11)	Santa Margarita River (Lower)	Enterococcus, Fecal Coliform, Phosphorus, Total Nitrogen as N
Gavilan HSA (902.22)	Santa Margarita River (Upper)	Toxicity
Pauba HSA (902.51)	Temecula Creek	Chlorpyrifos, Copper, Phosphorus, Total Dissolved Solids, Toxicity
French HSA (902.33)	Warm Springs Creek (Riverside County)	Chlorpyrifos, E. Coli, Fecal Coliform, Iron, Manganese, Phosphorus, Total Nitrogen as N

[2] The listed 303(d) pollutant(s) do not necessarily reflect impairment of the entire corresponding WMA or all corresponding major surface water bodies. The specific impaired portions of each WMA are listed in the State Water Resources Control Board's 2008 Section 303(d) List of Water Quality Limited Segments.

8. Trash is a persistent pollutant that can enter receiving waters from the MS4, accumulate, and be transported downstream into receiving waters over time. Trash poses a serious threat to the beneficial uses of the receiving waters, including, but not limited to, human health, rare and endangered species, navigation and human recreation.

9. The Copermittees' water quality monitoring data submitted to date documents persistent violations of Basin Plan water quality objectives for various runoff-related pollutants (indicator bacteria, dissolved solids, turbidity, metals, pesticides, etc.) at various watershed monitoring stations. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Riverside County.

10. When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed area is significantly greater in runoff volume, velocity, and peak flow rate than pre-development runoff from the same area. Runoff durations can also increase as a result of flood control and other efforts to control peak flow rates. Increased volume, velocity, rate, and duration of runoff, and decreased natural clean sediment loads, greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 3-5 percent conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

11. Development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed urban area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.

12. Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d)-impaired water bodies. Such areas have a much lower capacity to withstand pollutant loads than other, more sensitive areas. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. Therefore, additional controls to reduce storm water pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.

13. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not "inject" runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; (4) ensuring that each drainage feature is adequately maintained in perpetuity; and (5) pretreatment.

14. Non-storm water (dry weather) discharge from the MS4 is not considered a storm water (wet weather) discharge and therefore is not subject to regulation under the Maximum Extent Practicable (MEP) standard from CWA 402(p)(3)(B)(iii), which is explicitly for "Municipal ... *Stormwater Discharges* (emphasis added)" from the MS4. Rather, non-storm water discharges into the storm sewers, per CWA 402(p)(3)(B)(ii), are to be effectively prohibited. Such dry weather non-storm water discharges have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds and are to be effectively prohibited under the CWA.

15. Non-storm water discharges to the MS4 granted an influent exception [i.e., which are exempt from the effective prohibition requirement set forth in CWA section 402(p)(3)(B)(ii)] under 40 CFR 122.26 are included within this Order. Any exempted discharges identified by Copermittees as a source of pollutants are subsequently required to be *addressed* (emphasis added) as illicit discharges through prohibition and incorporation into existing IC/ID programs. Furthermore, the USEPA contemplates that permitting agencies such as the San Diego Water Board may also identify exempted discharges as a source of pollutants required to be addressed as illicit discharges (See Vol. 55 Fed. Reg. 48037). The San Diego Water Board and the Copermittees have identified landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the U.S.

D. RUNOFF MANAGEMENT PROGRAMS

1. General

a. This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in storm water to the MEP. However, since MEP is a dynamic performance standard, which evolves over time as runoff management knowledge increases, the Copermittees' runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of runoff management program implementation is expected to ultimately achieve compliance with water quality standards in the Region.

b. The Copermittees have generally been implementing the jurisdictional runoff management programs (JRMPs) required pursuant to Order No. R9-2004-001 since July 14, 2005. Prior to that, the Copermittees were regulated by Order No. 98-02, since May 13, 1998. MS4 discharges, however, continue to cause or contribute to violations of water quality standards as evidenced by the Copermittees' monitoring results.

c. This Order contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in storm water runoff to the MEP and achieve water quality standards. Some of the new or modified requirements, such as the revised Watershed Water Quality Workplan (Watershed Workplan) section, are designed to specifically address high priority water quality problems. Other requirements, such as for unpaved roads, are a result of San Diego Water Board's identification of water quality problems through investigations and complaints during the previous permit period. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other San Diego Water Board compliance assessment activities. Additional changes in the monitoring program provide consistency with the Code of Federal Regulations, USEPA guidance, State Water Board guidance, and the Southern California Monitoring Coalition recommendations.

d. Updated individual Storm Water Management Plans (Individual SWMP or JRMP), and Watershed Stormwater Management Plans (watershed SWMPs or Watershed Workplans), which, together with references in the DAMP, describe the Copermittees' runoff management programs in their entirety, are needed to guide the Copermittees' runoff management efforts and aid the Copermittees in tracking runoff management program implementation. Hereinafter, the individual SWMP is referred to as the JRMPs and the Watershed SWMP is referred to as the Watershed Workplan. It is practicable for the Copermittees to update the

JRMPs and Watershed Workplans within the timeframe specified in this Order, since significant efforts to develop these programs have already occurred.

e. Pollutants can be effectively reduced in storm water runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense." Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants that have been mobilized by wet-weather or dry-weather flows.

f. Runoff needs to be addressed during the three major phases of urban development (planning, construction, and use) in order to reduce the discharge of pollutants from storm water to the MEP, effectively prohibit non-storm water discharges and protect receiving waters. Development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can negatively impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development generates substantial pollutant loads which are discharged in runoff to receiving waters.

g. Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs.

h. This Order establishes Storm Water Action Levels (SALs) for selected pollutants based on USEPA Rain Zone 6 (arid southwest) Phase I MS4 monitoring data for pollutants in storm water. The SALs were computed as the 90th percentile of the data set, utilizing the statistical based population approach, one of three approaches recommended by the State Water Board's Storm Water Panel in its report, 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). SALs are identified in Section D of this Order. Copermittees must implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water from the permitted areas so as not to exceed the SALs. Exceedance of SALs may indicate inadequacy of programmatic measures and BMPs required in this Order.

2. Development Planning

a. The Standard Storm Water Mitigation Plan (SSMP) requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the State Water Board on October 5, 2000. In the precedential order, the State Water Board

found that the design standards, which essentially require that runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the SSMP requirements are appropriately applied to the majority of the Priority Development Project categories that are also contained in Section F.1 of this Order. The State Water Board also gave California Regional Water Quality Control Boards (Regional Water Boards) the needed discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in SSMPs.

b. Controlling runoff pollution by using a combination of onsite source control and site design BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. (2) Whereas, onsite source control BMPs can be applied during all runoff conditions end-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the pollutant source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.

c. Use of Low-Impact Development (LID) site design BMPs at new development, redevelopment and retrofit projects can be an effective means for minimizing the impact of storm water runoff discharges from the development projects on receiving waters. LID is a site design strategy with a goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques. LID site design BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of storm water runoff. Current runoff management, knowledge, practices and technology have resulted in the use of LID BMPs as an acceptable means of meeting the storm water MEP standard.

d. RGOs are significant sources of pollutants in storm water runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other developed areas.

e. Industrial sites are significant sources of pollutants in runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID site design,

source control, and treatment control BMPs are needed at industrial sites in order to meet the MEP standard. These BMPs are necessary where the industrial site is larger than 10,000 square feet. The 10,000 square feet threshold is appropriate, since it is consistent with requirements in other Phase I NPDES storm water regulations throughout California.

f. If not properly designed or maintained, certain BMPs implemented or required by municipalities for runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). Proper BMP design and maintenance to avoid standing water, however, can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities, local vector control agencies, and the California Department of Public Health during the development and implementation of runoff management programs.

g. The increased volume, velocity, frequency and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads in storm water runoff and the volume of storm water runoff. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by natural vegetated soil. Hydromodification measures for discharges to hardened channels are needed for the future restoration of the hardened channels to their natural state, thereby restoring the chemical, physical, and biological integrity and beneficial uses of local receiving waters.

3. Construction and Existing Development

a. In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (State and local) storm water regulation. Under this dual system, each Copermittee is responsible for enforcing its local permits, plans, and ordinances, and the San Diego Water Board is responsible for enforcing the General Construction Activities Storm Water Permit, State Water Board Order 2009-0009-DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, State Water Board Order 97-03 DWQ, NPDES No. CAS000001 (General Industrial Permit) and any reissuance of these permits. NPDES municipal regulations require that municipalities develop and implement measures to address runoff from industrial and construction activities. Those measures may include the implementation of other BMPs in addition to those BMPs that are required under the statewide general permits for activities subject to both State and local regulation.

b. Identification of sources of pollutants in runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants from its MS4 in storm water are reduced to the MEP and that non-storm water discharges are not occurring. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at areas that are at high risk for pollutant discharges.

c. Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Urban streams used in this manner are part of the municipalities' MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the urban stream is both an MS4 and receiving water.

d. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or otherwise control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.

e. Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges from storm water into MS4s must be reduced using a combination of management measures, including source control and an effective MS4 maintenance program implemented by each Copermittee.

f. Enforcement of local runoff related ordinances, permits, and plans is an essential component of every runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction. Education is an important aspect of every effective runoff management program and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs understand how their activities impact water quality, how to accomplish their jobs while protecting water quality, and understand their specific roles and responsibilities for compliance with this

Order. Public education, designed to target various urban land users and other audiences, is also essential to inform the public of how individual actions affect receiving water quality and how adverse effects can be minimized.

g. Public participation during the development of runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.

h. Retrofitting existing development with storm water treatment controls, including LID, is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards. Although SSMP BMPs are required for redevelopment, the current rate of redevelopment will not address water quality problems in a timely manner. Cooperation with private landowners is necessary to effectively identify, implement and maintain retrofit projects for the preservation, restoration, and enhancement of water quality.

4. Watershed Runoff Management

a. Since runoff within a watershed can flow from and through multiple land uses and political jurisdictions, watershed-based runoff management can greatly enhance the protection of receiving waters. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective watershed-based runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems. Watershed-based runoff management that does not actively reduce pollutant discharges and abate pollutant sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of this Order. Watershed management of runoff does not require Copermittees to expend resources outside of their jurisdictions. In some cases, however, this added flexibility provides more, and possibly more effective, alternatives for minimizing waste discharges. Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.

b. Some runoff issues, such as general education and training, can be effectively addressed on a regional basis. Regional approaches to runoff management can improve program consistency and promote sharing of resources, which can result in implementation of more efficient programs.

c. It is important for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially the State of California Department of Transportation, the U.S. federal government, sovereign American Indian tribes, and water and sewer districts, is also important.

E. STATUTE AND REGULATORY CONSIDERATIONS

1. The RWL language specified in this Order is consistent with language recommended by the USEPA and established in State Water Board Order WQ-99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Water Board on June 17, 1999. The RWL language in this Order requires compliance with water quality standards, which for storm water discharges is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limits based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the creation of conditions of pollution, contamination, or nuisance.

2. The Basin Plan, identifies the following existing and potential beneficial uses for surface waters in Riverside County: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Hydropower Generation (POW), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Spawning, Reproduction and/or Early Development (SPWN) and Preservation of Biological Habitats of Special Significance (BIOL).

3. This Order is in conformance with State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*, and the federal Antidegradation Policy described in 40 CFR 131.12.

4. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Copermittee from developing a non-point source plan, for the urban category, under CZARA. The San Diego Water Board addresses septic systems through the administration of other programs.

5. Section 303(d)(1)(A) of the CWA requires that "Each state shall identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters." The CWA also requires states to establish a priority ranking of impaired water bodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired water bodies is called the Section 303(d) List. The 2006 Section 303(d) List was approved by the State Water Board on October 25, 2006. On June 28, 2007, the 2006 303(d) List for California was given final approval by the USEPA. The 303(d) List was recently updated, and on December 16, 2009, the 2008 303(d) List was approved by the San Diego Water Board. The 2008 303(d) List for the San Diego Region was approved by the State Water Board on August 4, 2010. The 2008 303(d) List is awaiting USEPA approval.

6. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under CWA §402. (33 U.S.C. § 1342(p)(3)(B).) Second, the local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges. Third, the local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA §301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their MS4 discharges (i.e. effluent limitations). Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under State law predates the enactment of Article XIIIB, Section (6) of the California Constitution. Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards. (33 U.S.C. sec. 1313(d).) Once the USEPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 C.F.R. sec. 122.44(d)(1)(vii)(B).)

7. Runoff treatment and/or mitigation must occur prior to the discharge of runoff into receiving waters. Treatment BMPs must not be constructed in waters of the U.S. or State unless the runoff flows are sufficiently pretreated to protect the values and functions of the water body. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of an runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the

construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. Without federal authorization (e.g., pursuant to CWA § 404), waters of the U.S. may not be converted into, or used as, waste treatment or conveyance facilities. Similarly, waste discharge requirements pursuant to CWC §13260 are required for the conversion or use of waters of the State as waste treatment or conveyance facilities. Diversion from waters of the U.S./State to treatment facilities and subsequent return to waters of the U.S. is allowable, provided that the effluent complies with applicable NPDES requirements.

8. The issuance of waste discharge requirements and an NPDES permit for the discharge of runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

9. Storm water discharges from developed and developing areas in Riverside County are significant sources of certain pollutants that cause, may be causing, threatening to cause or contributing to water quality impairment in the waters of Riverside County. Furthermore, as delineated in the CWA section 303(d) list in Table 2, the San Diego Water Board has found that there is a reasonable potential that municipal storm water and non-storm water discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria (including Fecal Coliform and E. Coli), Copper, Manganese, Iron, Chlorpyrifos, Diazinon, Sulfates, Phosphorous, Nitrogen, Total Dissolved Solids (TDS), and Toxicity. In accordance with CWA section 303(d), the San Diego Water Board is required to establish TMDLs for these pollutants to these waters to eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Copermittees are warranted and required pursuant to this Order.

10. This Order requires each Copermittee to effectively prohibit all types of unauthorized discharges of non-storm water into its MS4. However, historically pollutants have been identified as present in dry weather non-storm water discharges from the MS4s through 303(d) listings, monitoring conducted by the Copermittees under Order No. R9-2004-0001, and there are others expected to be present in dry weather non-storm water discharges because of the nature of these discharges. This Order includes action levels for pollutants in non-storm water, dry weather discharges from the MS4. The non-storm water action levels are designed to ensure that the Order's requirement to effectively prohibit all types of unauthorized discharges of non-storm water into the MS4 is being complied with. Non-storm water action levels in the Order are based upon numeric or narrative water quality objectives and criteria as defined in the Basin Plan, the State Water Board's Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). An exceedance of an action level

requires specified responsive action by the Copermittees. This Order describes what actions the Copermittees must take when an exceedance of an action level is observed. Exceedances of non-storm water action levels do not alone constitute a violation of this Order but could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions established in this Order. Failure to undertake required source investigation and elimination action following an exceedance of a non-storm water action level (NAL or action level) is a violation of this Order. The San Diego Water Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-storm water discharges because there may be some discharges in which pollutants do not exceed established action levels. However, establishing NALs at levels appropriate to protect water quality standards is expected to lead to the identification of significant sources of pollutants in dry weather non-storm water discharges.

11. In addition to federal regulations cited in the Fact Sheet / Technical Report for the Order No. R9-2010-0016, monitoring and reporting required under Order No. R9-2010-0016 is required pursuant to authority under CWC section 13383.

12. With this Order, the San Diego Water Board has completed the re-issuance of the fourth iteration of the Phase I MS4 NPDES Permits for the Copermittees in the portions of San Diego County, Orange County, and Riverside County within the San Diego Region. The NPDES Permit requirements issued to the Copermittees in each county have substantially the same core requirements such as discharge prohibitions, receiving water limitations, jurisdictional components, and monitoring. In addition, the Copermittees cooperate regionally to develop monitoring with the Southern California Stormwater Monitoring Coalition and to develop program effectiveness with the California Stormwater Quality Association. Regional programs could improve the Copermittees' compliance with other permit components such as development of the Hydromodification Management Plans and Retrofitting Existing Development with more consistent implementation and cost sharing. Re-issuing the NPDES Permit requirements within five years for three counties under three different permits requires the San Diego Water Board to expend significant time and resources for issuance of the permits through three separate public proceedings, thereby greatly reducing the time and resources available to oversee compliance. Multiple permits also create confusion for determining compliance among regulated entities, especially the land development community. The San Diego Water Board recognizes that issuing a single MS4 permit for all Phase I entities in the San Diego Region will provide consistent implementation, improve communication among agencies within watersheds crossing multiple jurisdictions, and minimize staff resources spent with each permit renewal. The San Diego Water Board plans to develop a single regional MS4 permit prior to the expiration of this Order that will transfer the Copermittees' enrollment to the regional permit upon expiration of this Order.

F. PUBLIC PROCESS

1. The San Diego Water Board has notified the Copermittees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing MS4 discharges of pollutants in waters of the U.S.

2. The San Diego Water Board has held a public hearing on November 10, 2010 and heard and considered all comments pertaining to the terms and conditions of this Order.

IT IS HEREBY ORDERED that the Copermittees, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, must each comply with the following:

A. PROHIBITIONS AND RECEIVING WATER LIMITATIONS

1. Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in receiving waters of the state are prohibited.[3]

2. Storm water discharges from MS4s containing pollutants which have not been reduced to the MEP are prohibited.[3]

3. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses, water quality objectives developed to protect beneficial uses, and the State policy with respect to maintaining high quality waters) are prohibited.

   a. Each Copermittee must comply with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order through timely implementation of control measures and other actions to reduce pollutants in storm water discharges in accordance with this Order, including any modifications. If exceedance(s) of water quality standards persist notwithstanding implementation of this Order, the Copermittee must assure compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order by complying with the following procedure:

      (1) Upon a determination by either the Copermittee or the San Diego Water Board that storm water MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee must notify the San Diego Water Board within 30 days and thereafter submit a report to the San Diego Water Board that describes best management practices (BMPs) that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the Annual Report unless the San Diego Water Board[4] directs an earlier submittal. The report must include an implementation

[3] This prohibition does not apply to MS4 discharges which receive subsequent treatment to reduce pollutants in storm water discharges to the MEP prior to entering receiving waters (e.g., low flow diversions to the sanitary sewer). Runoff treatment and/or mitigation must occur prior to the discharge of runoff into receiving waters per finding E.7.

[4] The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to CWC §13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC §13223 or this Order explicitly states otherwise.

schedule. The San Diego Water Board may require modifications to the report

(2) Submit any modifications to the report required by the San Diego Water Board within 30 days of notification;

(3) Within 30 days following acceptance of the report described above by the San Diego Water Board, the Copermittee must revise its JRMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required; and

(4) Implement the revised JRMP and monitoring program in accordance with the approved schedule.

b. The Copermittee must repeat the procedure set forth above to comply with the receiving water limitations for continuing or recurring exceedances of the same water quality standard(s) following implementation of scheduled actions unless directed to do otherwise by the San Diego Water Board's Executive Officer.

c. Nothing in section A.3 prevents the San Diego Water Board from enforcing any provision of this Order while the Copermittee prepares and implements the above report.

4. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in Attachment A to this Order.

B. NON-STORM WATER DISCHARGES

1. Each Copermittee must effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit; or not prohibited in accordance with sections B.2 and B.3 below.

2. The following categories of non-storm water discharges are not prohibited unless a Copermittee or the San Diego Water Board identifies the discharge category as a source of pollutants to waters of the U.S. Where the Copermittee(s) have identified a category as a source of pollutants, the category must be addressed as an illicit discharge and prohibited through ordinance, order or similar means. The San Diego Water Board may identify categories of discharge that either require prohibition, or other controls for non-anthropogenic sources. For a discharge category determined to be a source of pollutants, the Copermittee, under direction of the San Diego Water Board, must either prohibit the discharge category or develop and implement appropriate control measures for non-anthropogenic sources to prevent the discharge of pollutants to the MS4 and report to the San Diego Water Board pursuant to Section K.1 and K.3 of this Order. The discharge categories are:

a. Diverted stream flows;
b. Rising ground waters;
c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
d. Uncontaminated pumped ground water[5];
e. Foundation drains[5];
f. Springs;
g. Water from crawl space pumps[5];
h. Footing drains[5];
i. Air conditioning condensation;
j. Flows from riparian habitats and wetlands;
k. Water line flushing[6,7];
l. Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
m. Individual residential car washing; and
n. Dechlorinated swimming pool discharges[8].

3. Emergency fire fighting flows (i.e., flows necessary for the protection of life or property) do not require BMPs and need not be prohibited.

   a. As part of the JRMP, each Copermittee must develop and implement a program to address pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified as significant sources of pollutants to waters of the U.S.

   b. Building fire suppression system maintenance discharges (e.g. sprinkler line flushing) contain waste. Therefore, such discharges are to be prohibited by the Copermittees as illicit discharges through ordinance, order, or similar means.

4. Each Copermittee must examine all dry weather effluent analytical monitoring results collected in accordance with section F.4 of this Order and Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016 to identify water quality problems which may be the result of any non-prohibited discharge category(ies) identified above in section B.2. Follow-up investigations must be conducted to identify and control, pursuant to section B.2, any non-prohibited discharge category(ies) listed above.

[5] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4 system.
[6] This exemption does not include fire suppression sprinkler system maintenance and testing discharges. Those discharges may be regulated under Section B.3.
[7] Requires enrollment under Order R9-2002-0020.
[8] Excluding saline swimming pool discharges.

C. NON-STORM WATER DRY WEATHER ACTION LEVELS

1. Each Copermittee, beginning no later than July 1, 2012, must implement the non-storm water dry weather action level (NAL) monitoring as described in Attachment E of this Order.

2. In response to an exceedance of an NAL, the Copermittee(s) having jurisdiction must investigate and seek to identify the source of the exceedance in a timely manner. However, if any Copermittee identifies a number of NAL exceedances that prevents it from adequately conducting source investigations at all sites in a timely manner, then that Copermittee may submit a prioritization plan and timeline that identifies the timeframe and planned actions to investigate and report its findings on all of the exceedances. Depending on the source of the pollutant exceedance, the Copermittee(s) having jurisdiction must take action as follows:

   a. If the Copermittee identifies the source of the exceedance as natural (non-anthropogenically influenced) in origin and in conveyance into the MS4; then the Copermittee must report its findings and documentation of its source investigation to the San Diego Water Board in its Annual Report.

   b. If the Copermittee identifies the source of the exceedance as an illicit discharge or connection, then the Copermittee must eliminate the discharge to its MS4 pursuant to Section F.4.f and report the findings, including any enforcement action(s) taken, and documentation of the source investigation to the San Diego Water Board in the Annual Report. If the Copermittee is unable to eliminate the source of discharge prior to the Annual Report submittal, then the Copermittee must submit, as part of its Annual Report, its plan and timeframe to eliminate the source of the exceedance. Those dischargers seeking to continue such a discharge must become subject to a separate NPDES permit prior to continuing any such discharge.

   c. If the Copermittee identifies the source of the exceedance as an exempted category of non-storm water discharge, then the Copermittees must determine if this is an isolated circumstance or if the category of discharges must be addressed through the prevention or prohibition of that category of discharge as an illicit discharge. The Copermittee must submit its findings including a description of the steps taken to address the discharge and the category of discharge, to the San Diego Water Board for review in its Annual Report. Such description must include relevant updates to or new ordinances, orders, or other legal means of addressing the category of discharge, and the anticipated schedule for doing so. The Copermittees must also submit a summary of its findings with the Report of Waste Discharge.

   d. If the Copermittee identifies the source of the exceedance as a non-storm water discharge in violation or potential violation of an existing separate NPDES permit

(e.g. the groundwater dewatering permit), then the Copermittee must report, within three business days, the findings to the San Diego Water Board including all pertinent information regarding the discharger and discharge characteristics.

e. If the Copermittee is unable to identify the source of the exceedance after taking and documenting reasonable steps to do so, then the Copermittee must perform additional focused sampling. If the results of the additional sampling indicate a recurring exceedance of NALs with an unidentified source, then the Copermittee must update its programs within a year to address the common contributing sources that may be causing such an exceedance. The Copermittee's annual report must include these updates to its programs including, where applicable, updates to their watershed workplans (Section G.2), retrofitting consideration (Section F.3.d) and program effectiveness work plans (Section J.4).

f. The Copermittees, or any interested party, may evaluate existing NALs and propose revised NALs for future Board consideration.

3. NALs can help provide an assessment of the effectiveness of the prohibition of non-storm water discharges and of the appropriateness of exempted non-storm water discharges. An exceedance of an NAL does not alone constitute a violation of the provisions of this Order. An exceedance of an NAL may indicate a lack of compliance with the requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions set forth in Sections A and B of this Order. Failure to timely implement required actions specified in this Order following an exceedance of an NAL constitutes a violation of this Order. Neither the absence of exceedances of NALs nor compliance with required actions following observed exceedances, excuses any non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s or any non-compliance with the prohibitions in Sections A and B of this Order. During any annual reporting period in which one or more exceedances of NALs have been documented the Copermittee must report in response to Section C.2 above, a description of whether and how the observed exceedances did or did not result in a discharge from the MS4 that caused, or threatened to cause or contribute to a condition of pollution, contamination, or nuisance in the receiving waters.

4. Monitoring of effluent will occur at the end-of-pipe prior to discharge into the receiving waters, with a focus on Major Outfalls, as defined in 40 CFR 122.26(B 5-6) and Attachment E of this Order. The Copermittees must develop their monitoring plans to sample a representative percentage of major outfalls and identified stations within each hydrologic subarea. At a minimum, outfalls that exceed any NALs once during any year must be monitored in the subsequent year. Any station that does not exceed an NAL, or only has exceedances that are identified as natural in origin and conveyance into the MS4 pursuant to Section C.2.a, for 3 successive years may be replaced with a different station.

5. Each Copermittee must monitor for the non-storm water dry weather action levels, which are incorporated into this Order as follows:

Action levels for discharges to inland surface waters:

Table 3.a: General Constituents

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Fecal Coliform	MPN/ 100 ml	200[A] 400[B]	-		BPO
Enterococci	MPN/ 100 ml	33	-	61[C]	BPO
Turbidity	NTU	-	20		BPO
pH	Units	Within limit of 6.5 to 8.5 at all times			BPO
Dissolved Oxygen	mg/L	Not less than 5.0 in WARM waters and not less than 6.0 in COLD waters			BPO
Total Nitrogen	mg/L	-	1.0	See MDAL	BPO
Total Phosphorus	mg/L	-	0.1	See MDAL	BPO
Methylene Blue Active Substances	mg/L	-	0.5	See MDAL	BPO
Iron	mg/L	-	0.3	See MDAL	BPO
Manganese	mg/L	-	0.05	See MDAL	BPO

A – Based on a minimum of not less than five samples for any 30-day period
B – No more than 10 percent of total samples may exceed 400 per 100 ml during any 30 day period
C – This Value has been set to Basin Plan Criteria for Designated Beach Areas
BPO – Basin Plan Objective
MDAL – Maximum Daily Action Level
AMAL – Average Monthly Action Level

Table 3.b: Priority Pollutants

		Freshwater (CTR)	
Parameter	Units	MDAL	AMAL
Cadmium	ug/L	**	**
Copper	ug/L	*	*
Chromium III	ug/L	**	**
Chromium VI (hexavalent)	ug/L	16	8.1
Lead	ug/L	*	*
Nickel	ug/L	**	**
Silver	ug/L	*	*
Zinc	ug/L	*	*

CTR – California Toxic Rule
*- Action Levels developed on a case-by-case basis (see below)
**- Action Levels developed on a case-by-case basis (see below), but calculated criteria are not to exceed Maximum Contaminant Levels under the California Code of Regulations[9]

[9] California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431.

The NALs for Cadmium, Copper, Chromium (III), Lead, Nickel, Silver and Zinc will be developed on a case-by-case basis because the freshwater criteria are based on site-specific water quality data (receiving water hardness). For these priority pollutants, the following equations (40 CFR 131.38.b.2) will be required:

Cadmium (Total Recoverable)	= exp(0.7852[ln(hardness)] -2.715)
Chromium III (Total Recoverable)	= exp(0.8190[ln(hardness)] + .6848)
Copper (Total Recoverable)	= exp(0.8545[ln(hardness)] - 1.702)
Lead (Total Recoverable)	= exp(1.273[ln(hardness)] - 4.705)
Nickel (Total Recoverable)	= exp(.8460[ln(hardness)] + 0.0584)
Silver (Total Recoverable)	= exp(1.72[ln(hardness)] - 6.52)
Zinc (Total Recoverable)	= exp(0.8473[ln(hardness)] + 0.884)

D. STORM WATER ACTION LEVELS

1. The Copermittees must implement the Wet Weather MS4 Discharge Monitoring as described in Attachment E of this Order, and beginning three years after the Order adoption date, the Copermittees must annually evaluate their data compared to the Stormwater Action Levels (SALs). At each monitoring station, a running average of twenty percent or greater of exceedances of any discharge of storm water from the MS4 to waters of the U.S. that exceed the SALs for each of the pollutants listed in Table 4 (below) requires the Copermittee(s) having jurisdiction to affirmatively augment and implement all necessary storm water controls and measures to reduce the discharge of the associated class of pollutants(s) to the MEP. The Copermittees must utilize the exceedance information when adjusting and executing annual work plans, as required by this Order. Copermittees must take the magnitude, frequency, and number of constituents exceeding the SAL(s), in addition to receiving water quality data and other information, into consideration when prioritizing and reacting to SAL exceedances in an iterative manner. Failure to appropriately consider and react to SAL exceedances in an iterative manner creates a presumption that the Copermittee(s) have not reduced pollutants in storm water discharges to the MEP.

Table 4. Storm Water Action Levels

Pollutant	Action Level
Turbidity (NTU)	126
Nitrate & Nitrite total (mg/L)	2.6
P total (mg/L)	1.46
Cd total (µg/L)	3.0
Cu total (µg/L)	127
Pb total (µg/L)	250
Zn total (µg/L)	976

2. The end-of-pipe assessment points for the determination of SAL compliance are major outfalls, as defined in 40 CFR 122.26(b)(5) and (b)(6) and Attachment E of this Order. The Copermittees must develop their monitoring plans to sample a representative percentage of the major outfalls within each hydrologic subarea. At a minimum, outfalls that exceed SALs must be monitored in the subsequent year. Any station that does not exceed an SAL for 3 successive years may be replaced with a different station. SAL samples must be 24 hour time-weighted composites.

3. The absence of SAL exceedances does not relieve the Copermittees from implementing all other required elements of this Order.

4. This Order does not regulate natural sources and conveyances into the MS4 of constituents listed in Table 5. To be relieved of the requirements to take action as described in D.1 above, the Copermittee must demonstrate that the likely and expected cause of the SAL exceedance is not anthropogenic in nature. This demonstration does not need to be repeated for subsequent exceedances of the same SAL at the same monitoring station.

5. The SALs will be reviewed and updated at the end of every permit cycle. The data collected pursuant to D.2 above and Attachment E can be used to create SALs based upon local data. The purpose of establishing the SALs is that through the iterative and MEP process, outfall storm water discharges will meet all applicable water quality standards.

E. LEGAL AUTHORITY

1. Each Copermittee must establish, maintain, and enforce adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. Nothing herein shall authorize a Copermittee or other discharger regulated under the terms of this order to divert, store or otherwise impound water if such action is reasonably anticipated to harm downstream water rights holders in the exercise of their water rights. This legal authority must, at a minimum, authorize the Copermittee to:

   a. Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies both to industrial and construction sites which have coverage under the statewide general industrial or construction storm water permits, as well as to those sites which do not. Grading ordinances must be updated and enforced as necessary to comply with this Order;
   b. Prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2;
   c. Prohibit and eliminate illicit connections to the MS4;

d. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;
e. Require compliance with conditions in Copermittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);
f. Utilize enforcement mechanisms to require compliance with Copermittee storm water ordinances, permits, contracts, or orders;
g. Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Copermittees;
h. Control of the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements with other owners of the MS4 such as the State of California Department of Transportation, the U.S. federal government, or sovereign Native American Tribes is encouraged;
i. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Copermittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites;
j. Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s from storm water to the MEP; and
k. Require documentation on the effectiveness of BMPs implemented to reduce the discharge of storm water pollutants to the MS4 to the MEP.

2. Each Copermittee must submit on or before June 30, 2012, a statement certified by its chief legal counsel that the Copermittee has taken the necessary steps to obtain and maintain full legal authority within its jurisdiction to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order. These statements must include:

a. Citation of runoff related ordinances and the reasons they are enforceable;
b. Identification of the local administrative and legal procedures available to mandate compliance with runoff related ordinances and therefore with the conditions of this Order, and a statement as to whether enforcement actions can be completed administratively or whether they must be commenced and completed in the judicial system; and
c. A brief description of how runoff related ordinances are adopted and the process by which they may be challenged.

F. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP)

Each Copermittee must implement all requirements of section F of this Order no later than July 1, 2012, unless otherwise specified. Upon adoption of this Order and until an updated JRMP is developed and implemented or July 1, 2012, whichever occurs first, each Copermittee must at a minimum implement its JRMP document, as the document was developed and amended to comply with the requirements of Order No. R9-2004-001.

Each Copermittee must develop and implement an updated JRMP for its jurisdiction no later than July 1, 2012. Each updated JRMP must meet the requirements of section F of this Order, reduce the discharge of storm water pollutants from the MS4 to the MEP, effectively prohibit non-storm water discharges, and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. In addition, each Copermittee's JRMP must identify all departments and positions within its jurisdiction that conduct runoff related activities, and their roles and responsibilities under this Order. This identification must include an up to date organizational chart specifying these departments and key personnel.

1. DEVELOPMENT PLANNING COMPONENT

Each Copermittee must implement a program which meets the requirements of this section and (1) reduces Development Project discharges of storm water pollutants from the MS4 to the MEP; (2) prevents Development Project discharges from the MS4 from causing or contributing to a violation of water quality standards; (3) prevents illicit discharges into the MS4; and (4) manages increases in runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

a. GENERAL PLAN

Each Copermittee must revise as needed its General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) to include water quality and watershed protection principles and policies that direct land-use decisions and require implementation of consistent water quality protection measures for all development, redevelopment, and retrofit projects. Examples of water quality and watershed protection principles and policies to be considered include the following:

(1) Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and where feasible slow runoff and maximize on-site infiltration of runoff.

(2) Implement pollution prevention methods supplemented by pollutant source controls and treatment BMPs. Use small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into an MS4.

(3) Preserve, and where possible, create, or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones. Encourage land acquisition of such areas.

(4) Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.

(5) Prior to making land use decisions, utilize methods available to estimate increases in pollutant loads and flows resulting from projected future development. Require incorporation of BMPs to mitigate the projected increases in pollutant loads and flows.

(6) Avoid development of areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss.

(7) Reduce pollutants associated with vehicles and increasing traffic resulting from development.

(8) Post-development runoff from a site must not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives and which have not been reduced to the MEP.

b. **ENVIRONMENTAL REVIEW PROCESS**

Each Copermittee must revise as needed its current environmental review processes to accurately evaluate water quality impacts and cumulative impacts and identify appropriate measures to avoid, minimize, and mitigate those impacts for all Development Projects.

c. **APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS**

For all proposed Development Projects, each Copermittee, during the planning process, and prior to project approval and issuance of local permits, must prescribe the necessary requirements so that Development Project discharges of storm water pollutants from the MS4 will be reduced to the MEP, will not cause or

contribute to a violation of water quality standards, and will comply with the Copermittee's ordinances, permits, plans, and requirements, and with this Order.

Performance Criteria: Discharges from each approved development project must be subject to the following management measures:

(1) Source control BMPs that reduce storm water pollutants of concern in runoff; prevent illicit discharges into the MS4; prevent irrigation runoff; storm drain system stenciling or signage; properly design outdoor material storage areas; properly design outdoor work areas; and properly design trash storage areas.

(2) The following LID BMPs listed below must be implemented at all Development Projects where applicable and feasible.

(a) Conserve natural areas, including existing trees, other vegetation, and soils;
(b) Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised;
(c) Minimize the impervious footprint of the project;
(d) Minimize soil compaction to landscaped areas;
(e) Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.); and
(f) Disconnect impervious surfaces through distributed pervious areas.

(3) Buffer zones for natural water bodies, where technically feasible. Where buffer zones are technically infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc.

(4) Other measures necessary so that grading or other construction activities meet the provisions specified in section F.2 of this Order.

(5) Submittal of documentation of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.

(6) Infiltration and Groundwater Protection

To protect groundwater quality, each Copermittee must apply restrictions to the use of treatment control BMPs that are designed to primarily function as large, centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions must be designed so that the use of such infiltration treatment control BMPs does not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each treatment control BMP designed to primarily function as a centralized infiltration device must meet the restrictions below, unless the Development Project demonstrates to the Copermittee that a restriction is not necessary to protect groundwater quality. The Copermittees may collectively or individually

develop alternative restrictions on the use of treatment control BMPs which are designed to primarily function as centralized infiltration devices. Alternative restrictions developed by the Copermittees can partially or wholly replace the restrictions listed below. The restrictions do not apply to small infiltration systems dispersed throughout a development project.

(a) Runoff must undergo pretreatment such as sedimentation or filtration prior to infiltration;

(b) All dry weather flows containing significant pollutant loads must be diverted from infiltration devices and treated through other BMPs;

(c) Pollution prevention and source control BMPs must be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;

(d) Infiltration treatment control BMPs must be adequately maintained so that they remove storm water pollutants to the MEP;

(e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark must be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;

(f) The soil through which infiltration is to occur must have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of runoff for the protection of groundwater beneficial uses;

(g) Infiltration treatment control BMPs must not be used for areas of industrial or light industrial activity; and other high threat to water quality land uses and activities as designated by each Copermittee unless first treated or filtered to remove pollutants prior to infiltration; and

(h) Infiltration treatment control BMPs must be located a minimum of 100 feet horizontally from any water supply wells.

(7) Where feasible, landscaping with native or low water species shall be preferred in areas that drain to the MS4 or to waters of the U.S.

(8) Rain water harvesting and water reuse, where feasible, must be encouraged as part of the site design and construction to reduce pollutants in storm water discharges to the MEP.

d. **STANDARD STORM WATER MITIGATION PLANS (SSMPS) – APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR PRIORITY DEVELOPMENT PROJECTS**

On or before June 30, 2012, the Copermittees must submit an updated SSMP, to the San Diego Water Board's Executive Officer for a 30 day public review and comment period. The San Diego Water Board's Executive Officer has the discretion to determine whether to hold a public hearing or to limit public input to written comments. Within 180 days of determination that the SSMP is in compliance with this Order's provisions, each Copermittee must amend its local ordinances consistent with the updated SSMP, and begin implementing the updated SSMP. Any updated local ordinances must be submitted to the San Diego Water Board with the Annual Report. The SSMP must meet the requirements of section F.1.d of this Order to (1) reduce Priority Development Project discharges of storm water pollutants from the MS4 to the MEP, and (2) prevent Priority Development Project runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.[10]

(1) Definition of Priority Development Project:

Priority Development Projects are:

(a) All new Development Projects that fall under the project categories or locations listed in section F.1.d.(2), and

(b) Those redevelopment projects that create, add, or replace at least 5,000 square feet of impervious surfaces on an already developed site and the existing development and/or the redevelopment project falls under the project categories or locations listed in section F.1.d.(2). Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to SSMP requirements, the numeric sizing criteria discussed in section F.1.d.(6) applies only to the addition or replacement, and not to the entire development. Where redevelopment

[10] Updated SSMP and hydromodification requirements must apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updated SSMP or hydromodification requirement commences. If lawful prior approval of a project exists, whereby application of an updated SSMP or hydromodification requirement to the project is illegal, the updated SSMP or hydromodification requirement need not apply to the project. Updated Development Planning requirements set forth in Sections F.1. (a) through (h) of this Order must apply to all projects or phases of projects, unless, at the time any updated Development Planning requirement commences, the projects or project phases meet any one of the following conditions: (i) the project or phase has begun grading or construction activities; or (ii) a Copermittee determines that lawful prior approval rights for a project or project phase exist, whereby application of the Updated Development Planning requirement to the project is legally infeasible. Where feasible, the Permittees must utilize the SSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SSMP and hydromodification requirements in its plans.

results in an increase of more than fifty percent of the impervious surfaces of a previously existing development, the numeric sizing criteria applies to the entire development.

(c) One acre threshold: In addition to the Priority Development Project Categories identified in section F.1.d.(2), Priority Development Projects must also include all other post-construction pollutant-generating new Development Projects that result in the disturbance of one acre or more of land by July 1, 2012.[11]

(2) Priority Development Project Categories

Where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SSMP requirements.

(a) New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site) including commercial, industrial, residential, mixed-use, and public projects. This category includes development projects on public or private land which fall under the planning and building authority of the Copermittees.

(b) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

(c) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet must meet all SSMP requirements except for structural treatment BMP and numeric sizing criteria requirement F.1.d.(6) and hydromodification requirement F.1.h.

(d) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.

(e) Environmentally Sensitive Areas (ESAs). All development located within, or directly adjacent to, or discharging directly to an ESA (where

[11] Pollutant generating Development Projects are those projects that generate pollutants at levels greater than natural background levels.

discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10 percent or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.

(f) Impervious parking lots 5,000 square feet or more and potentially exposed to runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.

(g) Street, roads, highways, and freeways. This category includes any paved impervious surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles. To the extent that the Copermittees develop revised standard roadway design and post-construction BMP guidance that comply with the provisions of Section F.1 of the Order, then public works projects that implement the revised standard roadway sections do not have to develop a project specific SSMP. The standard roadway design and post-construction BMP guidance must be submitted with the Copermittee's updated SSMP.

(h) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

(3) Pollutants of Concern

As part of its local SSMP, each Copermittee must implement an updated procedure for identifying pollutants of concern for each Priority Development Project. The procedure must address, at a minimum: (1) Receiving water quality (including pollutants for which receiving waters are listed as impaired under CWA section 303(d)); (2) Land-use type of the Development Project and pollutants associated with that land use type; and (3) Pollutants expected to be present on site.

(4) Low Impact Development BMP Requirements

Each Copermittee must require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss.

(a) The Copermittees must take the following measures to ensure that LID BMPs are implemented at Priority Development Projects:

(i) Each Copermittee must require LID BMPs or make a finding of technical infeasibility for each Priority Development Project in accordance with the LID waiver program in Section F.1.d.(7);

(ii) Each Copermittee must incorporate formalized consideration, such as thorough checklists, ordinances, and/or other means, of LID BMPs into the plan review process for Priority Development Projects; and

(iii) On or before July 1, 2012, each Copermittee must review its local codes, policies, and ordinances and identify barriers therein to implementation of LID BMPs. Following the identification of these barriers to LID implementation, where feasible, the Copermittee must take, by the end of the permit cycle, appropriate actions to remove such barriers. The Copermittees must include this review with the updated JRMP.

(b) The following LID BMPs must be implemented at each Priority Development Project:

(i) Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and ephemeral and intermittent streams) to the extent feasible[12].

(ii) Projects with landscaped or other pervious areas must, where feasible, properly design and construct the pervious areas to effectively receive and infiltrate, retain and/or treat runoff from impervious areas, prior to discharge to the MS4. Soil compaction for these areas must be minimized. The amount of the impervious areas that are to drain to pervious areas must be based upon the total size, soil conditions, slope, and other pertinent factors.

(iii) Projects with low traffic areas and appropriate soil conditions must be constructed with permeable surfaces.

[12] Priority Development Projects proposing to dredge or fill materials in waters of the U.S. must obtain a CWA Section 401 Water Quality Certification. Priority Development Projects proposing to dredge or fill waters of the State must obtain Waste Discharge Requirements.

(c) LID BMPs sizing criteria:

(i) LID BMPs must be sized and designed to ensure onsite retention without runoff, of the volume of runoff produced from a 24-hour 85th percentile storm event[13] ("design capture volume");

(ii) If onsite retention[14] LID BMPs are technically infeasible per section F.1.d.(7)(b), other LID BMPs may treat any volume that is not retained onsite provided that the total volume of the other LID BMPs, including pore spaces and pre-filter detention volume, are sized to hold at least 0.75 times the portion of the design capture volume that is not retained onsite. The LID BMPs must be designed for an appropriate surface loading rate to prevent erosion, scour and channeling within the BMP.

(d) If it is shown to be technically infeasible per Section F.1.d.(7)(b) to retain and/or treat the remaining volume up to and including the design capture volume using LID BMPs, then the project must implement conventional treatment control BMPs in accordance with Section F.1.d.(6) below and must participate in the LID waiver program in Section F.1.d.(7).

(e) All LID BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies.

(5) Source Control BMP Requirements

Each Copermittee must require each Priority Development Project to implement applicable source control BMPs. The source control BMPs to be required must:

(a) Prevent illicit discharges into the MS4;
(b) Minimize storm water pollutants of concern in runoff;
(c) Eliminate irrigation runoff;

[13] This volume is not a single volume to be applied to all of Riverside County. The size of the 85th percentile storm event is different for various parts of the County. The Copermittees are encouraged to calculate the 85th percentile storm event for each of its jurisdictions using local rain data pertinent to its particular jurisdiction (0.6 inch standard is a rough average for the County and should only be used where appropriate rain data is not available). In addition, isopluvial maps may be used to extrapolate rainfall data to areas where insufficient data exists in order to determine the volume of the local 85th percentile storm event in such areas. Where the Copermittees will use isopluvial maps to determine the 85th percentile storm event in areas lacking rain data, the Copermittees must describe their method for using isopluvial maps in its SSMPs.

[14] Infiltration LID BMPs are the preferred method for onsite retention, but does not preclude the use and implementation of all other retention LID BMPs (e.g. evapotranspiration, evaporation, and/or harvest), where technically feasible, prior to considering biofiltration LID BMPs for treatment of the design capture volume that is not otherwise retained onsite.

(d) Include storm drain system stenciling or signage;
(e) Include properly designed outdoor material storage areas;
(f) Include properly designed outdoor work areas;
(g) Include properly designed trash storage areas; and
(h) Include water quality protection requirements applicable to individual priority project categories.

(6) Treatment Control BMP Requirements

Each Copermittee must require each Priority Development Project that meets the Copermittee's technical infeasibility criteria in Section F.1.d(7) below, to implement conventional treatment control BMPs to treat the portion of the "design capture volume" that was not treated by LID BMPs per Section F.1.d(4) above. Conventional treatment control BMPs must meet the following requirements:

(a) All treatment control BMPs for a single Priority Development Project must collectively be sized to comply with the following numeric sizing criteria:

(i) Volume-based treatment control BMPs must be designed to mitigate (infiltrate, filter, or treat) the remaining portion of the design capture volume that was not retained and/or treated with LID BMPs; or

(ii) Flow-based treatment control BMPs must be designed to mitigate (filter, or treat) either: a) the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event; or b) the maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two.

(b) All treatment control BMPs for Priority Development Projects must, at a minimum:

(i) Be ranked with high or medium pollutant removal efficiency for the project's most significant pollutants of concern, as the pollutant removal efficiencies are identified in the Copermittees' SSMP. Treatment control BMPs with a low removal efficiency ranking must only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.
(ii) Be correctly sized and designed so as to remove storm water pollutants to the MEP.

(c) Target removal of pollutants of concern from runoff.

(d) Be implemented close to pollutant sources, and prior to discharging into waters of the U.S.

(e) Include proof of a mechanism under which ongoing long-term maintenance will be conducted to ensure proper maintenance for the life of the project. The mechanisms may be provided by the project proponent or Copermittee.

(f) Be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies.

(7) Low Impact Development (LID) BMP Waiver Program

The Copermittees must develop, collectively or individually, a LID waiver program for incorporation into the SSMP, which would allow a Priority Development Project to substitute implementation of all or a portion of required LID BMPs in Section F.1.d(4) with implementation of treatment control BMPs and either 1) on-site mitigation, 2) an off-site mitigation project, and/or 3) other mitigation developed by the Copermittees. The Copermittees must submit the LID waiver program as part of their updated SSMP. At a minimum, the program must meet the requirements below:

(a) Prior to implementation, the LID waiver program must clearly exhibit that it will not allow Priority Development Projects to result in a net impact (after consideration of any mitigation) from pollutant loadings over and above the impact caused by projects meeting the onsite LID retention requirements;

(b) For each Priority Development Project participating, the Copermittee must find that it is technically infeasible to implement LID BMPs that comply with the requirements of Section F.1.(d)(4). The Copermittee(s) must develop criteria to determine the technical feasibility of implementing LID BMPs . Each Priority Development Project participating must demonstrate that LID BMPs were implemented as much as feasible given the site's unique conditions. Technical infeasibility may result from conditions including, but not limited to:

(i) Locations that cannot meet the infiltration and groundwater protection requirements in section F.1.c.(6) for large, centralized infiltration BMPs. Where infiltration is technically infeasible, the project must still examine the feasibility of other onsite LID BMPs;
(ii) Insufficient demand for storm water reuse;

(iii) Smart growth and infill or redevelopment locations where the density and/or nature of the project would create significant difficulty for compliance with the LID BMP requirements; and

(iv) Other site, geologic, soil, or implementation constraints identified in the Copermittees updated SSMP document.

(c) Each Priority Development Project that participates in the LID waiver program must mitigate for the pollutant loads expected to be discharged due to not implementing the LID retention BMPs in section F.1.d.(4). The pollutant loading must be estimated for each project participating in the LID waiver program. The estimated impacts from not implementing the required LID retention BMPs in section F.1.d.(4) must be fully mitigated. Mitigation projects must be implemented within the same hydrologic unit as the Priority Development Project. Mitigation projects outside of the hydrologic subarea but within the same hydrologic unit may be approved provided that the project proponent demonstrates that mitigation projects within the same hydrologic subarea are infeasible and that the mitigation project will address similar beneficial use impacts as expected from the Priority Development Projects pollutant load. Onsite mitigation may include increasing the conventional treatment sizing factors to achieve pollutant load removal equal to or greater than the pollutant load removal expected from implementing onsite retention of the design capture volume. Offsite mitigation projects may include green streets projects, existing development retrofit projects, retrofit incentive programs, regional BMPs and/or riparian restoration projects. Project applicants seeking to utilize these alternative compliance provisions may propose other offsite mitigation projects, which the Copermittees may approve if they meet the requirements of this subpart.

(d) A Copermittee may choose to implement additional mitigation programs (e.g., pollutant credit system, mitigation fund) as part of the LID waiver program provided that the mitigation program clearly exhibits that it will not allow Priority Development Projects to result in a net impact from pollutant loadings over and above the impact caused by projects meeting LID requirements. Any additional mitigation programs that a Copermittee chooses to implement must be submitted to the San Diego Water Board Executive Officer for review and acceptance prior to implementation.

(8) LID and Treatment Control BMP Standards

(a) As part of the SSMP, each Copermittee must develop and require Priority Development Projects to implement siting, design, and maintenance criteria for each LID and treatment control BMP listed in the SSMP to determine feasibility and applicability and so that implemented LID and treatment control BMPs are constructed correctly and are effective at pollutant removal, runoff control, and vector minimization. Development of

BMP design worksheets which can be used by project proponents is encouraged.

(b) LID and treatment control BMPs implemented at any Priority Development Projects must mitigate (treat through infiltration, settling, filtration or other unit processes) the required volume or flow of runoff from all developed portions of the project, including landscaped areas.

(c) All LID and treatment control BMPs must be located so as to remove pollutants from runoff prior to its discharge to any receiving waters. Multiple Priority Development Projects may use shared post-construction BMPs as long as construction of any shared BMP is completed prior to the use or occupation of any Priority Development Project from which the BMP will receive runoff. Post construction BMPs must not be constructed within a waters of the U.S. or waters of the State.

(9) Implementation Process

(a) As part of its local SSMP, each Copermittee must implement a process to verify compliance with SSMP requirements. The process must identify at what point in the planning process Priority Development Projects will be required to meet SSMP requirements and at a minimum, the Priority Development Project must implement the required post-construction BMPs prior to occupancy and/or the intended use of any portion of that project. The process must also include identification of the roles and responsibilities of various municipal departments in implementing the SSMP requirements, as well as any other measures necessary for the implementation of SSMP requirements.

(b) Each Copermittee must establish a mechanism not only to track post-construction BMPs, but also to ensure that appropriate easements and ownerships are properly recorded in public records and the information is conveyed to all appropriate parties when there is a change in project or site ownership.

(10) Post-construction BMP Review

(a) The Copermittees must review and update the BMPs that are listed in their SSMP as options for treatment control. At a minimum, the update must include removal of obsolete or ineffective BMPs and addition of LID BMPs that can be used for treatment, such as bioretention cells, bioretention swales, etc. The update must also add appropriate LID BMPs to any tables or discussions in the local SSMPs addressing pollutant removal efficiencies of treatment control BMPs. In addition, the update must include review and revision where necessary of treatment control BMP pollutant removal efficiencies.

(b) The update must incorporate findings from BMP effectiveness studies conducted by the Copermittees for projects funded wholly or in part by the State Water Board or Regional Water Boards.

(c) Each Copermittee must implement a mechanism for annually incorporating findings from local treatment BMP effectiveness studies (e.g., ones conducted by, or on-behalf of, public agencies in Riverside County) into SSMP project reviews and permitting.

e. **BMP CONSTRUCTION VERIFICATION**

Prior to occupancy and/or intended use of any portion of the Priority Development Project subject to SSMP requirements, each Copermittee must inspect the constructed site design, source control, and treatment control BMPs applicable to the constructed portion of the project to verify that they have been constructed and are operating in compliance with all specifications, plans, permits, ordinances, and this Order.

f. **BMP MAINTENANCE TRACKING**

(1) Inventory of SSMP projects: Each Copermittee must develop and maintain a watershed-based database to track and inventory all projects constructed within their jurisdiction, that have a final approved SSMP (SSMP projects), and its structural post-construction BMPs implemented therein since July, 2005. LID BMPs implemented on a lot by lot basis at single family residential houses, such as rain barrels, are not required to be tracked or inventoried. At a minimum, the database must include information on BMP type(s), location, watershed, date of construction, party responsible for maintenance, dates and findings of maintenance verifications, and corrective actions, including whether the site was referred to the local vector control agency or department.

(2) Each Copermittee must verify that approved post-construction BMPs are operating effectively and have been adequately maintained by implementing the following measures:

(a) The designation of high priority SSMP Projects must consider the following:

(i) BMP size,
(ii) Recommended maintenance frequency,
(iii) Likelihood of operational and maintenance issues,
(iv) Location,

(v) Receiving water quality,
(vi) Compliance record,
(vii) Land use, and
(viii) Other pertinent factors;

At a minimum, high priority projects include those projects that generate pollutants (prior to treatment) within the tributary area of and within the same hydrologic subarea as a 303(d) listed waterbody impaired for that pollutant; or those projects generating pollutants within the tributary area for and within the same hydrologic subarea as an observed action level exceedance of that pollutant.

(b) Beginning on July 1, 2012, each Copermittee must verify that the required structural post-construction BMPs on the inventoried SSMP projects have been implemented, are maintained, and are operating effectively through inspections, self-certifications, surveys, or other equally effective approaches with the following conditions:

(i) The implementation, operation, and maintenance of all (100 percent) approved and inventoried final project public and private SSMPs (a.k.a. WQMPs) must be verified every five years;
(ii) All (100 percent) projects with BMPs that are high priority must be inspected by the Copermittee annually prior to each rainy season;
(iii) All (100 percent) Copermittee projects with BMPs must be inspected by the Copermittee annually;
(iv) At the discretion of the Copermittee, its inspections may be coordinated with the facility inspections implemented pursuant to section F.3. of this Order;
(v) For verifications performed through a means other than direct Copermittee inspection, adequate documentation must be submitted to the Copermittee to provide assurance that the required maintenance has been completed;
(vi) Appropriate follow-up measures (including re-inspections, enforcement, maintenance, etc.) must be conducted to ensure the treatment BMPs continue to reduce storm water pollutants as originally designed; and
(vii) Inspections must note observations of vector conditions, such as mosquitoes. Where conditions are identified as contributing to mosquito production, the Copermittee must notify its local vector control agency.

g. **ENFORCEMENT OF DEVELOPMENT SITES**

Each Copermittee must enforce its storm water ordinance for all development projects as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms must include appropriate sanctions to achieve compliance. Sanctions must include the following tools or their equivalent: Non-monetary penalties, fines, bonding requirements, liens, and/or permit or occupancy denials for non-compliance.

h. **HYDROMODIFICATION – LIMITATIONS ON INCREASES OF RUNOFF DISCHARGE RATES AND DURATIONS**[15]

Each Copermittee shall collaborate with the other Copermittees to develop and implement a Hydromodification Management Plan (HMP) to manage increases in runoff discharge rates and durations from all Priority Development Projects. The HMP must be incorporated into the SSMP and implemented by each Copermittee so that estimated post-project runoff discharge rates and durations must not exceed pre-development discharge rates and durations. Where the proposed project is located on an already developed site, the pre-project discharge rate and duration must be that of the pre-developed, naturally occurring condition. The draft HMP must be submitted to the San Diego Water Board on or before June 30, 2013. The HMP will be made available for public review and comment and the San Diego Water Board Executive Officer will determine whether to hold a public hearing before the full San Diego Water Board or whether public input will be through written comments to the Executive Officer only.

(1) The HMP must:

(a) Identify a method for assessing susceptibility and geomorphic stability of channel segments which receive runoff discharges from Priority Development Projects. A performance standard must be established that ensures that the geomorphic stability within the channel will not be compromised as a result of receiving runoff discharges from Priority Development Projects.

[15] Updated SSMP and hydromodification requirements must apply to all Priority Development Projects or phases of Priority Development Projects which have not yet begun grading or construction activities at the time any updated SSMP or hydromodification requirement commences. If a Copermittee determines that lawful prior approval of a project exists, whereby application of an updated SSMP or hydromodification requirement to the project is legally infeasible, the updated SSMP or hydromodification requirement need not apply to the project. The Copermittees must utilize the SSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SSMP and hydromodification requirements in its plans.

(b) Identify a range of runoff flows[16] based on continuous simulation of the entire rainfall record (or other analytical method proposed by the Copermittees and deemed acceptable by the San Diego Water Board) for which Priority Development Project post-project runoff flow rates and durations must not exceed pre-development (naturally occurring) runoff flow rates and durations by more than 10 percent, where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses. The lower boundary of the range of runoff flows identified must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks. The identified range of runoff flows may be different for specific watersheds, channels, or channel reaches. In the case of an artificially hardened (concrete lined, rip rap, etc.) channel, the lower boundary of the range of runoff flows identified must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks of a comparable natural channel (i.e. non-hardened, pre-development).

(c) Identify a method to assess and compensate for the loss of sediment supply to streams due to development. A performance and/or design standard must be created and required to be met by Priority Development Projects to ensure that the loss of sediment supply due to development does not cause or contribute to increased erosion within channel segments downstream of Priority Development Project discharge points.

(d) Designate and require Priority Development Projects to implement control measures so that (1) post-project runoff flow rates and durations do not exceed pre-development (naturally occurring) runoff flow rates and durations by more than 10 percent for the range of runoff flows identified under section F.1.h.(1)(b), where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses; (2) post-project runoff flow rates and durations do not result in channel conditions which do not meet the channel standard developed under section F.1.h.(1)(a) for channel segments downstream of Priority Development Project discharge points; and (3) the design of the project and/or control measures compensate for the loss of sediment supply due to development.

[16] The identified range of run off flows to be controlled should be expressed in terms of peak flow rates of rainfall events, such as "10% of the pre-development 2-year runoff event up to the pre-development 10-year runoff event."

(e) Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from Priority Development Projects to meet the range of runoff flows identified under Section F.1.h.(1)(b).

(f) Include other performance criteria (numeric or otherwise) for Priority Development Projects as necessary to prevent runoff from the projects from increasing and/or continuing unnatural rates of erosion of channel beds and banks, silt pollutants generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

(g) Include a review of pertinent literature.

(h) Identify areas within the Santa Margarita Hydrologic Unit for potential opportunities to restore or rehabilitate stream channels with historic hydromodification of receiving waters that are tributary to documented low or very low Index of Biotic Integrity (IBI) scores.

(i) Include a description of how the Copermittees will incorporate the HMP requirements into their local approval processes.

(j) Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations and address potential hydromodification impacts.

(k) Include technical information, including references, supporting any standards and criteria proposed.

(l) Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.

(m) Include a description of monitoring and other program evaluations to be conducted to assess the effectiveness of implementation of the HMP. Monitoring and other program evaluations must include an evaluation of changes to physical (e.g., cross-section, slope, discharge rate, vegetation, pervious/impervious area) and biological (e.g., habitat quality, benthic flora and fauna, IBI scores) conditions of receiving water channels as areas with Priority Development Projects are constructed (i.e. pre- and post-project), as appropriate.

(n) Include mechanisms for assessing and addressing cumulative impacts of Priority Development Projects within a watershed on channel morphology.

(2) In addition to the control measures that must be implemented by Priority Development Projects per section F.1.h.(1)(d), the HMP must include a suite of management measures that can be used on Priority Development Projects to mitigate hydromodification impacts, protect and restore downstream beneficial uses and prevent or further prevent adverse physical changes to downstream channels. The measures must be based on a prioritized consideration of the following elements in this order:

(a) Site design control measures;
(b) On-site management measures;
(c) Regional control measures located upstream of receiving waters; and
(d) In-stream management and control measures.

Where stream channels are adjacent to, or are to be modified as part of a Priority Development Project, management measures must include buffer zones and setbacks. The suite of management measures must also include stream restoration as a viable option to achieve the channel standard in section F.1.h.(1)(a). In-stream controls used as management measures to protect and restore downstream beneficial uses and for preventing or minimizing further adverse physical changes must not include the use of non-naturally occurring hardscape materials such as concrete, riprap, gabions, etc. to reinforce stream channels.

(3) As part of the HMP, the Copermittees may develop a waiver program that allows a redevelopment Priority Development Project, as defined in Section F.1.d.(1)(b), to implement offsite mitigation measures. A waiver may be granted if onsite management and control measures are technically infeasible to fully achieve post-project runoff flow rates and durations that do not exceed the pre-development (naturally occurring) runoff flow rates and durations. Redevelopment projects that are granted a waiver under the program must not have post-project runoff flow rates and durations that exceed the pre-project runoff flow rates and durations. The estimated incremental hydromodification impacts from not achieving the pre-development (naturally occurring) runoff flow rates and durations for the project site must be fully mitigated. The offsite mitigation must be within the same stream channel system to which the project discharges. Mitigation projects not within the same stream channel system but within the same hydrologic unit may be approved provided that the project proponent demonstrates that mitigation within the same stream channel is infeasible and that the mitigation project will address similar impacts as expected from the project.

(4) Each individual Copermittee has the discretion to not require Section F.1.h. at Priority Development Projects where the project:

(a) Discharges storm water runoff into underground storm drains discharging directly to water storage reservoirs and lakes;

(b) Discharges storm water runoff into conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs and lakes; or
(c) Discharges storm water runoff into other areas identified in the HMP as acceptable to not need to meet the requirements of Section F.1.h by the San Diego Water Board Executive Officer.

(5) HMP Reporting and Implementation

(a) On or before June 30, 2013, the Copermittees must submit to the San Diego Water Board a draft HMP that has been reviewed by the public, including the identification of the appropriate limiting range of flow rates per section F.1.h.(1)(b).

(b) Within 180 days of receiving San Diego Water Board comments on the draft HMP, the Copermittees must submit a final HMP that addressed the San Diego Water Board's comments.

(c) Within 90 days of receiving a determination of adequacy from the San Diego Water Board, each Copermittee must incorporate and implement the HMP for all Priority Development Projects.

(d) Prior to acceptance of the HMP by the San Diego Water Board, the early implementation measures likely to be included in the HMP must be encouraged by the Copermittees.

(6) Interim Hydromodification Criteria

Immediately following adoption of this Order and until the final HMP required by this Order has been determined by the San Diego Water Board to be adequate, each Copermittee must ensure that all Priority Development Projects are implementing the hydromodification (aka Hydrologic Condition of Concern) requirements found in Section 4.4 of the 2006 Riverside County WQMP (updated in 2009) unless one of the following conditions in lieu of those specified in the WQMP are met:

(a) Runoff from the Priority Development Project discharges (1) directly to a conveyance channel or storm drain that is concrete lined all the way from the point of discharge to the ocean, bay, lagoon, water storage reservoir or lake; and (2) the discharge is in full compliance with Copermittee requirements for connections and discharges to the MS4 (including both quality and quantity requirements); and (3) the discharge will not cause increased upstream or downstream erosion or adversely impact downstream habitat; and (4) the discharge is authorized by the Copermittee.

(b) The Priority Development Project disturbs less than one acre. The Copermittee has the discretion to require a project specific WQMP to address hydrologic condition concerns on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

(c) The runoff flow rate, volume, velocity, and duration for the post-development condition of the Priority Development Project do not exceed the pre-development (i.e. naturally occurring) condition for the 2-year, 24-hour and 10-year, 24-hour rainfall events. This condition must be substantiated by hydrologic modeling acceptable to the Copermittee.

Once a final HMP is determined to be adequate and is required to be implemented, compliance with the final HMP is required by this Order and compliance with the 2004 WQMP (updated in 2009) or the in-lieu interim hydromodification criteria set forth above no longer satisfies the requirements of this Order.

(7) No part of section F.1.h eliminates the Copermittees' responsibilities for implementing the Low Impact Development requirements under section F.1.d.(4).

i. UNPAVED ROADS DEVELOPMENT

The Copermittees must develop, where they do not already exist, and implement or require implementation of erosion and sediment control BMPs after construction of new unpaved roads. At a minimum, the BMPs must include the following, or alternative BMPs that are equally effective:

(1) Practices to minimize road related erosion and sediment transport;
(2) Grading of unpaved roads to slope outward where consistent with road engineering safety standards;
(3) Installation of water bars as appropriate; and
(4) Unpaved roads and culvert designs that do not impact creek functions and where applicable, that maintain migratory fish passage.

2. CONSTRUCTION COMPONENT

Each Copermittee must implement a construction program which meets the requirements of this section, prevents illicit discharges into the MS4, implements and maintains structural and non-structural BMPs to reduce pollutants in storm water runoff from construction sites to the MS4, reduces construction site discharges of storm water pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.

a. ORDINANCE UPDATE

By July 1, 2012, each Copermittee must review and update its grading ordinances and other ordinances as necessary to achieve full compliance with this Order, including requirements for the implementation of all designated BMPs and other measures.

b. SOURCE IDENTIFICATION

Each Copermittee must maintain an updated watershed-based inventory of all construction sites within its jurisdiction. The use of an automated database system, such as Geographical Information Systems (GIS) is strongly encouraged.

c. SITE PLANNING AND PROJECT APPROVAL PROCESS

Each Copermittee must incorporate consideration of potential water quality impacts prior to approval and issuance of construction and grading permits.

(1) Each construction and grading permit must require proposed construction sites to implement designated BMPs and other measures so that illicit discharges into the MS4 are prevented, storm water pollutants discharged from the site will be reduced to the MEP, and construction discharges from the MS4 are prevented from causing or contributing to a violation of water quality standards.

(2) Prior to permit issuance, the project proponent's runoff management plan (or equivalent construction BMP plan) must be required to comply, and reviewed to verify compliance with the local grading ordinance, other applicable local ordinances, and this Order.

(3) Prior to permit issuance, each Copermittee must verify that project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities, (hereinafter General Construction Permit), have existing coverage under the General Construction Permit.

d. **BMP IMPLEMENTATION**

(1) Designate BMPs: Each Copermittee must designate a minimum set of BMPs and other measures to be implemented at all construction sites. The designated minimum set of BMPs must include:

(a) Management Measures:

(i) Pollution prevention, where appropriate;
(ii) Development and implementation of a runoff management plan;
(iii) Minimization of areas that are cleared and graded to only the portion of the site that is necessary for construction;
(iv) Minimization of exposure time of disturbed soil areas;
(v) Minimization of grading during the rainy season and correlation of grading with seasonal dry weather periods to the extent feasible;
(vi) Limitation of grading to a maximum disturbed area as determined by each Copermittee before either temporary or permanent erosion controls are implemented to prevent storm water pollution. The Copermittee has the option of temporarily increasing the size of disturbed soil areas by a set amount beyond the maximum, if the individual site is in compliance with applicable storm water regulations and the site has adequate control practices implemented to prevent storm water pollution;
(vii) Temporary stabilization and reseeding of disturbed soil areas as rapidly as feasible;
(viii) Wind erosion controls;
(ix) Tracking controls;
(x) Non-stormwater management measures to prevent illicit discharges and control storm water pollution sources;
(xi) Waste management measures;
(xii) Preservation of natural hydrologic features where feasible;
(xiii) Preservation of riparian buffers and corridors where feasible;
(xiv) Evaluation and maintenance of all BMPs, until removed; and
(xv) Retention, reduction, and proper management of all storm water pollutant discharges on site to the MEP standard.

(b) Erosion and Sediment Controls:

(i) Erosion prevention. Erosion prevention is to be used as the most important measure for keeping sediment on site during construction;
(ii) Sediment controls. Sediment controls are to be used as a supplement to erosion prevention for keeping sediment on-site during construction;

(iii) Slope stabilization must be used on all active slopes during rain events regardless of the season and on all inactive slopes during the rainy season and during rain events in the dry season;
(iv) Permanent revegetation or landscaping as early as feasible; and
(v) Erosion and sediment controls must be required during the construction of unpaved roads.

(2) Each Copermittee must implement, or require implementation of, enhanced[17] measures to address the threat to water quality posed by all construction sites tributary to CWA section 303(d) water body segments impaired for sediment or turbidity. Each Copermittee must also implement, or require implementation of, enhanced, measures for construction sites within, or adjacent to, or discharging directly to receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).

(3) Active/Passive Sediment Treatment (AST): Each Copermittee must require implementation of AST for sediment at construction sites (or portions thereof) that are determined by the Copermittee to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors must be considered by the Copermittee:

(a) Soil erosion potential or soil type;
(b) The site's slopes;
(c) Project size and type;
(d) Sensitivity of receiving water bodies;
(e) Proximity to receiving water bodies;
(f) Non-storm water discharges;
(g) Ineffectiveness of other BMPs;
(h) Proximity and sensitivity of aquatic threatened and endangered species of concern;
(i) Known effects of AST chemicals; and
(j) Any other relevant factors.

(4) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each construction site within its jurisdiction year round. BMP implementation requirements, however, can vary based on wet and dry seasons. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season (May 1 through September 30).

[17] Enhanced BMPs are control actions specifically targeted to the pollutant or condition of concern and of higher quality and effectiveness than the minimum control measures otherwise required. Enhanced in this Order means better, not simply more, BMPs.

e. **INSPECTION OF CONSTRUCTION SITES**

Each Copermittee must conduct construction site inspections for compliance with its ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order. Priorities for inspecting sites must consider the nature and size of the construction activity, topography, and the characteristics of soils and receiving water quality.

(1) During the rainy season, each Copermittee must inspect at least every two weeks, all construction sites within its jurisdiction meeting any of the following criteria:

(a) All sites 30 acres or more in size with rough grading or with active, unstabilized slopes occurring during the rainy season;

(b) All sites one acre or more, and within the same hydrologic subarea and tributary to a CWA section 303(d) water body segment impaired for sediment; or within, directly adjacent to, or discharging directly to a receiving water within an ESA; and

(c) Other sites determined by the Copermittees or the San Diego Water Board as a significant threat to water quality. In evaluating threat to water quality, the following factors must be considered: (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; (7) known past record of non-compliance by the operators of the construction site; and (8) any other relevant factors.

(2) During the rainy season, each Copermittee must inspect at least monthly, all construction sites with one acre or more of soil disturbance not meeting the criteria specified above in section F.2.e.(1).

(3) During the rainy season, each Copermittee must inspect construction sites less than one acre in size as needed to ensure compliance with its ordinances and this Order.

(4) Each Copermittee must inspect all construction sites as needed during the dry season. Sites meeting the criteria in section F.2.e.(1) must be inspected at least once in August or September each year.

(5) Re-inspections: Based upon site inspection findings, each Copermittee must implement all follow-up actions (i.e., re-inspection, enforcement) necessary to comply with this Order. Reinspection frequencies must be determined by each Copermittee based upon the severity of deficiencies, the nature of the construction activity, and the characteristics of soils and receiving water quality.

(6) Inspections of construction sites must include, but not be limited to:

(a) Check for coverage under the General Construction Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.) during initial inspections;
(b) Assessment of compliance with Copermittee ordinances and permits related to runoff, including the implementation and maintenance of designated minimum BMPs;
(c) Assessment of BMP effectiveness;
(d) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;
(e) Review of site monitoring data results, if the site monitors its runoff
(f) Education and outreach on storm water pollution prevention, as needed; and
(g) Creation of a written or electronic inspection report.

(7) The Copermittees must track the number of inspections for each inventoried construction site throughout the reporting period to verify that each site is inspected at the minimum frequencies required.

f. **ENFORCEMENT OF CONSTRUCTION SITES**

(1) Each Copermittee must develop and implement an escalating enforcement process that achieves prompt corrective actions at construction sites for violations of the Copermittee's water quality protection permits, requirements, and ordinances. This enforcement process must include authorizing the Copermittee's construction site inspectors to take immediate enforcement actions when appropriate and necessary. The enforcement process must include appropriate sanctions such as stop work orders, non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

(2) Each Copermittee must be able to respond to construction complaints received from third-parties and to ensure the San Diego Water Board that corrective actions have been implemented, if warranted.

g. **REPORTING OF NON-COMPLIANT SITES**

(1) In addition to the notification requirements in Attachment B, each Copermittee must notify the San Diego Water Board when the Copermittee issues high level enforcement (as defined in the Copermittee's JRMP) to a construction site that poses a significant threat to water quality in its jurisdiction as a result of violations of its storm water ordinances.

(2) Each Copermittee must annually notify the San Diego Water Board, prior to the commencement of the rainy season, of all construction sites with alleged violations that pose a significant threat to water quality. Information may be

provided as part of the JRMP annual report if submitted prior to the rainy season. Information provided must include, but not be limited to, the following:

(a) WDID number if enrolled under the General Construction Permit
(b) Site Location, including address
(c) Current violations or suspected violations

3. EXISTING DEVELOPMENT COMPONENT

a. MUNICIPAL

Each Copermittee must implement a municipal program for the Copermittee's areas and activities that meets the requirements of this section, prevents illicit discharges into the MS4, reduces municipal discharges of storm water pollutants from the MS4 to the MEP, and prevents municipal discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification / Inventory

Each Copermittee must maintain an updated watershed-based inventory of all its municipal areas and those activities that have the potential to generate pollutants. The inventory must include the name, address (if applicable), and a description of the area/activity; which pollutants are potentially generated by the area/activity; whether the area/activity is adjacent to an ESA; and identification of whether the area/activity is tributary to and within the same hydrologic subarea as a CWA section 303(d) water body segment and generates pollutants for which the water body segment is impaired. Linear facilities, such as roads, streets, and highways, do not need to be individually inventoried. The use of an automated database system, such as Geographical Information Systems (GIS) is highly recommended.

(2) General BMP Implementation

(a) Pollution Prevention: Each Copermittee must implement pollution prevention methods in its municipal program and must require their use by appropriate departments, personnel, and contractors.

(b) Designate Minimum BMPs: Each Copermittee must designate a minimum set of BMPs for all municipal areas and those activities that have the potential to generate pollutants. The designated minimum BMPs for municipal areas and activities must be area or activity specific as appropriate.

(c) Each Copermittee must designate BMPs for special events that are expected to generate significant trash and litter. Controls to consider must include:

(i) Temporary screens on catch basins and storm drain inlets;
(ii) Temporary fencing to prevent windblown trash from entering adjacent water bodies and MS4 channels;
(iii) Proper management of trash and litter;
(iv) Catch basin cleaning following the special event and prior to an anticipated rain event;
(v) Street sweeping of roads, streets, highways and parking facilities following the special event; and
(vi) Other equivalent controls.

(d) Designate BMPs for ESAs and 303(d) Impairments: Each Copermittee must designate enhanced measures for its municipal areas and activities tributary to and within the same hydrologic subarea as CWA section 303(d) impaired water body segments when an area or those activities have the potential to generate pollutants for which the water body segment is impaired. Each Copermittee must also designate additional controls for its municipal areas and activities within or directly adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).

(e) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum and enhanced BMPs and any additional measures necessary based on its inventory to comply with this Order for each of its municipal area and those activities that have the potential to discharge pollution.

(3) <u>BMP Implementation for Management of Pesticides, Herbicides, and Fertilizers</u>

Each Copermittee must implement BMPs to reduce the contribution of storm water pollutants to the MEP associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from its municipal areas and activities to MS4s and receiving waters. Such BMPs must include, at a minimum:

(a) Educational activities, permits, certifications and other measures for municipal applicators and distributors;
(b) Integrated Pest Management (IPM) measures that rely on non-chemical solutions;
(c) The use of native vegetation;
(d) Schedules for irrigation and chemical application; and

(e) The collection and proper disposal of unused pesticides, herbicides, and fertilizers.

(4) BMP implementation for Flood Control Structures

(a) Each Copermittee must implement procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies.

(b) Each Copermittee must include water quality protection measures, where feasible, when retrofitting existing flood control structural devices.

(c) Each Copermittee must evaluate its existing flood control structures as part of ongoing routine maintenance, identify structures causing or contributing to a condition of pollution, implement measures to reduce or eliminate the structure's effect on pollution, and evaluate the feasibility of retrofitting the structural flood control device. The inventory and evaluation must be completed by and submitted to the San Diego Water Board in each JRMP Annual Report.

(5) BMP Implementation for Sweeping of Municipal Areas

Where municipal area sweeping is implemented as an MS4 BMP for municipal roads, streets, highways, and parking facilities, each Copermittee must design and implement the program based on the following criteria:

(a) Roads, streets, highways, and parking facilities identified as consistently generating the highest volumes of trash and/or debris must be swept at least two times per month.

(b) Roads, streets, highways, and parking facilities identified as consistently generating moderate volumes of trash and/or debris must be swept at least monthly.

(c) Roads, streets, highways, and parking facilities identified as generating low volumes of trash and/or debris must be swept as necessary, but no less than once per year.

(6) Operation and Maintenance of Municipal Separate Storm Sewer System (MS4) and Treatment Controls

(a) Treatment Controls: Each Copermittee must implement a schedule of inspection and maintenance activities to verify proper operation of all its municipal structural treatment controls designed to reduce storm water pollutant discharges to or from its MS4s and related drainage structures.

(b) MS4 and Facilities: Each Copermittee must implement a schedule of maintenance activities for its MS4 and facilities (including but not limited to catch basins, storm drain inlets, detention basins, etc). The maintenance activities must, at a minimum, include:

(i) Inspection and removal of accumulated waste at least once a year between May 1 and September 30 of each year for all MS4 facilities;
(ii) Additional facilities cleaning as necessary between October 1 and April 30 of each year;
(iii) Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year;
(iv) Open channels and basins must be cleaned of observed anthropogenic litter in a timely manner;
(v) Maintenance activities within open channels must not adversely impact beneficial uses;
(vi) Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed;
(vii) Proper disposal of waste removed pursuant to applicable laws; and
(viii) Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

(7) Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance

(a) Each Copermittee must implement controls and measures to prevent and eliminate infiltration of seepage from sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. Each Copermittee that operates both a municipal sanitary sewer system and a MS4 must implement controls and measures to prevent and eliminate infiltration of seepage from the sanitary sewers to the MS4s that must include overall sanitary sewer and MS4 surveys and thorough, routine preventive maintenance of both.

(b) Each Copermittee must implement controls to limit infiltration of seepage from sanitary sewers to municipal separate storm sewer systems where necessary. Such controls must include:

(i) Adequate plan checking for construction and new development;
(ii) Incident response training for its municipal employees that identify sanitary sewer spills;
(iii) Code enforcement inspections;
(iv) MS4 maintenance and inspections;
(v) Interagency coordination with sewer agencies; and

(vi) Proper education of its municipal staff and contractors conducting field operations on the MS4 or its municipal sanitary sewer (if applicable).

(8) Inspection of Municipal Areas and Activities

(a) At a minimum, each Copermittee must inspect the following high priority municipal areas and activities annually:

(i) Roads, Streets, Highways, and Parking Facilities;
(ii) Flood Management Projects and Flood Control Devices not otherwise inspected per Section F.3.a.(6)(b);
(iii) Areas and activities tributary to and within the same hydrologic subarea as a CWA section 303(d) impaired water body segment, where an area or activity generates pollutants for which the water body segment is impaired;
(iv) Areas and activities within or adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order);
(v) Municipal Facilities:
[a] Active or closed municipal landfills;
[b] Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
[c] Solid waste transfer facilities;
[d] Land application sites;
[e] Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles; and
[f] Household hazardous waste collection facilities.
(vi) Municipal airfields;
(vii) Parks and recreation facilities;
(viii) Special event venues following special events (festivals, sporting events, etc.);
(ix) Power washing activities; and
(x) Other municipal areas and activities that the Copermittee determines may contribute a significant pollutant load to the MS4.

(b) Other municipal areas and activities must be inspected as needed and in response to water quality data, valid public complaints, and findings from municipal or contract staff.

(c) Based upon site inspection findings, each Copermittee must implement all follow-up actions necessary to comply with this Order.

(9) Enforcement of Municipal Areas and Activities

Each Copermittee must enforce its storm water ordinance for all its municipal areas and activities as necessary to maintain compliance with this Order.

(10) Copermittee Maintained Unpaved Roads Maintenance

(a) The Copermittees must develop, where they do not already exist, and implement or require implementation of BMPs for erosion and sediment control measures during their maintenance activities on Copermittee maintained unpaved roads, particularly in or adjacent to receiving waters.

(b) The Copermittees must develop and implement or require implementation of appropriate BMPs to minimize impacts on streams and wetlands during their unpaved road maintenance activities.

(c) The Copermittees must maintain as necessary their unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport;

(d) Re-grading of unpaved roads during maintenance must be sloped outward where consistent with road engineering safety standards or alternative equally effective BMPs must be implemented to minimize erosion and sedimentation from unpaved roads; and

(e) Through their maintenance of unpaved roads, the Copermittees must examine the feasibility of replacing existing culverts or design of new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology.

b. COMMERCIAL / INDUSTRIAL

Each Copermittee must implement a commercial / industrial program that meets the requirements of this section, prevents illicit discharges into the MS4, reduces commercial / industrial discharges of storm water pollutants from the MS4 to the MEP, and prevents commercial / industrial discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification

(a) Each Copermittee must maintain an updated watershed-based inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could contribute a significant pollutant load to the MS4. The inventory must include the following minimum

information for each industrial and commercial site/source: name; address; pollutants potentially generated by the site/source; and identification of whether the site/source is tributary to a CWA §303(d) water body segment and generates pollutants for which the water body segment is impaired; and a narrative description including SIC codes which best reflects the principal products or services provided by each facility.

At a minimum, the following sites/sources must be included in the inventory:

(i) Commercial Sites/Sources:

[a] Automobile repair, maintenance, fueling, or cleaning;
[b] Airplane repair, maintenance, fueling, or cleaning;
[c] Boat repair, maintenance, fueling, or cleaning;
[d] Equipment repair, maintenance, fueling, or cleaning;
[e] Automobile and other vehicle body repair or painting;
[f] Mobile automobile or other vehicle washing;
[g] Automobile (or other vehicle) parking lots and storage facilities;
[h] Retail or wholesale fueling;
[i] Pest control services;
[j] Eating or drinking establishments, including such retail establishments with food markets;
[k] Mobile carpet, drape or furniture cleaning;
[l] Cement mixing or cutting;
[m] Masonry;
[n] Painting and coating;
[o] Botanical or zoological gardens and exhibits;
[p] Landscaping;
[q] Nurseries and greenhouses;
[r] Golf courses, parks and other recreational areas/facilities;
[s] Cemeteries;
[t] Pool and fountain cleaning;
[u] Marinas;
[v] Portable sanitary services;
[w] Building material retailers and storage;
[x] Animal boarding facilities and kennels;
[y] Mobile pet services;
[z] Power washing services;
[aa] Plumbing services; and
[bb] Other sites and sources with a history of un-authorized discharges to the MS4.

(ii) Industrial Sites/Sources:

[a] Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
[b] Operating and closed landfills;
[c] Facilities subject to SARA Title III; and
[d] Hazardous waste treatment, disposal, storage and recovery facilities.

(iii) ESAs and 303(d) Listed Waterbodies: All other commercial or industrial sites/sources tributary to and within the same hydrologic subarea as a CWA Section 303(d) impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired. All other commercial or industrial sites/sources within or directly adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order) or that generate pollutants tributary to and within the same hydrologic subarea as an observed exceedance of an action level.

(iv) All other commercial or industrial sites/sources that the Copermittee determines may contribute a significant pollutant load to the MS4.

(2) General BMP Implementation

(a) Pollution Prevention: Each Copermittee must require the use of pollution prevention methods by the inventoried industrial and commercial sites/sources.

(b) Designate / Update Minimum BMPs: Each Copermittee must designate a minimum set of BMPs for all inventoried industrial and commercial sites/sources. Where BMPs have already been designated, each Copermittee must review and update its existing BMPs for adequacy no later than with the submittal of the JRMP. Copermittees may continue to regularly review and update their designated BMPs for adequacy and subsequently submit any updates in their Annual Report. The designated minimum BMPs must be specific to facility types and pollutant-generating activities, as appropriate.

(c) Designate Enhanced BMPs for ESAs and 303(d) Impairments: Each Copermittee must designate enhanced measures for inventoried industrial and commercial sites/sources tributary to and within the same hydrologic subarea as CWA section 303(d) impaired water body segments (where a site/source generates pollutants for which the water body segment is

impaired). Each Copermittee must also designate additional controls for industrial and commercial sites/sources within or directly adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order). Copermittees may continue to regularly review and update their designated enhanced BMPs for adequacy and subsequently submit any updates in their next Annual Report.

(d) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum and enhanced BMPs and any additional measures necessary based on inspections, incident responses, and water quality data to comply with this Order at each industrial and commercial site/source within its jurisdiction.

(3) Mobile Businesses Program

(a) Each Copermittee must develop and implement a program to reduce the discharge of storm water pollutants from mobile businesses to the MEP and to prohibit non-storm water discharges pursuant to Section B of this Order. Each Copermittee must keep as part of its commercial source inventory a listing of mobile businesses known to operate within its jurisdiction that conduct services listed above in section F.3.b.(1)(a). The program must include:

(i) Development and implementation of minimum standards and BMPs to be required for each of the various types of mobile businesses;
(ii) Development and implementation of an enforcement strategy which specifically addresses the unique characteristics of mobile businesses;

(iii) Notification of those mobile businesses known to operate within the Copermittee's jurisdiction of the minimum standards and BMP requirements;
(iv) Development and implementation of an outreach and education strategy; and
(v) Inspection of mobile businesses as needed to implement the program.

(b) If they choose to, the Copermittees may cooperate in developing and implementing their programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education.

(4) Inspection of Industrial and Commercial Sites/Sources

Each Copermittee must conduct industrial and commercial site inspections for compliance with its ordinances, permits, and this Order. Mobile businesses must be inspected as needed pursuant to section F.3.b.(3).

(a) Inspection Procedures: Inspections must include but not be limited to:

(i) Review of BMP implementation plans not including SSMPs required pursuant to section F.1.d, if the site uses or is required to use such a plan;
(ii) Review of facility monitoring data, if the site monitors its runoff;
(iii) Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification Number), if applicable;
(iv) Assessment of compliance with Copermittee ordinances and Copermittee issued permits related to runoff;
(v) Assessment of the implementation, maintenance and effectiveness of the designated minimum and/or enhanced BMPs;
(vi) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and
(vii) Education and training on storm water pollution prevention, as conditions warrant.

(b) Frequencies: At a minimum all sites determined to pose a high threat to water quality must be inspected each year. All inventoried sites must be inspected at least once during a five year period. In evaluating threat to water quality, each Copermittee must consider, at a minimum, the following:

(i) Type of activity (SIC code);
(ii) Materials used at the facility;
(iii) Wastes generated;
(iv) Pollutant discharge potential, including whether the facility generates a pollutant that exceeds an action level;
(v) Non-storm water discharges;
(vi) Size of facility;
(vii) Proximity to receiving water bodies;
(viii) Sensitivity of receiving water bodies;
(ix) Whether the facility is subject to the General Industrial Permit or an individual NPDES permit;
(x) Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability;
(xi) Facility design;

(xii) Total area of the site, portion of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and runoff;
(xiii) The facility's compliance history; and
(xiv) Any other relevant factors.

(c) Third-Party Certifications: Each Copermittee may propose to develop and implement a third party certification program subject to San Diego Water Board Executive Officer acceptance. This program would verify industrial and commercial site/source compliance with the Copermittees' ordinances, permits, and this Order. To the extent that third party certifications are conducted to fulfill the requirements of Section F.3.b.(4) above, the Copermittee retains responsibility for compliance with this Order and will be responsible for conducting and documenting quality assurance and quality control of the third-party certifications.

The Copermittee's proposed third party certification program must include the following:

(i) A description of the procedures and measures for quality assurance and quality control;
(ii) A listing of sites/sources that may and may not participate in the program;
(iii) The representative percentage of certifications that would qualify to satisfy the inspection requirements in section F.3.b(4)(c) above;
(iv) Photo documentation of potential storm water violations identified during the third party inspection;
(v) Reporting to the Copermittee of identified significant potential violations, including imminent or observed illegal discharges, within 24 hours of the third party inspection;
(vi) Reporting to the Copermittee of all findings within one week of the inspection being conducted; and
(vii) Copermittee follow-up and/or enforcement actions for identified potential storm water violations within two business days of the potential violation report receipt.

(d) Based upon site inspection findings, each Copermittee must implement all follow-up actions and enforcement necessary to comply with this Order.

(e) To the extent that the San Diego Water Board has conducted an inspection of an industrial site during a particular year, the requirement for the responsible Copermittee to inspect this facility during the same year is deemed satisfied.

(f) The Copermittees must track the number of inspections for the inventoried industrial and commercial sites/sources throughout the reporting period to verify that the sites/sources are inspected at the minimum frequencies listed in this Order.

(5) Enforcement of Industrial and Commercial Sites/Sources

Each Copermittee must enforce its storm water ordinance for all industrial and commercial sites/sources as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms must include appropriate sanctions to achieve compliance. Sanctions must include the following tools or their equivalent: Non-monetary penalties, fines, bonding requirements, liens and/or permit denials for non-compliance.

(6) Reporting of Non-Compliant Sites

Each Copermittee must annually notify the San Diego Water Board, prior to the commencement of the wet season, of any unresolved high level enforcement action (as defined in the Copermittees' JRMP) that poses a significant threat to water quality in its jurisdiction as a result of violations of their storm water ordinances.

c. RESIDENTIAL

Each Copermittee must implement a residential program that meets the requirements of this section, prevents illicit discharges into the MS4, reduces residential discharges of storm water pollutants from the MS4 to the MEP, and prevents residential discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Threat to Water Quality Prioritization

Each Copermittee must identify residential areas and activities that pose a high threat to water quality. At a minimum, these must include:

(a) Automobile repair, maintenance, washing, and parking;
(b) Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
(c) Disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, cleaning products);
(d) Any other residential source that the Copermittee determines may contribute a significant pollutant load to the MS4;

(e) Any residential areas tributary to and within the same hydrologic subarea as a CWA section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
(f) Any residential areas within or directly adjacent to or discharging directly to receiving waters within an environmentally sensitive area (as defined in Attachment C of this Order)

(2) BMP Implementation

(a) Pollution Prevention: Each Copermittee must actively encourage the use of pollution prevention methods by residents.

(b) Designate BMPs: Each Copermittee must designate minimum BMPs for high-threat-to-water quality residential areas and activities. The designated minimum BMPs for high-threat-to-water quality residential areas and activities must be area or activity specific.

(c) Hazardous Waste BMPs: Each Copermittee must facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation must include educational activities, public information activities, and establishment of collection sites operated individually and/or jointly by the Copermittee(s) or a private entity. Curbside collection of household hazardous wastes is encouraged.

(d) Implement BMPs: Each Copermittee must implement, or require implementation of, the designated minimum BMPs and any additional measures necessary to comply with Sections A and B of this Order.

(e) Each Copermittee must implement, or require implementation of, BMPs for residential areas and activities that have not been designated a high threat to water quality, as necessary.

(3) Enforcement of Residential Areas and Activities

Each Copermittee must enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.

(4) Common Interest Areas (CIA) / Home Owner Association (HOA) Areas, and Mobile Home Parks

Each Copermittee must ensure that effective measures exist and are implemented or required to be implemented to ensure that runoff within and from common interest developments, including areas managed by associations and mobile home parks, and meets the objectives of this section and Order.

(a) BMP Implementation: Each Copermittee must implement or require implementation of management measures based on a review of pertinent factors, including:

(i) Maintenance duties and procedures typically used by CIA/HOA maintenance associations within its jurisdiction;
(ii) Whether streets and storm drains are publicly or privately owned within the CIA/HOA or mobile home park;
(iii) Whether the CIA/HOA area or mobile home park has been identified as a high priority residential area based on an evaluation of the site potential to generate pollutants contributing to a 303(d) listed waterbody or an observed action level exceedance; and
(iv) Other activities conducted or authorized by the HOA that may pose a significant risk to inland receiving waters.

(b) Legal Authority and Enforcement: By July 1, 2012, each Copermittee must review, and if necessary update, its Municipal Code to verify that they have the legal authority to implement and enforce its ordinances within CIA/HOA areas and mobile home parks.

d. RETROFITTING EXISTING DEVELOPMENT

Each Copermittee must develop and implement a retrofitting program that meets the requirements of this section. The goals of the existing development retrofitting program are to address the impacts of existing development through retrofit projects that reduce impacts from hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of storm water pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of water quality standards. Where feasible, at the discretion of the Copermittee, the existing development retrofitting program may be coordinated with flood control projects and other infrastructure improvement programs.

(1) The Copermittee(s) must identify and inventory existing areas of development (i.e. municipal, industrial, commercial, residential) as candidates for retrofitting. Potential retrofitting candidates must include but are not limited to:

(a) Areas of development that generate pollutants of concern to a TMDL or an ESA;
(b) Receiving waters that are channelized or otherwise hardened;
(c) Areas of development tributary to receiving waters that are channelized or otherwise hardened;

(d) Areas of development tributary to receiving waters that are significantly eroded; and
(e) Areas of development tributary to an ASBS or SWQPA.

(2) Each Copermittee must evaluate and rank the inventoried areas of existing developments to prioritize retrofitting. Criteria for evaluation must include but is not limited to:

(a) Feasibility;
(b) Cost effectiveness;
(c) Pollutant removal effectiveness, including reducing pollutants exceeding action level;
(d) Tributary area potentially treated;
(e) Maintenance requirements;
(f) Landowner cooperation;
(g) Neighborhood acceptance;
(h) Aesthetic qualities;
(i) Efficacy at addressing concern; and
(j) Potential improvements on public health and safety.

(3) Each Copermittee must consider the results of the evaluation in prioritizing work plans for the following year in accordance with Sections G.1 and J. Highly feasible projects expected to benefit water quality should be given a high priority to implement source control and treatment control BMPs. Where feasible, the retrofit projects may be designed in accordance with the SSMP requirements within sections F.1.d.(3) through F.1.d.(8) and the Hydromodification requirements in Section F.1.h.

(4) The Copermittees must cooperate with private landowners to encourage site specific retrofitting projects. The Copermittee must consider the following practices in cooperating and encouraging private landowners to retrofit their existing development:

(a) Demonstration retrofit projects;
(b) Retrofits on public land and easements that treat runoff from private developments;
(c) Education and outreach;
(d) Subsidies for retrofit projects;
(e) Requiring retrofit projects as enforcement, mitigation or ordinance compliance;
(f) Public and private partnerships; and
(g) Fees for existing discharges to the MS4 and reduction of fees for retrofit implementation.

(5) The known completed retrofit BMPs must be tracked in accordance with Section F.1.f. Retrofit BMPs on publicly owned properties must be inspected per section F.1.f . Privately owned retrofit BMPs must be inspected as needed.

(6) Where constraints on retrofitting preclude effective BMP deployment on existing developments at locations critical to protect receiving waters (as identified in section F.3.d.(1)), a Copermittee may propose a regional mitigation project to improve water quality. Such regional projects may include but are not limited to:

(a) Regional water quality treatment BMPs;
(b) Urban creek or wetlands restoration and preservation;
(c) Daylighting and restoring underground creeks;
(d) Localized rainfall storage and reuse to the extent such projects are fully protective of downstream water rights;
(e) Hydromodification project; and
(f) Removal of invasive plant species.

(7) A retrofit project or regional mitigation project may qualify as a Watershed Water Quality Activity provided it meets the requirements in section G. Watershed Workplan.

4. ILLICIT DISCHARGE DETECTION AND ELIMINATION

Each Copermittee must implement a program that meets the requirements of this section to actively detect and eliminate illicit discharges and disposal into the MS4. The program must address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Copermittee in accordance with section B of this Order.

a. PREVENT AND DETECT ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee must implement measures to prevent and detect illicit discharges to the MS4.

(1) Legal Authority: Each Copermittee must retain legal authority to prevent and eliminate illicit discharges and connections to the MS4.

(2) Inspections: Each Copermittee must include use of appropriate Copermittee personnel and contractors to assist in identifying illicit discharges and connections during their daily activities.

(a) Visual inspections for illegal discharges and connections must be conducted during routine maintenance of all MS4 facilities.

(b) Copermittee staff and contractors conducting non-MS4 field operations must be trained to report suspected illegal discharges and connections to proper Copermittee staff.

b. **MAINTAIN MS4 MAP**

Each Copermittee must maintain an updated map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The use of GIS is strongly encouraged. The MS4 map must include all segments of the storm sewer system owned, operated, and maintained by the Copermittee, as well as all known locations of inlets that discharge and/or collect runoff into the Copermittee's MS4, all known locations of connections with other MS4s (e.g. Caltrans), and all known locations of all the outfalls that discharge runoff from the Copermittee's MS4. The accuracy of the MS4 map must be confirmed during dry weather field screening and analytical monitoring and must be updated at least annually. The MS4 map including any GIS layers must be submitted with the updated JRMP.

c. **FACILITATE PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS - PUBLIC HOTLINE**

Each Copermittee must promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Copermittee must facilitate public reporting through development and operation of a public hotline. Public hotlines can be Copermittee-specific or shared by Copermittees. All storm water hotlines must be capable of receiving reports in both English and Spanish 24 hours per day and seven days per week. All reported incidents, and how each was resolved, must be summarized in each Copermittee's Annual Report.

d. **DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING**

Each Copermittee must conduct dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect illicit discharges and connections in accordance with Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016 in Attachment E of this Order.

e. **INVESTIGATION / INSPECTION AND FOLLOW-UP**

Each Copermittee must implement procedures to investigate and inspect portions of its MS4 that, based on the results of field screening, analytical monitoring, or other appropriate information, indicate a reasonable potential of containing illicit discharges, illicit connections, or other sources of pollutants in non-storm water.

(1) Develop response criteria for data: Each Copermittee must develop, update, and use numeric criteria action levels (or other actions level criteria where appropriate) to determine when follow-up investigations will be performed in response to water quality monitoring. The criteria must include required non-storm water action levels (see Section C) and a consideration of 303(d)-listed waterbodies and environmentally sensitive areas (ESAs) as defined in Attachment C.

(2) Respond to data: Each Copermittee must investigate portions of the MS4 for which water quality data or conditions indicates a potential illegal discharge or connection.

(a) Obvious illicit discharges (i.e. color, odor, or significant exceedances of action levels) must be investigated immediately.

(b) Field screen data: Within two business days of receiving dry weather field screening results that exceed action levels, the Copermittee(s) having jurisdiction must either initiate an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation must be included in the Annual Report.

(c) Analytical data: Within five business days of receiving analytical laboratory results that exceed action levels, the Copermittee(s) having jurisdiction must either initiate an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation must be included in the Annual Report.

(3) Respond to notifications: Each Copermittee must respond to and resolve each reported incident (e.g., public hotline, staff notification, etc.) made to the Copermittee in a timely manner. Criteria may be developed to assess the validity of, and prioritize the response to, each report.

f. **ELIMINATION OF ILLICIT DISCHARGES AND CONNECTIONS**

Each Copermittee must take immediate action to initiate steps necessary to eliminate all detected illicit discharges, illicit discharge sources, and illicit connections after detection within its jurisdiction. Elimination measures may include an escalating series of enforcement actions for those illicit discharges that are not a serious threat to public health or the environment. Illicit discharges that pose a serious threat to the public's health or the environment must be eliminated immediately.

g. **ENFORCE ORDINANCES**

Each Copermittee must implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4 and to eliminate detected illicit discharges and connections to its MS4.

h. **PREVENT AND RESPOND TO SEWAGE SPILLS (INCLUDING FROM PRIVATE LATERALS AND FAILING SEPTIC SYSTEMS) AND OTHER SPILLS**

Each Copermittee must implement management measures and procedures (including a notification mechanism) to prevent, respond to, contain and clean up all sewage (see below) and other spills that may discharge into its MS4 from any source (including private laterals and failing septic systems). Copermittees must coordinate with spill response teams to prevent entry of spills into the MS4 and contamination of surface water, ground water and soil. Each Copermittee must coordinate spill prevention, containment and response activities throughout all appropriate Copermittee departments, programs and agencies so that maximum water quality protection is available at all times.

5. PUBLIC PARTICIPATION COMPONENT

Each Copermittee must incorporate a mechanism for public participation in the updating, development, and implementation of the JRMP.

6. EDUCATION COMPONENT

Each Copermittee must implement education programs to (1) measurably increase the knowledge regarding MS4s, impacts of runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutants in storm water discharges and eliminate prohibited non-storm water discharges to MS4s and the environment. At a minimum, the education programs must meet the requirements of this section and address the following target communities:

- Copermittee Departments and Personnel
- New Development / Redevelopment Project Applicants, Developers, Contractors, Property Owners, and other Responsible Parties
- Construction Site Owners and Operators
- Commercial Owners and Operators
- Industrial Owners and Operators
- Residential Community and General Public

a. GENERAL REQUIREMENTS

(1) At a minimum, the Copermittee education programs must educate each target community on the following topics, as appropriate to the target community's potential storm water and non-storm water discharges to the MS4:

(a) Applicable water quality laws, regulations, permits, and requirements;
(b) Best management practices;
(c) General runoff concepts;
(d) Existing water quality, including local water quality conditions, impaired waterbodies and environmentally sensitive areas; and
(e) Other topics, as determined by the Copermittee(s), such as public reporting mechanisms, water conservation, low-impact development techniques, and public health and vector issues associated with runoff.

(2) Each Copermittee must implement educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.

b. SPECIFIC REQUIREMENTS

(1) Copermittee Departments and Personnel

(a) Each Copermittee must implement an education program so its staff and contractors (and Planning Boards and Elected Officials, if applicable) responsible for implementing the requirements of this Order have an understanding of the following topics as applicable to their responsibilities:

(i) Applicable water quality laws and regulations;
(ii) The potential effects and impacts that Copermittee departments and personnel activities related to their job duties can have on water quality);
(iii) Plan review policies and procedures to verify consistent application;
(iv) Methods of minimizing impacts to receiving water quality resulting from development, construction, and other potential pollutant generating activities;

(v) Proper implementation of erosion and sediment control, source control, treatment control, and other BMPs to minimize the impacts to receiving water quality resulting from development, construction, and other potential pollutant generating activities;
(vi) Applicable recordkeeping and tracking mechanisms; and
(vii) Inspection and enforcement procedures, BMP implementation, and review of monitoring data.

(b) Each Copermittee must train its staff responsible for oversight and conducting storm water compliance inspections and enforcement of construction activities (e.g. construction, building, code enforcement, grading review staffs, inspectors, and other responsible construction staff) annually prior to the rainy season.

(c) Each Copermittee must train its staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year.

(2) New Development / Redevelopment and Construction Sites

As early in the planning and development process as possible and all through the permitting and construction process, each Copermittee must notify parties responsible for the project about the importance of educating all construction workers in the field about storm water issues and BMPs, in addition to the topics under Section F.6.a.(1).

(3) Commercial and Industrial Sites / Sources

At least once during the five-year period of this Order, each Copermittee must notify the owner/operator of each of its inventoried commercial and industrial site/source of the BMP requirements applicable to the site/source.

(4) Residential and General Public

Each Copermittee shall collaboratively conduct or participate in development and implementation of a program to educate residential and general public target communities. The Copermittee residential and general public education programs must address potential pollutant generating activities (e.g., car washing, mobile operations, yard maintenance) and pollutant generating products (e.g., pesticides, fertilizers, household chemicals). The target audiences of the residential and general public education programs must include underserved target audiences (e.g., disadvantaged communities), residents and managers of CIA/HOA areas, and owners and residents of mobile home parks.

G. WATERSHED WATER QUALITY WORKPLAN

Each Copermittee must collaborate with other Copermittees to develop and implement a Watershed Water Quality Workplan (Watershed Workplan) to identify, prioritize, address, and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed.

1. Watershed Workplan Components

The work plan must, at a minimum:

a. Characterize the receiving water quality in the watershed. Characterization must include assessment and analysis of regularly collected water quality data, reports, monitoring and analysis generated in accordance with the requirements of the Receiving Waters Monitoring and Reporting Program, as well as applicable information available from other public and private organizations. This characterization must include an updated watershed map.

b. Identify and prioritize water quality problem(s) in terms of constituents by location, in the watershed's receiving waters. In identifying water quality problem(s), the Copermittees must, at a minimum, give consideration to TMDLs, receiving waters listed on the CWA section 303(d) list, waters with persistent violations of water quality standards, toxicity, or other impacts to beneficial uses, and other pertinent conditions.

c. Identify the likely sources, pollutant discharges and/or other factors causing the highest water quality problem(s) within the watershed. Efforts to determine such sources must include, but not be limited to: use of information from the construction, industrial/commercial, municipal, and residential source identification programs required within the JRMP of this Order; water quality monitoring data collected as part of the Receiving Water Monitoring and Reporting Program required by this Order, and additional focused water quality monitoring to identify specific sources within the watershed.

d. Develop a watershed BMP implementation strategy to attain receiving water quality objectives in the identified highest priority water quality problem(s) and locations. The BMP implementation strategy must include a schedule for implementation of the BMPs to abate specific receiving water quality problems and a list of criteria to be used to evaluate BMP effectiveness. Identified watershed water quality problems may be the result of jurisdictional discharges that will need to be addressed with BMPs applied in a specific jurisdiction in order to generate a benefit to the watershed. This implementation strategy must include a map of any implemented and/or proposed BMPs.

e. Develop a strategy to monitor improvements in receiving water quality directly

resulting from implementation of the BMPs described in the Watershed Workplan. The monitoring strategy must review the necessary data to report on the measured pollutant reduction that results from proper BMP implementation. Monitoring must, at a minimum, be conducted in the receiving water to demonstrate reduction in pollutant concentrations and progression towards attainment of receiving water quality objectives.

f. Establish a schedule for development and implementation of the Watershed strategy outlined in the Workplan. The schedule must, at a minimum, include forecasted dates of planned actions to address Provisions E.2(a) through E.2(e) and dates for watershed review meetings through the remaining portion of this Permit cycle. Annual watershed workplan review meetings must be open to the public and appropriately publically noticed such that interested parties may come and provide comments on the watershed program.

2. Watershed Workplan Implementation

Watershed Copermittee's must implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the San Diego Water Board.

3. Copermittee Collaboration

Watershed Copermittees must collaborate to develop and implement the accepted Watershed Workplan. Watershed Copermittee collaboration must include frequent regularly scheduled meetings. The Copermittees must pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-Copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4. The Copermittees must, as appropriate, participate in watershed management efforts to address water quality issues within the entire Santa Margarita Watershed (such as the County of San Diego and U.S. Marine Corps Camp Pendleton).

4. Public Participation

Watershed Copermittees must implement a watershed-specific public participation mechanism within each watershed. A required component of the watershed-specific public participation mechanism must be a minimum 30-day public review of and opportunity to comment on the Watershed Workplan prior to submittal to the San Diego Water Board. The Workplan must include a description of the public participation mechanisms to be used and identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan.

5. Watershed Workplan Review and Updates

Watershed Copermittees must review and update the Watershed Workplan annually to identify needed changes to the prioritized water quality problem(s) listed in the workplan. All updates to the Watershed Workplan must be presented during an Annual Watershed Review Meeting. Annual Watershed Review Meetings must occur once every calendar year and be conducted by the Watershed Copermittees. Annual Watershed Review Meetings must be open to the public and adequately noticed. Individual Watershed Copermittees must also review and modify their jurisdictional programs and JRMP Annual Reports, as necessary, so that they are consistent with the updated Watershed Workplan.

6. Pyrethroid Toxicity Reduction Evaluation

The Watershed Copermittees must incorporate the pyrethroid pollutant reduction program[18] into the Watershed Workplan. The pyrethroid pollutant reduction program must include the following elements:

a. Pursue state and federal regulatory change;
b. Implement a set of source controls targeted specifically at urban pyrethroid use;
c. Through the annual reporting process, monitor the implementation of those controls, assess effectiveness, and identify sources or areas where additional effort is needed;
d. Implement additional controls as needed; and
e. Continue to monitor implementation, as well as conditions within the target receiving waters, assess effectiveness, and re-evaluate control programs.

H. FISCAL ANALYSIS

1. Secure Resources: Each Copermittee must exercise its full authority to secure the resources necessary to meet all requirements of this Order.

2. Annual Analysis: Each Copermittee must conduct an annual fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs required by this Order. The analysis must include estimated expenditures for the current reporting period, the preceding period, and the next reporting period.

   a. Each analysis must include a description of the source of funds that are proposed to meet the necessary expenditures.
   b. Each analysis must include a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items.

[18] The pyrethroid pollutant reduction program is described in the "Riverside County – Santa Margarita Region Pyrethroid Source Identification Toxicity Reduction Evaluation, Final Phase II Report", January 2009 by MACTEC.

3. Annual Reporting: Each Copermittee must submit its annual fiscal analysis with the annual JRMP report.

I. TOTAL MAXIMUM DAILY LOADS

1. The waste load allocations (WLAs) of fully approved and adopted TMDLs are incorporated as Water Quality Based Effluent Limitations on a pollutant by pollutant, watershed by watershed basis. Early TMDL requirements, including monitoring, may be required and inserted into this Order pursuant to Finding E.10.

2. The Cities of Wildomar and Murrieta must comply with the requirements and WLAs assigned to the discharges from their MS4s contributing to the Lake Elsinore/Canyon Lake (San Jacinto Watershed) Nutrient TMDLs as specified in Section VI.D.2 of the Santa Ana Water Board's Order R8-2010-0033, including relevant sections of the fact sheet and findings, and subsequent revisions thereto.

J. PROGRAM EFFECTIVENESS ASSESSMENT AND REPORTING

Beginning with the Annual Report due in 2013, each Copermittee must annually assess and report upon the effectiveness of its JRMP and Watershed Workplan implementation to (1) reduce the discharge of storm water pollutants from its MS4 to the MEP; (2) prohibit non-stormwater discharges; and (3) prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

1. Program Effectiveness Assessments

a. IDENTIFY EFFECTIVENESS ASSESSMENTS

With the JRMP and Watershed Workplan submittal, each Copermittee must establish assessment measures or methods for each of the six outcome levels described by CASQA[19], using data from each JRMP program component, the MRP, and the Watershed Workplan.

(1) Assessment interval: For each established assessment measure or method, an assessment interval must be established as appropriate to the measure or method.

(2) Projected Timeframe: For each established assessment measure or method, each Copermittee must identify the projected timeframe within which the associated outcome level can adequately assess change.

[19] Effectiveness assessment outcome levels as defined by CASQA are defined in Attachment C of this Order. See "*Municipal Stormwater Program Effectiveness Assessment Guidance*" (CASQA, May 2007) for guidance for assessing program activities at the various outcome levels.

b. PERFORM ASSESSMENTS

(1) Annually: Each year, the Copermittee must perform each applicable assessment based on the associated assessment interval, and determine whether the desired outcome has been met.

(2) With the submittal of the Report of Waste Discharge, the Copermittees must determine whether their program implementation is resulting in the protection and/or improvement of water quality through an Integrated Assessment.

2. Respond to Assessments

a. Where the assessments indicate that the desired outcome level has not been achieved at the end of the projected timeframe, the Copermittee must review its applicable activities and BMPs to identify any modifications and improvements needed to maximize effectiveness, as necessary to comply with this Order. If the Copermittee determines that the existing activities/BMPs are adequate, or that the projected timeframe should be extended, justification and an updated timeframe for attainment of the outcome level must be provided in the Annual Report.

b. Each Copermittee must develop and implement a work plan and schedule to address any program modifications and improvements in response to the findings of its assessment. The work plan and schedule must be provided and updated with the applicable Annual Report. The work plan must include, at a minimum, the following:

(1) The problems and priorities identified during the assessment;
(2) A list of priority pollutants and known or suspected sources;
(3) A brief description of the strategy employed to reduce, eliminate or mitigate the negative impacts;
(4) A description and schedule for new and/or modified BMPs. The schedule is to include dates for significant milestones;
(5) A description of how the selected activities will address an identified high priority problem. This will include a description of the expected effectiveness and benefits of the new and/or modified BMPs;
(6) A description of implementation effectiveness metrics;
(7) A description of how efficacy results will be used to modify priorities and implementation; and
(8) A review of past activities implemented, progress in meeting water quality standards, and planned program adjustments.

3. Assessment and Response Reporting

Each Copermittee must include a summary of its effectiveness assessments within each Annual Report. Beginning with the FY 2012-2013 Annual Report, the Program Effectiveness reporting must include:

a. The results of each of the effectiveness assessments performed pursuant to J.1.b, including the demonstrated CASQA effectiveness level(s);

b. Responses to effectiveness assessments: A description of any program modifications planned in accordance with section J.2, including the work plan and identified schedule for implementation. The description must include the basis for determining that each modified activity and/or BMP represents an improvement expected to result in improved water quality; and

c. A description of any steps to be implemented to improve the Copermittee's ability to assess program effectiveness.

K. REPORTING

The Copermittees may propose alternate reporting criteria and schedules, as part of their updated JRMP, for the Executive Officer's acceptance.

1. Runoff Management Plans

a. JURISDICTIONAL RUNOFF MANAGEMENT PLANS

(1) The written account of the overall program to be conducted by each Copermittee to meet the jurisdictional requirements of section F of this Order is referred to as the Jurisdictional Runoff Management Plan (JRMP). Each Copermittee must revise and update its existing JRMP so that it describes all activities the Copermittee will undertake to implement the requirements of this Order. Each Copermittee must submit its updated and revised JRMP to the San Diego Water Board no later than June 30, 2012.

(2) At a minimum, each Copermittee's JRMP must be updated and revised to demonstrate compliance with each applicable section of this Order.

b. **WATERSHED WORKPLANS**

Copermittees must update and revise the Watershed Workplan to describe any changes in water quality problems or priorities, and any necessary change to actions Copermittees will take to implement jurisdictional or watershed BMPs to address those identified. The Copermittees must assemble and submit the Watershed Workplan to the San Diego Water Board no later than June 30, 2012, and must implement the Workplan within 90 days unless otherwise directed by the San Diego Water Board.

2. Other Required Reports and Plans

a. **SSMP UPDATES**

(1) Copermittees must submit their updated SSMP in accordance with the applicable requirements of section F.1 with the JRMP by June 30, 2012.

(2) Within 180 days of determination that the SSMP is in compliance with this Order's provisions, each Copermittee must amend its ordinances consistent with the SSMP and implement the updated SSMP. Any amended or new ordinances must be submitted to the San Diego Water Board the applicable Annual Report.

b. **HMP**

(1) By June 30, 2013, the Copermittees must submit to the San Diego Water Board Executive Officer a draft HMP that has been reviewed by the public, including identification of the appropriate limiting range of flow rates in accordance with the applicable requirements of section F.1.h.

(2) Within 180 of receiving San Diego Water Board comments on the draft HMP, the Copermittees must submit a final HMP that addressed the San Diego Water Board's comments.

(3) Within 90 days of receiving a finding of adequacy from the Executive Officer each Copermittee must incorporate and implement the HMP for all Priority Development Projects.

(4) Prior to acceptance of the HMP by the San Diego Water Board, the early implementation measures likely to be included in the HMP shall be encouraged by the Copermittees.

c. REPORT OF WASTE DISCHARGE

The Copermittees must submit to the San Diego Water Board, no later than 180 days in advance of the expiration date of this Order, a Report of Waste Discharge (ROWD) as an application for issuance of new waste discharge requirements. The fourth annual report for this Order may supplement the ROWD, provided the ROWD contains the minimum information below.

At a minimum, the ROWD must include the following: (1) Proposed changes to the Copermittees' runoff management programs; (2) Proposed changes to monitoring programs; (3) Justification for proposed changes; (4) Name and mailing addresses of the Copermittees; (5) Names and titles of primary contacts of the Copermittees; (6) Any other information necessary for the reissuance of this Order and (7) Any other information required by federal regulations for permit reapplications.

3. Annual Reports

JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP) ANNUAL REPORTS

a. Each Copermittee must generate individual JRMP Annual Reports that cover implementation of its jurisdictional activities during the past annual reporting period. Each Annual Report must verify and document compliance with this Order as directed in this section. Each Copermittee must retain records in accordance with the Standard Provisions in Attachment B of this Order, available for review, that document compliance with each requirement of this Order. The reporting period for these annual reports must be the previous fiscal year.

b. Each Copermittee must submit its JRMP Annual Reports to the San Diego Water Board by October 31of each year, beginning on October 31, 2013.

c. Each JRMP Annual Report must contain, at a minimum, the following information, as applicable to the Copermittee:

(1) Information required to be reported annually in Section H (Fiscal Analysis) of this Order;
(2) Information required to be reported annually in Section J (Program Effectiveness) of this Order;
(3) The completed Reporting Checklist found in Attachment D; and
(4) Information for each program component as described in the following Table 5:

Table 5. Annual Reporting Requirements

Program Component	Reporting Requirement
New Development	1. All updated relevant sections of the General Plan and environmental review process and a description of any planned updates within the next annual reporting period, if applicable;
	2. All revisions to the SSMP, including where applicable: (a) Identification and summary of where the SSMP fails to meet the requirements of this Order; (b) Updated procedures for identifying pollutants of concern for each Priority Development Project; (c) Updated treatment BMP ranking matrix; (d) Updated site design and treatment control BMP design standards;
	3. Number of Priority Development Projects reviewed and approved during the reporting period. Brief description of BMPs required at approved Priority Development Projects. Verification that site design, source control, and treatment BMPs were required on all applicable Priority Development Projects;
	4. Name and location of all Priority Development Projects that were granted a waiver from implementing LID BMPs pursuant to section F.1.d.(4) during the reporting period;
	5. Updated watershed-based BMP maintenance tracking database of approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction, including updates to the list of high-priority Priority Development Projects; and verification that the requirements of this Order were met during the reporting period;

Table 5. Annual Reporting Requirements (Cont'd)

Program Component	Reporting Requirement
New Development (Cont'd)	6. Name and brief description of all approved Priority Development Projects required to implement hydrologic control measures in compliance with section F.1.h including a brief description of the management measures planned to protect downstream beneficial uses and prevent adverse physical changes to downstream stream channels;
	7. Number and description of all enforcement activities applicable to the new development and redevelopment component and a summary of the effectiveness of those activities.
Construction	1. All updated relevant ordinances and description of planned ordinance updates within the next annual reporting period, if applicable;
	2. A description of any changes to procedures used for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality;
	3. Any changes to the designated minimum and enhanced BMPs;
	4. Summary of the inspection program, including the following information: (a) Total number and date of inspections conducted at each facility; (b) Number, date, and types of enforcement actions by facility; (c) Brief description of each high-level enforcement actions at construction sites including the effectiveness of the enforcement. Supporting paper (or electronic) files must be maintained by the Copermittees and made available upon San Diego Water Board request. Supporting files must include a record of inspection dates, the results of each inspection, photographs (if any), and a summary of any enforcement actions taken.
Municipal	1. Updated source inventory;
	2. All changes to the designated municipal BMPs;
	3. Descriptions of any changes to procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies;
	4. Summary and assessment of BMP retrofits implemented at flood control structures, including: (a) List of projects retrofitted; (b) List and description of structures evaluated for retrofitting; (c) List of structures still needing to be evaluated and the schedule for evaluation;

Table 5. Annual Reporting Requirements (Cont'd)

Program Component	Reporting Requirement
Municipal (Cont'd)	5. Summary of the municipal structural treatment control operations and maintenance activities, including: (a) Number of inspections and types of facilities; (b) Summary of findings;
	6. Summary of the MS4 and MS4 facilities operations and maintenance activities, including: (a) Number and types of facilities maintained; (b) Amount of material removed; (c) List of facilities planned for bi-annual inspections and the justification;
	7. Summary of the municipal areas/programs inspection activities, including: (a) Number and date of inspections conducted at each facility; (b) The BMP violations identified during the inspection by facility; (c) Number, date and types of enforcement actions by facility; (d) Summary of inspection findings and follow-up activities for each facility;
	8. Description of activities implemented to address sewage infiltration into the MS4;
	9. Description of BMPs and their implementation for unpaved roads construction and maintenance.
Commercial / Industrial	1. Updated inventory of commercial / industrial sources;
	2. Summary of the inspection program, including the following information: (a) Number and date of inspections conducted at each facility or mobile business; (b) The BMP violations identified during the inspection by facility; (c) Number, date, and types of enforcement actions by facility or mobile business; (d) Brief description of each high-level enforcement actions at commercial/industrial sites including the effectiveness of the enforcement and follow-up activities for each facility;
	3. All changes to designated minimum and enhanced BMPs;
	4. A list of industrial sites, including each name, address, and SIC code, that the Copermittee suspects may require coverage under the General Industrial Permit, but has not submitted an NOI.

Table 5. Annual Reporting Requirements (Cont'd)

Program Component	Reporting Requirement
Residential	1. All updated minimum BMPs required for residential areas and activities;
	2. Quantification and summary of applicable runoff and storm water enforcement actions within residential areas and activities;
	3. Description of efforts to manage runoff and storm water pollution in common interest areas and mobile home parks.
Retrofitting Existing Development	1. Updated inventory and prioritization of existing developments identified as candidates for retrofitting;
	2. Description of efforts to retrofit existing developments during the reporting year;
	3. Description of efforts taken to encourage private landowners to retrofit existing development;
	4. A list of all retrofit projects that have been implemented, including site location, a description of the retrofit project, pollutants expected to be treated, and the tributary acreage of runoff that will be treated;
	5. Any proposed retrofit or regional mitigation projects and timelines for future implementation;
	6. Any proposed changes to the Copermittee's overall retrofitting program.
Illicit Discharge Detection and Elimination	1. Any changes to the legal authority to implement Illicit Discharge Detection and Elimination activities;
	2. Any Changes to the established investigation procedures;
	3. Any changes to public reporting mechanisms, including phone numbers and web pages;
	4. Summaries of illicit discharges (including spills and water quality data events) and how each significant case was resolved;
	5. A description of instances when field screening and analytical data exceeded action levels, including those instances for which no investigation was conducted;
	6. A description of follow-up and enforcement actions taken in response to investigations of illicit discharges and a description of the outcome of the investigation/enforcement actions.
Workplans	Updated workplans including priorities, strategy, implementation schedule and effectiveness evaluation.

d. Each JRMP Annual Report must also include the following information regarding non-storm water discharges (see Section B.2. of this Order):

(1) Identification of non-storm water discharge categories identified as a source of pollutants to waters of the U.S;
(2) A description of any updates to ordinances, orders, or similar means to prohibit non-storm water discharge categories identified under section B.2 above ;
(3) Identification of any control measures to be required and implemented for

non-storm water discharge categories identified as needing controls by the San Diego Water Board; and

(4) A description of a program to address pollutants from non-emergency fire fighting flows identified by the Copermittee to be significant sources of pollutants.

4. Interim Reporting Requirements

For the reporting periods, prior to submittal of the JRMP, each JRMP Annual Report must be submitted in accordance with the requirements and deadlines described in Order No. 2004-001.

5. Universal Reporting Requirements

All submittals must include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal. The Principal Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal and the sections of the submittals for which it is responsible.

L. MODIFICATION OF PROGRAMS

Modifications of JRMPs and/or Watershed Workplan may be initiated by the Executive Officer of the San Diego Water Board or by the Copermittees. Requests by Copermittees must be made to the Executive Officer, and must be submitted during the annual review process. Requests for modifications should be incorporated, as appropriate, into the Annual Reports or other deliverables required or allowed under this Order.

1. Minor modifications to JRMPs, and/or Watershed Workplan, may be accepted by the Executive Officer where the Executive Officer finds the proposed modification complies with all discharge prohibitions, receiving water limitations, and other requirements of this Order.

2. Proposed modifications that are not minor require amendment of this Order in accordance with this Order's rules, policies, and procedures.

M. PRINCIPAL COPERMITTEE RESPONSIBILITIES

Within 180 days of adoption of this Order, the Copermittees must designate the Principal Copermittee and notify the San Diego Water Board of the name of the Principal Copermittee. The Principal Copermittee must, at a minimum:

1. Serve as liaison between the Copermittees and the San Diego Water Board on general permit issues, and when necessary and appropriate, represent the Copermittees before the San Diego Water Board.

2. Coordinate permit activities among the Copermittees and facilitate collaboration on the development and implementation of programs required under this Order.

3. Coordinate the submittal of the documents and reports as required by section K of this Order and Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016 in Attachment E of this Order.

N. RECEIVING WATERS AND MS4 DISCHARGE MONITORING AND REPORTING PROGRAM

Pursuant to CWC section 13267, the Copermittees must comply with all the requirements contained in Receiving Waters and MS4 Discharge Monitoring and Reporting Program (MRP) No. R9-2010-0016 in Attachment E of this Order.

O. STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS

1. Each Copermittee must comply with Standard Provisions, Reporting Requirements, and Notifications contained in Attachment B of this Order. This includes 24 hour/5 day reporting requirements for any instance of non-compliance with this Order as described in section 5.e of Attachment B.

2. All plans, reports and subsequent amendments submitted in compliance with this Order must be implemented immediately (or as otherwise specified). All submittals by Copermittees must be adequate to implement the requirements of this Order.

DIRECTIVES M: PRINCIPAL COPERMITTEE RESPONSIBILITIES
DIRECTIVES N: RECEIVING WATERS AND MS4 DISCHARGE MONITORING AND REPORTING PROGRAM
DIRECTIVES O: STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS

P. ADDITIONAL PROVISIONS

The Executive Officer shall meet with Camp Pendleton and other stakeholders at six (6) month intervals to identify and investigate water quality impacts, flow impacts, and impacts to water rights that may derive from the implementation of Low Impact Development BMPs required by Order R9-2010-0016 as they are developed by the storm water Copermittees. Any key issues or amendments to the Order that derive from those analyses and discussions will be promptly brought to the San Diego Water Board for their consideration.

I, David W. Gibson, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on November 10, 2010.

David W. Gibson
Executive Officer

ATTACHMENT A

BASIN PLAN PROHIBITIONS

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.

2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.

3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by a NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.

4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.

7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.

8. Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water

runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities. [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.

10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.

11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.

12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.

13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.

14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

ATTACHMENT B

STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE [40 CFR 122.41]

(a) *Duty to comply* [40 CFR 122.41(a)].

(1) The Copermittee must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(2) The Copermittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order has not yet been modified to incorporate the requirement.

(b) *Need to halt or reduce activity not a defense* [40 CFR 122.41(c)]. It shall not be a defense for the Copermittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.

(c) *Duty to mitigate* [40 CFR 122.41(d)]. The Copermittee shall take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment.

(d) *Proper operation and maintenance* [40 CFR 122.41(e)]. The Copermittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Copermittee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Copermittee only when necessary to achieve compliance with the conditions of this Order.

(e) *Property rights* [40 CFR 122.41(g)].

(1) This Order does not convey any property rights of any sort or any exclusive privilege.
(2) The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

(f) *Inspection and entry* [40 CFR 122.41(i)]. The Copermittee shall allow the Regional Water Quality Control Board, San Diego Region (Regional Board), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency

(USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the Copermittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
(3) Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
(4) Sample or monitor, at reasonable times, for the purpose of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location.

(g) *Bypass* [40 CFR 122.41(m)]

(1) Definitions:

i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Bypass not exceeding limitations - The Copermittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance (g)(3), (g)(4) and (g)(5) below.

(3) Prohibition of Bypass - Bypass is prohibited, and the Regional Board may take enforcement action against a Copermittee for bypass, unless:

i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
iii) The Copermittee submitted notice as required under Standard Provisions – Permit Compliance (g)(3) above.

(4) Notice

i) Anticipated bypass. If the Copermittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least ten days before the date of the bypass.
ii) Unanticipated bypass. The Copermittee shall submit notice of an unanticipated bypass as required in Standard Provisions 5(e) below (24-hour notice).

(h) *Upset* [40 CFR 122.41(n)] Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based effluent limitations because of factors beyond the reasonable control of the Copermittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(1) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance (h)(2) below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(2) Conditions necessary for a demonstration of upset. A Copermittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i) An upset occurred and that the Copermittee can identify the cause(s) of the upset;
ii) The permitted facility was at the time being properly operated;
iii) The Copermittee submitted notice of the upset as required in Standard Provisions – Permit Compliance (5)(e)(ii)(B) below (24-hour notice); and
iv) The Copermittee complied with any remedial measures required under Standard Provisions – Permit Compliance 1(c) above.

(3) Burden of Proof. In any enforcement proceeding, the Copermittee seeking to establish the occurrence of an upset has the burden of proof.

2. STANDARD PROVISIONS – PERMIT ACTION

(a) *General* [40 CFR 122.41(f)] This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition.

(b) *Duty to reapply* [40 CFR 122.41(b)]. If the Copermittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Copermittee must apply for and obtain new permit.

(c) *Transfers*. This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and

reissuance of the Order to change the name of the Copermittee and incorporate such other requirements as may be necessary under the CWA and the CWC.

3. STANDARD PROVISIONS – MONITORING

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 CFR Section 122.41 (j) (1)]

(b) Monitoring results must be conducted according to test procedures under 40 CFR Part 136, or in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [40 CFR Section 122.41(j)(4)][40 CFR Section 122.44(i)(1)(iv)].

4. STANDARD PROVISIONS – RECORDS

(a) Except for records of monitoring information required by this Order related to the Copermittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Copermittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application, This period may be extended by request of the Regional Water Board Executive Officer at any rime [40 CFR Section 122.41(j)(2)].

(b) *Records of monitoring information* [40 CFR 122.41(j) (3)] shall include:

(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.

(c) *Claims of confidentiality* [40 CFR Section 122.7(b)] of the following information will be denied:

(1) The name and address of any permit applicant or Copermittee; and
(2) Permit applications and attachments, permits and effluent data.

5. STANDARD PROVISIONS – REPORTING

(a) *Duty to provide information* [40 CFR 122.41(h)]. The Copermittee shall furnish to the Regional Board, SWRCB, or USEPA within a reasonable time, any information which the Regional Board, SWRCB, or USPEA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Copermittee shall also furnish to the Regional Board, SWRCB, or USEPA, copies of records required to be kept by this Order.

(b) *Signatory and Certification Requirements* [40 CFR 122.41(k)]

(1) All applications, reports, or information submitted to the Regional Board, SWRCB, or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting 5(b)ii), 5(b)iii), 5(b)iv), and 5(b) (see 40 CFR 122.22)

(2) *Applications* [40 CFR 122.22(a)(3)] All permit applications shall be signed by either a principal executive officer or ranking elected official.

(3) *Reports* [40 CFR 122.22(b)]. All reports required by this Order, and other information requested by the Regional Board, SWRCB, or USEPA shall be signed by a person described in Standard Provisions – Reporting 5(b)(2) above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

i) The authorization is made in writing by a person described in Standard Provisions-Reporting 5(b)(2) above;

ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and,

iii) The written authorization is submitted to the Regional Water Board and State Water Board.

(4) *Changes to authorization* [40 CFR Section 122.22(c)] If an authorization under Standard Provisions – Reporting 5(b)(3)of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5(b)(3) above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative.

(5) *Certification* [40 CFR Section 122.22(d)] Any person signing a document under Standard Provisions – Reporting 5(b)(2), or 5(b)(3) above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(c) *Monitoring reports.* [40 CFR 122.41(l)(4)]

(1) Monitoring results shall be reported at the intervals specified in the Receiving Waters and Runoff Monitoring and Reporting Program No. R9-2009-0002.

(2) Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Board or SWRCB for reporting results of mentoring of sludge use or disposal practices.

(3) If the Copermittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Board.

(4) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.

(d) *Compliance schedules.* [40 CFR Section 122.41(l)(5)] Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following each schedule date.

(e) *Twenty-four hour reporting* [40 CFR Section 122.41(l)(6)]

(1) The Copermittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Copermittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Copermittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(2) The following shall be included as information, which must be reported within 24 hours under this paragraph:

i) Any unanticipated bypass that exceeds any effluent limitation in the Order (See 40 CFR 122.41(g)).
ii) Any upset which exceeds any effluent limitation in this Order.

(3) The Regional Board may waive the above-required written report under this provision on a case-by-case basis if the oral report has been received within 24 hours.

(f) *Planned changes.* [40 CFR Section 122.41(l)(1)] The Copermittee shall give notice to the Regional Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are not subject to effluent limitations in this Order.

(3) The alteration or addition results in a significant change in the Copermittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

(g) *Anticipated noncompliance.* [40 CFR Section 122.41(l)(7)] The Copermittee shall give advance notice to the Regional Board or SWRCB of any planned changes in the permitted facility or activity, which may result in noncompliance with Order requirements.

(h) *Other noncompliance* [40 CFR Section 122.41(l) 7)] The Copermittee shall report all instances of noncompliance not reported under Standard Provisions 5(c), 5(d), and 5(e) above, at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5(e) above.

(i) *Other information* [40 CFR Section 122.41(l)(8)] When the Copermittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Board, SWRCB, or USEPA, the Copermittee shall promptly submit such facts or information.

6. STANDARD PROVISIONS – ENFORCEMENT

(a) The Regional Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, Sections 13385, 13386, and 13387.

7. ADDITIONAL STANDARD PROVISIONS

(a) *Municipal separate storm sewer systems* [40 CFR 122.42(c)]. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

(1) The status of implementing the components of the storm water management program that are established as permit conditions;

(2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes shall be consistent with 40 CFR 122.26(d)(2)(iii); and

(3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and 40 CFR

122.26(d)(2)(v);

(4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;

(5) Annual expenditures and budget for year following each annual report;

(6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and

(7) Identification of water quality improvements or degradation.

(b) *Storm water discharges* [40 CFR 122.42(d)]. The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) shall require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.

(c) *Other Effluent Limitations and Standards* [40 CFR 122.44(b)(1)]. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

(d) *Discharge is a privilege* [CWC section 13263(g)]. No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights.

(e) *Review and revision of Order* [CWC section 13263(e)]. Upon application by any affected person, or on its own motion, the Regional Board may review and revise this permit.

(f) *Termination or modification of Order* [CWC section13381]. This permit may be terminated or modified for causes, including, but not limited to, all of the following:

(1) Violation of any condition contained in this Order.
(2) Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts.
(3) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

(g) *Transfers*. When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.

(h) *Conditions not stayed*. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

(i) *Availability.* A copy of this Order shall be kept at a readily accessible location and shall be available to on-site personnel at all times.

(j) *Duty to minimize or correct adverse impacts.* The Copermittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

(k) *Interim Effluent Limitations.* The Copermittee shall comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by this Regional Board.

(l) *Responsibilities, liabilities, legal action, penalties* [CWC sections 13385 and 13387]. The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.

Nothing in this Order shall be construed to protect the Copermittee from its liabilities under federal, state, or local laws.

Except as provided for in 40CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Copermittee from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties to which the Copermittee is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

(m) *Noncompliance.* Any noncompliance with this Order constitutes violation of the CWA and is grounds for denial of an application or modification of the Order (also see 40 CFR 122.41(a)).

(n) *Director.* For purposes of this Order, the term "Director" used in parts of 40 CFR incorporated into this Order by reference and/or applicable to this Order shall have the same meaning as the term "Regional Board" used elsewhere in this Order, except that in 40 CFR 122.41(h) and (l), "Director" shall mean "Regional Board, SWRCB, and USEPA."

(o) The Regional Board has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The Regional Board or SWRCB may in the future, upon prior notice to the Copermittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to a MS4. Copermittees may prohibit any non-storm water discharge (or class of non-storm water discharges) to a MS4 that is authorized under such separate NPDES permits.

(p) *Effective date.* This Order shall become effective on the date of its adoption provided the USEPA has no objection. If the USEPA objects to its issuance, this Order shall not become effective until such objection is withdrawn. This Order supersedes Order No. 2001-01 upon the effective date of this Order.

(q) *Expiration.* This Order expires five years after adoption.

(r) *Continuation of expired order* [23 CCR 2235.4]. After this Order expires, the terms and conditions of this Order are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.

(s) *Applications.* Any application submitted by a Copermittee for reissuance or modification of this Order shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the California Code of Regulations.

(t) *Confidentiality.* Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the Regional Board office.

(u) *Severability.* The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

(v) R*eport submittal.* The Copermittee shall submit reports and provide notifications as required by this Order to the following:

NORTHERN WATERSHED UNIT
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
9174 SKY PARK COURT, SUITE 100
SAN DIEGO CA 92123-4340
Telephone: (858) 467-2952 Fax: (858) 571-6972

EUGENE BROMLEY
US ENVIRONMENTAL PROTECTION AGENCY
REGION IX
PERMITS ISSUANCE SECTION (W-5-1)
75 HAWTHORNE STREET
SAN FRANCISCO CA 94105

Unless otherwise directed, the Copermittee shall submit one hard copy for the official record and one electronic copy of each report required under this Order to the Regional Board and one electronic copy to the EPA.

ATTACHMENT C

ACRONYMS AND ABBREVIATIONS

ADT	Average Daily Traffic
AMAL	Average Monthly Action Level
ASBS	Area of Special Biological Significance
AST	Active/Passive Sediment Treatment
BMP	Best Management Practice
Basin Plan	Water Quality Control Plan for the San Diego Basin
BU	Beneficial Use
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWC	California Water Code
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
DAMP	Drainage Area Management Plan
DNQ	Detected, but not Quantified
EIA	Effective Impervious Area
ESAs	Environmentally Sensitive Areas
GIS	Geographic Information System
HMP	Hydromodification Management Plan
IBI	Index of Biotic Integrity
JRMP	Jurisdictional Runoff Management Plan
LID	Low Impact Development
MDAL	Maximum Daily Action Level
MEP	Maximum Extent Practicable
ML	Minimum Level
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
Copermittees	County of Riverside, the 4 incorporated cities within the County of Riverside in the San Diego Region, and the Riverside County Flood Control District
RGOs	Retail Gasoline Outlets
ROWD	Riverside County Copermittees' Report of Waste Discharge (application for NPDES reissuance)
RWLs	Receiving Water Limitations
SAL	Storm Water Action Level
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SIC	Standard Industrial Classification Code
SSMP	Standard Urban Storm Water Mitigation Plan
State Board	State Water Resources Control Board
SWQPA	State Water Quality Protected Area
TMDL	Total Maximum Daily Load

USEPA	United States Environmental Protection Agency
WLA	Waste Load Allocation
WQMP	Water Quality Management Plan
WRMP	Watershed Runoff Management Plan

DEFINITIONS

Active/Passive Sediment Treatment - Using mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge.

Anthropogenic Litter – Trash generated from human activities, not including sediment.

Average Monthly Action Level – the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Basin Plan – Water Quality Control Plan, San Diego Basin, Region 9, and amendments, developed by the Regional Board.

Beneficial Uses - The uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote tangible and intangible economic, social, and environmental goals. "Beneficial Uses" of the waters of the State that may be protected include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. [California Water Code Section 13050(f)].

Best Management Practices (BMPs) - Defined in 40 CFR 122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. In the case of municipal storm water permits, BMPs are typically used in place of numeric effluent limits.

Bioassessment - The use of biological community information to evaluate the biological integrity of a water body and its watershed. With respect to aquatic ecosystems, bioassessment is the collection and analysis of samples of the benthic macroinvertebrate community together with physical/habitat quality measurements associated with the sampling site and the watershed to evaluate the biological condition (i.e. biological integrity) of a water body.

Biocriteria - Under the CWA, numerical values or narrative expressions that define a desired biological condition for a water body that are legally enforceable. The USEPA

defines biocriteria as: "numerical values or narrative expressions that describe the reference biological integrity of aquatic communities inhabiting waters of a given designated aquatic life use... (that)...describe the characteristics of water body segments least impaired by human activities."

Biofiltration - refers to practices that use vegetation and amended soils to detain and treat runoff from impervious areas. Treatment is through filtration, infiltration, adsorption, ion exchange, and biological uptake of pollutants.

Biological Integrity - Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5:55-68 as: "A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region." Also referred to as ecosystem health.

Clean Water Act Section 402(p) [33 USC 1342(p)] - The federal statute requiring municipal and industrial dischargers to obtain NPDES permits for their discharges of storm water.

Clean Water Act Section 303(d) Water Body - An impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology based pollution controls required by the CWA. The discharge of runoff to these water bodies by the Copermittees is significant because these discharges can cause or contribute to violations of applicable water quality standards.

Construction Site – Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation.

Contamination - As defined in the Porter-Cologne Water Quality Control Act, contamination is "an impairment of the quality of waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. 'Contamination' includes any equivalent effect resulting from the disposal of waste whether or not waters of the State are affected."

Critical Channel Flow (Qc) – The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.

CWA – Federal Clean Water Act

CWC – California Water Code

Daily Discharge – Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day or any 24 hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g. concentration.)

The Daily Discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day, or other 24 hour period other than a day), or by the arithmetic mean of analytical results from one or more grab samples taken over the course of a day.

Detected, but not Quantified – those sample results less than the reporting level, but greater than or equal to the laboratory's Method of Detection Limit (MDL.)

Development Projects - Construction, rehabilitation, redevelopment, or reconstruction of any public or private residential project, industrial, commercial, or any other projects.

Dilution Credit – the amount of dilution granted to a discharger in the calculation of a WQBEL, based on the allowance of a specific mixing zone. It is calculated from the dilution ratio, or determined through conducting of a mixing zone study, or modeling of the discharge and receiving water.

Dry Season – May 1 through September 30 of each year.

Dry Weather – weather is considered dry if the preceding 72 hours has been without precipitation.

Effectiveness Assessment Outcome Level 1 - Compliance with Activity-based Permit Requirements – Level 1 outcomes are those directly related to the implementation of specific activities prescribed by this Order or established pursuant to it.

Effectiveness Assessment Outcome Level 2 - Changes in Attitudes, Knowledge, and Awareness – Level 2 outcomes are measured as increases in knowledge and awareness among target audiences such as residents, businesses, and municipal employees.

Effectiveness Assessment Outcome Level 3 - Behavioral Change and BMP Implementation – Level 3 outcomes measure the effectiveness of activities in affecting behavioral change and BMP implementation.

Effectiveness Assessment Outcome Level 4 - Load Reductions – Level 4 outcomes measure load reductions which quantify changes in the amounts of pollutants associated with specific sources before and after a BMP or other control measure is employed.

Effectiveness Assessment Outcome Level 5 - Changes in Runoff and Discharge Quality – Level 5 outcomes are measured as changes in one or more specific constituents or stressors in discharges into or from MS4s.

Effectiveness Assessment Outcome Level 6 - Changes in Receiving Water Quality – Level 6 outcomes measure changes to receiving water quality resulting from discharges into and from MS4s, and may be expressed through a variety of means such as compliance with water quality objectives or other regulatory benchmarks, protection of biological integrity, or beneficial use attainment.

Enclosed Bays – Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all

bays where the narrowest distance between the headlands or outermost bay works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays do not include inland surface waters or ocean waters.

Erosion – When land is diminished or worn away due to wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via storm water runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building, and timber harvesting.

Environmentally Sensitive Areas (ESAs) - Areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Orange; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees.

Estuaries – waters, including coastal lagoons, located at the mouth of streams that serve as areas of mixing fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and ocean water. Estuaries do not include inland surface waters or ocean waters.

Feasibility Analysis – Detailed description of the selection process for the treatment control BMPs for a Priority Development Project, including justification of why one BMP is selected over another. For a Priority Development Project where a treatment control BMP with a low removal efficiency ranking (as identified by the Model SUSMP) is proposed, the analysis shall include a detailed and adequate justification exhibiting the reasons implementation of a treatment control BMP with a higher removal efficiency is infeasible for the Priority Development Project or portion of the Priority Development Project.

Flow Duration – The long-term period of time that flows occur above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams (not a single storm event duration). The simplest way to visualize this is to consider a histogram of pre- and post-project flows using long-term records of hourly data. To maintain pre-project flow duration means that the total number of hours (counts) within each range of flows in a flow-duration histogram cannot increase between the pre- and post-project condition. Flow duration within the range of geomorphologically significant flows is important for managing erosion.

GIS – Geographic Information System

Grading - The cutting and/or filling of the land surface to a desired slope or elevation.

Hazardous Material – Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical

reactivity. These also include materials named by the USEPA in 40 CFR 116 to be reported if a designated quantity of the material is spilled into the waters of the U.S. or emitted into the environment.

Hazardous Waste - Hazardous waste is defined as "any waste which, under Section 600 of Title 22 of this code, is required to be managed according to Chapter 30 of Division 4.5 of Title 22 of this code" [CCR Title 22, Division 4.5, Chapter 11, Article 1].

Household Hazardous Waste – Paints, cleaning products, and other wastes generated during home improvement or maintenance activities.

Hydromodification – The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, such as stream channelization, concrete lining, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes.

Illicit Connection – Any connection to the MS4 that conveys an illicit discharge.

Illicit Discharge - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities [40 CFR 122.26(b)(2)].

Implementation Assessment – Assessment conducted to determine the effectiveness of Copermittee programs and activities in achieving measurable targeted outcomes, and in determining whether priority sources of water quality problems are being effectively addressed.

Inactive Slopes – Slopes on which no grading or other soil disturbing activities are conducted for 10 or more days.

Inland Surface Waters – all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Integrated Assessment – Assessment to be conducted to evaluate whether program implementation is properly targeted to and resulting in the protection and improvement of water quality.

Jurisdictional Runoff Management Plan (JRMP) – A written description of the specific jurisdictional runoff management measures and programs that each Copermittee will implement to comply with this Order and ensure that storm water pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

Low Impact Development (LID) – A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.

Low Impact Development Best Management Practices (LID BMPs) – LID BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States through storm water management and land development strategies that emphasize conservation sand the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. LID BMPs include retention practices that do not allow runoff, such as infiltration, rain water harvesting and reuse, and evapotranspiration. LID BMPs also include flow-through practices such as biofiltration that may have some discharge of storm water following pollutant reduction.

Maximum Daily Action Level (MDAL) – is the highest allowable daily discharge of a pollutant, over a calendar day (or 24 hour period). For pollutants with action levels expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with action levels expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Maximum Extent Practicable (MEP) – The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) for storm water that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment control BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT. A definition for MEP is not provided either in the statute or in the regulations. Instead the definition of MEP is dynamic and will be defined by the following process over time: municipalities propose their definition of MEP by way of their runoff management programs. Their total collective and individual activities conducted pursuant to the runoff management programs becomes their proposal for MEP as it applies both to their overall effort, as well as to specific activities (e.g., MEP for street sweeping, or MEP for MS4 maintenance). In the absence of a proposal acceptable to the Regional Board, the Regional Board defines MEP.

In a memo dated February 11, 1993, entitled "Definition of Maximum Extent Practicable," Elizabeth Jennings, Senior Staff Counsel, SWRCB addressed the achievement of the MEP standard as follows:

> *"To achieve the MEP standard, municipalities must employ whatever Best Management Practices (BMPs) are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive. In selecting BMPs to achieve the MEP standard, the following factors may be useful to consider:*
>
> a. *Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?*

b. *Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?*
c. *Public Acceptance: Does the BMP have public support?*
d. *Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?*
e. *Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?*

The final determination regarding whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the Regional or State Water Boards, and not by the municipal discharger. If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive, it is likely that MEP has not been met. On the other hand, if a municipal discharger employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit derived, it would have met the standard. Where a choice may be made between two BMPs that should provide generally comparable effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs that would address a pollutant source, or to pick a BMP base solely on cost, which would be clearly less effective. In selecting BMPs the municipality must make a serious attempt to comply and practical solutions may not be lightly rejected. In any case, the burden would be on the municipal discharger to show compliance with its permit. After selecting a menu of BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented."

Minimum Level – the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method sample weights, volumes and processing steps have been followed.

Monitoring Year – the monitoring year includes a full wet season and dry season, beginning annually on October 1st and ending on September 30th.

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designated or used for collecting or conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.26.

National Pollutant Discharge Elimination System (NPDES) - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

NOI – Notice of Intent

Non-Storm Water - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

Nuisance - As defined in the Porter-Cologne Water Quality Control Act a nuisance is "anything which meets all of the following requirements: 1) Is injurious to health, or is indecent, or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. 2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. 3) Occurs during, or as a result of, the treatment or disposal of wastes."

Ocean Waters – the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Board's California Ocean Plan.

Order – Order No. R9-2009-0002 (NPDES No. CAS0108740)

Person - A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof [40 CFR 122.2].

Point Source - Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant - Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated.

Pollution - As defined in the Porter-Cologne Water Quality Control Act: "the alteration of the quality of the waters of the State by waste, to a degree that unreasonably affects the either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses." Pollution may include contamination.

Pollutants of Concern – Pollutants for which water bodies are listed as impaired under CWA section 303(d), pollutants associated with the land use type of a development, and/or pollutants commonly associated with runoff. Pollutants commonly associated with runoff include total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides,

and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (decaying vegetation, animal waste, and anthropogenic litter).

Pollution Prevention - Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control BMPs, treatment control BMPs, or disposal.

Post-Construction BMPs - A subset of BMPs including structural and non-structural controls which detain, retain, filter, or educate to prevent the release of pollutants to surface waters during the final functional life of developments.

Pre-Project or Pre-Development Runoff Conditions (Discharge Rates, Durations, Etc.) – Runoff conditions that exist onsite immediately before the planned development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.

Principal Copermittee – County of Orange

Priority Development Projects - New development and redevelopment project categories listed in Section F.1.d(2) of Order No. R9-2009-0002.

Rainy Season – (aka Wet Season) is the period of time from October 1 forward to April 30 when the San Diego region experiences the most rainfall.

Receiving Waters – Waters of the United States.

Receiving Water Limitations (RWLs) - Waste discharge requirements issued by the Regional Board typically include both: (1) "Effluent Limitations" (or "Discharge Limitations") that specify the technology-based or water-quality-based effluent limitations; and (2) "Receiving Water Limitations" that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the "Receiving Water Limitations" provision is the provision used to implement the requirement of CWA section 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

Redevelopment - The creation, addition, and or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.

Retain – to keep or hold in a particular place, condition, or position without discharge to surface waters.

Runoff - All flows in a storm water conveyance system that consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water including dry weather flows.

San Diego Water Board – As used in this document the term "San Diego Water Board" is synonymous with the term "Regional Board" as defined in Water Code section 13050(b) and is intended to refer to the California Regional Water Quality Control Board for the San Diego Region as specified in Water Code Section 13200.

Sediment - Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

Shared Treatment Control BMP - BMPs used by multiple developments to infiltrate, filter, or treat the required volume or flow prior to discharge to a receiving water. This could include, for example, a treatment BMP at the end of an enclosed storm drain that collects runoff from several commercial developments.

Source Control BMP – Land use or site planning practices, or structural or nonstructural measures that aim to prevent runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and runoff.

State Water Quality Protection Area – A nonterrestrial marine or estuarine area designated to protect marine species or biological communities from an undesirable alteration in natural water quality, including, but not limited to, areas of special biological significance that have been designated by the State Water Resources Control Board through its water quality control planning process. Areas of special biological significance are a subset of State Water Quality Protection Areas, and require special protection as determined by the State Water Resources Control Board pursuant to the California Ocean Plan adopted and reviewed pursuant to Article 4 (commencing with Section 13160) of Chapter 3 of Division 7 of the California Water Code and pursuant to the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (California Thermal Plan) adopted by the state board.

Storm Water – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage. Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.

Standard Storm Water Mitigation Plan (SSMP) – A plan developed to mitigate the impacts of runoff from Priority Development Projects.

Third Party Inspectors - Industrial and commercial facility inspectors who are not contracted or employed by a regulatory agency or group of regulatory agencies, such as the Regional Board or Copermittees. The third party inspector is not a regular facility employee self-inspecting their own facility. The third party inspector could be a contractor or consultant employed by a facility or group of businesses to conduct inspections.

Total Maximum Daily Load (TMDL) - The maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under CWA section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

Toxicity - Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). The water quality objectives for toxicity provided in the Water Quality Control Plan, San Diego Basin, Region 9, (Basin Plan), state in part..."All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life....The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge".

Treatment Control BMP – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

Unpaved Road – is a long, narrow stretch without pavement used for traveling by motor passenger vehicle between two or more points. Unpaved roads are generally constructed of dirt, gravel, aggregate or macadam and may be improved or unimproved.

Waste - As defined in CWC Section 13050(d), "waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal."

Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system that applies to solid and semi-solid waste, which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, non-hazardous solid waste, and inert waste.

Water Quality Assessment – Assessment conducted to evaluate the condition of non-storm water and storm water discharges, and the water bodies which receive these discharges.

Water Quality Objective - Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water. [California Water Code Section 13050 (h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans. Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a receiving water and still generally ensure that the beneficial uses of the receiving water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the

beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne's definition of pollution. A condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are the reason why all waste discharge requirements implementing the federal NPDES regulations require compliance with water quality objectives. (Water quality objectives are also called water quality criteria in the CWA.)

Water Quality Standards - The beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.,) of water and the water quality objectives necessary to protect those uses.

Waters of the State - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition. Under this definition, a MS4 is always considered to be a Waters of the State.

Waters of the United States - As defined in the 40 CFR 122.2, the Waters of the U.S. are defined as: "(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA."

Watershed - That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as drainage area, catchment, or river basin).

Watershed Runoff Management Plan (WRMP) – A written description of the specific watershed runoff management measures and programs that each watershed group of Copermittees will implement to comply with this Order and ensure that storm water pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

WDRs – Waste Discharge Requirements

ATTACHMENT D

SCHEDULED SUBMITTALS SUMMARY AND REPORTING CHECKLIST

Submittal	Permit Section	Completion Date	Frequency
Prohibitions on dry-weather discharges not listed in Section B.2	B.2	July 1, 2012, then in JRMP Annual Report	Annual
Submit Certified Statement of Adequate Legal Authority	E.2	June 30, 2012	One time
Updated SSMP	F.1.d, K.2.a	June 30, 2012	One time
Identify and remove barriers to LID implementation	F.1.d.(4)(a)(v)	With JRMP Annual Report	Annual
Hydromodification Management Plan	F.1.h.(5), K.2.b	June 30, 2013	One Time for Draft
Flood Control Structure BMP Inventory and Evaluation	F.3.a.(4)	With JRMP Annual Report	Annual
Retrofitting Program	F.3.d.(3)	With JRMP Annual Report	Annual
Updated Watershed Workplans	G.1 K.1.b	June 30, 2012	One time
Fiscal Analysis	H.3	With JRMP Annual Report	Annual
Updated Jurisdictional Runoff Management Plans	K.1.a	June 30, 2012	One time
Report of Waste Discharge	K.2.c	At least 180 days prior to expiration of this Order	One time
Principal Copermittee submits JRMP Annual Reports to Regional Board	K.3.a.(2)	October 31, 2013 and annually thereafter	Annual
Principal Copermittee submits Notification of Principal Copermittee	M	180 days after adoption of the Order	One Time

Jurisdictional Runoff Management Program Annual Report Checklist

In the JRMP Annual Report each Copermittee shall provide an Annual Report Checklist. The Annual Report Checklist must be no longer than 2 pages, be current as of the 1st day of the rainy season of that year, and include a signed certification statement. The Annual Report Summary Checklist must provide the following information:

Order Requirements
Were All Requirements of this Order Met?

Construction
Number of Active Sites
Number of Inactive Sites
Number of Sites Inspected
Number of Inspections
Number of Violations
Number of Construction Enforcement Actions Taken

New Development
Number of Development Plan Reviews
Number of Grading Permits Issued
Number of Projects Exempted from Interim/Final Hydromodification Requirements

Post Construction Development
Number of Priority Development Projects
Number of SUSMP Required Post-Construction BMP Inspections
Number of SUSMP Required Post-Construction BMP Violations
Number of SUSMP Required Post-Construction BMP Enforcement Actions Taken

Illicit Discharges and Connections
Number of IC/ID Inspections
Number of IC/ID Detections by Staff
Number of IC/ID Detections from the Public
Number of IC/ID Eliminations
Number of IC/ID Violations
Number of IC/ID Enforcement Actions Taken

MS4 Maintenance
Number of Inspections Conducted
Amount of Waste Removed
Total Miles of MS4 Inspected

Municipal/Commercial/Industrial
Number of Facilities
Number of Inspections Conducted
Number of Facilities Inspected
Number of Violations
Number of Enforcement Actions Taken

Attachment E

RECEIVING WATERS AND MS4 DISCHARGE MONITORING AND REPORTING PROGRAM NO. R9-2010-0016

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I. PURPOSE

A. This Receiving Waters and MS4 Discharge Monitoring and Reporting Program (MRP) is intended to meet the following goals:
   1. Assess compliance with Order No. R9-2010-0016;
   2. Measure and improve the effectiveness of the Copermittees' runoff management programs;
   3. Assess the chemical, physical, and biological impacts to receiving waters resulting from MS4 discharges;
   4. Characterize storm water discharges;
   5. Identify sources of specific pollutants;
   6. Prioritize drainage and sub-drainage areas that need management actions;
   7. Detect and eliminate illicit discharges and illicit connections to the MS4;
   8. Assess the overall health of receiving waters; and
   9. Provide information to implement required BMP improvements.

B. This Receiving Waters and MS4 Discharges Monitoring and Reporting Program is designed to answer the following core management questions[1]:
   1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
   2. What is the extent and magnitude of the current or potential receiving water problems?
   3. What is the relative MS4 discharge contribution to the receiving water problem(s)?
   4. What are the sources of MS4 discharge that contribute to receiving water problem(s)?
   5. Are conditions in receiving waters getting better or worse?

II. MONITORING PROGRAM

The Monitoring Program is designed to assess the condition of receiving waters, monitor pollutants in storm and non-storm water effluent from the MS4, and conduct Special Studies to address conditions of concern. Where feasible, the Monitoring Program is designed to allow the Copermittees to combine required monitoring elements or efforts that are not mutually exclusive while still meeting the requirements of the Order.

[1] Core management questions from "*Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California: A report from the Stormwater Monitoring Coalition's Model Monitoring Technical Committee.*" Technical Report No. 419. August 2004.

A. Receiving Waters Monitoring Program

Each Copermittee must collaborate with the other Copermittees to develop, conduct, and report on a year-round watershed based Receiving Waters Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting must be conducted on a watershed basis for the Santa Margarita Hydrologic Unit (HU) and must be designed to meet the goals and answer the questions listed in section I above. The monitoring program must include the following components:

1. MASS LOADING STATION (MLS) MONITORING

a. Locations: The following existing mass loading stations must continue to be monitored: Lower Temecula Creek, Lower Murrieta Creek at the USGS Weir, and a permanent reference station.[2] Copermittees may propose, for San Diego Water Board review and approval, changing the location of a mass loading station.

b. Frequency: Each mass loading station must be monitored each year three times during wet weather events and twice during dry weather flow conditions.

c. Timing: Each mass loading station must be monitored for the first wet weather event of the season which meets USEPA's criteria described in 40 CFR 122.21(g)(7). Monitoring of the third wet weather event must be conducted after February 1. Dry weather mass loading monitoring events must be sampled at least three months apart between May and October. If flows are not evident for the second event, then sampling must be conducted during non-rain events in the following wet weather season.

d. Protocols: Protocols for mass loading sampling and analysis including analytical methods, target reporting limits, and data reporting formats must be compatible with the State Water Resources Control Board's (State Water Board's) State Surface Water Ambient Monitoring Program (SWAMP). If the mass loading sampling and analysis are determined to be impracticable with the SWAMP standards, the Copermittees must provide a written explanation and discussion in the submittal of the Planned Monitoring Program. Wet weather samples must be flow-weighted composites, collected for the duration of the entire runoff event. Where such monitoring is not practical, such as for large watersheds with significant groundwater recharge flows, composites must be collected at a minimum during the first 3 hours of

[2] A map depicting mass loading stations can be found in the Fact Sheet for Order R9-2010-0016.

flow. Dry weather event sampling must be time-weighted composites composed of 24 discrete hourly samples, whereby the mass loads of pollutants are calculated as the product of the composite sample concentration and the total volume of water discharged past the monitoring point during the time of sample collection.

(1) Automatic samplers must be used to collect samples from mass loading stations.

(2) Grab samples must be analyzed for temperature, pH, specific conductance, biochemical oxygen demand, oil and grease, E. coli , fecal coliform, enterococcus and for total petroleum hydrocarbons whenever a sheen is observed.

e. Copermittees must measure or estimate flow rates and volumes for each mass loading station sampling event to determine mass loadings of pollutants. Data from nearby USGS gauging stations may be utilized, or flow rates may be estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), Section 3.2.1.

f. In the event that the required number of sampling events are not conducted during one monitoring year at any given station, the Copermittees must provide a written explanation for the reduced number of sampling events in the subsequent Receiving Waters Monitoring Annual Report. The explanation must include, at a minimum, streamflow data from the nearest USGS gauging station, a full description of any equipment failures and subsequent remedies if applicable, efforts made to resample a future event, and any quality assurance or quality control issues encountered. The explanation must also include a description of steps taken to prevent further sampling failures.

g. The following constituents must be analyzed for each monitoring event at each station:

Table 1. Analytical Testing for Mass Loading (II.A.1) and Stream Assessment (II.A.2)

Conventionals, Nutrients, Hydrocarbons	**Pesticides**	**Metals (Total and Dissolved)**	**Bacteriological (mass loading)**
• Total Dissolved Solids • Total Suspended Solids • Turbidity • Total Hardness • pH • Specific Conductance • Temperature • Dissolved Oxygen • Total Phosphorus • Dissolved Phosphorus • Nitrite* • Nitrate* • Total Kjeldahl Nitrogen • Ammonia • Biological Oxygen Demand, 5-day • Chemical Oxygen Demand • Total Organic Carbon • Dissolved Organic Carbon • Methylene Blue Active Substances • Oil and Grease • Sulfate	• Diazinon • Chlorpyrifos • Malathion • Carbamates • Pyrethroids	• Arsenic • Cadmium • Total Chromium • Hexavalent Chromium** • Copper • Lead • Iron • Manganese • Nickel • Selenium • Zinc • Mercury • Silver • Thallium	• E. coli • Fecal Coliform • Enterococcus

* Nitrate and nitrite may be combined and reported as nitrate + nitrite.
** Hexavalent Chromium sampling must occur only for mass loading stations for the 1st wet weather event and 1 dry weather event.

h. Toxicity testing must be conducted for each monitoring event at each station according to the following Table 2:

Table 2. Toxicity Testing for Mass Loading (II.A.1) and Stream Assessment (II.A.2)

Program Component	*Dry Weather Flows*	*Storm Water Flows*
	Freshwater Organisms	**Freshwater Organisms**
Mass Loading	3 chronic* 3 acute*	3 acute*
Stream Assessment**	3 chronic* 3 acute*	n/a
Sediment Toxicity Special Study	1 chronic 1 acute	n/a

Table Notes
* Toxicity testing must include use of *Pimephales promelas* (fathead minnow), *Hyalella azteca* and *Pseudokirchneriella subcapitata (*formerly *Selenastrum capricornutum,* unicellular algae).
** Duplicative toxicity testing is not required for Stream Assessment Monitoring stations co-located at mass loading stations since Stream Assessment Monitoring must be conducted in conjunction with dry weather mass loading.

Species Notes:
1. Acute toxicity may be determined during the course of chronic toxicity monitoring per U.S. EPA protocols.

i. The presence of acute toxicity must be determined in accordance with USEPA protocol (EPA-821-R-02-012). The presence of chronic freshwater toxicity must be determined in accordance with USEPA protocol (EPA-821-R-02-013).

2. Stream Assessment Monitoring

Copermittees must conduct Stream Assessment Monitoring using multiple lines of evidence to assess the condition of biological communities in freshwater receiving waters. Stream assessment must include the collection and reporting of the following specified instream biological, chemical, and physical (including habitat) data.

a. Locations: At a minimum, the program must consist of station identification, sampling, monitoring, and analysis of data for six stream assessment stations in order to determine the biological, chemical and physical integrity of streams within the County of Riverside. The two existing mass loading stations at Murrieta and Temecula Creeks must continue to be monitored. Copermittees may propose, for San Diego Water Board review and approval, changing the location of stream assessment monitoring stations where the mass loading stations

location has changed pursuant to section II.A.1.a. Two reference stream assessment stations, including the existing Adobe Creek station, must be identified, sampled, monitored, and analyzed. Locations of reference stations must be identified according to protocols outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.[3]

b. Frequency: Stream assessment stations must be monitored in May or June (to represent the influence of wet weather on the communities). The timing of monitoring of stream assessment stations located at mass loading stations must coincide with dry weather monitoring of those mass loading stations.

c. Parameters / Methods: Stream assessment monitoring must include bioassessment, aquatic chemistry, and aqueous toxicity.

(1) Aquatic chemistry and aqueous toxicity must be conducted as outlined in Tables 1 and 2 using the same parameters and methods as the mass loading station monitoring.

(2) Bioassessment analysis procedures must include calculation of the Index of Biotic Integrity (IBI) for benthic macroinvertebrates for all bioassessment stations, as outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.

(3) Monitoring of stream assessment stations must be conducted according to the most current bioassessment Standard Operating Procedures (SOP) developed by the Surface Water Ambient Monitoring Program (SWAMP), and amendments, as applicable.[4] In collecting macroinvertebrate samples, the discharger must use the "Reachwide Benthos (Multihabitat) Procedure." The discharger must conduct, concurrently with all required macroinvertebrate collections, the "full" suite of physical/habitat characterization measurements specified in the SWAMP Bioassessment SOP, and as summarized in the *SWAMP Stream Habitat Characterization Form — Full Version.* [5]

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[3] Ode, et al. 2005. "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams." Environmental Management. Vol. 35, No. 1, pp. 1-13.

[4] Ode, P.R.. 2007. Standard operating procedures for collecting macroinvertebrate samples and associated physical and chemical data for ambient bioassessments in California. California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP) Bioassessment SOP 001. http://www.swrcb.ca.gov/water_issues/programs/swamp/tools.shtml#monitoring

[5] Available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf

(4) Monitoring of stream assessment stations must incorporate assessment of algae using SWAMP's SOP for Collecting Stream Algae Samples.[6] Assessment of freshwater algae must include algal taxonomic composition (diatoms and soft algae) and algal biomass. Future bioassessment must incorporate algal IBI scores, when developed.

d. A qualified professional environmental laboratory must perform all sampling, laboratory, quality assurance, and analytical procedures in accordance with the Southern California Regional Watershed Monitoring Program Bioassessment Quality Assurance Project Plan.[7] The Copermittees must utilize future Quality Assurance Project Plans as developed by SWAMP.

(1) The Copermittees must have and follow a quality assurance (QA) plan that covers the required stream assessment monitoring. External QA checks must be funded by the Copermittees, and performed by the California Department of Fish and Game's Aquatic Bioassessment Laboratory. An alternate laboratory with equivalent expertise and performance may be used if approved in advance in writing by San Diego Water Board.

(2) Identified organisms must be archived (i.e., retained) by the Copermittee(s) for a period of not less than three years from the date that all QA steps are completed. The identified organisms must be relinquished to the San Diego Water Board upon request by the San Diego Water Board.

(3) The macroinvertebrate results (i.e., taxonomic identifications consistent with the specified SAFIT STEs, and number of organisms within each taxa) must be submitted to the San Diego Water Board in electronic format. SWAMP is currently developing standardized formats for reporting bioassessment data. All bioassessment data collected after those formats become available must be submitted using the SWAMP formats. Until those formats are available, the biological data must be submitted in MS-Excel[8] (or equivalent) format.

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[6] Fetscher et al. 2009. Standard Operating Procedures for Collecting Stream Algae Samples and Associated Physical Habitat and Chemical Data for Ambient Bioassessments in California.

[7] Version 1.0 of the Southern California Regional Watershed Monitoring Program Bioassessment Quality Assurance Program Plan was released on June 25, 2009.

[8] Any version of Excel, 2000 or later, may be used.

The physical/habitat data must be reported using the standard format titled *SWAMP Stream Habitat Characterization Form — Full Version*.

3. FOLLOW-UP ANALYSIS AND ACTIONS (TIE AND TRE TRIAD APPROACH)

When results from the required monitoring indicate adverse water quality effects at a mass loading station or stream assessment station as defined in Table 3, Copermittees within the watershed(s) that discharge to that location must evaluate the extent and causes of MS4 discharge pollution to the adverse effects in receiving waters and prioritize and implement management actions to eliminate non-storm water discharges and/or reduce storm water sources from the MS4 as described in Table 3. Toxicity Identification Evaluations (TIEs) must be conducted to determine the cause of toxicity as outlined in Table 3 below. Other follow-up activities, which must be conducted by the Copermittees, are also identified in Table 3. Once the cause of toxicity has been identified by a TIE, the Copermittees must perform source identification projects as needed and implement the measures necessary to reduce or eliminate the pollutant discharges and abate the sources causing the toxicity.

Table 3. Triad Approach to Determining Follow-Up Actions[9]

	Chemistry	Toxicity	Benthic Alteration	Example Conclusions	Possible Actions or Decisions
1.	Exceedance of water quality objectives	Evidence of toxicity	Indications of alteration	Strong evidence of pollution-induced degradation	Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority
2.	No persistent exceedances of water quality objectives	No evidence of toxicity	No indications of alteration	No evidence of current pollution induced degradation Potentially harmful pollutants not yet concentrated enough to cause visible impact	No immediate action necessary Conduct periodic broad scans for new and/or potentially harmful pollutants
3.	Exceedance of water quality objectives	No evidence of toxicity	No indications of alteration	Contaminants are not bioavailable Test organisms not sensitive to problem pollutants	TIE would not provide useful information with no evidence of toxicity Continue monitoring for toxic and benthic impacts Initiate upstream source identification as a low priority Consider whether different or additional test organisms should be evaluated
4.	No persistent exceedances of water quality objectives	Evidence of toxicity	No indications of alteration	Unmeasured contaminant(s) or conditions have the potential to cause degradation Pollutant causing toxicity at very low levels	Recheck chemical analyses; verify toxicity test results Consider additional advanced chemical analyses Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a medium priority
5.	No persistent exceedances of water quality objectives	No evidence of toxicity	Indications of alteration	Alteration may not be due to toxic contamination Test organisms not sensitive to problem pollutants	No action necessary due to toxic chemicals Initiate upstream source identification (for physical sources) as a high priority Consider whether different or additional test organisms should be evaluated
6.	Exceedance of water quality objectives	Evidence of toxicity	No indications of alteration	Toxic contaminants are bioavailable, but in situ effects are not demonstrable Benthic analysis not sensitive enough to detect impact Potentially harmful pollutants not yet concentrated enough to change community	Determine if chemical and toxicity tests indicate persistent degradation Recheck benthic analyses; consider additional data analyses If recheck indicates benthic alteration, perform TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority If recheck shows no effect, use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a medium priority
7.	No persistent exceedances of water quality objectives	Evidence of toxicity	Indications of alteration	Unmeasured toxic contaminants are causing degradation Pollutant causing toxicity at very low levels Benthic impact due to habitat disturbance, not toxicity	Recheck chemical analyses and consider additional advanced analyses Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority Consider potential role of physical habitat disturbance
8.	Exceedance of water quality objectives	No evidence of toxicity	Indications of alteration	Test organisms not sensitive to problem pollutants Benthic impact due to habitat disturbance, not toxicity	TIE would not provide useful information with no evidence of toxicity Initiate upstream source identification as a high priority Consider whether different or additional test organisms should be evaluated Consider potential role of physical habitat disturbance

4. REGIONAL MONITORING PROGRAMS

The San Diego Water Board recognizes the importance and advantages of participation by Copermittees in Regional Monitoring Programs. As such, the Copermittees may propose participation in additional regional monitoring programs to supplement and/or replace monitoring required under this Order. The regional monitoring plan must be submitted to the San Diego Water Board[10] for review and approval. Documentation of participation and monitoring must be included in the annual report(s).

[9] Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Stormwater Monitoring Coalition August 2004. See Table 5-4 for definitions.

[10] For the purposes of Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016, review and approval by the San Diego Water Board of draft monitoring plans, proposals or protocols shall be conducted by the San Diego Water Board Executive Officer.

B. Wet Weather MS4 Discharge Monitoring

Each Copermittee must collaborate with the other Copermittees to develop, conduct, and report on a year-round, watershed-based, Wet Weather MS4 Discharge Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting must be conducted on a watershed basis for each of the hydrologic subareas within the Santa Margarita HU under jurisdiction of the Copermittees. The monitoring program must be designed to meet the goals, and answer the questions, listed in Section I above, as well as to implement required Storm Water Action Levels (SALs) in the Order. The monitoring program must include the following components;

1. MS4 OUTFALL MONITORING

The Copermittees must collaborate to develop and implement a monitoring program to characterize pollutant discharges from MS4 outfalls in each watershed during wet weather. The program must include the rationale and criteria for selection of outfalls to be monitored. The program must, at a minimum, include collection of samples for pollutants listed in Table 4 (below). This monitoring program must be designed to sample a representative percentage[11] of the major outfalls within each hydrologic subarea and must begin no later than the 2012-2013 monitoring year.

a. The program must comply with Section D of this Order for Storm Water Action Levels (SALs). Samples must be collected during the first 24 hours of the storm water discharge or for the entire storm water discharge if it is less than 24 hours.

(1) Grab samples may be utilized only for pH, indicator bacteria, DO, temperature and hardness.

(2) All other constituents must be sampled using 24-hour composite samples or for the entire storm water discharge if the storm event is less than 24 hours.

b. Sampling to compare MS4 outfall discharges with total metal SALs must include a measurement of receiving water hardness at each outfall. If a total metal concentration exceeds a SAL in Section D of

[11] A representative percentage determination must consider hydrologic conditions, total drainage area of the site, population density of the site, traffic density, age of the structures or buildings in the area, and land use types (commercial, residential and industrial).

the Order, that concentration must be compared to the California Toxic Rule criteria and the USEPA 1-hour maximum concentration for the detected level of receiving water hardness associated with that sample. If it is determined that the sample's total metal concentration for that specific pollutant exceeds the SAL but does not exceed the applicable 1-hour criteria for the measured level of hardness, then the SAL shall be considered not exceeded for that measurement.

Table 4. Analytical Testing for Wet Weather MS4 Discharges

Conventionals, Nutrients, Hydrocarbons	**Pesticides**	**Metals (Total and Dissolved)**	**Bacteriological**
• Total Dissolved Solids • Total Suspended Solids • Turbidity* • Total Hardness • pH • Specific Conductance • Temperature • Dissolved Oxygen • Total Phosphorus* • Dissolved Phosphorus • Nitrite * • Nitrate * • Total Kjeldahl Nitrogen • Ammonia • Biological Oxygen Demand, 5-day • Chemical Oxygen Demand • Total Organic Carbon • Dissolved Organic Carbon • Oil and Grease • Sulfate	• Diazinon • Chlorpyrifos • Pyrethroids	• Arsenic • Cadmium* • Chromium • Copper* • Lead* • Nickel • Selenium • Zinc* • Mercury • Silver • Thallium • Iron • Manganese	• Fecal Coliform • Enterococcus • E. coli
* Nitrate and nitrate may be combined and reported as nitrate + nitrite. ★Pollutant for which there is a Storm Water Action Level			

2. SOURCE IDENTIFICATION MONITORING

The Copermittees must collaborate to develop and implement a monitoring program to identify sources of pollutants causing the priority water quality problems within each hydrologic subarea. The monitoring program must include focused monitoring which moves upstream into each watershed as necessary to identify sources. This monitoring program must be implemented within each hydrologic subarea and must begin no later than the 2012-2013 monitoring year.

3. COMMENCEMENT OF MS4 OUTFALL AND SOURCE IDENTIFICATION MONITORING

The Principal Copermittee must submit to the San Diego Water Board for review and approval, a detailed draft of the wet weather MS4 discharge monitoring program to be implemented. The description must identify and provide the rationale for all constituents monitored, locations of monitoring, frequency of monitoring, and analyses to be conducted with the data generated. The draft must be submitted with the proposed monitoring program (Section III.A.1).

C. Non-Storm Water Dry Weather Action Levels and Illicit Discharge Detection and Elimination

Each Copermittee must collaborate with the other Copermittees to conduct, and report on a year-round watershed based Dry Weather Non-storm Water MS4 Discharge Monitoring Program. The monitoring program's implementation, analysis, assessment, and reporting must be conducted to assess compliance with section B and C of this Order, meet the goals of the MRP, and conduct Illicit Discharge Detection and Elimination Activities under Section F.4 of this Order. The monitoring program must also be designed to assess the contribution of dry weather flows to Clean Water Act Section 303(d) listed impairments. The monitoring program must include the following components:

1. MS4 OUTFALL MONITORING

Each Copermittee's program must be designed to determine levels of pollutants in effluent discharges from the MS4 into receiving waters. Each Copermittee must conduct the following dry weather field screening and analytical monitoring tasks:

a. Dry Weather Non-storm Water Effluent Analytical Monitoring Station Identification

(1) Sampling Stations must be located at major outfalls pursuant to section C of this Order. Other outfall sampling points (or any other point of access such as manholes) identified by the Copermittees as potential high risk sources of polluted effluent or as identified under Section C.4 of the Order must be sampled.

(2) Each Copermittee must clearly identify each dry weather effluent analytical monitoring station on its MS4 Map as either a separate GIS layer or a map overlay hereinafter referred to as a Dry Weather Non-storm Water Effluent Analytical Stations Map.

b. Develop Dry Weather Non-storm Water Effluent Analytical Monitoring Procedures

Each Copermittee must develop and/or update written procedures for effluent analytical monitoring including field observations, monitoring, and analyses to be conducted. These procedures must be consistent with 40 CFR part 136. At a minimum, the procedures must meet the following guidelines and criteria:

(1) Determining Sampling Frequency: Effluent analytical monitoring must be conducted at major outfalls and identified stations. The Copermittees must sample a representative percentage of major outfalls and identified stations within each hydrologic subarea.[12] The sampling must be done to assess compliance with dry weather non-storm water action levels pursuant to section C of this Order. All monitoring conducted must be preceded by a minimum of 72 hours of dry weather.

(2) Sampling of non-storm water discharges may be done utilizing grab samples. If a ponded MS4 discharge is observed at a monitoring station, the Copermittee(s) must record the observation and collect at least one (1) grab sample. If flow is evident, a 1-hour composite sample may be taken. The Copermittee(s) must estimate the discharge flow by measuring the width of water surface, approximate depth of water, and approximate flow velocity. A flow meter may also be utilized.

(3) Effluent samples must undergo analytical laboratory analysis for (a) all constituents described in *Table 1. Analytical Testing for Mass Loading and Stream Assessment* of this Order; (b) Constituents with assigned non-storm water action levels under Section C of this Order; and (c) Total Residual Chlorine.

(4) If the station is dry (i.e. no flowing or ponded MS4 discharge is observed), the Copermittee(s) must make and record all applicable observations on the MS4 outfall and receiving waters, including any evidence of past non-storm water flows and the presence of trash.

[12] A representative percentage determination must consider hydrologic conditions, total drainage area of the site, population density of the site, traffic density, age of the structures or buildings in the area, and land use types (commercial, residential and industrial).

2. SOURCE IDENTIFICATION MONITORING

The Copermittees must collaborate to develop and implement a monitoring program to identify sources of pollutants in non-storm water discharges in accordance with Sections C and F.4 of this Order. The source identification portion of the monitoring program must include: the following components:

a. Development and/or update of response criteria for dry weather non-storm water effluent analytical monitoring results:

(1) Response criteria must include action levels described in Section C of this Order.

(2) Response criteria must include evaluation of LC_{50} levels for toxicity to appropriate test organisms.

b. Develop and/or update Illicit Discharge Detection and Elimination response procedures for source identification follow up investigations and elimination in the event of exceedance of dry weather non-storm water effluent analytical monitoring response criteria (see above). These procedures must be consistent with procedures required in section C, F.4.d, and F.4.e. of this Order.

3. COMMENCEMENT OF MS4 OUTFALL AND SOURCE IDENTIFICATION MONITORING

The Copermittees must commence implementation of dry weather effluent analytical monitoring under the requirements of this Order no later than **July 1, 2012**. If monitoring indicates an illicit connection or illegal discharge, the Copermittee(s) must conduct the follow-up investigation and elimination activities described in sections C, F.4.d and F.4.e of this Order. In the interim period until the dry weather non-storm water effluent analytical monitoring program of this Order is implemented, each Copermittee must continue to implement dry weather field screening and analytical monitoring as it was most recently implemented pursuant to Order No. 2004-001.

D. High Priority Inland Aquatic Habitat Monitoring

The Copermittees must develop and submit to the San Diego Water Board by April 01, 2012, an inland aquatic habitat monitoring program for areas supporting high priority aquatic and/or riparian species. The goal of the monitoring program is to assess if MS4 storm water and non-storm water

discharges are affecting high priority inland aquatic habitat. The monitoring will assist the Copermittees in preventing the degradation of high quality waters within the jurisdiction of this Order that support high priority species by identifying discharges from MS4s which may cause or have the potential to cause impairment of beneficial uses within these areas.[13] High priority species include those federally and/or state listed as endangered, threatened, or as a species of concern. The design and goal of the monitoring program must be consistent with the criteria listed in Section I.B of this Monitoring Program, including evaluation of the protection of high priority species in receiving waters. The Copermittees must implement the program unless otherwise directed in writing by the San Diego Water Board.

The monitoring program must include the following components:

1. OUTFALL AND RECEIVING WATER MONITORING

   The program must be designed to determine levels of pollutants in storm water and non-storm water effluent discharges from the MS4 discharged into high priority inland aquatic habitat(s) and the level of those pollutants found in ambient receiving waters subject to the discharge. The Copermittees must conduct the following field screening and analytical monitoring tasks:

   a. MS4 and Receiving Waters Monitoring Station Identification

      (1) MS4 discharge stations must be major outfalls that directly discharge into high priority inland aquatic habitat. MS4 discharge stations may be selected in conjunction with monitoring required under Section II.B and II.C of the Receiving Waters and MS4 Discharge Monitoring Program.

      (2) Receiving water station(s) must be located upstream and downstream of the discharge within the high priority inland aquatic habitat. Receiving water stations must be located to prevent any significant co-mingling of receiving water flows with other sources.

[13] In accordance with requirements of State Water Resources Control Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality Waters in California.

b. Develop Analytical Monitoring Procedures

Each Copermittee must develop procedures for analytical monitoring (these procedures must be consistent with 40 CFR part 136), including field observations, pollutants to be monitored, analyses to be conducted, and quality assurance/control. At a minimum, the procedures must meet the following guidelines and criteria:

(1) Determining Sampling Frequency: The Copermittees must sample a representative number of major outfalls and receiving waters that are considered high priority inland aquatic habitat. Sampling of the discharge and receiving waters must be paired and occur during both storm and non-storm conditions.

(2) Sampling in receiving waters may be done utilizing grab samples, though composite samples are encouraged. Sampling of storm and non-storm water discharges from the MS4 must be done in accordance with Section II.B and II.C. If ponded receiving waters is/are observed at a monitoring station, the Copermittees must make written observations and collect at least one (1) grab sample. The Copermittee(s) must estimate the flow by measuring the width of water surface, approximate depth of water, and approximate flow velocity

(3) The proposed constituents for which samples will undergo analytical laboratory analysis.

(4) Procedures for recording applicable observations when monitoring stations are dry (i.e. no flowing water or ponded conditions).

3. ASSESSMENT OF MONITORING RESULTS

The program must include a discussion of monitoring results within the monitoring annual report. The discussion must include an evaluation of the contribution of MS4 discharges to ambient water conditions within high priority inland aquatic habitats, as well as any actions taken to prevent and/or reduce sources of those pollutants.

4. SOURCE IDENTIFICATION MONITORING

The Copermittees must collaborate to conduct source identification monitoring in accordance with Section II.B and II.C of the Monitoring and Reporting Program of this Order.

E. Special Studies

1. The Copermittees must conduct special studies, including any monitoring and/or modeling required for TMDL development and implementation, as directed by the San Diego Water Board.

2. Sediment Toxicity Study

   The Copermittees must develop and submit to the San Diego Water Board by April 01, 2012, a special study workplan to investigate the toxicity of sediment in streams and potential impact on benthic macroinvertebrate IBI scores. The Sediment Toxicity Special Study must be implemented in conjunction with the Stream Assessment Monitoring in II.A.2. The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board.

   The Sediment Toxicity Special Study must include the following elements:

   a. Sampling Locations: At least 4 stream assessment locations must be sampled, including 1 reference site and 1 mass loading site. Selection of sites must be done with consideration of subjectivity of receiving waters to discharges from residential and agricultural land uses.

   b. Frequency: At a minimum, sampling must occur once per year at each site for at least 2 years. Sampling must be done in conjunction with the stream assessment sampling required under Section II.A.2 of the Monitoring and Reporting Program of this Order.

   c. Parameters/Methods: At a minimum, sediment toxicity analysis must include the measurement of metals, pyrethroids and organochlorine pesticides. The analysis must include estimates of bioavailability based upon sediment grain size, organic carbon and receiving water temperature at the sampling site. Acute and chronic toxicity testing must be done using *Hyalella azteca* in accordance with Table 2.

   d. Results: Results and a Discussion must be included in the Monitoring Annual Report (see III.A). The Discussion must include an assessment of the relationship between observed IBI scores under Section II.A.2 and all variables measured.

3. Trash and Litter Investigation

   The Copermittees must develop and submit to the San Diego Water Board by September 01, 2012, a special study workplan to assess trash (including litter) as a pollutant within receiving waters on a watershed based scale. Litter is defined in California Government Code 68055.1g as "...improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or container constructed of steel, aluminum, glass, paper, plastic and other natural and synthetic, materials, thrown or deposited on lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing." A lead Copermittee must be selected for the Santa Margarita HU for the purposes of this Special Study. The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board

   The Trash and Litter Investigation must include the following elements:

   a. Locations: The lead Copermittee must identify suitable sampling locations within the Santa Margarita HU.

   b. Frequency: Trash at each location must be monitored a minimum of twice during the wet season following a qualified monitoring storm event (minimum of 0.1 inches preceded by 72 hours of dry weather) and twice during the dry season.

   c. Protocol: The lead Copermittee for the Santa Margarita HU must use the "Final Monitoring Workplan for the Assessment of Trash in San Diego County Watersheds" and "A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region" to develop a monitoring protocol for the Santa Margarita HU.

   d. Results and Discussion from the Trash and Litter Study must be included in the Monitoring Annual Report. The Results and Discussion must, at a minimum, include source identification, an evaluation of BMPs for trash reduction and prevention, and a description of any BMPs implemented in response to study results.

4. Agricultural, Federal and Tribal Input Study

   The Copermittees must develop and submit to the San Diego Water Board by September 01, 2012, a special study workplan to investigate the water quality of agricultural, federal and tribal runoff that is discharged into

their MS4 (see Finding D.3.c of the Order). The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board.

The Agricultural, Federal and Tribal Input Special Study must include the following elements:

a. Locations: The Copermittees must identify a representative number of sampling stations within their MS4 that receive discharges of agricultural, federal, and tribal runoff that has not co-mingled with any other source. At least one station from each category must be identified.

b. Frequency: One storm event must be monitored at each sampling location each year for at least 2 years.

c. Parameters/Methods: At a minimum, analysis must include those constituents listed in Table 1 of the MRP (see II.A.1). Grab samples may be utilized, though composite samples are preferred. Copermittees must also measure or estimate flow rates and volumes of discharges into the MS4.

d. Results: Results and Discussion from the Agricultural, Federal and Tribal Input Study must be included in the Monitoring Annual Report.

5. MS4 and Receiving Water Maintenance Study

The Copermittees must develop and submit to the San Diego Water Board by April 01, 2012, a special study workplan to investigate receiving waters that are also considered part of the MS4 (see Finding D.3.c of the Order) and which are subject to continual vegetative clearance activities (e.g. mowing). The study must be designed to assess the effects of vegetation removal activities and water quality, including, but not limited to, modification of biogeochemical functions, in-stream temperatures, receiving water bed and bank erosion potential and sediment transport. The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board.

The MS4 and Receiving Water Maintenance Special Study must include the following elements:

a. Locations: The Copermittees must identify suitable sampling locations, including at least one reference system that is not subject to maintenance activities.

b. Parameters/Methods: At a minimum, the Copermittees must monitor pre and post maintenance activities for indicator bacteria, turbidity (NTU), temperature, dissolved oxygen and nutrients (Nitrite, Nitrate, Total Kjeldahl Nitrogen, Ammonia and Total Phosphorous). Copermittees must also measure or estimate flow rates and volumes.

c. Results and Discussion from the MS4 and Receiving Water Maintenance Study must be included in the Annual Monitoring Report. The Discussion must include relevance of findings to CWA Section 303(d) listed impaired waters.

6. Intermittent and Ephemeral Stream Perennial Conversion Study

The Copermittees must develop and submit to the San Diego Water Board by April 01, 2013, a special study workplan to investigate the extent of any impacts to beneficial uses from the conversion of historically ephemeral or intermittent receiving waters to perennially flowing waters due to the continued discharge of currently exempted non-storm water from the MS4 and/or discharges into MS4s covered under a separate NPDES permit into receiving waters. The goal of the study is to assess if any impacts to beneficial uses, including, but not limited to, WILD, WARM, COLD or RARE, have occurred due to continuous discharge of currently exempted non-storm water discharges, and if the discharges should no longer be exempt. The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board.

The Intermittent and Ephemeral Stream Perennial Conversion Special Study must include the following elements:

a. Locations: The Copermittees must investigate their MS4 and adjacent downstream receiving waters to identify portions that have historically been ephemeral or intermittent but currently exhibit perennial flow due to exempted non-storm water discharges. Investigation must include historic habitat assessments, USGS gauging information, and historic aerial photography. Sampling must occur at a minimum of 2 identified perennially converted locations. Should the Copermittees be unable to locate any converted waters, a full description of the investigation must be documented in the annual report.

b. Parameters/Methods: The Copermittees must conduct water quality monitoring of the non-storm water discharge in accordance with Section C of this Order. In addition, the Copermittees must select a minimum of 2 downstream sampling points within the receiving waters subject the discharge and conduct the following:

(1) Grab samples must be taken and analyzed for indicator bacteria, nutrients (Nitrite, Nitrate, Total Kjeldahl Nitrogen, Ammonia and Total Phosphorous), turbidity (NTU), temperature, dissolved oxygen, total hardness, pH and 303(d) listed pollutants for all receiving waters at or downstream of the sampling site. The Copermittees must measure or estimate flow rates and volumes at each sampling point.

(2) Sampling at each site must include a quantitative and qualitative evaluation of beneficial uses. At a minimum, sampling must include observation estimation of active bed and bank erosion and erosion potential, invasive/non-native plant cover, aquatic non-native species, and potential vector control requirements.

c. Results and Discussion from the Intermittent and Ephemeral Stream Perennial Conversion Study must be included in the Annual Monitoring Report.

7. Stormwater Monitoring Coalition (SMC) Regional Monitoring of Southern California Coastal Watersheds:

The Copermittees must implement the monitoring program developed by the SMC for Regional Monitoring of the southern California coastal watersheds within the Santa Margarita Hydrologic Unit. Each Copermittee must evaluate the results of the monitoring program within and downstream of their jurisdiction and integrate the results into program assessments and modifications.

F. Monitoring Provisions

All monitoring activities must meet the following requirements:

1. Where procedures are not otherwise specified in this Receiving Waters Monitoring and Reporting Program, sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board (SWRCB).

2. Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity [40 CFR 122.41(j)(1)].

3. The Copermittees must retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the San Diego Water Board or USEPA at any time and must be extended during the course of any unresolved litigation regarding this discharge. [40 CFR 122.41(j)(2), CWC section 13383(a)]

4. Records of monitoring information must include [40 CFR 122.41(j)(3)]:

   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

5. All sampling, sample preservation, and analyses must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in this Receiving Waters Monitoring and Reporting Program or approved by the San Diego Water Board [40 CFR 122.41(j)(4)].

6. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order must, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. [40 CFR 122.41(j)(5)]

7. Calculations for all limitations which require averaging of measurements must utilize an arithmetic mean unless otherwise specified in this Receiving Waters Monitoring and Reporting Program. [40 CFR 122.41(l)(4)(iii)]

8. All chemical, bacteriological, and toxicity analyses must be conducted at a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the San Diego Water Board.

9. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Copermittees must instruct their laboratories to establish calibration standards that are equivalent to or lower than the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). If a Copermittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Copermittee must submit documentation from the laboratory to the San Diego Water Board for approval prior to raising the ML for any priority toxic pollutant.

10. The San Diego Water Board may make revisions to this Receiving Waters and MS4 Discharge Monitoring and Reporting Program at any time during the term of Order No. R9-2010-0016 and may include a reduction or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

11. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance must, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both. [40 CFR 122.41(k)(2)]

12. Monitoring must be conducted according the USEPA test procedures approved under 40 CFR 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants under the Clean Water Act" as amended, unless other test procedures have been specified in this Receiving Waters and MS4 Discharge Monitoring and Reporting Program, in Order No. R9-2010-0016, or by the San Diego Water Board.

13. If a Copermittee(s) monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring must

be included in the calculation and reporting of the data submitted in the reports requested by the San Diego Water Board. [40 CFR 122.41(l)(4)(ii)]

III. REPORTING PROGRAM

A. Monitoring Reporting

1. Planned Monitoring Program: The Principal Copermittee must submit to the San Diego Water Board by **June 1, 2012,** a proposed workplan describing the Receiving Waters and MS4 Discharge Monitoring Program to be implemented. Any updates to the planned monitoring program workplan proposed by the Copermittees shall be submitted with each Monitoring Annual Report. The Copermittees shall implement the proposed workplan unless otherwise directed in writing by the San Diego Water Board.

2. Monitoring Annual Report: The Principal Copermittee must submit the Receiving Waters and MS4 Discharge Monitoring Annual Report to the San Diego Water Board on October 1 of each year, beginning on **October 1, 2013**. Receiving Waters and MS4 Discharge Monitoring Annual Reports must include monitoring conducted under the previous fiscal year, must meet the following requirements:

   a. Annual monitoring reports must include the data/results, methods of evaluating the data, graphical summaries of the data, and an explanation/discussion of the data for each monitoring program component.

   b. Annual monitoring reports must include a watershed-based analysis of the findings of each monitoring program component (mass loading, bioassessment, etc...). Each watershed-based analysis must include:

      (1) Identification and prioritization of water quality problems within each watershed.
      (2) Identification and description of the nature and magnitude of potential sources of the water quality problems within each watershed.
      (3) Evaluation and presentation of pollutant load and concentration increases or decreases at each mass loading station over time.
      (4) Evaluation of pollutant loads and concentrations measured at mass loading stations with respect to land use, population, sources, and other characteristics of watersheds using tools such as multiple linear regression, factor analysis, and cluster analysis.

(5) Identification of links between source activities/conditions and observed receiving water impacts.
(6) Identification of recommended future monitoring to identify and address sources of water quality problems.
(7) Results and discussion of any TIE conducted, together with actions that will be implemented to reduce the discharge of pollutants in storm water, eliminate any discharge of pollutants in non-storm water, and abate the sources causing the toxicity.

c. Annual monitoring reports must include an analysis and interpretation of the data for each watershed with respect to the management questions listed in section I.B of this Receiving Waters Monitoring and Reporting Program.

d. Annual monitoring reports must include a discussion describing how each of the goals listed in section I.A of this MRP is addressed by the Copermittees' monitoring program for the monitoring year covered by the report.

e. Annual monitoring reports must include identification and analysis of any long-term trends in storm water or receiving water quality. Trend analysis must use nonparametric approaches, such as the Mann-Kendall test, including exogenous variables in a multiple regression model, and/or using a seasonal nonparametric trend model, where applicable.

f. Annual monitoring reports must provide an estimation of total pollutant loads (wet weather loads plus dry weather loads) due to MS4 Discharge for each of the hydrologic subareas, including for 303(d) pollutants specified in Table 2 of the Order.

g. Annual monitoring reports must, for each monitoring program component listed above, include an assessment of compliance with applicable water quality standards.

h. Annual monitoring reports must describe monitoring station locations by latitude and longitude coordinates, frequency of sampling, quality assurance/quality control procedures, and sampling and analysis protocols.

i. Annual monitoring reports must use a standard report format and include the following elements:

(1) A stand alone comprehensive executive summary addressing all sections of the monitoring report;
(2) Comprehensive interpretations and conclusions; and
(3) Recommendations for future actions.

j. All monitoring reports submitted to the Principal Copermittee or the San Diego Water Board must contain the certified perjury statement described in Attachment B of this Order No. R9-2010-0016.

k. Annual monitoring reports must be reviewed prior to submittal to the San Diego Water Board by a committee of the Copermittees (consisting of no less than three different Copermittee members).

l. Annual monitoring reports must be submitted in both electronic and paper formats. Electronic formats must be CEDEN or SWAMP-uploadable.[14]

3. Monitoring programs and reports must comply with section II.F of Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016 and Attachment B of this Order.

4. Following completion of an annual cycle of monitoring in October, the Copermittees must make the monitoring data and results available to the San Diego Water Board at the San Diego Water Board's request. Following completion of the annual cycle of monitoring, the Copermittees must upload monitoring data and results into the California Environmental Data Exchange Network (CEDEN)[15].

B. Interim Reporting Requirements

For the October 2010 to October 2012 monitoring period, the Principal Copermittee must submit the Receiving Waters Monitoring Annual Report as required under Order No. 2004-001. The Receiving Waters Monitoring Annual Report must address the monitoring conducted to comply with the requirements of Order No. 2004-0001.

[14] For updates to the SWAMP templates and formats, see http://www.waterboards.ca.gov/swamp.
[15] http://www.ceden.org/

C. Reporting Dates

Table 5. Table of Required MRP Reporting Dates and Frequencies.

Submittal	Section	Completion Date	Frequency
Description of Proposed Monitoring Program	III.A.1	June 1, 2012	One Time
Receiving Waters and MS4 Discharge Monitoring Annual Reports, Including Proposed Updates to the Monitoring Program	III.A.2	Starting October 1, 2013	Annual
Copermittees submit Interim Monitoring Program Annual Report	III.B	As required under Order No. 2004-001	One Time
Draft Wet Weather MS4 Discharge Monitoring Program	II.B	June 01, 2012	One Time
Draft High Priority Inland Aquatic Habitat Monitoring	II.D	April 01, 2012	One Time
Draft Sediment Toxicity Special Study	II.E.2	April 01, 2012	One Time
Draft Trash and Litter Special Study	II.E.3	September 01, 2012	One Time
Draft Agricultural, Federal and Tribal Input Study	II.E.4	September 01, 2012	One Time
Draft MS4 and Receiving Water Maintenance Study	II.E.5	April 01, 2012	One Time
Draft Intermittent and Ephemeral Stream Perennial Conversion Study	II.E.6	April 01, 2013	One Time

Attachment F

SOURCE DATA

I. STORM WATER ACTION LEVELS DATABASE.....2

II. NUMERIC ACTION LEVELS EVALUATION DATA[1].....9

[1] Represented data from monitoring conducted by the Copermittees and provided in the 2008-09 Annual Monitoring Report.

I. STORM WATER ACTION LEVELS DATABASE

N02+NO3 (mg/l)	Phosphorous Total (mg/l)	Cadmium Total (ug/l)	Copper Total (ug/l)	Lead Total (ug/l)	Zinc Total (ug/l)	Turbidity (NTU)
4.70	7.90	9.80	800.00	660.00	22500.00	10
4.20	7.19	6.00	340.00	620.00	18000.00	15
3.90	4.96	6.00	320.00	540.00	11000.00	15
3.90	4.50	6.00	270.00	520.00	9970.00	16
3.60	4.40	6.00	244.00	460.00	9100.00	22
3.60	4.24	6.00	230.00	450.00	8800.00	23
3.60	2.59	5.30	220.00	450.00	6500.00	23
3.50	2.59	5.00	220.00	440.00	5500.00	24
3.30	2.50	4.10	210.00	430.00	5000.00	24
3.30	2.50	4.00	210.00	400.00	4900.00	30
3.10	2.50	4.00	209.00	380.00	4600.00	31
3.00	2.27	4.00	209.00	360.00	4300.00	33
2.96	2.00	4.00	200.00	350.00	3800.00	36
2.90	2.00	4.00	200.00	330.00	3800.00	36
2.70	2.00	4.00	200.00	320.00	3400.00	39
2.70	2.00	3.90	200.00	320.00	3390.00	40
2.60	1.90	3.80	200.00	320.00	3100.00	45
2.60	1.90	3.40	180.00	310.00	2500.00	50
2.60	1.80	3.40	180.00	310.00	2200.00	50
2.50	1.80	3.20	166.00	310.00	2100.00	60
2.50	1.70	3.10	163.00	310.00	1829.00	61
2.32	1.70	3.00	160.00	300.00	1700.00	62
2.30	1.70	3.00	150.00	290.00	1500.00	65
2.20	1.60	3.00	140.00	280.00	1400.00	65
2.20	1.60	3.00	140.00	270.00	1300.00	66
2.10	1.60	3.00	140.00	270.00	1300.00	69
2.10	1.53	3.00	140.00	270.00	1285.00	70
2.10	1.50	3.00	140.00	270.00	1200.00	72
2.10	1.50	3.00	130.00	260.00	1100.00	80
2.00	1.47	3.00	130.00	260.00	1054.00	84
2.00	1.46	3.00	128.00	250.00	1000.00	97
2.00	1.40	3.00	120.00	250.00	980.00	111
2.00	1.40	3.00	120.00	250.00	960.00	140
1.90	1.40	3.00	120.00	245.00	850.00	151
1.90	1.30	2.90	120.00	230.00	850.00	157
1.90	1.30	2.80	120.00	230.00	850.00	590
1.90	1.30	2.70	111.00	225.00	850.00	
1.90	1.30	2.60	111.00	220.00	840.00	
1.80	1.30	2.50	110.00	220.00	780.00	
1.80	1.30	2.40	110.00	210.00	768.00	
1.70	1.24	2.40	110.00	210.00	760.00	
1.70	1.20	2.30	110.00	200.00	750.00	

1.70	1.20	2.20	110.00	200.00	740.00	
1.70	1.20	2.10	110.00	190.00	740.00	
1.70	1.20	2.00	100.00	190.00	730.00	
1.70	1.10	2.00	100.00	190.00	720.00	
1.70	1.10	2.00	100.00	190.00	710.00	
1.60	1.10	2.00	100.00	170.00	710.00	
1.60	1.10	2.00	100.00	170.00	700.00	
1.60	1.06	2.00	100.00	170.00	700.00	
1.60	1.00	2.00	99.00	160.00	690.00	
1.60	0.96	2.00	94.00	160.00	690.00	
1.60	0.96	2.00	91.00	150.00	680.00	
1.60	0.94	2.00	91.00	150.00	680.00	
1.53	0.94	2.00	90.00	150.00	670.00	
1.50	0.92	2.00	90.00	150.00	660.00	
1.50	0.91	2.00	89.00	150.00	660.00	
1.50	0.85	2.00	87.00	140.00	660.00	
1.50	0.85	2.00	87.00	140.00	650.00	
1.50	0.85	2.00	84.00	140.00	630.00	
1.50	0.83	2.00	83.00	130.00	610.00	
1.40	0.83	2.00	82.00	130.00	610.00	
1.40	0.83	2.00	81.00	130.00	597.00	
1.40	0.81	2.00	81.00	130.00	590.00	
1.40	0.81	2.00	77.00	130.00	590.00	
1.40	0.81	2.00	77.00	123.00	576.00	
1.40	0.80	2.00	76.00	120.00	570.00	
1.40	0.80	2.00	74.00	120.00	570.00	
1.32	0.78	2.00	72.00	120.00	560.00	
1.30	0.78	1.90	72.00	120.00	560.00	
1.30	0.77	1.90	72.00	120.00	540.00	
1.30	0.77	1.90	72.00	115.00	540.00	
1.30	0.76	1.80	72.00	110.00	520.00	
1.30	0.76	1.80	71.00	110.00	520.00	
1.30	0.75	1.80	70.00	110.00	520.00	
1.30	0.75	1.70	70.00	110.00	510.00	
1.29	0.75	1.60	67.00	102.00	500.00	
1.20	0.74	1.60	66.00	100.00	500.00	
1.20	0.73	1.60	66.00	100.00	490.00	
1.20	0.72	1.60	66.00	100.00	480.00	
1.20	0.72	1.60	65.00	100.00	475.00	
1.20	0.72	1.60	65.00	100.00	470.00	
1.20	0.71	1.50	63.00	99.00	470.00	
1.20	0.71	1.50	63.00	97.00	462.00	
1.20	0.69	1.40	62.00	97.00	460.00	
1.20	0.68	1.30	62.00	97.00	460.00	
1.20	0.68	1.30	60.00	95.00	450.00	
1.20	0.68	1.20	60.00	91.00	440.00	
1.10	0.68	1.20	59.00	90.00	440.00	
1.10	0.68	1.20	56.59	90.00	440.00	

1.10	0.67	1.20	55.00	87.00	430.00	
1.10	0.66	1.10	55.00	86.00	430.00	
1.10	0.66	1.10	54.00	86.00	430.00	
1.10	0.65	1.10	54.00	84.00	420.00	
1.10	0.65	1.10	54.00	82.00	420.00	
1.10	0.65	1.10	53.00	82.00	410.00	
1.10	0.65	1.00	53.00	81.00	409.00	
1.00	0.63	1.00	52.00	78.00	400.00	
1.00	0.62	1.00	51.00	78.00	400.00	
1.00	0.61	1.00	50.00	78.00	400.00	
1.00	0.60	1.00	50.00	77.00	390.00	
1.00	0.60	1.00	50.00	76.00	390.00	
1.00	0.59	1.00	50.00	76.00	390.00	
0.99	0.57	1.00	50.00	69.00	390.00	
0.99	0.57	1.00	50.00	69.00	390.00	
0.98	0.56	1.00	50.00	67.00	370.00	
0.97	0.56	1.00	50.00	66.00	370.00	
0.96	0.55	1.00	49.00	66.00	370.00	
0.96	0.55	1.00	49.00	66.00	360.00	
0.95	0.55	1.00	49.00	65.00	360.00	
0.95	0.53	1.00	48.00	64.00	360.00	
0.93	0.53	1.00	48.00	61.00	360.00	
0.93	0.53	1.00	47.00	57.00	350.00	
0.93	0.52	1.00	46.08	57.00	350.00	
0.93	0.52	1.00	46.00	56.00	350.00	
0.92	0.52	1.00	46.00	56.00	340.00	
0.90	0.52	1.00	44.25	53.00	340.00	
0.88	0.51	1.00	44.00	53.00	340.00	
0.87	0.51	1.00	44.00	52.60	340.00	
0.86	0.50	1.00	44.00	52.00	340.00	
0.85	0.49	1.00	44.00	51.00	340.00	
0.84	0.49	1.00	43.00	51.00	334.00	
0.83	0.48	1.00	43.00	50.00	330.00	
0.81	0.48	1.00	43.00	50.00	330.00	
0.81	0.48	1.00	42.00	50.00	330.00	
0.80	0.47	1.00	42.00	50.00	330.00	
0.80	0.47	1.00	42.00	50.00	330.00	
0.78	0.47	1.00	41.00	50.00	330.00	
0.78	0.46	1.00	40.00	50.00	330.00	
0.77	0.46	1.00	40.00	50.00	320.00	
0.77	0.46	1.00	40.00	50.00	320.00	
0.77	0.45	1.00	40.00	50.00	320.00	
0.74	0.45	1.00	40.00	50.00	320.00	
0.73	0.44	1.00	39.00	49.00	310.00	
0.72	0.44	1.00	39.00	47.00	310.00	
0.69	0.44	1.00	39.00	46.00	310.00	
0.69	0.44	1.00	39.00	46.00	308.00	
0.69	0.44	1.00	39.00	44.00	300.00	

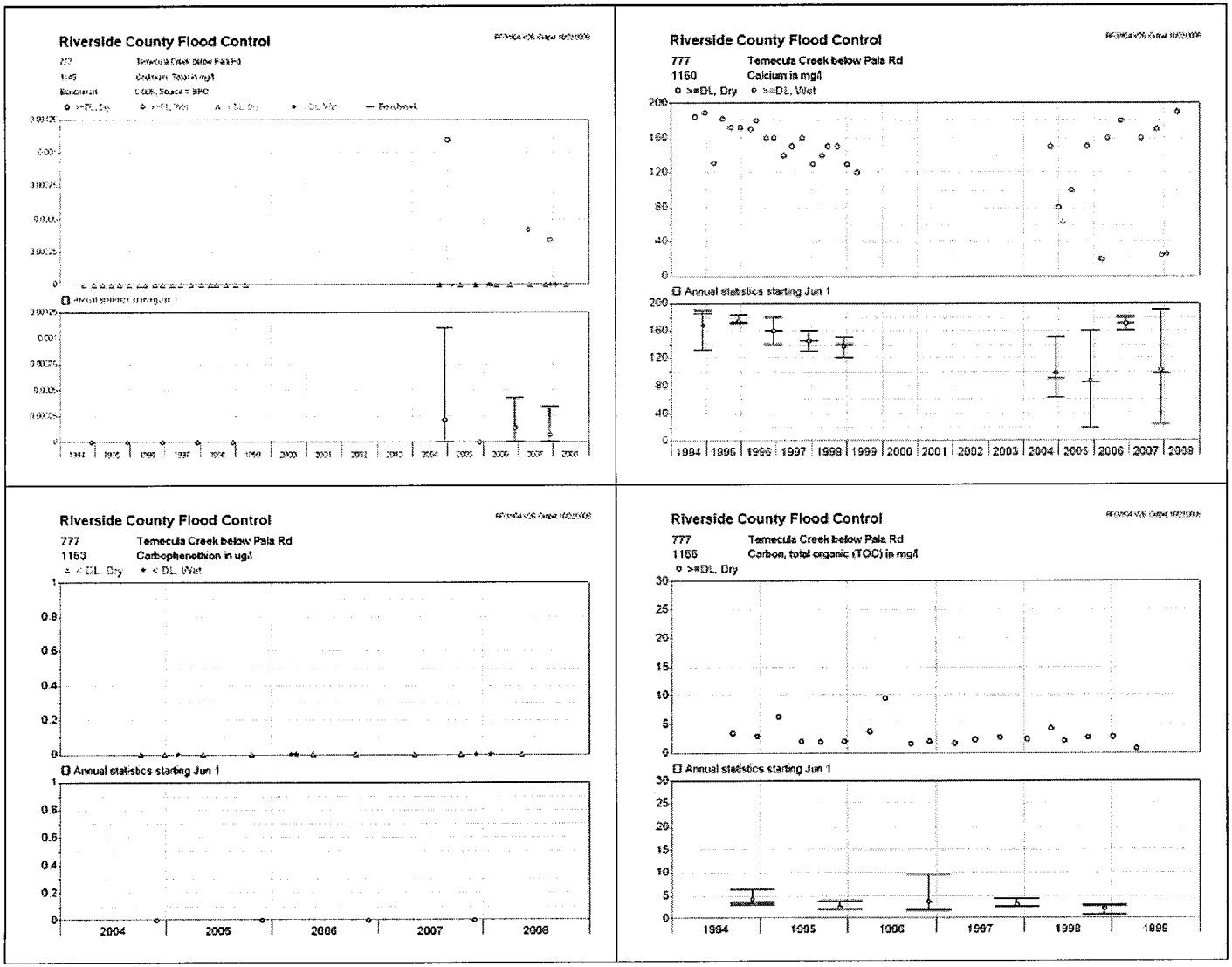
0.67	0.44	1.00	39.00	44.00	300.00	
0.67	0.44	1.00	37.00	43.00	300.00	
0.66	0.43	1.00	37.00	42.00	300.00	
0.66	0.42	1.00	37.00	41.00	290.00	
0.65	0.42	1.00	37.00	41.00	285.00	
0.63	0.41	1.00	37.00	41.00	280.00	
0.62	0.41	1.00	36.00	41.00	280.00	
0.62	0.41	1.00	36.00	41.00	280.00	
0.62	0.40	1.00	36.00	40.10	280.00	
0.60	0.40	1.00	36.00	40.00	280.00	
0.59	0.40	1.00	35.00	39.30	280.00	
0.59	0.40	1.00	35.00	39.00	280.00	
0.58	0.40	1.00	34.00	39.00	280.00	
0.57	0.40	1.00	34.00	39.00	280.00	
0.57	0.40	1.00	33.40	38.00	270.00	
0.55	0.40	1.00	33.00	38.00	270.00	
0.52	0.40	1.00	33.00	38.00	270.00	
0.50	0.40	1.00	33.00	37.00	270.00	
0.50	0.39	1.00	33.00	36.00	270.00	
0.46	0.39	1.00	33.00	36.00	270.00	
0.42	0.39	1.00	32.26	36.00	260.00	
0.42	0.38	1.00	32.01	36.00	260.00	
0.35	0.38	1.00	32.00	35.00	260.00	
0.10	0.38	1.00	32.00	34.00	260.00	
0.06	0.37	1.00	32.00	34.00	260.00	
	0.36	1.00	32.00	33.00	250.00	
	0.36	1.00	32.00	33.00	250.00	
	0.36	1.00	32.00	33.00	250.00	
	0.36	1.00	31.00	33.00	250.00	
	0.35	1.00	31.00	32.00	247.00	
	0.35	1.00	31.00	32.00	242.13	
	0.35	1.00	31.00	31.94	240.00	
	0.35	1.00	30.00	30.00	240.00	
	0.34	1.00	30.00	30.00	240.00	
	0.34	1.00	30.00	30.00	240.00	
	0.34	1.00	30.00	30.00	240.00	
	0.34	1.00	30.00	30.00	230.00	
	0.34	1.00	29.00	30.00	230.00	
	0.34	1.00	29.00	30.00	220.00	
	0.33	1.00	28.00	29.00	220.00	
	0.33	1.00	28.00	29.00	220.00	
	0.33	0.98	28.00	29.00	210.00	
	0.33	0.94	28.00	29.00	210.00	
	0.33	0.94	27.19	28.00	210.00	
	0.33	0.92	27.00	28.00	210.00	
	0.32	0.90	27.00	28.00	210.00	
	0.32	0.90	27.00	27.00	210.00	
	0.32	0.86	26.00	27.00	210.00	

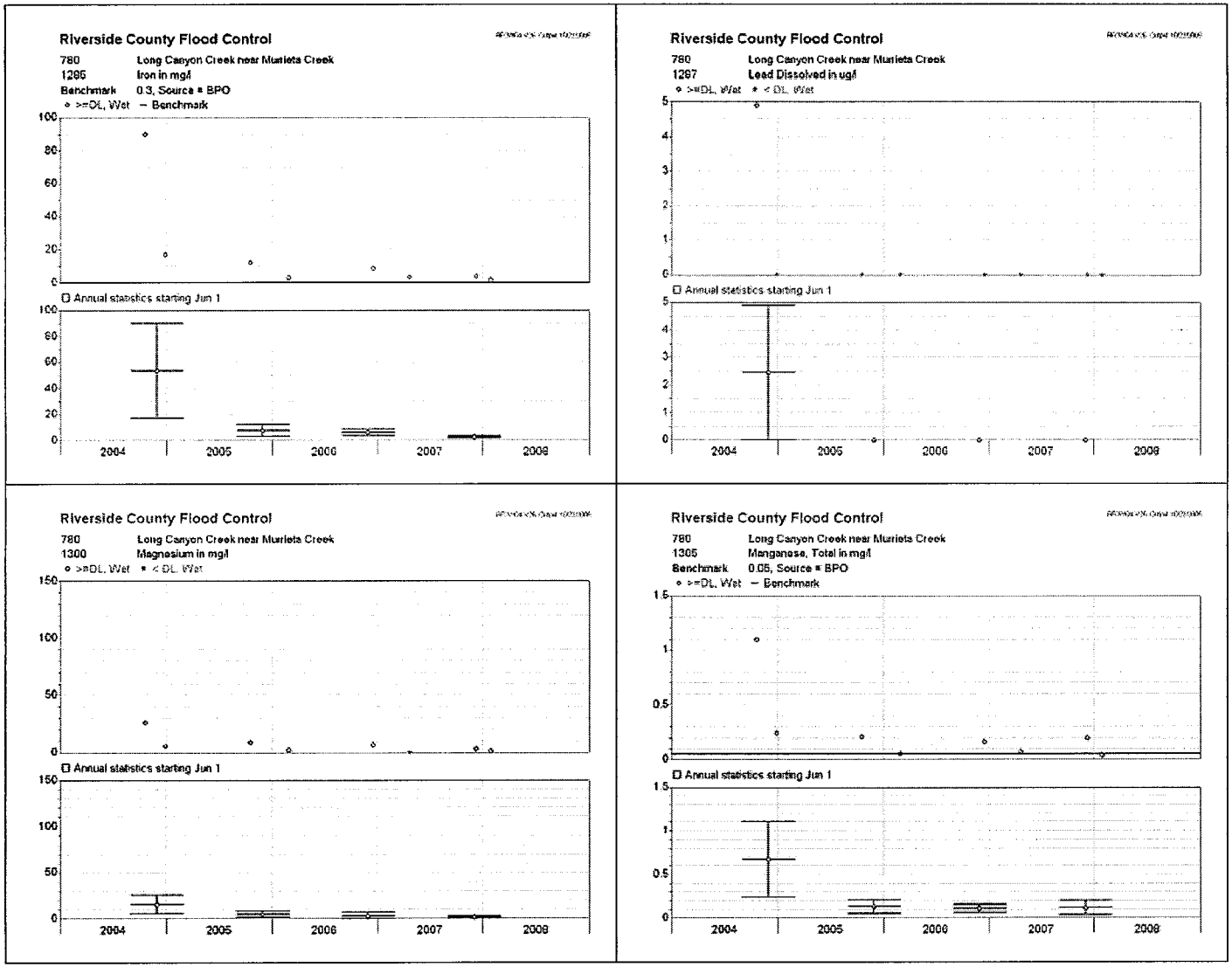
	0.32	0.80	26.00	26.31	205.00	
	0.32	0.80	26.00	26.00	202.79	
	0.31	0.71	25.00	26.00	202.00	
	0.31	0.70	25.00	25.00	200.00	
	0.30	0.70	25.00	25.00	200.00	
	0.30	0.60	24.00	25.00	200.00	
	0.30	0.60	24.00	24.60	200.00	
	0.30	0.59	23.00	24.00	200.00	
	0.30	0.59	23.00	24.00	200.00	
	0.30	0.52	23.00	24.00	200.00	
	0.30	0.50	23.00	24.00	194.49	
	0.29	0.50	23.00	23.00	190.00	
	0.29	0.50	22.00	23.00	190.00	
	0.29	0.50	22.00	23.00	190.00	
	0.29	0.50	21.00	23.00	190.00	
	0.29	0.50	21.00	23.00	184.13	
	0.29	0.50	21.00	23.00	180.00	
	0.28	0.50	21.00	22.20	180.00	
	0.28	0.50	20.36	22.00	180.00	
	0.28	0.50	20.00	22.00	180.00	
	0.27	0.50	20.00	22.00	180.00	
	0.27	0.50	20.00	22.00	180.00	
	0.27	0.50	20.00	21.20	180.00	
	0.26	0.50	20.00	21.10	170.00	
	0.26	0.40	19.00	21.00	170.00	
	0.26	0.40	19.00	20.00	170.00	
	0.26	0.40	18.00	19.10	170.00	
	0.25	0.30	18.00	19.00	160.00	
	0.25	0.30	18.00	19.00	160.00	
	0.25	0.30	18.00	19.00	160.00	
	0.25	0.30	18.00	19.00	160.00	
	0.25	0.30	17.00	18.50	160.00	
	0.25	0.30	17.00	18.00	160.00	
	0.24	0.20	17.00	18.00	160.00	
	0.24	0.20	17.00	18.00	160.00	
	0.24	0.20	17.00	18.00	160.00	
	0.23	0.04	17.00	17.00	160.00	
	0.23		17.00	17.00	150.00	
	0.23		17.00	17.00	150.00	
	0.23		17.00	17.00	150.00	
	0.22		16.00	17.00	150.00	
	0.22		16.00	17.00	150.00	
	0.22		16.00	17.00	146.00	
	0.22		16.00	17.00	145.00	
	0.22		16.00	17.00	140.00	
	0.22		15.00	16.90	140.00	
	0.22		15.00	16.00	140.00	
	0.21		15.00	15.00	140.00	

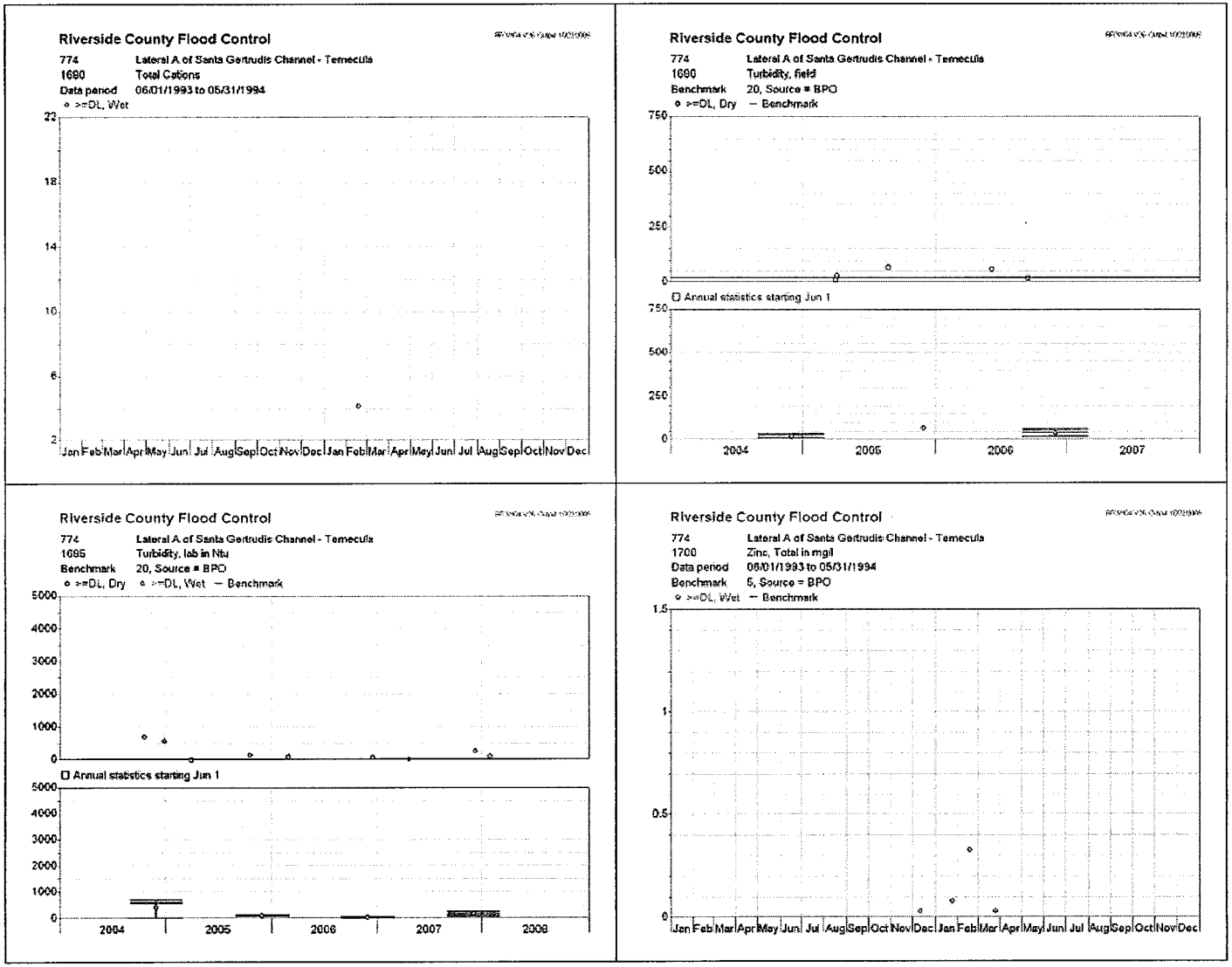
	0.21		15.00	15.00	140.00	
	0.21		15.00	15.00	140.00	
	0.21		14.50	15.00	140.00	
	0.21		14.00	15.00	140.00	
	0.21		14.00	14.00	140.00	
	0.20		14.00	14.00	140.00	
	0.20		14.00	14.00	136.55	
	0.20		14.00	13.00	135.60	
	0.20		14.00	13.00	130.00	
	0.20		13.00	13.00	130.00	
	0.20		13.00	13.00	130.00	
	0.20		13.00	13.00	130.00	
	0.20		13.00	12.00	130.00	
	0.20		13.00	12.00	130.00	
	0.19		13.00	12.00	130.00	
	0.19		12.00	12.00	127.00	
	0.19		12.00	12.00	124.00	
	0.19		12.00	12.00	122.05	
	0.19		12.00	11.00	120.00	
	0.19		11.00	11.00	120.00	
	0.19		11.00	11.00	120.00	
	0.18		10.00	10.00	120.00	
	0.18		10.00	10.00	112.11	
	0.18		10.00	10.00	110.00	
	0.18		10.00	10.00	110.00	
	0.18		9.60	10.00	110.00	
	0.18		9.60	10.00	110.00	
	0.17		9.10	10.00	110.00	
	0.17		9.10	10.00	110.00	
	0.17		9.00	10.00	110.00	
	0.17		8.30	9.60	110.00	
	0.17		8.20	9.40	110.00	
	0.16		8.00	9.10	108.00	
	0.15		8.00	9.00	100.00	
	0.15		7.70	9.00	100.00	
	0.15		7.70	9.00	100.00	
	0.15		7.00	9.00	100.00	
	0.15		7.00	8.00	100.00	
	0.15		6.80	8.00	100.00	
	0.14		6.80	8.00	99.00	
	0.14		6.80	8.00	98.00	
	0.14		6.50	8.00	97.00	
	0.14		6.50	8.00	93.40	
	0.14		6.30	8.00	92.00	
	0.14		6.30	7.60	92.00	
	0.14		6.10	7.50	90.00	
	0.13		5.60	7.00	90.00	
	0.13		5.40	7.00	90.00	

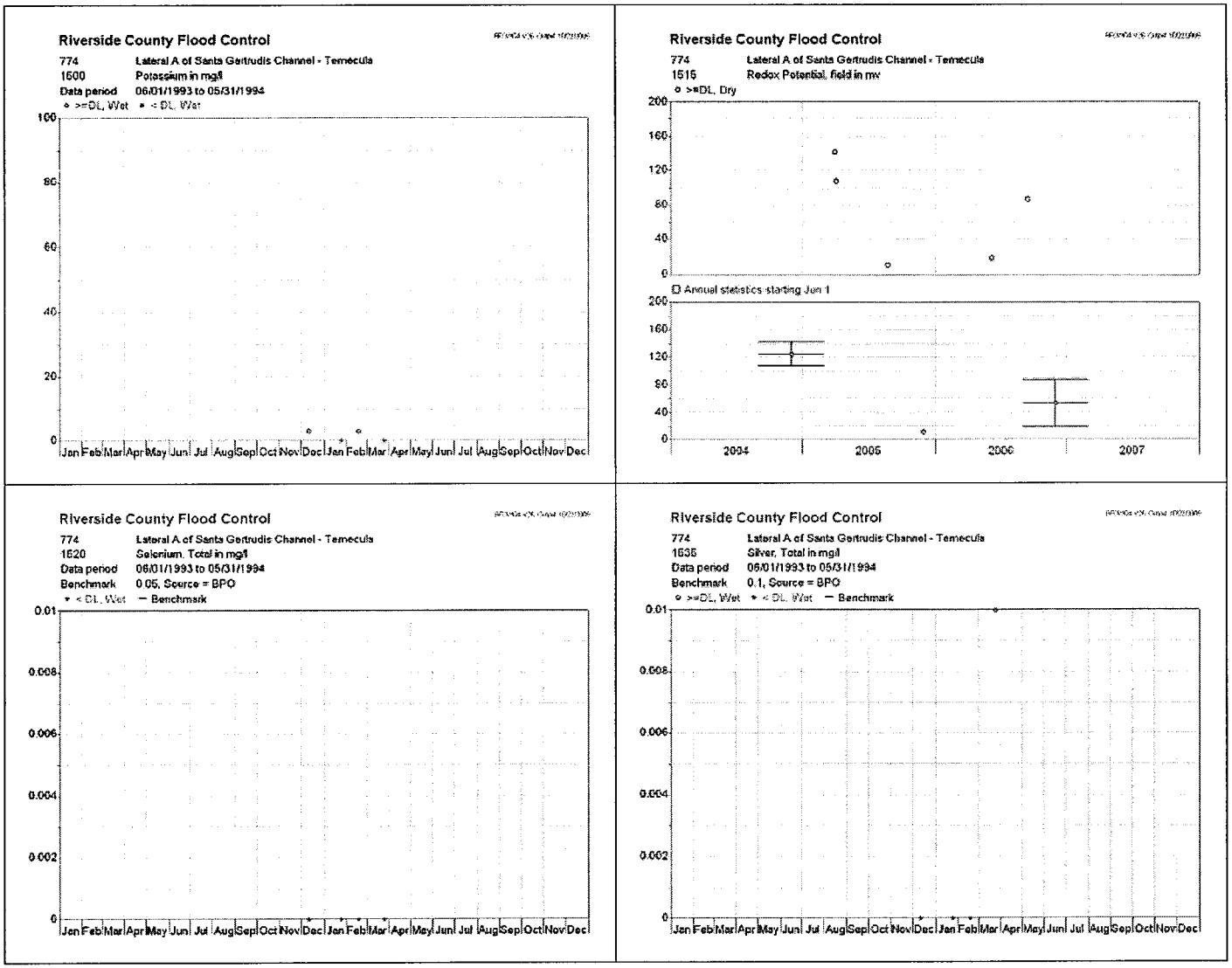
	0.13		5.20	6.00	86.00	
	0.13		5.00	6.00	83.00	
	0.13		4.90	6.00	81.00	
	0.12		4.50	5.90	81.00	
	0.12		4.10	5.80	80.00	
	0.12		4.10	5.40	80.00	
	0.11		3.90	5.00	80.00	
	0.11		3.40	5.00	80.00	
	0.11		2.60	5.00	80.00	
	0.11		2.60	5.00	79.00	
	0.10		2.60	5.00	73.00	
	0.10		2.30	5.00	72.00	
	0.10		2.00	4.80	70.00	
	0.10		2.00	4.80	70.00	
	0.09		1.70	4.70	70.00	
	0.08		1.50	4.60	70.00	
	0.06		1.50	4.00	64.00	
	0.03		1.50	4.00	63.00	
			1.40	3.80	61.00	
			1.40	3.00	60.00	
				3.00	56.00	
				2.30	44.00	
				2.00	40.00	
				1.60	37.00	
					35.00	
					30.00	
					26.00	
					24.00	
					20.00	
					10.00	
					5.00	

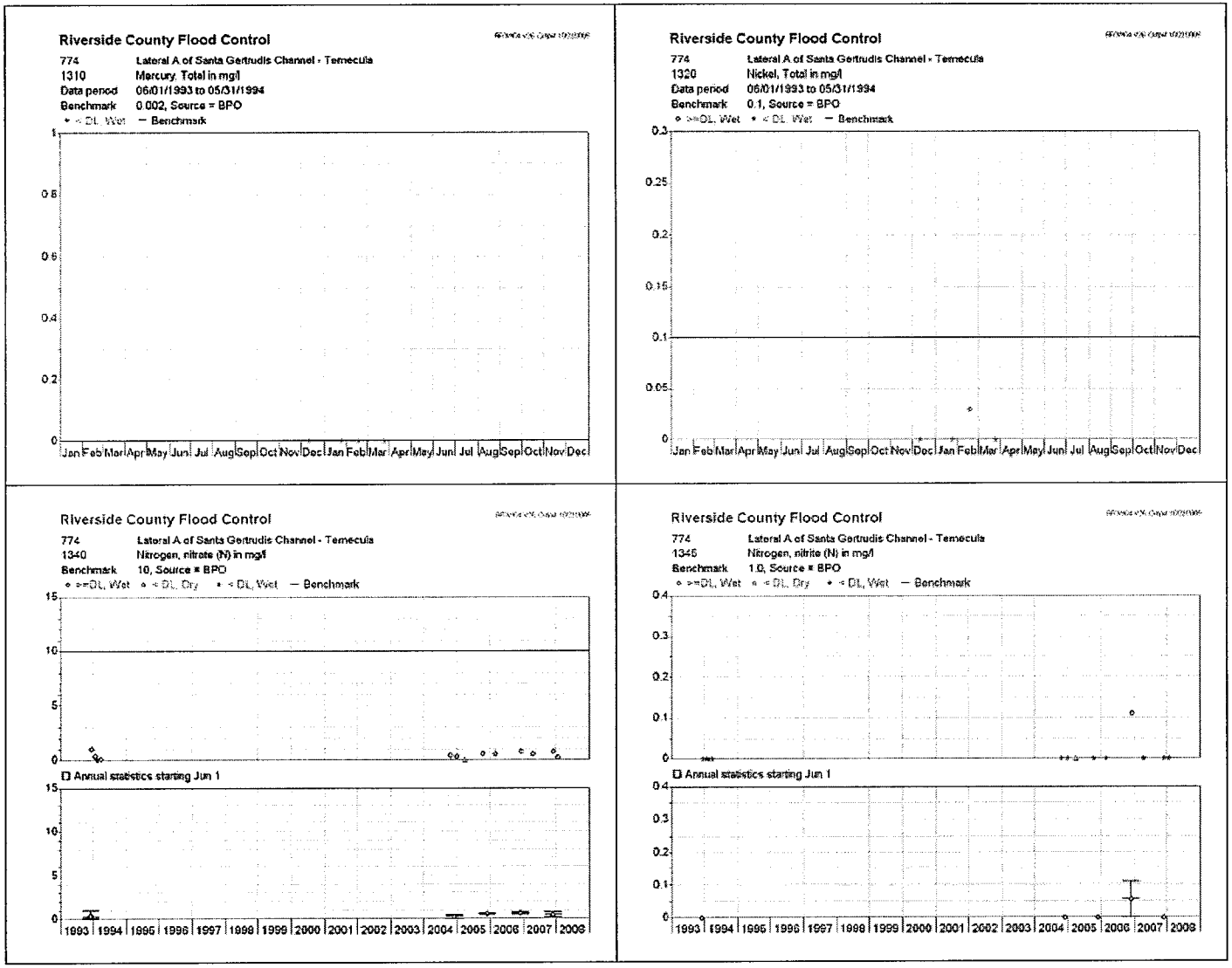
II. NUMERIC ACTION LEVELS EVALUATION DATA

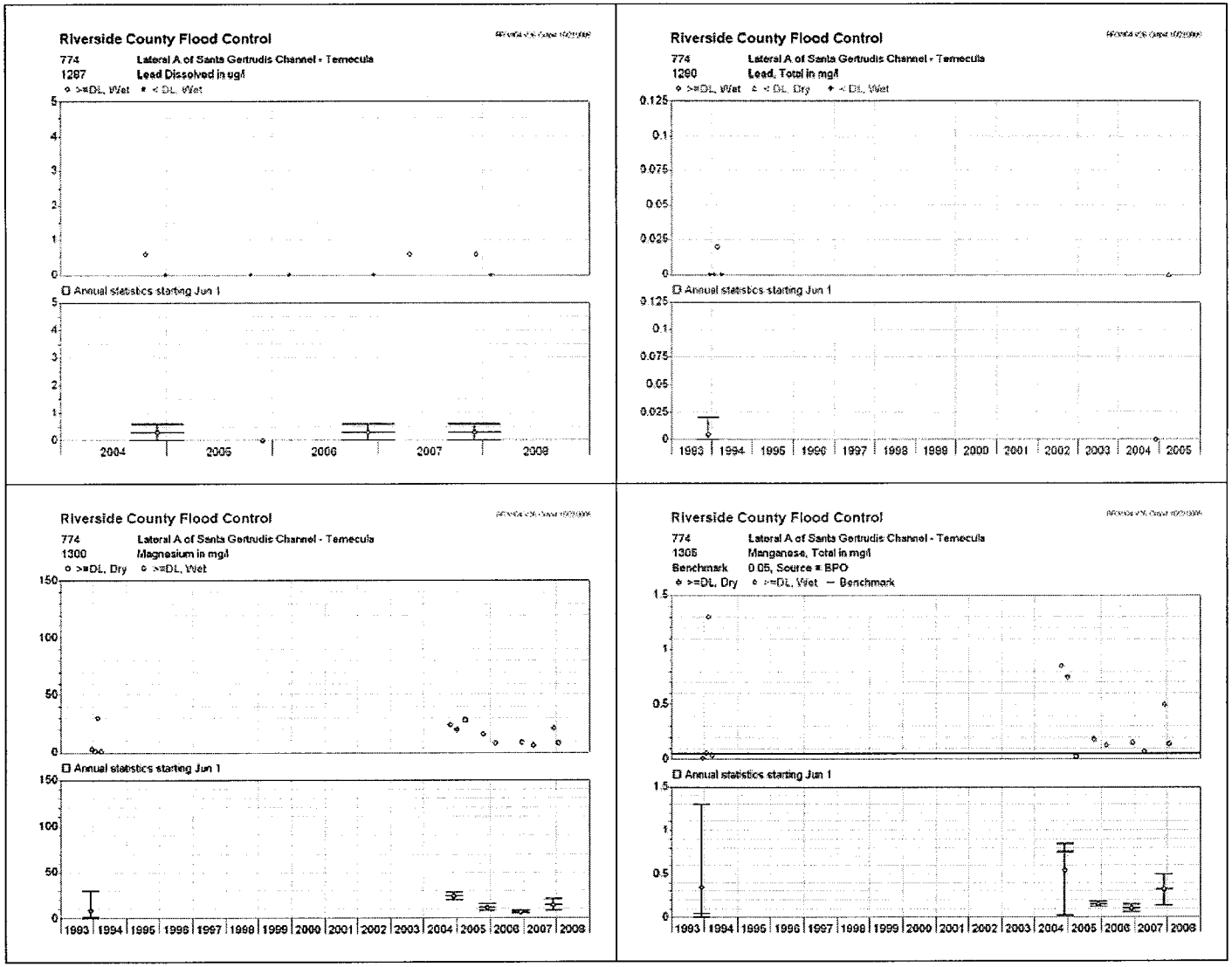


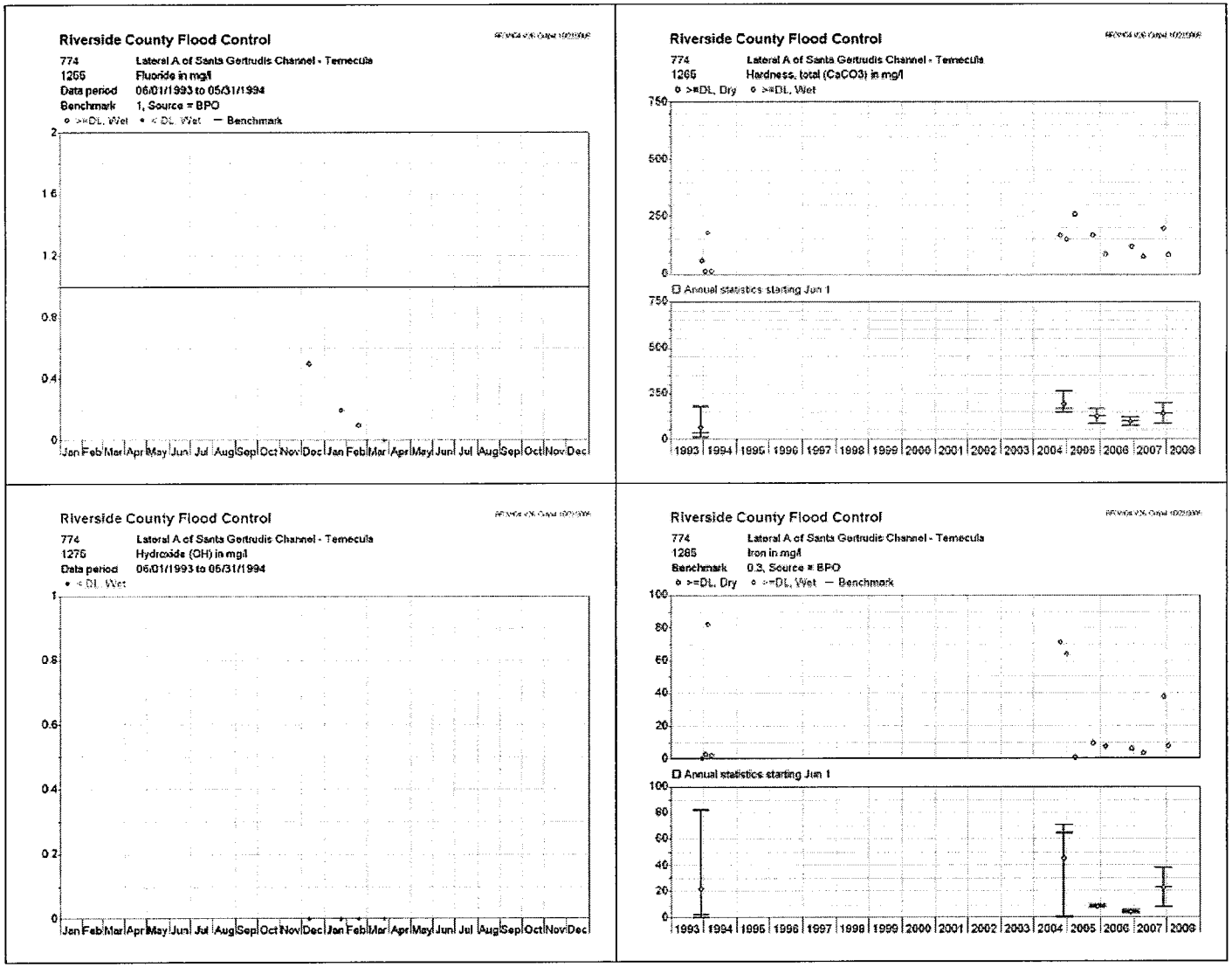

Riverside County Flood Control
780 Long Canyon Creek near Murrieta Creek
1295 Iron in mg/l
Benchmark 0.3, Source = BPO
o >=DL, Wet – Benchmark
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
780 Long Canyon Creek near Murrieta Creek
1297 Lead Dissolved in ug/l
o >=DL, Wet * < DL, Wet
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
780 Long Canyon Creek near Murrieta Creek
1300 Magnesium in mg/l
o >=DL, Wet * < DL, Wet
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
780 Long Canyon Creek near Murrieta Creek
1305 Manganese, Total in mg/l
Benchmark 0.05, Source = BPO
o >=DL, Wet – Benchmark
Annual statistics starting Jun 1
2004 2005 2006 2007 2008

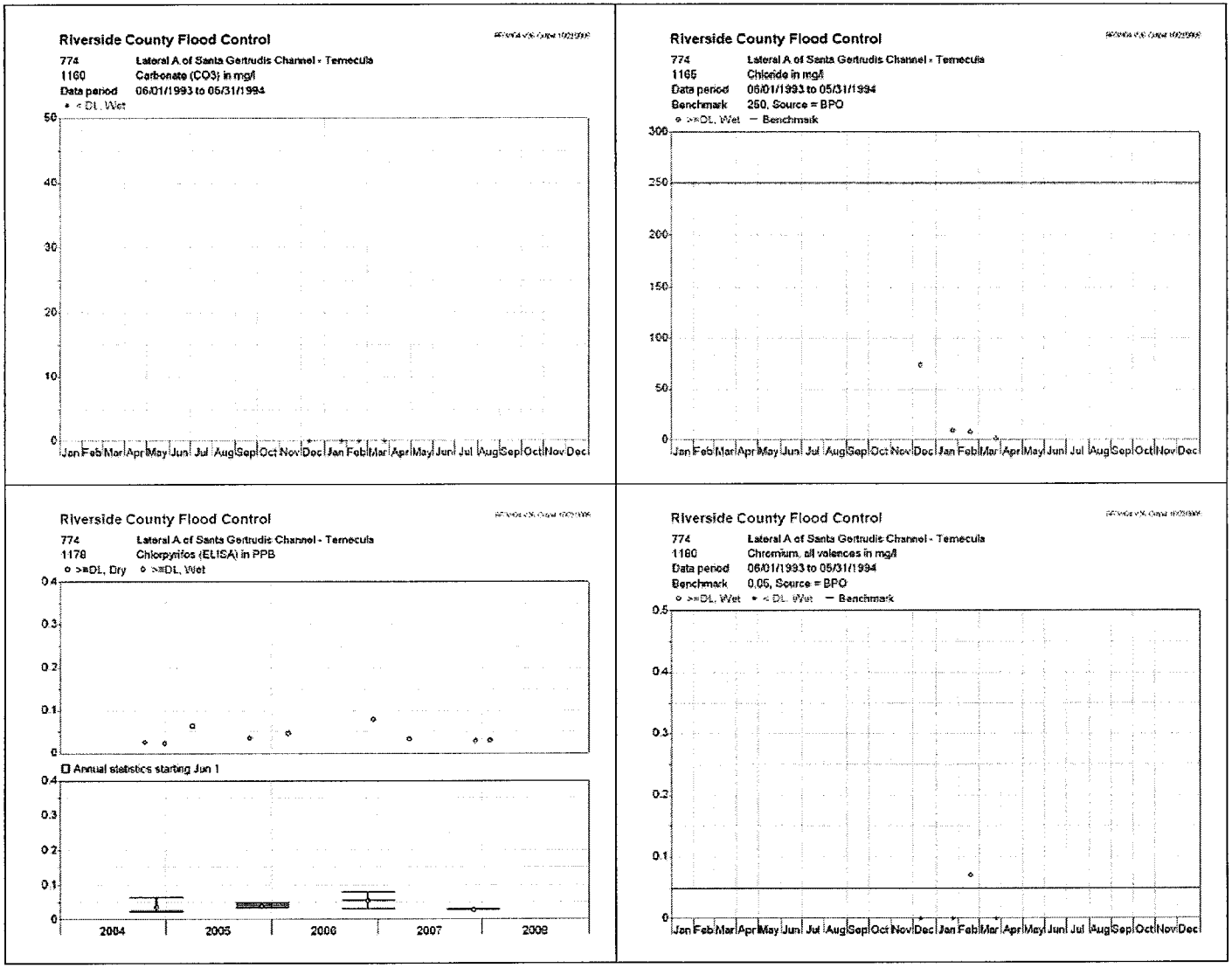

Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1690 Total Cations
Data period 06/01/1993 to 05/31/1994
>=DL, Wet
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1690 Turbidity, field
Benchmark 20, Source = BPO
>=DL, Dry — Benchmark
Annual statistics starting Jun 1
2004 2005 2006 2007
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1695 Turbidity, lab in Ntu
Benchmark 20, Source = BPO
>=DL, Dry >=DL, Wet — Benchmark
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1700 Zinc, Total in mg/l
Data period 06/01/1993 to 05/31/1994
Benchmark 5, Source = BPO
>=DL, Wet — Benchmark
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

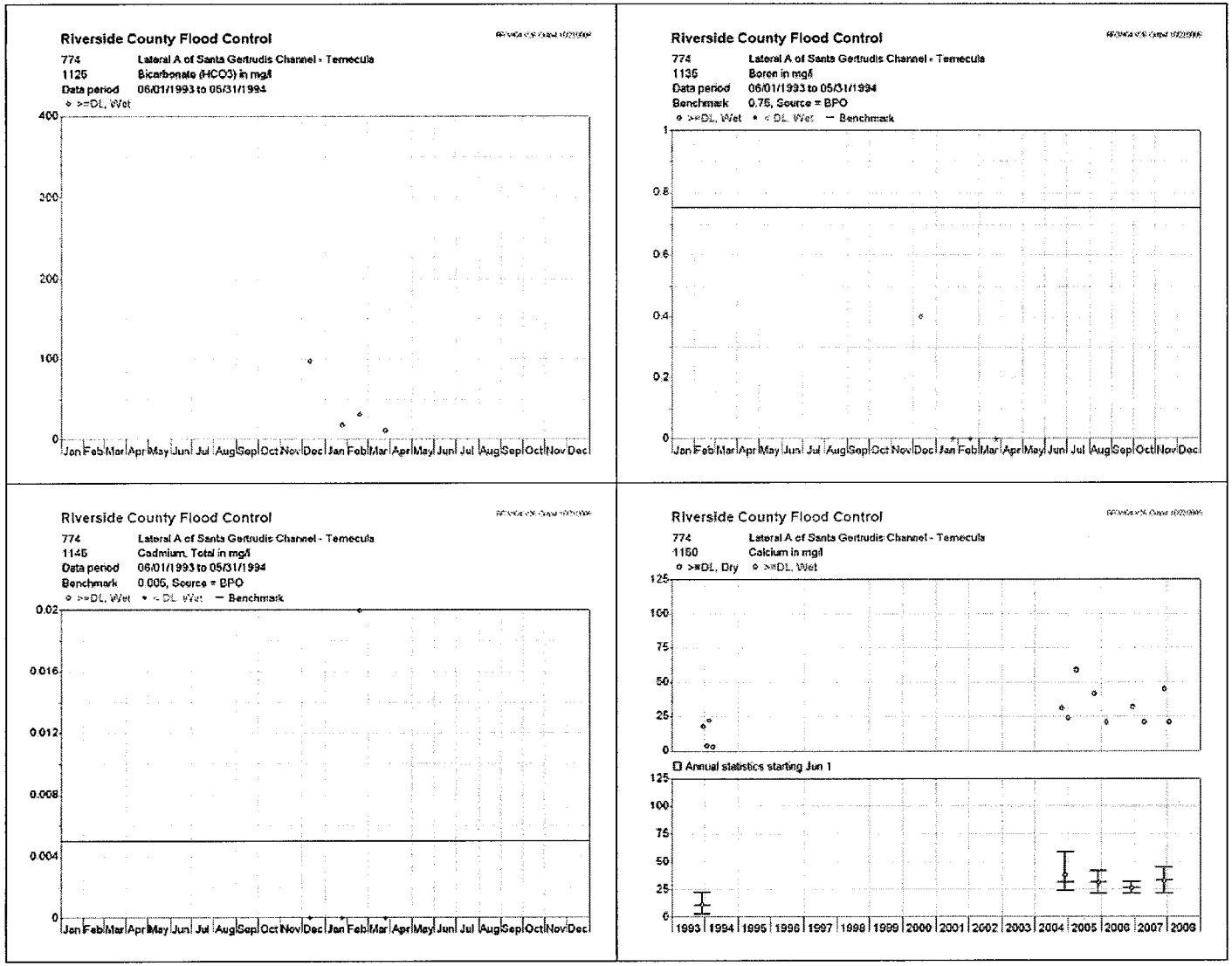

Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1500 Potassium in mg/l
Data period 06/01/1993 to 05/31/1994
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1515 Redox Potential, field in mv
Annual statistics starting Jun 1
2004
2005
2006
2007
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1620 Selenium, Total in mg/l
Data period 06/01/1993 to 05/31/1994
Benchmark 0.05, Source = BPO
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1635 Silver, Total in mg/l
Data period 06/01/1993 to 05/31/1994
Benchmark 0.1, Source = BPO

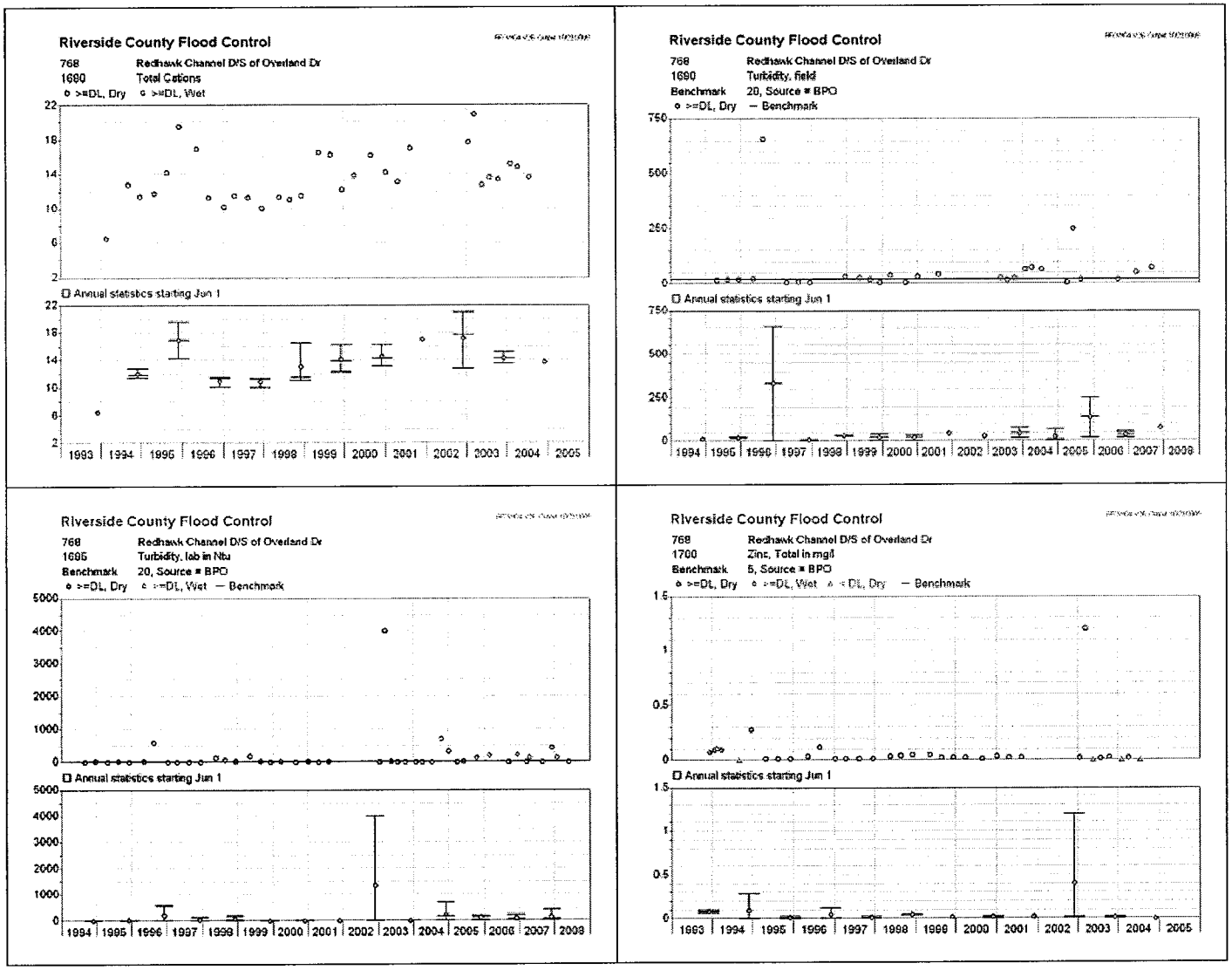

Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1310 Mercury, Total in mg/l
Data period 06/01/1993 to 05/31/1994
Benchmark 0.002, Source = BPO
Benchmark
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1320 Nickel, Total in mg/l
Data period 06/01/1993 to 05/31/1994
Benchmark 0.1, Source = BPO
Benchmark
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1340 Nitrogen, nitrate (N) in mg/l
Benchmark 10, Source = BPO
Benchmark
Annual statistics starting Jun 1
1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1345 Nitrogen, nitrite (N) in mg/l
Benchmark 1.0, Source = BPO
Benchmark
Annual statistics starting Jun 1
1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

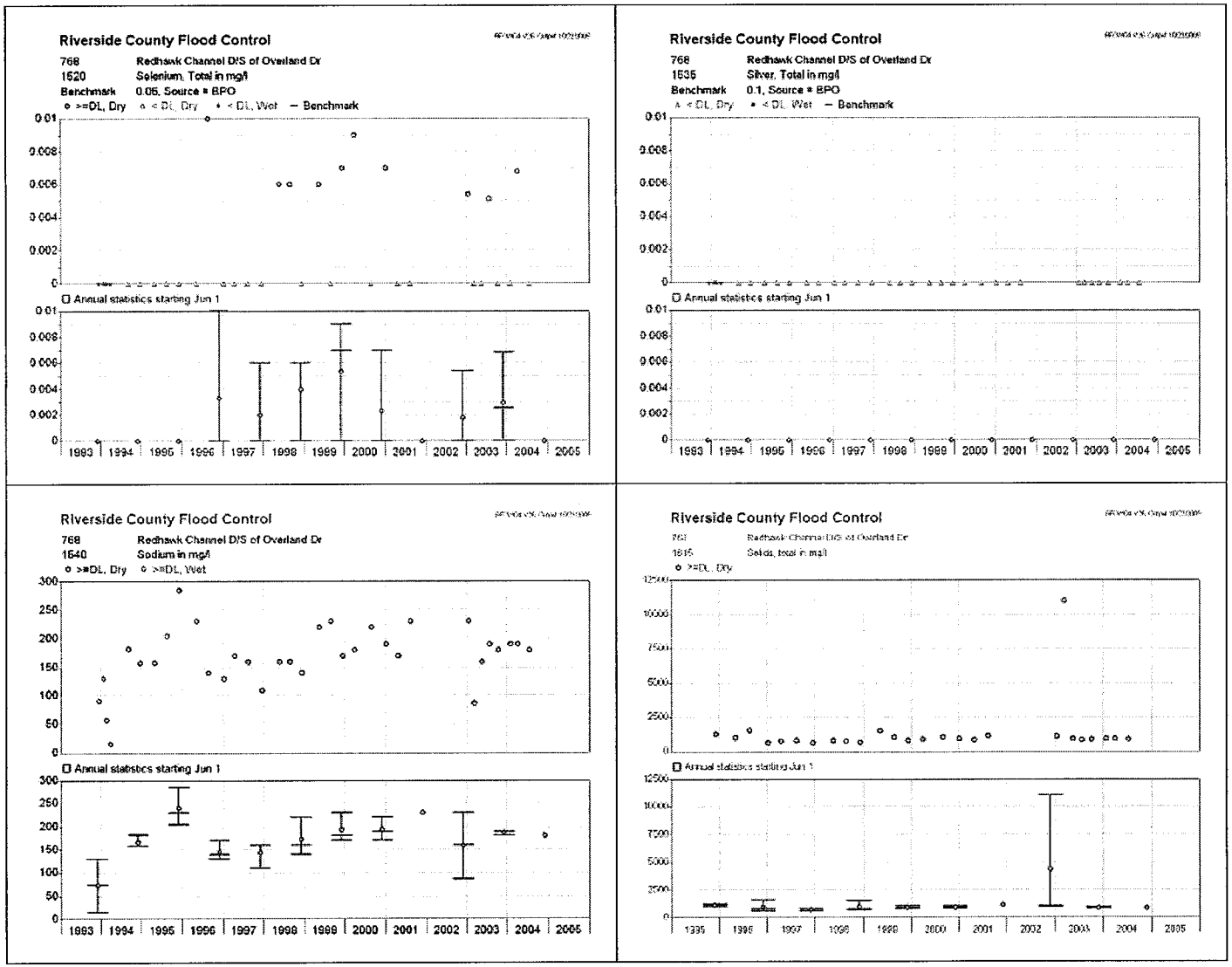

Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1287 Lead Dissolved in ug/l
Annual statistics starting Jun 1
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1290 Lead, Total in mg/l
Annual statistics starting Jun 1
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1300 Magnesium in mg/l
Annual statistics starting Jun 1
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1305 Manganese, Total in mg/l
Benchmark 0.05, Source = BPO
Annual statistics starting Jun 1

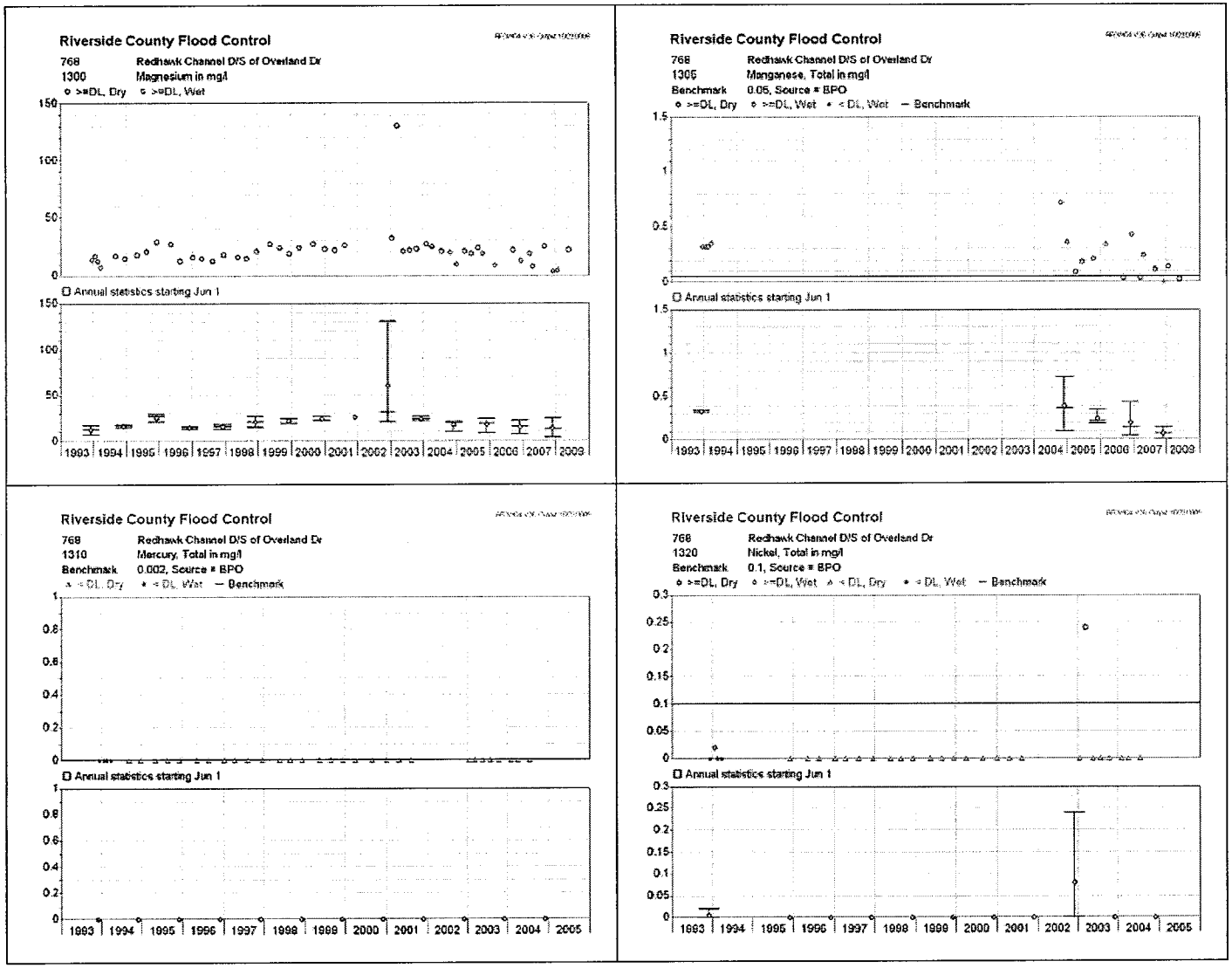

Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1265 Fluoride in mg/l
Data period 06/01/1993 to 05/31/1994
Benchmark 1, Source = BPO
o >=DL, Wet • < DL, Wet — Benchmark
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1265 Hardness, total (CaCO3) in mg/l
o >=DL, Dry o >=DL, Wet
Annual statistics starting Jun 1
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1275 Hydroxide (OH) in mg/l
Data period 06/01/1993 to 05/31/1994
• < DL, Wet
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1285 Iron in mg/l
Benchmark 0.3, Source = BPO
o >=DL, Dry o >=DL, Wet — Benchmark
Annual statistics starting Jun 1

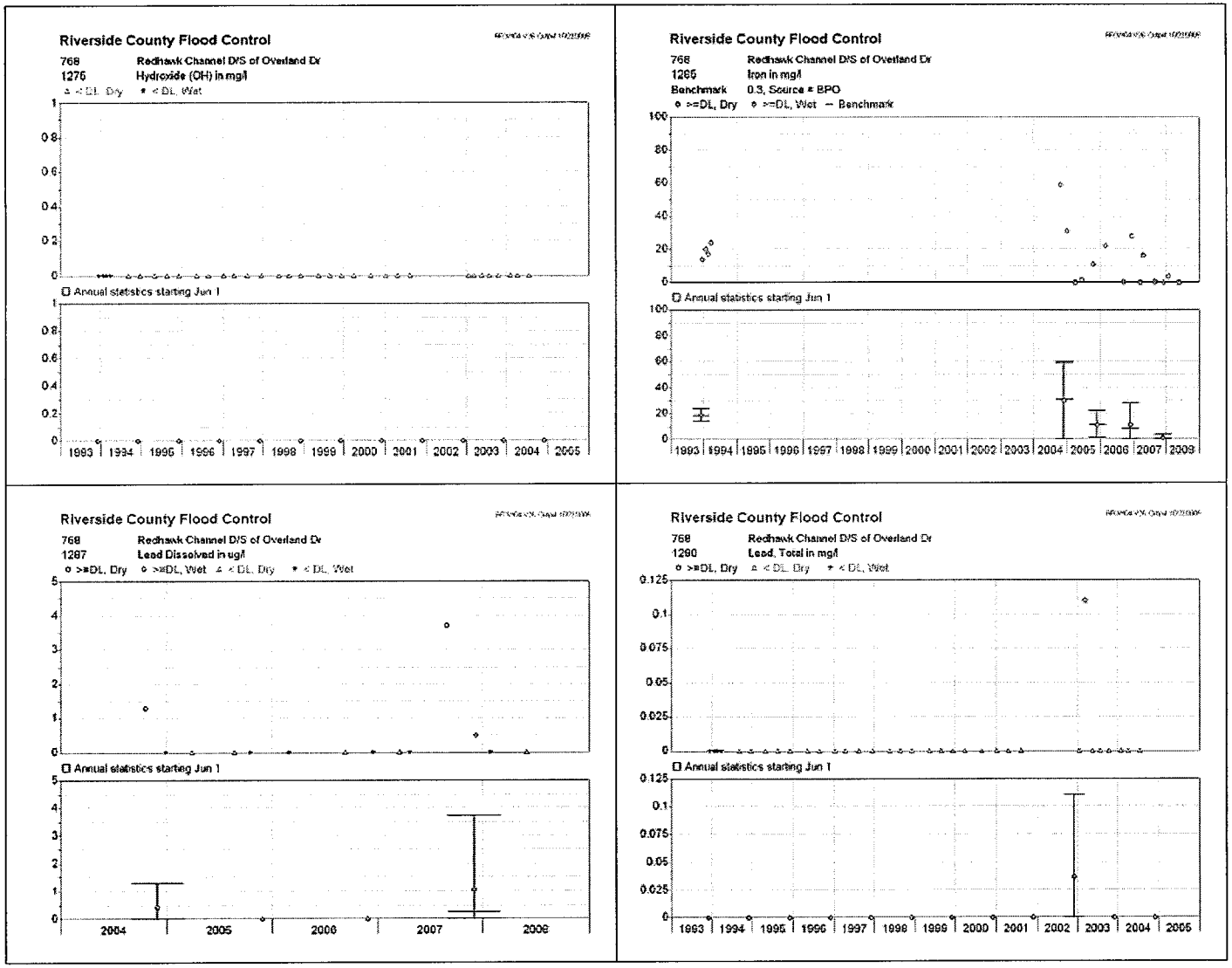

Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1160 Carbonate (CO3) in mg/l
Data period 06/01/1993 to 05/31/1994
• = DL, Wet
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1165 Chloride in mg/l
Data period 06/01/1993 to 05/31/1994
Benchmark 250, Source = BPO
o >=DL, Wet — Benchmark
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1178 Chlorpyrifos (ELISA) in PPB
o >=DL, Dry o >=DL, Wet
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1180 Chromium, all valences in mg/l
Data period 06/01/1993 to 05/31/1994
Benchmark 0.05, Source = BPO
o >=DL, Wet • = DL, Wet — Benchmark
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

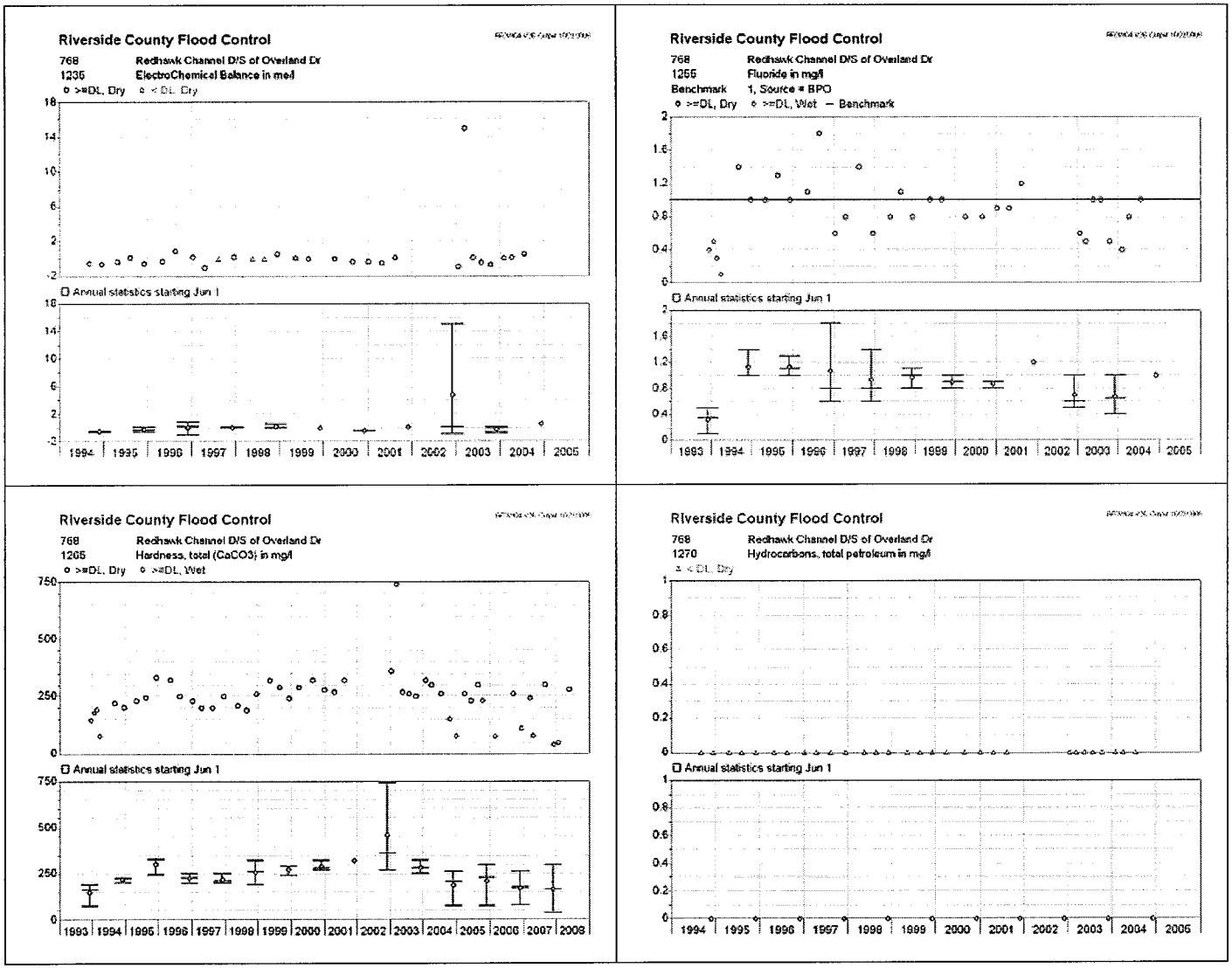

Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1125 Bicarbonate (HCO3) in mg/l
Data period 06/01/1993 to 05/31/1994
>=DL, Wet
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1135 Boron in mg/l
Data period 06/01/1993 to 05/31/1994
Benchmark 0.75, Source = BPO
>=DL, Wet < DL, Wet Benchmark
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1145 Cadmium, Total in mg/l
Data period 06/01/1993 to 05/31/1994
Benchmark 0.005, Source = BPO
>=DL, Wet < DL, Wet Benchmark
Riverside County Flood Control
774 Lateral A of Santa Gertrudis Channel - Temecula
1150 Calcium in mg/l
>=DL, Dry >=DL, Wet
Annual statistics starting Jun 1
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

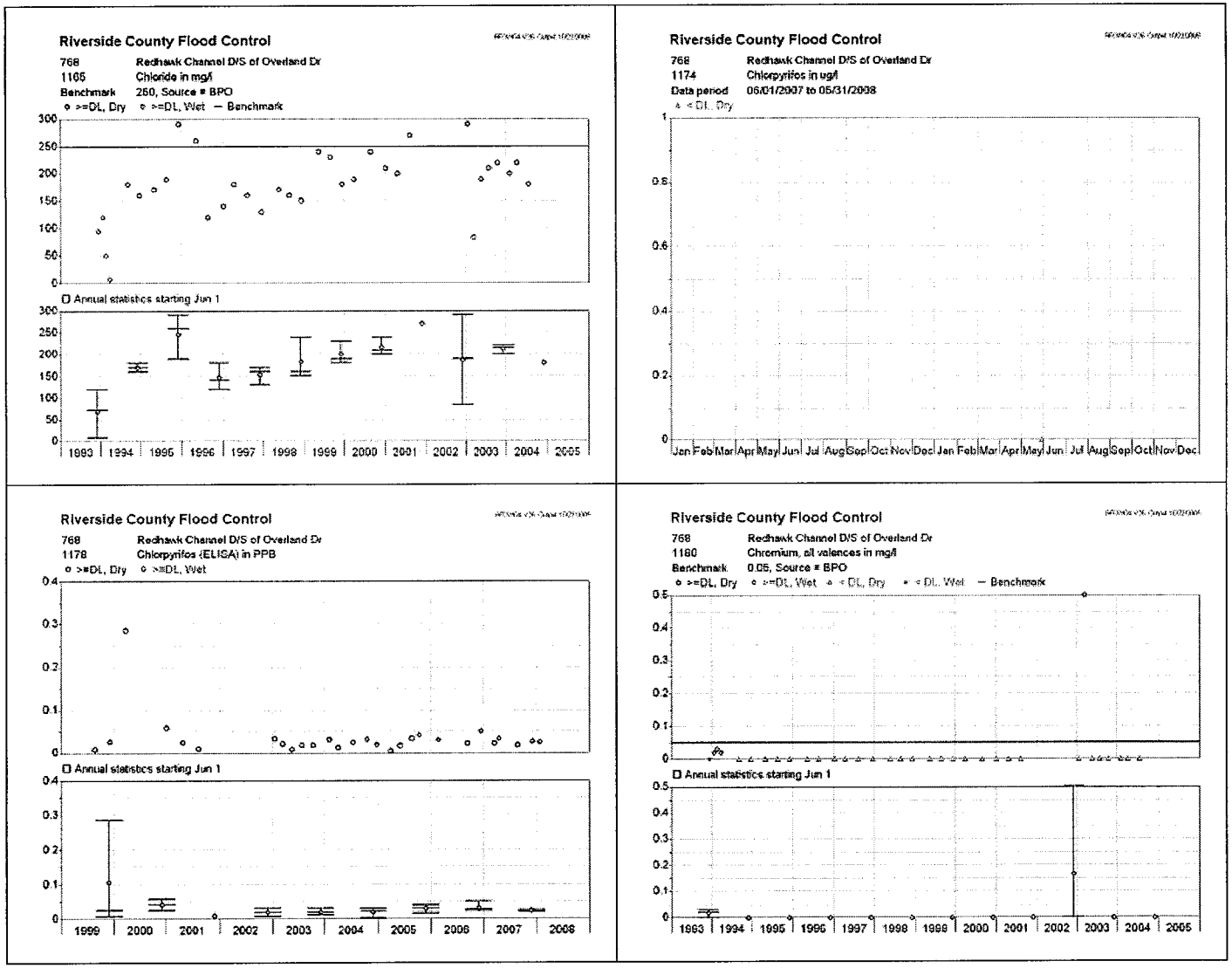

Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1690 Total Cations
>=DL, Dry >=DL, Wet
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1690 Turbidity, field
Benchmark 20, Source = BPO
>=DL, Dry — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1695 Turbidity, lab in Ntu
Benchmark 20, Source = BPO
>=DL, Dry >=DL, Wet — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1700 Zinc, Total in mg/l
Benchmark 5, Source = BPO
>=DL, Dry >=DL, Wet <DL, Dry — Benchmark
Annual statistics starting Jun 1

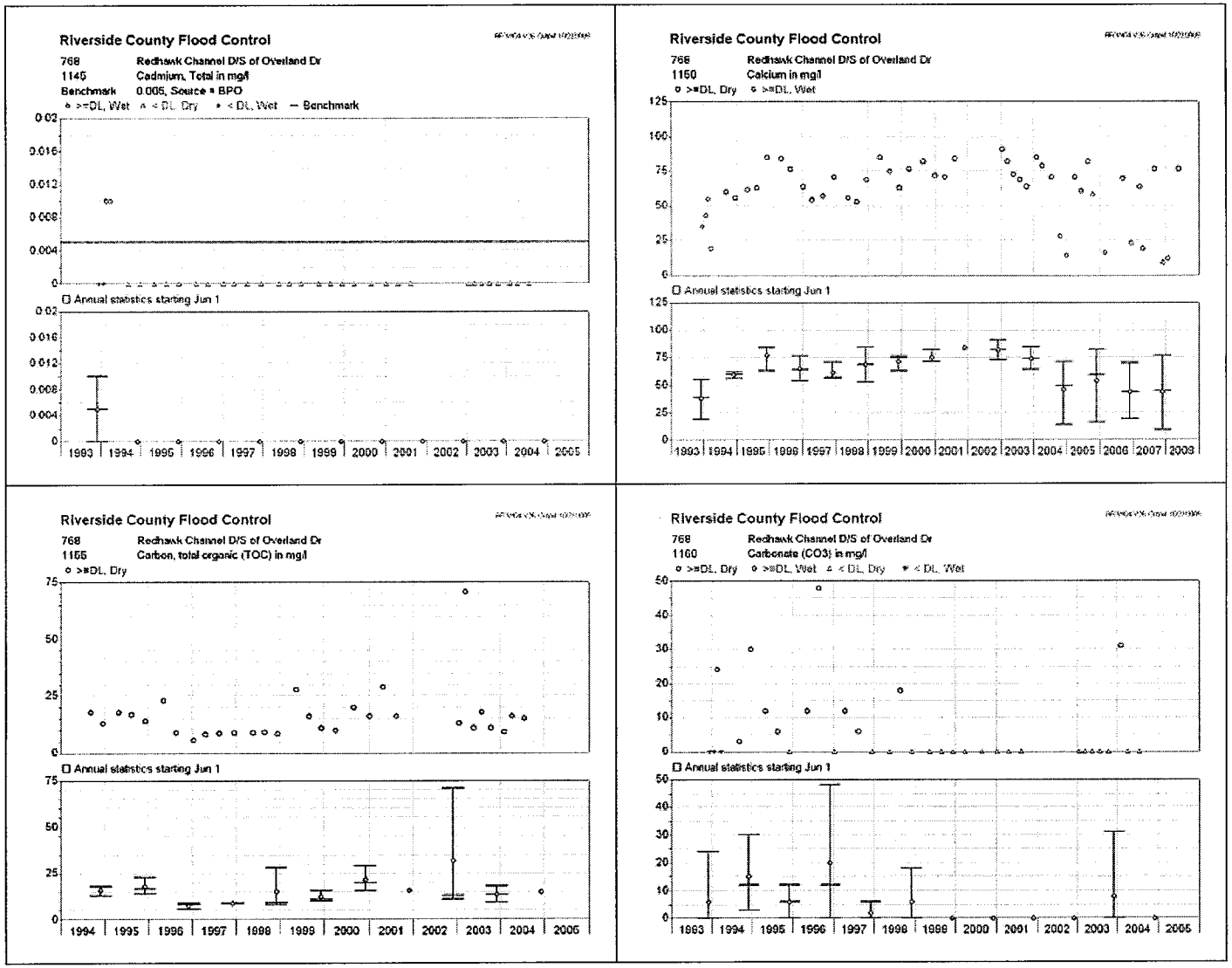

Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1520 Selenium, Total in mg/l
Benchmark 0.05, Source = BPO
o >=DL, Dry ∆ < DL, Dry + < DL, Wet — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1535 Silver, Total in mg/l
Benchmark 0.1, Source = BPO
∆ < DL, Dry + < DL, Wet — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1540 Sodium in mg/l
o >=DL, Dry ◊ >=DL, Wet
Annual statistics starting Jun 1
Riverside County Flood Control
o >=DL, Dry
Annual statistics starting Jun 1

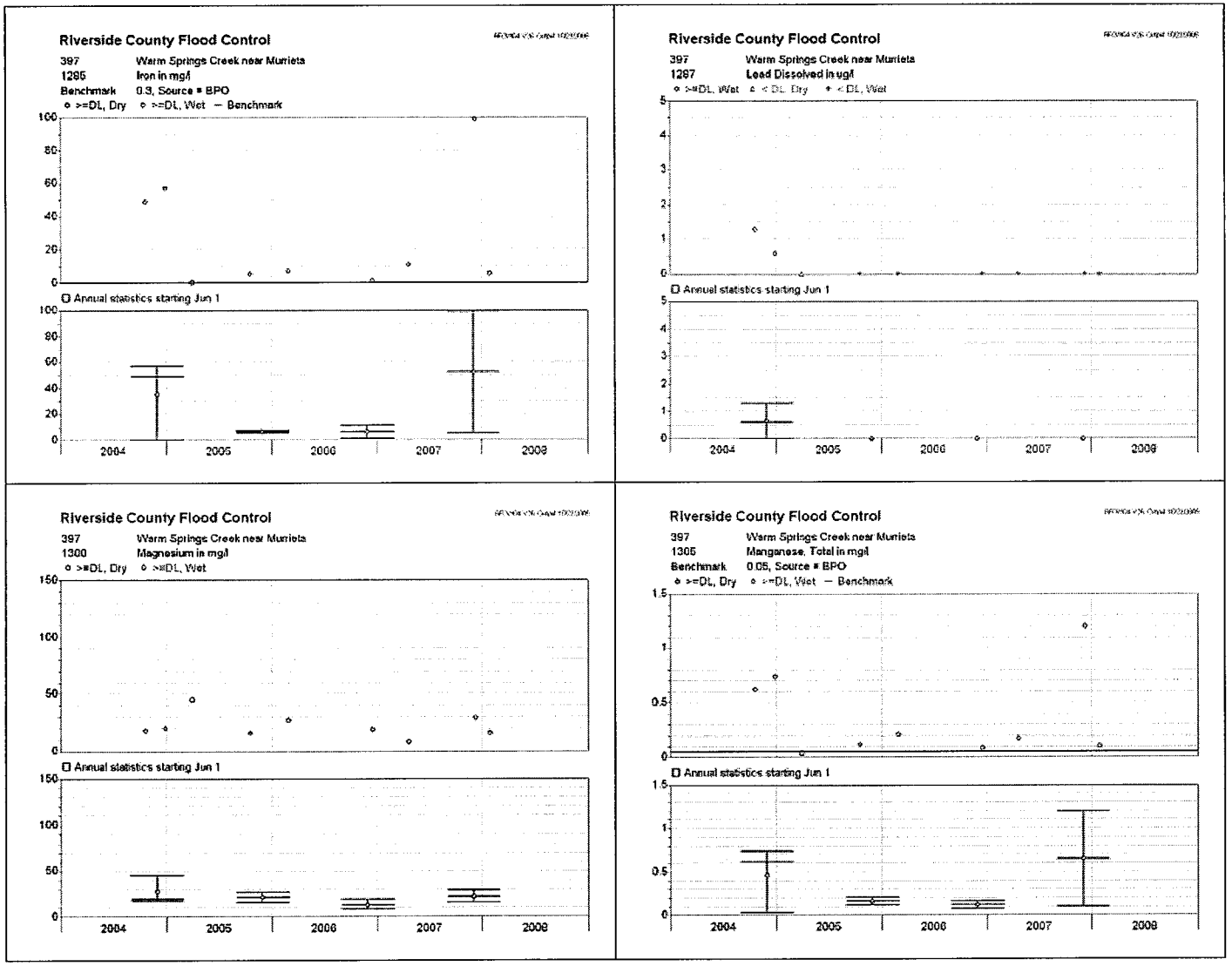

Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1300 Magnesium in mg/l
>=DL, Dry >=DL, Wet
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1305 Manganese, Total in mg/l
Benchmark 0.05, Source = BPO
>=DL, Dry >=DL, Wet < DL, Wet Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1310 Mercury, Total in mg/l
Benchmark 0.002, Source = BPO
< DL, Dry < DL, Wet Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1320 Nickel, Total in mg/l
Benchmark 0.1, Source = BPO
>=DL, Dry >=DL, Wet < DL, Dry < DL, Wet Benchmark
Annual statistics starting Jun 1

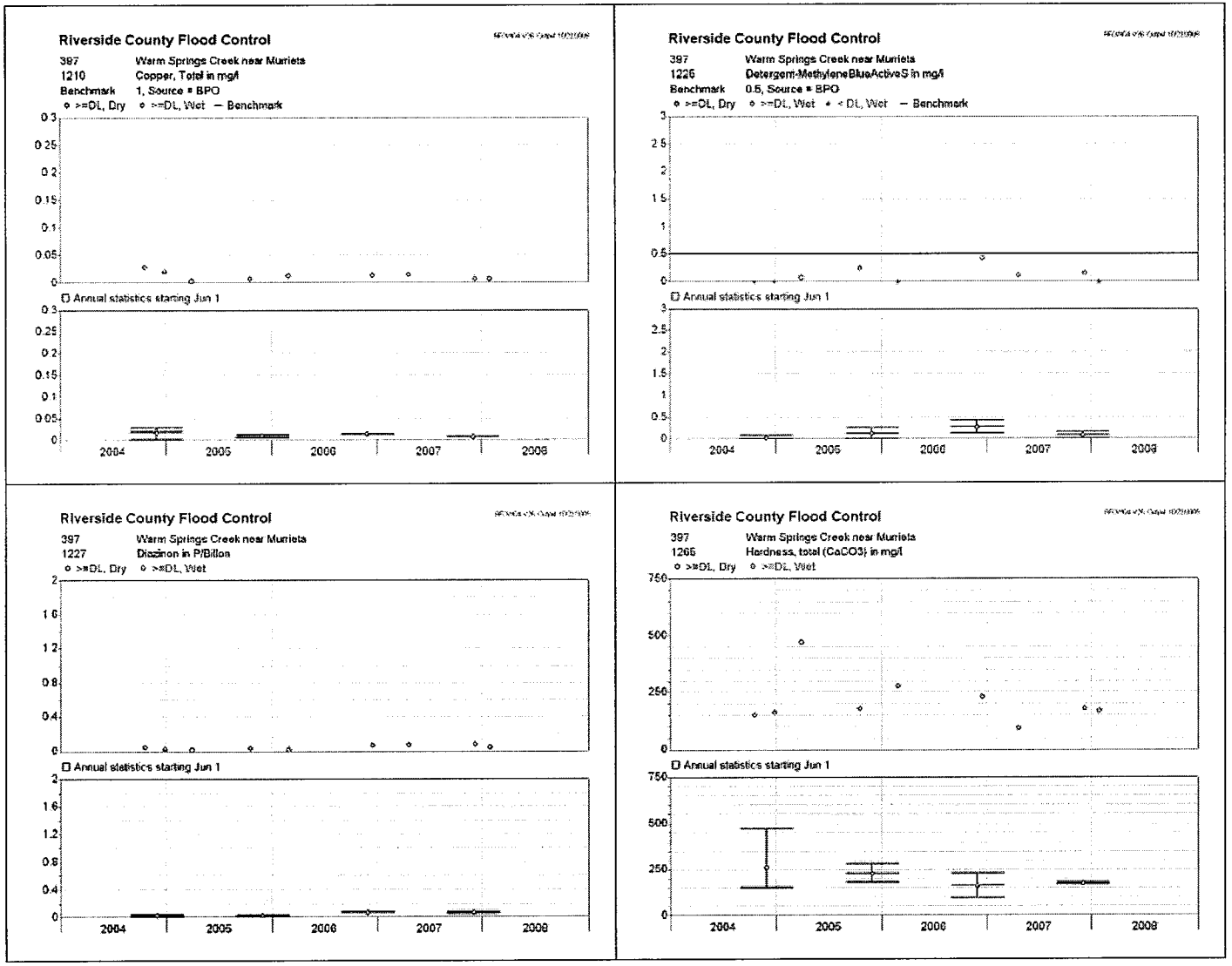

Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1276 Hydroxide (OH) in mg/l
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1265 Iron in mg/l
Benchmark 0.3, Source = BPO
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1287 Lead Dissolved in ug/l
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1290 Lead, Total in mg/l
Annual statistics starting Jun 1

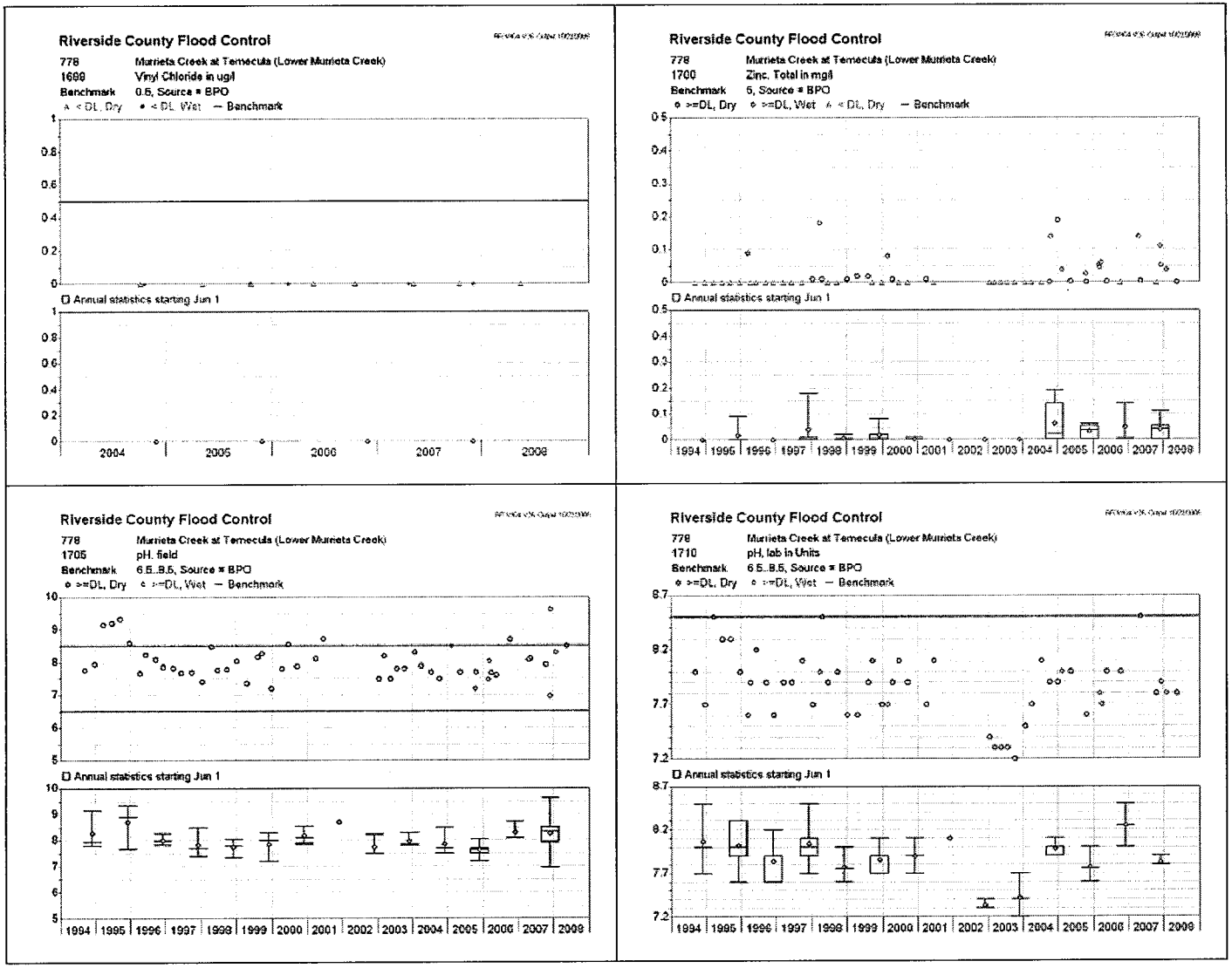

Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1235 ElectroChemical Balance in me/l
o >=DL, Dry
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1255 Fluoride in mg/l
Benchmark 1, Source = BPO
o >=DL, Dry o >=DL, Wet — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1265 Hardness, total (CaCO3) in mg/l
o >=DL, Dry o >=DL, Wet
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1270 Hydrocarbons, total petroleum in mg/l
Annual statistics starting Jun 1

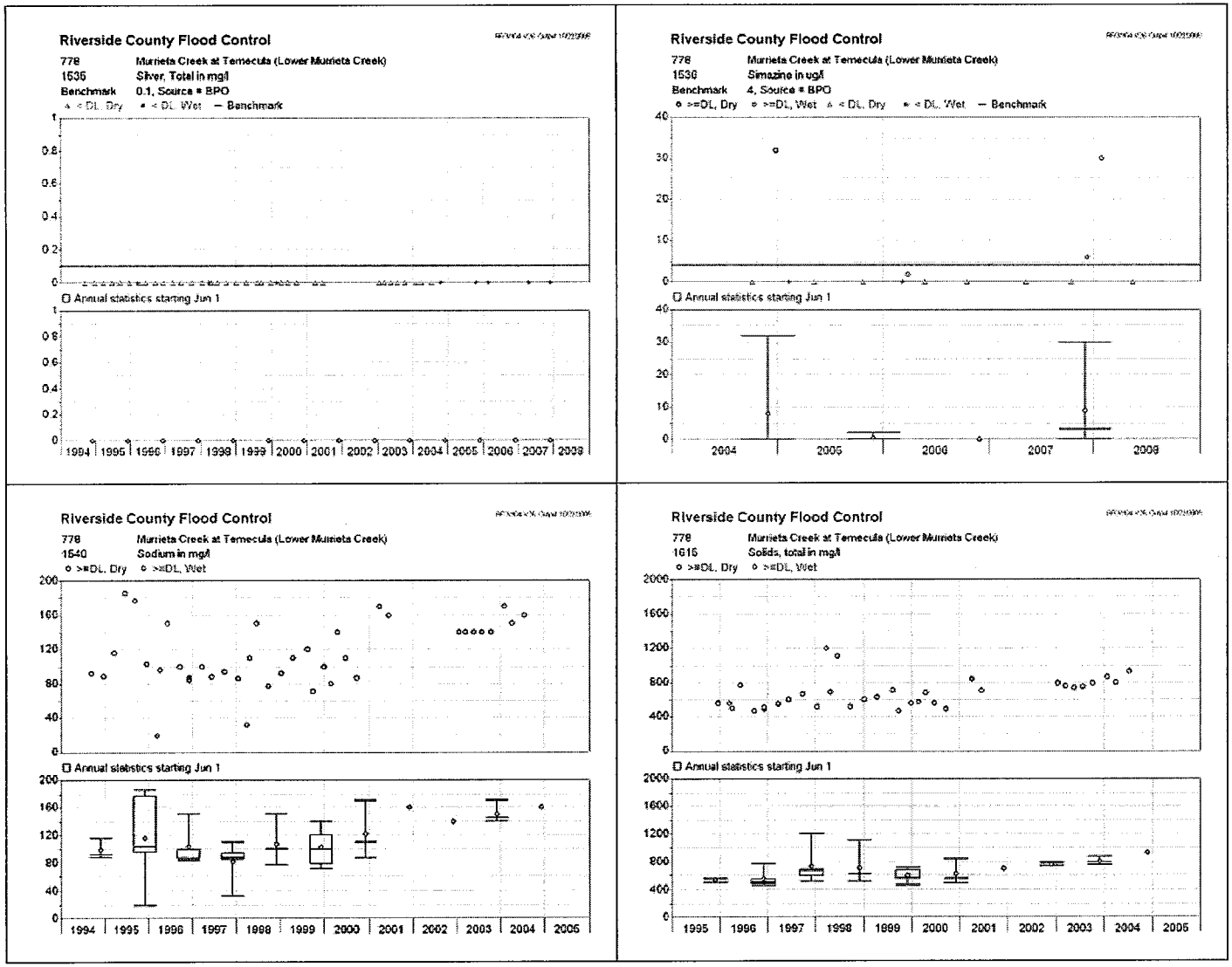

Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1165 Chloride in mg/l
Benchmark 250, Source = BPO
o >=DL, Dry o >=DL, Wet — Benchmark
Annual statistics starting Jun 1
1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1174 Chlorpyrifos in ug/l
Data period 06/01/2007 to 05/31/2008
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1178 Chlorpyrifos (ELISA) in PPB
o >=DL, Dry o >=DL, Wet
Annual statistics starting Jun 1
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1180 Chromium, all valences in mg/l
Benchmark 0.05, Source = BPO
o >=DL, Dry o >=DL, Wet o < DL, Dry * < DL, Wet — Benchmark
Annual statistics starting Jun 1
1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005

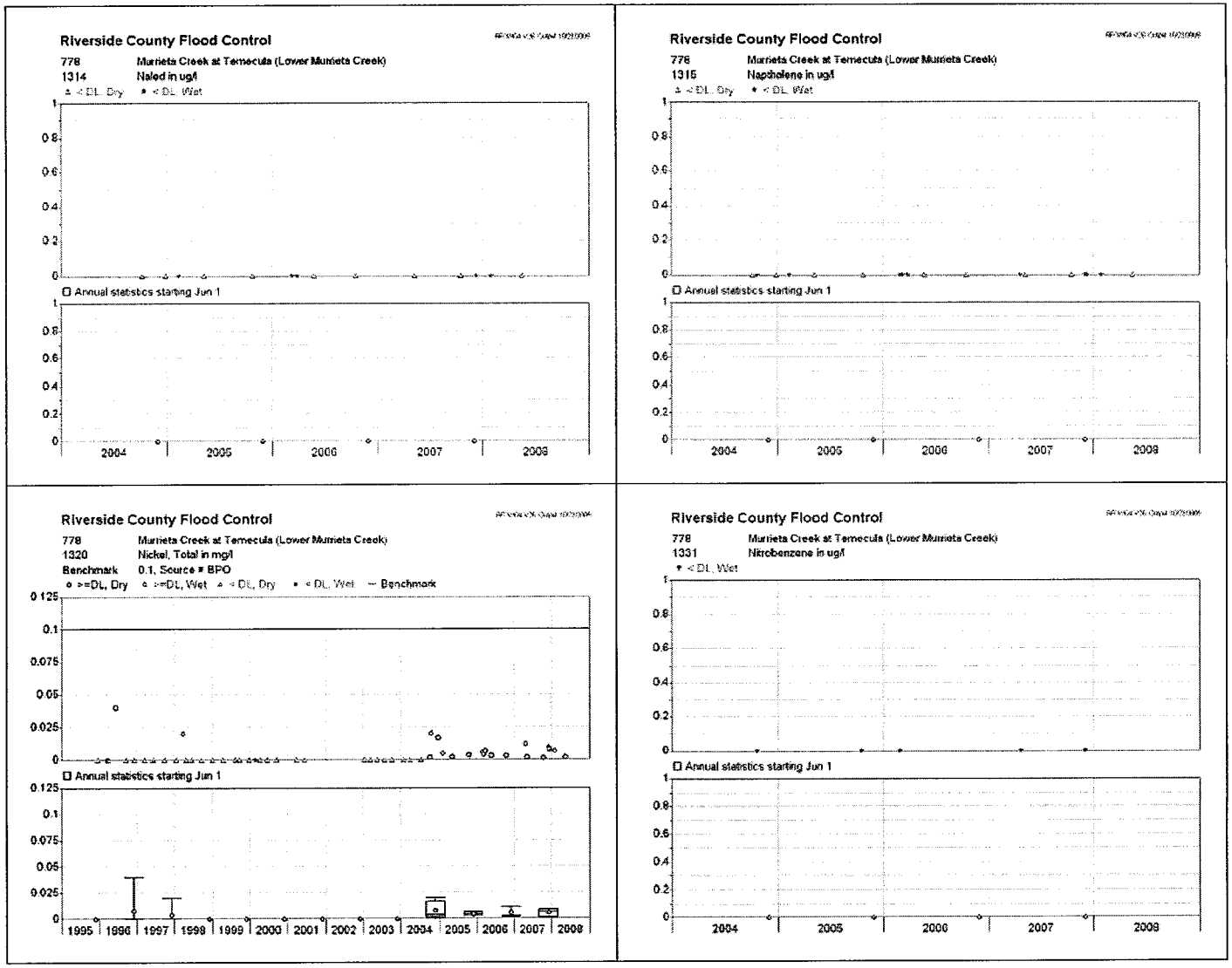

Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1145 Cadmium, Total in mg/l
Benchmark 0.005, Source = BPO
>=DL, Wet < DL, Dry < DL, Wet — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1150 Calcium in mg/l
>=DL, Dry >=DL, Wet
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1155 Carbon, total organic (TOC) in mg/l
>=DL, Dry
Annual statistics starting Jun 1
Riverside County Flood Control
768 Redhawk Channel D/S of Overland Dr
1160 Carbonate (CO3) in mg/l
>=DL, Dry >=DL, Wet < DL, Dry < DL, Wet
Annual statistics starting Jun 1

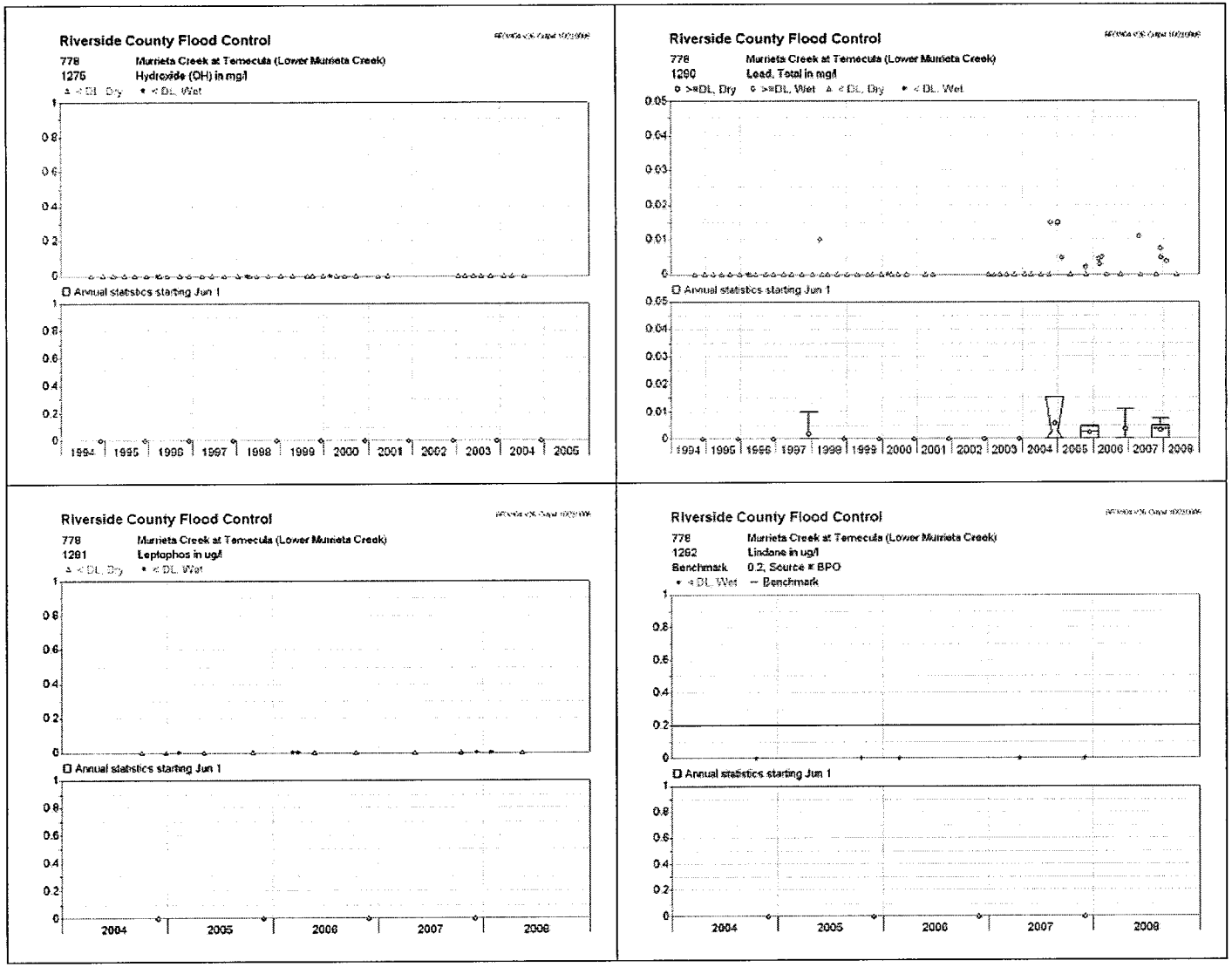

Riverside County Flood Control
397 Warm Springs Creek near Murrieta
1295 Iron in mg/l
Benchmark 0.3, Source = BPO
o >=DL, Dry o >=DL, Wet — Benchmark
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
397 Warm Springs Creek near Murrieta
1297 Lead Dissolved in ug/l
o >=DL, Wet ▲ < DL, Dry + < DL, Wet
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
397 Warm Springs Creek near Murrieta
1300 Magnesium in mg/l
o >=DL, Dry o >=DL, Wet
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
397 Warm Springs Creek near Murrieta
1305 Manganese, Total in mg/l
Benchmark 0.05, Source = BPO
o >=DL, Dry o >=DL, Wet — Benchmark
Annual statistics starting Jun 1
2004 2005 2006 2007 2008

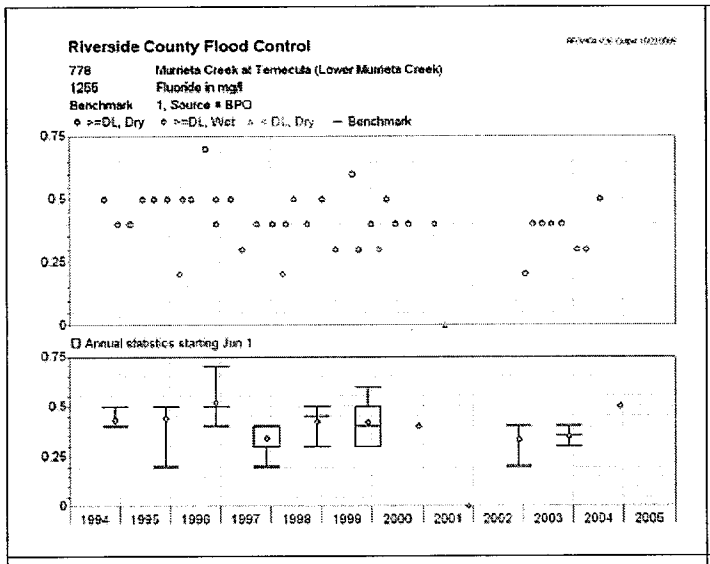

Riverside County Flood Control
397 Warm Springs Creek near Murrieta
1210 Copper, Total in mg/l
Benchmark 1, Source = BPO
>=DL, Dry >=DL, Wet Benchmark
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
397 Warm Springs Creek near Murrieta
1226 Detergent-MethyleneBlueActiveS in mg/l
Benchmark 0.5, Source = BPO
>=DL, Dry >=DL, Wet < DL, Wet Benchmark
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
397 Warm Springs Creek near Murrieta
1227 Diazinon in P/Billon
>=DL, Dry >=DL, Wet
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
397 Warm Springs Creek near Murrieta
1266 Hardness, total (CaCO3) in mg/l
>=DL, Dry >=DL, Wet
Annual statistics starting Jun 1
2004 2005 2006 2007 2008

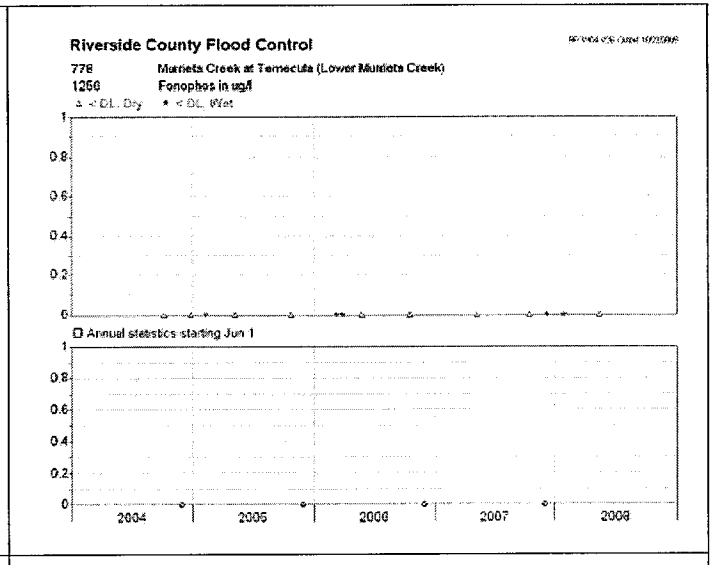

Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1699 Vinyl Chloride in ug/l
Benchmark 0.5, Source = BPO
▲ <DL, Dry ● <DL, Wet — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1700 Zinc, Total in mg/l
Benchmark 5, Source = BPO
○ >=DL, Dry ● >=DL, Wet ▲ <DL, Dry — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1705 pH, field
Benchmark 6.5..8.5, Source = BPO
○ >=DL, Dry ● >=DL, Wet — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1710 pH, lab in Units
Benchmark 6.5..8.5, Source = BPO
○ >=DL, Dry ● >=DL, Wet — Benchmark
Annual statistics starting Jun 1

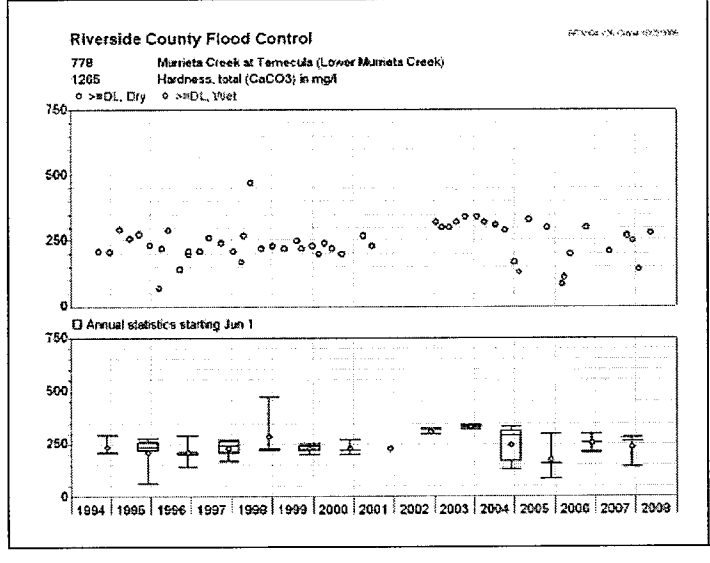

Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1536 Silver, Total in mg/l
Benchmark 0.1, Source = BPO
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1536 Simazine in ug/l
Benchmark 4, Source = BPO
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1540 Sodium in mg/l
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1615 Solids, total in mg/l
Annual statistics starting Jun 1

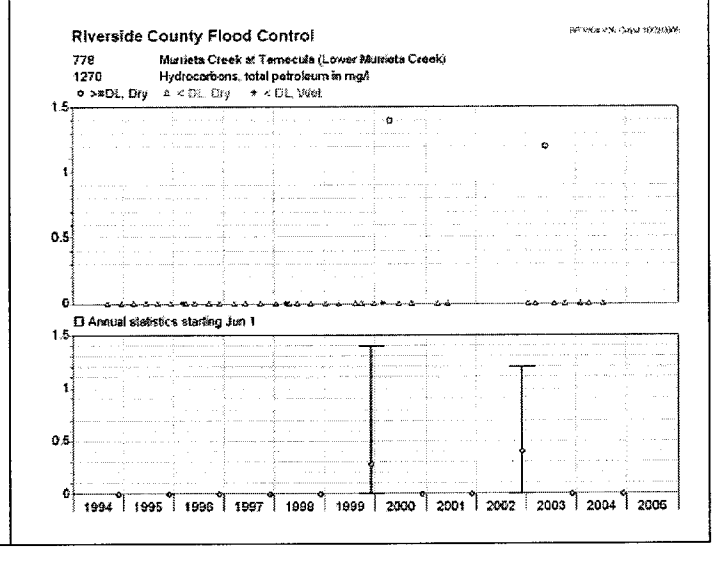

Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1314 Naled in ug/l
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1315 Napthalene in ug/l
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1320 Nickel, Total in mg/l
Benchmark 0.1, Source = BPO
Annual statistics starting Jun 1
1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1331 Nitrobenzene in ug/l
Annual statistics starting Jun 1
2004 2005 2006 2007 2008

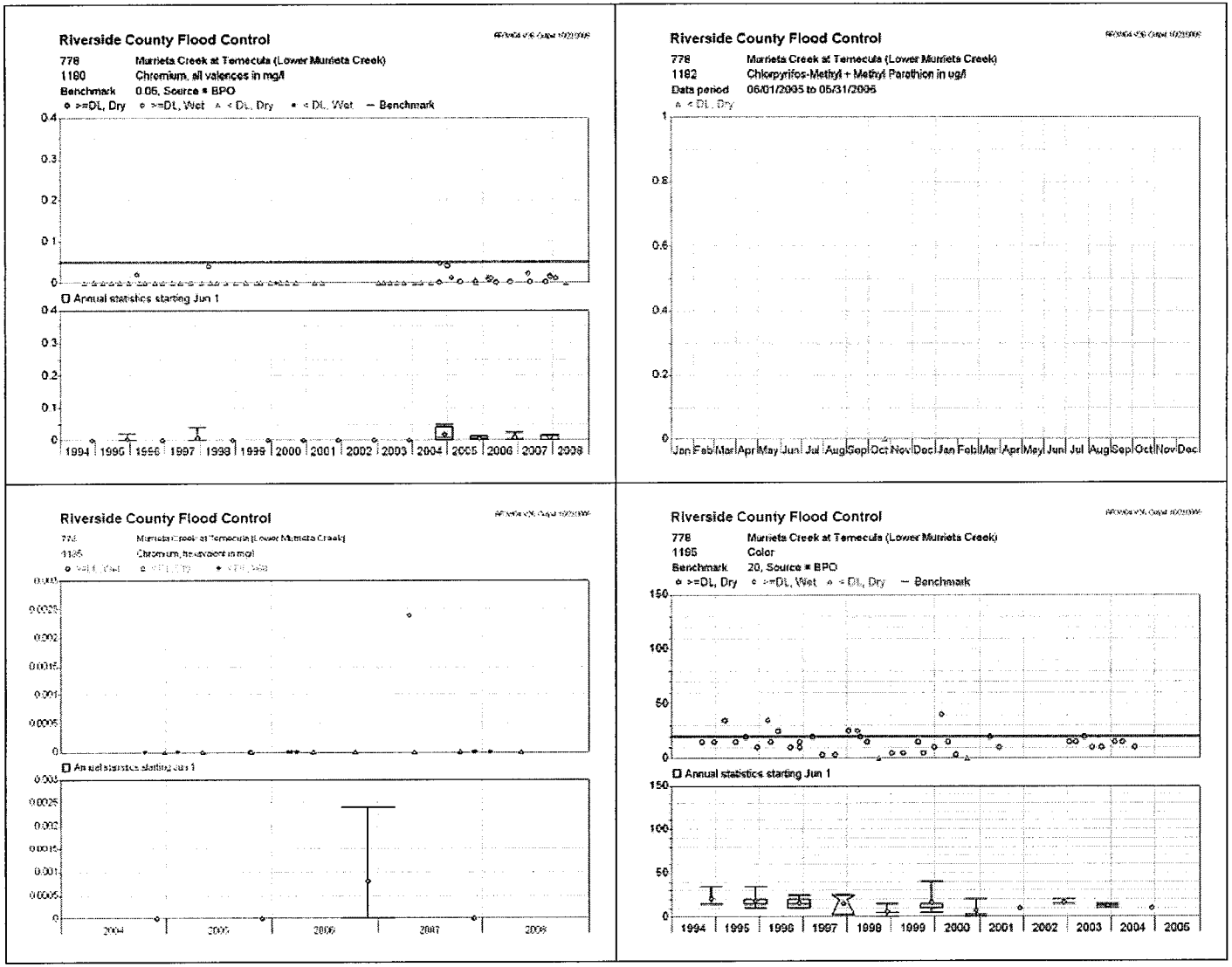

Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1275 Hydroxide (OH) in mg/l
Annual statstics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1290 Lead, Total in mg/l
o >=DL, Dry o >=DL, Wet Δ < DL, Dry • < DL, Wet
Annual statstics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1261 Leptophos in ug/l
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1262 Lindane in ug/l
Benchmark 0.2, Source = BPO
• < DL, Wet – Benchmark
Annual statistics starting Jun 1
2004 2005 2006 2007 2008


Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1255 Fluoride in mg/l
Benchmark 1, Source = BPO
o >=DL, Dry o >=DL, Wet Δ < DL, Dry — Benchmark
0.75
0.5
0.25
0
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005


Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1256 Fenophos in ug/l
Δ < DL, Dry * < DL, Wet
1
0.8
0.6
0.4
0.2
0
Annual statistics starting Jun 1
2004 2005 2006 2007 2008


Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1265 Hardness, total (CaCO3) in mg/l
o >=DL, Dry o >=DL, Wet
750
500
250
0
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008


Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1270 Hydrocarbons, total petroleum in mg/l
o >=DL, Dry Δ < DL, Dry * < DL, Wet
1.5
1
0.5
0
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005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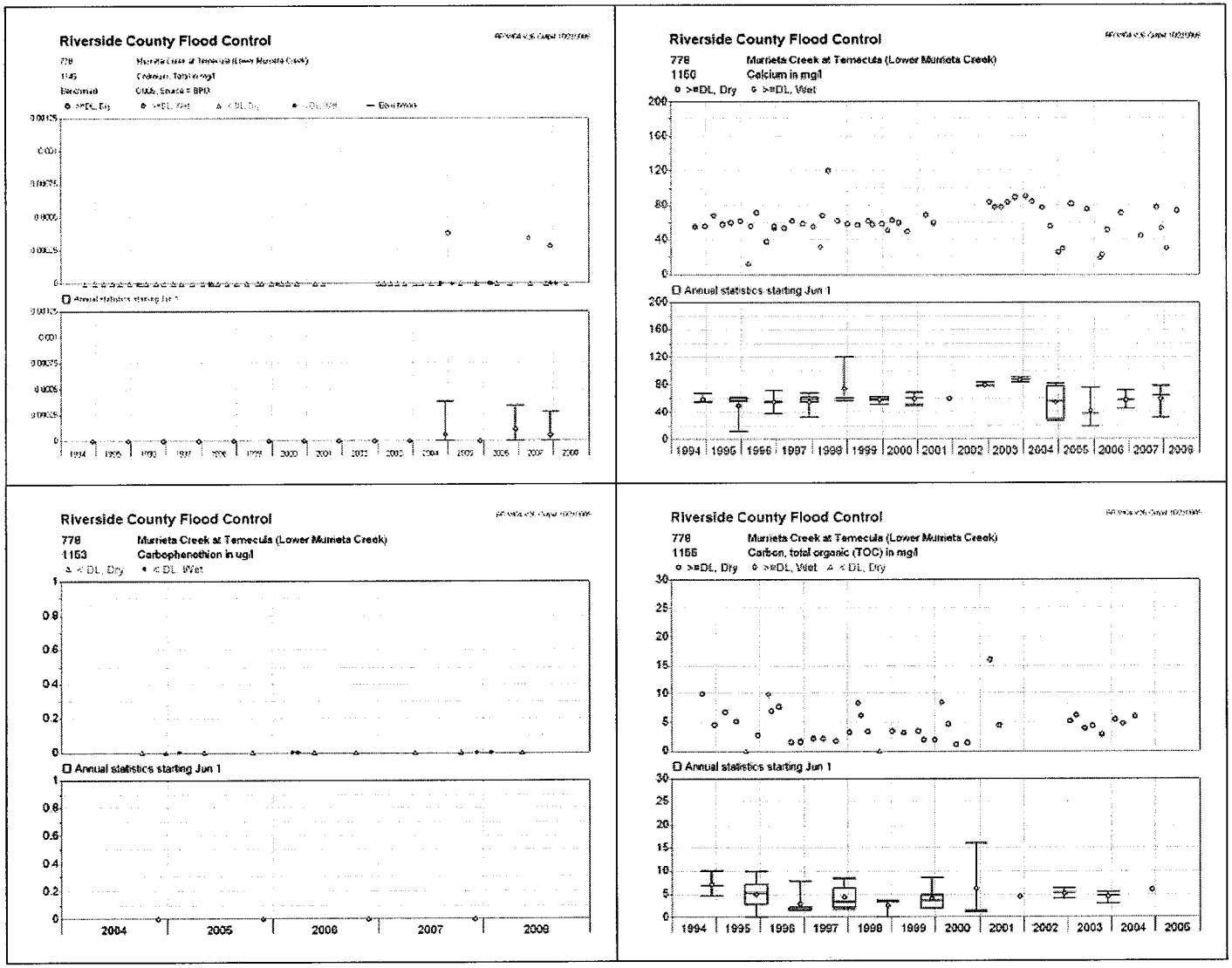
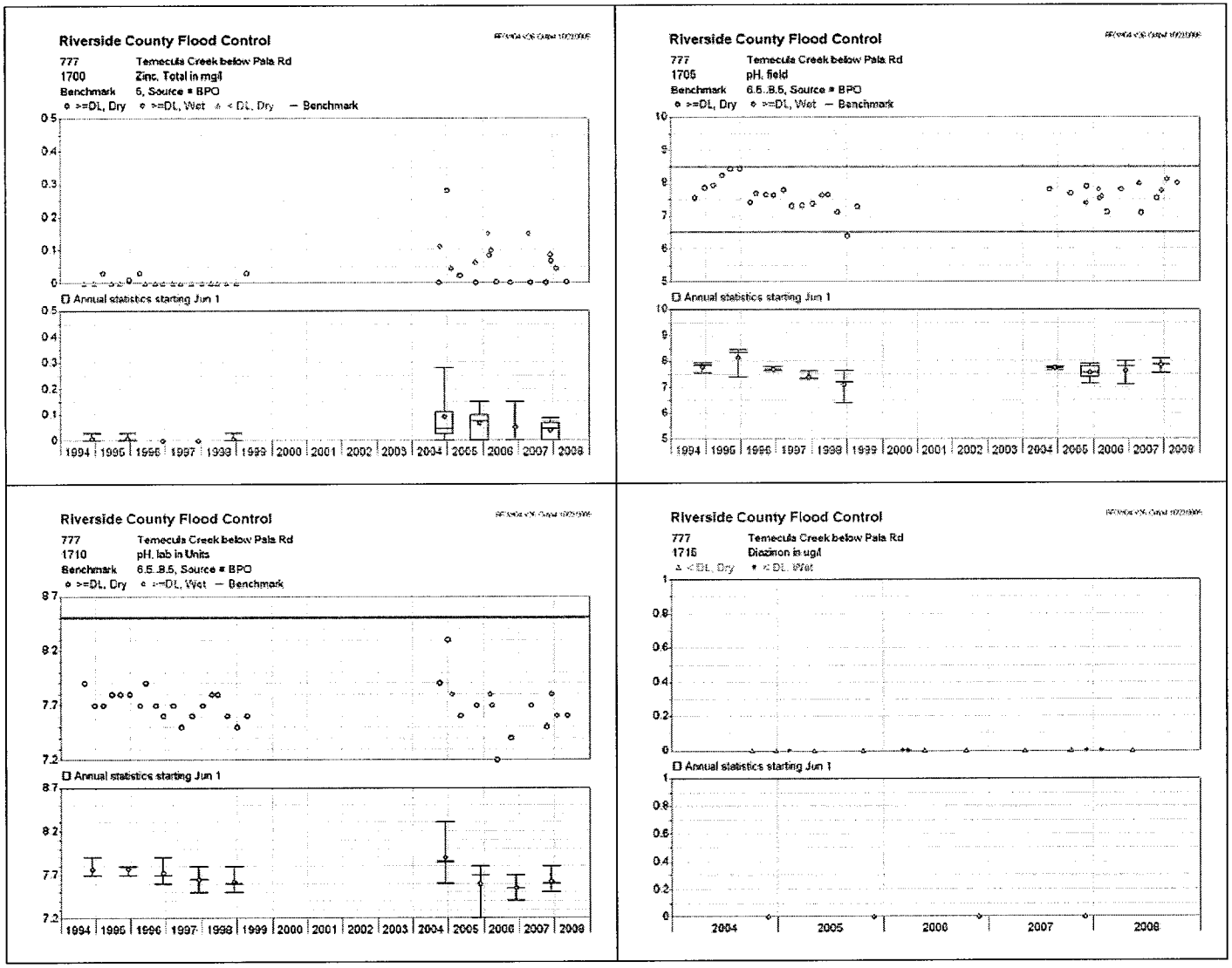
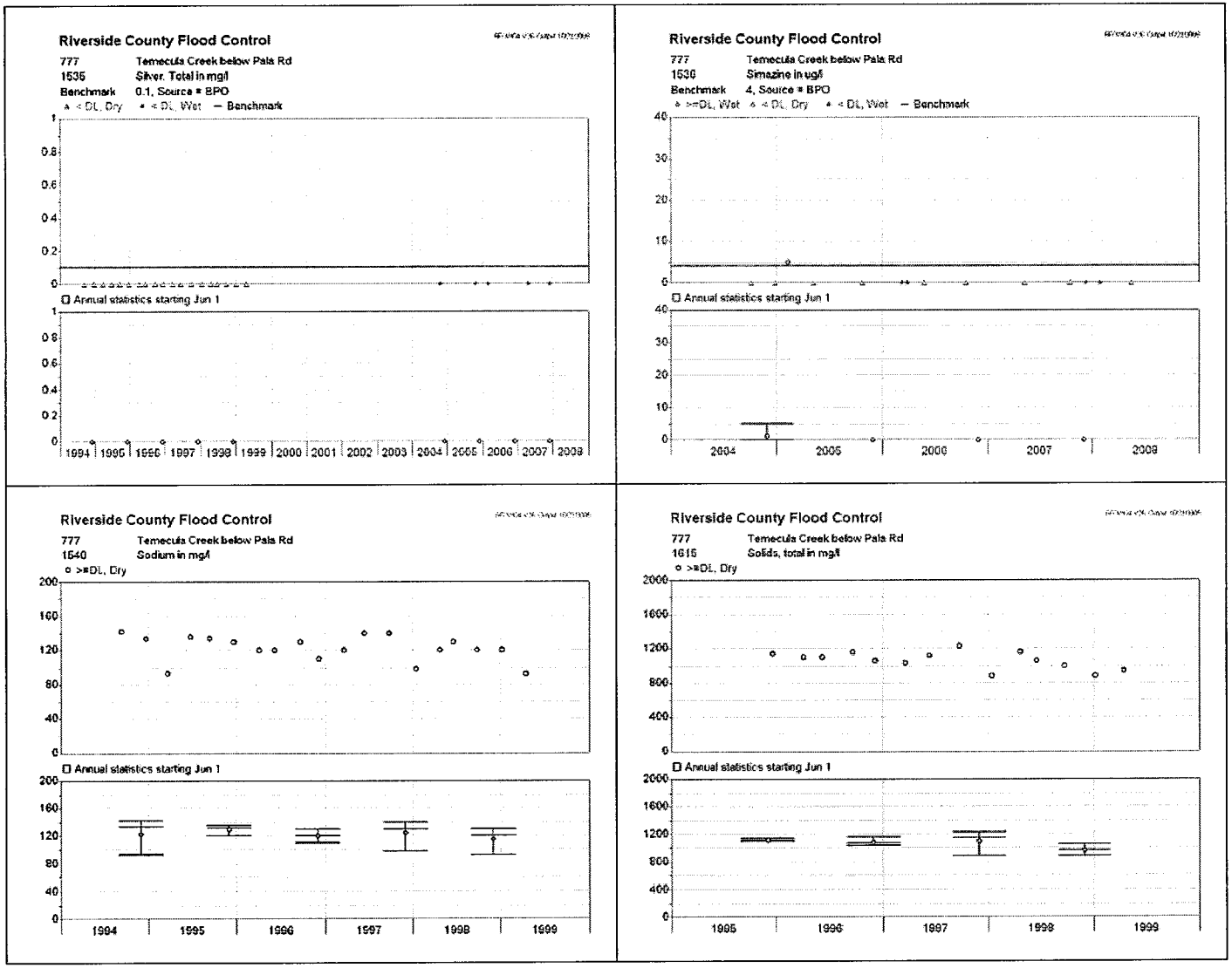
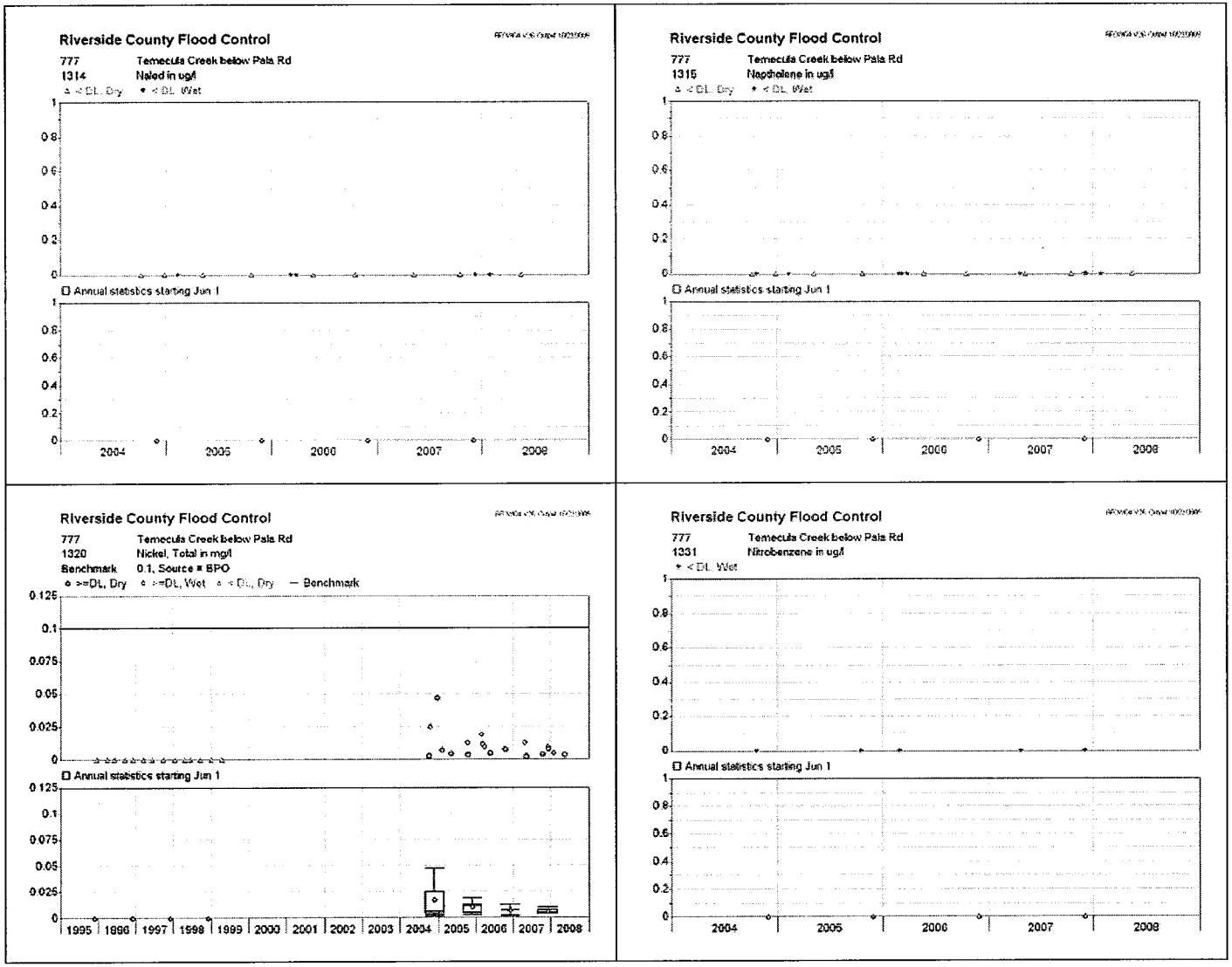
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1180 Chromium, all valences in mg/l
Benchmark 0.05, Source = BPO
>=DL, Dry >=DL, Wet < DL, Dry < DL, Wet Benchmark
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1182 Chlorpyrifos-Methyl + Methyl Parathion in ug/l
Data period 06/01/2005 to 05/31/2005
< DL, Dry
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Riverside County Flood Control
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1185 Color
Benchmark 20, Source = BPO
>=DL, Dry >=DL, Wet < DL, Dry Benchmark
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005

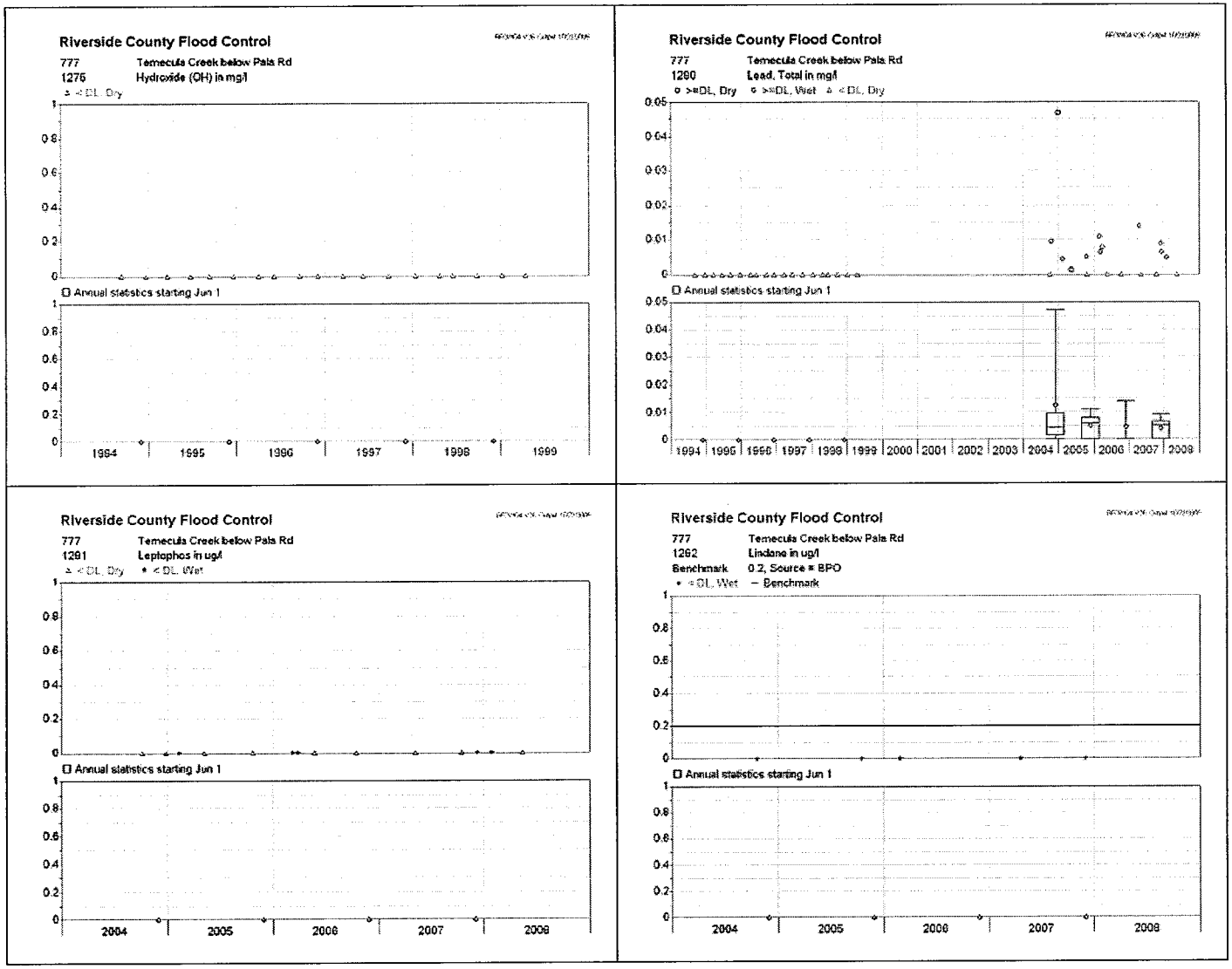

Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1160 Calcium in mg/l
>=DL, Dry
>=DL, Wet
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1153 Carbophenothion in ug/l
< DL, Dry
< DL, Wet
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
778 Murrieta Creek at Temecula (Lower Murrieta Creek)
1155 Carbon, total organic (TOC) in mg/l
>=DL, Dry
>=DL, Wet
< DL, Dry
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005

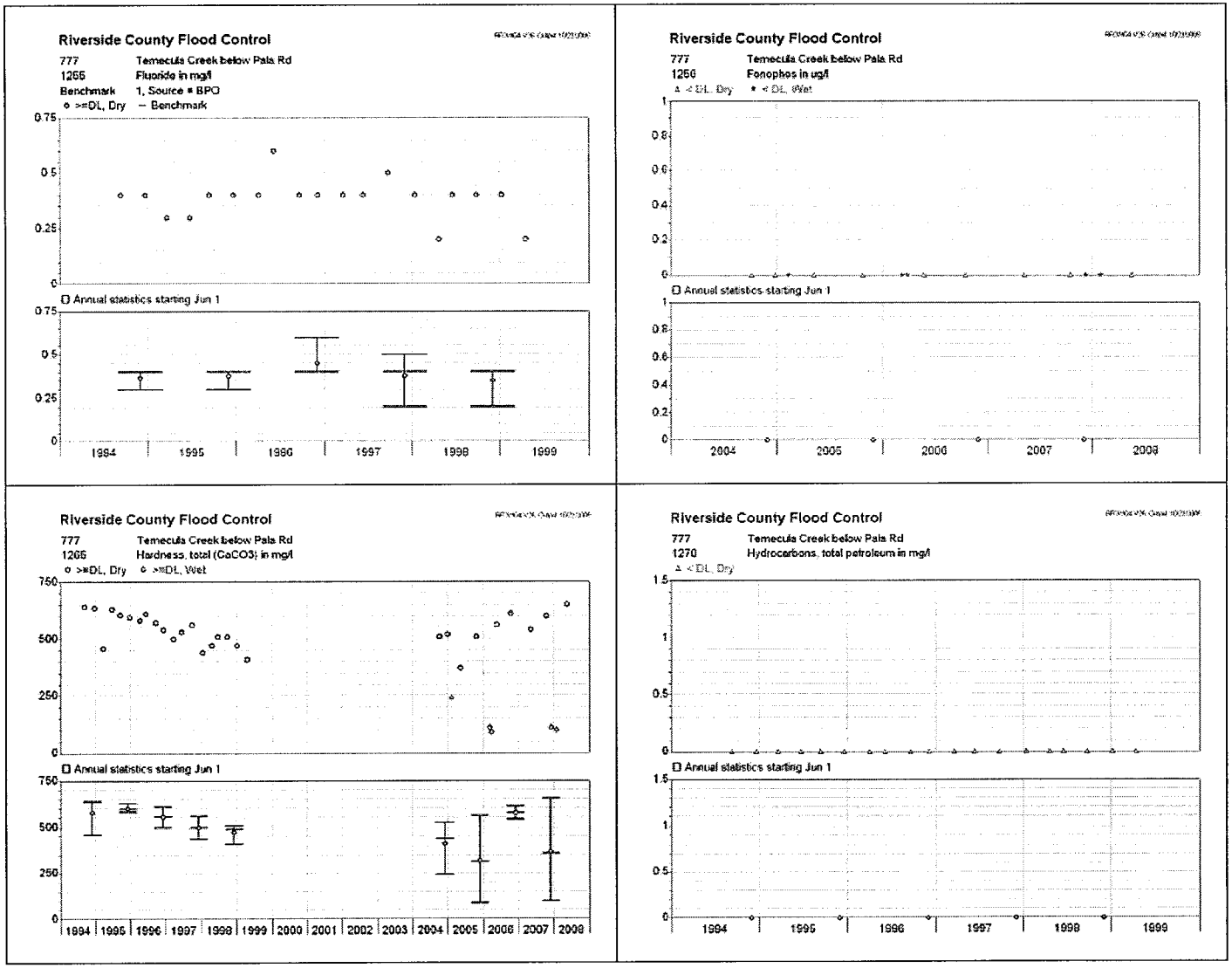

Riverside County Flood Control
777 Temecula Creek below Pala Rd
1700 Zinc, Total in mg/l
Benchmark 5, Source = BPO
o >=DL, Dry o >=DL, Wet ∆ < DL, Dry — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1705 pH, field
Benchmark 6.5..8.5, Source = BPO
o >=DL, Dry o >=DL, Wet — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1710 pH, lab in Units
Benchmark 6.5..8.5, Source = BPO
o >=DL, Dry o >=DL, Wet — Benchmark
Annual statistics starting Jun 1
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1715 Diazinon in ug/l
∆ < DL, Dry * >= DL, Wet
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

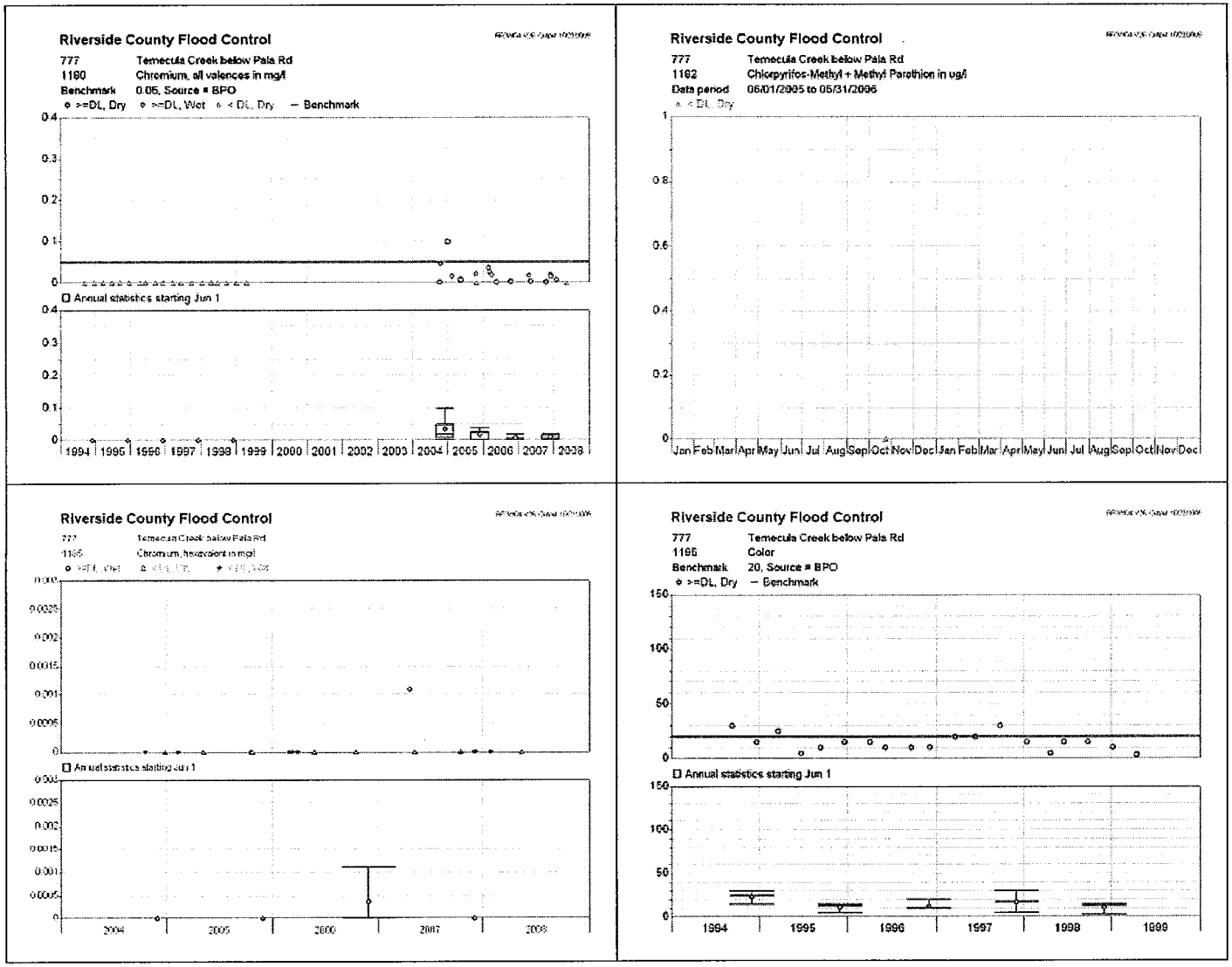

Riverside County Flood Control
777 Temecula Creek below Pala Rd
1535 Silver, Total in mg/l
Benchmark 0.1, Source = BPO
▲ < DL, Dry ▲ < DL, Wet — Benchmark
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1539 Simazine in ug/l
Benchmark 4, Source = BPO
▲ >=DL, Wet ▲ < DL, Dry ▲ < DL, Wet — Benchmark
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1540 Sodium in mg/l
○ >=DL, Dry
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1515 Solids, total in mg/l
○ >=DL, Dry
Annual statistics starting Jun 1
1995 1996 1997 1998 1999


Riverside County Flood Control
777 Temecula Creek below Pala Rd
1314 Naled in ug/l
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1315 Napthalene in ug/l
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1320 Nickel, Total in mg/l
Benchmark 0.1, Source = BPO
>=DL, Dry >=DL, Wet < DL, Dry Benchmark
Annual statistics starting Jun 1
1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1331 Nitrobenzene in ug/l
< DL, Wet
Annual statistics starting Jun 1
2004 2005 2006 2007 2008

360


Riverside County Flood Control
777 Temecula Creek below Pala Rd
1275 Hydroxide (OH) in mg/l
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1260 Lead, Total in mg/l
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1291 Leptophos in ug/l
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1262 Lindane in ug/l
Benchmark 0.2, Source = BPO
Annual statistics starting Jun 1
2004 2005 2006 2007 2008


Riverside County Flood Control
777 Temecula Creek below Pala Rd
1265 Fluoride in mg/l
Benchmark 1, Source = BPO
>=DL, Dry — Benchmark
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1266 Fenophos in ug/l
Annual statistics starting Jun 1
2004 2005 2006 2007 2008
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1265 Hardness, total (CaCO3) in mg/l
>=DL, Dry >=DL, Wet
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1270 Hydrocarbons, total petroleum in mg/l
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999


Riverside County Flood Control
777 Temecula Creek below Pala Rd
1160 Chromium, all valences in mg/l
Benchmark 0.05, Source = BPO
o >=DL, Dry o >=DL, Wet < DL, Dry — Benchmark
Annual statistics starting Jun 1
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1162 Chlorpyrifos-Methyl + Methyl Parathion in ug/l
Data period 06/01/2005 to 05/31/2006
< DL, Dry
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Riverside County Flood Control
Riverside County Flood Control
777 Temecula Creek below Pala Rd
1166 Color
Benchmark 20, Source = BPO
o >=DL, Dry — Benchmark
Annual statistics starting Jun 1
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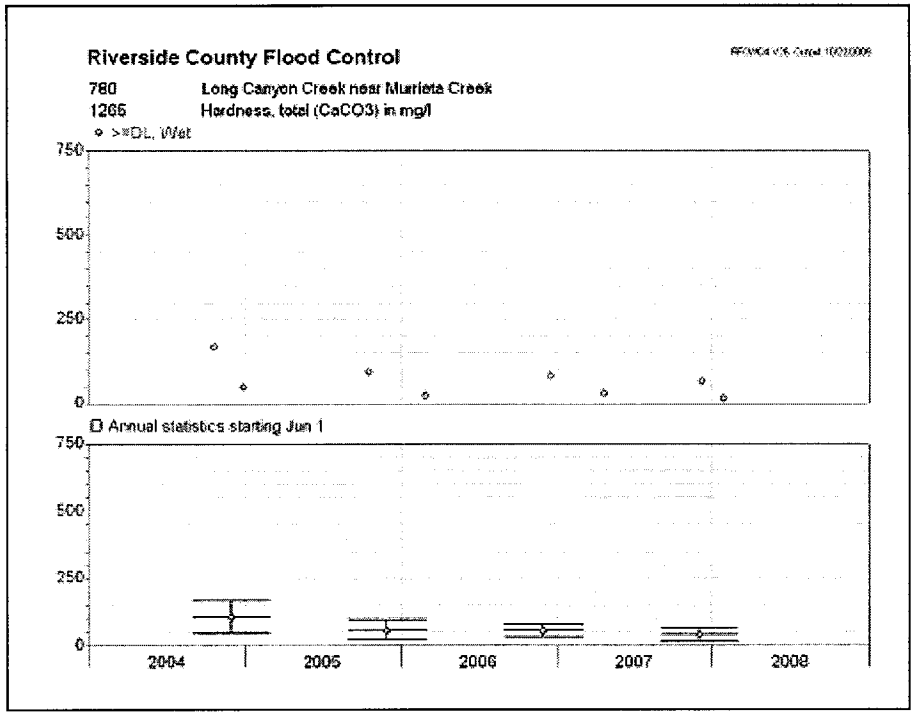
Riverside County Flood Control
780 Long Canyon Creek near Murrieta Creek
1265 Hardness, total (CaCO3) in mg/l
>=DL, Wet
750
500
250
0
Annual statistics starting Jun 1
750
500
250
0
2004
2005
2006
2007
2008

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

FACT SHEET / TECHNICAL REPORT

FOR

ORDER NO. R9-2010-0016
NPDES NO. CAS0108766

WASTE DISCHARGE REQUIREMENTS

FOR

DISCHARGES FROM THE
MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)
DRAINING THE COUNTY OF RIVERSIDE,
THE INCORPORATED CITIES OF RIVERSIDE COUNTY,
AND THE RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
WITHIN THE SAN DIEGO REGION

NOVEMBER 10, 2010

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LIST OF ACRONYMS AND ABBREVIATIONS

ADT	Average Daily Traffic
AMAL	Average Monthly Action Level
AST	Active/Passive Sediment Treatment
BAT	Best Available Technology
BIA	Building Industry Association
BMP	Best Management Practice
Basin Plan	Water Quality Control Plan for the San Diego Basin
CASQA	California Stormwater Quality Association
CCC	California Coastal Commission
CC&Rs	Covenants, Conditions and Restrictions
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
Colorado River Water Board	California Regional Water Quality Control Board, Colorado River Region
Copermittees	County of Riverside, the 4 incorporated cities within the County of Riverside in the San Diego Region, and the Riverside County Flood Control and Water Conservation District
CWA	Clean Water Act
CWC	California Water Code
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
DAMP	Drainage Area Management Plan
DNQ	Did Not Quantify
ESAs	Environmentally Sensitive Areas
FR	Federal Register
GIS	Geographic Information System
HMP	Hydromodification Management Plan
HU	Hydrologic Unit
IBI	Index of Biotic Integrity
IC/ID	Illicit Connections and Illicit Discharges
JRMP	Jurisdictional Runoff Management Plan
Los Angeles Water Board	California Regional Water Quality Control Board, Los Angeles Region
LID	Low Impact Development
MDAL	Maximum Daily Action Level
MEP	Maximum Extent Practicable
MRP	Receiving Waters Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System

LIST OF ACRONYMS AND ABBREVIATIONS (CONT'D)

NAL	Non-storm Water Action Levels
ND	Not Detected
NPDES	National Pollutant Discharge Elimination System
NRDC	Natural Resources Defense Council
NURP	Nationwide Urban Runoff Program
OAL	Office of Administrative Law
RCFCD	Riverside County Flood Control and Water Conservation District
Regional Water Board	California Regional Water Quality Control Board
RGOs	Retail Gasoline Outlets
ROWD	Riverside County Copermittees' Report of Waste Discharge (application for NPDES reissuance)
RWL	Receiving Water Limitations
SAL	Storm Water Action Level
Santa Ana Water Board	California Regional Water Quality Control Board, Santa Ana Region
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
San Francisco Bay Water Board	California Regional Water Quality Control Board, San Francisco Bay Region
SIC	Standard Industrial Classification Code
SIP	State Implementation Plan
SSMP	Standard Storm Water Mitigation Plan
State Water Board	State Water Resources Control Board
SWMP	Storm Water Management Plan
TAC	State Water Resources Control Board Urban Runoff Technical Advisory Committee
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
WDRs	Waste Discharge Requirements
WLA	Waste Load Allocation
WQO	Water Quality Objective
WQBEL	Water Quality Based Effluent Limitations
WQMP	Water Quality Management Plan
WQS	Water Quality Standard
WRMP	Watershed Runoff Management Plan

I. FACT SHEET FORMAT

This Fact Sheet briefly sets forth the principle facts and the significant factual, legal, methodological, and policy questions that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) considered in preparing Order No. R9-2010-0016. In accordance with the Code of Federal Regulations (CFR) title 40 parts 124.8 and 124.56 (40 CFR 124.8 and 124.56), this Fact Sheet includes, but is not limited to, the following information:

A. Contact information
B. Public process and notification procedures
C. Background information
D. Permitting approach
E. Economic issues
F. Legal authority
G. Findings
H. Directives

Tentative Order No. R9-2010-0016 was distributed for public review on July 23, 2010. The San Diego Water Board accepted written comments on the Tentative Order until September 7, 2010. A public hearing was subsequently held on November 10, 2010 to receive oral comments from interested persons.

The San Diego Water Board's files applicable to the issuance of Order No. R9-2010-0016 are incorporated into the administrative record in support of the findings and requirements of Order No. R9-2010-0016.

II. CONTACT INFORMATION

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email: wchiu@waterboards.ca.gov

The Order and other related documents can be downloaded from the San Diego Water Board website at http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/rsd_stormwater.shtml

All documents referenced in this Fact Sheet and in Order No. R9-2010-0016 are available for public review at the San Diego Water Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 8:00 am to 5:00 pm Monday through Friday. To schedule an appointment to inspect public records, contact the San Diego Water Board Records Management Officer at 858-467-2952.

Copermittees

1. City of Murrieta	4. County of Riverside
2. City of Temecula	5. Riverside County Flood Control and Water Conservation District
3. City of Wildomar	

III. PUBLIC PROCESS AND NOTIFICATION PROCEDURES

The San Diego Water Board followed the schedule listed below for the preparation of Order No. R9-2010-0016:

A. In December 2008, the San Diego Water Board met with the Copermittees to discuss the Report of Waste Discharge (ROWD) required by Order No. R9-2004-001.
B. On January 15, 2009, the San Diego Water Board received the ROWD for the permit renewal.
C. On October 29, 2009, the San Diego Water Board received the 2008-09 annual reports from the Copermittees for the existing permit.
D. On February 8, 2010, the San Diego Water Board notified all known interested parties that an electronic email listserv had been established to provide information and notices on the reissuance of the municipal storm water NPDES permit for southern Riverside County.
E. On February 18, 2010 the San Diego Water Board provided written comments on the ROWD to the Copermittees.
F. On March 22, 2010, the San Diego Water Board met with the Copermittees to discuss the potential changes to the permit based on the ROWD and annual reports.
G. Between April 22 and July 23, 2010, the San Diego Water Board met with the Copermittees on a weekly basis to discuss the Copermittees' concerns with the provisions of the Tentative Order.
H. On July 23, 2010, the San Diego Water Board released the Tentative Order for public review and comment.
I. Written comments were accepted until September 7, 2010.
J. A public hearing of the Tentative Order was conducted on November 10, 2010.

IV. BACKGROUND

Order No. R9-R9-2010-0016 is the fourth iteration of the storm water permit for the municipal separate storm sewer systems (MS4s) in the Riverside County portion of the San Diego Region. The first permit was adopted in 1990. The San Diego Water Board adopted the second iteration of the permit in 1998. The U.S. Environmental Protection Agency (USEPA) objected to the 1998 permit and reissued the permit in 1999. In 2000, the San Diego Water Board issued an addendum to the 1998 permit and incorporated the USEPA's permit by reference. The San Diego Water Board reissued the third iteration of the permit in 2004.

Municipal Storm Water Permits are required by the Federal Clean Water Act 1987 Amendments. The federal Clean Water Act (CWA) was amended in 1987 to address storm water runoff from municipal and industrial dischargers. One requirement of the amendment was that many municipalities throughout the United States were obligated for the first time to obtain National Pollutant Discharge Elimination System (NPDES) permits for discharges of storm water runoff from their MS4s. In response to the CWA amendment (and the pending federal NPDES regulations which would implement the amendment), the San Diego Water Board issued a municipal storm water permit, Order No. 90-46, in July 1990 to the Copermittees for their municipal separate storm sewer system (MS4) discharges.[1]

The First and Second Term Permits, Order Nos. 90-46 and 98-02, provided maximum flexibility. San Diego Water Board Order No. 90-46 contained the "essentials" of the 1990 regulations, but the requirements were written in very broad, generic terms. This was done in order to provide the maximum amount of flexibility to the Copermittees in implementing the new requirements (flexibility was, in fact, the stated reason for issuing the permit in advance of the final regulations). From staff's perspective however, "flexibility" in the form of lack of specificity, combined with the Copermittees' lack of funding and political will, also provided the Copermittees with ample reasons to take few substantive steps towards achieving water quality standards. The situation was exacerbated by the San Diego Water Board's own lack of storm water resources for oversight.

The Third-Term Permit introduced specific requirements. The regulatory approach incorporated into Order No. R9-2004-001 was a significant departure from the regulatory approach of the First and Second-Term Permits. Where San Diego Water Board Order Nos. 90-46 and 98-02 included broad, nonspecific requirements in order to provide the Copermittees with the maximum amount of flexibility in developing their programs, Order No. R9-2004-001 used detailed, specific requirements which outlined the minimum level of implementation required for the Copermittees' programs. In order to provide the Copermittees with the minimum requirements to meet the

[1] The 1990 permit was issued to the County of Riverside, the Orange County Flood Control and Water Conservation District, and the City of Temecula. Additional municipalities have been added to the MS4 NPDES permit as they have incorporated.

maximum extent practicable (MEP) standard for storm water of the San Diego Water Board, Order No. R9-2004-001 included more detail to emphasize the strong jurisdictional level programs developed by the Copermittees during the First and Second-Term Permits, as well as including the watershed-level program. The shift in permitting approaches resulted from the San Diego Water Board's conclusion that the lack of specificity in earlier Orders resulted in frequently unenforceable permit requirements, which in turn allowed some Copermittees to only make limited progress in implementing their programs.

The Third-Term Permit followed the San Diego County and Orange County permit templates. The shift in regulatory approaches for MS4 permits was first manifested in the 2001 MS4 permit to the owners and operators of San Diego County MS4s (Order No. 2001-01) and subsequently incorporated into the 2002 MS4 permit to the owners and operators of the Orange County MS4s (Order No. R9-2002-0001). The Third-Term Riverside County Permit included similar requirements as the 2001 San Diego County Permit and the 2002 Orange County Permit. Both the San Diego and Orange County Permits were appealed to the State Water Resources Control Board (State Water Board).[2] Minor modifications of each were made by the State Water Board, but the vast majority of the requirements were upheld. The San Diego County permit was also challenged in the Superior Court of the State of California and the Court of Appeal, Fourth Appellate District. Further litigation on the Orange County permit was held pending the precedential decisions on the San Diego Permit. The San Diego Permit was largely upheld in the Superior and Appellate Courts. The State of California Supreme Court declined to hear a final appeal from the Building Industry Association in March 2005. Thus, the Third-Term Riverside County permit requirements remained as slightly modified by the State Water Board.

The Third-Term Permit was adopted following substantial public participation. Public participation was extensive during the adoption process of the Third-Term Permit. The draft permit was released for public review and comment on December 15, 2003. Because the proposed requirements for Riverside County were similar to those that had recently been adopted and contested in San Diego County, much of the public participation dialogue echoed the discussions held during the San Diego renewal. A public workshop was held at the Temecula City Hall on January 23, 2004 to answer questions about the Tentative Order for the Third-Term Riverside County permit. A public hearing was held on February 11, 2004 to receive testimony. The public comment period was closed on March 10, 2004. Approximately 165 written and verbal comments were received and responded to during the public workshop, the public hearing, and the written comment period on the Tentative Order for the Third-Term Riverside County permit. Following the extensive public participation process, the San Diego Water Board adopted Order No. R9-2004-001 on July 14, 2004.

[2] Seven petitions were filed with the State Water Board over the Third-Term Orange County Permit. Six were placed in abeyance. Three of the petitioners sought stays. One stay request was dismissed and one was withdrawn. The active petition and stays were addressed by the State Water Board in Order WQO 2002-0014. That Order stayed provision F.5.f regarding sewage spills and modified Finding No. 26 regarding chronic toxicity.

Storm water programs have improved under the Third-Term Permit. Since adoption of Order No. R9-2004-001, the Copermittees' storm water programs have expanded. Audits of the Copermittees' programs and reviews of annual reports exhibit that the Copermittees' jurisdictional programs are largely in compliance with the Order. Some of the efforts currently being conducted on a regular basis by the Copermittees that were not conducted on a widespread basis prior to adoption of Order No. R9-2004-001, include: construction site storm water inspections, industrial and commercial facility storm water inspections, municipal facility storm water inspections, management of storm water quality from new development, development of best management practice (BMP) requirements for existing development, interdepartmental coordination, comprehensive water quality monitoring, and assessment of storm water program effectiveness.

Significant challenges remain. When viewed relative to the magnitude of the storm water runoff problem, enormous challenges remain, particularly regarding the management of storm water runoff on a watershed scale. Today, storm and non-storm water discharges from the MS4 continue to be the leading cause of water quality impairment in the San Diego Region.[3] Since 1998, the number of impaired water bodies in the Riverside County portion of the San Diego Region on the CWA section 303(d) List of Water Quality Impaired Segments (303(d) List) has increased with each new list (i.e. new impaired water bodies listed on the 2002, 2006, and 2008 303(d) Lists). The Copermittees' monitoring data exhibits persistent exceedances of water quality objectives in the Santa Margarita watershed.[4] The Santa Margarita watershed also has conditions that are frequently toxic to aquatic life. Bioassessment data from the watersheds further reflects these conditions, finding that macroinvertebrate communities in creeks have widespread Poor to Very Poor Index of Biotic Integrity (IBI) ratings.

[3] The potential sources of impairments are identified on the CWA section 303(d) list of impaired water bodies for the San Diego Region.

[4] Data is provided in annual reports to the San Diego Water Board. A summary of data collected during the Third-Term Permit is provided in the Riverside County Copermittees' application for permit reissuance. That summary is available on-line at:
http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/rsd_stormwater.shtml

V. PERMITTING APPROACH (PROGRAM INTEGRATION, FLEXIBILITY, AND DETAIL)

The Order contains an increased emphasis on storm water discharge management on a watershed basis. This shift towards increased watershed management is consistent with planning efforts conducted by the San Diego Water Board regarding reissuance of the San Diego Permit (Order No. R9-2007-0001) and Orange County Permit (Order No. R9-2009-0002). This shift reflects recognition of the maturity of the storm water programs since they began implementing the Third-Term Permit. Addressing storm water discharge management on a watershed basis is only possible if effective jurisdictional programs have been established, and maintaining effective jurisdictional programs is crucial to the success of watershed-focused management.

There are several reasons for this shift in emphasis. An emphasis on watersheds is necessary to shift the focus of the Copermittees from program development and implementation to water quality results. After over 20 years of Copermittee program implementation, it is critical that the Copermittees link their efforts with positive impacts on water quality. Addressing storm water on a watershed scale focuses on water quality results by emphasizing the receiving waters within the watershed. The conditions of the receiving waters drive management actions, which in turn focus on the water quality problems in each watershed.

Focusing on watershed implementation does not mean that the Copermittees must expend funds outside of their jurisdictions. Rather, the Copermittees within each watershed are expected to collaborate to develop a watershed strategy to address the high priority water quality problems within each watershed. They have the option of implementing the strategy in the manner they find to be most effective. Each Copermittee can implement the strategy individually within its jurisdiction, or the Copermittees can group together to implement the strategy throughout the watershed.

While the Order includes a new emphasis on addressing storm water discharges on a watershed basis, the Order includes recognition of the importance of continued program implementation on jurisdictional and countywide levels. The Order also acknowledges that jurisdictional, watershed, and countywide efforts are not always mutually exclusive. For this reason, an attempt has been made to allow for the Copermittees' jurisdictional, watershed, and countywide programs to integrate.

In the Order, the watershed requirements serve as the mechanism for this program integration. Since jurisdictional and countywide activities can also serve watershed purposes, such activities can be integrated into the Copermittees' watershed programs, provided the activities meet certain criteria. In this manner, the Copermittees' activities do not always need to distinguish between jurisdictional, watershed, and countywide levels of implementation. Instead, they can be integrated on multiple levels.

Such opportunities for program integration inherently provide flexibility to the Copermittees in implementing their programs. Program integration can be expanded or minimized as the Copermittees see fit. For example, there is flexibility provided in determining the activities to be integrated and implemented in the watershed programs – watershed-based efforts, countywide efforts, enhanced jurisdictional efforts, or a mixture of the three. Significant flexibility is also provided throughout other portions of the Order.

Copermittees can choose the best management practices (BMPs) to be implemented, or required to be implemented, for development, construction, and existing development areas. Flexibility to determine which industrial or commercial sites are to be inspected is also provided to the Copermittees. Educational approaches are also to be determined by the Copermittees under the Order. Implementation of certain efforts on a countywide basis is largely optional for the Copermittees as well. Significant leeway is also provided to the Copermittees in using methods to assess the effectiveness of their various runoff management programs. This flexibility is further extended to the monitoring program requirements, which allow the Copermittees to develop monitoring approaches to several aspects of the monitoring program.

The challenge in drafting the Order is to provide the flexibility described above while ensuring that the Order is still enforceable. To achieve this, the Order frequently prescribes minimum measurable outcomes, while providing the Copermittees with flexibility in the approaches they use to meet those outcomes. Enforceability has been found to be a critical aspect of the Order. For example, the watershed requirements of Order No. R9-2004-001 were some of the Order's most flexible requirements. This lack of specificity in the watershed requirements resulted in inefficient watershed compliance efforts. This situation reflects a common outcome of flexible permit language. Such language can be unclear and unenforceable, and it can lead to implementation of inadequate programs.

To avoid these types of situations, a balance between flexibility and enforceability has been crafted into the Order. Minimum measurable outcomes are utilized to ensure the Order is enforceable, while the Copermittees are provided flexibility in deciding how they will implement their programs to meet the minimum measurable outcomes.

VI. ECONOMIC ISSUES

Economic discussions of storm and non-storm water management programs tend to focus on the significant costs incurred by municipalities in developing and implementing the programs. However, when considering the cost of implementing the programs, it is also important to consider the alternative costs incurred by not fully implementing the programs, as well as the benefits which result from program implementation.

The financial crisis and current economic environment has amplified the concerns about the costs incurred by the municipalities in implementing their programs. It is frequently cited by many of the Copermittees as a justification for reducing or modifying the requirements that must be met by their programs. While the current economic environment is a cause for concern in the short term, it also provides an opportunity for these programs to find and implement improvements and efficiencies before the next period of growth and development.

It is very difficult to ascertain the true cost of implementation of the Copermittees' management programs because of inconsistencies in reporting by the Copermittees. Reported costs of compliance for the same program element can vary widely from city to city, often by a very wide margin that is not easily explained.[5] Despite these problems, efforts have been made to identify management program costs, which can be helpful in understanding the costs of program implementation.

Estimates of Phase I Storm Water Program Costs

The USEPA, the California Regional Water Quality Control Boards (Regional Water Boards), and the State Water Board have attempted to evaluate the costs of implementing municipal storm water programs. The assessments demonstrate that true costs are difficult to ascertain and reported costs vary widely. Nonetheless, they provide a useful context for considering the costs of requirements within Order No. R9-2010-0016. In addition, reported fiscal analyses tend to neglect the costs incurred to municipalities when storm water runoff is not effectively managed. Such costs result from pollution, contamination, nuisance, and damage to ecosystems, property, and human health.

In 1999 USEPA reported on multiple studies it conducted to determine the cost of management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be $9.16 per household. USEPA also studied 35 Phase I municipalities, finding costs to be $9.08 per household annually, similar to those anticipated for Phase II municipalities.[6]

[5] LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.
[6] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791-68792.

A study on Phase I MS4 program cost was also conducted by the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), where program costs reported in the municipalities' annual reports were assessed. The Los Angeles Water Board estimated that average per household cost to implement the MS4 program in Los Angeles County was $12.50.[7] Since the Los Angeles County permit is very similar to Order No. R9-2004-001, this estimate is also useful in assessing general program costs in Riverside County.

The State Water Board also commissioned a study by the California State University, Sacramento to assess costs of the Phase I MS4 program. This study includes an assessment of costs incurred by Phase I MS4s throughout the State to implement their programs. Annual cost per household in the study ranged from $18-46, with the Fresno-Clovis Metropolitan Area (FCMA) representing the lower end of the range, and the City of Encinitas (in San Diego County) representing the upper end of the range.[8] Included in the study is the City of Corona, which is in Riverside County under the jurisdiction of the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board).

The annual cost per household for the City of Corona's program was estimated to be $32, which should be similar to the costs to implement the MS4 programs in the Riverside County portion of the San Diego Region. In contrast, the cost of the City of Encinitas' program, with an annual cost per household estimated to be $46, may represent the upper range of Riverside County MS4 programs. However, the City of Encinitas's program cost can be considered as the high end of the spectrum for management program costs because the City has a consent decree with environmental groups regarding its program, and City of Encinitas has received recognition for implementing a superior program.

The annual costs for the City of Corona and City of Encinitas were estimated from data collected in 2003-2004. Between 2003 and 2008, the number of households in both cities has increased by approximately 3 percent and 7 percent, respectively.[9] In contrast, between 2003 and 2008 the number of households in the City of Temecula has increased from 23,199 to 31,135 (34 percent)[10] and the City of Murrieta has increased from 22,020 to 32,664 (48 percent).[11] This significant increase in number of households indicates a significant increase in the tax base (sales and property tax) available to fund the implementation of the MS4 programs for the City of Temecula and City of Murrieta, as well as for the County of Riverside and recently incorporated cities.

[7] Los Angeles Water Board, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.
[8] State Water Board, 2005. NPDES Stormwater Cost Survey. P. ii.
[9] Southern California Association of Governments, Profile of the City of Corona, dated May 2009; and City of Encinitas, Comprehensive Financial Annual Report, dated June 30, 2009.
[10] Southern California Association of Governments, Profile of the City of Temecula, dated May 2009.
[11] Southern California Association of Governments, Profile of the City of Murrieta, dated May 2009.

The average amount spent per household in the Cities of Temecula and Murrieta, however, does not correspond with the increase in the number of households or the amount spent in municipalities in other regions. The table below compares the reported expenditures for the MS4 programs from 2006-07 to 2008-09 compared to number of households in the Cities of Encinitas, Corona, Temecula, and Murrieta.[12]

	2006-07			2007-08			2008-09		
City	$ Spent	House-holds	$/House-hold	$ Spent	House-holds	$/House-hold	$ Spent	House-holds	$/House-hold
Encinitas	$1,192,174	23,798	$50.10	$2,052,671	23,871	$85.99	$1,729,962	24,100	$71.78
Corona	$988,547	43,000	$22.99	$1,151,779	43,482	$26.49	$1,162,928*	43,827	$26.53
Temecula	$566,952	28,890	$19.62	$748,267	30,222	$24.76	$534,492	31,135	$17.17
Murrieta	$186,377	30,237	$6.16	$258,247	31,758	$8.13	$541,180*	32,664	$16.56

It is important to note that the program costs reported above may not include costs incurred by other departments or programs that may support the MS4 permit programs. The costs only represent the funds spent by each municipality as reported in their jurisdictional program annual reports. In any case, the figures in the table above illustrate the disparity in the amounts reportedly budgeted and spent for the programs in the Riverside County portion of the San Diego Region in comparison to the amounts budgeted and spent in the Santa Ana Region and in the San Diego County portion of the San Diego Region.

It is also important to note that reported program costs are not all attributable to compliance with MS4 permits. Many program components, and their associated costs, existed before any MS4 permits were ever issued. For example, street sweeping and trash collection costs cannot be solely or even principally attributable to MS4 permit compliance, since these practices have long been expected from and implemented by municipalities.

Therefore, true program cost resulting from MS4 permit requirements is some fraction of reported costs. The California State University, Sacramento study found that only 38 percent of program costs are new costs fully attributable to MS4 permits. The remainder of the program costs was either pre-existing or resulted from enhancement of pre-existing programs.[13] In 2000, the County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement the County or Orange Drainage Area Management Plan (DAMP), was less than 20 percent of the total budget. The remaining 80 percent was attributable to pre-existing programs.[14]

[12] Amount ($) Spent figures are the actual expenditures reported in the 2006-07, 2007-08, and/or 2008/09 Annual Reports for the jurisdictional programs for each municipality (figures with * are estimated/budgeted expenditures). Number of households derived from SCAG 2009 profiles of Corona, Temecula, and Murrieta, and from City of Encinitas 2009 Financial Annual Report.
[13] State Water Board, 2005. NPDES Stormwater Cost Survey. P. 58.
[14] County of Orange, 2000. A NPDES Annual Progress Report. P. 60. More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

Estimating Costs of Reissued Storm Water Permits

The vast majority of costs that will be incurred as a result of implementing Order No. R9-2010-0016 is not new. Storm water management programs have been in place in Riverside County for over 15 years. As shown in the discussion above, the amount spent for MS4 Permit compliance per household in the municipalities in the Riverside County portion of the San Diego Region is already low compared to other regions. Any increase in cost to the Copermittees, however, is still expected to be incremental in nature. Since Order No. R9-2010-0016 "fine tunes" the requirements of Order No. R9-2004-001, these cost increases are expected to be modest.

Where there may be additional elements that will incur new costs, the Riverside County Copermittees are given the time to develop the budgets and funding mechanisms to phase those elements into their programs. Additionally, development of these additional elements by the Riverside County Copermittees will have the benefit of the experiences and work already done by the San Diego County and Orange County Copermittees.

The anticipated costs of program changes are difficult to estimate because of the flexibility inherent within the Permit and the recognition that program modifications will vary among the municipalities in response to the specific needs of the local and watershed programs. In other words, the Permit is intended to allow each Copermittee to de-emphasize some program components and strengthen others based on the experience of the jurisdictional programs.

The changes in Order No. R9-2010-0016 reflect the iterative process of BMP implementation and the necessarily adaptive nature of storm water management that is expected by the USEPA. In 1996, USEPA recognized that changes to MS4 programs would occur during the reapplication period based on new information on the relative magnitude of a problem, new data on water quality impacts of the storm water discharges, and experience gained under the prior permit.[15] Some changes have been proposed by the Copermittees in the permit reapplication package, and others have been included because the San Diego Water Board considers those measures necessary and feasible to protect water quality from the effects of MS4 discharges.

[15] Federal Register / Vol. 61, No. 155 / Friday, August 9, 1996 / Rules and Regulations. Interpretive policy memorandum on reapplication requirements for MS4s.

Other Economic Considerations

Economic considerations of management programs cannot be limited only to program costs. Evaluation of programs requires information on the implementation costs and information on the benefits derived from environmental protection and improvement.[16] Attention is often focused on program costs, but the programs must also be viewed in terms of their value to the public.

For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by USEPA to be $158-210.[17] This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study reports that the annual household willingness to pay for statewide clean water is approximately $180.[18] When viewed in comparison to household costs for existing management programs, household willingness to pay estimates exhibit that per household costs incurred by the Riverside County Copermittees to implement their management programs are very low.

Placing a value on good water quality in receiving waters is very difficult. The Santa Margarita River is one of the few remaining natural gorge rivers in southern California, with approximately 70 species of special concern (rare, threatened, or endangered) regularly inhabiting the watershed, including 30 that are currently protected under the Federal Endangered Species Act.[19] The Upper Santa Margarita Watershed provides significant habitat and recreation opportunities. In addition, residents and businesses in the Upper Santa Margarita Watershed rely heavily of local water for drinking, agriculture, and industrial supply.

Often the value of receiving waters with good water quality manifests in other forms, such as tourism, recreational opportunities, and increased property values. When surface waters are degraded, thereby degrading the habitat, the public loses the aesthetic value and benefit of being able to use the area in and around the water. Surface waters that are able to support the beneficial uses designated in the Water Quality Control Plan for the San Diego Basin (Basin Plan) can sustain plants and wildlife that can attract visitors and residents, providing aesthetic, recreational, as well as monetary value to the public. At this time, however, there have been no studies for the Riverside County portion of the San Diego Region to quantify the added value that surface waters with healthy water quality can provide.

It is also important to consider the benefits of management programs in conjunction with their costs. A study conducted by the University of Southern California and University of California, Los Angeles assessed the costs and benefits of implementing

[16] Ribaudo M.O. and D. Heelerstein. 1992, *Estimating Water Quality Benefits: Theoretical and Methodological Issues.* U.S. Department of Agriculture. Technical Bulletin No. 1808.
[17] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.
[18] State Water Board, 2005. NPDES Stormwater Cost Survey. P. iv.
[19] Stein, E. and Ambrose, R. 1998. Cumulative Impacts of Section 404 Clean Water Act Permitting on the Riparian Habitat of the Santa Margarita, California Watershed. Wetlands, Vol. 18, No. 3.

various approaches for achieving compliance with the MS4 permits in the Los Angeles Region. The study found that non-structural systems would cost $2.8 billion but provide $5.6 billion in benefit. If structural systems were determined to be needed, the study found that total costs would be $5.7 to $7.4 billion, while benefits could reach $18 billion.[20] Costs are anticipated to be borne over many years – probably ten years at least. As can be seen, the benefits of the programs are expected to considerably exceed their costs. Such findings are corroborated by USEPA, which found that the benefits of implementation of its Phase II storm water rule would also outweigh the costs.[21]

[20] Los Angeles Water Board, 2004. Alternative Approaches to Stormwater Control.
[21] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

VII. LEGAL AUTHORITY

The following statutes, regulations, and Water Quality Control Plans provide the basis for the requirements of Order No. R9-2010-0016: Clean Water Act (CWA), California Water Code (CWC), Title 40 of the Code of Federal Regulations (40 CFR) Parts 122, 123, 124 (National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, Final Rule), Part II of 40 CFR Parts 9, 122, 123, and 124 (National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule), Water Quality Control Plan – Ocean Waters of California (California Ocean Plan), Water Quality Control Plan for the San Diego Basin (Basin Plan), 40 CFR 131 Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule (California Toxics Rule), and the California Toxics Rule Implementation Plan.

The legal authority citations below generally apply to directives in Order No. R9-2010-0016, and provide the San Diego Water Board with ample underlying authority to require each of the directives of Order No. R9-2010-0016. Legal authority citations are also provided with each permit section discussion in section IX of this Fact Sheet/Technical Report.

CWA 402(p)(3)(B)(ii) – The CWA requires in section 402(p)(3)(B)(ii) that permits for discharges from municipal storm sewers "shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers."

CWA 402(p)(3)(B)(iii) – The CWA requires in section 402(p)(3)(B)(iii) that permits for discharges from municipal storm sewers "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."

40 CFR 122.26(d)(2)(i)(B,C,E, and F) – Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B,C,E, and F) provide that each Copermittee's permit application "shall consist of: (i) Adequate legal authority. A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to: [...] (B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer; (C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water; [...] (E) Require compliance with condition in ordinances, permits, contracts or orders; and (F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer."

40 CFR 122.26(d)(2)(iv) – Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) provides that the Copermittee shall develop and implement a proposed management program which "shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. [...] Proposed programs may impose controls on a system wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. [...] Proposed management programs shall describe priorities for implementing controls."

40 CFR 122.26(d)(2)(iv)(A - D) – Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in storm water runoff from new development and significant redevelopment, construction, and commercial, residential, industrial, and municipal land uses or activities. Prevention of illicit discharges is also required.

CWC 13377 – CWC section 13377 provides that "Notwithstanding any other provision of this division, the State Water Board or the Regional Water Boards shall, as required or authorized by the CWA, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with anymore stringent effluent standards or limitation necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance."

Order No. R9-2010-0016 is an essential mechanism for achieving the water quality objectives that have been established for protecting the beneficial uses of the water resources in the San Diego Water Board's portion of Riverside County. Federal NPDES regulation 40 CFR 122.44(d)(1) requires MS4 permits to include any requirements necessary to "achieve water quality standards established under CWA section 303, including State narrative criteria for water quality." The term "water quality standards" in this context refers to a water body's beneficial uses and the water quality objectives necessary to protect those beneficial uses as established in the Basin Plan and antidegradation policies.

LEGAL AUTHORITY

VIII. FINDINGS

The findings of the Order have been modified to reduce repetition in their discussions and address new requirements. Each finding of the Order is provided and discussed below. Additional discussion relative to the findings can be found in section IX of the Fact Sheet, which provides discussions of the Order's directives.

A. Basis For the Order

Finding A.1. This Order is based on the federal Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act (Division 7 of the Water Code, commencing with Section 13000), applicable State and federal regulations, all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the State Water Resources Control Board (State Water Board), the Water Quality Control Plan for the San Diego Basin adopted by the San Diego Water Board (Basin Plan), the California Toxics Rule, and the California Toxics Rule Implementation Plan.

Discussion of Finding A.1. In 1987, Congress established CWA Amendments to create requirements for storm water discharges under the NPDES program, which provides for permit systems to regulate the discharge of pollutants. Under the Porter-Cologne Water Quality Control Act, the State Water Board and the nine Regional Water Boards have primary responsibility for the coordination and control of water quality, including the authority to implement the CWA. Porter-Cologne (section 13240) directs the Regional Water Boards to set water quality objectives via adoption of Water Quality Control Plans (Basin Plans) that conform to all State policies for water quality control.

As a means for achieving those water quality objectives, Porter-Cologne (section 13243) further authorizes the Regional Water Boards to establish waste discharge requirements (WDRs) to prohibit waste discharges in certain conditions or areas. Since 1990, the San Diego Water Board has issued area-wide MS4 NPDES permits. The Order will renew Order No. R9-2004-001 to comply with the CWA and attain water quality objectives in the Basin Plan by including numeric storm water action levels to limit the contributions of pollutants conveyed by storm water, and by including numeric non-storm water action levels for dry weather non-storm water discharges designed to ensure that the Copermittees comply with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into their MS4. Further discussions of the legal authority associated with the prohibitions and directives of the Order are provided in section VII this document.

Finding A.2. This Order reissues National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108766, which was first adopted by the San Diego Water Board on July 16, 1990 (Order No. 90-38), and then reissued on May 13, 1998 (Order No. 98-02). On May 26, 1998, the United States Environmental Protection Agency

(USEPA), Region IX, objected to Order No. 98-02 due to concerns regarding Receiving Water Limitations (RWL) language. The USEPA concluded that the RWL language in the permit did not comply with the CWA and its implementing regulations. On April 27, 1999, the USEPA reissued the MS4 permit, which the San Diego Water Board adopted as Addendum No. 1 to Order No. 98-02 on November 8, 2000. On July 14, 2004, the San Diego Water Board adopted the third term MS4 permit, Order No. R9-2004-001. On January 15, 2009, the Riverside County Flood Control and Water Conservation District (RCFCD), as the Principal Copermittee, submitted a Report of Waste Discharge (ROWD) for reissuance of the municipal separate storm sewer system (MS4) Permit.

Discussion of Finding A.2. This Order renews National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108766, which was first issued on July 16, 1990 (Order No. 90-38), and then renewed on May 13, 1998 (Order No. 98-02). The USEPA determined that Order No. 98-02 the Receiving Water Limitations (RWL) language in the permit did not comply with the CWA and its implementing regulations. The USEPA assumed responsibility and reissued the Riverside County MS4 permit on April 27, 1999. Subsequently, the San Diego Water Board adopted Addendum No. 1 to Order No. 98-02 on November 8, 2000, which incorporated the USEPA's permit by reference. On July 14, 2004, the San Diego Water Board adopted the third term MS4 permit, Order No. R9-2004-001. On January 15, 2009, in accordance with Order No. R9-2004-001, the Riverside County Flood Control and Water Conservation District (District), as the Principal Copermittee, submitted a Report of Waste Discharge (ROWD) for reissuance of the municipal separate storm sewer system (MS4) Permit. Supporting information discussing the topic of this finding can be found in section V of this document.

Finding A.3. This Order is consistent with the following precedential Orders adopted by the State Water Board addressing MS4 NPDES Permits: Order WQ 99-05, Order WQ 2000-11, Order WQ 2001-15, Order WQO 2002-0014, and Order WQ 2009-0008 (*SWRCB/OCC FILE A-1780)*.

Discussion of Finding A.3. In recent years the State Water Board has considered several appeals of MS4 permits issued by the Regional Water Boards. In State Water Board Order WQ 99-05, the State Water Board established Receiving Water Limitation Language for MS4 permits. In State Water Board Order WQ 2000-11, the State Water Board addressed design standards for Standard Urban Storm Water Mitigation Plan (SUSMP) requirements. In State Water Board Order WQ 2001-15, the State Water Board addressed Petitions of the San Diego County MS4 Permit issued by the San Diego Water Board in 2001 (San Diego Water Board Order No. 2001-001). In State Water Board Order WQO 2002-0014, the State Water Board addresses Petitions of the Orange County MS4 Permit issued by the San Diego Water Board in 2002 (San Diego Water Board Order No. R9-2002-0001). In State Water Board Order WQ 2009-0008, the State Water Board addresses Petitions of the Los Angeles County MS4 Permit issued by the Los Angeles Water Board in 2006 (Los Angeles Water Board Order No. R4-2006-0074).

Finding A.4. The Fact Sheet / Technical Report for the Order No. R9-2010-0016, NPDES No. CAS0108766, Waste Discharge Requirements for Discharges from the MS4s Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the San Diego Region, includes cited regulatory and legal references and additional explanatory information and data in support of the requirements of this Order. This information, including any supplements thereto, is hereby incorporated by reference into these findings.

Discussion of Finding A.4. This Fact Sheet briefly sets forth the principle facts and the significant factual, legal, methodological, and policy questions that the San Diego Water Board considered in preparing Order No. R9-2010-0016, in accordance with the Code of Federal Regulations (CFR) title 40 parts 124.8 and 124.56 (40 CFR 124.8 and 124.56). This Fact Sheet includes general information regarding the watershed and the Copermittees' discharges from their MS4 systems. The discussions in the Fact Sheet include references to applicable statutes and regulations, as well as other supporting documents. The discussions in the Fact Sheet also can clarify the permit writer's intent for requirements that may appear vague or open to multiple interpretations.

B. Regulated Parties

Finding B.1. Each of the persons in Table 1 below, hereinafter called Copermittees or dischargers, owns or operates an MS4, through which it discharges storm water and non-storm water into waters of the United States (U.S.) within the San Diego Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the U.S.

The Cities of Murietta, Menifee and Wildomar also discharge into waters of the U.S. in the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board), so are located partially within both the San Diego and Santa Ana Water Board boundaries. As allowed by California Water Code (CWC) §13228, these Cities submitted written requests to be regulated for MS4 purposes under a permit adopted by only one Water Board. As authorized by CWC § 13228 and pursuant to a written agreement between the San Diego Water Board and the Santa Ana Water Board, the Cities of Murrieta and Wildomar are wholly regulated by the San Diego Water Board under this Order, including those portions of the Cities jurisdiction not within the San Diego Water Board's region. Similarly, the City of Menifee is wholly regulated by the Santa Ana Water Board under Order No. R8-2010-0033, including those portions of the City of Menifee within the San Diego Water Board's region.

Discussion of Finding B.1. Section 402 of the CWA prohibits the discharge of any pollutant to waters of the United States from a point source, unless that discharge is authorized by a NPDES permit. Though storm water and non-storm water may come from a diffuse source, it is discharged through MS4s, which are point sources under the CWA. Federal NPDES regulation 40 CFR 122.26(a) (iii) and (iv) provide that discharges from MS4s, which service medium or large populations greater than 100,000 or 250,000 respectively, shall be required to obtain a NPDES permit. Federal NPDES regulation 40 CFR 122.26(a)(v) also provides that a NPDES permit is required for "A [storm water] discharge which the Director, or in states with approved NPDES programs, either the Director or the USEPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States." Such sources are then designated into the program.

Included in Table 1 of the Order are the Cities of Murrieta, Temecula, and Wildomar, the County of Riverside, and the Riverside County Flood Control and Water Conservation District. The Cities of Wildomar and Menifee are newly incorporated cities. Both Cities were previously a part of the County of Riverside's jurisdiction and have an MS4 interrelated to other Copermittee MS4s in the San Diego Region. The boundaries of the Cities of Menifee, Murrieta, and Wildomar fall within the jurisdiction of both the San Diego Water Board and the Santa Ana Water Board.

As requested by the Cities of Menifee, Murrieta, and Wildomar, and pursuant to an agreement between the San Diego and Santa Ana Water Boards as authorized by CWC section 13228, the MS4s of the Cities of Murrieta and Wildomar are to be wholly regulated by the San Diego Water Board under this Order, and the MS4 of the City of Menifee is to be wholly regulated by the Santa Ana Water Board under Order No. R8-2010-0033. The agreement between the San Diego and Santa Ana Water Board to regulate the Cities of Menifee, Murrieta, and Wildomar will be subject to change with sufficient notice, and for good cause.

Other small MS4s also exist within the portion of Riverside County in the San Diego Region. While these small MS4s are not subject to this Order, they are subject to the Phase II NPDES storm water regulations. Over time, these small MS4s will be designated for coverage under the State Water Board's statewide general storm water permit for small MS4s.

C. Discharge Characteristics

Finding C.1. Discharges from the MS4 contain waste, as defined in the CWC, and pollutants that adversely affect the quality of the waters of the State. The discharge from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA.

Discussion of Finding C.1. Section 13050(d) of the CWC defines "waste" as "sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal." 40 CFR 122.2 defines "point source" as "any discernable, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff." 40 CFR 122.2 defines "discharge of a pollutant" as "Any addition of any pollutant or combination of pollutants to waters of the U.S. from any point source." Also, the justification for control of pollution into waters of the state can be found at CWC section 13260(a)(1). State Water Board Order No. WQ 2001-15 verifies that discharges from the MS4 contain waste.[22]

The term "urban runoff" has been removed throughout Order No. R9-2010-0016 and replaced with storm water (wet weather) or non-storm water (dry weather) runoff. This clarification is necessary to prevent the misunderstanding that regulation under this permit is subject only to urbanized areas. The term "urban runoff" is not defined in the Code of Federal Regulations or Federal Register in the regulation of Phase I MS4 discharges.

In the Copermittees' ROWD, a distinction is made between urban land use areas and non-urban land use areas. Urban land use areas include commercial, industrial, *urban residential (less than 1 acre)*, parks and recreation facilities, and streets and roads land use categories. Non-urban land use areas include preserves and open space, agriculture, federal/state/tribal lands/non-County jurisdiction, and *rural residential (greater than 1 acre)*. The ROWD implies that only discharges from the urban land use areas are subject to the requirements of the MS4 Permit, thus rural residential (greater than 1 acre) land use areas would not be subject to the requirements of the MS4 Permit. Rural residential land use areas, however, are subject to the requirements of the MS4 Permit. The removal of the term urban runoff will further clarify the application of the requirements of the MS4 Permit.

[22] State Water Board, 2001. Order WQ 2001-15. In the Matter of Petitions of Building Industry Association of San Diego County and Western States Petroleum Association: For Review of Waster Discharge Requirements Order No. 2001-01 for Urban Runoff from San Diego County [NPDES No. CAS0108758] Issued by the Regional Board.

The discharge of runoff from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA. The Permit defines runoff as all flows in a storm water conveyance system (MS4 defined below) and consists of the following components:

(1) storm water (wet weather flows) and
(2) non-storm water discharges (dry weather flows).

The Permit defines an MS4 as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designated or used for collecting or conveying storm water;

(iii) Which is not a combined sewer;

(iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.26.

Permit finding D.3.c. includes natural streams that convey runoff as part of the MS4. The presence of an MS4 system is not limited to areas considered to be "urban" in nature. Though the term urban is often referred to specifically as pertaining to cities, runoff means all flows in a storm water conveyance system, regardless of the location of the conveyance system. A conveyance system owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law), may be located in a setting (e.g. unincorporated area, low density residential) that is not considered by the public to be "urban" in nature. These areas are contributing pollutants to the MS4 system that must be addressed. The term runoff applies to all flows in an MS4 system, no matter where the MS4 may be located in regards to incorporated or unincorporated property. Storm water and non-storm water discharges from the rural residential (greater than 1 acre) land use category, characterized as non-urban, that enter into any part of the MS4 system (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), are also subject to the requirements of the MS4 Permit.

The Code of Federal Regulations (CFR) at 40 CFR 122.26 requires that large and medium MS4s obtain a permit for all discharges from their systems. Appendix I to 40 CFR 122 designates Riverside County as having a large and medium MS4 requiring a permit. The regulations do not differentiate discharges from urban or rural MS4 systems. Rather, the regulations require the permit for all discharges from their systems. In the Final Rule establishing the Phase 1 storm water regulations, the USEPA clarified that all discharges are subject to a permit. On page 48041 of the Final Rule, the USEPA states:

> "EPA recognizes that some of the counties addressed by today's rule have, in addition to areas with high unincorporated urbanized populations, areas that are essentially rural or uninhabited and may not be the subject of planned development. While permits issued for these municipal systems ***will cover*** *(emphasis added) municipal systems discharges in unincorporated portions of the county* (emphasis added), it is the intent of EPA that management plans and other components of the programs focus on the urbanized and developing areas of the county."

So, while the Permit covers all MS4 discharges regardless if that discharge is in an urban or unincorporated area; the Copermittees management program should focus on urbanized areas. Due to the Permit's requirements, the Copermittees management programs will naturally focus on urbanized areas. Urbanized areas have more industry, construction, pollution and MS4s that require more inspection, maintenance, monitoring, enforcement and complaint follow-up.

USEPA further clarified on page 48041 that all MS4 discharges require permit coverage when addressing highway MS4 systems:

> "[The regulations] will result in discharges from separate storm sewer systems serving State highways and other highways through storm sewers ... in unincorporated portions of specified counties being included as part of the large or medium municipal separate storm sewer systems, since all municipal separate storm sewers within the boundaries of these political entities are included."

In their summary on page 48043, the USEPA states:

> "The definition [of MS4] provides that all systems within a geographical area including highways and flood controls will be covered, thereby avoiding fragmented and ill-coordinated programs;"

Neither the State Water Board's storm water permit for Caltrans (State Water Board Order No. 99-06-DWQ) nor the Los Angeles Water Board's MS4 permit for Ventura County include the term "urban runoff" in a significant regulatory capacity. The Caltrans permit has one reference to "urban runoff" where the term is used interchangeably with "storm water." The draft Ventura permit uses the term "urban

runoff" when referring to titles of reference documents, previously adopted management plans and municipal ordinances that may contain the phrase.

The Copermittees have expressed concern regarding the regulation of pollutants from natural, undeveloped areas that enter the MS4 in an unincorporated area. Runoff and pollutants from any source entering the MS4, however, become the responsibility of the Copermittees upon entering the MS4. The assimilation of pollutants from natural, undeveloped areas is different under natural conditions compared to when they are transported through the MS4. The MS4 collection could change a natural sheet flow discharge to a concentrated point discharge. The MS4 does not provide natural infiltration or other pollutant remediation that these flows would receive in an otherwise natural drainage system. The MS4 may concentrate these natural pollutants and flows. In some cases, the MS4 may ultimately discharge the elevated concentrations of natural pollutants and flow rates to waters of the US far from the natural pollutant and flow source, causing a condition of pollution or a violation of water quality standards.

Finding C.2. MS4 storm water and non-storm water discharges are likely to contain pollutants that cause or threaten to cause a violation of surface water quality standards, as outlined in the Basin Plan. Storm water and non-storm water discharges from the MS4 are subject to the conditions and requirements established in the Basin Plan for point source discharges.

Discussion of Finding C.2. This finding is a clarification regarding the potential for discharges of storm water and non-storm water to impact the Beneficial Uses as described in the Basin Plan. As such these point source discharges require Waste Discharge Requirements (WDRs) to ensure that water quality standards are met. Furthermore, since point source discharges require WDRs, the discharges are subject to the prohibitions, conditions and requirements of the Basin Plan.

In addition, municipal discharges have been split into storm water and non-storm water discharges to represent the differing regulations applicable to storm water and non-storm water, though both types of discharges are likely to contain pollutants.

Finding C.3. The most common categories of pollutants in runoff include total suspended solids, sediment, pathogens (e.g., bacteria, viruses, protozoa), heavy metals (e.g., copper, lead, zinc and cadmium), petroleum products and polynuclear aromatic hydrocarbons, synthetic organics (e.g., pesticides, herbicides, and PCBs), nutrients (e.g., nitrogen and phosphorus fertilizers), oxygen-demanding substances (decaying vegetation, animal waste), detergents, and trash.

Discussion of Finding C.3. The National Urban Runoff Program (NURP) study showed that heavy metals, organics, coliform bacteria, nutrients, oxygen demanding substances (e.g., decaying vegetation), and total suspended solids are found at

relatively high levels in storm water and non-storm water discharges.[23] It also found that MS4 discharges draining residential, commercial, and light industrial areas contain significant loadings of total suspended solids and other pollutants. The Basin Plan goes on to identify runoff pollutants to include lawn and garden chemicals, household and automotive care products dumped or drained on streets, and sediment that erodes from construction sites.[24] In addition, the State Water Board Urban Runoff Technical Advisory Committee (TAC) finds that urban runoff pollutants include sediments, nutrients, oxygen-demanding substances, heavy metals, petroleum hydrocarbons, pathogenic bacteria, viruses, and pesticides.[25] Runoff that flows over streets, parking lots, construction sites, and industrial, commercial, residential, and municipal areas carries these untreated pollutants through storm drain networks directly to the receiving waters of the San Diego Region.

Finding C.4. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e. unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.

Discussion of Finding C.4. The 1992, 1994, and 1996 National Water Quality Inventory Reports to Congress prepared by USEPA showed a trend of impairment in the nation's waters from contaminated storm and non-storm water runoff.[26] The 1998 National Water Quality Inventory Report showed that runoff discharges affect 11 percent of rivers, 12 percent of lakes, and 28 percent of estuaries. Primary sources of impairment to rivers and streams included sediment, bacteria, nutrients, oxygen-depleting substances, metals, and pesticides. The report notes that runoff discharges are the leading source of pollution and the main factor in the degradation of surface water quality in California's coastal waters, rivers, and streams. Furthermore, the NURP study found that pollutant levels from illicit non-storm water discharges were high enough to significantly degrade receiving water quality, and threaten aquatic life, wildlife, and human health.[27]

In addition, the Region's CWA section 303(d) list, which identifies water bodies with impaired beneficial uses within the region, also indicates that the impacts of storm water and non-storm water runoff on receiving waters are significant. Many of the impaired water bodies on the 303(d) list are impaired by constituents that have been found at high levels within storm water and non-storm water runoff by the Riverside County storm water monitoring program.[28] Examples of constituents frequently

[23] Ibid.
[24] San Diego Water Board, 1994. Water Quality Control Plan, San Diego Basin, Region 9. San Diego.
[25] State Water Board, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.
[26] USEPA, 2000. Quality of Our Nation's Waters: Summary of the National Water Quality Inventory 1998 Report to Congress – USEPA 841-S-00-001; Water Quality Conditions in the United States: Profile from the 1998 National Water Quality Inventory Report to Congress – USEPA 841-F-00-006.
[27] USEPA, 1993. Results of the Nationwide Urban Runoff Program, Volume 1 – Final Report.
[28] County of Riverside, 2009. Riverside County Municipal Copermittees 2008-09 Annual Storm Water Program Report, Section 11.

responsible for beneficial use impairment include indicator fecal bacteria, heavy metals, toxicity, pesticides, dissolved solids, turbidity, and nutrients. These constituents have been found at high levels in runoff both regionally and nationwide.[29,30] In addition, impairments may be caused by synergistic effects of multiple contaminants or by pollutants not currently monitored by storm water programs.

Finding C.5. Pollutants in runoff can threaten and adversely affect human health. Human illnesses have been clearly linked to recreating near storm drains flowing to receiving waters. Also, runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.

Discussion of Finding C.5. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. A landmark study, conducted by the Santa Monica Bay Restoration Project, found that there was an increased occurrence of illness in people that swam in proximity to a flowing storm drain.[31] A study of south Huntington Beach and north Newport Beach (both located in northern Orange County) found that an illness rate of about 0.8 percent among bathers at those beaches resulted in about $3 million annually in health-related expenses.[32] Although the Upper Santa Margarita Watershed is inland, the watershed drains to the Pacific Ocean, and pollutants generated in the area may impact coastal waters. For example, the Santa Margarita River system provides the main source of beach sand for the beaches in northern San Diego County.[33] In addition, residents from the Upper Santa Margarita Watershed, who recreate at southern California beaches, benefit from clean water.

Residents and businesses in the Upper Santa Margarita Watershed also rely heavily on local water for drinking, agriculture and industrial supply. Over 40 percent of the water used in the watershed is locally produced.[34] In addition, surface and ground water from the Upper Santa Margarita Watershed flow to Fallbrook in San Diego County and the U.S. Marine Corps Base Camp Pendleton where it is used as part of the municipal and domestic water supply.

According to the USEPA, spilled fuel, solvents, waste oil, paints, and other maintenance fluids pose a risk to the environment, but may be especially harmful if they enter someone's drinking water supply.[35] Discharges of runoff from urban areas were identified by the California Department of Health Services as one of the most

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[29] Ibid.
[30] USEPA, 1983. Results of the Nationwide Urban Runoff Program, Volume 1 – Final Report.
[31] Haile, R.W., et al., 1996. An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay. Santa Monica Bay Restoration Project.
[32] Dwight, R.H., et al., 2005. Estimating the Economic Burden From Illnesses Associated With Recreational Coastal Water Pollution – A Case Study in Orange County, California. Journal of Enviro. Management Vol.76. No.2 p.95-103. Also reported in: Los Angeles Times, May 2, 2005. Here's What Ocean Germs Cost You: A UC Irvine Study Tallies the Cost of Treatment and Lost Wages for Beachgoers Who Get Sick.
[33] Shapiro. 1991. Refuge in an urbanized land, the Santa Margarita River: cultural and natural resource value. Santa Margarita Research Foundation, Fallbrook, CA.
[34] Jenks, .J. 2002. Santa Margarita River Watershed Annual Watermaster Report: Water Year 2000-2001.
[35] USEPA. 2004. Municipal Storm Water and Ground Water Discharge Regulations in California. F-909-04-004.

prevalent possible contaminating activities for drinking water sources.[36] This issue of potential source water contamination is of fundamental importance, because of the dependence on local water for domestic use in the Santa Margarita Watershed.

Furthermore, runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may eventually be consumed by humans. Pollutants such as heavy metals and pesticides, which are commonly found in MS4 runoff, have been found to bioaccumulate and biomagnify in long-lived organisms at the higher trophic levels.[37] Since many aquatic species are utilized for human consumption, toxic substances accumulated in species' tissues can pose a significant threat to public health. USEPA supports this finding when it states, "As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such and lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans."[38]

Finding C.6. Runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e. adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.

Discussion of Finding C.6. The Copermittees' monitoring data exhibits frequent toxic conditions in runoff during storm events and dry weather. Toxicity varies significantly within and among sites and over time. The cause of toxicity may vary between locations, dates, and indicator organisms. The actual cause may be influenced by various factors such as development, land uses, runoff management, habitat modification, hydromodification, and native aquatic environment. Some toxicity identification evaluations (TIEs) have identified pyrethroids as a cause of toxicity in the receiving waters.[39]

Finding C.7. The Copermittees discharge runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within one of the eleven hydrologic units (Santa Margarita Hydrologic Unit) comprising the San Diego Region as shown in Table 2. Some of the receiving water bodies have been designated as impaired by the San Diego Water Board in 2009 pursuant to CWA section 303(d).

[36] Ibid.
[37] Abel, P.D, 1996. Water Pollution Biology.
[38] USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. Washington D.C. EPA 833-R-00-002.
[39] County of Riverside, 2009. Riverside County Municipal Copermittees 2008-09 Annual Storm Water Program Report, Section 11.

Discussion of Finding C.7. This finding identifies the major receiving water bodies in the Riverside County portion of the Santa Margarita Hydrologic Unit that are listed as impaired on the CWA section 303(d) List of Impaired Waters (303(d) List). The 2006 303(d) List has been approved by the San Diego Water Board, State Water Board, and USEPA.[40] The 2008 303(d) List was approved by the San Diego Water Board on December 18, 2009 and by the State Water Board on August 4, 2010, and is awaiting USEPA approval.[41] The 303(d) list identifies waters that do not meet water quality standards after applying certain required technology-based effluent limits ("impaired" water bodies). As part of this listing process, states are required to prioritize waters/watersheds for future development of Total Maximum Daily Loads (TMDLs). The listed 303(d) pollutant(s) of concern do not necessarily reflect impairment of the entire corresponding major surface water bodies. The specific impaired portions of each water body are listed in the 2006 and 2008 303(d) Lists.

Since 2002, the number of water bodies and water body – pollutant combinations included on the 303(d) List, located in the Riverside County portion of the San Diego Region, has increased. A comparison of the 2002, 2006, and 2008 303(d) listings are summarized in the following table.

[40] The approved 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments is on-line at: http://www.waterboards.ca.gov/tmdl/303d_lists2006.html

[41] The 2008 Clean Water Act Section 303(d) List of Water Quality Limited Segments, approved by the San Diego Water Board and State Water Board, is available on-line at http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/303d_list/index.shtml

Comparison of Riverside County 303(d) Listings

Watershed[1]	2002 303(d) List		2006 303(d) List		2008 303(d) List[2]	
	Listed Water Body	Impairing Pollutants	Listed Water Body	Impairing Pollutants	Listed Water Body	Impairing Pollutants
De Luz Creek HSA (902.21)	NO LISTINGS	NOT APPLICABLE	De Luz Creek	Iron Manganese	De Luz Creek	Iron Manganese Nitrogen Sulfates
Gavilan HSA (902.22)	Sandia Creek	TDS	Sandia Creek	Iron Manganese Nitrogen Sulfates TDS	Sandia Creek	Iron Sulfates TDS
	Santa Margarita River (Upper)	Phosphorus	Santa Margarita River (Upper)	Phosphorus	Santa Margarita River (Upper)	Phosphorus Toxicity
Murrieta HSA (902.32)	NO LISTINGS	NOT APPLICABLE	Long Canyon Creek	TDS	Long Canyon Creek	Chlorpyrifos E. Coli Fecal Coliform Iron Manganese
French HSA (902.33)	NO LISTINGS	NOT APPLICABLE	NO LISTINGS	NOT APPLICABLE	Warm Springs Creek	Chlorpyrifos E. Coli Fecal Coliform Iron Manganese Phosphorus Total Nitrogen as N

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Comparison of Riverside County 303(d) Listings (Cont'd)

Watershed[1]	2002 303(d) List		2006 303(d) List		2008 303(d) List[2]	
	Listed Water Body	Impairing Pollutants	Listed Water Body	Impairing Pollutants	Listed Water Body	Impairing Pollutants
Gertrudis HSA (902.42)	NO LISTINGS	NOT APPLICABLE	NO LISTINGS	NOT APPLICABLE	Santa Gertrudis Creek	Chlorpyrifos Copper E. Coli Fecal Coliform Iron Phosphorus
Pauba HSA (902.51)	NO LISTINGS	NOT APPLICABLE	Temecula Creek	TDS Phosphorus Nitrogen	Temecula Creek	Chlorpyrifos Copper Phosphorus TDS Toxicity
	NO LISTINGS	NOT APPLICABLE	NO LISTINGS	NOT APPLICABLE	Redhawk Channel	Chlorpyrifos Copper Diazinon E. Coli Fecal Coliform Iron Manganese Nitrogen Phosphorus TDS
Wolf HSA (902.52)	Murrieta Creek	Phosphorus	Murrieta Creek	Phosphorus	Murrieta Creek	Chlorpyrifos Copper Iron Manganese Nitrogen Phosphorus Toxicity

Notes:
1. Hydrologic subarea (HSA) within the Santa Margarita Hydrologic Unit (HU), located in the Riverside County portion of the San Diego Basin.
2. Water bodies and pollutants on the 2008 303(d) List were approved by the San Diego Water Board on December 18, 2009 and by the State Water Board on August 4, 2010, and are awaiting final approval by the USEPA.

Finding C.8. Trash is a persistent pollutant which can enter receiving waters from the MS4, accumulate and be transported downstream into receiving waters over time. Trash poses a serious threat to the beneficial uses of the receiving waters, including, but not limited to, human health, rare and endangered species, navigation and human recreation.

Discussion of Finding C.8. The Copermittees to date have documented high volumes of trash coming from the MS4 system and in receiving waters.[42]

The Basin Plan specifies the following narrative Water Quality Objective (WQO) for Floating Material:

> *"Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses."*

The Basin Plan specifies the following narrative WQO for Suspended and Settleable Solids: Material:

> *"Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses."*

Additionally, high density urban areas in Southern California have been shown to be responsible for up to 60 percent of the trash that enters receiving waters from the MS4.[43] The retrofitting of existing MS4 systems, such as catch basins, in targeted high trash areas can result in significant reductions in the amount of trash entering receiving waters from the MS4.

Trash, as litter in both solid and liquid form, is consistently found on and adjacent to roadways. A California Department of Transportation Litter Management Pilot Study found that of roadway trash, plastics and Styrofoam accounted for 33 percent of trash by weight, and 43 percent by volume. Further, the study found that approximately 80 percent of the litter associated with roadways was floatable, indicating that, without capture, this litter would enter Waters of the State after a storm event, resulting in the impairment of Beneficial Uses.[44] The study, however, relied upon a mesh capture size of 0.25 inches (6.35 millimeters). This size is too large to effectively capture plastic pre-production pellets (a.k.a. "nurdles"), which are roughly 3 mm in size, and likely underestimated the total contribution of plastics. Furthermore, pre-production plastic pellets, which are small enough to be easily digested, have been found to carry persistent organic pollutants, including PCBs and DDT.[45]

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[42] Fiscal Year 2008-2009 Santa Margarita Watershed Annual Report
[43] The City of Los Angeles Meets Trash TMDLs Compliance with CB Inserts and Opening Covers. August 06, 2008.
[44] California Department of Transportation District 7 Litter Management Pilot Study. June 26, 2000.
[45] Rios, L.M., Moore, C. and Patrick R. Jones. 2007. Persistent organic pollutants carried by synthetic polymers in the ocean environment. *Marine Pollution Bulletin.* Vol. 54.

Finding C.9. The Copermittees' water quality monitoring data submitted to date documents persistent violations of Basin Plan water quality objectives for various runoff-related pollutants (indicator bacteria, dissolved solids, turbidity, metals, pesticides, etc.) at various watershed monitoring stations. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have Poor to Very Poor IBI ratings. In sum, the above findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Riverside County.

Discussion of Finding C.9. The Copermittees have produced data that demonstrates water quality objectives are frequently not met during dry and wet weather. The 2009 Report of Waste Discharge and the 2008-2009 Annual Reports document that receiving water monitoring stations often fail to meet water quality objectives established in the Basin Plan.

Water quality in receiving waters downstream of MS4 discharges fail to meet California Toxics Rule standards[46] and Basin Plan objectives. Data submitted in the MS4 Annual Reports indicate that at various times chemical, bacteria, pesticide, and metal concentrations may exceed water quality objectives in receiving waters in both wet and dry weather conditions.

There are no other significant NPDES permitted discharges to the creeks. For instance, there are no live-stream discharges of treated waste water in the Riverside County area of the Santa Margarita watershed. The few NPDES permits in the watershed are mainly for recycled water which only discharges occasionally during the rainy season. Because the water quality monitoring indicates exceedances of water quality standards and MS4 discharges are the main source of pollutants in the watersheds, it can be inferred that the MS4 discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Riverside County.

Finding C.10. When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed area is significantly greater in runoff volume, velocity, and peak flow rate than pre-development runoff from the same area. Runoff durations can also increase as a result of flood control and other efforts to control peak flow rates. Increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 3-5 percent conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect

[46] The California Toxics Rule criteria promulgated by the USEPA are directly applicable water quality standards for certain priority toxic pollutants in inland surface waters and enclosed bays and estuaries in California.

against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

Finding C.11. Development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.

Discussion of Findings C.10 and C.11. The Natural Resources Defense Council (NRDC) 1999 Report, "*Stormwater Strategies, Community Responses to Runoff Pollution*" identifies two main causes of the storm water pollution problem in developed areas. Both causes are directly related to development:

1. Increased volume and velocity of surface runoff. There are three types of human-made impervious covers that increase the volume and velocity of runoff: (i) rooftop, (ii) transportation imperviousness, and (iii) non-porous (impervious) surfaces. As these impervious surfaces increase, infiltration will decrease, forcing more water to run off the surface, picking up speed and pollutants.

2. The concentration of pollutants in the runoff. Certain industrial, commercial, residential and construction activities are large contributors of pollutant concentrations in storm water runoff. As human population density increases, it brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc.

As a result of these two causes, runoff leaving developed areas is significantly greater in volume, velocity, and pollutant load than pre-development runoff from the same area.

By accommodating the traditional approach to storm water management, development has also altered the flow regime (rate, magnitude, frequency, timing, and flashiness of runoff) that supports aquatic and riparian habitats. These hydrologic changes are driven by the loss of water storage capacity in the watersheds,[47] and exacerbated by physical alterations of the stream channel network.[48] This relationship between development and stream channel integrity has been documented nationally and in southern California. The Copermittees support these findings in their 1993 DAMP,[49] which states:

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[47] Konrad, Christopher P. and Derek K. Booth, 2005. *Hydrologic Changes in Urban Streams and Their Ecological Significance.* American Fisheries Society Symposium Vol.47 pp.157-177.
[48] Poff. N.L. et al. 1997. The Natural Flow Regime: A paradigm for river conservation and restoration. Bioscience Vol. 47, No. 11, pp.769-784.
[49] Riverside County Copermittees. 1993. Santa Margarita Regional Drainage Area Management Plan.

> "Many storm water runoff problems are primarily a consequence of urbanization. Water that previously soaked into the ground, removing pollutants by filtering through soil, and eventually replenishing groundwater supplies, now must flow overland and therefore enters local streams more rapidly. The rapid transport of water increases the erosion of stream banks and hillsides and does not permit filtering pollutants. Sediment carried by storm water runoff can build up in streambeds, harming fish and aquatic habitat. The sediment acts as a transport mechanism for pollutants which adhere to soil particles. Typical urban runoff pollutants found in surface waters include heavy metals, nutrients, petroleum products, sediment, bacteria, chemicals, and litter."

Hydrologic changes from development also directly and indirectly adversely affect wetlands. Natural wetlands support many beneficial uses and provide important water-quality related ecological services, including pollutant removal, flood attenuation, and groundwater recharge.[50] The Center for Watershed Protection recently provided USEPA with a synthesis of more than 100 scientific studies on the direct and indirect impacts of development, particularly urbanization, on wetlands and the role wetlands play in watershed quality. The report found that the three changes from land development with the most potential to impact wetlands include: Increased storm water runoff; decreased groundwater recharge; and flow constriction.[51] Each of these changes can often be avoided or minimized by implementing low impact development (LID) and hydromodification BMPs.

When Order No. R9-2004-001 was adopted, studies had shown that the level of imperviousness in an area strongly correlates with the quality of nearby receiving waters.[52] One comprehensive study, which looked at numerous areas, variables, and methods, revealed that stream degradation occurs at levels of imperviousness as low as 10 – 20 percent.[53] Stream degradation is a decline in the biological integrity and physical habitat conditions that are necessary to support natural biological diversity. For instance, few urban streams can support diverse benthic communities with imperviousness greater than or equal to 25 percent.[54] To provide some perspective, a medium density, single-family home area can be from 25 percent to 60 percent impervious (variation due to street and parking design).[55]

More recently, a report on the effects of impervious in southern California streams found that local ephemeral and intermittent streams are more sensitive to such effects than streams in other parts of the country. This study, by the Southern California

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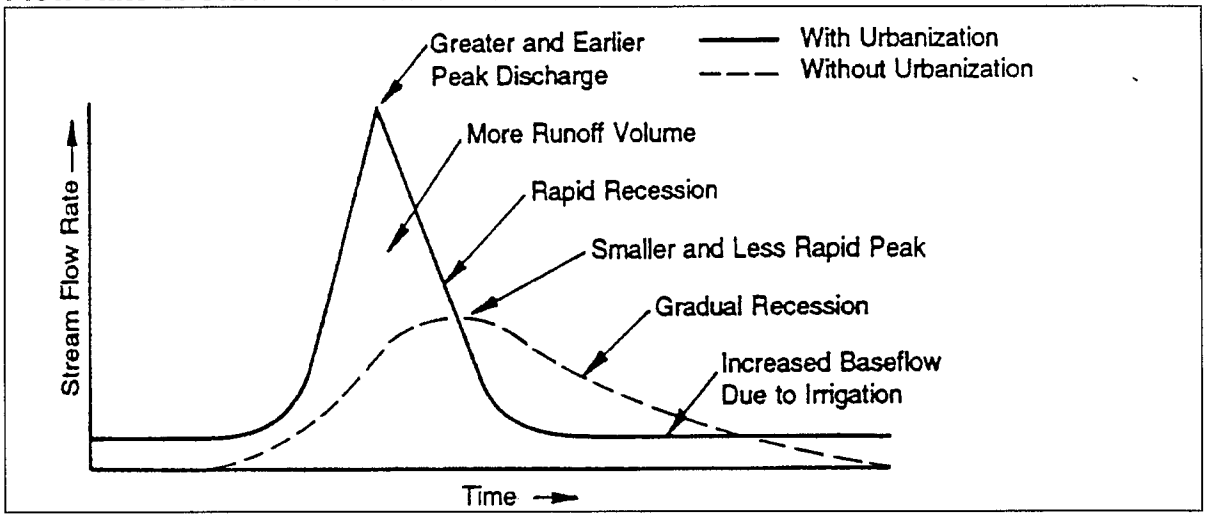
[50] Wright, Tiffany, et al. 2006. "Direct and Indirect Impacts of Urbanization on Wetland Quality." Prepared by the Center for Watershed Protection. Available at: http://www.cwp.org. 81p.
[51] Ibid p.26
[52] USEPA, 1999. Part II. 40 CFR Parts 9, 122, 123, and 124. National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. Federal Register.
[53] Ibid.
[54] Ibid.
[55] Schueler, T.R., 1994. The Importance of Imperviousness. Watershed Protection Techniques. As cited in 64 FR 68725.

Coastal Water Research Program, estimated a threshold of response at a two to three percent change in percent of impervious cover in a watershed. [56] This threshold is lower than the previously reported estimates by the USEPA that were cited in the Fact Sheet for Order No. R9-2004-001.

To demonstrate the principle of increased volume and velocity of runoff from urbanization, the figure below shows the flow rate of an urban vs. a natural stream. What the figure demonstrates is that urban stream flows have greater peaks and volumes, as well as shorter retention times than natural stream flows. The greater peak flows and volumes result in stream degradation through increased erosion of stream banks and damage to aquatic habitat. The shorter retention times result in less time for sediments and other pollutants to settle before being carried out to the ocean. This sediment, and the associated pollutants it carries, can be a significant cause of water quality degradation.

Flow Rate of Urban and Natural Streams[57]



Increased volume and velocity of runoff adversely impacts receiving waters and their beneficial uses in many ways. According to the Urban Runoff TAC report,[58] increases in population density and imperviousness result in changes to stream hydrology including:

1. Increased peak discharges compared to pre-development levels;
2. Increased volume of storm water runoff with each storm compared to pre-development levels;

[56] Coleman, Derrick, et al. 2005. *Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams.* Technical Report No. 450 of the Southern California Coastal Water Research Project.
[57] Adapted from Schueler, T.R., 1987. Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs. Metropolitan Washington Council of Governments.
[58] State Water Board, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

3. Decreased travel time to reach receiving water; increased frequency and severity of floods;
4. Reduced stream flow during prolonged periods of dry weather due to reduced levels of infiltration;
5. Increased runoff velocity during storms due to a combination of effects of higher discharge peaks, rapid time of concentration, and smoother hydraulic surfaces from channelization; and
6. Decreased infiltration and diminished ground water recharge.

Even though the rainfall depths in arid watersheds are lower, watershed development can greatly increase peak discharge rates during rare flood events.[59] A study conducted in arid watersheds around Riverside, CA showed that, over two decades, impervious cover increased from 9 percent to 22 percent, which resulted in an increase of more than 100 percent in the peak flow rate for the two-year storm event. The study also showed that the average annual storm water runoff volume had increased by 115 percent to 130 percent over the same time span.[60]

Flooding caused by the increased volume and velocity of runoff from urbanization in the upper Santa Margarita watershed are clear examples of the effects described above. Disastrous flooding has occurred more frequently in recent years. In the last century, flood events occurred in 1938, 1969, 1980, 1993, 1995, and 1998.[61] In the 1993 flood event, the Cities of Murrieta and Temecula sustained $12 million dollars in damage, and Camp Pendleton sustained $88 million in damage. Future flooding is expected to occur more frequently because of continued urban development within the watershed, and flood damages are expected to continue accruing at an estimated annual rate of $1,780,300.

Prior hydromodification studies in California have shown that the increase in impervious cover, and thus change in runoff volume, velocity, rate, and duration, results in a shift in the range of storms that produce geomorphically significant flows within receiving waters (see above discussion). Additionally, studies in California have determined that ninety percent of the geomorphic "work" done within channels receiving flows from developed areas now occurs from flows below the 10 year peak flow event.[62]

This increased volume, velocity, rate, and duration of runoff greatly accelerates the erosion of the beds and banks within downstream receiving waters. Additionally, storm water flows which runoff directly from impervious surfaces into the MS4 and thus receiving waters prevent the associated runoff of natural sediments which would occur in pre-project conditions. This combined alteration of the physical condition of storm water runoff results in accelerated downstream erosion of receiving water bed and

[59] Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection. P. 695-706.
[60] Ibid.
[61] U.S. Army Corps of Engineers, 2000. Final EIS/EIR, Murrieta Creek Flood Control Project.
[62] Santa Clara Valley Hydromodification Management Plan. April 21, 2005.

banks. The excessive erosion of stream beds and banks releases pollutants found in soils into receiving waters, degrades macroinvertebrate habitat (see D.2.c), eliminates spawning habitat, reduces associated wetland and riparian habitat, and threatens existing infrastructure adjacent to receiving waters. Bank sloughing within creeks and streams increases the pollutant loading to those receiving waters, particularly for turbidity and phosphorous.[63] In arid environments, accelerated channel erosion has been shown to have synergistic impacts within watersheds. Increased channel erosion within Las Vegas wash has resulted in the loss of over 1,000 acres of wetland and riparian habitat, released additional pollutants into downstream receiving waters, and eliminated in-stream habitat and water quality conditions required for existing threatened and endangered species.[64]

Regarding the impact of development on storm water runoff pollutant loads, the San Diego Water Board's Basin Plan states:

> *Nonpoint source pollution is primarily the result of man's uses of land such as urbanization, roads and highways, vehicles, agriculture, construction, industry, mineral extraction, physical habitat alteration (dredging/filling), hydromodification (diversion, impoundment, channelization), silviculture (logging), and other activities which disturb land.[65] As a result, when rain falls on and drains through urban freeways, industries, construction sites, and neighborhoods it picks up a multitude of pollutants. The pollutants can be dissolved in the runoff and quickly transported by gravity flow through a vast network of concrete channels and underground pipes referred to as storm water conveyance systems. Such systems ultimately discharge the polluted runoff, without treatment, into the nation's creeks, rivers, estuaries, bays, and oceans.[66]*

According to the Center for Watershed Protection, urbanization strongly shapes the quality of both surface and ground water in arid and semi-arid regions of the southwest. Since rain events are so rare, pollutants have more time to build up on impervious surfaces compared to humid regions. Therefore, the pollutant concentrations of storm water runoff from arid watersheds tend to be higher than that of humid watersheds.[67] The effect of antecedent rainfall events is demonstrated in a report from the California Department of Transportation (Caltrans) that found the concept of a seasonal first flush is applicable to the southern California climate.[68]

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[63] Sekely, A.C., Mulla, D.J. and D.W. Bauer. 2002. Streambank slumping and its contribution to the phosphorus and suspended sediment loads of the Blue Earth River, Minnesota. *Journal of Soil and Water Conservation.* September 2002 vol. 57 no. 5 243-250.

[64] Tuttle, P.L.. and E..L.. Orsak. 2002. Las Vegas Wash Water Quality and Implications to Fish and Wildlife. U.S. Fish and Wildlife Service.

[65] San Diego Water Board, 1994. Water Quality Control Plan for the San Diego Basin. P. 4-66.

[66] Ibid. P. 4-69 - 4-70.

[67] Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection. P. 695-706.

[68] Stenstrom, Michael and Masoud Kayhanian, 2005. *First Flush Phenomenon Characterization.* Prepared for Caltrans. Report No. CTSW-RT-05-73-02.6 Study jointly performed by UCLA and UCD. Most of the data presented was collected from three highly urbanized highway sites in west Los Angeles. Much effort went into developing a quantitative way of defining the mass first flush. Other aspects include: variability of water quality during storm events, litter characteristics, correlation among constituents, first flush of organics and particle size

Finding C.12. Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d)-impaired water bodies. Such areas have a much lower capacity to withstand pollutant loads than other, more sensitive areas. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. Therefore, additional controls to reduce storm water pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.

Discussion of Finding C.12. ESAs are defined in the Order as "Areas that include but are not limited to all CWA section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the Basin Plan; water bodies designated with the RARE beneficial use by the Basin Plan; areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Riverside; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees."

Areas that meet this definition are inherently sensitive habitats containing unique, rare, threatened, or endangered species, or are not achieving their designated beneficial uses. As discussed above, runoff is known to contain a wide range of pollutants and has demonstrated toxicity to plants and animals. Therefore, it is necessary to apply additional storm water controls for developments within, adjacent to, or directly discharging to ESAs. This need for additional storm water controls is addressed within each component of the Order. USEPA supports the requirement for additional storm water controls, stating "For construction sites that discharge to receiving waters that do not support their designated use or other waters of special concern, additional construction site controls are probably warranted and should be strongly considered."[69] Further support for requiring additional controls to reduce pollutants in storm water discharges to ESAs can be found in *Mitigation of Storm Water Impacts From New Developments in Environmentally Sensitive Areas*, a technical report written by the Los Angeles Water Board.[70]

Finding C.13. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not "inject" runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; (4)

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distribution, new methods for measuring oil and grease, and grab and composite sampling strategies. The report is available on-line at: http://www.dot.ca.gov/hq/env/stormwater/special/newsetup/

[69] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. Washington D.C. EPA/833-B-92-002.

[70] Los Angeles Water Board, 2001. Mitigation of Storm Water Impacts From New Developments In Environmentally Sensitive Areas.

ensuring that each drainage feature is adequately maintained in perpetuity; and (5) pretreatment.

Discussion of Finding C.13. Infiltration is an effective means for managing runoff. However, measures must be taken to protect groundwater quality when infiltration of runoff is implemented. USEPA supports runoff infiltration and provides guidance for protection of groundwater: "With a reasonable degree of site-specific design considerations to compensate for soil characteristics, infiltration may be very effective in controlling both urban runoff quality and quantity problems. This strategy encourages infiltration of urban runoff to replace the natural infiltration capacity lost through urbanization and to use the natural filtering and sorption capacity of soils to remove pollutants; however, the potential for some types of urban runoff to contaminate groundwater through infiltration requires some restrictions."[71] The restrictions placed on runoff infiltration in this Order are based on recommendations provided by the USEPA Risk Reduction Engineering Laboratory. The State Water Board found in Order WQ 2000-11 on the appeal of the Los Angeles Water Board's Standard Urban Storm Water Mitigation Plan (SUSMP) requirements that the guidance provided in the above referenced document by the USEPA Risk Reduction Engineering Laboratory is sufficient for the protection of groundwater quality from runoff infiltration. To further protect groundwater quality, the Order also includes guidance from the Los Angeles Water Board,[72] the State of Washington,[73] and the State of Maryland.[74] Subsequently, the California Storm Water Quality Association (CASQA) has produced technical guidance for post-construction treatment BMPs to protect ground water quality[75].

Finding C.14. Non-storm water (dry weather) discharge from the MS4 is not considered a storm water (wet weather) discharge and therefore is not subject to regulation under the Maximum Extent Practicable (MEP) standard from CWA 402(p)(3)(B)(iii), which is explicitly for "Municipal ... *Stormwater Discharges* (emphasis added)" from the MS4. Rather, non-storm water discharges into the storm sewers, per CWA 402(p)(3)(B)(ii), are to be effectively prohibited. Such dry weather non-storm water discharges have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds and are to be effectively prohibited under the CWA.

[71] USEPA, 1994. Potential Groundwater Contamination from Intentional and Nonintentional Stormwater Infiltration. EPA 600 SR-94 051.
[72] Los Angeles Water Board, 2000. Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County.
[73] Washington State Department of Ecology, 1999. Draft Stormwater Management in Washington State. Volume V – Runoff Treatment BMPs. Pub. No. 99-15.
[74] Maryland Department of the Environment, 1999. 2000 Maryland Stormwater Design Manual. Volume I.
[75] CASQA. The New Development and Redevelopment Handbook, 2003. Available on-line at http://www.cabmphandbooks.org/Development.asp

Discussion of Finding C.14.

Permitting Framework

The CWA prohibits the discharge of any pollutant from a point source into waters of the United States unless the discharger of the pollutant(s) obtains a NPDES permit pursuant to CWA section 402. The discharge of storm water and/or non-storm water from an MS4 system is considered a discharge from a point source. As discussed below, however, the CWA regulates storm water and non-storm water discharges under different standards.

In 1987 the CWA was amended to include provisions that specifically concerned NPDES permitting requirements for storm water discharges from MS4 systems. Section 402(p) of the CWA regulates the discharge of storm water from a point source, the municipal separate storm sewers. Such discharges of storm water are subject to the maximum extent practicable (MEP) storm water standard and the related iterative process. The MEP standard for storm water discharges reflects Congress' recognition that the variability of flow and intensity of storm events render difficult strict compliance with water quality standards by MS4s. However, this standard was not considered applicable to non-storm water discharges, which under 402(p) are required to be effectively prohibited from entering the MS4. Clearly, if non-storm water discharges must be effectively prohibited from entering the MS4, the very next requirement (402(p)(3)(B)(iii)) requiring discharges from the MS4 be reduced to the MEP intends that the discharge of pollutants be limited to storm water. Unless exempt or authorized under a separate NPDES permit, non-storm water discharges are not authorized to enter the MS4 in the first instance and are considered to be illicit discharges.

The Federal Register further clarifies that such discharges through an MS4 are not authorized under the CWA (55 Federal Register (FR) 47995):

> "Today's rule defines the term "illicit discharge" to describe any discharge through a municipal separate storm sewer system that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not authorized under the Clean Water Act. Section 402(p(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer... Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit."

The federal regulations (40 CFR 122.26(d)(vi)(2)(B)) require that the municipal separate storm sewer discharger prohibit "through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer." As owners and operators of the MS4, Copermittees cannot passively receive discharges from third parties (Federal Register 68766) and thus are responsible for the discharge of any non-storm water from their MS4.

The State Water Board recently recognized in order (Order WQ 2009-0008) that "[n]either the Clean Water Act nor the federal storm water regulations define 'non-storm water.' 'Illicit discharge' is defined as any discharge to an MS4 'not composed entirely of storm water.' Thus, 'illicit discharge' is the most nearly applicable definition of 'non-storm water' found in federal law and is often used interchangeably with that term."[76] In July 2010, the court in Los Angeles County v. State Water Resources Control Board remanded the Los Angeles Water Board's MS4 permit underlying Order WQ 2009-0008 for procedural reasons occurring during the permit adoption process. The court did not evaluate or rule upon the substantive findings and reasoning set forth in Order WQ 2009-0008. The State Water Board rescinded and voided Order WQ 2009-0008 to comply with the court's order. While the San Diego Water Board may no longer cite Order WQ 2009-0008, the San Diego Water Board has independently considered whether the requirement to eliminate non-stormwater discharges is subject to the MEP standard. The San Diego Water Board concludes that the MEP standard does not apply to non-stormwater discharges for the same reasons expressed by the State Water Board.

Storm Water and Non-storm Water Definitions

By definition non-storm water is not precipitation related. 40 CFR 122.26(b)(13) states that: "Storm water means storm water runoff, snowmelt runoff, and surface runoff and drainage." While "surface runoff and drainage" is not defined in federal law, it is related to precipitation events such as rain and/or snowmelt (see 55 FR 47995-96). The term "surface runoff and drainage" does not include all incidental flows in the MS4 system, but consists of flows relating to precipitation events as clarified by the Federal Register, USEPA's documents and permitting, and other Regional Water Board Orders.

The Federal Register (55 FR 47995-47996) provides clarification on the distinction between storm water and non-storm water discharges, including their regulation:

> "In response to the comments which requested EPA to define the term storm water broadly to include a number of classes of discharges **which are not in any way related to precipitation events, EPA believes that this rulemaking is not an appropriate forum for addressing the appropriate regulation of such non-storm water discharges**, even though some classes of non-storm water discharges may typically contain only minimal amounts of pollutants. Congress did not intend that the term storm water be used to describe any discharge that has a de minimis amount of pollutants, not did it intend for section 402(p) to be used to provide a moratorium from permitting other non-storm water discharges."

As recently recognized by the State Water Board in a precedential decision upholding an MS4 permit modification adopted by the Los Angeles Water Board, "U.S. EPA has previously rejected the notion that 'storm water,' as defined at 40 Code of Federal

[76] State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 4.

Regulations section 122.26(b)(13), includes dry weather flows. In U.S. EPA's preamble to the storm water regulations, U.S. EPA rejected an attempt to define storm water to include categories of discharges 'not in any way related to precipitation events.'[77] Thus, USEPA has made it clear that it deems discharges unrelated to precipitation events to be non-storm water discharges. 40 CFR 122.26(d)(iv)(B) itself provides specific examples of non-storm water discharges:

> "...the following category of non-storm water discharges or flows shall only be addressed where such discharges are identified by the municipality as sources of pollutants to the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20) to separate storm sewers, uncontaminated pumped groundwater,..."

USEPA also removed street wash waters from the definition of storm water, as USEPA specifically identified this discharge as being non-storm water (55 FR page 47996). Additionally, section 1.2.2.2 of USEPA's Multi-Sector General Permit for Industrial Activities (MSGP-2000) considers fire hydrant flushings, irrigation drainage, landscape watering, and foundation or footing drains to be non-storm water discharges. USEPA's September 1999 Storm Water Management Fact Sheet for Non-Storm Water Discharges to Storm Sewers states that non-storm water discharges can include discharges of process water, air conditioning condensate, non-contact cooling water, vehicle wash water, or sanitary wastes.

While these types of non-storm water discharges (or illicit discharges) may be regulated under storm water permits because as a practical matter they can enter and be discharged from the MS4 systems, they are not regulated as storm water discharges under the CWA because they are unrelated to precipitation events. As indicated above, the State Water Board's recent discussion of this issue supports the conclusion that non-storm water discharges are unrelated to precipitation events. In its Order affirming amendments to the Los Angeles County MS4 permit to implement a TMDL to control bacteria in dry weather flows, the State Water Board rejected petitioners County of Los Angeles and the Los Angeles County Flood Control District implied assertion that the definition of "storm water" contained in the federal regulations (defined as "surface run-off and drainage") includes the run-off and drainage from non-storm events. The State Water Board notes that the challenged permit provisions do not apply to storm water flows in that they apply only during dry weather conditions as defined in the permit. In upholding the challenged order, the State Water Board notes that the Los Angeles Water Board's permit language followed USEPA's approach, referring to USEPA's rejection of attempts to define storm water to include categories of discharges "not in any way related to precipitation events."[78]

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[77] State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 7.
[78] State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 7 (quoting 55 FR 47990. 47995).

Lastly, the San Diego Water Board and State Water Board have issued multiple, separate NPDES permits for non-storm water discharges, including, but not limited to, San Diego Water Board Order No. R9-2008-0002 (extracted groundwater), San Diego Water Board Order No. R9-2002-0020 (hydrostatic discharge), and State Water Board Order No. 2006-0008-DWQ (utility vaults), pursuant to section 402 of the CWA.

Permitting Non-storm Water Discharges

Non-storm water discharges may contain pollutants which result from various activities that occur within areas draining into the MS4. This includes, but is not limited to, illicit discharges and connections, exempted categories of discharge not a source of pollutants (40 CFR 122.26(d)), and discharges into the MS4 covered under a separate NPDES permit. As such, existing and proposed discharges of non-storm water from MS4s:

a) Result from similar activities through the MS4 system;
b) Are the same type of water;
c) Require similar action levels for the protection of the Beneficial Uses of the receiving waters;
d) Require similar monitoring;
e) Are under the passive control of the owner and operator of the MS4 system; and
f) Are more appropriately regulated under a general permit than individual permits.

The U.S. EPA's approach (and the San Diego Water Board's under its approved program) for non-storm water discharges from MS4s is to regulate these discharges under the existing 402 NPDES framework (FR 47995 and 48037 see below) for discharges to surface waters. The NPDES program (40 CFR 122.44(d)) utilizes discharge prohibitions and effluent limitations as regulatory mechanisms to regulate non-storm water discharges, including the use of technology and water quality-based effluent limitations. Non-numerical effluent limitations, such as BMPs for non-storm water discharges may only be authorized where numerical effluent limits are infeasible or where the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA (40 CFR 122.44(k) see below).

The Federal Register (55, page 48037) provides clarification that non-storm water discharges from the MS4 are to be regulated under section 402, not 402(p):

> "Conveyances which continue to accept other "non-storm water" discharges (e.g. discharges without an NPDES permit) with the exceptions noted above (*exempted discharges that are not a source of pollutants*) do not meet the definition of municipal separate storm sewer and are not subject to 402(p)(3)(B) of the CWA unless such discharges are issued separate NPDES permits. Instead, conveyances which continue to accept non-storm water discharges

> which have not been issued separate NPDES permits are subject to sections 301 and 402 of the CWA."

This regulatory approach is consistent with the approach recently upheld by the State Water Board in a precedential order adopted on August 4, 2009. In this Order, the State Water Board rejected a challenge to amendments to the Los Angeles County MS4 permit that require compliance with receiving water limitations and discharge prohibitions for dry weather, non-storm water discharges. Petitioners there argued that the receiving water limits and discharge prohibitions for dry weather dischargers were inappropriate and that the Los Angeles Water Board should instead have regulated the discharges with the maximum extent practicable standard, through an iterative process. The State Water Board concludes that dry weather discharges, as defined in the permit and in the underlying TMDL, "are more appropriately regarded as non-storm water discharges, which the Clean Water Act requires to be effectively prohibited."[79]

As stated above, for NPDES permits under 402 of the CWA, the Code of Federal Regulations (122.44(k)) clarify that a discharger may utilize BMPs to control or abate the discharge of pollutants when:

> "(1) Authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities;
> (2) Authorized under section 402(p) of the CWA for the control of storm water discharges;
> (3) Numeric limits are infeasible; or
> (4) The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA."

For the last 20 years, Riverside County NPDES permits for discharges of storm water have regulated non-storm water discharges from the MS4. These permits required Copermittees (dischargers) to prohibit non-storm water discharges into (thus through and from) their MS4 systems, implement a program to prevent illicit discharges, and monitor to identify illicit discharges and exempted discharges that are a source of pollution. These measures are considered Best Management Practices (BMPs), are required to be included in NPDES permits issued under section 402(p) of the CWA, and are considered by USEPA to be an interim approach to permitting non-storm water discharges from the MS4 in accordance with section 402 of the CWA and CFR 122.44(k).

As explained in the discussion of Finding C.15., below, the Copermittees' reliance on BMPs for the past 20 years has not resulted in compliance with applicable water quality standards. The San Diego Water Board has evaluated (in accordance with 40 CFR 122.44(d)(1)) past and existing controls (BMPs), non-storm water monitoring results, the sensitivity of the species in receiving waters (e.g. endangered species),

[79] State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 8

and the potential for effluent dilution, and has determined that existing BMPs to control pollutants in storm water discharges are not sufficient to protect water quality standards in receiving waters and the existing requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges into the MS4 historically results in the discharge of pollutants to the receiving waters. Thus, numeric action levels for non-storm water, dry weather, discharges from the MS4 and required actions following observed exceedances of numeric action levels have been established. For further discussion regarding the development of action levels please see Finding E.10 and discussion.

Dry weather action levels are applicable to non-storm water discharges of effluent from the MS4 system. Non-storm water effluent discharges from the MS4 are those which occur during dry weather conditions. These action levels are not applied to storm water discharges, as defined within the Order. Storm water discharges regulated by the Order are required to meet the MEP standard and related iterative process and have separate action levels.

Dry weather action levels are applicable to non-storm water discharges from the MS4 system into receiving waters. Non-storm water discharges are already required to be prohibited unless specifically exempted or covered under a separate NPDES permit. Dry weather action levels apply to non-storm water discharges of effluent from a point source into receiving waters. The MS4 is not a receiving water. Should a discharger wish to discharge a non-exempt category to the MS4 system, such discharges require a separate NPDES permit pursuant to sections 402 and 301 of the CWA. It is also infeasible to monitor and sample every discharge into the MS4, as such discharges are diffuse by nature and may vary spatially and temporally.

Finding C.15. Non-storm water discharges to the MS4 granted an influent exception [i.e. which are exempt from the effective prohibition requirement set forth in CWA section 402(p)(3)(B)(ii)] under 40 CFR 122. 26 are included within this Order. Any exempted discharges identified by Copermittees as a source of pollutants are subsequently required to be *addressed* (emphasis added) as illicit discharges through prohibition and incorporation into existing IC/ID programs. Furthermore, the USEPA contemplates that permitting agencies such as the San Diego Water Board may also identify exempted discharges as a source of pollutants required to be addressed as illicit discharges (See Vol. 55 FR 48037). The San Diego Water Board and the Copermittees have identified landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the U.S.

Discussion of Finding C.15. The FR (Vol. 55, page 48037) and 40 CFR 122.26(d)(iv)(B) clarify that certain components and categories of non-storm water discharges into the MS4 are not required to be prohibited. The Code of Federal Regulations requires the discharger have:

> "...a program, including inspections, to implement through ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program shall address all types of illicit discharges, however, the following category of non-storm water discharges or flows shall only be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20) to separate storm sewers, uncontaminated pumped groundwater,..."

The categories of non-storm water discharges into the MS4, as listed under 40 CFR 122.26(d)(iv)(B), are not required to be prohibited unless identified by the Copermittees as sources of pollutants to waters of the United States. The FR (Vol. 55, page 48037), however, goes on to clarify that:

> "However, the Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharge where appropriate."

Thus, the Copermittees or the San Diego Water Board may identify any of these categories of non-storm water discharges as a source of pollutants. As such, the identification of any of these categories as a source of pollutants requires them to be addressed as illicit discharges, which are not authorized under the CWA, and are required to be "effectively prohibited" as illicit discharges via ordinance, order or similar means. The prohibition of previously exempted discharges of non-storm water to waters of the United States from entering, and necessarily being discharged from an MS4, conforms with CWA requirements for standards and enforcement for effluent limitations necessary to meet water quality standards (33 U.S.C. 1311(b)(1)(C)).

To date the San Diego Water Board and the Copermittees have identified overspray and drainage from potable and reclaimed water landscape irrigation as a substantial source and conveyance mechanism for pollutants into waters of the United States. Several municipalities throughout the San Diego Region (e.g., cities and counties of Orange County and San Diego County) have reported and/or identified runoff originating from landscape irrigation as potential sources of dry weather flows conveying pollutants into their MS4s. This is also supported by legislation (Assembly Bill 1881) recently enacted by the State of California, which has identified runoff resulting from over irrigation not only as a waste of water resources, but also as a source of pollutants to the state's waterways.

Irrigation runoff into the MS4, as identified by the San Diego Water Board and the Copermittees, is a source of pollutants to waters of the United States, and is required to be *addressed* (emphasis added) as an illicit discharge per 40 CFR 122.26(d)(2)(iv)(B)(1) by prohibition through implementing and enforcing an ordinance, order or similar means. The San Diego Water Board and the Copermittees have identified irrigation water as a source of pollutants and conveyance of pollutants to waters of the United States, when

applied improperly in excess and thereafter entering the MS4, in the following documents:

- The Cities and County of Riverside "Only Rain in the Storm Drain" Pollution Prevention Program identifies runoff from irrigation as a source of pollutants to waters of the United States in the following documents:

    1) The Landscape and Garden public education brochure states:

    "Soil, yard wastes, over-watering [emphasis added] *and garden chemicals become part of the urban runoff mix that winds it way through streets, gutters and storm drains before entering lakes, rivers, streams, etc."*

    2) In a survey distributed at public outreach events,[80] the answer to the question about where lawn irrigation water goes states:

    "Water that leaves your lawn from irrigation…can pick up motor oil and grease from vehicles, excess fertilizer from your lawn, bacteria from pet waste, and excess pesticides from your yard. These pollutants can be carried down streets and storm drains directly to our streams, lakes and rivers without treatment!"

- In 2006, the State Water Board allocated Grant funding to the **SmartTimer/Edgescape Evaluation Program (SEEP)**. The project targets irrigation runoff by retrofitting existing development and documenting the conservation and runoff improvements. The Grant Application states that:

    "*Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators.*"

    Furthermore, the grant application states:

    "*Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the San Diego Basin Plan and Bacteria TMDL over the long term.*"

    This is reinforced in the project descriptions and objectives:

    "*Elevated dry-weather storm drain flows, composed primarily … of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California's*

[80] A copy of the survey was provided in the Riverside County Copermittees' Report of Waste Discharge, dated January 15, 2009, page 39.

urbanized coastline. Storm drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and warm, unseasonal contaminated freshwater plumes in the near-shore marine environment".

The basis of this grant project is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, they indicate that this alteration of natural flows is impacting the Beneficial Uses of Waters of the State and U.S. The results of this study can be applied broadly to any area where over-irrigation takes place, including Riverside County. Preliminary results from the study indicate that that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 *is* a source and conveyance of pollutants.

- Several municipalities in the San Diego Region have identified runoff from irrigation as a source of pollutants to waters of the United States in the following documents:

  1) The **Watershed Action Plan Annual Report**(s) for the 2006-2007 reporting period was submitted by the County of Orange, Orange County Flood Control District and Copermittees within the San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds. San Juan Creek, Laguna Coastal Streams, Aliso Creek and Dana Point Coastal Streams are all currently 303(d) listed as impaired for Indicator Bacteria within their watersheds and/or in the Pacific Ocean at the discharge points of their watersheds. The Orange County Copermittees, within their Watershed Action Strategy Table for Fecal Indicator Bacteria:

     "*Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the [...] watershed. Dry weather flow is the transport medium for bacteria and other 303(d) constituents of concern*". Additionally, they state that "*conditions in the MS4 contribute to high seasonal bacteria propagation in-pipe during warm weather. Landscape irrigation is a major contributor to dry weather flow, both as surface runoff due to over-irrigation and overspray onto pavements; and as subsurface seepage that finds its way into the MS4.*"

  2) The **Carlsbad Watershed Urban Runoff Management Program (WURMP) Fiscal Year 2008 Annual Report** was submitted by the Carlsbad Watershed Copermittees (Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, and the County of San Diego). In the WUMRP Annual Report, the Carlsbad

Watershed Copermittees stated the following:

"The Carlsbad Watershed Management Area (WMA) collective watershed strategy identifies bacteria, sediment, and nutrients as high priority water quality pollutants in the Agua Hedionda (904.3 – bacteria and sediment), Buena Vista (904.2 – bacteria), and San Marcos Creek (904.5 – nutrients) Hydrologic Areas. Bacteria, sediment, and nutrients have been identified as potential discharges from over-irrigation."

3) The **San Diego Bay Watershed Urban Runoff Management Program (WURMP) 2007-2008 Annual Report** was submitted by the San Diego Bay Watershed Copermittees (Cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego, the County of San Diego, the Port of San Diego, and the San Diego County Airport Authority). In Appendix D of the WUMRP Annual Report, titled Likely Sources of Pollutants, the San Diego Bay Watershed Copermittees identified over-irrigation of lawns as a pollutant generating activity from business and/or residential land uses for bacteria, pesticides, and sediment.

Within the reports above, municipalities throughout San Diego and Orange counties have acknowledged that runoff from over-irrigation is a potential or likely source of several types of pollutants to waters of the United States. Because there are landscaped areas in Riverside County that receive irrigation similar to San Diego and Orange counties, runoff from over-irrigation is also a likely source of pollutants to waters of the United States in Riverside County.

- There is statewide recognition of the pollution caused by over-irrigation, and current legislation already requires cities and counties to prohibit over-irrigation. On September 28, 2006 Governor Arnold Schwarzenegger approved Assembly Bill 1881, The Water Conservation in Landscaping Act (AB 1881, Laird). The act requires cities, counties, and charter cities and charter counties, to adopt landscape water conservation ordinances by January 1, 2010. Additionally, the law required the Department of Water Resources (DWR) to prepare a Model Water Efficient Landscape Ordinance for use by local agencies. The Water Efficient Landscape Ordinance was approved by the Office of Administrative Law on September 10, 2009. All local agencies were required to adopt a water efficient landscape ordinance by January 1, 2010. Local agencies could adopt the Water Efficient Landscape Ordinance developed by DWR, or an ordinance considered at least as effective as the Model Ordinance. The Water Efficient Landscape Ordinance includes a requirement that local agencies prohibit runoff from irrigation (§ 493.2):

  "(a) Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff *[emphasis added] from leaving the target landscape due to low head drainage, overspray, or other*

similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures. Penalties for violation of these prohibitions shall be established locally."

- On October 08, 2009, the State of California Department of Water Resources issued a letter to all cities and counties within the State of California giving reminder of required adoption of the Water Efficient Landscape Ordinance. The letter states that:

  "Other benefits include reduced irrigation runoff, reduced pollution of waterways, drought resistance, and less green waste."

- On December 18, 2009, the San Diego Water Board adopted Order No. R9-2009-0002, the fourth-term Orange County permit, which found that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. Landscape irrigation, irrigation water, and lawn watering were categories removed from the list of non-storm water discharges not prohibited to be discharged into the MS4.

D. Runoff Management Programs

Finding D.1.a. This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in storm water to the MEP. However, since MEP is a dynamic performance standard, which evolves over time as runoff management knowledge increases, the Copermittees' runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of runoff management program implementation is expected to ultimately achieve compliance with water quality standards in the Region.

Discussion of Finding D.1.a. Under CWA section 402(p), municipalities are required to reduce the discharge of storm water pollutants from their MS4s to the maximum extent practicable (MEP). MEP is the critical technology-based performance standard that municipalities must attain. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling storm water runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of storm water pollutants to the MEP requires Copermittees to assess each program component and revise activities, control measures, best management practices (BMPs), and measurable goals, as necessary to meet MEP.

To achieve the MEP standard, municipalities must employ whatever BMPs are technically feasible (i.e. are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing storm water pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive. In selecting BMPs to achieve the MEP standard, the following factors may be useful to consider:

1. Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?
2. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?
3. Public Acceptance: Does the BMP have public support?
4. Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?
5. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?

If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive BMPs, it is likely that MEP has not been met. On the other hand, if a municipal discharger employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost is prohibitive, it

would have met the standard. Where a choice may be made between two BMPs that should provide generally comparable effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs that would address a pollutant source, or to pick a BMP based solely on cost, which would be clearly less effective. In selecting BMPs the municipality must make a serious attempt to comply and practical solutions may not be easily dismissed. In any case, the burden is on the municipal discharger to comply with its permit. After selecting BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented.[81]

A definition of MEP is not provided in either the federal statute or in the federal regulations. The final determination regarding whether a municipality has reduced storm water pollutants to the MEP can only be made by the San Diego Water Board or the State Water Board, and not by the municipal discharger. While the San Diego Water Board or the State Water Board ultimately define MEP, it is the responsibility of the Copermittees to initially propose actions that implement BMPs to reduce storm water pollution to the MEP. In other words, the Copermittees' runoff management programs to be developed under the Order are the Copermittees' proposals of MEP. Their total collective and individual activities conducted pursuant to their runoff management programs become their proposal for MEP as it applies both to their overall effort, as well as to specific activities. The Order provides a minimum framework to guide the Copermittees in meeting the MEP standard for storm water.

It is the San Diego Water Board's responsibility to evaluate the proposed programs and specific BMPs to determine what constitutes MEP, using the above guidance and the court's 1994 decision in NRDC v. California Department of Transportation, Federal District Court, Central District of California. The federal court stated that a Copermittee must evaluate and implement BMPs except where (1) other effective BMPs will achieve greater or substantially similar pollution control benefits; (2) the BMP is not technically feasible; or (3) the cost of BMP implementation greatly outweighs the pollution control benefits. In the absence of a proposal acceptable to the San Diego Water Board, the San Diego Water Board will define MEP by requiring implementation of additional measures by the Copermittees.

The Copermittees' continual evolution in meeting the MEP standard is expected to achieve compliance with water quality standards. USEPA has consistently supported this expectation. In its Interim Permitting Approach for Water Quality-Based Effluent Limitations (WQBELs) in Storm Water Permits, USEPA states "the interim permitting approach uses best management practices (BMPs) in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for attainment of water quality standards."[82] USEPA reiterated its position in 1999, when it stated regarding the Phase II municipal storm water regulations that "successive iterations of the mix of BMPs and measurable goals will be driven by the objective of assuring maintenance of water quality standards" and "EPA anticipates

[81] State Water Board, 1993. Memo Entitled Definition of Maximum Extent Practicable.
[82] Federal Register / Vol. 61, No. 166 / August 26, 1996 / P. 43761.

that a permit for a regulated small MS4 operator implementing BMPs to satisfy the six minimum control measures will be sufficiently stringent to protect water quality, including water quality standards [...]."[83]

The requirements of the Order are expected to achieve compliance with receiving water quality standards. The approach to be used is the continual assessment, revision, and improvement of Copermittee best management practice implementation. This approach is consistent with the CWA and State Water Board guidance. In Defenders of Wildlife v. Browner (1999, 197 F. 3d 1035), the United States Court of Appeals for the Ninth Circuit states: "Under 33 U.S.C. section 1342 (p)(3)(B)(iii), the EPA's choice to include either management practices or numeric limitations in the permits was within its discretion." In addition, the approach is consistent with State Water Board Order WQ 99-05, which outlines an iterative approach for achieving compliance with water quality standards.

Finding D.1.b. The Copermittees have generally been implementing the Jurisdictional Runoff Management Programs (JRMPs) required pursuant to Order No. R9-2004-001 since July 14, 2005. Prior to that, the Copermittees were regulated by Order No. 98-02 since May 13, 1998. MS4 discharges, however, continue to cause or contribute to violations of water quality standards as evidenced by the Copermittees' monitoring results.[84]

Discussion of Finding D.1.b. In response to Order No. R9-2004-001, the Copermittees have developed their runoff management programs. In order to implement the plans, the Copermittees have, among other things, developed BMP requirements, improved inter- and intra-governmental coordination, improved training programs, improved illicit discharge detection procedures, and improved their monitoring efforts. Although the programmatic improvements have led to better implementation of BMPs, the Copermittees' monitoring data demonstrate that additional or revised BMPs are necessary to prevent discharges from MS4s from causing and contributing to violations of water quality standards. A discussion of data collected by the Copermittees is included in the discussion for Finding C.9.

Finding D.1.c. This Order contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in storm water runoff to the MEP and achieve water quality standards. Some of the new or modified requirements, such as the revised Watershed Water Quality Workplan (Watershed Workplan) section, are designed to specifically address these high priority water quality problems. Other requirements, such as for unpaved roads, are a result of San Diego Water Board's identification of water quality problems through investigations and complaints during the previous permit period. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other San Diego Water Board compliance assessment activities.

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[83] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68753-68754.
[84] County of Riverside, 2009. Riverside County Municipal Copermittees 2008-09 Annual Storm Water Program Report, Section 11..

Additional changes in the monitoring program provide consistency with the Code of Federal Regulations, USEPA guidance, State Water Board guidance, and the Southern California Monitoring Coalition recommendations.

Discussion of Finding D.1.c. The Copermittees are required to update and expand their runoff management programs on jurisdictional and watershed levels in order to improve their efforts to reduce the contribution of storm water pollutants in runoff to the MEP and meet water quality standards. Changes to Order No. R9-2004-001's requirements have been made to help ensure these two standards are achieved by the Copermittees.

The Orders' jurisdictional requirements have changed based on findings by the San Diego Water Board during typical compliance assurance activities, audits, or receipt of complaints.[85] Where the audits found common implementation problems, requirements have been altered to better ensure compliance. In addition, the San Diego Water Board conducted reviews of the jurisdictional annual reports submitted by the Copermittees. Updates to the requirements for the Copermittees' programs are also based in part on information found in the Copermittees' ROWD,[86] requirements that were included in the San Diego and Orange County MS4 permits, and discussions with the Riverside County Copermittees.

To better focus on attainment of water quality standards, the Order's jurisdictional and watershed requirements have been improved. The conditions of the receiving waters now drive management actions, which in turn focus diminishing resources on the highest priority water quality problems within the receiving waters in the watershed. Improvements to jurisdictional and watershed requirements were also made to facilitate a mutually clear understanding of the requirements between the San Diego Water Board and Copermittees.

During the previous permit period, the San Diego Water Board identified, through investigations and complaints, sediment discharges from unpaved roads as a significant source of water quality problems in the Riverside County portion of the San Diego Region. Enforcement and inspection activities conducted by the San Diego Water Board during the previous permit term have found a lack of source control for many unpaved roads within the jurisdiction of the Copermittees. Unpaved roads are a source of sediment that can be discharged in runoff to receiving waters, especially during storm events. Erosion of unpaved roadways occurs when soil particles are loosened and carried away from the roadway base, ditch, or road bank by water, wind, traffic, or other transport means. Exposed soils, high runoff velocities and volumes, sandy or silty soil types, and poor compaction increase the potential for erosion.

Road construction, culvert installation, and other maintenance activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff

[85] Audit reports, report reviews, and inspection reports are available for review at the San Diego Water Board office.
[86] All significant changes made to the Order's requirements are described and explained in detail in Fact Sheet section IX.

and thereby erosion and the release of sediment. Poorly designed roads can act as preferential drainage pathways that carry runoff and sediment into natural streams, impacting water quality. In addition, other public works activities along unpaved roads have the potential to significantly affect sediment discharge and transport within streams and other waterways, which can degrade the beneficial uses of those waterways.

USEPA also recognizes that discharges from unpaved roads are a threat to water quality. USEPA guidance[87] emphasizes the threat of unpaved roads to water quality:

> "*Dirt and gravel roads are a major potential source of these pollutants [sediment] and pollutants that bind to sediment such as oils, nutrients, pesticides, herbicides, and other toxic substances]. Many roads have unstable surfaces and bases. Roads act like dams, concentrating flows that accelerate erosion of road materials and roadsides. Both unstable surfaces and accelerated erosion then lead to sediment and dust.*"

There are several guidance documents, developed by the USEPA,[88] the US Forest Service,[89] the University of California,[90] and others, that include design and construction specifications and BMPs that are readily available for implementation by private and public entities. Implementing design and other source control BMPs for unpaved roads in the region is necessary to reduce and minimize the impacts of sediment discharged during storm events from unpaved roads to the MS4s and receiving waters.

Finding D.1.d. Updated individual Storm Water Management Plans (individual SWMPs or JRMPs) and Watershed Stormwater Management Plans (watershed SWMPs or Watershed Workplans), which, together with references in the DAMP, describe the Copermittees' runoff management programs in their entirety, are needed to guide the Copermittees' runoff management efforts and aid the Copermittees in tracking runoff management program implementation. Hereinafter, the individual SWMP is referred to as the JRMPs and the Watershed SWMP is referred to as the Watershed Workplan. It is practicable for the Copermittees to update the JRMPs and Watershed Workplans within the timeframe specified in this Order, since significant efforts to develop these programs have already occurred.

Discussion of Finding D.1.d. Development of runoff management plans is a crucial runoff management measure and should be considered a BMP. The plans help organize and focus the Copermittees' programs and guide their implementation. In its statewide assessment report to USEPA Region IX and the State Water Board, Tetra

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[87] USEPA 2006 "Environmentally Sensitive Maintenance for Dirt and Gravel Roads." Gesford and Anderson, USEPA-PA-2005.
[88] Ibid.
[89] US Forest Service, 1996. Forest Service Specifications for Construction of Roads & Bridges. EM-7720-100. Revised August 1996.
[90] University of California Division of Agriculture and Natural Resources, 2007. Rural Roads: A Construction and Maintenance Guide of California Landowners. Publication 8262.

Tech, Inc. concluded that the lack of a master storm water planning document must be considered a serious program deficiency[91]. When submitted to the San Diego Water Board, the plans provide useful correspondence between the Copermittees and the San Diego Water Board. The Plans also become available for review by the public, and thus facilitate public participation in runoff management decisions. Finally, while development and submittal of runoff management plans are not necessary to ensure compliance of the Copermittees' runoff management programs with the Order, the San Diego Water Board is provided with a means to track Copermittee implementation.

The focus of the Order is on development and implementation of storm water programs which meet MEP, rather than creation of Copermittee plans which exhibit MEP. While the Order does not rely upon the plans to ensure MEP and other standards are achieved, the plans still serve a useful purpose. As stated above, the plans serve to organize the Copermittees' efforts to address runoff. As a practical matter, any program of the size required by the Order should be documented in writing. This serves to guide implementation of the program by the numerous individuals responsible for program implementation.

Runoff management plans are not necessary for ensuring compliance with the Order because the Order itself contains sufficient detailed requirements to ensure that compliance with discharge prohibitions, receiving water limitations, and the narrative standard of MEP for storm water are achieved. Implementation by the Copermittees of programs in compliance with the Order's requirements, prohibitions, and receiving water limitations is the pertinent compliance standard to be used under the Order, as opposed to assessing compliance by reviewing the Copermittees' implementation of their plans alone. The San Diego Water Board ensures compliance with the Order by reviewing annual reports, conducting inspections, performing audits, and through other general program oversight.

Runoff management plans are particularly important and useful for municipalities when program implementation is spread across several departments and/or when municipalities experience staff turnover.[92] Each Copermittee relies on multiple employees or contractors for program implementation, but the spread of responsibility varies among Copermittees.[93] Written jurisdictional plans ensure appropriate coordination within each municipality.

Copermittees' runoff management plans are simply descriptions of their runoff management programs required under the Order. These plans serve as procedural correspondence which guides program implementation and aids the Copermittees and San Diego Water Board in tracking implementation of the programs. In this manner,

[91] Tetra Tech, Inc. 2006. *Assessment Report on Tetra Tech's Support of California's MS4 Stormwater Program.* Produced for USEPA Region IX and the California State and Regional Water Quality Control Boards.
[92] Tetra Tech, Inc. 2005. Program Evaluation Report. Orange County Storm Water Program: Cities of Laguna Beach, Laguna Hills, Lake Forest, and Rancho Santa Margarita.
[93] Responsible departments and employees are described in the 2005-06 Annual Reports for the MS4 programs.

the plans are not functional equivalents of the Order. For these reasons, the Copermittees' runoff management plans need not be an enforceable part of the Order.

The Copermittees' plans and programs can be updated on or before June 30, 2012 because much of their plans and programs are already in existence. In fact, many parts of their plans and programs have been in place for 15 years. Moreover, the adoption of Order No. R9-2004-001 required a larger scale reorganization of the Copermittees' programs than Order No. R9-2010-0016, but also only allowed one year for program updates. The Copermittees were generally able to meet the time schedule required under Order No. R9-2004-001. After discussions with the Copermittees, based on the timing of the adoption of the Order and the Copermittee's fiscal planning cycles, in conjunction with consideration for the current economic conditions, the San Diego Water Board agreed that additional time to update the Copermittees' plans and programs may be warranted. Thus, the Copermittees must update their plans and programs on or before June 30, 2012, which provides the Copermittees over 18 months, instead of 1 year, to update their plans and programs.

Finding D.1.e. Pollutants can be effectively reduced in storm water runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants that have been mobilized by wet-weather or dry-weather flows.

Discussion of Finding D.1.e. The State Water Board finds in its Order WQ 98-01 that BMPs are effective in reducing pollutants in storm water runoff, stating that "implementation of BMPs [is] generally the most appropriate form of effluent limitations when designed to satisfy technology requirements, including reduction of pollutants to the maximum extent practicable." A State Water Board TAC further supports this finding by recommending "that nonpoint source pollution control can be accomplished most effectively by giving priority to [BMPs] in the following order:

1. Pollution Prevention – implementation of practices that use or promote pollution free alternatives;
2. Source Control – implementation of control measures that focus on preventing or minimizing urban runoff from contacting pollution sources;
3. Treatment Control – implementation of practices that require treatment of polluted runoff either onsite or offsite."[94]

Pollution prevention, the reduction or elimination of pollutant generation at its source, is an essential aspect of BMP implementation. Fewer pollutants are available to be washed from developed areas when the generation of pollutants by activities is limited.

[94] State Water Board, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

Thus, pollutant loads in storm water discharges are reduced from these areas. In addition, there is no need to control or treat pollutants that are never generated. Furthermore, pollution prevention BMPs are generally more cost effective than removal of pollutants by treatment facilities or cleanup of contaminated media.[95,96]

In the Pollution Prevention Act of 1990, Congress established a national policy that emphasizes pollution prevention over control and treatment. CWC section 13263.3(a) also supports pollution prevention, stating "The Legislature finds and declares that pollution prevention should be the first step in a hierarchy for reducing pollution and managing wastes, and to achieve environmental stewardship for society. The Legislature also finds and declares that pollution prevention is necessary to support the federal goal of zero discharge of pollutants into navigable waters." Finally, the Basin Plan also supports this finding by stating "To eliminate pollutants in storm water, one can either clean it up by removing pollutants or prevent it from becoming polluted in the first place. Because of the overwhelming volume of storm water and the enormous costs associated with pollutant removal, pollution prevention is the only approach that makes sense."[97]

USEPA also supports the utilization of a combination of BMPs to address pollutants in runoff. For example, USEPA has found there has been success in addressing illicit discharge related problems through BMP initiatives like storm drain stenciling and recycling programs, including household hazardous waste special collection days.[98] Structural BMP performance data has also been compiled and summarized by USEPA.[99]

The summary provides the performance ranges of various types of structural BMPs for removing suspended solids, nutrients, pathogens, and metals from storm water flows. These pollutants are generally a concern in storm water in the San Diego Region and Riverside County. For suspended solids, the least effective structural BMP type was found to remove 30-65 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load. For nutrients, the least effective structural BMP type was found to remove 15-45 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load. For pathogens, the least effective structural BMP type was found to remove <30 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load. For metals, the least effective structural BMP type was found to

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[95] Devinny, J.S. et al. 2004. *Alternative Approaches to Stormwater Quality Control.* Prepared for the Los Angeles Regional Water Quality Control Board. Found as Appendix H to *NPDES Stormwater Cost Survey.* Prepared for the California State Water Resources Control Board by the Office of Water Programs California State University, Sacramento. Available on-line at: http://www.owp.csus.edu/research/npdes/

[96] Schueler, T.R.., 2000. Center for Watershed Protection. Assessing the Potential for Urban Watershed Restoration, Article 142.

[97] San Diego Water Board, 1994. Water Quality Control Plan, San Diego Basin, Region 9.

[98] USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System-Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges. 64 FR 68728.

[99] USEPA, 1999. Preliminary Data Summary of Urban Storm Water Best Management Practices. EPA 821-R-99-012.

remove 15-45 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load.

It is important to note that the CWA and NPDES federal regulations clearly require control of discharges into the MS4. CWA section 402(p)(3)(B)(ii) states that MS4 permits must "prohibit non-storm water discharges into the storm sewers." 40 CFR 122.26(d)(2)(iv)(B) requires Copermittees to "detect and remove [...] illicit discharges and improper disposal into the storm sewer." See Finding C.14 and Discussion.

The Order's approach to regulating discharges into and from the MS4 is in accordance with State Water Board Order WQ 2001-15. In that order, the State Water Board reviewed the San Diego County permit (Order No. 2001-01) requirements and made one change to one prohibition.[100] The Order upheld all other requirements of the current permit. Order No. R9-2010-0016 incorporates the one change made by the State Water Board, and continues the approach of Order No. 2001-01 (the basis for the current permit), as it was upheld by the State Water Board in Order WQ 2001-15. State Water Board Order WQ 2001-15 supports such requirements, stating: "It is important to emphasize that dischargers into MS4s continue to be required to implement a full range of BMPs, including source control."

The Court of Appeals, Fourth Appellate District, found that the current permit's approach to regulation of discharges into the MS4 was appropriate. Since the Order utilizes the same approach, the court decision supports the Order's requirements.

Finding D.1.f. Runoff needs to be addressed during the three major phases of urban development (planning, construction, and use) in order to reduce the discharge of storm water pollutants to the MEP, effectively prohibit non-storm water discharges and protect receiving waters. Development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can negatively impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development generates substantial pollutant loads which are discharged in runoff to receiving waters.

Discussion of Finding D.1.f. MS4 permits are issued to municipalities because of their land use authority. The ultimate responsibility for the pollutant discharges, increased runoff, and inevitable long-term water quality degradation that results from development lies with local governments. This responsibility is based on the fact that it is the local governments that have authorized the development (i.e. conversion of natural pervious ground cover to impervious surfaces) and the land uses that generate the pollutants and runoff. Furthermore, the MS4 through which the pollutants and

[100] The State Water Board removed the prohibition of discharges *into* the MS4 that cause or contribute to exceedances of water quality objectives. The revision allows for treatment of storm water flows once the pollutants have entered the MS4. It does not affect the effective prohibition on certain dry-weather flows into the MS4 that is required by the Clean Water Act.

increased flows are conveyed, and ultimately discharged into natural receiving waters, are owned and operated by the same local governments. In summary, the Copermittees under the Order are responsible for discharges into and out of their MS4s because (1) they own and operate the MS4; and (2) they have the legal authority that authorizes the very development and land uses with generate the pollutants and increased flows in the first place.

For example, since grading cannot commence prior to the issuance of a local grading permit, the Copermittees have a built-in mechanism to ensure that all grading activities are protective of receiving water quality. The Copermittee has the authority to withhold issuance of the grading permit until the project proponent has demonstrated to the satisfaction of the Copermittee that the project will not violate their ordinances or cause the Copermittee to be in violation of its MS4 permit. Since the Copermittee will ultimately be held responsible for any discharges from the grading project by the San Diego Water Board, the Copermittee will want to use its own permitting authority to ensure that whatever measures the Copermittee deems necessary to protect discharges into its MS4 are in fact taken by the project proponent.

The Order holds the local government accountable for this direct link between its land use decisions and water quality degradation. The Order recognizes that each of the three major stages in the development process (development planning, construction, and the use or operational stage) are controlled by and must be authorized by the local government. Accordingly, this permit requires the local government to implement, or require others to implement, appropriate best management practices to reduce storm water pollutant discharges and increased flow during each of the three stages of development.

Including plans for BMP implementation during the design phase of new development and redevelopment offers the most cost effective strategy to reduce storm water runoff pollutant loads to surface waters.[101] The Phase II regulations for small municipalities reflect the necessity of addressing runoff during the early planning phase. Due to the greater water quality concerns generally experienced by larger municipalities, Phase II requirements for small municipalities are also applicable to larger municipalities such as the Copermittees. The Phase II regulations direct municipalities to develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale. The program must ensure that controls are in place that would prevent or minimize water quality impacts. This includes developing and implementing strategies which include a combination of structural and/or non-structural BMPs appropriate to the locality. The program must also ensure the adequate long-term operation and maintenance of BMPs.[102] USEPA expands on the Phase II regulations for urban development when it recommends that Copermittees:

[101] USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.
[102] USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System-Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. 64 FR 68845.

> "Adopt a planning process that identifies the municipality's program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures. In developing your program, you should consider assessing existing ordinances, policies, programs and studies that address storm water runoff quality."

Management of storm water runoff during the construction phase is also essential. USEPA explains in the preamble to the Phase II regulations that storm water discharges generated during construction activities can cause an array of physical, chemical, and biological water quality impacts. Specifically, the biological, chemical and physical integrity of the waters may become severely compromised due to runoff from construction sites. Fine sediment from construction sites can adversely affect aquatic ecosystems by reducing light penetration, impeding sight-feeding, smothering benthic organisms, abrading gills and other sensitive structures, reducing habitat by clogging interstitial spaces within the streambed, and reducing intergravel dissolved oxygen by reducing the permeability of the bed material. Water quality impairment also results, in part, because a number of pollutants are preferentially absorbed onto mineral or organic particles found in fine sediment. The interconnected process of erosion (detachment of the soil particles), sediment transport, and delivery is the primary pathway for introducing key pollutants, such as nutrients, metals, and organic compounds into aquatic systems.[103]

Finally, storm water and non-storm water runoff from existing development must be addressed. The Copermittees' monitoring data exhibits that significant water quality problems exist in receiving waters which receive runoff from areas with extensive existing development, such as Aliso Creek. Source identification, BMP requirements, inspections, and enforcement are all important measures which can be implemented to address runoff from existing development. USEPA supports inspections and enforcement by municipalities when it states "Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations. Enforcement mechanisms [...] also must be described."[104]

Finding D.1.g. Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs.

[103] Ibid., 64 FR 68728.
[104] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

Discussion of Finding D.1.g. The annual reporting requirements are consistent with federal NPDES regulation 40 CFR 122.41, which states:

> "The operator of a large or medium municipal separate storm sewer system of a municipal separate storm sewer system that has been designated by the Director under section 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such a system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition, Such proposed changes shall be consistent with § 122.26(d)(2)iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and (7) Identification of water quality improvements or degradation."

CWC section 13267 provides that "the regional board may require that any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires."

The San Diego Water Board must assess the reports to ensure that the Copermittees' programs are adequate to assess and address water quality. The reporting requirements can also be useful tools for the Copermittees to review, update, or revise their programs. Areas or issues which have received insufficient efforts can also be identified and improved.

Finding D.1.h. This Order establishes Storm Water Action Levels (SALs) for selected pollutants based on USEPA Rain Zone 6 (arid southwest) Phase I MS4 monitoring data for pollutants in storm water. The SALs were computed as the 90th percentile of the data set, utilizing the statistical based population approach, one of three approaches recommended by the State Water Board's Storm Water Panel in its report, 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). SALs are identified in section D of this Order. Copermittees must implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water from the permitted areas so as not to exceed the SALs. Exceedance of SALs may indicate inadequacy of programmatic measures and BMPs required in this Order.

Discussion of Finding D.1.h. Section 402(p) of the CWA states MS4 permits for storm water shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. This includes requiring numeric effluent limitations for storm water.

SALs are not numeric effluent limitations, which is reflected in language which clarifies an excursion above a SAL does not create a presumption that MEP is not being met. Instead, a SAL exceedance is to be used by the Copermittee as an indication that the MS4 storm water discharge point is a definitive "bad actor," and the result from the monitoring needs to be considered as part of the iterative process for reducing pollutants in storm water to the MEP.

The CWA defines effluent limitations as:

> "Any restriction imposed by the Director on quantities, discharge rates, and concentrations of pollutants which are "discharged" from "point sources" into "waters of the United States"..." A SAL is not a restriction on a quantity, rate or concentration, but is a level at which actions that further reduce pollutants from that discharge point need to be evaluated in order to reduce storm water pollutants to the MEP. Thus, SALs are not effluent limitations as defined by the CWC or CWA.

The approach of using "action levels" is consistent with recommendations made by USEPA in their Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, dated August 26, 1996:

> "Under the Clean Water Act (CWA) and NPDES regulations, permitting authorities may employ a variety of conditions and limitations in storm water permits, including best management practices, performance objectives, narrative conditions, monitoring triggers, action levels (e.g., monitoring benchmarks, toxicity reduction evaluation action levels), etc., as the necessary water-quality based limitations, where numeric water quality based effluent limitations are determined to be unnecessary or infeasible". As such, these action levels are not considered numeric water quality-based effluent limitations.

It should be noted that a purpose of monitoring, required under this and previous Orders, is to aid in the evaluation of implemented programs and BMPs in reducing pollutants in storm water discharges to the MEP. The Monitoring and Reporting Program states:

This Receiving Waters Monitoring and Reporting Program is intended to meet the following goals:

2. Measure and improve the effectiveness of the Copermittees' runoff management programs;
3. Assess the chemical, physical, and biological impacts to receiving waters resulting from MS4 discharges;
4. Characterize storm water discharges;
5. Identify sources of specific pollutants;
6. Prioritize drainage and sub-drainage areas that need management actions; and
9. Provide information to implement required BMP improvements.

Since the first permit (adopted 20 years ago), Copermittees have utilized non-numerical limitations (BMPs) to control and abate the discharge of any pollutants in storm water discharges to the MEP. Copermittees have been accorded 20 years to research, develop, and deploy BMPs that are capable of reducing storm water discharges from the MS4 to levels represented in SALs. Storm Water Action Levels are set at such a level that any exceedance of a SAL will clearly indicate BMPs being implemented are insufficient to protect the Beneficial Uses of waters of the State. Copermittee shall utilize the exceedance information as a high priority consideration when adjusting and executing annual work plans, as required by this Permit. Failure to appropriately consider and react to SAL exceedances in an iterative manner creates a presumption that the Copermittee(s) have not complied to the MEP.

SALs have been developed utilizing Phase I storm water effluent data (updated February 2008, http://rpitt.eng.ua.edu/Research/ms4/mainms4.shtml) from the arid west region (USEPA Rain Zone 6). USEPA Rainfall Zone 6, which includes MS4 effluent data from Orange, San Diego, Los Angeles, Ventura and San Bernadino County. The approach taken to derive SALs is a straightforward percentile approach, with the SAL being set as the 90th percentile of the dataset for each constituent. This approach is consistent with the 2006 State Water Board Panel Report:

> "The statistically based population approach would once again rely on the average distribution of measured water quality values developed from many water quality samples taken for many events at many locations. In this case, however, the Action Level would be defined by the central tendency and variance estimates from the population data. For example, the Action Level could be set as two standard deviations above the mean, i.e. if measured concentrations are consistently higher than two standard deviations above the mean, an Action Level would be triggered. Other population based measures of central tendency could be used (i.e. geometric mean, median, etc.) or estimates of variance (i.e. prediction intervals, etc.). Regardless of which population based estimators are used (or percentile from above), the idea would be to identify the [statistically derived] point at which managers feel concentrations are significantly beyond the norm."

SALs are measurable criteria which quantify the performance of BMPs for a particular watershed or subwatershed that discharges storm water MS4 effluent from that particular discharge point. Thus, Copermittees can utilize SAL results to determine the effectiveness BMPs on the effluent from a particular area of the MS4.

SALs represent the lowest 10 percent of pollutant reduction for USEPA Rain Zone 6 MS4 Phase I programs discharging to waters of the United States. For the past 20 years, Copermittees have utilized non-numerical limitations (BMPs) to control and abate the discharge of any pollutants in storm water discharges to the MEP. Copermittees have been accorded 20 years to research, develop, and deploy BMPs that are capable of reducing storm water discharges from the MS4 to levels represented in SALs. Storm Water Action Levels are set at such a level that any exceedance of a SAL will indicate to the Copermittee(s) that the discharge is within the lowest 10% of monitored outfalls. Therefore, an exceedance of a SAL warrants priority consideration within the Copermittee iterative process.

Finding D.2.a. The Standard Storm Water Mitigation Plan (SSMP) requirements contained in this Order are consistent with Order WQ 2000-11 adopted by the State Water Board on October 5, 2000. In the precedential order, the State Water Board found that the design standards, which essentially require that runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the SSMP requirements are appropriately applied to the majority of the Priority Development Project categories that are also contained in section F.1 of this Order. The State Water Board also gave California Regional Water Quality Control Boards (Regional Water Boards) the needed discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in SSMPs.

Discussion of Finding D.2.a. The post-construction requirements and design standards contained in the SSMP section of Order No. R9-2010-0016 constitute MEP consistent with State Water Board guidance, court decisions, and San Diego Water Board requirements. The State Water Board and San Diego Water Board have made several recent decisions in regards to inclusion of SSMP requirements in MS4 permits. In a precedential decision, State Water Board Order WQ 2000-11, the State Water Board found that the SSMP provisions constitute MEP for addressing storm water pollutant discharges resulting from Priority Development Projects. The provisions of the SSMP section of the Order are also consistent with those previously issued by the San Diego Water Board for Riverside County (Order No. R9-2004-001), Southern Orange County (Order Nos. R9-2002-0001 and R9-2009-0002) and San Diego County (Order Nos. R9-2001-01 and R9-2007-0001), as well as requirements in the Los Angeles County MS4 permit (Order No. R4-2001-182). In State Water Board Order WQ 2001-15, the State Water Board reaffirmed that SSMP requirements constitute MEP. Moreover, the SSMP requirements of the San Diego County MS4 permit (Order No. R9-2001-01) were upheld when the California State Supreme Court declined to hear the matter on appeal.

Finding D.2.b. Controlling runoff pollution by using a combination of onsite source control and site design BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events; (2) Whereas, onsite source control BMPs can be applied during all runoff conditions end-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the pollutant source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.

Discussion of Finding D.2.b. Many end-of-pipe BMPs are designed for low flow conditions because their end-of-pipe location prevents them from being designed for large storm events. This results in the end-of-pipe BMPs being overwhelmed, bypassed, or ineffective during larger storm events more frequently than onsite BMPs designed for larger storms. BMPs are also frequently most effective for a particular type of pollutant (such as sediment). Such BMPs may be appropriate for small sites with a limited suite of pollutants generated; however, end-of-pipe BMPs must typically be able to address a wide range of pollutants generated by a sub-watershed, limiting their effectiveness and/or increasing costs. Moreover, the location of some end-of-pipe BMPs allow for untreated pollutants to be discharged to and degrade receiving waters prior to their reaching the BMPs. This fails to protect receiving waters, which is the purpose of BMP implementation. In addition, opportunities to educate the public regarding runoff pollution can be lost when end-of-pipe BMPs are located away from pollutant sources and out of sight. Onsite BMPs can lead to a better public understanding of runoff issues since their presence can provide a visible and/or tangible lesson in pollution prevention.

Finding D.2.c. Use of Low-Impact Development (LID) site design BMPs at new development, redevelopment and retrofit projects can be an effective means for minimizing the impact of storm water runoff discharges from the development projects on receiving waters. LID is a site design strategy with a goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques. LID site design BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of storm water runoff. Current runoff management, knowledge, practices and technology have resulted in the use of LID BMPs as an acceptable means of meeting the storm water MEP standard.

Discussion of Finding D.2.c. The CWA is the cornerstone of surface water quality protection in the United States. (The Act does not deal directly with ground water or with water quantity issues.) The statute employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways, and manage polluted runoff. These tools are employed to achieve the broader goal of

restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support the protection and propagation of fish, shellfish, wildlife and recreation in and on the water.

Increasing the volume, velocity, frequency and discharge duration of storm water runoff from developed areas will eventually greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume while simultaneously increasing impervious area. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by naturally vegetated soil. Furthermore, impervious surfaces tend to concentrate pollutants on the top of the surface that are then washed off into the MS4 and waters of the State in a concentrated manner. The use of LID site design BMPs can be an effective means of minimizing the impact of runoff discharges on receiving waters. By reducing water pollution, reducing runoff and increasing groundwater recharge, LID helps to improve the quality of receiving surface waters, stabilize the flow rates of receiving waters (preventing downstream hydromodification), reduce downstream flooding and protect and enhance water supply sources. Current runoff management, knowledge, practice and technology has resulted in the use of LID BMPs as an acceptable means of meeting the MEP standard for storm water treatment.

Current municipal codes may oppose or hinder the design, use and implementation of specific elements of LID. These codes include, but are not limited to, emergency services access requirements, building landscape ordinances, building height limits and parking space requirements. It is essential for Copermittees to work with other responsible agencies and/or update codes that have the potential to impact the use of LID.

The Local Government Commission, a non-profit organization working to build livable communities, developed a set of principles known as the *Ahwahnee Water Principles for Resource-Efficient Land Use*[105] that provide the opportunity to reduce costs and improve the reliability and quality of our water resources. Implementation of LID incorporates several of the Ahwahnee principles such as:

1. "Community Design should be compact, mixed use, walkable and transit-oriented so that urban runoff pollutants are minimized and the open lands that absorb water are preserved to the maximum extent possible."
3. "Water holding areas such as creek beds, recessed athletic fields, ponds, cisterns, and other features that serve to recharge groundwater, reduce runoff, improve water quality and decrease flooding should be incorporated into the urban landscape."
4. "All aspects of landscaping from the selection of plants to soil preparation and the installation of irrigation systems should be designed to reduce water demand, retain runoff, decrease flooding, and recharge groundwater."

[105] Local Government Commission, "The Ahwahnee Water Principles – A Blueprint for Regional Sustainability", http://water.lgc.org/Members/tony/docs/lgc_water_guide.pdf

5. "Permeable surfaces should be used for hardscape. Impervious surfaces such as driveways, streets, and parking lots should be minimized so that land is available to absorb storm water, reduce polluted urban runoff, recharge groundwater and reduce flooding."

The use of LID site design BMPs helps reduce the amount of impervious area associated with development and allows storm water to infiltrate into the soil. Natural vegetation and soil filters storm water runoff and reduces the volume and pollutant loads of storm water. Studies have revealed that the level of imperviousness resulting from development and urbanization is strongly correlated with the water quality impairment of nearby receiving waters.[106] In many cases, the impacts on receiving waters due to changes in hydrology can be more significant than those attributable to the contaminants found in storm water discharges.[107] These impacts include stream bank erosion (increased sediment load and subsequent deposition), benthic habitat degradation, and decreased diversity of macroinvertebrates. Although conventional BMPs do reduce storm water pollutant loads, they may not effectively control adverse effects from changes in the discharge hydrologic conditions.[108]

The Order includes requirements for developments to include site design BMPs that mimic or replicate the natural hydrologic cycle. Open space designs which maximize pervious surfaces and retention of "natural" drainages have been found to reduce both the costs of development and pollutant export.[109] Moreover, USEPA finds including plans for a "natural" site design and BMP implementation during the design phase of new development and redevelopment offers the most cost effective strategy to reduce storm water pollutant loads to surface waters.[110] In addition, a recent U.S. Department of Housing and Urban Development guidance document on low-impact development notes that the use of LID-based storm water management design allows land to be developed, but in a cost-effective manner that helps mitigate potential environmental impacts.[111]

Finding D.2.d. RGOs are significant sources of pollutants in storm water runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other developed areas.

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[106] USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule.
[107] Ibid.
[108] USEPA, 2000. Low-Impact Development: A literature review. EPA-841-B-00-005. 35p.
[109] Center for Watershed Protection, 2000. "The Benefits of Better Site Design in Residential Subdivisions." Watershed Protection Techniques. Vol. 3. No. 2.
[110] USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule.
[111] U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 2003. "The Practice of Low Impact Development." Prepared by: NAHB Research Center, Inc. Upper Marlboro, Maryland. Contract No. H-21314CA. 131p.

Discussion of Finding D.2.d. RGOs are included in the Order as a Priority Development Project category because RGOs produce significantly greater loadings of hydrocarbons and trace metals (including copper and zinc) than other developed areas. To meet the storm water MEP standard, source control and structural treatment BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) an average daily traffic (ADT) of 100 or more vehicles per day. These are appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of storm water runoff from RGOs on receiving waters.

This finding has been added to satisfy State Water Board Order WQ 2000-11's requirements for including RGOs as a Priority Development Category. State Water Board Order WQ 2000-11 acknowledged that a threshold (size, average daily traffic, etc.) appropriate to trigger SSMP requirements should be developed for RGOs and that specific findings regarding RGOs should be included in MS4 permits to justify the requirement.[112]

Finding D.2.e. Industrial sites are significant sources of pollutants in runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID site design, source control, and treatment control BMPs are needed at industrial sites in order to meet the MEP standard. These BMPs are necessary where the industrial site is larger than 10,000 square feet. The 10,000 square feet threshold is appropriate, since it is consistent with requirements in other Phase I NPDES storm water regulations throughout California.

Discussion of Finding D.2.e. Industrial sites can be a significant source of pollutants in storm water runoff. In an extensive review of storm water literature, the Los Angeles Water Board found widespread support for the finding that "industrial and commercial activities can also be considered hot spots as sources of pollutants." It also found that "industrial and commercial areas were likely to be the most significant pollutant source areas" of heavy metals.[113] Likewise, storm water runoff from heavy industry in the Santa Clara Valley has been found to be extremely toxic.[114] These findings are corroborated by USEPA, which states in the preamble to the 1990 Phase I NPDES storm water regulations that "Because storm water from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls for storm water discharges associated

[112] State Water Board, 2000. Order WQ 2000-11. In the Matter of the Petitions of The Cities Of Bellflower, Et Al., The City Of Arcadia, And Western States Petroleum Association Review of January 26, 2000 Action of the Regional Board And Actions and Failures to Act by both the California Regional Water Quality Control Board, Los Angeles Region and Its Executive Officer Pursuant to Order No. 96-054, Permit for Municipal Storm Water and Urban Run-Off Discharges Within Los Angeles County [NPDES NO. CAS614001] SWRCB/OCC FILES A-1280, A-1280(a) and A-1280(b)

[113] Los Angeles Water Board. 2001.

[114] Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection.

with industrial activity through their system in their storm water management program." Since heavy industrial sites can be a significant source of pollutants in runoff in a manner similar to other SSMP project categories such as commercial development or automotive repair shops, it is appropriate to include heavy industrial sites as a SSMP category in the Order.

The Phase I NPDES storm water regulations require the Copermittees to "control through ordinance, permit, contract, order, or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity" (40 CFR 122.26(d)(2)(i)). In addition, it has been established that the MEP standard for the control of storm water runoff from new development projects includes incorporation of the SSMP requirements. Since the Copermittees must both control storm water pollutants from industrial sites and meet the storm water MEP standard for new development, it is appropriate to apply the SSMP requirements to heavy industrial sites.

The State Water Board's Order WQ 2000-11 indicates that it is appropriate to apply SSMP requirements to categories of development where evidence shows the category of development can be a significant source of pollutants. As evidenced above, heavy industrial sites can be a significant source of pollutants. Therefore, the Order includes heavy industrial sites as a SSMP Priority Development Project category.

Finding D.2.f. If not properly designed or maintained, certain BMPs implemented or required by municipalities for runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). Proper BMP design and maintenance to avoid standing water, however, can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities, local vector control agencies, and the California Department of Public Health during the development and implementation of runoff management programs.

Discussion of Finding D.2.f. The implementation of certain structural BMPs or other runoff treatment systems can result in significant vector problems in the form of increased breeding or harborage habitat for mosquitoes, rodents or other potentially disease transmitting organisms. The implementation of BMPs that retain water may provide breeding habitat for a variety of mosquito species, some of which have the potential to transmit diseases such as Western Equine Encephalitis, St. Louis Encephalomyelitis, and malaria. Recent BMP implementation studies by Caltrans[115] in District 7 and District 11 have demonstrated mosquito breeding associated with some types of BMPs. The Caltrans BMP Retrofit Pilot study cited lack of maintenance and improper design as factors contributing to mosquito production. However, a Watershed Protection Techniques article describes management techniques for selecting, designing, and maintaining structural treatment BMPs to minimize mosquito

[115] Caltrans, 2000. BMP Retrofit Pilot Studies: A Preliminary Assessment of Vector Production.

production. [116] State and local runoff management programs that include structural BMPs with the potential to retain water have been implemented in Florida and the Chesapeake Bay region without resulting in significant public health threats from mosquitoes or other vectors.[117]

Finding D.2.g. The increased volume, velocity, frequency and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads in storm water runoff and the volume of storm water runoff. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by natural vegetated soil. Hydromodification measures for discharges to hardened channels allow for the future restoration of the hardened channels to their natural state, thereby restoring the chemical, physical, and biological integrity and beneficial uses of local receiving waters.

Discussion of Finding D.2.g. Increasing the volume, velocity, frequency and discharge duration of storm water runoff from developed areas will eventually greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume while simultaneously increasing impervious area. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by naturally vegetated soil.

Historic hydromodification impacts, such as concrete lining and channelization, have impacted the natural physical habitat of urban streams resulting in low IBI scores. The Copermittee's monitoring to date indicates decreased IBI scores in the developed watersheds when compared to reference sites, with developed sites consistently having poor or very poor IBI scores. While habitat scores remained stable over the last reporting period, with scores of marginal to sub-optimal, the Copermittees have consistently monitored high levels of fine sediment in habitat assessments and often changing vegetative cover. However, the impact of persistent toxicity at the bioassessment stations in conjunction with physical habitat scores is unknown.[118]

Hydromodification impacts result in poor physical habitat conditions through streambed scour, erosion, vegetation displacement, sediment deposition, channelization, and channel modifications. Increased sediment loads from hydromodification causes other impacts to physical habitats including increased turbidity which then may cause increased temperatures. In addition, an increased sediment load may have an increased biological content thereby increasing the

[116] Watershed Protection Techniques, 1995. Mosquitoes in Constructed Wetlands: A Management Bugaboo? 1(4):203-207.
[117] Shaver, E. and R. Baldwin , 1995. Sand Filter Design for Water Quality Treatment in Herricks, E., Ed. Stormwater Runoff and Receiving Systems: Impact, Monitoring, and Assessment, CRC Lewis Publishers, New York, NY.
[118] Riverside County Copermittees, 2008-2009 Santa Margarita Watershed Annual Report.

sediment oxygen demand and lowering the dissolved oxygen available for aquatic life.[119]

The objective of the CWA is "to restore and maintain the chemical, *physical,* and biological integrity of the Nation's waters (emphasis added)." Stream restoration by removing concrete and other unnatural materials is a major step toward achieving that objective. The success of future stream restoration and stabilization is, however, dependent on preventing and reducing physical impacts from activities upstream. Therefore, hydromodification management measures are necessary upstream of modified (e.g. concrete, rip rap, etc.) channels in addition to non-modified channels.

Please see discussion of Findings C.10 and C.11 for additional information about impacts due to increasing volume, velocity, frequency and discharge duration of storm water runoff from developed areas.

Finding D.3.a. In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (State and local) storm water regulation. Under this dual system, each Copermittee is responsible for enforcing its local permits, plans, and ordinances, and the San Diego Water Board is responsible for enforcing the General Construction Activities Storm Water Permit, State Water Board Order 2009-0009-DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, State Water Board Order97-03-DWQ, NPDES No. CAS000001 (General Industrial Permit). NPDES municipal regulations require that municipalities develop and implement measures to address runoff from industrial and construction activities. Those measures may include the implementation of other BMPs in addition to those BMPs that are required under the statewide general permits for activities subject to both State and local regulation.

Discussion of Finding D.3.a. USEPA finds the control of pollutant discharges from industry and construction so important to receiving water quality that it has established a double system of regulation over industrial and construction sites. This double system of regulation consists of two parallel regulatory systems with the same common objective: to keep pollutants from industrial and construction sites out of the MS4. In this double system of regulation for runoff from industrial and construction sites, local governments must enforce their legal authorities (i.e. local ordinances and permits) while the San Diego Water Board must enforce its legal authority (i.e. statewide general industrial and construction storm water permits). These two regulatory systems are designed to complement and support each other. Municipalities are not required to enforce San Diego Water Board and State Water Board permits. They are required, however, to enforce their ordinances and permits. The Federal regulations are clear that municipalities have responsibility to prevent

[119] USEPA, National Management Measures to Control Nonpoint Source Pollution from Hydromodification, EPA 841-B-07-002, July 2007.

non-storm water and address storm water runoff from industrial and construction sites which enters their MS4s.

Municipalities have this responsibility because they have the authority to issue land use and development permits. Since municipalities are the lead permitting authority for industrial land use and construction activities, they are also the lead for enforcement regarding runoff discharges from these sites. For sites where the municipality is the lead permitting authority, the San Diego Water Board will work with the municipality and provide support where needed. The San Diego Water Board will assist municipalities in enforcement against non-compliant sites after the municipality has exhibited a good faith effort to bring the site into compliance.

According to USEPA, the storm water regulations envision that NPDES permitting authorities and municipal operators will cooperate to develop programs to monitor and control pollutants in storm water discharges from industrial facilities.[120] USEPA discusses the "dual regulation" of construction sites in its Storm Water Phase II Compliance Assistance Guide, which states "Even though all construction sites that disturb more than one acre are covered nationally by an NPDES storm water permit, the construction site runoff control minimum measure [...] is needed to induce more localized site regulation and enforcement efforts, and to enable operators [...] to more effectively control construction site discharges into their MS4s."[121] While the Storm Water Phase II Compliance Assistance Guide applies to small municipalities, it is applicable to the Copermittees, because they are similar in size and have the potential to discharge similar pollutant types as Phase II municipalities.

Finding D.3.b. Identification of sources of pollutants in runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants from its MS4 in storm water are reduced to the MEP and that non-storm water discharges are not occurring. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at areas that are at high risk for pollutant discharges.

Discussion of Finding D.3.b. Source identification is necessary to characterize the nature and extent of pollutants in discharges and to develop appropriate BMPs. It is the first step in a targeted approach to runoff management. Source identification helps identify the location of potential sources of pollutants in runoff. Pollutants found to be present in receiving waters can then be traced to the sites which frequently generate such pollutants. In this manner source inventories can help to target inspections, monitoring, and potential enforcement. This allows for limited inspection, monitoring, and enforcement time to be most effective. USEPA supports source identification as a

[120] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.
[121] USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

concept when it recommends construction, municipal, and industrial source identification in guidance and the federal regulations.[122,123]

The development of BMPs for identified sources will help ensure that appropriate, consistent controls are implemented at all types of development and areas. Copermittees must reduce the discharge of pollutants in storm water runoff to the maximum extent practicable. To achieve this level of pollutant reduction, BMPs must be implemented. Designation of minimum BMPs helps ensure that appropriate BMPs are implemented for various sources. These minimum BMPs also serve as guidance as to the level of water quality protection required. USEPA requires development and implementation of BMPs for construction, municipal, commercial, industrial, and residential sources at 40 CFR 122.26(d)(2)(iv)(A-D).

Updating ordinances and approval processes is necessary in order for the Copermittees to control discharges to their MS4s. USEPA supports updating ordinances and approval processes when it states "A crucial requirement of the NPDES storm water regulation is that a municipality must demonstrate that it has adequate legal authority to control the contribution of pollutants in storm water discharged to its MS4. [...] In order to have an effective municipal storm water management program, a municipality must have adequate legal authority to control the contribution of pollutants to the MS4. [...] 'Control,' in this context, means not only to require disclosure of information, but also to limit, discourage, or terminate a storm water discharge to the MS4."[124]

Inspections provide a necessary means for the Copermittees to evaluate compliance of pollutant sources with their municipal ordinances and minimum BMP requirements. USEPA supports inspections when it recommends inspections of construction, municipal, and industrial sources.[125] Inspection of high risk sources are especially important because of the ability of frequent inspections to help ensure compliance, thereby reducing the risk associated with such sources. USEPA suggests that inspections can improve compliance when it states "Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations."[126]

Finding D.3.c. Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Urban streams used in this manner are part of the municipalities MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the urban stream is both an MS4 and receiving water.

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[122] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.
[123] 40 CFR 122.26(d)(2)(ii)
[124] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.
[125] Ibid.
[126] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

Discussion of Finding D.3.c. An MS4 is defined in the federal regulations as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), owned or operated by a Copermittee, and designed or used for collecting or conveying runoff.[127] Natural drainage patterns and urban streams are frequently used by municipalities to collect and convey runoff away from development within their jurisdiction. Therefore, the San Diego Water Board considers natural drainages that are used for conveyances of runoff, regardless of whether or not they've been altered by the municipality, as both part of the MS4s and as receiving waters. To clarify, an unaltered natural drainage, which receives runoff from a point source (channeled by a Copermittee to drain an area within their jurisdiction), which then conveys the runoff to an altered natural drainage or a man-made MS4, is both an MS4 and a receiving water.[128]

Finding D.3.d. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or otherwise control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.

Discussion of Finding D.3.d. CWA section 402(p) requires operators of MS4s to prohibit non-storm water discharges into their MS4s. This is necessary because pollutants which enter the MS4 generally are conveyed through the MS4 to be eventually discharged into receiving waters. If a municipality does not prohibit non-storm water discharges, it is providing the pathway (its MS4) which enables pollutants to reach receiving waters. Since the municipality's storm water management service can result in pollutant discharges to receiving waters, the municipality must accept responsibility for the water quality consequences resulting from this service. Furthermore, third party discharges can cause a municipality to be out of compliance with its permit. Since pollutants from third parties which enter the MS4 will eventually be discharged from the MS4 to receiving waters, the third party discharges can result in a situation of municipality non-compliance if the discharges lead to an exceedance of water quality standards. For these reasons, each Copermittee must prohibit and/or control discharges from third parties to its MS4. USEPA supports this concept when it states "the operators of regulated small MS4s cannot passively receive and discharge pollutants from third parties" and "the operator of a small MS4 that does not prohibit and/or control discharges into its system essentially accepts 'title' for those discharges. At a minimum, by providing free and open access to the MS4s that convey discharges

[127] USEPA, 2000. EPA Administered Permit Programs: The National Pollutant Discharge Elimination System. Code of Federal Regulations, Vol. 40, Part 122.
[128] San Diego Water Board, 2001. Response in Opposition to Petitions for Review of California Regional Water Quality Control Board San Diego Region Order No. 2001-01 – NPDES Permit No. CAS0108758 (San Diego Municipal Storm Water Permit).

to the waters of the United States, the municipal storm sewer system enables water quality impairment by third parties."[129]

In a recent decision issued for *United States v. Washington State Department of Transportation (WSDOT)*,[130] the court found that WSDOT, by allowing runoff from its MS4 to a receiving water that is part of a Superfund site, is an "arranger" of "disposal or treatment of hazardous substances" as defined under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) by "designing, constructing, and operating drainage systems whose sole function was to collect highway runoff and dispose of it into nearby water-bodies." The court went on to state that "WSDOT did design the drainage system and...has the ability to redirect, contain or treat its contaminated runoff."

Finding D.3.e. Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges from storm water into MS4s must be reduced using a combination of management measures, including source control and an effective MS4 maintenance program implemented by each Copermittee.

Discussion of Finding D.3.e. When rain falls and drains freeways, industries, construction sites, and neighborhoods, it picks up a multitude of pollutants. Gravity flow transports the pollutants to the MS4. Illicit discharges and connections also can contribute a significant amount of pollutants to MS4s. MS4s are commonly designed to convey their contents as quickly as possible. Due to the resulting typically high flow rates within the concrete conveyance systems of MS4s, pollutants which enter or are deposited in the MS4 and not removed are generally flushed unimpeded through the MS4 to waters of the United States. Since treatment generally does not occur within the MS4, in such cases reduction of storm water pollutants to the MEP must occur prior to discharges entering the MS4.

The importance of this concept is supported by the tons of wastes/pollutants that have been removed from the Copermittees' MS4s as reported in their ROWD.[131] Moreover, these pollutants will be discharged into receiving waters unless an effective MS4 and structural treatment BMP maintenance program is implemented by the Copermittees. The requirement for Copermittees to conduct a MS4 maintenance program is specifically directed in both the Phase I and Phase II storm water regulations. Regarding MS4 cleaning, USEPA states "The removal of sediment, decaying debris, and highly polluted water from catch basins has aesthetic and water quality benefits, including reducing foul odors, reducing suspended solids, and reducing the load of

[129] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68765-68766.
[130] United State District Court, Western District of Washington at Tacoma, Case No. C08-5722RJB, Order on Motions for Partial Summary Judgment, dated June 7, 2010.
[131] Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).

oxygen-demanding substances that reach receiving waters."[132] It goes on to say, "Catch basin cleaning is an efficient and cost-effective method for preventing the transport of sediment and pollutants to receiving water bodies." USEPA also finds that "Lack of maintenance often limits the effectiveness of storm water structural controls such as detention/retention basins and infiltration devices. [...] The proposed program should provide for maintenance logs and identify specific maintenance activities for each class of control, such as removing sediment from retention ponds every five years, cleaning catch basins annually, and removing litter from channels twice a year."[133]

Finding D.3.f. Enforcement of local runoff related ordinances, permits, and plans is an essential component of every runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction. Education is an important aspect of every effective runoff management program and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs understand how their activities impact water quality, how to accomplish their jobs while protecting water quality, and understand their specific roles and responsibilities for compliance with this Order. Public education, designed to target various urban land users and other audiences, is also essential to inform the public of how individual actions affect receiving water quality and how adverse effects can be minimized.

Discussion of Finding D.3.f. The Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A – D) are clear in placing responsibility on municipalities for control of runoff from third party activities and land uses to their MS4.[134] In order for municipalities to assume this responsibility, they must implement ordinances, permits, and plans addressing runoff from third parties. Assessments for compliance with their ordinances, permits, and plans are essential for a municipality to ensure that third parties are not causing the municipality to be in violation of its municipal storm water permit. When conditions of non-compliance are determined, enforcement is necessary to ensure that violations of municipality ordinances and permits are corrected. When the Copermittees determine a violation of its storm water ordinance, it must pursue correction of the violation. Without enforcement, third parties do not have incentive to correct violations. USEPA supports enforcement by municipalities when it states "Effective inspection and enforcement requires [...] penalties to deter

[132] USEPA, 1999. Storm Water O&M Fact Sheet, Catch Basin Cleaning. EPA 832-F-99-011.
[133] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.
[134] USEPA, 2000. EPA Administered Permit Programs: The National Pollutant Discharge Elimination System. Code of Federal Regulations, Vol. 40, Part 122.

infractions and intervention by the municipal authority to correct violations. Enforcement mechanisms [...] also must be described."[135]

Education is a critical BMP and an important aspect of runoff management programs. USEPA finds that "An informed and knowledgeable community is critical to the success of a storm water management program since it helps ensure the following: Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important, [and] greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters."[136]

Regarding target audiences, USEPA also states "The public education program should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children."

Finding D.3.g. Public participation during the development of runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.

Discussion of Finding D.3.g. This finding is supported by the Phase II Storm Water Regulations, which state "early and frequent public involvement can shorten implementation schedules and broaden public support for a program." USEPA goes on to explain, "Public participation is likely to ensure a more successful storm water program by providing valuable expertise and a conduit to other programs and governments."[137]

Finding D.3.h. Retrofitting existing development with storm water treatment controls, including LID, is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards. Although SSMP BMPs are required for redevelopment, the current rate of redevelopment will not address water quality problems in a timely manner. Cooperation with private landowners is necessary to effectively identify, implement, and maintain retrofit projects for the preservation, restoration, and enhancement of water quality.

Discussion of Finding D.3.h. Existing BMPs are not sufficient to protect the Beneficial Uses of receiving waters from storm water MS4 discharges, as evidenced by 303(d) listings and exceedances of Water Quality Objectives from the Copermittees' monitoring reports. As recognized in USEPA guidance, waters in the region cannot be protected without also addressing degradation caused by storm

[135] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA/833-B-92-002.
[136] USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.
[137] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68755.

water discharges from existing development. This requires more than just a new development and redeveloped sites program, which at best can only hold the line. For this reason USEPA recommends that storm water programs include a retrofit plan or program for retrofitting existing development.[138]

Implementing more advanced BMPs, including the retrofitting of existing development with LID BMPs, is part of the iterative process. Based on the current rate of redevelopment compared to existing BMPs, the use of LID only on new and redevelopment will not adequately address current water quality problems, including downstream hydromodification. Retrofitting existing development is practicable for a municipality through a systematic evaluation, prioritization and implementation plan focused on impaired water bodies, pollutants of concern, areas of downstream hydromodification, feasibility and effective communication and cooperation with private property owners.

To actually improve the quality of receiving waters, discharges from existing developed sites need to be mitigated, which generally means implementation of measures to retrofit existing development sites with storm water control measures that can retain and/or treat storm water on site. Retrofitting existing development is possible and reasonable to significantly improve water quality in receiving waters.

Successful retrofitting programs have been implemented in such diverse locations as Seattle, Washington[139]; Portland, Oregon[140], Santa Monica, California[141]; Kansas City, Kansas[142]; and Montgomery County, MD[143]. When appropriately applied as in this Order, retrofitting existing development meets MEP.

Finding D.4.a. Since runoff within a watershed can flow from and through multiple land uses and political jurisdictions, watershed-based runoff management can greatly enhance the protection of receiving waters. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective watershed-based runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems. Watershed-based runoff management that does not actively reduce pollutant discharges and abate pollutant sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of the this Order. Watershed management of runoff does not require Copermittees to expend resources outside of their jurisdictions. In some cases, however, this added flexibility provides more, and possibly more effective, alternatives for minimizing waste discharges.

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[138] USEPA, 2010. MS4 Permit Improvement Guide. EPA 833-R-10-001.
[139] SEA Street, http://www.seattle.gov/dpd/Planning/CityDesign/What_We_Do/Outreach/Folio/DPDS_008014.asp
[140] Clean River Rewards, http://www.portlandonline.com/BES/index.cfm?c=edeef
[141] City of Santa Monica, Urban Runoff program, http://www.smgov.net/Departments/OSE/categories/content.aspx?id=4007
[142] 10,000 Rain Gardens, http://www.rainkc.com/
[143] Rainscapes, http://www.montgomerycountymd.gov/Content/DEP/Rainscapes/home.html

Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.

Discussion of Finding D.4.a. In recent years, addressing water quality issues from a watershed perspective has increasingly gained attention. Regarding watershed-based permitting, the USEPA *Watershed-Based NPDES Permitting Policy Statement* issued on Jan. 7, 2004 states the following:

> USEPA continues to support a holistic watershed approach to water quality management. The process for developing and issuing NPDES permits on a watershed basis is an important tool in water quality management. USEPA believes that developing and issuing NPDES permits on a watershed basis can benefit all watershed stakeholders, from the NPDES permitting authority to local community members. A watershed-based approach to point source permitting under the NPDES program may serve as one innovative tool for achieving new efficiencies and environmental results. USEPA believes that watershed-based permitting can:
>
> - Lead to more environmentally effective results;
> - Emphasize measuring the effectiveness of targeted actions on improvements in water quality;
> - Provide greater opportunities for trading and other market based approaches;
> - Reduce the cost of improving the quality of the nation's waters;
> - Foster more effective implementation of watershed plans, including total maximum daily loads (TMDLs); and
> - Realize other ancillary benefits beyond those that have been achieved under the CWA (e.g., facilitate program integration including integration of Clean Water Act and Safe Drinking Water Act programs).
>
> Watershed-based permitting is a process that ultimately produces NPDES permits that are issued to point sources on a geographic or watershed basis. In establishing point source controls in a watershed-based permit, the permitting authority may focus on watershed goals, and consider multiple pollutant sources and stressors, including the level of nonpoint source control that is practicable. In general, there are numerous permitting mechanisms that may be used to develop and issue permits within a watershed approach.

This USEPA guidance is in line with State Water Board and San Diego Water Board watershed management goals. For example, the State Water Board's TAC recommends watershed-based water quality protection, stating "Municipal permits should have watershed specific components." The TAC further recommends that "All NPDES permits and Waste Discharge Requirements should be considered for reissuance on a watershed basis."

In addition, the Basin Plan states that "public agencies and private organizations concerned with water resources have come to recognize that a comprehensive evaluation of pollutant contributions on a watershed scale is the only way to realistically assess cumulative impacts and formulate workable strategies to truly protect our water resources. Both water pollution and habitat degradation problems can best be solved by following a basin-wide approach."

In light of USEPA's policy statement and the State Water Board's and San Diego Water Board's watershed management goals, the San Diego Water Board seeks to expand watershed management in the regulation of runoff from the MS4. Watershed-based MS4 permits can provide for more effective receiving water quality protection by focusing on specific water quality problems. The entire watershed for the receiving water can be assessed, allowing for critical areas and practices to be targeted for corrective actions. Known sources of pollutants of concern can be investigated for potential water quality impacts. Problem areas can then be addressed, leading to eventual improvements in receiving water quality. Management of runoff on a watershed basis allows for specific water quality problems to be targeted so that efforts result in maximized water quality improvements.[144]

Finding D.4.b. Some runoff issues, such as general education and training, can be effectively addressed on a regional basis. Regional approaches to runoff management can improve program consistency and promote sharing of resources, which can result in implementation of more efficient programs.

Discussion of Finding D.4.b. Copermittees in Riverside County participate in several runoff-related activities whose scope extends beyond the area subject to this Order. These include countywide activities (e.g., portions of Riverside County fall under the jurisdictions of the Santa Ana Water Board and California Regional Water Quality Control Board, Colorado River Region (Colorado River Water Board)), southern California, and statewide activities. Copermittees' participation in these regional activities is generally directed at improving management capability, preventing redundancy and taking advantage of economies of scale. For instance, Copermittees seek to develop consistency between watershed and/or jurisdictional programs (e.g., through standards development), and to collaborate on certain program activities such as education, training, and monitoring.

Finding D.4.c. It is important for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially the State of California Department of Transportation, the U.S. federal government, sovereign American Indian tribes, and water and sewer districts, is also important.

[144] San Diego Water Board, 2004. San Diego County Municipal Storm Water Permit Reissuance Analysis Summary. P. 1.

Discussion of Finding D.4.c. Conventional planning and zoning can be limited in their ability to protect the environmental quality of creeks, rivers, and other water bodies. Watershed-based planning is often ignored, despite the fact that receiving waters unite land by collecting runoff from throughout the watershed. Since watersheds unite land, they can be used as an effective basis for planning. Watershed-based planning enables local and regional areas to realize economic, social, and other benefits associated with growth, while conserving the resources needed to sustain such growth, including water quality.

This type of planning can involve four steps: (1) Identify the watersheds shared by the participating jurisdictions; (2) Identify, assess, and prioritize the natural, social, and other resources in the watersheds; (3) Prioritize areas for growth, protection, and conservation, based on prioritized resources; and (4) Develop plans and regulations to guide growth and protect resources. Local governments have started with simple, yet effective, steps toward watershed planning, such as adopting a watershed-based planning approach, articulating the basic strategy in their General Plans, and beginning to pursue the basic strategy in collaboration with neighboring local governments who share the watersheds. Examples of new mechanisms created to facilitate watershed-based planning and zoning include the San Francisquito Creek Watershed Coordinated Resource Management Process and the Santa Clara Basin Watershed Management Initiative.[145]

[145] Bay Area Stormwater Management Agencies Association., 1999. Start at the Source. Forbes Custom Publishing. Available on-line at: http://www.scvurppp-w2k.com/basmaa_satsm.htm

E. Statute and Regulatory Considerations

Finding E.1. The RWL language specified in this Order is consistent with language recommended by the USEPA and established in State Water Board Order WQ-99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Water Board on June 17, 1999. The RWL language in this Order requires compliance with water quality standards, which for storm water discharges is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limitations based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the creation of conditions of pollution, contamination, or nuisance.

Discussion of Finding E.1. The RWL language in the Order requires storm water compliance with water quality standards through an iterative approach for implementing improved and better-tailored BMPs over time. The iterative BMP process requires the implementation of increasingly stringent BMPs until receiving water quality standards are achieved. This is necessary because implementation of BMPs alone cannot ensure attainment of receiving water quality standards. For example, a BMP that is effective in one situation may not be applicable in another. An iterative process of BMP development, implementation, and assessment is needed to promote consistent compliance with receiving water quality objectives. If assessment of a given BMP confirms that the BMP is ineffective, the iterative process should be restarted, with redevelopment of a new BMP that is anticipated to result in compliance with receiving water quality objectives.

The issue of whether storm water discharges from MS4s must meet water quality standards has been intensely debated in past years. The argument arises because CWA section 402(p) fails to clearly state that municipal dischargers of storm water must meet water quality standards. On the issue of industrial discharges of storm water, the statute clearly indicates that industrial dischargers must meet both (1) the technology-based standard of "best available technology economically achievable (BAT)" and (2) applicable water quality standards. On the issue of municipal discharges however, the statute states that municipal dischargers must meet (1) the technology-based standard of MEP" and (2) "such other provisions that the Administrator or the State determines appropriate for the control of such pollutants." The statute fails, however, to specifically state that municipal dischargers must meet water quality standards.

As a result, the municipal storm water dischargers have argued that they do not have to meet water quality standards; and that they only are required to meet MEP for storm water. Environmental interest groups maintain that not only do MS4 discharges have to meet water quality standards, but that MS4 permits must also comply with numeric effluent limitations for the purpose of meeting water quality standards. On the issue of water quality standards, USEPA, the State Water Board, and the San Diego Water

Board have consistently maintained that MS4s must indeed comply with water quality standards. On the issue of whether water quality standards must be met by numeric effluent limitations, USEPA, the State Water Board (in Orders WQ 91-03 and WQ 91-04), and the San Diego Water Board have maintained that MS4 permits can contain narrative requirements for the implementation of BMPs in place of numeric effluent limitations for storm water discharges.[146]

In addition to relying on USEPA's legal opinion concluding that MS4s must meet MEP for storm water and water quality standards, the State Water Board also relied on the CWA's explicit authority for States to require "such other provisions that the Administrator or the State determines appropriate for the control of such pollutants" in addition to the technology-based standard of MEP for storm water discharges. To further support its conclusions that MS4 permit dischargers must meet water quality standards, the State Water Board relied on provisions of the CWC that specify that all waste discharge requirements must implement applicable Basin Plans and take into consideration the appropriate water quality objectives for the protection of beneficial uses.

The State Water Board first formally concluded that permits for MS4s must contain effluent limitations based on water quality standards in its Order WQ 91-03. In that Order, the State Water Board also concluded that it was appropriate for Regional Water Boards to achieve this result by requiring best management practices, rather than by inserting numeric effluent limitations into MS4 permits. Later, in Order WQ 98-01, the State Water Board prescribed specific precedent setting Receiving Water Limitations language to be included in all future MS4 permits. This language specifically requires that MS4 dischargers meet water quality standards and allows for the use of narrative BMPs (increasing in stringency and implemented in an iterative process) as the mechanism by which water quality standards can be met for storm water discharges.

In Order WQ 99-05, the State Water Board modified its receiving water limitations language in Order WQ 98-01 to meet specific objections by USEPA (the modifications resulted in stricter compliance with water quality standards). State Water Board Order WQ 99-05 states:

> "In Order WQ 98-01, the State Board ordered that certain receiving water limitation language be included in future municipal storm water permits. Following inclusion of that language in permits issued by the San Francisco Bay and San Diego Water Boards for Vallejo and Riverside respectively, the USEPA objected to the permits. The USEPA objection was based on the receiving water limitation language. The USEPA has now issued those permits itself and has included receiving water limitation language it deems appropriate.

[146] For the most recent assessment, see Storm Water Panel Recommendations to the California State Water Resources Control Board, 2006. *The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities.*

> In light of USEPA's objection to the receiving water limitation language in Order WQ 98-01 and its adoption of alternative language, the State Board is revising its instructions regarding receiving water limitation language for municipal storm water permits. It is hereby ordered that Order WQ 98-01 will be amended to remove the receiving water limitation language contained therein and to substitute the USEPA language. Based on the reasons stated here, and as a precedent decision, the following receiving water limitation language shall be included in future municipal storm water permits."

In the 1999 case involving MS4 permits issued by USEPA to several Arizona cities (*Defenders of Wildlife v. Browner*, 1999, 197 F. 3d 1035), the United States Court of Appeals for the Ninth Circuit upheld USEPA's requirement for MS4 dischargers to meet water quality standards, but it did so on the basis of USEPA's discretion rather than on the basis of strict compliance with the CWA. In other words, while holding that the CWA does not require all MS4 discharges to comply strictly with state water quality standards, the Court also held that USEPA has the authority to determine that ensuring strict compliance with state water quality standards is necessary to control pollutants. On the question of whether MS4 permits must contain numeric effluent limitations, the court upheld USEPA's use of iterative BMPs in place of numeric effluent limitations for storm water discharges.

On October 14, 1999, the State Water Board issued a legal opinion on the federal appellate decision and provided advice to the Regional Water Boards on how to proceed in the future. In the memorandum, the State Water Board concludes that the recent Ninth Circuit opinion upholds the discretion of USEPA and the State to (continue to) issue storm water permits to MS4s that require compliance with water quality standards through iterative BMPs. Moreover, the memorandum states that "[...] because most MS4 discharges enter impaired water bodies, there is a real need for permits to include stringent requirements to protect those water bodies. As TMDLs are developed, it is likely that MS4s will have to participate in pollutant load reductions, and the MS4 permits are the most effective vehicles for those reductions." In summary, the State Water Board found that the Regional Water Boards should continue to include the RWL established in State Water Board Order WQ 99-05 in all future permits.

The issue of the RWLs language was also central to the Building Industry Association's (BIA's) (and others') appeal of San Diego Water Board Order No. 2001-01 (San Diego MS4 permit), which was used as a template for San Diego Water Board Order No. R9-2002-0001 (Orange County MS4 permit). BIA contended that the storm water MEP standard was a ceiling on what could be required of the Copermittees in implementing their runoff management programs, and that Order No. 2001-01's receiving water limitations requirements exceeded that ceiling. In other words, BIA argued that the Copermittees could not be required to comply with receiving water limitations if they necessitated efforts which went beyond the MEP standard. Again, the courts upheld the San Diego Water Board's discretion to require compliance with water quality standards in municipal storm water permits, without limitation. The Court

of Appeal, Fourth Appellate District found that the San Diego Water Board has "the authority to include a permit provision requiring compliance with water quality standards."[147] On further appeal by BIA, the California State Supreme Court declined to hear the matter.

While implementation of the iterative BMP process is a means to achieve compliance with water quality objectives for storm water MS4 discharges, it does not shield the discharger from enforcement actions for continued non-compliance with water quality standards. Consistent with USEPA guidance,[148] regardless of whether or not an iterative process is being implemented, discharges that cause or contribute to a violation of water quality standards are in violation of Order No. R9-2010-0016.

Finding E.2. The Basin Plan, identifies the following existing and potential beneficial uses for surface waters in Riverside County: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Hydropower Generation (POW), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Spawning, Reproduction and/or Early Development (SPWN) and Preservation of Biological Habitats of Special Significance (BIOL).

Discussion of Finding E.2. The southwestern portion of Riverside County is within the San Diego Region. The Riverside County portion of the San Diego Region falls within Santa Margarita Hydrologic Unit. The major streams within the Riverside County portion of the Santa Margarita Hydrologic Unit are the Santa Margarita River, Temecula Creek, and Murrieta Creek. Other surface water bodies include De Luz Creek, Sandia Canyon Creek, Warm Springs Creek, San Gertrudis Creek, and Wilson Creek. Major inland water bodies include Lake Skinner and Vail Lake.

The Riverside County portion of the Santa Margarita Hydrologic Unit includes unincorporated portions of Riverside County, the Cities of Menifee, Murrieta, Temecula, and Wildomar..

Based on the 2000 census, approximately 150,000 people resided within the permitted area. Since the 2000 census, however, several new developments, especially in the Cities of Temecula and Murrieta have increased the housing stock of the area, and the population is now significantly higher. As of January 1, 2009, approximately 250,000 people reside in the permitted area, with approximately 30,000 people living in the unincorporated area of Riverside County (31,163) and approximately 220,000 living in the Cities of Menifee (613), Murrieta (99,574), Temecula (102,604), and Wildomar (22,240).[149]

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[147] Building Industry Association et al., v. State Water Resources Control Board, et al. 2004.
[148] USEPA, 1998. Jan. 21, 1998 correspondence, "State Board/OCC File A-1041 for Orange County," from Alexis Strauss to Walt Petit, and March 17, 1998 correspondence from Alexis Strauss to Walt Petit.
[149] Fiscal Year 2008-2009 Santa Margarita Watershed Annual Progress Report

Finding E.3. This Order is in conformance with State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*, and the federal Antidegradation Policy described in 40 CFR 131.12.

Discussion of Finding E.3. Runoff management programs are required to be designed to reduce pollutants in storm water MS4 discharges to the maximum extent practicable and achieve compliance with water quality standards. Therefore, implementation of runoff management programs, which satisfy the requirements of Order No. R9-2010-0016, will prevent violations of receiving water quality standards. The Basin Plan states that "Water quality objectives must [...] conform to US EPA regulations covering antidegradation (40 CFR 131.12) and State Water Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California." As a result, when water quality standards are met, USEPA and State Water Board antidegradation policy requirements are also met.

Finding E.4. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Copermittee from developing a non-point source plan, for the urban category, under CZARA. The San Diego Water Board addresses septic systems through the administration of other programs.

Discussion of Finding E.4. Coastal states are required to develop programs to protect coastal waters from nonpoint source pollution, as mandated by the federal CZARA. CZARA section 6217 identifies polluted runoff as a significant factor in coastal water degradation, and requires implementation of management measures and enforceable policies to restore and protect coastal waters. In lieu of developing a separate NPS program for the coastal zone, California's NPS Pollution Control Program was updated in 2000 to address the requirements of both the CWA section 319 and the CZARA section 6217 on a statewide basis. The California Coastal Commission (CCC), the State Water Board, and the nine Regional Water Boards are the lead State agencies for upgrading the program, although 20 other State agencies also participate. Pursuant to the CZARA (section 6217(g)) Guidance Document the development of runoff management programs pursuant to this NPDES permit fulfills the need for cities within watersheds that discharge to the coastal zone to develop an runoff non-point source plan identified in the State's Non-point Source Program Strategy and Implementation Plan.[150]

[150] State Water Board/CCC, 2000. Nonpoint Source Program Strategy and Implementation Plan, 1998-2013 (PROSIP).

Finding E.5. Section 303(d)(1)(A) of the CWA requires that "Each state shall identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters." The CWA also requires states to establish a priority ranking of impaired waterbodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired waterbodies is called the Section 303(d) List. The 2006 303(d) List was approved by the State Water Board on October 25, 2006. On June 28, 2007 the 2006 303(d) List for California was given final approval by the USEPA. The 303(d) List was recently updated, and on December 16, 2009 the 2008 303(d) List was approved by the San Diego Water Board. The 2008 303(d) List for the San Diego Region was approved by the State Water Board on August 4, 2010. The 2008 303(d) List is awaiting USEPA approval.

Discussion of Finding E.5. Section 303(d) of the federal CWA (CWA, 33 USC 1250, et seq., at 1313(d)), requires States to identify waters that do not meet water quality standards after applying certain required technology-based effluent limits ("impaired" water bodies). States are required to compile this information in a list and submit the list to USEPA for review and approval. This list is known as the Section 303(d) list of impaired waters, or 303(d) List. As part of this listing process, States are required to prioritize waters/watersheds for future development of TMDLs. The State Water Board and Regional Water Boards have ongoing efforts to monitor and assess water quality, to prepare the 303(d) List, to prioritize waters/watersheds for TMDL development, and to subsequently develop TMDLs. TMDLs developed and adopted by the San Diego Water Board are incorporated into the Basin Plan via a Basin Plan Amendment as authorized under CWC section 13240.

The 2006 California 303(d) List identifies impaired receiving water bodies and their watersheds within the State of California.[151] The San Diego Water Board recently updated the 303(d) List for the San Diego Region and adopted the 2008 303(d) List on December 16, 2009.[152] The number of water bodies listed as impaired in the Riverside County portion of the Santa Margarita Hydrologic Unit increased from 6 water bodies (13 water body / impairing pollutant combinations) on the 2006 303(d) List to 9 water bodies (49 water body / impairing pollutant combinations) on the 2008 303(d) List, indicating the receiving water quality has been degraded further (see Table 2). Storm water and non-storm water runoff that is discharged from the Copermittees' MS4s is a leading cause of receiving water quality impairment in the San Diego Region.

Finding E.6. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under CWA § 402. (33 U.S.C. §

[151] The approved 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments is on-line at: http://www.waterboards.ca.gov/tmdl/303d_lists2006.html.
[152] The 2008 Clean Water Act Section 303(d) List of Water Quality Limited Segments, approved by the San Diego Water Board and State Water Board, is available on-line at http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/303d_list/index.shtml

1342(p)(3)(B).) Second, the local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges. Third, the local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA § 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their MS4 discharges (i.e. effluent limitations). Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under State law predates the enactment of Article XIIIB, Section (6) of the California Constitution. Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards. (33 U.S.C. sec. 1313(d).) Once the UUSEPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 C.F.R. sec. 122.44(d)(1)(vii)(B).)

Discussion of Finding E.6. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under CWA section 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B).) This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants in storm water to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (Natural Resources Defense Council, Inc. v. U.S. E.P.A. (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.)

The authority exercised under this Order is not reserved state authority under the CWA's savings clause (cf. Burbank v. State Water Resources Control Bd. (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region (2006) 135 Cal.App.4th 1377, 1389; Building Industry Ass'n of San Diego County v. State Water Resources Control Bd. (2004) 124 Cal.App.4th 866, 882-883.)

Second, the local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few

inapplicable exceptions, the CWA regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (CWC § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See County of Los Angeles v. State of California (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The CWA and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the CWA requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), Defenders of Wildlife v. Browner (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Board decisions, this Order does not require strict compliance with water quality standards. (State Water Board Order WQ 2001-15, p. 7.) The Order, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (County of Fresno v. State of California (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric effluent limitations on their storm water discharges. To the extent, the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord County of San Diego v. State of California (1997) 15 Cal.4th 68, 107-108.) Likewise, the Copermittees have voluntarily sought a program-based municipal storm water permit in lieu of a numeric limitations approach on their storm water discharge. (See City of Abilene v. U.S. E.P.A. (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limitations].) The local agencies' voluntary decision to file a report of waste discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See Environmental Defense Center v. USEPA (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIIIB, Section (6) of the California Constitution.

The San Diego Water Board recognizes that the Commission on State Mandates recently found that certain provisions within two municipal storm water permits constituted reimbursable state mandates within the meaning of the California Constitution. The Commission did not determine the validity of those provisions; it only determined that the State must reimburse the claimants for the costs of implementing those provisions. The decisions directly affect only the municipal storm water permits identified in the two test claims. That is, the effect of the decisions is limited to the provisions of Los Angeles Water Board Order 01-182 and San Diego Order R9-2007-0001 identified by the Commission as reimbursable state mandates. No other municipal storm water permits or provisions therein are directly affected by the decisions and the San Diego Water Board is not precluded from adopting similar or identical provisions in the Tentative Order. Subsequent proceedings before the Commission to determine the local governments entitled to reimbursement and the amount of reimbursement are underway before the Commission. Separately, the State Water Board and San Diego and Los Angeles Water Boards have challenged these decisions in court.

Finding E.7. Runoff treatment and/or mitigation must occur prior to the discharge of runoff into receiving waters. Treatment BMPs must not be constructed in waters of the U.S. or State unless the runoff flows are sufficiently pretreated to protect the values and functions of the water body. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of a runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. Without federal authorization (e.g., pursuant to CWA § 404), waters of the U.S. may not be converted into, or used as, waste treatment or conveyance facilities. Similarly, waste discharge requirements pursuant to CWC §13260 are required for the conversion or use of waters of the State as waste treatment or conveyance facilities. Diversion from waters of the U.S./State to treatment facilities and subsequent return to waters of the U.S. is allowable, provided that the effluent complies with applicable NPDES requirements.

Discussion of Finding E.7. Runoff treatment and/or mitigation in accordance with any of the requirements in the Order must occur prior to the discharge of storm water into receiving waters. Allowing storm water polluted runoff to enter receiving waters prior to treatment to the MEP will result in degradation of the water body and potential

exceedances of water quality standards, from the discharge point to the point of dissipation, infiltration, or treatment. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This requirement is supported by federal regulation 40 CFR 131.10(a) and USEPA guidance. According to USEPA,[153] "To the extent possible, municipalities should avoid locating structural controls in natural wetlands. Before considering siting of controls in a natural wetland, the municipality should demonstrate that it is not possible or practicable to construct them in sites that do not contain natural wetlands. Practices should be used that settle solids, regulate flow, and remove contaminants prior to discharging storm water into a wetland."

Additional Federal guidance discusses the implementation of wetlands to treat municipal storm water discharges (USEPA, 2000. *Guiding Principles for Constructed Treatment Wetlands: Providing for Water Quality and Wildlife Habitat*). It states:

> *"..treatment wetlands should not be constructed in a waters of the U.S. unless you can sufficiently pretreat the stormwater flows to protect the values and functions of the waters of the U.S. Because storm water is an unpredictable effluent source and can contain high levels of toxic substances, nutrients, and pathogens, we strongly encourage that you construct the treatment wetland in uplands and use best management practices in these projects."*[154]

Consistent with USEPA guidance, the conversion or use of waters of the U.S./State into runoff treatment facilities or conveyance facilities for untreated storm water discharges must be appropriately reviewed by both Federal and State resource agencies. Such projects may be subject to federal permitting pursuant to CWA section 404 if discharges of dredged or fill material is involved.

The placement of hydromodification controls within waters of the U.S./State may also be subject to federal and/or state permitting, but would not necessarily be considered a pollutant treatment BMP. Provided that grade control structures are designed to re-establish a natural channel gradient and correct excessive changes to the sediment transport regime caused by urbanization, rather than to create a series of artificial hydrological impoundments for the purpose of treating pollution, this type of project is not considered an in-stream treatment BMP.

Finding E.8. The issuance of waste discharge requirements and an NPDES permit for the discharge of runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

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[153] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.
[154] USEPA, 2000. Guiding Principles for Constructed Treatment Wetlands: Providing for Water Quality and Wildlife Habitat, (EPA 843-B-00-003).

Discussion of Finding E.8. CWC section 13389 exempts the adoption of waste discharge requirements (such as NPDES permits) from CEQA requirements: "Neither the State Water Board nor the Regional Water Boards shall be required to comply with the provisions of Chapter 3 (commencing with section 21100) of Division 13 of the Public Resources Code prior to the adoption of any waste discharge requirement, except requirements for new sources as defined in the Federal Water Pollution Control Act or acts amendatory thereof or supplementary thereto."

This CEQA exemption was challenged during BIA's (and others') appeal of Order No. 2001-01. BIA contended that the CEQA exemption did not apply to permit requirements where the San Diego Water Board utilized its discretion to craft permit requirements which were more prescriptive than required by federal law. The Court of Appeal, Fourth Appellate District disagreed with this argument, stating "we also reject Building Industry's argument to the extent it contends the statutory CEQA exemption in CWC section 13389 is inapplicable to a particular NPDES permit provision that is discretionary, rather than mandatory, under the CWA."[155] On further appeal by BIA, the California State Supreme Court declined to hear the matter.

In a recent decision, the Court of Appeal of the State of California, Second Appellate District, upheld the CEQA exemption for municipal storm water NPDES permits (County of Los Angeles, et al. v. California State Water Resources Control Board, et al.).[156]

Finding E.9. Storm water discharges from developed and developing areas in Riverside County are significant sources of certain pollutants that cause, may be causing, threatening to cause or contributing to water quality impairment in the waters of Riverside County. Furthermore, as delineated in the CWA section 303(d) list in Table 2, the San Diego Water Board has found that there is a reasonable potential that municipal storm water and non-storm water discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria (including Fecal Coliform and E. Coli), Copper, Manganese, Iron, Chlorpyrifos, Diazinon, Sulfates, Phosphorous, Nitrogen, Total Dissolved Solids (TDS), and Toxicity. In accordance with CWA section 303(d), the San Diego Water Board is required to establish TMDLs for these pollutants to these waters to eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Copermittees are warranted and required pursuant to this Order.

Discussion of Finding E.9. CWA section 303(d)(1)(A) requires that:

> *"Each state must identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters."*

[155] Building Industry Association et al., v. State Water Resources Control Board, et al. 2004.
[156] Los Angeles County Super. Ct. No. BS080792. Partial publication dated November 6, 2006.

The CWA also requires states to establish a priority ranking of impaired water bodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired water bodies is called the 303(d) List. The current 303(d) List was approved by the State Water Board on October 25, 2006. On June 28, 2007 the 2006 303(d) List for California was given final approval by USEPA. Every two years the State of California is required by CWA section 303(d) and 40 CFR(130.7) to develop and submit to the USEPA for approval an updated 303(d) list of impaired water bodies. The San Diego Water Board recently updated the 303(d) List and adopted the 2008 303(d) List on December 16, 2009.[157] The 2008 303(d) List for the San Diego Region was approved by the State Water Board on August 4, 2010. The 2008 303(d) List is awaiting approval by the USEPA. The number of water bodies listed as impaired in the Riverside County portion of the Santa Margarita Hydrologic Unit increased from 6 water bodies (13 water body / pollutant combinations) on the 2006 303(d) List to 9 water bodies (49 water body / pollutant combinations) on the 2008 303(d) List, indicating the receiving water quality has been degraded further (see Table 2).

Multiple water bodies in Riverside County have been identified as impaired and placed on the 303(d) List. The 303(d) listing of a water body and subsequent TMDL development is required when regulations under current permits, such as Technology Based Effluent Limitations (TBELs), are not stringent enough to meet Water Quality Standards and protect the Beneficial Uses of Waters of the State.

Storm water discharges from developed and developing areas in Riverside County are a significant source of certain pollutants that cause, may be causing, threatening to cause, or contributing to water quality impairment in the waters of Riverside County. Furthermore, the CWA section 303(d) list indicates that there is a reasonable potential that municipal storm water and dry weather discharges from MS4s cause, or may cause, or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria, Copper, Manganese, Iron, Chlorpyrifos, Sulfates, Phosphorous, Nitrogen, Total Dissolved Solids, Toxicity and Turbidity (see Table 2). In accordance with CWA section 303(d), the San Diego Water Board is required to establish TMDLs for these pollutants in these waters to eliminate impairment and attain water quality standards. Per 40 CFR(130.7), WLAs are required for all point sources, including storm water and non-storm water discharges from MS4s. Therefore, focused pollutant control actions and further pollutant impact assessments by the Copermittees are warranted and required pursuant to this Order.

MS4 Permits address only those TMDL WLAs that have been adopted by the San Diego Water Board and have been approved by the State Water Board, Office of Administrative Law (OAL) and USEPA. WLAs are portions of a receiving water's loading capacity that is allocated to one of its existing or future point sources of

[157] The 2008 Clean Water Act Section 303(d) List of Water Quality Limited Segments, approved by the San Diego Water Board and State Water Board, is available on-line at http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/303d_list/index.shtml

pollution. To date, no TMDLs and WLAs have been adopted to address impaired water bodies in the Riverside County portion of the Santa Margarita Hydrologic Unit. When TMDLs and WLAs are adopted and approved, they will be incorporated into the MS4 permit. The TMDL WLAs in MS4 Permits can be addressed using water quality-based numeric effluent limitations (WQBELs) calculated at end-of-pipe. WQBELs must be consistent with the assumptions and requirements of the WLAs.[158]

Finding E.10. This Order requires each Copermittee to effectively prohibit all types of unauthorized discharges of non-storm water into its MS4. However, historically pollutants have been identified as present in dry weather non-storm water discharges from the MS4s through 303(d) listings, monitoring conducted by the Copermittees under Order No. R9-2004-001, and there are others expected to be present in dry weather non-storm water discharges because of the nature of these discharges. This Order includes action levels for pollutants in non-storm water, dry weather discharges from the MS4. The non-storm water action levels are designed to ensure that the Order's requirement to effectively prohibit all types of unauthorized discharges of non-storm water into the MS4 is being complied with. Non-storm water action levels in the Order are based upon numeric or narrative water quality objectives and criteria as outlined in the Basin Plan, the State Water Board's Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). An exceedance of an action level requires specified responsive action by the Copermittees. This Order describes what actions the Copermittees must take when an exceedance of an action level is observed. Exceedances of non-storm water action levels do not alone constitute a violation of this Order but could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions established in this Order. Failure to undertake required source investigation and elimination action following an exceedance of a non-storm water action level (NAL or action level) is a violation of this Order. The San Diego Water Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-storm water discharges because there may be some discharges in which pollutants do not exceed established action levels. However, establishing NALs at levels appropriate to protect water quality standards is expected to lead to the identification of significant sources of pollutants in dry weather non-storm water discharges.

Discussion of Finding E.10. This Order includes the existing requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges in the MS4s. It also includes the following prohibition set forth in the Basin Plan: "The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in CWC section 13050 is prohibited." (Prohibition A.1.) As discussed in the Order's Findings on discharge characteristics, e.g., C.2., C.4., C.6., C.7., C.9., C.14., and C.15., the Copermittees'

[158] Per 40 CFR 122.44(d)(1)(vii)(B)

reliance on BMPs for the past 20 years has not resulted in compliance with applicable water quality standards or compliance with the requirement to effectively prohibit all types of unauthorized discharges of non-storm water in the MS4. The San Diego Water Board has evaluated (in accordance with 40 CFR 122.44(d)(1)) past and existing control BMPs, non-storm water effluent monitoring results, the sensitivity of the species in receiving waters (e.g. endangered species), and the potential for effluent dilution, and has determined that existing BMPs to control pollutants in storm water discharges are not sufficient to protect water quality standards in receiving waters, and the existing requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges into the MS4, historically results in the discharge of pollutants to the receiving waters.

Therefore it is appropriate to establish dry weather non-storm water action levels based upon established water quality standards to measure pollutants levels in the discharge of dry weather non-storm water that could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4 and/or that these discharges are causing, or threatening to cause, a condition of pollution, contamination or nuisance in the receiving waters. NALs are not numeric effluent limitations. While not alone a violation of this Order, an exceedance of an NAL requires the Copermittees to initiate a series of source investigation and elimination actions to address the exceedance. Results from the NAL monitoring are to be used in developing the Copermittees annual work plans. Failure to undertake required source investigation and elimination action following an exceedance of an NAL is a violation of this Order. Also refer to further discussion in the Directives section C of the Fact Sheet.

A purpose of monitoring, required under this and previous Orders, as stated in the Monitoring and Reporting Program is to "detect and eliminate illicit discharges and illicit connections to the MS4" and to answer the following core management questions:

1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
2. What is the extent and magnitude of the current or potential receiving water problems?
3. What is the relative MS4 discharge contribution to the receiving water problem(s)?
4. What are the sources of MS4 discharge that contribute to receiving water problem(s)?
5. Are conditions in receiving waters getting better or worse?

For the past 20 years, Copermittees have utilized their illicit connection / illicit discharge (IC/ID) program to identify and eliminate non-storm water discharges that are sources of pollutants to the MS4. The Copermittees are also subject to the requirement to effectively prohibit all types of unauthorized discharges of non-storm water into the MS4s. Historically, discharges of unauthorized non-storm water do

occur, resulting in the discharge of pollutants to the receiving water. NALs have been included in this Order to ensure that the Copermittees comply with the requirement to effectively prohibit all types of unauthorized non-storm water discharges that are a source of pollutants in the receiving waters.

Finding E.12. With this Order, the San Diego Water Board has completed the re-issuance of the fourth iteration of the Phase I MS4 NPDES Permits for the Copermittees in the portions of San Diego County, Orange County, and Riverside County within the San Diego Region. The NPDES Permit requirements issued to the Copermittees in each county have substantially the same core requirements such as discharge prohibitions, receiving water limitations, jurisdictional components, and monitoring. In addition, the Copermittees cooperate regionally to develop monitoring with the Southern California Stormwater Monitoring Coalition and to develop program effectiveness with the California Stormwater Quality Association. Regional programs could improve the Copermittees' compliance with other permit components such as development of the Hydromodification Management Plans and Retrofitting Existing Development with more consistent implementation and cost sharing. Re-issuing the NPDES Permit requirements within five years for three counties under three different permits requires the San Diego Water Board to expend significant time and resources for issuance of the permits through three separate public proceedings, thereby greatly reducing the time and resources available to oversee compliance. Multiple permits also create confusion for determining compliance among regulated entities, especially the land development community. The San Diego Water Board recognizes that issuing a single MS4 permit for all Phase I entities in the San Diego Region will provide consistent implementation, improve communication among agencies within watersheds crossing multiple jurisdictions, and minimize staff resources spent with each permit renewal. The San Diego Water Board plans to develop a single regional MS4 permit prior to the expiration of this Order that will transfer the Copermittees' enrollment to the regional permit upon expiration of this Order.

Discussion of Finding E.12. With the advances in storm water science and regulation in the last decade, the additional complexity has resulted in a more significant amount of San Diego Water Board staff time and resources required to complete each Phase I MS4 Permit renewal. On average, the renewal of the fourth iteration of the Phase I MS4 Permits for each county has taken approximately 2 years and multiple staff to complete. The time and resources required to complete each renewal has diverted staff time and resources away from the San Diego Water Board's ability to oversee and ensure compliance with the permit provisions and requirements.

With the adoption of this Order, all the Phase I MS4s in the San Diego Region (i.e. Copermittees of Orange County, Riverside County and San Diego County) will essentially be subject to the same set of core requirements. Because there are now more similarities than differences among the permit provisions and requirements, developing and issuing a single regionwide permit to the Phase I MS4 entities may be appropriate with the next (i.e. fifth) iteration of the Phase I MS4 Permits.

This approach would provide a consistent set of regulatory requirements throughout the San Diego Region, thereby reducing the confusion that is created with different sets of requirements between areas in close proximity to each other. A regional set of requirements for the discharge prohibitions, receiving water limitations, jurisdictional program components (i.e., new development, construction, existing development, retrofitting), hydromodification management plans, low impact development design requirements, and monitoring would also make it easier for the programs in the three counties to share and transfer information and program efficiencies, and cooperate on a regionwide basis. Regionwide consistency would be especially beneficial where there are multiple counties involved in implementing permit requirements, such as the Santa Margarita watershed with parts of San Diego County and Riverside County, regional TMDLs (e.g., beaches and creeks bacteria TMDLs), or regional monitoring efforts or studies (e.g., Southern California Stormwater Monitoring Coalition, Bight '08).

An additional benefit would be the reduction of staff time and resources that will be required to renew future Phase I MS4 Permits, which would only be required once every 5 years for a single regionwide permit instead of once every 1 to 3 years for three separate permits. Because of these benefits, the San Diego Water Board plans to develop a single regional Phase I MS4 Permit with the next iteration of the San Diego County MS4 Permit, which will incorporate the Orange County and Riverside County Phase I MS4 entities upon the expiration of their respective permits, or sooner.

F. Public Process

Finding F.1. The San Diego Water Board has notified the Copermittees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing MS4 discharges of pollutants to waters of the U.S.

Discussion of Finding F.1. Public notification of development of a draft permit is required under Federal regulation 40 CFR 124.10(a)(1)(ii). This regulation states "(a) Scope. (1) The Director shall give public notice that the following actions have occurred: (ii) A draft permit has been prepared under Sec. 124.6(d)." Public notifications "shall allow at least 30 days for public comment," as required under Federal regulation 40 CFR 124.10(b)(1).

Finding F.2. The San Diego Water Board has held a public hearing on November 10, 2010 and heard and considered all comments pertaining to the terms and conditions of this Order.

Discussion of Finding F.2. Public hearings are required under CWC section 13378, which states "Waste discharge requirements and dredged or fill material permits shall be adopted only after notice and any necessary hearing." Federal regulation 40 CFR 124.12(a)(1) also requires public hearings for draft permits, stating "The Director shall hold a public hearing whenever he or she finds, on the basis or requests, a significant degree of public interest in a draft permit(s)." Regarding public notice of a public hearing, Federal regulation 40 CFR 124.10(b)(2) states that "Public notice of a public hearing shall be given at least 30 days before the hearing."

IX. DIRECTIVES

This section discusses significant changes which have been made to the requirements of the Order from the requirements which were previously included in Order No. R9-2004-001. For each section of the Order than has been changed there is a discussion which describes the change that was made and provides the rationale for the change. In addition, comments on the Copermittees' ROWD recommendations, as they pertain to each changed requirement of the Order, are provided.

Requirements of the Order that are not discussed in this section have not been significantly changed from those requirements previously included in Order No. R9-2004-001. For such requirements, discussions and rationale for the requirements can be found in section VIII of the Fact Sheet/Technical Report for San Diego Water Board Order No. R9-2004-001, dated July 14, 2004. Section VIII also provides additional background information for those requirements that have undergone significant change which are described in detail in this report. The Fact Sheet/Technical Report is available for download at:

http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/rsd_stormwater.shtml

Legal authority citations are provided for each major section of the Order. These citations apply to all applicable requirements within the section for which they are provided.

A. Prohibitions and Receiving Water Limitations

The following legal authority applies to section A:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: The Water Quality Control Plan for the San Diego Basin (Basin Plan) contains the following waste discharge prohibition: "The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in CWC section 13050, is prohibited."

CWC section 13050(l) states "(1) 'Pollution' means an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either of the following: (A) The water for beneficial uses. (B) Facilities which serve beneficial uses. (2) 'Pollution' may include "contamination."

CWC section 13050(k) states "Contamination' means an impairment of the quality of waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. 'Contamination' includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected."

CWC section 13050(m) states "Nuisance' means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of wastes."

CWC section 13241 requires each Regional Water Board to "establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance [...]."

CWC section 13243 provides that "A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted."

CWC section 13263(a) provides that waste discharge requirements prescribed by the San Diego Water Board implement the Basin Plan.

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in storm water runoff from commercial, residential, industrial, and construction land uses or activities.

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(A - D) require municipalities to have legal authority to control various discharges to their MS4.

Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal storm water permits to include any requirements necessary to "[a]cheive water quality standards established under section 303 of the CWA, including State narrative criteria for water quality."

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."

Section A of the Order combines two previously distinct requirement sections – Prohibitions and Receiving Water Limitations. These sections have been combined into one section for organization purposes and to reduce redundancy, since both sections address the same issue. These changes have no net effect on the implementation and enforcement of the Order.

Section A.3 describes the "iterative process." The Copermittees must reduce the discharge of storm water pollutants to the MEP and ensure that their MS4 discharges do not cause or contribute to violations of water quality standards. If the Copermittees have reduced storm water pollutant discharges to the MEP, but their discharges are still causing or contributing to violations of water quality standards, the Order provides a clear and detailed process for the Copermittees to follow. This process is often referred to as the "iterative process" and can be found at section A.3. The language of section A.3 is prescribed by the State Water Board and is included in MS4 permits statewide. Section A.3 essentially requires additional BMPs to be implemented until MS4 storm water discharges no longer cause or contribute to a violation of water quality standards.

The State Policy with respect to maintaining high quality waters has been added to clarify that discharges from the MS4 that cause or contribute to a violation of the Policy for high quality waters is prohibited.

The Copermittee must notify the San Diego Water Board of storm water discharges that are causing or contributing to an exceedance of applicable water quality standards. This notification can be in the form of an email or letter, with a summary of the pollutants in the storm water discharge that are exceeding the applicable water quality standards, and where and when the exceedances occurred. After notification is provided to the San Diego Water Board, the Copermittee must submit a report that describes the BMPs that are currently being implemented and the additional BMPs that will be implemented by the Copermittee to prevent or reduce the pollutants in the storm water discharge from causing or contributing to the exceedances of the applicable water quality standards. The report is separate from the notification and may be submitted with the Annual Report, unless the San Diego Water Board requests an earlier submittal of the report.

B. Non-Storm Water Discharges

The following legal authority applies to section B:

Broad Legal Authority: CWA sections 402, 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F), 40 CFR 122.26(d)(2)(iv) and 40 CFR 122.44.

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B) requires MS4 operators "to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermittees shall prevent all types of illicit discharges into the MS4 except for certain non-storm water discharges.

Section B of the Order has been reworded to simplify and clarify the requirements for addressing non-storm water discharges that are not prohibited. This rewording has no net effect on the implementation and enforcement of the Order.

Section B.2 identifies categories of non-storm water discharges that do not have to be addressed as illicit discharges unless identified by a Copermittee or the San Diego Water Board as a category that is a source of pollutants to waters of the U.S. If a Copermittee or the San Diego Water Board identifies a category of non-storm water discharges as a source of pollutants to waters of the U.S., the category must be addressed through a program, including inspections, to implement and enforce an ordinance, orders, or other similar means to prevent illicit discharges to the MS4.[159]

The program includes enforcement of an ordinance, orders, or other legal authority that prohibits the category of non-storm water discharges from entering the MS4. Implementation of the program is through the IC/ID program, described in Directive F.4, which includes requirements for investigating/inspecting illicit discharges and enforcing the ordinance, orders, or other legal authority that prohibits the category of non-storm water discharges from entering the MS4.

The federal regulations list several categories of non-storm water discharges or flows that do not have to be addressed by the program unless a Copermittee or the San Diego Water Board identifies a category as a source of pollutants to waters of the U.S. These categories are often referred to as "exempt" discharges that are "allowed" to be discharged into the MS4. There are two types of categories of non-storm water discharges or flows that are considered "exempt": 1) anthropogenic (e.g., water line

[159] Code of Federal Regulations Title 40 section 122.26(d)(2)(iv)(B)(1)

flushing, air conditioner condensate), and 2) non-anthropogenic (e.g., springs, rising ground water).

For "exempt" anthropogenic categories of non-storm water discharges or flows that are identified as sources of pollutants to waters of the U.S., those categories become illicit discharges and are no longer "allowed" to be discharged to the MS4. The IC/ID program addresses those discharges (i.e. investigation of illicit discharges and enforcement of ordinances prohibiting illicit discharges to the MS4).

For "exempt" non-anthropogenic discharges or flows that are identified as sources of pollutants to waters of the U.S., the IC/ID program cannot be fully implemented with enforcement. Categories of non-storm water discharges or flows that originate due to a natural source (e.g., springs or rising ground water) can be investigated and identified, but it would be difficult to enforce ordinances prohibiting these discharges to the MS4. In these cases, the Copermittee may need to implement other control measures to prevent the illicit discharges from non-anthropogenic sources from entering the MS4 (e.g., sealing the storm drains to prevent infiltration).

The IC/ID program also identifies categories of "exempt" non-storm water discharges that are sources of pollutants to waters of the U.S. If an individual discharge within a category of "exempt" non-storm water discharges is found to be an isolated incidence or source of pollutants and not representative of the category as a whole, the entire category does not need to be removed from the list of "exempt" categories of non-storm water discharges. If, however, the Copermittees or the San Diego Water Board find that a pattern of isolated incidents or sources are consistently discharging pollutants to waters of the U.S. over a period of time, or throughout the region, the category must be identified as a source of pollutants to waters of the U.S. warranting removal from the list of "exempt" categories of non-storm water discharges.

The San Diego Water Board and several municipalities throughout the San Diego Region (e.g., cities and counties of Orange County and San Diego County) have reported and/or identified runoff originating from landscape irrigation as likely sources of dry weather flows conveying pollutants into their MS4s. This is also supported by legislation (Assembly Bill 1881) recently enacted by the State of California, which has identified runoff resulting from over irrigation not only as a waste of water resources, but also as a source of pollutants to the state's waterways. Discharges from landscape irrigation have been identified by the San Diego Water Board and the Copermittees as a source of pollutants and conveyance of pollutants to waters of the United States in the following:

- In educational materials developed by The Cities and County of Riverside "Only Rain in the Storm Drain" Pollution Prevention Program, the Landscape and Garden brochure states: "Soil, yard wastes, *over-watering* [emphasis added] and garden chemicals become part of the urban runoff mix that winds it way through streets, gutters and storm drains before entering lakes, rivers, streams, etc."

- In an educational survey developed by The Cities and County of Riverside "Only Rain in the Storm Drain" Pollution Prevention Program distributed at Public Outreach events, the answer to the question about where lawn irrigation water goes states: *"Water that leaves your lawn from irrigation…can pick up motor oil and grease from vehicles, excess fertilizer from your lawn, bacteria from pet waste, and excess pesticides from your yard. These pollutants can be carried down streets and storm drains directly to our streams, lakes and rivers without treatment!"*

- In 2006, the State Water Board allocated Grant funding to the Smarttimer/Edgescape Evaluation Program (SEEP). The project targets irrigation runoff by retrofitting existing development and documenting the conservation and runoff improvements. The Grant Application states that "Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators". Furthermore, the grant application states that "Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the Basin Plan and Bacteria TMDL over the long term". This is reinforced in the project descriptions and objectives: "Elevated dry-weather storm drain flows, composed primarily … of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California's urbanized coastline. Storm drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and warm, unseasonal contaminated freshwater plumes in the near-shore marine environment". The basis of this grant project is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, they indicate that the alteration of natural flows is impacting the Beneficial Uses of waters of the State. The results of this study can be applied broadly to any area where over-irrigation takes place, including Riverside County. Preliminary results from the study indicate that that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 *is* a source and conveyance of pollutants.

- In the Watershed Action Plan Annual Report(s) for the 2006-2007 reporting period, submitted by the County of Orange, Orange County Flood Control District and Copermittees within the San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds, the Orange County Copermittees, within their Watershed Action Strategy Table for Fecal Indicator Bacteria state that "*Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the […] watershed. Dry weather flow is the transport medium for bacteria and other 303(d) constituents of concern*". Additionally, they state that "*conditions in the MS4 contribute to high seasonal bacteria propagation in-pipe during warm weather. Landscape irrigation is a major*

contributor to dry weather flow, both as surface runoff due to over-irrigation and overspray onto pavements; and as subsurface seepage that finds its way into the MS4."

- In the Carlsbad Watershed Urban Runoff Management Program (WURMP) Fiscal Year 2008 Annual Report, submitted by the Carlsbad Watershed Copermittees (Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, and the County of San Diego), the Carlsbad Watershed Copermittees state *"The Carlsbad Watershed Management Area (WMA) collective watershed strategy identifies bacteria, sediment, and nutrients as high priority water quality pollutants in the Agua Hedionda (904.3 – bacteria and sediment), Buena Vista (904.2 – bacteria), and San Marcos Creek (904.5 – nutrients) Hydrologic Areas. Bacteria, sediment, and nutrients have been identified as potential discharges from over-irrigation."*

- In Appendix D of the San Diego Bay WURMP 2007-2008 Annual Report, submitted by the San Diego Bay Watershed Copermittees (Cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego, the County of San Diego, the Port of San Diego, and the San Diego County Airport Authority), the San Diego Bay Watershed Copermittees identified *over-irrigation of lawns* from business and/or residential land uses as a likely pollutant source for bacteria, pesticides, and sediment.

- On September 28, 2006 Governor Arnold Schwarzenegger approved Assembly Bill 1881, The Water Conservation in Landscaping Act (AB 1881, Laird). The act requires cities, counties, and charter cities and charter counties, to adopt landscape water conservation ordinances by January 1, 2010. Additionally, the law required the Department of Water Resources (DWR) to prepare a Model Water Efficient Landscape Ordinance for use by local agencies. The Water Efficient Landscape Ordinance was approved by the Office of Administrative Law on September 10, 2009. All local agencies were required to adopt a water efficient landscape ordinance by January 1, 2010. Local agencies could adopt the Water Efficient Landscape Ordinance developed by DWR, or an ordinance considered at least as effective as the Model Ordinance. The Water Efficient Landscape Ordinance includes a requirement that local agencies prohibit runoff from irrigation (§ 493.2): *"Local agencies shall prevent water waste resulting from inefficient landscape irrigation by* prohibiting runoff from leaving the target landscape *[emphasis added] due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures. Penalties for violation of these prohibitions shall be established locally."*

- On October 08, 2009, the State of California Department of Water Resources issued a letter to all cities and counties within the State of California giving reminder of required adoption of the Water Efficient Landscape Ordinance. The letter states that: *"Other benefits include reduced irrigation runoff,* reduced

pollution of waterways *[emphasis added], drought resistance, and less green waste.*"

- On December 18, 2009, the San Diego Water Board adopted Order. No. R9-2009-0002, the fourth-term Orange County permit, which found that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. Landscape irrigation, irrigation water, and lawn watering were categories removed from the list of non-storm water discharges not prohibited to be discharged into the MS4.

- The San Diego Water Board has responded to complaints about and observed runoff from over-irrigation entering the MS4s in the Riverside County portion of the San Diego Region.

Several significant changes have been made to the list of categories of non-storm water discharges that do not have to be addressed as illicit discharges. A footnote has been added to dechlorinated swimming pool discharges on the list to specify that this category does not include saline swimming pool discharges. The list has been modified to remove the landscape irrigation, irrigation water and lawn watering "exempt" discharge categories (i.e. no longer "allowed" to enter the MS4). Language has been also added to the section to clarify differences in the federal regulations under 40 CFR 122.26(d)(iv)(B) and for the authority of the Director (i.e. San Diego Water Board) in regards to identifying exempted discharges.

Because the landscape irrigation, irrigation water and lawn watering "exempt" discharge categories have been removed from section B, per identification as a source and conveyance of pollutants to waters of the United States when discharged from the MS4, these illicit discharges must be addressed per 40 CFR 122.26(d)(iv)(B). The San Diego Water Board is requiring these discharges be addressed as illicit discharges by the Copermittees. This is consistent with the Federal Regulations (55 FR 48037). Thus, the discharges are to be prohibited via ordinance, order, or similar means and incorporated as part of the Copermittees IC/ID program.

Section B.3 has been clarified by the recognition of building fire suppression system maintenance (e.g. fire sprinklers) as an illicit discharge. The San Diego Water Board has found that such discharges contain waste, and as such the San Diego Water Board is requiring these discharges be addressed as illicit discharges by the Copermittees. This is consistent with the Federal Regulations (55 FR 48037). Thus, the discharges are to be prohibited via ordinance, order or similar means and incorporated as part of the Copermittees IC/ID program.

C. Non Storm Water Dry Weather Action Levels

The following legal authority applies to section C:

Broad Legal Authority: CWA section 402, 402(p)(3)(B)(ii), CWC §13377. 40 CFR 122.26(d)(2)(i)(B, C, E, and F), and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority:
CWA section 402(p)(3)(B)(ii) provides that MS4 permits "shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers."

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) provides that the proposed management program "shall be based on a description of a program including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermittee include in its proposed management program "a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system; this program description shall address all types of illicit discharges, however the [listed exempt] category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) provides that the Copermittee include in its proposed management program "a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) provides that the Copermittee include in its proposed management program "procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water."

Section C establishes non-storm water dry weather action levels (see also Finding C.14, Finding E.10, and the Discussion for those sections).

Non-exempted, non-storm water discharges are to be effectively prohibited from entering the MS4 or become subject to another NPDES permit (see Federal Register, Vol. 55, No. 222, pg. 47995). Conveyances which continue to accept non-exempt, non-storm water discharges do not meet the definition of MS4 and are not subject to section 402(p)(3)(B) of the CWA unless the discharges are issued separate NPDES permits. Instead, conveyances that continue to accept non-exempt, non-storm water

discharges that do not have a separate NPDES permit are subject to sections 301 and 402 of the CWA (see Federal Register, Vol. 55, No. 222, pg. 48037).

The Order requires the sampling of a representative percentage of major outfalls and other identified stations within each hydrologic subarea. While it is important to assess all major outfall discharges from the MS4 into receiving waters, to date the Copermittees have implemented a dry-weather monitoring program that has consisted of 4 water quality parameters collected in receiving waters, not major outfalls. In the ROWD the Copermittees have proposed relocating IC/ID (non-storm water) monitoring sites to major outfalls and increasing the level of monitoring. It is expected that the Copermittees will need to utilize current 303(d) listings, land use, the history of IC/ID complaints and the sensitivity of receiving waters in the selection and annual sampling of a representative percentage of major outfalls in accordance with the requirements under section C.4. It is expected the selection of major outfalls will be done in conjunction with the Copermittees' required updates to the MS4 map in section F.4.b of the Order.

The Order requires an increase in the number and type of pollutants sampled in non-storm water from major outfalls. To date, Copermittees have not sampled major outfalls, only receiving waters, and sampling was limited to total dissolved solids, dissolved oxygen, pH, turbidity and specific conductance. Additional sampling was generally, though not always, conducted by Copermittees if initial sampling exceeded a Copermittee threshold. With the exception of dissolved oxygen, the current thresholds do not represent water quality objectives, as sampling may not trigger a threshold, but may still be exceeding a water quality objective. This Order requires non-storm water discharges to be sampled for additional pollutants including indicator bacteria, nutrients (nitrate and phosphorous), Methylene Blue Active Substances (MBAS), pesticides and metals. These pollutants are expected to be present in non-storm water discharges, are pollutants for which receiving waters are 303(d) listed as impaired or have been identified as present through receiving water monitoring.

Background and Rationale for Requirements

The San Diego Water Board developed the requirements for dry weather, non-storm water action levels based upon an evaluation of existing controls, monitoring and reporting programs (effluent and receiving water), special studies, and based upon Findings C.1 C.3, C.4, C.6, C.7 and C.14. In addition, the Copermittees' ROWD supports the establishment of action levels which can be used in the effectiveness assessment program to ensure a minimum level of program implementation and identify shortcomings in their MS4 programs.[160]

[160] Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).

Water Quality Control Plan

CWA section 303(c) requires the state to establish Water Quality Standards (WQS). WQS define the water quality goals of a water body, or part thereof, by designating their use or uses to be made of the water and by setting criteria necessary to protect those uses.

The San Diego Water Board's Water Quality Control Plan for the San Diego Basin (Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The Basin Plan was adopted by the San Diego Water Board on September 8, 1994, and was subsequently approved by the State Water Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and State Water Board.

National Toxics Rule (NTR) and California Toxics Rule (CTR)

The USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995, and November 9, 1999. The CTR was adopted by USEPA on May 18, 2000,[161] and amended on February 13, 2001.[162] These rules include water quality criteria for priority pollutants and are applicable to non-storm water discharges from the MS4. Criteria for 126 priority pollutants are established by the CTR. USEPA promulgated this rule to fill a gap in California water quality standards that was created in 1994 when a California court overturned the State's water quality control plans containing criteria for priority toxic pollutants. The federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the CWA.

Antidegradation Policy

Section 131.12 of 40 CFR requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Boards' Basin Plans implement, and incorporate by reference, both the State and federal antidegradation policies. Permitted non-storm water discharges from the MS4 are consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution No. 68-16.

[161] Federal Register / Vol. 65, No. 97 / May 18, 2000 / Rules and Regulation P. 31861-31719; Code of Federal Regulations Title 40 Part 131

[162] Federal Register / Vol. 66, No. 30 / February 13, 2001 / Rules and Regulation P. 9960-9962; Code of Federal Regulations Title 40 Part 131

Sources of Drinking Water Policy
State Water Board Resolution No. 88-63 establishes state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal and domestic supplies. Requirements of this Order include action levels, where appropriate, reflecting municipal and domestic supply use as all waters within the County of Riverside under this Order are specifically assigned municipal and domestic supply as a Beneficial Use.

Monitoring and Reporting
40 CFR section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement state and federal regulations. The Monitoring and Reporting Program can be found as Attachment E of the Order.

Dilution or Mixing Zones
In order to protect the Beneficial Uses of receiving waters from pollutants as a result of non-storm water MS4 discharges, this Order does not provide for a mixing zone or a zone of initial dilution except when the discharge is to the surf zone.

The San Diego Region has predominantly intermittent and ephemeral rivers and streams (Inland Surface Waters) which vary in flow volume and duration at spatial and temporal scales. Therefore, it is assumed that any non-storm water discharge from the MS4 into the receiving water is likely to be of a quantity and duration that does not allow for dilution or mixing. For ephemeral systems, non-storm water discharges from the MS4 are likely to be the only surface flows present within the receiving water during the dry season. Additionally, all surface waters within the jurisdiction of this Order have been designated in the Basin Plan with municipal supply (MUN) as a beneficial use.

It is appropriate to base numeric action levels for dry weather non-storm water discharges on these considerations.

Establishment of Action Levels
Action levels in the Order are based upon numeric or narrative water quality objectives and criteria as defined in the Basin Plan and the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The San Diego Water Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-storm water discharges because there may be some discharges in which pollutants do not exceed established action levels.

In June of 2006, the State Water Board's Blue Ribbon Storm Water Panel released its report titled 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.' The

report only examined numerical limits as applied to storm water and not non-storm water. In the recommendations, the Blue Ribbon panel proposed storm water action levels which are computed using statistical based population approaches. For example, section D of the Permit uses a recommended statistical approach to develop storm water action levels. The Blue Ribbon panel did not examine the efficacy of action levels or recommendations for development of action levels for non-storm water discharges.

For discharges to inland surface waters, action levels are based on the USEPA water quality criteria for the protection of aquatic species, the USEPA water quality criteria for the protection of human health, water quality criteria and objectives in the applicable State plans, effluent concentration available using best available technology, and 40 CFR 131.38. Since the assumed initial dilution factor for the discharge is zero and a mixing zone is not allowed, a non-storm water discharge from the MS4 could not cause an excursion from numeric receiving water quality objectives if the discharge is in compliance with the action levels contained in the Order.

Dry weather monitoring of non-storm water conducted in receiving waters under the previous Order (Order No. R9-2004-001), which relies on BMPs as controls to protect water quality standards, has identified the presence of pollutants commonly found in non-storm water discharges. Monitoring of Indicator Bacteria, pH, Dissolved Oxygen, Phosphorus, Nitrate, Turbidity, Methylene Blue Active Substances (MBAS), and metals in receiving waters has shown concentrations that exceed state water quality criteria. It is appropriate to establish numeric action levels for these pollutants to ensure that the Copermittees are complying with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s.

Water Quality Limited Segments on the current 303(d) list (2008) within the jurisdiction of this Order have been identified due to exceedances of Sulfate and Total Dissolved Solids criteria from a source which is currently unknown (see Table 2). These pollutants are not monitored for in non-storm water effluent under the current non-storm water MS4 monitoring program. While this Order does not establish a numeric action level for these constituents at this time, this Order now requires non-storm water MS4 discharge monitoring to include monitoring for Sulfates, Total Dissolved Solids, and Chlorides.

Priority pollutants analyzed included Cadmium, Copper, Chromium, Lead, Nickel, Silver and Zinc. These priority pollutants are likely to be present in non-storm water MS4 discharges (see Finding C.3) though dissolved metal effluent monitoring was not conducted under the previous Order. The most stringent applicable water quality criteria have been identified for these seven metals and, excluding Chromium (VI), and all are dependent on receiving water hardness. The conversion factors for Cadmium and Lead are also water hardness dependent (40 CFR 131.38(b)(2)). These levels are established as the action levels for these constituents.

While effluent monitoring is not available from the previous Order, the monitoring that was done for metal concentrations in receiving waters often lacked a measurement of receiving water hardness. Due to the multiple point source discharges of non-storm water from the MS4, a discharge may enter a receiving water whose hardness will vary temporally. In addition, hardness may vary spatially within and among receiving waters.

However, other information is available to determine the appropriateness of an action level. Existing monitoring concentrations absent of receiving water data, no dilution credit or mixing zone allowance, current 303(d) listings of receiving waters for other pollutants, receiving water monitoring data, and the classification of waters as critical habitat for endangered and species of concern, provide evidence that NALs are appropriate for these priority pollutants at this time in order to ensure that the Copermittees comply with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s.

Existing receiving water pollutant concentration data (see attachment F) provides evidence that it is appropriate to include NAL based comparisons to water quality criteria given observed hardness levels, assumption of a conservative hardness level when data is absent, or designation of receiving waters as having MUN as a beneficial use. Although dry weather receiving water data is limited (see attachment F), data has been collected that documents exceedances of CTR criteria for Lead, Nickel, and Copper given the measured hardness for the receiving water. Absent receiving water hardness, Zinc has been detected in receiving waters at concentrations which may be in exceedance of CTR criteria depending on receiving water hardness. Additionally, Cadmium and Chromium were detected at elevated levels, though the concentrations were within CTR criteria given the observed receiving water hardness. However, these detections typically coincided with detections of other exceedances of water quality standards for other pollutants, including metals. Chromium and Nickel were also detected at levels that did not exceed CTR, but did exceed Maximum Contaminant Levels (MCLs) for receiving waters.

As discussed, inland surface waters have conservatively been allotted a mixing zone and dilution credit of zero. As such, any discharge of these priority pollutants is likely to impact the receiving water, regardless of the quantity or rate of discharge.

As discussed in Finding C.7 and discussion, multiple receiving waters within the County of Riverside are 303(d) listed for a number of pollutants, including toxicity. The 303(d) listing of a water body as impaired provides evidence that the receiving water(s) are already experiencing negative impacts. These water quality limited segments are more susceptible to degradation from the synergistic addition of more pollutants, even from upstream discharges. It is therefore appropriate to include NALs designed to ensure that the Copermittees are complying with the requirement to effectively prohibit all types of unauthorized discharges of non-storm water into the MS4s.

Copermittees have monitored the receiving waters for MS4 discharges pursuant to requirements under Order No. R9-2004-001. Dry weather receiving water data indicates poor conditions within waters receiving non-storm water MS4 discharges. Bioassessment conducted under the Order (2004-present) has documented all non-reference sites as consistently having poor or very poor IBI scores, likely due in part to receiving water chemistry and toxicity[163].

Receiving waters and downstream receiving waters within the jurisdiction of this Order contain species and/or are classified as critical habitat (or are exempted pursuant to Integrated National Resource Management Plans) for endangered, threatened, and state species of special concern including, but not limited to, *E. newberryi, A. marmorata pallida*, and *G. orcutti.*

Furthermore, the Santa Margarita River has been designated with the RARE beneficial use.

Dry Weather Non-Storm Water Action Levels Calculations for Discharges to Inland Surface Waters

On the basis of the foregoing discussion, the NALs were calculated with the following considerations and assumptions:

No dilution credit is considered for the discharge. Therefore, the discharge must comply with the Water Quality Objective at the point of discharge.

For NALs based on CTR, implementation was done using the procedure list as outlined in the State Implementation Plan (SIP) (see below example).

NAL CTR/SIP Calculation – Chromium VI Example:

Criteria for Priority Toxic Pollutants in the State of California is described in the CTR table listed in 40 CFR 131.38.

[163] Riverside County Copermittees 2007-08 and 2008-09 Annual Progress Reports.

A		B Freshwater		C Saltwater		D Human Health (10^{-6} risk for carcinogens) For consumption of:	
# Compound	CAS Number	Criterion Maximum Conc. [d] B1	Criterion Continuous Conc. [d] B2	Criterion Maximum Conc. [d] C1	Criterion Continuous Conc. [d] C2	Water & Organisms (µg/L) D1	Organisms Only (µg/L) D2
1. Antimony	7440360					14 a,s	4300 a,t
2. Arsenic [b]	7440382	340 i,m,w	150 i,m,w	69 i,m	36 i,m		
3. Beryllium	7440417					n	n
4. Cadmium [b]	7440439	4.3 e,i,m,w,x	2.2 e,i,m,w	42 i,m	9.3 i,m	n	n
5a. Chromium (III)	16065831	550 e,i,m,o	180 e,i,m,o			n	n
5b. Chromium (VI) [b]	18540299	16 i,m,w	11 i,m,w	1100 i,m	50 i,m	n	n
6. Copper [b]	7440508	13 e,i,m,w,x	9.0 e,i,m,w	4.8 i,m	3.1 i,m	1300	
7. Lead [b]	7439921	65 e,i,m	2.5 e,i,m	210 i,m	8.1 i,m	n	n
8. Mercury [b]	7439976	[Reserved]	[Reserved]	[Reserved]	[Reserved]	0.050 a	0.051 a
9. Nickel [b]	7440020	470 e,i,m,w	52 e,i,m,w	74 i,m	8.2 i,m	610 a	4600 a
10. Selenium [b]	7782492	[Reserved] p	5.0 q	290 i,m	71 i,m	n	n
11. Silver [b]	7440224	3.4 e,i,m		1.9 i,m			
12. Thallium	7440280					1.7 a,s	6.3 a,t
13. Zinc [b]	7440666	120 e,i,m,w,x	120 e,i,m,w	90 i,m	81 i,m		

Freshwater criterion maximum concentration (CMC) = 16 ug/L
Freshwater criterion continuous concentration (CCC) = 11 ug/L

These criteria are expressed in terms of the dissolved fraction of the metal in the water column. [See footnote "m" to Table in paragraph (b)(1) of 40 CFR 131.38].

40 CFR 122.45(c) requires that this Order include effluent limitations as total recoverable concentration; therefore it is appropriate to include action levels also as total recoverable concentration.

The SIP requires that if it is necessary to express a dissolved metal value as a total recoverable and a site-specific translator has not yet been developed, the San Diego Water Board shall use the applicable conversion factor from 40 CFR 131.38.

The term "Conversion Factor" (CF) represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column.

Total recoverable concentration * CF = Dissolved concentration criterion

or

Total recoverable concentration = Dissolved concentration criterion/ CF

Metal	Conversion factor (CF) for freshwater acute criteria	CF for freshwater chronic criteria	CF for saltwater acute criteria	CF[a] for saltwater chronic criteria
Antimony	[c]	[d]	[c]	[d]
Arsenic	1.000	1.000	1.000	1.000
Beryllium	[c]	[d]	[c]	[d]
Cadmium	[b]0.944	[b]0.909	0.994	0.994
Chromium (III)	0.316	0.860	[c]	[d]
Chromium (VI)	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead	[b]0.791	[b]0.791	0.951	0.951
Mercury				
Nickel	0.998	0.997	0.990	0.990
Selenium		[e]	0.998	0.998

CF for Chromium VI = .982 and .962, so the total recoverable concentrations for chromium VI:
16 ug/L dissolved (CMC)/ 0.982 (CF) = 16.3 ug/L total recoverable CMC
11 ug/L dissolved (CCC) / 0.962 (CF) = 11.4 ug/L total recoverable CCC

Effluent Variability multiplier and Coefficient of Variation (CV)
For each concentration based on an aquatic life criterion, the long-term average (LTA) is calculated by multiplying the concentration with a factor that adjusts for effluent variability. The multiplier can be found in Table 1 of the SIP. Since this Order does not have existing data to properly conduct a variability analysis in accordance with the SIP, the CV has been set equal to 0.6 per SIP requirements. The current effluent data is limited due to the small number of representative outfalls sampled, the lack of outfalls discharging to representative water bodies within the Region, and the targeted nature of the sampling design.

Based upon a CV of 0.6, Table 1 of the SIP requires an effluent variability as follows:
Acute Multiplier = 0.321
Chronic Multiplier = 0.527

The long-term average (LTA) is calculated by multiplying the total recoverable concentrations for zinc with the acute and chronic multipliers:
LTA Acute = 16.3 ug/L * 0.321 = 5.23
LTA Chronic = 86 11.4 ug/L * 0.527 = 6.01

The maximum daily action level (MDAL) and average monthly action level (AMAL) will be based on the most limiting of the acute and chronic LTA, in the case for chromium VI the most limiting LTA is the acute of 5.23 ug/L

NALs are calculated by multiplying the most limiting LTA with a multiplier that adjusts for the averaging periods and exceedance frequencies of the criteria and the effluent limitations. The multiplier can be found in Table 2 of the SIP. Since this Order has insufficient data, the CV has been set to 0.6 and since sampling frequency is four times a month or less, n has been set equal to 4 per the SIP.

Table 2. Long-Term Average (LTA) Multipliers for Calculating Effluent Limitations

Coefficient of Variation	MDEL Multiplier	AMEL Multiplier			MDEL/AMEL Multiplier		
	99th Percentile Occurrence Probability	95th Percentile Occurrence Probability			MDEL = 99th Percentile AMEL = 95th Percentile Occurrence Probability		
(CV)		n = 4	n = 8	n = 30	n = 4	n = 8	n = 30
0.1	1.25	1.08	1.06	1.03	1.16	1.18	1.22
0.2	1.55	1.17	1.12	1.06	1.33	1.39	1.46
0.3	1.90	1.26	1.18	1.09	1.50	1.60	1.74
0.4	2.27	1.36	1.25	1.12	1.67	1.82	2.02
0.5	2.68	1.45	1.31	1.16	1.84	2.04	2.32
0.6	3.11	1.55	1.38	1.19	2.01	2.25	2.62

Therefore, from Table 2 of the SIP, the LTA multipliers will be as follows:
MDAL Multiplier = 3.11
AMAL Multiplier = 1.55

The MDAL and AMAL limits are calculated by multiplying the LTA with an LTA multiplier for each limit:
MDAL = 5.23 ug/L * 3.11 = 16 ug/L
AMAL = 5.23 ug/L * 1.55 = 8.1 ug/L

Whole Effluent Toxicity (WET) Testing Requirements
A WET limit is required if a discharge causes, has a reasonable potential to cause, or contributes to an exceedance of applicable water quality standards, including numeric and narrative. Since these types of discharges are prohibited under this Order, WET limits are not applicable.

Discussion of AMALs, MDALs and Instantaneous Maximums
Where practical, action levels in this Order have been expressed as both AMALs and MDALs. Certain action levels may not practicably be expressed as AMALs and MDALs due to specific Basin Plan water quality objective language, sampling requirements and/or a lack of Criteria. Based upon the likely sampling frequency of the Copermittees, the frequency of sampling will occur such that grab samples are taken once per sampling day. This single sample would then be subject to MDALs and Instantaneous Maximum levels. In this case, the more conservative action level would apply. In addition, it is expected that some effluent monitoring will occur less than or equal to once per month. In this scenario, the MDAL, AMAL and Instantaneous Maximum levels would need to be met based upon one sample (unless sampling did

not occur). For some Basin Plan water quality objectives, AMALs have been excluded and only MDALs/Instantaneous Maximums set to prevent redundancy in action levels.

Compliance with Action Levels (Priority Pollutants)
Compliance with action levels shall be determined as follows:

Dischargers shall be deemed out of compliance with this Order if the Copermittee failed to take the prescribed action in response to a concentration of the priority pollutant in the monitoring sample that is greater than the action level and greater than or equal to the reported Minimum Level (exceedance of an action level). Regardless of the Copermittee's actions in response to an exceedance, they are still subject to the prohibitions found in sections A and B of the Order.

When determining to take an action in response to the AMALs and more than one sample result is available in a month, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "did not quantify" (DNQ) or "not detected" (ND). In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

(1) The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

(2) The median value of the data set shall be determined. If the data set has an odd number of data points then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of those points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

D. Storm Water Action Levels

The following legal authority applies to section D:

Broad Legal Authority: CWA §402, §402(p)(3)(B)(iii), CWC §13377, 40 CFR §122.44, 40 CFR §122.26(d)(1)(iv), 40 CFR §122.26(d)(2)(i)(E and F), and 40 CFR §122.26(d)(2)(iii and iv).

Specific Legal Authority:
CWA section 402(p)(3)(B)(iii) provides that MS4 permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(E and F) provides that the Copermittee "Require compliance with conditions in ordinances, permits, contracts or orders;" and "Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions ..."

Copermittees must conduct a comprehensive monitoring program as required under Federal NPDES regulations 40 CFR 122.26(d)(2)(iii), including the collection of quantitative MS4 storm water effluent data from outfalls.

Federal NPDES regulations 40 CFR 122.44 (d) provide that NPDES permits include any requirements necessary to "Achieve water quality standards,... including State narrative criteria for water quality."

Section D has been added to establish storm water action levels (see also Finding D.1.h and Discussion).

Introduction
The Copermittees' ROWD supports the establishment of action levels which can be used in the effectiveness assessment program to ensure a minimum level of program implementation and identify shortcomings in their MS4 programs.[164] Storm Water Action Level (SAL) concentrations, standards and constituents have been developed and incorporated into the monitoring requirements for wet weather.

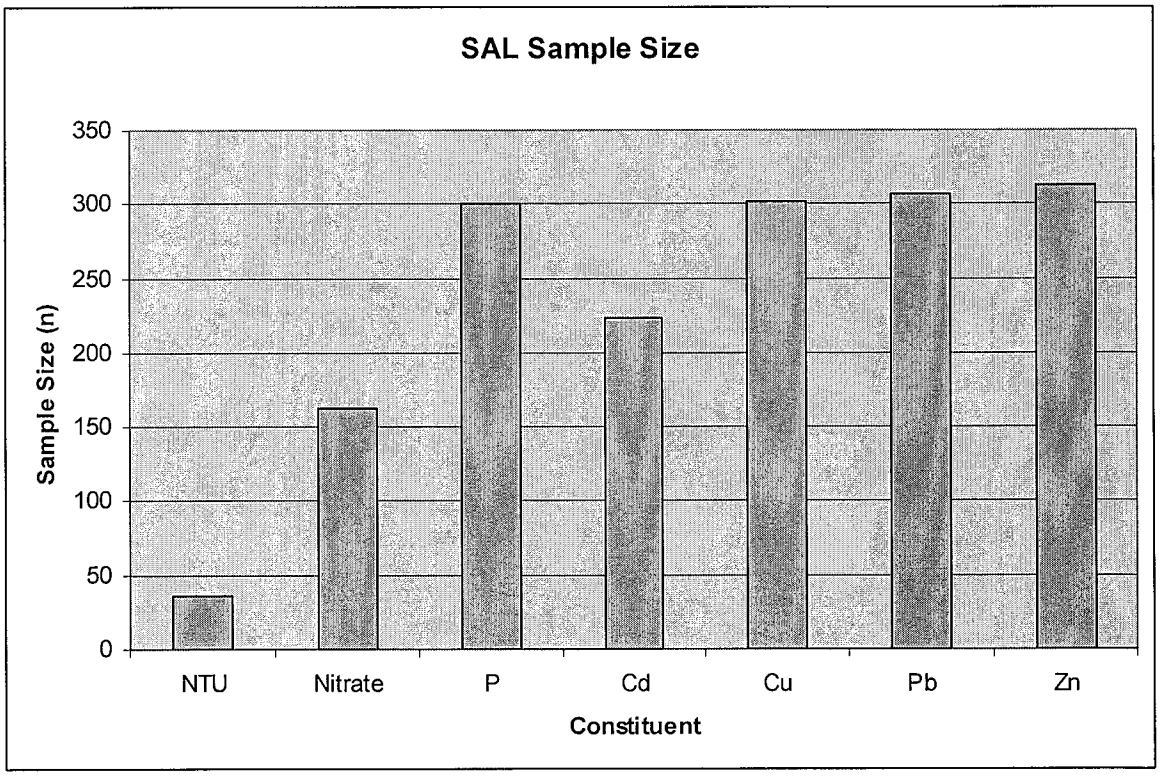
[164] Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).

SAL Concentration/Standards

SAL pollutant levels were developed from a regional subset of nationwide Phase I MS4 data by using USEPA Climate Zone 6 (arid west) data.[165] Utilizing data from USEPA Climate Zone 6 resulted in SALs which closely reflect the environmental conditions experienced in Riverside County. The localized subset of data includes sampling events from multiple Southern California locations including Orange, San Diego, Riverside, Los Angeles, and San Bernardino Counties. The dataset includes samples taken from highly built-out impervious areas and from storm events representative of Southern California conditions.

Additionally, utilization of regional data is appropriate due to the addition of data into the nationwide Phase I MS4 monitoring dataset in February 2008. This additional data increased the number of USEPA Climate Zone 6 samples to more than 400, and included additional monitoring events within Southern California (see figure below).

Sample Sizes Used to Calculate Storm Water Action Levels



In addition, the SALs reflect the water quality standards in the Basin Plan for the San Diego Region, the California Toxic Rule and USEPA Water Quality Criteria. Since it is the goal of the SALs, through the iterative and MEP process, to have outfall storm water discharges meet all applicable water quality objectives, the list of constituents to

[165] Data used to develop SAL are provided in Attachment F to Order No. R9-2010-0016, and obtained from http://rpitt.eng.ua.edu/Research/ms4/mainms4.shtml

be tested and protocol for testing has been developed to provide a reference point to evaluate the iterative MEP process.

SALs were developed based upon receiving water monitoring results and CWA section 303(d) impaired waters listings. Nitrogen, Copper and Phosphorous are all pollutants for which receiving waters are 303(d) listed as impaired and for which sufficient data was available to develop SALs. Additionally, receiving water monitoring, including from storm events monitored by the Copermittees, has demonstrated excursions and/or potential excursions, often absent receiving water hardness, above water quality criteria for turbidity (NTU), Cadmium, Lead, and Zinc. SALs were not developed for some pollutants for which receiving waters are 303(d) listed as impaired due to a lack of representative data available. These pollutants are required to be monitored but are not subject to a SAL under the Order.

Monitoring

The SALs require the measurement of hardness and to provide more specificity in the assessment of samples with SALs for total metal concentrations. While USEPA Climate Region 6 data includes a large sample size for concentrations of total metals, the impact the concentration will have on receiving waters will vary with receiving water hardness. Since it is the goal of the SALs, through the iterative and MEP process, to have MS4 storm water discharges meet all applicable water quality objectives, the hardness of the receiving water should be used when assessing the total metal concentration of a sample. Thus, when an exceedance of a SAL concentration is detected for a metal, the Copermittee must determine if that exceedance is above the existing applicable water quality limitation based upon the hardness of the receiving water. The water quality limitations Copermittees must use to assess total metal SAL exceedances are the California Toxic Rule (CTR) and USEPA National Recommended Water Quality Criteria for Freshwater Aquatic Life 1 hour maximum concentrations. The 1 hour maximum concentration is to be used for comparison since it is expected to most replicate the impacts to waters of the State from the first flush following a precipitation event.

E. Legal Authority

The following legal authority applies to section E:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that the Copermittees shall develop and implement legal authority to "Control through ordinance, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity."

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that the Copermittees shall develop and implement legal authority to "Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system."

Illicit discharge is defined under Federal NPDES regulation 40 CFR 122.26(b)(2) as "any discharge to a municipal separate storm sewer system that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities."

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in storm water runoff from commercial, residential, industrial, and construction land uses or activities.

Federal NPDES regulation 40 CFR 122.26(d)(1)(ii) requires from the Copermittee "A description of existing legal authority to control discharges to the municipal separate storm sewer system."

Section E.1.b requires the Copermittees to prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2 including but not limited to:

(1) Sewage;
(2) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
(3) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
(4) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;

(5) Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
(6) Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
(7) Discharges of pool or fountain water containing chlorine, biocides, toxic amounts of salt, or other chemicals; discharges of pool or fountain filter backwash water;
(8) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
(9) Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).

Section E.1.j has been added to the Order to ensure that BMPs implemented by third parties are effective. Since the Copermittees cannot passively receive and discharge pollutants from third parties, the Copermittees must ensure discharges of storm water pollutants to the MS4 are reduced to the MEP. In order to achieve this, the Copermittees must be able to ensure that effective BMPs are being implemented by requiring the third parties to document BMP effectiveness. Regarding the Copermittees' ability to require documentation and reporting from third parties, USEPA states "municipalities should provide documentation of their authority to enter, sample, inspect, review, and copy records, etc., as well as demonstrate their authority to require regular reports."[166]

[166] USEPA, 1992. Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

F. Jurisdictional Runoff Management Program

F.1. Development Planning Component

The following legal authority applies to section F.1:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWA section 402(a), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F), 40 CFR 131.12, and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(2) provides that Copermittees develop and implement a management program which is to include "A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plans shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed."

Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal storm water permits to include any requirements necessary to "[a]cheive water quality standards established under section 303 of the CWA, including State narrative criteria for water quality."

Sections F.1.a and F.1.b (General Plan and Environmental Review Process) require the Copermittees to update and revise their General Plan (or equivalent plan) and environmental review processes to ensure water quality and watershed protection principles are included. The Copermittees are required to detail any changes to the General Plan or environmental review process in their Jurisdictional Runoff Management Program Annual Reports. The General Plan must be updated to include water quality and watershed protection principles for all new development and redevelopment projects.

The change made to these sections requires updating the General Plan and Environmental Review Process on an as-needed basis. Each Copermittee has either updated, is in the process of updating, or has assessed its General Plan to ensure the General Plans include the required principles and are in compliance with Order No. R9-2004-001.

Section F.1.c (Approval Process Criteria and Requirements) requires that all development projects (regardless of size) implement BMPs to reduce storm water pollutant discharges to the MEP. Source control and site design BMP requirements were not clearly described in this section of Order No. R9-2004-001. Additional detail has been added to this section to better describe the source control and site design BMPs needed for implementation. This additional detail is consistent with the

requirements of the SSMP, also known in Riverside County as the Water Quality Management Plan (WQMP). However, only source control and site design BMPs that apply to all types of development projects are required (e.g., properly designed trash storage areas).

The requirements are consistent with Order No. R9-2004-001. However, some elements are not contained in the current DAMP[167] (e.g., buffer zones). One exception is that Order No. R9-2004-001's requirement that applicants must provide evidence of coverage under the General Industrial Permit has been removed, since industrial tenants for a development project are usually not known during the planning stage.

The section has also been modified to reflect the prohibition of over-irrigation runoff to the MS4, as well as LID requirements. Additionally, this section requires the use of native and/or low water use plants for landscaping, and rainwater harvesting, where feasible.

Sections F.1.d and F.1.d.(1) (Standard Storm Water Mitigation Plans and Definition of Priority Development Project) require the Copermittees to review and update their SSMPs (also known in Riverside County as Water Quality Management Plans – WQMPs) for compliance with the Order. The sections also require all Priority Development Projects falling under certain categories to meet SSMP requirements. The update is necessary to ensure that the Copermittees' SSMPs are consistent with the changes that have been made to the Order's SSMP requirements. The requirement for the development/adoption of a Model SSMP has been removed since a model was completed and adopted in 2005.

The SSMP section of the Order has been reformatted for clarity. There are also some significant changes. Changes have been made in response to USEPA program evaluations, recent BMP development and effectiveness studies, recent reports on the magnitude of problems caused by hydromodification, and reviews of annual reports and the ROWD submitted by the Copermittees.

In addition, the Order requires that a one-acre threshold be phased in over two years for the priority development category. This one-acre threshold was selected to be consistent with the State Water Board's Phase II NPDES requirements for small municipalities (Order No. 2003-0005-DWQ). The one-acre threshold is also included to be consistent with the State Water Board's Construction General Permit (Order No. 2009-0009-WQO), to ensure all Development Projects subject to the post-construction BMP requirements of the Construction General Permit will implement SSMP post-construction BMP requirements. The one-acre determination applies to the amount of ground area disturbed, not the total size of the parcel or project. Each Copermittee may also lower this threshold if desired.

[167] Riverside County Copermittees. *Drainage Area Management Plan (DAMP)2006.* July 21, 2006.

Section F.1.d.(2) (Priority Development Project Categories) includes several changes to improve, simplify, and clarify the Priority Development Project categories.

One of the most significant changes is that where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SSMP requirements. This criterion was not included in Order No. R9-2004-001. It is included, however, in the Model San Diego SSMP that was approved by the San Diego Water Board in 2002. It is included in this Order because existing development inspections by Riverside County municipalities show that facilities included in the Priority Development Project Categories routinely pose threats to water quality. This permit requirement will improve water quality and program efficiency by preventing future problems associated with partly treated storm water runoff from redevelopment sites. This approach to improving storm water runoff from existing developments is practicable because municipalities have a better ability to regulate new developments than existing developments.

Another significant change is a new category for any new development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This category applies to commercial, industrial, residential, mixed use, and public projects on private or public land.

Section F.1.d.(2)(g) was modified to allow the Copermittees to develop a standard roadway design and post-construction BMP guidance document that could be used by the Copermittees in lieu of a project specific SSMP for each public works road construction project. The guidance document must comply with the SSMP requirements, including the LID and hydromodification BMP requirements. The roadway design and post-construction BMP guidance must be included in the updated SSMP, and may be utilized after the San Diego Water Board has determined that the updated SSMP is acceptable.

Development of new industrial sites was not included as a category in the Priority Development Projects in Order No. R9-2004-001 because industrial NPDES requirements already establish storm water criteria. Industrial sites are now included in the new development category of the Order to be consistent with Phase II rules and to close loopholes.

Section F.1.d.(3) (Pollutants of Concern) requires Copermittees to update their procedures for identifying pollutants of concern for each Priority Development Project. This is important to do periodically because of changing water quality conditions and designations of impairments or areas of concern. Furthermore Copermittees continually learn more about pollutant-generating activities as they conduct inspections and investigations, and that information must be incorporated into the SSMP process.

Section F.1.d.(4) (Low Impact Development BMP Requirements) requires the Copermittees to require each Priority Development Project to implement low impact development (LID) BMPs to reduce the amount of polluted storm water runoff from

those sites. The Copermittees' ROWD proposes to revise the Riverside County Storm Water Quality BMP Design Handbook to incorporate LID design concepts.[168] The primary approach in LID site design BMPs is to limit the permanent loss of existing infiltration capacity because loss of infiltration is a major contributor to wet weather pollution discharges. General means to accomplish that goal include retaining natural infiltration areas of a site and limiting the amount of impervious surfaces. The Order does not require a specific or relative amount of pervious surfaces be added to a project. The Order seeks to retain on-site capture of the 85th percentile storm.

The Copermittees must require LID BMPs to be implemented for each Priority Development Project, unless found to be technically infeasible. LID BMPs must be formally considered during the plan review process for Priority Development Projects. The LID review process for each Priority Development Project is expected to include an assessment of LID BMP techniques to infiltrate, filter, store, evaporate, and/or retain runoff close to the source of the runoff. The review process is also expected to include an assessment of the potential collection of storm water for on site and off site reuse opportunities. In cases where LID BMPs are found to be technically infeasible, the Copermittees may grant a waiver to the Priority Development Project for all or a portion of the LID BMP requirements.

The Order directs the Copermittees to require new development projects to employ certain classes of LID site design BMPs. The required LID site design BMPs take advantage of features that are incorporated into the Priority Development Project, such as landscaping or walkways. It also requires that projects seek to maintain natural water drainage features rather than instinctively convey water in buried pipes and engineered ditches that eliminate natural water quality treatment functions. These types of site design BMPs are both effective and achievable.

LID BMPs must be sized and designed to ensure onsite retention without runoff, of the volume of runoff produced from a 24-hour 85th percentile storm event ("design capture volume"). This is consistent with other municipal storm water NPDES permits recently adopted by the Los Angeles and Santa Ana Water Boards, as well as the permit recently adopted by the San Diego Water Board for Orange County. The requirement for a numerical BMP design standard is well established for treatment control BMPs and is required in permits throughout the nation such as in Pennsylvania, West Virginia, Georgia, and Washington D.C. Since the 85th percentile storm event has previously been used as the numeric design standard for treatment control BMPs; the same size storm event can be applied as the numeric design standard for LID BMPs. The average 24-hour, 85th percentile rainfall for the Riverside County portion of the San Diego Region was calculated to be approximately 0.6 inches of rain.[169]

The retention and restoration of natural drainage features, such as ephemeral streams, wetlands, and depressions, can be particularly important because small tributaries are essential to the maintenance of the chemical, biological, and physical

[168] Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).
[169] San Diego Water Board, 2004. Fact Sheet/Technical report for Order No. R9-2004-001, dated July 14, 2004.

integrity of larger water bodies.[170] The loss and modification of such natural water resources to accommodate post-development storm water management leads to direct and indirect adverse effects on water quality that are felt both on the project site and off the site within the watershed.[171,172,173] Effects to aquatic beneficial uses from altered drainage features can occur downstream and upstream. The length of upstream or downstream effect of channel modifications is dependant on the specific structure type and channel slope.[174] For instance, road culverts can act as partial barriers to upstream distribution of native aquatic macroinvertebrates in urban streams, while bridges can provide adequate passage.[175] As a result of the adverse effects to water quality and beneficial uses, the State of California nonpoint source pollution program management measures for urban areas includes limiting the destruction of natural drainage features and natural conveyance areas.[176] Additionally, any project proposing to discharge dredge and/or fill material to waters of the United States and/or State is required to obtain a CWA section 401 Water Quality Certification and/or Waste Discharge Requirements from the San Diego Water Board or State Water Board.

LID site design BMP options do not need to be costly.[177] Some design options, such as concave vegetated surfaces or routing rooftop or walkway runoff to landscaped areas, are cost neutral.[178] Other LID site design BMPs, such as minimizing parking stall widths or use of efficient irrigation devices, are oftentimes already required. In addition, use of LID site design BMPs reduces storm water runoff quantity, allowing for treatment control BMPs and other storm water infrastructure on site to be smaller, therefore savings costs for both developers and municipalities.[179,180]

Because of the potential economic and environmental benefits of using LID site design, the U.S. Department of Housing and Urban Development, Office of Policy

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[170] Aquatic scientists comment letter (April 10, 2003) on the Advanced Notice of Proposed Rulemaking (ANPRM) on the Clean Water Act Regulatory Definition of "Waters of the United States." (Docket ID No. OW-2002-0050). This letter is a synthesis of scientific information regarding ephemeral, intermittent, and headwater streams. It was written to USEPA by 85 leading aquatic scientists.

[171] Wright, Tiffany, et al. 2006. *Direct and Indirect Impacts of Urbanization on Wetland Quality.* Prepared by the Center for Watershed Protection for the USEPA Office of Wetlands, Oceans, an Watersheds. 81p. Available on-line at http://www.cwp.org

[172] Konrad, Christopher P. and Derek K. Booth, 2005. *Hydrologic Changes in Urban Streams and Their Ecological Significance.* American Fisheries Society Symposium. Vol. 45 pp.157-177.

[173] Coleman, Derrick, et al. 2005. *Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams.* Technical Report No. 450 of the Southern California Coastal Water Research Project.

[174] Fischenich, J.C. 2001. "*Impacts of stabilization measures,*" EMRRP Technical Notes Collection (ERDC TNEMRRP- SR-32), U.S. Army Engineer Research and Development Center, Vicksburg, MS. http://www.wes.army.mil/el/emrrp

[175] Blakely, Tanya J., et al. 2006. *Barriers To The Recovery Of Aquatic Insect Communities In Urban Streams* Freshwater Biology Vol. 51(9), 1634–1645.

[176] California Nonpoint Source Encyclopedia, Management Measure 3.1.b. Runoff from Developing Areas, Site Development and Management Measure 3.3.a. Runoff from Existing Development, Existing Development.

[177] USEPA, 2000. Low-Impact Development: A literature review. EPA-841-B-00-005. 35p.

[178] Bay Area Stormwater Management Agencies Association., 1999. Start at the Source. Forbes Custom Publishing. Available on-line at: http://www.scvurppp-w2k.com/basmaa_satsm.htm. pp. 149.

[179] National Association of Home Builders Research Center. *Builders Guide to Low Impact Development.* Available on-line at http://www.toolbase.org

[180] National Association of Home Builders Research Center. *Municipal Guide to Low Impact Development.* Available on-line at http://www.toolbase.org

Development and Research, developed "*The Practice of Low Impact Development (LID)*" to assist the housing industry during the land development process. [181] This document focuses specifically on technologies that affect both the cost impacts and environmental issues associated with land development. Much of the report focuses on storm water management because LID storm water management systems can save capital costs for developers and maintenance costs for municipalities.[182] The executive summary of the HUD report notes:

> *This approach to land development, called Low Impact Development (LID), uses various land planning and design practices and technologies to simultaneously conserve and protect natural resource systems and reduce infrastructure costs. LID still allows land to be developed, but in a cost-effective manner that helps mitigate potential environmental impacts. LID is best suited for new, suburban development.*

Developers can use site and structure designs that reduce building footprints, decrease the amount of paved infrastructure, and provide for dispersed drainage and infiltration of runoff from impervious surfaces to reduce the effective impervious surface.[183] The concept of effective impervious surface is important, because when runoff from these surfaces is directed to pervious areas rather to an impervious drainage system (i.e. curbs, gutters, street surfaces, storm drain pipes), it can infiltrate, evaporate, or be taken up by vegetation, thereby reducing the total volume of storm water runoff leaving a site.

In addition to all the benefits discussed above, LID BMPs have several other advantages over conventional treatment control BMPs. As previously discussed, implementing LID BMPs can save on maintenance costs for municipalities and property owners. LID BMPs are typically easier to operate and maintain compared to conventional mechanical treatment control BMP technologies. Because LID BMPs are easier to operate and maintain, they are also more reliable compared to conventional mechanical treatment control BMP technologies, thus more sustainable over the long term.

Through its process of conditioning development projects under the CWA section 401 Water Quality Certification program, the San Diego Water Board finds that the level of LID site design BMP implementation in the Order is feasible for all projects. The LID BMP requirements will help ensure that LID site design BMPs are implemented for new development projects. LID site design BMPs are a critical component of storm water runoff management at new development projects, since the LID BMPs provide multiple benefits including preservation of hydrologic conditions, reduction of pollutant discharges, cost effectiveness, and green space.

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[181] U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 2003. *The Practice of Low Impact Development."* Prepared by: NAHB Research Center, Inc. Upper Marlboro, Maryland. Contract No. H-21314CA.
[182] Ibid. Executive Summary, p.x.
[183] Bay Area Stormwater Management Agencies Association. 2003. *Using Site Design Techniques to Meet Development Standards for Stormwater Quality.* Available on-line at: http://www.basmaa.org/

The Order provides the Copermittees with flexibility in implementing the LID site design BMP requirements by providing a LID BMP waiver program. The Riverside County Copermittees plan on allowing the implementation of the LID BMPs contained in the Riverside County LID Design Manual if retention LID BMPs are found to be technically infeasible to retain all of the design capture volume. Other LID BMP design and guidance manuals that are acceptable to the Copermittees and/or San Diego Water Board may also be considered.

If retention LID BMPs and/or other LID BMPs are technically infeasible to retain and/or treat all or part of the design capture volume for a Priority Development Project, a waiver may be granted for the remaining portion of the design capture volume. The waiver would allow the remaining portion of the design capture volume to be treated with conventional treatment control BMPs and some form of mitigation.

The use of conventional treatment control BMPs for Priority Development Projects is expected to be allowed by the Copermittees on a very limited basis, and only when a Copermittee finds that LID BMPs are technically infeasible for retaining and/or treating the full design capture volume. In such cases, the Copermittee may issue a waiver for the Priority Development Project from all or a portion of the LID BMP requirements. The LID BMP waiver program that must be developed and implemented by the Copermittee(s) is discussed below under section F.1.d.(7). The criteria that the Copermittee(s) may use to make a finding of technical infeasibility for implementing LID BMPs are also discussed under section F.1.d.(7).

Section F.1.d.(5) (Source Control BMP Requirements) requires that Priority Development Projects implement a minimum set of source control BMPs to protect the water quality of receiving waters from discharges of runoff from these projects. This section has been added to provide more detail and clarify the Order's requirements for source control BMPs. The minimum source control BMPs listed as required by this section must be implemented by each Priority Development Project. In cases where one or more of the minimum source control BMPs are not warranted as part of the site design for the Priority Development Project (e.g., no outdoor material storage and/or work areas), those source control BMPs are not expected to be implemented.

Section F.1.d.(6) (Treatment Control BMP Requirements) includes several design requirements for any treatment control BMPs that are allowed to be implemented (i.e. granted a waiver for all or part of the LID BMP requirements) on Priority Development Projects. These requirements are generally consistent with Order No. R9-2004-001, with two exceptions. First, the Order limits the selections of methods used to determine the appropriate volume of storm water runoff to be treated. The modification ensures that priority development project proponents utilize the most accurate information to determine the volume or flow of runoff which must be treated.

Second, the Order requires that treatment control BMPs selected for implementation at Priority Development Projects have a removal efficiency rating that is ranked with high

or medium pollutant removal frequency for the project's most significant pollutants of concern. The requirement allows exceptions for those projects that, with a feasibility analysis, can justify the use of a treatment control BMP with a low removal efficiency for a Priority Development Project. This requirement is needed because to date, the Copermittees have generally approved low removal efficiency treatment control BMPs without justification or evidence that use of higher efficiency treatment BMPs was considered and found to be infeasible. Specifically, it has been found during audits of the Copermittees' SSMP programs that many SSMP reports do not adequately describe the selection of treatment control BMPs.[184] Moreover, USEPA's contractor Tetra Tech, Inc. recommends that "project proponents should begin with the treatment control that is most effective at removing the pollutants of concern [...] and provide justification if that treatment control BMP is not selected."[185]

In addition, treatment control BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies. Related guidelines are identified in guidance from CASQA.[186] Additional considerations are outlined in publications from the California Department of Health Services and University of California Division of Agriculture and Natural Resources.[187]

Section F.1.d.(7) (Low-Impact Development BMP Waiver Program) requires the Copermittees to develop, collectively or individually, a LID BMP waiver program. For some Priority Development Project sites, it may be technically infeasible to implement the required LID BMPs to retain and/or treat the design capture volume due to the site constraints. For this reason, the San Diego Water Board has added to the Order a requirement for the Copermittees to develop such a program. The LID BMP waiver program would provide the opportunity for development projects to avoid partial or full LID BMP implementation in exchange for implementation of conventional treatment control BMPs and mitigation. The program would maintain equal water quality benefits as properly implemented LID BMPs when partial LID BMPs are coupled with some form of mitigation.

LID BMPs are not limited to infiltration BMPs, and may also include storage, evaporation, evapotranspiration, filtration, and/or on site reuse BMPs. Thus, the San Diego Water Board expects that every site will be able to implement some form of LID BMPs to some extent. The LID BMP waiver program is expected to be used by the Copermittees on a limited basis, and only when a Copermittee finds that LID BMPs are technically infeasible for retaining and/or treating the full design capture volume. The Order provides several conditions under which a Copermittee may find that the

[184] PG Environmental, 2008. Riverside County Flood Control and Water Conservation District and County of Riverside MS4 Inspection Report.
[185] Tetra Tech, Inc., 2005. Program Evaluation Report –San Diego Standard Urban Storm Water Mitigation Plan (SUSMP) Evaluation. P. 5.
[186] For example, see the California Stormwater BMP Handbook guidelines for Extended Detention Basins (TC-22) at http://www.cabmphandbooks.org.
[187] Marco Metzger. "Managing Mosquitoes in Stormwater Treatment Devices." University of California Division of Agriculture and Natural Resources Publication No. 8125. Available at http://anrcatalog.ucdavis.edu.

implementation of LID BMPs to retain and/or treat the design capture volume is technically infeasible [see section F.1.d.(7)(b)(i)-(iii)]. The Copermittees are not limited to the conditions listed in the Order, and may identify other conditions in the SSMP that would allow a finding of technical infeasibility.

Making a finding of technical infeasibility for the implementation of the LID BMP requirements on any Priority Development Project is at the discretion of each Copermittee through their SSMP plan review process. For any project proponent that would like to receive a waiver for all or part of the LID BMP requirements, the Copermittees may require and/or use any information to make a finding of technical infeasibility.

A separate technical report developed by the project proponent or the Copermittee to support a finding of technical infeasibility may not always be necessary to meet the requirements of this Order. In most cases, it is expected that the information that is provided in the project proponent's SSMP plan review documents (e.g., geotechnical reports, site design plans) will allow the Copermittees to determine whether or not it is technically feasible for LID BMPs to be implemented to retain and/or treat all or part of the design capture volume. The reason(s) for a Copermittee making a finding a technical infeasibility and granting a LID BMP waiver for any project must be provided in the Annual Report.

For Priority Development Projects that are granted a waiver for all or a portion of the LID BMP requirements, mitigation will be required to achieve water quality benefits that will be lost without the LID BMP retention and/or treatment. Any LID BMP waiver program which allows development projects to forgo all or part of the LID BMP implementation requirements must include mitigation provisions which will achieve similar water quality benefits. To ensure that this is the case for the LID BMP waiver program, minimum mitigation provisions for the program have been added to the Order.

Mitigation can be achieved on site or off site. On site mitigation may include additional sizing multipliers for conventional treatment control BMPs implemented on the site to treat a larger range of storm events to achieve the same or greater pollutant load removal expected from retention of the design capture volume. Off site mitigation may include other pollutant treatment projects that are not located on the site that will achieve the same or greater pollutant removal expected from on site LID BMPs for the design capture volume. For example, off site mitigation projects may include green streets projects, existing development retrofit projects, retrofit incentive programs, regional BMPs and/or riparian restoration projects. Off site mitigation projects may also satisfy the Order's retrofitting requirements in section F.3.d.

In addition to these mitigation options, the Order allows the Copermittees to develop and propose additional forms of mitigation (e.g., pollutant credit system, mitigation fund) that could be implemented as part of the LID BMP waiver program by the Copermittee(s). Any additional forms of mitigation proposed by the Copermittees

would be subject to approval by the San Diego Water Board Executive Officer prior to implementation.

Section F.1.d.(8) (LID and Treatment Control BMP Standards) addresses a need for the Copermittees to develop and apply consistent criteria for the design and maintenance of structural treatment BMPs. Correct BMP design is critical to ensure that BMPs are effective and perform as intended. Without design criteria, there is no assurance that this will occur, since there is no standard for design or review. As an example, Ventura County has developed a BMP manual that includes standard design procedure forms for BMPs. Ventura County's *Technical Guidance Manual for Storm Water Quality Control Measures* is available at http://www.vcstormwater.org/publications.htm."[188] CASQA also confirms the necessity of design criteria when it includes such criteria in its New Development and Redevelopment BMP Handbook.[189] This issue is noted in the ROWD, and the Copermittees propose to develop standard design checklist/plans/details for selected source control and treatment BMPs.[190]

Section F.1.d.(9) (Implementation Process) requires the Copermittee to implement a process to verify compliance with SSMP requirements. The process must identify at what point in the planning process that projects must meet SSMP requirements and what are roles/responsibilities of municipal departments. The intent of this requirement is to provide consistency in the application of the SSMP between the Copermittees. This requirement was included in previous Order No. R9-2004-001.

Section F.1.d.(10) (Post-construction BMP Review) requires the Copermittees to keep their SSMP up to date with BMP effectiveness studies for low-impact design and treatment control BMPs. This requirement will ensure that two important types of information be included in those efforts: Site design BMPs and treatment BMPs that are assessed as part of contracts with the State Water Board and San Diego Water Board. Projects funded with such state grants must include effectiveness assessments using a quality assurance plan. As a result, such studies generally provide reliable sources of local data and should be included in the SSMP.

Sections F.1.e (BMP Construction Verification)requires the Copermittees to verify that the BMPs are being constructed for each Priority Development Project subject to SSMP requirements (SSMP project). SSMP projects that improperly construct or fail to construct site design, source control, and treatment control BMPs can pose a significant threat to water quality. Section F.1.e is included in response to recommendations from USEPA.[191]

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[188] Ibid.
[189] California Stormwater Quality Association, 2003. Stormwater Best Management Practice Handbook – New Development and Redevelopment.
[190] Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).
[191] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68845. USEPA recommends such practices in the Phase II storm water regulations, promoting "inspections during construction to verify BMPs are built as designed."

In some cases SSMP projects may wish to allow occupancy and/or use of a portion of the site prior to full completion of the project. Section F.1.e is not intended to require a project to be fully (i.e. all phases and areas) completed before the occupancy and/or intended use of a portion of the site is allowed. A Copermittee, however, must verify that the BMPs designed to treat and control pollutants from the completed portion of the project are properly constructed before the occupancy and/or intended use of the completed portion is allowed. The BMPs must be specifically designed to control pollutants from the completed portion of the site that will be occupied and/or used prior to the full completion of the SSMP project.

Section F.1.f (BMP Maintenance Tracking) is included in the Order to ensure the continued effectiveness of the post-construction BMP requirements. BMPs need to be properly constructed and adequately maintained to ensure that they are operating correctly and remain effective in removing pollutants from a project site's runoff prior to discharging to receiving waters.

To facilitate the tracking of BMP maintenance, each Copermittee must develop and maintain a database of Priority Development Projects subject to SSMP requirements (SSMP projects) and the post-construction BMPs implemented for each SSMP project. The inventory is not expected or required to include LID BMPs that are implemented on a lot by lot basis at single family residential houses. The inventory, however, must include the post-construction BMPs for all other development or redevelopment SSMP project sites.

The Order requires BMPs at all high priority SSMP project sites as well as all Copermittee project sites with BMPs to be inspected by the Copermittees annually. Other measures, verification methods, and inspection frequencies may be used for BMPs at lower priority SSMP project sites. SSMP project sites with the highest potential for causing or contributing to a threat to water quality or an existing impairment of water quality are required to be inspected by the Copermittees on an annual basis.

The prioritization of the SSMP project sites requiring inspections by the Copermittees will be developed by the Copermittees and reported in the updated JRMP. The prioritization of SSMP project sites may be revised on an annual basis based on inspection findings, and the Copermittees must report changes in prioritization, and justification for each change, in the Annual Report.

The Order includes several criteria that must be considered by the Copermittees in determining the priority of a SSMP project site's threat to water quality. Receiving waters that are listed as impaired by pollutants and/or with discharges exceeding action levels are water bodies most at risk for impairment of beneficial uses. Thus, at a minimum, high priority SSMP projects must include sites that are known or suspected to generate pollutants in an area that is tributary (i.e. upstream within the same Hydrologic Subarea) to a receiving water body listed as impaired for those pollutants; and/or, a receiving water body where exceedances of action levels for

those pollutants are observed; and/or, a receiving water body where exceedances of NALs for those pollutants are observed and the Copermittee has not been able to identify the source.

Section F.1.h (Hydromodification) expands and clarifies current requirements for control of MS4 discharges to limit hydromodification effects caused by changes in runoff resulting from development and urbanization. The requirements are based on findings and recommendations of the Riverside County Storm Water Program,[192] the Stormwater Monitoring Coalition (SMC),[193,194] and the Storm Water Panel on Numeric Effluent Limits (Numeric Effluent Panel).[195] Added specificity is needed due to the current lack of a clear standard for controlling hydromodification resulting from development. More specific requirements are also warranted because hydromodification is increasingly recognized as a major factor affecting water quality and beneficial uses.

Hydromodification is the change in a watershed's runoff characteristics resulting from development, together with associated morphological changes to channels receiving the runoff. As the total area of impervious surfaces increases, infiltration of rainfall decreases, causing more water to run off the surface and at a higher velocity than natural conditions. While erosion in channels is a naturally occurring process, increased runoff rates, volumes, and velocities from developed areas can produce erosive flows in channels under rainfall conditions which are unnatural and were not previously problematic. Moreover, runoff from developed areas increases the duration of time that channels are exposed to erosive flows. The increase in the volume of runoff and the length of time that erosive flows occur ultimately intensify the amount and potential of channel erosion, subsequently causing changes in sediment transport characteristics and the hydraulic geometry (width, depth, and slope) of channels.[196]

These types of changes have been documented in southern California. It has been reported that researchers studying flood frequencies in Riverside County have found that increases in watershed imperviousness of only 9-22 percent can result in increases in peak flow rates for the two-year storm event of up to 100 percent.[197] Such changes in runoff have significant impacts on channel morphology. It has recently been found that ephemeral/intermittent channels in southern California appear to be

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[192] Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).
[193] Coleman, Derrick, et al. 2005. *Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams.* Technical Report No. 450 of the Southern California Coastal Water Research Project.
[194] Stein, Eric and Susan Zaleski. 2005. Managing Runoff to Protect Natural Streams: The Latest Developments on Investigation and Management of Hydromodification in California. Proceedings of a special technical workshop co-sponsored by California Stormwater Quality Association (CASQA), Stormwater Monitoring Coalition (SMC), and University of Southern California Sea Grant (USC Sea Grant). Technical Report No. 475 of the Southern California Coastal Water Research Project.
[195] Storm Water Panel Recommendations to the California State Water Resources Control Board. 2006. The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities.
[196] Santa Clara Valley Urban Runoff Pollution Prevention Program, 2005. Hydromodification Management Plan. P. 1-1.
[197] Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection.

more sensitive to changes in imperviousness than channels in other areas. Morphology of small channels in southern California was found to change with only 2-3 percent watershed imperviousness, as opposed to 7-10 percent watershed imperviousness in other parts of the nation.[198]

Sediment that would normally be eroded from the developed areas (i.e. naturally eroded if the area remained undeveloped) is typically coarser grained and deposited closer to the source. Coarser grained sediments that are deposited also provide or contribute to habitat that is more hospitable to aquatic flora and fauna.

Developed areas and increased impervious surface change the types and quality of sediment that are discharged in runoff to the channels under rainfall conditions, which can have an adverse impact on downstream habitats. Sediment in runoff from developed areas and impervious surfaces are typically finer grained, which remains suspended for longer periods of time and can affect aquatic flora (e.g., reduce photosynthesis by limiting transmittance of light) and fauna (e.g., interfere with respiration). Several types of pollutants generated on developed areas (e.g., pesticides, nutrients, bacteria, metals, hydrocarbons) also tend to adsorb on to finer grained sediments. In addition, finer grained sediments get deposited further away from the source or point of discharge. These changes in the characteristics and quality of the sediment in the runoff from developed areas also contribute to the hydromodification effects on downstream channels.

Effects of hydromodification are evident in Riverside County and recognized by the Copermittees. Analyses of bioassessment data within the San Diego Region has indicated that physical changes to stream channels caused by hydromodification are likely responsible, in part, for the low bioassessment scores in urbanized settings.[199] This pattern is consistent under Order No. R9-2004-001, although non-reference bioassessment monitoring was limited to two sites located at mass loading stations. These sites consistently exhibited poor or very poor IBI scores and sub-optimal or marginal habitat. In addition to poor habitat, water chemistry and toxicity impacts were documented at mass and tributary loading stations, likely exacerbating the observed low IBI scores.[200] It is important to recognize that the physical changes in stream channels are a direct result of MS4 discharges, but that two separate mechanisms are involved in bringing about those changes. First, is a change in the flow regime caused by the increase in impervious surfaces and loss of natural conveyance systems. Discharges to receiving waters from the MS4 outfalls do not mimic the natural discharges from former tributaries to that receiving water, and the change results in erosion. Second, the physical stream habitat in many places has been severely modified in order to efficiently convey those increased storm water discharges to the ocean. Where streams are hardened and/or buried to convey storm water, they

[198] Coleman, et. al., 2005. Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. P. iv.
[199] See San Diego Water Board Order No. R9-2009-002 Fact Sheet.
[200] Riverside County Copermittees Fiscal Year 2008-2009 Santa Margarita Watershed Annual Progress Report.

cannot provide adequate water quality and other necessary conditions to support beneficial uses. Both of these issues are addressed in the Order.

The Copermittees' recognize the need to improve management of hydromodification. The ROWD proposes to revise the SSMP to incorporate additional information from ongoing hydromodification studies conducted by the SMC. The Order allows the Copermittees to adopt criteria consistent with future SMC findings in the development of their Hydromodification Management Plan.

Section F.1.h. requires the Copermittees to submit a draft Hydromodification Management Plan (HMP) on or before June 30, 2013. This will provide the Copermittees over 2 years to develop the draft HMP.

Section F.1.h (1) describes several elements that must be included in the HMP. For example, the HMP must identify a method for assessing susceptibility of channel segments which receive runoff discharges from Priority Development Projects, and include a channel standard to ensure that the stability of the channel is not compromised as a result of discharges from the Priority Development Projects. The HMP must also identify a range of flows where Priority Development Projects could cause hydromodification effects and subsequent stream instability.

Maintaining the pre-development flows and durations from a Priority Development Project will significantly reduce the potential for increased erosion caused by development. Loss of natural sediment that will be removed because of otherwise pervious areas covered by the impervious development and removal of pollutants in runoff from Priority Development Projects, however, can still increase the potential for increased erosion. Runoff that is discharged from a project that lacks sediment becomes "sediment hungry" and can result in increased erosion upstream and downstream from the point of discharge. Thus, the HMP must also identify a method and compensate for the loss of sediment supply that is expected due to development and include a performance and/or design standard that will be able to mitigate for that expected loss of sediment supply.

The HMP must require Priority Development Projects to implement control measures (such as LID or detention basins) to prevent hydromodification and resultant degradation of stream conditions upstream and/or downstream of project sites. To compare post-project flow rates and durations to pre-project flow rates and durations, the HMP must specify that the pre-development (naturally occurring) flow rates and durations shall be used when assessing pre-project conditions, so that the naturally occurring hydrology throughout the watershed is eventually restored.

In cases where a stream has been armored with concrete, rip rap, or other man-made materials, the HMP shall require the assessment of a comparable soft-bottom channel as the channel standard, as opposed to using the characteristics of the hardened channel as the channel standard. This is to ensure that hydromodification management measures are already in place should any portion of the hardened

channel be returned to its natural state, thereby restoring the physical integrity of the creek and its Beneficial Uses. The only exceptions are for projects that discharge storm water runoff into underground storm drains or conveyance channels with bed and banks that have been concrete lined all the way to water storage reservoirs or lakes, where effects from hydromodification are not expected. Other exceptions that are acceptable to the San Diego Water Board may be identified in the final HMP.

The HMP must also include metrics for assessing impacts to downstream watercourses from Priority Development Projects, as well as assessing improvements to these watercourses. The metrics must be able to assess changes to the channels as Priority Development Projects are developed and constructed in the watershed. Monitoring and evaluating changes to the physical conditions of the channels receiving runoff discharges from Priority Development Projects will provide the Copermittees data that can be used to determine whether or not the HMP is effective at reducing the increased erosive forces caused by development and impervious surfaces over time.

In addition to metrics to assess changes to the physical conditions of the channels, the Copermittees must monitor and evaluate the biological conditions (e.g., habitat quality, benthic flora and fauna, IBI scores) of the channels. This is because historic hydromodification impacts, such as concrete lining and channelization, are suspected to have impacted the natural physical habitat of urban streams resulting in low IBI scores. The Copermittee's 2008-2009 monitoring report indicated decreased IBI scores at mass loading stations below urbanized watersheds, in part due to marginal or suboptimal habitat. The Monitoring and Reporting Program in the Order includes new requirements for monitoring of habitat for bioassessment, with the "Full" suite of physical/habitat characterization measurements found in the SWAMP Bioassessment Standard Operating Procedures being required with each bioassessment sample. Additional bioassessment sites are also required at locations higher in the watershed, which is expected to more closely reflect localized impacts. Therefore, the IBI scores required by the Monitoring and Reporting Program will be a useful metric in terms of assessing both impacts to streams from Priority Development Projects and improvements due to implementation of the HMP management measures. The Copermittees may also develop or utilize other metrics and identify other monitoring locations that can be used to assess the effectiveness of the HMP on the physical and biological conditions of the channels.

In addition to the control measures that must be included in the HMP to prevent or minimize hydromodification effects from Priority Development Projects, section F.1.h.(2) requires the HMP to include additional management measures that can be used on Priority Development Projects based on a prioritized consideration of the following elements in this order: 1) site-design control measures, 2) on-site management measures, 3) the use of regional control measures upstream of receiving waters, and lastly, 4) in-stream management and control measures (not to include reinforcement with non-naturally occurring materials). The suite of management measures must also include stream restoration as a viable option to achieve the channel standard and subsequently restore Beneficial Uses. In-stream controls are

expected to be in the form of stream restoration or rehabilitation. The use of stream restoration is expected to be an option that is used in conjunction with other on site management measures and not by itself as the only management measure. Stream restoration or rehabilitation projects that are considered in-stream controls for the purpose of preventing or minimizing hydromodification effects do not include projects that use non-naturally occurring materials (e.g., concrete, rip-rap, or gabions, etc.), but may include projects that use natural materials and/or create stable and sustainable channel configurations.

The San Diego Water Board recognizes that fully achieving post-project runoff flow rates and durations that do not exceed pre-development (naturally occurring) runoff flow rates and durations on redevelopment projects with existing impervious surfaces may be challenging. Thus, section F.1.h.(3) has been included to allow the Copermittees to propose, as part of the HMP, a waiver program specifically for Priority Development Projects that are redevelopment projects, as defined by section F.1.d.(1)(b). Because redevelopment projects may not be able to achieve post-project runoff flow rates and durations that do not exceed pre-development (naturally occurring) runoff flow rates and durations through onsite management and control measures, offsite mitigation measures may be required. Redevelopment projects must achieve post-project runoff flow rates and durations that are less than or equal to pre-project and down to pre-development runoff flow rates and durations to be eligible to receive a waiver under the program. For a redevelopment project, the pre-project runoff flow rates and durations are those currently being discharged by the existing development prior to the redevelopment project being built. Meeting pre-project runoff flow rates and durations is usually a less stringent performance criteria than meeting the pre-development runoff flow rates and durations. Implementing BMPs to meet the pre-project flow rates and durations is significantly easier and cheaper for a redevelopment project compared to meeting pre-development flow rates and durations. If a project is granted a waiver, the estimated incremental hydromodification impacts from not achieving the pre-development (naturally occurring) runoff flow rates and durations for the project site must be fully mitigated with offsite mitigation. Offsite mitigation measures may include utilizing regional hydrologic control measures (e.g., regional detention or infiltration basins) or rehabilitation of stream channels to achieve sustainable channel configurations.

Section F.1.h (6) describes interim hydromodification criteria that must be implemented by the Copermittees until the final HMP is found to be adequate by the San Diego Water Board Executive Officer. The Copermittees currently have hydromodification requirements in the SSMP (section 4.4 of the Riverside County WQMP). Until the final HMP is required to be implemented, the Copermittees must continue implementing their existing hydromodification requirements. The existing hydromodification requirements[201] allow exemptions for Priority Development Projects if they meet one of three conditions. One of those conditions is if a project discharges directly to a publicly-owned, operated and maintained MS4. This condition has been

[201] Riverside County Copermittees, 2006 (updated in 2009). Riverside County Water Quality Management Plan (WQMP), Section 4.4.

too broadly applied and has resulted in many projects being exempt from the hydromodification requirements in the past.

Therefore, the Order modifies the conditions that may exempt Priority Development Projects from implementing the interim hydromodification criteria. The modifications to the conditions are minor and can be implemented in the interim until the final HMP is approved. This allows the Copermittees to focus their resources on development of the final HMP.

Finally, the requirements included in section F.1.h do not supersede the LID BMP requirements in section F.1.d. (4). In certain situations, the requirements to incorporate LID BMPs will satisfy the requirements for hydromodification management. Using LID is a viable option for both accomplishing hydromodification management and pollutant load reductions.

Section F.1.i (Unpaved Roads Development) specifically requires the Copermittees to implement or require implementation of BMPs for erosion and sediment control after construction of all new unpaved roads. As discussed for Finding D.1c, design and source control BMPs for unpaved roads are needed to minimize the discharge of sediment to the MS4s and receiving waters, especially during storm events. There are several guidance documents available (see Discussion for Finding D.1.c) that include design and source control BMPs that can be readily implemented by the Copermittees for the development of new unpaved roads.

F.2. Construction Component

The following legal authority applies to section F.2:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D) provides that the proposed management program include "A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(1) provides that the proposed management program include "A description of procedures for site planning which incorporate consideration of potential water quality impacts."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(2) provides that the proposed management program include "A description of requirements for nonstructural and structural best management practices."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(3) provides that the proposed management program include "A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) provides that the proposed management program include "A description of appropriate educational and training measures for construction site operators."

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Copermittee must demonstrate that it can control "through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity."

Federal NPDES regulation 40 CFR 122.26(b)(14) provides that "The following categories of facilities are considered to be engaging in 'industrial activity' for the purposes of this subsection: [...] (x) Construction activity including cleaning, grading and excavation activities [...]."

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."

Section F.2 has additions to ensure the protection of threatened and endangered species and requires the consideration of potential impacts from the use of Active/Passive Sediment Treatment (AST) at sites determined by the Copermittees to be exceptional threats to water quality. These requirements were added to ensure additional protection of the Beneficial Uses of waters of the State.

Section F.2.a (Ordinance Update) requires each Copermittee to review and update its grading and storm water ordinances as necessary to comply with the MS4 permit. By updating the grading and storm water ordinances, the Copermittees will have the necessary legal authority to require construction sites to implement effective BMPs that will reduce pollutant discharges to the maximum extent practicable. The Order allows the Copermittees 365 days to review and update their ordinances. The 365 days should be adequate to allow for the relatively minor changes that might be needed since their ordinances were last updated under Order No. R9-2004-001.

Section F.2.b (Source Identification) requires the Copermittees to develop and update a watershed based inventory of all construction sites regardless of size or ownership. This section has been modified to require the inventory be updated regularly, rather than annually because constructions sites tend to change often within the course of a year. More frequent updates will ensure the Copermittees have a more accurate inventory of construction sites within their jurisdiction. A regularly updated inventory of active construction sites will assist the Copermittees in ensuring that all sites are inspected per Order requirements. The Order does not specify the frequency of updates, and instead relies on each Copermittee to develop updates appropriate to local construction activity. Failure to maintain a useful inventory would be a violation of the Order.

Section F.2.c (Site Planning and Project Approval Process) requires Copermittees to incorporate consideration of potential water quality impacts prior to approval and issuance of construction and grading permits.

This section now requires the Copermittees to review project proponents' runoff management plans for compliance with local regulations, policies, and procedures. USEPA recommends that it is often easier and more effective to incorporate storm water quality controls during the site plan review process or earlier.[202] In the Phase I storm water regulations, USEPA states that a primary control technique is good site planning.[203] USEPA goes on to say that the most efficient controls result when a comprehensive storm water management system is in place.[204] To determine if a construction site is in compliance with construction and grading ordinances and permits, USEPA states that the "MS4 operator should review the site plans submitted by the construction site operator before ground is broken."[205] Site plan review aids in compliance and enforcement efforts since it alerts the "MS4 operator early in the process to the planned use or non-use of proper BMPs and provides a way to track new construction activities."[206]

The Copermittees have the discretion to determine the depth and detail of the review, as well as the method by which the review will be conducted. The Copermittees review must at least verify that the project proponent's runoff management plan complies with the Copermittee's construction, storm water, and grading ordinances and permits prior to issuing the permit.

Section F.2.d (BMP Implementation) includes modifications to the requirements for each Copermittee to designate and ensure implementation of a set of minimum BMPs at construction sites. These modifications are based on San Diego Water Board findings and experience during implementation of Order No. R9-2004-001.

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[202] USEPA, 1992. Guidance 833-8-92-002. Section 6.3.2.1.
[203] Federal Register / Vol. 55, No. 222 / Friday, November 16, 1990 / Rules and Regulations. P. 48034.
[204] Ibid.
[205] USEPA, 2000. Guidance 833-R-00-002. Section 4.6.2.4, P. 4-30.
[206] Ibid., P. 4-31.

As a result, the Order requires a minimum set of BMPs to be designated for all sites. In addition to the minimum set of BMPs, enhanced BMPs must be designated and implemented for sites tributary to (i.e. upstream within the same Hydrologic Subarea of) a 303(d) listed water body, or within, directly adjacent to, or discharging directly to ESAs. Enhanced BMPs are control actions and measures specifically targeted to the pollutant or condition of concern and of higher quality and effectiveness than the minimum control measures otherwise required. Enhanced BMPs are expected to be better and more effective for pollutant removal than the minimum set of BMPs.

For sites that are identified as exceptional threat to water quality, active/passive sediment treatment (AST) is required to be implemented in addition to the minimum set and/or enhanced sediment control BMPs. AST is required at construction sites that are identified by the Copermittee as an exceptional threat to water quality due to high turbidity or suspended sediment levels in the site's effluent even when other sediment control BMPs have been implemented. In cases where the Copermittee's designated minimum set of BMPs and/or enhanced BMPs are not able or expected to be able to reduce turbidity or suspended sediment levels to a level that will be protective of water quality, AST is necessary and is considered MEP for the discharges from these sites.

AST has been effectively implemented extensively in the other states and in the Central Valley Region of California.[207] In addition, the San Diego Water Board's inspectors have observed AST being effectively implemented at large sites greater than 100 acres and at small, less than 5 acre, in-fill sites. AST is often necessary for Copermittees to ensure that discharges from construction sites are not causing or contributing to a violation of water quality standards. For example, the Basin Plan lists the water quality objective for turbidity as 20 NTU for all hydrologic areas and subareas except for the Coronado HA (10.10) and the Tijuana Valley (11.10). For certain construction sites with high clay content soils, large slopes and exposed areas, the only technology that is likely to meet 20 NTU is AST combined with erosion and sediment controls. To ensure the MEP standard and water quality standards are met, the requirement for implementation of AST at exceptional threat construction sites has been added to the Order, while still providing sufficient flexibility for each Copermittee's unique program.

The Copermittees may define types of construction sites, and/or at any time identify any construction sites after inspections, that are considered exceptional threats to water quality warranting AST. AST may include any sediment control technologies that are capable of reducing turbidity or suspended sediment levels in a construction site's discharge to meet water quality standards in receiving waters.

The Order does not include seasonal restrictions on grading. Seasonal restrictions on grading for storm water are difficult to implement due to the conflict between seasonal grading restrictions, avian breeding and nesting seasons and the seasonal passage of

[207] State Water Board, 2004. Conference on Advanced Treatment at Construction Sites.

endangered salmonids; therefore the seasonal grading restrictions have not been included with the other BMPs in the Order. For example, the Least Bell's Vireo and the Coastal California Gnatcatcher, found in southern California, are listed as federally endangered and threatened, respectively.[208] Permits issued by the California Department of Fish and Game (CDFG) restrict grading during these birds' breeding seasons, which is from April 10 to August 31 for the Least Bell's Vireo[209] and from February 15 to August 31 for the Coastal California Gnatcatcher.[210] Ideally storm water restrictions on grading would be during the rainy season from October 1 through April 30.[211] Combined, these restrictions would limit construction grading to be during the month of September, which is infeasible. Section D.2.d of the Order still requires project proponents to minimize grading during the rainy season and coincide grading with seasonal dry weather periods to the extent feasible.

Section F.2.e (Inspections) establishes criteria for inspections based on risk factors including size, season, and location of the construction site. Modifications have been made to requirements of Order No. R9-2004-001 based on the experience of the Copermittees and San Diego Water Board construction programs.

The types of construction sites that must be inspected every two weeks during the rainy season have been changed from Order No. R9-2004-001. In general, because large construction sites (i.e. greater than 50 acres) have been closely scrutinized during the last permit period, they tend to be adequately implementing BMPs. Smaller construction sites (i.e. site with less than 50 acres), however, were not inspected as frequently and can pose a significant threat to water quality. The final rule recently promulgated by USEPA for construction sites[212] identified construction sites with 20 or more acres of land disturbed at one time as posing a significant threat to water quality during the rainy season. Thus, the San Diego Water Board recognized that smaller construction sites needed to be inspected more frequently. As with the construction inspection requirements that were recently adopted for the Orange County Phase I MS4s, this Order requires sites in active grading during the rainy season that are over 30 acres, rather than sites over 50 acres, be inspected every two weeks.

The Order also lowers the size of construction sites adjacent to or discharging directly to ESAs that receive scrutiny. Order No. R9-2004-001 requires such sites five acres and more to be inspected every two weeks during the rainy season. This Order requires such sites one acre and above and tributary to (i.e. with the same Hydrologic Subarea of) a CWA section 303(d) water body segment impaired for sediment; or within, directly adjacent to, or discharging directly to a receiving water within an ESA to be inspected every two weeks during the rainy season and once during August or

[208] State of California, Department of Fish and Game, 2010. State and Federally Listed Endangered and Threatened Animals of California.
[209] United States Department of the Interior, Fish and Wildlife Service, 2001. Least Bell's Vireo Survey Guidelines.
[210] United States Department of the Interior, Fish and Wildlife Service, 1997. Coastal California Gnatcatcher (*Polioptila californica californica)* Presence/Absence Survey Guidelines.
[211] San Diego Water Board, 2001. Order No. 2001-01, San Diego County MS4 Permit. Directive F.2.g.(2).

September. The lower size threshold is consistent with Phase II storm water permits and the Construction General Permit, State Water Board Order No. 2009-0009-DWQ.

The Copermittees also have the discretion to define or identify other construction sites that are significant threats to water quality that must be inspected every two weeks. Several factors are provided that must be considered by each Copermittee in evaluating threat to water quality.

Finally, types of construction sites that must be inspected at least monthly during the rainy season have been changed from Order No. R9-2004-001. All construction sites with one acre or more of soil disturbance must be inspected monthly during the rainy season instead of just 3 times during the rainy season. This level of inspection is necessary by the Copermittees to ensure adequate compliance with their grading, building, storm water or other water quality related orders and provisions.

This section also requires the Copermittees to track the number of inspections for each inventoried construction site. This requirement has been added to ensure that the Copermittees can demonstrate that construction sites are inspected at the minimum frequencies.

Section F.2.g requires the Copermittees to notify the San Diego Water Board when high level enforcement has been issued to a construction site as a result of storm water violations. The Copermittees will define the types of high level enforcement that will warrant a notification of the San Diego Water Board in their JRMPs. Copermittees are also required to annually notify the San Diego Water Board of construction sites that have alleged violations. This section was added to enhance San Diego Water Board and Copermittee communication and coordination in regulating construction sites.

F.3 Existing Development Component

F.3.a. Municipal
The following legal authority applies to section D.3.a:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(1) provides that the proposed management program include "A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(3) provides that the proposed management program include "A description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving

waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of de-icing activities."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(4) provides that the proposed management program include "A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(5) provides that the proposed management program include "A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include "A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities."

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."

Section F.3.a.(2) (General BMP Implementation) requires the Copermittees to designate minimum BMPs for general municipal areas and activities, regardless of their threat to water quality. BMPs must also be designated for special events. The designated minimum BMPs required to be implemented at a site can be based on the sources or activities present at the site. Threat to water quality is used to determine inspection frequencies in section F.3.a.(8).

Section F.3.a.(3), F.3.a.(4), and F.3.a.(5) (BMP Implementation for Specific Categories) establishes requirements for specific categories of activities and areas. These are selected based on the CWA and findings of the Copermittees in annual reports and ROWD that identify these activities as warranting special attention.

Pesticides, Herbicides, and Fertilizers. 40 CFR 122.26(d)(2)(iv)(A)(6) requires a description of a storm water program for pesticides, herbicides, and fertilizers. In addition, water quality data demonstrates widespread presence of such pollutants in

receiving waters and MS4 discharges. In response to similar requirements of Order No. R9-2004-001, the Copermittees have developed a specific Integrated Pest Management, Pesticides, and Fertilizer guidelines.

Flood Control Structures. In order to more closely meet the intent of the federal regulations and guidance, the requirement has been modified. 40 CFR 122.26(d)(2)(iv)(A)(4) requires "A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible." Retrofitting flood control devices can reduce storm water pollutants and improve water quality.

USEPA expands on the federal provision with the following information: "Storm water management devices and structures that focus solely on water quantity are usually not designed to remove pollutants, and may sometimes harm aquatic habitat and aesthetic values".[213] As flood control structures and other elements of the MS4 age and retrofitting becomes necessary, opportunities for water quality improvements arise.

Conveyance systems which take water quality consideration into account (such as grassed swales, vegetated detention ponds, etc.) can often cost less to construct than traditional concrete systems. Evaluation of the applicability of such systems during retrofitting must occur to ensure that pollutants in storm water runoff are reduced to the maximum extent practicable. USEPA supports utilizing BMPs for pollution reduction in flood management projects, stating that "The proposed management program must demonstrate that flood management projects take into account the effects on the water quality of receiving water bodies. [...] Opportunities for pollutant reduction should be considered".[214]

There are generally two types of retrofits for flood control structures. The first type involves adding an engineered device to an existing structure in order to treat or divert runoff. Examples include catch basin inlet filters/screens, ultraviolet disinfection facilities, hydrodynamic separators, and diversions to the sanitary sewer. The second type involves re-installing pervious or natural treatment features to facilities. Examples include removing concrete portions of conveyances to create pervious conveyances; and creating treatment wetlands within flood detention facilities. The later type of retrofit is preferred by the San Diego Water Board. They are likely more sustainable over the long-term because they may require less rigorous operation and maintenance than the former. They may also provide the additional benefit of providing significant

[213] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. Washington D.C. EPA/833-B-92-002.
[214] Ibid.

or incidental opportunities for beneficial uses (e.g., recreation, wildlife, water supply).[215,216]

Sweeping of Municipal Areas. Sweeping municipal areas would likely be done in the absence of the Order. However, in certain cases it is an important component of a jurisdictional runoff management program. The Order contains requirements to ensure that the use of street sweeping is optimized for runoff applications if it is to be used and reported as a BMP.

Section F.3.a.(6) (Operation and Maintenance of MS4 and Treatment Controls) requires the Copermittees to inspect and remove waste from their MS4s prior to the rainy season.

Maintenance is critical to the successful implementation of every storm water runoff management program. USEPA finds that "Lack of maintenance often limits the effectiveness of storm water structural controls such as detention/retention basins and infiltration devices. [...] The proposed program should provide for maintenance logs of, and identify specific maintenance activities for, each class of control, such as removing sediment from retention ponds every five years, cleaning catch basins annually, and removing litter from channels twice a year.

If maintenance activities are scheduled infrequently, inspections must be scheduled to ensure that the control is operating adequately. In cases where scheduled maintenance is not appropriate, maintenance should be based on inspections of the control structure or frequency of storm events. If maintenance depends on the results of inspections or if it occurs infrequently, the applicant must provide an inspection schedule. The applicant should also identify the municipal department(s) responsible for the maintenance program".[217] The MS4 maintenance requirements are based on the above USEPA recommendations. This maintenance will help ensure that structural controls are in adequate condition to be effective year round, but especially at the beginning of and throughout the rainy season.

Two requirements have been added to the Order that were not within Order No. R9-2004-001. Subsection (iii) allows a decreased inspection frequency for facilities that are routinely clean, and subsection (iv) requires trash to be removed from open channels and detention basins in a timely manner. Typically, Copermittees have reported annual or semi-annual creek cleanups as significant BMPs. The large volumes of trash reported to be removed during these events demonstrates the significant amount of trash that accumulates in the channels. In order to reduce the effect of the trash, the Order requires that trash be removed more frequently.

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[215] Burton, Carmen et al. 2005. Assessing Water Source and Channel Type as Factors Affecting Benthic Macroinvertebrate and Periphyton Assemblages in the Highly Urbanized Santa Ana River Basin, California. American Fisheries Society Symposium. Vol.47 pp.239-262.

[216] Stromberg, Juliet C. 2001. Restoration of Riparian Vegetation in the South-Western United States: the importance of flow regimes and fluvial dynamism. Journal of Arid Environments. Vol49, pp.17-34.

[217] USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. Washington D.C. EPA/833-B-92-002.

Section F.3.a.(7) (Infiltration from Sanitary Sewer to MS4) requires the Copermittees to implement controls and measures to prevent and eliminate sewage infiltration or seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4.

Sections F.3.a.(8) and F.3.a.(9) (Inspections and Enforcement) establishes a minimum set of municipal areas and activities for oversight and inspection by the Copermittees and requires that Copermittees properly enforce runoff requirements at municipal areas and activities.

Section F.3.a.(10) (Copermittee Maintained Unpaved Roads Maintenance) requires the Copermittees to implement or require implementation of BMPs for erosion and sediment control during and after maintenance activities on the unpaved roads that the Copermittees are responsible for maintaining, particularly in or adjacent to stream channels or wetlands. As discussed for Finding D.1c, source control BMPs for unpaved roads are needed to minimize the discharge of sediment to the MS4s and receiving waters. There are several guidance documents available (see Discussion for Finding D.1.c) that include BMPs that can be readily implemented by the Copermittees for the development of new unpaved roads. This requirement is necessary to ensure the Copermittees minimize the discharge of sediment from their unpaved roads used for their maintenance activities.

F.3.b. Commercial / Industrial
The following legal authority applies to section F.3.b:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C) provides that the proposed management program include "A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(1) provides that the Copermittee must "identify priorities and procedures for inspections and establishing and implementing control measures for such discharges."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(2) provides that the proposed management program shall "Describe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C)

of this section, to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD_5 , TSS, total phosphorus, total Kjeldhal nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under 40 CFR 122.21(g)(7)(iii) and (iv)."

Federal NPDES regulation 40 CFR 122.26(d)(2)(ii) provides that the Copermittee "Provide an inventory, organized by watershed of the name and address, and a description (such as Standard Industrial Classification [SIC] codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity."

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Copermittee must demonstrate that it can control "through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A) provides that the Copermittee develop a proposed management program which includes "A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls."

Section F.3.b.(1) (Source Identification) requires that botanical and zoological gardens and exhibits, building material retailers and storage, animal boarding facilities and kennels, mobile pet services, plumbing services, and power washing services be included in the Copermittees' inventory of commercial sites/sources. These commercial or industrial sites and sources have been identified by the Copermittees and/or the San Diego Water Board as facilities that may contribute a significant pollutant load to the MS4. In cases where a particular type of facility is not present or known to operate within a Copermittee's jurisdiction, there is no expectation that there would be any such facilities included in the inventory. If, however, that type of facility does become established or begins operating within a Copermittee's jurisdiction during the period of this Order, the Copermittees are expected to identify those sites or sources and include them in their inventory of commercial or industrial facilities. This

is not a significant change because Order No. R9-2004-001 requires that any commercial or industrial site or source determined by a Copermittee to contribute a significant pollutant load to the MS4 be added to its inventory of commercial or industrial sites.

The inventory of commercial and industrial facilities is expected to be reviewed and, if necessary, updated at least annually and included in the Annual Report. The inventory is expected to include the prioritization of each facility to ensure the facility is inspected at the correct frequency. If changes are made to the prioritization for any facilities, justification for the changes is expected to be reported in the Annual Report. The inventory is the foundation for the tracking of BMP implementation, number and date(s) of inspections performed, inspection findings, violations, and enforcement actions for each commercial or industrial facility, all of which are expected to be included in the Annual Report.

Section F.3.b.(3) (Mobile Businesses Program) requires each Copermittee to develop and implement a program to reduce the discharge of storm water pollutants from mobile businesses to the MEP and to prevent the discharge of non-storm water. Mobile businesses are service industries that travel to the customer to perform the service rather than the customer traveling to the business to receive the service. Examples of mobile businesses are power washing, mobile vehicle washers, carpet cleaners, port-a-potty servicing, pool and fountain cleaning, mobile pet groomers, plumbers, and landscapers. These mobile services produce waste streams that could potentially impact water quality if appropriate BMPs are not implemented.

Order No. R9-2004-001 also requires BMP implementation for certain mobile businesses (e.g., mobile vehicle washing and mobile carpet cleaning). These storm water requirements of Order No. R9-2004-001 are not significantly different from the existing requirements. The Order specifies the Copermittees must prevent non storm water dry weather flows from entering the MS4 (see section C.2.b). Special attention is required for mobile businesses because of the difficultly of controlling discharges from mobile businesses with existing programs.

Mobile businesses present a unique difficulty in storm water regulation. Due to the transient nature of the business, the regular, effective practice of unannounced inspections is difficult to implement. Also, tracking these mobile businesses is difficult because they are often not permitted or licensed and their services cross Copermittee jurisdictions. Mobile businesses that operate within a municipality may be based in another municipality or even outside the Region.

The Order takes into account the difficulties in regulating mobile businesses. The Copermittees may choose to cooperate in developing and implementing their programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education. Sharing information will allow the Copermittees to better identify and track mobile businesses operating in their jurisdictions.

Because BMPs have been developed already, but communication with mobile businesses may be difficult, the Order provides broad flexibility to the Copermittees for developing a targeted program within the Commercial portion of each JRMP.

Section F.3.b.(4) (Inspection of Industrial and Commercial Sites/Sources) includes requirements for inspections of industrial and commercial sites/sources. The Order is similar to the Order No. R9-2004-001 in requiring that inspections check for coverage under the General Industrial Permit; assessment of compliance with Copermittee ordinances and permits related to storm water and non-storm water runoff; assessment of BMP implementation, maintenance, and effectiveness; visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and education and outreach on storm water pollution prevention.

The Order also requires that inspections include review of BMP implementation plans if the site uses or is required to use such a plan, and the review of facility monitoring data if the site monitors its runoff. BMP implementation plans do not include SSMPs required pursuant to section F.1.d. If a facility is not required to have a BMP implementation plan or required to collect monitoring data, the inspection does not need to include a review of this information. BMP implementation plans and monitoring data are expected to be available for any facility that is covered under the General Industrial Permit. The BMP implementation plans and monitoring data can provide the inspector pertinent information that can be used during the visual inspection of the facility (e.g., BMPs implemented, maintenance records for BMPs, pollutants in storm water runoff). The Copermittees' inspectors have the discretion to determine the depth and detail of the review and use of the information in conducting the inspection.

Changes in the Order's requirements for inspection procedures mimic USEPA's guidance: "Site inspections should include (1) an evaluation of the pollution prevention plan and any other pertinent documents, and (2) an onsite visual inspection of the facility to evaluate the potential for discharges of contaminated storm water from the site and to assess the effectiveness of the pollution prevention plan."[218] In 1999, USEPA "recognized visual inspection as a baseline BMP for over 10 years," and "visual inspections are an effective way to identify a variety of problems. Correcting these problems can improve the water quality of the receiving water."[219]

Inspection frequencies in the Order have been modified from Order No. R9-2004-001. Order No. R9-2004-001 specifies frequencies for inspecting commercial/industrial sites based on threat to water quality and requires high priority sites to be inspected annually. For sites not identified as high priority, each site must be inspected at least once within a 5 year period.

[218] USEPA, 1992. Guidance 833-8-92-002, section 6.3.3.4 "Inspection and Monitoring".
[219] USEPA, 1999. 832-F-99-046, "Storm Water Management Fact Sheet – Visual Inspection".

Also, the option for implementing a third party certification program is included. To the extent that third party certifications are conducted to fulfill the inspection requirements for this section of this Order, the Copermittee will be responsible for conducting and documenting quality assurance and quality control of the third-party certifications. The Copermittees may propose a third party certification program that must receive approval from the San Diego Water Board Executive Officer prior to implementation. The Order includes several requirements that must be included in the third party certification program in order for it to be considered for approval by the San Diego Water Board.

Section F.3.b.(6) (Reporting of Non-Compliant Sites) has been added as additional notification to the San Diego Water Board regarding commercial and industrial sites. Copermittees are required to annually notify, prior to the rainy season, the San Diego Water Board of commercial and industrial sites that have any unresolved high level enforcement actions. This was added to enhance San Diego Water Board and Copermittee communication. Information may be provided as part of the JRMP annual report if submitted prior to the rainy season.

F.3.c. Residential
The following legal authority applies to section F.3.c:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A) provides that the Copermittee develop a proposed management program which includes "A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls."

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."

Section F.3.c.(4) (Common Interest Areas / Home Owner Association Areas / Mobile Home Parks) includes requirements for common interest areas / homeowners' associations and mobile home parks. Many residential neighborhoods and some commercial areas within the jurisdiction of the Copermittees are within common interest developments and are, therefore, subject to management of common areas by associations. The Declaration of the Covenants, Conditions and Restrictions (CC&Rs)

contains the ground rules for the operation of such an association. CC&Rs are an appropriate method for protecting the common plan of developments and to provide for a mechanism for financial support for the upkeep of common areas including roads, storm drains, and other components of storm water conveyance systems.

This Order interprets common interest areas as property subject to the codes and ordinance and enforcement mechanisms of the city or county in which it resides and, therefore, holds the local government responsible for the discharge of wastes from storm water conveyance systems located within these areas.

Section F.3.d. Retrofitting Existing Development
The following legal authority applies to section F.3.d:

Legal Authority: The legal authority for retrofitting existing development is the same legal authority as that identified for municipal, industrial, commercial and residential development sections (See fact sheet discussion on those sections, F.3.a – c). In particular, CWA sections 402(p)(3)(B)(ii-iii), and CWC section 13377 give the Regional Water Board the legal authority to require retrofitting of existing development.

Section F.3.d has been added to require a plan for the retrofit of existing development (see Finding D.3.h and Discussion). This section contains specific requirements for a program to retrofit existing development. When appropriately applied as in this Order, retrofitting existing development meets MEP standards.

Existing BMPs are not sufficient, as evidenced by 303(d) listings and exceedances of Water Quality Objectives from the Copermittees monitoring reports. More advanced BMPs, including the retrofitting of existing development with LID, are part of the iterative process. Previous permits limited the requirement of treatment control BMPs to new development and redevelopment. Based on the current rate of redevelopment compared to existing BMPs, the use of LID only on new and redevelopment will not adequately address current water quality pollution and problems, including downstream hydromodification. Retrofitting existing development is practicable for a municipality through a systematic evaluation, prioritization and implementation plan focused on impaired water bodies, pollutants of concern, areas of downstream hydromodification, feasibility and effective communication and cooperation with private property owners. The retrofitting requirements are based largely on guidance from the USEPA[220] and the Center for Watershed Protection.[221]

Section F.3.d.(1) requires the Copermittees to identify and inventory areas of existing development within their jurisdiction as candidates for retrofitting projects. The Copermittees are expected to examine the inventories that they are maintaining as required under sections F.3.a-c, inspection findings, and any other forms of data and information to identify the candidates for retrofitting projects. Several areas of existing

[220] USEPA , MS4 Permit Improvement Guide, EPA 833-R-10-001, April, 2010.
[221] Center for Watershed Protection, Urban Subwatershed Restoration Manual No. 3, Urban Stormwater Retrofit Practices Manual, Version 1.0, July/August 2007.

development that must be identified as candidates for retrofitting projects are listed. Based in part on guidance developed by the Center for Watershed Protection, these areas of existing development are expected to provide the most immediate improvements for water quality through retrofitting. This list of areas that must be considered does not limit the Copermittees from identifying other areas within their jurisdiction that may be evaluated for retrofitting projects.

Section F.3.d.(2) requires each Copermittee to evaluate the candidates identified under section F.3.d.(1) and rank them based on several criteria. One or more types of retrofit source control or treatment control BMPs may be evaluated for each candidate. Landowner cooperation is among the criteria to evaluate and prioritize retrofitting. For example, retrofitting projects on publicly owned properties are likely and expected to be feasible with sufficient funding secured.

Section F.3.d.(4) requires each Copermittee to cooperate with private property owners to encourage the implementation of site specific retrofitting projects. Because the Copermittees have limited authority to directly require retrofitting projects on private property, the Copermittees must encourage private property owners to implement retrofitting projects through indirect programs and incentives. Several programs and incentives that have been successful in other areas are provided in the Order for the Copermittees consideration in developing their practices to encourage private property owners to retrofit their sites. This list, however, does not limit the Copermittees from identifying and considering other practices that may be effective in encouraging private property owners to implement retrofitting projects on their sites.

Section F.3.d.(5) requires retrofit BMPs that are implemented to be tracked in accordance with section F.1.f. The retrofit BMPs must also be inspected. Retrofit BMPs on publicly owned properties must be inspected per section F.1.f. Privately owned retrofit BMPs must be inspected as needed to ensure proper operation and maintenance. Tracking and inspecting retrofit BMPs is necessary for the Copermittee to ensure that the retrofit BMPs are not removed and are maintained to remain effective. Inspections can also provide the Copermittee useful information on the effectiveness of individual retrofit BMPs. For retrofit BMPs on publicly owned properties, tracking and inspection will correct any problems with the BMPs as soon as a problem arises and will ensure proper maintenance.

For retrofit BMPs on privately owned properties, retrofit BMPs are expected to be implemented and maintained by the property owner on a voluntary basis. The retrofit BMPs must be tracked by the Copermittees, but their inspections are required less frequently due to access issues (i.e. on an as-needed basis). Voluntary retrofitting projects do not warrant frequent Copermittee inspections due to the property owner's willingness to retrofit. Periodic inspections may be performed to ensure the site owner has not removed the retrofit BMPs. Periodic inspections would also ensure that the retrofit BMPs remain effective by providing an opportunity for the inspector to educate the original and subsequent site owner(s) if the retrofit BMP is not operating effectively and requires some maintenance.

F.4. Illicit Discharge Detection and Elimination

The following legal authority applies to section F.4:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) provides that the proposed management program "shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermittee include in its proposed management program "a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) provides that the Copermittee include in its proposed management program "a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) provides that the Copermittee include in its proposed management program "procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water."

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(4) provides that the Copermittee include in its proposed management program "a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer."

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(5) provides that the Copermittee include in its proposed management program "a description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers."

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(6) provides that the Copermittee include in its proposed management program "a description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials."

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(7) provides that the Copermittee include in its proposed management program "a description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary."

Section F.4.a (Prevent and Detect Illicit Discharges and Connections) requires the Copermittees to implement a program to actively seek and eliminate IC/IDs. Additional wording has been added to this section to clarify and ensure that all appropriate municipal personnel (i.e. field personnel) are utilized in the program to observe and report these illicit discharges and connections.

Section F.4.b (Maintain MS4 Map) requires each Copermittee to maintain an updated map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The Order specifies that the map must include the segments of the storm sewer system owned, operated, and maintained by the Copermittee, and include locations of all known inlets, connections with other MS4s, and outfalls to the Copermittee's MS4. Knowing where their inlets, access points, connections with other MS4s, and outfalls are located will allow the Copermittees to better track, identify, and eliminate IC/IDs. The use of a geographic information system (GIS) by the Copermittees is strongly encouraged for the MS4 map. The Riverside County Flood Control and Water Conservation District (RCFCD) currently maintains a GIS layer that is a compilation of all the Copermittee MS4 maps. Although an individual Copermittee may not have GIS capabilities, each Copermittee has agreements with RCFCD for providing updated MS4 maps to the RCFCD to update this GIS layer and subsequent submittal to the San Diego Water Board.

Section F.4.e (Investigation / Inspection and Follow-Up) requires the Copermittees to conduct follow up investigations and inspect portions of the MS4 for illicit discharges and connections, based on dry weather effluent analytical monitoring results. The section also requires the Copermittees to establish criteria for triggering follow up investigations. Additional language has been added to this section to clarify the minimum level of effort and timeframes for follow up investigations when dry weather limitations are exceeded. This section requires the Copermittees to include and evaluate the specified action levels in their response criteria and to develop response criteria for pollutants without action levels.

Timely investigation and follow up of exceedances is necessary to identify sources of illicit discharges, especially since many of the discharges are transitory. The requirements for immediate response to obvious illicit discharges and a 2 business day minimum response time when field screening action levels are exceeded is necessary to ensure timely response by the Copermittees. When analytical data indicate an exceedance of action levels, the Copermittee(s) have 5 business days to confirm the need to initiate an investigation to identify the source of the exceedance. The Copermittees are expected to investigate for potential sources of the pollutant(s) that may have caused the exceedance of action levels upstream of the collection point and collect additional analytical and field data as necessary. If the quality of the data

is confirmed to be unreliable or inaccurate and the investigation indicates there were no sources of the pollutant that could have caused an exceedance of the applicable action level, then further investigation is no longer warranted and should be documented in the Annual Report.

Section F.4.f (Elimination of Illicit Discharges and Connections) requires the Copermittee(s) to take immediate action to initiate steps necessary to eliminate illicit discharges, illicit discharge sources, and illicit connections that have been detected as a result of the investigations required under section F.4.e. The steps necessary to eliminate the illicit discharge or connection are typically initiated with identifying and contacting the person responsible for the illicit discharge or connection. The Copermittee(s) are expected to eliminate the detected illicit discharges and connections as soon as possible after they are able to contact the person responsible for the illicit discharge or connection. The steps expected and/or necessary to eliminate illicit discharges and connections under different scenarios and for different sources should be developed and implemented by the Copermittee(s). These steps may be outlined by the Copermittee(s) in their JRMPs.

In some cases, the Copermittee(s) may determine that one of the necessary steps is to contact the San Diego Water Board to assist in resolving and eliminating illicit discharges and connections. The Copermittee(s), however, are expected to exhaust all of their available administrative and enforcement authorities and mechanisms for addressing and eliminating illicit discharges and connections before contacting the San Diego Water Board for assistance.

Section F.4.h (Prevent and Response to Sewage Spills and Other Spills) requires each Copermittee to implement measures to prevent and respond to spills into its MS4. These requirements are consistent with Order No. R9-2004-001 and based on federal regulations at 40 CFR 122.26(d)(2)(iv)(B)(4). Those federal NPDES regulations clearly require that owners and operators of MS4s have procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.

The Order includes sewage and non-sewage spills in the requirement for spill prevention and response. Federal regulations clearly define sewage as an illicit discharge that must be addressed by municipalities (see Phase II Final Rule, p.68758). Sewage is an illicit discharge to the MS4 that threatens public health. As such, the Copermittees must implement measures to prevent sewage from entering the MS4 system and must respond to illicit discharges that have entered the system. This section has been revised to clarify that management measures and procedures must be implemented to prevent, respond to, and cleanup spills. In addition to the management measures and procedures, a mechanism for the Copermittees to be notified of spills is necessary in order for those management measures and procedures to be implemented as soon as possible after a spill has occurred. The facilitation of public reporting of illicit discharges required by section F.4.c, in addition to regular and open communication with other agencies (e.g., sanitary sewer districts),

may also serve as a mechanism for notifying the Copermittees of spills within their jurisdiction.

Section F.3.a.(7) of the Order includes requirements for measures that must be taken to prevent sewage spills. Examples of measures being implemented by Copermittees include inspections of fats, oils, and grease management at restaurants. Other preventative measures can be implemented during routine planning efforts for new development and redevelopment projects. Similarly, building permit inspections should be used to verify the integrity of the sanitary and storm sewer infrastructure and ensure that cross-connections between the two are avoided.

F.5. Public Participation Component

The following legal authority applies to section F.5:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

No significant changes from Order No. R9-2004-001 have been made to this section of the Order.

F.6. Education Component

The following legal authority applies to section F.6:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include "A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as *educational activities*, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(6) provides that the proposed management program include "A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) provides that the proposed management program include "A description of appropriate educational and training measures for construction site operators."

Section F.6 (Education Component) includes an introductory paragraph that is the same as in Order No. R9-2004-001, except for the addition of New Development / Redevelopment Project Applicants, Developers, Contractors, Property Owners, and other Responsible Parties to the list of target communities.

Section F.6.a (General Requirements) includes education topics that are required for the education programs developed and implemented for the target communities. The Copermittees can choose how and to what degree to address these topics. Some topics may be more important for certain target communities.

The requirement for educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials has been moved to this section from the Illicit Discharge Detection and Elimination section.

Section F.6.b (Specific Requirements) includes requirements for specific target communities, which are in addition to the general requirements. The education and training requirements previously included in other sections of Order No. R9-2004-001 (i.e. Development Planning, Construction, Existing Development) have been removed and consolidated under this section. Specific education requirements are included for: 1) the Copermittees' departments and personnel (i.e. staff and contractors, and Planning Boards and Elected Officials, if applicable), 2) new development / redevelopment and construction sites, 3) commercial and industrial sites/sources, and 4) residential and general public communities.

Section F.6.b.(1) (Copermittee Departments and Personnel) requires the Copermittees to implement an education program for their staff and contractors. Education is required at all levels of municipal staff and contractors. Education is especially important for the staff responsible for planning and development review, oversight, inspection and enforcement of construction activities, selecting and implementing BMPs for Copermittee areas, inspection and enforcement of industrial and commercial facilities, and other Copermittee activities which might result in discharges of pollutants if proper BMPs are not used.

Education of Copermittee departments and personnel may be conducted with joint and/or individual training programs (i.e. on a regional and/or jurisdictional scale), and may include both formal and informal training. The Copermittees may choose the scale and methods for educating their departments and personnel.

The annual training required for construction, building, code enforcement, grading review staffs, inspectors, and other responsible construction staff requires the training to occur annually, prior to the rainy season.

Section F.6.b.(2) (New Development / Redevelopment and Construction Sites) requires the Copermittees to educate parties responsible for a project (i.e. project applicants, developers, contractors, property owners, community planning groups, and other responsible parties) about storm water issues and BMPs. Different levels of training will be needed for planning groups, owners, developers, contractors, and construction workers, but all should get a general education of storm water requirements. Education of all construction workers can prevent unintentional discharges, such as discharges by workers who are not aware that they are not allowed to wash things down the storm drains. Training for BMP installation workers is imperative because the BMPs will fail if not properly installed and maintained. Training for field level workers can be formal or informal tail-gate format.

Section F.6.b.(3) (Commercial and Industrial Sites / Sources) requires the Copermittees to notify the owner/operator of each of their inventoried commercial and industrial sites/sources of the BMP requirements applicable to the site/source at least twice during the five-year period of the Order. Notification of BMP requirements may be fulfilled during the business license application/renewal process and/or during site inspections. Notifying commercial and industrial sites/sources of the BMP requirements will ensure the business owners are aware of the appropriate BMPs to implement that prevent discharges of pollutants from these sites/sources.

Section F.6.b.(4) (Residential and General Public) requires the target audiences for residential and general public communities to include underserved target audiences (e.g., disadvantaged communities), residents and managers of Common Interest Areas / Homeowner Associations, and owners and residents of mobile home parks. These communities are frequently neglected or underserved by most water quality education programs, but can be significant sources of pollutants. Thus, it is important for the residential and general public education programs to reach out to and educate these communities on their potential impacts to water quality.

G. Watershed Water Quality Workplan

The following legal authority applies to section G:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(a)(3)(ii) states: "The Director may [...] issue distinct permits for appropriate categories of discharges [...] including, but not limited to [...] all discharges within a system that discharge to the same watershed [...]"

Federal NPDES regulations 40 CFR 122.26(a)(3)(v) states: "Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed, or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas [watersheds] which contribute storm water to the system."

Federal NPDES regulation 40 CFR 122.26(a)(5) states: "The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)91)(v) of this section on a system-wide basis, a jurisdiction-wide basis, watershed basis, or other appropriate basis."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) states: "Proposed programs may impose controls on a system-wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls."

Section G requires Copermittees to continue implementation of their watershed runoff management program (WRMP), however the implementation approach has changed. Order No. R9-2004-001 required a Watershed SWMP that included a collaborative strategy to abate the sources and reduce the discharges causing high priority water quality problems. This strategy was to guide each watershed Copermittee's selection and implementation of Watershed Activities, so that the activities selected and implemented would remove that pollutant contribution responsible for the identified high priority water quality problem. Outcomes of these requirements were not able to demonstrate improvements to water quality.

Revised language in Order No. R9-2010-0016 attempts to focus each watershed Copermittee's efforts and resources on addressing the highest water quality problems in the watershed by focusing attention on the health of the receiving water body and the most efficient use of the watershed Copermittee's time and resources. Order No. R9-2010-0016 requires the watershed Copermittees to develop and follow a workplan approach towards assessing receiving water body conditions, prioritizing the highest

priority water quality problems, implementing effective BMPs, and measuring water quality improvement in the receiving water.

Section G.1. (Watershed Workplan Components) requires the watershed Copermittees to develop a workplan that will implement a collective watershed strategy to assess and prioritize the water quality problems, and identify, address, and mitigate the highest priority water quality issues/pollutants within the Upper Santa Margarita watershed's receiving waters. This section specifies the minimum components that must be included in the Watershed Workplan. Development of a workplan rather than watershed activities will allow the Copermittees flexibility to iteratively modify their watershed strategy over the course of future planning years as priorities change.

Section G.2 (Watershed Workplan Implementation) requires the Copermittee's to begin implementing the Watershed Workplan within 90 days of submittal unless otherwise directed by the San Diego Water Board. The Watershed Workplan must meet the requirements of the Order. The San Diego Water Board expects that implementing the Watershed Workplan, which will coordinate the Copermittees' efforts in the watershed, will result in water quality improvements sooner than later. If there are deficiencies in the Watershed Workplan, the San Diego Water Board will provide guidance to remedy those deficiencies as appropriate.

Section G.3 (Copermittee Collaboration) requires the Copermittees to collaborate to develop and implement the Watershed Workplan. Watershed Copermittee collaboration must include frequent regularly scheduled meetings. Because there are several other agencies with MS4s in the Upper Santa Margarita watershed that the Copermittees have indicated in the ROWD are a source of pollutants that may discharge into the MS4 systems of the Copermittees, the Copermittees are also required to pursue interagency agreements, or similar cooperative efforts, with non-Copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4. In addition, the Copermittees are required, as appropriate, to participate in watershed management efforts to address water quality issues within the entire Santa Margarita Watershed (such as the County of San Diego and United States Marine Corps Camp Pendleton).

Section G.4 (Public Participation) requires the Copermittees to implement a watershed-specific public participation mechanism within each watershed. A required component of the watershed-specific public participation mechanism must be a minimum 30-day public review of the Watershed Workplan. Opportunity for the public to review and comment on the Watershed Workplan must occur before the workplan is implemented.

Section G.5 (Watershed Workplan Review and Updates) requires the Copermittees to review and update the Watershed Workplan annually to identify needed changes to the prioritized water quality problem(s) listed in the workplan. This section requires the Copermittees to review and update their workplan each year to incorporate changing priorities and evolving watershed strategies.

Section G.6 (Pyrethroid Toxicity Reduction Evaluation) requires the Copermittees to incorporate the pyrethroid pollutant reduction program into the Watershed Workplan, as described in the ROWD.

H. Fiscal Analysis

The following legal authority applies to section H:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(vi) provides that "[The Copermittee must submit] for each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2)(iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds."

Section H has been expanded in order to develop more useful and meaningful fiscal reporting. A revamped fiscal reporting strategy will provide the San Diego Water Board and the Copermittees with better capability to manage performance of the programs.

The Copermittees' effort is expected to provide standardization of reporting so that figures between Copermittees are comparable, which is one of many types of information which can be used by the San Diego Water Board to better understand Copermittee program implementation. Standardization and comparison of fiscal analysis reporting is supported by the State Water Board funded NPDES Stormwater Cost Survey, which finds that "standards for reporting costs and storm water activities are needed to allow accurate cost comparisons to be made between storm water activities."[222] This document also provides guidance regarding categorization of expenditures for tracking and reporting.

The Order establishes a criterion for when Copermittees must add narrative evaluations to the tables. This will address some of the variability in reporting and will provide the public and San Diego Water Board with improved understanding of how resources are shifted in response to annual assessments. This will also help ensure that projected annual costs adequately reflect planned program modifications described in the annual reports.

The San Diego Water Board has chosen not to require a description of fiscal benefits realized from implementation of the storm water protection program. This is a recommendation from the National Association of Flood and Stormwater Management

[222] Currier, et al., 2005. *NPDES Storm Water Cost Survey Final Report.* Prepared for California State Water Resources Control Board by Office of Water Programs, California State University, Sacramento. P. 63.

Agencies.[223] For instance, the current fiscal assessment does not address city-wide fiscal benefits of protection (e.g., public health, tourism, property values, economic activity, beneficial uses, etc.), even though many costs currently reported to the San Diego Water Board are for related activities. This type of assessment may help Copermittees improve the allocation of resources and it may help the Copermittees secure adequate funding for the program. Finally, it will provide a clearer picture of the storm water and non-storm water runoff program to the public and San Diego Water Board. However, qualitative assessments could be overly subjective and most Copermittees likely lack the ability to provide accurate quantitative assessments. The San Diego Water Board encourages Copermittees to consider means for conducting assessments of fiscal benefits derived from the programs. Such assessments could be conducted on a regional scale similar to studies of program costs conducted by the State Water Board.[224]

Currently, each Riverside County municipality's annual report includes a table based on a template developed by the principal Copermittee. The template was meant to facilitate reporting consistency among the Copermittees. The annual report table contains estimates of spending during the reported period and estimates of the next year's spending.

Review of the fiscal analysis tables included in the annual reports has not been as straightforward as expected, and the value of the information is moderate. The reviews indicate that cities do not use consistent methods to fill in the tables because they use different accounting and budgeting processes, and certain storm water program expenditures are not easily categorized into the table formats. Furthermore, storm water permit-related activities involve several departments, which makes it difficult for the storm water manager to gather and decipher actual costs.

These issues also make it difficult for the Copermittees to accurately compartmentalize expenditures within the format. As a result, the current financial reporting provides estimates at best and cannot be reliably used to compare program implementation among most municipalities.

[223] National Association of Flood and Stormwater Management Agencies. 2006. *Guidance for Municipal Stormwater Funding.* Prepared under a grant provided by the USEPA.
[224] State Water Board, 2005. NPDES Stormwater Cost Survey.

I. Total Maximum Daily Loads

The following legal authority applies to section I:

Broad Legal Authority: CWA section 303(d)(1)(A) and (C), and Federal regulations 40 CFR 130.2(i), 40 CFR 130.7(b)(1) and 40 CFR 122.44(d)(1)(vii)(B).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.44(d)(1)(vii)(B) requires that NPDES permit requirements incorporate water quality based effluent limitations that must be consistent with the requirements and assumptions of wasteload allocations (WLAs) assigned to the MS4 as part of the calculated TMDLs.

Section I.1. is a placeholder for the requirements and WLAs assigned to the Copermittees' MS4 discharges of any future TMDLs that are adopted by the San Diego Water Board.

Section I.2 includes, by reference to Santa Ana Water Board Order No. R8-2010-0033, including the relevant sections of the fact sheet and findings (and subsequent revisions), the requirements and WLAs assigned to the MS4s for the Lake Elsinore/Canyon Lake (San Jacinto Watershed) Nutrient TMDLs that are being implemented for the Santa Ana Water Board. Because the San Jacinto Watershed is within the boundaries of the Santa Ana Water Board's region, the Lake Elsinore/Canyon Lake Nutrient TMDLs and its requirements must be implemented by the Cities of Murrieta and Wildomar for the areas within their jurisdictions located in the Santa Ana Region (Region 8).

J. Program Effectiveness Component

The following legal authority applies to section J:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(v) provides that the Copermittees must include "Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water." Under Federal NPDES regulation 40 CFR 122.42(c) applicants must provide annual reports on the progress of their storm water management programs.

Section J.1 (Program Effectiveness Assessments) of the Order requires the Copermittees to assess the effectiveness of the implementation of their jurisdictional, watershed, and monitoring programs and activities. The Riverside County Storm Water Program is supportive of the CASQA effort, and use of CASQA assessment techniques is consistent with the methodology proposed in the ROWD.[225,226]

This section requires the Copermittees to establish assessment measures or methods for each of the six outcome levels described by CASQA that will be used to assess the effectiveness of the Jurisdictional Runoff Management Program (JRMP) and Watershed Workplan implementation at (1) reducing the discharge of storm water pollutants from its MS4 to the MEP; (2) prohibit non-storm water discharges; and (3) preventing runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

The effectiveness assessment measures or methods must be established and included as part of the updated JRMPs and Watershed Workplan that are due on or before June 30, 2012. Beginning with the Annual Report due in 2013, the Copermittees are required to annually perform the assessments using the established assessment measures or methods.

Section J.2 (Respond to Assessments) of the Order requires the Copermittees to improve jurisdictional and watershed activities or BMPs when they are found to be ineffective or when water quality impairments are continuing. This requirement fulfills the purpose of conducting effectiveness assessments – to improve and refine the Copermittees' programs. The requirement is consistent with USEPA's Phase II

[225] The Riverside County Copermittees proposed an assessment strategy based on the CASQA Municipal Stormwater Program Effectiveness Assessment Guidance in section 6.1.2.1 of the ROWD.
[226] CASQA 2007. Municipal Stormwater Program Effectiveness Assessment Guidance.

regulations, which state: "If the permittee determines that its original combination of BMPs are not adequate to achieve the objectives of the municipal program, the MS4 should revise its program to implement BMPs that are adequate [...]."[227]

Each Copermittee must update the effectiveness assessment work plan and schedule to address any program modifications and improvements in response to the findings of their assessment. The updates to the work plan and schedule must be incorporated into the applicable Annual Report.

Section J.3 (Assessment and Response Reporting) of the Order describes the information required to be submitted in the Annual Report pertaining to program effectiveness assessments, review, and response. A summary of the effectiveness assessments, responses to the effectiveness assessments, and any steps implemented to improve the Copermittee's ability to assess program effectiveness must be included with the Annual Report. The reporting will demonstrate whether Copermittees have appropriately responded to the effectiveness assessments.

[227] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68762.

K. Reporting

The following legal authority applies to section K:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.42(c) requires that "The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation."

CWC section 13267 provides that "the Regional Board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires."

Section K.1 (Runoff Management Plans) outlines the process and due dates for submitting JRMPs and Watershed Workplan. The information to be included in the Jurisdictional and Watershed plans must be sufficient to demonstrate the capacity to implement the requirements of section F and G, respectively, of the Order.

In many cases, the requirements of the Order should not necessitate a complete rewrite of the plans, as was basically done in 2005. Only sections of the Order which are new or have been significantly changed should warrant rewriting of plans' sections. The San Diego Water Board plans to work with the Copermittees and provide guidance regarding where JRMPs and Watershed Workplan must be updated in accordance with the Order. This will help ensure that rewriting, reporting, and review efforts are minimized.

Section K.2 (Other Required Reports and Plans) include requirements for information to be included in the SSMP update, the HMP, and the Report of Waste Discharge (ROWD) for the next permit reissuance. The Order requires submittal of an updated SSMP on or before June 30, 2012; a draft HMP on or before June 30, 2013; and a

ROWD 180 days in advance of the expiration of this Order. The section also identifies the minimum information to be included in the ROWD, based on USEPA's May 17, 1996 guidance "Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems."

Section K.3 (Annual Reports) outlines the process and roles of the Copermittees for developing and submitting the JRMP Annual Report. Information to be included in the Annual Reports is described in section K.3.a.(3).

Each Copermittee is required to maintain records demonstrating that Permit activity requirements have been met, which allows the San Diego Water Board to confirm compliance as needed, such as via inspections, program audits, or requests for information per CWC sections 13225 and 13267.

Reporting requirements in the Order focus on results and responses to the effectiveness assessments conducted by the Copermittees. This will allow the San Diego Water Board to determine how appropriately municipalities adapt and tailor their programs to findings from activities and monitoring results. Assessment of progress toward meeting the objectives is possible because the data collected by the Copermittees under Order No. R9-2004-001 can be used to establish baseline conditions. Compared to activity-based reporting, this will greatly enhance the ability of the San Diego Water Board, Copermittees, and the public to determine whether the programs are successful.

The Order reduces the amount of program activity-based reporting from Order No. R9-2004-001. Under the CASQA assessment model, activity-based reporting includes primarily outcomes that document compliance with permit requirements (Level 1 outcomes), rather than being indicators of the impact of activity implementation.[228] This approach is consistent with guidance from the USEPA, which notes that annual reports should highlight program effectiveness as well as describing activities.[229] This emphasis is also consistent with recommendations from the National Academy of Public Administration in its report to USEPA on Evaluating Environmental Progress, which suggest that reviewing activities data provides limited value when evaluating the effectiveness of programs and resulting environmental conditions.[230]

The Order maintains some reporting requirements for certain activity-based outcomes. These are mostly focused on activities that establish or revise municipal processes related to storm water runoff and management. The processes required by the Order are especially important in situations where sustaining water quality improvements may require activities that extend beyond the five-year period of the NPDES permit.

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[228] Level 1 outcomes under the CASQA guidance include documentation that required activities have been implemented.

[229] USEPA 2007. *MS4 Program Evaluation Guidance.* USEPA Office of Wastewater Management EPA-833-R-07-003. January 2007 field test version.

[230] National Academy of Public Adminstration 2001. Evaluating Environmental Progress: How EPA and the States Can Improve the Quality of Enforcement and Compliance Information (June 2001). http://www.napawash.org

In addition, the Order maintains many activity-based reporting requirements related to enforcement of local requirements, with an emphasis on the results from such activities. This is intended to facilitate review of the contributions that inspection and enforcement activities have made toward meeting the goals of the Order. Reporting of these types of activities is supported by recommendations from the National Academy of Public Administration in its report to the USEPA: *Evaluating Environmental Progress: How EPA and the States Can Improve the Quality of Enforcement and Compliance Information* (June 2001).[231] Other activity-based reporting has been reduced to selected items based on consideration of program priorities.

Another source of prioritization for activity-based reporting is the *Storm Water Panel Recommendations to the California State Water Resources Control Board The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities* (June 19, 2006). In particular, the panel highlighted needs to improve the design, maintenance, and inspections of best management practices.

Section K.4 (Interim Reporting Requirements) specifies that the JRMP Annual Reports must be submitted in accordance with the requirements of Order No. R9-2004-001 prior to submittal of the JRMPs required under section K.1a.

[231] The National Academy of Public Administration report is available on-line at http://www.napawash.org

L. Modification of Programs

The following legal authority applies to section L:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Section L of the Order provides a process for the Copermittees to modify their runoff management programs. This process will be useful so that the Copermittees can continue to refine and improve their programs based on the findings of their annual program effectiveness assessments. The process allows for minor modifications to the Copermittees' programs where the Copermittees can exhibit that the modifications meet or exceed existing legal requirements under the Order. Such a process avoids lengthy and time consuming formal approvals of proposed modifications before the San Diego Water Board, while still ensuring compliance with applicable legal standards and the Order. The process included in the Order is based on a process utilized by the California Regional Water Quality Control Board, San Francisco Bay Region (San Francisco Bay Water Board) in their MS4 permit for Alameda County.[232]

[232] San Francisco Bay Water Board, 2003. Order No. R2-2003-0021. P. 45.

M. Principal Permittee Responsibilities

The following legal authority applies to section M:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(a)(3)(iii)(C) provides that "A regional authority may be responsible for submitting a permit application."

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that "[The Copermittee must demonstrate that it can control] through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system."

No significant changes were made to this section.

N. Receiving Waters and MS4 Discharge Monitoring and Reporting Program

The following legal authority applies to section N:

Broad Legal Authority: CWA sections 402, 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulations 40 CFR 122.26(d)(2)(iii) and 122.44 require the Copermittees to conduct a comprehensive monitoring program.

See section T of this Fact Sheet/Technical Report for a discussion of changes to the Receiving Waters Monitoring and Reporting Program.

O. Standard Provisions, Reporting Requirements, And Notifications

The following legal authority applies to section O:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Standard provisions, reporting requirements, and notifications are consistent to all NPDES permits and are generally found in Federal NPDES regulation 40 CFR 122.41.

Section O.2 of the Order has been changed to remove the statement that all plans and reports submitted in compliance with the Order are an enforceable part of the Order. This statement has been removed because it is unnecessary. The Order itself contains sufficient detailed requirements to ensure that compliance with discharge prohibitions, receiving water limitations, non-storm water action levels and the narrative standard of MEP for storm water are achieved. Implementation by the Copermittees of programs in compliance with the Order's requirements, prohibitions, and receiving water limitations is the pertinent compliance standard to be used under the Order, as opposed to assessing compliance by reviewing the Copermittees' implementation of their plans alone.

Rather than being substantive components of the Order itself, the Copermittees' management plans are simply descriptions of their runoff management programs required under the Order. These plans serve as procedural correspondence which guides program implementation and aids the Copermittees and San Diego Water Board in tracking implementation of the programs. In this manner, the plans are not functional equivalents of the Order. For these reasons, the Copermittees' runoff management plans need not be an enforceable part of the Order.

P. Attachment A – Basin Plan Prohibitions

The following legal authority applies to Attachment A:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: CWC section 13243 provides that "A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted."

CWC section 13263(a) provides that waste discharge requirements prescribed by the San Diego Water Board implement the Basin Plan.

No significant changes were made to this attachment.

Q. Attachment B – Standard Provisions

The following legal authority applies to Attachment B:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Standard provisions, reporting requirements, and notifications are consistent to all NPDES permits and are generally found in Federal NPDES regulation 40 CFR 122.41.

Attachment B includes Standard Provisions which have been developed by the State Water Board. These Standard Provisions ensure that NPDES permits are consistent and compatible with USEPA's federal regulations. Some Standard Provisions sections specific to publicly owned sewage treatment works are not included in Attachment B.

R. Attachment C – Definitions

The following legal authority applies to Attachment C:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Attachment C contains definitions for terms found in the Order. In addition, definitions for terms previously defined in Order No. R9-2004-001 Attachment C, but which are not found in the current Order, have been deleted.

An additional section which includes acronyms and abbreviations has been added. This is to ensure clarity and prevent confusion of terms. Definitions have been added for new terms used in the permit to provide a clear understanding of their meaning and use.

S. Attachment D – Summary of Submittals

The following legal authority applies to Attachment D:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, 13383, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv) and 122.44(i).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.42(c) requires that "The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation."

CWC section 13267 provides that "the regional board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires."

Attachment D to the Order provides a table summary of scheduled submittals required by the Order. Unscheduled submittals are no longer added to the table, since there is no proper due date for such submittals. A task summary has not been created for the Order, since the previous task summary was found to be redundant, repeating information found in the submittal summary and elsewhere in the Order.

A Jurisdictional Runoff Management Program (JRMP) Annual Report Checklist has been added to the reporting requirements. This addition is to determine and ensure that all requirements of the permit are being met. A Jurisdictional Runoff Management Program (JRMP) Annual Report Checklist has been added to the reporting requirements. This addition is to determine and ensure that all requirements of the permit are being met.

ATTACHMENT D

T. Attachment E - Receiving Waters and MS4 Discharge Monitoring and Reporting Program

The following legal authority applies to the Receiving Waters and MS4 Discharge Monitoring and Reporting Program:

Broad Legal Authority: CWA sections 402, 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv), 122.44 and 122.45.

Specific Legal Authority: Federal NPDES regulations 40 CFR 122.26(d)(2)(iii) requires the Copermittees to conduct a comprehensive monitoring program.

Federal NPDES regulation 40 CFR 122.42(c) requires that "The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation."

CWC section 13267 provides that "the regional board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires."

I. Purpose

According to USEPA, the benefits of sampling data include, but are not limited to:

1. Providing a means for evaluating the environmental risk of storm water discharges by identifying types and amounts of pollutants present;
2. Determining the relative potential for storm water discharges to contribute to water quality impacts or water quality standard violations;
3. Identifying potential sources of pollutants; and

4. Eliminating or controlling identified sources more specifically through permit conditions.[233]

Equally important, monitoring programs are an essential link in the improvement of storm water management efforts. Data collected from monitoring programs can be assessed to determine the effectiveness of management programs and practices, which is vital for the success of the iterative approach used to meet the MEP standard for storm water. When water quality data indicate that water quality standards or objectives are being exceeded, particular pollutants, sources, and drainage areas can be identified and targeted for specific management efforts. When data indicate that a particular BMP or program component is not effective, improved efforts can be selected and implemented.

Considering the benefits described above, the Receiving Waters Monitoring and Reporting Program (MRP) has been designed to determine impacts to receiving water quality and beneficial uses from storm water runoff and to use the results to refine the Copermittees' storm water runoff management programs for the reduction of storm water pollutant loadings to the MEP. For non-storm water discharges, monitoring has been designed to identify and eliminate prohibited illicit discharges and to determine appropriate actions to take in response to dry weather non-storm water action levels. Additionally, the results from dry weather non-storm water monitoring can be used to evaluate exempted non-storm water discharges as a source or conveyance of pollutants. The primary goals of the MRP include:

1. Assess compliance with Order No. R9-2010-0016;
2. Measure and improve the effectiveness of the Copermittees' runoff management programs;
3. Assess the chemical, physical, and biological impacts of receiving waters from MS4 discharges;
4. Characterize storm water runoff discharges;
5. Identify sources of specific pollutants;
6. Prioritize drainage and sub-drainage areas that need management actions;
7. Detect and eliminate illicit discharges and illicit connections to the MS4;
8. Assess the overall health of receiving waters; and
9. Provide information to implement required BMP improvements

Each of the components of the MRP is necessary to meet the objectives listed above. In addition, the MRP has been designed in accordance with the guidance provided by the Southern California Stormwater Monitoring Coalition's Model Monitoring Technical Committee in its August 2004 "Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California." This guidance document was developed in response to Senate Bill 72 (Kuehl), which addressed the standardization of sampling and analysis protocols in municipal storm water monitoring programs. The technical committee which developed the guidance included representatives from

[233] USEPA, 1992. NPDES Storm Water Sampling Guidance Document. EPA/833-B-92-001.

Southern California Regional Water Boards (including the San Diego Water Board), municipal storm water Copermittees (including Riverside County Flood Control District), Heal the Bay, and the Southern California Coastal Water Research Project.

As its title suggests, the guidance essentially developed a model municipal storm water monitoring program for use in Southern California. The model program is structured around five fundamental management questions, outlined below. The MRP is designed as an iterative step towards ensuring that the Copermittees' monitoring program can fully answer each of the five management questions.

1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
2. What is the extent and magnitude of the current or potential receiving water problems?
3. What is the relative storm water runoff contribution to the receiving water problem(s)?
4. What are the sources of storm water runoff that contribute to receiving water problem(s)?
5. Are conditions in receiving waters getting better or worse?

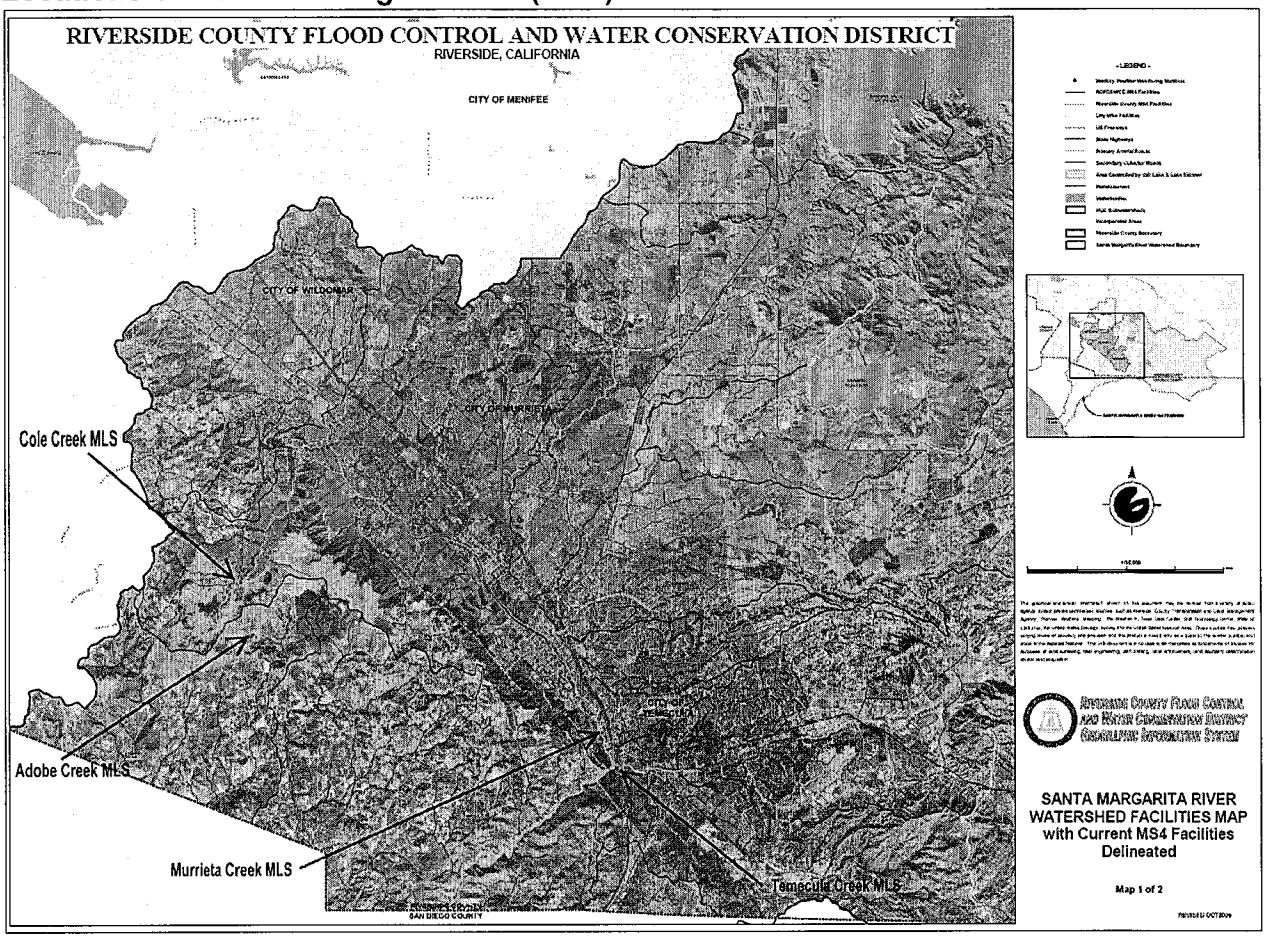
The three MS4 NPDES permits within San Diego Water Board jurisdiction each have very similar core monitoring requirements that include receiving water monitoring, effluent monitoring, and special studies (see Finding E.12 and Discussion). The justifications for each component of the monitoring program are discussed below.

II. Monitoring Program

The Monitoring Program has been organized into distinct sections and includes receiving water monitoring, MS4 effluent monitoring, a monitoring program in high priority inland aquatic habitat, and special studies. Each monitoring program is expected to answer specific questions and achieve goals outlined in section I. Some of these questions require the linkage of both receiving water monitoring and MS4 discharge monitoring that is required in the Order. As such, the Monitoring Program has been written to allow the Copermittees to utilize the same data and/or sampling effort where monitoring requirements overlap. For example, the Copermittees may elect to develop a Trash Special Study where the sampling is done at the same location and time as stream assessment monitoring. The Copermittees may evaluate the goals and questions of the Monitoring Program when evaluating how required monitoring programs may overlap.

Section II.A.1 (Mass Loading Station Monitoring) of the MRP requires mass loading and toxicity monitoring at monitoring stations located at the bottom of the Riverside County portion of the Santa Margarita watershed (see figure below).

Locations of Mass Loading Stations (MLS) under Order No. R9-2004-0001



The intent of current mass loading monitoring as conducted by the Copermittees under Order No. R9-2004-001 is to use water chemistry data from storm events and dry weather flows to calculate pollutant loads and to assess water quality with respect to applicable acute and chronic toxicity criteria from the California Toxics Rule (CTR) and bioassessment as part of the triad monitoring approach.[234] The mass loading monitoring that is required by the Order will provide data representing event mean concentrations of pollutants, total pollutant loadings, and toxicity conditions from specific drainage areas. Mass loading monitoring stations are recommended by the Model Monitoring Technical Committee in order to answer management questions 1, 2, and 5.[235] The stations are also expected to contribute towards meeting MRP goals

[234] Riverside County Copermittees. 2009. Report of Waste Discharge, section 6.4 .
[235] Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Chapter 5.

1, 2, 3, 4, 6, and 8. The locations of the mass loading monitoring stations are not changed from Order No. R9-2004-001. The MRP, however, retains flexibility to allow the Copermittees to propose changing the location of a mass loading station. The Copermittees may also propose additional mass loading stations should they determine more are needed. The Copermittees will identify a permanent mass loading reference station for the permit term.

Some revisions to the required list of constituents to be monitored at mass loading stations have been made. The changes are made to be compatible with the federal NPDES regulations and in response to data collected during the current permit term. Audits of the Copermittees' monitoring program and reviews of annual reports during the last permit term have found consistent shortcomings in the Copermittees' monitoring programs. As a result, some changes have been made to the monitoring requirements. The changes include:

1. All events must now include: Biological Oxygen Demand, 5-day Chemical Oxygen Demand, Total Organic Carbon, Dissolved Organic Carbon. These are specifically required by 40 CFR 122.26(d)(2)(iii)(A) and (B), but were omitted from collection and reporting required by Order No. R9-2004-001.

2. Carbamate and Pyrethroid pesticides must be monitored. Pyrethroid pesticides were identified from TIEs conducted in response to toxicity observed during sampling as part of the triad approach at Temecula and Murrieta Creek. Long term monitoring of pesticide presence is critical to evaluate Copermittees BMP efforts and program effectiveness. Carbamate pesticides are utilized in residential, agricultural and commercial applications, and have been shown to have negative direct and indirect impacts on aquatic invertebrates and vertebrates, as well as associated riparian species.[236] In addition, the National Marine Fisheries Service (NMFS) issued a Biological Opinion in 2009 that concluded pesticide products containing carbaryl and carbofuran are likely to jeopardize 22 listed salmonids, including Southern California Steelhead.[237]

3. Impaired water body pollutants. Specific pollutants have been added in response to the U.S. Environmental Protection Agency approval of California's 2004-2006 and the San Diego Water Board approval of the 2008 303(d) List.

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[236] See:
Boone and James. 2003. Interactions of an insecticide, herbicide, and natural stressors in amphibian community mesocosms. *Ecological Applications*: 13(3) pp. 829-841.
Hanazato. 2001. Pesticide effects on freshwater zooplankton: an ecological perspective. *Environmental Pollution*: 112 pp. 1-10.
USGS. 1999. Field Manual of Wildlife Diseases: General Field Procedures and Diseases of Birds. Chapter 39.
California Department of Pesticide Regulation. 2010. Urban Pesticide Monitoring in Northern and Southern California. http://www.cdpr.ca.gov/docs/emon/surfwtr/presentations.htm

[237] NMFS. 2009. Endangered Species Act Section 7 Consultation Biological Opinion: Environmental Protection Agency Registration of Pesticides Containing Carbaryl, Carbofuran, and Methomyl.

4. A requirement to collect a grab sample for total petroleum hydrocarbons whenever a sheen is observed has been added based upon results from IC/ID programs in existing southern California NPDES MS4 permits.

5. The required organisms for toxicity testing have changed from the previous order to be consistent with USEPA guidance.[238] *Ceriodaphnia dubia* (water flea) has been replaced with *Pimephales promelas* (fathead minnow) to provide at least three test species from different phyla. *Hyalella azteca* has been retained as a test organism due to sensitivity to pyrethroid pesticides.

6. A constituent-specific table has been added to provide clarity to the list of pollutants that are required to be monitored as part of the triad approach.

7. More prescriptive reporting requirements have been added in the event the Copermittees fail to monitor the required number of mass loading events.

Section II.A.2 (Stream Assessment Monitoring) of the MRP requires the Copermittees to conduct bioassessment monitoring using a multiple lines of evidence approach which includes collection of benthic macroinvertebrates and algae, a full physical habitat assessment, water chemistry sampling, and toxicity testing. Bioassessment monitoring is a cost-effective tool that measures the effects of water quality over time.[239] It is an important indicator of stream health and impacts from storm water and non-storm water runoff. It can detect impacts that chemical and toxicity monitoring alone cannot. USEPA encourages permitting authorities to consider requiring biological monitoring methods in conjunction with chemical and toxicity testing to fully characterize the nature and extent of impacts from runoff.[240] Therefore, the San Diego Water Board commonly requires bioassessment monitoring in MS4 and other types of discharge permits.

Bioassessment is the direct measurement of the biological, chemical, and physical condition, and attainment of beneficial uses of receiving waters (typically using benthic macroinvertebrates, periphyton, and fish). Bioassessment monitoring integrates the effects of both water chemistry (including toxicity) and physical habitat impacts (e.g., sedimentation or erosion) of various discharges on the biological community native to the receiving waters. Moreover, bioassessment is a direct measurement of the impact of cumulative, sub-lethal doses of pollutants that may be below reasonable water chemistry detection limits, but that still have biological affects.

Because bioassessment focuses on communities of living organisms as integrators of cumulative impacts resulting from water quality or habitat degradation, it defines the ecological risks resulting from storm water and non-storm water MS4 runoff.

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[238] USEPA, 1991. Technical Support Document for Water Quality Based Toxics Control. EPA 505-2-90-001.
[239] California Department of Fish and Game, 2002. California Regional Water Quality Control Board, San Diego Region 2002 Biological Assessment Report: Results of May 2001 Reference Site Study and Preliminary Index of Biotic Integrity.
[240] USEPA, 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. EPA 841-B-99-002. P. 2-5.

Bioassessment not only identifies that an impact has occurred, but also measures the effect of the impact and tracks recovery when control or restoration measures have been taken. These features make bioassessment a powerful tool to assess compliance, evaluate the effectiveness of BMPs, and to track both short and long-term trends (MRP goals 1, 2, 3, and 8). Bioassessment can also help answer management questions 1, 2, and 5.

The Order also identifies the most current established protocol to be used in identifying bioassessment reference stations. The protocol referenced in the Order is specified because it provides a qualitative and repeatable method for identifying reference sites. Moreover, the protocol is well established, since it has been peer reviewed and published.

The Order includes four significant modifications to the bioassessment monitoring required under Order No. R9-2004-001. These changes include:

1. Bioassessment monitoring must be consistent with the State Water Board's Surface Water Ambient Monitoring Program (SWAMP) Standard Operating Procedures (SOP) as amended.[241]

2. Bioassessment monitoring is to include an assessment of periphyton (algae).[242] Advantages of bioassessment using periphyton include: (1) they have rapid reproduction rates and very short life cycles, making them valuable indicators of short-term impacts; (2) as primary producers, they are most directly affected by physical and chemical factors; (3) sampling is easy and inexpensive; and (4) algal assemblages are sensitive to some pollutants which may not visibly affect other aquatic assemblages.[243] Future bioassessment must use algal IBI scores, when developed.

3. The number of bioassessment stations has been increased from three to six. The Copermittees currently conduct bioassessment monitoring at one reference station and at the two mass loading stations at Temecula and Murrieta Creek. The increase in required sampling is needed to evaluate more localized impacts higher in the Santa Margarita Hydrologic Unit (HU) in conjunction with SAL and NAL monitoring, as well as to evaluate any impacts that occur from hydromodification. The additional required reference station will aid in detecting any differences in bioassessment scores over time that may be independent of MS4 discharges.

4. The bioassessment section title has been changed to Stream Assessment Monitoring. This was done to prevent confusion by the Copermittees in

[241] SWAMP February 2007 (amended September 2008). Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California
[242] SWAMP June 2009. Standard Operating Procedures for Collecting Stream Algae Samples and Associated Physical Habitat and Chemical Data for Ambient Bioassessments in Califorinia.
[243] USEPA, 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. EPA 841-B-99-002. P. 3-3.

understanding sampling differences between mass loading stations and bioassessment sites. Under Order No. 2004-0001 all bioassessment sites were co-located with mass loading stations. Thus, the collection of water chemistry and toxicity data was done simultaneously for mass loading and bioassessment purposes, which prevented duplicative water chemistry and toxicity testing. For new "Stream Assessment Monitoring" sites not located at mass loading stations, the nomenclature for monitoring has been changed to prevent possible misinterpretation of the term "bioassessment" to mean only the collection of benthic macroinvertebrates and physical habitat data.

Section II.A.3 (Follow-up Analysis and Actions) of the MRP requires the Copermittees to use the results of the receiving water monitoring to determine if impacts from MS4 discharges are occurring and when follow-up actions are necessary. The triad approach allows a wide range of measurements to be combined to more efficiently identify pollutants, their sources, and appropriate follow-up actions. Results from the three types of monitoring must be assessed to evaluate the extent and causes of pollution in receiving waters and to prioritize management actions to eliminate or reduce the sources. The framework provided is to be used to determine conclusions from the data and appropriate follow-up actions. The framework is proposed by the Copermittees and derived from the Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California.[244] These follow-up actions are expected to primarily help answer management questions 2 and 4, as well as address MRP goals 2, 4, 5, 6 and 7.

When, based on the framework in Table 3 of the MRP, data indicates the presence of toxic pollutants in runoff, the Copermittees are required to conduct a Toxicity Identification Evaluation (TIE). A TIE is a set of procedures used to identify the specific chemical(s) responsible for toxicity to aquatic organisms. When discharges are toxic to a test organism, a TIE must be conducted to confirm potential constituents of concern and rule out others, therefore allowing Copermittees to determine and prioritize appropriate management actions. If a sample is toxic to more than one species, it is necessary to determine the toxicant(s) affecting each species. If the type and source of pollutants can be identified based on the data alone and an analysis of potential sources in the drainage area, a TIE is not necessary.

When a TIE identifies a pollutant associated with MS4 discharge as a cause of toxicity, it is then necessary to conduct follow-up actions to identify the causative agents of toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. Follow-up actions should analyze all potential source(s) causing toxicity, potential BMPs to eliminate or reduce the pollutants causing toxicity, and suggested monitoring to demonstrate that toxicity has been removed.

[244] Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. P. 5-61.

Section II.A.4 (Regional Monitoring Programs) of the MRP identifies that the San Diego Water Board recognizes the importance of regional monitoring efforts to answer monitoring questions and/or address problems that may not be specific to only the Santa Margarita hydrologic unit (see Finding E.12 and Discussion). Additionally, the Copermittees' jurisdiction does not encompass the entire Santa Margarita hydrologic unit, as portions of the hydrologic unit include, but are not limited to, San Diego County, tribal lands, the Cleveland National Forest, and Marine Corps Base at Camp Pendleton.

Section II.B (Wet Weather MS4 Discharge Monitoring) of the MRP requires the Copermittees to develop and implement a program, in accordance with 40 CFR 122.26(d)(2)(iii), to monitor and characterize pollutants in discharges of storm water effluent from major MS4 outfalls. Currently the Copermittees do not monitor the discharge of storm water from the MS4 outfalls. As a result, a substantial amount of information regarding the quality of MS4 effluent is unknown, and in-stream stations monitored under R9-2004-001 have not accurately characterized MS4 effluent data during the permit term.[245] The collection of wet-weather MS4 effluent data will enable the Copermittees to assess the effectiveness of existing storm water BMP measures, estimate cumulative annual pollutant loads from MS4 storm water discharges, and estimate seasonal pollutant loads from individual major outfalls. This data can be used to more effectively target storm water management program efforts. The MRP also requires compliance with section D of the Order for Storm Water Action Levels.

The monitoring of outfalls is expected to be used to identify storm drains that are discharging pollutants in concentrations that may pose a threat to receiving waters. Source investigations are expected to be conducted as a response to the data. The Copermittees are required to monitor for those pollutants in 40CFR 122.26(d)(2)(iii)(B); for 303(d) listed pollutants for the Santa Margarita Hydrologic Unit; and for pollutants with Storm Water Action Levels.

The MRP provides the Copermittees great flexibility in assigning stations and sampling frequency for wet-weather monitoring. Copermittees are to propose the number and frequency of monitoring stations, thus proposing the overall cost of their program. The San Diego Water Board will review the proposed program to ensure it will comply with Federal regulations and section D of the Order for Storm Water Action Levels.

The monitoring requirements also include a requirement to measure receiving water hardness when comparing storm water MS4 discharge data to Storm Water Action Levels for priority pollutants (e.g. metals). The effect of these constituents upon receiving waters will vary depending upon the hardness of receiving waters.

Section II.B.2 (Source Identification Monitoring) requires the Copermittees to develop and implement a program to identify sources of discharges of pollutants causing the high priority water quality problems within each hydrologic subarea. The current

[245] Riverside County Copermittees. 2009. Report of Waste Discharge, section 5.1.

source identification monitoring program conducted by the Copermittees has not been demonstrated to be effective due to the continued receiving water monitoring that documents persistent exceedances of water quality objectives for 303(d) listed pollutants, as well as the listing of new water bodies and pollutants (see Finding C.7). Furthermore, all monitoring conducted under Order R9-2004-001 focused on receiving water conditions rather than MS4 effluent discharges. Outside of required toxicity identification and reduction evaluations, little to no source identification was conducted for observed exceedances of water quality standards in receiving waters.

Identification of sources causing high priority water quality problems is a central purpose of storm water runoff management programs. Monitoring which enables the Copermittees to identify sources of water quality problems aids the Copermittees in focusing their management efforts, improving their programs and choosing additional and/or better BMPs. In turn, the Copermittees' programs can abate identified sources, which will improve the quality of storm water runoff discharges and receiving waters. This monitoring is needed to address management questions 3 and 4, in addition to ensuring that pollutants in storm water discharges from the MS4 are reduced to the MEP. Moreover, in its review of the San Diego County Copermittees' monitoring proposal, Tetra Tech, Inc. finds that "after some years of assessment monitoring, it is time to look more systematically at determining the relative urban contributions and the sources of urban runoff that contribute to identified receiving water problems."[246]

Section II.C (Non-Storm Water Dry Weather Action Levels) of the MRP describes the monitoring to be conducted by the Copermittees to determine compliance with dry weather, non-storm water action levels.

The section for Dry Weather Non-Storm Water Action Level Monitoring has taken the place of Illicit Discharge Detection and Elimination Monitoring under the previous Order. This change is required to assess compliance with action levels for non-storm water discharges from the MS4 into receiving waters while the Copermittees simultaneously conduct Illicit Discharge Detection and Elimination activities. The prior Order did not require the testing of non-storm water MS4 effluent prior to discharge into receiving waters, and thus Illicit Discharge Detection and Elimination Monitoring was conducted in receiving waters that were technically considered part of the MS4 but did not necessarily contain solely MS4 effluent. Discussions between the San Diego Water Board and Copermittees identified this shortcoming, which is reflected in the Copermittees Annual Reports (2007-08 and 2008-09), and the Copermittees have requested the point of monitoring for non-storm water be changed to sample MS4 effluent.[247] The required sampling frequency has great flexibility and allows Copermittees to sample a representative number of discharge points while the sampling methodology continues to be grab sampling. Additionally, the selection of representative outfalls or other identified stations has been clarified to ensure that those selected are consistent with federal requirements under 40 CFR 122.26(d) and section C of the Order.

[246] Tetra Tech Inc., 2006. Review of San Diego County MS4 Monitoring Program.
[247] Riverside County Copermittees ROWD, January 2009. Section 7.8.2.

Section II.C.2 (Source Identification Monitoring) requires the Copermittees to develop and implement a program to identify the sources of pollutants in non-storm water discharges. The section provides clarification that the program must utilize action levels pursuant to section C of the Order as a source identification response criteria. The source identification monitoring program is required under sections C, F.4.d, and F.4.e of the Order and to comply with 40 CFR 122.26(d)(2)(iv)(B), which requires the Copermittees have a program to detect and remove illicit discharges into the MS4.

Section II.D (High Priority Inland Aquatic Habitat) of the MRP describes required monitoring to be done in order to assess if MS4 storm water and/or non-storm water discharges are affecting high priority aquatic and/or riparian species. The existing monitoring program does almost all monitoring at or near mass loading stations, which are located at and below the confluence of multiple major hydrologic subareas. While this approach may estimate cumulative loadings and impacts from entire hydrologic areas, it provides little information regarding localized impacts to receiving waters subject to MS4 discharges, especially for high priority habitats. This approach is also recommended by the Southern California Stormwater Monitoring Coalition's Model Monitoring Technical Committee as an integral part of a storm water monitoring program. The Model Monitoring Technical Committee, which includes a member from RCFCD, recommends the use of "site-specific stations focused on the status of high-priority inland habitats of concern, with monitoring based primarily on the Triad approach for dry weather sampling and on chemistry and toxicity for wet weather."[248]

The monitoring of MS4 discharges into high-priority inland habitats is of special importance to the species which rely on the habitat subject to the discharge. The Santa Margarita River, and its tributaries, has been designated with BIOL, WARM, COLD, RARE and WILD beneficial uses, in part due to the presence of threatened and endangered species.[249] Portions of the Santa Margarita HU also include areas designated as critical habitat by state and Federal agencies. Federal and State threatened and endangered species are particularly susceptible to negative direct and indirect effects of MS4 discharges because the habitat available to them has already been reduced, restricted, and/or degraded, and their populations have already been reduced to low levels.[250] Therefore, short-term or chronic degradation of habitat or exposure to pollutants caused by MS4 discharges results in a proportionally high level of negative impact to already impacted beneficial uses. Threatened or endangered species with reduced habitat availability may be restricted from avoiding pollutants associated with MS4 discharges,[251] and any reproductive impacts from pollutants would likely have significant negative effects on already low population sizes.

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[248] Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California.
[249] See Federal Register 50 CFR 71.11 and the California Code of Regulations, Title 14 Section 670.5.
[250] Carroll, R., Augspurger, C., Dobson, A., Franklin, J., Orians, G., Reid, W., Tracy, R., Wilcove, D. and J. Wilson. 1996. Strengthening the use of science in achieving the goals of the Endangered Species Act: An Assessment by the Ecological Society of America. *Ecological Applications.* 6(1) pp. 1-11.
[251] For example, see National Marine Fisheries Service Draft Southern Steelhead Recovery Plan, July 2009.

Information regarding the extent of environmentally-sensitive habitats is available from sources familiar to the Copermittees.[252] Examples include the Western Riverside Multiple Species Habitat Conservation Plan, Santa Margarita HU assessments conducted by the U.S. Army Corps of Engineers, and California Department of Fish and Game Ecological Reserves. Therefore, a relatively small level of effort will be required to collect information to determine high priority inland aquatic habitats. In addition, the Copermittees already are required to have updated inventories of inland MS4 outfall locations. As a result, a monitoring plan can be developed within 36 months to address the new requirement.

Section II.E.2 (Sediment Toxicity Study) includes a requirement that the Copermittees conduct a sediment toxicity special study. This study has been added to the Monitoring and Reporting requirements to assess the quality of stream sediments and possible contamination due to runoff from the MS4. Toxicity tests focusing on aqueous toxicity may not account for the full toxicity of receiving waters if constituents, such as heavy metals or pesticides, are bound to sediments. Southern California studies have shown that stream sediments can exhibit significant levels of toxic metals and pesticides, including pyrethroids.[253,254] Additionally, the Copermittees have identified the presence of aqueous toxicity at both mass loading stations due to pyrethroid pesticides, but their presence in sediments is unknown.

Section II.E.3 (Trash and Litter Investigation) includes a requirement that the Copermittees conduct a Trash and Litter Investigation (see Finding C.8 and Discussion). The objective of the study is to evaluate the quantity, type, and source(s) of trash and litter in receiving waters (see Finding E.12 and Discussion regarding regional efforts). Although trash can impair beneficial uses, the amount and type of trash discharged into receiving waters from the Copermittee(s) MS4 is unknown. Thus, the Copermittees have largely been unable to assess the effectiveness of their BMPs that target trash as a pollutant. The special study requires the Copermittees to utilize previously developed protocols to determine the source of trash and litter in receiving waters, assess BMP effectiveness, and implement additional BMPs if needed according to the requirements of the Order. Qualitative and quantitative protocols for trash assessment have already been developed for San Diego County and the San Francisco Bay Region. These protocols are required to be used in the development of the special study, are expected to reduce Copermittee costs, and promote regional consistency in trash and litter assessments.

Section II.E.4 (Agricultural, Federal and Tribal Input Study) includes a requirement for the Copermittees to draft and subsequently conduct a special study to determine the water quality of storm water flows which are entering their MS4 from agricultural,

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[252] See Riverside County Copermittees ROWD, January 2009. Section 4.3.3.
[253] Holmes, R.W., Anderson, B.S., Phillips, B.M., Hunt, J.W., Crane, D.B., Mekebri, A. and V. Connor. 2008. Statewide Investigation of the Role of Pyrethroid Pesticides in Sediment Toxicity in California's Urban Waterways. *Environmental Science Technology* 42: 7003-7009..
[254] Crane, D.B. and C. Younghans-Haug. 1992. Oxadiazon residue concentrations in sediment, fish, and shellfish from a combined residential/agricultural area in Southern California. *Bulletin of Environmental Contamination and Toxicology*. Volume 48, no. 4.

federal and tribal areas. The objective of the study is to determine the type, quantity and estimated loading of pollutants in these discharges. In the ROWD, the Copermittees specifically state their concern regarding the quality of storm water which is discharged into their MS4 from such areas, and state that these discharges may affect overall water quality, primarily in the Murrieta and Temecula Creek watersheds.[255] However, no data, information, or analyses were presented or identified on the level of pollutants in such flows into their MS4. The special study has been designed with sampling frequency and parameter requirements that lend flexibility to the Copermittees. The minimum requirements are limited to grab samples for pollutants expected to be present in storm water discharges and at a number of representative sites chosen be the Copermittees. The special study requires testing to be source specific (e.g. only sampling discharge into from one of the three sources) and does not allow for sampling to be done on co-mingled flows within the MS4. Additionally, the Copermittees may elect to conduct composite sampling, toxicity testing, more targeted sites, or a combination thereof.

Section II.E.5 (MS4 and Receiving Water Maintenance Study) includes a requirement that the Copermittees investigate impacts to Beneficial Uses from routine removal of vegetation from portions of the MS4 that are also receiving waters (see Finding D.3.c and Discussion). The objective of the study is to determine if there are short-term or long-term in-stream water quality impacts from maintenance activities and to assess if the activities exacerbate the impairment of receiving waters 303(d) listed as impaired wholly or partially from MS4 discharges. Receiving waters within the Copermittees jurisdiction have been routinely cleared of vegetation by the Copermittees as part of their MS4 maintenance programs without mitigation efforts. The in-stream modification of vegetation may result in changes in water quality and Beneficial Uses from changes in nutrient cycling, the storage of organic matter, infiltration, flow attenuation, temperature and erosion potential.[256,257,258] The relative contribution, if any, of maintenance activities to CWA 303(d) water quality impairments in unknown. The program is also expected to work in conjunction with other permit requirements of the Order. For example, the Copermittees may choose to utilize study results when implementing the HMP, LID, and retrofitting programs.

Section II.E.6 (Intermittent and Ephemeral Stream Perennial Conversion Study) includes a study to assess specifically exempted non-storm water discharges[259] into surface waters and discharges into MS4s covered under a separate NPDES permit in order to determine if the exempted discharges and/or separate NPDES discharges to the MS4 are causing or contributing to a condition of pollution, contamination or nuisance. For ephemeral and intermittent inland surface waters, modification of flows

[255] Riverside County Copermittees ROWD, January 2009. Sections 3.2 and 3.3.
[256] Fischenich, J.C. and R.R. Copeland. 2001. Environmental Considerations for Vegetation in Flood Control Channels. US Army Corps of Engineers.
[257] Shade et al. 2005. Hydrologic exchange and N uptake by riparian vegetation in an arid-land stream. *Journal of North American Benthological Society*. 24(1):19–28.
[258] Warner, R.E. and K.M. Hendrix. 1984. California Riparian Systems: Ecology, Conservation, and Productive Management. *pp. 160-189.* University of California Press.
[259] See Finding C.15 of the Order for discussion of exempted non-storm water discharges.

may impact beneficial uses through modification of in-stream ecology including, but not limited to, sediment transport, biogeochemical functioning, water temperature, non-native species presence and exclusion of native species.[260,261] The objective of the study is to determine if the alteration of natural in-stream hydrologic regimes from intermittent or ephemeral to perennial due to exempted non-storm water discharges has modified the beneficial uses of the receiving water. The evaluation includes both qualitative and quantitative measurements of parameters which will help the Copermittees determine if exempted discharges and/or separate NPDES discharges into the MS4 are causing a condition of pollution, contamination, or nuisance. Such a determination would potentially require an action to be taken by the Copermittee(s) (i.e. prohibition of an exempted discharge), permit modification for a separate NPDES permit, and/or an action by the San Diego Water Board.

Section II.F (Monitoring Provisions) of the MRP includes monitoring provisions which are standard requirements for all municipal storm water permits.

III. Reporting Program

Section III of the MRP discusses submittal of the Planned Monitoring Program, the Receiving Waters and MS4 Discharge Monitoring Annual Reports, and Interim Reporting Requirements. For the purposes of Receiving Waters and MS4 Discharge Monitoring and Reporting Program, required reviews and approvals by the San Diego Water Board of draft monitoring plans, proposals or protocols shall be conducted by the San Diego Water Board Executive Officer.

Section III.C (Table of Reporting Requirements) has been added to the MRP to provide a quick reference for all required reporting dates found in the MRP

[260] Naiman, R.J., Bunn, S.E., Nilsson, C., Petts, G.E., Pinay, G., and L.C. Thompson. 2002. Legitimizing Fluvial Ecosystems as Users of Water: An Overview. *Environmental Management*: 30(4) pp. 455-467.
[261] Marchetti, M.P., Light, T., Moyle, P.B. and J.H. Viers. 2004. Fish Invasions in California Watersheds: Testing Hypotheses Using Landscape Patterns. *Ecological Applications.* 14(5) pp. 1507-1525.

U. Attachment F - Source Data

Attachment F contains data utilized for the development of Storm Water Action Levels and Non-storm Water Action Levels.

ATTACHMENT F

Tab 2

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
ORDER NO. R9-2004-001
NPDES NO. CAS0108766
WASTE DISCHARGE REQUIREMENTS
FOR DISCHARGES OF URBAN RUNOFF FROM
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)
DRAINING THE COUNTY OF RIVERSIDE,
THE CITY OF MURRIETA, THE CITY OF TEMECULA AND THE
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION
DISTRICT WITHIN THE SAN DIEGO REGION

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MONITORING AND REPORTING PROGRAM No. R9-2004-001

FINDINGS

The California Regional Water Quality Control Board, San Diego Region (hereinafter SDRWQCB), finds that:

1. The Riverside County Flood Control and Water Conservation District (District), the County of Riverside and the Cities of Murrieta and Temecula (hereinafter called Permittees), own or operate municipal separate storm sewer systems (MS4s), through which urban runoff is discharged into waters of the United States (U.S.) within the Santa Margarita Watershed area of Riverside County in the San Diego Region (hereinafter referred to as the Upper Santa Margarita Watershed).

2. The SDRWQCB has previously issued two MS4 permits for the Upper Santa Margarita Watershed. The first-round MS4 permit was issued on July 16, 1990, and the second-round MS4 permit was issued on May 13, 1998 (Order No. R9-98-02). On May 26, 1998, the United States Environmental Protection Agency (EPA), Region IX, objected to Order No. 98-02 due to concerns regarding the Receiving Water Limitations (RWL) language. The EPA concluded that the RWL language in the permit did not comply with the federal Clean Water Act (CWA) and its implementing regulations. On April 27, 1999, the EPA reissued the MS4 permit, which the SDRWQCB adopted as Addendum No. 1 to Order No. R9-98-02 on November 8, 2000. On May 30, 2003 and in accordance with Order No. R9-98-02, the District, as the Principal Permittee, submitted a Report of Waste Discharge (ROWD) for renewal of their MS4 Permit.

3. The Water Quality Control Plan for the San Diego Basin (Basin Plan), identifies the following beneficial uses for water bodies in the Santa Margarita Watershed: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1) (potential use), Non-contact Water Recreation (REC2), Warm Freshwater Habitat WARM, Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), and Rare, Threatened, or Endangered Species (RARE).

4. Urban runoff contains waste, as defined in the California Water Code (CWC), and pollutants that adversely affect the quality of the waters of the State. The discharge of urban runoff from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA.

5. The most common categories of pollutants in urban runoff include total suspended solids, sediment (due to anthropogenic activities); pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers), oxygen-demanding substances (decaying vegetation, animal waste), and trash.

6. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.

7. Pollutants in urban runoff can threaten human health. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. Also, urban runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.

8. Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d) impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particular sensitive environment. Therefore, additional control to reduce pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.

9. Urban runoff often contains pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.

10. The Final 2002 CWA Section 303(d) List of Water Quality Limited Segments identifies the entire length of Murrieta Creek (12 miles) and the upper portion of the Santa Margarita River (18 miles) as impaired for phosphorus. Potential sources of the phosphorus impairment include urban runoff and unknown point and nonpoint sources. The Santa Margarita Lagoon is listed as impaired for eutrophication.

11. The Permittees' water quality monitoring data submitted to date documents persistent exceedances of Basin Plan water quality objectives for various urban runoff-related pollutants (chlorpyrifos, chromium, diazinon, dissolved oxygen, fecal coliform, MBAS, phosphorus, etc.) at eight different monitoring stations in the Upper Santa Margarita Watershed. The data indicate that urban runoff from activities such as over-application of pesticides and potential illicit discharges from industrial and commercial activities may be contributing to potential water quality impairments. Also, bioassessment monitoring, conducted by the California Department of Fish and Game, and physical assessments, conducted as part of the development of the Draft Operational Guidebook For Referenced Based Assessment of the Functions of Riverine Waters/Wetlands in the Santa Margarita Watershed, indicate that impacts to the biological and physical integrity of receiving waters have occurred as a result of urbanization in the upper watershed.

12. Peak storm water discharges rates, velocities and durations must be controlled to prevent downstream erosion and protect stream habitat. When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed urban area is significantly greater in volume, velocity, peak flow rate, and pollutant load than pre-development runoff from the same area. The increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels.

13. As part of the ROWD, the Permittees proposed to update and modify their existing Drainage Area Management Plan (DAMP), dated March 1993, to incorporate new programs, requirements, and commitments. Direction to the Permittees in revising the DAMP, hereinafter referred to as a Storm Water Management Plan (SWMP), is necessary to ensure that the document provides a written description of the specific urban runoff management measures and programs that each Permittee will implement to fulfill its individual responsibilities and the area-wide and watershed-based activities necessary to meet the maximum extent practicable (MEP) standard. It is practicable for the Permittees to update the SWMP within one year. The SWMP is an integral and enforceable component of this Order.

14. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of pollutants in urban runoff to the MEP requires Permittees to conduct and document evaluation and assessment of each program component and revise activities, control measures, best management practices (BMPs), and measurable goals, as necessary to meet MEP. Because MEP is a dynamic performance standard, it is necessary to describe in greater detail, measures that are essential for compliance.

15. Pollutants can be effectively reduced in urban runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants from urban runoff.

16. Developing minimum BMPs and implementing or requiring their implementation at industrial and commercial facilities, construction sites, and residential areas is necessary for the Permittees to ensure that, ultimately, discharges of pollutants into and from its MS4 are reduced to the MEP.

17. Controlling urban runoff pollution by using a combination of onsite source control BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. Whereas, onsite source control BMPs can be applied during all runoff conditions; (2) End-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.

18. Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff into a receiving water. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of an urban runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This is consistent with EPA guidance to avoid locating structural controls in natural wetlands.

19. Historic and current developments make use of natural drainage patterns and features as conveyances for urban runoff. Urban streams used in this manner are both MS4s and receiving waters.

20. As operators of the MS4s, the Permittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or exceedances of water quality objectives.

21. In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (state and local) storm water regulation. Under this dual system, the SDRWQCB is responsible for enforcing the General Construction Activities Storm Water Permit, SWRCB Order 97-03 DWQ, NPDES No. CAS000001 (General Construction Permit) and the General Industrial Activities Storm Water Permit, SWRCB Order 99-08 DWQ, NPDES No. CAS000002 (General Industrial Permit), and each municipal Permittee is responsible for enforcing its local permits, plans, and ordinances, which may require the implementation of additional BMPs than required under the statewide general permits.

22. This Order implements the federal CWA, the Porter-Cologne Water Quality Control Act (Division 7 of the CWC, commencing with section 13000), applicable state and federal regulations, all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the State Water Resources Control Board (SWRCB), and the Basin Plan.

23. The RWL language specified in this Order is consistent with language recommended by the EPA and established in SWRCB Water Quality Order 99-05, adopted by the SWRCB on June 17, 1999. The RWL in this Order require compliance with water quality standards through an iterative approach requiring the implementation of improved and better-tailored BMPs over time.

24. The Standard Urban Storm Water Management Plan (SUSMP) requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the SWRCB on October 5, 2000. In the precedential order, the SWRCB found that the design standards, which essentially require that urban runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflects the MEP standard. The order also found that the design standards are appropriately applied to the majority of the Priority Development Project categories contained in Section F of this Order. It gave Regional Water Quality Control Boards (RWQCBs) the discretion to include additional categories and locations, such as retail gasoline outlets (RGOs) and ESAs, in future SUSMPs.

25. RGOs are significant sources of pollutants in urban runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other urban areas. To meet MEP, source control and treatment control BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more, or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day. These are appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of urban runoff from RGOs on receiving waters.

26. This Order is in conformance with SWRCB Resolution No. 68-16 and the federal Antidegradation Policy described in 40 CFR 131.12.

27. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Permittee from developing a non-point source plan, for the urban category, under CZARA. The SDRWQCB addresses septic systems through the administration of other programs.

28. Each Permittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction.

29. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not "inject" runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; and (3) ensuring that each drainage feature is adequately maintained in perpetuity.

30. If not properly designed or maintained, certain BMPs implemented or required by municipalities for urban runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). However, proper BMP design to avoid standing water can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities and local vector control agencies and the State Department of Health Services during the development and implementation of the SWMP.

31. The issuance of waste discharge requirements and an NPDES permit for the discharge of urban runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

32. The SDRWQCB has notified the Permittees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of urban runoff.

33. The SDRWQCB has, at public meetings on February 11, 2004 and July 14, 2004, held public hearings and heard and considered all comments pertaining to the terms and conditions of this Order.

PERMIT PROVISIONS

IT IS HEREBY ORDERED: That the Permittees, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, shall each comply with the following:

A. PROHIBITIONS

1. Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the State are prohibited.

2. Discharges from MS4s that cause or contribute to exceedances of water quality objectives for surface water or groundwater are prohibited.

3. Discharges from MS4s containing pollutants which have not been reduced to the MEP are prohibited.

4. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in **Attachment A** to this Order.

B. NON-STORM WATER DISCHARGES

1. Each Permittee shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit; or authorized in accordance with Requirements B.2 and B.3 below.

2. The following categories of non-storm water discharges are not prohibited unless a Permittee or the SDRWQCB identifies the discharge category as a source of pollutants to waters of the U.S. For such a discharge category, the Permittee shall either prohibit the discharge category or develop and implement appropriate control measures under the SWMP to reduce pollutants to the MEP and submit the report to the SDRWQCB pursuant to section III.A.1.d of Monitoring and Reporting Program No. R9-2004-001 (hereafter referred to as the MRP).

   a) Diverted stream flows;
   b) Rising ground waters;
   c) Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
   d) Uncontaminated pumped ground water;
   e) Foundation drains;
   f) Springs;
   g) Water from crawl space pumps;
   h) Footing drains;
   i) Air conditioning condensation;
   j) Flows from riparian habitats and wetlands;
   k) Water line flushing;
   l) Landscape irrigation;
   m) Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
   n) Irrigation water;
   o) Lawn watering;

p) Individual residential car washing;
q) Non-emergency fire fighting flows; and
r) Dechlorinated swimming pool discharges.

3. Discharges from emergency fire fighting activities are not prohibited. If discharges are determined to be a significant source of pollutants to waters of the U.S., the Permittees shall require the implementation of appropriate BMPs to reduce the discharge of pollutants to the MEP, when not interfering with the protection of health and property.

4. Each Permittee shall examine its Illicit Discharge Monitoring results collected in accordance with Requirement J.3 of this Order and section II.B of the MRP to identify water quality problems which may be the result of any non-prohibited discharge category(ies) listed above in Requirement B.2. Follow-up investigations shall be conducted as necessary to identify and control any non-prohibited discharge category(ies) listed above.

C. RECEIVING WATER LIMITATIONS

1. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses of receiving waters) are prohibited.

2. Each Permittee shall comply with Requirement C.1, Prohibition A.2, and Prohibition A.4 as it applies to Prohibition No. 5 in **Attachment A** of this Order through timely implementation of control measures and other actions to reduce pollutants in urban runoff discharges in accordance with the SWMP and other requirements of this Order including any modifications. The SWMP shall be designed to achieve compliance with Requirement C.1, Prohibition A.2, and Prohibition A.4 as it applies to Prohibition 5 in **Attachment A** of this Order. If exceedance(s) of water quality standards persist notwithstanding implementation of the SWMP and other requirements of this Order, the Permittee shall assure compliance with Requirement C.1, Prohibition A.2, and Prohibition A.4 as it applies to Prohibition 5 in **Attachment A** of this Order by complying with the following procedure:

   a) Upon a determination by either a Permittee or the SDRWQCB that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Permittee shall promptly notify and thereafter submit a report to the SDRWQCB that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the SWMP Annual Report unless the SDRWQCB directs an earlier submittal. The report shall include an implementation schedule. The SDRWQCB may require modifications to the report;

   b) Submit any modifications to the report required by the SDRWQCB within 30 days of notification;

   c) Within 30 days following SDRWQCB approval of the report described above, the Permittee shall revise its SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required;

   d) Implement the revised SWMP and monitoring program in accordance with the approved schedule.

   So long as the Permittee has complied with the procedures set forth above and are implementing

the revised SWMP, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the SDRWQCB to develop additional BMPs.

D. LEGAL AUTHORITY

1. Each Permittee shall establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. This legal authority must, at a minimum, authorize the Permittee to:

   a) Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies both to industrial and construction sites that have coverage under the General Industrial Permit and General Construction Permit, as well as to those sites that do not. Grading ordinances shall be upgraded and enforced as necessary to comply with this Order.

   b) Prohibit all identified illicit discharges not otherwise allowed pursuant to Requirement B.2 including but not limited to:

      (1) Sewage;

      (2) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;

      (3) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;

      (4) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;

      (5) Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;

      (6) Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;

      (7) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;

      (8) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and

      (9) Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).

   c) Prohibit and eliminate illicit connections to the MS4;

   d) Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;

   e) Require compliance with conditions in Permittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);

f) Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s to the MEP.

g) Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Permittee must have authority to enter, sample, inspect, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites;

h) Utilize enforcement mechanisms to require compliance with Permittee storm water ordinances, permits, contracts, or orders; and

i) Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Permittees;

2. Each Permittee shall include as part of its Individual SWMP, which must be submitted within 365 days of adoption of this Order, a statement certified by its chief legal counsel that the Permittee has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order.

E. STORM WATER MANAGEMENT PLAN (SWMP)

1. Within 365 days from the date of this Order, the Principal Permittee shall submit a SWMP to the SDRWQCB. The SWMP shall describe the various urban runoff management programs that will be implemented to comply with this Order and to reduce pollutants in urban runoff to the MEP for the duration of this Order. The SWMP is an integral and enforceable component of this Order and shall consist of the following:

   a) Individual SWMP - The written description of each Permittee's individual programs that address Sections B through J of this Order. **Attachment D** contains direction for the preparation of the Individual SWMP. Each Permittee shall submit their Individual SWMP to the Principal Permittee by a date determined by the Principal Permittee for inclusion in the SWMP.

   b) Watershed SWMP - The written account of all area-wide and watershed-based programs and activities conducted by the Permittees. The Watershed SWMP shall contain the programs and items required above in Requirements K.1 – K.4 of this Order.

2. Unless otherwise specified, within 365 days of the adoption of this Order, each Permittee shall have completed full implementation of the SWMP and all requirements in this Order. Prior to the implementation of new or revised programs, each Permittee shall, at a minimum, continue implementation of existing programs developed pursuant to Order No. R9-98-02 and described in the 2002-2003 Annual Progress Report.

3. Each Permittee shall incorporate a mechanism for public participation during the development and implementation of its SWMP.

F. DEVELOPMENT PLANNING

Permittees shall implement a program, including but not limited to, the requirements in this section, to reduce pollutants in urban runoff from developments to the MEP.

1. Assess General Plan

   Each Permittee's General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) shall include water quality and watershed protection principles and policies to direct land-use decisions and require implementation of consistent water quality protection measures for development projects. As part of its Individual SWMP, each Permittee shall provide a workplan with a time schedule detailing any changes to its General Plan regarding water quality and watershed protection. Examples of water quality and watershed protection principles and policies to be considered include the following:

   a) Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of development and, where feasible, slow runoff and maximize on-site infiltration of runoff.

   b) Implement pollution prevention methods supplemented by source control and treatment control BMPs. Use small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into an MS4.

   c) Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones. Encourage land acquisition of such areas.

   d) Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.

   e) Prior to making land use decisions, utilize methods available to estimate increases in pollutant loads and flows resulting from projected future development. Require incorporation of appropriate BMPs to mitigate the projected increases in pollutant loads and flows.

   f) Avoid development of areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss.

   g) Reduce pollutants associated with vehicles and increasing traffic resulting from development.

   h) Post-development runoff from a site shall not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives and which have not been reduced to the MEP.

2. Modify Development Project Approval Processes

   a) Requirements for all Development Projects (New Development and Redevelopment)

      During the planning process, prior to the issuance of permits, Permittees shall require all proposed development projects to implement BMPs to ensure that the discharge of pollutants from the development will be reduced to the MEP and will comply with this Order and all local ordinances, plans, and permits. Development project requirements shall ensure that water quality objectives are not violated throughout the life of the development. At a minimum, requirements shall:

      (1) Require project proponent to implement applicable pollution prevention and source control BMPs for applicable development projects.

      (2) Require project proponent to implement site design/landscape characteristics where feasible which maximize infiltration, provide retention, slow runoff, and minimize impervious land coverage for all development projects.

(3) Require project proponent to incorporate buffer zones for natural water bodies, where feasible. Where buffer zones are infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc.

(4) When known, require industrial facility operators subject to the General Industrial Permit to provide evidence of permit coverage prior to occupancy.

(5) Require project proponent to ensure its grading or other construction activities meet the provisions specified in Section G of this Order.

(6) Require project proponent to provide proof of a mechanism which will ensure ongoing long-term maintenance of all structural post-construction BMPs.

b) Standard Urban Storm Water Mitigation Plans (SUSMPs) – Requirements for Priority Development Projects

Within 365 days of adoption of this Order, each Permittee shall develop, adopt, and implement a SUSMP to reduce pollutants to the MEP and to maintain or reduce downstream erosion and protect stream habitat from all Priority Development Projects. Priority Development Projects are: a) all new development projects, and b) those redevelopment projects that create, add or replace at least 5,000 square feet of impervious surfaces on an already developed site, that are listed under the project categories or locations in Requirement F.2.b.(1) below. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to SUSMP requirements, the numeric sizing criteria discussed in Requirement F.2.b.(3) applies only to the addition, and not to the entire development. Each Permittee shall submit both the adopted SUSMP and amended ordinances to the SDRWQCB no later than 365 days after the adoption of this Order.

Immediately following adoption of its SUSMP, each Permittee shall review and ensure that all Priority Development Projects meet SUSMP requirements. The SUSMP requirements shall apply to all Priority Development Projects or phases of Priority Development Projects that have not yet begun grading or construction activities. If a Permittee determines that lawful prior approval of a project exists, whereby application of SUSMP requirements to the project is infeasible, SUSMP requirements need not apply to the project. Where feasible, the Permittees shall utilize the 12-month SUSMP development and implementation period to ensure that projects undergoing approval processes include application of SUSMP requirements in their plans.

(1) Priority Development Project Categories

(a) *Housing subdivisions of 10 or more dwelling units.* This category includes single-family homes, multi-family homes, condominiums, and apartments.

(b) *Commercial developments greater than 100,000 square feet.* This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than 100,000 square feet. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-

malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.

(c) *Automotive repair shops.* This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

(d) *Restaurants.* This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement F.2.b.(3) and peak flow rate requirement F.2.b.(2)(a).

(e) *All hillside development greater than 5,000 square feet.* This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.

(f) *Environmentally Sensitive Areas (ESAs).* All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.

(g) *Parking lots 5,000 square feet or more.* Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.

(h) *Street, roads, highways, and freeways.* This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.

(i) *Retail Gasoline Outlets.* This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day

(2) BMP Requirements – The SUSMP shall include a list of recommended source control and treatment control BMPs. The SUSMP shall require all Priority Development Projects to implement a combination of on-site source control and on-site/shared treatment control BMPs (to treat the runoff specifically generated from each project) selected from the recommended BMP list. The BMPs shall, at a minimum:

(a) Control the post-development urban runoff discharge velocities, volumes, durations, and peak rates to maintain or reduce pre-development downstream erosion, and to protect stream habitat;

(b) Conserve natural areas where feasible;

(c) Minimize storm water pollutants of concern in urban runoff from the Priority Development Projects (through implementation of source control BMPs). Identification of pollutants of concern shall include, at a minimum, all pollutants for which water bodies receiving the development's runoff are listed as impaired under CWA section 303(d), all pollutants associated with the land use type of the development, and all pollutants commonly associated with urban runoff;

(d) Be effective at removing or treating the pollutants of concern associated with the project;

(e) Minimize directly connected impervious areas where feasible;

(f) Protect slopes and channels from eroding;

(g) Include storm drain stenciling and signage;

(h) Include properly designed outdoor material storage areas;

(i) Include properly designed trash storage areas;

(j) Include proof of a mechanism, to be provided by the project proponent or Permittee, which will ensure ongoing long-term BMP maintenance;

(k) Include additional water quality provisions applicable to individual Priority Development Project categories;

(l) Be correctly designed so as to remove pollutants to the MEP;

(m) Be implemented close to pollutant sources, when feasible, and prior to discharging into receiving waters; and

(n) Ensure that post-development runoff does not contain pollutant loads which cause or contribute to an exceedance of water quality objectives and which have not been reduced to the MEP.

Under no circumstances can a BMP be constructed in a receiving water.

(3) Numeric Sizing Criteria – The SUSMP shall require treatment control BMPs to be implemented for all Priority Development Projects. All treatment control BMPs shall be located so as to infiltrate, filter, or treat the required runoff volume or flow prior to its discharge to any receiving water. Treatment control BMPs may be shared by multiple Priority Development Projects as long as construction of any shared treatment control BMPs is completed prior to the use of any development project from which the treatment control BMP will receive runoff, and prior to discharge to a receiving water.

In addition to meeting the BMP requirements listed in Requirement F.2.b.(2) above, all treatment control BMPs for a single Priority Development Project shall collectively be sized to comply with the following numeric sizing criteria:

(a) *Volume* - Volume-based BMPs shall be designed to mitigate (infiltrate, filter, or treat) either:

(i) The volume of runoff produced from a 24-hour 85th percentile rainfall depth, as determined from the local historical rainfall record (0.6 inch approximate average for the Riverside County area)[1]; or

(ii) The volume of runoff produced by the 85th percentile 24-hour runoff event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998); or

(iii) The volume of annual runoff based on unit basin storage volume, to achieve 90% or more volume treatment by the method recommended in *California Stormwater Best Management Practices Handbook New Development and Redevelopment* (2003)); or

(iv) The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile 24-hour runoff event;[2]

OR

(b) *Flow* - Flow-based BMPs shall be designed to mitigate (infiltrate, filter, or treat) either:

(i) The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event; or

(ii) The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two; or

(iii) The maximum flow rate of runoff for each hour of a storm event, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

(4) Equivalent Numeric Sizing Criteria - The Permittees may develop, as part of the SUSMP, any equivalent method for calculating the volume or flow which must be mitigated (i.e., any equivalent method for calculating numeric sizing criteria) by post-construction treatment control BMPs. Such equivalent sizing criteria may be authorized by the SDRWQCB for use in place of the above criteria. In the absence of development and subsequent authorization of such equivalent numeric sizing criteria, the above numeric sizing criteria requirement shall be implemented.

[1] This volume is not a single volume to be applied to all of Riverside County. The size of the 85th percentile storm event is different for various parts of the County. The Permittees are encouraged to calculate the 85th percentile storm event for each of their jurisdictions using local rain data pertinent to their particular jurisdiction (inch standard is a rough average for the County and should only be used where appropriate rain data is not available). In addition, isopluvial maps may be used to extrapolate rainfall data to areas where insufficient data exists in order to determine the volume of the local 85th percentile storm event in such areas. Where the Permittees will use isopluvial maps to determine the 85th percentile storm event in areas lacking rain data, the Permittees shall describe their method for using isopluvial maps in their SUSMPs.

[2] Under this volume criteria, hourly rainfall data may be used to calculate the 85th percentile storm event, where each storm event is identified by its separation from other storm events by at least six hours of no rain. Where the Permittees may use hourly rainfall data to calculate the 85th percentile storm event, the Permittees shall describe their method for using hourly rainfall data to calculate the 85th percentile storm event in their SUSMPs.

(5) Pollutants or Conditions of Concern – As part of the SUSMP, the Permittees shall develop a procedure for pollutants or conditions of concern to be identified for each Priority Development Project. The procedure shall address, at a minimum: (1) Receiving water quality (including pollutants for which receiving waters are listed as impaired under CWA section 303(d)); (2) Land use type of the development project and pollutants associated with that land use type; (3) Pollutants expected to be present on site; (4) Changes in storm water discharge flow rates, velocities, durations, and volumes resulting from the development project; and (5) Sensitivity of receiving waters to changes in storm water discharge flow rates, velocities, durations, and volumes.

(6) Implementation Process – As part of the SUSMP, the Permittees shall develop a process by which SUSMP requirements will be implemented. The process shall identify at what point in the planning process development projects will be required to meet SUSMP requirements. The process shall also include identification of the roles and responsibilities of various municipal departments in implementing the SUSMP requirements, as well as any other measures necessary for the implementation of SUSMP requirements.

(7) Waiver Provision – A Permittee may provide for a project to be waived from the requirement of implementing all treatment control BMPs (Requirements F.2.b.(2) & F.2.b.(3)) if infeasibility can be established. A waiver of infeasibility shall only be granted by a Permittee when all available treatment control BMPs have been considered and rejected as infeasible. Permittees shall notify the SDRWQCB within 5 days of each waiver issued and shall include the following information in the notification:

(a) Name of the person granting each waiver;

(b) Name of developer receiving the waiver;

(c) Site location;

(d) Reason for waiver; and

(e) Description of BMPs required.

As part of the SUSMP, the Permittees may develop a program to require project proponents who have received waivers to transfer the savings in cost, as determined by the Permittee(s), to a storm water mitigation fund. This program may be implemented by all Permittees that choose to provide waivers. Funds may be used on projects to improve urban runoff quality within the watershed of the waived project. The waiver mitigation program should, at a minimum, identify:

(a) The entity or entities that will manage the storm water mitigation fund (i.e., assume full responsibility for);

(b) The range and types of acceptable projects for which mitigation funds may be expended;

(c) The entity or entities that will assume full responsibility for each mitigation project including its successful completion; and

(d) How the dollar amount of fund contributions will be determined.

(8) Infiltration and Groundwater Protection – To protect groundwater quality, each Permittee shall apply restrictions to the use of treatment control BMPs that are designed to primarily function as infiltration devices (such as infiltration trenches and infiltration

basins). Such restrictions shall ensure that the use of such infiltration treatment control BMPs shall not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, use of treatment control BMPs that are designed to primarily function as infiltration devices shall meet the following conditions.[3] As part of the SUSMP, the Permittees may develop alternative restrictions on the use of treatment control BMPs which are designed to primarily function as infiltration devices.

(a) Urban runoff shall undergo pretreatment such as sedimentation or filtration prior to infiltration;

(b) All dry weather flows shall be diverted from infiltration devices;

(c) Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;

(d) Infiltration treatment control BMPs shall be adequately maintained so that they remove pollutants to the MEP;

(e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;

(f) The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses;

(g) Infiltration treatment control BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated by each Permittee; and

(h) Infiltration treatment control BMPs shall be located a minimum of 100 feet horizontally from any water supply wells. As part of the SUSMPs, the Permittees may develop alternative restrictions on the use of treatment control BMPs that are designed to primarily function as infiltration devices.

(9) Downstream Erosion – The Permittees shall develop numeric criteria to ensure that discharges from Priority Development Projects maintain or reduce pre-development downstream erosion and protect stream habitat. At a minimum, numeric criteria shall be developed to control urban runoff discharge velocities, volumes, durations, and peak rates in order to maintain or reduce pre-development downstream erosion and protect stream habitat. The Permittees shall propose numeric criteria and a time-schedule for implementation of the criteria on new development projects within 365 days of the identification of the criteria and no later than the fourth-year Annual Report, or the application for permit renewal, to be submitted no later than October 31, 2008.

[3] These conditions do not apply to treatment control BMPs that allow incidental infiltration and are not designed to primarily function as infiltration devices (such as grassy swales, detention basins, vegetated buffer strips, constructed wetlands, etc.).

The Permittees shall be prepared to implement the numeric criteria upon renewal of this Order.

3. Revise Environmental Review Processes

Permittees shall revise their current environmental review processes as necessary to include requirements for evaluation of water quality effects and identification of appropriate mitigation measures for all development projects. The following questions are examples to be considered in addressing increased pollutants and flows from proposed projects:

a) Could the proposed project result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).

b) Could the proposed project result in significant alteration of receiving water quality during or following construction?

c) Could the proposed project result in increased impervious surfaces and associated increased runoff?

d) Could the proposed project create a significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes?

e) Could the proposed project result in increased erosion downstream?

f) Is the project tributary to an already impaired water body, as listed on the CWA section 303(d) list? If so, can it result in an increase in any pollutant for which the water body is already impaired?

g) Is the project tributary to other environmentally sensitive areas? If so, can it exacerbate already existing sensitive conditions?

h) Could the proposed project have a potentially significant environmental impact on surface water quality of marine, fresh, or wetland waters?

i) Could the proposed project have a potentially significant adverse impact on groundwater quality?

j) Could the proposed project cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses?

k) Can the project impact aquatic, wetland, or riparian habitat?

4. Conduct Education Efforts Focused on Development

a) Internal: Municipal Staff

Each Permittee shall implement an education program that includes annual training to ensure that planning and development review staffs (and Planning Boards and Elected Officials, if applicable) have an understanding of:

(1) Federal, state, and local water quality laws and regulations applicable to development projects;

(2) The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization); and

(3) How impacts to receiving water quality resulting from development can be minimized (i.e., through implementation of various source control and treatment control BMPs).

b) External: Project Applicants, Developers, Contractors, Property Owners, Community Planning Groups

As early in the planning and development process as possible, each Permittee shall implement a program to educate project applicants, developers, contractors, property owners, and community planning groups on the following topics:

(1) Federal, state, and local water quality laws and regulations applicable to development projects;

(2) Required federal, state, and local permits pertaining to water quality;

(3) Water quality impacts of urbanization; and

(4) Methods for minimizing the impacts of development on water quality.

G. CONSTRUCTION

Each Permittee shall implement a program to address construction sites to reduce pollutants in runoff to the MEP during all construction phases. At a minimum the construction component shall address:

1. Pollution Prevention

Each Permittee shall implement pollution prevention methods in its Construction Component and shall require its use by construction site owners, developers, contractors, and other responsible parties, where appropriate.

2. Grading Ordinance Update

Within 365 days of adoption of this Order, each Permittee shall review and update its grading ordinances as necessary for compliance with its storm water ordinances and this Order. The updated grading ordinance shall require implementation of BMPs designated by the Permittees pursuant to Requirements G.5 of this Order and other measures during all construction activities.

3. Modify Construction and Grading Approval Process

Each Permittee shall develop and implement a process to ensure that BMPs to reduce the discharge of pollutants to the MEP are applicable to construction and grading permits and plans prior to their approval and issuance. Such BMPs shall include the following requirements or their equivalent:

a) Require project proponent to develop and implement a plan to manage storm water and non-storm water discharges from the site at all times;

b) Require project proponent to minimize grading during the wet season and coincide grading with seasonal dry weather periods to the extent feasible. If grading does occur during the wet season, require project proponent to implement additional BMPs for any rain events which may occur, as necessary for compliance with this Order;

c) Require project proponent to emphasize erosion prevention as the most important measure for keeping sediment on site during construction;

d) Require project proponent to utilize sediment controls as a supplement to erosion prevention for keeping sediment on-site during construction, and never as the single or primary method;

e) Require project proponent to minimize areas that are cleared and graded to only the portion of the site that is necessary for construction;

f) Require project proponent to minimize exposure time of disturbed soil areas;

g) Require project proponent to temporarily stabilize and reseed disturbed soil areas as rapidly as possible;

h) Require project proponent to permanently revegetate or landscape as early as feasible;

i) Require project proponent to stabilize all slopes; and

j) Require project proponents subject to the General Construction Permit to provide evidence of existing permit coverage.

4. Source Identification

Each Permittee shall annually develop and update, prior to the rainy season, an inventory of all construction sites within its jurisdiction regardless of site size or ownership. This requirement is applicable to all construction sites regardless of whether the construction site is subject to the General Construction Permit, or other individual NPDES permit. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended, but not required.

5. BMP Implementation

a) Each Permittee shall designate a set of minimum BMPs that ensure the following at all construction sites:

(1) Erosion prevention;

(2) Slope stabilization;

(3) Phased grading;

(4) Revegetation as early as feasible;

(5) Preservation of natural hydrologic features where feasible;

(6) Preservation of riparian buffers and corridors where feasible;

(7) Maintenance of all source control and treatment control BMPs; and

(8) Retention and proper management of sediment and other construction pollutants on site.

b) Each Permittee shall implement, or require the implementation of, the designated minimum BMPs at each construction site within its jurisdiction year round. If a particular minimum BMP is infeasible at any specific site, each Permittee shall implement, or require the implementation of, other equivalent BMPs. Each Permittee shall also implement or require any additional site specific BMPs as necessary to comply with this Order, including BMPs which are more stringent than those required under the General Construction Permit.

c) Each Permittee shall implement, or require the implementation of, BMPs year round; however, BMP implementation requirements can vary based on wet and dry seasons.

d) Each Permittee shall implement, or require implementation of, additional controls for construction sites tributary to CWA section 303(d) water bodies impaired for sediment as necessary to comply with this Order. Each Permittee shall implement, or require implementation of, additional controls for construction sites within or adjacent to or discharging directly to receiving waters within ESAs as necessary to comply with this Order.

6. Inspection of Construction Sites

   a) Each Permittee shall conduct construction site inspections for compliance with its local ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order.

   b) During the wet season Permittees shall, at a minimum, inspect the following sites every two weeks[4]:

      (1) All sites 50 acres or more in size and grading will occur during the wet season;

      (2) All sites 5 acres or more, and tributary to a CWA section 303(d) water body impaired for sediment or within or directly adjacent to or discharging directly to a receiving water within ESA; and

      (3) Other sites determined by the Permittees or the SDRWQCB as a significant threat to water quality. In evaluating threat to water quality, the following factors shall be considered: (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; and (7) any other relevant factors.

   c) The Permittees, at a minimum, shall inspect all construction sites that do not meet the criteria specified in Requirement G.6.b above, but encompass 1 acre or more of soil disturbance at least three times during the wet season.

   d) The Permittees shall inspect construction sites less than 1 acre in size on as needed basis.

   e) Permittees shall inspect all construction sites as needed during the dry season.

   f) Based upon site inspection findings, each Permittee shall implement all follow-up actions necessary to comply with this Order.

7. Enforcement of Construction Sites

   Each Permittee shall enforce its ordinances (grading, storm water, etc.) and permits (building, grading, etc.) at all construction sites as necessary to maintain compliance with this Order. Permittee ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent: stop work authority, non-monetary penalties, fines, financial security, and/or permit denials for non-compliance.

8. Education Focused on Construction Activities

   a) Internal: Municipal Staff

      Each Permittee shall implement an education program that includes annual training to ensure that its construction, building, and grading review staff and inspectors have, at a minimum, an understanding of:

      (1) Federal, state, and local water quality laws and regulations applicable to construction and grading activities;

[4] Any site may be inspected on a monthly basis if the responsible Permittee certifies in a written statement to the SDRWQCB ALL of the following (certified statements may be submitted to the SDRWQCB at any time for one or more sites):

- Permittee has record of construction site's WDID number documenting the site's coverage under the General Construction Permit;
- Permittee has reviewed the construction site's SWPPP and finds the SWPPP to be in compliance with all local ordinances, permits, and plans; and
- Permittee finds that the SWPPP is being properly implemented on site.

(2) The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization);

(3) How erosion can be prevented;

(4) How impacts to receiving water quality resulting from construction activities can be minimized (i.e., through implementation of various source control and treatment control BMPs); and

(5) How to assess construction sites for adequate BMP implementation and compliance with local codes, ordinances, and permits, and this Order.

b) External: Project Applicants, Contractors, Developers, Property Owners, and other Responsible Parties

Each Permittee shall implement an education program to ensure that project applicants, contractors, developers, property owners, and other responsible parties have an understanding of the topics outlined above.

H. EXISTING DEVELOPMENT

Each Permittee shall develop and implement programs to prevent or reduce pollutants in runoff to the MEP from all existing development under its jurisdiction. The Existing Development programs shall address Sections H.1 through H.3 for municipal facilities and activities, industrial and commercial facilities, and residential activities.

1. Municipal Program

a) Pollution Prevention

Each Permittee shall require the use of pollution prevention methods by municipal departments, contractors, and personnel, where appropriate.

b) Source Identification

Each Permittee shall develop, and update annually, an inventory of the name, address (if applicable), and description of all of the Permittee's municipal facilities and activities that generate pollutants. Municipal facilities and activities to be inventoried shall include, but are not limited to, the following:

- Roads, streets, highways, and parking facilities;
- Flood management projects and flood control devices;
- Drainage facilities;
- Active or closed municipal landfills;
- Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
- Incinerators;
- Solid waste transfer facilities;
- Land application sites;
- Uncontrolled sanitary landfills;
- Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles;
- Sites for disposing and treating sewage sludge;
- Hazardous waste treatment, disposal, and recovery facilities;
- Household hazardous waste collection facilities;

- Municipal airfields;
- Parks and recreational facilities;
- Golf courses;
- Cemeteries;
- Other landscaped areas;
- Channel maintenance activities involving mowing and pesticide/herbicide application;
- Municipal facilities and activities tributary to a CWA section 303(d) impaired water body, where an area or activity generates pollutants for which the water body is impaired. Facilities and activities within or adjacent to or discharging directly to receiving waters within ESAs; and
- Other municipal facilities and activities that the Permittee determines may contribute a significant pollutant load to the MS4.

c) BMP Implementation

(1) Within 365 days from the date of this Order, each Permittee shall implement or require the implementation of BMPs to reduce pollutants in urban runoff to the MEP from all of the Permittee's municipal facilities and activities. The required BMPs shall be facility or activity specific as appropriate.

(2) For facilities and/or activities tributary to CWA section 303(d) impaired water bodies that generate pollutants for which the water body is impaired, each Permittee shall implement or require the implementation of additional BMPs to target that pollutant. Each Permittee shall implement, or require implementation of, additional controls for municipal facilities and activities within or directly adjacent to or discharging directly to receiving waters within ESAs as necessary to comply with this Order.

d) MS4 Maintenance

(1) Each Permittee shall implement a schedule of maintenance activities for its structural source and treatment control BMPs designed to reduce pollutant discharges to or from its MS4s and related drainage structures.

(2) Each Permittee shall implement a schedule of maintenance activities for its MS4. The maintenance activities must, at a minimum, include:

(a) Inspection of all of the Permittee's catch basins and storm drain inlets at least once a year between May 1 and September 30. If accumulated waste is visible, the catch basin, or storm drain inlet, shall be cleaned out. Additional cleaning shall be conducted as necessary;

(b) Removal of anthropogenic litter from the Permittee's open channels at least once a year between May 1 and September 30, with additional removal as necessary;

(c) Record keeping of the Permittee's MS4 cleaning activities;

(d) Proper disposal of waste removed from the Permittee's MS4 pursuant to applicable laws; and

(e) Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

e) Management of Pesticides, Herbicides, and Fertilizers

The Permittees shall implement BMPs to reduce the contribution of pollutants to the MEP

associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from municipal facilities and activities to MS4s. Such BMPs shall include, at a minimum: (1) educational activities, permits, certifications and other measures for municipal applicators and distributors; (2) integrated pest management measures that rely on non-chemical solutions; (3) the use of native vegetation; (4) schedules for irrigation and chemical application; and (5) the collection and proper disposal of unused pesticides, herbicides, and fertilizers.

f) Inspection of Municipal Facilities and Activities

At a minimum, each Permittee shall inspect all municipal facilities and activities annually. Inspections shall include an assessment of BMP implementation and effectiveness. Based upon site inspection findings, each Permittee shall implement all follow-up actions necessary to comply with this Order.

g) Enforcement of Municipal Facilities and Activities

Each Permittee shall enforce its storm water ordinance at all of its municipal facilities and activities as necessary to maintain compliance with this Order.

2. Industrial/Commercial Facilities Program

a) Pollution Prevention

Each Permittee shall require the use of pollution prevention methods by industrial/commercial facilities, where appropriate.

b) Source Identification

Each Permittee shall develop an inventory or database of all industrial and commercial facilities under its jurisdiction (regardless of site ownership) that could contribute a significant pollutant load to the MS4. At a minimum, the following facilities shall be included:

(1) Commercial Facilities:

- Automobile mechanical repair, maintenance, fueling, or cleaning;
- Airplane mechanical repair, maintenance, fueling, or cleaning;
- Boat mechanical repair, maintenance, fueling, or cleaning;
- Equipment repair, maintenance, fueling, or cleaning;
- Automobile and other vehicle body repair or painting;
- Mobile automobile or other vehicle washing (base of operations);
- Automobile (or other vehicle) parking lots and storage facilities;
- Retail or wholesale fueling;
- Pest control services (base of operations);
- Eating or drinking establishments;
- Mobile carpet, drape or furniture cleaning (base of operations);
- Concrete mixing or cutting (base of operations);
- Masonry (base of operations);
- Painting and coating (base of operations);
- Landscaping (base of operations);
- Nurseries and greenhouses;
- Golf courses, parks and other recreational areas/facilities;

- Cemeteries;
- Pool and fountain cleaning (base of operations);
- Port-a-Potty servicing (base of operations);

(2) Industrial Facilities:

- Industrial facilities, as defined at 40 CFR 122.26(b)(14), including those subject to the General Industrial Permit;
- Operating and closed municipal landfills;
- Facilities subject to SARA Title III;
- Hazardous waste treatment, disposal, storage and recovery facilities;

(3) All other facilities tributary to a CWA section 303(d) impaired water body, where a facility generates pollutants for which the water body is impaired; and

(4) All other facilities that the Permittee determines may contribute a significant pollutant load to the MS4.

The inventory shall include the following minimum information for each facility: name; address; a narrative description that best reflects the principal products or services provided by each facility, and the SIC code for industrial facilities.

Each Permittee shall maintain an up-to-date inventory. New information obtained during inspections or through other intra-agency informational sources (e.g. business licenses, pretreatment permits, sanitary sewer hook-up permits, yellow pages, etc.) shall be used to update the inventory on a regular basis.

c) BMP Implementation

(1) Within 365 days from the date of this Order, each Permittee shall designate a set of minimum BMP requirements for all inventoried industrial/commercial facilities to reduce the discharge of pollutants in runoff to the MEP. Designated BMPs may be specific to facility types or to pollutant-generating activities conducted at the facilities.

(2) For facilities and/or activities tributary to CWA section 303(d) impaired water bodies that generate pollutants for which the water body is impaired, each Permittee shall designate additional BMPs to target that pollutant. Each Permittee shall implement, or require implementation of, additional controls for industrial/commercial facilities and activities within or directly adjacent to or discharging directly to receiving waters within ESAs as necessary to comply with this Order.

(3) Within 365 days from the date of this Order, each Permittee shall notify all inventoried facilities of their applicable minimum BMP requirements, and a description of the local codes or ordinances requiring compliance with reducing the discharge of pollutants in runoff to the MEP.

(4) Each Permittee shall implement, or require the implementation of, the designated minimum BMPs at each inventoried facility within its jurisdiction. If a particular minimum BMP is infeasible at any specific site, each Permittee shall implement, or require implementation of, other equivalent BMPs. Each Permittee shall also implement or require any additional site specific BMPs as necessary to comply with this Order including BMPs which are more stringent than those required under the General Industrial Permit.

d) Inspection of Industrial/Commercial Facilities

(1) To establish priorities for inspections and oversight of industrial/commercial facilities, the Permittees shall prioritize each inventory described in Requirement H.2.b. above by threat to water quality (high, medium, or low). In evaluating threat to water quality, each Permittee shall consider, at a minimum, the following:

- Type of facility (SIC Code);
- Materials used at the facility;
- Wastes generated;
- Exposure of activities and pollutant discharge potential;
- History of non-storm water discharges;
- Size of facility;
- Proximity to receiving water bodies and sensitivity of receiving water bodies;
- Whether the industrial site is subject to the General Industrial Permit;
- Any available source monitoring data; and
- Any other relevant factors.

(2) Each Permittee shall inspect and ensure minimum BMP implementation at all inventoried industrial/commercial facilities in accordance with the following schedule:

(a) High priority facilities shall be inspected annually;

(b) Medium priority facilities shall be inspected biannually (twice during the 5-year term of the permit);

(c) Low priority facilities shall be inspected once during the 5-year term of the permit; and

(d) Mobile operations shall be inspected as needed.

(3) Inspections of industrial facilities shall include, but not be limited to:

(a) Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.);

(b) Assessment of compliance with Permittee ordinances and permits related to urban runoff, including the implementation and maintenance of designated minimum BMPs;

(c) Assessment of BMP effectiveness;

(d) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and

(e) Education and outreach on storm water pollution prevention.

(4) Inspections of commercial facilities shall include, but not be limited to:

(a) Assessment of compliance with Permittee ordinances and permits related to urban runoff, including the implementation and maintenance of designated minimum BMPs;

(b) Assessment of BMP effectiveness;

(c) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and

(d) Education and outreach on storm water pollution prevention.

(5) To the extent that the SDRWQCB has conducted an inspection of an industrial facility during a particular year, the requirement for the responsible Permittee to inspect this site during the same year will be satisfied.

(6) Based upon facility inspection findings, each Permittee shall implement all follow-up actions necessary to comply with this Order.

e) Enforcement of Industrial/Commercial Facilities

Each Permittee shall enforce its storm water ordinance at all industrial/commercial facilities as necessary to maintain compliance with this Order. Permittee ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

f) Reporting of Industrial Non-Filers

As part of each Annual Report, each Permittee shall report a list of industrial facilities, including the name, address, and SIC code, that may require coverage under the General Industrial Permit for which a NOI has not been filed.

g) Industrial/Commercial Inspection Training

Each Permittee shall train staff responsible for conducting inspections of industrial/commercial facilities at least once a year. Permittees are encouraged to conduct training programs and provide compliance assistance to industrial/commercial facility owners, operators, and employers.

3. Residential Program

a) Pollution Prevention

Each Permittee shall encourage the use of pollution prevention methods by residents, where appropriate.

b) Source Identification

Each Permittee shall identify high priority residential activities that may contribute a significant pollutant load to the MS4. These activities may include:

- Automobile repair and maintenance;
- Automobile washing;
- Automobile parking;
- Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- Disposal of household hazardous waste;
- Disposal of pet waste;
- Disposal of green waste; and
- Any other residential source that the Permittee determines may contribute a significant pollutant load to the MS4.

c) BMP Implementation

(1) Within 365 days from the date of this Order, each Permittee shall designate a set of minimum BMP requirements for all high priority residential activities to reduce the discharge of pollutants in urban runoff to the MEP.

(2) For residential activities tributary to CWA section 303(d) impaired water bodies that generate pollutants for which the waterbody is impaired, each Permittee shall designate additional BMPs to target that pollutant. Each Permittee shall implement, or require implementation of, additional controls for high priority residential activities within or directly adjacent to or discharging directly to receiving waters within ESAs as necessary to comply with this Order.

(3) Each Permittee shall implement, or require implementation of, the designated minimum BMPs for the high priority residential activities identified pursuant to Requirement H.3.b. above. If a particular minimum BMP is infeasible for any specific site/source, each Permittee shall require implementation of other equivalent BMPs. Each Permittee shall also implement, or require implementation of, any additional BMPs necessary to comply with this Order.

(4) Within 365 days from the date of this Order, each Permittee shall notify residents of the applicable minimum BMP requirements, and a description of the local codes or ordinances requiring compliance with reducing the discharge of pollutants in runoff to the MEP.

d) Enforcement of Residential Areas and Activities

Each Permittee shall enforce its storm water ordinance for residential activities as necessary to maintain compliance with this Order.

I. EDUCATION

Each Permittee shall implement an Education Component using all media as appropriate to (1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum the education component shall address the following target communities:

1. Municipal Departments and Personnel
2. Construction Site Owners and Developers
3. Industrial Owners and Operators
4. Commercial Owners and Operators
5. Residential Community, General Public, and School Children
6. Quasi-Governmental Agencies/Districts (i.e., educational institutions, water districts, sanitation districts, etc.)

J. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

Each Permittee shall implement an Illicit Discharge Detection and Elimination program containing measures to actively seek and eliminate illicit discharges and connections. At a minimum the Illicit Discharge Detection and Elimination program shall address:

1. Illicit Discharges and Connections

Each Permittee shall implement a program to actively seek and eliminate illicit discharges and connections into its MS4. The program shall address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Permittee in accordance with Section B of this Order.

2. Develop/Maintain MS4 Map

Each Permittee shall develop or obtain an up-to-date labeled map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The use of a GIS is highly recommended. The accuracy of the MS4 map shall be confirmed and updated at least annually.

3. Illicit Discharge Monitoring

Each Permittee shall implement the Illicit Discharge Monitoring Program in accordance with Section II.B of the MRP to detect illicit discharges and connections.

4. Investigation/Inspection and Follow-Up

Each Permittee shall investigate and inspect any portion of its MS4 that, based on visual observations, monitoring results or other appropriate information, indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water (including non-prohibited discharge(s) identified in Section B of this Order). Each Permittee shall develop numeric criteria in accordance with section II.B.3. of the MRP to determine when follow-up actions will be necessary. Numeric criteria and follow-up procedures shall be described in each Permittees' Individual SWMP.

5. Elimination of Illicit Discharges and Connections

Each Permittee shall eliminate all illicit discharges, illicit discharge sources, and illicit connections as soon as possible after detection. Elimination measures may include an escalating series of enforcement actions for those illicit discharges that are not a serious threat to public health or the environment. Illicit discharges that are a serious threat to public health or the environment must be eliminated immediately.

6. Enforce Ordinances

Each Permittee shall implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4. Each Permittee shall also implement and enforce its ordinance, orders, or other legal authority to eliminate detected illicit discharges and connections to it MS4.

7. Sewage Spill Prevention and Response

Each Permittee shall take appropriate actions to prevent, respond to, contain and cleanup sewage spills (including private laterals and failing septic systems) into the MS4 and to prevent the contamination of surface water, ground water and soil to the MEP. Appropriate actions may include the following:

- Develop and implement a mechanism to be notified of all sewage spills from private laterals and failing septic systems into the MS4;
- Coordinate sewage spill prevention, containment and response activities throughout all appropriate departments, programs and agencies to ensure maximum water quality protection at all times;
- Require adequately sized and properly maintained private property sewerage systems, such as at residential and commercial complexes;
- Require proper connections of private laterals to the public sewer main;
- Require adequately-sized, and properly maintained grease control devices at food establishments which otherwise could result in sewer line grease blockages;

- Conduct municipal activities such as street repair or tree plantings in a manner that minimizes sewer line damages or root blockages;
- Identify priority areas, produce maps and other information on systems obtained during development review;
- Educate the public on measures to prevent sewage spills; and
- Ensure that private sewer lines are inspected.

8. Facilitate Public Reporting of Illicit Discharges and Connections - Public Hotline

Each Permittee shall promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Permittee shall facilitate public reporting through development and operation of a public hotline. Public hotlines can be Permittee-specific or shared by Permittees. All storm water hotlines shall be capable of receiving reports in both English and Spanish 24 hours per day / seven days per week. Permittees shall respond to and resolve each reported incident. All reported incidents, and how each was resolved, shall be summarized in each Permittee's Individual Annual Report.

9. Facilitate Disposal of Used Oil and Toxic Materials

Each Permittee shall facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation shall include educational activities, public information activities, and establishment of collection sites operated by the Permittee or a private entity. Neighborhood collection of household hazardous wastes is encouraged.

K. WATERSHED-BASED ACTIVITIES

1. Each Permittee shall collaborate with other Permittees to identify, address, and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed.

2. Each Permittee shall collaborate with all other Permittees to develop and implement a Watershed SWMP for the Upper Santa Margarita Watershed. The Watershed SWMP shall, at a minimum, contain the following:

   a) An accurate map of the Upper Santa Margarita Watershed (preferably in GIS format) that identifies all receiving waters, all CWA section 303(d) impaired receiving waters, existing and planned land uses, MS4s, major highways, jurisdictional boundaries, and industrial and commercial facilities, municipal sites, and residential areas.

   b) A description of any interagency agreement, or other efforts, with non-Permittee owners of the MS4 (such as Caltrans, Native American Tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4;

   c) An assessment of the water quality of all receiving waters in the watershed based upon (1) existing water quality data; and (2) results from the Receiving Waters and Illicit Discharge Monitoring Programs described in the MRP;

   d) An identification and prioritization of major water quality problems in the watershed caused or contributed to by MS4 discharges and the likely source(s) of the problem(s);

   e) An implementation time schedule of short and long-term recommended activities (individual and collective) needed to address the highest priority water quality problem(s) identified in Requirement K.2.d. above. For this section, "short-term activities" shall mean those activities

that are to be completed during the life of this Order and "long-term activities" shall mean those activities that are to be completed beyond the life of this Order;

f) A watershed-based education program, which focuses on water quality issues specific to the Santa Margarita watershed;

g) A mechanism to facilitate collaborative "watershed-based" (i.e., natural resource-based) land use planning with neighboring local governments in the watershed.

h) A description of any other urban runoff management programs or activities being conducted collectively by the Permittees to address water quality issues;

i) A description of Permittee responsibilities for implementing the programs described in the Watershed SWMP;

j) The expenditures and funding sources for the area-wide and watershed-based activities and programs;

k) Standardized reporting formats developed collectively by the Permittees, as specified in Requirement M.1;

l) Short-term strategy for assessing the effectiveness of the activities and programs implemented as part of the Watershed SWMP. The short-term assessment strategy shall identify methods to assess program effectiveness and include specific direct and indirect performance measurements that will track the immediate progress and accomplishments of the Watershed SWMP towards improving receiving water quality impacted by urban runoff discharges. The short-term strategy shall also discuss the role of monitoring data collected by the Permittees in substantiating or refining the assessment; and

m) Long-term strategy for assessing the effectiveness of the Watershed SWMP. The long-term assessment strategy shall identify specific direct and indirect performance measurements that will track the long-term progress of the Watershed SWMP towards achieving improvements in receiving water quality impacted by urban runoff discharges. Methods used for assessing effectiveness shall include the following or their equivalent: surveys, pollutant loading estimations, receiving water quality monitoring, and achievement of measurable goals. The long-term strategy shall also discuss the role of monitoring data in substantiating or refining the assessment.

3. Permittees shall, as appropriate, participate in watershed management efforts to address storm water quality issues within the entire Santa Margarita Watershed, including efforts conducted by other entities in the watershed, such as San Diego County, U.S. Marine Corps Base Camp Pendleton, Native American tribes, and other state, federal, and local agencies.

4. At least once a year, all Permittees shall meet to review and assess available water quality data (from the MRP and other reliable sources), assess program effectiveness, and to review and update the Watershed SWMP.

L. MONITORING AND REPORTING PROGRAM

Pursuant to CWC section 13267, the Permittees shall comply with all requirements contained in the MRP.

M. PRINCIPAL PERMITTEE RESPONSIBILITIES

The Principal Permittee shall, at a minimum:

1. Coordinate the joint development by all of the Permittees of standardized format(s) for all reports required under this Order (e.g., annual reports, monitoring reports, fiscal analysis reports, and program effectiveness reports, etc.). The standardized reporting format(s) shall be submitted to the SDRWQCB for review as part of the SWMP. The standardized format(s) shall be used by all Permittees and shall include protocols for electronic reporting.

2. Integrate individual Permittee documents and reports required under this Order into single unified documents and reports for submittal to the SDRWQCB as described below. If a reporting date falls on a non-working day or State holiday, then the report is to be submitted on the following working day.

   a) SWMP – The Principal Permittee shall submit the SWMP in its entirety to the SDRWQCB within 365 days of the adoption of this Order. The Principal Permittee shall be responsible for preparing the Watershed SWMP and its Individual SWMP. The Principal Permittee shall also be responsible for collecting and assembling the Individual SWMPs describing the activities and programs to be implemented by each individual Permittee.

   b) MRP - The Principal Permittee shall submit the SWMP Annual Reports and the Monitoring Program Annual Reports in accordance with MRP No. R9-2004-001. The Principal Permittee shall be responsible for producing the Watershed SWMP Annual Report as well as its Individual Annual Report, and for collecting and assembling the Individual SWMP Annual Reports covering the activities conducted by each Permittee. The Principal Permittee shall also be responsible for coordinating the implementation of and reporting on the Receiving Waters Monitoring Program, described in sections II.A and III.B of the MRP.

   c) Interagency Agreement - The Principal Permittee shall submit a copy of the Interagency Agreement to the SDRWQCB, if and when the agreement is updated.

N. STANDARD PROVISIONS

1. Each Permittee shall comply with the standard provisions contained in **Attachment B** of this Order. This includes 24 hour/5day reporting requirements for any instance of non-compliance with this Order as described in Section 1.1.6 of **Attachment B**.

2. All documents submitted to the SDRWQCB pursuant to this Order, including but not limited to SWMP documents, annual reports, monitoring reports, and SUSMPs, shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement.

3. All plans, reports and subsequent amendments submitted in compliance with this Order shall be implemented immediately (or as otherwise specified) and shall be an enforceable part of this Order upon submission to the SDRWQCB. All submittals by Permittees must be adequate to implement the requirements of this Order.

*I, John H.Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on **July 14, 2004.***

John H. Robertus
Executive Officer

ATTACHMENT A

BASIN PLAN PROHIBITIONS

California Water Code (CWC) section 13243 provides that a California Regional Water Quality Control Board (RWQCB), in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by section 13050(c) of the CWC, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the SDRWQCB.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in CWC section 13050, is prohibited.

2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in CWC section 13264 is prohibited.

3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in CWC section13376) is prohibited.

4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless the SDRWQCB issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the SDRWQCB. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the RWQCB.

7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the SDRWQCB.

8. Any discharge to a MS4 that is not composed entirely of "*storm water*" is prohibited unless authorized by the SDRWQCB. [The federal regulations, 40 CFR 122.26 (b) (13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26 (b) (2) defines an illicit discharge as any discharge to a MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities. [40 CFR 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a MS4 is prohibited.

10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in CWC section 13264, is prohibited.

11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.

12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.

13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the SDRWQCB.

14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

ATTACHMENT B
STANDARD PROVISIONS

1. FEDERAL NPDES STANDARD PROVISIONS [40 CFR 122.41]

(a) *Duty to comply* [40 CFR 122.41(a)]. The permittee must comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order has not yet been modified to incorporate the requirement.

(1) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order has not yet been modified to incorporate the requirement.

(2) The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

(3) Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

(b) *Duty to reapply* [40 CFR 122.41(b)]. If the permittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the permittee must apply for and obtain a new order.

(c) *Need to halt or reduce activity not a defense* [40 CFR 122.41(c)]. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.

(d) *Duty to mitigate* [40 CFR 122.41(d)]. The permittee shall take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this Order which has a reasonable likelihood of adversely affecting human health or the environment.

(e) *Proper operation and maintenance* [40 CFR 122.41(e)]. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the discharger only when the operation is necessary to achieve compliance with the conditions of this Order.

(f) *Permit actions* [40 CFR 122.41(f)]. This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(g) *Property rights* [40 CFR 122.41(g)]. This Order does not convey any property rights of any sort or any exclusive privilege.

(h) *Duty to provide information* [40 CFR 122.41(h)]. The permittee shall furnish to the Director, within a reasonable time, any information which the SDRWQCB may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. The permittee shall also furnish to the SDRWQCB upon request, copies of records required to be kept by this Order.

(i) *Inspection and entry* [40 CFR 122.41(i)]. The permittee shall allow the SDRWQCB, or an authorized representative (including an authorized contractor acting as a representative of the SDRWQCB or EPA), upon presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
(4) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the CWA , any substances or parameters at any location.

(k) *Signatory requirement* [40 CFR 122.41(k)]

(1) All applications, reports, or information submitted to the SDRWQCB shall be signed and certified (see 40 CFR 122.22)

(2) The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(l) *Reporting requirements* [40 CFR 122.41(l)]

(1) *Planned changes.* The permittee shall give notice to the SDRWQCB as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).
iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(2) *Anticipated noncompliance.* The permittee shall give advance notice to the SDRWQCB of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

(3) *Transfers.* This permit is not transferable to any person except after notice to the SDRWQCB. The SDRWQCB may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the CWA. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory.)

(4) *Monitoring reports.* The applicable provisions from 40 CFR 122.41(l)(4) are contained in the Monitoring and Reporting Program for this Order.

(5) *Compliance schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(6) *Twenty-four hour reporting.*

i) The permittee shall report any noncompliance, which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
ii) The following shall be included as information, which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the Order (See 40 CFR 122.41(g)).
(B) Any upset which exceeds any effluent limitation in the Order.
(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the SDRWQCB in the permit to be reported within 24 hours. (See 40 CFR 122.44(g)).

iii) The SDRWQCB may waive the written report on a case-by-case basis for reports under paragraph (l)(6)(ii) of this section if the oral report has been received within 24 hours.

(7) *Other noncompliance.* The permittee shall report all instances of noncompliance not reported under paragraphs (l)(4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section.

(8) *Other information.* Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the SDRWQCB, it shall promptly submit such facts or information.

(m) *Bypass* [40 CFR 122.41(m)]

(1) Definitions

i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations of this Order or the concentrations of pollutants set forth in Ocean Plan Table A or Table B to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (m)(3) and (m)(4) of this provision.

(3) Notice

i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten days before the date of the bypass.

ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (1)(6) of this section (24-hour notice).

(4) Prohibition of Bypass

i) Bypass is prohibited, and the SDRWQCB may take enforcement action against the permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) The permittee submitted notices as required under paragraph (m)(3) of this section.

ii) The SDRWQCB may approve an anticipated bypass, after considering its adverse effects, if the SDRWQCB determines that it will meet the three conditions listed above in paragraph (m)(4)(i) of this section.

(n) *Upset* [40 CFR 122.41(n)]

(1) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(2) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (n)(3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(3) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i) An upset occurred and that the permittee can identify the cause(s) of the upset;

ii) The permitted facility was at the time being properly operated;

iii) The permittee submitted notice of the upset as required in section (1)(6)(ii)(B) of this section (24-hour notice); and

iv) The permittee complied with any remedial measures required under paragraph (d) of this section.

(4) Burden of Proof. In any enforcement proceeding the discharger seeking to establish the occurrence of an upset has the burden of proof.

2. SIGNATORY REQUIREMENTS [40 CFR 122.22]

(a) *Applications* [40 CFR 122.22(a)(3)]. All applications shall be signed by either a principal executive officer or ranking elected official.

(b) *Reports* [40 CFR 122.22(b)]. All reports required by this Order, and other information requested by the SDRWQCB shall be signed by a person described in paragraph a. of this reporting requirement, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in section (a) above;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and,

(3) The written authorization is submitted to the SDRWQCB.

(c) *Changes to authorization.* If an authorization under paragraph (b) of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph b. of this reporting requirement must be submitted to the SDRWQCB prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d) *Certification.* Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

3. ADDITIONAL STANDARD PROVISIONS

(a) *Municipal separate storm sewer systems* [40 CFR 122.42(c)]. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

(1) The status of implementing the components of the storm water management program that are established as permit conditions;

(2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes shall be consistent with 40 CFR 122.26(d)(2)(iii); and

(3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and 40 CFR 122.26(d)(2)(v);

(4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;

(5) Annual expenditures and budget for year following each annual report;

(6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and

(7) Identification of water quality improvements or degradation.

(b) *Storm water discharges* [40 CFR 122.42(d)]. The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) shall require compliance with the conditions of

the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.

(c) *Discharge is a privilege* [CWC section 13263(g)]. No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights.

(d) *Review and revision of Order* [CWC section 13263(e)]. Upon application by any affected person, or on its own motion, the SDRWQCB may review and revise this permit.

(e) *Termination or modification of Order* [CWC section13381]. This permit may be terminated or modified for causes, including, but not limited to, all of the following:

(8) Violation of any condition contained in this Order;
(9) Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts.
(10) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

(f) *Transfers.* When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.

(g) *Conditions not stayed.* The filing of a request by the permittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

(h) *Availability.* A copy of this Order shall be kept at a readily accessible location and shall be available to on-site personnel at all times.

(i) *Duty to minimize or correct adverse impacts.* The permittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

(j) *Responsibilities, liabilities, legal action, penalties* [CWC sections 13385 and 13387]. The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.

Nothing in this Order shall be construed to protect the discharger from its liabilities under federal, state, or local laws.

Except as provided for in 40CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

(k) *Noncompliance.* Any noncompliance with this Order constitutes violation of the CWC and is grounds for denial of an application for modification of the Order (also see 40 CFR 122.41(a).

(l) *Director.* For purposes of this Order, the term "Director" used in parts of 40 CFR incorporated into this Order by reference and/or applicable to this Order shall have the same meaning as the term "SDRWQCB" used elsewhere in this Order, except that in 40 CFR 122.41(h) and (I), "Director" shall mean "SDRWQCB. SWRCB, and EPA."

(m) The SDRWQCB has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The SDRWQCB or SWRCB may in the future, upon prior notice to the Permittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to a MS4. Permittees may prohibit any non-storm water discharge (or class of non-storm water discharges) to a MS4 that is authorized under such separate NPDES permits.

(n) *Effective date.* This Order shall become effective on the date of its adoption provided the EPA has no objection. If the EPA objects to its issuance, this Order shall not become effective until such objection is withdrawn. This Order supersedes Order No. R9-98-02 upon the effective date of this Order.

(o) *Expiration.* This Order expires on **July 14, 2009**.

(p) *Continuation of expired order* [23 CCR 2235.4]. After this Order expires, the terms and conditions of this Order are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.

(q) *Applications.* Any application submitted by a permittee for reissuance or modification of this Order shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the CCR.

(r) *Confidentiality.* Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the SDRWQCB office.

(s) *Severability.* The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

(t) *Report submittal.* The discharger shall submit reports and provide notifications as required by this Order to the following:

NORTHERN WATERSHED PROTECTION UNIT
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
9174 SKY PARK COURT, SUITE 100
SAN DIEGO CA 92123-4340
Telephone: (858) 467-2952 Fax: (858) 571-6972

EUGENE BROMLEY
US ENVIRONMENTAL PROTECTION AGENCY
REGION IX
PERMITS ISSUANCE SECTION (W-5-1)

75 HAWTHORNE STREET
SAN FRANCISCO CA 94105

Unless otherwise directed, the discharger shall submit one hard copy for the official record and one electronic copy of each report required under this Order to the SDRWQCB and one hard copy to the EPA.

ATTACHMENT C
DEFINITIONS

Anthropogenic Litter – Trash generated from human activities, not including sediment.

Basin Plan – Water Quality Control Plan, San Diego Basin, Region 9, and amendments, developed by the SDRWQCB.

BAT (Best Available Technology) – The technology-based standard established by congress in CWA section 402(p)(3)(A) for industrial dischargers of storm water. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of treatment and best management practices, or BMPs. For example, secondary treatment (or the removal of 85% suspended solids and BOD) is the BAT for suspended solid and BOD removal from a sewage treatment plant. BAT generally emphasizes treatment methods first and pollution prevention and source control BMPs secondarily.

The best economically achievable technology that will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the EPA Administrator. Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the permitting authority deems appropriate.

Beneficial Uses - The uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals "Beneficial Uses" of the waters of the State that may be protected against include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the waters of the State on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. [CWC section 13050(f)].

Bioaccumulate - The progressive accumulation of contaminants in the tissues of organisms through any route including respiration, ingestion, or direct contact with contaminated water, sediment, pore water, or dredged material to a higher concentration than in the surrounding environment. Bioaccumulation occurs with exposure and is independent of the tropic level.

Bioassessment - The use of biological community information to evaluate the biological integrity of a water body and its watershed. With respect to aquatic ecosystems, bioassessment is the collection and analysis of samples of the benthic macroinvertebrate community together with physical/habitat quality measurements associated with the sampling site and the watershed to evaluate the biological integrity of a water body.

Biological Integrity - Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5:55-68 as: "A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region." Also referred to as ecosystem health.

(BMP) Best Management Practices - Defined in 40 CFR 122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the U.S. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Clean Water Act Section 303(d) Impaired Water Body - An impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology based pollution controls required by the CWA.

Construction Site – Any project requiring a local grading or building permit, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities. Soil disturbing activities include clearing, grading, disturbances to ground such as stockpiling, and excavation.

Contamination - As defined in the Porter-Cologne Water Quality Control Act, contamination is "an impairment of the quality of waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. 'Contamination' includes any equivalent effect resulting from the disposal of waste whether or not waters of the State are affected."

CWA – Federal Clean Water Act

CWC – California Water Code

Designated Waste - A "nonhazardous waste which consists of pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality objectives, or which could cause degradation of waters of the State" [CCR Title 27, chapter 3, subchapter 2, article 2, section 20210; CWC section 13173].

Development Projects - New development or redevelopment with land disturbing activities; structural development, including construction or installation of a building or structure, the creation of impervious surfaces; and land subdivision.

Dry Season – May 1 through September 30 of each year.

Effluent Limitations – any restriction imposed on quantities, discharge rates, and concentrations of pollutants, which are discharged from point sources into waters of the State.

Erosion – When land is diminished or worn away due to wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via storm water runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building, and timber harvesting.

ESA (Environmentally Sensitive Area) – Areas "in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would easily be disturbed or degraded by human activities and developments" (California Public Resources Code section 30107.5). ESAs subject to urban runoff requirements include but are not limited to all CWA section 303(d) impaired water bodies, areas designated as Areas of Special Biological Significance by the SWRCB (Basin Plan); water bodies designated with the RARE beneficial use by the SWRCB (Basin Plan); areas within the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP) plan area that contain rare or especially valuable plant or animal life or their habitat; and any other equivalent environmentally sensitive areas which the Permittees have identified.

GIS – Geographic Information System

Grading - The cutting and/or filling of the land surface to a desired slope or elevation.

Hazardous Material – Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by the EPA in 40 CFR 116 to be reported if a designated quantity of the material is spilled into the waters of the U.S. or emitted into the environment.

Hazardous Waste - Hazardous waste is defined as "any waste which, under Section 600 of Title 22 of this code, is required to be managed according to Chapter 30 of Division 4.5 of Title 22 of this code" [CCR Title 22, Division 4.5, Chapter 11, Article 1].

Household Hazardous Waste – Paints, cleaning products, and other wastes generated during home improvement or maintenance activities.

Illicit Connection – Any connection to the MS4 that conveys an illicit discharge.

Illicit Discharge - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities [40 CFR 122.26(b)(2)].

Inert Waste - Material that "does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste" [CCR Title 27, Chapter 3, Subchapter 2, Article 2, Section 20230].

MEP (Maximum Extent Practicable) – The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment control BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT. A definition for MEP is not provided either in the statute or in the regulations. Instead the definition of MEP is dynamic and will be defined by the following process over time: municipalities propose their definition of MEP by way of their SWMP. Their total collective and individual activities conducted pursuant to the SWMP becomes their proposal for MEP as it applies both to their overall effort, as well as to specific activities (e.g., MEP for street sweeping, or MEP for MS4 maintenance). In the absence of a proposal acceptable to the SDRWQCB, the SDRWQCB defines MEP.

In a memo dated February 11, 1993, entitled "Definition of Maximum Extent Practicable," Elizabeth Jennings, Senior Staff Counsel, SWRCB addressed the achievement of the MEP standard as follows:

> *"To achieve the MEP standard, municipalities must employ whatever Best Management Practices (BMPs) are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive. In selecting BMPs to achieve the MEP standard, the following factors may be useful to consider:*
>
> *a. Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?*

b. *Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?*
c. *Public Acceptance: Does the BMP have public support?*
d. *Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?*
e. *Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?*

The final determination regarding whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the Regional or State Water Boards, and not by the municipal discharger. If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive, it is likely that MEP has not been met. On the other hand, if a municipal discharger employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit derived, it would have met the standard. Where a choice may be made between two BMPs that should provide generally comparable effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs that would address a pollutant source, or to pick a BMP base solely on cost, which would be clearly less effective. In selecting BMPs the municipality must make a serious attempt to comply and practical solutions may not be lightly rejected. In any case, the burden would be on the municipal discharger to show compliance with its permit. After selecting a menu of BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented."

MS4 (Municipal Separate Storm Sewer System) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designated or used for collecting or conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.26.

NOI – Notice of Intent

Non-hazardous Solid Waste - All putrescible and nonputrescible solid, semi-sold, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-sold wastes and other discarded solid or semi-solid waste; provided that such wastes do not contain wastes which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentration which exceed applicable water quality objectives or could cause degradation of wasters of the state." [CCR Title 27, Chapter 3, Subchapter 2, Article 2, Section 20220]

Non-Storm Water - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

NPDES (National Pollution Discharge Elimination System) - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

NPS (Nonpoint Source) – Diffuse, widespread sources of pollution. These sources may be large or small, but are generally numerous throughout a watershed. Non Point Sources include but are not limited to urban, agricultural, or industrial areas, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation. NPS pollution can occur year round any time rainfall, snowmelt, irrigation, or any other source of water runs over land or through the ground, picks up pollutants from these numerous, diffuse sources and deposits them into rivers, lakes, and coastal waters or introduces them into ground water.

Nuisance - As defined in the Porter-Cologne Water Quality Control Act a nuisance is "anything which meets all of the following requirements: 1) Is injurious to health, or is indecent, or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. 2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. 3) Occurs during, or as a result of, the treatment or disposal of wastes."

Order – Order No. R9-2004-001 (NPDES No. CAS0108766)

Person - A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof [40 CFR 122.2].

Point Source - Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant - Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated.

Pollution - As defined in the Porter-Cologne Water Quality Control Act: "the alteration of the quality of the waters of the State by waste, to a degree that unreasonably affects the either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses." Pollution may include contamination.

Pollutants of Concern – All pollutants for which water bodies are listed as impaired under CWA section 303(d), all pollutants associated with the land use type of a development, and all pollutants commonly associated with urban runoff. Pollutants commonly associated with urban runoff include total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (decaying vegetation, animal waste, and anthropogenic litter).

Pollution Prevention - Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control BMPs, treatment control BMPs, or disposal.

Post-Construction BMPs - A subset of BMPs including structural and non-structural controls which detain, retain, filter, or educate to prevent the release of pollutants to surface waters during the final functional life of developments.

Principal Permittee – Riverside County Flood Control and Water Conservation District

Priority Development Projects – New development and redevelopment projects listed in Requirement F.2.b.(1) of tentative Order No. R9-2004-001.

Receiving Waters – Waters of the U.S.

RWLs (Receiving Water Limitations) - Waste discharge requirements issued by the SDRWQCB typically include both: (1) "Effluent Limitations" (or "Discharge Limitations") that specify the technology-based or water-quality-based effluent limitations; and (2) "Receiving Water Limitations" that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the "Receiving Water Limitations" provision is the provision used to implement the requirement of CWA section 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

Sediment - Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

Shared Treatment BMP - BMPs used by multiple developments to infiltrate, filter, or treat the required volume or flow prior to discharge to a receiving water. This could include, for example, a treatment BMP at the end of an enclosed storm drain that collects runoff from several commercial developments.

Source Control BMP – Land use or site planning practices, or structural or nonstructural measures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.

Storm Water – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage.

SUSMP (Standard Urban Storm Water Mitigation Plan) – A plan developed to mitigate the impacts of urban runoff from Priority Development Projects in accordance with Requirement F.2.b. of tentative Order No. R9-2004-001.

SWMP (Storm Water Management Plan) – A written description of the specific urban runoff management measures and programs that each Permittee will implement to reduce the discharge of pollutants in urban runoff to the MEP and to comply with Order No. R9-2004-001.

TMDL (Total Maximum Daily Load) - The maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under CWA section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

Toxicity - Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). The water quality objectives

for toxicity provided in the Basin Plan state in part... *"All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life... The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge."*

Treatment Control BMP – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

Urban Runoff - All flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water illicit discharges (dry weather flows).

Waste - As defined in CWC Section 13050(d), "waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal."

Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system that applies to solid and semi-solid waste, which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, non-hazardous solid waste, and inert waste.

Water Quality Objective - Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water. [CWC section 13050 (h)]. California's water quality objectives are established by the SWRCB and RWQCBs in the Water Quality Control Plans.

Water Quality Standards - The beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.,) of water and the water quality objectives necessary to protect those uses.

Waters of the State - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition. Under this definition, a MS4 is always considered to be a Waters of the State.

Waters of the United States - As defined in 40 CFR 122.2, the Waters of the U.S. are defined as: **"(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;** (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition**: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;** (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this

definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA."

Watershed - That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as drainage area, catchment, or river basin).

WDRs – Waste Discharge Requirements

Wet Season – October 1 through April 30 of each year.

ATTACHMENT D
INDIVIDUAL SWMP CONTENTS

Pursuant to Requirement E.1.a. of tentative Order No. R9-2004-001, each Permittee shall develop an Individual SWMP that describes their specific urban runoff management programs and activities that will be implemented to comply with the Order. An individual SWMP that addresses the items listed below would provide a complete description of the programs and activities the Permittee plans to implement to comply with the Order and to reduce pollutants in urban runoff to the MEP. In the event that a specific component is not applicable to a Permittee, the Permittee shall provide an explanation of non-applicable programs with the SWMP submittal and does not need to provide the information requested below in that particular section of their Individual SWMP.

1. **Administrative and Legal Procedures**
   a) Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under the Order. Include an up-to-date organizational chart specifying these departments and key personnel;
   b) Citation of urban runoff related ordinances and the reasons they are enforceable;
   c) Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of the Order;
   d) Description of how these ordinances are implemented and appealed; and
   e) Description of whether the Permittee can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.

2. **Development Planning (Section F)**
   a) A description of the water quality and watershed protection principles that have been or will be included in the Permittee's General plan, and a time schedule where modifications are planned, if applicable;
   b) A description of the development project approval process and how it ensures that urban runoff from new development and redevelopment will be reduced to the MEP, that post-development runoff volumes and velocities will be controlled, and that water quality objectives will not be violated throughout the life of the project;
   c) A final SUSMP document that meets the requirements specified in Section F.2.b. of the Order, and a copy of the ordinance (amended or new) that gives the Permittee the authority to implement and enforce the SUSMP. The SUSMP may be submitted under separate cover as an attachment to the SWMP;
   d) A description of the Permittee's current environmental review process and how it addresses impacts to water quality and appropriate mitigation measures. If the Permittee plans to modify the process during the permit term, a time schedule for modifications shall be included;
   e) A description of education efforts related to development and how they will be implemented; and
   f) A description of the measurable goals that will be used to assess the effectiveness of this program component.

3. **Construction Component (Section G)**

a) A description of which pollution prevention methods will be required for implementation, and the steps that will be taken to ensure implementation;

b) Updated grading ordinances, including adequate enforcement mechanisms;

c) A description of the modified construction and grading approval process;

d) Updated construction and grading project requirements in local grading and construction permits;

e) A completed inventory of all construction sites;

f) A list and description of minimum BMPs that will be implemented, or required to be implemented;

g) A description of the steps that will be taken to ensure the implementation of prescribed BMPs at all construction sites;

h) A description of planned inspection frequencies;

i) A description of inspection procedures;

j) A description of enforcement mechanisms and steps that will be used;

k) A description of the construction education program and how it will be implemented; and

l) A description of the measurable goals that will be used to assess the effectiveness of this program component.

4. Municipal Component (Section H.1)

a) A description of which pollution prevention methods will be required for implementation, and the steps taken to ensure implementation;

b) A completed inventory of all municipal facilities and activities;

c) A description of which BMPs will be implemented, or required to be implemented, for municipal facilities and activities;

d) A description of steps that will be taken to ensure the implementation of prescribed BMPs at municipal facilities and activities;

e) A description of municipal maintenance activities and schedules;

f) A description of the management strategy for pesticides, herbicides, and fertilizer use;

g) A description of inspection procedures;

h) A description of enforcement mechanisms and how they will be used; and

i) A description of the measurable goals that will be used to assess the effectiveness of this program component.

5. Industrial/Commercial Facilities Component (Section H.2)

a) A description of which pollution prevention methods will be required for implementation, and the steps that will be taken to ensure implementation;

b) A completed and prioritized inventory of all industrial/commercial facilities that could contribute a significant pollutant load to the MS4;

c) A list of minimum BMPs that will be implemented, or required to be implemented, for each facility type or pollutant-generating activity;

d) A description of the steps that will be taken to ensure the implementation of prescribed BMPs at industrial/commercial facilities, including notification procedures;

e) A description of inspection procedures;

f) A description of enforcement mechanisms and how they will be used;

g) A description of training efforts; and

h) A description of the measurable goals that will be used to assess the effectiveness of this program component.

6. Residential Component (Section H.3)

a) A description of which pollution prevention methods will be encouraged for implementation, and the steps that will be taken to encourage implementation;

b) A list of residential activities that have been identified as high priority;

c) A list of minimum BMPs that will be implemented, or required to be implemented, for high priority residential activities;

d) A description of the steps that will be taken to ensure the implementation of prescribed BMPs for high priority residential activities;

e) A description of enforcement mechanisms and how they will be used; and

f) A description of the measurable goals that will be used to assess the effectiveness of this program component.

7. Education Component (Section I)

a) A description of the content, form, and frequency of education efforts for each target community; and

b) A description of the measurable goals that will be used to assess the effectiveness of the public education program.

8. Illicit Discharge Detection and Elimination Component (Section J)

a) A description of the program to actively seek and eliminate illicit discharges and illicit connections;

b) An Illicit Discharge Monitoring Program, in accordance with the Monitoring and Reporting Program, to be conducted to detect illicit discharges and illicit connections;

c) A description of investigation and inspection procedures to follow up on dry weather monitoring results or other information which indicate potential for illicit discharges and illicit connections;

d) A description of procedures to promptly eliminate detected illicit discharges and illicit connections;

e) A description of enforcement mechanisms and how they will be used;

f) A description of the mechanism to receive notification of spills;

g) A description of efforts to facilitate public reporting of illicit discharges and connections, including a public hotline;

h) A description of efforts to facilitate proper disposal of used oil and other toxic materials; and

i) A description of measurable goals that will be used to assess the effectiveness of this program component.

9. Public Participation Component (Section E.3)

A description of how public participation will be included in the development and implementation of each Permittee's Individual SWMP.

10. Assessment of Individual SWMP Effectiveness Component

As part of its Individual SWMP, each Permittee shall develop a long-term strategy for assessing the effectiveness of its Individual SWMP. The long-term assessment strategy shall, at a minimum, include the following:

a) An assessment of the progress towards meeting the measurable goals identified in each program component;

b) An assessment of Illicit Discharge and Receiving Water monitoring data; and

c) An assessment of overall program effectiveness.

11. Fiscal Analysis Component

Each Permittee shall secure the resources necessary to meet the requirements of the Order. As part of its Individual SWMP, each Permittee shall describe and analyze the capital and operation and maintenance expenditures necessary to accomplish the activities required in the Order, and a description of the source of funds the Permittee proposes to use to meet those expenditures.

12. Fire Fighting

A description of a program to reduce pollutants from non-emergency fire fighting flows identified by the Permittee to be significant sources of pollutants.

California Regional Water Quality Control Board
San Diego Region

Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the San Diego Region

Order No. R9-2010-0016
NPDES No. CAS0108766

November 10, 2010

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
9174 Sky Park Court, Suite 100, San Diego, California 92123-4340
Phone • (858) 467-2952 • Fax (858) 571-6972
http://www.waterboards.ca.gov/sandiego

To request copies of the Riverside County Municipal Storm Water Permit, please contact Ben Neill, Water Resources Control Engineer at (858) 467 – 2983, bneill@waterboards.ca.gov

Documents also are available at: http://www.waterboards.ca.gov/sandiego

Tab 3

33 U.S.C. § 1342(b)

(b) State permit programs
At any time after the promulgation of the guidelines required by subsection (i)(2) of section 1314 of this title, the Governor of each State desiring to administer its own permit program for discharges into navigable waters within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. In addition, such State shall submit a statement from the attorney general (or the attorney for those State water pollution control agencies which have independent legal counsel), or from the chief legal officer in the case of an interstate agency, that the laws of such State, or the interstate compact, as the case may be, provide adequate authority to carry out the described program. The Administrator shall approve each submitted program unless he determines that adequate authority does not exist:

(1) To issue permits which -

(A) apply, and insure compliance with, any applicable requirements of sections 1311, 1312, 1316, 1317, and 1343 of this title;

(B) are for fixed terms not exceeding five years; and

(C) can be terminated or modified for cause including, but not limited to, the following:

(i) violation of any condition of the permit;

(ii) obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts;

(iii) change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

(D) control the disposal of pollutants into wells;

(2)

(A) To issue permits which apply, and insure compliance with, all applicable requirements of section 1318 of this title; or

(B) To inspect, monitor, enter, and require reports to at least the same extent as required in section 1318 of this title;

(3) To insure that the public, and any other State the waters of which may be affected, receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application;

(4) To insure that the Administrator receives notice of each application (including a copy thereof) for a permit;

(5) To insure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing;

(6) To insure that no permit will be issued if, in the judgment of the Secretary of the Army acting through the Chief of Engineers, after consultation with the Secretary of the department in which the Coast Guard is operating, anchorage and navigation of any of the navigable waters would be substantially impaired thereby;

(7) To abate violations of the permit or the permit program, including civil and criminal penalties and other ways and means of enforcement;

(8) To insure that any permit for a discharge from a publicly owned treatment works includes conditions to require the identification in terms of character and volume of pollutants of any significant source introducing pollutants subject to pretreatment standards under section 1317(b) of this title into such works and a program to assure compliance with such pretreatment standards by each such source, in addition to adequate notice to the permitting agency of

(A) new introductions into such works of pollutants from any source which would be a new source as defined in section 1316 of this title if such source were discharging pollutants,

(B) new introductions of pollutants into such works from a source which would be subject to section 1311 of this title if it were discharging such pollutants, or

(C) a substantial change in volume or character of pollutants being introduced into such works by a source introducing pollutants into such works at the time of issuance of the permit. Such notice shall include information on the quality and quantity of effluent to be introduced into such treatment works and any anticipated impact of such change in the quantity or quality of effluent to be discharged from such publicly owned treatment works; and

(9) To insure that any industrial user of any publicly owned treatment works will comply with sections 1284(b), 1317, and 1318 of this title.

33 U.S.C. § 1342(p)

(p) Municipal and industrial stormwater discharges

(1) General rule
Prior to October 1, 1994, the Administrator or the State (in the case of a permit program approved under this section) shall not require a permit under this section for discharges composed entirely of stormwater.

(2) Exceptions
Paragraph (1) shall not apply with respect to the following stormwater discharges:

(A) A discharge with respect to which a permit has been issued under this section before February 4, 1987.

(B) A discharge associated with industrial activity.

(C) A discharge from a municipal separate storm sewer system serving a population of 250,000 or more.

(D) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.

(E) A discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) Permit requirements

(A) Industrial discharges
Permits for discharges associated with industrial activity shall meet all applicable provisions of this section and section 1311 of this title.

(B) Municipal discharge
Permits for discharges from municipal storm sewers -

(i) may be issued on a system- or jurisdiction-wide basis;

(ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

(iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

DEERING'S CALIFORNIA CODES ANNOTATED
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*** This document is current through urgency Chapter 745 & Extra. Sess. Ch. 16 ***
of the 2011 Session, and the 2011 Governor's Reorganization Plan No. 1.

WATER CODE
Division 7. Water Quality
Chapter 2. Definitions

GO TO CALIFORNIA CODES ARCHIVE DIRECTORY

Cal Wat Code § 13050 (2011)

§ 13050. Terms used in this division

As used in this division:

(a) "State board" means the State Water Resources Control Board.

(b) "Regional board" means any California regional water quality control board for a region as specified in Section 13200.

(c) "Person" includes any city, county, district, the state, and the United States, to the extent authorized by federal law.

(d) "Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

(e) "Waters of the state" means any surface water or groundwater, including saline waters, within the boundaries of the state.

(f) "Beneficial uses" of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

(g) "Quality of the water" refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use.

(h) "Water quality objectives" means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

(i) "Water quality control" means the regulation of any activity or factor which may affect the quality of the waters of the state and includes the prevention and correction of water pollution and nuisance.

(j) "Water quality control plan" consists of a designation or establishment for the waters within a specified area of all of the following:

(1) Beneficial uses to be protected.

(2) Water quality objectives.

(3) A program of implementation needed for achieving water quality objectives.

(k) "Contamination" means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.

(l)

(1) "Pollution" means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following:

(A) The waters for beneficial uses.

(B) Facilities which serve these beneficial uses.

(2) "Pollution" may include "contamination."

(m) "Nuisance" means anything which meets all of the following requirements:

(1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

(2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

(3) Occurs during, or as a result of, the treatment or disposal of wastes.

(n) "Recycled water" means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefor considered a valuable resource.

(o) "Citizen or domiciliary" of the state includes a foreign corporation having substantial business contacts in the state or which is subject to service of process in this state.

(p)

(1) "Hazardous substance" means either of the following:

(A) For discharge to surface waters, any substance determined to be a hazardous substance pursuant to Section 311(b)(2) of the Federal Water Pollution Control Act *(33 U.S.C. Sec. 1251* et seq.).

(B) For discharge to groundwater, any substance listed as a hazardous waste or hazardous material pursuant to *Section 25140 of the Health and Safety Code*, without regard to whether the substance is intended to be used, reused, or discarded, except that "hazardous substance" does not include any substance excluded from Section 311(b)(2) of the Federal Water Pollution Control Act because it is within the scope of Section 311(a)(1) of that act.

(2) "Hazardous substance" does not include any of the following:

(A) Nontoxic, nonflammable, and noncorrosive stormwater runoff drained from underground vaults, chambers, or manholes into gutters or storm sewers.

(B) Any pesticide which is applied for agricultural purposes or is applied in accordance with a cooperative agreement authorized by *Section 116180 of the Health and Safety Code*, and is not discharged accidentally or for purposes of disposal, the application of which is in compliance with all applicable state and federal laws and regulations.

(C) Any discharge to surface water of a quantity less than a reportable quantity as determined by regulations issued pursuant to Section 311(b)(4) of the Federal Water Pollution Control Act.

(D) Any discharge to land which results, or probably will result, in a discharge to groundwater if the amount of the discharge to land is less than a reportable quantity, as determined by regulations adopted pursuant to Section 13271, for substances listed as hazardous pursuant to *Section 25140 of the Health and Safety Code*. No discharge shall be deemed a discharge of a reportable quantity until regulations set a reportable quantity for the substance discharged.

(q)

(1) "Mining waste" means all solid, semisolid, and liquid waste materials from the extraction, beneficiation, and processing of ores and minerals. Mining waste includes, but is not limited to, soil, waste rock, and overburden, as de-

fined in *Section 2732 of the Public Resources Code*, and tailings, slag, and other processed waste materials, including cementitious materials that are managed at the cement manufacturing facility where the materials were generated.

(2) For the purposes of this subdivision, "cementitious material" means cement, cement kiln dust, clinker, and clinker dust.

(r) "Master recycling permit" means a permit issued to a supplier or a distributor, or both, of recycled water, that includes waste discharge requirements prescribed pursuant to Section 13263 and water recycling requirements prescribed pursuant to Section 13523.1.

HISTORY:

Added Stats 1969 ch 482 § 18, operative January 1, 1970. Amended Stats 1969 ch 800 § 2.5; Stats 1970 ch 202 § 1; Stats 1980 ch 877 § 1; Stats 1989 ch 642 § 2; Stats 1991 ch 187 § 1 (AB 673); Stats 1992 ch 211 § 1 (AB 3012); Stats 1995 ch 28 § 17 (AB 1247), ch 847 § 2 (SB 206); Stats 1996 ch 1023 § 429 (SB 1497), effective September 29, 1996.

NOTES:

Editor's Notes

The above section was enacted without a subdivision (k)(B)(1).

Amendments:

1969 Amendment:

Added the last sentence in subd (c).

1970 Amendment:

(1) Added ", including such waste placed within containers of whatever nature prior to, and for purposes of, disposal" at the end of subd (d); and **(2)** substituted "aesthetic" for "esthetic" after "recreation;" in subd (f).

1980 Amendment:

Added subd (p).

1989 Amendment:

In addition to making technical changes, added **(1)** "all of the following:" in the introductory clause of subd (j); **(2)** "either of the following" in the introductory clause of subd (*l*); **(3)** "meets all of the following requirements" in the introductory clause of subd (m); and **(4)** added subd (q).

1991 Amendment:

Amended subd (n) by adding **(1)** "or 'recycled water' "; and **(2)** "and is therefor considered a valuable resource".

DEERING'S CALIFORNIA CODES ANNOTATED
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*** This document is current through urgency Chapter 745 & Extra. Sess. Ch. 16 ***
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WATER CODE
Division 7. Water Quality
Chapter 4. Regional Water Quality Control
Article 4. Waste Discharge Requirements

GO TO CALIFORNIA CODES ARCHIVE DIRECTORY

Cal Wat Code § 13260 (2011)

§ 13260. Reports; Fees; Recoverable Costs; Waiver; Exemptions

(a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:

(1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.

(2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.

(3) A person operating, or proposing to construct, an injection well.

(b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.

(c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

(d)

(1)

(A) Each person who is subject to subdivision (a) or (c) shall submit an annual fee according to a fee schedule established by the state board.

(B) The total amount of annual fees collected pursuant to this section shall equal that amount necessary to recover costs incurred in connection with the issuance, administration, reviewing, monitoring, and enforcement of waste discharge requirements and waivers of waste discharge requirements.

(C) Recoverable costs may include, but are not limited to, costs incurred in reviewing waste discharge reports, prescribing terms of waste discharge requirements and monitoring requirements, enforcing and evaluating compliance with waste discharge requirements and waiver requirements, conducting surface water and groundwater monitoring and modeling, analyzing laboratory samples, adopting, reviewing, and revising water quality control plans and state policies

for water quality control, and reviewing documents prepared for the purpose of regulating the discharge of waste, and administrative costs incurred in connection with carrying out these actions.

(D) In establishing the amount of a fee that may be imposed on a confined animal feeding and holding operation pursuant to this section, including, but not limited to, a dairy farm, the state board shall consider all of the following factors:

(i) The size of the operation.

(ii) Whether the operation has been issued a permit to operate pursuant to Section 1342 of Title 33 of the United States Code.

(iii) Any applicable waste discharge requirement or conditional waiver of a waste discharge requirement.

(iv) The type and amount of discharge from the operation.

(v) The pricing mechanism of the commodity produced.

(vi) Any compliance costs borne by the operation pursuant to state and federal water quality regulations.

(vii) Whether the operation participates in a quality assurance program certified by a regional water quality control board, the state board, or a federal water quality control agency.

(2)

(A) Subject to subparagraph (B), the fees collected pursuant to this section shall be deposited in the Waste Discharge Permit Fund, which is hereby created. The money in the fund is available for expenditure by the state board, upon appropriation by the Legislature, solely for the purposes of carrying out this division.

(B)

(i) Notwithstanding subparagraph (A), the fees collected pursuant to this section from stormwater dischargers that are subject to a general industrial or construction stormwater permit under the national pollutant discharge elimination system (NPDES) shall be separately accounted for in the Waste Discharge Permit Fund.

(ii) Not less than 50 percent of the money in the Waste Discharge Permit Fund that is separately accounted for pursuant to clause (i) is available, upon appropriation by the Legislature, for expenditure by the regional board with jurisdiction over the permitted industry or construction site that generated the fee to carry out stormwater programs in the region.

(iii) Each regional board that receives money pursuant to clause (ii) shall spend not less than 50 percent of that money solely on stormwater inspection and regulatory compliance issues associated with industrial and construction stormwater programs.

(3) A person who would be required to pay the annual fee prescribed by paragraph (1) for waste discharge requirements applicable to discharges of solid waste, as defined in *Section 40191 of the Public Resources Code*, at a waste management unit that is also regulated under Division 30 (commencing with *Section 40000) of the Public Resources Code*, shall be entitled to a waiver of the annual fee for the discharge of solid waste at the waste management unit imposed by paragraph (1) upon verification by the state board of payment of the fee imposed by *Section 48000 of the Public Resources Code*, and provided that the fee established pursuant to *Section 48000 of the Public Resources Code* generates revenues sufficient to fund the programs specified in *Section 48004 of the Public Resources Code* and the amount appropriated by the Legislature for those purposes is not reduced.

(e) Each person that discharges waste in a manner regulated by this section shall pay an annual fee to the state board. The state board shall establish, by regulation, a timetable for the payment of the annual fee. If the state board or a regional board determines that the discharge will not affect, or have the potential to affect, the quality of the waters of the state, all or part of the annual fee shall be refunded.

(f)

(1) The state board shall adopt, by emergency regulations, a schedule of fees authorized under subdivision (d). The total revenue collected each year through annual fees shall be set at an amount equal to the revenue levels set forth in the Budget Act for this activity. The state board shall automatically adjust the annual fees each fiscal year to conform with the revenue levels set forth in the Budget Act for this activity. If the state board determines that the revenue col-

lected during the preceding year was greater than, or less than, the revenue levels set forth in the Budget Act, the state board may further adjust the annual fees to compensate for the over and under collection of revenue.

(2) The emergency regulations adopted pursuant to this subdivision, any amendment thereto, or subsequent adjustments to the annual fees, shall be adopted by the state board in accordance with Chapter 3.5 (commencing with *Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code.* The adoption of these regulations is an emergency and shall be considered by the Office of Administrative Law as necessary for the immediate preservation of the public peace, health, safety, and general welfare. Notwithstanding Chapter 3.5 (commencing with *Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code*, any emergency regulations adopted by the state board, or adjustments to the annual fees made by the state board pursuant to this section, shall not be subject to review by the Office of Administrative Law and shall remain in effect until revised by the state board.

(g) The state board shall adopt regulations setting forth reasonable time limits within which the regional board shall determine the adequacy of a report of waste discharge submitted under this section.

(h) Each report submitted under this section shall be sworn to, or submitted under penalty of perjury.

(i) The regulations adopted by the state board pursuant to subdivision (f) shall include a provision that annual fees shall not be imposed on those who pay fees under the national pollutant discharge elimination system until the time when those fees are again due, at which time the fees shall become due on an annual basis.

(j) A person operating or proposing to construct an oil, gas, or geothermal injection well subject to paragraph (3) of subdivision (a) shall not be required to pay a fee pursuant to subdivision (d) if the injection well is regulated by the Division of Oil and Gas of the Department of Conservation, in lieu of the appropriate California regional water quality control board, pursuant to the memorandum of understanding, entered into between the state board and the Department of Conservation on May 19, 1988. This subdivision shall remain operative until the memorandum of understanding is revoked by the state board or the Department of Conservation.

(k) In addition to the report required by subdivision (a), before a person discharges mining waste, the person shall first submit both of the following to the regional board:

(1) A report on the physical and chemical characteristics of the waste that could affect its potential to cause pollution or contamination. The report shall include the results of all tests required by regulations adopted by the board, any test adopted by the Department of Toxic Substances Control pursuant to *Section 25141 of the Health and Safety Code* for extractable, persistent, and bioaccumulative toxic substances in a waste or other material, and any other tests that the state board or regional board may require, including, but not limited to, tests needed to determine the acid-generating potential of the mining waste or the extent to which hazardous substances may persist in the waste after disposal.

(2) A report that evaluates the potential of the discharge of the mining waste to produce, over the long term, acid mine drainage, the discharge or leaching of heavy metals, or the release of other hazardous substances.

(l) Except upon the written request of the regional board, a report of waste discharge need not be filed pursuant to subdivision (a) or (c) by a user of recycled water that is being supplied by a supplier or distributor of recycled water for whom a master recycling permit has been issued pursuant to Section 13523.1.

HISTORY:

Added Stats 1969 ch 482 § 18, operative January 1, 1970. Amended Stats 1980 ch 656 § 1; Stats 1984 ch 268 § 32.8, effective June 30, 1984; Stats 1985 ch 653 § 1, ch 1591 § 4; Stats 1986 ch 31 § 1, effective March 21, 1986, ch 1013 § 5, effective September 23, 1986; Stats 1988 ch 1026 § 1; Stats 1989 ch 627 § 1, ch 642 § 5. Supplemented by the Governor's Reorganization Plan No. 1 of 1991 § 194, effective July 17, 1991. Amended Stats 1992 ch 211 § 2 (AB 3012); Stats 1993 ch 656 § 57 (AB 1220), effective October 1, 1993; Stats 1995 ch 28 § 20 (AB 1247); Stats 1997 ch 775 § 1 (AB 1186); Stats 2002 ch 1124 § 56 (AB 3000), effective September 30, 2002. Amended Stats 2003 1st Ex Sess 2003-2004 ch 1 § 3 (AB 10X); Stats 2011 ch 2 § 28 (AB 95), effective March 24, 2011.

NOTES:

Editor's Notes

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*** This document is current through urgency Chapter 745 & Extra. Sess. Ch. 16 ***
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WATER CODE
Division 7. Water Quality
Chapter 4. Regional Water Quality Control
Article 4. Waste Discharge Requirements

GO TO CALIFORNIA CODES ARCHIVE DIRECTORY

Cal Wat Code § 13263 (2010)

§ 13263. Requirements prescribed by board; Review, revision, and notice; Absence of vested right to discharge waste

(a) The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge, except discharges into a community sewer system, with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241.

(b) A regional board, in prescribing requirements, need not authorize the utilization of the full waste assimilation capacities of the receiving waters.

(c) The requirements may contain a time schedule, subject to revision in the discretion of the board.

(d) The regional board may prescribe requirements although no discharge report has been filed.

(e) Upon application by any affected person, or on its own motion, the regional board may review and revise requirements. All requirements shall be reviewed periodically.

(f) The regional board shall notify in writing the person making or proposing the discharge or the change therein of the discharge requirements to be met. After receipt of the notice, the person so notified shall provide adequate means to meet the requirements.

(g) No discharge of waste into the waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights.

(h) The regional board may incorporate the requirements prescribed pursuant to this section into a master recycling permit for either a supplier or distributor, or both, of recycled water.

(i) The state board or a regional board may prescribe general waste discharge requirements for a category of discharges if the state board or that regional board finds or determines that all of the following criteria apply to the discharges in that category:

(1) The discharges are produced by the same or similar operations.

(2) The discharges involve the same or similar types of waste.

(3) The discharges require the same or similar treatment standards.

(4) The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.

(j) The state board, after any necessary hearing, may prescribe waste discharge requirements in accordance with this section.

HISTORY:

Added Stats 1969 ch 482 § 18, operative January 1, 1970. Amended Stats 1992 ch 211 § 3 (AB 3012); Stats 1995 ch 28 § 21 (AB 1247), ch 421 § 2 (SB 572).

NOTES:

Amendments:

1992 Amendment:

In addition to making technical changes, added subd (h).

1995 Amendment:

(1) Amended subd (a) by **(a)** substituting "in an existing discharge," for "therein"; **(b)** deleting "from time to time" after "the conditions existing" in the first sentence; **(c)** adding "any" after "shall implement"; and **(d)** substituting "that" for "if any" after "quality control plans" in the second sentence; **(2)** added "regional" at the beginning of subd (d); **(3)** substituted "recycling" for "reclamation" and "recycled" for "reclaimed" in subd (h); and **(4)** added subds (i) and (j). (As amended Stats 1995 ch 421, compared to the section as it read prior to 1995. This section was also amended by an earlier chapter, ch 28. See *Gov C § 9605.*)

Historical Derivation:

(a) Former Wat C § 13002, as added Stats 1949 ch 1549 § 1, amended Stats 1959 ch 1299 § 4, Stats 1967 ch 1447 § 5.3.

(b) Former Wat C § 13054.2, as added Stats 1959 ch 1299 § 17.

(c) Former Wat C § 13054.3, as added Stats 1959 ch 1299 § 18, amended Stats 1967 ch 1447 § 11.

Editor's Notes

For investigation of analytic procedures, see the 1989 Note following Wat § 13260.

Collateral References:

Cal. Forms Pleading & Practice (Matthew Bender(R)) ch 418 "Pollution And Environmental Matters".

WATER CODE
SECTION 13367

13367. (a) For purposes of this chapter, "preproduction plastic" includes plastic resin pellets and powdered coloring for plastics.

(b) (1) The state board and the regional boards shall implement a program to control discharges of preproduction plastic from point and nonpoint sources. The state board shall determine the appropriate regulatory methods to address the discharges from these point and nonpoint sources.

(2) The state board, when developing this program, shall consult with any regional board with plastic manufacturing, handling, and transportation facilities located within the regional board's jurisdiction that has already voluntarily implemented a program to control discharges of preproduction plastic.

(c) The program control measures shall, at a minimum, include waste discharge, monitoring, and reporting requirements that target plastic manufacturing, handling, and transportation facilities.

(d) The program shall, at a minimum, require plastic manufacturing, handling, and transportation facilities to implement best management practices to control discharges of preproduction plastics. A facility that handles preproduction plastic shall comply with either subdivision (e) or the criteria established pursuant to subdivision (f).

(e) At a minimum, the state board shall require the following best management practices in all permits issued under the national pollutant discharge elimination system (NPDES) program that regulate plastic manufacturing, handling, or transportation facilities:

(1) Appropriate containment systems shall be installed at all onsite storm drain discharge locations that are down-gradient of areas where preproduction plastic is present or transferred. A facility shall install a containment system that is defined as a device or series of devices that traps all particles retained by a one millimeter mesh screen and has a design treatment capacity of not less than the peak flowrate resulting from a one-year, one-hour storm in each of the down-gradient drainage areas. When the installation of a containment system is not appropriate because one or more of a facility's down-gradient drainage areas is not discharged through a stormwater conveyance system, or when the regional board determines that a one millimeter or similar mesh screen is not appropriate at one or more down-gradient discharge locations, the regulated facility shall identify and propose for approval by the regional board technically feasible alternative storm drain control measures that are designed to achieve the same performance as a one millimeter mesh screen.

(2) At all points of preproduction plastic transfer, measures shall be taken to prevent discharge, including, but not limited to, sealed containers durable enough so as not to rupture under typical loading and unloading activities.

(3) At all points of preproduction plastic storage, preproduction plastic shall be stored in sealed containers that are durable enough so as not to rupture under typical loading and unloading activities.

(4) At all points of storage and transfer of preproduction

plastic, capture devices shall be in place under all transfer valves and devices used in loading, unloading, or other transfer of preproduction plastic.

(5) A facility shall make available to its employees a vacuum or vacuum type system, for quick cleanup of fugitive preproduction plastic.

(f) The state board shall include criteria for submitting a no exposure certification pursuant to Section 122.26(g) of Title 40 of the Code of Federal Regulations in all NPDES permits regulating plastic manufacturing, handling, or transportation facilities. Facilities that satisfy the no exposure certification criteria are conditionally exempt from the permitting requirements pursuant to Section 122.26 of Title 40 of the Code of Federal Regulations. The no exposure certification shall be required every five years or more frequently as determined by the state board or a regional board.

(g) The state board and the regional boards shall implement this chapter by January 1, 2009.

(h) Nothing in this chapter limits the authority of the state board or the regional boards to establish requirements in addition to the best management practices for the elimination of discharges of preproduction plastic.

1990 (16 U.S.C. Sec. 1455b), and this division in the preparation of this detailed implementation program.

(2)(A) The program shall include all of the following components:

(i) Nonregulatory implementation of best management practices.

(ii) Regulatory-based incentives for best management practices.

(iii) The adoption and enforcement of waste discharge requirements that will require the implementation of best management practices.

(B) In connection with its duties under this subdivision to prepare and implement the state's nonpoint source management plan, the state board shall develop, on or before February 1, 2001, guidance to be used by the state board and the regional boards for the purpose of describing the process by which the state board and the regional boards will enforce the state's nonpoint source management plan, pursuant to this division.

(C) The adoption of the guidance developed pursuant to this section is not subject to Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code.

(b) The state board, in consultation with the California Coastal Commission and other appropriate agencies, as necessary, on or before December 31 of each year, shall submit to the Legislature, and make available to the public, both of the following:

(1) Copies of all state and regional board reports that contain information related to nonpoint source pollution and that the state or regional boards were required to prepare in the previous fiscal year pursuant to Sections 303, 305(b), and 319 of the Clean Water Act (33 U.S.C. Secs. 1313, 1315(b), and 1329), Section 6217 of the federal Coastal Zone Act Reauthorization Amendments of 1990 (16 U.S.C. Sec. 1455b), related regulations, and this division.

(2) A summary of information related to nonpoint source pollution that is set forth in the reports described pursuant to paragraph (1) including, but not limited to, summaries of both of the following:

(A) Information that is related to nonpoint source pollution and that is required to be included in reports prepared pursuant to Section 305(b) of the Clean Water Act (33 U.S.C. 1315(b)).

(B) Information that is required to be in reports prepared pursuant to Section 319(h)(11) of the Clean Water Act (33 U.S.C. Sec. 1329(h)(11)).

CHAPTER 5.5. COMPLIANCE WITH THE PROVISIONS OF THE FEDERAL WATER POLLUTION CONTROL ACT AS AMENDED IN 1972

§ 13370. Legislative intent

The Legislature finds and declares as follows:

(a) The Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.), as amended, provides for permit systems to regulate the discharge of pollutants and dredged or fill material to the navigable waters of the United States and to regulate the use and disposal of sewage sludge.

(b) The Federal Water Pollution Control Act, as amended, provides that permits may be issued by states which are authorized to implement the provisions of that act.

(c) It is in the interest of the people of the state, in order to avoid direct regulation by the federal government of persons already subject to regulation under state law pursuant to this division, to enact this chapter in order to authorize the state to implement the provisions of the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto, and federal regulations and guidelines issued pursuant thereto, provided, that the state board shall request federal funding under the Federal Water Pollution Control Act for the purpose of carrying out its responsibilities under this program.

§ 13370.5. Legislative findings

(a) The Legislature finds and declares that, since the Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.), as amended, and applicable federal regulations (40 C.F.R. § 403 et seq.) provide for a pretreatment program to regulate the discharge of pollutants into publicly owned treatment works and provide that states with approved national pollutant discharge elimination system (NPDES) permit programs shall apply for approval of a state pretreatment program, it is in the interest of the people of the state to enact this section in order to avoid direct regulation by the federal government of publicly owned treatment works already subject to regulation under state law pursuant to this division.

(b) The state board shall develop a state pretreatment program and shall, not later than September 1, 1985, apply to the Environmental Protection Agency for approval of the pretreatment program in accordance with federal requirements.

§ 13372. Consistency

(a) This chapter shall be construed to ensure consistency with the requirements for state programs implementing the Federal Water Pollution Control Act and acts

§ 122.26 Storm water discharges (applicable to State NPDES programs, see § 123.25).

(a) *Permit requirement.* (1) Prior to October 1, 1994, discharges composed entirely of storm water shall not be required to obtain a NPDES permit except:

(i) A discharge with respect to which a permit has been issued prior to February 4, 1987;

(ii) A discharge associated with industrial activity (see § 122.26(a)(4));

(iii) A discharge from a large municipal separate storm sewer system;

(iv) A discharge from a medium municipal separate storm sewer system;

(v) A discharge which the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This designation may include a discharge from any conveyance or system of conveyances used for collecting and conveying storm water runoff or a system of discharges from municipal separate storm sewers, except for those discharges from conveyances which do not require a permit under paragraph (a)(2) of this section or agricultural storm water runoff which is exempted from the definition of point source at § 122.2.

The Director may designate discharges from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination the Director may consider the following factors:

(A) The location of the discharge with respect to waters of the United States as defined at 40 CFR 122.2.

(B) The size of the discharge;

(C) The quantity and nature of the pollutants discharged to waters of the United States; and

(D) Other relevant factors.

(2) The Director may not require a permit for discharges of storm water runoff from the following:

(i) Mining operations composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with or that have not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct, or waste products located on the site of such operations, except in accordance with paragraph (c)(1)(iv) of this section.

(ii) All field activities or operations associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities, except in accordance with paragraph (c)(1)(iii) of this section. Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities are not subject to the provisions of paragraph (c)(1)(iii)(C) of this section.

NOTE TO PARAGRAPH (a)(2)(ii): EPA encourages operators of oil and gas field activities or operations to implement and maintain Best Management Practices (BMPs) to minimize discharges of pollutants, including sediment, in storm water both during and after construction activities to help ensure protection of surface water quality during storm events. Appropriate controls would be those suitable to the site conditions and consistent with generally accepted engineering design criteria and manufacturer specifications. Selection of BMPs could also be affected by seasonal or climate conditions.

(3) *Large and medium municipal separate storm sewer systems.* (i) Permits must be obtained for all discharges from large and medium municipal separate storm sewer systems.

(ii) The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or medium municipal separate storm sewer system including, but not limited to: all discharges owned or operated by the same municipality; located within the same jurisdiction; all discharges within a system that discharge to the same watershed; discharges

within a system that are similar in nature; or for individual discharges from municipal separate storm sewers within the system.

(iii) The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either:

(A) Participate in a permit application (to be a permittee or a co-permittee) with one or more other operators of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system;

(B) Submit a distinct permit application which only covers discharges from the municipal separate storm sewers for which the operator is responsible; or

(C) A regional authority may be responsible for submitting a permit application under the following guidelines:

(*1*) The regional authority together with co-applicants shall have authority over a storm water management program that is in existence, or shall be in existence at the time part 1 of the application is due;

(*2*) The permit applicant or co-applicants shall establish their ability to make a timely submission of part 1 and part 2 of the municipal application;

(*3*) Each of the operators of municipal separate storm sewers within the systems described in paragraphs (b)(4) (i), (ii), and (iii) or (b)(7) (i), (ii), and (iii) of this section, that are under the purview of the designated regional authority, shall comply with the application requirements of paragraph (d) of this section.

(iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.

(v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system.

(vi) Co-permittees need only comply with permit conditions relating to discharges from the municipal separate storm sewers for which they are operators.

(4) *Discharges through large and medium municipal separate storm sewer systems.* In addition to meeting the requirements of paragraph (c) of this section, an operator of a storm water discharge associated with industrial activity which discharges through a large or medium municipal separate storm sewer system shall submit, to the operator of the municipal separate storm sewer system receiving the discharge no later than May 15, 1991, or 180 days prior to commencing such discharge: the name of the facility; a contact person and phone number; the location of the discharge; a description, including Standard Industrial Classification, which best reflects the principal products or services provided by each facility; and any existing NPDES permit number.

(5) *Other municipal separate storm sewers.* The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)(1)(v) of this section on a system-wide basis, jurisdiction-wide basis, watershed basis or other appropriate basis, or may issue permits for individual discharges.

(6) *Non-municipal separate storm sewers.* For storm water discharges associated with industrial activity from point sources which discharge through a non-municipal or non-publicly owned separate storm sewer system, the Director, in his discretion, may issue: a single NPDES permit, with each discharger a co-permittee to a permit issued to the operator of the portion of the system that discharges into waters of the United States; or, individual permits to each discharger of storm water associated with industrial activity through the non-municipal conveyance system.

(i) All storm water discharges associated with industrial activity that discharge through a storm water discharge system that is not a municipal separate storm sewer must be covered by an individual permit, or a permit issued to the operator of the portion of the system that discharges to waters of the United States, with each discharger to the non-municipal conveyance a co-permittee to that permit.

(ii) Where there is more than one operator of a single system of such conveyances, all operators of storm water discharges associated with industrial activity must submit applications.

(iii) Any permit covering more than one operator shall identify the effluent limitations, or other permit conditions, if any, that apply to each operator.

(7) *Combined sewer systems.* Conveyances that discharge storm water runoff combined with municipal sewage are point sources that must obtain NPDES permits in accordance with the procedures of §122.21 and are not subject to the provisions of this section.

(8) Whether a discharge from a municipal separate storm sewer is or is not subject to regulation under this section shall have no bearing on whether the owner or operator of the discharge is eligible for funding under title II, title III or title VI of the Clean Water Act. *See* 40 CFR part 35, subpart I, appendix A(b)H.2.j.

(9)(i) On and after October 1, 1994, for discharges composed entirely of storm water, that are not required by paragraph (a)(1) of this section to obtain a permit, operators shall be required to obtain a NPDES permit only if:

(A) The discharge is from a small MS4 required to be regulated pursuant to §122.32;

(B) The discharge is a storm water discharge associated with small construction activity pursuant to paragraph (b)(15) of this section;

(C) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that storm water controls are needed for the discharge based on wasteload allocations that are part of "total maximum daily loads" (TMDLs) that address the pollutant(s) of concern; or

(D) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that the discharge, or category of discharges within a geographic area, contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(ii) Operators of small MS4s designated pursuant to paragraphs (a)(9)(i)(A), (a)(9)(i)(C), and (a)(9)(i)(D) of this section shall seek coverage under an NPDES permit in accordance with §§122.33 through 122.35. Operators of non-municipal sources designated pursuant to paragraphs (a)(9)(i)(B), (a)(9)(i)(C), and (a)(9)(i)(D) of this section shall seek coverage under an NPDES permit in accordance with paragraph (c)(1) of this section.

(iii) Operators of storm water discharges designated pursuant to paragraphs (a)(9)(i)(C) and (a)(9)(i)(D) of this section shall apply to the Director for a permit within 180 days of receipt of notice, unless permission for a later date is granted by the Director (see §124.52(c) of this chapter).

(b) *Definitions.* (1) *Co-permittee* means a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.

(2) *Illicit discharge* means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

(3) *Incorporated place* means the District of Columbia, or a city, town, township, or village that is incorporated under the laws of the State in which it is located.

(4) *Large municipal separate storm sewer system* means all municipal separate storm sewers that are either:

(i) Located in an incorporated place with a population of 250,000 or more as determined by the 1990 Decennial Census by the Bureau of the Census (Appendix F of this part); or

(ii) Located in the counties listed in appendix H, except municipal separate

storm sewers that are located in the incorporated places, townships or towns within such counties; or

(iii) Owned or operated by a municipality other than those described in paragraph (b)(4) (i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(4) (i) or (ii) of this section. In making this determination the Director may consider the following factors:

(A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(4)(i) of this section;

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters; and

(E) Other relevant factors; or

(iv) The Director may, upon petition, designate as a large municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraph (b)(4) (i), (ii), (iii) of this section.

(5) *Major municipal separate storm sewer outfall* (or "major outfall") means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

(6) *Major outfall* means a major municipal separate storm sewer outfall.

(7) *Medium municipal separate storm sewer system* means all municipal separate storm sewers that are either:

(i) Located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the 1990 Decennial Census by the Bureau of the Census (Appendix G of this part); or

(ii) Located in the counties listed in appendix I, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or

(iii) Owned or operated by a municipality other than those described in paragraph (b)(7) (i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(7) (i) or (ii) of this section. In making this determination the Director may consider the following factors:

(A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(7)(i) of this section;

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters; or

(E) Other relevant factors; or

(iv) The Director may, upon petition, designate as a medium municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (b)(7) (i), (ii), (iii) of this section.

(8) *Municipal separate storm sewer* means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

(9) *Outfall* means a *point source* as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

(10) *Overburden* means any material of any nature, consolidated or unconsolidated, that overlies a mineral deposit, excluding topsoil or similar naturally-occurring surface materials that are not disturbed by mining operations.

(11) *Runoff coefficient* means the fraction of total rainfall that will appear at a conveyance as runoff.

(12) *Significant materials* includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

(13) *Storm water* means storm water runoff, snow melt runoff, and surface runoff and drainage.

(14) *Storm water discharge associated with industrial activity* means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under this part 122. For the categories of industries identified in this section, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in paragraphs (b)(14)(i) through (xi) of this

section) include those facilities designated under the provisions of paragraph (a)(1)(v) of this section. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of paragraph (b)(14):

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) in paragraph (b)(14) of this section);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(l) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221–25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (b)(14) (i)–(vii) or (ix)–(xi) of this section are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA;

(x) Construction activity including clearing, grading and excavation, except operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a

part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221–25;

(15) *Storm water discharge associated with small construction activity* means the discharge of storm water from:

(i) Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. The Director may waive the otherwise applicable requirements in a general permit for a storm water discharge from construction activities that disturb less than five acres where:

(A) The value of the rainfall erosivity factor ("R" in the Revised Universal Soil Loss Equation) is less than five during the period of construction activity. The rainfall erosivity factor is determined in accordance with Chapter 2 of *Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)*, pages 21–64, dated January 1997. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C 552(a) and 1 CFR part 51. Copies may be obtained from EPA's Water Resource Center, Mail Code RC4100, 401 M St. SW, Washington, DC 20460. A copy is also available for inspection at the U.S. EPA Water Docket , 401 M Street SW, Washington, DC 20460, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* An operator must certify to the Director that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five; or

(B) Storm water controls are not needed based on a "total maximum daily load" (TMDL) approved or established by EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, an equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. For the purpose of this paragraph, the pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the Director that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis.

(ii) Any other construction activity designated by the Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the United States.

EXHIBIT 1 TO § 122.26(B)(15)—SUMMARY OF COVERAGE OF "STORM WATER DISCHARGES ASSOCIATED WITH SMALL CONSTRUCTION ACTIVITY" UNDER THE NPDES STORM WATER PROGRAM

Automatic Designation: Required Nationwide Coverage.	• Construction activities that result in a land disturbance of equal to or greater than one acre and less than five acres.

EXHIBIT 1 TO § 122.26(B)(15)—SUMMARY OF COVERAGE OF "STORM WATER DISCHARGES ASSOCIATED WITH SMALL CONSTRUCTION ACTIVITY" UNDER THE NPDES STORM WATER PROGRAM—Continued

Potential Designation: Optional Evaluation and Designation by the NPDES Permitting Authority or EPA Regional Administrator.	• Construction activities disturbing less than one acre if part of a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre and less than five acres. (see § 122.26(b)(15)(i).) • Construction activities that result in a land disturbance of less than one acre based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants. (see § 122.26(b)(15)(ii).)
Potential Waiver: Waiver from Requirements as Determined by the NPDES Permitting Authority..	Any automatically designated construction activity where the operator certifies: (1) A rainfall erosivity factor of less than five, or (2) That the activity will occur within an area where controls are not needed based on a TMDL or, for non-impaired waters that do not require a TMDL, an equivalent analysis for the pollutant(s) of concern. (see § 122.26(b)(15)(i).)

(16) *Small municipal separate storm sewer system* means all separate storm sewers that are:

(i) Owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.

(ii) Not defined as "large" or "medium" municipal separate storm sewer systems pursuant to paragraphs (b)(4) and (b)(7) of this section, or designated under paragraph (a)(1)(v) of this section.

(iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

(17) *Small MS4* means a small municipal separate storm sewer system.

(18) *Municipal separate storm sewer system* means all separate storm sewers that are defined as "large" or "medium" or "small" municipal separate storm sewer systems pursuant to paragraphs (b)(4), (b)(7), and (b)(16) of this section, or designated under paragraph (a)(1)(v) of this section.

(19) *MS4* means a municipal separate storm sewer system.

(20) *Uncontrolled sanitary landfill* means a landill or open dump, whether in operation or closed, that does not meet the requirements for runon or runoff controls established pursuant to subtitle D of the Solid Waste Disposal Act.

(c) *Application requirements for storm water discharges associated with industrial activity and storm water discharges associated with small construction activity*—(1) *Individual application.* Dischargers of storm water associated with industrial activity and with small construction activity are required to apply for an individual permit or seek coverage under a promulgated storm water general permit. Facilities that are required to obtain an individual permit or any dischage of storm water which the Director is evaluating for designation (see § 124.52(c) of this chapter) under paragraph (a)(1)(v) of this section and is not a municipal storm sewer, shall submit an NPDES application in accordance with the requirements of § 122.21 as modified and supplemented by the provisions of this paragraph.

(i) Except as provided in § 122.26(c)(1)(ii)–(iv), the operator of a storm water discharge associated with industrial activity subject to this section shall provide:

(A) A site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) of the facility including: each of its drainage and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each past or present area used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied, each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility;

(B) An estimate of the area of impervious surfaces (including paved areas and building roofs) and the total area drained by each outfall (within a mile radius of the facility) and a narrative description of the following: Significant materials that in the three years prior to the submittal of this application have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage or disposal of such materials; materials management practices employed, in the three years prior to the submittal of this application, to minimize contact by these materials with storm water runoff; materials loading and access areas; the location, manner and frequency in which pesticides, herbicides, soil conditioners and fertilizers are applied; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the ultimate disposal of any solid or fluid wastes other than by discharge;

(C) A certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges which are not covered by a NPDES permit; tests for such nonstorm water discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. The certification shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during a test;

(D) Existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility that have taken place within the three years prior to the submittal of this application;

(E) Quantitative data based on samples collected during storm events and collected in accordance with § 122.21 of this part from all outfalls containing a storm water discharge associated with industrial activity for the following parameters:

(*1*) Any pollutant limited in an effluent guideline to which the facility is subject;

(*2*) Any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit);

(*3*) Oil and grease, pH, BOD5, COD, TSS, total phosphorus, total Kjeldahl nitrogen, and nitrate plus nitrite nitrogen;

(*4*) Any information on the discharge required under § 122.21(g)(7)(vi) and (vii);

(*5*) Flow measurements or estimates of the flow rate, and the total amount of discharge for the storm event(s) sampled, and the method of flow measurement or estimation; and

(*6*) The date and duration (in hours) of the storm event(s) sampled, rainfall measurements or estimates of the storm event (in inches) which generated the sampled runoff and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (in hours);

(F) Operators of a discharge which is composed entirely of storm water are exempt from the requirements of § 122.21 (g)(2), (g)(3), (g)(4), (g)(5), (g)(7)(iii), (g)(7)(iv), (g)(7)(v), and (g)(7)(viii); and

(G) Operators of new sources or new discharges (as defined in §122.2 of this part) which are composed in part or entirely of storm water must include estimates for the pollutants or parameters listed in paragraph (c)(1)(i)(E) of this section instead of actual sampling data, along with the source of each estimate. Operators of new sources or new discharges composed in part or entirely of storm water must provide quantitative data for the parameters listed in paragraph (c)(1)(i)(E) of this section within two years after commencement of discharge, unless such data has already been reported under the monitoring requirements of the NPDES permit for the discharge. Operators of a new source or new discharge which is composed entirely of storm water are exempt from the requirements of §122.21 (k)(3)(ii), (k)(3)(iii), and (k)(5).

(ii) An operator of an existing or new storm water discharge that is associated with industrial activity solely under paragraph (b)(14)(x) of this section or is associated with small construction activity solely under paragraph (b)(15) of this section, is exempt from the requirements of §122.21(g) and paragraph (c)(1)(i) of this section. Such operator shall provide a narrative description of:

(A) The location (including a map) and the nature of the construction activity;

(B) The total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;

(C) Proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements;

(D) Proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements;

(E) An estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of fill material and existing data describing the soil or the quality of the discharge; and

(F) The name of the receiving water.

(iii) The operator of an existing or new discharge composed entirely of storm water from an oil or gas exploration, production, processing, or treatment operation, or transmission facility is not required to submit a permit application in accordance with paragraph (c)(1)(i) of this section, unless the facility:

(A) Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987; or

(B) Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or

(C) Contributes to a violation of a water quality standard.

(iv) The operator of an existing or new discharge composed entirely of storm water from a mining operation is not required to submit a permit application unless the discharge has come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

(v) Applicants shall provide such other information the Director may reasonably require under §122.21(g)(13) of this part to determine whether to issue a permit and may require any facility subject to paragraph (c)(1)(ii) of this section to comply with paragraph (c)(1)(i) of this section.

(2) [Reserved]

(d) *Application requirements for large and medium municipal separate storm sewer discharges.* The operator of a discharge from a large or medium municipal separate storm sewer or a municipal separate storm sewer that is designated by the Director under paragraph (a)(1)(v) of this section, may submit a jurisdiction-wide or system-wide permit application. Where more than one public entity owns or operates a municipal separate storm sewer within a geographic area (including adjacent

or interconnected municipal separate storm sewer systems), such operators may be a coapplicant to the same application. Permit applications for discharges from large and medium municipal storm sewers or municipal storm sewers designated under paragraph (a)(1)(v) of this section shall include;

(1) *Part 1.* Part 1 of the application shall consist of;

(i) *General information.* The applicants' name, address, telephone number of contact person, ownership status and status as a State or local government entity.

(ii) *Legal authority.* A description of existing legal authority to control discharges to the municipal separate storm sewer system. When existing legal authority is not sufficient to meet the criteria provided in paragraph (d)(2)(i) of this section, the description shall list additional authorities as will be necessary to meet the criteria and shall include a schedule and commitment to seek such additional authority that will be needed to meet the criteria.

(iii) *Source identification.* (A) A description of the historic use of ordinances, guidance or other controls which limited the discharge of non-storm water discharges to any Publicly Owned Treatment Works serving the same area as the municipal separate storm sewer system.

(B) A USGS 7.5 minute topographic map (or equivalent topographic map with a scale between 1:10,000 and 1:24,000 if cost effective) extending one mile beyond the service boundaries of the municipal storm sewer system covered by the permit application. The following information shall be provided:

(*1*) The location of known municipal storm sewer system outfalls discharging to waters of the United States;

(*2*) A description of the land use activities (e.g. divisions indicating undeveloped, residential, commercial, agricultural and industrial uses) accompanied with estimates of population densities and projected growth for a ten year period within the drainage area served by the separate storm sewer. For each land use type, an estimate of an average runoff coefficient shall be provided;

(*3*) The location and a description of the activities of the facility of each currently operating or closed municipal landfill or other treatment, storage or disposal facility for municipal waste;

(*4*) The location and the permit number of any known discharge to the municipal storm sewer that has been issued a NPDES permit;

(*5*) The location of major structural controls for storm water discharge (retention basins, detention basins, major infiltration devices, etc.); and

(*6*) The identification of publicly owned parks, recreational areas, and other open lands.

(iv) *Discharge characterization.* (A) Monthly mean rain and snow fall estimates (or summary of weather bureau data) and the monthly average number of storm events.

(B) Existing quantitative data describing the volume and quality of discharges from the municipal storm sewer, including a description of the outfalls sampled, sampling procedures and analytical methods used.

(C) A list of water bodies that receive discharges from the municipal separate storm sewer system, including downstream segments, lakes and estuaries, where pollutants from the system discharges may accumulate and cause water degradation and a brief description of known water quality impacts. At a minimum, the description of impacts shall include a description of whether the water bodies receiving such discharges have been:

(*1*) Assessed and reported in section 305(b) reports submitted by the State, the basis for the assessment (evaluated or monitored), a summary of designated use support and attainment of Clean Water Act (CWA) goals (fishable and swimmable waters), and causes of nonsupport of designated uses;

(*2*) Listed under section 304(l)(1)(A)(i), section 304(l)(1)(A)(ii), or section 304(l)(1)(B) of the CWA that is not expected to meet water quality standards or water quality goals;

(*3*) Listed in State Nonpoint Source Assessments required by section 319(a) of the CWA that, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain water

quality standards due to storm sewers, construction, highway maintenance and runoff from municipal landfills and municipal sludge adding significant pollution (or contributing to a violation of water quality standards);

(*4*) Identified and classified according to eutrophic condition of publicly owned lakes listed in State reports required under section 314(a) of the CWA (include the following: A description of those publicly owned lakes for which uses are known to be impaired; a description of procedures, processes and methods to control the discharge of pollutants from municipal separate storm sewers into such lakes; and a description of methods and procedures to restore the quality of such lakes);

(*5*) Areas of concern of the Great Lakes identified by the International Joint Commission;

(*6*) Designated estuaries under the National Estuary Program under section 320 of the CWA;

(*7*) Recognized by the applicant as highly valued or sensitive waters;

(*8*) Defined by the State or U.S. Fish and Wildlife Services's National Wetlands Inventory as wetlands; and

(*9*) Found to have pollutants in bottom sediments, fish tissue or biosurvey data.

(D) *Field screening.* Results of a field screening analysis for illicit connections and illegal dumping for either selected field screening points or major outfalls covered in the permit application. At a minimum, a screening analysis shall include a narrative description, for either each field screening point or major outfall, of visual observations made during dry weather periods. If any flow is observed, two grab samples shall be collected during a 24 hour period with a minimum period of four hours between samples. For all such samples, a narrative description of the color, odor, turbidity, the presence of an oil sheen or surface scum as well as any other relevant observations regarding the potential presence of non-storm water discharges or illegal dumping shall be provided. In addition, a narrative description of the results of a field analysis using suitable methods to estimate pH, total chlorine, total copper, total phenol, and detergents (or surfactants) shall be provided along with a description of the flow rate. Where the field analysis does not involve analytical methods approved under 40 CFR part 136, the applicant shall provide a description of the method used including the name of the manufacturer of the test method along with the range and accuracy of the test. Field screening points shall be either major outfalls or other outfall points (or any other point of access such as manholes) randomly located throughout the storm sewer system by placing a grid over a drainage system map and identifying those cells of the grid which contain a segment of the storm sewer system or major outfall. The field screening points shall be established using the following guidelines and criteria:

(*1*) A grid system consisting of perpendicular north-south and east-west lines spaced ¼ mile apart shall be overlayed on a map of the municipal storm sewer system, creating a series of cells;

(*2*) All cells that contain a segment of the storm sewer system shall be identified; one field screening point shall be selected in each cell; major outfalls may be used as field screening points;

(*3*) Field screening points should be located downstream of any sources of suspected illegal or illicit activity;

(*4*) Field screening points shall be located to the degree practicable at the farthest manhole or other accessible location downstream in the system, within each cell; however, safety of personnel and accessibility of the location should be considered in making this determination;

(*5*) Hydrological conditions; total drainage area of the site; population density of the site; traffic density; age of the structures or buildings in the area; history of the area; and land use types;

(*6*) For medium municipal separate storm sewer systems, no more than 250 cells need to have identified field screening points; in large municipal separate storm sewer systems, no more than 500 cells need to have identified field screening points; cells established by the grid that contain no storm sewer segments will be eliminated from consideration; if fewer than 250 cells in medium municipal sewers are created,

and fewer than 500 in large systems are created by the overlay on the municipal sewer map, then all those cells which contain a segment of the sewer system shall be subject to field screening (unless access to the separate storm sewer system is impossible); and

(7) Large or medium municipal separate storm sewer systems which are unable to utilize the procedures described in paragraphs (d)(1)(iv)(D) (*1*) through (*6*) of this section, because a sufficiently detailed map of the separate storm sewer systems is unavailable, shall field screen no more than 500 or 250 major outfalls respectively (or all major outfalls in the system, if less); in such circumstances, the applicant shall establish a grid system consisting of north-south and east-west lines spaced ¼ mile apart as an overlay to the boundaries of the municipal storm sewer system, thereby creating a series of cells; the applicant will then select major outfalls in as many cells as possible until at least 500 major outfalls (large municipalities) or 250 major outfalls (medium municipalities) are selected; a field screening analysis shall be undertaken at these major outfalls.

(E) *Characterization plan.* Information and a proposed program to meet the requirements of paragraph (d)(2)(iii) of this section. Such description shall include: the location of outfalls or field screening points appropriate for representative data collection under paragraph (d)(2)(iii)(A) of this section, a description of why the outfall or field screening point is representative, the seasons during which sampling is intended, a description of the sampling equipment. The proposed location of outfalls or field screening points for such sampling should reflect water quality concerns (*see* paragraph (d)(1)(iv)(C) of this section) to the extent practicable.

(v) *Management programs.* (A) A description of the existing management programs to control pollutants from the municipal separate storm sewer system. The description shall provide information on existing structural and source controls, including operation and maintenance measures for structural controls, that are currently being implemented. Such controls may include, but are not limited to: Procedures to control pollution resulting from construction activities; floodplain management controls; wetland protection measures; best management practices for new subdivisions; and emergency spill response programs. The description may address controls established under State law as well as local requirements.

(B) A description of the existing program to identify illicit connections to the municipal storm sewer system. The description should include inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented.

(vi) *Fiscal resources.* (A) A description of the financial resources currently available to the municipality to complete part 2 of the permit application. A description of the municipality's budget for existing storm water programs, including an overview of the municipality's financial resources and budget, including overall indebtedness and assets, and sources of funds for storm water programs.

(2) *Part 2.* Part 2 of the application shall consist of:

(i) *Adequate legal authority.* A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to:

(A) Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity;

(B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer;

(C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water;

(D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;

(E) Require compliance with conditions in ordinances, permits, contracts or orders; and

(F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.

(ii) *Source identification.* The location of any major outfall that discharges to waters of the United States that was not reported under paragraph (d)(1)(iii)(B)(*1*) of this section. Provide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity;

(iii) *Characterization data.* When "quantitative data" for a pollutant are required under paragraph (d)(2)(iii)(A)(*3*) of this section, the applicant must collect a sample of effluent in accordance with 40 CFR 122.21(g)(7) and analyze it for the pollutant in accordance with analytical methods approved under part 136 of this chapter. When no analytical method is approved the applicant may use any suitable method but must provide a description of the method. The applicant must provide information characterizing the quality and quantity of discharges covered in the permit application, including:

(A) Quantitative data from representative outfalls designated by the Director (based on information received in part 1 of the application, the Director shall designate between five and ten outfalls or field screening points as representative of the commercial, residential and industrial land use activities of the drainage area contributing to the system or, where there are less than five outfalls covered in the application, the Director shall designate all outfalls) developed as follows:

(*1*) For each outfall or field screening point designated under this subparagraph, samples shall be collected of storm water discharges from three storm events occurring at least one month apart in accordance with the requirements at §122.21(g)(7) (the Director may allow exemptions to sampling three storm events when climatic conditions create good cause for such exemptions);

(*2*) A narrative description shall be provided of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event;

(*3*) For samples collected and described under paragraphs (d)(2)(iii)(A)(*1*) and (A)(*2*) of this section, quantitative data shall be provided for: the organic pollutants listed in Table II; the pollutants listed in Table III (toxic metals, cyanide, and total phenols) of appendix D of 40 CFR part 122, and for the following pollutants:

Total suspended solids (TSS)
Total dissolved solids (TDS)
COD
BOD_5
Oil and grease
Fecal coliform
Fecal streptococcus
pH
Total Kjeldahl nitrogen
Nitrate plus nitrite
Dissolved phosphorus
Total ammonia plus organic nitrogen
Total phosphorus

(*4*) Additional limited quantitative data required by the Director for determining permit conditions (the Director may require that quantitative data shall be provided for additional parameters, and may establish sampling conditions such as the location, season of sample collection, form of precipitation (snow melt, rainfall) and other parameters necessary to insure representativeness);

(B) Estimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls and the event mean concentration of the cumulative discharges to waters of the United States from all identified municipal outfalls during a storm event (as described under §122.21(c)(7)) for BOD_5, COD, TSS, dissolved solids, total nitrogen, total ammonia plus organic nitrogen, total phosphorus, dissolved phosphorus, cadmium, copper, lead,

and zinc. Estimates shall be accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modelling, data analysis, and calculation methods;

(C) A proposed schedule to provide estimates for each major outfall identified in either paragraph (d)(2)(ii) or (d)(1)(iii)(B)(*1*) of this section of the seasonal pollutant load and of the event mean concentration of a representative storm for any constituent detected in any sample required under paragraph (d)(2)(iii)(A) of this section; and

(D) A proposed monitoring program for representative data collection for the term of the permit that describes the location of outfalls or field screening points to be sampled (or the location of instream stations), why the location is representative, the frequency of sampling, parameters to be sampled, and a description of sampling equipment.

(iv) *Proposed management program.* A proposed management program covers the duration of the permit. It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable. Proposed management programs shall describe priorities for implementing controls. Such programs shall be based on:

(A) A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls. At a minimum, the description shall include:

(*1*) A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers;

(*2*) A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed. (Controls to reduce pollutants in discharges from municipal separate storm sewers containing construction site runoff are addressed in paragraph (d)(2)(iv)(D) of this section;

(*3*) A description of practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities;

(*4*) A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible;

(*5*) A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges (this program can be coordinated with the program developed under paragraph (d)(2)(iv)(C) of this section); and

(*6*) A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.

(B) A description of a program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer. The proposed program shall include:

(*1*) A description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program description shall address all types of illicit discharges, however the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (program descriptions shall address discharges or flows from fire fighting only where such discharges or flows are identified as significant sources of pollutants to waters of the United States);

(*2*) A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens;

(*3*) A description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water (such procedures may include: sampling procedures for constituents such as fecal coliform, fecal streptococcus, surfactants (MBAS), residual chlorine, fluorides and potassium; testing with fluorometric dyes; or conducting in storm sewer inspections where safety and other considerations allow. Such description shall include the location of storm sewers that have been identified for such evaluation);

(*4*) A description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer;

(*5*) A description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers;

(*6*) A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials; and

(*7*) A description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary;

(C) A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system. The program shall:

(*1*) Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges;

(*2*) Describe a monitoring program for storm water discharges associated

with the industrial facilities identified in paragraph (d)(2)(iv)(C) of this section, to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD_5, TSS, total phosphorus, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under §122.21(g)(7) (vi) and (vii).

(D) A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system, which shall include:

(1) A description of procedures for site planning which incorporate consideration of potential water quality impacts;

(2) A description of requirements for nonstructural and structural best management practices;

(3) A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality; and

(4) A description of appropriate educational and training measures for construction site operators.

(v) *Assessment of controls.* Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water.

(vi) *Fiscal analysis.* For each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2) (iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

(vii) Where more than one legal entity submits an application, the application shall contain a description of the roles and responsibilities of each legal entity and procedures to ensure effective coordination.

(viii) Where requirements under paragraph (d)(1)(iv)(E), (d)(2)(ii), (d)(2)(iii)(B) and (d)(2)(iv) of this section are not practicable or are not applicable, the Director may exclude any operator of a discharge from a municipal separate storm sewer which is designated under paragraph (a)(1)(v), (b)(4)(ii) or (b)(7)(ii) of this section from such requirements. The Director shall not exclude the operator of a discharge from a municipal separate storm sewer identified in appendix F, G, H or I of part 122, from any of the permit application requirements under this paragraph except where authorized under this section.

(e) *Application deadlines.* Any operator of a point source required to obtain a permit under this section that does not have an effective NPDES permit authorizing discharges from its storm water outfalls shall submit an application in accordance with the following deadlines:

(1) *Storm water discharges associated with industrial activity.* (i) Except as provided in paragraph (e)(1)(ii) of this section, for any storm water discharge associated with industrial activity identified in paragraphs (b)(14)(i) through (xi) of this section, that is not part of a group application as described in paragraph (c)(2) of this section or that is not authorized by a storm water general permit, a permit application made pursuant to paragraph (c) of this section must be submitted to the Director by October 1, 1992;

(ii) For any storm water discharge associated with industrial activity from a facility that is owned or operated by a municipality with a population of less than 100,000 that is not authorized by a general or individual permit, other than an airport, powerplant, or uncontrolled sanitary landfill, the permit application must be submitted to the Director by March 10, 2003.

(2) For any group application submitted in accordance with paragraph (c)(2) of this section:

(i) *Part 1.* (A) Except as provided in paragraph (e)(2)(i)(B) of this section, part 1 of the application shall be submitted to the Director, Office of Wastewater Enforcement and Compliance by September 30, 1991;

(B) Any municipality with a population of less than 250,000 shall not be required to submit a part 1 application before May 18, 1992.

(C) For any storm water discharge associated with industrial activity from a facility that is owned or operated by a municipality with a population of less than 100,000 other than an airport, powerplant, or uncontrolled sanitary landfill, permit applications requirements are reserved.

(ii) Based on information in the part 1 application, the Director will approve or deny the members in the group application within 60 days after receiving part 1 of the group application.

(iii) *Part 2.* (A) Except as provided in paragraph (e)(2)(iii)(B) of this section, part 2 of the application shall be submittted to the Director, Office of Wastewater Enforcement and Compliance by October 1, 1992;

(B) Any municipality with a population of less than 250,000 shall not be required to submit a part 1 application before May 17, 1993.

(C) For any storm water discharge associated with industrial activity from a facility that is owned or operated by a municipality with a population of less than 100,000 other than an airport, powerplant, or uncontrolled sanitary landfill, permit applications requirements are reserved.

(iv) *Rejected facilities.* (A) Except as provided in paragraph (e)(2)(iv)(B) of this section, facilities that are rejected as members of the group shall submit an individual application (or obtain coverage under an applicable general permit) no later than 12 months after the date of receipt of the notice of rejection or October 1, 1992, whichever comes first.

(B) Facilities that are owned or operated by a municipality and that are rejected as members of part 1 group application shall submit an individual application no later than 180 days after the date of receipt of the notice of rejection or October 1, 1992, whichever is later.

(v) A facility listed under paragraph (b)(14) (i)–(xi) of this section may add on to a group application submitted in accordance with paragraph (e)(2)(i) of this section at the discretion of the Office of Water Enforcement and Permits, and only upon a showing of good cause by the facility and the group applicant; the request for the addition of the facility shall be made no later than February 18, 1992; the addition of the facility shall not cause the percentage of the facilities that are required to submit quantitative data to be less than 10%, unless there are over 100 facilities in the group that are submitting quantitative data; approval to become part of group application must be obtained from the group or the trade association representing the individual facilities.

(3) For any discharge from a large municipal separate storm sewer system;

(i) Part 1 of the application shall be submitted to the Director by November 18, 1991;

(ii) Based on information received in the part 1 application the Director will approve or deny a sampling plan under paragraph (d)(1)(iv)(E) of this section within 90 days after receiving the part 1 application;

(iii) Part 2 of the application shall be submitted to the Director by November 16, 1992.

(4) For any discharge from a medium municipal separate storm sewer system;

(i) Part 1 of the application shall be submitted to the Director by May 18, 1992.

(ii) Based on information received in the part 1 application the Director will approve or deny a sampling plan under paragraph (d)(1)(iv)(E) of this section within 90 days after receiving the part 1 application.

(iii) Part 2 of the application shall be submitted to the Director by May 17, 1993.

(5) A permit application shall be submitted to the Director within 180 days of notice, unless permission for a later date is granted by the Director (see § 124.52(c) of this chapter), for:

(i) A storm water discharge that the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines that the discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States (see paragraphs (a)(1)(v) and (b)(15)(ii) of this section);

(ii) A storm water discharge subject to paragraph (c)(1)(v) of this section.

(6) Facilities with existing NPDES permits for storm water discharges associated with industrial activity shall maintain existing permits. Facilities with permits for storm water discharges associated with industrial activity which expire on or after May 18, 1992 shall submit a new application in accordance with the requirements of 40 CFR 122.21 and 40 CFR 122.26(c) (Form 1, Form 2F, and other applicable Forms) 180 days before the expiration of such permits.

(7) The Director shall issue or deny permits for discharges composed entirely of storm water under this section in accordance with the following schedule:

(i)(A) Except as provided in paragraph (e)(7)(i)(B) of this section, the Director shall issue or deny permits for storm water discharges associated with industrial activity no later than October 1, 1993, or, for new sources or existing sources which fail to submit a complete permit application by October 1, 1992, one year after receipt of a complete permit application;

(B) For any municipality with a population of less than 250,000 which submits a timely Part I group application under paragraph (e)(2)(i)(B) of this section, the Director shall issue or deny permits for storm water discharges associated with industrial activity no later than May 17, 1994, or, for any such municipality which fails to submit a complete Part II group permit application by May 17, 1993, one year after receipt of a complete permit application;

(ii) The Director shall issue or deny permits for large municipal separate storm sewer systems no later than November 16, 1993, or, for new sources or existing sources which fail to submit a complete permit application by November 16, 1992, one year after receipt of a complete permit application;

(iii) The Director shall issue or deny permits for medium municipal separate storm sewer systems no later than May 17, 1994, or, for new sources or existing sources which fail to submit a complete permit application by May 17, 1993, one year after receipt of a complete permit application.

(8) For any storm water discharge associated with small construction activities identified in paragraph (b)(15)(i) of this section, see §122.21(c)(1). Discharges from these sources require permit authorization by March 10, 2003, unless designated for coverage before then.

(9) For any discharge from a regulated small MS4, the permit application made under §122.33 must be submitted to the Director by:

(i) March 10, 2003 if designated under §122.32(a)(1) unless your MS4 serves a jurisdiction with a population under 10,000 and the NPDES permitting authority has established a phasing schedule under §123.35(d)(3) (see §122.33(c)(1)); or

(ii) Within 180 days of notice, unless the NPDES permitting authority grants a later date, if designated under §122.32(a)(2) (see §122.33(c)(2)).

(f) *Petitions.* (1) Any operator of a municipal separate storm sewer system may petition the Director to require a separate NPDES permit (or a permit issued under an approved NPDES State program) for any discharge into the municipal separate storm sewer system.

(2) Any person may petition the Director to require a NPDES permit for a discharge which is composed entirely of storm water which contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) The owner or operator of a municipal separate storm sewer system may petition the Director to reduce the Census estimates of the population served by such separate system to account for storm water discharged to combined sewers as defined by 40 CFR 35.2005(b)(11) that is treated in a publicly owned treatment works. In municipalities in which combined sewers are operated, the Census estimates of

population may be reduced proportional to the fraction, based on estimated lengths, of the length of combined sewers over the sum of the length of combined sewers and municipal separate storm sewers where an applicant has submitted the NPDES permit number associated with each discharge point and a map indicating areas served by combined sewers and the location of any combined sewer overflow discharge point.

(4) Any person may petition the Director for the designation of a large, medium, or small municipal separate storm sewer system as defined by paragraph (b)(4)(iv), (b)(7)(iv), or (b)(16) of this section.

(5) The Director shall make a final determination on any petition received under this section within 90 days after receiving the petition with the exception of petitions to designate a small MS4 in which case the Director shall make a final determination on the petition within 180 days after its receipt.

(g) *Conditional exclusion for "no exposure" of industrial activities and materials to storm water.* Discharges composed entirely of storm water are not storm water discharges associated with industrial activity if there is "no exposure" of industrial materials and activities to rain, snow, snowmelt and/or runoff, and the discharger satisfies the conditions in paragraphs (g)(1) through (g)(4) of this section. "No exposure" means that all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product.

(1) *Qualification.* To qualify for this exclusion, the operator of the discharge must:

(i) Provide a storm resistant shelter to protect industrial materials and activities from exposure to rain, snow, snow melt, and runoff;

(ii) Complete and sign (according to §122.22) a certification that there are no discharges of storm water contaminated by exposure to industrial materials and activities from the entire facility, except as provided in paragraph (g)(2) of this section;

(iii) Submit the signed certification to the NPDES permitting authority once every five years;

(iv) Allow the Director to inspect the facility to determine compliance with the "no exposure" conditions;

(v) Allow the Director to make any "no exposure" inspection reports available to the public upon request; and

(vi) For facilities that discharge through an MS4, upon request, submit a copy of the certification of "no exposure" to the MS4 operator, as well as allow inspection and public reporting by the MS4 operator.

(2) *Industrial materials and activities not requiring storm resistant shelter.* To qualify for this exclusion, storm resistant shelter is not required for:

(i) Drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak ("Sealed" means banded or otherwise secured and without operational taps or valves);

(ii) Adequately maintained vehicles used in material handling; and

(iii) Final products, other than products that would be mobilized in storm water discharge (e.g., rock salt).

(3) *Limitations.* (i) Storm water discharges from construction activities identified in paragraphs (b)(14)(x) and (b)(15) are not eligible for this conditional exclusion.

(ii) This conditional exclusion from the requirement for an NPDES permit is available on a facility-wide basis only, not for individual outfalls. If a facility has some discharges of storm water that would otherwise be "no exposure" discharges, individual permit requirements should be adjusted accordingly.

(iii) If circumstances change and industrial materials or activities become exposed to rain, snow, snow melt, and/or runoff, the conditions for this exclusion no longer apply. In such cases, the discharge becomes subject to enforcement for un-permitted discharge. Any conditionally exempt discharger who

anticipates changes in circumstances should apply for and obtain permit authorization prior to the change of circumstances.

(iv) Notwithstanding the provisions of this paragraph, the NPDES permitting authority retains the authority to require permit authorization (and deny this exclusion) upon making a determination that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.

(4) *Certification.* The no exposure certification must require the submission of the following information, at a minimum, to aid the NPDES permitting authority in determining if the facility qualifies for the no exposure exclusion:

(i) The legal name, address and phone number of the discharger (see § 122.21(b));

(ii) The facility name and address, the county name and the latitude and longitude where the facility is located;

(iii) The certification must indicate that none of the following materials or activities are, or will be in the foreseeable future, exposed to precipitation:

(A) Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to storm water;

(B) Materials or residuals on the ground or in storm water inlets from spills/leaks;

(C) Materials or products from past industrial activity;

(D) Material handling equipment (except adequately maintained vehicles);

(E) Materials or products during loading/unloading or transporting activities;

(F) Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);

(G) Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;

(H) Materials or products handled/stored on roads or railways owned or maintained by the discharger;

(I) Waste material (except waste in covered, non-leaking containers, e.g., dumpsters);

(J) Application or disposal of process wastewater (unless otherwise permitted); and

(K) Particulate matter or visible deposits of residuals from roof stacks/vents not otherwise regulated, i.e., under an air quality control permit, and evident in the storm water outflow;

(iv) All "no exposure" certifications must include the following certification statement, and be signed in accordance with the signatory requirements of § 122.22: "I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "no exposure" and obtaining an exclusion from NPDES storm water permitting; and that there are no discharges of storm water contaminated by exposure to industrial activities or materials from the industrial facility identified in this document (except as allowed under paragraph (g)(2)) of this section. I understand that I am obligated to submit a no exposure certification form once every five years to the NPDES permitting authority and, if requested, to the operator of the local MS4 into which this facility discharges (where applicable). I understand that I must allow the NPDES permitting authority, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of storm water from the facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false

information, including the possibility of fine and imprisonment for knowing violations."

[55 FR 48063, Nov. 16, 1990]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 122.26, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 122.27 Silvicultural activities (applicable to State NPDES programs, see § 123.25).

(a) *Permit requirement.* Silvicultural point sources, as defined in this section, as point sources subject to the NPDES permit program.

(b) *Definitions.* (1) *Silvicultural point source* means any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States. The term does not include non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance from which there is natural runoff. However, some of these activities (such as stream crossing for roads) may involve point source discharges of dredged or fill material which may require a CWA section 404 permit (See 33 CFR 209.120 and part 233).

(2) *Rock crushing and gravel washing facilities* means facilities which process crushed and broken stone, gravel, and riprap (See 40 CFR part 436, subpart B, including the effluent limitations guidelines).

(3) *Log sorting and log storage facilities* means facilities whose discharges result from the holding of unprocessed wood, for example, logs or roundwood with bark or after removal of bark held in self-contained bodies of water (mill ponds or log ponds) or stored on land where water is applied intentionally on the logs (wet decking). (See 40 CFR part 429, subpart I, including the effluent limitations guidelines).

§ 122.28 General permits (applicable to State NPDES programs, see § 123.25).

(a) *Coverage.* The Director may issue a general permit in accordance with the following:

(1) *Area.* The general permit shall be written to cover one or more categories or subcategories of discharges or sludge use or disposal practices or facilities described in the permit under paragraph (a)(2)(ii) of this section, except those covered by individual permits, within a geographic area. The area should correspond to existing geographic or political boundaries such as:

(i) Designated planning areas under sections 208 and 303 of CWA;

(ii) Sewer districts or sewer authorities;

(iii) City, county, or State political boundaries;

(iv) State highway systems;

(v) Standard metropolitan statistical areas as defined by the Office of Management and Budget;

(vi) Urbanized areas as designated by the Bureau of the Census according to criteria in 30 FR 15202 (May 1, 1974); or

(vii) Any other appropriate division or combination of boundaries.

(2) *Sources.* The general permit may be written to regulate one or more categories or subcategories of discharges or sludge use or disposal practices or facilities, within the area described in paragraph (a)(1) of this section, where the sources within a covered subcategory of discharges are either:

(i) Storm water point sources; or (ii) One or more categories or subcategories of point sources other than storm water point sources, or one or more categories or subcategories of "treatment works treating domestic sewage", if the sources or "treatment works treating domestic sewage" within each category or subcategory all:

(A) Involve the same or substantially similar types of operations;

(B) Discharge the same types of wastes or engage in the same types of sludge use or disposal practices;

(C) Require the same effluent limitations, operating conditions, or standards for sewage sludge use or disposal;

(D) Require the same or similar monitoring; and (E) In the opinion of the

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TITLE 40 -- PROTECTION OF ENVIRONMENT
CHAPTER I -- ENVIRONMENTAL PROTECTION AGENCY
SUBCHAPTER D -- WATER PROGRAMS
PART 122 -- EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
SUBPART C -- PERMIT CONDITIONS

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40 CFR 122.44

§ 122.44 Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs, see § 123.25).

In addition to the conditions established under § 122.43(a), each NPDES permit shall include conditions meeting the following requirements when applicable.

(a)(1) Technology-based effluent limitations and standards based on: effluent limitations and standards promulgated under section 301 of the CWA, or new source performance standards promulgated under section 306 of CWA, on case-by-case effluent limitations determined under section 402(a)(1) of CWA, or a combination of the three, in accordance with § 125.3 of this chapter. For new sources or new dischargers, these technology based limitations and standards are subject to the provisions of § 122.29(d) (protection period).

(2) Monitoring waivers for certain guideline-listed pollutants.

(i) The Director may authorize a discharger subject to technology-based effluent limitations guidelines and standards in an NPDES permit to forego sampling of a pollutant found at 40 CFR Subchapter N of this chapter if the discharger has demonstrated through sampling and other technical factors that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger.

(ii) This waiver is good only for the term of the permit and is not available during the term of the first permit issued to a discharger.

(iii) Any request for this waiver must be submitted when applying for a reissued permit or modification of a reissued permit. The request must demonstrate through sampling or other technical information, including information generated during an earlier permit term that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger.

(iv) Any grant of the monitoring waiver must be included in the permit as an express permit condition and the reasons supporting the grant must be documented in the permit's fact sheet or statement of basis.

(v) This provision does not supersede certification processes and requirements already established in existing effluent limitations guidelines and standards.

(b)(1) Other effluent limitations and standards under sections 301, 302, 303, 307, 318 and 405 of CWA. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in the permit, the Director shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition. See also § 122.41(a).

(2) Standards for sewage sludge use or disposal under section 405(d) of the CWA unless those standards have been included in a permit issued under the appropriate provisions of subtitle C of the Solid Waste Disposal Act, Part C of Safe Drinking Water Act, the Marine Protection, Research, and Sanctuaries Act of 1972, or the Clean Air Act, or under State permit programs approved by the Administrator. When there are no applicable standards for sewage sludge use or disposal, the permit may include requirements developed on a case-by-case basis to protect public health and the environment from any adverse effects which may occur from toxic pollutants in sewage sludge. If any applicable standard for sewage sludge use or disposal is promulgated under section 405(d) of the CWA and that standard is more stringent than any limitation on the pollutant or practice in the permit, the Director may initiate proceedings under these regulations to modify or revoke and reissue the permit to conform to the standard for sewage sludge use or disposal.

(3) Requirements applicable to cooling water intake structures under section 316(b) of the CWA, in accordance with part 125, subparts I, J, and N of this chapter.

(c) Reopener clause: For any permit issued to a treatment works treating domestic sewage (including "sludge-only facilities"), the Director shall include a reopener clause to incorporate any applicable standard for sewage sludge use or disposal promulgated under section 405(d) of the CWA. The Director may promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

(d) Water quality standards and State requirements: any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, 318 and 405 of CWA necessary to:

(1) Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.

(i) Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.

(ii) When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.

(iii) When the permitting authority determines, using the procedures in paragraph (d)(1)(ii) of this section, that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a State numeric criteria within a

State water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant.

(iv) When the permitting authority determines, using the procedures in paragraph (d)(1)(ii) of this section, that adischarge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the numeric criterion for whole effluent toxicity, the permit must contain effluent limits for whole effluent toxicity.

(v) Except as provided in this subparagraph, when the permitting authority determines, using the procedures in paragraph (d)(1)(ii) of this section, toxicity testing data, or other information, that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative criterion within an applicable State water quality standard, the permit must contain effluent limits for whole effluent toxicity. Limits on whole effluent toxicity are not necessary where the permitting authority demonstrates in the fact sheet or statement of basis of the NPDES permit, using the procedures in paragraph (d)(1)(ii) of this section, that chemical-specific limits for the effluent are sufficient to attain and maintain applicable numeric and narrative State water quality standards.

(vi) Where a State has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits using one or more of the following options:

(A) Establish effluent limits using a calculated numeric water quality criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use. Such a criterion may be derived using a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include: EPA's Water Quality Standards Handbook, October 1983, risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current EPA criteria documents; or

(B) Establish effluent limits on a case-by-case basis, using EPA's water quality criteria, published under section 304(a) of the CWA, supplemented where necessary by other relevant information; or

(C) Establish effluent limitations on an indicator parameter for the pollutant of concern, provided:

(1) The permit identifies which pollutants are intended to be controlled by the use of the effluent limitation;

(2) The fact sheet required by § 124.56 sets forth the basis for the limit, including a finding that compliance with the effluent limit on the indicator parameter will result in controls on the pollutant of concern which are sufficient to attain and maintain applicable water quality standards;

(3) The permit requires all effluent and ambient monitoring necessary to show that during the term of the permit the limit on the indicator parameter continues to attain and maintain applicable water quality standards; and

(4) The permit contains a reopener clause allowing the permitting authority to modify or revoke and reissue the permit if the limits on the indicator parameter no longer attain and maintain applicable water quality standards.

(vii) When developing water quality-based effluent limits under this paragraph the permitting authority shall ensure that:

(A) The level of water quality to be achieved by limits on point sources established under this paragraph is derived from, and complies with all applicable water quality standards; and

(B) Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7.

(2) Attain or maintain a specified water quality through water quality related effluent limits established under section 302 of CWA;

(3) Conform to the conditions to a State certification under section 401 of the CWA that meets the requirements of § 124.53 when EPA is the permitting authority. If a State certification is stayed by a court of competent jurisdiction or an appropriate State board or agency, EPA shall notify the State that the Agency will deem certification waived unless a finally effective State certification is received within sixty days from the date of the notice. If the State does not forward a finally effective certification within the sixty day period, EPA shall include conditions in the permit that may be necessary to meet EPA's obligation under section 301(b)(1)(C) of the CWA;

(4) Conform to applicable water quality requirements under section 401(a)(2) of CWA when the discharge affects a State other than the certifying State;

(5) Incorporate any more stringent limitations, treatment standards, or schedule of compliance requirements established under Federal or State law or regulations in accordance with section 301(b)(1)(C) of CWA;

(6) Ensure consistency with the requirements of a Water Quality Management plan approved by EPA under section 208(b) of CWA;

(7) Incorporate section 403(c) criteria under part 125, subpart M, for ocean discharges;

(8) Incorporate alternative effluent limitations or standards where warranted by "fundamentally different factors," under 40 CFR part 125, subpart D;

(9) Incorporate any other appropriate requirements, conditions, or limitations (other than effluent limitations) into a new source permit to the extent allowed by the National Environmental Policy Act, 42 U.S.C. 4321 et seq. and section 511 of the CWA, when EPA is the permit issuing authority. (See § 122.29(c)).

(e) Technology-based controls for toxic pollutants. Limitations established under paragraphs (a), (b), or (d) of this section, to control pollutants meeting the criteria listed in paragraph (e)(1) of this section. Limitations will be established in accordance with paragraph (e)(2) of this section. An explanation of the development of these limitations shall be included in the fact sheet under § 124.56(b)(1)(i).

(1) Limitations must control all toxic pollutants which the Director determines (based on information reported in a permit application under § 122.21(g)(7) or in a notification under § 122.42(a)(1) or on other information) are or may be discharged at a level greater than the level which can be achieved by the technology-based treatment requirements appropriate to the permittee under § 125.3(c) of this chapter; or

(2) The requirement that the limitations control the pollutants meeting the criteria of paragraph (e)(1) of this section will be satisfied by:

(i) Limitations on those pollutants; or

(ii) Limitations on other pollutants which, in the judgment of the Director, will provide treatment of the pollutants under paragraph (e)(1) of this section to the levels required by § 125.3(c).

(f) Notification level. A "notification level" which exceeds the notification level of § 122.42(a)(1)(i), (ii) or (iii), upon a petition from the permittee or onthe Director's initiative. This new notification level may not exceed the level which can be achieved by the technology-based treatment requirements appropriate to the permittee under § 125.3(c)

(g) Twenty-four hour reporting. Pollutants for which the permittee must report violations of maximum daily discharge limitations under § 122.41(1)(6)(ii)(C) (24-hour reporting) shall be listed in the permit. This list shall include any toxic pollutant or hazardous substance, or any pollutant specifically identified as the method to control a toxic pollutant or hazardous substance.

(h) Durations for permits, as set forth in § 122.46.

(i) Monitoring requirements. In addition to § 122.48, the following monitoring requirements:

(1) To assure compliance with permit limitations, requirements to monitor:

(i) The mass (or other measurement specified in the permit) for each pollutant limited in the permit;

(ii) The volume of effluent discharged from each outfall;

(iii) Other measurements as appropriate including pollutants in internal waste streams under § 122.45(i); pollutants in intake water for net limitations under § 122.45(f); frequency, rate of discharge, etc., for noncontinuous discharges under § 122.45(e); pollutants subject to notification requirements under § 122.42(a); and pollutants in sewage sludge or other monitoring as specified in 40 CFR part 503; or as determined to be necessary on a case-by-case basis pursuant to section 405(d)(4) of the CWA.

(iv) According to test procedures approved under 40 CFR Part 136 for the analyses of pollutants or another method is required under 40 CFR subchapters N or O. In the case of pollutants for which there are no approved methods under 40 CFR Part 136 or otherwise required under 40 CFR subchapters N or O, monitoring must be conducted according to a test procedure specified in the permit for such pollutants.

(2) Except as provided in paragraphs (i)(4) and (i)(5) of this section, requirements to report monitoring results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge, but in no case less than once a year. For sewage sludge use or disposal practices, requirements to monitor and report results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the sewage sludge use or disposal practice; minimally this shall be as specified in 40 CFR part 503 (where applicable), but in no case less than once a year.

(3) Requirements to report monitoring results for storm water discharges associated with industrial activity which are subject to an effluent limitation guideline shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge, but in no case less than once a year.

(4) Requirements to report monitoring results for storm water discharges associated with industrial activity (other than those addressed in paragraph (i)(3) of this section) shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge. At a minimum, a permit for such a discharge must require:

(i) The discharger to conduct an annual inspection of the facility site to identify areas

contributing to a storm water discharge associated with industrial activity and evaluate whether measures to reduce pollutant loadings identified in a storm water pollution prevention plan are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed;

(ii) The discharger to maintain for a period of three years a record summarizing the results of the inspection and a certification that the facility is in compliance with the plan and the permit, and identifying any incidents of non-compliance;

(iii) Such report and certification be signed in accordance with § 122.22; and

(iv) Permits for storm water discharges associated with industrial activity from inactive mining operations may, where annual inspections are impracticable, require certification once every three years by a Registered Professional Engineer that the facility is in compliance with the permit, or alternative requirements.

(5) Permits which do not require the submittal of monitoring result reports at least annually shall require that the permittee report all instances of noncompliance not reported under § 122.41(l)(1), (4), (5), and (6) at least annually.

(j) Pretreatment program for POTWs. Requirements for POTWs to:

(1) Identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of CWA and 40 CFR part 403.

(2)(i) Submit a local program when required by and in accordance with 40 CFR part 403 to assure compliance with pretreatment standards to the extent applicable under section 307(b). The local program shall be incorporated into the permit as described in 40 CFR part 403. The program must require all indirect dischargers to the POTW to comply with the reporting requirements of 40 CFR part 403.

(ii) Provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1), following permit issuance or reissuance.

(3) For POTWs which are "sludge-only facilities," a requirement to develop a pretreatment program under 40 CFR part 403 when the Director determines that a pretreatment program is necessary to assure compliance with Section 405(d) of the CWA.

(k) Best management practices (BMPs) to control or abate the discharge of pollutants when:

(1) Authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities;

(2) Authorized under section 402(p) of the CWA for the control of storm water discharges;

(3) Numeric effluent limitations are infeasible; or

(4) The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

NOTE TO PARAGRAPH (k)(4): Additional technical information on BMPs and the elements of BMPs is contained in the following documents: Guidance Manual for Developing Best Management Practices (BMPs), October 1993, EPA No. 833/B-93-004, NTIS No. PB 94-178324, ERIC No. W498); Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, September 1992, EPA No. 832/R-92-005, NTIS No. PB 92-235951, ERIC No. N482); Storm Water Management for Construction Activities, Developing

Pollution Prevention Plans and Best Management Practices: Summary Guidance, EPA No. 833/R-92-001, NTIS No. PB 93-223550; ERIC No. W139; Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices, September 1992; EPA 832/R-92-006, NTIS No. PB 92-235969, ERIC No. N477; Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices: Summary Guidance, EPA 833/R-92-002, NTIS No. PB 94-133782; ERIC No. W492. Copies of those documents (or directionson how to obtain them) can be obtained by contacting either the Office of Water Resource Center (using the EPA document number as a reference) at (202) 260-7786; or the Educational Resources Information Center (ERIC) (using the ERIC number as a reference) at (800) 276-0462. Updates of these documents or additional BMP documents may also be available. A list of EPA BMP guidance documents is available on the OWM Home Page at http://www.epa.gov/owm. In addition, States may have BMP guidance documents.

These EPA guidance documents are listed here only for informational purposes; they are not binding and EPA does not intend that these guidance documents have any mandatory, regulatory effect by virtue of their listing in this note.

(l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under § 122.62.)

(2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

(i) Exceptions -- A permit with respect to which paragraph (l)(2) of this section applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant, if --

(A) Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;

(B)(1) Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or

(2) The Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b);

(C) A less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;

(D) The permittee has received a permit modification under section 301(c), 301(g), 301(h), 301(i), 301(k), 301(n), or 316(a); or

(E) The permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

(ii) Limitations. In no event may a permit with respect to which paragraph (l)(2) of this section applies be renewed, reissued, or modified to contain an effluent limitation which is less stringent than required by effluent guidelines in effect at the time the permit is renewed, reissued, or modified. In no event may such a permit to discharge into waters be renewed, issued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 303 applicable to such waters.

(m) Privately owned treatment works. For a privately owned treatment works, any conditions expressly applicable to any user, as a limited co-permittee, that may be necessary in the permit issued to the treatment works to ensure compliance with applicable requirements under this part. Alternatively, the Director may issue separate permits to the treatment works and to its users, or may require a separate permit application from any user. The Director's decision to issue a permit with no conditions applicable to any user, to impose conditions on one or more users, to issue separate permits, or to require separate applications, and the basis for that decision, shall be stated in the fact sheet for the draft permit for the treatment works.

(n) Grants. Any conditions imposed in grants made by the Administrator to POTWs under sections 201 and 204 of CWA which are reasonably necessary for the achievement of effluent limitations under section 301 of CWA.

(o) Sewage sludge. Requirements under section 405 of CWA governing the disposal of sewage sludge from publicly owned treatment works or any other treatment works treating domestic sewage for any use for which regulations have been established, in accordance with any applicable regulations.

(p) Coast Guard. When a permit is issued to a facility that may operate at certain times as a means of transportation over water, a condition that the discharge shall comply with any applicable regulations promulgated by the Secretary of the department in which the Coast Guard is operating, that establish specifications for safe transportation, handling, carriage, and storage of pollutants.

(q) Navigation. Any conditions that the Secretary of the Army considers necessary to ensure that navigation and anchorage will not be substantially impaired, in accordance with § 124.59 of this chapter.

(r) Great Lakes. When a permit is issued to a facility that discharges into the Great Lakes System (as defined in 40 CFR 132.2), conditions promulgated by the State, Tribe, or EPA pursuant to 40 CFR part 132.

(s) Qualifying State, Tribal, or local programs. (1) For storm water discharges associated with small construction activity identified in § 122.26(b)(15), the Director may include permit conditions that incorporate qualifying State, Tribal, or local erosion and sediment control program requirements by reference. Where a qualifying State, Tribal, or local program does not include one or more of the elements in this paragraph (s)(1), then the Director must include those elements as conditions in the permit. A qualifying State, Tribal, or local erosion and sediment control program is one that includes:

(i) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;

(ii) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

(iii) Requirements for construction site operators to develop and implement a storm water pollution prevention plan. (A storm water pollution prevention plan includes site descriptions, descriptions of appropriate control measures, copies of approved State, Tribal or local

requirements, maintenance procedures, inspection procedures, and identification of non-storm water discharges); and

(iv) Requirements to submit a site plan for review that incorporates consideration of potential water quality impacts.

(2) For storm water discharges from construction activity identified in § 122.26(b)(14)(x), the Director may include permit conditions that incorporate qualifying State, Tribal, or local erosion and sediment control program requirements by reference. A qualifying State, Tribal or local erosion and sediment control program is one that includes the elements listed in paragraph (s)(1) of this section and any additional requirements necessary to achieve the applicable technology-based standards of "best available technology" and "best conventional technology" based on the best professional judgment of the permit writer.

HISTORY:
[48 FR 14153, Apr. 1, 1983, as amended at 49 FR 31842, Aug. 8, 1984; 49 FR 38049, Sept. 26, 1984; 50 FR 6940, Feb. 19, 1985; 50 FR 7912, Feb. 27, 1985; 54 FR 256, Jan. 4, 1989; 54 FR 18783, May 2, 1989; 54 FR 23895, June 2, 1989; 57 FR 11413, Apr. 2, 1992; 57 FR 33049, July 24, 1992; 60 FR 15386, Mar. 23, 1995; 64 FR 42434, 42469, Aug. 4, 1999, as corrected at 64 FR 43426, Aug. 10, 1999; 64 FR 68722, 68847, Dec. 8, 1999; 65 FR 30886, 30908, May 15, 2000; 65 FR 43586, 43661, July 13, 2000, withdrawn at 68 FR 13608, 13614, Mar. 19, 2003; 66 FR 53044, 53048, Oct. 18, 2001; 66 FR 65256, 65337, Dec. 18, 2001; 69 FR 41576, 41682, July 9, 2004; 70 FR 60134, 60191, Oct. 14, 2005; 71 FR 35006, 35040, June 16, 2006; 72 FR 11200, 11212, Mar. 12, 2007]

AUTHORITY:
The Clean Water Act, 33 U.S.C. 1251 et seq.

NOTES:
[EFFECTIVE DATE NOTE: 71 FR 35006, 35040, June 16, 2006, revised paragraph (b)(3), effective July 17, 2006; 72 FR 11200, 11212, Mar. 12, 2007, revised paragraph (i)(1)(iv), effective Apr. 11, 2007.]

NOTES APPLICABLE TO ENTIRE CHAPTER:
[PUBLISHER'S NOTE: Nomenclature changes to Chapter I appear at 65 FR 47323, 47324, 47325, Aug. 2, 2000.]
[PUBLISHER'S NOTE: For Federal Register citations concerning Chapter 1 Notice of implementation policy, see: 71 FR 25504, May 1, 2006.]
[PUBLISHER'S NOTE: For Federal Register citations concerning Chapter 1 Findings, see: 74 FR 66496, Dec. 15, 2009.]
[PUBLISHER'S NOTE: For Federal Register citations concerning Chapter I Denials, see: 75 FR 49556, Aug. 13, 2010.]

NOTES APPLICABLE TO ENTIRE PART:
[PUBLISHER'S NOTE: For Federal Register Citations concerning Part 122 policy statements, see: 61 FR 41698, Aug. 9, 1998.]

NOTES TO DECISIONS: COURT AND ADMINISTRATIVE DECISIONS SIGNIFICANTLY DISCUSSING SECTION --
Communities for a Better Environment v State Water Resources Control Bd. (2003, 1st Dist) 109 Cal App 4th 1089, 1 Cal Rptr 3d 76, 2003 CDOS 5149, 2003 Daily Journal DAR 6533, reh den (2003, Cal App 1st Dist) 2003 Cal App LEXIS 1082
Divers' Environmental Conservation Organization v State Water Resources Control Bd. (2006, 4th Dist) 145 Cal App 4th 246, 51 Cal Rptr 3d 497, 2006 CDOS 10951, 36 ELR 20237, reh den (2006,

Tab 4

FOR PUBLICATION

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

NATURAL RESOURCES DEFENSE COUNCIL, INC.; SANTA MONICA BAYKEEPER,

Plaintiffs-Appellants,

v.

COUNTY OF LOS ANGELES; LOS ANGELES COUNTY FLOOD CONTROL DISTRICT; MICHAEL ANTONOVICH, in his official capacity as Supervisor; YVONNE BURKE, in her official capacity as Supervisor; GLORIA MOLINA, in her official capacity as Supervisor; ZEV YAROSLAVSKY, in his official capacity as Supervisor; DEAN D. EFSTATHIOU, in his official capacity as Acting Director of Los Angeles County Department of Public Works; DON KNABE, in his official capacity as Supervisor,

Defendants-Appellees.

No. 10-56017

D.C. No. 2:08-cv-01467-AHM-PLA

ORDER and OPINION

Appeal from the United States District Court
for the Central District of California
A. Howard Matz, District Judge, Presiding

Argued and Submitted
December 10, 2010—Pasadena, California

Filed July 13, 2011

9425

ORDER

This Court's Opinion, filed March 10, 2011, and published at 636 F.3d 1235 (9th Cir. 2011), is withdrawn and replaced by the attached Opinion.

With this filing, the panel has voted unanimously to deny Appellees' petition for panel rehearing. Judge Pregerson and Judge M. Smith have voted to deny Appellees' petition for rehearing en banc, and Judge Holland so recommends.

The full court has been advised of the Opinion and petition for rehearing en banc, and no active judge has requested a vote on whether to rehear the matter en banc. Fed. R. App. P. 35.

Accordingly, Appellees' petition for rehearing or for rehearing en banc is DENIED.

No further petitions for rehearing or rehearing en banc will be entertained in this case.

OPINION

Before: Harry Pregerson, and Milan D. Smith, Jr., Circuit Judges, and H. Russel Holland, Senior District Judge.*

Opinion by Judge Milan D. Smith, Jr.

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*The Honorable H. Russel Holland, Senior United States District Judge for the District of Alaska, sitting by designation.

COUNSEL

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Francisco, California, for plaintiffs-appellants Natural Resources Defense Council, Inc. and Santa Monica Baykeeper.

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Theresa Ann Dunham, Somach Simmons & Dunn, Sacramento, California, for amicus curiae California Stormwater Quality Association.

Kamala D. Harris, Attorney General of California; Kathleen A. Kenealy, Senior Assistant Attorney General; James R. Potter, Jennifer Novak, Deputy Attorneys General, Office of the California Attorney General, Los Angeles, California, for amicus curiae California Regional Water Quality Control Board, Los Angeles Region.

OPINION

M. SMITH, Circuit Judge:

Plaintiffs-Appellants Natural Resources Defense Council and Santa Monica Baykeeper appeal the district court's grant of summary judgment in favor of two municipal entities that Plaintiffs allege are discharging polluted stormwater in violation of the Federal Water Pollution Control Act (the Clean Water Act, Act, or CWA), 86 Stat. 816, codified as amended at 33 U.S.C. § 1251 *et seq.* Plaintiffs contend that Defendants-

Appellees County of Los Angeles (County) and Los Angeles County Flood Control District (District) are discharging polluted urban stormwater runoff collected by municipal separate storm sewer systems (ms4) into navigable waters in Southern California. The levels of pollutants detected in four rivers—the Santa Clara River, the Los Angeles River, the San Gabriel River, and Malibu Creek (collectively, the Watershed Rivers)—exceed the limits allowed in a National Pollutant Discharge Elimination System (NPDES) permit which governs municipal stormwater discharges in the County. Although all parties agree that numerous water-quality standards have been exceeded in the Watershed Rivers, Defendants contend that there is no evidence establishing their responsibility for, or discharge of, stormwater carrying pollutants to the rivers. The district court agreed with Defendants and entered a partial final judgment.

We conclude that the district court erred with respect to the evidence of discharges by the District into two of the Watershed Rivers—the Los Angeles River and San Gabriel River. Specifically, Plaintiffs provided evidence that the monitoring stations for the Los Angeles and San Gabriel Rivers are located in a section of ms4 owned and operated by the District and, after stormwater known to contain standards-exceeding pollutants passes through these monitoring stations, this polluted stormwater is discharged into the two rivers. Accordingly, Plaintiffs were entitled to summary judgment on the District's liability for discharges into the Los Angeles River and San Gabriel River, and therefore we reverse the district court's grant of summary judgment in favor of the District on these claims.

Plaintiffs, however, failed to meet their evidentiary burden with respect to discharges by the District into the Santa Clara River and Malibu Creek. Plaintiffs did not provide evidence sufficient for the district court to determine if stormwater discharged from an ms4 controlled by the District caused or contributed to pollution exceedances located in these two rivers.

Similarly, Plaintiffs did not delineate how stormwater from ms4s controlled by the County caused or contributed to exceedances in any of the Watershed Rivers. Accordingly, we affirm the district court's grant of summary judgment in favor of the Defendants on these claims.

FACTUAL AND PROCEDURAL BACKGROUND

I. Stormwater Runoff in Los Angeles County

A. The MS4

Stormwater runoff is surface water generated by precipitation events, such as rainstorms, which flows over streets, parking lots, commercial sites, and other developed parcels of land. Whereas natural, vegetated soil can absorb rainwater and capture pollutants, paved surfaces and developed land can do neither. When stormwater flows over urban environs, it collects "suspended metals, sediments, algae-promoting nutrients (nitrogen and phosphorus), floatable trash, used motor oil, raw sewage, pesticides, and other toxic contaminants[.]" *Envtl. Def. Ctr., Inc. v. EPA*, 344 F.3d 832, 840 (9th Cir. 2003). This runoff is a major contributor to water pollution in Southern California rivers and the Pacific Ocean and contributes to the sickening of many ocean users each year.

The County is a sprawling 4,500 square-mile amalgam of populous incorporated cities and significant swaths of unincorporated land. The District is a public entity governed by the Los Angeles County Board of Supervisors and the Department of Public Works. The District is comprised of 84 cities and some unincorporated areas of the County. The County and the District are separate legal entities.

In the District, stormwater runoff is collected by thousands of storm drains located in each municipality and channeled to a storm sewer system. The municipalities in the District oper-

ate ms4s[1] to collect and channel stormwater. The County also operates an ms4 for certain unincorporated areas. Unlike a sanitary sewer system, which transports municipal sewage for treatment at a wastewater facility, or a combined sewer system, which transports sewage and stormwater for treatment, ms4s contain and convey only untreated stormwater. *See* 40 C.F.R. § 122.26(a)(7), (b)(8). In the County, municipal ms4s are "highly interconnected" because the District allows each municipality to connect its storm drains to the District's extensive flood-control and storm-sewer infrastructure (the MS4).[2] That infrastructure includes 500 miles of open channels and 2,800 miles of storm drains. The length of the MS4 system and the locations of all storm drain connections are not known exactly because a comprehensive map of the storm drain system does not exist. While the number and location of storm drains are too numerous to catalogue, it is undisputed that the MS4 collects and channels stormwater runoff from

[1]Under Federal Regulations, an ms4 is:

> a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
>
> (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body . . . having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity . . .
>
> (ii) Designed or used for collecting or conveying storm water;
>
> (iii) Which is not a combined sewer; and
>
> (iv) Which is not part of a Publicly Owned Treatment Works (POTW) . . . .

40 C.F.R. § 122.26(b)(8).

[2]Throughout this Opinion, reference is made to both "ms4" and "*the* MS4." The former is a generic reference to municipal separate storm sewer systems without regard to their particular location, while the latter specifically refers to the flood control and storm-sewer infrastructure described *supra* that exists in the County and is controlled by the District.

across the County. That stormwater is channeled in the MS4 to various watercourses including the four Watershed Rivers at the heart of this litigation: the Los Angeles River, the San Gabriel River, the Santa Clara River, and Malibu Creek. The Watershed Rivers drain into the Pacific Ocean at Santa Monica Bay, Los Angeles Harbor, and Long Beach Harbor.

The gravamen of Plaintiffs' action is that by allowing untreated and heavily-polluted stormwater to flow unabated from the MS4 into the Watershed Rivers, and eventually into the Pacific Ocean, Defendants have violated the Clean Water Act.

B. The Clean Water Act and NPDES Permit

The Clean Water Act is the nation's primary water-pollution-control law. The Act's purpose is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). "To serve those ends, the Act prohibits 'the discharge of any pollutant by any person' unless done in compliance with some provision of the Act." *S. Fl. Water Mgmt. Dist. v. Miccosukee Tribe of Indians*, 541 U.S. 95, 102 (2004) (quoting 33 U.S.C. § 1311(a)). "Discharge of a pollutant" is defined as "any addition of any pollutant to navigable waters from any point source[.]" 33 U.S.C. § 1362(12); *see Comm. to Save Mokelumne River v. East Bay Mun. Util. Dist.*, 13 F.3d 305, 308 (9th Cir. 1993) (characterizing "discharge" as " 'add[ing]' pollutants from the outside world to navigable water").

Under the Clean Water Act, ms4s fall under the definition of "point sources." 33 U.S.C. § 1362(14). A point source is "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. § 1362(14).

A person or entity wishing to add pollutants to navigable waters must comply with the NPDES, which "requires dischargers to obtain permits that place limits on the type and quantity of pollutants that can be released into the Nation's waters." *Miccosukee Tribe*, 541 U.S. at 102; 33 U.S.C. § 1342(a), (p). The Act "generally prohibits the 'discharge of any pollutant' . . . *from a 'point source'* into the navigable waters of the United States' " unless the point source is covered by an NPDES permit. *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1163 (9th Cir. 1999) (quoting 33 U.S.C. §§ 1311(a), 1362(12)(A)) (emphasis added); *see also Arkansas v. Oklahoma*, 503 U.S. 91, 101-02 (1992) (describing NPDES permitting system). An NPDES permit requires its holder—the "permittee"—to follow the requirements of numerous Clean Water Act provisions, *see* 33 U.S.C. § 1342(a), which include effluent limitations, water-quality standards, water monitoring obligations, public reporting mechanisms, and certain discharge requirements. *See id.* §§ 1311, 1312, 1314, 1316, 1317, 1318, 1343.

The Act uses two water-quality-performance standards, by which a discharger of water may be evaluated—"effluent limitations" and "water quality standards." *Arkansas v. Oklahoma*, 503 U.S. at 101 (citing 33 U.S.C. §§ 1311, 1313, 1314); *see also Sierra Club v. Union Oil Co. of Calif.*, 813 F.2d 1480, 1483 (9th Cir. 1987), *vacated on other grounds*, 485 U.S. 931 (1988), *reinstated*, 853 F.2d 667 (9th Cir. 1988). An effluent limitation is "any restriction established by a State or the [Environmental Protection Agency (EPA)] Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters. . . ." 33 U.S.C. § 1362(11). An effluent-limitation guideline is determined in light of " 'the best practicable control technology currently available.' " *Union Oil*, 813 F.2d at 1483 (quoting 33 U.S.C. § 1311(b)(1)(A)).

Water-quality standards "are used as a supplementary basis for effluent limitations, so that numerous dischargers, despite

their individual compliance with technology-based limitations, can be regulated to prevent water quality from falling below acceptable levels." *Union Oil*, 813 F.2d at 1483 (citing *EPA v. Calif. ex rel. State Water Res. Control Bd.*, 426 U.S. 200, 205 n.12 (1976) (hereafter *EPA v. Calif.*)). Water-quality standards are developed in a two-step process. First, the EPA, or state water authorities establish a waterway's "beneficial use." *Natural Res. Def. Council, Inc. v. EPA*, 16 F.3d 1395, 1400 (4th Cir. 1993); *see also* Cal. Water Code § 13050(f) ("'Beneficial uses' of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves."). Once the beneficial use is determined, water quality criteria that will yield the desired water conditions are formulated and implemented. *See NRDC v. EPA*, 16 F.3d at 1400; *see also* 33 U.S.C. § 1313(a), (c)(2)(A); 40 C.F.R. § 131.3(i) ("Water quality standards are provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses.").

Unlike effluent limitations, which are promulgated by the EPA to achieve a certain level of pollution reduction in light of available technology, water-quality standards emanate from the state boards charged with managing their domestic water resources. *See Arkansas v. Oklahoma*, 503 U.S. at 101. The EPA gives the states guidance in drafting water-quality standards and "state authorities periodically review water quality standards and secure the EPA's approval of any revisions in the standards." *Id.*

The EPA has authorized the State of California to develop water-quality standards and issue NPDES permits. Under the Porter-Cologne Water Quality Control Act, California state law designates the State Water Resources Control Board and nine regional boards as the principal state agencies for enforc-

ing federal and state water pollution law and for issuing permits. *See* Cal. Water Code §§ 13000, 13001, 13140, 13240, 13370, 13377. Beginning in 1990, the California State Water Resources Control Board for the Los Angeles Region (the Regional Board) issued an NPDES permit (the Permit) to cover stormwater discharges by the County, the District, and 84 incorporated municipalities in the County (collectively the Permittees or Co-Permittees).[3] *See City of Arcadia v. State Water Res. Control Bd.*, 119 Cal. Rptr. 3d 232, 240-41 (Cal. Ct. App. 2010). The Permit was renewed in 1996, 2001, 2006, and 2007.

The Permit is divided into two broad sections: findings by the Regional Board and an order authorizing and governing the Permittees' discharges (Order). The findings cover many introductory and background subjects, including a history of NPDES permitting in the County; applicable state and federal laws governing stormwater discharges; studies conducted by the County and researchers about the deleterious effects of polluted stormwater; coverage and implementation provisions; and guidelines for administrative review of Permit provisions. The Permit covers "all areas within the boundaries of the Permittee municipalities . . . over which they have regulatory jurisdiction as well as unincorporated areas in Los Angeles County within the jurisdiction of the Regional Board." In total, the Permit governs municipal stormwater discharge across more than 3,100 square miles of land in the County.

The Permit relates the many federal and state regulations governing stormwater discharges to Southern California's watercourses. Among these regulations is the Water Quality Control Plan for the Los Angeles Region (the Basin Plan). Under California law, the regional boards' "water quality plans, called 'basin plans,' must address the beneficial uses to

[3]"Co-permittee means a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator." 40 C.F.R. § 122.26(b)(1).

be protected as well as water quality objectives, and they must establish a program of implementation." *City of Arcadia*, 119 Cal. Rptr. 3d at 240 (quoting *City of Burbank v. State Water Res. Control Bd.*, 108 P.3d 862, 865 (Cal. 2005) (citing Cal. Water Code § 13050(j))). The Permit provides that "[t]he Basin Plan designates beneficial uses of receiving waters and specifies both narrative and numerical water quality objectives for the receiving water in Los Angeles County." "Receiving waters" are defined as all surface water bodies in the Los Angeles Region that are identified in the Basin Plan. Permittees are to assure that storm water discharges from the MS4 shall neither cause nor contribute to the exceedance of water quality standards and objectives nor create conditions of nuisance in the receiving waters, and that the discharge of non-storm water to the MS4 has been effectively prohibited. The Permit incorporates and adopts the Basin Plan, which sets limits on bacteria and contaminants for the receiving waters of Southern California. The water-quality standards limit, among other pollutants, the levels of ammonia, fecal coliform bacteria, arsenic, mercury, and cyanide in Southern California's inland rivers.

The Permit contains myriad prohibitions and conditions regarding discharges into and from the MS4. Under Part 1, the Permittees are directed to "effectively prohibit non-storm water discharges into the MS4 and watercourses" unless allowed by an NPDES permit. Under Part 2, titled "Receiving Water Limitations," "discharges from the MS4 that cause or contribute to the violation of the Water Quality Standards or water quality objectives are prohibited." The "Water Quality Standards and Water Quality Objectives" are defined in the Permit as "water quality criteria contained in the Basin Plan, the California Ocean Plan, the National Toxics Rule, the California Toxics Rule, and other state or federal approved surface water quality plans. Such plans are used by the Regional Board to regulate all discharges, including storm water discharges."

The Permit, in Part 2.3, provides that Permittees "shall comply" with the MS4 discharge prohibitions, set forth in Parts 2.1 and 2.2, "through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with [the Los Angeles Stormwater Quality Management Program (SQMP)] and its components and other requirements of this Order. . . ." The SQMP includes "descriptions of programs, collectively developed by the Permittees in accordance with provisions of the NPDES Permit, to comply with applicable federal and state law." Part 2.3 further provides that "[i]f exceedances of Water Quality Objectives or Water Quality Standards [ ] persist, notwithstanding implementation of the SQMP and its components and other requirements of this permit," Permittees "shall assure compliance with discharge prohibitions and receiving water limitations" by engaging in an "iterative process" procedure:

> a) Upon a determination by either the Permittee or the Regional Board that discharges are causing or contributing to an exceedance of an applicable Water Quality Standard, the Permittee shall promptly notify and thereafter submit a Receiving Water Limitations (RWL) Compliance Report . . . to the Regional Board that describes [Best Management Practices (BMPs)] that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedances of Water Quality Standards.
>
> . . .
>
> c) Within 30 days following the approval of the RWL Compliance Report, the Permittee shall revise the SQMP and its components and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, an imple-

> mentation schedule, and any additional monitoring required.
>
> d) Implement the revised SQMP and its components and monitoring program according to the approved schedule.
>
> [Part 2.4] So long as the Permittee has complied with the procedures set forth above and is implementing the revised SQMP and its components, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Regional Board to develop additional BMPs.

When a violation arises, a Permittee must adhere to the procedures in its Compliance Report until the exceedances abate.

Part 3 of the Permit, titled "Storm Water Quality Management Program (SQMP) Implementation," provides that "[e]ach Permittee shall, at a minimum, implement the SQMP." Part 3.A.3 requires Permittees to "implement additional controls, where necessary, to reduce the discharge of pollutants in storm water to the [Maximum Extent Practicable (MEP)]." Part 3.B requires the implementation of BMPs by the Permittees. Part 3.G specifies that each Permittee is vested with the "necessary legal authority" to prohibit discharges to the MS4, and the Permittees are directed to develop storm-water and urban runoff ordinances for its jurisdiction.

The Permit has both self-monitoring and public-reporting requirements, which include: (1) monitoring of "mass emissions" at seven mass emission monitoring stations; (2) Water Column Toxicity Monitoring; (3) Tributary Monitoring; (4) Shoreline Monitoring; (5) Trash Monitoring; (6) Estuary Sampling; (7) Bioassessment; and (8) Special Studies.

This case concerns high levels of pollutants, particularly heavy metals and fecal bacteria, identified by mass-emissions

monitoring stations for the four Watershed Rivers (the Monitoring Stations). Mass-emissions monitoring measures *all* constituents present in water, and the readings give a cumulative picture of the pollutant load in a waterbody. According to the Permit, the purpose of mass-emissions monitoring is to (1) estimate the mass emissions from the MS4, (2) assess trends in the mass emissions over time, and (3) determine if the MS4 is contributing to exceedances of Water Quality Standards by comparing results to the applicable standards in the Basin Plan. The Permit establishes that the Principal Permittee, which is the District, shall monitor the mass-emissions stations. The Permit requires that mass-emission readings be taken five times per year for the Watershed Rivers.

The Los Angeles River and San Gabriel River Monitoring Stations are located in a channelized portion of the MS4 that is owned and operated by the District. *See* Excerpts of Record at 11; *see also* Dist. Ct. Docket No. 101: Declaration of Aaron Colangelo Ex. N: Deposition of Mark Pestrella at 476-78. The Los Angeles River Monitoring Station is located in the City of Long Beach in "a concrete lined trapezoidal channel."[4] The Los Angeles River Monitoring Station measures "total upstream tributary drainage" of 825 square miles, as the Los Angeles River is the largest watershed outlet in the County. The San Gabriel River Monitoring Station is located in Pico Rivera and measures an upstream tributary watershed of 450 square miles.

The Malibu Creek Monitoring Station is not located within a channelized portion of the MS4 but at an "existing stream gage station" near Malibu Canyon Road. It measures 105

[4]"Section Two: Site Descriptions," Los Angeles Cnty. Dept. of Pub. Works, *available at* http://dpw.lacounty.gov/wmd/npdes/9899_report/SiteDesc.pdf (last accessed July 6, 2011); *see also* "Section Two: Site Descriptions," Los Angeles Cnty. Dept. of Pub. Works, *available at* http://dpw.lacounty.gov/wmd/NPDES/2006-07_report%5CSection%202.pdf (last accessed July 6, 2011).

miles of tributary watershed. The Santa Clara River Monitoring Station is located in the City of Santa Clara and measures an upstream tributary area of 411 square miles.[5]

C. Water-Quality Exceedances in the Watershed Rivers

Between 2002 and 2008, the four Monitoring Stations identified hundreds of exceedances of the Permit's water-quality standards. These water-quality exceedances are not disputed. For instance, monitoring for the Los Angeles and San Gabriel Rivers showed 140 separate exceedances. These included high levels of aluminum, copper, cyanide, fecal coliform bacteria, and zinc in the rivers. Further, ocean monitoring at Surfrider Beach showed that there were 126 separate bacteria exceedances on 79 days, including 29 days where the fecal coliform bacteria limit was exceeded.

The District admits that it conveys pollutants via the MS4, but contends that its infrastructure alone does not generate or discharge pollutants. According to Defendants, the District conveys the collective discharges of the numerous "up-sewer" municipalities. Moreover, Defendants identify thousands of permitted dischargers whose pollutants are reaching the Watershed Rivers:

> (1) Los Angeles River watershed: (a) at least 1,344 NPDES-permitted industrial and 488 construction stormwater dischargers allowed to discharge during the time period relevant to the case; (b) three wastewater treatment plants; and (c) 42 separate incorporated cities within the Los Angeles River watershed discharging into the river upstream of the mass emission station.

[5]"Section Two: Site Descriptions," Los Angeles Cnty. Dept. of Pub. Works, *available at* http://dpw.lacounty.gov/wmd/NPDES/2006-07_report%5CSection%202.pdf (last accessed July 6, 2011).

(2) San Gabriel River watershed: (a) at least 276 industrial and 232 construction stormwater dischargers during the relevant time period; (b) at least 20 other industrial dischargers that were specifically permitted to discharge pollutants in excess of the water quality standards at issue in this action; (c) two wastewater treatment plants; and (d) 21 separate incorporated cities discharging into the watershed upstream of the mass emission station.

(3) Santa Clara River watershed: (a) eight dischargers permitted by industrial wastewater discharge permits where the limits in the permit allowed discharges of pollutants at concentrations higher than the water quality standards which plaintiffs contend were exceeded; (b) approximately 26 industrial and 187 construction stormwater dischargers; and (c) the Saugus Wastewater Reclamation Plant.

(4) Malibu Creek watershed: (a) seven industrial wastewater dischargers; and (b) at least five permitted discharges under the general industrial stormwater permit and at least 16 construction sites permitted to discharge under the general construction stormwater permit.

II. Proceedings before the District Court

Based on data self-reported by Defendants, Plaintiffs catalogued the water-quality exceedances in the Watershed Rivers. Beginning on May 31, 2007, Plaintiffs sent a series of notice letters to Defendants concerning these exceedances. On March 3, 2008, based on these purported violations, Plaintiffs commenced this citizen-enforcement action. After the district court dismissed certain elements of Plaintiffs' initial complaint because notice of the Permit violations was defective, Plaintiffs sent Defendants an adequate notice letter on July 3, 2008.

Plaintiffs filed the First Amended Complaint (Complaint) on September 18, 2008. In the Complaint, Plaintiffs assert six causes of action under the Clean Water Act. Only the first four of Plaintiffs' claims, which relate to the exceedances in the Watershed Rivers, and which the district court designated the "Watershed Claims," are before us. The first three Watershed Claims allege that, beginning in 2002 or 2003, the District and the County caused or contributed to exceedances of water-quality standards in the Santa Clara River (Claim 1), the Los Angeles River (Claim 2), and the San Gabriel River (Claim 3), in violation of 33 U.S.C. §§ 1311(a), 1342(p). The fourth Watershed Claim alleges that, beginning in 2002, Defendants caused or contributed to exceedances of the water quality standards and violated the Total Maximum Daily Load (TMDL) limits in Malibu Creek. Plaintiffs' four Watershed Claims each rest on the same premise: (1) the Permit sets water-quality limits for each of the four rivers; (2) the mass-emissions stations have recorded exceedances of those standards; (3) an exceedance is non-compliance with the Permit and, thereby, the Clean Water Act; and (4) Defendants, as holders of the Permit and operators of the MS4, are liable under the Act.

Before the district court, Plaintiffs moved for partial summary judgment on two of the Watershed Claims: the Los Angeles River and San Gabriel River exceedances. Defendants cross-moved for summary judgment on all four Watershed Claims.

In a March 2, 2010 Order, the district court denied each cross-motion for summary judgment on the Watershed Claims. *NRDC v. County of Los Angeles*, No. 08 Civ. 1467 (AHM), 2010 WL 761287 (C.D. Cal. Mar. 2, 2010), *amended on other grounds*, 2011 WL 666875 (C.D. Cal. Jan. 27, 2011). Although the district court accepted Plaintiffs' arguments that the Permit "clearly prohibits 'discharges from the MS4 that cause or contribute to the violation of Water Quality Standards or water quality objectives,' " 2010 WL 761287, at *6,

and that mass-monitoring stations "are the proper monitoring locations to determine if the MS4 is contributing to exceedances [of the Water Quality Standards or water quality objectives,]" *id.*, the district court held that Plaintiffs were attempting to establish liability without presenting evidence of who was responsible for the stormwater discharge. The district court observed that although "the District is responsible for the pollutants in the MS4" at the time they pass the mass-emissions stations, "that does not necessarily determine the question of whether the water passing by these points is a 'discharge' within the meaning of the Permit and the Clean Water Act." *Id.* at *7. Unable to decipher from the record where the MS4 ended and the Watershed Rivers begin, or whether any upstream outflows were contributing stormwater to the MS4, the district court stated that "Plaintiffs would need to present some evidence (monitoring data or an admission) that some amount of a standards-exceeding pollutant is being discharged though at least one District outlet." *Id.* at *8.

Following supplemental briefing, the district court again determined that "Plaintiffs failed to present evidence that the standards-exceeding pollutants passed through the Defendants' MS4 *outflows* at or near the time the exceedances were observed. Nor did Plaintiffs provide any evidence that the mass emissions stations themselves are located at or near a Defendant's outflow." The district court thereupon entered summary judgment for Defendants on all four Watershed Claims.

Under Fed. R. Civ. P. 54(b), the district court entered a partial final judgment on the Watershed Claims because they were "factually and legally severable" from the other claims and "[t]he parties and the Court would benefit from appellate resolution of the central legal question underlying the watershed claims: what level of proof is necessary to establish defendants' liability." Plaintiffs timely appeal.

JURISDICTION AND STANDARD OF REVIEW

We have jurisdiction under 28 U.S.C. § 1291.

We review the district court's grant of summary judgment in a Clean Water Act enforcement action de novo. *Assoc. to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res., Inc.*, 299 F.3d 1007, 1009 (9th Cir. 2002) (citing *Waste Action Project v. Dawn Mining Corp.*, 137 F.3d 1426, 1428 (9th Cir. 1998)).

DISCUSSION

Determining whether the County or the District violated the Permit's conditions, and thereby the Clean Water Act, requires us to examine whether an exceedance at a mass-emission monitoring station is a Permit violation, and, if so, whether it is beyond dispute that Defendants discharged pollutants that caused or contributed to water-quality exceedances.

I. Whether Exceedances at Mass-Emission Stations Constitute Permit Violations

[1] "The Clean Water Act regulates the discharge of pollutants into navigable waters, prohibiting their discharge unless certain statutory exceptions apply." *Russian River Watershed Protection Comm. v. City of Santa Rosa*, 142 F.3d 1136, 1138 (9th Cir. 1998) (citing 33 U.S.C. § 1311(a)). One such exception is for discharges by entities or individuals who hold NPDES permits. *Id.* The NPDES permitting program is the "centerpiece" of the Clean Water Act and the primary method for enforcing the effluent and water-quality standards established by the EPA and state governments. *Am. Iron & Steel Inst. v. EPA*, 115 F.3d 979, 990 (D.C. Cir. 1997); *see also Nw. Envtl. Advocates v. City of Portland*, 56 F.3d 979, 986-90 (9th Cir. 1995) ("Citizen suits to enforce water quality standards effectuate complementary provisions of the CWA and the

underlying purpose of the statute as a whole."); *Friends of the Everglades v. S. Fla. Water Mgmt. Dist.*, 570 F.3d 1210, 1225 (11th Cir. 2009) (citing *Nat'l Wildlife Fed'n v. Gorsuch*, 693 F.2d 156,175-76 (D.C. Cir. 1982) ("There is indeed some basis in the legislative history for the position that Congress viewed the NPDES program as its most effective weapon against pollution.")).

To decipher the meaning and enforceability of NPDES permit terms, we interpret the unambiguous language contained in the permit. *Russian River*, 142 F.3d at 1141. We review a permit's provisions and meaning as we would any contract or legal document. *See Nw. Envtl. Advocates*, 56 F.3d at 982. As described *supra*, the Permit prohibits MS4 discharges into receiving waters that exceed the Water Quality Standards established in the Basin Plan and elsewhere. Specifically, Section 2.1 provides: "[D]ischarges from the MS4 that cause or contribute to the violation of Water Quality Standards or water quality objectives are prohibited." Section 2.2 of the Permit reads: "Discharges from the MS4 of storm water, or non-storm water, for which a Permittee is responsible for, shall not cause or contribute to a condition of nuisance."

Nevertheless, Defendants contend that exceedances observed at mass-emissions stations cannot establish liability on behalf of any individual Permittee. Their argument in this respect, as we discuss more thoroughly *infra*, relies heavily on their belief that the record is bereft of evidence connecting Defendants to the water-quality exceedances. Defendants also assert that the mass-emissions stations are "neither designed nor intended" to measure the compliance of any Permittee and, therefore, cannot form the basis for a Permit violation. Defendants also argue that municipal compliance with an NPDES stormwater permit cannot be reviewed under the same regulatory framework as a private entity or an individual. In support of this contention, Defendants cite to a 1990 EPA rule:

> When enacting this provision, Congress was aware of the difficulties in regulating discharges from municipal separate storm sewers solely through traditional end-of-pipe treatment and intended for EPA and NPDES States to develop permit requirements that were much broader in nature than requirements which are traditionally found in NPDES permits for industrial process discharges or POTWs. The legislative history indicates, municipal storm sewer system "permits will not necessarily be like industrial discharge permits." Often, an end-of-the-pipe treatment technology is not appropriate for this type of discharge.

Brief of Appellees 33 (quoting "National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges," 55 Fed. Reg. 47,990, 48,037-38 (Nov. 16, 1990)).

As we detail *infra*, neither the statutory development of the Clean Water Act nor the plain language of EPA regulations supports Defendants' arguments that NPDES permit violations are less enforceable or unenforceable in the municipal-stormwater context. In fact, since the inception of the NPDES, Congress has expanded NPDES permitting to bring municipal dischargers within the Clean Water Act's coverage.

A. Regulating MS4 Operators

The NPDES permitting program originated in the 1972 amendments to the Clean Water Act. Pub. L. 92-500, § 2, 86 Stat. 88, *reprinted in* 1972 U.S.C.C.A.N. 3668 (codified as amended at 33 U.S.C. § 1342). At the time, the NPDES program was viewed "as the primary means of enforcing the Act's effluent limitations." *Natural Res. Def. Council v. Costle*, 568 F.2d 1369, 1371 (D.C. Cir. 1977); *see also Natural Res. Def. Council, Inc. v. EPA*, 966 F.2d 1292, 1295 (9th Cir. 1992) (examining statutory history of 1972 amendments

to the Clean Water Act) (hereafter *NRDC v. EPA*). The permitting program is codified at Section 402 of the Clean Water Act. 33 U.S.C. § 1342. In 1973, the EPA promulgated regulations categorically exempting "discharges from a number of classes of point sources . . . including . . . separate storm sewers containing only storm runoff uncontaminated by any industrial or commercial activity." *Costle*, 568 F.2d at 1372 (citing 40 C.F.R. § 125.4 (1975)). The EPA's exemption of certain point sources, including ms4s, from Section 402's blanket requirement was invalidated by the United States Court of Appeals for the District of Columbia Circuit in *Costle*. *Id.* at 1376-77. The *Costle* court highlighted that "[t]he wording of the [CWA], legislative history, and precedents are clear: the EPA Administrator does not have authority to exempt categories of point sources from the permit requirements of § 402." *Id.* at 1377.

In the ten-year period following the *Costle* decision, the EPA did not promulgate regulations addressing discharges by ms4 operators. *See NRDC v. EPA*, 966 F.2d at 1296 (citing "National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges; Application Deadlines," 56 Fed. Reg. 56,548 (1991)). In 1987, after continued nonfeasance by the EPA, Congress enacted the Water Quality Act amendments to the Clean Water Act to regulate stormwater discharges from, *inter alia*, ms4s. *See Defenders of Wildlife*, 191 F.3d at 1163 ("Ultimately, in 1987, Congress enacted the Water Quality Act amendments to the CWA."); *NRDC v. EPA*, 966 F.2d at 1296 ("Recognizing both the environmental threat posed by storm water runoff and EPA's problems in implementing regulations, Congress passed the Water Quality Act of 1987[.]") (internal citations omitted); *see also* 55 Fed. Reg. 47,994 ("[P]ermits for discharges from municipal separate storm sewer systems must require controls to reduce the discharge of pollutants to the maximum extent practicable, and where necessary water quality-based controls, and must include a requirement to effectively prohibit non-storm water discharges into the storm

sewers. Furthermore, EPA in consultation with State and local officials must develop a comprehensive program to designate and regulate other storm water discharges to protect water quality.").

[2] The principal effect of the 1987 amendments was to expand the coverage of Section 402's permitting requirements. *NRDC v. EPA*, 966 F.2d at 1296. Section 402(p) established a "phased and tiered approach" for NPDES permitting. *Nw. Envtl. Def. Ctr. v. Brown*, 640 F.3d 1063, 1081-82 (9th Cir. 2011) (citing 33 U.S. § 1342(p)). "The purpose of this approach was to allow EPA and the states to focus their attention on the most serious problems first." *NRDC v. EPA*, 966 F.2d at 1296. "Phase I" included "five categories of stormwater discharges," deemed "the most significant sources of stormwater pollution," who were required to obtain an NPDES permit for their stormwater discharge by 1990. *Brown*, 640 F.3d at 1082 (citing 33 U.S. § 1342(p)(2)). The five categories of the most serious discharge were:

> (p) Municipal and industrial stormwater discharges
> . . .
>
> (2) . . .
>
> . . .
>
> (A) A discharge with respect to which a permit has been issued under this section before February 4, 1987.
>
> (B) A discharge associated with industrial activity.
>
> (C) *A discharge from a municipal separate storm sewer system serving a population of 250,000 or more.*

> (D) *A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.*
>
> (E) A discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

33 U.S.C. § 1342(p)(2) (emphases added). Of the five categories of Phase I dischargers required to obtain the first permits, two are ms4 operators: municipalities with populations over 250,000, and municipalities with populations between 100,000 and 250,000. *Id.* § 1342(p)(2)(C)-(D). Indeed, as noted *supra*, the Permit at issue here was first authorized in 1990 pursuant to the 1987 amendments.

Rather than regulate individual sources of runoff, such as churches, schools and residential property (which one Congressman described as a potential "nightmare"),[6] and as regulations prior to 1987 theoretically required, Congress put the NPDES permitting requirement at the municipal level to ease the burden of administering the program. *Brown*, 640 F.3d at 1085-86. That assumption of municipal control is found in the Permit at issue here—Part 3.G.2 of the Permit states that "Permittees shall possess adequate legal authority to . . . [r]equire persons within their jurisdiction to comply with conditions in Permittee's ordinances, permits, contracts, model programs, or orders (i.e. hold dischargers to its MS4 accountable for their contributions of pollutants and flows.)[.]"

[6] *See* 131 Cong. Rec. 15616, 15657 (Jun. 13, 1985) (Statement of Sen. Wallop) ("[The regulations] can be interpreted to require everyone who has a device to divert, gather, or collect stormwater runoff and snowmelt to get a permit from EPA as a point source. . . . Requiring a permit for these kinds of stormwater runoff conveyance systems would be an administrative nightmare.").

[3] Defendants' position that they are subject to a less rigorous or unenforceable regulatory scheme for their stormwater discharges cannot be reconciled with the significant legislative history showing Congress's intent to bring ms4 operators under the NPDES-permitting system. Even the selectively excerpted regulatory language Defendants present to us—"Congress was aware of the difficulties in regulating discharges from municipal separate storm sewers . . . [and] intended for EPA and NPDES States to develop permit requirements that were much broader in nature than requirements which are traditionally found in NPDES permits"—does not support Defendants' view. Indeed, this excerpt is but one paragraph from a longer section titled, "Site-Specific Storm Water Quality Management Programs for Municipal Systems." 55 Fed. Reg. 48,037-38. The quoted language follows a paragraph which reads:

> Section 402(p)(3)(iii) of the CWA *mandates* that permits for discharges from municipal separate storm sewers *shall require controls to reduce the discharge of pollutants* to the maximum extent practicable (MEP), including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Director determines appropriate for the control of such pollutants.

55 Fed. Reg. 48,038 (emphasis added). The use of such language—employing "mandates" and commands to regulate—hardly supports Defendants' notion that NPDES permits are unenforceable against municipalities for their stormwater discharges. Moreover, the paragraphs that follow the excerpt explain why developing system-wide controls to manage municipal stormwater is preferable to controlling pollution through end-of-pipe effluent technologies. *Id.* The regulations highlight that "Congress recognized that permit requirements for municipal separate storm sewer systems should be developed in a flexible manner to allow site-specific permit condi-

tions to reflect the wide range of impacts that can be associated with these discharges." *Id.* Rather than evincing any intent to treat permitting "differently" for municipalities, the EPA merely explains why state authorities that issue permits should draft site-specific rules, as the Regional Board did here, and why water-quality standards may be preferable over more-difficult-to-enforce effluent limitations. Avoiding wooden permitting requirements and granting states flexibility in setting forth requirements is not equivalent to immunizing municipalities for stormwater discharges that violate the provisions of a permit.

B. Enforcement of Mass-Emissions Violations

Part and parcel with Defendants' argument that they are subject to a relaxed regulatory structure is their view that the Permit's language indicates that mass-emissions monitoring is not intended to be enforcement mechanism against municipal dischargers. Defendants claim that measuring water-quality serves only an hortatory purpose—as Defendants state, "the mass emission monitoring program . . . neither measures nor was designed to measure any individual permittee's compliance with the Permit." This proposition, which if accepted would emasculate the Permit, is unsupported by either our case law or the plain language of the Permit conditions.

[4] "The plain language of CWA § 505 authorizes citizens to enforce *all* permit conditions." *Nw. Envtl. Advocates*, 56 F.3d at 986 (emphasis in original). We used these words and emphasized *all* permit conditions because the language of the Clean Water Act is clear in its intent to guard against all sources and superintendents of water pollution and "clearly contemplates citizen suits to enforce 'a permit or condition thereof.' " *Id.* (citing 33 U.S.C. § 1365(f)(2), (f)(6)); *see also W. Va. Highlands Conservancy, Inc. v. Huffman*, 625 F.3d 159, 167 (4th Cir. 2010) ("In other words, the statute takes the water's point of view: water is indifferent about who initially polluted it so long as pollution continues to occur.").

We have previously addressed, and rejected, municipal attempts to avoid NPDES permit enforcement. In *Northwest Environmental Advocates*, we considered a citizen-suit challenging the City of Portland's operation of a combined sewer system which periodically overflowed and discharged raw sewage into two rivers. 56 F.3d at 981-82. The plaintiffs brought suit on the basis of an NPDES permit condition which "prohibit[ed] any discharges that would violate Oregon water quality standards." *Id.* at 985. Reviewing the history of the 1972 amendments and the Supreme Court's decision in *PUD No.1 of Jefferson County v. Washington Department of Ecology*, 511 U.S. 700 (1994), we recognized that Congress had authorized enforcement of state water-quality standards, lest municipalities be immunized on the technicality that not all water standards can be expressed as effluent limitations. *Id.* at 988-89. The overflows from the Portland sewer system were "caused primarily by uncontrollable events—*i.e.*, the amount of stormwater entering the system[.]" *Id.* at 989. Because the total amount of water entering and leaving the sewer system was unknown, it was impossible to articulate effluent standards which would "ensure that the gross amount of pollution discharged [would] not violate water quality standards." *Id.* Only by enforcing the water-quality standards themselves as the limits could the purpose of the CWA and the NPDES system be effectuated. *Id.* at 988-90. Indeed, we noted that prior to the 1972 incorporation of effluent limitations, the Clean Water Act depended entirely on enforcement based on water-quality standards. *Id.* at 986. However, troubled by the " 'almost total lack of enforcement' " under the old system, Congress added the effluent limitation standards "not to supplant the old system" but to "improve enforcement." *Id.* at 986 (quoting S. Rep. No. 414, 92d Cong., 2d Sess. 2 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3671).

Our prior case law emphasizes that NPDES permit enforcement is not scattershot—each permit term is simply enforced as written. *See Union Oil*, 813 F.2d at 1491 ("It is unclear whether the court intended to excuse these violations under

the upset defense or under a de minimis theory. In either event, the district court erred. The Clean Water Act and the regulations promulgated under it make no provision for 'rare' violations."); *see also United States v. CPS Chem. Co.*, 779 F. Supp. 437, 442 (D. Ark. 1991) ("For enforcement purposes, a permittee's [Discharge Monitoring Reports] constitute admissions regarding the levels of effluents that the permittee has discharged."). As we explained in *Union Oil*, Congress structured the CWA to function by self-monitoring and self-reporting of violations to " 'avoid the necessity of lengthy fact finding, investigations, and negotiations at the time of enforcement.' " 813 F.2d at 1492 (quoting S. Rep. No. 414, 92d Cong., 1st Sess. 64, *reprinted in* 1972 U.S.C.C.A.N. 3668, 3730). When self-reported exceedances of an NPDES permit occur, the Clean Water Act allows citizens to bring suit to enforce the terms of the Permit.

[5] The plain language of the Permit countenances enforcement of the water-quality standards when exceedances are detected by the various compliance mechanisms, including mass-emissions monitoring. First, the Permit incorporates and adopts the Basin Plan, which sets the water-quality standards for bacteria and contaminants for the receiving waters of Southern California, including the Watershed Rivers. The Permit then sets out a multi-part monitoring program for those standards, the goals of which explicitly include "[a]ssessing compliance with this Order[.]" "Compliance" under the Clean Water Act primarily means adhering to the terms and conditions of an NPDES permit. *EPA v. Calif.*, 426 U.S. at 223 ("Thus, the principal means of enforcing the pollution control and abatement provisions of the Amendments is to enforce compliance with a permit."). The first monitoring program listed in the Permit is "Mass Emissions." While Defendants are correct to note that mass-emissions monitoring has as one of its goals "estimat[ing] the mass emissions from the MS4," Defendants fail to mention that another goal, listed just below "estimating," is "[d]etermin[ing] if the MS4 is contributing to exceedances of Water Quality Standards."

Although Defendants argue that compliance with other Permit provisions, in particular Part 2.3's iterative process, forgives violations of the discharge prohibitions in Parts 2.1 and 2.2, no such "safe harbor" is present in this Permit.[7] Rather, Part 2.3 first provides that Permittees shall comply with the Water Quality Standards "through timely implementation of control measures and other actions. . . in accordance with the SQMP and its components." Part 2.3 clarifies that Parts 2 and 3 of the Permit interact, but it offers no textual support for the proposition that compliance with certain provisions shall forgive non-compliance with the discharge prohibitions. As opposed to absolving noncompliance or exclusively adopting the MEP standard, the iterative process ensures that if water quality exceedances "persist," despite prior abatement efforts, a process will commence whereby a responsible Permittee amends its SQMP. Given that Part 3 of the Permit states that SQMP implementation is the "minimum" required of each Permittee, the discharge prohibitions serve as additional requirements that operate as enforceable water-quality-based performance standards required by the Regional Board. *See e.g., Bldg. Indus. Ass'n of San Diego Cnty. v. State Water Res. Control Bd.*, 22 Cal. Rptr. 3d 128, 141 (Cal. Ct. App. 2004) (rejecting arguments that "under federal law the 'maximum extent practicable' standard is the 'exclusive' measure that may be applied to municipal storm sewer discharges and [that] a regulatory agency may not require a Municipality to comply with a state water quality standard if the required controls exceed a 'maximum extent practicable' standard").

[7]We also note, as did the district court, that when the validity of this Permit was challenged in California state court by various municipal entities, including the District, the argument that the Permit's discharge prohibitions were invalid for not containing a "safe harbor" was rejected. *See In re L.A. Cnty. Mun. Storm Water Permit Litig.*, No. BS 080548, at 4-5, 7 (L.A. Super. Ct. Mar. 24, 2005) ("In sum, the Regional Board acted within its authority when it included Parts 2.1 and 2.2. in the Permit without a 'safe harbor,' whether or not compliance therewith requires efforts that exceed the 'MEP' standard.").

Part 6.D of the Permit, titled "Duty to Comply," lays any doubts about municipal compliance to rest: "Each Permittee must comply with all terms, requirements, and conditions of this Order. Any violation of this order constitutes a violation of the Clean Water Act . . . and is grounds for enforcement action, Order termination, Order revocation and reissuance, denial of an application for reissuance; or a combination thereof[.]" This unequivocal language is unsurprising given that all NPDES permits must include monitoring provisions ensuring that permit conditions are satisfied. *See* 33 U.S.C. § 1318(a)(A) ("[T]he Administrator [of the EPA] shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), [and] (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe)[.]"); 40 C.F.R. § 122.44(i)(1) (specifying the monitoring requirements for compliance, "mass . . . for each pollutant limited in the permit," and volume of effluent discharged); *Ackels v. EPA*, 7 F.3d 862, 866 (9th Cir. 1993) ("[T]he Act grants EPA broad authority to require NPDES permitees to monitor, at such intervals as the Administrator shall prescribe, whenever it is required to carry out the objectives of the Act.").

[6] In sum, the Permit's provisions plainly specify that the mass-emissions monitoring is intended to measure compliance and that "[a]ny violation of this Order" is a Clean Water Act violation. The Permit is available for public inspection to aid this purpose. Accordingly, we agree with the district court's determination that an exceedance detected through mass-emissions monitoring is a Permit violation that gives rise to liability for contributing dischargers.

II. Evidence of Discharge

We next turn to the factual issue on which the district court granted summary judgement in favor of Defendants—whether

any evidence in the record shows Defendants discharged stormwater that caused or contributed to water-quality violations. The district court determined that a factual basis was lacking:

> Plaintiffs failed to present evidence that the standards-exceeding pollutants passed through the Defendants' MS4 *outflows* at or near the time the exceedances were observed. Nor did Plaintiffs provide any evidence that the mass emissions stations themselves are located at or near a Defendant's outflow. Plaintiffs do represent in their supplemental briefing that their monitoring data reflects sampling conducted at or near Defendants' outflows. . . . However, the declarations on which Plaintiffs rely do *not* clearly indicate that the sampling in question was conducted at an outflow (as opposed to in-stream).
>
> . . .
>
> In short, Plaintiffs have failed to follow the Court's instructions and present data which could establish that "standards-exceeding pollutants . . . passed through Defendants' MS4 *outflows* at or near the time the exceedances were observed." That the pollutants must have passed through an outflow is key because, as the Court found in the March 2 Order, standards-exceeding pollutants must have passed through a County or District outflow in order to constitute a discharge under the Clean Water Act and the Permit.

[7] Plaintiffs have argued throughout this litigation that the measured exceedances in the Watershed Rivers *ipso facto* establish Permit violations by Defendants. Because these points are designated in the Permit for purposes of assessing "compliance," this argument is facially appealing. But the Clean Water Act does not prohibit "undisputed" exceedances;

it prohibits "discharges" that are *not* in compliance with the Act, which means in compliance with the NPDES. *See* 33 U.S.C. § 1311(a); *see also Miccosukee Tribe*, 541 U.S. at 102. While it may be undisputed that exceedances have been detected, responsibility for those exceedances requires proof that some entity discharged a pollutant. Indeed, the Permit specifically states that "*discharges* from the MS4 that cause or contribute to the violation of the Water Quality Standards or water quality objectives *are prohibited*."

"[D]ischarge of pollutant" is defined as "any addition of any pollutant to navigable waters from any point source[.]" 33 U.S.C. § 1362(12). Under the Clean Water Act, the MS4 is a "Point Source." *See* 33 U.S.C. § 1342(p)(2), 1362(14). "Navigable waters" is used interchangeably with "waters of the United States." *See Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F.3d 526, 532 (9th Cir. 2001). Those terms mean, *inter alia*, "[a]ll waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide[.]" 40 C.F.R. § 122.2. The Watershed Rivers are all navigable waters.

Thus, the primary factual dispute between the parties is whether the evidence shows any *addition* of pollutants by Defendants to the Watershed Rivers. Defendants contend that the "District does not generate any of the pollutants in the system, but only transports them from other permitted and non-permitted sources." Moreover, Defendants contend that by measuring mass-emissions downstream from where the pollutants entered the sewer system, it is not possible to pinpoint which entity, if any, is responsible for adding them to the rivers. In the words of the district court, there is no evidence that "standards-exceeding pollutants . . . passed through Defendants' MS4 *outflows* at or near the time the exceedances were observed." Plaintiffs counter that the Monitoring Stations are downstream from hundreds of miles of storm drains which have generated the pollutants being detected. To Plaintiffs, it

is irrelevant which of the thousands of storm drains were the source of polluted stormwater—as holders of the Permit, Defendants bear responsibility for the detected exceedances.

Resolving this dispute over whether Defendants added pollutants depends heavily on the level of generality at which the facts are viewed. At the broadest level, all sides agree with basic hydrology—upland water becomes polluted as it runs over urbanized land and begins a downhill flow, first through municipal storm drains, then into the MS4 which carries the water (and everything in it) to the Watershed Rivers, which flow into the Pacific Ocean. More narrowly, it is, as Plaintiffs concede, impossible to identify the particular storm drains that had, for instance, some fecal bacteria which contributed to a water-quality violation. Ultimately, each side fails to rebut the other's arguments. Defendants ignore their role as controllers of thousands of miles of MS4 and the stormwater it conveys[8] by demanding that Plaintiffs engage in the Sisyphean task of testing particular storm drains in the County for the source of each pollutant. Likewise, Plaintiffs did not enlighten the district court with sufficient evidence for certain claims and assumed it was obvious to anyone how stormwater makes its way from a parking lot in Pasadena into the MS4, through a mass-emissions station, and then to a Watershed River.

[8] Despite shortcomings in each side's arguments, there is evidence in the record showing that polluted stormwater from the MS4 was added to two of the Watershed Rivers: the Los

[8]Defendants' untenable position about their responsibility for discharges is confirmed by the testimony of their Rule 30(b)(6) witness:

> *Question*: What if those flows [which exceeded water-quality standards] were so polluted with oil and grease that they were on fire as they came out of the system? Would your view be the same, that the District is not contributing to exceedances?
>
> *Answer*: That the system the District maintains is not contributing to, yes.

Angeles River and San Gabriel River. Because the mass-emissions stations, as the appropriate locations to measure compliance, for these two rivers are located in a section of the MS4 owned and operated by the District, when pollutants were detected, they had not yet exited the point source into navigable waters. As such, there is no question over who controlled the polluted stormwater at the time it was measured or who caused or contributed to the exceedances when that water was again discharged to the rivers—in both cases, the District. As a matter of law and fact, the MS4 is distinct from the two navigable rivers; the MS4 is an intra-state man-made construction—not a naturally occurring Watershed River. *See Headwaters*, 243 F.3d at 533 ("The EPA has interpreted 'waters of the United States' to include 'intrastate lakes, rivers, streams (including intermittent streams) . . . the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce' and 'tributaries of [those] waters.' " (quoting 40 C.F.R. § 122.2(c), (e)). At least some outfalls for the MS4 were downstream from the mass-emissions stations. *See* 40 C.F.R. § 122.26(9) ("Outfall means a point source . . . at the point where a municipal separate storm sewer discharges to waters of the United States . . . ."). The discharge from a point source occurred when the still-polluted stormwater flowed out of the concrete channels where the Monitoring Stations are located, through an outfall, and into the navigable waterways. We agree with Plaintiffs that the precise location of each outfall is ultimately irrelevant because there is no dispute that MS4 eventually adds stormwater to the Los Angeles and San Gabriel Rivers downstream from the Monitoring Stations.

Although the District argues that merely channeling pollutants created by other municipalities or industrial NPDES permittees should not create liability because the District is not an instrument of "addition" or "generation,"[9] the Clean Water

[9]This issue does not usually arise in Clean Water Act litigation because it is generally assumed that ms4s "discharge" stormwater. *See, e.g.*, *Miss.*

Act does not distinguish between those who add and those who convey what is added by others—the Act is indifferent to the originator of water pollution. As Judge Wilkinson of the Fourth Circuit cogently framed it: "[The Act] bans 'the discharge of any pollutant by any person' regardless of whether that 'person' was the root cause or merely *the current superintendent of the discharge*." *Huffman*, 625 F.3d at 167 (emphasis added). "Point sources" include instruments that channel water, such as "any pipe, ditch, *channel*, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. § 1362(14) (emphasis added). The EPA's regulations further specify that ms4 operators require permits for channeling: "Discharge of a pollutant . . . includes additions of pollutants into waters of the United States from: surface runoff which is collected or *channelled* by man; discharges through pipes, sewers, or other conveyances owned by a State [or] municipality." 40 C.F.R. § 122.2 (emphasis added). "[M]ost urban runoff is discharged through conveyances such as separate storm sewers or other conveyances which are point sources under the CWA. These discharges are subject to the NPDES program." 55 Fed. Reg. 47,991. Finally, the Supreme Court stated in *Miccosukee Tribe* that "the definition of 'discharge of a pollutant' contained in § 1362(12) . . . *includes* within its reach point sources that do not themselves generate pollutants." 541 U.S. at 105 (emphasis added).

[9] Accordingly, the district court erred in stating that "Plaintiffs have not provided the Court with the necessary evidence to establish that the Los Angeles River and the San Gabriel River below the mass emissions monitoring stations

River Revival v. Adm'r, E.P.A., 107 F. Supp. 2d 1008, 1009 (D. Minn. 2000) ("These lawsuits involve the discharge of storm water into the Mississippi River through the Cities' storm sewers. Thus, and this is not in dispute, the storm water discharge is subject to the NPDES permitting requirements.").

are bodies of water that are distinct from the MS4 above these monitoring stations." In light of the evidence that the Los Angeles River and San Gabriel River mass-emission stations are in concrete portions of the MS4 controlled by the District, it is beyond dispute that the District is discharging pollutants from the MS4 to the Los Angeles River and San Gabriel River in violation of the Permit. Thus, Plaintiffs are entitled to summary judgment on Claims 2 and 3.

[10] However, we agree with the district court that, as the record is currently constituted, it is not possible to mete out responsibility for exceedances detected in the Santa Clara River and Malibu Creek (Claims 1 and 4). Like the district court, we are unable to identify the relationship between the MS4 and these mass-emissions stations. From the record, it appears that both monitoring stations are located within the rivers themselves. Plaintiffs have not endeavored to provide the Court with a map or cogent explanation of the inter-workings or connections of this complicated drainage system. We recognize that both the Santa Clara and Malibu Creek Monitoring Stations are downstream from hundreds or thousands of storm drains and MS4 channels. It is highly likely, but on this record nothing more than assumption, that polluted stormwater exits the MS4 controlled by the District and the County, and flows downstream in these rivers past the mass-emissions stations. To establish a violation, Plaintiffs were obligated to spell out this process for the district court's consideration and to spotlight how the flow of water from an ms4 "contributed" to a water-quality exceedance detected at the Monitoring Stations. *See, e.g.*, *Nicholas Acoustics & Specialty Co. v. H & M Constr. Co.*, 695 F.2d 839, 846-47 (5th Cir. 1983) ("We wish to emphasize most strongly that it is foolhardy for counsel to rely on a court to find disputed issues of material fact not highlighted by counsel's paperwork; a party that has suffered the consequences of summary judgment below has a definite and specific duty to point out the thwarting facts . . . . Judges are not ferrets!"). Contrary to Plaintiffs' contention, this would not require independent sampling of

the District's outfalls. Indeed, simply ruling out the other contributors of stormwater to these two rivers or following up to vague answers given by Defendants' witnesses could have satisfied Plaintiffs' evidentiary obligation. In the alternative, prior to commencing actions such as this one, Plaintiffs could heed the district court's sensible observation and, for purposes of their evidentiary burden, "sample from *at least one* outflow that included a standards-exceeding pollutant[.]"

Finally, for all four Watershed Rivers, the record is silent regarding the path stormwater takes from the unincorporated land controlled by the County to the Monitoring Stations. The district court correctly demanded evidence for the County's liability, which Plaintiffs did not proffer.

[11] In sum, Plaintiffs were entitled to summary judgment on Claims 2 and 3 against the District for the Los Angeles River and San Gabriel River because (1) the Monitoring Stations for these two rivers are located in a portion of the MS4 owned and operated by the District, (2) these Monitoring Stations detected pollutants in excess of the amount authorized by the NPDES permit, and (3) this polluted water "discharged" into the Los Angeles River and San Gabriel River. The Plaintiffs, however, have not met their burden on summary judgment for their other claims because they did not provide the district court with evidence that the MS4 controlled by the District "discharged" pollutants that passed through the Monitoring Stations in the Santa Clara River and Malibu Creek, or that ms4s controlled by the County "discharged" pollutants that passed through the Monitoring Stations in any of the four rivers in question.

CONCLUSION

The district court's judgment for Defendant District on Claims 2 and 3 of the First Amended Complaint is REVERSED, and this matter is REMANDED to the district court for further proceedings consistent with this opinion. The

district court's grant of summary judgment for Defendant District on Claims 1 and 4 and for Defendant County on all Watershed Claims is AFFIRMED.

AFFIRMED IN PART, REVERSED IN PART, and REMANDED.

Each side shall bear its own costs.

LexisNexis®

DEFENDERS OF WILDLIFE and THE SIERRA CLUB, Petitioners, v. CAROL M. BROWNER, in her official capacity as Administrator of the United States Environmental Protection Agency, Respondent. CITY OF TEMPE, ARIZONA; CITY OF TUCSON, ARIZONA; CITY OF MESA, ARIZONA; PIMA COUNTY, ARIZONA; and CITY OF PHOENIX, ARIZONA, Intervenors-Respondents.

No. 98-71080

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

191 F.3d 1159; *1999 U.S. App. LEXIS 22212*; *99 Cal. Daily Op. Service 7618*; *99 Daily Journal DAR 9661*; *30 ELR 20116*

August 11, 1999, Argued and Submitted, San Francisco, California
September 15, 1999, Filed

SUBSEQUENT HISTORY: [**1] As Amended December 7, 1999.

PRIOR HISTORY: Petition to Review a Decision of the Environmental Protection Agency. EPA No. 97-3.

DISPOSITION: PETITION DENIED.

CASE SUMMARY:

PROCEDURAL POSTURE: Petitioners appealed decision of the Environmental Appeals Board denying reconsideration of the Environmental Protection Agency's decision issuing five municipalities National Pollution Discharge System permits, without requiring numeric limitations to ensure compliance with state water-quality standards.

OVERVIEW: The Environmental Protection Agency (EPA) issued permits to municipalities without requiring limitations on storm-sewer discharges. Petitioners alleged that the Water Quality Act (WQA), *33 U.S.C.S. § 1311(b)(1)(C)*, required municipalities to strictly comply with state water-quality standards. Court concluded that EPA's decision was not arbitrary or capricious. Court determined that WQA unambiguously expressed Congress' intent that municipal storm-sewer discharges did not have to strictly comply with WQA. Congress expressly put in provision for industrial storm-water discharges requiring compliance with WQA, but there was no similar provision in WQA for municipal storm-sewer discharges. The plain language of WQA thus exempted municipal storm-sewer discharges from strict compliance. Court found other provisions in WQA excluded certain discharges from permit altogether. Based on that fact, court concluded exemption of municipal storm-sewer discharges from strict compliance with WQA was not so unusual that the court should not interpret the statute as written.

OUTCOME: Court denied petition for reconsideration, because Environmental Protection Agency did not act arbitrarily or capriciously in issuing permits. In examining Water Quality Act, court determined that it was Congress' specific intent to exempt municipal storm-sewer discharges from strict compliance with the statute.

LexisNexis(R) Headnotes

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Public Participation
[HN1] *26 U.S.C.S. § 1342(a)(1)* authorizes the Environmental Protection Agency to issue National Pollution Discharge Elimination System permits, thereby allowing entities to discharge some pollutants.

Administrative Law > Judicial Review > Reviewability > Standing
Civil Procedure > Justiciability > General Overview

Environmental Law > Litigation & Administrative Proceedings > Judicial Review
[HN2] *33 U.S.C.S. § 1369(b)(1)(F)* authorizes any interested person to seek review in court of an Environmental Protection Agency decision issuing or denying any permit under *26 U.S.C.S. § 1342(a)(1)*. Any interested person means any person that satisfies the injury-in-fact requirement for U.S. Const. art. III standing.

Environmental Law > Litigation & Administrative Proceedings > Nuisances, Trespasses & Strict Liability
[HN3] A plaintiff claiming injury from environmental damage must use the area affected by the challenged activity.

Administrative Law > Judicial Review > Standards of Review > Abuse of Discretion
Administrative Law > Judicial Review > Standards of Review > Arbitrary & Capricious Review
Environmental Law > Litigation & Administrative Proceedings > Judicial Review
[HN4] The Administrative Procedures Act, *5 U.S.C.S. § 701, et seq.*, provides the standard of review for the Environmental Protection Agency's decision to issue a permit. Under the Administrative Procedures Act, the court generally reviews such a decision to determine whether it was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.

Administrative Law > Agency Rulemaking > Rule Application & Interpretation > Validity
Administrative Law > Judicial Review > Standards of Review > General Overview
Governments > Legislation > Interpretation
[HN5] The court has established a two-step process for reviewing an agency's construction of a statute it administers. Under the first step, the court employs traditional tools of statutory construction to determine whether Congress has expressed its intent unambiguously on the question before the court. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress. If, instead, Congress has left a gap for the administrative agency to fill, the court proceeds to step two. At step two, the court must uphold the administrative regulation unless it is arbitrary, capricious, or manifestly contrary to the statute.

Environmental Law > Water Quality > Clean Water Act > Coverage & Definitions > Discharges

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
[HN6] The Clean Water Act, *33 U.S.C.S. § 1251, et seq.*, generally prohibits the discharge of any pollutant from a point source into the navigable waters of the United States. An entity can, however, obtain a National Pollution Discharge Elimination System permit that allows for the discharge of some pollutants.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN7] A National Pollution Discharge Elimination System permit imposes effluent limitations on discharges. First, a permit-holder shall achieve effluent limitations which shall require the application of the best practicable control technology currently available. Second, a permit-holder shall achieve any more stringent limitation, including those necessary to meet water quality standards, treatment standards or schedules of compliance, established pursuant to any state law or regulations.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
[HN8] See *33 U.S.C.S. § 1342(p)(3)*.

Governments > Legislation > Interpretation
[HN9] Questions of congressional intent that can be answered with traditional tools of statutory construction are still firmly within the province of the courts. Using traditional tools of statutory construction, when interpreting a statute, the court looks first to the words that Congress used. Rather than focusing just on the word or phrase at issue, the court looks to the entire statute to determine congressional intent.

Governments > Legislation > Interpretation
[HN10] Where Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
Governments > Legislation > Interpretation
[HN11] The court generally refuses to interpret a statute in a way that renders a provision superfluous.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
Governments > Local Governments > Licenses
[HN12] The Water Quality Act contains other provisions that undeniably exempt certain discharges from the permit requirement altogether, and therefore from *33 U.S.C.S. § 1311*. For example, the Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture. *33 U.S.C.S. § 1342(l)(1)*. Similarly, a permit is not required for certain storm-water runoff from oil, gas, and mining operations. See *33 U.S.C.S. § 1342(l)(2)*.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
[HN13] Congress gave the administrator discretion to determine what controls are necessary. Under that discretionary provision, the Environmental Protection Agency (EPA) has the authority to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants. The EPA also has the authority to require less than strict compliance with state water-quality standards. The EPA has adopted an interim approach, which uses best management practices (BMPs) in first-round storm water permits to provide for the attainment of water quality standards.

COUNSEL: Jennifer Anderson and David Baron, Arizona Center for Law in the Public Interest, Phoenix, Arizona, for the petitioners.

Alan Greenberg, Attorney, U.S. Department of Justice, Environment & Natural Resources Division, Denver, Colorado, for the respondent.

Craig Reece, Phoenix City Attorney's Office, Phoenix, Arizona; Stephen J. Burg, Mesa City Attorney's Office, Mesa, Arizona; Timothy Harrison, Tucson City Attorney's Office, Tucson, Arizona; and Harlan C. Agnew, Deputy County Attorney, Tucson, Arizona, for the intervenors-respondents.

David Burchmore, Squire, Sanders & Dempsey, Cleveland, Ohio, for the amici curiae.

JUDGES: Before: John T. Noonan, David R. Thompson, and Susan P. Graber, Circuit Judges. Opinion by Judge Graber.

OPINION BY: SUSAN P. GRABER

OPINION

[*1161] AMENDED OPINION

GRABER, Circuit Judge:

Petitioners challenge the Environmental Protection Agency's (EPA) decision to issue National Pollution Discharge Elimination System (NPDES) permits to five municipalities, for their separate storm sewers, without requiring numeric limitations [**2] to ensure compliance with state water-quality standards. Petitioners sought administrative review of the decision within the EPA, which the Environmental Appeals Board (EAB) denied. This timely petition for review ensued. For the reasons that follow, we deny the petition.

FACTUAL AND PROCEDURAL BACKGROUND

Title [HN1] *26 U.S.C. § 1342(a)(1)* authorizes the EPA to issue NPDES permits, thereby allowing entities to discharge some pollutants. In 1992 and 1993, the cities of Tempe, Tucson, Mesa, and Phoenix, Arizona, and Pima County, Arizona (Intervenors), submitted applications for NPDES permits. The EPA prepared draft permits for public comment; those draft permits did not attempt to ensure compliance with Arizona's water-quality standards.

Petitioner Defenders of Wildlife objected to the permits, arguing that they must contain numeric limitations to ensure strict compliance with state water-quality standards. The State of Arizona also objected.

Thereafter, the EPA added new requirements:

> To ensure that the permittee's activities achieve timely compliance with applicable water quality standards (Arizona Administrative Code, Title 18, Chapter 11, Article 1), the [**3] permittee shall implement the [Storm Water Management Program], monitoring, reporting and other requirements of this permit in accordance with the time frames established in the [Storm Water Management Program] referenced in Part I.A.2, and elsewhere in the permit. This timely implementation of the requirements of this permit shall constitute a schedule of compliance authorized by Arizona Administrative Code, section R18-11-121(C).

The Storm Water Management Program included a number of structural environmental controls, such as storm-water detention basins, retention basins, and infil-

tration ponds. It also included programs to remove illegal discharges.

With the inclusion of those "best management practices," the EPA determined that the permits ensured compliance with state water-quality standards. The Arizona Department of Environmental Quality agreed:

> The Department has reviewed the referenced municipal NPDES storm-water permit pursuant to Section 401 of the Federal Clean Water Act to ensure compliance with State water quality standards. We have determined that, based on the information provided in the permit, and the fact sheet, adherence to provisions and [**4] requirements set forth in the final municipal permit, will protect the water quality of the receiving water.

On February 14, 1997, the EPA issued final NPDES permits to Intervenors. Within 30 days of that decision, Petitioners requested an evidentiary hearing with the regional administrator. *See* 40 C.F.R. § 124.74. Although Petitioners requested a hearing, they conceded that they raised only a legal issue and that a hearing was, in fact, unnecessary. Specifically, Petitioners raised only the legal question whether the Clean Water Act (CWA) requires numeric limitations to ensure strict compliance with state water-quality standards; they did not raise the factual question whether the management practices that the EPA chose would be effective.

[*1162] On June 16, 1997, the regional administrator summarily denied Petitioners' request. Petitioners then filed a petition for review with the EAB. *See* 40 C.F.R. § 124.91(a). On May 21, 1998, the EAB denied the petition, holding that the permits need not contain numeric limitations to ensure strict compliance with state water-quality standards. Petitioners then moved for reconsideration, *see* 40 C.F.R. § 124.91(i), which the EAB denied.

[**5] JURISDICTION

[HN2] Title *33 U.S.C. § 1369(b)(1)(F)* authorizes "any interested person" to seek review in this court of an EPA decision "issuing or denying any permit under *section 1342* of this title." "Any interested person" means any person that satisfies the injury-in-fact requirement for Article III standing. *See Natural Resources Defense Council, Inc. v. EPA, 966 F.2d 1292, 1297 (9th Cir. 1992)* [*NRDC II*]. It is undisputed that Petitioners satisfy that requirement. Petitioners allege that "members of Defenders and the Club use and enjoy ecosystems affected by storm water discharges and sources thereof governed by the above-referenced permits," and no other party disputes those facts. *See Lujan v. Defenders of Wildlife, 504 U.S. 555, 565-66, 119 L. Ed. 2d 351, 112 S. Ct. 2130 (1992)* [HN3] ("[A] plaintiff claiming injury from environmental damage must use the area affected by the challenged activity."); *see also NRDC II, 966 F.2d at 1297* ("NRDC claims, inter alia, that [the] EPA has delayed unlawfully promulgation of storm water regulations and that its regulations, as published, inadequately control storm water [**6] contaminants. NRDC's allegations . . . satisfy the broad standing requirement applicable here.").

Intervenors argue, however, that they were not parties when this action was filed and that this court cannot redress Petitioners' injury without them. Their real contention appears to be that they are indispensable parties under *Federal Rule of Civil Procedure 19*. We need not consider that contention, however, because in fact Intervenors have been permitted to intervene in this action and to present their position fully. In the circumstances, Intervenors have suffered no injury.

DISCUSSION

A. *Standard of Review*

[HN4] The Administrative Procedures Act (APA), *5 U.S.C. §§ 701-06*, provides our standard of review for the EPA's decision to issue a permit. *See American Mining Congress v. EPA, 965 F.2d 759, 763 (9th Cir. 1992)*. Under the APA, we generally review such a decision to determine whether it was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *5 U.S.C. § 706(2)(A)*.

On questions of statutory interpretation, we follow the approach from *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984)*. [**7] *See NRDC II, 966 F.2d at 1297* (so holding). In *Chevron, 467 U.S. at 842-44*, the Supreme Court devised a two-step process for reviewing an administrative agency's interpretation of a statute that it administers. *See also Bicycle Trails Council of Marin v. Babbitt, 82 F.3d 1445, 1452 (9th Cir. 1996)* ("The [HN5] Supreme Court has established a two-step process for reviewing an agency's construction of a statute it administers."). Under the first step, we employ "traditional tools of statutory construction" to determine whether Congress has expressed its intent unambiguously on the question before the court. *Chevron, 467 U.S. at 843 n.9*. "If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress." *Id. at 842-43* (footnote omitted). If, instead, Congress has left a gap for the administrative agency to fill, we proceed to step two. *See id. at 843*. At step two, we must uphold the administrative regulation

unless it is "arbitrary, capricious, or manifestly contrary to the statute." *Id. at 844.*

[**8] [*1163] B. *Background*

[HN6] The CWA generally prohibits the "discharge of any pollutant," *33 U.S.C. § 1311(a)*, from a "point source" into the navigable waters of the United States. *See 33 U.S.C. § 1362(12)(A).* An entity can, however, obtain an NPDES permit that allows for the discharge of some pollutants. *See 33 U.S.C. § 1342(a)(1).*

[HN7] Ordinarily, an NPDES permit imposes effluent limitations on such discharges. *See 33 U.S.C. § 1342(a)(1)* (incorporating effluent limitations found in *33 U.S.C. § 1311*). First, a permit-holder "shall . . . achieve . . . effluent limitations . . . which shall require the application of the best practicable control technology [BPT] currently available." *33 U.S.C. § 1311(b)(1)(A).* Second, a permit-holder "*shall . . . achieve . . . any more stringent limitation*, including those *necessary to meet water quality standards*, treatment standards or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title)." *33 U.S.C. § 1311* [**9] *(b)(1)(C)* (emphasis added). Thus, although the BPT requirement takes into account issues of practicability, *see Rybachek v. EPA, 904 F.2d 1276, 1289 (9th Cir. 1990)*, the EPA also "is under a specific obligation to require that level of effluent control which is needed to implement existing water quality standards without regard to the limits of practicability," *Oklahoma v. EPA, 908 F.2d 595, 613 (10th Cir. 1990)* (internal quotation marks omitted), *rev'd on other grounds sub nom. Arkansas v. Oklahoma, 503 U.S. 91, 117 L. Ed. 2d 239, 112 S. Ct. 1046 (1992). See also Ackels v. EPA, 7 F.3d 862, 865-66 (9th Cir. 1993)* (similar).

The EPA's treatment of storm-water discharges has been the subject of much debate. Initially, the EPA determined that such discharges generally were exempt from the requirements of the CWA (at least when they were uncontaminated by any industrial or commercial activity). *See* 40 C.F.R. § 125.4 (1975).

The Court of Appeals for the District of Columbia, however, invalidated that regulation, holding that "the EPA Administrator does not have authority to exempt categories of point sources from [**10] the permit requirements of § 402 [*33 U.S.C. § 1342*]." *Natural Resources Defense Council, Inc. v. Costle, 186 U.S. App. D.C. 147, 568 F.2d 1369, 1377 (D.C. Cir. 1977).* "Following this decision, [the] EPA issued proposed and final rules covering storm water discharges in 1980, 1982, 1984, 1985 and 1988. These rules were challenged at the administrative level and in the courts." *American Mining Congress, 965 F.2d at 763.*

Ultimately, in 1987, Congress enacted the Water Quality Act amendments to the CWA. *See NRDC II, 966 F.2d at 1296* ("Recognizing both the environmental threat posed by storm water runoff and [the] EPA's problems in implementing regulations, Congress passed the Water Quality Act of 1987 containing amendments to the CWA.") (footnotes omitted). Under the Water Quality Act, from 1987 until 1994, [1] most entities discharging storm water did not need to obtain a permit. *See 33 U.S.C. § 1342(p).*

1 As enacted, the Water Quality Act extended the exemption to October 1, 1992. Congress later amended the Act to change that date to October 1, 1994. *See* Pub. L. No. 102-580.

[**11] Although the Water Quality Act generally did not require entities discharging storm water to obtain a permit, it did require such a permit for discharges "with respect to which a permit has been issued under this section before February 4, 1987," *33 U.S.C. § 1342(p)(2)(A)*; discharges "associated with industrial activity," *33 U.S.C. § 1342(p)(2)(B)*; discharges from a "municipal separate sewer system serving a population of [100,000] or more," *33 U.S.C. § 1342(p)(2)(C) & (D)*; and "[a] discharge for which the Administrator . . . determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States," *33 U.S.C. § 1342(p)(2)(E).*

[*1164] When a permit is required for the discharge of storm water, the Water Quality Act sets two different standards:

> (A) Industrial discharges
>
> Permits for discharges associated with industrial activity shall meet all applicable provisions of this section *and section 1311* of this title.
>
> (B) Municipal discharge
>
> Permits for discharges from municipal [**12] storm sewers -
>
> (i) may be issued on a system- or jurisdiction-wide basis;
>
> (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
>
> (iii) *shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods,*

> *and such other provisions as the Administrator . . . determines appropriate for the control of such pollutants.*

[HN8] *33 U.S.C. § 1342(p)(3)* (emphasis added).

C. *Application of Chevron*

The EPA and Petitioners argue that the Water Quality Act is ambiguous regarding whether Congress intended for municipalities to comply strictly with state water-quality standards, under *33 U.S.C. § 1311(b)(1)(C)*. Accordingly, they argue that we must proceed to step two of *Chevron* and defer to the EPA's interpretation that the statute does require strict compliance. *See Zimmerman v. Oregon Dep't of Justice, 170 F.3d 1169, 1173 (9th Cir. 1999)* ("At step two, we must uphold the administrative regulation unless it is arbitrary, capricious, or [**13] manifestly contrary to the statute.") (citation and internal quotation marks omitted), *petition for cert. filed*, No. 99-243 (Aug. 10, 1999).

Intervenors and *amici*, on the other hand, argue that the Water Quality Act expresses Congress' intent unambiguously and, thus, that we must stop at step one of *Chevron*. *See, e.g., National Credit Union Admin. v. First Nat'l Bank & Trust Co., 522 U.S. 479, 118 S. Ct. 927, 938-39, 140 L. Ed. 2d 1 (1998)* ("Because we conclude that Congress has made it clear that the *same* common bond of occupation must unite each member of an occupationally defined federal credit union, we hold that the NCUA's contrary interpretation is impermissible under the first step of *Chevron*.") (emphasis in original); *Sierra Club v. EPA, 118 F.3d 1324, 1327 (9th Cir. 1997)* ("Congress has spoken clearly on the subject and the regulation violates the provisions of the statute. Our inquiry ends at the first prong of *Chevron*."). We agree with Intervenors and *amici*: For the reasons discussed below, the Water Quality Act unambiguously demonstrates that Congress did not require municipal storm-sewer discharges to comply [**14] strictly with *33 U.S.C. § 1311(b)(1)(C)*. That being so, we end our inquiry at the first step of the *Chevron* analysis.

"Questions [HN9] of congressional intent that can be answered with 'traditional tools of statutory construction' are still firmly within the province of the courts" under *Chevron*. *NRDC II, 966 F.2d at 1297* (citation omitted). "Using our 'traditional tools of statutory construction,' *Chevron, 467 U.S. at 843 n.9, 104 S. Ct. 2778*, when interpreting a statute, we look first to the words that Congress used." *Zimmerman, 170 F.3d at 1173* (alterations, citations, and internal quotation marks omitted). "Rather than focusing just on the word or phrase at issue, we look to the entire statute to determine Congressional intent." *Id.* (alterations, citations, and internal quotation marks omitted).

As is apparent, Congress expressly required *industrial* storm-water discharges to comply with the requirements of *33 U.S.C. § 1311*. *See 33 U.S.C. § 1342(p)(3)(A)* ("Permits for discharges associated with industrial activity *shall meet all applicable* [**15] *provisions of* this section and *section 1311* of this title.") (emphasis added). By incorporation, then, industrial [*1165] storm-water discharges "*shall . . . achieve . . . any more stringent limitation*, including those necessary to meet water quality standards, treatment standards or schedules of compliance, established pursuant to any State law or regulation (under authority preserved by section 1370 of this title)." *33 U.S.C. § 1311(b)(1)(C)* (emphasis added); *see also* Sally A. Longroy, *The Regulation of Storm Water Runoff and its Impact on Aviation*, 58 J. Air. L. & Com. 555, 565-66 (1993) ("Congress further *singled out* industrial storm water dischargers, all of which are on the high-priority schedule, and requires them to satisfy all provisions of section 301 of the CWA [*33 U.S.C. § 1311*]. . . . Section 301 further mandates that NPDES permits include requirements that receiving waters meet water quality based standards.") (emphasis added). In other words, industrial discharges must comply strictly with state water-quality standards.

Congress chose not to include a similar provision for municipal [**16] storm-sewer discharges. Instead, Congress required municipal storm-sewer discharges "to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator . . . determines appropriate for the control of such pollutants." *33 U.S.C. § 1342(p)(3)(B)(iii)*.

The EPA and Petitioners argue that the difference in wording between the two provisions demonstrates ambiguity. That argument ignores precedent respecting the reading of statutes. Ordinarily, "where [HN10] Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion." *Russello v. United States, 464 U.S. 16, 23, 78 L. Ed. 2d 17, 104 S. Ct. 296 (1983)* (citation and internal quotation marks omitted); *see also United States v. Hanousek, 176 F.3d 1116, 1121 (9th Cir. 1999)* (stating the same principle), *petition for cert. filed*, No. 98-323 (Aug. 23, 1999). Applying that familiar [**17] and logical principle, we conclude that Congress' choice to require industrial storm-water discharges to comply with *33 U.S.C. § 1311*, but not to include the same requirement for municipal discharges, must be given effect. When we read the two related sections together, we conclude that *33*

U.S.C. § 1342(p)(3)(B)(iii) does not require municipal storm-sewer discharges to comply strictly with *33 U.S.C. § 1311(b)(1)(C)*.

Application of that principle is significantly strengthened here, because *33 U.S.C. § 1342(p)(3)(B) is not merely silent* regarding whether municipal discharges must comply with *33 U.S.C. § 1311*. Instead, *§ 1342(p)(3)(B)(iii) replaces* the requirements of *§ 1311* with the requirement that municipal storm-sewer dischargers "reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator . . . determines appropriate for the control of such pollutants." *33 U.S.C. § 1342(p)(3)(B)(iii)*. [**18] In the circumstances, the statute unambiguously demonstrates that Congress did not require municipal storm-sewer discharges to comply strictly with *33 U.S.C. § 1311(b)(1)(C)*.

Indeed, the EPA's and Petitioners' interpretation of *33 U.S.C. § 1342(p)(3)(B)(iii)* would render that provision superfluous, a result that we prefer to avoid so as to give effect to all provisions that Congress has enacted. *See Government of Guam ex rel. Guam Econ. Dev. Auth. v. United States, 179 F.3d 630, 634 (9th Cir. 1999)* ("This [HN11] court generally refuses to interpret a statute in a way that renders a provision superfluous."), *as amended, 1999 U.S. App. LEXIS 18691, 1999 WL 604218 (9th Cir. Aug. 12, 1999)*. *Section 1342(p)(3)(B)(iii)* creates a lesser standard than *§ 1311*. Thus, if *§ 1311* continues to apply to municipal storm-sewer discharges, [*1166] the more stringent requirements of that section always would control.

Contextual clues support the plain meaning of *§ 1342(p)(3)(B)(iii)*, which we have described above. [HN12] The Water Quality Act contains other provisions that undeniably exempt certain discharges from the permit requirement altogether (and therefore from [**19] *§ 1311*). For example, "the Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture." *33 U.S.C. § 1342(l)(1)*. Similarly, a permit is not required for certain storm-water runoff from oil, gas, and mining operations. *See 33 U.S.C. § 1342(l)(2)*. Read in the light of those provisions, Congress' choice to exempt municipal storm-sewer discharges from strict compliance with *§ 1311* is not so unusual that we should hesitate to give effect to the statutory text, as written.

Finally, our interpretation of *§ 1342(p)(3)(B)(iii)* is supported by this court's decision in *NRDC II*. There, the petitioner had argued that "the EPA has failed to establish substantive controls for municipal storm water discharges as required by the 1987 amendments." *NRDC II, 966 F.2d at 1308*. This court disagreed with the petitioner's interpretation of the amendments:

> Prior to 1987, municipal storm water dischargers were subject to the same substantive control requirements as industrial and other types of storm water. In the 1987 amendments, *Congress retained the* [**20] *existing, stricter controls for industrial storm water dischargers but prescribed new controls for municipal storm water discharge.*

Id. (emphasis added). The court concluded that, under *33 U.S.C. § 1342(p)(3)(B)(iii)*, "*Congress did not mandate a minimum standards approach.*" *Id.* (emphasis added). The question in *NRDC II* was not whether *§ 1342(p)(3)(B)(iii)* required strict compliance with state water-quality standards, *see 33 U.S.C. § 1311(b)(1)(C)*. Nonetheless, the court's holding applies equally in this action and further supports our reading of *33 U.S.C. § 1342(p)*.

In conclusion, the text of *33 U.S.C. § 1342(p)(3)(B)*, the structure of the Water Quality Act as a whole, and this court's precedent all demonstrate that Congress did not require municipal storm-sewer discharges to comply strictly with *33 U.S.C. § 1311(b)(1)(C)*.

D. *Required Compliance with 33 U.S.C. § 1311(b)(1)(C)*

We are left with Intervenors' contention that the EPA may not, under the CWA, require strict compliance with state water-quality [**21] standards, through numerical limits or otherwise. We disagree.

Although Congress did not require municipal storm-sewer discharges to comply strictly with *§ 1311(b)(1)(C)*, *§ 1342(p)(3)(B)(iii)* states that "permits for discharges from municipal storm sewers . . . shall require . . . *such other provisions as the Administrator . . . determines appropriate for the control of such pollutants.*" (Emphasis added.) That provision gives the EPA discretion to determine what pollution controls are appropriate. As this court stated in *NRDC II*, "Congress [HN13] gave the administrator discretion to determine what controls are necessary. . . . NRDC's argument that the EPA rule is inadequate cannot prevail in the face of the clear statutory language." *966 F.2d at 1308*.

Under that discretionary provision, the EPA has the authority to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants. The EPA also has the authority to require less than strict compliance with state water-quality standards. The EPA has adopted an interim approach, which "uses

best management practices (BMPs) in first-round storm water permits . . . to provide [**22] for the attainment of water quality standards." The EPA applied that approach to the permits at issue here. Under *33 U.S.C. § 1342(p)(3)(B)(iii)*, the EPA's choice to include [*1167] either management practices or numeric limitations in the permits was within its discretion. *See NRDC II, 966 F.2d at 1308* ("Congress did not mandate a minimum standards approach or specify that [the] EPA develop minimal performance requirements."). In the circumstances, the EPA did not act arbitrarily or capriciously by issuing permits to Intervenors.

PETITION DENIED.

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER: WQ 2000 - 11

In the Matter of the Petitions of
THE CITIES OF BELLFLOWER, ET AL., THE CITY OF ARCADIA, AND WESTERN STATES PETROLEUM ASSOCIATION
Review of January 26, 2000 Action of the Regional Board
and
Actions and Failures to Act
by both the
California Regional Water Quality Control Board,
Los Angeles Region and Its Executive Officer
Pursuant to Order No. 96-054,
Permit for Municipal Storm Water and Urban Run-Off Discharges Within
Los Angeles County
[NPDES NO. CAS614001]

SWRCB/OCC FILES A-1280, A-1280(a) and A-1280(b)

BY THE BOARD:

On July 15, 1996, the Los Angeles Regional Water Quality Control Board (Regional Water Board) issued a revised national pollutant discharge elimination system (NPDES) permit in Order No. 96-054 (permit) to the 85 incorporated cities and the county within Los Angeles County (the County).[1] The permit covers storm water discharges from municipal separate storm sewer systems throughout the County.[2]

[1] This was the second storm water permit adopted for Los Angeles County and its cities. The first permit was the subject of an earlier Order. (In the Matter of Natural Resources Defense Council, Inc., Order WQ 91-04). In this permit, the County is designated as the Principal Permittee, and each city is designated as a permittee. The County is required to submit various documents on behalf of all of the permittees.
[2] The Regional Water Board has since issued a separate permit for one city, Long Beach. The relevant provisions of the Long Beach permit are similar to those in Order No. 96-054.

The permit contains provisions for the regulation of storm water discharges from development planning and construction.[3] Pursuant to these provisions, the County was required to submit Standard Urban Storm Water Mitigation Plans (SUSMPs).[4] The SUSMPs are plans that designate best management practices (BMPs) that must be used in specified categories of development projects. The County submitted SUSMPs, but the Regional Water Board approved the SUSMPs only after making revisions. The Executive Officer issued the revised SUSMPs on March 8, 2000.[5]

On February 25, 2000, the State Water Resources Control Board (State Water Board or Board) received a petition for review of the actions and failures to act regarding the SUSMPs from a number of cities, the Building Industry Association of Southern California and the Building Industry Legal Defense Foundation (jointly referred to as Cities). A second petition was received from the City of Arcadia. And a third petition was received from the Western States Petroleum Association (WSPA). On April 7, 2000, the petitioners filed amendments to their petitions, concerning the March 8, 2000 issuance of the SUSMPs. The Cities' amendment also revised the list of cities included in the petition. The Cities' petition now includes 32 cities. The petitions are legally and factually related, and have therefore been consolidated for purposes of review.[6] The petitioners also requested a stay of the SUSMPs. This request was denied by letter, dated May 11, 2000.

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[3] Permit, Part 2.III. These provisions focus more on post-construction impacts of development than on discharges from construction activities.
[4] Permit, Part 2.III.A.1.c.
[5] These are referred to herein as the Final SUSMPs. The Final SUSMPs also apply to Long Beach, even though it is subject to a separate permit.
[6] Cal. Code of Regs., tit. 23, section 2054.

On June 7 and 8, 2000, the Board held a hearing in Torrance. Several entities, including the petitioners, the Regional Water Board, and several environmental groups[7], were designated parties. The evidence from that hearing has been included in the record before the Board. The record for comments on the petition was kept open until the end of the hearing. The parties were allowed to submit post-hearing briefs.[8]

I. BACKGROUND

In prior Orders[9] this Board has explained the need for the municipal storm water programs and the emphasis on BMPs in lieu of numeric effluent limitations. The emphasis for preventing pollution from storm water discharges is still on the development and implementation of effective BMPs, but with the expectation that the level of effort will increase over time. In its Interim Permitting Approach[10], the United States Environmental Protection Agency (U.S. EPA) stated that first-round permits should include BMPs, and expanded or better-tailored BMPs in subsequent permits where necessary to attain water quality standards. Dischargers, consultants, and academic institutions in California and nationwide have conducted numerous studies on the effectiveness of BMPs and appropriate design standards. While many questions are still

[7] The environmental groups are Natural Resources Defense Council, Inc., Santa Monica BayKeeper, and Heal the Bay.

[8] There are several documents that were not timely received and, therefore, are not made a part of the record before the Board. The hearing notice specified that all evidence from parties must be received by May 31, 2000. The Regional Water Board submitted documents on June 6, 2000. The hearing notice specified that policy statements were due by the close of the hearing. Several comment letters were received June 12, 13, and 19, 2000. None of these submittals are a part of the record. The post-hearing briefs were subject to a 10-page limit. The environmental groups submitted objections to the post-hearing brief submitted by the Cities. First, the environmental groups challenge the length of the brief. All briefs were subject to a 10-page limit. The Cities submitted a 10-page brief, with a 22-page attachment showing extensive proposed revisions to the SUSMPs. This submittal violates the page limit, and only the brief is considered part of the record. Second, the environmental groups claim that an e-mail message referred to by the petitioners is subject to attorney-client privilege and should not have been used in this hearing. This e-mail message, from the Regional Water Board's counsel to one of its engineers, was placed in the Regional Water Board's administrative record and submitted to the State Water Board. Any privilege that may have attached to the message has been waived and no longer exists. Finally, the post-hearing brief from the City of Arcadia was received late and will not be considered. Documents submitted late for interim deadlines (such as the deadline for submitting responses to the petitions), have been included in the record.

[9] See, especially Orders WQ 91-03 (In the Matter of Citizens for a Better Environment et al.) and WQ 91-04.

[10] Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits. (61 Federal Register 57425.)

outstanding, more is expected of municipal dischargers, and many are implementing more effective programs.

While storm water management plans are improving, our knowledge of the impacts is also growing. Urban runoff has been determined to be a significant contributor of impairment to waters throughout the state. In Los Angeles specifically, beach closures are sometimes associated with urban runoff. In adopting the SUSMPs, the Regional Water Board took note of the urgent need for preventing further pollution from urban runoff and storm water discharges.

It is important to emphasize the role of the SUSMPs within the totality of regulating storm water discharges, and the purpose of these particular control measures. The requirement to prepare SUSMPS was part of the development controls in the permit. In addition to development controls, the permit requires education, public outreach, programs to restrict illicit connections and discharges, and controls on public facilities. In the context of the entire effort required by the permit, the development controls can be seen as preventing the existing situation from becoming worse.

The Final SUSMPs include a list of mandatory BMPs for nine categories of development. There are provisions that are applicable to all categories and lists of BMPs for individual categories. Requirements applicable to all categories include provisions to limit erosion from new development and redevelopment, requirements to conserve natural areas, protection of slopes and channels, and storm drain stenciling. Examples of BMPs specific to categories of discharge include design of loading docks for commercial projects and design of fueling areas for retail gasoline outlets. In most respects, the Final SUSMPs were similar to those proposed by the County. The significant departures were the inclusion of a numeric design standard for structural or treatment control BMPs, and the inclusion of certain types of projects that were not

covered in the County's proposal. The design standard creates objective and measurable criteria for the amount of runoff that must be treated or infiltrated by BMPs.

The record indicates that the purpose of the development controls, including the SUSMPs, is not simply to prevent pollution associated with construction runoff. As the petitioners point out, construction discharges are already subject to this Board's Statewide Construction Permit. The development controls in the SUSMPs, on the other hand, focus on post-construction runoff. They are aimed at limiting not just the pollutants in runoff from the new development, but also the volume of runoff that enters the municipal storm sewer system. By limiting runoff from new development, the SUSMPs prevent increased impacts from urban runoff generally. There is adequate technical information in the record to show that by controlling the volume of runoff from new development, BMPs can be effective in reducing the discharge of pollutants in storm water runoff.

The Procedure for Adopting the SUSMPs

The permit requires a program for controls on Development Planning and Construction. It involved a number of submissions by the County in consultation with the Cities. The first step was submission of a checklist for determining priority projects and exempt projects. The checklist was due on January 30, 1998. A list of recommended BMPs for development projects was also due on that date. The SUSMPs were due within six months of approval of the BMP list, and were to incorporate BMPs for certain categories of development. Following approval of the SUSMPs, the cities and County were to implement development programs for priority projects, consistent with the BMP list and the SUSMPs.

The BMP list was not approved until April 22, 1999. Thereafter, the County submitted proposed SUSMPs on July 22, 1999. The Regional Water Board held a public workshop on

August 10, 1999. Following the workshop, the County submitted revisions to the SUSMPs on August 12, 1999. On August 16, 1999, the Regional water Board gave notice that it would discuss the SUSMPs in a public meeting on September 16, 1999. There was significant discussion at that meeting regarding the intent of the Executive Officer to approve the SUSMPs, but with revisions including a numeric design standard. At the conclusion of the meeting, the Regional Water Board members asked the Executive Officer to revise the SUSMPs and bring them back to another meeting. On December 7, 1999, the Executive Officer circulated revised SUSMPs for public review. This document incorporated a numeric design standard and made other revisions to the permittees' proposal. The Regional Water Board held a hearing on the SUSMPs on January 26, 2000. At that meeting, the Regional Water Board endorsed the SUSMPs revised by the Executive Officer, but directed him to make further changes. The Executive Officer issued the Final SUSMPs on March 8, 2000.

The Contents of the Final SUSMPs

The permit provides that the SUSMPs must incorporate the appropriate elements of the BMP list and, at a minimum, apply to seven development categories: 100-plus home subdivisions; 10-plus home subdivisions; 100,000-plus square foot commercial developments; automotive repair shops; retail gasoline outlets; restaurants; and hillside single-family dwellings.

The SUSMPs proposed by the County applied to these seven categories. Various BMPs applied to the different categories, and the SUSMPs contained narrative mitigation requirements for source control and treatment. The July proposals stated:

> "The development must be designed so as to mitigate (infiltrate and/or treat) the site runoff generated from impervious directly connected areas that may contribute pollutants of concern to the storm water conveyance system."

There were no numeric design criteria for mitigation. According to various participants, earlier County drafts had included design standards to mitigate flows from 0.6-inch storm events. But any numeric criteria had been removed from the version that was submitted.

In its revised SUSMPs, submitted on August 12, the County explained in its cover letter that the mitigation language did not mean that all runoff must be mitigated. Rather, the County's intent was to omit a numerical standard from the SUSMPs. The revised SUSMPs no longer referred to mitigation at all. Instead, the following language replaced the mitigation requirement:

> "The development must be designed so as to minimize, to the maximum extent practicable (MEP), the introduction of pollutants of concern that may result in significant impacts, generated from site runoff of directly connected impervious areas (DCIA), to the storm water conveyance system as approved by the building official."

The Final SUSMPs, as approved by the Executive Officer and the Regional Water Board, included several revisions from the County's submittal. The revision that is of greatest concern to the petitioners is the addition of Design Standards for Structural or Treatment Control BMPs.[11] The design standards require that developments subject to the SUSMPs shall be designed to mitigate storm water runoff (by treatment or infiltration) from one of the following:

> "1. The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area..., or
> 2. The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment..., or
> 3. The volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system, or
> 4. The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for "treatment" (0.75 inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event."

[11] The Final SUSMPs also include the narrative language quoted from the County's August 22, 1999 proposal.

The Final SUSMPs also applied to two additional categories of development: parking lots over 5,000 square feet or with 25 or more spaces and exposed to storm water, and to developments in environmentally-sensitive areas. Other revisions included application to all projects in the categories instead of discretionary projects only and the definition of redevelopment.

II. CONTENTIONS AND FINDINGS[12]

Contention: The petitioners contend that the Regional Water Board erred in not complying with the Administrative Review Process within the permit, and acted arbitrarily and capriciously and in violation of the Clean Water Act and state law.

Finding: The permit required the County, in consultation with the cities subject to the permit, to submit SUSMPs. The permit includes some general minimum requirements for the SUSMPs.[13] The Executive Officer is granted authority to approve the SUSMPs.[14]

The permit also contains an administrative review process.[15] The permit states that the administrative review process "formalizes the procedure for review and acceptance of reports and documents" and "provides a method to resolve any differences in compliance expectations between the Regional Board and Permittees, prior to initiating enforcement action."[16] Following this introductory statement, the permit includes two procedures. The first is for review and approval or disapproval of reports and documents. The second is the dispute resolution section that must be followed prior to enforcement action.

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[12] This Order does not address all of the issues raised by the petitioners. The Board finds that the issues that are not addressed are insubstantial and not appropriate for State Water Board review. (See *People v. Barry* (1987) 194 Cal.App.3d 158, [239 Cal.Rptr. 349], Cal. Code Regs., tit. 3, § 052.)
[13] Permit, Part 2, III.A.1.c.
[14] Permit, Part 2, III.A.2.
[15] Permit, Part 2, I.G.
[16] *Id.*

The process for review of documents that are subject to the Executive Officer's approval is that the Executive Officer will notify the permittees of the results of the review and approval or disapproval within 120 days. If the Executive Officer does not do so, the permittees must notify the Regional Water Board of their intent to implement the documents without approval. The Executive Officer then has 10 days to respond, or the permittees may implement the program and the Executive Officer may not make modifications.

The dispute resolution procedure is to be used when the Executive Officer determines that a permittee's storm water program is insufficient to meet the permit's provisions. The Executive Officer must send a "Notice of Intent to Meet and Confer" with the permittee. A meet and confer period then ensues, resulting in a written "Storm Water Program Compliance Amendment (SWPCA)." The permittee is provided time to comply with the SWPCA. The Executive Officer is not allowed to take enforcement action against a permittee until the Executive Officer notifies the permittee in writing that the administrative review process has been exhausted and that a violation exists warranting enforcement.

The petitioners contend that the Executive Officer failed to notify the permittees that their SUSMPs were inadequate within 120 days of its submittal. The petitioners also argue that, by revising the SUSMPs without pursuing the dispute resolution process, the Regional Water Board "violated" the terms of the permit.

The provision for review of documents, which clearly includes the SUSMPs, requires that the Executive Officer notify the permittees of the results of the review and approval or disapproval within 120 days. The County submitted the revised SUSMPs on August 12, 1999. Within 120 days, the Regional Water Board held a workshop where staff expressed their concerns with the SUSMPs. Also within 120 days the Regional Water Board itself held a public

meeting where there was extensive discussion and concern by board members that the SUSMPs did not include a numeric standard. And, prior to any notification by the permittees that they would proceed with implementing their SUSMPs, the Regional Water Board held a hearing January 26, 2000, where it directed the Executive Officer to issue the SUSMPs with revisions. The Executive Officer did so on March 8, 2000.

It is clear from the record that the Executive Officer, and the Regional Water Board itself, did inform the permittees that the SUSMPs were inadequate. There was no requirement for a specific form for expressing disapproval of documents. The extensive discussion and meetings on the need for revisions to the SUSMPs, and the Executive Officer's approval of revised SUSMPs, plainly refutes the allegation that the Regional Water Board never notified the permittees of its disapproval of the County's proposed SUSMPs.

The permittees also claim that the Regional Water Board "violated" the permit by failing to institute the meet and confer process.[17] The dispute resolution process, which includes meet and confer, did not apply to the decision to disapprove the proposed SUSMPs. That process is only required when the Regional Water Board ultimately takes an enforcement action against a permittee. It is separate from the process for review and approval or disapproval of documents, and does not even appear to relate to possible enforcement actions for submission of inadequate documents. This is illustrated by the fact that the provision regarding documents refers to submittals from both the Principal Permittee and the individual permittees, while the dispute resolution provision refers only to the permittees. This distinction is relevant because the County is charged with submitting the documents, while the individual permittees are responsible for compliance. A fair reading of the entire section on the administrative review process is that the

[17] We note that permits are issued to permittees to allow discharges to waters of the state. It is only permittees, and not Regional Water Boards, who can be charged with violating permits.

review and approval or disapproval of documents applies to submission of documents by the County on behalf of the cities, while the dispute resolution process applies to enforcement actions against any permittees for failing to implement adequate programs.

Contention: The petitioners contend that the Regional Water Board was not authorized to revise the SUSMPs to add more stringent requirements.

Finding: The petitioners contend that the mitigation standards in the SUSMPs are more stringent than the requirement in the permit to reduce pollutants in storm water runoff to the maximum extent practicable (MEP)[18]. The issue of what level of protection constitutes MEP will be discussed *Infra*, in the discussion of the reasonableness of the numeric standards. But the petitioners also make certain procedural claims on this point. They argue that in approving the BMP list, the Regional Water Board determined that those BMPs constituted MEP and that the Board could not add additional BMPs in the SUSMPs. They also contend the Regional Water Board itself had no authority to "usurp" the Executive Officer's role in reviewing the SUSMPs.[19] Finally, the petitioners contend that the Regional Water Board was not authorized to mandate a program for the permittees without amending the permit.

The permit requires the County to submit a list of BMPs for approval. The Regional Water Board approved this list. Following approval of the list, the County was required to submit the SUSMPs, which must "incorporate the appropriate elements of the recommended BMPs list."[20] The petitioners contend that by approving the list, the Regional Water Board determined that those BMPs constituted MEP, and that under the terms of the permit the Regional Water Board could not require additional BMPs.

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[18] The technology-based standard for controls under municipal storm water permits is MEP. For a fuller discussion of this standard, see Order WQ 91-03.
[19] It is undisputed that, at its January 26, 2000 meeting, the Board directed the Executive Officer to make additional revisions to the SUSMPs.
[20] Permit, Part 2, III.A.1.c.

In addressing this contention, we face what appears to be a fundamental misunderstanding of the numeric design standards on the part of the petitioners. The design standards are objective criteria that developers must achieve in designing their BMPs. The design standards are not separate BMPs. The standards tell what magnitude of storm event the BMPs must be designed to treat or infiltrate. They do not specify the BMPs that must be employed.

The SUSMPs as submitted by the County specify BMPs for various categories of development. Many of these BMPs are designed to minimize the pollutants in storm water runoff, by reducing flow through infiltration or by treatment. Examples of BMPs proposed by the County include infiltration basins and trenches, oil/water separators, and media filtration. The County's proposed SUSMPs also included language requiring minimizing the introduction of pollutants to the storm water conveyance system. That language remains unchanged in the Final SUSMPs. The only significant difference between the two versions of the SUSMPs was that the Regional Water Board established numeric criteria for designing the BMPs.

In adopting the Final SUSMPs, the Regional Water Board based its decision on the MEP standard.[21] The Regional Water Board did not significantly revise the BMP list or specify further the actions that developers must take to comply with the SUSMPs. Thus, we find that the Regional Water Board did not inappropriately revise its determination of what constituted MEP.

The Regional Water Board is the political body responsible for water quality control in the Los Angeles region.[22] While the Regional Water Board may delegate specified powers and duties to its Executive Officer,[23] it can at any time act on its own behalf. The fact that the Board authorized its Executive Officer to approve the SUSMPs in the permit did not mean that the Board thereby denied itself the opportunity to provide direction to the Executive Officer in his

[21] Resolution R-00-02.
[22] Water Code sections 13200 and 13225.
[23] Water Code section 13223.

approval. Such an interpretation of its delegation authority would result in an improper failure of the Board to assume responsibility for water quality in the region.

We also find that the Regional Water Board was authorized to revise the SUSMPs to achieve compliance with the permit's requirements. The SUSMPs are a part of implementation of the permit. Because the permit regulates storm water discharges throughout the entire Los Angeles region and it is implemented by 85 cities and the County, it is obvious that the permit could not spell out every detail of the program for the five-year term of the permit. Instead, the implementation is through the submission, review and approval, and implementation of various programs, including the SUSMPs.[24] Where it receives a submission that it finds is not consistent with the requirements of the permit, it is reasonable for the Regional Water Board to be able to require revisions. The Regional Water Board is not required to amend the permit each time it approves a submittal or approves a submittal with revisions. On the other hand, if the Regional Water Board's action in requiring revisions is inconsistent with the terms of the permit, then the Board should not act without first amending the permit. While the Regional Water Board could have required the County to make the revisions rather than making them itself, we see no harm in the Regional Water Board's approach.

As will be discussed below, in most respects the Final SUSMPs are consistent with the permit. But there are some portions of the SUSMPs that are not consistent, and in those cases the SUSMPs provisions are further revised in this Order.

Contention: The petitioners make various procedural claims, including that they were denied due process, and that the Regional Water Board violated the Administrative Procedure

[24] A fuller discussion of the use of storm water management plans to incorporate a developing program is found in Order No. WQ 91-03.

Act, the California Environmental Quality Act (CEQA), and the California Constitution, Article XIII B, section 6 (regarding state mandates).

Finding: The petitioners point out that at the January 26, 2000 Regional Water Board hearing, there was some confusion over late changes to the SUSMPs and they contend they were not provided adequate opportunity to comment. There was significant discussion of the SUSMPs over several months. We do not agree with the petitioners that a program of this magnitude must necessarily take years to develop. But we are concerned that at the January 26, 2000 hearing, interested persons and permittees were not given adequate time to review late revisions or to comment on them. Given the intense interest in this issue, the Regional Water Board should have diverged from its strict rule limiting individual speakers to three minutes and conducted a more formal process. Such a process should provide adequate time for comment, including continuances where appropriate.[25] But to the extent the Regional Water Board's process caused any harm, this Board cured those harms. We held a two-day hearing in Los Angeles County, where all parties were allowed significant time to present their positions and testimony. In addition, we allowed the introduction of new evidence that had not been presented to the Regional Water Board. At this point, all parties have been afforded a full opportunity to review the Final SUSMPs, to present their positions and evidence, and to engage in cross-examination. The petitioners' due process rights have been protected.

The Board has already addressed the contentions regarding compliance with other laws in prior decisions. The Administrative Procedure Act exempts the adoption of permits from its requirements.[26] While the SUSMPs are not a permit, they are implementing documents for a

[25] For future adjudicative proceedings that are highly controversial or involve complex factual or legal issues, we encourage regional water boards to follow the procedures for formal hearings set forth in Cal. Code of Regs., tit. 23, section 648 et seq.

[26] Government Code section 11352; See, Order No. 95-4 (In the Matter of the City and County of San Francisco).

permit, and are therefore subject to the exemption. Moreover, they are relevant only to this permit, and are not a general rule of application. The constitutional provisions regarding state mandates also do not apply to NPDES permits.[27] As will be explained below, the SUSMPs as revised herein, are consistent with MEP and therefore are federally mandated. The provisions of CEQA requiring adoption of environmental documents also do not apply to NPDES permits.[28] Again, as an implementing document for the permit, there is no requirement for a separate CEQA analysis.[29]

Contention: The petitioners contend that the SUSMPs do not properly apply the maximum extent practicable standard.

Finding: The permit, consistent with Clean Water Act section 402(p)(3)(B)(iii), requires controls to reduce the discharge of pollutants to the maximum extent practicable, or MEP.[30] In approving the Final SUSMPs, the Regional Water Board acknowledged that one of the primary objectives of the municipal storm water program is the requirement to reduce the discharge of pollutants from storm water conveyance systems to the MEP.[31] While all parties appear to agree that the standard for the SUSMPs is MEP, they disagree about what level of effort is necessary to comply with that standard.

The petitioners approach this issue from two angles. First, they contend that the SUSMPs will not provide water quality benefits that reflect MEP. Second, they contend that there could be adverse impacts on groundwater quality that have not been adequately evaluated.

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[27] See, Order No. WQ 90-3 (In the Matter of San Diego Unified Port District).
[28] Water Code section 13389.
[29] We do note with interest the environmental groups' comment that if the permittees believed it was necessary to comply with the APA and CEQA prior to adoption of the SUSMPs, then they themselves would have violated those acts in their submissions of the proposed SUSMPs.
[30] Permit, Finding 13.
[31] Final SUSMPs, at page 2; Resolution No. R-00-02, at page 3.

Storm Water Design Standards as MEP

In adopting the Final SUSMPs, the Regional Water Board found that many rivers and streams in Los Angeles County are impaired for pollutants found in storm water and urban runoff, and that storm water runoff carries pollutants from nearly all types of developed properties.[32] Pollutant loading from the aggregate of development in the basin results in impairments from sediments, metals, complex organic compounds, oil and grease, nutrients, and pesticides.[33] The Final SUSMPs reflect two goals: to reduce the amounts of these pollutants in runoff and to reduce the ability of runoff to act as a conveyance system to deliver more pollutants to receiving waters. The Final SUSMPs, which include lists of BMPs and design standards requiring treatment or infiltration, address these two goals.

Clean Water Act section 402(p)(3)(B)(iii), which sets forth the requirements for establishing MEP in municipal storm water permits, provides that such permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." The United States Environmental Protection Agency (U.S. EPA), in a guidance document, explains that BMPs should be used in first-round storm water permits, and "expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards."[34] The Clean Water Act, as interpreted by U.S. EPA, does require that, in a second-round permit,[35] expanded BMPs may be appropriate. In light of the number of water

[32] Resolution No. R-00-02.
[33] *Id.*
[34] Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, 61 Federal Register 57425 (1996).
[35] The original permit was issued in 1990. The 1996 permit is a second-round permit.

bodies impaired by runoff in Los Angeles County, it was appropriate to expand the scope of BMPs during the permit term.

The regulations implementing section 402(p) specifically require municipalities to have controls to reduce the discharge of pollutants from their storm sewer systems that "receive discharges from areas of new development and significant redevelopment," including post-construction discharges.[36] Clearly, it was appropriate for the Regional Water Board to require BMPs for new development and significant redevelopment. The permittees, who submitted their own version of SUSMPs with listed BMPs for categories of development, appear to have no real quarrel with this general mandate.

This Board has already endorsed requirements to limit the flow of the "first flush" of storm water, which may contain more significant pollutants.[37] The permittees' own version of the SUSMPs required mitigation of storm water runoff by treatment or infiltration, thus conceding the propriety of these two approaches to lessening the impact of storm water discharges. The crux of the disagreement is that the Regional Water Board added numeric design standards to establish the amount of runoff that must be treated or infiltrated, and required the mandatory application of these standards to categories of development.

The addition of measurable standards for designing the BMPs provides additional guidance to developers and establishes a clear target for the development of the BMPs. The U.S. EPA guidance manual suggests the use of design criteria and performance standards for post-construction BMPs.[38] The numeric criteria the Regional Water Board adopted essentially

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[36] 40 CFR section 122.26(d)(2)(iv)(A)(2).
[37] In the Matter of National Steel and Shipbuilding Company, et al., Order WQ 98-07, at slip opinion 7.
[38] Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Strom Sewer Systems, at page 6-4 (November 1992).

requires that 85 percent of the runoff from the development be infiltrated or treated.[39] In adopting these standards, the Regional Water Board based its decision on a research review of standards in other states and a statistical analysis of the rainfall in the area. The standard was set to gain the maximum benefit in mitigation while imposing the least burden on developers.[40] In light of the evidence of the use of this or more stringent standards in other states, the expert testimony supporting this standard, the endorsement by U.S. EPA in its comments, and the cost-effectiveness of its implementation (discussed below), the Regional Water Board acted appropriately in determining that the standards reflect MEP.[41]

We also find that the Regional Water Board appropriately applied these standards to seven of the categories listed in the SUSMPs: single-family hillside residences, 100,000 square foot commercial developments, automotive repair shops, restaurants, home subdivisions with 10 to 99 housing units, home subdivisions with 100 or more housing units, and parking lots with 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff.[42] These categories, except for parking lots, were already targeted for special treatment in the permit. The evidence shows that each listed category can be a significant source of pollutants and/or runoff following development. It is appropriate that the design standards apply so that BMPs for these categories of development result in the infiltration or treatment of a significant about of the runoff.

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[39] Four different methods of calculation are permitted, so the percentage of capture may vary slightly.

[40] At the hearing in this matter, Regional Water Board staff explained that the standard was set at the bottom of the "knee" of the curve where the benefits of the mitigation requirements decrease and the cost increases. Other states have set the standard higher along this curve, requiring 90 to 95 percent mitigation.

[41] This conclusion in no way departs from our acceptance of BMPs in lieu of numeric effluent limitations in storm water permits. (See, e.g., Order WQ 91-03 and Order WQ 91-04.) The numeric standard is a design standard for BMPs. It does not quantify or limit the pollutants in the effluent. It also does not specify which of the listed BMPs must be employed.

[42] As discussed below, this Board is revising the SUSMPs to delete the application of the design standards to retail gasoline outlets and to locations within or directly adjacent to or discharging directly to environmentally-sensitive areas.

Potential Impacts on Ground Water

The petitioners contend that infiltration of runoff may lead to ground water pollution, and that the Regional Water Board did not properly consider such potential impacts. The mitigation standards provide for a waiver where there is a risk of ground water contamination because a known unconfined aquifer lies beneath the land surface or an existing or potential underground source of drinking water is less than ten feet from the soil surface.[43] The Final SUSMPs also include a discussion on how to use infiltration so that the risk of contamination of groundwater is reduced, and where infiltration is not appropriate.[44]

The Regional Water Board did consider the potential impacts to groundwater from infiltration, and included appropriate limitations and guidance on its use as a BMP. These provisions will ensure adequate protection of groundwater from any adverse impacts due to infiltration.

Contention: The petitioners contend the Regional Water Board failed to show that the SUSMPs as adopted are cost-effective and that the benefits to be obtained outweigh the costs.

Finding: The petitioners refer to the Preamble to the Phase II storm water regulations[45] as the basis for their economic argument. The quoted language, however, does not wholly support the petitioners' contention. The Preamble states that President Clinton's Clean Water Initiative clarifies "that the maximum extent practicable standard should be applied in a site-specific, flexible manner, taking into account cost considerations as well as water quality effects."[46] It is clear that cost should be considered in determining MEP; this does not mean that

[43] Final SUSMP, page 14.
[44] *Id.*, at page 15.
[45] 64 Federal Register 68722 and following. These regulations do not apply to the permit, but the general language on MEP is relevant to EPA's interpretation of the standard.
[46] 64 Federal Register 68722, 68732 (December 8, 1999).

the Regional Water Board must demonstrate that the water quality benefits outweigh the economic costs.

While the standard of MEP is not defined in the storm water regulations or the Clean Water Act, the term has been defined in other federal rules. Probably the most comparable law that uses the term is the Superfund legislation, or CERCLA, at section 121(b). The legislative history of CERCLA indicates that the relevant factors, to determine whether MEP is met in choosing solutions and treatment technologies, include technical feasibility, cost, and state and public acceptance.[47] Another example of a definition of MEP is found in a regulation adopted by the Department of Transportation for onshore oil pipelines. MEP is defined as to "the limits of available technology and the practical and technical limits on a pipeline operator . . . ."[48]

These definitions focus mostly on technical feasibility, but cost is also a relevant factor. There must be a serious attempt to comply, and practical solutions may not be lightly rejected. If, from the list of BMPs, a permittee chooses only a few of the least expensive methods, it is likely that MEP has not been met. On the other hand, if a permittee employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. Thus while cost is a factor, the Regional Water Board is not required to perform a cost-benefit analysis.

In reviewing the record, it is apparent that the Regional Water Board did evaluate the cost of the SUSMPs. While the petitioners claim there is no evidence in the record to show the

[47] 132 Cong. Rec. H 9561 (Oct. 8, 1986).
[48] 49 CFR section 194.5.

SUSMPs are necessary and cost effective, the opposite is true. The record is replete with documentation of costs of pilot mitigation projects, studies from similar programs in other states, and research studies. The Regional Water Board complied with the requirement to consider cost.

The Regional Water Board found that the cost to include BMPs that will meet the mitigation criteria will be one to two percent of the total development cost. This amount appears reasonable, especially in light of the amount of impervious surface already in Los Angeles County and the impacts on impaired water bodies. In considering the cost of compliance, it is also important to consider the costs of impairment. The beach closures in the Los Angeles region, well documented in the evidence, have reached critical proportions. These beach closures clearly have a financial impact on the area, and should be positively affected by the SUSMPs.

We do note that there could be further cost savings for developers if the permittees develop a regional solution for the problem. We recommend that the cities and the County, along with other interested agencies, work to develop regional solutions so that individual dischargers are not forced to create numerous small-scale projects. While the SUSMPs are an appropriate means of requiring mitigation of storm water discharges, we also encourage innovative regional approaches.[49]

Contention: The petitioners have raised contentions regarding details of the SUSMPs, including the amount of time allowed for inclusion of SUSMPs in local ordinances, and their application to both "discretionary" and "non-discretionary" projects. In addition, during the hearing certain ambiguities in the wording of the Final SUSMPs became apparent, including the provisions regarding redevelopment and environmentally-sensitive areas. In this portion of the

[49] We note that the SUSMPs as written do not in any way preclude the development of regional solutions approved by the Regional Water Board as a means to comply with the BMP and design standard requirements.

Order we address these issues and also the application of the design standards to retail gasoline outlets (RGOs) and the waiver funding requirements.

Finding: The testimony at the hearing in this matter revealed that there are specific provisions of the SUSMPs that create confusion as to the types of development projects subject to the mitigation design standards. The petitioners also contend that application of the standards to specific types of development either is unreasonable or is inconsistent with the terms of the permit. The specific requirements are discussed below.

Retail Gasoline Outlets

Petitioner WSPA contends that RGOs should be excluded from the SUSMPs. Its petition raised the same general contentions as the other petitioners, but at the hearing WSPA presented evidence specific to RGOs. In particular, WSPA raised questions about the propriety of applying the design standards for BMPs to RGOs. In considering this issue, we conclude that construction of RGOs is already heavily regulated and that owners may be limited in their ability to construct infiltration facilities. Moreover, in light of the small size of many RGOs and the proximity to underground tanks, treatment may not always be feasible, or safe. The mandatory BMPs that are included in the SUSMPs may be adequate to achieve MEP at RGOs, but the Regional Water Board should add additional mandatory BMPs, such as use of dry cleanup methods (e.g. sweeping) for removal of litter and debris, use of rags and absorbents for leaks and spills, restricting the practice of washing down hard surfaces unless the wash water is collected and disposed of properly, annual training of employees on proper spill cleanup and waste disposal methods, and the inclusion of BMPs to address trash receptacle areas and air/water supply

areas.[50] We conclude that because RGOs are already heavily regulated and may be limited in their ability to construct infiltration facilities or to perform treatment, they should not be subject to the BMP design standards at this time, and recommend that the Regional Water Board undertake further consideration of a threshold relative to size of the RGO, number of fueling nozzles, or some other relevant factor. This Order should not be construed to preclude inclusion of RGOs in the SUSMP design standards, with proper justification, when the permit is reissued.

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Redevelopment Projects

The SUSMPs were written to apply to new development and to some types of redevelopment in nine categories of projects. The definition of "redevelopment" reflected the intent of the Regional Water Board to define the scope of redevelopment projects subject to the requirements. That definition[51], however, was somewhat confusing, and it was apparent from testimony at the hearing that the parties had different understandings of the scope of redevelopment subject to the SUSMPs. In their post-hearing briefs, the various parties appeared to agree on the actual intent of the Regional Water Board in including redevelopment in the SUSMPs. This intent was to include redevelopment that adds or creates at least 5,000 square feet of impervious surface to the original development and, where the addition constitutes less than 50 percent of the original development, to limit the application of the BMP design standards to the addition.

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[50] These BMPs are from a list of BMPs in a publication of the California Storm Water Quality Task Force. (Best Management Practice Guide – Retail Gasoline Outlets. March 1997.) This publication includes BMPs in addition to those listed in the SUSMPs. All BMPs recommended in this publication should be mandated.

[51] The SUSMPs state: "Redevelopment" means, on an already developed site, the creation or addition of at least 5,000 square feet of impervious surfaces or the creation or addition of fifty percent or more of impervious surfaces or the making of improvements to fifty percent or more of the existing structure. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces.

While some parties requested further requirements for development, it appears that the Regional Water Board's original intent was relatively simple to apply and results in a fair and appropriate application of the SUSMPs' requirements to redevelopment. Therefore, we will revise the definition in the SUSMPs accordingly.

Environmentally-Sensitive Areas

The permit required that the SUSMPs address at least seven development categories.[52] The final SUSMPs added two more categories: parking lots of 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff; and location within or directly adjacent to an environmentally-sensitive area (ESA). The petitioners contend that the addition of ESAs was inappropriate because the permit refers only to "development categories"[53] and ESA is a location category.

Whether or not the Regional Water Board went beyond the permit's terms in including this category, we find a fundamental problem with the language of the SUSMPs regarding ESAs. All of the other categories are relatively simple to apply because they describe the types of development that fall within the category. For instance, the threshold for a commercial development is 100,000 square feet. If the development is smaller, it is not subject to the SUSMPs. But for developments within ESAs, the SUSMPs contain no threshold. This absence led to speculation by the petitioners that something as small as a new patio on a home in an ESA would make the SUSMPs applicable. The Regional Water Board, at the hearing and in its post-hearing brief, conceded that there should be some threshold. While the Regional Water Board

[52] The categories listed in the permit are: single-family hill residences, 100,000 square-foot commercial developments, automotive repair shops, retail gasoline outlets, restaurants, home subdivisions with 10 to 99 housing units, and home subdivisions with 100 or more housing units. Permit, Part 2, III.A.1.c.
[53] *Id.*

did recommend a specific threshold, we believe that it is inappropriate for this Board to add a threshold that has not been fully discussed by all interested persons.

While it may be appropriate to include more stringent controls for developments in ESAs, we also note that such developments are already subject to extensive regulation under other regulatory programs. Moreover, in light of the permit language limiting the SUSMPs to development categories, ESAs are not an appropriate category within the SUSMPs. The Regional Water Board may choose to consider the issue further when it reissues the permit.

Discretionary and Non-Discretionary, or Ministerial, Projects

The petitioners contend that the SUSMPs should apply only to projects that are considered "discretionary" within the meaning of California Environmental Quality Act (CEQA).[54] They argue that the inclusion of non-discretionary, or ministerial, projects is inconsistent with the terms of the permit.

The permit provisions on development projects do refer to "discretionary" projects in several places. The permittees are directed to develop a checklist for determining priority and exempt projects.[55] Priority projects are defined as development and redevelopment projects requiring discretionary approval, which may have a potential significant effect on storm water quality.[56] The permittees are also required to develop a BMP list.[57] In developing the SUSMPs, the permittees are required to incorporate appropriate elements of the BMP list.[58] Next, the permittees must develop a program on planning control measures for priority projects (which are limited to projects requiring discretionary approval), consistent with the list of BMPs and the

[54] Public Resources Code section 21000 *et seq.*
[55] Permit, Part 2, III.A.1.a.
[56] *Id.*
[57] Permit, Part 2, III.A.1.b.
[58] Permit, Part 2, III.A.1.c.

SUSMPs.[59] The permit further states that, in order to assure compliance with these requirements, the permittees must develop guidelines on preparing CEQA documents that link mitigation conditions to "local discretionary project approvals."[60]

Taken as a whole, the provisions of the permit appear to link the development requirements for SUSMPs to developments that receive discretionary approval by local governments, as defined in CEQA. The SUSMPs are an implementation tool for the permit and must be consistent with the permit. While the limitation of the SUSMPs to discretionary projects may not be sufficiently broad for an effective storm water control program, the Regional Water Board acted inappropriately in expanding the SUSMPs to include non-discretionary projects. The Regional Water Board may consider expanding the development controls beyond CEQA discretionary projects when it reissues the permit. But at this time, the SUSMPs must be revised so that they are limited to development projects requiring discretionary approval within the meaning of CEQA.[61]

Waiver Funding Requirement

Where a waiver is granted from the design standard requirements, the Final SUSMPs provide that the permittee must require the project proponent to transfer the cost savings to a storm water mitigation fund. The fund is to be operated by a public agency or a non-profit entity, to promote regional or alternative solutions for storm water pollution in the same storm watershed. The petitioners contend that the funding requirement will create an additional administrative burden.

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[59] Permit, Part 2, III.a.2.
[60] Permit, Part 2, III.a.3.b.
[61] We note that the Final SUSMPs already include a definition of "discretionary project" consistent with the definition in the CEQA guidelines. Final SUSMPs at page 4 of 25; Title 14, California Code of Regulations, section 15357. Apparently this definition was inadvertently retained after the Regional Water Board decided to expand the SUSMPs beyond discretionary projects.

The concept of a mitigation fund or "bank" is a positive idea for obtaining regional solutions to storm water runoff. As a long-term strategy, municipal storm water dischargers should work to establish regional mitigation facilities, which may be more cost-effective and more technically effective than mitigation structures at individual developments. But at this point there are not sufficient resources in place to require all permittees to establish such funds or to find appropriate non-profit organizations. Before mandating funding, preliminary questions should be answered, including who will manage the fund, what types of projects it will be used for, what entities can legally operate such funds, and how permittees will determine the amount of the assessments. It would be appropriate for the County to consider developing a program with the appropriate flood control agency, or as a model for the separate cities to develop. There may be suitable agencies to administer such funds, but the development of programs may take some time. The Regional Water Board should consider adopting such a program when it reissues the permit, after consultation with the appropriate local agencies.

III. CONCLUSIONS

Based on the discussion above, the Board concludes that:

1. The Regional Water Board complied with the procedural requirements of the permit, including the Administrative Review Process, in approving the Final SUSMPs.
2. The Regional Water Board was authorized to revise the SUSMPs by including more stringent requirements than the permittees had proposed.
3. The Regional Water Board complied with did not violate the Administrative Procedure Act, CEQA, or the Constitutional provisions on state mandates. The petitioners' due process rights have been protected
4. The Regional Water Board considered the costs of the SUSMPs, and acted reasonably in requiring these controls in light of the expected benefits to water quality.

5. The Final SUSMPs reflect a reasonable interpretation of development controls that achieve reduction of pollutants in storm water discharges to the maximum extent practicable.
6. The SUSMPs include adequate protections of groundwater quality from any impacts from infiltration.
7. The SUSMPs will be revised to clarify the intent of the Regional Water Board and to make them consistent with the permit. Specifically, retail gasoline outlets should not be subject to the BMP design standards because they are already heavily regulated and may be limited in their ability to construct infiltration facilities or to perform treatment. Redevelopment projects should be subject to the SUSMPs only if they result in creation or addition of 5,000 square feet of impervious surfaces. Environmentally-sensitive areas should not be listed as a category in the SUSMPs. The SUSMPs should only apply to discretionary projects. The requirement for funding by project proponents who receive waivers should be deleted. The SUSMPs will be amended as shown in the attachment to this Order.
8. In light of the revisions of the SUSMPs made by this Order, and to allow the permittees adequate time to adopt implementing ordinances, the deadline for adopting ordinances will be revised to January 15, 2001, and the effective date of the Final SUSMPs will be revised to February 15, 2001.

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IV. ORDER

IT IS HEREBY ORDERED that the Standard Urban Storm Water Mitigation Plans for Los Angeles County and Cities in Los Angeles County is revised consistent with the amendments attached hereto. In all other respects the petitions are dismissed.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on October 5, 2000.

AYE: Arthur G. Baggett, Jr.
Mary Jane Forster
John W. Brown

NO: None

ABSENT: Peter S. Silva

ABSTAIN: None

/s/
Maureen Marché
Administrative Assistant to the Board

AMENDMENTS TO SUSMPS

[These amendments are to the Final SUSMP, as published March 8, 2000]

Page 3 of 25

First full paragraph:

All **discretionary development and redevelopment** projects that fall into one of ~~seven~~ **the following** categories are ~~identified in the Los Angeles County MS4 Permit as requiring~~ **subject to these** SUSMPs. These categories are:

- Single-family Hillside Residences
- 100,000 Square Foot Commercial Developments
- Automotive Repair Shops
- Retail Gasoline Outlets
- Restaurants
- Home Subdivisions with 10 to 99 housing units
- Home Subdivisions with 100 or more housing units
- **Parking lots 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff**

Second full paragraph:

~~The Regional Board Executive Officer has designated two additional categories subject to SUSMP requirements for the Los Angeles County MS4 Permit. These categories are:~~

- ~~Location within or directly adjacent to or discharging directly to an environmentally sensitive area, and~~
- ~~Parking lots 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff~~

Fourth full paragraph:

Permittees shall amend codes, if necessary, not later than ~~September 8, 2000~~ **January 15, 2001,** to give legal effect to the SUSMP requirements. The SUSMP requirements for projects identified herein shall take effect not later than ~~October 8, 2000~~ **February 15, 2001.**

Page 4 of 25

Delete definition of "Environmentally Sensitive Area"

Revise Definition of "Redevelopment":

"Redevelopment" means, on an already developed site, the creation or addition of at least 5,000 square feet of impervious surfaces ~~or the creation or addition of fifty percent or more of impervious surfaces or the making of improvements to fifty percent or more of the existing structure~~. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routing maintenance activity; and land disturbing activities related with structural or impervious surfaces. **Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to these SUSMPs, the Design Standards apply only to the addition, and not to the entire development.**

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Add to "Limited Exclusion": Retail Gasoline Outlets

Page 15 of 25

Delete the first full paragraph (storm water mitigation funding)

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2001- 15

In the Matter of the Petitions of

BUILDING INDUSTRY ASSOCIATION OF SAN DIEGO COUNTY
AND
WESTERN STATES PETROLEUM ASSOCIATION

For Review Of Waste Discharge Requirements Order No. 2001-01
for Urban Runoff from San Diego County
[NPDES No. CAS0108758]
Issued by the
California Water Quality Control Board,
San Diego Region

SWRCB/OCC FILES A-1362, A-1362(a)

BY THE BOARD:

On February 21, 2001, the San Diego Regional Water Quality Control Board (Regional Water Board) issued a revised national pollutant discharge elimination system (NPDES) permit in Order No. 2001-01 (permit) to the County of San Diego (County), the 18 incorporated cities within the County, and the San Diego Unified Port District. The permit covers storm water discharges from municipal separate storm sewer systems (MS4) throughout the County. The permit is the second MS4 permit issued for the County, although the first permit was issued more than ten years earlier.[1]

[1] NPDES permits generally expire after five years, but can be extended administratively where the Regional Water Board is unable to issue a new permit prior to the expiration date. As the record in this matter amply demonstrates, the Regional Water Board engaged in an extensive process of issuing draft permits, accepting comments, and holding workshops and hearings since at least 1995.

The permit includes various programmatic and planning requirements for the permittees, including construction and development controls, controls on municipal activities, controls on runoff from industrial, commercial, and residential sources, and public education. The types of controls and requirements included in the permit are similar to those in other MS4 permits, but also reflect the expansion of the storm water program since the first MS4 permit was adopted for San Diego County 11 years ago.[2]

On March 23, 2001, the State Water Resources Control Board (State Water Board or Board) received petitions for review of the permit from the Building Industry Association of San Diego County (BIA) and from the Western States Petroleum Association (WSPA).[3] The petitions are legally and factually related, and have therefore been consolidated for purposes of review.[4] None of the municipal dischargers subject to the permit filed a petition, nor did they file responses to the petitions.

I. BACKGROUND

MS4 permits are adopted pursuant to Clean Water Act section 402(p). This federal law sets forth specific requirements for permits for discharges from municipal storm sewers. One of the requirements is that permits "shall require controls to reduce the discharge of

[2] For a discussion of the evolution of the storm water program, consistent with guidance from the United States Environmental Protection Agency (U.S. EPA), see Board Order WQ 2000-11.

[3] On March 23, the State Water Board also received brief letters from the Ramona Chamber of Commerce, the North San Diego County Association of Realtors, the San Diego County Apartment Association, the National Association of Industrial and Office Properties, and the California Building Industry Association. All of these letters state that they are "joining in" the petition filed by BIA. None of the letters contain any of the required information for petitions, which is listed at Cal. Code of Regs., tit. 23, section 2050. These letters will be treated as comments on the BIA petition. To the extent the authors intended the letters be considered petitions, they are dismissed.

[4] Cal. Code of Regs., tit. 23, section 2054.

pollutants to the maximum extent practicable [MEP]." States establish appropriate requirements for the control of pollutants in the permits.

This Board very recently reviewed the need for controls on urban runoff in MS4 permits, the emphasis on best management practices (BMPs) in lieu of numeric effluent limitations, and the expectation that the level of effort to control urban runoff will increase over time.[5] We pointed out that urban runoff is a significant contributor of impairment to waters throughout the state, and that additional controls are needed. Specifically, in Board Order WQ 2000-11 (hereinafter, LA SUSMP order), we concluded that the Los Angeles Regional Water Board acted appropriately in determining that numeric standards for the design of BMPs to control runoff from new construction and redevelopment constituted controls to the MEP.[6]

The San Diego permit incorporates numeric design standards for runoff from new construction and redevelopment similar to those considered in the LA SUSMP order.[7] In addition, the permit addresses programmatic requirements in other areas. The LA SUSMP order was a precedential decision,[8] and we will not reiterate our findings and conclusions from that decision.[9]

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[5] Board Order WQ 2000-11.

[6] As explained in that Order, numeric design standards are not the same as numeric effluent limitations. While BIA contends that the permit under review includes numeric effluent limitations, it does not. A numeric design standard only tells the dischargers how much runoff must be treated or infiltrated; it does not establish numeric effluent limitations proscribing the quality of effluent that can be discharged following infiltration or treatment.

[7] The San Diego permit also includes provisions that are different from those approved in the LA SUSMP Order, but which were not the subject of either petition. Such provisions include the inclusion of non-discretionary projects. We do not make any ruling in this Order on matters that were not addressed in either petition.

[8] Government Code section 11425.60; State Board Order WR 96-1 (Lagunitas Creek), at footnote 11.

[9] BIA restates some of the issues this Board considered in the LA SUSMP order. For instance, BIA contends that it is inappropriate for the permit to regulate erosion control. While this argument was not specifically addressed in our prior Order, it is obvious that the most serious concern with runoff from construction is the potential for increased erosion. It is absurd to contend that the permit should have ignored this impact from urban runoff.

The petitioners make numerous contentions, mostly concerning requirements that they claim the dischargers will not be able to, or should not be required to, comply with. We note that none of the dischargers has joined in these contentions. We further note that BIA raises contentions that were already addressed in the LA SUSMP order. In this Order, we have attempted to glean from the petition issues that are not already fully addressed in Board Order Board Order WQ 2000-11, and which may have some impact on BIA and its members. WSPA restated the contentions it made in the petition it filed challenging the LA SUSMP order. We will not address those contentions again.[10] But we will address whether the Regional Water Board followed the precedent established there as it relates to retail gasoline outlets.[11]

[10] On November 8, 2001, following the October 31 workshop meeting that was held to discuss the draft order, BIA submitted a "supplemental brief" that includes many new contentions raised for the first time. (Interested persons who were not petitioners filed comments on the draft order asking the State Water Board to address some of these.) The State Water Board will not address these contentions, as they were not timely raised. (Wat. Code § 13320; Cal. Code of Regs., tit. 23, § 2050(a).) Specific contentions that are not properly subject to review under Water Code section 13320 are objections to findings 16, 17, and 38 of the permit, the contention that permit provisions constitute illegal unfunded mandates, challenges to the permit's inspection and enforcement provisions, objections to permit provisions regarding construction sites, the contention that post-construction requirements should be limited to "discretionary" approvals, the challenge to the provisions regarding local government compliance with the California Environmental Quality Act, and contentions regarding the term "discharge" in the permit. BIA did not meet the legal requirements for seeking review of these portions of the permit.

[11] On November 8, 2001, the State Water Board received eight boxes of documents from BIA, along with a "Request for Entry of Documents into the Administrative Record." BIA failed to comply with Cal. Code of Regs., tit. 23, section 2066(b), which requires such requests be made "prior to or during the workshop meeting." The workshop meeting was held on October 31, 2001. The request will therefore not be considered. BIA also objected in this submittal that the Regional Water Board did not include these documents in its record. The Regional Water Board's record was created at the time the permit was adopted, and was submitted to the State Water Board on June 11, 2001. BIA's objection is not timely.

II. CONTENTIONS AND FINDINGS[12]

Contention: BIA contends that the discharge prohibitions contained in the permit are "absolute" and "inflexible," are not consistent with the standard of "maximum extent practicable" (MEP), and financially cannot be met.

Finding: The gist of BIA's contention concerns Discharge Prohibition A.2, concerning exceedance of water quality objectives for receiving waters: "Discharges from MS4s which cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater are prohibited." BIA generally contends that this prohibition amounts to an inflexible "zero contribution" requirement.

BIA advances numerous arguments regarding the alleged inability of the dischargers to comply with this prohibition and the impropriety of requiring compliance with water quality standards in municipal storm water permits. These arguments mirror arguments made in earlier petitions that required compliance with water quality objectives by municipal storm water permittees. (See, e.g., Board Orders WQ 91-03, WQ 98-01, and WQ 99-05.) This Board has already considered and upheld the requirement that municipal storm water discharges must not cause or contribute to exceedances of water quality objectives in the receiving water. We adopted an iterative procedure for complying with this requirement, wherein municipalities must report instances where they cause or contribute to exceedances, and then must review and improve BMPs so as to protect the receiving waters. The language in the permit in Receiving

[12] This Order does not address all of the issues raised by the petitioners. The Board finds that the issues that are not addressed are insubstantial and not appropriate for State Water Board review. (See *People v. Barry* (1987) 194 Cal.App.3d 158 [239 Cal.Rptr. 349]; Cal. Code Regs., tit. 23, § 2052.) We make no determination as to whether we will address the same or similar issues when raised in future petitions.

Water Limitation C.1 and 2 is consistent with the language required in Board Order WQ 99-05, our most recent direction on this issue.[13]

While the issue of the propriety of requiring compliance with water quality objectives has been addressed before in several orders, BIA does raise one new issue that was not addressed previously. In 1999, the Ninth Circuit Court of Appeals issued an opinion addressing whether municipal storm water permits must require "strict compliance" with water quality standards.[14] (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.) The court in *Browner* held that the Clean Water Act provisions regarding storm water permits do not require that municipal storm-sewer discharge permits ensure strict compliance with water quality standards, unlike other permits.[15] The court determined that: "Instead, [the provision for municipal storm water permits] *replaces* the requirements of [section 301] with the requirement that municipal storm-sewer dischargers 'reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator . . . determines appropriate for the control of such pollutants'." (191 F.3d at 1165.) The court further held that the Clean Water Act does grant the permitting agency discretion to determine what pollution controls are appropriate for municipal storm water discharges. (*Id.* at 1166.) Specifically, the court stated

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[13] In addition to Discharge Prohibition A.2, quoted above, the permit includes Receiving Water Limitation C.1, with almost identical language: "Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) are prohibited." Receiving Water Limitation C.2 sets forth the iterative process for compliance with C.1, as required by Board Order WQ 99-05.

[14] "Water quality objectives" generally refers to criteria adopted by the state, while "water quality standards" generally refers to criteria adopted or approved for the state by the U.S. EPA. Those terms are used interchangeably for purposes of this Order.

[15] Clean Water Act § 301(b)(1)(C) requires that most NPDES permits require strict compliance with quality standards.

that U.S. EPA had the authority either to require "strict compliance" with water quality standards through the imposition of numeric effluent limitations, or to employ an iterative approach toward compliance with water quality standards, by requiring improved BMPs over time. (*Id.*) The court in *Browner* upheld the EPA permit language, which included an iterative, BMP-based approach comparable to the language endorsed by this Board in Order WQ 99-05.

In reviewing the language in this permit, and that in Board Order WQ 99-05, we point out that our language, similar to U.S. EPA's permit language discussed in the *Browner* case, does not require strict compliance with water quality standards. Our language requires that storm water management plans be designed to achieve compliance with water quality standards. Compliance is to be achieved over time, through an iterative approach requiring improved BMPs. As pointed out by the *Browner* court, there is nothing inconsistent between this approach and the determination that the Clean Water Act does not mandate strict compliance with water quality standards. Instead, the iterative approach is consistent with U.S. EPA's general approach to storm water regulation, which relies on BMPs instead of numeric effluent limitations.

It is true that the holding in *Browner* allows the issuance of municipal storm water permits that limit their provisions to BMPs that control pollutants to the maximum extent practicable (MEP), and which do not require compliance with water quality standards. For the reasons discussed below, we decline to adopt that approach. The evidence in the record before us is consistent with records in previous municipal permits we have considered, and with the data we have in our records, including data supporting our list prepared pursuant to Clean Water Act section 303(d). Urban runoff is causing and contributing to impacts on receiving waters throughout the state and impairing their beneficial uses. In order to protect beneficial uses and to achieve compliance with water quality objectives in our streams, rivers, lakes, and the ocean, we

must look to controls on urban runoff. It is not enough simply to apply the technology-based standards of controlling discharges of pollutants to the MEP; where urban runoff is causing or contributing to exceedances of water quality standards, it is appropriate to require improvements to BMPs that address those exceedances.

While we will continue to address water quality standards in municipal storm water permits, we also continue to believe that the iterative approach, which focuses on timely improvement of BMPs, is appropriate. We will generally not require "strict compliance" with water quality standards through numeric effluent limitations and we will continue to follow an iterative approach, which seeks compliance over time.[16] The iterative approach is protective of water quality, but at the same time considers the difficulties of achieving full compliance through BMPs that must be enforced throughout large and medium municipal storm sewer systems.[17]

We have reviewed the language in the permit, and compared it to the model language in Board Order WQ 99-05. The language in the Receiving Water Limitations is virtually identical to the language in Board Order WQ 99-05. It sets a limitation on discharges that cause or contribute to violation of water quality standards, and then it establishes an iterative approach to complying with the limitation. We are concerned, however, with the language in Discharge Prohibition A.2, which is challenged by BIA. This discharge prohibition is similar to the Receiving Water Limitation, prohibiting discharges that cause or contribute to exceedance of

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[16] Exceptions to this general rule are appropriate where site-specific conditions warrant. For example, the Basin Plan for the Lake Tahoe basin, which protects an outstanding national resource water, includes numeric effluent limitations for storm water discharges.

[17] While BIA argues that the permit requires "zero contribution" of pollutants in runoff, and "in effect" contains numeric effluent limitations, this is simply not true. The permit is clearly BMP-based, and there are no numeric effluent limitations. BIA also claims that the permit will require the construction of treatment plants for storm water similar to the publicly-owned treatment works for sanitary sewage. There is no basis for this contention; there is no requirement in the permit to treat all storm water. The emphasis is on BMPs.

water quality objectives. The difficulty with this language, however, is that it is not modified by the iterative process. To clarify that this prohibition also must be complied with through the iterative process, Receiving Water Limitation C.2 must state that it is also applicable to Discharge Prohibition A.2. The permit, in Discharge Prohibition A.5, also incorporates a list of Basin Plan prohibitions, one of which also prohibits discharges that are not in compliance with water quality objectives. (See, Attachment A, prohibition 5.) Language clarifying that the iterative approach applies to that prohibition is also necessary.[18]

BIA also objects to Discharge Prohibition A.3, which appears to require that treatment and control of discharges must always occur prior to entry into the MS4: "Discharges into and from MS4s containing pollutants which have not been reduced to the [MEP] are prohibited."[19] An NPDES permit is properly issued for "discharge of a pollutant" to waters of the United States.[20] (Clean Water Act § 402(a).) The Clean Water Act defines "discharge of a pollutant" as an "addition" of a pollutant to waters of the United States from a point source. (Clean Water Act section 502(12).) Section 402(p)(3)(B) authorizes the issuance of permits for discharges "from municipal storm sewers."

We find that the permit language is overly broad because it applies the MEP standard not only to discharges "from" MS4s, but also to discharges "into" MS4s. It is certainly

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[18] The iterative approach is not necessary for all Discharge Prohibitions. For example, a prohibition against pollution, contamination or nuisance should generally be complied with at all times. (See, Discharge Prohibition A.1.) Also, there may be discharge prohibitions for particularly sensitive water bodies, such as the prohibition in the Ocean Plan applicable to Areas of Special Biological Significance.

[19] Discharge Prohibition A.1 also refers to discharges into the MS4, but it only prohibits pollution, contamination, or nuisance that occurs "in waters of the state." Therefore, it is interpreted to apply only to discharges to receiving waters.

[20] Since NPDES permits are adopted as waste discharge requirements in California, they can more broadly protect "waters of the state," rather than being limited to "waters of the United States." In general, the inclusion of "waters (footnote continued)

true that in most instances it is more practical and effective to prevent and control pollution at its source. We also agree with the Regional Water Board's concern, stated in its response, that there may be instances where MS4s use "waters of the United States" as part of their sewer system, and that the Board is charged with protecting all such waters. Nonetheless, the specific language in this prohibition too broadly restricts all discharges "into" an MS4, and does not allow flexibility to use regional solutions, where they could be applied in a manner that fully protects receiving waters.[21] It is important to emphasize that dischargers into MS4s continue to be required to implement a full range of BMPs, including source control. In particular, dischargers subject to industrial and construction permits must comply with all conditions in those permits prior to discharging storm water into MS4s.

Contention: State law requires the adoption of wet weather water quality standards, and the permit improperly enforces water quality standards that were not specifically adopted for wet weather discharges.

Finding: This contention is clearly without merit. There is no provision in state or federal law that mandates adoption of separate water quality standards for wet weather conditions. In arguing that the permit violates state law, BIA states that because the permit applies the water quality objectives that were adopted in its Basin Plan, and those objectives were not specifically adopted for wet weather conditions only, the Regional Water Board violated

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of the state" allows the protection of groundwater, which is generally not considered to be "waters of the United States."

[21] There are other provisions in the permit that refer to restrictions "into" the MS4. (See, e.g., Legal Authority D.1.) Those provisions are appropriate because they do not apply the MEP standard to the permittees, but instead require the permittees to demand appropriate controls for discharges into their system. For example, the federal regulations require that MS4s have a program "to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system . . . ." (40 C.F.R. § 122.26(d)(2)(iv)(D).)

Water Code section 13241. These allegations appear to challenge water quality objectives that were adopted years ago. Such a challenge is clearly inappropriate as both untimely, and because Basin Plan provisions cannot be challenged through the water quality petition process. (See Wat. Code § 13320.) Moreover, there is nothing in section 13241 that supports the claim that Regional Water Boards must adopt separate wet weather water quality objectives. Instead, the Regional Water Board's response indicates that the water quality objectives were based on all water conditions in the area. There is nothing in the record to support the claim that the Regional Water Board did not in fact consider wet weather conditions when it adopted its Basin Plan. Finally, Water Code section 13263 mandates the Regional Water Board to implement its Basin Plan when adopting waste discharge requirements. The Regional Water Board acted properly in doing so.

BIA points to certain federal policy documents that authorize states to promulgate water quality standards specific to wet-weather conditions.[22] Each Regional Water Board considers revisions to its Basin Plan in a triennial review. That would be the appropriate forum for BIA to make these comments.

Contention: BIA contends that the permit improperly classifies urban runoff as "waste" within the meaning of the Water Code.

Finding: BIA challenges Finding 2, which states that urban runoff is a waste, as defined in the Water Code, and that it is a "discharge of pollutants from a point source" under the federal Clean Water Act. BIA contends that the legislative history of section 13050(d) supports

[22] These documents do not support the claim that U.S. EPA and the Clinton Administration indicated that the absence of such regulations "is a major problem that needs to be addressed," as claimed in BIA's Points and Authorities, at page 18.

its position that "waste" should be interpreted to exclude urban runoff. The Final Report of the Study Panel to the California State Water Resources Control Board (March, 1969) is the definitive document describing the legislative intent of the Porter-Cologne Water Quality Control Act. In discussing the definition of "waste," this document discusses its broad application to "current drainage, flow, or seepage into waters of the state of harmful concentrations" of materials, including eroded earth and garbage.

As we stated in Board Order WQ 95-2, the requirement to adopt permits for urban runoff is undisputed, and Regional Water Boards are not required to obtain any information on the impacts of runoff prior to issuing a permit. (At page 3.) It is also undisputed that urban runoff contains "waste" within the meaning of Water Code section 13050(d), and that the federal regulations define "discharge of a pollutant" to include "additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man." (40 C.F.R. § 122.2.) But it is the waste or pollutants in the runoff that meet these definitions of "waste" and "pollutant," and not the runoff itself.[23] The finding does create some confusion, since there are discharge prohibitions that have been incorporated into the permit that broadly prohibit the discharge of "waste" in certain circumstances. (See Attachment A to the permit.) The finding will therefore be amended to state that urban runoff contains waste and pollutants.

Contention: BIA contends that the Regional Water Board violated California Environmental Quality Act (CEQA).

[23] The Regional Water Board is appropriately concerned not only with pollutants in runoff but also the volume of runoff, since the volume of runoff can affect the discharge of pollutants in the runoff. (See Board Order WQ 2000-11, at page 5.)

Finding: As we have stated in several prior orders, the provisions of CEQA requiring adoption of environmental documents do not apply to NPDES permits.[24] BIA contends that the exemption from CEQA contained in section 13389 applies only to the extent that the specific provisions of the permit are required by the federal Clean Water Act. This contention is easily rejected without addressing whether federal law mandated all of the permit provisions. The plain language of section 13389 broadly exempts the Regional Water Board from the requirements of CEQA to prepare environmental documents when adopting "any waste discharge requirement" pursuant to Chapter 5.5 (§§ 13370 et seq., which applies to NPDES permits).[25] BIA cites the decision in *Committee for a Progressive Gilroy v. State Water Resources Control Board* (1987) 192 Cal.App.3d 847. That case upheld the State Water Board's view that section 13389 applies only to NPDES permits, and not to waste discharge requirements that are adopted pursuant only to state law. The case did not concern an NPDES permit, and does not support BIA's argument.

Contention: WSPA contends that the Regional Water Board did not follow this Board's precedent for retail gasoline outlets (RGOs) established in the LA SUSMP order.

Finding: In the LA SUSMP order, this Board concluded that construction of RGOs is already heavily regulated and that owners may be limited in their ability to construct infiltration facilities. We also noted that, in light of the small size of many RGOs and the proximity to underground tanks, it might not always be feasible or safe to employ treatment methodologies. We directed the Los Angeles Regional Water Board to mandate that RGOs

[24] Water Code section 13389; see, e.g., Board Order WQ 2000-11.

[25] The exemption does have an exception for permits for "new sources" as defined in the Clean Water Act, which is not applicable here.

employ the BMPs listed in a publication of the California Storm Water Quality Task Force. (*Best Management Practice Guide – Retail Gasoline Outlets* (March 1997).) We also concluded that RGOs should not be subject to the BMP design standards at this time. Instead, we recommended that the Regional Water Board undertake further consideration of a threshold relative to size of the RGO, number of fueling nozzles, or some other relevant factor. The LA SUSMP order did not preclude inclusion of RGOs in the SUSMP design standards, with proper justification, when the permit is reissued.

The permit adopted by the Regional Water Board did not comply with the directions we set forth in the LA SUSMP order for the regulation of RGOs. The permit contains no findings specific to the issues discussed in our prior order regarding RGOs, and includes no threshold for inclusion of RGOs in SUSMPs. Instead, the permit requires the dischargers to develop and implement SUSMPs within one year that include requirements for "Priority Development Project Categories," including "retail gasoline outlets." While other priority categories have thresholds for their inclusion in SUSMPs, the permit states: "Retail Gasoline Outlet is defined as any facility engaged in selling gasoline."[26]

The Regional Water Board responded that it did follow the directions in the LA SUSMP order. First, it points to findings that vehicles and pollutants they generate impact receiving water quality. But the only finding that even mentions RGOs is finding 4, which simply lists RGOs among the other priority development project categories as land uses that generate more pollutants. The Regional Water Board staff also did state some justifications for the inclusion of RGOs in two documents. The Draft Fact Sheet explains that RGOs contribute

[26] Permit at F.1.b(2)(a)(x).

pollutants to runoff, and opines that there are appropriate BMPs for RGOs. The staff also prepared another document after the public hearing, which was distributed to Board Members prior to their vote on the permit, and which includes similar justifications and references to studies.[27] The LA SUSMP order called for some type of threshold for inclusion of RGOs in SUSMPs. The permit does not do so. Also, justifications for permit provisions should be stated in the permit findings or the final fact sheet, and should be subject to public review and debate.[28] The discussion in the document submitted after the hearing did not meet these criteria. There was some justification in the "Draft Fact Sheet," but the fact sheet has not been finalized.[29] In light of our concerns over whether SUSMP sizing criteria should apply to RGOs, it was incumbent on the Regional Water Board to justify the inclusion of RGOs in the permit findings or in a final fact sheet, and to consider an appropriate threshold, addressing the concerns we stated. The Regional Water Board also responded that when the dischargers develop the SUSMPs, the dischargers might add specific BMPs and a threshold as directed in the LA SUSMP order. But the order specifically directed that any threshold, and the justification therefore, should be included in the permit. The Regional Water Board did not comply with these directions.

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[27] See "Comparison Between Tentative Order No. 2001-01 SUSMP Requirements and LARWQCB SUSMP Requirements (as Supported by SWRCB Order WQ 2000-11)."

[28] See 40 C.F.R. sections 124.6(e) and 124.8.

[29] U.S. EPA regulations require that there be a fact sheet accompanying the permit. (40 C.F.R. § 124.8.) The record contains only a draft fact sheet, which was never published or distributed in final form. The Regional Water Board should finalize the fact sheet, accounting for any revisions made in the final permit, and publish it on its web site as a final document.

III. CONCLUSIONS

Based on the discussion above, the Board concludes that:

1. The Regional Water Board appropriately required compliance with water quality standards and included requirements to achieve reduction of pollutants to the maximum extent practicable. The permit must be clarified so that the reference to the iterative process for achieving compliance applies not only to the receiving water limitation, but also to the discharge prohibitions that require compliance with water quality standards. The permit should also be revised so that it requires that MEP be achieved for discharges "from" the municipal sewer system, and for discharges "to" waters of the United States, but not for discharges "into" the sewer system.

2. The Regional Water Board was not required to adopt wet-weather specific water quality objectives.

3. The Regional Water Board inappropriately defined urban runoff as "waste."

4. The Regional Water Board did not violate the California Environmental Quality Act.

5. The permit will be revised to delete retail gasoline outlets from the Priority Development Project Categories for Standard Urban Storm Water Mitigation Plans. The Regional Water Board may consider adding retail gasoline outlets, upon inclusion of appropriate findings and a threshold describing which outlets are included in the requirements.

IV. ORDER

IT IS HEREBY ORDERED that the Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems in San Diego County (Order No. 2001-01) are revised as follows:

1. Part A.3: The words "into and" are deleted.

2. Part C.2: Throughout the first paragraph, the words ", Part A.2, and Part A.5 as it applies to Prohibition 5 in Attachment A" shall be inserted following "Part C.1."

3. Finding 2: Revise the finding to read: **URBAN RUNOFF CONTAINS "WASTE" AND "POLLUTANTS"**: Urban runoff contains waste, as defined in the California Water Code, and pollutants, as defined in the federal Clean Water Act, and adversely affects the quality of the waters of the State.

4. Part F.1.b(2)(a): Delete section "x."

In all other respects the petitions are dismissed.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on November 15, 2001.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché
Clerk to the Board

STATE OF CALIFORNIA

STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2006-0012

In the Matter of the Petition of

BOEING COMPANY

For Review of Waste Discharge Requirements (WDR) Orders
R4-2004-0111, R4-2006-0008, and R4-2006-0036 for the
Santa Susana Field Laboratory
Issued by the
California Regional Water Quality Control Board,
Los Angeles Region

SWRCB/OCC FILES A-1653 AND A-1737

BY THE BOARD:

The Boeing Company (Boeing) operates the Santa Susana Field Laboratory (SSFL) in Ventura County.[1] The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) has regulated wastewater discharges from SSFL to waters of the United States since at least 1992.[2] The regulated discharges include storm water runoff, discharges from groundwater remediation systems, industrial wastewater from ongoing operations such as engine test stands, and domestic wastewater from two sewage treatment plants.

On July 1, 2004, the Los Angeles Water Board re-issued a permit to Boeing for discharges from SSFL. (Waste Discharge Requirements Order No. R4-2004-0111 (2004 Permit).) On August 2, 2004, Boeing filed a petition with the State Water Resources Control

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[1] Boeing owns SSFL with the National Aeronautical Space Agency (NASA). The United States Department of Energy (DOE) also owns several buildings at the site. NASA and DOE are not named in the permit reviewed herein, and their participation is not an issue before us.

[2] Waste Discharge Requirements Order No. 92-092, adopted December 7, 1992. The permit was reissued in 1998 (1998 Permit). Waste Discharge Requirements Order No. 98-051, adopted June 29, 1998. This is a national pollutant discharges elimination system (NPDES) permit, No. CA0001309.

Board (State Water Board) challenging the 2004 Permit.[3] (Our File No. A-1653.) Boeing requested that its petition be held in abeyance.[4]

On January 19, 2006, the Los Angeles Water Board modified the 2004 Permit, adding and revising the outfalls listed and the effluent limitations. (Waste Discharge Requirements Order No. R4-2006-0008; January 2006 Permit.) On February 21, 2006, Boeing filed a petition challenging the January 2006 Permit and the failure of the Los Angeles Water Board to adopt a Cease and Desist Order with a compliance schedule and interim effluent limitations. (Our File No. A-1737.) Boeing also asked the State Water Board to activate its 2004 petition, File No. A-1635. On March 9, 2006, the Los Angeles Water Board again revised Boeing's permit, this time adding additional effluent limitations. (Waste Discharge Requirements Order No. R4-2006-0036; March 2006 Permit.) On March 16, 2006, Boeing filed a petition challenging the March 2006 Permit.[5] Boeing also requested a stay of various effluent limitations. The State Water Board denied the stay request in Order WQ 2006-0007.[6]

Many of Boeing's contentions concern the propriety and legality of numeric effluent limitations in the Permit. In particular, Boeing emphasizes that its discharges are largely storm water, and it points to the issues this Board faces as to whether to include numeric effluent limitations in storm water permits. As we will explain, the issues addressed in this Order are relevant only to a unique industrial operation subject to an individual NPDES permit. Our conclusions here do not apply to the issue of numeric effluent limitations for general permits

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[3] Committee to Bridge the Gap (CBG) also filed a petition challenging the permit. (Our File No. A-1653(a).) The State Water Board dismissed CBG's petition on February 14, 2005.

[4] The State Water Board's regulations allow a petitioner to request its petition be held in abeyance. (California Code of Regulations (Cal. Code Regs.), tit. 23, § 2050, subd. (d).) When a petition challenging a permit is held in abeyance, the State Water Board does not act upon the petition until it is activated and the challenged permit remains in full force and effect. (*Ibid.*)

[5] The March 16 petition was not assigned a separate file number, and instead is considered to be an amendment to File No. A-1737. All of the petitions filed by Boeing have been consolidated for purposes of review. (Cal. Code Regs., tit. 23, § 2054.) The 2004 Permit, as modified, is referred to as "the Permit." Where necessary, the different versions are referred to as the 2004 Permit, the January 2006 Permit, and the March 2006 Permit.

[6] The State Water Board received the administrative record and responses to the petitions on May 15, 2006. Part of the record was a report Boeing submitted to the Los Angeles Water Board for its February 2006 meeting. CBG asks this Board to limit the use of that report. All portions of the record were before the Los Angeles Water Board in its actions and are appropriately part of our administrative record. On October 13, 2006, Boeing submitted a new report to the State Water Board and asks that it be considered a part of our administrative record. We decline to do so. That report was received long after the Los Angeles Water Board acted and only two weeks before the State Water Board issued its draft order in this matter. Moreover, Boeing refused to place its petitions in abeyance, which would have allowed time for the State Water Board to review the report and for interested persons to respond to the permit. (See, Cal. Code Regs., tit. 23, § 2050.6.) Boeing's request is denied.

regulating discharges of storm water from thousands of entities engaged in construction and industrial activities.

In this Order, the State Water Board upholds the Permit in most respects. We conclude that the Los Angeles Water Board acted properly in issuing the Permit and in including requirements more akin to a typical individual NPDES permit than the General Permit for Industrial Activities.[7] We also conclude that the Permit includes appropriate monitoring requirements and sites. Moreover, we conclude that at least until Boeing submits a report of waste discharge describing its changed discharge, the Permit must continue to regulate many of the discharges from SSFL as commingled wastewater, rather than as storm water discharges. We also conclude Outfall 001 is duplicative with Outfall 011 and that Outfall 002 is duplicative with Outfall 018 for enforcement purposes. Only two of these outfalls should be regulated with numeric effluent limitations as compliance points. The numeric effluent limitations contained in the Permit were properly calculated and were properly based on the "reasonable potential" for discharges from SSFL to cause or contribute to exceedances of water quality standards and it is appropriate and proper for the Permit to retain these numeric effluent limitations. Finally, we conclude that the Los Angeles Water Board erred in failing to issue a cease and desist order (CDO), including a compliance schedule with interim effluent limitations, following a catastrophic fire at SSFL in September 2005. We will remand the Permit to the Los Angeles Water Board to make revisions consistent with this Order. The compliance schedule shall apply retroactively to the adoption of the January 2006 Permit.[8]

I. BACKGROUND

Boeing's SSFL is located at the top of Woolsey Canyon Road in Simi Hills. The site includes approximately 1500 acres of developed land and 1200 acres of undeveloped land. Industrial activities have occurred at the site for more than 50 years. These activities have included research, development, assembly, disassembly, and testing of rocket engines, missile components, and chemical lasers. There have also been nuclear reactors at SSFL, and the administrative record shows evidence of accidents with these reactors. As of the time the Permit was issued, Boeing activities that contributed to discharges, include rocket engine

[7] General Permit for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (WQO No. 97-03-DWQ).

[8] All contentions not discussed in this Order are not sufficiently substantial to warrant review. (See *People v. Barry* (1987) 194 Cal.App.3d 158; Cal. Code Regs., tit. 23, § 2052(a)(1).)

testing, fire suppression, pressure-testing of equipment to support rocket engine testing, domestic wastewater treatment, and contaminated groundwater treatment.

Boeing representatives have recently stated, including in testimony at the hearing on its stay request, that the only existing discharges from the site are storm water runoff. In particular, Boeing representatives state that it has stopped all rocket engine testing and will not resume testing, if at all, until it can remove all wastewater associated with testing from the site (presumably by trucking the wastewater offsite). In addition, they testified that the treatment plants (groundwater remediation and domestic sewage treatment) are no longer discharging at the site, but instead all wastewater is trucked away. There is nothing in the record to indicate that Boeing has submitted a report of waste discharge regarding these changes in its discharge or requested that the Permit be modified.[9]

Because of the historical activities at SSFL, the site is subject to remediation requirements pursuant to the Resource Conservation and Recovery Act of 1976 (RCRA).[10] The lead agency for the RCRA cleanup is the California Department of Toxic Substances Control (DTSC). DTSC regulates nine closed surface impoundments. The site had radioactive waste that the United States Department of Energy (DOE) is responsible for decontaminating and decommissioning. Boeing still uses radioisotopes for calibrating radiation detectors and counting equipment, but there is no surface water discharge associated with these activities. There is surface runoff from throughout the site, including areas subject to RCRA cleanup. The record shows that there are instances where runoff from SSFL has been contaminated with, or has the potential to be contaminated with, constituents associated with the historical activities at the site and the RCRA remediation. For example, the catchment area of Outfall 004 is comprised of a landscape with surface soil contaminated with mercury and other constituents from the former Sodium Reactor Experiment site. Until the contaminated soil is removed (a likely final remediation solution for this area), Boeing has covered the soil with an impermeable cover and, at the bottom of the catchment, implemented BMPs to treat the runoff. If the cover were compromised, discharges from the site could enter surface waters. There are also constituents that have been detected in runoff from the site that are associated with historic

[9] Dischargers must submit a report of waste discharge for any material change or proposed change in the character, location, or volume of their discharge. (Wat. Code, § 13260, subdivision (c).) The discharges characterized in the Permit generally occur only when there is wet weather runoff from the site. Thus, it is within Boeing's knowledge and control whether it will ensure that process water is not commingled with storm water in the future.

[10] 42 United States Code Annotated (U.S.C.A.) §§ 6901 et seq.

activities. For example, perchlorate, a chemical associated with rocket propellant testing, has been detected at an outfall near the rocket propellant testing area.

SSFL is situated in the Simi Hills. Because of its location and topography, and the large size of the facility, there is runoff from the site to several watersheds. Most of the runoff flows to Bell Creek, which is tributary to the Los Angeles River. There is also runoff into various drainages of Arroyo Simi and to Runkel, Dayton, and Woolsey Canyons. The Permit establishes eighteen outfalls.[11] Outfalls 001 and 002 are at the southerly perimeter of the SSFL, and approximately sixty percent of the runoff from the facility discharges through these two outfalls, which lead to Bell Creek, and then to the Los Angeles River. Outfall 008 discharges to Happy Valley, and ultimately to Bell Creek and the Los Angeles River. Discharges through Outfalls 003, 004, 005, 006, 007, 009, and 010 flow to small watersheds to the northwest of SSFL. These are not tributary to the Los Angeles River. Outfalls 011, 012, 013, 014, 015, 016, 017, and 018 each are sited near areas of specific activities on SSFL, including the two domestic sewage treatment plants, the groundwater treatment plant, and the rocket engine test stand. Outfalls 012-017 each discharge to waters that flow through Outfalls 011 or 018, which in turn flow through Outfalls 001 and 002, respectively. There are several points that are important to our deliberations regarding these outfalls: (1) Outfalls 001-010 are each situated along the perimeter of SSFL, while Outfalls 011-018 are situated in the interior of the site and discharge through perimeter outfalls; (2) Outfalls 001, 002, and 011-018 are authorized to discharge commingled storm water, industrial process water (from groundwater treatment and rocket engine testing) and domestic wastewater (from the sewage treatment plants); and (3) Outfalls 003-010 are the only outfalls designated in the Permit as discharging only storm water runoff.

The Los Angeles Water Board initially adopted the Permit that Boeing now challenges in July 2004. It amended the Permit in January and March 2006, adding and revising effluent limitations each time. In January 2006, the Los Angeles Water Board considered but refused to adopt a CDO, which would have included a time schedule and interim effluent limitations. Boeing filed a petition challenging the July 2004 Permit, but did not seek active review of its challenge to the Permit until February 21, 2006, when Boeing also challenged the January modification.[12] Boeing also challenged the failure to adopt the CDO.

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[11] These are designated Outfalls 001 through 018.

[12] It later challenged the March modification also.

In addition to the Permit modifications, which generally made the Permit more stringent, there was also a significant physical event at SSFL that impacted permit compliance. Beginning on September 28, 2005, the Topanga Fire swept through the site and burned approximately seventy percent of the site. The fire destroyed numerous plants that had served as vegetative cover to control runoff. At the time, BMPs Boeing employed to minimize pollutants in runoff were largely vegetative cover, and the fire destroyed most of this cover. The fire also resulted in ash deposition throughout the site, the result of burned material from both the site and adjacent areas, which contained contaminants regulated by the Permit. Since the fire, Boeing has been engaged in stabilizing and restoring vegetative cover and also in building new structural BMPs at the site.

II. CONTENTIONS AND FINDINGS[13]

Contention: Boeing contends that most, if not all, of its discharge is storm water runoff and that it should be regulated in a similar manner as the State Water Board's General Permit for Industrial Activities.

Finding: The discharges from SSFL are unusual in many respects. SSFL is a very large industrial site in a remote area, with no other industrial sites nearby. It occupies a large area on hillsides, with runoff flowing into a number of different watersheds. There are vast areas of historical contamination and development, and also large areas of open space and native vegetation. Calculations show that SSFL has the potential, in a 24-hour 10-year storm, to discharge an estimated 272 million gallons of storm water runoff. It is the subject of ongoing RCRA cleanup and groundwater remediation. While greatly reduced from its peak activity, there are still ongoing industrial activities occurring. While it originally was situated in a remote location, there are now many residential developments nearby SSFL. The Permit allows Boeing to discharge not only storm water runoff from the site, but also industrial process water, wastewater from groundwater treatment facilities, and domestic wastewater from sewage treatment plants.

The conditions described above make SSFL a unique site, especially because of its size, the degree of historical contamination, and the site topography that results in large

[13] Boeing included various interrelated contentions in its 2004 Petition, its February 2006 Petition, and its March 2006 Petition. Each petition essentially restated and revised the grounds for the petition. Each petition also included a statement of points and authorities, which also stated the bases for the petition somewhat differently than the petition itself. The statement of contentions herein is an effort to summarize and articulate these various arguments, while not restating verbatim each of the contentions listed in the different documents.

amounts of runoff during storm events. The Permit regulates both storm water-only and commingled storm water, domestic, and industrial process water discharges. As will be described below, the legal requirements for the regulation of storm water-only discharges vary from those for the regulation of process water discharges. Wastewater that commingles storm water and process water is subject to the legal requirements for industrial process water. The Permit was based on Boeing's request, through its report of waste discharge, for authorization to discharge process water and storm water from several outfalls at SSFL. In its papers and testimony, Boeing states that it is no longer discharging process water from these facilities. If that is so, in order for its permit to be revised accordingly, it must file a report of waste discharge describing this change in its discharge.[14]

Eight of the eighteen outfalls at SSFL are storm water-only outfalls: Outfalls 003-010. These eight outfalls are all "perimeter" outfalls—flows through these outfalls leave SSFL through different watersheds. (The only other perimeter outfalls—Outfalls 001 and 002—receive all of the commingled flows and together discharge approximately sixty percent of the total flows from SSFL.) While these eight outfalls are designated as storm water-only, the record shows that they each have a significant potential to discharge water contaminated by the historical practices and remediation activities at SSFL. Each of these outfalls is associated with areas of the site with significant historical activities. Outfalls 003-007 receive runoff from past and existing radiological facilities: runoff to Outfall 003 is from the Radioactive Material Handling Facility, runoff to Outfall 004 is from the Sodium Reactor Experiment, runoff to Outfall 005 is from Sodium Burn Pit 1, runoff to Outfall 006 is from Sodium Burn Pit 2, and runoff to Outfall 007 is from Building 100. Outfall 008, which discharges to Happy Valley, is located near facilities that formerly used perchlorate, and that constituent has been found in the runoff. Outfall 009 receives WS-13 drainage and runoff to Outfall 010 is from Building 203, and these outfalls were added to the Permit based on monitoring in the areas.[15] There are numerous other operation areas at SSFL that do not have individual outfalls specifically assigned to them. Generally, the outfalls listed in the Permit are associated with operations over which the

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[14] During the proceedings on the stay request, Boeing's attorney stated that the only process water currently discharged is well purge water, and that change in discharge would be raised to the Los Angeles Water Board when the Permit is modified or reissued. In any event, the Permit as adopted does regulate both process water and storm water, some of it commingled, and the evidence shows that Boeing requested such a permit.

[15] The specific activities and runoff potential are described in detail, *infra*.

Los Angeles Water Board, rather than DTSC, is the lead agency.[16] The outfalls along the perimeter of SSFL, however, do capture all of the runoff that is known to have the potential to contain contaminants associated with industrial activities.

Boeing argues that its site is comparable to other sites regulated by the General Permit for Industrial Activities. It contends that the Los Angeles Water Board was required to follow the assumptions contained in that permit, including the absence of numeric effluent limitations therein. We disagree with this premise.

SSFL is a unique site warranting thorough and detailed regulation. It is not at all the same as a typical facility subject to the General Permit for Industrial Activities. Moreover, it is not permitted as a storm water-only site, regardless of whether the vast majority of the runoff is storm water, rather than process water. The federal Clean Water Act requires that all discharges of wastewater containing pollutants from industrial sites must comply with the technology-based requirements of best practicable control technology currently available (BCT) and best available technology economically achievable (BAT) and with any more stringent limitations necessary to meet water quality standards. (33 U.S.C.A. § 1311(b).)[17] These same standards apply to discharges of storm water associated with industrial activities. (CWA § 402(p)(3)(A).)[18] While the same legal standards in section 301(b) apply to both industrial process water and industrial storm water, the decision whether to include numeric water effluent limitations varies depending whether the permit regulates process water (even if mixed with storm water) or storm water only[19]. The separate rules for storm water discharges apply only to discharges "composed *entirely* of storm water." (CWA § 402(p)(1) (emphasis added).) For this reason, the General Permit for Industrial Activities authorizes only storm water discharges. Only eight of the eighteen outfalls at SSFL (Outfalls 003-010) are composed entirely of storm water. The other ten outfalls, whether or not they may be composed of "mostly" or "almost entirely" of storm water, as Boeing contends, are subject to the same regulatory requirements as any other industrial process water. Thus, Boeing does not qualify for coverage under the General Permit.

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[16] The Fact Sheet to the Permit includes a thorough discussion of the location, operations, and constituents associated with each outfall.

[17] Clean Water Act (CWA) § 301(b). Hereafter, citations to the federal statute will refer only to the CWA citation.

[18] *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.

[19] As discussed in detail below, process water permits must include numeric effluent limitations unless it is not "feasible" to include such limitations. Storm water-only permits are not required to include numeric effluent limitations, without the necessity of determining infeasibility.

The Permit must include appropriate requirements for both process water and storm water discharges. Boeing also contends that numeric effluent limitations are not appropriate for process water discharges from SSFL, pursuant to federal regulations.[20] We will discuss in detail the propriety of numeric effluent limitations for the various outfalls regulated in the Permit. In general, however, we reject Boeing's contention that the Los Angeles Water Board was required to regulate the various discharges from SSFL in a similar manner to the General Permit for Industrial Activities.

Contention: Boeing contends that the monitoring and compliance points are inappropriate.

Finding: The Permit lists eighteen outfalls. Each outfall has numerous numeric effluent limitations for constituents for which the Los Angeles Water Board determined that discharges had the reasonable potential to cause or contribute to exceedances of water quality standards in surface waters. Boeing points out that prior permits for SSFL had fewer points where monitoring was required and where effluent limitations applied. A brief history of the Los Angeles Water Board's permitting strategy is necessary in order to understand this contention.

Boeing challenges the 2004 Permit and modifications in January and March of 2006. The prior permit was adopted in 1998. (Waste Discharge Requirements Order No. 98-051; 1998 Permit.) The 1998 Permit regulated storm water runoff, industrial and domestic wastewater, and groundwater treatment discharges from SSFL. The 1998 Permit established as compliance points Outfalls 001 and 002, which are 6,000 feet south of the final retention ponds, and Outfalls 003-007 to the north.[21] The 1998 Permit also stated that the storm water discharges were "covered by" the General Industrial Storm Water Permit and that "its requirements are incorporated in [the 1998 Permit] by reference."[22] For Outfalls 001 and 002, the 1998 Permit listed numeric effluent limitations for 49 constituents. Outfalls 003-007 in the 1998 Permit have numeric effluent limitations for 25 constituents. Most effluent limitations were for daily maximum and not for monthly average.

The 2004 Permit added the three perimeter outfalls that were not listed in the 1998 Permit (Outfalls 008-010) and the eight interior outfalls (Outfalls 011-018). The 2004

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[20] 40 Code of Federal Regulations (C.F.R.) § 122.44(k)(3).

[21] Thus, the 1998 Permit did not list as separate outfalls three of the perimeter outfalls listed in the 2004 Permit (008-010) and the eight interior outfalls that lead to 001 and 002 (011-018).

[22] 1998 Permit, Finding 27.

Permit also discussed the reasonable potential for discharges through the various outfalls to cause or contribute to exceedance of criteria in the California Toxic Rule (CTR).[23] The 2004 Permit included numeric effluent limitations for 40 constituents for Outfalls 001 and 002, 19 numeric effluent limitations for Outfalls 003-007, 11 numeric effluent limitations for Outfalls 008-010, and 14 numeric effluent limitations for Outfalls 015-017. (There were no numeric effluent limitations assigned to Outfalls 011, 012, 013, 014, or 018.) A significant change from the 1998 Permit was that the 2004 Permit included maximum daily loads in addition to the maximum daily concentrations in the prior permit. In addition, some of the limitations were more stringent, reflecting the CTR criteria, and some constituents changed. Thus, the major changes from the 1988 Permit to the 2004 Permit were not the inclusion of numeric effluent limitations in the permit—these were already in the 1998 permit, including numeric effluent limitations for storm water-only discharges. The major changes were the addition of numeric effluent limitations for three perimeter outfalls and for three interior outfalls, tightening of some numeric effluent limitations to implement the CTR criteria, and the addition of maximum daily loading limitations.

In January of 2006, based on monitoring results in the interim, the Los Angeles Water Board modified the 2004 Permit, adding numeric effluent limitations for Outfalls 011 and 018[24] and for Outfalls 012, 013, and 014[25]. This permit modification occurred shortly after the Topanga Fire. Finally, in March of 2006, the Los Angeles Water Board again modified the 2004 Permit, this time revising numeric effluent limitations to reflect two Total Maximum Daily Loads (TMDLs) the Board had adopted.[26] The result was more stringent and new numeric effluent limitations for outfalls with discharges ultimately flowing to the Los Angeles River: Outfalls 001, 002, 011, and 018.[27]

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[23] 40 C.F.R. title 131.36. In the CTR, the United States Environmental Protection Agency (U.S. EPA) adopted water quality standards for priority pollutants in California. The State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan, or SIP) in order to implement the CTR in permits. The CTR and the SIP were each adopted in 2000.

[24] The numeric effluent limitations for Outfalls 001, 002, 011 and 018 are identical.

[25] There are 19 numeric effluent limitations listed for Outfalls 012, 013, and 014.

[26] The TMDLs were for metals and for nutrient loading in the Los Angeles River. TMDLs are required by § 303 of the CWA. NPDES permits must be consistent with the assumptions and requirements of TMDLs. (40 C.F.R. § 122.44(d)(1)(vii).)

[27] Some interior outfalls ultimately flowing to the Los Angeles River also have TMDL-based effluent limitations.

For each effluent limitation at each outfall, the 2004 Permit requires monitoring. Boeing challenges both the number of outfalls listed as compliance points and the breadth of the monitoring requirements. NPDES permits generally must require monitoring at each outfall for each constituent for which there are effluent limitations.[28] The federal regulations do not require analytical monitoring at facilities that discharge storm water associated with industrial activities,[29] but this relaxation of requirements is generally associated with the "nature of the permit conditions."[30] Thus, where a permit regulating storm water discharges associated with industrial activity does contain numeric effluent limitations, "sampling requirements will be appropriate,"[31] while permits that include BMPs in lieu of numeric effluent limitations, may require inspections and BMP evaluation rather than sampling.[32] Therefore, to the extent that outfalls are properly listed as compliance points and that numeric effluent limitations are appropriate, then the monitoring requirements are appropriate. We turn then to the propriety of listing eighteen outfalls as compliance points.

In reviewing the specific locations for sampling and compliance, it is true that the number of outfalls has grown, from the 1998 permit, which listed seven outfalls, to the 2004 Permit, which lists 18 outfalls. Moreover, when the 2004 Permit was adopted, it listed 13 outfalls as compliance points, and when it was modified in 2006, it listed 18 outfalls as compliance points. The actual activities at the SSFL did not vary greatly from 1998 until 2006, although the Los Angeles Water Board did obtain more detailed monitoring data over these years. The chief change in regulatory strategy that resulted in the addition of outfalls was the inclusion of "interior" outfalls as compliance points. There are seven outfalls that all drain to Outfalls 001 and 002.[33] In addition, the number of perimeter outfalls grew from seven to ten.[34] In reviewing the propriety of adding these outfalls as compliance points, we address the interior and perimeter outfalls separately.

We first consider the perimeter outfalls. The 2004 Permit added Outfalls 008, 009, and 010. Storm water runoff discharges from Outfalls 009 and 010 to Arroyo Simi to the

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[28] 40 C.F.R. § 122.44(i).

[29] 40 C.F.R. § 122.44(i)(2)(i)(4) and (5).

[30] Vol. 57 Federal Register 11394, 11402.

[31] *Ibid.*

[32] *Ibid.*

[33] Outfalls 011-018.

[34] Outfalls 008-010 were added.

north of SSFL. Storm water runoff at Outfall 008 discharges from Happy Valley to Dayton Canyon Creek, which ultimately flows to Bell Creek and then the Los Angeles River. Outfalls 001-007, which have all been compliance points with numeric effluent limitations since at least 1998, each discharge to different watersheds around the perimeter of the site.

The Fact Sheet to the 2004 Permit describes in detail each outfall, the locations of former and current industrial activities that are drained, and the constituents of concern. All of the perimeter outfalls are placed so that they would pick up pollutants associated with industrial activities. The industrial activities at the site, including the prior activities for which there are historic contaminants, are indeed potentially substantial contributors of pollutants to surface waters. Outfalls 001 and 002 receive the vast majority of the site's runoff, including treated wastewater, water from the groundwater treatment systems, excess reclaimed water, water from the engine test stands, and storm water. While the other perimeter outfalls have much less runoff, and do not receive process wastewater, they each drain areas that may contain pollutants from the numerous industrial activities conducted at the site. For example, Outfall 010 drains Building 203, which is subject to significant remediation measures under the direction of DTSC. The building was used for repair and calibration of instruments containing mercury. Currently, the building houses operations related to laser research, including polishing fibers, hand wipe solvent, and chemical cleaning, assembly and testing of components.[35] Should BMPs fail, these contaminants would pose significant risks to surface waters. We conclude that each of these perimeter outfalls is properly situated as a compliance point.[36] We also conclude that the 2004 Permit properly requires monitoring at each of these outfalls.

The interior outfalls[37] raise different issues concerning their propriety. Each of these outfalls is authorized to receive commingled process and storm water. Flows through Outfalls 012, 013, 016 and 017 discharge through Outfall 018, and thence through Outfall 002. Flows through Outfalls 014 and 015 discharge through Outfall 011, and thence through Outfall 001. Each of the six outfalls that flow to Outfalls 011 and 012[38] is located near areas of significant past and present industrial activity. While the effluent limitations for 012-017 vary depending on the contaminants present at the specific areas drained, the effluent limitations for 001, 002, 011, and 018 are identical, reflecting that each drains large areas of SSFL and that

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[35] All wastes are currently placed in containers and transported off-site for disposal.

[36] We will discuss separately, *infra*, the propriety of the numeric effluent limitations assigned to these outfalls.

[37] Outfalls 011-018.

011 and 018 drain to 001 and 002, respectively. The Fact Sheet for the January 2006 Permit states: "Discharges from Outfalls 011 and 018 receive no additional treatment or additional discharges prior to exiting Outfalls 001 and 002."[39]

In considering the decision by the Los Angeles Water Board to list Outfalls 011-018 as separate outfalls, each with numeric effluent limitations, we again consider the uniqueness of the SSFL site—its large size, its hilltop location, the significant chemicals used in the past, and to a lesser extent, in the present. We also note Boeing's argument that it no longer intends to discharge non-storm water flows, although it has not yet submitted a report of waste discharge for a permit that would prohibit all discharges of industrial process and domestic wastewater. Since the Permit currently regulates process water discharges at each interior outfall, it is appropriate to apply numeric effluent limitations at each of these outfalls. U.S. EPA regulations require this approach:

> All permit effluent limitations, standards, and prohibitions shall be established for each outfall or discharge point of the permitted facility, except as otherwise provided under §122.44(k) (BMPs where limitations are infeasible) . . . . (40 C.F.R. § 122.45(a).)[40]

It is possible that, even if Boeing continues to discharge commingled runoff, some of the numeric effluent limitations in the interior and the perimeter may, in fact, count the same violation twice in such a manner as to treat a single violation as multiple violations. In other words, if discharges are unchanged from an interior outfall to a perimeter outfall, and the same numeric effluent limitations are exceeded at each outfall, Boeing could be cited twice for the same violation. The ongoing monitoring results required by the Permit should disclose whether that is the case. Therefore, if Boeing does not submit a report of waste discharge limiting its discharges to storm water only, the Los Angeles Water Board must consider whether there is double counting for violations at more than one outfall and, if there is, avoid this. The Los Angeles Water Board should undertake this review when it reissues a permit.

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[38] Outfalls 012-017.

[39] Fact Sheet for January 2006 Permit, at p.35 accompanying Order No. R4-2006-0111. In its Response to Comments on the draft NPDES permit, the Los Angeles Water Board explains that the property between Outfalls 001 and 011 and between Outfalls 002 and 018 is undeveloped land where no industrial operations have occurred and that "staff will not oppose a decision to delete Outfalls 001 and 002 as compliance points or a decision to require monitoring only at these locations." (Fact Sheet, at p.34.)

[40] Thus, so long as numeric effluent limitations are appropriate, each outfall must be regulated as a compliance point. In the next Contention we discuss Boeing's contention that the Los Angeles Water Board erred in including numeric effluent limitations and that it should have instead used BMPs pursuant to 40 C.F.R. § 122.44(k).

Even before the Permit might be modified or reissued, we conclude that it was not appropriate for the 2006 Permit to establish compliance points at both Outfalls 001 and 011 and at both Outfalls 002 and 018. As is clear from the Fact Sheet and the Response to Comments, there is no evidence that there will be any change in pollutants discharged between Outfalls 011 and 001 or between Outfalls 018 and 002. According to the administrative record, there are no industrial operations or other potential contributors of pollutants between each of these points; the only rationale provided was that the decision was within the discretion of the Los Angeles Water Board. But in the exercise of discretion there must be rationale provided. Normally the State Water Board would not review the designation of specific outfall locations. In this case, because of the large number of effluent limitations and constituents regulated, adding Outfalls 011 and 018 will have the effect of doubling the number of any permit violations of effluent limitations at Outfalls 001 and 002 without any observable benefit to water quality. We conclude that the Permit should not have established effluent limitations for Outfalls 011 and 018.[41]

Contention: Boeing contends that the Permit inappropriately contains numeric effluent limitations for storm water-only discharges, that the numeric effluent limitations for commingled wastewater are improperly calculated, and that the Permit improperly determines that Boeing's discharges have the reasonable potential to cause or contribute to many of the water quality standards cited in the Permit.

Finding: Before addressing these contentions, we will point out that there are only eight outfalls that are currently authorized to discharge storm water only. While the other ten outfalls may discharge mostly or, as Boeing claims, "almost entirely" storm water, the fact that the Permit authorizes the discharge of industrial process and domestic wastewater from these outfalls raises different issues in evaluating the propriety of the process the Los Angeles Water Board followed in determining "reasonable potential" and in establishing numeric effluent limitations.

For the commingled discharges—Outfalls 001, 002, and 011-018—the Los Angeles Water Board was required to adopt numeric effluent limitations unless it was infeasible to establish such limitations.[42] In adopting numeric effluent limitations, it was required

[41] We will leave to the sound discretion of the Los Angeles Water Board whether to delete the effluent limitations from Outfalls 001 and 002 or from Outfalls 011 and 018. Pending that determination, this Order will stay the effect of the effluent limitations for Outfalls 011 and 018.

[42] For process water discharges, 40 C.F.R. § 122.44(k)(3) permits non-numeric effluent limitations, generally in the form of BMPs, where numeric effluent limitations are not feasible. (*Communities for a Better Environment v. State Water Board* (2003) 109 Cal.App.4th 1089, 1105.)

to comply with the SIP for priority pollutants listed in the CTR. The SIP sets forth the methodology for determining which constituents exhibit "reasonable potential" and for calculating the numeric effluent limitations. In prior orders,[43] we have discussed in detail the requirements of the SIP and the required methodology for determining reasonable potential and calculating effluent limitations. We have reviewed the methodology employed by the Los Angeles Water Board and its explanation of its determinations and find these efforts to be exceptional.

We will address Boeing's contention that, in light of section 122.44(k)(3) allowing the use of BMPs in lieu of numeric effluent limitations where it is infeasible to establish numeric effluent limitations, the Los Angeles Water Board acted improperly or inappropriately in establishing numeric effluent limitations.[44] Boeing contends that it has proven that it cannot comply with numeric effluent limitations "immediately" and it claims that Los Angeles Water Board staff members concede "that Boeing cannot immediately comply" with the requirements.[45]

There is little precedent concerning the meaning of the term "infeasible" in section 122.44(k)(3). In *Communities for a Better Environment, Supra*, the court upheld the Boards' conclusion "that a numeric WQBEL was not feasible (i.e., 'not appropriate') . . . ." We view the issue of determining whether a numeric effluent limitation is "feasible" as concerning the ability or propriety of establishing such a limit, rather than the ability of the discharger to comply. In *Communities*, the court addressed the feasibility of a numeric effluent where the limitation implemented a narrative water quality objective, there was a need for ongoing study of the constituent, and there was an upcoming TMDL for the particular constituent. (Numerous other constituents were subject to numeric effluent limitations for the mixed storm water and process water discharge in that case.[46]) We disagree with Boeing's reading of the provision, i.e. that "feasibility" refers to its ability to comply with the limitations. Discharges of process

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[43] See, e.g., *In the Matter of Yuba City*, State Water Board Order No. WQO 2004-0013 and *In the Matter of County Sanitation District No.2* Order No. WQO 2003-0009.

[44] It is, frankly, difficult to determine whether Boeing does, in fact, make this contention. Because of its emphasis on commingled discharges being mostly (or perhaps, all) storm water and its use of the term "infeasible" to refer to the time in which it can achieve compliance (discussed below), it is not entirely clear that Boeing is challenging the use of numeric effluent limitations to regulate the commingled wastewater. Nonetheless, because it seeks to "vacate any new numeric effluent limits added to the 2004 or 2006 Permits applicable to combined storm water and wastewater dischargers" (Petition, 2/21/06), we will address this contention.

[45] Memorandum of Points and Authorities, 3/16/06, at p.23.

[46] See, also, *In the Matter of National Steel and Shipbuilding Company*, Order WQ 98-07 (approving numeric effluent limitations for facility discharging storm water along with some process water).

wastewater from industrial sites (and storm water-only discharges associated with industrial activity) must comply with water quality standards.[47] Whether the permit limitations are written as BMPs or as numeric effluent limitations, the legal standard is the same. As we have stated before, programs of prohibitions, source control measures, and BMPs constitute effluent limitations and can be written to achieve compliance with water quality standards.[48]

In any event, Boeing does not clearly argue that, for its commingled wastewater discharges, it cannot achieve compliance with the numeric effluent limitations. Rather, it argues that it cannot achieve "immediate" compliance. Much of its argument refers to the impacts of the Topanga Fire and the need for time to come into compliance. This argument is relevant to the need for compliance schedules, rather than whether numeric effluent limitations should be employed. We are also cognizant that Boeing has been subject to numeric effluent limitations for discharges through 001 and 002, which drain all of the commingled wastewater outfalls, since at least 1998. Finally, the amount of toxic chemicals historically and currently used at the site, in addition to the site topography that results in large amounts of runoff, all lead to the conclusion that it is feasible, i.e. appropriate, to establish numeric effluent limitations for the commingled runoff from the site. We conclude that the Los Angeles Water Board did not act inappropriately or improperly in refusing to find that numeric effluent limitations were infeasible pursuant to 40 C.F.R. section 122.44(k)(3).

However, the Los Angeles Water Board must modify (or reissue) the permit so that either Outfalls 001 and 002 or Outfalls 011 and 018 are subject to numeric effluent limitations, but not all four outfalls.

There are eight outfalls that are currently permitted to discharge only storm water runoff.[49] These outfalls, except for Outfall 008, discharge to the northeast of SSFL, into different watersheds than the major Outfalls 001 and 002. Outfall 008 discharges through Happy Valley and eventually to the Los Angeles River, but not through Outfalls 001 or 002. All of these outfalls, except for Outfall 008, have been regulated with numeric effluent limitations at least since the 1998 Permit. Each outfall is positioned so as to receive runoff from specific areas associated with historic or existing areas with contamination from industrial activities.

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[47] CWA § 301(b).

[48] *In the Matter of Citizens for a Better Environment, et al.* Order WQ 91-3, at p.30-31.

[49] Outfalls 003-010.

Federal regulations do not require numeric effluent limitations for discharges of storm water.[50] The Water Boards can include numeric effluent limitations in individual storm water permits or can choose not to. The Water Boards are also not required to perform a reasonable potential analysis for each constituent.[51] We have long held that storm water permits issued in California need not always include numeric effluent limitations.[52] This is not to say that numeric effluent limitations cannot be included in storm water permits. In adding subsection (2) to section 122.44(k), the U.S. EPA explained that it was employing the Interim Permitting Policy for Water Quality-Based Effluent Limitations in Storm Water Permits (Interim Permitting Policy).[53] (Vol. 64 Fed. Reg. 68722, 86788-9.) The Interim Permitting Policy generally endorses narrative effluent limitations based on BMPs, but it also supports numeric effluent limitations where either there is adequate information or the facility has long been subject to numeric effluent limitations:

> "In cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits, as necessary and appropriate. This interim permitting approach is not intended to affect those storm water permits that already include appropriately derived numeric water quality-based effluent limitations." (Vol. 61 Fed. Reg. 43761; repeated at Vol. 64 Fed. Reg. 68788.)

U.S. EPA explains that the Interim Permitting Policy does not explicitly apply to states and that states are encouraged to adopt similar policies. (*Ibid.*) As Boeing points out in its papers, the State Water Board is currently reviewing the issues concerning whether storm water permits should, as a general matter, contain numeric effluent limitations. To assist us in this task, we appointed a Blue Ribbon Panel and recently received their report and recommendations.[54] The Panel was asked to address the feasibility of numeric effluent

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[50] 40 C.F.R. § 122.44(k)(2).

[51] *Divers' Environmental Conservation Organization v State Water Resources Control Board* (2006) ___ Cal.Rptr.3d ___, 2006 WL 3423150.

[52] See, e.g., *In the Matter of Citizens for a Better Environment, et al.* Order WQ 91-3, at p.30-31. Note that prior to 1999, there was no separate exemption for storm water discharges apart from the general rule requiring numeric effluent limitations except where infeasible. Thus, our older decisions and general permits made determinations regarding feasibility. In 1999, § 122.44(k) was amended to add the subsection (2), which authorizes the permitting authority to include BMPs in lieu of numeric effluent limitations in storm water permits, without the necessity of making a determination of infeasibility. (Vol. 64 Fed. Reg. 68722, 68847.)

[53] U.S. EPA issued the Interim Permitting Policy was issued on August 1, 1996. (Vol. 61 Fed. Reg. 43761.)

[54] The report is available at http://www.waterboards.ca.gov/stormwtr/docs/numeric/swpanel_final_report.pdf.

limitations in general industrial permits, general construction permits, and area-wide municipal permits.[55] Thus, while the report will help the State Water Board and Regional Water Boards to design these new permits, the purpose of the Report was never specifically intended to address individual storm water permits.[56] The issues explored by the Panel are not directly applicable to this permit and our decision here does not reflect or presage our future actions and policies on the Panel report and the general question of numeric effluent limitations for storm water permits.

We conclude that the Boeing site is unique both from a physical standpoint–the immense area covered, the extensive past contamination, existing activities, and the amount of runoff from the steep terrain–and from a regulatory standpoint, since it has been subject to individual permits with numeric effluent limitations for storm water discharges for many years. The runoff from remediation areas has the potential to contain contaminants from the historic industrial activities. For example, the catchment area of Outfall 004 is comprised largely of a landscape whose surface soil is contaminated with mercury and other contaminants from the former Sodium Reactor Experiment site. Boeing is remediating this site and may ultimately remove the contaminated soil and dispose of it off-site. Until DTSC authorizes such a final solution, the contaminated soil is covered and Boeing uses BMPs at the bottom of the catchment to treat the runoff. It was appropriate and proper for the Los Angeles Water Board to continue to apply numeric effluent limitations at the storm water-only outfalls (including the addition of Outfall 008) in the 2004 Permit and in its modifications.

Boeing also contends that the Los Angeles Water Board was prohibited from applying the SIP when it decided to establish numeric effluent limitations for the storm water-only outfalls. We disagree. U.S. EPA adopted water quality criteria for priority pollutants in California in the CTR. (40 C.F.R. Part 131.36.) In 2000, the State Water Board adopted the SIP to implement the CTR. The SIP includes instructions on determining "reasonable potential" and in calculating numeric effluent limitations for priority pollutants. Thus, the SIP is legally applicable only to priority pollutants listed in the CTR.

The SIP is also not legally applicable to storm water discharges. In footnote 1 of the SIP, we stated: "This Policy does not apply to regulation of storm water discharges. The [State Water Board] has adopted precedential decisions addressing regulation of municipal

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[55] *Ibid.*

[56] It is, of course, possible that some of the policy decisions we will make regarding whether and how to use numeric effluent limitations in general and area-wide storm water permits could ultimately impact our review of individual permits, but we have not even acted upon the report's recommendations yet. Moreover, the permit at issue is an individual permit that is a reissuance of a permit that for almost 10 years has always included numeric effluent limitations for its storm water-only discharges.

storm water discharges in Orders WQ 91-03, 92-04, 96-13, 98-01, and 990-05. The [State Water Board] has also adopted two statewide general permits regulating the discharge of pollutants contained in storm water from industrial and construction activities." All of the references in this footnote refer to area-wide municipal permits and general permits that do not include numeric water quality-based numeric effluent limitations. Thus, by this footnote, we made clear our policy that such permits are not *required* to determine reasonable potential for each constituent or to include numeric effluent limitations.

While the SIP does not legally apply to storm water discharges, that is not to say that if, in an appropriate case, a storm water permit includes numeric effluent limitations, the SIP procedures cannot be employed to determine reasonable potential and to calculate effluent limitations. We have already addressed the use of the SIP for non-priority pollutants.[57] Where a regional water board makes determinations concerning "reasonable potential" and calculating numeric effluent limitations for constituents not subject to the CTR, the regional water board must articulate the bases for its determinations.[58] In *Yuba City*, we found that the regional board properly relied on both the SIP and U.S. EPA's Technical Support Document for Water Quality-Based Toxics Control (TSD) in establishing numeric effluent limitations for non-priority pollutants.[59] This is precisely what the Los Angeles Water Board did in this case. Just as the SIP can be used for non-priority pollutants, it can also be used for storm water discharges, so long as the methodology is explained and justified. We conclude that the Permit appropriately relied on the SIP, the TSD, and also the California Permit Writers Training Tool in developing the numeric effluent limitations. Because none of these documents are required by a formal Policy or a regulation to be used to determine "reasonable potential" and to calculate numeric effluent limitations for storm water discharge, the Los Angeles Water Board was required to explain fully its procedures.[60] We conclude that the Los Angeles Water Board met that burden.

Contention: Boeing claims that the Los Angeles Water Board erred in refusing to issue a cease and desist order with a four-year compliance schedule and interim effluent limitations in 2006.[61]

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[57] See, e.g. *In the Matter of Napa Sanitation District*, Order WQO 2001-16 and *In the Matter of Yuba City*, Order WQO 2004-0013.

[58] *Ibid.*

[59] EPA/505/2-90-001, March 1991.

[60] See requirements for calculating numeric effluent limitations in 40 C.F.R. title 122.44(d).

[61] Boeing refers to draft Order No. R4-2006-0YYY, which was prepared by staff from the Los Angeles Water Board.

Finding: The request for a CDO with a compliance schedule raises different issues than Boeing's claims that numeric effluent limitations were inappropriate because compliance with those limitations was "infeasible." As we discussed, above, the issue regarding feasibility for inclusion of numeric effluent limitations pursuant to 40 C.F.R. section 122.44(k)(3) concerns whether it is "appropriate", or feasible from a regulatory perspective, to establish numeric effluent limitations. In any event, the discharge is subject to the strict requirements of compliance with water quality standards. The propriety for an enforcement action that includes a time schedule to come into compliance with the permit's effluent limitations does turn on the specific discharger's ability to comply.[62]

The permitting history alone does not appear to justify the need for additional time to comply with the Permit. Permits for SSFL have included numeric effluent limitations since at least 1998. The vast majority of new and revised effluent limitations were added in July 2004. When Boeing filed a petition in August 2004, it asked that the petition remain in abeyance and it did not allege that it had been improperly denied a compliance schedule and interim limits. These issues were raised in its appeals of the 2006 Permit modifications. The 2006 modifications, however, were generally limited to adding effluent limitations to the interior Outfalls 012-014 and 015-017. Thus, on the face of the permitting actions alone, it is difficult to justify the need for a compliance schedule and interim limitations, especially Boeing's request that these revisions be retroactive to July 2004.

Boeing also points out, however, the devastating effects of the Topanga Fire as a basis for a compliance schedule and interim limits. The record includes ample evidence that the Topanga Fire, which destroyed vegetation through 70 percent of SSFL, was indeed a major incident that would significantly affect its ability to comply with the numeric effluent limitations in the Permit. The photographs and testimony in the record provide strong evidence that the BMPs in place prior to the September 2005 fire were substantially destroyed and that, in addition, ash from the fire likely contains additional contaminants regulated by the Permit. In light of the large size of SSFL and the fact that most of the volume of discharges are associated with storm water runoff,[63] the natural landscape has been used as the major component in the treatment system. Thus, vegetation is used to prevent and remove pollutants from moving off-

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[62] *City of Sacramento v. State Water Resources Control Board* (1992) 2 Cal.App.4th 960, 965.

[63] While commingling of process water and storm water result in the legal treatment of the wastewater as process water, in reviewing the *factual* issues, such as whether a fire resulted in the need for a compliance schedule, it is relevant that the wastewater discharges are largely composed of storm water runoff.

site in storm water flows. Commenters including CBG contend that prior to the Topanga Fire Boeing's BMPs were inadequate and that a compliance schedule would, in effect, reward Boeing for past inadequacies. We do not find that argument persuasive. First, regardless of how effective the BMPs and treatment used prior to the fire, all would still be burned and unusable after the fire. Second, while we agree that some of the BMPs most recently installed do surpass the prior BMPs,[64] we find that these new systems are state of the art and their absence prior to the fire does not necessarily indicate that the prior BMPs were inadequate. As to the list of violations throughout the several years prior to the fire, while we do not in any way condone permit violations, the number of individual permit violations at a site the size and complexity of SSFL does not necessarily mean that the BMPs were wholly inadequate.

The record shows that on January 19, 2006, the Los Angeles Water Board considered whether to issue a cease and desist order. A CDO is an enforcement order. Water Code section 13301 provides that when a regional board finds that a discharge of waste is taking place, or threatening to take place, in violation of a permit, "the board may issue an order to cease and desist" and may issue an order requiring immediate compliance, compliance in accordance with a time schedule, and appropriate remedial activities. The State Water Board's Water Quality Enforcement Policy explains the use of cease and desist orders:

> "Cease and Desist Orders (CDOs) are adopted pursuant to California Water Code sections 13301-13303. CDOs may be issued to dischargers violating or threatening to violate WDRs or prohibitions prescribed by the RWQCB or the SWRCB. CDOs are often issued to dischargers with chronic non-compliance problems. These problems are rarely amenable to a short-term solution. Often, compliance involves extensive capital improvements or operational changes. The CDO will usually contain a compliance schedule, including interim deadlines (if appropriate), interim effluent limits (if appropriate), and a final compliance date. CDOs may also include restrictions on additional service connections to community sewer systems and combined stormwater/sewer systems."[65]

In light of the circumstances of the Topanga Fire, the nature of the site, including its topography, the fact that most of the discharges consist of runoff, the difficulty of ensuring compliance at numerous outfalls that receive discharges from many sources, and the ensuing impact on Boeing's ability to comply with the permit terms, we conclude that the Los Angeles

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[64] For example, at the stay hearing, Boeing presented evidence of a carbon filtration system now employed at some outfalls.

[65] Water Quality Enforcement Policy, at p.20.

Water Board acted inappropriately in refusing to issue an enforcement order with a compliance schedule and interim effluent limitations based on the impacts from the Topanga Fire.

We have stated above that the Permit appropriately required strict compliance with water quality standards through numeric effluent limitations. Our findings in this section do not take away from that conclusion. They address, instead, whether the Los Angeles Water Board acted inappropriately and improperly by refusing to issue an enforcement action with a time schedule where the site was subject to a fire that destroyed its control structures. We find that it was not justifiable to demand immediate compliance by Boeing. In view of the impacts of the fire, a time schedule was warranted based on the specific situation that Boeing faced. We note that, as an enforcement action, a CDO does not condone permit violations. Rather, it constitutes a finding of violation or impending violation of an order and it carries with it the potential for higher fines should it be violated.[66] On the other hand, there is no justification to make the compliance schedule retroactive to July 2004, before the fire and before Boeing even pressed its claim that it needed a compliance schedule. We will remand this issue to the Los Angeles Water Board to issue a CDO. Any CDO should include a compliance schedule that is as short as possible. The order should be retroactive to January 19, 2006, when the matter was considered.

III. CONCLUSIONS

1. The Boeing Permit is an individual permit for commingled storm water and industrial process water and should not be regulated the same as sites subject to the General Permit for storm water discharges associated with Industrial Activities.
2. The monitoring requirements in the Permit are appropriate.
3. Outfalls 001-010, which are situated on the perimeter of the property, are properly situated as compliance points.
4. Outfalls 012-017, which are situated in the interior of the property, are properly situated as compliance points, at least while Boeing is authorized to discharge industrial process water, treated groundwater, and domestic wastewater. But in any event, it is inappropriate to count the same violation twice in such a manner as to treat a single violation as multiple violations.
5. Outfalls 001 and 011 and Outfalls 002 and 018 are duplicative because Outfalls 011 and 018 flow directly to Outfalls 001 and 002, respectively, without any change in flows or discharge in the interim and with only open space between them. The Permit should

[66] Wat. Code, § 13385, subdivision (e) requires consideration of prior history of violations in establishing administrative liability for permit violations.

include only one set of these outfalls as compliance points subject to numeric effluent limitations.

6. The Permit appropriately contains numeric effluent limitations and these were properly calculated based on determinations of "reasonable potential" to cause or contribute to exceedance of water quality standards.
7. The Los Angeles Water Board properly used the SIP and federal guidance materials to calculate numeric effluent limitations for storm water discharges by explaining and justifying its methodology.
8. The Los Angeles Water Board acted inappropriately in refusing to issue Boeing a CDO, with a compliance schedule and interim effluent limitations, when it modified the Permit in 2006, based on the effects of the Topanga Fire.
9. Nothing in this Order prevents enforcement of the Permits, except insofar as the Los Angeles Water Board adds a compliance schedule in a CDO, which compliance schedule shall not be effective until January 19, 2006. Also, the CDO does not operate to excuse violations of any Permit.

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IV. ORDER

The Permit is remanded to the Los Angeles Water Board to revise the provisions concerning Outfalls 001, 002, 011, and 018, consistent with this Order. The effluent limitations from Outfalls 011 and 018 are stayed, pending a determination by the Los Angeles Water Board deleting either Outfalls 011 and 018 or Outfalls 001 and 002 as compliance points. The Los Angeles Water Board is also instructed to issue a CDO with the shortest possible compliance schedule, which shall be based on the impacts from the Topanga Fire, with interim effluent limitations, and which shall be effective January 19, 2006. The Los Angeles Water Board is instructed to review the Permit to ensure that numeric effluent limitations for different outfalls do not count the same violation twice in such a manner as to treat a single violation as multiple violations. In all other respects, the petitions are DENIED.

CERTIFICATION

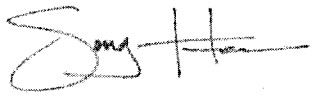
The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on December 13, 2006.

AYE: Tam M. Doduc
Arthur G. Baggett
Charles R. Hoppin
Gary Wolff, P.E., Ph.D.

NO: None

ABSENT: None

ABSTAIN: None



Song Her
Clerk to the Board

Tab 5

DECLARATION OF JASON UHLEY

REGARDING ADDITIONAL FACTUAL ISSUES

I, JASON UHLEY, hereby declare and state as follows:

1. I am Chief of the Watershed Protection Division of the Riverside County Flood Control & Water Conservation District ("District"). In that capacity, I share responsibility for the compliance of the District with regard to the requirements of California Regional Water Quality Control Board, San Diego Region ("RWQCB") Order No. R9-2010-0016 (the "Permit"), as they apply to the District.

2. I am a Professional Engineer in the State of California and have worked on issues relating to stormwater and urban runoff within the Santa Margarita region of Riverside County for over eight years. I also have been involved in the design and construction of flood control structures in Riverside County through my work with the District, which is required under California law to protect the citizens of the county from flood waters. I also serve on the Board of Directors of the California Association of Stormwater Quality Agencies ("CASQA"), and spent two years coordinating and attending CASQA's annual stormwater conference, wherein industry professionals, Best Management Practices ("BMP") manufacturers, and State, Regional and USEPA Regulators come together to share ideas and current and developing trends in stormwater management. I have familiarity with the requirements of the Permit and with applicable federal and state stormwater laws and regulations.

3. I was one of the principal authors of the written comments of the District regarding the proposed Permit and am familiar with their contents.

4. I am familiar with the results of the monitoring of pollutants contained in stormwater and urban runoff in the Santa Margarita region of Riverside County. I also am familiar with the nature of the streams in that region, including their patterns of flow and general lack thereof.

5. I make this declaration based on my own personal knowledge, except for matters set forth herein based on information and belief, and as to those matters I believe them to be true. If called upon to testify, I could and would competently do so as to the matters set forth herein.

6. Based on my experience as an engineer with responsibility for flood control projects, including the design and construction of flood control channels, I am familiar with the type of construction required for the reinforcement of flood control channels used in the Santa Margarita region, as well as elsewhere in Riverside County. Any requirement that does not allow the use of non-natural materials such as concrete, rip-rap, or gabions, where needed to reinforce such channels, is not practicable on technical grounds, as in a majority of situations, such materials must be used as necessary to protect the lives and property of the citizens of the County from flood waters. Such non-natural materials, while often necessary, can nevertheless typically be implemented in a manner that fosters the rehabilitation of beneficial uses.

7. I am generally familiar with the nature and location of unpaved roads within the Santa Margarita region of Riverside County. It is my understanding, based on that knowledge, that such unpaved roads largely do not convey stormwater in a fashion that would qualify the roads as part of an MS4. Additionally, such roads may not discharge into an MS4, but rather either discharge sheet flow or, if a waterbody is adjacent to the road, discharge into a natural

waterbody not operated by a municipality and which does not meet the definition of "MS4" contained in federal regulations.

8. The hydrologic character of streams in the Santa Margarita region of Riverside County has been greatly affected by the construction of two dams in the region, the Vail and Skinner Dams, and by groundwater pumping, which have reduced the flows in some streams that were formerly intermittent streams (streams with continual flow at least part of the year), or perennial streams (streams with year-round flow) and made them ephemeral streams (which flow only during wet weather conditions). As a result of the influence of these dams, and the groundwater pumping, during dry weather, the Rancho California Water District is required to discharge water down the Santa Margarita River in order to maintain water supplies to downstream users.

9. During dry weather, the few streams in the Santa Margarita region that formerly were perennial through much or all of their length, are now dry. A limited few that have dry weather flows only in limited segments, typically only a few hundred feet in length. In many of those cases, the source of the limited dry weather flows is known to be resulting from rising groundwater, or from exempt non-storm water discharges from the MS4s. Thus, there is no evidence that streams in the Santa Margarita region have been converted to perennial on the basis of discharges from MS4s.

10. I am familiar with the six special studies that the RWQCB has required under the Permit to be performed by the copermittees. In particular, it is my understanding that the cost of the study on intermittent and ephemeral stream conversion to perennial streams would exceed $30,000 and could be as much as $100,000.

11. Programs and controls implemented to reduce pollutants to the Maximum Extent Practicable ("MEP") standard, while compliant with the federal regulations, may not be enough to ensure that MS4 discharges do not at any time cause or contribute to an exceedance of water quality standards. This is because the character of pollutants in stormwater and urban runoff discharged from MS4s as well as in Receiving Waters, both across the state, and within the Santa Margarita region of Riverside County, have been shown to be extremely variable. Further, the sources of pollutants in that stormwater and runoff are multiple, and are not always attributable to anthropogenic sources under the jurisdiction of the Copermittees, nor to discharges from Copermittees' MS4s. For example, Manganese is known to be pervasive in both the soils and groundwater within the Santa Margarita region, and has been detected in stormwater runoff at widely varying concentrations and locations over time and even within a single wet season. This variability further complicates attempts to identify any potential anthropogenic sources that may be contributing. Due to these factors, it would be impracticable to design MS4 programs that, by reducing pollutants to the MEP, could simultaneously ensure that at no point in time did MS4 discharges cause or contribute to an exceedances of the Manganese water quality standard in receiving waters. This conundrum exists for virtually all pollutants in stormwater runoff to some degree, reinforcing the conclusion that even programs designed to reduce pollutants in MS4 discharges to the MEP cannot guarantee that such discharges will not at some point in time cause or contribute to an exceedances of a water quality standard.

12. Based on my knowledge of the variability of the concentrations of pollutants in stormwater discharges within the Santa Margarita region of Riverside County, the status of stormwater BMP technology in general, as well as the nature of water quality standards established by the State of California as applicable in the Santa Margarita region , I am not aware

of any practicable BMP programs or technology that, while reducing pollutants to the MEP, can also ensure that MS4 discharges will not at some point in time cause or contribute to exceedances of any water quality standard. This is a conclusion based both upon the difficulty of attaining the State's water quality standards and the costs to be incurred in that effort.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on November 9, 2011 at Riverside, California.

Jason Uhley

Tab 6

WARREN D. WILLIAMS
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RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
September 7, 2010

Chairman David King and Members of the Board
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, California 92123-4353

Dear Chairman King:

Re: Tentative Order R9-2010-0016, NPDES No. CAS0108740, Riverside County Municipal Separate Storm Sewer System Permit Reissuance *NWU:749045:bneill*

The Riverside County Flood Control and Water Conservation District (District) is submitting this comment letter on the above listed Tentative Order, on behalf of the Riverside County MS4 Permittees within the San Diego Region (Copermittees). Tentative Order R9-2010-0016 (draft MS4 Permit) was drafted by Board staff to serve as the reissuance of Order R9-2004-0001 (existing MS4 Permit) which covers the Santa Margarita Region of Riverside County. This letter was developed in consultation with the Copermittees and reflects our most critical concerns. The Board's careful consideration of these critical concerns will be appreciated.

This comment letter is organized as follows:

Executive Summary 2
Background 4
- Receiving Waters and Water quality Conditions 4
- Proactive Permittee Programs to Protect Local Resources 5
- Economic Conditions 6
- Approach to the Permit Renewal 7
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Priority Issues and Solutions 8
- Monitoring and Reporting Program (Attachment 4) 8
- Unpaved Roads Requirements (Sections F.1.i., F.3.a.(11), F.3.c.(5)) 10
- Post-Construction BMP Inspections 11
- Commercial and Industrial Inspections 12
- Retrofit 15
- Irrigation Runoff 16

Conclusion 17

In addition, the following attachments provide support for our priority issues and solutions, provide additional legal comments and/or summarize additional technical changes recommended to the draft MS4 Permit. Attachment 9 is a full redline markup of the draft MS4 Permit incorporating all of our recommended edits. Attachment 9 also includes additional minor edits not found elsewhere in this letter or its attachments.

Attachment 1 – Summary of Proactive Efforts to Manage Stormwater
Attachment 2 – Economic Assessment
Attachment 3 – Language Changes Supported by Board Staff and Copermittees
Attachment 4– Monitoring and Reporting Program Requirements
Attachment 5 – Proposed Unpaved Road Requirements of the Draft 2010 Santa Margarita Region MS4 Permit
Attachment 6 – Prohibition of Irrigation Runoff
Attachment 7 – General Legal Comments
Attachment 8 – District Specific Comments
Attachment 9 – Redline Comments of MS4 Permit and Attachments
Attachment 10 - Fact Sheet Comments

EXECUTIVE SUMMARY

It is the goal of the Copermittees to obtain an MS4 permit that is both protective of the beneficial uses of the receiving waters in the Santa Margarita Region and respectful of the unprecedented economic conditions impacting the Copermittees. Further, the Copermittees have no interest in repeating the three-year Orange County MS4 Permit adoption process. In an effort to achieve our goal and head off a renewal process similar to Orange County's, the Copermittees approached David Gibson, Regional Board Executive Officer, in February 2010 regarding implementing a win-win process for developing the draft MS4 Permit.

In response, the Executive Officer authorized Board staff to meet with the Copermittees to foster communication and understanding. The Copermittees appreciate the Executive Officer's decision to dedicate staff time to meetings regarding the individual requirements of the South Orange County MS4 Permit and the appropriateness of those individual requirements to the Santa Margarita Region. The meetings provided an opportunity to foster a mutual understanding of the goals and objectives of Board staff and the capabilities and limitations of the Copermittees. As a result, the Permittees and Regional Board staff worked collaboratively to develop language for consideration in the Tentative Order.

However, the process did not resolve several significant issues due to the following constraints:

1. The process needed to be cut short as the Board expected the draft MS4 Permit to be heard in October. Copermittee staff requested that the hearing be delayed to allow the process to complete several times, but these requests were denied;

2. Regional Board staff indicated that the Board had adopted the South Orange County MS4 Permit as a model permit and, therefore, the Board would have to approve any major revisions to the provisions established in that MS4 Permit; and

3. Regional Board staff indicated that the Board would have to resolve our issues with several new provisions of the draft MS4 Permit addressing unpaved roads, inspection programs and monitoring requirements, all requirements that exceed the provisions of the Orange County MS4 Permit.

Although the collaborative process has improved the draft MS4 Permit with respect to several provisions of the Orange County MS4 Permit, Board staff also introduced several costly compliance and monitoring requirements, many of these requirements were introduced during the very latter part of the collaborative process. As described within this letter and its attachments, **the remaining issues and these new requirements result in a Permit that is economically infeasible** and has no substantiated nexus to demonstrated impairments of beneficial uses within the Santa Margarita Region caused by MS4 discharges. **At a minimum, the Priority issues outlined below must be addressed before the Copermittees can support the draft MS4 Permit.**

The Copermittees note that despite being directed to take several important issues to the Board, we have not been provided an opportunity for a formal or informal workshop before the Board. By contrast, the South Orange County MS4 Copermittees had at least three workshops and five formal hearings prior to adoption of that permit. Although we do not want to duplicate the Orange County renewal process, it is common practice to allow at least one workshop on significant permit issues before holding an adoption hearing. Given the issues outlined in this letter and in the attachments, there are numerous issues worthy of at least one workshop.

The Copermittees also have significant concern with the use of the South Orange County MS4 Permit as a model for our MS4 Permit area. As outlined in more detail throughout this letter and the attachments, the South Orange County and Santa Margarita Region MS4 Permit areas vary widely with regard to the water resources to be protected and available tax revenue to fund local programs and services, including compliance with MS4 permit requirements. Orange County has substantial coastal water resources with active recreational use, twice the population, and significantly higher tax revenues. The per capita cost for the residents within the Santa Margarita Region to comply with the requirements of the draft MS4 Permit is significantly greater than the per capita cost faced in South Orange County, with each dollar spent effectively hitting our residents three to four times harder. The expansion of regional program elements (e.g., coordination, monitoring, reporting, program development, effectiveness assessment) will result in an annual doubling of these costs, with a peak increase of nearly 300% for these programs alone. The Copermittees simply cannot economically support, nor does the Santa Margarita Region warrant, the same level of programs as South Orange County to protect our local receiving waters.

In summary, the meetings between Regional Board staff and Copermittee staff were honest, good faith and productive efforts to bridge the gaps between the requirements of the Orange County MS4 Permit and the specific needs of, and resources available to, the Upper Santa Margarita Watershed (the draft MS4 Permit area). However, given the constraints identified herein, the differing impacts on beneficial uses and current economic realities, the current draft MS4 Permit cannot be supported by the Copermittees.

> ***The Copermittees, therefore, request that the Board direct staff to work with the Copermittees to resolve the issues identified in this letter prior to considering adoption of the Permit.***

In the interest of developing economically feasible requirements for Board consideration, the balance of this letter and its attachments propose and justify changes to the draft MS4 Permit that will reduce costs to an achievable level, while continuing to raise the bar, where appropriate, to effectively protect the beneficial uses of receiving waters in the Santa Margarita Region. Please note that the Copermittees have many other concerns in addition to those identified in this letter with provisions in the draft MS4 Permit. These concerns are discussed in the Attachments to this letter, the redline of the Permit and the letters drafted by individual Copermittees.

BACKGROUND

Receiving Waters and Water Quality Conditions

This draft Permit proposes to regulate discharges from the MS4 owned by the Copermittees within the Santa Margarita Region of Riverside County. The MS4 in the Santa Margarita Region primarily discharges into Murrieta and Temecula Creeks and immediate tributaries thereto.

Unlike several of the watersheds in South Orange County, which exhibit perennial flow, the Santa Margarita Region is an ephemeral watershed. The only areas of perennial flow in the Santa Margarita Region are located at the formation of the Santa Margarita River right at the County line and in mountain areas outside of the urbanized areas serviced by the MS4s. The creeks in the urbanized areas of the watershed serviced by the MS4s are ephemeral and flows are only observed during and immediately after significant storm events. Any non-stormwater flows quickly disappear by seepage into the alluvial sands. Additionally, rising groundwater has been observed in Murrieta and Temecula Creeks for a short distance at various locations upstream of the confluence with the Santa Margarita River; however such conditions existed prior to urbanization.[1]

Since the initial MS4 permit was issued in 1990, the Copermittees have been actively and successfully implementing programs to manage their MS4 discharges. As described in the 2009 report of waste discharge (ROWD) submitted by the Copermittees, there have been no statistically

[1] [1] State of California Department of Public Works Division of Water Resources, Bulletin No. 57, "Santa Margarita River Investigation," Volume I, June 1956, p. 48.

significant increases in pollutant concentrations since issuance of the initial MS4 permit in 1990, despite the fact that the Santa Margarita Region has experienced over 300% population growth over the same time period. Further, although staff points out several recent 303(d) listings as basis for the need to enhance regulations, these listings were based on data that mostly predates our existing management programs implemented under the 2004 NPDES MS4 Permit. Further, the Permittees have submitted additional data for the current round of listings that should result in the removal of some of these additional listings based on more recent data. Additionally, the likely sources of these impairments include natural background concentrations in soils and groundwater (iron and manganese), natural and/or agricultural source loads (nutrients, total dissolved solids, sulfates and bacteria), and/or federally authorized uses of products (pesticides and copper). Although all of these sources can have urban components, it is also clear that these sources are mostly non-point in nature and not solely urban sourced, as implied in the Fact Sheet and Findings.

Proactive Permittee Programs to Protect Local Resources

Murrieta and Temecula Creeks and their tributaries are an important economic, environmental and social resource for the Santa Margarita Region. The Copermittees are cognizant of these benefits and have implemented or initiated proactive programs beyond the requirements of the current and previous MS4 permits to ensure that these resources remain viable and are protected for future generations. These programs are described in Attachment 1 and include:

- Integrated Planning, including the development of an Integrated Regional Water Management Plan that is actively coordinated with San Diego and Orange Counties.

- Management of New Development, including a progressive LID BMP implementation program five years in the making. The program includes a comprehensive LID BMP design manual, proposed public maintenance mechanism and a $3,000,000 LID BMP Testing and Demonstration Facility.

- Water Quality Monitoring and Assessment, including active participation in the Southern California Stormwater Monitoring Coalition, California Stormwater Quality Association (CASQA) and Santa Margarita Region Executive Management Team, and including funding of several special studies designed to improve the science of stormwater management.

- Statewide Stormwater Leadership, including active leadership in promoting changes in the regulations of pesticides at the state and federal level and strong leadership and representation within the CASQA organization.

- Habitat and Aquatic Resource Conservation, including development of the largest and most comprehensive Multiple Species Habitat Conservation Plan in California.

Economic Conditions

As the draft MS4 Permit for the Santa Margarita Region of Riverside County was modeled on the MS4 Permit developed for South Orange County, it is important to carefully contrast the economic resources available to the Counties:

- The population of the Santa Margarita Region (289,765) is 48% less than the population of South Orange County (553,161).[2]
- The 2009 per capita income in Riverside County ($29,177) is 38% less than the per capita income in Orange County ($46,898).[3]
- The current unemployment rate in Riverside County is 15.3 percent, which is 56% higher than the unemployment rate in Orange County (9.8 percent).[4]

Property and sales tax revenues are the primary sources of funding for local programs and services, including compliance with MS4 Permit requirements. Based on population and average home value, South Orange County generates over four times the property tax revenue generated in the Santa Margarita Region. Based on data presented in the Los Angeles Economic Development Corporation's July 2010 Economic Forecast, South Orange County generates 2.6 times the taxable sales generated in the Santa Margarita Region. As a less affluent area with a relatively small population, the Copermittees in the Santa Margarita Region receive significantly less property and sales tax revenue than municipalities in South Orange County and are less able to fund additional MS4 Permit compliance costs. These issues are discussed in detail in Attachment 2.

The recession also has impacted the economy in the Santa Margarita Region more than in South Orange County and it is projected that tax revenues will continue at a reduced level for an extended period, with **recovery not expected within the Permit term**. The poor economy has resulted in reductions of reserves to minimum levels and cuts or eliminations in virtually all local services and programs in the Santa Margarita Region. As a result any increases in funding for the water quality mandates contained in the draft MS4 Permit can come only by reducing funding for public safety or other existing state and federal mandates.

Modeling the draft MS4 Permit on the South Orange County permit represented a significant expansion of compliance requirements and compliance costs relative to the existing MS4 Permit issued to the Santa Margarita Region Copermittees. The requirements in the draft MS4 Permit have been expanded to include additional compliance and monitoring requirements beyond the South

[2] Richard Boon, County of Orange, personal communication, September 1, 2010.
[3] Economic Forecast, Los Angeles Economic Development Corporation, July 2010.
[4] Monthly Labor Force Data for Counties, July 2010 – Preliminary, Labor Market Information Division, Employment Development Department, August 20, 2010. http://www.calmis.ca.gov/file/lfmonth/countyur-400c.pdf

Orange County permit, further increasing compliance costs. We would submit that such an approach is fundamentally unfair and could be viewed as arbitrary.

Approach to the Permit Renewal

As noted above, the Copermittees share the Board's goal of continually improving both the effectiveness and the efficiency of the MS4 compliance program. To that end, the Copermittees proposed program revisions in the ROWD that were designed to effectively manage/address the discharge of pollutants from their MS4, while making effective and responsible use of sharply reduced and further declining public funds. The ROWD recognized the Copermittees' proactive efforts and integrated those efforts into our recommendations for enhancing the MS4 Permit program. Further, the Copermittees met with Regional Board staff prior to the submittal of the ROWD in January 2009 to ensure that we had identified and addressed all of staff's concerns.

In March 2010, the Copermittees met with the Regional Board staff to discuss a collaborative process for renewing the draft Permit. At that time, the Executive Officer identified that the Board's fundamental goals for the renewal would be to develop a permit that is:

- Socially responsible;
- Environmentally responsible;
- Affordable; and
- Protective of water quality.

The Copermittees proposed initiating the discussions by focusing on the existing MS4 Permit and identifying what provisions needed to be changed to address local water quality conditions, the approach outlined in the ROWD. Regional Board staff preferred to start with the South Orange County permit and require the Copermittees to justify why programs in the Santa Margarita Region should be different than those proposed for Orange County. Regional Board staff also noted that none of the major provisions of the South Orange County permit could likely be altered, as that permit was now a model for the San Diego Region. In the interest of moving the process forward in light of the current economy, the Copermittees agreed to proceed based on the Board staff's terms.

Outcome of Discussions with Board Staff

The discussions resulted in several improvements to the draft Permit including:

- Streamlined and more useful reporting and effectiveness assessment requirements.
- Greatly improved Development Planning / Low Impact Development (LID) requirements (further discussed in Attachment 3).

- Language clarifications to more clearly state the intent of various requirements and to eliminate ambiguity.

- Enhanced understanding of the permit requirements and intent.

However, the addition of several new requirements not originally in the Orange County MS4 Permit as well as the constraints of working from within the boundaries of the existing Orange County MS4 Permit, resulted in an economically infeasible draft MS4 Permit that exceeds the water resource protection needs of the Santa Margarita Region and is too expensive for implementation by the Copermittees. Unless the permit requirements are revised to address specific local needs and resources, the Copermittees will not be able to implement the Permit requirements in a manner that is protective of water quality.

PRIORITY ISSUES AND SOLUTIONS

The Copermittees have identified specific and focused changes to the Permit that will allow the Copermittees to address staff's primary water quality concerns, while reducing compliance costs in a manner that is appropriate for the local watersheds. As previously noted, Board staff has directed the Copermittees to bring these changes directly to the Board for consideration, although we are hopeful that by summarizing them in writing that they may be addressed ahead of the scheduled October 13th hearing.

Monitoring and Reporting Program (Attachment 4)
Prior to the submittal of the ROWD, the Copermittees met with Board staff to propose changes to the Monitoring and Reporting Program (MRP). In these discussions, Board staff identified two areas for needed improvement:

- Relocation of Illicit Connection / Illicit Discharge (IC/ID) monitoring stations to MS4 outfalls, and

- Incorporation of Action Levels

In more recent discussions, Board staff noted that the MRP needed significant modification to reflect the South Orange County MRP, but would be scaled to be appropriate to the smaller Santa Margarita Region.

Unfortunately, the final MRP requirements have been expanded well beyond the South Orange County MRP requirements, resulting in a program that is completely out of proportion with the needs and resources of the Santa Margarita Region. In fact, the proposed MRP requirements will result in a **500% increase in monitoring program costs**, costing our residents **over two and a half times the per capita costs for South Orange County**.

Per Capita Monitoring Cost Comparison

Draft Permit	OC Permit
$5.13 per capita	~$2.00 per capita

The Copermittees recognize that monitoring and data collection is necessary. However, the MRP requirements exceed what is necessary to address management questions related to water quality, are beyond requirements dictated in the South Orange County MRP, and are beyond the Copermittees' ability to fund. Not only are the level of requirements inappropriate for the Santa Margarita Region, but they disregard the economic realities faced by the Copermittees. As such, the MRP falls far short of meeting the Executive Officer's stated goals of affordability.

In the interest of finding ways to offer Board staff a comparable program in a more cost effective and appropriate manner, the Copermittees have identified nine adjustments to the MRP that will **save approximately seven hundred and eighty thousand dollars ($780,000)** ***annually*** and bring per capita monitoring costs more in line with the South Orange County MRP, while maintaining the core components of the MRP. Table 1 summarizes the key changes and the respective cost savings. It is important to note that any change highlighted in RED reflects bringing the program in line with the South Orange County MRP. Figure 1 below shows graphically the comparative costs for the draft MRP with and without the requested adjustments. Please note that the 100% baseline in Figure 2 reflects the current cost of the Copermittees' current MRP.

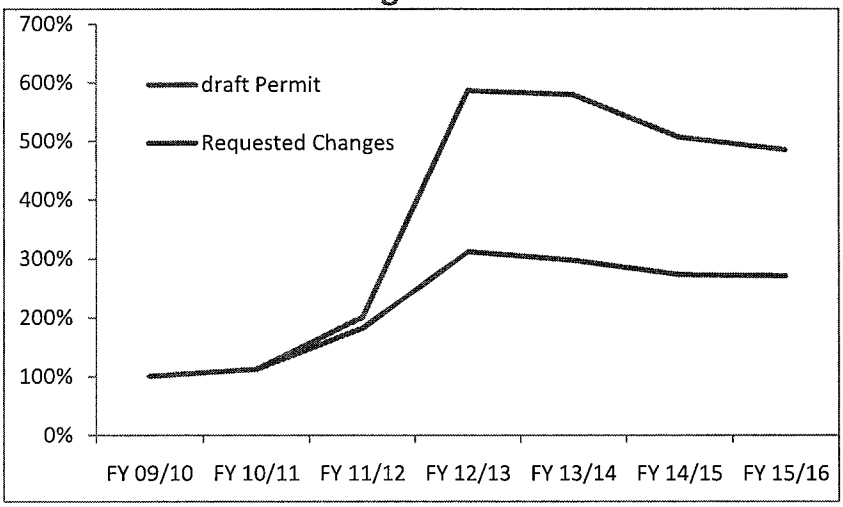
Table 1 - Cost Savings resulting from proposed MRP changes[1]

Component	Requested Change	Cost reduction
Mass Loading Stations	1) Wet Weather - 3 wet -> 2 wet	**~$79,000**
	2) Dry Weather - Composite -> Grab	**~$66,000**
Toxicity Testing (MLS and Bioassessment)	3) 3 organisms -> 2 organisms	**~$14,000**
Bioassessment	4) 6 stations -> 3 stations	**~$158,000**
	5) 2X each -> 1X each	**~$95,000**
Action Levels	6) 'Representative Number/Percent' -> Representative - and remove 'within each sub area'	**~$241,000**
	7) SAL Composites -> Grab	**~$165,000**
Inland Aquatic Habitat Monitoring	8) Eliminate requirement	**~$140,000**
Special Studies	9) 6 special studies -> 4 studies, and Replace with more locally appropriate studies	**~$220,000/year**
TOTAL ESTIMATED SAVINGS	Net savings of all recommended changes (annualized)	***~780,000/year***

Note: Red text refers to requirements currently in the South Orange County MRP.

1. See Attachment 4 for detail descriptions of requested changes.

Figure 1



Draft Permit	OC Permit	Proposed Changes
~~$5.13/ per capita~~	~$2.00/per capita	**$2.54/per capita**

Although the requested adjustments to the MRP will not eliminate cost increases, and will result in an MRP which is more expensive, on a per capita basis, than the South Orange County MRP, they provide a more manageable program for the Copermittees.

The Copermittees request that the Board make the adjustments identified in Attachment 4 above before Permit adoption.

Each of these requested adjustments and justifications for each is further discussed in Attachment 4 to this letter.

Unpaved Roads Requirements (Sections F.1.i, F.3.a.(11), F.3.c.(5))
The requirements for unpaved roads are particularly cumbersome, onerous and unreasonable. Our detailed analysis of these requirements is provided in Attachment 5. In summary, the proposed unpaved road requirements may result in substantial and unnecessary additional Copermittee costs that are not justified by the facts in the Santa Margarita Region. The Copermittees believe that the existing MS4 Permit requirements for new development, construction, maintenance and IC/ID adequately address regulation of unpaved roads that threaten water quality. If the Regional Board believes that unpaved roads require further regulation, the Copermittees believe that the appropriate regulatory mechanism is a general permit (Waste Discharge Requirements or NPDES permit) that would apply to *all* unpaved roads in the San Diego Region, rather than only those that are under the jurisdiction of the Copermittees.

The Copermittees request that Sections F.1.i, F.3.a.(11) and F.3.c.(5) regulating unpaved roads be deleted from the draft MS4 Permit.

However, should the Water Board insist on retaining unpaved road requirements in this Permit, the Copermittees request the following revisions. These revisions are needed to ensure that all parties have a clear understanding of the requirements as clarified in Attachment 9. In summary, the Copermittees request:

- Clarification that these requirements apply to those unpaved roads that the Copermittees maintain in their road system.
    - This should be commonly understood, but the clarification is important to include due to complex legal limitations and rights associated with access, ownership, and maintenance of unpaved roads.
- Removal of language that specifies specific BMPs that must be implemented.
    - Specifying the method of compliance is prohibited pursuant to CWC Section 13360, and inappropriately forces the Copermittees to adopt particular solutions that may not best fit the situation.
- Removal of requirement for BMPs for private unpaved roads.
    - The proposed requirements would require the creation of an additional and unnecessary program element addressing privately owned unpaved roads. The Copermittees believe that a focused public outreach program should be implemented to educate property owners and associations about the need to properly maintain unpaved roads. This education program combined with existing IC/ID enforcement capabilities seems a more reasoned and responsible response to addressing this issue.

Should Sections F.1.i, F.3.a.(11) and F.3.c.(5) regulating unpaved roads not be removed from the Permit, the Copermittees request they be modified as noted above. Specific redline edits to address the requested changes are contained in Attachment 9.

Post-Construction BMP Inspections
Section F.1.f of the draft MS4 Permit includes new requirements for the Copermittees to verify that Post-Construction BMPs are being appropriately maintained. The new requirements appropriately develop a risk-based approach to inspections, defining eight factors that the Copermittees must consider in determining 'high-priority' projects.

However, language in Section F.1.f.(2)(a) removes that discretion by stating:

> *'At a minimum, high priority projects include those projects that generate pollutants (prior to treatment) within the tributary area of a 303(d) listed waterbody impaired for that pollutant; or those projects generating pollutants within the tributary area for an observed action level exceedance of that pollutant.'*

This language is excessively broad, and will require virtually all sites in the watershed to be designated as 'high priority' and, therefore, subject to annual inspections. This language is inconsistent with the goals of a socially responsible and affordable permit and should be modified for several reasons:

- Inspections frequencies should be based on risk of discharge. Annual inspections are not needed for all sites that *generate* a specific pollutant. For example, if a site generates a pollutant associated with 303(d) listing, but the site retains runoff onsite or stores those pollutants indoors, annual inspections would be unnecessary. However, sites that store 303(d) listed pollutants outdoors or otherwise have a high risk of discharge should be inspected more frequently.

- The language dilutes Copermittee resources by requiring annual inspections of low-risk sites, preventing the Copermittees from appropriately concentrating resources on problematic sites/sources. This is because when an action level is exceeded then all parties in the watershed are assumed guilty until proven innocent.

While the Copermittees are not opposed to implementing a program to verify that these BMPs are being maintained, it is critically important that they be provided the flexibility to determine which sites warrant annual inspections. **Specifically, the Permittees request that the language in F.1.f.(2)(a) be amended as follows prior to adoption of the Permit:**

> *At a **minimum**, high priority projects include those projects that ~~generate pollutants (prior to treatment) within the tributary area of a 303(d) listed waterbody impaired for that pollutant; or those projects generating pollutants within the tributary area for~~ have been determined to be the source of an observed action level exceedance.~~ of that pollutant.~~*

Commercial and Industrial Inspections

Section F.3.b. of the draft Permit includes requirements to inventory and inspect Commercial and Industrial businesses. The draft Permit expands upon existing inventory and inspection requirements in two problematic ways:

- It requires significantly more businesses to be inspected, and

- It includes new requirements specifying what the Copermittees are required to inspect when they are onsite.

More inspections
Sections F.3.b.(1)(a)(i) and (ii) identify 42 categories of businesses that must be inventoried and inspected based on risk of pollutant discharge. However, Section F.3.b.(1)(a)(iii) adds virtually any business in the Permit area, independent of pollutant discharge risk:

> *'**All** other commercial or industrial sites/sources **within or directly adjacent to or discharging directly to receiving waters within environmentally sensitive areas** (as defined in Attachment C of this Order) or **that generate** pollutants tributary to an observed exceedance of an action level.' (Bold emphasis added)*

In effect, section F.3.b.(1)(a)(iii) adds the following additional businesses:

- EVERY business that is adjacent to (or within) an Environmentally Sensitive Area (ESA), regardless of whether the business generates or discharges any pollutants, and

- EVERY business that 'generates' pollutants which happens to be upstream of an action level exceedance, *regardless* of whether the site has ever *discharged any* pollutants.

This language expands the list of sites far beyond the current requirements, and well beyond those sites that actually pose a threat to water quality. This is clearly unnecessary and should be removed for several reasons:

- It inappropriately separates 'risk' from the 'response', by requiring the Copermittees to inspect businesses irrespective of the risk that the business poses to water quality. For example, this language would require the Copermittees to expend resources and time inspecting hair salons, office buildings and other activities that happen to be adjacent to an ESA. This inappropriate broad-brush approach to permitting actually works to discredit the Copermittees' NPDES programs and dilute resources, rather than enhancing protection of water quality.

- It will further remove the flexibility that the Copermittees need to be able to re-allocate resources to inspecting and following up with sites/sources that are problematic.

Therefore, the Copermittees request that the language in F.3.b.(1)(a)(iii) be amended as follows prior to adoption of the Permit:

> *All other commercial or industrial sites/sources ~~within or directly adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as~~*

~~*defined in Attachment C of this Order) or that generate pollutants tributary to*~~ *that have been determined to be the source of an observed exceedance of an action level.*

Additional items to review during inspections

Section F.3.b.(4)(a) specifies what the Copermittees must review when performing an inspection. The new requirements in subsections (i) and (ii) to review BMP implementation plans, and review facility monitoring data, respectively, are an unnecessary new mandate. They should be removed for several reasons:

- The requirements burden the Copermittees with reviewing information that is required under General Permits and is the responsibility of the Regional Board to enforce.

- The requirements would significantly increase the inspection time for sites with General Permits and endanger an existing collaborative inspection program (Complaince/Assistance Program (CAP)) that leverages the time highly trained Environmental Health Inspectors spend onsite for Certified Unified Program Agencies (CUPA) and Food Services inspections to also conduct NPDES inspections. The CAP program not only utilizes highly trained Environmental Health inspectors, but also regionalizes the inspections and, therefore, provides multiple benefits including uniformity, reduction in total number of inspections and higher-quality inspections. The Environmental Health HazMat inspection program administrators have indicated that they cannot accommodate the additional time required to implement the new requirements, as they would unduly cut into their ability to meet their own state-mandated inspection frequencies.

- By virtue of eliminating the CAP program, the requirements would effectively mandate a more fractured and disconnected set of inspections for the businesses, contrary to CAL EPA mandates for consolidated inspections, and in turn diluting the effectiveness of the program.

The Copermittees request that the language in F.3.b.(1)(a)(iii) be amended as follows prior to adoption of the Permit:

(a) Inspection Procedures: Inspections must include but not be limited to:
- *(i)* ~~*Review of BMP implementation plans, if the site uses or is required to use such a plan;*~~
- *(ii)* ~~*Review of facility monitoring data, if the site monitors its runoff;*~~
- *(iii) Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification Number), if applicable;*
- *(iv) Assessment of compliance with Copermittee ordinances and Copermittee issued permits related to runoff;*
- *(v) Assessment of the implementation, maintenance and effectiveness of the designated minimum and/or enhanced BMPs;*

Retrofit
Section F.3.d. proposes a program to develop an inventory of existing developments that may be candidates for future water quality retrofits. The requirement goes on to encourage the Copermittees to collaborate with local property owners to promote urban retrofit in an effort to accelerate reductions in pollutant loading from existing urban areas.

Although laudable, this requirement has two significant problems:

1) The program is self-defeating as it contains no "carrots" to lure private property owners into participating in the program. Any property owner that is interested in volunteering in this effort would be required to fully comply with all provisions of the draft MS4 Permit. This includes preparation of compliance documents such as SSMPs, LID and hydromodification studies, subjecting themselves to additional regulatory scrutiny through business and BMP inspection programs required by the MS4 Permit, and otherwise incurring a myriad of costs and requirements. These costs and requirements would provide a strong disincentive to participate in a retrofit program. This program will only work if it is modified to remove these disincentives.

2) Current and projected economic conditions will limit the interest and participation of private property owners. Long-term economic predictions for Riverside County indicate that assessed valuations and property values will likely remain stagnant for the term of this Permit. Similarly, sales tax and unemployment are not expected to significantly improve either.

Without Co-Permittee resources to supplement private retrofit projects, the current economic disincentives for private redevelopment that are built into the program and the current impact of the economy on private property owners, there is no real value to the program.

PREFERRED POLICY CHOICE: The Permittees strongly request that this program be deleted for the aforementioned reasons.

Alternatively, and at minimum, the Copermittees request that the schedule for completion of the retrofitting program be revised to provide for development during the term of the Permit and submittal of the proposed program with the next ROWD. This will allow the Copermittees to defer expenditures related to development of the program until later in the Permit term when it is hoped that economic conditions and local revenues will improve. The Copermittees expect few opportunities for retrofit until the economy improves. Due to the Copermittees' limited ability to require retrofit on private property, our best opportunities for retrofit may be associated with approvals of proposed modifications of existing developments.

ALTERNATE POLICY CHOICE: If the Retrofit requirements are not removed, the Copermittees request that the Regional Board modify Section F.3.d. as follows:

Each Copermittee must develop and implement a retrofitting program that meets the requirements of this section upon submittal of the ROWD.

Irrigation Runoff

The draft MS4 Permit categorically prohibits the discharge of landscape irrigation; irrigation water; lawn watering; (collectively 'irrigation runoff') and non-emergency fire fighting flow runoff to the MS4. The basis for this requirement comes from the current Orange County stormwater permit within the San Diego Region (NPDES No. CAS0108740), which prohibits such discharges.

Although irrigation runoff may have been shown to be a problem in South Orange County, it has **not** been shown to be causing problems in receiving waters in the Santa Margarita Region. Attachment 6 summarizes the unique conditions and other facts that warrant the restoration of irrigation runoff as a non-prohibited non-stormwater discharge category. It is important to reiterate the three key points made in Attachment 6:

- Unlike the watersheds in South Orange County, the Santa Margarita Region is an ephemeral watershed;
- Unlike South Orange County, the Copermittees have **not** identified landscape irrigation, irrigation water or lawn water as an actual source of pollutants or conveyance of pollutants to waters of the U.S.;
- The draft MS4 Permit requires Copermittees to eliminate irrigation runoff ***TO THE MS4,*** which by definition, requires elimination of discharges to streets, curbs and gutters.

As noted above, the prohibition appears to hold the Copermittees responsible for any amount of irrigation runoff discharged to the curb and gutter, *regardless* of whether or not the discharge ever reaches receiving waters or causes or contributes to the exceedance of a water quality standard. This fact, combined with the fact that irrigation runoff has not been shown to be causing impairments in the local receiving waters, will make enforcement difficult to justify with residents and will likely result in community outrage over bans on irrigation. Further the Copermittees are not water purveyors, and as such, have little control over residential irrigation runoff outside of sending code enforcement officers out to look for incidents of excessive irrigation runoff. This is a very inefficient use of resources. In any event, the provisions as written will do little for water quality but potentially much for community outrage against water quality programs. The Copermittees do not believe this is the intent of the Board.

It is further worth noting that the Permit already contains an investigation and remediation process via Non-Stormwater Action Levels (NALs) by which the Copermittees will identify the source of problematic non-stormwater discharges. Should the source be found to be a conditionally exempt non-stormwater discharge, the permit requires the Copermittees to address that discharge or the entire category of discharges as appropriate. By allowing the NAL process to determine when and where

conditionally exempt discharges need to be prohibited, the Copermittees are better positioned to justify any enforcement actions.

PREFERRED POLICY CHOICE: the Copermittees request that the Regional Board restore the conditional exemption for landscape irrigation, irrigation water and lawn watering as outlined in Attachments 6 and 7.

Alternatively, if the Regional Board nevertheless insists on prohibiting Irrigation Runoff, the Copermittees request that the draft MS4 Permit be revised to allow for irrigation runoff to be managed as a JRMP program, rather than as a prohibited discharge to the MS4. This alternative request is consistent with how the Permit currently deals with non-emergency fire fighting discharges, which was also removed from the list of non-prohibited non-storm water discharges. The Executive Officer stated that he would be open to consideration of a program for irrigation runoff that would address discharges from the MS4. This alternative approach allows the Copermittees to develop a program that focuses on irrigation runoff problem areas, as opposed to holding the Copermittees responsible for eliminating any instant case of over-irrigation to a street independent of threat to receiving water quality.

ALTERNATIVE POLICY CHOICE: The Copermittees request that the Regional Board clarify that irrigation runoff is only prohibited where it is discharged *from* an MS4 (into receiving waters) by adding the following language:

B.4. *As part of the JRMP, the Copermittees must develop and implement a program to address pollutants from landscape irrigation, irrigation water and lawn watering identified as significant sources of pollutants to waters of the United States.*

Legal Issues
The Copermittees have identified legal issues that raise fundamental questions regarding several of the key elements of the Tentative Order.

The Copermittees request review of the legal issues and revision of the Tentative Order prior to adoption.

Each of the legal issues and requested adjustments and justifications for each requested revision is further discussed in Attachments 7 and 8 to this letter.

CONCLUSION

It is fundamental that the MS4 Permit be economically, technically, and legally feasible. To be credible, and to pass legal muster, MS4 Permit requirements must demonstrable a nexus to water quality improvements. Instead the current requirements, although well intended but not always well

developed, will put the Copermittees in non-compliance since we cannot afford to implement all the requirements and consequently this will not lead to water quality improvement.

The present economic crisis has made daily headlines over the past three years and Riverside County has been identified as the 11th most impacted county in the nation. In the ROWD and throughout the development of the draft MS4 Permit, the Copermittees have provided abundant publicly available information regarding the impact of this crisis on their revenues, staffing, and programs. Virtually every program and service, including public safety services, has been impacted, and others have been eliminated. Contingency reserves have been depleted to the lowest levels allowable to maintain operations. At this point, the Copermittees cannot increase water quality compliance spending without real risks to reducing spending on existing state and federal mandates or other much-needed local programs and services. As proposed, the draft MS4 Permit is economically infeasible.

In an effort to promote a viable 4th-term MS4 Permit, the Copermittees proactively engaged Regional Board staff in a collaborative dialogue with the intent of developing an economically feasible MS4 Permit that was protective of receiving water quality in the Santa Margarita Region. However, the following constraints have limited the benefits of the process:

1. The discussions were curtailed because the Board expected the draft MS4 Permit to be heard in October;

2. The Board had adopted the South Orange County MS4 Permit as a "model" permit, and, therefore, would have to approve any major revisions to the provisions of that Permit; and

3. The inclusion of several new provisions of the draft MS4 Permit addressing unpaved roads, inspection programs and monitoring requirements go well beyond the Orange County Permit.

As noted in the Executive Summary, the MS4 Permit adopted for South Orange County was ultimately developed for a region with substantial coastal resources and perennial streams, twice the population, significantly higher property tax revenues, and more affluent tax payers.

By contrast, the ephemeral conditions found in the Santa Margarita Region result in stream channels that are dry during dry weather conditions and receive less rain during wet season conditions. The stream flow conditions in the Santa Margarita Region are entirely unlike the significant perennial flow conditions found in South Orange County. The proposed changes contained herein address these realities. The proposed changes also address necessary changes to ensure that the Copermittees can continue to afford implementation of the draft MS4 Permit given the significant economic disadvantages faced by the Santa Margarita Region, disadvantages that have been exacerbated by the impacts of the recession.

The requirements in the Permit must protect beneficial uses in a cost effective manner. It is always a balance to protect water quality and avoid unnecessary increases in program compliance costs. Balancing local water quality needs and funding limitations should be paramount in the current economic climate. Proposed program expansions must be carefully weighed against economic realities and be justified by conditions actually found in the Santa Margarita Region. As described, unpaved roads and business inspections have been effectively addressed by existing programs, yet the draft MS4 Permit proposes requirements that can only be met by establishment of new compliance programs and, in the case of the business inspections, elimination of the highly effective CAP.

The legislature created Regional Boards to protect our beneficial uses while carefully considering the technical and economical feasibility of such protection. Even in the best of economic times, state and local government must carefully manage public revenues. A policy-level decision by the Regional Board is necessary to direct staff to work with the Copermittees to address the comments contained herein. The Copermittees request your support in our effort to develop an economically, technically, and legally feasible MS4 Permit that is appropriate to the Santa Margarita Region. As noted in the opening Executive Summary of this comment letter we specifically request that you direct Regional Board provide staff with direction to resolve the issues identified in this letter and attachments.

Thank you for your time and consideration. We look forward to discussing this issue further at the October 13th hearing.

Very truly yours,

JASON E. UHLEY
Chief of the Watershed Protection Division

JEU:bjp

Economic Assessment
Draft 2010 Santa Margarita Region MS4 Permit
September 2, 2010

The Draft Municipal Separate Storm Sewer System Permit (Draft Tentative Order No. R9-2010-0016; NPDES No. CAS0108740) for the Santa Margarita Region of Riverside County (draft Permit) proposes new and expanded compliance requirements that would significantly increase the Copermittee compliance costs. Further, the draft Permit expands the compliance requirements and compliance costs beyond those required by the recently adopted MS4 Permit for South Orange County, a more populous and affluent area with significantly greater tax revenues to support the compliance programs. These additional requirements and costs are proposed at a time when the Copermittees have been severely impacted by the most significant economic downturn since the Great Depression. These impacts include high levels of unemployment and homes in default, sharply reduced Copermittee revenues and increased demands on public services. Moreover, these impacts have fallen disproportionately on communities in Riverside County relative to South Orange County and San Diego County, due in large part to the crash of the housing market.

Due to their reduced revenues, the Copermittees budgets and staffing have been significantly reduced for virtually all services and programs operated by the Copermittees, including police, fire, and paramedic services. Funding has been focused on essential public safety and existing state and federally mandated programs. Increases in funding for the water quality mandates contained in the draft Permit can only come from reduced funding for these basic priorities. Therefore, the expanded compliance requirements proposed in the draft Permit are economically infeasible. This paper describes the general economic conditions in the Santa Margarita Region, the Copermittees' current budget and budget projections, their assessment of projected increases in compliance costs, and economic forecasts provided by other parties.

POPULATION

Riverside County, which is subject to three NPDES MS4 permits, has a total population of 2,153,186. However, only 289,765 persons (approximately 13 percent) reside within the Santa Margarita Region.[1] Population and housing projections for the Santa Margarita Region are summarized in Table 1. MS4 discharges in Riverside County are regulated by separate NPDES stormwater permits issued by the Colorado River, Santa Ana, and San Diego Regional Water Quality Control Boards. Although these three MS4 permits address the same federal regulatory requirements, the provisions in the draft Permit are often not well aligned with the requirements of the other two MS4 permits. As such, the cost for complying with those requirements is borne entirely by the 289,765 residents within the Santa Margarita Region.

[1] Riverside County Projections 2010 (RCP-10), Transportation and Land Management Agency, Administrative Services, Center for Demographic Research, June 23, 2010.

Table 1: Santa Margarita Region Population & Housing Projections 2010[2]

	Population / Housing Units		
Jurisdiction	**2010**	**2015**	**2020**
Murrieta	101,680/34,812	105,513/36,162	109,343/37,512
Temecula	102,727/33,194	109,136/35,270	112,242/36,321
Wildomar	32,720/11,123	37,289/12,722	42,475/14,537
Unincorporated	52,638/17,546	54,584/18,195	59,878/19,959
Total	**289,765/96,675**	**306,522/102,349**	**323,938/108,329**

CURRENT ECONOMIC CONDITIONS

Unemployment

Higher unemployment directly impacts the revenue streams available to the County and the Cities for funding programs and services. As illustrated in Figure 1, the unemployment rate in Riverside County is currently 15.3 percent, which is 42 percent higher than the unemployment rate in San Diego County (9.8 percent) and 56 percent higher than the unemployment rate in Orange County (9.8 percent).[3]

SOURCES OF LOCAL REVENUE

The Copermittee's primary revenue sources for implementation of programs and services are property taxes, sales taxes, and development/construction permit fees. Each of these sources has declined substantially since the beginning of the recession in FY 2006/2007. The 2009 per capita income in Riverside County ($29,177) is 31% lower than the per capita income in San Diego County ($42,094) and 32% lower than the per capita income in Orange County ($46,898).[4] The population of the Santa Margarita Region (289,765) is 48% lower than the population of South Orange County (553,161[5]) and 91% lower than the population of San Diego County. As a less affluent area with relatively small

[2] Riverside County Projections 2010 (RCP-10), Transportation and Land Management Agency, Administrative Services, Center for Demographic Research, June 23, 2010.

[3] Monthly Labor Force Data for Counties, July 2010 – Preliminary, Labor Market Information Division, Employment Development Department, August 20, 2010. http://www.calmis.ca.gov/file/lfmonth/countyur-400c.pdf

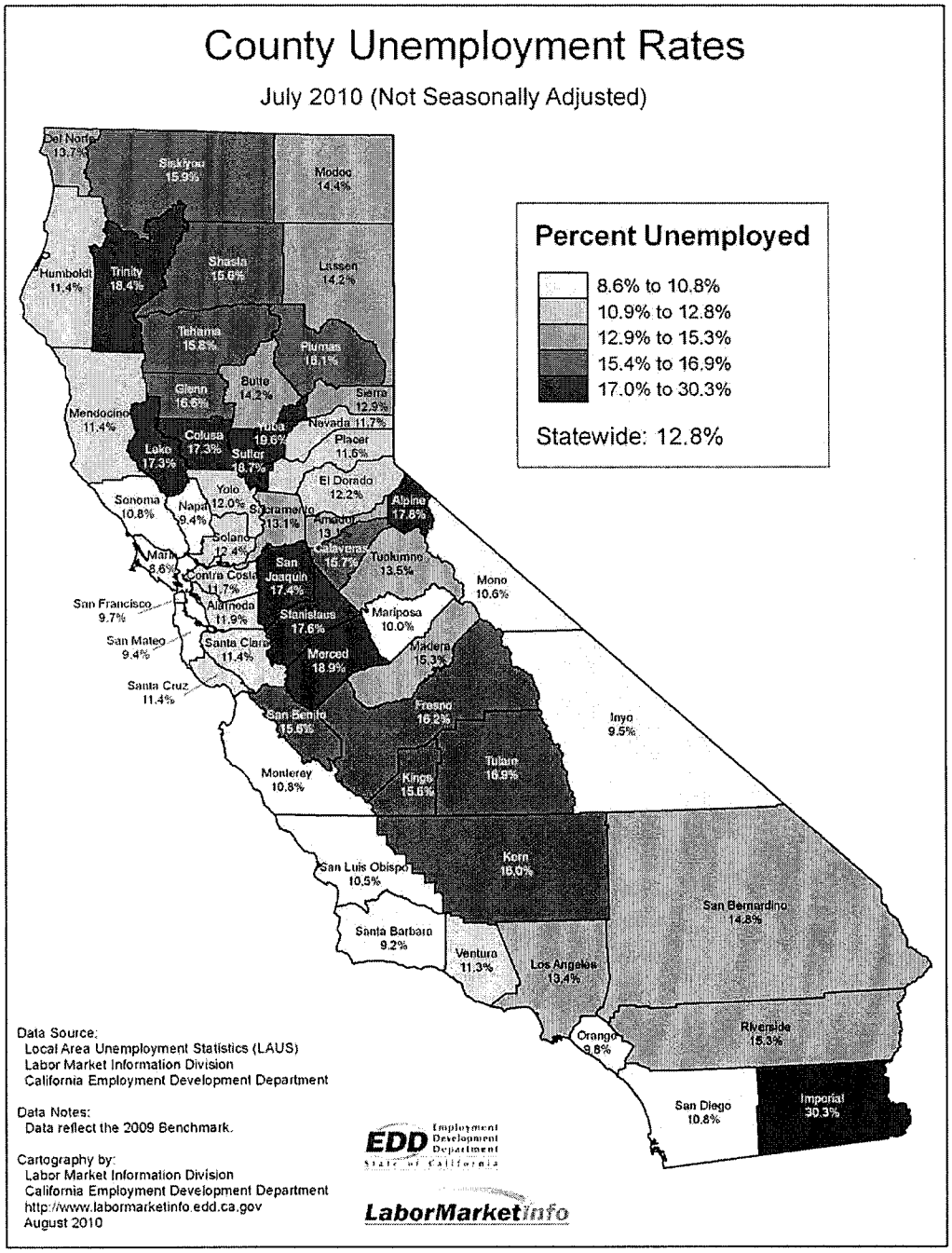
population, the Santa Margarita Region has far less revenue than South Orange County and San Diego County to fund local programs and services, and MS4 permit compliance costs.

Per Capita Income[6]

	Riverside County	Orange County	San Diego County
2006	29,148	49,098	42,110
2007	29,950	49,790	43,816
2008	30,088	49,650	44,438
2009	29,177	46,898	42,094
2010 (forecast)	28,117	47,435	42,651

Figure 1. Unemployment Rates of California Counties (title for figure on next page)

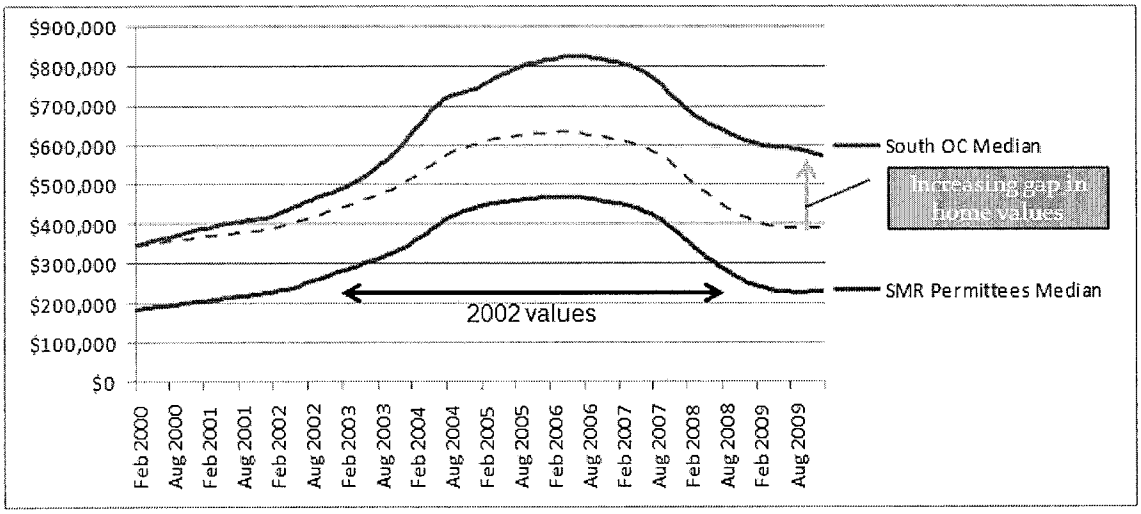
[4] Economic Forecast, Los Angeles Economic Development Corporation, July 2010.
[5] Richard Boon, County of Orange, personal communication, September 1, 2010.
[6] Economic Forecast, Los Angeles Economic Development Corporation, July 2010.


County Unemployment Rates
July 2010 (Not Seasonally Adjusted)
Percent Unemployed
8.6% to 10.8%
10.9% to 12.8%
12.9% to 15.3%
15.4% to 16.9%
17.0% to 30.3%
Statewide: 12.8%
Del Norte 13.7%
Siskiyou 15.9%
Modoc 14.4%
Humboldt 11.4%
Trinity 18.4%
Shasta 15.8%
Lassen 14.2%
Tehama 15.8%
Plumas 16.1%
Glenn 16.6%
Butte 14.2%
Sierra 12.9%
Mendocino 11.4%
Colusa 17.3%
Yuba 19.6%
Nevada 11.7%
Lake 17.3%
Sutter 16.7%
Placer 11.6%
Yolo 12.0%
El Dorado 12.2%
Sonoma 10.8%
Napa 9.4%
Sacramento 13.1%
Alpine 17.8%
Amador 13.
Solano 12.4%
Calaveras 15.7%
Tuolumne 13.5%
Marin 8.6%
San Joaquin 17.4%
Contra Costa 11.7%
Mono 10.6%
San Francisco 9.7%
Alameda 11.9%
Stanislaus 17.6%
Mariposa 10.0%
San Mateo 9.4%
Santa Clara 11.4%
Merced 18.9%
Madera 15.3%
Santa Cruz 11.4%
San Benito 15.6%
Fresno 16.2%
Inyo 9.5%
Monterey 10.8%
Kings 15.6%
Tulare 16.9%
San Luis Obispo 10.5%
Kern 16.0%
San Bernardino 14.8%
Santa Barbara 9.2%
Ventura 11.3%
Los Angeles 13.4%
Orange 9.8%
Riverside 15.3%
San Diego 10.8%
Imperial 30.3%
Data Source:
Local Area Unemployment Statistics (LAUS)
Labor Market Information Division
California Employment Development Department
Data Notes:
Data reflect the 2009 Benchmark.
Cartography by:
Labor Market Information Division
California Employment Development Department
http://www.labormarketinfo.edd.ca.gov
August 2010
EDD Employment Development Department State of California
LaborMarketInfo

Home Values/Property Tax Revenue

Property tax revenue, which is a major source of funding for the County and Cities, is a direct function of the total inventory of real estate and the assessed values of the real estate. With a small population relative to South Orange County and San Diego County and a limited amount of commercial and industrial property, the Santa Margarita Region is supported by a much smaller inventory of real estate from which to obtain property tax revenue. The high rate of foreclosures in Riverside County has also resulted in significant declines in real estate values and, consequently, property tax revenue. The Riverside County Auditor-Controller projects that property values will fall over 10 percent in FY 2009-10 and could fall further in FY 2010/2011.[7] Figure 3 illustrates the decline in median home values in the Santa Margarita Region and South Orange County. Although home values in both areas have declined, home values in the Santa Margarita Region have declined at a greater rate and the difference in home values between the two areas has grown with the recession.

Figure 3. Median Home Values[8]



The Inland Empire (Riverside and San Bernardino Counties) registered more defaults and foreclosures than any other area of Southern California.[9] The Inland Empire was ranked No. 5 in nationwide foreclosure activity during the first half of 2010, with almost 4.5 percent of households in default. A total 63,717 mortgage default notices, auction sale notices, and bank repossessions were recorded in the Riverside-San Bernardino-Ontario metropolitan area between January and June 2010, according to RealtyTrac. Accordingly, one in 23 households were in some stage of foreclosure during this six-month period. Additionally, almost 45 percent of homeowners with a mortgage in Riverside and San Bernardino Counties owe more on their homes than the homes are worth. As illustrated in Figure 3, Orange County

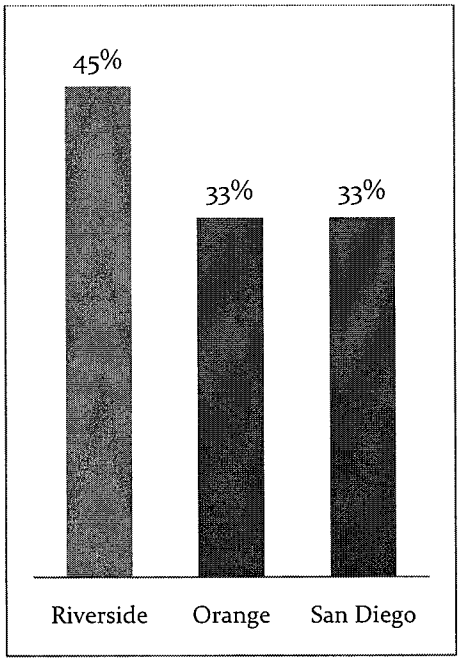
[7] Comprehensive Annual Financial Report of the County of Riverside for the Fiscal Year Ended June 30, 2009, Robert E. Byrd, Riverside County Auditor-Controller, December 9, 2009. P. vii. http://www.auditorcontroller.org/opencms/publications/FinancialPub/cafr/CAFR_2009/Introductory.pdf

[8] Source: www.zillow.com

[9] Economic Forecast, Los Angeles Economic Development Corporation, July 2010, p. 50.

and San Diego County have not been impacted by "upside-down mortgages" to the same extent as has Riverside County.

Figure 3. "Upside-Down Mortgages"



One expert, Professor Mason Gaffney of the UC Riverside Economics Department believes that the housing market is in a vicious cycle simply because there are too many homes. According to Professor Gaffney, because demand is down, prices will go down, and more people will go "upside-down" on their mortgage, and then go into foreclosure. Professor Gaffney estimates that the bottom of the housing market will not be seen for another three years, due to the previous overbuilding in Riverside County.[10]

Although the recession has impacted property values throughout Southern California, Riverside County remains at a distinct disadvantage relative to Orange and San Diego Counties. The average home value in Riverside County is $207, 900, which is 58% less than the average home value in South Orange County ($499,500) and 45% less than the average home value in San Diego County ($378,800).[11] As a result, property tax revenues per home in Riverside County are 58% less than in Orange County and 45% less than in San Diego County. The larger populations and number of homes in Orange and San Diego Counties multiply this disparity in property tax revenue that can be used to help fund NPDES compliance programs. Based on population and average home value, South Orange County generates over four times the property tax revenue generated in the Santa Margarita Region, and San Diego County generates 20 times the property tax revenue of the Santa Margarita Region. Clearly, the Copermittees in the Santa Margarita Region receive significantly less property tax revenue than either Orange or San Diego Counties and are less able to fund additional MS4 permit compliance costs.

[10] Ibid.
[11] Zillow Home Value Index – Riverside County, Zillow.com. August 10, 2010.

Sales Tax Revenue

The next most significant revenue source for program funding is sales tax. Sales tax revenue is a function of population and relative income. As described, the Santa Margarita Region has a less affluent and smaller population than South Orange County and San Diego County on which to generate sales tax revenue.

The high levels of unemployment in Riverside County have reduced disposable income which has further depressed sales tax revenues. Retail sales in Riverside County fell by nearly 27% in 2008 and 2009.[12] Statewide sales and use tax revenues for the second quarter of 2010 declined approximately 10.4 percent. Additionally, taxable sales for the first quarter of 2010 remained flat compared to a year earlier.[13] Although data specific to the Santa Margarita Region is not available, it is anticipated that taxable sales have been impacted more significantly than in Orange and San Diego Counties due to the higher unemployment rate in Riverside County.

Taxable sales are directly proportional to sales tax revenue. Based on data presented in the Los Angeles Economic Development Corporation's July 2010 Economic Forecast, South Orange County generates 2.6 times the taxable sales generated in the Santa Margarita Region and San Diego County generates 13.3 times the taxable sales of the Santa Margarita Region. Clearly, the Copermittees in the Santa Margarita Region receive significantly less sales tax revenue than either Orange or San Diego Counties and are less able to fund additional MS4 permit compliance costs.

Development and Construction Permit Fees

Prior to the recession, development and construction permit fees funded a variety of compliance activities related to review, approval, inspection and enforcement associated with development and construction activities. Since the recession, revenues from these fees have been virtually eliminated. As a result, Copermittee inspection and enforcement of development and construction activities, including abandoned projects, has been funded by the Copermittees' general funds. General fund budgets are in turn supported by sales and property tax revenues which, as described, have declined significantly.

New Fees or Taxes

Another potential source of funding would be the establishment of a new fee or tax. Such revenues would be subject to the requirements of Proposition 218. Recent efforts to pass supplemental fees have been mixed and given the current economic conditions, this option appears infeasible. For example, on the March 2006 ballot, an attempt by the City of Encinitas to pass a Clean Water Fee was defeated by the voters.[14] It is notable that this rejection of a Clean Water Fee occurred prior to the recession in a relatively affluent coastal city.

Economic Forecasts

The Riverside County Executive Office assessed Riverside County's economy in a report to the Board of Supervisors submitted with the FY 2010/2011 Recommended Budget. In this assessment, it was noted that the economy is still staggering and that economic news has been mixed. Although a slightly rising

[12] Economic Forecast, Los Angeles Economic Development Corporation, July 2010, p. 51.
[13] News release "Local Sales Tax Allocations Reduced in Many Areas of the State," California Board of Equalization, August 27, 2010. http://www.boe.ca.gov/news/2010/92-10-G.pdf
[14] FY 2008-2009 JURMP Annual Report, City of Encinitas, p. 10-3.

stock market and other nationwide measures could be interpreted to signal improvement, persistently high unemployment and personal and national debt call for caution, and a double-dip recession is possible. Locally, while some experts project revenues will shrink again in FY 2011/2012, Riverside County's economic consultants foresee a long and gradual muted recovery and the County will be managing with drastically reduced budgets for an extended period. Budget reductions of approximately $21 million are projected for FY 2011/2012. The County projects that it will see a balanced but significantly reduced budget in FY 2012/2013, with a total budget of $670 million (compared to $736 in 2007). Based on this assessment and reports in the media, it appears that the economy in Riverside County will stabilize at a reduced level and may not recover during the term of the SMR MS4 Permit.

Projected Increases in Compliance Costs

The draft Permit proposes a significant expansion of compliance requirements that would significantly increase the Copermittee compliance costs. The draft Permit was developed by starting with the MS4 Permit for South Orange County. The requirements proposed in the draft Permit that would significantly increase compliance costs include:

Regional Compliance Requirements

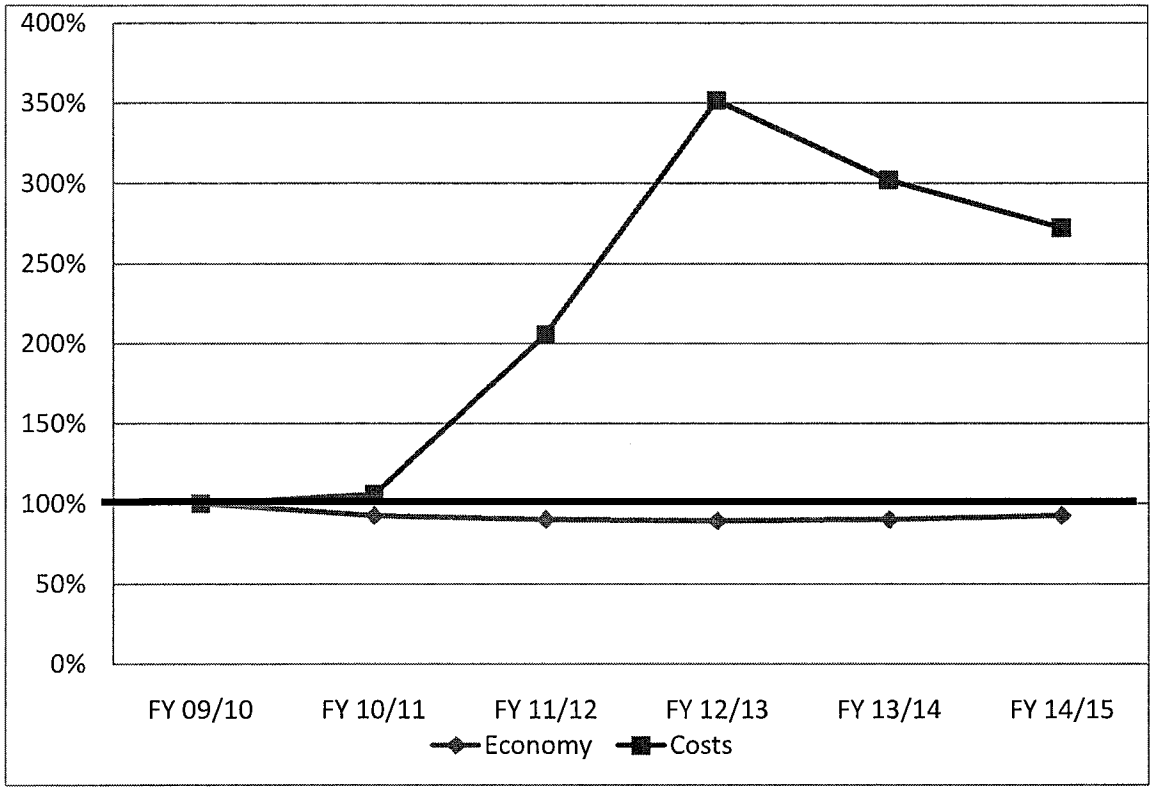
- Monitoring and special studies (See Attachment 4)
- Hyrdomodification Management Plan (including monitoring)
- Retrofit study
- Other general program updates (JRMP)

Individual Copermittee Compliance Requirements

- Enforcement of Irrigation runoff prohibition (See Attachment 6)
- Significantly Increased business and BMP inspections
- BMP retrofit requirements
- Regulation of unpaved roads (See attachment #5)
- Hydromodification requirements
- Monitoring Source Identifications
- Expanded IC/ID requirements

Estimates for implementation of the regional compliance requirements have been prepared and Figure 4 illustrates the disparity between projected Copermittee revenues and costs for implementation of the proposed regional programs. Due to the fact that calculating costs for implementing entirely new programs is excessively difficult, cost estimates for the implementation of individual Copermittee compliance requirements have not been completed, although it is expected that their individual costs will parallel the regional costs presented in Figure 4.

Figure 3. Projected Revenues vs MS4 Permit Compliance Costs



ECONOMIC SUMMARY

As all sources of revenues have been reduced significantly, the Copermittees have been required to reduce staffing through layoffs, attrition and furlough; reduce funding across the board for public services and programs, and, in some cases, completely eliminate public services and programs. For example, it is estimated that County of Riverside staffing has been reduced by 2,500 since FY 2006/2007 mostly in the form of early retirement and layoffs. It is estimated that an additional 500-700 staff positions will be eliminated by the County in FY 2011/2012.

Due to the loss of revenue, virtually all Copermittee programs or services have been reduced, including fire and police. As an example, the Riverside County FY 2010/2011 Recommended Budget for Riverside County proposes:

- Public safety department cuts of 3 – 5 percent
- Other department cuts averaging 19 percent
- Continued staff reductions

After three years of modest cuts culminating in a 25% decrease, the Board of Supervisors approved an additional 19% cut in the general fund and a 4% cut to public safety for FY 2010/2011. These additional cuts will decrease spending by an additional $71 million. The remaining budget gap will be filled from general fund reserves set aside for economic uncertainty. Since FY 2006/2007 Riverside County general fund reserves have declined from over $300 million to $30 million. The County cannot decrease the reserve fund any further without affecting the County's ability to obtain credit. According to the Associated Press Economic Stress Index, of counties with populations of at least 25,000, Riverside County was identified as the eleventh most economically stressed county in the nation based on its June 2010 stress scores.[15]

All County departments have been directed to only provide those core services that the County is mandated to provide. At this point, the Copermittees are struggling to maintain the existing compliance programs required by the 2004 MS4 Permit with available staff and funding. Implementation of expanded or new Permit compliance requirements would require the Copermittees to either further reduce implementation of other mandated programs or reduce the level of implementation of MS4 Permit compliance programs - at risk of receiving an NOV and ACL. In other words, the Copermittees cannot increase MS4 Permit compliance expenditures without directly impacting compliance with other state or federally-mandated programs.

CONCLUSION

The draft Permit was developed by starting with the MS4 Permit for South Orange County. This represented a significant expansion of compliance requirements and compliance costs relative to the 2004 Permit issued to the Copermittees in the Santa Margarita Region, and by no means are the costs incremental in nature. South Orange County is a permit area with twice the population, 2.6 times the sales tax revenue, and over four times the property tax revenue of the Santa Margarita Region. The draft Permit was then expanded to include additional compliance and monitoring requirements, further increasing compliance costs. Plainly, it is unrealistic to impose greater, or even the same Permit requirements on the Santa Margarita Region, as have been imposed on South Orange County.

In addition to having a lower property tax revenue based on lower property tax base and lower per capita retail sales, the Santa Margarita Region has also been hit harder by the recession, which has further diminished funding resources. It is projected that revenues will continue at a reduced level for an extended period with recovery not expected within the term of the Permit term. Therefore, the available resources to fund public safety, existing state and federal mandates, and expanded water quality permit requirements are much less than San Diego and Orange Counties.

The economy has resulted in reductions of reserves to minimum levels and virtually all local services and programs have been reduced or eliminated. As increases in funding for the water quality mandates contained in the draft Permit can only come from reduced funding for public safety, existing state and federal mandates, the expanded compliance requirements proposed in the draft Permit are economically infeasible.

[15] "20 Most Stressed, 20 Least Stressed Counties, The Associated Press, August 2, 2010.

Attachment 4: Monitoring and Reporting Program Requirements

Introduction

Tentative Order R9-2010-0016 (draft MS4 Permit) includes proposed requirements within Attachment E Monitoring and Reporting Program (draft MRP) that are not necessary to address management questions related to water quality, beyond requirements dictated to Orange County and beyond the Copermittees' ability to fund. Due to the expansion of monitoring requirements proposed by Regional Board staff, costs for monitoring program compliance are two and half times more expensive for Santa Margarita Region residents than to South Orange County residents. The Copermittees recognize monitoring and data collection are necessary to assist with program effectiveness assessment and address stormwater management questions within the Santa Margarita Region. However, the proposed revisions provided within this paper allow these assessments and questions to be answered in a more cost effective manner while retaining all major components of the draft MRP. The proposed revisions prune requirements that are not necessary to answer key management questions for this MS4 program, eliminate elements that may be of general interest and therefore should be handled at a more regional, state or federal level and/or correct provisions that are contrary to, or not aligned with, methods of practice established by the Southern California Stormwater Monitoring Coalition or other MS4 Permits approved by your Board. The changes proposed herein result in annual savings of approximately $780,000 while maintaining the integrity of the MRP. Even with these proposed revisions, this MRP is significantly more expensive than the Copermittees' current program.

Table 1 - Cost Savings resulting from proposed MRP changes

Section	Component	Requested Change	Cost reduction
A	**Mass Loading Stations**	1) Wet Weather - 3 wet -> 2 wet	**~$79,000**
		2) Dry Weather - Composite -> Grab	**~$66,000**
B	**Toxicity Testing (MLS and Bioassessment)**	3) 3 organisms -> 2 organisms	**~$14,000**
C	**Bioassessment**	4) 6 stations -> 3 stations	**~$158,000**
		5) 2X each -> 1X each	**~$95,000**
D	**Action Levels**	6) 'Representative Number/Percent' -> Representative - and remove 'within each sub area'	**~$241,000**
		7) SAL Composites -> Grab	**~$165,000**
E	**Inland Aquatic Habitat Monitoring**	8) Eliminate requirement	**~$140,000**
F	**Special Studies**	9) 6 special studies -> 4 studies, and Replace with more locally appropriate studies	**~$220,000/year**
	TOTAL ESTIMATED SAVINGS	Net savings of all recommended changes (annualized)	***~780,000/year***

Note: Red text refers to the requirements that are beyond the MRP requirements in the OC permit.

Attachment 4: Monitoring and Reporting Program Requirements

Draft Monitoring and Reporting Program Requirements

Background

Prior to the release of the first draft of the MRP requirements to the Copermittees, Water Board staff indicated the program would be similar to the South Orange County MS4 Permit (OC Permit) yet scaled appropriately to the Santa Margarita Region. The first draft of the MRP was not released until three weeks prior to the public release draft MRP. To our surprise, instead of being appropriately scaled, the draft MRP actually exceeded the scope and costs of the OC Permit MRP. Due to limited time, Water Board staff recommended the discussions regarding MRP requirements be brought before the Regional Board at the appointed October 13, 2010 Board Hearing. This was particularly frustrating as it was not consistent with our mutual goal to resolve technical issues at the staff level and bring only necessary policy issues to the Regional Board.

One of the most significant issues with the MRP is that the Copermittees proposed several new special studies in the ROWD. The Copermittees moved forward on these studies in good faith, including a $3,000,000 LID Demonstration and Testing Facility at the District headquarters in Riverside. The final MRP does not recognize any of these efforts, and instead mandates six new special studies and a habitat monitoring program. Initially, Board staff indicated that these six studies were for discussion and that it was not their intent to include all of the studies, however, later Board staff changed their position and mandated all of the studies. Further, the habitat monitoring program was actually removed from the Orange County MS4 Permit due to the addition of the NAL/SAL monitoring which was expected to effectively address the underlying habitat monitoring questions. These unnecessary additions put the Copermittees in the precarious position of having to abandon special studies that were already deemed by local stakeholders to be of critical value to managing stormwater within our region.

Cost Saving Requirement Revisions – Overview

The proposed draft MRP includes additional stations, constituents, data analysis and multiple special studies that exceed other programs such as South Orange County's or established standards of practice. These elements will not add substantively to the understanding of MS4 water quality impacts within the Santa Margarita Region and vastly exceed the ability of the Copermittees ability to pay and staff. Table 1 summarizes the Copermittees' requested revisions to the draft MRP and the costs savings from each revision.

These changes are also critical as the draft MRP proposes a program that exceeds available monitoring staffing and equipment resources. The District is currently in the process of recruiting for budgeted positions that were based on the monitoring program contained in our ROWD. However, review of the MRP has determined that our estimations were woefully inadequate. The MRP special studies and other requirements require scientists and other staff with specialized training and backgrounds that are not readily available. The District will likely have to find staff with generalized knowledge in related fields and spend significant resources training them to be knowledgeable in the science of stormwater management. Even if we were to consult out most of the work, we would still need specialized staff to scope, manage and review the consultants' work. It is not feasible to find, recruit and train the necessary staff and also deploy the proposed MRP in the time allotted. The Copermittees' proposed revisions scale

requirements to a more financially attainable and manageable level. Detailed justifications for each revision are described below.

Cost Saving Requirement Revisions – Section A
Mass Loading Station Monitoring - Attachment E: II.A.1.b & II.A.1.c

Revision: Request wet weather monitoring to be required twice a year instead of three times a year.

Justification: (1) The Water Board Staff has referenced the SMC guidance and indicated not enough data has been collected to warrant a requirement change from three wet weather samples to two. However this guidance states once three wet weather samples have been collected for three years, sampling for two wet weather events is acceptable. This data has been collected by the Copermittees. The Copermittees successfully collected three wet weather events for three reporting periods; in addition, the Copermittees have over 10 years of data to form the basis of future analyses. Although the methods of collection have changed, our statistical analysis indicates that there is no statistically significant difference between data sets collected during prior terms and the current term. (2) The current OC and SD Permits require only two wet weather samples. (3) The Santa Margarita Region is semi arid with ephemeral flows, sampling for a third storm event has proven, and will continue to prove difficult and may result in non compliance due to climate (lack of storm events). (4) The cost to Copermittees to fund a third wet weather monitoring event during this permit term is significant.

Mass Loading Station Monitoring - Attachment E: II.A.1.d

Revision: Request dry weather sampling method to be changed from composite sampling to grab samples.

Justification: (1) The Copermittees currently conduct dry weather sampling using an instantaneous grab sample. The MRP proposes 24-hour composite sampling, which represents a significant cost increase due to the need to construct infrastructure at the sampling sites to secure and facilitate portable automatic sampling equipment. (2) Composite samples will mask illicit discharges which is one of the primary reasons for dry weather monitoring. (3) Due to dry weather flows' steady nature, the flows can be accurately characterized using a grab sample. (4) The SMC Regional Bioassessment Program, which effectively defines the standard of practice for receiving waters monitoring, has found that chemistry samples must be collected at the most downstream transect (Transect A) to be representative of the flow through the assessed reach. This program therefore uses Grab samples collected immediately prior to benthomacroinvertebrate (BMI) and periphyton sampling. If composite sampling was required, it similarly must be done at the downstream transect; however, the composites would not be representative as they would pick up sediment, nutrients and other pollutants that had been unnaturally introduced by the BMI and periphyton collection activities. This would create an unrepresentative sample and the sampling equipment would be at risk of failure due to the suspension of sediment.

Cost Saving Requirement Revisions – Section B
Toxicity Testing - Attachment E: II.A.1.h

Revision: Request change in toxicity testing from three organisms to two organisms.

Justification: (1) The MRP specified in the OC Permit requires toxicity testing of two organisms and this permit should not go beyond requirements found within the OC Permit due to limited funding and resources. This is an example of a simple change where cost-savings can be realized. (2) The USEPA only has chronic toxicity protocols for *Pseudokirchneriella. Subcapitata* (formerly, *Selenastrum capricornutum*). Therefore there are no established protocols for the other two species, and data collection results will be difficult to compare to other regions.

Cost Saving Requirement Revisions – Section C
Stream Assessment Monitoring - Attachment E: II.A.2.a

Revision: Request that three stream assessment stations be monitored instead of six stations.

Justification: (1) The existing MS4 Permit requires three stream assessment stations annually. These stations are our mass loading stations. It should be noted that this is an ephemeral watershed. The current stations were selected because they were the only stations that had flowing water during the bioassessment sampling periods, not because they were necessary representative of urban runoff (although they are downstream of the entire MS4 system). Specifically, during dry weather, none of the current receiving waters stations receive runoff from the MS4 due to the ephemeral nature of the watershed. Similarly, efforts to find flowing water for the Regional Bioassessment Program have been challenging. For example, in 2009, the first year of the program, 35 random sites were evaluated before one perennial site could be identified. In 2010, 39 random sites were evaluated. The final sites that were selected were actually our CURRENT mass loading stations as they were the first randomly selected sites that had flow. This lack of flow was recognized by SCCWRP in establishing the distribution of Regional Bioassessment Stations in southern California. This is why southwest Riverside County is only assigned one Bioassessment station. (2) As is demonstrated above, the Copermittees are not likely to find three additional flowing stations that are indicative of impacts from MS4 discharges. The Permit requirement therefore puts the Copermittees in unavoidable non-compliance with the Permit. (3) The cost of monitoring the additional three stations is substantial, and given the relative size of the MS4 system and population of RC to OC, the additional stations are not appropriate on an environmental, economic or social justice scale.

Stream Assessment Monitoring - Attachment E: II.A.2.b

Revision: Request frequency be changed from twice per year to once per year for stream assessment monitoring.

Justification: (1) The Water Board Staff and Executive Officer agreed to make this change as a trade for the Copermittees participation in the SMC Regional Bioassment special study. The change was based on findings by the Southern California Coastal Watershed Research Project (SCCWRP) scientiests indicating that there is no seasonally signficant difference in bioassesment scores. The Copermittees volunteered to implement th Regional Bioassessment Program ahead of the necessary changes to the NPDES MS4 Permit program to reduce the bioassessment sampling events in a good faith effort. (2) To determine if two sampling events are in fact necessary, the Copermittees evaluated the difference in biological community scores between Spring and Fall for data collected at Lower Murrieta, Lower Temecula and

Adobe Creeks during May and October from 2007 through 2009. Utilizing a Two-Way Analysis of Variance of Southern California Index of Biological Integrity (IBI) scores, with season (Spring/Fall) and year (2007 through 2009) as variables, results indicated no statistical difference between years for any of the Permittee's three sites. No seasonal statistical difference in IBI scores ($p \geq 0.19$) was noted within any of the three stations, indicating that the IBI scores were consistent across seasons, regardless of the year. This data confirmed SCCWRP findings that there is not a change in the biological communities between the Spring and Fall seasons. (3) Further, the MRP within the OC Permit states that stations with year-round flow conditions may be monitored in May/June or September/October. Current assessment stations at Murrieta Creek, Temecula Creek, and Adobe Creek are perennial stations. Consistency across programs would denote assessments of these creeks once per year.

Cost Saving Requirement Revisions – Section D

MS4 Outfall Monitoring - Action Levels - Attachment E: II.B.1 and II.C.1.b.(1)

Revision: Request "a representative percentage of the major outfalls within each hydrologic subarea" (**II.B.1**) and "a representative number of major outfalls within each hydrologic subarea" (**II.C.1.b.(1)**) be changed to "representative major outfalls" as shown in the redlines attached to this comment letter.

Justification: (1) The draft MRP requires sampling of a representative number or representative percentage of major outfalls. This is a problematic compliance target as it focuses the program on a particular and open-ended "number" or "percent" of outfalls. By revising the language to require monitoring of "representative major outfalls", the burden is on the Copermittees to come up with a program that is truly representative, without requirements to meet an arbitrary number or percent of outfalls. The Copermittees are concerned about subareas that have many outfalls, which could require sampling of more sites than are economically feasible. These costs could escalate beyond the initial sampling event because if a NAL or SAL exceedance is recorded, source assessments studies are triggered that require additional staff time and resources. If this requirement is not revised, costs will quickly rise beyond the Copermittees' ability to sustain the MS4 compliance program.

MS4 Outfall Monitoring - Action Levels - Attachment E: II.B.1 and II.C.1.b.(1)

Revision: Request the following text revisions in footnote:

> "A representative ~~percentage~~ determination must consider hydrologic conditions, total drainage area of the site, ~~population density of the site, traffic density, age of the structures or buildings in the area, and~~ land use types (commercial, residential and industrial) , costs and other considerations as appropriate."

Justification: (1) The Copermittees originally asked for clarification on what factors would be considered for "representative percentage" and Water Board staff agreed to cost being included. The failure to include cost as a factor results in a program that reduces resources and diminishes funds quickly. The revision of the above allows for cost to be included through "other considerations as appropriate". (2) Deletion of percentage is consistent with previous comments. (3) Hydrologic conditions, population density of the site, traffic density and age of the structures or building in the area are all proposed

deletions because each subarea may not be sensitive to these factors and if one of this factors is applicable it will be included under the addition "other considerations as appropriate".

MS4 Outfall Monitoring - Action Levels - Attachment E: II.B.1.a

Revision: Request samples for Storm Water Action Levels (SALs) to be changed from 24-hour composite to grab.

Justification: (1) Composite sampling would result in significant increased cost due to the cost of purchasing additional automatic sampling equipment and constructing the necessary infrastructure to support its use. (2) Grab samples are likely more conservative. The Copermittees propose that grab samples be collected first and then, if a problem is indicated, the Copermittees would specify needed follow-up monitoring in the Source Assessment Monitoring Plan. (3) Freed resources can be dedicated to other key components of the program, such as follow-up source assessment studies.

Cost Saving Requirement Revisions – Section E
High Priority Inland Aquatic Habitat Monitoring - Attachment E: II.D

Revision: Request removal of the High Priority Inland Aquatic Habitat Monitoring requirements.

Justification: (1) This is an entirely new monitoring program. This monitoring program was initially proposed in the Orange County NPDES MS4 Permit, but later deleted when the NAL/SAL monitoring requirement was added. This trade was made as it was expected that the outfall monitoring data from the NAL and SAL program would effectively answer the underlying management question – "are MS4s impairing beneficial uses in priority aquatic habitat areas?" The underlying logic for removing the requirement in Orange County similarly applies here. Given the current economic conditions and the fact that this was considered and deleted from the OC Permit; the Copermittees respectfully request that this requirement similarly be deleted from the Riverside County MRP.

Cost Saving Requirement Revisions – Section F
Special Studies - Attachment E: II.E

Revision: Request alteration of Special Study Program.

Justification: The Draft Permit requires six special studies to be conducted (TMDL Development and Implementation, Sediment Toxicity, Trash and Litter Investigation, Agricultural, Federal and Tribal Input Study, MS4 and Receiving Water Maintenance Study and Intermittent and Ephemeral Stream Perennial Conversion Study). *This is in excess of the four special studies required by the OC MRP*. Given the larger MS4 Permit Area, population and resources available to South Orange County, the additional studies proposed on Riverside County are inappropriate from a social, economic and environmental justice standpoint. (1) Water Board staff acknowledged multiple studies were added to the draft MRP with the intention of that would be eliminated. (2) The issues addressed by these studies are not all specific to the Santa Margarita Region and would be more appropriate to be evaluated as part of a broader regional study, such as the Sediment Toxicity study. (3) The Agricultural, Federal, and Tribal Input Study is specifically inappropriate as it requires the Copermittees to monitor the discharges of other entities subject to separate NPDES regulations. (4) The Intermittent and Ephemeral Stream Perennial

Conversion Study is specifically inappropriate as it incorrectly presumes that such ephemeral streams are actually being converted to perennial systems within the permit area due to MS4 discharges. Some additional specific points include:

- Sediment Toxicity – In the waterbodies found in the Santa Margarita watershed (which are intermittent at best and dry most of the time) the idea of investigating sediment toxicity and its impacts on benthic macroinvertebrates seems a reach. Current sediment toxicity monitoring in the State is focused on year round streams and estuaries (e.g. the Delta). Furthermore the current state of sediment toxicity monitoring is at best in its infancy as is the State's policy regarding Sediment Quality Objectives. It would seem that a more reasonable approach associate with sediment toxicity is to allow the science to catch up with the policy and for the Copermittees to learn from these other statewide efforts.

- Agricultural, Federal, and Tribal Input Study - Ongoing monitoring efforts in the Central Valley and the Los Angeles Regions for the Agriculture Waiver Program are more robust and statistically valid to make any efforts by Riverside County to be pale in comparison and likely insignificant. Likewise, monitoring in watersheds (e.g. Lake Tahoe, and the northwest part of the State) where water bodies are impaired by sediment and where Federal and Tribal land uses have inputs to the impaired water bodies is significant and should take precedent over any efforts in Riverside County. As previously noted, it is inappropriate to require the Copermittees to not only monitor their own discharges, but also expend resources monitoring the discharges of others. The Regional Board has authorities to require these sources to collect their own data and should exercise that authority appropriately if such studies are required.

- MS4 and Receiving Water Maintenance Study - It is likely that every flood control district in the State and Caltrans would be impacted by the MS4 and Receiving Water Maintenance Study; therefore it would be imperative to have a well thought out, comprehensive, and regional study to answer the questions being posed in the MRP. Requiring the Copermittees to take on this responsibility is misleading and will not be sufficient to answer the broad questions being posed in the MRP. A more reasonable approach would be to model a regional program similar to the current SCCWRP efforts to assess hydromodification requirements for southern California.

- Intermittent and Ephemeral Stream Perennial Conversion Study – Finally, review of historical water resource data by the Copermittees (as indicated in the ROWD), USGS and state and federal courts have all found that the construction of Vale and Skinner dams has significantly increased the ephemeral nature of local watersheds, resulting in much drier conditions than naturally occurred. This is why Rancho California Water District is required to discharge raw water down the Santa Margarita River at the County Line. Requiring a study to study the impacts of ephemeral conversion demonstrates a clear lack of understanding of historical and current receiving water conditions. Further, similar to our comment above regarding the MS4 and Receiving Water Maintenance Study, this study is better addressed at a regional or statewide level. It is not possible to develop a sufficient local database to statistically validate any impacts from non-stormwater discharges within any reasonable timeframe. Furthermore any minimal

monitoring effort that could be provide by the Copermittees would not comprehensively address the questions being proposed in the MRP and would be a waste of resources. Again a regional approach, whether it be SCCWRP or other combination of stormwater Copermittees, would be a more logical and constructive approach to address this issue. The Copermittees have proposed maintaining two of the special studies (TMDL Development and Trash Assessment), while replacing the other four with locally preferred special studies already in place (Regional Bioasessment Program and LID BMP design, maintenance, and effectiveness study). The Copermittees believe the alternate proposal provides information that is directly relevant and beneficial to the Santa Margarita Region. This would result in an annual cost savings of $314,000 per year. This would maintain parity with the OC Permit, which only has four special studies, three of which are identical to the studies proposed below (TMDL Development, Regional Bioassessment, Trash and Litter investigation). Specific language to incorporate the new studies is included in the redline markup of the MRP.

The Copermittees propose the following studies, the write-up for which can be found in Attachment 9 to the comment letter:

1. TMDL Development and Implementation

2. **LID BMP design, maintenance and effectiveness study and demonstration**

   This study will be valuable in ensuring BMPs that are required are effective and the benefit and integration of LID BMPs into a site is understood. This proposed study would directly affect the Copermittees ability to ensure effective LID BMPs are being implemented.

3. **Regional Bioassessment study**

   All the Southern California counties have committed to participate in this study, with the understanding that it would be written into the MS4 permits as a special study for which they would get credit. The Copermittees have been proactively implementing this study without a MS4 Permit requirement, and want to be able to continue to support these regional studies.

4. Trash and Litter Investigation

Other Changes

Table 1: Analytical Testing for Mass Load (A.1) and Bioassessment (A.2)

Revision: Request "Carbamates" be removed as a constituent for analytical testing in Table 1.

Justification: The testing of carbamates should be dictated by the completion of toxicity identification evaluations (TIEs). The use of carbaryl in urban areas throughout California dropped approximately 80% between 2004 and 2008[1]. This drop is also matched by an 80% reduction in the number of USEPA-registered carbaryl products between 2004 and 2008. A downward trend since 2006 likely reflects a long-

[1] TDC Environmental, LLC (2010). *Annual Urban Pesticide Use Data Report 2010.* Prepared for the Urban Pesticide Pollution Prevention Project (UP3 Project) and the San Francisco Estuary Partnership (SFEP) through grant agreement from the State Water Resources Control Board (Agreement 09-305-550-1). June.

term reduction in the availability of carbaryl products due to USEPA regulatory requirements.[2] Further, once the USEPA completes its regulatory process for the full implementation of new carbayl restrictions[3], urban carbaryl use is likely to continue to decline.

Revision: Request "Hexavalent Chromium" be removed as a constituent for analytical testing in Table 1.

Justification: Since 2004, monitoring in the Santa Margarita Region has reflected that out of 62 total samples, there were 60 non-detected levels of Hexavalent chromium. The 2 detected levels of Hexavalent chromium occurred in April 2007 in wet weather samples. It may be notes that 2007 was the driest year on record for the region and analyzed samples reflect an extended period between wet weather events.

Revision: Request "Biological Oxygen Demand, 5day" and "Chemical Oxygen Demand" be removed as constituents for analytical testing in Table 1.

Justification: The reference in the Fact Sheet supporting the inclusion of these constituents is to the initial Phase 1 application requirements. It should be noted that the initial constituent list is not required of future permits. Further, these constituents are costly to analyze and do not provide new information that is relevant to the management of the NPDES MS4 Program.

Revision: Request "Total Organic Carbon" and "Dissolved Organic Carbon" be removed as constituents for analytical testing in Table 1.

Justification: The reference within the Fact Sheet does not require these constituents and there is a significant cost in analyzing the constituents. It is not clear what additional information these constituents provide that would be useful in managing the MS4 program that is not already addressed through the collection of other constituents.

Table 4: Analytical Testing for Wet Weather MS4 Discharges

Revision: Request "Biological Oxygen Demand, 5day" and "Chemical Oxygen Demand" be removed as constituents for analytical testing in Table 4.

Justification: The reference in the Fact Sheet supporting the inclusion of these constituents is to the initial Phase 1 application requirements. It should be noted that the initial constituent list is not required of future permits. Further, these constituents are costly to analyze and do not provide new information that is relevant to the management of the NPDES MS4 Program.

Revision: Request "Total Organic Carbon" and "Dissolved Organic Carbon" be removed as constituents for analytical testing in Table 4.

Justification: The reference within the Fact Sheet does not require these constituents and there is a significant cost in analyzing the constituents. It is not clear what additional information these constituents

[2] USEPA (2008). Amended Reregistration Eligibility Decision (RED) for Carbaryl. EPA-738-R-08-010. August.

[3] USEPA (2007). Reregistration Eligibility Decision (RED) for Carbaryl. EPA-738-R-07-018. September.

provide that would be useful in managing the MS4 program that is not already addressed through the collection of other constituents.

Attachment E: II.B.2

Revision: Request the following text revisions:

> "The Copermittees must collaborate to develop and implement a ~~monitoring~~program to identify sources of pollutants causing the priority water quality problems within each hydrologic subarea. The ~~monitoring~~ program must include focused monitoring ~~which moves upstream into each watershed~~ as necessary to identify source areas, or other methods to identify the societal sources of pollutants, as appropriate. This ~~monitoring~~ program must ~~be implemented within each hydrologic subarea and must begin~~ no later than the 2012-2013 monitoring year."

Justification: As drafted, the permit requires source identifications to start at the end point of the watershed and move upstream. The requested revisions are intended to provide flexibility to allocate resources appropriately based on field judgements. The second part of the revision is to acknowledge some pollutant contributions to the MS4 are in-fact, non-point source, and cannot be pinpointed through focused source ID Monitoring.

Attachment E: II.C.1.b.(2)

Revision: Request text additions:

> "Sampling of non-storm water discharges may be done utilizing grab samples. If a ponded MS4 discharge is observed at a monitoring station, the Copermittee(s) must record the observation and collect at least one (1) grab sample, however ponded water samples will not be used in determining action level exceedances. If flow is evident, a 1-hour composite sample may be taken. The Copermittee(s) must estimate the flow using techniques such as by measuring the width of water surface, approximate depth of water, and approximate flow velocity."

Justification: The first text addition is to avoid triggering action levels due to increased concentrations caused by evaporation of ponded water. Evaporation of ponded water will result in increased concentrations of any constituents contained in the water. NALs are based on Water Quality Objectives that are based on stable, flowing stream conditions. The second text addition is to allow flexibility in measuring stream flows. In some cases, flow gauges or flow meters may be available to estimate flow.

Attachment E: III.A.2.

Revision: Request text additions:

> Monitoring Annual Report: The Principal Copermittee must submit the Receiving Waters and MS4 Discharge Monitoring Annual Report to the San Diego Water Board on October 1 of each year, beginning on **October 1, 2013**. Receiving Waters and MS4 Discharge Monitoring Annual Reports must cover the monitoring activities and results from the previous fiscal year, and must meet the following requirements:

Justification: All of the Copermittees' activities are tracked and reported on a Fiscal Year basis. This facilitates clearer data and cost tracking, and results that can be more effectively integrated into the JRMP reports in a clear and understandable manner, since the reporting periods are aligned. This change is important, so as to allow for a simpler transition from the existing monitoring and data tracking methods, to those that will be developed for compliance with the permit.

Attachment E: III.A.2.e

Revision: Request the following text revisions:

> "~~Annual~~ The 4th year monitoring report must include identification and analysis of any long-term trends in the Copermittees' MS4 storm water discharges or receiving water quality. Appropriate statistical methods shall be used to evaluate the water quality data. ~~Trend analysis must use nonparametric approaches, such as the Mann-Kendall test, including exogenous variables in a multiple regression model, and/or using a seasonal nonparametric trend model, where applicable~~"

Justification: The first edit is to require the long term statistical analyses be performed on a time schedule consistent with submission of the ROWD. Requiring long-term statistical trend analyses on an annual basis is unnecessary and inappropriately increases analysis and reporting costs and complexity. The second edit recognizes a multitude of different statistical methods could be used and others may be more appropriate to the dataset than those identified in the draft MRP.

Attachment E: III.A.2.f

Revision: Request elimination of requirement for annual monitoring reports to include total pollutant loads (wet weather loads plus dry weather loads) due to MS4 Discharge for each of the hydrologic subareas.

Justification: Many assumptions go into the calculations of total loads, making their use in statistical analyses questionable at best. The Copermittees have continued to provide this data, but do not see that it has any value.

Note: Other redlines noted but not included in this paper are for clarification purposes and to make sure permit language is consistent with requested changes throughout Attachment E.

Attachment 5: Proposed Unpaved Road Requirements of the Draft 2010 Santa Margarita Region MS4 Permit

Executive Summary

The Draft Municipal Separate Storm Sewer System Permit (Draft Tentative Order No. R9-2010-0016; NPDES No. CAS0108740) for the Santa Margarita Region of Riverside County (Draft MS4 Permit) includes proposed findings and requirements for development and maintenance of unpaved roads that are redundant to existing regulatory requirements. The proposed requirements for maintenance of unpaved roads may lead to the unintended consequence of discouraging maintenance of the majority of the unpaved roads in the Santa Margarita Region, which may increase the potential for erosion and sediment discharge from such roads. Statements in the Fact Sheet and Findings, monitoring data, and Permittee observations and experience do not support identification of unpaved roads as a significant source of pollutants to receiving waters in the Santa Margarita Region, thereby warranting additional regulation of unpaved roads.

The Copermittees request that the proposed requirements for development and maintenance of unpaved roads be removed from the Draft MS4 Permit. The Copermittees believe that enhancement of existing programs by identifying Best Management Practices (BMPs) specific to maintenance of unpaved roads and providing public education to owners and contractors providing maintenance of privately maintained unpaved roads will be as effective as the program in the draft Permit at substantially less cost. If the San Diego Regional Board determines that unpaved roads within their jurisdiction require further regulation, the Permittees believe that the appropriate regulatory mechanism is a General Permit (Waste Discharge Requirements or NPDES Permit) since the Draft MS4 Permit addresses only a fraction of unpaved roads within the jurisdiction of the San Diego Regional Board.

Attachment 5: Proposed Unpaved Road Requirements of the Draft 2010 Santa Margarita Region MS4 Permit

1.0 Background

The stream system in the Santa Margarita Region is ephemeral, with only small isolated segments exhibiting natural perennial flow due to rising groundwater. Such a stream system does not support fish migration. Runoff from the Santa Margarita Region naturally exhibits high sediment loads due to precipitation patterns, limited vegetative cover, soil types and steep topography.

Most existing unpaved roads in the Santa Margarita Region are private roads on private property that have not been engineered and have evolved through use. Such unpaved roads consist of earthen materials that have been compacted by vehicular use and do not include improved drainage, engineered grading or surface improvement. However, proposed unpaved road projects are subject to the development requirements of the MS4 Permit and the Construction General Permit and would be engineered.

In contrast to paved roads, unpaved roads are predominantly lightly traveled and found in rural areas serving economically disadvantaged residents. Many of these roads remain unpaved for economic reasons. Moreover, some residents do not want paved roads as they desire to preserve the rural/rustic nature of their communities.

Maintenance of unpaved roads in the Santa Margarita Region is generally limited to smoothing washboard depressions that have been created by vehicle use and to improve drainage by properly sloping the surface. The smoothed road surface is compacted by the grading equipment and, subsequently, by regular traffic use. This routine maintenance activity is intended to maintain original lines and grade, and the original purpose of the unpaved road. Repair of landslides and washouts, and replacement of culverts is also performed as needed, in some instances on an emergency basis. Landslide and washout repairs may require the implementation and maintenance of temporary erosion and sediment control BMPs until the disturbed area is stabilized.

The Permittees voluntarily provide limited maintenance of Copermittee maintained, dedicated and accepted unpaved roads for public access. This voluntary maintenance is provided for public safety, including emergency vehicle access, and to maintain utility of the public easement. There is no requirement that the Permittees provide this maintenance.

Most unpaved roads in the Santa Margarita Region are not maintained by the Permittees, but instead are private roads located on private property. Permittee staff is only allowed to enter private property if a crime or illegal activity is observed. The County of Riverside has not accepted maintenance of unpaved roads since the late 1940s and now only accepts paved roads that have been designed and constructed to County standards. Murrieta and Temecula will only approve new subdivisions with paved roadways constructed to their standards. In some instances, the Permittees maintain unpaved roads under contract to Home Owners' Associations or through Community Service Areas. However, the Permittees are prohibited by law from using Gas Tax funds for maintenance of unpaved roads on private property.

Other entities that are not under the legal authority of the Permittees also own unpaved roads in the Santa Margarita Region. These entities include:

- Agricultural Operators
- Eastern Municipal Water District
- Federal Lands
- Metropolitan Water District of Southern California
- Nature Conservancy
- Railroads
- Rancho California Water District
- Southern California Edison
- State of California
- Tribal Lands

2.0 Findings Addressing Proposed Requirements for Unpaved Roads

Finding D.1.c of the Draft MS4 Permit states:

> This Order contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in storm water runoff to the MEP and achieve water quality standards. Some of the new or modified requirements, such as the revised Watershed Water Quality Workplan (Watershed Workplan) section, are designed to specifically address these high priority water quality problems. Other requirements, such as for unpaved roads, are a result of San Diego Water Board's identification of water quality problems through investigations and complaints during the previous permit period. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other San Diego Water Board compliance assessment activities. Additional changes in the monitoring program provide consistency with the Code of Federal Regulations, USEPA guidance, State Water Board guidance, and the Southern California Monitoring Coalition recommendations.

The discussion of Finding D.1.c states:

> The Copermittees are required to update and expand their runoff management programs on jurisdictional and watershed levels in order to improve their efforts to reduce the contribution of storm water pollutants in runoff to the MEP and meet water quality standards. Changes to Order No. R9-2004-001's requirements have been made to help ensure these two standards are achieved by the Copermittees.
>
> The Orders' jurisdictional requirements have changed based on findings by the San Diego Water Board during typical compliance assurance activities, audits, or receipt of complaints. Where the audits found common implementation problems, requirements have been altered to better ensure compliance. In addition, the San Diego Water Board conducted reviews of the jurisdictional annual reports submitted by the Copermittees. Updates to the requirements for the Copermittees' programs are also based in part on

information found in the Copermittees' ROWD requirements that were included in the San Diego and Orange County MS4 permits, and discussions with the Riverside County Copermittees.

To better focus on attainment of water quality standards, the Order's jurisdictional and watershed requirements have been improved. The conditions of the receiving waters now drive management actions, which in turn focus diminishing resources on the highest priority water quality problems within the receiving waters in the watershed. Improvements to jurisdictional and watershed requirements were also made to facilitate a mutually clear understanding of the requirements between the San Diego Water Board and Copermittees.

During the previous permit period, the San Diego Water Board identified, through investigations and complaints, sediment discharges from unpaved roads as a significant source of water quality problems in the Riverside County portion of the San Diego Region. Enforcement and inspection activities conducted by the San Diego Water Board during the previous permit term have found a lack of source control for many unpaved roads within the jurisdiction of the Copermittees. Unpaved roads are a source of sediment that can be discharged in runoff to receiving waters, especially during storm events. Erosion of unpaved roadways occurs when soil particles are loosened and carried away from the roadway base, ditch, or road bank by water, wind, traffic, or other transport means. Exposed soils, high runoff velocities and volumes, sandy or silty soil types, and poor compaction increase the potential for erosion. Road construction, culvert installation, and other maintenance activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff and thereby erosion and the release of sediment. Poorly designed roads can act as preferential drainage pathways that carry runoff and sediment into natural streams, impacting water quality. In addition, other public works activities along unpaved roads have the potential to significantly affect sediment discharge and transport within streams and other waterways, which can degrade the beneficial uses of those waterways.

USEPA also recognizes that discharges from unpaved roads are a threat to water quality. USEPA guidance emphasizes the threat of unpaved roads to water quality:

"Dirt and gravel roads are a major potential source of these pollutants [sediment] and pollutants that bind to sediment such as oils, nutrients, pesticides, herbicides, and other toxic substances]. Many roads have unstable surfaces and bases. Roads act like dams, concentrating flows that accelerate erosion of road materials and roadsides. Both unstable surfaces and accelerated erosion then lead to sediment and dust."

There are several guidance documents, developed by the USEPA, the US Forest Service, the University of California, and others, that include design and construction specifications and BMPs that are readily available for implementation by private and

> public entities. Implementing design and other source control BMPs for unpaved roads in the region is necessary to reduce and minimize the impacts of sediment discharged during storm events from unpaved roads to the MS4s and receiving waters.

Comment: The evidence cited in the Finding, water quality monitoring data, and Permittee observations and experience since establishment of the MS4 Permit in 1990 do not identify unpaved roads as a significant source of pollutants resulting in water quality impairments. The Copermittees support the continued application of development and construction requirements and maintenance of temporary erosion and sediment control BMPs as specified in existing permits.

The requirements for development and maintenance of unpaved roads were proposed by Regional Board staff for inclusion in the Draft MS4 Permit just prior to its release for public comment. Prior to that time, and dating from the original establishment of the MS4 Permit requirements in 1990, unpaved roads had not once been mentioned by Regional Board staff as a significant source of water quality impairment requiring additional regulatory.

The discussion of Finding D.1.c. states that the inclusion of unpaved road requirements was based on "investigations and complaints" reviewed by the San Diego Regional Board. However, Regional Board staff identified only one recent case regarding an unpaved road in the Santa Margarita Region as a problem. The Copermittee in question has investigated this case and it is being addressed as an enforcement action. Although the Copermittees have not had the opportunity to review the investigations and complaints cited by Regional Board staff, no feedback from these investigations was reported to the Copermittees at the MS4 Permit discussions prior to the proposal of the unpaved road requirements. This indicates to the Copermittees that unpaved roads do not in fact present a significant water quality concern.

The Copermittees have reviewed the documents cited by Regional Board staff in the discussion of Finding D.1.c. and the conditions in the Santa Margarita Region are vastly different from those in Pennsylvania and Northern California cited in those documents. These areas receive regular precipitation, have significant vegetative cover, and perennial streams, some of which may support migrating fish. Nothing in these documents suggests that unpaved roads are a significant source requiring special attention in the Santa Margarita Region. Further, no data collected during Copermittee monitoring nor their observations support a conclusion that unpaved roads are a significant source of pollutants warranting special regulatory attention.

The lack of evidentiary support for the unpaved roads provisions makes their inclusion in the Draft MS4 Permit arbitrary and capricious. The Copermittees therefore request deletion of Finding D.1.C.

3.0 Fact Sheet Addressing Proposed Requirements for Unpaved Roads

Page 146 of the Fact Sheet states:

> **Section F.1.i** (Unpaved Roads Development) specifically requires the Copermittees to implement or require implementation of BMPs for erosion and sediment control after construction of all new unpaved roads. As discussed for Finding D.1c, design and source control BMPs for unpaved roads are needed to minimize the discharge of sediment to the MS4s and receiving waters,

especially during storm events. There are several guidance documents available (see Discussion for Finding D.1.c) that include design and source control BMPs that can be readily implemented by the Copermittees for the development of new unpaved roads.

Page 155 of the Fact Sheet states:

> **Section F.3.a.(10)** (Unpaved Roads Maintenance) requires the Copermittees to implement or require implementation of BMPs for erosion and sediment control during and after maintenance activities on unpaved roads, particularly in or adjacent to stream channels or wetlands. As discussed for Finding D.1c, source control BMPs for unpaved roads are needed to minimize the discharge of sediment to the MS4s and receiving waters. There are several guidance documents available (see Discussion for Finding D.1.c) that include BMPs that can be readily implemented by the Copermittees for the development of new unpaved roads. This requirement is necessary to ensure the Copermittees minimize the discharge of sediment from their unpaved roads used for their maintenance activities.

Page 160 of the Fact Sheet states:

> **Section F.3.c.(5)** (Privately Owned Unpaved Roads Maintenance) includes requirements for privately owned unpaved roads. The Copermittees must require implementation of BMPs for erosion and sediment control during maintenance activities on privately owned unpaved roads, particularly roads that are in or adjacent to receiving waters. As discussed for Finding D.1.c, BMPs for unpaved roads are needed to minimize the discharge of sediment to the MS4s and receiving waters. There are several guidance documents available (see Discussion for Finding D.1.c) that include design and source control BMPs that can the Copermittees can readily require to be implemented.
>
> In addition, where the Copermittees identify illegal construction and maintenance grading activities on privately owned unpaved roads, the Copermittees must enforce their ordinances to prevent illicit discharges of sediment and other pollutants from privately owned unpaved roads to their MS4s and receiving waters.

Comment: For the reasons set forth above, there is no evidence that unpaved roads require special regulatory attention in the MS4 Permit. Moreover, proposed requirements specific to unpaved roads are redundant to existing requirements in both the existing Permit and the draft MS4 Permit, the state General Construction Permit, and the Copermittees' Stormwater ordinances. To the extent that unpaved roads are of concern to Regional Board staff, those concerns can be effectively addressed by minor adjustments to these existing compliance programs. In a time of tight regulatory budgets, adding these additional requirements, especially where there is no demonstrated need for them, is arbitrary and capricious. The Copermittees request deletion of requirements specific to unpaved roads (see discussion below) as well as these statements in the Fact Sheet.

Attachment 5: Proposed Unpaved Road Requirements of the Draft 2010 Santa Margarita Region MS4 Permit

4.0 Draft MS4 Permit Requirements for Unpaved Roads

4.1 Unpaved Road Development Requirements

Proposed requirements for the development of unpaved road projects appear on page 45 in section F.1.i of the Draft MS4 Permit. The proposed requirements state:

> **i. Unpaved Roads Development**
>
> The Copermittees must develop, where they do not already exist, and implement or require implementation of erosion and sediment control BMPs after construction of new unpaved roads. At a minimum, the BMPs must include:
>
> (1) Practices to minimize road related erosion and sediment transport;
>
> (2) Grading of unpaved roads to slope outward where consistent with road engineering safety standards;
>
> (3) Installation of water bars as appropriate;
>
> (4) Unpaved roads and culvert designs that do not impact creek functions and where applicable, that maintain migratory fish passage.

Virtually all unpaved road development activities would be greater than one acre and/or be part of a priority development project of one acre or more. Such development projects are required to prepare and implement project-specific Standard Urban Stormwater Mitigation Plans (SUSMPs) under Section F of both the existing MS4 Permit and the Draft MS4 Permit. The SUSMPs identify post-construction BMPs that will be implemented for all elements of the project, including the unpaved road elements of the project. Unpaved road projects are also required to comply with the state General Construction Permit, which requires preparation of a SWPPP that identifies construction-phase BMPs and post-construction BMPs. These development and construction phase requirements are applicable to unpaved roads and are imposed by the Copermittees during the development review process, during the issuance of grading permits and during construction inspections. Either the general requirements for development projects in the existing or Draft MS4 Permit and/or the General Construction Permit already require identification and implementation of post-construction BMPs, including erosion and sediment control BMPs, when developing new unpaved roads. Therefore, additional requirements for development of unpaved roads are redundant and the Copermittees request that these redundant requirements be removed from the Draft MS4 Permit.

4.2 Unpaved Road Maintenance Requirements

Proposed requirements for the maintenance of unpaved roads appear on page 56 in Section F.3.a(10) and on page 64 in Section F.3.c.(5) of the Draft MS4 Permit. The proposed requirements state:

> **F.3.a. (10) <u>Unpaved Roads Maintenance</u>**

(a) The Copermittees must develop, where they do not already exist, and implement or require implementation of BMPs for erosion and sediment control measures during such maintenance activities on unpaved roads, particularly in or adjacent to receiving waters.

(b) The Copermittees must develop and implement or require implementation of appropriate BMPs to minimize impacts on streams and wetlands during unpaved road maintenance activities.

(c) The Copermittees must regularly maintain their unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport;

(d) Re-grading of unpaved roads during maintenance must be sloped outward where consistent with road engineering safety standards;

(e) Through their regular maintenance of unpaved roads, the Copermittees must examine the feasibility of replacing existing culverts or design of new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology.

F.3.c. (5) Privately Owned Unpaved Roads Maintenance

(a) The Copermittees must require implementation of BMPs for erosion and sediment control during maintenance activities on privately owned unpaved roads, particularly in or adjacent to stream channels or wetlands.

(b) The Copermittees must enforce their ordinances against illegal construction and maintenance grading activities on privately owned unpaved roads, so as to prevent impacts to water quality.

The documents.[1,2,3] cited in Finding D.1.c discuss shaping of the surface of unpaved roads during smoothing, and maintenance of temporary sediment and erosion control BMPs associated with maintenance activities, such as repair of landslides and wash outs. The temporary erosion and sediment control BMPs identified include straw bales and silt fencing. The documents do not describe conditions in the Santa Margarita Region, but rather in Pennsylvania and Northern California.

Unpaved Roads Maintained by Copermittees

The conditions in the Santa Margarita Region are vastly different from the conditions found in Pennsylvania and Northern California. Nevertheless, the Copermittees conduct surface grading and maintain temporary erosion and sediment control BMPs as appropriate following completion of maintenance on unpaved roads. These BMPs associated with the routine maintenance of unpaved roads

[1] USEPA 2006 "Environmentally Sensitive Maintenance for Dirt and Gravel Roads." Gesford and Anderson,USEPA-PA-2005.

[2] US Forest Service, 1996. Forest Service Specifications for Construction of Roads & Bridges. EM-7720-100. Revised August 1996.

[3] University of California Division of Agriculture and Natural Resources, 2007. Rural Roads: A Construction and Maintenance Guide of California Landowners. Publication 8262.

will be documented and procedures formalized in the Riverside County Drainage Area Management Plan (DAMP).

Unpaved Roads Maintained by Others

As previously described, the vast majority of unpaved roads within the jurisdiction of the Copermittees are not maintained by the Copermittees, but are maintained by others, typically private property owners. As these are public easements over private property, however, the underlying property owner is under no legal obligation to provide maintenance. To provide reasonable access, maintenance of such unpaved roads is voluntarily provided by property owners and, in some cases, home owners' associations. State law prohibits the use of Gas Tax funds by the Copermittees for the maintenance of unpaved roads on private property. Requirements for implementation and maintenance of temporary erosion and sediment control BMPs in areas under the legal jurisdiction of the Copermittees are addressed by the general requirements of the Copermittees' stormwater ordinances and, where grading activities are significant, through the Copermittees' grading ordinances. As maintenance of unpaved roads on private property is voluntary, more aggressive regulation of such private roads may in fact discourage routine maintenance of unpaved roads, likely resulting in an increase in erosion and sediment discharge from such roads.

As an alternative, maintenance of unpaved roads can be effectively addressed by enhancing existing programs. There is no need to create a new compliance program requirement specific to unpaved roads, especially where such programs cannot in any event be implemented by the Copermittees on private property. The Copermittees believe that a better approach is to provide public education to property owners and grading contractors in areas served by unpaved roads, focusing on the proper methods of shaping unpaved road surfaces and the benefits of implementing and maintaining temporary erosion and sediment controls.

The Copermittees request that these proposed provisions be removed from the Draft MS4 Permit.

5.0 Alternative Regulation of Unpaved Roads

There is nothing unique about potential discharges from unpaved roads under the legal jurisdiction of the Copermittees such that they would require special regulation. As discussed above, there is significant mileage of unpaved roads in the Santa Margarita Region that are not under the legal jurisdiction of the Copermittees. If there is concern about the impact of unpaved roads on water quality (a concern that, for the reasons already stated, is not supported by the evidence), there is no reason to believe that unpaved roads not under the legal jurisdiction of the Copermittees do not present the same potential to affect receiving water quality.

If it is determined that development and maintenance of unpaved roads requires special additional regulation, then such regulation should apply equally and on the same schedule to all unpaved roads under the jurisdiction of the San Diego Regional Board, not just those under the legal authority of the Copermittees. The Copermittees request that, if staff continues to maintain that unpaved roads require additional regulation, those requirements be addressed through a general permit for unpaved roads, and not in the Draft MS4 Permit.

6.0 Conclusion

No evidence, whether statements in the Fact Sheet and Findings, monitoring data, or Copermittee observations and experience, supports identification of unpaved roads as a significant source of pollutants to receiving waters in the Santa Margarita Region warranting additional regulation. The proposed unpaved road requirements are redundant to requirements of existing permits, including the state General Construction Permit, as well as existing Copermittee ordinances and programs. To the extent that unpaved roads may be a source of pollutants to the MS4 and thence to receiving waters, the Copermittees believe that enhancement of existing programs by documenting BMPs specific to maintenance of unpaved roads and providing public education to owners and contractors who provide maintenance of privately maintained unpaved roads will be as effective in reducing such pollutants, at a much reduced cost.

If the Regional Board determines that unpaved roads within its jurisdiction require further regulation, the appropriate method for addressing those roads is through a General Permit (Waste Discharge Requirements or NPDES Permit) rather than the Draft MS4 Permit, since a General Permit would address all unpaved roads in the San Diego Region, not just the subset of unpaved roads under the legal jurisdiction of the Copermittees.

Attachment 6: Prohibition of Irrigation Runoff

Introduction

The Draft Municipal Separate Storm Sewer System Permit (Draft Tentative Order No. R9-2010-0016 (NPDES No. CAS0108740) for the Santa Margarita Region of Riverside County (Draft SMR MS4 Permit) categorically prohibits the discharge of landscape irrigation; irrigation water; lawn watering; (collectively 'irrigation runoff') and non-emergency fire fighting flows runoff to the MS4. The basis for this requirement comes from the current Orange County Stormwater Permit within the San Diego Region (NPDES No. CAS0108740), which prohibits such discharges.

Context of Requested Changes

Stream and Watershed Characteristics

Unlike the watersheds in South Orange County, the Santa Margarita Region is an ephemeral watershed that includes Murrieta and Temecula Creeks which are perennial interrupted streams, i.e., they include some reaches in which the flow is continuous and others where flow is ephemeral. However, the areas of perennial flow in the Santa Margarita Region are located in mountain area tributaries outside of the urbanized areas serviced by the MS4s. These perennial flows quickly disappear by seepage into the sands and gravels and resurface upstream of the confluence of Murrieta and Temecula Creeks. The creeks in the urbanized areas of the watershed, located primarily in the valley, are ephemeral and flows are only observed during and immediately following significant storm events[1].

Rising groundwater is currently observed in Murrieta Creek below its confluence with the Santa Gertrudis Channel, an observation consistent with the observations made by the State of California in 1956.[2] Rising groundwater is also observed in Temecula Creek approximately one quarter mile upstream of the Interstate 15 Bridge. In 1956, the State observed more extensive rising groundwater conditions occurring as far upstream as the Highway 79 Bridge. Based on the virtual absence of non-stormwater flows and the rising groundwater conditions observed in lower Murrieta and Temecula Creeks prior to development of the watershed, there is no evidence that the rising groundwater currently observed is due to Urban Runoff nor that Urban Runoff has affected the quality of rising groundwater.

Irrigation Runoff is Not a Source of Pollutants

Finding C.15 states:

> *Non-storm water discharges to the MS4 granted an influent exception [i.e., which are exempt from the effective prohibition requirement set forth in CWA section 402(p)(3)(B)(ii)] under 40 CFR 122.26 are included within this Order. Any exempted discharges identified by Copermittees as a source of pollutants are subsequently required to be addressed (emphasis added) as illicit discharges through prohibition and incorporation into existing IC/ID programs. Furthermore, the USEPA contemplates that permitting agencies such as the San Diego Water Board may also identify exempted discharges as a source of pollutants required to be addressed as illicit discharges (See VOl.*

[1] Riverside Flood Control and Water Conservation District, "Hydrologic Data for 1975-76 Season," March 1982, p. 49.

[2] State of California Department of Public Works Division of Water Resources, Bulletin No. 57, "Santa Margarita River Investigation," Volume I, June 1956, p. 48.

> *55 Fed. Reg. 48037). The San Diego Water Board and the Copermittees have identified landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the U.S. Of course, rising groundwater is exempt from regulation under 40 CFR 122.26 as a non-prohibited non-storm water discharge.*

The last sentence of this Finding does not accurately reflect the facts. Unlike Orange County, and despite Board staff's contentions in the fact sheet the Copermittees have **not** identified landscape irrigation, irrigation water or lawn water as a source of pollutants or conveyance of pollutants to waters of the U.S. Rather, this statement is based on the efforts in Orange County where that County found that the significant perennial flows throughout the urbanized areas were caused by irrigation runoff. Not only has irrigation runoff not been found to be a source of pollutants to waters of the U.S. in the Santa Margarita Region as a category, no individual discharges of irrigation runoff in the region have been found to be a source of pollutants. As described in the Stream Flow Characteristics section above, during dry weather there is no perennial flow in the waters of the U.S. in the urbanized area until rising groundwater occurs just before the confluence of Murrieta and Temecula Creeks. This is unlike streams in South Orange County, that it was found that the significant perennial flows throughout the urbanized areas were caused by irrigation runoff. In the Santa Margarita Region, any weather runoff that does reach receiving waters quickly seeps into the alluvial soils.

Second, the Discussion of Finding C.15 in the Fact Sheet fails to demonstrate the need for a prohibition of this irrigation runoff as a non-stormwater runoff *category*. The discussion references conditions outside of and unlike those found in the Santa Margarita Region and misconstrues statements in public education materials that encourage runoff management as justification for the proposed prohibitions. Finally, no justification is provided in this discussion or elsewhere to support the prohibition of the non-emergency fire fighting flows runoff as a category.

Prohibition Not Economically Justifiable

A prohibition of irrigation runoff will result in significant costs to the public and the Copermittees as the prohibition is ***TO THE MS4***, which is defined to include streets, curbs and gutters. As the MS4 Permit has eliminated the MEP protections for dry weather non-stormwater discharges (see also legal comments in Attachment 7 to the comment letter), this makes the Copermittees responsible for every incidence of over-irrigation, regardless of whether such discharges ever affect receiving waters. As such, the cost to eliminate these discharges is not commensurate with any measurable environmental benefit. The Copermittees cannot impose fees to recover the costs of enforcing this new requirement and, as described in the Economics White Paper (Attachment 2 to the comment letter), the Copermittees have even fewer resources to carry out the requirements of the current MS4 Permit than in past years, much less carry out the additional requirements set forth in the draft Permit, including the development and implementation of a new program to prohibit irrigation runoff.

As this prohibition would also apply to Copermittees' facilities, retrofit of existing facilities would likely be immediately required to ensure compliance. The City of Murrieta, for example, has estimated that retrofit of their sprinklers to a drip system to avoid irrigation runoff from their facilities alone would cost $250,000.

Attachment 6: Prohibition of Irrigation Runoff

Irrigation Runoff Addressed by Existing Requirements and Programs

Management of irrigation runoff is currently addressed by existing requirements and programs and the additional requirements proposed in the draft Permit are unnecessary. The use of reclaimed water is regulated under Waste Discharge Requirements (WDRs) issued by the Regional Board.

The draft Permit also provides other mechanisms to address irrigation runoff. **First**, if a discharge of irrigation runoff was determined to be a source of stormwater pollutants, the Copermittees already have the legal authority to take appropriate enforcement action to control the discharge as an illegal discharge, under their existing storm water ordinances. **Second**, the non-stormwater action level monitoring required by this draft Permit will identify any potentially problematic non-stormwater discharges and identify the source of those discharges. Should the source be determined to be irrigation runoff, it will require the Copermittees to address that discharge. Both mechanisms are better suited (financially and legally) to deal with irrigation runoff than a complete prohibition provision in the absence of local data showing it as a problem.

Finally, local water purveyors are better equipped and able to address irrigation runoff. As an example, Rancho California Water District and Eastern Municipal Water District actively promote water conservation programs, which are supported by the Metropolitan Water District of Southern California. The County and the cities have adopted water conservation ordinances as required by the Water Conservation in Landscaping Act (AB 1881, Laird). Given these facts, there is even less justification for an extensive and expensive program to address an irrigation runoff issue that is not, in fact, a source of pollutants causing or contributing to a violation of water quality standards in the Santa Margarita Region.

Preferred Requested Permit Revisions

Specifically, the Permittees request that the language in the Permit be amended as follows prior to adoption of the Permit:

Delete Finding C.15

As the last sentence of this Finding is not supported by fact, the Permittees request that it be deleted as noted in the following text and the entirety of the Discussion of Finding C.15 in the Fact Sheet be deleted.

> *Non-storm water discharges to the MS4 granted an influent exception [i.e., which are exempt from the effective prohibition requirement set forth in CWA section 402(p)(3)(B)(ii)] under 40 CFR 122.26 are included within this Order. Any exempted discharges identified by Copermittees as a source of pollutants are subsequently required to be addressed (emphasis added) as illicit discharges through prohibition and incorporation into existing IC/ID programs. Furthermore, the USEPA contemplates that permitting agencies such as the San Diego Water Board may also identify exempted discharges as a source of pollutants required to be addressed as illicit discharges (See VOl. 55 Fed. Reg. 48037). ~~The San Diego Water Board and the Copermittees have identified landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the U.S.~~*

Attachment 6: Prohibition of Irrigation Runoff

Restore Conditional Exemption

The Permittees request that the landscape irrigation; irrigation water; lawn watering; and non-emergency fire fighting flows runoff categories be restored to the list of non-prohibited, non-stormwater discharges identified in B.2 of the draft SMR MS4 Permit as noted below. In the event that an individual irrigation runoff discharge is determined to be a source of pollutants as identified by the non-stormwater dry weather action level (NAL) process, appropriate action can be taken by the Permittees to control that source.

B.2. Non-Stormwater Discharges

> This item includes a listing of discharges that are not prohibited unless a discharge is determined to be a source of pollutants to waters of the U.S. Landscape irrigation, irrigation water, lawn watering and non-emergency fire fighting flows were deleted from this list as noted:

a. Diverted stream flows;
b. Rising groundwaters;
c. Uncontaminated groundwater infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
d. Uncontaminated pumped groundwater[3];
e. Foundation drains[3];
f. Springs;
g. Water from crawl space pumps[3];
h. Footing drains[3];
i. Air conditioning condensation;
j. Flows from riparian habitats and wetlands;
k. Water line flushing[4,5];
l. Landscape irrigation;
m. Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
n. Irrigation water;
o. Lawn watering;
p. Individual residential car washing;
q. Non-emergency fire fighting flows; and
r. Dechlorinated swimming pool discharges

Additional Clarifications

It is not practicable for the Copermittees to prevent or eliminate irrigation runoff. The Permittees request that the following requirements be revised as noted to provide achievable compliance requirements:
F.1.c.(1) Approval Process Criteria and Requirements for All Development Projects states:

[3] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4 system.
[4] This exemption does not include fire suppression sprinkler system maintenance and testing discharges. Those discharges may be regulated under Section B.3.
[5] Requires enrollment under Order R9-2002-0020.

Performance Criteria: Discharges from each approved development project must be subject to the following management measures:

(1) Source control BMPs that reduce stormwater pollutants of concern in runoff;~~prevent~~ reduce the potential for illicit discharges into the MS4; ~~prevent~~ reduce the potential for irrigation runoff; storm drain system stenciling or signage; properly design outdoor material storage areas; properly design outdoor work areas; and properly design trash storage areas.

F.1.d.(5) Source Control BMP Requirements states:

Each Copermittee must require each Priority Development Project to implement applicable source control BMPs. The source control BMPs to be required must:

(a) Prevent illicit discharges into the MS4;
(b) Minimize storm water pollutants of concern in runoff;
(c) ~~Eliminate~~ Reduce the potential for irrigation runoff;
(d) Include storm drain system stenciling or signage;
(e) Include properly designed outdoor material storage areas;
(f) Include properly designed outdoor work areas;
(g) Include properly designed trash storage areas;
(h) Include water quality protection requirements applicable to individual priority project categories.

Alternative Requested Permit Revisions

Regulate irrigation runoff discharges from the MS4, rather than as prohibited discharge to the MS4

If the Regional Board nevertheless insists on prohibiting irrigation runoff, the Copermittees request that the draft MS4 Permit be revised to allow for irrigation runoff to be managed as a Jurisdiction Runoff Management Plan (JRMP) program, rather than as a prohibited discharge to the MS4. This alternative request is consistent with how the Permit currently deals with non-emergency fire fighting discharges, which was also removed from the list of non-prohibited non-stormwater discharges. The Executive Officer stated that he would be open to consideration of a program for irrigation runoff that would address discharges from the MS4. This alternative approach allows the Copermittees to develop a program that focuses on irrigation runoff problem areas, as opposed to holding the Copermittees responsible for eliminating any instant case of over-irrigation independent of threat to receiving water quality.

As the alternative to restoring the conditional exemption, the Copermittees request the Board to ADD Provision B.4 as follows:

B.4. As part of the JRMP, the Copermittees must develop and implement a program to address pollutants from landscape irrigation, irrigation water and lawn watering identified as significant sources of pollutants to waters of the United States.

LEGAL COMMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT ON TENTATIVE ORDER NO. R9-2010-0016, WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) DRAINING THE COUNTY OF RIVERSIDE, THE INCORPORATED CITIES OF RIVERSIDE COUNTY, AND THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT WITHIN THE SAN DIEGO REGION

The following comments are made by the Riverside County Flood Control and Water Conservation District (District) with respect to legal issues raised by the above-referenced Tentative Order (Order). These comments are being made on behalf of the District and, with respect to issues common to the other Copermittees, also on behalf of the County of Riverside and the Cities of Menifee (to the extent that this City will remain as a Co-Permittee under the Order), Murrieta, Temecula and Wildomar. We also understand that the County and the individual Cities will be filing comments on the Order under separate cover. The comments contained in this document are intended to complement, but not supersede, the individual comments of the County and the City. Also, the District will be filing separate comments concerning issues specific to it.

The District reserves the right to make additional legal comments on the Order prior to the close of the public hearing to adopt the order. In addition, legal comments may also be included in the Technical Comments separately filed herewith by the District.

The redlined version of the Order submitted with the District's comment letter also addresses the following and additional comments, along with requested changes in the text of the Order.

General Comments:

1. ***Dual Requirement to Adopt Programs and Guarantee Results***

Throughout Part F. of the Tentative Order relating to the Jurisdictional Runoff Management Program, the language requires not only that the Copermittees adopt programs intended to achieve control of pollutants but also requires such programs to achieve certain ends. See, for example, Part F.1., where each Copermittee must implement a development planning program which meets the requirements of Section F of the Tentative Order *and* which requires such a program to (1) reduce development project discharges from the MS4 to the MEP, (2) prevent such discharges "from causing or contributing to a violation of water quality standards", (3) prevents illicit discharges to the MS4, and (4) manages increases in runoff discharge rates. A similar requirement is set forth in other provisions, including Part F.3, relating to existing development, Part F.3.b., relating to commercial/industrial programs, Part F.3.c., relating to residential programs and Part F.6, relating to the education component where, in each case, the Copermittees are required to develop programs and ensure their performance.

This dual requirement, to develop a program and then to ensure that it achieves the intended ends, is unlawful, as it goes beyond the requirements of the MS4 regulations and requires the Copermittees to guarantee the results of activities that will often be in the control of third parties.

The MS4 regulations require that the MS4 permittees develop the required programs. See, for example, 40 CFR § 122.26(d)(2)(iv(A)((2), which requires the Copermittees to, among other things, develop and implement a management program including a "description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment". The Copermittees certainly could be liable under the permit if they failed to adequately "develop, implement and enforce controls". However, the MS4 regulations do not require that the Copermittees guarantee, under threat of being found in violation of the permit, that such controls achieve the desired ends of the management programs. It should be also noted that in many other parts of the Order, the Copermittees are directed to develop programs "designed" to achieve water quality goals.

Further, the iterative BMP approach required by the State Water Resources Control Board ("State Board") in precedential State Board Order WQ 99-05 and subsequent rulings would be made meaningless if the Copermittees were strictly liable for ensuring in their programs that discharges did not cause or contribute to a violation of a water quality standard. It is appropriate for the Board to set forth in these sections the "elements needed in the Copermittees' program to fulfill the goals of [the] directive", as set forth in staff's Response to Comment 297 on the Orange County MS4 permit, Order No. R9-2009-0002. However, the Board has no authority to require the Copermittees to guarantee that such goals will be fulfilled, as the current language appears to require.

In addition to the portions of the Order cited, the Copermittees also request changes to similar provisions found at Sections F.1.d, F.1.d.5, F.2, F.3.a, F.4, and G. The attached redline identifies those and any additional parts.

2. *Requirement to Follow State Law on Requirements Not Required by Federal Law*

A number of requirements in the Tentative Order exceed the requirements of federal law. The Board may have discretion to impose such requirements under state law (*Defenders of Wildlife v. Browner,* 191 F.3d 1159 (9th Cir. 1999), however, the California Supreme Court has determined that to the extent such state law requirements are included in an NPDES permit, the Board must consider the factors set forth in Water Code § 13263(a) and § 13241, including the water quality that could reasonably be achieved by the requirements and economic considerations. *City of Burbank v. State Water Resources Control Board* (2005) 35 Cal. 4th 613. See also Water Code § 13000, setting forth that the activities and factors which may affect the quality of the waters of the state "shall be regulated to attain the highest water quality which is reasonable, considering all demands being made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible".

The Fact Sheet and findings for the Tentative Order do not establish that staff has considered such factors or, to the limited extent the factors were considered, staff used out-of-date and incomplete information. In particular, the economic analysis contained in Section VI of the Fact Sheet uses out-of-date information on the economic viability of the cities in the Santa Margarita Region, ignoring the impact of the national recession, which has hit the Region with particular force and which has caused a major reduction in property tax and sale tax revenues available to

fund water quality activities under the Order. For a more complete economic analysis, please see Attachment 2 to the comment letter.

Findings in Tentative Order:

Finding A.4: This finding states that responses to comments on the Order would be "incorporated by reference" into the findings supporting the Order.

Comment: Incorporating responses to comments as to which interested parties have no chance to comment prior to the hearing on the Order raises a due process concern.

Finding C.14: This finding states, in relevant part, that "[n]on-storm water (dry weather) discharge from the MS4 is not considered a storm water (wet weather) discharge and therefore is not subject to regulation under the Maximum Extent Practicable (MEP) standard . . . .". The finding further asserts that such discharges are to be "effectively prohibited" from discharge into the MS4.

Comment: The rationale for this finding, as set forth in the Fact Sheet, relies on a State Board precedential decision, Order No. WQ 2009-0008. This order has been vacated by order of the Los Angeles County Superior Court in *County of Los Angeles v. State Water Resources Control Board,* Case No. BS 122724 (July 16, 2010). Thus, the order has no further effect and cannot be cited or relied upon by the Board in support of this finding or any other finding or directive in the Order.

Moreover, the finding incorrectly states that discharges of non-stormwater from the MS4 are not subject to the MEP standard. This parsing of "stormwater" and "non- stormwater" is not found in the Clean Water Act, which states only that the MS4 permit "shall require controls to reduce the discharge of *pollutants* to the maximum extent practicable . . . .". 33 U.S.C. 1342(p)(3)(B)(iii) (emphasis supplied). The preamble to the MS4 regulations promulgated by U.S. EPA moreover also acknowledges that "MEP control measures" would be implemented to address not only pollutants in "stormwater" but also from "non-stormwater discharges."

> As the preamble states:
>
> [Copermittees are required] to develop management programs for four types of pollutant sources which discharge to large and medium municipal storm sewer systems. Discharges from [such systems] are usually expected to be composed primarily of: (1) Runoff from commercial and residential areas; (2) storm water runoff from industrial areas; (3) runoff from construction sites; and (4) *non-storm water discharges*. Part 2 of the permit application has been designed to allow [permittees] the opportunity to propose *MEP control measures for each of these components of the discharge".* 55 Fed. Reg. at 48052 (emphasis supplied).

This language sets forth EPA's understanding of the plain language of the Act: "pollutants" must be controlled to the MEP from the MS4 "discharge", not merely stormwater. While State Board Order No. WQ 2009-0008 improperly attempted to ignore this distinction and liken non-stormwater discharges to prohibited "illicit discharges", that order has been vacated and cannot be cited by the Board.

Moreover, the interpretation that the Clean Water Act requires controls of dry weather discharges from the MS4 in the same manner as if such discharges were from an industrial wastewater source ignores the factual complexity of the MS4 discharge. For example, some of that discharge will be composed of exempt discharges, such as car washing runoff, swimming pool drainage, rising groundwater, foundation drains and other such sources. As to these types of discharges, U.S. EPA stated that "it is unlikely Congress intended to require municipalities to effectively prohibit . . . *seemingly innocent flows that are characteristic of human existence in urban environments and which discharge to municipal separate storm sewers".* 55 Fed. Reg. at 48037 (emphasis added). Other parts of that discharge will be comprised of industrial discharges separately permitted by the Board, such as well development discharges. These discharges cannot be distinguished from possible illicit discharges, yet they must still be treated to the MEP. There is no requirement in the Clean Water Act, or in the implementing regulations, to ensure that these mixed dry weather discharges must be "effectively prohibited" in the same way that an industrial plant would be required to control its discharges.

Finding C.15: This finding states, in relevant part, that the Board and the Copermittees have identified "landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the U.S." The finding further asserts that such non-exempt discharges are required to be "addressed" as "illicit discharges" and effectively prohibited from entry into the MS4.

Comment: The rationale for this prohibition lacks both a factual and legal basis. The factual issues are discussed in the District's technical comments on this issue. With regard to legal issues, the justification for removing the preexisting exemption for these discharges (referred to hereafter as "irrigation water") is completely lacking. First, given that the justification is based on State Board Order WQ 2009-0008, which likens dry weather discharges to "illicit discharges" required to be "effectively prohibited" from entry into the MS4, the vacation of this order by the Los Angeles County Superior court eliminates this Order as a justification for the prohibition.

Second, EPA, in the preamble to the federal MS4 regulations, required that a *permittee* must make a finding that the "irrigation water" discharges must be a "source of pollutants to waters of the United States . . . .". 55 Fed. Reg. 48037. Moreover, such discharges must represent a "significant" source of pollutants to waters of the United States "under certain conditions". U.S. EPA *Guidance Manual for the Preparation of Part 2 of the NPDES Permit Application for Discharges from Municipal Separate Storm Sewer Systems,* November 1992 ("EPA Part 2 Guidance Manual"), at p. 6-33. These conditions require a focus not on an entire category of discharges, but rather a discharger-by-discharger examination.

In the MS4 regulatory preamble, EPA stated that "[i]n general, municipalities will not be held responsible for prohibiting some specific components of discharges or flows listed below through their [MS4], even though such components may be considered non-storm water discharges, unless such discharges *are specifically identified on a case-by-case basis as needing to be addressed".* 55 Fed. Reg. 47995 (emphasis supplied). In the Guidance Manual, EPA states:

> If an applicant knows . . . that landscape irrigation water from a ***particular site*** flows through and picks up pesticides **or *excess*** nutrients from fertilizer applications, there may

> be a reasonable potential for a storm water discharge to result in a water quality impact. In such an event, the applicant should contact the NPDES permitting authority to request that the authority order ***the discharger*** . . . to obtain a separate NPDES permit (or in this case, the discharge could be controlled through the storm water management program of the MS4).
>
> EPA Part 2 Guidance Manual, p. 6-33 (emphasis added).

Third, the finding asserts that the Board has the authority to "identify exempted discharges as a source of pollutants" and that it has identified the irrigation discharges "as a source of pollutants and conveyance of pollutants to waters of the U.S." Read in the context of the previously cited language, however, the Board has no power greater than a municipality and must identify specific discharges, and not entire categories of discharges. See 55 Fed. Reg. 48037. And, as noted in the white paper on irrigation runoff, the Copermittees have not, in fact, identified irrigation discharges as a source of pollutants or a "conveyance of pollutants" to waters of the United States.

Finding D.1.b.: This finding states that "MS4 discharges, however, continue to cause *or contribute to* violations of water quality standards as evidenced by the Copermittees' monitoring results". (Emphasis added)

Comment: With respect to discharges that "contribute to" violations of water quality standards, it should be noted that for concentration-based water quality standards, an MS4 discharge at concentrations *below* the water quality standard cannot, as a matter of simple scientific fact, *contribute to* a violation of such a water quality standard. If the discharge is below the standard in question, that discharge will never exceed the water quality standard, no matter the volume of the discharge.

Finding D.2.g: This finding, which concerns the effects of urbanization on the characteristics of stormwater flow, states in part that "[h]ydromodification measures for discharges to hardened channels are needed for the future restoration of the hardened channels to their natural state . . . ."

Comment: Hardened flood control channels are in place in the Santa Margarita Region due to the need to protect the lives and property of Riverside County residents from floodwaters. Such channels, and other flood control structures, have been established by the District in accordance with its statutory obligations set down by the Legislature in California Water Code App. § 48-9. In particular, we draw the Board's attention to that section of the Water Code setting forth the power of the District to "control the flood and storm waters of said district" and to save and conserve in any manner all or any of such waters and protect from damage from such flood or storm waters the watercourses, watersheds, public highways, life and property in said district." Water Code App. § 48-9(8).

The Board has no statutory jurisdiction under the MS4 program to alter any flood control structures or channels of the District or to some jurisdiction over the construction or location of such structures or channels. Any such alteration or construction must be done with the cooperation and agreement of the District and in accord with the District's statutory mandate to protect the citizens of Riverside County. Please see changes in redline.

Finding D.3.c: This finding states in part that "urban streams", whether natural, anthropogenic or partially modified, are considered part of the "MS4" if they are used as a conveyance for runoff.

Comment: The definition of "MS4" does *not* include any natural watercourse. This is evident both from the definition of "MS4" in the federal Clean Water Act regulations and from EPA's comments in the preamble to those regulations. First, the definition of "MS4", in relevant part, states that it consists of "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains" "owned or operated by" a municipality "having jurisdiction over disposal of . . . storm water" that is "designed or used for collecting or conveying storm water". 40 CFR § 122.26(b)(8). Nothing in that definition even suggests that natural watercourses are part of the MS4, only improved watercourses.

Second, U.S. EPA, in the preamble to the original MS4 regulations, stated unequivocally that "[t]he Agency also wants to clarify that streams, wetlands and other water bodies that are waters of the United States are not storm sewers for the purpose of this rule". 53 Fed Reg. 49442 (December 7, 1988).[1]

Moreover, none of the Copermittees "own" or "operate" a natural stream. Such streams are waters of the State and are "owned" by the people of California.

The authority cited in the Fact Sheet for this finding, a response filed with the State Board in opposition to a petition challenging an MS4 permit issued by the Board to San Diego County, contradicts the federal definition and, under the Supremacy Clause, cannot be employed. Please see changes in redline.

Finding E.1: This finding states that the RWL language in the Tentative Order "requires compliance with water quality standards, which for stormwater discharges compliance is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time".

Comment: The District has two comments regarding this finding, one relating to the language of the finding and one relating to the Fact Sheet discussion of the finding. First, the language of State Board Order WQ 99-05, which establishes the RWL language required to be placed in MS4 permits statewide, is not limited to "stormwater" discharges, but rather to all discharges into receiving waters. See State Board Order WQ 99-05. This is consistent also with the requirement that "discharges" from the MS4, not merely stormwater discharges, must be controlled to the MEP and are not required to meet numeric effluent limitations. 33 U.S.C. § 1342(p)(3)(B)(iii). Second, while the language of the finding correctly states that compliance with water quality standards "is to be achieved through an iterative approach", language in the Fact Sheet improperly contradicts this finding by asserting that compliance with the iterative BMP process

[1] EPA saw no need to further clarify this point in the final rulemaking for the MS4 regulations. The absence of any discussion of this point in the final rulemaking does not, contrary to comments made by Board staff in responses to comments on the South Orange County MS4 Permit, Order No. R9-2009-0002, indicate that EPA abandoned this reading of the Act.

"does not shield the discharger from enforcement actions for continued non-compliance with water quality standards". Fact Sheet, page 91.

Such an interpretation contradicts the plain language of Order WQ 99-05 and appears to represent an "end-run" around the entire iterative process and the concept of MEP, which is a flexible concept, intended to allow the development of site-specific permit conditions based on the judgment of the permit writer. See, e.g., 55 Fed. Reg. 48038. The interpretation is, therefore, not consonant with the requirements of the State Board precedential order and the MS4 regulations and should be deleted from the Fact Sheet.

Finding E.6: This finding purports to determine that the Tentative Order "does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section(6) of the California Constitution".

Comment: This finding has no place in the Tentative Order. The exclusive jurisdiction over a determination as to whether a mandate constitutes an unfunded state mandate lies with the Commission on State Mandates. The Commission has exclusive authority to determine, in the first instance, whether a requirement constitutes an unfunded state mandate. Government Code §§ 17751 and 17552; *Lucia Mar Unified School District v. Honig* (1988) 44 Cal.3d 830, 837; *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1546, 1596-97. The findings of an agency that has no jurisdiction to make those findings are entitled to no weight.

Second, the finding is erroneous on several grounds. It is erroneous in its assertion that the Tentative Order "implements federally mandated requirements under CWA §402". While true, the Order also contains separate state-mandated requirements. As the California Supreme Court has held, NPDES permits (like the Tentative Order) can contain both federal and state requirements. See *City of Burbank, supra,* 35 Cal. 4th at 618, 628. Where those non-federal requirements constitute a new program or higher level of service ordered by the state or exceed federal requirements, those requirements can qualify as a state mandate requiring a subvention of funds. See *Long Beach Unified School District v State of California* (1990) 225 Cal.App.3d 155, 172-73. Even if the requirement derives from federal law, the requirement can still constitute an unfunded state mandate if the state agency has a choice as to whether to impose the requirement on the permittees, e.g., *Hayes,* 11 Cal.App.4th at 1593-94.

Recently, the Commission on State Mandates held that both the Los Angeles County MS4 Permit and the San Diego County MS4 Permit contained requirements that constituted an unfunded state mandate, not required by federal law. *In re Test Claim on Los Angeles Regional Quality Control Board Order No. 01-182,* July 31, 2009; *In re Test Claim on San Diego Regional Water Quality Control Board Order No. R9-2007-0001*, March 26, 2010.

The finding further asserts that the obligations to be imposed on the Copermittees are "similar to, and in many respects less stringent than" obligations on non-governmental discharges. A similar argument was considered and rejected by the Commission in the Los Angeles and San Diego MS4 Permit Test Claims. The District disagrees with this assertion, as there are numerous requirements in the Tentative Order that are uniquely applicable to governmental entities. This is, however, a question that would be addressed by the Commission on State Mandates were a test claim to be filed, the only procedure for the determination of this issue.

The finding further asserts that Copermittees "have the authority to levy service charges, fees, or assessments to pay for compliance with this Order". This finding is both erroneous on the facts and without any basis in the record. The question of how a state mandate is to be funded is beyond the scope of the Board's expertise and, again, is exclusively within the jurisdiction of the Commission on State Mandates. The finding also asserts that the "Copermittees requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA §301, subdivision (a)". A similar argument was made and rejected in the Los Angeles and San Diego MS4 Permit Test Claims. The finding further asserts that prohibitions against conditions of pollution or nuisance predate the enactment of Article XIIIB Section 6 of the California Constitution. The requirements of the Tentative Order far exceed such requirements. And, in any event, whether such requirements predate Article XIIIB Section 6 is an issue for the Commission on State Mandates.

The finding is not supported by evidence in the record and is in fact contradicted by controlling legal precedent. Even were it to be included in the Tentative Order, it is entitled to no weight since the Board lacks jurisdiction to make such a finding. For these reasons, the finding and any associated discussion in the Fact Sheet should be deleted. Please see changes in redline.

Directives in Tentative Order:

Section A.1: This directive mandates, among other things, that discharges "into" MS4s that would cause or threaten to cause a condition of "pollution, contamination, or nuisance" in receiving waters of the state are prohibited.

Comment: While the Board in this Order has jurisdiction to prohibit discharges "from" the MS4, it cannot regulate conditions within the MS4, since these are not in fact "receiving waters of the state". In any event, the language is superfluous, since regulation of a discharge from the MS4, which is subject matter of the Tentative Order, accomplishes the same end. Please see the accompanying redline.

Section A.3: This directive both recites the prohibition against discharges that cause or contribute to the violation of water quality standards and introduces the iterative process required by the State Board for MS4 permittees.

Comment: To clarify that the iterative process specifically applies to the Copermittees' compliance requirements in Section A.3, language has been added in the redline.

Section A.3.b: This directive relates to the requirement that the Copermittees repeat the iterative process to comply with receiving water limitations for continuing or recurring exceedances of the limitations.

Comment: Clarifying language changes are requested in the redline.

Section A.3.c: This directive indicates that nothing prevents the Board from enforcing any provision of the Order while the Copermittees are preparing and implementing the receiving water limitation report.

Comment: The drafting and enforcement of ordinances by a municipality is a municipal function that cannot be directed by the Regional Board. Article XI, section 7 of the Constitution guarantees municipalities the right to "make and enforce within [their] limits all local police, sanitary and other ordinances and regulations not in conflict with general laws". Thus, specific requirements as to the content of ordinances cannot be directed by the Board. The redline requests deletion of this requirement.

Section F.3.c.(4): This directive requires that each Copermittee "must ensure that effective measures exist and are implement or required to be implemented to ensure that runoff within and from common interest developments, including areas managed by associations and mobile home parks, and meets the objectives of this section and Order".

Comment: The Fact Sheet inappropriately states that the Tentative Order "interprets common interest areas as property subject to the codes and ordinance and enforcement mechanisms of the city or county in which it resides and, therefore, holds the local government responsible for the discharge of wastes from storm water conveyance systems located within these areas".

The Tentative Order regulates discharges from the MS4. Drainage systems and the runoff handled *within* a private development or common interest area generally are not part of the Copermittees' MS4, as the Copermittees (unless they actually maintain their MS4 within such areas) have no right to maintain or regulate such internal systems, beyond the enforcement of local ordinances regulating discharges *into* the Copermittees' MS4 or through the requirement to install and maintain BMPs. Discharges from such systems are thus no different than discharges from any other private property within the Copermittees' jurisdiction. The first full paragraph in this section should be deleted because it is merely prefatory language to the specific requirements set forth in the remainder of the section.

Section F.3.c.(5): This directive requires the Copermittees to enforce their ordinances with respect to grading activities on privately owned unpaved roads "so as to prevent impacts to water quality".

Comment: In addition to the general objection to the requirement to regulate unpaved roads, found in a separate white paper and in the general comment letter, this specific directive violates the constitutional requirement that the drafting and enforcement of ordinances by a municipality is a municipal function that cannot be directed by the Regional Board. Article XI, section 7 of the Constitution guarantees municipalities the right to "make and enforce within [their] limits all local police, sanitary and other ordinances and regulations not in conflict with general laws". Thus, specific requirements as to the content of ordinances cannot be directed by the Board. Moreover, the scope of the Order is to address discharges from the MS4, not discharges from non-point or non-MS4 sources that may affect "water quality". The redline requests deletion of this requirement.

Section F.6: This directive includes a description of the purposes of the education program with respect to stormwater and non-stormwater discharges.

Comment: The redline includes revisions that correctly state the requirements of the Clean Water Act.

Section H.1: This directive requires that each "Copermittees must exercise its full authority to secure the resources necessary to meet all requirements of this Order".

Comment: There is no statutory or regulatory authority for this requirement. The MS4 regulations require *only* that the Copermittees submit a "fiscal analysis" of the resources required to accomplish permit program activities, including a description of the sources of funds. 40 CFR § 122.26(d)(2)(vi). Moreover, this requirement is inherently vague and ambiguous and is, therefore, especially troublesome given the economic conditions now faced by the County and the Cities within the Santa Margarita region. This directive should be deleted, or at minimum, revised as shown in the redlines.

Standard Provisions, Attachment B:

In the Standard Provisions, it is stated that the Order "may be modified, revoked and reissued, or terminated for cause", citing 40 CFR § 122.41(f). However, the Standard Provisions do not cite 40 CFR § 122.62 or provide that any such modification, revocation or reissuance may only be carried out upon prior notice and hearing. See Water Code § 13263 (regional board, "after any necessary hearing", may prescribe requirements for waste discharges). The Standard Provisions should make clear that any modification, revocation or reissuance of the Order can only be accomplished at a noticed public hearing, with opportunity for comment.

DISTRICT-SPECIFIC COMMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT ON TENTATIVE ORDER NO. R9-2010-0016, WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) DRAINING THE COUNTY OF RIVERSIDE

The following comments are made by the Riverside County Flood Control and Water Conservation District (District) with respect to District-specific issues raised by the above referenced Tentative Order (Order) as the Order pertains to the District. These comments are in addition to the comments made by the District and on behalf of the other Copermittees, the County of Riverside and the Cities of Menifee (to the extent that this City will remain as a Copermittee under the Order), Murrieta, Temecula and Wildomar. We also understand that the County and the individual Cities will be filing comments on the Order under separate cover. These comments are intended to supplement those comments filed by the District on behalf of itself and the other Copermittees.

The District reserves the right to make additional comments on the Order prior to the close of the public hearing to adopt the Order.

The focus of these comments is to apprise Regional Board staff of the limited jurisdiction of the District within the Santa Margarita Region and to suggest language clarifying the requirements of the Order to reflect the District's limited jurisdiction. While aspects of the Order clearly apply to the District as an owner and operator of the Municipal Separate Storm Sewer System (MS4) serving the watershed, because of the limited nature of the District's jurisdiction over land areas within the watershed, many cannot. For example, the District, unlike other Copermittees, does not control activities on land not directly owned by the District, nor does it have ordinances or issue permits governing the use of such land. The District simply does not have statutory authority to govern the activities of the residents within a municipal area, unlike the other Copermittees.

Thus, a number of the provisions in the Order are not applicable to the District in the same manner and some are entirely not applicable. This letter highlights those provisions. The comments noted below also are reflected in the redline of the Order submitted with these and other comment white papers.

Comments on Findings

1. **Need for New Finding B.2:** Section B in the findings describes the regulated parties. The District requests a new finding B.2, which provides as follows:

> The Riverside County Flood Control and Water Conservation District (District) is not a municipality but rather operates various elements of the MS4 system within the San Diego Region in the form of flood control structures, including channels. Such channels and other flood control structures have been constructed and are operated by the District in accordance with its statutory obligations established by the Legislature in California Water Code App. § 48-9, to "control the flood and storm waters of said district" and to save and conserve in any manner all or any of such waters and protect from damage from such flood or storm waters the watercourses, watersheds, public highways, life and property in said district." Water Code App. § 48-9(8). As

a creature of state law, and not a municipal corporation, the District does not exercise jurisdiction over land areas within the San Diego Region and the activities carried out on those land areas outside of its limited rights-of-way. Please see redline.

2. **Findings, Section D.3:** This section of the Findings referring to "Construction and Existing Development" is of limited applicability to the District, since the only construction projects that would be overseen by the District are of or within its own facilities. The redline sets forth a change to clarify this limited applicability.

COMMENTS ON DIRECTIVES

1. **Section F.1.a:** The District, as a non-municipality, does not prepare a General Plan or equivalent because it does not govern development within a geographical area. Thus, the requirements of this section of the Order are not applicable to it. Please see redline.

2. **Section F.1.d.(4)(a)(iii):** Since the District, as a non-municipality, does not have land use codes, policies and ordinances, this provision, relating to the removal of "barriers to LID implementation," is not applicable to it. Please see redline.

3. **Section F.1.d.(9):** The only Priority Development Projects (PDP) relevant to the District would be the District's owned non-flood control channel projects, since it has no authority to permit private or non-District facilities and exercises jurisdiction over no private land areas within the watershed, and because the construction of flood control channels is subject to the jurisdiction of the U.S. Army Corps of Engineers through the Clean Water Act Section 404 permit program, not the NPDES permit program under Section 402 of the Clean Water Act. Thus, this directive, which requires the verification of compliance by third parties with Standard Stormwater Mitigation Plan (SSMP) requirements, is not applicable to the District. Please see redline.

4. **Section F.1.e:** As noted above, the only PDPs over which the District would have authority are its own projects. Thus, this directive, which requires inspection of BMPs at PDPs constructed by third parties, is not applicable to the District. Please see redline.

5. **Section F.1.g:** Since the District is not a municipality, and does not permit third parties to build development projects, this provision is not applicable to it. (It should be noted that this directive also has been objected to by the District on behalf of itself and the other Copermittees.)

6. **Sections F.2, F.2.a and F.2.f.:** These directives require each Copermittee to comply with each of the requirements of the section, to review and update its grading and other ordinances, and implement an enforcement process for Construction sites. These requirements are not applicable to the District in the same manner as the other Copermittees, as the District is not a municipality and does not issue grading or other permits for private land use activities. Please see redline.

7. **Sections F.3.b-c:** These directives, which require the development of commercial/industrial and residential programs, are applicable to a municipality but not to the District, which does not have land area occupied by either commercial/industrial or residential developments. Such requirements may be applicable to the municipal Copermittees, but not to the District, which only operates MS4 within the

Permit area. The District's rights-of-way are limited to that which is necessary to properly operate flood control infrastructure. Please see redline.

8. **Section F.3.d:** This directive requires development of a retrofitting program for "municipal, industrial, commercial and residential" areas of development. The District only maintains MS4 facilities within the Santa Margarita Region, and does not have jurisdiction over other areas of development. The Order should make clear that any retrofitting requirements (which are the subject of separate comments by the District on behalf of other Copermittees) apply only to development with the jurisdiction of the Copermittee. Clarifying changes are set forth in the redline.

9. **Section F.6:** This directive contains requirements for education of various target communities, including commercial and industrial owners and operators and residential communities, most of which are not within the jurisdiction of the District. The Order should make clear that such educational programs must be consistent with the jurisdiction of the Copermittees. Clarifying changes are set forth in the redline.

Attachment 10: Fact Sheet Comments

Introduction

These comments on the Fact Sheet should be read in conjunction with the other white papers submitted as part of the comments on the Tentative Order.

Fact Sheet Text, Page 7:

> "The First and Second Term Permits, Order Nos. 90-46 and 98-02, provided maximum flexibility. San Diego Water Board Order No. 90-46 contained the "essentials" of the 1990 regulations, but the requirements were written in very broad, generic terms. This was done in order to provide the maximum amount of flexibility to the Copermittees in implementing the new requirements (flexibility was, in fact, the stated reason for issuing the permit in advance of the final regulations). From staff's perspective however, "flexibility" in the form of lack of specificity, combined with the Copermittees' *lack of funding and political will,* also provided the Copermittees with ample reasons to take few substantive steps towards achieving water quality standards. The situation was exacerbated by the San Diego Water Board's own lack of storm water resources for oversight."

Problem with Text:
The statement regarding a 'lack of funding and political will' is unsupported and inflammatory, and provides no benefit in a public document.

Suggestion:
Delete this statement.

Fact Sheet Text, Page 12 and 13:

> "It is very difficult to ascertain the true cost of implementation of the Copermittees' management programs because of inconsistencies in reporting by the Copermittees. Reported costs of compliance for the same program element can vary widely from city to city, often by a very wide margin that is not easily explained.[6] Despite these problems, efforts have been made to identify management program costs, which can be helpful in understanding the costs of program implementation....
>
> A study on Phase I MS4 program cost was also conducted by the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), where program costs reported in the municipalities' annual reports were assessed. The Los Angeles Water Board estimated that average per household cost to implement the MS4 program in Los Angeles County was $12.50. 8 Since the Los Angeles County permit is very similar to Order No. R9-2004-001, this estimate is also useful in assessing general program costs in Riverside County.
>
> The State Water Board also commissioned a study by the California State University, Sacramento to assess costs of the Phase I MS4 program. This study includes an assessment of costs incurred by Phase I MS4s throughout the State to implement their programs. Annual cost per household in the study ranged from $18-46, with the Fresno-Clovis Metropolitan Area (FCMA) representing the lower end of the range, and the City of Encinitas (in San Diego County) representing the upper end of the range.9 Included in the study is the City of Corona, which is in Riverside County

under the jurisdiction of the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board).

The annual cost per household for the City of Corona's program was estimated to be $32, which should be similar to the costs to implement the MS4 programs in the Riverside County portion of the San Diego Region. In contrast, the cost of the City of Encinitas' program, with an annual cost per household estimated to be $46, may represent the upper range of Riverside County MS4 programs. However, the City of Encinitas's program cost can be considered as the high end of the spectrum for management program costs because the City has a consent decree with environmental groups regarding its program, and City of Encinitas has received recognition for implementing a superior program.

The annual costs for the City of Corona and City of Encinitas were estimated from data collected in 2003-2004. Between 2003 and 2008, the number of households in both cities has increased by approximately 3 percent and 7 percent, respectively.10 In contrast, between 2003 and 2008 the number of households in the City of Temecula has increased from 23,199 to 31,135 (34 percent)11 and the City of Murrieta has increased from 22,020 to 32,664 (48 percent).12 This significant increase in number of households indicates a significant increase in the tax base (sales and property tax) available to fund the implementation of the MS4 programs for the City of Temecula and City of Murrieta, as well as for the County of Riverside and recently incorporated cities."

Problem with Text:
The text notes that it is difficult to compare costs between Cities for stormwater program implementation since the cost accounting varies widely, and the specific issues also vary widely. Despite this fact, the fact sheet goes on to make just such comparisons and further implies that the Santa Margarita Region Cities are underfunding their programs by comparison. For example, the City of Encinitas is cited as an example of a city that is spending on the upper end for a stormwater program. The City of Encinitas varies significantly from the cities in the Santa Margarita area in that it must address a major outfall (Cottonwood Creek) at its primary beach (Moonlight Beach). Cottonwood Creek has perennial dry weather flow from urban sources and exceeds REC-1 and REC-2 water quality standards. Since Cottonwood Creek discharges at Moonlight Beach, frequent sanitary standard exceedences were noted on a year–round basis. The City of Encinitas constructed a dry weather flow treatment plant near Moonlight Beach to treat Cottonwood Creek to correct this problem. No such compliance problems exist for the Copermittees. The comparisons in this part of the fact sheet are not valid.

In addition, the Fact Sheet leaves the inaccurate impression that the Copermittees have ample financial resources to fund MS4 programs by completely ignoring the effects of the current national recession. (See Attachment 2). As pointed out in Attachment 2 (Economic Assessment), declines in home values and tax receipts have crippled the ability of the Copermittees to finance such programs. The Fact Sheet selectively examines the period 2003-2008, when there was significant growth, but ignores the period 2008-2010, when that growth ended and the economy declined precipitously, affecting property and sale tax receipts as well as other sources of revenue.

Suggestion:
Delete the text on Page 13 and 14 of the Fact Sheet.

Fact Sheet Text Page 15:

> "The vast majority of costs that will be incurred as a result of implementing OrderNo. R9-2010-0016 is not new. Storm water management programs have been in place in Riverside County for over 15 years. As shown in the discussion above, the amount spent for MS4 Permit compliance per household in the municipalities in the Riverside County portion of the San Diego Region is already low compared to other regions. Any increase in cost to the Copermittees, however, is still expected to be incremental in nature. Since Order No. R9-2010-0016 "fine tunes" the requirements of Order No. R9-2004-001, these cost increases are expected to be modest.
>
> Where there may be additional elements that will incur new costs, the Riverside County Copermittees are given the time to develop the budgets and funding mechanisms to phase those elements into their programs. Additionally, development of these additional elements by the Riverside County Copermittees will have the benefit of the experiences and work already done by the San Diego County and Orange County Copermittees."

Problem with Text:
The Fact Sheet states that the vast majority of costs for implementing the Tentative Order are 'not new'. This is not correct. Almost every program in the Tentative Order has been amended and require new resources. Specific programs include, but are not limited to, the monitoring program (over fivefold increase in costs), hydromodification management programs, new development programs, inspection programs, irrigation runoff prohibitions, retrofit studies and MS4 maintenance programs. The very prescriptive and detailed requirements of the Tentative Order impose new requirements on the Copermittees at a time when funding sources are drying up. The Copermittees estimate that implementation of the regional components of the new Order (as written) will cost approximately $11,500,000 (e.g. the costs to write the new compliance documents, develop the retrofit, hydromodification programs and develop and implement the new monitoring program). These costs are on top of the current expenditures to implement the existing regional monitoring program (approximately $5,000,000 for the five-year permit term). These costs are further amplified by the direct cost of implementation that will be incurred by the individual Permittees (e.g. the cost to implement the new compliance documents and hydromodification programs). The text further indicates that the Tentative Order provides time for the Permittees to 'develop...funding mechanisms'. This statement assumes that the Copermittees have the ability to collect additional funds from taxpayers to support the stormwater program implementation. This is false, since any such funds, outside of inspection or plan review fees, would be required to be submitted to a vote of the people pursuant to Propostion 218. In the current economic and political climate, a successful vote to increase taxes is extremely remote. The Copermittees further note that in the City of Encinitas in Orange County, cited by the staff as an example of proactive MS4 regulation, a minimal stormwater proposition recently was voted down.

Suggestion:
Delete the text noted above in the Fact Sheet and add a discussion on the difficulties of funding expansions to the Copermittees' stormwater programs due to Proposition 218.

Fact Sheet Text Page 16:

> "For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by USEPA to be $158-210.18. This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study reports that the annual household willingness to pay for statewide clean water is approximately $180.19. When viewed in comparison to household costs for existing management programs, household willingness to pay estimates exhibit that per household costs incurred by the Riverside County Copermittees to implement their management programs are very low."

Problem with Text:
The discussion in the referenced text is not represented correctly. The figure cited in the California State University, Sacramento study includes the cost of wastewater treatment. The author of the study notes:

'The survey question was for restoring water quality for all waters throughout the state from all impairment, not just within a city or region and not just for impairment from stormwater pollution.' The current cost for sewer fees exceed $200 per year, Thus, the vast majority of the "household willingness" figure relates to sanitary sewer costs, and not to the costs of addressing stormwater.

Suggestion:
Delete this text in the fact sheet and note that the cost consumers are currently paying for clean water in the Permit area exceeds that which studies cited have found they are willing to pay.

Fact Sheet Text Page 17:

> "University of California, Los Angeles assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 permits in the Los Angeles Region. The study found that non-structural systems would cost $2.8 billion but provide $5.6 billion in benefit. If structural systems were determined to be needed, the study found that total costs would be $5.7 to $7.4 billion, while benefits could reach $18 billion.[21] Costs are anticipated to be borne over many years – probably ten years at least. As can be seen, the benefits of the programs are expected to considerably exceed their costs. Such findings are corroborated by USEPA, which found that the benefits of implementation of its Phase II storm water rule would also outweigh the costs."

Problem with Text:
It is a basic principle that public spending should have a positive cost-benefit. The Fact Sheet implies that since spending on stormwater has a positive cost-benefit, such spending should be increased. The reality is that there are also other public spending priorities such as police, fire, ambulance, and public utilities competing for the same funding, all of which have positive cost-benefit ratios. Moreover, the UCLA study specifically focused on the benefit of improving beach water quality, which is a very significant economic factor in terms of tourism in coastal Los Angeles County. No beaches exist in the Santa Margarita Region, and given the ephemeral nature of many of the Region's waterways, attempting to extrapolate the UCLA study is not appropriate. In the absence of a similar cost-benefit study being undertaken in the Santa Margarita Region, the studies cited by staff do not provide any basis for the conclusions reached in the Fact Sheet.

Suggestion:
As the fundamental basis for this comment is flawed, in the absence of any local data for inland waterbodies in semi-arid climates, the text should be deleted.

Fact Sheet Text Page 35:

> "Trash, as litter in both solid and liquid form, is consistently found on and adjacent to roadways. A California Department of Transportation Litter Management Pilot Study found that of roadway trash, plastics and Styrofoam accounted for 33 percent of trash by weight, and 43 percent by volume. Further, the study found that approximately 80 percent of the litter associated with roadways was floatable, indicating that, without capture, this litter would enter Waters of the State after a storm event, resulting in the impairment of Beneficial Uses.[45] The study, however, relied upon a mesh capture size of 0.25 inches (6.35 millimeters). This size is too large to effectively capture plastic pre-production pellets (a.k.a. "nurdles"), which are roughly 3 mm in size, and likely underestimated the total contribution of plastics. Furthermore, pre-production plastic pellets, which are small enough to be easily digested, have been found to carry persistent organic pollutants, including PCBs and DDT."

Problem with Text:
While the Fact Sheet suggests that there is a compelling argument to address trash along Caltrans highways, such a problem is not found on municipal streets. The Caltrans studies found that a substantial portion of the litter load comes from uncovered loads on commercial and private vehicles. The low speed roadways operated by the Copermittees do not create similar conditions or handle similar traffic. Further, the text discusses pre-production plastics (nurdles), yet fails to acknowledge that there are no industries within the Copermittees' jurisdiction that manufacture or use this material. The Fact Sheet's citation of studies that have no bearing on actual conditions within the Santa Margarita Region cannot be used to justify programs in the Tentative Order addressing such non-existent conditions. The ROWD has a more informed discussion of trash issues based on actual conditions in the Santa Margarita Region.

Suggestion:
Revise the fact sheet text to discuss the current findings relative to trash in the Permit region based on the ROWD.

Fact Sheet Text Page 50 and 51

> Pg. 50 - "To date the San Diego Water Board and the Copermittees have identified overspray and drainage from potable and reclaimed water landscape irrigation as a substantial source and conveyance mechanism for pollutants into waters of the United States."
>
> Pg. 51 – "The San Diego Water Board and the Copermittees have identified irrigation water as a source of pollutants and conveyance of pollutants to waters of the United States, when applied improperly in excess and thereafter entering the MS4, in the following documents:"

Problem with Text:
The documents cited in the Fact Sheet do not support the conclusion that irrigation water is a source of pollutants or conveyance of pollutants in the *Santa Margarita Region*. First, the comments in the public education document cited in the Fact Sheet were borrowed from an Orange County publication, and do not represent any official conclusion by the Copermittees that irrigation water represents a water quality

threat. Plainly over-irrigation is to be discouraged, as even if the water is clean, it adds to the Copermittees' costs of addressing such waters. Second, this public education document is the *only* document from a Santa Margarita Region source. The other documents cited by staff are studies conducted in other areas, with different hydrology and climate. For a more comprehensive assessment of the irrigation runoff issues, please see Attachment 6 (Prohibition of Irrigation Runoff).

Suggestion:
Delete the referenced text and the quotes referencing Permittee education materials. Also remove the improperly supported irrigation runoff prohibition.

Revise the text to accurately reflect the lack of any connection between irrigation runoff and impairments of receiving waters in the Santa Margarita Region.

Fact Sheet Text Page 58:

> "Enforcement and inspection activities conducted by the San Diego Water Board during the previous permit term have found a lack of source control for many unpaved roads within the jurisdiction of the Copermittees."

Problem with Text:
The Copermittees submit that there is no evidence reflecting any substantial water quality problem relating to MS4 discharges affected by unpaved roads. Moreover, the mileage of unpaved roads in the jurisdiction of the Copermittees is a small percentage of the total mileage of unpaved roads in the Santa Margarita Region, given that many of these roads are operated by such jurisdictions as the U.S. Forest Service. Please see Attachment 5 (Unpaved Roads). Further, the Fact Sheet notes on page 27 that Permits "will cover municipal systems discharges in unincorporated portions of the county, it is the intent of EPA that management plans and other components of the program focus on the urbanized and developing area of the County". Dedicating resources to unpaved roads diverts already limited resources from the urbanized areas intended to be addressed by USEPA regulations.

Suggestion:
The references and associated program requirements should be removed from the Permit and addressed through a separate general permit for unpaved roads, if in fact unpaved roads are a significant source of pollutants.

Fact Sheet Text Page 69:

> "The order also found that the SSMP requirements are appropriately applied to the majority of the Priority Development Project categories that are also contained in section F.1 of this Order. The State Water Board also gave California Regional Water Quality Control Boards (Regional Water Boards) the needed discretion to include additional categories and locations, such as retail gasoline outlets(RGOs), in SSMPs "
>
> "The provisions of the SSMP section of the Order are also consistent with those previously issued by the San Diego Water Board for Riverside County (Order No. R9-2004-001), Southern Orange County (Order Nos. R9-2002-0001 and R9-2009-0002) and San Diego County."

Problem with Text:
Several PDP categories or thresholds are not supported by Order WQ 2000-11 such as the 10,000 square feet requirement for residential areas nor the 1-acre threshold for all development projects. Further the Order ignores other applicable portions of Order WQ 2000-11. Specifically, the memo from State Board Chief Counsel Craig S. Wilson transmitted WQ Order 2000-11 to the Regional Board executive officers states that with regard to discretion that:

> "3. The Order allows broader discretion by the Regional Water Boards to decide whether to include additional types of development in future SUSMPs. These areas for potential future inclusion in SUSMPs include retail gasoline outlets, ministerial projects (only discretionary projects are included in the approved SUSMPs), and projects in environmentally sensitive areas. **If Boards include these types of developments in future permits, the Order explains the types of evidence and findings that are necessary."**

Order 2000-11 requires that revisions to regulatory thresholds be justified economically. The Copermittees have expressed their concern with requirement F.1.d.(2)(a) regulating residential developments of 10,000 sq. ft. or more and requirement F.1.d.(1)(c) regulating any project 1-acre or more. These thresholds, and their relative impact on project proponents, have not been adequately justified. The Permittees have noted that these regulations will negatively impact the construction of custom homes (individual lot developments). The relative economic impact of meeting the SSMP requirements for individual homeowners has not been justified in the fact sheet.

Suggestion:
As shown in the redline markup (Attachment 9); The 1-acre SSMP threshold (F.1.d.(1)(c)) should be deleted and the 10,000 square feet threshold for residential areas (F.1.d.(2)(a)) should be made the same as the requirement contained in the Riverside County Santa Ana NPDES MS4 Permit.

Fact Sheet Text Page76:

> "The success of future stream restoration and stabilization is, however, dependent on preventing and reducing physical impacts from activities upstream. Therefore, hydromodification management measures are necessary upstream of modified (e.g. concrete, rip rap, etc.) channels in addition to non-modified channels."

Problem with Text:
In some areas, hardened channels may be needed for flood control and public safety. In those areas, channel restoration may not be feasible and onsite controls are not warranted. The protection of public safety from flooding is a statutorily required duty of the District. See Water Code App. Section 48-9. Any provisions of the Tentative Order that would presume to challenge this duty must be deleted. The District assumes that the Regional Board and staff are not placing themselves in the position of making flood control judgments, as the agency is neither charged by the Legislature with such obligation nor is the agency equipped to do so.

Suggestion:
Revise the text to add "except where hardened channels are required for the protection of public safety"

Fact Sheet Text Page 77:

> "Since municipalities are the lead permitting authority for industrial land use and construction activities, they are also the lead for enforcement regarding runoff discharges from these sites."

Problem with Text:
This is a leap of logic we should probably not let pass. The Copermittees can greatly influence the design and construction, but the Industrial Permit is focused on the operation of the facility, and that is where the authority of the Board lies - and is arguably the most important aspect of runoff quality from the site.

Suggestion:
Delete the sentence.

Fact Sheet Text Page 79:

> "To clarify, an unaltered natural drainage, which receives runoff from a point source (channeled by a Copermittee to drain an area within their jurisdiction), which then conveys the runoff to an altered natural drainage or a man-made MS4, is both an MS4 and a receiving water."

Problem with Text:
As noted in Attachment 7 (General Legal Comments) regarding Finding D.3.c., a natural drainage, whether or not it conveys point source runoff to a man-made MS4, is not itself part of the MS4.

Suggestion:
Delete text.

Fact Sheet Text Page 79:

> "As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or otherwise control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards."

Problem with Text:
First, the Copermittees, as operators of the MS4, are required to address storm drainage. During storm conditions in particular, the District is required to handle flood waters so as to protect the lives and property of residents of Riverside County. The failure to do so is a violation of state law. See Water Code App. Section 48-9. Thus, the Copermittees must "passively receive and discharge" waters from third parties, which waters may contain pollutants. Moreover, the operator of the MS4 is NOT accepting responsibility for discharges from other MS4 systems. There is no provision for joint liability under the federal Clean Water Act or the California Water Code. The former directs its prohibitions against a "discharger," and no others. 33 U.S.C. §§ 1319 and 1342. A party is responsible only for its own discharges or those over which it has control. *Jones v. E.R. Snell Contractor, Inc.*, 333 F.Supp.2d 1344, 1348 (N.D. Ga. 2004); *United States v. Sargent County Water Dist.*, 876 F.Supp. 1081, 1088 (D.N.D. 1992).

The Clean Water Act MS4 regulations, moreover, specifically provide that Copermittees under an MS4 Permit are required to "comply with permit conditions relating to discharges from the municipal separate storm sewers for which they are operators." 40 C.F.R. § 122.26(a)(3)(vi) (emphasis supplied). Moreover,

the Regional Board, as the permitting agency for stormwater and Industrial Permits, and the State Board as the overall agency responsible for compliance with the Clean Water Act in California, are responsible for ensuring that the discharges from such permitted facilities, whether or not they enter the MS4, are in compliance with the requirements of those permits. Finally, many sources of pollutants are beyond the control of the MS4 operators but are within the control of other agencies, if those agencies elect to exercise their authority. A major example is the discharge of metals from motor vehicle brake pads, which contributes to exceedances of copper, zinc and potentially other metals in stormwater. The MS4 operators cannot control the composition of brake pads, nor can the MS4 operators control air emissions from domestic and foreign sources that discharge pollutants onto the surface area of the region, which can then wash into the MS4 systems.

Suggestion:
Delete cited text.

Fact Sheet Text Page 81:

> "Since treatment generally does not occur within the MS4, in such cases reduction of storm water pollutants to the MEP must occur prior to discharges entering the MS4."

Problem with Text:
Nothing in the MS4 regulations prohibits use of the MS4 for treatment. Frankly, some of the most effective treatment facilities for pollutants may be located in the MS4 as part of regional treatment systems. An example are catch basins, which collect trash and other debris and detention and retention basins that can be used to capture, treat and infiltrate runoff.

Suggestion:
Delete cited text.

Fact Sheet Text Page 84:

> "When appropriately applied as in this Order, retrofitting existing development meets MEP."

Problem with Text:
Only retrofits that are applied with the requirements of the Order meet MEP, which is not the case.

Suggestion:
Delete the text.

Fact Sheet Text Page 88:

> "The RWL language in the Order requires storm water compliance with water quality standards through an iterative approach for implementing improved and better-tailored BMPs over time. The iterative BMP process requires the implementation of increasingly stringent BMPs until receiving water quality standards are achieved. This is necessary because implementation of BMPs alone cannot ensure attainment of receiving water quality standards."

Problem with Text:
61 Federal Register 57425 (1996), Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits states "expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards."

Suggestion:
The second sentence should be revised to reflect the actual text from federal regulations (specifically "in subsequent permits"). Further the last sentence does not make sense and is contrary to the proceeding text and should be deleted.

Fact Sheet Text Page 112:

"The San Diego Water Board has responded to complaints about and observed runoff from over-irrigation entering the MS4s in the Riverside County portion of the San Diego Region."

Problem with Text:
There is no evidence in the fact sheet supporting this statement.

Suggestion:
Provide evidence or delete statement.

Fact Sheet Text Page 130:

"This section requires the use of native and/or low water use plants for landscaping."

Problem with Text:
There was an agreement that this would be suggested but not a requirement. This requirement also mandates the means of compliance, in violation of Water Code section 13360.

Suggestion:
Change the text:

"Section ~~requires~~ suggests the use of native and/or low water use plants for landscaping,"

Fact Sheet Text Page 136:

"This requirement is needed because to date, the Copermittees have generally approved low removal efficiency treatment control BMPs without justification or evidence that use of higher efficiency treatment BMPs was considered and found to be infeasible."

Problem with Text:
The Copermittees challenge the accuracy of this Statement. Riverside County has been requiring landscaped based low impact development BMPs since 2005. The District has also spent a substantial sum of money and time developing BMP manuals with specific criteria to ensure the effectiveness of BMPs.

Suggestion:
Delete the unsupported and offensive statement.

Fact Sheet Text Page 142:

"Where streams are hardened and/or buried to convey storm water, they cannot provide adequate water quality."

Problem with Text:
Unsupported and incorrect. Hardened channels can be designed to provide both flood protection and natural stream function. For example, hardened levees can be designed to be set back and backfilled with native material, effectively providing a natural substrate for stream function. Similarly, porous channel materials such as gabions can provide both flood protection and substrate for native habitat. Finally,

even underground systems can be connected to regional treatment systems that provide requisite water quality benefits where appropriate.

Suggestion:
Delete.

Fact Sheet Text Page 145:

> "Redevelopment projects, however, must be able to achieve post-project runoff flow rates and durations that are less than or equal to pre-project and down to pre-development runoff flow rates and durations to be eligible to receive a waiver under the program."

Problem with Text:
This requirement is self-defeating. By placing regulatory obligations on redevelopments that make the cost of redevelopment greater than the cost of developing on virgin land, the Permit effectively promotes inner-city blight as existing structures are abandoned and suburban development is promoted due to economic factors. The Permit should include accommodations for redevelopment to ensure that existing developed areas are economically preferable for new development and to prevent the onset of unnecessary additional impervious area.

Suggestion:
The Permit and fact sheet should be revised to offer exemptions for hydromodification requirements for redevelopments where such improvements are infeasible.

Fact Sheet Text Page 160:

> "Retrofitting existing development is practicable for a municipality through a systematic evaluation, prioritization and implementation plan focused on impaired water bodies, pollutants of concern, areas of downstream."

Problem with Text:
Although the current requirement simply calls for a study, it is expected that future permits will require implementation of said study. This study exceeds the requirements for Copermittees to evaluate opportunities for retrofit of the MS4 contained in the federal regulations and federal Clean Water Act. There are no revenues to promote such a program.

Suggestion:
The Board should recognize in the fact sheet that without funding provided by the state, there is no revenue for such a program.

Fact Sheet Text Page 161:

> **"Section F.3.d.(4)** requires each Copermittee to cooperate with private property owners to encourage the implementation of site specific retrofitting projects. Because the Copermittees have limited authority to directly require retrofitting projects on private property, the Copermittees must encourage private property owners to implement retrofitting projects through indirect programs and incentives."

Problem with Text:
If the Board wishes to promote urban retrofit, then they also need to incentivize the program. Currently, property owners wishing to volunteer for urban retrofit projects are required to comply with the SSMP,

including hydromodification and LID requirements, opt into BMP inspection programs and subject themselves to ongoing scrutiny through business inspection programs required by the Permit. The permit places an ECONOMIC DISINCENTIVE in the way of promoting a general good for the watershed. The purpose of this requirement is to promote acceleration of water quality benefits from existing urban areas. The requirements, as written, promote a program that is doomed to failure.

Suggestion:
The Board should clearly exempt urban retrofit projects from the new development requirements of the Permit if they wish to accelerate water quality improvements from existing urban areas.

Fact Sheet Text Page 162:

> "Periodic inspections may be performed to ensure the site owner has not removed the retrofit BMPs."

Problem with Text:
Similar to the prior comment, this creates a disincentive to retrofit BMPs.

Suggestion:
Delete.

Fact Sheet Text Page 163:

> **"Section F.4.b** ...access points (i.e. manholes), connections..."

Problem with Text:
The text from the Phase I rule implementing the NPDES regulations and the requirement of the storm drain system map is:

(from Federal Register, Vol 55, No 222, Friday Nov 18, 1990):

> "[submit] a USGS 7.5 minute topographic map...[showing] The location of known municipal storm sewer system outfalls discharging to waters of the United States...the location of major structural controls for storm water discharge (retention basins etc) and the identification of publicly owned parks, recreation areas and other open lands."

The proposed requirements exceed the federal regulatory requirements for MS4 mapping. Further, the mapping of manholes is a significant economic burden that would have no benefit for our staff. Manholes are typically placed at regular intervals (300 – 500 feet) on underground storm drain systems. Once a map providing the location of the MS4 system is available, manholes are quickly located through visual inspection in the field. Further, storm drain plans that are available to Permittee staff can be used to locate specific manholes where absolutely necessary. The economic costs of mapping potentially thousands of manholes is not offset by any known benefit.

Suggestion:
Delete requirement to map manholes.

Fact Sheet Text Page 198:

> **"Section II.D** (High Priority Inland Aquatic Habitat) of the MRP describes required monitoring to be done in order to assess if MS4 storm water and/or non-storm water discharges are affecting high priority aquatic and/or riparian species."

Problem with Text:
This requirement was deleted from the Orange County NPDES MS4 Permit when the provision to assess outfalls using NALs and SALs was added. It is not clear why such an accommodation would not also be provided to the Riverside County NPDES MS4 Program. This region has significantly less economic resources than south Orange County or San Diego County to implement monitoring programs. The Permittees specifically request this be deleted as impacts to aquatic habitat will be detected through the NAL/SAL program.

Suggestion:
This requirement should be deleted.

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State of California

Memorandum

To : Archie Matthews
Division of Water Quality

Date: FEB 11 1993

Elizabeth M. Jennings

Elizabeth Miller Jennings
Senior Staff Counsel
OFFICE OF THE CHIEF COUNSEL
From : STATE WATER RESOURCES CONTROL BOARD
901 P Street, Sacramento, CA 95814
Mail Code: G-8

Subject: DEFINITION OF "MAXIMUM EXTENT PRACTICABLE"

ISSUE

What is the meaning of the standard "maximum extent practicable" (MEP) as used in the Clean Water Act's storm water provisions, and how can this standard be communicated to the regulated community? How can this concept be included in the draft BMP manual?

CONCLUSION

The standard "maximum extent practicable" is not specifically defined for use in the storm water program. It has been defined in other rules, however, to require taking all actions which are technically feasible. I have included draft language for the manual.

DISCUSSION

Section 402(p) of the Clean Water Act (33 U.S.C. § 1342(p)) provides that permits issued for discharges from municipal separate storm sewers must require controls to reduce the discharge of pollutants "to the maximum extent practicable". The statutory language provides that municipal permits:

> "Shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other

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provisions as the [EPA] Administrator or the State determines appropriate for the control of such pollutants." Clean Water Act Section 402(p)(3)(B)(iii); 33 U.S.C. § 1342(p)(3)(B)(iii).

Neither Congress nor the U.S. Environmental Protection Agency (EPA) has defined the term "maximum extent practicable", and yet this is the critical standard which municipal dischargers must attain in order to comply with their permits. (The State could have spelled out the specific controls which the municipalities were required to undertake. However, such an approach would have relinquished the municipal dischargers of any flexibility in implementing their storm water programs.)

On its face, it is possible to discern some outline of the intent of Congress in establishing the MEP standard. First, the requirement is to reduce the discharge of pollutants, rather than totally prohibit such discharge. Presumably, the reason for this standard (and the difference from the more stringent standard applied to industrial dischargers in Section 402(p)(3)(A)), is the knowledge that it is not possible for municipal dischargers to prevent the discharge of all pollutants in storm water. The second point which is clearly encompassed in the standard is that it is the permitting agency, and not the discharger, which is the ultimate arbiter on whether there has been sufficient reduction of pollutants.

The most difficult issue is determining how much pollutants must be reduced, or, in other words, which best management practices (BMPs) must be employed in order to comply with the MEP standard. While the term is not defined in the Clean Water Act or the EPA regulations, the same term does appear in other federal laws and regulations, and there are some definitions or interpretations which may be useful to the storm water program.

In the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. § 7901, et seq.), the Department of Energy was required to designate within one year of the Act's adoption "to the maximum extent practicable" contaminated areas within the vicinity of uranium processing sites. In addressing a lawsuit brought after the Department designated very few of the "vicinity properties", the federal court declared that MEP means "a substantial majority of the locations" should have been designated within the year. Sierra Club v. Edwards (D.C.D.C. 1983) 19 ERC 1357. Where a NEPA regulation required that "to the maximum extent practicable" environmental clearance was required for uncompleted projects which had never undergone NEPA review, a court held that the regulation "mandates a meaningful

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environmental review" rather than a "perfunctory evaluation". Save the Courthouse Committee v. Lynn (S.D.N.Y. 1975) 408 F.Supp. 1323.

In an interim final regulation recently promulgated by the Department of Transportation, MEP is defined, where operators of onshore oil pipelines must have resources "to the maximum extent practicable" to remove and to mitigate or prevent worst case discharges. 49 CFR Part 194. MEP is defined to mean:

> "The limits of available technology and the practical and technical limits on an individual pipeline operator in planning the response resources required to provide the on-water recovery capability and the shoreline protection and cleanup capability to conduct response activities . . .."

Finally, the term MEP is used in the Superfund legislation, wherein permanent solutions and alternative treatment technologies must be selected "to the maximum extent practicable". CERCLA, Section 121(b). The legislative history of the language indicates that the relevant factors in determining whether MEP is met include technical feasibility, cost, and state and public acceptance. 132 Cong. Rec. H 9561 (Oct. 8, 1986).

While each of the above interpretations and definitions varies, they do follow a pattern. The pattern that emerges is that there must be a serious attempt to comply, and that practical solutions may not be lightly rejected. If a municipality reviews a lengthy menu of BMPs, and chooses to select only a few of the least expensive, it is likely that MEP has not been met. On the other hand, if a municipal discharger employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. In any case, the burden would be on the municipal discharger to show compliance.

The definitions contained in the pipeline regulation and the Superfund leg-islative history are most analogous to storm water regulation. The major emphasis in both of these rules are technical feasibility. Similarly, the municipal dischargers should be required to employ whatever BMPs are feasible, i.e., are likely to be effective and are not cost prohibitive. Thus, where a choice may be made between two BMPs which should provide generally comparative effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs which would address a pollutant source or to pick a BMP based solely on cost, which would be clearly less effective.

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As you know, the BMP Guidance manual is being published by the Task Force, which is made up of dischargers, rather than by the State Water Board. As far as I know, there is no intention for the State Water Board to adopt the manual as its own guidance document. Therefore, it is important to stress in the manual, both in the section on MEP and in the front of the manual, that this manual is not a publication of the State or the Regional Water Boards, and that these Boards have not specifically endorsed the contents. Rather, the manual was assembled by a group of dischargers in the interest of assisting themselves and others to comply with the storm water permits. In the section on MEP, it should be stated that the final determination regarding whether a discharger was reduced pollutants to the maximum extent practicable can only be made by the Regional or State Water Boards, but that selection and implementation of BMPs through consideration of the listed factors should assist dischargers in achieving compliance.

The following language is suggested in order to clarify that the manual is not the product of the State Water Board:

> "This Manual was produced and published by the Storm Water Task Force, an advisory body of municipal agencies regulated by the storm water program. This Manual is not a publication of the State Water Resources Control Board or any Regional Water Quality Control Board, and none of these Boards has specifically endorsed the contents thereof. The purpose of this manual is to assist the members of the Task Force and other dischargers subject to storm water permits, ,in attaining compliance with such permits."

The following language is recommended in place of Insert A in the manual for municipal dischargers:

> "Although MEP is not defined by the federal regulations, use of this manual in selecting BMPs should assist municipalities in achieving MEP. In selecting BMPs which will achieve MEP, it is important to remember that municipalities will be responsible to reduce the discharge of pollutants in storm water to the maximum extent practicable. This means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. The following factors may be useful to consider:
>
> '1. Effectiveness: Will the BMP address a pollutant of concern?

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'2. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?

'3. Public acceptance: Does the BMP have public support?

'4. cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?

'5. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc.?

"After selecting a menu of BMPs, it is of course the responsibility of the discharger to insure that all BMPs are implemented."

United States
Environmental Protection
Agency

Office Of Water
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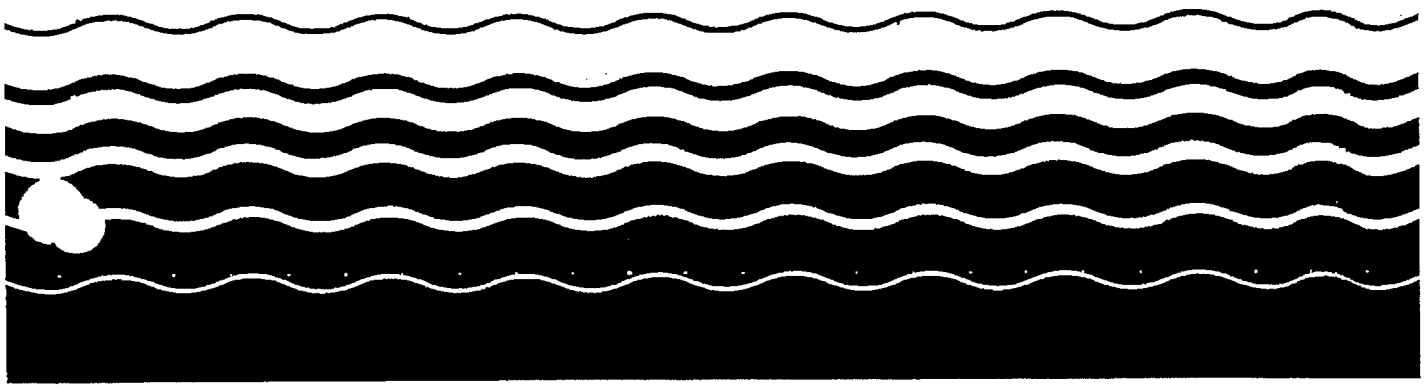
Guidance Manual For The Preparation Of Part 2 Of The NPDES Permit Applications For Discharges From Municipal Separate Storm Sewer Systems



§122 26(d)(2)(iv)(B) [The application must include a] description of a program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer

The NURP study concluded that the quality of urban runoff can be adversely impacted by illicit connections and illegal dumping. Often, large amounts of wastes, particularly used oils, are improperly disposed of in storm sewers. Elimination of these sources of pollutants would result in a dramatic improvement in the quality of storm water discharges from MS4s. Procedures to eliminate such discharges should be an important part of the proposed management program.

The regulatory requirement cited above is intended to directly implement the mandate of Section 402(p)(3)(B)(ii) of the CWA, which requires permits for MS4s to effectively prohibit non-storm water discharges into storm sewers In certain instances, the most appropriate action will be for the municipality to ensure that illicit discharges become covered by a NPDES permit However, in most cases, elimination of illicit discharges or improper dumping is the appropriate focus of this program component The quality of storm water runoff from inner-city core areas, particularly in older parts of the country, would benefit most from this component

The applicant should propose a schedule for implementing this program component throughout the initial permit term This schedule should reflect the priorities identified by the municipality during the application process and be based on the problems particular to the specific MS4

6.5.1 Prohibiting Illicit Discharges

The proposed management program must include a description of inspection procedures, orders, ordinances, and other legal authorities necessary to prevent illicit discharges to the MS4.

§122.26(d)(2)(iv)(B)(1) [The application must include a] description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program description shall address all types of illicit discharges, however the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States . . . . *[these sources are listed in the guidance].*

This proposed management program component also should describe how the prohibition on illicit discharges will be implemented and enforced. The description should include a schedule and allocation of staff and resources A direct linkage should exist between this program component and the adequate legal authority requirements for the ordinances and orders to effectively implement the prohibition of illicit discharges

While this program component is required to prohibit all types of illicit discharges, the following categories of non-storm water discharges need only be prohibited by the MS4 when they are identified by the MS4 as sources of pollutants to waters of the United States:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to separate storm sewers
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water

- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water

While EPA does not consider these flows to be innocuous, they are only regulated by the storm water program to the extent that they may be identified as significant sources of pollutants to waters of the United States under certain circumstances. If an applicant knows, for example, that landscape irrigation water from a particular site flows through and picks up pesticides or excess nutrients from fertilizer applications, there may be a reasonable potential for a storm water discharge to result in a water quality impact. In such an event, the applicant should contact the NPDES permitting authority to request that the authority order the discharger to the MS4 to obtain a separate NPDES permit (or in this case, the discharge could be controlled through the storm water management program of the MS4)

The applicant should consider the specific land use, age, and stage of development in this program component. For example, one study in an established metropolitan area found that 60 percent of automobile-related businesses had improper storm drain connections. While some of the problems discovered in this study were the result of improper plumbing or illegal connections to storm drains, the majority of the connections were approved by the municipality when they were built

For problem identification and problem-solving, a municipality may elect to implement a follow-up study that traces identified pollution incidents to their source (e.g , up the system) A variety of pollutant-tracing techniques and field screening can be used to identify illicit discharges

6.5.2 Field Screening

Part 1 of the application requires applicants to submit the results of field screening studies to evaluate the possible occurrence of illicit connections and improper dumping [§122 26(d)(1)(iv)(D)]. Dry weather flows that were encountered during the initial field screening were sampled and analyzed. The analysis was intended to provide information about illicit connections and improper dumping.

In Part 2, applicants are required to propose procedures for continued field screening during the term of the permit.

> §122 26(d)(2)(iv)(B)(2) [The application must include a] description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens

Applicants can propose to use procedures similar to those used for field screening required in Part 1 of the application or they can propose alternative procedures and techniques. The Part 1 field screening requirements are found in §122.26(d)(1)(iv)(D) and are explained in the Part 1 guidance manual

The Part 2 proposed field screening program component should describe areas of the system where the continuation of the field screening program will be conducted and the rationale for selecting these areas For example, the rationale for continuing field screening at a given location might be that a wide variation in results was obtained during the initial screens In addition, the applicant should propose field screening for a portion of any recently-identified major outfalls that were not known to the applicant when it prepared its Part 1 application, provided sampling of these outfalls is safe and practicable

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Poway drops its stormwater fee charge

Research shows city should have placed levy on ballot measure

BY HAILEY PERSINGER, REPORTER - NORTH COUNTY

THURSDAY, OCTOBER 20, 2011 AT 6:05 P.M.

AdChoices

POWAY — A fee that was tacked onto the trash bills of Poway residents nearly four years ago has been taken off the books, along with nearly all the revenue it brings in each year to help the city pay for services such as litter pickup and street sweeping.

Poway City Council members voted Tuesday to eliminate the city's stormwater program charge and refund some of the $5 million it's generated since it went into effect in 2008. The fees cost an average family about $44 each year. Businesses paid up to $1,230 annually. The fees amounted to $1.3 million each year — more than 80 percent of the stormwater program's $1.6 million annual budget.

The city will refund fees that were paid within the past 12 months and is working on a process to return the money to residents and business owners. According to city code, the statute of limitations for refunds is one year. The remaining three years of overpaid fees will not be returned.

City Attorney Morgan Foley said City Manager Penny Riley asked him to look into the validity of the fee when he began his work with the city in April. He determined that the charge should have been placed on a ballot for Poway voters. That step was left out of the city's approval process.

When the stormwater fee came up for a council vote in November 2007, city staff members told the council that there was not enough opposition from residents for the council to reject it. The city had mailed 36,000 public hearing notices on the fee to property owners and received only 20 letters asking officials to reconsider the proposal. Protests from more than 7,000 water and sewer customers were needed for the council to throw out the proposed fee.

According to a city staff report for Tuesday's meeting, "at that time, staff believed that the majority protest process ... was adequate to approve the fee."

The city began to look into the way the fee was approved after the passage of state Proposition 26, which voters approved last November. It requires a ballot measure to go before voters for most new fees.

Assistant City Manager Tina White said the city has worked as quickly as possible to repeal the charges and noted that Foley's investigation into the fee's validity was one of the first items city officials put on his to-do list.

"It was a hot topic of evolving discussion and legal opinions for months because attorneys were trying to figure out exactly what Proposition 26 did," White said. "When the voters approve it, then the real work begins."

Riley said the stormwater budget will be replaced by money from the city's $73.5 million

operating budget. A $2.6 million surplus will help fill the immediate gaps in stormwater funding.

According to the city's website, residents and business owners who are owed refunds will be contacted within the next two months.

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DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On August 5, 2021, I served the:

- **Joint Test Claim filed by County of Riverside et al., on November 10, 2011, revised on December 2, 2011, April 28, 2017, and corrected on August 5, 2021**

  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03
  County of Riverside, Riverside County Flood Control and Water Conservation District, Cities of Murrieta, Temecula, and Wildomar, Co-Claimants

by making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on August 5, 2021 at Sacramento, California.

Jill L. Magee
Commission on State Mandates
980 Ninth Street, Suite 300
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COMMISSION ON STATE MANDATES

Mailing List

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Claimants: City of Murrieta
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September 20, 2017
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Exhibit B

September 19, 2017

Ms. Heather Halsey
Executive Director
Commission on State Mandates
980 Ninth Street, Suite 300
Sacramento, CA 95814

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03

Dear Ms. Halsey:

The Department of Finance (Finance) has reviewed the test claim on the California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016. The claimants allege the test claim permit is a reimbursable state mandate because the test claim permit requirements exceed federal law, were not included in the prior permit and, therefore, impose a new program or higher level of service on local agency dischargers.

Finance defers to the State Water Resources Control Board and the California Regional Water Quality Control Board, San Diego Region, on the impact of the Supreme Court decision *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749 on the federal law component of the state mandate determination. Finance also defers to the Boards on the assertion that the test claim activities impose a new program or higher level of service. Finance comments primarily on the adequacy of fee authority issue raised by the claimants.

Claimants argue they have no fee authority or revenue source other than their general fund to fully cover the alleged mandated costs incurred for the claimed activities. Finance believes claimants do have stormwater fee authority undiminished by Propositions 218 or 26. Notably, Proposition 26 specifically excludes assessments and property-related fees imposed in accordance with Proposition 218 from the definition of taxes (Art. XIIIC, § 1, subd. (e)(7)). Further, claimants have authority to impose property-related fees under their police power for alleged mandated permit activities whether or not it is politically feasible to impose such fees via voter approval as may be required by Proposition 218. Local governments can choose not to submit a fee to the voters and voters can indeed reject a proposed fee, but not with the effect of turning permit costs into state reimbursable mandates.

In *Clovis Unified School Dist. v. Chiang* (2010) 188 Cal. App.4th 794, college districts challenged the State Controller's mandate claiming instructions that automatically reduced reimbursement claims by the amount the districts are statutorily authorized to charge students for health fees, regardless of whether the districts chose to charge the fees or not. The court held that "[to] the extent a local agency or school district 'has the authority' to charge for the mandated program or increased level of service, that charge cannot be recovered as a state-mandated cost. (*Clovis* at p. 812). The court reasoned that "this basic principle flows from common sense as well. As the Controller succinctly puts it, 'Claimants can choose not to require these fees, but not at the state's expense.'" (*Ibid.*)

The same reasoning applies to claimants here. They can choose not to put a fee to the voters, or the voters can reject a fee, but not at the state's expense. The application of Proposition 218 does not result in alleged mandate costs recoverable solely from tax proceeds. Sufficient fee authority exists, regardless of political feasibility. Under Government Code section 17556, subdivision (d), claimants have authority to impose fees sufficient to pay for permit activities and they are not eligible for mandate reimbursement.

If the Commission were to conclude the permit imposes reimbursable mandated costs, claimants identified potentially offsetting revenue, including access to county stormwater funds, fuel tax and community services revenue, lighting and maintenance revenue, development/business registration fees and benefit assessments that should reduce those costs and be identified by the Commission.

Sincerely,

JUSTYN HOWARD
Program Budget Manager

DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

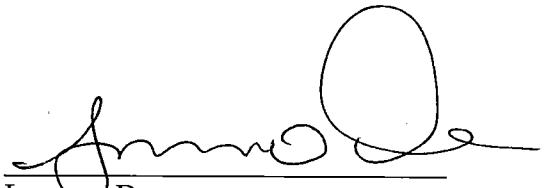
I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On September 25, 2017, I served the:

- **Finance Comments on the Test Claim filed September 20, 2017**

  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03
  County of Riverside, Riverside County Flood Control and Water Conservation District, Cities of Murrieta, Temecula, and Wildomar, Co-Claimants

By making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.
I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on September 25, 2017 at Sacramento, California.



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COMMISSION ON STATE MANDATES

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Last Updated: 9/21/17

Claim Number: 11-TC-03

Matter: California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

Claimants: City of Murrieta
City of Temecula
City of Wildomar
County of Riverside
Riverside County Flood Control and Water Conservation District

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CALIFORNIA Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

RECEIVED
September 22, 2017
Commission on
State Mandates

September 22, 2017

VIA DROP BOX

Heather Halsey
Executive Director
Commission on State Mandates
980 Ninth Street, Suite 300
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California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03; County of Riverside, Riverside County Flood Control and Water Conservation District, Cities of Murrieta, Temecula and Wildomar, Co-Claimants

COMMENTS OF STATE WATER RESOURCES CONTROL BOARD AND CALFIORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION, ON TEST CLAIM 11-TC-03

Dear Ms. Halsey:

The State Water Resources Control Board (State Water Board) and the San Diego Regional Water Quality Control Board (San Diego Water Board) (collectively "Water Boards") jointly file this opposition to Test Claim 11-TC-03. This Test Claim arises from a federal permit issued by the San Diego Water Board in 2010 as Order No. R9-2010-0016 (*Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District Within the San Diego Region (National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108766)* (hereafter NPDES Permit, MS4 Permit or Permit). The Test Claim filed with the Commission on State Mandates (Commission) seeks reimbursement of estimated and other unspecified costs of implementing or complying with multiple requirements in the Permit.

I. INTRODUCTION

The San Diego Water Board issued this NPDES Permit pursuant to requirements in the federal Clean Water Act (CWA),[1] its implementing regulations, and guidance from the United States Environmental Protection Agency (U.S. EPA). The State Water Board and San Diego Water Board have been authorized by the U.S. EPA to issue NPDES permits—which are mandated by the CWA—in lieu of issuance of these permits by U.S. EPA. The Permit regulates the discharge of storm water runoff from the municipal separate storm sewer systems (MS4s) within

[1] Federal Water Pollution Control Act (FWPCA; 33 U.S.C.A. §§ 1251 et seq.) The federal Act is referred to herein by its popular name, the Clean Water Act (CWA) and the code sections used are those for the CWA.

the County of Riverside. Claimants are incorporated cities within Riverside County, the County of Riverside and Riverside County Flood Control and Water Conservation District Copermittees) within the San Diego Region. Pursuant to the independent federal laws in the Clean Water Act, this Permit also requires prohibitions on the discharge of non-storm water *into* the Claimants' MS4s.[2] These prohibitions are not subject to the maximum extent practicable technical standard for storm water discharges.

The federal Clean Water Act prohibits discharges of pollutants to waters of the United States except in compliance with a NPDES permit. In the Clean Water Act, Congress mandated that local agencies must apply for and receive permits regulating discharges of pollutants from their MS4s to waters of the United States. Congress also mandated that local agencies prohibit discharges of most non-storm water discharges into their MS4s. Local agencies are generally issued a single system-wide MS4 permit for each inter-connected municipal storm sewer system.[3] The San Diego Water Board issued Order No. R9-2010-0016 on November 10, 2010. As required by federal statute and regulations, the Permit contains numerous requirements for the Copermittees to take actions, known as Best Management Practices (BMPs), to reduce the flow of pollutants into waters in the San Diego Region in order to improve water quality. When it considered the Permit, the San Diego Water Board found that provisions and requirements were necessary to meet the maximum extent practicable standard (MEP) and are based exclusively on federal law.[4]

In order to obtain reimbursement, the Claimants must show as a threshold matter that the state has imposed new programs or higher levels of service.[5] They must prove either that (1) the program must carry out a governmental function of providing services to the public, or (2) the requirements, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state.[6]

The Claimants are not entitled to subvention if they proposed the permit provisions, if the costs are imposed as a result of federal mandates rather than state mandates, or if any additional costs beyond a federal mandate are *de minimis*. Finally, Claimants must establish that they are required to use tax monies to pay for permit implementation of permit provisions.[7] As explained in detail below, the Claimants are not entitled to subvention of costs for the provisions challenged through their Test Claim. They have not shown that the challenged provisions constitute new programs or higher levels of service or are unique to local agencies and one or more exceptions under mandates law applies to each challenged provision, precluding a finding that subvention of funds is required.

Since the Test Claim was filed in November 2011, the California Supreme Court decided *Department of Finance v. Comm'n on State Mandates* (2016) 1 Cal.5th 749, *as modified on denial of rehearing* (Nov. 16, 2016) (*Department of Finance*). The Supreme Court's opinion was limited to a narrow issue: whether three conditions concerning trash receptacles and inspections

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[2] CWA § 402(p)(3)(B)(ii).

[3] CWA § 402(p)(3)(B)(i).

[4] See, e.g., 2010 Permit, Findings D.1.a, D.1.c, D.1.f, D.2.e, D.3.a, Fact Sheet E.6., p. 93.

[5] Cal. Const., Art. XIII B, § 6, subd. (a).

[6] Cal. Const., Art. XIIIB, § 6, subd. (a).

[7] See Cal. Gov. Code § 17556.

in the 2001 Los Angeles Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) permit (LA MS4 Permit) required controls that would reduce the discharge of pollutants to the MEP, as required by the Clean Water Act.[8]

By contrast, the 2010 Riverside MS4 Permit (2010 Permit) reflects the San Diego Water Board's findings that each of the challenged permit terms was *necessary* to comply with the federal requirement that MS4 permits impose controls that reduce the discharge of pollutants to the MEP,[9] and were based entirely on federal authority. The Supreme Court noted the absence of these findings in the LA Permit and further opined that such findings would be entitled to deference.[10] In addition, the Supreme Court's primary focus was the construction of MEP. This test claim raises the following legal questions or factually distinct circumstances that the Supreme Court did not address:

1. The San Diego Water Board found the permit requirements at issue in this test claim were federal mandates. "Had the Regional Board found when imposing the disputed permit conditions, that those conditions were the only means by which the maximum extent practicable standard could be implemented, deference to the board's expertise in reaching that finding would be appropriate."[11] Such findings are "case specific, based among other things on factual circumstances."[12]
2. The LA permittees and Los Angeles Water Board did not dispute that each of the three challenged requirements were a new program or higher level of service[13] and none were contained in previous permits.[14] That is not the case in this Test Claim as the San Diego Water Board contends that none of the challenged requirements is a new program or higher level of service.
3. There was no evaluation of whether the contested provisions were required under a TMDL or other independent federal mandate such as the mandate to effectively prohibit non-storm water discharges into their MS4s.
4. None of the three requirements evaluated by the Supreme Court were terms U.S. EPA included in any EPA-issued MS4 NPDES permits.[15]
5. The Supreme Court did not evaluate whether the local government had the authority to levy fees or assessments pursuant to Government Code section 17556, subdivision (d). (*Id.* at p. 761 [acknowledging that the Commission found that the local governments were not entitled to reimbursement because they had authority to levy fees to pay for the required inspections, an issue the Supreme Court did not review].)
6. The Supreme Court did not consider the exception to unfunded state mandates for generally applicable requirements. The Permit's discharge requirements are generally applicable and do not impose "unique" obligations on municipal entities.[16]

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[8] *Id.* at p. 757, citing 33 U.S.C. § 1342(p)(3)(B).

[9] See e.g., 2010 Permit, Findings D.1.a, D.1.c, D.1.f, D.2.e, D.3.a, Fact Sheet E.6., p. 93.

[10] *Dep't. of Finance, v. Comm'n on State Mandates, supra*, 1 Cal.5th at p. 768.

[11] *Ibid.*

[12] *Ibid.*, fn. 15.

[13] *Id.*, at p. 762.

[14] *Id.* at pp. 760-61.

[15] *Id.* at pp. 761 and 771-72.

[16] The Water Boards also note that in several instances Claimants rely upon the Commission's prior findings in *Statement of Decision in Case No. 07-TC-09, Discharge of Stormwater Runoff – Order No. R9-2007-0001*

(footnote continued on next page)

7. The Supreme Court did not evaluate the permittees' voluntary participation in the NPDES program.

As discussed below, the Supreme Court's November 16, 2016, modifications to its opinion underscore that the determination of whether a particular requirement exceeds the federal standards is a case-specific, factual determination.

II. BACKGROUND

The Water Boards contend that the challenged provisions impose neither new programs nor higher levels of service on local governments. Should the Commission disagree, the Water Boards urge the Commission to find that one or more of the legislative or judicially recognized unfunded state mandates exceptions apply to preclude any findings of subvention. The Water Boards discuss all of the provisions and applicable exceptions below. In light of the San Diego Water Board's findings that permit provisions are necessary for the Claimants to meet the MEP standard[17] and are based entirely on federal authority,[18] the principal question at issue will be to evaluate, with appropriate deference, whether the challenged provisions are federal mandates, as the San Diego Water Board determined when it adopted the Permit. The Water Boards elaborate on these issues below in both in general and provision-specific discussion, but here provide some additional legal context for the Water Boards' decisions and issuance of MS4 permits under federal law.

A. Regulatory Overview of the Clean Water Act Municipal Storm Water Program

In 1972, the federal Clean Water Act was extensively amended to implement a permitting system for all discharges of pollutants from "point sources" to waters of the United States.[19] The permits are issued pursuant to the National Pollutant Discharge Elimination System, and are known as "NPDES permits." The 1972 amendments allowed U.S. EPA to authorize states to issue these permits.[20] California was the first state in the nation to obtain such authorization. In order to obtain this authorization, the California Legislature amended the Water Code, finding that the state should implement the federal law in order to avoid direct regulation by the federal government.[21] The California legislature mandated that California's permit program must ensure consistency with federal law.[22]

(footnote continued from previous page)
(March 30, 2010) as support for the arguments in this Test Claim. In considering the challenged Permit provisions, the Water Boards urge the Commission to recognize factual distinctions between the two permits and the fact that challenges to the Commission's findings on multiple mandates law matters in the 2010 Statement of Decision have not yet been resolved by the courts. Specifically, the courts have not yet determined how, if at all, the *Department of Finance* decision affects that matter and numerous other issues were raised but not addressed by *Department of Finance.*

[17] See, e.g., 2010 Permit, Finding D.1.a. (the challenged non-storm water provisions are not subject to the MEP standard but are based on independent federal authority.)

[18] See 2010 Permit Fact Sheet, Finding E.6, p. 93.

[19] CWA §§ 301 and 402.

[20] CWA § 402(b).

[21] Wat. Code, § 13370 *et seq.*, adding Chapter 5.5 to the Porter-Cologne Water Quality Control Act.

[22] Wat. Code, § 13372.

The Water Boards are the state agencies charged with implementing the federal program.[23] The State Water Board's regulations incorporate the U.S. EPA regulations implementing the federal permit program.[24] Therefore, both the CWA and U.S. EPA regulations are applicable to the permit program in California.[25] In California, permits to allow discharges into state waters are termed "waste discharge requirements."[26] When issuing permits for discharges to waters of the United States, the term "waste discharge requirements" is equivalent to the term "permit" in the CWA.[27] Thus, waste discharge requirements that the Water Boards issue for discharges to waters of the United States are NPDES permits under federal law. When the San Diego Water Board, a state agency, adopts an NPDES permit in lieu of U.S. EPA, it must adopt as stringent a permit as the federal agency would have.[28]

The Clean Water Act prohibits the discharge of pollutants from point sources to waters of the United States, except in compliance with an NPDES permit.[29] In 1973, U.S. EPA issued regulations that exempted certain types of discharges it determined were administratively infeasible to regulate, including storm water runoff. The reason that such regulation is difficult, as will be more fully explained below, is that storm water runoff generally is not subjected to any treatment. Instead, it simply runs off urban streets, into gutters and drainage ways, and flows directly into streams, lakes, and the ocean.[30] This exemption was overruled in *Natural Resources Defense Council v. Costle* (1977) 568 F.2d 1369, which held that the exemption was illegal, and ordered U.S. EPA to require NPDES permits for storm water runoff. In *Costle*, the court suggested innovative methods for permitting, including using general permits for numerous sources and issuing permits that "proscribe industry practices that aggravate the problem of point source Pollution."[31] Where permits proscribe actions that dischargers must implement, these requirements are commonly called "best management practices" (BMPs). Despite the *Costle* decision, U.S. EPA had not adopted regulations implementing a permitting program for storm water runoff by 1987. That year, Congress amended the CWA, specifically requiring storm water permits for industrial and municipal storm water runoff.[32] The amendments require NPDES permits for "[a] discharge from a municipal separate storm sewer system [MS4] serving a population of 250,000 or more."[33]

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[23] Wat. Code, § 13370.

[24] Cal. Code Regs., tit. 23, § 2235.2.

[25] The permits *may* also include additional state requirements. (Cal. Code Regs., tit. 23, § 2235.3; *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613.)

[26] Wat. Code, § 13263.

[27] Wat. Code, § 13374.

[28] CWA § 402(b).

[29] CWA § 301(a). In general, "navigable waters" or "waters of the United States," includes all surface waters, such as rivers, lakes, bays and the ocean. (CWA § 502.)

[30] The chief traditional categories of discharges subject to NPDES permits are industrial process wastewater and sanitary sewer effluent. Both of these discharges are typically processed in a treatment plant before they are discharges to surface waters.

[31] *Costle*, *supra*, at 1380.

[32] CWA § 402(p).

[33] CWA § 402(p)(2)(C). U.S. EPA defines municipal separate storm sewer systems (MS4s) that serve a population over 250,000 as "large" MS4s.

The Clean Water Act contains three provisions specific to permits for MS4s: (1) permits may be issued on a system- or jurisdiction-wide basis; (2) permits must include a requirement to effectively prohibit non-storm water discharges into storm sewers; and (3) permits must require controls to reduce the discharge of pollutants to the maximum extent practicable (MEP).[34] In describing the controls that permits must include, the statute states that the controls shall include: "management practices, control techniques and system, design and engineering methods, and such other provisions as the [permit writer] determines appropriate for the control of such pollutants."[35] Thus, the federal law mandates that permits issued to MS4s must require management practices[36] that will result in reducing pollutants to the MEP. The state is required, by federal law, to select the BMPs.[37]

On November 16, 1990, U.S. EPA published regulations addressing storm water discharges from MS4s.[38] The regulations establish minimum requirements for MS4 permits and generally focus on the requirement that MS4s implement programs to reduce the amount of pollutants found in storm water discharges to the MEP. However, the regulations also require the MS4's program to include an element to detect and remove illicit discharges and improper disposal into the storm sewer.[39] "Illicit discharges" defined in the regulations is the most closely applicable definition of "non-storm water" contained in federal law, and the terms are often used interchangeably. The State Water Board has concluded that "U.S. EPA added the illicit discharge program requirement with the stated intent of implementing the Clean Water Act's provision requiring permits to 'effectively prohibit non-storm water discharges.'"[40] The importance of this history is to emphasize that the starting point for the discussion of MS4 permits is that *all discharges of any substance other than stormwater are prohibited - completely.*

B. Overview of Legal Standards for MS4 Permits

The Clean Water Act does not provide a specific set of permit terms that the permitting agency must include in each MS4 permit. Rather, the NPDES regulations require a permitting agency to determine what controls will meet MEP in a particular MS4 permit. The applicable legal standards that permitting authorities must meet when issuing MS4 permits are set forth in Clean Water Act section 402(p)(3)(B)(ii) and (iii) and require that MS4 permits:

> (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers, and
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> (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system design and engineering methods, and such other provisions as the

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[34] CWA § 402(p)(3)(B).

[35] *Id.*

[36] These are commonly referred to as "best management practices," or "BMPs."

[37] *NRDC v. USEPA* (9th Cir. 1992) 966 F.2d 1292.

[38] Vol. 55 Federal Register (Fed. Reg.) 47990 *et seq.* (Nov. 16, 1990).

[39] 40 C.F.R. § 122.26, subd. (d)(2)(iv)(B).

[40] State Board Order WQ 2009-0008 (County of Los Angeles), p. 4 (withdrawn on other grounds).

> Administrator or the State determines appropriate for the control of such pollutants.

Federal and state permit writers must comply with these legal standards.[41]

To obtain coverage under an NPDES permit, federal regulations specify the information that applicants for MS4 permits must include in their applications. For the large and medium MS4s, the application requirements are extensive. Applications:

> shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable.[42]

The federal regulations also require, among other elements, that a proposed management program must address oversight of discharges into the system from the general population, and from industrial and construction activities within its jurisdiction and shall include "[a] description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls."[43]

1. The Federal MEP Standard

The maximum extent practicable or "MEP" standard is akin to a technology-based standard and was first established in the Clean Water Act in 1987. The fundamental requirement that municipalities reduce pollutants in MS4s to the MEP remains a cornerstone of the mandate imposed on municipalities by the federal Clean Water Act and implementing NPDES regulations. Meeting the MEP standard is generally a result of emphasizing pollution prevention and structural and treatment methods serving as additional lines of defense. The MEP approach is an ever evolving, flexible and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so too do the actions that must be taken to comply with the standard. This is consistent with the U.S. EPA's guidance that successive permits for the same MS4 must become more refined and detailed. The MEP standard, which the San Diego Water Board found the permit provisions

[41] CWA § 402(b).

[42] 40 C.F.R. § 122.26(d)(2)(iv).

[43] *Id.*, § 122.26(d)(2)(iv)(A).

necessary to meet in this case, is discussed in more detail below as relevant to challenged permit provisions.

2. The Federal Prohibition on Non-Storm Water Discharges

Wholly independent from the MEP standard is the Clean Water Act requirement that MS4 permittees effectively prohibit non-storm water discharges to their MS4s. Under Clean Water Act section 402(p)(3)(B)(ii), permitting agencies must ensure that permits for MS4 discharges include requirements necessary to "effectively prohibit non-stormwater discharges into the storm sewers." U.S. EPA has defined "storm water" to mean "stormwater runoff, snow melt runoff and surface runoff and drainage." While "non-storm water" is not defined in the CWA or federal regulations, the federal regulations define "illicit discharge" as "any discharge to a municipal separate storm sewer that is not composed entirely of storm water and that is not covered by an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer and discharges resulting from firefighting activities)."[44] This definition is the most closely applicable definition of "non-storm water" contained in federal law. Non-storm water discharges are generally considered dry weather discharges.[45] In general, the requirement to "effectively prohibit" non-storm water discharges requires either prohibiting the flows to the MS4's system through a program to detect and remove illicit discharges or ensuring that operators of such non-storm water systems obtain NPDES permits for those discharges. MS4 operators meet this requirement by implementing a program to detect and remove illicit discharges, or by requiring a discharger to obtain a separate NPDES permit for the non-storm water discharge into the storm sewer.[46]

C. Overview of Riverside County MS4 Permit Development

In 1990, pursuant to the CWA amendments of 1987, the San Diego Water Board issued the first municipal storm water permit to the County of Riverside and other copermittees. In May 1998,[47] and again in 2004 and 2010, the San Diego Water Board renewed the permit. The Permit that is the subject of this test claim is the fourth such permit. In part because of persistent exceedances of federal water quality objectives in most watersheds, the 2010 Permit increased the emphasis on storm water discharge management on a watershed basis. At that time, the San Diego Water Board noted that "[a]ddressing storm water on a watershed scale focuses on water quality results by emphasizing receiving waters within the watershed."[48] As a general matter, the Permit carries over and builds on the prior permit programs and implements independent federal requirements, all with a focus on water quality outcomes.

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[44] 40 C.F.R. § 122.26(b)(2).

[45] See also, State Water Board Order No. 2015-0175 (2012 Los Angeles MS4 Permit), pp.62-63, confirming that non-storm water discharges to the MS4s under the Clean Water Act are not subject to the MEP standard applicable to storm water discharges.

[46] 40 C.F.R. § 122.26(d)(2)(iv)(B). See also 55 Fed. Reg. 47990, 47995 ["Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit"].

[47] USEPA objected to and assumed responsibility for the 1998 Permit in September 1998. In 1999, USEPA reissued the permit with modifications to the receiving water limitations language necessary to comply with the Clean Water Act. USEPA returned the permit as revised to the San Diego Water Board for implementation and the subsequently modified the originally adopted permit to incorporate the USEPA-required changes in 2000.

[48] *Ibid.*

III. OVERVIEW OF MANDATES LAW

Article XIIIB, Section 6, of the California Constitution requires subvention of funds to reimburse local governments for state-mandated programs in specified situations. There are several exceptions and limitations to the subvention requirements that provide bases for the Commission to determine that the Test Claim is not subject to subvention. Article XIIIB, Section 6 provides, "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service." Implementing statutes clarify that no subvention of funds is required if: (1) the mandate imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation (Govt. Code, § 17556, subd. (c)); or (2) the local agency proposed the mandate (*id.*, subd. (a)); or (3) the local agency has the authority to levy service charges, fees, or assessments sufficient to pay (*id.*, subd. (d)).

Numerous judicial decisions have further defined limitations on the requirements for subvention of funds. Specifically, subvention is only required if expenditure of tax monies is required, and not if the costs can be reallocated or paid for with fees.[49] In addition, reimbursement to local agencies is required only for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities. Laws of general application are not entitled to subvention.[50] The fact that a requirement may single out local governments is not dispositive; where local agencies are required to perform the same functions as private industry, no subvention is required.[51]

IV. THE CHALLENGED PERMIT PROVISIONS DO NOT IMPOSE NEW PROGRAMS OR REQUIRE HIGHER LEVELS OF SERVICE AND APPLICABLE MANDATES EXCEPTIONS PRECLUDE SUBVENTION—GENERAL RESPONSES

Claimants contend that this Permit imposes numerous new programs or requires higher levels of service than previously required and that all of the activities for which they seek reimbursement exceed federal law. They also assert that the provisions are uniquely imposed on local government and they are unable to assess a fee to recover the costs of the mandated activities. As a threshold matter, the Test Claim provisions have not been determined to impose new programs or higher levels of service within the context of mandates law.[52] The following general discussion of applicable mandates law supports denial of each of Claimants' challenges. Where appropriate, the Water Boards provide additional support for the conclusion that exceptions apply to specific challenged provisions, in Section V, below.

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[49] *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176; *Redevelopment Agency v. Commission on State Mandates* (1997) 55 Cal.App.4th 976.

[50] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46.

[51] *City of Richmond v. Commission on State Mandates* (1998) 64 Cal.App.4th 1190.

[52] What constitutes a new program or higher level of service in the context of municipal storm water permits remains unresolved. The issue was raised in the Water Boards' and Department of Finance's Petition for Writ of Mandate regarding the Statement of Decision in 07-TC-09 (San Diego Water Board Order No. R9-2007-0001), referenced above.

Even if the Commission finds that some of the challenged provisions do impose a new program or higher level of service, as explained below, the challenged provisions are nonreimbursable because of applicable mandates exceptions. The Claimants, as well as other Copermittees, proposed concepts on which many of the challenged permit requirements are based in their permit application, or report of waste discharge (ROWD) or in the permitting process for their requested permit. The San Diego Water Board found that the challenged provisions were adopted entirely under federal law and are necessary to implement the MEP standard and other independent federal law requirements. Therefore none of the costs are for activities exceeding federal requirements. Claimants are not *required* to use taxes to pay for the costs for the programs. They can be paid for by levying fees especially enacted for storm water programs.[53] The local agencies have not established that tax monies are required.[54]

Additionally, compliance with NPDES permits, and specifically with storm water permits, is required of private industry as well as state and federal government agencies. Local government is not singled out. And, in fact, the requirements for industrial entities are more stringent than for local government dischargers because industrial entities are required to strictly comply with water quality standards. Similarly, private industry and governmental agencies, like municipalities, are required to control non-storm water discharges from their facilities and, where they have been identified as contributing to a surface water impairment, are assigned a wasteload allocation in federally required TMDLs. Finally, if the Commission determines that a portion of the MS4 operators' activities exceed federal law requirements and would otherwise qualify for subvention, the costs are *de minimis* and therefore not reimbursable.

A. The Contested Provisions Do Not Impose New Programs or Higher Levels of Service

Not a New Program

Under mandates law, a program is defined as "a program which carries out the 'governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state.'" *(County of Los Angeles v. Comm'n on State Mandates* (2003) 110 Cal.App.4th 1176, 1189 [citing *County of Los Angeles v. State of California* (1987) 43 Cal. 3d 46, 56].) A program is "new" if the local government had not previously been required to

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[53] The Claimants generally state that they are unaware of authority to raise fees or impose surcharges to fund the modifications to their Permit. The claimants refer to limitations on assessing fees and surcharges under California law. The referenced law concerns only the percent of voters who must approve the assessment. The Cities of Palo Alto, San Clemente, San Jose, Alameda and Santa Cruz have storm water fee funded programs. Thus, the municipalities have not shown they are *required* to rely on using tax money to fund challenged activities.

[54] As mentioned in the Introduction, what constitutes fee authority in the context of municipal storm water permits, particularly with consideration of Proposition 218, remains unresolved. The Commission did not consider the later approved Proposition 26. In their petition for writ of mandate in *State of California, Department of Finance, et al., v. Commission on State Mandates,* Sacramento County Superior Court, Case No. 34-2010-80000604, the Water Boards and Department of Finance challenged the Commission's conclusion in the underlying Statement of Decision in 07-TC-09 that the requirement for voter approval as prerequisite to raising fees precluded finding that a local agency has fee authority to pay for some permit-related activities. Likewise, Claimants in a cross-petition for writ in the same matter challenged the sufficiency of the evidence supporting the Commission's underlying determination that local agencies have authority to fund hydromodification and low impact development programs through their land development programs. These issues remain unresolved. The Court of Appeal has set oral argument in this matter for November 20, 2017.

institute it. (*Ibid.*) Here, even if each of the challenged provisions could be considered a "program," none meets the definition of "new." Claimants had been permitted under the NPDES program implementing storm water programs for more than two decades at the time the MS4 Permit was adopted. Prior permits, like the Permit, included management plan requirements, monitoring programs, annual reporting requirements, land development requirements, enforcement obligations, and the requirement to comply with receiving water limitations and prohibitions through an iterative process.[55]

No Higher Levels of Service

The changes to the requirements of prior permits (e.g., increased detail or specificity) also do not amount to a higher level of service, both because equivalent changes are applicable to non-municipal permittees, discussed in Section V, below, and because they are merely refinements of existing requirements.[56] A higher level of service is not simply any increase in costs. "If the Legislature had intended to continue to equate 'increased level of service' with 'additional costs,' then the provision would be circular: 'costs mandate by the state' are defined as 'increased costs' due to an increased level of service, which, in turn would be defined as 'additional costs.'"[57] Costs for purposes of Section 6 do "not equal every increase in a locality's budget resulting from compliance with a new state directive."[58]

Nor does every increase in specificity about where to direct costs amount to a higher level of service.[59] That the level of specificity in a permit reconsidered and reissued every five years may have changed over time is consistent with U.S. EPA's guidance that MS4 permitting follow an iterative process whereby each successive permit becomes more refined, detailed, and expanded as needed, based on experience under the previous permit. (See, 55 Fed. Reg. 47990, 48052 ("EPA anticipates that storm water management programs will evolve and mature over time."); 64 Fed. Reg. 68722, 68754; Dec. 8, 1999) ("EPA envisions application of the MEP standard as an iterative process.") and Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits (Sept. 1, 1996) ("The interim permitting approach uses BMPs in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards."))[60]

Rather, the costs incurred must involve programs previously funded exclusively by the state. (See *City of San Jose v. State of California* (1996) 45 Cal. App.4th 1802, 1812 [citing *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 836]; see also *County of Sonoma v. Comm'n on State Mandates* (2000) 84 Cal. App.4th 1264, 1288 [state law requiring reallocation of school funds from one local government entity to another, where local government generally

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[55] See, San Diego Water Board Order Nos. 98-02 (as issued by U.S. EPA in 1999 and reissued by the San Diego Water Board in 2000) and R9-2004-001, both issued to Riverside County Copermittees in the San Diego Region.

[56] See *County of Los Angeles v. Comm'n on State Mandates*, *supra,* 110 Cal.App. 4th at pp. 1189-1190.

[57] *Id.,* at p. 1191.

[58] *Id.,* at p. 1194; accord *San Diego Unified School Dist. v. Comm'n on State Mandates* (2004) 33 Cal.4th 859, 876-877.

[59] See *Id.,* at p. 1194 [requiring local law enforcement agencies devote some of their training budgets to domestic violence training was not a higher level of service].

[60] See Letter from U.S. EPA, Alexis Strauss, to State Water Board, April 10, 2008, concerning Los Angeles County Copermittee Test Claims Nos. 03-TC-04, 03-TC-19, 03-TC-20, and 03-TC-21.

had always had a substantial role in funding schools, did not impose a higher level of service].) The "state must be attempting to divest itself of its responsibility to provide fiscal support for a program, or forcing a new program on a locality for which it is ill equipped to allocate funding." (See *County of Los Angeles v. Comm'n on State Mandates, supra,* 110 Cal.App.4th at p. 1194; accord *Dept. of Finance v. Comm'n on State Mandates, supra,* 1 Cal.5th at p. 771 [agreeing that state had shifted responsibility for some industrial inspections to local government agency].)

With some exceptions, Claimants do not contend that the state has shifted any costs to local government or that they have been saddled with entirely new obligations to control pollution in storm water. Without any burden shifting from the state to municipalities, mere direction from the San Diego Water Board that the municipalities reallocate some of their resources in a particular way does not amount to a higher level of service. (See *County of Los Angeles v. Comm'n on State Mandates, supra,* 110 Cal.App.4th at p. 1194.) "Loss of flexibility does not, in and of itself, require the [local agencies] to expend funds that previously had been expended by the State." (*Ibid.;* accord *Dept. of Finance v. Comm'n on State Mandates* (2003) 30 Cal.App.4th 727, 748 [requirement that school districts allocate some of their grant funds in a particular way did not transform those costs into a reimbursable state mandate].)

In this case, any costs arising from the Permit's requirements do not result from a "new" program. Nor do they result from a "higher level of service," because the state has not shifted its own responsibilities to local agencies and the permittees are not "ill-equipped" to allocate funding to storm water control. And, as explained below, Copermittees have been subject to the same federal standards (the federal MEP standard or the requirement to effectively prohibit non-storm water discharges) since 1990. Whether must implement different approaches in an effort to achieve the required federal standards does not mean the state has imposed a new program or required performance of a higher level of service.

B. Mandates Exceptions Preclude Finding Subvention is Required

1. Under *Department of Finance*, the San Diego Water Board's federal law findings are entitled to deference.

Federal law specifically requires that permits be issued to the local governments that operate MS4s and that permits must require programs and actions that will result in reducing the pollutants that discharge from the MS4 to waters of the United States to the maximum extent practicable. If the Water Boards had not been authorized to issue the permit in lieu of U.S. EPA, the MS4 discharges would be prohibited unless U.S. EPA itself issued a similar permit directly to the local governments. Therefore, in issuing the permit provisions necessary to comply with federal law, the San Diego Water Board exercised its duty under federal law. As the Ninth Circuit Court of Appeals held in *Natural Resources Defense Council v. U.S. EPA* (9th Cir. 1992) 996 F.2d 1292, "Congress did not mandate a minimum standards approach."[61] Rather, Congress mandated that the permitting entity, here the San Diego Water Board, determine appropriate provisions designed to control pollutants.[62]

[61] *NRDC v. U.S. EPA, supra,* at 1308.

[62] *Id.*

The Court of Appeal in *Rancho Cucamonga v. Regional Water Quality Control Bd., Santa Ana Region,* succinctly addressed the federal mandate on the regional water boards to prescribe requirements that meet the federal MEP standard:[63]

> In creating a permit system for dischargers from municipal storm sewers, Congress intended to implement actual programs. (*Natural Resources Defense Council, Inc. v. Costle* (D.C.Cir.1977) 568 F.2d 1369, 1375.) The Clean Water Act authorizes the imposition of permit conditions, including: "management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." (33 U.S.C. § 1342, subd. (p)(3)(B)(iii).) The Act authorizes states to issue permits with conditions necessary to carry out its provisions. (33 U.S.C. § 1342, subd. (a)(1).) The permitting agency has discretion to decide what practices, techniques, methods and other provisions are appropriate and necessary to control the discharge of pollutants. (*NRDC v. EPA* (9th Cir.1992) 966 F.2d 1292, 1308.) That is what the Regional Board has created in the 2002 permit.[64]

As in *Rancho Cucamonga*, the Permit comprises requirements to implement BMPs to meet the MEP standard for storm water discharges. The federal law mandates that permits issued to MS4s must require management practices, control techniques and system, design and engineering methods, and other provisions that will result in reducing pollutants to the MEP. Similarly, the San Diego Water Board exercised its duty under federal law and adopted the Permit provisions requiring compliance with non-storm water discharge prohibitions and TMDL requirements, independent federal law mandates. The fact that the San Diego Water Board exercised its discretion, as required by federal law, to impose requirements that it determined were necessary to implement federal law and meet the MEP standard in this Permit supports the conclusion that the permit provisions are federal, not state mandates. Under the factual circumstances here, *Department of Finance* does not require a different result.

An essential underpinning of *Department of Finance* is the Supreme Court's determination that the LA MS4 Permit had as its roots both federal and State law. The Los Angeles Water Board made no finding that the permit requirements were necessary to implement the MEP standard.[65] Instead, the Los Angeles Water Board found only that the permit was consistent with or within the federal standard.

In contrast, when issuing the Permit, the San Diego Water Board implemented *only federal law*: The San Diego Water Board found: "[I]t is entirely federal authority that forms the legal basis to establish the permit provisions[,]"[66] and that "[T]his Order implements federally mandated requirements under the CWA" including "federal requirements to effectively prohibit non-storm

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[63] *City of Rancho Cucamonga v. Regional Water Quality Control Bd., Santa Ana Region* (2002) 135 Cal.App.4th 1377.

[64] *Rancho Cucamonga, supra,* at 1389.

[65] *Department of Finance v. Comm'n on State Mandates, supra,* 1 Cal.5th at p. 768.

[66] 2010 Permit Fact Sheet, p. F-34.

water discharges, to reduce the discharge of pollutants in storm water to the MEP."[67] Findings in Section E of the Permit and Fact Sheet set forth the Board's regulatory basis for issuing the Permit. Collectively, these findings make it clear that the Board intended to and did rely solely on federal law in issuing the Permit.[68]

The discussion herein describes how the contested provisions meet the MEP standard. In *Department of Finance*, the Supreme Court held that, "Had the Regional Board found when imposing the disputed permit conditions, that those conditions were the only means by which the maximum extent practicable standard could be implemented, deference to the board's expertise in reaching that finding would be appropriate."[69] Unlike the LA MS4 permit, the San Diego Water Board made findings in connection with specific challenged provisions, that such provisions were necessary to implement the maximum extent practical standard.[70] The San Diego Water Board also found:

> The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (cf. Burbank v. State Water Resources Control Bd. (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not 'less stringent' than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, *it is entirely federal authority that forms the legal basis to establish the permit provisions.* (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.)[71]

As the Supreme Court held, "deference to the board's expertise in reaching that finding would be appropriate."[72]

The Water Boards understand the Supreme Court to mean that, to be entitled to deference, regional boards must make an express finding that the particular set of permit conditions finally embodied in a given permit is required to meet that federal standard, and must support that finding with evidence. The opinion is consistent with the Boards' reading of the Clean Water Act: where a regional board has devised a set of conditions necessary to ensure local governments' compliance with federal law (that is, a set of conditions that is federally mandated), the regional board does not have a choice to impose some other, less rigorous, set of conditions.

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[67] *Id.*

[68] The finding that the permit terms are necessary to satisfy the federal MEP standard under the factual circumstances presented means the San Diego Water Board did not impose more stringent terms under the Porter-Cologne Water Quality Control Act, which it is authorized to do. (See *City of Burbank v. State Water Resources Control Board* (2005) 35 Cal.4th 613, 626-629.)

[69] *Department of Finance v. Comm'n on State Mandates, supra,* 1 Cal.5th at p. 768.

[70] See, e.g., 2010 Permit, Finding D.1.a. ("This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in storm water to the MEP.")

[71] 2010 Permit Fact Sheet, p. F-93 (emphasis added).

[72] *Department of Finance v. Comm'n on State Mandates, supra,* 1 Cal.5th at p. 768.

Additionally, this Permit, like its predecessors, implements the wholly separate Clean Water Act requirement that local agencies effectively prohibit non-storm water discharges into their storm sewers. Specifically, the Clean Water Act provides that permits for discharges from municipal storm sewers "shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers."[73] Permit provisions crafted to compel compliance with this federal mandate have been applicable since the first MS4 permit in 1990 do not constitute imposition of a new program or require that Copermittees perform a higher level of service.

Department of Finance addressed the narrow question of whether the federal MEP standard and certain implementing regulations[74] mandated both the trash can and inspection requirements contained in the LA Permit. In reaching its decision, the Supreme Court's analysis necessarily turned on whether, and to what extent, the MEP standard and the specific implementing regulations compelled the Los Angeles Regional Board to impose the challenged permit conditions.[75] Consequently, the Supreme Court decision has limited application when the federal standard compelling a challenged permit provision is wholly separate from the MEP standard and those specific implementing regulations. One of the exceptions to the subvention requirements is if the mandate imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation.[76]

The non-storm water provisions are authorized by an independent federal requirement not analyzed by the Supreme Court in the *Department of Finance* decision.

2. U.S. EPA Has Required Similar Provisions in Permits it Has Issued

The Supreme Court observed that U.S. EPA-issued permits do not contain requirements to provide trash receptacles at transit stops (a requirement of the LA MS4 Permit), and found that the absence of such conditions in EPA-issued permits "undermines the argument that the requirement was federally mandated."[77] The Court's modifications to its original opinion underscore that determining what constitutes MEP is a case-specific, factual determination and the absence of similar conditions in U.S. EPA-issued permits is not fatal to the argument that a particular requirement is necessary to meet the federal standard.[78] U.S. EPA has, however,

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[73] CWA § 402(p)(3)(B)(ii).

[74] The Supreme Court considered Title 40 of the Code of Federal Regulations, parts 122.26(d)(2)(iv)(A)(3), (B)(1), (C)(1),and (D)(3) in reaching its decision. (*Department of Finance v. Comm'n on State Mandates*, *supra*, 1 Cal.5th at p. 749.)

[75] *Id.* at p. 767 ("The federal CWA broadly directed the board to issue permits...designed to reduce the pollutant discharges to the maximum extent practicable").

[76] Gov. Code, § 17556, subd. (c).

[77] *Department of Finance v. Comm'n on State Mandates, supra,* 1 Cal.5th at p. 772.

[78] The Court:

> The opinion in this matter filed on August 29, 2016, and appearing in the California Official Reports at 1 Cal.5th 749, is modified as follows: On page 768 of the published opinion, a footnote is inserted at the end of the sentence that reads: "The board's legal authority to administer the CWA and its technical experience in water quality control would call on sister agencies as well as courts to defer to that finding." The new footnote, which is numbered as footnote 15, reads: "Of course, this finding would be case specific, based among other things on local factual circumstances." On page 771 of the published opinion, current footnote 15 is renumbered as footnote 16. On page 772 of the published opinion, the word "fatally" is deleted from the sentence that reads:

(footnote continued on next page)

issued permits requiring substantially similar provisions to some of the contested provisions of this Permit. If the State had not issued the Permit, the U.S. EPA would have done so. The inclusion of substantially similar provisions by U.S. EPA in other permits demonstrates that the San Diego Water Board effectively administered federal requirements concerning permit requirements.

To the extent the provisions are more detailed or provide more specificity than past iterations of the Permit, that is consistent with U.S. EPA's guidance that successive permits for the same MS4 must become more refined and detailed:

> The EPA also expects stormwater permits to follow an iterative process whereby each successive permit becomes more refined, detailed, and expanded as needed, based on experience under the previous permit. See, 55 Fed. Reg. 47990, 48052 ("EPA anticipates that storm water management programs will evolve and mature over time."); 64 Fed. Reg. 67722, 68754; Dec, 8, 1999) ("EPA envisions application of the MEP as an iterative process.") Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits (Sept. 1, 1996) ("The interim permitting approach uses BMPs in first-round stormwater permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards.")[79]

The permit provisions are, as the San Diego Water Board concluded, federal mandates. Even if the Commission concludes that some aspect of a challenged provision imposes requirements that exceed a federal mandate, the costs to implement those activities are *de minimis* and therefore not entitled to subvention.[80]

3. The Permit Does Not Impose Requirements Unique to Local Agencies

None of the challenged provisions is subject to subvention because the Permit is not imposed uniquely upon local government. In order to obtain reimbursement, the Claimants must demonstrate either that (1) the program must carry out a governmental function of providing services to the public, or (2) the requirements, to implement a state policy, implement unique requirements on local governments and do not apply generally to all residents. (Cal. Const. Art. XIIIB, § 6, subd. a; see also *City of Richmond v. Comm'n on State Mandates* (1998) 64 Cal.App.4th 1190, 1199.) "[T]he intent underlying section 6 was to require reimbursement to local agencies for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities."[81]

(footnote continued from previous page)

> "The fact the EPA itself had issued permits in other cities, but did not include the trash receptacle condition, fatally undermines the argument that the requirement was federally mandate."

[79] Letter from Alexis Strauss to Tam Doduc and Dorothy Rice, April 10, 2008, concerning Los Angeles County Copermittees Test Claim Nos. 03-TC-04, 03-TC-19, 03-TC 20 and 03-TC-21.

[80] See generally, *San Diego Unified School District v. Comm'n on State Mandates* (2004) 33 Cal.4th 859, 889.

[81] *Id.*, at p. 874

Reimbursement to local agencies is required only for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities. Laws of general applicability are not entitled to subvention because they do not "force" programs on localities.[82] The fact that a requirement may single out local governments is not dispositive; where local agencies are required to perform the same functions as private industry, no subvention is required.[83]

U.S. EPA requires both municipal and non-municipal storm water discharges to be controlled.[84] Moreover, numerous provision of the Regional Permit are "laws of general applicability" and therefore fail to constitute an unfunded state mandate. (See *City of Richmond v. Comm'n on State Mandates, supra,* 64 Cal.App.4th at pp. 1197-1198.) Compliance with NPDES regulations, and specifically with storm water requirements, is required by private industry as well as state and federal government agencies.[85] Local government is not subject to "unique" requirements. In fact, municipal storm water discharges are not managed as stringently as industrial and construction storm water discharges.[86] Likewise, WLAs developed in federally required TMDLs are applied to identified sources of pollutants, whether MS4 operators, private industry, or government agencies.[87] Thus, while the permit provisions in this Permit apply only to the public entities enrolled in the permit, the substantive actions required by the permit's provisions are by no means unique to this class of permittee. That other NPDES permits impose similar requirements on non-local agencies demonstrates that the storm water program is not unique to local government.

4. Separate Storm Water Discharge is a Voluntary Program

No subvention is required when a local agency incurs costs voluntarily. (See *Dept. of Finance v. Comm'n on State Mandates* (2003) 30 Cal. 4th 727, 743 [costs of complying with program requirement to prepare agenda not entitled to subvention where participation in program itself was voluntary]; *City of Merced v. State of Cal.* (1984) 153 Cal. App. 3d 777, 783 [payment for loss of goodwill not state mandated where city elected to acquire property by eminent domain].) Here, similarly, there is no requirement that a municipality discharge via storm sewers or directly into waters of the United States. MS4 permittees, like all other permittees seeking approval to discharge to waters of the United States, must obtain permission in the form of a Clean Water Act NPDES permit before doing so.[88]

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[82] *Id.* at p. 875; *County of Los Angeles v. State of California, supra,* 43 Cal.3d at pp. 56-57.

[83] *Ibid.; City of Richmond v. Comm'n on State Mandates, supra,* 64 Cal.App.4th at p. 1197.

[84] 40 C.F.R. § 122.26, subd. (a)(vi)(6).

[85] See e.g., State Water Board Caltrans MS4 Order (*NPDES Statewide Storm Water Permit, Waste Discharge Requirements for State of California, Department of Transportation* (State Water Board Order WQ 2012-0011)), State Water Board Industrial General Storm water Permit (State Water Board Order WQ 2014-0057), Naval Base San Diego NPDES Permit (San Diego Water Board Order No. R9-2016-0163), Naval Base Coronado NPDES Permit (San Diego Water Board Order No. R9-2015-0117) and NPDES Permit for National Steel and Shipbuilding Company (NASSCO) (San Diego Water Board Order No. R9-2016-0116) containing storm water and non-storm water requirements.

[86] *Defenders of Wildlife v. Browner, supra*, 191 F.3d at pp. 1164-1165 [distinguishing "strict compliance" required of industrial storm water dischargers to MEP standard applicable to municipal storm water dischargers.]

[87] See Section V.B., below, regarding TMDLs that are also applicable to agricultural dischargers and Caltrans.

[88] See *NRDC v. County of Los Angeles, supra,* 725 F.3d at p. 1198 (citing *Arkansas v. Oklahoma* (1992) 503 U.S. 91).

5. Claimants Have Authority to Raise Fees for Contested Provisions

Subvention is only required if expenditure of tax monies is required, and not if the costs can be reallocated or funded through service charges, fees, or assessments. (See Gov. Code, § 17556, subd. (d) [costs not mandated by the state when the local agency has "authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service"]; *County of Los Angeles v. Comm'n on State Mandates*, *supra*, 110 Cal.App.4th at p. 1189 ["in order for a state mandate to be found, the local governmental entity must be required to expend the proceeds of its tax revenues"]; *Redevelopment Agency v. Comm'n on State Mandates* (1997) 55 Cal.App.4th 976, 987 ["No state duty of subvention is triggered where the local agency is not required to expend its proceeds of taxes"].)[89] Subvention of funds is only required if expenditure of tax monies is required, and not if the costs are simply reallocated or funded through other means.[90]

In the Commission's Statement of Decision considered in *Department of Finance*, the Commission found that all but one of the challenged provisions issued by the Los Angeles Water Board in its MS4 permit did not qualify as unfunded state mandates as they did "not impose costs mandated by the state within the meaning of article XIII B, Section 6 of the California Constitution because the claimants have fee authority (under Cal. Const. article XI, § 7) within the meaning of Government Code section 17556, subdivision (d), sufficient to pay for the activities in those parts of the permit."[91] Although the Supreme Court acknowledged the Commission's finding, it did not address the fee issue but remanded for further proceedings. *Department of Finance* is thus inapplicable on this issue.

Similarly, here, Claimants have not demonstrated that they are precluded from establishing or raising fees. Claimants subject to this Permit are not *required* to use taxes to pay for the costs of the programs, and can levy fees, such as inspection fees. The claimants have the ability to charge fees to cover development program costs.[92] Municipalities can and do adopt fees from their residents and businesses that fund their stormwater programs. For example, the City of Alameda has adopted fees for implementation of their programs. (See, e.g., Alameda website [describing stormwater fee structure].) Indeed, Palo Alto recently raised its stormwater fee last year. The Cities of San Clemente, San Jose and Santa Cruz have also adopted fee

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[89] The claimants must also demonstrate that the fees are more than *de minimis*. (*San Diego Unified School Dist. v. Commission on State Mandates*, *supra*, 33 Cal.4th at p. 889 ["incidental procedural requirements, producing at most de minimis added cost, should be viewed as part and parcel of the underlying federal mandate, and hence nonreimbursable under Government Code, section 17556, subdivision (c)"].) *Department of Finance* did not consider when a particular cost is *de minimis*. Except to the extent the Court affirmed prior holdings that *de minimis* costs do not create reimbursable mandates, *Department of Finance* does not apply to the Commission's determination on that issue.

[90] Claimants must establish that they are required to use tax monies to pay for implementation of permit provisions. (Gov. Code §§ 17553, subd. (b)(1)(F) [test claim must identify funding sources, including general purpose funds available for this purpose, special funds and fee authority]; and Gov. Code § 17556, subd. (d).)

[91] County of Los Angeles Test Claim, Statement of Decision, p. 2.

[92] For a general overview of funding mechanisms that have been employed by municipalities, see Black and Veatch 2005 Stormwater Utility Survey, p. 2 (72% cited stormwater user fees as major [at least 90% of total income] revenue sources and the majority of utilities resported funding was adequate to meet all or most needs).

assessments.[93] Whether circumstances make it impractical to assess fees is not relevant to the inquiry. (*Connell v. Sup. Ct.* (1997) 59 Cal.App.4th 382, 398 [where statute on its face authorized water districts to levy fees sufficient to pay the costs associated with a regulatory change, there was no right to reimbursement]; *Clovis Unified School Dist. v. Chiang* (2010) 188 Cal.App.4th 794, 812 ["to the extent a local agency... 'has the authority' to charge for the mandated program or increased level of service, that charge cannot be recovered as a state mandated cost"].)

V. SPECIFIC RESPONSES

While the general discussion above in Section IV explains why it is appropriate for the Commission to reject the Test Claim in its entirety, the following elaboration on specific challenges provides additional justification in support of Test Claim rejection.

A. Removal of Categories of Irrigation Runoff from Non-Prohibited Non-Storm Water Discharges (Directive B.2.)

Claimants contend that the 2010 Permit's removal of three previously exempted categories of non-storm water discharges – irrigation water discharges comprising irrigation water, landscape irrigation and lawn watering – exceeds the federal law requirements. Claimants misinterpret the applicable federal requirement and disregard factual information in the record that supports removal of these discharge categories from the list of exempted non-storm water discharges. The San Diego Water Board's determination to remove these categories was based exclusively on the federal law mandate requiring MS4 permittees to effectively prohibit non-storm water discharges to the MS4.[94]

As discussed above, the Clean Water Act requires that MS4 permittees effectively prohibit non-storm water discharges to the MS4.[95] Non-storm water discharges are not subject to the MEP standard applicable to storm water discharges.[96] Federal MS4 permit application requirements specify that an applicant must demonstrate adequate legal authority to "[p]rohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer;" and "[c]ontrol through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water."[97] The regulations define the term "illicit discharges" as: "any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire-fighting activities."[98] In other words, since illicit discharges are not authorized by the Clean Water Act, they must be prohibited.

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[93] See documentation of City of Alameda Storm Water Fee Ordinance, City of Palo Alto Storm Drainage Fee Ordinance, and storm water fees authorized in Cities of San Clemente, San Jose and Santa Cruz, included as attachments to this response.

[94] See 2010 Permit, Finding E.6., Fact Sheet, p. 93.

[95] CWA § 402(p)(3)(ii).

[96] *Id., and see also,* State Water Resources Control Board Order No. WQ-2015-0075, pp. 62-63.

[97] 40 C.F.R. § 122.26(d)(2)(i)(B) and (C).

[98] *Id.* § 122.26(b)(2).

Implementing federal regulations do, however, identify a number of categories of non-storm water discharges that need not be treated as illicit unless a municipality has identified the category as a source of pollution. These include categories of discharges such as from foundation drains, springs, crawl space pump water, air conditioning condensation, residential car washing and dechlorinated swimming pool discharges.[99] Where, as here, a municipality has identified previously exempt categories of non-storm water discharge as sources of pollutants, the categories represent illicit discharges and must be prohibited in compliance with the CWA.[100]

Claimants argue that removal of the exemptions for irrigation waters in Directive B.2. of the 2010 Permit exceeds federal law in part because the applicable federal regulations only require categories of discharges be addressed if the municipality, and not the regulating entity, identifies the category as a source of pollutants to the MS4s. The 2010 Permit reflects, however, that Claimants identified landscape irrigation, irrigation water and lawn watering as significant dry weather, non-storm water contributors of pollutants to MS4s during the permit development process. For example, as discussed in the Permit, the Cities and County of Riverside's "Only Rain in the Storm Drain" Pollution Prevention Program identifies runoff from irrigation as a source of pollutants to waters of the United States in the following documents: (1) The Landscape and Garden public education brochure ["Soil, yard wastes, over-watering and garden chemicals become part of the urban runoff mix that winds its way through streets, gutters and storm drains before entering lakes, rivers, streams, etc."]; and (2) In a survey distributed at public outreach events the answer to the question about where lawn irrigation water goes states: "Water that leaves your lawn from irrigation . . . can pick up motor oil and grease from vehicles, excess fertilizer from your lawn, bacteria from pet waste, and excess pesticides from your yard. These pollutants can be carried down the streets and storm drains directly to our streams, lakes and rivers without treatment!" [101]

The record for this Permit reflects statewide recognition of the pollution caused by over-irrigation (see, e.g., legislation directed at prevention of over-irrigation, A.B. 1881, enacted as Water Conservation in Landscaping Act) and also reflects that pollution in irrigation waters is ubiquitous and would be extremely difficult to isolate and address on a site-by-site basis.[102] Therefore, requiring Claimants to address only individual sites, rather than the categories of irrigation waters, as they suggest, would not satisfy the federal requirements. U.S. EPA endorsed the removal of these three categories from the regulatory list of exempted non-storm water discharges.[103] For these reasons, the Commission should give significant weight to the San Diego Water Board's conclusion that these provisions are required by federal law. If the Commission nonetheless finds that the removal of these exempt categories was not required by federal law, other mandates exceptions apply to make the provision inapplicable.

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[99] *Id.* § 122.26(d)(2)(iv)(B)(i).

[100] CWA § 402(p)(3)(B)(ii).

[101] The survey was included in the Riverside County Copermittees' Report of Waste Discharge dated January 15, 2009, p. 39. See also Permit Fact Sheet, pp. 108-109.

[102] See 2010 Permit Fact Sheet, pp. 107-111.

[103] See U.S. EPA Comment Letter, September 7, 2010, pp. 2-3.

There is No New Program or Higher Level of Service

The change to the 2010 Permit reflects the operation of federal law as implemented in the two prior permits issued to Claimants. In Order No. 98-02, issued by U.S. EPA in 1999 and later adopted by the San Diego Water Board for implementation, U.S. EPA established the required federal prohibition on non-storm water discharges as follows: "The permittees shall prohibit non-storm water discharges into the MS4. NPDES permitted discharges are exempt from this prohibition."[104] The 2004 Permit carried over the prohibition: "Each Permittee shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit; or authorized in accordance with Requirements B.2. and B.3. below."[105] Both prior permits recognize categories of exempted non-storm water discharges but specified processes for removing the exemptions when categories are identified as sources of pollutants.[106] When the municipality has provided information showing that a category of discharge is a source of pollutants, federal law requires it to address the category in a manner similar to other recognized illicit discharges under the federal non-storm water provisions in place for decades. Implementation of this decades-old standard does not amount to imposition of a new program or any higher level of service than was previously in place. Copermittees are expected to perform the same level of service as in prior permits – effectively prohibit unauthorized non-storm water discharges. The categories identified as sources of pollutants must be removed for them to achieve the standard already imposed. Because there state has not imposed a new program or required a higher level of service, the challenged provision is not a state mandate subject to subvention.

For all these reasons, and for the additional reasons discussed in the General Responses, above, the Commission should find that removal of these previously exempted irrigation water categories from Directive B.2. is not a state mandate subject to subvention.

B. Requirement to Meet Non-Storm Water Action Levels or NALS (Directives C and F.4.)

The Claimants challenge as unfunded state mandates certain 2010 Permit provisions that require monitoring, reporting and appropriate responses when non-storm water dry weather action levels (NALs) are exceeded. The NALs provisions are necessary to meet the federal standard set forth in the CWA at section 403(p)(3)(b)(ii). As discussed above in General Responses, the 2010 Permit carries forward from prior permits and implements the CWA's requirement that each Copermittee effectively prohibit all types of unauthorized non-storm water discharges into its MS4.[107] The 2010 Permit includes action levels for pollutants in non-storm water discharges from the MS4 designed to ensure that the requirement is complied with. The Order establishes action levels based on applicable water quality objectives from the Basin Plan and other water quality control plans[108] and describes actions that the Copermittees must take when they observe

[104] Order No. 98-02 (amended in 2000 to reflect revisions required by USEPA in 1999), Section A.2, p. 2.

[105] Order No. R9-2004-001, section B.1, p. 7.

[106] Order No. 98-02, pp. 2-3; Order No. R9-2004-001, section B.2 – B.4, pp. 7-8.

[107] CWA § 402(p)(3)(B)(ii).

[108] See e.g., Basin Plan and Water Quality Control Plan for Ocean Waters of California (Ocean Plan).

exceedances of the action levels. The determination to include action levels resulted from evaluation of available information leading to the conclusion that Copermittee reliance on existing BMPs for almost 20 years had yet to result in compliance with applicable water quality standards. U.S. EPA has long-ago noted:

> Conveyances which continue to accept other "non-storm water" discharges (e.g. discharges without an NPDES permit) with the exceptions noted above (*exempted discharges that are not a source of pollutants*) do not meet the definition of municipal separate storm sewer and are not subject to 402(p)(3)(B) of the CWA unless such discharges are issued separate NPDES permits. Instead, conveyances which continue to accept non-storm water discharges which have not been issued separate NPDES permits are subject to sections 301 and 402 of the CWA.[109]

Except in compliance with specific sections of the CWA, including section 402, the CWA prohibits any discharge of pollutants to waters of the United States.[110] U.S. EPA supported inclusion of the NALs, comparable to those adopted in the 2009 Orange County Permit at issue in Test Claim 10-TC-11, as "consistent with our efforts to ensure MS4 permit requirements are more measurable and enforceable."[111] In commenting on the 2013 Regional MS4 Permit, U.S. EPA endorsed NALs, saying "we still believe the clarity and enforceability of the permit would be enhanced by adding clearer provisions for acting upon action level exceedences to the permit similar to the Board's 2009 permit for Orange County."[112] U.S. EPA expanded on the importance and value of action levels in similar comments to the Santa Ana Water Board in 2014,

> [T]he Permit should be revised to include action levels as part of the permits monitoring and reporting program. . . . The goal of including both non-stormwater and stormwater action levels is to guide implementation efforts and measure progress towards the protection of water quality and [designated] beneficial uses of the state from adverse impacts caused or contributed to by MS4 discharges.[113]

Without monitoring and reporting requirements based on NALs, the Copermittees will be no closer to controlling sources of non-storm water pollution, as the CWA requires. For these reasons, and consistent with the Board's findings that the permit provisions are exclusively based on federal law, the NALs and implementing provisions in the 2010 Permit are necessary to meet federal requirements. The Commission should give

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[109] 55 Fed. Reg. 47990, 47995 and 48037.

[110] CWA § 301(a).

[111] U.S. EPA Comment Letter, September 7, 2010, p. 2.

[112] U.S. EPA Comment Letter on Draft San Diego Regional MS4 Permit (Order R9-2013-0001) January 11, 2013, p. 5.

[113] U.S. EPA Comment Letter to Santa Ana Water Board, June 20, 2014, p. 2.

significant weight to the Board's determinations and defer to its findings under *Department of Finance*.

There is No New Program or Higher Level of Service

As described above in the General Responses above, the federal standard requiring prohibition of most non-storm water discharges to MS4s has been in place for decades. The NALs provisions are designed to help achieve compliance with the federal standard--not to impose a new program or even require a higher level of service. The level of service is the same as has been required and expected of Copermittees in prior permits. And like the 2010 Permit, the prior permit contained specific non-storm water or dry-weather monitoring and follow-up requirements.[114]

Other Mandates Exceptions Also Apply

In addition, the challenged provisions are not reimbursable because other mandates exceptions apply. The NALs are based on water quality exceedance information provided by the Copermittees. Claimants also proposed a similar process in their Report of Waste Discharge. The Report of Waste Discharge proposed inclusion of Municipal Action Levels or MALs "for appropriate metrics to ensure a minimum level of program implementation and identify shortcomings that could affect the Permittee's progress toward the established goals. The MALs would not be permit compliance measures, but triggers for further Permittee evaluation of the affected compliance program."[115] Finally, as discussed in General Responses, above, Copermittees can raise fees or otherwise fund the NALs provisions and have not demonstrated they are not required to use tax monies to implement these provisions. For all of these reasons, the Commission should find the challenged provisions are not state mandates subject to subvention.

C. Requirement to Meet Storm Water Action Levels or "SALs" (Directive D)

Claimants challenge the 2010 Permit requirements, including associated monitoring and reporting requirements, to implement Storm Water Action Levels (SALs) as exceeding federal law. The SALs provisions are, as the San Diego Water Board determined, necessary to meet the maximum extent practicable standard.[116] Moreover, the directive to consider exceedances of SALs does not impose a new program or higher level of service on Copermittees. The Commission should conclude that activities to comply with Directive D are not state mandates subject to subvention.

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[114] See Prior Permit (Order No. R9-2004-001), e.g., Directive B.1., ["Each permittee shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit or authorized in accordance with Requirements B.2. and B.3 below."], Directive B.4, "Each Permittee shall examine its Illicit Discharge Monitoring results . . . to identify water quality problems which may be the result of any non-prohibited discharge category(ies) listed above in Requirement B.2. Follow-up investigations shall be conducted as necessary to identify and control . . . [,]" and Directive J.4., "Each Permittee shall develop numeric criteria in accordance with section II.B.3 of the MRP to determine when follow-up actions will be necessary."

[115] Report of Waste Discharge, January 15, 2009, Section 6.1.2, p. 30.

[116] 2010 Permit, Fact Sheet, Finding D.1.h, p. 67.

Directive D Was Necessary to Meet the MEP Standard

Directive D requires the Copermittees to "implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water from the permitted areas so as not to exceed the SALs. Exceedance of SALs may indicate inadequacy of programmatic measures and BMPs required in this Order."[117] As in prior permits, Copermittees are required to comply with water quality standards and to control pollutants in storm water discharges to the MEP. They remain required "through timely implementation of control measures and other actions to reduce pollutants in storm water discharges."[118] Contrary to Claimants' assertions, SALs, like NALs, do not exceed the requirements of federal law, but instead are required in this case to encourage the Copermittees to take appropriate measures to control of pollutants in storm water to the maximum extent practicable standard.

Claimants assert that SALs are similar to "'strict' numeric effluent limits" because they are "tied to achieving compliance with specific numeric limits."[119] The Water Boards disagree. Exceedances of SALs are not violations of the 2010 Permit. Instead, the purpose of SALs is to aid the Copermittees in evaluating implemented programs and the effectiveness of BMPs in reducing pollutants in storm water discharges to the MEP. The 2010 Permit states "SALs are not a numeric effluent limitation, which is reflected in language which clarifies an excursion above a SAL does not create a presumption that MEP is not being met. Instead, a SAL exceedance is to be used by the Copermittee as an indication that the MS4 storm water discharge point is a definitive 'bad actor,' and the result from the monitoring needs to be considered as part of the iterative process for reducing pollutants in storm water to the MEP."[120] The purpose of monitoring for SALs exceedances is to "aid in the evaluation of implemented programs and BMPs in reducing pollutants in storm water discharges to the MEP. . . . Copermittees can utilize SAL results to determine the effectiveness of BMPs on the effluent from a particular areas of the MS4."[121] The San Diego Water Board also found SALs necessary as follows:

> Copermittees have been accorded 20 years to research, develop, and deploy BMPs that are capable of reducing storm water discharges from the MS4 to levels represented in SALs. Storm Water Action Levels are set at such a level that any exceedance of a SAL will clearly indicate BMPs being implemented are insufficient to protect the Beneficial Uses of waters of the State. Copermittee[s] shall utilize the exceedance information as a high priority consideration when adjusting and executing annual work plans, as required by this Permit.[122]

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[117] 2010 Permit, Finding D.1.h, p. 8.

[118] 2010 Permit, Directive A.3.a, p. 18.

[119] Test Claim, Narrative Statement, Section 5, p. 25.

[120] 2010 Permit, Fact Sheet, Finding D.1.h., p. 67.

[121] 2010 Permit, Fact Sheet, Finding D.1.h., p. 69.

[122] *Id.*, p. 68.

The provisions implementing SALs are, as the San Diego Water Board found, necessary to meet MEP.

The San Diego Water Board's determination in Finding E.6 that the 2010 Permit, including Directive G, is based exclusively on federal law is reinforced by U.S.EPA guidance[123] and testimony supporting use of action levels in MS4 permits. With specific reference to the 2010 Permit, U.S. EPA supported the SALs because they help clarify the term "MEP' and "would be consistent with our goal of including more measurable and enforceable requirements in MS4 permits."[124] U.S. EPA also offered oral testimony at the adoption hearing for the 2009 Orange County Permit supporting incorporation of SALs[125] in similar circumstances and recommended to the Santa Ana Water Board that it also incorporate SALs (as well as NALs) in an northern Orange County permit.[126] As discussed above in the General Responses, the San Diego Water Board's findings concerning the basis for these provisions are entitled to deference under *Department of Finance.* For these reasons, the provisions are part of a federal, not a state, mandate and the Commission should give significant weight to the San Diego Water Board's conclusion that these provisions are required by federal law.

Not a New Program or Higher Level of Service

If the Commission finds that the provisions exceed federal law, they are nonetheless nonreimubursable. The directive to implement SALs is not a new program or higher level of service. The San Diego Water Board determined that SALs are necessary to achieve the decades-old federal standard applicable to municipal storm water discharges. As in prior permits, Copermittees are required to comply with water quality standards and to control pollutants in storm water discharges to the MEP. They remain required "through timely implementation of control measures and other actions to reduce pollutants in storm water discharges."[127] The requirement is consistent with federal application requirements that copermittees submit with their application package a "comprehensive planning process . . . to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate."[128] For these reasons, SALs provisions do not constitute a new program or higher level of service.

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[123] 61 Fed. Reg. 41698, Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits.

[124] U.S. EPA Comment Letter, September 7, 2009, p. 3; see also U.S.EPA Comment Letter on 2009 Orange County Permit, September 28, 2009, p. 3.

[125] See Oral Testimony of John Kemmerer, Nov. 18, 2009 (Orange County, Order No. R9-2009-0001) (Tr., p. 97).

[126] U.S. EPA letter to Santa Ana Water Board, June 20, 2014. ("[T]he Permit should be revised to include action levels as part of the permits monitoring and reporting program. . . . The goal of including both non-stormwater and stormwater action levels is to guide implementation efforts and measure progress towards the protection of water quality and [designated] beneficial uses of the state from adverse impacts caused or contributed to by MS4 discharges.")

[127] 2010 Permit, Directive A.3.a, p. 18.

[128] 40 C.F.R. § 122.26(d)(2)(iv).

Other Mandates Exceptions Also Apply

Moreover, as discussed in General Responses, above, Claimants can raise fees to pay for the implementation of these provisions. They have not demonstrated that they are required to spend tax monies on these provisions. And to the extent activities are found to exceed federal law requirements, incremental costs would be *de minimis*. For all these reasons, the Commission should find the provisions are not state mandates subject to subvention.

D. Priority Development Project and Hydromodification Requirements (Directives F.1.d and F.1.h)

Claimants generally challenge the 2010 Permit implementation requirements for hydromodification management and low impact development (LID) best management practices for Priority Development Projects (PDPs). Specifically, Claimants contend that the requirement to develop and implement a program requiring PDPs to implement LID BMPs (F.1.d.(4)) and to develop and implement an LID BMP waiver program (Directive F.1.d.(7)) are unfunded state mandates. They also contend the requirement in Directive F.1.h to implement hydromodification requirements for PDPs likewise is an unfunded state mandate.[129]

The Priority Development Project and Hydromodification Requirements are Necessary to Meet MEP

The San Diego Water Board found the challenged provisions are based exclusively on federal law and that the land development provisions are necessary to reduce the discharge of pollutants in storm water the MEP.[130] As with most other challenged provisions, the hydromodification and LID provisions, as components of the jurisdictional runoff management program, are required for the purpose of reducing the discharge of storm water pollutants from the MS4 to the MEP.[131] As specified in CWA section 402(p)(3)(B)(iii), permits for discharges from municipal storm sewers "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods . . . ."[132] Applicable regulations require that applicants propose management programs "to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate" and further require municipalities to "implement controls to reduce pollutants in storm water runoff from new development and significant redevelopment." [133]

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[129] Claimants suggest that the Commission's challenged statement of decision in 07-TC-09 as determinative of their arguments. As the Commission is aware, judicial challenges to the statement of decision are not yet resolved.

[130] 2010 Permit, Finding E.6 and Finding D.1.a. See also discussion above in Introduction and General Responses.

[131] 2010 Permit, Directive F.1.

[132] CWA 402(p)(3)(B)(iii).

[133] 40 C.F.R. § 122.26(d)(2)(iv)(*2*).

Findings in Section D of the 2010 Permit elaborate on the water quality problems caused by land development and urbanization and emphasize the need for controls such as hydromodification and LID provisions in meeting the MEP standard. For example:

> Increasing the volume, velocity, frequency and discharge duration of storm water runoff from developed areas will eventually greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume while simultaneously increasing impervious area. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by natural vegetated soil.[134]

LID BMPs are necessary to address related water quality problems:

> Use of Low-Impact Development (LID) site design BMPs at new development, redevelopment and retrofit projects can be an effective means for minimizing the impact of storm water runoff discharges from the development projects on receiving waters. LID is a site design strategy with a goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques. LID site design BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of storm water runoff. Current runoff management, knowledge, practices and technology have resulted in the use of LID BMPs as an acceptable means of meeting the storm water MEP standard.[135]

Consistent with U.S. EPA guidance recognizing the importance of addressing hydromodification and LID in MS4 permits,[136] the federal agency's extensive comments during the permit development and issuance process endorse inclusion of these controls. U.S. EPA wrote: "We have focused most of our attention on requirements related to low impact development (LID) and TMDL implementation, given the potential environmental benefits to be derived from these particular components of the stormwater permit program."[137] With regard to hydromodification requirements, U.S. EPA "would encourage the [San Diego Water Board] to retain these requirements in the final permit. The proposed requirements in the Riverside County permit are similar to requirements in other recently-adopted Southern California MS4 permits, and the requirements will further the objectives of the LID provisions in the permit."[138] With regard to the 2009 Orange County permit's comparable requirements, U.S. EPA stated: "We are pleased to

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[134] 2010 Permit, Finding D.2.g., Fact Sheet, p. 75 and see also e.g., Finding D.2.e, "As with other land uses, LID site design, source control, and treatment control BMPs are needed at industrial sites in order to meet the MEP standard."

[135] 2010 Permit, Finding D.2.c; see also Findings C.10 and C.11.

[136] See 2010 Permit, Fact Sheet, Finding D.2.c.

[137] U.S. EPA Comments, September 7, 2010, p. 1.

[138] *Id.*, p. 3.

see the draft permit continues to include requirements related to hydromodification, and that clear, measurable requirements are included to address the issue. We believe the requirements are fully supported in the fact sheet and are consistent with the requirements of other recent MS4 permits in California."[139] U.S. EPA made similar comments in other southern California permit proceedings.[140]

Testimony by U.S. EPA during the public hearing in November 2009 in the southern Orange County MS4 proceeding is equally supportive of inclusion of LID and hydromodifcation requirements to implement federal law as set forth in the 2010 Riverside Permit. On behalf of U.S. EPA, Mr. Kemmerer testified:

> [W]e believe that the permit being proposed for adoption today is among the best of the renewed permits across the State of California and there are several specific aspects that I want to highlight and commend in the permit. First are the low-impact development provisions. And these really are clear, measurable and enforceful [sic] requirements consistent with the basic approach that are taken by the Santa Ana board for the northern portion of Orange County. . . . . Both permits require the use of these [sic] LID to retain a specified volume of stormwater, the volume is the same in both permits based on the definition of the capture volume. And we really see this as consistent with both the Orange County permit and other permits that are being adopted around the State. And I really believe that these provisions provide a valuable framework for reducing pollution at the source and ensuring – in order to protect water quality. You've heard a lot of other benefits about L.I.D for groundwater conservation. And for reducing our reliance on importing water from Northern California. I guess I can't really overemphasize the importance of incorporating these L.I.D. provisions in the permit.[141]

As stated previously, U.S. EPA's views on what federal law requires is entitled to considerable deference. And its views are fully consistent with the reasons considered by the San Diego Water Board when it determined that these provisions are based exclusively on federal law and necessary to meet the MEP standard.

In 2008, the State of Washington, Washington Pollution Control Hearings Board (PCHB) issued a decision addressing a Phase I MS4 permit that included provisions to promote, but not require, implementation of LID.[142] The PCHB considered LID and found that the permit failed to satisfy the federal MEP standard and Washington state law because it

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[139] U.S. EPA Comment Letter, September 28, 2009, p. 4.

[140] Id., pp. 1-2 and see U.S. EPA Comment Letter in 2009 Orange County MS4 proceeding, May 14, 2009, p. 2.

[141] U.S. EPA, Kemmerer Testimony, Nov. 18, 2009 (Orange County, Order No. R9-2009-0002), (Hrg. Tr., pp. 94-95).

[142] State of Washington, Pollution Control Hearing Board, Findings of Fact, Conclusions of Law and Order, Puget Soundkeeper Alliance, et al. v. State of Washington, Department of Ecology, PCHB Nos. 07-21, et al, August 7, 2008.

only included provisions to promote LID, but did not require LID at the parcel and subdivision level.[143] The PCHB decision lends further support for the Board's determination to include LID provisions to implement the MEP standard. The Commission should defer to the San Diego Water Board's determination that the provisions are necessary to meet the MEP standard and find that the challenged provisions are federal mandates.

Not a New Program or Higher Level of Service

Even if the Commission were to find that the HMP and LID provisions are not required by or exceed federal law, the provisions do not impose a new program or higher level of service. The challenged requirements are laid out in greater detail, but the preceding permit also contained numerous requirements directed at minimizing the effects of hydromodification through creation of impervious surfaces, avoiding development of areas particularly susceptible to erosion and sediment loss, requiring developers to maximize infiltration, provide retention, slow runoff and control post-development urban runoff discharge velocities, rates and volumes.[144] Claimants were previously directed to "develop numeric criteria to ensure that discharges from Prioirty Development Projects maintain or reduce pre-development downstream erosion and protect stream habitat. At a minimum, numeric criteria shall be developed to control urban runoff discharge velocities, volumes, durations, and peak rates in order to maintain or reduce pre-development downstream erosion and protect stream habitat."[145] Thus, these are not new programs or higher levels of service but instead are at most refinements to the prior permit designed to aid Copermittees in achieving the MEP standard.

Other Mandates Exceptions Also Apply

In addition, as documented in the 2010 Permit Fact Sheet, the Copermittees themselves recognized the need to incorporate LID design concepts in their BMP design handbook.[146] As noted in the Permit Fact Sheet, the hydromodification requirements are based on the findings and recommendations of the Riverside County Storm Water Program in their 2009 Report of Waste Discharge. "As committed to in the 2004 WQMP (now Appendix O to the Riverside County DAMP), the Permittees have developed numeric guidance for hydromodification and are now working with SCCWRP to develop enhanced hydromodification guidance for Southern California. The Permittees will use the completed guidance to update the WQMP, BMP Design Handbook and other guidance as necessary to effectively mitigate hydromodification impacts."[147] Their recommendations helped form the basis for the hydromodification findings which flesh out prior requirements.

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[143] *Id.,* Conclusion of Law No. 17, p. 58.

[144] 2004 Riverside County Permit, Order No. R9-2004-001, e.g., Directive F.1(a),(d) and (f) and Directive F.2.(a).

[145] *Id.,* Directive F.1.(b).(9).

[146] See 2010 Permit Fact Sheet, Directive F.1.d.(4), pp. 130-134 and ROWD (January 15, 2009), section 7.2.2.1 "The Permittees will revise the Riverside County Storm Water Quality Best Management Practice Design Handbook to (1) better incorporate LID design concepts, and (2) incorporate guidance to describe how developments can offset Treatment Control and hydromodification impacts with LID concepts including infiltration, evapo-transpiration, reuse, onsite stormwater management."

[147] See e.g., ROWD, § 7.2.2.2, p. 49.

Finally, as discussed above in the General Responses, Claimants have fee authority to fund the LID and hydromodification requirements and cannot establish that they must raise tax monies in order to comply. Claimants may recover the costs of implementing these requirements through development or other fees. Claimants are not subject to the substantive LID and hydromodification provisions unless they are also undertaking a Priority Development Project.[148] In this latter case, the costs to comply with the provisions are voluntary and not subject to subvention.

Moreover, also as discussed above in General Responses, to the extent the Commission finds that the challenged requirement was imposed in excess if federal law authority, any incremental costs for activities to implement the requirement in the hydromodification management plan beyond previously existing requirements are *de minimis* and therefore not subject to subvention. The *de minimis* determination is further supported in that Claimants must require developers of PDPs to adhere to the requirements, not undertake the requirements themselves (unless voluntarily doing so as a municipal developer). For all these reasons, the challenged provisions are not state mandates subject to subvention.

E. BMP Maintenance Tracking Requirements (Directive F.1.f)

Claimants challenge the permit provision requiring Copermittees to develop and implement a watershed-based database to track projects with a final approved SSMP and structural BMPs. Contrary to Claimants' assertion, the requirement implements and is necessary to meet the MEP standard mandated in federal law and other mandates exceptions also apply.

The BMP Maintenance Tracking Requirements are Necessary to Meet the MEP Standard

The BMP maintenance tracking requirement is integral to the successful implementation of runoff management programs that must be continually assessed, modified and improved upon, in order to achieve the evolving federal MEP standard.[149] As discussed above, the Clean Water Act provides that permits for MS4s "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, . . . "[150] Applicable federal regulations require Copermittees to implement controls to reduce pollutants in storm water runoff from new development and significant redevelopment, construction, and commercial, industrial and municipal land uses or activities. Prevention of illicit discharges is also required.[151] They also require that MS4 operators submit reports that include, among other things, "[t]he status of implementing the components of the storm water management program that are

[148] If a Claimant is also developing a project, it subjects itself to the hydromodification requirements voluntarily.

[149] 2010 Permit, Finding D.1.a.

[150] CWA § 402(p)(3)(B)(iii).

[151] 40 C.F.R. § 122.26(d)(2)(iv)(A)-(D).

established as permit conditions."[152] BMPs are integral to these federal law requirements. The San Diego Water Board explained the applicable Clean Water Act requirements, in part, as follows:

> Under CWA section 402(p), municipalities are required to reduce the discharge of storm water pollutants from their MS4s to the maximum extent practicable (MEP). MEP is the critical technology-based performance standard that municipalities must attain. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling storm water runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of storm water pollutants to the MEP requires Copermittees to assess each program component and revise activities, control measures, best management practices (BMPs), and measurable goals, as necessary to meet MEP. . . . To achieve the MEP standard, municipalities must employ whatever BMPs are technically feasible (i.e., are likely to be effective) and are not cost prohibitive.[153]

Maintenance tracking is essential to improving the effectiveness of BMP requirements. Federal regulations direct tracking and reporting of "[t]he status of implementing the components of the storm water management program that are established as permit conditions;" "[a] summary of data, including monitoring data, that is accumulated throughout the reporting year;" and "[a] summary describing the number and nature of enforcement actions, inspections, and public education programs," among others.[154] Tracking inspections of BMPs is an approach consistent with U.S. EPA guidance:

> Creating an inventory of post-construction structural stormwater control measures, including tracking of specific information, will first enable Permittees to know what control measures they are responsible for. Without this information, the permittee will not be protecting water quality to their full potential since inspections, maintenance, and follow-up changes cannot be performed. Tracking information such as latitude/longitude, maintenance and inspection requirements and follow-up will allow the permittee to be able to better allocate their resources for those activities that are immediately necessary . . . .[155]

U.S. EPA further recommends:

> Permit writers should clearly specify requirements for inspections. Inspecting and properly maintaining structural stormwater controls to ensure they are working as designed is just as important as

[152] *Id.*, § 122.26(a)(1)(v)(1).

[153] 2010 Permit, Finding D.1.a. and Fact Sheet discussion, pp. 55-57.

[154] 40 C.F.R. 122.42(c), (1), (4) and (6).

[155] MS4 Permit Improvement Guide, pp. 64-66.

> installing them in the first place. By having specific requirements, Permittees will be reminded that they must allocate resources to ensure control measures are properly maintained and functioning.[156]

For the above reasons, together with the San Diego Water Board's finding that the provisions in the permit are based exclusively on federal law, the Commission should find that these provisions are required by federal law and defer to the San Diego Water Board's determination that they are necessary to meet the federal MEP standard.

Other Mandates Exceptions Also Apply

If the Commission nonetheless finds that the provisions exceed federal law, the provisions are not reimbursable because other mandates exceptions apply. First, in their 2009 Report of Waste Discharge, Copermittees proposed an approach for inspecting and/or verifying maintenance of treatment control BMPs implemented for PDPs to ensure effectiveness, among other things.[157] Moroever, Copermittees have authority to raise fees to pay for the BMP maintenance tracking. They have not shown that they must raise tax monies to pay for these costs. To the extent the Commission finds that the requirement to keep track of the BMPs implemented to comply with the federal MEP standard exceed federal law, the Water Boards would expect the associated costs to be *de minimis.* For these reasons, the Commission should find that the challenged provisions are not state mandates subject to subvention.

F. Construction Site Requirements (Directives F.2.d and F.2.e)

Claimants contend that two Permit provisions affecting certain construction sites are unfunded state mandates requiring reimbursement. First, Claimants challenge the directive that each Copermittee require implementation of Active/Passive Sediment Treatment (AST) at construction sites they determine to be "an exceptional risk to water quality" (including at their own sites, if applicable) (Provision F.2.d). Second, Claimants challenge the directive that Claimants review monitoring results if a construction site it is inspecting has monitored its runoff.

The Directives to Implement AST and to Review Available Monitoring Data Are Necessary to Meet the Federal MEP Standard

The two challenged provisions are necessary to implement the MEP standard as it pertains to land development and construction activities addressed by the 2010 Permit. The San Diego Water Board found that "Runoff needs to be addressed during the three major phases of urban development (planning, construction, and use) in order to reduce the discharge of pollutants from storm water to the MEP . . . . Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters."[158] The requirements are clearly founded in federal storm water regulations that require municipalities to implement controls to reduce pollutants in storm water runoff from new development and construction activities.

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[156] *Id.* at pp. 63-64.

[157] ROWD, section 7.2.2.6, pp. 50-51.

[158] 2010 Permit, Finding D.1.f.

(122.26(d)(2)(iv)(A-D).) And, as noted by U.S. EPA in its 2000 Phase II Storm Water Regulations, the federal regulations place responsibility on municipalities to control runoff from third party activities and land uses to their MS4.[159]

Additional findings demonstrate that the challenged provisions are necessary to meet the MEP standard. For example, the San Diego Water Board noted: "Enforcement of local runoff related ordinances, permits, and plans is an essential component of every runoff management program and is specifically required in the federal storm water regulations and this Order."[160] The San Diego Water Board also recognized that the obligation to control discharges of pollutants associated with land development to the MS4 is appropriately required of municipalities due to their land use authority. "The ultimate responsibility for pollutant discharges, increased runoff, and inevitable long-term water quality degradation that result from development lies with local governments [with authority to control and authorize development)]." [161]

The San Diego Water Board's findings that the AST provisions are necessary to meet MEP are extensive:

> For sites that are identified as exceptional threat to water quality, active/passive sediment treatment (AST) is required to be implemented in addition to the minimum set and/or enhanced sediment control BMPs. AST is required at construction sites that are identified by the Copermittees as an exceptional threat to water quality due to high turbidity or suspended sediment levels in the site's effluent even when other sediment control BMPs have been implemented. In cases where the Copermittee's designated minimum set of BMPs and/or enhanced BMPs are not able or expected to be able to reduce turbidity or suspended sediment levels to a level that will be protective of water quality, *AST is necessary and is considered MEP for the discharges from these sites.*[162]

The Board also determined: "To ensure the MEP standard and water quality standards are met, the requirement for implementation of AST at exceptional threat construction sites has been added to the Order, while still providing sufficient flexibility for each Copermittee's unique program."[163]

Moreover, the monitoring data inspection requirement falls under the federal regulations that require permittees to: "[c]ontrol through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial

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[159] Phase II Storm Water Regulations, 64 Fed. Reg. 68,722; 40 CFR § 122.26(b)(15)(i). See also, USEPA 1992, Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

[160] 2010 Permit, Finding D.3.f.

[161] 2010 Permit Fact Sheet, Finding D.1.f.

[162] 2010 Permit Fact Sheet, Directive F.2.d, pp. 146-148 (emphasis added).

[163] 2010 Permit, Fact Sheet, Directive F.2.d., p. 147.

activity."[164] Construction activity is a subset of industrial activity but is treated separately in the storm water permit.[165] In addition, the Board found that "inspections provide a necessary means for the Copermittees to evaluate compliance of pollutant sources with their municipal ordinances and minimum BMP requirements." Finally, the requirement that inspections also include review of available discharge monitoring data appears to fall squarely within the federal reporting requirement applicable to Claimants.[166]

The San Diego Water Board's extensive discussion and bases for finding that the challenged provisions are necessary to meet MEP are entitled to deference under *Department of Finance.*

Not a New Program or Higher Level of Service

Even if the Commission finds that the challenged provisions are not federal mandates, they also are not unfunded state mandates because they do not impose new programs or higher levels of service on Claimants. Although the specific challenged provisions were not contained in the prior permit, it contained numerous requirements directing Claimants to control pollutants in discharges of runoff associated with industrial and construction activity and to require construction sites to comply with construction and grading ordinances and permits. Among other things, the 2004 Permit required permittees to conduct construction site inspections for compliance with local ordinances and permits within their geographic area.[167]

With regard to heightened BMP requirements for sites near sensitive waterbodies, the 2004 permit directed that permittees require construction sites to implement additional controls at sites near or adjacent to sensitive waters (such as those on the 303(d) list impaired for sediment).[168] The requirement to implement AST for sediment at construction sites Copermittees determine to pose an exceptional threat to water quality, taking into consideration the sensitivity of receiving waters and proximity to receiving waters, as well as the proximity and sensitivity of aquatic threatened and endangered species, merely builds this requirement. Providing factors for coperrmittees to consider in determining whether a construction site is an exceptional threat to water quality generates more information to assist in making the determination and arguably results in lesser, rather than greater, effort to perform.

With regard to the requirement to review monitoring results, where available, at construction sites, the prior permit also required, among other things, permittees to conduct construction site inspections for compliance with its local grading and storm water ordinances and permits[169] and to carry out inspections, surveillance and monitoring necessary to determine compliance with local ordinances and permits.[170] To the extent these requirements for inspection and monitoring included evaluation of existing monitoring data collected by construction site owners or

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[164] 40 C.F.R. 122.26(d)(2)(i)(A).

[165] *Id.,* at § 122.26(b)(14)(x).

[166] *Id., at* § 122.42(c). This section provides that operators of large or medium MS4s "must submit an annual report by the anniversary date of the issuance of the permit for such system. The report shall include: . . . ."(4) A summary of data, including monitoring data, that is accumulated throughout the reporting year."

[167] See Order No. R9-2004-001, Dir. G.6.a.

[168] *Ibid.*

[169] *Ibid.*

[170] *Id.*, Dir. D.1.g.

operators, the 2010 Permit's challenged provision does not impose either a new program or higher level of service.

Claimants make the additional but related argument that the requirement to review monitoring results is a new program because the state has shifted the costs of the review requirement from the San Diego Water Board to the Copermittees. This is not the case. The 2010 Permit does not require inspection of construction sites for compliance with the Statewide Construction General Storm Water Permit (CGP) but instead for compliance with the Copermittees' ordinances and permits. To the extent that a site has monitored runoff and has such data, 2010 Permit requires review of the data during an inspection. Claimants are not required to perform functions otherwise required to be performed by the San Diego Water Board staff. No functions and therefore no costs were shifted from the San Diego Water Board to Claimants.

Other Mandates Exceptions Also Apply

Finally, as discussed above, the Claimants have fee authority to implement these requirements and have not shown that they are required to raise taxes to fund them. To the extent they are subject to the AST requirements for any municipal projects, the projects are voluntary and any associated costs must be discounted. Moreover, the costs for associated activities are *de minimis.* For all these reasons, and for the reasons discussed in the General Responses, above, the Commission should find that no subvention is required for these construction site related requirements.

G. Unpaved Roads BMP Requirements (Directives F.1.i and F.3.a.10)

Claimants contend that the 2010 Permit's provisions directed at controlling erosion and sediment discharges from unpaved roads exceed federal law and impose new programs or higher levels of service on Claimants.[171] The challenged provisions require implementation of specified minimum BMPs, or "alternative BMPs that are equally effective[,]" during the development and maintenance of copermittee-maintained unpaved roads.

The Unpaved Roads Discharges Provisions Are Necessary to Meet the Federal MEP Standard

As discussed in the Permit (Finding D.1.c), design and source control BMPs for unpaved roads are needed to minimize the discharge of sediment to the MS4s and receiving waters, implementing the federal mandate to control pollutants in storm water discharges to the MEP. The challenged provisions fall within the Development Planning Component of the Permit supported by the San Diego Water Board's finding that "[r]unoff needs to be addressed during the three major phases of urban development (planning, construction and use) in order to reduce the discharge of pollutants from storm water to the MEP . . . ."[172] The requirement to

[171] Claimants also argue that the provisions were imposed solely under state law to the extent they require control of discharges of sediment from roads that do not qualify as MS4s or do not discharge into MS4s. (Narrative Statement, p. 42.) This argument disregards the basis of the permit is to regulate the discharges of pollutants in storm water into and from MS4s and to implement the prohibition on non-storm water discharges into MS4s and is issued to Claimants as owners and operators of MS4s. (See, e.g., 2010 Permit, Findings A and B.) To the extent the challenged provision is susceptible to the interpretation of unlimited applicability to roads with no potential conveyance to an MS4 Claimants ascribe to it, that interpretation is unsupported by the overarching purpose of and legal basis for issuing an MS4 permit to Claimants.

[172] 2010 Permit, Finding D.1.f.

implement BMPs during development and maintenance of copermittee-maintained unpaved roads is necessary to implement this federal requirement, consistent with the San Diego Water Board's finding that:

> [c]onstruction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment in receiving waters. Existing development generates substantial pollutant loads which are discharged in runoff to receiving waters.[173]

The Board concluded that "[e]rosion of unpaved roadways occurs when soil particles are loosened and carried away from the roadway base, ditch or road bank by water . . . ."[174]

Maintenance of developed unpaved roads pose the same risks and in fact were specifically identified in the 2010 Permit because of complaints and investigations regarding sediment discharges from unpaved roads causing water quality problems within Riverside County during the prior permit time period.[175] In finding the provisions necessary to meet MEP, the Board concluded: "Implementing design and other source control BMPs for unpaved roads in the region is necessary to reduce and minimize the impacts of sediment discharged during storm events from unpaved roads to the MS4s and receiving waters."[176] The unpaved roads BMP requirements are an essential component of the storm water management programs required to include "controls to reduce the discharge of pollutants to the maximum extent practicable (MEP)" set forth in the federal regulations.[177]

U.S. EPA has also recognized the significant threat to water quality posed by discharges from unpaved roads and guidance emphasizes the threat as follows: "Dirt and gravel roads are a major potential source of these pollutants [sediment] and pollutants that bind to sediment such as oils, nutrients, pesticides, herbicides, and other toxic substances]. Many roads have unstable surfaces and bases. Roads act like dams, concentrating flows that accelerate erosion of road materials and roadsides. Both unstable surfaces and accelerated erosion then lead to sediment and dust."[178] For these reasons, and the additional reasons in the General Responses, above, the San Diego Water Board's findings that the requirement is necessary to meet the MEP standard are entitled to deference.

Not a New Program or Higher Level of Service

The San Diego Water Board's prior permit issued to Riverside County Copermittees in 2004 contained comparable findings about the need for erosion and sediment controls and implementation of BMPs to mitigate projected increases in pollutant loads and flows associated

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[173] *Ibid.*

[174] *Id.*, Finding D.1.c.

[175] *Ibid.*

[176] *Ibid.*

[177] 40 C.F.R. § 122.26(d)(iv)(*a)(2)*.

[178] U.S. EPA 2006 "Environmentally Sensitive Maintenance for Dirt and Gravel Roads." Gesford and Anderson, USEPA-PA-2005 (referenced in Permit Fact Sheet, Finding D.1.c.)

with development to implement the federal prohibition on discharges from MS4s containing pollutants that have not been reduced to the MEP.[179] The prior permit required implementation of appropriate BMPs during the construction and maintenance of unpaved roads but the applicability to unpaved roads was made explicit in the 2010 Permit as a result of inspections and complaints made during the 2004 permit time period.[180] Because unpaved roads were already subject to the requirements to implement appropriate BMPs to reduce pollutants in storm water discharges to the MS4s to the MEP, although not specified by name, these provisions do not impose a new program or higher level of service.

Other Mandates Exceptions Also Apply

If the Commission nonetheless finds that the provisions exceed federal law and impose a new program or higher level of service, the provisions are not state mandates subject to subvention because other mandates exceptions apply. Copermittees have authority to raise fees to pay for requiring implementation of BMPs during road construction and for maintenance of copermittee-maintained roads. They have not shown that they must raise tax monies to pay for these costs. Moreover, to the extent the provisions result in activities beyond those in the prior order, any necessary costs of compliance are *de minimis.* For these reasons, and for the reasons discussed in the General Responses, above, the Commission should find that the challenged provisions are not state mandates subject to subvention.

H. Industrial/Commercial Inspection Requirement (Directive F.3.b.4(a)(ii))

Claimants contend that the 2010 Permit provision requiring review of industrial or commercial facility monitoring data if the site monitors its runoff as part of the copermittees' inspection procedures is a state mandate because the requirement could be performed by the San Diego Water Board under the Statewide Industrial General Permit. Claimants contend that even if there is an underlying federal requirement supporting this provision, the State has improperly shifted the obligation, for which it collects fees, to the local entities. Water Boards disagree that any obligations, or associated costs, have been shifted from the State to Claimants and assert that the provision is exclusively a federal mandate, required to meet the MEP standard.

The Inspection Requirement Is Necessary to Meet the Federal MEP Standard

Federal law requires the copermittees to reduce pollutants in their storm water discharges to the MEP. The monitoring data inspection requirements for industrial and commercial facilities is supported by the federal regulations that require permittees to: "[c]ontrol through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity."[181] The requirement to review facility monitoring data results, if the site monitors its runoff, is necessary for copermittees to evaluate whether an industrial or commercial site's implementation of BMPs to control the discharges of pollutants in storm water runoff is effective at meeting the MEP standard.[182] More specifically,

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[179] See Order No. R9-2004-001, Directives A.1., A.3, F.1, F.3 and G.5.a(8) ["[r]etention of proper management of sediment and other construction pollutants on site."].

[180] See 2010 Permit, Finding D.1.c.

[181] 40 C.F.R. 122.26(d)(2)(i)(A).

[182] See 2010 Permit, Finding D.3.b.

Directive A.1.a, is similarly focused, requiring permittees to "[c]ontrol the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites."[183] If a site's runoff data demonstrates excessively high levels of pollutants, a copermittee will need to implement better and more effective BMPs to achieve the federal standard. The San Diego Water Board discussed the crucial nature of source identification, which can be facilitated by reviewing runoff monitoring reports, in finding:

> Source identification is necessary to characterize the nature and extent of pollutants in discharges and to develop appropriate BMPs. It is the first step in a targeted approach to runoff management. Source identification helps identify the location of potential sources of pollutants in runoff. Pollutants found to be present in receiving waters and then be traced to the sites which frequently generate such pollutants. In this manner, source inventories can help to target inspections, monitoring and potential enforcement. This allows for limited inspection, monitoring, and enforcement time to be most effective. USEPA supports source identification as a concept when it recommends construction, municipal, and industrial source identification in guidance and the federal regulations.[184]

Finally, the San Diego Water Board found that "inspections provide a necessary means for the Copermittees to evaluate compliance of pollutant sources with their municipal ordinances and minimum BMP requirements[]" *a necessary part of the process to achieve MEP*. The San Diego Water Board's findings are entitled to deference under *Department of Finance.*

Not a New Program or Higher Level of Service

The State has not improperly or freely chosen to shift its own obligations and associated costs to the Claimants to perform monitoring data review as part of municipal inspections. The Industrial General Permit in effect at the time the 2010 permit was adopted (and until it was superseded in 2014) did not require the regional water boards to review monitoring data if sites monitor their runoff. In any event, the regional water boards would inspect a facility for compliance with the Industrial General Permit and not, as required of copermittees, for compliance with the copermittees' ordinances, permits and the MS4 permit. Claimants have not demonstrated that a shifting of responsibilities and costs has occurred.[185]

Moreover, while the specific requirement to review monitoring data, if available, was absent in the prior permit, the federal requirement to reduce pollutants in storm water discharges to the MEP is the same. In addition, the 2004 Permit required that inspections "check for assessment

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[183] 2010 Permit, Directive A.1.a.

[184] 2010 Permit, Fact Sheet, Finding D.3.b. See also USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems (EPA833-B-92-002) and 40 CFR 122.26(d)(2)(ii).

[185] In *Department of Finance,* the Supreme Court upheld the Commission's finding regarding evidence that the Los Angeles Water Board staff had suggested shifting of responsibilities had occurred. (1 Cal. 5th at 770.) No such evidence is present here.

of BMP implementation, maintenance, and effectiveness; visual observations for non-storm water discharges, potential illicit connections, and potential discharge of polluatns in storm water runoff."[186] While not specifically required in the prior permit, reviewing available monitoring data is wholly consistent with the prior requirements and an effective way to determine whether the existing standard is being met at industrial or commercial facilities. This requirement does not rise to the level necessary to find a new program or higher level service has been imposed.

Other Mandates Exceptions Also Apply

Claimants have not established they must use tax money to pay for the monitoring data review for facilities that monitor their discharge. Second, if the Commission finds that the requirement to review available monitoring data as part of an inspection already being performed is a new program or higher level of service and exceeds federal requirements, any associated incremental costs of performing this function would be *de minimis.* As pointed out in the San Diego Water Board's responses to comments on the 2010 Permit, including review of monitoring data would not significantly increase inspection times – in fact is expected to take a matter of minutes to review as part of an otherwise required inspection.[187] As discussed above, the Claimants have fee authority to implement these requirements and have not shown that they are required to raise taxes to fund them. For these reasons, and for the additional reasons discussed in General Responses, above, the Commission should find that no subvention is required to include the review of available monitoring data as part of inspections at industrial or commercial sites.

I. Retrofitting Program for Existing Development (Directive F.3.d)

Provision F.3.d requires Copermittees to develop a framework for encouraging projects to retrofit existing development, particularly to serve as source control and treatment control BMPs to reduce pollutants in storm water discharges to the MEP. This provision requires Copermittees to (1) identify and inventory candidate retrofitting projects, (2) evaluate and rank the inventory for prioritization, (3) consider the evaluation in prioritizing work plans for the following year, (4) cooperate with private landowners in encouraging retrofitting projects and (5) track known completed retrofit BMPs and perform inspections on publicly owned properties and privately owned properties, as needed. Claimants argue that the provisions "are analogous to, though more prescriptive than, the inspection and trash receptacle requirements found to be state mandates in the L.A. County permit."[188] Claimants also argue that nothing in federal law requires copermittees to develop, fund and implement a retrofitting program.[189]

The Retrofitting Provisions are Necessary to Meet the Federal MEP Standard

While the storm water regulations do not explicitly require these provisions be included in the permit, the provisions do require development of potential strategies that can result in significant water quality improvements as the Copermittees implement their water quality improvement programs. The provisions flow from the Clean Water Act requirements to control pollutants in discharges to the MEP standard and to effectively prohibit non-storm water discharges to the

[186] 2010 Permit, Fact Sheet, Dir. F.3.b(4).

[187] 2010 Permit, Response to Comment 98.

[188] Test Claim Narrative Statement, p. 47, citing *Department of Finance,* 1 Cal.5th at 770-772.

[189] Test Claim Narrative Statement, p. 46.

MS4s.[190] They also implement the regulatory requirement to address land development controls.[191] In developing these challenged requirements, the Board found:

> Retrofitting existing development with storm water treatment controls, including LID, is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards. Although SSMP BMPs are required for redevelopment, the current rate of redevelopment will not address water quality problems in a timely manner. Cooperation with private landowners is necessary to effectively identify, implement and maintain retrofit projects for the preservation, restoration, and enhancement of water quality.[192]

Similarly, the San Diego Water Board found:

> The goals of the existing development retrofitting program are to address the impacts of existing development through retrofit projects that reduce impacts from hydromodification, promote LID, support riparian and aquatic habitat restoration, *reduce the discharges of storm water pollutants to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of water quality standards.* Where feasible, at the discretion of the Copermittee, the existing development retrofitting program may be coordinated with flood control projects and other infrastructure improvement projects.[193]

The San Diego Water Board also considered the MS4 Permit Improvement Guide in evaluating the merits of including the retrofitting program in the 2010 permit. Issued by U.S. EPA, the Guide reflects the federal permitting authority's view that retrofitting plans or programs for existing development should be included in storm water programs because, without addressing storm water runoff from existing developments, waters in the region cannot be adequately protected. Although discounted by Claimants as mere guidance with no legal or regulatory effect, the MS4 Permit Improvement Guide, published in 2010, represents the federal permitting authority's views on steps such as retrofitting of existing development that likely are necessary in many areas to achieve the MEP standard. In accord with U.S. EPA's views, the San Diego Water Board found that evidence of 303(d) listings and exceedances of water quality objectives in copermittee monitoring reports indicates that existing BMPs are not sufficient in many cases to meet the MEP standard and protect the beneficial uses of receiving waters.

> Implementing more advanced BMPs, including the retrofitting of existing development with LID BMPs, is part of the iterative process. Based on the current rate of redevelopment compared to existing BMPs, the use of LID only on new and redevelopment

[190] CWA, § 402(p)(3)(B)(iii) and (ii).

[191] See 40 C.F.R. § 122.26(d)(2)(iv)(A)(2).

[192] 2010 Permit, Finding D.3.h.

[193] 2010 Permit, Directive F.3.d (emphasis added).

> will not adequately address current water quality problems, including downstream hydromodification. Retrofitting existing development is practicable for a municipality through a systematic evaluation, prioritization and implementation plan focused in impaired water bodies, pollutants of concern, areas of downstream hydromodification, feasibility and effective communication and cooperation with private property owners. ¶ To actually improve the quality of receiving waters, discharges from existing developed sites need to be mitigated, which generally means implementation of measures to retrofit existing development sites with storm water control measures that can retain and/or treat storm water on site. Retrofitting existing development is possible and reasonable to significantly improve water quality in receiving waters. ¶ Successful retrofitting programs have been implemented in such diverse locations as Seattle, Washington[], Portland, Oregon[], Santa Monica, California[], Kansas City, Kansas[], and Montgomery County Maryland. When appropriately applied as in this Order, *retrofitting existing development meets MEP.*[194]

As previously explained, the San Diego Water Board's findings that these provisions are necessary to satisfy the MEP standard and are based entirely on federal law support the determination that they are a federal, not state, mandate and such findings are entitled to deference under *Department of Finance.*[195]

Moreover, the Water Boards also observe that U.S. EPA required similar – and in some instances more detailed – requirements to address storm water control opportunities in existing development areas in its most recent MS4 permit issued to the District of Columbia. This federal MS4 Permit requires, among other things, that the District establish a "Retrofit Program" and "implement retrofits for stormwater discharges from a minimum of 18,000,000 square feet of impervious surfaces during the permit term. A minimum of 1,500,000 square feet of this objective must be in transportation rights-of-way," and the District "shall achieve a minimum net annual tree planting rate of 4,150 plantings annually within the District MS4 area, with the objective of a District-wide urban tree canopy coverage of 40[percent] by 2035. . . . The permittee shall ensure that trees are planted and maintained, including requirements for adequately designed and sized tree boxes, to achieve optimal stormwater retention and tree survival rates."[196]

The fact that this U.S. EPA-issued permit includes such prescriptive requirements that are likewise absent when compared directly to the text of the implementing storm water regulations evidenced support for the San Diego Water Board's findings that the permit provisions, under

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[194] 2010 Permit Fact Sheet, Finding D.3.h (internal citations omitted). See also Center for Watershed Protection, Urban Subwatershed Restoration Manual No. 3, Urban Stormwater Retrofit Practices Manual, Version 1.0, July/August 2007.

[195] Claimants' assertion that the provisions are analogous to and somehow more prescriptive than the inspection and trash receptacle requirements in the Los Angeles Permit considered in *Department of Finance* is misplaced where, as here, the San Diego Water Board determined that the provisions are necessary to meet MEP.

[196] U.S. EPA MS4 Permit DC0000221, issued to District of Columbia, modified October 25, 2012, e.g., section 4.1.5 (Retrofit Program for Existing Discharges) and section 4.1.6 (Tree Canopy).

the factual circumstances of the 2010 Permit, are necessary to meet the MEP standard and are based entirely on federal law. It is notable that U.S. EPA also endorsed inclusion of the retrofitting requirements in this Permit.[197]

Not a New Program or Higher Level of Service

In requiring Copermittees to encourage voluntary retrofitting projects, no new program or higher level of service is required. Copermittees are directed to develop a framework to encourage and track voluntary efforts, all of which, if implemented, are intended to assist the permittees to achieve the same federal standards--of controlling pollutants in storm water discharges to the MEP and effectively prohibiting non-storm water discharges – to which permittees have been subject for decades. The retrofitting permit provision does not impose a state mandate.

Other Mandates Exceptions Also Apply

Even if the Commission determines that some aspect of these provisions exceeds federal law, the costs to make these programs available as opportunities for developers would be *de miminis*, and do not entitle Claimants to reimbursement. That Copermittees can, at their discretion, coordinate the retrofitting program with flood control projects and other infrastructure improvement programs lends further support to the conclusion that the costs are de minimis. Finally, as discussed above, Claimants have fee authority to implement these requirements and have not shown that they are required to raise taxes to fund them. For these reasons, and for the additional reasons discussed in General Responses, above, the Commission should find that no state mandate exists, but if one is found to exist, should find that subvention of funds is required.

J. Watershed Water Quality Workplan Requirements (Directive G)

Claimants challenge the Permit's requirement that they develop and implement a Watershed Water Quality Workplan set forth in Directive G of the 2010 Permit. Claimants contend that the requirement in its entirety is not required by federal law and the San Diego Water Board imposed it through the exercise of true choice. Claimants also allege that significant differences in the Watershed Workplan requirement exist as compared to the Watershed SWMP in the 2004 permit that it builds upon and that the activities required to implement the Watershed Workplan represent a higher level of service, not just an incremental change from the prior permit. These arguments are addressed in turn, below.

Watershed Water Quality Workplan Requirements Are Part of the Watershed-Based Runoff Programs Necessary to Reduce Pollutant Discharges to Meet the Federal MEP Standard

As discussed in the 2010 Permit, watershed management "provides a means to focus on the most important water quality problems in each watershed . . . to maximize protection of beneficial use in an efficient manner."[198] The Watershed Workplan requirement was modified from the comparable 2004 permit provision because results from implementation of the 2004 order showed that "lack of specificity in the watershed requirements resulted in inefficient watershed compliance efforts."[199] As the San Diego Water Board explained in the Fact Sheet:

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[197] U.S. EPA Comment Letter, September 7, 2010, p. 3.

[198] 2010 Permit, Finding D.4.a.

[199] 2010 Permit Fact Sheet, pp. 10-11.

> Section G requires Copermittees to continue implementation of their watershed runoff management program (WRMP), however the implementation approach has changed. Order No. R9-2004-001 required a Watershed SWMP that included a collaborative strategy to abate the sources and reduce the discharges causing high priority water quality problems. This strategy was to guide each watershed Copermittee's selection and implementation of Watershed Activities, so that the activities selected and implemented would remove that pollutant contribution responsible for the identified high priority water quality problem. Outcomes of these requirements were not able to demonstrate improvements to water quality.[200]

The San Diego Water Board found Watershed Workplans (together with Individual Storm Water Management Plans) necessary "to guide the Copermittees' runoff management efforts and ad the Copermittees in tracking runoff management program implementation."[201] Similarly, the Board found that watershed-based runoff management:

> Provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective watershed-based runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems. Watershed-based runoff management that *does not actively reduce pollutant discharges and abate sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of this Order.*[202]

Implementation of the iterative process is how Copermittees can demonstrate that they are taking appropriate steps to achieve the MEP standard.

In the 2010 Permit Fact Sheet, the San Diego Water Board established that the Watershed Workplan requirement as part of the required "comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices . . . . Proposed management programs shall describe priorities for implementing controls."[203] The Board also noted "[t]he focus of the Order is on development and implementation of storm water programs which meet MEP, rather than creation of Copermittee plans which exhibit MEP."[204]

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[200] 2010 Permit Fact Sheet, Directive G.

[201] 2010 Permit, Finding D.1.d.

[202] 2010 Permit, finding D.4.a (emphasis added).

[203] 2010 Permit Fact Sheet, p. 19, quoting 40 C.F.R. § 122.26(d)(2)(iv).

[204] 2010 Permit Fact Sheet, Finding D.1.d.

The Commission's findings that the permit requirements are necessary to meet MEP and based exclusively on federal law are entitled to deference.

Not a New Program or Higher Level of Service Compared to the Watershed SWMP Required in the Prior Permit

Even if the Commission concludes that the Watershed Workplan requirements are not federal mandates, the Commission should find that no state mandate exists because no new program or higher level of service has been imposed. Claimants contend the Watershed Workplan directives in the 2010 Permit are "significantly different and more demanding than in the earlier permit" and "represented a significant increase in the actual level and type of activities required of Claimants" and therefore requires a higher level of service.[205] The Water Boards disagree with Claimants' characterization.

First, the Watershed Workplan requirements are designed to consolidate watershed planning requirements and help the Copermittees achieve the Clean Water Act's prohibition on discharges of pollutants in storm water that are not controlled to the MEP—the same standard which has applied since 1987-- in a more efficient and effective manner.[206] No new program was imposed.

Second, the specific activities Claimants contend are newly mandated were in substantial part already required of permittees in the 2004 Permit. The 2004 Permit's Watershed Storm Water Management Program (SWMP) was carried over in the 2010 Permit with a refocused implementation approach. "Section G requires Copermittees to continue implementation of their watershed runoff management program (WRMP), however the implementation approach has changed."[207] As with the 2004 permit, the 2010 Permit "requires the watershed Copermittees to develop and follow a workplan approach towards assessing receiving water body conditions, prioritizing the highest priority water quality problems, implementing effective BMPs, and measuring water quality improvement in the receiving water."[208] However, the permit contains greater specificity necessary to demonstrate improvements in water quality (through achievement of the MEP standard). "The San Diego Water Board expects that implementing the Watershed Workplan, which will coordinate the Copermittees' efforts in the watershed, will result in water quality improvements sooner than later."[209]

Claimants generally characterize these mandated activities as differing from the 2004 Permit in the following ways:

> While the 2004 Permit contained a requirement for permittees to develop and implement a Watershed SWMP (2004 Permit, Section K) . . . [s]ignificant differences included the requirement to not only review monitoring data collected under the permit, but also data from 'applicable information available from other public

[205] Narrative Statement, p. 51.

[206] CWA § 402(p)(3)(b)(iii).

[207] 2010 Permit Fact Sheet, Directive G.

[208] 2010 Permit Fact Sheet, Directive G.

[209] Ibid.

> and private organizations;' to prioritize water quality problems 'in terms of constituents by locations' not merely in the watershed generally; to identify likely sources, pollutant discharges and/or other factors causing the highest water quality problems within the watershed, including the requirement to conduct 'additional focused water quality monitoring to identify specific sources within the watershed;' to develop a watershed BMP implementation strategy, including a schedule for implementing BMPs to abate specific receiving water quality problems; to develop a strategy to monitor improvements in receiving water quality directly resulting from BMP described in the Watershed Workplan; to 'pursue efforts to obtain' interagency agreements with non-permittee MS4s to control contribution of pollutants 'from one portion of the shared MS4 to another portion of the shared MS4[']' (the2004 Permit only required a description of any such agreements); to offer a 30-day public review and comment period prior to submittal of the Watershed Workplan to the RWQCB; and, to hold an Annual Watershed Review Meeting, open to the public and 'adequately noticed.'[210]

More specifically, Claimants contend Directive G of the 2010 Permit newly mandates the following specific activities. Following each challenged activity (in italics) is a description of the analogous provision to which permittees were subject in the prior permit:

> 1. *Characterize watershed receiving water quality, including analyzing monitoring data collected under the 2010 Permit from other public and private organizations;*

While employing some different terminology, these functions are comparable in level of service to what the prior permit required. For example, the prior permit required: "An assessment of the water quality of all receiving waters in the watershed based upon (1) existing water quality data; and (2) results from the Receiving Waters and Illicit Discharge Monitoring Programs described in the MRP" (Dir. K.2.c)); and "An identification and prioritization of major water quality problems in the watershed caused or contributed to by MS4 discharges and the likely source(s) of the problem(s)" (Dir. K.2.d));

Characterizing watershed receiving water quality is comparable to the prior permit's requirement to assess water quality based on existing and new water quality data as well as identify and prioritize major water quality problems, together with identification of the likely sources of the problems. And the 2004 Permit required appropriate joint watershed management efforts with non-copermittee entities (Dir. K.3), contemplated shared efforts with state agencies, local districts and Native American Tribes (Dir. K.2.b)) and required at least annual assessment of "available water quality data (from the MRP and other *reliable sources*) . . . ." (Dir. K.4., emphasis added.) Unless the Copermittees considered other public and private organizations' water quality monitoring data to be *unreliable*, Claimants were already required to perform the same functions under the prior permit.

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[210] Test Claim, Narrative Statement, pp. 50-51.

2. *Identify and prioritize water quality problems by constituent and by location, giving consideration to total maximum daily loads, waters listed as impaired pursuant to CWA section 303(d), and other pertinent conditions;*

While in some instances employing different terminology, these functions also are comparable in level of service to what the prior permit required. For example, the prior permit required copermittee collaboration "to identify, address, and mitigate the highest priority water quality issue/pollutants in the Upper Santa Margarita Watershed." (Dir. K.1.) The prior permit also required copermittees to identify and prioritize major water quality problems "and the likely source(s) of the problem(s)" (Dir. K.2.d)) and to assess the water quality of all receiving waters based upon existing data and specific monitoring results. (Dir. K.2.c).) The prior permit also required an implementation time schedule "of short and long-term recommended activities (individual and collective) needed to address the highest priority water quality problem(s) identified in Requirement K.2.d." (Dir. K.2.e).)

Claimants were also previously required to develop short-term and long-term effectiveness assessment strategies, including for short term assessments: "specific direct and indirect performance measurements" and "discuss the role of monitoring data collected by the Permittees in substantiating or refining the assessment" (Dir. K.2.l)) and for long-term assessments, to consider methods such as surveys, pollutant loading estimations, receiving water quality monitoring, and achievement of measurable goals." (Dir. K.2.m).) Additionally, Claimants also were previously required to develop a map including depiction of CWA section 303(d) impaired receiving waters. (Dir. K.2.a).) Water bodies listed under CWA section 303(d) are listed impaired for specific, identified, constituents. Moreover, the 2010 Permit's requirement to prioritize water quality conditions by constituent and location requires efforts comparable efforts as the 2004 Permit that required, among other things, permittees to consider existing data and monitoring results to identify likely sources of pollutants and to employ and evaluate the results of short- and long-term effectiveness assessment strategies.

3. *Identify likely sources causing the highest water quality problems within the watershed, including from monitoring conducted under the 2010 Permit and additional focused water quality monitoring to identify specific sources;*

While in some instances employing different terminology, the functions challenged by Claimants are comparable in level of service to what the prior permit required. For example, the prior permit required copermittee collaboration "to identify, address, and mitigate the highest priority water quality issue/pollutants in the Upper Santa Margarita Watershed." (Dir. K.1.) The prior permit also required copermittees to identify and prioritize major water quality problems "and the likely source(s) of the problem(s)" (Dir. K.2.d)) and to assess the water quality of all receiving waters based upon existing data and specific monitoring results. (Dir. K.2.c).) The prior permit also required an implementation time schedule "of short and long-term recommended activities (individual and collective) needed to address the highest priority water quality problem(s) identified in Requirement K.2.d." (Dir. K.2.e).)

Claimants were also previously required to develop short-term and long-term effectiveness assessment strategies, including for short term assessments: "specific direct and indirect performance measurements" and "discuss the role of monitoring data collected by the Permittees in substantiating or refining the assessment" (Dir. K.2.l)) and for long-term

assessments, to consider methods such as surveys, pollutant loading estimations, receiving water quality monitoring, and achievement of measurable goals." (Dir. K.2.m).) Claimants also were previously required to develop a map including depiction of CWA section 303(d) impaired receiving waters. (Dir. K.2.a).) Water bodies listed under CWA section 303(d) are listed impaired for specific, identified, constituents. Moreover, the 2010 Permit's requirement to prioritize water quality conditions by constituent and location requires efforts comparable efforts as the 2004 Permit that required, among other things, permittees to consider existing data and monitoring results to identify likely sources of pollutants and to employ and evaluate the results of short- and long-term effectiveness assessment strategies.

4. *Develop a watershed BMP implementation strategy, including a schedule to implement BMPs to abate specific receiving water quality problems; and Develop a strategy to monitor improvements in receiving water quality stemming from implementation of BMPs described in the Watershed Workplan, including required monitoring in the receiving water*

While employing some different terminology, the prior permit required Claimants to perform a comparable level of service in that the prior permit required copermittee collaboration "to identify, address, and mitigate the highest priority water quality issue/pollutants in the Upper Santa Margarita Watershed." (Dir. K.1.) The efforts required in the prior permit's parallel watershed-focused Directive K did not use the phrase Best Management Practices (BMPs) but substantively required the same efforts requiring "identification and prioritization of major water quality problems in the watershed caused or contributed to by MS4 discharges and the likely source(s) of the problem(s)" (Dir. K.2.d)) and requiring implementation of a "schedule of short and long-term recommended activities (individual and collective) needed to address the highest priority water quality problems . . . " (Dir. K.2.e) as well as strategies for assessment the effectiveness of the activities, including specific direct and indirect performance measurements. (Dir. K.2.l and K.2.m).)

Other actions required of the permittees in the prior permit also amount to BMPs, such as collaboration of "'watershed-based' (i.e., natural resource-based) land use planning with neighboring local governments" (Dir. K.2.g), implementation of a "watershed-based education program" (K.2.f) and "any other urban runoff management programs or activities being conducted collectively by the Permittees to address water quality issues" (Dir. K.2.h).) The provision challenged by Claimants does not impose a new or higher level of service compared to the prior permit.

5. *Establish a schedule for development and implementation of the watershed strategy outlined in the Watershed Workplan, including the holding of annual watershed workplan review meetings open to the public;*

While it used different terminology, the prior permit already required permittees to meet at minimum annually "to review and assess available water quality data . . . assess program effectiveness, and to review and update the Watershed SWMP." (Dir. K.4.) To the extent the minimum annual meetings of Permittees were not subject to open meeting requirements, the requirement to open the meetings to the public is a new requirement, however any costs associated with opening a staff level meeting to the public, with no additional requirement to respond to any public comments, would be *de minimis.*

6. *Implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the RWQCB*;

The prior permit required implementation of the parallel Watershed SWMP but did not specify that implementation should begin within 90 days of submittal of the SWMP unless directed otherwise. Regardless of the timing of commencement of implementation, Claimants were required to implement the Watershed SWMP under the prior permit sufficiently early to begin implementation of the short-term strategy and to give substance to the at least annual effectiveness assessment. (Dir. K.4.)

7. *Cooperate among permittees to develop and implement the Watershed Workplan, including the requirement to pursue interagency agreements with non-permittee MS4 operators*;

The prior permit required copermittees to "as appropriate, participate in watershed management efforts to address storm water quality issues within the entire Santa Margarita Watershed, including efforts conducted by other entities in the watershed, such as San Diego County, U.S. Marine Corps Base Camp Pendleton, Native American tribes, and other state, federal, and local agencies." (Dir. K.3.) The prior permit also required that permittees describe any interagency agreements "or other efforts, with non-Permittee owners of the MS4 such as Caltrans, Native American Tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4." (Dir. K.2.b). The prior permit anticipated that coordination with other non-permittee MS4 owners/operators was a minimum element of the required Watershed SWMP. (Dir. K.2.)

Coupled with the requirement that the Watershed SWMP would, also at a minimum, require such things as "[a]n assessment of the water quality of all receiving waters in the watershed . . ." (Dir. K.2.c) (emphasis added)), cooperation with other MS4 owners within the watershed, even if not memorialized in an interagency agreement, was already necessitated by the prior permit.

8. *Implement a public participation mechanism within each watershed, including opportunity for public review and comment on the draft Watershed Workplan prior to its submission to the RWQCB;*

To the extent the requirement to allow public participation prior to submittal of a draft Watershed Workplan is new to the 2010 Permit, for purposes of responding to Claimants' challenge, it is important to note that the 2010 Permit does not *mandate* that Copermittees actually consider or respond to comments on the draft Watershed Workplan,[211] nor does it mandate holding a public meeting at that stage. By its term, it simply mandates that Copermittees make a draft available for public review and comment. To the extent allowing public comment on the draft Watershed Workplan is determined to be a new requirement, any costs associated with making a draft available for public comment, with no additional associated mandated requirements to respond to any public comments or modify the draft, would be *de minimis.*

[211] While evaluation of comments and consideration of revisions based on the comments would give meaning to the public review and comment process, for Test Claim purposes, there is no such mandate in the 2010 Permit.

9. *As part of the review and annual update of the Watershed Workplan, hold an Annual Watershed Review meeting open to the public and adequately noticed.*[212]

As discussed above, Claimants were previously required to meet at least annually "to review and assess available water quality data (from the MRP and other reliable sources), assess program effectiveness, and to review and update the Watershed SWMP." (Dir. K.4.) While the earlier provision did not require opening the annual meeting to the public and providing notice of such meeting, such efforts do not impose a new program or even a higher level of service be provided.

It is apparent from a comparison of Directive G to the prior permit's comparable Directive K that the challenged aspects of Directive G do not actually impose a new program or require provision of a higher level of service. As such, the Commission should find that Directive G is not a state mandate entitling Claimants to subvention of funds.

Other Mandates Exceptions Also Apply

If the Commission determines that Directive G's provisions do impose a new program or higher level service and that the challenged activities are not mandated by federal law, no reimbursement should be required because associated incremental costs for the 2010 Permit's requirements would be *de minimis*.[213] In addition, Copermittees have fee authority to fund these activities and have not demonstrated they must raise tax monies to comply. For these reasons, and for the additional reasons discussed in the General Responses, above, the Commission should find that no subvention is required for this challenged provision.

K. Requirements Relating to Jurisdictional Urban Runoff Management Plan (JRMP) Annual Report (Provision F.2.a.)

Claimants contend that Provision F.2.a contains requirements that are state mandates subject to reimbursement because the numerous elements required to be included in Copermittees' JRMP Annual Reports exceed requirements of federal law and exceed comparable requirements in the prior permit. The Water Boards disagree. The challenged Annual Report elements are a necessary part of the federal mandate to control pollutants in storm water discharges from the MS4 to the MEP and the independent federal mandate to effectively prohibit non-storm water discharges into the MS4. Further, contrary to Claimants' characterization, the requirement to include the challenged elements does not result in imposition of a new program or somehow require a higher level of service be provided by Copermittees. For the reasons discussed below, the Commission should find that no reimbursable state mandate was imposed.

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[212] Test Claim, Narrative Statement, pp. 51-52.

[213] For example, costs associated with issuing an electronic meeting notice and scheduling the already required annual meeting in a room with adequate space for the anticipated public and of making draft plans available for public review and comment would be *de minimis*.

Inclusion of the Challenged Elements in the Annual Reports Is Necessary to Meet the Federal MEP Standard

Directive K.3 in the 2010 Permit required submittal of a Jurisdictional Runoff Management Program (JRMP) Annual Report. Among other purposes, the JRMP annual report is necessary to evaluate whether timely implementation of control measures and other actions to reduce pollutants in storm water discharges in accordance with this Order, is achieved. The 2010 Permit found that the annual reporting requirements are consistent with federal regulations, which provide:

"The operator of a large or medium municipal separate storm sewer system that has been designated by the Director under section 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such a system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and (7) Identification of water quality improvements or degradation."[214]

All of the information required under Directive K.3., Table 5, and Attachment D challenged by Claimants are "data . . . accumulated throughout the reporting year" to provide a "status of implementing" the controls as specified in 40 CFR section 122.42(c). In more practical terms, reporting requirements are necessary so that Copermittees have criteria that can be used to demonstrate that their storm water management programs are implementing the most effective controls to reduce the discharge of pollutant to the MEP standard or if more effective measures must be implemented.

Unlike in the LA Permit case considered in *Department of Finance*, the San Diego Water Board found that the provisions in the 2010 Permit are exclusively based on federal law and found that the underlying substantive provisions to be reported upon were necessary to meet the MEP standard. Consistently, the 2010 Permit found that "[a]nnual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs."[215] The San Diego Water Board's findings are entitled to deference under *Department of Finance*.

Moreover, that the requirement is a federal, not a state mandate, is likewise supported by the inclusion of similar requirements in the most recent U.S. EPA-issued MS4 Permit for the District of Columbia. In that permit, U.S. EPA requires the District to "continue to implement, assess and upgrade all of the controls, procedures and management practices described in this permit, and in the SWMP dated February 19, 2009, and any subsequent updates. . . ," and "No later than 3 years from the issuance date of this permit the permittee shall notice a fully updated Plan

[214] 2010 Permit Fact Sheet, Finding D.1.g, p. 66, citing 40 C.F.R. § 122.42(c).

[215] 2010 Permit, Finding D.1.g., citing 40 C.F.R. § 122.42(c).

including all of the elements required in this permit."[216] U.S. EPA's Annual Report requirements imposed in the same permit also include extensive requirements for proposed revisions, assessments and analyses.[217] The fact that U.S. EPA has issued at least one permit that includes similar requirements supports the San Diego Water Board determination that the provisions were necessary to meet the MEP standard in this case.

Not a New Program or Higher Level of Service

The Water Boards disagree that the requirement to include additional elements in the JRMP Annual Reports imposes a new program or requires a higher level of service by Claimants. The prior MS4 permit for Riverside County also required preparation of updated JRMPs and, as described in the 2010 Permit, "reduces the amount of program activity-based reporting from Order No. R9-2004-001."[218] Claimants' contention that the 2004 Permit "did not contain the detailed requirements set forth in 40 CFR § 122.42(c)"[219] is incorrect. The substantive content to be included elsewhere in the Individual SWMP Annual Reports were specified in great detail as part of the Monitoring and Reporting Program (MRP) associated with the 2004 Permit.[220] For example, the MRP for Order No. R9-2004-001 required comparable "Individual Annual Reports" as follows:

> Each Individual Annual Report shall be a documentation of the activities conducted by each Permittee during the previous annual reporting period. Each Permittee shall submit their Individual Annual Report to the Principal Permittee by a date determined by the Principal Permittee for inclusion in the SWMP Annual Report. Each Individual Annual Report shall, at a minimum, contain the following:[221]
>
> a) Comprehensive description of all activities conducted by the Permittee to meet all requirements of Order No. R9-2004-001, including, but not limited to, the following information:
>
> (1) Development Planning (Section F):
>
> (i) Description of any amendments to the General Plan or the development project approval process;
>
> (ii) Number of grading permits issued;
>
> (iii) Number of developments conditioned to meet SUSMP requirements*;
>
> (iv) Attach one example of a development project that was conditioned to meet SUSMP requirements and a description of the required BMPs;
>
> (v) Description of any updates to the environmental review process;

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[216] U.S. EPA MS4 Permit DC0000221, (modified October 25, 2012) sec. 3.

[217] *Id., at* sec. 6.2.1

[218] 2010 Permit Fact Sheet, Dir. K.3, pp. 175-76. The Fact Sheet continued: "Under the CASQA assessment model, activity-based reporting includes primarily outcomes that document compliance with permit requirements (Level 1 outcomes), rather than being indicators of the impact of activity implementation.[fn] This approach is consistent with guidance from the USEPA, which notes that annual reports should highlight program effectiveness as well as describing activities." *Id.*

[219] Test Claim Narrative Statement, p. 54.

[220] See also, Order No. R9-2004-001, Directive C.2.

[221] See Order No. R9-2004-001, MRP No. R9-2004-001, Dir. III.A.1.

* Items with an asterisk are not applicable to the first annual report.

(vi) Description and number of training efforts conducted during the reporting period (for staff, developers, contractors, etc.), including the number of staff trained; and

(vii) An assessment of program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.*

(2) Construction (Section G):

(i) Number of inspections conducted;

(ii) Number and type of enforcement actions related to construction sites;

(iii) Description of modifications made to the construction and grading approval process;

(iv) Description and number of training efforts conducted during the reporting period (for staff inspectors, contractors, and construction site operators); and

(v) An assessment of program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.*

(3) Municipal (Section H.1):

(i) Number of municipal inspections conducted;

(ii) Number and types of enforcement actions taken;

(iii) Number of catch basins and inlets that were inspected and the number that were cleaned;

(iv) Assessment of the amount and type of debris removed from catch basins, streets, and open channels, including an identification of problem areas that generate the most pollutants;

(v) Assessment of effectiveness of BMPs that have been implemented for municipal facilities and activities;

(vi) Description and number of training efforts conducted over the last year (for municipal facility operators and/or inspectors); and

(vii) An assessment of program effectiveness based on the measurable goals established in each Permittee's Individual SWMP.*

(4) Industrial/Commercial (Section H.2):

(i) Number of inspections conducted;

(ii) Number and type of enforcement actions taken; and

(iii) An assessment of overall program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.*

(5) Residential (Section H.3):

(i) A description of residential areas that were focused on during the past year;

(ii) Number and types of enforcement actions taken; and

(iii) Assessment of overall program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.*

(6) Education (Section I):

(i) Description of education efforts conducted by the Permittee (not collectively with other Permittees) during the previous year;

(ii) Assessment of overall program effectiveness based on the measurable goals established in the Permitee's Individual SWMP.*

(7) Illicit Discharge Detection and Elimination (Section J):

(i) Number of illicit discharges, connections and spills reported and/or identified during the reporting period;

(ii) Number of illicit discharges or connections investigated during the reporting period and the outcome of the investigations;

(iii) Number and types of enforcement actions taken for illicit discharges or connections during the reporting period;

(iv) Number of times your agency's hotline was called during the reporting period, as compared to previous reporting periods;
(v) Number and location of dry weather monitoring sites that were monitored during the reporting period;
(vi) Summary of Illicit Discharge Monitoring Program results, including: 1) All inspection, field screening, and analytical monitoring results; 2) All follow-up and elimination activities; and 3) Any proposed changes to station locations and/or sampling frequencies; and
(vii) An assessment of overall program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.*

(8) Public Participation – a description of efforts to include the public in urban runoff management programs during the reporting period (i.e., river clean-ups, volunteer monitoring, Permittee council meetings related to the SWMP, etc.).

b) Assessment of Program Effectiveness - each Permittee shall include an assessment of the effectiveness of its Individual SWMP using the measurable goals and direct and indirect assessment measurements developed in the SWMP, in accordance with Attachment D of Order No. R9-2004-001.

c) Fiscal Analysis Component - each Permittee shall include an annual fiscal analysis, for each fiscal year covered by Order No. R9-2004-001, in its Individual Annual Report. This analysis shall evaluate the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities of the Permittee's Individual SWMP. The analysis shall include the following:
(1) A report of the previous reporting period's budget, and a budget for the upcoming reporting period. To the extent possible, the budgets should be broken down by the following programs:
(i) Program management;
(ii) Construction Inspections;
(iii) Development plan review/SUSMP implementation;
(iv) Industrial/Commercial inspections;
(v) Illicit discharge and connection response and elimination;
(vi) Municipal activities (catch basin cleaning, BMP maintenance, etc.);
(vii) Education;
(viii) Monitoring; and
(ix) Other
(2) A description of the source(s) of funds that were utilized during the previous fiscal year and the source(s) of funds proposed to meet the necessary expenditures for the subsequent year, including legal restrictions on the use of such funds.

d) Non-Storm Water Discharges – Permittees shall report on any discharge category listed in Requirement B.2 of Order No. R9-2004-001 that was identified as a source of pollutants during the reporting period. For each identified category, the Permittee shall report whether it elected to prohibit the discharge or to require BMPs to reduce pollutants in the discharge to the MEP. If the discharge is not prohibited, the BMPs that will be implemented, or required to be implemented, shall be described in each Permittee's Individual SWMP Annual Report.

e) Receiving Water Limitations – the report required pursuant to Requirement C.2.a. of Order No. R9-2004-001, if applicable.

f) A summary of all urban runoff related data not included in the annual monitoring report (e.g., special investigations); and

g) Proposed revisions to the Individual SWMP, including areas in need of improvement based on the assessment of effectiveness of each program component.[222]

The extensive level of detailed reporting requirements already in place prior to adoption of the 2010 Permit support the conclusion that no new program or higher level of service was imposed. Claimants have not established a state mandate exists.

Other Mandates Exceptions Also Apply

Even if the Commission finds that inclusion of the challenged elements in the Annual Report results in a state mandate, reimbursement should not be required. For many if not all of the related substantive provisions underlying the required elements, Claimants have fee authority and have not demonstrated they must raise taxes to fund their inclusion in the Annual Report. To the extent some of the underlying requirements to be reported upon concern municipal projects, Copermittees undertake those projects voluntarily and may not receive reimbursement for inclusion of the element in the Annual Report. Finally, inclusion of information generated from implementation of other substantive permit requirements should not result anything but *de minimis* costs. For all these reasons, and the additional reasons in the General Responses, above, the Commission should find no reimbursable state mandate has been imposed.

L. Special Studies Requirements (Attachment E)

Claimants assert that several special studies required in the 2010 Permit are not mandated by federal law and are properly the obligation of the San Diego Water Board or State Water Board to carry out. Therefore, Claimants assert, the San Diego Water Board has chosen to shift its responsibilities to Claimants to carry out the special studies requirements and they are state, not federal, mandates. As an initial matter, with respect to all of the challenged special studies, Claimants have not demonstrated that either the San Diego Water Board or the State Water Board is required by law to carry out the functions established in the special studies. There has been no shifting of responsibilities to the Copermitttees, as Claimants assert.

The special studies do not represent new programs or require Copermittees to perform higher levels of service than under prior permits. Instead, the Special Studies requirements were targeted at areas of copermittee program deficiencies and were designed to help ensure Copermittees achieve the required federal standard of controlling pollutants in storm water discharges to the MEP or the separate federal requirement of effectively prohibiting non-storm water discharges into the MS4. They primarily are intended to require the Copermittees to collect monitoring data as part of the federally required monitoring program that can be used either to demonstrate that their jurisdictional runoff management programs are meeting the federal standards or that will inform changes needed to improve their programs so that the standards are met. Although they have different substantive focuses than the 2004 Permit special studies, the do not amount to establishment of new programs or mandates to perform higher levels of service.

[222] Order No. R9-2004-001, MRP, Dir. III.A.1, pp. 12-14.

The Challenged Special Studies Are Necessary to Meet the MEP Standard

The special studies represent "prescribed conditions . . . on data and information collection" (see 122.26(d)(2)) to meet the federal requirements of MEP and the independent federal requirement to effectively prohibit non-storm water discharges to the MS4. As components of monitoring programs, the requirements were entirely consistent with both of these mandates. The Board found:

> The Copermittees are required to update and expand their runoff management programs on jurisdictional and watershed levels in order to improve their efforts to reduce the contribution of storm water pollutants in runoff to the MEP and meet water quality standards. Changes to Order No. R9-2004-001's requirements have been made to help ensure these two standards are achieved by the Copermittees.[223]

The determination to require these special studies was an essential part of this effort. The Board based the monitoring provisions in part on the need to understand how to address the "persistent exceedances of water quality objectives in the Santa Margarita watershed. The Santa Margarita watershed also has conditions that are frequently toxic to aquatic life. Bioassessment data from the watersheds further reflects these conditions . . . ."[224] Special studies "are recommended when preliminary source identification work identifies a receiving water problem and/or to answer receiving water questions related to MS4 discharges not addressed by core monitoring programs."[225] They are necessary to require Copermittees to collect monitoring data that they can use to either demonstrate that their JRMPs are able to effectively prohibit non-storm water discharges and "reduce the discharge of pollutants to the MEP" or instead develop the data necessary to improve their programs to be able to achieve these requirements.

Claimants acknowledge that federal regulations require them to conduct a monitoring program and submit an annual report that among other things, identifies proposed changes to the storm water management program and revisions to the assessment of controls reported in the permit application. Claimants are also required by federal law to report on the identification of water quality improvements or degradation.[226] Specifically, the federal regulations require Copermittees "to conduct a comprehensive monitoring program." In support of the special studies requirements, the San Diego Water Board found significant water quality degradation in monitored receiving waters warranted requirements to address program deficiencies and noted:

> The Copermittees' water quality monitoring data submitted to date documents persistent violations of Basin Plan water quality objectives for various runoff-related pollutants (indicator bacteria, dissolved solids, turbidity, metals, pesticides, etc.) at various watershed monitoring stations. Persistent toxicity has also been

[223] 2010 Permit Fact Sheet, Finding D.1.c.

[224] 2010 Permit, Fact Sheet, p. 9.

[225] 2010 Permit, Response to Comment 150. To the extent Claimants actually replaced requirements through participation in regional efforts and recognized cost savings, those costs savings must be identified.

[226] See 40 C.F.R. §§ 122.26(d)(2)(iii) and 122.26(d)(2)(iv).

> observed at some watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Riverside County.[227]

The San Diego Water Board found that requirements such as the special studies were necessary to address noted program deficiencies.[228]

The overarching federal basis for the Montioring Program (of which the special studies requirements are part) is to "assess the condition of receiving waters, monitor pollutants in storm and non-storm water effluent from the MS4, and conduct Special Studies to address conditions of concern." [229] Additional purposes of the MRP are to meet the following goals:

> (1) Assess compliance with Order No. R9-2010-0016; (2) Measure and improve the effectiveness of the Copermittees' runoff management programs; (3) Assess the chemical, physical, and biological impacts resulting from MS4 discharges; (4) characterize storm water discharges; identify sources of specific pollutants; prioritize drainage and sub-drainage areas that need management actions; detect and eliminate illicit discharges and illicit connections to the MS4, assess the overall health of receiving waters; and Provide information to implement required BMP improvements.[230]

As the San Diego Water Board found in Attachment E equally important to the recognized benefits of sampling data:

> [M]onitoring programs are an essential link in the improvement of storm water management efforts. Data collected from monitoring programs can be assessed to determine the effectiveness of management programs and practices, which is vital for the success of the iterative approach used to meet the MEP standard for storm water. When water quality data indicate that water quality standards or objectives are being exceeded, particular pollutants, sources, and drainage areas can be identified and targeted for specific management efforts. When data indicate that a particular BMP or program component is not effective, improved efforts can be selected and implemented.[231]

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[227] 2010 Permit, Finding C.9.

[228] 2010 Permit, Finding D.1.c.

[229] 2010 Permit, Section E, MRP, p. 2.

[230] Ibid.

[231] 2010 Permit Fact Sheet, Attachment E, p. 186.

The Board likewise found that: "Considering the benefits described above, the Receiving Waters Monitoring and Reporting Program (MRP) has been designed to determine impacts to receiving water quality and beneficial uses from storm water runoff and to use the results to refine the Copermittees' storm water runoff management programs for the reduction of storm water pollutant loadings to the MEP. For non-storm water discharges, monitoring has been designed to identify and eliminate prohibited illicit discharges and to determine appropriate actions to take in response to dry weather non-storm water action levels. *Each of the components of the MRP is necessary to meet the objectives listed above."* [232]

A brief evaluation of each challenged study leads to the same conclusion – that the study requirements were necessary to meet the federal MEP standard or in some instances to demonstrate compliance with the effective prohibition of non-storm water discharges.

Sediment Toxicity Study

The Sediment Toxicity Study required a workplan to investigate the toxicity of sediment in streams and potential impacts on index of biotic integrity (IBI) scores and required inclusion of the results in Copermittees' Annual Monitoring Report. Claimants' primary argument specific to the sediment toxicity special study is that sediment should be addressed on a statewide basis because it is of statewide interest. The fact that sediment toxicity (like many other persistent water quality issues) is an issue statewide does not mean that it is not properly addressed by the San Diego Water Board in the context of waters within its region. The San Diego Water Board found that: "[t]his study has been added to the Monitoring and Reporting requirements to assess the quality of stream sediments and possible contamination due to runoff from the MS4."[233]

The requirement was based on information provided by the Copermittees who had "identified the presence of aqueous toxicity at both mass loading stations due to pyrethroid pesticides, but their present in sediments is unknown." [234] The San Diego Water Board's findings in the 2010 Permit Fact Sheet support a determination that to the contrary, the sediment toxicity study was necessary to implement the federal MS4 requirements.

Trash and Litter Investigation

The primary argument unique to the trash and litter investigation appears to be that the requirements may also result in evaluation of trash and litter that may have entered the MS4 or receiving waters from wind or direct deposit, rather than through storm water or non-storm water discharges. Therefore, Claimants assert, the requirement lacks federal basis. As noted in the requirement itself, the trash and litter study was intended to inform the need for improved BMPs as part of the iterative process of achieving the federal MEP standard. Specifically, the San Diego Water Board found that:

> Although trash can impair beneficial uses, the amount and type of trash discharged into receiving waters from the Copermittee(s) MS4 is unknown. Thus, the Copermittees have largely been

[232] 2010 Permit, Section E, MRP, Fact Sheet, p. 186.

[233] 2010 Permit, Attachment E, Fact Sheet, p. 196.

[234] Ibid.

> unable to assess the effectiveness of their BMPs that target trash as a pollutant. The special study requires the Copermittees to utilize previously developed protocols to determine the source of trash and litter in receiving waters, assess BMP effectiveness, and implement additional BMPs if needed according to the requirements of the Order.[235]

In addition, the fact that the 2012 MS4 Permit U.S. EPA issued to the District of Columbia under federal authority contains a provision requiring trash control supports the San Diego Water Board's conclusion that this study was necessary to meet MEP. In the Washington DC permit, U.S. EPA specified:

> The permittee shall continue to ensure the implementation of a program to further reduce the discharge of floatables (e.g., litter and other human-generated solid refuse). The floatables program shall include source controls and, where necessary, structural controls.[236]

The program has associated requirements for development of a trash reduction calculation methodology as part of their Annual Report to U.S. EPA.[237]

Moreover, the trash and litter study originated from information voluntarily provided by Copermittees in their ROWD for the 2010 Permit. "Urban Runoff discharged to MS4s in Riverside County ultimately flows to various surface water bodies (inland streams, lakes, and reservoirs) and typically carries Pollutants that originate from numerous dispersed and uncontrolled sources. Examples of Pollutants that may be present in Urban Runoff are fertilizer, heavy metals, nutrients, petroleum products, sediment, bacteria, chemicals, and litter."[238]

Agricultural, Federal and Tribal Input Study

This special study required Copermittees to investigate the water quality of inputs to the Copermittees' MS4s from agricultural, tribal and federal runoff sources and include the results in the Monitoring Annual Report. Claimants contend that San Diego Water Board should have directed this study at the agricultural, federal and tribal sources through the San Diego Water Board's Porter-Cologne authority. While it is possible that the San Diego Water Board could have directed other entities to investigate discharges affecting Copermittee's MS4s, such discharges into Copermittees' MS4s are squarely their responsibility to evaluate in efforts to meet the MEP standard for storm water discharges and the independent federal law requirement that Copermittees' effectively prohibit non-storm water discharges into the MS4s. In any case, the San Diego Water Board is not responsible for undertaking the investigation required in the special study and did not shift its responsibility to Claimants. As the Board noted, the requirement for this study emanated from Copermittees' own ROWD:

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[235] *Ibid.*

[236] Washington D.C. (2011) (Permit No. DC0000221), § A.4.7.2.

[237] *Id.*, at A.4.7.10.

[238] 2009 ROWD, § 4.4.2.

> In the ROWD, the Copermittees specifically state their concern regarding the quality of storm water which is discharged into their MS4 from [agricultural, tribal and federal] areas, and state that these discharges may affect overall water quality, primarily in the Murrieta and Temecula Creek watersheds. However, no data, information, or analyses were presented or identified on the level of pollutants in such flows into their MS4. The special study has been designed with sampling frequency and parameter requirements that lend flexibility to the Copermittees.[239]

This study also originated from information voluntarily provided by Copermittees.

> This special study was included based upon information provided in the Copermittees' ROWD, as the Copermittees stated their concern regarding the quality of storm water being discharged into their MS4s from Agricultural, Federal and Tribal areas without sufficient supporting data. The Copermittees are responsible for flows into, through and from their MS4s . . . . This special study is intended to identify those flows and determine the level of pollutants being discharged into their MS4s. The information from this study will be useful in determining whether pollutant contributions from agricultural, federal, and tribal areas are actually a significant source of pollutants entering the Copermittees' MS4 systems, as they assert.[240]

MS4 and Receiving Water Maintenance Study

This special study required Copermittees to develop a workplan to investigate receiving waters that are considered part of the MS4 and which are subject to continual vegetative clearance activities to assess the effects of the vegetation removal on water quality. It also required Copermittees to include the results in the annual monitoring report. The San Diego Water Board identified the purpose and need for the study as follows: "The objective of this study is to determine if there are short-term or long-term in-stream water quality impacts from maintenance activities and to assess if the activities exacerbate the impairment of receiving waters 303(d) listed as impaired wholly or partially from MS4 discharges. *Receiving waters within the Copermittees jurisdiction have been routinely cleared of vegetation by the Copermittees as part of their MS4 maintenance programs without mitigation efforts."*[241] These purposes are wholly consistent with the goal of ensuring that Copermittees' efforts are effectively achieving the MED standard.

Claimants' argument that there can be no Clean Water Act basis for this study because beneficial uses cannot exist within MS4s as MS4s are by definition not waters of the United States.[242] Claimants contend that the rationale for the study – "that the MS4 and the 'receiving water' can be the same water body" is contradicted by a determination of the United States

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[239] 2010 Permit, Attachment E, Fact Sheet, p. 197.

[240] 2010 Permit, Response to Comment 168.

[241] *Ibid.*

[242] Test Claim Narrative Statement, pp. 59-60.

Court of Appeals for the Ninth Circuit in *NRDC v. County of Los Angeles, 673 F.3d 880 (9th Cir. 2011) reversed in part sub nom., Los Angeles County Flood Control Dist. V. NRDC, 133 S. Ct. 710 (2013).* Claimants' assertions are unsupported and their reliance on the 2011 *NRDC* case for the proposition cited is misplaced. On remand from the United States Supreme Court, the Ninth Circuit Court of Appeal recognized:

> [I]t appears that the pertinent river segments are part of *both* the LA MS4 itself *and* 'the waters of the United States' that the CWA protects. . . . We misconstrued some of the data before us when we previously held otherwise. *See Natural Res. Def. Council,* 673 F.3d at 899.[243]

The Water Boards also disagree that the federal definition of MS4 precludes some portion of a receiving water body from also being considered part of an MS4.[244]

Not a New Program or Higher Level of Service

The prior permit similarly contained special studies intended to address specific research or management issues not addressed by core monitoring requirements as part of the monitoring and reporting program.[245] That the focus of the studies in the 2010 Permit is directed at different and higher priority water quality issues requiring attention does not transform the studies into new programs or higher levels of service mandated on Claimants.

Other Mandates Exceptions Also Apply

As discussed above with regard to each of the challenged special studies, the studies were largely based on information voluntarily provided by Copermittees as water quality concerns. Further, Claimants have not demonstrated that they must raise tax monies to pay for implementation of the studies. Finally, it is likely that cost savings can be achieved by coordination of efforts or use of information for dual purposes. For all of these reasons, and for the additional reasons in the General Responses, above, the Commission should conclude there is no state mandate requiring subvention.

M. Requirements that 2010 Permit Program Ensure No Violations of Water Quality Standards and Other Requirements (Directives F.1., F.1.d, F.2., F.3.a, F.3.b, F.3.c, F.3.d, and F.6)

Claimants assert that language in the 2010 Permit required the implementation of programs independently required in Section F to meet standards that exceed what the Clean Water Act requires. Specifically, for each of the identified programs in Section F, Claimants challenge as exceeding federal law the associated language requiring implementation of the program to federal standards (1) to prevent discharges from the MS4 from causing or contributing to a violation of water quality standards or (2) to effectively prohibit non-storm water

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[243] *NRDC v. Los Angeles County Flood Control District, (9th Cir. 2013) 725 F.3d 1194, 1200, fn. 12.*

[244] To the extent Claimants challenge all or a portion of a fifth special study as a state mandate, the Water Boards disagree that the LID impacts study requirement is a state rather than federal mandate. The LID impacts study Claimants identify as in lieu of the fifth special study is not a state mandate in any case because it is not required by the permit itself.

[245] Order No. R9-2004-001, MRP, Section A.III, p. 8.

discharges/prevent illicit discharges into the MS4.[246] In short, Claimants contend they are required to "meet the absolute requirement of ensuring no violation of water quality standards and the prevention of illicit discharges."[247]

As an initial matter, Claimants acknowledge that they separately challenged the development and implementation of some of the programs as unfunded mandates. They assert, however, a separate unfunded mandate was imposed when the 2010 Permit included the identified standard(s) for implementation of each of the respective programs. To the extent the implementation of the underlying programs is or could have been challenged as state mandates, any costs associated with implementation of those requirements, whether implemented to successfully achieve compliance with water quality standards or to prohibit non-storm water discharges, or some lesser level of compliance, should be evaluated within the challenges to those substantive programs. The Water Boards do not view the challenged language within the program provisions as extractable for separate mandates evaluation. We nonetheless explain here why the language implements the federal standards applicable to MS4 permits and within the program contexts is neither new nor a higher level service when compared to Claimants' prior MS4 permits.

The Receiving Water Limitations Language is Required by Federal Law and Does Not Impose A New Program or Higher Level of Service

Claimants assert that the challenged language requires absolute compliance or guarantees of compliance beyond what federal law requires. Claimants mischaracterize or misunderstand the nature of the permit requirements in the context of the 2010 Permit.

Together Provisions A.1, A.2, and A.3 in the Prohibitions and Receiving Water Limitations Provisions of the 2010 Permit implement the same language that the State Water Board directed in a 1999 precedential order that regional water boards use in MS4 permits.[248] The precedential "receiving water limitations language" generally requires that municipal storm water discharges shall not cause or contribute to exceedances of water quality objectives in the receiving waters.[249] The language was initially developed by U.S. EPA after it objected to receiving water limitations in two regional water board permits (including the 1998 MS4 Permit issued to Riverside County Copermittees) that effectively provided a safe harbor from enforcement during iterative process implementation. Since 1999, the State Water Board consistently has expected receiving water limitations in MS4 permits to be complied with through the iterative process of employing successively improved BMPs.[250]

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[246] Test Claim, Narrative Statement, p. 61-63.

[247] Test Claim, Narrative Statement, p. 61.

[248] State Board Order WQ 99-05 (*Environmental Health Coalition*), p.1.

[249] *Ibid.*

[250] See, State Water Board Order WQ 2015-0075, p. 11 ("We have previously exercised the discretion we have under federal law in favor of requiring compliance with water quality standards, but have required less than strict compliance. We have directed, in precedential orders, that MS4 permits require discharges to be controlled so as not to cause or contribute to exceedances of water quality standards in receiving waters,[fn] *but have prescribed an iterative process whereby an exceedance of a water quality standard triggers a process of BMP improvements.*" (Emphasis added.)

Although it has been included in all permits issued to Riverside County Copermittees since 1999, Claimants argue that the San Diego Water Board's inclusion of the same mandatory language in specific program provisions in the 2010 Permit newly imposes an absolute compliance requirement where none existed previously. Although not cited for this proposition, Test Claimants in other MS4 matters, including *San Diego Region Order No. R9-2015-0100 and Order No. R9-2015-0001, Test Claim 15-TC-02,* have made parallel arguments, relying on the Ninth Circuit Court of Appeals decision in *NRDC v. County of Los Angeles* (2013) 725 F.3d 1194 (the *NRDC* decision) for the (incorrect) proposition that the 2013 opinion created a strict liability scheme where none existed previously. Orange County Claimants in that matter therefore asserted that the receiving water limitations language in the San Diego Regional Permit exceeds federal law by newly requiring "strict liability." The Water Boards' written comments filed in that Test Claim 15-TC-02 are equally responsive to Claimants' argument here.

The State Water Board explained the impacts of the *NRDC* case in a 2015 Water Quality order addressing the most recent Los Angeles MS4 Permit as follows:

> The lack of a safe harbor in the iterative process of the 2001 Los Angeles Order was again acknowledged in 2011 and 2013, this time by the Ninth Circuit Court of Appeal. In these instances, the Ninth Circuit was considering a citizen suit brought by the Natural Resources Defense Council against the City of Los Angeles and the Los Angeles County Flood Control District for alleged violations of the receiving water limitations of that order. The Ninth Circuit held that, as the receiving water limitations of the 2001 Los Angeles MS4 Order (and accordingly, the precedential language in State Water Board Order WQ 99-05) was drafted, engagement in the iterative process does not excuse liability for violations of water quality standards.[fn] The California Court of Appeal has come to the same conclusion in interpreting similar receiving water limitations provisions in MS4 Orders issued by the San Diego Regional Water Quality Control Board in 2001 and the Santa Ana Regional Water Quality Control Board in 2002[fn].[251]

The decisions of the state[252] and federal courts on this point are in harmony with the Water Boards' long-standing view:

> [T]he iterative process, as established in our precedential orders and as generally written into MS4 permits adopted by the water boards, does not provide a 'safe harbor' to MS4 dischargers. When a discharger is shown to be causing or contributing to an exceedance of water quality standards, that discharger is in violation of the permit's receiving water limitations and potentially subject to enforcement by the water boards or through a citizen

[251] State Water Board Order WQ 2015-0075, p. 11.

[252] See *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 890; and *City of Rancho Cucamonga v. Regional Water Quality Control Bd.* (2006) 135 Cal.App.4th 1377.

> suit, regardless of whether or not the discharger is actively engaged in the iterative process.[fn][253]

Although it specifically considered whether to allow a safe harbor as requested by many copermittee petitioners, the State Water Board declined in 2015 to modify its longstanding interpretation of its precedential language.[254] In sum, engagement in the iterative process did not, as Claimants suggest and may have perceived, afford them a safe harbor from enforcement under prior permits with comparable provisions. The Ninth Circuit Court of Appeals' conclusion that receiving water limitations provisions are independent from the provisions establishing the iterative process for purposes of enforcement is not new, but instead confirms the Water Boards' historical interpretation carried through successive permits for MS4s statewide. Thus, not only is the receiving water limitations language not new—neither is the Water Boards' interpretation of the language with regard to the legal standard for enforceability.[255]

The receiving water limitations language, in general, requires that storm water discharges from MS4s not cause or contribute to a violation of water quality standards. Compliance with water quality standards is expected to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs [through the water quality improvement plans] over time.[256] The San Diego Water Board reiterated in the 2010 Permit that achieving compliance "will be accomplished through the implementation of water quality improvement strategies and runoff management programs [BMPs] that effectively prohibit non-storm water discharges into the Copermittees' MS4s, and reduce pollutants in storm water discharges from the Copermittees' MS4s to the MEP."[257] This approach is wholly consistent with the precedential language developed by U.S. EPA and established in precedential language in 1999. As explained above, the language does not exceed federal law by newly requiring and absolute requirement or a guarantee of compliance with water quality standards, as Claimants contend. The receiving water limitations language is required by federal law and is expected to be achieved through an iterative process over time.

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[253] State Water Board Order WQ 2015-0075, p. 12, fn. 44.

[254] In declining to modify the receiving water limitations language to establish a safe harbor as requested by many copermittees statewide, the State Water Board concluded: "We will not reverse our precedential determination in State Water Board Order WQ 99-05 that established the receiving water limitations provisions for MS4 permits statewide and reiterate that we will continue to read those provisions consistent with how the courts have: engagement in the iterative process does not excuse exceedances of water quality standards." (*Id.*, p. 15.)

[255] See also, e.g., San Diego Water Board Responses to Comments on Tentative Order No. R9-2013-0001, March 27, 2013, p. 40 ("While the State Water Board and San Diego Water Board in its recent MS4 permits have directed MS4 dischargers to achieve compliance with water quality standards through an 'iterative process,' using the State Water Board's precedential receiving water limitations language, the Water Boards have never interpreted the iterative process to provide a 'safe harbor' for MS4 dischargers. Thus, the Ninth Circuit's recent opinion is consistent with the Water Boards' interpretation and does not create any new uncertainty or third party liability risks that did not previously exist.")

[256] 2010 Permit, Finding D.1. And see Finding D.1.a, "This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in storm water to the MEP. However, since MEP is a dynamic performance standard, which evolves over time as runoff management knowledge increases, the Copermittees' runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of runoff management program implementation is expected to ultimately achieve compliance with water quality standards in the Region."

[257] *Id., Dir. A.*

Inclusion of similar requirements in U.S. EPA-issued permits likewise supports the San Diego Water Board's determination of federal necessity. The Supreme Court in *Department of Finance* observed that U.S. EPA-issued permits do not contain requirements to provide trash receptacles at transit stops (a requirement of the LA MS4 Permit), and found that the absence of such conditions in EPA-issued permits "undermines the argument that the requirement was federally mandated."[258] Here, U.S. EPA's MS4 permit issued to the District of Columbia in 2011 (modified in 2012) includes a substantially similar provision requiring compliance with water quality standards.[259] The State Water Board also recognized the District of Columbia's MS4 permit is reflective of U.S. EPA's "general practice" to also require compliance with water quality standards over time.[260] That the MS4 Permit issued by U.S. EPA to the District of Columbia also imposes comparable requirements demonstrates that the San Diego Water Board effectively administered federal requirements concerning permit requirements and further supports the Water Boards' view that the permit provisions are required by federal law.

In any case, the receiving water limitations language in Provision A of the 2010 Permit is not a new – it is identical in substance to the receiving water limitations language set forth not only in the 2004 Permit but also as included by USEPA in 1999 when it assumed responsibility for issuing Order No. 98-02 with appropriate water quality standards language in 1999.[261] Nor does the language in the 2010 Permit impose any more stringent level of compliance than previously existed. As discussed above, under mandates law, a program is "new" if the local government had not previously been required to implement it. *(County of Los Angeles v. Comm'n on State Mandates* (2003) 110 Cal.App.4th 1176, 1189 [citing *County of Los Angeles v. State of California* (1987) 43 Cal. 3d 46, 56].) Here, even if each of the challenged provisions could be considered a "program," none meets the definition of "new."

Moreover, Claimants have not established that a higher level of service is required as compared to prior permits. In fact, the 2010 Permit carries forward language from the 2004 Permit in which the San Diego Water Board stated that compliance with the iterative process is not a shield to enforcement. "It should be noted that while implementation of the iterative BMP process is a means to achieve compliance with water quality objectives, it does not shield the discharger from enforcement actions for continued non-compliance with water quality objectives. Consistent with EPA guidance (EPA, 1998a and 1998b) regardless of whether or not an iterative process is being implemented, *discharges that cause or contribute to an exceedance of water quality objectives are in violation of Order No. R9-2004-001.*"[262] The 2010 Permit's comparable provision states: "Nothing in section A.3 [Prohibitions and Receiving Water Limitations] prevents the San Diego Water Board from enforcing any provision of this

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[258] *Id.*, at pp. 771-772.

[259] "[The permittee must] [e]ffectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the Ms4 as necessary to comply with existing District of Columbia Water Quality Standards (DCWQS)." (DC0000221, modified October 25, 2012, p. 5.)"

[260] State Water Board Order WQ 2015-0075, citing to Modified NPDES Permit No. DC0000221 for the MS4 for the District of Columbia, p. 14.

[261] See Order No. R9-2004-001, Provisions A and C.; Order 98-2 (as modified by USEPA 1999 and readopted by the San Diego Water Board in 2000).

[262] Order No. R9-2004-001, Permit Fact Sheet, § C.2., p. 34 (emphasis added).

Order while the Copermittee prepares and implements the above [iterative process implementation] report."[263] The 2010 Permit did not impose a higher level of service.

Because the challenged permit language does not impose a new program or higher level of service on Claimants, the Commission should find that no state mandate was imposed.

Effective Prohibition of Non-Storm Water Discharges (CWA § 402(p)(3)(B)(ii))

Claimants assert that in various permit requirements to implement some of the Claimants' development programs (e.g., development planning programs, programs for discharges from municipal, commercial/industrial and residential facilities) they are required to prevent illicit discharges to the MS4 or to eliminate residential non-storm water discharges to the MS4. Specifically, with regard to Development Planning (F.1), the Construction Component (F.2), the Municipal Component (F.3.a.), the Commercial/Industrial Component (F.3.b.) and the Residential Component (F.3.c), Claimants assert they were required to go beyond "effectively prohibiting" non-storm water discharges to the MS4 and were instead held to "prevent" or "eliminate" such discharges."[264] Claimants contend a state mandate was imposed by inclusion of the challenged language because "[n]othing in federal law or regulation authorized the RWQCB to require Claimants to develop or implement programs that will prevent non-stormwater discharges from entering the MS4 . . . ."[265]

The challenged language concerning elimination or prevention of unauthorized non-storm water discharges implements and is required by federal law. As discussed in more detail above, independent from the MEP standard is the Clean Water Act requirement that MS4 permittees effectively prohibit non-storm water discharges to their MS4s. Under Clean Water Act section 402(p)(3)(B)(ii), permitting agencies must ensure that permits for MS4 discharges include requirements necessary to "effectively prohibit non-stormwater discharges into the storm sewers." While "non-storm water" is not defined in the CWA or federal regulations, the federal regulations define "illicit discharge" as "any discharge to a municipal separate storm sewer that is not composed entirely of storm water and that is not covered by an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer and discharges resulting from firefighting activities)."[266] This definition is the most closely applicable definition of "non-storm water" contained in federal law.

As stated in the Phase I Final Rule, U.S. EPA added the illicit discharge program requirement to begin implementation of the "effective prohibition" requirement to detect and control certain non-storm water discharges to their municipal system. U.S. EPA stated: "Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit (other than the permit for the discharge from the [MS4]."[267]

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[263] 2010 Permit, Directive A.3.c.

[264] Test Claim, Narrative Statement, pp. 62-63.

[265] Id., p. 65.

[266] 40 C.F.R. § 122.26(b)(2).

[267] 55 Fed. Reg. 47990, 47995 (Nov. 16, 1990).

While the CWA requires MS4 permittees to "effectively prohibit" unauthorized non-storm water discharges to the MS4, the implementing federal storm water regulations also address the prevention or elimination of illicit discharges. Specifically, the storm water regulations provide that the proposed management program "shall be based on a description of a program, including a schedule, to detect and *remove* (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) *illicit discharges* and improper disposal into the storm sewer."[268] Similarly, proposed management programs must include "a program, including inspections, to implement and enforce an ordinance, orders or similar means to *prevent illicit discharges* to the municipal storm sewer system."[269] Other regulatory provisions also contemplate permittees will implement programs to prevent non-storm water discharges to the MS4s.[270]

The Water Boards are not aware of any judicial opinions interpreting the phrase "effectively" as it modifies "prohibit non-storm water discharges" in the CWA. However, in general, the requirement to "effectively prohibit" non-storm water discharges has been interpreted in MS4 permits to require either the prohibition of unauthorized non-storm water flows to the MS4's system through a program to detect and remove illicit discharges or ensuring that operators of such non-storm water systems obtain NPDES permits for those discharges. This implementation approach is consistent with Clean Water Act's prohibition on discharges of pollutants to surface waters without first obtaining a NPDES permit for such discharge.[271] MS4 operators meet this requirement by implementing a program to detect and remove illicit discharges, or by requiring a discharger to obtain a separate NPDES permit for the non-storm water discharge into the storm sewer.[272]

The Non-Storm Water/Illicit Discharge Provisions Are Not New and Do Not Impose A Higher Level of Service

Even if the Commission were to agree with Claimants that the requirement to prohibit non-storm water discharges appearing in identified instances in the 2010 Permit exceeds what federal law requires, no state mandate exists because Claimants are unable to demonstrate that the challenged language imposes a new program or higher level of service.

Order No. 98-02 (issued to Riverside County Copermittees, as modified, in 2000) specified that with certain enumerated exceptions, "permittees *shall prohibit* non-storm water discharges into the MS4."[273] And while the 2004 Permit specifies that permittees "shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized

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[268] 40 C.F.R. 122.26(d)(2)(iv)(B) (emphasis added).

[269] *Id.*, at 122.26(d)(2)(iv)(B)(1) (emphasis added).

[270] See, e.g., 40 CFR 122.26(d)(2)(iv)(B)(3) (proposed management program to include 'procedures to be followed to investigate portions of the [MS4] . . .indicate reasonable potential of containing illicit discharges or other sources of non-storm water."; and 40 CFR 122.26(d)(2)(iv)(B)(4) ("proposed management program to include "a description of procedures to *prevent,* contain, and respond to spills that may discharge into the [MS4]." (emphasis added).)

[271] CWA § 301.

[272] 40 C.F.R. § 122.26(d)(2)(iv)(B). See also 55 Fed. Reg. 47990, 47995 ["Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit"].

[273] Order 98-02, as modified, Section A.2.

by a separate NPDES permit; or authorized in accordance with [permit provisions],"[274] it also requires development and implementation of an illicit discharge detection and elimination program "containing measures to actively seek and *eliminate* illicit discharges and connections."[275]

The prior permit, consistent with the federal storm water regulations discussed above, also requires that permittees "shall *eliminate* all illicit discharges, illicit discharge sources, and illicit connections as soon as possible after detection; and "shall implement and enforce its ordinances, orders, or other legal authority to *prevent* illicit discharges and connections to its MS4."[276] The challenged requirements are not a new program and do not impose any higher standard or level of service on Copermittees. Accordingly, the Commission should find no state mandate was imposed.

Other Mandates Exceptions Also Apply

Even if the Commission nonetheless finds that the implementation standards in the 2010 Permit programs challenged here independently impose new programs or higher levels of service or exceed federal requirements, any associated incremental costs in implementing the programs are *de minimis*. Additionally, as discussed above, the Claimants have fee authority to implement these requirements and have not shown that they are required to raise taxes to fund them. For all of these reasons, and for the additional reasons discussed in the General Responses, above, the Commission should find that no subvention is required for these challenged aspects of substantive programs.

VI. CONCLUSION

The above response establishes that the provisions in the Test Claim are not state mandates because they do not impose new programs or higher levels of service on Claimants. For any challenged provision that the Commission nonetheless finds to be mandated by the state, the Commission should find that the provisions are instead mandated by federal law and/or that other exceptions apply, precluding a finding that subvention is required for any of the Test Claim provisions.

The focus of consideration of the federal mandate exception in *Department of Finance* was the application of the MEP standard to two LA MS4 Permit provisions, where the Los Angeles Regional Water Quality Control Board had not explicitly found that the provisions met that standard.[277] In reaching the conclusion that those two provisions did *not* meet MEP, the Court suggested that the result might have been different if the agency *had* found that permit conditions were MEP, and specifically noted that deference to the agency would be appropriate.[278] Here, the San Diego Water Board *did* find that the permit conditions of the MS4 Permit were necessary to satisfy the MEP standard and that the permit was based entirely on federal law. Those findings are entitled to deference.

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[274] Order No. R9-2004-001, section B.1.

[275] Order No. R9-2004-001, Section J.

[276] Order No. R9-2004-001, Section J.5 and J.6 (emphasis added).

[277] *Department of Finance v. Comm'n on State Mandates, supra*, 1 Cal.5th at p. 768.

[278] *Id.*

Even if the Commission does not defer to the San Diego Water Board's findings, analogous provisions in U.S. EPA-issued permits independently demonstrate that the Permit's provisions were federally mandated.[279] In addition, the Permit's provisions implement other federal standards, discussed above, that the Supreme Court did not evaluate. Furthermore, the Supreme Court's decision did not address a number of the other exceptions to mandates law present here, such as the existence of fee authority, the absence of a new program or higher level of service, and the absence of requirements "unique" to local governments and situations where costs are *de minimis*.

For these reasons, the Commission should find that the 2010 Permit does not impose state mandates requiring subvention and the Commission should deny the Test Claim in its entirety.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my personal knowledge.

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Attachments

cc: Service List via Commission Drop Box

[279] See *id.*, at p. 772.

State Statutes and Regulations

1. Water Code § 13370, et seq. (Division 7, Chapter 5.5)
2. Cal. Code Regs., tit. 23, § 2235.2
3. Cal. Code Regs., tit. 23, § 2235.3

Federal Court Decisions

4. *Waterkeeper Alliance, Inc. v. U.S. EPA* (2nd Cir. 2005) 399 F.3d. 486
5. *Natural Resources Defense Council v. Los Angeles County Flood Control Dist.* (9th Cir. 2013) 725 F.3d 1194.

State Court Decisions

6. *Connell v. Superior Court* (1997) 59 Cal.App.4th 382
7. *Clovis Unified School District v. Chiang* (2010) 188 Cal.App.4th 794

State Policies and Permits

8. State Water Resources Control Board, *Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options* (June 16, 2005)
9. State Water Resources Control Board, Water Quality (WQ) Order No. 2012-0175, *Waste Discharge Requirements for the Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4* (June 16, 2015)
10. State Water Resources Control Board, Order 2012-0011-DWQ as Amended, NPDES No. CAS000003, *National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit, Waste Discharge Requirements (WDRs) for State of California, Department of Transportation* (Adopted 2012, Amended 2014 and 2015)
11. State Water Resources Control Board, Order No. 2014-0057-DWQ NPDES No. CAS000001, *General Permit for Storm Water Discharges Associated with Industrial Activities* (Adopted April 1, 2014)

San Diego Water Board MS4 Permit Materials

12. Order No. 98-02 as amended in 2000 to reflect revisions required by USEPA in 1999 (Addendum No. 1 to Order No. 98-02 Modifying Order No. 98-02 to Incorporate Language Developed by the United States Environmental Protection Agency) and Agenda Item

13. San Diego Water Board Response to Comments on Order No. R9-2013-0001 (March 27, 2013)
14. San Diego Water Board Response to Comments on Order No. R9-2015-0001 (January 21, 2015)
15. San Diego Water Board Response to Comments Report for Order No. R9-2015-0100 (November 4, 2015, Revised November 10, 2015)
16. U.S. EPA Comment Letter on Draft Regional MS4 Permit (February 14, 2012)
17. U.S. EPA Comment Letter on Draft Regional MS4 Permit (January 11, 2013)
18. Transcript of San Diego Water Board Public Hearing for Order No. R9-2015-0100, November 18, 2015
19. U.S. EPA Comment Letter on 2009 Orange County MS4 Permit (May 14, 2009)
20. U.S. EPA Comment Letter on 2009 Orange County MS4 Permit (June 18, 2009)
21. U.S. EPA Comment Letter on 2009 Orange County MS4 Permit (Sept. 28, 2009)

Other Regional Water Board MS4 Permit Materials

22. 2001 Los Angeles Regional Water Board MS4 Permit, Order No. 01-182, *NPDES Permit CAS004001, Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach* (December 2001, amended in September 2006 and August 2007)

U.S. EPA Issued MS4 Permits, Correspondence and Guidance

23. U.S. EPA, NPDES Permit No. DC0000221, *Authorization to Discharge Under the National Pollutant Discharge Elimination System, Municipal Separate Storm Sewer System Permit,* issued to the District of Columbia (Final Modified Permit, October 25, 2012)
24. U.S. EPA, NPDES Permit No. DC0000221, *Authorization to Discharge Under the National Pollutant Discharge Elimination System, Municipal Separate Storm Sewer System Permit,* issued to the District of Columbia, Fact Sheet (September 30, 2011)
25. Letter from Alexis Strauss, U.S. EPA, to State Water Board (April 10, 2008)
26. Letter from Alexis Strauss, U.S. EPA, to Mark Grey (July 31, 2008)
27. Letter from U.S. EPA to Santa Ana Water Board re Draft Permit for Orange County (June 20, 2014)
28. Letter from U.S. EPA to Los Angeles Water Board re Draft Permit for Los Angeles (July 23, 2012)
29. Letter from U.S. EPA to State Water Board Concerning Petition A-2236(a)-(kk) (January 20, 2015)

30. U.S. EPA, *MS4 Improvement Guidance* (April 2010)
31. U.S. EPA, *National Management Measures to Control Nonpoint Source Pollution from Hydromodification* (July 2007)
32. U.S. EPA Hydromodification Management Program Technical Report (December 2005)

Miscellaneous Materials

33. 2005 Stormwater Utility Report, Black and Veatch
34. City of Santa Cruz Measure E
35. City of San Jose Storm Sewer Charge (web page listing)
36. City of San Clemente Urban Runoff Management Fee/Clean Ocean Program
37. City of Palo Alto Storm Drainage Fee/San Jose Mercury News Article
38. City of Alameda Sewer and Storm Water Fees Bulletin

ATTACHMENT 1

West's Annotated California Codes
Water Code
Division 7. Water Quality
Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972

West's Ann.Cal.Water Code D. 7, Ch. 5.5, Refs & Annos
Currentness

Editors' Notes

GENERAL NOTES

2009 Main Volume

<Chapter 5.5 was added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 12, 1972.>

West's Ann. Cal. Water Code D. 7, Ch. 5.5, Refs & Annos, CA WATER D. 7, Ch. 5.5, Refs & Annos
Current with urgency legislation through Chapter 893 of 2016 Reg.Sess., Ch. 8 of 2015-2016 2nd Ex.Sess., and all propositions on 2016 ballot.

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West's Annotated California Codes
Water Code (Refs & Annos)
Division 7. Water Quality (Refs & Annos)
Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13370

§ 13370. Legislative findings and declarations

Currentness

The Legislature finds and declares as follows:

(a) The Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.), as amended, provides for permit systems to regulate the discharge of pollutants and dredged or fill material to the navigable waters of the United States and to regulate the use and disposal of sewage sludge.

(b) The Federal Water Pollution Control Act, as amended, provides that permits may be issued by states which are authorized to implement the provisions of that act.

(c) It is in the interest of the people of the state, in order to avoid direct regulation by the federal government of persons already subject to regulation under state law pursuant to this division, to enact this chapter in order to authorize the state to implement the provisions of the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto, and federal regulations and guidelines issued pursuant thereto, provided, that the state board shall request federal funding under the Federal Water Pollution Control Act for the purpose of carrying out its responsibilities under this program.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 746, p. 2343, § 1; Stats.1980, c. 676, p. 2028, § 319; Stats.1987, c. 1189, § 1.)

West's Ann. Cal. Water Code § 13370, CA WATER § 13370
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Water Code (Refs & Annos)
Division 7. Water Quality (Refs & Annos)
Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13370.5

§ 13370.5. Additional findings and declarations; pretreatment program

Currentness

(a) The Legislature finds and declares that, since the Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.), as amended, and applicable federal regulations (40 C.F.R. § 403 et seq.) provide for a pretreatment program to regulate the discharge of pollutants into publicly owned treatment works and provide that states with approved national pollutant discharge elimination system (NPDES) permit programs shall apply for approval of a state pretreatment program, it is in the interest of the people of the state to enact this section in order to avoid direct regulation by the federal government of publicly owned treatment works already subject to regulation under state law pursuant to this division.

(b) The state board shall develop a state pretreatment program and shall, not later than September 1, 1985, apply to the Environmental Protection Agency for approval of the pretreatment program in accordance with federal requirements.

Credits
(Added by Stats.1984, c. 1542, § 1.)

West's Ann. Cal. Water Code § 13370.5, CA WATER § 13370.5
Current with urgency legislation through Chapter 893 of 2016 Reg.Sess., Ch. 8 of 2015-2016 2nd Ex.Sess., and all propositions on 2016 ballot.

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KeyCite Red Flag - Severe Negative Treatment
KeyCite Red Flag Negative Treatment§13371. Repealed by Stats.1987, c. 1189, §2

West's Annotated California Codes
Water Code (Refs & Annos)
Division 7. Water Quality (Refs & Annos)
Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13371

§ 13371. Repealed by Stats.1987, c. 1189, § 2

Currentness

West's Ann. Cal. Water Code § 13371, CA WATER § 13371
Current with urgency legislation through Chapter 893 of 2016 Reg.Sess., Ch. 8 of 2015-2016 2nd Ex.Sess., and all propositions on 2016 ballot.

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Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13372

§ 13372. Construction and application of chapter

Effective: January 1, 2004
Currentness

(a) This chapter shall be construed to ensure consistency with the requirements for state programs implementing the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto. To the extent other provisions of this division are consistent with the provisions of this chapter and with the requirements for state programs implementing the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto, those provisions apply to actions and procedures provided for in this chapter. The provisions of this chapter shall prevail over other provisions of this division to the extent of any inconsistency. The provisions of this chapter apply only to actions required under the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto.

(b) The provisions of Section 13376 requiring the filing of a report for the discharge of dredged or fill material and the provisions of this chapter relating to the issuance of dredged or fill material permits by the state board or a regional board shall be applicable only to discharges for which the state has an approved permit program, in accordance with the provisions of the Federal Water Pollution Control Act, as amended, for the discharge of dredged or fill material.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1987, c. 1189, § 3; Stats.2003, c. 683 (A.B.897), § 5.)

Notes of Decisions (1)

West's Ann. Cal. Water Code § 13372, CA WATER § 13372
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West's Ann.Cal.Water Code § 13373

§ 13373. Certain definitions; same as federal act

Currentness

The terms “navigable waters,” “administrator,” “pollutants,” “biological monitoring,” “discharge” and “point sources” as used in this chapter shall have the same meaning as in the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto.

Credits

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1987, c. 1189, § 4.)

Notes of Decisions (2)

West's Ann. Cal. Water Code § 13373, CA WATER § 13373
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West's Ann.Cal.Water Code § 13374

§ 13374. Waste discharge requirements; equivalent to “permits” under federal act

Currentness

The term “waste discharge requirements” as referred to in this division is the equivalent of the term “permits” as used in the Federal Water Pollution Control Act, as amended.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972.)

Notes of Decisions (1)

West's Ann. Cal. Water Code § 13374, CA WATER § 13374
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West's Ann.Cal.Water Code § 13375

§ 13375. Radiological, chemical or biological warfare agents; discharge prohibited

Currentness

The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is hereby prohibited.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972.)

West's Ann. Cal. Water Code § 13375, CA WATER § 13375
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West's Ann.Cal.Water Code § 13376

§ 13376. Discharging pollutants or dredged or fill material or operating treatment works; reports of discharges or proposed discharges; prohibited discharges; exceptions

Effective: January 1, 2011
Currentness

A person who discharges pollutants or proposes to discharge pollutants to the navigable waters of the United States within the jurisdiction of this state or a person who discharges dredged or fill material or proposes to discharge dredged or fill material into the navigable waters of the United States within the jurisdiction of this state shall file a report of the discharge in compliance with the procedures set forth in Section 13260. Unless required by the state board or a regional board, a report need not be filed under this section for discharges that are not subject to the permit application requirements of the Federal Water Pollution Control Act, as amended. [1] A person who proposes to discharge pollutants or dredged or fill material or to operate a publicly owned treatment works or other treatment works treating domestic sewage shall file a report at least 180 days in advance of the date on which it is desired to commence the discharge of pollutants or dredged or fill material or the operation of the treatment works. A person who owns or operates a publicly owned treatment works or other treatment works treating domestic sewage, which treatment works commenced operation before January 1, 1988, and does not discharge to navigable waters of the United States, shall file a report within 45 days of a written request by a regional board or the state board, or within 45 days after the state has an approved permit program for the use and disposal of sewage sludge, whichever occurs earlier. The discharge of pollutants or dredged or fill material or the operation of a publicly owned treatment works or other treatment works treating domestic sewage by any person, except as authorized by waste discharge requirements or dredged or fill material permits, is prohibited. This prohibition does not apply to discharges or operations if a state or federal permit is not required under the Federal Water Pollution Control Act, as amended.

Credits
(Added by Stats.1987, c. 1189, § 6. Amended by Stats.2010, c. 288 (S.B.1169), § 32.)

Notes of Decisions (11)

Footnotes
1 33 U.S.C.A. § 1251 et seq.

West's Ann. Cal. Water Code § 13376, CA WATER § 13376
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KeyCite Yellow Flag - Negative Treatment
Unconstitutional or PreemptedLimited on Preemption Grounds by Karuk Tribe of Northern California v. California Regional Water Quality Control Bd., North Coast Region, Cal.App. 1 Dist., Mar. 30, 2010

West's Annotated California Codes
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West's Ann.Cal.Water Code § 13377

§ 13377. Issuance of waste discharge requirements and dredged or fill material permits

Currentness

Notwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 618, p. 2068, § 1; Stats.1978, c. 746, p. 2344, § 3.)

Notes of Decisions (6)

West's Ann. Cal. Water Code § 13377, CA WATER § 13377
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West's Ann.Cal.Water Code § 13378

§ 13378. Adoption of waste discharge requirements and dredged or fill material permits; notice and hearing; term

Currentness

Waste discharge requirements and dredged or fill material permits shall be adopted only after notice and any necessary hearing. Such requirements or permits shall be adopted for a fixed term not to exceed five years for any proposed discharge, existing discharge, or any material change therein.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 746, p. 2344, § 4.)

Notes of Decisions (2)

West's Ann. Cal. Water Code § 13378, CA WATER § 13378
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KeyCite Red Flag - Severe Negative Treatment
KeyCite Red Flag Negative Treatment§13379. Repealed by Stats.1978, c. 618, p. 2069, §2

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West's Ann.Cal.Water Code § 13379

§ 13379. Repealed by Stats.1978, c. 618, p. 2069, § 2

Currentness

West's Ann. Cal. Water Code § 13379, CA WATER § 13379
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West's Ann.Cal.Water Code § 13380

§ 13380. Review of waste discharge requirements and dredged or fill material permits

Currentness

Any waste discharge requirements or dredged or fill material permits adopted under this chapter shall be reviewed at least every five years and, if appropriate, revised.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 746, p. 2344, § 5.)

West's Ann. Cal. Water Code § 13380, CA WATER § 13380
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West's Ann.Cal.Water Code § 13381

§ 13381. Termination or modification of waste discharge requirements and dredged or fill material permits

Currentness

Waste discharge requirements or dredged or fill material permits may be terminated or modified for cause, including, but not limited to, all of the following:

(a) Violation of any condition contained in the requirements or permits.

(b) Obtaining the requirements by misrepresentation, or failure to disclose fully all relevant facts.

(c) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 746, p. 2344, § 6.)

West's Ann. Cal. Water Code § 13381, CA WATER § 13381
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West's Ann.Cal.Water Code § 13382

§ 13382. Control of disposal of pollutants into wells or surrounding groundwater

Currentness

Waste discharge requirements shall be adopted to control the disposal of pollutants into wells or in areas where pollutants may enter into a well from the surrounding groundwater.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1984, c. 1461, § 1.)

West's Ann. Cal. Water Code § 13382, CA WATER § 13382
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West's Ann.Cal.Water Code § 13382.5

§ 13382.5. Discharge of pollutants from a point source to aquaculture project

Currentness

Waste discharge requirements shall be adopted to permit the discharge of a specific pollutant or pollutants in a controlled manner from a point source to a defined managed aquaculture project if such discharge meets all applicable requirements of the Federal Water Pollution Control Act [1] and acts amendatory thereof and supplementary thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans.

Credits
(Added by Stats.1978, c. 618, p. 2069, § 3.)

Footnotes
1 33 U.S.C.A. § 1251 et seq.

West's Ann. Cal. Water Code § 13382.5, CA WATER § 13382.5
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West's Ann.Cal.Water Code § 13383

§ 13383. Monitoring, inspection, entry, reporting, and recordkeeping requirements; establishment and maintenance; inspections

Effective: January 1, 2004
Currentness

(a) The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge.

(b) The state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required.

(c) The state board or a regional board may inspect the facilities of any person subject to this section pursuant to the procedure set forth in subdivision (c) of Section 13267.

Credits
(Added by Stats.1987, c. 1189, § 8. Amended by Stats.2003, c. 683 (A.B.897), § 6.)

West's Ann. Cal. Water Code § 13383, CA WATER § 13383
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West's Ann.Cal.Water Code § 13383.5

§ 13383.5. Storm water discharge; monitoring requirements; application to specified municipalities and regulated industries

Effective: January 1, 2002
Currentness

(a) As used in this section, "regulated municipalities and industries" means the municipalities and industries required to obtain a storm water permit under Section 402(p) of the Clean Water Act (33 U.S.C. Sec. 1342(p)) and implementing regulations.

(b) This section only applies to regulated municipalities that were subject to a storm water permit on or before December 31, 2001, and to regulated industries that are subject to the General Permit for Storm Water Discharges Associated with Industrial Activities Excluding Construction Activities.

(c) Before January 1, 2003, the state board shall develop minimum monitoring requirements for each regulated municipality and minimum standard monitoring requirements for regulated industries. This program shall include, but is not limited to, all of the following:

(1) Standardized methods for collection of storm water samples.

(2) Standardized methods for analysis of storm water samples.

(3) A requirement that every sample analysis under this program be completed by a state certified laboratory or by the regulated municipality or industry in the field in accordance with the quality assurance and quality control protocols established pursuant to this section.

(4) A standardized reporting format.

(5) Standard sampling and analysis programs for quality assurance and quality control.

(6) Minimum detection limits.

(7) Annual reporting requirements for regulated municipalities and industries.

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(8) For the purposes of determining constituents to be sampled for, sampling intervals, and sampling frequencies, to be included in a municipal storm water permit monitoring program, the regional board shall consider the following information, as the regional board determines to be applicable:

(A) Discharge characterization monitoring data.

(B) Water quality data collected through the permit monitoring program.

(C) Applicable water quality data collected, analyzed, and reported by federal, state, and local agencies, and other public and private entities.

(D) Any applicable listing under Section 303(d) of the Clean Water Act (33 U.S.C. Sec. 1313).

(E) Applicable water quality objectives and criteria established in accordance with the regional board basin plans, statewide plans, and federal regulations.

(F) Reports and studies regarding source contribution of pollutants in runoff not based on direct water quality measurements.

(d) The requirements prescribed pursuant to this section shall be included in all storm water permits for regulated municipalities and industries that are reissued following development of the requirements described in subdivision (c). Those permits shall include these provisions on or before July 1, 2008. In a year in which the Legislature appropriates sufficient funds for that purpose, the state board shall make available to the public via the Internet a summary of the results obtained from storm water monitoring conducted in accordance with this section.

Credits
(Added by Stats.2001, c. 492 (S.B.72), § 1.)

West's Ann. Cal. Water Code § 13383.5, CA WATER § 13383.5
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West's Ann.Cal.Water Code § 13383.6

§ 13383.6. Educational materials on stormwater pollution; permits issued with the requirement; satisfaction

Effective: January 1, 2006
Currentness

On and after January 1, 2007, if a regional board or the state board issues a municipal stormwater permit pursuant to Section 402(p) of the Clean Water Act (33 U.S.C. Sec. 1342(p)) that includes a requirement to provide elementary and secondary public schools with educational materials on stormwater pollution, the permittee may satisfy the requirement, upon approval by the regional board or state board, by contributing an equivalent amount of funds to the Environmental Education Account established pursuant to subdivision (a) of Section 71305 of the Public Resources Code.

Credits
(Added by Stats.2005, c. 581 (A.B.1721), § 7.)

West's Ann. Cal. Water Code § 13383.6, CA WATER § 13383.6
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West's Ann.Cal.Water Code § 13383.7

§ 13383.7. Comprehensive guidance document for evaluating and measuring effectiveness of municipal stormwater management programs; quantifiable measures; reference to guidelines in establishing municipal stormwater programs and permits

Effective: January 1, 2008
Currentness

(a) No later than July 1, 2009, and after holding public workshops and soliciting public comments, the state board shall develop a comprehensive guidance document for evaluating and measuring the effectiveness of municipal stormwater management programs undertaken, and permits issued, in accordance with Section 402(p) of the Clean Water Act (33 U.S.C. Sec. 1342(p)) and this division.

(b) For the purpose of implementing subdivision (a), the state board shall promote the use of quantifiable measures for evaluating the effectiveness of municipal stormwater management programs and provide for the evaluation of, at a minimum, all of the following:

(1) Compliance with stormwater permitting requirements, including all of the following:

(A) Inspection programs.

(B) Construction controls.

(C) Elimination of unlawful discharges.

(D) Public education programs.

(E) New development and redevelopment requirements.

(2) Reduction of pollutant loads from pollution sources.

(3) Reduction of pollutants or stream erosion due to stormwater discharge.

(4) Improvements in the quality of receiving water in accordance with water quality standards.

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(c) The state board and the regional boards shall refer to the guidance document developed pursuant to subdivision (a) when establishing requirements in municipal stormwater programs and permits.

Credits

(Added by Stats.2007, c. 610 (A.B.739), § 6.)

West's Ann. Cal. Water Code § 13383.7, CA WATER § 13383.7
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West's Ann.Cal.Water Code § 13383.8

§ 13383.8. Stormwater management task force; report on implementation of priority goals and objectives of Ocean Protection Council's strategic plan

Effective: January 1, 2008
Currentness

(a) The state board shall appoint a stormwater management task force comprised of public agencies, representatives of the regulated community, and nonprofit organizations with expertise in water quality and stormwater management. The task force shall provide advice to the state board on its stormwater management program that may include, but is not limited to, program priorities, funding criteria, project selection, and interagency coordination of state programs that address stormwater management.

(b) The state board shall submit a report, including, but not limited to, stormwater and other polluted runoff control information, to the Ocean Protection Council no later than January 1, 2009, on the way in which the state board is implementing the priority goals and objectives of the council's strategic plan.

Credits
(Added by Stats.2007, c. 610 (A.B.739), § 7.)

West's Ann. Cal. Water Code § 13383.8, CA WATER § 13383.8
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West's Ann.Cal.Water Code § 13384

§ 13384. Applications for requirements and permits; notice to public and affected states; hearing

Currentness

The state board or the regional boards shall ensure that the public, and that any other state, the waters of which may be affected by any discharge of pollutants or dredged or fill material to navigable waters within this state, shall receive notice of each application for requirements or report of waste discharge or application for a dredged or fill material permit or report of dredged or fill material discharge and are provided an opportunity for public hearing before adoption of such requirements or permit.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 746, p. 2344, § 8.)

West's Ann. Cal. Water Code § 13384, CA WATER § 13384
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West's Ann.Cal.Water Code § 13385

§ 13385. Violations; civil liability; applicability; compliance projects; annual report

Effective: January 1, 2012
Currentness

(a) A person who violates any of the following shall be liable civilly in accordance with this section:

(1) Section 13375 or 13376.

(2) A waste discharge requirement or dredged or fill material permit issued pursuant to this chapter or any water quality certification issued pursuant to Section 13160.

(3) A requirement established pursuant to Section 13383.

(4) An order or prohibition issued pursuant to Section 13243 or Article 1 (commencing with Section 13300) of Chapter 5, if the activity subject to the order or prohibition is subject to regulation under this chapter.

(5) A requirement of Section 301, 302, 306, 307, 308, 318, 401, or 405 of the federal Clean Water Act (33 U.S.C. Sec. 1311, 1312, 1316, 1317, 1318, 1341, or 1345), as amended.

(6) A requirement imposed in a pretreatment program approved pursuant to waste discharge requirements issued under Section 13377 or approved pursuant to a permit issued by the administrator.

(b)(1) Civil liability may be imposed by the superior court in an amount not to exceed the sum of both of the following:

(A) Twenty-five thousand dollars ($25,000) for each day in which the violation occurs.

(B) Where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed twenty-five dollars ($25) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

(2) The Attorney General, upon request of a regional board or the state board, shall petition the superior court to impose the liability.

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(c) Civil liability may be imposed administratively by the state board or a regional board pursuant to Article 2.5 (commencing with Section 13323) of Chapter 5 in an amount not to exceed the sum of both of the following:

(1) Ten thousand dollars ($10,000) for each day in which the violation occurs.

(2) Where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed ten dollars ($10) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

(d) For purposes of subdivisions (b) and (c), "discharge" includes any discharge to navigable waters of the United States, any introduction of pollutants into a publicly owned treatment works, or any use or disposal of sewage sludge.

(e) In determining the amount of any liability imposed under this section, the regional board, the state board, or the superior court, as the case may be, shall take into account the nature, circumstances, extent, and gravity of the violation or violations, whether the discharge is susceptible to cleanup or abatement, the degree of toxicity of the discharge, and, with respect to the violator, the ability to pay, the effect on its ability to continue its business, any voluntary cleanup efforts undertaken, any prior history of violations, the degree of culpability, economic benefit or savings, if any, resulting from the violation, and other matters that justice may require. At a minimum, liability shall be assessed at a level that recovers the economic benefits, if any, derived from the acts that constitute the violation.

(f)(1) Except as provided in paragraph (2), for the purposes of this section, a single operational upset that leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation.

(2)(A) For the purposes of subdivisions (h) and (i), a single operational upset in a wastewater treatment unit that treats wastewater using a biological treatment process shall be treated as a single violation, even if the operational upset results in violations of more than one effluent limitation and the violations continue for a period of more than one day, if all of the following apply:

(i) The discharger demonstrates all of the following:

(I) The upset was not caused by wastewater treatment operator error and was not due to discharger negligence.

(II) But for the operational upset of the biological treatment process, the violations would not have occurred nor would they have continued for more than one day.

(III) The discharger carried out all reasonable and immediately feasible actions to reduce noncompliance with the applicable effluent limitations.

(ii) The discharger is implementing an approved pretreatment program, if so required by federal or state law.

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(B) Subparagraph (A) only applies to violations that occur during a period for which the regional board has determined that violations are unavoidable, but in no case may that period exceed 30 days.

(g) Remedies under this section are in addition to, and do not supersede or limit, any other remedies, civil or criminal, except that no liability shall be recoverable under Section 13261, 13265, 13268, or 13350 for violations for which liability is recovered under this section.

(h)(1) Notwithstanding any other provision of this division, and except as provided in subdivisions (j), (k), and (*l*), a mandatory minimum penalty of three thousand dollars ($3,000) shall be assessed for each serious violation.

(2) For the purposes of this section, a "serious violation" means any waste discharge that violates the effluent limitations contained in the applicable waste discharge requirements for a Group II pollutant, as specified in Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations, by 20 percent or more or for a Group I pollutant, as specified in Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations, by 40 percent or more.

(i)(1) Notwithstanding any other provision of this division, and except as provided in subdivisions (j), (k), and (*l*), a mandatory minimum penalty of three thousand dollars ($3,000) shall be assessed for each violation whenever the person does any of the following four or more times in any period of six consecutive months, except that the requirement to assess the mandatory minimum penalty shall not be applicable to the first three violations:

(A) Violates a waste discharge requirement effluent limitation.

(B) Fails to file a report pursuant to Section 13260.

(C) Files an incomplete report pursuant to Section 13260.

(D) Violates a toxicity effluent limitation contained in the applicable waste discharge requirements where the waste discharge requirements do not contain pollutant-specific effluent limitations for toxic pollutants.

(2) For the purposes of this section, a "period of six consecutive months" means the period commencing on the date that one of the violations described in this subdivision occurs and ending 180 days after that date.

(j) Subdivisions (h) and (i) do not apply to any of the following:

(1) A violation caused by one or any combination of the following:

(A) An act of war.

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(B) An unanticipated, grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight.

(C) An intentional act of a third party, the effects of which could not have been prevented or avoided by the exercise of due care or foresight.

(D)(i) The operation of a new or reconstructed wastewater treatment unit during a defined period of adjusting or testing, not to exceed 90 days for a wastewater treatment unit that relies on a biological treatment process and not to exceed 30 days for any other wastewater treatment unit, if all of the following requirements are met:

(I) The discharger has submitted to the regional board, at least 30 days in advance of the operation, an operations plan that describes the actions the discharger will take during the period of adjusting and testing, including steps to prevent violations and identifies the shortest reasonable time required for the period of adjusting and testing, not to exceed 90 days for a wastewater treatment unit that relies on a biological treatment process and not to exceed 30 days for any other wastewater treatment unit.

(II) The regional board has not objected in writing to the operations plan.

(III) The discharger demonstrates that the violations resulted from the operation of the new or reconstructed wastewater treatment unit and that the violations could not have reasonably been avoided.

(IV) The discharger demonstrates compliance with the operations plan.

(V) In the case of a reconstructed wastewater treatment unit, the unit relies on a biological treatment process that is required to be out of operation for at least 14 days in order to perform the reconstruction, or the unit is required to be out of operation for at least 14 days and, at the time of the reconstruction, the cost of reconstructing the unit exceeds 50 percent of the cost of replacing the wastewater treatment unit.

(ii) For the purposes of this section, "wastewater treatment unit" means a component of a wastewater treatment plant that performs a designated treatment function.

(2)(A) Except as provided in subparagraph (B), a violation of an effluent limitation where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300, if all of the following requirements are met:

(i) The cease and desist order or time schedule order is issued after January 1, 1995, but not later than July 1, 2000, specifies the actions that the discharger is required to take in order to correct the violations that would otherwise be subject to subdivisions (h) and (i), and the date by which compliance is required to be achieved and, if the final date by which compliance is required to be achieved is later than one year from the effective date of the cease and desist order or time schedule order, specifies the interim requirements by which progress towards compliance will be measured and the date by which the discharger will be in compliance with each interim requirement.

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(ii) The discharger has prepared and is implementing in a timely and proper manner, or is required by the regional board to prepare and implement, a pollution prevention plan that meets the requirements of Section 13263.3.

(iii) The discharger demonstrates that it has carried out all reasonable and immediately feasible actions to reduce noncompliance with the waste discharge requirements applicable to the waste discharge and the executive officer of the regional board concurs with the demonstration.

(B) Subdivisions (h) and (i) shall become applicable to a waste discharge on the date the waste discharge requirements applicable to the waste discharge are revised and reissued pursuant to Section 13380, unless the regional board does all of the following on or before that date:

(i) Modifies the requirements of the cease and desist order or time schedule order as may be necessary to make it fully consistent with the reissued waste discharge requirements.

(ii) Establishes in the modified cease and desist order or time schedule order a date by which full compliance with the reissued waste discharge requirements shall be achieved. For the purposes of this subdivision, the regional board may not establish this date later than five years from the date the waste discharge requirements were required to be reviewed pursuant to Section 13380. If the reissued waste discharge requirements do not add new effluent limitations or do not include effluent limitations that are more stringent than those in the original waste discharge requirements, the date shall be the same as the final date for compliance in the original cease and desist order or time schedule order or five years from the date that the waste discharge requirements were required to be reviewed pursuant to Section 13380, whichever is earlier.

(iii) Determines that the pollution prevention plan required by clause (ii) of subparagraph (A) is in compliance with the requirements of Section 13263.3 and that the discharger is implementing the pollution prevention plan in a timely and proper manner.

(3) A violation of an effluent limitation where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300 or 13308, if all of the following requirements are met:

(A) The cease and desist order or time schedule order is issued on or after July 1, 2000, and specifies the actions that the discharger is required to take in order to correct the violations that would otherwise be subject to subdivisions (h) and (i).

(B) The regional board finds that, for one of the following reasons, the discharger is not able to consistently comply with one or more of the effluent limitations established in the waste discharge requirements applicable to the waste discharge:

(i) The effluent limitation is a new, more stringent, or modified regulatory requirement that has become applicable to the waste discharge after the effective date of the waste discharge requirements and after July 1, 2000, new or modified control measures are necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

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(ii) New methods for detecting or measuring a pollutant in the waste discharge demonstrate that new or modified control measures are necessary in order to comply with the effluent limitation and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

(iii) Unanticipated changes in the quality of the municipal or industrial water supply available to the discharger are the cause of unavoidable changes in the composition of the waste discharge, the changes in the composition of the waste discharge are the cause of the inability to comply with the effluent limitation, no alternative water supply is reasonably available to the discharger, and new or modified measures to control the composition of the waste discharge cannot be designed, installed, and put into operation within 30 calendar days.

(iv) The discharger is a publicly owned treatment works located in Orange County that is unable to meet effluent limitations for biological oxygen demand, suspended solids, or both, because the publicly owned treatment works meets all of the following criteria:

(I) Was previously operating under modified secondary treatment requirements pursuant to Section 301(h) of the Clean Water Act (33 U.S.C. Sec. 1311(h)).

(II) Did vote on July 17, 2002, not to apply for a renewal of the modified secondary treatment requirements.

(III) Is in the process of upgrading its treatment facilities to meet the secondary treatment standards required by Section 301(b)(1)(B) of the Clean Water Act (33 U.S.C. Sec. 1311(b)(1)(B)).

(C)(i) The regional board establishes a time schedule for bringing the waste discharge into compliance with the effluent limitation that is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the effluent limitation. Except as provided in clause (ii), for the purposes of this subdivision, the time schedule shall not exceed five years in length.

(ii)(I) For purposes of the upgrade described in subclause (III) of clause (iv) of subparagraph (B), the time schedule shall not exceed 10 years in length.

(II) Following a public hearing, and upon a showing that the discharger is making diligent progress toward bringing the waste discharge into compliance with the effluent limitation, the regional board may extend the time schedule for an additional period not exceeding five years in length, if the discharger demonstrates that the additional time is necessary to comply with the effluent limitation. This subclause does not apply to a time schedule described in subclause (I).

(iii) If the time schedule exceeds one year from the effective date of the order, the schedule shall include interim requirements and the dates for their achievement. The interim requirements shall include both of the following:

(I) Effluent limitations for the pollutant or pollutants of concern.

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(II) Actions and milestones leading to compliance with the effluent limitation.

(D) The discharger has prepared and is implementing in a timely and proper manner, or is required by the regional board to prepare and implement, a pollution prevention plan pursuant to Section 13263.3.

(k)(1) In lieu of assessing all or a portion of the mandatory minimum penalties pursuant to subdivisions (h) and (i) against a publicly owned treatment works serving a small community, the state board or the regional board may elect to require the publicly owned treatment works to spend an equivalent amount towards the completion of a compliance project proposed by the publicly owned treatment works, if the state board or the regional board finds all of the following:

(A) The compliance project is designed to correct the violations within five years.

(B) The compliance project is in accordance with the enforcement policy of the state board, excluding any provision in the policy that is inconsistent with this section.

(C) The publicly owned treatment works has prepared a financing plan to complete the compliance project.

(2) For the purposes of this subdivision, "a publicly owned treatment works serving a small community" means a publicly owned treatment works serving a population of 10,000 persons or fewer or a rural county, with a financial hardship as determined by the state board after considering such factors as median income of the residents, rate of unemployment, or low population density in the service area of the publicly owned treatment works.

(*l*)(1) In lieu of assessing penalties pursuant to subdivision (h) or (i), the state board or the regional board, with the concurrence of the discharger, may direct a portion of the penalty amount to be expended on a supplemental environmental project in accordance with the enforcement policy of the state board. If the penalty amount exceeds fifteen thousand dollars ($15,000), the portion of the penalty amount that may be directed to be expended on a supplemental environmental project may not exceed fifteen thousand dollars ($15,000) plus 50 percent of the penalty amount that exceeds fifteen thousand dollars ($15,000).

(2) For the purposes of this section, a "supplemental environmental project" means an environmentally beneficial project that a person agrees to undertake, with the approval of the regional board, that would not be undertaken in the absence of an enforcement action under this section.

(3) This subdivision applies to the imposition of penalties pursuant to subdivision (h) or (i) on or after January 1, 2003, without regard to the date on which the violation occurs.

(m) The Attorney General, upon request of a regional board or the state board, shall petition the appropriate court to collect any liability or penalty imposed pursuant to this section. Any person who fails to pay on a timely basis any liability or penalty imposed under this section shall be required to pay, in addition to that liability or penalty, interest, attorney's fees, costs for collection proceedings, and a quarterly nonpayment penalty for each quarter during which the

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failure to pay persists. The nonpayment penalty shall be in an amount equal to 20 percent of the aggregate amount of the person's penalty and nonpayment penalties that are unpaid as of the beginning of the quarter.

(n)(1) Subject to paragraph (2), funds collected pursuant to this section shall be deposited in the State Water Pollution Cleanup and Abatement Account.

(2)(A) Notwithstanding any other provision of law, moneys collected for a violation of a water quality certification in accordance with paragraph (2) of subdivision (a) or for a violation of Section 401 of the federal Clean Water Act (33 U.S.C. Sec. 1341) in accordance with paragraph (5) of subdivision (a) shall be deposited in the Waste Discharge Permit Fund and separately accounted for in that fund.

(B) The funds described in subparagraph (A) shall be expended by the state board, upon appropriation by the Legislature, to assist regional boards, and other public agencies with authority to clean up waste or abate the effects of the waste, in cleaning up or abating the effects of the waste on waters of the state or for the purposes authorized in Section 13443.

(*o*) The state board shall continuously report and update information on its Internet Web site, but at a minimum, annually on or before January 1, regarding its enforcement activities. The information shall include all of the following:

(1) A compilation of the number of violations of waste discharge requirements in the previous calendar year, including stormwater enforcement violations.

(2) A record of the formal and informal compliance and enforcement actions taken for each violation, including stormwater enforcement actions.

(3) An analysis of the effectiveness of current enforcement policies, including mandatory minimum penalties.

(p) The amendments made to subdivisions (f), (h), (i), and (j) during the second year of the 2001-02 Regular Session apply only to violations that occur on or after January 1, 2003.

Credits

(Added by Stats.1987, c. 1189, § 10. Amended by Stats.1999, c. 92 (A.B.1104), § 6; Stats.1999, c. 93 (S.B.709), § 6; Stats.2000, c. 807 (S.B.2165), § 2; Stats.2001, c. 869 (A.B.1664), § 7; Stats.2002, c. 995 (A.B.2351), § 1; Stats.2002, c. 1019 (A.B.1969), § 2, eff. Sept. 28, 2002; Stats.2002, c. 1019 (A.B.1969), § 3, eff. Sept. 28, 2002, operative Jan. 1, 2003; Stats.2003, c. 683 (A.B.897), § 7; Stats.2004, c. 644 (A.B.2701), § 41; Stats.2006, c. 404 (S.B.1733), § 3; Stats.2007, c. 130 (A.B.299), § 239; Stats.2010, c. 645 (S.B.1284), § 1; Stats.2011, c. 296 (A.B.1023), § 314.)

Notes of Decisions (9)

West's Ann. Cal. Water Code § 13385, CA WATER § 13385
Current with urgency legislation through Chapter 893 of 2016 Reg.Sess., Ch. 8 of 2015-2016 2nd Ex.Sess., and all propositions on 2016 ballot.

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Division 7. Water Quality (Refs & Annos)
Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13385.1

§ 13385.1. Discharge monitoring reports; serious violation; time to file report and penalties for failure to file; deposit and expenditure of penalty funds; "effluent limitation" defined

Effective: January 1, 2011
Currentness

(a)(1) For the purposes of subdivision (h) of Section 13385, a "serious violation" also means a failure to file a discharge monitoring report required pursuant to Section 13383 for each complete period of 30 days following the deadline for submitting the report, if the report is designed to ensure compliance with limitations contained in waste discharge requirements that contain effluent limitations. This paragraph applies only to violations that occur on or after January 1, 2004.

(2)(A) Notwithstanding paragraph (1), a failure to file a discharge monitoring report is not a serious violation for purposes of subdivision (h) of Section 13385 at any time prior to the date a discharge monitoring report is required to be filed or within 30 days after receiving written notice from the state board or a regional board of the need to file a discharge monitoring report, if the discharger submits a written statement to the state board or the regional board that includes both of the following:

(i) A statement that there were no discharges to waters of the United States reportable under the applicable waste discharge requirements during the relevant monitoring period.

(ii) The reason or reasons the required report was not submitted to the regional board by the deadline for filing that report.

(B) Upon the request of the state board or regional board, the discharger may be required to support the statement with additional explanation or evidence.

(C) If, in a statement submitted pursuant to subparagraph (A), the discharger willfully states as true any material fact that he or she knows to be false, that person shall be subject to a civil penalty not exceeding ten thousand dollars ($10,000). Any public prosecutor may bring an action for a civil penalty under this subparagraph in the name of the people of the State of California, and the penalty imposed shall be enforced as a civil judgment.

(D) Notwithstanding subparagraph (A), the failure to file a discharge monitoring report is subject to penalties in accordance with subdivisions (c) and (e) of Section 13385.

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(b)(1) Notwithstanding paragraph (1) of subdivision (a), a mandatory minimum penalty shall continue to apply and shall be assessed pursuant to subdivision (h) of Section 13385, but only for each required report that is not timely filed, and shall not be separately assessed for each 30-day period following the deadline for submitting the report, if both of the following conditions are met:

(A) The discharger did not on any occasion previously receive, from the state board or a regional board, a complaint to impose liability pursuant to subdivision (b) or (c) of Section 13385 arising from a failure to timely file a discharge monitoring report, a notice of violation for failure to timely file a discharge monitoring report, or a notice of the obligation to file a discharge monitoring report required pursuant to Section 13383, in connection with its corresponding waste discharge requirements.

(B) The discharges during the period or periods covered by the report do not violate effluent limitations, as defined in subdivision (d), contained in waste discharge requirements.

(2) Paragraph (1) shall only apply to a discharger who does both of the following:

(A) Files a discharge monitoring report that had not previously been timely filed within 30 days after the discharger receives written notice, including notice transmitted by electronic mail, from the state board or regional board concerning the failure to timely file the report.

(B) Pays all penalties assessed by the state board or regional board in accordance with paragraph (1) within 30 days after an order is issued to pay these penalties pursuant to Section 13385.

(3) Notwithstanding paragraph (1), the failure to file a discharge monitoring report is subject to penalties in accordance with subdivisions (c) and (e) of Section 13385.

(4) This subdivision shall become inoperative on January 1, 2014.

(c)(1) Notwithstanding any other provision of law, moneys collected pursuant to this section for a failure to timely file a report, as described in subdivision (a), shall be deposited in the State Water Pollution Cleanup and Abatement Account.

(2) Notwithstanding Section 13340 of the Government Code, the funds described in paragraph (1) are continuously appropriated, without regard to fiscal years, to the state board for expenditure by the state board to assist regional boards, and other public agencies with authority to clean up waste or abate the effects of the waste, in responding to significant water pollution problems.

(d) For the purposes of this section, paragraph (2) of subdivision (f) of Section 13385, and subdivisions (h), (i), and (j) of Section 13385 only, "effluent limitation" means a numeric restriction or a numerically expressed narrative restriction, on the quantity, discharge rate, concentration, or toxicity units of a pollutant or pollutants that may be discharged from an authorized location. An effluent limitation may be final or interim, and may be expressed as a prohibition. An

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effluent limitation, for those purposes, does not include a receiving water limitation, a compliance schedule, or a best management practice.

(e) The amendments made to this section by Senate Bill 1284 of the 2009-10 Regular Session of the Legislature shall apply to violations for which an administrative civil liability complaint or a judicial complaint has not been filed before July 1, 2010, without regard to the date on which the violations occurred.

Credits

(Added by Stats.2003, c. 609 (A.B.1541), § 1. Amended by Stats.2005, c. 145 (A.B.495), § 1; Stats.2006, c. 538 (S.B.1852), § 677; Stats.2008, c. 760 (A.B.1338), § 23, eff. Sept. 30, 2008; Stats.2010, c. 645 (S.B.1284), § 2.)

Editors' Notes

APPLICATION

<For application of the amendment by Stats.2010, c. 645 (S.B.1284), see the terms of this section.>

West's Ann. Cal. Water Code § 13385.1, CA WATER § 13385.1
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West's Ann.Cal.Water Code § 13385.2

§ 13385.2. Publicly owned treatment works (POTW) to demonstrate that financing plan is designed to generate sufficient funding to complete compliance program

Effective: September 29, 2006
Currentness

(a) Prior to the state board or regional board making its findings pursuant to subdivision (k) of Section 13385, the publicly owned treatment works shall demonstrate to the satisfaction of the state board or regional board that the financing plan prepared pursuant to subparagraph (C) of paragraph (1) of subdivision (k) of that section is designed to generate sufficient funding to complete the compliance project within the time period specified pursuant to subparagraph (A) of paragraph (1) of subdivision (k) of that section.

(b) This section shall only become operative if Senate Bill 1733 [1] of the 2005-06 Regular Session is enacted and becomes operative.

Credits
(Added by Stats.2006, c. 725 (A.B.1752), § 1, eff. Sept. 29, 2006.)

Editors' Notes

OPERATIVE EFFECT

<For operative effect of this section, see its terms.>

Footnotes
1 Stats.2006, c. 404 (S.B.1733).
West's Ann. Cal. Water Code § 13385.2, CA WATER § 13385.2
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West's Ann.Cal.Water Code § 13385.3

§ 13385.3. Operative effect

Effective: September 29, 2006
Currentness

(a) The amendments made to subdivision (k) of Section 13385 of the Water Code by Senate Bill 1733 [1] of the 2005-06 Regular Session shall become operative on July 1, 2007.

(b) This section shall only become operative if Senate Bill 1733 of the 2005-06 Regular Session is enacted and becomes operative.

Credits
(Added by Stats.2006, c. 725 (A.B.1752), § 2, eff. Sept. 29, 2006.)

Footnotes
1 Stats.2006, c. 404 (S.B.1733).

West's Ann. Cal. Water Code § 13385.3, CA WATER § 13385.3
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West's Ann.Cal.Water Code § 13386

§ 13386. Threatened or continuing violations or failure of discharger to comply with cost or charge; injunctions

Currentness

Upon any threatened or continuing violation of any of the requirements listed in paragraphs (1) to (6), inclusive, of subdivision (a) of Section 13385, or upon the failure of any discharger into a public treatment system to comply with any cost or charge adopted by any public agency under Section 204(b) of the Federal Water Pollution Control Act, as amended, [1] the Attorney General, upon the request of the state board or regional board shall petition the appropriate court for the issuance of a preliminary or permanent injunction, or both, as appropriate, restraining that person or persons from committing or continuing the violation. Subdivision (b) of Section 13331 shall be applicable to proceedings under this section.

Credits
(Added by Stats.1987, c. 1189, § 12. Amended by Stats.1996, c. 659 (A.B.3036), § 27.)

Footnotes
1 33 U.S.C.A. § 1284(b).
West's Ann. Cal. Water Code § 13386, CA WATER § 13386
Current with urgency legislation through Chapter 893 of 2016 Reg.Sess., Ch. 8 of 2015-2016 2nd Ex.Sess., and all propositions on 2016 ballot.

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West's Ann.Cal.Water Code § 13387

§ 13387. Violations; criminal penalties

Effective: October 1, 2011
Currentness

(a) Any person who knowingly or negligently does any of the following is subject to criminal penalties as provided in subdivisions (b), (c), and (d):

(1) Violates Section 13375 or 13376.

(2) Violates any waste discharge requirements or dredged or fill material permit issued pursuant to this chapter or any water quality certification issued pursuant to Section 13160.

(3) Violates any order or prohibition issued pursuant to Section 13243 or 13301, if the activity subject to the order or prohibition is subject to regulation under this chapter.

(4) Violates any requirement of Section 301, 302, 306, 307, 308, 318, 401, or 405 of the Clean Water Act (33 U.S.C. Sec. 1311, 1312, 1316, 1317, 1318, 1328, 1341, or 1345), as amended.

(5) Introduces into a sewer system or into a publicly owned treatment works any pollutant or hazardous substances that the person knew or reasonably should have known could cause personal injury or property damage.

(6) Introduces any pollutant or hazardous substance into a sewer system or into a publicly owned treatment works, except in accordance with any applicable pretreatment requirements, which causes the treatment works to violate waste discharge requirements.

(b) Any person who negligently commits any of the violations set forth in subdivision (a) shall, upon conviction, be punished by a fine of not less than five thousand dollars ($5,000), nor more than twenty-five thousand dollars ($25,000), for each day in which the violation occurs, by imprisonment for not more than one year in a county jail, or by both that fine and imprisonment. If a conviction of a person is for a violation committed after a first conviction of the person under this subdivision, subdivision (c), or subdivision (d), punishment shall be by a fine of not more than fifty thousand dollars ($50,000) for each day in which the violation occurs, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 16, 20, or 24 months, or by both that fine and imprisonment.

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(c) Any person who knowingly commits any of the violations set forth in subdivision (a) shall, upon conviction, be punished by a fine of not less than five thousand dollars ($5,000), nor more than fifty thousand dollars ($50,000), for each day in which the violation occurs, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code, or by both that fine and imprisonment. If a conviction of a person is for a violation committed after a first conviction of the person under this subdivision or subdivision (d), punishment shall be by a fine of not more than one hundred thousand dollars ($100,000) for each day in which the violation occurs, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for two, four, or six years, or by both that fine and imprisonment.

(d)(1) Any person who knowingly commits any of the violations set forth in subdivision (a), and who knows at the time that the person thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be punished by a fine of not more than two hundred fifty thousand dollars ($250,000), imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 5, 10, or 15 years, or by both that fine and imprisonment. A person that is an organization shall, upon conviction under this subdivision, be subject to a fine of not more than one million dollars ($1,000,000). If a conviction of a person is for a violation committed after a first conviction of the person under this subdivision, the punishment shall be by a fine of not more than five hundred thousand dollars ($500,000), by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 10, 20, or 30 years, or by both that fine and imprisonment. A person that is an organization shall, upon conviction for a violation committed after a first conviction of the person under this subdivision, be subject to a fine of not more than two million dollars ($2,000,000). Any fines imposed pursuant to this subdivision shall be in addition to any fines imposed pursuant to subdivision (c).

(2) In determining whether a defendant who is an individual knew that the defendant's conduct placed another person in imminent danger of death or serious bodily injury, the defendant is responsible only for actual awareness or actual belief that the defendant possessed, and knowledge possessed by a person other than the defendant, but not by the defendant personally, cannot be attributed to the defendant.

(e) Any person who knowingly makes any false statement, representation, or certification in any record, report, plan, notice to comply, or other document filed with a regional board or the state board, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required under this division shall be punished by a fine of not more than twenty-five thousand dollars ($25,000), by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 16, 20, or 24 months, or by both that fine and imprisonment. If a conviction of a person is for a violation committed after a first conviction of the person under this subdivision, punishment shall be by a fine of not more than twenty- five thousand dollars ($25,000) per day of violation, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for two, three, or four years, or by both that fine and imprisonment.

(f) For purposes of this section, a single operational upset which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation.

(g) For purposes of this section, “organization,” “serious bodily injury,” “person,” and “hazardous substance” shall have the same meaning as in Section 309(c) of the Clean Water Act (33 U.S.C. Sec. 1319(c)), as amended.

(h)(1) Subject to paragraph (2), funds collected pursuant to this section shall be deposited in the State Water Pollution Cleanup and Abatement Account.

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(2)(A) Notwithstanding any other provision of law, fines collected for a violation of a water quality certification in accordance with paragraph (2) of subdivision (a) or for a violation of Section 401 of the Clean Water Act (33 U.S.C. Sec. 1341) in accordance with paragraph (4) of subdivision (a) shall be deposited in the Water Discharge Permit Fund and separately accounted for in that fund.

(B) The funds described in subparagraph (A) shall be expended by the state board, upon appropriation by the Legislature, to assist regional boards, and other public agencies with authority to clean up waste or abate the effects of the waste, in cleaning up or abating the effects of the waste on waters of the state, or for the purposes authorized in Section 13443.

Credits

(Added by Stats.1987, c. 1189, § 14. Amended by Stats.1996, c. 775 (A.B.2937), § 5; Stats.2001, c. 869 (A.B.1664), § 8; Stats.2003, c. 683 (A.B.897), § 8; Stats.2004, c. 183 (A.B.3082), § 362; Stats.2005, c. 22 (S.B.1108), § 211; Stats.2006, c. 347 (A.B.2367), § 23; Stats.2011, c. 15 (A.B.109), § 616, eff. April 4, 2011, operative Oct. 1, 2011.)

Notes of Decisions (20)

West's Ann. Cal. Water Code § 13387, CA WATER § 13387
Current with urgency legislation through Chapter 893 of 2016 Reg.Sess., Ch. 8 of 2015-2016 2nd Ex.Sess., and all propositions on 2016 ballot.

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West's Annotated California Codes
Water Code (Refs & Annos)
Division 7. Water Quality (Refs & Annos)
Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13388

§ 13388. Board members; disqualification if income from person subject to requirements

Effective: June 27, 2012
Currentness

(a) Notwithstanding any other provision of this division or Section 175, and except as provided in subdivision (b), a person shall not be a member of the state board or a regional board if that person receives, or has received during the previous two years, a significant portion of his or her income directly or indirectly from any person subject to waste discharge requirements or applicants for waste discharge requirements pursuant to this chapter.

(b)(1) A person shall not be disqualified from being a member of a regional board because that person receives, or has received during the previous two years, a significant portion of his or her income directly or indirectly from a person subject to waste discharge requirements, or an applicant for waste discharge requirements, that are issued pursuant to this chapter by the state board or regional board other than the regional board of which that person is a member.

(2) Paragraph (1) shall be implemented only if the United States Environmental Protection Agency either determines that no program approval is necessary for that implementation, or approves of a change in California's National Pollutant Discharge Elimination System program, to allow the state to administer the National Pollutant Discharge Elimination System permit program consistent with paragraph (1).

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972, operative March 1, 1973. Amended by Stats.2012, c. 39 (S.B.1018), § 121, eff. June 27, 2012.)

Notes of Decisions (1)

West's Ann. Cal. Water Code § 13388, CA WATER § 13388
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West's Annotated California Codes
Water Code (Refs & Annos)
Division 7. Water Quality (Refs & Annos)
Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13389

§ 13389. Applicability of environmental impact reports

Currentness

Neither the state board nor the regional boards shall be required to comply with the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code prior to the adoption of any waste discharge requirement, except requirements for new sources as defined in the Federal Water Pollution Control Act or acts amendatory thereof or supplementary thereto.

Credits
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972.)

Notes of Decisions (3)

West's Ann. Cal. Water Code § 13389, CA WATER § 13389
Current with urgency legislation through Chapter 893 of 2016 Reg.Sess., Ch. 8 of 2015-2016 2nd Ex.Sess., and all propositions on 2016 ballot.

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Chapter 9. Waste Discharge Reports and Requirements
Article 3. Waste Discharges from Point Sources to Navigable Waters

23 CCR § 2235.2

§ 2235.2. Compliance with Regulations of the U.S. Environmental Protection Agency.

Waste discharge requirements for discharge from point sources to nagivable waters shall be issued and administered in accordance with the currently applicable federal regulations for the National Pollutant Discharge Elimination System (NPDES) program.

Note: Authority cited: Section 1058, Water Code. Reference: Chapter 5.5 (commencing with Section 13370) of Division 7, Water Code.

This database is current through 9/23/16 Register 2016, No. 39

23 CCR § 2235.2, 23 CA ADC § 2235.2

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ATTACHMENT
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THOMSON REUTERS
WESTLAW California Code of Regulations

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23 CCR § 2235.3

§ 2235.3. Additional Requirements.

In addition to the federal regulations, waste discharge requirements prescribed for discharges to navigable water shall be in compliance with applicable state regulations, including, when appropriate, the requirements of Sections 2230(c), 2232 and 2233.

Note: Authority cited: Sections 185 and 1058, Water Code. Reference: Section 13263, Water Code.

HISTORY

1. Amendment filed 4-16-82; effective upon filing pursuant to Government Code Section 11346.2(d) (Register 82, No. 16).

This database is current through 9/23/16 Register 2016, No. 39

23 CCR § 2235.3, 23 CA ADC § 2235.3

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ATTACHMENT
4

KeyCite Yellow Flag - Negative Treatment
Not Followed on State Law Grounds Michigan Farm Bureau v. Dep't of Environmental Quality, Mich.App., March 29, 2011

399 F.3d 486
United States Court of Appeals,
Second Circuit.

WATERKEEPER ALLIANCE, INC., American Farm Bureau Federation, National Chicken Council, National Pork Producers Council, American Littoral Society, Sierra Club, Inc., Natural Resources Defense Council, Inc., Petitioners/Intervenors,
v.
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Michael O. Leavitt, Administrator, United States Environmental Protection Agency Respondents.

Docket Nos. 03–4470 (L), 03–4621(C), 03–4631(C), 03–4641(C), 03–4849(C), 04–40199(C), 03–40229(C).
|
Argued: Dec. 13, 2004.
|
Decided: Feb. 28, 2005.

Synopsis

Background: Various environmental groups and farm groups brought multiple challenges to administrative rule promulgated by the Environmental Protection Agency (EPA) under the Clean Water Act (CWA) in order to regulate the emission of water pollutants by concentrated animal feeding operations (CAFO).

Holdings: The Court of Appeals, Katzmann, Circuit Judge, held that:

[1] provision of rule allowing permitting authorities to issue permits without reviewing the terms of nutrient management plans violated statutory provisions of CWA;

[2] permitting scheme established by rule promulgated violated the CWA's public participation requirements;

[3] regulatory exemption for agricultural stormwater discharges did not violate the CWA;

[4] EPA acted reasonably in choosing as best available technology for beef and cattle CAFOs an option requiring that groundwater-related requirements be implemented, as necessary, on a case-by-case basis, rather than uniformly imposed;

[5] EPA acted reasonably in rejecting as best available technology for swine, poultry, and veal CAFOs an option requiring a zero discharge requirement that did not allow overflows from the production area under any circumstances;

[6] EPA's failure to impose best conventional pollutant control technology effluent limitation guidelines specifically designed to reduce pathogens in CAFO's violated the CWA; and

[7] new source performance standards for the production areas of swine, poultry, and veal CAFOs violated the CWA.

So ordered.

West Headnotes (16)

[1] Administrative Law and Procedure
Arbitrary, unreasonable or capricious action; illegality

To determine whether an agency has acted in an arbitrary and capricious fashion, an appellate court must ask whether the agency has examined the relevant data and articulated a satisfactory explanation for its action including a rational connection between the facts found and the choice made.

2 Cases that cite this headnote

[2] Administrative Law and Procedure
Validity

Normally, an appellate court must deem arbitrary and capricious an agency rule where the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect

of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

2 Cases that cite this headnote

[3] **Environmental Law**
Discharge of pollutants

Provision of administrative rule promulgated by the Environmental Protection Agency (EPA) under the Clean Water Act (CWA) to regulate the emission of water pollutants by concentrated animal feeding operations allowing permitting authorities to issue permits without reviewing the terms of nutrient management plans violated statutory provisions of CWA requiring permitting authorities to assure compliance with all effluent limitations and standards for land applications of manure, litter, and process waste water, and was otherwise arbitrary and capricious under the Administrative Procedure Act (APA). Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., as amended, 33 U.S.C.A. § 1251 et seq.; 40 C.F.R. § 122.23(d)(2).

4 Cases that cite this headnote

[4] **Environmental Law**
Discharge of pollutants

Provision of administrative rule promulgated by the Environmental Protection Agency (EPA) under the Clean Water Act (CWA) to regulate the emission of water pollutants by concentrated animal feeding operations allowing permitting authorities to issue permits that did not include the terms of nutrient management plans violated CWA requirement that effluent limitations must be included in the permits, and was otherwise arbitrary and capricious. Federal Water Pollution Control Act Amendments of 1972, §§ 301(a, b), 402(a), as amended, 33 U.S.C.A. §§ 1311(a, b), 1342(a).

11 Cases that cite this headnote

[5] **Environmental Law**
Discharge of pollutants

Environmental Law
Notice and comment

Permitting scheme established by administrative rule promulgated by the Environmental Protection Agency (EPA) under the Clean Water Act (CWA) to regulate the emission of water pollutants by concentrated animal feeding operations violated the CWA's public participation requirements and was otherwise arbitrary and capricious under the Administrative Procedure Act; although the preamble to the rule indicated that the EPA expected that the permitting authority would make the information available to the public upon request, the rule provided no assurance that the EPA's expectations would be satisfied. 5 U.S.C.A. § 551 et seq.; Federal Water Pollution Control Act Amendments of 1972, §§ 101(e), 402(a, j), as amended, 33 U.S.C.A. §§ 1251(e), 1342(a, j); 40 C.F.R. § 122.42(e)(2)(ii).

4 Cases that cite this headnote

[6] **Environmental Law**
Discharge of pollutants

Permitting scheme established by administrative rule promulgated by the Environmental Protection Agency (EPA) under the Clean Water Act (CWA) to regulate the emission of water pollutants by concentrated animal feeding operations (CAFO), requiring that every CAFO owner or operator either apply for a permit, and comply with the effluent limitations contained in the permit, or affirmatively demonstrate that no permit was needed because there was no potential to discharge, exceeded statutory authority granted by the CWA to regulate and control the actual discharge of pollutants; the CWA gave the EPA the authority to regulate only actual discharges,

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not potential discharges and not point sources themselves. Federal Water Pollution Control Act Amendments of 1972, §§ 301(e), 402, 502(12, 14), as amended, 33 U.S.C.A. §§ 1311(e), 1342; 1362(12, 14); 40 C.F.R. §§ 122.23(d), 122.23(f).

24 Cases that cite this headnote

[7] Environmental Law

Discharge of pollutants

Regulatory exemption for agricultural stormwater discharges contained in rule promulgated by the Environmental Protection Agency (EPA) under the Clean Water Act (CWA) to regulate the emission of water pollutants by concentrated animal feeding operations did not violate the CWA. Federal Water Pollution Control Act Amendments of 1972, § 502, as amended, 33 U.S.C.A. § 1362; 40 C.F.R. § 122.23(e).

1 Cases that cite this headnote

[8] Environmental Law

Substances, Sources, and Activities Regulated

Any discharge from a land area under the control of a concentrated animal feeding operation, regardless of whether the discharge is collected at the land application area itself, is a "point source discharge" subject to regulation under rule promulgated by the Environmental Protection Agency (EPA) under the Clean Water Act (CWA) to regulate the emission of water pollutants by concentrated animal feeding operations. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., as amended, 33 U.S.C.A. § 1251 et seq.; 40 C.F.R. § 122.23(e).

12 Cases that cite this headnote

[9] Environmental Law

Particular limitations and guidelines

In setting best available technology (BAT) standards for determining effluent limitation guidelines (ELG), for purposes of rule promulgated by the Environmental Protection Agency (EPA) under the Clean Water Act (CWA) to regulate the emission of water pollutants by concentrated animal feeding operations (CAFO), the EPA complied with statutory duties, notwithstanding that the rule did not explicitly identify the single, existing best-performing CAFO in each category or subcategory of the rule; the EPA extensively surveyed available technologies, narrowed the list of potential BAT candidates to seven options, and subsequently found, within the bounds of its discretion, that a specific option was the best candidate for BAT, because all the other options considered either did not perform better than that option, were not adequately supported in science, or were not economically achievable. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., as amended, 33 U.S.C.A. § 1251 et seq.

5 Cases that cite this headnote

[10] Environmental Law

Particular limitations and guidelines

Environmental Protection Agency (EPA) acted reasonably in choosing as best available technology for beef and cattle concentrated animal feeding operations (CAFOs) an option requiring that groundwater-related requirements be implemented, as necessary, on a case-by-case basis, rather than uniformly imposed, when promulgating rule under the Clean Water Act (CWA) to regulate the emission of water pollutants by CAFOs; studies showed that variability in topography, climate, distance to surface water, and geologic facts influenced whether and how pollutant discharges at a particular site entered surface water via groundwater, and EPA's final economic analysis showed a nearly six-fold increase in the number of beef, dairy, and heifer CAFOs projected to close were the option requiring uniform, rather than case-by-case implementation, adopted. Federal Water Pollution Control

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Act Amendments of 1972, § 101 et seq., as amended, 33 U.S.C.A. § 1251 et seq.

1 Cases that cite this headnote

[11] Environmental Law

Particular limitations and guidelines

Environmental Protection Agency (EPA) acted reasonably in rejecting as best available technology for swine, poultry, and veal concentrated animal feeding operations an option requiring a zero discharge requirement that did not allow overflows from the production area under any circumstances when promulgating rule under the Clean Water Act (CWA) to regulate the emission of water pollutants by concentrated animal feeding operations (CAFO); after conducting extensive economic analysis, involving numerous economic tests and modeling, the EPA determined that such an option would render 17 percent of swine CAFOs and 11 percent of the CAFOs, on the whole, vulnerable to closure. Federal Water Pollution Control Act Amendments of 1972, § 304(b)(2)(B), as amended, 33 U.S.C.A. § 1314(b)(2)(B).

3 Cases that cite this headnote

[12] Environmental Law

Scope of Inquiry on Review of Administrative Decision

A reviewing court can neither second-guess Environmental Protection Agency's (EPA) analysis nor undertake its own economic study; rather, the court must uphold regulations if EPA has established in the record a reasonable basis for its decision.

Cases that cite this headnote

[13] Environmental Law

Particular limitations and guidelines

Environmental Protection Agency's (EPA) failure to impose best conventional pollutant control technology (BCT) effluent limitation guidelines (ELGs) specifically designed to reduce pathogens in concentrated animal feeding operations, when promulgating rule under the Clean Water Act to regulate the emission of water pollutants by concentrated animal feeding operations violated the Clean Water Act. Federal Water Pollution Control Act Amendments of 1972, § 304(b)(2)(A), as amended, 33 U.S.C.A. § 1314(b)(2)(A).

5 Cases that cite this headnote

[14] Environmental Law

Particular limitations and guidelines

New source performance standards for the production areas of swine, poultry, and veal concentrated animal feeding operations (CAFOs) allowing the CAFOs to comply with total prohibition against production area discharges by designing, operating, and maintaining a facility to contain the runoff from a 100-year, 24-hour rainfall event violated the Clean Water Act; the EPA never modeled the potential overflows and pollutant loads from a system with a 100-year, 24-hour storm event, and while certain studies may have shown that the rule would have substantially prevented production area discharges, substantially preventing discharges was not the same as prohibiting them outright. Federal Water Pollution Control Act Amendments of 1972, § 306, as amended, 33 U.S.C.A. § 1316.

2 Cases that cite this headnote

[15] Environmental Law

Notice and comment

New source performance standards for the production areas of swine, poultry, and veal concentrated animal feeding operations violated the Clean Water Act's public participation requirements, given that the Environmental Protection Agency (EPA) introduced a change to the standard that was not subject to public comment. Federal Water Pollution Control Act Amendments of 1972, § 101(e), as amended, 33 U.S.C.A. § 1251(e).

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Cases that cite this headnote

[16] **Environmental Law**
Particular limitations and guidelines
Environmental Law
Discharge of pollutants

Rule promulgated by the Environmental Protection Agency (EPA) under the Clean Water Act to regulate the emission of water pollutants by concentrated animal feeding operations violated the Clean Water Act and was otherwise arbitrary and capricious under the Administrative Procedure Act (APA), to the extent that the EPA failed to justify the lack of water quality based effluent limitations (WQBELs) for concentrated animal feeding operations discharges other than agricultural stormwater discharges. 5 U.S.C.A. § 551 et seq.; Federal Water Pollution Control Act Amendments of 1972, § 302(a), as amended, 33 U.S.C.A. § 1312(a); 40 C.F.R. § 122.23(e).

7 Cases that cite this headnote

West Codenotes

Held Invalid
40 C.F.R. § 122.23(d), (d)(2), (f) 40 C.F.R. § 122.42(e)(2)(ii)40 C.F.R. § 412.46

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Before: OAKES, KATZMANN, and WESLEY, Circuit Judges.

Opinion

KATZMANN, Circuit Judge.

In this consolidated petition, we review various challenges to a regulation promulgated by the United States Environmental Protection Agency under the Clean Water Act in order to abate and control the emission of water pollutants from concentrated animal feeding operations. While we deny many of the challenges here brought, we find that several aspects of the regulation violate the express terms of the Clean Water Act or are otherwise arbitrary and capricious under the Administrative Procedure Act. Accordingly, we grant the petitions in part and deny the petitions in part.

BACKGROUND

A. *Statutory Background*

The Clean Water Act (the "Act") is a cornerstone of the federal effort to protect the environment. "[D]esigned to 'restore and maintain the chemical, physical, and biological integrity of the Nation's waters,' " *No Spray Coalition, Inc. v. City of* ***491** *New York,* 351 F.3d 602, 604 (2d Cir.2003) (quoting 33 U.S.C. § 1251(a)), the Act is the principal legislative source of the EPA's authority—

and responsibility—to abate and control water pollution. *See* 33 U.S.C. §§ 1311(a), 1342, 1362.

By way of very brief overview, the Act formally prohibits the "discharge of a pollutant" [1] by "any person" [2] from any "point source" [3] to navigable waters except when authorized by a permit issued under the National Pollutant Discharge Elimination System ("NPDES"). *See* 33 U.S.C. §§ 1311(a), 1342. This means, as a practical matter, that the EPA primarily advances the Act's objectives—including the ambitious goal that water pollution be not only reduced, but eliminated, *see* 33 U.S.C. § 1251(a)(1)—through the use of NPDES permits that, while authorizing some water pollution, place important restrictions on the quality and character of that licit pollution.

NPDES permits are issued either by the EPA, itself, or by the states in a federally approved permitting system. *See* 33 U.S.C. § 1342. Regardless of the issuer, every NPDES permit is statutorily required to set forth, at the very least, "effluent limitations," that is, certain "restriction[s] ... on [the] quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters." *S. Florida Water Mgmt. Dist. v. Miccosukee Tribe of Indians,* 541 U.S. 95, 124 S.Ct. 1537, 1541, 158 L.Ed.2d 264 (2004) ("Generally speaking, the NPDES requires dischargers to obtain permits that place limits on the type and quantity of pollutants that can be released into the Nation's waters.").

The specific effluent limitations contained in each individual NPDES permit are dictated by the terms of more general "effluent limitation guidelines" ("ELGs"), which are separately promulgated by the EPA. *Cf. EPA v. California, ex rel. State Water Res. Control Bd.,* 426 U.S. 200, 205, 96 S.Ct. 2022, 48 L.Ed.2d 578 (1976) ("An NPDES permit serves to transform generally applicable effluent limitations and other standards including those based on water quality into the obligations ... of the individual discharger."). ELGs, and the effluent limitations established in accordance with them, are technology-based restrictions on water pollution. They are technology-based, because they are established in accordance with various technological standards that the Act statutorily provides and that, pursuant to the Act, vary depending upon the type of pollutant involved, the type of discharge involved, and whether the point source in question is new or already existing. We will discuss these with greater detail below. For now, we note simply that the technology standards for already existing point sources include (1) the best available technology economically achievable, *see* 33 U.S.C. § 1311(b)(2)(A); (2) the best conventional pollutant control technology, *see* 33 U.S.C. § 1314(b)(2)(A); and (3) the best practicable ***492** control technology currently available, *see* 33 U.S.C. § 1314(b)(1)(A). The technology standard for new point sources, which is commonly referred to as a new source performance standard, is based on the best available demonstrated control technology, *see* 33 U.S.C. § 1316.

We also note that where effluent limitations prove insufficient to attain or maintain certain water quality standards, the Act requires NPDES permits to include additional water quality based effluent limitations. *See* 33 U.S.C. §§ 1311(b)(1), 1312(a). Overall, we hope to make clear that the NPDES permit is critical to the successful implementation of the Act because—by setting forth technology-based effluent limitations and, in certain cases, additional water quality based effluent limitations—the NPDES permit "defines, and facilitates compliance with, and enforcement of, a preponderance of a discharger's obligations under the [Act]." *California, ex rel. State Water Res. Control Bd.,* 426 U.S. at 205, 96 S.Ct. 2022.

B. *Regulatory Background*

In the consolidated petition before us, we are asked to review, *inter alia,* the permitting requirements and effluent limitation guidelines promulgated by the EPA in its attempt to regulate the emission of water pollutants from so-called concentrated animal feeding operations ("CAFOs"). Before reviewing these challenges, however, a few introductory words about CAFOs themselves are in order.

CAFOs are the largest of the nation's 238,000 or so "animal feeding operations"—"agriculture enterprises where animals are kept and raised in confinement." National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations, 68 Fed.Reg. 7176, 7179 (Feb. 12, 2003) (codified at 40 C.F.R. Parts 9, 122, 123 and 412) [hereinafter "Preamble to the Final Rule"]. [4] Such "agriculture enterprises" are not, however, of a kind the Founding Fathers likely would have envisioned populating America's "yeoman

republic." *See generally,* STANLEY ELKINS AND ERIC MCKITRICK, *Jefferson and the Yeoman Republic,* THE AGE OF FEDERALISM 195–208 (1972). On the contrary, CAFOs are large-scale industrial operations that raise extraordinary numbers of livestock.[5] For example, a "Medium CAFO"[6] raises as many as ***493** 9,999 sheep, 54,999 turkeys, or 124,999 chickens (other than laying hens).[7] "Large CAFOs"[8] raise even more staggering numbers of livestock—sometimes, raising literally millions of animals in one location.

Economically, these CAFOs generate billions of dollars of revenue every year.[9] The EPA has focused on the industry because CAFOs also generate millions of tons of manure every year,[10] and "when improperly managed, [this manure] can ***494** pose substantial risks to the environment and public health." Preamble to the Final Rule at 7179.

Animal waste includes a number of potentially harmful pollutants. According to the EPA, the pollutants associated with CAFO waste principally include: (1) nutrients such as nitrogen and phosphorus; (2) organic matter; (3) solids, including the manure itself and other elements mixed with it such as spilled feed, bedding and litter materials, hair, feathers and animal corpses; (4) pathogens (disease-causing organisms such as bacteria and viruses); (5) salts; (6) trace elements such as arsenic; (7) odorous/volatile compounds such as carbon dioxide, methane, hydrogen sulfide, and ammonia; (8) antibiotics; and (9) pesticides and hormones. *See* National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitations Guidelines and Standards for Concentrated Animal Feeding Operations, 66 Fed.Reg. 2960, 2976–79 (proposed Jan. 12, 2001) [hereinafter "Proposed Rule"]; *see also* Preamble to the Final Rule at 7181.

These pollutants can infiltrate the surface waters in a variety of ways including spills and other dry-weather discharges, overflows from storage "lagoons," and discharge to the air coupled with subsequent redeposition on the landscape. *See* Preamble to the Final Rule at 7181. Perhaps the most common way by which pollutants reach the surface waters is through improper "land application." Land application, the predominant means by which CAFOs dispose of animal waste,[11] is a process by which manure, litter, and other process wastewaters are spread onto fields controlled by CAFOs. As all parties here agree, when properly land-applied, manure, litter, and other process wastewaters can act as a fertilizer, because "land application of CAFO waste fosters the reuse of the nitrogen, phosphorus, and potassium in these wastes for crop growth." EPA, STATE COMPENDIUM: PROGRAMS AND REGULATORY ACTIVITIES RELATED TO ANIMAL FEEDING OPERATIONS 13 (May 2002). However, when waste is excessively or improperly land-applied, the nutrients contained in the waste become pollutants that can and often do run off into adjacent waterways or leach into soil and ground water. *See id.;* Preamble to the Final Rule at 7180–81.

In light of these environmental threats, the EPA first promulgated regulations for CAFOs in 1974 and 1976—regulations that, very generally speaking, defined the types of animal feeding operations that qualify as CAFOs, set forth various NPDES permit requirements, and established effluent limitation guidelines for CAFOs. *See* 41 Fed.Reg. 11,458 (Mar. 18, 1976); 39 Fed.Reg. 5704 (Feb. 14, 1974). After having been sued, in 1989, for failing to publish a plan to revise existing effluent limitations for the industry pursuant to 33 U.S.C. § 1314(m),[12] the EPA, on January 12, 2001, proposed to "revise and update" the first set of CAFO regulations. *See* Proposed Rule at 2960. The EPA explained, in proposing its revisions, that the new rule aimed to address not only inadequate compliance with existing policy, but also the "changes that have occurred in the animal production industries." Proposed ***495** Rule at 2972. Specifically, the EPA pointed to the "continued trend toward fewer but larger operations, coupled with greater emphasis on more intensive production methods and specialization," a trend that—along with "increased reports of large-scale discharges from these facilities" and "continued runoff"—had contributed to "the significant increase in nutrients and resulting impairment of many U.S. waterways." *Id.*

The EPA received approximately 11,000 public comments on the proposed rule, *see* Preamble to the Final Rule at 7187, as well as an additional 450 or so comments following the publication, in November 2001 and July 2002, of Notices of Data Availability (documents that summarized new data and information presented to the EPA). *See id.* at 7187–88. Ultimately, on February 12, 2003, the EPA promulgated its Final CAFO Rule ("CAFO Rule" or "Rule"). *See* 40 C.F.R. §§ 9, 122, 123, 412; *see also* Preamble to the Final Rule at 7176.

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The aspects of the Rule most relevant to the petitions before us are as follows:

(1) *The Duty to Apply for an NPDES Permit*

The Rule requires that all CAFO owners or operators must apply for an individual NPDES permit or submit a notice of intent for coverage under an NPDES general permit. *See* 40 C.F.R. § 122.23(d)(1). There is, however, an exception: Section 122.23(d)(2) provides, in effect, that an owner or operator of a Large CAFO need not seek coverage under an NPDES permit if the owner or operator secures a determination from the director of the relevant permitting authority that the Large CAFO has "no potential to discharge" manure, litter or process wastewater. *See* 40 C.F.R. § 122.23(d)(2); *see also id.* at § 122.23(f) (describing the process by which a Large CAFO may secure a determination that it has "no potential to discharge").

(2) *NPDES Permit Requirements*

The Rule includes the requirement that each CAFO develop and implement a nutrient management plan. Such a nutrient management plan must, under the Rule:

> (i) Ensure adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities;
>
> (ii) Ensure proper management of mortalities (i.e. dead animals) to ensure that they are not disposed of in a liquid manure, storm water, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities;
>
> (iii) Ensure that clean water is diverted, as appropriate, from the production area;
>
> (iv) Prevent direct contact of confined animals with waters of the United States;
>
> (v) Ensure that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants;
>
> (vi) Identify appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the United States;
>
> (vii) Identify protocols for appropriate testing of manure, litter, process wastewater, and soil;
>
> (viii) Establish protocols to land apply manure, litter or process wastewater in accordance with site specific nutrient ***496** management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater; and
>
> (ix) Identify specific records that will be maintained to document the implementation and management of the minimum elements described [above].

40 C.F.R. § 122.42(e)(1)(i)-(ix). Additionally, the effluent limitation guidelines for CAFOs (which we will describe in a moment) further require that each Large CAFO develop and implement a nutrient management plan that, *inter alia,* includes a waste "application rate" that "minimize[s] phosphorus and nitrogen transport from the field to surface waters." 40 C.F.R. § 412.4(c)(2).

(3) *The Discharges Subject to NPDES Requirements*

The Rule provides, in § 122.23(e), that all land application discharges from a CAFO are subject to NPDES requirements, i.e., any discharge of manure, litter, or process wastewater that results from the land application of these materials by a CAFO is a discharge that is regulable and subject to NPDES permit requirements. 40 C.F.R. § 122.23(e). Where, however, CAFOs land-apply waste in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in that waste, any subsequent "precipitation-related" discharge is considered to be an "agricultural stormwater discharge" that is, under the Act, exempt from regulation. *See id.;* 33 U.S.C. § 1362(14).

(4) *Effluent Limitation Guidelines*

The Rule establishes effluent limitation guidelines ("ELGs") that apply to land application discharges by Large CAFOs and to the "production areas"[13] of Large CAFOs.[14] Two general comments about these ELGs are in order. First, although the EPA usually

establishes quantitative or numerical ELGs, the EPA here promulgated "best management practices," which are qualitative or non-numerical ELGs for Large CAFOs, but which, we note, are still technology-based because they are based on the technology standards prescribed by the Act. *See* 40 C.F.R. § 412.4; *see also* 40 C.F.R. § 122.44(k) (describing the circumstances in which the EPA may promulgate "best management practices" in the place of numerical ELGs). Second, because the EPA here decided to organize Large CAFOs into four subcategories (depending upon the types of animals present), the ELGs are also organized into four subcategories. *See* Preamble to the Final Rule at 7208. Additionally, we note that, with respect ***497** to land application, best management practices include, most importantly, the requirement that Large CAFOs "develop and implement a nutrient management plan" that, *inter alia,* sets an application rate that minimizes the transport of phosphorus and nitrogen from the land application field to surface waters. 40 C.F.R. §§ 412.4(c)(1)-(2). The land application best management practices also provide for manure and soil sampling, inspection of land application equipment and various setback requirements. *See* 40 C.F.R. § 412.4(c)(3)-(5). With respect to the ELGs for production areas, best management practices include various requirements designed to minimize the possibility of overflows, such as mandatory inspections of relevant equipment and the installation of depth markers in surface and liquid impoundments (e.g., lagoons, ponds, and tanks). *See* 40 C.F.R. § 412.37; Preamble to the Final Rule at 7214–21.

DISCUSSION

Two sets of petitioners bring challenges to the CAFO Rule: the "Environmental Petitioners" (Waterkeeper Alliance, Inc., Sierra Club, Natural Resources Defense Council, Inc., and the American Littoral Society) and the "Farm Petitioners" (American Farm Bureau Federation, National Chicken Council, and the National Pork Producers Council).[15] *Amici curiae,* who represent various environmental and public health interests, join the Environmental Petitioners in some of their challenges.

All the challenges we here consider—most of which are brought by the Environmental Petitioners—can be divided into three general categories: (1) challenges to the permitting scheme established by the CAFO Rule; (2) challenges to the types of discharges subject to regulation under the CAFO Rule; and (3) challenges to the effluent limitation guidelines established by the CAFO Rule.[16] We will address each category in turn.

To the extent we are asked to review whether some aspect of the CAFO Rule violates the Clean Water Act, our inquiry is governed by the standards set forth in *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984). *See also Public Citizen, Inc. v. Mineta,* 340 F.3d 39, 53 (2d Cir.2003). If Congress has "directly spoken to the precise question at issue" and "the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress." *Chevron,* 467 U.S. at 842–43, 104 S.Ct. 2778 (footnote omitted). If, however, we determine that the statute is silent or ambiguous with respect to the specific question at issue, then we consider "whether the agency's answer is based on a permissible construction of the statute." *Id.* at 843, 104 S.Ct. 2778.

***498** **[1]** **[2]** To the extent we are asked to review whether some aspect of the CAFO Rule violates the Administrative Procedure Act because it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," 5 U.S.C. § 706(2)(A), our inquiry is governed by the standard set forth in *Motor Vehicle Manufacturers' Association of the United States, Inc. v. State Farm Mutual Automobile Insurance Company.* *See* 463 U.S. 29, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983). *See also Public Citizen,* 340 F.3d at 53. To determine whether an agency has acted in an arbitrary and capricious fashion, we ask whether the agency has "examine[d] the relevant data and articulate[d] a satisfactory explanation for its action including a rational connection between the facts found and the choice made." *State Farm,* 463 U.S. at 42, 103 S.Ct. 2856. Then, "[i]n reviewing that explanation, we must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment." *Id.* Normally, we must deem arbitrary and capricious an agency rule where "the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Id.* at 43, 103 S.Ct. 2856 (internal quotations and citations omitted).

With this background in mind, we turn now to the various challenges.

A. *Challenges to the CAFO Rule Permitting Scheme*

1. *Failure to Regulate*

The Environmental Petitioners broadly indict the CAFO Rule as countenancing the creation of an "impermissible self-regulatory permitting regime." More precisely, the Environmental Petitioners argue that the CAFO Rule is unlawful because: (1) it empowers NPDES authorities to issue permits to Large CAFOs in the absence of any meaningful review of the nutrient management plans those CAFOs have developed; and (2) it fails to require that the terms of the nutrient management plans be included in the NPDES permits. We agree with the Environmental Petitioners on both counts.

a. *Failure to Require Permitting Authority Review*

[3] The Clean Water Act demands regulation in fact, not only in principle. Under the Act, permits authorizing the discharge of pollutants may issue only where such permits *ensure* that every discharge of pollutants will comply with all applicable effluent limitations and standards. Section 1342(a)(1) of Title 33 provides, for example, that when the EPA is, itself, issuing NPDES permits, the EPA may issue a permit for the discharge of any pollutant or combination of pollutants "upon condition that such discharge will meet ... all applicable requirements [including the effluent limitations statutorily required by 33 U.S.C. § 1311]." The Act further provides that the EPA "shall prescribe conditions for such permits *to assure compliance with* [all applicable requirements, including effluent limitations]." 33 U.S.C. § 1342(a)(2) (emphasis added). Similarly, 33 U.S.C. § 1342(b) allows states to distribute NPDES permits only where, *inter alia,* the state permitting programs "*apply, and insure compliance with,* any applicable [effluent limitations and standards]." 33 U.S.C. § 1342(b) (emphasis ***499** added). [17]

By failing to provide for permitting authority review of the nutrient management plans, the CAFO Rule plainly violates these statutory commandments and is otherwise arbitrary and capricious under the Administrative Procedure Act. The requirement to develop and implement a nutrient management plan is, after all, one of the "best management practices" that constitute the effluent limitation guidelines for land application by Large CAFOs. *See* 40 C.F.R. § 412.4(c)(1). But not just *any* nutrient management plan suffices under the Rule. On the contrary, the effluent limitation guidelines expressly require that Large CAFOs develop and implement a nutrient management plan that:

> incorporates the requirements of paragraphs (c)(2) through (c)(5) of this section based on a field-specific assessment of the potential for nitrogen and phosphorus transport from the field and that addresses the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters.

Id. Accordingly, in order to comply with the effluent limitations for land application of manure, litter, and process wastewater, Large CAFOs must, *inter alia,* develop and implement nutrient management plans that, pursuant to paragraph(c)(2), include "application rates" that "minimize phosphorus and nitrogen transport from the field to surface waters in compliance with the technical standards for nutrient management established by the Director." *See* 40 C.F.R. § 412.4(c)(2).

As presently constituted, the CAFO Rule does nothing to *ensure* that each Large CAFO has, in fact, developed a nutrient management plan that satisfies the above requirements. The CAFO Rule does nothing to ensure, in other words, that each Large CAFO will comply with all applicable effluent limitations and standards. This is because, most glaringly, the CAFO Rule fails to require that permitting authorities review the nutrient management plans developed by Large CAFOs before issuing a permit that authorizes land application discharges.

A recent decision of the Ninth Circuit supports the conclusion we here reach. In *Environmental Defense Center, Inc. v. EPA* ("EDC"), the Ninth Circuit considered a challenge to a "Phase II" EPA rule for municipal storm sewer systems. *See* 344 F.3d 832 (9th Cir.2003), *cert. denied, Texas Cities Coalition on Stormwater v. EPA,* 541 U.S. 1085, 124 S.Ct. 2811, 159 L.Ed.2d 246 (2004). Among other things, the Phase II

Rule allowed small municipal storm sewer systems to seek permission to discharge pollutants by submitting an individualized set of best management practices designed by each municipal storm sewer system ("stormwater management plans"), either in the form of an individual permit application or in the form of a notice of intent to comply with a general permit. *See EDC,* 344 F.3d at 842. So long as a notice of intent included a stormwater management plan, the EPA deemed a municipal storm sewer system to be in compliance with the relevant standards of the Clean Water Act, including the standard that municipal stormwater pollution be reduced to the "maximum extent practicable." *See id.* at 855; 33 U.S.C. § 1342(p)(3)(B)(iii); 40 C.F.R. § 123.35. The Phase II Rule did not require NPDES authorities to review the stormwater management plans themselves.

***500** The Ninth Circuit held, however, that the failure to require permitting authority review of the stormwater management plans violated the Clean Water Act.[18] While the Ninth Circuit was quick to laud "[i]nvolving regulated parties in the development of individual stormwater pollution control programs," it emphasized that "programs that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity to ensure that each such program reduces the discharge of pollutants to the maximum extent practicable [i.e., the relevant statutory standard]." *EDC,* 344 F.3d at 856. The Phase II Rule, by contrast, failed to require that the relevant permitting authorities review the stormwater management plans to "ensure that the measures that any given operator of a [small municipal storm sewer system] has decided to undertake will *in fact* reduce discharges to the maximum extent practicable." *Id.* at 855 (emphasis in original). Accordingly, the Phase II Rule provided no safeguard against a municipal storm sewer system's "misunderstanding or misrepresenting its own stormwater situation and proposing a set of minimum measures for itself that would reduce discharges by far less than the maximum extent practicable." *Id.*

Like the Phase II Rule, the CAFO Rule does not require that NPDES permitting authorities review the nutrient management plans to ensure that the nutrient management plans designed by the Large CAFOs will *in fact* reduce land application discharges in a way that "achieve[s] realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters." 40 C.F.R. § 412.4(c)(1). Like the Phase II Rule, the CAFO Rule does not adequately prevent Large CAFOs "from misunderstanding or misrepresenting" their specific situation and adopting improper or inappropriate nutrient management plans, with improper or inappropriate waste application rates.[19]

The EPA offers two principal arguments in defense of the permitting scheme, neither ***501** of which we find to be persuasive. First, the EPA argues that the nutrient management plan does not, itself, constitute an effluent limitation guideline but is, instead, "simply a planning tool" to help CAFOs comply with the effluent limitations. Accordingly, EPA contends that it is not statutorily compelled to require permitting authority review of the plans. We reject this argument. For one thing, we believe that the terms of the nutrient management plans are *themselves* effluent limitations, for reasons we state in Section A.1.b, *infra.* By failing to require permitting authority review of nutrient management plans, the CAFO Rule thus allows permits to issue that do not assure compliance with all applicable effluent limitations. Even assuming, *arguendo,* that EPA is correct and the nutrient management plan is not, itself, an effluent limitation, EPA's argument still fails on its own terms. For while EPA denies that the nutrient management plan is itself an effluent limitation, even the EPA concedes, as it must, that the requirement to develop and implement a nutrient management plan *is* an effluent limitation; this requirement is, after all, one of the "best management practices" required by the CAFO Rule. *See* 40 C.F.R. § 412.4(c)(1). The CAFO Rule—by failing to provide for permitting authority review—still does not *ensure* that each Large CAFO has, in fact, developed and implemented a nutrient management plan that satisfies the requirements of 40 C.F.R. § 412(c)(1).

Second, the EPA argues that there is no *need* for permitting authority review because the Rule provides Large CAFOs with little room for discretion—and thus little room for error—in setting their waste application rates. This is true, the EPA argues, because the Rule requires states to develop "technical standards" based on certain "field-specific assessment[s]" and further requires Large CAFOs to adopt application rates that comply with those technical standards. *See* 40 C.F.R. § 412.4(c)(2); 40 C.F.R. § 412.4(c)(1). However, while state technical standards will reduce discretion on the part of the Large CAFOs, they will not eliminate it. State technical

standards are based on *field*-specific assessments. But Large CAFOs ultimately set application rates based on *site*-specific assessments of the relevant field conditions, as the EPA concedes in the Preamble to the Rule. *See* Preamble to the Final Rule at 7209 ("Today's rule requires Large CAFOs to determine and implement *site-specific* nutrient application rates that are consistent with the technical standards for nutrient management established by the permitting authority.") (emphasis added); *see also id.* at 7213 ("The nutrient management plan is the tool CAFOs must use to assess soil and other field conditions at their operation ... to determine the *site-specific* nitrogen or phosphorus-based rate at which manure, litter, and other process wastewaters are to be applied.") (emphasis added).[20] ***502** By not providing for permitting authority review of these application rates, the CAFO Rule fails to adequately prevent Large CAFOs from "misunderstanding or misrepresenting" the application rates they must adopt in order to comply with state technical standards. The CAFO Rule does not ensure that the Large CAFOs will, in fact, develop nutrient management plans—and waste application rates—that comply with all applicable effluent limitations and standards.

b. *Failure to Require that the Terms of the Nutrient Management Plans be Included in the NPDES Permits*

[4] The Clean Water Act unquestionably provides that all applicable effluent limitations must be included in each NPDES permit. *See* 33 U.S.C. §§ 1311(a), 1311(b), 1342(a); *see also Am. Paper Inst., Inc. v. EPA,* 996 F.2d 346, 349 (D.C.Cir.1993) (noting that the Clean Water Act "mandates that every permit contain [*inter alia*] effluent limitations that reflect the pollution reduction achievable by using technologically practicable controls"). What the parties here dispute is whether the terms of the nutrient management plans, themselves, constitute effluent limitations that must be included in the NPDES permits.

As we have already stated, rather than setting forth *numerical* effluent limitations for land application of manure, the CAFO Rule establishes *non-numerical* effluent limitations in the form of best management practices. *See* 40 C.F.R. § 412.4. Among these best management practices is the requirement that CAFOs "develop and implement a nutrient management plan" that, *inter alia,* sets application rates that minimize phosphorus and nitrogen transport. *See* 40 C.F.R. § 412.4(c)(1). The EPA readily acknowledges that the requirement to *develop and implement* a nutrient management plan is a non-numerical effluent limitation, but argues that—under the wording of this requirement—the terms of the nutrient management plans themselves do not constitute the non-numerical effluent limitations. Accordingly, EPA argues that the terms of the nutrient management plans need not be included in the NPDES permits.

We believe that the EPA's argument is foreclosed by the statutory definition of effluent limitation. The Clean Water Act defines effluent limitation to mean "any *restriction* established by a State or the Administrator on quantities, *rates,* and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources ..." 33 U.S.C. § 1362(11) (emphasis added). There is no doubt that under the CAFO Rule, the only restrictions actually imposed on land application discharges are those restrictions imposed by the various terms of the nutrient management plan, including the waste application *rates* developed by the Large CAFOs pursuant to their nutrient management plans. Indeed, the requirement to develop a nutrient management plan constitutes a restriction on land application discharges only to the extent that the nutrient management plan actually imposes restrictions on land application discharges. To accept the EPA's contrary argument—that *requiring* a nutrient management plan is itself a restriction on land application discharges—is to allow semantics to torture logic.

Because we believe that the terms of the nutrient management plans constitute effluent limitations, we hold that the CAFO Rule—by failing to require that the terms of the nutrient management plans be included in NPDES permits—violates the ***503** Clean Water Act and is otherwise arbitrary and capricious in violation of the Administrative Procedure Act.

2. *Lack of Public Participation*

[5] The Environmental Petitioners also argue, and we here find, that the permitting scheme established by the CAFO Rule violates the Clean Water Act's public participation requirements and is otherwise arbitrary and capricious under the Administrative Procedure Act.

Congress clearly intended to guarantee the public a meaningful role in the implementation of the Clean Water Act. The Act unequivocally and broadly declares, for example, that "[p]ublic participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this Act shall be provided for, encouraged, and assisted by the Administrator and the States." 33 U.S.C. § 1251(e). Consistent with this demand, the Act further provides that there be an "opportunity for public hearing" before any NPDES permit issues, *see* 33 U.S.C. §§ 1342(a), 1342(b)(3); that a "copy of each permit application and each permit issued under this section [1342] shall be available to the public," *see* 33 U.S.C. § 1342(j); and that "any citizen" may bring a civil suit for violations of the Act, *see* 33 U.S.C. § 1365(a).

The CAFO Rule deprives the public of the opportunity for the sort of regulatory participation that the Act guarantees because the Rule effectively shields the nutrient management plans from public scrutiny and comment. Admittedly, the Preamble to the Rule indicates that the "EPA *expects* that the permitting authority will make this information available to the public upon request," *see* Preamble to the Final Rule at 7233 (emphasis added); however, the Rule provides no assurance that EPA's expectations will be satisfied. Not only does the CAFO Rule fail to require that the terms of the nutrient management plans be included in the NPDES permits, it also fails to provide the public with any other means of access to them. After all, the Rule provides only that a "copy of the CAFO's site-specific nutrient management plan must be maintained on site and made available to the Director [of the state permitting authority] upon request." 40 C.F.R. § 122.42(e)(2)(ii). The Rule does not similarly require that copies of the nutrient management plans be made available to the *public* by the CAFOs.

This scheme violates the Act's public participation requirements in a number of respects. First and foremost, in light of our holding that the terms of the nutrient management plans constitute effluent limitations that should have been included in NPDES permits, the CAFO Rule deprives the public of its right to assist in the "development, revision, and enforcement of ... [an] *effluent limitation.*" 33 U.S.C. § 1251(e) (emphasis added). More specifically, the CAFO Rule prevents the public from calling for a hearing about—and then meaningfully commenting on—NPDES permits before they issue. *See* 33 U.S.C. §§ 1342(a), 1342(b)(3). The CAFO Rule also impermissibly compromises the public's ability to bring citizen-suits, a "proven enforcement tool" that "Congress intended [to be used...] to both spur and supplement government enforcement actions." Clean Water Act Amendments of 1985, Senate Environment and Public Works Comm., S.Rep. No. 50, 99th Cong., 1st Sess. 28 (1985). Under the CAFO Rule, as written, citizens would be limited to enforcing the mere requirement to develop a nutrient management plan, but would be without means to enforce the terms of the nutrient management plans because they ***504** lack access to those terms. This is unacceptable.

And even assuming, *arguendo,* that the nutrient management plans did not themselves constitute effluent limitations, we would still hold that the CAFO Rule violates the Act's public participation requirements. Nutrient management plans are, even under the EPA's own theory of the CAFO Rule, a critical indispensable feature of the "plan, or program established by the Administrator or any State" in order to regulate Large CAFO land application discharges. 33 U.S.C. § 1251(e). The EPA itself has stated in the Preamble to the Rule that "the only way to ensure that non-permitted point source discharges of manure, litter, or process wastewaters from CAFOs do not occur is to require ... [land application] in accordance with site specific nutrient management practices." Preamble to the Final Rule at 7198. Since nutrient management plans embody all the relevant "site specific nutrient management practices," it is clear that, even according to the EPA, nutrient management plans are a *sine qua non* of the "regulation, standard, plan, or program" it established to regulate land application discharges. 33 U.S.C. § 1251(e).

Given that the CAFO Rule forestalls—rather than "provid[es] for, encourag [es], and assist[s]"—public participation in the development and enforcement of nutrient management plans, and given that nutrient management plans are an important "regulation, standard, effluent limitation, plan or program" established by the EPA to regulate land application discharges, the CAFO Rule violates the plain dictates of 33 U.S.C. § 1251(e).

3. *The Duty to Apply*

[6] The Farm Petitioners also challenge the permitting scheme established by the CAFO Rule. They contend that the EPA has exceeded its statutory jurisdiction by requiring all CAFOs to either apply for NPDES permits or otherwise demonstrate that they have no potential to discharge. We agree and grant their petition in this regard.

The Clean Water Act authorizes the EPA to regulate, through the NPDES permitting system, only the discharge of pollutants. The Act generally provides, for example, that "Except as in compliance [with all applicable effluent limitations and permit restrictions,] the *discharge of any pollutant* by any person shall be unlawful." 33 U.S.C. § 1311(a) (emphasis added). Consistent with this prohibition, the Act authorizes the EPA to promulgate effluent limitations for—and issue permits incorporating those effluent limitations for—the discharge of pollutants. Section 1311 of Title 33 provides that "[e]ffluent limitations ... shall be applied to all point sources of *discharge of pollutants,*" *see* 33 U.S.C. § 1311(e). Section 1342 of the same Title then gives NPDES authorities the power to issue permits authorizing the *discharge of any pollutant or combination of pollutants. See* 33 U.S.C. § 1342(a)(1) ("the Administrator may, after opportunity for public hearing, issue a permit for *the discharge of any pollutant, or combination of pollutants* ") (emphasis added); *see also* 33 U.S.C. § 1342(b) (authorizing states to administer permit programs for "discharges into navigable waters"). In other words, unless there is a "discharge of any pollutant," there is no violation of the Act, and point sources are, accordingly, neither statutorily obligated to comply with EPA regulations for point source discharges, nor are they statutorily obligated to seek or obtain an NPDES permit.

Congress left little room for doubt about the meaning of the term "discharge of any pollutant." The Act expressly defines the term to mean "(A) any addition of any ***505** pollutant to navigable waters from any point source, [or] (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft." 33 U.S.C. § 1362(12). Thus, in the absence of an actual addition of any pollutant to navigable waters from any point, there is no point source discharge, no statutory violation, no statutory obligation of point sources to comply with EPA regulations for point source discharges, and no statutory obligation of point sources to seek or obtain an NPDES permit in the first instance.

The CAFO Rule violates this statutory scheme. It imposes obligations on all CAFOs regardless of whether or not they have, in fact, added any pollutants to the navigable waters, i.e. discharged any pollutants. After all, the Rule demands that every CAFO owner or operator either apply for a permit—and comply with the effluent limitations contained in the permit—or affirmatively demonstrate that no permit is needed because there is "no potential to discharge." *See* 40 C.F.R. §§ 122.23(d) and (f). In the EPA's view, such demands are appropriate because all CAFOs have the *potential* to discharge pollutants. *See* Preamble to the Final Rule at 7202 ("The 'duty to apply' provision is based on the presumption that every CAFO has a potential to discharge."). While we appreciate the policy considerations underlying the EPA's approach in the CAFO Rule, however, we are without authority to permit it because it contravenes the regulatory scheme enacted by Congress; the Clean Water Act gives the EPA jurisdiction to regulate and control only *actual* discharges—not potential discharges, and certainly not point sources themselves. *See Natural Resources Defense Council v. EPA,* 859 F.2d 156, 170 (D.C.Cir.1988) (noting that "the [Act] does not empower the agency to regulate point sources themselves; rather, EPA's jurisdiction under the operative statute is limited to regulating the discharge of pollutants"). To the extent that policy considerations do warrant changing the statutory scheme, "such considerations address themselves to Congress, not to the courts." *MCI Telecommunications Corp. v. AT & T, Co.,* 512 U.S. 218, 234, 114 S.Ct. 2223, 129 L.Ed.2d 182 (1994) (citation omitted).

EPA's other arguments are also unavailing. The EPA principally attempts to derive support for its "duty to apply" provision from the statutory definition of point source. EPA argues that point source is defined to mean not only "any discernible, confined and discrete conveyance" from which pollutants "are" discharged, but also "any discernible, confined and discrete conveyance" from which pollutants "*may be* " discharged. 33 U.S.C. § 1362(14). The EPA cannot, however, point to any provision of the statute that gives operational effect to the "may be" language in the manner in which the EPA seeks to do so here. The EPA points, for example, to 33 U.S.C. § 1311(e). Yet that section provides not that effluent limitations shall be applied to all point sources, end of story, but that effluent limitations shall be applied "to all point sources *of discharge of*

pollutants in accordance with the provisions of this chapter." 33 U.S.C. § 1311(e) (emphasis added). Thus, while point sources are statutorily defined to include potential dischargers, effluent limitations can, pursuant to 33 U.S.C. § 1311(e), be applied only to "point sources of *discharge of pollutants,*" i.e. those point sources that are *actually* discharging. [21] *Id.*

The EPA also argues that the "duty to apply" provision is consistent with the Act's goal of not just reducing, but eliminating ***506** water pollution. It is true that the duty to apply provision is consistent with the broad goal of eliminating water pollution. However, the duty to apply flatly contravenes the statute's text, which more specifically defines—and circumscribes—the powers that Congress conferred upon the EPA in order to effectuate the Clean Water Act's goals. Principles of statutory construction forbid us from sanctioning EPA conduct that is plainly inconsistent with a statute's specific text. *See Caminetti v. United States,* 242 U.S. 470, 485, 37 S.Ct. 192, 61 L.Ed. 442 (1917) ("It is elementary that the meaning of a statute must, in the first instance, be sought in the language in which the act is framed, and if that is plain ... the sole function of the courts is to enforce it according to its terms.").

For all these reasons, we believe that the Clean Water Act, on its face, prevents the EPA from imposing, upon CAFOs, the obligation to seek an NPDES permit or otherwise demonstrate that they have no potential to discharge. *See Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.,* 467 U.S. 837, 842–43, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984) (where Congress has "directly spoken to the precise question at issue" and "the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.") (footnote omitted). [22]

B. *Challenges to the Types of Discharges Regulated*

1. *Regulatory Exemption for "Agricultural Stormwater" Discharges*

As stated in the background section, *supra,* the CAFO Rule generally provides ***507** that discharges from a land application area under the control of a CAFO are subject to NPDES requirements. *See* 40 C.F.R. § 122.23(e). However, the Rule, like the Clean Water Act itself, carves out an exception where the discharge in question is "an agricultural storm water discharge," *id.*—a category of discharges that the Act exempts from regulation via the statutory definition of "point source." *See* 33 U.S.C. § 1362(14). More specifically, the Rule classifies, as agricultural stormwater, any "precipitation-related discharge of manure, litter, or process wastewater from land areas under the control of a CAFO" where the "manure, litter or process wastewater has [otherwise] been applied in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization." 40 C.F.R. § 122.23(e).

[7] The Environmental Petitioners contend that this approach violates the Clean Water Act and is otherwise arbitrary and capricious in violation of the Administrative Procedure Act because the Clean Water Act's definition of "point source" requires regulation of *all* CAFO discharges, notwithstanding the fact that agricultural stormwater discharges are otherwise deemed exempt from regulation. We disagree.

The Act defines the term "point source" as follows:

> "[P]oint source" means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, *concentrated animal feeding operation,* or vessel or other floating craft, from which pollutants are or may be discharged. *This term does not include agricultural stormwater discharges* and return flows from irrigated agriculture.

33 U.S.C. § 1362(14) (emphasis added). Contrary to the views of the Environmental Petitioners, we find that this provision is self-evidently ambiguous as to whether CAFO discharges can ever constitute agricultural stormwater. Here, the Act expressly defines the term point source to *include* "concentrated animal feeding operations;" the Act expressly defines "point source" to *exclude* "agricultural stormwater;" and the Act makes absolutely no attempt to reconcile the two. Congress has not addressed the precise issue the Environmental Petitioners put before us, and, as a result, the operative question we must consider becomes, pursuant to *Chevron,* whether the CAFO Rule's

exemption for "precipitation-related" land application discharges is grounded in a "permissible construction" of the Clean Water Act. *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.,* 467 U.S. 837, 843, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984).

The EPA reads the Act's definition of "point source" as generally authorizing the regulation of CAFO discharges, but exempting such discharges from regulation to the extent that they constitute agricultural stormwater. We think this is a reasonable construction in light of the legislative purpose of the agricultural stormwater exemption and given precedent from this circuit. With respect to legislative purpose, we believe it reasonable to conclude that when Congress added the agricultural stormwater exemption to the Clean Water Act, it was affirming the impropriety of imposing, on "any person," liability for agriculture-related discharges triggered not by negligence or malfeasance, but by the weather—even when those discharges came from what would otherwise be point sources. There is no authoritative legislative history to the contrary. The Environmental Petitioners, for example, cite legislative history from 1972 in support of their position; however, the agricultural stormwater ***508** exemption was not added to the Clean Water Act until a full fifteen years later, when Congress passed the Water Quality Act of 1987. *See* Water Quality Act of 1987, Pub.L. No. 100–4 § 503, 101 Stat. 7 (1987). It would be improper for us to rely on statements from 1972 in order to resolve an ambiguity that was not created until 1987. In our view, prior legislative history is a hazardous basis for inferring the intent of a subsequent Congress, in the same way that "*subsequent* legislative history is a hazardous basis for inferring the intent of an *earlier* Congress." *Pension Benefit Guaranty Corp. v. LTV Corp.,* 496 U.S. 633, 650, 110 S.Ct. 2668, 110 L.Ed.2d 579 (1990) (emphasis added) (citation omitted). And, in any event, none of the legislative history from 1972 comes close to casting doubt on the construction we permit here. [23]

Precedent from this circuit also supports the construction that the EPA advances and we here permit. In *Concerned Area Residents for the Environment v. Southview Farm,* this Court considered the agricultural stormwater exemption and its statutory relationship to point source discharges, specifically CAFO discharges. 34 F.3d 114 (2d Cir.1994). The essence of the Court's holding was not, as Environmental Petitioners contend, that discharges from an area under the control of a CAFO can *never* qualify for the agricultural stormwater exemption. Rather, the Court held that a discharge from an area under the control of a CAFO can be considered *either* a CAFO discharge that is subject to regulation *or* an agricultural stormwater discharge that is not subject to regulation. Whether or not a discharge is regulable turned, in the Court's view, on the primary cause of the discharge. That is why the Court wrote that a discharge could be regulated, and liability imposed, where "the run-off was primarily caused by the over-saturation of the fields rather than the rain and that sufficient quantities of manure were present so that the run-off could not be classified as 'stormwater.' " *Id.* at 121.

We believe that the CAFO Rule comports both with Congress' intent in enacting the agricultural stormwater exemption and with our holding in *Southview Farm.* So far as Congress' intent is concerned, while the Rule holds CAFOs liable for most land application discharges, it prevents CAFOs from being held liable for "precipitation-related discharge[s]" where "manure, litter or process wastewater has [otherwise] been applied in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization." 40 C.F.R. § 122.23(e). In other words, like the Clean Water Act itself, the CAFO Rule seeks to remove liability for agriculture-related discharges ***509** primarily caused by nature, while maintaining liability for other discharges. So far as our holding in *Southview Farm* is concerned, discharges from land areas under the control of a CAFO can and should generally be regulated, but where a CAFO has taken steps to ensure appropriate agricultural utilization of the nutrients in manure, litter, and process wastewater, it should not be held accountable for any discharge that is primarily the result of "precipitation."

We also find unpersuasive the only other significant complaint the Environmental Petitioners lodge against the CAFO Rule's agricultural stormwater exemption—namely that it is unreasonable, and hence improper, for the EPA to construe the term "agricultural" as encompassing any stormwater discharge from a land area under the control of a CAFO. The Environmental Petitioners contend that CAFOs must be viewed as industrial, not agricultural. We disagree. Dictionaries from the period in which the agricultural stormwater exemption was adopted define "agriculture" or "agricultural" in a way that can permissibly be construed to encompass CAFOs. For example, Webster's New World Dictionary defined the term "agriculture"

to include, *inter alia,* "work of cultivating the soil, producing crops, and raising livestock." WEBSTER'S NEW WORLD DICTIONARY OF AMERICAN ENGLISH 26 (3rd College Ed.1988). The Oxford English Dictionary similarly defined agriculture to include, *inter alia,* "cultivating the soil," "including the allied pursuits of gathering in the crops and rearing live stock." I THE OXFORD ENGLISH DICTIONARY 267 (2d Ed.1989). Here, there is no question that CAFOs "rais[e]" or "rear" livestock and, because land-applied manure is used as fertilizer, "cultivat[e] the soil" as well. *Cf.* Preamble to the Final Rule at 7197 ("When manure or process wastewater is applied in accordance with practices designed to ensure appropriate agricultural utilization of nutrients, it ... fulfills an important agricultural purpose, namely the fertilization of crops ..."). As a result, we cannot say that the EPA has impermissibly treated CAFOs as agricultural in character.

Additionally, we note again that the CAFO Rule classifies precipitation-related discharges as agricultural stormwater only where CAFOs have otherwise applied "manure, litter or process wastewater ... in accordance with site specific nutrient management practices that ensure appropriate *agricultural* utilization." 40 C.F.R. § 122.23(e) (emphasis added). Thus, even the CAFO Rule's application of the agricultural stormwater exemption is expressly tethered to agricultural endeavors. [24]

Accordingly, for all these reasons, we reject the Environmental Petitioners' challenge to the CAFO Rule's exemption for agricultural stormwater discharges because we believe that the exemption is premised on a permissible construction of the Act.

***510** 2. *Regulation of "Uncollected" Discharges*

[8] The Farm Petitioners contend that the CAFO Rule violates the Clean Water Act because it regulates "uncollected" discharges from land areas under the control of a CAFO; in effect, the Farm Petitioners claim that runoff from land application areas, unless "collected" or "channelized" at the land application area itself, does not constitute a point source discharge. We reject this claim because, in our view, regardless of whether or not runoff is collected at the land application area, itself, any discharge from a land area under the control of a CAFO is a point source discharge subject to regulation because it is a discharge from a *CAFO.*

To evaluate the Farm Petitioners' claim we turn, once again, to the statutory definition of point source. The term "point source" is defined to mean, in relevant part, "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, *concentrated animal feeding operation,* or vessel or other floating craft, *from which pollutants are or may be discharged."* 33 U.S.C. § 1362(14) (emphasis added). Given that the Act expressly defines "point source" to include concentrated animal feeding operations, the Farm Petitioners can prevail on their challenge only if we find that the Act prohibits classifying a land application discharge as a discharge "*from* " a CAFO. We believe, however, that the Act not only permits, but demands, that land application discharges be construed as discharges "from" a CAFO to the extent that they are not otherwise agricultural stormwater.

As this Court previously held in *Catskill Mountains Chapter of Trout Unlimited, Inc. v. City of New York*, the term point source refers to "the proximate source from which the pollutant is directly introduced to [a] destination water body." *See* 273 F.3d 481, 493 (2d Cir.2001). [25] Here, CAFOs are unquestionably "the proximate source" of any discharge of pollutants from land application areas under their control to the surface waters (again, except where those discharges are agricultural stormwater). But for the application of manure by the CAFO to the land, there could never be a discharge of pollutants from the land to the surface waters. Thus, any land application discharge that is not agricultural stormwater is, definitionally, a discharge "from" a CAFO that can be regulated as a point source discharge.

Contrary to the contentions of the Farm Petitioners, whether the land application run-off has been "collected" or "channelized" at the land application area is irrelevant to the determination regarding whether such run-off constitutes a CAFO discharge. To be sure, the Act does generally contemplate that discharges be "channelized" in order to fall within the EPA's regulatory jurisdiction; that is why the term "point source" is defined as "discrete, discernible, conveyances." However, a CAFO is, itself, a "channel" under the Act—it is, of course, expressly included in the list of examples of the types of "point sources" the EPA may regulate. Thus, ***511** any discharge "from" a CAFO is already a point

source discharge. Requiring that manure, litter, or process wastewater be separately channelized at the land application site before any runoff could be considered a "point source discharge" would be, in effect, to impose a requirement not contemplated by the Act: that pollutants be channelized not once but twice before the EPA can regulate them.

Even assuming that the Act did not plainly require that land application discharges generally be regulated as point source discharges, we would find that the EPA has permissibly construed the statute in defining, as a "discharge from a CAFO," the "discharge of manure, litter or process wastewater to waters of the United States from a CAFO as a result of the application of that manure, litter or process wastewater by the CAFO to land areas under its control." 40 C.F.R. § 122.23(e). Land application areas are, after all, an integral and indeed indispensable part of CAFO operations. CAFOs depend on them to receive the volumes of manure their animals generate; as we noted in the background section above, "[s]everal estimates indicate that 90% of CAFO-generated waste is land applied." EPA, STATE COMPENDIUM: PROGRAMS AND REGULATORY ACTIVITIES RELATED TO ANIMAL FEEDING OPERATIONS 13 (May 2002). Given this fact and given that, under the Rule, only discharges from land application areas "under [the] control" of a CAFO are subject to regulation, *see* 40 C.F.R. § 122.23(e), the EPA could quite reasonably conclude that runoff from a land application area is runoff from a CAFO.

Thus, we reject the challenge to the CAFO Rule's regulation of land application discharges, including "uncollected" discharges.

C. *Challenges to the CAFO Rule Effluent Limitations*

The Environmental Petitioners bring a host of challenges to: (1) the CAFO Rule's technology-based effluent limitation guidelines; and (2) the CAFO Rule's failure to promulgate additional water quality based effluent limitations.

Again, we note that the specific effluent limitations contained in each individual NPDES permit are dictated by the terms of more general "effluent limitation guidelines" ("ELGs"), which are separately promulgated by the EPA. *Cf. EPA v. California, ex rel. State Water Res. Control Bd.*, 426 U.S. 200, 205, 96 S.Ct. 2022, 48 L.Ed.2d 578 (1976) ("An NPDES permit serves to transform generally applicable effluent limitations and other standards including those based on water quality into the obligations ... of the individual discharger."). ELGs, and the effluent limitations established in accordance with them, are technology-based restrictions on water pollution; they are technology-based because they are established in accordance with various technological standards that the Act statutorily provides and that, pursuant to the Act, vary depending upon the type of pollutant involved, the type of discharge involved, and whether the point source in question is new or already existing. *See* 33 U.S.C. § 1311. For existing facilities, the Act requires that ELGs be based on standards that include: (1) the best available technology economically achievable ("BAT"), *see* 33 U.S.C. § 1311(b)(2)(A); (2) the best conventional pollutant control technology ("BCT"), *see* 33 U.S.C. § 1314(b)(2)(A); and (3) the best practicable control technology currently available ("BPT"), *see* 33 U.S.C. § 1314(b)(1)(A). The technology standard for new point sources, which is commonly referred to as a new source performance standard, is based on the best available ***512** demonstrated control technology. *See* 33 U.S.C. § 1316.

The EPA here established non-numerical ELGs for the production areas of CAFOs, and did so on a sub-category by sub-category basis. Of these, two are relevant: the subcategory for dairy cows and cattle (other than veal calves), grouped together under Part 412, Subpart C of EPA's regulations ("Subpart C CAFOs"), *see* 40 C.F.R. § 412.30–37, and the subcategory for swine, poultry and veal calves, grouped under Part 412, Subpart D, ("Subpart D CAFOs"), *see* 40 C.F.R. § 412.40–47. The EPA, which was required to set BAT, BPT and BCT standards for the production areas of Subpart C and Subpart D CAFOs, here determined that the identical "technologies" satisfy these standards, and accordingly promulgated ELGs based on the same technologies. Generally speaking, these ELGs, whether based on BAT, BCT or BPT standards: (1) set forth a prohibition on discharges from the production area of a CAFO (except insofar as the discharges are caused by "precipitation"); (2) require best management practices for the production area, including the installation of depth markers in manure lagoons and storage tanks, daily inspections of water lines, and weekly inspections of animal waste storage structures and of equipment used for channeling stormwater or runoff; (3) require additional best management practices

for land application areas; and (4) provide an opportunity for alternative performance standards based upon "site-specific alternative technologies that achieve a quantity of pollutants discharged from the production area equal to or less than the quantity of pollutants that would be discharged under the baseline." *See* 40 CFR § 412.31(a)(2).

The Environmental Petitioners present several challenges to the technology-based ELGs promulgated by the EPA. Specifically, they challenge the BAT-based ELGs, the BCT-based ELGs for pathogens, and the new source performance standard adopted for Subpart D CAFOs. The Environmental Petitioners also challenge the EPA's decision not to impose additional water quality based effluent limitations. We address each set of challenges in turn.

1. *Challenges to the BAT Standards*

The Environmental Petitioners contend that the CAFO Rule's BAT-based ELGs—i.e. the ELGs reflecting the best available technology economically achievable ("BAT"), *see* 33 U.S.C. § 1311(b)(2)(A)—violate the Clean Water Act, or are otherwise arbitrary and capricious, in three respects. To wit, the Environmental Petitioners claim that: (a) in establishing the BAT standards, EPA failed to consider the best-performing technologies in the CAFO industry; (b) EPA improperly abandoned a more suitable option as BAT for beef and cattle CAFOs (Subpart C CAFOs); and (c) the EPA improperly rejected a more suitable option for swine, poultry and veal CAFOs (Subpart D CAFOs). We deny all these challenges.

a. *Failure to Consider the Best Performing Technologies*

[9] The Environmental Petitioners sweepingly contend that, in developing its BAT standards, the EPA failed to consider the single-best performing or optimally operating CAFO in each category or subcategory and then adopt BAT standards that reflect the respective performances of those CAFOs. We reject this summary challenge. The record reflects that EPA extensively surveyed available technologies, narrowed the list of potential BAT candidates to seven options, and subsequently found, within the bounds of its discretion, that "Option 2"—described below—was the best candidate for BAT, because ***513** all the other options considered either did not perform better than "Option 2," were not adequately supported in science, or were not economically achievable. The EPA engaged, here, in extensive data collection. The EPA conducted more than 116 site visits to CAFOs in over 20 states. It obtained information regarding the operational characteristics, waste management systems, and financial situations of CAFOs from several agencies within the USDA such as the National Agricultural Statistics Service, the Animal and Plant Health Inspection Service, and the Economic Research Service. EPA also attended conferences, obtained research from the land grant university system, met with several trade associations, and conducted extensive literature reviews. It received and considered approximately 11,000 public comments on the proposed CAFO Rule, *see* Preamble to the Final Rule at 7178, as well as an additional 450 or so comments following the publication, in November 2001 and July 2002, of Notices of Data Availability (documents that summarized new data and information presented to the EPA). *See id.* at 7187–88. On the basis of this data collection, the EPA ultimately found that the BAT standards it adopted—which generally require improved operation and maintenance—would significantly reduce CAFO discharges as well or better than any other available, economically achievable technologies. And it generally justified this decision within the bounds of its discretion. *See, e.g., id.* at 7215 ("One recent study from Iowa State University suggested 76 percent of earthen manure structures lacked appropriate accompanying management and maintenance activities. Another study in North Carolina stated more than 90 percent of violations were attributed to operation and management deficiencies.").

To be sure, the CAFO Rule does not *explicitly* identify the single, existing best-performing CAFO in each category or subcategory of the Rule. However, it is obvious that the CAFO Rule *substantively* establishes standards that make "reference to the best performer in any industrial category"—and nothing in the Act or the legislative history indicates that any more was required of the EPA. *See* 1 A LEGISLATIVE HISTORY OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, Committee Print Compiled for the Senate Committee on Public Works by the Library of Congress, Ser. No. 93–1, p. 170 (1973). We believe that in all BAT subcategories, the EPA has either adopted the technology employed by the best performers or declined to do so for permissible reasons. Indeed, the Environmental Petitioners cannot identify any specific performance standard that the EPA failed to consider or

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rejected for impermissible reasons in adopting its BAT standards. Thus, the EPA has complied with its statutory duties in setting the BAT standards, and we consequently reject the Environmental Petitioners' challenge to them.

b. *BAT for Beef and Cattle CAFOs ("Subpart C CAFOs")*

The Environmental Petitioners also challenge the BAT standards on the narrower ground that the EPA improperly abandoned a more suitable option as BAT for beef and cattle (Subpart C) CAFOs. Specifically, the Environmental Petitioners contend that EPA should have selected what EPA had called "Option 3," rather than "Option 2" as BAT for Subpart C CAFOs.

By way of brief background, after reviewing an array of various pollution control technologies and best management practices, the EPA—as we previously stated ***514** —narrowed the list of potential BAT candidates to seven options. Those seven options can be generally summarized as follows:

> *Option 1* would require controls on land application of manure, based on the ability of the soil to assimilate the nitrogen content of the manure, plus inspection and recordkeeping requirements for the production area;
>
> *Option 2* would require the same controls as Option 1, but would restrict the rate of manure application instead to a (generally lower) phosphorus-based application rate where necessary, depending on site-specific soil conditions;
>
> *Option 3* would require the same controls as Option 2, but would also require ground water monitoring and discharge controls, unless the CAFO could show that the groundwater beneath manure storage areas or stockpiles do not have a direct hydrologic connection to surface waters;
>
> *Option 4* would require the same controls as Option 3, but would also require sampling of surface waters adjacent to the production area and/or land under control of the CAFO to which manure is applied;
>
> *Option 5* would require—at least for Subpart D CAFOs —the same controls as Option 2, but would also establish a zero discharge requirement that does not allow overflows from the production area under any circumstances;
>
> *Option 6* would require the same controls as Option 2, but would also require that swine and dairy operations install and implement anaerobic digestion and gas recovery to treat manure; and
>
> *Option 7* would require the same controls as Option 2, but would also prohibit manure application to frozen, snow-covered, or saturated ground.

See EPA, PROPOSED RULE DEVELOPMENT DOCUMENT 10–14 to 10–21 (Jan.2001).

[10] The EPA initially proposed adopting Option 3 as BAT for Subpart C CAFOs, *see* Proposed Rule at 3061–62, but ultimately adopted Option 2. *See* Preamble to the Final Rule at 7215–16. That is to say, the EPA initially proposed that various groundwater-related requirements be uniformly imposed on CAFOs, but ultimately decided that groundwater-related requirements be implemented, as necessary, on a case-by-case basis. *See id.;* Proposed Rule at 3062.[26] The Environmental Petitioners claim that the rejection of Option 3's groundwater requirements is unsupported in the record. The EPA argues, in opposition, that it reasonably determined that Option 2 is better technology ***515** than Option 3, and that Option 3 would impose prohibitive economic costs on the CAFO industry. We believe that the record adequately supports EPA's determinations and accordingly defer to the Agency's selection of Option 2.

The EPA principally claims that Option 2 is better technology than Option 3 because groundwater-related requirements are highly dependent on site-specific variables and that, accordingly, such requirements are more effectively evaluated and implemented on a case-by-case basis, rather than imposed uniformly. The record adequately supports this claim. Studies do show that variability in topography, climate, distance to surface water, and geologic factors influence whether and how pollutant discharges at a particular site enter surface water via groundwater. *See* EPA, PROPOSED RULE DEVELOPMENT DOCUMENT 12–12 (Jan.2001). For example, a study by Clapp and Hornberger demonstrates that variability in soil types significantly affects the rates at which water flows through them; indeed, Clapp and Hornberger "reported that water flowed through sand about 100 times faster than through clayey [sic] soils and about 10 times faster than through silty soils." *Id.* Given that there is sufficient record support for EPA's

determination that groundwater-related requirements are better imposed on a case-by-case basis, and given that Option 2 requires CAFOs to consider whether such requirements are needed, *see* Proposed Rule at 3062, we find that EPA has adequately justified its finding that Option 2 constitutes better technology than Option 3. *See Nat'l Wildlife Fed'n v. EPA,* 286 F.3d 554, 566 (D.C.Cir.2002) (upholding the EPA's determination to regulate "color discharges" from pulp and paper mill process on a case-by-case basis where such discharges were dependent on site-specific conditions).

The record also supports the EPA's decision to reject Option 3 as economically prohibitive and not likely to result in any significant reduction in groundwater pollution. *See Am. Petroleum Inst. v. EPA,* 787 F.2d 965, 972 (5th Cir.1986) ("EPA would disserve its mandate were it to tilt at windmills by imposing BAT limitations which removed de minimis amounts of polluting agents from our nation's waters, while imposing possibly disabling costs upon the regulated industry."). EPA's final economic analysis showed a nearly six-fold increase in the number of beef, dairy, and heifer CAFOs projected to close under Option 3, were that Option, rather than Option 2, adopted. This amounted to a potential facility closure rate under Option 3 of 29% for heifer CAFOs, 19% for beef, and 12% for the subcategory as a whole. *See* EPA, FINAL RULE ECONOMIC ANALYSIS 3–22 (Dec.2002). At the same time, the EPA found that while it was difficult to quantify on an industry-wide basis the pollutant reduction that would be associated with nationally-applicable ELGs for groundwater controls, its pollution reduction models showed a difference of less than 1% between the nitrogen load reduction achieved under Option 3 as opposed to Option 2. *See* EPA, PROPOSED RULE DEVELOPMENT DOCUMENT 12–15 (Jan.2001).

In light of all the above, we deny the Environmental Petitioners' challenge to the selection of Option 2 as BAT for Subpart C CAFOs.

c. *BAT for Swine, Poultry and Veal CAFOs ("Subpart D CAFOs")*

[11] Although the EPA initially proposed Option 5 as BAT for Subpart D CAFOs, *see* Proposed Rule at 3063–64, the EPA ultimately determined that the costs of Option 5 would not be economically achievable and, accordingly, adopted Option ***516** 2. *See* Preamble to the Final Rule at 7218–19. The Environmental Petitioners here challenge the EPA's rejection of Option 5 on the grounds that: (1) the EPA gave undue consideration to cost; (2) the EPA's economic modeling is flawed; and (3) even assuming the reasonableness of the EPA's economic models, the Agency has, in other contexts, deemed "economically achievable" technologies that produced the same or worse economic costs. We reject all of these challenges and uphold the EPA's selection of Option 2 as BAT for Subpart D CAFOs.

As a preliminary matter, we note that Environmental Petitioners are correct that cost is only one of the factors that EPA is supposed to consider in establishing BAT standards. *See* 33 U.S.C. § 1314(b)(2)(B) (specifying that the EPA should consider "the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate"). However, the Clean Water Act "does not state what weight should be accorded to the relevant factors; rather, the Act gives EPA the discretion to make those determinations." *BP Exploration & Oil, Inc. v. EPA,* 66 F.3d 784, 802 (6th Cir.1995). And as this Court previously indicated in *Riverkeeper, Inc. v. EPA,* the Administrator is obligated to "inquire into the initial and annual costs of applying the technology and make an affirmative determination that those costs can be reasonably borne by the industry." 358 F.3d 174, 195 (2d Cir.2004). Thus, if the EPA determines, with adequate support in the record, that a given set of costs cannot reasonably be borne by a given industry, courts must defer to that determination.

We believe that the EPA has here determined, with adequate support in the record, that Subpart D CAFOs cannot reasonably bear the costs associated with Option 5, because the EPA—after conducting extensive economic analysis, involving numerous economic tests and modeling—determined that Option 5 would render 17% of swine CAFOs and 11% of Subpart D CAFOs, on the whole, vulnerable to closure. *See* EPA, FINAL RULE ECONOMIC ANALYSIS at 3–19 to 3–22 (Dec.2002). [27]

[12] Environmental Petitioners challenge the probity of the EPA's economic modeling, because, in their view,

the EPA should have assumed that CAFOs could offset their compliance costs by obtaining state and federal funding ("cost-share assistance") and by passing the costs on to consumers ("cost passthrough"). In evaluating this challenge, we wish to make clear, at the outset, that the EPA's determinations about costs, as well as the methodology that the EPA employs in making such determinations, are entitled to deference. [28] "While EPA must take seriously its statutory duty to consider cost, courts of review should be mindful of the many ***517** problems inherent in an undertaking of this nature and uphold a reasonable effort made by the Agency." *Nat'l Wildlife Fed'n v. EPA,* 286 F.3d 554, 563 (D.C.Cir.2002) (quoting *FMC Corp. v. Train,* 539 F.2d 973, 979 (4th Cir.1976)). A reviewing court can neither "second-guess EPA's analysis nor 'undertake [its] own economic study'; rather, the court must 'uphold the regulations if EPA has established in the record a reasonable basis for its decision.' " *Id.* at 565 (citation omitted); *see also Chem. Mfrs. Ass'n v. EPA,* 870 F.2d 177, 250 (5th Cir.1989) ("a 'court's inquiry will be limited to whether the Agency considered the cost of technology, along with the other statutory factors, and whether its conclusion is reasonable' " (citation omitted)).

We believe that the EPA has reasonably justified its decision not to consider either cost-share assistance or cost passthrough in promulgating the final CAFO Rule. First, with respect to cost-share assistance, the EPA determined, within the bounds of its discretion, that there were too many uncertainties regarding the extent to which any such assistance would mitigate compliance costs and that, accordingly, it would be inappropriate to consider cost-share assistance as a reliable offset to compliance costs. In its proposed economic analysis, EPA determined, for example, that although the USDA's Environmental Quality Incentives Program ("EQIP") could theoretically ease the economic strain that Option 5 might impose, the EQIP program should not be relied upon because it might not cover all new applications from CAFOs, might limit the eligibility of CAFOs through various requirements, and might delay distributing funds to CAFOs given various waiting lists and geographic priorities. *See* EPA, PROPOSED RULE ECONOMIC ANALYSIS 4–55 to 56 (Jan.2001). And while certain legislation passed by Congress in 2002 eliminated some restrictions on EQIP participation and substantially increased funding for EQIP, EPA still believed, at the time it conducted its final economic analysis, that the benefits of the EQIP program were still too speculative to count on because it remained unclear what the actual funding levels would be, what limits might be placed on the types of waste management practices covered, and what share of dollars would be allocated to confinement facilities—as opposed to other agricultural operations—and to larger-sized operations. *See* EPA, FINAL RULE ECONOMIC ANALYSIS 2–66 to 2–68 (Dec.2002). We cannot say that the EPA unreasonably determined that federal allocations were too uncertain to rely upon.

Second, with respect to cost passthrough, we believe that EPA determined, within the bounds of its discretion, that the possibility of passing costs on to consumers was also too uncertain to rely upon. The EPA explained in its proposed rule economic analysis that farmers are at the bottom of a long food marketing chain, subject to imperfect market conditions characterized by "local oligopsony conditions, or 'few buyers'." *See* EPA, PROPOSED RULE ECONOMIC ANALYSIS 4–60 (Jan.2001), citing Rogers and Sexton, *Assessing the Importance of Oligopsony Power in Agricultural Markets,* 76 AMER. J. AGR. ECON. 1143–50, Dec. 1994. Given the limited bargaining power of those who raise and confine animals, *see id.* at 2–25 to 2–26, the EPA thus concluded that "[i]ndividual farmers generally have a limited ability to pass on increased costs associated with regulations" and that, as a result, it would be a mistake to rely on cost passthrough. *See id.* at 4–60. We cannot say that the EPA acted unreasonably in ***518** making these determinations. [29]

Having rejected the challenges to the soundness of the EPA's economic models, we move finally to Environmental Petitioners' claim that, even assuming the reasonableness of the EPA's economic modeling, the results do not support a finding that Option 5 was economically unachievable because the Agency has, in other contexts, deemed "economically achievable" technologies that produced the same or worse economic costs. We reject this claim as well. The EPA here estimated that Option 5 would expose up to 11% of Subpart D CAFOs to financial stress sufficient to create a risk of closure. *See* EPA, FINAL RULE ECONOMIC ANALYSIS at 3–22 (Dec.2002). While the EPA—and courts—have treated more substantial risks of closure as nonetheless supporting a finding of economic achievability, *see, e.g., Chem. Mfrs. Assoc. v. EPA,* 870 F.2d at 202 (upholding BAT where 14% of facilities

would be forced to close), it is also true that the EPA—and courts—have treated less substantial risks of closure as supporting a finding of economic unachievability. For example, the D.C. Circuit has upheld an EPA determination that a projected closure rate of less than 7% could support a finding of economic unachievability. *See Nat'l Wildlife Fed'n v. EPA,* 286 F.3d 554, 563 (D.C.Cir.2002). In the end, economic achievability is a determination the EPA must make on an industry-by-industry basis because each industry has its own special attributes and requires an individual assessment of appropriate financial criteria. And we must defer to such determinations unless they are unreasonable. *See id.,* 286 F.3d at 565.

Thus, we reject the Environmental Petitioners' claim that the EPA unlawfully selected Option 2, rather than Option 5, as BAT for Subpart D CAFOs.

2. *Challenge to the BCT Standard for Pathogens*

[13] The Environmental Petitioners next claim that the EPA's failure to adopt any requirements specifically designed to reduce pathogen discharges violates the Clean Water Act and is otherwise arbitrary and capricious in violation of the Administrative Procedure Act.[30] We agree with the Environmental Petitioners in part.

The EPA does not dispute that it is required, under the Clean Water Act, to promulgate BCT-based effluent guidelines for at least one pathogen, namely fecal coliform. *See* 33 U.S.C. § 1314(a)(4) (listing fecal coliform as a conventional pollutant subject to regulation); 33 U.S.C. § 1311(b)(2)(E) (requiring the promulgation of BCT standards for pollutants). That is to say, the EPA does not dispute that it is required to promulgate a technology standard for achieving pathogen reductions that reflects the *best* conventional ***519** pollutant control technology. The EPA also does not here dispute that there is a more than *de minimis* presence of pathogens in the animal waste regulated by the CAFO Rule. In the Preamble to the CAFO Rule, for example, the EPA expressly acknowledges "the presence of pathogens in animal wastes and the potential risk they pose to human health and the environment." Preamble to the Final Rule at 7217. *See also* EPA, RESPONSE TO COMMENTS ON THE NPDES PERMITTING REQUIREMENTS AND EFFLUENT LIMITATIONS GUIDELINES FOR CONCENTRATED ANIMAL FEEDING OPERATIONS A–8 (Dec.2002) ("EPA recognizes the presence of pathogens in animal wastes and the potential risk they pose to human health and the environment"); Proposed Rule at 2977 (noting that livestock manure "contains countless microorganisms, including bacteria, viruses, protozoa, and parasites," that "[m]ultiple species of pathogens may be transmitted directly from a host animal's manure to surface water" and that "[o]ver 150 pathogens found in livestock manure are associated with risks to humans").

The EPA argues that, notwithstanding the above, its failure to impose any BCT-based ELGs specifically designed to achieve pathogen reductions is justified. Principally, the EPA argues that: (1) the pathogen controls it did evaluate, most of which appear to relate to the use or potential use of anaerobic digestion technology, would not necessarily lead to significant pathogen reduction, but would impose significant costs, *see* Preamble to the Final Rule at 7217; and (2) the ELGs otherwise adopted by the CAFO Rule may "incidentally" achieve some reductions of the pathogens in CAFO discharges. *See* Brief of Respondents United States Environmental Protection Agency, et al. at 196; *see also* Preamble to the Final Rule at 7217 ("Although the ELG requirements in this rule are not specifically designed to reduce the pathogens in animal wastes, today's rule may achieve some reductions of pathogens in CAFO discharges ...").

In our view, however, the CAFO Rule violates the Clean Water Act because the EPA has not made an affirmative finding that the BCT-based ELGs adopted in the CAFO Rule do *in fact* represent the best conventional pollutant control technology for reducing pathogens. The EPA may well determine, within the bounds of its discretion, that the ELGs otherwise adopted by the CAFO do in fact represent the best conventional pollutant control technology for reducing pathogens. It may well be the case, to put it slightly differently, that the EPA determines, after considering all the relevant factors, that the ELGs otherwise adopted by the CAFO Rule will directly—not just incidentally—reduce pathogens and do so better than any other pollutant control technology. But we cannot, consistent with the Act, allow the EPA to avoid imposing any other pollutant control technology without an express finding in this regard. The Act requires that the EPA select the best pollutant control technology for reducing pathogens, and we must enforce that requirement.[31]

Accordingly, we grant the petition to the extent that Environmental Petitioners challenge the EPA's failure to impose ELGs specifically designed to reduce pathogens in CAFO discharges as a violation of the Clean Water Act.

***520** 3. *Challenge to the New Source Performance Standard for Swine, Poultry, and Veal*

The Environmental Petitioners claim that the EPA's "new source performance standard" for the production areas of swine, poultry, and veal CAFOs is arbitrary and capricious and that—because the EPA introduced a change to the standard that was not subject to public comment—the new source performance standard for the production areas of swine, poultry, and veal CAFOs violates the Clean Water Act's public participation requirements. We agree with them in part.

The Clean Water Act requires the EPA to promulgate "New Source Performance Standards" ("NSPS") for new, as opposed to already existing, sources of pollution. *See* 33 U.S.C. § 1316. The Act provides that these standards must "reflect the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants." 33 U.S.C. § 1316(a)(1). The Act further requires that the EPA "take into consideration the cost of achieving such effluent reduction, and any non-water quality, environmental impact and energy requirements." 33 U.S.C. § 1316(b)(1)(B). And we note that the EPA is given "considerable discretion to weigh and balance the various factors required by statute to set [NSPS]." *Riverkeeper, Inc. v. EPA,* 358 F.3d 174, 195 (2d Cir.2004) (citation omitted).

The EPA initially proposed that the NSPS for the production areas of swine, poultry and veal CAFOs include various groundwater-related requirements, *see* Proposed Rule at 3144, and also proposed that the NSPS for the production areas of swine, poultry, and veal CAFOs include a total prohibition on production area discharges. *See id.* ("There must be no discharge of process wastewater pollutants into U.S. waters, including any pollutants discharged to ground water which have a direct hydrological connection to surface waters."). In the Final Rule, however, the EPA changed course in several respects: (1) The NSPS did not include the groundwater-related requirements; (2) the NSPS still barred all production area discharges, but provided that a CAFO could comply with this requirement by designing, constructing, operating and maintaining production areas that could "contain all manure, litter, and process wastewater including the runoff and the direct precipitation from a 100–year, 24–hour rainfall event;" and (3) the NSPS empowered permitting authorities to establish alternative performance standards that allow production area discharges, so long as such discharges were accompanied by "an equivalent or greater reduction in the quantity of pollutants released to other media" by the CAFO. *See* 40 C.F.R. § 412.46. The Environmental Petitioners here challenge all three aspects of the final NSPS.

We reject the challenge to the extent that it concerns the EPA's failure to include groundwater-related requirements as part of the NSPS. The EPA's decision not to include such requirements as part of the NSPS was predicated on the same findings underlying its decision not to include groundwater-related requirements as part of the BAT for "Subpart C CAFOs." And as we have already explained, we believe that these findings are supported in the record. *See* discussion *supra.*

[14] However, we agree with the Environmental Petitioners that there is not adequate support in the record for either: (1) ***521** the EPA's decision to allow CAFOs to comply with the "total prohibition" requirement by designing, operating, and maintaining a facility to contain the runoff from a 100–year, 24–hour rainfall event; or (2) the EPA's decision to allow CAFOs to comply with the "total prohibition" requirement through alternative performance standards.

With respect to the former, the EPA claims that the "100–year, 24–hour rainfall event" design standard is functionally equivalent to or a logical outgrowth of a total prohibition standard. The EPA has not, however, adequately substantiated this claim. For example, the EPA never modeled the potential overflows and pollutant loads from a system with a 100–year, 24–hour storm event design capacity; so far as we can tell, the EPA modeled only the potential overflows and pollutant loads from a system with a 25–year, 24–hour storm event. And while certain studies may have shown that the production area BMPs adopted by the CAFO Rule would have substantially prevented the production area discharges documented in the record, we think it obvious that

substantially preventing discharges is not the same as prohibiting them outright.

With respect to the latter, the EPA has not justified in any way—let alone with adequate support in the record—its decision to allow a CAFO to comply with the total prohibition standard through an alternative standard permitting production area discharges so long as the CAFO's aggregate pollution is equivalent to or lower than what it would have been without the production area discharges.

[15] Additionally, because the EPA did not indicate, until the adoption of the final rule, that it was considering either the 100–year, 24–hour rainfall event option or the possibility of alternative performance standards, we find that the EPA's decision to adopt such provisions as part of the NSPS for swine, poultry, and veal violates the Clean Water Act's public participation requirements. *See* 33 U.S.C. § 1251(e) ("Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this Act shall be provided for, encouraged, and assisted by the Administrator and the States").

4. *Challenge to the EPA's Failure to Impose Water Quality Based Effluent Limitations*

[16] We now consider the final challenge brought in this consolidated petition, namely, whether the CAFO Rule violates the Clean Water Act and is otherwise arbitrary and capricious under the Administrative Procedure Act because the Rule fails to promulgate water quality based effluent limitations ("WQBELs") and also bars states from doing so. We agree with the Environmental Petitioners that it does, at least in part.

As stated above, the Clean Water Act not only requires that the EPA promulgate technology-based effluent limitations, but also provides that additional WQBELs "shall be established"—either by the EPA, *see* 33 U.S.C. § 1312(a), or by the states, *see* 33 U.S.C. § 1314(1)—where "discharges of pollutants from a point source or group of point sources ... would interfere with the attainment or maintenance of that water quality in a specific portion of the navigable waters which shall assure protection of public health, public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water." 33 U.S.C. § 1312(a). The Act authorizes the imposition of such WQBELs because "[t]he limitations necessary ***522** to achieve a given level of water quality in one reach of a waterway may require more control of effluents than that attainable through application of the best available technology." 2 A LEGISLATIVE HISTORY OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, Committee Print Compiled for the Senate Committee on Public Works by the Library of Congress, Ser. No. 93–1, p. 1464 (1973).

The CAFO Rule does not, here, promulgate any WQBELs. This much is clear. And this does not present a problem to the extent that the Rule fails to promulgate—and bars the states from promulgating—WQBELs for any "agricultural stormwater discharge," as that term is defined in 40 C.F.R. § 122.23(e). [32] Agricultural stormwater discharges are, after all, statutorily exempt from any effluent limitations, including WQBELs, because they are not point source discharges. *See* 33 U.S.C. § 1362(14).

What is fully unclear is: (1) why the CAFO Rule exempts discharges other than agricultural stormwater discharges from WQBELs, and (2) whether the CAFO Rule bars the states from promulgating WQBELs for discharges other than agricultural stormwater discharges, and, if so, why. With regard to the former, the EPA has here indicated its intention not to promulgate any WQBELs whatsoever; the Preamble to the Final Rule states, after all, that the "EPA does not expect that water quality-based effluent limitations will be established for CAFO discharges resulting from the land application of manure, litter or process wastewater." Preamble to the Final Rule at 7207. The EPA has, however, only justified its determination not to impose WQBELs, only insofar as agricultural stormwater discharges are concerned. *See id.* The EPA has not attempted, in any way, to explain its failure to promulgate WQBELs for CAFO discharges other than agricultural stormwater discharges as that term is defined in 40 C.F.R. § 122.23(e). The EPA sidesteps the issue completely on appeal, and the Preamble to the CAFO Rule similarly fails to explain, let alone justify, its decision. Since there is otherwise evidence in the record suggesting that the EPA's technology-based effluent limitation guidelines may not, on their own, "assure ***523** protection of public health," *see, e.g.,* Memorandum from Laurel J. Staley, Chief, Treatment and Destruction

Branch, Land Remediation & Pollution Control Division, EPA, Re: Assessment of the Necessity for Controlling Potentially Infectious Microorganisms in Animal Wastes (Jan. 16, 2002), we find that the EPA's failure to justify the lack of WQBELs for CAFO discharges other than agricultural stormwater discharges violates 33 U.S.C. § 1312(a) and is arbitrary and capricious in violation of the Administrative Procedure Act.[33] Accordingly, on remand, we direct the EPA to explain whether or not, and why, WQBELs are needed to assure that CAFO discharges will not "interfere with the attainment or maintenance of that water quality in a specific portion of the navigable waters which shall assure protection of public health, public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water." 33 U.S.C. § 1312(a).

Additionally, we find that the Preamble to the Rule is ambiguous about whether states may promulgate WQBELs for discharges other than agricultural stormwater discharges as that term is defined in 40 C.F.R. § 122.23(e). On the one hand, the Preamble does, at one time, seem to suggest that states may promulgate WQBELs; it provides that "[a]lthough, as noted above, manure and process wastewater discharges from the land application area are not directly subject to water quality-based effluent limits, EPA encourages States to address water quality protection issues in their technical standards for determining appropriate land application practice." Preamble to the Final Rule at 7198. On the other hand, the Preamble elsewhere says that where a CAFO has implemented site-specific practices designed to ensure appropriate agricultural utilization of nutrients, it is free from *any* further regulation. To wit, the Preamble states:

> In explaining how the scope of CAFO point source discharges is limited by the agricultural storm water exemption, EPA intends that this limitation will provide a "floor" for CAFOs that will ensure that, where a CAFO is land applying manure, litter or process wastewater in accordance with site specific practices designed to ensure appropriate agricultural utilization of nutrients, *no further effluent limitations will be authorized, for example, to ensure compliance with water quality standards.*

Id. (emphasis added). Given the ambiguity in the Preamble, and given the fact that at least one state has expressed concern that the Rule prevents the imposition of any state WQBELs, *see* Wisconsin Dep't of Natural Res. Comments on U.S. EPA's Proposed Rule Revisions for Concentrated Animal Feeding Operations at 1 (July 27, 2001), we believe it necessary for the EPA to explain more clearly, on remand, whether in fact states may promulgate WQBELs for discharges other than agricultural stormwater discharges as the term is defined in 40 C.F.R. § 122.23(e) and, if not, why.

Accordingly, we grant the Environmental Petitioners' challenge to the extent that they claim that the CAFO Rule is arbitrary and capricious under the Administrative Procedure Act because the EPA has ***524** not sufficiently justified its decision not to promulgate WQBELs for discharges other than agricultural stormwater discharges, as that term is defined in 40 C.F.R. § 122.23(e). Additionally, we grant the Environmental Petitioners' petition to the extent that it seeks clarification of whether the CAFO Rule bars the states from promulgating WQBELs.[34]

CONCLUSION

For the foregoing reasons, the petitions are granted in part and denied in part. We hereby vacate those provisions of the CAFO Rule that: (1) allow permitting authorities to issue permits without reviewing the terms of the nutrient management plans; (2) allow permitting authorities to issue permits that do not include the terms of the nutrient management plans and that do not provide for adequate public participation; and (3) require CAFOs to apply for NPDES permits or otherwise demonstrate that they have no potential to discharge. We also remand other aspects of the CAFO Rule to the EPA for further clarification and analysis. Specifically, we direct the EPA to: (1) definitively select a BCT standard for pathogen reduction; and (2) clarify—via a process that adequately involves the public—the statutory and evidentiary basis for allowing Subpart D CAFO's to comply with the new source performance standard by either: (a) designing, constructing, operating and maintaining production areas that could contain

all manure, litter and process wastewater including the runoff and the direct precipitation from a 100–year, 24–hour rainfall event; or (b) complying with alternative performance standards that allow production area discharges, so long as such discharges are accompanied by an equivalent or greater reduction in the quantity of pollutants released to other media. Additionally, we direct the EPA to clarify the statutory and evidentiary basis for failing to promulgate water quality based effluent limitations for discharges other than agricultural stormwater discharges, as that term is defined in 40 C.F.R. § 122.23(e), and also direct the EPA to clarify whether states may develop water quality based effluent limitations on their own. We uphold the CAFO Rule in all other respects.

All Citations

399 F.3d 486, 59 ERC 2089, 35 Envtl. L. Rep. 20,049

Footnotes

1 The term "discharge of a pollutant" is defined to mean, *inter alia,* "any addition of any pollutant to navigable waters from any point source." 33 U.S.C. § 1362(12)(A).

2 The term "person" is defined to mean "an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body." 33 U.S.C. § 1362(5).

3 The term "point source" is defined to mean "any discernible, confined and discrete conveyance ... from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). Notably, the Act includes "concentrated animal feeding operation" as an example of a point source. *Id.*

4 Under 40 C.F.R. 122.23(b)(1), an animal feeding operation ("AFO") is defined to mean:

> a lot or facility (other than an aquatic animal production facility) where the following conditions are met:
> (i) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12–month period, and
> (ii) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

5 The CAFO Rule defines a concentrated animal feeding operation as "an AFO [animal feeding operation] that is defined as a Large CAFO or as a Medium CAFO by the terms of this paragraph, or that is designated as a CAFO in accordance with paragraph (c) of this section." 40 C.F.R. § 122.23(b)(2). Paragraph (c) provides that an appropriate authority (either a state director, the EPA administrator or both) may designate an AFO as a CAFO upon a determination that the AFO is "a significant contributor of pollutants to waters of the United States." 40 C.F.R. § 122.23(c).

6 According to 40 C.F.R. § 122.23(b)(6), the term Medium CAFO includes:

> ... any AFO with the type and number of animals that fall within any of the ranges listed in paragraph (b)(6)(i) of this section and which has been defined or designated as a CAFO. An AFO is defined as a Medium CAFO if:
> (i) The type and number of animals that it stables or confines falls within any of the following ranges:
> (A) 200 to 699 mature dairy cows, whether milked or dry;
> (B) 300 to 999 veal calves;
> (C) 300 to 999 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs;
> (D) 750 to 2,499 swine each weighing 55 pounds or more;
> (E) 3,000 to 9,999 swine each weighing less than 55 pounds;
> (F) 150 to 499 horses;
> (G) 3,000 to 9,999 sheep or lambs;
> (H) 16,500 to 54,999 turkeys;
> (I) 9,000 to 29,999 laying hens or broilers, if the AFO uses a liquid manure handling system;
> (J) 37,500 to 124,999 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system;
> (K) 25,000 to 81,999 laying hens, if the AFO uses other than a liquid manure handling system;
> (L) 10,000 to 29,999 ducks (if the AFO uses other than a liquid manure handling system); or
> (M) 1,500 to 4,999 ducks (if the AFO uses a liquid manure handling system); and
> (ii) Either one of the following conditions are met:
> (A) Pollutants are discharged into waters of the United States through a man-made ditch, flushing system, or other similar man-made device; or

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(B) Pollutants are discharged directly into waters of the United States which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

7 However, the animal feeding operation raising the chickens must use something "other than a liquid manure handling system." *See* 40 C.F.R. 122.23(b)(6)(J).

8 40 C.F.R. § 122.23(b)(3) classifies an animal feeding operation as a Large CAFO if it:

... stables or confines as many as or more than the number of animals specified in any of the following categories:
(i) 700 mature dairy cows, whether milked or dry;
(ii) 1,000 veal calves;
(iii) 1,000 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs.
(iv) 2,500 swine each weighing 55 pounds or more;
(v) 10,000 swine each weighing less than 55 pounds;
(vi) 500 horses;
(vii) 10,000 sheep or lambs;
(viii) 55,000 turkeys;
(ix) 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system;
(x) 125,000 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system
(xi) 82,000 laying hens, if the AFO uses other than a liquid manure handling system;
(xii) 30,000 ducks (if the AFO uses other than a liquid manure handling system); or
(xiii) 5,000 ducks (if the AFO uses a liquid manure handling system).

9 *See, e.g.,* EPA, DEVELOPMENT DOCUMENT FOR THE FINAL REVISIONS TO THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM REGULATION AND THE EFFLUENT GUIDELINES FOR THE CONCENTRATED ANIMAL FEEDING OPERATIONS , 4–35 (Dec.2002) (noting that "[b]y 1997, the value of poultry production exceeded $21.6 billion, and much of the poultry output was generated by corporate producers on large facilities producing more than 100,000 birds." (citations omitted)).

10 The USDA estimates that operations that confine livestock and poultry generate about 500 million tons of animal manure each year—over three times more raw waste than humans generate in the United States, according to the EPA. Preamble to the Final Rule at 7180.

11 "Several estimates indicate that 90% of CAFO-generated waste is land applied." EPA, STATE COMPENDIUM: PROGRAMS AND REGULATORY ACTIVITIES RELATED TO ANIMAL FEEDING OPERATIONS 13 (May 2002).

12 That suit, brought by the NRDC and Public Citizen, was resolved by a consent decree in which the EPA agreed to propose new effluent limitation guidelines for the swine, poultry, beef and dairy subcategories of CAFOs. *See* Consent Decree, as amended, *NRDC v. Reilly, modified sub. nom., NRDC v. Whitman,* No. 89–2980 (D.D.C.1/31/1992).

13 40 C.F.R. § 122.23(b)(8) defines production area as:

that part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes but is not limited to feed silos, silage bunkers, and bedding materials. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities [dead animals].

14 The ELGs promulgated by the CAFO Rule apply only to *Large* CAFOs. *See* Preamble to the Final Rule at 7208.

15 We refer to both sets of petitioners as they refer to themselves.

16 The Farm Petitioners also challenge the CAFO Rule for impermissibly assuming jurisdiction over all "surface waters," when the Clean Water Act confers upon the EPA the authority to regulate only "navigable waters," a term defined by the Act to mean "waters of the United States, including the territorial seas." 33 U.S.C. § 1362(7). The EPA has clarified, however, that the CAFO Rule employs the term "surface waters" only in an effort to distinguish surface water from groundwater and that the Agency fully recognizes that its regulatory authority encompasses only the "waters of the United States, including the territorial seas." Given these clarifications, we deny the Farm Petitioners' challenge as moot.

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17 We note that the EPA has authorized 45 States and the Virgin Islands to administer the NPDES program. *See* Preamble to the Final Rule at 7185.

18 Admittedly, the Ninth Circuit predicated its holding on a violation of a statutory provision different from the provisions at issue in this case. To wit, the Ninth Circuit held that the Phase II Rule violated 33 U.S.C. § 1342(p)(3)(B)(iii), a provision that specifically pertains to municipal storm sewer discharges and that allows permits for such discharges to issue only where the permits "require controls to reduce the discharge of pollutants to the maximum extent practicable." 33 U.S.C. § 1342(p)(3)(B)(iii). *See EDC,* 344 F.3d at 855–56. This is, however, a distinction without a difference. The demand that permits authorizing municipal storm sewer discharges must "require controls" is, in sum and substance, identical to the demand that permits authorizing discharges from *other* point sources must "assure compliance with" applicable effluent limitations. Both provisions require regulation of discharges *in fact.*

19 There may well be reason to fear that Large CAFOs may misunderstand their specific situation and prepare inadequate nutrient management plans as a result. Even the EPA has acknowledged that crafting proper waste application rates is a complicated task—that is why the EPA expressly recommended, but notably did not require, that waste application rates be prepared by those who are "competent in or have an understanding of a number of technical areas, including soil science and soil fertility, nutrient application and management, crop production, soil and manure testing and results interpretation, fertilizer materials and their characteristics, BMPs [best management practices] for the management of nutrients and water, and applicable laws and regulations." Preamble to the Final Rule at 7213. Tellingly, the EPA also specifically recognized, in the Preamble to the CAFO Rule, that "USDA, and other organizations such as the American Society of Agronomy, Crop Science Society of America, Soil Science Society of America, and a number of land grant universities, recommend that nutrient management plans be prepared by trained and certified specialists." *Id.*

20 On its face, the Rule requires CAFOs—like state permitting authorities—to develop nutrient management plans based on "field-specific assessments." 40 C.F.R. § 412.4(c)(1). However, it is clear that each CAFO must make such "field-specific assessments" on a site-by-site basis; that is, each CAFO must determine what the relevant field conditions are at its site in order to determine its site-specific waste application rate. *See* Preamble to the Final Rule at 7209 ("Today's rule requires Large CAFOs to determine and implement *site-specific* nutrient application rates that are consistent with the technical standards for nutrient management established by the permitting authority.") (emphasis added); *see also id.* at 7213 ("The nutrient management plan is the tool CAFOs must use to assess soil and other field conditions at their operation ... to determine the *site-specific* nitrogen or phosphorus-based rate at which manure, litter, and other process wastewaters are to be applied.") (emphasis added).

21 We also point out that our reading of 33 U.S.C. § 1311(e) does not render superfluous the "may be" language included in the statutory definition of point source. In our view, the "may be" language can be read to clarify the reach of the EPA's power to seek injunctive relief. *See* 33 U.S.C. § 1319(b); *see generally Weinberger v. Romero–Barcelo,* 456 U.S. 305, 102 S.Ct. 1798, 72 L.Ed.2d 91 (1982).

22 Because we find that the EPA lacks statutory authorization to require potential dischargers to apply for NPDES permits, we need not consider whether the record here supports the EPA's determination that Large CAFOs may reasonably be presumed to be such potential dischargers. We hasten to note, however, that if Congress were to amend the Clean Water Act to permit the imposition of a duty-to-apply, we believe the EPA would have ample reason to consider imposing this duty upon Large CAFOs. In our view, the EPA has marshaled evidence suggesting that such a prophylactic measure may be necessary to effectively regulate water pollution from Large CAFOs, given that Large CAFOs are important contributors to water pollution and that they have, historically at least, improperly tried to circumvent the permitting process. *See, e.g.,* Proposed Rule at 2976–77 (noting that, according to the 1998 National Water Quality Inventory, the agricultural sector was the leading contributor to identified water quality impairments in the nation's rivers and lakes); *id.* at 3008 ("since the inception of the NPDES permitting program in the 1970s, a relatively small number of larger CAFOs has actually sought permits"); *see also* Preamble to the Final Rule at 7180 (describing a rise in the excess manure nutrients produced by animal feeding operations); *id.* at 7181 (detailing the ecological and human health impacts caused by CAFO manure and wastewater), *id.* at 7237 (noting the pollutants present in manure and other CAFO wastes and describing how they contribute to the impairment of water quality).

We also note that the EPA has not argued that the administrative record supports a regulatory presumption to the effect that Large CAFOs *actually* discharge. As such, we do not now consider whether, under the Clean Water Act as it currently exists, the EPA might properly presume that Large CAFOs—or some subset thereof—actually discharge. *See generally NLRB v. Curtin Matheson Scientific, Inc.,* 494 U.S. 775, 110 S.Ct. 1542, 108 L.Ed.2d 801 (1990); *National Mining Ass'n v. Babbitt,* 172 F.3d 906 (D.C.Cir.1999).

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23 For example, the Environmental Petitioners substantially rely on a statement from Senator Robert Dole acknowledging the environmental threat posed by "[p]recipitation runoff" from areas storing animal and poultry waste. 2 A LEGISLATIVE HISTORY OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, Committee Print Compiled for the Senate Committee on Public Works by the Library of Congress, Ser. No. 93–1, p. 1295 (1973). Senator Dole did not at all suggest that the Act aimed, in fact, to regulate precipitation runoff. His statement about precipitation runoff was merely part of a larger discussion about the general environmental threat posed by animal and poultry waste. To wit, he stated that: "In these modern facilities, the use of bedding and litter has been greatly reduced; consequently, the manure which is produced remains essentially in the liquid state and is much more difficult to handle without odor and pollution problems. Precipitation runoff from these areas picks up high concentrates of pollutants, which reduce oxygen levels in receiving streams and lakes and accelerate the eutrophication process." *Id.*

24 We note, moreover, that while the EPA had previously classified CAFO discharges as industrial, rather than agricultural, the Agency has here adequately justified that change on the ground that "[w]hen manure or process wastewater is applied in accordance with practices designed to ensure appropriate agricultural utilization of nutrients, it... fulfills an important agricultural purpose, namely the fertilization of crops..." Preamble to the Final Rule at 7197. *Cf. Motor Vehicle Manufacturers Association of the United States, Inc. v. State Farm Mutual Automobile Insurance Company,* 463 U.S. 29, 42, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983) (where an agency has changed course it is "obligated to supply a reasoned analysis for the change."). Because the EPA also put the public on notice of the substantive change, *see* Proposed Rule at 3029–32, it has complied with all applicable procedural requirements.

25 We note that, in this respect, *Catskill Mountains* is in complete accord with *Southview Farm.* Implicit in *Southview Farm* is the idea that when a discharge from a land application area under the control of a CAFO is primarily caused by rain, such a discharge is not subject to regulation because the rain—not the CAFO—is the proximate source of the discharge; but when "run-off [is] primarily caused by the over-saturation of the fields rather than the rain and [there are] sufficient quantities of manure ... present," *Southview Farm,* 34 F.3d at 121, such a discharge *is* subject to regulation because the CAFO—not the rain—is the proximate source of the discharge.

26 As the EPA explained in the Preamble to the Proposed Rule and reaffirmed in its brief in this consolidated petition,

> even under Option 2, permit writers [are] required to consider whether a facility is located in an area where its hydrogeology makes it likely that the ground water underlying the facility is hydrologically connected to surface water and whether a discharge to surface water from the facility through such hydrologically connected ground water may cause or contribute to a violation of State water quality standards. In cases where such a determination was made by the permit writer, he or she would impose appropriate conditions to prevent discharge via a hydrologic connection [and that these conditions] would be included in the permit.

Proposed Rule at 3062. It is thus clear that when the EPA stated, in the Preamble to the Final Rule, that "requirements limiting the discharge of pollutants to surface water via groundwater ... are beyond the scope of today's ELGs," Preamble to the Final Rule at 7216, the EPA meant only that uniform national requirements are beyond the scope of today's ELGs. The EPA did not, in other words, mean to suggest that NPDES authorities lacked the power to impose groundwater-related requirements on a case-by-case basis, where necessary.

27 Because the Clean Water Act "imposes no obligation on EPA to subdivide industries so that each point-source category contains identical producers," *BASF Wyandotte Corp. v. Costle,* 598 F.2d 637, 655 (1st Cir.1979), we reject the Environmental Petitioners' claim that EPA should segregate poultry CAFOs out of Subpart D and separately consider the costs of imposing Option 5 on them.

28 We agree with the Environmental Petitioners that the EPA's economic determinations are not—as the EPA puts it—entitled to "heightened deference." Deference, not "heightened" deference, is due.

29 We also uphold, as reasonable, EPA's decision not to rely on "long-run market adjustments," given that these, too, are inherently uncertain and difficult to predict and that, in any event, adjustments for the long-run might "mask severe financial effects at regulated CAFOs in the short-run." *See* EPA, FINAL RULE ECONOMIC ANALYSIS 2–64 (Dec.2002).

30 We find that, contrary to the EPA's argument, the Environmental Petitioners are not barred from bringing this claim, because one comment expressly addressed the inadequacy of the Agency's pathogen reduction measures, *see* Excerpt Number CAFO201424–27 in EPA, RESPONSE TO COMMENTS ON THE NPDES PERMITTING REQUIREMENTS AND EFFLUENT LIMITATIONS GUIDELINES FOR CONCENTRATED ANIMAL FEEDING OPERATIONS at 9–81 (Dec.2002) and because, in any event, the Agency clearly considered its statutory obligation to impose pathogen reduction measures in the course of promulgating the CAFO Rule. *See Nat'l Resources Def. Council, Inc. v. EPA,* 824 F.2d 1146, 1151 (D.C.Cir.1987).

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31 Because the EPA never made an affirmative finding that the other ELGs adopted by the CAFO Rule constitute the *best* conventional pollutant control technology, we need not address whether EPA reasonably rejected other pathogen controls. The rejection of those controls is not properly before this Court.

32 The Environmental Petitioners argue that the Preamble to the Final Rule can be construed to give the term "agricultural stormwater discharge" a broader definition than the one provided in 40 C.F.R. § 122.23(e). Because the Preamble at one point states that where a CAFO has developed site specific practices to ensure appropriate agricultural utilization of nutrients, "*[a]ny remaining discharge* ... would be covered by the agricultural storm water exemption," the Environmental Petitioners claim that the agricultural stormwater exemption might be read to include even "dry weather discharges," i.e., discharges not caused by rain. Preamble to the Final Rule at 7198. We disagree. First and most importantly, the CAFO Rule itself provides that only a "precipitation-related discharge" can be classified as agricultural stormwater. 40 C.F.R. § 122.23(e). Dry-weather discharges are, by definition, not precipitation-related. Second, the Preamble expressly states—in the paragraph preceding the statement that the Environmental Petitioners construe as suggesting a broader definition of agricultural stormwater—that "any dry weather discharge of manure or process wastewater resulting from its application to land area [sic] under the control of a CAFO would not be considered an agricultural storm water discharge and would thus be subject to Clean Water Act requirements." Preamble to the Final Rule at 7198. Thus, the agricultural stormwater exemption encompasses only those discharges that the CAFO Rule defines as agricultural stormwater, that is, a "precipitation-related discharge of manure, litter, or process wastewater from land areas under the control of a CAFO" where the "manure, litter or process wastewater has [otherwise] been applied in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization." 40 C.F.R. § 122.23(e).

33 To be clear, we are not asked to consider—and we accordingly do not consider—whether EPA is statutorily required, in the first instance, to investigate the propriety of imposing WQBELs. Here, we hold only that where the EPA has made a determination, one way or the other, about the propriety of imposing WQBELs, that determination must be reasonable and supported in the record, i.e., not arbitrary and capricious.

34 The Environmental Petitioners moved to clarify and/or supplement the administrative record on appeal to include certain documents exchanged between the EPA and the Office of Management and Budget. They so moved because, in their view, the EPA–OMB documents supported their challenges to (a) the EPA's failure to promulgate WQBELs and (b) the CAFO Rule's new source performance standard for swine, poultry, and veal. Because we have granted both these challenges without even considering the EPA–OMB documents, we deny the Environmental Petitioners' motion as moot.

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ATTACHMENT
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725 F.3d 1194
United States Court of Appeals,
Ninth Circuit.

NATURAL RESOURCES DEFENSE COUNCIL, INC.; Santa Monica Baykeeper, Plaintiffs–Appellants,
v.
COUNTY OF LOS ANGELES; Los Angeles County Flood Control District; Michael Antonovich, in his official capacity as Supervisor; Yvonne Burke, in her official capacity as Supervisor; Gloria Molina, in her official capacity as Supervisor; Zev Yaroslavsky, in his official capacity as Supervisor; Dean D. Efstathiou, in his official capacity as Acting Director of Los Angeles County Department of Public Works; Don Knabe, in his official capacity as Supervisor, Defendants–Appellees.

No. 10–56017.
|
Aug. 8, 2013.

Synopsis

Background: Environmental organizations brought action against California municipal entities, alleging that they were discharging urban stormwater runoff into navigable waters in violation of the Clean Water Act (CWA). The United States District Court for the Central District of California, A. Howard Matz, J., entered a partial final judgment in favor of defendants, and plaintiffs appealed. On denial of rehearing en banc, the Court of Appeals, 673 F.3d 880, affirmed in part, reversed in part, and remanded. Certiorari was granted. —— U.S. ——, 133 S.Ct. 710, 184 L.Ed.2d 547, reversed and remanded.

[Holding:] On remand, the Court of Appeals, Milan D. Smith, Jr., held that pollution exceedances detected at monitoring stations of County of Los Angeles and Los Angeles County Flood Control District were sufficient to establish County defendants' liability as matter of law for violations of terms of their National Pollutant Discharge Elimination System (NPDES) permit.

Reversed and remanded.

West Headnotes (9)

[1] Environmental Law
Discharge of pollutants

In nearly all cases, a National Pollutant Discharge Elimination System (NPDES) permit is required before anyone may lawfully discharge a pollutant from a point source into the navigable waters of the United States. Clean Water Act, §§ 301(a), 402, 33 U.S.C.A. §§ 1311(a), 1342.

7 Cases that cite this headnote

[2] Environmental Law
Reporting, notice, and monitoring requirements

Pollution exceedances detected at monitoring stations of County of Los Angeles and Los Angeles County Flood Control District were sufficient to establish County defendants' liability as matter of law for violations of terms of their National Pollutant Discharge Elimination System (NPDES) permit issued pursuant to Clean Water Act, since data collected at monitoring stations was intended to determine whether permittees were in compliance with permit, and extrinsic considerations, including Clean Water Act's monitoring requirements, also supported that conclusion; limiting permittee's responsibility to "discharge[s] for which it is the operator" applied to appropriate remedy for permit violations, not to liability for those violations. Clean Water Act, § 402(a)(2), (k), 33 U.S.C.A. § 1342(a)(2), (k); 40 C.F.R. §§ 122.26(d)(2)(i)(F), 122.41(a), 122.44(i)(1); Restatement (Second) of Contracts § 203(a).

7 Cases that cite this headnote

[3] Federal Courts
Mandate

No opinion of the circuit becomes final until the mandate issues. F.R.A.P.Rule 41(c), 28 U.S.C.A.

3 Cases that cite this headnote

[4] **Federal Courts**
Law of the case in general

Federal Courts
Mandate

Earlier judgment by Court of Appeal was not final, and it could not be considered the law of the case, since mandate in case had not issued.

3 Cases that cite this headnote

[5] **Environmental Law**
Violations and liability in general

A permittee violates the CWA when it discharges pollutants in excess of the levels specified in the permit, or where the permittee otherwise violates the permit's terms. Clean Water Act, § 402(k), 33 U.S.C.A. § 1342(k); 40 C.F.R. § 122.41(a).

9 Cases that cite this headnote

[6] **Environmental Law**
Discharge of pollutants

If the language of a National Pollutant Discharge Elimination System (NPDES) permit, considered in light of the structure of the permit as a whole, is plain and capable of legal construction, the language alone must determine the permit's meaning; however, if the permit's language is ambiguous, a court may turn to extrinsic evidence to interpret its terms. Clean Water Act, § 402(k), 33 U.S.C.A. § 1342(k); 40 C.F.R. § 122.41(a).

12 Cases that cite this headnote

[7] **Environmental Law**
Discharge of pollutants

A court must give effect to every word or term in a National Pollutant Discharge Elimination System (NPDES) permit and reject none as meaningless or surplusage; therefore, a court must interpret the permit in a manner that gives full meaning and effect to all of the permit's provisions and avoid a construction of the permit that focuses only on a few isolated provisions. Clean Water Act, § 402(k), 33 U.S.C.A. § 1342(k); 40 C.F.R. § 122.41(a); Restatement (Second) of Contracts § 203(a).

4 Cases that cite this headnote

[8] **Environmental Law**
Discharge of pollutants

One of a court's obligations in interpreting an National Pollutant Discharge Elimination System (NPDES) permit is to determine the intent of the permitting authority; thus, a court gives significant weight to any extrinsic evidence that evinces the permitting authority's interpretation of the relevant permit. Clean Water Act, § 402(a)(2), (k), 33 U.S.C.A. § 1342(a)(2), (k); 40 C.F.R. §§ 122.26(d)(2)(i)(F), 122.41(a), 122.44(i)(1).

5 Cases that cite this headnote

[9] **Environmental Law**
Discharge of pollutants

A court does not defer to the interpretation of CWA National Pollutant Discharge Elimination System (NPDES) permit by a regional board. Clean Water Act, § 402, 33 U.S.C.A. § 1342.

9 Cases that cite this headnote

Attorneys and Law Firms

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On Remand from the United States Supreme Court. D.C. No. 2:08–cv–01467–AHM–PLA.

Before: HARRY PREGERSON and MILAN D. SMITH, JR., Circuit Judges, and H. RUSSEL HOLLAND, Senior District Judge. *

OPINION

M. SMITH, Circuit Judge:

Plaintiffs–Appellants Natural Resources Defense Council and Santa Monica Baykeeper (collectively, the Plaintiffs) filed suit against the County of Los Angeles and the Los Angeles County Flood Control District (collectively, the County Defendants) alleging that the County Defendants are discharging polluted stormwater in violation of the terms of their National Pollutant Discharge Elimination System (NPDES) permit, issued pursuant to the Federal Water Pollution Control Act (the Clean Water Act, Act, or CWA), 86 Stat. 816, codified as amended at 33 U.S.C. §§ 1251, *et seq.* The district court granted the County Defendants' motion for summary judgment, reasoning that Plaintiffs failed to prove that any *individual* defendant had discharged pollutants in violation of the Clean Water Act, where Plaintiffs' only evidence of violations was monitoring data taken downstream of the County Defendants' (and others') discharge points, as opposed to data sampled at the relevant discharge points themselves. On appeal, we affirmed the district court's judgment in part and reversed in part. *Natural Res. Def. Council, Inc. v. Cnty. of L.A.,* 673 F.3d 880 (9th Cir.2011). On January 8, 2013, the Supreme Court reversed our judgment and remanded this case to us for further proceedings. *L.A. Cnty. Flood Control Dist. v. Natural Res. Def. Council, Inc.,* —— U.S. ——, 133 S.Ct. 710, 184 L.Ed.2d 547 (2013). On February 19, 2013, we ordered the parties to file supplemental briefs addressing the implications of the Supreme Court's ruling. Having considered the Supreme Court's ruling, the responses of the parties in their supplemental briefs, and other matters noted ***1197** herein, we now conclude that the pollution exceedances detected at the County Defendants' monitoring stations are sufficient to establish the County Defendants' liability for NPDES permit violations as a matter of law. Accordingly, we once again reverse the district court's grant of summary judgment in favor of the County Defendants, and remand to the district court for a determination of the appropriate remedy for the County Defendants' violations.

FACTUAL BACKGROUND

I. Stormwater Runoff in Los Angeles County

Stormwater runoff is surface water generated by precipitation events, such as rainstorms, which flows over streets, parking lots, commercial sites, and other developed parcels of land. When stormwater courses over urban environs, it frequently becomes polluted with contaminants, such as "suspended metals, sediments, algae-promoting nutrients (nitrogen and phosphorus), floatable trash, used motor oil, raw sewage, [and] pesticides[.]" [1] *Envtl. Def. Ctr., Inc. v. EPA,* 344 F.3d 832, 840 (9th Cir.2003). This polluted stormwater often makes its way into storm drains and sewers, which "generally channel collected runoff into federally protected water bodies," *id.,* such as rivers and oceans. Consequently, stormwater runoff has been recognized as "one of the most significant sources of water pollution in the nation, at times comparable to, if not greater than, contamination from industrial and sewage sources." *Id.* (citation omitted).

Los Angeles County (the County) is home to more than 10 million people and covers a sprawling amalgam of populous incorporated cities and significant swaths of unincorporated land. The Los Angeles County Flood Control District (the District) is a public entity governed by the Los Angeles County Board of Supervisors and the Los Angeles County Department of Public Works. The District comprises 84 cities and some unincorporated areas of the County. The County and the District are separate legal entities.

Each city in the District operates a municipal separate storm sewer system (ms4) [2] that is composed of gutters, catch basins, storm drains, and pipes that collect and convey stormwater. The County also operates its own ms4 that primarily collects and conveys stormwater runoff in the unincorporated areas of the County. Each of these ms4s connects to the District's substantially larger ms4, an extensive flood-control and storm-sewer infrastructure ***1198** consisting of approximately 500 miles of open channels and 2,800 miles of storm drains. Because a comprehensive map of the County Defendants' storm sewer system does not exist, no one knows the exact

size of the LA MS4[3] or the locations of all of its storm drain connections and outfalls.[4] But while the number and location of storm drains and outfalls are too numerous to catalog, it is undisputed that the LA MS4 collects and channels stormwater runoff from across the County. It is similarly undisputed that untreated stormwater is discharged from LA MS4 outfalls into various watercourses, including the Los Angeles and San Gabriel Rivers.[5] These rivers, in turn, drain into several coastal waters, including, among others, the Santa Monica Bay and the Pacific Ocean.

II. The County Defendants' NPDES Permit

[1] Section 301(a) of the CWA prohibits the "discharge of any pollutant" from any "point source" into "navigable waters" unless the discharge complies with certain other sections of the CWA.[6] *See* 33 U.S.C. § 1311(a). One of those sections is section 402, which provides for the issuance of NPDES permits. 33 U.S.C. § 1342. In nearly all cases, an NPDES permit is required before anyone may lawfully discharge a pollutant from a point source into the navigable waters of the United States. *See Arkansas v. Oklahoma,* 503 U.S. 91, 101–02, 112 S.Ct. 1046, 117 L.Ed.2d 239 (1992); *Environmental Law Handbook* 323 (Thomas F.P. Sullivan ed., 21st ed.2011).

Congress has empowered the EPA Administrator to delegate NPDES permitting authority to state agencies. 33 U.S.C. § 1342(b). Pursuant to this authority, the EPA has authorized the State of California to develop water quality standards and issue NPDES permits. Pursuant to the Porter–Cologne Water Quality Control Act, California state law designates the State Water Resources Control Board and ***1199** nine regional boards as the principal state agencies charged with enforcing federal and state water pollution laws and issuing NPDES permits. *See* Cal. Water Code §§ 13000 *et seq.* The entity responsible for issuing permits in the Los Angeles area is the California State Water Resources Control Board for the Los Angeles Region (the Regional Board).

On June 18, 1990, the Regional Board first issued an NPDES permit (the Permit) regulating stormwater discharges by the County, the District, and the 84 incorporated municipalities in the District (collectively, the Permittees). The Permit has subsequently been renewed or amended several times, and the version of the Permit at issue in this litigation came into force on December 13, 2001.[7] The Permit covers all relevant discharges that occur "within the boundaries of the Permittee municipalities ... over which [the municipalities have] regulatory jurisdiction as well as unincorporated areas in Los Angeles County within the jurisdiction of the Regional Board."

The Permit runs to 99 pages and contains a myriad of rules, regulations, and conditions regarding the Permittees' operation of the LA MS4. However, only two sets of the Permit's provisions are particularly relevant to this appeal; those contained in Part 2, titled "Receiving Water Limitations," and those contained in the section titled "Monitoring and Reporting Program."

Part 2 places limits on the type and amount of pollutants the Permittees may lawfully discharge from the LA MS4. Specifically, Part 2 prohibits "discharges from the [LA] MS4 that cause or contribute to the violation of the Water Quality Standards or water quality objectives."[8] The Permit defines "Water Quality Standards and Water Quality Objectives" as "water quality criteria contained in the Basin Plan, the California Ocean Plan, the National Toxics Rule, the California Toxics Rule, and other state or federal approved surface water quality plans."[9] Succinctly put, the Permit incorporates the pollution standards promulgated in other agency documents such as the Basin Plan, and prohibits stormwater discharges that "cause or contribute to the violation" of those incorporated standards. The Permit further provides that the Permittees "shall comply" with the LA MS4 discharge prohibitions outlined in Part 2 "through timely implementation of control measures and other actions to reduce pollutants in the[ir LA MS4] discharges...."

The Monitoring and Reporting Program complements Part 2. Under that program, the Permittees are required to monitor the impacts of their LA MS4 discharges on water quality and to publish the results of all pollution monitoring at least annually. The primary objectives of the monitoring program include "assessing compliance" with the Permit, "measuring and improving the effectiveness" of the Los Angeles Countywide Stormwater Quality Management Program (SQMP),[10] and assessing ***1200** the environmental impact of urban runoff on the receiving waters in the County.

One of the principal ways the Permittees are required to monitor their LA MS4 discharges is through mass-emissions monitoring. Mass-emissions monitoring measures all constituents present in water, and the readings give a cumulative picture of the pollutant load in a waterbody. The Permit requires the District, as Principal Permittee, to conduct mass-emissions monitoring at seven enumerated monitoring stations located throughout the County. The District is also responsible for analyzing the resulting data and submitting a comprehensive report of its findings. [11] According to the Permit, the purpose of mass-emissions monitoring is to: (1) estimate the mass emissions from the LA MS4; (2) assess trends in the mass emissions over time; and (3) determine if the LA MS4 is contributing to exceedances of Water Quality Standards by comparing the monitoring results to the applicable pollution standards promulgated in the Basin Plan and similar documents.

The Permittees sited a mass-emissions monitoring station in both the Los Angeles and San Gabriel Rivers (collectively, the Monitoring Stations). The Los Angeles River monitoring station is located in a channelized portion of the Los Angeles River that runs through the City of Long Beach. [12] The San Gabriel River monitoring station is located in a channelized portion of the San Gabriel River that runs through the City of Pico Rivera. The Monitoring Stations are located downstream of numerous LA MS4 outfalls controlled by the County Defendants and various other non-party Permittees.

Between 2002 and 2008, when this case was filed, the District published annual monitoring reports that contain the data that the District collected at the Monitoring Stations. According to those reports, the Monitoring Stations identified 140 separate exceedances of the Permit's water quality standards, including excessive levels of aluminum, copper, cyanide, zinc, and fecal coliform bacteria in both the Los Angeles and San Gabriel Rivers. The County Defendants do not dispute the accuracy of the monitoring data.

PROCEDURAL BACKGROUND

Using the monitoring data self-reported by the District, Plaintiffs cataloged the ***1201** water quality exceedances measured in various receiving waters in the County. Beginning on May 31, 2007, Plaintiffs sent a series of notice letters to the County Defendants informing them that Plaintiffs believed that they were violating the terms of the Permit. [13] Specifically, Plaintiffs contended that the water quality exceedances documented in the District's monitoring reports demonstrated liability under the CWA. Dissatisfied with the County Defendants' response to these letters, Plaintiffs brought this citizen-enforcement action on March 3, 2008. After the district court dismissed certain elements of the Plaintiffs' initial complaint because notice of the Permit violations was defective, Plaintiffs sent the County Defendants an adequate notice letter on July 3, 2008.

Plaintiffs filed their First Amended Complaint on September 18, 2008. In the complaint, Plaintiffs asserted six causes of action under the CWA. Four of the Plaintiffs' claims, which the district court designated the "Watershed Claims," were initially before us on appeal. The first three Watershed Claims allege that, beginning in 2002 or 2003, the County Defendants caused or contributed to exceedances of water quality standards in the Santa Clara River (Claim 1), the Los Angeles River (Claim 2), and the San Gabriel River (Claim 3), in violation of 33 U.S.C. §§ 1311(a), 1342(p). The fourth Watershed Claim alleges that, beginning in 2002, County Defendants caused or contributed to exceedances of the water quality standards and violated the total maximum daily load limits in Malibu Creek. All of the Watershed Claims rest on the same premise: (1) the Permit incorporates water-quality limits for each receiving water body; (2) mass-emissions monitoring stations have recorded pollutant loads in the receiving water bodies that exceed those permitted under the relevant standards; (3) an exceedance constitutes non-compliance with the Permit and, thereby, the Clean Water Act; and (4) County Defendants, as holders of the Permit and joint operators of the LA MS4, are liable for these exceedances under the Act.

Early in the litigation, the district court bifurcated liability and remedy, and all proceedings related to remedy were stayed until liability was determined. On March 2, 2010, the district court denied all parties' cross-motions for summary judgment with regard to liability. *NRDC v. Cnty. of L.A.,* No. CV 08–1467–AHM, 2010 WL 761287 (C.D.Cal. Mar. 2, 2010), *amended on other grounds,* 2011 WL 666875 (C.D.Cal. Jan. 27, 2011). Although the district court accepted Plaintiffs' arguments that the Permit "clearly prohibits 'discharges from the [LA] MS4 that cause or contribute to the violation of Water

Quality Standards or water quality objectives,' " 2010 WL 761287, at *6, and that mass-monitoring stations "are the proper monitoring locations to determine if the [LA] MS4 is contributing to exceedances" of the Water Quality Standards or water quality objectives, *id.*, the district court held that Plaintiffs were improperly attempting to use the District's self-reported monitoring data to establish liability without presenting evidence that any individual defendant was discharging pollutants that "cause[d] or contribute[d] to the violation" of the water quality standards. *Id.* The district court observed that although "the District is responsible for the pollutants in the [LA] MS4" at the time they pass the Monitoring Stations, "that does not necessarily determine the question of whether the water passing by these points is a ***1202** 'discharge' within the meaning of the Permit and the Clean Water Act." *Id.* at *7. Unable to determine whether any of the County Defendants' upstream LA MS4 outflows were contributing polluted stormwater to navigable waters, the district court stated that "Plaintiffs would need to present some evidence (monitoring data or an admission) that some amount of a standards-exceeding pollutant is being discharged through at least one District outlet." *Id.* at *8.

Following supplemental briefing, the district court again determined that "Plaintiffs failed to present evidence that the standards-exceeding pollutants passed through the Defendants' [LA] MS4 *outflows* at or near the time the exceedances were observed. Nor did Plaintiffs provide any evidence that the mass emissions stations themselves are located at or near a Defendant's outflow." The district court thus entered summary judgment for the County Defendants on the Watershed Claims.

On June 9, 2010, the district court entered a partial final judgment on the Watershed Claims under Fed.R.Civ.P. 54(b). The court reasoned that an interlocutory appeal was appropriate because the Watershed Claims are "factually and legally severable" from the Plaintiffs' other claims and "[t]he parties and the Court would benefit from appellate resolution of the central legal question underlying the watershed claims: what level of proof is necessary to establish defendants' liability." The Plaintiffs timely appealed.

On appeal, the Plaintiffs pressed the same legal argument they advanced in the district court: that the data published in the County Defendants' annual monitoring reports —data which shows undisputed pollution exceedances at the mass-emissions monitoring stations—conclusively establishes the County Defendants' liability for Permit violations as a matter of law. Like the district court, we rejected this contention and held that the Plaintiffs must submit at least some additional proof of the County Defendants' *individual* contributions to the measured Permit violations. *See Natural Res. Def. Council,* 673 F.3d at 898 (noting that "the Clean Water Act does not prohibit 'undisputed' exceedances; it prohibits 'discharges' that are *not* in compliance with the Act.... While it may be undisputed that exceedances have been detected, responsibility for those exceedances requires proof that some entity discharged a pollutant.").

Nonetheless, we held the District liable for CWA violations in the Los Angeles and San Gabriel Rivers because we concluded that the mass-emissions monitoring stations for each river are "located in a section of the [LA] MS4 owned and operated by the District" and that "when pollutants were detected, they had not yet exited the point source into navigable waters." *Id.* at 899. We further clarified that "[t]he [relevant] discharge from a point source occurred when the still-polluted stormwater flowed out of the concrete channels where the Monitoring Stations are located, through an outfall, and into the navigable waterways. We agree with Plaintiffs that the precise location of each outfall is ultimately irrelevant because there is no dispute that [the LA] MS4 eventually adds stormwater to the Los Angeles and San Gabriel Rivers downstream from the Monitoring Stations." *Id.* at 900.

On October 11, 2011, the District filed a petition for writ of certiorari, 2011 WL 4874090, which was granted in part on June 25, 2012. *L.A. Cnty. Flood Control Dist. v. Natural Res. Def. Council, Inc.,* —— U.S. ——, 133 S.Ct. 23, 183 L.Ed.2d 673 (2012). The Supreme Court granted review in order to answer a single question: "Under the CWA, does a discharge of pollutants occur when polluted water ***1203** flows from one portion of a river that is navigable water of the United States, through a concrete channel or other engineered improvement in the river, and then into a lower portion of the same river?" *L.A. Cnty. Flood Control Dist.,* 133 S.Ct. at 712–13 (internal quotation marks omitted). The Court answered in the negative, and re-affirmed its holding in *S. Fla. Water Mgmt. Dist. v. Miccosukee Tribe of Indians,* 541 U.S. 95, 124 S.Ct. 1537, 158 L.Ed.2d 264 (2004), that "pumping polluted water from one part of a water body into another

part of the same body is not a discharge of pollutants under the CWA." *L.A. Cnty. Flood Control Dist.,* 133 S.Ct. at 711. The Court did not address any other basis for the District's potential liability for Permit violations and instead reversed our prior judgment and remanded this case to us for additional proceedings. *Id.* at 713–14.

JURISDICTION AND STANDARD OF REVIEW

We have jurisdiction under 28 U.S.C. § 1291. We review the district court's grant of summary judgment de novo. *Assoc. to Protect Hammersley, Eld, & Totten Inlets v. Taylor Res., Inc.,* 299 F.3d 1007, 1009 (9th Cir.2002).

DISCUSSION

I.

[2] Plaintiffs return from the Supreme Court with the same argument they have consistently advanced throughout this litigation—that the County Defendants' monitoring data establishes their liability for Permit violations as a matter of law. We previously rejected this argument, *see Natural Res. Def. Council,* 673 F.3d at 898, and the Supreme Court explicitly declined to address it. [14]

On remand, the County Defendants argue that we may not reconsider our earlier decision because it has become "final," and because "reconsideration of Appellants' monitoring argument would fly in the face of the finality given to decisions of this Court after denial of rehearing or expiration of the time in which to seek such further review." Alternatively, the County Defendants argue that our earlier disposition should be left undisturbed because it has become the law of the case. The County Defendants are mistaken on both counts.

[3] **[4]** "No opinion of this circuit becomes final until the mandate issues[.]" *Carver v. Lehman,* 558 F.3d 869, 878 (9th Cir.2009); *see also* Fed R.App. P. 41(c), 1998 Adv. Comm. Note ("A court of appeals' judgment or order is not final until issuance of the mandate[.]"). Thus, we have explained that a "court of appeals may modify or revoke its judgment at any time prior to issuance of the mandate, sua sponte or by motion of the parties." *United States v. Foumai,* 910 F.2d 617, 620 (9th Cir.1990). The mandate in this case has not issued. Consequently, our earlier judgment is not final. *Carver,* 558 F.3d at 878. Nor can it be considered the law of the case. *See id.* at 878 n. 16 ("[U]ntil the mandate issues, an opinion is not fixed as settled Ninth Circuit law, and reliance on the opinion is a gamble." (citation omitted)); *see also* ***1204** *Key Enters. of Del., Inc. v. Venice Hosp.,* 9 F.3d 893, 898 (11th Cir.1993) ("[B]ecause the panel's mandate had not issued, the panel's decision was never the 'law of the case.' "). Put simply, we are free to reconsider the merits of Plaintiffs' argument, and we now do so.

II.

[5] Where a permittee discharges pollutants in compliance with the terms of its NPDES permit, the permit acts to "shield" the permittee from liability under the CWA. 33 U.S.C. § 1342(k). The permit shield is a major benefit to a permittee because it protects the permittee from any obligation to meet more stringent limitations promulgated by the EPA unless and until the permit expires. *See Piney Run Pres. Ass'n v. Cnty. Comm'rs of Carroll Cnty.,* 268 F.3d 255, 266–69 (4th Cir.2001); *see also The Clean Water Act Handbook* 67 (Mark A. Ryan ed., 3rd ed.2011). Of course, with every benefit comes a cost: a permittee violates the CWA when it discharges pollutants in excess of the levels specified in the permit, or where the permittee otherwise violates the permit's terms. *See Russian River Watershed Prot. Comm. v. City of Santa Rosa,* 142 F.3d 1136, 1138 (9th Cir.1998); *see also* 40 C.F.R. § 122.41(a) ("Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for [an] enforcement action"); *Nw. Envtl. Advocates v. City of Portland,* 56 F.3d 979, 986 (9th Cir.1995) (noting that "[t]he plain language of [the CWA citizen suit provision] authorizes citizens to enforce *all* permit conditions"); *Environmental Law Handbook* 327 ("The primary purpose of NPDES permits is to establish enforceable effluent limitations.").

Plaintiffs allege that the County Defendants are violating the terms of the Permit by discharging pollutants into the Los Angeles and San Gabriel Rivers in excess of the permitted levels. County Defendants do not dispute that they are discharging pollutants from the LA MS4 into these rivers. Nor can the County Defendants dispute that their own monitoring reports demonstrate that pollution levels recorded at the Monitoring Stations

are in excess of those allowed under the Permit. Rather, the County Defendants focus on their perception of the evidentiary burden Plaintiffs must satisfy in order to hold any individual defendant liable for these pollution exceedances. Plaintiffs contend that they may rely exclusively on the District's monitoring reports to establish liability. County Defendants, however, argue that they cannot be held liable for Permit violations based solely on the data published in the District's monitoring reports because: (1) the mass-emissions monitoring required under the Permit was "neither designed nor intended" to measure the compliance of any Permittee; and (2) the monitoring data cannot parse out precisely *whose* discharge(s) contributed to any given exceedance because the Monitoring Stations sample pollution levels downstream from a legion of discharge points (*e.g.,* LA MS4 outfalls) controlled by various Permittees and other non-party entities, as opposed to at the discharge points themselves.

[6] To resolve the parties' contentions, we must interpret the language of the Permit. Although the NPDES permitting scheme can be complex, a court's task in interpreting and enforcing an NPDES permit is not—NPDES permits are treated like any other contract. *See Nw. Envtl. Advocates,* 56 F.3d at 982 ("We review the district court's interpretation of the 1984 permit as we would the interpretation of a contract or other legal document."). [15] If the language of the permit, considered in light of the structure of the permit as a ***1205** whole, "is plain and capable of legal construction, the language alone must determine the permit's meaning." *Piney Run Pres. Ass'n,* 268 F.3d at 270 (citation omitted). If, however, the permit's language is ambiguous, we may turn to extrinsic evidence to interpret its terms. *Id.* Our sole task at this point of the case is to determine what Plaintiffs are required to show in order to establish *liability* under the terms of *this particular* NPDES permit. [16]

A. The Plain Language of the Permit

"[NPDES permit] terms are to be given their ordinary meaning, and when the terms of a [permit] are clear, the intent of the parties must be ascertained from the [permit] itself." *Klamath Water Users Protective Ass'n. v. Patterson,* 204 F.3d 1206, 1210 (9th Cir.1999). Plaintiffs argue that the text of the County Defendants' Permit is clear, and provides that the District's mass-emissions monitoring data will be used to assess the County Defendants' compliance with the Permit, and particularly Part 2, which prohibits "discharges from the [LA] MS4 that cause or contribute to the violation of Water Quality Standards or water quality objectives." The County Defendants dispute this notion, and first claim that the District's mass-emissions monitoring is intended to serve only a hortatory purpose. As County Defendants state, "the mass emission monitoring program ... neither measures nor was designed to measure any individual permittee's compliance with the Permit." This argument is clearly belied by the text of the Permit and is rejected.

The Permit establishes a "Monitoring and Reporting Program" with the stated objectives of *both* characterizing stormwater discharges *and* assessing compliance with water-quality standards. The Permit language could not be more explicit in this regard, stating that "[a]ssessing compliance with this [Permit]" is one of the "primary objectives of the Monitoring Program." "The fact that the parties dispute a [permit's] meaning does not establish that the [permit] is ambiguous; it is only ambiguous if reasonable people could find its terms susceptible to more than one interpretation." *Klamath Water Users Protective Ass'n,* 204 F.3d at 1210. No reasonable person could find even the slightest ambiguity in the phrase "[t]he primary objectives of the Monitoring Program include, but are not limited to: Assessing compliance with this [Permit]." Consequently, we decline to embrace the County Defendants' initial argument that "the mass-emission monitoring stations, as a matter of fact, do not assess the compliance of any permittee with the Permit...."

County Defendants' alternative argument, while more facially appealing, fares no better. Specifically, the County Defendants point to certain Permit language they claim shows that the Regional Board did not intend for the mass–emissions monitoring data to be used to establish liability for Permit violations. For instance, ***1206** the County Defendants note that the Permit provides that "[e]ach permittee is responsible only for a discharge for which it is the operator." County Defendants also cite language in Part 2 that reads: "Discharges from the [LA] MS4 of storm water, or non-storm water, *for which a Permittee is responsible* for [sic], shall not cause or contribute to a condition of nuisance." The County Defendants read this language as precluding a finding of liability against them—or any other Permittee—without independent monitoring data establishing that discharges from a particular entity's ms4 outfalls exceeded standards.

[7] "[A] court must give effect to every word or term" in an NPDES permit "and reject none as meaningless or surplusage...." *In re Crystal Props., Ltd., L.P.,* 268 F.3d 743, 748 (9th Cir.2001) (quotations omitted); *see also* Restatement (Second) of Contracts § 203(a) (1981) ("[A]n interpretation which gives a reasonable, lawful, and effective meaning to all the terms is preferred to an interpretation which leaves a part unreasonable, unlawful, or of no effect."). "Therefore, we must interpret the [Permit] in a manner that gives full meaning and effect to all of the [Permit's] provisions and avoid a construction of the [Permit] that focuses only on" a few isolated provisions. *In re Crystal Props.,* 268 F.3d at 748.

The County Defendants' interpretation of the Permit ultimately must be rejected because it would create an unreasonable result. Reading the clause that "[e]ach permittee is responsible only for a discharge for which it is the operator" to preclude use of the mass-emission monitoring data to "assess [ ] compliance with this [Permit]" would render the monitoring provisions of the Permit largely meaningless. Under the County Defendants' reading of the Permit, individual Permittees could discharge an unlimited amount of pollutants from the LA MS4 but never be held liable for those discharges based on the results of the mass-emissions monitoring, even though that monitoring is explicitly intended to assess whether Permittees are in compliance with Part 2's discharge limitations. We are unwilling to accept such a strained interpretation. *See Mastrobuono v. Shearson Lehman Hutton, Inc.,* 514 U.S. 52, 63, 115 S.Ct. 1212, 131 L.Ed.2d 76 (1995) (holding that courts should be guided by the "cardinal principle of contract construction: that a document should be read to give effect to all of its provisions and to render them consistent with each other"). A better reading of the Permit's putatively conflicting provisions, therefore, is the one proposed by Plaintiffs. Limiting a Permittee's responsibility to "discharge[s] for which it is the operator" applies to the appropriate *remedy* for Permit violations, not to *liability* for those violations. Indeed, Plaintiffs' reading is consistent with the remedial scheme of the Permit itself. If the LA MS4 is found to be contributing to water quality violations, each Permittee must take appropriate remedial measures with respect to its *own* discharges.[17] Thus, a finding of *liability* against the County Defendants would not, as defendants argue, hold any County Defendant responsible for discharges for which they are not "the operator."

In sum, and contrary to the County Defendants' contentions, the language of the Permit is clear—the data collected at the Monitoring Stations is intended to determine whether the Permittees are in compliance with the Permit. If the District's ***1207** monitoring data shows that the level of pollutants in federally protected water bodies exceeds those allowed under the Permit, then, as a matter of permit construction, the monitoring data conclusively demonstrate that the County Defendants are not "in compliance" with the Permit conditions. Thus, the County Defendants are liable for Permit violations.

B. Extrinsic Considerations

Although we believe the plain language of the Permit clearly contemplates that the County Defendants' monitoring data will be used to assess Permit compliance (*i.e.,* establish liability for CWA violations), we note that numerous extrinsic considerations also undercut the County Defendants' position.

First and foremost, the Clean Water Act *requires* every NPDES permittee to monitor its discharges into the navigable waters of the United States in a manner sufficient to determine whether it is in compliance with the relevant NPDES permit. 33 U.S.C. § 1342(a)(2); 40 C.F.R. § 122.44(i)(1) ("[E]ach NPDES permit shall include conditions meeting the following ... monitoring requirements ... to assure compliance with permit limitations."). That is, an NPDES permit is unlawful if a permittee is not required to effectively monitor its permit compliance. *See* 40 C.F.R. § 122.26(d)(2)(i)(F) ("Permit applications for discharges from large and medium municipal storm sewers ... shall include ... monitoring procedures necessary to determine compliance and noncompliance with permit conditions...."). As previously noted, the County Defendants contend that the mass–emissions monitoring program "neither measures nor was designed to measure any individual permittee's compliance with the Permit." But if the County Defendants are correct, the Permit would be unlawful under the CWA. We must interpret the provisions of the Permit like any other contract and reject an interpretation that would render the Permit unenforceable. *See Walsh v. Schlecht,* 429 U.S. 401, 408, 97 S.Ct. 679, 50 L.Ed.2d 641 (1977) (noting that "contracts should not be interpreted to render them illegal and unenforceable where the wording

lends itself to a logically acceptable construction that renders them legal and enforceable"); *see also Nw. Envtl. Advocates,* 56 F.3d at 984; Restatement (Second) of Contracts § 203.

[8] Second, the County Defendants' position has been explicitly rejected by the Regional Board, the entity that issued the Permit. This is important because one of our obligations in interpreting an NPDES permit is "to determine the intent of the permitting authority...." *Piney Run Pres. Ass'n,* 268 F.3d at 270. Thus, we give significant weight to any extrinsic evidence that evinces the permitting authority's interpretation of the relevant permit. *See Nw. Envtl. Advocates,* 56 F.3d at 985 (relying on "significant evidence from [the state permitting agency], the permit author," to determine the proper scope of an NPDES permit).

Here, the record contains an amicus brief filed by the Regional Board in a lawsuit nearly identical to this one. [18] In that suit, these same Plaintiffs sued the City of Malibu, one of the County Defendants' co-permittees, for violating the NPDES Permit at issue in this case. In its brief, the Regional Board stated its position that:

> The Permit recognizes that the inter-connected nature of the system means that it may be difficult to determine exactly where [pollutants] originated ***1208** within the [LA] MS4. This does not mean, however, that the Permit assumes only one permittee may be responsible. Instead, it recognizes that in such an integrated storm sewer system, one or more Permittees may have caused or contributed to violations.... Having constructed a joint sewer system that, by design, co-mingles the [Permittees'] discharges, they cannot avoid enforcement because one cannot determine the original source of pollutants in the waste stream.

[9] The Regional Board also noted that "the monitoring program that the permittees requested (and were granted) does not readily generate the permittee-by-permittee outfall data that the [County Defendants] would require as a precondition to enforcement." As a result, the Regional Board disagreed with any construction of the Permit that would require individualized proof of a Permittees' discharges in order to establish liability. Simply put, the Regional Board indicated that it "does not agree" that the "burden [of proving Permit violations] rests upon the enforcing entity." Although we do not defer to the Regional Board's interpretation of the Permit, *see Orthopaedic Hosp. v. Belshe,* 103 F.3d 1491, 1495 (9th Cir.1997), its rejection of the County Defendants' position is clearly instructive.

Finally, the County Defendants' arguments run counter to the purposes of the CWA, and ignore the inherent complexity of ensuring an ms4's compliance with an NPDES permit that covers thousands of different point sources and outfalls. As we have previously recognized, "[t]he NPDES program fundamentally relies on self-monitoring." *Sierra Club v. Union Oil Co. of Cal.,* 813 F.2d 1480, 1491 (9th Cir.1987), *vacated and remanded on other grounds,* 485 U.S. 931, 108 S.Ct. 1102, 99 L.Ed.2d 264 (1988), *and reinstated and amended by* 853 F.2d 667 (9th Cir.1988). Congress' purpose in adopting this self-monitoring mechanism was to promote straightforward enforcement of the Act. *See id.* at 1492 (noting that Congress wished to "avoid the necessity of lengthy fact finding, investigations, and negotiations at the time of enforcement. Enforcement of violations of requirements under this Act should be based on relatively narrow fact situations requiring a minimum of discretionary decision making or delay") (quoting S.Rep. No. 92–414, 92nd Cong., 1st Sess. 64, *reprinted in* 1972 U.S.Code Cong. & Ad. News 3668, 3730). [19] Or, as one treatise writer has described enforcement of the Act:

> The CWA is viewed by many as the easiest of the federal environmental statutes to enforce. This is because persons regulated under the act normally must report their own compliance and noncompliance to the regulating agency. For example, holders of NPDES permits must file periodic discharge monitoring reports (or DMRs), which must contain the results of all monitoring of discharges, and must indicate where those discharges exceed permit limitations.... Thus, enforcement actions may be brought based on little, if anything, more than the DMRs and other reports submitted by the permittee itself.
>
> *Environmental Law Handbook* at 357–58.

Admittedly, regulating pollution from ms4s is substantially more complicated than regulating pollution from a few defined point sources. Like the LA MS4 at issue here, municipal separate storm sewer systems often cover many square miles and comprise numerous, geographically ***1209** scattered, and sometimes uncharted sources of pollution, including

streets, catch basins, gutters, man-made channels, and storm drains. Faced with the difficult task of regulating millions of storm-sewer point sources, Congress amended the CWA in 1987 to grant the EPA the express authority to create a separate permitting program for ms4s. 33 U.S.C. § 1342(p)(2), (3). In enacting these amendments, Congress recognized that for large urban areas like Los Angeles, ms4 permitting cannot be accomplished on a source-by-source basis. The amendments therefore give the EPA, or a state like California to which the EPA has delegated permitting authority, broad discretion to issue permits "on a system-wide or jurisdiction-wide basis," 40 C.F.R. § 122.26(a)(1)(v), rather than requiring cities and counties to obtain separate permits for millions of individual stormwater discharge points. This increased flexibility is crucial in easing the burden of issuing stormwater permits for both permitting authorities and permittees. [20]

But while otherwise more flexible than the traditional NPDES permitting system, nothing in the ms4 permitting scheme relieves permittees of the obligation to monitor their compliance with their NPDES permit in some fashion. *See* 33 U.S.C. § 1342(a)(2) ("The Administrator shall prescribe conditions for [NPDES] permits to assure compliance with the requirements of [the permit], including conditions on data and information collection, reporting, and such other requirements as he deems appropriate."); 40 C.F.R. § 122.44(i)(1) (establishing that every permit "shall include" monitoring "[t]o assure compliance with the permit limitations"). Rather, EPA regulations make clear that while ms4 NPDES permits need not require monitoring of each stormwater source at the precise point of discharge, they may instead establish a monitoring scheme "sufficient to yield data which are *representative of the monitored activity*...." 40 C.F.R. § 122.48(b) (emphasis added). In fact, EPA regulations require permittees, like the County Defendants here, to propose a "monitoring program for *representative data collection* for the term of the permit that describes the location of outfalls or field screening points to be sampled (*or the location of instream stations*)" and explain "why the [chosen] location is *representative*...." 40 C.F.R. § 122.26(d)(2)(iii)(D) (emphases added). Here, the County Defendants did just that. County Defendants themselves chose the locations of the Monitoring Stations, locations that are downstream from a significant number of their outfalls. [21] And, as required by law, the County Defendants chose locations that they certified were necessarily "representative" of the monitored activity (*i.e.,* the Permittees' discharges of stormwater runoff into the navigable waters of the United States). [22] Now, however, County Defendants claim ***1210** that their compliance with the Permit cannot be measured using the results of the representative monitoring they themselves agreed to, that the Regional Board approved, and that the Permit itself contemplates is to be used to assess compliance with its terms. We take this opportunity to reevaluate and reject County Defendants' arguments.

CONCLUSION

Because the results of County Defendants' pollution monitoring conclusively demonstrate that pollution levels in the Los Angeles and San Gabriel Rivers are in excess of those allowed under the Permit, the County Defendants are *liable* for Permit violations as a matter of law. This case is remanded to the district court for further proceedings consistent with this opinion, including a determination of the appropriate *remedy* for the County Defendants' violations.

REVERSED and REMANDED.

*1211 APPENDICES

Appendix A

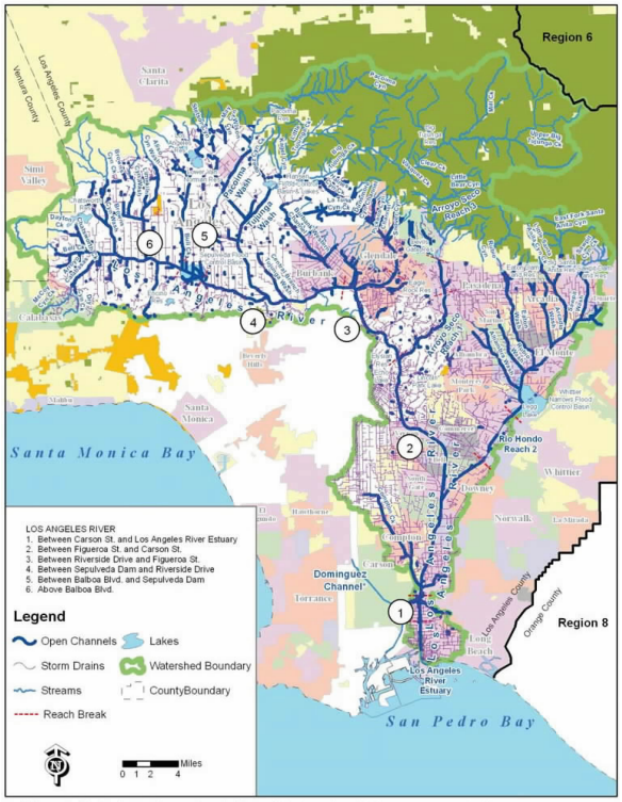

Figure C-4: Los Angeles River Watershed Management Area Flow Schematic.

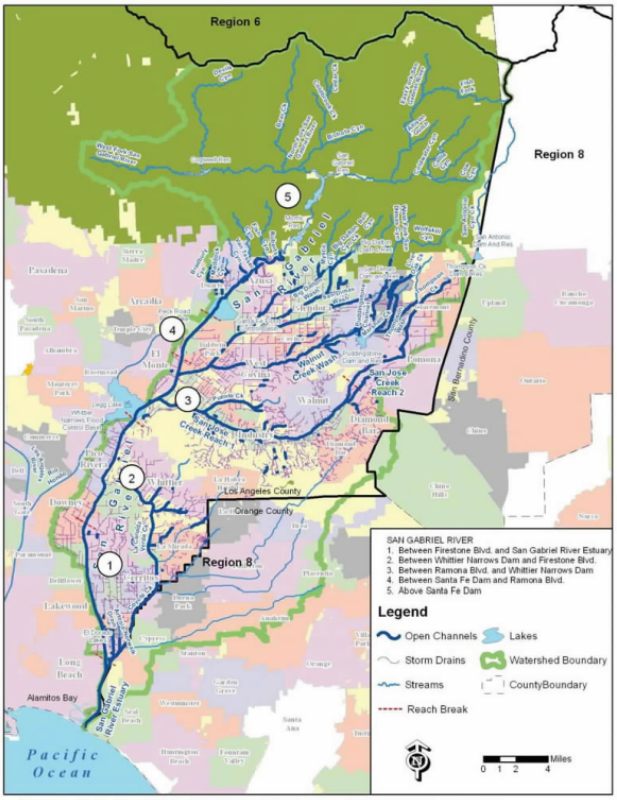

Figure C-5: San Gabriel River Watershed Management Area Flow Schematic.

Appendix B

All Citations

725 F.3d 1194, 13 Cal. Daily Op. Serv. 8623, 2013 Daily Journal D.A.R. 10,619

Footnotes

* The Honorable H. Russel Holland, Senior District Judge for the U.S. District Court for the District of Alaska, sitting by designation.

1 Whereas natural, vegetated soil can absorb rainwater and capture pollutants, paved surfaces and developed land can do neither. Paved facilities with particularly high volumes of motor vehicle traffic—such as parking lots, retail gasoline outlets, and fast food restaurants—are typically responsible for producing higher concentrations of pollutants in storm water runoff.

2 Federal Regulations define an ms4 as:

> a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
> (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body ... having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity ...;
> (ii) Designed or used for collecting or conveying storm water;
> (iii) Which is not a combined sewer; and
> (iv) Which is not part of a Publicly Owned Treatment Works....

40 C.F.R. § 122.26(b)(8). Unlike a sanitary sewer system, which transports municipal sewage for treatment at a wastewater facility, or a combined sewer system, which transports sewage and stormwater for treatment, an ms4 conveys only untreated stormwater. *See* 40 C.F.R. § 122.26(a)(7), (b)(8).

3 Throughout this Opinion, reference is made to both "ms4" and the "LA MS4." The former is a generic reference to an individual municipal separate storm sewer system without regard to its particular location, while the latter specifically

refers to the entire flood control and stormsewer infrastructure described *supra* that exists in Los Angeles County, and which is made up of the various interconnected ms4s that are controlled by the County, the District, and the incorporated cities within the District.

4 An "outfall" is defined as a "point source ... at the point where a municipal separate storm sewer discharges to waters of the United States...." 40 C.F.R. § 122.26(b)(9). It is estimated that the LA MS4 contains tens of thousands of outfalls where stormwater runoff is discharged into federally protected water bodies.

5 Plaintiffs originally complained about the County Defendants' discharges into four water bodies: the Los Angeles River, the San Gabriel River, the Santa Clara River, and Malibu Creek. *See Natural Res. Def. Council,* 673 F.3d at 883. On remand to this court, however, Plaintiffs only seek review of the district court's summary judgment ruling regarding the County Defendants' discharges into the Los Angeles and San Gabriel Rivers.

6 A point source is defined as "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). Throughout this litigation, there has been confusion regarding whether the LA MS4 is a "point source" under the CWA. *See Natural Res. Def. Council,* 673 F.3d at 898 (accepting Plaintiffs' argument that "[u]nder the Clean Water Act, the [LA] MS4 is a 'Point Source.' "). The LA MS4 is *not* a single point source. Rather, the LA MS4 is a collection of point sources, including outfalls, that discharge into the navigable waters of the United States.

7 On November 8, 2012, the Regional Board issued a new NPDES permit to the County Defendants and various other permittees.

8 Part 2 also mandates that "[d]ischarges from the [LA] MS4 of storm water, or non-storm water, for which a Permittee is responsible for [sic], shall not cause or contribute to a condition of nuisance."

9 Under California law, regional boards are required to formulate water quality plans, called "basin plans," which designate the beneficial uses of protected water bodies within the boards' jurisdiction, establish water quality objectives for those water bodies, and establish a program for implementing the basin plan. *See City of Burbank v. State Water Res. Control Bd.,* 35 Cal.4th 613, 26 Cal.Rptr.3d 304, 108 P.3d 862, 865 (2005) (citing Cal. Water Code § 13050(j)).

10 The Permit defines the SQMP as "the Los Angeles Countywide Stormwater Quality Management Program, which includes descriptions of programs, collectively developed by the Permittees in accordance with the provisions of the NPDES permit, to comply with applicable federal and state law...."

11 The District publishes these "Stormwater Monitoring Reports" on the internet at: http://ladpw.org/wmd/NPDES/report_directory.cfm. (last accessed August 1, 2013).

12 In a declaration submitted to the district court, the County Defendants described both Monitoring Stations as being located "in a portion of the District's flood control channel." *See also* "Section Two: Site Descriptions," Los Angeles Cnty. Dept. of Pub. Works, *available at* http://dpw.lacounty.gov/wmd/npdes/9899_report/SiteDesc.pdf (last accessed August 1, 2013). Thus, it appears that the pertinent river segments are part of *both* the LA MS4 itself *and* "the waters of the United States" that the CWA protects. But regardless of whether the mass-emissions monitoring stations are *also* part of the LA MS4, there is no dispute that the mass-emissions monitoring stations are located *within* the Los Angeles and San Gabriel Rivers, downstream of a significant number of the County Defendants' LA MS4 outfalls. We misconstrued some of the data before us when we previously held otherwise. *See Natural Res. Def. Council,* 673 F.3d at 899 ("As a matter of law and fact, the [LA] MS4 is distinct from the two navigable rivers; the [LA] MS4 is an intra-state man-made construction —not a naturally occurring Watershed River"); *see also* 53 Fed.Reg. 49,416, 49,453 (Dec. 7, 1988) (EPA observes that "[i]n many situations, waters of the United States that receive discharges from municipal storm sewers can be mistakenly considered to be part of the storm sewer system.").

13 The CWA requires plaintiffs to provide 60 days notice to an alleged violator, the State in which the violation is alleged to be occurring, and the EPA, before filing suit. 33 U.S.C. § 1365(b)(1)(A).

14 *See L.A. Cnty. Flood Control Dist.,* 133 S.Ct. at 713–14 ("Under the permit's terms, the NRDC and Baykeeper maintain, the exceedances detected at instream monitoring stations are by themselves sufficient to establish the District's liability under the CWA for its upstream discharges. This argument failed below. It is not embraced within, or even touched by, the narrow question on which we granted certiorari. We therefore do not address, and indicate no opinion on, the issue NRDC and Baykeeper seek to substitute for the question we took up for review.").

15 *See also Piney Run Pres. Ass'n.,* 268 F.3d at 269–70; *Am. Canoe Ass'n., Inc. v. D.C. Water & Sewer Auth.,* 306 F.Supp.2d 30, 42 (D.D.C.2004).

16 The question before us is not whether the Clean Water Act mandates any particular result. An NPDES permitting authority has wide discretion concerning the terms of a permit. It could, for example, lawfully write an ms4 permit that provides

that all permittees will share liability in some ratio for any measured exceedance of applicable pollutant limits. Or, as a further example, a permitting authority could lawfully write a permit providing that only the co-permittee(s) whose specific discharges are connected to a particular pollutant exceedance may be held liable for the permit violation. *See* 33 U.S.C. § 1342(a)(2) ("The Administrator shall prescribe conditions for [NPDES] permits to assure compliance with the requirements of [33 U.S.C. § 1342(a)(1)], including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.").

17 The relevant Permit provision states: "Each Permittee is required to comply with the requirements of this Order applicable to discharges within its boundaries ... and not for the implementation of the provisions applicable to the Principal Permittee or other Permittees."

18 *Santa Monica Baykeeper, et al. v. City of Malibu,* No. CV–08–01465 (AHM) (C.D.Cal. Mar. 3, 2008).

19 *See also* 44 Fed.Reg. 32,854, 32,863 (June 7, 1979) ("Congress intended that prosecution for permit violations be swift and simple.").

20 *See* 55 Fed.Reg. 47,990, 48,046 (Nov. 16, 1990) (noting that issuing individual permits to cover all ms4 discharges to the waters of the United States is "unmanageable"); *id.* at 48,049–48,050 ("Given the complex, variable nature of storm water discharges from municipal systems, EPA favors a permit scheme where the ... [p]ermit writers have the necessary flexibility to develop monitoring requirements that more accurately reflect the true nature of highly variable and complex discharges.").

21 "Q: Does the County's ms4 outlet to any tributaries of the Los Angeles River? A: Yes. Q: Does it outlet to tributaries of the Los Angeles River upstream of the mass emissions station? A: Yes.... Q: Does [the County's ms4] outlet to the San Gabriel River upstream of the mass emissions station? A: Yes." Pestrella Dep. 697:7–698:6, June 2, 2009.

22 "Q: Who selected the location of those stations, do you know? A: The County selected those locations for a particular purpose. And the purpose was [to be] far enough away from tidal influence *so that you would be characterizing the stormwater runoff as opposed to ocean waters.* Q: And the locations were then approved by Regional Board staff; is that correct? A: Correct." Wamikannu Dep. 130:13–130:19, July 1, 2009 (emphasis added).

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ATTACHMENT
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H

Court of Appeal, Third District, California.
Kathleen CONNELL, as Controller, etc., et al.,
Petitioners,
v.
SUPERIOR COURT of Sacramento County,
Respondent;
SANTA MARGARITA WATER DISTRICT et al.,
Real Parties in Interest.
No. C024295.

Nov. 20, 1997.
Review Denied Feb. 25, 1998.

Local water districts filed petitions for writ of mandate to enforce state Board of Control decision which found state regulation amendment increasing level of purity required for use of reclaimed wastewater in irrigation to constitute reimbursable state mandate. The Superior Court, Sacramento County, James Timothy Ford, J., granted petitions. State Controller and State Treasurer appealed. The Court of Appeal, Sims, J., held that: (1) although judgment was interlocutory, Court would exercise its discretion to treat appeal as writ petition in interest of justice and judicial economy; (2) even assuming elements of administrative collateral estoppel had been met, public-interest exception applied to allow review of question of law of whether recycled wastewater regulation constituted reimbursable state mandate; (3) water district statute on its face authorized local water districts to levy fees sufficient to pay costs of regulation amendment, which thus precluded entitlement of local water districts to reimbursement; and (4) statute precluding reimbursement was triggered by districts' power or right to levy fees sufficient to cover costs of state-mandated program regardless of their practical ability to do so.

Peremptory writ of mandate issued.

****232 *385** Daniel E. Lungren, Attorney General, Floyd D. Shimomura, Senior Assistant Attorney General, Linda A. Cabatic and Susan R. Oie, Deputy Attorneys General, for Petitioners.

No appearance for Respondent.

James A. Curtis, Nevada City, for Real Parties in Interest.

SIMS, Associate Justice.

This case involves a dispute as to whether a statewide regulatory amendment, increasing the level of purity required when reclaimed wastewater is used for certain types of irrigation, constitutes a state-mandated program for which water districts are entitled to reimbursement from the state. (Cal. Const., art. XIIIB, § 6 [hereafter, ****233**section 6]; [FN1] Gov.Code, § 17500 et seq.; former Rev. & Tax.Code, § 2201 et seq.) The State Controller and State Treasurer appeal from a trial court judgment granting ***386** petitions for writ of mandate brought by Santa Margarita Water District (SMWD), Marin Municipal Water District, Irvine Ranch Water District and Santa Clara Valley Water District (the Districts), seeking to enforce a state Board of Control (the Board) decision which found the regulatory amendment constituted a reimbursable state mandate. [FN2] Appellants contend the trial court erred because (1) the amendment did not constitute a new program or higher level of service in an existing program; (2) the Districts' claim was abolished when the statutory basis for their claim-- former Revenue and Taxation Code section 2207--was repealed before their rights were reduced to final judgment, and (3) the Districts' authority to levy fees to pay for the increased costs defeats their claim of a reimbursable mandate. Appellants also challenge the trial court's determination that they were collaterally estopped from challenging the Board of Control's decision (finding a reimbursable state mandate) by their failure timely to seek judicial review of the administrative decision. We shall conclude the Districts' authority to levy fees defeats their claim of a reimbursable mandate, and appellants are not collaterally estopped from raising this matter. We therefore need not address the other contentions. Treating this appeal from a nonappealable judgment as an extraordinary writ petition, we shall direct the trial court to vacate its judgment and enter a new judgment denying the Districts' petitions.

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FN1. Section 6 provides: "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, except that the Legislature may, but need not, provide such subvention of funds for the following mandates: [¶] (a) Legislative mandates requested by the local agency affected; [¶] (b) Legislation defining a new crime or changing an existing definition of a crime; or [¶] (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975."

FN2. The trial court first held proceedings in the matter of the petition filed by Santa Margarita Water District. The other three water districts had filed petitions, which were consolidated and awaiting hearing. The parties to the consolidated case filed a stipulation indicating they did not wish to relitigate the entitlement issues already decided by Judge Ford in the Santa Margarita Water District case, and they stipulated to assignment of their cases to Judge Ford pursuant to California Rules of Court, rule 213 (assignment to one judge for all or limited purposes), for determination of amounts as to each district. The judgment expressly covers the petitions of all four districts.

FACTUAL AND PROCEDURAL BACKGROUND

In 1975, the State Department of Health Services (DHS) adopted regulations (Cal.Code Regs., tit. 22, §§ 60301-60357) implementing Water Code section 13521, which provides: "The State Department of Health Services shall establish uniform statewide recycling criteria for each varying type of use of recycled water where the use involves the protection of public health." Section 60313 [FN3] of the California Code of Regulations prescribed the level of purity required for reclaimed water to be used for landscape irrigation.

FN3. California Code of Regulations section 60313, initially provided: "Landscape Irrigation. Reclaimed water used for the irrigation of golf courses, cemeteries, lawns, parks, playgrounds, freeway landscapes, and landscapes in other areas where the public has access shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed." (Former section 60313 of Cal.Code Regs., tit. 22, Register 75. No. 14, Apr. 5, 1975.)

***387** In May 1976, SMWD adopted a plan to develop a wastewater reclamation system. In August 1976, SMWD filed an application with the responsible regional water quality control board (Water Control Board) for a permit to discharge wastewater from the proposed reclamation system. SMWD also planned to provide reclaimed water for irrigation, potentially to 2,173 acres of land.

****234** In February 1977, the Water Control Board issued SMWD a permit for operation of a reclamation system--the Oso Creek facility. The permit required SMWD to comply with all applicable wastewater reclamation regulations then in effect.

In late 1977, SMWD learned DHS might be considering modifications to the Title 22 regulations.

In August 1978, SMWD completed construction of the Oso Creek facility, at a cost of $17 million.

In September 1978, DHS amended the regulations. The amendment to California Code of Regulations section 60313 [FN4] increased the level of purity required before reclaimed wastewater could be used for the irrigation of parks, playgrounds and school yards. It is this amendment which allegedly constituted a state-mandated cost. SMWD modified its facility to comply with the amended regulations, completing the modifications in 1983.

FN4. Section 60313 of California Code of

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> Regulations, title 22, as amended, provides: "(a) Reclaimed water used for the irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 23 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed, and the number of coliform organisms does not exceed 240 per 100 milliliters in any two consecutive samples.
> "(b) Reclaimed water used for the irrigation of parks, playgrounds, schoolyards, and other areas where the public has similar access or exposure shall be at all times an adequately disinfected, oxidized, coagulated, clarified, filtered wastewater or a wastewater treated by a sequence of unit processes that will assure an equivalent degree of treatment and reliability. The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed, and the number of coliform organisms does not exceed 23 per 100 milliliters in any sample."

***388** On October 1, 1982, SMWD filed a "test claim" [FN5] with the Board, alleging the regulatory amendment relating to the use of reclaimed wastewater constituted a new program or higher level of service. The test claim was made pursuant to former Revenue and Taxation Code section 2231, [FN6] which required reimbursement to local agencies for costs mandated by the state (see now Gov.Code, § 17561 [FN7]), and former Revenue and Taxation Code section 2207, subdivisions (a) and (b) [FN8] defining "costs mandated by the ****235** state." (See now Gov.Code, § 17514. [FN9]) The test claim also cited section 6 (fn. 1, ante).

> FN5. At the time in question, "test claim" meant "the first claim filed with the State Board of Control alleging that a particular statute or executive order imposes a mandated cost on such local agency or school district." (Former Rev. & Tax.Code, § 2218, Stats.1980, ch. 1256, § 7, p. 4249.) "Estimated claims" and "reimbursement claims" were used to make specific demand against an appropriation made for the purpose of paying such claims. (*Ibid.*)
> A similar structure, distinguishing between "test claims" and various "reimbursement claims" or "entitlement claims" continues presently in Government Code sections 17521-17522.
> At the time in question, the statutory procedure provided that if the Board found a mandate, it did not determine the amount to be reimbursed to the test claimant; rather, the Board then adopted a statewide cost estimate which was reported to the Legislature. (Stats.1980, ch. 1256; Stats.1982, ch. 734.) It was the State Controller who determined specific amounts to be reimbursed, after the Legislature appropriated funds for that purpose. (*Ibid.*)
>
> FN6. Former Revenue and Taxation Code section 2231 provided in part: "(a) The state shall reimburse each local agency for all 'costs mandated by the state,' as defined in Section 2207...." (Stats.1982, ch. 1586, § 3, p. 6264.)
>
> FN7. Government Code section 17561 provides in part: "(a) The state shall reimburse each local agency and school district for all 'costs mandated by the state,' as defined in Section 17514...."
>
> FN8. Former Revenue and Taxation Code section 2207 provided in part: " 'Costs mandated by the state' means any increased costs which a local agency is required to incur as a result of the following: [¶] (a) Any law enacted after January 1, 1973, which mandates a new program or an increased level of service of an existing program; [¶] (b) Any executive order issued after January 1, 1973, which mandates a new program...." (Stats.1980, ch. 1256, § 4, pp. 4247-4248.)
> The test claim did *not* invoke other subdivisions of section 2207, concerning

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"(c) Any executive order issued after January 1, 1973, which (i) implements or interprets a state statute and (ii), by such implementation or interpretation, increases program levels above the levels required prior to January 1, 1973.[¶] ... [¶] (h) Any statute enacted after January 1, 1973, or executive order issued after January 1, 1973, which adds new requirements to an existing optional program or service and thereby increases the cost of such program or service if the local agencies have no reasonable alternatives other than to continue the optional program." (Stats.1980, ch. 1256, § 4, pp. 4247-4248.) Since these subdivisions were not invoked, we have no need to consider them.

FN9. Government Code section 17514 provides: " 'Costs mandated by the state' means any increased costs which a local agency or school district is required to incur after July 1, 1980, as a result of any statute enacted on or after January 1, 1975, or any executive order implementing any statute enacted on or after January 1, 1975, which mandates a new program or higher level of service of an existing program within the meaning of Section 6...."

***389** On July 28, 1983, the Board determined the amended regulations imposed state mandated costs. In so doing, the Board rejected the position of state agencies seeking denial of the claim on the ground that local agencies are not mandated to use reclaimed water and because, if local agencies do choose to use it, they can recover the cost in charges made to purchasers of the water.

On January 19, 1984, the Board adopted "Parameters and Guidelines" establishing criteria for payment of claims to water districts pursuant to this mandate. (Former Rev. & Tax.Code, § 2253.2, Stats.1982, ch. 734, § 10; Gov.Code, § 17557.)

On May 31, 1984, the Board amended its Parameters and Guidelines to provide for reimbursement of SMWD's cost of preparing and presenting the test claim.

In June 1984, the Board, pursuant to former Revenue and Taxation Code section 2255, [FN10] submitted to the Legislature a statewide cost estimate of $14 million for this mandate. The Legislature did not appropriate any funds for the mandate in 1984.

FN10. Former Revenue and Taxation Code section 2255 provided: "At least twice each calendar year the Board of Control shall report to the Legislature on the number of mandates it has found and the estimated statewide costs of such mandates. Such report shall identify the statewide costs estimated for each such mandate and the reasons for recommending reimbursement.... Immediately on receipt of such report a local governmental claims bill shall be introduced in the Legislature. The local government claims bill, at the time of its introduction, shall provide for an appropriation sufficient to pay the estimated costs of such mandates, pursuant to the provisions of this article." (Stats.1980, ch. 1256, § 20, p. 4255.)
The current provision is contained in Government Code section 17600, which provides: "At least twice each calendar year the commission shall report to the Legislature on the number of mandates it has found pursuant to Article 1 (commencing with Section 17550) and the estimated statewide costs of these mandates. This report shall identify the statewide costs estimated for each mandate and the reasons for recommending reimbursement."

In 1985, the Legislature included an appropriation of almost $14 million for this state-mandated cost in the budget, but the Governor vetoed the appropriation.

In 1986, a bill including $945,000 for the subject mandate was introduced, but the bill was not enacted.

On January 27, 1987, SMWD filed in the trial court a petition for writ of mandate pursuant to Code of Civil Procedure section 1085. The petition sought an order directing (1) the State Controller to issue a warrant "to pay the State's obligation to SMWD for its 'costs mandated by the state' " and (2) the State Treasurer to pay the Controller's warrant.

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***390** At a hearing, the trial court upheld the Board's decision that the amended regulations required a higher level of service and held the doctrines of waiver and collateral estoppel applied to that decision, such that the state, by failing to challenge the Board's decision within the three-year statute of limitations, was barred from challenging it now. However, the trial court did allow the state to argue that the amended regulations did not come within the definition of "program," as that word had recently been defined in *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56, 233 Cal.Rptr. 38, 729 P.2d 202.

The trial court recognized that, since there was no appropriation for this mandate in the state budget, the court could not grant the relief sought by SMWD (an order directing the Controller to issue a warrant and the Treasurer to pay it) unless the court found ****236** the existence of funds reasonably available in the state budget which could be tapped for this purpose. The trial court stated it was not prepared to find the existence of funds reasonably available without a full evidentiary hearing. Rather than use the Board's statewide estimate, the court believed it needed to know the amount to which each water district would be entitled before it could determine whether there were funds reasonably available in the budget. The trial court ruled the exact amount of money to be reimbursed to the Districts had never been determined and referred the matter to a referee to make that determination.

In February 1989, a court-appointed referee began evidentiary hearings to determine the amount of reimbursement for each water district.

In 1989, the Legislature repealed former Revenue and Taxation Code section 2207 (fn. 8, *ante*), defining "costs mandated by the state." (Stats.1989, ch. 589, § 7.)

On July 29, 1994, appellants filed in the trial court a motion for judgment on the pleadings/motion to dismiss, arguing repeal of former Revenue and Taxation Code section 2207 destroyed any right to reimbursement and divested the court of jurisdiction to proceed. The motion also revisited the issue presented to and rejected by the Board, that the water districts' authority to levy fees defeated a finding that the costs were reimbursable.

In February 1995, the trial court issued its ruling denying appellants' motion for judgment on the pleadings and for dismissal. The court in its minute order determined repeal of former Revenue and Taxation Code section 2207 in 1989 had not destroyed the Districts' right to reimbursement pursuant to the Board's decision, because the Board's decision was reduced to "final judgment" before the statutory repeal. The court said the Board's ***391** decision on July 28, 1983, became final in July 1986, when the applicable three-year statute of limitations for seeking judicial review lapsed. The Board's decision therefore conclusively established the Districts' right to reimbursement, and appellants were collaterally estopped from challenging the Board's decision. The court further said no discernible injustice or public interest precluded this application of collateral estoppel; rather, justice would be furthered by allowing the Districts to enforce their right to reimbursement as established by the Board.

The trial court further said the statutory authority of the Districts to levy service charges and assessments (Former Rev. & Tax.Code, § 2253.2, subd. (b)(4), [FN11] Stats.1982, ch. 734, § 10, p. 2916; Gov.Code, § 17556 [FN12]) did not bar reimbursement for state-mandated costs. "When the Board determined that the 1978 amendment of the regulations establishing reclamation criteria imposed reimbursable state-mandated costs, it rejected the argument of the State Departments of Health Services and Finance that the costs were not reimbursable pursuant to former Revenue and Taxation Code section 2253(b)(4) and implicitly determined, in accordance with the presentation of [Santa Margarita Water District] that [the Districts] did not have sufficient authority to levy service charges and assessments to pay for the increased level of service mandated by the 1978 regulatory amendment. This implicit determination, resolving a mixture of legal and factual issues, became final and binding on respondents under the doctrine of collateral estoppel when they failed to seek judicial review of the Board's decision within the three-year limitations period."

FN11. At the time SMWD filed its test claim, former Revenue and Taxation Code section 2253.2 provided in part: "(b) The Board of Control shall not find a

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> reimbursable mandate ... in any claim submitted by a local agency ... if, after a hearing, the board finds that: ... [¶] (4) The local agency ... has the authority to levy service charges, fees or assessments sufficient to pay for the mandated program or level of service." (Stats.1982, ch. 734, § 10, p. 2916.)
>
> FN12. Government Code section 17556 provides in part: "The [Commission on State Mandates (formerly the Board of Control)] shall not find costs mandated by the state, as defined in Section 17514, in any claim submitted by a local agency or school district if, after a hearing, the commission finds that: ... [¶] (d) The local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service."

****237** At a further hearing concerning the amount owed to each water district, the trial court stated it had erred in referring the matter to a referee and should have rendered a judgment directing the Controller to determine the amounts owed.

On June 3, 1996, the trial court entered a judgment stating (1) the Board's decision was final at the time the petitions were filed in the trial court; (2) ***392** the state mandate is a program for which reimbursement is due under *County of Los Angeles v. State of California, supra,* 43 Cal.3d 46, 233 Cal.Rptr. 38, 729 P.2d 202; (3) the court having concluded it was inappropriate for the court to determine amounts of reimbursement, the Controller was directed to make that determination. The court directed issuance of a writ commanding the Controller to determine the amounts due to the Districts.

Appellants appeal from the judgment.

The Districts filed a cross-appeal, but we dismissed the cross-appeal pursuant to stipulation of the parties.

DISCUSSION

I. *Appealability*

[1] Because the petition sought an order directing the Controller to issue a warrant and the Treasurer to pay a warrant but the judgment merely ordered the Controller to determine amounts without disposing of those matters, and because the record reflected the trial court's recognition that it could not order issuance or payment of warrants unless it determined appropriated funds for such expenditures were reasonably available in the state budget [FN13] (*Carmel Valley Fire Protection Dist. v. State of California* (1987) 190 Cal.App.3d 521, 538-541, 234 Cal.Rptr. 795)--a determination requiring an evidentiary hearing which was not held--we requested supplemental briefing on the question whether the judgment was a final appealable judgment, as opposed to an interlocutory judgment.

> FN13. The petition for writ of mandate alleged there was a continuously appropriated State Mandates Claims Fund upon which the Legislature had placed restrictions which on their face made the fund inapplicable to the mandate at issue in this case. The petition further alleged these restrictions were unconstitutional, such that upon a judicial declaration of their unconstitutionality, there would exist funds reasonably available to pay SMWD. The trial court made no ruling on these matters. In this appeal, we need not and do not decide the propriety of the remedy sought by the Districts.

An appealable judgment or order is a jurisdictional prerequisite to an appeal. (Code Civ. Proc., § 904.1; 9 Witkin, Cal. Procedure (4th ed. 1997) Appeal, §§ 13-14, pp. 72-73.)

[2] An interlocutory judgment is not appealable; generally, a judgment is interlocutory if anything further in the nature of judicial action on the part of the trial court is essential to a final determination of the rights of the parties. (*Lyon v. Goss* (1942) 19 Cal.2d 659, 669-670, 123 P.2d 11.)

In their supplemental briefs, both sides maintain the judgment is a final appealable judgment but for different reasons. Both sides are wrong.

***393** Appellants assert the judgment is final because nothing further remains to be done by the trial court. According to appellants, the Controller, after

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determining what amounts are due, is supposed to submit that amount to the Legislature to appropriate the funds (though the judgment contains no such direction). Appellants assert that, if the Legislature does not appropriate the funds, the Districts' remedy would be to file a new action in the Superior Court to enforce the court's prior order, and to compel payment out of funds already appropriated and reasonably available for the expenditures. Appellants assert it is thus premature to consider whether appropriated funds are reasonably available to pay any reimbursement due.

The Districts' supplemental brief, while agreeing the judgment is a final appealable judgment, disputes appellants' view of what happens after the Controller determines the amounts. The Districts maintain the trial court intended for appellants to pay the amounts determined by the Controller, despite the judgment's failure so to state. The Districts claim the unresolved factual question of the existence of available appropriated ****238** funds in the budget is merely "an administrative detail" which need not be addressed by the court except in a proceeding to enforce the judgment in the event appellants refuse to pay.

Both sides are wrong. Nothing in the judgment requires the Controller to submit an appropriations bill to the Legislature, and appellants cite no authority that would require such a procedure--which would duplicate steps previously undertaken in this case without success. Nor does anything in the judgment call for issuance or payment of warrants. *Carmel Valley, supra,* 190 Cal.App.3d 521, 234 Cal.Rptr. 795--a case discussed in the trial court and on appeal--recognized that a court violates the separation of powers doctrine if it purports to compel the Legislature to appropriate funds, but no such violation occurs if the court orders payment from an existing appropriation. (*Id.* at pp. 538-539, 234 Cal.Rptr. 795.) Thus, the Districts' view of this matter as an administrative detail for a later postjudgment enforcement proceeding is unsupported.

We recognize this litigation arises from a "test claim," which merely determines whether a state-mandated cost exists. (See fn. 5, *ante.*) Perhaps no issue of payment should arise at all at the test claim stage, though neither side so argues.

In any event, the judgment plainly leaves matters undecided.

We conclude the judgment is interlocutory and therefore not appealable.

[3] Nevertheless, on our own motion, we shall exercise our discretion to treat the appeal as a writ petition and shall grant review on that basis. ***394**(*Morehart v. County of Santa Barbara* (1994) 7 Cal.4th 725, 743-744, 29 Cal.Rptr.2d 804, 872 P.2d 143 [treating appeal as writ petition is authorized means for obtaining review of interlocutory judgments].) We shall exercise our discretion to treat the appeal as a writ petition in the interest of justice and judicial economy, because the merits of the dispositive issues have been fully briefed, both sides urge review, and the judgment compels the Controller to engage in complex factfinding determinations which may be moot if the trial court erred on the merits of the mandate issues. Given the difficulties in discerning how the former statutory process of test claims was supposed to work in practice, we believe the interests of justice and judicial economy are best served by reviewing the judgment rather than dismissing the appeal.

We stress, however, that our review is limited to contentions raised in the briefs--which do not raise issues of the propriety of the remedy sought by the Districts. We express no view on whether the remedy sought by the Districts was an available or appropriate remedy.

II. *Standard of Review*

[4][5] In reviewing the trial court's ruling on a writ of mandate, the appellate court is ordinarily confined to an inquiry as to whether the findings and judgment of the trial court are supported by substantial evidence. (*Evans v. Unemployment Ins. Appeals Bd.* (1985) 39 Cal.3d 398, 407, 216 Cal.Rptr. 782, 703 P.2d 122.) However, where the facts are undisputed and the issues present questions of law, the appellate court is not bound by the trial court's decision but may make its own determination. (*Ibid.*)

III. *Collateral Estoppel*

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We first address the trial court's determination that appellants were collaterally estopped from challenging the Board's determination of state-mandated cost (except for the ability to address the effect of a new Supreme Court case defining "program"). The trial court stated the Board's decision became final for collateral estoppel purposes in July 1986, when the statute of limitations for judicial review expired.

Appellants contend the trial court erred in applying collateral estoppel, because there was no "final judgment" for collateral estoppel purposes, since the amount of reimbursement had yet to be determined.

We conclude it is not necessary to decide the parties' dispute as to whether the requirements of administrative collateral estoppel are met, because even assuming the elements are met, the doctrine of collateral ****239** estoppel should be disregarded pursuant to the public interest exception.

***395** Thus, our Supreme Court declined to apply collateral estoppel in a state-mandated costs case in *City of Sacramento v. State of California* [*Sacramento II*] (1990) 50 Cal.3d 51, 64-65, 266 Cal.Rptr. 139, 785 P.2d 522. There, a city and a county filed claims with the Board seeking subvention of costs imposed by a statute (Stats.1978, ch. 2, p. 6 et seq. referred to in *Sacramento II* as "chapter 2/78") which extended mandatory coverage under the state unemployment insurance law to include state and local governments. The Board found there was no state-mandated program and denied the claims. On mandamus, the trial court overruled the Board and found the costs reimbursable. We affirmed the trial court in a published opinion. (*City of Sacramento v. State of California* [*Sacramento I*] (1984) 156 Cal.App.3d 182, 203 Cal.Rptr. 258.) On remand, the Board determined the amounts due on the claims, but the Legislature refused to appropriate the necessary funds. The city filed a class action seeking among other things payment of the state-mandated costs. The trial court granted summary judgment for the state on the grounds the statute did not impose state-mandated costs. The Supreme Court upheld the trial court's decision.

The Supreme Court in *Sacramento II* rejected the local agencies' argument that the state was collaterally estopped from relitigating the issue whether a state-mandated cost existed, because *Sacramento I* "finally" decided the matter. (*Sacramento II, supra,* 50 Cal.3d at p. 64, 266 Cal.Rptr. 139, 785 P.2d 522.) The Supreme Court said: "Generally, collateral estoppel bars the party to a prior action, or one in privity with him, from relitigating issues finally decided against him in the earlier action. [Citation.] '... But when the issue is a question of law rather than of fact, the prior determination is not conclusive either if injustice would result or if the public interest requires that relitigation not be foreclosed....' [Citation.]

"Even if the formal prerequisites for collateral estoppel are present here, the public-interest exception governs. Whether chapter 2/78 costs are reimbursable under article XIIIB and parallel statutes constitutes a pure question of law. The *state* was the losing party in *Sacramento I,* and also the only entity legally affected by that decision. Thus, strict application of collateral estoppel would foreclose any reexamination of the holding of that case. The state would remain bound, and no other person would have occasion to challenge the precedent.

"Yet the consequences of any error transcend those which would apply to mere private parties. If the result of *Sacramento I* is wrong but unimpeachable, taxpayers statewide will suffer unjustly the consequences of the state's continuing obligation to fund the chapter 2/78 costs of local agencies...." (*Sacramento II, supra,* 50 Cal.3d at p. 64, 266 Cal.Rptr. 139, 785 P.2d 522, original italics.)

***396** The Supreme Court also rejected the argument that res judicata applied. "Of course, res judicata and the rule of final judgments bar us from disturbing individual claims or causes of action, on behalf of specific agencies, which have been finally adjudicated and are no longer subject to review. [Citations.] However, the issues presented in the current action are not limited to the validity of any such finally adjudicated individual claims. Rather, they encompass the question of defendants' subvention obligations *in general* under chapter 2/78." (*Sacramento II, supra,* 50 Cal.3d at p. 65, 266 Cal.Rptr. 139, 785 P.2d 522, original italics.)

[6] If this court's opinion finding a reimbursable mandate in *Sacramento I* did not constitute a final

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adjudication precluding further consideration of the matter, a fortiori the Board's decision in the instant case does not constitute a final adjudication precluding further consideration. Thus, here, as in *Sacramento II*, the issues presented are not limited to the validity of any finally adjudicated individual claim, but encompass the question of subvention obligations in general under the regulatory amendment of wastewater purification standards. If the Board's decision is wrong but unimpeachable, taxpayers statewide would suffer unjustly the consequences of a continuing obligation to fund the costs of local water districts. We reject the Districts' argument that no public interest ****240** exists in this case because only a few local entities are involved.

The Districts suggest application of the public interest exception to collateral estoppel would nullify the legislative intent to avoid multiple proceedings by creating a comprehensive and exclusive procedure for handling state mandated costs issues in the administrative forum. (E.g., Gov.Code, § 17500. [FN14]) However, we are bound by Supreme Court authority applying the public interest exception in a state-mandated costs case. ***397**(*Auto Equity Sales, Inc. v. Superior Court* (1962) 57 Cal.2d 450, 20 Cal.Rptr. 321, 369 P.2d 937.) Moreover, contrary to the Districts' implication, the administrative decision is not the final word; the statutory scheme authorizes judicial review of the administrative decision. (Gov.Code, § 17559; former Rev. & Tax.Code, § 2253.5, Stats.1977, ch. 1135, § 12, p. 3650.) Additionally, the instant judicial proceeding was initiated by the Districts, not by appellants. Thus, in this case application of the public interest exception to collateral estoppel is not creating multiple proceedings.

> FN14. Government Code section 17500 provides in part: "The Legislature finds and declares that the existing system for reimbursing local agencies ... for the costs of state-mandated local programs has not provided for the effective determination of the state's responsibilities under Section 6.... The Legislature finds and declares that the failure of the existing process to adequately and consistently resolve the complex legal questions involved in the determination of state-mandated costs has led to an increasing reliance by local agencies and school districts on the judiciary and, therefore, in order to relieve unnecessary congestion of the judicial system, it is necessary to create a mechanism which is capable of rendering sound quasi-judicial decisions and providing an effective means of resolving disputes over the existence of state-mandated local programs. [¶] It is the intent of the Legislature in enacting this part to provide for the implementation of Section 6 ... and to consolidate the procedures for reimbursement of statutes specified in the Revenue and Taxation Code with those identified in the Constitution. Further, the Legislature intends that the Commission on State Mandates, as a quasi-judicial body, will act in a deliberative manner in accordance with the requirements of Section 6...."

In light of the Supreme Court's decision in *Sacramento II*, we disregard earlier authority of an intermediate appellate court which applied administrative collateral estoppel to a question of law in a state-mandated costs case without express discussion of the public interest exception. (*Carmel Valley, supra*, 190 Cal.App.3d at p. 536, 234 Cal.Rptr. 795.)

We conclude that, insofar as appellants' contentions present questions of law, the public interest exception to administrative collateral estoppel governs, and we shall therefore address the legal arguments raised in appellants' brief.

IV. *Authority To Levy Fees*

Appellants contend that, even if the regulatory amendment is a new program for state mandated costs purposes, the water districts' authority to levy fees defeats a determination that the costs are reimbursable. We agree.

At the time SMWD filed its test claim, former Revenue and Taxation Code section 2253.2 provided in part:

"(b) The Board of Control shall not find a reimbursable mandate, pursuant to either Section 2250 of this code or to Section 905.2 of the Government Code, in any claim submitted by a local

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agency or school district, pursuant to subdivision (a) of Section 2218, if, after a hearing, the board finds that:

"....
"(4) The local agency or school district has the authority to levy service charges, fees or assessments sufficient to pay for the mandated program or level of service." [FN15] (Stats.1982, ch. 734, § 10, p. 2917; Stats.1980, ch. 1256, § 15, pp. 4253-4254.)

> FN15. This case presents no issue concerning any distinction between "service charges, fees or assessment," as used in the statute. The parties on appeal frame the issue in terms of the authority to levy "fees." We adopt their usage for the sake of simplicity.

***398** The same provision is currently contained in Government Code section 17556. [FN16]

> FN16. Government Code section 17556 provides in part: "The commission [formerly the Board] shall not find costs mandated by the state, as defined in Section 17514, in any claim submitted by a local agency or school district, if, after a hearing, the commission finds that: ... [¶] (d) The local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service...."

****241** The facial constitutionality of this provision was upheld in *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 280 Cal.Rptr. 92, 808 P.2d 235. The *Fresno* court rejected an argument that the statute was facially unconstitutional as conflicting with section 6 (fn. 1, *ante*), which contains no exclusion of reimbursement where the local agency has authority to levy fees. Section 6 requires subvention only when the costs in question can be recovered solely from tax revenues. (*Id.* at p. 487, 280 Cal.Rptr. 92, 808 P.2d 235.) Government Code section 17556, subdivision (d), "effectively construes the term 'costs' in the constitutional provision as excluding expenses that are recoverable from sources other than taxes. Such a construction is altogether sound." (*County of Fresno v. State of California, supra,* 53 Cal.3d at p. 487, 280 Cal.Rptr. 92, 808 P.2d 235.)

Here, appellants contend that, at all pertinent times, the water districts have had *authority* to levy fees to cover the costs at issue in this case. They cite provisions such as Water Code section 35470, which provides: "Any district formed on or after July 30, 1917, may, in lieu in whole or in part of raising money for district purposes by assessment, make water available to the holders of title to land or the occupants thereon, and may fix and collect charges therefor. The charges may include standby charges to holders of title to land to which water may be made available, whether the water is actually used or not. The charges may vary in different months and in different localities of the district to correspond to the cost and value of the service, and the district may use so much of the proceeds of the charges as may be necessary to defray the ordinary operation or maintenance expenses of the district and for any other lawful district purpose."

[7] We agree this statute on its face authorizes the Districts to levy fees sufficient to pay the costs involved with the regulatory amendment. We thus shall conclude the Board erred in finding a right to reimbursement despite this authority to levy fees, and we shall conclude appellants are not collaterally estopped from pressing this point.

The Districts do not dispute they have authority to levy fees for the costs involved in this case. Instead they argue the real issue is whether they had ***399** "sufficient" authority. They claim this issue was a mixed question of law and fact, and appellants should be collaterally estopped from raising it. [FN17]

> FN17. The Districts assert appellants are relying on evidence that was not before the Board. However, they do not explain what they mean or give us any reference to appellants' brief. We therefore disregard the assertion.

We agree with appellants that the public interest exception to collateral estoppel should be applied here, because the issue presents a pure question of law. The Districts tried to make it a factual issue, but we shall explain why the facts presented by the District were immaterial.

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Thus, in proceedings before the Board (where Water Code section 35470 was cited to the Board by state agencies), SMWD did not argue it lacked "authority" to levy fees for this purpose. Instead, SMWD argued and presented evidence that it would not be economically desirable to do so. SMWD submitted declarations stating that rates necessary to cover the increased costs would render the reclaimed water unmarketable and would encourage users to switch to potable water. SMWD maintained that imposition of higher fees on users would contravene the legislative policy expressed in Water Code section 13512, which directs the state to undertake all possible steps to encourage development of wastewater reclamation facilities.

The Board made no express finding concerning this issue. The record contains only the Board minutes, which reflect a motion was made "To find a mandate and continue the issue regarding the claimant's ability to levy a service charge, to the parameters and guidelines process." There was no second to the motion. A motion was then made to find the regulatory amendment contained a reimbursable mandate. The motion carried. The minutes then state: "Discussion: Chairperson Yost disagreed with the motion as she felt the claimant could recover their costs by levying a service charge...." The Board's Parameters and Guidelines stated in part: ****242** "If service charges or assessments were levied to defray the cost of the new criteria, the claim must be reduced by the amount received from such charges or assessment."

In proceedings before the trial court, SMWD admitted the district had the authority to levy fees but argued existence of authority was not enough, and the real question was whether it was economically feasible to levy fees sufficient to pay the mandated costs. Thus, SMWD's counsel stated at the hearing in the trial court: "The state keeps focusing on the question of whether the authority to issue, to assess fees and charges exists, and we have never contested that it didn't.

"But the statute which says that the Board cannot find the existence of a mandate if there's authority to assess fees and charges, and then the critical ***400** phrase, 'sufficient to pay for the mandated costs,' that's the condition with [*sic*] which they cannot satisfy.

"We proved that, the Board of Control hearing, through economic evidence. We proved it through testimony that the market was absolutely inelastic in terms of reclaimed water and potable water, that if you raise the price of reclaimed water over the potable water, that people would then buy the potable water, and that's all in the record.

"And so we showed that even though we have the authority, it was not sufficient to pay...."

We note the record also reflects comments by SMWD's counsel to the trial court, that its customers were paying the increased costs as an "advance" against the state's obligation. The court pointed out users' payment of increased costs disproved the economic evidence SMWD had presented to the Board, that it could not raise its prices without losing its customers. The record also contains indications that the Districts funded the increased costs by diverting money from other sources. As will appear, we need not address this evidence, because it is not relevant to the question of authority to levy fees sufficient to fund the increased costs imposed by the regulatory amendment, which is a question of law in this case.

The trial court's minute order stated the districts' authority to levy fees did not bar reimbursement for state-mandated costs, because the Board "implicitly determined" the districts did not have "sufficient" authority to levy fees to pay for the increased service mandated by the 1978 regulatory amendment, and this "implicit determination, resolving a mixture of legal and factual issues, became final and binding on [appellants] under the doctrine of collateral estoppel when they failed to seek judicial review of the Board's decision within the three-year limitations period."

On appeal, appellants argue the sole inquiry is whether the local agency has "authority" to levy fees sufficient to pay the costs, and it does not matter whether the local agency, for economic reasons, finds it undesirable to exercise that authority. Appellants argue this presents a question of law, such that the public interest exception to collateral estoppel would apply (assuming the requirements of collateral estoppel are otherwise met).

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[8][9] We agree with appellants. In construing statutes, our primary task is to determine the lawmakers' intent. (*Brown v. Kelly Broadcasting Co.* (1989) 48 Cal.3d 711, 724, 257 Cal.Rptr. 708, 771 P.2d 406.) To determine intent, we look first to the words themselves. (*Ibid.*) "If the language is clear ***401** and unambiguous there is no need for construction, nor is it necessary to resort to indicia of the intent of the Legislature...." (*Lungren v. Deukmejian* (1988) 45 Cal.3d 727, 735, 248 Cal.Rptr. 115, 755 P.2d 299.)

[10] Here, the statute is clear and unambiguous. On its face the statute precludes reimbursement where the local agency has "authority" to levy fees sufficient to pay for the mandated program or level of service. The legal meaning of "authority" includes the "Right to exercise powers; ..." (Black's Law Dictionary (6th ed.1990) p. 133.) The lay meaning of "authority" includes "the power or right to give commands [or] take action...." (Webster's New World Dictionary (3d college ed.1988) p. 92.) Thus, when we commonly ask whether a police officer has the "authority" to arrest a suspect, we want to know whether the officer has the legal ****243** sanction to effect the arrest, not whether the arrest can be effected as a practical matter.

Thus, the plain language of the statute precludes reimbursement where the local agency has the authority, i.e., the right or the power, to levy fees sufficient to cover the costs of the state-mandated program.

The Districts in effect ask us to construe "authority," as used in the statute, as a practical ability in light of surrounding economic circumstances. However, this construction cannot be reconciled with the plain language of the statute and would create a vague standard not capable of reasonable adjudication. Had the Legislature wanted to adopt the position advanced by the Districts, it would have used "reasonable ability" in the statute rather than "authority."

The question is whether the Districts have authority, i.e., the right or power, to levy fees sufficient to cover the costs. The Districts clearly have authority to levy fees sufficient to cover the costs at issue in this case. Water Code section 35470 authorizes the levy of fees to "correspond to the cost and value of the service," and the fees may be used "to defray the ordinary operation or maintenance expenses of the district and for any other lawful district purpose." The Districts do not demonstrate that anything in Water Code section 35470 limits the authority of the Districts to levy fees "sufficient" to cover their costs.

Thus, the economic evidence presented by SMWD to the Board was irrelevant and injected improper factual questions into the inquiry.

On appeal, the Districts briefly argue economic undesirability of levying fees constitutes a lack of authority to levy fees sufficient to cover costs. They claim the evidence before the Board showed SMWD "could not" ***402** increase its fees because it was already charging as much for reclaimed as it was for potable water. However, the cited portion of the record does not show SMWD "could not" increase its fees but only that an increase would render reclaimed water unmarketable and encourage users to switch to potable water. The Districts cite no authority supporting their construction of former Revenue and Taxation Code section 2253.2 (now Gov.Code, § 17556) that *authority* to levy fees sufficient to cover costs turns on economic feasibility. We have seen the plain language of the statute defeats the Districts' position.

Since the issue in this case presented a question of law, we conclude the public interest exception to collateral estoppel applies. (*Sacramento II*, *supra*, 50 Cal.3d at p. 64, 266 Cal.Rptr. 139, 785 P.2d 522.)

The Districts argue application of the public interest exception in this case raises policy concerns about the finality of administrative decisions on state-mandated costs, because if collateral estoppel does not apply in this case, it will never apply. However, we merely hold, in accordance with Supreme Court pronouncement, that the public interest exception to collateral estoppel applies under the circumstances of this case to this state-mandated cost issue which presents solely a question of law.

The Districts argue any fees levied by the districts "cannot exceed the cost to the local agency to provide such service," because such excessive fees would constitute a special tax. However, the districts fail to explain how this is an issue. No one is suggesting the districts levy fees that exceed their costs.

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The Districts cite evidence presented to the referee in the aborted hearing to determine amounts owed to each District, that SMWD's Director of Finance testified SMWD has other sources of revenue from other services it provides (such as sewer service), maintains separate accounts, and borrowed funds internally from other accounts to cover costs incurred as a result of the subject mandate. The Districts assert this testimony reflects that SMWD "recognized the legal limitations on its authority to impose fees for the services that it provides." However, nothing in this evidence demonstrates any legal limitations on the authority to levy the necessary fees.

The Districts say appellants appear to believe the Districts should require users of other services to subsidize the Districts' cost of reclaiming and selling wastewater, through excessive user fees. However, we do not read appellants' brief as presenting ****244** any such argument and in any event do not base our decision on that ground.

***403** In a footnote, the districts make the passing comment: "In light of the adoption of Proposition 218, which added Articles XIII C and XIII D to the California Constitution this past November [1996], the authority of local agencies to recover costs for many services will be impacted by the requirement to secure the approval by majority vote of the property owners voting, to levy or to increase property related fees. See Section 6, Article XIII D." The districts do not contend that the services at issue in this appeal are among the "many services" impacted by Proposition 218. We therefore have no need to consider what effect, if any, Proposition 218 might have on the issues in this case.

We conclude the districts were not entitled to reimbursement of state-mandated costs, because they had authority to levy fees sufficient to pay for the level of service mandated by the 1978 regulatory amendment. Appellants were not collaterally estopped from raising this issue in the trial court. We thus conclude the Districts' mandamus petitions should have been denied. We therefore need not address appellants' contentions that (1) the regulatory amendment did not constitute a new program or higher level of service, or (2) any right to reimbursement was abolished upon repeal of former Revenue and Taxation Code section 2207.

DISPOSITION

Let a peremptory writ of mandate issue, directing the trial court to vacate its judgment and enter a new judgment denying the Districts' petitions for writ of mandate. Appellants shall recover their costs on appeal.

PUGLIA, P.J., and NICHOLSON, J., concur.

•SANTA MARGARITA WATER DISTRICT; Irvine Ranch Water District; Marin Municipal Water District; Santa Clara Valley Water District, Respondents and Cross-Appellants, v. STATE CONTROLLER, et al, Appellants and Cross-Respondents., 1997 WL 33560339 (Appellate Brief) (Cal.App. 3 Dist. January 10, 1997), Appellants' Opening Brief

•SANTA MARGARITA WATER DISTRICT; Irvine Ranch Water District; Marin Municipal Water District; Santa Clara Valley Water District, Respondents and Cross-Appellants, v. STATE CONTROLLER, et al., Appellants and Cross-Respondents., 1997 WL 33560175 (Appellate Brief) (Cal.App. 3 Dist. April 14, 1997), Respondents' Brief

•SANTA MARGARITA WATER DISTRICT; Irvine Ranch Water District; Marin Municipal Water District; Santa Clara Valley Water District, Respondents, v. STATE CONTROLLER, et al., Appellants., 1997 WL 33559969 (Appellate Brief) (Cal.App. 3 Dist. June 4, 1997), Appellants' Reply Brief

59 Cal.App.4th 382, 69 Cal.Rptr.2d 231, 97 Cal. Daily Op. Serv. 8821, 97 Daily Journal D.A.R. 14,255

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ATTACHMENT
7

188 Cal.App.4th 794
Court of Appeal, Third District, California.

CLOVIS UNIFIED SCHOOL DISTRICT et al., Plaintiffs and Appellants,
v.
John CHIANG, as State Controller, etc., Defendant and Appellant.

No. C061696.
|
Sept. 21, 2010.
|
As Modified on Denial of Rehearing Oct. 14, 2010.

Synopsis
Background: School districts and community college districts brought action against State Controller's Office for declaratory and writ relief challenging auditing rules used in reducing state-mandated reimbursement claims for employee salary and benefit costs. The Superior Court, Sacramento County, No. 06CS00748 and 07CS00263, Lloyd G. Connelly, J., invalidated the Contemporaneous Source Document Rule (CSDR) as applied to Intradistrict Attendance Program and Collective Bargaining Program, granted no relief as to CSDR as applied to the School District of Choice Program (SDC) and the Emergency Procedures, Earthquake Procedures and Disasters Program (EPEPD), and upheld the Health Fee Rule. Plaintiffs appealed.

Holdings: The Court of Appeal, Butz, J., held that:

[1] CSDR implemented, interpreted, or made specific the regulatory Parameters and Guidelines (P&Gs) applied to state-mandated reimbursement claims;

[2] declaratory and traditional mandate relief was appropriate form of relief for use of CSDR as underground regulation; and

[3] amount of optional student fee was deducted from amount reimbursed to community college districts for state-mandated costs.

Reversed in part with directions and affirmed in part.

West Headnotes (14)

[1] **Declaratory Judgment**
Limitations and laches

Mandamus
Time to Sue, Limitations, and Laches

States
State expenses and charges and statutory liabilities

School districts' and community college districts' action against State Controller's Office, for declaratory and writ relief challenging audits that reduced state-mandated reimbursement claims for employee salary and benefit costs based on an auditing rule which was an invalid underground regulation in violation of the state Administrative Procedure Act (APA), was subject to the three-year statute of limitations for lawsuits based on statutory liability, since state-mandated reimbursement was a statutory liability. West's Ann.Cal.C.C.P. § 338(a); West's Ann.Cal.Gov.Code §§ 11340 et seq., 17500 et seq.

1 Cases that cite this headnote

[2] **Administrative Law and Procedure**
Nature and Scope

An Administrative Procedure Act (APA) regulation has two principal characteristics: it must apply generally; and it must implement, interpret, or make specific the law enforced or administered by the agency, or govern the agency's procedure. West's Ann.Cal.Gov.Code § 11342.600.

1 Cases that cite this headnote

[3] **Administrative Law and Procedure**
Nature and Scope

For a regulation to "apply generally," as required to be subject to the Administrative Procedure Act (APA), the rule need not apply universally; a rule applies generally so long

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as it declares how a certain class of cases will be decided. West's Ann.Cal.Gov.Code § 11342.600.

Cases that cite this headnote

[4] States

Administration of finances in general

State Controller's Office's Contemporaneous Source Document Rule (CSDR) applied generally, as required to be a regulation subject to the Administrative Procedure Act (APA), where the CSDR was applied generally to the auditing of reimbursement claims, and the Controller's auditors had no discretion to judge on a case-by-case basis whether to apply the CSDR. West's Ann.Cal.Gov.Code § 11342.600.

Cases that cite this headnote

[5] States

State expenses and charges and statutory liabilities

State Controller's Office's Contemporaneous Source Document Rule (CSDR) implemented, interpreted, or made specific the regulatory Parameters and Guidelines (P&Gs) applied to state-mandated reimbursement claims for the School District of Choice (SDC) Program in effect before May 27, 2004, and thus was a regulation subject to the Administrative Procedure Act (APA), since there were substantive differences between the CSDR and the P&Gs then in effect; the CSDR barred the use of employee time declarations and certifications as source documents or equivalents even though the P&Gs had nothing to say on that subject, and the CSDR did not countenance the use of documented estimates even though such estimates were allowable under the P&Gs. West's Ann.Cal.Gov.Code §§ 11342.600, 17557, 17558.5(a); West's Ann.Cal.Educ.Code § 48209.9 (Repealed).

Cases that cite this headnote

[6] States

State expenses and charges and statutory liabilities

State Controller's Office's Contemporaneous Source Document Rule (CSDR) implemented, interpreted, or made specific the regulatory Parameters and Guidelines (P&Gs) applied to state-mandated reimbursement claims for the Emergency Procedures, Earthquake Procedures and Disasters Program (EPEPD), and thus was a regulation subject to the Administrative Procedure Act (APA), since there were substantive differences between the CSDR and the P&Gs then in effect; unlike the P&Gs, the CSDR barred the use of employee time declarations and certifications as source documents, and the CSDR did not countenance the use of documented estimates. West's Ann.Cal.Gov.Code §§ 11342.600, 17557, 17558.5(a); West's Ann.Cal.Educ.Code §§ 35925–35927, 40041.5, 40042 (Repealed).

Cases that cite this headnote

[7] States

State expenses and charges and statutory liabilities

State Controller's Office's Contemporaneous Source Document Rule (CSDR) implemented, interpreted, or made specific the regulatory Parameters and Guidelines (P&Gs) applied to state-mandated reimbursement claims for the Intradistrict Attendance Program, and thus was a regulation subject to the Administrative Procedure Act (APA), since there were substantive differences between the CSDR and the P&Gs then in effect; unlike the P&Gs, the CSDR barred the use of time studies or employee time declarations and certifications as source documents. West's Ann.Cal.Gov.Code §§ 11342.600, 17557, 17558.5(a); West's Ann.Cal.Educ.Code § 35160.5.

Cases that cite this headnote

[8] States

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State expenses and charges and statutory liabilities

State Controller's Office's Contemporaneous Source Document Rule (CSDR) implemented, interpreted, or made specific the regulatory Parameters and Guidelines (P&Gs) applied to state-mandated reimbursement claims for the school district Collective Bargaining Program, and thus was a regulation subject to the Administrative Procedure Act (APA), since there were substantive differences between the CSDR and the P&Gs then in effect; unlike the P&Gs, the CSDR required source documents. West's Ann.Cal.Gov.Code §§ 3540 et seq., 11342.600, 17557, 17558.5(a).

1 Cases that cite this headnote

[9] **Declaratory Judgment**

State officers and boards

Declaratory Judgment

Education

Mandamus

Establishment, maintenance, and management of schools

Declaratory and accompanying traditional mandate relief was an appropriate form of relief, for school districts' challenge to State Controller's Office's policy of using an underground regulation to conduct audits in violation of the Administrative Procedure Act (APA), even though the underground regulation was later incorporated into valid regulations, where the dispute related to audit determinations under the invalid regulation which did not become final prior to the applicable statute of limitations, and there was no adequate administrative remedy because the Commission on State Mandates consistently refused to rule on underground regulation claims. West's Ann.Cal.Gov.Code § 11350.

2 Cases that cite this headnote

[10] **Evidence**

Administrative rules and regulations

In appeal from trial court's partial grant of declaratory and writ relief against underground regulations used by State Controller's Office in reducing state-mandated reimbursement claims for employee salary and benefit costs, Court of Appeal would not take judicial notice of a subsequent amendment of the regulatory Parameters and Guidelines (P&Gs) applied to the reimbursement claims, which brought the underground regulations into compliance with the Administrative Procedure Act (APA) after the time period at issue in the lawsuit. West's Ann.Cal.Gov.Code §§ 11340 et seq., 17500 et seq.

Cases that cite this headnote

[11] **Evidence**

Official proceedings and acts

In appeal from trial court's partial grant of declaratory and writ relief against underground regulations used by State Controller's Office in reducing school districts' and community college districts' state-mandated reimbursement claims for employee salary and benefit costs, Court of Appeal would not take judicial notice of the Commission on State Mandates Incorrect Reduction Claim caseload summary or the Controller's list of final audit reports for California school districts and community college districts. West's Ann.Cal.Gov.Code § 17558.7(a).

1 Cases that cite this headnote

[12] **States**

State expenses and charges and statutory liabilities

Under the statutes requiring reimbursement to local government for state-mandated costs, the amount of an optional student health fee was deducted from the amount reimbursed to community college districts for the state-mandated cost of the Health Fee Elimination Program, even when districts chose not to charge their students those fees. West's

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Ann.Cal.Gov.Code §§ 17514, 17556(d); West's Ann.Cal.Educ.Code § 76355(a)(1); § 72246 (Repealed).

See Cal. Jur. 3d, State of California, § 104; 9 Witkin, Summary of Cal. Law (10th ed. 2005) Taxation, § 121.

Cases that cite this headnote

[13] States
State expenses and charges and statutory liabilities

To the extent a local agency or school district has the authority to charge for a state-mandated program or increased level of service, that charge cannot be recovered as a state-mandated cost. West's Ann.Cal. Const. Art. 13B, § 6; West's Ann.Cal.Gov.Code §§ 17514, 17556(d).

Cases that cite this headnote

[14] States
State expenses and charges and statutory liabilities

State Controller's Office had the authority to rely on the Government Code, rather than only on the Parameters and Guidelines (P&Gs) adopted by the Commission on State Mandates, to uphold an audit rule excluding the amount of optional fees from the amount recoverable as state-mandated costs. West's Ann.Cal.Gov.Code §§ 17514, 17556(d).

Cases that cite this headnote

Attorneys and Law Firms

****36** Lozano Smith, Gregory A. Wedner and Sloan R. Simmons, Sacramento, for Plaintiffs and Appellants.

Richard L. Hamilton for California School Boards Association and Its Education Legal Alliance, as Amicus Curiae on behalf of Plaintiffs and Appellants Clovis Unified School District, Fremont Unified School District, Newport–Mesa Unified School District, Norwalk–La Mirada Unified School District, Riverside Unified School District, San Juan Unified School District and Sweetwater Union High School District.

Edmund G. Brown, Jr., Attorney General, Jonathan K. Renner, Assistant Attorney General, Douglas J. Woods and Kathleen A. Lynch, Deputy Attorneys General, for Defendant and Appellant.

Opinion

BUTZ, J.

***797** This declaratory relief and writ of mandate action concerns the validity of two auditing rules used by defendant State Controller's Office (Controller). The Controller used these rules in reducing state-mandated reimbursement claims for employee salary and benefit costs submitted from plaintiff school districts and community college districts (hereafter plaintiffs).

Contemporaneous Source Document Rule (CSDR)

The first auditing rule is referred to by plaintiffs as the Contemporaneous Source Document Rule (CSDR). The Controller used this rule to reduce reimbursement claims for the following four state-mandated school district programs during the challenged period straddling fiscal years 1998 to 2003: (1) the School District of Choice Program (SDC); (2) the Emergency Procedures, Earthquake Procedures and Disasters Program (EPEPD); (3) the ***798** Intradistrict Attendance Program; and (4) the Collective Bargaining Program. We conclude this rule was an invalid underground regulation under the state Administrative Procedure Act (APA) during this period. (Gov.Code, § 11340 et seq.) [1] Consequently, we overturn the Controller's audits for these four programs during this period to the extent they were based on this rule.

Health Fee Elimination Program: Health Fee Rule

The second auditing rule is the Health Fee Rule, which the Controller used to reduce reimbursement claims for state-****37** mandated health services provided by the plaintiff community college districts pursuant to the Health Fee Elimination Program. We uphold the validity of this rule.

The trial court: (1) invalidated the CSDR as applied to the Intradistrict Attendance and Collective Bargaining Programs (from which the Controller appeals); (2) hinted at the CSDR's invalidity as applied to the

SDC and EPEPD Programs but did not grant relief thereon, apparently deeming the administrative remedy sufficient (from which the school districts appeal); and (3) upheld the validity of the Health Fee Rule (from which the community college districts appeal). We shall affirm the judgment regarding the Intradistrict Attendance Program, the Collective Bargaining Program, and the Health Fee Rule, but reverse the judgment, with directions, regarding the SDC and EPEPD Programs.

Because the issues raised in this appeal are almost entirely legal ones subject to our independent review (see *Grier v. Kizer* (1990) 219 Cal.App.3d 422, 434, 268 Cal.Rptr. 244, disapproved on a different ground in *Tidewater Marine Western, Inc. v. Bradshaw* (1996) 14 Cal.4th 557, 577, 59 Cal.Rptr.2d 186, 927 P.2d 296 (*Tidewater*) [whether an auditing rule is an APA regulation is a question of law]), it is unnecessary to set forth a factual background at this stage. Instead, we will proceed straight to our discussion. First, we will briefly summarize the process of state-mandated reimbursement and the concept of underground regulation. Then we will turn our attention to the programs and remedies at issue, weaving in the pertinent facts as we go.

DISCUSSION

I. State-mandated Reimbursement Process

In 1979, California's voters adopted article XIII B, section 6 of the state Constitution, which specifies that if the state imposes any "new program ***799** or higher level of service" on any local government (including a school district), the state must reimburse the locality for the costs of the program or increased level of service.

In 1984, the Legislature enacted statutes to govern the state mandate process. (§ 17500 et seq.) Under these statutes, the Commission on State Mandates (the Commission) determines, pursuant to a "test claim" process, whether a state program constitutes a reimbursable state mandate. (§§ 17551, subd. (c), 17553.)

Once the Commission determines that a state mandate exists, it adopts regulatory "[P]arameters and [G]uidelines" (P & G's) to govern the state-mandated reimbursement. (§ 17557.) The Controller, in turn, then issues nonregulatory "[C]laiming [I]nstructions" for each Commission-determined mandate; these instructions must derive from the Commission's test claim decision and its adopted P & G's. (§ 17558.) Claiming Instructions may be specific to a particular mandated program, or general to all such programs.

The Controller may audit a reimbursement claim filed by a local agency or school district within three years of the claim's filing or last amendment. (§ 17558.5, subd. (a).)

If the Controller reduces a specific reimbursement claim via an audit, the claimant may file an "[I]ncorrect [R]eduction [C]laim" with the Commission. (§ 17558.7, subd. (a).)

II. The Concept of Invalid Underground Regulation

[1] In their petitions for writ of mandate and complaints for declaratory relief, the school districts (comprising Clovis, ****38** Fremont, Newport–Mesa, Norwalk–La Mirada, Riverside, Sweetwater, and San Juan; hereafter collectively, School Districts) allege that the CSDR constitutes an invalid, unenforceable underground regulation under the APA as applied by the Controller in auditing salary and benefit costs in reimbursement claims for the SDC, EPEPD, Intradistrict Attendance, and Collective Bargaining Programs during the applicable periods roughly encompassing the fiscal years 1998 to 2003. [2]

***800** In their petition for writ of mandate and complaint for declaratory relief (actually appended to the School Districts' petition and complaint), the community college districts (comprising San Mateo, Santa Monica, State Center, and El Camino; hereafter collectively, College Districts) allege that the Health Fee Rule constitutes an invalid, unenforceable underground regulation under the APA as applied by the Controller in auditing reimbursement claims for the Health Fee Elimination Program or, alternatively, that the Controller's auditing actions in this respect were beyond its lawful authority.

The basic legal principles that apply to these allegations are as follows:

" 'If a rule constitutes a "regulation" within the meaning of the APA (other than an "emergency regulation" ...) it may not be adopted, amended, or

repealed except in conformity with "basic minimum procedural requirements" ' " which include public notice, opportunity for comment, agency response to comment, and review by the state Office of Administrative Law. (*Morning Star Co. v. State Bd. of Equalization* (2006) 38 Cal.4th 324, 333, 42 Cal.Rptr.3d 47, 132 P.3d 249 (*Morning Star*).) "These requirements promote the APA's goals of bureaucratic responsiveness and public engagement in agency rulemaking." (*Ibid.*)

Any regulation " 'that substantially fails to comply with these requirements may be judicially declared invalid' " and is deemed unenforceable. (*Morning Star, supra,* 38 Cal.4th at p. 333, 42 Cal.Rptr.3d 47, 132 P.3d 249; § 11350, subd. (a).)

[2] A "regulation" under the APA "means every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure." (§ 11342.600.) As we will later explain more fully, an APA regulation has two principal characteristics: It must apply generally; and it must implement, interpret, or make specific the law enforced or administered by the agency, or govern the agency's procedure. (*Morning Star, supra,* 38 Cal.4th at pp. 333–334, 42 Cal.Rptr.3d 47, 132 P.3d 249; *Tidewater,* ****39** *supra,* 14 Cal.4th at p. 571, 59 Cal.Rptr.2d 186, 927 P.2d 296.)

*801 III. The CSDR as Applied to the SDC, EPEPD, Intradistrict Attendance, and Collective Bargaining Programs

We will start with the SDC Program. We do so because, of these four programs, the Commission's APA-valid, pre-May 27, 2004 P & G's for the SDC Program most closely resemble the Controller's CSDR. [3] If we conclude, nevertheless, that the CSDR is an underground regulation that violates the APA in this context, we will have to conclude similarly for these three other programs. It is undisputed that the Controller's CSDR was not enacted in compliance with APA procedure.

As we shall explain, we conclude that the CSDR, as applied to the (pre-May 27, 2004) SDC Program, is an underground, unenforceable regulation under the APA. Accordingly, the CSDR is invalid as applied to the School Districts' SDC Programs for the applicable periods roughly encompassing the fiscal years 1998 to 2003 (see fn. 2, *ante*), and invalid in parallel fashion to the three other programs as well.

The Commission determined, in the mid–1990's, that the SDC Program imposed a reimbursable state-mandated program on school districts by establishing the right of parents/guardians of students, who were prohibited from transferring to another school district, to appeal to the county board of education. (See former Ed.Code, § 48209.9, inoperative July 1, 2003.)

From August 24, 1995, until May 27, 2004, the Commission's P & G's for the SDC Program set forth the following two requirements for school districts seeking SDC state-mandated reimbursement for employee salary and benefit costs: (1) "Identify the employee(s) and their job classification, describe the mandated functions performed and specify the actual number of hours devoted to each function, the productive hourly rate and the related benefits. The average number of hours devoted to each function may be claimed if supported by a documented time study"; and (2) "For auditing purposes, all costs claimed must be traceable to source documents (e.g., employee time records, invoices, receipts, purchase orders, contracts, etc.) and/or worksheets that show evidence of and the validity of such claimed costs."

The Commission's SDC Program P & G's divide the subject of reimbursable costs into three categories: employee salaries and benefits; materials and supplies; and contracted services. The examples set forth in these P & G's for ***802** "source documents" align with these three categories: "employee time records" for employee salaries and benefits; "invoices," "receipts" and "purchase orders" for materials and supplies; and "contracts" for contracted services. At issue in this appeal for the SDC, EPEPD, Intradistrict Attendance, and Collective Bargaining Programs are just the cost category of employee salaries and benefits.

From the initial issuance of the Commission's SDC Program P & G's in 1995 until May 27, 2004, the Controller's SDC-specific Claiming Instructions substantively aligned with the SDC Program P & G's.

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However, in September 2003, the Controller revised its general Claiming Instructions (that apply to state-mandated reimbursement claims in general) to set **40 forth, for the first time, what has become known as the CSDR. The CSDR states:

"To be eligible for mandated cost reimbursement for any fiscal year, only actual costs may be claimed. Actual costs are those costs actually incurred to implement the mandated activities. Actual costs must be traceable and supported by source documents that show the validity of such costs, when they were incurred, and their relationship to the reimbursable activities. A source document is a document created at or near the same time the actual cost was incurred for the event or activity in question. Source documents may include, but are not limited to, employee time records or time logs, sign-in sheets, invoices, and receipts.

"Evidence corroborating the source documents may include, but is not limited to, worksheets, cost allocation reports (system generated), purchase orders, contracts, agendas, training packets, and declarations. Declarations must include a certification or declaration stating, 'I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct based upon personal knowledge.' Evidence corroborating the source documents may include data relevant to the reimbursable activities otherwise in compliance with local, state, and federal government requirements. However, corroborating documents cannot be substituted for source documents."

Substantial evidence showed that prior to the use of the CSDR in Controller audits, school districts obtained SDC state-mandated reimbursement for employee salary and benefit costs based on (1) declarations and certifications from the employees that set forth, after the fact, the time they had spent on SDC-mandated tasks; or (2) an annual accounting of time determined by the number of mandated activities and the average time for each activity. After the Controller began using the CSDR in its auditing of SDC reimbursement claims, the Controller deemed these declarations, certifications, and accounting methods insufficient, and reduced the *803 reimbursement claims accordingly. (Substantial evidence also showed that the Controller, in 2000, began applying a CSDR requirement in field audits of SDC reimbursement claims, before the CSDR was expressed in the Controller's general Claiming Instructions in September 2003 or adopted in the Commission's SDC Program P & G's on May 27, 2004.)

The question is whether the Controller's CSDR constituted an underground, unenforceable regulation that the Controller used in auditing the School Districts' SDC Program for the fiscal years 1998 to 2003, because the CSDR constituted a state agency regulation that was not adopted in conformance with the APA prior to its valid adoption in the Commission's SDC Program P & G's on May 27, 2004. We answer this question "yes."

[3] " '*A regulation subject to the APA* ... has *two principal identifying characteristics.* [Citation.] *First,* the agency must intend its rule to apply generally, rather than in a specific case. The rule need not, however, apply universally; a rule applies generally so long as it declares how a certain class of cases will be decided. [Citation.] *Second,* the rule must "implement, interpret, or make specific the law enforced or administered by [the agency], or ... govern [the agency's] procedure." ' " (*Morning Star, supra,* 38 Cal.4th at pp. 333–334, 42 Cal.Rptr.3d 47, 132 P.3d 249, quoting *Tidewater, supra,* 14 Cal.4th at p. 571, 59 Cal.Rptr.2d 186, 927 P.2d 296, italics added.)

[4] As to the first criterion—whether the rule is intended to apply generally—substantial evidence supports the trial **41 court's finding that the CSDR was "applie[d] generally to the auditing of reimbursement claims ...; the Controller's auditors ha[d] no discretion to judge on a case[-]by[-]case basis whether to apply the rule." (The trial court made this finding in the context of ruling on the Intradistrict Attendance and Collective Bargaining Programs, but this finding is a general one that applies equally to the SDC Program. The trial court did not apply this general finding to the SDC Program only because the court reasoned that the CSDR was not an APA-violative underground regulation in the SDC context, as the Commission later adopted the CSDR into its SDC Program P & G's (see fn. 3, *ante*). As we shall explain later, we reject this reasoning involving subsequent adoption.)

[5] The CSDR also meets the second criterion of being a regulation: It implements, interprets, or makes specific the law enforced or administered by the Controller. The Controller argues, to the contrary, that the CSDR "merely restates" the source document requirement found in the pre-May 27, 2004 Commission P & G's for the SDC Program, and that "source documents" are, by their

sourceful nature, contemporaneous. As we explain, we reject this argument.

Admittedly, the pre-May 27, 2004 SDC Program P & G's stated that, "[f]or auditing purposes, all costs claimed must be traceable to source documents ***804** (e.g., employee time records, invoices, receipts, purchase orders, contracts, etc.) and/or worksheets that show evidence of and the validity of such claimed costs." However, the Controller's CSDR, in contrast to these P & G's, did not equate "source documents" with "worksheets," but relegated "worksheets" to the second-class status of "corroborating documents" that can only serve as evidence that corroborates "source documents." This is no small matter either. This is because, prior to the Controller using the CSDR to audit reimbursement claims, the School Districts, in making these claims, had used employee declarations and certifications and average time accountings to document the employee time spent on SDC-mandated activities; and such methods can be deemed akin to worksheets.

More significantly, the CSDR expressly states that employee declarations and certifications are only corroborating documents, *not* source documents; the pre-May 27, 2004 SDC Program P & G's had nothing to say on this subject. In effect, then, the CSDR bars the use of employee time declarations and certifications as source documents or source document-equivalent worksheets, in contrast to the pre-May 27, 2004 P & G's.

Along similar lines, the pre-May 27, 2004 SDC Program P & G's also stated that the "average number of [employee] hours devoted to each [mandated] function may be claimed if supported by a documented time study"; the record showed that such a time study is a documented estimate. The CSDR, which recognizes only actual costs traceable and supported by contemporaneous source documents, does not countenance such estimation.

Nor may the Controller point to the examples of the source documents listed in the pre-May 27, 2004 SDC Program P & G's and argue they show the contemporaneous nature of source documents: "employee time records, invoices, receipts, purchase orders, contracts, etc." First, this argument ignores the source document-equivalent of "worksheets" set forth in these P & G's, as discussed above. And, second, while the CSDR lists "employee time records," "invoices," and "receipts" as source documents, it specifies that "purchase orders," "contracts" (and "worksheets") ****42** are only corroborating documents, not source documents.

Finally, the School Districts that had used employee declarations and certifications and average time accountings to document time for reimbursement claims also note that it is *now* physically impossible to comply with the CSDR's requirement of contemporaneousness that "[a] source document is a ***805** document *created at or near the same time the actual cost was incurred* for the event or activity in question." [4] (Italics added.)

Given these substantive differences between the Commission's pre-May 27, 2004 SDC Program P & G's and the Controller's CSDR, we conclude that the CSDR implemented, interpreted or made specific the following laws enforced or administered by the Controller: the Commission's pre-May 27, 2004 P & G's for the SDC Program (§ 17558) [the Commission submits regulatory P & G's to the Controller, who in turn issues nonregulatory Claiming Instructions based thereon]; and the Controller's statutory authority to audit state-mandated reimbursement claims (§ 17561, subd. (d)(2)).

Consequently, the CSDR meets the two criteria for being an APA regulation. And because the CSDR, as applied to the SDC Program, was not adopted as a regulation in compliance with the APA rule-making procedures until its May 27, 2004 incorporation into the SDC Program P & G's, this CSDR is an underground and unenforceable regulation as applied to the audits of the School Districts' SDC Programs for the applicable periods roughly encompassing the fiscal years 1998 to 2003. (See fn. 2, *ante.*) These audits are invalidated to the extent they used this CSDR.

[6] **[7]** **[8]** As we noted at the outset of this part of the opinion, if we were to conclude (as we now have done) that the CSDR is an underground regulation that violates the APA in the SDC Program context presented here, we would have to conclude similarly for the EPEPD, Intradistrict Attendance, and Collective Bargaining Programs too. This is because the Commission's P & G's for these latter three programs less resembled the Controller's CSDR than did the Commission's pre-May 27, 2004 P & G's for the SDC Program. We now turn to the EPEPD, Intradistrict

Attendance, and Collective Bargaining Programs, which we will describe briefly in order.

The EPEPD Program was found to be a reimbursable state-mandated program in 1987. This program requires school districts to establish earthquake procedures for each of its school buildings, and to allow use of its buildings, grounds and equipment for mass care and welfare shelters during public disasters or emergencies. (Former Ed.Code, §§ 35925–35927, 40041.5, 40042.)

***806** From 1991 until June 2, 2003, the Commission's P & G's for the EPEPD Program required school districts seeking state-mandated reimbursement for employee salary and benefit costs: (1) to "provide a listing of each employee ... and the number of hours devoted to their [mandated] function"; and (2) "[f]or auditing purposes, all costs claimed may be ****43** traceable to source documents and/or worksheets that show evidence of the validity of such costs." The Controller's EPEPD-specific Claiming Instructions, since 1996, have stated that "Source documents required to be maintained by the [reimbursement] claimant may include, but are not limited to, employee time cards and/or cost allocation reports." (The Commission, in like fashion to what it did with the SDC Program, incorporated the CSDR into its P & G's for the EPEPD Program, effective June 2, 2003.)

These pre-June 2, 2003 P & G's for the EPEPD Program parallel the pre-May 27, 2004 P & G's for the SDC Program, but even less resemble the Controller's CSDR than did those SDC Program P & G's. For the reasons set forth above involving the SDC Program, then, we conclude that the Controller's CSDR is an underground, unenforceable regulation as applied to the audits of the School Districts' EPEPD Programs for the applicable periods roughly encompassing the fiscal years 1998 to 2003. (See fn. 2, *ante.*) These audits are invalidated to the extent they used this CSDR.

The Intradistrict Attendance Program, in 1995, was found to be a reimbursable state-mandated program. This program establishes a policy of open enrollment within a school district for district residents. (Former Ed.Code, § 35160.5.)

Since 1995, the Commission's P & G's for the Intradistrict Attendance Program have required school districts seeking state-mandated reimbursement for employee salary and benefit costs (1) to "[i]dentify the employee(s) and their job classification ... and specify the actual number of hours devoted to each [mandated] function.... The average number of hours devoted to each function may be claimed if supported by a documented time study"; and (2) "[f]or auditing purposes, all costs claimed must be traceable to source documents and/or worksheets that show evidence of the validity of such costs." For the 1998 to 2003 period of fiscal years at issue, the Controller's Intradistrict Attendance Program-specific Claiming Instructions substantively mirrored P & G's for (1) above (except for the "average number of hours" provision), and stated as to source documents: "Source documents required to be maintained by the claimant may include, but are not limited to, employee time records that show the employee's actual time spent on this mandate." (In early 2010, the Commission incorporated the Controller's CSDR into the Intradistrict Attendance Program P & G's; see fn. 5, *post.*)

***807** Applying the same reasoning we have applied above with respect to the SDC and the EPEPD Programs, we conclude that the Controller's CSDR is an underground, unenforceable regulation as applied to the audits of the School Districts' Intradistrict Attendance Programs for the applicable periods roughly encompassing the fiscal years 1998 to 2003. (See fn. 2, *ante.*) These audits are invalidated to the extent they used this CSDR.

That leaves the Collective Bargaining Program, which was found to be a reimbursable state-mandated program in 1978 (by the Commission's predecessor, the State Board of Control). This program requires school district employers to collectively bargain with represented employees, and to publicly disclose the major provisions of their agreements prior to final adoption. (§ 3540 et seq.)

If the Commission's pre-May 27, 2004 P & G's for the SDC Program most closely resemble the Controller's CSDR, the P & G's for the Collective Bargaining Program bear the least resemblance. As pertinent, the Collective Bargaining Program P & G's require school districts seeking reimbursement ****44** for employee salary and benefit costs to simply "[s]upply workload data requested ... to support the level of costs claimed" and "[s]how the classification of the employees involved, amount of time spent, and their hourly rate"; nothing is said about "source documents."

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The Controller's Collective Bargaining Program-specific Claiming Instructions substantively mirror those of the Intradistrict Attendance Program, stating that source documents include employee time records that show the employee's actual time spent on the mandated function. (And as with the Intradistrict Attendance Program, the Commission, in early 2010, incorporated the Controller's CSDR into the Collective Bargaining Program P & G's; see fn. 5, *post.*)

Consequently, employing the same reasoning we have employed above, we conclude that the Controller's CSDR is an underground, unenforceable regulation as applied to the audits of the School Districts' Collective Bargaining Programs for the applicable periods roughly encompassing the fiscal years 1998 to 2003. (See fn. 2, *ante.*) These audits are invalidated to the extent they used this CSDR.

IV. Declaratory and Related Writ of Mandate Relief

The trial court declared that the Controller's CSDR, as applied to the audits of the Intradistrict Attendance and Collective Bargaining Programs for the 1998 to 2003 period of fiscal years, was an invalid and void underground regulation under the APA. Correspondingly, the trial court issued a peremptory writ of mandate (traditional mandamus) invalidating these CSDR-based audits to the extent they were not final audit determinations for more than ***808** three years before the School Districts filed their respective lawsuits on May 23, 2006 (Clovis et al.) and March 2, 2007 (San Juan). This three-year period is the applicable three-year statute of limitations under Code of Civil Procedure section 338, subdivision (a), for enforcing a statutory liability like state-mandated reimbursement. We are affirming this part of the trial court's judgment.

However, the trial court refused to provide, in parallel fashion, declaratory and writ of mandate relief for the CSDR-based audits involving the SDC and EPEPD Programs. The School Districts contend the trial court erred in this respect. We agree.

In refusing to provide this relief, the trial court reasoned that, since the Commission had incorporated the Controller's CSDR into the Commission's regulatory P & G's for the SDC and EPEPD Programs, there was no longer an actual and ongoing controversy upon which to grant declaratory and related mandate relief concerning the CSDR's invalidity as an underground regulation in this context; and the Commission could administratively determine, pursuant to the Incorrect Reduction Claim process, the past audits that had used the CSDR before its incorporation into the SDC and EPEPD Programs' P & G's. This is where we part company with the trial court.

Our departure is based on section 11350 of the APA and the legal principles set forth in *Californians for Native Salmon etc. Assn. v. Department of Forestry* (1990) 221 Cal.App.3d 1419, 271 Cal.Rptr. 270 (*Native Salmon*) and its progeny.

Section 11350 of the APA specifies that "[a]ny interested person may obtain a judicial declaration as to the validity of any regulation ... by bringing an action for declaratory relief...." (§ 11350, subd. (a).)

In *Native Salmon,* the plaintiffs sought declaratory relief against the state forestry department, alleging that it was department policy, with respect to timber harvest plans: (1) to delay responses to public comments, and (2) to not evaluate the cumulative ****45** impact of logging activities in the plans. The *Native Salmon* court concluded that declaratory relief was appropriate in this context, stating: "[Plaintiffs] ... challenge not a specific [administrative] order or decision [which is generally subject to review only pursuant to a writ of *administrative* mandate, rather than traditional mandate], or even a series thereof, but an overarching, quasi-legislative policy set by an administrative agency. Such a policy is subject to review in an action for declaratory relief.... [¶] ... [R]eview of specific, discretionary administrative decisions [must not be confused] with review of a generalized agency policy. Declaratory relief directed to *policies* of administrative agencies is not an unwarranted control of discretionary, specific agency decisions." (*Native Salmon,* ***809** *supra,* 221 Cal.App.3d at p. 1429, 271 Cal.Rptr. 270, citations omitted; accord, *Venice Town Council, Inc. v. City of Los Angeles* (1996) 47 Cal.App.4th 1547, 1566, 55 Cal.Rptr.2d 465; see also *Simi Valley Adventist Hospital v. Bontá* (2000) 81 Cal.App.4th 346, 354–355, 96 Cal.Rptr.2d 633.)

[9] **[10]** **[11]** Similarly, here, the School Districts have challenged "an overarching, quasi-legislative policy set by an administrative agency" (*Native Salmon, supra,* 221 Cal.App.3d at p. 1429, 271 Cal.Rptr. 270) rather

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than a specific, discretionary administrative decision: i.e., the Controller's policy of using the (underground) CSDR to conduct audits in the SDC and EPEPD Programs for the period straddling the fiscal years 1998 to 2003. Declaratory and accompanying traditional mandate relief is appropriate in this context; this is an ongoing controversy limited by the three-year statute of limitations noted above. [5]

And there is no adequate administrative remedy. The trial court made a finding—supported by substantial evidence—that the Commission "consistently refuses to rule on underground regulation claims on the basis of an opinion that it lacks jurisdiction to decide such claims." (The trial court made this finding in discussing the Intradistrict Attendance and Collective Bargaining Programs, but the finding applies equally to the SDC and EPEPD Programs.)

We conclude that declaratory and accompanying traditional mandate relief applies not only to the Intradistrict Attendance and Collective Bargaining Programs, but also to the SDC and EPEPD Programs for the fiscal years at issue. [6]

*810 V. Health Fee Elimination Program

[12] In 1986, and again in 1989 (after statutory amendment), the Commission determined ****46** that the Health Fee Elimination Program imposed a reimbursable state-mandated cost on those community college districts that provide health services, by requiring those districts to maintain in the future the level of service they had provided in the 1986–1987 fiscal year (termed, the "maintenance of effort" requirement); this "maintenance of effort" had to take place even if the districts, as they were and are permitted to do under the relevant statute, eliminated their nominal statutory student health fee ($7.50 per semester maximum (former Ed.Code, § 72246, Stats.1984, 2d Ex.Sess., ch. 1, p. 6642)); $10 per semester maximum (current Ed.Code, § 76355, subd. (a)(1)). [7]

The College Districts contend that the Controller's Claiming Instruction for the Health Fee Elimination Program is an underground regulation under the APA and beyond the Controller's authority. Specifically, the College Districts argue that the Controller's Health Fee Rule misapplies the Commission's Health Fee Elimination Program P & G's by automatically reducing reimbursement claims by the amount that districts are statutorily authorized to charge students for health fees, even when a district chooses not to charge its students those fees.

Since 1989, the Commission's Health Fee Elimination Program P & G's have stated in pertinent part:

"Any offsetting savings the claimant experiences as a direct result of this statute [i.e., the health fee statutes—formerly Ed.Code, § 72246; now Ed.Code, § 76355] must be deducted from the [reimbursement] costs claimed. In addition, reimbursement for this mandate received from any source, e.g., federal, state, etc., shall be identified and deducted from this claim. This shall include the amount of $7.50 per full-time student per semester, $5.00 per full-time student for summer school, or $5.00 per full-time student per quarter, as authorized by Education Code section 72246[, subdivision] (a). This shall also include payments (fees) received from individuals other than students who are not covered by Education Code Section 72246 for health services."

***811** The Controller's Health Fee Rule (i.e., its Health Fee Elimination Program-specific Claiming Instruction) states in pertinent part:

"Eligible claimants will be reimbursed for health service costs at the level of service provided in the 1986/87 fiscal year. The reimbursement will be reduced by the amount of student health fees authorized per the Education Code [section] 76355."

The College Districts maintain that the Controller's Health Fee Rule constitutes an invalid, underground regulation—i.e., one not adopted pursuant to the APA—because it meets the two-part test of a "regulation": (1) the Controller generally applies it; and (2) the rule implements, interprets or makes specific the Commission's Health Fee Elimination Program P & G's. ****47** (*Morning Star, supra,* 38 Cal.4th at pp. 333–334, 42 Cal.Rptr.3d 47, 132 P.3d 249.)

There is no quibble with part (1)—general application. The real issue is with part (2) of the test—defining a "regulation" as implementing, interpreting, or making specific the Health Fee Elimination Program P & G's.

The College Districts argue that those P & G's require that the mandate claimant have actually "experience[d]" or "received" an amount of health service money for that amount to be deducted from the reimbursement claim. That is, if a college district does not charge its students a health service fee, as the district is statutorily permitted to do, then the district has not "experienced" or "received" that fee, and that amount cannot be deducted. The College Districts note that the Health Fee Rule, by contrast, states flatly that "reimbursement will be reduced by the amount of student health fees authorized per the Education Code [section] 76355."

The College Districts' argument carries some weight, especially when viewed solely within the prism of comparing the Health Fee Elimination Program P & G's to the Health Fee Rule semantically. But the argument falters when exposed to the broader context of the nature of state-mandated costs and common sense.

As for the nature of state-mandated costs, section 17514 defines "costs mandated by the state" to mean "any *increased costs* which a local agency or school district is *required to incur* after July 1, 1980, as a result of any statute enacted on or after January 1, 1975, or any executive order implementing any statute enacted on or after January 1, 1975, which mandates a new program or higher level of service of an existing program within the meaning of Section 6 of Article XIIIB of the California Constitution." (Italics added.) And section 17556 reflects this definition by stating that costs are not deemed mandated by the state to the extent the "local agency or school district *has the authority* to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service." (§ 17556, subd. (d), italics added.)

[13] ***812** The College Districts point out, though, in a series of overlapping arguments, that sections 17514 and 17556 govern the *Commission's* determination of whether a program is a state-mandated program, not the *Controller's* determination as to audit reductions; and the Commission has already found the Health Fee Elimination Program to be a state-mandated program. This observation, however, does not diminish the basic principle underlying the state mandate process that sections 17514 and 17566, subdivision (d) embody: To the extent a local agency or school district "has the authority" to charge for the mandated program or increased level of service, that charge cannot be recovered as a state-mandated cost. [8] (See *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 401, 69 Cal.Rptr.2d 231 ["the plain language of [section 17556, subdivision (d)] precludes reimbursement where the local agency has the authority, i.e., the right or the power, to levy fees sufficient to cover the costs of the state-mandated program"]; see *Connell,* at pp. 397–398, 69 Cal.Rptr.2d 231.)

And this basic principle flows from common sense as well. As the Controller succinctly ****48** puts it, "Claimants can choose not to require these fees, but not at the state's expense."

[14] The College Districts also argue that the Controller lacks the authority to rely on these Government Code sections to uphold its Health Fee Rule. The argument is that, since the Health Fee Rule is a claiming instruction, its validity must be determined *solely* through the Commission's P & G's. To accept this argument, though, we would have to ignore, and so would the Controller, the fundamental legal principles underlying state-mandated costs. We conclude the Health Fee Rule is valid.

DISPOSITION

We direct the trial court to issue a peremptory writ of mandate that invalidates the Controller's audits of the School Districts' SDC and EPEPD Program reimbursement claims for the applicable periods identified in footnote 2, *ante,* encompassing the fiscal years 1998 to 2003, to the extent those audits were based on the CSDR and did not become final audit determinations prior to the applicable three-year statute of limitations. If it chooses to do so, the Controller may re-audit the relevant reimbursement claims based on the documentation requirements of the P & G's and claiming ***813** instructions when the mandate costs were incurred (i.e., not using the CSDR). In all other respects, the judgment is affirmed.

The parties shall each bear their own costs on appeal. (Cal. Rules of Court, rule 8.278(a)(3).)

We concur: SCOTLAND, P.J., and NICHOLSON, J.

All Citations

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Footnotes

1 Undesignated statutory references are to the Government Code.

2 Because of the large number of school districts and program audits involved, as well as the slightly varying fiscal years at issue corresponding to these districts and program audits, we will use the general phrasing "applicable periods roughly encompassing the fiscal years 1998 to 2003" to describe the audits at issue. The parties are well aware of the particular audits being challenged for this period. Regardless, the School Districts must meet the applicable three-year statute of limitations that governs lawsuits based on statutory liability (like state-mandated reimbursement) for any audits of the four programs that have been determined on the basis of the invalidated CSDR. (Code Civ. Proc., § 338; *Union of American Physicians & Dentists v. Kizer* (1990) 223 Cal.App.3d 490, 504, fn. 5, 272 Cal.Rptr. 886.) San Juan School District filed its petition and complaint on March 2, 2007. The rest of the School Districts, together, filed their petition and complaint on May 23, 2006. The trial court consolidated these two petitions and complaints on March 27, 2007.

The School Districts made challenges to other programs as well, but these challenges are not at issue on appeal.

3 On May 27, 2004, the Commission validly amended its SDC Program P & G's to adopt this CSDR language.

4 As a related aside, it is interesting to note that the Controller's SDC-specific Claiming Instructions that were in place during the pre–2004 P & G's stated that, "[f]or audit purposes, all supporting documents must be retained [by claimant] [only] for a period of two years after the end of the calendar year in which the reimbursement claim was filed or last amended, whichever is later"; but the Controller had three years in which to conduct a reimbursement audit "after the date that the actual reimbursement claim is filed or last amended, whichever is later." (§ 17558.5, subd. (a).)

5 The Controller had requested that, at a minimum, we stay this appeal in light of the Commission's pending decision to incorporate the Controller's CSDR into the Commission's P & G's for the Intradistrict Attendance and Collective Bargaining Programs, as the Commission has done for the SDC and EPEPD Programs. In a subsequent request for judicial notice, the Controller has now noted that the Commission, on January 29, 2010, amended its P & G's for the Intradistrict Attendance and Collective Bargaining Programs to adopt the CSDR for each program. We deny this request for judicial notice. This is because the central issue in the present appeal concerns the Controller's policy of using the CSDR *during the 1998 to 2003 fiscal years,* when the CSDR was an underground regulation. This issue is not resolved by the Commission's *subsequent* incorporation of the CSDR into its Intradistrict Attendance and Collective Bargaining Programs' P & G's.

Also, we deny the School Districts' request for judicial notice of the Commission's Incorrect Reduction Claim caseload summary and the Controller's list of final audit reports for California school districts and community college districts.

6 In light of our resolution, we need not consider the School Districts' alternative claim that the Controller's CSDR constitutes an unlawful retroactive rule, or the School Districts' additional claim that regardless whether an actual controversy exists for purposes of declaratory relief, the requested writ relief is not moot.

7 As Education Code section 76355, subdivision (a)(1) states: "The governing board of a district maintaining a community college may require community college students to pay a fee in the total amount of not more than ten dollars ($10) for each semester, seven dollars ($7) for summer school, seven dollars ($7) for each intersession of at least four weeks, or seven dollars ($7) for each quarter for health supervision and services, including direct or indirect medical and hospitalization services, or the operation of a student health center or centers, or both." (An inflationary adjustment is provided for in subdivision (a)(2) of § 76355.)

8 In light of sections 17514 and 17556, subdivision (d), the Commission found the Health Fee Elimination Program to be a reimbursable state-mandated program to the extent the cost to community college districts of maintaining their level of health services at the 1986–1987 level, as required by the Health Fee Elimination Program mandate, is not covered by the nominal health fee authorized by section 76355, subdivision (a)(1) ($10 maximum per semester per student).

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ATTACHMENT
8

Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options

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Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options

Preface

The State Water Resources Control Board and the Regional Water Quality Control Boards (Water Boards) are committed to protecting and restoring the waters of California to ensure that all applicable beneficial uses are fully attained. Where waters are not meeting their beneficial uses from anthropogenic sources of pollutants, the Water Boards will use the Total Maximum Daily Load (TMDL) program to craft an implementation plan to ensure that the waters meet all applicable standards as soon as is practicable. The TMDL program remains a high priority program of the Water Boards.

This Policy is intended to ensure that the impaired waters of the state are addressed in a timely and meaningful fashion. In those cases where immediate restoration activities are available, the policy encourages those actions to take place immediately rather than waiting for a regulatory action by the Water Boards. In this respect, the Water Boards are committed to work with all interested parties to develop appropriate plans to restore water bodies to water quality standards. The Water Boards will continue to pursue information from all interested persons in developing such plans and will encourage early restoration activities prior to completion of a TMDL, where such activities will result in improved water quality.

While the Policy allows a TMDL to be established through alternative regulatory actions, it is anticipated that the majority of TMDLs will be established through an implementation plan adopted as a Basin Plan amendment. This is due to the complexity of the problems needing correction for most of the impaired waters. Where alternative regulatory methods are used to establish TMDLs, however, those TMDLs will be incorporated into the Water Quality Management Plan after they are approved. Using existing regulatory programs to ensure waters are restored, where such mechanism exists, will promote a cost effective and timely response that has proven elusive when relying exclusively on basin planning to establish TMDLs.

The Water Boards are committed to use all means to ensure that the waters of the State are protected for the use and enjoyment of the people of the State and that the waters attain the highest water quality that is reasonable, considering all demands being made and to be made of the waters. The Water Boards will continue to use the best information and science available to the program in developing restoration plans for the waters of the State.

I. Addressing Impaired Waters

Section 303(d) of the Clean Water Act (CWA) contains backstop provisions designed to ensure that all state water quality standards are met. The water quality of many waters of the state is currently unacceptable. The Total Maximum Daily Load (TMDL) program was created by the State Board to implement the requirements of these backstop provisions, consistent with state and federal law, for the purpose of ensuring that water quality standards are attained. The TMDL program is the primary program responsible for achieving clean water where traditional controls on point sources have proven inadequate to do so. The program thus is charged with creating plans that consider all sources and causes of impairment, and allocating responsibility for corrective measures, regardless of sources or cause, that will attain water quality standards.

The State Water Resources Control Board (State Board) and Regional Water Quality Control Boards (Regional Boards) are delegated the responsibility for implementing California's Porter Cologne Water Quality Control Act and the federal Clean Water Act (CWA). Pursuant to relevant provisions of both of those acts the State and Regional Boards establish water quality standards, including designated (beneficial) uses and criteria or objectives to protect those uses. Section 303(d) of the CWA (33 USC § 1313(d)) requires the states to identify certain waters within their borders that are not attaining water quality standards and to establish the total maximum daily load (TMDL) for certain pollutants impairing those waters. According to USEPA, a TMDL is a numerical calculation of the amount of a pollutant that a water body can assimilate and still meet standards. A TMDL includes one or more numerical targets that represent attainment of the applicable standards, considering seasonal variations and a margin of safety, in addition to the allocation of the target or load among the various sources of the pollutant. These include waste load allocations (WLAs) for point sources, and load allocations (LAs) for nonpoint sources and natural background. TMDLs established for impaired waters must be submitted to the US Environmental Protection Agency (USEPA) for approval.

CWA section 303(e) requires the states to implement their approved TMDLs through their Continuing Planning Process. The USEPA's regulations do not provide for USEPA approval of TMDL implementation plans (however the regulations do require NPDES permits to be consistent with the assumptions and requirements of TMDLs and available WLAs). TMDL implementation is therefore largely a function of California law, including but not limited to CWC Section 13242, which requires a program of implementation to achieve water quality objectives.

Regional Boards have wide latitude, numerous options, and some legal constraints that apply when determining how to address impaired waters. Irrespective of whether CWA section 303(d) requires a TMDL, the process for addressing waters that do not meet applicable standards must be accomplished through existing regulatory tools and mechanisms. This policy is intended to outline those tools and mechanisms, and explain how the federal requirement to establish TMDLsfits within those confines. This policy also establishes a certification[1] process whereby the Regional Boards can formally recognize regulatory or nonregulatory actions of other entities as appropriate implementation programs when the Regional Boards determine those actions will result in attainment of standards. In addition, implementation activities taken to achieve LAs must be consistent with the SWRCB Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Implementation Policy).

This policy is not intended and shall not be construed as limiting the authority of the State Board or the Regional Boards in any manner. A flowchart is included as attachment A, which tracks this discussion.

The following principles apply to the process of resolving impairments in surface waters not attaining standards in California:

[1] The term "certification" has been used in many contexts related to point and nonpoint source pollution control. Its use here is expressly intended to not embody any of those definitions. Unless otherwise indicated, the term "certification", as used in this policy, is limited to describing a process by which the Regional Boards can formally recognize an acceptable alternative implementation program for a TMDL. The term "Certification" is further defined in the glossary.

A. If the water body is neither impaired nor threatened, the appropriate regulatory response is to delist the water body.

The first step in addressing a listing is to identify the scope of the problem. In some cases, this analysis will lead to a conclusion that standards are in fact being attained and the water is not threatened, either because the assumptions underlying the listing were incorrect, or because the impairment has been corrected. In such circumstances, it is appropriate to delist the water body in accordance with the "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List.".

B. If the failure to attain standards is due to the fact that the applicable standards are not appropriate to natural conditions, an appropriate regulatory response is to correct the standards.

If the water body is impaired, the cause of the impairment must be ascertained. There are five common reasons (see below[2]) that standards are being exceeded. In most cases, a pollution reduction strategy of some sort will be warranted. However, in some instances part or the entire cause of the impairment will be due to problems with the standards themselves. While in most cases the existing standards are appropriate and amenable to TMDL development, periodically investigation during the development of a TMDL or its implementation plan may reveal that the standards may be inappropriate or imprecise, thus rendering water quality attainment impossible unless standards are modified. In such cases, staff will undertake a limited review of the standards. The purpose of standards review during the TMDL process is not to reassess the Water Boards' previous policy determinations that underlie the Beneficial Use Designations or Water Quality Objectives, but rather to ensure that the standards are amenable to an appropriate implementation plan. Modification of standards should not be viewed as "an easy fix" to avoid a TMDL, and review of the appropriateness of the standards will not be considered in every case. Reviewing the appropriateness of the policies underlying standards is complex and involves processes that generally are beyond the scope of TMDL process. Review of standards' underlying policies generally occurs in the triennial review process. Unlike the triennial review process, the TMDL process is not designed to evaluate standards' appropriateness, but to create a strategy to attain those standards that have already been established. If staff determines that the policies underlying the existing standards should be revisited, in lieu of crafting an implementation plan under this policy, the impaired water shall be referred to the Water Quality Standards staff for consideration of an appropriate standards action, through the appropriate processes. Irrespective, it is always necessary to review the standards applicable to the listed waterbody in order to determine the appropriate target or targets. Three typical examples of where standards may need modification are where:

1. **Natural conditions alone are incompatible with the Standards**: This occurs either when natural background levels of a pollutant exceed water quality objectives, or natural background conditions are incompatible with the beneficial uses assigned in the basin plan, or natural background conditions are degrading the water body.

2. **Standards are too broad or too vague**: For example, a water body may extend beyond an area where associated beneficial uses are appropriate, such as the geographic boundaries of an estuarine environment.

[2] This is not intended to be an exclusive list of causes.

3. **Incompatible Uses Exist**: This may occur when two or more uses are incompatible with each other. For instance, wildlife waste may generate pathogen levels that render the water unsuitable for human recreation.

In each of the above situations, revision of the standards themselves may be the best (or only) way to address the impairment. Revision of the standards can include removing uses, establishing subcategories of uses, establishing seasonal uses (all of which may require a Use Attainability Analysis (UAA), establishing a Site-Specific Objective (SSO), or other modification of the water quality standard. When a standards action is deemed appropriate, the State and Regional Board shall follow all applicable requirements, including but not limited to those set forth in part 131 of Title 40 of the Code of Federal Regulations and Article 3 of Division 7, Chapter 4 of the California Water Code.

Additionally, an anti-degradation finding may authorize the lowering of water quality to some degree, which may address the impairment. The anti-degradation policies established in federal regulations and state policy both authorize the lowering of water quality in certain circumstances, where doing so would not impair beneficial uses. If an anti-degradation finding is appropriate, the requirements of 40 CFR § 131.12 and Resolution #68-16 shall be adhered to.

C. The State Board and Regional Boards are responsible for the quality of all waters of the state, irrespective of the cause of the impairment. In addition, a TMDL must be calculated for impairments caused by certain EPA designated pollutants.

The two other common causes or categories of impairment are related to anthropogenic factors. They include waters impaired by pollution and waters impaired by certain EPA designated pollutants. The Porter-Cologne Water Quality Control Act charges the State Board and Regional Boards with the responsibility of protecting the beneficial uses and quality of all waters of the state, irrespective of the cause of the impairment. Thus, if possible, the impairment should be corrected in either event. Presently, the EPA has designated all pollutants as suitable for TMDL calculation under proper technical conditions.

1. **Pollutants**: The term "pollutant" is defined in section 502(6) of the Clean Water Act. Section 303(d) of the Clean Water Act requires TMDLs be established for each impairing "pollutant" that is suitable for TMDL calculation. EPA has determined that under proper technical conditions, all pollutants are suitable for TMDL calculation. Thus, before undertaking an action to correct an impairment, the Loading Capacity of the pollutant must be calculated for impaired waters, and thus the load reductions necessary (considering seasonal variations and a margin of safety) to attain standards. Corrective action will implement the assumptions and requirements of the Loading Capacity using any combination of existing regulatory tools.

2. **Pollution**: The term "pollution" is defined in section 502(19) of the Clean Water Act and section 13050(l) of the California Water Code. When non-pollutant pollution is the cause of the impairment, the Regional Boards may skip the step of calculating the Loading Capacity and proceed immediately to designing corrective action using existing regulatory tools.

D. Whether or not a TMDL calculation is required as described above, impaired waters will be corrected (and implementation plans crafted) using existing regulatory tools

All violations of standards should be redressed, and the Boards may use any combination of existing regulatory tools to do so. Existing regulatory tools include[3] individual or general waste discharge requirements (be they under Chapter 4 or under Chapter 5.5 (NPDES permits) of the Porter-Cologne Water Quality Control Act), individual or general waivers of waste discharge requirements, enforcement actions, interagency agreements, regulations, basin plan amendments, and other policies for water quality control. Basin plan amendments can include adopting new or revised implementation measures, adopting prohibitions, or where appropriate, modifying standards. The priority ranking assigned to an impaired water will help the Regional Boards determine which impairments will be addressed in what order, according to available resources. The following sections describe the different forms in which an implementation plan may be adopted. The requirement to establish the TMDL or Loading Capacity for the pollutant does not change this analysis.

1. If the solution to an impairment will require multiple actions of the regional board that affect multiple persons, the solution must be implemented through a basin plan amendment or other regulation.

The requirement to use a basin plan amendment or other regulation to tie together numerous actions by the Regional Board stems from the California Administrative Procedures Act (APA). Consistent with the APA, any policy, plan, or guideline must be adopted as a regulation in the proper manner before it may be applied. The term "underground regulation" has been used to describe regulations that have not been properly adopted. The APA requirements ensure that persons subject to regulations have the opportunity to participate in the process during which the assumptions underlying an implementation plan are derived. If there were no such process, every regulated person would be subject to subsequent requirements based upon assumptions determined in a previous proceeding to which they were not a party. Accordingly, when an implementation plan would require multiple actions of the Regional Board, the plan itself must be adopted as a separate action to enable interested persons to comment upon the assumptions of the plan, before they are imposed, one by one, on members of the public at large. The Regional Boards generally use the basin planning process to adopt such plans.

2. If the solution to an impairment can be implemented with a single vote of the regional board, it may be implemented by that vote.

When an implementation plan can be adopted in a single regulatory action, such as a permit, a waiver, or an enforcement order, there is no legal requirement to first adopt the plan through a basin plan amendment. The plan may be adopted directly in that single regulatory action. The permittee (or other regulated party), and any other interested persons may challenge all assumptions underlying the implementation plan during that permitting (or other regulatory) action. In such circumstances, a basin plan amendment may be redundant. There may nonetheless be case-specific reasons why a Regional Board may choose to adopt an implementation plan by a basin plan amendment even if it could be implemented by a single vote

[3] This section is not intended to articulate an exhaustive list of tools available to the State Board or Regional Boards to address violations of standards. It is only intended to provide an example of possibilities.

of the Regional Board. There is no error in doing so should the Regional Board, for whatever reason, deem it desirable.

3. **If a solution to an impairment is being implemented by a regulatory action of another state, regional, local, or federal agency, and the Regional Board finds that the solution will actually correct the impairment, the Regional Board may certify that the regulatory action will correct the impairment and if applicable, implement the assumptions of the TMDL, in lieu of adopting a redundant program.**

The Regional Boards and State Board have the ultimate responsibility over water quality protection for all waters in the State. That responsibility does not imply that the State Board or a Regional Board must adopt redundant regulations when they determine that another regulatory body is adequately addressing a water quality problem. Like most state agencies, the State and Regional Boards generally have inadequate resources to timely address each and every water quality problem, and they must therefore, prioritize use of their resources to where they will do the most good. The fact, however, that another regulatory body is addressing a water quality problem is not alone a sufficient basis for a Regional Board to forego remedial action. The Regional Boards may neither delegate nor abdicate their responsibility over the waters of the State. Furthermore, they may not indefinitely defer taking necessary action if another agency is not properly addressing a problem. However, where another agency is constructively involved in efforts to address an impairment, the SWRCB and RWQCB should seek to take those efforts into account and, where appropriate, take advantage of these third-party efforts. Not only does this avoid unnecessary duplication of effort, it can leverage the SWRCB's and RWQCBs' limited staffing and financial resources.

Only when the Regional Board independently determines that a program being implemented by another regulatory entity will be adequate to correct the impairment, may the Regional Board rely upon that program. If a Regional Board makes such findings, and the findings are supported by substantial evidence in the administrative record, the Regional Board may certify that such program will implement the assumptions and requirements of the TMDL. Nothing in this policy should be construed as implying that State may avoid its responsibilities under Water Code sections 13263, 13269, 13377, or any other section of the Porter Cologne Act. In other words, this certification procedure shall not be deemed to allow the Regional Board to rely upon an alternative program where the Regional Board has a legal responsibility to implement its own requirements (such as issuing or waiving WDRs, or imposing certain effluent limitations in permits where such effluent limitations are required by law). The Regional Boards must perform their statutorily mandated responsibilities irrespective of whether another body is also regulating an activity.

Finally, if water quality problems persist, the Regional Board may not indefinitely defer enforcement action to other agencies. The RWQCB can ask the agency to enforce its own requirements, and if they fail to do so in a manner consistent with the assumptions and requirements of the TMDL, the Regional Board must exercise its independent authority.

4. **If a solution to an impairment is being implemented by a non-regulatory action of another entity, and the regional board finds that the solution will actually correct the impairment, the regional board may certify that the non-regulatory action will correct the impairment and if applicable, implement the assumptions of the TMDL, in lieu of adopting a redundant program.**

Similar to subsection c., above, the Regional Boards may rely upon actions by non-regulatory entities, if the Regional Board makes findings, supported by substantial evidence in the record, that a program being implemented by a non-regulatory entity will be adequate to correct the impairment. The fact that the Regional Boards have limited resources to accomplish their water quality mission can and should be used as a basis to encourage interested persons to undertake to abate impairments in the time before the Regional Boards may otherwise be able to address them. For instance, several RWQCBs have had experience working with industry groups, both formally and informally, to develop education and self-regulation within a particular industry. Other organizations have become active in NPS pollution prevention and land restoration efforts through CWA §319(h) grants, State bond grants, or the State Revolving Fund loan program. Many of the partnerships formed to take advantage of these financial resources have developed into self-sustaining third-party organizations. Some are affiliated with RCDs or have developed as part of the Coordinated Resource Management Planning (CRMP) approach; others are watershed groups or have developed their own organizational structure based on other geographic or industry-specific factors. In some situations the organizations accomplish their goals through a mix of public and private partnership efforts. The RWQCB staff has worked with these groups at various levels. The RWQCBs have broad flexibility and discretion in fashioning TMDL implementation programs, and are encouraged to be as innovative and creative as possible, and, as appropriate, to build upon Third-Party Programs

II. Process for adopting TMDLs

Section 1. Definitions:

a) **Certification.** As used in this policy, the term "certification" shall refer to a formal attestation by a Regional Board that a specific program of implementation, proposed by another regulatory or non-regulatory entity, will be consistent with the assumptions and requirements of a Regional Board-established TMDL that is set at a level that will ensure attainment of water quality standards, considering seasonal variations and a margin of safety. The term "certify" or "certifies" shall refer to the act of issuing the certification. A certification under this policy shall not be deemed to confer any other form of certificate or create any other form of certification, including but not limited to those described in sections 1288 or 1341 of Title 33 of the United States Code.

b) **Loading capacity (LC).** The greatest amount of loading that a water can receive without violating water quality standards.

c) **Load allocation (LA).** The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which can range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible, natural and nonpoint source loads should be distinguished. (40 CFR 130.2(g))

d) Waste Load allocation (WLA). The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation (40 CFR 130.2(h)).

e) Margin of Safety (MOS). The required component of the TMDL that accounts for the uncertainty about the relationship between the pollutant loads and the quality of the receiving waterbody (CWA section 303(d)(1)(C)). The MOS is normally incorporated into the conservative assumptions used to develop TMDLs (generally within the calculations or models) and approved by EPA either individually or in state/EPA agreements. This may be referred to as an "implicit" MOS. If the MOS needs to be larger than that which is allowed through the conservative assumptions, additional MOS can be added as a separate component of the TMDL (in this case, quantitatively, a TMDL = LC = WLA + LA + MOS). When the MOS is expressed as a specific reservation or assignment of part of the LC, it may be referred to as an "explicit" MOS.

f) Total Maximum Daily Load (TMDL). The sum of the individual wasteload allocations (WLAs) for point sources, load allocations (LAs) for nonpoint sources and natural background, and a margin of safety (MOS). TMDLs can be expressed in terms of mass per time, toxicity, or other appropriate measures that relate to a state's water quality standard.

Section 2. TMDLs are adopted with programs that implement correction of the impairment. TMDLs may be adopted in any of the following ways:

a) The TMDL may be adopted with and reflected in assumptions underlying a basin plan amendment, or another regulation or policy for water quality control that is designed to guide the Regional Board in correcting the impairment

b) The TMDL may be adopted with and reflected in assumptions underlying a permitting action, enforcement action, or another single regulatory action that is designed by itself to correct the impairment

c) The TMDL may be adopted with and reflected in a resolution or order that certifies either that:

i) A regulatory program has been adopted and is being implemented by another state, regional, local, or federal agency, and the program will correct the impairment; or

ii) A non-regulatory program is being implemented by another entity, and the program will correct the impairment.

d) Subsection c), above, shall not be construed as authorizing the Regional Board to delegate its authority over water quality control to another regulatory or non-regulatory entity. In all cases the Regional Board must determine the LC of the water body, and thus the load reductions necessary (considering seasonal variations and a margin of safety) to attain standards. The Regional Board must exercise its independent discretion to determine whether or not such alternative program is consistent with the LC. As such, any resolution under subsection c), above, must include specific findings, supported by substantial evidence in the record, that demonstrate each of the following about the regulatory or non-regulatory program:

i) The program is consistent with the assumptions and requirements of the TMDL;

ii) Sufficient mechanisms exist to provide reasonable assurances that the program will address the impairment in a reasonable period of time;

iii) Sufficient mechanisms to enforce the program exist or the regional board otherwise has sufficient confidence that the program will be implemented, such that further regulatory action in the form of a TMDL implementation plan by the Regional Board is unnecessary and would be redundant.

The above findings will require a fact-specific inquiry, dependent upon the type of impairment at issue, the identity, authority, and interests of those proposing the alternative program, and a variety of other factors. A lower confidence that the program will remain in place and will succeed can be mitigated by findings that sufficient fallback provisions exist to ensure that the impairment will be addressed in a reasonable period of time if the program is unsuccessful. Such fallback provisions could include instructions that staff commence a regulatory program under section 2.a) or 2.b) above at a time-certain if the impairment has not then been addressed.

e) Any certification under subdivision c) above, may only be issued and remains valid if:

i) A monitoring plan that addresses the impaired water has been adopted or approved by the Regional Board, and it is adhered to;

ii) The program contains conditions that require trackable progress, and such progress is tracked. A timeline must identify the point or points at which regulatory intervention and reversion to Regional Board direct oversight will be triggered if the pace of work lags or fails;

iii) The certification contains a provision setting forth that the it must be revoked by the Regional Board based upon its findings that the program has not been adequately implemented, is not achieving its goals, or is no longer adequate to restore water quality;

iv) For alternative programs intended to control non-point source contributions to an impairment, such programs comport with the requirements of the Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program, including, but not limited to, the Key Elements of an NPS Pollution Control Implementation Program.

Any interested party may file a petition with the State Board pursuant to Water Code section 13320 to review a Regional Board's failure to adequately ensure that the certification remains valid.

f) A Regional Board may delegate the authority to make certifications under section 2.c) to its Executive Officer for non-controversial TMDLs.

g) A certification under section 2.c), above, shall be valid only for the purpose of implementing TMDLs required by section 303(d) of the Clean Water Act. Such a certification shall not be deemed to constitute a "certification" as used in any other section of the Clean Water Act or as used in any other statute.

h) A certification under section 2 c), above, shall include a date upon which the certification will expire, if not reissued. On of before the expiration date, the Regional Board shall review the actions taken to address the impaired waters, and may renew the certification if significant progress has been made to correct the impairment, or the Regional Board may direct staff to develop another regulatory solution to the impairment.

i) When TMDLs are adopted under sections 2.b) or 2.c), above, the TMDLs must be referenced in the relevant Basin Plans before or during the next triennial review. (40 CFR 130.6(c).)

Section 3. State Board Review. The manner of review by the State Board shall depend upon and be consistent with the manner in which the TMDL has been adopted by the Regional Board.

a) Basin Plan amendments are subject to State Board approval pursuant to Water Code section 13245.

b) Permits and orders are subject to State Board review pursuant to Water Code section 13320.

c) Interested persons may file a petition for State Board reconsideration of any resolution or order issuing or denying a certification under section 2.c) above, in the manner described in Division 3, Chapter 28, Article 6, of Title 23 of the California Code of Regulations, however, any such petition shall be filed not later than 30 days after the date of the certification resolution or order by the Regional Board.

Section 4. Transmittal to USEPA and Request for Approval. The TMDL shall be transmitted to USEPA for approval as follows:

a) By the Division of Water Quality, for TMDLs adopted pursuant to Section 2.a).

i) The Division of Water Quality shall not transmit the TMDL for approval until the Office of Administrative Law has concluded any applicable review of the regulations implementing the TMDL.

b) By the Regional Board's Executive Officer, for TMDLs adopted pursuant to Section 2.b) or 2.c).

i) The Division of Water Quality shall prepare a standard transmittal form for use by the Regional Boards.

ii) The Regional Board shall not transmit the TMDL for approval until either the time to file a petition for review with the State Board has lapsed, or the State Board has dismissed any petitions challenging, or has otherwise approved, the certification or order. The Regional Board may transmit the TMDL for approval if a petition is pending and either no request for a stay has been filed, or the State Board has denied the request for a stay.

iii) A copy of each transmittal by a Regional Board shall be sent to the Division of Water Quality.

Section 5. Delisting.

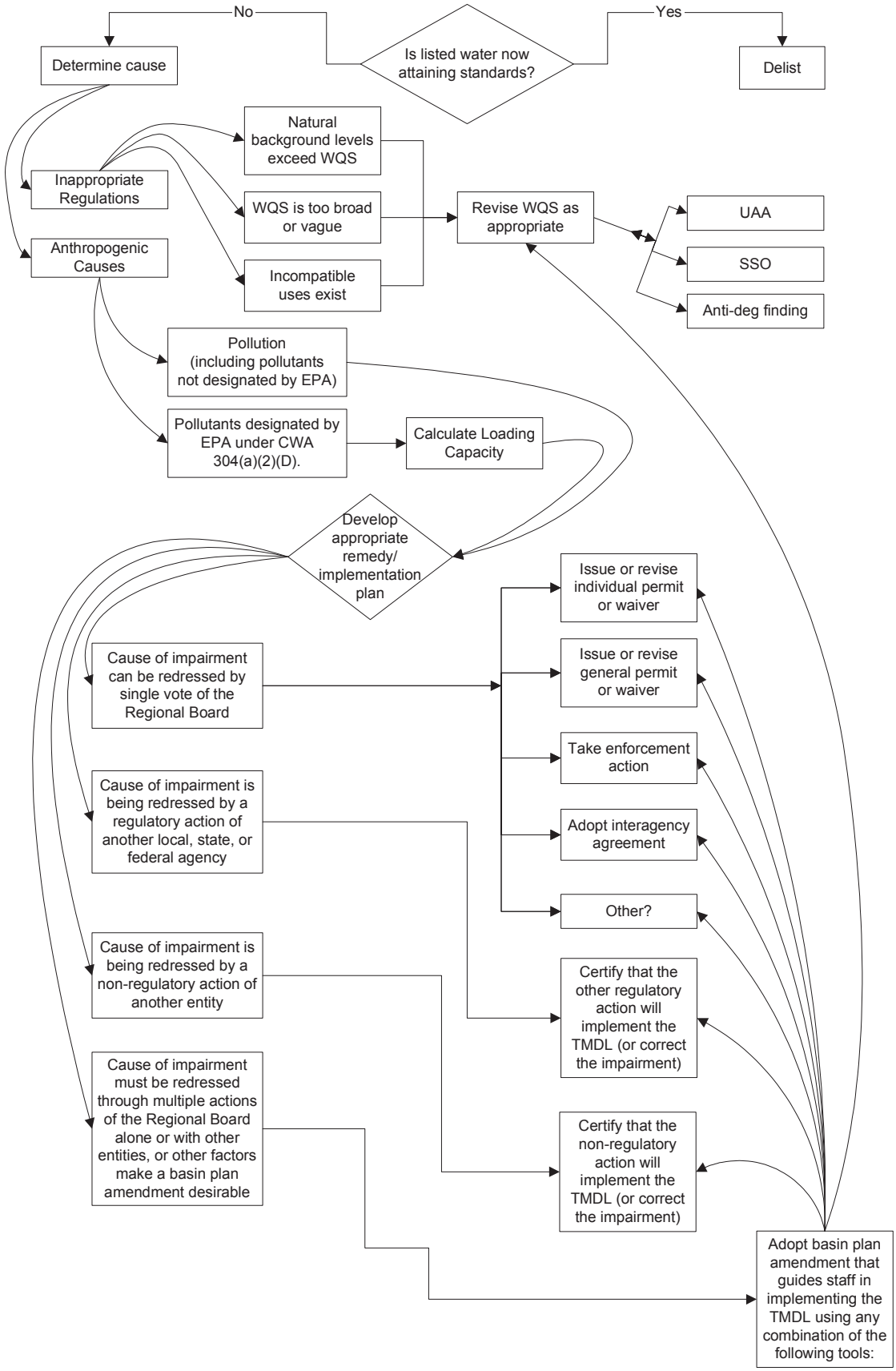
a) When a Regional Board determines that a water body is in fact attaining standards and is not threatened, the Regional Board may on its own motion entertain a resolution recommending the water body be delisted, in lieu of waiting until the next listing cycle. Given the process established by the 303(d) list policy to list and delist waters at regular intervals, failure to take action under this subsection in lieu of waiting until the next 303(d) listing cycle, shall not be deemed inappropriate or improper.

b) No water body shall be deemed delisted pursuant to section 5.a), above, until the State Board has approved the recommendation, and the decision has been transmitted to, and thereafter approved by, USEPA.

Section 6. Existing Authority Preserved.

a) Nothing in this policy shall affect the responsibility of the State Board or any Regional Board to implement the provisions of an applicable Basin Plan or other policy for water quality control, and to ensure that all water quality standards are attained, whether or not a TMDL has yet been established for a given water body. Nor shall any provision of this policy be construed as limiting the authority of the State Board or any Regional Board with respect to any of its existing regulatory tools or processes." Furthermore, where multiple actions of a Regional Board are simply using existing regulatory or enforcement authorities to IMPLEMENT one or more existing regulatory standards, and/or prohibitions, no underground regulation problem is presented and no rulemaking is required because the regulatory standard, and/or prohibition has already been adopted through the proper rulemaking or legislative process.

Attachment A: Impaired Waters Regulatory Decision Tree



Note: After implementation of the chosen regulatory tool(s) the practitioner would start at the beginning of the decision tree to evaluate the effectiveness of the implementation program and, as appropriate, choose an alternative regulatory option to address the water body impairment

ATTACHMENT
9

STATE OF CALIFORNIA

STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2015-0075

In the Matter of Review of

Order No. R4-2012-0175, NPDES Permit No. CAS004001

WASTE DISCHARGE REQUIREMENTS FOR MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) DISCHARGES WITHIN THE COASTAL WATERSHEDS OF LOS ANGELES COUNTY, EXCEPT THOSE DISCHARGES ORIGINATING FROM THE CITY OF LONG BEACH MS4

Issued by the
California Regional Water Quality Control Board,
Los Angeles Region

SWRCB/OCC FILES A-2236 (a)-(kk)

BY THE BOARD:

In this order, the State Water Resources Control Board (State Water Board) reviews Order No. R4-2012-0175 (NPDES Permit No. CAS004001) adopted by the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) on November 8, 2012. Order No. R4-2012-0175 regulates discharges of storm water and non-storm water from the municipal separate storm sewer systems (MS4s) located within the coastal watersheds of Los Angeles County, with the exception of the City of Long Beach MS4, and is hereinafter referred to as the "Los Angeles MS4 Order" or the "Order." We received 37 petitions challenging various provisions of the Los Angeles MS4 Order. For the reasons discussed herein, we generally uphold the Los Angeles MS4 Order, but with a number of revisions to the findings and provisions in response to issues raised in the petitions and as a result of our own review of the Order.

I. BACKGROUND

The Los Angeles MS4 Order regulates discharges from the MS4s operated by the Los Angeles County Flood Control District, Los Angeles County, and 84 municipal permittees (Permittees) in a drainage area that encompasses more than 3,000 square miles and multiple watersheds. The Order was issued by the Los Angeles Water Board in

accordance with section 402(p)(3)(B) of the Clean Water Act[1] and sections 13263 and 13377 of the Porter-Cologne Water Quality Control Act (Porter-Cologne Act),[2] as a National Pollutant Discharge Elimination System (NPDES) permit to control storm water and non-storm water discharges that enter the area's water bodies from the storm sewer systems owned or operated by the multiple governmental entities named in the Order. The Los Angeles MS4 Order superseded Los Angeles Water Board Order No. 01-182 (2001 Los Angeles MS4 Order), and is the fourth iteration of the NPDES permit for MS4 discharges in the relevant area.

The Los Angeles MS4 Order incorporates most of the pre-existing requirements of the 2001 Los Angeles MS4 Order, including the water quality-based requirement to not cause or contribute to exceedances of water quality standards in the receiving water. The Los Angeles MS4 Order also requires Permittees to comply with new water quality-based requirements to implement 33 watershed-based total maximum daily loads (TMDLs) for the region. The Order links both of these water quality-based requirements to the programmatic elements of the Order by allowing Permittees to comply with the water quality-based requirements, in part, by developing and implementing a watershed management program (WMP) or enhanced watershed management program (EWMP), as more specifically defined in the Order.

Following adoption of the Los Angeles MS4 Order, we received 37 timely petitions challenging various provisions of the Order and, in particular, the provisions implementing TMDLs and integrating water quality-based requirements and watershed-based program implementation. Several petitioners asked that their petitions be held in abeyance;[3] however, due to the number of active petitions also seeking review, we declined to hold those petitions in abeyance at that time.[4] Five petitioners additionally requested that we partially stay the Los Angeles MS4 Order. Following review, the Executive Director of the State Water Board denied the stay requests for failure to comply with the prerequisites for a stay as specified in California Code of Regulations, title 23, section 2053.

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[1] 33 U.S.C. § 1342(p)(3)(B).

[2] Wat. Code, §§ 13263, 13377.

[3] See Cal. Code Regs., tit. 23, § 2050.5, subd. (d).

[4] By letter dated January 30, 2013, we provided an opportunity for petitioners to submit an explanation for why a petition should be held in abeyance notwithstanding the existence of the active petitions. In response, two petitioners, City of Signal Hill and the City of Claremont, argued that their petitions raised unique issues not common to the remaining petitions and therefor appropriate for abeyance. We thereafter denied their requests on July 29, 2013, finding that the unique issues could nevertheless be resolved concurrently with the issues in the other petitions. On October 9, 2013, the City of Claremont withdrew two of the claims in its petition.

We deemed the petitions complete by letter dated July 8, 2013, and, as permitted under our regulations,[5] consolidated the petitions for review.

An issue front and center in the petitions is the appropriateness of the approach of the Los Angeles MS4 Order in addressing what we generally refer to as "receiving water limitations." Receiving water limitations in MS4 permits are requirements that specify that storm water and non-storm water discharges must not cause or contribute to exceedances of water quality standards in the waters of the United States that receive those discharges. In precedential State Water Board Order WQ 99-05 (*Environmental Health Coalition*), we directed that all MS4 permits contain specific language that explains how the receiving water limitations will be implemented. (For clarity, we refer to MS4 permit language that relates to implementation of the permit's receiving water limitations as "receiving water limitations provisions.") We held a workshop on November 20, 2012, concerning receiving water limitations in MS4 permits. The purpose of the workshop was to receive public comment on an issue paper discussing several alternatives to the receiving water limitations provisions currently included in MS4 permits as directed by Order WQ 99-05 (Receiving Water Limitations Issue Paper).[6]

Because the Los Angeles MS4 Order contains new provisions that authorize the Permittees to develop and implement WMP/EWMPs in lieu of requiring compliance with the receiving water limitations provisions, we view our review of the Order as an appropriate avenue for resolving some of the issues raised in our November 20, 2012 workshop. Through notice to all interested persons, we bifurcated the responses to the petitions and solicited two separate sets of responses: (1) Responses to address issues related to whether the WMP/EWMP alternatives contained in the Los Angeles MS4 Order are an appropriate approach to revising the receiving water limitations provisions in MS4 permits (August 15, 2013 Receiving Water Limitations Submissions); and (2) Responses to address all other issues raised in the petitions (October 15, 2013 Responses).[7] We held a workshop on October 8, 2013, to hear public comment on the first set of responses.

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[5] Cal. Code Regs., tit. 23, § 2054.

[6] Information on that workshop is available at <http://www.waterboards.ca.gov/water_issues/programs/stormwater/rwl.shtml> (as of Nov 18, 2014).

[7] We requested the bifurcated responses initially by letter dated July 15, 2013. Subsequent letters on July 29, 2013, and September 18, 2013, clarified the nature of the submissions and extended the submission deadline for the second response.

State Water Board regulations generally require final disposition on petitions within 270 days of the date a petition is deemed complete.[8] However, in this case, we required additional time to review the large number of issues raised in the petitions. When the State Water Board anticipates addressing a petition on the merits after the review period passes, it may indicate that it will review the matter on its own motion.[9] On April 1, 2014, we adopted Order WQ 2014-0056 taking up review of the issues in the petitions on our own motion.[10]

We now resolve the issues in the petitions with this order.

II. ISSUES AND FINDINGS

The 37 petitions raise over sixty contentions claiming deficiencies in the Los Angeles MS4 Order. This Order addresses the most significant contentions. To the extent petitioners raised issues that are not discussed in this Order, such issues are dismissed as not raising substantial issues appropriate for State Water Board review.[11]

Before proceeding to the merits of the petitions, we will resolve several procedural issues.

Requests to Take Official Notice or Supplement the Record with Additional Evidence

We received a number of requests to take official notice of documents not in the administrative record of the adoption of the Los Angeles MS4 Order by the Los Angeles Water Board (hereinafter Administrative Record)[12] and a number of requests to admit supplemental evidence not considered by the Los Angeles Water Board.[13] We reviewed the requests with

[8] Cal. Code Regs., tit. 23, § 2050.5, subd. (b).

[9] See Wat. Code, § 13320, subd. (a); Cal. Code Regs., tit. 23, § 2050.5, subd. (c).

[10] To avoid premature litigation on the petition issues as a result of our review extending past the 270 day-regulatory review period, at our suggestion most of the petitioners asked that their petitions be placed in abeyance until adoption by the State Water Board of a final order. We granted those requests. Simultaneously with adopting this order, we are removing the petitions from abeyance and acting upon them.

[11] *People v. Barry* (1987) 194 Cal.App.3d 158, 175-177; *Johnson v. State Water Resources Control Bd.* (2004) 123 Cal.App.4th 1107, 1114; Cal. Code Regs., tit. 23, § 2052, subd. (a)(1).

[12] The Administrative Record was prepared by the Los Angeles Water Board and is available at <http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/AdminRecordOrderNoR4_2012_0175/index.shtml> (as of Nov. 18, 2014).

[13] Several requests for official notice or to admit supplemental evidence were received concurrently with submission of the petitions, with the August 15, 2013 Receiving Water Limitations Submissions, and with the October 15, 2013 Responses. Additional requests for official notice were submitted concurrently with comments on first and revised public drafts of this order and were opposed by several parties. (Request for Official Notice, Natural Resources Defense Council, Los Angeles Waterkeeper, and Heal the Bay, Jan. 21, 2015; Request for Official Notice, Natural Resources Defense Council, Los Angeles Waterkeeper and Heal the Bay, June 2, 2015.) Although we have reviewed these additional requests for official notice, we have not granted the requests for the various reasons articulated in this section, in Section II.B.8, and in footnote 74.

consideration of whether they were appropriate for notice or admission based on the legal standards governing our proceedings[14] and whether the documents would materially aid in our review of the issues in the proceedings. We grant the requests with regard to documents 1-7 below, and additionally take official notice on our own motion of documents 8, 9, and 10:[15]

1. Order No. 2013-0001-DWQ, NPDES Permit for Storm Water Discharges from Small MS4s, adopted by State Water Board, February 5, 2013;[16]
2. Modified NPDES Permit No. DC0000022 for the MS4 for the District of Columbia issued by the United States Environmental Protection Agency (USEPA), November 9, 2012, and a responsiveness summary issued in support of its original adoption of the permit, October 7, 2011;[17]
3. Administrative Procedures Update Number 90-004 on Antidegradation Policy Implementation for NPDES Permitting, issued by the State Water Board, July 2, 1990;[18]
4. Chapter 7 of the NPDES Permit Writers' Manual, updated by USEPA, September 2010;[19]
5. Letter to the Water Management Administration, Maryland Department of the Environment, issued by USEPA, August 8, 2012;[20]

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[14] For official notice see Cal. Code Regs., tit. 23, § 648.2; Gov. Code, § 11515; Evid. Code, § 452. For admission of supplemental evidence see Cal. Code Regs., tit. 23, § 2050.6.

[15] We note that two documents for which we received requests for official notice are already in the administrative record: USEPA, Memorandum Setting Forth Revisions to the November 22, 2002 Memorandum Establishing Total Maximum Daily Load Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs (Nov. 12, 2010) (Administrative Record, section 10.II, RB-AR23962-23968); USEPA, Chapter 6 of the NPDES Permit Writers' Manual (updated Sept. 2010) (Administrative Record, section 10.IV, RB-AR24905-24932).

[16] County of Los Angeles October 15, 2013 Response, Att. C; also available at <http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/phsii2012_5th/order_final.pdf> (as of Nov. 18, 2014).

[17] Los Angeles Water Board Request for State Water Board to Take Official Notice of Or Accept as Supplemental Evidence Exhibit A through SS (Oct. 15, 2013) (Los Angeles Water Board Request for Official Notice), Exh.'s A, B; also available at <http://www.epa.gov/reg3wapd/pdf/pdf_npdes/stormwater/DCMS4/MS4FinalLimitedModDocument/FinalModifiedPermit_10-25-12.pdf> and <http://www.epa.gov/reg3wapd/pdf/pdf_npdes/stormwater/DCMS4/FinalPermit2011/DCMS4FINALResponsivenessSummary093011.pdf> (as of Nov. 18, 2014).

[18] Los Angeles Water Board Request for Official Notice, Exh.C; also available at <http://www.swrcb.ca.gov/water_issues/programs/npdes/docs/apu_90_004.pdf> (as of Nov.18, 2014).

[19] Chapter 7 of USEPA's NPDES Permit Writers' Manual, EPA-833-K-10-001, September 2010 (NPDES Permit Writers' Manual) was submitted as Exhibit C to Natural Resources Defense Council, Los Angeles Waterkeeper and Heal the Bay Request for Official Notice (Dec. 10, 2012) (Environmental Petitioners' Request for Official Notice). The chapter may additionally be accessed through links at <http://water.epa.gov/polwaste/npdes/basics/NPDES-Permit-Writers-Manual.cfm> (as of Nov.18, 2014).

6. Memorandum to the Water Management Division Directors, Regions I-X, and NPDES State Directors, issued by USEPA, 1989;[21]
7. "Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12," issued by USEPA, Region 9, June 3, 1987;[22]
8. Order WQ 2014-0077-DWQ, amending NPDES Statewide Storm Water Permit for State of California Department of Transportation, Order 2012-0011-DWQ, adopted by State Water Board, May 20, 2014;[23]
9. Statement from USEPA soliciting comments on the USEPA Memorandum Setting forth Revisions to the November 22, 2002 Memorandum Establishing Total Maximum Daily Load Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs (November 12, 2010), issued March 17, 2011.[24]
10. Memorandum, "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs,'" issued by USEPA, November 26, 2014.[25]

In addition, we are incorporating the administrative record of the November 20, 2012 workshop on receiving water limitations, including the Receiving Water Limitations Issue Paper and comments by interested persons, into our record for the petitions on the Los Angeles MS4 Order.[26]

(continued from previous page)

[20] Environmental Petitioners' Request for Official Notice, Exh.B, available at <http://www.waterboards.ca.gov/public_notices/petitions/water_quality/docs/a2236/a2236m_rfon.pdf> (as of Nov. 18, 2014).

[21] Environmental Petitioners' Request for Official Notice, Exh.D; also available at <http://www.epa.gov/npdes/pubs/owm0231.pdf> (as of Nov. 18, 2014).

[22] Environmental Petitioners' Request for Official Notice, Exh.E; available at <http://www.waterboards.ca.gov/public_notices/petitions/water_quality/docs/a2236/a2236m_rfon.pdf> (as of Nov. 18, 2014).

[23] Available at <http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0077_dwq.pdf> (as of Nov. 18, 2014).

[24] Available at <http://water.epa.gov/polwaste/npdes/stormwater/upload/sw_tmdlwla_comments.pdf> (as of Nov. 18, 2014).

[25] Available at <http://water.epa.gov/polwaste/npdes/stormwater/upload/EPA_SW_TMDL_Memo.pdf> (as of March 30, 2015).

[26] The Receiving Water Limitations Issue Paper and comments and workshop presentations by interested person are available at <http://www.waterboards.ca.gov/water_issues/programs/stormwater/rwl.shtml>.

Among other requests, we are not granting the requests to take official notice of or supplement the Administrative Record with the notices of intent, workplans, draft programs, and other documents filed by Permittees toward development of WMPs/EWMPs and associated monitoring programs following adoption of the Los Angeles MS4 Order or comments submitted on those documents, or the conditional approvals of several of the programs. With regard to factual evidence regarding actions taken by Permittees to comply with the Los Angeles MS4 Order after it was adopted, we believe it appropriate to close the record with the adoption of the Los Angeles MS4 Order. However, we are keenly aware that the success of the Los Angeles MS4 Order in addressing water quality issues depends primarily on the careful and effective development and implementation of programs consistent with the requirements of the Order; we speak to that issue later in our discussion.

City of El Monte's Amended Petition

Petitioner City of El Monte (El Monte) timely filed a petition on December 10, 2012, challenging a number of provisions of the Los Angeles MS4 Order. Thereafter, on February 19, 2013, El Monte filed an amended petition, based on information it asserted was not available prior to the deadline for submission of the petition.

Water Code section 13320, subdivision (a) provides that a petition for review of a regional water quality control board (regional water board) action must be filed within 30 days of the regional water board's action.[27] The State Water Board interprets that requirement strictly and petitions filed more than 30 days from regional water board action are rejected as untimely. El Monte asserted that the two additional arguments raised in the amended petition were based on information that was not available prior to the deadline for submitting the petition and were therefore appropriate for State Water Board consideration.

Even if we were required by statute or regulation to accept amended petitions based on new information, here, El Monte's new arguments are not supported by information previously unavailable. First, El Monte argues that the Supreme Court's decision in *Los Angeles County Flood Control District v. Natural Resources Defense Council* (2013) 133 S.Ct. 710 invalidated certain provisions of the Los Angeles MS4 Order that require compliance with water quality standards and total maximum daily load requirements through receiving water monitoring. Contrary to El Monte's assertion, the decision by the Supreme Court did not invalidate any requirements of the Los Angeles MS4 Order and did not result in any changes to

[27] See also Cal. Code Regs., tit. 23, § 2050.

the Order. The Supreme Court decision, to the extent it applies to the legal issues before us in this matter, constitutes precedential case law and must be considered in our review of the Los Angeles MS4 Order, but it does not constitute new information that supports an amended petition.[28]

Second, El Monte argues that the Los Angeles Water Board failed to consider various provisions of the California Watershed Improvement Act of 2009[29] when it adopted the Los Angeles MS4 Order. To the extent El Monte believed that the California Watershed Improvement Act was relevant to adoption of the Los Angeles MS4 Order, El Monte had the opportunity to raise that issue in comments before the Los Angeles Water Board and in its timely petition to the State Water Board. Having failed to raise the issue before the Los Angeles Water Board and in its timely petition, El Monte cannot raise the issue in an amended petition.[30]

We reject El Monte's amended petition as untimely.

Environmental Petitioners' Motion to Strike

Petitioners Natural Resources Defense Council, Los Angeles Waterkeeper, and Heal the Bay (Environmental Petitioners), submitted a motion on November 11, 2013, requesting that the State Water Board strike sections of the October 15, 2013 Responses by six petitioners (Motion to Strike). The relevant sections respond to a collateral estoppel argument made by the Environmental Petitioners in their August 15, 2013 Receiving Water Limitations Submission to the State Water Board. Several parties asserted in their petitions that requiring compliance with water quality standards in MS4 permits violates federal law or conflicts with prior State Water Board precedent. The Environmental Petitioners responded in their August 15, 2013 Receiving Water Limitations Submission that these arguments were barred by collateral estoppel because the claims were settled in prior court cases challenging the 2001 Los Angeles MS4 Order. Six of the October 15, 2013 Responses, namely those by the Cities of

[28] We note that the State Water Board has the option of allowing additional briefing when there are material legal developments concerning issues raised in a petition, but we did not find such briefing would aid review of the petitions in this case.

[29] Wat. Code, § 16100 et seq.

[30] In addition to being untimely, El Monte's argument lacks merit. The California Watershed Improvement Act of 2009 grants authority to local government permittees regulated by an MS4 permit to develop and implement watershed improvement plans, but does not limit the authority of a regional water board to impose terms related to watershed management in an MS4 permit. Further, the terms of the WMPs/EWMPs are largely consistent with the watershed improvement plans authorized by the Act, so a permittee can comply with the Los Angeles MS4 Order while also using the authority provided by the California Watershed Improvement Act of 2009 if it so chooses.

Arcadia, Claremont, Covina, Duarte and Huntington Park, San Marino et al.,[31] and Sierra Madre, incorporated a response to the collateral estoppel argument.

We stated in a July 15, 2013 letter that"[i]nterested persons may not use the [October 15] [32] deadline for responses on the remaining petition issues as an opportunity to respond to comments filed on the receiving water limitations approach." We clarified further in a July 29, 2013 letter: "[W]hen submitting subsequent responses to the petitions in accordance with the [October 15] deadline, petitioners and interested persons should not raise new issues related to the specific questions regarding the watershed management program/enhanced watershed management program or respond to any August 15, 2013, submissions; however petitioners and interested persons will not be precluded from responding to specific issues raised in the original petitions on grounds that the issues are related to the receiving water limitations language."

We find that the collateral estoppel responses by the six petitioners are disallowed by the direction we provided in our July 15 and July 29, 2013 letters. However, as will be apparent in our discussion in section II.A, we do not rely on the Environmental Petitioners' collateral estoppel argument in resolving the petitions. Our determination that portions of the October 15, 2013 Responses are disallowed is, therefore, immaterial to the resolution of the issues.[33]

Having resolved the procedural issues, we turn to the merits of the Petitions.

A. Implementation of the Iterative Process as Compliance with Receiving Water Limitations

The Los Angeles MS4 Order includes receiving water limitations provisions that are consistent with our direction in Order WQ 99-05 in Part V.A of the Los Angeles MS4 Order. Part V.A. provides, in part, as follows:

1. Discharges from the MS4 that cause or contribute to the violation of receiving water limitations are prohibited.

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[31] The cities of San Marino, Rancho Palos Verdes, South El Monte, Norwalk, Artesia, Torrance, Beverly Hills, Hidden Hills, Westlake Village, La Mirada, Vernon, Monrovia, Agoura Hills, Commerce, Downey, Inglewood, Culver City, and Redondo Beach submitted a joint October 15, 2013 Response.

[32] The July 15, 2013 letter set a deadline of September 20, 2013, which was subsequently extended to October 15, 2013.

[33] In a November 21, 2013 letter, we indicated that we would consider the Motion to Strike concurrently with drafting of this Order, but that we would not accept any additional submissions in this matter, including any responses to the Motion to Strike. City of San Marino objected to the letter and submitted an opposition to the Motion to Strike. Several petitioners submitted joinders in City of San Marino's motion. For the same reasons articulated above, we are not accepting these submissions; they would not affect our resolution of the issues.

2. Discharges from the MS4 of storm water, or non-storm water, for which a Permittee is responsible [footnote omitted], shall not cause or contribute to a condition of nuisance.

3. The Permittees shall comply with Parts V.A.1 and V.A.2 through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the storm water management program and its components and other requirements of this Order including any modifications. . . .[34]

The petitioners that are permittees (hereinafter referred to as "Permittee Petitioners")[35] argue that the above language either means, or should be read and/or clarified to mean, that good faith engagement in the requirements of Part V.A.3, traditionally referred to as the "iterative process," constitutes compliance with Parts V.A.1. and V.A.2. The position put forth by Permittee Petitioners is one we took up when we initiated a process to re-examine the receiving water limitations and iterative process in MS4 permits statewide with our Receiving Water Limitations Issue Paper and the November 20, 2012 workshop. We summarize the law and policy regarding Permittee Petitioners' position again here and ultimately disagree with Permittee Petitioners that implementation of the iterative process does or should constitute compliance with receiving water limitations.

The Clean Water Act generally requires NPDES permits to include technology-based effluent limitations and any more stringent limitations necessary to meet water quality standards.[36] In the context of NPDES permits for MS4s, however, the Clean Water Act does not explicitly reference the requirement to meet water quality standards. MS4 discharges must meet a technology-based standard of prohibiting non-storm water discharges and reducing pollutants in the discharge to the Maximum Extent Practicable (MEP) in all cases, but requiring strict compliance with water quality standards (e.g., by imposing numeric effluent limitations) is at the discretion of the permitting agency.[37] Specifically the Clean Water Act states as follows:

> Permits for discharges from municipal storm sewers –
>
> . . .
>
> (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

[34] Los Angeles MS4 Order, Part V.A, pp. 38-39.

[35] For ease of reference, where an argument is made by multiple Permittee Petitioners, even if not by all, we attribute that argument to Permittee Petitioners generally, and do not list which of the 37 Permittee Petitioners in fact make the argument. Where only one or two Permittee Petitioners make a particular argument, we have identified the specific Permittee Petitioner(s).

[36] 33 U.S.C. §§ 1311, 1342(a).

[37] 33 U.S.C. § 1342(p)(3)(B); *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.

> (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as . . . the State determines appropriate for the control of such pollutants.[38]

Thus, a permitting agency imposes requirements related to attainment of water quality standards where it determines that those provisions are "appropriate for the control of [relevant] pollutants" pursuant to the Clean Water Act municipal storm water provisions.

Under the Porter-Cologne Act, waste discharge requirements must implement applicable water quality control plans, which include the beneficial uses to be protected for a given water body and the water quality objectives reasonably required for that protection.[39] In this respect, the Porter-Cologne Act treats MS4 dischargers and other dischargers even-handedly and anticipates that all waste discharge requirements will implement the water quality control plans. However, when implementing requirements under the Porter-Cologne Act that are not compelled by federal law, the State Water Board and regional water boards (collectively, "water boards") have some flexibility to consider other factors, such as economics, when establishing the appropriate requirements.[40] Accordingly, since the State Water Board has discretion under federal law to determine whether to require strict compliance with the water quality standards of the water quality control plans for MS4 discharges, the State Water Board may also utilize the flexibility under the Porter-Cologne Act to decline to require strict compliance with water quality standards for MS4 discharges.

We have previously exercised the discretion we have under federal law in favor of requiring compliance with water quality standards, but have required less than strict compliance. We have directed, in precedential orders, that MS4 permits require discharges to be controlled so as not to cause or contribute to exceedances of water quality standards in receiving waters,[41] but have prescribed an iterative process whereby an exceedance of a water quality standard triggers a process of BMP improvements. That iterative process involves reporting of the violation, submission of a report describing proposed improvements to BMPs

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[38] 33 U.S.C. § 1342(p)(3)(B).

[39] Wat. Code, § 13263. The term "water quality standards" encompasses the beneficial uses of the water body and the water quality objectives (or "water quality criteria" under federal terminology) that must be met in the waters of the United States to protect beneficial uses. Water quality standards also include the federal and state antidegradation policy.

[40] Wat. Code, §§ 13241, 13263; *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613.

[41] State Water Board Orders WQ 98-01 (*Environmental Health Coalition*), WQ 99-05 (*Environmental Health Coalition)*, WQ 2001-15 (*Building Industry Association of San Diego*).

expected to better meet water quality standards, and implementation of these new BMPs.[42] The current language of the existing receiving waters limitations provisions was actually developed by USEPA when it vetoed two regional water board MS4 permits that utilized a prior version of the State Water Board's receiving water limitations provisions.[43] In State Water Board Order WQ 99-05, we directed that all regional boards use USEPA's receiving water limitations provisions.

There has been significant confusion within the regulated MS4 community regarding the relationship between the receiving water limitations and the iterative process, in part because the water boards have commonly directed dischargers to achieve compliance with water quality standards by improving control measures through the iterative process. But the iterative process, as established in our precedential orders and as generally written into MS4 permits adopted by the water boards, does not provide a "safe harbor" to MS4 dischargers. When a discharger is shown to be causing or contributing to an exceedance of water quality standards, that discharger is in violation of the permit's receiving water limitations and potentially subject to enforcement by the water boards or through a citizen suit, regardless of whether or not the discharger is actively engaged in the iterative process.[44]

The position that the receiving water limitations are independent from the provisions that establish the iterative process has been judicially upheld on several occasions. The receiving water limitations provisions of the 2001 Los Angeles MS4 Order specifically have been litigated twice, and in both cases, the courts upheld the provisions and the Los Angeles Water Board's interpretation of the provisions. In a decision resolving a challenge to the 2001 Los Angeles MS4 Order, the Los Angeles County Superior Court stated: "[T]he Regional [Water] Board acted within its authority when it included [water quality standards compliance] in

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[42] State Water Board Order WQ 99-05, pp. 2-3; see also State Water Board Order WQ 2001-15, pp. 7-9. Additionally, consistent with federal law, we found it appropriate to require implementation of BMPs in lieu of numeric water quality-based effluent limitations to meet water quality standards. *See* State Water Board Orders WQ 91-03 (*Citizens for a Better Environment)*, WQ 91-04 (*Natural Resources Defense Council*), WQ 98-01, WQ 2001-15. This issue is discussed in greater detail in Section II.C. of this order.

[43] See State Water Board Orders WQ 99-05, WQ 2001-15.

[44] Several Permittee Petitioners have argued that the State Water Board's opinion in State Water Board Order WQ 2001-15 must be read to endorse a safe harbor in the iterative process. We disagree. Regardless, the State Water Board's position that the iterative process of the subject permit did not create a "safe harbor" from compliance with receiving water limitations was clearly established in subsequent litigation on that order. (See *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (Super. Ct. 2003, No. GIC780263), affd. *Building Industry Assn. of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866.)

the Permit without a 'safe harbor,' whether or not compliance therewith requires efforts that exceed the 'MEP' standard."[45] The lack of a safe harbor in the iterative process of the 2001 Los Angeles MS4 Order was again acknowledged in 2011 and 2013, this time by the Ninth Circuit Court of Appeal. In these instances, the Ninth Circuit was considering a citizen suit brought by the Natural Resources Defense Council against the County of Los Angeles and the Los Angeles County Flood Control District for alleged violations of the receiving water limitations of that order. The Ninth Circuit held that, as the receiving water limitations of the 2001 Los Angeles MS4 Order (and accordingly as the precedential language in State Water Board Order WQ 99-05) was drafted, engagement in the iterative process does not excuse liability for violations of water quality standards.[46] The California Court of Appeal has come to the same conclusion in interpreting similar receiving water limitations provisions in MS4 Orders issued by the San Diego Regional Water Quality Control Board in 2001 and the Santa Ana Regional Water Quality Control Board in 2002.[47]

While we reiterate that the judicial rulings have been consistent with the water boards' intention and position regarding the relationship between the receiving water limitations and the iterative process, we acknowledge that some in the regulated community perceived the 2011 Ninth Circuit opinion in particular as a re-interpretation of that relationship. Our Receiving Water Limitations Issue Paper and subsequent workshop reflected our desire to re-examine the issue in response to concerns expressed by the regulated community in the aftermath of that ruling.

As stated above, both the Clean Water Act and the Porter-Cologne Act afford some discretion to not require strict compliance with water quality standards for MS4 discharges. In each of the discussed court cases above, the court's decision is based on the specific permit language; thus the cases do not address our authority with regard to requiring compliance with water quality standards in an MS4 permit as a threshold matter, and they do not require us to continue to exercise our discretion as we decided in State Water Board Order

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[45] *In re Los Angeles County Municipal Storm Water Permit Litigation* (L.A. Super. Ct., No. BS 080548, Mar. 24, 2005) Statement of Decision from Phase I Trial on Petitions for Writ of Mandate, pp. 4-5, 7. The decision was affirmed on appeal (*County of Los Angeles v. State Water Resources Control Board* (2006) 143 Cal.App.4th 985); however, this particular issue was not discussed in the court of appeal's decision.

[46] *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2011) 673 F.3d. 880, rev'd on other grounds sub nom. *Los Angeles County Flood Control Dist. v. Natural Resources Defense Council* (2013) 133 S.Ct. 710, mod. by *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2013) 725 F.3d 1194, cert. den. *Los Angeles County Flood Control Dist. v. Natural Resources Defense Council* (2014) 134 S.Ct. 2135.

[47] *Building Industry Assn. of San Diego County, supra*,124 Cal.App.4th 866; *City of Rancho Cucamonga v. Regional Water Quality Control Bd.* (2006) 135 Cal.App.4th 1377.

WQ 99-05. Although it would be inconsistent with USEPA's general practice of requiring compliance with water quality standards over time through an iterative process,[48] we may even have the flexibility to reverse[49] our own precedent regarding receiving water limitations and receiving water limitations provisions and make a policy determination that, going forward, we will either no longer require compliance with water quality standards in MS4 permits, or will deem good faith engagement in the iterative process to constitute such compliance.[50]

However, with this Order, we now decline to do either. As the storm water management programs of municipalities have matured, an increasing body of monitoring data indicates that many water quality standards are in fact not being met by many MS4s. The iterative process has been underutilized and ineffective to date in bringing MS4 discharges into compliance with water quality standards. Compliance with water quality standards is and should remain the ultimate goal of any MS4 permit. We reiterate and confirm our determination that provisions requiring compliance with receiving water limitations are "appropriate for the control of . . . pollutants" addressed in MS4 permits and that therefore, consistent with our authority under the Clean Water Act, we will continue to require compliance with receiving water limitations.[51]

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[48] See, e.g. Modified NPDES Permit No. DC0000022 for the MS4 for the District of Columbia, *supra*, fn. 17.

[49] Of course any change of direction would be subject to ordinary principles of administrative law. (See Code Civ. Proc., § 1094.5, subd. (b).)

[50] As such, it is not necessary to address the collateral estoppel arguments raised by the Environmental Petitioners and opposed by Permittee Petitioners. We agree that it is settled law that we have the discretion to require compliance with water quality standards in an MS4 permit under federal and state law. We also agree that it is settled law that the receiving water limitations provisions currently spelled out in our MS4 permits do not carve out a safe harbor in the iterative process. But the question for us is whether we should continue to exercise our discretion to utilize the same approach to receiving water limitations established under our prior precedent, or proceed in a new direction.

[51] Several Permittee Petitioners argued in comments submitted on the first draft of this order that, because we find that we have some discretion under Clean Water Act section 402(p)(3) to not require compliance with receiving water limitations, the Los Angeles Water Board's action in requiring such compliance -- and our action in affirming it -- is pursuant to state authority. (See, e.g., Cities of Arcadia, Claremont, and Covina, Comment Letter, Jan. 21, 2015.) The Permittee Petitioners argue that the action is therefore subject to evaluation in light of the factors set out in Water Code section 13263 and 13241 pursuant to *City of Burbank, supra,* 35 Cal.4th 613. Under *City of Burbank,* a regional water board must consider the factors specified in section 13241 when issuing waste discharge requirements under section 13263, subdivision (a), but only to the extent those waste discharge requirements exceed the requirements of the federal Clean Water Act. (35 Cal.4th at 627.) Nowhere in our discussion in this section do we mean to disavow either that the Los Angeles Water Board acted under federal authority to impose "such other provisions as . . .determine[d] appropriate for the control of . . . pollutants" in adopting the receiving water limitations provisions of the Los Angeles MS4 Order in the first instance or that we are acting under federal authority in upholding those provisions. (33 U.S.C. § 1342(p)(3)(B)(iii).) The receiving water limitations provisions do not exceed the requirements of federal law. We nevertheless also point out that the Los Angeles Water Board engaged in an analysis of the factors under section 13241 when adopting the Order. (See Los Angeles MS4 Order, Att. F, Fact Sheet, pp. F-139 to F-155.)

As we explained in 2001, "[u]rban runoff is causing and contributing to impacts on receiving waters throughout the state and impairing their beneficial uses."[52] More than a decade later, this is still true. By definition, many of our urban waterways will never attain water quality standards and fully realize their beneficial uses if municipal runoff is allowed to continue to cause or contribute to exceedances of water quality standards. Further, the efforts of other dischargers who are required to not cause or contribute to exceedances of water quality standards would be largely in vain if we did not regulate MS4 dischargers with a somewhat even hand.

Such an approach is additionally consistent with the Porter-Cologne Act's emphasis on water quality control plans as the cornerstone of water quality planning and regulation and the act's expectation that all waste discharge requirements will implement the water quality control plans. We believe that direct enforcement of water quality standards is necessary to protect water quality, at a minimum as a back-stop where dischargers fail to meet requirements of the Order designed to achieve progress toward meeting the standards. We will not reverse our precedential determination in State Water Board Order WQ 99-05 that established the receiving water limitations provisions for MS4 permits statewide and reiterate that we will continue to read those provisions consistent with how the courts have: engagement in the iterative process does not excuse exceedances of water quality standards. We accordingly also decline to direct any revisions to the receiving water limitations provisions of the Los Angeles MS4 Order, which are consistent with our precedential language.[53]

Yet, we are sympathetic to the assertions made by MS4 dischargers that the receiving water limitations provisions mandated by our Order WQ 99-05 may result in many years of permit noncompliance, because it may take years of technical efforts to achieve compliance with the receiving water limitations, especially for wet weather discharges.

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[52] State Water Board Order WQ 2001-15, p. 7.

[53] We disagree with Permittee Petitioners' argument that the receiving water limitations in Part V.A of the Los Angeles MS4 Order are confusing, unclear, or overbroad, because they prohibit causing or contributing to a violation of a receiving water limitation rather than a violation of water quality standards. The Los Angeles Water Board defines "receiving water" as "[a] 'water of the United States' in to which waste and/or pollutants are or may be discharged." (Los Angeles MS4 Order, Att. A., p. A-16.) The Los Angeles Water Board further defines "receiving water limitations" as "[a]ny applicable numeric or narrative water quality objective or criterion, or limitation to implement the applicable water quality objective or criterion, for the receiving water as contained in Chapter 3 or 7 of the Water Quality Control Plan for the Los Angeles Region (Basin Plan), water quality control plans or policies adopted by the State Water Board, or federal regulations, including but not limited to, 40 CFR §131.38." (*Ibid.*) Receiving water limitations are therefore the water quality standards, including water quality objectives and criteria, that apply to the receiving water as expressed in the water quality control plan for the region, statewide water quality control plans that specify objectives for water bodies in the region, State Water Board policies for water quality control, and federal regulations.

Accordingly, we believe that the MS4 permits should incorporate a well-defined, transparent, and finite alternative path to permit compliance that allows MS4 dischargers that are willing to pursue significant undertakings beyond the iterative process to be deemed in compliance with the receiving water limitations.

With the WMP/EWMP provisions of the Los Angeles MS4 Order, the Los Angeles Water Board is striving to allow one such alternative compliance path. As such, the fundamental issue for review before us in this matter is whether the Los Angeles MS4 Order's WMP/EWMP provisions constitute a legal and technically sound compliance alternative for achieving receiving water limitations. We discuss and resolve this issue in the next section.

B. WMP/EWMP as Alternative Compliance Options for Complying with Receiving Water Limitations

The WMP/EWMP provisions allow Permittees to choose an integrated and collaborative watershed-based approach to meeting the requirements of the Los Angeles MS4 Order, including the receiving water limitations. Permittees develop a plan, either collaboratively or individually, that addresses water quality priorities within a watershed. Permittees first prioritize water quality issues within each watershed. Permittees may use the WMP/EWMP to address water body-pollutant combinations for which a TMDL has been developed, giving highest priority to those with interim and final compliance deadlines within the permit term. Permittees may also address water body-pollutant combinations for which no TMDL has been developed, but where the water body is impaired or shows exceedances of the standards for the relevant pollutant from an MS4 source. Once prioritization is completed, Permittees assess the sources of the pollutants and select watershed strategies that are designed to eliminate non-storm water discharges to the MS4 that are a source of pollutants, that meet all applicable TMDL-derived interim and final water quality-based effluent limitations (WQBELs) and/or limitations to be met in the receiving water (referred to herein as "other TMDL-specific limitations")[54] pursuant to corresponding compliance schedules, and that ensure that discharges from the MS4 do not cause or contribute to exceedances of receiving water limitations. Except as described below for storm water retention projects, Permittees conduct a "reasonable assurance analysis" for each water body-pollutant combination incorporated into the

[54] Some of the TMDL limitations of the Los Angeles MS4 Order are expressed not as WQBELs but as standards to be met in the receiving water. The Los Angeles MS4 Order refers to these limitations as "receiving water limitations;" however, in order to avoid confusion with the general receiving water limitations in Part V.A., we will use the term "other TMDL-specific limitations." Accordingly, while the Los Angeles MS4 Order uses the term "receiving water limitations" to refer to both the receiving water limitations in part V.A and some of the TMDL-based requirements in Attachments L-R, when we use the term we refer only to the receiving water limitations in part V.A.

WMP/EWMP to demonstrate the ability of the program to meet those objectives. Permittees additionally implement an integrated monitoring and assessment program to determine progress, adapting strategies and measures as necessary.[55]

In addition to all the requirements above, for those Permittees that choose to develop and implement an EWMP, the EWMP provisions also require that Permittees collaborate on multi-benefit regional projects and, wherever feasible, retain all non-storm runoff, as well as all storm water runoff from the 85th percentile 24-hour storm event (hereinafter "storm water retention approach") for the drainage areas tributary to the projects.[56]

The primary controversy concerning the WMP/EWMP provisions of the Los Angeles MS4 Order is the manner in which they interact with the receiving water limitations and the WQBELs and other TMDL-specific limitations. Under certain conditions detailed in the Order, Permittees may be deemed in compliance with the receiving water limitations and the WQBELs and other TMDL-specific limitations by fully implementing the WMP/EWMP, rather than by demonstrating that the receiving water limitations and the WQBELs and other TMDL-specific limitations have actually been achieved. Specifically:

1. Permittees that develop and implement a WMP/EWMP and fully comply with all requirements and dates of achievement for the WMP/ EWMP as established in the Los Angeles MS4 Order, are deemed to be in compliance with the receiving water limitations in Part V.A for the water body-pollutant combinations addressed by the WMP/EWMP.[57]

2. Permittees fully in compliance with the requirements and dates of achievement of the WMP/EWMP are deemed in compliance with the *interim* WQBELs and other TMDL-specific limitations in Attachments L-R for the water body-pollutant combinations addressed by the WMP/EWMP.[58]

3. Permittees implementing an EWMP and utilizing the storm water retention approach in a drainage area tributary to the applicable water body are deemed in compliance with the *final* WQBELs and other TMDL-specific limitations in Attachments L-R for the water body-pollutant combinations addressed by the storm water retention approach.[59]

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[55] Los Angeles MS4 Order, Part VI.C., pp. 49-67.

[56] *Id.*, Part VI.C.1.g., pp. 48-49.

[57] *Id.*, Part VI.C.2.b., p. 52.

[58] *Id.*, Parts VI.C.3.a., p. 53, VI.E.2.d.i.4., pp. 143-44. The Los Angeles MS4 Order establishes separate requirements for Trash TMDLs and the WMP/EWMP are not a means of achieving compliance with the Trash TMDL provisions. (See Part VI.E.5, pp. 147-154.) References to TMDLs in this section exclude the Trash TMDLs.

[59] *Id.*, Part VI.E.2.e.i.(4), p. 145. As with Part VI.E.2.d.i.4, this Part does not apply to Trash TMDLs.

4. Because the Order additionally provides that full compliance with the general TMDL requirements in Part VI.E and the WQBELs and other TMDL-specific limitations in Attachments L through R constitutes compliance with the receiving water limitations in V.A for the specific pollutants addressed by the relevant TMDL, [60] provisions 2 and 3 above also constitute compliance with the receiving water limitations for the particular water body-pollutant combinations.

5. Finally, Permittees that have declared their intention to develop a WMP/EWMP may be deemed in compliance with receiving water limitations and with interim WQBELs with compliance deadlines occurring prior to approval of the WMP/EWMP if they meet certain conditions during the development phase.[61]

Both Environmental Petitioners and Permittee Petitioners put forth a number of arguments to the effect that the WMP/EWMP provisions of the Los Angeles MS4 Order are contrary to federal and state law or reflect poor policy. We discuss each argument below.

1. Anti-backsliding

The Environmental Petitioners argue that the inclusion of the WMP/EWMP in the Los Angeles MS4 Order violates the anti-backsliding provisions of the Clean Water Act and of the federal regulations.[62] The Clean Water Act generally prohibits the relaxation of an effluent limitation established in an NPDES permit when that permit is renewed; the federal regulations include similar provisions. The Environmental Petitioners argue that the WMP/EWMP of the Los Angeles MS4 Order, by allowing a discharger to be deemed in compliance with receiving water limitations, even where a discharger may in fact be causing or contributing to an exceedance of a water quality standard, represent a relaxation of the receiving water limitations provisions contained in the 2001 Los Angeles MS4 Order.[63]

We do not agree with the Environmental Petitioners that the WMP/EWMP provisions of the Los Angeles MS4 Order violate the anti-backsliding provisions of either the Clean Water Act or the federal regulations. Anti-backsliding provisions are an important aspect

[60] *Id.*, Part VI.E.2.c.ii., p. 143. Although this provision reflects a departure from provisions in previous MS4 permits, the provision has not generated controversy and has not been contested in the petitions. The State Water Board supports this provision in MS4 permits, as discussed at section II.B.5.b. of this order.

[61] *Id.*, Parts VI.C. 2.d., pp. 52-53, VI.E.2.d.i.(4)(d), p. 144.

[62] 33 U.S.C. § 1342(o); 40 C.F.R. §122.44(*l*).

[63] The receiving water limitations of the 2001 Los Angeles MS4 Order (like the receiving water limitations in Section V.A. of the Los Angeles MS4 Order) were modeled on the precedential language in State Water Board Order WQ 99-05.

of the Clean Water Act that generally promote continued progress toward clean water, but the provisions do not apply in all circumstances and are subject to certain exceptions. The 2001 Los Angeles MS4 Order required compliance with receiving water limitations, directed Permittees to achieve those limitations through the iterative process, but retained the Los Angeles Water Board's discretion to enforce compliance with the receiving water limitations at any time. The Los Angeles MS4 Order requires compliance with receiving water limitations, but allows implementation of control measures through the WMPs/EWMPs to constitute such compliance, and reserves direct enforcement of the receiving water limitations to situations where a permittee fails to comply with the WMP/EWMP provisions. The approaches under the prior and current orders are designed to achieve the same results – compliance with receiving water limitations – but through distinct paths that are not easily comparable for purposes of the specific, technical anti-backsliding requirements laid out in federal law.[64] We nevertheless discuss the provisions below.

The Clean Water Act contains both statutory anti-backsliding provisions in section 402(o) and regulatory anti-backsliding provisions in 40 C.F.R. section 122.44(*l*). The Clean Water Act's statutory prohibition against backsliding applies under a narrow set of criteria specified in Clean Water Act section 402(o). First, section 402(o) prohibits relaxing effluent limitations originally established based on best professional judgment, when there is a newly revised effluent limitation guideline.[65] The WMP/EWMP is not derived from an effluent limitation guideline, so this first prohibition is inapplicable. Second, section 402(o) prohibits relaxing effluent limitations imposed pursuant to Clean Water Act sections 301(b)(1)(C) or 303(d) or (e).[66] The receiving water limitations provisions in the 2001 Los Angeles MS4 Order were not

[64] Responding to an argument that NPDES Permit No. DC00000221 for MS4 discharges to the District of Columbia violated anti-backsliding requirements by removing certain numeric limitations in the prior permit, USEPA stated: "The Commenter implies that a Permit that replaces a numeric effluent limit with a non-numeric one is somehow automatically less stringent on that parameter. However, the narrative requirement only violates the anti-backsliding prohibition if the two provisions are comparable. . . . In this case, the two provisions are not comparable: EPA has determined that compliance with the performance standards in the Final Permit will result in more water quality protections for the DC MS4's receiving streams than did the previous aggregate numeric limit." (Responsiveness Summary, p. 84, *supra,* fn.17, citing *Communities for a Better Environment v. State Water Resources Control Bd.* (2005) 132 Cal. App. 4th 1313.)

[65] 33 U.S.C. § 1342(o)(1) ("In the case of effluent limitations established on the basis of subsection (a)(1)(B) of this section, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 1314 (b) of this title subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.").

[66] *Ibid.* ("In the case of effluent limitations established on the basis of section 1311 (b)(1)(C) or section 1313 (d) or (e) of this title, a permit may not be renewed, reissued, or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit except in compliance with section 1313 (d)(4) of this title.").

established based on either section 301(b)(1)(C) or section 303(d) or (e), so this prohibition on backsliding is inapplicable.[67] The receiving water limitations provisions in MS4 permits are imposed under section 402(p)(3)(B) of the Clean Water Act rather than under section 301(b)(1)(C),[68] and are accordingly not subject to the anti-backsliding requirements of section 402(o).

With respect to the regulatory anti-backsliding provisions in 40 Code of Federal Regulations section 122.44(*l*), the non-applicability is less clear cut. USEPA promulgated 40 Code of Federal Regulations section 122.44(*l*)(1) and its predecessor anti-backsliding regulations prior to the Water Quality Act of 1987, which established the municipal permitting requirements of section 402(p)(3)(B). There is ample regulatory history to demonstrate USEPA's intent in establishing the anti-backsliding policy and regulations with respect to evolving technology standards for traditional point sources.[69] We have found no definitive guidance, however, since that time from USEPA or the courts applying the general provisions of section 122.44(*l*) in the context of municipal storm water permits.[70] Further, we have previously noted that anti-backsliding principles may be difficult to assess in the context of non-

[67] The Environmental Petitioners do not argue that the Los Angeles MS4 Order is contrary to Clean Water Act section 303(d)(4) (33 U.S.C. § 1313(d)(4)), which also sets out anti-backsliding requirements. Section 303(d)(4) sets out the conditions under which effluent limitations based on TMDL wasteload allocations may be relaxed. Specifically, effluent limitations for a discharge impacting an impaired water body where standards have not yet been attained may only be relaxed if either the cumulative effect of the revisions still assures the attainment of the water quality standards or the designated use that is not being attained is removed. (33 U.S.C. § 1313(d)(4)(A).) Where a water body has attained standards, effluent limitations may only be relaxed consistent with the federal antidegradation policy. (33 U.S.C. § 1313(d)(4)(B).)

[68] *Defenders of Wildlife*, *supra*, 191 F.3d at pp. 1165-1166.

[69] See, e.g., 44 Fed.Reg. 32854, 32864 (Jun. 7, 1979) (describing codification of predecessor regulation codified at 40 C.F.R. 122.15(i).) In the context of municipal storm water, the MEP standard is the technology standard; the record here supports that MEP, as reflected in the permit conditions, has evolved since the issuance of the 2001 Los Angeles MS4 Order to become more stringent. (See, e.g., Los Angeles MS4 Order, Part VI.D.9.h.vii., p.132, compared to 2001 Los Angeles MS4 Order, Part 4.F.5.c., pp.48-49 [trash controls]; Los Angeles MS4 Order, Part VI.D.7.c., pp. 97-109, as compared to 2001 Los Angeles MS4 Order, Part 4.D.3., pp.36-37 [new development/redevelopment project performance criteria]; Los Angeles MS4 Order, Part VI.D.8.d., pp.113-114, as compared to 2001 Los Angeles MS4 Order, Part 4.E., pp.42-45 [requirements for construction sites less than one acre].)

[70] As requested by the Environmental Petitioners, we took official notice of a Letter to the Water Management Administration, Maryland Department of the Environment, issued by USEPA Region III on August 8, 2012. (See fn. 19). We acknowledge that the letter states at page 3 that a provision in the Prince George County, Maryland, Phase I MS4 draft permit allowing for more time to complete tasks that were required under the previous permit constituted backsliding. The letter refers in passing to section 122.44(*l*)(1), but the letter has no regulatory effect and, further, is devoid of any analysis. The Environmental Petitioners have also pointed us to discussion of the regulatory anti-backsliding provisions in the NPDES Permit Writers' Manual. (NPDES Permit Writers' Manual, p. 7-4.) The relevant section of the NPDES Permit Writers' Manual does not explicitly distinguish between municipal storm water permits and traditional NPDES Permits in its discussion of the applicability of regulatory anti-backsliding provisions; however, nor does it specifically direct application of the anti-backsliding regulatory provisions to municipal storm water permits. We do not find this discussion to be to be determinative on the issue.

quantitative, non-numeric requirements such as BMPs and plans.[71] It is unnecessary, however, to resolve the ultimate applicability of the regulatory anti-backsliding provisions, because, assuming for the sake of argument they do apply, the WMP/EWMP provisions would qualify for an exception to backsliding as discussed below.

Even if the receiving water limitations in MS4 permits could be considered subject to the anti-backsliding requirements of the Clean Water Act or the federal regulations, backsliding would be permissible based on the new information available to the Los Angeles Water Board when it developed and adopted the Los Angeles MS4 Order. The Clean Water Act and federal regulations contain exceptions to the anti-backsliding requirements where new information is available to the permitting authority that was not available at the time of the issuance of the prior permit and that would have justified the imposition of less stringent effluent limitations at that time.[72] The Los Angeles Water Board makes a compelling argument in its October 15, 2013 Response that the development of 33 watershed-based TMDLs adopted since 2001, the inclusion and implementation of three of those TMDLs in the 2001 Los Angeles MS4 Order, and the TMDL-specific and general monitoring and analysis during implementation, have made new information available to the Los Angeles Water Board that fundamentally shaped the WMP/EWMP alternative of the Los Angeles MS4 Order. The Los Angeles Water Board states that the new information resulted in a new understanding that "time to plan, design, fund, operate and maintain [best management practices (BMPs)] is necessary to attain water quality improvements, and these BMPs are best implemented on a watershed scale."[73] The Los Angeles Water Board further points out that, in terms of water supply, there has been a paradigm shift in the last decade from viewing storm water as a liability to viewing it as a regional asset, and that the Los Angeles MS4 Order was drafted to incorporate this new paradigm into its structure.

The WMP/EWMP approach represents a comprehensive attempt to implement the Board's new understanding regarding how to make progress toward achieving water quality

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[71] See Order WQ 96-13 (*Save San Francisco Bay Association*) at pp. 8-10. Although the relevant portion of that decision primarily concerned Clean Water Act section 402(o), its analysis is equally instructive with respect to 40 C.F.R. section 122.44(*l*). (In passing, we note that the order appears to assume that the permit's water quality-based requirements for the MS4 permit were derived pursuant to section 301(b)(1)(C); however, that assumption is in error based on the *Defenders of Wildlife* decision and subsequent State Water Board precedent.)

[72] See 33 U.S.C. § 1342(o)(2)(B)(i); 40 C.F.R. § 122.44(*l*)(1) (anti-backsliding does not apply if the circumstances on which the previous permit was based have materially and substantially changed and would constitute cause for permit modification under 40 C.F.R. section 122.62); 40 C.F.R. § 122.62(a)(2) (stating that new information not available at the time the previous permit was issued is cause for modification); see also 40 C.F.R. §122.44(*l*)(2)(i)(B)(1).

[73] Los Angeles Water Board October 15, 2013 Response, p. 51.

standards as well as supporting the development of new water supplies.[74] The anti-backsliding requirements of the Clean Water Act and the federal regulations thus did not foreclose the incorporation of the WMP/EWMP alternatives into the Los Angeles MS4 Order even though the alternatives allow additional time to achieve receiving water limitations as compared to the immediate compliance required under the 2001 Los Angeles MS4 Order.

We shall amend Finding II.N. and Part III.D.4, page F-20, of Attachment F, Fact Sheet, as follows:

Finding II.N:

N. Anti-Backsliding Requirements. Section 402(o)(2) of the CWA and federal regulations at 40 CFR section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous permit. **The Fact Sheet of this Order contains further discussion regarding anti-backsliding.**

Attachment F, Fact Sheet, Part III.D.4:

4. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. ~~All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous permit.~~ **While this Order allows implementation of Watershed Management Plans/EWMPs to constitute compliance with receiving water limitations under certain circumstances, the availability of that alternative and the corresponding availability of additional time to come into compliance with receiving water limitations, does not violate the anti-backsliding provisions. The receiving**

[74] The Environmental Petitioners argue that information relied on to develop the WMP/EWMP approach was available to the Los Angeles Water Board at the time of the issuance of the 2001 Los Angeles MS4 Order, since regional and watershed based strategies and technologies in storm water planning, as well as the potential benefits of storm water for water supply, were considered prior to the last permit cycle. Similarly, the Environmental Petitioners argue that some of the data gathered through TMDL development was through the process of assessing impairments and through preparing drafts of the TMDL and was therefore available to the Los Angeles Water Board in 2001. (Environmental Petitioners, Written Comments, Jan. 21, 2015, pp. 15-17, 23-25.) The Environmental Petitioners have asked us to take official notice of several documents that support these assertions. It is not necessary for us to do so because we do not disagree with the Environmental Petitioners that some of the information that the Los Angeles Water Board has cited in support of an exception to the anti-backsliding requirements was available at the time of the adoption of the 2001 Los Angeles MS4 Order. We nevertheless concur with the Los Angeles Water Board that the more than a decade of implementation of storm water requirements, as well as the development and implementation of TMDL requirements, since 2001, has, as a whole, fundamentally reshaped our understanding of the physical and time scale on which such measures must be implemented to bring MS4s into compliance with receiving water limitations. Further, we find that all regional water boards are informed by the information gained in the Los Angeles region, so that any regional water board that adopts an alternative compliance path in a subsequent Phase I permit would not be in violation of anti-backsliding requirements, regardless of the particular storm water permitting history of that region.

water limitations provisions of this Order are imposed under section 402(p)(3)(B) of the Clean Water Act rather than based on best professional judgment, or based on section 301(b)(1)(C) or sections 303(d) or (e), and are accordingly not subject to the anti-backsliding requirements of section 402(o). Although the non-applicability is less clear with respect to the regulatory anti-backsliding provisions in 40 Code of Federal Regulations section 122.44(*l*), the regulatory history suggests that USEPA's intent was to establish the anti-backsliding regulations with respect to evolving technology standards for traditional point sources. (See, e.g., 44 Fed.Reg. 32854, 32864 (Jun. 7, 1979)). It is unnecessary, however, to resolve the ultimate applicability of the regulatory anti-backsliding provisions, because the WMP/EWMP provisions qualify for an exception to backsliding as based on new information. The Watershed Management Plan/EWMP provisions of this Order were informed by new information available to the Board from experience and knowledge gained through the process of developing 33 watershed-based TMDLs and implementing several of the TMDLs since the adoption of the previous permit. In particular, the Board recognized the significance of allowing time to plan, design, fund, operate and maintain watershed-based BMPs necessary to attain water quality improvements and additionally recognized the potential for municipal storm water to benefit water supply. Thus, even if the receiving water limitations are subject to anti-backsliding requirements, they were revised based on new information that would support an exception to the anti-backsliding provisions. (33 U.S.C. § 1342(o)(2)(B)(i); 40 C.F.R. § 122.44(l)(1); 40 C.F.R. §122.44(l)(2)(i)(B)(1)).

2. Antidegradation

The Environmental Petitioners argue that the WMP/EWMP provisions of the Los Angeles MS4 Order violate the federal and state antidegradation policies.[75] The federal and state antidegradation policies generally require that the existing quality of water bodies be maintained, unless degradation is justified through specific findings. At a minimum, any degradation may not lower the quality of the water below the water quality standards.[76]

The federal and state antidegradation policies are not identical; however, where the federal antidegradation policy is applicable, the State Water Board has interpreted State Water Board Resolution No. 68-16, the state antidegradation policy, to incorporate the federal antidegradation policy.[77] In the context of the Los Angeles MS4 Order, a federal NPDES permit, compliance with the federal antidegradation policy would require consideration of the following: First, the Los Angeles MS4 Order must ensure that "existing instream uses and the level of

[75] 40 C.F.R. § 131.12; State Water Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality Waters in California (State Water Board Resolution No. 68-16).

[76] *Ibid.*

[77] State Water Board Order WQ 86-17 (*Fay*), pp. 16-19.

water quality necessary to protect the existing uses" is maintained and protected.[78] Second, if the baseline quality of a water body for a given constituent "exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected" through the requirements of the Los Angeles MS4 Order unless the Los Angeles Water Board makes findings that (1) any lowering of the water quality is "necessary to accommodate important economic or social development in the area in which the waters are located;" (2) "water quality adequate to protect existing uses fully" is assured; and (3) "the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control" are achieved.[79]

The Los Angeles MS4 Order must also comply with any requirements of State Water Board Resolution No. 68-16 beyond those imposed through incorporation of the federal antidegradation policy.[80] In particular, the Los Angeles Water Board must find that not only present, but also anticipated future uses of water are protected, and must ensure "best practicable treatment or control" of the discharges."[81] The baseline quality considered in making the appropriate findings is the best quality of the water since 1968, the year of the adoption of Resolution No. 68-16, or a lower level if that lower level was allowed through a permitting action that was consistent with the federal and state antidegradation policies.[82]

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[78] 40 C.F.R. § 131.12(a)(1). This provision has been interpreted to mean that, "[i]f baseline water quality is equal to or less than the quality as defined by the water quality objective, water quality shall be maintained or improved to a level that achieves the objectives." (State Water Board, Administrative Procedures Update, Antidegradation Policy Implementation for NPDES Permitting, 90-004 (APU 90-004), p. 4.) This provision is completely consistent with, and implemented by, the receiving water limitations provisions discussed above.

[79] 40 C.F.R. § 131.12(a)(2); see also State Water Board Resolution No. 68-16, Resolve 2. The federal regulations additionally require strict maintenance of water quality for "outstanding national resources." (40 C.F.R. § 131.12(a)(3).) There are no designated outstanding national resource waters covered by the Los Angeles MS4 Order.

[80] See State Water Board Order WQ 86-17 (*Fay)*, p. 23, fn. 11.

[81] State Water Board Resolution No. 68-16, Resolve 2. Best practicable treatment or control is not defined in Resolution No. 68-16; however, the State Water Board has evaluated what level of treatment or control is technically achievable using "best efforts." (See State Water Board Orders WQ 81-5 (*City of Lompoc*), WQ 82-5 (*Chino Basin Municipal Water District)*, WQ 90-6 (*Environmental Resources Protection Council*).) A Questions and Answers document on Resolution No. 68-16 by the State Water Board states as follows: "To evaluate the best practicable treatment or control method, the discharger should compare the proposed method to existing proven technology; evaluate performance data, e.g. through treatability studies; compare alternative methods of treatment or control; and/or consider the method currently used by the discharger or similarly situated dischargers . . .The costs of the treatment or control should also be considered . . . ." (Questions and Answers, Resolution No. 68-16, State Water Board (Feb. 16, 1995), pp. 5-6.)

[82] APU 90-004, p.4. The baseline for application of the federal antidegradation policy is 1975. For state antidegradation requirements, see also *Asociacion de Gente Unida por el Agua v. Central Valley Water Board* (2012) 210 Cal.App.4th 1255,1270. The baseline for the application of the state antidegradation policy is generally the highest water quality achieved since 1968. However, where a water quality objective for a particular constituent was adopted after 1968, the baseline for that constituent is the highest water quality achieved since the adoption of the *(Continued)*

The Los Angeles MS4 Order contains a conclusory antidegradation finding, but the Fact Sheet contains additional discussion.[83] The Fact Sheet discussion essentially conveys that, where there are high quality waters in the region, the antidegradation requirements are met because the Order requires best practicable treatment or control in the form of MEP and water quality standards compliance and, further, where the water quality is already impaired, the Order requires implementation of TMDL requirements to achieve water quality standards over time. The Fact Sheet also finds that the Los Angeles MS4 Order does not authorize an increase in waste discharges. The Los Angeles Water Board argues that it was not required to make more detailed findings because, using its best professional judgment and available data, it concluded that the Los Angeles MS4 Order would prevent any degradation. For this proposition, the Los Angeles Water Board cites to State Water Board guidance from 1990 (APU 90-004).[84] The guidance may be construed to exempt the Los Angeles Water Board from conducting an extensive pollutant by pollutant analysis for each water body in the region, but it does not exempt the Board from clearly stating its basis for finding that its action is consistent with the antidegradation policies.

The Los Angeles Water Board has provided a more extensive analysis of why the Los Angeles MS4 Order complies with the antidegradation policies in its October 15, 2013 Response. The Los Angeles Water Board argues that most of the water bodies impacted by the Los Angeles MS4 Order are already impaired for multiple constituents and that, even if some of these water bodies may have been higher quality in 1968, a scenario largely contradicted by the available data,[85] the appropriate baseline for the quality of such waters is the level of control achieved under the prior permit. The Los Angeles Water Board further argues that the Los Angeles MS4 Order has provisions that are equally or more stringent than those of the

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(continued from previous page)
objective. Resolution 68-16 requires a comparison of the existing quality to "the quality established in policies as of the date on which such policies become effective." (Resolution 68-16, Resolve 1.)

[83] Los Angeles MS4 Order, Finding II.M; Fact Sheet, Att. F, pp. F19-F20.

[84] APU 90-004, p. 2.

[85] We reviewed the Administrative Record, including the 1998 Clean Water Act section 303(d) List (May 12, 1999) (Administrative Record, section 10.VI.E., RB-AR35684-35733), the 2010 Clean Water Act section 303(d) List (Oct.11, 2011) (Administrative Record, section 10.VI.E., RB-AR35734-35785), Santa Monica Bay Restoration Project, An Assessment of Inputs of Fecal Indication Organisms and Human Enteric Viruses from Two Santa Monica Bay Storm Drains (1990) (Administrative Record, section 10.VI.E, RB-AR43363-43413), Toxic Substances Monitoring Program, 10 Year Summary Report 1978-1987 (Administrative Record, Order No. 01-182, R0044602-0045053) and comments submitted by interested persons to the Los Angeles Water Board (Administrative Record RB-AR1006-1038, RB-AR1100-1128, RB-AR1768-2119, RB-AR2653-2847, RB-AR5642-17888). We found no specific evidence presented to the Los Angeles Water Board of high quality waters in the region with regard to pollutants typically associated with storm water discharges; however, we also recognize that in the absence of specific evidence of high quality waters, a blanket statement that there are no high quality water body-pollutant combinations may be overbroad.

2001 Los Angeles MS4 Order and therefore will not allow water quality to degrade below the level of control achieved under the prior permit.

We agree with the Los Angeles Water Board that the Los Angeles MS4 Order maintains and improves the level of control achieved under the 2001 Los Angeles MS4 Order. We expect that the Los Angeles MS4 Order's TMDL requirements and receiving water limitations, which may be implemented through the WMP/EWMP provisions, will be the means for achieving water quality standards for the majority of degraded water bodies in the region. To assert, as the Environmental Petitioners do, that compliance with the receiving water limitations provisions of the 2001 Los Angeles Order is more stringent than establishing specific implementation requirements with clear deadlines for TMDL and receiving water limitations compliance is misguided. We are concerned with the totality of the provisions in the two permits and find that, viewed from that broader perspective, the Los Angeles MS4 Order is at least as stringent in addressing degradation as its predecessor.[86] The Los Angeles MS4 Order improves on past practices that have been inadequate to protect water quality, and includes a monitoring and assessment program that will identify any changes in water quality.[87] In general, under the Los Angeles MS4 Order, we expect to see a trajectory away from any past degradation, even if there may be some continued short-term degradation.

We are not persuaded, however, that the level of control achieved under the 2001 Los Angeles MS4 Order necessarily represents the baseline for purposes of an antidegradation analysis. The 2001 Los Angeles MS4 Order had only minimal findings regarding antidegradation and it is not apparent that any degradation that may have continued under the conditions of the 2001 Los Angeles MS4 Order was anticipated by the Los Angeles Water Board and supported with appropriate analysis regarding economic and social benefits[88] and best practicable treatment or control. We therefore find that the appropriate baseline remains 1968 or the highest quality of receiving waters attained since 1968. We acknowledge

[86] In making this finding we also recognize that the Permittees may be deemed in compliance with receiving water limitations prior to approval of the WMP/EWMP. (Los Angeles MS4 Order Parts VI.C.2.d., pp. 52-53, VI.E.2.d.i.(4)(d), p. 144.) As discussed further under section II.B.6., we find that the Los Angeles Water Board reasonably exercised its discretion in allowing for compliance during the program development phase and further that the program development phase does not detract from the overall effectiveness of the permit provisions.

[87] *See Asociacion de Gente Unida, supra*, 210 Cal.App.4th at p. 1278.

[88] We note that the administrative record provides evidence that some discharge of storm water is to the maximum benefit of the people of the state because such discharge is necessary for flood control and public safety and helps accommodate development. (See, e.g., Administrative Record, section 10.VI.C, RB-AR30101; RB-AR32557-32558.)

that the evidence in the record indicates that it is unlikely that many water bodies were high quality even as far back as 1968, but we cannot make a blanket statement to that effect.[89]

Despite this conclusion, we will not remand the antidegradation issue to the Los Angeles Water Board for further consideration, but will make the findings ourselves based on the record before us. Our findings are necessarily made at a generalized level. Even if the directive of APU 90-004 to carry out a complete antidegradation analysis for each water body-pollutant combination is applicable here, there is simply insufficient data available (to us or the Los Angeles Water Board) to make such findings. The APU 90-004 contemplates the appropriate antidegradation analysis for a discrete discharge or facility. It has limited value when considering antidegradation in the context of storm water discharges from diffuse sources, conveyed through multiple outfalls, with multiple pollutants impacting multiple water bodies within a municipality, or in this case, region, especially given that reliable data on the baseline water quality from 1968 is not available.[90]

The Environmental Petitioners propose that antidegradation be addressed in subsequent actions of the Los Angeles Water Board by requiring that the reasonable assurance analysis (discussed in greater detail in section II.B.4.c. of this Order) supporting a WMP/EWMP also demonstrate that the proposed control measures will maintain high quality of waters with regard to pollutants for which they are not impaired. We reject this approach for two reasons. First, the Los Angeles Water Board was required under the federal and state antidegradation policies to evaluate whether permit conditions would lead to degradation of high quality waters at the time of permit issuance. Second, requiring Permittees to incorporate an evaluation of all water body-pollutant combinations, including those where there are no impairments or exceedances, would require them to expand the reasonable assurance analysis beyond its useful function and manageable scope.

We shall amend Finding II.M and Part D.3 at pages F-19 to F-20 of Attachment F, the Fact Sheet, as follows:

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[89] See fn. 85.

[90] We note that USEPA did not conduct a detailed antidegradation analysis in issuing NPDES Permit No. DC00000221 for MS4 discharges to the District of Columbia, presumably for similar reasons. The court in *Asociacion de Gente Unida* relied on APU 90-004 in part in rejecting an antidegradation analysis conducted by the Central Valley Regional Water Quality Control Board for discharges of pollutants to groundwater from dairy facilities region-wide, but the court's objection was to the regional water board's reliance on an illusory prohibition of discharge to groundwater in finding that no antidegradation analysis was required, not to the sufficiency of any generalized antidegradation analysis the Board might have conducted in lieu of its reliance on the prohibition. (210 Cal.App.4th at pp. 1271-1273.)

Finding II. M.

M. Antidegradation Policy
40 CFR section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining the Quality of the Waters of the State"). Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16 **as set out in the Fact Sheet.**

Attachment F, Fact Sheet Part III.D.3.

3. Antidegradation Policy. 40 CFR section 131.12[4] requires that the state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining the Quality of the Waters of the State"). Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Resolution No. 68-16 and 40 CFR section 131.12 require the Regional Water Board to maintain high quality waters of the State **unless degradation is justified based on specific findings. First, the Board must ensure that "existing instream uses and the level of water quality necessary to protect the existing uses" are maintained and protected. Second, if the baseline quality of a water body for a given constituent exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected through the requirements of the Order unless the Board makes findings that (1) any lowering of the water quality is necessary to accommodate important economic or social development in the area in which the waters are located; (2) water quality adequate to protect existing uses fully is assured; and (3) the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control are achieved. The Board must also comply with any requirements of State Water Board Resolution No. 68-16 beyond those imposed through incorporation of the federal antidegradation policy. In particular, the Board must find that not only present, but also anticipated future uses of water are protected, and must ensure best practicable treatment or control of the discharges. The baseline quality considered in making the appropriate findings is the best quality of the water since 1968, the year of the adoption of Resolution No. 68-16, or a lower level if that lower level was allowed through a permitting action that was consistent with the federal and state antidegradation policies.** ~~until it is demonstrated that any change in quality will~~

~~be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Water Board's policies. Resolution 68-16 requires that discharges of waste be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained.~~

The discharges permitted in this Order are consistent with the antidegradation provisions of 40 CFR section 131.12 and Resolution 68-16 **as set out in the Findings below:**~~.~~

1. ~~Many of the water bodies within the area covered by this Order are of high quality. The Order requires the Permittees to meet best practicable treatment or control to meet water quality standards. As required by 40 CFR section 122.44(a), the Permittees must comply with the "maximum extent practicable" technology-based standard set forth in CWA section 402(p).~~ Many of the waters within the area covered by this Order are impaired ~~and~~ **for multiple pollutants discharged through MS4s and are not high quality waters with regard to these pollutants. In most cases, there is insufficient data to determine whether these water bodies were impaired as early as 1968, but the limited available data shows impairment dating back for more than two decades. Many such water bodies are** listed on the State's CWA Section 303(d) List and either the Regional Water Board or USEPA has established TMDLs to address the impairments. **This Order ensures that existing instream (beneficial) water uses and the level of water quality necessary to protect the existing uses is maintained and protected**. This Order requires the Permittees to comply with permit provisions to implement the WLAs set forth in the TMDLs in order to restore the beneficial uses of the impaired water bodies consistent with the assumptions and requirements of the TMDLs. **This Order further requires compliance with receiving water limitations to meet water quality standards in the receiving water either by demonstrating compliance pursuant to Part V.A and the Permittee's monitoring and reporting program pursuant to Part VI.B or by implementing Watershed Management Programs/EWMPs with a compliance schedule.** This Order includes requirements to develop and implement storm water management programs, achieve water quality-based effluent limitations, and effectively prohibit non-storm water discharges through the MS4.

2. To the extent that some of the water bodies within the jurisdiction are high quality waters with regard to some constituents, this Order finds as follows:

a. Allowing limited degradation of high quality water bodies through MS4 discharges is necessary to accommodate important economic or social development in the area and is consistent with the maximum benefit to the people of the state. The discharge of storm water in certain circumstances is to the maximum benefit to the people of the state because it can assist with maintaining instream flows that support beneficial uses, may spur the development of multiple-benefit projects, and may be necessary for flood control, and public safety as well as to accommodate development in the

area. The alternative – capturing all storm water from all storm events – would be an enormous opportunity cost that would preclude MS4 permittees from spending substantial funds on other important social needs. The Order ensures that any limited degradation does not affect existing and anticipated future uses of the water and does not result in water quality less than established standards. The Order requires compliance with receiving water limitations that act as a floor to any limited degradation.

b. The Order requires the highest statutory and regulatory requirements and requires that the Permittees meet best practicable treatment or control. The Order prohibits all non-storm water discharges, with a few enumerated exceptions, through the MS4 to the receiving waters. As required by 40 CFR section 122.44(a), the Permittees must comply with the "maximum extent practicable" technology-based standard set forth in CWA section 402(p), and implement extensive minimum control measures in a storm water management program. Recognizing that best practicable treatment or control may evolve over time, the Order includes new and more specific requirements as compared to Order No. 01-182. The Order incorporates options to implement Watershed Management Programs or EWMPs that must specify concrete and detailed structural and non-structural storm water controls that must be implemented in accordance with an approved time schedule. The Order contains provisions to encourage, wherever feasible, retention of the storm water from the 85th percentile 24-hour storm event.

~~The issuance of this Order does not authorize an increase in the amount of discharge of waste. The Order includes new requirements to implement WLAs assigned to Los Angeles County MS4 discharges that have been established in 33 TMDLs, most of which were not included in the previous Order.~~

3. Compliance Schedules and the Appropriateness of Enforcement Orders

The Environmental Petitioners concede that immediate compliance with receiving water limitations is not achievable in many instances and that some additional time to reach compliance is warranted. They have proposed an alternative to the WMP/EWMP that would incorporate many of the provisions of those programs but require implementation through the mechanism of a time schedule order or other enforcement order rather than as permit conditions. The Los Angeles MS4 Order already provides that Permittees who are out of compliance with final WQBELs and other TMDL-specific limitations may request a time schedule order.[91] Under the alternative proposed by the Environmental Petitioners, all Permittees that are currently out of compliance with receiving water limitations not addressed by a TMDL as well as with interim TMDL requirements with passed compliance deadlines, would be issued a time schedule order or other enforcement order not to exceed the five year term of

[91] Los Angeles MS4 Order, Part VI.E.4., pp.146-147.

the permit. The Permittees would then implement a WMP/EWMP type plan to achieve compliance with the appropriate limitations within the confines of the enforcement order.

In the prior two sections, we found that the WMP/EWMP provisions are not contrary to the anti-backsliding or antidegradation requirements of federal and state law. We therefore disagree with the Environmental Petitioners that the relevant provisions must be stricken from the Order and incorporated instead into an enforcement order for those reasons. We also find that, given that strict compliance with water quality standards is discretionary in MS4 permits, the Los Angeles Water Board was not restricted to limiting the schedule for compliance with receiving water limitations to the term of the Los Angeles MS4 Order.

Further, from a policy perspective, we find that the MS4 Permittees that are developing and implementing a WMP/EWMP should be allowed additional time to come into compliance with receiving water limitations and interim and final TMDLs through provisions built directly into their permit, rather than through enforcement orders. Building a time schedule into the permit itself, as the Los Angeles MS4 Order does, is appropriate because it allows a more efficient regulatory structure compared to having to issue multiple enforcement orders. More importantly, it is appropriate to regulate Permittees in a manner that allows them to strive for compliance with the permit terms, provided no provision of law otherwise precludes including the schedule in the NPDES permit. For example, for traditional point source discharges subject to strict compliance with water quality standards pursuant to section 301(b)(1)(C), the terms of a compliance schedule are dictated by our compliance schedule policy (State Water Board Resolution 2008-0025) and any additional time for compliance could only be under the auspices of an enforcement order outside the permit.[92]

The WMP/EWMP provisions constitute an effort to set ambitious, yet achievable, targets for Permittees; receiving water limitations, on the other hand, while the ultimate goal of MS4 permitting, may not in all cases be achievable within the five-year permit cycle. Generally, permits are best structured so that enforcement actions are employed when a discharger shows some shortcoming in achieving a realistic, even if ambitious, permit condition and not under circumstances where even the most diligent and good faith effort will fail to achieve the required condition. We add that it is our intention to encourage a watershed-based approach to addressing storm water issues going forward and that it would be contrary to that intention to

[92] We also note that the State Water Board's Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2005) (State Implementation Policy) and the CTR itself (40 C.F.R. § 131.38(e)) restrict the scope of compliance schedules for effluent limitations addressing the discharge of toxic pollutants; however the policy does not apply to storm water discharges. (State Implementation Policy, p.3, fn.1.)

structure the watershed-based requirements as an enforcement order. We will not require Permittees that propose and timely implement a WMP/EWMP to request time schedule orders or other enforcement orders as a precondition of being in compliance with the receiving water limitations or interim TMDL requirements of the Los Angeles MS4 Order.

While declining to structure the WMP/EWMP provisions generally as an enforcement order, we acknowledge that time schedule orders are appropriate under some circumstances. We have already noted that the Los Angeles MS4 Order allows a Permittee to request a time schedule order where a final compliance deadline for a state-adopted TMDL has passed and the Permittee believes that additional time to comply with the requirement is necessary.[93] We expect that a Permittee will request a time schedule order also if the Permittee fails to meet a final compliance deadline for a TMDL after the adoption date of the Los Angeles MS4 Order. We will also provide that a Permittee may request a time schedule order if the Permittee fails to meet a final compliance deadline for a receiving water limitation set in the Permittee's WMP/EWMP.

We shall add a new Part VI.C.6.b and revise Part VI.E.4.b as follows:

Part VI.C.6

b. Where a Permittee believes that additional time to comply with a final receiving water limitation compliance deadline set within a WMP/EWMP is necessary, and the Permittee fails to timely request or is not granted an extension by the Executive Officer, a Permittee may, no less than 90 days prior to the final compliance deadline, request a time schedule order pursuant to California Water Code section 13300 for the Regional Water Board's consideration.

Part VI.E.4

b. Where a Permittee believes that additional time to comply with the final water quality-based effluent limitations and/or receiving water limitations is necessary, a Permittee may within 45 days of Order adoption**, or no less than 90 days prior to the final compliance deadline if after adoption of the Order,** request a time schedule order pursuant to California Water Code section 13300 for the Regional Water Board's consideration.

4. Rigor and Accountability in the WMPs/EWMPs

We now turn to a consideration, from a technical as well as policy lens, as to whether the WMPs/EWMPs are structured in a manner that will maximize the likelihood of

[93] *Ibid.*

reaching the ultimate goal of the compliance alternative – achieving receiving water limitations.[94] We can support an alternative approach to compliance with receiving water limitations only to the extent that that approach requires clear and concrete milestones and deadlines toward achievement of receiving water limitations and a rigorous and transparent process to ensure that those milestones and deadlines are in fact met. Conversely, we cannot accept a process that leads to a continuous loop of iterative WMP/EWMP implementation without ultimate achievement of receiving water limitations.

We find below that the WMP/EWMP provisions generally ensure the appropriate rigor, transparency, and accountability, and that, with the few revisions we direct, are designed to lead to achievement of receiving water limitations.[95]

a. Milestones and Compliance Deadlines

We first consider whether the WMP/EWMP provisions require clear, concrete, and finite milestones and deadlines.

For water body-pollutant combinations addressed by TMDLs, the Los Angeles MS4 Order requires the Permittees to incorporate the compliance schedules found in Attachments L through R of the Order, which reflect previously adopted TMDL-based requirements, into the WMP/EWMP, and, as necessary, to develop interim milestones and dates for their achievement.[96] A Permittee that does not thereafter comply with the approved compliance schedule must instead demonstrate compliance with the WQBELs and other TMDL-specific limitations of the Order.[97] For water body-pollutant combinations not addressed by a TMDL, but where the relevant pollutant is one for which the water body is identified as impaired on the Clean Water Act section 303(d) List and the pollutant is in the same class as a TMDL pollutant, the Order requires that the WMP/EWMP incorporate a schedule consistent with the TMDL schedule for the same class pollutant.[98] A Permittee that does not thereafter comply with

[94] From a legal standpoint, our analysis serves to verify that the Los Angeles MS4 Order's alternative compliance approach through WMPs/EWMPs is supported by the findings and by evidence in the record. (*Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506.)

[95] We do not agree with Permittee Petitioners that the WMP/EWMP provisions are precluded by the program requirements of 40 Code of Federal Regulations section 122.26. Nor do we agree that the requirements are vague or lack definition. The WMP/EWMP provisions of the Order are guidelines for development of a subsequent program with more specificity to be approved by the Los Angeles Water Board or its Executive Officer.

[96] Los Angeles MS4 Order, Part VI.C.5.c., pp.64-65.

[97] *Id.*, Part VI.E.2.d.i(4)(c), p.144.

[98] *Id.*, Part VI.C.2.a.i., pp. 49-50.

the approved compliance schedule must instead demonstrate immediate compliance with the receiving water limitations in Part V.A.[99] We will not disturb these provisions.

With regard to exceedances of receiving water limitations not addressed by a TMDL, and where the pollutant is not in the same class as a pollutant addressed by a TMDL, the Order requires that the WMP/EWMP include milestones based on measurable criteria or indicators and a schedule for achieving the milestones. The WMP/EWMP must also incorporate a final date for achievement of receiving water limitations, but that date is circumscribed simply as "as soon as possible."[100] Parts VI.C.2.a.ii.(4) and VI.C.2.a.iii.(2)(c) help clarify the meaning of "as soon as possible:"

> Permittees shall identify enforceable requirements and milestones and dates for their achievement to control MS4 discharges such that they do not cause or contribute to exceedances of receiving water limitations within a timeframe(s) that is as short as possible, taking into account the technological, operation, and economic factors that affect the design, development, and implementation of the control measures that are necessary. The time between dates shall not exceed one year. Milestones shall relate to a specific water quality endpoint (e.g., x% of the MS4 drainage area is meeting the receiving water limitations) and dates shall relate either to taking a specific action or meeting a milestone.[101]

We will make a revision to the compliance schedule provisions to make it clear that the term "as soon as possible" is to be interpreted consistent with the more specific direction cited above. However, because the WMP/EWMP, and therefore the proposed compliance schedule, is subject to public review and comment and approval by the Los Angeles Water Board or its

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[99] *Id.*, Part VI.C.2.c., p.52.

[100] *Id.*, Part VI.C.5.c.iii.(3), p. 65. If the pollutant is not in the same class as those addressed in a TMDL, but the water body is still identified as impaired for that pollutant, the WMP/EWMP must either have a final compliance deadline within the 5 year permit term or Permittees are expected to initiate development of a stakeholder-proposed TMDL and incorporate a compliance schedule consistent with the TMDL. (*Id.*, Part VI.C.2.a. ii., pp. 50-51) (If the exceedances are in a drainage area implementing the storm water retention approach, there is no requirement to initiate the TMDL development process.) The requirement to address receiving water limitations is ongoing. As exceedances are found through monitoring for water body-pollutant combinations not identified on the 303(d) List, Permittees must either meet receiving water limitations or include the water body-pollutant combination in the WMP/EWMP and set enforceable requirements and milestones and dates for their achievement within a time frame that is as short as possible. (*Id.*, Part VI.C.2.a.iii, pp. 51-52.) Permittees are deemed in compliance with receiving water limitations only for water body-pollutant combinations addressed in the WMP/EWMPs. Thus, as pointed out by several interested parties, for lower priority water body-pollutant combinations not incorporated into a WMP/EWMP for which exceedances are detected, Permittees may be in violation of the receiving water limitations. A Permittee always has the ability to reprioritize a water body-pollutant combination from low priority to high priority and amend its WMP/EWMP to incorporate measures to address that water body-pollutant combination.

[101] *Id.*, Parts VI.C.2.a.ii.4, p. 50, VI.C.2.a.iii.(2)(c), p. 51 (identical language).

Executive Officer,[102] we do not find it necessary to constrain the determination of milestones and dates for the achievement of receiving water limitations any further.

We shall amend Part VI.C.5.c.iii.(3)(b) as follows:

(b) A final date for achieving the receiving water limitations as soon as possible**, consistent with Parts VI.C.2.a.ii.(4) & VI.C.2.a.iii.(2)(c)**.

b. Constraints on Extension of Deadlines

The fact that the Los Angeles MS4 Order requires the establishment of concrete and rigorous deadlines within the WMP/EWMP for the achievement of receiving water limitations is critical to ensuring progress on such achievement; however, the Order also contemplates that the deadlines, with the exception of those compliance deadlines established in a TMDL, may be extended.[103] The WMP/EWMP is subject to an adaptive management process. Based on the results of that process the Permittees may propose modifications, including modifications to compliance deadlines and interim milestones, in the Annual Report.[104]

The potential for multiple extensions is nevertheless ameliorated by the fact that extensions of compliance deadlines and interim milestones require Los Angeles Water Board Executive Officer approval,[105] and are accordingly, subject to a 30-day public comment period.[106] The public comment period will allow all other interested persons to weigh in on the appropriateness of any requested extensions. If thereafter dissatisfied with the determination made by the Executive Officer, interested persons may additionally seek review of the Executive Officer's decision by the Los Angeles Water Board.[107] Of course, in cases where no extension

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[102] *Id.*, Part VI.C.4.c., p.56, Table 9, p. 54, Part VI.A.5.b., p. 42, Att. F, Fact Sheet, p. F-42. Under Part VI.A.5.b, "[a]ll documents submitted to the Regional Water Board Executive Officer for approval shall be made available to the public for a 30-day period to allow for public comment."

[103] *Id.*, Parts VI.C.7, p.66, VI.C.8, pp.66-67.

[104] *Id.*, Part, VI.C.8, p.67. Under another provision of the Order, Permittees may at any time request an extension of deadlines for achievement of interim milestones established to address exceedances of receiving water limitations not otherwise addressed by a TMDL. (*Id.*, Part VI.C.6.a., p.65.) (We note that the cited provision refers to "milestones established pursuant to Part VI.C.4.c.ii.(3)," but the intent appears to have been to reference Part VI.C.5.c.iii.(3).) But as we read the Los Angeles MS4 Order, extensions of not just interim deadlines for achievement of milestones but also final compliance deadlines to achieve receiving water limitations are already allowed under the adaptive management provisions of Part VI.C.8.a.ii.: "Based on the results of the adaptive management process, Permittees shall report any modifications, including where appropriate *new compliance deadlines* and interim milestones, with the exception of those compliance deadlines established in a TMDL, necessary to improve the effectiveness of the Watershed Management Program or EWMP, in the Annual Report . . . ." (Emphasis added.)

[105] *Id.*, Parts VI.C.8, p.67, VI.C.6.a., p.65. We recognize that as currently written the adaptive management provisions in effect deem any modifications to the WMPs/EWMPs approved if the Executive Officer "expresses no objections" within 60 days. (*Id.,* Part VI.C.8.a.iii., p. 67.) With our revisions, any deadline extensions must be affirmatively approved by the Executive Officer.

[106] *Id.*, Part VI.A.5.b, p. 42.

[107] *Id.*, Part VI.A.6, p.42.

is available, as with final deadlines established in TMDLs,[108] or where no extension is requested or granted, failure to meet a deadline means that the Permittee will have to comply from that time forward with the receiving water limitations or WQBELs and other TMDL-specific limitations or request a time schedule order. Therefore, Permittees cannot rely on the certainty of a deadline extension, and Permittees have a strong incentive to implement control measures that will in fact get them to compliance by the established deadline. Given that the Permittees and the Los Angeles Water Board are working with limited data regarding storm water impacts and control measure performance, especially where TMDLs have not been developed, we are hesitant to remove all flexibility for deadline extensions, and find that the Order strikes an appropriate balance.

Permittee Petitioners seek even greater flexibility under the WMP/EWMP provisions for adjusting approved control measures and time lines. They advocate for amendments that would allow a Permittee to propose alternative controls or time lines upon a demonstration that required controls for timely achievement of a limitation are either technically infeasible or otherwise constitute a substantial hardship to the Permittee. We have found above that, in the case of final deadlines set in the WMP/EWMP for achievement of receiving water limitations not otherwise addressed in a TMDL, the Los Angeles MS4 Order already provides for an opportunity to propose new deadlines through the adaptive management process. We will make a clarifying revision below to confirm that Permittees may ask for extensions in meeting receiving water limitations not addressed by a TMDL. Technical infeasibility or substantial hardship may be grounds for such a request. The Los Angeles Water Board Executive Officer, in turn, may, after allowing for public review and comment, choose to (1) extend the deadline, (2) decline the extension but approve any time schedule order requested by the Permittee, or (3) decline the extension and not approve a time schedule order, with the result that the Permittee will be out of compliance with the provision of the WMP/EWMP and therefore the receiving water limitations of Part V.A. As stated previously, interested persons may thereafter ask the Los Angeles Water Board to review the Executive Officer's determination.[109]

With regard to final deadlines for WQBELs and other TMDL-specific limitations, we will not amend the WMP/EWMP provisions to add flexibility for extensions. We find that the only option appropriately available to a Permittee unable to meet final deadlines that are set out in a TMDL and incorporated into the Los Angeles MS4 Order and the WMP/EWMPs, is to

[108] *Id.*, Part VI.C.8.a.ii., p.67.

[109] *Id.*, Part VI.A.6, p.42.

request a time schedule order, consistent with Part VI.E.2.e. of the Order, as that Part was amended in section II.B.3. above.[110]

We shall amend Part VI.C.6.a as follows:

a. Permittees may request an extension of deadlines for achievement of interim milestones **and final compliance deadlines** established pursuant to Part VI.C.4**5**.c.iii.~~(3) only~~**, with the exception of those final compliance deadlines established in a TMDL**. Permittees shall provide requests in writing at least 90 days prior to the deadline and shall include in the request the justification for the extension. Extensions ~~shall be subject to approval by~~ **must be affirmatively approved by** the Regional Water Board Executive Officer, **notwithstanding Part VI.C.8.a.iii.**

c. Rigor and Accountability in the Process

We see three additional components of the WMPs/EWMPs as essential to ensuring that the proposed WMPs/EWMPs are in fact designed to achieve receiving water limitations within the appropriate time frame.

First, as documents to be approved by either the Los Angeles Water Board or its Executive Officer, the WMPs/EWMPs are subject to a public review and comment period.[111] Such review includes consideration of proposed control measures, deadlines for achievement of final limitations, and the reasonable assurance analysis that supports the WMP/EWMP. We expect this public process to vet the proposed WMPs/EWMPs and facilitate revisions to strengthen the programs as needed, thereby providing some assurance that approved WMPs/EWMPs will achieve the water quality targets set out.

Second, the requirement for a reasonable assurance analysis in particular is designed to ensure that Permittees are choosing appropriate controls and milestones for the WMP/EWMP.[112] Competent use of the reasonable assurance analysis should facilitate achievement of final compliance within the specified deadlines.[113]

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[110] Final TMDL deadlines are established and incorporated into the Basin Plans during the TMDL development process. That process invites stakeholder participation and the proposed schedule is subject to public review and comment and approval by the relevant regional water board, the State Water Board, and USEPA. The deadlines are established with consideration of the time needed for compliance for all dischargers contributing to an impairment, including industrial and construction storm water dischargers and traditional NPDES dischargers. Although we recognize that it may not always be feasible for municipal storm water dischargers to meet final TMDL deadlines, short of amending the Basin Plan to modify the deadlines (see *California Association of Sanitation Agencies v. State Water Resources Control Board* (2012) 208 Cal.App.4th 1438), we find it appropriate for the dischargers to request time schedule orders rather than be granted an extension within the provisions of the Los Angeles MS4 Order.

[111] See Los Angeles MS4 Order, Parts VI.C.4.d., p. 57, VI.C.6, p. 65, Table 9, p.54; see also id., Part VI.A.5., p. 42.

[112] *Id.*, Part VI.C.5.b.iv.(5), pp. 63-64.

[113] We note that the Los Angeles Water Board has released guidance on the development of a reasonable assurance analysis. The guidance was released after adoption of the Los Angeles MS4 Order and accordingly is not *(Continued)*

Third, the adaptive management provisions of the Order ensure that the Permittees will evaluate monitoring data and other new information every two years and consider progress up to that point on achieving WQBELs and other TMDL-specific limitations. Permittees are required as part of the adaptive management process to propose modifications to improve the effectiveness of the WMP/EWMP and implement those modifications.[114]

While we are supportive of all of these measures, we find that they should be strengthened. As a preliminary matter, we will require the Permittees to submit specific information, concurrently with the two-year adaptive management process, that will assist the Los Angeles Water Board in determining how effective the WMP/EWMP path is in spurring the completion of on-the-ground structural control measures that lead to measurable water quality improvement. As we discuss further in Section II.B.8 of this Order, we will direct the Los Angeles Water Board to report to the State Water Board periodically on the effectiveness of the WMP/EWMP approach and expect the additional information submitted by the Permittees to inform that report.

More significantly, we will add a provision that requires Permittees to comprehensively update the reasonable assurance analysis and the WMP/EWMP, following an opportunity to implement the adaptive management process. Given the limitations inherent in models, as well as the potential incentive to choose the lowest effort and cost level predicted by the model to achieve receiving water limitations,[115] we are concerned that reliance on one initial reasonable assurance analysis is insufficient to ensure that in the long term WMPs/EWMPs will

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part of the Administrative Record. We nevertheless take this opportunity to state that we expect any revisions and updates to the guidance to be subject to a public process as part of reissuance of the Los Angeles MS4 Order.

[114] Los Angeles MS4 Order, Part VI.C.8., pp. 66-67. We add that the adaptive management process will also allow Permittees to revise their WMPs/EWMPs to take advantage of funding opportunities as they arise in the future, including funding opportunities through Assembly Bill 2403 (approved by Governor, June 28, 2014 (2013-2014 Reg. Sess.)) and Proposition 1 (approved by ballot Nov. 4, 2014). We are cognizant of criticism that the adaptive management process is just another version of the ineffective iterative process of the receiving water limitations. These arguments are misplaced. Unlike the iterative process of the receiving water limitations, the adaptive management process is only one component of a series of actions required under the WMP/EWMP and acts as a periodic check to ensure that all the other requirements are achieving the stated goals of the WMP/EWMP within clearly stated deadlines. As our discussion above makes clear, we would not endorse an alternative compliance path with the sole requirement to adaptively manage implemented control measures. Further, the adaptive management process in the Los Angeles MS4 Order differs from the iterative process in that Permittees must carry out the adaptive management process every two years, limiting any discretionary determination as to when the program must be evaluated. (Los Angeles MS4 Order, Part VI.C.8.a.)

[115] The numerical analysis methods and models approved for use by Permittees for estimating hydrologic conditions and contaminant fate and transport in the watersheds should, in principle, be able to propagate any and all known uncertainty to the outputs and results. It is in the public interest that the Los Angeles Water Board communicate this uncertainty to all stakeholders, as the results in most cases will affect the beneficial uses of California waters. Moreover, it is highly desirable that, to the extent possible, the Los Angeles Water Board define a minimum level of uncertainty (or level of confidence) acceptable for a reasonable assurance analysis to be approved.

achieve relevant water quality goals. . Currently, as stated above, the Permittees are required to implement the adaptive management process every two years from the date of program approval. Under the provision we add, the Permittees will be required to comprehensively update the reasonable assurance analysis (including potentially considering whether the model itself and its assumptions require updating) and the WMP/EWMP after several years of adaptive management, based on previous years' monitoring data and other performance measures. The Permittee will submit a full revised package to the Los Angeles Water Board Executive Officer for approval, following public review.

Given that the WMPs/EWMPs in many cases address water quality targets that are to be achieved a decade or more in the future, a periodic, complete re-consideration and recalibration of the assumptions and predictions that support the proposed control measures and implementation schedule in light of new data, above and beyond the two-year adaptive management requirements of the Los Angeles MS4 Order, is essential, notwithstanding the additional time and effort that Permittees must expend on the update. We also recognize that such review is a staff intensive process for the Los Angeles Water Board, but addressing storm water impacts is a priority for that Board. Although we expect that the update will be necessary in most cases, the new requirements provide that the Executive Officer of the Los Angeles Water Board may waive the requirement for an update if the Permittee demonstrates through water quality monitoring that the WMP/EWMP is meeting appropriate targets. Our direction to require a comprehensive update of the reasonable assurance analyses and the WMPs/EWMPs after several cycles of adaptive management should in no way be construed as limiting the Los Angeles Water Board Executive Officer's discretion to request such updates earlier in the implementation process or the obligation of the Permittees to initiate such updates earlier in the implementation process based on the ongoing adaptive management process.

The second added provision will not be relevant for the permit term of the order before us; however, we anticipate that the next iteration of an MS4 Order for the Los Angeles area will closely track the Los Angeles MS4 Order to allow for continued implementation of the WMP/EWMPs.

We shall amend Part VI.C.8 by adding new subsections a.iv. and b. as follows:

a.

iv. Permittees shall report the following information to the Regional Water Board concurrently with the reporting for the adaptive management process:

(1) On-the-ground structural control measures completed;

(2) Non-structural control measures completed;

(3) Monitoring data that evaluates the effectiveness of implemented control measures in improving water quality;

(4) Comparison of the effectiveness of the control measures to the results projected by the RAA;

(5) Comparison of control measures completed to date with control measures projected to be completed to date pursuant to the Watershed Management Program or EWMP;

(6) Control measures proposed to be completed in the next two years pursuant to the Watershed Management Program or EWMP and the schedule for completion of those control measures;

(7) Status of funding and implementation for control measures proposed to be completed in the next two years.

b. Watershed Management Program Resubmittal Process

i. In addition to adapting the Watershed Management Program or EWMP every two years as described in Part VI.C.8.a., Permittees must submit an updated Watershed Management Program or EWMP with an updated Reasonable Assurance Analysis by June 30, 2021, or sooner as directed by the Regional Water Board Executive Officer or as deemed necessary by Permittees through the Adaptive Management Process, for review and approval by the Regional Water Board Executive Officer. The updated Reasonable Assurance Analysis must incorporate both water quality data and control measure performance data, and any other information informing the two-year adaptive management process, gathered through December 31, 2020. As appropriate, the Permittees must consider any new numeric analyses or other methods developed for the reasonable assurance analysis. The updated Watershed Management Program or EWMP must comply with all provisions in Part VI.C. The Regional Water Board Executive Officer will allow a 60-day public review and comment period with an option to request a hearing. The Regional Water Board Executive Officer must approve or disapprove the updated Watershed Management Program or EWMP by June 30, 2022. The Executive Officer may waive the requirement of this provision, following a 60-day public review and comment period, if a Permittee demonstrates through water quality monitoring data that the approved Watershed Management Program or EWMP is meeting appropriate water quality targets in accordance with established deadlines.

5. Determination of Compliance with Final Requirements

a. Compliance with Final TMDL Requirements[116]

Part VI.E.2.e.i.4. of the Los Angeles MS4 Order provides that Permittees will be deemed in compliance with the final WQBELs and other TMDL-specific limitations if "[i]n drainage areas where Permittees are implementing an EWMP, (i) all non-storm water and (ii) all storm water runoff up to and including the volume equivalent to the 85th percentile, 24 hour event is retained for the drainage area tributary to the applicable receiving water."[117] Part VI.E.2.e.i.4 is one of four options available to the Permittee in Part VI.E.2.e. to be deemed in compliance with WQBELs and other TMDL-specific limitations. The other three options allow a Permittee to establish compliance with a final WQBEL or other TMDL-specific limitation by showing that (1) there are no violations of the final WQBEL; (2) there are no exceedances of the receiving water limitation for the specific pollutant in the receiving water at or downstream of the Permittee's outfall, or (3) there is no direct or indirect discharge from the Permittee's MS4 to the receiving water during any relevant time period.[118] These three options ensure that either the receiving water limitations or WQBELs and other TMDL-specific limitations are in fact being complied with. In contrast, the storm water retention approach assumes compliance with *final* WQBELs and other TMDL-specific limitations, and accordingly, compliance with the receiving water limitations in Part V for the relevant water body-pollutant combinations,[119] even if the final WQBELs and other TMDL-specific limitations are not actually being achieved. The Environmental Petitioners argue that the Los Angeles Water Board has failed to establish through findings and record evidence that the storm water retention approach will in fact achieve compliance with the WQBELs and other TMDL-specific limitations and that the Los Angeles

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[116] The Los Angeles MS4 Order additionally deems compliance with *interim* WQBELs and other TMDL-specific limitations if the "Permittee has submitted and is fully implementing an approved" WMP/EWMP. (Los Angeles MS4 Order, Part VI.E.2.d.i.(4), p. 143; see also *id.*, Part VI.C.3.a., p. 53.) Because Permittees are required to incorporate into the WMP/EWMP compliance schedules "compliance deadlines occurring within the permit term for all applicable interim . . . water quality-based effluent limitations and/or receiving water limitations in Part VI.E and Attachments L through R," we expect that in most cases full implementation of the WMP/EWMP necessarily results in compliance with interim WQBELs and other TMDL-specific limitations. However, to the extent this is not the result reached, we find that requiring implementation of the WMP/EWMP with control measures designed to achieve interim WQBELs and other TMDL-specific limitations, in lieu of showing actual compliance with any *interim* numeric requirements, is consistent with the assumptions and requirements of the wasteload allocations of the relevant TMDLs. (40 C.F.R. § 122.44(d)(1)(vii)(B).)

[117] Los Angeles MS4 Order, Part VI.E.2.e.i.(4), p. 145.

[118] *Id.*, Part VI.E.2.e.i.(1)-(3), pp. 144-45.

[119] We note again that Part VI.E.2.c.i. states that Part VI.E establishes the manner of achieving compliance with the receiving water limitations in Part V.A where the receiving water limitations are associated with water body-pollutant combinations addressed in a TMDL.

MS4 Order's reliance on the storm water retention approach for final compliance determination is therefore contrary to the law.

We are supportive of the EWMP's use of the storm water retention approach as a technical requirement. Retention of storm water is likely to be an effective path to water quality improvement. Furthermore, in addition to preventing pollutants from reaching the receiving water except as a result of high precipitation events (which also generally result in significant dilution in the receiving water), the storm water retention approach has additional benefits including recharge of groundwater, increased water supply, reduced hydromodification effects, and creation of more green space to support recreation and habitat.[120]

We have some concerns, however, with the lack of verification in the Los Angeles MS4 Order that final WQBELs and other TMDL-specific limitations or receiving water limitations will in fact be met as a result of implementation of the storm water retention approach. We acknowledge that, in most cases, the final TMDLs have deadlines outside of the permit term for the Los Angeles MS4 Order and that, therefore, with regard to those, our concerns are more theoretical at this point than immediate. Nevertheless, we agree with the Environmental Petitioners that the evidence in the Administrative Record is not sufficient to establish that the storm water retention approach will in all cases result in achievement of final WQBELs and other TMDL-specific limitations and, more importantly, are concerned that the Order itself does not incorporate clear requirements that would provide for such verification in the process of implementation.

With regard to evidence in the Administrative Record, it is clear that the storm water retention approach is a promising approach for achieving compliance with receiving water limitations, with multiple additional environmental benefits. But the research regarding the storm water retention approach is still in early stages and we cannot say with certainty at this point that implementation will lead to compliance with receiving water limitations in all cases.[121]

With that conclusion in mind, we look to the Los Angeles MS4 Order itself to determine if there are sufficient additional provisions to assure that, in the long run, the storm water retention approach will achieve the ultimate goal of compliance with receiving water limitations. We first note that the Order does not require a reasonable assurance analysis when

[120] See e.g. Administrative Record, section 10.VI.C, RB-AR29263-29311, RB-AR32318-32350.

[121] We reviewed the citations to the Administrative Record provided in the Los Angeles Water Board October 15, 2013 Response and in the October 15, 2013 Responses of many of the Petitioners. We find that the cited studies show the storm water retention to be a promising approach to meeting water quality standards, but do not establish, at a sufficiently high level of confidence, that the storm water retention approach will definitively achieve compliance with the receiving water limitations.

a Permittee opts for the storm water retention approach. Permittees are required to conduct a reasonable assurance analysis for each water body-pollutant combination addressed by a WMP, with the objective of demonstrating the ability of the controls to ensure that MS4 discharges achieve applicable WQBELs and do not cause or contribute to exceedances of receiving water limitations.[122] The relevant provisions reference EWMPs, but elsewhere the Order states that the reasonable assurance analysis is only required for areas covered by the EWMP where retention of the 85th percentile, 24-hour storm event is not feasible.[123] The Fact Sheet also implies that the requirement for a reasonable assurance analysis is confined to situations where the storm water retention approach is not feasible.[124] In sum, then, Permittees that choose to develop and implement an EWMP are required to conduct a reasonable assurance analysis for each waterbody-pollutant combination addressed by the EWMP, except in the drainage areas that are tributary to the storm water retention projects.

The fact that the storm water retention approach does not require a reasonable assurance analysis prior to implementation to demonstrate the ability of the approach to achieve compliance with the limitations is mitigated in part by required monitoring and adaptive management to verify compliance following implementation. Although the provision could be clearer, we read the language "[i]n drainage areas where Permittees are implementing an EWMP" in Part VI.E.2.e.i.(4) to require Permittees to be in compliance with all aspects of the EWMP, including the monitoring and adaptive management provisions of Parts VI.C.7 and 8, to be deemed in compliance with final limitations through the storm water retention approach. As we read the Order, a Permittee's showing that it has retained all non-storm water and all storm water up to and including the volume equivalent to the 85th percentile, 24-hour event, establishes compliance, but only if the Permittee continues to conduct monitoring and adapt the EWMP in response to the monitoring. The Los Angeles Water Board appears to read the Order the way we do, as it states in its October 15, 2013 Response that "the Permit requires monitoring and adaptive management, which will continue to inform the Los Angeles Water Board regarding the efficacy of this storm water retention approach in conjunction with implementation of the other storm water management program elements and any needed

[122] Los Angeles MS4 Order, Part VI.C.5.b.iv.(5), pp. 63-64.

[123] *Id.*, Part VI.C.1.g., p. 48.

[124] *Id.*, Att. F, Fact Sheet, p. F-39.

modifications to the approach."[125] The Los Angeles Water Board further states in comments submitted on a draft of this order, as follows:

> The Los Angeles MS4 Order does not exclude EWMPs or areas within an EWMP where the stormwater retention standard is achieved from the integrated watershed monitoring, assessment and adaptive management processes. Neither does the Los Angeles MS4 Order specify or contemplate an end to the monitoring, assessment and adaptive management processes in the case of a Watershed Management Program (WMP) or EWMP. These required elements, including receiving water and outfall monitoring, evaluation of these monitoring data, and modification of the EWMP to improve its effectiveness, will be continually conducted throughout the Watershed Management Area addressed by the EWMP. . . . The Los Angeles Water Board understood that these regional multi-benefit projects would take time to implement and that Permittees needed to be afforded this time in the Los Angeles MS4 Order. The Los Angeles Water Board will continually evaluate progress during the implementation period. If, as full implementation nears, some Receiving Water Limitations are still not achieved, the Los Angeles Water Board and State Water Board have a variety of tools that can be used at a regional or statewide level including reconsideration of TMDLs, Basin Planning actions, policy development and permitting, among others.[126]

We will make a revision to Part VI.E.2.e.i. to make it clear that the Permittee must be in compliance with all other requirements of the EWMP in addition to implementation of the storm water retention approach in order to be deemed in compliance with the final WQBELs and other TMDL-specific limitations.

With no definitive evidence in the record establishing that the storm water retention approach will achieve final requirements, no reasonable assurance analysis required at the outset, and reliance only on subsequent monitoring and adaptive management to improve results if final limitations are not in fact achieved, the storm water retention approach does not provide a level of assurance of success that would lead us to conclude that its implementation, with nothing else, is sufficient to constitute compliance with final WQBELs and other TMDL-specific limitations. We understand that there are nevertheless very good reasons to encourage its use. Certainly for all non-storm water and for all storm water generated in storms up to the 85th percentile storm, the storm water retention approach achieves compliance because there is no discharge. And there are significant benefits beyond water quality, including most importantly benefits to water supply. We also believe that public projects requiring investment of this magnitude are unlikely to be carried out without a commitment from the water boards that Permittees will be considered in compliance even if the resulting improvement in water quality

[125] Los Angeles Water Board, October 15, 2013 Response, p. 62.

[126] Los Angeles Water Board, Comment Letter, January 21, 2015, pp. 2-3.

does not rise all the way to complete achievement of the final WQBELs and other TMDL-specific limitations.

We are not willing to go as far as saying that compliance with the storm water retention approach alone constitutes compliance with final WQBELs and other TMDL-specific limitations for all time, regardless of the actual results.[127] Nonetheless, we anticipate that implementation of such projects will bring the drainage area most and, in many cases, all of the way to achievement of water quality standards. Where there is still a gap in required water quality improvement, we expect the Executive Officer of the Los Angeles Water Board to require appropriate actions, consistent with the provisions of the Los Angeles MS4 Order and the Los Angeles Water Board's stated interpretation of those provisions,[128] to close that gap with additional control measures in order for the Permittee to be considered in compliance with the WQBEL or other TMDL-specific limitation. There are various mechanisms to provide assurances that additional control measures will be implemented to achieve the WQBEL or other TMDL-specific limitation, and in some instances, it may be appropriate for the Los Angeles Water Board to issue a time schedule order governing the implementation of further control measures. Further, as acknowledged by the Los Angeles Water Board in its comments, in some circumstances, reconsideration of the underlying TMDLs and the final deadlines within those TMDLs may instead be warranted.[129] We additionally recognize that municipal storm water management is an area of continued development and, with continued research and data evaluation, water quality standards may evolve and become more nuanced or sophisticated over time.

While we decline to interpret the storm water retention approach to, in and of itself, constitute compliance with final WQBELs and other TMDL-specific limitations, we emphasize here that any additional control measures to reach compliance that may be required by the Los Angeles Water Board must not require changes to installed storm water retention projects. Any revisions should be prospective in nature and should not disturb projects that Permittees have already installed in good faith to comply with the provisions of their EWMP.

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[127] Further, Permittees still have substantial incentive to develop and implement an EWMP. If a permittee pursues an EWMP, it will be deemed in compliance with the receiving water limitations during the EWMP development phase, and it may also recognize significant non-water quality benefits.

[128] Los Angeles Water Board, Comment Letter, January 21, 2015, pp. 2-3. As explained in footnote 110, at this time we see limited options available to the Los Angeles Water Board in addressing compliance with final deadlines for WQBELs and other TMDL-specific limitations.

[129] We also acknowledge the need for and commit to supporting state-wide solutions for source reduction as appropriate, similar to the brake pad legislation adopted to address copper discharges. (Senate Bill 346 (approved by the Governor September 27, 2010).)

Ultimately, we must set out to verify through appropriate monitoring that final WQBELs and other TMDL-specific limitations can be achieved through the storm water retention approach, or be willing to revise that approach. However, new or additional measures required at that point should be additive to the storm water retention approach measures already installed.

In sum, despite the uncertainty inherent in allowing the storm water retention approach, we concur in its use in the Los Angeles MS4 Order, with the clarification that ultimate compliance is subject to continued planning, monitoring and adaptive management. We shall amend Part VI.E.2.e.i. as follows:

> i. A Permittee shall be deemed in compliance with an applicable final water quality-based effluent limitation and final receiving water limitation for the pollutant(s) associated with a specific TMDL if any of the following is demonstrated:
>
> . . .
>
> (4) In drainage areas where Permittees are implementing an EWMP, (i) all non-storm water and (ii) all storm water runoff up to and including the volume equivalent to the 85th percentile, 24 hour event is retained for the drainage area tributary to the applicable receiving water**, and the Permittee is implementing all requirements of the EWMP, including, but not limited to, Parts VI.C.7 and VI.C.8 of this Order**. This provision (4) shall not apply to final trash WQBELs.

b. Compliance with Final Receiving Water Limitations

The Los Angeles MS4 Order states that for receiving water limitations associated with water-body pollutant combinations addressed in a TMDL, compliance with the TMDL requirements of the Order in Part VI.E and Attachments L through R constitutes compliance with the receiving water limitations in Part V.A.[130] In other words, if there is an exceedance for a pollutant in a water body that has a TMDL addressing that pollutant, as long as the Permittee is complying with the requirements for the TMDL, the Permittee is deemed in compliance with the receiving water limitation. No petitioner has contested this provision and we find that it constitutes an appropriate approach to compliance with receiving water limitations for water body-pollutant combinations that are addressed by a TMDL.

For exceedances of receiving water limitations for a water body-pollutant combination not addressed by a TMDL, as previously discussed, the Permittee must either incorporate control measures to address the exceedances into the Permittee's WMP/EWMP or comply directly with the receiving water limitations provisions of Part V.A of the Order. For

[130] Los Angeles MS4 Order, Part VI.E.2.c.ii., p. 143.

Permittees that choose the WMP/EWMP approach, the WMP/EWMP must incorporate "a final date for achieving the receiving water limitation."[131] To the extent the Permittee does not achieve the limitation by that final date and does not request and receive an extension, the Permittee has "fail[ed] to meet [a] requirement or date for its achievement in an approved Watershed Management Program or EWMP"[132] and is immediately subject to the receiving water limitations provisions of the Order, with the same result that it is out of compliance. In other words, implementation of non-structural and structural control measures in accordance with the timelines established in the WMP/EWMP constitutes compliance with the receiving water limitations up until the final deadline for achievement of the relevant receiving water limitation; however, at the deadline for final compliance, there must be verification of achievement based on the receiving water limitation itself. While we find that the Order provisions lead to this result as written, for the sake of greater clarity, we will specifically state that final compliance with receiving water limitations must be determined through verification that the receiving water limitation is actually being achieved.

We shall amend Part VI.C.2.c. as follows:

> **c.** If a Permittee fails to meet any requirement or date for its achievement in an approved Watershed Management Program or EWMP, the Permittee shall be subject to the provisions of Part V.A. for the waterbody-pollutant combination(s) that were to be addressed by the requirement. **For water body-pollutant combinations that are not addressed by a TMDL, final compliance with receiving water limitations is determined by verification through monitoring that the receiving water limitation provisions in Part V.A.1 and 2 have been achieved.**

c. Compliance with the Non-Storm Water Discharge Prohibition

The Environmental Petitioners suggest that the Los Angeles MS4 Order is unclear as to whether compliance with the WMP/EWMP may also constitute compliance with the non-storm water discharge prohibition of the Order. We disagree that the Los Angeles MS4 Order is unclear on this issue. The Permittees' obligation to comply with the receiving water limitations and WQBELs and other TMDL-specific limitations in Parts V.A and VI.E is independent of the Permittees' obligation to comply with the effective prohibition of non-storm water discharges in Part III.A. The several provisions stating that Permittees will be deemed to be in compliance with the receiving water limitations of the Los Angeles MS4 Order for implementing the WMP/EWMP specifically reference Parts V.A and VI.E of the Order and not

[131] *Id.*, Part VI.C.5.c.iii.(3)(b), p. 65.

[132] *Id.*, Part VI.C.2.c., p. 52.

III.A.[133] This notwithstanding, Parts VI.C.1.d and VI.C.5.b.iv.(2) require that a Permittee's WMP/EWMP include program elements and control measures to effectively prohibit non-storm water discharges consistent with Part III.A and Part VI.D.4.d or VI.D.10. Therefore, a Permittee's implementation of program elements and control measures consistent with Part III.A and Part VI.D.4.d or VI.D.10, through its approved WMP/EWMP, may provide a mechanism for compliance with Part III.A. Although we accordingly see no need to direct revisions to the Order, we provide this clarification here to respond to the Environmental Petitioners' concern and address any confusion that may exist.

6. "Safe Harbor" During the Planning Phase for the WMP/EWMP

Under the Los Angeles MS4 Order, a Permittee that has declared its intention to develop a WMP/EWMP is deemed in compliance with the receiving water limitations and with interim WQBELs with due dates prior to approval of the WMP/EWMP for the water body-pollutant combinations the WMP/EWMP addresses, provided it meets certain conditions, even though the Permittee is developing, not implementing the WMP/EWMP. Specifically, the Permittee is deemed in compliance if the Permittee (1) provides timely notice of its intent to develop a WMP/EWMP; (2) meets all interim and final deadlines for development of a WMP/EWMP; (3) targets implementation of watershed control measures in the existing program

[133] Los Angeles MS4 Order, Parts VI.C.2.b., p. 52, VI.C.3.a., p. 53, VI.E.2.c.ii., p. 143, VI.C. 2.d., pp. 52-53, VI.E.2.d.i.(4)(d), p. 144. To the extent that a non-storm water discharge authorized by Part III.A may be causing or contributing to an exceedance of receiving water limitations in V.A, compliance with the WMP/EWMP provisions would constitute compliance with the receiving water limitations and any relevant interim WQBELs and other TMDL-specific limitations, as long as the WMP/EWMP addresses the water body-pollutant combination for that water body. However, the discharger would have to additionally comply with requirements in Part III.A. and Part VI.D.4.d or VI.D.10 through its approved WMP/EWMP for conditionally exempt non-storm water discharges that are found to cause or contribute to an exceedance in the receiving water. (See *id.*, Part III.A.4.c.-e., pp. 31-32.) We disagree that every discharge from a Permittee's MS4 to the receiving water of non-storm water that is not specifically authorized under Part III.A will necessarily be subject to enforcement under the Los Angeles MS4 Order. Section 402(p)(3)(B)(ii) of the Clean Water Act imposes a requirement to "effectively prohibit" non-storm water discharges. Part III.A of the Los Angeles MS4 Order effectuates that requirement with a requirement for the Permittee to prohibit non-storm water discharges: "Each Permittee shall, for the portion of the MS4 for which it is an owner or operator, prohibit non-storm water discharges through the MS4 to receiving waters, except where such discharges are . . . [listing exceptions]." (Los Angeles MS4 Order, Part III.A.1, p. 27.) The Los Angeles MS4 Order incorporates a specific and detailed programmatic requirement – the Illicit Connections and Illicit Discharges Elimination Program – for the Permittees to achieve their obligation to effectively prohibit non-storm water discharges. (Los Angeles MS4 Order, Parts VI.D.4.d., pp. 81-86, VI.D.10, pp. 137-141.) We recognize that even the most comprehensive efforts to address unauthorized non-storm water discharges may not eliminate all such discharges. Where a Permittee is fully implementing its Illicit Connections and Illicit Discharges Elimination Program, either pursuant to Parts VI.D.4.d. or VI.D.10, or by incorporation of customized actions into a WMP/EWMP as approved by the Los Angeles Water Board (see Los Angeles MS4 Order Part VI.D.1.a., p. 67), we would expect any enforcement action under Part III.A to be supported by a fact-specific analysis of the nature and source of the unauthorized non-storm water discharge and the efforts of the Permittee to prohibit the discharge.

to address known contributions of pollutants; and (4) receives approval of the WMP/EWMP within the specified time periods.[134]

The Environmental Petitioners object to the availability of a "safe harbor" during the planning phase. We disagree with the Environmental Petitioners that providing a "safe harbor" in the planning phase is disallowed by applicable law -- see our discussion of anti-backsliding requirements in section II.B.1. and antidegradation requirements in section II.B.2. However, we understand that deeming a discharger in compliance with receiving water limitations during the planning phase, not just the implementation phase, could weaken the incentive for Permittees to efficiently and timely seek approval of a WMP/EWMP and to move on to implementation. It is the implementation of the WMP/EWMP that will in fact lead to progress toward compliance with receiving water limitations; the planning phase is essential, but should be only as long as necessary for a well-planned program with carefully analyzed controls to be developed. Given the significance of the water quality issues addressed by the WMP/EWMPs, it is paramount that implementation begin as soon as feasible. Accordingly, the "safe harbor" in the planning phase is appropriate only if it is clearly constrained in a manner that sustains incentives to move on to approval and implementation and is structured with clear, enforceable provisions.

Having reviewed the planning sections of the WMP/EWMP provisions carefully, we find that the Los Angeles MS4 Order does sufficiently constrain the planning phase, so that the "safe harbor" provided is not unreasonable. As already stated, compliance is deemed only if the Permittee is meeting the relevant deadlines for development and approval of the WMP/EWMP.[135] There are no provisions in the Order that allow for extensions to these deadlines. If a Permittee fails to obtain approval within the allowed number of months for the development of a WMP/EWMP, the Order states that the Permittee must then instead demonstrate actual compliance with receiving water limitations and with applicable interim WQBELs.[136] The Los Angeles MS4 Order is also clear that achievement of any TMDL-associated final deadlines occurring prior to the approval deadlines for the WMP/EWMP cannot be excused through commitment to planning for a WMP/EWMP.[137]

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[134] *Id.*, Parts VI.C.2.d., p. 52, VI.C.3.b., p. 53, VI.E.2.d.i.(4)(d), p. 144.

[135] *Id.*, Parts VI.C.2.d., p. 52, VI.C.3.b., p. 53, VI.E.2.d.i.(4)(d), p. 144.

[136] *Id.*, Part VI.C.4.e., p. 58.

[137] *Id.*, Parts VI.C.3.c., p. 53, VI.C.4.d.iii, p. 58. Under Part VI.C.4.d.iii., Permittees must ensure that MS4 discharges achieve compliance with interim, in addition to final, trash WQBELs during the planning phase.

Further, Permittees are subject to a number of conditions during the planning phase that will ensure that progress toward achievement of receiving water limitations is not put on hold pending approval of the plan. These include requirements to put in place Low Impact Development (LID) ordinances and green streets policies[138] and to continue to implement watershed control measures in the existing storm water management programs, including those to eliminate non-storm water discharges,[139] but in a manner that is targeted to address known pollutants.[140]

Given the clear, enforceable requirements limiting the planning phase of the WMP/EWMP provisions, we find that the Los Angeles MS4 Order's inclusion of provisions deeming compliance with the receiving water limitations and with interim WQBELs during development of the programs is reasonable.

In fact, we are concerned that the Los Angeles Water Board has left no room for any deviation from the prescribed development schedule for WMP/EWMPs. A Permittee working in good faith to develop a WMP/EWMP over multiple months may encounter an issue that requires it to ask for a short extension on an interim or final deadline. Under such circumstances, the Los Angeles Water Board should be able to consider the request for the extension, rather than have its hands tied and have to reject a WMP/EWMP based on lack of timeliness. We will add a provision to the Order that provides the Los Angeles Water Board or its Executive Officer discretion in granting such extensions, but the Permittee will not be deemed in compliance with the applicable receiving water limitations and WQBELs during the period of the extension.

We shall add a new Part VI.C.4.g. as follows:

> **g. Permittees may request an extension of the deadlines for notification of intent to develop a Watershed Management Program or EWMP, submission of a draft plan, and submission of a final plan. The extension is subject to approval by the Regional Water Board or the Executive Officer. Permittees that are granted an extension for any deadlines for development of the WMP/EWMP shall be subject to the baseline requirements in Part VI.D and shall demonstrate compliance with receiving water limitations pursuant to Part V.A. and with applicable interim water quality-based effluent limitations in Part VI.E pursuant to subparts VI.E.2.d.i.(1)-(3) until the Permittee has an approved WMP/EWMP in place.**

[138] *Id.*, Part VI.C.4.c., pp. 56-57.

[139] *Id.*, Part VI.C.4.d.i.-ii., pp. 57-58.

[140] *Id.*, Parts VI.C.2.d.iii., pp. 52-53, VI.C.3.b.iii., p. 53, VI.E.2.d.i.(4)(d)(3), p. 144.

7. Conclusion

In conclusion, we uphold the WMP/EWMP provisions as a reasonable alternative compliance option for meeting receiving water limitations and uphold the WMP/EWMP provisions in all other aspects, except as specifically stated above. We find that the WMP/EWMP approach is a clearly defined, implementable, and enforceable alternative to the receiving water limitations provisions that we mandated in Order WQ 99-05, and that the alternative provides Permittees an ambitious, yet achievable, path forward for steady and efficient progress toward achievement of those limitations while remaining in compliance with the terms of the permit.

We direct all regional water boards to consider the WMP/EWMP approach to receiving water limitations compliance when issuing Phase I MS4 permits going forward.[141] In doing so, we acknowledge that regional differences may dictate a variation on the WMP/EWMP approach, but believe that such variations must nevertheless be guided by a few principles.[142] We expect the regional water boards to follow these principles unless a regional water board makes a specific showing that application of a given principle is not appropriate for region-specific or permit-specific reasons.

1. The receiving water limitations provisions of Phase I MS4 permits should continue to require compliance with water quality standards in the receiving water and should not deem good faith engagement in the iterative process to constitute such compliance. The Phase I MS4 permits should therefore continue to use the receiving water limitations provisions as directed by State Water Board Order WQ 99-05.

[141] We acknowledge that small MS4s permitted under the statewide General Permit for WDRs for Storm Water Discharges from Small MS4s (Order No. 2013-0001-DWQ) (General Phase II MS4 Permit) have similar practical issues as Phase I permittees in complying with receiving water limitations. Nevertheless, because the General Phase II MS4 Permit is issued by the State Water Board, not the regional water boards, we limit our guidance to regional water boards to the Phase I permits. The State Water Board is committed to working with small MS4s, the regional water boards, and interested persons in developing an alternative compliance option for the General Phase II MS4 Permit.

[142] In considering appropriate guidance for regional water boards drafting alternative compliance paths in municipal storm water permits, we have reviewed the proposed "strategic compliance program" model language that was submitted by the California Stormwater Quality Association (CASQA) and supported in whole or in part by a number of interested persons. (CASQA August 15, 2013 Receiving Water Limitations Submission, Attachment A, Section E.) While we have not in these proceedings adopted the CASQA language, or, for that matter, any specific language, for alternative compliance path provisions, regional water boards remain free to consider and incorporate the CASQA approach into their municipal storm water permits to the extent they determine and document that the approach, including any modifications, satisfies the principles we set out in this section as well as all other direction we have provided in this order.

2. The Phase I MS4 permits should include a provision stating that, for water body-pollutant combinations with a TMDL, full compliance with the requirements of the TMDL constitutes compliance with the receiving water limitations for that water body-pollutant combination.
3. The Phase I MS4 permits should incorporate an ambitious, rigorous, and transparent alternative compliance path that allows permittees appropriate time to come into compliance with receiving water limitations without being in violation of the receiving water limitations during full implementation of the compliance alternative.
4. The alternative compliance path should encourage watershed-based approaches, address multiple contaminants, and incorporate TMDL requirements.
5. The alternative compliance path should encourage the use of green infrastructure and the adoption of low impact development principles.
6. The alternative compliance path should encourage multi-benefit regional projects that capture, infiltrate, and reuse storm water and support a local sustainable water supply.
7. The alternative compliance path should have rigor and accountability. Permittees should be required, through a transparent process, to show that they have analyzed the water quality issues in the watershed, prioritized those issues, and proposed appropriate solutions. Permittees should be further required, again through a transparent process, to monitor the results and return to their analysis to verify assumptions and update the solutions. Permittees should be required to conduct this type of adaptive management on their own initiative without waiting for direction from the regional water board.

8. Direction to the Los Angeles Water Board to Report to the State Water Board on Implementation

We recognize that our review has been limited to the provisions of the Los Angeles MS4 Order. The success of the WMP/EWMP approach depends in large part on the steps that follow adoption of these provisions, i.e., the effort invested by Permittees in developing WMPs/EWMPs that truly address the stringent provisions of the Order, the precision with which the Los Angeles Water Board reviews the draft programs and requires revisions, and, most importantly, the actual implementation and appropriate enforcement of the programs once approved. The work going forward must ensure that the WMPs/EWMPs in fact exhibit the rigor and accountability the provisions of the Los Angeles MS4 Order demand. We expect that the Los Angeles Water Board will make careful oversight and enforcement a priority and that they will be aided in this process by the public review and comment opportunities built into the terms of the Order.

The process of developing the WMPs/EWMPs is currently ongoing -- the Los Angeles Water Board has been reviewing draft and revised draft WMPs and workplans for EWMPs – and, although we have been asked by the Environmental Petitioners to take official notice of some of the submissions and conditional approvals in the process, it is premature for the State Water Board to speak to the sufficiency of the resulting WMPs/EWMPs until the Los Angeles Water Board, with full input from the stakeholders, has had the opportunity to consider, revise, and finally approve the programs. We note again that all documents submitted to the Los Angeles Water Board Executive Officer for approval are subject to a 30-day public comment period[143] and that any formal determination or approval by the Executive Officer may be reviewed by the Los Angeles Water Board upon request by an interested person.[144] And an interested person may petition the State Water Board to review an action or failure to act of the Los Angeles Water Board.[145]

Once the WMPs/EWMPs are approved, ensuring that they are diligently and timely implemented must remain a top priority for the Los Angeles Water Board. We expect that the Los Angeles Water Board will continue to work cooperatively and closely with the Permittees, the Environmental Petitioners, and other interested persons in this process, but that the Board will also use its enforcement authority to ensure that appropriate progress is made toward water quality goals. We intend to remain involved in this process, as we must learn statewide from the successes and shortcomings of the approach we are endorsing with this order. We accordingly direct the Los Angeles Water Board to report to us on progress in implementation of the WMPs/EWMPs, and progress in improving water quality during this and the next permit term by February 28, 2018, by February 29, 2020, and by March 31, 2022. Specifically, we ask that the Los Angeles Water Board report on region-wide data for the following:

- On-the-ground structural control measures completed;
- Non-structural control measures completed;
- Monitoring data that evaluates the effectiveness of implemented control measures in improving water quality;

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[143] Los Angeles MS4 Order, Part V.A.5.b, p. 42.

[144] *Id*., Part V.A.6, p. 42.

[145] Wat. Code, § 13320. On April 28, 2015, the Executive Officer of the Los Angeles Water Board conditionally approved several submitted WMPs. On May 28, 2015, the Environmental Petitioners filed a petition challenging the conditional approvals and requesting review by the Los Angeles Water Board and by the State Water Board of the Executive Officer's determination.

- Comparison of the effectiveness of the control measures to the results projected by the reasonable assurance analyses;
- Comparison of control measures completed to date with control measures projected to be completed to date pursuant to the WMPs/EWMPs;
- Control measures proposed to be completed in the next two years pursuant to the WMPs/EWMPs and the schedule for completion of those control measures;
- Status of funding and implementation for control measures proposed to be completed in the next two years;
- Trends in receiving water quality related to pollutants typically associated with storm water;
- Available permit compliance data, including requests for compliance extensions;
- Enforcement actions taken and results.

In addition to covering the above information, the third report shall summarize and reflect the comprehensive information gathered through the updates of the reasonable assurance analyses and WMPs/EWMPs conducted by the Permittees in the second permit term.

C. Appropriateness of TMDL Requirements

Section 303(d) of the Clean Water Act requires the water boards to identify impaired water bodies that do not meet water quality standards after applying required technology-based effluent limitations.[146] TMDLs are developed by either the regional water boards or by USEPA in response to section 303(d) listings of impaired water bodies. A TMDL is defined as the sum of the individual wasteload allocations for point sources of pollution, the load allocations for nonpoint sources of pollution, and the contribution from background sources of pollution,[147] and represents the maximum amount of a pollutant that a water body may receive and still achieve water quality standards. TMDLs developed by regional water boards include implementation provisions[148] and are typically incorporated into the regional water board's water quality control plan.[149] TMDLs developed by USEPA typically contain the total load and load allocations required by section 303(d), but do not set out comprehensive implementation provisions.[150] Most TMDLs are not self-executing, but instead rely upon subsequently-issued permits to impose requirements on discharges that implement the TMDLs' wasteload

[146] 33 U.S.C. § 1313(d).

[147] 40 C.F.R. § 130.2(i).

[148] Wat. Code, §§ 13050, subd. (j), 13242.

[149] See 40 C.F.R. §§ 130.6(c)(1).

[150] *Am. Farm Bureau Fed'n v. U.S. E.P.A.* (M.D. Pa. 2013) 984 F. Supp. 2d 289, 314.

allocations.[151] The Los Angeles MS4 Order includes TMDL-specific requirements that implement 33 TMDLs (twenty-five adopted by the Los Angeles Water Board, seven established by USEPA, and one adopted by the Santa Ana Regional Water Quality Control Board that assigned requirements to two Permittees of the Los Angeles MS4 Order) in Part VI.E and in Attachments L-R.

Petitioners raise a number of challenges to the TMDL-based requirements of the Los Angeles MS4 Order. We take up several of those arguments in this section.[152]

1. Inclusion of Numeric WQBELs

Permittee Petitioners argue that the numeric WQBELs incorporated into the Los Angeles MS4 Order as TMDL-based limitations are contrary to the Clean Water Act and to state law and policy. We disagree.

Under the federal regulations implementing the Clean Water Act, effluent limitations in NPDES permits developed to achieve water quality standards must be consistent with the assumptions and requirements of any available wasteload allocation for the discharge.[153] In addition, the Porter-Cologne Act requires that waste discharge requirements implement any relevant water quality control plans,[154] including TMDL requirements that have been incorporated into the water quality control plans. The Los Angeles MS4 Order incorporates numeric WQBELs and other limitations that the Los Angeles Water Board found are consistent with the TMDL requirements applicable to the Permittees.

Permittee Petitioners argue that there is no requirement under federal law for incorporation of TMDL requirements into an MS4 permit and that the inclusion of the requirements in Part VI.E and in Attachments L-R was therefore at the discretion of the Los Angeles Water Board. They point out, as we acknowledged in section II.A, that MS4 discharges must meet a technology-based standard of prohibiting non-storm water discharges and reducing pollutants in the discharge to the MEP, but that requirements to strictly meet water quality standards are at the discretion of the permitting agency.[155] Because TMDL requirements are a path to achieving water quality standards, the Permittee Petitioners argue, the Los Angeles Water Board had the discretion not to include them in the Los Angeles MS4 Order.

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[151] *City of Arcadia v. EPA* (N.D. Cal. 2013) 265 F.Supp.2d 1142, 1144-1145.

[152] We note that we do not take up any arguments that challenge the terms of the TMDLs. Those arguments should have been made during the public process when the TMDLs were adopted. They are untimely now.

[153] 40 C.F.R. § 122.44(d)(1)(vii)(B).

[154] Wat. Code, § 13263, subd. (a).

[155] 33 U.S.C. § 1342(p); *Defenders of Wildlife*, *supra*, 191 F.3d 1159.

Answering the question of whether the Los Angeles Water Board was required under federal law to strictly effectuate TMDL compliance through the Los Angeles MS4 Order is a largely irrelevant exercise because we have already reaffirmed in this order that we will continue to require water quality standards compliance in MS4 permits. Further, given the back-stop nature of TMDLs, and the fact that each set of dischargers must meet their share of the allocation to reach the total reductions set out, a regime in which municipal storm water dischargers were given a pass on TMDL obligations would render the promise of water quality standards achievement through TMDLs illusory. This is especially true in a large urbanized area where pollutants in storm water constitute a significant share of the impairment and where other dischargers would be disproportionately burdened if MS4s were not held to their allocations. Although not dispositive, we also note that USEPA has assumed in guidance (discussed in more detail below) issued on storm water and TMDL implementation that MS4 permits must incorporate effluent limitations consistent with the assumptions and requirements of relevant wasteload allocations.[156] To the extent the TMDL provisions of the Clean Water Act and the federal regulations could be read to preclude mandatory incorporation of wasteload allocations into an MS4 permit, effluent limitations consistent with those load allocations should nevertheless be required under Clean Water Act section 402, subsection (p)'s direction that the MS4 permit shall require "such other controls" as the permitting authority determines "appropriate for the control of such pollutants."[157] Finally, for TMDLs incorporated into water quality control plans, the implementation plan associated with the TMDL applies to all dischargers named, including MS4 permittees, and the MS4 permits must be consistent with the direction in the water quality control plan.[158]

Having found that the Los Angeles Water Board acted in a manner consistent with federal and state law when it developed WQBELs to address applicable TMDLs, we next turn to whether *numeric* WQBELs were appropriate. We find that the Los Angeles Water Board

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[156] USEPA, Memorandum, "Establishing Total Maximum Daily Load Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs," (Nov. 22, 2002) (2002 USEPA Memorandum); see also USEPA, Memorandum, "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs,' " (Nov. 26, 2014) (2014 USEPA Memorandum). The 2014 USEPA Memorandum replaced a memorandum with the same title issued on November 12, 2010, which was subsequently opened to public comment. (USEPA Statement (March 17, 2011), available at <http://water.epa.gov/polwaste/npdes/stormwater/upload/sw_tmdlwla_comments.pdf> (as of Nov. 18, 2014).)

[157] 33 U.S.C. § 1342(p)(3)(B)(iii). See, e.g., State Water Board Orders WQ 91-03, WQ 91-04, WQ 98-01, WQ 99-05, WQ 2001-15.

[158] Wat. Code, § 13263, subd. (a); see also *State Water Res. Control Bd. Cases* (2006) 136 Cal. App. 4th 674, 730 (noting the obligation of the water boards to follow the program of implementation included in a water quality control plan).

acted within its legal authority when establishing numeric WQBELs, and further that its choice of numeric WQBELs was a reasonable exercise of its policy discretion.

In the context of MS4 discharges, effluent limitations in NPDES permits may be expressed in the form of either numeric limitations or best management practices (BMPs). The federal regulations specifically state that BMP-based effluent limitations may be used to control pollutants for storm water discharges.[159] USEPA has issued two memoranda, on November 22, 2002 (2002 USEPA Memorandum), and on November 26, 2014 (2014 USEPA Memorandum), providing guidance to the states on translating wasteload allocations for storm water into effluent limitations in NPDES Permits.[160] The 2002 USEPA Memorandum contemplated that "the NPDES permitting authority will review the information provided by the TMDL . . . and determine whether the effluent limit is appropriately expressed using a BMP approach (including an iterative BMP approach) or a numeric limit."[161] The 2002 USEPA Memorandum further stated that "EPA expects that most WQBELs for NPDES-regulated municipal . . . storm water discharges will be in the form of BMPs, and that numeric limits will be used only in rare instances."[162] The 2014 USEPA Memorandum, after noting the increased information available to the permitting agencies after more than a decade of experience with setting wasteload allocations and effluent limitations, explained that:

> Where the TMDL includes WLAs for stormwater sources that provide numeric pollutant loads, the WLA should, where feasible, be translated into effective, measurable WQBELs that will achieve this objective. This could take the form of a numeric limit, or of a measurable, objective BMP-based limit that is projected to achieve the WLA. . . . The permitting authority's decision as to how to express the WQBEL(s), either as numeric effluent limitations or as BMPs, with clear, specific, and measurable elements, should be based on an analysis of the specific facts and circumstances surrounding the permit, and/or the underlying

[159] 40 C.F.R. § 122.44(k)(2); see also 33 U.S.C. § 1342(p)(3)(B)(iii). 40 Code of Federal Regulations section 122.44(k)(3) further contemplates that BMP-based effluent limitations are appropriate where it is infeasible to develop a numeric effluent limitation.

[160] 2002 USEPA Memorandum; 2014 USEPA Memorandum. In addition to the two memoranda, USEPA published guidance titled "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits" ((Sept. 1996) 61 Federal Register 57425), which recommended inclusion of BMPs in first-round permits, and expanded or better-tailored BMPs in subsequent permits. In 2005, the State Water Board assembled a blue ribbon panel to address the feasibility of including numeric effluent limits as part of NPDES municipal, industrial, and construction storm water permits. The panel issued a report dated June 19, 2006, which included recommendations as to the feasibility of including numeric limitations in storm water permits. The report concluded that it was not feasible, at that time, to set enforceable numeric effluent limitations for municipal storm water discharges.

[161] 2002 USEPA Memorandum, p. 5.

[162] *Id*., p. 2.

WLA, including the nature of the stormwater discharge, available data, modeling results, and other relevant information. [163]

Both options – to choose BMP-based WQBELs or to choose numeric WQBELs – were legally available to the Los Angeles Water Board. In adopting numeric WQBELs, the Los Angeles Water Board analyzed the specific facts and circumstances surrounding storm water discharges in the region and reasonably concluded that numeric WQBELs were warranted because storm water discharges constituted a significant contributor to the water quality standards exceedances in the area and the exceedances had not been to date resolved through BMP-based requirements. Moreover, the Los Angeles Water Board concluded that it could feasibly develop numeric WQBELs following the extensive work already conducted to develop the TMDLs, which involved analyzing pollutant sources and allocating loads using empirical relationships or quantitative models. We will not second-guess the determination of the Los Angeles Water Board, given its extensive and unique role in developing the TMDLs and the permit to implement the TMDLs, that numeric WQBELs were appropriate for the Los Angeles MS4 Order.[164]

We emphasize, however, that we are not taking the position that numeric WQBELs are appropriate in all MS4 permits or even with respect to certain TMDLs within an MS4 permit. In a recent amendment to State Water Board Order 2011-0011-DWQ, NPDES Statewide Storm Water Permit for State of California Department of Transportation (Caltrans),[165] we found BMP-based TMDL requirements to be "consistent with the assumptions and requirements of the WLAs" of the TMDLs applicable to Caltrans. That determination was based on a number of factors including the fact that Caltrans, a single discharger, was named in over 80 TMDLs statewide, the fact that Caltrans had relatively little contribution to the exceedances in each of those TMDLs, and the consideration that there was significant efficiency to be gained by streamlining and standardizing control measure implementation throughout Caltrans' statewide storm water program. Similarly, regional water boards may find BMP-based requirements to be appropriate based on TMDL-specific, region-specific, or permittee-specific

[163] 2014 USEPA Memorandum, p. 6.

[164] The Los Angeles Water Board incorporated a discussion in the Fact Sheet of how the TMDL wasteload allocations were translated into numeric WQBELs in order to implement the TMDLs in the Los Angeles MS4 Order. (Los Angeles MS4 Order, Att.F, Fact Sheet, pp. F-89-F-100). See 40 C.F.R. § 124.8. We are not independently reviewing the calculations and analyses underlying the specific numeric limitations arrived at by the Los Angeles Water Board; rather, our review has been limited to a determination of whether the choice of numeric rather than BMP-based limitations was reasonable. To the extent any petitioners asked us to independently review the issue in their petitions seeking review of the Order, the issue is dismissed. See fn. 11.

[165] State Water Board Order WQ 2014-0077-DWQ.

considerations. In many ways, the Los Angeles MS4 Order was uniquely positioned to incorporate numeric WQBELs because of the extensive TMDL development in the region in the past decade and the documented role of MS4 discharges in contributing to the impairments addressed by those TMDLs. Thus, while we decline to remove the numeric WQBELs from the Los Angeles MS4 Order, we also decline to urge the regional water boards to use numeric WQBELs in all MS4 permits. [166]

2. Requirement for Reasonable Potential Analysis

The federal regulations implementing NPDES permitting require the permitting authority to establish WQBELs for point source discharges when those discharges cause, have the "reasonable potential" to cause, or contribute to an excursion above water quality standards.[167] Permittee Petitioners argue that the Los Angeles Water Board did not conduct an appropriate reasonable potential analysis prior to imposing numeric WQBELs. The argument is misguided. The Los Angeles Water Board established that the MS4 discharges can cause or contribute to exceedances of water quality standards through the process of developing TMDLs and assigning wasteload allocations. At the permitting stage, the Los Angeles Water Board's legal obligation was to develop WQBELs "consistent with the assumptions and requirements of any wasteload allocation" in the TMDLs,[168] and not to reconsider reasonable potential.[169]

3. USEPA-Established TMDLs

USEPA has established seven TMDLs that include wasteload allocations for MS4 discharges covered by the Los Angeles MS4 Order. In contrast to state-adopted TMDLs, USEPA-established TMDLs do not contain an implementation plan or schedule for achievement of the wasteload allocations,[170] with the effect that Permittees must comply with wasteload allocations immediately. To avoid this result, the regional water board may either adopt a

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[166] Relying on the 2014 USEPA Memorandum, Permittee Petitioners also argue that the Los Angeles Water Board was required to disaggregate storm water sources within applicable TMDLs. The 2014 USEPA Memorandum only encourages permit writers to assign specific shares of the wasteload allocation to specific permittees during the permitting process, reasoning that permit writers may have more detailed information than the TMDL writers to assign reductions for specific sources. (2014 USEPA Memorandum, p.8.) In an MS4 system as complex and interconnected as that covered under the Los Angeles MS4 Order, we do not expect the permitting authority to be able to disaggregate wasteload allocations by discharger. Further, as discussed in section II.F. on joint responsibility, the Los Angeles MS4 Order has provided a means for Permittees with commingled discharges to demonstrate that they are not responsible for any given exceedance of a limitation.

[167] 40 C.F.R. § 122.44(d)(1)(iii).

[168] 40 C.F.R. § 122.44(d)(1)(vii)(B).

[169] See USEPA, NPDES Permit Writers Manual (updated September 2010), Chapter 6, section 6.3.3.

[170] See, e.g., *Am. Farm Bureau Fed'n v. U.S. E.P.A., supra,* 984 F. Supp. 2d at p. 314.

separate implementation plan as a water quality control plan amendment[171] or issue the Permittee a compliance order with a compliance schedule.[172] For the seven USEPA-established TMDLs applicable to the Permittees, the Los Angeles Water Board authorizes Permittees subject to a wasteload allocation in a USEPA-established TMDL to propose control measures that will be effective in meeting the wasteload allocation, and a schedule for their implementation that is as short as possible, as part of a WMP/EWMP. [173] Permittees that do not submit an adequate WMP/EWMP are required to demonstrate compliance with the wasteload allocations immediately.[174]

Permittee Petitioners argue that the Los Angeles Water Board has acted inconsistently in requiring BMP-based compliance with the USEPA-established TMDLs but requiring numeric WQBELs for the state-established TMDLs. We have already stated above in section C.1 that the permitting authority has discretion to choose between BMP-based and numeric effluent limitations depending on fact-specific considerations. The Los Angeles Water Board was not restricted to choosing one single uniform approach to implementing all 33 TMDLs in the Los Angeles MS4 Order. In fact, straight-jacketing NPDES permit writers to choose one approach to the exclusion of another, even within the confines of a single MS4 permit, would run afoul of USEPA's expectations in the 2014 USEPA Memorandum for a fact-specific, documented justification for the permit requirements included to implement a wasteload allocation.

The Environmental Petitioners argue that the provisions are contrary to law because they excuse Permittees from complying with final numeric wasteload allocations as long as they are implementing the BMPs proposed in the WMP/EWMP. The approach taken by the Los Angeles MS4 Order to compliance here is similar to the provisions for compliance with receiving water limitations that are not otherwise addressed by a TMDL: The Permittee proposes control measures and a timeline that is as short as possible and is considered in compliance with the final numeric limitations while implementing the control measures consistent with the schedule. We find that, given the absence of an implementation plan with final compliance deadlines specified in the Los Angeles Water Board's water quality control

[171] Wat. Code, § 13242.

[172] *Id.*, See, e.g., § 13300.

[173] The Los Angeles MS4 Order's Fact Sheet states that the Los Angeles Water Board may choose to adopt implementation plans or issue enforcement orders in the future. (Los Angeles MS4 Order, Att. F, Fact Sheet, p. F-111.)

[174] Los Angeles MS4 Order, Part VI.E.3., pp. 145-146.

plan, this approach is consistent with the assumptions and requirements of the relevant wasteload allocations. We will not revise the provisions.

D. Non-Storm Water Discharge Provisions

Permittee Petitioners argue that the non-storm water discharge provisions of the Los Angeles MS4 Order are contrary to the Clean Water Act. Specifically, Permittee Petitioners assert that the Los Angeles MS4 Order improperly regulates non-storm water discharges from the MS4 to the receiving waters by imposing the prohibition of discharge "through the MS4 to the receiving waters" and by imposing WQBELs and other numeric limitations, rather than the MEP standard, on dry weather discharges.

The Los Angeles MS4 Order states that "[e]ach Permittee shall, for the portion of the MS4 for which it is an owner or operator, prohibit non-storm water discharges through the MS4 to receiving waters" with certain exceptions including discharges separately regulated under an NPDES permit and discharges conditionally exempt from the prohibition consistent with the federal regulations.[175] Permittee Petitioners take issue with the imposition of the prohibition "through the MS4 to receiving waters" because the language does not track the specific requirement of the Clean Water Act that the MS4 permit "include a requirement to effectively prohibit non-stormwater discharges *into the storm sewer."* (Emphasis added.)[176]

We find the variation in language to be a distinction without a difference. Whether the Los Angeles MS4 Order prohibits non-storm water discharges *into* the MS4 or *through* the MS4 to receiving waters, the intent and effect of the prohibition is to prevent non-exempt non-storm water discharges from reaching the receiving waters.[177] The legal standard governing non-storm water – effective prohibition -- is not altered because the Los Angeles MS4 Order imposes the prohibition at the point of entry into the receiving water rather than the point of entry into the MS4 itself. Instructively, USEPA has used the terms "into," "from," and "through" interchangeably when describing the prohibition.[178]

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[175] *Id.*, Part III.A, pp 27-33.

[176] 33 U.S.C. § 1342(p)(3)(B)(ii).

[177] The Los Angeles Water Board notes that the language in the Los Angeles MS4 Order is not significantly changed from the version in the 2001 Los Angeles MS4 Order, which prohibited non-storm water discharges "into the MS4 and watercourses." The Board additionally asserts that phrasing the prohibition as "through the MS4 to receiving waters" provides Permittees with greater flexibility to use measures that control non-storm water after it enters the MS4, including regional solutions such as low-flow diversions and catch-basin inserts.

[178] See, e.g., 55 Fed. Reg. 47990, 47995-47996 ("Section 402(p)(B)(3) of the CWA requires that permits for discharges *from municipal separate storm sewer systems* require the municipality to 'effectively prohibit' non-storm water discharges *from the municipal separate storm sewer*…Ultimately, such non-storm water discharges *through a municipal separate storm sewer* must either be removed from the system or become subject to an NPDES permit. . . . *(Continued)*

Permittee Petitioners' objection to the phrasing of the prohibition in the Los Angeles MS4 Order appears to be based largely on the assumption that prohibiting non-storm water discharges at the point of entry into the receiving water rather than at the point of entry into the MS4 allows the Los Angeles Water Board to impose requirements on those discharges that would otherwise not be available under the Clean Water Act and federal regulations. We disagree.

As a preliminary matter, regardless of the phrasing of the non-storm water discharge prohibition, MEP is not the standard that governs non-storm water discharges. Permittee Petitioners have asserted that, for non-storm water discharges that enter the MS4, MEP is the governing standard just as it is for storm water discharges. This assertion misinterprets the statute. The Clean Water Act imposes two separate standards for regulation of non-storm water and storm water in an MS4 permit: The MS4 permit "shall include a requirement to effectively prohibit non-stormwater discharges" into the MS4, and "shall require controls to reduce the discharge of pollutants to the maximum extent practicable. . . ."[179] Although the statute imposes the MEP standard to control of "pollutants" rather than specifically to "pollutants in storm water," any reading of section 402(p)(3)(B)(iii) to apply generally to both non-storm water and storm water would render the effective prohibition of non-storm water in section 402(p)(3)(B)(ii) meaningless. The federal regulations confirm the distinction between the treatment of storm water and non-storm water by establishing requirements to prevent illicit discharges from entering the MS4.[180] While the regulations have no definition for "non-storm water discharges," illicit discharges most closely represent the statutory term and are defined as "any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit . . . and discharges resulting from firefighting activities."[181] Further, contrary to assertions by Permittee Petitioners, the definition of storm water in the federal regulations is not inclusive of dry weather discharges. The federal regulations define storm water as "storm water runoff, snow melt runoff, and surface runoff and

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The CWA prohibits the point source discharge of non-storm water not subject to an NPDES permit *through municipal separate storm sewers to waters of the United States.*" (Emphasis added.))

[179] 33 U.S.C. § 1342(p)(3)(b)(iii).

[180] 40 C.F.R. § 122.26(d)(2)(iv)(B).

[181] *Id.*, § 122.26(b)(2). The preamble to the regulations states: "Today's rule defines the term 'illicit discharge' to describe any discharge through a municipal separate storm sewer system that is not composed entirely of storm water and that is not covered by an NPDES permit." (55 Fed. Reg. 47990, 47995 (Nov. 16, 1990).)

drainage."[182] Surface runoff and drainage cannot be understood to refer to dry weather discharges where USEPA has specifically stated in the preamble to the relevant regulations that it would not expand the definition of storm water to include "a number of classes of discharges which are not in any way related to precipitation events."[183] Accordingly, dry weather discharges are not a component of storm water discharges subject to the MEP standard.[184]

Second, the Los Angeles Water Board's legal authority to impose TMDL-based WQBELs and other limitations on dry weather discharges is derived not from the phrasing of the discharge prohibition in the statute but from the TMDLs themselves, as well as the Clean Water Act direction to require "such other provisions" as the permitting authority "determines appropriate for the control of such pollutants." We have already found that the Los Angeles MS4 Order reasonably (and legally) incorporated numeric WQBELs and other limitations to implement the TMDLs. The Los Angeles Water Board's authority to impose the limitations for dry weather conditions is accordingly independent of the provisions establishing the non-storm water effective prohibition.

Permittee Petitioners also assert that requiring compliance with the non-storm water discharge prohibition through and from the MS4 would frustrate enforcement of the illicit connection and illicit discharge elimination programs of the Los Angeles MS4 Order, which continue to require the Permittee to prohibit illicit discharges and connections *to* the MS4.[185] On this point, we agree with the Los Angeles Water Board that the illicit connection and illicit discharge elimination program is a means to implement the non-storm water prohibition and independently implementable and enforceable. We are more sympathetic to the argument by Permittee Petitioners that, in the context of a complex MS4 system with commingled discharges, the prohibition of discharges through the MS4 to the receiving waters poses greater compliance challenges than a prohibition of discharges into the MS4; however, the Los Angeles MS4 Order's Monitoring and Reporting Program contains a procedure by which a Permittee will notify the Board and the upstream jurisdiction when non-exempted, non-storm water discharges pose an issue in commingled discharges.[186] Further, the Los Angeles Water Board states in its

[182] 40 C.F.R. § 122.26(b)(13).

[183] 55 Fed. Reg. 47990, 47995 (Nov. 16, 1990).

[184] We disagree that the phrasing of the non-storm water discharge prohibition in the Los Angeles MS4 Order means that *any* dry weather discharges from the MS4 could be construed as a violation of the Clean Water Act for the same reasons articulated in footnote 133 of this order.

[185] Los Angeles MS4 Order, Parts VI.A.2.a.iii, p. 40, VI.D.4.d., p. 81-86, VI.D.10, p. 137-141.

[186] Los Angeles MS4 Order, Att. E, Monitoring and Reporting Program, Part IX.F.6, p. E-27.

October 15, 2013 Response that the upstream jurisdiction would then have the responsibility to further investigate and address the discharge.[187] The challenge of addressing compliance and enforcement in the context of interconnected MS4s and commingled discharges is a challenge pervasive in the MS4 regulatory structure and not unique to non-storm water discharges. We are not sufficiently persuaded by Permittee Petitioners' arguments regarding compliance to disturb the non-storm water prohibitions as currently established in the Los Angeles MS4 Order.

E. Monitoring Provisions

Relying on Water Code sections 13165, 13225, and 13267, Permittee Petitioners argue that the Los Angeles Water Board was required to conduct a cost-benefit analysis to support the monitoring and reporting requirements of the Los Angeles MS4 Order. Because the monitoring and reporting provisions of the Los Angeles MS4 Order are incorporated pursuant to federal law, the cited provisions are inapplicable here. The monitoring and reporting provisions of the Los Angeles MS4 Order were established under the Clean Water Act and USEPA's regulations.[188] Further, under state law, Water Code section 13383, rather than Water Code section 13267, controls monitoring and reporting requirements in the context of NPDES permitting, and that provision does not include a requirement to ensure that the burden, including costs of the report, bear a reasonable relationship to the need for the report.[189]

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[187] Los Angeles Water Board, October 15, 2013 Response, p. 33 & fn. 116.

[188] See 33 U.S.C. §§ 1318, 1342(a)(2); 40 C.F.R. §§ 122.26(d)(2)(i)(F), 122.26(d)(2)(iii)D), 122.41(h), 122.41(j), 122.41(*l*), 122.42(c),122.44(i), 122.48.

[189] Permittee Petitioners argue that the cost considerations of Water Code sections 13225 and 13267 are relevant to the Los Angeles MS4 Order notwithstanding the fact that it was issued under federal authority because the requirements of those section are not inconsistent with the requirements of section 13383. (See Water Code, §13372, subd. (a) ("To the extent other provisions of this division are consistent with the requirements for state programs . . . those provisions apply . . . ").) This exact assertion was taken up by the trial court in litigation challenging the 2001 Los Angeles MS4 Order and decided in favor of the Los Angeles Water Board. The trial court stated: "As noted in *Silkwood v. Kerr-McGee Corp.* (1984) 464 U.S. 238, the Court held, in part: 'state law is still preempted. . . where the state law stands as an obstacle to the accomplishment of the full purposes and objectives of Congress.' (464 U.S. at p. 248.) Applying Water Code sections 13225 and 13267 would stand, in the words of *Silkwood* as: 'an obstacle to the accomplishment of the full purposes and objectives of [the federal law].' (Ibid)." (*In re Los Angeles County Municipal Storm Water Permit Litigation* (L.A. Super. Ct., No. BS 080548, Mar. 24, 2005) Statement of Decision from Phase II Trial on Petitions for Writ of Mandate, at pp.19-20 (Administrative Record, section 10.II., RB-AR23197-23198.). Further, we note that Water Code section 13383, subdivision (c) specifically references subdivision (c) of section 13267 when establishing facility inspection requirements; in contrast, section 13383, subdivision (a) does not reference subdivision (b) of section 13267, which incorporates the requirement that "[t]he burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports." Water Code section 13383, subdivision (a), was therefore arguably intended to stand in place of the requirements in section 13267(b). Finally, even where authority to impose a monitoring and reporting requirement is clearly derived from Water Code section 13267, the provision requires consideration of the costs and benefits of monitoring and reporting, but not a full cost-benefit analysis. We therefore find that the Los Angeles Water Board did not fail to meet its legal obligations by not carrying out a full cost-benefit analysis specific to the monitoring and reporting requirements of the Los Angeles MS4 Order. However, in making this finding, in no way do we mean to disavow the significance of cost consideration in permitting actions, even where not specifically required by law. We note again that the Los Angeles Water Board carefully considered the costs of *(Continued)*

Moreover, the monitoring and reporting requirements of the Los Angeles MS4 Order do not exceed the requirements of the Clean Water Act and the federal regulations.[190] In particular, we find that the receiving water monitoring requirements of the Order are reasonable in light of the need to identify water quality exceedances and evaluate progress in compliance with water quality standards. The argument made by several Permittee Petitioners that the federal regulations allow only two types of monitoring – effluent and ambient – for compliance is without support in the relevant regulations. The relevant law is clear that the permitting authority is required to incorporate monitoring and reporting requirements sufficient to determine compliance with the permit conditions.[191] In contrast, nothing in the Clean Water Act or the regulations states that requiring wet weather receiving water monitoring is beyond the authority of the permitting agency.[192] Further, accepting such a constrained interpretation of the Clean Water Act's monitoring requirements would undermine storm water permitting assessment. Excluding wet weather receiving water monitoring would preclude storm water dischargers from assessing the impacts of their discharges on waters of the United States during the events for which they are primarily being permitted—storm events. We find nothing in the text or preamble of the federal regulations to support a narrow interpretation of monitoring to exclude wet weather receiving monitoring.

To the extent Permittee Petitioners are arguing that the MEP standard, applied at the outfall, constrains the permitting authority's discretion to require monitoring beyond the outfall, we also find no support in the law for that proposition. We have already stated that we will continue to require compliance with water quality standards in MS4 permits. Wet weather receiving water monitoring is fundamental to assessing the effects of storm water discharges on water quality and determining the trends in water quality as Permittees implement control

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compliance with the Los Angeles MS4 Order generally as summarized in the Fact Sheet. (See Los Angeles MS4 Order, Att. F, Fact Sheet, pp. F-144-F-149.) Further, the Los Angeles Water Board considered monitoring costs-related comments on earlier drafts of the Los Angeles MS4 Order, and, in a number of cases, where presented with an argument that a cost related to a particular monitoring requirement was not commensurate with the benefits to be received from that requirement, made revisions to the requirement. (See, e.g., Administrative Record, section 8, RB-AR19653-19654, RB-AR19666, RB-AR19674, RB-AR19681.)

[190] The Los Angeles Water Board provided its rationale for the receiving water monitoring requirements in the Fact Sheet of the Los Angeles MS4 Order. (Los Angeles MS4 Order, Att. F, Fact Sheet, F-113-F-137.)

[191] See 33 U.S.C. § 1318(a)(2); 40 C.F.R. § 122.26(d)(2)(i)(F). While we do not interpret these requirements to mean that each and every permit condition must have a corresponding monitoring and reporting requirement, neither do we see any constraints on the water boards' authority to establish monitoring and reporting requirements.

[192] Permittee Petitioners reference language in the federal regulations concerning "effluent and ambient monitoring" (40 C.F.R. § 122.44(d)(1)(vi)(C)(3)) and appear to be using the phrase as support for their argument. That section is inapposite as it applies to situations where a State has not established a water quality objective for a pollutant present in the effluent and instead establishes effluent limitations on an indicator parameter for the pollutant of concern.

measures. Compliance may be determined at the outfall – for example, where a permittee determines that the discharge does not exceed an applicable WQBEL or receiving water limitation – but outfall monitoring alone cannot provide the broader data related to trends in storm water discharge impacts on the receiving water. Accordingly, receiving water monitoring is a legal and reasonable component of the monitoring and reporting program. Further, because Permittees are responsible for impacts to the receiving waters resulting from their MS4 discharges, Permittees may be required to participate in monitoring not only in receiving waters within their jurisdiction but also in monitoring all receiving waters that their discharges impact.

We will make no revisions to the Monitoring and Reporting provisions of the Order.

F. Joint Responsibility

In the extensive and interconnected system regulated by the Los Angeles MS4 Order, discharges originating from one Permittee's MS4 frequently commingle with discharges from other Permittees' MS4s within or outside of the Permittee's jurisdiction. Permittee Petitioners argue that the Los Angeles MS4 Order improperly ascribes responsibility to all Permittees with commingled discharges where those commingled discharges exceed a WQBEL or cause or contribute to exceedances of receiving water limitations. Specifically, Permittee Petitioners take issue with the fact that the Los Angeles MS4 Order ascribes "joint responsibility"[193] to the co-Permittees without a showing that a particular Permittee has in fact discharged the pollutant causing or contributing to the exceedance.

The Los Angeles Water Board counters that the joint responsibility regime is consistent with the intent of the Clean Water Act and further that it does not compel a Permittee to clean up the discharge of another Permittee. The Los Angeles Water Board points to two provisions for this latter proposition. First, even with joint responsibility, Permittees that have commingled MS4 discharges need only comply with permit conditions relating to discharges from the MS4 for which they are owners or operators.[194] Second, even where joint responsibility is presumed, a Permittee may subsequently counter the presumption of joint responsibility by

[193] "Joint responsibility" is the term used in the Los Angeles MS4 Order. (See Los Angeles MS4 Order, Part II.K.1, p. 23 ("'Joint responsibility' means that the Permitttees that have commingled MS4 discharges are responsible for implementing programs in their respective jurisdictions, or within the MS4 for which they are an owner and/or operator, to meet the water quality-based effluent limitations and/or receiving water limitations assigned to such commingled MS4 discharges.") As defined by the Los Angeles Water Board and as discussed below, this term does not have the same meaning and scope as the legal doctrine of "joint liability."

[194] Los Angeles MS4 Order, Parts II.K.1, pp. 23-24, VI.A.4.a., p. 41; 40 C.F.R. § 122.26(a)(3)(vi); see also, *id*., Part VI.E.2.b.ii., p. 142 (stating in the context of TMDL requirements that, where discharges are commingled and assigned a joint WLA, "each Permittee is only responsible for discharges from the MS4 for which they are owners and/or operators.")

affirmatively demonstrating that its MS4 discharge did not cause or contribute to the relevant exceedances.[195]

Given the size and complexity of the MS4s regulated under the Los Angeles MS4 Order and the challenges inherent in designing a monitoring program that could parse out responsibility for each individual Permittee, we find that a joint responsibility regime is a reasonable approach to assigning initial responsibility for an exceedance. The Los Angeles MS4 Order provisions addressing TMDLs also appropriately take a joint responsibility approach, given that the wasteload allocations from which the WQBELs and other TMDL-specific limitations are derived are most frequently expressed as joint allocations shared by all MS4 dischargers in the watershed. We further agree with the Los Angeles Water Board that the regime is one that is permissible under applicable law. The Clean Water Act contemplates that MS4 permits may be issued on a system-wide or jurisdiction-wide basis[196] and the federal regulations anticipate the need for inter-governmental cooperation.[197] Further, the United States Court of Appeal, Ninth Circuit, recently stated in *Natural Resources Defense Council v. County of Los Angeles* (2013) 725 F.3d 1194 that the permitting authority has wide discretion concerning the terms of a permit, including the manner in which permittees share liability.[198]

Yet, we also find that joint responsibility in an MS4 Order is only appropriate if the ultimate responsibility for addressing an exceedance rests with those permittees that actually cause or contribute to the exceedance in question. The re-issued Los Angeles MS4 Order contains additional specificity and monitoring, beyond that contained in the 2001 Los Angeles MS4 Order, to document compliance and the presence or absence of an individual municipality's contribution of pollutants to the storm water. For this reason, the general reasoning of the Ninth Circuit's 2013 *Natural Resources Defense Council v. County of Los Angeles* decision finding liability based solely on the presence of pollutants above water quality standards in the receiving waters is of limited forward-looking importance. Generally, in the context of MS4 permits, we do not sanction joint responsibility to the extent that that joint

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[195] *Id.*, Part VI.E.2., pp.141-42; see also id., Part II.K.1, pp. 23-24.

[196] 33 U.S.C. § 1342(p)(3)(B)(i).

[197] See 40 C.F.R. §§ 122.26(d)(2)(i)(D), 122.26(d)(2)(iv), 122.26(d)(2)(vii).

[198] *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2013) 725 F.3d 1194, 1205, fn. 16, cert. den. *Los Angeles County Flood Control Dist. v. Natural Resources Defense Council* (2014) 134 S.Ct. 2135. The Ninth Circuit went on to find that, based on the specific language of the 2001 Los Angeles MS4 Order, the Permittees were jointly liable for exceedances detected by mass emissions monitoring.

responsibility would require each Permittee to take full responsibility for addressing violations, regardless of whether, and to what extent, each permittee contributed to the violation.[199]

The Los Angeles MS4 Order does not impose such a joint responsibility regime where each Permittee must take full responsibility for addressing other Permittees' violations. In addition to clearly stating that permittees are responsible only for their contribution to the commingled discharges, the Los Angeles MS4 Order provides that Permittees may affirmatively show that their discharge did not cause or contribute to an exceedance. Joint responsibility, as applied by the Los Angeles MS4 Order, is thus consistent with our expectation that ultimate responsibility for addressing an exceedance rests with those Permittees that actually cause or contribute to the exceedance and consistent with the regulatory direction that co-permittees need only comply with permit conditions relating to discharges from the MS4 for which they are owners or operators.

While the result is that the burden rests on the Permittee to demonstrate that its commingled discharge is not the source of an exceedance, rather than on the Los Angeles Water Board to demonstrate that a Permittee's commingled discharge is causing or contributing to the exceedance, the result is not contrary to law. The Los Angeles Water Board has the initial burden to show that a violation of the Los Angeles MS4 Order has occurred,[200] but the Board can do so by establishing an exceedance of a limitation by jointly responsible Permittees and need not identify the exact source of the exceedance. This scheme represents a reasonable policy approach to a complicated compliance question where the Permittees are more closely familiar than the Los Angeles Water Board with their outfalls and their discharges in the extensive and interconnected MS4 network.

We are, however, concerned that the Los Angeles MS4 Order's treatment of the joint responsibility issue is too narrow. The Los Angeles Water Board addresses the issue of joint responsibility primarily in the context of compliance with the TMDL requirements of the Order. Commingled discharges pose the same questions of assigning responsibility where receiving water limitations are exceeded in water bodies receiving MS4 discharges from multiple jurisdictions, but where the pollutant is not addressed by a TMDL. A similar approach to

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[199] In a "joint and several liability" scheme, a plaintiff may collect his or her entire damages from any one defendant, and the defendants must then rely on principles of indemnity or contribution to apportion ultimate liability amongst themselves. (See *American Motorcycle Assn. v. Superior Court of Los Angeles County* (1978) 20 Cal. 3d 578, 586-590.) Because the Los Angeles MS4 Order's joint responsibility scheme does not equate to joint liability, and because we do not find such liability appropriate from a policy perspective, we do not address Petitioners' legal arguments as to whether joint or joint and several liability in the storm water context would be consistent with applicable law.

[200] See e.g. *Sackett v. E.P.A.* (9th Cir. 2010) 622 F.3d 1139 rev'd on other grounds *Sackett v. E.P.A.* (2012) 132 S. Ct. 1367.

assigning responsibility for addressing the exceedances is appropriate there. We will add new language to the Los Angeles MS4 Order mirroring Part VI.E.2.b., but applying the principles more generally.

We also take this opportunity to emphasize that all MS4 permits should be drafted to avoid one potential, but likely unintended, result arising from *Natural Resources Defense Council v. County of Los Angeles*. The broadest reading of the Ninth Circuit's holding following remand from the U.S. Supreme Court would assign joint liability to all Permittees for any exceedance at a monitoring location designated for the purpose of compliance determination, even if the particular pollutant is not typically found in storm water and has a likely alternative source such as an industrial discharger or waste water treatment plan. Providing municipalities an opportunity to demonstrate that they did not contribute to a pollutant present in receiving waters above standards will prevent this outcome.

We shall amend Part VI.B. as follows:

B. Monitoring and Reporting Program (MRP) Requirements

1. Dischargers shall comply with the MRP and future revisions thereto, in Attachment E of this Order or may, in coordination with an approved Watershed Management Program per Part VI.C, implement a customized monitoring program that achieves the five Primary Objectives set forth in Part II.A. of Attachment E and includes the elements set forth in Part II.E. of Attachment E.

2. Compliance Determination for Commingled Discharges

a. For commingled discharges addressed by a TMDL, a Permittee shall demonstrate compliance with the requirements of Part E as specified at Part E.2.b.

b. For commingled discharges not addressed by a TMDL, a Permittee shall demonstrate compliance with the requirements of Part V.A as follows:

i. Pursuant to 40 CFR section 122.26(a)(3)(vi), each Permittee is only responsible for discharges from the MS4 for which they are owners and/or operators.

ii. Where Permittees have commingled discharges to the receiving water, or where Permittees' discharges commingle in the receiving water, compliance in the receiving water shall be determined for the group of Permittees as a whole unless an individual Permittee demonstrates that its discharge did not cause or contribute to the exceedance, pursuant to subpart iv. below.

iii. For purposes of compliance determination, each Permittee is responsible for demonstrating that its discharge did not cause or contribute to an exceedance of the receiving water limitation in the target receiving water.

iv. A Permittee may demonstrate that its discharge did not cause or contribute to an exceedance of a receiving water limitation in one of the following ways:

(1) Demonstrate that there was no discharge from the Permittee's MS4 into the applicable receiving water during the relevant time period;

(2) Demonstrate that the discharge from the Permittee's MS4 was controlled to a level that did not cause or contribute to the exceedance in the receiving water;

(3) Demonstrate that there is an alternative source of the pollutant that caused the exceedance, that the pollutant is not typically associated with MS4 discharges, and that the pollutant was not discharged from the Permittee's MS4; or

(4) Demonstrate that the Permittee is in compliance with the Watershed Management Programs provisions under VI.C.

G. Separation of Functions in Advising the Los Angeles Water Board

Petitioners Cities of Duarte and Huntington Park (Duarte and Huntington Park) argue that their rights to due process of law were violated when the same attorneys advised both the Los Angeles Water Board staff and the Board itself in the course of the proceedings to adopt the Los Angeles MS4 Order. We disagree and reaffirm our position that permitting actions do not require the water boards to separate functions when assigning counsel to advise in development and adoption of a permit.

A water board proceeding to adopt a permit, including an NPDES permit, waste discharge requirements, or a waiver of waste discharge requirements, is an adjudicative proceeding subject to the Administrative Procedure Act's administrative adjudication statutes in Government Code section 11400 et seq.[201] Section 11425.10, part of the "Administrative Adjudication Bill of Rights," provides that "[t]he adjudicative function shall be separated from the investigative, prosecutorial, and advocacy functions with the agency . . . ."[202] In accordance with

[201] See Cal. Code Regs., tit. 23, § 648, subd. (b).

[202] Gov. Code, § 11425.10, subd. (a)(4). Subdivision (a)(4) references section 11425.30, which addresses disqualification of a presiding officer that has served as "investigator, prosecutor, or advocate" in the proceeding or its preadjudicative stage or is subject to "the authority, direction, or discretion" of a person who has served in such roles.

this directive, the water boards separate functions in all enforcement cases, assigning counsel and staff to prosecute the case, and separate counsel and staff to advise the board.

In a permitting action, water board counsel have an advisory role, not an investigative, prosecutorial, or advocacy role. Permitting actions are not investigative in nature and there is no consideration of liability or penalties that would make the action prosecutorial in nature. Further, while both counsel and staff are expected to develop recommendations for their boards, the role of counsel and staff is not to act as an advocate for one particular position or party concerning the permitting action, but to advise the board as neutrals, with consideration of the legal, technical, and policy implications of all options before the board. In the case of counsel, such consideration and advice includes not just legal evaluation of the substantive options for permitting but also of procedural issues such as admissibility of the evidence, conduct of the hearing, and avoidance of board member conflicts. Because counsel and staff are advisors to the board rather than advocates for a particular position, the same counsel may advise staff in the course of development of the permit and the board in the adoption proceedings.

A primary purpose of separation of functions in adjudicatory proceedings is the need to prevent improper ex parte communications.[203] The exceptions to the ex parte communications rules further support the position that counsel advising board staff may also advise the board itself. While section 11430.10 of the Government Code generally prohibits communications concerning issues in a pending administrative proceeding between the presiding officer and an employee of the agency that is a party,[204] one exception provides that a communication "for the purpose of assistance and advice to the presiding officer," in this case the board, "from a person who has not served as investigator, prosecutor, or advocate in the proceeding or its preadjudicative stage" is permissible. Even if board counsel could be considered an advocate in the proceeding, another provision (specifically referencing the water boards) excepts the communication from the general ex parte communications rules. A communication is not an ex parte communication if:

> (c) The communication is for the purpose of advising the presiding officer concerning any of the following matters in an adjudicative hearing that is nonprosecutorial in character:

[203] See *Dept. of Alcoholic Beverage Control v. Alcoholic Beverage Control Appeals Bd.* (2006) 40 Cal.4th 1, 9-10.

[204] Government Code section 11430.10 prohibits communications between an employee that is a "party" to a pending proceeding and the presiding officer. We disagree that Los Angeles Water Board staff, as an advisor to the Board, was a "party" to the proceedings for adoption of the Los Angeles MS4 Order, but, even if staff could be considered a party, the cited exceptions to the ex parte communications rules would apply.

. . .
(2) The advice involves an issue in a proceeding of the San Francisco Bay Conservation and Development Commission, California Tahoe Regional Planning Agency, Delta Protection Commission, Water Resources Control Board, or a regional water quality control board.[205]

The fact that communications that would otherwise be considered prohibited ex parte communications are specifically permitted in non-prosecutorial adjudicative proceedings of the water boards further supports the position that the water boards are not obligated by law to separate functions in permitting actions.

We acknowledge that there may be some unique factual circumstances under which a permitting proceeding could violate due process or the Administrative Procedure Act because board counsel either acted or gave the appearance of acting as a prosecutor or advocate. Duarte and Huntington Park point to a writ of mandate issued by the Los Angeles Superior Court in 2010,[206] holding that a 2006 proceeding to incorporate provisions of the Santa Monica Bay Beaches TMDL into the 2001 Los Angeles MS4 Order was not fairly conducted because Los Angeles Water Board counsel had acted as an advocate for Board staff, directly examining Board staff witnesses, cross-examining witnesses called by permittees, objecting to questions asked by permittees, and making a closing argument on behalf of Board staff, while simultaneously advising the Board. The proceedings to adopt the Los Angeles MS4 Order did not follow the type of adversarial structure that led the Superior Court to find a violation of separation of functions in the 2006 proceedings.[207] Further, nothing in the conduct of the Los Angeles Water Board attorneys in the Los Angeles MS4 Order proceedings leads us to find that they acted as advocates for a particular position or party, rather than as advisors to the Board.

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[205] Gov. Code, § 11430.30. We note that the Law Revision Commission comments on section 11430.30, subdivision (c), state that "[s]ubdivision (c) applies to nonprosecutorial types of administrative adjudications, such as . . . proceedings . . . setting *water quality protection…requirements."* (Emphasis added.) The notes further state that "[t]he provision recognizes that the length and complexity of many cases of this type may as a practical matter make it impossible for any agency to adhere to the restrictions of [ex parte communications], given limited staffing and personnel." (25 Cal.L.Rev.Comm. Reports 711 (1995).) We agree that the lengthy and complex nature of permitting proceedings, and the limited staffing resources of the water boards, caution against an expansive interpretation of separation of functions in non-prosecutorial adjudications.

[206] *County of Los Angeles v. State Water Resources Control Board* (Super. Ct., Los Angeles Co. (June 2, 2010, Minute Order) No. BS122724) (Administrative Record, section 10.II, RB-AR23665-23667.)

[207] We also note that, although the writ directed that petitioners were entitled to a new hearing "in which the same person does not act as both an advocate before the Board and an advisor to the Board," the writ had no direct bearing on the separate proceedings to adopt the Los Angeles MS4 Order. In any case, as discussed, Board attorneys did not act as advocates in the proceedings to adopt the Los Angeles MS4 Order.

The two specific cases pointed to by Duarte and Huntington Park – advice by Board counsel to Board member Mary Ann Lutz regarding recusal due to ex parte communications and advice to the Board generally on the lack of a cost-benefit analysis requirement in federal law – may be contrary to the legal position held by Duarte and Huntington Park, but there is nothing in the record to suggest that the advice was driven by biased advocacy for a Board staff position.[208] In the absence of such evidence, we find no reason to depart from the general rule that separation of functions is not required in a permitting proceeding[209] and find that Los Angeles Water Board counsel acted in accordance with applicable laws in advising Board staff and the Board itself.

H. Signal Hill's Inclusion in the Order

The City of Signal Hill (Signal Hill) argues that the Los Angeles Water Board acted contrary to relevant law when it issued the system-wide Los Angeles MS4 Order that included Signal Hill, even though Signal Hill had submitted an application for an individual permit.[210] We disagree.

Signal Hill points out that the federal regulations allow an operator of an MS4 to choose between submitting an application jointly with one or more other operators for a joint permit or individually for a distinct permit.[211] However, the choice of application does not necessarily dictate the type of permit that the permitting authority ultimately deems appropriate. The permitting authority in turn has discretion to determine if the permit should be issued on a

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[208] See Administrative Record**,** section 7, RB-AR18309-18316, RB-AR18397-18400 (Transcript of Proceedings on Oct. 4, 2012), section 7, RB-AR18892-18894 (Transcript of Proceedings on Oct. 5, 2012).

[209] Although *Morongo Band of Mission Indians v. State Water Resources Control Board* (2009) 45 Cal.4th 731 concerned an enforcement proceeding and therefore is not on point for our legal determination above, we take note of the direction by the California Supreme Court that separation of functions in an administrative tribunal should not be expanded beyond its appropriate scope: "In construing the constitutional due process right to an impartial tribunal, we take a more practical and less pessimistic view of human nature in general and of state administrative agency adjudicators in particular . . . [and where proper procedure is followed and in the absence of a specific demonstration of bias or unacceptable risk of bias] we remain confident that state administrative agency adjudicators will evaluate factual and legal arguments on their merits, applying the law to the evidence in the record to reach fair and reasonable decisions." (*Morongo Band of Mission Indians, supra*, at pp. 741-742.)

[210] Signal Hill was one of several permittees under the 2001 Los Angeles MS4 Order that elected not to submit an application jointly with the other permittees for the renewed permit. The other parties have not challenged their inclusion under the Los Angeles MS4 Order. The Los Angeles Water Board rejected Signal Hill's application as incomplete; however, our determination that the Los Angeles Water Board had the discretion to issue the system-wide Los Angeles MS4 Order is not dependent on that fact.

[211] 40 C.F.R. § 122.26(a)(3)(iii). Signal Hill has also cited regulations applicable to Small MS4s at 40 Code of Federal Regulations sections 122.30 through 122.37. These regulations are not applicable here because the Los Angeles Water Board has designated the Greater Los Angeles County MS4, which includes the incorporated cities and the unincorporated areas of Los Angeles County within coastal watersheds, as a large MS4 pursuant to 40 Code of Federal Regulations section 122.26(b)(4).

jurisdictional or system-wide basis.[212] While the federal regulations do not specifically state that, in exercising that discretion, the permitting authority may override the permit applicant's preference for an individual permit, nothing in the regulations constrains its authority to do so. Section 122.26(a)(3)(iii) of 40 Code of Federal Regulations does not require the permitting authority to take any specific action in response to the submission of an individual application. And sections 122.26(a)(3)(ii) and 122.26(a)(3)(iv) provide that the permitting authority "may issue" system-wide or distinct permits. The preamble to the regulations similarly contemplates wide discretion for the permitting authority to choose system-wide permits, including a permit that would allow an entire system in a geographical region to be designated under one permit.[213] Particularly because the option of a system-wide permit would be significantly frustrated if MS4 operators were allowed to opt out at their discretion, the most reasonable reading of the regulations is that the permitting authority, not the applicant, makes the ultimate decision as to the scope of the permit that will be issued. Accordingly, we find that the Los Angeles Water Board had the discretion under the relevant law to issue the Los Angeles MS4 Order with Signal Hill as a permittee.

We also find that the Los Angeles Water Board's decision regarding Signal Hill was appropriately supported by findings in the Order and in the Fact Sheet.[214] Finding C of the Los Angeles MS4 Order, as well as discussion in the Fact Sheet,[215] establishes that the Los Angeles Water Board found a system-wide permit to be appropriate for a number of reasons, including that Permittees' MS4s comprise a large interconnected system with frequently commingled discharges, that the TMDLs to be implemented apply to the jurisdictional areas of multiple Permittees, that the passage of Assembly Bill 2554[216] in 2010 provided a potential means for funding collaborative water quality improvement plans among Permittees, and that the results of an online survey conducted by Los Angeles Water Board staff showed that the

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[212] 33 U.S.C. § 1342(p)(3)(B)(i); 40 C.F.R. § 122.26(a)(1)(v), (a)(3)(ii), (a)(3)(iv).

[213] See 55 Fed. Reg. 47990, 48039-48043 (preamble to the Phase I regulations noting that section 122.26(a)(3)(iv) would allow an entire system in a geographical region to be designated under one permit and further discussing that sections 122.26(a)(1)(v) and (a)(3)(ii) allow the permitting authority broad discretion in issuing system-wide permits).

[214] *Topanga Assn.*, *supra*, 11 Cal.3d at 515.

[215] Los Angeles MS4 Order, Part II.C., pp. 14-15; id., Att. F, Fact Sheet, pp. F-15-F-18.

[216] Assembly Bill No. 2554, Chapter 602, an act to amend sections 2 and 16 of the Los Angeles County Flood Control Act (Chapter 755 of the Statutes of 1915), relating to the Los Angeles County Flood Control District, Sept. 30, 2010 (Administrative Record, section 10.VI.C., RB-AR29172-29179). The Bill allows the Los Angeles County Flood Control District to assess a property-related fee or charge, subject to voter approval in accordance with proposition 218, for storm water and clean water programs.

majority of Permittees favored either a single MS4 permit for Los Angeles County or several watershed-based permits.

Signal Hill points out that the reasons enumerated by the Los Angeles Water Board as grounds for issuance of a system-wide permit did not preclude the Los Angeles Water Board from issuing an individual permit to the City of Long Beach (Long Beach).[217] The Los Angeles Water Board has provided the rationale for distinguishing Signal Hill and Long Beach in its October 15, 2013 Response. The Los Angeles Water Board explains that Long Beach has had an individual permit for more than a decade and that, unlike Signal Hill, it was not permitted under the 2001 Los Angeles MS4 Order. The Board's decision to issue a separate permit to Long Beach was originally the result of a settlement agreement that resolved litigation on the MS4 permit issued by the Los Angeles Water Board in 1996, and Long Beach has a proven track record in implementing the individual permit while cooperating with Permittees under the Los Angeles MS4 Order.[218] We find that the Los Angeles Water Board reasonably distinguished between Long Beach and the Permittees under the Los Angeles MS4 Order in making determinations as to individual permitting. We will not reverse its determination but we will add a brief statement reflecting that reasoning to the Fact Sheet.

We shall amend section III.D.1.a. at page F-18, Attachment F, Fact Sheet, as follows:

> The Regional Water Board determined that the cities of Signal Hill and Downey, the five upper San Gabriel River cities, and the LACFCD are included as Permittees in this Order. **In making that determination, the Regional Water Board distinguished between the permitting status of those cities and the permitting status of the City of Long Beach at this time because the City of Long Beach has a proven track record in implementing an individual permit and developing a robust monitoring program under that individual permit, as well as in cooperation with other MS4 dischargers on watershed based implementation. While all other incorporated cities with discharges within the coastal watersheds of Los Angeles County, as well as Los Angeles County and the Los Angeles County Flood Control District, are permitted under this Order,** ~~I~~individually tailored permittee requirements are provided in this Order, where appropriate.

[217] Signal Hill is located in the geographical middle of Long Beach and is entirely surrounded by that city.

[218] Los Angeles Water Board, October 15, 2013 Response, p. 25, fn. 78.

III. CONCLUSION

Based on the above discussion, we conclude as follows:

1. Although we are not bound by federal law or state law to require compliance with water quality standards in municipal storm water permits, we will not depart from our prior precedent regarding compliance with water quality standards. The regional water boards shall continue to require compliance with receiving water limitations in municipal storm water permits through incorporation of receiving water limitations provisions consistent with State Water Board Order WQ 99-05.

2. However, we find that municipal storm water dischargers may not be able to achieve water quality standards in the near term and therefore that it is appropriate for municipal storm water permits to incorporate a well-defined, transparent, and finite alternative path to permit compliance that allows MS4 dischargers that are willing to pursue significant undertakings beyond the iterative process to be deemed in compliance with the receiving water limitations.

3. We find that the WMP/EWMP provisions of the Los Angeles MS4 Order, with minor revisions that we incorporate herein, are an appropriate alternative to immediate compliance with receiving water limitations. The WMP/EWMP provisions are ambitious, yet achievable, and include clear and enforceable deadlines for the achievement of receiving water limitations and a rigorous and transparent process for development and implementation of the WMPs/EWMPs.

4. We find that the WMP/EWMP provisions do not violate anti-backsliding requirements.

5. We find that the WMP/EWMP provisions do not violate antidegradation requirements; however, we find that the antidegradation findings made by the Los Angeles Water Board are too cursory and revise those findings consistent with the federal and state antidegradation policies.

6. We find that issuance of time schedule orders is appropriate where a final receiving water limitations deadline set in the WMP/EWMP or a final TMDL-related deadline is not met; however we find that the WMP/EWMP compliance schedule need not otherwise be structured as an enforcement order.

7. We clarify the WMP/EWMP provisions to make it clear that final compliance with receiving water limitations and final WQBELs and other TMDL-specific limitations must be verified through monitoring.

8. We clarify the WMP/EWMP provisions to make it clear that Permittees may request extensions of deadlines incorporated into the WMPs/EWMPs except those final deadlines established in a TMDL. However, any deadline extensions must be approved by the Executive Officer after public review and comment.

9. In order to add greater rigor and accountability to the process of achieving receiving water limitations, we revise the WMP/EWMP provisions to add that the Permittees must comprehensively evaluate new data and information and revise the WMPs/EWMPs, including the supporting reasonable assurance analysis, by June 30, 2021, for approval by the Executive Officer.

10. We find that the storm water retention approach is a promising approach to achieving receiving water limitations, but also find that the Administrative Record does not support a finding that the approach will necessarily lead to achievement of water quality standards in all cases. We revise the WMP/EWMP provisions to clarify that, in the case of implementation of an EWMP with the storm water retention approach, if compliance with a final WQBEL or other TMDL-specific limitation is not in fact achieved in the drainage area, a Permittee will be considered in compliance with the relevant limitation only if the Permittee continues to adaptively manage the EWMP to achieve ultimate compliance with the WQBEL or other TMDL limitation.

11. We find reasonable the WMP/EWMP provisions that allow permittees to be deemed in compliance with receiving water limitations during the planning and development phase of the WMP/EWMP. We revise the WMP/EWMP provisions to state that, if a Permittee fails to meet one of the deadlines, the Permittee may still develop a WMP/EWMP for approval by the Los Angeles Water Board or its Executive Officer; however, the Permittee will not be deemed in compliance with receiving water limitations or WQBELs and other TMDL-specific limitations during the subsequent WMP/EWMP development period.

12. We recognize that the Los Angeles MS4 Order WMP/EWMP compliance path alternative may not be appropriate in all MS4 permits. In order to provide guidance to regional water boards preparing Phase I MS4 permits, we lay out several principles to be followed in drafting receiving water limitations compliance alternatives: Phase I MS4 permits should (1) continue to require compliance with water quality standards in accordance with our Order WQ 99-05; (2) allow compliance with TMDL requirements to constitute compliance with receiving water limitations; (3) provide for a compliance

alternative that allows permittees to achieve compliance with receiving water limitations over a period of time as described above; (4) encourage watershed-based approaches, address multiple contaminants, and incorporate TMDL requirements; (5) encourage the use of green infrastructure and the adoption of low impact development principles; (6) encourage the use of multi-benefit regional projects that capture, infiltrate, and reuse storm water; and (7) require rigor, accountability, and transparency in identification and prioritization of issues in the watershed, in proposal and implementation of control measures, in monitoring of water quality, and in adaptive management of the program. We expect the regional water boards to follow these principles unless the regional water board makes a specific showing that application of a given principle is not appropriate for region-specific or permit-specific reasons.

13. We recognize that the success of the WMP/EWMP approach depends in large part on the steps that follow adoption of the provisions, including the development and approval of rigorous WMPs/EWMPs and the implementation and appropriate enforcement of the programs once approved. We direct the Los Angeles Water Board to periodically report specific information to the State Water Board regarding implementation of the WMPs/EWMPs, including on-the-ground structural control measures completed, monitoring data evaluating the effectiveness of such measures, control measures proposed to be completed and proposed funding and schedule, trends in receiving water quality related to storm water discharges, and compliance and enforcement data.

14. We find that the Los Angeles Water Board acted in a manner consistent with the law when establishing numeric WQBELs. We further find that the development of numeric WQBELs was a reasonable exercise of the Los Angeles Water Board's policy discretion, given its experience in developing the relevant TMDLs and the significance of storm water impacts in the region. However, we find that numeric WQBELs are not necessarily appropriate in all MS4 permits or for all parameters in any single MS4 permit.

15. We find that the Los Angeles Water Board's choice of BMP-based WQBELs, to be proposed by the Permittee in the WMP/EWMP to address USEPA-established TMDLs was reasonable.

16. We find that the Los Angeles Water Board did not act contrary to federal law when it prohibited the discharge of non-storm water "through the MS4 to receiving water" instead of "into" the MS4. Regardless of the exact wording of the prohibition, the standard that applies to non-storm water is the requirement of "effective prohibition." However, the Los Angeles Water Board also has authority to regulate any dry weather discharges from the MS4s under the applicable TMDLs.

17. We find that the monitoring and reporting provisions of the Los Angeles MS4 Order are consistent with applicable law and reasonable.

18. We find that assigning joint responsibility for commingled discharges that cause exceedances is not contrary to applicable law. Given the size and complexity of the MS4s regulated under the Los Angeles MS4 Order, the joint responsibility regime also constitutes a reasonable policy choice. The Los Angeles MS4 Order specifically allows a permittee to avoid joint responsibility by demonstrating that its commingled discharge is not the source of an exceedance.

19. We find that representation of the Los Angeles Water Board and the Los Angeles Water Board staff by the same attorneys in the proceedings to adopt the Los Angeles MS4 Order was lawful and reasonable.

20. We find that the Los Angeles Water Board acted in a manner consistent with applicable law and reasonably when it issued a system-wide permit that included Signal Hill.

Addressing the water quality impacts of municipal storm water is a complex and difficult undertaking, requiring innovative approaches and significant investment of resources. We recognize and appreciate the commendable effort of the Los Angeles Water Board to come up with a workable and collaborative solution to the difficult technical, policy, and legal issues, as well as the demonstrated commitment of many of the area's MS4 dischargers and of the environmental community to work with the Los Angeles Water Board in the development and implementation of the proposed solution. We also recognize the extensive work that interested persons from across the state, including CASQA, have invested in assisting us in understanding how the watershed-based alternative compliance approach developed by the Los Angeles Water Board may inform statewide approaches to addressing achievement of water quality requirements. While storm water poses an immediate water quality problem, we believe that a rigorous and transparent watershed-based approach that emphasizes low impact development, green infrastructure, multi-benefit projects, and capture, infiltration, and reuse of storm water is

a promising long-term approach to addressing the complex issues involved. We must balance requirements for and enforcement of immediate, but often incomplete, solutions with allowing enough time and leeway for dischargers to invest in infrastructure that will provide for a more reliable trajectory away from storm water-caused pollution and degradation. We believe that the Los Angeles MS4 Order, with the revisions we have made, strikes that balance at this stage in our storm water programs, but expect that we will continue to revisit the question of the appropriate balance as the water boards' experience in implementing watershed-based solutions to storm water grows.

IV. ORDER

IT IS HEREBY ORDERED that the Los Angeles MS4 Order is amended as described above in this order. The Los Angeles Water Board is directed to prepare a complete version of the Los Angeles MS4 Order (including any necessary non-substantive conforming corrections), post the conformed Los Angeles MS4 Order on its website, and distribute it as appropriate.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held June 16, 2015.

AYE:	Chair Felicia Marcus Vice Chair Frances Spivy-Weber Board Member Tam M. Doduc Board Member Steven Moore Board Member Dorene D'Adamo
NAY:	None
ABSENT:	None
ABSTAIN:	None

Jeanine Townsend
Clerk to the Board

ATTACHMENT
10

CONFORMED (04/07/15)

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
ORDER 2012-0011-DWQ

AS AMENDED BY
ORDER WQ 2014-0006-EXEC,
ORDER WQ 2014-0077-DWQ, AND
ORDER WQ 2015-0036-EXEC

NPDES NO. CAS000003
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
STATEWIDE STORM WATER PERMIT
WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

The State Water Resources Control Board adopted Order 2012-0011-DWQ on:	September 19, 2012
The Executive Director of the State Water Resources Control Board issued Order WQ 2014-0006-EXEC on:	January 17, 2014
The State Water Resources Control Board adopted Order WQ 2014-0077-DWQ on:	May 20, 2014
The Executive Director of the State Water Resources Control Board issued Order WQ 2015-0036-EXEC on:	April 7, 2015
The amendments to Order 2012-0011-DWQ contained in Order 2015-0036-DWQ are effective on:	**April 7, 2015**

CERTIFICATION

The undersigned, Clerk to the State Water Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on September 19, 2012.

AYE: Chairman Charles R. Hoppin
Vice Chair Frances Spivy-Weber
Board Member Tam M. Doduc
Board Member Steven Moore
Board Member Felicia Marcus

NAY: None

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
ORDER 2012-0011-DWQ

AS AMENDED BY
ORDER WQ 2014-0006-EXEC,
ORDER WQ 2014-0077-DWQ, AND
ORDER WQ 2015-0036-EXEC

NPDES NO. CAS000003

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STATEWIDE STORM WATER PERMIT WASTE DISCHARGE REQUIREMENTS (WDRS) FOR STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

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CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
ORDER 2012-0011-DWQ

AS AMENDED BY
ORDER WQ 2014-0006-EXEC,
ORDER WQ 2014-0077-DWQ, AND
ORDER WQ 2015-0036-EXEC

NPDES NO. CAS000003
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
STATEWIDE STORM WATER PERMIT
WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

FINDINGS

The State Water Resources Control Board (State Water Board) finds that:

Permit Application

1. The State of California, Department of Transportation (hereafter the Department) has applied to the State Water Board for reissuance of its statewide storm water permit and waste discharge requirements to discharge storm water and permitted non-storm water to waters of the United States under the National Pollutant Discharge Elimination System (NPDES) permit program.

Background and Authority

Permit Background

2. Prior to issuance of the Department's first statewide storm water permit (Order No. 99-06-DWQ), the Regional Water Boards regulated storm water discharges from the Department's storm drain systems with individual permits. On July 15, 1999, the State Water Board adopted a statewide permit to consolidate storm water permits previously adopted by the Regional Water Boards. This statewide permit regulates storm water and non-storm water discharges from the Department's properties and facilities, and discharges associated with operation and maintenance of the State highway system. The Department's properties include all Right-of-Way (ROW) owned by the Department. The Department's facilities include, but are not limited to, maintenance stations/yards, equipment storage areas, storage facilities, fleet vehicle parking and maintenance areas and warehouses with material storage areas.

Federal Authority

3. In 1987, the United States Congress amended the federal Clean Water Act (CWA) and added section 402(p), which established a framework for regulating municipal and

industrial storm water discharges under the NPDES Permit Program. On November 16, 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated federal regulations for controlling pollutants in storm water runoff discharges (known as Phase I storm water regulations). Phase I storm water regulations require permit coverage for storm water discharges from large and medium Municipal Separate Storm Sewer Systems (MS4s), certain categories of industrial facilities, and construction activities disturbing five or more acres of land. On December 8, 1999, U.S. EPA promulgated regulations, known as Phase II storm water regulations, which require NPDES permit coverage for storm water discharges from small MS4s and construction sites which disturb one to five acres of land.

State Authority

4. California Water Code (Wat. Code) section 13376 provides that any person discharging or proposing to discharge pollutants to waters of the United States within the jurisdiction of the state shall apply for and obtain Waste Discharge Requirements (WDRs). (For this permit, the State term "WDRs" is equivalent to the federal term "NPDES permits" as used in the Clean Water Act). The State Water Board issues this Order pursuant to section 402 of the Clean Water Act and implementing regulations adopted by U.S. EPA and chapter 5.5, division 7 of the California Water Code (commencing with § 13370 et seq.). It shall serve as an NPDES permit for point source discharges to surface waters. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with § 13260 et seq.). Applicable State regulations on discharges of waste are contained in the California Code of Regulations (Cal. Code Regs.), tit. 23, Division 3, Chapter 9.

Storm Water Definition

Storm Water Discharge

5. Storm water discharges consist only of those discharges that originate from precipitation events. Storm water is defined in the Code of Federal Regulations (40 C.F.R. § 122.26(b)(13)) as storm water runoff, snowmelt runoff, and surface runoff and drainage. During precipitation events, storm water picks up and transports pollutants into and through MS4s and ultimately to waters of the United States.

Non-Storm Water Discharge

6. Non-storm water discharges consist of all discharges from an MS4 that do not originate from precipitation events.

Generally, non-storm water discharges to an MS4 are prohibited, conditionally exempt from prohibition, or regulated separately by an NPDES permit. The categories of conditionally exempt non-storm water discharge are specified at 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(1). Non-storm water discharges that are regulated by a separate NPDES permit are not subject to the discharge prohibition. Prohibited non-storm water discharges include conditionally exempt discharges that are found to be a source of pollutants to waters of the United States. Illicit discharges must also be prohibited. An illicit discharge is defined in 40 Code of Federal Regulations section 122.26(b)(2) as "any discharge to a municipal storm sewer that is not composed entirely of storm water except

discharges pursuant to an NPDES permit (other than the NPDES Permit for discharges from the Municipal Separate Storm Sewer System) and discharges resulting from fire fighting activities." Provision B of this Order addresses non-storm water discharge.

Non-storm water discharges to an MS4 with a discharge to an ASBS are subject to a different set of conditions as stated in Finding 22.a.

Performance Standards

Performance Standard for Discharges from MS4s

7. Clean Water Act section 402(p) establishes performance standards for discharges from MS4s. Clean Water Act section 402(p)(3)(B) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." This Order prohibits storm water discharges that do not comply with the maximum extent practicable (MEP) standard.

8. Compliance with the MEP standard involves applying Best Management Practices (BMPs) that are effective in reducing or eliminating the discharge of pollutants to the waters of the United States. MEP emphasizes pollutant reduction and source control BMPs to prevent pollutants from entering storm water runoff. MEP may require treatment of the storm water runoff if it contains pollutants. BMP development is a dynamic process, and the menu of BMPs contained in a SWMP may require changes over time as experience is gained and/or the state of the science and art progresses. MEP is the cumulative effect of implementing, evaluating, and making corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate controls are implemented in the most effective manner. The State Water Board has held that “MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the costs would be prohibitive.” (SWRCB, 2000b).

Permit Coverage and Scope

Discharges Regulated by this Permit

9. This Order regulates the following discharges:

    a. Storm water discharges from all Department-owned MS4s;
    b. Storm water discharges from the Department’s vehicle maintenance, equipment cleaning operations facilities and any other non-industrial facilities with activities that have the potential of generating significant quantities of pollutants; and
    c. Certain categories of non-storm water discharges as listed under provision B. of this Order.

    This Order does not regulate storm water discharges from leased office spaces, Department owned batch plants or any other industrial facilities, as industrial facilities defined in the Statewide Industrial General Permit. The Department will obtain coverage

for storm water discharges associated with industrial activities under the Statewide Industrial General Permit for each batch plant and industrial facility, and shall comply with applicable requirements. While this Order does not regulate storm water discharges associated with industrial activities, it does impose contractor requirements for certain industrial facilities.

This Order does not regulate discharges from the Department's construction activities, including dewatering effluent discharges from construction projects. Instead, the Department will obtain coverage for storm water discharges associated with construction activities under Order No. 2009-0009-DWQ Statewide Construction General Permit. While this Order does not regulate storm water discharges associated with construction activities, it does impose electronic filing, notification, reporting and contractor requirements for certain construction projects, and imposes limitations on types of materials that may be used during construction which may have an impact on post-construction discharges. Any discharges from a site occurring after completion of construction are fully subject to the requirements of this Order.

Some Regional Water Boards have issued specific requirements for dewatering effluent discharges in their regions. The Department will consult with the appropriate Regional Water Board and comply with the applicable dewatering requirements in each region.

Department Activities and Discharges

Department Activities

10. The Department is primarily responsible for the design, construction, management, and maintenance of the State highway system including; freeways, bridges, tunnels, and facilities such as corporation yards, maintenance facilities, rest areas, weigh stations, park and ride lots, toll plazas and related properties. The Department is also responsible for initial emergency spill response and cleanup for unauthorized discharges of waste within the Department's ROW.

Department Discharges

11. The Department's discharges include storm water and non-storm water discharges generated from:

    a. Maintenance and operation of State-owned ROW;
    b. Department storage and disposal areas;
    c. Department facilities;
    d. Department Airspaces; and
    e. Other properties and facilities owned and operated by the Department.

    The Department discharges either directly to surface waters or indirectly through municipal storm water conveyance systems. These surface waters include creeks, rivers, reservoirs, wetlands, saline sinks, lagoons, estuaries, bays, and the Pacific Ocean and tributaries thereto, some or all of which are waters of the United States as defined in 40 Code of

Federal Regulations section 122.2. As specified, this Order regulates the Department's municipal storm water and non-storm water discharges.

Potential Pollutants

12. Discharges of storm water and non-storm water from Department properties, facilities, and activities have been shown to contribute pollutants to waters of the United States. As such, these discharges may be causing or threatening to cause violations of water quality objectives and can have damaging effects on human health and aquatic ecosystems. The quality and quantity of these discharges vary considerably and are affected by many environmental factors including hydrology, geology, land use, climatology and chemistry, and by controllable management factors including maintenance practices, spill prevention and response activities, public education (i.e., concerning trash and other storm water pollutants) and pollution prevention.

    Pollutant sources from the Department properties, facilities, and activities include motor vehicles, highway surface materials such as fine particles of asphalt and concrete, highway maintenance products, construction activities, erodible shoulder materials, eroding cut and filled slopes, abrasive sand and deicing salts used in winter operations, abraded tire rubber, maintenance facilities, illegal connections, illegal dumping, fluids from accidents and spills, and landscape care products.

    Pollutant categories include, but are not limited to, metals (such as copper, lead, and zinc), synthetic organic compounds (pesticides), Polycyclic Aromatic Hydrocarbons (PAHs) from vehicle emissions, oil and grease, Total Petroleum Hydrocarbons (TPH), sediment, nutrients (nitrogen and phosphorus fertilizers), debris (trash and litter), pathogens, and oxygen demanding substances (decaying vegetation, animal waste, and other organic matter).

Characterization Monitoring

13. Under the previous permit (Order No. 99-06-DWQ), the Department conducted a comprehensive, multi-component storm water monitoring program. The Department monitored and collected pollutant characterization information at more than 180 sites statewide, yielding more than 60,000 data points. The Department used the data to evaluate the effectiveness of the Department's maintenance facility pollution prevention plans and highway operation control measures. This information is also used to identify pollutants of concern in the Department's discharges.

Department Discharge Characterization Studies

14. The Department compared the monitoring results from the 2002 and 2003 Runoff Characterization Studies (California Department of Transportation, 2003)[1] to California Toxics Rule (CTR) objectives and to several surface water quality objectives considered potentially relevant to storm water runoff quality. The Department prioritized constituents as high, medium, and low, according to a percentage estimate by which the most stringent water quality objective was exceeded. The Department identified lead, copper, zinc,

[1] References are found in Attachment X of this Order.

aluminum, diazinon, chlorpyrifos, and iron as high priority constituents in the Department's runoff. The sources of other water quality objectives considered were:

a. National Primary Drinking Water Maximum Contaminant Levels (40 C.F.R., § 141.1);
b. U.S. EPA Action Plan for Beaches and Recreational Waters;
c. U.S. EPA Aquatic Life Criteria;
d. California Department of Public Health Maximum Contaminant Levels; and California Department of Fish and Game Recommended Criteria for Diazinon and Chlorpyrifos.

Department Discharges that are Subject to MS4 Permit Regulations

15. An MS4 is a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains. An MS4 is designed or used for collecting or conveying storm water. It is not a combined sanitary sewer and is not part of a Publicly Owned Treatment Works (POTW). Clean Water Act section 402(p) and 40 Code of Federal Regulations section 122.26 (a)(v) give the State authority to regulate discharges from an MS4 on a system-wide or jurisdiction-wide basis. All MS4s under the Department's jurisdiction are considered one system, and are regulated by this Order. Therefore, all storm water and exempted and conditionally exempted non-storm water discharges from the Department owned MS4 are subject to the requirements in this Order.

Maintenance and Construction Activities not Subject to the Construction General Permit

16. Some maintenance and construction activities such as roadway and parking lot repaving and resurfacing may not be subject to the Construction General Permit. Such activities may involve grinding and repaving the existing surface and have the potential to mobilize pollutants, even though it may not involve grading or land disturbance. The Department's Maintenance Staff Guide (Department, 2007b), Project Planning and Design Guide (Department, 2010) and the California Stormwater Quality Association (CASQA) California Construction Stormwater BMP Handbook (CASQA, 2009) specify BMPs for paving and grinding operations. The Department is required to implement BMPs for such operations to control the discharge of pollutants to the MEP.

Department Construction Projects Involving Lead Contaminated Soils

17. Department construction projects may involve soils that contain lead in quantities that meet the State definition of hazardous waste but not the federal definition. The Department of Toxic Substances Control (DTSC) has issued a variance (V09HQSCD006) effective July 1, 2009, allowing the Department to place soil containing specific concentrations of aerially deposited lead under pavement or clean soil. In addition to complying with the terms of the variance, the Department also needs to notify the appropriate Regional Water Boards to determine the appropriate regulation of these soils.

18. Past monitoring data show that storm water runoff from the Department's facilities contains pollutants that may adversely affect the beneficial uses of receiving waters. Facilities not

subject to the Industrial General Permit are required to implement BMPs to reduce the discharge of pollutants from these facilities to the MEP.

Provisions of This Order

19. Storm water discharges from MS4s are highly variable in frequency, intensity, and duration, and it is difficult to characterize the amount of pollutants in the discharges. In accordance with 40 Code of Federal Regulations section 122.44(k)(2), the inclusion of BMPs in lieu of numeric effluent limitations is appropriate in storm water permits. This Order requires implementation of BMPs to control and abate the discharge of pollutants in storm water to the MEP. To assist in determining if the BMPs are effectively achieving MEP standards, this Order requires effluent and receiving water monitoring. The monitoring data will be used to determine the effectiveness of the applied BMPs and to make appropriate adjustments or revisions to BMPs that are not effective.

Receiving Water Limitations

20. The effect of the Department's storm water discharges on receiving water quality is highly variable. For this reason, this Order requires the Department to implement a storm water program designed to achieve compliance with water quality standards, over time through an iterative approach. If discharges are found to be causing or contributing to an exceedance of an applicable Water Quality Standard, the Department is required to revise its BMPs (including use of additional and more effective BMPs).

Discharges to Areas of Special Biological Significance

21. The State Water Board has designated 34 coastal marine waters as Areas of Special Biological Significance (ASBS) in the California Ocean Plan. An ASBS is a coastal area requiring protection of species or biological communities. The Department discharges storm water into the following ASBS:

    a. Redwoods National Park ASBS
    b. Saunders Reef ASBS
    c. James V. Fitzgerald ASBS
    d. Año Nuevo ASBS
    e. Carmel Bay ASBS
    f. Point Lobos ASBS
    g. Julia Pfeiffer Burns ASBS
    h. Salmon Creek Coast ASBS
    i. Laguna Point to Latigo Point ASBS
    j. Irvine Coast ASBS

22. The Ocean Plan prohibits waste discharges into ASBS. The Ocean Plan allows the State Water Board to grant exceptions to this prohibition, provided that: (1) the exception will not compromise protection of ocean waters for beneficial uses, and (2) the public interest will be served. The Department has applied for and been granted an exception under the General Exception for Storm Water and Non-Point Source Discharges to ASBS. The exception

allows the continued discharge into ASBS provided the Department complies with the special protections specified in the General Exception.

22a. Non-storm water discharges to ASBS are prohibited except as specified in the General Exception. Certain enumerated non-storm water discharges are allowed under the General Exception if essential for emergency response purposes, structural stability, slope stability, or if occur naturally. In addition, an NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS. This Order allows utility vault discharges to segments of the Department MS4 with a direct discharge to an ASBS, provided the discharge is authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. The State Water Board is in the process of reissuing the General NPDES Permit for Utility Vaults. As part of the renewal, the State Water Board will require a study to characterize representative utility vault discharges to an MS4 with a direct discharge to an ASBS and will impose conditions on such discharges to ensure the discharges do not alter natural ocean water quality in the ASBS. Given the limited number of utility vault discharges to MS4s that discharge directly to an ASBS, the State Water Board finds that discharges from utility vaults and underground structures to a segment of the Department's MS4 with a direct discharge to an ASBS are not expected to result in the MS4 discharge causing a substantial alteration of natural ocean water quality in the ASBS in the interim period while the General NPDES Permit for Discharges from Utility Vaults is renewed and the study is completed. However, if a Regional Water Board determines a specific discharge from a utility vault or underground structure does alter the natural ocean water quality in an ASBS, the Regional Water Board may prohibit the discharge as specified in this Order.

<u>New Development and Re-development Design Standards</u>

23. 40 Code of Federal Regulations section 122.26(d)(2)(iv)(A)(2) requires municipal storm water permittees to implement a new development and redevelopment program to reduce the post-construction generation and transport of pollutants. Development can involve grading and soil compaction, an increase in impervious surfaces (roadways, roofs, sidewalks, parking lots, etc.), and a reduction of vegetative cover, all of which increase the amount of rainfall that ends up as runoff, and decrease the particle size and the load of watershed sediment. The increase in runoff generally leads to increased pollutant loading from watersheds, even if post-construction pollutant concentrations are similar to pre-construction concentrations. The accelerated erosion and deposition resulting from an increase in runoff and a decrease in the size and load of watershed sediment generally causes a stream channel to respond by deepening and widening and detaching from the historic floodplain. The magnitude of response depends on geology, land use, and channel stability at the time of the watershed disturbance. Increased pollutant loads and alteration of the runoff/sediment balance have the potential to negatively impact the beneficial uses of receiving waters including streams, lakes, wetlands, ground water, oceans, bays and estuaries, and the biological habitats supported by these aquatic systems.

24. Department projects have the potential to negatively impact stream channels and downstream receiving waters through modification of the existing runoff hydrograph. The hydromodification requirements in this Order are "effluent limitations," which are defined by the Clean Water Act to include any restriction on the quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources (C.W.A., § 502(11)).

25. Waters of the United States supporting the beneficial use of fish migration could be adversely impacted by improperly designed or maintained stream crossings, or through natural channel evolution processes affected by Department activities. This Order requires the Department to submit to the State Water Board the annual report required under Article 3.5 of the Streets and Highways Code reporting on the Department's progress in locating, assessing, and remediating barriers to fish passage.

26. Low Impact Development (LID) is a sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional storm water management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID uses site design and storm water management to maintain the site's pre-project runoff rates and volumes by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source.

27. On October 5, 2000, the State Water Board adopted a precedential decision concerning the use of Standard Urban Storm Water Mitigation Plans (SUSMPs) (Order WQ 2000-11). The SUSMP in that case required sizing design standards for post-construction BMPs for specific categories of new development and redevelopment projects. Order WQ 2000-11 found that provisions in the SUSMPs, as revised in the order, reflected MEP. The LID requirements, post-construction requirements for impervious surface and the design standards in this Order are consistent with Order WQ 2000-11 and meet the requirement for development of a SUSMP.

Self-Monitoring Program

28. Effluent and receiving water monitoring are necessary to evaluate the effectiveness of BMP measures and to track compliance with water quality standards. This Order requires the Department to conduct effluent and receiving water monitoring.

Storm Water Management Plan (SWMP)

29. The SWMP describes the procedures and practices that the Department proposes to reduce or eliminate the discharge of pollutants to storm drainage systems and receiving waters. On May 17, 2001, the State Water Board approved a Storm Water Management Plan submitted by the Department. That SWMP was updated in 2003 (Department, 2003c) and the updates were approved by the Executive Director of the State Water Board on February 13, 2003. On January 15, 2004, the Department submitted a proposed Storm Water Management Plan as part of its NPDES permit application to renew its previous statewide storm water permit (Order No. 99-06-DWQ). The State Water Board and Regional Water Board staff and the Department discussed and revised Best Management

Practices (BMP) controls and many other components proposed in each section of the SWMP during numerous meetings from January 2004 to 2006. The Department submitted a revised SWMP in June 2007. The 2004 and 2007 SWMPs have not been approved by the State Water Board and the Department has continued to implement the 2003 SWMP. The Department is in the process of revising aspects of the 2003 SWMP to address the Findings of Violation and Order for Compliance issued by U.S. EPA in 2011 (U.S. EPA Docket No. CWA-09-2011-0001).

30. The SWMP and any future modifications or revisions are integral to and enforceable components of this Order. Any documents incorporated into the SWMP by reference that specify the manner in which the Department will implement the SWMP shall be consistent with the requirements of this Order.

31. This Order requires the Department to submit an Annual Report each year to the State Water Board. The Annual Report serves the purpose of evaluating, assessing, and reporting on each relevant element of the storm water program, and revising activities, control measures, BMPs, and measurable objectives, as necessary, to meet the applicable standards.

32. Revisions to the SWMP requiring approval by the State Water Board's Executive Director are subject to public notice and the opportunity for a public hearing.

Total Maximum Daily Load (TMDL) Requirements

33. TMDLs are calculations of the maximum amount of a pollutant that a water body can receive and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations or WLAs) and non-point sources (load allocations or LAs), plus the contribution from background sources and a margin of safety (40 C.F.R., § 130.2, subd.(i)). Discharges from the Department's MS4 are considered point source discharges.

34. This Order implements U.S. EPA-approved or U.S. EPA-established TMDLs applicable to the Department. This Order requires the Department to comply with all TMDLs listed in Attachment IV. Attachment IV identifies TMDLs adopted by the Regional Water Boards and approved by the State Water Board and U.S. EPA that assign the Department a Waste Load Allocation (WLA) or that specify the Department as a responsible party in the implementation plan. In addition, Attachment IV identifies TMDLs established by U.S. EPA that specify the Department as a responsible party or that identify NPDES permitted storm water sources or point sources generally, or identify roads generally, as subject to the TMDL. In accordance with 40 Code of Federal Regulations section 122.44, subdivision (d)(1)(vii)(B), NPDES water quality-based effluent limitations (WQBELs) must be consistent with the assumptions and requirements of available TMDL WLAs. In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement any relevant water quality control plans. The TMDL requirements in this Order are consistent with the assumptions and requirements of the TMDLs applicable to the Department.

35. TMDL WLAs in this Order are not limited by the MEP standard. Due to the nature of storm water discharges, and the typical lack of information on which to base numeric WQBELs, federal regulations (40 C.F.R., § 122.44, subd. (k)(2)) allow for the implementation of BMPs to control or abate the discharge of pollutants from storm water.

36. The Department reported in its 2008-09 Annual Report to the State Water Board that it is subject to over 50 TMDLs and is in the implementation phase of over 30 TMDLs. The State Water Board has since determined that the Department is subject to 84 TMDLs. WLAs and LAs for some TMDLs are shared jointly among several dischargers, with no specific mass loads assigned to individual dischargers. In some of these cases, multiple dischargers are assigned a grouped or aggregate waste load allocation, and each discharger is jointly responsible for complying with the aggregate waste load allocation.

37. The high variance in the level of detail and specificity in the TMDLs developed by the Regional Water Boards and U.S. EPA necessitates the development of more specific permit requirements in many cases, including deliverables and required actions, derived from each TMDL's WLA and implementation requirements. These requirements will provide clarity to the Department regarding its responsibilities for compliance with applicable TMDLs. The development of TMDL-specific permit requirements is subject to notice and a public comment period. Because most of the TMDLs were developed by the Regional Water Boards, and because some of the WLAs are shared by multiple dischargers, the development of TMDL-specific permit requirements has been coordinated initially at the Regional Water Board level.

38. Attachment IV specifies TMDL-specific permit implementation requirements for the Lake Tahoe sediment and nutrients TMDL, Napa River Sediment TMDL, Sonoma Creek Sediment TMDL, and the Lake Elsinore and Canyon Lake Nutrients TMDL. These requirements are consistent with the assumptions and requirements of applicable WLAs assigned to the Department, and with the adopted and approved TMDL, Basin Plan, and related Regional Water Board Orders and Resolutions.

39. For all remaining TMDLs identified in Attachment IV, the Regional Water Boards, in consultation with the State Water Board and the Department, developed categorical pollutant permit requirements. The Fact Sheet contains supporting analyses explaining how the proposed categorical pollutant permit requirements will implement the TMDL and are consistent with the assumptions and requirements of any applicable WLA and how the BMPs will be sufficient to implement applicable WLAs. Following a notice and comment period, Attachment IV of this Order and the Fact Sheet was reopened consistent with provision E.11.c. for incorporation of these requirements and supporting analysis into the Order and Fact Sheet.

40. This Order specifies the requirements to be followed for the Comprehensive TMDL Monitoring Plan. TMDL monitoring requirements are found in Attachment IV, Section III.A. The Regional Water Boards may require additional monitoring through Regional Water Board orders pursuant to Water Code section 13383.

41. Attachment IV may additionally be reopened consistent with provision E.11.b. of this Order for incorporation of newly adopted TMDLs or amendments to existing TMDLs into the Permit.

Non-Compliance

42. NPDES regulations require the Department to notify the Regional Water Board and/or State Water Board of anticipated non-compliance with this Order (40 C.F.R., § 122.41(l)(2)); or of instances of non-compliance that endanger human health or the environment (40 C.F.R., § 122.41(l)(6)).

Regional Water Board and State Water Board Enforcement

43. The Regional Water Boards and the State Water Board will enforce the provisions and requirements of this Order.

Region Specific Requirements

Basin Plans

44. Each Regional Water Board has adopted a Basin Plan for the watersheds within its jurisdiction. Basin Plans identify the beneficial uses for each water body and the water quality objectives necessary to protect them. The Department is subject to the prohibitions and requirements of each Basin Plan.

Region Specific Requirements

45. Regional Water Boards have identified Region-specific water quality issues and concerns pertaining to discharges from the Department's properties. Region-specific requirements to address these issues are included in this Order.

Local Municipalities and Preemption

46. Storm water and non-storm water from MS4s that are owned and managed by other NPDES permitted municipalities may discharge to storm water conveyance systems owned and managed by the Department. This Order does not supersede the authority of the Department to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within its jurisdiction as allowed by State and federal law.

    Storm water and non-storm water from the Department's ROW, properties, facilities, and activities may discharge to storm water conveyance systems managed by other NPDES permitted municipalities. This Order does not preempt or supersede the authority of the permitted municipalities to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within their jurisdiction as allowed by State and federal law.

Anti-Degradation Policy

47. 40 Code of Federal Regulations section 131.12 requires that state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's anti-degradation policy in State Water Board Resolution No.

68-16. Resolution No. 68-16 incorporates the federal anti-degradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plans implement, and incorporate by reference, both the State and federal anti-degradation policies. This Order is consistent with the anti-degradation provision of 40 Code of Federal Regulations section 131.12 and State Water Board Resolution No. 68-16.

Endangered Species Act

48. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2115.5) or the Federal Endangered Species Act (16 U.S.C.A., §§ 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the United States. The Department is responsible for meeting all requirements of the applicable Endangered Species Act.

California Environmental Quality Act (CEQA)

49. The action to adopt an NPDES Permit is exempt from the provisions of CEQA (Public Resources Code, § 21100, et. seq.), pursuant to section 13389 of the California Water Code (County of Los Angeles et al., v. California Water Boards et al., (2006), 143 Cal.App.4th 985).

Public Notification

50. The Department, interested agencies, and persons have been notified of the State Water Board's intent to reissue requirements for storm water discharges and have been provided an opportunity to submit their written comments and recommendations. State Water Board staff prepared a Fact Sheet and Response to Comments, which are incorporated by reference as part of this Order.

Public Hearing

51. The State Water Board, through public testimony in public meetings and in written form, has received and considered all comments pertaining to this Order.

Cost of Compliance

52. The State Water Board has considered the costs of complying with this Order and whether the required BMPs meet the minimum "maximum extent practicable" standard required by federal law. The MEP approach is an evolving, flexible, and advancing concept, which considers technical and economic feasibility. Because of the numerous advances in storm water regulation and management and the size of the Department's MS4, the Order does not require the Department to fully incorporate and implement all advances in a single permit term, but takes an incremental approach that allows for prioritization of efforts for the most effective use of the increased, but nevertheless limited, Department funds. This Order will have an effect on costs to the Department above and beyond the costs from the Department's prior permit. Such costs will be incurred in complying with the post-

construction, hydrograph modification, Low Impact Development, and monitoring and reporting requirements of this Order. Additional costs will also be incurred in correcting non-compliant discharges.[2] These incremental costs are necessary to advance the controls and management of storm water by the Department and to facilitate reduction of the discharge of pollutants to the MEP.

53. This Order supersedes Order No. 99-06-DWQ.

54. This Order serves as an NPDES permit pursuant to Clean Water Act section 402 or amendments thereto, and shall become effective on July 1, 2013, provided that the Regional Administrator, U.S. EPA, Region IX, expresses no objections.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code, regulations, and plans and policies adopted thereafter, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereafter, that the Department shall comply with the following:

A. GENERAL DISCHARGE PROHIBITIONS

1. Storm water discharges from the Department's Municipal Separate Storm Sewer System (MS4) containing pollutants that have not been reduced to the Maximum Extent Practicable (MEP), are prohibited. The Department shall achieve the pollutant reductions described in this Prohibition through implementation of the provisions in this Order and the approved SWMP.

2. Discharges to Areas of Special Biological Significance (ASBS).

    a. Existing storm water discharges into an ASBS are allowed only if the discharges:

        1) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
        2) Are designed to prevent soil erosion;
        3) Occur only during wet weather; and
        4) Are composed of only storm water runoff, except as provided at B.6.

    b. Discharges composed of storm water runoff shall not alter natural water quality in an ASBS.

    c. The discharge of trash is prohibited.

    d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no

[2] Although the cost of compliance with TMDL waste load allocations was considered, compliance with TMDLs is not subject to the MEP standard.

additional pollutant loading). "Existing storm water outfalls" are those that were constructed or under construction prior to January 1, 2005. "New contribution of waste" is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.

e. The discharges comply with all terms, prohibitions, and special conditions contained in sections E.2.c.2)a)i) and E.5. of this Order.

3. Discharge of material other than storm water, or discharge that is not composed entirely of storm water, to waters of the United States or another permitted MS4 is prohibited, except as conditionally exempted under Section B.2 of this Order or authorized by a separate National Pollutant Discharge Elimination System (NPDES) permit.

4. The discharge of storm water or conditionally exempt non-storm water that causes or contributes to the violation of water quality standards or water quality objectives (collectively WQSs), the California Toxics Rule (CTR), or impairs the beneficial uses established in a Water Quality Control Plan, or a promulgated policy of the State or Regional Water Boards, is prohibited. The Department shall comply with all discharge prohibitions contained in Regional Water Board Basin Plans.

5. The discharge of storm water to surface waters of the United States in a manner causing or threatening to cause a condition of pollution or nuisance as defined in Water Code section 13050 is prohibited.

6. Discharge of wastes or wastewater from road-sweeping vehicles or from other maintenance activities to any waters of the United States or to any storm drain leading to waters of the United States is prohibited unless in compliance with section E.2.h.3)c)ii) of this Order or authorized by another NPDES permit.

7. The dumping, deposition, or discharge of waste by the Department directly into waters of the United States or adjacent to such waters in any manner that may allow its being transported into the waters is prohibited unless authorized by the Regional Water Board.

8. The discharge of sand, silt, clay, or other earthen materials from any activity in quantities which cause deleterious bottom deposits, turbidity, or discoloration in waters of the United States or which unreasonably affect or threaten to affect beneficial uses of such waters, is prohibited.

B. NON-STORM WATER DISCHARGE PROHIBITIONS

Non-storm water discharges, other than those to ASBS, must comply with the following provisions:

1. The Department shall effectively prohibit non-storm water discharges into its storm water conveyance system unless such discharges are either:

   a. Authorized by a separate NPDES permit; or
   b. Conditionally exempt in accordance with provision B.2. of this NPDES permit

2. Conditionally Exempt Non-storm Water Discharges.

   The following non-storm water discharges are conditionally exempt from Prohibition B.1 unless the Department or the State Water Board Executive Director identifies them as sources of pollutants to receiving waters. For discharges identified as sources of pollutants, the Department shall either eliminate the discharge or otherwise effectively prohibit the discharge.

   a. Diverted stream flows;
   b. Rising ground waters;
   c. Uncontaminated ground water infiltration (as defined at 40 C.F.R., § 35.2005(20)) to MS4s;
   d. Uncontaminated pumped ground water;
   e. Foundation drains, including slope lateral drains;
   f. Springs;
   g. Water from crawl space pumps;
   h. Footing drains;
   i. Air conditioning condensation;
   j. Flows from riparian habitats and wetlands;
   k. Water line flushing[3];
   l. Minor, incidental discharges of landscape irrigation water[4];
   m. Discharges from potable water sources[3];
   n. Irrigation water[5];
   o. Minor incidental discharges from lawn watering;
   p. Individual residential car washing; and
   q. Dechlorinated swimming pool discharges.

3. Some Regional Water Boards have separate dewatering and/or "de minimus" NPDES discharge permits or Basin Plan requirements for some or all of these listed non-storm water discharges. The Department shall check with the appropriate Regional Water Board to determine if a specific non-storm water discharge requires coverage under a separate NPDES permit.

4. The Department is not required to prohibit emergency fire fighting flows (i.e., flows necessary for the protection of life or property). Discharges associated with emergency

[3] In order to remain conditionally exempt, discharges shall be dechlorinated prior to discharge.
[4] In order to remain conditionally exempt, landscape irrigation systems must be designed, operated and maintained to control non-incidental runoff. See definition of incidental runoff in Attachment VIII.
[5] Return flows from irrigated agriculture are not point-source discharges and are not prohibited from entering the Department's MS4.

firefighting do not require BMPs, but they are recommended if feasible. As part of the SWMP, the Department shall develop and implement a program to reduce pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) as specified in the SWMP.

5. If the State Water Board Executive Director determines that any category of conditionally exempt non-storm water discharge is a source of pollutants, the State Water Board Executive Director may require the Department to conduct additional monitoring and submit a report on the discharges. The State Water Board Executive Director may also order the Department to cease a non-storm water discharge if it is found to be a source of pollutants.

   Non-storm water discharges to ASBS must comply with the following provisions:

6. Non-storm water discharges to ASBS are prohibited except as stated in this Section.

   The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability, or occur naturally:

   a. Discharges associated with emergency fire fighting operations.
   a. Foundation and footing drains.
   b. Water from crawl space or basement pumps.
   c. Hillside dewatering.
   d. Naturally occurring groundwater seepage via a storm drain.
   f. Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

   Discharges from utility vaults and underground structures to a segment of the Department's MS4 with a direct discharge to an ASBS are permitted if such discharges are authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. A Regional Water Board may nonetheless prohibit a specific discharge from a utility vault or underground structure if it determines that the discharge is causing the MS4 discharge to the ASBS to alter natural ocean water quality in the ASBS.

   Additional non-storm water discharges to a segment of the Department's MS4 with a direct discharge to an ASBS are allowed only to the extent the relevant Regional Water Board finds that the discharge does not alter natural ocean water quality in the ASBS.

   Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan or alter natural ocean water quality in an ASBS.

C. EFFLUENT LIMITATIONS

The Department shall reduce the discharge of pollutants from its MS4 to waters of the United States to the MEP, as necessary to achieve TMDL WLAs established for discharges by the Department, and to comply with the Special Protections for discharges to ASBS.

D. RECEIVING WATER LIMITATIONS

1. Receiving water quality objectives, as specified in the Water Quality Control Plans and promulgated policies and regulations of the State and Regional Water Boards, are applicable to discharges from the Department's facilities and properties.

2. The discharge of storm water from a facility or activity shall not cause or contribute to an exceedance of any applicable water quality standard.

3. Storm water discharges shall not cause the following conditions to create a condition of nuisance or to adversely affect beneficial uses of waters of the United States:

   a. Floating or suspended solids, deposited macroscopic particulate matter, or foam;
   b. Bottom deposits or aquatic growth;
   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin, and/or;
   e. Toxic or deleterious substances present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

4. The Department shall comply with Sections A.4, D.2 and D.3 of this Order through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SWMP and other requirements of this Order including any modifications. The SWMP shall be designed to achieve compliance with Sections A.4, D.2 and D.3 of this Order. If exceedance(s) of WQS persist notwithstanding implementation of the SWMP and other requirements of this Order, the Department shall assure compliance with Sections A.4, D.2 and D.3 of this Order by complying with the procedure specified at Section E.2.c.6)c) of this Order.

5. Provided the Department has complied with the procedure set forth in provision E.2.c.6)c) of this Order and is implementing the revised SWMP required by provision E.1., the Department is not required to repeat the procedure called for in provision E.2.c.6)c) for continuing or recurring exceedances of the same receiving water limitations unless directed by the State Water Board's Executive Director or Regional Water Board Executive Officer to develop additional BMPs.

6. Where the Department discharges waste to a water of the State that is not a water of the United States, compliance with the prohibitions, limitations, and provisions of this Order when followed for that water of the State will constitute compliance with the requirements of the Porter-Cologne Water Quality Control Act, unless the Department is notified otherwise in writing by the State Water Board Executive Director or a Regional Water Board Executive Officer.

E. PROVISIONS

1. Storm Water Management Plan (SWMP)

a. The Department shall update, maintain and implement an effective SWMP that describes how the Department will meet requirements of this Order as outlined in E.1.b below. The Department shall submit for Executive Director approval an updated SWMP consistent with the provisions and requirements of this Order within one year of the effective date of this Order. The SWMP shall identify and describe the BMPs that shall be used. The SWMP shall be reviewed annually and modified as necessary to maintain an effective program in accordance with the procedures of this Order. The SWMP shall reflect the principles that storm water management is to be a year-round proactive program to eliminate or control pollutants at their source or to reduce them from the discharge by either structural or nonstructural means when elimination at the source is not possible.

b. The SWMP shall contain the following elements:

1) Overview
2) Management And Organization
3) Monitoring And Discharge Characterization Program
4) Project Planning And Design
5) BMP Development and Implementation
6) Construction
7) Compliance with the Industrial General Permit
8) Maintenance Program Activities, including facilities operations
9) Non-Departmental Activities
10) Non-Storm Water Activities/ Discharges
11) Training
12) Public Education and Outreach
13) Region Specific Activities (See provision E.6 and Attachment V.)
14) Program Evaluation
15) Measurable Objectives
16) Reporting
17) References

The Department shall implement all requirements of this Order regardless of whether those requirements are addressed by an element of the SWMP.

c. The SWMP shall include all provisions and commitments in the 2003 SWMP (Department, 2003c), as revised in response to U.S. EPA's Findings of Violation and Order for Compliance (U.S. EPA Docket No. C.W.A.-09-2011-0001). The Department shall continue to implement the 2003 SWMP to the extent that it does not conflict with the requirements of this Order and until a new SWMP is approved pursuant to this Order.

d. All policies, guidelines, and manuals referenced by the SWMP and related to storm water are intended to facilitate implementation of the SWMP, and shall be consistent with the requirements of this Order.

e. The SWMP shall define terms in a manner that is consistent with the definitions in 40 Code of Federal Regulations section 122.2. This includes, but is not limited to, the definitions for pollutant, waters of the United States, and point source. Where there is a conflict between the SWMP and the language of this Order, the language of this Order shall govern.

f. Unless otherwise specified in this Order, proposed revisions to the SWMP shall be submitted to the State Water Board Executive Director as part of the Annual Report. The Department shall revise all other appropriate manuals to reflect modifications to the SWMP.

g. Revisions to the SWMP requiring Executive Director approval will be publicly noticed for thirty days on the State Water Board's website and via the storm water electronic notification list. During the public notice period, members of the public may submit written comments or request a public hearing. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised at the hearing. Upon review of the request or requests for a public hearing, the Executive Director may, in his or her discretion, schedule a public hearing prior to approval of the SWMP revision. The Executive Director shall schedule a hearing if there is a significant degree of public interest in the proposed revision. If no public hearing is conducted, the Executive Director shall consider all public comments received and may approve the SWMP revision if it meets the conditions set forth in this Order. Any SWMP revision approved by the Executive Director will be posted on the State Water Board's website.

h. The Department shall maintain for public access on its website the latest approved version of the SWMP. The Department shall update the SWMP on its website within 30 days of approval of revisions by the State Water Board.

2. Storm Water Program Implementation Requirements

a. Overview

The Department shall provide an overview of the storm water program in the SWMP. The overview will include:

1) A statement of the SWMP purpose;
2) A description of the regulatory background;
3) A description of the SWMP applicability;
4) A description of the relationship of the Permit, SWMP, and related Department documents; and
5) A description of the permits addressed by the SWMP.

b. Management and Organization

The Department shall provide in the SWMP an overview of its management and organizational structure, roles and responsibilities of storm water personnel, a description of the role and focal point of the Department's storm water program, and a description of the Storm Water Advisory Teams. The Department shall implement the program specified in the SWMP. The Department shall also implement any additional requirements contained in this Order.

1) *Coordination with Local Municipalities*

a) The Department is expected to comply with the lawful requirements of municipalities and other local, regional, and/or other State agencies regarding discharges of storm water to separate storm sewer systems or other watercourses under the agencies' jurisdictions.

b) The Department shall include a ***MUNICIPAL COORDINATION PLAN*** in the SWMP. The plan shall describe the specific steps that the Department will take in establishing communication, coordination, cooperation, and collaboration with other MS4 storm water management agencies and their programs including establishing agreements with municipalities, flood control departments, or districts as necessary or appropriate. The Department shall report on the status and progress of interagency coordination activities in each Annual Report.

2) *Legal Authority*

a) The Department shall establish, maintain, and certify that it has adequate legal authority through statute, permit, contract or other means to control discharges to and from the Department's properties, facilities and activities.

b) The Department has provided a statement certified by its chief legal counsel that the Department has adequate legal authority to implement and enforce

each of the key regulatory requirements contained in 40 Code of Federal Regulations sections 122.26(d)(2)(i)(A-F). The Department shall submit annually, as part of the Annual Report, a ***CERTIFICATION OF THE ADEQUACY OF LEGAL AUTHORITY***.

3) *Fiscal Resources*

a) The Department shall seek to maintain adequate fiscal resources to comply with this NPDES Permit. This includes but is not limited to:

i) Implementing and maintaining all BMPs;
ii) Implementing an effective storm water monitoring program; and
iii) Retaining qualified personnel to manage the storm water program.

b) The Department shall submit a ***FISCAL ANALYSIS*** of the storm water program annually. At a minimum, the fiscal analysis shall show:

i) The allocation of funds to the Districts for compliance with this Order;
ii) The funding for each program element;
iii) A comparison of actual past year expenditures with the current year's expenditures and next year's proposed expenditures;
iv) How the funding has met the goals specified in the SWMP and District workplans; and
v) Description of any cost sharing agreements with other responsible parties in implementing the storm water management program.

c) The fourth year report shall contain a ***BUDGET ANALYSIS*** for the next permit cycle.

4) *Practices and Policies*
The Department shall identify in the SWMP any of the Department's practices and policies that conflict with implementation of the storm water program. The Department shall annually propose changes, including changes to implementation schedules, needed to resolve these conflicts and otherwise effectively implement the SWMP and the requirements of this Order.

5) *Inspection Program*
The Department shall have an inspection program to ensure that this Order and the SWMP are implemented, and that facilities are constructed, operated, and maintained in accordance with this Order and the SWMP. The program shall include training for inspection personnel, documentation of field activities, a reporting system that can be used to track effectiveness of control measures, enforcement procedures (or referral for enforcement) for non-compliance, procedures for taking corrective action, and responsibilities and responsible personnel of all affected functional offices and branches.

The inspection program shall also include standard operating procedures for documenting inspection findings, a system of escalating enforcement response to non-compliance (including procedures for addressing third party (i.e., contractor) non-compliance), and a system to ensure the timely resolution of all violations of this Order or the SWMP. The Department shall delegate adequate authority to appropriate personnel within all affected functional offices and branches to require corrective actions (including stop work orders).

6) *Incident Reporting - Non-Compliance and Potential/Threatened Non-Compliance*
The Department shall report all known incidents of non-compliance with this Order. Non-compliance may be emergency, field, or administrative. The Department shall electronically file a complete ***INCIDENT REPORT FORM*** (Attachment I) in the Storm Water Multiple Application Report and Tracking System (SMARTS)[6] and provide verbal notifications as soon as practicable, but no later than the time frames specified in Attachment I. Submission of an Incident Report Form is not an admission by the Department of a violation of this Order. The types of incidents requiring non-compliance reporting are discussed in Attachment I. The State Water Board or Regional Water Board may require additional information. The Department shall include in the Annual Report a summary of all incidents by type and District, and report on the status of each.

The Department shall report all potential or threatened non-compliance to the State Water Board and appropriate Regional Water Board in accordance with the "Anticipated non-compliance" provisions described in Attachment VI (Standard Provisions). The report shall describe the timing, nature and extent of the anticipated non-compliance. An Incident Report Form is not required for anticipated non-compliance. Anticipated non-compliance may be for field or administrative incidents only.

c. Monitoring and Discharge Characterization Requirements
The Department shall revise and implement the SWMP consistent with the requirements specified below.

1) *Monitoring Site Selection*
Monitoring shall be conducted in two tiers. Tier 1 consists of all sites for which monitoring is required pursuant to the requirements of the General Exception, including Special Protections, to the California Ocean Plan waste discharge prohibitions for storm water and non-point source discharges to ASBS, and sites in impaired watersheds for which the Department has been assigned a WLA and monitoring requirements pursuant to an approved TMDL. Tier 2 consists of all sites where the Department has existing monitoring data, including both storm water and non-storm water. Tier 2 sites may include locations where the Department has conducted characterization monitoring or where monitoring has been conducted for other purposes.

[6] https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

The Department shall conduct without limitation all Tier 1 monitoring as required under the ASBS Special Protections and under the adopted and approved TMDLs. The Department may satisfy Tier 1 monitoring requirements by participating in stakeholder groups. Retrofitting and verification monitoring under Tier 2 need not be initiated until there are less than 100 sites actively monitored under Tier 1. There shall be a minimum of 100 active monitoring sites at any one time, consisting of Tier 1, Tiers 1 and 2, or Tier 2.

Sites from Tier 2 shall be prioritized by the Department in consideration of the threat to water quality, including the pollutant and its concentration or load, the distance to receiving water, water quality objectives, and any existing impairments in the receiving waters. The prioritized list shall be submitted to the State Water Board within eight (8) months of the effective date of this Order. The State Water Board will review the prioritized list and may revise it to reflect Regional or State Water Board priorities. The revised list will be approved by the Executive Director and will become effective upon notice to the Department.

2) *Water Quality Monitoring*

a) Tier 1 Monitoring Requirements

i) Areas of Special Biological Significance

The Department's ASBS monitoring program shall include both core discharge monitoring and ocean receiving water and reference site monitoring. The State and Regional Water Boards must approve receiving water and reference site sampling locations and any adjustments to the monitoring program. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions exist.

(1) Core Discharge Monitoring Program

Core discharge monitoring is the monitoring of storm water effluents from the storm water outfalls at the priority discharge locations listed in Attachment III.

(a) General Sampling Requirements for Timing and Storm Size

Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-storm receiving water is sampled, and analyzed for

the same constituents as receiving water and reference site samples (see section E.2.c.2)a)i)(2)) as described below.

(b) Runoff Flow Measurements
For storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width, including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State Water Board. Report measurements annually for each precipitation season to the State and Regional Water Boards.

(c) Runoff samples – storm events
(i) Outfalls equal to or greater than 18 inches (0.46m) in diameter or width.

Samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination. Samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS. If the Department has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B (shown in Attachment II) metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).

(ii) Outfalls equal to or greater than 36 inches (0.91m) in diameter or width.
Samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination. Samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and

phosphates). Samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

(d) If the Department does not participate in a regional monitoring program as described in provision E.2.c.2)a)i)(2)(b)in addition to (i) and (ii) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A (shown in Attachment II) constituents, Table B constituents for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For discharges to ASBS in more than one Regional Water Board, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

(e) The Executive Director of the State Water Board may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

(2) Ocean Receiving Water and Reference Area Monitoring Program
In addition to performing the Core Discharge Monitoring Program in provision E.2.c.2)a)i)(1) above, the Department must perform ocean receiving water monitoring. The Department may either implement an individual monitoring program or participate in a regional integrated monitoring program.

(a) Individual Monitoring Program
If the Department elects to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS, in addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:

(i) Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in provision E.2.c.2)a)i)(1)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan

PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm) and during (or immediately after) the same storm (post storm). Post storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

(ii) Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.

(iii) A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.

(iv) Once during each permit term and in each subsequent five year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the

State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.

(v) Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.

(vi) The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

(b) Regional Integrated Monitoring Program

The Department may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within an ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the prescribed individual monitoring approach described in provision E.2.c.2)a)i)(2)(a) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.

(i) Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are

303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non-storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled by the Department. Because the Department discharges to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

(ii) ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than18 inches). Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS by the Department. At a minimum, one reference station and one receiving water station shall be sampled in each applicable Regional Water Board.

(iii) Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons.

(iv) Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

(v) Determinations of compliance with Special Protections requirements for ASBS discharges (State Water Board resolution DWQ 2012-0012) shall be made by the Executive Director of the State Water Board or his designee. When a determination is made that a site or discharge is in compliance with the Special Protections, the site will no longer be considered an active monitoring site pursuant to provision E.2.c.1). This provision applies regardless of any continued monitoring that may be required at the site pursuant to the Special Protections.

ii) Total Maximum Daily Load Watersheds
The Department shall comply with the TMDL monitoring requirements in Attachment IV, or in orders of the Regional Water Boards pursuant to Water Code section 13383 that require TMDL-related monitoring. TMDL monitoring shall also include the constituents listed in Attachment II, except as exempted in Attachment IV.

Determinations of compliance with the TMDL shall be made by the Executive Officer of the Regional Water Board or his designee. When a determination is made that a site or discharge is in compliance with the TMDL, the site will no longer be considered an active monitoring site pursuant to provision E.2.c.1) and monitoring of Attachment II constituents will be discontinued. This provision applies regardless of any continued monitoring that may be required at the site pursuant to the TMDL.

b) Tier 2 Retrofit and Verification Monitoring Requirements
Corrective actions shall be implemented at the top 15 percent of sites (rounded up) on the Tier 2 priority list, subject to the number of sites per year specified in provision E.2.c.1). Follow up monitoring shall be conducted to confirm the effectiveness of the measures implemented, as determined by the Executive Officer of the Regional Water Board or his designee. Follow up monitoring is not required where the discharge has been eliminated, or where

the implemented BMP provides full retention of the 85th percentile, 24-hour rain event.

Determinations of compliance at the Tier 2 sites shall be made by the Executive Officer of the Regional Water Board or his designee. When a determination is made that a site or discharge is in compliance, the site will no longer be considered an active monitoring site pursuant to provision E.2.c.1).

3) *Corrective Actions*
Corrective actions may include structural or non-structural BMPs. All structural BMPs must be designed according to the requirements in provisions E.2.d. and E.2.e.

4) *Field and Laboratory Data Requirements*
The Department shall prepare, maintain, and implement a Quality Assurance Project Plan (QAPP) in accordance with the Surface Water Ambient Monitoring Program. All monitoring samples shall be collected and analyzed according to the Department's QAPP developed for the purpose of compliance with this Order. SWAMP Quality Assurance Program Plan (2008) is available at:

http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml

All samples shall be analyzed by a certified or accredited laboratory as required by Water Code section 13176. Global Positioning System (GPS) coordinates shall be recorded for all monitoring sites, including sites selected for the final Tier 2 priority list (top 15%) according to existing data.

Water quality data (receiving water and effluent) shall be uploaded to the Storm Water Multi-Application Reporting and Tracking System (SMARTS) and must conform to "CEDEN Minimum Data Templates" format. CEDEN Minimum Data Templates are available at **http://ceden.org/**.

Analytical results shall be filed electronically in SMARTS within 30 days of receipt by the Department.

5) *Monitoring Results Report*
The Department shall submit, separate from the Annual Report, a ***MONITORING RESULTS REPORT*** (**MRR)** by October 1 of each year.

a) The MRR shall include a list of all sites in Tier 1 and Tier 2 being actively monitored, and the results of the past fiscal year's monitoring activities including effluent and receiving water quality monitoring.
b) The Department shall specifically highlight sample values that exceed applicable WQSs, including toxicity objectives. Complete sample results or

lab data need not be included, but must be retained and filed electronically, and must be provided to the Regional Water Board or State Water Board as provided in provision E.2.c.4).

c) The MRR shall include a summary of sites requiring corrective actions needed to achieve compliance with this Order, and a review of any iterative procedures (where applicable) at sites needing corrective actions.
d) The reporting period for the MRR shall be July 1 of the prior year through June 30 of the current year.

6) *Compliance Monitoring and Reporting*

a) The Department shall review and propose any updates, as needed, to the Non-compliance Reporting Plan for Municipal and Construction Activities in section 9.4.1 of the SWMP. The plan shall identify the staff in each District Office and Regional Water Board to send and receive ***INCIDENT REPORT FORMS*** (Attachment I). The Department shall continue to implement the July 2008 Construction Compliance Evaluation Plan or any updated plan as approved by the Executive Director.
b) The Department shall summarize, by District, all non-compliance incidents, including construction, in the Annual Report. The summary shall include incident dates, types, locations, and the status of the non-compliance incidents.
c) Receiving Water Limitations Compliance.

i) Upon a determination by the Department or the Regional Water Board Executive Officer that a discharge is causing or contributing to an exceedance of an applicable WQS, the Department shall provide verbal notification within five (5) days, and within 30 days thereafter submit a report to the appropriate Regional Water Board with a copy to the State Water Board. Verbal notification is not required where the determination is made by the Regional Water Board. An Incident Report is not required. Where the pollutant causing the exceedance is subject to a waste load allocation listed in Attachment IV of this Order, the Department shall comply with the requirements of the relevant TMDL in lieu of this provision.
ii) The report shall describe BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance. The report shall include an implementation schedule. The Regional Water Board Executive Officer may require modifications to the report.
iii) The Department shall submit any modifications to the report required by the Regional Water Board within 30 days of notification.
iv) The Department shall implement the revised BMPs and conduct any additional monitoring required according to the implementation schedule.

d) Toxicity
   i) Tests for chronic toxicity, where required, shall be estimated as specified in Short-term Method for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002; Table IA, 40 Code of Federal Regulations section 136 and its subsequent amendments or revisions.
   ii) For the Department's discharges, the In-stream Waste Concentration (IWC) is 100 percent (i.e., either is 100 percent storm water or 100% non-storm water). To calculate either a Pass or Fail of the effluent concentration chronic toxicity test at the IWC, the instructions in Appendix A in the National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA/833-R-10-003) shall be used. A Pass result indicates no toxicity at the IWC, and a Fail result indicates toxicity at the IWC. Results shall be reported as provided in provision E.2.c.5).

e) Toxicity Reduction Evaluations (TREs)
   i) The Department shall include in the SWMP a TRE workplan (1-2 pages) specifying the steps that will be taken in preparing a TRE, when a TRE is required pursuant to provision E.2.c.6)e)ii). The workplan shall include, at a minimum:

      (a) A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and BMP efficiencies.
      (b) A description of the steps that will be taken to identify effective pollutant/toxicity reduction opportunities.
      (c) If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., a Department laboratory or outside contractor).

   ii) Upon a determination that a discharge is causing or contributing to an exceedance of an applicable toxicity standard, a TRE may be required by the appropriate Regional Water Board Executive Officer on a site specific basis. The TRE shall be conducted according to the workplan in the SWMP.

d. Project Planning and Design

The Department shall describe in the SWMP how storm water management is incorporated into the project planning and design process, and how the procedures and methodologies used in the selection of Design and Construction BMPs will be used in Department projects. The Department shall implement the program specified in the SWMP, any documents incorporated into the SWMP by reference, and any additional requirements contained in this Order.

Department and Non-Department projects within the Department's ROW that are new development or redevelopment shall comply with the standard project planning and design requirements for new development and redevelopment specified below. These requirements shall apply to all new and redevelopment projects that have not completed the project initiation phase on the effective date of this Order.

1) *Design Pollution Prevention Best Management Practices*
   The following design pollution prevention best management practices shall be incorporated into all projects that create disturbed soil area (DSA), including projects designed to meet the post-construction treatment requirements (Section E.2.d.2)). The SWMP shall be updated to reflect these principles.

   a) Conserve natural areas, to the extent feasible, including existing trees, stream buffer areas, vegetation and soils;
   b) Minimize the impervious footprint of the project;
   c) Minimize disturbances to natural drainages;
   d) Design and construct pervious areas to effectively receive runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope and other pertinent factors;
   e) Implement landscape and soil-based BMPs such as compost-amended soils and vegetated strips and swales;
   f) Use climate-appropriate landscaping that minimizes irrigation and runoff, promotes surface infiltration, and minimizes the use of pesticides and fertilizers; and
   g) Design all landscapes to comply with the California Department of Water Resources Water Efficient Landscape Ordinance.

      http://www.water.ca.gov/wateruseefficiency/landscapeordinance/technical.cfm

      Where the California Department of Water Resources Water Efficient Landscape Ordinance conflicts with a local water conservation ordinance, the Department shall comply with the local ordinance.

2) *Post-Construction Storm Water Treatment Controls*

   a) <u>Projects Subject to Post-Construction Treatment Requirements</u>
      i) Department Projects
         The Department shall implement post construction treatment control BMPs for the following new development or redevelopment projects:

         (1) Highway Facility projects that create 1 acre or more of new impervious surface.
         (2) Non-Highway Facility projects that create 5,000 square feet or more of new impervious surface.

ii) Non-Department Projects within Department ROW

(1) The Department shall exercise control or oversight over Non-Department projects through encroachment permits or other means.
(2) Non-Department development or redevelopment projects shall be subject to the same post-construction treatment control requirements as Department projects.
(3) For all Non-Department Projects that trigger post-construction treatment control requirements, the Department shall review and approve the design of post-construction treatment controls and BMPs prior to implementation.

iii) Waiver
Where a Regional Water Board Executive Officer finds that a project will have a minimal impact on water quality, the Executive Officer may waive the treatment control requirements, or lessen the stringency of the requirements, for a project. Waivers may not be granted for projects subject to treatment control requirements based on a waste load allocation assigned to the Department.

b) Numeric Sizing Criteria for Storm Water Treatment Control BMPs:
Treatment control BMPs constructed for Department and Non-Department projects shall be designed according to the following priorities (in order of preference):

i) Infiltrate, harvest and re-use, and/or evapotranspire the storm water runoff;
ii) Capture and treat the storm water runoff.

The storm water runoff volumes and rates used to size BMPs shall be based on the 85th percentile 24-hour storm event. This sizing criterion shall apply to the entire treatment train within Project Limits. Design Pollution Prevention BMPs can be used to comply with this requirement.

In the event the entire runoff volume from an 85th percentile 24-hour storm event cannot be infiltrated, harvested and re-used, or evapotranspired, the excess volume may be treated by Low Impact Development (LID)-based flow-through treatment devices. Where LID-based flow-through treatment devices are not feasible, the excess volume may be treated through conventional volume-based or flow-based storm water treatment devices.

The Department shall always prioritize the use of landscape and soil-based BMPs to treat storm water runoff. Other BMPs may be used only after landscape and soil-based BMPs are determined to be infeasible. The

Department shall also consider other effective storm water treatment control methods or devices for Department approval.

c) Scope of Design Criteria Applicability for Redevelopment Projects

i) For Highway Facilities:

(1) Where redevelopment results in an increase in impervious area that is less than or equal to 50 percent of the total post-project impervious area within Project Limits, the numeric sizing criteria shall only apply to the new impervious area and not to the entire project.

If the redeveloped impervious area cannot be hydraulically separated from the existing impervious area, the Department shall either: provide treatment for redeveloped areas and as much of the hydraulically inseparable flow as feasible, based on site conditions and constraints; or identify treatment opportunities equivalent to the redeveloped area (see Alternative Compliance, below).

If it is not possible to separate the flows from redeveloped areas from the existing impervious area, the treatment system shall be designed to treat as much of the hydraulically inseparable flow as feasible, and shall bypass or divert any excess around the treatment device. The purpose of this requirement is to prevent overloading the treatment device and impairing its performance.

(2) Where redevelopment results in an increase in impervious area that is greater than 50 percent of the total post-project impervious area within Project Limits, the numeric sizing criteria apply to the entire project.

ii) For Non-Highway Facilities, where redevelopment results in an increase in impervious area that is less than or equal to 50 percent of the total post-project impervious area of an existing development, the numeric sizing criteria shall only apply to the new impervious area and not to the entire project.

(1) If the redeveloped impervious area cannot be hydraulically separated from the existing impervious area, the Department shall either provide treatment for existing and redeveloped areas, or identify treatment opportunities equivalent to the redeveloped area (See Alternative Compliance, below).

(2) Where redevelopment results in an increase in impervious area that is greater than 50 percent of the total post-project impervious area of an existing development, the numeric sizing criteria apply to the entire project.

d) Alternative Compliance

If the Department determines that all or any portion of on-site treatment for a project is infeasible on-site, the Department shall prepare a proposal for alternative compliance for approval by the Regional Water Board Executive Officer or his designee until such time as a statewide process is approved by the Executive Director of the State Water Board. The proposal shall include documentation supporting the determination of infeasibility. Alternative compliance may be achieved outside Project Limits within the Department's ROW, including within another Department project. Alternative compliance to be achieved outside Project Limits shall include provisions for the long-term maintenance of such treatment facilities.

3) *Hydromodification Requirements*

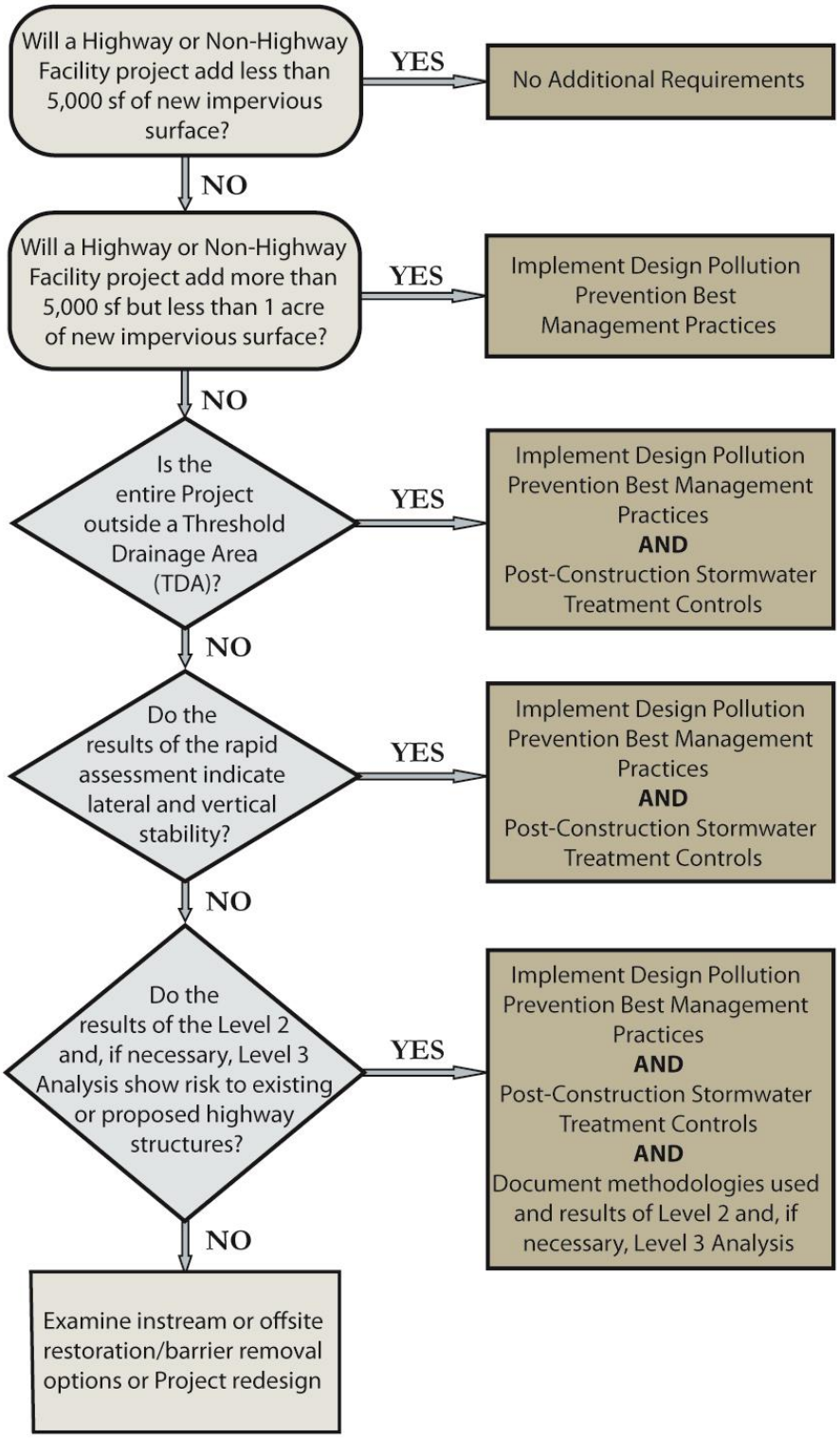
The Department shall ensure that all new development and redevelopment projects do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. Unstable stream channels negatively impact water quality by yielding much greater quantities of sediment than stable channels. The Department shall employ the risk-based approach detailed in this permit to assess lateral and vertical stability. The approach assists the Department in assessing pre-project channel stability and implementing mitigation measures that are appropriate to protect structures and minimize stream channel bank and bed erosion. The approach is depicted in Figure 1 and described below.

a) Highway or Non-Highway Facility projects that add between 5,000 square feet and 1 acre of new impervious surface must implement the Design Pollution Prevention Best Management Practices in Section E.2.d.1).

b) Highway or Non-Highway Facility projects that add 1 acre or more of new impervious surface completely outside of a Threshold Drainage Area[7] must implement the Design Pollution Prevention Best Management Practices and the Post-Construction Storm Water Treatment Controls in Section E.2.d.

[7] Threshold Drainage Area is defined as the area draining to a location at least 20 channel widths downstream of a stream crossing (pipe, swale, culvert, or bridge) within Project Limits. Delineating the Threshold Drainage Area is not necessary if there is/ are no stream crossing(s) within the Project Limits.

FIGURE 1: Hydromodification Flowchart



c) Highway or Non-Highway Facility projects that add 1 acre or more of new impervious surface with any impervious portion of the project located within a Threshold Drainage Area must conduct a rapid assessment of stream stability[8] at each stream crossing (e.g., pipe, culvert, swale or bridge) within that Threshold Drainage Area. If the stream crossing is a bridge, a follow up rapid assessment of stream stability is also required and can be coordinated with the federally-mandated bridge inspection process. The assessment will be conducted within a representative channel reach to assess lateral and vertical stability. A representative reach is a length of stream channel that extends at least 20 channel widths upstream and downstream of a stream crossing. For example, a 20 foot-wide channel would require analyzing a 400 foot distance upstream and downstream of the discharge point or bridge. If sections of the channel within the 20 channel width distance are immediately upstream or downstream of steps, culverts, grade controls, tributary junctions, or other features and structures that significantly affect the shape and behavior of the channel, more than 20 channel widths should be analyzed.

d) If the results of the rapid assessment indicate that the representative reach is laterally and vertically stable (i.e., a rating of excellent or good) the Department does not have to conduct further analyses and must implement the Design Pollution Prevention Best Management Practices and the Post-Construction Storm Water Treatment Controls in Section E.2.d.

e) If the results of the rapid assessment indicate that the representative reach will not be laterally and vertically stable (i.e., a rating of excellent or good), the Department must determine whether the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures by conducting appropriate Level 2 (and, if necessary, Level 3) analyses. The Department shall follow the Level 2 and 3 analysis guidelines contained in HEC-20 (FHWA, 2001) or a suitable equivalent within an accessible portion of the reach. If the results of the appropriate Level 2 (and, if necessary Level 3) analyses indicate that there is no risk to existing or proposed highway structures, the Department must implement the Design Pollution Prevention Best Management Practices and the Post-Construction Storm Water Treatment Controls in Section E.2.d. and document the methodologies used, the results, and the mitigation measures suggested as part of the appropriate Level 2 and, if necessary, Level 3 analyses.

f) If the results of the Level 2 and 3 analysis indicate that the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures, other options must be implemented, including, but not limited to, in-stream and floodplain enhancement/restoration, fish barrier

[8] Guidance and worksheets used for the rapid assessment of stream stability are in the Federal Highway Administration publication "*Assessing Stream Channel Stability at Bridges in Physiographic Regions"* (FHWA, 2006).

removal as identified in the report required under Article 3.5 of the Streets and Highways Code (see below), regional flow control, off-site BMPs, and, if necessary, project re-design.

4) *Stream Crossing Design Guidelines to Maintain Natural Stream Processes*
The Department shall review and revise as necessary the guidance document "Fish Passage Design for Road Crossings" (Department, 2009). In reviewing and revising the guidance document, the Department shall be consistent with the latest stream crossing design, construction, and rehabilitation criteria contained in the California Salmonid Stream Habitat Restoration Manual (California Department of Fish & Game, 2010) and National Marine Fisheries Service guidance (NMFS, 2001). The review shall be completed no later than one year after the effective date of this Order. The Department shall submit in the Year 2 Annual Report a report detailing the review of the guidance document. The Year 2 Annual Report shall also report on the implementation of the road crossing guidelines.

If it is infeasible to meet any of the guidelines specified above, the Department shall prepare written documentation justifying the determination of infeasibility. Documentation shall be provided to the Regional Water Board for approval.

The Department shall submit to the State Water Board by October 1 of each year the same report required under Article 3.5 of the Streets and Highways Code requiring the Department to report on the status of its efforts in locating, assessing, and remediating barriers to fish passage.

e. BMP Development & Implementation
In the SWMP, the Department shall include a description of how BMPs will be developed, constructed and maintained. The Department shall continue to evaluate and investigate new BMPs through pilot studies. The Department shall submit updates to the ***STORM WATER TREATMENT BMP TECHNOLOGY REPORT*** and the ***STORM WATER MONITORING AND BMP DEVELOPMENT STATUS REPORT*** in the Annual Report.

1) *Vector Control*

a) All storm water BMPs that retain storm water shall be designed, operated and maintained to minimize mosquito production, and to drain within 96 hours of the end of a rain event, unless designed to control vectors. BMPs shall be maintained at the frequency specified by the manufacturer. This limitation does not apply in the Lake Tahoe Basin and in other high-elevation regions of the Sierra Nevada above 5000 feet elevation with similar alpine climates. The Department shall operate and maintain all BMPs to prevent the propagation of vectors, including complying with applicable provisions of the California Health and Safety Code relating to vector control.

b) The Department shall cooperate and coordinate with the California Department of Public Health (CDPH) and with local mosquito and vector control agencies on issues related to vector production in the Department's structural BMPs. The Department shall prepare and maintain an inventory of structural BMPs that retain water for more than 96 hours. The inventory need not include BMPs in the Lake Tahoe Basin or other regions of the Sierra Nevada above 5000 feet. The inventory shall be provided to CDPH in electronic format for distribution to local mosquito and vector control agencies. The inventory shall be provided in Year 2 of the permit and updated every two years.

2) *Storm Water Treatment BMPs*

a) The Department shall inspect all newly installed storm water treatment BMPs within 45 days of installation to ensure they have been installed and constructed in accordance with approved plans. If approved plans have not been followed, the Department shall take appropriate remedial actions to bring the BMP or control into conformance with its approved design.
b) The Department shall inspect all installed storm water treatment BMPs at least once every year, beginning one year after the effective date of this Order.
c) The Department may drain storm water treatment BMPs to the MS4 if the discharge does not cause or contribute to exceedances of water quality standards. Retained sediments shall be disposed of properly, in compliance with all applicable local, State, and federal acts, laws, regulations, ordinances, and statutes.
d) The Department shall develop and utilize a watershed-based database to track and inventory treatment BMPs and treatment BMP maintenance within its jurisdiction. At a minimum, the database shall include:

i) Name and location of BMP;
ii) Watershed, Regional Water Board and District where project is located;
iii) Size and capacity;
iv) Treatment BMP type and description;
v) Date of installation;
vi) Maintenance certifications or verifications;
vii) Inspection dates and findings;
viii) Compliance status;
ix) Corrective actions, if any; and
x) Follow-up inspections to ensure compliance.

Electronic reports for each BMP inspected during the reporting period shall be submitted to each associated Regional Water Board in tabular form. A summary of the tracking system data shall be included in the Annual Report along with a report on maintenance activities for post construction BMPs.

The tracking system database shall be made available to the State Water Board or any Regional Water Board upon request.

3) BMPs shall not constitute a hazard to wildlife.

4) *Biodegradable Materials.*
The Department shall utilize wildlife-friendly 100% biodegradable[9] erosion control products wherever feasible. At any site where erosion control products containing non-biodegradable materials have been used for temporary site stabilization, the Department shall remove such materials when they are no longer needed. If the Department finds that erosion control netting or products have entrapped or harmed wildlife at any site or facility, the Department shall remove the netting or product and replace it with wildlife-friendly biodegradable products.

f. Construction

1) *Compliance with the Statewide Construction Storm Water General Permit (CGP) and Lake Tahoe Construction General Permit (TCGP)*
Construction activities that may receive coverage under the CGP or the TCGP are not covered under this MS4 Permit. The Department shall electronically file Permit Registration Documents (PRD) for coverage under the CGP or TCGP for all projects subject to the CGP or TCGP.

2) *Construction Activities not Requiring Coverage Under the CGP*
For construction activities that are not subject to the CGP or the TCGP, the Department shall implement BMPs to reduce the discharge of pollutants to the MEP in storm water discharges associated with land disturbance activities including clearing, grading and excavation activities that result in the disturbance of less than one acre of total land area. The Department shall also implement BMPs to reduce the discharge of pollutants to the MEP for construction and maintenance activities that do not involve land disturbance such as roadway and parking lot repaving and resurfacing. The Department must comply with any region-specific waste discharge requirements, including any requirements applicable to activities involving less than one acre land disturbance.

3) *Construction Projects Involving Lead Contaminated Soils*
The Department has applied for and received variances from the California Department of Toxic Substances Control (DTSC) for the reuse of some soils that contain lead. For construction projects that have received a DTSC variance, the Department shall notify the appropriate Regional Water Board in writing 30 days prior to advertisement for bids to allow a determination by the Regional Water Board of the need for development of Waste Discharge Requirements (WDRs).

[9] For purposes of this Order, photodegradable synthetic products are not considered biodegradable.

4) *Pavement Grindings*
The Department shall comply with the requirements of the Regional Water Boards for the management of pavement grindings as well as with all local and State regulations, including Titles 22 and 27 of the California Code of Regulations.

5) *Contractor Compliance*
The Department shall require its contractors to comply with this Order and with all applicable requirements of the CGP.

6) *Construction Non-Compliance Reporting*
Incidents of non-compliance with the CGP shall be reported pursuant to the provisions of the CGP. The Department shall provide in the Annual Report a summary of all construction project non-compliance (Section E.2.c.6)b)).

g. Compliance with Statewide Industrial Storm Water General Permit (IGP)
Industrial activities are not covered under this MS4 permit. The Department shall electronically file PRDs for coverage under the IGP for all facilities subject to coverage under the IGP. The categories of industrial facilities are provided in Attachment 1 of the Industrial General Permit (NPDES Permit No. CAS000001; the current Order No. 97-03-DWQ). The Department shall require its industrial facility contractors to comply with all requirements of the IGP. The discharge of pollutants from facilities not covered by the Industrial General Permit will be reduced to the MEP through the appropriate implementation of BMPs.

h. Maintenance Program Activities and Facilities Operations

1) *Implement SWMP Requirements*
The Department shall implement the program specified in the SWMP to reduce or eliminate pollutants in storm water discharges from Department maintenance facilities and maintenance activities. The Department shall also implement any additional requirements contained in this Order.

2) A ***FACILITY POLLUTION PREVENTION PLAN (FPPP)*** describes the activities conducted at a facility and the BMPs to be implemented to reduce or eliminate the discharge of pollutants in storm water runoff from the facility.

The Department shall prepare, revise and/or update the FPPPs for all maintenance facilities by October 1 of the first year. Each facility shall be evaluated separately and assigned appropriate site specific BMPs. The FPPP shall describe the activities conducted at the facility and the BMPs to be implemented to reduce or eliminate the discharge of pollutants in storm water runoff from the facility. The FPPP shall describe the inspection program used to ensure that maintenance BMPs are implemented and maintained. The Department shall identify in each Annual Report the status of the FPPP for each

Maintenance Facility by District and Region, including the date of the last update or revision and the nature of any revisions.

The Department shall evaluate all non-maintenance Facilities, excluding leased properties, for water quality problems. If the Department identifies a water quality problem at a non-maintenance facility, it shall prepare an FPPP for that facility. If Regional Water Board staff determines that a non-maintenance facility may discharge pollutants to the storm water drainage system or directly to surface waters, the Department shall prepare an FPPP for that facility.

Regional Water Board staff has the authority to require the submittal of an FPPP at any time, to require changes to a FPPP, and to require changes in the implementation of the provisions of a FPPP.

3) *Highway Maintenance Activities*
   a) The Department shall develop and implement runoff management programs and systems for existing roads, highways, and bridges to reduce runoff pollutant concentrations and volumes entering surface waters. The Department shall:

      i) Identify priority and watershed pollutant reduction opportunities (e.g., improvements to existing urban runoff control structures). Priority shall be given to sites in sensitive watersheds or where there is an existing or potential threat to water quality;
      ii) Establish schedules for implementing appropriate controls; and
      iii) Identify road segments with slopes that are prone to erosion and sediment discharge and stabilize these slopes to control the discharge of pollutants to the MEP. An inventory of vulnerable road segments shall be maintained in the District Work Plans. Stabilization activities shall be reported in the Annual Report. This section does not apply to landslides and other forms of mass wasting which are covered under section E.2.h.3)d).

   b) Vegetation Control
      The Department shall control its handling and application of chemicals including pesticides, herbicides, and fertilizers to reduce or eliminate the discharge of pollutants to the MEP. The Department shall incorporate integrated pest management and integrated vegetation management practices into its vegetation control program[10]. At a minimum, the Department shall:

      i) Apply herbicides and pesticides in compliance with federal, state and local use regulations and product label directions.

[10] http://www.epa.gov/opp00001/factsheets/ipm.htm and http://www.ipm.ucdavis.edu/

(1) Violations of regulations shall be reported to the County Agricultural Commissioners within 10 business days.
(2) The Annual Report shall include a summary of violations and follow-up actions to correct them.

ii) Minimize the application of chemicals by using integrated pest management and integrated vegetation management. For example, the Department may reduce the need for application of fertilizers and herbicides by using native species and using mechanical and biological methods for control of exotic species.

iii) Prior to chemical applications, assess site-specific and application-specific conditions to prevent discharge. The assessment shall include the following variables:

(1) Expected precipitation events, especially those with the potential for high intensity;
(2) Proximity to water bodies;
(3) Intrinsic mobility of the chemical;
(4) Application method, including any tendency for aerial dispersion;
(5) Fate and transport of the chemical after application;
(6) Effects of using combinations of chemicals; and
(7) Other conditions as identified by the applicator.

iv) Apply nutrients at rates and by means necessary to establish and maintain vegetation without causing significant nutrient runoff to surface water.

v) Ensure that all employees or contractors who, within the scope of their duties, prescribe or apply herbicides, pesticides, or fertilizers (including over-the-counter products) are appropriately trained and licensed to comply with these provisions.

vi) Propose SWMP provisions as appropriate.

vii) Include the following items in the Annual Report:

(1) A summary of the Department's chemical use. Report the quantity of chemicals used during the previous reporting period by name and type of chemical, by District, and by month.
(2) An assessment of long-term trends in herbicide usage. Include a table presenting yearly District herbicide totals by chemical type;
(3) A comparison of the statewide herbicide use with the Department’s herbicide reduction goals;

(4) An analysis of the effectiveness of implementation of vegetation control BMPs. Improvements to BMP implementation either being used or proposed for usage shall be discussed. If no improvements are proposed, explain why;
(5) Justification for any increases in use of herbicides, pesticides, and fertilizers;
(6) A report on the number and percentage of employees who apply pesticides and have been trained and licensed in the Department's Pesticide and Fertilizer Pollution Control Program policies; and
(7) Training materials, if requested by the State Water Board.

c) Storm Water Drainage System Facilities Maintenance

i) The Department shall inspect all urban[11] drainage inlets and catch basins a minimum of once per year and shall remove all waste and debris from drainage inlets and catch basins when waste and debris have accumulated to a depth of 50 percent of the inlet or catch basin capacity.
ii) Waste and debris, including sweeper and vacuum truck waste, shall be managed and reported in accordance with all applicable laws and regulations, including the Cal. Code Regs. Title 27, Division 2, Subdivision 1.
iii) The Department shall develop a ***WASTE MANAGEMENT PLAN*** that includes a comprehensive inventory of waste storage, transfer, and disposal sites; the source(s) of waste and the physical and chemical characterization of the waste retained at each site; estimated annual volumes of material and existing or planned waste management practices for each waste and facility type. Waste characterization need not be conducted on a site-by-site basis but may be evaluated programmatically based upon the highway environment and associated land uses contributing to the sites, climate, and ecoregion. The Waste Management Plan shall be submitted for State Water Board review and approval within one year of the effective date of this Order.

d) Landslide Management Activities
The Department shall develop a ***LANDSLIDE MANAGEMENT PLAN*** that includes BMPs for Department construction and maintenance work landslide-related activities (e.g., prevention, containment, clean-up). The *Landslide Management Plan* shall address all forms of mass wasting such as slumps, mud flows, and rockfalls, and shall include BMPs specifically for burn site management activities. The Department shall submit the *Landslide Management Plan* with the Year 1 Annual Report and implement the *Landslide Management Plan* for the remainder of the Permit term.

[11] For purposes of this requirement, the term "urban" shall mean located within an "urbanized area" as determined by the latest Decennial Census by the Bureau of the Census (Urbanized Area).

4) *Surveillance Activities*

a) Spill Response

The Department will follow the applicable Emergency Management Agency (EMA) procedures and timelines specified in Water Code sections 13271 and 13272 for reporting spills.

b) Illegal Connection/Illicit Discharge (IC/ID) and Illegal Dumping Response

i) The Department shall implement the BMPs and other requirements of the SWMP and this Order to reduce and eliminate IC/IDs and illegal dumping.

ii) The Department shall develop an ***IC/ID AND ILLEGAL DUMPING RESPONSE PLAN*** that includes, at a minimum, the following:

(a) Procedures for investigating reports or discoveries of IC/IDs or incidents of illegal dumping, for remediating or eliminating the IC/IDs, and for clean-up of illegal dump sites.

(b) Procedures for prevention of illegal dumping at sites subject to repeat or chronic incidents of illegal dumping.

(c) Procedures for educating the public, raising awareness and changing behaviors regarding illegal dumping, and encouraging the public to contact the appropriate local authorities if they witness illegal dumping.

Within 6 months of the effective date of this Order, the Department shall submit the ***IC/ID AND ILLEGAL DUMPING RESPONSE PLAN*** to the State Water Board Executive Director for approval.

iii) The Department shall report all suspected IC/IDs to the Regional Water Board.

c) Reporting Requirements for Trash and Litter

The Department shall report on the trash and litter removal activities that are currently underway or are initiated after adoption of this Order. Activities include, but are not limited to, storm drain maintenance, road sweeping, public education and the Adopt-A-Highway program. Reporting and assessment of these or future activities shall follow protocols established by the Department and shall include estimated annual volumes of the trash and litter removed. Results shall be submitted as part of the Annual Report in a summary format by District. Prior year's data shall be included to facilitate an analysis of trends.

d) Department Activities Outside the Department's Right-of-Way

The Department shall include provisions in its contracts that require the contractor to obtain and comply with applicable permits for project-related facilities and operations outside the Department's ROW. Facilities may include concrete or asphalt batch plants, staging areas, concrete slurry

processing or other material recycling operations, equipment and material storage yards, material borrow areas, and access roads.

5) *Maintenance Facility Compliance Inspections*

a) District staff shall inspect all maintenance facilities at least twice annually. Follow up inspections shall be conducted when deficiencies are noted. The inspections are to identify areas contributing to a discharge of pollutants associated with maintenance facility activities, to determine if control practices to reduce pollutant loadings identified in the Facility Pollution Prevention Plans (FPPP) are adequate and properly implemented, and to determine whether additional control practices are needed. The District shall keep a record of inspections. The record of the inspections shall include the date of the inspection, the individual(s) who performed the inspection, a report of the observations, recommendations for any corrective actions identified or needed, and a description of any corrective actions undertaken.

b) The Regional Water Board may require the Department to conduct additional site inspections, to submit reports and certifications, or to perform additional sampling and analysis to the extent authorized by the Water Code.

c) Records of all inspections, compliance certifications, and non-compliance reporting shall be retained for a period of at least three years. With the exception of non-compliance reporting, the Department is not required to submit these records unless requested.

6) *Operation and Maintenance of Post-Construction BMPs*
The Department shall prepare and implement long-term operation and maintenance plans for every site subject to the post-construction storm water treatment design standards. The plans must ensure the following: a) Long-term structural LID BMPs are maintained as necessary to ensure they continue to work effectively; b) Proprietary devices are maintained according to the manufacturer's directions; and c) Post-construction BMPs are replaced if they lose their effectiveness.

i. Non-Departmental Activities
The Department shall summarize its control over all non-departmental (third party) activities performed on Department ROW in the SWMP. The summary shall describe how the Department shall ensure compliance with this Order in all non-departmental activities.

The Department shall not grant or renew encroachment permits or easements benefitting any third party required to obtain coverage under the Statewide Construction and/or Industrial Storm Water General Permits unless the party has obtained coverage. In all leases, rental agreements, and all other contracts with

third parties conducting activities within the ROW, the Department shall require the third party to comply with applicable requirements of the Construction General Permit, the Industrial General Permit, and this Order.

j. Non-Storm Water Activities/ Discharges

1) The Department shall describe the management activities for all non-storm water discharges in the SWMP. Management activities shall include the procedures for prohibiting illicit discharges and illegal connections, and procedures for spill response, cleanup, reporting, and follow-up.

2) *Agricultural Return Flows*
The Department shall provide reasonable support to the monitoring activities of agricultural dischargers whose runoff enters the MS4. Reasonable support includes facilitating monitoring activities, providing necessary access to monitoring sites, and cooperating with monitoring efforts as needed. It does not include actively conducting monitoring or providing funding. The Department may require agricultural dischargers to follow established Department access and encroachment procedures in establishing sites and conducting monitoring activities, and may deny access at sites that may restrict traffic flow or pose a danger to any party.

3) See Section B of this Order for the complete list of conditionally exempt non-storm water discharges and compliance requirements.

k. Training

1) The Department shall implement a training program for Department employees and construction contractors. The training program shall be described in the SWMP.

2) The training program shall cover:

a) Causes and effects of storm water pollution;
b) Regulatory requirements;
c) Best Management Practices;
d) Penalties for non-compliance with this Order; and
e) Lessons learned.

3) The Department shall provide a review and assessment of all training activities in the Annual Report.

l. Public Education and Outreach

The Department shall implement a Statewide Public Education Program and describe it in the SWMP. The Department shall continue to seek opportunities to participate in public outreach and education activities with other MS4 permittees.

1) The Statewide Public Education Program shall include the following elements:

   a) Research: A plan for conducting research on public behavior that affects the quality of the Department's runoff. The information gathered will form the foundation for all the public education conducted.
   b) Education: Education of the general public to modify behavior and communicate with commercial and industrial entities whose actions may add pollutants to the Department's storm water.
   c) Mass Media Advertising: Continue the advertising campaign as a focal point of the public education strategy. The campaign should focus on the behaviors of concern and should be designed to motivate the public to change those behaviors. The public education campaign should be revised and updated according to the results of the research. The Department may cooperate with other organizations to implement the public education campaign.

2) A ***PUBLIC EDUCATION PROGRAM PROGRESS REPORT*** shall be submitted as part of the Annual Report.

m. Program Evaluation

1) The Department shall implement the program specified in the SWMP and any additional requirements contained in this Order.
2) *Field Activities* ***SELF-AUDIT***
   The Department will perform compliance evaluations for field activities including construction, highway maintenance, facility maintenance, and selected targeted program components. The results of the field compliance evaluations for each fiscal year will be provided in the Annual Report.
3) ***OVERALL PROGRAM EFFECTIVENESS EVALUATION****:*
   Each year, the Department shall submit an ***OVERALL PROGRAM EFFECTIVENESS EVALUATION*** together with the Annual Report. The Department shall increase the scope of the evaluation each year in response to the environmental monitoring data it collects. The effectiveness evaluation shall be comparable to that outlined in CASQA's *Municipal Stormwater Program Effectiveness Assessment Guidance*[12] and shall emphasize assessment of BMPs specifically targeting primary pollutants of concern. The effectiveness evaluation shall include, but is not limited to, the following components:

[12] https://www.casqa.org/store/products/tabid/154/p-7-effectiveness-assessment-guide.aspx

a) Assessment of program effectiveness in achieving permit requirements and measurable objectives.
b) Assessment of program effectiveness in protecting and restoring water quality and beneficial uses.
c) Identification of quantifiable effectiveness measurements for each BMP, including measurements that link BMP implementation with improvement of water quality and beneficial use conditions.
d) Identification of how the Department will propose revisions to the SWMP to optimize BMP effectiveness when effectiveness assessments identify BMPs or programs that are ineffective or need improvement.

n. Measurable Objectives
The Department shall implement the program specified in the SWMP and any additional requirements contained in this Order. In the SWMP, the Department shall identify measurable objectives to meet the SWMP's goals, proposed activities and tasks to meet the objectives, and a time schedule for the proposed activities and tasks. In the Annual Report, the Department shall report on its progress in meeting the measurable objectives.

o. References
The Department shall provide references for all information, documents, and studies used in the development of the SWMP.

3. Annual Report

a. The Department shall submit 13 copies of an ***ANNUAL REPORT*** to the State Water Board Executive Director by October 1 of each year. An electronic copy shall also be uploaded into SMARTS in the portable document format (PDF). The reporting period for the Annual Report shall be July 1 through June 30. The Annual Report shall contain all information and submittals required by this Order including, but not limited to:

1) A District-by-District description of storm water pollution control activities conducted during the reporting period;
2) A progress report on meeting the SWMP's measurable objectives;
3) An Overall Program Effectiveness Evaluation as described in section E.2.m.3);
4) Proposed revisions to the SWMP, including revisions to existing BMPs, along with corresponding justifications;
5) A report on post-construction BMP maintenance activities;
6) A list of non-approved BMPs that were implemented in each District during the reporting period including the type of BMP, reason for use, physical location, and description of any monitoring;
7) An evaluation of project planning and design activities conducted during the year;

8) A summary of non-compliance with this Order and the SWMP as specified in Section E.2.c.6)b). The summary shall include an assessment of the effectiveness of any Department enforcement and penalties, and as appropriate, proposed solutions to improve compliance;
9) An evaluation of the Monitoring Results Report, including a summary of the monitoring results;
10) Proposed revisions to the Department's Vegetation Control Program;
11) Proposals for monitoring and control of non-storm water discharges that are found to be sources of pollutants as described in Section B. of this Order;
12) District Workplans (See below); and
13) Measures implemented to meet region-specific requirements.

A partial summary of reporting requirements is contained in Attachment IX of this Order.

b. ***DISTRICT WORKPLANS***

The Department shall submit ***DISTRICT WORKPLANS*** (workplans) for each District by October 1 of each year, as part of the Annual Report. The workplans will be forwarded to the appropriate Regional Water Board Executive Officer for acceptance. Workplans are deemed accepted after 60 days after receipt by the Regional Water Board unless rejected in writing. District staff shall meet with Regional Water Board staff on an annual basis prior to submittal of the workplans to discuss alternatives and ensure that appropriate post construction controls are included in the project development process through review of the workplan and early consultation and coordination between District and Regional Water Board staff. Workplans shall conform with the requirements of applicable Regional Water Board Basin Plans and shall include, at a minimum:

1) A description of all activities and projects, including maintenance projects, to be undertaken by the Districts. For all projects with soil disturbing activities, this shall include a description of the construction and post construction controls to be implemented;
2) The area of new impervious surface and the percentage of new impervious surface to existing impervious surface for each project;
3) The area of disturbed soil associated with each project or activity;
4) A description of other permits needed from the Regional Water Boards for each project or activity;
5) Potential and actual impacts of the discharge(s) from each project or activity;
6) The proposed BMPs to be implemented in coordination with other MS4 permittees to comply with WLAs and LAs assigned to the Department for specific pollutants in specific watersheds or sub watersheds;
7) The elements of the statewide monitoring program to be implemented in the District;

8) Identification of high-risk areas (such as locations where spills or other releases may discharge directly to municipal or domestic water supply reservoirs or ground water percolation facilities);
9) Spill containment, spill prevention and spill response and control measures for high-risk areas; and
10) Proposed measures to be taken to meet Region-specific requirements included in Attachment V.
11) An inventory of vulnerable road segments having slopes that are prone to erosion and sediment discharge.

4. TMDL Compliance Requirements

a. Implementation

The Department shall comply with all TMDL-related requirements identified in Attachment IV.

In addition, consistent with provision E.11.b of this Order, the State Water Board may reopen this Order to incorporate any modifications or revisions to the TMDLs in Attachment IV, or to incorporate any new TMDLs adopted during the term of this Order that assign a WLA to the Department or that identify the Department as a responsible party in the TMDL implementation plan.

b. Status Review Report

The Department shall prepare a ***TMDL STATUS REVIEW REPORT*** to be submitted with each Annual Report. The ***TMDL STATUS REVIEW REPORT*** shall include all information required in Attachment IV.

5. ASBS Compliance Requirements

a. Priority Discharges
Attachment III, ASBS Priority Discharge Locations, identifies representative monitoring locations where the Department has priority discharges to ASBS. Priority discharges are those that pose the greatest threat to water quality in the ASBS and which the State Water Board identifies to require monitoring and potential installation of structural or non-structural controls.

b. Alternate Locations
The Executive Director of the State Water Board may authorize revisions to Attachment III, ASBS Priority Discharge Locations, where access limitations or safety considerations make it infeasible to conduct monitoring. Alternate locations proposed by the Department shall be in as close proximity to the original priority discharge locations as is feasible.

c. Compliance Schedule

1) On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) to ASBS shall be effectively prohibited.

2) No later than September 20, 2013, the Department shall submit a draft written ASBS Compliance Plan to the State Water Board Executive Director that describes its strategy to comply with these provisions, including the requirement to maintain natural water quality in the affected ASBS (see provision E.5.d.). The final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, shall be submitted no later than September 20, 2015 and shall be included in the SWMP.

3) Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these provisions shall be implemented.

4) Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these provisions shall be operational.

5) Within six (6) years of the effective date of the Exception, the Department must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the Department must re-sample the receiving water, pre- and post-storm. If after re-sampling, the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See Figure 2.

6) The Executive Director of the State Water Board may only authorize additional time to comply with provisions E.5.b.4) and E.5.b.5) above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

   If the Department claims physical impossibility, it shall notify the Executive Director of the State Water Board in writing within thirty (30) days of the date that the discharger Department first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in provisions E.5.c.4) or E.5.c.5). The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Permit provision. The Department shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of

the delay on water quality, the measures taken or to be taken by the Department to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Department shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The Department may request an extension of time for compliance based on lack of funding. The request for an extension shall require a demonstration and documentation of a good faith effort to acquire funding through the Department's budgetary process, and a demonstration that funding was unavailable or inadequate.

d. ASBS Compliance Plan
The Department shall develop and submit to the Executive Director of the State Water Board a draft ASBS Compliance Plan not later than September 20, 2013. The ASBS Compliance Plan shall address all locations listed in Attachment III as follows:

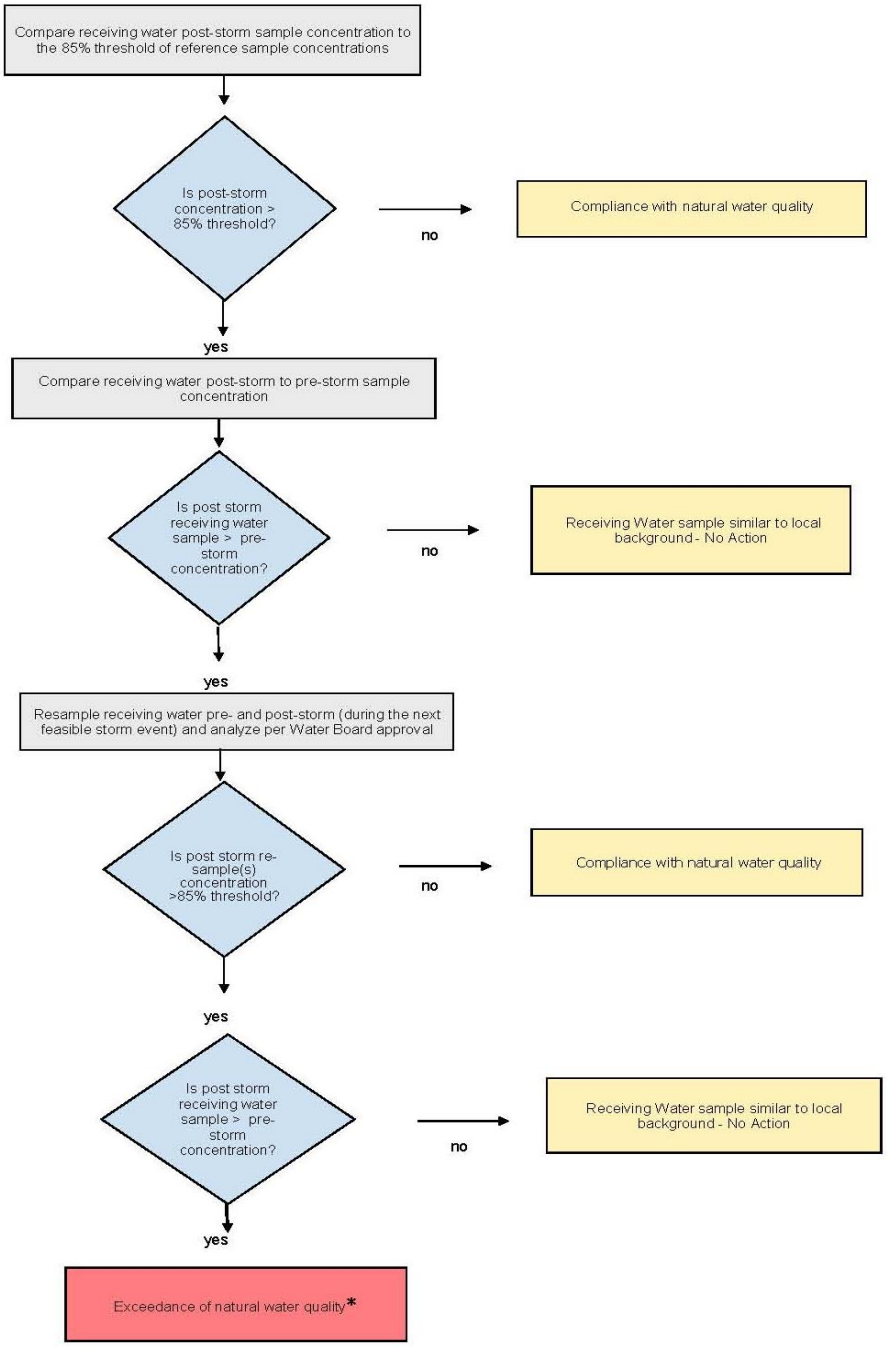
1) Include a map of surface drainage of storm water runoff, showing areas of sheet runoff, priority discharge locations, and any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable.

2) Describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.

3) Require minimum inspection frequencies as follows:

a) The minimum inspection frequency for construction sites shall be weekly during the rainy season;
b) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season; and
c) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season, and maintained to remove trash and other anthropogenic debris.

Figure 2
ASBS Special Protections
Flowchart to Determine Compliance with Natural Water Quality



*** When an exceedance of natural water quality occurs, the Department must comply with section I.A.2.h of the Special Protections as well as the requirements of this Order. Note, when sampling data is available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.**

4) Address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:

   a) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
   b) A 90% reduction in pollutant loading during storm events, for the Department's total discharges.

   The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of the Special Protections.

5) Address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.

6) Describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures currently employed and planned for higher threat discharges, and shall include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, the Department must first consider, and use where feasible, LID practices to infiltrate, use, or evapotranspire storm water runoff on-site, if LID practices would be the most effective at reducing pollutants from entering the ASBS.

7) The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.

e. Reporting
   If the results of the receiving water monitoring described in provision E.2.c.2)a)i) indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and Regional Water Board within 30 days

of receiving the results.

1) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.

2) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWMP for future implementation, and any additional BMPs that may be added to the SWMP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.

3) Within 30 days of the approval of the report by the State Water Board Executive Director, the discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.

4) As long as the discharger has complied with the procedures described above and is implementing the revised SWMP, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

6. Region Specific Requirements

a. The Department shall implement the region-specific requirements specified in this Order.
b. In the SWMP, the Department shall describe how individual Districts will address region-specific requirements in each Regional Water Board.
c. Region specific requirements are specified in Attachment V of this Order.

7. Regional Water Board Authorities

a. Upon the effective date of this Order, the Regional Water Boards shall enforce the requirements of this Order. Enforcement may include, but is not limited to, reviewing FPPPs, reviewing workplans and monitoring reports, conducting compliance inspections, conducting monitoring, reviewing Annual Reports and other information, and issuing enforcement orders.
b. Regional Water Boards may require submittal of FPPPs.
c. Regional Water Boards may require retention of records for more than three years.
d. To the extent authorized by the Water Code, Regional Water Boards may impose additional monitoring and reporting requirements and may provide guidance on monitoring plan implementation (Water Code, § 13383).
e. Regional Water Board staff may inspect the Department's facilities, roads, highways, bridges, and construction sites.

f. Regional Water Boards may issue other individual storm water NPDES permits or WDRs to the Department, particularly for discharges beyond the scope of this Order.

8. Requirements of Other Agencies

This Order does not preempt or supersede the authority of other State or local agencies (such as the Department of Toxic Substances Control or the California Coastal Commission) and local municipalities to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within their jurisdictions as allowed by State and federal law.

9. Standard Provisions

The Department shall comply with the Standard Provisions (Attachment VI) and any amendments thereto.

10. Permit Compliance and Rescission of Previous Waste Discharge Requirements

This Order shall serve and become effective as an NPDES permit and the Department shall comply with all its requirements on July 1, 2013. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 99-06-DWQ, except for compliance purposes for violations occurring before the effective date of this Order.

11. Permit Re-Opener

This Order may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations 122.62, 122.63, 122.64, and 124.5. The State Water Board may reopen and modify this Order at any time prior to its expiration under any of the following circumstances:

a. Present or future investigations demonstrate that the discharge(s) regulated by this Order may have the potential to cause or contribute to adverse impacts on water quality and/or beneficial uses.
b. New or revised Water Quality Objectives come into effect, or any new TMDL is adopted or revised that assigns a WLA to the Department or that identifies the Department as a responsible party in the TMDL implementation plan. In such cases, effluent limitations and other requirements in this Order may be modified as necessary to reflect the new TMDLs or the new or revised Water Quality Objectives; or
c. TMDL-specific permit requirements for adopted TMDLs are developed by a Regional Water Board for incorporation into this Order.

d. The State Water Board determines, after opportunity for public comment and a public workshop, that revisions are warranted to those provisions of the Order addressing compliance with water quality standards in the receiving water and/or those provisions of the Order establishing an iterative process for implementation of management practices to assure compliance with water quality standards in the receiving water.

12. Dispute Resolution

In the event of a disagreement between the Department and a Regional Water Board over the interpretation of any provision of this Order, the Department shall first attempt to resolve the issue with the Executive Officer of the Regional Water Board. If a satisfactory resolution is not obtained at the Regional Water Board level, the Department may submit the issue in writing to the Executive Director of the State Water Board or his designee for resolution, with a copy to the Executive Officer of the Regional Water Board. The issue must be submitted to the Executive Director within ten days of any final determination by the Executive Officer of the Regional Water Board. The Executive Officer of the Regional Water Board will be provided an opportunity to respond.

13. Order Expiration and Reapplication

a. This Order expires on June 30, 2018.

b. If a new order is not adopted by June 30, 2018, then the Department shall continue to implement the requirements of this Order until a new one is adopted.

c. In accordance with Title 23, Division 3, Chapter 9 of the California Code of Regulations, the Department shall file a report of waste discharge no later than 180 days before the expiration date of this Order as application for reissuance of this permit and waste discharge requirements. The application shall be accompanied by a SWMP, and a summary of all available water quality data for the discharge and receiving waters, including conventional pollutant data from at least the most recent three years, and toxic pollutant data from at least the most recent five years, in the discharge and receiving water. Additionally, the Discharger shall include the final results of any studies that may have a bearing on the limits and requirements of the next permit.

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

FACT SHEET
FOR

ORDER 2012-0011-DWQ

AS AMENDED BY
ORDER WQ 2014-0006-EXEC,
ORDER WQ 2014-0077-DWQ, AND
ORDER WQ 2015-0036-EXEC

NPDES NO. CAS000003
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
STATEWIDE STORM WATER PERMIT
WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

This Fact Sheet contains information regarding the waste discharge requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit for the California State Department of Transportation (Department) for discharges of storm water and certain types of non-storm water. This Fact Sheet describes the factual, legal, and methodological basis for the permit conditions, provides supporting documentation, and explains the rationale and assumptions used in deriving the limits and requirements.

BACKGROUND

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act (CWA)) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful, unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the Clean Water Act added section 402(p). Section 402(p) establishes that storm water discharges are point source discharges and lays out a framework for regulating municipal and industrial storm water discharges under the NPDES program. On November 16, 1990, the United States Environmental Protection Agency (U.S. EPA) promulgated final regulations that establish the storm water permit requirements.

Pursuant to the 1990 regulations, storm water permits are required for discharges from a municipal separate storm sewer system (MS4) serving a population of 100,000 or more. U.S. EPA defines an MS4 as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned or operated by a State (40 Code of Federal Regulations

(C.F.R.), § 122.26(b)(8)). The regulations also require storm water permits for 11 categories of industry, including construction activities where the construction activity: (1) disturbs more than one (1) acre of land; (2) is part of a larger common plan of development; and/or (3) is found to be a significant threat to water quality.

Before July 1999, storm water discharges from Department storm water systems were regulated by individual NPDES permits issued by the Regional Water Quality Control Boards (Regional Water Boards). On July 15, 1999, the State Water Resources Control Board (State Water Board) issued a statewide permit (Order No. 99-06-DWQ), which regulated all storm water discharges from Department owned MS4s, maintenance facilities and construction activities. The existing permit (Order No. 99-06-DWQ) will be superseded by adoption of a new permit.

Industrial activities are covered by two General Permits that have been adopted by the State Water Board. The Department's construction activities are subject to the requirements under the NPDES General Permit for Construction Activities (CGP, NPDES Permit No. CAS000002) for construction activities that are equal to or greater than one (1) acre. The exception to this is in the Lake Tahoe area, where the Lahontan Regional Water Board adopted its own construction general permit (NPDES Permit No. CAG616002). The Department's industrial facility activities are subject to the requirements of the NPDES General Permit for Industrial Activities (IGP, NPDES Permit No. CAS000001).

The Department is responsible for the design, construction, management, and maintenance of the State highway system, including freeways, bridges, tunnels, the Department's facilities, and related properties. The Department's discharges consist of storm water and non-storm water discharges from State owned right-of-way (ROW).

Clean Water Act section 402(p) and 40 Code of Federal Regulations section 122.26 (a)(v) give the State authority to regulate discharges from an MS4 on a system-wide or jurisdiction-wide basis. The State Water Board considers all storm water discharges from all MS4s and activities under the Department's jurisdiction as one system. Therefore, this Order is intended to cover all of the Department's municipal storm water activities.

This Order will be implemented by the Department and enforced by the State Water Board and nine Regional Water Boards.

The Department operates highways and highway-related properties and facilities that cross through local jurisdictions. Some storm water discharges from the Department's MS4 enter the MS4s owned and managed by these local jurisdictions. This Order does not supersede the authority of local agencies to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within their jurisdiction as allowed by State and federal law. The Department is expected to comply with the lawful requirements of municipalities and other local, regional, and/or state agencies regarding discharges of storm water to separate storm sewer systems or other watercourses under the agencies' jurisdictions.

GENERAL DISCHARGE PROHIBITIONS

This Order authorizes storm water and conditionally exempt non-storm water discharges from the Department's properties, facilities and activities. This Order prohibits the discharge of material other than storm water, unless specifically authorized in this Order.

The Department owns and operates highway systems that are located adjacent to and discharge into many ASBS. This Order specifies that Department discharges to an ASBS are prohibited except in compliance with the conditions and special protections contained in the General Exception for Storm Water and Non-Point Source Discharges to ASBS, State Water Board Resolution 2012-0012. This State Water Board resolution is hereby incorporated by reference and the Department is required to comply with applicable requirements. Attachment III identifies 77 priority Department ASBS discharge locations. These locations represent sites having significant potential to impact the ASBS that are feasible to retrofit. The following locations are not included in the list:

1. Inland sites discharging indirectly to the ASBS;
2. Sites where the discharge is attenuated through vegetation;
3. Sites where it is infeasible to install a BMP, e.g. an overhanging outfall or where there is insufficient space to install a treatment control; and
4. Sites that would pose a safety hazard to motorists, or that would be unsafe to install or maintain.

Provision E.5 of the Order requires the Department to ensure that structural controls at these locations are operational within six (6) years of the effective date of the General Exception.

NON-STORM WATER

Non-storm water discharges are subject to different requirements under the Order depending on whether they are discharged to ASBS.

Non-storm water discharges outside ASBS:

Non-storm water discharges must be effectively prohibited unless they are authorized by a separate NPDES permit or are conditionally exempt under provisions of the Order consistent with 40 CFR, §122.26 (d)(2) (iv)(B). Non-storm water discharges that are not specifically or conditionally exempted by this Order are subject to the existing regulations for point source discharges. Conditionally exempt non-storm water discharges that are found to be significant sources of pollution are to be effectively prohibited.

Discussion of Agricultural Return Flows:
The Department (2007a) indicated in its Non-Storm Water Report that agricultural irrigation water return flows carrying pollutants pass under the Department's ROW in many locations and enter its MS4. Agricultural return flows are not prohibited or conditionally exempted non-

storm water discharges and are not subject to the non-storm water requirements of the Order.

The regulations conditionally exempt MS4s from the requirement to effectively prohibit "irrigation water" discharges to the MS4. The regulations also completely exempt MS4s from addressing non-storm water discharges (also called "illicit discharges") if they are regulated by an NPDES permit (40 C.F.R., §§ 122.26(b)(2); 122.26(d)(2)(iv)(B)). The term "irrigation water" is not defined and the regulations do not clarify whether that term is intended to encompass agricultural return flows that may run on to the Department's rights of way.

Because agricultural return flows cannot be regulated by an NPDES permit, it is unlikely that they were intended to be treated as "illicit discharges" under the federal MS4 regulations. In discussing illicit non-storm water discharges and the requirement to effectively prohibit such discharges, the preamble of the Phase I final regulations states: "The CWA prohibits the *point source* discharge of non-storm water not subject to an NPDES permit through municipal separate storm sewers to waters of the United States. Thus, classifying such discharges as illicit properly identifies such discharges as being illegal" (55 FR 47996) (emphasis added). Implicit in this statement is that illicit discharges do not include non-point source discharges, including agricultural return flows, which are statutorily excluded from the definition of a point-source discharge (C.W.A., § 502(14)).[13]

Clean Water Act Section 402(l)(1) states that an NPDES permitting agency "shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture." Accordingly, agricultural return flows co-mingling with an illicit discharge would be treated as a point source discharge. This fact, however, does not lead the State Water Board to find that agricultural return flows should be subject to the conditional prohibition on non-storm water discharges.

First, the illicit discharge prohibition acts to prevent non-storm water discharges "*into* the storm sewers" (C.W.A., § 402(p)(3)(B)(ii)) (emphasis added). Based on a plain reading of the statutory language,[14] a determination of what constitutes an illicit discharge should be made with reference to the nature of the discharge as it enters the MS4. Unless the agricultural return flow has co-mingled with a point source discharge prior to entering the MS4, it is not subject to the discharge prohibition. Further, since certain point source discharges are conditionally exempted from the requirement for effective prohibition under 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(*1*), the fact that the agricultural return flow may have co-mingled with such an exempted dry weather point source discharge prior to entering the MS4 does not render it an illicit discharge subject to the effective

[13] Elsewhere in the preamble, EPA refers to the conditionally exempted non-storm water discharges as "seemingly innocent flows that are characteristic of human existence *in urban environments* and which discharge to municipal separate storm sewers" (55 F.R.48037) (emphasis added). This language further suggests that the term "irrigation water" was not intended to encompass irrigation return flows characteristic of a rural area.

[14] 40 C.F.R. §122.26(d)(2)(iv)(B)(*1*) similarly states that the MS4 is to "prevent illicit discharges *to* the municipal separate storm sewer system." (Emphasis added.)

prohibition.[15] *See Fishermen Against the Destruction of the Environment, Inc. v. Closter Farms, Inc. (11th Cir. 2002)* 300 F.3d 1294.

Second, even assuming that the agricultural return flow mingling with a point source discharge *after* entering the MS4 would trigger the requirements related to non-storm water discharges, agricultural return flows are not expected to require an effective prohibition. Irrigation of agricultural fields typically occurs in dry weather, not wet weather, and therefore the State Water Board anticipates that irrigation return flows into the Department's MS4 would generally not co-mingle with discharges other than exempt non-storm water discharges.

Further, agricultural return flows entering an MS4, while not regulated by an NPDES permit, are through much of the State regulated under WDRs, waivers, and Basin Plan prohibitions. The regulations exempt MS4s from addressing non-storm water discharges that are regulated by an NPDES permit. Flows to the Department's MS4 regulated through state-law based permits are subject to regulatory oversight analogous to being subject to an NPDES permit. The appropriate regulatory mechanism for these discharges is the non-point source regulatory programs and not a municipal storm water permit.[16]

Non-Storm Water Discharges to ASBS:

Non-storm water discharges to ASBS are prohibited except as specified in the General Exception. Certain enumerated non-storm water discharges are allowed under the General Exception if essential for emergency response purposes, structural stability, slope stability, or if occur naturally.

Discussion of Utility Vault Discharges:
In addition, an NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS. This Order allows utility vault discharges to segments of the Department MS4 with a direct discharge to an ASBS, provided the discharge is authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. The State Water Board is in the process of reissuing the General NPDES Permit for Utility Vaults. As part of the renewal, the State Water Board will require a study to characterize representative utility vault discharges to an MS4 with a direct discharge to an ASBS and will impose conditions on such discharges to ensure the discharges do not alter natural ocean water quality in the ASBS. Given the limited number of utility vault discharges to MS4s that

[15] The Federal Register discussion clarifies that "irrigation return flows are excluded from regulation under the NPDES program," but that "joint discharges," i.e. discharges with a component "from activities unrelated to crop production" may be regulated (55 FR 47996).
[16] It should also be noted that the Department has limited control options since up gradient flows such as agricultural runoff must in many cases be allowed to flow under or alongside the roadway so as to not threaten roadway integrity.

discharge directly to an ASBS, the State Water Board finds that discharges from utility vaults and underground structures to MS4s with a direct discharge to an ASBS are not expected to result in the MS4 discharge causing a substantial alteration of natural ocean water quality in the ASBS in the interim period while the General NPDES Permit for Discharges from Utility Vaults is renewed and the study is completed. However, if a Regional Water Board determines a specific discharge from a utility vault or underground structure does alter the natural ocean water quality in an ASBS, the Regional Water Board may prohibit the discharge as specified in this Order. It should also be noted that, under the California Ocean Plan Section III.E.2 (Implementation Provisions for ASBS), limited-term activities that result in temporary and short-term changes in existing water quality in the ASBS may be permitted.

EFFLUENT LIMITS

The State of California Nonpoint Source Program Five-Year Implementation Plan (SWRCB, 2003) (the Plan) describes a variety of pollutants in urban storm water and non-storm water that are carried in MS4 discharges to receiving waters. These include oil, sand, de-icing chemicals, litter, bacteria, nutrients, toxic materials and general debris from urban and suburban areas. The Plan identifies construction as a major source of sediment erosion and automobiles as primary sources of petroleum hydrocarbons.

The Natural Resources Defense Council (NRDC) also identified two main causes of storm water pollution in urban areas (NRDC, 1999). Both identified causes are directly related to development in urban and urbanizing areas:

1. Increased volume and velocity of surface runoff. There are three types of human-made impervious cover that increase the volume and velocity of runoff: (i) rooftops, (ii) transportation imperviousness, and (iii) non-porous (impervious) surfaces. As these impervious surfaces increase, infiltration will decrease, forcing more water to run off the surface, picking up speed and pollutants.

2. The concentration of pollutants in the runoff. Certain industrial, commercial, residential and construction activities are large contributors of pollutant concentrations in urban runoff. As human population density increases, it brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc.

   As a result of these two causes, runoff leaving developed urban areas is significantly greater in volume, velocity, and pollutant load than pre-development runoff from the same area.

NPDES storm water permits must meet applicable provisions of sections 301 and 402 of the Clean Water Act. For discharges from an MS4, Clean Water Act section 402(p)(3)(B)(iii) requires control of pollutants to the maximum extent practicable (MEP). A permitting agency also has the discretion to require dischargers to implement more stringent controls, if

necessary, to meet water quality standards (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1166.), (discussed below under Receiving Water Limitations).

MEP is the technology-based standard established by Congress in Clean Water Act section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve. MEP is generally achieved by emphasizing pollution prevention and source control BMPs as the first lines of defense in combination with structural and treatment methods where appropriate. The MEP approach is an ever evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP.

In a precedential order (State Water Board Order WQ 2000-11 (In the Matter of the petitions of the Cities of Bellflower et al.)), the State Water Board has stated as follows:

> While the standard of MEP is not defined in the storm water regulations or the Clean Water Act, the term has been defined in other federal rules. Probably the most comparable law that uses the term is the Superfund legislation, or CERCLA, at section 121(b). The legislative history of CERCLA indicates that the relevant factors, to determine whether MEP is met in choosing solutions and treatment technologies, include technical feasibility, cost, and state and public acceptance. Another example of a definition of MEP is found in a regulation adopted by the Department of Transportation for onshore oil pipelines. MEP is defined as to "the limits of available technology and the practical and technical limits on a pipeline operator . . . ."
>
> These definitions focus mostly on technical feasibility, but cost is also a relevant factor. There must be a serious attempt to comply, and practical solutions may not be lightly rejected. If, from the list of BMPs, a permittee chooses only a few of the least expensive methods, it is likely that MEP has not been met. On the other hand, if a permittee employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. Thus while cost is a factor, the Regional Water Board is not required to perform a cost-benefit analysis.

The final determination of whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the permitting agency, and not by the discharger.

Because of the numerous advances in storm water regulation and management and the size of the Department's MS4, this Order does not require the Department to fully incorporate and

implement all advances in a single permit term. The Order allows for prioritization of efforts to ensure the most effective use of available funds.

This Order will have an impact on costs to the Department above and beyond the costs from the Department's prior permit. Such costs will be incurred in complying with the post-construction, hydrograph modification, Low Impact Development, and monitoring and reporting requirements of this Order. Additional costs will also be incurred in correcting non-compliant discharges. Recognizing that there are cost increases associated with the Order, the State Water Board has prepared a cost analysis to approximate the anticipated cost associated with implementing this permit. The resulting cost analysis is discussed later in this Fact Sheet under the section on "Cost of Compliance and Other MEP Considerations." The cost analysis has been prepared based on available data and is not a cost-benefit analysis.

The individual and collective activities required by this Order and contained in the Department's Storm Water Management Plan (SWMP) meet the MEP standard.

RECEIVING WATER LIMITATIONS

Under federal law, an MS4 permit must include "controls to reduce the discharge of pollutants to the maximum extent practicable . . . and such other provisions as . . . the State determines appropriate for the control of such pollutants." (Clean Water Act §402(p)(3)(B)(iii).) The State Water Board has previously determined that limitations necessary to meet water quality standards are appropriate for the control of pollutants discharged by MS4s and must be included in MS4 permits. (State Water Board Orders WQ 91-03, 98-01, 99-05, 2001-15; see also *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F3d 1159.). The Proposed Order accordingly prohibits discharges that cause or contribute to violations of water quality standards.

The Proposed Order further sets out that, upon determination that a Permittee is causing or contributing to an exceedance of applicable water quality standards, the Permittee must engage in an iterative process of proposing and implementing additional control measures to prevent or reduce the pollutants causing or contributing to the exceedance. This iterative process is modeled on receiving water limitations set out in State Water Board precedential Order WQ 99-05 and required by that Order to be included in all municipal storm water permits.

The Ninth Circuit held in *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2011) 673 F.3d 880 that engagement in the iterative process does not provide a safe harbor from liability for violations of permit terms prohibiting exceedances of water quality standards. The Ninth Circuit holding is consistent with the position of the State Water Board and Regional Water Boards that exceedances of water quality standards in an MS4 permit constitute violations of permit terms subject to enforcement by the Boards or through a citizen suit. While the Boards have generally directed dischargers to achieve compliance by improving control measures through the iterative process, the Board retains the discretion to

take other appropriate enforcement and the iterative process does not shield dischargers from citizen suits.

The State Water Board has received multiple comments, from the Department and from other interested parties, expressing confusion and concern about the Order provisions regarding receiving water limitations and the iterative process. The Department has commented that the provisions as currently written do not provide the Department with a viable path to compliance with the proposed Order. Other commenters, including environmental parties, support the current language.

As stated above, the provisions in this Order regarding receiving water limitations and the iterative process are based on precedential Board orders. Accordingly, substantially identical provisions are found in the proposed statewide Phase II MS4 NPES permit, as well as the Phase I NPDES permits issued by the Regional Water Boards. In the context of the proposed Phase II MS4 permit, similar comments have been received. Because of the broad applicability of any policy decisions regarding the receiving water limitations and iterative process provisions, the State Water Board has proposed a public workshop to consider this issue and seek public input.

Rather than delay consideration of adoption of the tentative Order in anticipation of any future changes to the receiving water limitations and iterative process provisions that may result from the public workshop and deliberation, the Board has added a specific reopener clause at Section 11.d. to facilitate any future revisions as necessary.

NUMERIC EFFLUENT LIMITATIONS AND BLUE RIBBON PANEL OF EXPERTS

Under 40 Code of Federal Regulations section 122.44(k)(2)&(3); the State Water Board may impose BMPs for control of storm water discharges in lieu of numeric effluent limitations.[17]

In 2005, the State Water Board assembled a blue ribbon panel to address the feasibility of including numeric effluent limits as part of NPDES municipal, industrial, and construction storm water permits. The panel issued a report dated June 19, 2006, which included recommendations as to the feasibility of including numeric limitations in storm water permits, how such limitations should be established, and what data should be required (SWRCB, 2006).

[17] On November 12, 2010, U.S. EPA issued a revision to a November 22, 2002 memorandum in which it had "affirm[ed] the appropriateness of an iterative, adaptive management best management practices (BMP) approach" for improving storm water management over time. In the revisions, U.S. EPA recommended that, in the case the permitting authority determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality excursion, the permitting authority, where feasible, include numeric effluent limitations as necessary to meet water quality standards. However, the revisions recognized that the permitting authority's decision as to how to express water quality based effluent limitations (WQBELs), i.e. as numeric effluent limitations or BMPs, would be based on an analysis of the specific facts and circumstances surrounding the permit. U.S. EPA has since invited comment on the revisions to the memorandum and will be making a determination as to whether to "either retain the memorandum without change, to reissue it with revisions, or to withdraw it." http://www.epa.gov/npdes/pubs/sw_tmdlwla_comments_pdf

The report concluded that “It is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges. However, it is possible to select and design them much more rigorously with respect to the physical, chemical and/or biological processes that take place within them, providing more confidence that the estimated mean concentrations of constituents in the effluents will be close to the design target.”

Consistent with the findings of the Blue Ribbon Panel and precedential State Water Board orders (State Water Board Orders Nos. WQ 91-03 and WQ 91-04), this Order allows the Department to implement BMPs to comply with the requirements of the Order.

In 1980, the State Water Resources Control Board adopted concentration-based numeric effluent limitations for total nitrogen, total phosphate, total iron, turbidity, and grease and oil for storm water discharges in the Lake Tahoe Basin. The Lahontan Regional Water Board included revised versions of those limitations in Table 5.6-1 of the Water Quality Control Plan for the Lahontan Region (Basin Plan). The numeric effluent limitations in Table 5.6-1 were included in previous iterations of the Department's MS4 permit. This Order does not include these referenced numeric effluent limitations. The TMDL for sediment and nutrients in Lake Tahoe, approved by U.S. EPA on August 16, 2011, removed statements from the Basin Plan requiring the effluent limitations in Table 5.6-1 to apply to municipal jurisdictions and the Department. The Lake Tahoe TMDL would constitute cause for permit revocation and reissuance in accordance with 40 Code of Federal Regulations section 122.62(a)(3), so the removal of the referenced numeric effluent limitations is consistent with 40 Code of Federal Regulations section 122.44(l)(1). Further, any water quality based effluent limitations in MS4 permits are imposed under section 402(p)(3)(B) of the Clean Water Act rather than under section 301(b)(1)(C), and are accordingly not subject to the antibacksliding requirements of section 402(o). The Order requires compliance with pollutant load reduction requirements established by the Lake Tahoe TMDL for total nitrogen, total phosphorus, and fine sediment particles.

OTHER PROVISIONS OF THIS ORDER

Storm Water Management Plan (SWMP)

The SWMP describes the procedures and practices that the Department proposes to reduce or eliminate the discharge of pollutants to storm drainage systems and receiving waters. On May 17, 2001, the State Water Board approved a Storm Water Management Plan submitted by the Department. That SWMP was updated in 2003 (Department, 2003c) and the updates were approved by the Executive Director of the State Water Board on February 13, 2003. On January 15, 2004, the Department submitted a proposed Storm Water Management Plan as part of its NPDES permit application to renew its previous statewide storm water permit (Order No. 99-06-DWQ). The State Water Board and Regional Water Board staff and the Department discussed and revised Best Management Practices (BMP) controls and many

other components proposed in each section of the SWMP during numerous meetings from January 2004 to 2006. The Department submitted a revised SWMP in June 2007 (Department, 2007c). The 2004 and 2007 SWMPs have not been approved by the State Water Board and the Department has continued to implement the 2003 SWMP. The Department is in the process of revising aspects of the 2003 SWMP to address the Findings of Violation and Order for Compliance issued by U.S. EPA in 2011 (U.S. EPA Docket No. CWA-09-2011-0001).

This Order requires the Department to update, maintain and implement an effective SWMP that describes how the Department will meet requirements of this Order. Within one year of the effective date of the Order, the Department shall submit for Executive Director approval a SWMP consistent with the provisions and requirement of the Order. The SWMP is an integral and enforceable component of this Order and is required to be updated on an annual basis.

In ruling upon the adequacy of federal regulations for discharges from small municipal storm sewer systems, the court in *Environmental Defense Center v. United States EPA* (9th Cir. 2003) 344 F.3d 832 held that NPDES "notices of intent" that required the inclusion of a proposed storm water management program (SWMP) are subject to the public participation requirements of the federal Clean Water Act because they are functionally equivalent to NPDES permit applications and because they contain "substantive information" about how the operator will reduce its discharges to the maximum extent practicable. By implication, the public participation requirements of the Clean Water Act may also apply to proposals to revise the Department's SWMP. Although the Proposed Order contains significantly more detailed and prescriptive requirements for achievement of MEP than previously adopted orders for the Department, some of the substantive information about how MEP will be achieved is arguably still set out in the SWMP. This Order accordingly provides for public participation in the SWMP revision process. However, because there may be a need for numerous revisions to the SWMP during the term of this Order, a more streamlined approach to SWMP revisions is needed to provide opportunities for public hearings while preserving the State Water Board's ability to effectively administer its NPDES storm water permitting program. (See *Costle v. Pacific Legal Foundation* (1980) 445 U.S. 198, 216-221, *Natural Resources Defense Council v. Costle* (9th Cir. 1977) 568 F.2d 1369, 1382.)

This Order establishes that revisions to the SWMP requiring Executive Director approval will be publicly noticed for thirty days on the State Water Board's website (except as otherwise specified). During the public notice period, a member of the public may submit a written comment or request that a public hearing be conducted. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. Upon review of the request or requests for a public hearing, the Executive Director may, in his or her discretion, schedule a public hearing to take place before approval of the SWMP revision. The Executive Director shall schedule a hearing if there is a significant degree of public interest in the proposed revision. If no public hearing is conducted, the Executive Director may approve the SWMP revision if it meets the conditions set forth in this Order.

Any SWMP revision approved by the Executive Director will be posted on the State Water Board's website.

The Department references various policies, manuals, and other guidance related to storm water in the SWMP. These documents are intended to facilitate implementation of the SWMP and must be consistent with all requirements of the Order.

In addition to the annual submittal of the proposed SWMP revisions, this Order also requires the Department to submit workplans that explain how the program will be implemented in each District. The purpose of the workplans is to bring the proposed statewide program of the SWMP to the practical and implementable level at the District, watershed, and water body level.

Legal Authority
The Department has submitted a certification of adequate legal authority to implement the program. Through implementation of the storm water program, the Department may find that the legal authority is, in fact, not adequate. This Order requires the Department to reevaluate the legal authority each year and recertify that it is adequate. The Department is required to submit the Certification of the Adequacy of Legal Authority as part of the Annual Report each year. If it becomes clear that the legal authority is not adequate to fully implement the SWMP and the requirements of this Order, the Department must seek the authority necessary for implementation of the program.

SWMP Implementation Requirements

Management and Organization
The Department must maintain adequate funding to implement an effective storm water program and must submit an analysis of the funding each year. This includes a report on the funding that is dedicated to storm water as well as an estimate of the funding that has been allocated to various program elements that are not included in the storm water program funding. An example of this would be to estimate the funding that has been made available to the Maintenance Program to implement the development of Maintenance Facility Pollution Prevention Plans (FPPP) and to implement the Best Management Practices (BMPs) that are necessary for water quality.

The Department's facilities and rights-of-way may cross or overlap other MS4s. The Department is required to coordinate their activities with other municipalities and local governments that have responsibility for storm water runoff. This Order requires the Department to prepare a Municipal Coordination Plan describing the approach that the Department will take in establishing communication, coordination, cooperation and collaboration with other storm water management programs.

Discharge Monitoring and Reporting Program
Since 1998, the Department has conducted monitoring of runoff from representative transportation facilities throughout California. The key objectives of the characterization

monitoring were to produce scientifically credible data on runoff from the Department's facilities, and to provide useful information in designing effective storm water management strategies. Between 2000 and 2003, the Department conducted a three-year characterization monitoring study (Department, 2003b). The study generated over 60,000 data points from over 180 monitoring sites. Results were compared with California Toxics Rule (CTR) objectives and other relevant receiving water quality objectives (U.S. EPA, 2000b). Copper, lead, and zinc were estimated to exceed the CTR objectives for dissolved and total fractions in greater than 50 percent of samples. Diazinon and chlorpyrifos were also found to exceed the California Department of Fish and Game recommended chronic criteria in a majority of samples.

The discharge monitoring program has been structured to focus on the highest priority water quality problems in order to ensure the most effective use of limited funds. A tiered approach is established that gives first priority to monitoring in ASBS and TMDL watersheds. Monitoring in these locations must be conducted pursuant to the applicable requirements of the ASBS Special Protections or TMDL, without limitation as to the number of sites. The second monitoring tier requires the Department to examine and prioritize existing monitoring locations where existing data show elevated levels of pollutants. Fifteen percent of the highest priority sites must be scheduled for retrofit, with a maximum of 100 sites per year.

Monitoring constituents were chosen by the State Water Board from the results of the Department's comprehensive, multi-component storm water characterization monitoring program conducted in 2002 and 2003 and various other characterization studies.

Toxicity in storm water discharges from the Department's rights-of-way has been reported in a number of studies. A 2005 report prepared for the Department by the University of California at Davis "Toxicity of Storm Water from Caltrans Facilities" reported significant occurrences of acute and chronic toxicity (Department, 2005). Toxicity Identification Evaluations showed toxicity from a number of compounds, including heavy metals, organic compounds, pesticides and surfactants. Toxicity testing is required under the Order, and a workplan for conducting Toxicity Reduction Evaluations is required to be included in the SWMP.

Monitoring data must be filed electronically in the Storm Water Multiple Application Report and Tracking System (SMARTS). Receiving water monitoring data must be comparable[18] with the Surface Water Ambient Monitoring Program (SWAMP), (SWAMP, 2010), and must be uploaded to the California Data Exchange Network (CEDEN).

[18] U.S. EPA defines comparability as the measure of confidence with which one data set, element, or method can be considered as similar to another. Functionally, SWAMP comparability is defined as adherence to the SWAMP Quality Assurance Program Plan and the Surface Water Ambient Monitoring Program Information Management Plan.

Incident Reporting - Non-Compliance and Potential/Threatened Non-Compliance
The Department may at times be out of compliance with the requirements of this Order. Incidents of non-compliance and potential or threatened non-compliance must be reported to the State and Regional Water Boards. This Order identifies the conditions under which non-compliance reporting will be required. This Order distinguishes between emergency, field, and administrative (procedural) incidents that require notification to the State and Regional Water Boards, and requires that a summary of non-compliance incidents and the subsequent actions taken by the Department to reduce, eliminate and prevent the reoccurrence of the non-compliance be included in the Annual Report.

Emergency, field and administrative incidents are defined in Attachment I and have separate reporting requirements. Generally, failure to meet any permit requirement that is local or regional in nature will be reported to the Regional Water Boards. Attachment I outlines the reporting timelines for the three categories. This reporting will be conducted through the Storm Water Multiple Application Report and Tracking System (SMARTS)[19]. Distribution of this report internally between the State Water Board and any Regional Water Boards will be conducted through this system.

Project Planning and Design
In Order WQ 2000-11, the State Water Board considered Standard Urban Storm Water Mitigation Plans (SUSMPs) related to new development and redevelopment. The SUSMPs include a list of BMPs for specific development categories, and a numeric design standard for structural or treatment control BMPs. The numeric design standard created objective and measurable criteria for the amount of runoff that must be treated or infiltrated by BMPs. While this Order does not regulate construction activities, it does regulate the post-construction storm water runoff pursuant to municipal storm water regulations. SUSMPs are addressed in this Order through the numeric sizing criteria that apply to treatment BMPs at specified new and redevelopment projects and through requirements to implement Low Impact Development through principles of source control, site design, and storm water treatment and infiltration.

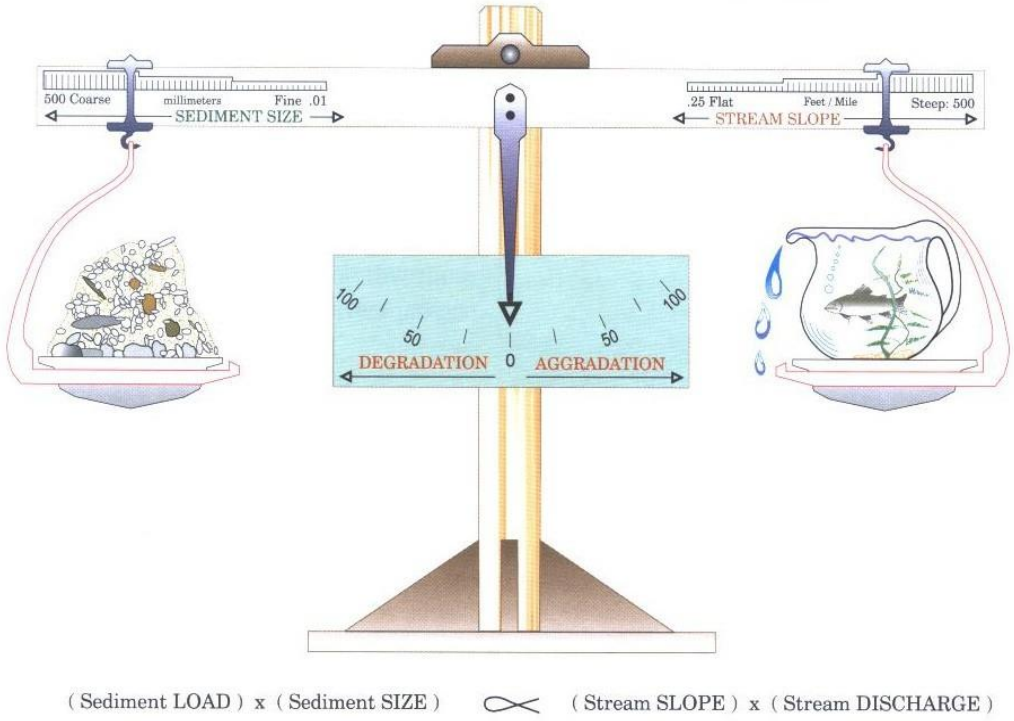
The Order provides the Department with an alternative compliance method for complying with the Treatment Control BMP numeric sizing criteria for projects where on-site treatment is infeasible. Under that method, the Department may propose complying with the requirements by installing and maintaining equivalent treatment BMPs at an offsite location (meaning outside of Project Limits) within the watershed, or by contributing funds to achieve the same amount of treatment at a regional project within the watershed. This compliance method will provide some flexibility to the Department in meeting the treatment control requirements.

[19] https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

Hydromodification and Channel Protection
Department development and redevelopment projects have the potential to negatively impact stream channels and downstream receiving waters. The potential impacts of hydromodification by Department projects must be assessed in the project planning and design stage, and measures taken to mitigate them. This section describes the rationale and approach for the hydromodification and channel protection requirements.

A dominant paradigm in fluvial geomorphology holds that streams adjust their channel dimensions (width and depth) in response to long-term changes in sediment supply and bankfull discharge. The bankfull stage corresponds to the discharge at which channel maintenance is the most effective, that is, the discharge at which the moving sediment, forming or removing bars, and forming or changing bends and meanders, are doing work that results in the average morphologic characteristics of channels (Finkenbine, 2000). A.W. Lane showed the generalized relationship between sediment load, sediment size, stream discharge and stream slope, as shown in Figure 1, (Rosgen, 1996). A change in any one of these variables sets up a series of mutual adjustments in the companion variables resulting in a direct change in the physical characteristics of the stream channel.

Figure 1 - Schematic of the Lane Relationship



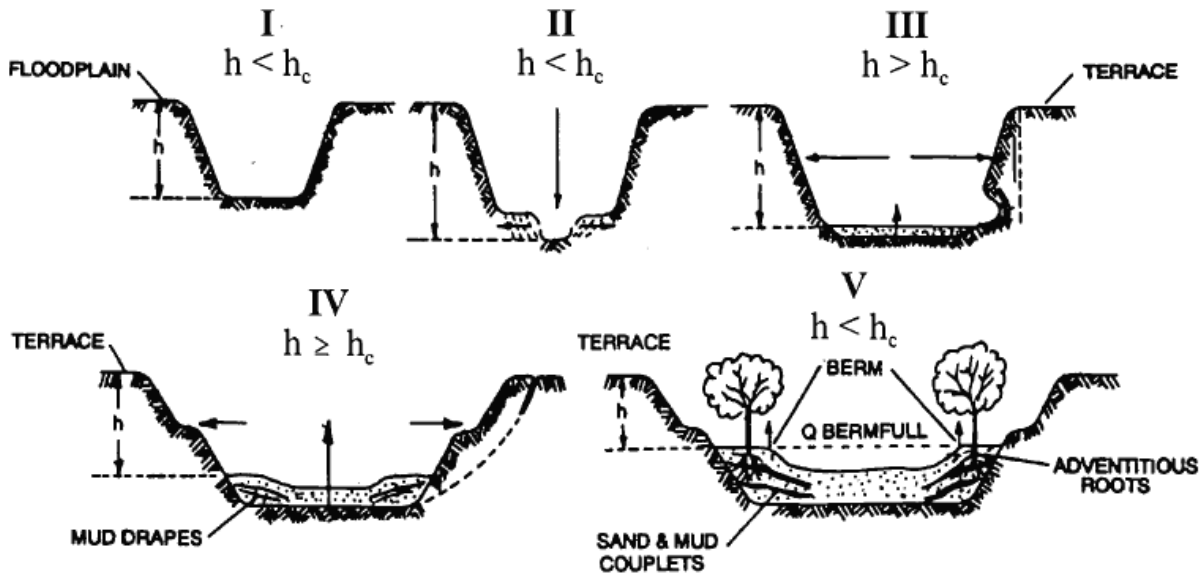
After Lane (1955) as cited in Rosgen (1996)

Stream slope times stream discharge (the right side of the scale) is an approximation of stream power, a unifying concept in fluvial geomorphology (Bledsoe, 1999). Urbanization generally increases stream power and affects the resisting forces in a channel (represented as sediment load and sediment size on the left side of the scale).

During construction, sediment loads can increase from 2 to 40,000 times over pre-construction levels (Goldman, 1986). Most of this sediment is delivered to stream channels during large, episodic rain events (Wolman, 2001). This increased sediment load leads to an initial aggradation phase where stream depths may decrease as sediment fills the channel, leading to a decrease in channel capacity and an increase in flooding and overbank deposition. A degradation phase initiates after construction is completed.

Schumm et al (Schumm, 1984) developed a channel evolution model that describes the series of adjustments from initial downcutting, to widening, to establishing new floodplains at lower elevations (Figure 2).

Figure 2 - Channel Changes Associated with Urbanization



h = bank height
hc = critical bank height (the bank is susceptible to failure when bank heights are greater than critical bank height. Stable banks have low angles and heights)

After Incised Channel Evolution Sequence in Schumm et al. 1984

Channel incision (Stage II) and widening (Stages III and to a lesser degree, Stage IV) are due to a number of fundamental changes on the landscape. Connected impervious area and compaction of pervious surfaces increase the frequency and volume of bankfull discharges (Stein, 2005; Booth, 1997), resulting in an increase in stream power. Increased drainage density (miles of stream length per square mile of watershed) also affects receiving channels (May, 1998; SCVURPPP, 2002). Increased drainage density and hydraulic efficiency leads to an increase in the frequency and volume of bankfull discharges because the time of concentration is shortened. Flows from engineered pipes and channels are also often “sediment starved” and seek to replenish their sediment supply from the channel.

Encroachment of stream channels can also lead to an increase in stream slope, which leads to an increase in stream power. In addition, watershed sediment loads and sediment size (with size generally represented as the median bed and bank particle size, or d_{50}) decrease during urbanization (Finkenbine, 2000; Pizzuto, 2000). This means that even if pre- and post- development stream power are the same, more erosion will occur in the post-development stage because the smaller particles are less resistant.

As shown in Stages II and III, the channel deepens and widens to accommodate the increased stream power (Hammer, 1973; Booth, 1990) and decrease in sediment load and sediment size. Channels may actually narrow as entrained sediment from incision is deposited laterally in the channel (Trimble, 1997). After incised channels begin to migrate laterally (Stage III), bank erosion begins, which leads to general channel widening (Trimble, 1997). At this point, a majority of the sediment that leaves a drainage area comes from within the channel, as opposed to the background and construction related hillslope contribution (Trimble, 1997). Stage IV is characterized by more aggradation and localized bank instability. Stage V represents a new quasi-equilibrium channel morphology in balance with the new flow and sediment supply regime. In other words, stream power is in balance with sediment load and sediment size.

The magnitude of the channel morphology changes discussed above varies along a stream network as well as with the age of development, slope, geology (sand-bedded channels may cycle through the evolution sequence in a matter of decades whereas clay-dominated channels may take much longer), watershed sediment load and size, type of urbanization, and land use history. It is also dependent on a channel's stage in the channel evolution sequence when urbanization occurs. Management strategies must take into account a channel's stage of adjustment and account for future changes in the evolution of channel form (Stein, 2005).

The hydromodification requirements in this Order are based on established Federal Highway Administration procedures for assessing stream stability at highway crossings. These procedures are geomorphically based and have historically been used to inform bridge and culvert design and to ensure that these structures are not impacted by decreased lateral and vertical stability (FHWA, 2001; FHWA, 2006). Maintaining lateral and vertical stability will not only protect highway structures but will serve the broader interest of maintaining stable stream form and function.

These hydromodification requirements are risk based and reflect the concept that stable channels (as determined from a Level 1 rapid analysis) do not have to undergo any further analysis and that hydrology-based design standards are protective.

If stream channels are determined to be laterally and or vertically unstable, the analysis procedures are much more rigorous and the mitigation measures are potentially more extensive. There is support in the literature for the type of tiered, risk-based approach taken in this Order (Booth, 1990; Watson, 2002; Bledsoe, 2002; Bledsoe et al., 2008).

California Senate Bill 857 (2006) amended Article 3.5 of the Streets and Highways Code to require the Department to assess and remediate barriers to passage of anadromous fish at stream crossings along the State Highway System. The bill also requires the Department to, among other things, prepare an annual report to the legislature on the status of the Department's efforts in locating, assessing, and remediating barriers to fish passage. Waters of the State supporting the beneficial use of fish migration could be adversely impacted by improperly designed or maintained stream crossings, or through natural channel evolution processes. Accordingly, this Order requires the Department to also submit the annual report required under SB 857 to the State Water Board.

Low Impact Development (LID)
On January 20, 2005, the State Water Board adopted sustainability as a core value for all California Water Boards' activities and programs, and directed State Water Board staff to consider sustainability in all future policies, guidelines, and regulatory actions. Sustainability can be achieved through appropriate implementation of the LID techniques required by this Order.

The proper implementation of LID techniques not only results in water quality protection benefits and a reduction of land development and construction costs, but also enhances property values, and improves habitat, aesthetic amenities, and quality of life (U.S. EPA, 2007). Further, properly implemented LID techniques reduce the volume of runoff leaving a newly developed or re-developed area thereby lowering the peak rate of runoff, and thus minimizing the adverse effects of hydromodification on stream habitat (SWRCB, 2007). The requirements of this Order facilitate the implementation of LID strategies to protect water quality, reduce runoff volume, and to promote sustainability.

Unlike traditional storm water management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID takes a different approach by using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's pre-development hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall. LID has been a proven approach in other parts of the country and is seen in California as an alternative to conventional storm water management.

LID is a tool that can be used to better manage natural resources and limit the pollution delivered to waterways. To achieve optimal benefits, LID needs to be integrated with watershed planning and appropriate land use programs. LID by itself will not deliver all the water quality outcomes desired; however, it does provide enhanced storm water treatment and mitigates increased volume and flow rates (SWRCB, 2007).

This Order approaches LID through source control design principles, site design principles and storm water treatment and infiltration principles. Source control and site design principles are required as applicable to provide enough flexibility such that projects are not forced to include inappropriate or impractical measures. Not all of the storm water treatment

and infiltration principles identified in the Order are required to be implemented but are listed in order of preference with the most environmentally protective and effective alternatives listed first.

BMP Development and Implementation
The Department has developed a BMP program for control of pollutants from existing facilities and for new and reconstructed facilities. This BMP program includes development, construction, maintenance and evaluation of BMPs, and investigation of new BMPs. The goal of BMP implementation is to control the discharge of pollutants to the applicable standards.

While erosion control BMPs are typically used on construction sites, some are used as permanent, post-construction BMPs. Typical erosion control BMPs involve use of straw or fiber rolls and mats. These rolls and mats are often held together by synthetic mesh or netting. Synthetic materials are persistent in the environment and have been found to be a source of pollutants, trash (Brzozowski, 2009), and hazard to wildlife through entrapment (Brzozowski, 2009; Barton and Kinkead, 2005; Walley et al, 2005; Stuart et al, 2001). For erosion control products used as permanent, post-construction BMPs, this Order requires the use of biodegradable materials, and the removal of any temporary erosion control products containing synthetic materials when they are no longer needed. Biodegradable materials are required in erosion control products used by the Departments of Transportation in the states of Delaware and Iowa (Brzozowski, 2009). Use of synthetic (plastic) materials is also prohibited through a Standard Condition in Streambed Alteration Agreements by the California Department of Fish and Game, Region 1 (Van Hattem, personal communication, 2009).

Potential Unintended Public Health Concerns Associated with Structural BMPs
The Department worked collaboratively with the California Department of Public Health (CDPH) on a comprehensive, multi-component monitoring program of more than 120 structural BMPs for mosquito production (Department, 2004). The data revealed that certain BMPs may unintentionally create habitat suitable for mosquitoes and other vectors. The California Health and Safety Code prohibits landowners from knowingly providing habitat for or allowing the production of mosquitoes and other vectors, and gives local vector control agencies broad inspection and abatement powers. This Order requires the Department to comply with applicable provisions of the Health and Safety Code and to cooperate and coordinate with CDPH and local mosquito and vector control agencies on vector control issues in the Department's MS4.

Construction
The Department's construction activities were previously regulated under the MS4 permit (Order 99-06-DWQ), which required the Department to comply with the substantive provisions of the CGP but not the requirement to file separate notices of intent for each construction project. Some Regional Water Boards have had difficulty enforcing the provisions of the CGP when enrollment under that permit is not required. This Order requires the Department to file for separate coverage for each construction project under the

CGP. This change is expected to increase the Department's accountability for discharges from construction sites and improve the ability of the Regional Water Boards to take enforcement actions as necessary.

Though discharges from construction activities are not regulated under this Order, any discharges from a site occurring after completion of construction (i.e. post-construction discharges) are fully subject to the requirements of this Order.

Some Department construction-related activities such as roadway and parking lot repaving and resurfacing may mobilize pollutants, even though they may not trigger coverage under the CGP. Such activity may discharge pollutants to the environment, however. BMPs for the control of such discharges are specified in the Department's Project Planning and Design Guide and Construction Site BMP Field Manual and Trouble Shooting Guide, and in the California Stormwater Quality Association (CASQA) California Stormwater BMP Handbook (Department, 2010; Department, 2003a); (CASQA, 2009). The Department is required to implement BMPs to control such discharges.

Because some Department construction projects may not involve grading or land disturbance of one acre or more, these smaller projects do not trigger requirements to enroll under the Construction General Permit. This Order requires the Department to implement BMPs to control discharges from such projects to the MEP. Failure to implement appropriate BMPs is a violation of this Order.

Maintenance Program Activities
Preservation of vegetation is an effective method for the control of pollutants in runoff; however the Department must control vegetation in its rights-of-way for purposes of traffic safety and nuisance. The Department currently implements a vegetation control program with a stated purpose of minimizing the use of agricultural chemicals and maximizing the use of appropriate native and adapted vegetation for erosion control, filtering of runoff, and velocity control.

Notwithstanding the Department's commitment to reduce the use of agricultural chemicals, the Department reported a total amount of 208,549 pounds of herbicide used in the 2008-2009 Storm Water Management Program Annual Report (Department (2010a); CTSW-RT-10-182-32.1). Reported reasons for increased herbicide usage included:

1. Local weather conditions, such as increased rainfall, leading to increased weed production.
2. The need to address new mandates for fire suppression (fuel abatement) adjacent to roadways.
3. Requests from local cities and counties.
4. Increase in or outbreaks of noxious weeds in areas adjacent to farmland.

This Order contains detailed requirements for the control of vegetation and reporting requirements for the use of agricultural chemicals.

The Department's maintenance facilities discharge pollutants to the MS4. This Order requires the Department to prepare Facility Pollution Prevention Plans (FPPPs) for all maintenance facilities. The Department is also required to implement BMP programs at each facility as necessary and periodically inspect each facility.

Spill cleanup is part of the Department's maintenance program. This Order requires the Department to ensure that spills on its rights-of-way are fully and appropriately cleaned up, and to provide appropriate notifications to local municipalities which may be affected by the spill. The Department is also required to notify the appropriate Regional Water Board of any spill with the potential to impact receiving waters.

This Order requires the Department to monitor and clean storm drain inlets when they have reached 50 percent capacity. The Department must initiate procedures contained in an Illegal Connection/Illicit Discharge (IC/ID) and Illegal Dumping Response Plan where storm water structures are found to contain excessive material resulting from illegal dumping, and it must determine if enhanced BMPs are needed at the site.

This Order requires the Department to implement the BMPs and other requirements of the SWMP and this Order to reduce and eliminate IC/IDs. It also requires the Department to prepare a Storm Drain System Survey Plan and an Illegal Dumping Response Plan.

Facilities Operations
There is potential for the discharge of pollutants from Department facilities during rain events. The discharge of pollutants from facilities not covered by the IGP will be reduced to the MEP through the appropriate implementation of BMPs.

This Order requires the Department to file an NOI for coverage under the IGP for industrial facilities as specified in Attachment 1 of the IGP. This requirement is expected to increase the Department's accountability for discharges from industrial facilities and improve the ability of the Regional Water Boards to take enforcement actions as necessary.

Department Activities Outside the Department's Right-of-Way
Facilities and operations outside the Department's ROW may support various Department activities. Facilities may include concrete or asphalt batch plants, staging areas, concrete slurry processing or other material recycling operations, equipment and material storage yards, material borrow areas, and access roads. Facilities may be operated by the Department or by a third party. The Department is required to include provisions in its contracts that require the contractor to obtain and comply with applicable permits for facilities and operations outside the Department's ROW when these facilities are active for the primary purpose of accommodating Department activities.

Non-Department Projects and Activities
Non-Department projects and activities include construction projects or other activities conducted by a third party within the Department's ROW. The Department is responsible for runoff from all non-Department projects and activities in its rights-of-way unless a separate

permit is issued to the other entity. At times, local municipalities or private developers may undertake construction projects or other activities within the Department's ROW. The Department may exercise control or oversight over these third party projects or activities through encroachment permits or other means. This Order sets project planning and design requirements for non-Department projects.

Management Activities for Non-Storm Water Discharges
Non-storm water discharges are dry weather flows that do not originate from precipitation events. Non-storm water discharges are illicit discharges and are prohibited by the federal regulations (40 C.F.R., § 122.26 (d)(2)(iv)(B)(*1*)) unless exempted or separately permitted. Procedures for prohibiting illicit discharges and illegal connections, and for responding to illegal dumping and spills are needed to prevent environmental damage and must be described in the SWMP.

Training and Public Education
Education is an important element of municipal storm water runoff management programs. U.S. EPA (2005) finds that "An informed and knowledgeable community is crucial to the success of a storm water management program since it helps ensure the following: Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important, [and] greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters."

U.S. EPA also states "The public education program should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children."

This Order requires the Department to implement a Training and Public Education program. The Training and Public Education program focuses on three audiences: Department employees, Department contractors, and the general public. The Department must implement programs for all three audiences. The Training and Public Education program is considered a BMP and an analysis of its effectiveness is needed.

Program Evaluation
This Order requires the Department to evaluate the effectiveness and adequacy of the storm water program on an annual basis. This includes both water quality monitoring and a self-audit of the program. The audit is intended to determine the effectiveness of the storm water and non-storm water programs through the evaluation of factors and program components such as:

1. Storm water and non-storm water discharges, including pollutant concentrations from locations representative of the Department's properties, facilities, and activities;
2. Maintenance activity control measures;
3. Facility pollution prevention plans;

4. Permanent control measures; and
5. Highway operation control measures.

In addition to water quality monitoring and the self-audit, the Department must perform an Overall Program Effectiveness Evaluation each year to determine the effectiveness of the program in achieving environmental and water quality objectives. The scope of the evaluation is expected to increase each year in response to the continuing collection of environmental monitoring data.

Reporting
Comprehensive reporting is needed to determine compliance with this Order and to track the effectiveness of the Department's storm water program over time. A summary of the reports required from the Department is presented in Attachment IX of the Order. The State Water Board and Regional Water Boards have the authority under various sections of the California Water Code to request additional information as needed.

The Department must track, assess and report on program implementation to ensure its effectiveness. In addition to the individual reports referenced above, the Department is required to submit an annual report to the State Water Board by October 1 of each year. The Annual Report must evaluate compliance with permit conditions, evaluate and assess the effectiveness of BMPs, summarize the results of the monitoring program, summarize the activities planned for the next reporting cycle, and, if necessary, propose changes to the SWMP.

Total Maximum Daily Loads (TMDL)

Section 303(d) of the Clean Water Act requires States to identify waters ("impaired" water bodies) that do not meet water quality standards after applying certain required technology-based effluent limits. States are required to compile this information in a list and submit the list to the U.S. EPA for review and approval. This list is known as the Section 303(d) list of impaired waters.

As part of the listing process, States are required to prioritize waters/watersheds for future development of TMDLs. A TMDL is defined as the sum of the individual waste load allocations (WLAs) for point sources of pollution, plus the load allocations (LAs) for nonpoint sources of pollution, plus the contribution from background sources of pollution and a margin of safety. The State Water Board and Regional Water Boards have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to subsequently develop TMDLs.

TMDLs are developed by either the Regional Water Boards or U.S. EPA in response to Section 303(d) listings. TMDLs developed by Regional Water Boards include implementation provisions and can be incorporated as Basin Plan amendments. TMDLs developed by U.S. EPA typically contain the total load and load allocations required by Section 303(d), but do not contain comprehensive implementation provisions. Subsequent

steps after Regional Water Board TMDL development are: approval by the State Water Board, approval by the Office of Administrative Law, and ultimately, approval by U.S. EPA.

The Department has been assigned mass based and concentration based WLAs for constituents contributing to a TMDL in specific regions. The Department is subject to TMDLs in the North Coast, San Francisco Bay, Central Coast, Los Angeles, Central Valley, Lahontan, Colorado River, Santa Ana, and San Diego Regions. These TMDLs are summarized in Table 1 of this Fact Sheet below, and Table IV.2 of Attachment IV of this Order.

Table 1. Department Statewide TMDLs

Water Body	Pollutant	U.S. EPA Approved/Established
North Coast Region		
Albion River *	Sediment	December 2001
Big River *	Sediment	December 2001
Lower Eel River *	Temperature & Sediment	December 18, 2007
Middle Fork Eel River *	Temperature & Sediment	December 2003
South Fork Eel River *	Sediment & Temperature	December 16, 1999
Upper Main Eel River and Tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury) *	Sediment & Temperature	December 29, 2004
Garcia River	Sediment	March 16, 1998
Gualala River *	Sediment	November 29, 2004
Klamath River	Temperature, Dissolved Oxygen, Nutrient, & Microcystin	December 28, 2010
Lost River	Nitrogen and Biochemical Oxygen Demand	December 30, 2008
Mad River *	Sediment & Turbidity	December 21, 2007
Navarro River *	Temperature & Sediment	December 27, 2000
Noyo River *	Sediment	December 16, 1999
Redwood Creek *	Sediment	December 30, 1998
Scott River	Sediment and Temperature	August 11, 2006
Shasta River	Dissolved Oxygen & Temperature	January 26, 2007
Ten Mile River *	Sediment	December 2000

Water Body	Pollutant	U.S. EPA Approved/Established
Trinity River *	Sediment	December 20, 2001
South Fork Trinity River and Hayfork Creek *	Sediment	December 1998
Van Duzen River & Yager Creek *	Sediment	December 16, 1999
San Francisco Bay Region		
Napa River	Sediment	January 20, 2011
Richardson Bay	Pathogens	December 18, 2009
San Francisco Bay	PCBs	March 29, 2010
San Francisco Bay	Mercury	February 12, 2008
San Pedro and Pacifica State Beach	Bacteria	August 1, 2013
San Francisco Bay Urban Creeks	Diazinon & Pesticide-Related Toxicity	May 16, 2007
Sonoma Creek	Sediment	September 8, 2010
Central Coast Region		
San Lorenzo River (*includes Carbonera Lompico, Shingle Mill Creeks)*	Sediment	February 19, 2004
Morro Bay *(includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary)*	Sediment	January 20, 2004
Los Angeles Region		
Ballona Creek	Metals (Ag, Cd, Cu, Pb, & Zn) and Selenium	December 22, 2005 and reaffirmed on October 29, 2008
Ballona Creek	Trash	August 1, 2002 and February 8, 2005
Ballona Creek Estuary	Toxic Pollutants (Ag, Cd, Cu, Pb, Zn, Chlordane, DDTs, Total PCBs, and Total PAHs)	December 22, 2005
Ballona Creek, Ballona Estuary and Sepulveda Channel	Bacteria	March 26, 2007
Ballona Creek Wetlands *	Sediment and Invasive Exotic Vegetation	March 26, 2012
Calleguas Creek and its Tributaries and Mugu	Metals and Selenium	March 26, 2007

Water Body	Pollutant	U.S. EPA Approved/Established
Lagoon		
Calleguas Creek its Tributaries and Mugu Lagoon	Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation	March 14, 2006
Colorado Lagoon	Organochlorine Pesticides, Polychlorinated Biphenyls, Sediment Toxicity, Polycyclic Aromatic Hydrocarbons, and Metals	June 14, 2011
Dominguez Channel, Greater Los Angeles and Long Beach Harbor Waters	Toxic Pollutants: Metals (Cu, Pb, Zn), DDT, PAHs, and PCBs	March 23, 2012
Legg Lake	Trash	February 27, 2008
Long Beach City Beaches and Los Angeles & Long Beach Harbor Waters *	Indicator Bacteria	March 26, 2012
Los Angeles Area (Echo Park Lake) *	Nitrogen, Phosphorus, Chlordane, Dieldrin, PCBs, and Trash	March 26, 2012
Los Angeles Area (Lake Sherwood) *	Mercury	March 26, 2012
Los Angeles Area (North, Center, and Legg Lakes) *	Nitrogen and Phosphorus	March 26, 2012
Los Angeles Area (Peck Road Park Lake) *	Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash	March 26, 2012
Los Angeles Area (Puddingstone Reservoir) *	Nitrogen, Phosphorus, Chlordane, DDT, PCBs, Hg, and Dieldrin	March 26, 2012
Los Angeles River and Tributaries	Metals	December 22, 2005 and October 29, 2008 & Reopened and Modified on November 3, 2011
Los Angeles River	Trash	July 24, 2008
Los Angeles River Watershed	Bacteria	March 23, 2012
Los Cerritos *	Metals	March 17, 2010
Machado Lake	Pesticides and Polychlorinated Biphenyls	March 20, 2012
Machado Lake	Trash	February 27, 2008

Water Body	Pollutant	U.S. EPA Approved/Established
Machado Lake	Eutrophic, Algae, Ammonia, and Odors (Nutrient)	March 11, 2009
Malibu Creek Watershed	Bacteria	January 10, 2006, Revised November 8, 2013**
Malibu Creek and Lagoon *	Sedimentation and Nutrients to Address Benthic Community Impairments	July 2, 2013
Malibu Creek Watershed	Trash	June 26, 2009
Marina del Rey Harbor	Toxic Pollutants	March 16, 2006
Marina del Rey, Harbor Back Basins, Mothers' Beach	Bacteria	March 18, 2004, Revised November 7, 2013**
Revolon Slough and Beardsley Wash	Trash	August 1, 2002 and February 8, 2005
San Gabriel River *	Metals (Cu, Pb, & Zn) and Selenium	March 26, 2007
Santa Clara River Estuary and Reaches 3, 5, 6, and 7	Coliform	January 13, 2012
Santa Clara River Reach 3 *	Chloride	June 18, 2003
Santa Monica Bay *	DDTs and PCBs	March 26, 2012
Santa Monica Bay Nearshore & Offshore	Debris (trash & plastic pellets)	March 20, 2012
Santa Monica Bay Beaches	Bacteria	June 19, 2003, Revised November 7, 2013**
Upper Santa Clara River	Chloride	April 6, 2010
Ventura River Estuary	Trash	February 27, 2008
Ventura River and its Tributaries	Algae, Eutrophic Conditions, and Nutrients	June 28, 2013
Central Valley Region		
Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch	Mercury	February 7, 2007
Clear Lake	Nutrients	September 21, 2007
Sacramento – San Joaquin Delta	Methylmercury	October 20, 2011
Lahontan Region		

Water Body	Pollutant	U.S. EPA Approved/Established
Lake Tahoe	Sediment and Nutrients	August 16, 2011
Truckee River	Sediment	September 16, 2009
Colorado River Region		
Coachella Valley Storm Water Channel	Bacterial Indicators	April 27, 2012
Santa Ana Region		
Big Bear Lake	Nutrients for Hydrological Conditions	September 25, 2007
Lake Elsinore and Canyon Lake	Nutrients	September 30, 2005
Rhine Channel Area of the Lower Newport Bay *	Chromium and Mercury	June 14, 2002
San Diego Creek and New Port Bay, including the Rhine Channel *	Metals (Cadmium, Copper, Lead, & Zinc)	June 14, 2002
San Diego Creek and Upper Newport *	Cadmium	June 14, 2002
San Diego Creek Watershed	Organochlorine Compounds (DDT, Chlordane, PCBs, and Toxaphene)	November 12, 2013
Upper & Lower Newport Bay	Organochlorine Compounds (DDT, Chlordane, & PCBs)	November 12, 2013
San Diego Region		
Chollas Creek	Diazinon	November 3, 2003
Chollas Creek	Dissolved Copper, Lead, and Zinc	December 18, 2008
Rainbow Creek	Total Nitrogen and Total Phosphorus	March 22, 2006
Project 1 – Revised Twenty Beaches and Creek in the San Diego Region (Including Tecolote Creek)	Indicator Bacteria	June 22, 2011
* U.S. EPA Established TMDL ** OAL Approved, U.S. EPA Approval Pending		

The TMDL-based requirements of this Order are not limited to the maximum extent practical (MEP) standard. The TMDL-based requirements have been imposed in accordance with 40 Code of Federal Regulations section 122.44(d)(1)(vii)(B). Pursuant to 40 Code of Federal Regulations section 122.44(d)(1)(vii)(B), the effluent limitations for NPDES permits must be consistent with the assumptions and requirements of any available WLA for the discharge prepared by the state and approved by EPA, or established by EPA. In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement

any relevant water quality control plans (basin plans), including TMDL requirements that have been incorporated into the basin plans.

Effluent limitations for NPDES-regulated storm water discharges that implement WLAs in TMDLs may be expressed in the form of best management practices (BMPs). (See 33 U.S.C. §1342(p)(3)(B)(iii); 40 C.F.R. §122.44(k)(2)&(3).) Where effluent limitations are expressed as BMPs, there should be adequate demonstration in the administrative record of the permit, including in the Fact Sheet, that the BMPs will be sufficient to comply with the WLAs.[20] (See 40 C.F.R. §§ 124.8, 124.9 & 124.18.) The NPDES permit must also specify the monitoring necessary to determine compliance with permit limitations. (See 40 C.F.R. § 122.44(i).) Where effluent limitations are specified as BMPs, the permit should also specify the monitoring necessary to assess if the expected load reductions attributed to BMP implementation are achieved (e.g., BMP performance data). The permit should additionally provide a mechanism to make adjustments to the required BMPs as necessary to ensure their adequate performance.[21]

As detailed below, this Order establishes BMP-based requirements for TMDL implementation that are consistent with the requirements and assumptions of the relevant WLAs. This Order further requires implemented BMPs to be monitored for effectiveness and to be adaptively managed for modifications as necessary to achieve WLAs.

Overview

The State Water Board and Regional Water Boards have reviewed the WLAs, implementation requirements, and monitoring requirements specified in the adopted and approved Regional Water Board Basin Plans or in U.S. EPA-established TMDLs applicable to the Department. In most of the relevant TMDLs, the Department's contribution to impairment is a small portion of the overall contribution from multiple sources (less than five percent). While the Department is generally a small contributor to impairment, the statewide reach of its highway system means that it is a contributor in numerous impaired watersheds. The Department must comply with applicable TMDLs across the state.

The fact that one discharger – the Department – must implement requirements for over 84 TMDLs administered by nine Regional Water Boards poses a unique challenge in permitting. Many of the TMDLs are designed to address the same pollutants causing impairment, and progress in achievement of the WLA for these pollutant categories requires implementation of similar control measures coupled with monitoring and adaptive management. In past

[20] Establishing Total Maximum Daily Load Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs," Memorandum, U.S. EPA, November 22, 2002. On November 12, 2010, U.S. EPA issued a revision to the November 22, 2002, memorandum, recommending that "where the TMDL includes WLAs for storm water sources that provide numeric pollutant load or numeric surrogate pollutant parameter objectives, the WLA should, where feasible, be translated into numeric WQBELs in the applicable storm water permits." The revision further stated, however, that the permitting authority's decision as to how to express water quality based effluent limitations (WQBELs), i.e. as numeric effluent limitations or BMPs, would be based on an analysis of the specific facts and circumstances surrounding the permit.

[21] *Ibid.*

regulatory actions, however, the Department has been directed to comply with the TMDL requirements by reference to the sections of the relevant basin plan and through coordination with the relevant Regional Water Board. As a result, the Department has devoted significant effort to coordination and exercises to determine the next steps, with limited progress in installing on-the-ground control measures to achieve actual water quality improvements. This Order provides a focused and streamlined process for TMDL compliance so that the Department may proceed as quickly as possible to installation of control measures and monitoring, and adaptive management of those control measures to result in water quality improvements. The Order's TMDL requirements provide consistency in determining compliance requirements, where appropriate. To allow for consistency, with resulting time and cost-efficiency, in achieving compliance with the TMDL requirements applicable to the Department, the State Water Board has developed a set of pollutant category requirements to be implemented by the Department.

The pollutant categories are as follows:
1. Sediment/Nutrients/Mercury/Siltation/Turbidity TMDLs
2. Metals/Toxics/Pesticides TMDLs
3. Trash TMDLs
4. Bacteria TMDLs
5. Diazinon TMDLs
6. Selenium TMDLs
7. Temperature TMDLs
8. Chloride TMDLs

Table IV.2 of Attachment IV of this Order lists all TMDLs applicable to the Department. For each TMDL, Table IV.2 cross-references one or more pollutant category. The Department must implement the cross-referenced pollutant category requirements to achieve compliance with the TMDL provisions of the Order. Where TMDL-specific, rather than, or in addition to, pollutant category-specific permit requirements are appropriate (because of the unique local conditions or specific requirements in the TMDL), those requirements are also noted in Table IV.2. In addition, Table IV.2 cross-references the monitoring, reporting and adaptive management requirements applicable to all pollutant categories.

Attachment IV of this Order recognizes that, because the Department must comply with numerous TMDLs, the Department must phase in implementation requirements for TMDLs over several years. To achieve the highest water quality benefit as quickly as feasible in the permit term, this phase-in must be accomplished in a manner that addresses discharges with the highest impact on water quality first. Accordingly, Attachment IV requires the Department, by October 1, 2014, to prepare and submit an inventory of all impaired reaches subject to TMDLs to which the Department discharges with prioritized implementation of controls for these reaches based on a set of qualitative criteria. In preparing the initial prioritization, the Department must consider the degree of impairment of the water body, measured by the percent pollution reduction needed to achieve the WLA, the contributing drainage area from the Department's right of way (ROW) relative to the watershed draining to the reach, and the relative proximity of the ROW to the receiving water.

The State Water Board will allow a 30-day public comment period on the Department's initial prioritization and will work with the Department and the Regional Water Boards to compile a final prioritization to be approved by the State Water Board Executive Director. Criteria for final prioritization to be considered by the Department, the State Water Board and Regional Water Boards include:

a. Opportunities for synergistic benefits with existing or anticipated projects or activities within the reach, e.g., cooperative efforts with other dischargers or projects within an ASBS.
b. Multiple TMDLs that can be addressed by a single BMP within a reach.
c. TMDL deadlines specified in a Basin Plan.
d. Regional Water Board and State Water Board priorities.
e. Accessibility for construction and/or maintenance (i.e. safety considerations).
f. Multi-benefit projects that provide benefits in addition to water quality improvement, such as groundwater recharge or habitat enhancement.

In finalizing the prioritization, the State Water Board and Regional Water Boards will consider the compliance date for attainment of the WLAs established in the Basin Plans and may adjust the prioritization accordingly. It is the intent of the State Water Board to have the Department meet listed TMDL deadlines where feasible.

Upon State Water Board Executive Director approval of final prioritization, the Department must implement control measures to achieve 1650 Compliance Units (CUs) per year. One CU is equivalent to one acre of the Department's ROW, from which the runoff is retained, treated, or otherwise controlled prior to discharge to the relevant reach. BMPs installed during construction activities in TMDL watersheds may receive CU credit for that portion of the treatment volume that exceeds the baseline treatment control requirements specified in the Order. A CU may be claimed when the BMP retrofit project enters the Project Initiation Document (PID) phase of implementation per the requirements of the Order. If a BMP retrofit project is not completed within the approved time schedule, the CU(s) will be revoked unless the Executive Director approves a delay.

The determination of the number of CUs the Department must complete each year is based on the objective of addressing every TMDL in Attachment IV within 20 years. A primary factor considered in the determination of the number of CUs to be completed each year is the compliance due date for the final WLA for many of the relevant TMDLs. The State Water Board considered two approaches in determining the annual number of CUs.

The first approach is based on a simple calculation of the number of acres of ROW that must be treated to ensure that all TMDL watersheds are addressed over a 20 year time frame. Data submitted by the Department indicate that there are 68,000 acres of ROW within TMDL watersheds.

It is not possible or necessary to treat 100 percent of the runoff from TMDL watersheds. In evaluating monitoring sites for discharges into ASBS, staff found that approximately 64

percent of the sites considered could not be addressed, either due to access limitations or safety considerations. Similar conditions are expected to exist in TMDL watersheds, although the percentage will not be as high because the terrain found along most of California's coastline is more difficult and rugged than the terrain that typically exists in the rest of the state. Accordingly, for purposes of this calculation based on the Department's preliminary estimates, the percentage of inaccessible/unsafe sites is reduced by one-half for TMDL watersheds, or 32 percent, translating into approximately 22,000 fewer acres (68,000 x 32 percent = 22,000) that must be treated. Therefore, the Department will have to address approximately 46,000 acres of ROW to comply with the TMDL requirements of Attachment IV. With the objective of addressing all TMDLs in Attachment IV within 20 years, the Department must treat or otherwise address 2300 acres per year (46,000/20 = 2300) throughout the state within the TMDL watersheds listed in Attachment IV.

The second approach for determination of CUs considered by the State Water Board is based on the Department's updated estimates of ROWs that must be treated. This proposal provided by the Department segregates the TMDLs into eight pollutant categories, similar to those presented in Attachment IV, including sediments, metals, trash and bacteria. The Department proposed annual CU commitments based upon the individual categories, with 600 CUs for sediments, a combined 710 CUs for metals and trash, and 340 CUs for bacteria, for an annual total of 1650 CUs. The proposal does not include other pollutant categories in which the acreage and controls for sediments, metals, trash, and bacteria would overlap with the acreage and controls for these other pollutants. This overlap of coverage was identified for the above categorical annual commitments so that the total ROW acreage requiring treatment equates to 33,000 acres.

Though the two approaches produce similar results, the State Water Board confirms that the second approach is sufficient for TMDL-implementation planning at the current stage of TMDL implementation; therefore the second compliance unit determination approach described above is implemented in this Order. The State Water Board believes that 1650 CUs represent a reasonable balance of resources and environmental protection, and will be sufficient to address the TMDLs in Attachment IV in the foreseeable future. The Department is ultimately responsible for demonstrating that it has complied with the TMDLs in Attachment IV by meeting the WLAs and other TMDL performance criteria, independent of its annual obligation to receive credit for compliance units. 1650 CUs per year may be more or less than is needed to comply with the TMDLs in Attachment IV within 20 years. This permit expires in 2018; therefore Attachment IV of this Order requires the Department to present to the State Water Board, at a public meeting to be scheduled approximately 180 days prior to the expiration of the Order, a TMDL Progress Report containing an evaluation of the progress achieved during this permit term. The State Water Board will then evaluate the compliance unit approach and the Department's progress in meeting the 20 year objective before consideration of subsequent requirements in a subsequently renewed permit.

Using an average cost $176,000 per BMP/acre[22], the proposed annual cost to meet this requirement relying solely on retrofits is approximately $290,000,000. The Department's contribution to impairment in any given TMDL is generally a small portion of the overall contribution from multiple sources. In many cases, synergistic effects can be achieved and water quality improvements are better served through coordinated efforts with other parties to the TMDL. To encourage collaborative implementation, Attachment IV of this Order allows CUs for collaborative efforts based on the amount of financial participation made by the Department. To determine an appropriate financial equivalence staff used the cost data submitted by the Department of $176,000 per BMP/acre or per CU. However, to encourage collaborative efforts, staff proposes a 50 percent discount for participation in these types of agreements. Attachment IV accordingly sets the CU equivalent at $88,000. Based on the same approach described above, and relying solely on contributions to collaborative efforts, the annual cost to the Department is approximately $145,000,000.

Attachment IV allows for two types of collaborative implementation: Cooperative Implementation Agreements between the Department and other responsible parties to conduct work to comply with a TMDL, and a Cooperative Implementation Grant Program funded by the Department and administered by the State Water Board. The grant program will be used to fund capital projects in impaired watersheds in which the Department has been assigned a WLA or otherwise has responsibility for implementation of the TMDL. Cooperative implementation will satisfy some or all of the Department's obligations under a TMDL, whether or not discharges from the Department's ROW are controlled or treated.

Cooperative implementation has the following advantages:

- Allows for retrofit projects off the ROW, at locations that may otherwise have space, access, or safety limitations within the ROW;
- Provides for the involvement of local watershed partners who have an interest and expertise in the best way to protect, manage, and enhance water quality in the watershed;
- Allows for implementation of BMPs and other creative solutions not typically available to the Department;
- Allows for larger watershed scale projects; and
- Leverages resources from other entities.

In addition, the Cooperative Implementation Grant Program eliminates the Department's complex budgeting and project approval process to expedite the implementation of BMPs in impaired watersheds.

If the Department elects to fund a Cooperative Implementation Grant Program, the Department and the State Water Board will enter into a formal agreement to specify the terms of the grant program and the commitments and responsibilities of the parties. The agreement will specify the following:

[22] Construction capital cost based on information provided by Department staff.

- The Department will pay all State Water Board costs in administering the grant program. No credit for compliance units will be given for administrative costs paid to the State Water Board.
- The Department will track and report on the projects funded under the grant program.
- Grantees will be responsible for the long term management, operation, and maintenance of BMPs.
- Grants are limited to other responsible parties named in the TMDL.
- Projects shall address storm water runoff and treat or control the same Pollutants of Concern that the Department is responsible for.
- Priority is given to projects that address impairments in the highest priority reaches identified in the prioritization process specified in Attachment IV, Section I.A.
- If the grant program is discontinued, any unexpended funds will be returned to the Department and the corresponding compliance units will be revoked and added to subsequent annual compliance unit totals.

Attachment IV reflects the State Water Board's commitment to streamlining TMDL compliance for the Department to proceed as quickly as feasible to implement on-the-ground control measures and obtain measurable improvement in water quality. In the prioritization process, the Department and the Water Boards will consider the final compliance deadlines under the TMDLs; however, the State Water Board recognizes that the requirements in Attachment IV do not mirror all specific interim deadlines for studies, reports, and pollutant reductions in the TMDLs included to demonstrate progress toward meeting the WLAs. The requirements in Attachment IV are general yet consistent with specific planning, study, and reporting requirements in the TMDLs.

The Department is required annually to include in the TMDL Status Review Report its proposal for reaches to be addressed in the upcoming year, with selected control measures and projected schedule for implementation. The Department is also required to report a set of information that encompasses updates on cooperative and individual implementation activities completed, as well as an analysis of the effectiveness of existing BMPs and activities in meeting the WLAs. This information will be reviewed by the State Water Board and will be publicly available. Control measures and implementation schedules proposed for the upcoming year are subject to the approval of the Executive Director, or designee.

Attachment IV does not list the final required WLAs for each TMDL. With few exceptions, the WLAs are to be achieved jointly by a number of storm water dischargers and accordingly are of limited use in determining and enforcing the Department's specific responsibilities under the TMDL. The State Water Board finds that effective implementation and enforcement of Attachment IV is better achieved through clear requirements for implementation of controls, and monitoring and adaptive management of such controls, than by implementation of joint WLAs into the permit requirements.

Nevertheless, the WLAs, both Department-specific and joint with other dischargers, are discussed in the sections below. While the WLAs are not incorporated into Attachment IV as permit requirements, the discussion establishes that Attachment IV is consistent with the

requirements and assumptions of the WLAs. In general, the Department is a relatively small contributor to the impairment to be addressed by the relevant TMDLs.[23] Attachment IV requires a focused effort to address the priority discharges through measurable and streamlined progress in implementation of controls, effectively addressing the relatively small contribution from the Department. The Department must verify progress through reporting of subsequent monitoring and adaptive management activities.

As an additional step in determining compliance toward achievement of WLAs, the Department must submit a TMDL Progress Report with its application for permit reissuance in January of 2018, analyzing the effectiveness of the control measures installed for each reach and whether the control measures have been or will be sufficient to achieve WLAs and other performance standards by the final TMDL compliance deadlines. The TMDL Progress Report will be subject to public review and comment and will inform the State Water Board as it considers subsequent requirements in a subsequently reissued permit.

A. General Requirements for all TMDLs: Comprehensive TMDL Monitoring, Reporting, and Adaptive Management

As previously discussed, an NPDES permit must specify the monitoring necessary to determine compliance with effluent limitations. Where effluent limitations are specified as BMPs, the permit should specify the monitoring necessary to assess if the expected load reductions attributed to BMP implementation are achieved. The permit should additionally provide a mechanism to make adjustments to the required BMPs as necessary to ensure their adequate performance. Attachment IV requires continuation of existing monitoring plans as approved by the Regional Water Board Executive Officer. Where there is no approved monitoring plan in place for a TMDL, the Department is required to submit a plan to the State Water Board by January 1, 2015, with a time schedule to implement the plan. The submitted plan must be designed to assess the effectiveness of implemented BMPs and to inform BMP selection. The Department shall use the monitoring data to conduct an on-going assessment of the performance and effectiveness of BMPs and shall use the assessment to inform modifications to control measures to achieve WLAs and other applicable performance standards.

BMP effectiveness monitoring and the adaptive management strategy related to BMP implementation allows for flexibility in source control methods until the most appropriate BMPs are identified and installed for the control of a pollutant. The Department will evaluate the effectiveness of the controls that were implemented each year and submit the results of the evaluation in the TMDL Status Review Report, which is submitted as part of the Annual Report. If the controls implemented are shown to be ineffective, then the Department must either re-design the BMP or implement a new type of control measure to address the inadequacies of the current design. The process of assessing the performance and

[23] In the few instances where the Department's contribution is a relatively high percentage of the total contribution from identified sources, as identified in this Fact Sheet, the State Water Board would expect the Department to prioritize addressing such discharges and evaluating the performance and effectiveness of the selected BMPs.

effectiveness of BMPs and using that assessment to modify or replace inadequate BMPs ensures that the Department will make progress toward achieving the requirements of the TMDLs within the permit term.

The Department must also prepare and submit a TMDL Progress Report to the State Water Board as part of its permit reissuance application. That report must include: (1) a summary of the effectiveness of the control measures installed for each reach that has been addressed, as a result of BMP effectiveness assessment, (2) a determination as to whether the control measures have been or will be sufficient to achieve WLAs and other performance standards by the final compliance deadlines, (3) where the control measures are determined not to be sufficient to achieve WLAs or other performance standards by the final compliance deadlines, a proposal for improved control measures to address the relevant pollutants, and (4) a summary of the estimated amount of pollutants that were prevented from entering into the receiving waters. The TMDL Progress Report will be subject to public review and comment and will inform the requirements of the reissued permit.

B. Sediments/Nutrients/Mercury/Siltation/Turbidity Pollutant Category

General Description of Pollutant Category

The TMDLs in this pollutant category identify sediment from roads as a significant or primary source of these pollutants. Excessive sediment loads have resulted in the non-attainment of water quality objectives for sediment, suspended material, and settleable material. Excess sediment delivery to stream channels is associated with several natural processes as well as anthropogenic sources.

Sources of Pollutant and How Pollutants Enters the Waterway

Natural sources include geologically unstable areas that are subject to landslides, as well as smaller sediment sources such as gullies and stream-bank failures. Anthropogenic sources include road-related stream crossing failures, gullies, fill failures, and landslides precipitated by road-related surface erosion and cut bank failures. Road-related activities which can increase sediment discharge to a waterway include the construction and maintenance of paved and unpaved roadways, watercourse crossing construction, reconstruction, maintenance, use, and obliteration, and many activities conducted on unstable slopes. Unstable areas are areas with a naturally high risk of erosion and areas or sites that will not reasonably respond to efforts to prevent, restore or mitigate sediment discharges. Unstable areas are characterized by slide areas, gullies, eroding stream banks, or unstable soils that are capable of delivering sediment to a watercourse. Slide areas include shallow and deep seated landslides, debris flows, debris slides, debris torrents, earthflows, headwall swales, inner gorges and hummocky ground. Unstable soils include unconsolidated, non-cohesive soils and colluvial debris.

Mercury is negatively impacting the beneficial uses of many waters of the state. As of 2010, more than 180 water bodies are designated as impaired by mercury, and fish in these waters can have mercury concentrations that pose a health risk for humans and wildlife that eat the fish, including threatened and endangered species. The beneficial uses impacted by

mercury include, but may not be limited to, COMM, WILD, and RARE beneficial uses. Also REC-1 has been used for many waters to indicate fish consumption as part of fishing. Sources of mercury include gold and mercury mines, naturally mercury enriched soils, atmospheric deposition, improper disposal of mercury containing items, such as batteries and dental amalgam. Mercury from many of these sources can end up in storm water and industrial and municipal wastewater.

Watershed Contribution
The Department is a relatively minor source of pollutants and small percentage of the watershed. The Department will address the highest problem areas and therefore, addressing the problem at the appropriate level for the Sediment, Nutrients, Mercury, Siltation and Turbidity TMDLs.

Control Measures
Attachment IV requires the Department to implement control measures to prevent erosion and sediment discharge. The measures that control the discharge of sediment can be effective in controlling releases of nutrients and mercury. This can be achieved by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.

In addition to TMDL requirements, the Department has developed a BMP program for control of pollutants from existing facilities and for new and reconstructed facilities. This BMP program includes implementation, maintenance and evaluation of BMPs, and the investigation of new BMPs. The goal of BMP implementation is to control the discharge of pollutants to achieve the applicable standards. Erosion control BMPs are typically used on construction sites, although some are also used as permanent, post-construction BMPs.

Department's Contribution
The Department's discharge contribution is discussed under the individual TMDLs below. The TMDLs in this pollutant category attribute most anthropogenic sediment related beneficial use impairments to logging activities and, to a lesser degree, some agricultural activities. Logging activities routinely include extensive construction and maintenance of unpaved roads which range over large areas, whereas the Department maintains a network of paved highways which account for a small fraction of the total area devoted to all paved roadways within the boundaries of these TMDLs.

The requirements in Attachment IV are generally sufficient to address the sediment TMDLs that originate from a comparatively minor pollutant source, and this is accomplished by focusing on the most problematic areas and activities within this relatively low-volume subset of anthropogenic discharges for this pollutant category.

NORTH COAST REGION SEDIMENT TMDLS

As discussed under individual TMDLs below, the TMDLs in this pollutant category attribute most anthropogenic sediment-related beneficial use impairments to logging activities and, to a lesser degree, some agricultural activities. Logging activities in the North Coast region routinely include extensive construction and maintenance of unpaved roads which range over large areas of the Coast Range's vertical topography, whereas the Department maintains a network of paved highways which accounts for a small fraction of the total area devoted to all paved roadways within the boundaries of these TMDLs.

WLAS
The North Coast Regional Water Board has adopted the "Total Maximum Daily Load Implementation Policy Statement for Sediment-Impaired Receiving Waters in the North Coast Region" on November 29, 2004. The goals of the Policy are to control sediment waste discharges to impaired water bodies so that the TMDLs are met, sediment water quality objectives are attained, and beneficial uses are no longer adversely affected by sediment. This policy requires the use of NPDES permits and waste discharge requirements to achieve compliance with sediment-related water quality standards.

The sediment control requirements in Attachment IV (TMDL Requirements) of this Order are intended to reduce the adverse impacts of excessive sediment discharges to sediment-impaired waters, including impacts to the cold water salmonid fishery and the COLD, COMM, RARE, SPWN, and MIGR beneficial uses. The beneficial uses associated with the cold water salmonids fishery are often the most sensitive to sediment discharges. The North Coast Regional Water Board's basin plan has the following narrative water quality objectives which apply to sediment-related discharges to receiving waterbodies:

Parameter	Water Quality Objectives
Suspended Material	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affects beneficial uses.
Settleable Material	Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
Sediment	The suspended sediment load and suspended sediment discharge rate of surface water shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
Turbidity	Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.

Department's Contribution:
The Department's specific discharge contribution is discussed under the individual TMDLs below.

Albion River Sediment TMDL, December 2001

Final WLA
U.S. EPA states that there are no significant individual point sources of sediment in the Albion River watershed.

Final WLA Specific to the Department
U.S. EPA states that there are no significant individual point sources of sediment in the Albion River watershed. As a consequence, its wasteload allocation is set to zero.

Final Deadlines
U.S. EPA did not specify deadlines for implementation.

Department's Contribution (relative contribution to pollutant loading)
Approximately five percent of the total miles of roads within the watershed are paved, whereas logging road construction, logging road usage, and other activities associated with logging operations constitute the majority of anthropogenic sediment discharges. The Department's paved roadways thus constitute some undetermined fraction of the total paved road mileage: its wasteload allocation is set to zero.

Big River Sediment TMDL, December 2001

Final WLA
U.S. EPA states that there are no significant individual point sources of sediment in the Big River watershed, so the wasteload allocation is zero.

Final WLA Specific to the Department
U.S. EPA states that there are no significant individual point sources of sediment in the Big River watershed.

Final Deadlines
U.S. EPA did not specify deadlines for implementation.

Department's Contribution (relative contribution to pollutant loading**)**
Approximately three (3) percent of the miles of roadways within the watershed are paved, whereas logging road construction, logging road usage, and other activities associated with logging operations constitute the majority of anthropogenic sediment discharges. The Department is not listed as a source of point source discharges of sediment.

Lower Eel River Sediment & Temperature TMDL, December 18, 2007

Final Sediment WLA
For the Department's facilities, construction sites, and municipalities, the wasteload allocation is expressed as equivalent to the load allocations, as specified in the following table:

Sediment Source		Average Daily		Average Daily		Percent Reduction 1955 -2003
		1955 – 2003 Loading	Load Allocation	1955 – 2003 Loading	Load Allocation	
		(tons/mi^2/yr)	(tons/mi^2/yr)	(tons/mi^2/day)	(tons/mi^2/day)	
Natural Load Allocation		718	718	2.0	2.0	0%
Roads	**Episodic**	43	9	0.1	0.02	80%
	Chronic	115	17	0.3	0.05	85%
Timber Harvest		590	147	1.6	0.4	75%
Skid Trail		7	1	0.02	0.5	90%
Bank Erosion		21	6	0.1	0.03	70%
Total Human-related Load Allocation		775	180	2.1	0.5	77%
Total Load Allocations Natural and Human-Related Sources		1,493	898	4.1	2.5	

Final WLA Specific to the Department
As stated above, U.S. EPA's wasteload allocation for the temperature TMDL assigned to the Department and other point source dischargers is zero net increase in receiving water temperature.

Final Deadlines
As noted above, U.S. EPA did not set a specific sediment WLA for the Department.

Department's Contribution (relative contribution to pollutant loading)
The Department's relative sediment contribution is not known.

Eel River (Middle-Fork) Eden Valley and Round Valley HSAs Temperature and Sediment TMDL, December 2003

Final Sediment WLA

U.S. EPA states that because discharge from point sources cannot be readily determined, and because possible loading from point sources is not distinguished from general management-related loading in the source analysis, U.S. EPA considers the rates set as load allocations (i.e., for nonpoint sources) to also represent wasteload allocations (i.e., for those point sources that would be covered by general NPDES permits).

Table 7: Sediment TMDLs and Allocation (t/mi^2/yr)

Source	Black Butte	Elk Creek	Round Valley	Upper MF	Williams Thatcher	BASINWIDE Load
TOTAL Natural	**724**	**1,059**	**374**	**410**	**417**	**574**
Percent Reduction over current	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
Subtotals Landslides	**9**	**12**	**10**	**2**	**2**	**6**
Percent Reduction over current	0%	5%	5%	0%	5%	5%
Subtotal Small Management Sources	**7**	**41**	**9**	**8**	**19**	**23**
Percent Reduction over current	0%	32%	95%	0%	89%	70%
Total Management-Related	**16**	**53**	**19**	**10**	**21**	**29**
Percent Reduction over current	0%	27%	91%	0%	88%	65%
TMDL – ALL SOURCES	**740**	**1,112**	**393**	**420**	**438**	**603**
Percent Reduction over current	0%	2%	32%	0%	26%	8%
Percent Natural	98%	95%	95%	98%	95%	95%
Percent Management	2%	5%	5%	2%	5%	5%

Final Sediment WLA Specific to the Department

As discussed above, U.S. EPA did not assign a specific sediment WLA to the Department.

Final Sediment Deadlines
U.S. EPA did not specify deadlines for implementation.

Department's Sediment Contribution (relative contribution to pollutant loading)
U.S. EPA states that the Department's discharges of sediment, like other point sources of anthropogenic sediment discharges in this TMDL, are comparatively minor sources of this pollutant.

South Fork Eel River Temperature & Sediment TMDL, December 16, 1999

U.S. EPA's source analysis indicates that the sediment loading due to nonpoint erosion from roads and other anthropogenic activities accounts for a substantial portion of the total sediment loading in this watershed.

The waste load allocation for point sources are for sediment only, i.e., they are not directly related to the temperature portion of the TMDL, nor does U.S. EPA set a waste load allocation for point sources under the temperature portion of the TMDL. However, U.S. EPA also states that any improvements in stream temperature from reduced sedimentation contribute to the cumulative benefits of both sediment and temperature load reductions, and this assumption is accommodated in U.S. EPA's calculations for the margin of safety in this TMDL.

Final Sediment WLA
U.S. EPA set the wasteload allocation to zero because it found that there are no point sources of sediment in this watershed.

Final Sediment WLA Specific to the Department
As stated above, U.S. EPA states that there are no point source discharges of sediment within this TMDL, so the Department's wasteload allocation is set to zero.

Final Sediment Deadlines
U.S. EPA did not specify deadlines for implementation.

Department's Sediment Contribution (relative contribution to pollutant loading)
U.S. EPA states that there are no discharges from point sources within this TMDL, and because of this finding, the Department's potential contribution to anthropogenic sediment loading is insignificant.

Upper Main Eel River Temperature & Sediment TMDL, December 29, 2004

Final Sediment WLA
For the sediment TMDL, U.S. EPA states that point sources are not significant, and sets the waste load allocation to zero.

Final Sediment WLA Specific to the Department
U.S. EPA views point source contributions to sediment loading in this TMDL, so the Department's wasteload allocation is set to zero.

Final Deadlines
U.S. EPA did not specify deadlines for implementation.

Department's Sediment Contribution (relative contribution to pollutant loading)
U.S. EPA considers all point sources of anthropogenic sediment loading to be insignificant for purposes of this TMDL.

Garcia River Sediment & Temperature TMDL, March 16, 1998

Final Sediment WLA
The wasteload allocation is effectively set to zero for "controllable" anthropogenic discharges of sediment, including those associated with roads, since all controllable discharges of sediment from roadways are prohibited.

Final Sediment WLA Specific to the Department
Although not specifically included in this TMDL, the wasteload allocation for all "controllable" anthropogenic discharges of sediment from roadways is effectively set to zero.

Final Sediment Deadlines
The structure of this 2002 TMDL requires responsible parties to choose an option for controlling 'sediment delivery', and some 'due dates' have already passed, e.g., January 2005 was the deadline for the Long Term Road System Plan- it is unclear which option, if any, has been selected by the Department.

Department's Sediment Contribution (relative contribution to pollutant loading)
The Department's relative sediment pollutant loading is not known.

Gualala River Sediment &Temperature TMDL, November 29, 2004

Final Sediment WLA
U.S. EPA set the wasteload allocation for sediment discharges to zero, noting that point sources of sediment pollution are insignificant within the area described in this TMDL.

Final Sediment WLA Specific to the Department
There is no wasteload allocation specifically assigned to the Department, but as mentioned above, U.S. EPA set these to zero because of their comparative insignificance as sources.

Final Sediment Deadlines
U.S. EPA did not specify deadlines for implementation.

Department's Sediment Contribution (relative contribution to pollutant loading)
Approximately three percent of the miles of roadways included within this TMDL are paved. The Department's potential contribution to pollutant loading is some unspecified fraction of the former, whereas logging road construction, logging road usage, and other activities associated with logging operations constitute the majority of anthropogenic sediment discharges. Due to its relative insignificance as a source of sediment pollution the Department's wasteload allocation is set to zero.

Klamath River in California Temperature, Dissolved Oxygen, Nutrients, and Microcystin TMDL, December 28, 2010

Final Nutrients WLA
Daily mass-based nutrient (total phosphorus and total nitrogen) and organic matter load allocations are assigned to segments of the Klamath River and its tributaries.

Source Area	Daily TP Load Allocations (lbs/day)	Daily TN Load Allocations (lbs/day)
Stateline	245+	3,139+
Upstream of Copco 1 Reservoir	(61)+	(330)+
Stateline to Iron Gate Dam inputs	22+	339+
Δ Iron Gate Hatchery	0+	0+
Tributaries between Iron Gate Dam and the Shasta River	49+	317+
Shasta River	75+	220+
Tributaries between Shasta River and Scott River	17+	97+
Scott River	87+	1,279+
Tributaries between Scott River and Salmon River	187+	1,050+
Salmon River	193+	1,583+
Tributaries between Salmon River and Trinity River	90+	504+
Trinity River	762+	5,783+
Tributaries between Trinity River and Turwar Creek	179+	1,004+
Total Maximum Daily Load	**1,845**	**14,985**

Final Nutrients WLA Specific to the Department
There are no WLAs that are assigned specifically to the Department. The Department is expected to address nutrient inputs into the Klamath River watershed through control of sediment from its road and highway facilities.

Final Nutrients Deadlines
There are no final deadlines for achievement of WLAs. However, the Department shall submit annual reports to the North Coast Regional Water Board documenting progress in implementing.

Department's Nutrients Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the nutrient pollutant loading is not known.

Lost River Nitrogen Biochemical Oxygen Demand to address Dissolved Oxygen and pH Impairments December 30, 2008

The Lower Lost River TMDL was developed by the North Coast Regional Water Quality Control Board and approved by U.S. Environmental Protection Agency (U.S. EPA) (regional board resolution number R1-2010-0026). It established TMDLs for Nitrogen and Biochemical Oxygen Demand to address Dissolved Oxygen and pH Impairments. The Lower Lost River TMDLs implementation plan which was established by U.S. EPA is included in the Klamath River TMDL. Both the Klamath River TMDL and the Lower Lost River TMDL were both approved on December 28, 2010.

Final Nitrogen WLAs

Segment	**Total Dissolved Inorganic Nitrogen WLA** (average kg/day)	**Total Carbonaceous Biochemical Oxygen Demand (CBOD)** (average kg/day)
Lost River from Border of Tule Lake Refuge	79.5	197.0
Tule Lake Refuge TMDLs	181.5	90.10
Lower Klamath Refuge TMDLs	76.2	889.9

Final Nitrogen WLAs Specific to the Department

Segment	**Dissolved inorganic nitrogen,** (average kg/day)	**Carbonaceous Biochemical Oxygen Demand (CBOD)** (average kg/day)
Lost River from border of Tule Lake Refuge	0.3	0.5
Tule Lake Refuge TMDLs	0.3	0.5
Lower Klamath Refuge TMDLs	0.3	0.5

Final Nitrogen Deadlines
There are no deadlines associated with these TMDLs.

Department's Nitrogen Contribution (relative contribution to pollutant loading)

Segment	Percentage of Total Dissolved Inorganic Nitrogen WLA	Percentage of Total Carbonaceous Biochemical Oxygen Demand (CBOD) WLA
Lost River from border of Tule Lake Refuge	100	100
Tule Lake Refuge TMDLs	3.0	10.1
Lower Klamath Refuge TMDLs	100	100

Mad River Sediment and Turbidity TMDL, December 21, 2007

U.S. EPA states that almost all sources of sediment in the Mad River watershed are from diffuse, nonpoint sources, including runoff from roads, timber operations, and natural background. In the Mad River basin, individual point sources are negligible sources of sediment and suspended sediment. To ensure protection of the cold water beneficial use, EPA has determined that it is appropriate to consider the rates set forth in these TMDLs as load allocations to also represent wasteload allocations for the *diffuse* discharges in the watershed that are subject to NPDES permits, as discussed below.

Final WLAs for Sediment and Turbidity

Wasteload allocations for diffuse, permitted point sources function similarly to and are represented by the nonpoint source load allocations, and wasteload allocations for permitted point sources are provided concentration-based wasteload allocations equivalent to what is included in the permits in order to account for incidental sediment and suspended sediment discharges. The TMDLs for sediment and turbidity include separate but identical load allocations for nonpoint sources and wasteload allocations for the diffuse point sources for each subarea. These WLAs are equivalent to and represented by the LAs, and the LAs are expressed on a unit loading basis (tons/mi2/year); therefore, they are not added to the LAs in the TMDL equation.

Table 20. Total Sediment Load Allocations Summary for the Mad River Watershed

Sediment Source		Average Annual		Average Daily		Percent Reduction over 1976 – 2006 Period
		1976 – 2006 Loading (tons/mi^2/yr)	Load Allocation (tons/mi^2/yr)	1976 – 2006 Loading (tons/mi^2/yr)	Load Allocation (tons/mi^2/yr)	
Natural Load Allocation		**894**	**894**	**2.4**	**2.4**	**0%**
Roads	Landslides	1,298				
	Surface	242				
Roads Subtotal		**1,540**	**174**	**4.2**	**0.5**	**89%**
Harvest	Landslide	38				
	Surface	2				

Sediment Source	Average Annual		Average Daily		Percent Reduction over 1976 – 2006 Period
	1976 – 2006 Loading (tons/mi^2/yr)	Load Allocation (tons/mi^2/yr)	1976 – 2006 Loading (tons/mi^2/yr)	Load Allocation (tons/mi^2/yr)	
Harvest Subtotal	40	5	0.1	0.01	89%
Total Human-related Load	1,580	179	4.3	0.5	89%
Total Load: All Sources	**2,474**	**1,073**	**6.8**	**2.9**	**57%**
Note: values have been rounded.					

Suspended sediment is estimated as a proportion of total sediment load, and the reductions for the suspended sediment load are shown in Table 21 (below). The reductions reflect similar priorities as for the total sediment load. Suspended sediment is estimated as a proportion of total sediment load, and the reductions for the suspended sediment load are shown in Table 21. The reductions reflect similar priorities as for the total sediment load.

Table 21. Suspended Sediment Load Allocations Summary for the Mad River Watershed

Sediment Source		Average Annual		Average Daily		Percent Reduction over 1976 – 2006 Period
		1976 – 2006 Loading (tons/mi^2/yr)	Load Allocation (tons/mi^2/yr)	1976 – 2006 Loading (tons/mi^2/yr)	Load Allocation (tons/mi^2/yr)	
Natural Load Allocation		809	809	2.2	2.2	0 %
Road	**Landslides**	1,174				
	Surface	219				
Roads Subtotal		**1,393**	**158**	**3.8**	**0.4**	**89%**
Harvest	**Landslides**	34				
	Surface	2				
Harvest Subtotal		**36**	**4**	**0.1**	**0.01**	**89%**
Total Human-related Load		**1,430**	**162**	**3.9**	**0.4**	**89%**
Total Load: All Sources		**2,238**	**971**	**6.1**	**2.7**	**57%**

Final WLAs for Sediment and Turbidity Specific to the Department

U.S. EPA grouped the Department's discharges under its NPDES municipal storm water permit with other "diffuse" NPDES-permitted storm water discharges occurring in this TMDL. U.S. EPA's source analysis did not distinguish between land areas subject to NPDES regulation and nonpoint sources of sediment and turbidity. U.S. EPA's TMDLs thus include separate but identical load allocations (LAs) for nonpoint sources and wasteload allocations (WLAs) for the "diffuse" point sources for each subarea. These WLAs are equivalent to and

represented by the LAs, and the LAs are expressed on a unit loading basis (tons/mi2/year); therefore, they are not added to the LAs in the TMDL equation.

For the diffuse permitted sources such as the Department's discharges under its municipal storm water permit, the waste load allocation is expressed as equivalent to the load allocation for (all) roads. The load allocations for roads are listed in the tables given above.

U.S. EPA also states that the Regional Water Board may wish to refine these TMDLs and allocations further in the future.

Final Sediment and Turbidity Deadlines
U.S. EPA did not specify deadlines for implementation.

Department's Sediment and Turbidity Contribution
U.S. EPA states that non-NPDES nonpoint sources are responsible for nearly all sediment loading in the watershed, but does not estimate the Department's potential contribution to sediment and turbidity waste loading in this TMDL. Only six percent of the roads in this watershed are paved, and some unspecified portions of the latter are State highways.

Navarro River Sediment and Temperature TMDL, December 27, 2000

Final Sediment WLA
The Navarro River TMDLs for temperature and sediment are based on separate analyses. Reduced sediment loads could be expected to lead to increased frequency and depth of pools, and to reduced wetted channel width/depth ratios.

Final Sediment WLA Specific to the Department
The Department is not specifically mentioned as a source of pollutant loading for temperature and sediment, nor are any other point sources of these pollutants. The wasteload allocation for the Department is therefore presumed to be set to zero.

Final Sediment Deadlines
U.S. EPA did not specify deadlines for implementation of this TMDL.

Department's Sediment Contribution
As mentioned above, neither Department nor other point sources are identified as sources of pollutant loading for temperature or sediment, so U.S. EPA has determined that these potential sources are insignificant in this TMDL.

Noyo River Sediment TMDL, December 16, 1999

Final Sediment WLA
U.S. EPA apportioned the total load among several non-point sources of sediment, after accounting for background load. As a consequence, this TMDL does not include wasteload allocations for point sources.

Final Sediment WLA Specific to the Department
U.S. EPA did not specify deadlines for implementation of this TMDL.

Department's Sediment Contribution (relative to pollutant loading)
As stated above, U.S. EPA did not establish wasteload allocations for point sources of sediment.

Redwood Creek Sediment TMDL, U.S. EPA Established December 30, 1998

Final Sediment WLA
U.S. EPA did not establish wasteload allocations for point sources in this TMDL.

Final WLA
U.S. EPA established this TMDL on December 30, 1998 and it became effective immediately.

Final WLA Specific to the Department and the Department's Contribution
As stated above, U.S. EPA did not establish wasteload allocations for point sources of sediment.

Final Deadlines
U.S. EPA did not specify deadlines for implementation of this TMDL.

Department's Contribution (relative to pollutant loading)
The Department's contribution relative sediment pollutant loading is not known.

Scott River Sediment and Temperature TMDL, August 11, 2006

Final Sediment WLA
U.S. EPA states that there are no point sources of sediment and/or temperature related discharges within the area encompassed by this TMDL, so the wasteload allocation is set to zero.

Final Sediment WLA Specific to the Department
None.

Final Sediment Deadlines
U.S. EPA directed Regional Water Board staff to evaluate the Department's state-wide NPDES permit in the North Coast Region by September 8, 2008. The purpose of the evaluation was to determine the adequacy and effectiveness of the Department's storm water program in preventing and reducing elevated water temperatures in the North Coast Region, including the Scott River watershed.

Department's Sediment Contribution (relative to pollutant loading)
As noted above, U.S. EPA did not establish specific wasteload allocations for point sources, so the wasteload allocations are set to zero. The Department's point source contribution is therefore judged to be insignificant.

Ten Mile River Sediment TMDL, December 2000

Final Sediment WLA
U.S. EPA states that there are no point sources of sediment discharges within the area included within this TMDL: wasteload allocations are therefore set to zero.

Final Sediment WLA Specific to the Department
As stated above, U.S. EPA did not establish wasteload allocations for point sources such as the Department in this TMDL, so the wasteload allocations are set to zero.

Final Sediment Deadlines
U.S. EPA did not specify deadlines for implementation of this TMDL.
Department's Sediment Contribution (relative pollutant loading)
The Department's relative sediment contribution is judged to be insignificant.

Trinity River Sediment TMDL, December 20, 2001

Final Sediment WLA
U.S. EPA did not subdivide waste load and load allocations into specific sources such as roads and timber harvest, unlike several of its other sediment-related TMDLs in Region 1. U.S. EPA divided the basin into subareas because of the wide range of sediment delivery rates within each of the several subareas. U.S. EPA further states that although nonpoint sources are responsible for most sediment loading in the watershed, point sources also discharge some sediment.

The TMDL identified wasteload allocations for point sources and load allocations for nonpoint sources as pollutant loading rates (tons/square mile/year) for subareas within the Trinity Basin. The source analysis supporting these allocations evaluated sediment loading at a subarea scale, and did not attempt to distinguish sediment loading at the scale of specific land ownership, nor did the source analysis specifically distinguish between land areas subject to NPDES regulation and land areas not subject to NPDES regulation. As a

consequence, the TMDL includes separate but identical load allocations for nonpoint sources and wasteload allocations for point sources for each subarea. The joint LA/WLA's for each subarea are given in the following tables:

Table 5-2. TMDL and Allocations by Source Category for Upper Area

Source Categories		Subareas within the Upper Assessment Area				
		Reference Subwatersheds[1]	Westside Tributaries[2]	Upper Trinity[3]	East Fork Tributaries[4]	East Side Tributaries[5]
Current Sediment Delivery Rate						
Background (non-management)		1,125	421	2,759	258	241
Management	**Roads**	129	101	162	319	48
	Timber Harvest	240	31	1,084	46	22
	Legacy (Roads, Mining)	7	25	21	26	96
	Total Mgmt.	376	157	1,267	391	96
Total Sediment Delivery		1,051	578	4,026	649	337
Total as percent of background		133%	137%	146%	252%	140%
Loading Capacity (TMDL) and Allocations (tons/mi^2/yr)						
TMDL (= 1.25 X Background)		1,406	526	3,449	323	301
Background Allocation		1,125	421	2,759	258	241
Total Management Allocation (= TMDL – Background)		281	105	690	65	60
Percent reduction needed in management to attain TMDL		25%	33%	46%	83%	37%

1. Stuarts Fork, Swift Creek, Coffee Creek
2. Stuart Arm Area, Stoney Creek, Mule Creek, East Fork Stuart Fork, West Side Trinity Lake, Hatchet Creek, Buckeye Creek;
3. Upper Trinity River, Tangle Blue, Sunflower, Graves, Bear Upper Trinity Mainstem Area, Ramshorn Creek, Ripple Creek, Minnehaha Creek, Snowslide Gulch Area, Scorpion Creek
4. East Fork Trinity, Cedar Creek, Squirrel Gulch Area
5. East Side Tributaries, Trinity Lake

Table 5.3 TMDL and Allocations by Source Category for Upper Middle Area

Source Categories		Subareas within the Upper Assessment Area					
		Weaver and Rush Creeks (72 mi^2)	Deadwood Creek, Hoadley Gulch and Poker Bar Area (47 mi^2)	Lewiston Lake Area (25 mi^2)	Grass Valley Creek[1] (37 mi^2)	Indian Creek (34 mi^2)	Reading and Brown Creek (104 mi^2)
Current Sediment Delivery Rates (tons/mi^2/yr)							
Background (non-management)		675	273	195	175	324	263
Management	**Roads**	144	220	83	287	1.570	125
	Timber Harvest	61	280	37	1,136	330	204
	Legacy (Roads, Mining)	81	62	69	65	68	42
	Total Mgmt.	286	562	189	1,488	1,968	372
Total Sediment Delivery		961	835	384	1,663	2,292	635
Total as percent of background		142%	305%	197%	950%	707%	241%
Loading Capacity (TMDL) and Allocations (tons/mi^2/yr)							
TMDL (= 1.25 X Background)		844	341	244	219	405	329
Background Allocation		675	273	195	175	324	263
Total Management Allocation (= TMDL – Background)		169	68	49	44	81	66
Percent reduction needed in management to attain TMDL		41%	88%	74%	97%	96%	82%

1. The rates in Grass Valley Creek do not account for the amount of sediment trapped by Buckhorn Dam and Hamilton Ponds.

Table 5.4 TMDL and Allocations by Source Category for Lower Middle Assessment Area

Source Categories		Subareas within the Lower Middle Assessment Area				
		Reference Subwatersheds[1] (434 mi^2)	Canyon Creek (64 mi^2)	Upper Tributaries[2] (72 mi^2)	Middle Tributaries[3] (54 mi^2)	Lower Tributaries[4] (96 mi^2)
Current Sediment Delivery Rates (tons/mi^2/yr)						
Background (non-management)		1,568	1,302	268	210	221
Management	**Roads**	11	2,482	60	37	41
	Timber Harvest	4	4	29	16	20
	Legacy (Roads, mining)	9	17	46	28	29
	Total Mgmt.	24	2,503	135	81	90
Total Sediment Delivery		1,592	3,805	403	291	311
Total as percent of background		102%	292%	150%	139%	141%
Loading Capacity (TMDL) and Allocations (tons/mi^2/yr)						
TMDL (= 1.25 X Background)		1,592	1,628	335	263	276
Background Allocation		1,568	1,302	268	210	221
Total Management Allocation (= TMDL – Background)		24	326	67	53	55
Percent reduction needed in management to attain TMDL		0	87%	50%	35%	39%

1. New River, Big French, Manzanita, North Fork, East Fork North Fork.
2. Dutch, Soldier, Oregon Gulch, Conner Creek Area.
3. Big Bar Area, Prairie Creek, Little French Creek.
4. Swede, Italian, Canadian, Cedar Flat, Mill, McDonald, Hennessy, Quinby Creek Area, Hawkins, Sharber.

Table 5.5. TMDL and Allocations by Source Category for Lower Assessment Area

Source Categories		Subareas within the Lower Assessment Area. Outside of Hoopa Valley Tribe Reservation Boundaries				
		Reference Subwatersheds Horse Linto Creek: 64 mi^2)	Mill Creek and Tish Tang (39mi^2)	Willow Creek (43 mi^2)	Campbell Creek and Supply Creek (11 mi^2)	Lower Mainstem Area and Coon Creek (32mi^2)
Current Sediment Delivery Rates (tons/mi^2/yr)						
Background (non-management)		2,110	839	374	7,845	252
Management	**Roads**	483	703	854	14,349	76
	Timber Harvest	87	83	201	785	15
	Legacy (Roads, Mining)	26	26	26	26	22
	Total Mgmt.	596	812	1,081	15,160	113
Total Sediment Delivery		2,706	1,651	1,455	23,005	365
Total as percent of background		128%	197%	389%	293%	145%
Loading Capacity (TMDL) and Allocations (tons/mi^2/yr)						
TMDL (= 1.25 X Background)		2,638	1,049	468	9,806	315
Background Allocation		2,110	839	374	7,845	245
Total Management Allocation (= TMDL – Background)		528	210	94	1,961	63
Percent reduction needed in management to attain TMDL		11%	74%	91%	87%	44%

Note:
Since Background rates for Lower Mainstem Area and Coon Creek were not available from GMA (2001), U.S. EPA used the same rate as was calculated for the Quinby Creek Area is comparable in size and underlain by the same geology type (Galice Formation).

Final Sediment Deadlines
U.S. EPA did not specify deadlines for implementation.

Final Sediment WLA Specific to the Department
U.S. EPA issued joint LAs and WLA's, as noted above, so source-specific wasteload allocations were not developed for this TMDL.

Department's Sediment Contribution (relative pollutant loading)
It is not possible to estimate the Department's point source contribution from the source analysis developed by U.S. EPA.

South Fork Trinity River Watershed Sediment Total Maximum Daily Load (U.S. EPA, 1998)

Final Sediment WLA
U.S. EPA states that there are no point source discharges, and set the waste load allocation to zero.

Final Sediment WLA Specific to the Department
There is no waste load allocation for the Department's discharges. In keeping with U.S. EPA's rationale, this means that the waste load allocation for the Department's sediment discharges is zero.

Final Deadlines
No deadlines were specified.

Department's Pollutant Contribution
The Department is mentioned as a possible source of sediment discharges, but the relative contribution of its potential discharges were not measured or estimated. The State highways it mentions in the geographic area included in the TMDL are portions of Highways 36 and 101.

Van Duzen River Watershed Sediment Total Maximum Daily Load (U.S. EPA, 1999)

Final Sediment WLA
U.S. EPA states that there are no point source discharges, and set the waste load allocation to zero.

Final Sediment WLA Specific to the Department
There is no waste load allocation for the Department's discharges. In keeping with U.S. EPA's rationale, this means that the waste load allocation for the Department's sediment discharges is zero.

Final Sediment TMDL Deadlines
No deadlines were specified.

Department's Pollutant Contribution
The Department is mentioned as a possible source of sediment discharges, but the relative contribution of its potential discharges were not measured or estimated. The State highways it mentions in the geographic area included in the TMDL are portions of Highways 3, 36, and 299.

Napa River Sediment TMDL, January 20, 2011

Final Sediment WLA

The wasteload allocations are listed in the following table:

Point Source Category	Current Load		Reduction Needed (percentage)	Wasteload Allocations	
	Metric (Tons/year)	**Percentage of Natural Background**		**Metric** (Tons/year)	**Percent of Natural Background**
Construction Storm Water Order No. 99-08-DWQ	500	0.3	0	500	.03
Municipal Storm Water NPDES Permit No. CAS000001	800	0.5	0	800	0.5
Industrial Storm Water NPDES Permit No. CAS000001	500	0.3	0	500	0.3
Department Storm Water-Order No. 99-06-DWQ	600	0.4	0	600	0.4
Wastewater Treatment Plant Discharges [a]					
City of St. Helena NPDES Permit No. CA0038016	30	<0.1	0	30	<0.1
Town of Yountville/CA Veteran's Home NPDES Permit No. CA0038121	30	<0.1	0	30	<0.1
City of Calistoga NPDES Permit No. CA0037966	40	<0.1	0	40	<0.1
TOTAL	**2,500**	**2**		**2,500**	**2**

a. For wastewater treatment plant discharges, compliance with existing permit effluent limit of 30 mg/L of TSS is consistent with these wasteload allocations.

Note: Above estimates for loads, percent reductions, and allocations are rounded to two significant figures.

Final Sediment WLA Specific to the Department

The Department's wasteload allocation is 600 metric tons/year.

Final Sediment Deadlines
The Department is deemed to be implementing appropriate control measures if it discharges in compliance with its municipal storm water permit, and if it conducts the monitoring program included in its storm water permit.

Department's Sediment Contribution (relative to pollutant loading)
The Regional Water Board indicates that the Department is a fairly minor anthropogenic source of sediment discharges, and attributes its current discharges to only 0.4% of natural background loading. As a consequence, the Regional Water Board has determined that compliance with its NPDES permit will enable the Department to meet its sediment wasteload allocation.

Sonoma Creek Sediment TMDL, September 8, 2010

Final WLA
Although roadways are cited as a major source of sediment loading in the Sonoma Creek watershed, the Regional Water Board has determined that compliance with its NPDES permit for storm water will enable the Department to meet its wasteload allocation for sediment.

Final Sediment WLA Specific to the Department
The Department's wasteload allocation is 100 tons/year, which is its current (2005) estimated annual discharge of sediment within the area encompassed by this TMDL.

Final Sediment Deadlines
In collaboration with stakeholders in the watershed, Water Board staff will develop a detailed monitoring program to assess progress of TMDL attainment and provide a basis for reviewing and revising TMDL elements or implementation actions. As an initial milestone, by fall 2011, the Regional Water Board and watershed partners were required to complete monitoring plans to evaluate: a) attainment of water quality targets; and b) suspended sediment and turbidity conditions. Initial data collection, based on the protocols established in these monitoring plans was anticipated to begin in the winter of 2011-2012.

Department's Sediment Contribution (relative to pollutant loading)
The Regional Water Board estimates that the Department's point source discharges of sediment constitute approximately 8% of total point sources discharges of sediment.

San Francisco Bay Mercury TMDL, February 12, 2008

The San Francisco Bay Mercury TMDL was adopted by the San Francisco Bay Regional Water Quality Control Board as Resolution Number R2-2006-0052 on August 9, 2006. It was approved by U.S. EPA on February 12, 2008.

Final Mercury WLA
There are no WLAs specific to the Department. Instead, the Department's WLA is an unspecified portion of the WLA assigned to the city or municipal NPDES permit in which the Department's roads or facilities reside.

Final Mercury WLA Specific to the Department
No deadlines specified.

Final Mercury Deadlines
The WLAs must be attained by February 12, 2028.

Department's Mercury Contribution (relative contribution to pollutant loading)
The Department's contribution is unknown.

CENTRAL COAST SEDIMENT TMDLS

Although roadways are cited as a major source of sediment loading in some Central Coast watersheds, the Central Coast Regional Water Board has determined that compliance with the Department's NPDES permit will meet the Department's wasteload allocation.

San Lorenzo River (includes Carbonera Lompico, and Shingle Mill Creeks) Sediment TMDL, February 19, 2004

Final Sediment WLA
The sediment load to the San Lorenzo River derives from both nonpoint sources and point sources. The TMDL combines nonpoint source LAs and point source WLAs for each segment of this TMDL, as specified in the following table:

Sediment Source Category	Allocation (tons/year)			
	Shingle Mill Creek	Carbonera Creek	Lompico Creek	San Lorenzo River
Upland Timber Harvest Plan (THP) Roads	0	419	362	25,215
Streamside THP Roads on Steep Slopes	0	182	164	10,949
Upland Public/ Private Roads	146	1,235	367	13,835
Streamside Public/Private Roads on Steep Slopes	77	135	239	6,178

Sediment Source Category	Allocation (tons/year)			
	Shingle Mill Creek	Carbonera Creek	Lompico Creek	San Lorenzo River
THP Land	0	23	16	1,057
Other Urban and Rural Land	310	2,622	965	43,368
Mass Wasting	0	4,082	6,440	157,388
Channel/Bank Erosion	324	3,030	989	48,149
Total Allocation = TMDL[3]	857	11,728	9,542	306,139

Note:
3 The term "TMDL" is used here for familiarity. The allowable loads for the San Lorenzo River and its tributaries are actually expressed as a Total Annual Loads (tons/year). This expression of load accounts for seasonal variation in sediment loads explained by the seasonality of rainfall in this region of the Central Coast.

Final Sediment WLA Specific to the Department
As stated above, no specific waste load allocation was assigned to the Department.

Final Sediment Deadlines
Compliance with its municipal storm water permit is deemed to be sufficient to meet the Department's waste load allocation for sediment.

Department's Sediment Contribution (relative contribution to pollutant loading)
This TMDL does not estimate the relative contribution of the Department's roadways/facilities to sediment discharges, but this source appears to be moderate based on this TMDL's source analysis.

Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary) Sediment TMDL, January 20, 2004

Final WLA
The sediment load to Morro Bay, Los Osos Creek and Chorro Creek derives from both nonpoint sources and point sources. The TMDL combines nonpoint source LAs and point source WLAs for each segment of this TMDL, as specified in the following table:

Final Sediment WLA Specific to the Department

	Watershed	Total (Tons/Yr) Rounded to the nearest ton
Loading Allocations (TMDL expressed as annual load)	Chorro Creek at Reservoir	6,541
	Dairy Creek	440
	Pennington Creek	966
	San Luisito Creek	7,315
	San Bernardo Creek	10,269
	Minor Tributaries	4,489
	Chorro Creek (Subtotal)	**30,020**
	Los Osos Creek	3,052
	Warden Creek and Tributaries	1,812
	Los Osos Creek (Subtotal)	**4,864**
	Morro Bay Watershed (Total)	**34,885**

Final Sediment WLA Specific to the Department
Although no specific wasteload allocation was assigned to the Department, this TMDL states that discharges which are in compliance with their respective storm water (and other) NPDES permits are meeting their portion of shared responsibility for achieving sediment load reduction.

Final Sediment Deadlines
Implementation will rely on the State's Plan for NPS pollution control (CWC §13369) and continued implementation of existing regulatory controls as appropriate for point sources, including storm water pursuant to NPDES surface water discharge regulations and Waste Discharge Requirements under Porter-Cologne. Final compliance with sediment load reductions is scheduled to be achieved by 2054 (50 years from the adoption of the TMDL).

Department's Sediment Contribution (relative contribution to pollutant loading)
The Department's contribution to sediment loading was not estimated in this TMDL.

LOS ANGELES REGION SEDIMENT/NUTRIENTS/MERCURY TMDLS

Department's Pollution Contribution:
Although roadways are cited as a major source of sediment loading in some watersheds**,** for purposes of current sediment-related TMDLs, the Los Angeles Regional Water Board has determined that compliance with its NPDES permit will meet the Department's wasteload allocations for sediment.

Ballona Creek Wetlands Sediment and Invasive Exotic Vegetation TMDLs, March 26, 2012

Final Sediment WLA
U.S. EPA established wasteload allocations (WLAs) for sediment to address the impairments identified for the Ballona Creek Wetlands. WLAs are assigned to the Los Angeles County MS4 and their co-permittees, and the Department, who are responsible for the loading of sediment into Ballona Creek Wetlands. The WLAs are the total allowable sediment load that can be discharged into Ballona Creek Wetlands. This total sediment load includes both suspended sediment and sediment bed load that are transported from Ballona Creek Watershed into Ballona Creek Wetlands. Invasive exotic vegetation listed on the California Noxious Weed list are given a WLA and LA of zero.

Since the current existing discharge of sediment load is not contributing to the listed impairments or otherwise causing a negative impact to Ballona Creek Wetlands, this TMDL establishes joint WLAs based on existing conditions. The allowable WLA is set at 58,354 yd^3/yr (or 44,615 m^3/yr). The joint wasteload allocation is as follows:

Responsible Jurisdiction	Input	Sediment Wasteload Allocation[1] (yd^3/yr)	Existing Total Sediment Load (yd^3/yr)
Los Angeles County MS4 , Co-Permittees & Department	Ballona Creek Watershed	58,354	58,354

Final Sediment WLA Specific to the Department
As stated above, there is no WLA specific to the Department. The joint point source WLA is 58,354 cubic yards of sediment per year, which is equivalent to the current estimated total sediment loading contributed by these sources.

Final Sediment Deadlines
U.S. EPA did not specify deadlines for implementation of this TMDL.

Department's Contribution (relative contribution to pollutant loading)
The Department's relative contribution to anthropogenic sediment loading is not estimated or quantified in this TMDL. However, the joint WLAs are set to the current estimated sediment discharges, which the Department can meet through compliance with its NPDES municipal storm water permit.

Calleguas Creek and its Tributaries & Mugu Lagoon Metals (including Mercury) and Selenium TMDL, March 26, 2007

Final Mercury WLA
The Department shares group mass-based WLAs for mercury for Calleguas Creek and Revolon Slough with other Permitted Storm water Dischargers (PSDs). Final WLAs are mass-based and are dependent upon annual flow ranges.

Final Mass-based WLAs for Annual Flow Ranges, Mercury in Suspended Sediment

Flow Range, Millions of Gallons per Year	**Calleguas Creek** (lbs/yr)	**Revolon Slough** (lbs/yr)
0-15,000 MGY	0.4	0.1
15,000-25,000 MGY	1.6	0.7
Above 25,000 MGY	9.3	1.8

Final Mercury WLA Specific to the Department
There is no specific allocation for the Department.

Final Mercury Deadlines
The final WLAs must be achieved within 15 years after the effective date of the amendment, or March 26, 2022.

Department's Mercury Contribution (relative contribution to pollutant loading)
The Department's areal proportion of the watershed is not known.

The Los Angeles Area Lakes and Reservoir

TMDLs specific to the Department include targets for the following lakes:
- Echo Park Lake: nitrogen phosphorus, chlordane, dieldrin, PCBs, and trash
- Lake Sherwood: mercury
- Legg Lakes (North, Center and Legg): nitrogen and phosphorus
- Peck Road Park Lake: nitrogen and phosphorus
- Puddingstone Reservoir: nitrogen, phosphorus, chlordane, DDT, PCBs, Hg, and Dieldrin

Wasteload allocations were assigned to responsible jurisdictions based on existing loading of nitrogen and phosphorus to each lake. To allow flexibility in implementing the nutrient TMDLs, responsible jurisdictions receiving required reductions have the option to submit a request to the Regional Board for alternative concentration-based wasteload allocations. These jurisdictions can receive alternative concentration-based wasteload allocations not to exceed 1.0 and 0.1 milligrams per liter total nitrogen and total phosphorus, respectively.

During wet weather, runoff from industrial sites has the potential to contribute pollutant loadings. During dry weather, the potential contribution of pollutant loadings from industrial storm water is low because non-storm water discharges are prohibited or authorized by the

permit only under the following circumstances: when they do not contain significant quantities of pollutants, where Best Management Practices are in place to minimize contact with significant materials and reduce flow, and when they are in compliance with Regional Board and local agency requirements.

Los Angeles Area (Echo Park Lake) Total Nitrogen, Total Phosphorus, Chlordane, Dieldrin, PCBs, and Trash TMDLs, March 26, 2012)

Final Nutrient WLAs

	Total Phosphorus, (lbs/year)	**Total Nitrogen,** (lbs/year)
TOTAL	83.3	682

Final Nutrient WLAs Specific to the Department

Subwatershed	**Total Phosphorus,** (lbs/year)	**Total Nitrogen,** (lbs/year)
Northern	0.608	4.77
Southern	0.051	0.403

Final Nutrient Deadlines

There are no final deadlines specified for the Department.

Department's Nutrient Contributions *(relative contribution to pollutant loading)*

Subwatershed	**Percentage of the Total Phosphorus Load**	**Percentage of the Total Nitrogen Load**
Northern	0.6 %	0.7 %
Southern	0.05 %	0.06 %

Los Angeles Area (North, Center & Legg Lakes) Nitrogen and Phosphorus, TMDLs, March 26, 2012

Final Nutrient WLA Nitrogen & Phosphorous TMDLs

	Total Phosphorus (lbs/year)	**Total Nitrogen** (lbs/year)
TOTAL	1,541	9,135

Final WLAs Specific to the Department

Subwatershed	**Total Phosphorus,** (lbs/year)	**Total Nitrogen,** (lbs/year)
Direct to Center Lake	4.6	15.5
Direct to Legg Lake	1.2	4.0
Direct to North Lake	19.1	64.1
Northwestern	9.4	29.3
Northeastern	10.9	34.0

Alternative concentration-based WLAs are available to the Department if it satisfies certain criteria as detailed in the TMDL. Those WLAs are:

Subwatershed	**Maximum Allowable WLA for Total Phosphorus** (mg/L)	**Maximum Allowable WLA for Total Nitrogen** (mg/L)
Direct to Center Lake	0.1	1.0
Direct to Legg Lake	0.1	1.0
Direct to North Lake	0.1	1.0
Northwestern	0.1	1.0
Northeastern	0.1	1.0

Final Nutrient Deadlines

There are no final deadlines specified for the Department.

Department's Nutrient Contribution (relative contribution to pollutant loading)

Subwatershed	**Percentage of the Total Phosphorus Load**	**Percentage of the Total Nitrogen Load**
Direct to Center Lake	0.2 %	0.2 %
Direct to Legg Lake	0.1 %	<0.1 %
Direct to North Lake	1.0 %	0.6 %
Northwestern	0.5 %	0.3 %
Northeastern	0.6 %	0.3 %

Los Angeles Area (Peck Road Park Lake) Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash TMDLs, March 26, 2012

Final Nutrient WLAs

	Total Phosphorus (lbs/year)	**Total Nitrogen** (lbs/year)
TOTAL	19,319	186,845

Final Nitrogen & Phosphorus WLA Specific to the Department

Subwatershed	**Total Phosphorus** (lbs/year)	**Total Nitrogen** (lbs/year)
Eastern	158	1,165
Western	34.2	251

Final Nutrient Deadlines

There are no final deadlines specified for the Department.

Department's Nutrient Contribution (relative contribution to pollutant loading)

Subwatershed	**Percentage of the Total Phosphorus Load**	**Percentage of the Total Nitrogen Load**
Eastern	0.8 %	0.6 %
Western	0.2 %	0.1 %

Los Angeles Area (Puddingstone Reservoir) Nitrogen, Phosphorus, Chlordane, DDT, PCBs, Mercury, and Dieldrin TMDLs, March 26, 2012

Final Nutrient WLAs for Puddingstone Reservoir

Final Nitrogen and Phosphorus WLAs

	Total Phosphorus (lbs/year)	**Total Nitrogen** (lbs/year)
TOTAL	4,226	18,756

Final Nitrogen, Phosphorus WLAs Specific to the Department

Subwatershed	**Total Phosphorus** (lbs/year)	**Total Nitrogen** (lbs/year)
Northern	167	745
Southern	14.8	68.2

Alternative concentration-based WLAs are available to the Department if it satisfies certain criteria as detailed in the TMDL. Those WLAs are:

Subwatershed	Maximum Allowable WLA for Total Phosphorus (mg/L)	Maximum Allowable WLA for Total Nitrogen (mg/L)
Northern	0.1	1.0
Direct Southern	0.1	1.0

Final Nutrient Deadlines
There are no final deadlines specified for the Department.

Department's Nutrient Contribution (relative contribution to pollutant loading)

Subwatershed	Percentage of the Total Phosphorus Load	Percentage of the Total Nitrogen Load
Northern	3.6 %	3.4 %
Southern	0.3 %	0.3 %

Final Mercury WLA for Puddingstone Reservoir
Final Waste Load Allocations are assigned to the Department for sub-watersheds for Puddingstone Reservoir, and must be met at the Department's discharge points.

Final Mercury WLA for Puddingstone Reservoir Specific to the Department
Mercury WLAs for Puddingstone Reservoir

Subwatershed	Area (ac)	Existing Annual Hg Load (g/yr)	Percent of Load	Final Wasteload Allocation (g/yr)
Puddingstone-Northern	110	1.32	1.85	0.702
Puddingstone-Southern	11.6	0.0960	0.13	0.051

Fish Harbor is impaired for mercury in sediment. The Department is named as a responsible party for WLAs to Fish Harbor. The final concentration-based WLA for sediment in Fish Harbor is 0.15 mg per kilogram of dry sediment.

Final Mercury Deadlines for Puddingstone Reservoir
The Department is subject to the prescribed point source interim WLAs which are effective as of March 23, 2012. Compliance with all final WLAs is required by March 23, 2032.

Department's Mercury Contribution for Puddingstone Reservoir (relative contribution to pollutant loading)

Subwatershed	Annual Hg Load (g/yr)	Percent of Total Load
Northern	1.32	1.85
Southern	0.096	0.13
Total	**1.42**	**1.99**

Los Angeles Area (Lake Sherwood) Mercury TMDL, March 26, 2012

Final Mercury WLA

Final waste load allocations are assigned to the Department for one sub-watershed, Lake Sherwood, and must be met at the Department's discharge points.

Final Mercury WLA Specific to the Department

Mercury WLAs for Lake Sherwood

Subwatershed	Area (ac)	Existing Annual Hg Load (g/yr)	Percent of Load	Final Wasteload Allocation (g/yr)
Carlisle Canyon	2.75	0.049	0.12	0.014

Final Mercury Deadlines

There are no final deadlines specified for the Department.

Department's Mercury Contribution (relative contribution to pollutant loading)

Subwatershed	Annual Hg Load (g/yr)	Percent of Total Load
Carlisle Canyon	0.049	0.12
Entire Watershed	**0.049**	**0.001**

Machado Lake Eutrophic, Algae, Ammonia, and Odors (Nutrients), March 11, 2009

Final Nutrients WLA

Final concentration-based Waste Load Allocations are established for total phosphorus and total nitrogen (defined as the sum of the concentrations of Total Kjeldhal Nitrogen, Nitrate as N, and Nitrite as N). For most storm water permittees, the final WLA for total phosphorus is 0.1 mg/L. For total nitrogen, the final WLA is 1.0 mg/L.

Final Nutrients WLA Specific to the Department

For the Department, the final WLA for total phosphorus is 0.1 mg/L. For total nitrogen, the final WLA is 1.0 mg/L.

Final Nutrients Deadlines

The Department must achieve its final WLAs by September 11, 2018.

Department's Nutrients Contribution (relative contribution to pollutant loading)
The Department's contribution to the overall loading is not defined in the TMDL. The draft Machado Lake Nutrients TMDL Implementation Plan, submitted on March 11, 2011 by the Department states that the Department's roadways and facilities comprise approximately 1.2 percent of the Machado Lake Watershed.

Malibu Creek & Lagoon TMDL for Sedimentation and Nutrients, July 2, 2013

Sediment loading into Malibu Lagoon is much higher than naturally expected. The excess sediment accumulates in the Lagoon tidal channels and carries greater nutrient loads and cause algae blooms with likely adverse impacts on benthic macroinvertebrates.

Final Sedimentation WLA
Allocations for Sedimentation as listed in Table 10-2. (Based on SCAG 2008 land use and Jurisdictional maps provided by MS4 Co-permittees.)

Type of Allocation	Responsible Party	Impervious Area (total acres)	Pervious Area (acres)	Allocation Fraction	Sedimentation Allocation (tons/yr)
WLA	WLA Los Angeles Co. below	887	10.612	17.4%	1,012
WLA	Department below Malibou Lake	60	61	0.8%	44
LA	Unincorporated area draining to Las Virgenes Creek**	8	267	0.3%	16
LA	Protected land below Malibou Lake*	**253**	**16,820**	**13.7**	**796**
LA	Load Allocation at outlet of Malibou Lake	**3,669**	**37,550**	**67.9%**	**3,950**
Total		**4,878**	**65,310**	**100.0 %**	**5,817**

Final Sedimentation WLA Specific to the Department
See Table 10-2 above for the Department's below Malibou Lake.

Final Sedimentation Deadlines
U.S. EPA did not develop final deadlines for this TMDL.

Department's Sedimentation Contribution (relative contribution to pollutant loading)
See the Department's Nutrients Contribution below.

Final Nutrients WLA
There are no total final WLAs for Malibu Creek and Lagoon. Below are the concentration-based numeric targets as listed in Table 10-4 of this TMDL.

Season	Total Nitrogen (mg/l)	Total Phosphorus (mg/l)
Summer (Apr 15 – Nov 15)	0.65	0.1
Winter (Nov 16 - Apr 14)	1.0	0.2

Final Nutrients WLA Specific to the Department
Final WLAs are established Total Nitrogen (TN) and Total Phosphorus (TP) for summer and winter as listed in Table 10-4 of this TMDL.

Summer TN, mg/l (Apr 15 – Nov 15)	Winter TN, mg/l (Nov 16 – Apr 14)	Summer TP, mg/l (Apr 15 – Nov 15)	Winter TP, mg/l (Nov 16 – Apr 14)
1.0	4.0	0.1	0.2

Final Nutrients Deadlines
EPA did not develop final deadlines for this TMDL.

Department's Nutrients Contribution (relative contribution to pollutant loading)
The Department's total area within the watershed is 206 acres, of a total of 65,310 acres or 0.317% of the total watershed.

The Department's contribution to the nutrient loads is not specified in the TMDL, but it can be assumed that the contribution is nearly the same as the allocation fraction for sediment in Table 10-2, at 0.8%. Multiplying the monthly watershed loads for winter and summer from Tables 5-3 and 5-4, respectively, by the Department's allocation fraction provides an approximation of the Department's total contribution to the monthly load.

Source	Summer TN Load kg/mo (Apr 15 – Nov 15)	Winter TN Load kg/mo (Nov 16 – Apr 14)	Summer TP Load kg/mo (Apr 15 – Nov 15)	Winter TP Load kg/mo (Nov 16 – Apr 14)
Total Load	789	20,442	140	2,842
Department Runoff (estimate based on area)	6.31	164	1.12	22.7

Ventura River and its Tributaries Algae, Eutrophic Conditions, and Nutrients TMDL, June 28, 2013

This TMDL establishes dry-weather and wet-weather WLAs for nitrogen and a dry-weather TMDL for phosphorus.

Final Nutrients WLA
The final dry-weather Total Nitrogen and Total Phosphorus loads are not explicitly stated in the TMDL.

Final Nutrients WLA Specific to the Department
The final total dry-weather total nitrogen WLA for the Department is 1.1 pound/day. The final dry-weather total phosphorus WLA for the Department is 0.11 pound/day.

Wet-weather allocations for "nitrogen", defined as the sum of Nitrate-N and Nitrite-N, are the same for all storm water dischargers and are site-specific to the reaches of the watershed:

Reach	Nitrate-N + Nitrite-N (mg/L)
Estuary	7.4
Reach 1	7.4
Reach 2	10
Cañada Larga	10
Reach 3	5
San Antonio Creek	5
Reach 4	5
Reach 5	5

Final Nutrients Deadlines
Wet-weather WLAs for the Department apply on the effective date of the TMDL. Dry-weather WLAs for the Department must be achieved by June 28, 2019.

Department's Nutrients Contribution
The Department's proportional contributions to the final WLAs are estimated to be approximately 1 percent each.

CENTRAL VALLEY REGION NUTRIENTS AND MERCURY TMDLS

Clear Lake Nutrients TMDL, September 21, 2007

Final Nutrients WLA
The final WLA for phosphorus for Clear Lake is 2100 kg per year.

Final Nutrients WLA Specific to the Department
The Department is given a final WLA for phosphorus of 100 kg per year.

Final Nutrients Deadlines
The Department shall achieve its WLAs by September 21, 2017.

Department's Nutrients Contribution (relative contribution to pollutant loading**)**
The Department contributes 4.8 percent to the final phosphorus WLA.

Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch Mercury TMDL, February 7, 2011

Final Methylmercury WLA

Implementation Summary Cache Creek and Bear Creek Methylmercury Allocations

Source	**Acceptable Annual Load** (g/yr)
Cache Creek (Clear Lake to North Fork Confluence	11
North Fork Cache Creek	12.4
Harley Gulch	0.04
Davis Creek	0.7
Bear Creek @ Highway 20	3
In-channel production and un-gauged tributaries	32
Bear Creek @ Bear Valley Road	0.9
Sulphur Creek	0.8
In-channel production and un-gauged tributaries	1

Final Mercury WLA Specific to the Department

No specific WLA assigned to the Department.

Final Mercury Deadlines

None specified.

Department's Mercury Contribution (relative contribution to pollutant loading)

The Department's relative contribution to pollutant loading is not known.

Sacramento-San Joaquin River Delta Estuary Methylmercury TMDL, October 20, 2011

Final Methylmercury WLA

Delta Methylmercury Allocations

Permittee	NPDES Permit	**Waste Load Allocation** (g/yr)
Central Delta		
County of Contra Costa	CAS083313	0.75
City of Lodi	CAS000004	0.053
Port of Stockton MS4	CAS084077	0.39
County of San Joaquin	CAS000004	0.57
Stockton Area MS4	CAS083470	3.6
SUBTOTAL		*5.4*
Marsh Creek		
County of Contra Costa	CAS083313	0.30
SUBTOTAL		*0.30*
Mokelumne River		

Permittee	NPDES Permit	Waste Load Allocation (g/yr)
County of San Joaquin	CAS000004	0.016
SUBTOTAL		*0.016*
Sacramento River		
City of Rio Vista	CAS000004	0.0078
Sacramento Area MS4	CAS082597	1.0
County of San Joaquin	CAS000004	0.11
County of Solano	CAS000004	0.041
City of West Sacramento	CAS000004	0.36
County of Yolo	CAS000004	0.041
SUBTOTAL		*1.6*
San Joaquin River		
City of Lathrop	CAS000004	0.097
Port of Stockton MS4	CAS084077	0.0036
County of San Joaquin	CAS000004	0.79
Stockton Area MS4	CAS083470	0.18
City of Tracy	CAS000004	0.65
SUBTOTAL		*1.7*
West Delta		
County of Contra Costa	CAS083313	3.2
SUBTOTAL		*3.2*
Yolo Bypass		
County of Solano	CAS00004	0.021
City of West Sacramento	CAS00004	0.28
County of Yolo	CAS00004	0.083
SUBTOTAL		*0.38*
TOTAL		***12.596***

Final Methylmercury WLA Specific to the Department
There are no WLAs specific to the Department. However, allocations for each of the defined municipal entities in the above table include all current and future permitted dischargers within the geographic boundaries of these municipalities and unincorporated areas, including the Department.

Final Methylmercury Deadlines
The final WLAs for dischargers in the Delta and Yolo bypass shall be met as soon as possible, but no later than January 1st, 2030.

Department's Methylmercury Contribution (relative contribution to pollutant loading)
The Department's contribution to the methylmercury load is not known.

Lake Tahoe Sediment and Nutrients TMDL, August 16, 2011

Attachment IV incorporates TMDL-specific permit requirements for the sediments and nutrients TMDL for Lake Tahoe. The TMDL requires the Department to meet pollutant load reduction requirements and to develop and implement a comprehensive Pollutant Load Reduction Plan (PLRP).

Final Sediment WLA
The pollutant load reduction requires the Department to reduce fine sediment particle (FSP), total phosphorus (TP), and total nitrogen (TN) loads by ten percent, seven percent and eight percent respectively by September 30, 2016. The Department shall prepare a Pollutant Load Reduction Plan (PLRP) describing how it expects to meet the pollutant load reductions.

Final Sediment Deadlines
This plan is to be submitted no later than July 15, 2013. By July 15, 2014, the Department shall submit a Progress Report documenting pollutant load reductions accomplished between May 1, 2004 (baseline year) and October 15, 2011. The Department shall also prepare and submit a Storm Water Monitoring Plan for review and approval by the Regional Board by July 15, 2013 and implement the approved plan.

Final deadlines for both nitrogen and phosphorus WLAs are for 65 years after the effective date of the TMDL (August 16, 2076).

Department's Sediment Contribution (relative contribution to pollutant loading)
Final Nutrient WLA

Constituent	Basin-Wide Load (MT/yr)	Urban Upland Load	Final Urban Upland Reduction %	Final WLA, (MT/yr)
Nitrogen	345	63	50	31.5
Phosphorus	38	18	46	8.28

Final Nutrient WLA Specific to the Department
The Department's specific contributions to the loads are not defined. The Department is part of a group of Urban Upland (storm water) dischargers. The Department was required to submit a 2004 baseline load estimate specific to its jurisdiction by August 16, 2013.

Final Nutrient Deadlines
Final deadlines for both nitrogen and phosphorus WLAs are for 65 years after the effective date of the TMDL (August 16, 2076).

Department's Nutrient Contribution (relative contribution to pollutant loading)
The Department's relative contribution to pollutant loading is not known.

Truckee River Sediment TMDL, September 16, 2009

TMDL attainment will be evaluated through the TMDL targets: these targets express desired conditions in the watershed, rather than sediment mass reductions. This was deemed to be appropriate because sediment mass reductions are not a practical indication of beneficial use protection due to the inherent natural variability of sediment delivery and the uncertainties associated with accurately measuring sediment loads and reductions.

Final Sediment WLA
For the most part, point source dischargers' compliance with their respective NPDES permits are deemed to be evidence of compliance with their respective responsibilities to help achieve desired watershed conditions, as described above.

Final Sediment WLA Specific to the Department
The Department's compliance with its storm water permit is deemed to be evidence of compliance with its responsibility to help achieve desired watershed conditions, as described above.

Final Sediment TMDL Deadlines
The Truckee River instream sediment targets are currently being met and will be further evaluated for TMDL attainment.

Department's Contribution (relative contribution to pollutant loading)
The Department's relative contribution to sediment pollutant loading is not known.

SANTA ANA REGION NUTRIENTS AND MERCURY TMDLS

Big Bear Lake Nutrients for Dry Hydrological Conditions TMDL, September 25, 2007

This TMDL contains waste load allocations for phosphorus loads under dry hydrological conditions, defined as an average tributary inflow to Big Bear Lake ranging from 0 to 3,049 acre-feet, average lake levels ranging from 6,671 to 6,735 feet and annual precipitation ranging from 0 to 23 inches.

Final Nutrients WLA
The total Waste Load Allocation is 475 pounds/year.

Final Nutrients WLA Specific to the Department
There is no WLA specific to the Department.

Final Nutrients Deadlines
The WLA must be achieved by December 31, 2015.

Department's Nutrients Contribution (relative contribution to pollutant loading**)**
The Department's relative contribution to nutrient pollutant loading is not known.

Lake Elsinore and Canyon Lake Nutrients TMDL, September 30, 2005

The Department has already committed to cooperative implementation actions, monitoring actions, special studies and implementation actions jointly with other responsible agencies as an active paying member of the Lake Elsinore/Canyon Lake TMDL Task Force. If the Department doesn't fulfill its Lake Elsinore/Canyon Lake Task Force obligations or if the Department chooses to opt out of the cooperative approach with the TMDL Task Force for implementation actions, monitoring actions, and/or special studies then the Department will have to implement the requirements listed in Table IV.2. of Attachment IV.

Final Nutrients WLA

Waterbody	Final Total Phosphorus Waste Load Allocation (kg/year)	Final Total Nitrogen Waste Load Allocation (kg/year)
Canyon Lake	487	6,248
Lake Elsinore	3,845	7,791

Final Nutrients WLA Specific to the Department
There are no WLAs specific to the Department.

Final Nutrients Deadlines
Final allocation compliance is to be achieved by December 31, 2020.
Department's Nutrient Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the nutrient pollutant loading is not available.

Rhine Channel Area of Lower Newport Bay Chromium and Mercury, U.S. EPA Established on June 14, 2002

Mercury Final WLA
A WLA for mercury to Rhine Channel is 0.225 kilograms/year.

Mercury Final WLA Specific to the Department
The final mass-based Mercury WLA for the Department is 0.0027 kilograms/year.

Mercury Final Deadlines
The Santa Ana Regional Water Quality Control Board anticipated a Basin Plan Amendment addressing implementation of the above TMDLs in 2007; these amendments have not yet been completed

Department's Mercury Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the mercury loading is approximately three percent. This WLA was developed by taking the available load and dividing it roughly in proportion to the land areas associated with the remaining source categories (including the Department).

SAN DIEGO REGION SEDIMENT AND NUTRIENTS TMDLS

Historical loading of sediment to some coastal wetlands within Region 9 has resulted in impacts to natural wetland functions. The excess deposition and movement of sediment within remaining coastal wetlands has greatly altered the natural conditions. Urbanized development of the watershed and the channel straightening has modified both the sediment supply and the ability of flows to transport sediments. Additionally, channelization of streams has cut off the banks and floodplains of natural rivers within these watersheds. Sediments carried in flows are not stored within the banks but are rather transported to the outlet of coastal estuaries where they are deposited. Recurring dredging operations in coastal areas also affect sediment transport and deposition patterns in these watersheds. Wetland and estuarine habitats tend to be fragmented by existing roads, infrastructure, and surrounding urbanized development.

In some Region 9 watersheds, natural processes of erosion have been accelerated due to anthropogenic watershed disturbances, resulting in impairment of additional principally biological resources, but also recreational uses, including: RARE, MIGR, SPWN, WILD, EST, MAR, BIOL, REC1, REC2, NAV.

Rainbow Creek Total Nitrogen and Total Phosphorus TMDL, March 22, 2006

Final Nutrient WLA
The final WLA for nitrogen is 82 kilograms/year. The final WLA for phosphorus is eight kilograms/year.

Final Nutrient WLA Specific to the Department
The final WLA for nitrogen for the Department is 49 kilograms/year. The final WLA for phosphorus for the Department is five kilograms/year.

Final Nutrient Deadlines
The Department shall achieve the final WLA by December 31, 2021.

Department's Nutrient Contribution (relative contribution to pollutant loading)
The Department's contribution to the nitrogen and phosphorus WLAs is three percent of the total.

C. Metals/Toxics/Pesticides TMDL Pollutant Category

General Description of Pollutant Category
Toxic pollutants, including but not limited to Pesticides, Polycyclic Aromatic Hydrocarbons (PAHs) and Polychlorinated Biphenyls (PCBs), cause several impairments to California's water quality.

Sources of Pollutant & How it Enters the Waterway
The main transport mechanism for these pollutants is through fine sediment. Once the contaminated fine sediments wash of the roadways and into storm drains or nearby receiving waters they re-suspend in the water column and become bioavailable.

Metals including copper, zinc, lead, cadmium, nickel and chromium are toxic to aquatic life and cause impairments to California's waterbodies. Toxic metals are present in water as both dissolved and total recoverable fractions. During times of high precipitation (storm events), the primary transport mechanism for metals, especially in the total recoverable fraction, is again the mobilization of fine sediment. Accumulated contaminated fine sediment washes off roadways and into storm drains or nearby receiving waters. Metals in the sediment become bioavailable while suspended in the water column. During times of low precipitation, flows that reach storm drains or discharge points are typically insufficient to mobilize fine sediment, but dissolved metal ions are still bioavailable and reach discharge points.

Mechanical components of automobiles, especially those that are subjected to frictional stresses are either known or supposed sources of these metals (i.e., copper from brake pads and zinc from synthetic rubber tires). Some toxic metals are also present in petroleum-based lubricants and in gasoline and diesel fuel (i.e. cadmium).

Watershed Contribution
The Department is identified in many TMDLs as a source of toxic pollutants because they own and operate the roadways which act as conveyance systems of fine sediments. However, in most cases the Department makes up a relatively minor load for toxic pollutants because the models used to develop TMDLs rely on the percentage of land use to determine WLAs.

The Department is named in the TMDLs below as a source of metals in storm water because it owns, operates and maintains roadways and facilities present in these watersheds. As with toxics, in most cases, the Department is assigned a relatively minor proportion of the entire storm water WLA for each metal because its roadways and facilities comprise a small proportion of the total watershed area.

Control Measures
The requirements in Part C of Attachment IV of this permit address both dissolved and sediment-bound sources of toxics and metals. Section C.1 addresses treatment of the fine sediment fraction of toxics and metals and requires that the Department implement structural controls/BMPs.

Dissolved fraction metal impairments require an inventory of outfalls/discharge points to waterbodies within each prioritized reach impaired by dissolved fraction metals and to propose and implement appropriate controls consistent with the report.

The Reach Prioritization and Implementation Requirements in Section I.A. and I.B. of Attachment IV place a priority on identifying and addressing the highest source generating areas. This strategy will control the largest sources of fine sediment for a minor pollutant source and allow for attainment of the applicable WLAs consistent with the Toxic Pollutants and Metals TMDLs identified in Table IV.2 of Attachment IV.

In Section III.C.1, the options for controlling sediment-bound toxics and metals are essentially the same. The types of BMPs expected to be implemented to address fine sediment discharges under C.1 are those expected to be implemented to address sediment discharges for the sediment TMDLs discussed above.

Section III.C.2 explains that Dissolved Fraction Metals levels in storm water are reduced when contaminated sediment is removed or mitigated, but additional structural and non-structural BMPs may still be necessary to achieve compliance. In some cases, this may require building or instituting BMPs in addition to those used for metals in fine sediments for the same discharge points. Structural BMPS might include Infiltration or detention basins/trenches, filtration using metal-absorbing media, etc.

Section III.C.3. Pesticides. The Department is to comply with the Vegetation Control provision that specifies practices for the safe handling and use of pesticides, including compliance with federal, state and local regulations, and label directions.

SAN FRANCISCO BAY REGION TOXIC TMDLS

San Francisco Bay PCBs TMDL, March 29, 2010

The TMDL identifies storm water runoff as a major source for PCB transport and includes the Department's roadways, non-roadway facilities, and rights-of-way.

Final PCBs WLA
The total WLA for all storm water runoff sources is two kilograms/year.

Final PCBs WLA Specific to the Department
All storm water runoff sources share a two kilograms/year WLA.

Final PCBs Deadlines
The WLA of two kilograms/year is broken up by county and is to be achieved within 20 years or March 29, 2030.

Department's PCBs Contribution (relative contribution to pollutant loading**)**
The TMDL also directs the storm water sources to implement this TMDL through the applicable NPDES permits.

***San Francisco Bay Urban Creeks Diazinon and Pesticide Toxicity,* May 16, 2007**

Final Pesticide Toxicity WLA
The TMDL states that most urban runoff flows through storm drains operated by all storm water entities including the Department. The WLA for each storm water entity is 1 TUC_a (TUC_a = 100/No Observed Adverse Effect Concentration) and one TUC_c (TUC_c = 100/No Observed Effect Concentration) in water and sediment.

Final Pesticide Toxicity WLA Specific to the Department
The Department's level of responsibility is not identified.

Final Pesticide Toxicity Deadlines
The TMDL specifies that all NPDES permits for runoff management agencies, including the Department, require implementation of best management practices and control measures that reduce pesticides in urban runoff to the maximum extent practicable. No final compliance date is specified, however, the Regional Water Board may require additional control measures if the Department fails to meet the TMDL targets.

Department's Contribution (relative contribution to pollutant loading)
The Department's relative contribution to pesticide toxicity pollutant loading is not known.

LOS ANGELES REGION METALS AND TOXICITY TMDLS

Ballona Creek Metals & Selenium TMDL, December 22, 2005 and reaffirmed on December 29, 2008

The TMDL identifies storm water as a significant contributor to loadings of copper, lead and zinc (and selenium) to Ballona Creek and Sepulveda Canyon Channel in both dry weather and wet weather.

Final Metals WLA
Storm water allocations are divided among the MS4 and general permits named in the TMDL based on an areal weighting approach.

Final Metals WLA Specific to the Department
The Department is assigned separate dry-weather and wet-weather Waste Load Allocations (WLAs). Dry-weather conditions apply to days when the maximum daily flow in Ballona Creek is less than 40 cubic feet per second (cfs), and wet-weather conditions apply to days when the maximum daily flow in Ballona Creek is equal to or greater than 40 cfs. Both dry-weather and wet-weather WLAs are mass-based, although alternate concentration-based dry-weather WLAs are allowed due to the expense of obtaining accurate flow measurements.

Dry-weather WLAs g/day, Total Recoverable Metal:

Waterbody	Copper	Lead	Zinc
Ballona Creek	11.2	6.0	143.1
Sepulveda Channel	5.1	2.7	64.7

Wet-weather WLAs, g/day, Total Recoverable Metal; V is daily flow volume in liters:

Waterbody	Copper	Lead	Zinc
All	$2.37 * V * 10^{-7}$	$7.78 * V * 10^{-7}$	$1.57 * V * 10^{-6}$

Alternate dry-weather WLAs, µg/L, Total Recoverable Metal:

Waterbody	Copper	Lead	Zinc
All	24	13	304

Final Metals Deadlines
The Department is responsible for meeting its assigned mass-based WLAs, but has the option to work with the other MS4 permittees. Each municipality and permittee is required to meet the storm water waste load allocation at designated TMDL effectiveness monitoring points. The MS4 permittees including the Department may use a combination of structural and non-structural BMPs to achieve compliance with the storm water WLAs. Total compliance is to be achieved by January 11, 2021.

Department's Metals Contribution (relative contribution to pollutant loading)
The Department's relative contribution to metals pollutant loading is not known.

Ballona Creek Estuary Toxic Pollutants TMDL, December 22, 2005

Final OC-Compounds & PAHs WLA
The storm water WLAs are apportioned between the MS4 permittees, the Department, the general construction, and the general industrial storm water permits based on an areal weighting approach.

Final WLA Specific to the Department
The Department is assigned the following WLAs based on the 1.3 percent land area associated with the Department:

Metals Storm Water WLAs Apportioned between Permits

Cadmium (kg/yr)	Copper (kg/yr)	Lead (kg/yr)	Silver (kg/yr)	Zinc (kg/yr)
0.11	3.2	4.4	0.09	14

Organics Storm Water WLAs Apportioned between Permits

Total Chlordane (g/yr)	Total DDTs (g/yr)	Total PCBs (g/yr)	Total PAHs (g/yr)
0.05	0.15	2	400

Final WLA Deadlines
The implementation schedule for the MS4 and the Department permittees consists of a phased approach, with compliance to be achieved in prescribed percentages of the watershed with total compliance to be achieved within 15 years of the TMDL effective date or December 22, 2020.

Department's WLA Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the pollutant loading is unknown.

Calleguas Creek OC Pesticides, PCBs, and Siltation TMDL, March 14, 2006

Final OC Pesticides & PCBs WLA
In accordance with current U.S. EPA practice, a group concentration-based WLA has been developed for MS4s, including the Department's MS4. The grouped allocation will apply to all NPDES-regulated municipal storm water discharges in the Calleguas Creek Watershed. Storm water WLAs will be incorporated into the NPDES permit as receiving water limits measured at the downstream points of each subwatershed and are expected to be achieved through the implementation of BMPs as outlined in the implementation plan.

Interim WLAs as an In-stream Annual Average (ng/g)

Pollutant	Mugu Lagoon	Calleguas Creek	Revolon Slough	Arroyo Las Posas	Arroyo Simi	Conejo Creek
Total Chlordane	25.0	17.0	48.0	3.3	3.3	3.4
4,4-DDD	69.0	66.0	400.0	290.0	14.0	5.3
4,4-DDE	300.0	470.0	1,600.0	950.0	170.0	20.0
4,4-DDT	39.0	110.0	690.0	670.0	25.0	2.0
Dieldrin	19.0	3.0	5.7	1.1	1.1	3.0

Pollutant	Mugu Lagoon	Calleguas Creek	Revolon Slough	Arroyo Las Posas	Arroyo Simi	Conejo Creek
Total PCBs	180.0	3,800.0	7,600.0	25,700.0	25,700.0	3,800.0
Toxaphene	22,900.0	260.0	790.0	230.0	230.0	260.0

Final WLAs as an In-stream Annual Average

Pollutant	Mugu Lagoon (ng/g)	Calleguas Creek (ng/g)	Revolon Slough (ng/g)	Arroyo Las Posas (ng/g)	Arroyo Simi (ng/g)	Conejo Creek (ng/g)
Total Chlordane	3.3	3.3	0.9	3.3	3.3	3.3
4,4-DDD	2.0	2.0	2.0	2.0	2.0	2.0
4,4-DDE	2.2	1.4	1.4	1.4	1.4	1.4
4,4-DDT	0.3	0.3	0.3	0.3	0.3	0.3
Dieldrin	4.3	0.2	0.1	0.2	0.2	0.2
Total PCBs	180.0	120.0	130.0	120.0	120.0	120.0
Toxaphene	360.0	0.6	1.0	0.6	0.6	0.6

Final OC Pesticides & PCBs WLA Specific to the Department
See Tables above.

Final OC Pesticides & PCBs Deadlines
The above Final WLAs (ng/g) as an in-stream annual average are to be achieved by March 24, 2026, but the schedule and allocations can be altered based on the results of several special studies required in the TMDL implementation plan.

Department's OC Pesticides & PCBs Contribution (relative contribution to pollutant loading)

The Department's relative pesticide and PCB contribution is not known.

Calleguas Creek and its Tributaries & Mugu Lagoon Metals and Selenium TMDL, March 26, 2007

Final Metals WLAs
Urban storm water runoff was identified as a source for metals pollution in the TMDL. The Department shares group WLAs for nickel, copper and selenium with other Permitted Storm water Dischargers (PSDs). Concentration-based interim limits for nickel, copper and selenium are effective from the date of the TMDL for all PSDs. Final WLAs are mass-based.

There are final WLAs for both dry-weather and wet-weather conditions. The dry-weather WLAs apply to days when flows in the stream are less than the 86th percentile flow rate for each reach. The wet-weather WLAs apply to days when flows in the stream exceed the 86th percentile flow rate for each reach. Dry weather limits are based on chronic California Toxics Rule (CTR) criteria. Wet weather limits are based on acute CTR criteria.

Interim Concentration-based Wet and Dry Weather Limits

Metal	Calleguas and Conejo Creek			Revolon Slough		
	Dry CMC µg/L	Dry CCC µg/L	Wet CMC µg/L	Dry CMC µg/L	Dry CCC µg/L	Wet CMC µg/L
Copper	23	19	204	23	19	204
Nickel	15	13	*	15	13	*
* The current loads do not exceed the TMDL under wet conditions: interim limits not required						

Final Mass-based Dry-weather WLAs, lbs/day, Total Recoverable Metal in Water Column

Metal	Calleguas and Conejo Creek			Revolon Slough		
	Low	Average	Elevated	Low	Average	Elevated
Copper (lbs/day)	0.04 * WER – 0.02	0.12 * WER – 0.02	0.18 * WER – 0.03	0.03 * WER – 0.01	0.06 * WER – 0.03	0.13 * WER – 0.02
Nickel (lbs/day)	0.100	0.120	0.440	0.050	0.069	0.116

Final Mass-based Wet-weather WLAs, lbs/day, total recoverable metal in water column

Metal	Calleguas Creek	Revolon Slough
Copper (lbs/day)	(0.00054*Q^2*0.032*Q -0.17)*WER – 0.06	(0.0002*Q^2 +0.0005*Q)*WER
Nickel (lbs/day)	0.014*Q^2 + 0.82*Q	0.027*Q^2 + 0.47*Q

A WER is applied to final numeric targets for copper for the Mugu Lagoon, Calleguas Creek 2, and Revolon/Beardsley reaches; the WER defaults to a value of one (1) unless a site-specific study is approved. The mass-based WLAs apply to the Permitted Storm water Dischargers as a group, and the Department has no specific proportional WLA.

Final Metals WLA Specific to the Department

The WLAs above apply to all permitted storm water dischargers, including the Department. The Department has no specific final WLAs.

Final Metals Deadlines

All PSDs have required interim reductions of 25 percent and 50 percent by March 26, 2012 and March 26, 2017, respectively. The final WLAs must be achieved within 15 years after the effective date of the amendment (March 26, 2022). Implementation shall be achieved through BMPs. The Department was originally tasked with submitting an Urban Water Quality Control Plan by March 26, 2012. Implementation is meant to be achieved using BMPs. The Department was required to conduct a source control study and submit an

Urban Water Quality Management Program for copper, nickel, selenium and mercury by March 26, 2009.

Department's Metals Contribution (relative contribution to pollutant loading**)**
The Department's contribution to the metal loads is unknown.

Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs and Metals TMDL, June 14, 2011

The TMDL identifies the point sources of OC pesticides, PCBs, PAHs, and metals discharged to Colorado Lagoon are urban runoff and storm water discharges from the MS4 and the Department. The Colorado Lagoon watershed is divided into five sub-basins that discharge storm water and urban dry weather runoff to Colorado Lagoon. Each of the sub-basins is served by a major storm sewer trunk line and supporting appurtenances that collect and transport storm water and urban dry weather runoff to Colorado Lagoon.

Final WLAS for OC Pesticides, PCBs, and PAHs
The Department and the City of Long Beach shall each be responsible for achieving the following final mass-based WLAs assigned to the Line I Storm Drain as it conveys storm water from both the Department's facilities and the City of Long Beach:

Final Mass-based WLA for MS4 Discharges

Total Chlordane	**Dieldrin** (mg/yr)	**Total PAHs** (mg/yr)	**Total PCBs** (mg/yr)	**Total DDTs** (mg/yr)
3.65	0.15	29,321.50	165.49	11.52

In addition, concentration-based WLAs for sediment are assigned to MS4 permittees including the City of Long Beach, LACFCD, and the Department. Concentration-based WLAs for sediment are applied as average monthly limits. Compliance with the concentration-based WLAs for sediment shall be determined by pollutant concentrations in the sediment in the lagoon at points in the West Arm, North Arm, and Central Arm that represent the cumulative inputs from the MS4 drainage system to the lagoon. Concentration-based interim WLAs for sediment are set to allow time for removal of contaminated sediment through proposed implementation actions. Interim WLAs are based on the 95th percentile value of sediment data collected from 2000-2008. The following interim and final WLAs will be included in MS4 permits in accordance with NPDES guidance and requirements:

Concentration-based WLAs

Pollutants	Interim WLAs (µg/dry kg)	Final WLAs (µg/dry kg)
Total Chlordane	129.65	0.50
Dieldrin	26.20	0.02
Total PAHs	4,022	4,022
Total PCBs	89.90	22.7
Total DDTs	149.80	1.58

Final WLAs for Metals

The Department is jointly responsible with the City of Long Beach in attaining final mass-based WLAs for lead and zinc in sediment and storm water conveyed to Colorado Lagoon via the Line I Storm Drain. In addition, concentration-based interim limits are established for all storm water dischargers, including the Department.

Interim Concentration-based WLAs for Metals in Sediment

Metal	Average Monthly Sediment	
	Interim WLA (µg/kg)	**Final WLA** (µg/kg)
Lead	399,500	46,700
Zinc	565,000	150,000

Final Mass-based WLAs for Metals in Line I Storm Drain

Metal	mg/yr
Lead	340,455.99
Zinc	1,093,541.72
Proposed BMPs that may apply to the Line I Storm Drain include: Low-flow diversion, trash separation devices, vegetated bioswales, cleaning of existing culverts, or direct removal of accumulated sediment	

Final OC Pesticides, PCBs & PAHs WLA Specific to the Department

See tables above.

Final OC Pesticides, PCBs & PAHs Deadlines

The Department is subject to the prescribed point source interim WLAs which are effective as of July 28, 2011. Compliance with all final WLAs is required by July 28, 2018.

The Department's OC Pesticides, PCBs & PAHs Contribution (*relative contribution to pollutant loading****)***

The Department's relative contribution to the OC Pesticides, PCBs, and PAHs pollutant loading is not known.

Dominguez Channel and Greater Los Angeles and Long Beach Harbor Toxic Pollutants TMDL, March 23, 2012

The toxic pollutants included in this TMDL include Copper, lead, zinc, DDT, PAHs, and PCBs.

Final WLAs for OC Pesticides PCBs, and PAHs

Interim and final WLA are assigned to storm water discharges including those from the Department's MS4. Dominguez Channel freshwater allocations are set for wet weather only because exceedances have only been observed in wet weather. Mass-based allocations have been set where sufficient data was available to calculate mass-based allocations; otherwise, concentration-based allocations have been set. Interim and final WLAs shall be included in permits in accordance with state and federal regulations and guidance.

An interim freshwater toxicity allocation of two chronic toxicity units (TUc) applies to all point sources to Dominguez Channel during wet weather including the Department. A final freshwater toxicity allocation of one (1) TUc applies to all point sources to Dominguez Channel during wet weather including the Department.

Interim sediment allocations for Dominguez Channel Estuary and greater Los Angeles and Long Beach Harbor waters are assigned to storm water discharges based on the 95th percentile of sediment data collected from 1998-2006. The final mass-based allocations for PAHs expressed as an annual loading (kilograms/year) of pollutants in the sediment deposited to the Dominguez Channel Estuary, Los Angeles River Estuary, and the Greater Los Angeles and Long beach Harbor Waters. The final mass-based allocations for Total DDT and Total PCBs, expressed annual loading (grams/year) of pollutants in the sediment deposited to the Dominguez Channel Estuary, Los Angeles River Estuary, and the Greater Los Angeles and Long Beach Harbor Waters.

OC Pesticides PCBs, and PAHs Interim and Final WLAs

Interim Concentration-Based Sediment Allocations			
	Total PAHs (mg/kg)	**Total DDTs** (mg/kg)	**Total PCBs** (mg/kg)
Dominguez Channel Estuary	31.60	1.727	1.490
Long Beach Inner Harbor	4.58	0.070	0.060
Los Angeles Inner Harbor	90.30	0.341	2.107
Long Beach Outer Harbor	4,022	0.075	0.248
Los Angeles Outer Harbor	4,022	0.097	0.310
Los Angeles River Estuary	4.36	0.254	0.683
San Pedro Bay	4,022	0.057	0.193
Cabrillo Marina	36.12	0.186	0.199
Consolidated Slop	386.00	1.724	1.920
Cabrillo Beach Area	4,022	0.145	0.033
Fish Harbor	2102.7	40.5	36.6

Final Mass-Based Sediment Allocations for the Department			
	Total PAHs (kg/yr)	**Total DDTs** (g/yr)	**Total PCBs** (g/yr)
Dominguez Channel Estuary	0.0023	0.004	0.004
Consolidated Slip	0.00009	0.00014	0.00006
Inner Harbor	0.0017	0.0010	0.0011
Outer Harbor	0.00021	0.000010	0.00004
Fish Harbor	0.000021	0.0000010	0.000006
Cabrillo Marina	0.0000016	0.00000028	0.00000024
San Pedro Bay	0.077	0.002	0.019
LA River Estuary	0.333	0.014	0.047

Final Concentration-based Sediment WLAs for Other Bioaccumulative Compounds (dry sediment)		
Total Chlordane (µg/kg)	**Dieldrin** (µg/kg)	**Toxaphene** (µg/kg)
0.5	0.02	0.10

Final OC Pesticides PCBs, and PAHs WLAs for Metals

Interim and final WLAs for copper, lead and zinc are assigned to storm water discharges including those from the Department's MS4. Freshwater allocations for Dominguez Channel are set for wet weather only because exceedances have only been observed in wet weather. Wet weather conditions in Dominguez Channel and all of its upstream tributaries apply to any day when the maximum daily flow is greater than 62.7 cfs at any point in Dominguez Channel. Mass-based allocations have been set where sufficient data were available to calculate mass-based allocations; otherwise, WLAs are concentration-based.

Interim allocations for Dominguez Channel and Torrance Lateral are assigned to storm water dischargers, including the Department, and are based on the 95th percentile of total metals data collected from January 2006 to January 2010 using a log-normal distribution. Interim sediment allocations for Dominguez Channel Estuary and greater Los Angeles and Long Beach Harbor waters are assigned to storm water discharges based on the 95th percentile of sediment data collected from 1998-2006.

Interim Concentration-Based WLAs for Dominguez Channel and Torrance Lateral

Total Copper (µg/L)	**Total Lead** (µg/L)	**Total Zinc** (µg/L)
207.51	122.88	898.87

Interim Concentration-Based Sediment Allocations (mg/kg sediment)

Waterbody	Copper (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)
Dominguez Channel Estuary	220.0	510.0	789.0
Long Beach Inner Harbor	142.3	50.4	240.6
Los Angeles Inner Harbor	154.1	145.5	362.0
Long Beach Outer Harbor	67.3	46.7	150
Los Angeles Outer Harbor	104.1	46.7	150
Los Angeles River Estuary	53.0	46.7	183.5
San Pedro Bay	76.9	66.6	263.1
Cabrillo Marina	367.6	72.6	281.8
Consolidated Slip	1470.0	1100.0	1705.0
Cabrillo Beach Area	129.7	46.7	163.1
Fish Harbor	558.6	116.5	430.5

Wet-weather freshwater metals allocations are assigned to Dominguez Channel and all of its upstream reaches and tributaries above Vermont Avenue. Mass-based (grams/day) WLAs are divided between the Department and other MS4 permittees by subtracting the other storm water or NPDES WLAs, air deposition and margin of safety from the total loading capacity. Metals targets used to calculate these WLAs were based on an assumed hardness of 50 mg/L and 90th percentile annual flow rates for Dominguez Channel (62.7 cfs).

The Department's Final mass-based water WLAs for Dominguez Channel

Total Copper	Total Lead	Total Zinc
32.3 *(g/day)*	142.6 *(g/day)*	232.6 *(g/day)*

For the Torrance Lateral subwatershed, concentration-based freshwater WLAs for both water and sediment are assigned to all dischargers, including the Department. Metals targets used to calculate these WLAs were based on an assumed hardness of 50 mg/L and 90th percentile annual flow rates.

The Department's Final concentration-based WLAs for Torrance Lateral

Media (units)	Total Copper	Total Lead	Total Zinc
Water (µg/L, unfiltered)	9.7	42.7	69.7
Sediment (mg/kg, dry)	31.6	35.8	121

The final mass-based allocations for metals are expressed as an annual loading (kilograms/year) of pollutants in the sediment deposited to the Dominguez Channel Estuary, Los Angeles River Estuary, and the Greater Los Angeles and Long Beach Harbor Waters. The Interim and Final WLAs are:

Reach	Total Copper (kg/yr)	Total Lead (kg/yr)	Total Zinc (kg/yr)
Dominguez Channel Estuary	0.384	0.93	4.7
Consolidated Slip	0.043	0.058	0.5

Reach	Total Copper (kg/yr)	Total Lead (kg/yr)	Total Zinc (kg/yr)
Inner Harbor	0.032	0.641	2.18
Outer Harbor	0.0018	0.052	0.162
Fish Harbor	0.0000005	0.00175	0.0053
Cabrillo Marina	0.00019	0.0028	0.007
San Pedro Bay	0.88	2.39	9.29
LA River Estuary	5.1	9.5	34.8

In addition to the above, Fish Harbor is impaired for mercury in sediments, Consolidated Slip is impaired for mercury, cadmium and chromium in sediments and Dominguez Channel Estuary is impaired for cadmium in sediments. These waterbodies are assigned no interim WLAs but are assigned final concentration-based WLAs. The Department is NOT named as a responsible party for WLAs to Consolidated Slip.

Final concentration-based sediment WLAs for other metals, dry sediment

Reach	Cadmium mg/kg	Chromium mg/kg	Mercury mg/kg
Dominguez Channel Estuary	1.2	-	-
Fish Harbor	-	-	0.15
Note: The Department is NOT specifically named as a responsible party for implementation actions to Dominguez Channel proper in the 1st Phase of implementation to reduce the amount of sediment transport from point sources that directly or indirectly discharge to the Dominquez Channel and the Harbor waters, even though it has specific WLAs.			

Final Toxic Pollutant WLA Specific to the Department
See tables above.

Final Toxic Pollutant Deadlines
The Department is subject to the prescribed point source interim WLAs which are effective as of March 23, 2012. Compliance with all final WLAs is required by March 23, 2032.

Department's Toxic Pollutant Contribution (relative contribution to pollutant *loading)*
The Department's relative contribution to the toxic pollutant loading is not known.

Los Angeles Area Lakes for Organochlorine Pesticides and PCBs

To assess compliance with the organochlorine (OC) compounds TMDLs, monitoring should include monitoring of fish tissue at least every three years as well as once yearly sediment and water column sampling. For the OC pesticides and PCBs TMDLs a demonstration that fish tissue targets have been met in any given year must at minimum include a composite sample of skin off fillets from at least five common carp each measuring at least 350mm in length. At a minimum, compliance monitoring should measure the following in-lake water quality parameters: total suspended sediments, total PCBs, total chlordane, dieldrin, and total DDTs; as well as the following in-lake sediment parameters: total organic carbon, total PCBs, total chlordane, dieldrin, and total DDTs. WLAs are assigned to storm water inputs.

These sources should be measured near the point where they enter the lakes once a year during a wet weather event. Sampling should be designed to collect sufficient volumes of suspended solids to allow for the analysis of at minimum: total organic carbon, total suspended solids, total PCBs, total chlordane, dieldrin, and total DDTs. Measurements of the temperature, dissolved oxygen, pH and electrical conductivity should also be taken.

U.S. EPA established TMDLs do not include implementation plans so all WLAs are considered in effect as of the approval date.

Los Angeles Area (Echo Park Lake) Nitrogen, Phosphorus, Chlordane, Dieldrin, and Trash TMDLs, U.S. EPA Established on March 26, 2012

The entire watershed of Echo Park Lake is contained in MS4 jurisdictions, and watershed loads are therefore assigned WLAs. The Department's areas and facilities that operate under a general industrial storm water permit also receive WLAs. There are TMDLs for PCBs, Chlordane, and Dieldrin, and each has specific WLAs for the Department which are detailed below. The TMDLs have two sets of WLAs, one of which relies on meeting various fish tissue targets that would supersede the initial set of WLAs. Each WLA must be met at the point of discharge.

Final WLAs

PCBs WLA

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (µg/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	1.77	0.17
Southern	Department	State Highway Storm water	1.77	0.17

If the Fish Tissue targets are met:

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	59.8	0.17
Southern	Department	State Highway Storm water	59.8	0.17

Total Chlordane TMDL

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	2.10	0.59
Southern	Department	State Highway Storm water	2.10	0.59

If Fish Tissue Targets are met:

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	3.24	0.59
Southern	Department	State Highway Storm water	3.24	0.59

Dieldrin TMDL

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	0.80	0.14
Southern	Department	State Highway Storm water	0.80	0.14

If the Fish Tissue targets are met:

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	1.90	0.14
Southern	Department	State Highway Storm water	1.90	0.14

Final OC Compounds WLA Specific to the Department
See tables above.

Final OC Compounds Deadlines
U.S. EPA did not establish deadlines.

Department's OC Compounds Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the OC Pesticide pollutant loading is unknown.

Los Angeles Area (Peck Road Park Lake) Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash

Final OC Compounds WLA
The entire watershed of Peck Road Park Lake is contained in MS4 jurisdictions, and watershed loads are therefore assigned WLAs. The Department areas and facilities that operate under a general industrial storm water permit also receive WLAs. There are TMDLs for PCBs, Chlordane, DDTs, and Dieldrin and each has specific WLAs for the Department which are detailed below. The TMDLs have two sets of WLAs, one of which relies on meeting various fish tissue targets that would supersede the initial set of WLAs. Each WLA must be met at the point of discharge.

Final OC Compounds WLA Specific to the Department

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Eastern	Department	State Highway Storm water	1.29	0.17
Western	Department	State Highway Storm water	1.29	0.17

If the Fish Tissue targets are met:

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Eastern	Department	State Highway Storm water	59.8	0.17
Western	Department	State Highway Storm water	59.8	0.17

Total Chlordane TMDL

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Eastern	Department	State Highway Storm water	1.73	0.59
Western	Department	State Highway Storm water	1.73	0.59

If the Fish Tissue targets are met:

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Eastern	Department	State Highway Storm water	3.24	0.59
Western	Department	State Highway Storm water	3.24	0.59

Total DDTs TMDL

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Eastern	Department	State Highway Storm water	5.28	0.59
Western	Department	State Highway Storm water	5.28	0.59

Dieldrin TMDL

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Eastern	Department	State Highway Storm water	0.43	0.14
Western	Department	State Highway Storm water	0.43	0.14

If the Fish Tissue targets are met:

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Eastern	Department	State Highway Storm water	1.90	0.14
Western	Department	State Highway Storm water	1.90	0.14

Final OC Compounds WLA Specific to the Department
See tables above.

Final OC Compounds Deadlines
U.S. EPA did not establish deadlines.

Department's OC Compounds Contribution (relative contribution to pollutant loading)

The Department's relative contribution to the OC Pesticides and PCBs pollutant loading is not known.

Los Angeles Area (Puddingstone Reservoir) Nitrogen, Phosphorus, Chlordane, DDT, PCBs, Mercury, and Dieldrin TMDLs, U.S. EPA Established on March 26, 2012

Final OC Compounds WLA

In the Puddingstone Reservoir watershed, WLAs are required for all permittees in the northern subwatershed and the Department's areas in the southern subwatershed. There are TMDLs for PCBs, Chlordane, DDTs, and Dieldrin and each has specific WLAs for the Department which are detailed below.

Final OC Compounds WLA Specific to the Department

The TMDLs have two sets of WLAs, one of which relies on meeting various fish tissue targets that would supersede the initial set of WLAs. Each WLA must be met at the point of discharge.

Total PCBs TMDL

Subwatershed	**Responsible Jurisdiction**	**Input**	**Suspended Sediment WLAs** (ug/kg dry weight)	**Water Column WLAs** (ng/L)
Northern	Department	State Highway Storm water	0.59	0.17
Southern	Department	State Highway Storm water	0.59	0.17

If the Fish Tissue targets are met:

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	59.8	0.17
Southern	Department	State Highway Storm water	59.8	0.17

Total Chlordane TMDL

Subwatershed	**Responsible Jurisdiction**	**Input**	**Suspended Sediment WLAs** (ug/kg dry weight)	**Water Column WLAs** (ng/L)
Northern	Department	State Highway Storm water	0.75	0.57
Southern	Department	State Highway Storm water	0.75	0.57

If the Fish Tissue targets are met:

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	3.24	0.57
Southern	Department	State Highway Storm water	3.24	0.57

Total DDTs TMDL

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	3.94	0.59
Southern	Department	State Highway Storm water	3.94	0.59

If the Fish Tissue targets are met:

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	5.28	0.59
Southern	Department	State Highway Storm water	5.28	0.59

Dieldrin TMDL

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	0.22	0.14
Southern	Department	State Highway Storm water	0.22	0.14

If the Fish Tissue targets are met:

Subwatershed	Responsible Jurisdiction	Input	Suspended Sediment WLAs (ug/kg dry weight)	Water Column WLAs (ng/L)
Northern	Department	State Highway Storm water	1.90	0.14
Southern	Department	State Highway Storm water	1.90	0.14

Final OC Compounds WLA Specific to the Department
See tables above.

Final OC Compounds Deadlines
U.S. EPA did not establish deadlines.

Department's OC Compounds *Contribution* *(relative contribution to pollutant loading)*

The Department's relative contribution to pollutant loading is not known.

Los Angeles River Watershed Metals TMDL, September 6, 2007

Final Metals WLA
This TMDL includes wet-weather and dry-weather WLAs for copper, lead, and zinc. Wet-weather conditions are when the maximum daily flow of the Los Angeles River is greater than or equal to 500 cfs. Dry-weather conditions are where maximum daily flow is less than 500 cfs; critical flows are also listed for each of the reaches in this TMDL.

Final Metals WLA Specific to the Department
For dry-weather conditions, the Department is assigned grouped WLAs with other MS4 permittees.

WERs are explicitly included in these WLAs, but default to a value of 1 (unit less) unless site-specific values are approved by the Regional Water Board. Concentration-based limits are also allowed for dry weather due to the expense of obtaining accurate flow measurements; in this case, the concentration-based limits are equal to dry-weather reach-specific dry-weather numeric targets.

Final Mass-based Dry-weather WLAs for Storm water and MS4s, Total Recoverable Metals

Waterbody	Critical Flow (CFS)	Copper (kg/day)	Lead (kg/day)	Zinc (kg/day)
LAR 6	7.20	0.53 x WER	0.33 x WER	-
LAR 5	0.75	0.05 x WER	0.03 x WER	-
LAR 4	5.13	0.32 x WER	0.12 x WER	-

Waterbody	Critical Flow (CFS)	Copper (kg/day)	Lead (kg/day)	Zinc (kg/day)
LAR 3	4.84	0.06 x WER	0.03 x WER	-
LAR 2	3.86	0.13 x WER	0.07 x WER	-
LAR 1	2.58	0.14 x WER	0.07 x WER	-
Bell Creek	0.79	0.06 x WER	0.04 x WER	-
Tujunga Wash	0.03	0.001x WER	0.0002xWER	-
Burbank Channel	3.3	0.15 x WER	0.07 x WER	-
Verdugo Wash	3.3	0.18 x WER	0.10 x WER	-
Arroyo Seco	0.25	0.01 x WER	0.01 x WER	-
Rio Hondo Reach 1	0.50	0.01 x WER	0.006 x WER	0.16 x WER
Compton Creek	0.90	0.04 x WER	0.02 x WER	-
Note: All WERs are equal to 1 (unit less)				

Final Concentration-based reach-specific numeric targets, total recoverable metals

Waterbody	Copper (µg/L)	Lead (µg/L)	Zinc (µg/L)
LA River Reach 6	WER[1] * 30	WER[1] * 19	-
LA River Reach 5	WER[1] * 30	WER[1] * 19	-
LA River Reach 4	WER[2] * 26	WER[1] * 10	-
LA River Reach 3 above LA-Glendale WRP	WER[2] * 23	WER[1] * 12	-
LA River Reach 3 below LA-Glendale WRP	WER[2] * 26	WER[1] * 12	-
LA River Reach 2	WER[2] * 22	WER[1] * 11	-
LA River Reach 1	WER[2] * 23	WER[1] * 12	-
Bell Creek	WER[1] * 30	WER[1] * 19	-
Burbank Western Channel (above WRP)	WER[2] * 26	WER[1] * 14	-
Burbank Western Channel (below WRP)	WER[2] * 19	WER[1] * 9.1	-
Verdugo Wash	WER[2] * 23	WER[1] * 12	-
Compton Creek	WER[1] * 19	WER[1] * 8.9	-
Arroyo Seco	WER[2] * 22	WER[1] * 11	-
Rio Hondo Reach 1	WER[1] * 13	WER[1] * 5.0	WER[1] * 131
Monrovia Canyon	-	WER[1] * 8.2	-
Note: [1] WER is equal to 1 (unit less) [2] WER for this constituent in this reach is 3.96			

Wet-weather allocations are apportioned among storm water permit holders based on percent area of the watershed served by storm drains.

Final Mass-based wet-weather WLAs, Total Recoverable Metals

Metal	**Waste Load Allocation** (kg/day) **Total Recoverable**
Cadmium	WER * 5.3 * 10^{-11} * daily volume (L) – 0.03
Copper	WER * 2.9 *10^{-10} * daily volume (L) – 0.2
Lead	WER * 1.06 * 10^{-09} * daily volume (L) – 0.07
Zinc	WER * 2.7 * 10^{-09} * daily volume (L) – 1.6

Final Metals Deadlines
By January 11, 2024, the jurisdictional group shall demonstrate that 100 percent of the group's total drainage area served by the storm drain system is effectively meeting the dry-weather WLAs and 50 percent of the group's total drainage area served by the storm drain system is effectively meeting the wet-weather WLAs. By January 11, 2028, the jurisdictional group shall demonstrate that 100 percent of the group's total drainage area served by the storm drain system is effectively meeting both the dry-weather and wet-weather WLAs. MS4s and the Department may meet the TMDL using a phased implementation approach using a combination of structural and non-structural BMPs.

Department's Metals Contribution (relative contribution to pollutant loading)
Unknown

Los Cerritos Channel Metals TMDL, March 17, 2010

Final Metals WLA
This TMDL assigns the Department wet-weather WLAs for copper, lead and zinc and a dry-weather WLA for copper only. Wet weather is defined as where the maximum daily flow of Los Cerritos Channel is greater than 23 cfs, and dry weather is where the maximum daily flow of the Channel is less than 23 cfs. For dry-weather copper targets, a site-specific translator was used, defined as the median value of the ratio of direct measurements to CTR criteria. Only the Department and other MS4s have a mass-based WLA for copper for dry weather, and this is divided among permittees based on estimates of respective percentage of total watershed area.

Final mass-based wet-weather WLAs are divided among the Department, other MS4 permittees, General Construction permittees and General Industrial permittees based on an estimate of the percentage of land area covered under each permit. The Department's estimated percent area of the watershed is 0.8 percent.

Final Metals WLA Specific to the Department

Copper Dry-weather WLA, Total Recoverable Metal	
Copper	1.0 g/day

Metals Wet-weather WLAs, Total Recoverable Metal (V is daily flow volume in liters)		
Copper g/day	**Lead** g/day	**Zinc** g/day
$0.070 * V * 10^{-6}$	$0.397 * V * 10^{-6}$	$0.680 * V * 10^{-6}$

Final Metals Deadlines
U.S. EPA did not include implementation measures for the TMDL, and as such implementation procedures are the responsibility of the Los Angeles Regional Water Board. Implementation measures for this TMDL are currently being developed by the Los Angeles Regional Water Board.

Department's Metals Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the metals pollutant loading is not known.

Machado Lake Pesticides and PCBs TMDL, March 20, 2012

The point sources of pesticides and PCBs into Machado Lake are storm water and urban runoff discharges including those from the Department's MS4. Storm water and urban runoff dischargers to Machado Lake occur through the following sub-drainage systems: Wilmington Drain, Project 77 and Project 510.

Final Pesticides and PCBs WLA
The following WLAs apply to all point sources:

Pollutants	WLAs (ug/kg dry weight)
Total PCBs	59.8
DDT (all congeners)	4.16
DDE (all congeners)	3.16
DDD (all congeners)	4.88
Total DDT	5.28
Total Chlordane	3.24
Dieldrin	1.9

Final Pesticides and PCBs WLA Specific to the Department
See table above.

Final Pesticides and PCBs Deadlines
The TMDL WLAs are applied with a three-year averaging period and shall be incorporated into MS4 permits, including the Department's MS4 permit, and general construction and industrial storm water NPDES permits and any other non-storm water NPDES permits.

Storm water dischargers may coordinate compliance with the TMDL. Permitted storm water dischargers can implement a variety of implementation strategies to meet the required WLAs, such as non-structural and structural BMPs, and/or diversion and treatment to reduce sediment transport from the watershed to the lake. Compliance with the TMDL may be based on a coordinated Monitoring and Reporting Program. The Department is subject to the prescribed point source WLAs with a final compliance date of September 30, 2019.

Department's Pesticides and PCBs Contribution (relative contribution to pollutant loading)

The Department's relative contribution to the OC Pesticides and PCBs pollutant loading is not known.

Marina Del Rey Harbor Toxics Pollutants TMDL, March 26, 2006

Final Toxic Pollutant WLAs
The Department is assigned mass-based WLAs for copper, lead and zinc along with other storm water permittees in the watershed. The Copper, Lead, and Zinc WLAs are apportioned between the permittees based on an estimate of the percentage of land area covered under each permit.

Total Mass-based Storm Water Metal WLAs:

Copper (kg/yr)	**Lead** (kg/yr)	**Zinc** (kg/year)
2.06	2.83	9.11

Total Mass-based Storm Water Organics WLAs:

Total Chlordane (g/yr)	**Total PCBs** (g/yr)
0.03	1.38

Final Toxic Pollutants WLAs Specific to the Department
Mass-based Metals WLAs for Caltrans

Copper (kg/yr)	**Lead** (kg/yr)	**Zinc** (kg/year)
0.022	0.03	0.096

Mass-based Organics WLAs for the Department:

Total Chlordane (g/yr)	**Total PCBs** (g/yr)
0.0003	0.015

Final Toxic Pollutant Deadlines
The implementation schedule for the MS4 permittees and the Department consists of a phased approach. A combination of non-structural and structural BMPs may be used to achieve compliance with the WLAs, with compliance to be achieved in prescribed percentages of the watershed. Total compliance is to be achieved within 10 years or March 22, 2016. However, the Regional Board may extend the implementation period up to 15 years or March 22, 2021, if an integrated water resources approach is employed.

Department Toxic Pollutant Contribution (relative contribution to pollutant loading)
The Department is assigned approximately one percent of the WLA for each pollutant, based on an estimate of area within the watershed.

San Gabriel River Metals & Selenium TMDL, U.S. EPA Established on March 26, 2007

Final Metals WLA
The Department is assigned WLAs for dry-weather and wet-weather for copper, lead and zinc (as well as selenium). For San Gabriel River Reach 2, the critical flow for wet weather is 260 cfs; for Coyote Creek, the critical flow is 156 cfs. The combined storm water WLA is allocated to individual permits based on percent area of the developed portion of the watershed.

For dry-weather copper, all MS4 storm water permittees, including the Department, are assigned concentration-based WLAs specific to San Gabriel River Reach 1, Coyote Creek, and the San Gabriel River Estuary.

Dry-weather Concentration-Based Copper WLAs for Storm water Permittees

Waterbody	Concentration-based WLA (µg/L)
Estuary	3.7
San Gabriel Reach 1	18
Coyote Creek	20

The TMDL establishes wet-weather WLAs to San Gabriel River Reach 2 for lead, and the Department is part of a grouped mass-based WLA. For Coyote Creek, mass-based WLAs are applied to copper, lead, and zinc. These WLAs are further divided among municipal storm water, industrial storm water, and construction storm water permits that are expressed as an area-based proportion of the total WLA. The Department and other MS4s share WLAs because there are not enough data on the relative reach-specific extent of these permittees' areas. The mass-based WLAs for the grouped Department's and MS4s are defined as the

daily storm volume times the numeric target of the metal for the waterbody times the estimated percentage of watershed covered by these permits.

WLAs for San Gabriel River Reach 2, Coyote Creek and to all of their respective Tributaries

Reach	Copper (kg/day)	Lead (kg/day)	Zinc (kg/day)
San Gabriel Reach 2	--	Daily storm vol * 166 µg/L * 49%	--
Coyote Creek	Daily storm vol * 27 µg/L * 91.5%	Daily storm vol * 106 µg/L * 91.5%	Daily storm vol * 158 µg/L * 91.5%

Final Metals WLA Specific to the Department
No specific WLAs.

Final Metals Deadlines
U.S. EPA did not include implementation measures for the TMDL, and implementation procedures are the responsibility of the Los Angeles Regional Water Board. Implementation measures or this TMDL are currently being developed by the Los Angeles Regional Water Board.

Department's Metals Contribution (relative contribution to pollutant loading)
The Department's contribution to the metals loads is not known.

Santa Monica Bay PCBs and DDTs TMDLs, U.S. EPA Established on March 26, 2012

Final PCBs and DDTs WLA
The grouped WLAs are apportioned to the Los Angeles County MS4 permit, the Department's MS4 permit, and enrollees under the general construction and industrial storm water permits. Mass-based WLAs are to be partitioned among the four groups based on the percent area of each major group in the watersheds draining to Santa Monica Bay. Permittees covered under the general construction and storm water permittees are not expected to perform individual sampling; instead, monitoring should be conducted on a coordinated, watershed-wide basis consistent with the WLAs in the TMDL. The establishment of watershed efforts to identify and address sources of DDTs and PCBs within the watersheds and reporting of the total storm water loadings of DDT and PCB to Santa Monica Bay is encouraged.

The analysis of DDT and PCBs on suspended particle loadings from the mass emission stations will provide more robust measures of mass loadings. If additional data indicate that existing storm water loadings differ from the storm water WLAs defined in the TMDL, the Los Angeles Regional Water Board should consider re-opening the TMDL to better reflect actual loadings.

BMPs and pollutant removal are the most suitable courses of action to reduce DDT and PCBs in the Santa Monica Bay Watershed. Attention should be focused on those watersheds with the highest potential loadings to Santa Monica Bay, such as those that are more heavily urbanized. BMPs should also be targeted to reduce potential PCB loads from industrial and construction runoff as studies have shown that these may be a major source of PCBs. U.S. EPA also recommends implementation of a PCB Source Identification and Control program within storm water permits to evaluate and identify controllable sources of PCBs.

Final PCBs and DDT WLAs Specific to the Department

Final PCBs and DDTs WLAs

Total PCBs (g/yr)	**Total DDTs** (g/yr)
3.9	0.75

Final PCBs and DDTs Deadlines

U.S. EPA recommends that storm water WLAs be evaluated based on a three year averaging period. This will provide more robust assessment for compliance and should smooth out variability due to wet years. This is consistent with timeframes provided for the Los Angeles Harbor/Long Beach TMDL.

Department's PCBs and DDTs Contribution (relative contribution to pollutant loading)

The footprint of the Department's MS4 is 2.7 percent of the area within the Santa Monica Bay watersheds.

SANTA ANA REGION METALS/TOXICS/PESTICIDES TMDLS

Rhine Channel Area of Lower Newport Bay Chromium and Mercury, U.S. EPA Established on June 14, 2002

Final Chromium WLA

For Rhine Channel, the final Chromium WLA is 7.44 kg/yr in sediment.

Final Chromium WLA Specific to the Department

The final mass-based Chromium WLA for the Department is 0.89 kilograms/year in sediment.

Final Chromium Deadlines

The Santa Ana Regional Water Board anticipated a Basin Plan Amendment addressing implementation of the above TMDLs in 2007; these amendments have not yet been completed.

Department's Chromium Contribution (relative contribution to pollutant loading**)**

The Department's relative contribution to the Chromium loading is approximately three percent of the total, based on area.

San Diego Creek and Newport Bay, including Rhine Channel Metals (Copper and Zinc) TMDL, U.S. EPA Established on June 14, 2002

Final Metals WLA
WLAs are established for cadmium, copper, lead and zinc in the San Diego Creek watershed, for cadmium, copper, lead and zinc in Newport Bay, and for cadmium, copper, lead, zinc and chromium (and mercury) in Rhine Channel. San Diego Creek is a fresh water stream, while Newport Bay and Rhine Channel are saltwater.

Final Metals WLA Specific to the Department
For San Diego Creek, the Department is assigned concentration-based WLAs for cadmium, copper, lead, and zinc. There are no wet-weather or dry-weather WLAs, but there are four sets of WLAs for each metal for four different flow tiers. All flow tiers have an acute and chronic WLA, except for the highest flow tier, which only has an acute WLA.

Concentration-based WLAs for San Diego Creek Watershed by Flow Tiers, µg/L

Metal	< 20 cfs); H = 400 mg/L		21 – 181 cfs		182 - 815 cfs		> 815 cfs
	Acute	Chronic	Acute	Chronic	Acute	Chronic	Acute
Cu	50	29.3	40	24.3	30.2	18.7	25.5
Pb	281	10.9	224	8.8	162	6.3	134
Zn	379	382	316	318	243	244	208
* Applies to Upper Newport Bay Only							

For Newport Bay, mass-based WLAs for cadmium, copper, lead and zinc were assigned to the Department. These WLAs were developed on estimates made using Best Professional Judgment because insufficient data were available to accurately estimate relative contributions to existing loads. The Department's share of the estimated loads is based on the relative proportion of watershed land area among the Department and adjacent permit-holders.

Final mass-based WLAs in Newport Bay, Dissolved Metals

Metal	Cu	Pb	Zn
Total	423 lbs/yr	2,171 lbs/yr	22,866 lbs/yr

Additional concentration-based limits apply only to sources which discharge directly to the Bay, including storm water dischargers from storm drains direction to Bay segments.

Newport Bay Concentration-based Dissolved Metal TMDLs, WLAs/LAs

Metal	Dissolved saltwater Acute TMDLs and allocations (µg/L)	Dissolved saltwater chronic TMDLs and allocations (µg/L)
Cu	4.8	3.1
Pb	210	8.1
Zn	90	81
* Applies to Upper Newport Bay Only		

Final Metals Deadlines
U.S. EPA did not include implementation measures for the TMDL.

Department's Metals Contribution (relative contribution to pollutant loading**)**
The Department's relative contribution to the metals pollutant loading is not known.

San Diego Creek and Upper Newport Bay Cadmium TMDL, U.S. EPA Established on June 14, 2002

Final Cadmium WLA
Concentration-based WLAs for San Diego Creek Watershed by Flow Tiers

Metal	< 20 cfs); H = 400 mg/L		21 – 181 cfs		182 - 815 cfs		> 815 cfs
	Acute	Chronic	Acute	Chronic	Acute	Chronic	Acute
Cd (µg/L)	19.1	6.2	15.1	5.3	10.8	4.2	8.9
* Applies to Upper Newport Bay Only							

Newport Bay Concentration-based Dissolved Metal TMDLs, WLAs/LAs

Metal	Dissolved saltwater Acute TMDLs and allocations (µg/L)	Dissolved saltwater chronic TMDLs and allocations (µg/L)
Cd	42	9.3
* Applies to Upper Newport Bay Only		

Final Cadmium WLA Specific to the Department
See Table above.

Final Cadmium Deadlines
U.S. EPA did not include implementation measures for the TMDL.

Department's Cadmium Contribution
The Department's relative contribution to the cadmium pollutant loading is not known.

San Diego Creek Watershed, Organochlorine Compounds and PCBs TMDLs, November 12, 2013

Final OC Compounds WLA

The Department is listed as a primary source of pollutant loads to the San Diego Creek watershed. The mass-based WLAs were expressed as both daily and annual values. Pollutants include Total DDT, Chlordane, Total PCBs and Toxaphene.

WLAs Expressed as a Daily Value (grams/day)					
Watershed	**Input**	**Total DDT**	**Chlordane**	**Total PCBs**	**Toxaphene**
San Diego Creek	Department (11%)	0.11	0.07	0.03	0.002
WLAs Expressed as a Annual Value (grams/year)					
Watershed	**Input**	**Total DDT**	**Chlordane**	**Total PCBs**	**Toxaphene**
San Diego Creek	Department (11%)	39.2	25.2	12.4	0.6

Final OC Compounds WLA Specific to the Department

See Tables above.

Final OC Compounds Deadlines

Compliance with the TMDLs and WLAs is to be achieved as soon as possible, but no later than December 31, 2020. The way that this deadline applies to a particular discharger differs depending on whether the discharger is participating in the Working Group. Ultimate compliance with permit limitations based on WLAs is expected to be based upon iterative implementation of effective BMPs to manage the discharge of fine sediments containing organochlorine compounds, along with monitoring to measure BMP effectiveness.

Department's OC Compounds Contribution (relative contribution to pollutant loading)

Based upon the percentage of the total urban land use comprised by Urban-Roads, Department's facilities and roadways make up 11 percent of the land area and are assigned a proportion of the overall WLAs accordingly.

Upper & Lower Newport Bay Organochlorine Compounds TMDL, November 12, 2013

Final OC Compounds WLA

Upper Newport Bay and Lower Newport Bay OC Compounds WLAs

WLAs Expressed as a Daily Value (grams/day)					
Watershed	**Input**	**Total DDT**	**Chlordane**	**Total PCBs**	**Toxaphene**
Upper Newport Bay	Department (11%)	0.04	0.03	0.02	-
Lower Newport Bay	Department (11%)	0.02	0.01	0.07	-

WLAs Expressed as a Annual Value (grams/year)					
Watershed	**Input**	**Total DDT**	**Chlordane**	**Total PCBs**	**Toxaphene**
Upper Newport Bay	Department (11%)	15.8	9.2	9.1	-
Lower Newport Bay	Department (11%)	5.8	3.4	23.9	-

Final OC Compounds WLA Specific to the Department

See Tables above.

Final OC Compounds Deadlines

Compliance with the TMDLs and WLAs is to be achieved as soon as possible, but no later than December 31, 2020. The way that this deadline applies to a particular discharger differs depending on whether the discharger is participating in the Working Group. Ultimate compliance with permit limitations based on WLAs is expected to be based upon iterative implementation of effective BMPs to manage the discharge of fine sediments containing organochlorine compounds, along with monitoring to measure BMP effectiveness.

Department's OC Compounds Contribution (relative contribution to pollutant loading)

Based upon the percentage of the total urban land use comprised by Urban-Roads, Department's facilities and roadways make up 11 percent of the land area and are assigned a proportion of the overall WLAs accordingly.

Chollas Creek Dissolved Copper, Lead and Zinc TMDLs, December 18, 2008

Final Metals WLA
WLAs are concentration-based and set as the acute and chronic limits in the California Toxics Rule times 90 percent for all permitted dischargers, in units of µg/L, as dissolved metals. The final WLAs are based on statistical measures of hardness used in calculating permit requirements.

Final Concentration-based WLAs
Chollas Creek, Copper, Lead, and Zinc WLAs, Dissolved Metal

Metal	Numeric Target for Acute Conditions: Criteria Maximum Concentration, (µg/L)	Numeric Target for Chronic Conditions: Criteria Continuous Concentration, (µg/L)
Copper	(1) * (0.96) * {e^ [0.9422 * ln (hardness) - 1.700]} * 0.9	(1) * (0.96) * {e^[0.8545 * ln (hardness) - 1.702]} * 0.9
Lead	(1) * {1.46203 – [0.145712 * ln (hardness)]} * {e^ [1.273 * ln (hardness) - 1.460]} * 0.9	(1) * {1.46203 – [0.145712 * ln (hardness)]} * {e^[1.273 * ln (hardness) - 4.705]} * 0.9
Zinc	(1) * (0.978) * {e^ [0.8473 * ln (hardness) + 0.884]} * 0.9	(1) * (0.986) * {e^[0.8473 * ln (hardness) + 0.884]} * 0.9

Final Metals WLA Specific to the Department
There are no WLAs specific to the Department.

Final Metals Deadlines
The Department along with other responsible parties must meet 100 percent of Chollas Creek Metals TMDL WLA reductions by December 18, 2028.

Department's Contribution *(relative contribution to pollutant loading)*
The Department's contribution to the metal loads is not known.

D. Trash TMDL Pollutant Category

General Description of Pollutant Category
As discussed under the ten individual TMDLs below, the TMDLs in the trash pollutant category establish that the Department varies in the significance of a source of trash and debris. The scale of the Department as a source depends on the magnitude and location of the impacted water body and corresponding land uses. For the individual TMDLs, the Department is not the sole responsible party for source of trash and debris. Other point source responsible parties include Los Angeles County MS4 permittees, Ventura County MS4 permittees, and industrial permittees.

Since trash generation rates are dependent on land use, the requirements for the Department in Attachment IV Section III.D.1 focus on significant trash generating areas. These areas include: highway on- and off-ramps in high density residential, commercial and industrial land uses, rest areas and park-and-rides, state highways in commercial and industrial land uses, and mainline highway segments to be identified by the Department through pilot studies and/or surveys. The requirements in Attachment IV are expected to address the highest source of trash from the Department by focusing management practices on the highest problem areas.

Attachment IV Section III.D.1 establishes a prohibition of discharge of trash to receiving waters. All of the individual TMDLs set a numeric target of zero trash, since the receiving water body lacks an assimilative capacity for any piece of the trash. Attaining the numeric target is difficult due to the transport mechanisms of the trash, specifically for the Department whose users are temporary and transitory. Attachment IV Section III.D.2 sets forth two compliance options to achieve the prohibition of discharge. The compliance options focus on implementation of management practices, treatment controls, and institutional controls in the significant trash generating areas and the coordination with neighboring municipalities to implement treatment and institutional controls in significant trash generating areas and priority land use areas (high density residential, industrial, commercial, mixed urban, and public transportation stations).

Sources of Pollutant & How it Enters the Waterway
Trash and debris are the man-made products that are improperly discarded and transported to surface water bodies. Trash is considered a 'gross pollutants' and excludes sediments, oil and grease, and vegetation. Trash can include cigarette butts, paper, fast food containers, plastic grocery bags, cans and bottles, used diapers, construction site debris, industrial plastic pellets, old tires and appliances. Trash and debris cause impairments to beneficial uses of surface water bodies, including rivers, lakes, enclosed bays and estuaries, and ocean waters.

Watershed Contribution
Trash impacts aquatic habitat and life. Mammals, turtles, birds, fish, and crustaceans are threatened following the ingestion or entanglement of trash. Ingestion and entanglement can be fatal for freshwater, estuarine, saline and marine aquatic life. Similarly, habitat alterations and degradations due to trash can make natural habitats unsuitable for spawning, migration, and preservation of aquatic life. These negative effects of trash to aquatic life can impact several beneficial uses. The aquatic life beneficial uses that can be impacted by negative effects of trash include: Warm Freshwater Habitat (WARM); Cold Freshwater habitat (COLD); Inland Saline Water Habitat (SAL); Estuarine Habitat (EST); Marine Habitat (MAR); Wildlife Habitat (WILD); Preservation of Biological Habitats (BIOL); Rare, Threatened, or Endangered Species (RARE); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and/or Early Development (SPWN); and Wetland Habitat (WET).

Trash impacts human activity by means of jeopardizing public health and safety and posing harm and hindrance in recreational, navigational, and commercial activities. The human

beneficial uses impacted by trash and debris include: Navigation (NAV); Water Contact Recreation (REC-1); Non-Contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Aquaculture (AQUA); Shellfish Harvesting (SHELL); and Industrial Service Supply (IND).

Trash and debris, which is intentionally or accidentally discarded in watershed drainage areas, enter a water body through a transport mechanism. Transport mechanisms include the following:

1. Storm drains: trash is deposited throughout the watershed and is carried to a water body during and after significant rainstorms through storm drains.
2. Wind/wave action: trash can also blow into the waterways directly.
3. Direct disposal: direct dumping of trash to water body.

The amount and type of trash and debris that is washed into the storm drain system is generally a function of the surrounding land use. It is generally accepted that commercial, industrial, high density residential land use contribute larger loads of gross pollutants per area compared to low residential and open space and park land use areas.

Control Measures

Full capture system is a type of treatment control that is a device or series of devices that traps all particles that are 5 mm or greater and has a design treatment capacity that is not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area. For the Department, there are three types of full capture systems that fall under the category of Gross Solids Removal Devices (GSRDs). Gross Solids Removal Devices (GSRDs) were developed by the Department to be retrofitted into existing highway drainage systems or implemented in future highway drainage systems. GSRDs are structures that remove litter and solids five mm and larger from the storm water runoff using various screening technologies. Overflow devices are incorporated, and the usual design of the overflow release device is based upon the design storm for the roadway. Though designed to capture litter, the devices can also capture some of the vegetation debris. The devices shown below are generally limited to accept flows from pipes 30 inches in diameter and smaller.

The three types of potential GSRDs the Department could utilize are linear radial and two versions using an inclined screen. A linear radial device is relatively long and narrow, with flow entering one end and exiting the other end. It is suited for narrow and flat rights-of-way with limited space. It utilizes modular well screen casings with 5 mm louvers and is contained in a concrete vault, although it also could be attached to a headwall at a pipe outfall. While runoff flows enter into the screens, they pass radially through the louvers and trap litter in the casing. A smooth bottom to convey litter to the end of the screen sections is required, so a segment of the circumference of each screen is uncovered. The louvered sections have access doors for cleaning by vacuum truck or other equipment. Under most placement conditions the goal would be to capture within the casing one year's volume of

litter. This device has been configured with an overflow/bypass for larger storm events and if the unit becomes plugged.

Two Inclined Screen Devices have also been developed. Each device requires about 1-meter of hydraulic head and is better suited for fill sections. In the Type 1 device, the storm water runoff flows over the weir and falls through the inclined bar rack. The screen has five-mm maximum spacing between the bars. Flow passes through the screen and exits via the discharge pipe. The trough distributes influent over the inclined screen. Storm water pushes captured litter toward the litter storage area. The gross solids storage area is sloped to drain to prevent standing water. This device has been configured with an overflow/bypass for larger storm events and if the unit becomes plugged. It has a goal of litter capture and storage for one year. The Type 2 Inclined Screen only comes in a sloped sidewall version.

Full capture devices and treatment controls are highly effective to capture and retain trash when properly maintained. However, there are locations that might be infeasible to install treatment controls. The Department may elect to employ institutional controls, which are non-structural best management practices that may include street sweeping and anti-litter education and outreach programs. Street sweeping minimizes trash loading to the river by removing trash from streets and curbs. Maintaining a regular street sweeping schedule reduces the buildup of trash on streets and prevents trash from entering catch basins and the storm drain system. Street sweeping can also improve the appearance of roadways. There are at least three types of street sweepers the Department may employ: 1) mechanical, 2) vacuum filter, and 3) regenerative air sweepers. Public education can be an effective implementation alternative to reduce the amount of trash entering water bodies. The public is often unaware that trash littered on the street ends up in receiving waters, much less the cost of abating it. The Department may elect to continue to participate in educational programs like ‘Adopt-A-Highway’ and ‘Don’t Trash California’.

As specified in Attachment IV Section III.D.3, the Department shall submit an annual status report of the selected treatment and institutional control measures implemented to comply with the prohibition of discharge of trash. In addition to the annual status report, the Department should conduct a pilot survey to further determine highway characteristics and sections that should be included in the category of significant trash generating areas. The pilot study will further assure compliance with the prohibition of discharge and reduction of trash to receiving water bodies from high trash generation areas from the Department’s jurisdiction.

Ballona Creek Trash TMDL, August 1, 2002 and February 8, 2005

Final WLA
The numeric target for this TMDL is zero trash in the water. Storm drains were identified as a major source of trash. WLAs were assigned to permittees of the Los Angeles County MS4 permit and the Department.

Final WLA Specific to the Department
The Department is assigned the following baseline WLAs of trash.

Weight (lbs/mile^2)	**Volume** (ft^3/mile^2)
7479.36	892.64

Final Deadlines
The implementation schedule for the MS4 and the Department permittees consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within twelve years from the effective date of the TMDL (September 30, 2015).

Department's Contribution (relative contribution to pollutant loading**)**
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 13 percent.

Legg Lake Trash TMDL, February 27, 2008

Final WLA
The numeric target for this TMDL is zero trash in Legg Lake and on the shoreline. Both point sources and nonpoint sources are identified as sources of trash in Legg Lake. WLAs were assigned to the permittees of the Los Angeles County MS4 permit and the Department.

Final Trash WLA Specific to the Department
The Department is assigned the following baseline WLAs assuming a trash generation rate of 6677 (gallons of uncompressed litter per mile^2 per year).

Point Source Area (mile^2)	**Baseline WLA** (gal/yr)
0.09	586.92

Final Trash Deadlines
The implementation schedule for the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years from the effective date of the TMDL (March 6, 2016).

Department's Trash Contribution (relative contribution to pollutant loading)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 7.9 percent.

Los Angeles Area (Echo Park Lake) Nitrogen, Phosphorus, Chlordane, Dieldrin, PCBs, and Trash TMDL, March 26, 2012

Final Trash WLA
The numeric target for this TMDL is zero trash in Echo Park Lake and on the shoreline. Both point sources and nonpoint sources are identified as sources of trash. WLAs could be assigned to permittees of the Los Angeles County MS4 permit and the Department.

The Department is estimated to have the following baseline WLAs assuming a trash generation rate of 6,677 (gallons of uncompressed litter per mile^2 per year).

Point Source Area (mile^2)	**Current Point Source Trash Load** (gal/yr)
0.022	150

Final Trash WLA Specific to the Department
No WLAs were assigned to the Department.

Final Trash Deadlines
There is no compliance and implementation schedule for the Echo Park Lake Trash TMDL.

Department's Trash Contribution (relative contribution to pollutant loading**)**
As there is no assigned WLA, the Department's contribution to the estimated point source trash loads is 16.7 percent.

Los Angeles Area (Peck Road Park) Lake Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash TMDL, March 26, 2012

Final Trash WLA
The numeric target for this TMDL is zero trash in Peck Road Lake and on the shoreline. Both point sources and nonpoint sources are identified as sources of trash. WLAs could be assigned to permittees of the Los Angeles County MS4 permit and the Department.

Final Trash WLA Specific to the Department
No WLAs were assigned to the Department.

Final Trash Deadlines
There is no compliance and implementation schedule for the Peck Road Park Lake Trash TMDL.

Department's Trash Contribution (relative contribution to pollutant loading**)**
As there are no assigned WLAs, the Department's contribution to the estimated point source trash loads is 3.9 percent or 950 gal/yr.

Los Angeles River Trash TMDL, December 24, 2008

Final Trash WLA
The numeric target for the Los Angeles River Watershed Trash TMDL is zero trash in the water. Storm drains were identified as a major source of trash in the Los Angeles River. WLAs were assigned to permittees of the Los Angeles County MS4 permit and the Department.

Final Trash WLA Specific to the Department
The Department is assigned the following baseline WLAs for trash.

WLA (gal)	**WLA** (lbs)
59421	66,566

Final Trash Deadlines
The implementation schedule for the MS4 and the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within seven years from the effective date of the TMDL (September 30, 2014).

Department's Trash Contribution (relative contribution to pollutant loading)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 11.8 percent.

Machado Lake Trash TMDL, February 27, 2008

Final Trash WLA
The numeric target for this TMDL is zero trash in Machado Lake and on the shoreline. Both point sources and nonpoint sources are identified as sources of trash in Machado Lake. WLAs were assigned to permittees of the Los Angeles County MS4 permit and the Department.

Final Trash WLA Specific to the Department
The Department is assigned the following baseline WLA assuming a trash generation rate of 5,334 (gallons of uncompressed litter per mile^2 per year).

Point Source Area (mile^2)	Baseline WLA (gal/yr)
0.63	4,215.84

Final Trash Deadlines
The implementation schedule for the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years of the effective date of the TMDL (March 6, 2016).
Department's Trash Contribution (relative contribution to pollutant loading)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 4.5 percent.

Malibu Creek Watershed Trash TMDL, June 26, 2009

Final Trash WLAs
The numeric target for the Malibu Creek Watershed Trash TMDL is zero trash in or on the water and on the shoreline. For point sources, zero means that no trash is discharged into the water body of concern, shoreline, and channels. Both point source and nonpoint sources of trash were identified in the water bodies in the Malibu Creek Watershed. For point sources, WLAs were assigned to permittees of the Los Angeles County MS4 permit and Ventura County MS4 permit and the Department.

Final Trash WLA Specific to the Department
The Department is assigned the following WLAs assuming a trash generation rate of 640 (gallons of uncompressed litter).

Point Source Area (mile^2)	Baseline WLA (gal/yr)
0.32	10,813

Final Trash Deadlines
The implementation schedule for the MS4 and the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years of the effective date of the TMDL (July 7, 2017).

Department's Trash Contribution (relative contribution to pollutant loading)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 65.5. percent.

Revolon Slough and Beardsley Wash Trash TMDL, August 1, 2002, February 8, 2005, and February 27, 2008

Final Trash WLA
The numeric target for the Revolon Slough and Beardsley Wash TMDL is zero trash within Revolon Slough, Beardsley Wash and their tributaries. Both point source and nonpoint sources of trash were identified in the Revolon Slough and Beardsley Wash. For point sources, WLAs were assigned to permittees of the Ventura County MS4 permit and the Department.

Final Trash WLA Specific to the Department
The Department is assigned the following WLA (gal/year) assuming a trash generation rate of 640 (gallons of uncompressed litter).

Point Source Area ($mile^2$)	**Baseline WLA** (gal/yr)
1.68	11,215.45

Final Trash Deadlines
The implementation schedule for the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years of the effective date of the TMDL (March 6, 2016).

Department's Trash Contribution (relative contribution to pollutant loading)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 64.1 percent.

Santa Monica Bay Nearshore & Offshore Debris (trash and plastic pellets), March 20, 2012

Final Trash WLA
The numeric target for the Santa Monica Bay Debris TMDL is zero trash in Santa Monica Bay. For point sources, zero trash is defined as no trash discharged into water bodies within the Santa Monica Bay Watershed and into Santa Monica Bay or on the shoreline of Santa Monica Bay. For nonpoint sources, zero trash is defined as no trash on the shoreline or beaches, or in harbors adjacent to Santa Monica Bay. The numeric target for plastic pellets in the Santa Monica Bay Debris TMDL is zero plastic pellets in Santa Monica Bay. Both point source and nonpoint sources of trash were identified in Santa Monica Bay Nearshore and Offshore areas. For point sources, WLAs were assigned to permittees of the Los Angeles County MS4 permit and Ventura County MS4 permit and the Department.

Final Trash WLA Specific to the Department
The Baseline WLA for the Department was based on a trash generation rate of 33,452.8 gallons per mile^2 per year.

Point Source Area (mile^2)	Baseline WLA (gal/year)
1.08	36,129.0

Final Trash Deadlines
The implementation schedule for the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years of the effective date of the TMDL (March 12, 2020).

Department's Trash Contribution (relative contribution to pollutants)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 32.8 percent.

Ventura River Estuary Trash TMDL, February 27, 2008

Final Trash WLA
The numeric target for the Ventura River Estuary Trash TMDL is zero trash in or on the water and on the shoreline. Both point source and nonpoint sources of trash were identified in the Ventura River Estuary.

Final Trash WLA Specific to the Department
The Department is assigned the following WLAs assuming a trash generation rate of 640 (gallons of uncompressed litter).

Point Source Area (mile^2)	Baseline WLA (gal/yr)
0.31	2,049.86

Final Trash Deadlines
The implementation schedule for the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years of the effective date of the TMDL (March 8, 2016).

Department's Trash Contribution (relative contribution to pollutants)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 34.8 percent.

E. Bacteria TMDL Pollutant Category

General Description of Pollutant Category

Receiving waters are often adversely affected by urban storm water runoff containing bacteria. Several reaches and tributaries have been impaired due to excessive amounts of coliform bacteria. There is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities. Fecal coliform bacteria may be introduced from a variety of sources including storm water runoff, dry-weather runoff, onsite wastewater and animal wastes. In addition, humans may be exposed to waterborne pathogens through recreation water use or by harvesting and consuming filter-feeding shellfish.

Attachment IV of this permit requires the Department to prioritize reaches, including those within watersheds under a bacteria TMDL, and then further to select each year the reaches for implementing control measures to address the highest priority reaches.

Sources of Pollutant & How it Enters the Waterway

Major contributors are flows and associated bacteria loading from storm water conveyance systems. The extent of bacteria loading from natural sources such as birds, waterfowl and other wildlife, however, are unknown as data does not exist to quantify the impact of wildlife on the waterbodies.

Watershed Contribution

The TMDLs in the Bacteria Pollutant Category show that the Department is a relatively minor source of pollutants.

Control Measures

This prioritization strategy will control the largest sources of bacteria first and allow for attainment of the applicable WLAs consistent with the bacteria TMDLs identified in Part E of Attachment IV. The Department must install structural and nonstructural controls utilizing BMPs to variously control dry weather discharges and wet weather discharges.

The Department has options that would be effective for controlling non-storm water runoff during dry weather. The Department is required to implement control measures to ensure that the effective prohibition of non-storm water discharges is implemented. This can be achieved through infiltration, diversion, or other methods. Generally, there should be no flow from areas during dry weather. Overwatering, broken sprinklers and irrigation pipes can be a source of dry weather flows. The Department can limit dry weather discharges by ensuring that broken sprinklers and irrigation pipes are fixed within 72 hours. To control overwatering and the resulting runoff, the Department could review watering schedules for irrigated areas on an annual basis.

To control runoff during wet weather, the Department should work with responsible agencies to jointly comply with the TMDL whenever possible. If the Department does not work with the other responsible agencies, non-structural and structural BMPs would be necessary.

Increasing infiltration through the slowing of runoff and improving soil structure and texture to encourage infiltration of storm water are non-structural ways to reduce runoff. In addition, structural BMPs like biofiltration strips, biofiltration swales and detention basis can work in concert with the non-structural BMPs to capture of the runoff.

Wet-weather flows for the most part impact water contact recreation beneficial uses (REC-1). The Department shall implement control measures to prevent or eliminate the discharge of bacteria from its ROW through a combination of source control and treatment BMPs. These treatment BMPs shall include retention/detention, infiltration, diversion of storm water or through preemptive activities such as sweeping, clean-up of illegal dumping, and public education on littering.

SAN FRANCISCO BAY BACTERIA TMDLS

Richardson Bay Pathogens TMDL, December 18, 2009

The TMDL identifies storm water runoff as a potential pathogen source, along with sanitary sewer systems and houseboats and vessel marinas. The Department is listed in the storm water runoff source category along with other implementing parties.

Final Pathogens WLA
The WLA for Fecal Coliform in the pollutant category of storm water runoff is a median of < 14 MPN/100 ml and a 90th percentile limit of <43 MPN/100 ml (no more than 10 percent of total samples during any 30-day period may exceed this number)

The implementation plan for storm water runoff has the following actions:

1. Implement applicable storm water management plan.
2. Update/amend storm water management plan, as appropriate, to include specific measures to reduce pathogen loading, including additional education and outreach efforts, and installation of additional pet waste receptacles.
3. Report progress on implementation of pathogen reduction measures to the Water Board.

For most pollutants, TMDLs are expressed on a mass-load basis (e.g., kilograms per year). For pathogen indicators such as fecal coliform, however, it is the number of organisms in a given volume of water (i.e., their density), and not their total number (or mass) that is significant with respect to public health risk and protection of beneficial uses. The density of fecal coliform organisms in a discharge and/or in the receiving waters is the technically relevant criteria for assessing the impact of discharges, water quality, and public-health risk. U.S. EPA guidance recommends establishing density-based TMDLs for pollutants that are not readily controllable on a mass basis. Therefore, we propose density-based TMDLs and pollutant load allocations, expressed in terms of fecal coliform concentrations.

Establishment of a density-based, rather than a mass-based, TMDL carries the advantage of eliminating the need to conduct a complex and potentially error-prone analysis to link loads and projected densities. A load-based pathogens TMDL would require calculation of acceptable loads based on acceptable bacterial densities and anticipated discharge volumes, and then back-calculation of expected densities under various load reduction scenarios. Since discharge volumes in Richardson Bay are highly variable and difficult to measure, such an analysis would inevitably involve a great deal of uncertainty with no increased water quality benefit.

Pathogen WLA Specific to the Department
As stated in the TMDL, the Department's wasteload allocations for discharges from municipal separate storm sewers are set by NPDES permits No. CAS000004 [Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)] and CAS000003 (National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit Waste Discharge Requirements (WDRs) for State Of California Department Of Transportation).

Final Pathogens Deadline
The completion date for these implementation actions is "as specified in approved storm water management plan and in applicable NPDES permit." Region 2 does not anticipate that the Department's storm water management plan will need to be revised because they believe that the source of bacteria in highway runoff is wildlife.

The TMDL also notes that in 2013, the Water Board will evaluate monitoring results and assess progress towards attaining TMDL targets and load allocations.

Department's Pathogens Contribution (relative contribution to pollutant loading)
The Department's relative contribution to pathogen pollutant loading is not known.

San Pedro and Pacifica State Beach Bacteria TMDL, August 1, 2013

The San Pedro and Pacifica State Beach Bacteria TMDL was developed by the San Francisco Bay Regional Water Quality Control Board and approved by U.S. EPA on August 1, 2013. The TMDL identifies sanitary sewer systems, horse facilities and municipal storm water runoff and dry weather flows as sources that have the potential to discharge bacteria, if not properly managed, to San Pedro Creek and Pacifica State Beach.

Final Bacteria WLA
The TMDL established a desired, or target condition for the water contact recreation use in San Pedro Creek and at Pacifica State Beach based on the water quality objectives for indicator bacteria. The wasteload allocations are based on the water quality objectives shown in the table below:

Bacteriological Water Quality Objectives for San Pedro Creek and Pacifica State Beach		
Indicator Type	**Pacifica State Beach (Marine REC-1)** MPN/100 mL	**San Pedro Creek (Freshwater REC-1)** MPN/100 mL[1]
	Single Sample Maximum	**90th Percentile/No Sample Greater Than**
E. coli	NA	235
Fecal Coliform	400	400
Enterococcus	104	NA
Total Coliform	10,000[2]	10,000
	Geometric Mean[3]	**Geometric Mean/Log Mean/Median**
E. coli	NA	
Fecal Coliform	200	126
Enterococcus	35	200
Total Coliform	1,000	NA
		240

Notes:
1. Based on a minimum of five consecutive samples equally spaced over a 30-day period.
2. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
3. Calculated based on the five most recent samples from each site during a 30-day period.

NA: not applicable.

For this TMDL, a reference system and antidegradation approach has been incorporated the wasteload allocations as an allowable number of times that the water quality objectives can be exceeded. The following table lists the allowable exceedances:

Numeric Targets, TMDLs and Allocations Based on Allowable Exceedances of Single-Sample Objective for San Pedro Creek and Pacifica State Beach					
	San Pedro Creek		**Pacifica State Beach**		
	Dry Weather	**Wet Weather[5]**	**Summer Dry Weather** (Apr. 1 - Oct. 31)	**Winter Dry Weather** (Nov. 1 - Mar. 31)	**Wet Weather[5]**
Allowable Exceedances of Single-Sample Objectives (assuming daily sampling is conducted) [1,2,3]	4	26	0	2	30
Allowable Exceedances of Single-Sample	1	4	0	1	5

Numeric Targets, TMDLs and Allocations Based on Allowable Exceedances of Single-Sample Objective for San Pedro Creek and Pacifica State Beach					
	San Pedro Creek		Pacifica State Beach		
	Dry Weather	**Wet Weather[5]**	**Summer Dry Weather** (Apr. 1 - Oct. 31)	**Winter Dry Weather** (Nov. 1 - Mar. 31)	**Wet Weather[5]**
Objectives (assuming weekly sampling is conducted)[4]					

Notes:
1. Allowable exceedances are calculated by multiplying exceedance rates observed in the reference system(s) by the number of days during each respective period in the reference year (1994).
2. To end up with whole numbers, where the fractional remainder for the calculated allowable exceedance days exceeds 0.1, then the number of days is rounded up.
3. The calculated number of exceedance days assumes that daily sampling is conducted.
4. To determine the allowable number of exceedance events given a weekly sampling regime, as practiced for monitoring San Pedro Creek and Pacifica State Beach, the number of exceedance days was adjusted by solving for "X" in the following equation: X = (exceedance days x 52 weeks) / 365 days.
5. Wet weather is defined as any day with 0.1 inches of rain or more and the following three days.

Final Bacteria Deadlines

The TMDLs, load allocations and wasteload allocations for Pacifica State Beach shall be attained within eight years of the effective date of the TMDL (August 1, 2021). The TMDLs, load allocations and wasteload allocations to San Pedro Creek shall be attained within 15 years of the effective Date of the TMDL (August 1, 2028).

Storm water discharges from the Department's stretch of Highway 1 crossing the northwestern edge of the San Pedro Creek watershed are not a significant source of indicator bacteria because that section of the highway does not include any typical bacteria-generating sources such as homeless encampments, restroom facilities, garbage bins, etc. The Department's existing BMPs and storm water NPDES permit requirements, as of the effective date of the TMDL (August 1, 2013), are sufficient to attain and maintain its portion of the wasteload allocation.

Department's Bacteria Contribution (relative contribution to pollutant loading)

The Department's relative contribution to bacteria pollutant loading is not known.

Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDL, March 26, 2007

Final Bacteria WLA
The Department is noted as a source of storm water runoff. The Department and municipal storm water permittees and co-permittees are assigned waste load allocations (WLAs) expressed as the number of daily or weekly sample days that may exceed the single sample targets equal to the TMDLs established for the impaired reaches and WLA assigned to waters tributary to impaired reaches. The County of Los Angeles, the Department, and the Cities of Los Angeles, Culver City, Beverly Hills, Inglewood, West Hollywood, and Santa Monica are the responsible jurisdictions and responsible agencies for the Ballona Creek Watershed.

For the single sample objectives of the impaired REC-1 and LREC-1 reaches, the proposed WLA for summer dry-weather is zero (0) days of allowable exceedances, and those for winter dry-weather and wet-weather are three (3) days and seventeen (17) days of exceedance, respectively. In the instances where more than one single sample objective applies, exceedance of any one of the limits constitutes an exceedance day. The proposed waste load allocation for the rolling 30-day geometric mean for the responsible agencies and jurisdictions is zero (0) days of allowable exceedances.

For the single sample objectives of the impaired REC-2 reach, the proposed WLA for all periods is a 10 percent exceedance frequency of the REC-2 single sample water quality objectives. The proposed waste load allocation for the rolling 30-day geometric mean for the responsible agencies and jurisdictions is zero (0) days of allowable exceedances.

In addition to assigning TMDLs for the impaired reaches, Waste Load Allocations and Load Allocations are assigned to the tributaries to these impaired reaches. These WLAs and LAs are to be met at the confluence of each tributary and its downstream reach (see Table 7.21.2b of Attachment A to Resolution No. 2006-011). See Chapter 3 of Region 4's Basin Plan for bacteriological objectives for Water Contact Recreation for Marine and Fresh Waters, for Limited Water Contact Recreation and for Non-contact Water Recreation.

Final Bacteria WLA Specific to the Department
There is no specific WLA assigned to the Department. The responsible jurisdictions and responsible agencies within the watershed are jointly responsible for complying with the waste load allocation in each reach.

Final Bacteria Deadlines
See Final WLA above.

Department's Bacteria Contribution (relative contribution to pollutant loading)
The Department's jurisdiction within the cities and unincorporated areas in the Ballona Creek Watershed totals 1206 acres. This equals 1.5 percent of the watershed.

Long Beach City Beaches Indicator Bacteria TMDL, March 26, 2012

The TMDL identifies storm water runoff from the Department's properties such as the highway system, park and ride facilities, and maintenance yards as a potential source of bacteria. The Department has jurisdiction of some areas in the Los Angeles River (LAR) Estuary direct drainage, but not in the Long Beach City beaches direct drainage.

Final Bacteria WLA
To implement the single sample bacteria water quality objectives (total coliform, fecal coliform, enterococcus, and fecal-to-total coliform ratio) for waters designated REC-1, an allowable number of exceedance days for three seasons (summer dry, winter dry and winter wet) is set for marine waters using a reference system/anti-degradation approach. This approach ensures that bacteriological water quality is at least as good as that of a reference system and that no degradation of the existing bacteriological water quality is permitted where the existing condition is better than that of the selected reference system(s). The exceedance days are used to set load allocations (LA) and waste load allocations (WLAs) in these TMDLs.

Storm water systems covered under the City of Long Beach, Los Angeles County and the Department's MS4 permits are assigned WLAs in the form of exceedance days. During summer dry conditions, reductions in exceedance days are estimated to be 13-120 days during a 120 day period (11 percent to 100 percent of the time), depending on the location of the monitoring site. During winter wet conditions, reductions in exceedance days are estimated to be 11-45 days during a 75-day period (15 percent to 60 percent of the time) depending on the location of the monitoring site. During winter dry conditions, reductions in exceedance days are estimated to be 0-11 days during an 80 day period (zero (0) percent to 14 percent of the time) depending on the location of the monitoring site.

Final Bacteria WLA Specific to the Department
See Final WLA above.

Final Bacteria Deadlines
As this TMDL was established by U.S. EPA, U.S. EPA only described recommendations to the Regional Board that could be used. No timelines were noted.

Department's Bacteria Contribution (relative contribution to pollutant loading)
The loading of bacteria specifically from the Department's properties has not been determined in the LAR Estuary direct drainage. However a conservative estimate of 128 acres or approximately two percent of the LAR Estuary drainage area is noted in the TMDL.

Los Angeles River Watershed Bacteria, March 23, 2012

Final Bacteria WLA
The Los Angeles River Watershed Bacteria TMDL was developed by the Los Angeles Regional Water Quality Control Board and approved by U.S. EPA. The TMDL identifies storm water from the MS4 Permittees (the Department along with the County of Los Angeles and the Incorporated Cities therein and the City of Long Beach) as the principal source of bacteria in both dry weather and wet weather.

Final Bacteria WLA Specific to the Department
This TMDL uses a "reference system/anti-degradation approach" to implement the water quality objectives per the implementation provisions in Chapter 3 of the Basin Plan. On the basis of the historical exceedance frequency at Southern California reference reaches, a certain number of daily exceedances of the single sample bacteria objectives are permitted. The allowable number of exceedance days is set such that (1) bacteriological water quality at any site is at least as good as at the reference site(s) and (2) there is no degradation of existing bacteriological water quality. This approach recognizes that there are natural sources of bacteria that may cause or contribute to exceedances of the single sample objectives and that it is not the intent of the Regional Board to require treatment or diversion of natural coastal creeks or to require treatment of natural sources of bacteria from undeveloped areas.

For MS4 dischargers, the final dry-weather WLAs and wet-weather WLA for the single sample targets are listed below**:**

Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling
Dry Weather	5	1
Non-High Flow Suspension (HFS) Waterbodies Wet Weather	15	2
HFS Waterbodies Wet Weather	10 (not including HFS days)	2 (not including HFS days)

The final WLAs for the geometric mean target during any time at any river segment and tributary in the Los Angeles River Watershed is zero (0) days of allowable exceedances.

Final Bacteria Deadlines
The Department has from 8.5 to 25 years (September 23, 2020 to March 23, 2037) to achieve final WLAs depending on the segment of the waterbody. Table 7-39.3 in Attachment A to Resolution No. R10-007 lists other interim implementation compliance dates.

Department's Bacteria Contribution (relative contribution to pollutant loading)
The Department's MS4 permit covers approximately 6,950 acres, which is equivalent to around one percent of the urban watershed.

Malibu Creek and Lagoon Bacteria TMDL, June 7, 2012

The TMDL identifies on-site wastewater treatment plants, storm water runoff, dry weather runoff and wildlife (birds) as possible sources of bacterial contamination.

Final WLA
Malibu Creek and Lagoon Bacteria TMDL: Final Annual Allowable Exceedance Days for Single Sample Limits by Sampling Location

Compliance Deadline		January 24, 2012		July 15, 2021	
Station ID	Location Name	Dry Weather ^		Wet Weather ^	
		Daily sampling (No. days)	Weekly sampling (No. days)	Daily sampling (No. days)	Weekly sampling
LA RWQCB	**Triunfo Creek**	5	1	15	2
LA RWQCB	**Lower Las Virgenes Creek**	5	1	15	2
LA RWQCB	**Lower Medea Creek**	5	1	15	2
LVMWD (R-9)	**Upper Malibu Creek, above Las Virgenes Creek**	5	1	15	2
LVMWD (R-2)	**Middle Malibu Creek, below Tapia discharge 001**	5	1	15	2
LVMWD (R-3)	**Lower Malibu Creek, 3 mi below Tapia**	5	1	15	2
LVMWD (R-4)	**Malibu Lagoon, above PCH**	5	1	15	2
LVMWD (R-11)	**Malibu Lagoon, below PCH**	9*	2*	17	3
	Other sampling stations as identified in the Compliance Monitoring Plan as approved by the Executive Officer including at least one sampling station in each subwatershed, and areas where frequent REC-1 use is known to occur.	5	1	15	2

Compliance Deadline		January 24, 2012		July 15, 2021	
Station ID	Location Name	Dry Weather ^		Wet Weather ^	
		Daily sampling (No. days)	Weekly sampling (No. days)	Daily sampling (No. days)	Weekly sampling

Notes:
The number of allowable exceedances is based on the lesser of (1) the reference system or (2) existing levels of exceedance based on historical monitoring data.
The allowable number of exceedance days is calculated based on the 90th percentile storm year in terms of wet days at the LAX meteorological station.
^ A dry day is defined as a non-wet day.
A wet day is defined as a day with a 0.1 inch or more of rain and the three days following the rain event.
* The number of allowable exceedance days is for the winter dry-weather period. No exceedance days are allowed for the summer dry-weather period.

Final Bacteria WLA Specific to the Department
No exceedances are allowed for the geometric mean limits. The allowable days of exceedance for the single sample limits differ depending on season, dry weather or wet weather, and by sampling locations as described in the Table above (Malibu Creek and Lagoon Bacteria TMDL: Final Annual Allowable Exceedance Days for Single Sample Limits by Sampling Location

Final Bacteria Deadlines
This TMDL will be implemented in two phases as outlined in the TMDL. By January 24, 2012, compliance with the allowable number of dry-weather exceedance days must be achieved. By July 15, 2021, compliance with the allowable number of wet-weather exceedance days and the geometric mean targets must be achieved.

Department's Bacteria Contribution (relative contribution to pollutant loading**)**
The Department's relative contribution to bacteria pollutant loading is not known.

Marina del Rey Harbor (MdRH) Mother's Beach and Back Basin Bacteria TMDL, March 18, 2004, revised November 7, 2013

The TMDL identifies dry-weather urban runoff and storm water conveyed by storm drains as the primary sources of elevated bacterial indicator densities to MdRH Mothers' Beach and back basins during dry and wet weather. Potential sources of bacterial contaminations at Mothers' Beach and the back basins of MdRH include marina activities such as waste disposal from boats, boat deck and slip washing, swimmer "wash-off," restaurant washouts and natural sources from birds, waterfowl and other wildlife.

Final Bacteria WLA
Implementation of the bacteria objectives and the associated TMDL numeric targets is achieved using a "reference system/anti-degradation approach" as set forth in Chapter 3 of

the Basin Plan. As required by the Clean Water Act and California Water Code, Basin Plans include beneficial uses of waters, water quality objectives to protect those uses, an anti-degradation policy, collectively referred to as water quality standards, and other plans and policies necessary to implement water quality standards. This TMDL and its associated waste load allocations, which shall be incorporated into relevant permits, and load allocations are the vehicles for implementation of the Region's standards.

The geometric mean targets may not be exceeded at any time. For purposes of this TMDL, the geometric means shall be calculated weekly as a rolling geometric mean using five or more samples, for six week periods starting all calculation weeks on Sunday. For the single sample targets, each existing monitoring site is assigned an allowable number of exceedance days for three time periods: (1) summer dry-weather (April 1 to October 31), (2) winter dry-weather (November 1 to March 31), and (3) wet-weather (defined as days with 0.1 inch of rain or greater and the three days following the rain event).

The County of Los Angeles, Los Angeles County Flood Control District, City of Los Angeles, and Culver City are the Los Angeles County MS4 permittees identified as the responsible jurisdictions and responsible agencies for the Marina del Rey Watershed. All proposed WLAs for summer dry weather are zero (0) days of allowable exceedances.[24] The proposed WLAs for winter dry weather and wet weather vary by monitoring location as identified in the following table:

Marina del Rey Harbor Mothers' Beach and Back Basins Bacteria TMDL: Final Allowable Exceedance Days by Sampling Location

Compliance Deadline		March 18, 2007		March 18, 2007		July 15, 2021	
		Summer Dry Weather ^		Winter Dry Weather ^		Wet Weather ^	
		Apr 1 – Oct 31		Nov 1 – Mar 31		Nov 1 – Oct 31	
Station ID	**Location Name**	**Daily sampling** (No. days)	**Weekly sampling** (No. Days)	**Daily sampling** (No. days)	**Weekly sampling** (No. days)	**Daily sampling** (No. days)	**Weekly sampling** (No. days)
MdRH-1	**Mothers' (Marina) Beach, at playground area**	0	0	9	2	17	3

[24] In order to fully protect public health, no exceedances are permitted at any monitoring location during summer dry-weather (April 1 to October 31). In addition to being consistent with the two criteria, waste load allocations of zero (0) days of allowable exceedances are further supported by the fact that the California Department of Public Health has established minimum protective bacteriological standards – the same as the numeric targets in this TMDL – which, when exceeded during the period April 1 to October 31, result in posting a beach with a health hazard warning (California Code of Regulations, Title 17, Section 7958).

Compliance Deadline		March 18, 2007		March 18, 2007		July 15, 2021	
		Summer Dry Weather ^		Winter Dry Weather ^		Wet Weather ^	
		Apr 1 – Oct 31		Nov 1 – Mar 31		Nov 1 – Oct 31	
MdRH-2	**Mothers' (Marina) Beach, at lifeguard tower**	0	0	9	2	17	3
MdRH-3	**Mothers' (Marina) Beach, between lifeguard tower and boat dock**	0	0	9	2	17	3
MdRH-4	**Basin D, near first slips outside swim area**	0	0	9	2	17	3
MdRH-5	**Basin E, in front of tide-gate from Oxford Basin**	0	0	9	2	17	3
MdRH-6	**Basin E, center of basin**	0	0	9	2	17	3
MdRH-7	**Basin E, in front of Boone-Olive Pump Outlet**	0	0	9	2	17	3
MdRH-8	**Back of Main Channel**	0	0	9	2	17	3
MdRH-9	**Basin F, center of basin**	0	0	9	2	8	1

Compliance Deadline	March 18, 2007	March 18, 2007	July 15, 2021
	Summer Dry Weather ^	Winter Dry Weather ^	Wet Weather ^
	Apr 1 – Oct 31	Nov 1 – Mar 31	Nov 1 – Oct 31

Notes:

The number of allowable exceedances is based on the lesser of (1) the reference system or (2) existing levels of exceedance based on historical monitoring data.

The allowable number of exceedance days during winter dry-weather is calculated based on the 10th percentile storm year in terms of dry days at the LAX meteorological station.

The allowable number of exceedance days during wet-weather is calculated based on the 90th percentile storm year in terms of wet days at the LAX meteorological station.

^ A dry day is defined as a non-wet day.
A wet day is defined as a day with a 0.1 inch or more of rain and the three days following the rain event.

Final Bacteria WLA Specific to the Department
See Final WLA above.

Final Bacteria Deadlines
This TMDL will be implemented over an 18-year period. By March 18, 2007, there shall be no allowable exceedances of the single sample limits at any location during summer dry weather (April 1 to October 31) or winter dry weather (November 1 to March 31). By July 15, 2021, compliance with the allowable number of wet weather exceedance days and the geometric mean targets must be achieved.

Department's Bacteria Contribution (relative contribution to pollutant loading**)**
The Department's jurisdiction covers one percent of the watershed.

Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL, January 13, 2012

The TMDL identifies dry- and wet-weather urban runoff discharges from the storm water conveyance systems as significant contributors of bacteria loading to the Santa Clara River and Estuary. Mass emission data collected by MS4 Permittees show elevated levels of bacteria in the river. Data from natural landscapes in the region indicate that open space loading is not a significant source of bacteria.

Final Bacteria WLA
The Statewide Storm Water Permit for Department Activities (CAS000003) are assigned WLAs of zero (0) allowable exceedance days of the single sample targets for both dry and wet weather and no exceedances of the geometric mean targets because they are not expected to be significant source of indicator bacteria. Compliance with an effluent limit based on the bacteria water quality objectives will be used to demonstrate compliance with the WLA.

Final Bacteria WLA Specific to the Department
See Final WLA above.

Final Deadlines
The TMDL states that WLAs assigned to the Department's permit must be attained on the effective date of the TMDL.

Department's Contribution (relative contribution to pollutant loading)
The Department's relative contribution to pollutant loading is unknown.

Santa Monica Bay Beaches Bacteria TMDL June 19, 2003, Revised November 7, 2013

Final WLA
With the exception of isolated sewage spills, dry weather urban runoff and storm water runoff conveyed by storm drains and creeks is the primary source of elevated bacterial indicator densities to Santa Monica Beaches (SMB). Limited natural runoff and groundwater may also potentially contribute to elevated bacterial indicator densities during winter dry weather. Because the bacterial indicators used as targets in the TMDL are not specific to human sewage, storm water runoff from undeveloped areas may also be a source of elevated bacterial indicator densities. For example, storm water runoff from natural areas may convey fecal matter from wildlife and birds or bacteria from soil. This is supported by the finding that, at the reference beach, the probability of exceedance of the single sample targets during wet weather is 0.22.

Implementation of the bacteria objectives in Chapter 3 of the Basin Plan and the associated TMDL numeric targets is achieved using a "reference system/anti-degradation approach" rather than the alternative "natural sources exclusion approach" or strict application of the single sample objectives. As required by the Clean Water Act and Porter-Cologne Water Quality Control Act, Basin Plans include beneficial uses of waters, water quality objectives to protect those uses, an anti-degradation policy, collectively referred to as water quality standards, and other plans and policies necessary to implement water quality standards. This TMDL and its associated waste load allocations, which shall be incorporated into relevant permits, and load allocations are the vehicles for implementation of the Region's standards.

The geometric mean targets may not be exceeded at any time. For the single sample targets, each existing shoreline monitoring site is assigned an allowable number of exceedance days during three time periods as defined in the table below (summer dry weather, winter dry weather, and wet weather [defined as days with 0.1 inch of rain or greater and the three days following the rain event]). The allowable exceedance days for each associated shoreline monitoring site are identified in the following table:

Allowable Number of Days that may Exceed any Single Sample Bacterial Indicator Target for Existing Shoreline Monitoring Stations

Compliance Deadline			15-Jul-06		1-Nov-09		15-Jul-21	
			Summer Dry Weather^		Winter Dry Weather^		Wet Weather Year-round	
Station ID	Location Name	Subwatershed	Daily sampling (No. days)	Weekly sampling (No. days)	Daily sampling (No. days)	Weekly sampling (No. days)	Daily sampling (No. days)	Weekly sampling (No. days)
SMB 1-1	**Leo Carillo Beach (REFERENCE**	**Arroyo Sequit**	**0**	**0**	**9**	**2**	17	3
SMB 1-2	El Pescador State Beach	Los Alisos	0	0	1	1	5	1
SMB 1-3	El Matador State Beach	Encinal Canyon	0	0	1	1	3	1
SMB 1-4	Trancas Creek	Trancas Canyon	0	0	9	2	17	3
SMB 1-5	Zuma Creek	Zuma Canyon	0	0	9	2	17	3
SMB 1-6	Walnut Creek	Ramirez Canyon	0	0	9	2	17	3
SMB O-1#	Paradise Cove	Ramirez Canyon	0	0	9	2	15	3
SMB 1-7	Ramirez Creek	Ramirez Canyon	0	0	9	2	17	3
SMB 1-8	Escondido Creek	Escondido Canyon	0	0	9	2	17	3
SMB 1-9	Latigo Canyon Creek	Latigo Canyon	0	0	9	2	17	3
SMB 1-10	Solstice Creek	Solstice Canyon	0	0	5	1	17	3
SMB O-2#	Puerco Canyon storm drain	Corral Canyon	0	0	0	0	6	1
SMB 1-11	Wave wash of unnamed creek on Puerco Beach	Corral Canyon	0	0	9	2	17	3
SMB 1-12	Marie Canyon Storm Drain on	Corral Canyon	0	0	9	2	17	3
SMB 1-13	Sweetwater Creek on Carbon	Carbon Canyon	0	0	9	2	17	3
SMB 1-14	Las Flores Creek	Las Flores	0	0	6	1	17	3
SMB 1-15	Big Rock Beach at 19948 Pacific	Piedra Gorda	0	0	9	2	17	3
SMB 1-16	Pena Creek	Pena Canyon	0	0	3	1	14	2
SMB 1-17	Tuna Canyon Creek	Tuna Canyon	0	0	7	1	12	2
SMB 1-18	Topanga Creek	Topanga Canyon	0	0	9	2	17	3
SMB 4-1	San Nicholas Canyon Creek	Nicholas Canyon	0	0	4	1	14	2
SMB 2-1	Castlerock (Parker Mesa) Storm	Castlerock	0	0	9	2	17	3
SMB 2-2	Santa Ynez Storm Drain	Santa Ynez	0	0	9	2	17	3
SMB 2-3	Will Rogers State Beach at 17200	Santa Ynez	0	0	9	2	17	3
SMB 2-4	Pulga Canyon storm drain	Pulga Canyon	0	0	9	2	17	3
SMB 2-5	Temescal Storm Drain	Pulga Canyon	0	0	9	2	17	3
SMB 2-6	Bay Club Storm Drain	Santa Ynez	0	0	9	2	17	3
SMB 2-7	Santa Monica Canyon, Will	Santa Monica	0	0	9	2	17	3
SMB 2-8	Venice Pier, Venice	Ballona	0	0	9	2	17	3
SMB 2-9	Topsail Street extended	Ballona	0	0	9	2	17	3
SMB 2-10	Dockweiler State Beach at Culver	Dockweiler	0	0	9	2	17	3
SMB 2-11	North Westchester Storm Drain	Dockweiler	0	0	0	0	17	3
SMB 2-12	World Way extended	Dockweiler	0	0	9	2	17	3
SMB 2-13	Imperial Highway storm drain	Dockweiler	0	0	4	1	17	3
SMB 2-14	Opposite Hyperion Plant, 1 mile	Dockweiler	0	0	9	2	17	3
SMB 2-15	Grand Avenue Storm Drain	Dockweiler	0	0	9	2	17	3

Compliance Deadline			15-Jul-06		1-Nov-09		15-Jul-21	
			Summer Dry Weather^		Winter Dry Weather^		Wet Weather Year-round	
Station ID	Location Name	Subwatershed	Daily sampling (No. days)	Weekly sampling (No. days)	Daily sampling (No. days)	Weekly sampling (No. days)	Daily sampling (No. days)	Weekly sampling (No. days)
SMB 3-1	Montana Ave. Storm Drain	Santa Monica	0	0	9	2	17	3
SMB 3-2	Wilshire Blvd., Santa Monica	Santa Monica	0	0	9	2	17	3
SMB 3-3	Santa Monica Municipal Pier at	Santa Monica	0	0	9	2	17	3
SMB 3-4	Santa Monica Beach at	Santa Monica	0	0	9	2	17	3
SMB 3-5	Ashland Av. storm drain (Venice)	Santa Monica	0	0	9	2	17	3
SMB 3-6	Rose Ave. Storm Drain on	Santa Monica	0	0	6	1	17	3
SMB 3-7	Venice City Beach at Brooks	Ballona	0	0	9	2	17	3
SMB 3-8	Venice Pavilion at projection of	Ballona	0	0	9	2	17	3
SMB 3-9	Strand Street extended	Santa Monica	0	0	9	2	17	3
SMB 5-1	Manhattan State Beach at 40th	Hermosa	0	0	1	1	4	1
SMB 5-2	Terminus of 28th Street Drain in	Hermosa	0	0	9	2	17	3
SMB 5-3	Manhattan Beach Pier	Hermosa	0	0	3	1	6	1
SMB 5-4	Near 26th Street on Hermosa	Hermosa	0	0	3	1	12	2
SMB 5-5	Hermosa Beach Pier	Hermosa	0	0	2	1	8	2
SMB 6-1	Herondo Storm Drain	Redondo	0	0	9	2	17	3
SMB 6-2	Redondo Municipal Pier - 100	Redondo	0	0	3	1	14	2
SMB 6-3	4' x 4' outlet at projection of	Redondo	0	0	5	1	17	3
SMB 6-4	120' north of Topaz groin	Redondo	0	0	9	2	17	3
SMB 6-5	Storm Drain at Projection of	Redondo	0	0	4	1	11	2
SMB 6-6	Malaga Cove, Palos Verdes	Redondo	0	0	1	1	3	1
SMB 7-1	Malaga Cove	Palos Verdes	0	0	1	1	14	2
SMB 7-2	Bluff Cove	Palos Verdes	0	0	1	1	0	0
SMB 7-3	Long Point	Palos Verdes	0	0	1	1	5	1
SMB 7-4	Abalone Cove	Palos Verdes	0	0	0	0	1	1
SMB 7-5	Portuguese Bend Cove	Palos Verdes	0	0	1	1	2	1
SMB 7-6	Royal Palms	Palos Verdes	0	0	1	1	6	1
SMB 7-8	Wilder Annex	Palos Verdes	0	0	1	1	2	1
SMB 7-9	Outer Cabrillo Beach	Palos Verdes	0	0	1	1	3	1
SMB MC-1	Malibu Point, Malibu Colony Dr.	Malibu Canyon	0	0	9	2	17	3
SMB MC-2	Surfrider Beach (breach point of	Malibu Canyon	0	0	9	2	17	3
SMB MC-3	Malibu Pier on Carbon Beach	Malibu Canyon	0	0	9	2	17	3

Notes: The allowable number of exceedance days during winter dry weather is calculated based on the 10th percentile year in terms of non-wet days at the LAX meteorological station.
The number of allowable exceedances during winter dry weather is based on the lesser of (1) the reference system or (2) existing levels of exceedance based on historical shoreline data.
^Dry weather days are defined as those with <0.1 inch of rain and those days not less than 3 days after a rain day. Rain days are defined as those with >=0.1 inch of rain.
Detailed descriptions of the sampling locations are provided in the Santa Monica Bay Beaches Bacterial TMDLs Coordinated Shoreline Monitoring Plan.
#Monitoring began in 2010 and data was examined from April 2010 to November 2011

Final Bacteria WLA Specific to the Department
See Final WLA above.

Final Bacteria Deadlines
The final implementation targets in terms of allowable wet-weather exceedance days must be achieved at each individual beach location no later than July 15, 2021.

Department's Contribution (relative contribution to pollutant loading)
The Department's relative contribution to bacteria pollutant loading is not known.

COLORADO RIVER REGION BACTERIA TMDL

Coachella Valley Storm Water Channel (CVSC) Bacterial Indicators TMDL, April 27, 2012

The TMDL identifies flows from urban MS4s as violating applicable water quality objectives for REC I and REC II. Birds and other animals are possible sources of bacteria in the CVSC.

Final Bacterial Indicator WLA
Wasteload allocations (WLAs) for bacteria indicator dischargers into CVSC are described below:

Allocation Type	Discharger	E. Coli Allocations
Point Source (WLAs)	Department	A log mean (Geomean) of the MPN of ≤126/100ml (based on a minimum of not less than five samples during a 30-day period), or 400 MPN/100ml for a single sample.

Final Bacterial Indicator WLA Specific to the Department
See Final WLA above.

Final Bacterial Indicator Deadlines
The final implementation targets in terms of allowable wet-weather exceedance days must be achieved at each individual beach location no later than July 15, 2021.

Department's Bacterial Indicator Contribution (relative contribution to pollutant loading)
The Department's relative contribution to bacteria pollutant loading is not known.

Project I – Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) TMDL, June 22, 2011

The TMDL identifies dry and wet weather runoff as the source of bacterial loading.

Final Indicator Bacteria WLA
In general, controllable point and nonpoint sources generating less than five percent of the total loads (e.g., The Department and/or Agriculture) were assigned WLAs and LAs equal to their existing loads, resulting in no load reduction requirements.

The dry weather mass-load based TMDLs were assigned entirely to discharges from MS4 land uses because the runoff that transports bacteria to surface waters during dry weather is expected to occur in urban areas. The allocation of the dry weather mass-based TMDL assumes that no surface runoff discharge to receiving waters occurs from the Department, Agriculture, or Open Space land use categories (i.e., $WLA_{Caltrans} = 0$, $LA_{Agriculture} = 0$, and $LA_{OpenSpace} = 0$) , meaning the entire dry weather mass-based TMDL (i.e., allowable mass load) is allocated to Municipal MS4 land use categories (i.e., WLA_{MS4} = TMDL).

For the wet weather TMDLs, discharges of surface runoff are expected from all land use types, thus allocations were assigned to each land use category (i.e., Municipal MS4s, the Department, Agriculture, and Open Space). The Department's wet weather WLAs were set equal to existing loads, since the Department's discharges were found to account for less than 1 percent of the wet weather load. Allocations were assigned based on discharges of "existing" bacteria loads predicted with a wet weather watershed model. In general, the Department WLAs, Agriculture LAs (in all but four of the modeled watersheds), and Open Space LAs were set equal to the "existing" bacteria loads predicted by the wet weather watershed model. The remainder of allowable bacteria load that can be discharged to the receiving waters as part of the TMDL was assigned as the Municipal MS4s WLAs (or proportionally divided between the Municipal MS4s and Agriculture land use categories in four of the modeled watersheds).

Final Indicator Bacteria WLA Specific to Department
See Final WLA above.

Final Indicator Bacteria Deadlines
TMDL Compliance Schedule: Full implementation of the TMDLs for indicator bacteria shall be completed within 10 to 20 years (April 4, 2021 to April 4, 2031) from the effective date of the Basin Plan amendment. The compliance schedule for implementing the load and wasteload reductions required to achieve the wet weather and dry weather TMDLs is phased in over time.

The dry weather TMDLs must be achieved in the receiving waters as soon as possible, but no later than 10 years (April 4, 2021) from the effective date of the Basin Plan amendment

that establishes the TMDLs. For dischargers that undertake wet weather load reduction programs only for bacteria, the wet weather TMDLs must be achieved in the receiving waters as soon as possible, but no later than 10 years (April 4, 2021) from the effective date.

For dischargers in watersheds that undertake concurrent wet weather load reduction programs for other pollutant constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with the bacteria load reduction requirements in these TMDLs, an alternative compliance schedule may be proposed and incorporated by the San Diego Water Board into the implementing orders. The wet weather TMDL compliance schedules may be extended, but no more than a total of 20 years (April 4, 2031) from the effective date of the Basin Plan amendment. The dry weather TMDL compliance schedule cannot be extended to be more than 10 years (April 4, 2021) from the effective date of the Basin Plan amendment.

Department's Indicator Bacteria Contribution (relative contribution to pollutant loading)

The Department's relative contribution to bacteria pollutant loading is unknown.

F. Diazinon TMDL Pollutant Category

General Description of Pollutant Category
Diazinon is an organophosphate insecticide has been banned for residential use; it is still used in agriculture.

Sources of Pollutant & How it Enters the Waterway
It is a broad spectrum contact insecticide. Residential use was for general-purpose gardening use and indoor pest control of ants, fleas, cockroaches, silverfish, mosquitos and spiders in residential, non-food buildings.

Watershed Contribution
The Department does not use Diazinon. The Department is identified as a source of Diazinon because they own and operate storm water conveyance systems in association with roadways and facilities. In some areas the Department's storm water systems are connected to municipal storm water systems.

Control Measures
Attachment IV, Section III.F, prohibits the discharge of Diazinon. This prohibition is consistent with the TMDLs for Diazinon which generally limit the discharge of this pesticide to non-toxic levels. Since the Department does not use Diazinon it is in compliance with the prohibition of discharge. Attachment IV, Part F does not require additional monitoring beyond what is specified in the permit.

SAN FRANCISCO BAY REGION DIAZINON TMDL

San Francisco Bay Urban Creeks Diazinon and Pesticide Toxicity May 16, 2007

The TMDL states that most urban runoff flows through storm drains operated by all storm water entities including the Department. The use of diazinon is prohibited in the Department's NPDES permit, and no additional measures are required.

Final Diazinon WLA
The WLA for each storm water entity is 100 ng/L as a one-hour average.

Final Diazinon WLA Specific to the Department
The Department's level of responsibility is not identified.

Final Diazinon Deadlines
The TMDL does not specify any interim or final compliance dates but states that the requirements included in the permits are inadequate to meet the targets the San Francisco Bay Water Board will require additional control measures or additional actions by others.

Department's Diazinon Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the diazinon pollutant loading is not known.

SAN DIEGO REGION DIAZINON TMDL

Chollas Creek Diazinon TMDL, November 3, 2003

Final Diazinon WLA
The below concentration-based waste load allocations are applied equally to all diazinon discharge sources in the Chollas Creek watershed:

Waterbody	Diazinon (ng/L)	
	Acute (1 hour ave)	Chronic (4 day ave)
Chollas Creek	72	45

Final Diazinon WLA Specific to the Department
The final WLA for the Department is noted above.

Final Diazinon Deadlines
The TMDL states that the phased compliance schedule will apply only to attainment of numeric limitations for diazinon and all other requirements of this TMDL will be immediately effective upon incorporation into applicable NPDES permits.

Department Diazinon Contribution
In the supporting technical documentation, the San Diego Regional Water Board stated that the Department is responsible for the major freeways and roadways making up approximately four percent of the land in the watershed; that the Department reports diazinon is not used; and that the Department has an integrated pest management plan. Since the Department does not use Diazinon it is in compliance with the prohibition of discharge.

G. Selenium TMDL Pollutant Category

General Description of Pollutant Category

Sources of Pollutant & How it Enters the Waterway
Selenium is naturally occurring in geologic formations, soils and aquatic sediments. Storm water runoff, dewatering, ground water seepage, irrigation of high selenium content soils, and oil refineries are identified as sources of selenium to surface waters in southern California. Generally, atmospheric deposition was determined to be a not significant source. Selenium bioaccumulates to levels that cause severe impacts on invertebrates, fish, birds that prey on fish, and humans.

Watershed Contribution
Selenium in soil may be a contributing source, and naturally occurring selenium in groundwater may be a significant source.

Control Measures
As discussed under the individual TMDLs below, the TMDLs in this pollutant category generally establish that the Department is a relatively minor source of selenium since the sources of selenium are not transportation related. The Department is expected to continue its current pollutant control activities in order to remain in compliance with the TMDLs.

LOS ANGELES REGION SELENIUM TMDL

Ballona Creek Metals and Selenium TMDL, December 22, 2005 and reaffirmed on October 29, 2008.

This TMDL addresses dry- and wet-weather discharges of metals and selenium in Ballona Creek and Sepulveda Canyon Channel. There are significant differences in the sources of metals and selenium loadings during dry and wet weather because hardness values and flow conditions in Ballona Creek and Sepulveda Canyon Channel vary between dry and wet weather. A grouped mass-based waste load allocation is developed for the storm water permittees that includes the Department.

Final Selenium WLA
The Department and MS4 storm water NPDES permittees will be found to be effectively meeting the dry-weather WLAs if the instream pollutant concentrations or load at the first downstream monitoring location is equal to or less than the corresponding concentration- or load based WLA.

Selenium Dry-weather Storm Water WLAs Apportioned between Storm Water Permits (grams total recoverable metals/day)

Permittee	Waste Load Allocation (grams/day)
Ballona Creek	
MS4 Permittees	169
Department	2
Sepulveda Channel	
MS4 Permittees	76
General Industrial	1

Selenium Wet-weather Storm Water WLAs Apportioned between Storm Water Permits (total recoverable metals)

Permittee	Waste Load Allocation (grams/day)
MS4 Permittees	4.73E-06 x Daily storm volume (L)
Department	6.59E-08 x Daily Storm Volume (L)
General Construction	1.37E-07 x Daily storm volume (L)
General Industrial	3.44E-08 x Daily storm volume (L)

The Department and MS4 NPDES permittees will be found to be effectively meeting the wet-weather WLAs if the loading at the most downstream monitoring location is equal to or less than the wet-weather WLA.

Final Selenium WLA Specific to the Department
See Tables above for specific Department WLAs.

Final Deadlines
The implementation schedule for the MS4 permittees and the Department consists of a phased approach, with compliance to be achieved in prescribed percentages of the watershed, with total compliance to be achieved within 15 years. The Department shall demonstrate that 100 percent of the total drainage area served by the MS4 system is effectively meeting the dry-weather and wet-weather WLAs.

Whereas the Department is responsible for meeting their mass-based waste load allocations they may choose to work with the MS4 Permittees.

Department's Selenium Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the selenium loading is not known.

Calleguas Creek, its Tributaries and Mugu Lagoon Metals and Selenium TMDL, March 26, 2007

Significant sources were identified as urban runoff, agricultural runoff, groundwater seepage and POTW effluent. The Department is a participant in the watershed-wide water monitoring program.

Final Selenium WLA
Dry-weather is defined as days when flows in the stream are less than the 86th percentile flow rate for each reach; wet weather is defined as flows greater than 86th percentile. The daily maximum interim limit is set equal to the 99th percentile of available discharge data, the monthly average interim limit is set equal to the 95th percentile. The interim WLAs for dry-weather in Revolon Slough are 14 μg/L criteria maximum concentration (CMC), and 13 μg/L criteria continuous concentration (CCC) for wet-weather. There is no interim wet-weather WLA because current loads do not exceed the TMDL. In this TMDL interim limits and WLAs are applied to receiving waters.

Final Selenium WLA Specific to the Department
Final WLAs for selenium in Revolon Slough are:
Dry weather: In lbs/day are 0.004 low flow, 0.003 average flow, 0.004 elevated flow.
Wet weather: In lbs/day is 0.027*Q^2+0.47*Q, where Q equals the daily storm volume.
Current loads do not exceed the loading capacity during wet weather, therefore no additional action by the Department is needed during wet weather.

Final Deadlines
The TMDL states that storm water dischargers are expected to achieve compliance through implementation of BMPs. A group watershed monitoring plan was required and receiving water monitoring compliance points are specified for all dischargers subject to the TMDL. A 25 percent reduction was required by March 2012, and a 50 percent reduction is required by March 2017. Final compliance is required by March 2022. The TMDL states that achievement of required reductions will be evaluated based on progress towards BMP implementation as outlined in the UWQMPs and in consideration of background loading information. The requirements of Attachment IV, Section III.G are consistent with the requirements of the TMDL.

Department's Selenium Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the selenium pollutant loading is not known.

San Gabriel River and Impaired Tributaries Metals and Selenium TMDL, March 26, 2007

The San Gabriel River and impaired tributaries metals and selenium TMDL was established by U.S. EPA (and therefore there are no milestones, compliance schedule, or monitoring requirements) and includes a dry-weather TMDL for selenium in San Jose Creek Reach 1.

The TMDL notes that selenium is present in local marine sedimentary rocks and presumes that much of the selenium in San Jose Creek results from natural soils, and that this assumption is corroborated by the fact that many of the impairments in San Jose Creek occur after the channel becomes soft-bottomed. Other potential sources were identified as mobilization of groundwater, such as by dewatering, irrigation of soils naturally high in selenium, and discharges from petroleum-related activities.

The requirements of Attachment IV, Section III.G are consistent with the requirements of the TMDL.

Final WLA for Selenium
The TMDL sets a dry-weather selenium WLA of five (5) μg/L for all storm water discharges to San Jose Creek. The TMDL states that a review of the storm water permits indicates that the Department discharges entirely to municipal storm water systems.

Final Selenium WLA Specific to the Department
No specific selenium WLAs are assigned to the Department. The dry-weather WLAs for the storm water permittees are shared by the MS4 permittees and the Department because there is not enough data on the relative extent of MS4 and the Department's areas.

Final Deadlines for Selenium
The MS4 permittees and the Department shall demonstrate that 100 percent of the total drainage area served by the storm drain system is effectively meeting both the dry-weather and wet-weather WLAs and attaining water quality standards for metals and selenium.

Department's Selenium Contribution (relative contribution to pollutant loading)
The Department's relative contribution to selenium pollutant loading is not known.

H. Temperature TMDL Pollutant Category

General Description of Pollutant Category
The North Coast Region Basin Plan defines the water quality objective for temperature as follows:

(1) For estuaries, the Basin Plan incorporates by reference the statewide plan entitled "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California."

(2) The following temperature objectives apply to surface waters:

The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall the temperature of any COLD water be increased by more than five degrees Fahrenheit

above natural receiving water temperature. At no time or place shall the temperature of WARM intrastate waters be increased more than five degrees Fahrenheit above natural receiving water temperature.

The designated beneficial uses affected by thermal pollution of receiving waters include: cold freshwater habitat (COLD); rare, threatened, and endangered species (RARE); migration of aquatic organisms (MIGR); and spawning, reproduction, and/or early development of fish (SPWN); commercial and sport fishing (COMM); and contact and non-contact water recreation (REC-1 and REC-2).

Sources of Pollutant & How it Enters the Waterway
Anthropogenic processes that influence water temperature include changes to stream shade, stream flow via changes in groundwater accretion, streamflow via surface water use, changes to local microclimates, and channel geometry. Road construction and maintenance can, for example, involve the removal of some riparian vegetation, thus increasing ambient water temperature along the affected segment of a surface water body unless this impact is minimized via re-planting and/or by reducing the amount of vegetation removed.

Natural sources of sediment which can increase receiving water temperatures include geologically unstable areas that are subject to landslides, as well as smaller sediment sources such as gullies and stream-bank failures. Anthropogenic sources include road-related stream crossing failures, gullies, fill failures, and landslides precipitated by road-related surface erosion and cut bank failures. Road-related activities which can increase sediment discharge to a waterway include the construction and maintenance of paved and unpaved roadways, watercourse crossing construction, reconstruction, maintenance, use, and obliteration, and many activities conducted on unstable slopes. Unstable areas are areas with a naturally high risk of erosion and areas or sites that will not reasonably respond to efforts to prevent, restore or mitigate sediment discharges. Unstable areas are characterized by slide areas, gullies, eroding stream banks, or unstable soils that are capable of delivering sediment to a watercourse. Slide areas include shallow and deep seated landslides, debris flows, debris slides, debris torrents, earthflows, headwall swales, inner gorges and hummocky ground. Unstable soils include unconsolidated, non-cohesive soils and colluvial debris.

Watershed Contribution
The Department is a relatively minor source of pollutants and small percentage of the watershed. The Department will address the highest problem areas soonest and therefore address the problem at the appropriate level for the temperature and sediment TMDLs.

Control Measures
Dischargers responsible for vegetation removal are encouraged (and sometimes required) to preserve and restore such vegetation where possible. This may include planting riparian trees, minimizing the removal of vegetation that provides shade to a water body, and minimizing activities that might suppress the growth of new or existing vegetation. Reductions in sediment loads are expected to increase the number and depth of pools in

streams and rivers, and to reduce wetted channel width/depth ratios. These changes would tend to result in lower stream temperatures overall and in more lower-temperature pool habitat.

The Department is required to implement control measures to prevent erosion and sediment discharge. The measures that control the discharge of sediment can be effective in reducing thermal pollution in receiving waters. This can be achieved by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and avoidance of alterations of natural runoff flow patterns.

The sediment control requirements in Attachment IV are intended to reduce the adverse impacts of excessive sediment discharges to sediment-impaired waters, including impacts to the cold water salmonid fishery and the COLD, COMM, RARE, SPWN, and MIGR beneficial uses. The beneficial uses associated with the cold water salmonids fishery are often the most sensitive to sediment discharges.

The Sediment TMDL Implementation Policy also directs staff to develop: (1) the Work Plan, which describes how and when permitting and enforcement tools are to be used; (2) the Guidance Document on Sediment Waste Discharge Control; (3) the Sediment TMDL Implementation Monitoring Strategy; and (4) the Desired Conditions Report. Of these items, the Guidance Document on Sediment Waste Discharge Control and the Sediment TMDL Implementation Monitoring Strategy are still under development by the North Coast Region. At present, the requirements in Attachment IV are generally sufficient to address the sediment/temperature TMDLs in the North Coast Region that originate from a comparatively minor pollutant source, and this is accomplished by focusing on the most problematic areas and activities within this relatively low-volume subset of anthropogenic discharges for this pollutant category.

Attachment IV requires continuation of existing monitoring plans, or monitoring consistent with the TMDLs' requirements as approved by the Regional Water Board Executive Officer. A primary focus of the monitoring required by Attachment IV is management practice effectiveness monitoring and "Adaptive Management" for BMP implementation requirements ensures compliance with the sediment/temperature TMDLs.

The North Coast Regional Water Board is also in the process of amending its basin plan for the control of thermal pollution. These revisions will add a policy for implementing the water quality objective for temperature. The amendment will also add additional action plans to implement total maximum daily loads for temperature in the Navarro, and Eel, and Mattole watersheds.

The proposed revisions to the Basin Plan include changes to Chapter 4 –Implementation Plans. The Regional Water Board directed staff to prepare an amendment incorporating a temperature implementation policy into the Basin Plan by adoption of resolution R1-2012-0013.The proposed Basin Plan amendment will describe the approach to implementing the interstate water quality objective for temperature in one cohesive policy. It will identify the

regulatory mechanisms staff will employ to ensure achievement of the water quality objective for temperature, it will describe the significance of stream shade as a factor determining stream temperatures, and it will direct staff to address temperature concerns through existing authorities and processes.

The proposed Basin Plan amendment will also establish implementation plans for the Navarro, Mattole, Upper Main Eel, Middle Main Eel, Lower Eel, Middle Fork Eel, North Fork Eel, and South Fork Eel River temperature TMDLs.

NORTH COAST REGION TEMPERATURE TMDLS

Eel River (Lower HA) Temperature and Sediment TMDL, U.S. EPA Established on December 18, 2007

Final Temperature WLA
For the diffuse permitted sources, such as municipal and industrial storm water discharges, the Department's facilities, construction sites, and municipalities, as well as for discharges that are subject to NPDES permits but are not currently permitted, the waste load allocation (WLA) is expressed as follows: zero net increase in receiving water temperature.

Final Temperature WLA Specific to the Department
As stated above, U.S. EPA's wasteload allocation for the temperature TMDL assigned to the Department and other point source dischargers is zero net increase in receiving water temperature.

Final Temperature Deadlines
U.S. EPA did not specify deadlines for implementation.

Department's Contribution (relative contribution to pollutant loading**)**
U.S. EPA states that although nonpoint sources are responsible for most heat loading in the watershed, point sources may also discharge some heat in the watershed.

Eel River (Middle-Fork) Eden Valley, and Round Valley HSAs Temperature and Sediment TMDL, U.S. EPA Established on December 2003

Final Temperature WLA
Although U.S. EPA states that because appropriate heat loads, water temperatures and tree heights cannot be generalized on a basin-wide scale, this reduction is best achieved by allowing trees to grow so as to provide the equivalent amount of shade that would be provided under natural conditions. In addition, measures to reduce sediment discharge and promote establishment or protection of additional refugia pool areas will facilitate attainment of water quality standards. In this sense, the temperature and sediment TMDLs overlap to some degree.

Final Temperature WLA Specific to the Department
Please see above discussion of the temperature WLA.

Final Temperature Deadlines
U.S. EPA did not specify deadlines for implementation.
Department's Temperature Contribution (relative contribution to pollutant loading)
U.S. EPA states that although nonpoint sources are responsible for most heat loading in the watershed, point sources may also discharge some heat in the watershed.

Eel River (South Fork) HA Temperature and Sediment TMDL, U.S. EPA Established on December 16, 1999

U.S. EPA's source analysis indicates that the sediment loading due to nonpoint erosion from roads and other anthropogenic activities accounts for a substantial portion of the total sediment loading in this watershed.

The waste load allocation for point sources are for sediment only, i.e., they are not directly related to the temperature portion of the TMDL, nor does U.S. EPA set a waste load allocation for point sources under the temperature portion of the TMDL. However, U.S. EPA also states that any improvements in stream temperature from reduced sedimentation contribute to the cumulative benefits of both sediment and temperature load reductions, and this assumption is accommodated in U.S. EPA's calculations for the margin of safety in this TMDL.

Final Temperature WLAs
As stated above, there is no wasteload allocation for point sources.

Final Temperature WLA Specific to the Department
As stated above, there is no specific wasteload allocation for the Department.

Final Temperature Deadlines
U.S. EPA did not specify deadlines for implementation.

Department's Temperature Contribution to Thermal Loading (relative contribution to pollutant loading)

U.S. EPA attributes most sediment and thermal pollutant loading in the TMDL to nonpoint sources, and considers the Department's and other point source contributions to be comparatively minor.

Eel River (Upper Main HA) Temperature and Sediment TMDL, U.S. EPA Established on December 29, 2004

Final Temperature WLA
U.S. EPA states that there are no point source discharges included in the temperature TMDL for purposes of attaining temperature reductions via "shade allocation," so the waste load allocation is set to zero. U.S. EPA states that permitted sources of increased water temperatures and sediment loading, if they occur in the future, will be attributable only to construction-related storm water discharges.

Final Temperature WLA Specific to the Department
As stated above, U.S. EPA stated that there are no point source discharges for thermal pollution, so the wasteload allocation for all point source discharges (including the Department) is set to zero.

Final Temperature Deadlines
U.S. EPA did not specify deadlines for implementation.

Department's Temperature Contribution (relative contribution to pollutant loading)
U.S. EPA considers all point sources of temperature pollution to be insignificant for purposes of this TMDL.

Klamath River in California Temperature, Dissolved Oxygen, Nutrients, and Microcystin TMDL, December 28, 2010

Final Temperature WLA
The Iron Gate Fish Hatchery was identified as the only point-source heat load in the Klamath River watershed: The interstate water quality objective for temperature prohibits the discharge of thermal waste to the Klamath River, and therefore the waste load allocation for Iron Gate Hatchery is set to zero, as monthly average temperatures. The TMDL addresses elevated temperatures from natural and non-point anthropogenic sources. The non-point sources include: (1) excess solar radiation, expressed as its inverse, shade; (2) heat loads associated with increased sediment loads; (3) heat loading from impoundments; and (4) heat loads from Oregon. The assigned load allocations for temperature are expressed as follows (as adapted from Table 4-15 in the basin plan):

Source	Allocation
Excess Solar Radiation (expressed as effective shade)	The shade provided by topography and full potential vegetation conditions at a site, with an allowance for natural disturbances such as floods, wind throw, disease, landslides, and fire.
Increased Sediment Loads	Zero temperature increase caused by substantial human-caused sediment-related channel alterations.
Impoundment Discharges	Zero temperature increase above natural temperatures[1]
Excess Solar Radiation	The shade provided by topography and full potential

Source	Allocation
(expressed as effective shade)	vegetation conditions at a site, with an allowance for natural disturbances such as floods, wind throw, disease, landslides, and fire.
Increased Sediment Loads	Zero temperature increase caused by substantial human-caused sediment-related channel alterations.[2]
Impoundment Discharges	Zero temperature increase above natural temperatures

1. Natural temperatures are those water temperatures that exist in the absence of anthropogenic influences, and are equal to natural background.
2. Substantial human-caused sediment-related channel alteration: "A human-caused alteration of stream channel dimensions that increases channel width, decreases depth, or removes riparian vegetation to a degree that alters stream temperature dynamics and is caused by increased sediment loading."

Final Temperature WLA Specific to the Department
The Department was not assigned a waste load allocation for temperature.

Final Deadlines
No deadlines were specified.

Department's Pollutant Contribution (relative contribution to pollutant loading)
The Department is listed as a source of thermal pollution: however, the relative magnitude of the Department's contribution to thermal pollution was not specified or estimated.

Navarro River Sediment and Temperature TMDL, U.S. EPA Established on December 27, 2000

Final Temperature WLA
U.S. EPA states that there are no known point sources of heat to the Navarro or its tributaries. The source analysis therefore focused on non-point sources. The wasteload allocation any for point sources which might be present is thus presumed to set to zero.

The Navarro River TMDLs for temperature and sediment are based on separate analyses. Reduced sediment loads could be expected to lead to increased frequency and depth of pools and to reduced wetted channel width/depth ratios. These changes would tend to result in lower stream temperatures overall and in more lower-temperature pool habitat.

Improvements in stream temperature that may result from reduced sedimentation were not considered in the analysis.

Final Temperature WLA Specific to the Department
The Department is not specifically mentioned as a source of pollutant loading for temperature, therefore the wasteload allocation for the Department is presumed to be set to zero.

Final Temperature Deadlines
U.S. EPA did not specify deadlines for implementation of this TMDL.

Department's Temperature Contribution (relative contribution to pollutant loading**)**

As mentioned above, neither the Department nor other point sources are identified as sources of pollutant loading for temperature or sediment, so U.S. EPA has determined that these potential sources are insignificant in this TMDL.

Scott River Sediment and Temperature TMDL, August 11, 2006

Final Temperature WLA
U.S. EPA states that there are no point sources for temperature related discharges within the area encompassed by this TMDL, so the waste load allocation is set to zero.

Final Temperature WLA Specific to the Department
U.S. EPA directed Regional Water Board staff shall evaluate the effects of the Department's state-wide NPDES permit, storm water permit, and waste discharge requirements (collectively known as the Department's Storm Water Program) by September 8, 2008. The evaluation shall determine the adequacy and effectiveness of the Department's Storm Water Program in preventing, reducing, and controlling sediment waste discharges and elevated water temperatures in the North Coast Region, including the Scott River watershed.

Final Temperature Deadlines
U.S. EPA did not establish specific wasteload allocations for point sources, so the wasteload allocations are set to zero.

Department's Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the temperature pollutant loading is not known.

Shasta River Dissolved Oxygen and Temperature TMDL, U.S. EPA Established on December 26, 2007

Final Temperature WLA
There are no point source heat loads in the Shasta River watershed, and therefore no waste load allocations apply.

Final Temperature WLA Specific to the Department
The Department was not assigned a waste load allocation for temperature: as stated above, there are no point sources of heat loads in the Shasta River watershed.

Final Deadlines
No deadlines were specified.

Department's Pollutant Contribution
The Department's relative contribution to the temperature pollutant loading in Shasta River Watershed is not known.

I. Chloride Pollutant Category

General Description of Pollutant Category
The Department is named as a responsible party in the Santa Clara River watershed chloride TMDL.

Sources of Pollutant & How it Enters the Waterway
Chloride in the Santa Clara River watershed is principally due to increased salt loadings from imported water and the use of self-regenerating water softeners.

Watershed Contribution
The Department does not import water and does not use self-generating water softeners.

Control Measures
The Department is expected to be in compliance with the chloride WLA without any additional control actions as long as the Department is in compliance with this Order.

LOS ANGELES REGION CHLORIDE TMDLS

Santa Clara River Reach 3 Chloride TMDL, U.S. EPA Established on June 18, 2003

There are two major sources that discharge into Reach 3, the Santa Paula and Fillmore WRPs, that comprise approximately 80 percent of the total estimated load under flow conditions.

The Department is one of five minor point sources that discharge to Reach 3. Although the Department is a minor source, the minor discharges to the Santa Clara River are typically related to dewatering and construction projects that are covered by other NPDES permits.

Final Chloride WLA

Estimated Chloride Loads to Reach 3 Under Low Flow Conditions

Point Sources	Waste Load Allocation (mg/L)
Fillmore WRP	80
Santa Paula WRP	80
MS4 Stormwater	80

Point Sources	Waste Load Allocation (mg/L)
Construction General Permit	80
Department	80
Other Minor Permits	80
NonPoint Sources	**Load Allocation** (mg/L)
Other Tributaries to Reach 3*	80
Sespe Creek	40
Santa Clara Reach 4	100
Total	**80**
* Although other tributaries to Reach 3 were not included in the linkage analysis above, their contributions to Reach 3 chloride loads and flows are believed to be insignificant.	

Final Chloride WLA Specific to the Department
Specific WLA for the Department is 80 mg/L.

Final Chloride Deadlines
U.S. EPA established this TMDL and it became effective on June 18, 2003. The Department is expected to be in compliance with the Chloride WLA without any additional control actions as long as the Department is in compliance with this Order.

Department's Chloride Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the chloride pollutant loading in the Santa Clara River Reach 3 is not known.

Upper Santa Clara River Chloride TMDL, April 6, 2010
The principal source of chloride in the Upper Santa Clara River is discharges from the Saugus WRP and Valencia WRP, which are estimated to contribute 70 percent. These sources of chloride accumulate and degrade groundwater in the lower area east of Piru Creek in the basin.

Final Chloride WLA
Other minor NPDES discharges receive conditional WLAs shown below.

Reach	Concentration-based Conditional WLA for Chloride (mg/L)
6	150 (12-month Average)
	230 (Daily Maximum)
5	150 (12-month Average)
	230 (Daily Maximum)
4B	117 (3-month Average)
	230 (Daily Maximum)

Final Chloride WLA Specific to the Department
The Department is assigned the above concentration based WLAs.

Final Chloride Deadlines
The interim and final WLAs for TDS and sulfate contained in the Basin Plan Amendment are essentially established for the principal sources. The Department does not import water and does not use self-generating water softeners. The Department is expected to be in compliance with the Chloride WLA without any additional control actions as long as the Department is in compliance with this Order.

Department's Chloride Contribution (relative contribution to pollutant loading)
The Department's relative contribution to the chloride pollutant loading in the Upper Santa Clara River is not known.

Region Specific Requirements

The Regional Water Boards have identified specific areas within their Regions requiring special conditions (Attachment V). These special conditions are needed to account for the unique value of the resource(s) within the Region, special pollutant or pollution control issues within the Region, or storm water management and compliance issues applicable to the Region. These special requirements need not be applied statewide but are applicable only to Department discharges within the Regions as specified in Attachment V. Region specific requirements are included for the North Coast, San Francisco Bay, and Lahontan Regional Water Boards.

North Coast Region

1. Sediment. Region specific requirements addressing sediment discharges in sediment-impaired watersheds in the North Coast Region are based on the "Total Maximum Daily Load Implementation Policy Statement for Sediment-Impaired Receiving Waters in the North Coast Region," as included in the Basin Plan and Resolution No. R1-2004-0087. The Policy requires the use of NPDES permits and waste discharge requirements to achieve compliance with sediment-related water quality standards. The requirements in Attachment V to systematically inventory, prioritize, control, monitor, and adapt, as well as to include a time schedule in the annual District Workplan, are consistent with region-wide excess sediment control regulations.

   The sediment requirements are intended to reduce the adverse impacts of excessive sediment discharges to sediment-impaired waters, including impacts to the cold water salmonid fishery and the COLD, COMM, RARE, SPWN, and MIGR beneficial uses. The beneficial uses associated with the cold water salmonid fishery are often the most sensitive to sediment discharges. Risks to salmonids from excessive sediment are well documented in scientific literature and include:

   - the filling of pools and subsequent reduction in available in-stream salmonid habitat;
   - burial of spawning gravels;
   - gill abrasion and death due to extremely high turbidity levels;
   - reduction in macroinvertebrate populations available as food for salmonids; and

- alterations in channel geometry to a wider, shallower channel which is subject to increases in solar heating.

2. Riparian Vegetation Requirements. Region specific requirements to protect and restore riparian vegetation are based on the Water Quality Objective for temperature. The temperature objective states, in part, that the natural receiving water temperature shall not be altered unless it can be demonstrated that such alteration does not adversely affect beneficial uses. Removal of riparian vegetation associated with Department activities has the potential to decrease shade, increase solar radiation, and raise water temperatures, and may therefore cause an exceedance of the temperature objective.

   The requirements in Attachment V direct the Department to protect and restore riparian vegetation to the greatest extent feasible. In many cases, activities involving the removal of riparian vegetation will require a 401 water quality certification, which will contain more specific conditions regarding the removal and/or establishment of vegetation.

   These requirements are intended to prevent alterations to natural receiving water temperature from Department activities. The primary mechanism in which riparian vegetation influences water temperature is through the shade. Loss of riparian vegetation and the shade that it provides can lead to increased solar radiation, hotter water temperatures, and adverse impacts to beneficial uses. The beneficial uses most sensitive to increases in water temperature are often those associated with the cold water salmonid fishery. Risks to salmonids are well documented in scientific literature and include:

   - reduced feeding rates and growth rates;
   - impaired development of embryos and alevins;
   - changes in the timing of life history events, such as upstream migration, spawning, and seaward migration;
   - increased disease infection rates and disease mortality; and
   - direct mortality.

San Francisco Bay Region

The Urban Runoff Management, Comprehensive Control Program section of the Basin Plan (Chapter 4.14) requires municipalities and local agencies, including the Department, to address existing water quality problems and prevent new problems associated with urban runoff through the development and implementation of a comprehensive control program focused on reducing current levels of pollutant loading to storm drains to the maximum extent practicable.

The Highway Runoff Control Program section of the Basin Plan (Chapter 4.14.2) requires the Department to manage and monitor pollutant sources from its ROW through development and implementation of a highway runoff management plan.

The Basin Plan comprehensive and highway runoff program requirements are designed to be consistent with federal regulations (40 C.F.R., §§ 122-124) and are implemented through issuance of NPDES permits to owners and operators of MS4s. A summary of the regulatory provisions is contained in Title 23 of the California Code of Regulations at section 3912. The Basin Plan identifies beneficial uses and establishes water quality objectives for surface waters in the Region, as well as effluent limitations and discharge prohibitions intended to protect those uses. The region-specific requirements in Attachment V of this Order implement the plans, policies, and provisions of the Regional Water Board's Basin Plan.

1. Trash Load Reduction.

    a. Legal Authority. The following legal authorities apply to the trash load reduction requirements specified in Attachment V:

        - Clean Water Act sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 Code of Federal Regulations sections 122.26(d)(2)(i)(B, C, D, E, and F) and 40 Code of Federal Regulations section 122.26(d)(2)(iv).
        - Federal NPDES regulations 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B) requires, "shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer."
        - Federal NPDES regulation 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(2) requires, "a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens."
        - Federal NPDES regulation 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(3) requires, "a description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water."
        - Federal NPDES regulations 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(4) requires, "a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer."
        - San Francisco Bay Basin Plan, Chapter 4 – Implementation, Table 4-1 Prohibitions, Prohibition 7, which is consistent with the State Water Board's Enclosed Bays and Estuaries Policy, Resolution 95-84, prohibits the discharge of rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas. This prohibition was adopted by the Regional Water Board in the 1975 Basin Plan, primarily to protect recreational uses such as boating.

b. Extent, Impacts, and Conclusions. Trash[25] and litter are a pervasive problem near and in creeks and in San Francisco Bay having major impacts on the environment, including aquatic life and habitat in those waters. Ubiquitous, unacceptable levels of trash in waters of the San Francisco Bay Region warrant a comprehensive and progressive program of education, warning, and enforcement, and certain areas warrant consideration of structural controls and treatment. Trash in urban waterways of coastal areas can become *marine debris*, known to harm fish and wildlife and cause adverse economic impacts.[26] It accumulates in streams, rivers, bays, and ocean beaches throughout the San Francisco Bay Region, particularly in urban areas.

Trash adversely affects numerous beneficial uses of waters, particularly recreation and aquatic habitat. Not all litter and debris delivered to streams are of equal concern with regard to water quality. Besides the obvious negative aesthetic effects, most of the harm of trash in surface waters is to wildlife in the form of entanglement or ingestion.[27,28] Some elements of trash exhibit significant threats to human health, such as discarded medical waste, human or pet waste, and broken glass.[29] Also, some household and industrial wastes can contain toxic batteries, pesticide containers, and fluorescent light bulbs containing mercury. Large trash items such as discarded appliances can present physical barriers to natural stream flow, causing physical impacts such as bank erosion. From a management perspective, the persistent accumulation of trash in a waterbody is of particular concern, and signifies a priority for prevention of trash discharges. Also of concern are trash *hotspots* where illegal dumping, littering, and/or accumulation of trash occur.

The narrative water quality objectives applicable to trash are Floating Material (Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses), Settleable Material (Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses), and Suspended Material (Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses).

[25] For the purposes of this provision, trash is defined to consist of litter and particles of litter. Man-made litter is defined in California Government Code section 68055.1 (g): *Litter* means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing.

[26] Moore, S.L., and M.J. Allen. 2000. Distribution of anthropogenic and natural debris on the mainland shelf of the Southern California Bight. *Mar. Poll. Bull*. 40:83-88.

[27] Laist, D. W. and M. Liffmann. 2000. *Impacts of marine debris: research and management needs*. Issue papers of the International Marine Debris Conference, Aug. 6-11, 2000. Honolulu, HI, pp. 16–29.

[28] McCauley, S.J. and K.A. Bjorndahl. 1998. Conservation implications of dietary dilution from debris ingestion: sublethal effects in post-hatchling loggerhead sea turtles. *Conserv. Biol*. 13(4):925-929.

[29] Sheavly, S.B. 2004. *Marine Debris: an Overview of a Critical Issue for our Oceans*. 2004 International Coastal Cleanup Conference, San Juan, Puerto Rico. The Ocean Conservancy.

The Regional Water Board, at its February 11, 2009 hearing, adopted a resolution proposing that 26 waterbodies be added to the 303(d) list for trash. The adopted Resolution and supporting documents are contained in Attachment 10.1 – 303(d) Trash Resolution and Staff Report, February 2009.

Data collected by Regional Water Board staff using the SWAMP Rapid Trash Assessment (RTA) Protocol,[30] over the 2003–2005 period,[31] suggest that the current approach to managing trash in waterbodies is not reducing the adverse impact on beneficial uses. The levels of trash in the waters of the San Francisco Bay Region are high, even with the Basin Plan prohibitions and potentially large fines. During dry weather conditions, a significant quantity of trash, particularly plastic, is making its way into storm drains and being transported downstream to San Francisco Bay and the Pacific Ocean. On the basis of 85 surveys conducted at 26 sites throughout the Bay Area, staff have found an average of 2.93 pieces of trash for every foot of stream, and all the trash was removed when it was surveyed, indicating high return rates of trash over the 2003–2005 study period.

A number of key conclusions can be made from the RTA study:

- Lower watershed sites have higher densities of trash.
- All watersheds studied in the San Francisco Bay Region have high levels of trash.
- There are trash source hotspots, usually associated with parks, schools, or poorly kept commercial facilities.
- Dry season deposition of trash, associated with wind and dry season runoff, contributes measurable levels of trash to downstream locations.
- The majority of trash is plastic at lower watershed sites where trash accumulates in the wet season. This suggests that urban runoff is a major source of floatable plastic found in the ocean and on beaches as marine debris.
- Parks that have more evident management of trash by city staff and local volunteers, including cleanup within the creek channel, have measurably less trash and higher RTA scores.

c. Trash Reduction measures shall demonstrate compliance through timely implementation of controls in all high trash generating areas for the prohibition of discharge of trash and include the following:

- Implementation of full capture systems, treatment controls, and/or enhanced maintenance controls for storm drains or catchment that service the significant trash generating areas.
- Coordinate with neighboring MS4 permittees to construct, operate and maintain those controls listed above.

[30] SWAMP Rapid Trash Assessment Protocol, Version 8
[31] SWAMP S.F. Bay Region Trash Report, January 23, 2007

- Assess for the effectiveness of enhanced maintenance controls implemented in high generating trash areas, as well as coordination with local municipalities.
- Abate trash from construction and reconstruction projects.
- Include trash capture devices on the outlets of treatment systems for new and redeveloped highway projects to achieve the full trash capture standard.
- Report in each Annual Report, as part of the TMDL STATUS REVIEW REPORT a per District summary of trash reduction controls and their effectiveness.

d. Costs of Trash Control. Costs for either enhanced trash management measure implementation or installation and maintenance of trash capture devices are significant, but when spread over several years, and when viewed on a per-capita basis, are reasonable. To meet Basin Plan and local MS4 requirements, trash capture devices have already been installed by other municipalities in the Bay Area.

   Cost information on various trash capture devices is included in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) BMP Trash Toolbox (July 2007). The Toolbox contains cost information for both trash capture devices and enhanced trash management measure implementation, covers a broad range of options, and also discusses operation and maintenance costs.

2. Storm Water Pump Stations. In late 2005, Regional Water Board staff investigated an occurrence of low salinity and dissolved oxygen conditions in Old Alameda Creek (Alameda County) and Alviso Slough (Santa Clara County). In the case of Old Alameda Creek, discharge of black-colored water from the Alvarado pump station to the slough was observed at the time of the data collection on September 7, 2005, confirming dry weather urban runoff as the source of the violations of the five (5) mg/L dissolved oxygen water quality objective. Such conditions were measured again on September 21, 2005.

   On October 17, 2005, waters in Alviso Slough were much less saline than the salt ponds and had the lowest documented dissolved oxygen of the summer, suggesting a dry weather urban runoff source. The dissolved oxygen sag was detected surface to bottom at 2.3 mg/L at a salinity of less than one part per thousand (ppt), mid-day, when oxygen levels should be high at the surface. The sloughs have a typical depth of six feet.

   Board staff's investigations of these incidents, documented in a memorandum,[32] found that "storm water pump stations, universally operated by automatic float triggers, have been confirmed as the cause in at least one instance, and may represent an overlooked source of controllable pollution to the San Francisco Bay Estuary and its tidal sloughs... [that] discharges of dry weather urban runoff from these pump stations are not being managed to protect water quality, and [that] surveillance monitoring has detected measurable negative water quality consequences of this current state of pump station management."

[32] Internal Water Board Memo dated December 2, 2005: "Dry Weather Urban Weather Urban Runoff Causing or Contributing to Water Quality Violations: Low Dissolved Oxygen (DO) in Old Alameda Creek and Alviso Slough."

Pump station discharges of dry weather urban runoff can cause violations of water quality objectives. These discharges are controllable point sources of pollution that are virtually unregulated. The Regional Water Board has determined that the measures included in Attachment V are necessary to address these discharges and water quality problems.

Lahontan Region

1. The Lahontan Basin Plan encourages the infiltration of storm water runoff to treat pollutants in discharges and mitigate the effects of increased runoff to surface waters from the addition of impervious surfaces. The 20-year, one-hour design storm has been historically applied and accepted as an effective requirement to mitigate discharges of storm water to surface waters in the sensitive high mountain watersheds of the Lahontan Region. Water Board staff has estimated that facilities designed to treat or infiltrate the 20-year, one-hour storm event effectively capture approximately 85 percent of the average annual runoff volume in the Lake Tahoe Basin. However, it is recognized that the natural environment provides adequate infiltration and/or treatment in areas where there is little or no connectively to surface waters. Therefore the Lahontan Water Board encourages the Department to focus implementation of storm water treatment facilities in those areas that discharge directly to surface waters to maximize water quality benefits. This requirement is applicable to existing highways and facilities in the Mammoth Lakes Area Hydrologic Unit.

2. The Natural Environment as Treatment (NEAT) study has helped identify the priority areas within the Lake Tahoe Hydrologic Unit where storm water treatment and control measure implementation has the most benefit for water quality protection. Similarly, the NEAT study has helped identify those areas where there may be limited water quality benefits associated with implementing structural treatment and control measures. The NEAT approach is also applicable in other areas. This provision is needed to focus available resources on the areas where the most water quality benefit can be achieved.

3. The October 15 to May 1 grading prohibition is necessary to reduce erosion and sedimentation from disturbed areas within the sensitive high elevation areas within the Lahontan Region. These are areas where snow fall restricts the ability to control storm water pollution through the winter months. This requirement mitigates winter erosion issues by requiring disturbed soil areas to be winterized prior to the onset of snow, and allows for exceptions where there is a compelling need.

Regional Water Board Authorities

Regional Water Boards and their staff will oversee implementation and compliance with this Order. As appropriate, they will review reports, conduct inspections, and take enforcement actions on violations of this Order.

Cost of Compliance and Other MEP Considerations

General Cost Considerations in Storm Water Regulation and Management

The Department will incur incremental costs in implementing this Order, such as the cost of complying with the Order's storm water treatment BMP, post-construction, hydromodification, Low Impact Development, and monitoring and reporting requirements. The Department will also incur additional costs in following the iterative process as required by the Order. The cost of complying with TMDL waste load allocations is not considered since TMDLs are not subject to the MEP standard.

In adopting Order WQ 2000-11, the State Water Board found that cost is a relevant factor, among others such as feasibility and public acceptance that should be considered in determining MEP. The State Water Board considered the costs in preparing this Order and has determined that the costs reflect the MEP standard. The State Water Board further found in adopting Order WQ 2000-11 that in considering the cost of compliance, it is also important to consider the costs of impairment; that is, the negative impact of pollution on the economy and the positive impact of improved water quality. So, while it is appropriate and necessary to consider the cost of compliance, it is also important to consider the larger economic impacts of implementation of the storm water management program.

Many studies have been undertaken to assess the cost of compliance with storm water permits. Most studies have focused on municipal programs as opposed to "linear MS4s" or Departments of Transportation. A study by the Los Angeles Regional Water Board reported wide variability in the cost of compliance among municipal permit holders which was not easily explained (LARWQCB, 2003).

In 1999, U.S. EPA reported on multiple studies it conducted to determine the cost of urban runoff management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be $9.16 per household. U.S. EPA also studied 35 Phase I municipalities, finding costs to be similar to those anticipated for Phase II municipalities, at $9.08 per household annually (U.S. EPA, 1999a).

A program cost study was also conducted by the Los Angeles Regional Water Board, where program costs reported in the municipalities' annual reports were assessed. The Water Board estimated the average per household cost to implement the MS4 program in Los Angeles County was $12.50.

The State Water Board also commissioned a study by California State University, Sacramento to assess costs of the Phase I MS4 program. This study is current and includes an assessment of costs incurred by the City of Encinitas in implementing its program. Annual cost per household ranged from $18-46, with the City of Encinitas representing the upper end of the range (SWRCB, 2005). The cost of the City of Encinitas' program is understandable, given the city's coastal location, reliance on tourism, and additional costs resulting from a consent decree with environmental groups regarding its program. For these reasons, as well as the general recognition the city receives for implementing a superior program, the city's program cost can be considered as the high end of the spectrum for municipal storm water management program costs.

The California Department of Finance (Finance, 2003) conducted a comprehensive review of the Department's storm water program. Finance noted widely divergent compliance cost estimates produced by regulators and environmental organizations versus consultant's estimates. Finance also had difficulty identifying compliance costs because of the way storm water activities are integrated with other functions and allocated among the different divisions within the Department, and because they are funded from different sources. Finance made three findings related to cost:

- The projected costs of compliance are escalating.
- Storm water compliance costs are integrated into many of the Department's business processes and are not accurately tracked.
- As storm water compliance costs increase, the amount of funding available for highway projects decreases, which reduces the number of projects that can be constructed.

The review concluded that balancing costs and benefits is a difficult policy decision and there should be a recognition of the trade-offs associated with resource allocation decisions given the Department's limited resources.

It is important to note that storm water program costs are not all attributable to compliance with MS4 permits. Many program components and their associated costs existed before any MS4 permits were issued. For example, for the Department, storm drain maintenance, street sweeping and trash/litter collection costs cannot be solely or even principally attributable to MS4 permit compliance since these practices have long been implemented before the MS4 permit was issued. Even many structural BMPs (erosion protection, energy dissipation devices, detention basins etc.) are standard engineering practice for many projects and are not implemented solely to comply with permit provisions. Therefore, the true cost resulting from MS4 permit requirements is some fraction of the cost to operate and maintain the highway system.

The California State University, Sacramento study found that only 38 percent of program costs are new costs fully attributable to MS4 permits. The remainder of program costs was either pre-existing or resulted from enhancement of pre-exiting programs (SWRCB, 2005). The County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement its Drainage Area Management Plan is less than 20 percent of the total budget. The remaining 80 percent is attributable to pre-existing programs (County of Orange, 2007). Any increase in cost to the Department by the requirements of this Order will be incremental in nature.

Storm water management programs cannot be considered solely in terms of their costs. The programs must also be viewed in terms of their value to the public. For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by U.S. EPA to be $158-210 per household (U.S. EPA, 1999a). This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study corroborates U.S. EPA's estimates, reporting annual

household willingness to pay for statewide clean water to be $180 (SWRCB, 2005). Though these costs may be assessed differently at the state level (for the Department) than at the municipal level, the results indicate that there is public support for storm water management programs and that costs incurred by the Department to implement its storm water management program remain reasonable.

It is also important to consider the cost of not implementing a storm water management program. Urban runoff in southern California has been found to cause illness in people bathing near storm drains (Haile et al.,1996). A study of south Huntington Beach and north Newport Beach found that an illness rate of about 0.8 percent among bathers at those beaches resulted in about $3 million annually in health-related expenses (Lin, 2005). Extrapolation of such numbers to the beaches and other water contact recreation areas in the state would increase these numbers significantly.

Storm water runoff and its impact on receiving waters also impacts the tourism industry. The California Travel and Tourism Commission (2009) estimated that in 2008 direct travel spending in California was $97.6 billion directly supporting 924,000 jobs, with earnings of $30.6 billion. Travel spending in 2008 generated $1.6 billion in local taxes and $2.8 billion in state taxes. Impacts on tourism from storm water runoff (e.g. beach closures) can have a significant impact on the economy. The experience of Huntington Beach provides an example of the potential economic impact of poor water quality. Approximately eight miles of Huntington Beach were closed for two months in the middle of summer of 1999, impacting beach visitation and the local economy.

Cost Considerations Relative to the Department
In written comments and before the Board, the Department has stated that the requirements of the first public drafts would impose prohibitive costs on the Department at a time of economic difficulty and limited resources. State Water Board staff has carefully considered the Department's comments and revised the draft Tentative Order to continue to address critical water quality problems in consideration of the cost of compliance.

State Water Board staff completed a Draft Tentative Order and submitted it to the Department, U.S. EPA, and the Natural Resources Defense Council for informal stakeholder review in the fall of 2010. Further review was provided by the Regional Water Boards. Staff revised the Draft Tentative Order to address the informal comments received and released it for public review on January 7, 2011 (Draft Tentative Order). Approximately 330 comments from 16 commenters were received on the Draft Tentative Order, and a public hearing was held on July 19, 2011. Staff further revised the Draft Tentative Order and released a Revised Draft Tentative Order on August 18, 2011 (Revised Draft Tentative Order). Approximately 220 comments from 33 commenters were received on the Revised Draft Tentative Order, and a State Water Board workshop was held on September 21, 2011. In each set of comments and before the Board, the Department expressed significant concerns with the cost of compliance with the Tentative Orders.

On October 6, 2011, the California Senate Select Committee on California Job Creation and Retention held a hearing on the economic impacts of the State Water Board's three general or statewide storm water permits that were under renewal: the Phase II Small MS4 permit, the Industrial General Permit, and the Department's MS4 permit. The Executive Director of the State Water Board testified at the hearing that the comments regarding cost of compliance with the permits were being considered carefully and that the three permits required substantial revision to address the comments. State Water Board staff held bi-weekly meetings with the Department in October through December 2011 to discuss their concerns. Revisions resulting from these meetings are contained in the Second Revised Draft Tentative Order which was released for public review on April 27, 2012 (Second Revised Draft Tentative Order).

This section is a general discussion of the cost of compliance with the Second Revised Draft Tentative Order and of current expenditures by the Department to comply with the existing permit (Order 99-06-DWQ) (Existing Permit). It also discusses the more significant changes between the Revised Draft and Second Revised Draft Tentative Orders.

It is very difficult to precisely determine the true cost of implementation of the Department's storm water management program as affected by this Order. Due to the extensive, distributed nature of the Department's MS4, permit requirements that involve an unknown level of implementation or that depend on environmental variables that are as yet undefined, and the difficulty in isolating program costs attributable to permit compliance, only general conclusions can be drawn from this information.

The Department has made a number of estimates of the cost of complying with the Draft and Revised Draft Tentative Orders. Generally, the Department's estimates are based on worst-case scenarios or the most restrictive interpretation of the Tentative Orders. In a presentation to a meeting of the American Association of State Highway and Transportation Officials (AASHTO) on June 22, 2011,[33] the Department's Chief Environmental Engineer, Scott McGowen estimated the annual cost of compliance at $281million. This estimate was based on the January 7, 2011 Draft Tentative Order. At the July 19, 2011 public hearing, the Department estimated the annual compliance cost at approximately $450 million, based on the same January 7, 2011 Draft Tentative Order. At the September 21, 2011 State Water Board workshop, the Department estimated an annual compliance cost of $904 million, based on the requirements of the August 18, 2011 Revised Draft Tentative Order. It should be noted that the August 18 draft removed or modified a number of provisions that were expected to reduce the cost of compliance.

Annual expenditures for the Department's storm water management program under the Existing Permit (DWQ 99-06) are provided in the Department's annual reports. For fiscal years 2007-08 through 2010-11, the Department reported annual personal services and

[33] Caltrans NPDES Tentative Order, Natural Systems and Ecological Communities Subcommittee at the National Planning and Environmental Practitioners Meeting. AASHTO, June 22, 2011.

operating expenses of $93.8 million, $93.6 million, $75.2 million, and $89.2 million. These figures do not include the cost of capital improvements needed to comply with the permit.

State Water Board staff estimated the capital expenditures for the Existing Permit in two ways. First, the Department provided the number of post-construction storm water treatment BMPs installed in 2009-10 and 2010-11 along with typical unit costs for each BMP. In 2007-08, the Department spent approximately $74.7 million for 396 treatment BMPs, $104.5 million in 2009-10 for 667 treatment BMPs, and $75.7 million in 2010-11 for 506 treatment BMPs. The Department indicated that anomalies in the data for 2008-09 make them unreliable and they are therefore not included. The Department also indicated that the unit cost factors do not include costs for design, ROW and other related elements. The estimates therefore can be considered on the low side.

Second, capital expenditures were estimated from budget appropriations from the Department's State Highway Operation and Protection Program (SHOPP) as reported in the 2008-09 annual report. The SHOPP account is the primary source of funding for storm water-related capital expenses. Storm water compliance costs are not consistently reported in the annual reports; however, the 2008-09 annual report contains sufficient information to make an estimate. The capital value of the SHOPP "storm water mitigation element" for fiscal years 2009-10 through 2012-13 is $640 million, including capital outlay support, or about $160 million per year.

Using average personal services and operating expenses for the last four years ($88 million) and average annual programmed SHOPP funding, the Department's expenditures to comply with the Existing Permit amount to approximately $248 million.

As stated above, the Department has estimated cost of compliance with the Draft Tentative and Revised Draft Tentative Orders variously at $281 to $904 million. These estimates are based on "worst case scenarios" and on the most restrictive interpretations of the Orders' requirements. In preparing the Second Revised Tentative Order, staff worked to provide greater clarity and certainty to the Department on the scope of permit obligations and to eliminate compliance costs that were not expected to yield significant water quality benefits. With the exception of a lowering of the post-construction treatment threshold for non-highway facility projects from 10,000 square feet of new impervious surface to 5,000 square feet[34], no requirements have been added to the Second Revised Draft Tentative Order that would materially increase the cost of compliance over the Revised Draft Tentative Order. In contrast, a number of substantive requirements have been removed, replaced or modified from the Revised Draft Tentative Order with the goal of focusing the Department's limited resources on the most significant water quality issues. These changes are expected to result in a lower cost of compliance with the Second Revised Draft Tentative Order as compared to the Revised Tentative Order. These include:

[34] The threshold was lowered for consistency with the draft statewide Phase II Small MS4 General Permit and with regional MS4 permits.

1. Water quality monitoring program.
   a. Replaced random compliance-driven monitoring approach with a tiered approach focusing on ASBS and TMDL watersheds, and deferring to the monitoring requirements specified in the ASBS Special Protections and TMDLs.
   b. Deleted sampling pool, water quality action levels, and response process flow chart.
   c. Removed 29 constituents from the monitoring constituent list.
   d. Limited the monitoring for new constituents to TMDL watersheds.
   e. For sites with existing monitoring data, limited BMP retrofits to 15 percent of the highest priority sites.
   f. Deleted the long-term monitoring program.
   g. Deleted maintenance facility compliance monitoring.

2. Project Planning and Design.
   a. Raised the treatment threshold for highway projects from 5,000 square feet of new impervious surface to one acre.
   b. Deleted the requirement for pilot Low Impact Development retrofits and effectiveness evaluations.

3. Hydromodification.
   a. Removed requirement for programmatic stream stability assessments and a retrofit implementation schedule.
   b. Raised the risk assessment threshold for non-highway facility projects from 10,000 square feet of new impervious surface to one acre.

4. Region Specific Requirements – removed, modified or scaled back requirements for the San Francisco Bay, Los Angeles, Central Valley, Lahontan, and San Diego Regional Water Boards with the goal of maximizing statewide consistency of requirements for the Department.

5. Construction Program – replaced requirement to inspect contractor operations outside the ROW with a requirement to include compliance language in its construction contracts.

6. TMDLs – Revised Attachment IV to more precisely identify the TMDLs applicable to the Department and shifted responsibility to prepare TMDL implementation plans from the Department to the Regional Water Boards.

7. ASBS – Added Attachment III to identify priority Department ASBS outfalls for installation of controls.

8. Maintenance Program.
   a. Deleted the requirement to report the amount of waste and debris removed from drainage inlets.
   b. Replaced the site-by-site characterization of waste management sites with a programmatic characterization.
   c. Deleted the requirement to prepare and implement a storm drain system survey plan.

d. Replaced quantitative measurements of trash and litter removal with estimated annual volumes.

9. Non-Storm Water.
   a. Deleted surveillance monitoring of agricultural return flows.
   b. Deleted characterization monitoring of slope lateral drains.

Though no firm conclusions or precise estimates can be drawn from this analysis, it is expected that the revisions to the Revised Draft Tentative Order will significantly reduce the cost of compliance.

ATTACHMENT I
Incident Report Form

Type of incident: ☐ **Field** ☐ **Administrative**	
Name of person completing this form:	Person's agency name and address:
_____	Person's phone and e-mail:

For Field incidents complete Sections 1 and 3. For Administrative incidents complete Section 2. See Non-Compliance Notification Schedule on Page 2.

SECTION 1: Field incidents

Date(s) and time(s) of incident:	1. Start date / time:
	2. End date / time:
Location of Incident:	3. Nearest city / town:
	4. Street address / nearest cross street:
	5. Latitude / Longitude:
County: _____	6. Additional location detail:
Materials involved in the incident: (use Comments Section below if necessary):	6. Name(s) of material(s) discharged:
	7. Approximate quantity discharged (specify units):
	8. Approximate concentration of material:
Discharge to surface water? ☐ **No** ☐ **Yes** If yes, answer questions 9-11	9. Name of waterbody:
	10. Apparent effects (if any) on waterbody:
	11. Estimated extent of impacts to waterbody:
Was CalEMA notified? ☐ **No** ☐ **Yes** If yes, answer questions12-14	12. Date and time of notification:
	13. Name of person making the notification:
	14. Phone number of person making the notification:
Was the Regional Water Board (RWB) notified? ☐ **No** ☐ **Yes** If yes, answer questions 15-17	15. Name of RWB contact:
	16. RWB contact's phone / e-mail:
	17. Name of person making the notification:
Were downgradient communities / people notified? ☐ **No** ☐ **Yes** If yes, answer questions 18 - 20	18. Date and time of notification:
	19. Name of person making the notification:
	20. Phone number of person making the notification:
	21. Name of downgradient community/ person:

	Field Non-Compliance (check all that apply**)**
	Lack of BMP(s), ineffective implementation of BMP(s), or failure of BMP(s) resulted in a discharge of pollutants to surface water.
	Monitoring data indicates an exceedance of a defined standard. Defined standards include TMDL Waste Load Allocations, and water quality standards in the Water Quality Control Plans and promulgated policies and regulations of the State and Regional Water Boards, including California Ocean Plan limitations and prohibitions.
	Discharge of prohibited non-storm water.
	Failure to comply with Facility Pollution Prevention Plan (FPPP) requirements.
	Failure to comply with inspection, monitoring, and reporting requirements and protocols.
	Other (describe - use Comments Section below if needed):

SECTION 2: Administrative Non-Compliance (check all that apply**)**

	Failure to submit reports or documents required by the Permit and/or SWMP, failure of timely submittal, and/or failure to submit required information.
	Failure to develop and/or maintain a site-specific FPPP or to implement any other procedural requirement of the Permit.
	Other (describe - use Comments Section below if needed):

SECTION 3: Description of Incident

Activities in the area prior to the incident (If any):
Initial assessment of any impact caused by the discharge (If any):
Samples collected and analyses requested (If any):
Steps taken to mitigate damage and prevent reoccurrence (If any):
Current Status:
Schedule for proposed mitigation/abatement (If any):
Other Comments:

Non-Compliance Notification Schedule

Type of Incident	Within 5 Working Days (Verbal)	Within 10 Working Days (Written)	Within 30 Calendar Days (Written)	In Annual Report
Emergency Incidents[1]	–	–	–	Chronological summary and status of all incidents
Field[2]	Notify RWB Executive Officer	To RWB Executive Officer and copies to Dept. HQ	–	Chronological summary and status of all incidents
Administrative[3]	Notify RWB Executive Officer or SWB Contact[3]	–	To RWB Executive Officer, SWB Executive Director, and copies to Dept. HQ.	Chronological summary and status of all incidents

[1] Sudden, unexpected, unpreventable incidents that threaten public health, public safety, property, or the environment that pose a clear and imminent danger requiring immediate action to prevent or mitigate the damage or threat, and that result in a discharge or potential discharge.

[2] Failure to meet any non-administrative requirement of the SWMP or Permit or to meet any applicable water quality standard. This includes failure to install required BMPs or conduct required monitoring or maintenance. It also includes discharges or prohibited non-storm water that do not meet the definition of emergency incidents. It does not include determinations by the Department or a Regional Water Board Executive Officer that a discharge is causing or contributing to an exceedance of an applicable WQS. See provision E.2.c.6)c).

[3] Failure to meet any administrative or procedural requirement of the SWMP or Permit including submission of required reports, notifications and certifications. The report of non-compliance shall be submitted to the same organization (State or Regional Water Board) to which the required report was originally due.

Certification – I certify that under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Contractor (if applicable)	Title	Telephone	Date:
Signature of Department Representative	Title	Telephone	Date:

ATTACHMENT II

Monitoring Constituent List

(Not Applicable to ASBS Discharges)

Constituent	Analytical Method	Reporting Limit[35]	Units
WATER COLUMN CHEMISTRY			
Conventional Pollutants			
Hardness as CaCO3	SM 2340 B or C	5	mg/L
pH	Calibrated Field Instrument		pH Units
Temperature	Calibrated Field Instrument		C +/-
Flow Rate	Calibrated Field Instrument		ft^3/s
Total Dissolved Solids	EPA 160.1	1	mg/L
Total Suspended Solids	EPA 160.2	1	mg/L
Hydrocarbons			
Oil & Grease	EPA 1664B	1.4	mg/L
Polycyclic Aromatic Hydrocarbons (Total)	EPA 8310	0.05	µg/L
Nutrients			
Total Kjeldahl Nitrogen (TKN)	EPA 351.3	100	µg/L
Nitrate as Nitrogen (NO_3-N)	EPA 300.0	100	µg/L
Phosphorous (Total)	EPA 365.2	30	µg/L
Metals			
Aluminum (Total)	EPA 200.8	25	µg/L
Chromium (Total)	EPA 200.8	1	µg/L
Copper (Total)	EPA 200.8	1	µg/L
Iron (Total)	EPA 200.8	1	µg/L
Lead (Total)	EPA 200.8	1	µg/L
Zinc (Total)	EPA 200.8	5	µg/L
Microbiological			
Fecal Coliform	SM 9221 C E	2	MPN/100 mL
Enterococcus[36]	EPA 1600	2	CFU/100 mL
WATER COLUMN TOXICITY			
Chronic[37]	EPA 821-R-02-013	Pass/Fail	

[35] Reporting limits should be sufficient enough to detect the presence of a constituent based on the applicable Regional Water Board Basin Plan. If no limit is specified in the Basin Plan, the reporting limit specified in this table will be used. If no limit is specified in this table, then the Regional Boards shall be consulted.

[36] Only applicable for direct discharges to marine waters. See definition of direct discharges and indirect discharges in Attachment VIII (glossary).

[37] To calculate either a Pass or Fail of the effluent concentration chronic toxicity test at the IWC, the instructions in Appendix A in the National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA/833-R-10-003) shall be used.

ATTACHMENT II

ASBS Monitoring

TABLE A
Monitoring Constituent List
(excerpted from California Ocean Plan dated 2009)

Constituent	Units
Grease and Oil	mg/L
Suspended Solids	mg/L
Settleable Solids	mL/L
Turbidity	NTU
PH	

TABLE B
Monitoring Constituent List
(excerpted from California Ocean Plan dated 2009)

Constituent	Units
Arsenic	µg/L
Cadmium	µg/L
Chromium	µg/L
Copper	µg/L
Lead	µg/L
Mercury	µg/L
Nickel	µg/L
Selenium	µg/L
Silver	µg/L
Zinc	µg/L
Cyanide	µg/L
Total Chlorine Residual	µg/L
Ammonia (as N)	µg/L
Acute Toxicity	TUa
Chronic Toxicity	TUc
Phenolic Compounds (non-chlorinated)	µg/L
Chlorinated Phenolics	µg/L
Endosulfan	µg/L
Endrin	µg/L
HCH	µg/L

Analytical Chemistry Methods: All constituents shall be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, shall be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

ASBS PRIORITY DISCHARGE LOCATIONS

Sample ID	Regional Board	ASBS Name	Longitude	Latitude
SAU020A	1	Saunders Reef	-123.65273	38.85916
SAU019A	1	Saunders Reef	-123.6528	38.86067
SAU016A	1	Saunders Reef	-123.65237	38.85849
SAU015	1	Saunders Reef	-123.65178	38.85612
SAU013A	1	Saunders Reef	-123.6514	38.85451
SAU014	1	Saunders Reef	-123.6517	38.8551
SAU011A	1	Saunders Reef	-123.64853	38.8527
SAU008	1	Saunders Reef	-123.6478	38.8521
SAU006A	1	Saunders Reef	-123.64777	38.85186
SAU009A	1	Saunders Reef	-123.64809	38.85254
RED023	1	Redwoods National Park	-124.1017	41.60527
RED027	1	Redwoods National Park	-124.10126	41.59657
RED028	1	Redwoods National Park	-124.10101	41.59729
RED018A	1	Redwoods National Park	-124.1061	41.613
RED015	1	Redwoods National Park	-124.11257	41.62928
RED014	1	Redwoods National Park	-124.11296	41.63059
RED017A	1	Redwoods National Park	-124.10571	41.61195
FIT012	2	James V. Fitzgerald	-122.516861	37.531406
ANO030	3	Ano Nuevo	-122.30121	37.11334
ANO033	3	Ano Nuevo	-122.29881	37.11202
ANO001	3	Ano Nuevo	-122.306364	37.121672
ANO002	3	Ano Nuevo	-122.30534	37.11987
ANO035	3	Ano Nuevo	-122.29297	37.10714
ALT004	4	Laguna Point to Latigo Point	-119.059097	34.08609
MUG005	4	Laguna Point to Latigo Point	-119.03821	34.083896
ALT005	4	Laguna Point to Latigo Point	-119.054291	34.085415
ALT006	4	Laguna Point to Latigo Point	-119.048653	34.085361
MUG008	4	Laguna Point to Latigo Point	-119.036389	34.083644
MUG010	4	Laguna Point to Latigo Point	-119.014826	34.070804
MUG013	4	Laguna Point to Latigo Point	-118.993551	34.065445
MUG016	4	Laguna Point to Latigo Point	-118.987069	34.062852
ALT008	4	Laguna Point to Latigo Point	-118.985931	34.062325

Sample ID	Regional Board	ASBS Name	Longitude	Latitude
MUG028	4	Laguna Point to Latigo Point	-118.974165	34.058928
ALT009	4	Laguna Point to Latigo Point	-118.975975	34.059978
MUG031	4	Laguna Point to Latigo Point	-118.968706	34.056265
MUG041	4	Laguna Point to Latigo Point	-118.964271	34.053461
MUG046	4	Laguna Point to Latigo Point	-118.960862	34.052112
MUG048	4	Laguna Point to Latigo Point	-118.9594833	34.05172
MUG049	4	Laguna Point to Latigo Point	-118.9594333	34.05165
MUG051	4	Laguna Point to Latigo Point	-118.957316	34.050937
ALT011	4	Laguna Point to Latigo Point	-118.939404	34.045355
MUG053	4	Laguna Point to Latigo Point	-118.95539	34.050248
MUG059	4	Laguna Point to Latigo Point	-118.9515	34.048835
MUG058	4	Laguna Point to Latigo Point	-118.95042	34.048355
ALT010	4	Laguna Point to Latigo Point	-118.948184	34.047873
MUG061	4	Laguna Point to Latigo Point	-118.94834	34.047675
MUG077	4	Laguna Point to Latigo Point	-118.9345833	34.04513
MUG078	4	Laguna Point to Latigo Point	-118.934358	34.045431
MUG070	4	Laguna Point to Latigo Point	-118.9320000	34.04600
MUG066	4	Laguna Point to Latigo Point	-118.924654	34.04714
MUG073	4	Laguna Point to Latigo Point	-118.922723	34.046418
MUG135	4	Laguna Point to Latigo Point	-118.897426	34.041983
MUG147	4	Laguna Point to Latigo Point	-118.894154	34.041553
MUG150	4	Laguna Point to Latigo Point	-118.889212	34.040872
MUG187	4	Laguna Point to Latigo Point	-118.869505	34.039285
SAD0950	4	Laguna Point to Latigo Point	-118.8385500	34.02699
SAD0960	4	Laguna Point to Latigo Point	-118.8375000	34.02619
SAD0970	4	Laguna Point to Latigo Point	-118.8364600	34.02535
SAD0980	4	Laguna Point to Latigo Point	-118.8348600	34.02435
MUG318	4	Laguna Point to Latigo Point	-118.834316	34.023879
SAD0990	4	Laguna Point to Latigo Point	-118.8326600	34.02302
SAD1000	4	Laguna Point to Latigo Point	-118.8303400	34.02123
MUG355	4	Laguna Point to Latigo Point	-118.829258	34.02122

Sample ID	Regional Board	ASBS Name	Longitude	Latitude
SAD1030	4	Laguna Point to Latigo Point	-118.827049	34.018711
SAD1040	4	Laguna Point to Latigo Point	-118.8256600	34.01748
SAD1050	4	Laguna Point to Latigo Point	-118.8249200	34.01700
SAD1060	4	Laguna Point to Latigo Point	-118.8225400	34.01559
ALT017	4	Laguna Point to Latigo Point	-118.777059	34.025805
MUG346	4	Laguna Point to Latigo Point	-118.783588	34.02508
MUG283	4	Laguna Point to Latigo Point	-118.765915	34.02589
IRV020	8	Irvine Coast	-117.840190	33.576001
IRV009	8	Irvine Coast	-117.830393	33.566251
IRV007	8	Irvine Coast	-117.828078	33.565343
IRV001	8	Irvine Coast	-117.81858	33.558
IRV002	8	Irvine Coast	-117.821484	33.560705
CAR007B	3	Carmel Bay	-121.923798	36.52499
CAR006	3	Carmel Bay	-121.92457	36.52469

Total Maximum Daily Load Requirements

Attachment IV prescribes the implementation requirements for the Total Maximum Daily Loads (TMDLs) in which the Department of Transportation (Department) has been identified as a responsible party. The TMDLs in this attachment have been (1) adopted by the Regional Water Quality Control Boards (Regional Water Boards) and approved by the State Water Resources Control Board (State Water Board) and the Office of Administrative Law or the United States Environmental Protection Agency (U.S. EPA), or (2) established by U.S. EPA.

Section I of this attachment provides directions and general guidance on development of a prioritized list of reaches for implementation actions. Section II identifies the applicable TMDLs and implementation requirements. Section II also contains TMDL-specific permit requirements for the Lake Tahoe Sediment/Nutrients TMDL, Napa River Sediment TMDL, Sonoma Creek Sediment TMDL, and the Lake Elsinore and Canyon Lake Nutrients TMDL. Section III prescribes the general implementation requirements applicable to all TMDLs, and the specific requirements applicable to each pollutant category.

The TMDLs addressed in this attachment were developed by numerous parties over many years, and vary widely in their implementation requirements. As explained in further detail in the Fact Sheet for this Order, Attachment IV establishes consistent implementation requirements among the TMDLs by separating them into one of eight categories by pollutant type, based upon the common treatment and control actions associated with each pollutant type. Each impaired waterbody will be prioritized for implementation by reach, with a fixed number of "compliance units" that must be achieved each year so that all TMDLs are addressed in 20 years. Effectiveness monitoring of the treatment and control actions is required to inform an adaptive management process.

The following eight TMDL pollutant categories have been established for TMDL implementation[38]:

1. Sediment/Nutrients/Mercury/Siltation/Turbidity
2. Metals/Toxics/Pesticides
3. Trash
4. Bacteria
5. Diazinon
6. Selenium
7. Temperature
8. Chloride

The Department shall comply with the requirements of Attachment IV. These requirements are directly enforceable through Order 2012-0011-DWQ (Order).

[38] Some TMDLs containing multiple pollutants have been separated according to the categories that best address the individual pollutants.

Section I. TMDL Prioritization and Implementation

A. Reach Prioritization for Pollutant Categories

The Department shall prioritize all TMDLs for implementation of source control measures and best management practices (BMPs). Prioritization shall be consistent with the final TMDL deadlines to the extent feasible. Prioritization shall be conducted separately for each pollutant category and shall be based on an evaluation of each reach of applicable receiving waters within the watershed with a TMDL. The Department shall conduct the prioritization using the following five steps:

1. Complete an inventory of reaches. If reaches are defined in a TMDL, the Department may use that delineation for developing the inventory. If no reaches are specified in the TMDL, the Department shall delineate the receiving water into reaches.

2. Segregate the inventory of reaches according to the pollutant categories listed below in Section III, B through I (Categorical Inventories of Reaches). Individual reaches may be present in multiple pollutant categories.

3. Rank the reaches in each TMDL category in accordance with a procedure similar to that presented in Table IV.1. below.

4. Submit the prioritized Categorical Inventories of Reaches to the State Water Board **by October 1, 2014**, for Regional Water Board and State Water Board consideration. The State Water Board will provide public notice of the submission and the submission will be subject to a 30-day public comment period.

5. The Department shall collaborate with the State Water Board and Regional Water Boards on a final prioritization for each of the Categorical Inventories of Reaches. Factors that may be considered in the final prioritization will include, but not be limited to:

    a. Opportunities for synergistic benefits with existing or anticipated projects or activities within the reach, e.g., cooperative efforts with other dischargers or projects within an ASBS,
    b. Multiple TMDLs that can be addressed by a single BMP or a suite of BMPs within a reach,
    c. TMDL deadlines specified in a Basin Plan,
    d. Regional Water Board and State Water Board priorities,
    e. Accessibility for construction and/or maintenance (e.g., safety considerations), and
    f. Multi-benefit projects that provide benefits in addition to water quality improvement, such as groundwater recharge or habitat enhancement.

B. Implementation

Following completion of the process described in Section I.A, the State Water Board Executive Director will approve, with any changes, the final prioritized Categorical Inventories of Reaches. The Department shall then select and begin implementation actions, as specified in Sections II and III, within the highest priority reaches to achieve at least the minimum number of compliance units as described below.

1. The Department shall include the following information regarding implementation of control measures in the selected reaches for the upcoming reporting period in the ***TMDL STATUS REVIEW REPORT***, as required in Section E.4.b. of the Order:
   a. Name of the waterbody,
   b. Associated TMDL(s),
   c. Proposed control measures,
   d. Proposed number of compliance units per control measure, and
   e. Projected schedule for installation of control measures with anticipated beginning and ending dates.

2. The Department shall also include in the ***TMDL STATUS REVIEW REPORT***[39] a discussion of previous years' activities including:
   a. The status of implementation activities,
   b. The location of the control measures,
   c. The size and type of BMPs that were installed,
   d. The effectiveness of the BMPs installed, including any pertinent monitoring data (e.g., influent vs. effluent data),
   e. A summary update of any cooperative implementation agreements (see Attachment IV, section II.B.1), including those that are solely for each TMDL,
   f. A summary update of activities and/or actions that have been completed for any cooperative implementation agreement for each TMDL,
   g. A summary update of projects initiated under the cooperative implementation grant program (see Attachment IV, section II.B.2),
   h. A summary update of activities and/or actions that have been completed for any projects under the cooperative implementation grant program,
   i. A summary of institutional control measures implemented to comply with Attachment IV,
   j. A summary of TMDLs adopted during the past year where the Department is assigned a WLA or the Department is identified as a responsible party in the implementation plan,
   k. A discussion, supported by data and analysis, of whether the Department considers work in the reach complete because it has met WLAs and other TMDL performance criteria, and

[39] Per section III.A.3.a of this attachment, by January 1, 2015, the Department shall submit the required information regarding planned implementation of control measures for the first upcoming reporting period (after permit amendment per Order WQ 2014-0077-DWQ) of January 1, 2015 – October 1, 2015.

l. Any other information requested by the State Water Board Executive Director or designee.

Control measures and implementation schedules proposed for the upcoming year are subject to the approval of the Executive Director of the State Water Board or designee.

3. Each year the Department shall select and begin implementation activities within the highest priority reaches to achieve a minimum of 1650 compliance units. A compliance unit is defined as one acre of the Department's Right-of-Way (ROW) from which the runoff is retained, treated, and/or otherwise controlled prior to discharge to the relevant reach. Compliance units may be credited to the Department for the following actions:

   - stand-alone BMP retrofits,
   - cooperative implementation,
   - monitoring program-related retrofits,
   - post-construction treatment beyond permit requirements, and
   - other pollution reduction practices necessary to comply with the TMDL.

   Compliance units, unless specifically stated below, are credited only when the Department begins implementation of an action listed above.[40] Once compliance units have been credited for a site, the Department may not receive credit for additional compliance units at that location for additional activities or corrective measures needed to bring the site into compliance. See Section III.A.2. Credit may be received, however, for new activities within the same reach that do not treat the runoff from a site that has already received treatment.

4. The Department may receive credit for compliance units by contributing funds to Cooperative Implementation Agreements and/or the Cooperative Implementation Grant Program (see Section II.B. below). The Department may receive credit for one compliance unit for each $88,000 that it contributes. For Cooperative Implementation Agreements, the credit will be received when the Department transfers the funds to a responsible party. For the Cooperative Implementation Grant Program, the credit will be received when the Department transfers the funds to the State Water Board.

5. No credit will be given to post-construction BMPs that only meet the minimum requirements of this Order (Section E.2.d.2)a)). Other projects within a TMDL watershed where treatment is provided above and beyond the post-construction requirements in this Order, may receive compliance units according to the following formula:

[40] For purposes of Section I.B of this attachment, implementation means that a project has entered the Project Initiation Document (PID) phase, the process used by the Department to explain the scope, funding commitment, and approval of a transportation project (http://www.dot.ca.gov/hq/oppd/pdpm/other/PDPM-Chapters.pdf).

$[(V_t-V_o)/p_{85}]*12$ = acres treated (compliance units calculated to the nearest 0.1)
Where, V_t = Planned volume of runoff to be treated (acre-ft.),
V_o = Volume of runoff from 85th percentile, 24-hour storm event (acre-ft.),
p_{85} = depth of the 85th percentile, 24-hour storm event (inches).

Table IV.1 – Reach Prioritization Scoring Matrix
The rating factors in this table are intended as guidance. Each pollutant category will be ranked separately.

Rating Factor	Criteria		
	High	**Medium**	**Low**
Impairment Status: Percent reduction needed	Over 75%	25% - 75%	Below 25%
Department's Drainage Area Contributing to the Reach	Over 5% of drainage area	Between 1% and 5% of drainage area	Less than 1% of drainage area
Proximity to Receiving Waters	Over 75% of ROW within 0.25 miles of reach	Between 25% and 75% of ROW within 0.25 miles of reach	Less than 25% of ROW within 0.25 miles of reach
Community Environmental Health Impact	Top 3 categories	Middle 4 categories	Lower 3 categories

Impairment Status
The degree of impairment of the waterbody, measured by the percent pollution reduction needed to achieve the WLA. Reaches with higher degrees of impairment will be given higher priority. Consider all sources of impairment when making this determination.

Department's Contributing Drainage Area
The contributing drainage area from the Department's ROW is relative to the watershed draining to the reach.

Proximity to Receiving Waters
This rating factor measures the relative proximity of the Department's ROW to the reach of the water that receives runoff from the Department's ROW. Sites discharging through conveyances within 0.25 miles of the pertinent reach are considered to have greater potential to contribute pollutants and receive a higher rating.

Community Environmental Health Impact
This rating factor requires use of the California Office of Health Hazard Assessment (OEHHA) evaluation tool "Enviroscreen" which can be found at http://oehha.ca.gov/ej/ces11.html. This tool should be used to assess environmental justice issues. Outcomes are segregated into 10 categories ranging from low to high environmental justice scores. Higher scores indicate that there is a higher potential for environmental justice issues to be present at a site.

Section II. Applicable TMDLs and Implementation Requirements

A. For each reach for which the Department has committed to begin implementation actions in accordance with Section I of this attachment, the Department shall do one of the following:

1. Implement the requirements in Table IV.2 applicable to that reach ensuring that all BMPs installed meet the minimum requirements specified in the following permit sections:
   - E.2.d.1) (Design Pollution Prevention Best Management Practices),
   - E.2.d.2)b) (Numeric Sizing Criteria for Storm Water Treatment Control BMPs),
   - E.2.e.1) (BMP Development and Implementation, Vector Control),
   - E.2.e.2) (BMP Development and Implementation , Storm Water Treatment BMPs),
   - E.2.e.3) (BMP Development and Implementation, Wildlife), and
   - E.2.e.4) (BMP Development and Implementation, Biodegradable Materials) of this Order.

In addition, the Department shall ensure that all BMPs installed do not cause a decrease in lateral (bank) or vertical (channel bed) stability in receiving stream channels.

2. Demonstrate that it has entered into or intends to enter into a Cooperative Implementation Agreement with other parties having responsibility for the TMDL, as specified below under Cooperative Implementation Agreements.

3. Identify cooperative implementation grants that have been awarded to other parties having responsibility for the TMDL, as specified below under Cooperative Implementation Grant Program.

B. Cooperative Implementation

1. Cooperative Implementation Agreements

a. The Department is encouraged to establish agreements for cooperative implementation efforts, such as joint implementation actions and/or special implementation studies with other parties that have responsibility for the TMDL, except where precluded by a TMDL or where specific implementation requirements are prescribed in Table IV.2. Cooperative agreements that only involve monitoring are not eligible for compliance units.

b. Where the Department has existing cooperative implementation agreements with other responsible parties, it shall fulfill the commitments and requirements of those agreements.

c. Where the Department has not yet committed to cooperative implementation efforts, but intends to do so, the Department must provide written notification,

including the anticipated date of commitment, to the State Water Board in its ***TMDL STATUS REVIEW REPORT***.

d. Cooperative agreements relative to the TMDL implementation activity are subject to approval by the applicable Regional Water Board Executive Officer. Cooperative agreements shall describe the terms of the mutually agreed activities to be performed, and at a minimum shall include:

   i. The date the cooperative agreement was approved by the Regional Water Board,
   ii. A map showing the location of work to be performed in the reach,
   iii. Any monitoring program parameters and responsibilities,
   iv. Any implementation responsibilities, including BMP Operation and Maintenance,
   v. Any funding commitments that correspond with the implementation responsibilities, and
   vi. A termination clause upon failure to comply with the terms and conditions of the agreement, as applicable.

e. The Department shall submit sufficient information to document the progress in achieving the requirements of the TMDL for each cooperative implementation agreement in its annual ***TMDL STATUS REVIEW REPORT***. (See Section I.B.2.)

f. If the Department is not participating or has not given notice of its intent to participate in cooperative implementation efforts, or the Department is not fulfilling its cooperative implementation responsibilities under an agreement, it shall immediately comply with applicable TMDL Control Requirements listed in Table IV-2 below and report the corresponding status in the ***TMDL STATUS REVIEW REPORT***.

2. **Cooperative Implementation Grant Program**

a. The Department may establish a cooperative implementation grant program to be administered by the State Water Board for TMDL watersheds.

b. If the Department elects to establish a grant program, the Department and State Water Board will prepare an agreement specifying the terms of the grant program and the commitments and responsibilities of the parties. The Department will be responsible for paying the State Water Boards' cost of administering the grant program.

c. Cooperative implementation grants will be used to fund capital projects undertaken by other responsible parties in impaired watersheds in which the Department has been assigned a WLA or otherwise has responsibility for implementation of the TMDL. Cooperative implementation grant applications that are consistent with the final prioritized Categorical Inventories of Reaches

(Section I.A.5) will be given a higher priority for funding. Cooperative implementation grants will not be awarded for projects that only involve monitoring, where precluded by a TMDL, or where specific implementation requirements are prescribed in Table IV.2.

C. Consideration for Factors Affecting Implementation

Implementation may require environmental approvals and permitting from local, State, and/or federal resource agencies (e.g., California Coastal Commission, California Department of Fish and Wildlife, U.S. Army Corps of Engineers, local Flood Control agencies, local County, etc.). Other factors such as safety concerns and technical infeasibility may affect project implementation. Delays or cancellations due to environmental or permitting factors beyond the Department's control must be reported in its annual ***TMDL STATUS REVIEW REPORT***.

The State Water Board will revoke compliance units for projects not completed within the implementation schedule approved under Section I.B.1 of this attachment, unless the delay in the implementation schedule is additionally approved by the Executive Director. Partial credit may be allowed if a portion of the project is completed and functioning.

The State Water Board will revoke compliance units for unrecovered grant funds for projects that are not completed under Section II.B.2 of this attachment. Partial credit may be allowed if a portion of the project is completed and functioning. If the grant program is discontinued, any unexpended funds will be returned to the Department and the corresponding compliance units will be revoked.

Compliance units revoked shall be added to the total number of the required compliance units in following years. For example, if a project which claimed 20 compliance units is cancelled, 1670 compliance units (1650 + 20) are required to be implemented in the following year. If the grant program is discontinued, additional time may be allowed for the Department to implement the corresponding compliance units.

Table IV.2. TMDL Summary Table and Control Requirements

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
R1 - North Coast Regional Water Board			
Albion River	**Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 2001 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Big River	**Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 2001 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Lower Eel River	**Temperature and Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 18, 2007 BPA: N/A Resolution: N/A	Implement Section III.A., Section III.B., and Section III.H.
Middle Fork Eel River	**Temperature and Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 2003 BPA: N/A Resolution: N/A	Implement Section III.A., Section III.B., and Section III.H.
South Fork Eel River	**Sediment and Temperature**	***U.S. EPA Established TMDL*** Effective Date: December 16, 1999 BPA: N/A Resolution: N/A	Implement Section III.A., Section III.B., and Section III.H.
Upper Main Eel River and Tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury)	**Temperature and Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 29, 2004 BPA: N/A Resolution: N/A	Implement Section III.A., Section III.B., and Section III.H.
Garcia River	**Sediment**	Effective Date: March 16, 1998 BPA: 4-37.00 Action Plan for the Garcia River Watershed Resolution:	Implement Section III.A. and Section III.B.
Gualala River	**Sediment**	***U.S. EPA Established TMDL*** Effective Date: November 29, 2004 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
Klamath River in California	**Temperature, Dissolved Oxygen, Nutrients, and Microcystin**	Effective Date: December 28, 2010 BPA: Action Plan for Klamath River TMDLs Resolution: R1-2010-0026	Implement, Section III.A., Section III.B., Section III.H. In addition, the Department shall refer to the Section E.2.d.4) of this Order for locating, assessing, and remediating barriers to fish passage.
Lost River	**Nitrogen, Biochemical Oxygen Demand to address Dissolved Oxygen and pH Impairments**	Effective Date: December 30, 2008 BPA: Action Plan for Lost River TMDL Resolution: R1-2010-0026	Implement Section III.A. and Section III.B.
Mad River	**Sediment and Turbidity**	***U.S. EPA Established TMDL*** Effective Date: December 21, 2007 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Navarro River	**Sediment and Temperature**	***U.S. EPA Established TMDL*** Effective Date: December 27, 2000 BPA: N/A Resolution: N/A	Implement Section III.A., Section III.B., and Section III.H.
Noyo River	**Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 16, 1999 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Redwood Creek	**Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 30, 1998 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Scott River	**Sediment and Temperature**	Effective Date: August 11, 2006 BPA: Action Plan for Scott River. Resolutions: R1-2005-0113 &R-2010-0026	Implement Section III.A., Section III.B., and Section III.H.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
Shasta River	**Dissolved Oxygen and Temperature**	Effective Date: January 26, 2007 BPA: Action Plan for the Shasta River Watershed Resolution: R1-2006-0052	Implement Section III.A., Section III.B., and Section III.H.
Ten Mile River	**Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 2000 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Trinity River	**Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 20, 2001 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
South Fork Trinity River and Hayfork Creek	**Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 1998 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Van Duzen River and Yager Creek	**Sediment**	***U.S. EPA Established TMDL*** Effective Date: December 16, 1999 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
R2 - San Francisco Bay Regional Water Board			
Napa River	**Sediment**	Effective Date: January 20, 2011 BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs Resolution: R2-2009-0064	Implement Section III.A., Section III.B., and the following: • Conduct a survey of stream crossings associated with Department roadways, and develop a prioritized implementation plan and schedule for repair and/or replacement of high priority crossings/culverts. • Submit plan and schedule for conducting stream crossings surveys with

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
			TMDL STATUS REVIEW REPORT in accordance with Section I.B. above. • Submit implementation plan and schedule for repair and/or replacement of high priority crossings/culverts with ***TMDL STATUS REVIEW REPORT*** in accordance with Section I.B. above.
Richardson Bay	**Pathogens**	Effective Date: December 18, 2009 BPA: Pathogens in Richardson Bay Resolution: R2-2008-0061	Implement Section III.A. and Section III.E.
San Francisco Bay	**PCBs**	Effective Date: March 29, 2010 BPA: Exhibit A & TMDL & Implementation Plan for PCBs Resolution: R1-2008-0012	Implement Section III.A. and Section III.C.
San Francisco Bay	**Mercury**	Effective Date: February 12, 2008 BPA : Chapter 7, SF Bay Mercury TMDL Resolution: R2-2006-0052	Implement Section III.A, Section III.B., and the following: The Department shall work out an equitable mercury WLA scheme in consultation with the San Francisco Bay Area Urban Runoff Management Agencies.
San Pedro and Pacifica State Beach	**Bacteria**	Effective Date: August 1, 2013 BPA – Chapter 3, Section 3.3.1 Bacteria Resolution: R2-2012-0089	Implement Section III.A. and Section III.E.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
Sonoma Creek	**Sediment**	Effective Date: September 8, 2010 BPA: Exhibit A & Implementation Plan Resolution: R2-2008-0103	Implement Section III.A., Section III.B, and the following: • Conduct a survey of stream crossings associated with Department roadways, and develop a prioritized implementation plan and schedule for repair and/or replacement of high priority crossings/culverts. • Submit plan and schedule for conducting stream crossings surveys with ***TMDL STATUS REVIEW REPORT*** in accordance with Section I.B. above. • Submit implementation plan and schedule for repair and/or replacement of high priority crossings/culverts with ***TMDL STATUS REVIEW REPORT*** in accordance with Section I.B. above.
San Francisco Bay Urban Creeks	**Diazinon & Pesticide-Related Toxicity**	Effective Date: May 16, 2007 BPA: Chapter 3, Toxicity Resolution: R2-2005-0063	Implement Section III.A., Section III.C., and Section III.F.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
R3 - Central Coast Regional Water Board			
San Lorenzo River (includes Carbonera Lompico, and Shingle Mill Creeks)	**Sediment**	Effective Date: February 19, 2004 BPA: Attachment to R3-2002-0063 Resolution: R3-2002-0063	Implement Section III.A. and Section III.B.
Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary)	**Sediment**	Effective Date: January 20, 2004 BPA: Attachment A to R3-2002-0051 Resolution: R3-2003-0051	Implement Section III.A. and Section III.B.
R4 - Los Angeles Regional Water Board			
Ballona Creek	**Metals (Ag, Cd, Cu, Pb, & Zn) and Selenium**	Effective Date: December 22, 2005 and reaffirmed on October 29, 2008 BPA: Attachment A, Chapter 7-12 Resolution: R2007-015	Implement Section III.A., Section III.C., and Section III.G.
Ballona Creek	**Trash**	Effective Date: August 1, 2002 & February 8, 2005 BPA: Attachment A, Chapter 7-3. Resolution: 2004-0023	Implement Section III.A. and Waste Load Allocation requirements and schedule as set forth in the Ballona Creek Trash TMDL.
Ballona Creek Estuary	**Toxic Pollutants (Ag, Cd, Cu, Pb, Zn, Chlordane, DDTs, Total PCBs, & Total PAHs)**	Effective Date: December 22, 2005 BPA: Attachment A, Chapter 7-14 Resolution: R4-2005-008	Implement Section III.A. and Section III.C.
Ballona Creek, Ballona Estuary, and Sepulveda Channel	**Bacteria**	Effective Date: March 26, 2007 and November 18, 2013 BPA: Attachment A, Chapter 7-21 Resolution: R4-2006-011	Implement Section III.A. and Section III.E.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
Ballona Creek Wetlands	**Sediment and Invasive Exotic Vegetation**	***U.S. EPA Established*** Effective Date: March 26, 2012 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Calleguas Creeks, its Tributaries and Mugu Lagoon	**Metals and Selenium**	Effective Date: March 26, 2007 BPA: Attachment A, Chapter 7-19 Resolution: R4-2006-012	Implement Section III.A., Section III.C., and Section III.G.
Calleguas Creeks its Tributaries and Mugu Lagoon	**Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation**	Effective Date: March 14, 2006 BPA: Attachment A, Chapter 7-17 Resolution: R4-2005-010	Implement Section III.A., Section III.B, and Section III.C.
Colorado Lagoon	**Organochlorine Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals (Pb & Zn)**	Effective Date: June 14, 2011 BPA: Attachment K, Chapter 7-38 Resolution: R09-005	Implement Section III.A. and Section III.C.
Dominguez Channel & Greater Los Angeles & Long Beach Harbor Waters	**Toxic Pollutants: Metals (Cu, Pb, Zn), DDT, PAHs, and PCBs**	Effective Date: March 23, 2012 BPA: Attachment A, Chapter 7-40 Resolution: R11-008	Implement Section III.A. and Section III.C.
Legg Lake	**Trash**	Effective Date: February 27, 2008 BPA: Attachment A, Chapter 7-27 Resolution: R4-2007-10	Implement Section III.A. and Section III.D.
Long Beach City Beaches and Los Angeles River Estuary	**Indicator Bacteria**	***U.S. EPA Established*** Effective Date: March 26, 2012 BPA: N/A Resolution: N/A	Implement Section III.A., and Section III.E.
Los Angeles Area (Echo Park Lake)	**Nitrogen, Phosphorus, Chlordane, Dieldrin, PCBs, & Trash**	***U.S. EPA Established*** Effective Date: March 26, 2012 BPA: N/A Resolution: N/A	Implement Section III.A., Section III.B., Section III.C., and Section III.D.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
Los Angeles Area (Lake Sherwood)	**Mercury**	***U.S. EPA Established*** Effective Date: March 26, 2012 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Los Angeles Area (North, Center, & Legg Lakes)	**Nitrogen & Phosphorus**	***U.S. EPA Established*** Effective Date: March 26, 2012 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Los Angeles Area (Peck Road Park Lake)	**Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash**	***U.S. EPA Established*** Effective Date: March 26, 2012 BPA: N/A Resolution: N/A	Implement Section III.A., Section III.B., Section III.C, and Section III.D.
Los Angeles Area (Puddingstone Reservoir)	**Nitrogen, Phosphorus, Chlordane, DDT, PCBs, Hg, and Dieldrin**	***U.S. EPA Established*** Effective Date: March 26, 2012 BPA: N/A Resolution: N/A	Implement Section III.A., Section III.B., and Section III.C.
Los Angeles River and Tributaries	**Metals**	Effective Date: December 22, 2005, October 29, 2008, & Reopened and Modified on November 3, 2011 BPA: Attachment A, Chapter 7-13 to 7-13 and Attachment B Resolution: R2007-014 & R10-003	Implement Section III.A. and Section III.C.
Los Angeles River	**Trash**	Effective Date: December 24, 2008 BPA: Attachment A, Chapter 7-2 Resolution: R4-2007-012	Implement Section III.A. and Waste Load Allocation requirements and schedule as set forth in the Los Angeles River Watershed Trash TMDL.
Los Angeles River Watershed	**Bacteria**	Effective Date: March 23, 2012 BPA: Attachment A, Chapter 7-39 Resolution: R10- 007	Implement Section III.A and Section III.E.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
Los Cerritos	**Metals**	***U.S. EPA Established*** Effective Date: March 17, 2010 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.C.
Machado Lake	**Eutrophic, Algae, Ammonia, and Odors (Nutrients)**	Effective Date: March 11, 2009 BPA: Attachment A, to R09-006 Resolution: R08-006	Implement Section III.A. and Section III.B.
Machado Lake	**Pesticides and PCBs**	Effective Date: March 20, 2012 BPA: Attachment A, Chapter 7-38 Resolution: R10- 008	Implement Section III.A. and Section III.C.
Machado Lake	**Trash**	Effective Date: February 27, 2008 BPA: Attachment A, Chapter 7-26 Resolution: R4-2007-06	Implement Section III.A. and Section III.D.
Malibu Creek Watershed	**Bacteria**	Effective Date: January 10, 2006, Revised on November 8, 2013 ** BPA: Attachment A, Chapter 7-10 Resolution: 2004-019R & R12-009	Implement Section III.A. and Section III.E.
Malibu Creek and Lagoon	**Sedimentation and Nutrients to address Benthic Community Impairments**	***U.S. EPA Established TMDL*** Effective Date: July 2, 2013 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.B.
Malibu Creek Watershed	**Trash**	Effective Date: June 26, 2009 BPA: Attachment A, Chapter 7-31 Resolution: R4-2008-007	Implement Section III.A. and Section III.D.
Marina del Rey Harbor	**Toxic Pollutants (Cu, Pb, Zn, Chlordane, and Total PCBs)**	Effective Date: March 16, 2006 BPA: Attachment A, Chapter 7-18 Resolution: R4-2005-012	Implement Section III.A. and Section III.C.
Marina del Rey Harbor Mothers' Beach and Back Basins	**Bacteria**	Effective Date: March 18, 2004, Revised on November 7, 2013 ** BPA: Attachment A, Chapter 7-5 Resolution: 2003-012, R12-007	Implement Section III.A. and Section III.E.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
Revolon Slough and Beardsley Wash	**Trash**	Effective Date: August 1, 2002 & February 8, 2005 BPA: Attachment A, Chapter 7-3 Resolution: 2004-0023	Implement Section III.A. and Section III.D.
San Gabriel River	**Metals (Cu, Pb, Zn) and Selenium**	***U.S. EPA Established TMDL*** Effective Date: March 26, 2007 BPA: N/A Resolution: N/A	Implement Section III.A., Section III.C., and Section III.G.
Santa Clara River Estuary and Reaches 3, 5, 6, and 7	**Coliform**	Effective Date: January 13, 2012 BPA: Attachment A, Chapter 7-36 Resolution: R10-006	Implement Section III.A. and Section III.E.
Santa Clara River Reach 3	**Chloride**	Effective Date: December 11, 2008 BPA: Attachment B to Resolution No. R4-2008-012 & R4-2008-012	Implement Section III.A. and Section III.I.
Santa Monica Bay Beaches	**Bacteria**	Effective Date: June 19, 2003, Revised November 7, 2013 ** BPA: Attachment A, Revised in Chapter 7-4 Resolution: 2003-012, R12-007	Implement Section III.A. and Section III.E.
Santa Monica Bay	**DDTs and PCBs**	***U.S. EPA Established TMDL*** Effective Date: March 26, 2012 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.C.
Santa Monica Bay Nearshore & Offshore	**Debris (trash & plastic pellets)**	Effective Date: March 20, 2012 BPA: Attachment A, Chapter 7 Resolution:	Implement Section III.A. and Section III.D.
Upper Santa Clara River	**Chloride**	Effective Date: April 6, 2010 BPA: Attachment B. Chapter 7-6 Resolution: R4-2008-012	Implement Section III.A. and Section III.I.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
Ventura River Estuary	**Trash**	Effective Date: February 27, 2008 BPA: Attachment A, Chapter 7-25 Resolution: R4-2007-008	Implement Section III.A. and Section III.D.
Ventura River and its Tributaries	**Algae, Eutrophic Conditions, and Nutrients**	Effective Date: June 28, 2013 BPA: Attachment A, Chapter 7-35 Resolution: R12-011	Implement Section III.A. and Section III.B.
R5 - Central Valley Regional Water Board			
Clear Lake	**Nutrients**	Effective Date: September 21, 2007 BPA: Attachment 1 to R5-2006-0060 Resolution No.: R5-2006-0060	Implement Section III.A. and Section III.B.
Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch	**Mercury**	Effective Date: February 7, 2007 BPA: Attachment 1 to R5-2005-0146 Resolution: R5-2005-0146	Implement Section III.A. and Section III.B.
Sacramento-San Joaquín River Delta Estuary	**Methyl mercury**	Effective Date: October 20, 2011 BPA: Sacramento River and San Joaquin River Basins for the Control of Methylmercury and Total Mercury in the Sacramento – San Joaquin River Delta Estuary Resolution: R5-2010-0043.	Implement Section III.A. and Section III.B.
R6 - Lahontan Regional Water Board			
Lake Tahoe Sediment and Nutrients TMDL Effective Date: August 16, 2011 BPA: WQ Amendment May 2008 Resolution: 2009-0028 **Lake Tahoe Sediment Requirements** A. Pollutant Load Reduction Requirements The Department must reduce fine sediment particle (FSP), total phosphorus (TP), and total nitrogen (TN) loads by 10%, 7%, and 8%, respectively, by September 30, 2016.			

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements

Pollutant load reductions shall be measured in accordance with the processes outlined in the most recent version of Lake Clarity Crediting Program Handbook. To demonstrate compliance with the average annual fine sediment particle pollutant load reduction requirements, the Department must earn and maintain 298 Lake Clarity Credits for the water year October 1, 2015 to September 30, 2016, and for subsequent water years.

B. Pollutant Load Reduction Plans

The Department shall prepare a Pollutant Load Reduction Plan (PLRP) describing how it expects to meet the pollutant load reduction requirements described in Section A above. The Department shall submit a plan no later than July 15, 2014 that shall include, at a minimum, the following elements:

1. *Catchment registration schedule*
   The PLRP shall include a list of catchments that the Department plans to register pursuant to the approved Lake Clarity Crediting Program to meet load reduction requirements. The list shall include catchments where capital improvement projects have been constructed since May 1, 2004 that the Department expects to claim credit for, and catchments where projects will be constructed and other load reduction activities (capital improvements, institutional controls, and other measures/practices implement) taken during the term of this Order.

2. *Proposed pollutant control measures*
   The PLRP shall generally describe storm water program activities to reduce fine sediment particle, total phosphorus, and total nitrogen loading that the Department will implement in identified catchments.

3. *Pollutant load reduction estimates*
   The Department shall conduct pollutant load reduction analyses on a representative catchment subset to demonstrate that proposed implementation actions are expected to achieve the pollutant load reduction requirements specified in Section A. above. For representative catchments, the analysis shall include detailed estimates of both baseline pollutant loading and expected pollutant loading resulting from implementation actions and provide justification why the conducted load reduction analysis is adequate for extrapolation to other catchments.

   The pollutant loading estimates shall differentiate between estimates of pollutant load reductions achieved since May 1, 2004 and pollutant load reductions from actions not yet taken.

4. *Load reduction schedule*
   The PLRP shall describe a schedule for achieving the pollutant load reduction requirements described in the

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
Lake Tahoe Sediment TMDL Section A above. The schedule shall include an estimate of expected pollutant load reductions for each year of this Permit term based on preliminary numeric modeling results. The schedule shall also describe which catchments the Department anticipates it will register for each year of this Permit term. 5. *Annual adaptive management* The PLRP shall include a description of the processes and procedures to annually assess storm water management activities and associated load reduction progress. The plan shall describe how the Department will use information from the monitoring and implementation or other efforts to improve operational effectiveness and for achieving the pollutant load reduction requirements specified in Section A. 6. *Pollutant Load Reduction Plan Update* By March 15, 2017, the Department shall update its Pollutant Load Reduction Plan to describe how it will achieve the pollutant load reduction requirements for the second five-year TMDL implementation period, defined as the ten-year load reduction milestone in the Lake Tahoe TMDL. Specifically, the updated Pollutant Load Reduction Plan shall demonstrate how the Department will reduce baseline fine sediment particle, total nitrogen, and total phosphorus loads by 21 percent, 14 percent, and 14 percent, respectively, by water year 2021. C. Pollutant Load Reduction Progress To demonstrate pollutant load reduction progress, the Department shall submit a Progress Report by July 15, 2014 documenting pollutant load reductions accomplished between May 1, 2004 (baseline year) and October 15, 2011. D. Pollutant Load Reduction Monitoring and Water Quality Monitoring Requirements The Department shall prepare and submit a Storm water Monitoring Plan for review and approval by the Regional Water Board by July 15, 2013 and implement the approved plan.			
Truckee River	**Sediment**	Effective Date: September 16, 2009 BPA: WQ Amendment May 2008 Resolution: 2009-0028	Implement Sections III.A. and Section III.B.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
R7 - Colorado River Regional Water Board			
Coachella Valley Storm Water Channel	**Bacterial Indicators**	Effective Date: April 27, 2012 BPA: Attachment 1: Final CVSC Bacteria TMDL Resolution: R7-2010-0028	Implement Section III.A. and Section III.E.
R8 - Santa Ana Regional Water Board			
Big Bear Lake	**Nutrients for Dry Hydrological Conditions**	Effective Date: September 25, 2007 BPA: Attachment to R8-2006-0023 Resolutions: R8-2006-0023, and R8-2008-0070	Implement Section III.A. and Section III.B.

Lake Elsinore and Canyon Lake Nutrients TMDL
Effective Date: September 30, 2005
BPA: Attachment to R8-2004-0037 &
R8-2006- 0031
Resolution: R8-2007-0083
Implement Section III.A., Section III.B., and the following:

Lake Elsinore/Canyon Lake Nutrient TMDL Joint Responsibility Options

a. The Department has already committed to cooperative implementation actions, monitoring actions, special studies and implementation actions jointly with other responsible agencies as an active paying member of the Lake Elsinore/Canyon Lake TMDL Task Force. The Department shall continue with those actions and remain an active paying Task Force member.

b. If the State Water Board is notified that the Department is not fulfilling its Lake Elsinore/Canyon Lake Task Force obligations or if Department chooses to opt out of the cooperative approach with the TMDL Task Force for implementation actions, monitoring actions, and/or special studies the Department shall make a formal decision six months after the adoption of the Permit Amendment. These decisions must be approved/adopted by the State Board. The Department will then be required to conduct the following activities:
   1) Within 30 days of such notification, implement a Lake Elsinore and Canyon Lake in-lake monitoring consistent with the TMDL Task Force monitoring program.
   2) Within 30 days of such notification, submit a proposed Department facilities monitoring program to evaluate nutrient discharges from the Department's facilities in the Lake Elsinore/Canyon Lake watershed.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
3) Within 30 days of notification, develop and implement a Lake Elsinore in-lake sediment nutrient reduction program to mitigate Department facilities in-lake nutrient sediment load. Develop and implement a monitoring program to evaluate the success of in-lake sediment reduction strategies that will be implemented. 4) Within 60 days of notification, develop and implement a Canyon Lake in-lake sediment nutrient reduction program to mitigate Department facilities in-lake nutrient sediment load. Develop and implement a monitoring program to evaluate the success of in-lake sediment reduction strategies that will be implemented. 5) Within 60 days of notification, submit an annual monitoring report by August 15th of each year. 6) Submit an annual in-lake nutrient reduction program status report by August 15th of each year			
Rhine Channel Area of Lower Newport Bay	**Chromium and Mercury**	***U.S. EPA Established TMDL*** Effective Date: June 14, 2002 BPA: N/A Resolution: N/A	Implement Section III.A., Section III.B., and Section III.C.
San Diego Creek and Newport Bay, including Rhine Channel	**Metals (Copper, Lead, & Zinc)**	***U.S. EPA Established TMDL*** Effective Date: June 14, 2002 BPA: N/A Resolution: N/A	Implement Section III.A. and Section III.C.
San Diego Creek and Upper Newport Bay	**Cadmium**	***U.S. EPA Established TMDL*** Effective Date: June 14, 2002 BPA: N/A	Implement Section III.A. and Section III.C
San Diego Creek Watershed	**Organochlorine Compounds (DDT, Chlordane, PCBs, & Toxaphene)**	Effective Date: November 12, 2013 BPA: Attachment 2 Resolution: R8-2011-0037	Implement Section III.A. and Section III.C.
Upper & Lower Newport Bay	**Organochlorine Compounds (DDT, Chlordane & PCBs)**	Effective Date: November 12, 2013 BPA: Attachment 2 Resolution: R8-2011-0037	Implement Section III.A. and Section III.C.

Impaired Waterbody	Pollutant(s)	Approved or U.S. EPA Established TMDLs Effective Date Basin Plan Amendment Resolution No.	Implementation Requirements
R9 - San Diego Regional Water Board			
Chollas Creek	**Diazinon**	Effective Date: November 3, 2003 BPA: Attachment A to Resolution: R9-2002-0123	Implement Section III.A. and Section III.F.
Chollas Creek	**Dissolved Copper, Lead and Zinc**	Effective Date: December 18, 2008 BPA: Attachment A Resolution: R9-2007-0043	Implement Section III.A and Section III.C.
Rainbow Creek	**Total Nitrogen and Total Phosphorus**	Effective Date: March 22, 2006 BPA: Attachment A Resolution: R9-2005-0036	Implement Section III.A. and Section III.B.
Project 1- Revised Twenty Beaches & Creeks in the San Diego Region (including Tecolote Creek)	**Indicator Bacteria**	Effective Date: June 22, 2011 BPA: Attachment A Resolution: R9-2010-001	Implement Section III.A. and Section III.E.
** OAL Approved, U.S. EPA Approval Pending			

Section III. General and Categorical Requirements

A. General Requirements for All TMDLs:

1. **Comprehensive TMDL Monitoring Plan**

   a. The Department shall continue to implement existing TMDL water quality monitoring plans, including cooperative water quality monitoring plans that the Department is party to that have already received approval from the Regional Water Board Executive Officer.

   b. The Department shall develop and implement a comprehensive TMDL monitoring plan to be submitted to the State Water Board by January 1, 2015. The comprehensive TMDL monitoring plan shall include existing approved water quality monitoring plans as described in Section III.A.1.a. above, and shall also include monitoring for all TMDLs that do not have existing approved

water quality monitoring plans. The proposed comprehensive TMDL monitoring plan shall be designed to inform selection of BMPs, to inform future reach prioritization submittals, and to assess the effectiveness of BMP implementation. The Department may propose monitoring by pollutant category and may rely on representative monitoring for BMP effectiveness assessment. The comprehensive TMDL monitoring plan shall include a time-schedule for the implementation of the monitoring plan. The comprehensive TMDL monitoring plan is subject to approval by the Executive Director of the State Water Board.

2. **Adaptive Management**
The Department shall use monitoring data to conduct an on-going assessment of the performance and effectiveness of BMPs. The assessment shall include necessary modifications to control measures to achieve WLAs and other applicable performance standards. Where an assessment indicates that control measures are inadequate to achieve WLAs and other performance standards in a reach, the Department must implement improved control measures/BMPs.

3. **Reporting**
   a. By January 1, 2015, the Department shall submit the required information in section I.B. of this attachment regarding planned implementation of control measures for the upcoming reporting period (January 1, 2015 – October 1, 2015).

   b. The Department shall summarize the previous year's TMDL monitoring results, deliverables and other actions as specified in its annual ***TMDL STATUS REVIEW REPORT***.

   c. The Department shall prepare and submit a ***TMDL PROGRESS REPORT*** by January 1, 2018, to the State Water Board as part of its report of waste discharge under Provision E.13.c. The ***TMDL PROGRESS REPORT*** shall be presented to the State Water Board as an informational item and include the following information:
      i. A summary of the effectiveness of the control measures installed for each reach that has been addressed, as a result of the BMP effectiveness assessment,
      ii. A determination as to whether the control measures have been or will be sufficient to achieve WLAs and other performance standards by the final compliance deadlines,
      iii. Where the control measures are determined not to be sufficient to achieve WLAs or other performance standards by the final compliance deadlines, a proposal for improved control measures to address the relevant pollutants,
      iv. A summary of the estimated quantified amount of pollutants prevented from entering into the receiving waters as a result of BMPs, cooperative agreements, or other source control measures taken, and

v. An analysis demonstrating that the level of effort (1650 compliance units/year) during the present permit cycle will be sufficient to achieve WLAs and other performance standards for all TMDLs listed in Table IV.2 by 2034. The analysis must utilize monitoring data if available, pertinent analytical tools, including modeling where appropriate, and provide a reasonable assurance that applicable WLAs and performance criteria will be met.

The ***TMDL PROGRESS REPORT*** will be subject to public review and comment and will be used in the development of the reissued permit.

B. Sediment/Nutrients/Mercury/Siltation/Turbidity TMDL Control Requirements

Sediment, nutrient and mercury TMDLs identify sediment from roads as a significant or primary source of these pollutants. Measures that control the discharge of sediment can be effective in controlling releases of nutrients and mercury. Therefore, the Department shall implement control measures to prevent or minimize erosion and sediment discharge. This can be achieved by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.

C. Metals/Toxics/Pesticides TMDL Control Requirements

1. **Fine Particulates**

Toxic pollutants and/or heavy metals have a high affinity for adherence to fine sediment, such as particles from tires, brake parts, and the road surfaces. Therefore, the appropriate control measures for metals and toxics are to control erosion and prevent or minimize the discharge of fine sediment. The Department shall implement control measures to prevent the discharge of fine sediment. This can be achieved by intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying runoff flow patterns.

2. **Dissolved Fraction Metals**

The fraction of metals that are not bound to particulates exists in a dissolved state as free metal ions, as inorganic complexes, or bound to dissolved organic chemicals. Although fine particulate removal also reduces dissolved fraction metals, additional control measures may be necessary for the control of dissolved metals. Typically, treatment for dissolved fraction metals requires physical structures that prevent contaminated runoff from reaching receiving waters, such as infiltration systems that allow runoff water to percolate into soil.

The Department shall propose and implement appropriate control measures to reduce the discharge of dissolved fraction metals to comply with this Order.

3. **Pesticides**

The Department shall comply with Provision E.2.h.3)b) of this Order which specifies practices for the safe handling and use of pesticides, including

compliance with federal, State and local regulations, and label directions. This provision also requires site assessments, applicator training, and implementation of integrated pest and vegetation management practices in its vegetation control program.

D. Trash TMDL Control Requirements

Trash in waterbodies reduces habitat for aquatic life, directly impacts wildlife from ingestion or entanglement, impacts human health from pathogens, and impacts the aesthetics of waterbodies.

1. The discharge of trash to receiving waters is prohibited. The Department shall comply with this prohibition in all significant trash generating areas in the watersheds subject to trash TMDL controls, identified as the following:
   a. Highway on-ramps and off-ramps in high density residential, commercial, and industrial land use areas.
   b. Rest area and park-and-ride facilities.
   c. State highways in commercial and industrial land use areas.
   d. Mainline highway segments identified through pilot studies and/or surveys.

2. The Department shall comply with the discharge prohibition of trash through one of the following control measures:
   a. Install, operate, and maintain a full capture system, treatment controls, and/or institutional controls for storm drains that service the significant trash generating areas; or
   b. Coordinate with neighboring municipalities that have jurisdiction over significant trash generating areas and/or priority land use areas (high density residential, industrial, commercial, mixed urban, and public transportation stations) to implement Section III.D.2.a above.

3. The Department shall submit as part of its ***TMDL STATUS REVIEW REPORT*** a determination of the highway characteristics that may qualify as significant trash generating areas by October 1, 2015, and

4. The Department shall submit as part of its ***TMDL STATUS REVIEW REPORT*** the status of each of the applicable control measures specified in Section III.D.2 above.

   The constituents of Attachment II are not applicable for this pollutant category; therefore the Department is exempted from monitoring for the constituents listed in Attachment II for the waterbodies listed only for trash impairments.

E. Bacteria TMDL Control Requirements

The constituents of Attachment II are not applicable for this pollutant category; therefore the Department is exempted from monitoring for the constituents listed in Attachment II for the waterbodies listed only for bacteria impairments.

1. Dry-Weather Flows

Dry weather non-storm water discharges may significantly increase bacteria loading to receiving waters. Therefore, the Department shall implement control measures to ensure that the effective prohibition of non-storm water discharges (Provision B.2. of this Order) is implemented according to the prioritized work schedule specified in Section I of this attachment. The prohibition of non-storm water discharges can be achieved through infiltration, diversion, or other methods.

2. Wet-Weather Flows
Wet weather storm water discharges also contribute significant bacteria loads to receiving waters. The principal impact is to the water contact recreation beneficial use (REC-1). The Department shall implement control measures/BMPs to prevent or eliminate the discharge of bacteria from its ROW. Source control and preemptive activities such as street sweeping, clean-up of illegal dumping, public education on littering; and BMPs such as retention/detention, infiltration, diversion of storm water prevent or eliminate the discharge of bacteria to receiving waters.

F. Diazinon TMDL Control Requirements

Diazinon is an organophosphate pesticide used in agriculture. It is no longer registered by the California Department of Pesticide Regulation for non-agricultural uses. The Department does not use diazinon on its ROW. The discharge of diazinon is prohibited.

G. Selenium TMDL Control Requirements

Selenium is naturally occurring in geologic formations, soils and aquatic sediments. Storm water runoff, dewatering, ground water seepage, irrigation of high selenium content soils, and oil refineries are identified as significant sources of selenium. The Department shall implement control measures to control the discharge of selenium, unless the Department can demonstrate one of the following:

1. There is no exceedance of an applicable receiving water limitation for selenium in the receiving water(s) at, or immediately downstream of, the Department's outfall(s), or
2. There is no direct or indirect discharge from the Department's outfall(s) to the receiving water during the time period subject to the WLA.

The Department does not have to comply with the monitoring requirements of Attachment II in demonstrating non-exceedance or no discharge of selenium.

H. Temperature TMDL Control Requirements

Maintenance activities may increase receiving water temperatures as a result of vegetation removal and/or erosion and sedimentation. Sedimentation and erosion control measures for temperature impairments are being required in accordance with Section III.B. Therefore, the Department shall:

1. Preserve existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases,

2. Provide effective shade near receiving waters susceptible to temperature increases, and
3. Maintain site potential effective shade near receiving waters susceptible to temperature increases.

Alteration of riparian biotic conditions that may increase sedimentation or reduce effective shade shall receive prior written authorization by the applicable Regional Water Board Executive Officer or designee.

Site-specific Potential Effective Shade is defined as the shade equivalent to that provided by topography and potential vegetation conditions at a site. Effective shade is the percentage of direct beam solar radiation that attenuated and scattered before reaching the ground or stream surface from topographic and vegetation conditions. The term “site-specific potential” is defined as the vegetation conditions possible at a location, considering the vegetation species present, and any natural factors that limit vegetation size and density.

I. Chloride TMDL Control Requirements

Elevated levels of chloride in receiving waters affect their beneficial use for agricultural irrigation. Chloride in the Santa Clara River watershed is principally due to increased salt loadings from imported water and the use of self-regenerating water softeners. The Department does not discharge significant amounts of chloride and any minimal discharges are expected to be addressed under the requirements of this Order. No additional TMDL implementation actions for control of chloride are required in this attachment.

REGIONAL WATER BOARD SPECIFIC REQUIREMENTS

PART 1
NORTH COAST REGION

1. North Coast Regional Water Board Resolution R1-2004-0087 directs its staff to utilize existing regulatory programs to address sources of sediment within sediment impaired watersheds. The Department owns road right-of-way and other property within watersheds that are listed as impaired for sediment. Some of these facilities have sources of sediment (eroding shoulders, failed culverts, unstabilized cut and fill slopes, etc) that discharge into sediment impaired waterbodies. Consistent with Resolution R1-2004-0087 and the Water Quality Control Plan for the North Coast Region, the Department shall take the following steps in watersheds listed for sediment to identify, prioritize and control sources of sediment that discharge anthropogenic amounts of sediment into impaired waters. These requirements are in addition to any watershed-specific TMDL implementation requirements listed in Attachment IV of this Order. Steps to be taken include:

    a. Inventory: Identify sources of excess sediment or threatened discharge, and quantify the discharge or threatened discharges from the source(s).

    b. Prioritize: Prioritize efforts to control discharge of excess sediment based on, but not limited to, severity of threat to water quality and beneficial uses, the feasibility of source control, and source site accessibility. The inventory and prioritized steps shall be completed within two (2) years of the adoption of this Order and updated annually. This step is not required if the Department is implementing the requirements of Attachment IV for sediment TMDLs as the given reaches have already been prioritized within the context of statewide implementation.

    c. Implement: Develop and implement feasible sediment control practices to prevent, minimize, and control the discharge.

    d. Monitor and Adapt: Use monitoring results to direct adaptive management measures in order to refine and adjust erosion control practices and implementation schedules, until sediment discharge is reduced and no longer causes a violation of any sediment related narrative or numeric objective.

    Each District within the North Coast Region shall include a time schedule for the above-referenced activities within the District Workplan for Regional Water Board approval. The time schedule shall implement the required activities as quickly as feasible. An annual update on activities and compliance with the projected time schedule shall be included in each subsequent annual report.

2. Removal of riparian vegetation may result in a threatened discharge or an exceedance of a water quality objective. The North Coast Region has many

watersheds that are impaired for excess sediment and temperature. Riparian vegetation shall be protected and restored to the greatest extent feasible and removal may require permitting by the Regional Water Board.

PART 2
SAN FRANCISCO BAY REGION

1. High Trash Generation Areas

The Department shall demonstrate compliance with Discharge Prohibition 7, Table 4-1 of the San Francisco Bay Regional Water Board Basin Plan through the timely implementation of control measures in all high trash generating areas in the San Francisco Bay Region, identified as the following:

a. Freeway on- and off-ramps in high density residential, commercial and industrial land uses.
b. Rest areas and park-and-rides.
c. State highways in commercial and industrial land use areas.
d. Other freeway segments as identified by maintenance staff and/or trash surveys.

2. Control Measures

The Department shall comply with the prohibition of discharge for trash through implementation of the following control measures:

a. Install, operate, and maintain full trash capture systems, treatment controls, and/or enhanced maintenance controls for storm drains or catchments that service the significant trash generating areas.
b. Coordinate with neighboring MS4 permittees to construct, operate, and maintain full trash capture systems, treatment controls, and/or enhanced maintenance controls in high trash generating areas and/or priority land use areas (high density residential, industrial, commercial, and public transportation stations).

All installed devices that meet the full trash capture definition (See “Full Capture System”, Attachment VIII) may be counted toward this requirement regardless of date of installation.

3. Coordination with Local Entities

The Department may choose to establish a municipal coordination plan to design, build, operate, and/or maintain controls in conjunction with other watershed stakeholders. The Minimum Full Trash Capture requirement may be met with the Department specific activities and devices, or from load reduction resulting from municipal coordination implementation, or any combination thereof, so long as the municipal coordination activities meet the full trash capture standard.

4. Assessment

The Department shall assess the effectiveness of enhanced maintenance controls implemented in high trash generation areas. This assessment will include controls implemented in coordination with local municipalities.

5. Additional

a. Abate trash from construction and reconstruction projects.
b. Include trash capture devices on the outlets of treatment systems for new and redeveloped highway projects to achieve the full trash capture standard.

6. Reporting

In each Annual Report, as part of the ***TMDL STATUS REVIEW REPORT,*** the Department shall provide a per District summary of the following:

a. Trash load reduction actions.
b. Full trash capture installation and maintenance.
c. Implementation of enhanced maintenance controls.
d. A map and list of high trash generation areas and the installed controls addressing each area.
e. The reporting of trash load shall be in a manner approved by the Executive Officer.
f. Municipal coordination implementation.

7. **Storm Water Pump Stations**

The Department shall comply with the following implementation measures to reduce polluted water discharges from its pump stations:

a. Complete an inventory of pump stations within the Department's jurisdiction in the San Francisco Bay Region, including locations and key characteristics[41] and submit to the Regional Water Board by October 1, 2015.

b. Inspect and collect dissolved oxygen (DO) data from 20 percent of the pump stations once a year (100 percent in five years) after a minimum of a two week antecedent period with no precipitation. DO monitoring is exempted where all discharge from a pump station remains in the storm water collection system or infiltrates into a dry creek immediately downstream.
c. If DO levels are at or below three milligrams per liter (3 mg/L), apply corrective actions, such as continuous pumping at a low flow rate, aeration, or other appropriate methods to maintain DO concentrations of the discharge above 3 mg/L.

d. Report inspection and monitoring results in the Annual Report.

[41] Characteristics include name of pump station, latitude and longitude in NAD83, number of pumps, drainage area in acres, dominant land use(s), first receiving water body, maximum pumping capacity of station in gallons per minute (gpm), flow measurement capability (Y or N), flow measurement method, average wet season discharge rate in gpm, dry season discharge (Y, N, or unknown), nearest municipal wastewater treatment plant, wet well storage capacity in gallons, trash control (Y or N), trash control measure, and date built or last updated.

PART 3
LAHONTAN REGION

The Water Quality Control Plan for the Lahontan Region (Basin Plan) has additional requirements which have been historically applied to the Department's permits and which apply to this NPDES Permit in the Lahontan Region. These requirements include:

1. For projects meeting the criteria specified in Provision E.2.d.of the permit (Project Planning and Design), the following numeric sizing criteria for storm water treatment control BMPs apply:

   Where storm water runoff is determined to have connectivity to surface waters and/or is not adequately infiltrated or treated by the natural environment, storm water/urban runoff collection, treatment, and/or infiltration disposal facilities shall be designed, installed, and maintained for the discharge of storm water runoff from all impervious surfaces generated by the 20-year, one-hour design storm (1) within the Truckee River Hydrologic Unit (3/4- inch of rain), (2) within the East Fork Carson River and West Fork Carson River Hydrologic Units (one inch of rain), and (3) within the Mammoth Creek Hydrologic Unit above 7,000-foot elevation (one inch of rain). Hydrologic evaluations may be required or may be conducted consistent with the NEAT study described in item No. 2 below to help determine areas where infiltration of the 20-year, one-hour storm is required.

2. In 2009, the Department completed the Natural Environment as Treatment (NEAT) study and report for 38 miles of roadway within the Lake Tahoe Hydrologic Unit. The NEAT approach is consistent with the strategic approach required by this permit. Projects developed within the NEAT study area shall be designed and constructed based on the priority areas identified by the study.

3. Unless granted a variance by the Lahontan Regional Water Board Executive Officer, there shall be neither removal of vegetation nor disturbance of existing ground surface conditions between October 15 of any year and May 1 of the following year, except when there is an emergency situation that threatens the public health or welfare. This prohibition period applies to the Lake Tahoe, Truckee River, East Fork Carson River, and West Fork Carson River Hydrologic Units and above the 5,000-foot elevation in the portions of Mono and Inyo Counties within the Lahontan Region.

4. Project Review Requirements
   a. The Department shall participate in early project design consultation for all projects within the Lake Tahoe, Truckee River, East and West Forks Carson River and Mammoth Creek Hydrologic Units.

   b. The Department must solicit Lahontan Regional Water Board staff review when project development/design is at the 20 to 30 percent design level (prior to Project "Approval" and Environmental Document), 60 percent design level, and 90 percent design level (Plans, "Specifications" and Estimates).

ATTACHMENT VI — STANDARD PROVISIONS

1. **Duty to Comply.** The Department shall comply with all of the conditions of this Order. Any permit noncompliance constitutes a violation of the CWA and the Porter-Cologne Water Quality Control Act, which may be grounds for enforcement action or denial of permit coverage. [40 C.F.R. § 122.41(a)]

   The Department shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. [40 C.F.R. § 122.41(a)(1)]

2. **Modification, Revocation and Reissuance, or Termination.** This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Department for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any General Permit condition.

3. **Enforcement**
   a. The provision contained in this enforcement section shall not act as a limitation on the statutory or regulatory authority of the State and Regional Water Board.

   b. Any violation of the Order constitutes violation of the California Water Code and regulations adopted hereunder and the provisions of the Clean Water Act, and is the basis for enforcement action, permit termination, permit revocation and reissuance, denial of an application for permit reissuance; or a combination thereof.

   c. The State and Regional Water Boards may impose administrative civil liability may refer a discharger to the State Attorney General to seek civil monetary penalties, may seek injunctive relief or take other appropriate enforcement action as provided in the California Water Code or federal law.

   d. All applications, reports, or information submitted to the State Water Board or Regional Water Boards shall be signed and certified. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both. [40 C.F.R. § 122.41(k)]

4. **Need to Halt or Reduce Activity not a Defense.** It shall not be a defense for the Department in an enforcement action that it would have been necessary to halt or

reduce the permitted activity in order to maintain compliance with the conditions of this Order. [40 C.F.R. § 122.41(c)]

5. **Duty to Mitigate.** The Department shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. [40 C.F.R. § 122.41(d)]

6. **Proper Operation and Maintenance.** The Department at all times shall properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Department to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems installed by the Department only when necessary to achieve compliance with the conditions of this Order. [40 C.F.R. § 122.41(e)]

7. **Property Rights.** This Order does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State, or local laws or regulations. [40 C.F.R. § 122.41(g)]

8. **Duty to Provide Information.** Within a reasonable time specified by the State Water Board, Regional Water Boards, or U.S. EPA, the Department shall furnish records, reports, or information required to be kept by this Order, and shall furnish any information requested to determine whether cause exists for modifying, revoking, and reissuing, or terminating this Order or to determine compliance with this Order. [40 C.F.R. § 122.41(h)]

9. **Inspection and Entry.** [40 C.F.R. § 122.41(i)] Upon the presentation of credentials and other documents as may be required by law, the Department shall allow the State and Regional Water Boards, or U.S. EPA to:

    a. Enter upon the Department's premises where a regulated facility or activity is located or conducted or where records are required to be kept under the conditions of this Order;

    b. Have access to and copy at reasonable times any records that must be kept under the conditions of this Order;

    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

    d. Sample or monitor at reasonable times for the purposes of assuring ensuring permit compliance, or as otherwise authorized by the Clean Water Act.

10. **Monitoring and Records.** [40 C.F.R. § 122.41(j)]
    a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

    b. The Department shall retain records of all monitoring information for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the State Water Board's Executive Director or Regional Water Board's Executive Officer at any time.

    c. Records of monitoring information shall include:

        i. The date, exact place, and time of sampling or measurements;
        ii. The individual(s) who performed the sampling or measurements;
        iii. The date(s) analyses were performed;
        iv. The individual(s) who performed the analyses;
        v. The analytical techniques or methods used; and
        vi. The results of such analyses.

    d. Monitoring must be conducted according to test procedures approved under 40 C.F.R. § 136 unless another method is required under 40 C.F.R. subchapters N or O.

    e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both.

11. **Signatory Requirements.** All reports, certifications, and records required by this Order or requested by the State Water Board and Regional Water Boards or U.S. EPA shall be signed by either a principal executive officer or by a duly authorized representative. A person is a duly authorized representative only if [40 C.F.R. §§ 122.22 & 122.41(k)]:

    a. The authorization is made in writing by the principal executive officer; and

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the Department. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, the Department shall provide a new authorization prior to submittal of any reports, certifications, or records signed by the newly authorized representative.

12. **Certification.** Any person signing documents under Provision 11 above shall make the following certification [40 C.F.R. § 122.22(d)]:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

13. **Reporting Requirements.**

a. *Planned changes*. The Department shall give advance notice to the State Water Board and the appropriate Regional Water Board of any planned physical alteration or additions to the permitted facility. Notice is required under this provision only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged; [40 C.F.R. § 122.41(l)(1)]

b. *Anticipated noncompliance*. The Department shall give advance notice to the appropriate Regional Water Board of any planned changes at the permitted facility or activity which may result in noncompliance with Permit requirements; [40 C.F.R. § 122.41(l)(2)]

c. *Compliance Schedules*. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following each scheduled date; [40 C.F.R. § 122.41(l)(5)]

d. *Other Information*. Where the Department becomes aware that it failed to submit any relevant facts, or submitted incorrect information in a permit application or in any required report, it shall promptly submit such facts or information [40 C.F.R. § 122.41(l)(8)].

e. The Department shall submit, except for the Annual Report, one copy of each report required by the permit to the State Water Board. The Department shall also submit one copy to each of the appropriate Regional Water Boards. The Department may choose to submit its properly signed reports electronically

into SMARTS in the Portable Document Format (PDF) and submit hard copies only upon request of the State or Regional Water Board staff.

14. **Oil and Hazardous Substance Liability.** Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Department from any responsibilities, liabilities, or penalties to which the Department is or may be subject to under Section 311 of the CWA.

15. **Severability.** The provisions of this Order are severable; and if any provision of this Order or the application of any provision of this Order to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

16. **Availability.** A copy of this Order shall be maintained at the facility and be available at all times to the appropriate facility personnel and to representatives of the Regional Water Boards, State Water Board, or U.S. EPA.

17. **Education.** The Department shall ensure that all personnel whose decisions or activities could affect storm water quality are familiar with the requirements of this NPDES Permit.

ATTACHMENT VII — LIST OF ACRONYMS & ABBREVIATIONS

ASBS	Areas of Special Biological Significance
BAT	Best Available Technology Economically Achievable
Basin Plans	Regional Water Quality Control Plans
BCT	Best Conventional Pollutant Control Technology
BMPs	Best Management Practices
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	Construction General Permit - NPDES General Permit for Storm Water Discharges Associated with Construction Activities
CTR	California Toxics Rule
CWA	Clean Water Act
CWC	California Water Code
Department	California Department of Transportation (Caltrans)
EC	Electrical Conductivity
EMA	Emergency Management Agency
ESA	Environmentally Sensitive Area
FPPP	Facility Pollution Prevention Plan
GPS	Global Positioning System
Hydromodification	Hydrograph Modification
IC/ID	Illegal Connection/ Illicit Discharge
IGP	Industrial General Permit - NPDES General Permit for Discharges Associated with Industrial Activities Excluding Construction Activities
LA	Load Allocation
LID	Low Impact Development
MEP	Maximum Extent Practicable
MRP	Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
NCIR	Non-Compliance Incident Report
NOI	Notice of Intent
NPDES	National Polluant Discharge Elimination System
Ocean Plan	California Ocean Plan
PAHs	Polycyclic Aromatic Hydrocarbons
POTW	Publicly Owned Treatment Works
Regional Water Board	Regional Water Quality Control Board
ROW	Department Right-of-Way
State Water Board	State Water Resources Control Board
SUSMP	Standard Urban Storm Water Mitigation Plan
SWAMP	Surface Water Ambient Monitoring Program
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TCGP	Tahoe Construction General Permit
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TPH	Total Petroleum Hydrocarbon
TSS	Total Suspended Solids
U.S. EPA	United States Environmental Protection Agency
WDRs	Waste Discharge Requirements
WLA	Waste Load Allocation
WQBEL	Water Quality-Based Effluent Limitation
WQO	Water Quality Objective
WQS	Water Quality Standard
Workplans	District Workplans

ATTACHMENT VIII - GLOSSARY

Acute Toxicity. A chemical stimulus severe enough to rapidly induce an effect; in aquatic toxicity tests, an effect observed within 96 hours or less is considered acute. When expressed as toxic units acute (TUa), TUa=100/96-hour LC 50 percent. Acute toxicity can also be expressed as lethal concentration 50 percent (LC 50).

Administrative Noncompliance. Failure to comply with the procedural requirements of this Order. Examples include but are not limited to: failure to submit required reports or documents required by the Permit and/or SWMP, missed deadlines or late submittal, and/or failure to submit required information, failure to develop and/or maintain site-specific FPPP or to implement any other procedural requirement of the Permit.

Areas of Special Biological Significance (ASBS). Ocean or estuarine areas designated by the State Water Board that require special protection of species or biological communities to the extent where alteration of natural water quality is undesirable. The California Ocean Plan describes ASBSs as “those areas containing biological communities of such extraordinary value that no risk of change in their environment as the result of man's activities can be entertained". ASBSs are a subset of State Water Quality Protection Areas.

Basin Plans. Basin Plans (regional water quality control plans) are the principal regulatory mechanisms for protection of water quality in California. Basin plans describe the beneficial uses that each water body supports, e.g. drinking, swimming, fishing, and agricultural irrigation; the water quality objectives necessary to protect those uses; and the program implementation needed to achieve the objectives, such as waste discharge permits and enforcement actions.

Batch Plant. A processing plant where concrete or asphalt is mixed before transport to a construction site. Batch plants are considered to be industrial activities as defined in 40 CFR 122.26(b)(14) (iii) and are regulated under the Industrial General Permit.

Beneficial Uses. The uses of the water protected against degradation including, but not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Available Technology Economically Achievable (BAT). Technology-based compliance standard established by the Clean Water Act. BAT is based on consideration of the age of the equipment and facilities involved, the processes employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements) and other factors as deemed appropriate. BAT effluent

limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT). Technology-based compliance standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, oil and grease. BCT is established by a two-part "cost reasonableness" test, which compares the cost for an industry to reduce its pollutant discharge with the cost to a POTW for similar levels of reduction of a pollutant loading. The second test examines the cost-effectiveness of additional industrial treatment beyond BCT. Limits must be reasonable under both tests.

Best Management Practices (BMPs). Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs include structural and nonstructural controls, treatment requirements, operation and maintenance procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Non-Approved BMP. Any BMP for maintenance, construction, design pollution prevention, and treatment that are not in the Department's SWMP (CTSW-RT-02-008) or Statewide Storm Water Quality Practice Guidelines (CTSW-RT-02-009) approved for statewide use.

Post-Construction BMPs. Any structural or non-structural controls that detain, retain, or filter storm water to prevent the release of pollutants to receiving waters after final site stabilization is attained.

Structural BMPs. Any structural facility designed and constructed to mitigate the adverse impacts of storm water runoff (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

Source Control BMPs. Any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source. Examples include treatment techniques that use natural measures to reduce pollution levels, do not require extensive construction efforts, and/or promote pollutant reduction by controlling the pollutant source.

Treatment Control BMPs. Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

California Ocean Plan (Ocean Plan). The water quality control plan for California near-coastal waters, first adopted by the State Water Resources Control Board in 1972.

The purpose of the Ocean Plan is to protect the beneficial uses of the State's ocean waters by identifying water quality objectives, setting general waste discharge requirements, and listing discharge prohibitions. In addition, the Ocean Plan is used to develop and update statewide water quality control plans, policies, and standards involving marine waters.

California Toxics Rule. The Federal regulation, found at 40 CFR § 131.38. Establishes water quality criteria (limits) for heavy metals and other toxic compounds for the protection of beneficial uses of surface waters in California.

Catch Basins. A storm drain inlet having a sump below the outlet to capture settled solids, debris, sediment, and prevent clogging.

Chronic Toxicity. The ability of a substance or a mixture of substances to cause harmful effects over an extended period of time. Expressed as toxic units chronic (TUc), TUc=100/NOEL, where NOEL is the No Observed Effect Level.

Construction Activity. Any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

Cut and Fill. The process of moving earth by excavating part of an area and using the excavated material for adjacent embankment of fill areas.

Department Airspaces. Any area within the Department's operating right-of-way that can safely accommodate a privately managed use such as: parking lots, self storage units, commercial businesses, light industry, and cellular telephone towers. The Department executes airspace leases with third parties for these uses.

Department Facility. A Maintenance Facility, Non-maintenance Facility, Highway Facility, Industrial Facility, or Vehicle Maintenance.

Maintenance Facility. A facility under Department ownership or control that contains fueling areas, maintenance stations/yards, waste storage or disposal facilities, wash racks, equipment or vehicle storage and materials storage areas.

***Non-maintenance Facility*.** Laboratories or office buildings used exclusively for administrative functions.

Highway Facility. Highways are linear facilities designed to carry vehicular and pedestrian traffic. These include freeways, highways, and expressways as designated by the California Streets and Highway Code and the California legislature. These facilities also include all support infrastructure associated with these freeways, including bridges, toll plazas, inspection and weigh stations, sound walls, retaining

walls, culverts, vegetated slopes, shoulders, intersections, off ramps, on ramps, over passes, lights, signal lights, gutter, guard rail, and other support

facilities. The support infrastructure is considered a Highway Facility only when accompanied by an increase in highway impervious surface. Otherwise, it is considered a non-highway .

***Industrial Facility*.** A collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.

Non-Highway Facility. For purposes of this permit, a Non-Highway Facility is any facility not meeting the definition of a Highway Facility, including but not limited to rest stops, park and ride facilities, maintenance stations, vista points, warehouses, laboratories, and office buildings.

Discharge. When used without qualification means the discharge of a pollutant.

Direct Discharge. Any discharge from the MS4 that does not meet the definition of an indirect discharge.

Indirect Discharge. Any discharge from the MS4 that is conveyed to the receiving water through 300 feet or more of an unlined ditch or channel as measured between the discharge point from the MS4 and the receiving water.

Discharge of a Pollutant. The addition of any pollutant or combination of pollutants to waters of the United States from any point source, or any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. The term includes additions of pollutants to waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

District Workplans (DWPs). Annual workplans prepared by each District containing descriptions of all activities and projects to be undertaken in the District that are necessary to implement the SWMP and comply with the requirements of this Order. DWPs are submitted annually with the Annual Report. Formerly known as the Regional Work Plans.

Drainage Inlet. A location where water runoff enters a storm water drainage system that includes streets, gutters, conduits, natural or artificial drains, channels and watercourses, or other facilities that are owned, operated, maintained and used for the purpose of collecting, storing, transporting or disposing of storm water

Effluent. Any discharge from the MS4.

Emergency. Any sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage.

Erosion. The diminishing or wearing away of land due to wind, or water. Often the eroded material (silt or sediment) becomes a pollutant via stormwater runoff.

Erosion occurs naturally, but can be intensified by land disturbing and grading activities such as farming, development, road building, and timber harvesting.

Facility Pollution Prevention Plan (**FPPP**)**.** A plan that identifies the functional activities specific to the maintenance facility and the applicable BMPs and other procedures utilized by facility personnel to control the discharge of pollutants in storm water. Facilities subject to FPPPs include: maintenance yards/stations; material storage facilities/permanent stockpile locations (if not totally enclosed); equipment storage and repair facilities, roadside rest areas, agricultural and highway patrol weigh stations, decant storage or disposal locations, and permanent and temporary solid and liquid waste management sites.

FPPPs are not required for temporary stockpile locations (in continuous use for less than one year). All temporary stockpile locations shall implement the applicable best management practices defined in the Caltrans Stormwater Quality Handbook Maintenance Staff guide. Any stockpile location in continuous use for more than one year is deemed permanent and requires a Facility Pollution Prevention Plan.

Full Capture System. A full capture system is any single device or series of devices that traps all particles retained by a five (5) mm mesh screen and has a design treatment capacity of not less than the peak flow rate Q resulting from a one-year, one-hour, storm in the subdrainage area.

Rational equation is used to compute the peak flow rate: $Q = C \times I \times A$
Where Q = design flow rate (cubic feet per second, cfs);
C = runoff coefficient (dimensionless);
I = design rainfall intensity (inches per hour, as determined per a rainfall isohyetal map), and
A= subdrainage area (acres).

Hydrograph Modification (Hydromodification). The alteration of the hydrologic characteristics of surface waters through watershed development. Under past practices, new and re-development construction activities resulted in urbanization, which in turn modified natural watershed and stream processes. The impacts of hydromodification include, but are not limited to, increased bed and bank erosion,

loss of habitat, increased sediment transport and deposition, and increased flooding. Urbanization does this by altering the terrain, modifying the vegetation and soil characteristics, introducing impervious surfaces such as pavement and buildings, and altering the condition of stream channels through straightening, deepening, and armoring. These changes affect hydrologic characteristics in the watershed and affect the supply and transport of sediment in the stream system.

Hydromodification Management Plan. A plan to control and reduce the impacts of hydrograph modification from development activities in a watershed.

Illegal Connection/Illicit Discharge (IC/ID).

Illegal Connection. An engineered conveyance that is connected to an MS4 without authorization by local, state, or federal statutes, ordinances, codes, or regulations.

Illicit Discharge. Any discharge to an MS4 that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. It includes all non-storm water discharges except conditionally exempt non-storm water discharges.

***Illegal Dumping*.** Discarding or disposal within the Department's right-of-way, properties or facilities, either intentionally or unintentionally, of trash and other wastes in non-designated areas that may contribute to storm water pollution.

Impervious Cover. Any surface in the landscape that cannot effectively absorb or infiltrate rainfall; for example, sidewalks, rooftops, roads, and parking lots.

Incidental Runoff. Unintended small amounts (volume) of runoff from landscape irrigation, such as minimal over-spray from sprinklers that escapes the irrigated area. Water leaving an irrigated area is not considered incidental if it is due to improper (e.g. during a precipitation event) or excessive application, if it is due to intentional overflow or application, or if it is due to negligence. Leaks and other discharges (e.g. broken sprinkler heads) are not considered incidental if not corrected within 72 hours of learning of the discharge or if the discharge exceeds 1000 gallons.

Land Use. How land is managed or used by humans (e.g., residential and industrial development, roads, mining, timber harvesting, agriculture, grazing, etc.). Land use is generally regulated at the local level in the U.S. based on zoning and other regulations. Land use mapping differs from land cover mapping in that it is not always obvious what the land use is from visual inspection.

Load Allocation. The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which can range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading (40 CFR 130.2(g)).

Low Impact Development (LID). An approach to land development with the goal of mimicking or replicating the pre-project hydrologic regime through the use of design techniques to create a functionally equivalent hydrologic site design. Hydrologic functions of storage, infiltration and ground water recharge, as well as the volume and frequency of discharges are maintained through the use of integrated and distributed micro-scale storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of runoff flow paths and flow time. Other strategies include the preservation/protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, mature trees, flood plains, woodlands, and highly permeable soils.

Maximum Extent Practicable (MEP). The minimum required performance standard for implementation of municipal storm water management programs to reduce pollutants in storm water. Clean Water Act § 402(p)(3)(B)(iii) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." MEP is the cumulative effect of implementing, evaluating, and making corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate controls are implemented in the most effective manner. To achieve the MEP standard, municipalities must employ whatever BMPs are technically feasible and are not cost-prohibitive. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the costs would be prohibitive. A final determination of whether a municipality has reduced pollutants to the MEP can only be made by the State or Regional Water Boards.

Municipal Separate Storm Sewer System (MS4). A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is: (1) Owned or operated by a state, city, town, village, or other public entity that discharges to waters of the U.S.; (2) Designed or used to collect or convey storm water; (3) Not a combined sewer; and (4) Not part of a Publicly Owned Treatment Works.

Natural Ocean Water Quality. The water quality (based on selected physical, chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, i.e., an absence of significant amounts of: (a) man-made constituents (e.g., DDT); (b) other chemical (e.g., trace metals), physical (temperature/thermal pollution, sediment burial), and biological (e.g., bacteria) constituents at concentrations that have been elevated due to man's activities above those resulting from the naturally occurring processes that affect the area in question; and (c) non-indigenous biota (e.g., invasive algal bloom species) that have been introduced either deliberately or accidentally by man. Discharges "shall not alter natural ocean water quality" as determined by a comparison to the range of constituent concentrations in reference areas agreed upon via the regional

monitoring program(s). If monitoring information indicates that natural ocean water quality is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff sample data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

New Development. Any newly constructed facility, street, road, highway or contiguous road surface installed as part of a street, road or highway project within the Department's right-of-way.

Non-Department Activities. Third party activities that are primarily controlled by encroachment permits, leases, and rental agreements. They include both construction activities and non-construction activities.

Non-Department Projects. Same as Non-Department Activities.

Non-storm Water. Discharges that are not induced by precipitation events and are not composed entirely of storm water. These discharges include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, concrete washout water, paint wash water, irrigation water, pipe testing water, lawn watering overspray, hydrant flushing, and fire fighting activities.

Nonpoint Source. Pollution that is not released through a discrete conveyance but rather originates from multiple sources over a relatively large area. Nonpoint sources can be divided into source activities related to either land or water use, including failing septic tanks, animal agriculture, forest practices, and urban and rural runoff.

Nuisance. Anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; (3) occurs during, or as a result of, the treatment or disposal of wastes.

Perennial Stream. Any stream shown as a solid blue line on the latest version of the U.S. Geological Survey (USGS) 7.5 minute series quadrangle map (sometimes referred to as a blue-line stream). Where 7.5 minute series maps have not been prepared by USGS, 15 minute series maps are used.

Pesticide. Substances intended to repel, kill, or control any species designated a "pest" including weeds, insects, rodents, fungi, bacteria, or other organisms. The family of pesticides includes herbicides, insecticides, rodenticides, fungicides, algicides, and bactericides.

Algicide. A pesticide that controls algae in swimming pools and water tanks.

***Herbicide*.** A pesticide designed to control or kill plants, weeds, or grasses.

***Insecticide*.** A pesticide compound specifically used to kill or prevent the growth of insects.

Rodenticide. A pesticide or other agent used to kill rats and other rodents or to prevent them from damaging food, crops, or forage.

Fungicide. A pesticide used to control or destroy fungi on food or grain crops.

***Bactericide*.** A pesticide used to control or destroy bacteria, typically in the home, schools, or on hospital equipment.

pH. A measure of the degree of acidity or alkalinity in a water sample. The pH of natural waters tends to range between six (6) and nine (9), with neutral being seven (7). Extremes of pH can have deleterious effects on aquatic systems.

Point source. Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.

Pollutant. Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

Pollutants of Concern. Pollutants in a discharge with potential to cause a condition of pollution or nuisance due to the discharge of excessive amounts, proximity to receiving waters, or the properties of the pollutant. Pollutants that impair waterbodies listed under CWA section 303(d) are also Pollutants of Concern. Pollutants in the Department's discharge that may be Pollutants of Concern include, but are not limited to, total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (e.g., decaying vegetation and animal waste), and litter and trash.

Pollution. An alteration of the quality of the waters of the state by waste to a degree which unreasonably affects the beneficial uses of the water or facilities which serve those beneficial uses (Porter-Cologne Water Quality Control Act, section 13050(l)(1)).

Redevelopment. The creation, addition, and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that removes impervious materials and exposes the underlying soil or pervious subgrade. Redevelopment does not include trenching and resurfacing associated with utility work; pavement grinding and resurfacing of existing roadways; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway. Redevelopment does include replacement of existing roadway surfaces where the underlying soil or pervious subgrade is exposed during construction. Replaced impervious surfaces of this type shall be considered "new impervious surfaces" for purposes of determining the applicability of post-construction treatment controls as provided in provision E.2.d.2).

Roadway. Any road within the Department's right-of-way.

Routine Maintenance. Activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of a facility. Routine maintenance does not include replacement of existing roadway surfaces where the underlying soil or pervious subgrade is exposed.

Right-of-Way (ROW). Real property that is either owned or controlled by the Department or subject to a property right of the Department. Right-of-way that is in current use is referred to as operating ROW.

Sediment. Soil, sand, and minerals washed from land into water, usually after rain.

Slope Lateral Drainage. Horizontal drains placed in hillside embankments to intercept groundwater and direct it away from slopes to provide stability.

Spill. The sudden release of a potential pollutant to the environment.

Storm Water. Storm water runoff, snowmelt runoff, and surface runoff and drainage, as defined in 40 CFR 122.26 (b)(13).

Storm Water Runoff. The portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels or pipes.

Standard Urban Storm Water Mitigation Plan (SUSMP). Plans designating the Best Management Practices that must be used in specified categories of development and redevelopment. The State Water Board adopted a precedential decision (Order WQ 2000-11) upholding a SUSMP requirement imposed under a Phase I MS4 permit and requiring SUSMPs in all MS4 permits.

Storm Water Management Plan (SWMP). Description of the procedures and practices used to reduce or eliminate the discharge of pollutants to storm drain systems and receiving waters.

Surface Water Ambient Monitoring Program (SWAMP). The State Water Board's monitoring, assessment, and reporting program for ambient surface water.

Threshold Drainage Area (TDA). The area draining to a location 20 channel widths downstream (representative reach) of a stream crossing (pipe, swale, culvert, or bridge) within Project Limits.

Threatened Non-compliance. Any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

Total Dissolved Solids (TDS). A quantitative measure of the residual minerals dissolved in water that remain after evaporation of a solution and used to evaluate the quality of freshwater systems.

Total Kjeldahl Nitrogen (TKN). The sum of organic nitrogen and total ammonia nitrogen.

Total Maximum Daily Load (TMDL). The sum of the individual WLAs for point sources and LAs for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs (40 CFR 130.2(i)).

Total Petroleum Hydrocarbon (TPH). A measure of the concentration or mass of petroleum hydrocarbons in a given amount of soil or water. TPH is a mixture of different compounds from different sources.

Total Suspended Solids (TSS). Suspended particulate matter: Fine material or soil particles that remain suspended by the water column. They create turbidity and, when deposited, can smother fish eggs or alevins.

Toxicity. The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Trash. All improperly discarded waste material associated with human habitation, of human origin; or from any producing, manufacturing, or processing operation including, but not limited to, product packaging or containers constructed of steel,

aluminum, glass, paper, plastic, and other natural and synthetic materials that are thrown or deposited in waters or where it could be transported, as floating, suspended, and/or settleable materials, to waters of the State, including watersheds. (SWRCB Trash Policy).

Turbidity. Murkiness or cloudiness of water, indicating the presence of suspended solids.

United States Environmental Protection Agency (U.S. EPA). U.S. EPA works to develop and enforce regulations that implement environmental laws enacted by the United States Congress. U.S. EPA is responsible for researching and setting national standards for the Storm Water Program.

Waste. Includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

Wasteload Allocation (WLA). The portion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution. Waste load allocations constitute a type of water quality-based effluent limitation.

Water Quality Objectives (WQO). The limits or levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or to prevent nuisance within a specific area. Water quality objectives may be numeric or narrative.

Water Quality Standards (WQS). State-adopted and U.S. EPA-approved water quality standards for surface water bodies. The standards prescribe the beneficial uses (swimmable, fishable, drinkable, etc.) of the water body and establish the WQOs that must be met to protect designated uses.

Waters of the State. Any surface water or groundwater, including saline waters, within boundaries of the state, as defined in CWC 13050(e). This Order contains requirements to protect the beneficial uses of waters of the State.

Waters of the United States. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. Waters of the United States [as defined in 40 CFR 230.3(s)] include all interstate waters and intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use of which would affect or could affect interstate or foreign commerce. The definition also applies to tributaries of the aforementioned waters. See 40 CFR 122.2 for the complete definition, which is hereby incorporated by reference.

Watershed. A drainage area or basin in which all water drains or flows toward a central collector such as a stream, river, or lake at a lower elevation.

Wetlands. Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Workplans. See District Workplans.

Attachment IX: Reporting Requirements

Reporting Requirement	Permit Section	Due Date	Frequency
Annual Report	E.3.	October 1, 2013	Annually
Draft ASBS Compliance Plan	E.5.c.2)	September 20, 2013	18 months after the General Exception effective date
Final ASBS Compliance Plan	E.5.c.2)	September 20, 2015	30 months after the General Exception effective date
Budget Analysis	E.2.b.3)c)	October 1, 2017	Year 4 of Permit Cycle
Certification of the Adequacy of Legal Authority	E.2.b.2)b)	October 1, 2013	Annually as part of the Annual Report
District Workplans	E.3.b.	October 1, 2013	Annually as part of the Annual Report
Facility Pollution Prevention Plan (FPPP)	E.2.h.2)	October 1, 2013	Annually as part of the Annual Report and as required by the Regional Water Board
Fiscal Analysis	E.2.b.3)b)	October 1, 2013	Annually as part of the Annual Report
IC/ID & Illegal Dumping Response Plan	E.2.h.4)b)ii)	December 31, 2013	Update as needed annually
Incident Report Form	E.2.b.6)and Attachment I	October 1, 2013	As Needed
Landslide Management Plan	E.2.h.3)d)	October 1, 2013	Year 1 Annual Report
Monitoring Results Report (MRR)	E.2.c.5)	October 1, 2013	Annually
Monitoring Site Prioritization (Tier 2)	E.2.c.1)	March 1, 2014	Within 8 months of the effective date
Municipal Coordination Plan	E.2.b.1)b)	October 1, 2013	To be Included in the SWMP and Progress Report as part of the Annual Report
Overall Program Effectiveness Evaluation	E.2.m.3)	October 1, 2013	Annually as part of the Annual Report
Public Education Program Progress Report	E.2.l.2)	October 1, 2013	Annually as part of the Annual Report
Self-Audit - (includes construction activities)	E.2.m.2)	October 1, 2013	Annually as part of the Annual Report
Stormwater Monitoring & BMP Development Status Report	E.2.e.	October 1, 2013	Annually as part of the Annual Report
Stormwater Treatment BMP Technology Report	E.2.e.	October 1, 2013	Annually as part of the Annual Report
TMDL Status Review Report	E.4.b.	October 1, 2015	Annually as part of the Annual Report
Updated Stormwater Management Plan (SWMP)	E.1.a.	October 1, 2013	Revisions as part of the Annual Report
Waste Management Plan	E.2.h.3)c)iii)	July 1, 2014	Within 1 year of the Effective Date

Note: This table is a partial list of reporting requirements. The Department shall submit all required reports as provided in the Order. Any discrepancy between the text of the NPDES Permit and this table will be resolved in favor of the Permit.

Effective Date of this Order is July 1, 2013
Effective Date of the ASBS Special Protections (General Exception) is March 20, 2012

ATTACHMENT X — REFERENCES

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ATTACHMENT
11

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES

ORDER
NPDES NO. CAS000001

This Order was adopted by the State Water Resources Control Board on:	**April 1, 2014**
This Order shall become effective on:	**July 1, 2015**
This Order shall expire on:	**June 30, 2020**

IT IS HEREBY ORDERED that as of July 1, 2015 this Order supersedes Order 97-03-DWQ except for Order 97-03-DWQ's requirement to submit annual reports by July 1, 2015 and except for enforcement purposes. As of July 1, 2015, a Discharger shall comply with the requirements in this Order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder.

CERTIFICATION

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order, including its fact sheet, attachments, and appendices is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on April 1, 2014.

AYE:	Chair Felicia Marcus Vice Chair Frances Spivy-Weber Board Member Tam M. Doduc Board Member Steven Moore
NAY:	None
ABSENT:	Board Member Dorene D'Adamo
ABSTAIN:	None

Jeanine Townsend
Clerk to the Board

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I. FINDINGS

A. General Findings

The State Water Resources Control Board (State Water Board) finds that:

1. The Federal Clean Water Act (Clean Water Act) prohibits certain discharges of storm water containing pollutants except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. (33 U.S.C. §§ 1311, 1342 (also referred to as Clean Water Act §§ 301, 402).) The United States Environmental Protection Agency (U.S. EPA) promulgates federal regulations to implement the Clean Water Act's mandate to control pollutants in storm water discharges. (40 C.F.R. § 122, et seq.) The NPDES permit must require implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges (NSWDs). The NPDES permit must also include additional requirements necessary to implement applicable water quality objectives or water quality standards (water quality standards, collectively).

2. On November 16, 1990, U.S. EPA promulgated Phase I storm water regulations in compliance with section 402(p) of the Clean Water Act. (55 Fed. Reg. 47990, codified at 40 C.F.R. § 122.26.) These regulations require operators of facilities subject to storm water permitting (Dischargers), that discharge storm water associated with industrial activity (industrial storm water discharges), to obtain an NPDES permit. Section 402(p)(3)(A) of the Clean Water Act also requires that permits for discharges associated with industrial activity include requirements necessary to meet water quality standards.

3. Phase II storm water regulations[1] require permitting for storm water discharges from facilities owned and operated by a municipality with a population of less than 100,000. The previous exemption from the Phase I permitting requirements under section 1068 of the Intermodal Surface Transportation Efficiency Act of 1991 was eliminated.

4. This Order (General Permit) is an NPDES General Permit issued in compliance with section 402 of the Clean Water Act and shall take effect on July 1, 2015, provided that the Regional Administrator of U.S. EPA has no objection. If the U.S. EPA Regional Administrator has an objection, this General Permit will not become effective until the objection is withdrawn.

5. This action to adopt an NPDES General Permit is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000, et seq.) in accordance with section 13389 of the Water Code. (See *County of*

[1] U.S. EPA. Final NPDES Phase II Rule. <http://cfpub.epa.gov/npdes/stormwater/swfinal.cfm>. [as of February 4, 2014]

Los Angeles v. California State Water Resources Control Bd. (2006) 143 Cal.App.4th 985.)

6. State Water Board Order 97-03-DWQ is rescinded as of the effective date of this General Permit (July 1, 2015) except for Order 97-03-DWQ's requirement that annual reports be submitted by July1, 2015 and except for enforcement purposes.

7. Effective July 1, 2015, the State Water Board and the Regional Water Quality Control Boards (Regional Water Boards) (Water Boards, collectively) will enforce the provisions herein.

8. This General Permit authorizes discharges of industrial storm water to waters of the United States, so long as those discharges comply with all requirements, provisions, limitations, and prohibitions in this General Permit.

9. Industrial activities covered under this General Permit are described in Attachment A.

10. The Fact Sheet for this Order is incorporated as findings of this General Permit.

11. Acronyms are defined in Attachment B and terms used in this General Permit are defined in Attachment C.

12. This General Permit regulates industrial storm water discharges and authorized NSWDs from specific categories of industrial facilities identified in Attachment A hereto, and industrial storm water discharges and authorized NSWDs from facilities designated by the Regional Water Boards to obtain coverage under this General Permit. This General Permit does not apply to industrial storm water discharges and NSWDs that are regulated by other individual or general NPDES permits

13. This General Permit does not preempt or supersede the authority of municipal agencies to prohibit, restrict, or control industrial storm water discharges and authorized NSWDs that may discharge to storm water conveyance systems or other watercourses within their jurisdictions as allowed by state and federal law.

14. All terms defined in the Clean Water Act, U.S. EPA regulations, and the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000, et seq.) will have the same definition in this General Permit unless otherwise stated.

15. Pursuant to 40 Code of Federal Regulations section 131.12 and State Water Board Resolution 68-16, which incorporates the requirements of 40 Code of Federal Regulations section 131.12 where applicable, the State Water Board finds that discharges in compliance with this General Permit will not result in the lowering of water quality to a level that does not achieve water quality objectives and protect beneficial uses. Any degradation of water quality from existing high quality water to a level that achieves water quality objectives and

protects beneficial uses is appropriate to support economic development. This General Permit's requirements constitute best practicable treatment or control for discharges of industrial storm water and authorized non-storm water discharges, and are therefore consistent with those provisions.

16. Compliance with any specific limits or requirements contained in this General Permit does not constitute compliance with any other applicable permits.

17. This General Permit requires that the Discharger certify and submit all Permit Registration Documents (PRDs) for Notice of Intent (NOI) and No Exposure Certification (NEC) coverage via the State Water Board's Storm Water Multiple Application and Report Tracking System (SMARTS) website. (See Attachment D for an example of the information required to be submitted in the PRDs via SMARTS.) All other documents required by this General Permit to be electronically certified and submitted via SMARTS can be submitted by the Discharger or by a designated Duly Authorized Representative on behalf of the Discharger. Electronic reporting is required to reduce the state's reliance on paper, to improve efficiency, and to make such General Permit documents more easily accessible to the public and the Water Boards.

18. All information provided to the Water Boards shall comply with the Homeland Security Act and all other federal law that concerns security in the United States, as applicable.

B. Industrial Activities Not Covered Under this General Permit

19. Discharges of storm water from areas on tribal lands are not covered under this General Permit. Storm water discharges from industrial facilities on tribal lands are regulated by a separate NPDES permit issued by U.S. EPA.

20. Discharges of storm water regulated under another individual or general NPDES permit adopted by the State Water Board or Regional Water Board are not covered under this General Permit, including the State Water Board NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.

21. Storm water discharges to combined sewer systems are not covered under this General Permit. These discharges must be covered by an individual permit. (40 C.F.R. § 122.26(a)(7).)

22. Conveyances that discharge storm water runoff combined with municipal sewage are not covered under this General Permit.

23. Discharges of storm water identified in Clean Water Act section 402(l) (33 U.S.C. § 1342(l)) are not covered under this General Permit.

24. Facilities otherwise subject to this General Permit but for which a valid Notice of Non-Applicability (NONA) has been certified and submitted via SMARTS, by the Entity are not covered under this General Permit. Entities (See Section XX.C.1 of this General Permit) who are claiming "No Discharge"

through the NONA shall meet the eligibility requirements and provide a No Discharge Technical Report in accordance with Section XX.C.

25. This General Permit does not authorize discharges of dredged or fill material regulated by the US Army Corps of Engineers under section 404 of the Clean Water Act and does not constitute a water quality certification under section 401 of the Clean Water Act.

C. Discharge Prohibitions

26. Pursuant to section 13243 of the Water Code, the State Water Board may specify certain conditions or areas where the discharge of waste, or certain types of waste, is prohibited.

27. With the exception of certain authorized NSWDs as defined in Section IV, this General Permit prohibits NSWDs. The State Water Board recognizes that certain NSWDs should be authorized because they are not generated by industrial activity, are not significant sources of pollutants when managed appropriately, and are generally unavoidable because they are related to safety or would occur regardless of industrial activity. Prohibited NSWDs may be authorized under other individual or general NPDES permits, or waste discharge requirements issued by the Water Boards.

28. Prohibited NSWDs are referred to as unauthorized NSWDs in this General Permit. Unauthorized NSWDs shall be either eliminated or permitted by a separate NPDES permit. Unauthorized NSWDs may contribute significant pollutant loads to receiving waters. Measures to control sources of unauthorized NSWDs such as spills, leakage, and dumping, must be addressed through the implementation of Best Management Practices (BMPs).

29. This General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the Water Boards.

30. Direct discharges of waste, including industrial storm water discharges, to Areas of Special Biological Significance (ASBS) are prohibited unless the Discharger has applied for and the State Water Board has granted an exception to the State Water Board's 2009 Water Quality Control Plan for Ocean Waters of California as amended by State Water Board Resolution 2012-0056 (California Ocean Plan)[2] allowing the discharge.

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[2] State Water Resources Control Board. Ocean Standards Web Page. <http://www.waterboards.ca.gov/water_issues/programs/ocean/>. [as of February 4, 2014].
State Water Resources Control Board. Water Quality Control Plan for Ocean Waters of California 2009. <http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/2009_cop_adoptedeffective_usepa.pdf>. [as of February 4, 2014].
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D. Effluent Limitations

31. Section 301(b) of the Clean Water Act and 40 Code of Federal Regulations section require NPDES permits to include technology-based requirements at a minimum, and any more stringent effluent limitations necessary for receiving waters to meet applicable water quality standards. Clean Water Act section 402(p)(3)(A) requires that discharges of storm water runoff from industrial facilities comply with Clean Water Act section 301.

32. This General Permit requires control of pollutant discharges using BAT and BCT to reduce and prevent discharges of pollutants, and any more stringent effluent limitations necessary for receiving waters to meet applicable water quality standards.

33. It is not feasible for the State Water Board to establish numeric technology based effluent limitations for discharges authorized by this General Permit at this time. The rationale for this determination is discussed in detail in the Fact Sheet of this General Permit. Therefore, this General Permit requires Dischargers to implement minimum BMPs and applicable advanced BMPs as defined in Section X.H (collectively, BMPs) to comply with the requirements of this General Permit. This approach is consistent with U.S. EPA's 2008 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (2008 MSGP).

34. 40 Code of Federal Regulations section 122.44(d) requires that NPDES permits include Water Quality Based Effluent Limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality standards for receiving waters.

35. Where numeric water quality criteria have not been established, 40 Code of Federal Regulations section 122.44(d)(1)(vi) provides that WQBELs may be established using U.S. EPA criteria guidance under section 304(a) of the Clean Water Act, a proposed state criteria or policy interpreting narrative criteria supplemented with other relevant information, and/or an indicator parameter.

36. This General Permit requires Dischargers to implement BMPs when necessary, in order to support attainment of water quality standards. The use of BMPs to control or abate the discharge of pollutants is authorized by 40 Code of Federal Regulations section 122.44(k)(3) because numeric effluent limitations are infeasible and implementation of BMPs is reasonably necessary to achieve effluent limitations and water quality standards, and to carry out the purposes and intent of the Clean Water Act. (40 C.F.R. § 122.44(k)(4).)

E. Receiving Water Limitations

37. This General Permit requires compliance with receiving water limitations based on water quality standards. The primary receiving water limitation requires that industrial storm water discharges and authorized NSWDs not

cause or contribute to an exceedance of applicable water quality standards. Water quality standards apply to the quality of the receiving water, not the quality of the industrial storm water discharge. Therefore, compliance with the receiving water limitations generally cannot be determined solely by the effluent water quality characteristics. If any Discharger's storm water discharge causes or contributes to an exceedance of a water quality standard, that Discharger must implement additional BMPs or other control measures in order to attain compliance with the receiving water limitation. Compliance with water quality standards may, in some cases, require Dischargers to implement controls that are more protective than controls implemented solely to comply with the technology-based requirements in this General Permit.

F. Total Maximum Daily Loads (TMDLs)

38. TMDLs relate to the maximum amount of a pollutant that a water body can receive and still attain water quality standards. A TMDL is defined as the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations) and non-point sources (load allocations), plus the contribution from background sources. (40 C.F.R. § 130.2(i).) Discharges addressed by this General Permit are considered to be point source discharges, and therefore must comply with effluent limitations that are "consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the state and approved by U.S. EPA pursuant to 40 Code of Federal Regulations section 130.7. (40 C.F.R. § 122.44 (d)(1)(vii).) In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement any relevant water quality control plans. Many TMDLs contained in water quality control plans include implementation requirements in addition to waste load allocations. Attachment E of this General Permit lists the watersheds with U.S. EPA-approved and U.S. EPA-established TMDLs that include requirements, including waste load allocations, for Dischargers covered by this General Permit.

39. The State Water Board recognizes that it is appropriate to develop TMDL-specific permit requirements derived from each TMDL's waste load allocation and implementation requirements, in order to provide clarity to Dischargers regarding their responsibilities for compliance with applicable TMDLs. The development of TMDL-specific permit requirements is subject to public noticing requirements and a corresponding public comment period. Due to the number and variety of Dischargers subject to a wide range of TMDLs, development of TMDL-specific permit requirements for each TMDL listed in Attachment E will severely delay the reissuance of this General Permit. Because most of the TMDLs were established by the Regional Water Boards, and because some of the waste load allocations and/or implementation requirements may be shared by multiple Dischargers, the development of TMDL-specific permit requirements is best coordinated at the Regional Water Board level.

40. State and Regional Water Board staff will develop proposed TMDL-specific permit requirements (including monitoring and reporting requirements) for each of the TMDLs listed in Attachment E. After conducting a 30-day public comment period, the Regional Water Boards will submit to the State Water Board proposed TMDL-specific permit requirements for adoption by the State Water Board into this General Permit by July 1, 2016. The Regional Water Boards may also include proposed TMDL-specific monitoring requirements for inclusion in this General Permit, or may issue Regional Water Board orders pursuant to Water Code section 13383 requiring TMDL-specific monitoring. The proposed TMDL-specific permit requirements shall have no force or effect until adopted, with or without modification, by the State Water Board. Consistent with the 2008 MSGP, Dischargers are not required to take any additional actions to comply with the TMDLs listed in Attachment E until the State Water Board reopens this General Permit and includes TMDL-specific permit requirements, unless notified otherwise by a Regional Water Board.

41. The Regional Water Boards shall submit to the State Water Board the following information for each of the TMDLs listed in Attachment E:

    a. Proposed TMDL-specific permit, monitoring and reporting requirements applicable to industrial storm water discharges and NSWDs authorized under this General Permit, including compliance schedules and deliverables consistent with the TMDLs. TMDL-specific permit requirements are not limited by the BAT/BCT technology-based standards;

    b. An explanation of how the proposed TMDL-specific permit requirements, compliance schedules, and deliverables are consistent with the assumptions and requirements of any applicable waste load allocation and implement each TMDL; and,

    c. Where a BMP-based approach is proposed, an explanation of how the proposed BMPs will be sufficient to implement applicable waste load allocations.

42. Upon receipt of the information described in Finding 40, and no later than July 1, 2016, the State Water Board will issue a public notice and conduct a public comment period for the reopening of this General Permit to amend Attachment E, the Fact Sheet, and other provisions as necessary for incorporation of TMDL-specific permit requirements into this General Permit. Attachment E may also be subsequently reopened during the term of this General Permit to incorporate additional TMDL-specific permit requirements.

G. Discharges Subject to the California Ocean Plan

43. On October 16, 2012 the State Water Board amended the California Ocean Plan. The amended California Ocean Plan requires industrial storm water dischargers with outfalls discharging to ocean waters to comply with the

California Ocean Plan's model monitoring provisions. These provisions require Dischargers to: (a) monitor runoff for specific parameters at all outfalls from two storm events per year, and collect at least one representative receiving water sample per year, (b) conduct specified toxicity monitoring at certain types of outfalls at a minimum of once per year, and (c) conduct marine sediment monitoring for toxicity under specific circumstances. The California Ocean Plan provides conditions under which some of the above monitoring provisions may be waived by the Water Boards.

44. This General Permit requires Dischargers with outfalls discharging to ocean waters that are subject to the model monitoring provisions of the California Ocean Plan to develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers that have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015 (the effective date of this General Permit), or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.

45. The California Ocean Plan prohibits the direct discharge of waste to ASBS. ASBS are defined in California Ocean Plan as "those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable."

46. The California Ocean Plan authorizes the State Water Board to grant an exception to Ocean Plan provisions where the board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

47. On March 20, 2012, the State Water Board adopted Resolution 2012-0012 which contains exceptions to the California Ocean Plan for specific discharges of storm water and non-point sources. This resolution also contains the special protections that are to be implemented for those discharges to ASBS.

48. This General Permit requires Dischargers who have been granted an exception to the Ocean Plan authorizing the discharges to ASBS by the State Water Board to comply with the requirements contained in Section VIII.B of this General Permit.

H. Training

49. To improve compliance and maintain consistent implementation of this General Permit, Dischargers are required to designate a Qualified Industrial Storm Water Practitioner (QISP) for each facility the Discharger operates that has entered Level 1 status in the Exceedance Response Action (ERA) process as described in Section XII of this General Permit. A QISP may be assigned to more than one facility. In order to qualify as a QISP, a State

Water Board-sponsored or approved training course must be completed. A competency exam may be required by the State Water Board to demonstrate sufficient knowledge of the QISP course material.

50. A QISP must assist the Discharger in completing the Level 1 status and Level 2 status ERA requirements as specified in Section XII of this General Permit. A QISP is also responsible for assisting New Dischargers that will be discharging to an impaired water body with a 303(d) listed impairment, demonstrate eligibility for coverage through preparing the data and/or information required in Section VII.B.

51. A Compliance Group Leader, as defined in Section XIV of this General Order must complete a State Water Board sponsored or approved training program for Compliance Group Leaders.

52. All engineering work subject to the Professional Engineers Act (Bus. & Prof. Code § 6700, et seq.) and required by this General Permit shall be performed by a California licensed professional engineer.

53. California licensed professional civil, industrial, chemical, and mechanical engineers and geologists have licenses that have professional overlap with the topics of this General Permit. The California Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors and Geologists (CBPELSG) provides the licensure and regulation of professional civil, industrial, chemical, and mechanical engineers and professional geologists in California. The State Water Board is developing a specialized self-guided State Water Board-sponsored registration and training program specifically for these CPBELSG licensed engineers and geologists in good standing with CBPELSG.

I. Storm Water Pollution Prevention Plan (SWPPP) Requirements

54. This General Permit requires the development of a site-specific SWPPP in accordance with Section X of this General Permit. The SWPPP must include the information needed to demonstrate compliance with the requirements of this General Permit. The SWPPP must be submitted electronically via SMARTS, and a copy be kept at the facility. SWPPP revisions shall be completed in accordance with Section X.B of this General Permit

J. Sampling, Visual Observations, Reporting and Record Keeping

55. This General Permit complies with 40 Code of Federal Regulations section 122.44(i), which establishes monitoring requirements that must be included in storm water permits. Under this General Permit, Dischargers are required to: (a) conduct an Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation) to identify areas of the facility contributing pollutants to industrial storm water discharges, (b) evaluate whether measures to reduce or prevent industrial pollutant loads identified in the Discharger's SWPPP are adequate and properly implemented in accordance with the terms of this

General Permit, and (c) determine whether additional control measures are needed.

56. This General Permit contains monitoring requirements that are necessary to determine whether pollutants are being discharged, and whether response actions are necessary. Data and information resulting from the monitoring will assist in Dischargers' evaluations of BMP effectiveness and compliance with this General Permit. Visual observations are one form of monitoring. This General Permit requires Dischargers to perform a variety of visual observations designed to identify pollutants in industrial storm water discharges and their sources. To comply with this General Permit Dischargers shall: (1) electronically self-report any violations via SMARTS, (2) comply with the Level 1 status and Level 2 status ERA requirements, when applicable, and (3) adequately address and respond to any Regional Water Board comments on the Discharger's compliance reports.

57. Dischargers that meet the requirements of the No Exposure Certification (NEC) Conditional Exclusion set forth in Section XVII of this General Permit are exempt from the SWPPP requirements, sampling requirements, and visual observation requirements in this General Permit.

K. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

58. U.S. EPA regulations at 40 Code of Federal Regulations Chapter I Subchapter N (Subchapter N) establish technology-based Effluent Limitation Guidelines and New Source Performance Standards (ELGs) for industrial storm water discharges from facilities in specific industrial categories. For these facilities, compliance with the BAT/BCT and ELG requirements constitutes compliance with technology-based requirements of this General Permit.

59. 40 Code of Federal Regulations section 122.44(i)(3) and (4) require storm water permits to require at least one Annual Evaluation and any monitoring requirements for applicable ELGs in Subchapter N. This General Permit requires Dischargers to comply with all applicable ELG requirements found in Subchapter N.

L. Sampling and Analysis Reduction

60. This General Permit reduces the number of qualifying sampling events required to be sampled each year when the Discharger demonstrates: (1) consistent compliance with this General Permit,(2) consistent effluent water quality sampling, and (3) analysis results that do not exceed numerical action levels.

M. Role of Numeric Action Levels (NALs) and Exceedance Response Actions (ERAs)

61. This General Permit incorporates a multiple objective performance measurement system that includes NALs, new comprehensive training requirements, Level 1 ERA Reports, Level 2 ERA Technical Reports, and Level 2 ERA Action Plans. Two objectives of the performance measurement system are to inform Dischargers, the public and the Water Boards on: (1) the overall pollutant control performance at any given facility, and (2) the overall performance of the industrial statewide storm water program. Additionally, the State Water Board expects that this information and assessment process will provide information necessary to determine the feasibility of numeric effluent limitations for industrial dischargers in the next reissuance of this General Permit, consistent with the State Water Board Storm Water Panel of Experts' June 2006 Recommendations.[3]

62. This General Permit contains annual and instantaneous maximum NALs. The annual NALs are established as the 2008 MSGP benchmark values, and are applicable for all parameters listed in Table 2. The instantaneous maximum NALs are calculated from a Water Board dataset, and are only applicable for Total Suspended Solids (TSS), Oil and Grease (O&G), and pH. An NAL exceedance is determined as follows:

    a. For annual NALs, an exceedance occurs when the average of all analytical results from all samples taken at a facility during a reporting year for a given parameter exceeds an annual NAL value listed in Table 2 of this General Permit; or,

    b. For the instantaneous maximum NALs, an exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for Total Suspended Solids, and Oil and Grease), or are outside of the instantaneous maximum NAL range (for pH) listed in Table 2 of this General Permit. For the purposes of this General Permit, the reporting year is July 1 through June 30.

63. The NALs are not intended to serve as technology-based or water quality-based numeric effluent limitations. The NALs are not derived directly from either BAT/BCT requirements or receiving water objectives. NAL exceedances defined in this General Permit are not, in and of themselves, violations of this General Permit. A Discharger that does not fully comply with the Level 1 status and/or Level 2 status ERA requirements, when required by the terms of this General Permit, is in violation of this General Permit.

64. ERAs are designed to assist Dischargers in complying with this General Permit. Dischargers subject to ERAs must evaluate the effectiveness of their

[3] State Water Board Storm Water Panel of Experts, The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 19, 2006) <http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf> [as of February 4, 2014].

BMPs being implemented to ensure they are adequate to achieve compliance with this General Permit.

65. U.S. EPA regulations at Subchapter N establish ELGs for storm water discharges from facilities in 11 industrial categories. Dischargers subject to these ELGs are required to comply with the applicable requirements.

66. Exceedances of the NALs that are attributable solely to pollutants originating from non-industrial pollutant sources (such as run-on from adjacent facilities, non-industrial portions of the Discharger's property, or aerial deposition) are not a violation of this General Permit because the NALs are designed to provide feedback on industrial sources of pollutants. Dischargers may submit a Non-Industrial Source Pollutant Demonstration as part of their Level 2 ERA Technical Report to demonstrate that the presence of a pollutant causing an NAL exceedance is attributable solely to pollutants originating from non-industrial pollutant sources.

67. A Discharger who has designed, installed, and implemented BMPs to reduce or prevent pollutants in industrial storm water discharges in compliance with this General Permit may submit an Industrial Activity BMPs Demonstration, as part of their Level 2 ERA Technical Report.

68. This General Permit establishes design storm standards for all treatment control BMPs. These design standards are directly based on the standards in State Water Board Order 2000-0011 regarding Standard Urban Storm Water Mitigation Plans (SUSMPs). These design standards are generally expected to be consistent with BAT/BCT, to be protective of water quality, and to be effective for most pollutants. The standards are intended to eliminate the need for most Dischargers to further treat/control industrial storm water discharges that are unlikely to contain pollutant loadings that exceed the NALs set forth in this General Permit.

N. Compliance Groups

69. Compliance Groups are groups of Dischargers (Compliance Group Participants) that share common types of pollutant sources and industrial activity characteristics. Compliance Groups provide an opportunity for the Compliance Group Participants to combine resources and develop consolidated Level 1 ERA Reports for Level 1 NAL exceedances and appropriate BMPs for implementation in response to Level 2 status ERA requirements that are representative of the entire Compliance Group. Compliance Groups also provide the Water Boards and the public with valuable information as to how industrial storm water discharges are affected by non-industrial background pollutant sources (including natural background) and geographic locations. When developing the next reissuance of this General Permit, the State Water Board expects to have a better understanding of the feasibility and benefits of sector-specific and watershed-based permitting alternatives, which may include technology- or water quality-based numeric effluent limitations. The effluent data, BMP performance data

and other information provided from Compliance Groups' consolidated reporting will further assist the State Water Board in addressing sector-specific and watershed-based permitting alternatives.

O. Conditional Exclusion – No Exposure Certification (NEC)

70. Pursuant to U.S. EPA Phase II regulations, all Dischargers subject to this General Permit may qualify for a conditional exclusion from specific requirements if they submit a NEC demonstrating that their facilities have no exposure of industrial activities and materials to storm water discharges.

71. This General Permit requires Dischargers who seek the NEC conditional exclusion to obtain coverage in accordance with Section XVII of this General Permit. Dischargers that meet the requirements of the NEC are exempt from the SWPPP, sampling requirements, and monitoring requirements in this General Permit.

72. Dischargers seeking NEC coverage are required to certify and submit the applicable permit registration documents. Annual inspections, re-certifications, and fees are required in subsequent years. Light industry facility Dischargers excluded from coverage under the previous permit (Order 97-03-DWQ) must obtain the appropriate coverage under this General Permit. Failure to comply with the Conditional Exclusion conditions listed in this General Permit may lead to enforcement for discharging without a permit pursuant to sections 13385 or 13399.25, et seq., of the Water Code. A Discharger with NEC coverage that anticipates a change (or changes) in circumstances that would lead to exposure should register for permit coverage prior to the anticipated changes.

P. Special Requirements for Facilities Handling Plastic Materials

73. Section 13367 of the Water Code requires facilities handling preproduction plastic to implement specific BMPs aimed at minimizing discharges of such materials. The definition of Plastic Materials for the purposes of this General Permit includes the following types of sources of Plastic Materials: virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other types of preproduction plastics with the potential to discharge or migrate off-site.

Q. Regional Water Board Authorities

74. Regional Water Boards are primarily responsible for enforcement of this General Permit. This General Permit recognizes that Regional Water Boards have the authority to protect the beneficial uses of receiving waters and prevent degradation of water quality in their region. As such, Regional Water Boards may modify monitoring requirements and review, comment, approve or disapprove certain Discharger submittals required under this General Permit.

IT IS HEREBY ORDERED that all Dischargers subject to this General Permit shall comply with the following conditions and requirements.

II. RECEIVING GENERAL PERMIT COVERAGE

A. Certification

1. For Storm Water Multiple Application and Report Tracking System (SMARTS) electronic account management and security reasons, as well as enforceability of this General Permit, the Discharger's Legally Responsible Person (LRP) of an industrial facility seeking coverage under this General Permit shall certify and submit all Permit Registration Documents (PRDs) for Notice of Intent (NOI) or No Exposure Certification (NEC) coverage. All other documents shall be certified and submitted via SMARTS by the Discharger's (LRP) or by their Duly Authorized Representative in accordance with the Electronic Signature and Certification Requirements in Section XXI.K. All documents required by this General Permit that are certified and submitted via SMARTS shall be in accordance with Section XXI.K.

2. Hereinafter references to certifications and submittals by the Discharger refer to the Discharger's LRP and their Duly Authorized Representative.

B. Coverages

This General Permit includes requirements for two (2) types of permit coverage, NOI coverage and NEC coverage. State Water Board Order 97-03-DWQ (previous permit) remains in effect until July 1, 2015. When PRDs are certified and submitted and the annual fee is received, the State Water Board will assign the Discharger a Waste Discharger Identification (WDID) number.

1. General Permit Coverage (NOI Coverage)

   a. Dischargers that discharge storm water associated with industrial activity to waters of the United States are required to meet all applicable requirements of this General Permit.

   b. The Discharger shall register for coverage under this General Permit by certifying and submitting PRDs via SMARTS (http://smarts.waterboards.ca.gov), which consist of:

      i. A completed NOI and signed certification statement;

      ii. A copy of a current Site Map from the Storm Water Pollution Prevention Plan (SWPPP) in Section X.E;

      iii. A SWPPP (see Section X); and,

c. The Discharger shall pay the appropriate Annual Fee in accordance with California Code of Regulations, title 23, section 2200 et seq.[4]

2. General Permit Coverage (NEC Coverage)

a. Dischargers that certify their facility has no exposure of industrial activities or materials to storm water in accordance with Section XVII qualify for NEC coverage and are not required to comply with the SWPPP or monitoring requirements of this General Permit.

b. Dischargers who qualify for NEC coverage shall conduct one Annual Facility Comprehensive Compliance Evaluation (Annual Evaluation) as described in Section XV, pay an annual fee, and certify annually that their facilities continue to meet the NEC requirements.

c. The Discharger shall submit the following PRDs on or before October 1, 2015 for NEC coverage via SMARTS:

i. A completed NEC Form (Section XVII.F.1) and signed certification statement (Section XVII.H);

ii. A completed NEC Checklist (Section XVII.F.2); and

iii. A current Site Map consistent with requirements in Section X.E.;

d. The Discharger shall pay the appropriate annual fee in accordance with California Code of Regulations, title 23, section 2200 et seq.[5]

3. General PRD Requirements

a. Site Maps

Dischargers registering for NOI or NEC coverage shall prepare a site map(s) as part of their PRDs in accordance with Section X.E. A separate copy of the site map(s) is required to be in the SWPPP. If there is a significant change in the facility layout (e.g., new building, change in storage locations, boundary change, etc.) a revision to the site map is required and shall be certified and submitted via SMARTS.

b. A Discharger shall submit a single set of PRDs for coverage under this General Permit for multiple industrial activities occurring at the same facility.

c. Any information provided to the Water Boards by the Discharger shall comply with the Homeland Security Act and other federal law that

[4] Annual fees must be mailed or sent electronically using the State Water Boards' Electronic Funds Transfer (EFT) system in SMARTS.
[5] See footnote 4.

addresses security in the United States; any information that does not comply should not be submitted in the PRDs. The Discharger must provide justification to the Regional Water Board regarding redacted information within any submittal.

d. Dischargers may redact trade secrets from information that is submitted via SMARTS. Dischargers who certify and submit redacted information via SMARTS must include a general description of the redacted information and the basis for the redaction in the version that is submitted via SMARTS. Dischargers must submit complete and un-redacted versions of the information that are clearly labeled "CONFIDENTIAL" to the Regional Water Board within 30 days of the submittal of the redacted information. All information labeled "CONFIDENTIAL" will be maintained by the Water Boards in a separate, confidential file.

4. Schedule for Submitting PRDs - Existing Dischargers Under the Previous Permit.

a. Existing Dischargers[6] with coverage under the previous permit shall continue coverage under the previous permit until July 1, 2015. All waste discharge requirements and conditions of the previous permit are in effect until July 1, 2015.

b. Existing Dischargers with coverage under the previous permit shall register for NOI coverage by July 1, 2015 or for NEC coverage by October 1, 2015. Existing Dischargers previously listed in Category 10 (Light Industry) of the previous permit, and continue to have no exposure to industrial activities and materials, have until October 1, 2015 to register for NEC coverage.

c. Existing Dischargers with coverage under the previous permit, that do not register for NOI coverage by July 1, 2015, may have their permit coverage administratively terminated as soon as July 1, 2015.

d. Existing Dischargers with coverage under the previous permit that are eligible for NEC coverage but do not register for NEC coverage by October 1, 2015 may have their permit coverage administratively terminated as soon as October 1, 2015.

e. Existing Dischargers shall continue to comply with the SWPPP requirements in State Water Board Order 97-03-DWQ up to, but no later than, June 30, 2015.

[6] Existing Dischargers are Dischargers with an active Notice of Intent (permit coverage) under the previous permit (97-03-DWQ) prior to the effective date of this General Permit.

f. Existing Dischargers shall implement an updated SWPPP in accordance with Section X by July 1, 2015.

g. Existing Dischargers that submit a Notice of Termination (NOT) under the previous permit prior to July 1, 2015 and that receive NOT approval from the Regional Water Board are not subject to this General Permit unless they subsequently submitted new PRDs.

5. Schedule for Submitting PRDs - New Dischargers Obtaining Coverage On or After July 1, 2015

   New Dischargers registering for NOI coverage on or after July 1, 2015 shall certify and submit PRDs via SMARTS at least seven (7) days prior to commencement of industrial activities or on July 1, 2015, whichever comes later.

   a. New Dischargers registering for NEC coverage shall electronically certify and submit PRDs via SMARTS by October 1, 2015, or at least seven (7) days prior to commencement of industrial activities, whichever is later.

C. Termination and Changes to General Permit Coverage

1. Dischargers with NOI or NEC coverage shall request termination of coverage under this General Permit when either (a) operation of the facility has been transferred to another entity, (b) the facility has ceased operations, completed closure activities, and removed all industrial related pollutants, or (c) the facility's operations have changed and are no longer subject to the General Permit. Dischargers shall certify and submit a Notice of Termination via SMARTS. Until a valid NOT is received, the Discharger remains responsible for compliance with this General Permit and payment of accrued annual fees.

2. Whenever there is a change to the facility location, the Discharger shall certify and submit new PRDs via SMARTS. When ownership changes, the prior Discharger (seller) must inform the new Discharger (buyer) of the General Permit applications and regulatory coverage requirements. The new Discharger must certify and submit new PRDs via SMARTS to obtain coverage under this General Permit.

3. Dischargers with NOI coverage where the facility qualifies for NEC coverage in accordance with Section XVII of this General Permit, may register for NEC coverage via SMARTS. Such Dischargers are not required to submit an NOT to cancel NOI coverage.

4. Dischargers with NEC coverage, where changes in the facility and/or facility operations occur, which result in NOI coverage instead of NEC coverage, shall register for NOI coverage via SMARTS. Such Dischargers are not required to submit an NOT to cancel NEC coverage.

5. Dischargers shall provide additional information supporting an NOT, or revise their PRDs via SMARTS, upon request by the Regional Water Board.

6. Dischargers that are denied approval of a submitted NOT or registration for NEC coverage by the Regional Water Board, shall continue compliance with this General Permit under their existing NOI coverage.

7. New Dischargers (Dischargers with no previous NOI or NEC coverage) shall register for NOI coverage if the Regional Water Board denies NEC coverage.

D. Preparation Requirements

1. The following documents shall be certified and submitted by the Discharger via SMARTS:

   a. Annual Reports (Section XVI) and SWPPPs (Section X);

   b. NOTs;

   c. Sampling Frequency Reduction Certification (Section XI.C.7);

   d. Level 1 ERA Reports (Section XII.C) prepared by a QISP;

   e. Level 2 ERA Technical Reports and Level 2 ERA Action Plans (Sections XII.D.1-2) prepared by a QISP; and,

   f. SWPPPs for inactive mining operations as described in Section XIII, signed (wet signature and license number) by a California licensed professional engineer.

2. The following documents shall be signed (wet signature and license number) by a California licensed professional engineer:

   a. Calculations for Dischargers subject to Subchapter N in accordance with Section XI.D;

   b. Notice of Non-Applicability (NONA) Technical Reports described in Section XX.C for facilities that are engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website;

   c. NONA Technical Reports described in Section XX.C for facilities located in basins or other physical locations that are not tributaries or hydrologically connected to waters of the United States; and,

   d. SWPPPs for inactive mines described in Section XIII.

III. DISCHARGE PROHIBITIONS

A. All discharges of storm water to waters of the United States are prohibited except as specifically authorized by this General Permit or another NPDES permit.

B. Except for non-storm water discharges (NSWDs) authorized in Section IV, discharges of liquids or materials other than storm water, either directly or indirectly to waters of the United States, are prohibited unless authorized by another NPDES permit. Unauthorized NSWDs must be either eliminated or authorized by a separate NPDES permit.

C. Industrial storm water discharges and authorized NSWDs that contain pollutants that cause or threaten to cause pollution, contamination, or nuisance as defined in section 13050 of the Water Code, are prohibited.

D. Discharges that violate any discharge prohibitions contained in applicable Regional Water Board Water Quality Control Plans (Basin Plans), or statewide water quality control plans and policies are prohibited.

E. Discharges to ASBS are prohibited in accordance with the California Ocean Plan, unless granted an exception by the State Water Board and in compliance with the Special Protections contained in Resolution 2012-0012.

F. Industrial storm water discharges and NSWDs authorized by this General Permit that contain hazardous substances equal to or in excess of a reportable quantity listed in 40 Code of Federal Regulations sections 110.6, 117.21, or 302.6 are prohibited.

IV. AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

A. The following NSWDs are authorized provided they meet the conditions of Section IV.B:

1. Fire-hydrant and fire prevention or response system flushing;

2. Potable water sources including potable water related to the operation, maintenance, or testing of potable water systems;

3. Drinking fountain water and atmospheric condensate including refrigeration, air conditioning, and compressor condensate;

4. Irrigation drainage and landscape watering provided all pesticides, herbicides and fertilizers have been applied in accordance with the manufacturer's label;

5. Uncontaminated natural springs, groundwater, foundation drainage, footing drainage;

6. Seawater infiltration where the seawater is discharged back into the source: and,

7. Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g., “piped” cooling tower blowdown or drains).

B. The NSWDs identified in Section IV.A are authorized by this General Permit if the following conditions are met:

1. The authorized NSWDs are not in violation of any Regional Water Board Water Quality Control Plans (Basin Plans) or other requirements, or statewide water quality control plans or policies requirement;

2. The authorized NSWDs are not in violation of any municipal agency ordinance or requirements;

3. BMPs are included in the SWPPP and implemented to:

   a. Reduce or prevent the contact of authorized NSWDs with materials or equipment that are potential sources of pollutants;

   b. Reduce, to the extent practicable, the flow or volume of authorized NSWDs;

   c. Ensure that authorized NSWDs do not contain quantities of pollutants that cause or contribute to an exceedance of a water quality standards; and,

   d. Reduce or prevent discharges of pollutants in authorized NSWDs in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

4. The Discharger conducts monthly visual observations (Section XI.A.1) of NSWDs and sources to ensure adequate BMP implementation and effectiveness; and,

5. The Discharger reports and describes all authorized NSWDs in the Annual Report.

C. Firefighting related discharges are not subject to this General Permit and are not subject to the conditions of Section IV.B. These discharges, however, may be subject to Regional Water Board enforcement actions under other sections of the Water Code. Firefighting related discharges that are contained and are later discharged may be subject to municipal agency ordinances and/or Regional Water Board requirements.

V. EFFLUENT LIMITATIONS

A. Dischargers shall implement BMPs that comply with the BAT/BCT requirements of this General Permit to reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

B. Industrial storm water discharges from facilities subject to storm water ELGs in Subchapter N shall not exceed those storm water ELGs. The ELGs for industrial storm water discharges subject to Subchapter N are in Attachment F of this General Permit.

C. Dischargers located within a watershed for which a Total Maximum Daily Load (TMDL) has been approved by U.S. EPA, shall comply with any applicable TMDL-specific permit requirements that have been incorporated into this General Permit in accordance with Section VII.A. Attachment E contains a reference list of potential TMDLs that may apply to Dischargers subject to this General Permit.

VI. RECEIVING WATER LIMITATIONS

A. Dischargers shall ensure that industrial storm water discharges and authorized NSWDs do not cause or contribute to an exceedance of any applicable water quality standards in any affected receiving water.

B. Dischargers shall ensure that industrial storm water discharges and authorized NSWDs do not adversely affect human health or the environment.

C. Dischargers shall ensure that industrial storm water discharges and authorized NSWDs do not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

VII. TOTAL MAXIMUM DAILY LOADS (TMDLs)

A. Implementation

1. The State Water Board shall reopen and amend this General Permit, including Attachment E, the Fact Sheet and other applicable Permit provisions as necessary, in order to incorporate TMDL-specific permit requirements, as described in Findings 38 through 42. Once this General Permit is amended, Dischargers shall comply with the incorporated TMDL-specific permit requirements in accordance with any specified compliance schedule(s). TMDL-specific compliance dates that exceed the term of this General Permit may be included for reference, and are enforceable in the event that this General Permit is administratively extended or reissued.

2. The State Water Board may, at its discretion, reopen this General Permit to add TMDL-specific permit requirements to Attachment E, or to incorporate new TMDLs adopted during the term of this General Permit that include requirements applicable to Dischargers covered by this General Permit.

B. New Dischargers applying for NOI coverage under this General Permit that will be discharging to a water body with a 303(d) listed impairment are ineligible for coverage unless the Discharger submits data and/or information, prepared by a QISP, demonstrating that:

1. The Discharger has eliminated all exposure to storm water of the pollutant(s) for which the water body is impaired, has documented the procedures taken to prevent exposure onsite, and has retained such documentation with the SWPPP at the facility;

2. The pollutant for which the water body is impaired is not present at the Discharger's facility, and the Discharger has retained documentation of this finding with the SWPPP at the facility; or,

3. The discharge of any listed pollutant will not cause or contribute to an exceedance of a water quality standard. This is demonstrated if: (1) the discharge complies with water quality standard at the point of discharge, or (2) if there are sufficient remaining waste load allocations in an approved TMDL and the discharge is controlled at least as stringently as similar discharges subject to that TMDL.

VIII. DISCHARGES SUBJECT TO THE CALIFORNIA OCEAN PLAN

A. Discharges to Ocean Waters

1. Dischargers with outfalls discharging to ocean waters that are subject to the model monitoring provisions of the California Ocean Plan shall develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015, or seven (7) days prior to commencing of operations, whichever is later, are ineligible to obtain coverage under this General Permit.

2. Dischargers are ineligible for the methods and exceptions provided in Section XI.C of this General permit for any of the outfalls discharging to ocean waters subject to the model monitoring provisions of the California Ocean Plan.

B. Discharge Granted an Exceptions for Areas of Special Biological Significance (ASBS)

Dischargers who were granted an exception to the California Ocean Plan prohibition against direct discharges of waste to an ASBS pursuant to Resolution 2012-0012[7] amended by Resolution 2012-0031[8] shall comply with the conditions and requirements set forth in Attachment G of this General Permit. Any Discharger that applies for and is granted an exception to the California Ocean Plan prohibition after July 1, 2013 shall comply with the conditions and requirements set forth in the granted exception.

IX. TRAINING QUALIFICATIONS

A. General

1. A Qualified Industrial Storm Water Practitioner (QISP) is a person (either the Discharger or a person designated by the Discharger) who has completed a State Water Board-sponsored or approved QISP training course[9], and has registered as a QISP via SMARTS. Upon completed registration the State Water Board will issue a QISP identification number.

2. The Executive Director of the State Water Board or an Executive Officer of a Regional Water Board may rescind any QISP's registration if it is found that the QISP has repeatedly demonstrated an inadequate level of performance in completing the QISP requirements in this General Permit. An individual whose QISP registration has been rescinded may request that the State Water Board review the rescission. Any request for review must be received by the State Water Board no later than 30 days of the date that the individual received written notice of the rescission.

3. Dischargers with Level 1 status shall:

   a. Designate a person to be the facility's QISP and ensure that this person has attended and satisfactorily completed the State Water Board-sponsored or approved QISP training course.

   b. Ensure that the facility's designated QISP provides sufficient training to the appropriate team members assigned to perform activities required by this General Permit.

[7] State Water Resources Control Board. Resolution 2012-0012. <http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0012.pdf>. [as of February 4, 2014].
[8] State Water Resources Control Board. Resolution 2012-0031. <http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0031.pdf>. [as of February 4, 2014].
[9] A specialized self-guided State Water Board-sponsored registration and training program will be available as an option for CPBELSG licensed professional civil, mechanical, industrial, and chemical engineers and professional geologists by the effective date of this General Permit.

X. Storm Water Pollution Prevention Plan (SWPPP)

A. SWPPP Elements

Dischargers shall develop and implement a site-specific SWPPP for each industrial facility covered by this General Permit that shall contain the following elements, as described further in this Section[10]:

1. Facility Name and Contact Information;
2. Site Map;
3. List of Industrial Materials;
4. Description of Potential Pollution Sources;
5. Assessment of Potential Pollutant Sources;
6. Minimum BMPs;
7. Advanced BMPs, if applicable;
8. Monitoring Implementation Plan;
9. Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation); and,
10. Date that SWPPP was Initially Prepared and the Date of Each SWPPP Amendment, if Applicable.

B. SWPPP Implementation and Revisions

All Dischargers are required to implement their SWPPP by July 1, 2015 or upon commencement of industrial activity. The Discharger shall:

1. Revise their on-site SWPPP whenever necessary;
2. Certify and submit via SMARTS their SWPPP within 30 days whenever the SWPPP contains significant revision(s); and,
3. With the exception of significant revisions, the Discharger is not required to certify and submit via SMARTS their SWPPP revisions more than once every three (3) months in the reporting year.

[10] Appendix 1 (SWPPP Checklist) of this General Permit is provided to assist the Discharger in including information required in the SWPPP. This checklist is not required to be used.

C. SWPPP Performance Standards

1. The Discharger shall ensure a SWPPP is prepared to:

   a. Identify and evaluate all sources of pollutants that may affect the quality of industrial storm water discharges and authorized NSWDs;

   b. Identify and describe the minimum BMPs (Section X.H.1) and any advanced BMPs (Section X.H.2) implemented to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDs. BMPs shall be selected to achieve compliance with this General Permit; and,

   c. Identify and describe conditions or circumstances which may require future revisions to be made to the SWPPP.

2. The Discharger shall prepare a SWPPP in accordance with all applicable SWPPP requirements of this Section. A copy of the SWPPP shall be maintained at the facility.

D. Planning and Organization

1. Pollution Prevention Team

   Each facility must have a Pollution Prevention Team established and responsible for assisting with the implementation of the requirements in this General Permit. The Discharger shall include in the SWPPP detailed information about its Pollution Prevention Team including:

   a. The positions within the facility organization (collectively, team members) who assist in implementing the SWPPP and conducting all monitoring requirements in this General Permit;

   b. The responsibilities, duties, and activities of each of the team members; and,

   c. The procedures to identify alternate team members to implement the SWPPP and conduct required monitoring when the regularly assigned team members are temporarily unavailable (due to vacation, illness, out of town business, or other absences).

2. Other Requirements and Existing Facility Plans

   a. The Discharger shall ensure its SWPPP is developed, implemented, and revised as necessary to be consistent with any applicable municipal, state, and federal requirements that pertain to the requirements in this General Permit.

   b. The Discharger may include in their SWPPP the specific elements of existing plans, procedures, or regulatory compliance documents that

contain storm water-related BMPs or otherwise relate to the requirements of this General Permit.

c. The Discharger shall properly reference the original sources for any elements of existing plans, procedures, or regulatory compliance documents included as part of their SWPPP and shall maintain a copy of the documents at the facility as part of the SWPPP.

d. The Discharger shall document in their SWPPP the facility's scheduled operating hours as defined in Attachment C. Scheduled facility operating hours that would be considered irregular (temporary, intermittent, seasonal, weather dependent, etc.) shall also be documented in the SWPPP.

E. Site Map

1. The Discharger shall prepare a site map that includes notes, legends, a north arrow, and other data as appropriate to ensure the map is clear, legible and understandable.

2. The Discharger may provide the required information on multiple site maps.

3. The Discharger shall include the following information on the site map:

   a. The facility boundary, storm water drainage areas within the facility boundary, and portions of any drainage area impacted by discharges from surrounding areas. Include the flow direction of each drainage area, on-facility surface water bodies, areas of soil erosion, and location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.) or municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized NSWDs;

   b. Locations of storm water collection and conveyance systems, associated discharge locations, and direction of flow. Include any sample locations if different than the identified discharge locations;

   c. Locations and descriptions of structural control measures[11] that affect industrial storm water discharges, authorized NSWDs, and/or run-on;

   d. Identification of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;

[11] Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

e. Locations where materials are directly exposed to precipitation and the locations where identified significant spills or leaks (Section X.G.1.d) have occurred; and

f. Areas of industrial activity subject to this General Permit. Identify all industrial storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and material reuse areas, and other areas of industrial activity that may have potential pollutant sources.

F. List of Industrial Materials

The Discharger shall ensure the SWPPP includes a list of industrial materials handled at the facility, and the locations where each material is stored, received, shipped, and handled, as well as the typical quantities and handling frequency.

G. Potential Pollutant Sources

1. Description of Potential Pollutant Sources

   a. Industrial Processes

      The Discharger shall ensure the SWPPP describes each industrial process including: manufacturing, cleaning, maintenance, recycling, disposal, and any other activities related to the process. The type, characteristics, and approximate quantity of industrial materials used in or resulting from the process shall be included. Areas protected by containment structures and the corresponding containment capacity shall be identified and described.

   b. Material Handling and Storage Areas

      The Discharger shall ensure the SWPPP describes each material handling and storage area, including: the type, characteristics, and quantity of industrial materials handled or stored; the shipping, receiving, and loading procedures; the spill or leak prevention and response procedures; and the areas protected by containment structures and the corresponding containment capacity.

   c. Dust and Particulate Generating Activities

      The Discharger shall ensure the SWPPP describes all industrial activities that generate a significant amount of dust or particulate that may be deposited within the facility boundaries. The SWPPP shall describe such industrial activities, including the discharge locations, the source type, and the characteristics of the dust or particulate pollutant.

d. Significant Spills and Leaks

The Discharger shall:

i. Evaluate the facility for areas where spills and leaks can likely occur;

ii. Ensure the SWPPP includes:

a) A list of any industrial materials that have spilled or leaked in significant quantities and have discharged from the facility's storm water conveyance system within the previous five-year period;

b) A list of any toxic chemicals identified in 40 Code of Federal Regulations section 302 that have been discharged from the facilities' storm water conveyance system as reported on U.S. EPA Form R, as well as oil and hazardous substances in excess of reportable quantities (40 C.F.R. §§ 110, 117, and 302) that have discharged from the facility's storm water conveyance system within the previous five-year period;

c) A list of any industrial materials that have spilled or leaked in significant quantities and had the potential to be discharged from the facility's storm water conveyance system within the previous five-year period; and,

iii. Ensure that for each discharge or potential discharge listed above the SWPPP includes the location, characteristics, and approximate quantity of the materials spilled or leaked; approximate quantity of the materials discharged from the facility's storm water conveyance system; the cleanup or remedial actions that have occurred or are planned; the approximate remaining quantity of materials that have the potential to be discharged; and the preventive measures taken to ensure spills or leaks of the material do not reoccur.

e. NSWDs

The Discharger shall:

i. Ensure the SWPPP includes an evaluation of the facility that identifies all NSWDs, sources, and drainage areas;

ii. Ensure the SWPPP includes an evaluation of all drains (inlets and outlets) that identifies connections to the storm water conveyance system;

iii. Ensure the SWPPP includes a description of how all unauthorized NSWDs have been eliminated; and,

iv. Ensure all NSWDs are described in the SWPPP. This description shall include the source, quantity, frequency, and characteristics of the NSWDs, associated drainage area, and whether it is an authorized or unauthorized NSWD in accordance with Section IV.

f. Erodible Surfaces

The Discharger shall ensure the SWPPP includes a description of the facility locations where soil erosion may be caused by industrial activity, contact with storm water, authorized and unauthorized NSWDs, or run-on from areas surrounding the facility.

2. Assessment of Potential Pollutant Sources

a. The Discharger shall ensure that the SWPPP includes a narrative assessment of all areas of industrial activity with potential industrial pollutant sources. At a minimum, the assessment shall include:

i. The areas of the facility with likely sources of pollutants in industrial storm water discharges and authorized NSWDs;

ii. The pollutants likely to be present in industrial storm water discharges and authorized NSWDs;

iii. The approximate quantity, physical characteristics (e.g., liquid, powder, solid, etc.), and locations of each industrial material handled, produced, stored, recycled, or disposed;

iv. The degree to which the pollutants associated with those materials may be exposed to, and mobilized by contact with, storm water;

v. The direct and indirect pathways by which pollutants may be exposed to storm water or authorized NSWDs;

vi. All sampling, visual observation, and inspection records;

vii. The effectiveness of existing BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDs;

viii. The estimated effectiveness of implementing, to the extent feasible, minimum BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDs; and,

ix. The identification of the industrial pollutants related to the receiving waters with 303(d) listed impairments identified in Appendix 3 or approved TMDLs that may be causing or contributing to an exceedance of a water quality standard in the receiving waters.

b. Based upon the assessment above, Dischargers shall identify in the SWPPP any areas of the facility where the minimum BMPs described in

subsection H.1 below will not adequately reduce or prevent pollutants in storm water discharges in compliance with Section V.A. Dischargers shall identify any advanced BMPs, as described in subsection H.2 below, for those areas.

c. Based upon the assessment above, Dischargers shall identify any drainage areas with no exposure to industrial activities and materials in accordance with the definitions in Section XVII.

d. Based upon the assessment above, Dischargers shall identify any additional parameters, beyond the required parameters in Section XI.B.6 that indicate the presence of pollutants in industrial storm water discharges.

H. Best Management Practices (BMPs)

1. Minimum BMPs

The Discharger shall, to the extent feasible, implement and maintain all of the following minimum BMPs to reduce or prevent pollutants in industrial storm water discharges.[12]

a. Good Housekeeping

The Discharger shall:

i. Observe all outdoor areas associated with industrial activity; including storm water discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas impacted by off-facility materials or storm water run-on to determine housekeeping needs. Any identified debris, waste, spills, tracked materials, or leaked materials shall be cleaned and disposed of properly;

ii. Minimize or prevent material tracking;

iii. Minimize dust generated from industrial materials or activities;

iv. Ensure that all facility areas impacted by rinse/wash waters are cleaned as soon as possible;

v. Cover all stored industrial materials that can be readily mobilized by contact with storm water;

[12] For the purposes of this General Permit, the requirement to implement BMPs "to the extent feasible" requires Dischargers to select, design, install and implement BMPs that reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

vi. Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with storm water;

vii. Prevent disposal of any rinse/wash waters or industrial materials into the storm water conveyance system;

viii. Minimize storm water discharges from non-industrial areas (e.g., storm water flows from employee parking area) that contact industrial areas of the facility; and,

ix. Minimize authorized NSWDs from non-industrial areas (e.g., potable water, fire hydrant testing, etc.) that contact industrial areas of the facility.

b. Preventive Maintenance

The Discharger shall:

i. Identify all equipment and systems used outdoors that may spill or leak pollutants;

ii. Observe the identified equipment and systems to detect leaks, or identify conditions that may result in the development of leaks;

iii. Establish an appropriate schedule for maintenance of identified equipment and systems; and,

iv. Establish procedures for prompt maintenance and repair of equipment, and maintenance of systems when conditions exist that may result in the development of spills or leaks.

c. Spill and Leak Prevention and Response

The Discharger shall:

i. Establish procedures and/or controls to minimize spills and leaks;

ii. Develop and implement spill and leak response procedures to prevent industrial materials from discharging through the storm water conveyance system. Spilled or leaked industrial materials shall be cleaned promptly and disposed of properly;

iii. Identify and describe all necessary and appropriate spill and leak response equipment, location(s) of spill and leak response equipment, and spill or leak response equipment maintenance procedures; and,

iv. Identify and train appropriate spill and leak response personnel.

d. Material Handling and Waste Management

The Discharger shall:

i. Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with storm water during a storm event;

ii. Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with storm water;

iii. Cover industrial waste disposal containers and industrial material storage containers that contain industrial materials when not in use;

iv. Divert run-on and storm water generated from within the facility away from all stockpiled materials;

v. Clean all spills of industrial materials or wastes that occur during handling in accordance with the spill response procedures (Section X.H.1.c); and,

vi. Observe and clean as appropriate, any outdoor material or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes.

e. Erosion and Sediment Controls

For each erodible surface facility location identified in the SWPPP (Section X.G.1.f), the Discharger shall:

i. Implement effective wind erosion controls;

ii. Provide effective stabilization for inactive areas, finished slopes, and other erodible areas prior to a forecasted storm event;

iii. Maintain effective perimeter controls and stabilize all site entrances and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site;

iv. Divert run-on and storm water generated from within the facility away from all erodible materials; and,

v. If sediment basins are implemented, ensure compliance with the design storm standards in Section X.H.6.

f. Employee Training Program

The Discharger shall:

i. Ensure that all team members implementing the various compliance activities of this General Permit are properly trained to implement the requirements of this General Permit, including but not limited to: BMP implementation, BMP effectiveness evaluations, visual observations,

and monitoring activities. If a Discharger enters Level 1 status, appropriate team members shall be trained by a QISP;

ii. Prepare or acquire appropriate training manuals or training materials;

iii. Identify which personnel need to be trained, their responsibilities, and the type of training they shall receive;

iv. Provide a training schedule; and,

v. Maintain documentation of all completed training classes and the personnel that received training in the SWPPP.

g. Quality Assurance and Record Keeping

The Discharger shall:

i. Develop and implement management procedures to ensure that appropriate staff implements all elements of the SWPPP, including the Monitoring Implementation Plan;

ii. Develop a method of tracking and recording the implementation of BMPs identified in the SWPPP; and

iii. Maintain the BMP implementation records, training records, and records related to any spills and clean-up related response activities for a minimum of five (5) years (Section XXI.J.4).

2. Advanced BMPs

a. In addition to the minimum BMPs described in Section X.H.1, the Discharger shall, to the extent feasible, implement and maintain any advanced BMPs identified in Section X.G.2.b, necessary to reduce or prevent discharges of pollutants in its storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

b. Advanced BMPs may include one or more of the following BMPs:

i. Exposure Minimization BMPs

These include storm resistant shelters (either permanent or temporary) that prevent the contact of storm water with the identified industrial materials or area(s) of industrial activity.

ii. Storm Water Containment and Discharge Reduction BMPs

These include BMPs that divert, infiltrate, reuse, contain, retain, or reduce the volume of storm water runoff. Dischargers are

encouraged to utilize BMPs that infiltrate or reuse storm water where feasible.

iii. Treatment Control BMPs

This is the implementation of one or more mechanical, chemical, biologic, or any other treatment technology that will meet the treatment design standard.

iv. Other Advanced BMPs

Any additional BMPs not described in subsections b.i through iii above that are necessary to meet the effluent limitations of this General Permit.

3. Temporary Suspension of Industrial Activities

For facilities that plan to temporarily suspend industrial activities for ten (10) or more consecutive calendar days during a reporting year, the Discharger may also suspend monitoring if it is infeasible to conduct monitoring while industrial activities are suspended (e.g., the facility is not staffed, or the facility is remote or inaccessible) and the facility has been stabilized. The Discharger shall include in the SWPPP the BMPs necessary to achieve compliance with this General Permit during the temporary suspension of the industrial activity. Once all necessary BMPs have been implemented to stabilize the facility, the Discharger is not required to:

a. Perform monthly visual observations (Section XI.A.1.a.); or,

b. Perform sampling and analysis (Section XI.B.) if it is infeasible to do so (e.g. facility is remotely located).

The Discharger shall upload via SMARTS (7) seven calendar days prior to the planned temporary suspension of industrial activities:

a. SWPPP revisions specifically addressing the facility stabilization BMPs;

b. The justification for why monitoring is infeasible at the facility during the period of temporary suspension of industrial activities;

c. The date the facility is fully stabilized for temporary suspension of industrial activities; and,

d. The projected date that industrial activities will resume at the facility.

Upon resumption of industrial activities at the facility, the Discharger shall, via SMARTS, confirm and/or update the date the facility's industrial activities have resumed. At this time, the Discharger is required to resume all compliance activities under this General Permit.

The Regional Water Boards may review the submitted information pertaining to the temporary suspension of industrial activities. Upon review, the Regional Water Board may request revisions or reject the Discharger's request to temporarily suspend monitoring.

4. BMP Descriptions

   a. The Discharger shall ensure that the SWPPP identifies each BMP being implemented at the facility, including:

      i. The pollutant(s) that the BMP is designed to reduce or prevent in industrial storm water discharges;

      ii. The frequency, time(s) of day, or conditions when the BMP is scheduled for implementation;

      iii. The locations within each area of industrial activity or industrial pollutant source where the BMP shall be implemented;

      iv. The individual and/or position responsible for implementing the BMP;

      v. The procedures, including maintenance procedures, and/or instructions to implement the BMP effectively;

      vi. The equipment and tools necessary to implement the BMP effectively; and,

      vii. The BMPs that may require more frequent visual observations beyond the monthly visual observations as described in Section XI.A.1.

   b. The Discharger shall ensure that the SWPPP identifies and justifies each minimum BMP or applicable advanced BMP not being implemented at the facility because they do not reflect best industry practice considering technological availability and economic practicability and achievability.

   c. The Discharger shall identify any BMPs described in subsection a above that are implemented in lieu of any of the minimum or applicable advanced BMPs.

5. BMP Summary Table

   The Discharger shall prepare a table summarizing each identified area of industrial activity, the associated industrial pollutant sources, the industrial pollutants, and the BMPs being implemented.

6. Design Storm Standards for Treatment Control BMPs

All new treatment control BMPs employed by the Discharger to comply with Section X.H.2 Advanced BMPs and new sediment basins installed after the effective date of this order shall be designed to comply with design storm standards in this Section, except as provided in an Industrial Activity BMP Demonstration (Section XII.D.2.a). A Factor of Safety shall be incorporated into the design of all treatment control BMPs to ensure that storm water is sufficiently treated throughout the life of the treatment control BMPs. The design storm standards for treatment control BMPs are as follows:

a. Volume-based BMPs: The Discharger, at a minimum, shall calculate[13] the volume to be treated using one of the following methods:

   i. The volume of runoff produced from an 85th percentile 24-hour storm event, as determined from local, historical rainfall records;

   ii. The volume of runoff produced by the 85th percentile 24-hour storm event, determined as the maximized capture runoff volume for the facility, from the formula recommended in the Water Environment Federation's Manual of Practice;[14] or,

   iii. The volume of annual runoff required to achieve 80% or more treatment, determined in accordance with the methodology set forth in the latest edition of California Stormwater Best Management Practices Handbook[15], using local, historical rainfall records.

b. Flow-based BMPs: The Discharger shall calculate the flow needed to be treated using one of the following methods:

   i. The maximum flow rate of runoff produced from a rainfall intensity of at least 0.2 inches per hour for each hour of a storm event;

   ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from local historical rainfall records, multiplied by a factor of two; or,

   iii. The maximum flow rate of runoff, as determined using local historical rainfall records, that achieves approximately the same reduction in total pollutant loads as would be achieved by treatment of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

[13] All hydrologic calculations shall be certified by a California licensed professional engineer in accordance with the Professional Engineers Act (Bus. & Prof. Code § 6700, et seq).

[14] Water Environment Federation (WEF). Manual of Practice No. 23/ ASCE Manual of Practice No. 87, cited in chapter 5 (1998 Edition) and Cited in Chapter 3 (2012 Edition) .

[15] California Stormwater Quality Association. Stormwater Best Management Practice New Development and Redevelopment Handbook. < http://www.casqa.org/ >. [as of July 3, 2013].

I. MONITORING IMPLEMENTATION PLAN

The Discharger shall prepare a Monitoring Implementation Plan in accordance with the requirements of this General Permit. The Monitoring Implementation Plan shall be included in the SWPPP and shall include the following items:

1. An identification of team members assigned to conduct the monitoring requirements;

2. A description of the following in accordance with Attachment H:

   a. Discharge locations;

   b. Visual observation procedures; and,

   c. Visual observation response procedures related to monthly visual observations and sampling event visual observations.

3. Justifications for any of the following that are applicable to the facility:

   a. Alternative discharge locations in accordance with Section XI.C.3;

   b. Representative Sampling Reduction in accordance with Section XI.C.4; or,

   c. Qualified Combined Samples in accordance with Section XI.C.5.

4. Procedures for field instrument calibration instructions, including calibration intervals specified by the manufacturer; and,

5. An example Chain of Custody form used when handling and shipping water quality samples to the lab.

XI. MONITORING

A. Visual Observations

1. Monthly Visual Observations

   a. At least once per calendar month, the Discharger shall visually observe each drainage area for the following:

      i. The presence or indications of prior, current, or potential unauthorized NSWDs and their sources;

      ii. Authorized NSWDs, sources, and associated BMPs to ensure compliance with Section IV.B.3; and,

iii. Outdoor industrial equipment and storage areas, outdoor industrial activities areas, BMPs, and all other potential source of industrial pollutants.

b. The monthly visual observations shall be conducted during daylight hours of scheduled facility operating hours and on days without precipitation.

c. The Discharger shall provide an explanation in the Annual Report for uncompleted monthly visual observations.

2. Sampling Event Visual Observations

Sampling event visual observations shall be conducted at the same time sampling occurs at a discharge location. At each discharge location where a sample is obtained, the Discharger shall observe the discharge of storm water associated with industrial activity.

a. The Discharger shall ensure that visual observations of storm water discharged from containment sources (e.g. secondary containment or storage ponds) are conducted at the time that the discharge is sampled.

b. Any Discharger employing volume-based or flow-based treatment BMPs shall sample any bypass that occurs while the visual observations and sampling of storm water discharges are conducted.

c. The Discharger shall visually observe and record the presence or absence of floating and suspended materials, oil and grease, discolorations, turbidity, odors, trash/debris, and source(s) of any discharged pollutants.

d. In the event that a discharge location is not visually observed during the sampling event, the Discharger shall record which discharge locations were not observed during sampling or that there was no discharge from the discharge location.

e. The Discharger shall provide an explanation in the Annual Report for uncompleted sampling event visual observations.

3. Visual Observation Records

The Discharger shall maintain records of all visual observations. Records shall include the date, approximate time, locations observed, presence and probable source of any observed pollutants, name of person(s) that conducted the observations, and any response actions and/or additional SWPPP revisions necessary in response to the visual observations.

4. The Discharger shall revise BMPs as necessary when the visual observations indicate pollutant sources have not been adequately addressed in the SWPPP.

B. Sampling and Analysis

1. A Qualifying Storm Event (QSE) is a precipitation event that:

   a. Produces a discharge for at least one drainage area; and,

   b. Is preceded by 48 hours with no discharge from any drainage area.

2. The Discharger shall collect and analyze storm water samples from two (2) QSEs within the first half of each reporting year (July 1 to December 31), and two (2) QSEs within the second half of each reporting year (January 1 to June 30).

3. Compliance Group Participants are only required to collect and analyze storm water samples from one (1) QSE within the first half of each reporting year (July 1 to December 31) and one (1) QSE within the second half of the reporting year (January 1 to June 30).

4. Except as provided in Section XI.C.4 (Representative Sampling Reduction), samples shall be collected from each drainage area at all discharge locations. The samples must be:

   a. Representative of storm water associated with industrial activities and any commingled authorized NSWDs; or,

   b. Associated with the discharge of contained storm water.

5. Samples from each discharge location shall be collected within four (4) hours of:

   a. The start of the discharge; or,

   b. The start of facility operations if the QSE occurs within the previous 12-hour period (e.g., for storms with discharges that begin during the night for facilities with day-time operating hours). Sample collection is required during scheduled facility operating hours and when sampling conditions are safe in accordance with Section XI.C.6.a.ii.

6. The Discharger shall analyze all collected samples for the following parameters:

   a. Total suspended solids (TSS) and oil and grease (O&G);

   b. pH (see Section XI.C.2);

c. Additional parameters identified by the Discharger on a facility-specific basis that serve as indicators of the presence of all industrial pollutants identified in the pollutant source assessment (Section X.G.2). These additional parameters may be modified (added or removed) in accordance with any updated SWPPP pollutant source assessment;

d. Additional applicable parameters listed in Table 1 below. These parameters are dependent on the facility Standard Industrial Classification (SIC) code(s);

e. Additional applicable industrial parameters related to receiving waters with 303(d) listed impairments or approved TMDLs based on the assessment in Section X.G.2.a.ix. Test methods with lower detection limits may be necessary when discharging to receiving waters with 303(d) listed impairments or TMDLs;

f. Additional parameters required by the Regional Water Board. The Discharger shall contact its Regional Water Board to determine appropriate analytical test methods for parameters not listed in Table 2 below. These analytical test methods will be added to SMARTS; and

g. For discharges subject to Subchapter N, additional parameters specifically required by Subchapter N. If the discharge is subject to ELGs, the Dischargers shall contact the Regional Water Board to determine appropriate analytical methods for parameters not listed in Table 2 below.

7. The Discharger shall select corresponding NALs, analytical test methods,, and reporting units from the list provided in Table 2 below. SMARTS will be updated over time to add additional acceptable analytical test methods. Dischargers may propose an analytical test method for any parameter or pollutant that does not have an analytical test method specified in Table 2 or in SMARTS. Dischargers may also propose analytical test methods with substantially similar or more stringent method detection limits than existing approved analytical test methods. Upon approval, the analytical test method will be added to SMARTS.

8. The Discharger shall ensure that the collection, preservation and handling of all storm water samples are in accordance with Attachment H, Storm Water Sample Collection and Handling Instructions.

9. Samples from different discharge locations shall not be combined or composited except as allowed in Section XI.C.5 (Qualified Combined Samples).

10. The Discharger shall ensure that all laboratory analyses are conducted according to test procedures under 40 Code of Federal Regulations part 136, including the observation of holding times, unless other test procedures have been specified in this General Permit or by the Regional Water Board.

11. Sampling Analysis Reporting

a. The Discharger shall submit all sampling and analytical results for all individual or Qualified Combined Samples via SMARTS within 30 days of obtaining all results for each sampling event.

b. The Discharger shall provide the method detection limit when an analytical result from samples taken is reported by the laboratory as a "non-detect" or less than the method detection limit. A value of zero shall not be reported.

c. The Discharger shall provide the analytical result from samples taken that is reported by the laboratory as below the minimum level (often referred to as the reporting limit) but above the method detection limit.

Reported analytical results will be averaged automatically by SMARTS. For any calculations required by this General Permit, SMARTS will assign a value of zero (0) for all results less than the minimum level as reported by the laboratory.

TABLE 1: Additional Analytical Parameters

SIC code	SIC code Description	Parameters*
102X	Copper Ores	COD; N+N
12XX	Coal Mines	Al; Fe
144X	Sand and Gravel	N+N
207X	Fats and Oils	BOD; COD; N+N
2421	Sawmills & Planning Mills	COD; Zn
2426	Hardwood Dimension	COD
2429	Special Product Sawmills	COD
243X	Millwork, Veneer, Plywood	COD
244X	Wood Containers	COD
245X	Wood Buildings & Mobile Homes	COD
2491	Wood Preserving	As; Cu
2493	Reconstituted Wood Products	COD
263X	Paperboard Mills	COD
281X	Industrial Inorganic Chemicals	Al; Fe; N+N
282X	Plastic Materials, Synthetics	Zn
284X	Soaps, Detergents, Cosmetics	N+N; Zn
287X	Fertilizers, Pesticides, etc.	Fe; N+N; Pb; Zn; P
301X	Tires, Inner Tubes	Zn
302X	Rubber and Plastic Footwear	Zn
305X	Rubber & Plastic Sealers & Hoses	Zn
306X	Misc. Fabricated Rubber Products	Zn
325X	Structural Clay Products	Al
326X	Pottery & Related Products	Al
3297	Non-Clay Refractories	Al
327X	Concrete, Gypsum, Plaster Products (Except 3274)	Fe
3295	Minerals & Earths	Fe
331X	Steel Works, Blast Furnaces, Rolling and Finishing Mills	Al; Zn
332X	Iron and Steel Foundries	Al; Cu; Fe; Zn
335X	Metal Rolling, Drawing, Extruding	Cu; Zn

336X	Nonferrous Foundries (Castings)	Cu; Zn
34XX	Fabricated Metal Products (Except 3479)	Zn; N+N; Fe; Al
3479	Coating and Engraving	Zn; N+N
4953	Hazardous Waste Facilities	NH3; Mg; COD; As; Cn; Pb; HG; Se; Ag
44XX	Water Transportation	Al; Fe; Pb; Zn
45XX	Air Transportation Facilities[16]	BOD; COD; NH3
4911	Steam Electric Power Generating Facilities	Fe
4953	Landfills and Land Application Facilities	Fe
5015	Dismantling or Wrecking Yards	Fe; Pb; Al
5093	Scrap and Waste Materials (not including source-separated recycling)	Fe; Pb; Al; Zn; COD

***Table 1 Parameter Reference**	
Ag – Silver	**Mg** – Magnesium
Al – Aluminum	**N+N** - Nitrate & Nitrite Nitrogen
As – Arsenic	**NH** – Ammonia
BOD – Biochemical Oxygen Demand	**Ni** – Nickel
Cd - Cadmium	**P** – Phosphorus
Cn – Cyanide	**Se** – Selenium
COD – Chemical Oxygen Demand	**TSS** – Total Suspended Solids
Cu – Copper	**Zn** – Zinc
Fe – Iron	**Pb** – Lead
Hg – Mercury	

[16] Only airports (SIC 4512-4581) where a single Discharger, or a combination of permitted facilities use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis, are required to monitor these parameters for those outfalls that collect runoff from areas where deicing activities occur.

TABLE 2: Parameter NAL Values, Test Methods, and Reporting Units

PARAMETER	TEST METHOD	REPORTING UNITS	ANNUAL NAL	INSTANTANEOUS MAXIMUM NAL
pH*	See Section XI.C.2	pH units	N/A	Less than 6.0 Greater than 9.0
Suspended Solids (TSS)*, Total	SM 2540-D	mg/L	100	400
Oil & Grease (O&G)*, Total	EPA 1664A	mg/L	15	25
Zinc, Total (H)	EPA 200.8	mg/L	0.26**	
Copper, Total (H)	EPA 200.8	mg/L	0.0332**	
Cyanide, Total	SM 4500–CN C, D, or E	mg/L	0.022	
Lead, Total (H)	EPA 200.8	mg/L	0.262**	
Chemical Oxygen Demand (COD)	SM 5220C	mg/L	120	
Aluminum, Total	EPA 200.8	mg/L	0.75	
Iron, Total	EPA 200.7	mg/L	1.0	
Nitrate + Nitrite Nitrogen	SM 4500-NO3- E	mg/L as N	0.68	
Total Phosphorus	SM 4500-P B+E	mg/L as P	2.0	
Ammonia (as N)	SM 4500-NH3 B+ C or E	mg/L	2.14	
Magnesium, total	EPA 200.7	mg/L	0.064	
Arsenic, Total (c)	EPA 200.8	mg/L	0.15	
Cadmium, Total (H)	EPA 200.8	mg/L	0.0053**	
Nickel, Total (H)	EPA 200.8	mg/l	1.02**	
Mercury, Total	EPA 245.1	mg/L	0.0014	
Selenium, Total	EPA 200.8	mg/L	0.005	
Silver, Total (H)	EPA 200.8	mg/L	0.0183**	
Biochemical Oxygen Demand (BOD)	SM 5210B	mg/L	30	

SM – Standard Methods for the Examination of Water and Wastewater, 18th edition
EPA – U.S. EPA test methods
(H) – Hardness dependent
* Minimum parameters required by this General Permit
**The NAL is the highest value used by U.S. EPA based on their hardness table in the 2008 MSGP.

C. Methods and Exceptions

1. The Discharger shall comply with the monitoring methods in this General Permit and Attachment H.

2. pH Methods

   a. Dischargers that are not subject to Subchapter N ELGs mandating pH analysis related to acidic or alkaline sources and have never entered Level 1 status for pH, are eligible to screen for pH using wide range litmus pH paper or other equivalent pH test kits. The pH screen shall be performed as soon as practicable, but no later than 15 minutes after the sample is collected.

   b. Dischargers subject to Subchapter N ELGs shall either analyze samples for pH using methods in accordance with 40 Code of Federal Regulations 136 for testing storm water or use a calibrated portable instrument for pH.

   c. Dischargers that enter Level 1 status (see Section XII.C) for pH shall, in the subsequent reporting years, analyze for pH using methods in accordance with 40 Code of Federal Regulations 136 or use a calibrated portable instrument for pH.

   d. Dischargers using a calibrated portable instrument for pH shall ensure that all field measurements are conducted in accordance with the accompanying manufacturer's instructions.

3. Alternative Discharge Locations

   a. The Discharger is required to identify, when practicable, alternative discharge locations for any discharge locations identified in accordance with Section XI.B.4 if the facility's discharge locations are:

      i. Affected by storm water run-on from surrounding areas that cannot be controlled; and/or,

      ii. Difficult to observe or sample (e.g. submerged discharge outlets, dangerous discharge location accessibility).

   b. The Discharger shall submit and certify via SMARTS any alternative discharge location or revisions to the alternative discharge locations in the Monitoring Implementation Plan.

4. Representative Sampling Reduction

   a. The Discharger may reduce the number of locations to be sampled in each drainage area (e.g., roofs with multiple downspouts, loading/unloading areas with multiple storm drains) if the industrial

activities, BMPs, and physical characteristics (grade, surface materials, etc.) of the drainage area for each location to be sampled are substantially similar to one another. To qualify for the Representative Sampling Reduction, the Discharger shall provide a Representative Sampling Reduction justification in the Monitoring Implementation Plan section of the SWPPP.

b. The Representative Sampling Reduction justification shall include:

i. Identification and description of each drainage area and corresponding discharge location(s);

ii. A description of the industrial activities that occur throughout the drainage area;

iii. A description of the BMPs implemented in the drainage area;

iv. A description of the physical characteristics of the drainage area;

v. A rationale that demonstrates that the industrial activities and physical characteristics of the drainage area(s) are substantially similar; and,

vi. An identification of the discharge location(s) selected for representative sampling, and rationale demonstrating that the selected location(s) to be sampled are representative of the discharge from the entire drainage area.

c. A Discharger that satisfies the conditions of subsection 4.b.i through v above shall submit and certify via SMARTS the revisions to the Monitoring Implementation Plan that includes the Representative Sampling Reduction justification.

d. Upon submittal of the Representative Sampling Reduction justification, the Discharger may reduce the number of locations to be sampled in accordance with the Representative Sampling Reduction justification. The Regional Water Board may reject the Representative Sampling Reduction justification and/or request additional supporting documentation. In such instances, the Discharger is ineligible for the Representative Sampling Reduction until the Regional Water Board approves the Representative Sampling Reduction justification.

5. Qualified Combined Samples

a. The Discharger may authorize an analytical laboratory to combine samples of equal volume from as many as four (4) discharge locations if the industrial activities, BMPs, and physical characteristics (grade, surface materials, etc.) within each of the drainage areas are substantially similar to one another.

b. The Qualified Combined Samples justification shall include:

i. Identification and description of each drainage area and corresponding discharge locations;

ii. A description of the BMPs implemented in the drainage area;

iii. A description of the industrial activities that occur throughout the drainage area;

iv. A description of the physical characteristics of the drainage area; and,

v. A rationale that demonstrates that the industrial activities and physical characteristics of the drainage area(s) are substantially similar.

c. A Discharger that satisfies the conditions of subsection 5.b.i through iv above shall submit and certify via SMARTS the revisions to the Monitoring Implementation Plan that includes the Qualified Combined Samples justification.

d. Upon submittal of the Qualified Combined Samples justification revisions in the Monitoring Implementation Plan, the Discharger may authorize the lab to combine samples of equal volume from as many as four (4) drainage areas. The Regional Water Board may reject the Qualified Combined Samples justification and/or request additional supporting documentation. In such instances, the Discharger is ineligible for the Qualified Combined Samples justification until the Regional Water Board approves the Qualified Combined Samples justification.

e. Regional Water Board approval is necessary to combine samples from more than four (4) discharge locations.

6. Sample Collection and Visual Observation Exceptions

a. Sample collection and visual observations are not required under the following conditions:

i. During dangerous weather conditions such as flooding or electrical storms; or,

ii. Outside of scheduled facility operating hours. The Discharger is not precluded from collecting samples or conducting visual observations outside of scheduled facility operating hours.

b. In the event that samples are not collected, or visual observations are not conducted in accordance with Section XI.B.5 due to these exceptions, an explanation shall be included in the Annual Report.

c. Sample collection is not required for drainage areas with no exposure to industrial activities and materials in accordance with the definitions in Section XVII.

7. Sampling Frequency Reduction Certification
   a. Dischargers are eligible to reduce the number of QSEs sampled each reporting year in accordance with the following requirements:

      i. Results from four (4) consecutive QSEs that were sampled (QSEs may be from different reporting years) did not exceed any NALs as defined in Section XII.A; and

      ii. The Discharger is in full compliance with the requirements of this General Permit and has updated, certified and submitted via SMARTS all documents, data, and reports required by this General Permit during the time period in which samples were collected.

   b. The Regional Water Board may notify a Discharger that it may not reduce the number of QSEs sampled each reporting year if the Discharger is subject to an enforcement action.

   c. An eligible Discharger shall certify via SMARTS that it meets the conditions in subsection 7.a above.

   d. Upon Sampling Frequency Reduction certification, the Discharger shall collect and analyze samples from one (1) QSE within the first half of each reporting year (July 1 to December 31), and one (1) QSE within the second half of each reporting year (January 1 to June 30). All other monitoring, sampling, and reporting requirements remain in effect.

   e. Dischargers who participate in a Compliance Group and certify a Sampling Frequency Reduction are only required to collect and analyze storm water samples from one (1) QSE within each reporting year.

   f. A Discharger may reduce sampling per the Sampling Frequency Reduction certification unless notified by the Regional Water Board that: (1) the Sampling Frequency Reduction certification has been rejected or (2) additional supporting documentation must be submitted. In such instances, a Discharger is ineligible for the Sampling Frequency Reduction until the Regional Water Board provides Sampling Frequency Reduction certification approval. Revised Sampling Frequency Reduction certifications shall be certified and submitted via SMARTS by the Discharger.

   g. A Discharger loses its Sampling Frequency Reduction certification if an NAL exceedance occurs (Section XII.A).

D. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

1. In addition to the other requirements in this General Permit, Dischargers with facilities subject to storm water ELGs in Subchapter N shall:

   a. Collect and analyze samples from QSEs for each regulated pollutant specified in the appropriate category in Subchapter N as specified in Section XI.B;

   b. For Dischargers with facilities subject to 40 Code of Federal Regulations parts 419[17] and 443[18], estimate or calculate the volume of industrial storm water discharges from each drainage area subject to the ELGs and the mass of each regulated pollutant as defined in parts 419 and 443; and,

   c. Ensure that the volume/mass estimates or calculations required in subsection b are completed by a California licensed professional engineer.

2. Dischargers subject to Subchapter N shall submit the information in Section XI.D.1.a through c in their Annual Report.

3. Dischargers with facilities subject to storm water ELGs in Subchapter N are ineligible for the Representative Sampling Reduction in Section XI.C.4.

XII. EXCEEDANCE RESPONSE ACTIONS (ERAs)

A. NALs and NAL Exceedances

The Discharger shall perform sampling, analysis and reporting in accordance with the requirements of this General Permit and shall compare the results to the two types of NAL values in Table 2 to determine whether either type of NAL has been exceeded for each applicable parameter. The two types of potential NAL exceedances are as follows:

1. Annual NAL exceedance: The Discharger shall determine the average concentration for each parameter using the results of all the sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data). The Discharger shall compare the average concentration for each parameter to the corresponding annual NAL values in Table 2. For Dischargers using composite sampling or flow-weighted measurements in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA's NPDES Storm Water

[17] Part 419 - Petroleum refining point source category
[18] Part 443 - Effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources for the paving and roofing materials (tars and asphalt) point source category

Sampling Guidance Document.[19] An annual NAL exceedance occurs when the average of all the analytical results for a parameter from samples taken within a reporting year exceeds the annual NAL value for that parameter listed in Table 2; and,

2. Instantaneous maximum NAL exceedance: The Discharger shall compare all sampling and analytical results from each distinct sample (individual or combined as authorized by XI.C.5) to the corresponding instantaneous maximum NAL values in Table 2. An instantaneous maximum NAL exceedance occurs when two (2) or more analytical results from samples taken for any single parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G) or are outside of the instantaneous maximum NAL range for pH.

B. Baseline Status

At the beginning of a Discharger's NOI Coverage, all Dischargers have Baseline status for all parameters.

C. Level 1 Status

A Discharger's Baseline status for any given parameter shall change to Level 1 status if sampling results indicate an NAL exceedance for that same parameter. Level 1 status will commence on July 1 following the reporting year during which the exceedance(s) occurred.[20]

1. Level 1 ERA Evaluation

   a. By October 1 following commencement of Level 1 status for any parameter with sampling results indicating an NAL exceedance, the Discharger shall:

   b. Complete an evaluation, with the assistance of a QISP, of the industrial pollutant sources at the facility that are or may be related to the NAL exceedance(s); and,

   c. Identify in the evaluation the corresponding BMPs in the SWPPP and any additional BMPs and SWPPP revisions necessary to prevent future NAL exceedances and to comply with the requirements of this General Permit. Although the evaluation may focus on the drainage areas where the NAL exceedance(s) occurred, all drainage areas shall be evaluated.

2. Level 1 ERA Report

[19] U.S. EPA. NPDES Storm Water Sampling Guidance Document. <http://www.epa.gov/npdes/pubs/owm0093.pdf >. [as of February 4, 2014]

[20] For all sampling results reported before June 30th of the preceding reporting year. If sample results indicating an NAL exceedance are submitted after June 30th, the Discharger will change status once those results have been reported.

a. Based upon the above evaluation, the Discharger shall, as soon as practicable but no later than January 1 following commencement of Level 1 status :

i. Revise the SWPPP as necessary and implement any additional BMPs identified in the evaluation;

ii. Certify and submit via SMARTS a Level 1 ERA Report prepared by a QISP that includes the following:

1) A summary of the Level 1 ERA Evaluation required in subsection C.1 above; and,

2) A detailed description of the SWPPP revisions and any additional BMPs for each parameter that exceeded an NAL.

iii. Certify and submit via SMARTS the QISP's identification number, name, and contact information (telephone number, e-mail address).

b. A Discharger's Level 1 status for a parameter will return to Baseline status once a Level 1 ERA report has been completed, all identified additional BMPs have been implemented, and results from four (4) consecutive QSEs that were sampled subsequent to BMP implementation indicate no additional NAL exceedances for that parameter.

3. NAL Exceedances Prior to Implementation of Level 1 Status BMPs.

Prior to the implementation of an additional BMP identified in the Level 1 ERA Evaluation or October 1, whichever comes first, sampling results for any parameter(s) being addressed by that additional BMP will not be included in the calculations of annual average or instantaneous NAL exceedances in SMARTS.

D. Level 2 Status

A Discharger's Level 1 status for any given parameter shall change to Level 2 status if sampling results indicate an NAL exceedance for that same parameter while the Discharger is in Level 1. Level 2 status will commence on July 1 following the reporting year during which the NAL exceedance(s) occurred.[21]

1. Level 2 ERA Action Plan

[21] For all sampling results reported before June 30th of the preceding reporting year. If sample results indicating an NAL exceedance are submitted after June 30th, the Discharger will change status upon the date those results have been reported into SMARTS.

a. Dischargers with Level 2 status shall certify and submit via SMARTS a Level 2 ERA Action Plan prepared by a QISP that addresses each new Level 2 NAL exceedance by January 1 following the reporting year during which the NAL exceedance(s) occurred. For each new Level 2 NAL exceedance, the Level 2 Action Plan will identify which of the demonstrations in subsection D.2.a through c the Discharger has selected to perform. A new Level 2 NAL exceedance is any Level 2 NAL exceedance for 1) a new parameter in any drainage area, or 2) the same parameter that is being addressed in an existing Level 2 ERA Action Plan in a different drainage area.

b. The Discharger shall certify and submit via SMARTS the QISP's identification number, name, and contact information (telephone number, e-mail address) if this information has changed since previous certifications.

c. The Level 2 ERA Action Plan shall at a minimum address the drainage areas with corresponding Level 2 NAL exceedances.

d. All elements of the Level 2 ERA Action Plan shall be implemented as soon as practicable and completed no later than 1 year after submitting the Level 2 ERA Action Plan.

e. The Level 2 ERA Action Plan shall include a schedule and a detailed description of the tasks required to complete the Discharger's selected demonstration(s) as described below in Section D.2.a through c.

2. Level 2 ERA Technical Report

On January 1 of the reporting year following the submittal of the Level 2 ERA Action Plan, a Discharger with Level 2 status shall certify and submit a Level 2 ERA Technical Report prepared by a QISP that includes one or more of the following demonstrations:

a. Industrial Activity BMPs Demonstration

This shall include the following requirements, as applicable:

i. Shall include a description of the industrial pollutant sources and corresponding industrial pollutants that are or may be related to the NAL exceedance(s);

ii. Shall include an evaluation of all pollutant sources associated with industrial activity that are or may be related to the NAL exceedance(s);

iii. Where all of the Discharger's implemented BMPs, including additional BMPs identified in the Level 2 ERA Action Plan, achieve

compliance with the effluent limitations of this General Permit and are expected to eliminate future NAL exceedance(s), the Discharger shall provide a description and analysis of all implemented BMPs;

iv. In cases where all of the Discharger's implemented BMPs, including additional BMPs identified in the Level 2 ERA Action Plan, achieve compliance with the effluent limitations of this General Permit but are not expected to eliminate future NAL exceedance(s), the Discharger shall provide, in addition to a description and analysis of all implemented BMPs:

1) An evaluation of any additional BMPs that would reduce or prevent NAL exceedances;

2) Estimated costs of the additional BMPs evaluated; and,

3) An analysis describing the basis for the selection of BMPs implemented in lieu of the additional BMPs evaluated but not implemented.

v. The description and analysis of BMPs required in subsection a.iii above shall specifically address the drainage areas where the NAL exceedance(s) responsible for the Discharger's Level 2 status occurred, although any additional Level 2 ERA Action Plan BMPs may be implemented for all drainage areas; and,

vi. If an alternative design storm standard for treatment control BMPs (in lieu of the design storm standard for treatment control BMPs in Section X.H.6 in this General Permit) will achieve compliance with the effluent limitations of this General Permit, the Discharger shall provide an analysis describing the basis for the selection of the alternative design storm standard.

b. Non-Industrial Pollutant Source Demonstration

This shall include:

i. A statement that the Discharger has determined that the exceedance of the NAL is attributable solely to the presence of non-industrial pollutant sources. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance.) The sources shall be identified as either run-on from adjacent properties, aerial deposition from man-made sources, or as generated by on-site non-industrial sources;

ii. A statement that the Discharger has identified and evaluated all potential pollutant sources that may have commingled with storm water associated with the Discharger's industrial activity and may be contributing to the NAL exceedance;

iii. A description of any on-site industrial pollutant sources and corresponding industrial pollutants that are contributing to the NAL exceedance;

iv. An assessment of the relative contributions of the pollutant from (1) storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition and (2) the storm water associated with the Discharger's industrial activity;

v. A summary of all existing BMPs for that parameter; and,

vi. An evaluation of all on-site/off-site analytical monitoring data demonstrating that the NAL exceedances are caused by pollutants in storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition.

c. Natural Background Pollutant Source Demonstration

This shall include:

i. A statement that the Discharger has determined that the NAL exceedance is attributable solely to the presence of the pollutant in the natural background that has not been disturbed by industrial activities. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance);

ii. A summary of all data previously collected by the Discharger, or other identified data collectors, that describes the levels of natural background pollutants in the storm water discharge;

iii. A summary of any research and published literature that relates the pollutants evaluated at the facility as part of the Natural Background Source Demonstration;

iv. Map showing the reference site location in relation to facility along with available land cover information;

v. Reference site and test site elevation;

vi. Available geology and soil information for reference and test sites;

vii. Photographs showing site vegetation;

viii. Site reconnaissance survey data regarding presence of roads, outfalls, or other human-made structures; and,

ix. Records from relevant state or federal agencies indicating no known mining, forestry, or other human activities upstream of the proposed reference site.

3. Level 2 ERA Technical Report Submittal

a. The Discharger shall certify and submit via SMARTS the Level 2 ERA Technical Report described in Section D.2 above.

b. The State Water Board and Regional Boards (Water Boards) may review the submitted Level 2 ERA Technical Reports. Upon review of a Level 2 ERA Technical Report, the Water Boards may reject the Level 2 ERA Technical Report and direct the Discharger to take further action(s) to comply with this General Permit.

c. Dischargers with Level 2 status who have submitted the Level 2 ERA Technical Report are only required to annually update the Level 2 ERA Technical Report based upon additional NAL exceedances of the same parameter and same drainage area (if the original Level 2 ERA Technical Report contained an Industrial Activity BMP Demonstration and the implemented BMPs were expected to eliminate future NAL exceedances in accordance with Section XII.D.2.a.ii), facility operational changes, pollutant source(s) changes, and/or information that becomes available via compliance activities (monthly visual observations, sampling results, annual evaluation, etc.). The Level 2 ERA Technical Report shall be prepared by a QISP and be certified and submitted via SMARTS by the Discharger with each Annual Report. If there are no changes prompting an update of the Level 2 ERA Technical Report, as specified above, the Discharger will provide this certification in the Annual Report that there have been no changes warranting re-submittal of the Level 2 ERA Technical Report.

d. Dischargers are not precluded from submitting a Level 2 ERA Action Plan or ERA Technical Report prior to entering Level 2 status if information is available to adequately prepare the report and perform the demonstrations described above. A Discharger who chooses to submit a Level 2 ERA Action Plan or ERA Technical Report prior to entering Level 2 status will automatically be placed in Level 2 in accordance to the Level 2 ERA schedule.

4. Eligibility for Returning to Baseline Status

a. Dischargers with Level 2 status who submit an Industrial Activity BMPs Demonstration in accordance with subsection 2.a.i through iii above and have implemented BMPs to prevent future NAL exceedance(s) for the Level 2 parameter(s) shall return to baseline status for that parameter, if results from four (4) subsequent consecutive QSEs sampled indicate no additional NAL exceedance(s) for that parameter(s). If future NAL exceedances occur for the same parameter(s), the Discharger's Baseline status will return to Level 2 status on July 1 in the subsequent reporting year during which the NAL exceedance(s) occurred. These Dischargers shall update the Level 2 ERA Technical Report as required above in Section D.3.c.

b. Dischargers are ineligible to return to baseline status if they submit any of the following:

   i. A industrial activity BMP demonstration in accordance with subsection 2.a.iv above;

   ii. An non-industrial pollutant source demonstration; or,

   iii. A natural background pollutant source demonstration.

5. Level 2 ERA Implementation Extension

   a. Dischargers that need additional time to submit the Level 2 ERA Technical Report shall be automatically granted a single time extension for up to six (6) months upon submitting the following items into SMARTS, as applicable:

      i. Reasons for the time extension;

      ii. A revised Level 2 ERA Action Plan including a schedule and a detailed description of the necessary tasks still to be performed to complete the Level 2 ERA Technical Report; and

      iii. A description of any additional temporary BMPs that will be implemented while permanent BMPs are being constructed.

   b. The Regional Water Boards will review Level 2 ERA Implementation Extensions for completeness and adequacy. Requests for extensions that total more than six (6) months are not granted unless approved in writing by the Water Boards. The Water Boards may (1) reject or revise the time allowed to complete Level 2 ERA Implementation Extensions, (2) identify additional tasks necessary to complete the Level 2 ERA Technical Report, and/or (3) require the Discharger to implement additional temporary BMPs.

XIII. INACTIVE MINING OPERATION CERTIFICATION

A. Inactive mining operations are defined in Part 3 of Attachment A of this General Permit. The Discharger may, in lieu of complying with the General Permit requirements described in subsection B below, certify and submit via SMARTS that their inactive mining operation meets the following conditions:

1. The Discharger has determined and justified in the SWPPP that it is impracticable to implement the monitoring requirements in this General Permit for the inactive mining operation;

2. A SWPPP has been signed (wet signature and license number) by a California licensed professional engineer and is being implemented in accordance with the requirements of this General Permit; and,

3. The facility is in compliance with this General Permit, except as provided in subsection B below.

B. The Discharger who has certified and submitted that they meet the conditions in subsection A above, are not subject to the following General Permit requirements:

1. Monitoring Implementation Plan in Section X.I;

2. Monitoring Requirements in Section XI;

3. Exceedance Response Actions (ERAs) in Section XII; and,

4. Annual Report Requirements in Section XVI.

C. Inactive Mining Operation Certification Submittal Schedule

1. The Discharger shall certify and submit via SMARTS NOI coverage PRDs listed in Section II.B.1 and meet the conditions in subsection A above.

2. The Discharger shall annually inspect the inactive mining site and certify via SMARTS no later than July 15th of each reporting year, that their inactive mining operation continues to meet the conditions in subsection A above.

3. The Discharger shall have a California licensed professional engineer review and update the SWPPP if there are changes to their inactive mining operation or additional BMPs are needed to comply with this General Permit. Any significant updates to the SWPPP shall be signed (wet signature and license number) by a California license professional engineer.

4. The Discharger shall certify and submit via SMARTS any significantly revised SWPPP within 30 days of the revision(s).

XIV. COMPLIANCE GROUPS AND COMPLIANCE GROUP LEADERS

A. Compliance Group Qualification Requirements

1. Any group of Dischargers of the same industry type or any QISP representing Dischargers of the same industry type may form a Compliance Group. A Compliance Group shall consist of Dischargers that operate facilities with similar types of industrial activities, pollutant sources, and pollutant characteristics (e.g., scrap metals recyclers would join a different group than paper recyclers, truck vehicle maintenance facilities would join a different group than airplane vehicle maintenance facilities, etc.). A Discharger participating in a Compliance Group is termed a Compliance Group Participant. Participation in a Compliance Group is not required. Compliance Groups may be formed at any time.

2. Each Compliance Group shall have a Compliance Group Leader.

3. To establish a Compliance Group, the Compliance Group Leader shall register as a Compliance Group Leader via SMARTS. The registration shall include documentation demonstrating compliance with the Compliance Group qualification requirements above and a list of the Compliance Group Participants.

4. Each Compliance Group Participant shall register as a member of an established Compliance Group via SMARTS.

5. The Executive Director of the State Water Board may review Compliance Group registrations and/or activities for compliance with the requirements of this General Permit. The Executive Director may reject the Compliance Group, the Compliance Group Leader, or individual Compliance Group Participants within the Compliance Group.

B. Compliance Group Leader Responsibilities

1. A Compliance Group Leader must complete a State Water Board sponsored or approved training program for Compliance Group Leaders.

2. The Compliance Group Leader shall assist Compliance Group Participants with all compliance activities required by this General Permit.

3. A Compliance Group Leader shall prepare a Consolidated Level 1 ERA Report for all Compliance Group Participants with Level 1 status for the same parameter. Compliance Group Participants who certify and submit these Consolidated Level 1 ERA Reports are subject to the same provisions as individual Dischargers with Level 1 status, as described in Section XII.C. A Consolidated Level 1 ERA Report is equivalent to a Level 1 ERA Report.

4. The Compliance Group Leader shall update the Consolidated Level 1 ERA Report as needed to address additional Compliance Group Participants with ERA Level 1 status.

5. A Compliance Group Leader shall prepare a Level 2 ERA Action Plan specific to each Compliance Group Participant with Level 2 status. Compliance Group Participants who certify and submit these Level 2 ERA Action Plans are subject to the same provisions as individual Dischargers with Level 2 status, as described in Section XII.D.

6. A Compliance Group Leader shall prepare a Level 2 ERA Technical Report specific to each Compliance Group Participant with Level 2 status. Compliance Group Participants who certify and submit these Level 2 ERA Technical Reports are subject to the same provisions as individual Dischargers with Level 2 status, as described in Section XII.D.

7. The Compliance Group Leader shall inspect all the facilities of the Compliance Group Participants that have entered Level 2 status prior to preparing the individual Level 2 ERA Technical Report.

8. The Compliance Group Leader shall revise the Consolidated Level 1 ERA Report, individual Level 2 ERA Action Plans, or individual Level 2 Technical Reports in accordance with any comments received from the Water Boards.

9. The Compliance Group Leader shall inspect all the facilities of the Compliance Group Participants at a minimum of once per reporting year (July 1 to June 30).

C. Compliance Group Participant Responsibilities

1. Each Compliance Group Participant is responsible for permit compliance for the Compliance Group Participant's facility and for ensuring that the Compliance Group Leader's activities related to the Compliance Group Participant's facility comply with this General Permit.

2. Compliance Group Participants with Level 1 status shall certify and submit via SMARTS the Consolidated Level 1 ERA Report. The Compliance Group Participants shall certify that they have reviewed the Consolidated Level 1 ERA Report and have implemented any required additional BMPs. Alternatively, the Compliance Group Participant may submit an individual Level 1 ERA Report in accordance with the provisions in Section XII.C.2.

3. Compliance Group Participants with Level 2 status shall certify and submit via SMARTS their individual Level 2 ERA Action Plan and Technical Report prepared by their Compliance Group Leader. Each Compliance Group Participant shall certify that they have reviewed the Level 2 ERA Action Plan and Technical Report and will implement any required additional BMPs.

4. Compliance Group Participants can at any time discontinue their participation in their associated Compliance Group via SMARTS. Upon discontinuation, the former Compliance Group Participant is immediately subject to the sampling and analysis requirements described in Section XI.B.2.

XV. ANNUAL COMPREHENSIVE FACILITY COMPLIANCE EVALUATION (ANNUAL EVALUATION)

The Discharger shall conduct one Annual Evaluation for each reporting year (July 1 to June 30). If the Discharger conducts an Annual Evaluation fewer than eight (8) months, or more than sixteen (16) months, after it conducts the previous Annual Evaluation, it shall document the justification for doing so. The Discharger shall revise the SWPPP, as appropriate, and implement the revisions within 90 days of the Annual Evaluation. At a minimum, Annual Evaluations shall consist of:

A. A review of all sampling, visual observation, and inspection records conducted during the previous reporting year;

B. An inspection of all areas of industrial activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the storm water conveyance system;

C. An inspection of all drainage areas previously identified as having no exposure to industrial activities and materials in accordance with the definitions in Section XVII;

D. An inspection of equipment needed to implement the BMPs;

E. An inspection of any BMPs;

F. A review and effectiveness assessment of all BMPs for each area of industrial activity and associated potential pollutant sources to determine if the BMPs are properly designed, implemented, and are effective in reducing and preventing pollutants in industrial storm water discharges and authorized NSWDs; and,

G. An assessment of any other factors needed to comply with the requirements in Section XVI.B.

XVI. ANNUAL REPORT

A. The Discharger shall certify and submit via SMARTS an Annual Report no later than July 15th following each reporting year using the standardized format and checklists in SMARTS.

B. The Discharger shall include in the Annual Report:

1. A Compliance Checklist that indicates whether a Discharger complies with, and has addressed all applicable requirements of this General Permit;

2. An explanation for any non-compliance of requirements within the reporting year, as indicated in the Compliance Checklist;

3. An identification, including page numbers and/or sections, of all revisions made to the SWPPP within the reporting year; and,

4. The date(s) of the Annual Evaluation.

XVII. CONDITIONAL EXCLUSION - NO EXPOSURE CERTIFICATION (NEC)

A. Discharges composed entirely of storm water that has not been exposed to industrial activity are not industrial storm water discharges. Dischargers are conditionally excluded from complying with the SWPPP and monitoring requirements of this General Permit if all of the following conditions are met:

1. There is no exposure of Industrial Materials and Activities to rain, snow, snowmelt, and/or runoff;

2. All unauthorized NSWDs have been eliminated and all authorized NSWDs meet the conditions of Section IV;

3. The Discharger has certified and submitted via SMARTS PRDs for NEC coverage pursuant to the instructions in Section II.B.2; and,

4. The Discharger has satisfied all other requirements of this Section.

B. NEC Specific Definitions

1. No Exposure - all Industrial Materials and Activities are protected by a Storm-Resistant Shelter to prevent all exposure to rain, snow, snowmelt, and/or runoff.

2. Industrial Materials and Activities - includes, but is not limited to, industrial material handling activities or equipment, machinery, raw materials, intermediate products, by-products, final products, and waste products.

3. Material Handling Activities - includes the storage, loading and unloading, transportation, or conveyance of any industrial raw material, intermediate product, final product, or waste product.

4. Sealed - banded or otherwise secured, and without operational taps or valves.

5. Storm-Resistant Shelters - includes completely roofed and walled buildings or structures. Also includes structures with only a top cover supported by permanent supports but with no side coverings, provided material within the structure is not subject to wind dispersion (sawdust, powders, etc.), or track-out, and there is no storm water discharged from within the structure that comes into contact with any materials.

C. NEC Qualifications

To qualify for an NEC, a Discharger shall:

1. Except as provided in subsection D below, provide a Storm-Resistant Shelter to protect Industrial Materials and Activities from exposure to rain, snow, snowmelt, run-on, and runoff;

2. Inspect and evaluate the facility annually to determine that storm water exposed to industrial materials or equipment has not and will not be discharged to waters of the United States. Evaluation records shall be maintained for five (5) years in accordance with Section XXI.J.4;

3. Register for NEC coverage by certifying that there are no discharges of storm water contaminated by exposure to Industrial Materials and Activities from areas of the facility subject to this General Permit, and certify that all unauthorized NSWDs have been eliminated and all authorized NSWDs meet the conditions of Section IV (Authorized NSWDs). NEC coverage and annual renewal requires payment of an annual fee in accordance with California Code of Regulations, title 23, section 2200 et seq.; and,

4. Submit PRDs for NEC coverage shall be prepared and submitted in accordance with the:

   a. Certification requirements in Section XXI.K; and,

   b. Submittal schedule in accordance with Section II.B.2.

D. NEC Industrial Materials and Activities - Storm-Resistant Shelter Not Required

To qualify for NEC coverage, a Storm-Resistant Shelter is not required for the following:

1. Drums, barrels, tanks, and similar containers that are tightly Sealed, provided those containers are not deteriorated, do not contain residual industrial materials on the outside surfaces, and do not leak;

2. Adequately maintained vehicles used in material handling;

3. Final products, other than products that would be mobilized in storm water discharge (e.g., rock salt);

4. Any Industrial Materials and Activities that are protected by a temporary shelter for a period of no more than ninety (90) days due to facility construction or remodeling; and,

5. Any Industrial Materials and Activities that are protected within a secondary containment structure that will not discharge storm water to waters of the United States.

E. NEC Limitations

1. NEC coverage is available on a facility-wide basis only, not for individual outfalls. If a facility has industrial storm water discharges from one or more drainage areas that require NOI coverage, Dischargers shall register for NOI coverage for the entire facility through SMARTS in accordance with Section II.B.2. Any drainage areas on that facility that would otherwise qualify for NEC coverage may be specially addressed in the facility SWPPP by including an NEC Checklist and a certification statement demonstrating that those drainage areas of the facility have been evaluated; and that none of the Industrial Materials or Activities listed in subsection C above are, or will be in the foreseeable future, exposed to precipitation.

2. If circumstances change and Industrial Materials and Activities become exposed to rain, snow, snowmelt, and/or runoff, the conditions for this exclusion shall no longer apply. In such cases, the Discharger may be subject to enforcement for discharging without a permit. A Discharger with NEC coverage that anticipates changes in circumstances should register for NOI coverage at least seven (7) days before anticipated exposure.

3. The Regional Water Board may deny NEC coverage and require NOI coverage upon determining that:

   a. Storm water is exposed to Industrial Materials and Activities; and/or

   b. The discharge has a reasonable potential to cause or contribute to an exceedance of an applicable water quality standards.

F. NEC Permit Registration Documents Required for Initial NEC Coverage

A Discharger shall submit via SMARTS the following PRDs for NEC coverage to document the applicability of the conditional exclusion:

1. The NEC form, which includes:

   a. The legal name, postal address, telephone number, and e-mail address of the Discharger;

   b. The facility business name and physical mailing address, the county name, and a description of the facility location if the facility does not have a physical mailing address; and,

   c. Certification by the Discharger that all PRDs submitted are correct and true and the conditions of no exposure have been met.

2. An NEC Checklist prepared by the Discharger demonstrating that the facility has been evaluated; and that none of the following industrial materials or activities are, or will be in the foreseeable future, exposed to precipitation:

a. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed;

b. Materials or residuals on the ground or in storm water inlets from spills/leaks;

c. Materials or products from past industrial activity;

d. Material handling equipment (except adequately maintained vehicles);

e. Materials or products during loading/unloading or transporting activities;

f. Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);

g. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;

h. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;

i. Waste material (except waste in covered, non-leaking containers, e.g., dumpsters);

j. Application or disposal of processed wastewater (unless already covered by an NPDES permit); and,

k. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.

3. Site Map (see Section X.E).

G. Requirements for Annual NEC Coverage Recertification

By October 1 of each reporting year beginning in 2015, any Discharger who has previously registered for NEC coverage shall either submit and certify an NEC demonstrating that the facility has been evaluated, and that none of the Industrial Materials or Activities listed above are, or will be in the foreseeable future, exposed to precipitation, or apply for NOI coverage.

H. NEC Certification Statement

All NEC certifications and re-certifications shall include the following certification statement:

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of 'no exposure' and obtaining an exclusion from NPDES storm water permitting; and that there are no discharges of storm water contaminated by exposure to industrial activities

or materials from the industrial facility identified in this document (except as allowed in subsection C above). I understand that I am obligated to submit a no exposure certification form annually to the State Water Board and, if requested, to the operator of the local Municipal Separate Storm Sewer System (MS4) into which this facility discharges (where applicable). I understand that I must allow the Water Board staff, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of storm water from the facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

XVIII. SPECIAL REQUIREMENTS - PLASTIC MATERIALS

A. Facilities covered under this General Permit that handle Plastic Materials are required to implement BMPs to eliminate discharges of plastic in storm water in addition to the other requirements of this General Permit that are applicable to all other Industrial Materials and Activities. Plastic Materials are virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other similar types of preproduction plastics with the potential to discharge or migrate off-site. Any Dischargers' facility handling Plastic Materials will be referred to as Plastics Facilities in this General Permit. Any Plastics Facility covered under this General Permit that manufactures, transports, stores, or consumes these materials shall submit information to the State Water Board in their PRDs, including the type and form of plastics, and which BMPs are implemented at the facility to prevent illicit discharges. Pursuant to Water Code section 13367, Plastics Facilities are subject to mandatory, minimum BMPs.

1. At a minimum, Plastics Facilities shall implement and include in the SWPPP:

   a. Containment systems at each on-site storm drain discharge location down gradient of areas containing plastic material. The containment system shall be designed to trap all particles retained by a 1mm mesh screen, with a treatment capacity of no less than the peak flow rate from a one-year, one-hour storm.

   b. When a containment system is infeasible, or poses the potential to cause an illicit discharge, the facility may propose a technically feasible

alternative BMP or suite of BMPs. The alternative BMPs shall be designed to achieve the same or better performance standard as a 1mm mesh screen with a treatment capacity of the peak flow rate from a one-year, one-hour storm. Alternative BMPs shall be submitted to the Regional Water Board for approval.

c. Plastics Facilities shall use durable sealed containers designed not to rupture under typical loading and unloading activities at all points of plastic transfer and storage.

d. Plastics Facilities shall use capture devices as a form of secondary containment during transfers, loading, or unloading Plastic Materials. Examples of capture devices for secondary containment include, but are not limited to catch pans, tarps, berms or any other device that collects errant material.

e. Plastics Facilities shall have a vacuum or vacuum-type system for quick cleanup of fugitive plastic material available for employees.

f. Pursuant to Water Code section 13367(e)(1), Plastics Facilities that handle Plastic Materials smaller than 1mm in size shall develop a containment system designed to trap the smallest plastic material handled at the facility with a treatment capacity of at least the peak flow rate from a one-year, one-hour storm, or develop a feasible alternative BMP or suite of BMPs that are designed to achieve a similar or better performance standard that shall be submitted to the Regional Water Board for approval.

2. Plastics Facilities are exempt from the Water Code requirement to install a containment system under section 13367 of the Water Code if they meet one of the following requirements that are determined to be equal to, or exceed the performance requirements of a containment system:

   a. The Discharger has certified and submitted via SMARTS a valid No Exposure Certification (NEC) in accordance with Section XVII; or

   b. Plastics Facilities are exempt from installing a containment system, if the following suite of eight (8) BMPs is implemented. This combination of BMPs is considered to reduce or prevent the discharge of plastics at a performance level equivalent to or better than the 1mm mesh and flow standard in Water Code section 13367(e)(1).

      i. Plastics Facilities shall annually train employees handling Plastic Materials. Training shall include environmental hazards of plastic discharges, employee responsibility for corrective actions to prevent errant Plastic Materials, and standard procedures for containing, cleaning, and disposing of errant Plastic Materials.

ii. Plastics Facilities shall immediately fix any Plastic Materials containers that are punctured or leaking and shall clean up any errant material in a timely manner.

iii. Plastics Facilities shall manage outdoor waste disposal of Plastic Materials in a manner that prevents the materials from leaking from waste disposal containers or during waste hauling.

iv. Plastics Facilities that operate outdoor conveyance systems for Plastic Materials shall maintain the system in good operating condition. The system shall be sealed or filtered in such a way as to prevent the escape of materials when in operation. When not in operation, all connection points shall be sealed, capped, or filtered so as to not allow material to escape. Employees operating the conveyance system shall be trained how to operate in a manner that prevents the loss of materials such as secondary containment, immediate spill response, and checks to ensure the system is empty during connection changes.

v. Plastics Facilities that maintain outdoor storage of Plastic Materials shall do so in a durable, permanent structure that prevents exposure to weather that could cause the material to migrate or discharge in storm water.

vi. Plastics Facilities shall maintain a schedule for regular housekeeping and routine inspection for errant Plastic Materials. The Plastics Facility shall ensure that their employees follow the schedule.

vii. PRDs shall include the housekeeping and routine inspection schedule, spill response and prevention procedures, and employee training materials regarding plastic material handling.

viii. Plastics Facilities shall correct any deficiencies in the employment of the above BMPs that result in errant Plastic Materials that may discharge or migrate off-site in a timely manner. Any Plastic Materials that are discharged or that migrate off-site constitute an illicit discharge in violation of this General Permit.

XIX. REGIONAL WATER BOARD AUTHORITIES

A. The Regional Water Boards may review a Discharger's PRDs for NOI or NEC coverage and administratively reject General Permit coverage if the PRDs are deemed incomplete. The Regional Water Boards may take actions that include rescinding General Permit coverage, requiring a Discharger to revise and re-submit their PRDs (certified and submitted by the Discharger) within a specified time period, requiring the Discharger to apply for different General Permit coverage or a different individual or general permit, or taking no action.

B. The Regional Water Boards have the authority to enforce the provisions and requirements of this General Permit. This includes, but is not limited to,

reviewing SWPPPs, Monitoring Implementation Plans, ERA Reports, and Annual Reports, conducting compliance inspections, and taking enforcement actions.

C. As appropriate, the Regional Water Boards may issue NPDES storm water general or individual permits to a Discharger, categories of Dischargers, or Dischargers within a watershed or geographic area. Upon issuance of such NPDES permits, this General Permit shall no longer regulate the affected Discharger(s).

D. The Regional Water Boards may require a Discharger to revise its SWPPP, ERA Reports, or monitoring programs to achieve compliance with this General Permit. In this case, the Discharger shall implement these revisions in accordance with a schedule provided by the Regional Water Board.

E. The Regional Water Boards may approve requests from a Discharger to include co-located, but discontiguous, industrial activities within the same facility under a single NOI or NEC coverage.

F. Consistent with 40 Code of Federal Regulations section 122.26(a)(9)(i)(D), the Regional Water Boards may require any discharge that is not regulated by this General Permit, that is determined to contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States, to be covered under this General Permit as appropriate. Upon designation, the Discharger responsible for the discharge shall obtain coverage under this General Permit.

G. The Regional Water Boards may review a Discharger's Inactive Mining Operation Certification and reject it at any time if the Regional Water Board determines that access to the facility for monitoring purposes is practicable or that the facility is not in compliance with the applicable requirements of this General Permit.

H. All Regional Water Board actions that modify a Discharger's obligations under this General Permit must be in writing and should also be submitted in SMARTS.

XX. SPECIAL CONDITIONS

A. Reopener Clause

This General Permit may be reopened and amended to incorporate TMDL-related provisions. This General Permit may also be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, water quality control plans or water quality control policies, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations sections 122.62, 122.63, 122.64, and 124.5.

B. Water Quality Based Corrective Actions

1. Upon determination by the Discharger or written notification by the Regional Water Board that industrial storm water discharges and/or authorized NSWDs contain pollutants that are in violation of Receiving Water Limitations (Section VI), the Discharger shall:

    a. Conduct a facility evaluation to identify pollutant source(s) within the facility that are associated with industrial activity and whether the BMPs described in the SWPPP have been properly implemented;

    b. Assess the facility's SWPPP and its implementation to determine whether additional BMPs or SWPPP implementation measures are necessary to reduce or prevent pollutants in industrial storm water discharges to meet the Receiving Water Limitations (Section VI); and,

    c. Certify and submit via SMARTS documentation based upon the above facility evaluation and assessment that:

        i. Additional BMPs and/or SWPPP implementation measures have been identified and included in the SWPPP to meet the Receiving Water Limitations (Section VI); or

        ii. No additional BMPs or SWPPP implementation measures are required to reduce or prevent pollutants in industrial storm water discharges to meet the Receiving Water Limitations (Section VI).

2. The Regional Water Board may reject the Dischargers water quality based corrective actions and/or request additional supporting documentation.

C. Requirements for Dischargers Claiming "No Discharge" through the Notice of Non-Applicability (NONA)

1. For the purpose of the NONA, the Entity (Entities) is referring to the person(s) defined in section 13399.30 of the Water Code.

2. Entities who are claiming "No Discharge" through the NONA shall meet the following eligibility requirements:

    a. The facility is engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website (or other nearby precipitation data available from other government agencies) so that there will be no discharge of industrial storm water to waters of the United States; or,

    b. The facility is located in basins or other physical locations that are not hydrologically connected to waters of the United States.

3. When claiming the "No Discharge" option, Entities shall submit and certify via SMARTS both the NONA and a No Discharge Technical Report. The No

Discharge Technical Report shall demonstrate the facility meets the eligibility requirements described above.

4. The No Discharge Technical Report shall be signed (wet signature and license number) by a California licensed professional engineer.

XXI. STANDARD CONDITIONS

A. Duty to Comply

Dischargers shall comply with all standard conditions in this General Permit. Permit noncompliance constitutes a violation of the Clean Water Act and the Water Code and is grounds for enforcement action and/or removal from General Permit coverage.

Dischargers shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions.

B. Duty to Reapply

Dischargers that wish to continue an activity regulated under this General Permit after the expiration date of this General Permit shall apply for and obtain authorization from the Water Boards as required by the new general permit once it is issued.

C. General Permit Actions

1. This General Permit may be modified, revoked and reissued, or terminated for cause. Submittal of a request by the Discharger for General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.

2. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge, and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.

D. Need to Halt or Reduce Activity Not a Defense

In an enforcement action, it shall not be a defense for a Discharger that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

E. Duty to Mitigate

Dischargers shall take all responsible steps to reduce or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

F. Proper Operation and Maintenance

Dischargers shall at all times properly operate and maintain any facilities and systems of treatment and control (and related equipment and apparatuses) which are installed or used by the Discharger to achieve compliance with the conditions of this General Permit. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a Discharger when necessary to achieve compliance with the conditions of this General Permit.

G. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges. It also does not authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of federal, state, or local laws and regulations.

H. Duty to Provide Information

Upon request by the relevant agency, Dischargers shall provide information to determine compliance with this General Permit to the Water Boards, U.S. EPA, or local Municipal Separate Storm Sewer System (MS4) within a reasonable time. Dischargers shall also furnish, upon request by the relevant agency, copies of records that are required to be kept by this General Permit.

I. Inspection and Entry

Dischargers shall allow the Water Boards, U.S. EPA, and local MS4 (including any authorized contractor acting as their representative), to:

1. Enter upon the premises at reasonable times where a regulated industrial activity is being conducted or where records are kept under the conditions of this General Permit;

2. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;

3. Inspect the facility at reasonable times; and,

4. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

J. Monitoring and Records

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. If Dischargers monitor any pollutant more frequently than required, the results of such monitoring shall be included in the calculation and reporting of the data submitted.

3. Records of monitoring information shall include:

   a. The date, exact location, and time of sampling or measurement;

   b. The date(s) analyses were performed;

   c. The individual(s) that performed the analyses;

   d. The analytical techniques or methods used; and,

   e. The results of such analyses.

4. Dischargers shall retain, for a period of at least five (5) years, either a paper or electronic copy of all storm water monitoring information, records, data, and reports required by this General Permit. Copies shall be available for review by the Water Board's staff at the facility during scheduled facility operating hours.

5. Upon written request by U.S. EPA or the local MS4, Dischargers shall provide paper or electronic copies of Annual Reports or other requested records to the Water Boards, U.S. EPA, or local MS4 within ten (10) days from receipt of the request.

K. Electronic Signature and Certification Requirements

1. All Permit Registration Documents (PRDs) for NOI and NEC coverage shall be certified and submitted via SMARTS by the Discharger's Legally Responsible Person (LRP). All other documents may be certified and submitted via SMARTS by the LRP or by their designated Duly Authorized Representative.

2. When a new LRP or Duly Authorized Representative is designated, the Discharger shall ensure that the appropriate revisions are made via SMARTS. In unexpected or emergency situations, it may be necessary for the Discharger to directly contact the State Water Board's Storm Water Section to register for SMARTS account access in order to designate a new LRP.

3. Documents certified and submitted via SMARTS by an unauthorized or ineligible LRP or Duly Authorized Representative are invalid.

4. LRP eligibility is as follows:

    a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        i. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function; or

        ii. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

    b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;

    c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. This includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).

5. Duly Authorized Representative eligibility is as follows:

    a. The Discharger must authorize via SMARTS any person designated as a Duly Authorized Representative;

    b. The authorization shall specify that a person designated as a Duly Authorized Representative has responsibility for the overall operation of the regulated facility or activity, such as a person that is a manager, operator, superintendent, or another position of equivalent responsibility, or is an individual who has overall responsibility for environmental matters for the company; and,

    c. The authorization must be current (it has been updated to reflect a different individual or position) prior to any report submittals, certifications, or records certified by the Duly Authorized Representative.

L. Certification

Any person signing, certifying, and submitting documents under Section XXI.K above shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons that manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

M. Anticipated Noncompliance

Dischargers shall give advance notice to the Regional Water Board and local MS4 of any planned changes in the industrial activity that may result in noncompliance with this General Permit.

N. Penalties for Falsification of Reports

Clean Water Act section 309(c)(4) provides that any person that knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

O. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the initiation of any legal action or relieve the Discharger from any responsibilities, liabilities, or penalties to which the Discharger is or may be subject to under section 311 of the Clean Water Act.

P. Severability

The provisions of this General Permit are severable; if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

Q. Penalties for Violations of Permit Conditions

1. Clean Water Act section 309 provides significant penalties for any person that violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act or any permit condition or limitation implementing any such section in a permit issued under section 402. Any

person that violates any permit condition of this General Permit is subject to a civil penalty not to exceed $37,500[22] per calendar day of such violation, as well as any other appropriate sanction provided by section 309 of the Clean Water Act.

2. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which may be greater than penalties under the Clean Water Act.

R. Transfers

Coverage under this General Permit is non-transferrable. When operation of the facility has been transferred to another entity, or a facility is relocated, new PRDs for NOI and NEC coverage must be certified and submitted via SMARTS prior to the transfer, or at least seven (7) days prior to the first day of operations for a relocated facility.

S. Continuation of Expired General Permit

If this General Permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 Code of Federal Regulations 122.6 and remain in full force and effect.

[22] May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FACT SHEET FOR
STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
NPDES NO. CAS000001

*The factsheet to the IGP was updated in January 2015 to correct typographical errors. The deadline listed in Section I.D.13 (page 8) and Section II.G.1 (page 27) of the factsheet for dischargers with outfalls to ocean waters to develop and implement a monitoring program in compliance with the California Ocean Plan model monitoring provisions was corrected to July 1, 2015, which is the deadline listed in finding 44 in the general order.

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I. BACKGROUND

A. Purpose

The purpose of this Fact Sheet is to explain the legal requirements and technical rationale that serve as the basis for the requirements of this Order 2014-0057-DWQ (General Permit), adopted by the State Water Resources Control Board (State Water Board) on April 1, 2014. This General Permit regulates operators of facilities subject to storm water permitting (Dischargers), that discharge storm water associated with industrial activity (industrial storm water discharges). This General Permit replaces Water Quality Order 97-03-DWQ**.** This Fact Sheet does not contain any independently-enforceable requirements; the General Permit contains all of the actual requirements applicable to Dischargers. In case of any conflict between the Fact Sheet and the General Permit, the terms of the General Permit govern.

B. History

The Federal Clean Water Act (CWA)[1] prohibits discharges from point sources to waters of the United States, unless the discharges are in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. (CWA § 301(a).) In 1987, the CWA was amended to establish a framework for regulating municipal storm water discharges and discharges of storm water associated with industrial activity (industrial storm water discharges) under the NPDES program. (CWA § 402(p).) In 1990, the United States Environmental Protection Agency (U.S. EPA) promulgated regulations, commonly known as Phase I, establishing application requirements for storm water permits for specified categories of industries. (40 C.F.R. § 122.26.) In 1992, U.S. EPA revised the monitoring requirements for industrial storm water discharges. (40 C.F.R. § 122.44(i)(2), (4), (5).) In 1999, U.S. EPA adopted additional storm water regulations, known as Phase II. (64 Fed. Reg. 68722.) The Phase II regulations provide for, among other things, a conditional exclusion from NPDES permitting requirements for industrial activities that have no exposure to storm water.

Industrial storm water discharges are regulated pursuant to CWA section 402(p)(3)(A). This provision requires NPDES permits for industrial storm water discharges to implement CWA section 301, which includes requirements for Dischargers to comply with technology-based effluent limitations, and any more stringent water quality-based limitations necessary to meet water quality standards. Technology-based effluent limitations applicable to industrial activities are based on best conventional pollutant control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. (CWA § 301(b)(1)(A) and (2)(A).) To ensure compliance with water quality standards, NPDES permits may also require a Discharger to implement best management practices (BMPs). 40 Code of Federal Regulations section 122.44(k)(4) requires the use of BMPs to control or abate the discharge of pollutants when numeric effluent limitations (NELs) are infeasible. The State Water Board has concluded that it is infeasible to establish

[1] Federal Water Pollution Control Act of 1970 (also referred to as the Clean Water Act or CWA), 33 U.S.C. § 1201 et seq. All further statutory references herein are to the CWA unless otherwise indicated.

NELs for storm water discharges associated with industrial activity due to insufficient information at the time of adoption of this General Permit.

On April 17, 1997, the State Water Board issued NPDES General Permit for Industrial Storm Water Discharges, Excluding Construction Activities, Water Quality Order 97-03-DWQ (previous permit). This General Permit, Order 2014-0057-DWQ rescinds the previous permit and serves as the statewide general permit for industrial storm water discharges. The State Water Board concludes that significant revisions to the previous permit requirements are necessary for implementation, consistency and objective enforcement. As discussed in this Fact Sheet, this General Permit requires Dischargers to:

- Eliminate unauthorized non-storm water discharges (NSWDs);
- Develop and implement storm water pollution prevention plans (SWPPPs) that include best management practices (BMPs);
- Implement minimum BMPs, and advanced BMPs as necessary, to achieve compliance with the effluent and receiving water limitations of this General Permit;
- Conduct monitoring, including visual observations and analytical storm water monitoring for indicator parameters;
- Compare monitoring results for monitored parameters to applicable numeric action levels (NALs) derived from the U.S. EPA 2008 Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (2008 MSGP) and other industrial storm water discharge monitoring data collected in California;
- Perform the appropriate Exceedance Response Actions (ERAs) when there are exceedances of the NALs; and,
- Certify and submit all permit-related compliance documents via the Storm Water Multiple Application and Report Tracking System (SMARTS). Dischargers shall certify and submit these documents which include, but are not limited to, Permit Registration Documents (PRDs) including Notices of Intent (NOIs), No Exposure Certifications (NECs), and Storm Water Pollution Prevention Plans (SWPPPs), as well as Annual Reports, Notices of Termination (NOTs), Level 1 ERA Reports, and Level 2 ERA Technical Reports.

C. Blue Ribbon Panel of Experts (Panel)

In 2005 and 2006, the State Water Board convened a Blue Ribbon Panel of Experts (Panel) to address the feasibility of NELs in California's storm water permits. Specifically, the Panel was charged with answering the following questions:

> Is it technically feasible to establish numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits?

How would such limitations or criteria be established, and what information and data would be required? [2]

The Panel was directed to answer these questions for industrial storm water discharge general permits, construction storm water discharge general permits, and area-wide municipal storm water discharge permits. The Panel was also directed to address both technology-based and water quality based limitations and criteria.

In evaluating the establishment of numeric limitations and criteria, the Panel was directed to consider all of the following:

- The ability of the State Water Board to establish appropriate objective limitations or criteria;
- How compliance is to be determined;
- The ability of Dischargers and inspectors to monitor for compliance; and
- The technical and financial ability of Dischargers to comply with the limitations or criteria.

Following an opportunity for public comment, the Panel identified several water quality concerns, public process and program effectiveness issues. A summary of the Panel's recommendations regarding industrial storm water discharges follows:[3]

- Current data are inadequate; accordingly, the State Water Board should improve monitoring requirements to collect useful data for establishing NALs and NELs.
- Required parameters for further monitoring should be consistent with the type of industrial activity (i.e., monitor for heavy metals when there is a reasonable expectation that the industrial activity will contribute to increased heavy metals concentrations in storm water).
- Insofar as possible, the use of California data (or national data applicable to California) is preferred when setting NELs and NALs.
- Industrial facilities that do not discharge to Municipal Separate Storm Sewer Systems (MS4s) should implement BMPs for their non-industrial exposure (e.g., parking lots, roof runoff) similar to BMPs implemented by commercial facilities in MS4 jurisdictions.

[2] State Water Board Storm Water Panel of Experts, The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 19, 2006). <http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf>. [as of February 4, 2014].

[3] See footnote 2.

- In all cases, Dischargers should implement a suite of minimum BMPs, including, but not limited to, good housekeeping practices, employee training, and preventing exposure of materials to rain.

- Standard Industrial Classification (SIC) code categories are not a satisfactory way of identifying industrial activities at any given site. The State Water Board should develop an improved method of characterizing industrial activities that will improve water quality in storm water.

- Recognizing that implementing the Panel's suggested changes is a large task, the State Water Board should set priorities for implementation of the Panel's suggested approach in order to achieve the greatest reduction of pollutants statewide.

- Recognizing that an increasing number of industries have moved industrial activities indoors to prevent storm water pollution, such facilities should be granted regulatory relief from NALs and/or NELs , but should still be required to comply with any applicable MS4 permit requirements.

- Recognizing the need for improved monitoring and reduction of pollutants in industrial storm water discharges, the State Water Board should consider the total economic impact of its requirements to not economically penalize California industries when compared to industries outside of California.

With regard to the industrial activities component of its charge, the Panel limited its focus to the question of whether sampling data can be used to derive technology-based NELs. The Panel did not address other factors or approaches that may relate to the task of determining technology- and water quality-based NELs consistent with the regulations and law. Examples of these other factors are discussed in more detail in this Fact Sheet. Additionally, in its final report the Panel did not clearly differentiate between the role of numeric and non-numeric effluent limitations, nor did it consider U.S. EPA procedures used to promulgate effluent limitation guidelines (ELGs) in 40 Code of Federal Regulations, Chapter I, Subchapter N (Subchapter N).

D. Summary of Significant Changes in this General Permit

The previous permit issued by the State Water Board on April 17, 1997, had been administratively extended since 2002 until the adoption of this General Permit. Significant revisions to the previous permit were necessary to update permit requirements consistent with recent regulatory changes pertaining to industrial storm water under the CWA. This General Permit differs from the previous permit in the following areas:

1. Minimum Best Management Practices (BMPs)

   This General Permit requires Dischargers to implement a set of minimum BMPs. Implementation of the minimum BMPs, in combination with any advanced BMPs (BMPs, collectively,) necessary to reduce or prevent pollutants in industrial storm water discharges, serve as the basis for compliance with this General Permit's

technology-based effluent limitations and water quality based receiving water limitations. Although there is great variation in industrial activities and pollutant sources between industrial sectors and, in some cases between operations within the same industrial sector, the minimum BMPs specified in this General Permit represent common practices that can be implemented by most facilities.

The previous permit did not require a minimum set of BMPs but rather allowed Dischargers to consider which non-structural BMPs should be implemented and which structural BMPs should be considered for implementation when non-structural BMPs are ineffective.

This General Permit requires Dischargers to implement minimum BMPs (which are mostly non-structural BMPs), and advanced BMPs (which are mostly structural BMPs) when implementation of the minimum BMPs do not meet the requirements of the General Permit. Advanced BMPs consists of treatment control BMPs, exposure reduction BMPs, and storm water containment and discharge reduction BMPs. BMPs that exceed the performance expectation of minimum BMPs are considered advanced BMPs. Dischargers are encouraged to utilize advanced BMPs that infiltrate or reuse storm water where feasible.

The minimum and advanced BMPs required in this General Permit are consistent with U.S. EPA's 2008 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (2008 MSGP), guidance developed by the California Stormwater Quality Association, and recommendations by Regional Water Quality Control Board (Regional Water Board) inspectors. Dischargers are required to evaluate BMPs being implemented and determine an appropriate interval for the implementation and inspection of these BMPs.

2. Conditional Exclusion - No Exposure Certification (NEC)

   This General Permit applies U.S. EPA Phase II regulations regarding a conditional exclusion for facilities that have no exposure of industrial activities and materials to storm water. (40 C.F.R. § 122.26(g).) (The previous permit required light industries to obtain coverage only if their activities were exposed to storm water.) This General Permit implements current U.S. EPA rules allowing any type of industry to claim a conditional exclusion. The NEC requires enrollment for coverage prior to conditionally excluding a Discharger from a majority of this General Permit's requirements.

3. Electronic Reporting Requirements

   This General Permit requires Dischargers to submit and certify all reports electronically via SMARTS. The previous permit used a paper reporting process with electronic reporting as an option.

4. Training Expectations and Roles

   This General Permit requires that Dischargers arrange to have appropriately trained personnel implementing this General Permit's requirements at each facility. In

addition, if a Discharger's facility enters Level 1 status, the Level 1 ERA Report must be prepared by a Qualified Industrial Storm Water Practitioner (QISP). All Action Plans and Technical Reports required in Level 2 status must also be prepared by a QISP.

Dischargers may appoint a staff person to complete the QISP training or may contract with an outside QISP. QISP training is tailored to persons with a high degree of technical knowledge and environmental experience. Although QISPs do not need to be California licensed professional engineers, it may be necessary to involve a California licensed professional engineer to perform certain aspects of the Technical Reports.

5. Numeric Action Levels (NALs) and NAL Exceedances

This General Permit contains two types of NAL exceedances. An annual NAL exceedance occurs when the average of all sampling results within a reporting year for a single parameter (except pH) exceeds the applicable annual NAL. The annual NALs are derived from, and function similarly to, the benchmark values provided in the 2008 MSGP. Instantaneous maximum NALs target hot spots or episodic discharges of pollutants. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the applicable instantaneous maximum NAL value. Instantaneous maximum NALs for Total Suspended Solids (TSS) and Oil and Grease (O&G) are based on previously gathered California industrial storm water discharge monitoring data. The instantaneous maximum NAL for pH is derived from the benchmark value provided in the 2008 MSGP.

6. Exceedance Response Actions (ERA)

This General Permit requires Dischargers to develop and implement ERAs, when an annual NAL or instantaneous maximum NAL exceedance occurs during a reporting year. The first time an annual NAL or instantaneous maximum NAL exceedance occurs for any one parameter, a Discharger's status is changed from Baseline to Level 1 status, and the Discharger is required to evaluate and revise, as necessary, its BMPs (with the assistance of a QISP) and submit a report prepared by a QISP. The second time an annual NAL or instantaneous maximum NAL exceedance occurs for the same parameter in a subsequent reporting year, the Discharger's status is changed from Level 1 to Level 2 status, and Dischargers are required to submit a Level 2 ERA Action Plan and a Level 2 ERA Technical Report. Unless the demonstration is not accepted by the State Water Board or a Regional Water Board, the Discharger is not required to perform additional ERA requirements for the parameter(s) involved if the Discharger demonstrates that:

a. Additional BMPs required to eliminate NAL exceedances are not technologically available or economically practicable and achievable; or,

b. NAL exceedances are solely caused by non-industrial pollutant sources; or,

c. NAL exceedances are solely attributable to pollutants from natural background sources.

Information supporting the above demonstrations must be included in QISP-prepared Level 2 ERA Technical Reports.

7. CWA section 303(d) Impairment

This General Permit requires a Discharger to monitor additional parameters if the discharge(s) from its facility contributes pollutants to receiving waters that are listed as impaired for those pollutants (CWA section 303(d) listings). This General Permit lists the receiving waters that are 303(d) listed as impaired for pollutants that are likely to be associated with industrial storm water in Appendix 3. For example, if a Discharger discharges to a water body that is listed as impaired for copper, and the discharge(s) from its facility has the potential sources of copper, the Discharger must add copper to the list of parameters to monitor in its storm water discharge.

8. Design Storm Standards for Treatment Control BMPs

This General Permit includes design storm standards for Dischargers implementing treatment control BMPs. The design storm standards include both volume- and flow-based criteria. Dischargers are not required to retrofit existing treatment control BMPs unless required to meet the technology-based effluent limitations and receiving water limitations in this General Permit.

9. Qualifying Storm Event (QSE)

This General Permit defines a QSE as a precipitation event that:

a. Produces a discharge for at least one drainage area; and,

b. Is preceded by 48 hours with no discharge from any drainage area.

The definition above differs from the definition in the previous permit, resulting in an increase number of QSEs eligible for sample collection. Therefore, most Dischargers will be able to collect the required number of samples, regardless of their facility location.

10. Sampling Protocols

This General Permit requires Dischargers to collect samples during scheduled facility operating hours from each drainage location within four hours of: (1) the start of the discharge from a QSE occurring during scheduled facility operating hours, or (2) the start of scheduled facility operating hours if the QSE occurred in the previous twelve (12) hours. The benefits of this sampling protocol: (a) allows a more reasonable amount of time to collect samples, (b) increases the likelihood for samples collected at discharge locations to be representative of the drainage area discharge characteristics, (c) increases the number of QSEs eligible for sample collection, and, (d) reduces the likelihood of Dischargers collecting samples with short-term concentration spikes.

The previous permit required that Dischargers collect grab samples during the first hour of discharge that commenced during scheduled facility operating hours. These sample collection requirements were widely considered to be too rigid and out of step with other states' sample collection requirements. Since many storm events begin in the evening or early morning hours, numerous opportunities to collect samples were lost because Dischargers could not obtain samples during the first hour of discharge. Dischargers with facilities that have multiple discharge locations had difficulties collecting samples within such a short timeframe therefore affecting data quality.

11. Sampling Frequency

This General Permit increases the sampling frequency by requiring the Discharger to collect and analyze storm water samples from each discharge location for two (2) QSEs within the first half of each reporting year (July 1 to December 31), and two (2) QSEs within the second half of each reporting year (January 1 to June 30). The increased sampling, compared to the previous permit's two samples during the wet season, is consistent with the 2008 MSGP and other states' permit requirements and will improve compliance determination with this General Permit. The State Water Board expects that the elimination of the wet season sampling requirements will increase the number of possible QSEs eligible for monitoring.

12. Compliance Groups

To allow industrial facilities to efficiently share knowledge, skills and resources towards achieving General Permit compliance, this General Permit allows the formation of Compliance Groups and Compliance Group Leaders. Dischargers participating in a Compliance Group (Compliance Group Participants) are collectively required to sample twice a year. Compliance Group Leaders are required to be approved through the State Water Board-approved training program process, inspect each facility once within each reporting year, and prepare Level 1 and Level 2 ERA reports as necessary. The Compliance Group option is described in more detail in General Permit section XIV and in this Fact Sheet in the Section titled "Compliance Groups."

13. Discharges to Ocean Waters

This General Permit requires Dischargers with ocean-discharging outfalls subject to model monitoring provisions of the California Ocean Plan to develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan model monitoring provisions by July 1, 2015 or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.

II. TECHNICAL RATIONALE FOR REQUIREMENTS IN THIS GENERAL PERMIT

A. Receiving General Permit Coverage

1. This General Permit provides regulatory coverage for new and existing industrial storm water discharges and authorized NSWDs from:

   a. Facilities required by federal regulations to obtain an NPDES permit;

   b. Facilities designated by the Regional Water Boards to obtain an NPDES permit; and,

   c. Facilities directed by the Regional Water Boards to obtain coverage specifically under this General Permit. The Regional Water Board typically directs a Discharger to change General Permit coverage under two circumstances:

      (1) switch from an individual NPDES permit to this General Permit, or

      (2) switch from the NPDES General Permit for Storm Water Discharges Associated with Construction And Land Disturbance Activities, (Order 2009-0009-DWQ, NPDES No CAS000002 (to this General Permit for long-term construction related activities that are similar to industrial activities (e.g. concrete batch plants).

40 Code of Federal Regulations section 122.26(b)(14) defines "storm water discharge associated with industrial activity" and describes the types of facilities subject to permitting (primarily by Standard Industrial Classification (SIC) code). This General Permit provides regulatory coverage for all facilities with industrial activities described in Attachment A where the covered industrial activity is the Discharger's primary industrial activity. In some instances, a Discharger may have more than one primary industrial activity occurring at a facility.

The 1987 SIC manual uses the term "establishment" to determine the primary economic activity of a facility. The manual instructs that where distinct and separate economic activities are performed at a single location, each activity should be treated as a separate establishment (and, therefore, separate primary activity). For example, the United States Navy (primary SIC code 9711) may conduct industrial activities subject to permitting under this General Permit, such as landfill operations (SIC code 4953), ship and boat building and repair (SIC code 3731, and flying field operations (SIC code 4581).

The SIC manual also discusses "auxiliary" functions of establishments. Auxiliary functions provide management or support services to the establishment. Examples of auxiliary functions are warehouses and storage facilities for the establishment's own materials, maintenance and repair shops of the establishment's own machinery, automotive repair shops or storage garages of the establishment's own vehicles, administrative offices, research, development, field engineering support, and testing conducted for the establishment. When auxiliary functions are performed at physically separate facilities from the establishment they serve, they generally are not subject to General Permit coverage. If

auxiliary functions are performed at the same physical location as the establishment, then they are subject to General Permit coverage if they are associated with industrial activities.

This clarification does not change the scope of which facilities are subject to permitting relative to the 1997 IGP. The 1997 IGP Fact Sheet had used the term "auxiliary" to describe a facility's separate primary activities, which has caused confusion.

In 1997, the North American Industrial Classification System (NAICS) was published, replacing the SIC code system. The U.S. EPA has indicated that it intends to incorporate the NAICS codes into the federal storm water regulations but has not done so yet. The State Water Board recognizes that many Dischargers in newer industries were not included in the 1987 SIC code manual and may have difficulty determining their SIC code information. To address this transition, SMARTS has been modified to accept both SIC codes and NAICS codes, and NAICS codes are automatically translated into SIC codes. There may be instances of conflict between SIC and NAICS codes. The use of NAICS codes shall not expand or reduce the types of industries subject to this General Permit as compared to the SIC codes listed in the General Permit. State Water Board staff will work closely with the applicant to resolve these conflicts in SMARTS as they are identified. Dischargers should be aware that the use of an NAICS code which results in failure to submit any of the required PRDs under this General Permit remains a violation of the terms of this General Permit.

The facilities included in category one of Attachment A (facilities subject to Subchapter N) are subject to storm water ELGs that are incorporated into the requirements of this General Permit. Dischargers whose facilities are included in this category must examine the appropriate federal ELGs to determine the applicability of those guidelines. This General Permit contains additional requirements (Section XI.D) that apply only to facilities with storm water ELGs.

2. Types of Discharges Not Covered by this General Permit

   a. Discharges from construction and land disturbance activities that are subject to the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit).

   b. Discharges covered by an individual or general storm water NPDES permit. Some industrial storm water discharges may be regulated by other individual or general NPDES permits issued by the State Water Board or the Regional Water Boards (Water Boards, collectively,). This General Permit shall not regulate these discharges. When the individual or general NPDES permits for such discharges expire, the Water Boards may authorize coverage under this General Permit or another general NPDES permit, or may issue a new individual NPDES permit consistent with the federal and state storm water regulations. Interested parties may request that the State Water Board or appropriate Regional Water Board issue individual or general NPDES permits for specific discharges that, in their view are not properly regulated through this General Permit. General permits may be issued for a particular industrial group or watershed area which

would supersede this General Permit. To date, two Regional Water Board have issued such permits:

i. The Lahontan Regional Water Board has adopted an NPDES permit and general Waste Discharge Requirements to regulate discharges from marinas and maintenance dredging (Regional Water Board Order R6T-2005-0015 - NPDES Permit No. CAG616003) in the Lake Tahoe Hydrologic Unit.

ii. The Santa Ana Regional Water Board adopted the Sector Specific General Permit for Stormwater Runoff Associated with Industrial Activities from Scrap Metal Recycling Facilities within the Santa Ana Region, Order R8-2012-0012, NPDES Permit No. CAG 618001 (Scrap Metal Recycling Permit). The Scrap Metal Recycling Permit is applicable to facilities within the Santa Ana Region that are listed under Standard Industrial Classification (SIC) Code 5093 and engaged in the following types of activities: (1) automotive wrecking for scrap-wholesale (this category does not include facilities engaged in automobile dismantling for the primary purpose of selling second hard parts); (2) iron and steel scrap - wholesale; (3) junk and scrap metal - wholesale; (4) metal waste and scrap - wholesale; and (5) non-ferrous metals scrap - wholesale. Other types of facilities listed under SIC Code 5093 and engaged in waste recycling are not required to get coverage under the Scrap Metal Recycling Permit. A list of covered facilities as of February 8, 2011 was included in Attachment A of the Scrap Metal Recycling Permit.

c. Discharges that the Regional Water Boards determine to be ineligible for coverage under this General Permit. In such cases, a Regional Water Board will require the discharges be covered by another individual or general NPDES permit. The applicability of this General Permit to such discharges is terminated when the discharge is subject to another individual or general NPDES permit.

d. Discharges that do not enter waters of the United States. These include:

i. Discharges to municipal separate sanitary sewer systems;

ii. Discharges to evaporation ponds, discharges to percolation ponds, and/or any other methods used to retain and prevent industrial storm water discharges from entering waters of the United States;

iii. Discharges to combined sewer systems. In California, the only major combined sewer systems are located in San Francisco and downtown Sacramento. Dischargers who believe they discharge into a combined sewer system should contact the local Regional Water Board to verify discharge location; and,

iv. Dischargers Claiming the “No Discharge” Option in the Notice of Non-Applicability (NONA) (Fact Sheet Section II.S).

e. Discharges from mining operations or oil and gas facilities composed entirely of flows that are from conveyances or systems of conveyances used for collecting and conveying precipitation runoff and do not come into contact with any overburden, raw materials, intermediate products, finished products, by-products, or waste products located at the facility. (33 U.S.C. § 1342(l)(2).)

f. Discharges from facilities on Tribal Lands regulated by U.S. EPA.

3. Obtaining General Permit Coverage (Section II of this General Permit)

   The State Water Board has developed the SMARTS online database system to handle registration and reporting under this General Permit. More information regarding SMARTS and access to the database is available online at https://smarts.waterboards.ca.gov. The State Water Board has determined that all documents related to general storm water enrollment and compliance must be certified and submitted via SMARTS by Dischargers.

   This General Permit requires all Dischargers to electronically certify and submit PRDs via SMARTS to obtain: (1) regulatory coverage, or (2) to certify that there are no industrial activities exposed to storm water at the facility and obtain regulatory coverage under the NEC provision of this General Permit. Facilities that were eligible to self-certify no exposure under the previous permit (see category 10 in Attachment 1 of the previous permit) are required to certify and submit via SMARTS PRDs for NOI coverage under this General Permit by July 1, 2015 or for NEC coverage by October 1, 2015. The Water Board is estimating that 10,000 – 30,000 Dischargers may be registering for NOI or NEC coverage under this General Permit. Separate registration deadlines, one for NOI coverage and one for NEC coverage, provides Dischargers better assistance from Storm Water Helpdesk and staff.

   Dischargers shall electronically certify and submit the PRDs via SMARTS for each individual facility. This requirement is intended to establish a clear accounting of the name, address, and contact information for each Discharger, as well as a description of each Discharger's facility.

   The Water Boards recognize that certain information pertaining to an industrial facility may be confidential. Many Stakeholders were asking for clarification on the process the Water Boards would use to manage confidential information or the process Dischargers could use to redact such information. Dischargers may redact trade secrets information from required submittals (Section II.B.3.d). Dischargers are required to include a general description of the redacted information and the basis for the redaction. Dischargers are still required to submit complete and un-redacted versions of the information to the Water Boards within 30 days, however these versions should be clearly labeled "CONFIDENTIAL" so that the confidentiality of these documents is clear to Regional Water Board staff, even when there is a change in staff. This General Permit requires that all information provided to the Water Boards by the Discharger comply with the Homeland Security Act and other federal law that addresses security in the United States.

   All Dischargers who certify and submit PRDs via SMARTS for NOI coverage on or after July 1, 2015 or for NEC coverage on or after October 1, 2015, shall immediately comply with the provisions in this General Permit.

4. General Permit Coverage for Landfills

   This General Permit covers storm water discharges from landfills, land application sites, and open dumps that receive or have received industrial waste from any facility covered by this General Permit. Industrial storm water discharges from these

facilities must be covered by this General Permit unless (1) they are already covered by another NPDES permit, or (2) the Regional Water Board has determined that an NPDES permit is not required because the site has been stabilized or required closure activities have been completed.

In most cases, it is appropriate for new landfill construction or final closure to be covered by the Construction General Permit, rather than this General Permit. Questions have arisen as to what constitutes new landfill construction at an existing landfill versus the normal planned expansion of a landfill. Similarly, questions have arisen about the type of closure activities that may be subject to the Construction General Permit versus the normal closure of "cells" that occurs during continued landfill operations and are not subject to the Construction General Permit. Other questions such as whether temporary or permanent newly graded/paved roads disturbing greater than one acre at a landfill are subject to the Construction General Permit. Landfill Dischargers have asked for clarity regarding these questions. The previous permit required Dischargers to contact the Regional Water Boards to determine permit appropriateness. Site specific circumstances continue to require Dischargers to contact Regional Water Boards for final determinations.

Based upon the State Water Board's storm water program history, there are only a handful of instances where an operating landfill has been simultaneously subject to both the construction and industrial permitting requirements. Typically a landfill is subject to the construction permitting requirements during the time the landfill is initially constructed and prior to operation. A landfill is subject to the industrial permitting requirements during landfill operations, and subject to the construction permitting requirements during final landfill closure activities.

Once a landfill begins operations, continued expansion or closure of incremental landfill cells is authorized under the industrial permitting requirements since these are normal aspects of landfill operations. These expansion/closure activities occur within a limited timeframe (often taking less than 90 days from beginning to end) and are not separately subject to additional local approval (e.g., a new building permit). Any construction or demolition of temporary non-impervious roads directly related to landfill operations are subject to the industrial permitting requirements.

Construction or closure of a separate section of the landfill that is either subject to additional permitting by the local authorities and/or lasts more than 90 days requires coverage under the Construction General Permit. Construction of permanent facility structures such as buildings and impervious parking lots or roads that disturb greater than one acre are also subject to the Construction General Permit. (Permanent facility structures are defined as any structural improvements designed to remain until the landfill is closed.)

Site specific circumstances such as proximity to nearby waterways, extent of activities, pollutants of concern, and other considerations can impact any decision as to whether a particular activity is to be regulated under this General Permit or the Construction General Permit. Regional Water Boards will continue to exercise their discretion as necessary to protect the beneficial uses of the receiving water(s).

5. General Permit Coverage for Small Municipal Separate Storm Sewer Systems (MS4s)

   Section 1068 of the Intermodal Surface Transportation Efficiency Act of 1991 exempted municipal agencies serving populations of less than 100,000 from Phase I permit requirements other than sanitary landfills, power plants, and airports facilities. U.S. EPA's Phase II regulations eliminated the above exemption as of March 10, 2003. All facilities in Attachment A of this General Permit that are operated by a small municipal agency are subject to NPDES storm water permitting requirements and this General Permit.

6. Changes to General Permit Coverage

   Dischargers who no longer operate a facility required to be covered under this General Permit (either NOI or NEC coverage) are required to electronically certify and submit via SMARTS a Notice of Termination (NOT). An NOT is required when there is a change in ownership of the industrial activities subject to permitting or when industrial activities subject to permitting are permanently discontinued by the Discharger at the site. When terminating NOI coverage, Dischargers may only submit an NOT once all exposure of industrial materials and equipment have been eliminated. Dischargers may not submit NOTs for temporary or seasonal facility closures. The General Permit requires Dischargers to implement appropriate BMPs to reduce or prevent pollutants in storm water discharges during the temporary facility closure.

   This General Permit allows Dischargers to change General Permit coverage, as appropriate, from NOI coverage to NEC coverage or from NEC coverage to NOI coverage.

B. Discharge Prohibitions

This General Permit covers industrial storm water discharges and authorized NSWDs from industrial facilities and prohibits any discharge of materials other than storm water and authorized NSWDs (Section III and Section IV of this General Permit). It is a violation of this General Permit to discharge hazardous substances in storm water in excess of the reportable quantities established in 40 Code of Federal Regulations sections 117.3 and 302.4.

The State Water Board is authorized, under Water Code section 13377, to issue NPDES permits which apply and ensure compliance with all applicable provisions of the CWA, and any more stringent limitations necessary to implement water quality control plans, protect beneficial uses, and prevent nuisance.

C. Non-Storm Water Discharges (NSWDs)

Unauthorized NSWDs can be generated from various pollutant sources. Depending upon their quantity and location where generated, unauthorized NSWDs can discharge to the storm drain system during dry weather as well as during a storm event (comingled with storm water discharge). These NSWDs can consist of, but are not limited to; (1) waters generated by the rinsing or washing of vehicles, equipment,

buildings, or pavement, or (2) fluid, particulate or solid materials that have spilled, leaked, or been disposed of improperly.

Some NSWDs are not directly related to industrial activities and normally discharge minimal pollutants when properly managed. Section IV of this General Permit provides a limited list of NSWDs that are authorized if Dischargers implement BMPs to prevent contact with industrial materials prior to discharge. The list in Section IV is similar to the list provided in the 2008 MSGP but does not include pavement and external building surfaces washing without detergents. These two items are not included because the Discharger is responsible to reduce or prevent pollutants in storm water discharges from paved areas and buildings associated with industrial activities. Since industrial materials and non-industrial material likely co-exist, the washing of paved areas and external building surfaces may result in discharges of pollutants associated with industrial activities. In addition, washing activities generally occur during dry-weather periods when receiving water flows are lower than wet-weather periods. Wash waters are likely to discharge in higher concentrations than would occur if these pollutants were naturally discharged during a storm event. The discharge of high concentration wash water during a time of dry-weather flows is inconsistent with the goal of protecting receiving waters. These discharges are, therefore, considered unauthorized NSWDs. Similar to the 2008 MSGP, firefighting related discharges are not subject to this General Permit.

A major required element of the SWPPP is the identification and measures for elimination of unauthorized NSWDs. Unauthorized NSWDs can contribute a significant pollutant load to receiving waters. Measures to control spills, leakage, and dumping can often be addressed through BMPs. This General Permit's BMP requirements for NSWDs remain essentially unchanged from the previous permit other than the increased frequency of required visual observations from quarterly to monthly. See Section XI.A.1 of this General Permit.

D. Effluent Limitations

1. Technology-Based and Water Quality-Based Effluent Limitations

   CWA Section 301(b)(1)(C) requires that discharges from existing facilities must, at a minimum, comply with technology-based effluent limitations based on the technological capability of Dischargers to control pollutants in their discharges. Discharges must also comply with any more stringent water quality-based limitations necessary to meet water quality standards in accordance with CWA Section 301(b)(1)(C). Water quality-based limitations are discussed in Section E of this Fact Sheet titled "Receiving Water Limitations." Both technology-based effluent limitations and water quality-based limitations are implemented through NPDES permits. (CWA sections 301(a) and (b).)

2. Types of Technology-Based Effluent Limitations

   All NPDES permits are required to contain technology-based effluent limitations (TBELs). (40 C.F.R. §§122.44(a)(1) and 125.3.) TBELs may consist of effluent limitations guidelines (ELGs) established by U.S. EPA through regulation, or may be developed using best professional judgment on a case-by-case basis.

The CWA sets forth standards for TBELs based on the type of pollutant or the type of facility/source involved. The CWA establishes two levels of pollution control for existing sources. For the first level, existing sources that discharge pollutants directly to receiving waters were initially subject to effluent limitations based on the "best practicable control technology currently available" (BPT). (33 U.S.C. § 1314(b)(1)(B).) BPT applies to all pollutants. For the second level, existing sources that discharge conventional pollutants are subject to effluent limitations based on the "best conventional pollutant control technology" (BCT). (33 U.S.C. §1314(b)(4)(A); see also 40 C.F.R. §401.16 (list of conventional pollutants).) Also for the second level, other existing sources that discharge toxic pollutants or "nonconventional" pollutants ("nonconventional" pollutants are pollutants that are neither "toxic" nor "conventional") are subject to effluent limitations based on "best available technology economically achievable" (BAT). (33 U.S.C. §1311(b)(2)(A); see also 40 C.F.R. §401.15 (list of toxic pollutants).) The factors to be considered in establishing the levels of these control technologies are specified in section 304(b) of the CWA and in U.S. EPA's regulations at 40 C.F.R. §125.3.

When establishing ELGs for an industrial category, U.S. EPA evaluates a wide variety of technical factors to determine BPT, BCT, and BAT. U.S. EPA considers the specific factors of an industry such as pollutant sources, industrial processes, and the size and scale of operations. U.S. EPA evaluates the specific treatment, structural, and operational source control BMPs available to reduce or prevent pollutants in the discharges. The costs of implementing BMPs to address these factors are weighed against their effectiveness and ability to protect water quality. Factors such as industry economic viability, economies of scale, and retrofit costs are also considered.

To date, U.S. EPA has: (1) not promulgated storm water ELGs for most industrial categories, (2) not established NELs within all ELGs that have been promulgated, and (3) exempted certain types of facilities within an industrial category from complying with established ELGs. The feedlot category (40 Code of Federal Regulations part 412) provides an example of several of these points. In that instance, U.S. EPA did not establish numeric effluent limitations but instead: (1) established a narrative effluent limitation requiring retention of all feedlot-related runoff from a 25-year, 24-hour storm, and (2) limited application of the ELG to feedlots with a minimum number of animals. U.S. EPA also recently promulgated ELGs for the "Construction and Development (C&D)" industry, which included, among many other limitations, conditional numeric effluent limitations. Though the NELs in these ELGs were later stayed by U.S. EPA, the ELGs exempted construction sites of less than 30 acres from complying with the established numeric effluent limitations.

40 Code of Federal Regulations, Chapter I, Subchapter N ("Subchapter N"), includes over 40 separate industrial categories where the U.S. EPA has established ELGs for new and existing industrial wastewater discharges to surface waters, discharges to publicly owned treatment works (pre-treatment standards), and storm water discharges to surface waters. Generally, U.S. EPA has focused its efforts on the development of ELGs for larger industries and those industries with the greatest potential to pollute. In total, the 40 categories for which ELGs have been

established (not including construction) represent less than 10 percent of the types of facilities subject to this General Permit. Additionally, most ELGs focus on industrial process wastewater discharges and pre-treatment standards, and only 11 of the 40 categories establish numeric or narrative ELGs for industrial storm water discharges. Those that do include ELGs for industrial storm water discharges generally address storm water discharges that are generated from direct contact with primary pollutant sources at the subject facilities, and not the totality of the industrial storm water discharge from the facility, as the term "storm water discharge associated with industrial activity" for this General Order is defined in the CWA. (40 C.F.R. § 122.26(b)(14).) Where U.S. EPA has not issued effluent limitation guidelines for an industry, the State Water Board is required to establish effluent limitations for NPDES permits on a case-by-case basis based on best professional judgment (BPJ). (33 U.S.C. § 1342(a)(1); 40 C.F.R. § 125.3(c)(2).) In this General Permit, most of the TBELs are based on BPJ decision-making because no ELG applies.

The TBELs in this General Permit represent the BPT (for conventional, toxic, and non-conventional pollutants), BCT (for conventional pollutants), and BAT (for toxic pollutants and non-conventional pollutants) levels of control for the applicable pollutants. If U.S. EPA has not promulgated ELGs for an industry, or if a Discharger is discharging a pollutant not covered by the otherwise applicable ELG, the State Water Board is required to establish effluent limitations in NPDES permit limitations based on best professional judgment. (33 U.S.C. § 1342(a)(1); 40 C.F.R. 125.3(c).) This General Permit includes TBELS established on best professional judgment and limitations based on storm water-specific ELGs listed in Attachment F of this General Permit, where applicable.

3. Authority to Include Non-Numeric Technology-Based Limits in NPDES Permits

TBELs in this General Permit are based on best professional judgment and are non-numeric ("narrative") technology-based effluent limitations expressed as requirements for implementation of effective BMPs. Federal regulations provide that permits must include BMPs to control or abate the discharge of pollutants when where "[n]umeric effluent limitations are infeasible." 40 C.F.R. 122.44(k)(3).

Since 1977, courts have recognized that there are circumstances when numeric effluent limitations are infeasible and have held that EPA may issue permits with conditions (e.g., BMPs) designed to reduce the level of effluent discharges to acceptable levels. Natural Res. Def. Council, Inc. v. Costle, 568 F.2d 1369 (D.C.Cir.1977).

U.S. EPA has also interpreted the CWA to allow BMPs to take the place of numeric effluent limitations under certain circumstances. 40 C.F.R. §122.44(k), titled "Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs ...)," provides that permits may include BMPs to control or abate the discharge of pollutants when: (1) "[a]uthorized under section 402(p) of the CWA for the control of stormwater discharges"; or (2) "[n]umeric effluent limitations are infeasible." 40 C.F.R. § 122.44(k).

In 2006, The U.S. Court of Appeals for the Sixth Circuit held that the CWA does not require U.S. EPA to set numeric limits where such limits are infeasible. (Citizens Coal Council v. United States Environmental Protection Agency, 447 F.3d 879, 895-96 (6th Cir. 2006)). The Citizens Coal court cited to the statement in Waterkeeper Alliance, Inc. v. EPA, 399 F.3d 486, 502 (2d Cir. 2005) that "site-specific BMPs are effluent limitations under the CWA" in concluding that "the EPA's inclusion of numeric and non-numeric limitations in the guideline for the coal remining subcategory was a reasonable exercise of its authority under the CWA." (447 F.3d at 896.) Additionally, the Citizen's Coal court cited to Natural Res. Def. Council, Inc. v. EPA, 673 F.2d 400, 403 (D.C.Cir.1982) noting that "section 502(11) [of the CWA] defines 'effluent limitation' as 'any restriction' on the amounts of pollutants discharged, not just a numerical restriction." NPDES permit writers have substantial discretion to impose non-quantitative permit requirements pursuant to section 402(a)(1)), especially when the use of numeric limits is infeasible. (NRDC v. EPA, 822 F.2d 104, 122-24 (D.C. Cir. 1987); 40 C.F.R. 122.44(k)(3).)

4. Decision to Include Non-Numeric Technology-Based Effluent Limits in This General Permit

   It is infeasible for the State Water Board to develop numeric effluent limitations using the best professional judgment approach due to lack of sufficient information. Previous versions of this General Permit required Dischargers to sample their industrial storm water discharges and report the results to the Regional Water Boards. Dischargers were not required to submit this data online into a statewide database; as a result, much of this data is not available for analysis. Moreover, much of the data that are available for analysis are not of sufficient quality to make conclusions or perform basic statistical tests.

   The Blue Ribbon Panel of Experts, State Water Board staff, and many stakeholders evaluated the available storm water data set and concluded that the information provides limited value due to the limited pool of industrial facilities submitting data, poor overall data quality, and extreme variance within the dataset, as described below.

   The poor quality of the existing data set is attributable a number of factors. For example, the previous permits have required Dischargers to sample during the first hour of discharge from two storm events a year. This sampling schedule was designed to catch what was considered to represent the higher end of storm water discharge concentrations for most parameters. The results from this type of sampling were thought to be an indicator of whether or not additional BMPs would be necessary. The sampling schedule was not designed, however, to estimate pollutant discharge loading, or to characterize the impact of the discharge on the receiving water. Doing so would normally require the use of more advanced sampling protocols such as flow meters, continuous automatic sampling devices, certified/trained sampling personnel, and other facility-specific considerations.

   Furthermore, there is currently no data which details the relationship between the BMPs implemented at each facility and the facility's sampling results. The SWPPPs required by the previous permits were not submitted to the Water Boards, but were

kept onsite by Dischargers. Due to the limited availability of quality sampling data and "level of effort" information contained in SWPPPs, the State Water Board is unable to exercise best professional judgment to make the connection between effluent quality (sampling results) and the level of effort, costs, and performance of the various technologies that is needed in order to express the TBELs in this General Permit numerically, as NELs.

Some stakeholders have suggested that separating the data sets by industry type would lead to more reliable data with which to develop NELs. Advocates of this approach suggest that the variability of the data may be caused in part by the mixing of data from different industrial categories. The State Water Board believes that the variation is primarily due to storm intensity, duration, time of year, soil saturation or some other factors. It is necessary to collect information related to those factors and BMPs implemented in order to evaluate the variability attributable to those factors. There is currently too large of an information gap to begin the process of developing NELs for all industrial sectors not currently subject to ELGs.

The State Water Board has proposed NELs in past drafts of this General Permit. In comments, many stakeholders have highlighted the difficulty of developing statewide NELs that are applicable to all industry sectors, or even NELs that cover any specific industry sectors. For example, stakeholders have commented that:

a. Background/ambient conditions in some hydrogeologic zones may contribute pollutant loadings that would significantly contribute to, if not exceed, the NEL values;

b. Some advanced treatment technologies have flow/volume limitations as well as economy of scale issues for smaller facilities;

c. Treatment technologies that require that sheet flows be captured and conveyed via discrete channels or basins may not only result in significant retrofit costs, but may conflict with local ordinances that prohibit such practices, as they can cause damage or erosion to down gradient property owners, or cause other environmental problems;

d. There is insufficient regulatory guidance and procedures to allow permit writers to properly specify monitoring frequency and sampling protocols (e.g., instantaneous maximum, 1-day average, 3-day average, etc.), and for Dischargers to obtain representative samples to compare to NELs for the purpose of strict compliance; and,

e. NELs must be developed with consideration of what is economically achievable for each industrial sector. These stakeholders point out that the U.S. EPA goes to great lengths evaluating the various BMP technologies available for a particular pollutant, the costs and efficiency of each BMP, and the applicability of the BMPs to the industry as a whole or to a limited number of industrial sites based upon the size of the facility, the quantity of material, and other considerations.

The State Water Board does not have the information (including monitoring data, industry specific information, BMP performance analyses, water quality information, monitoring guidelines, and information on costs and overall effectiveness of control technologies) necessary to promulgate NELs at the time of adoption of this General Permit. Therefore, it is infeasible to include NELs in this statewide General Permit.

Many of the new requirements in this General Permit have been designed to address the shortcomings of previous permits and the existing storm water data set. Under this General Permit, sampling results must be certified and submitted into SMARTS by Dischargers, along with SWPPPs which outline the technologies and BMPs used to control pollutants at each facility. The ERA process will also collect information on costs and the engineering aspects of the various control technologies employed by each facility. Previous permit versions did not have a mechanism for receiving this site specific information electronically, and only a small percentage of Dischargers submitted their Annual Reports via SMARTS. This General Permit will make this information more accessible, allowing the Water Boards to evaluate the relationship between BMPs and the ability of facilities to meet the NALs set forth in this General Permit. Finally, the new Qualified Industrial Storm Water Practitioner (QISP) training requirements of this General Permit have been designed in part to improve the quality of the data submitted.

5. Narrative Technology-Based Effluent Limitations (TBELs) and Best Management Practices (BMPs)

   The primary TBEL in this General Permit requires Dischargers to "implement BMPs that comply with the BAT/BCT requirements of this General Permit to reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability." (Section V.A of this General Permit). This TBEL is a restatement of the BAT/BCT standard, as articulated by U.S. EPA in the 2008 MSGP and accompanying Fact Sheet. In order to comply with this TBEL, Dischargers must implement BMPs that meet or exceed the BAT/BCT technology-based standard. The requirement to "reduce or prevent" is equivalent to the requirement in the federal regulations that BMPs be used in lieu of NELs to "control or abate" the discharge of pollutants. (40 C.F.R. § 122.44(k).)

   BMPs are defined as the "scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to reduce or prevent the discharge of pollutants… includ[ing] treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage." (40 C.F.R. § 122.2.)

   This General Permit (Sections X.H.1 and X.H.2) requires all Dischargers to implement minimum BMPs, as well as any advanced BMPs that are necessary to adequately reduce or prevent pollutants in discharges consistent with the TBELs. The minimum BMPs specified in this General Permit represent common practices that can be implemented by most facilities. This General Permit generally does not mandate the specific mode of design, installation or implementation for the minimum BMPs at a Discharger's facility. It is up to the Discharger, in the first instance, to

determine what must be done to meet the applicable effluent limits. For example, Section X.H.1.a.vi of this General Permit requires Dischargers to contain all stored non-solid industrial materials that can be transported or dispersed via wind or contact with storm water. How this is achieved will vary by facility: for some facilities, all activities may be moved indoors, while for others this will not be feasible. However, even for the latter, many activities may be moved indoors, others may be contained using tarps or a containment system, while still other activities may be limited to times when exposure to precipitation is not likely. Each of these control measures is acceptable and appropriate depending upon the facility-specific circumstances.

BMPs can be actions (including processes, procedures, schedules of activities, prohibitions on practices and other management practices), or structural or installed devices to reduce or prevent water pollution. (40 C.F.R. § 122.2.) They can be just about anything that is effective at preventing pollutants from entering the environment, and for meeting applicable limits of this General Permit. In this General Permit, Dischargers are required to select, design, install, and implement facility-specific control measures to meet these limits. Many industrial facilities already have such control measures in place for product loss prevention, accident and fire prevention, worker health and safety or to comply with other environmental regulations. Dischargers must tailor the BMPs detailed in this General Permit to their facilities, as well as improve upon them as necessary to meet permit limits. The examples detailed in this Fact Sheet emphasize prevention over treatment. However, sometimes more traditional end-of-pipe treatment may be necessary, particularly where a facility might otherwise cause or contribute to an exceedance of water quality standards.

This General Permit requires Dischargers to implement BMPs "to the extent feasible." Consistent with the control level requirements of the CWA, for the purposes of this General Permit, the requirement to implement BMPs "to the extent feasible" means to reduce and/or prevent discharges of pollutants using BMPs that represent BAT and BPT in light of best industry practice.[4] In other words, Dischargers are required to select, design, install and implement BMPs that reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering their technological availability and economic practicability and achievability.

To determine technological availability and economic practicability and achievability, Dischargers need to consider what control measures are considered "best" for their industry, and then select and design control measures for their site that are viable in terms of cost and technology. The State Water Board believes that for many facilities minimization of pollutants in storm water discharges can be achieved without using highly engineered, complex treatment systems. The BMPs included in

[4] Because toxic and nonconventional pollutants are controlled in the first step by BPT and in the second step by BAT, and the second level of control is "increasingly stringent" (EPA v. National Crushed Stone, 449 U.S. 64, 69 (1980), for simplicity of discussion, the rest of this discussion will focus on BAT. Similarly, because the BAT levels of control in this General Permit are expressed as BMPs and pollution prevention measures, they will also control conventional pollutants. Therefore this discussion will focus on BAT rather than BCT or BPT for conventional pollutants.

this General Permit emphasize effective “low-tech” controls, such as regular cleaning of outdoor areas where industrial activities may take place, proper maintenance of equipment, diversion of storm water around areas where pollutants may be picked up, and effective advanced planning and training (e.g., for spill prevention and response).

E. Receiving Water Limitations and Water Quality Standards

Pursuant to CWA section 301(b)(1)(C) and Water Code section 13377, this General Permit requires compliance with receiving water limitations based on water quality standards. The primary receiving water limitation requires that industrial storm water discharges not cause or contribute to an exceedance of applicable water quality standards. Implementation of the BMPs as required by the technology-based effluent limitation in Section V of this General Permit will typically result in compliance with the receiving water limitations. The discussion of BMPs in this General Permit generally focuses on requiring implementation of BMPs to the extent necessary to achieve compliance with the technology-based effluent limitations, because the technology-based limitations apply similarly to all facilities. In addition, however, this General Permit also makes it clear that, if any individual facility's storm water discharge causes or contributes to an exceedance of a water quality standard, that Discharger must implement additional BMPs or other control measures that are tailored to that facility in order to attain compliance with the receiving water limitation. A Discharger that is notified by a Regional Water Board or who determines the discharge is causing or contributing to an exceedance of a water quality standard must comply with the Water Quality Based Corrective Actions found in Section XX.B of this General Permit.

Water Quality Based Corrective Actions are different from the Level 1 and Level 2 ERAs that result from effluent-based monitoring. It is possible for a Discharger to be engaged in Level 1 or Level 2 ERAs for one or more pollutants and simultaneously be required to perform Water Quality Based Corrective Actions for one or more other pollutants.

Failure to comply with these additional Water Quality Based Corrective Action requirements is a violation of this General Permit. If additional operational source control measures do not adequately reduce the pollutants, Dischargers must implement additional measures such as the construction of treatment systems and/or overhead coverage. Overhead coverage is any structure or temporary shelter that prevents the vertical contact of precipitation with industrial materials or activities. If the Regional Water Board determines that the Discharger’s selected BMPs are inadequate, the Regional Water Board may require implementation of additional BMPs and/or may take enforcement against Dischargers for failure to comply with this General Permit.

F. Total Maximum Daily Loads (TMDLs)

TMDLs are regulatory tools that provide the maximum amount of a pollutant from potential source in the watershed that a water body can receive while attaining water quality standards. A TMDL is defined as the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations) and non-point sources (load allocations), plus the contribution from background sources. (40 C.F.R. § 130.2, subd. (i).) Discharges covered by this General Permit are considered to be point

source discharges, and therefore must comply with effluent limitations that are "consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the State and approved by EPA pursuant to 40 Code of Federal Regulations section 130.7." (40 C.F.R. § 122.44, subd. (d)(1)(vii).) In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement relevant water quality control plans. Many TMDLs in existing water quality control plans include both waste load allocations and implementation requirements. Attachment E of this General Permit lists the watersheds with U.S. EPA-approved and U.S. EPA-established TMDLs that include TMDL requirements for Dischargers covered by this General Permit.

NPDES-regulated storm water discharges (which include industrial storm water) must be addressed by waste load allocations in TMDLs. (40 C.F.R. § 130.2(h).) NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the waste load allocations in TMDLs. (40 C.F.R. § 122.44(d)(1)(vii)(B).) To date, the relevant waste load allocations assigned to industrial storm water discharges are not directly translatable to effluent limitations. Many of the TMDLs lack sufficient facility specific information, discharge characterization data, implementation requirements, and compliance monitoring requirements. Accordingly, an analysis of each TMDL applicable to industrial storm water discharges must to be performed to determine if it is appropriate to translate the waste load allocation into a numeric effluent limit, or if the effluent limit is to be expressed narratively using a BMP approach. U.S. EPA recognizes that because storm water discharges are highly variable in frequency and duration and are not easily characterized, it is often not feasible or appropriate to establish numeric limits. Variability and the lack of data available make it difficult to determine with precision or certainty actual and projected loadings for individual Dischargers or groups of Dischargers.

Regardless of whether the effluent limit is to be numeric or narrative, the existing waste load allocations must be carefully analyzed, and in many cases translated, to determine the appropriate effluent limitations. Issues of interpretation exist with all of the waste load allocations applicable to Dischargers, and these issues vary based on the TMDL. Below is an example of one of the simpler issues:

FIGURE 1: Example Waste Load Allocations Proposed Translation: Ballona Creek Estuary – Toxic Pollutants

Metals per Acre Waste Load Allocations for Individual General Construction or Industrial Storm Water Permittees (grams/year/acre)				
Cadmium	Copper	Lead	Silver	Zinc
0.1	3	4	0.1	13
Metals per Acre Waste Load Allocations for Individual General Construction or Industrial Storm Water Permittees (milligrams/year/acre)				
Chlordane	DDTs	Total Polychlorinated biphenyl (PCBs)	Total Polycyclic aromatic hydrocarbons (PAHs)	
0.04	0.14	2	350	

In order for the above waste load allocations to effectively be implemented as effluent limits under the General Permit, the Water Boards must (1) identify which discharges the waste load allocations apply to, (2) identify the acreages of the individual facilities, (3) convert the waste load allocations from grams/year/acre (or milligrams/year/acre) to grams/year (or milligrams/year) based on the acreage at each identified facility, (4) assign the effluent limits to the identified Dischargers, (5) determine appropriate monitoring to assess compliance with the effluent limits, and (6) develop a tracking mechanism for each identified facility and their individual effluent limits. A similar stepwise process is necessary for each TMDL with waste load allocations assigned to industrial storm water discharges. For TMDLs where effluent limits will be expressed as BMPs, analysis must to be performed to determine the appropriate BMPs and the corresponding effectiveness to comply with the assigned waste load allocations.

Some waste load allocations are already expressed as concentration based numbers. It may appear simple to incorporate these values into this General Permit as effluent limits, but the questions still remain regarding how to determine compliance. The monitoring requirements in this General Permit are not designed to measure compliance with a numeric effluent limit or to measure the effect of a discharge on a receiving water body. (See the discussion on monitoring requirements in Fact Sheet Section II.J.) This General Permit requires sampling of four (4) storm events a year, with certain limitations as to when a discharge may be sampled. This method of monitoring may not appropriately serve as TMDL compliance sampling since grab samples are only representative of the particular moment in time when the sample was taken. Since storm water is highly variable, four grab samples per year may not provide sufficient confidence that the effluent limit is being met. An alternative monitoring scheme may be necessary to determine the facility's impact on the receiving water and to determine compliance with any assigned effluent limits. Questions concerning whether sampling results should be grab samples, composite samples, flow-weighted averaged over all drainage areas, etc. cannot be determined for each concentration-based TMDL without a more thorough analysis.

Additionally, monitoring and assessment requirements must be developed for all of the TMDLs to determine compliance with or progress towards meeting TMDL requirements. The proposed monitoring requirements in this General Permit are not designed to assess pollutant loading or determine compliance with TMDL-specific effluent limits.

Due to the large number and variety of discharges subject to a wide range of TMDLs statewide, to prevent a severe delay in the adoption of this General Permit, TMDL-specific permit requirements for the TMDLs listed in Attachment E will be proposed by the Regional Water Boards. Since the waste load allocations and/or implementation requirements apply to multiple discharges in the region(s) the TMDL were developed, the development of TMDL-specific permit requirements is best coordinated at the Regional Water Board level. The development of TMDL-specific permit requirements is subject to notice and a public comment period prior to incorporation into this General Permit.

Regional Water Board staff, with the assistance of State Water Board staff, will develop and submit the proposed TMDL-specific permit requirements for each of the TMDLs listed in Attachment E by July 1, 2016.[5] After conducting a 30-day public comment period, the Regional Water Boards will propose TMDL-specific permit requirements to the State Water Board for adoption into this General Permit. The Regional Water Boards may also include TMDL-specific monitoring requirements for inclusion in this General Permit, or may issue Regional Water Board orders pursuant to Water Code section 13383 requiring TMDL-specific monitoring. The Regional Water Boards or their Executive Officers may complete these tasks, and the proposed TMDL-specific permit requirements shall have no force or effect until adopted, with or without modification, by the State Water Board. Unless directed to do so by the Regional Water Board, Dischargers are not required to take any additional actions to comply with the TMDLs listed in Attachment E until the State Water Board reopens this General Permit and includes TMDL-specific permit requirements. This approach is consistent with the 2008 MSGP. TMDL-specific permit requirements are not limited by the BAT/BCT technology-based standards.

The Regional Water Boards will submit to the State Water Board the following information for each of the TMDLs listed in Attachment E:

- Proposed TMDL-specific permit requirements, including any applicable effluent limitations, implementation timelines, additional monitoring requirements, reporting requirements, an explanation of how an exceedance of an effluent limitation or a violation of the TMDL will be determined, and required deliverables consistent with the TMDL(s);
- An explanation of how the proposed TMDL-specific permit requirements, timelines, and deliverables are consistent with the assumptions and requirements of applicable waste load allocation(s) to implement the TMDL(s);
- Where a BMP-based approach is proposed, an explanation of how the proposed BMPs will be sufficient to implement applicable waste load allocations; and
- Where concentration-based monitoring is required, an explanation of how the required monitoring, reporting and calculation methodology for an exceedance of an effluent limitation or a violation of the TMDL(s) will be sufficient to demonstrate compliance with the TMDL(s).

Upon receipt of the information described above, the State Water Board will conduct a public comment period and reopen this General Permit to populate Attachment E, the Fact Sheet, and other provisions as necessary in order to incorporate these TMDL-specific permit requirements into this General Permit. Attachment E may also be reopened during the term of this General Permit to add additional TMDLs and corresponding implementation requirements.

This General Permit (Section X.G.2.a.ix) requires a Discharger to identify any additional industrial parameters that may be discharged to a waterbody with a 303(d) impairment identified in Appendix 3 as likely to be associated with industrial storm water.

[5] Due to the workload associated with the implementation of this General Permit (e.g., training program development, NEC outreach, electronic enrollment and reporting via SMARTS) it is believed that two years in necessary for Staff to complete a comprehensive analysis and stakeholder process for TMDLS applicable to Dischargers under this General Permit.

Dischargers may need to implement additional monitoring for any applicable parameters (Section XI.B.6.e). Appendix 3 of this General Permit includes the water bodies with 303(d) impairments or TMDLs for pollutants that are likely to be associated with industrial storm water in black font, and those that are not likely to be associated with industrial storm water in red font. This determination is based on the pollutant or pollutants that are causing each impairment, and the State Water Board's general experience regarding the types of pollutants that are typically found in industrial storm water discharges. The list of waterbodies is from the State Water Boards statewide 2010 Integrated CWA Section 303(d) List / Section 305(b) Report.

Some of the water bodies with 303(d) impairments or TMDLs listed in Appendix 3 of this General Permit are not applicable to Dischargers covered under this General Permit. Appendix 3 indicates these water bodies Dischargers are not required to include in their pollutant source assessment (unless directed to do so by the Regional Water Board).

New Dischargers (as defined in Attachment C) applying for NOI coverage under this General Permit that will be discharging to an impaired water body with a 303(d) listed impairment are ineligible for coverage unless the Discharger submits data and/or information, prepared by a QISP, demonstrating that the facility will not cause or contribute to the impairment. Section VII.B of this General Permit describes the three different options New Dischargers have for making this determination. This General Permit requires a QISP to assist the New Discharger with this determination because individuals making this determination will need expertise in industrial storm water pollutant sources, BMPs and a thorough understanding of complying with U.S. EPA's storm water regulations and this General Permit's requirements. Not requiring New Dischargers to have a QISP assist in this demonstration would possibly lead to costly retrofits or closure of a new facility that has not demonstrated that the facility will not cause or contribute to the impairment.

G. Discharges Subject to the California Ocean Plan

1. Discharges to Ocean Waters

   On October 16, 2012 the State Water Board amended the California Ocean Plan (California Ocean Plan) to require industrial storm water Dischargers with outfalls discharging to ocean waters to comply with the California Ocean Plan's model monitoring provisions. The amended California Ocean Plan requires industrial storm water dischargers with outfalls discharging to ocean waters to comply with the California Ocean Plan's model monitoring provisions. These provisions require Dischargers to: (a) monitor runoff for specific parameters at all outfalls from two storm events per year, and collect at least one representative receiving water sample per year, (b) conduct specified toxicity monitoring at certain types of outfalls at a minimum of once per year, and (c) conduct marine sediment monitoring for toxicity under specific circumstances (California Ocean Plan, Appendix III). The California Ocean Plan provides conditions under which some of the above monitoring provisions may be waived by the Water Boards.

   This General Permit requires dischargers with outfalls that discharge to ocean waters to comply with the California Ocean Plan's model monitoring provisions and

any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015 or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.

2. Areas of Special Biological Significance (ASBS) Exception

   The State Water Board adopted the California Ocean Plan (California Ocean Plan) in 1972, and has subsequently amended the Plan. The California Ocean Plan prohibits the discharge of waste to designated ASBS. ASBS are ocean areas designated by the State Water Board as requiring special protection through the maintenance of natural water quality. The California Ocean Plan states that the State Water Board may grant an exception to California Ocean Plan provisions where the State Water Board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

   On March 20, 2012, the State Water Board adopted Resolution 2012-0012 (ASBS Exception), which grants an exception to the California Ocean Plan prohibition on discharges to ASBS for a limited number of industrial storm water Discharger applicants. The ASBS Exception contains "Special Protections" to maintain natural water quality and protect the beneficial uses of the ASBS. In order to legally discharge into an ASBS, these Dischargers must comply with the terms of the ASBS Exception and obtain coverage under this General Permit. This General Permit incorporates the terms of the ASBS Exception and includes the applicable monitoring requirements for all Dischargers discharging to an ASBS under the ASBS Exception.

H. Training Qualifications

This General Permit and the previous permit both require Dischargers to ensure that personnel responsible for permit compliance have an acceptable level of knowledge. Stakeholders have observed that the previous permit did not adequately specify how to comply with various elements of the permit, such as selecting discharge locations representative of the facility storm water discharge and evaluating potential pollutant sources, nor did it provide a clearly outlined Discharger training program. Guidance that is available from outside sources can be complicated to understand or costly to obtain, which can result in many Dischargers developing and implementing deficient SWPPPs and conducting inadequate monitoring activities. Some Dischargers under the previous permit had the resources to hire professional environmental staff or environmental consultants to assist in compliance. Even in those cases, however, there was little certainty that Dischargers received training regarding implementation of the various BMPs being implemented and required monitoring activities under the previous permit. Through this General Permit, the State Water Board seeks to improve compliance and monitoring data quality, and expand each Discharger's understanding of this General Permit's requirements.

This General Permit establishes the Qualified Industrial Storm Water Practitioner (QISP) role. A QISP is someone who has completed a State Water Board sponsored or

approved QISP training course and has registered in SMARTS. A QISP is required to implement certain General Permit requirements at the facility once it has entered Level 1 status in the ERA process as described in Section XII of this General Permit. In some instances it may be advisable for a facility employee to take the training, or for a facility to hire a QISP prior to entering Level 1 status as the training will contain information on the new permit requirements and how to perform certain tasks such as selecting discharge locations representative of the facility storm water discharge, evaluating potential pollutant sources, and identifying inadequate SWPPP elements.

Some industry stakeholders have claimed that their staff is already adequately trained. These employees may continue to perform the basic permit functions (e.g. prepare SWPPPs, perform monitoring requirements, and prepare Annual Reports) without receiving any additional training if the facility's sampling and analysis results do not exceed the NALs. This requirement is structured in a manner to reduce the costs of compliance for facilities that may not negatively impact receiving water quality.

California licensed professional civil, industrial, chemical, and mechanical engineers and geologists have licenses that have professional overlap with the topics of this General Permit. The California Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors and Geologists (CBPELSG) provides the licensure and regulation of professional civil, industrial, chemical, and mechanical engineers and professional geologists in California. The State Water Board is developing a specialized self-guided State Water Board-sponsored registration and training program specifically for these CPBELSG licensed engineers and geologists in good standing with CBPELSG. The CBPELSG has staff and resources dedicated to investigate and take appropriate enforcement actions in instances where a licensed professional engineer or geologist is alleged to be noncompliant with CBPELSG's laws and regulations. Actions that result in noncompliance with this General Permit may constitute a potential violation of the CBPELSG requirements and may subject a licensee to investigation by the CBPELSG.

A QISP may represent one or more facilities but must be able to perform the functions required by this General Permit at all times. It is advisable that this individual be limited to a specific geographic region due to the difficulty of performing the needed tasks before, during, and after qualifying storm events may be difficult or impossible if extensive travel is required. Dischargers are required to ensure that the designated QISP has completed the appropriate QISP training course.

This General Permit contains a mechanism that allows for the Water Boards' Executive Director or Executive Officer to rescind the registration of any QISPs who are found to be inadequately performing their duties as a QISP will no longer be able to do so. A QISP may ask the State Water Board to review any decision to revoke his or her QISP registration. Table 1 of this Fact Sheet below describes the different roles that the QISP and California licensed professional engineers have in this General Permit.

TABLE 1: Role-Specific Permit Requirements

Qualifications	Task
QISP	Assist New Dischargers determine coverage eligibility for Discharges to an impaired water body, Level 1 ERA Evaluation and report, Level 2 ERA Action Plan, and Technical Report, and the Level 2 ERA extension
California licensed professional engineer	Inactive Mining Operation Certification, SWPPPs for inactive mining, and annual re-certification of Inactive Mining Operation Certification, NONA Technical Reports, and Subchapter N calculations

I. Storm Water Pollution Prevention Plan (SWPPP)

1. General

This General Permit requires that all Dischargers develop, implement, and retain onsite a site-specific SWPPP. The SWPPP requirements generally follow U.S. EPA's five-phase approach to developing SWPPPs, which has been adapted to reflect the requirements of this General Permit in Figure 2 of this Fact Sheet. This approach provides the flexibility necessary to establish appropriate BMPs for different industrial activities and pollutant sources. This General Permit requires a Discharger to include in its SWPPP (Section X of this General Permit) a site map, authorized NSWDs at the facility, and an identification and assessment of potential pollutants sources resulting from exposure of industrial activities to storm water.

This General Permit requires that Dischargers clearly describe the BMPs that are being implemented in the SWPPP. In addition to providing descriptions, Dischargers must also describe who is responsible for the BMPs, where the BMPs will be installed, how often and when the BMPs will be implemented, and identify any pollutants of concern. Table 2 of this Fact Sheet provides an example of how a Discharger could assess potential pollution sources and provide a corresponding BMPs summary.

This General Permit requires that Dischargers select an appropriate facility inspection frequency beyond the required monthly inspections if necessary, and to determine if SWPPP revisions are necessary to address any physical or operational changes at the facility or make changes to the existing BMPs (Section X.H.4.a.vii and Section XI.A.4 of this General Permit). Facilities that are subject to multi-phased physical expansion or significant seasonal operational changes may require more frequent SWPPP updates and facility inspections. Facilities with very stable operations may require fewer SWPPP updates and facility inspections.

Failure to develop or implement an adequate SWPPP, or update or revise an existing SWPPP as required, is a violation of this General Permit. Failure to maintain the SWPPP on-site and have it available for inspection is also a violation of this General Permit.

Dischargers are also required to submit their SWPPPs and any SWPPP revisions via SMARTS; accordingly, BMP revisions made in response to observed compliance problems will be included in the revised SWPPP electronically submitted via SMARTS. Not all SWPPP revisions are significant and it is up to the Dischargers to distinguish between revisions that are significant and those that are not significant. If no changes are made at all to the SWPPP, the Discharger is not required to resubmit the SWPPP on any specific frequency.

- Significant SWPPP Revisions: Dischargers are required to certify and submit via SMARTS their SWPPP within 30 days of the significant revision(s). While it is not easy to draw a line generally between revisions that are significant and those that are not significant, Dischargers are not required to certify and submit via SMARTS any SWPPP revisions that are comprised of only typographical fixes or minor clarifications.

- All Other SWPPP Revisions: Dischargers are required to submit revisions to the SWPPP that are determined to not be significant every three (3) months in the reporting year.

FIGURE 2: Five Phases for Developing and Implementing an Industrial Storm Water Pollution Prevention Plan (SWPPP)

PLANNING AND ORGANIZATION

*Form Pollution Prevention Team
*Review other facility plans

ASSESSMENT

*Develop a site map
*Identify potential pollutant sources
*Inventory of materials and chemicals
*List significant spills and leaks
*Identify Non-Storm Water Discharges
*Assess pollutant risk

Best Management Practice (BMP) IDENTIFICATION

*Identify minimum required BMPs
*Identify any advanced BMPs

IMPLEMENTATION

*Train employees for the Pollution Prevention Team
*Implement BMPs
*Collect and review records

EVALUATION / MONITORING

*Conduct annual facility evaluation (Annual Evaluation)
*Review monitoring information
*Evaluate BMPs
*Review and revise SWPPP

TABLE 2: Example - Assessment of Potential Industrial Pollution Sources and Corresponding BMPs Summary

Area	Activity	Pollutant Source	Industrial Pollutant	BMPs
Vehicle and Equipment Fueling	Fueling	Spills and leaks during delivery	Fuel oil	-Use spill and overflow protection
		Spills caused by topping off fuel tanks	Fuel oil	-Train employees on proper fueling, cleanup, and spill response techniques
		Hosing or washing down fuel area	Fuel oil	-Use dry cleanup methods rather than hosing down area -Implement proper spill prevention control program
		Leaking storage tanks	Fuel oil	-Inspect fueling areas regularly to detect problems
		Rainfall running off fueling area, and rainfall running onto and off fueling area	Fuel oil	-Minimize run-on of storm water into the fueling area, cover fueling area

2. Minimum and Advanced BMPs

Section V of this General Permit requires the Discharger to comply with technology-based effluent limitations (TBELs). In this General Permit, TBELs rely on implementation of BMPs for Dischargers to reduce and prevent pollutants in their discharge. The BMP effluent limitations have been integrated into the Section X.H of this General Permit and are divided into two categories – minimum BMPs which are generally non-structural BMPs that all Dischargers must implement to the extent feasible, and advanced BMPs which are generally structural BMPs that must be implemented if the minimum BMPs are inadequate to achieve compliance with the TBELs. Section X of this General Permit includes both substantive control requirements in the form of the BMPs listed in Section X.H, as well as various reporting and recordkeeping requirements. The requirement to implement BMPs "to the extent feasible" allows Dischargers flexibility when implementing BMPs, by not requiring the implementation of BMPs that are not technologically available and economically practicable and achievable in light of best industry practices.

The 2008 MSGP requires Dischargers to comply with 12 non-numeric technology-based effluent limits in Section 2.1.2 of the permit through the implementation of "control measures." This requirement is an expansion of the general considerations outlined in the MSGP adopted in 2000. The control measures specified by the U.S. EPA in the 2008 MSGP are as follows (in order as listed in the 2008 MSGP):

1. Minimize Exposure
2. Good Housekeeping
3. Maintenance
4. Spill Prevention and Response Procedures
5. Erosion and Sediment Controls
6. Management of Runoff
7. Salt Storage Piles or Piles Containing Salt
8. Sector Specific Non-Numeric Effluent Limits
9. Employee Training
10. Non-Storm Water Discharges (NSWDs)
11. Waste, Garbage and Floatable Debris
12. Dust Generation and Vehicle Tracking of Industrial Materials

This General Permit addresses eleven of the above twelve control measures from the 2008 MSGP Section 2.1.2 Non-Numeric Technology-Based Effluent Limits (BPT/BAT/BCT). Eleven of the control measures are addressed as minimum BMPs that the State Water Board has determined to be most applicable to California's Dischargers. Two of those eleven control measures (1- Minimize Exposure, 6 – Management of Runoff) are also identified as advanced BMPs (Section X.H.2 of this General Permit). This General Permit is not a sector-specific permit and therefore does not contain limitations to address control measure number 8 (Sector Specific Non-Numeric Effluent Limits).

The non-structural elements of the control measure to minimize exposure are addressed in the minimum BMP Section X.H.1 of this General Permit while structural control elements are addressed in the advanced BMP Section X.H.2 of this General Permit. The on-site diversion elements of the control measure to minimize exposure are addressed as minimum BMPs.

The runoff reduction elements of the control measure to minimize exposure are included as advanced BMPs. Advanced BMPs that are required to be implemented when a Discharger has implemented the minimum BMPs to the extent feasible and they are not adequate to comply with the TBELs. The advanced BMP categories are: (1) exposure minimization BMPs, (2) storm water containment and discharge reduction BMPs, (3) treatment control BMPs, and (4) additional advanced BMPs needed to meet the effluent limitations of this General Permit. Advanced BMPs are generally structural control measures and can include any BMPs that exceed the minimum BMPs. The control measure for Non-Storm Water Discharges (NSWDs) is addressed in both the discharge prohibitions (Section III) and authorized non-storm water discharges (Section IV) of this General Permit and essentially represents a minimum BMP.

This General Permit encourages Dischargers to utilize BMPs that infiltrate or reuse storm water where feasible. The State Water Board expects that these types of BMPs will not be appropriate for all industrial facilities, but recognizes the many possible benefits (e.g. increased aquifer recharge, reduces flooding, improvements to water quality) associated with the infiltration and reuse of storm water. Encouraging the use of storm water infiltration and reuse BMPs is consistent with the statewide approach to managing storm water with lower impact methods.

The BMPs in this General Permit that coincide with the control measures in the 2008 MSGP are as follows (in order as listed in the 2008 MSGP):

a. Minimization of Exposure to Storm Water

Section 2.1.2.1 of the 2008 MSGP requires Dischargers to minimize the exposure of industrial materials and areas of industrial activity to rain, snow, snowmelt, and runoff. The 2008 MSGP mixes both structural and nonstructural BMPs and specifies particular BMPs to consider when minimizing exposure such as grading/berming areas to minimize runoff, locating materials indoors, spill clean up, contain vehicle fluid leaks or drain fluids before storing vehicles on-site, secondary containment of materials, conduct cleaning activities undercover, indoors or in bermed areas, and drain all wash water to a proper collection system.

This General Permit requires the evaluation of BMPs in the potential pollutant source assessment in the SWPPP (Section X.G.2). When the minimum BMPs are not adequate to comply with the TBELs, Dischargers are required to implement advanced BMPs (Section X.H.2.a). These advanced BMPs may include additional exposure minimization BMPs (Section X.H.2.b.1).

b. Good Housekeeping

Section 2.1.2.2 of the 2008 MSGP requires that Dischargers keep all exposed areas that may be a potential source of pollutants clean and orderly. This General Permit (Section X.H.1.a) seeks to define “clean and orderly” by specifying a required set of nine (9) minimum good housekeeping BMPs, which include: observations of outdoor/exposed areas, BMPs for controlling material tracking, BMPs for dust generated from industrial materials or activities, BMPs for rinse/wash water activities, covering stored industrial materials/waste, containing all stored non-solid industrial materials, preventing discharge of rinse/wash waters/industrial materials, prevent non-industrial area discharges from contact with industrial areas of the facility, and prevent authorized NSWDs from non-industrial areas from contact with industrial areas of the facility.

c. Preventative Maintenance

Section 2.1.2.3 of the 2008 MSGP requires that Dischargers regularly inspect, test, maintain, and repair all industrial equipment to prevent leaks, spills and releases of pollutants that may be exposed to storm water discharged to receiving waters. This General Permit (Section X.H.1.b) incorporates this

concept by requiring four (4) nonstructural BMPs which include: identification and inspection of equipment, observations of potential leaks in identified equipment, an equipment maintenance schedule, and equipment maintenance procedures.

d. Spill and Leak Prevention and Response

Section 2.1.2.4 of the 2008 MSGP requires that Dischargers minimize the potential for leaks, spills and other releases that may be exposed to storm water. Dischargers are also required to develop a spill response plan which includes procedures such as labeling of containers that are susceptible to a spill or a leakage, establishing containment measures for such industrial materials, procedures for stopping leaks/spills, and provisions for notification of the appropriate personnel about any occurrence. This General Permit (Section X.H.1.c) requires implementation of four (4) BMPs to address spills. These BMPs include: developing a set of spill response procedures to minimize spills/leaks, develop procedures to minimize the discharge of industrial materials generated through spill/leaks, identifying/describing the equipment needed and where it will be located at the facility, and identify/training appropriate spill response personnel.

e. Erosion and Sediment Controls

Section 2.1.2.5 of the 2008 MSGP requires the use of structural and/or non-structural control measures to stabilize exposed areas and contain runoff. Also required is the use of a flow velocity dissipation device(s) in outfall channels where necessary to reduce erosion and/or settle out pollutants. This General Permit (Section X.H.1.e) requires the implementation of (5) BMPs to prevent erosion and sediment discharges. The erosion and sediment control BMPs include: implementing effective wind erosion controls, providing for effective stabilization of erodible areas prior to a forecasted storm event, site entrance stabilization/prevent material tracking offsite and implement perimeter controls, diversion of run-on and storm water generated from within the facility away from all erodible materials, and ensuring compliance with the design storm standards in Section X.H.6. U.S. EPA has developed online resources for erosion and sediment controls.[6]

f. Management of Runoff

Section 2.1.2.6 of the 2008 MSGP requires the diversion, infiltration, reuse, containment, or otherwise reduction of storm water runoff, to minimize pollutants in discharges. This General Permit (Sections X.H.1.a.viii, X.H.1.d.iv., and

[6] U.S. EPA. 2008 MSGP. <http://cfpub.epa.gov/npdes/stormwater/msgp.cfm> [as of February 4, 2014].
U.S. EPA. National Menu of BMPs. <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>. [as of February 4, 2014].
U.S. EPA. National Management Measures to Control Nonpoint Source Pollution from Urban Areas <http://water.epa.gov/polwaste/nps/urban/index.cfm>. [as of February 4, 2014].

X.H.1.e.iv) requires Dischargers to divert run-on from non-industrial sources and manage storm water generated within the facility away from industrial materials and erodible surfaces. Runoff reduction is required as an advanced BMP when minimum BMPs are not adequate to comply with the TBELs. The 2008 MSGP encouraged Dischargers to consult with EPA's internet-based resources relating to runoff management.[7]

g. Salt Storage Piles or Piles Containing Salt

Section 2.1.2.7 of the 2008 MSGP requires salt storage piles/piles containing salt that may be discharged to be enclosed or covered and to use BMPs when the salt is being used. This General Permit does not have a minimum BMP specifically for salt storage, however it does require all stockpiled/stored industrial materials be managed in a way to reduce or prevent industrial storm water discharges of the stored/stockpiled pollutants. The good housekeeping (Section X.H.1.a) and material handling and waste management (Section X.H.1.d) minimum BMPs in this General Permit require that all materials readily mobilized by storm water be covered, the minimization of handling of industrial materials or wastes that can be readily mobilized by contact with storm water during a storm event, and the diversion of run-on from stock piled materials.

h. Sector Specific Non-Numeric Effluent Limits

Section 2.1.2.8 of the 2008 MSGP requires Dischargers to achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Part 8 of the 2008 MSGP. This General Permit is not a sector-specific permit and does not contain sector-specific non-numeric effluent limitations like the 2008 MSGP. While this General Permit does not specify sector-specific BMPs, Dischargers are required to select and implement BMPs for their specific facility to reduce or prevent industrial storm water discharges of pollutants to comply with the technology-based effluent limitations. In addition, sectors with applicable ELGs must comply with those ELGs.

i. Employee Training Program

Section 2.1.2.9 of the 2008 MSGP requires all employees engaged in industrial activities or the handling of industrial materials that may affect storm water to obtain training covering implementation of this General Permit. This General Permit (Section X.D.1 and X.H.1.f) requires a facility to establish a Pollution Prevention Team (team members, collectively) responsible for implementing permit requirements such as the SWPPP, monitoring requirements, or BMPs.

[7] U.S. EPA. Sector-Specific Industrial Stormwater Fact Sheet Series <www.epa.gov/npdes/stormwater/msgp>. [as of February 4, 2014].
U.S. EPA. National Menu of Stormwater BMPs <www.epa.gov/npdes/stormwater/menuofbmps> [as of February 4, 2014].
U.S. EPA. National Management Measures to Control Nonpoint Source Pollution from Urban Areas (and any similar State or Tribal publications) <www.epa.gov/owow/nps/urbanmm/index.html>. [as of February 4, 2014].

The five (5) minimum training BMPs include: ensuring that all team members are properly trained, preparing the proper training materials and manuals, identifying which individuals needs to be trained, providing a training schedule, and maintaining documentation on the training courses and which individuals received the training.

This General Permit also requires a QISP to be assigned to each facility that reaches Level 1 status. One purpose of a QISP is to have an individual available who can provide compliance assistance with these training requirements. The QISP is responsible for training the appropriate team members. Appropriate team members are any team members involved in implementing this General Permit for drainage areas causing NAL exceedances, and any other team members identified by the QISP that need additional training to implement this General Permit.

j. NSWDs

Section 2.1.2.10 of the 2008 MSGP requires that unauthorized NSWDs are eliminated (Part 1.2.3 of the 2008 MSGP lists the NSWDs authorized by the 2008 MSGP). The good housekeeping minimum BMP (Section X.H.1.a.ix of this General Permit) requires that contact between authorized NSWDs and industrial areas of the facility be minimized. This General Permit (Section IV) also includes separate requirements for authorized NSWDs and (Section III) prohibits unauthorized NSWDs.

k. Material Handling and Waste Management

Section 2.1.2.11 of the 2008 MSGP requires that Dischargers ensure waste, garbage, and floatable debris are not discharged into receiving waters. The 2008 MSGP identifies keeping areas clean and intercepting such materials as ways to minimize such discharges. This General Permit (Section X.H.1.d) requires Dischargers to implement six (6) general BMPs that address material handling and waste management. These BMPs include: preventing or minimizing handling of waste or materials during a storm event that could potentially result in a discharge, containing industrial materials susceptible to being dispersed by the wind, covering industrial waste disposal containers when not in use to contain industrial materials, diversion of run-on and storm water generated from within the facility away from all stock piled materials, cleaning and managing spills of such wastes or materials (in accordance with Section X.H.1.e of this General Permit), and conducting observations of outdoor areas and equipment that may come into contact with such materials or waste and become contaminated.

l. Waste, Garbage and Floatable Debris

Section 2.1.2.11 of the 2008 MSGP requires that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged. Material handling and waste management BMPs are included in Section X.H.1.d of this General Permit. Dischargers are required to: prevent handling of waste materials during a storm event that could result in a discharge, contain waste disposal

containers when not in use, clean and manage spills from waste, and observe outdoor areas and equipment that may come into contact with waste and become contaminated.

m. Dust Generation and Vehicle Tracking of Industrial Materials

Section 2.1.2.12 of the 2008 MSGP requires that generation of dust and off-site tracking of raw, final, or waste materials is minimized. This General Permit does not require minimization of dust generation and vehicle tracking of industrial materials as a minimum BMP directly. Dust generation and vehicle tracking of industrial materials BMPs are included in Section X.H.1.a ("good housekeeping") of this General Permit where Dischargers must prevent dust generation from industrial materials or activities and contain all stored non-solid industrial materials that can be transported or dispersed via wind or come in contact with storm water, and Section X.H.1.d. ("material handling and waste management") of this General Permit, which requires Dischargers to contain non-solid industrial materials or wastes that can be dispersed via wind erosion or come into contact with storm water during handling.

n. Quality Assurance and Record Keeping

Section 2.1.2 of the 2008 MSGP does not directly designate record keeping as a control measure. This General Permit (Section X.H.1.g) includes quality assurance and record keeping as a minimum BMP and requires Dischargers to implement three (3) general BMPs. These BMPs include: developing and implementing procedures to ensure that all elements of the SWPPP are implemented, develop a method of tracking and recording the implementation of all BMPs identified in the SWPPP, and a requirement to keep and maintain those records. This ensures that management procedures are designed and permit requirements are implemented by appropriate staff.

o. Implementation of BMPs in the SWPPP

Like the previous permit, this General Permit does not assign Dischargers a schedule to implement BMPs. Instead, this General Permit requires Dischargers to select the appropriate schedule to implement the minimum BMPs. In addition, this General Permit requires Dischargers to identify, as necessary, any BMPs that should be implemented prior to precipitation events. Although Dischargers are required to maintain internal procedures to ensure the BMPs are implemented according to schedule or prior to precipitation events, Dischargers are only required to certify in the Annual Report whether they complied with the BMP implementation requirements.

Dischargers are required to implement an effective suite of BMPs that meet the technology and water-quality based limitations of this General Permit. Based upon Regional Water Board staff inspections, there is significant variation between Dischargers' interpretations of what BMPs were necessary to comply with the previous permit. This General Permit establishes a new requirement that Dischargers must implement, to the extent feasible, specific minimum BMPs

to reduce or prevent the presence of pollutants in their industrial storm water discharge. In addition, due to the wide variety of facilities conducting numerous and differing industrial activities throughout the state, this General Permit retains the requirement from the previous permit that Dischargers establish and implement additional BMPs beyond the minimum. Implementation of this General Permit's minimum BMPs, together with any necessary advanced BMPs, will result in compliance with the effluent limitations of this General Permit (Section V.A). All Dischargers must evaluate their facilities and determine the best practices within their industry considering technological availability and economic practicability and achievability to implement these minimum BMPs and any advanced BMPs.

The State Water Board has selected minimum BMPs that are generally applicable at all facilities. The minimum BMPs are consistent with the types of BMPs normally found in properly developed SWPPPs and, in most cases, should represent a significant portion of the effort required for a Discharger to achieve compliance. Due to the diverse industries covered by this General Permit, the development of a more comprehensive list of minimum BMPs is not currently feasible. The selection, applicability, and effectiveness of a given BMP is often related to industrial activity type and to facility-specific facts and circumstances. Advanced BMPs must be selected and implemented by Dischargers, based on the type of industry and facility-specific conditions, to the extent necessary to comply with the technology-based effluent limitation requirements of this General Permit.

Failure to implement all of the minimum BMPs to the extent feasible is a violation of this General Permit. (Section X.H.1.) Dischargers must justify any determination that it is infeasible to implement a minimum BMP in the SWPPP (Section X.H.4.b). Failure to implement advanced BMPs necessary to achieve compliance with either the technology or water quality standards requirements in this General Permit is a violation of this General Permit.

p. Temporary Suspension of Industrial Activities

The exception for inactive and unstaffed sites in section 6.2.1.3 of the 2008 MSGP does not require a Discharger with a facility that is inactive and unstaffed with no industrial materials or activities exposed to storm water (in accordance with the substantive requirements in 40 Code of Federal Regulations section 122.26(g)) to complete benchmark monitoring. The Discharger is required to sign and certify a statement in the SWPPP verifying that the site is inactive and unstaffed. If circumstances change and industrial materials or activities become exposed to storm water or the facility becomes active and/or staffed, this exception no longer applies and the Discharger is required to begin complying immediately with the applicable benchmark monitoring requirements under part 6.2 of the 2008 MSGP.

This General Permit allows Dischargers to temporarily suspend monitoring at facilities where industrial activities have been suspended in accordance with Section X.H.3. This is only intended for Dischargers with facilities where it is

infeasible to comply with this General Permit's monitoring while activities are suspended (e.g. remote, unstaffed, or inaccessible facilities during the time of such a suspension). Dischargers are required to update the facility's SWPPP with the BMPs being used to stabilize the site and submit the suspension dates and a justification for the suspension of monitoring via SMARTS.

3. Design Storm Standards for Treatment Control BMPs

It is the State Water Board's intent to minimize the regulatory uncertainty and costs concerning treatment control BMPs in order to encourage the implementation of treatment control BMPs when appropriate. Section X.H.6 of this General Permit specifies a design storm standard for use when treatment controls BMPs are installed. There is both a volume-based and flow-based design storm standard in this General Permit. Both are based on the 85th percentile 24-hour storm event. Without a design storm standard, Dischargers have installed treatment controls using a wide variety of designs that were sometimes either unnecessarily stringent/expensive, or deficient in complying with the requirements of the relevant permit. Some Dischargers have been hesitant to consider treatment options because of the uncertainty concerning acceptable treatment design. The design storm standards are generally expected to:

- Be consistent with the effluent limitations of this General Permit;
- Be protective of water quality;
- Be achievable for most pollutants and their associated treatment technologies; and,
- Reduce the costs associated with treating industrial storm water discharges beyond the levels necessary to achieve compliance with this General Permit.

In lieu of complying with the design storm standards for treatment control BMPs, Dischargers may certify and submit a Level 2 ERA Technical Report, including an Industrial Activity BMPs Demonstration (Section XII.D.2.a of this General Permit). The Level 2 ERA Technical Report requirement is based upon NAL exceedances. Under this option, a Discharger with Level 2 status must either implement BMPs to eliminate future NAL exceedances, or justify what BMPs must be implemented to comply with this General Permit even if the BMPs will not eliminate future exceedances of NALs. Dischargers who implement treatment control BMPs that vary from the design storm standards in Section X.H.6 must include an analysis showing that their treatment control BMPs comply with this General Permit's effluent limitations in the Industrial Activity BMP Demonstration.

This General Permit does not require Dischargers to retrofit existing treatment controls that do not meet the design storm standard, unless the Discharger determines that the existing treatment controls are not adequate to comply with this General Permit. In addition, once TMDL-specific implementation requirements are added to this General Permit, those Dischargers subject to TMDLs may need to add

new or retrofitted treatment control BMPs to meet the TMDL implementation requirements.

To arrive at these design storm standards, the State Water Board has relied heavily on previous Water Board decisions concerning treatment efficacy for municipalities, published documents, stakeholder comments, and reasonableness. In 2000, the State Water Board issued State Water Board Order WQ 2000-11, which upheld Los Angeles Regional Water Board's permit requirements which mandated that all new development and redevelopment exceeding certain size criteria design treatment BMPs based on a specific storm volume: the 85th percentile 24-hour storm event. This design storm standard was based on research demonstrating that the standard represents the maximized treatment volume cut-off at the point of diminishing returns for rainfall/runoff frequency.[8] On the basis of this equation, the maximized runoff volume for 85 percent treatment of annual runoff volumes in California can range from 0.08 to 0.86 inch depending on the imperviousness of the watershed area and the mean amount of rainfall. This design storm standard is referred to as the Standard Urban Storm Water Mitigation Plan's volumetric criterion and there are multiple acceptable methods of calculating this volume. For more information, see the California Stormwater Best Management Practices Handbook.[9]

The San Diego Regional Water Board first established both volumetric and flow-based design storm criteria for NPDES MS4 permits. It is generally accepted by civil engineers doing hydrology work to use twice the peak hourly flow of a specific storm event to use as the basis for flow-based design of BMPs. This General Permit therefore establishes the flow-based design storm standard to be twice the peak hourly flow of the 85th percentile 24-hour storm event.

The primary objective of specifying a design storm standard is to properly size BMPs to, at a minimum, effectively treat the first flush of run-off from all storm events. The economic impacts of treating all storm water from a facility versus the minimal environmental benefit of complete treatment justify the design storm approach. It is unrealistic to require each facility to do a cost benefit analysis of their treatment structures. To simplify the requirements for design, the State Water Board reviewed research from the City of Portland[10] and the City of San Jose[11] to determine the volume of each rain event compared to the amount of events that occur for that volume. The results of their findings show an inflection point that is typically found at approximately the 80 to 85 percentile of recorded storm events.

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[8] California Regional Water Quality Control Board Los Angeles Region, Standard Urban Storm Water Mitigation Plans and Numerical Design Standards for Best Management Practices - Staff Report and Record of Decision (Jan. 18, 2000) <http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/susmp/susmp_final_staff_report.pdf>. [as of February 4, 2014].

[9] California Stormwater Quality Association, Stormwater Best Management Practice New Development and Redevelopment Handbook (2003) <http://www.casqa.org/>. [as of February 4, 2014].

[10] City of Portland Oregon. Portland Stormwater Management Manual Appendix E.1: Pollution Reduction Methodology E.1-1 (August 1, 2008). <http://www.portlandoregon.gov/bes/article/202909>. [as of February 4, 2014].

[11] California Stormwater Quality Association (CASQA). CASQA BMP Handbook (January 2003) New Development and Redevelopment (Errata 9-04) <http://www.casqa.org/>. [as of February 4, 2014].

Dischargers should be aware of the potential unintended public health concerns associated with treatment control BMPs. Extensive monitoring studies conducted by the California Department of Public Health (CDPH) have documented that mosquitoes opportunistically breed in structural BMPs, particularly those that hold standing water for over 96 hours. BMPs that produce mosquitoes create potential public health concerns and increase the burden on local vector control agencies that are mandated to inspect for and abate mosquitoes and other vectors within their jurisdictional boundaries. These unintended consequences can be lessened when BMPs incorporate design, construction, and maintenance principles developed specifically to minimize standing water available to mosquitoes[12] while having negligible effects on the capacity of the structures to provide water quality improvements. The California Health and Safety Code prohibits landowners from knowingly providing habitat for or allowing the production of mosquitoes and other vectors, and gives local vector control agencies broad inspection and abatement powers.[13]

Dischargers who install any type of volume-based treatment device are encouraged to consider the BMPs in the California Department of Public Health's guidance manual published July 2012, "Best Management Practices for Mosquito Control in California" at http://www.cdph.ca.gov/HealthInfo/discond/Documents/BMPforMosquitoControl07-12.pdf.

4. Monitoring Implementation Plan

Dischargers are required to prepare and implement a Monitoring Implementation Plan (Section X.I of this General Permit). The Monitoring Implementation Plan requirements are designed to assist the Discharger in developing a comprehensive plan for the monitoring requirements in this General Permit and to assess their monitoring program. The Monitoring Implementation Plan includes a description of visual observation procedures and locations, as well as sampling procedures, locations, and methods. The Monitoring Implementation Plan shall be included in the SWPPP.

J. Monitoring and Reporting Requirements

1. General Monitoring Provisions

This General Permit requires Dischargers to develop and implement a facility-specific monitoring program. Monitoring is defined as visual observations, sampling and analysis. The monitoring data will be used to determine:

[12] California Department of Public Health. (2012). Best Management Practices for Mosquito Control in California. < http://www.westnile.ca.gov/resources.php>. [as of February 4, 2014]
[13] California Health & Safety Code, Division 3, Section 2060 and following.

a. Whether BMPs addressing pollutants in industrial storm water discharges and authorized NSWDs are effective for compliance with the effluent and receiving water limitations of this General Permit,

b. The presence of pollutants in industrial storm water discharges and authorized NSWDs (and their sources) that may trigger the implementation of additional BMPs and/or SWPPP revisions; and,

c. The effectiveness of BMPs in reducing or preventing pollutants in industrial storm water discharges and authorized NSWDs.

Effluent sampling and analysis information may be useful to Dischargers when evaluating the need for improved BMPs. The monitoring requirements in this General Permit recognize the 2008 MSGP approach to visual observations as an effective monitoring method for evaluating the effectiveness of BMPs at most facilities. Section 6.2 of the 2008 MSGP limits its monitoring sampling requirements to certain industrial categories. Similar to the previous permit, this General Permit requires all Dischargers to sample unless they have obtained NEC coverage or have an inactive mining operation(s) certified as allowed under this General Permit Section XIII.

This General Permit defines a Qualifying Storm Event (QSE) to provide clarity to Dischargers of when sampling is required. The previous permit (Section B.5.a) specified that sampling was required within the first hour of discharge, however, this General Permit requires Dischargers to sample within four hours of the start of Discharge. Many Dischargers were not able to get samples of their discharge locations within one (1) hour under the previous permit so this general permit has expanded the timeframe allowed to provide enough time to sample all discharge locations. The previous permit required three working dry days before sampling and this General Permit defines this period as 48 hours, this timeframe was decreased to provide more opportunities for Dischargers to obtain samples. This General Permit does not specify a volume for sampling due to the complexity of using rain gauges and the limited access of rain gauge station data.

Dischargers are only required to obtain samples required during scheduled facility operating hours and when sampling conditions are safe in accordance with Section XI.C.6.a.ii of this General Permit. If a storm event occurs during unscheduled facility operating hours (e.g. during the weekend or night) and during the 12 hours preceding the scheduled facility operating hours, the Dischargers is still responsible for obtaining samples at discharge locations that are still producing a discharge at the start of facility operations. Under the previous permit, many Dischargers were unable to obtain samples due to rainfall beginning at night.

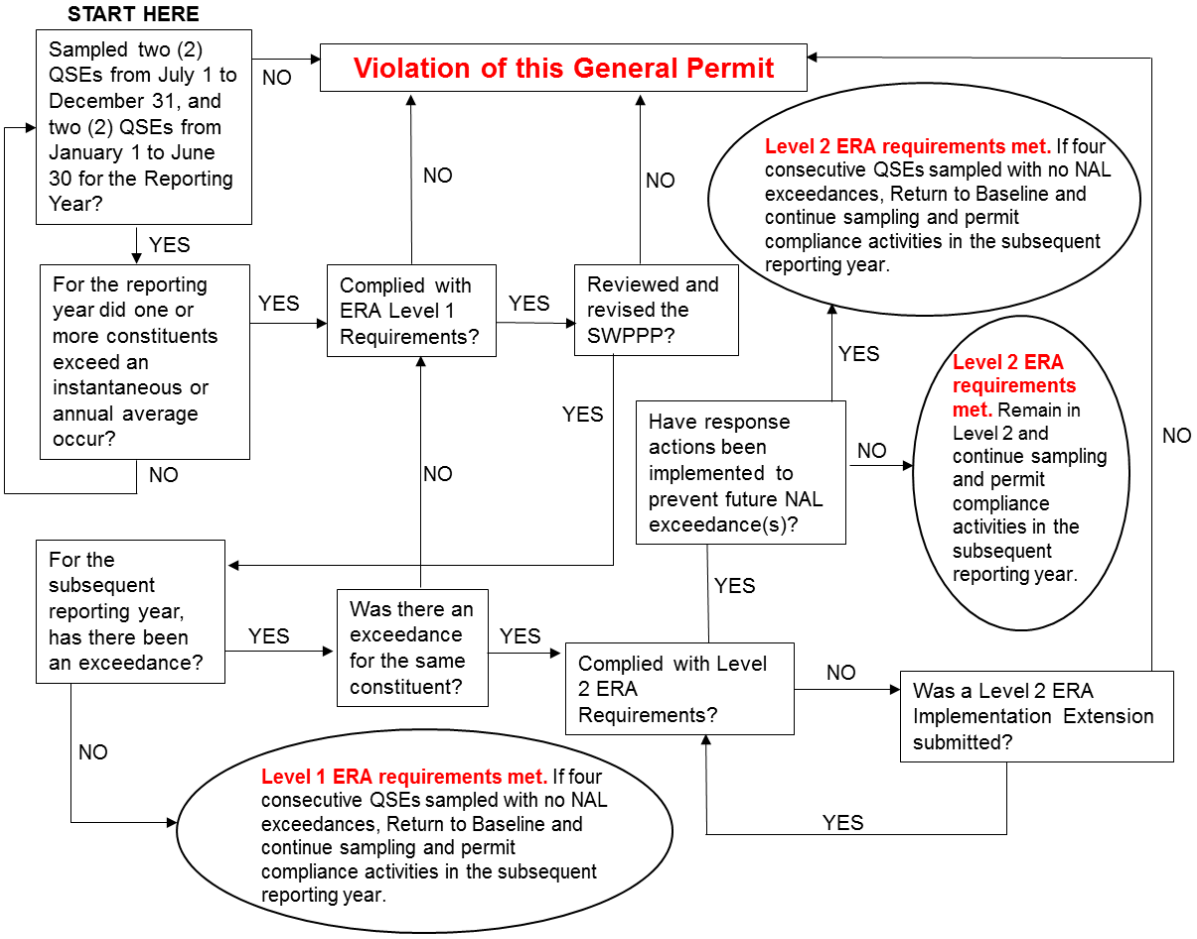
The State Water Board recognizes that it may not be feasible for all facilities to obtain four QSEs in a reporting year because there may not be enough qualifying storm events to do so. Therefore, a Discharger that is unable to collect and analyze storm water samples from two QSEs in each half of a reporting year due to a lack of QSEs is not in violation of Section XI.B.2. Dischargers that miss four QSEs during

a reporting year due to the fact that four QSEs did not occur are not required to make up these sampling events in subsequent reporting years.

The State Water Board recognizes that each facility has unique physical characteristics, industrial activities, and/or variations in BMP implementation and performance which warrants the requirement that each facility demonstrate its compliance. Figure 3 of this Fact Sheet provides a summary of all the monitoring-related requirements of this General Permit. This General Permit's monitoring requirements include sampling and analysis requirements for specific indicator parameters that indicate the presence of pollutants in industrial storm water discharges. The "indicator parameters" are oil and grease (for petroleum hydrocarbons), total suspended solids (for sediment and sediment bound pollutants) and pH (for acidic and alkaline pollutants). Additionally, Dischargers are required to evaluate their facilities and analyze samples for additional facility-specific parameters. These monitoring program requirements are designed to provide useful, cost-effective, timely, and easily obtained information to assist Dischargers as they identify their facility's pollutant sources and implement corrective actions and revise BMPs as necessary (Section XI.A.4 of this General Permit).

This General Permit requires a combination of visual observations and analytical monitoring. Visual observations provide Dischargers with immediate information indicating the presence of many pollutants and their sources. Dischargers must implement timely actions and revise BMPs as necessary (Section XI.A.4) when the visual observations indicate pollutant sources have not been adequately addressed in the SWPPP. Analytical monitoring provides an additional indication of the presence and concentrations of pollutants in storm water discharge. Dischargers are required to evaluate potential pollutant sources and corresponding BMPs and revise the SWPPP appropriately when specific types of NAL exceedances occur as described below.

FIGURE 3: Compliance Determination Flowchart



2. Visual Observations

There are two major changes to the visual observation requirements in this General Permit compared to the previous permit, which include:

a. Monthly Visual Observations

The previous permit required separate quarterly visual observations for unauthorized and authorized non-storm water discharges. It did not require periodic visual observations of the facility to determine whether all potential pollutant sources were being adequately controlled with BMPs. Prior drafts of this General Permit proposed the addition of pre-storm inspections. This was met with great resistance by Dischargers because of the complexity and burden of determining when a QSE would occur. Many of these Dischargers recommended that monthly BMP and non-storm water discharge visual observations should replace the proposed pre-storm inspections. This General Permit merges all visual observations into a single monthly visual observation.

b. Sampling Event Visual Observations

The previous permit required monthly storm water visual observations. This required Dischargers to conduct visual observations for QSEs that were not being sampled since only two QSEs were required to be sampled in the previous permit. As discussed below, the sampling requirement has been increased to four QSEs within each reporting year with two QSEs required in each half of the reporting year. We expect that this will result in more samples being collected and analyzed, since most of California experiences, on average, at least two QSEs per half year. This General Permit streamlines the storm water visual observation requirement by linking the visual observations to the time of sampling.

3. Sampling and Analysis

   a. General

      As part of the process for developing previous drafts of this General Permit, the State Water Board considered comments from numerous stakeholders concerning sampling and analysis. Sampling and analysis issues were the most dominant of all issues raised in the comments.

      The State Water Board received stakeholder comments that fall into three primary categories concerning this General Permit's sampling and analysis approach:

      i. Comments supporting an intensive water quality sampling and analysis approach (with the goal of producing more accurate discharge-characterizing and pollutant concentration data) as the primary method of determining compliance with effluent limitations and receiving water limitations. Since this approach requires large amounts of high quality data to accurately quantify the characteristics of the discharges, it is referred to as the quantitative monitoring approach. Stakeholders supporting the quantitative approach generally also support the use of stringent NELs to evaluate compliance with this General Permit;

      ii. Comments supporting only visual observations as the primary method of determining compliance: These stakeholders generally assert that storm water sampling is an incomplete and not very cost effective means of determining water quality impacts on the receiving waters; and,

      iii. Comments supporting a combination of visual observations and cost-effective water quality sampling and analysis approach (sampling and analysis that would produce data indicating the presence of pollutants) to determine compliance (similar to the previous permit's approach). Since this approach uses more qualitative information to describe the quality and characteristics of the discharges, it is referred to as the qualitative monitoring approach.

      Within each of the three categories, there are various recommendations and rationales as to the exact monitoring frequencies, procedures and methods, required to implement the approach. Stakeholders in favor of the quantitative monitoring approach commented that it is the only reliable and meaningful

method of assuring that: (1) BMPs are effective in reducing or preventing pollutants in storm water discharge in compliance with BAT/BCT, and (2) the discharge is not causing or contributing to an exceedance of a water quality standards. The stakeholders state that visual observations are not effective in measuring pollutant concentrations nor is it effective in determining the presence of colorless and/or odorless pollutants. The stakeholders state that qualitative monitoring (and the use of indicator parameters) will not provide results useful for calculating pollutant loading nor will it accurately characterize the discharge.

Stakeholders in favor of requiring only visual observations state that sampling and analysis is unnecessary because (1) the previous permit did not include NELs so the usefulness of sampling and analysis data is limited, (2) a significant majority of Dischargers should be able to develop appropriate BMPs without sampling and analysis data, (3) most pollutant sources and pollutants can be detected and mitigated through visual observations, (4) the costs associated with quantitative monitoring are excessive and disproportionate to any benefits, (5) U.S. EPA's storm water regulations do not require sampling, (6) The 2008 MSGP relies heavily on visual observations and requires only a limited number of specific industries to conduct sampling and analysis, and (7) the majority of Dischargers are small businesses and do not have sufficient training or understanding to perform accurate sampling and analysis.

Stakeholders in favor of requiring both visual observations and a cost-effective qualitative monitoring program state that (1) both are within the means and understanding of most Dischargers, and (2) monitoring results are useful for evaluating a Discharger's compliance without unnecessarily increasing the burden on the Discharger and without subjecting Dischargers to non-technical enforcement actions.

The State Water Board finds that it is feasible for the majority of Dischargers to develop appropriate BMPs without having to perform large amounts of quantitative monitoring, which can be very costly. In the absence of implementing NELs, the State Water Board has determined that the infeasibility and costs associated with developing quantitative monitoring programs at each of thousands industrial facilities currently permitted would outweigh the limited benefits. The primary difficulty associated with requiring intensive quantitative monitoring lies with the cost and the difficulty of accurately sampling industrial storm water discharges.

Stakeholders that support quantitative monitoring believe the data is necessary to determine pollutant loading, concentration, or contribution to water quality violations. In order to derive data necessary to support those goals, however, the data must be of high quality, meaning it must be accurate, precise and have an intact chain of custody. Many industrial facilities do not have well-defined storm water conveyance systems for sample collection. Storm water frequently discharges from multiple locations through sheet flow into nearby streets and adjoining properties. Sample collection from a portion of the sheet flow is an inexact measurement since not all of the flow is sampled. Requiring every Discharger to construct well-defined storm water conveyances may cost

anywhere from thousands to hundreds of thousands of dollars per facility depending on the size and nature of each industrial facility. At many facilities, the construction of such conveyances may also violate local building codes, create safety hazards, cause flooding, or increase erosion. In addition, eliminating sheet flow at some facilities could result in increased pollutant concentrations.

The State Water Board has considered the complexity and costs associated with quantitative monitoring. Unlike continuous point source discharges (e.g., publicly owned treatment works), storm water discharges are variable in intensity and duration. The concentration of pollutants discharged at any one time is dependent on many complex variables. The largest concentration of pollutants would be expected to discharge earlier in the storm event and taper off as discharges continue. Therefore, effective quantitative monitoring of storm water discharges would require that storm water discharges be collected and sampled until most or all of the pollutants have been discharged. Multiple samples would need to be collected over many hours. To determine the pollutant mass loading, the storm water discharge flow must also be measured each time a sample is collected.

For a quantitative monitoring approach to yield useful pollutant loading information, the installation of automatic sampling devices and flow meters at each discharge location would usually be necessary. In addition, qualified individuals would be needed to conduct the monitoring procedures, and to handle and maintain flow meters and automatic samplers are needed. A significant majority of storm water Dischargers under this General Permit do not possess the skills to manage such an effort. Dischargers will bear the cost of employing and/or training on-site staff to do this work, or the cost of contracting with environmental consultants and acquiring the required flow meters and automatic samplers. The cost to Dischargers to conduct quantitative monitoring varies depending on the number of outfalls, the number of storms, the length of each storm, the amount of staff training, and other variables.

To address these concerns, this General Permit includes a number of new items that bridge the gap between the previous permit's qualitative monitoring and the quantitative approach recommended by many commenters. This General Permit includes a requirement for all Dischargers to designate a QISP when they enter Level 1 status due to NAL exceedances. The QISP is required to be trained to: (1) more accurately identify discharge locations representative of the facility storm water discharge (2) select and implement appropriate sampling procedures (3) evaluate and develop additional BMPs to reduce or prevent pollutants in the industrial storm water discharges.

Dischargers that fail to develop and implement an adequate Monitoring Implementation Plan that includes both visual observations and sampling and analysis, are in violation of this General Permit. Dischargers that fail to comply with Level 1 status and Level 2 status ERA requirements, triggered by NAL exceedances, are in violation of this General Permit.

Water Code section 13383.5 requires that the State Water Board include (1) standardized methods for collection of storm water samples, (2) standardized methods for analysis of storm water samples, (3) a requirement that every sample analysis be completed by a State certified laboratory or in the field in accordance with Quality Assurance and Quality Control (QA/QC) protocols, (4) a standardized reporting format, (5) standardized sampling and analysis programs for QA/QC, and (6) minimum detection limits. The monitoring requirements in this General Permit (Section XI), as supplemented by SMARTS, address these requirements.

Under the previous permit, many Dischargers did not developed adequate sample collection and handling procedures, decreasing the quality of analytical results. In addition, Dischargers often selected inappropriate test methods, method detection limits, or reporting units. This General Permit requires all Dischargers to identify discharge locations that are representative of industrial storm water discharges and develop and implement reasonable sampling procedures to ensure that samples are not mishandled or contaminated.

It is infeasible for the State Water Board to provide a single comprehensive set of sample collection and handling procedures/instructions due to the wide variation in storm water conveyance and collection systems in use at facilities around the state. As an alternative, Attachment H of this General Permit provides minimum storm water sample collection and handling instructions that pertain to all facilities. Dischargers are required to develop facility-specific sample collection and handling procedures based upon these minimum requirements. Table 2 in this General Permit provides the minimum test methods that shall be used for a variety of common pollutants. Dischargers must be aware that use of more sensitive test methods (e.g., U.S. EPA Method 1631 for Mercury) may be necessary if they discharge to an impaired water body or are otherwise required to do so by the Regional Water Board. This General Permit allows Dischargers to propose an analytical test method for any parameter or pollutant that does not have an analytical test method specified in Table 2 or in SMARTS. Dischargers may also propose analytical test methods with substantially similar or more stringent method detection limits than existing approved analytical test methods. Upon approval, SMARTS will be updated over time to add additional acceptable analytical test methods.

The previous permit allowed Dischargers to reduce sampling analysis requirements for substantially similar drainage areas by either (1) combining samples for an unspecified maximum number of substantially similar drainage areas, or (2) sampling a reduced number of substantially similar drainage areas. The State Water Board provided this procedure to reduce analytical costs. The complexity associated with determining substantially similar drainage areas has led Dischargers to produce various, and sometimes questionable, analytical schemes. In addition, the previous permit did not establish a maximum number of samples that could be combined.

To standardize sample collection and analysis as required by Water Code section 13383.5, while continuing to offer a reduced analytic cost option, these

requirements have been revised. Section XI.B.4 of this General Permit requires Dischargers to collect samples from all discharge locations regardless of whether the discharges are substantially similar or not. Dischargers may analyze each sample collected, or may analyze a combined sample consisting of equal volumes, collected from as many as four (4) substantially similar discharge locations. A minimum of one combined sample shall be analyzed for every one (1) to four (4) discharge locations, and the samples shall be combined in the lab in accordance with Section XI.C.5 of this General Permit.

Representative sampling is only allowed for sheet flow discharges or discharges from drainage areas with multiple discharge locations. Dischargers shall select the appropriate location(s) to be sampled and intervals necessary to obtain samples representative of storm water associated with industrial activities generated within the corresponding drainage area. Dischargers are not required to sample discharge locations that have no exposure of industrial activities or materials as defined in Section XVII of this General Permit within the corresponding drainage area. However, Dischargers are required to conduct the monthly visual observations regardless of the selected locations to be sampled.

This General Permit defines a QSE as a precipitation event that produces a discharge from any drainage area that is preceded by 48 consecutive hours without a discharge from any drainage area. The previous permit did not include a QSE definition; instead, it utilized a different approach to defining the storm events that were required to be sampled. Under the previous permit, eligible storm events were storm events that occurred after three consecutive working days of dry weather. The three consecutive working days of dry weather definition in the previous permit led Dischargers to miss many opportunities to sample. Some Dischargers were unable to collect samples from two storm events in certain years under the previous definition. To resolve this difficulty, this General Permit increases the sampling requirements to four (4) QSEs per year, while decreasing the number of days without a discharge, resulting in additional opportunities for Dischargers to sample. Additionally, by eliminating the previous permit's reference to "dry weather," this General Permit allows some precipitation to occur between QSEs so long as there is no discharge from any drainage area. This change will result in more QSE sampling opportunities.

To improve clarity and consistency, the definitions contained in other storm water permits were considered with the goal of developing a standard definition for 'dry weather' for this General Permit. The 2008 MSGP sets a "measurable storm event" as one that produces at least 0.1 inches of precipitation and results in an actual discharge after 72 hours (three days) of dry weather. The State of Washington defines a "qualifying storm event" as a storm with at least 0.1 inches of precipitation preceded by at least 24 hours of no measurable precipitation, mirroring the definition found in the previous MSGP (2000 version). The State of Oregon requires that samples be taken in the first 12 hours of discharge and no less than 14 days apart. Review of other permits concludes that there is not a single commonly used approach to triggering sampling in industrial general permits. Therefore an enforceable sampling trigger is included in this General

permit that requires Dischargers to sample four storm events within each reporting year.

b. Effluent Water Quality Sampling and Analysis Parameters

Dischargers are required to sample and analyze their effluent for certain parameters. "Parameter" is a term used in laboratory analysis circles to represent a distinct, reportable measure of a particular type. For example, ammonia, hexavalent chromium, total nitrogen and chemical oxygen demand are all parameters that a laboratory can analyze storm water effluent for and report a quantity back. A parameter is also an indicator of pollution. In this General Permit, pH, total suspended solids and chemical oxygen demand are examples of indicator parameters. They are not direct measures of a water quality problem or condition of pollution but can be used to indicate a problem or condition of pollution. Indicator parameters can also be used to indicate practices and/or the presence of materials at a facility to bring forth information for compliance evaluation processes, like annual report review and inspection. For example, chemical oxygen demand concentrations can indicate the presence of dissolved organic compounds, like residual food from collected recycling materials.

Minimum parameter-specific monitoring is required for Dischargers, regardless of whether additional facility-specific parameters are selected. This General Permit requires some parameters to be analyzed and reported for the duration of permit coverage to develop comparable sampling data over time and over many storm events and to demonstrate compliance. The Regional Water Boards may use such data to evaluate individual facility compliance and assess the differences between various industries. Accordingly, the parameters selected correspond to a broad range of industrial facilities, are inexpensive to sample and analyze, and have sampling and analysis methods which are easy to understand and implement. Some analytical methods for field measurements of some parameters, such as pH, may be performed using relatively inexpensive field instruments and provides an immediate alert to possible pollutant sources.

The following three selected minimum parameters are considered indicator parameters, regardless of facility type. These parameters typically provide indication and/or the correlation of whether other pollutants are present in storm water discharge. These parameters were selected for the following reasons:

i. pH is a numeric measurement of the hydrogen-ion concentration. Many industrial facilities handle materials that can affect pH. A sample is considered to have a neutral pH if it has a value of 7. At values less than 7, water is considered acidic; above 7 it is considered alkaline or basic. Pure rain water in California typically has a pH value of approximately 7.

ii. Total Suspended Solids (TSS) is an indicator of the un-dissolved solids that are present in storm water discharge. Sources of TSS include sediment from erosion, and dirt from impervious (i.e., paved) areas. Many pollutants adhere to sediment particles; therefore, reducing sediment will reduce the amount of these pollutants in storm water discharge.

iii. Oil and Grease (O&G) is a measure of the amount of O&G present in storm water discharge. At very low concentrations, O&G can cause sheen on the surface of water. O&G can adversely affect aquatic life, create unsightly floating material, and make water undrinkable. Sources of O&G include, but are not limited to, maintenance shops, vehicles, machines and roadways.

The previous permit allowed Dischargers to analyze samples for either O&G or Total Organic Carbon (TOC). This General Permit requires all Dischargers analyze samples for O&G since almost all Dischargers with outdoor activities operate equipment and vehicles can potentially generate insoluble oils and greases. Dischargers with water soluble-based organic oils may be required to also test for TOC. The TOC and O&G tests are not synonymous, duplicative or interchangeable.

This General Permit removes the requirement to analyze for specific conductance as part of the minimum analytic parameters. Specific conductance is not required by U.S. EPA for any industry type. Additionally, stakeholder comments indicate that there are many non-industrial sources that may cause high specific conductance and interfere with the efficacy of the test. For example, salty air deposition that occurs at facilities in coastal areas may raise the specific conductance in water over 500 micro-ohms per centimeter (µhos/cm). Dischargers are not prevented from performing a specific conductance test as a screening tool if it is useful to detect a particular pollutant of concern as required (e.g. salinity).

This General Permit requires Dischargers subject to Subchapter N ELGs for pH to analyze for pH using approved test methods in accordance with 40 Code of Federal Regulations part 136. These federal regulations specify that analysis of pH must take place within 15 minutes of sample collection. All other Dischargers may screen for pH using wide range litmus pH paper or other equivalent pH test kits within 15 minutes of sample collection. If in any reporting year a Discharger has two or more pH results outside of the range of 6.0 – 9.0 pH units, that Discharger is required to comply with the approved test methods in 40 Code of Federal Regulations part 136 in subsequent reporting years.

For almost all Dischargers, obtaining laboratory analysis within 15 minutes is logistically impossible. For many Dischargers, maintaining a calibrated pH meter is difficult, labor intensive, and error prone. Screening for pH will limit the number of additional Dischargers required to comply with 40 Code of Federal Regulations part 136 methods to those that have pH measures outside the range of 6.0-9.0 pH units. The use of wide range litmus pH paper or other equivalent pH test kits is not as accurate as a calibrated pH meter, however litmus paper is allowed in the 2008 MSGP, and when used properly it can provide an accurate screening measure to determine if further more-accurate pH sampling is necessary to determine compliance.

Review of available monitoring data shows that storm water discharges from most types of industrial facilities comply with the pH range of 6.0 to 9.0 pH units. There are specific types of industries, like cement or concrete manufacturers that

have shown a trend of higher pH values very close to 9.0 pH units. Rather than require all industries as a whole to monitor with the more costly 40 Code of Federal Regulations part 136 methods, this General Permit establishes a triggering mechanism for these more advanced pH test methods. The Regional Water Boards retain their authority to require more accurate test methods. Once a Discharger triggers the requirement to use the more accurate testing methods in 40 Code of Federal Regulations part 136, the Discharger may not revert back to screening for pH for the duration of coverage under this General Permit.

In the early 1990s, U.S. EPA, through its group application program, evaluated nationwide monitoring data and developed the listed parameters and SIC associations shown in Table 1 of this General Permit. The 2008 MSGP requires that Dischargers analyze storm water effluent for the listed parameters under certain conditions. In addition to the parameters in Table 1 of this General Permit, Dischargers are required to select additional facility-specific analytical parameters to be monitored, based upon the types of materials that are both exposed to and mobilized by contact with storm water. Dischargers must, at a minimum, understand how to identify industrial materials that are handled outdoors and which of those materials can easily dissolve or be otherwise transported via storm water.

The Regional Water Boards have the authority to revise the monitoring requirements for an individual facility or group of facilities based on site-specific factors including geographic location, industry type, and potential to pollute. For example, the Los Angeles Regional Water Board required all dismantlers (SIC Code 5015) within their jurisdiction to monitor for copper and zinc instead of aluminum and iron during the term of the previous permit. SMARTS will be programmed to incorporate any monitoring revisions required by the Regional Water Boards. Dischargers will receive email notification of the monitoring requirement revision and their SMARTS analytical reporting input screen will display the corresponding revisions. Dischargers may add, but not otherwise modify, the sampling parameters on their SMARTS input screen.

Dischargers are also required to identify pollutants that may cause or contribute to an existing exceedance of any applicable water quality standards for the receiving water. This General Permit requires Dischargers to control its discharge as necessary to meet the receiving water limitations, and to select additional monitoring parameters that are representative of industrial materials handled at the facility (regardless of the degree of storm water contact or relative mobility) that may be related to pollutants causing a water body to be impaired.

4. Methods and Exceptions

   a. Storm Water Discharge Locations

      Dischargers are required to visually observe and collect samples of industrial storm water discharges from each drainage area at all discharge locations. These samples must be representative of the storm water discharge leaving each drainage area. This is a change from the previous permit which allowed a

Discharger to reduce the number of discharge locations sampled if two or more discharge locations were substantially similar.

Dischargers are required to identify, when practicable, alternate discharge locations if: (1) the facility's industrial drainage areas are affected by storm water run-on from surrounding areas that cannot be controlled, or (2) discharge locations are difficult to observe or sample (e.g. submerged discharge outlets, dangerous discharge location accessibility).

b. Representative Sampling Reduction

Some stakeholders have indicated that there are unique circumstances where sampling a subset of representative discharge locations fully characterizes the full set of storm water discharges. Stakeholders provided examples related to drainage areas with multiple discharge locations where sampling only a subset of these discharge locations produces results that are representative of the drainage areas' storm water discharges. In such situations, this General Permit allows Dischargers to reduce the number of discharge locations. For each drainage area with multiple discharge locations (e.g. roofs with multiple downspouts, loading/unloading areas with multiple storm drain inlets), the Discharger may reduce the number of discharge locations to be sampled if the conditions in Section XI.C.4 of this General Permit are met.

c. Qualified Combined Samples

Dischargers may combine samples from up to four (4) discharge locations if the industrial activities within each drainage area and each drainage area's physical characteristics (i.e. grade, surface materials) are substantially similar.

Dischargers are required to provide documentation in the Monitoring Implementation Plan supporting that the above conditions have been evaluated and fulfilled. A Discharger may combine samples from more than four (4) discharge locations only with approval from the appropriate Regional Water Board.

d. Sample Collection and Visual Observation Exceptions

Dischargers are not required to collect samples or conduct visual observations during dangerous weather conditions such as flooding or electrical storms, or outside of scheduled facility operating hours. A Discharger is not precluded from conducting sample collection activities or visual observations outside of scheduled facility operating hours.

In the event that a Discharger is unable to collect the required samples or conduct visual observations due to the above exceptions, the Discharger must include an explanation of the conditions obstructing safe monitoring in its Annual Report. If access to a discharge location is dangerous on a routine basis, a Discharger must choose an alternative discharge location in accordance with General Permit Section XI.C.3.

e. Sampling Frequency Reduction

Facilities that do not have NAL exceedances for four (4) consecutive QSEs are unlikely to pose a significant threat to water quality. If the storm water from these facilities is also in full compliance with this General Permit, the Discharger is eligible for a reduction in sampling frequency. The Sampling Frequency Reduction allows a Discharger to decrease its monitoring from four (4) samples within each reporting year to one (1) QSE within the first half of each reporting year (July 1 to December 31) and one (1) QSE within the second half of each reporting year (January 1 to June 30). If a Discharger has a subsequent NAL exceedance after the Sampling Frequency Reduction, it must comply with the original sampling requirements of this General Permit. Only Dischargers that have baseline status or that have satisfied the Level 1 requirements are eligible for this sampling and analysis reduction.

A Discharger requesting to reduce its sampling frequency shall certify and submit a Sampling Frequency Reduction certification via SMARTS. The Sampling Frequency Reduction certification shall include documentation that the General Permit conditions for the Sampling Frequency Reduction have been satisfied.

Dischargers participating in a Compliance Group and certifying a Sampling Frequency Reduction are only required to collect and analyze storm water samples from one (1) QSE within each reporting year. These Dischargers must receive year-round compliance assistance from their Compliance Group Leader and must comply with all requirements of this General Permit.

5. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

Federal regulations at Subchapter N establish ELGs for industrial storm water discharges from facilities in eleven industrial sectors. For these facilities, compliance with the ELGs constitutes compliance with the technology standard of BPT, BAT, BCT, or New Source Performance Standards provided in the ELG for the specified pollutants, and compliance with the technology-based requirements in this General Permit for the specified pollutant.

K. Exceedance Response Actions (ERAs)

1. General

The previous permit did not incorporate the benchmarks from any of the MSGPs or NALs for Dischargers to evaluate sampling results. Unlike the requirements for industrial storm water discharges that cause or contribute to an exceedance of a water quality standards, the previous permit did not provide definitions, procedures or guidelines to assess sampling results. Many Regional Water Boards have formally or informally notified Dischargers that exceedances of the MSGP benchmarks should be used to determine whether additional BMPs are necessary. However, there was considerable confusion as to the extent to which a Discharger would be expected to implement actions in response to exceedances of these values, and the timelines that had to be met to prevent an enforcement action. The lack of specificity with regards to what constituted an exceedance, and what actions

are required in response to an exceedance, have been identified as a problem by the Water Boards, industry and environmental stakeholders.

This General Permit contains two (2) types of NALs. Annual NALs function similarly to, and are based upon, the values provided in the 2008 MSGP. Instantaneous maximum NALs target hot spots or episodic discharges of pollutants and are established based on California industrial storm water discharge monitoring data. When a Discharger exceeds an NAL it is required to perform ERAs. The ERAs are divided into two levels of responses and can generally be differentiated by the number of years in which a facility's discharge exceeds an NAL trigger. These two levels are explained further in Section XII of this General Permit. This ERA process provides Dischargers with an adaptive management-based process to develop and implement cost-effective BMPs that are protective of water quality and compliant with this General Permit. This process is also designed to provide Dischargers with a more defined pathway towards full compliance.

The ERA requirements in this General Permit were developed using best professional judgment and Water Board experience with the shortcomings of the previous permit's compliance procedures. Public comments received during State Water Board hearings on the 2002, 2005, 2011, 2012 and 2013 draft permits, and NPDES industrial storm water discharge permits from other states with well-defined ERA requirements were also considered by the State Water Board.

The State Water Board presumes that one single NAL exceedance for a particular parameter is not a clear indicator that a facility's discharge is out of compliance with the technology-based effluent limitations or receiving water limitations. This presumption recognizes the highly variable nature of storm water discharge and the limited value of a single quarterly grab sample to represent the quality of a facility's storm water discharge for an entire storm event and all other non-sampled storm events. With this presumption, the State Water Board is addressing costly monitoring requirements that do not bring forth valuable compliance and/or water quality information.

2. NALs and NAL Exceedances

   a. This General Permit contains two types of NAL exceedances as follows:

      Annual NAL exceedance - the Discharger is required to calculate the average annual concentration for each parameter using the results of all sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data), and compare the annual average concentration to the corresponding Annual NAL values in Table 2 of this General Permit. An annual NAL exceedance occurs when the annual average of all the sampling results for a parameter taken within a reporting year exceeds the annual NAL value for that parameter listed in Table 2 of this General Permit.

      For the purposes of calculating the annual average concentration for each parameter, this General Permit considers any sampling result that are a "non-detect" or less than the method detection limit as a zero (0) value. The reason to use zero (0) values instead of the detected but not quantifiable

value (minimum level or reporting limit) is that these values are very low and are unlikely to contribute to an NAL exceedance. There are statistical methods to include low values when calculations are for numeric criteria and limitations, however, the NALs in this General Permit are approximate values used to provide feedback to the Discharger on site performance, and are not numeric criteria or limitations. Therefore, it is not necessary to include these insignificant values in the calculations for the NALs. For Dischargers using composite sampling or flow measurement in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA Guidance Manual for the Monitoring and Reporting Requirements of the NPDES Multi-Sector Storm Water General Permit.[14]

i. Instantaneous maximum NAL exceedance - the Discharger is required to compare all sampling and analytical results from each distinct sample (individual or combined) to the corresponding instantaneous maximum NAL values in Table 2 of this General Permit. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G), or are outside of the instantaneous maximum NAL range (for pH).

b. Instantaneous maximum NAL analysis

In its June 19, 2006 report, the Blue Ribbon Panel of Experts (Panel) made several specific recommendations for how to set numeric limitations in future industrial storm water general permit(s). For sites not subject to TMDLs, the Panel suggested that the numeric values be based upon industry types or categories, with the recognition that each industry has its own specific water quality issues and financial viability. Furthermore, the Panel concluded:

> To establish Numeric Limits for industrial sites requires a reliable database, describing current emissions by industry types or categories, and performance of existing BMPs. The current industrial permit has not produced such a database for most industrial categories because of inconsistencies in monitoring or compliance with monitoring requirements. The Board needs to reexamine the existing data sources, collect new data as required and for additional water quality parameters (the current permit requires only pH, conductivity, total suspended solids, and either total organic carbon or oil and grease) to establish practical and achievable Numeric Limits.

The Panel suggested an alternative method that would allow the use of the existing Water Board dataset to establish action levels, referred to as the “ranked percentile” method. The Panel recommended:

[14] U.S. EPA. NPDES Storm Water Sampling Guidance Document. Web. July 1992. <http://www.epa.gov/npdes/pubs/owm0093.pdf>. [as of February 4, 2014].

> The ranked percentile approach (also a statistical approach) relies on the average cumulative distribution of water quality data for each constituent developed from many water quality samples taken for many events at many locations. The Action Level would then be defined as those concentrations that consistently exceed some percentage of all water quality events (i.e. the 90th percentile). In this case, action would be required at those locations that were consistently in the outer limit (i.e. uppermost 10th percentile) of the distribution of observed effluent qualities from urban runoff.

After performing various data analysis exercises with the Water Board dataset, State Water Board staff concluded that the Water Board dataset is not adequate to calculate instantaneous NAL values using the Panel's recommended method for all of parameters that have annual NAL values based on the U.S. EPA benchmarks. Additionally, public comments on the January 2011 draft of this General Permit suggest that it is problematic to calculate NAL values based on the existing data. Therefore, the Water Board dataset was not used to calculate instantaneous NAL values for all parameters.

However, since all Dischargers regulated under the previous permit were required to sample for TSS and O&G/TOC, State Water Board staff found that the existing dataset for these parameters is of sufficient quality to calculate instantaneous NAL values. State Water Board staff also found that this data was less prone to what appear to be data input errors. The final dataset used to calculate the instantaneous NALs in this General Permit had outlier values that were eliminated from the dataset by using approved test method detection limits ranges. The methods and corresponding method detection limit ranges used to screen outliers are as follows:

- O&G - EPA 413.1 Applicable Range: 5-1,000 mg/L
- O&G - EPA 1664 Applicable Range: 5-1,000 mg/L
- TSS - EPA 160.2 Applicable Range: 4-20,000 mg/L

The intent of the instantaneous maximum NAL is to identify specific drainage areas of concern or episodic sources of pollution in industrial storm water that may indicate inadequate storm water controls and/or water quality impacts. In the effort to add instantaneous NAL exceedances to the ERA process, the State Water Board explored different options for the development of an appropriate value (i.e. percentile approach, benchmarks times a multiplier, confidence intervals). The California Stormwater Quality Association's comments on the previous draft permit included a proposed method for calculating NAL values using a percentile approach. The State Water Board researched and evaluated this methodology and determined it is the most appropriate way to directly compare available electronic sampling data from Dischargers regulated under the previous permit. This percentile approach was used to establish the instantaneous maximum NALs in this General Permit, for discharges to directly compare with sampling results and identify drainage areas of water quality concern.

The percentile approach is a non-parametric approach identified in many statistical textbooks for determining highly suspect values. Highly suspect values are defined as values that exceed the limits of the outer fences of a box plot. Upper limits of the outer fence are calculated by adding three times the inter-quartile range (25th to 75th percentiles) to the upper-end of the inter-quartile range (the 75th percentile). The California Stormwater Quality Association calculated an NAL value of 401 mg/L for TSS using the percentile approach using the Water Board dataset. The State Water Board performed the same analysis with the same Water Board dataset and calculated a slightly different value of 396 mg/L; therefore, the instantaneous maximum NAL value for TSS of 400 mg/L was established. Appling the percentile approach to the existing O&G data results in the instantaneous maximum NAL value for O&G of 25 mg/L.

The State Water Board compared existing sampling data to the instantaneous maximum NAL values and concluded that seven (7) percent of the total samples exceeded the highly suspected value for TSS and 7.8 percent of the total samples exceeded the highly suspected value for O&G. These results suggest that the instantaneous maximum NAL values are adequate to identify drainage areas of concern statewide since they are not regularly exceeded. Using best professional judgment, the State Water Board concludes that an exceedance of these values twice within a reporting year is unlikely to be the result of storm event variability or random BMP implementation problems, and the use of the percentile approach is therefore appropriate.

Due to issues with the ranges of concentrations and the logarithmic nature of pH, statistical methods cannot be applied to pH in the same ways as other parameters. Review of storm water sampling data by the State Water Board and other stakeholders has shown that pH is not typically a parameter of concern for most industrial facilities. Accordingly, a range of pH limits established in Regional Water Board Basin Plans is implemented in this General Permit for the instantaneous maximum NAL values. Most Basin Plans set a water quality objective of 6.0 - 9.0 pH units for water bodies, an exceedance outside the range of 6.0 - 9.0 pH units is consistent with the water quality concerns for pH among Regional Water Boards. An industrial facility with proper BMP implementation is expected to have industrial storm water discharges within the range of 6.0 - 9.0 pH units.

High concentrations of TSS and O&G, or pH values outside the range of 6.0 – 9.0 pH units, in a discharge may be an indicator of potential BMP implementation or receiving water quality concerns with other pollutants with parameters that do not have an instantaneous maximum NAL value. The State Water Board may consider instantaneous maximum NAL values for other parameters in a subsequent reissuance of this General Permit, based on data collected during this General Permit term.

The percentile approach is considered by many stakeholders to be the best method to evaluate BMP performance and general effluent quality in a community or population where the vast majority of the industrial facilities are implementing sufficient pollutant control measures. The Water Board's current

dataset does not provide a way of evaluating actual BMP implementation at each facility when analyzing the data; therefore the monitoring information reported during the previous permit term cannot be linked to compliance with technology-based standards. The State Water Board intends to use data collected during this General Permit term to evaluate the percentile approach, improve the quality of collected data for other parameters, and further develop an understanding of how reported data relates to implemented BMP-control technologies.

Under this General Permit, a Discharger enters Level 1 status and must fulfill the Level 1 status ERA requirements following its first occurrence of any NAL exceedance. Level 2 status ERA requirements follow the second occurrence of an NAL exceedance for the same parameter in a subsequent reporting year. This ERA process provides Dischargers with an adaptive management-based process to develop and implement cost-effective BMPs that are protective of water quality and compliant with this General Permit. This General Permit's ERA process is designed to have a well-defined compliance end-point. It is not a violation of this General Permit to exceed the NAL values; it is a violation of the permit, however, to fail to comply with the Level 1 status and Level 2 status ERA requirements in the event of NAL exceedances.

The State Water Board acknowledges that storm water discharge concentrations are often highly variable and dependent upon numerous circumstances such as storm size, the time elapsed since the last storm, seasonal activities, and the time of sample collection. Since there are potential enforcement consequences for failure to comply with this General Permit's ERA process, the State Water Board's intention is to use NAL exceedances to solely require Dischargers with recurring annual NAL exceedances or drainage areas that produce recurring instantaneous maximum NAL exceedances to be subject to the follow-up ERA requirements.

If NALs exceedances do not occur, the State Water Board generally expects that the Discharger has implemented sufficient BMPs to control storm water pollution. When NAL exceedances do occur, however, the potential that the Discharger may not have implemented appropriate and/or sufficient BMPs increases, and the Discharger is required to implement escalating levels of ERAs. If NAL exceedances occur, this General Permit requires Dischargers to evaluate and potentially install additional BMPs, or re-evaluate and improve existing BMPs to be in compliance with this General Permit.

3. Baseline Status

At the beginning of a Discharger's NOI coverage under this General Permit, the Discharger has Baseline status. A Discharger demonstrating compliance with all NALs will remain at Baseline status and is not required to complete Level 1 status and Level 2 status ERA requirements.

If a Discharger has returned to Baseline status (from Level 2 status) and additional NAL exceedances occur, the Discharger goes into Level 1 status, then potentially

Level 2 status. Dischargers do not go directly into Level 2 status from Baseline status.

4. Level 1 Status

   Regardless of when an NAL exceedance occurs during Baseline status, a Discharger's status changes from Baseline status to Level 1 status on July 1 of the subsequent reporting year. By October 1 following the commencement of Level 1 status, the Discharger is required to appoint a QISP to assist with the completion of the Level 1 Evaluation. The Level 1 Evaluation must include a review of the facility's SWPPP for compliance with the effluent and receiving water limitations of this General Permit, an evaluation of the industrial pollutant sources at the facility that are or may be related to the NAL exceedance(s), and identification of any additional BMPs that will eliminate future exceedances. When conducting the Level 1 Evaluation, a Discharger must ensure that all potential pollutant sources that could be causing or contributing to the NAL exceedance(s) are fully characterized, that the current BMPs are adequately described, that employees responsible for implementing BMPs are appropriately trained, and that internal procedures are in place to track that BMPs are being implemented as designed in the SWPPP. A Discharger is additionally required to evaluate the need for additional BMPs. Level 1 ERAs are designed to provide the Discharger the opportunity to improve existing BMPs or add additional BMPs to comply with the requirements of this General Permit.

   By January 1 following commencement of Level 1 status, a Discharger is required to certify and submit via SMARTS a Level 1 ERA Report prepared by a QISP. The Level 1 ERA Report must contain a summary of the Level 1 Evaluation, all new or revised BMPs added to the SWPPP.

   In most cases, the State Water Board believes that Level 1 status BMPs will be operationally related rather than structural and, therefore can be implemented without delay. Recognizing that a Discharger should not be penalized for sampling results obtained before implementing BMPs, sampling results for parameters and their corresponding drainage areas that caused the NAL exceedance up to October 1 or the date the BMPs were implemented, whichever is sooner, will not be used for calculating NAL exceedances. Although this General Permit allows up to January 1 to implement Level 1 status BMPs, the State Board has chosen an interim date of October 1 to encourage more timely Level 1 BMP implementation. Dischargers who implement Level 1 BMPs after October 1 may risk obtaining subsequent sampling results that may cause them to go into Level 2 status.

5. Level 2 Status

   Level 2 ERAs are required during any subsequent reporting year in which the same parameter(s) has an NAL exceedance (annual average or instantaneous maximum), if this occurs, a Discharger's status changes from Level 1 status to Level 2 status on July 1 of the subsequent reporting year. Dischargers with Level 2 status must further evaluate BMP options for their facility. Dischargers may have to implement additional BMPs, which may include physical, structural, or mechanical devices that

are intended to prevent pollutants from contacting storm water. Examples of such controls include, but are not limited to:

- Enclosing and/or covering outdoor pollutant sources within a building or under a roofed or tarped outdoor area.

- Physically separating the pollutant sources from contact with run-on of uncontaminated storm water.

- Devices that direct contaminated storm water to appropriate treatment BMPs (e.g., discharge to sanitary sewer as allowed by local sewer authority).

- Treatment BMPs including, but not limited to, detention ponds, oil/water separators, sand filters, sediment removal controls, and constructed wetlands.

Dischargers may select the most cost-effective BMPs to control the discharge of pollutants in industrial storm water discharges. Where appropriate, BMPs can be designed and targeted for various pollutant sources (e.g., providing overhead coverage for one potential pollutant while discharging to a detention basin for another source may be the most cost-effective solution).

a. Level 2 ERA Action Plans

The State Water Board acknowledges that there may be circumstances that make it difficult, if not impossible, for a Discharger to immediately implement additional BMPs. For example, it may take time to get a contract for construction in place, obtain necessary building permits, and design and construct the BMPs. Dischargers may also suspect that pollutants are from a non-industrial or natural background source and need time to study their site. A Discharger is required to certify and submit an Action Plan prepared by a QISP via SMARTS by January 1 following the reporting year in which the NAL exceedance that resulted in the Discharger entering Level 2 occurred. The Level 2 ERA Action Plan requires a Discharger to propose actions necessary to complete the Level 2 ERA Technical Report, the demonstrations the Discharger has selected, and propose a time frame for implementation.

If a Discharger changes the QISP assisting with the Level 2 ERA requirements this General Permit requires the Discharger to update the QISP information via SMARTS. Current information on individuals assisting Dischargers with compliance of this General Permit provides the Water Boards with the necessary contact information if there are questions on the submitted documents, and for possible verification of a QISP's certification.

Dischargers are required to address each Level 2 NAL exceedance in an Action Plan. The State Water Board recognizes that Dischargers with Level 2 status may have multiple parameters or facility areas that have Level 2 NAL exceedances and the timing of the exceedances may make it very difficult to address all Level 2 NAL exceedances in one Action Plan. When Level 2 ERA exceedances occur in subsequent reporting years, after an Action Plan is

certified and submitted, a Discharger will need to develop an Action Plan for this new Level 2 NAL exceedance. This General Permit defines new Level 2 NAL exceedances as an exceedance for a new parameter in any drainage area at the facility, or an exceedance for the same parameter being addressed in an existing Action Plan, but where the exceedance occurred in a different drainage area than identified in the existing Action Plan.

b. Level 2 ERA Technical Reports

The Level 2 ERA Technical Report contains three different options that require a Discharger to submit demonstrations showing the cause of the NAL exceedance(s). This General Permit requires a Discharger to appoint a QISP to prepare the Level 2 ERA Technical Reports. The State Water Board acknowledges that there may be cases where a combination of the demonstrations may be appropriate; therefore a Discharger may combine any of the following three demonstration options in their Level 2 ERA Technical Report when appropriate. A Discharger is only required to annually update its Level 2 ERA Technical Report when necessary as defined in Section XII.D.3.c of this General Permit, and is not required to annually re-certify and re-submit the entire Level 2 ERA Technical Report. If there are no changes prompting an update of the Level 2 ERA Technical Report, as specified in Section XII.D.3.c of this General Permit, the Discharger will provide this certification in the Annual Report that there have been no changes warranting re-submittal of the Level 2 ERA Technical Report.

i. Industrial Activity BMPs Demonstration

The Industrial Activity BMPs Demonstration is for the following:

- Dischargers who decided to implement additional BMPs that are expected to eliminate future NAL exceedance(s) and that have been implemented in order to achieve compliance with the technology-based effluent limitations of this General Permit, and

- Dischargers who decided to implement additional BMPs that may not eliminate future NAL exceedance(s) and that have been implemented in order to achieve compliance with the technology-based effluent limitations of this General Permit.

When preparing the Industrial Activity BMPs Demonstration, the QISP shall identify and evaluate all individual pollutant source(s) associated with industrial activity that are or may be related to an NAL exceedance and all designed, information on the drainage areas associated with the Level 2 NAL exceedances, and installed BMPs that are implemented to reduce or prevent pollutants in industrial storm water discharges in compliance with this General Permit.

If an Industrial Activity BMPs Demonstration is submitted as the Level 2 ERA Technical Report and the Discharger is able to show reductions in pollutant concentrations below the NALs for four (4) subsequent consecutive QSEs, the Discharger returns to Baseline Status. A Discharger that submits an Industrial Activity BMPs Demonstration but has not installed additional BMPs that are expected to eliminate future NAL exceedance(s) will remain with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

ii. Non-Industrial Pollutant Source Demonstration

A Non-Industrial Pollutant Source Demonstration is for a Discharger to demonstrate that the pollutants causing the NAL exceedances are not related to industrial activities conducted at the facility, and additional BMPs at the facility will not contribute to the reduction of pollutant concentrations.

Dischargers including the Non-Industrial Pollutant Demonstration in their Level 2 ERA Technical Report shall have a QISP determine that the sources of non-industrial pollutants in storm water discharges are not from industrial activity or natural background sources within the facility.

Sources of non-industrial pollutants that are discharged separately and are not comingled with storm water associated with industrial activity are not considered subject to this General Permit's requirements. When pollutants from non-industrial sources are comingled with storm water associated with industrial activity, the Discharger is responsible for all the pollutants in the combined discharge unless the technical report clearly demonstrates that the NAL exceedances due to the combined discharge are solely attributable to the non-industrial sources. The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance. In most cases, the Non-Industrial Pollutant Source Demonstration will contain sampling data and analysis distinguishing the pollutants from non-industrial sources from the pollutants generated by industrial activity.

Once the Level 2 ERA Technical Report, including this demonstration is certified and submitted via SMARTS, the Discharger has satisfied all the requirements necessary for that pollutant for ERA purposes. A Discharger that submits a Non-Industrial Pollutant Demonstration remains with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

iii. Natural Background Pollutant Source Demonstration

The benchmark monitoring schedule in section 6.2.1.2 of the 2008 MSGP allows a Discharger to determine that the exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background. A Discharger making this determination is not required to perform corrective

action or additional benchmark monitoring providing that the other 2008 MSGP requirements are met. The 2008 MSGP Fact Sheet requires Dischargers to include in the following in the SWPPP: 1) map(s) showing the reference site location, facility, available land cover information, reference site and test site elevation, available geology and soil information for reference and test sites, photographs showing site vegetation, site reconnaissance survey data and records. This General Permit requires this information to be included in the Natural Background Pollutant Source Demonstration in Section XII.D.2.c.

The Natural Background Pollutant Source Demonstration in this General Permit is for a Discharger that can demonstrate that pollutants causing the NAL exceedances are not related to industrial activities conducted at the facility, and are solely attributable to the presence of those pollutants in natural background. The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance. Natural background pollutants include those substances that are naturally occurring in soils or groundwater that have not been disturbed by industrial activities. Natural background pollutants do not include legacy pollutants from earlier activity on a site, or pollutants in run-on from neighboring sources which are not naturally occurring. Dischargers are not required to reduce concentrations for pollutants in the effluent caused by natural background sources if these pollutants concentrations are not increased by industrial activity.

The 2008 MSGP Fact Sheet states that the background concentration of a pollutant in runoff from a non-human impacted reference site in the same watershed must be determined by evaluation of ambient monitoring data or by using information from a peer-reviewed publication or a local, state, or federal government publication specific to runoff or storm water in the immediate region. Studies that are in other geographic areas, or are clearly based on different topographies or soils, are not sufficient to meet this requirement. When such data is not available, and there are no known sources of the pollutant, the background concentration should be assumed to be zero.
In cases where historic monitoring data from a site are used for generating a natural background concentration, and the site is no longer accessible or able to meet reference site acceptability criteria, the Discharger must submit documentation (e.g., historic land use maps) indicating the site did meet reference site criteria (such as indicating the absence of human activity) during the time data collection occurred.

Once the Level 2 ERA Technical Report, including a Natural Background Demonstration meeting the conditions in Section XII.D.2.c of this General Permit is certified and submitted via SMARTS, the Discharger is no longer responsible for the identified background parameters(s) in the corresponding drainage area(s). A Discharger that submits this type of demonstration will

remain with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

c. Level 2 ERA Implementation Extension

The State Water Board recognizes that there may be circumstances that make implementation of all necessary actions required in the Level 2 ERAs by the permitted due dates infeasible. In such circumstances a Discharger may request additional time by submitting a Level 2 ERA Implementation Extension. The Level 2 ERA Implementation Extension will automatically allow Dischargers up to an additional six (6) months to complete the tasks identified in the Level 2 ERA Action Plans while remaining in compliance with this General Permit. The Level 2 ERA Implementation Extension is subject to Regional Water Board review. If additional time is needed beyond the initial six (6) month extension, a second Level 2 ERA Implementation Extension may be submitted but is not effective unless it is approved by the Water Board.

L. Inactive Mining Operations

Inactive mining sites may need coverage under this General Permit. Inactive mining operations are mining sites, or portions of sites, where mineral mining and/or dressing occurred in the past with an identifiable Discharger (owner or operator), but are no longer actively operating. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials. A Discharger has the option to certify and submit via SMARTS that its inactive mining operations meet the conditions for an Inactive Mining Operation Certification in Section XIII of this General Permit. The Discharger must have a SWPPP for an inactive mine signed (wet signature with license number) by a California licensed professional engineer. The Inactive Mining Operation Certification in this General Permit is in lieu of performing certain identified permit requirements. This General Permit requires an annual inspection of an inactive mining site and an annual re-certification of the SWPPP. Any significant updates to the SWPPP shall be signed (wet signature and license number) by a California license professional engineer. The Discharger must certify and submit via SMARTS any significantly revised SWPPP within 30 days of the revision(s)

M. Compliance Groups and Compliance Group Leaders

Group Monitoring, as defined in the previous permit, has been eliminated in this General Permit and replaced with a new compliance option called Compliance Groups. The Compliance Group option differs from Group Monitoring as it requires (1) all Dischargers participating in a Compliance Group (Compliance Group Participants) sample two QSEs each year, (2) the Compliance Group Leader to inspect each Participant's facility within each reporting year, (3) the Compliance Group Leader must complete a State Water Board sponsored or approved training program for Compliance Group Leaders, and (4) the Compliance Group Leader to prepare Consolidated Level 1 ERA Reports, and individual Level 2 ERA Action Plans and Technical Reports. The Compliance Group option is similar to Group Monitoring as it retains a mechanism that

allows Dischargers of the same industry type to comply with this General Permit through shared resources in a cost saving manner.

This General Permit emphasizes sampling and analysis as a means to evaluate BMP performance and overall compliance, and the significantly reduced sampling requirements previously afforded to Group Monitoring Participants (two samples within a five-year period) does not provide the necessary information to achieve these goals. However, a moderate reduction in sampling requirements is included as an incentive for Compliance Group Participants while concurrently requiring sufficient individual facility sampling data to determine compliance. A Compliance Group Leader is required to provide the necessary sampling training and guidance to the Compliance Group Participants. This additional training requirement will increase sampling data quality that will offset the reduced sampling frequency for Compliance Groups.

Participation in Compliance Groups will provide additional cost savings for Dischargers in the preparation of the Consolidated Level 1 ERA Reports, and for Compliance Group Leader assistance in preparing the Level 2 ERA Action Plans and the individual Level 2 ERA Technical Reports. It is likely that many of the pollutant sources causing NAL exceedances, and the corresponding BMP cost evaluation and selection, when appropriate, will overlap for groups of facilities in a similar industry type. When these overlaps occur, a Compliance Group Leader should be able to more efficiently evaluate the pollutant sources and BMP options, and prepare the necessary reports.

The State Water Board believes that it is necessary for Compliance Group Leaders to have a higher level of industrial storm water compliance and training experience than the expectations of a QISP. Many stakeholder comments on this General Permit suggested various certifications to provide this higher level of experience; however, the State Water Board believes a process similar to the Trainer of Record process for the Construction General Permit training program will develop Compliance Group Leaders with the appropriate level of experience to fulfill the necessary qualifications.

The intent of the Compliance Groups is to have only one or a small number of Compliance Groups per industrial sector. The process for becoming a QISP trainer and/or a Compliance Group Leader is purposely similar to the Construction General Permit trainer of record process for consistency within storm water regulatory leaders. The formal process to qualify to conduct trainings for QISPs and/or to be a Compliance Group Leader will include the submittal of a statement of qualifications for review, a review fee, completion of an exam and training specific to this role. For more information see the Construction General Permit trainer of record process: http://www.casqa.org/TrainingandEducation/ConstructionGeneralPermitTrainingQSDQSPToR/tabid/205/Default.aspx

After the initial Compliance Group registration, Compliance Group Leaders are required to submit and maintain their list of Compliance Group Participants via SMARTS. There are no additional administrative documents required. The previous permit required group leaders to provide annual group evaluation reports and a letter of intent to continue group monitoring. The State Water Board found these items to be resource intensive and placed an unnecessary administrative burden on group leaders. The

Compliance Group requirements in this General Permit reduces the administrative burden on both the Compliance Group Leaders and Water Board staff.

The State Water Board's intent for the effluent data, BMP selection, cost, and performance information, and other industry specific information provided in Compliance Group reports is for evaluation of sector-specific permitting approaches and the use of NALs in the next reissuance of this General Permit.

N. Annual Evaluation

Federal regulations require NPDES industrial storm water Dischargers to evaluate their facility and SWPPP annually. Typically this requires an inspection of the facility to ensure: (1) the SWPPP site map is up to date, (2) control of all potential pollutant sources is included in the SWPPP, and (3) sampling data and visual observation records are used to evaluate if the proper BMPs are being implemented. As Dischargers are required to conduct monthly visual observation that partially overlap with the actions required by the annual evaluation requirements, Dischargers may perform the annual evaluation inspection concurrent with a monthly visual observation.

O. Annual Report

All Dischargers shall certify and submit via SMARTS an Annual Report no later than July 15 following each reporting year. The reporting requirements for this General Permit's Annual Report are streamlined in comparison to the previous permit. The Annual Report now consists of two primary parts: (1) a compliance checklist indicating which permit requirements were completed and which were not (e.g., a Discharger who completes the required sampling of four QSEs during the reporting year, versus a Discharger who is only able to sample two QSEs during the reporting year), and (2) an explanation for items on the compliance checklist that were determined incomplete by the Discharger. Unlike the previous permit, the Annual Report does not require Dischargers to provide the details of each visual observation (such as name of observer, time of observation, observation summary, corrective actions, etc.) or provide the details of the Annual Comprehensive Site Evaluation. Dischargers, however, continue to be required to retain those records and have them available upon request. The Annual Report is further simplified through the immediate electronic reporting via SMARTS of sampling data and copies of the original laboratory reports instead of such information being included in the Annual Report.

P. Conditional Exclusion - No Exposure Certification (NEC) Requirements

This General Permit's conditional exclusion requirements are similar to the requirements provided in 40 C.F.R. section 122.26(g)(3). Clarifications were added in this General Permit, however, to the types of "storm resistant shelters" and the periods when "temporary shelters" may be used in order to avert regulatory confusion. California does not have operating coal power plants, which are a major contributor to acid rain elsewhere in the United States. California does have nonpoint sources or atmospheric deposition that may locally impact the pH of the rain water, however this is

not categorized as acid rain as referred to by the U.S. EPA for the NEC coverage requirements. The No Exposure Guidance Document[15] developed by the U.S. EPA mentions acid rain as a potential source of contaminants to consider for NEC coverage. The acid rain leachate language was not included in this General Permit's Appendix 2 to clarify that Dischargers may qualify for NEC coverage, even if the facility has metal buildings or structures.

The Discharger shall certify and submit complete PRDs for NEC coverage via SMARTS. Based upon the State Water Board's experience with reissuing and implementing the 2009 Construction General Permit, the transition for existing Dischargers to register under this new General Permit is staff resource intensive. The State Water Board staff is available to assist Dischargers requiring assistance with enrolling under this General Permit, both for NOI coverage and NEC coverage. The State Water Board has also experienced that more time is needed for its staff to assist Dischargers registering for NEC coverage. To provide better customer service to all Dischargers, three months have been added to the NEC coverage PRD submittal schedule for new and existing Dischargers (Section II.B.4 of this General Permit, extending the NEC coverage registration date to October 1, 2015.

Dischargers must annually inspect their facility to ensure continued compliance with NEC requirements, and annually re-certify and submit an NEC via SMARTS. Based on its regulatory experience, the State Water Board has determined that a five-year NEC re-certification period is inadequate. A significant percentage of facilities may revise, expand, or relocate their operations in any given year. Furthermore, a significant percentage of facilities experience turnover of staff knowledgeable of the NEC requirements and limitations. Accordingly, the State Water Board believes that annual NEC evaluation and re-certification requirements are appropriate to continually assure adequate program compliance.

Q. Special Requirements - Plastic Materials

Water Code section 13367 requires the Water Boards to implement measures that control discharges of preproduction plastic from point and nonpoint sources. The State Water Board intends to use this General Permit to regulate discharges of preproduction plastics from areas of facilities that are subject to this General Permit. A Regional Water Board may designate facilities, or areas of facilities, that are not otherwise subject to this General Permit, pursuant to Section XIX.F. For example, a Regional Water Board may designate Plastic Materials handling areas of a transportation facility that are not associated with vehicle maintenance as requiring coverage under this General Permit.

Preproduction plastics used by the plastic manufacturing industry are small in size and have the potential to mobilize in storm water. Preproduction plastic washed into storm water drains can move to waters of the United States where it contributes to the growing problem of plastic debris in inland and coastal waters. Water Code section 13367

[15] U.S. EPA. Guidance Manual for Conditional Exclusion from Storm Water Permitting Based On "No Exposure" of Industrial Activities to Storm Water. Web. June 2000. < http://www.epa.gov/npdes/pubs/noxguide.pdf>. [as of January 31, 2014].

outlines five mandatory BMPs that are required for all facilities that handle preproduction plastic. These mandatory BMPs are included in this General Permit.

The State Water Board has received comments regarding the Water Code requirements for Plastics Facilities to install a containment system for on-site storm drain locations that meet 1mm capture and 1-year 1-hour storm flow requirement standards. As a result, this General Permit includes the option under Water Code section 13367 that allows a plastics facility to propose an alternative BMP or suite of BMPs that can meet the same performance and flow requirements as a 1mm capture and 1-year 1-hour storm flow containment system standards. These alternative BMPs are to be submitted to the Regional Water Board for approval. This alternative is intended to allow the facility to develop BMPs that focus on pollution prevention measures that can perform as well as, or better than, the containment system otherwise required by the statute.

The State Water Board also includes two additional containment system alternatives in this General Permit that are considered to be equivalent to, or better than, the 1mm capture and 1-year 1-hour storm flow requirements:

- An alternative allowing plastic facilities to implement a suite of eight BMPs addressing the majority of potential sources of plastic discharges. This suite of BMPs is based on industry and U.S. EPA recommendations and Water Board experience with storm water inspections, violations, and enforcement cases throughout California.

- An alternative allowing a facility to operate in a manner such that all preproduction plastic materials are used indoors and pose no potential threat for discharge off-site. The facility is required to notify the Regional Water Board of the intent to seek this exemption and of any changes to the facility or operations that may disqualify the facility for the exemption. The exemption may be revoked by the Regional Water Board at any time.

Plastics facilities may use preproduction plastic materials that are less than 1mm in size, or produce materials, byproducts, or waste that is smaller than 1mm in size. These small size materials will pass through the 1mm capture containment system required by Water Code section 13367. Plastics facilities with sub-1mm materials must design a containment system to capture the smallest size material onsite with a 1-year 1-hour storm flow requirement, or propose alternative BMPs for Regional Water Board approval that meet the same requirements.

The remaining BMPs required by Water Code section 13367 are consistent with recommendations for handling and clean-up of preproduction plastics in the American Chemistry Council publication, *Operation Clean Sweep* and U.S. EPA's publication *Plastic Pellets in the Aquatic Environment: Sources and Recommendations*. The State Water Board believes that the entire approach in this General Permit for plastic materials is consistent with Water Code section 13367.

R. Regional Water Board Authorities

The Regional Water Boards retain discretionary authority over many issues that may arise from industrial discharges within their respective regions. This General Permit

emphasizes the authority of the Regional Water Boards over specific requirements of this General Permit that do not meet region-specific water quality protection regulatory needs.

S. Special Conditions: Requirements for Dischargers Claiming the "No Discharge" Option in the Notice of Non-Applicability

1. General

   Entities that operate facilities generating storm water associated with industrial activities that is not discharged to waters of the United States are not required to obtain General Permit coverage. Entities that have contacted the Water Boards to inquire what is necessary to avoid permit coverage have received inconsistent guidance. This has resulted in regulatory inconsistency and uncertainty as to whether they are in compliance if their industry operates without General Permit coverage. Depending upon how each Regional Water Board handles "No Discharge" claims, some facilities with advanced containment design may be required to obtain General Permit coverage while other facilities with less advanced containment design may be allowed to operate without General Permit coverage. Some stakeholders have complained that this type of regulatory inconsistency puts some facilities at an economically-competitive disadvantage given the costs associated with permit compliance.

   U.S. EPA regulations do not provide a design standard, definition, or guidance as to what constitutes "No Discharge." Unlike Conditional Exclusion requirements, U.S. EPA regulations do not require an entity to submit technical justification or certification that a facility does not discharge to waters of the United States (U.S.). Therefore entities have previously been allowed to self-determine that their facility does not discharge to water of the U.S. when using any containment design standard. The State Water Board does not have available information showing that most entities have adequately performed hydraulic calculations to determine the frequency of discharge corresponding to their containment controls or have had these hydraulic calculations reviewed or completed by a California licensed professional engineer. Although U.S. EPA makes clear that an unpermitted discharge to waters of the U.S. is a violation of the CWA, this leaves regulatory agencies with the very difficult task of knowing when any given facility discharges in order to carry-out enforcement actions.

   In 1998, the Water Code was amended to require entities who are requested by the Water Boards to obtain General Permit coverage, but that have a valid reason to not obtain General Permit coverage, to submit a Notice of Non-Applicability (NONA). (Wat. Code, § 13399.30, subd. (a)(2)). The NONA covers multiple reasons why an entity is not required to be permitted including (1) facility closure, (2) not the legal owner, (3) incorrect SIC code, (4) eligibility for the Conditional Exclusion (No Exposure Certification), and (5) the facility not discharging to water of the U.S. ("No Discharge"). The previous permit contained definitions, requirements, and guidance that entities may reference to determine whether they are eligible to select any of the first four NONA reasons for not obtaining General Permit coverage. However, neither the previous permit nor the Water Code provide definitions, requirements,

and guidance for entities to determine whether they are eligible to indicate "No Discharge" on the NONA as a reason for not obtaining General Permit coverage.

This General Permit addresses and resolves the issues discussed above by establishing consistent, statewide eligibility requirements in Section XX.C for entities submitting NONAs indicating "No Discharge." When requested by the Water Boards to obtain General Permit coverage, entities must meet these "No Discharge" eligibility requirements or obtain General Permit coverage. The Water Boards retain enforcement authority if a facility subsequently discharges.

2. "No Discharge" Eligibility Requirements

The entity must certify submit in SMARTS a NONA Technical Report signed (wet signature and license number) by a California licensed professional engineer that contains the analysis and details of the containment design supporting the "No Discharge" eligibility determination. Because containment design will require hydraulic calculations, soil permeability analysis, soil stability calculations, appropriate safety factor consideration, and the application of other general engineering principles, state law requires the technical report to be signed (wet signature and license number) by a California licensed professional engineer.

The State Water Board has selected a containment design target that, as properly applied will result in few, if any, discharges. The facility must either be:

a. Engineered and constructed to contain all storm water associated with industrial activities from discharging to waters of the United States. (The determination of what is a water of the United States can be complicated, and in certain circumstances, a discharge to groundwater that has a direct hydrologic connection to waters of the United States may constitute a discharge to a water of the United States.) Dischargers must base their information upon maximum historic precipitation event data (or series of events) from the nearest rain gauges as provided by the National Oceanic and Atmospheric Administration's (NOAA) website, or other nearby precipitation data available from other government agencies. At a minimum, Dischargers must ensure that the containment design addresses maximum 1-hour, 24-hour, weekly, monthly, and annual precipitation data for the duration of the exclusion.

   Design storm events are generally specified as a one-time expected hydraulic failure over a reoccurrence of years for a specified storm event. For example, if a design storm standard is a 100 year 24-hour event, then a facility's containment system designed to contain the maximum volume of water would be expected to fall in 24 hours once every 100 years. Design standards vary dependent upon the regulatory program and the level of protection needed. Since California has considerable variations in climate/topography/soil conditions across the state, the "No Discharge" NONA eligibility requirements have been created so that each facility's containment design can incorporate unique site specific circumstances to meet the requirement that discharges will not occur based upon past historical precipitation data. Facilities that are not designed to not meet the "No Discharge" eligibility requirements must obtain General Permit coverage.

b. Located in basins or other physical locations that are not hydrologically connected to waters of the United States.

The State Water Board considered allowing Entities to review United States Army Corp of Engineer maps to determine, without a California licensed professional engineer, whether their facility location is within a basin and/or other physical location that is not hydrologically connected to waters of the United States. The State Water Board believes that this determination can be difficult in some cases, or is likely to be performed incorrectly. In addition, there may be areas of the state that are not hydrologically connected to waters of the United States, but are not on United States Army Corps of Engineer maps. Therefore, all "No Discharge" Technical Reports must be signed (wet signature and license number) by a California licensed professional engineer.

3. Additional Considerations

The "No Discharge" determination does not cover storm water containment systems that transfer industrial pollutants to groundwater. Entities must determine whether designs that incorporate infiltration may discharge to and contaminate groundwater. If there is a threat to groundwater, Entities must contact the Regional Water Boards prior to construction of infiltration design elements.

Entities that have not eliminated all discharges that are subject to General Permit coverage (NOI Coverage or NEC Coverage) are ineligible to submit NONAs indicating "No Discharge."

ATTACHMENT A

FACILITIES COVERED BY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

1. Facilities Subject To Storm Water Effluent Limitations Guidelines, New Source Performance Standards, or Toxic Pollutant Effluent Standards Found in 40 Code of Federal Regulations, Chapter I, Subchapter N (Subchapter N):

   Cement Manufacturing (40 C.F.R. Part 411); Feedlots (40 C.F.R. Part 412); Fertilizer Manufacturing (40 C.F.R. Part 418); Petroleum Refining (40 C.F.R. Part 419), Phosphate Manufacturing (40 C.F.R. Part 422), Steam Electric (40 C.F.R. Part 423), Coal Mining (40 C.F.R. Part 434), Mineral Mining and Processing (40 C.F.R. Part 436), Ore Mining and Dressing (40 C.F.R. Part 440), Asphalt Emulsion (40 C.F.R. Part 443), Landfills (40 C.F.R. Part 445), and Airport Deicing (40 C.F.R. Part 449).

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2. Manufacturing Facilities:

   Facilities with Standard Industrial Classifications (SICs) 20XX through 39XX, 4221 through 4225. (This category combines categories 2 and 10 of the previous general permit.)

3. Oil and Gas/Mining Facilities:

   Facilities classified as SICs 10XX through 14XX, including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 Code of Federal Regulations. 434.11(1) because the performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Acts authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations. Inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined material; or sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim.

4. Hazardous Waste Treatment, Storage, or Disposal Facilities:

   Hazardous waste treatment, storage, or disposal facilities, including any facility operating under interim status or a general permit under Subtitle C of the Federal Resource, Conservation, and Recovery Act.

5. Landfills, Land Application Sites, and Open Dumps:

   Landfills, land application sites, and open dumps that receive or have received industrial waste from any facility within any other category of this Attachment; including facilities subject to regulation under Subtitle D of the Federal Resource, Conservation, and Recovery Act, and facilities that have accepted wastes from construction activities (construction activities include any clearing, grading, or excavation that results in disturbance).

6. Recycling Facilities:

   Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093.

7. Steam Electric Power Generating Facilities:

   Any facility that generates steam for electric power through the combustion of coal, oil, wood, etc.

8. Transportation Facilities:

   Facilities with SICs 40XX through 45XX (except 4221-25) and 5171 with vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or other operations identified under this Permit as associated with industrial activity.

9. Sewage or Wastewater Treatment Works:

   Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge, that are located within the confines of the facility, with a design flow of one million gallons per day or more, or required to have an approved pretreatment program under 40 Code of Federal Regulations part 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the Clean Water Act.

ATTACHMENT B

ACRONYM LIST

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

ASBS	Areas of Special Biological Significance
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BPT	Best Practicable Control Technology Currently Available
CBPELSG	California Board for Professional Engineers, Land Surveyors and Geologists
DWQ	Division of Water Quality
ELGs	Effluent Limitations Guidelines and New Source Performance Standards
ERA	Exceedance Response Action
MS4	Municipal Separate Storm Sewer System
MSGP	Multi Sector General Permit
NAL	Numeric Action Level
NAICS	North American Industrial Classification System
NEC	No Exposure Certification
NEL	Numeric Effluent Limitation
NOI	Notice of Intent
NONA	Notice of Non Applicability
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NSWD	Non Storm Water Discharges
O&G	Oil and Grease
PRDs	Permit Registration Documents
QA/QC	Quality Assurance/Quality Control
QISP	Qualified Industrial Storm water Practitioner
QSE	Qualifying Storm Event
SIC	Standard Industrial Classification
SMARTS	Storm Water Multiple Application and Report Tracking System
SWPPP	Storm Water Pollution Prevention Plan
TBEL	Technology Based Effluent Limitation
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TSS	Total Suspended Solids
U.S. EPA	United States Environmental Protection Agency
WDID	Waste Discharge Identification Number
WQBEL	Water Quality Based Effluent Limitation

ATTACHMENT C

GLOSSARY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

Adoption Date April 1, 2014

Aerial Deposition
Total suspended particulate matter found in the atmosphere as solid particles or liquid droplets. Chemical composition of particulates varies widely, depending on location and time of year. Sources of airborne particulates include but are not limited to: dust, emissions from industrial processes, combustion products from the burning of wood and coal, combustion products associated with motor vehicle or non-road engine exhausts, and reactions to gases in the atmosphere. Deposition is the act of these materials being added to a landform.

Beneficial Uses
As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation, include but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Available Technology Economically Achievable (BAT)
As defined by United States Environmental Protection Agency (U.S. EPA), BAT is a technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. The BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT)
As defined by U.S. EPA, BCT is a technology-based standard for the discharge from existing industrial point sources of conventional pollutants including biochemical oxygen demand (BOD), total suspended sediment (TSS), fecal coliform, pH, oil and grease.

Best Professional Judgment (BPJ)
The method used by permit writers to develop technology-based NPDES permits conditions on a case-by-case basis using all reasonably available and relevant data.

GLOSSARY

Best Management Practices (BMPs)
Scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Chain of Custody
Form used to track sample handling as samples progress from sample collection to the laboratory. The chain of custody is also used to track the resulting analytical data from the laboratory to the client. Chain of custody forms can be obtained from an analytical laboratory upon request.

Debris
Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

Detected Not Quantifiable
A sample result that is between the Method Detection Limit (MDL) and the Minimum Level (ML).

Discharger
A person, company, agency, or other entity that is the operator of the industrial facility covered by this General Permit.

Drainage Area
The area of land that drains water, sediment, pollutants, and dissolved materials to a common discharge location.

Effective Date
The date, set by the State Water Resources Control Board (State Water Board), when at least one or more of the General Permit requirements take effect and the previous permit expires. This General Permit requires most of the requirements (such as SMARTs submittals, minimum BMPs, sampling and analysis requirements) to take effect on July 15, 2015.

Effluent
Any discharge of water either to the receiving water or beyond the property boundary controlled by the Discharger.

Effluent Limitation
Any numeric or narrative restriction imposed on quantities, discharge rates, and concentrations of pollutants that are discharged from point sources into waters of the United States, waters of the contiguous zone, or the ocean.

GLOSSARY

Erosion
The process by which soil particles are detached and transported by the actions of wind, water or gravity.

Erosion Control BMPs
Vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc., placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution.

Facility
A collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.

Field Measurements
Testing procedures performed in the field with portable field-testing kits or meters.

Good Housekeeping BMPs
BMPs designed to reduce or eliminate the addition of pollutants through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

Industrial Materials
Includes, but is not limited to: raw materials, recyclable materials, intermediate products, final products, by product, waste products, fuels, materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERLCA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge and that are used, handled, stored, or disposed in relation to a facility's industrial activity.

Method Detection Limit
The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.

Minimum Level
The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that all method-specified sample weights, volumes, and cleanup procedures have been employed.

Monitoring Implementation Plan
Planning document included in the Storm Water Pollution Prevention Plan (SWPPP). Dischargers are required to record information on the implementation of the monitoring requirements in this General Permit. The MIP should include relevant information on:

the Monthly Visual Observation schedule, Sampling Parameters, Representative Sampling Reduction, Sample Frequency Reduction, and Qualified Combined Samples.

Monitoring Requirements
Includes sampling and analysis activities as well as visual observations.

Natural Background
Pollutants including substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from previous activity at a facility, or pollutants in run-on from neighboring sources which are not naturally occurring.

New Discharge(r)
A facility from which there is a discharge, that did not commence the discharge at a particular site prior to August 13, 1979, which is not a new source as defined in 40 Code of Federal Regulations 122.29, and which has never received a finally effective NPDES permit for discharges at that site. See 40 Code of Federal Regulations 122.2.

Numeric Action Level (NAL) Exceedance
Annual NAL exceedance - the Discharger shall determine the average concentration for each parameter using the results of all the sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data) and compare this to the corresponding Annual NAL values in Table 2. For Dischargers using composite sampling or flow measurement in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA Guidance Manual for the Monitoring and Reporting Requirements of the NPDES Multi-Sector Storm Water General Permit.[1] An annual NAL exceedance occurs when the average of all the analytical results for a parameter from samples taken within a reporting year exceeds an annual NAL value for that parameter listed in Table 2 (or is outside the NAL pH range);

Instantaneous maximum NAL exceedance - the Discharger shall compare all sampling and analytical results from each distinct sample (individual or composite) to the corresponding Instantaneous maximum NAL values in Table 2. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G), or are outside of the instantaneous maximum NAL range (for pH).

Non Detect
Sample result is less than Method Detection Limit; Analyte being tested cannot be detected by the equipment or method.

[1] U.S. EPA. NPDES Storm Water Sampling Guidance Document. <http://www.epa.gov/npdes/pubs/owm0093.pdf >. [as of July 3, 2013]

Non-Storm Water Discharges (NSWDs)
Discharges that do not originate from precipitation events. Including but not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

Numeric Action Level (NAL)
Pollutant concentration levels used to evaluate if best management practices are effective and if additional measures are necessary to control pollutants. NALs are not effluent limits. The exceedance of an NAL is not a permit violation.

Operator
In the context of storm water associated with industrial activity, any party associated with an industrial facility that meets either of the following two criteria:

a. The party has operational control over the industrial SWPPP and SWPPP specifications, including the ability to make modifications to those plans and specifications

b. The party has day-to-day operational control of activities at the facility which are necessary to ensure compliance with a SWPPP for the facility or other permit conditions (e.g., authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

pH
Unit universally used to express the intensity of the acid or alkaline condition of a water sample. The pH of natural waters tends to range between 6.0 and 9.0, with neutral being 7.0.

Plastic Materials
Plastic Materials are virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other similar types of preproduction plastics with the potential to discharge or migrate off-site.

Qualified Industrial Storm Water Practitioner (QISP)
Only required once a Discharger reaches Level 1 status, a QISP is the individual assigned to ensure compliance with this General Permit or to assist New Dischargers with determining coverage eligibility for discharges to an impaired water body. A QISP's responsibilities include implementing the SWPPP, performing the Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation), assisting in the preparation of Annual Reports, performing ERAs, and training appropriate Pollution Prevention Team members. The individual must take the appropriate state approved or sponsored training to be qualified. Dischargers shall ensure that the designated QISP is geographically located in an area where they will be able to adequately perform the permit requirements at all of the facilities they represent.

Qualifying Storm Event (QSE)
A precipitation event that:

a. Produces a discharge for at least one drainage area; and
b. Is preceded by 48 hours with no discharge from any drainage area.

Regional Water Board
Includes the Executive Officer and delegated Regional Water Board staff.

Runoff Control BMPs
Measures used to divert run-on from offsite and runoff within the site.

Run-on
Discharges that originate offsite and flow onto the property of a separate facility or property or, discharges that originate onsite from areas not related to industrial activities and flow onto areas on the property with industrial activity.

Scheduled Facility Operating Hours
The time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

Sediment
Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

Sedimentation
Process of deposition of suspended matter carried by water, wastewater, or other liquids that flow by gravity. Control of sedimentation is accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material.

Sediment Control BMPs
Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. Includes those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (i.e., silt fence, sediment basin, fiber rolls, etc.).

Sheet Flow
Flow of water that occurs overland in areas where there are no defined channels and where the water spreads out over a large area at a uniform depth.

Source
Any facility or building, property, road, or area that causes or contributes to pollutants in storm water.

Storm Water
Storm water runoff, snowmelt runoff, and storm water surface runoff and drainage.

Storm Water Discharge Associated With Industrial Activity
The discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant as identified in Attachment A of this General Permit. The term does not include discharges from facilities or activities excluded from the NPDES program. The term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials; manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined at 40 C.F.R. section 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 C.F.R. section 122.

Material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph) include those facilities designated under 40 C.F.R. section122.26(a)(1)(v).

Structural Controls
Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution.

Total Suspended Solids (TSS)
The measure of the suspended solids in a water sample including inorganic substances such as soil particles, organic substances such as algae, aquatic plant/animal waste, and particles related to industrial/sewage waste, etc. The TSS test measures the concentration of suspended solids in water by measuring the dry weight of a solid material contained in a known volume of a sub-sample of a collected water sample. Results are reported in mg/L.

Toxicity
The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses, such as impaired reproduction or growth anomalies.

Trade Secret
Information, including a formula, pattern, compilation, program, device, method, technique, or process, that: (1) derives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and (2) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

Turbidity
The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU).

Waters of the United States
Generally refers to surface waters, as defined for the purposes of the federal Clean Water Act.

Water Quality Objectives
Defined in the California Water Code as limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

Water Quality Standards
Consists of beneficial uses, water quality objectives to protect those uses, an antidegradation policy, and policies for implementation. Water quality standards are established in Regional Water Quality Control Plans (Basin Plans) and statewide Water Quality Control Plans. U.S. EPA has also adopted water quality criteria (the same as objectives) for California in the National Toxics Rule and California Toxics Rule.

ATTACHMENT D

PERMIT REGISTRATION DOCUMENTS (PRDs)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

This Attachment provides an example of the information Dischargers are required to submit in the PRDs via the Storm Water Multiple Application and Report Tracking System (SMARTS). The actual PRD requirements are in Section II of this General Permit.

A. Who Must Submit PRDs

All Dischargers that operate facilities as described in Attachment A of this General Permit are subject to either Notice of Intent (NOI) or No Exposure Certification (NEC) Coverage and shall comply with the PRD requirements in this General Permit.

B. Who Is Not Required to Submit PRDs

Dischargers that operate facilities described below are not required to submit PRDs:

1. Facilities that are not described in Attachment A;

2. Facilities that are described in Attachment A but do not have discharges of storm water associated with industrial activity to waters of the United States; or,

3. Facilities that are already covered by an NPDES permit for discharges of storm water associated with industrial activity.

C. Annual Fees for NOI and NEC Coverage

Annual Fees for NOI and NEC coverage are established through regulations adopted by the State Water Board and are subject to change (see California Code of Regulations, title 23, section 2200 et seq.).

D. When and How to Apply

Dischargers proposing to conduct industrial activities subject to this General Permit must electronically certify and submit PRDs via the Storm Water Multiple Application

Reporting and Tracking System (SMARTS)[1] no less than seven (7) days prior to the commencement of industrial activity. Existing Dischargers must submit PRDs for NOI coverage by July 1, 2015 or for NEC coverage by October 1, 2015.

E. PRD Requirements for NOI Coverage

1. Notice of Intent (NOI) and Signed Electronic Authorization Form.
2. Site Map (Section X.E of this General Permit).
3. Storm Water Pollution Prevention Plan (see Section X of this General Permit).

F. Description of PRDs for NOI Coverage

1. The Notice of Intent (NOI) requires the following information:
   a. Operator/Owner Information

      Operator/Owner Company or Organization Name
      Contact First Name
      Contact Last Name
      Title
      Street Address
      Address Line 2
      City/State/Zip
      Phone (e.g. 999-999-9999)
      E-mail (e.g. abc@xyz.com)
      Federal Tax ID

   b. Facility Information

      Facility Name
      WDID Number (if applicable)
      Contact First Name
      Contact Last Name
      Title
      Street Address
      Address Line 2
      City
      County
      Phone (e.g. 999-999-9999)

[1] The State Water Board has developed the SMARTS online database system to handle registration and reporting under this General Permit. More information regarding SMARTS and access to the database is available online at <https://smarts.waterboards.ca.gov>. [as of June 26, 2013].

Emergency Phone (e.g. 999-999-9999)
E-mail (abc@xyz.com)
State/Zip CA
Total Site Size (Acres)
Latitude (Decimal degrees only, minimum 5 significant digits, e.g. 99.99999)
Longitude (Decimal degrees only, minimum 5 significant digits, e.g. 99.99999)
Total Percentage Site Imperviousness Area of Facility (Acres)
Total Areas of Industrial Activities and Materials Exposed to Precipitation
Primary SIC Code
Secondary SIC Code
Tertiary SIC Code
Regional Water Board

c. Billing Information

Billing Name
Contact First Name
Contact Last Name
Title
Street Address
Address Line 2
City/State/Zip
Phone (e.g. 999-999-9999)
E-mail (e.g. abc@xyz.com)

d. Receiving Water Information

Does your facility's storm water flow directly or indirectly into waters of the US such as river, lake, ocean, etc. (check box for directly or indirectly)

i. Indirectly to waters of the US

ii. Storm drain system - Enter owner's name:

iii. Directly to waters of the US (e.g., river, lake, creek, stream, bay, ocean, etc.)

iv. Name of the receiving water: _____

2. The Site Map(s) shall include the following Information:

   a. The facility boundary;

   b. Storm water drainage areas within the facility boundary;

   c. Portions of any drainage area impacted by discharges from surrounding areas and flow direction of each drainage area;

   d. On-facility surface water bodies;

   e. Areas of soil erosion;

   f. Location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.);

   g. Location(s) of municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized Non-Storm Water Discharges (NSWDs);

   h. Locations of storm water collection and conveyance systems and associated points of discharge, and direction of flow;

   i. Any structural control measures (that affect industrial storm water discharges, authorized NSWDs, and run-on);

   j. All impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;

   k. Locations where materials are directly exposed to precipitation;

   l. Locations where significant spills or leaks identified (Section X.G.1.d of this General Permit) have occurred;

   m. Areas of industrial activity subject to this General Permit;

   n. All storage areas and storage tanks;

   o. Shipping and receiving areas;

   p. Fueling areas;

q. Vehicle and equipment storage/maintenance areas;

r. Material handling and processing areas;

s. Waste treatment and disposal areas;

t. Dust or particulate generating areas;

u. Cleaning and material reuse areas; and,

v. Any other areas of industrial activity which may have potential pollutant sources.

3. The Storm Water Pollution Prevention Plan (SWPPP) must be prepared in accordance with Section X of this General Permit.

4. A NOI Certification by the Discharger that all PRDs submitted are correct and true.

5. SMARTS Electronic Authorization Form (Signed by any user authorized to certify and submit data electronically).

G. PRD Requirements for NEC Coverage

1. No Exposure Certification and Signed Electronic Authorization Form.

2. No Exposure Certification Checklist Consistent with Requirements in Section XVII.F.2 of this General Permit.

3. Current Site Map Consistent with Requirements in Section X.E of this General Permit.

H. Description of PRDs for NEC Coverage

1. The No Exposure Certification requires the following information:

   a. Operator/Owner Information

      Operator/Owner Name
      Contact First Name
      Contact Last Name
      Title

Street Address
Address Line 2
City/State/Zip
Phone Ex (999-999-9999)
E-mail (abc@xyz.com)
Federal Tax ID

b. Facility Information

Facility Name
Contact First Name
Contact Last Name
Title
Street Address
Address Line 2
City
County
Phone Ex (999-999-9999)
Emergency Phone Ex (999-999-9999)
E-mail (abc@xyz.com)
State/Zip CA
Total Site Size (Acres)
Latitude (Decimal degrees only, minimum 5 significant digits, Ex 99.99999)
Longitude (Decimal degrees only, minimum 5 significant digits, Ex 99.99999)
Percent of Site Imperviousness (%)
Primary SIC Code
Secondary SIC Code
Tertiary SIC Code
Regional Water Board

c. Billing Information

Billing Name (if different than Operator/Owner)
Contact First Name
Contact Last Name
Title
Street Address
Address Line 2
City/State/Zip
Phone E.g. (999-999-9999)
E-mail (e.g. abc@xyz.com)

d. SMARTS Electronic Authorization Form - Signed by any user authorized to certify and submit data electronically.

e. Certification by the Discharger that all PRDs submitted are correct and true and that the conditions of no-exposure have been met.

2. The NEC Checklist (Section XVII.F.2 of this General Permit) must be prepared to demonstrate that, based upon a facility inspection and evaluation, none of the following industrial materials or activities are, or will be in the foreseeable future, exposed to precipitation:

   a. Activities such as using, storing, or cleaning industrial machinery or equipment, and areas with materials or residuals from these activities;

   b. Materials or residuals on the ground or in storm water inlets from spills/leaks;

   c. Materials or products from past industrial activity;

   d. Material handling equipment (except adequately maintained vehicles);

   e. Materials or products during loading/unloading or transporting activities;

   f. Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);

   g. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;

   h. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;

   i. Waste material (except waste in covered, non-leaking containers, e.g., dumpsters). Application or disposal of processed wastewater (unless already covered by an NPDES permit); and,

   j. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.

3. The Site Map(s) shall include the following information (see Section X.E of this General Permit):

   a. The facility boundary;

   b. Storm water drainage areas within the facility boundary;

   c. Portions of any drainage area impacted by discharges from surrounding areas and flow direction of each drainage area;

d. On-facility surface water bodies;

e. Areas of soil erosion;

f. Location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.);

g. Location(s) of municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized NSWDs;

h. Locations of storm water collection and conveyance systems and associated points of discharge, and direction of flow;

i. Any structural control measures (that affect industrial storm water discharges, authorized NSWDs, and run-on);

j. All impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;

k. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified (Section X.G.1.d of this General Permit) have occurred;

l. Areas of industrial activity subject to this General Permit;

m. All storage areas and storage tanks;

n. Shipping and receiving areas;

o. Fueling areas;

p. Vehicle and equipment storage/maintenance areas;

q. Material handling and processing areas;

r. Waste treatment and disposal areas;

s. Dust or particulate generating areas;

t. Cleaning and material reuse areas; and,

u. Any other areas of industrial activity which may have potential pollutant sources.

PERMIT REGISTRATION DOCUMENTS (PRDS)

I. Obtaining Coverage

To obtain coverage under this General Permit PRDs must be included and completed. If any of the required items are missing, the PRD submittal is considered incomplete and will be rejected. Upon receipt of a complete PRD submittal, the State Water Board will process the application package in the order received and assign a (WDID) number.

J. Additional Information

The Water Board may require the submittal of additional information in SMARTS if required to determine the appropriate fee for the facility as specified by the fee regulations.

K. Questions

If you have any questions on completing the PRDs or about SMARTS, please email stormwater@waterboards.ca.gov or call (866) 563-3107.

ATTACHMENT E

LIST OF TOTAL MAXIMUM DAILY LOADS (TMDLS) APPLICABLE TO INDUSTRIAL STORM WATER DISCHARGERS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

The following table contains a list of Regional Water Board adopted and/or U.S. EPA established/approved TMDLs, as of the adoption date of this General Permit, that are applicable to industrial storm water Dischargers. TMDLs adopted/established after the effective date of the General Permit may, at the Water Boards discretion, be included in this General Permit. This General Permit may be reopened to amend TMDL-specific permit requirements in this Attachment E, or to incorporate new TMDLs adopted during the term of this General Permit that include requirements applicable to Dischargers covered by this General Permit.

Water Body	Pollutant
San Francisco Bay Regional Water Quality Control Board	
Napa River	Sediment
Sonoma Creek	Sediment
Los Angeles Regional Water Quality Control Board	
Santa Clara River Reach 3	Chloride
Santa Clara River	Nutrients
Los Angeles River	Metals
Los Angeles River	Nutrients
San Gabriel River	Metals and Selenium
Santa Monica Bay	Nearshore Debris
Machado Lake	Nutrient
Harbor Beaches of Ventura	Bacteria
Ballona Creek	Metals
Ballona Creek Estuary	Toxic Pollutants
Los Angeles Harbor	Bacteria
Marina del Rey Back Basins	Bacteria
Santa Clara River	Bacteria
Walker Creek,	Mercury
Oxnard Drain No. 3	Pesticides, PCBs[1] and Sediment Toxicity
Long Beach City Beaches and Los Angeles River Estuary	Indicator Bacteria
Los Angeles and Long Beach Harbors	Toxic and Metals

[1] Polychlorinated biphenyls

LIST OF TOTAL MAXIMUM DAILY LOADS (TMDLS) APPLICABLE TO INDUSTRIAL STORM WATER DISCHARGERS

Los Angeles Area Lakes	Nitrogen, Phosphorus, Mercury, Trash, Organochlorine Pesticides and PCBs
Santa Monica Bay	DDTs and PCBs
Machado Lake	Toxics
Colorado Lagoon	Pesticides, Polycyclic aromatic hydrocarbons, PCBs, and Metals
Calleguas Creek Watershed	Salts
Calleguas Creek Watershed	Metals and Selenium
Ballona Creek, Ballona Estuary, and Sepulveda Channel	Bacteria
Marina Del Rey Harbor-Back Basins	Copper, Lead, Zinc, and Chlordane, and Total PCBs
Los Cerritos Channel	Metals
Santa Ana Regional Water Quality Control Board	
San Diego Creek and Newport Bay	Toxic Pollutants
San Diego Regional Water Quality Control Board	
Chollas Creek	Diazinon
Chollas Creek	Copper, Lead, and Zinc
Los Peñasquitos Lagoon	Sediment
Rainbow Creek	Total Nitrogen and Total Phosphorus
Shelter Island Yacht Basin	Dissolved Copper
Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in SD Bay	Indicator Bacteria
Twenty Beaches and Creeks	Indicator Bacteria

ATTACHMENT F

EFFLUENT LIMITATION GUIDELINES (ELGs)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

The following Parts of federal regulations at 40 Code of Federal Regulations Chapter I Subchapter N (Subchapter N) contain ELGs approved by US EPA for specific categories of industrial storm water discharges:

Point Source Category	ELGs[1]
Part 411 - Cement Manufacturing	411.pdf
Part 418 - Fertilizer Manufacturing	418.pdf
Part 419 - Petroleum Refining	419.pdf
Part 422 - Phosphate Manufacturing	422.pdf
Part 423 - Steam Electric Power Generating	423.pdf

[1] The applicable ELGs are attached to this Attachment F. To view the attachments from an electronic (pdf) version of this Attachment F, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icons of the attached pdf files. The attachments are also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (www.waterboards.ca.gov).

EFFLUENT LIMITATION GUIDELINES (ELGs)

Point Source Category	ELGs[2]
Part 429 - Wetting of logs at wet deck storage areas	429.pdf
Part 434 - Coal Mining	434.pdf
Part 436 - Mineral Mining And Processing	436.pdf
Part 440 - Ore Mining And Dressing	440.pdf
Part 443 - Paving And Roofing Materials (Tars And Asphalt)	443.pdf
Part 445 - Landfills	445.pdf
Part 449 - Airport Deicing	449.pdf

2 The applicable ELGs are attached to this Attachment F. To view the attachments from an electronic (pdf) version of this Attachment F, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icons of the attached pdf files. The attachments are also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (www.waterboards.ca.gov).

EFFLUENT LIMITATION GUIDELINES (ELGs)

New Source Performance Standards

New source performance standards (NSPS) represent the best available demonstrated control technology standards. US EPA has established NSPS guidelines for the industries found in the Table below. The intent of NSPS guidelines is to set effluent limitations that represent state-of-the-art treatment technology for new sources.[3]

Table 1 - Storm Water Specific NSPS Effluent Limitation Guidelines

Regulated Discharge	40 CFR Section	Multi Sector General Permit Sector	NSPS	Date New Source Data Established
Discharge resulting from spray down or intentional wetting of logs as wet deck storage areas	Part 429, Subpart I	A	Yes	1/26/81
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished products, by-products or waste products (SIC 2874)	Part 418, Subpart A	C	Yes	4/8/74
Runoff from asphalt emulsion facilities	Part 443, Subpart A	D	Yes	7/28/75
Runoff from materials storage piles at cement manufacturing facilities	Part 411, Subpart C	E	Yes	2/20/74
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, D	J	No	N/A
Runoff from hazardous waste and non-hazardous waste landfills	Part 445, Subparts A and B	K, L	Yes	2/2/00
Runoff from coal storage piles at steam electric generating facilities	Part 423	O	Yes	11/19/82 & 10/8/74
Discharges from primary airports with over 1,000 annual jet departures that conduct deicing operations.	Part 449, Subpart A	S	Yes	NA

[3] New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced: (1) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or (2) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal as defined in 40 C.F.R section 122.26.

ATTACHMENT G

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

A. Areas of Special Biological Significance (ASBS)

1. ASBS are defined in the California Ocean Plan as "those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable."

2. The California Ocean Plan prohibits the discharge of waste to ASBS.

3. The California Ocean Plan authorizes the State Water Board to grant an exception to Ocean Plan provisions where the board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

4. On March 20, 2012, the State Water Board adopted Resolution 2012-0012 (amended by Resolution 2012-0031 on June 19, 2012) which contained a general exception to the California Ocean Plan for discharges of storm water and non-point sources (ASBS Exception). This resolution also contains the Special Protections that are to be implemented for direct discharges to ASBS. Resolution 2012-0012 is hereby incorporated by reference and its requirements must be complied with by industrial storm water Dischargers discharging directly to ASBS.

5. This General Permit requires Dischargers who have been granted an Ocean Plan exception for discharges to ASBS to comply with the requirements contained in the Special Protections. These requirements are contained below.

B. ASBS Non-Storm Water Discharges

1. The term "ASBS Non-Storm Water Discharges" means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not comprised entirely of storm water.

2. Only the following ASBS Non-Storm Water Discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

a. Discharges associated with emergency fire fighting operations.

b. Foundation and footing drains.

c. Water from crawl space or basement pumps.

d. Hillside dewatering.

e. Naturally occurring groundwater seepage via a storm drain.

f. Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

3. Authorized ASBS Non- Storm Water Discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.

4. At the San Clemente Island ASBS, discharges incidental to military training and research, development, test, and evaluation operations are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed in the two military closure areas in the vicinity of Wilson Cove and Castle Rock. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.

5. At the San Nicolas Island and Begg Rock ASBS, discharges incidental to military research, development, testing, and evaluation of, and training with, guided missile and other weapons systems, fleet training exercises, small-scale amphibious warfare training, and special warfare training are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.

C. ASBS Compliance Plan

1. State Water Board Resolution 2012-0012 grants an exception to the Ocean Plan's prohibition on discharges to ASBS (ASBS Exception) to applicants who were identified as Dischargers of industrial storm water to ASBS (ASBS Dischargers). Each ASBS Discharger shall specifically address the prohibition of ASBS Non-Storm Water Discharges and the requirement to maintain natural water quality for industrial storm water discharges to an ASBS in an ASBS Compliance Plan to be included in the ASBS Discharger's SWPPP. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board. The ASBS Compliance Plan shall include:

a. A map of surface drainage of storm water runoff, showing areas of sheet runoff and priority discharges, and a description of any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified as requiring installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable. The SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.

b. A description of the measures by which all unauthorized ASBS Non-Storm Water Discharges (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.

c. A description of how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the Discharger can document to the satisfaction of the Executive Director that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:

   1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or

   2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

      The baseline date for the reduction is March 20, 2012 (the effective date of the ASBS Exception), except for those structural BMPs installed between January 1, 2005 and the adoption of these special protections. The reductions must be achieved and documented by March 20, 2018.

d. A description of how the ASBS Discharger will address erosion and the prevention of anthropogenic sedimentation in the ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.

e. A description of the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an

implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, ASBS Dischargers must first consider using LID practices to infiltrate, use, or evapotranspiration storm water runoff on-site. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.

D. Reporting

If the results of the receiving water monitoring described in Section F. below (Sampling and Analysis Requirements) indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the ASBS Discharger shall submit a report to the State Water Board within 30 days of receiving the results.

1. The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.

2. The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWPPP for future implementation, and any additional BMPs that may be added to the SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.

3. Within 30 days of the approval of the report by the Executive Director, the ASBS Discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.

4. As long as the ASBS Discharger has complied with the procedures described above and is implementing the revised SWPPP, the Discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

5. Compliance with this section does not excuse violations of any term, prohibition, or special condition contained in the Special Protections of the ASBS Exception.

E. Compliance Schedule

1. As of March 20, 2012, all unauthorized ASBS Non-Storm Water Discharges (e.g., dry weather flow) were effectively prohibited.

2. By September 20, 2013, the Discharger shall submit a draft written ASBS Compliance Plan to the Executive Director that describes its strategy to comply with these special conditions, including the requirement to maintain natural water

quality in the affected ASBS. The ASBS Compliance Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls (implementation schedule) to comply with these special conditions for inclusion in the Discharger's SWPPP.

3. By September 20, 2014, the Discharger shall submit the final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring.

4. By September 20, 2013, any non-structural controls that are necessary to comply with these special conditions shall be implemented.

5. By March 20, 2018, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.

6. By March 20, 2018, all Dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the Discharger must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See Flowchart at the end of this Attachment.

7. The Executive Director may only authorize additional time to comply with the special conditions 5 and 6, above if good cause exists to do so. Good cause means a physical impossibility or lack of funding

   If a Discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in 5. or 6. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of these requirements. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

   The Discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

a. for municipalities, a demonstration of significant hardship to Discharger ratepayers, by showing the relationship of storm water fees to annual household income for residents within the Discharger's jurisdictional area, and the Discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or

b. for other governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

F. Additional Requirements – Waterfront and Marine Operations

In addition to the above provisions, a Discharger with waterfront and marine operations shall comply with the following:

1. For discharges related to waterfront and marine operations, the Discharger shall develop a Waterfront and Marine Operations Management Plan (Waterfront Plan). This plan shall contain appropriate Management Measures/Practices to address nonpoint source pollutant discharges to the affected ASBS.

   a. The Waterfront Plan shall contain appropriate Management Measures/Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.

   b. For discharges from marinas and recreational boating activities, the Waterfront Plan shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.

   c. The Waterfront Plan shall include Management Practices to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The management practices shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.

   d. The Waterfront Plan shall include Management Practices to address the prohibition against trash discharges to ASBS. The Management Practices shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate Management Practices to ensure that the receptacles are

adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate Management Practices include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.

e. The Discharger shall submit its Waterfront Plan to the State Water Board Executive Director by September 20, 2012. The Waterfront Plan is subject to approval by the State Water Board Executive Director. The plan must be fully implemented within by September 20, 2013.

2. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.

3. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.

4. If the Discharger anticipates that the Discharger will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the Discharger shall submit a technical report as soon as practicable to the Executive Director. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.

5. The State Water Board may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.

   If a Discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in Section F.1.e above. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Attachment. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The Discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

a. a demonstration of significant hardship by showing that the Discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.

b. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

G. Sampling and Analysis Requirements

1. Monitoring is mandatory for all ASBS Dischargers to assure compliance with the Ocean Plan. Monitoring requirements include both: (1) Core Discharge Monitoring and (2) Ocean Receiving Water Monitoring (see Sections H. and I. below). The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

2. Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notifying the Executive Director that hazardous conditions prevail.

3. Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

H. Core Discharge Monitoring Program

1. General sampling requirements for timing and storm size:

   Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples as described in Section I. below.

2. Runoff flow measurements

   a. For industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be

measured or calculated, using a method acceptable to and approved by the Executive Director.

b. This will be reported annually for each precipitation season to the Executive Director.

3. Runoff samples – storm events

a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width: 1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, if within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination; and 2) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:

1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, if within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination; and

2) samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates); and

3) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

4) if an ASBS Discharger has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).

c. For an applicant not participating in a regional integrated monitoring program [see below in Section I.3.] in addition to the sampling requirements in Section H.3.a. and b. above, a minimum of the two largest outfalls or 20 percent of the

larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents (Table A and B constituents are provided at the end of this Attachment) for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

d. The Executive Director may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

I. Ocean Receiving Water and Reference Area Monitoring Program

1. In addition to performing the Core Discharge Monitoring Program in Section H. above, all ASBS Dischargers must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, ASBS Dischargers may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.

2. Individual Monitoring Program: The requirements listed below are for those ASBS Dischargers who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:

   a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in Section H.3. above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents (Table A and B constituents are provided at the end if this Attachment) for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

      The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm), and during (or immediately after) the same storm (post-storm). Post-storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be

sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents (provided at the end of this Attachment) for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod Eohaustorius estuarius must be performed.

c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.

d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (Mytilus californianus) and/or sand crabs (Emerita analoga or Blepharipoda occidentalis). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.

e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the ASBS Discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.

f. The monitoring requirements of the Individual Monitoring Program in this Section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point

after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

3. Regional Integrated Monitoring Program: ASBS Dischargers may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section I.2.) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.

   a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non-storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional integrated monitoring program, the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

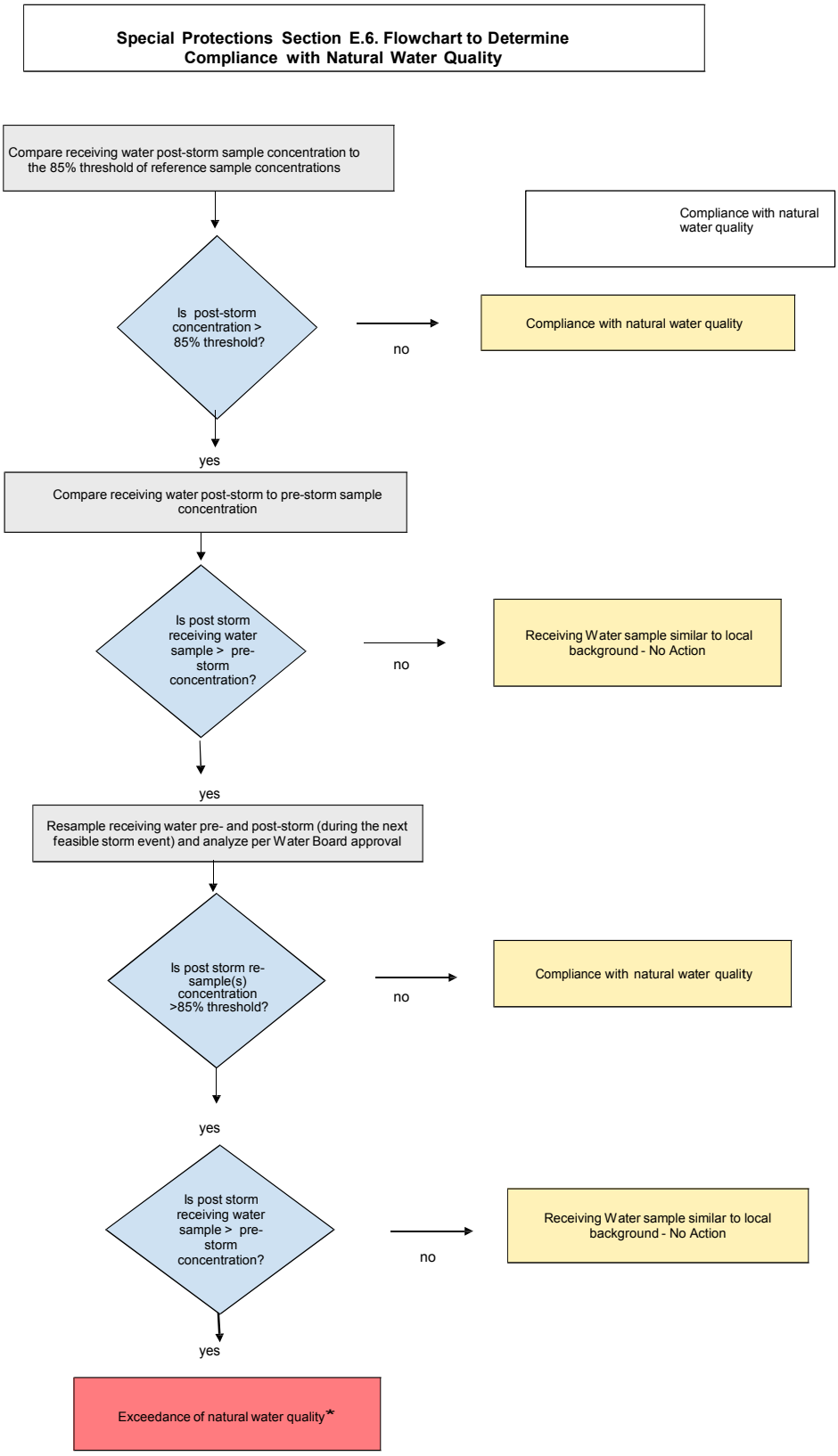
   b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate

storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS Dischargers that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.

d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS



* When an exceedance of natural water quality occurs, the Discharger must comply with Section D. Note, when sampling data is available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.

ASBS Monitoring

TABLE A
Monitoring Constituent List
(excerpted from California Ocean Plan dated 2009)

Constituent	Units
Grease and Oil	mg/L
Suspended Solids	Mg/L
Settleable Solids	mL/L
Turbidity	NTU
PH	

TABLE B
Monitoring Constituent List
(Excerpted from California Ocean Plan dated 2009)

Constituent	Units
Arsenic	µg/L
Cadmium	µg/L
Chromium	µg/L
Copper	µg/L
Lead	µg/L
Mercury	µg/L
Nickel	µg/L
Selenium	µg/L
Silver	µg/L
Zinc	µg/L
Cyanide	µg/L
Total Chlorine Residual	µg/L
Ammonia (as N)	µg/L
Acute Toxicity	TUa
Chronic Toxicity	TUc
Phenolic Compounds (non-chlorinated)	µg/L
Chlorinated Phenolics	µg/L
Endosulfan	µg/L
Endrin	µg/L
HCH	µg/L

Analytical Chemistry Methods: All constituents shall be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, shall be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

ATTACHMENT H

SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

For more detailed guidance, Dischargers should refer to the U.S. EPA's "Industrial Stormwater Monitoring and Sampling Guide," dated March 2009, available at: http://www.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf and the "NPDES Storm Water Sampling Guidance Document," dated July 1992, available at: http://www.epa.gov/npdes/pubs/owm0093.pdf .

1. Identify the sampling parameters required to be tested and the number of storm water discharge points that will be sampled. Request the analytical testing laboratory to provide the appropriate number and type of sample containers, sample container labels, blank chain of custody forms, and sample preservation instructions.

2. Determine how samples will be transported to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The Discharger may either deliver the samples to the laboratory, arrange for the laboratory to pick up the samples, or overnight ship the samples to the laboratory. All sample analysis shall be done in accordance with 40 Code of Federal Regulations part 136. Samples for pH have a holding time of 15 minutes.[1]

3. Qualified Combined Samples shall be combined by the laboratory and not by the Discharger. Sample bottles must be appropriately labeled to instruct the laboratory on which samples to combine.

4. Unless the Discharger can provide flow weighted information, all combined samples shall be volume weighted.

5. For grab samples, use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers may contaminate samples.

6. For automatic samplers that are not compatible with bottles provided by the laboratory, the Discharger is required to send the sample container included with the automatic sampler to the laboratory for analysis.

[1] 40 C.F.R. section 136.3, Table II - Required Containers, Preservation Techniques, and Holding Times.

7. The Discharger can only use automatic sampling device to sample parameters that the device is designed to. For pH, Dischargers can only use automatic sampling devices with the ability to read pH within 15 minutes of sample collection.

8. The Discharger is prohibited from using an automatic sampling device for Oil and Grease, unless the automatic sampling device is specifically designed to sample for Oil and Grease.

9. To prevent contamination, do not touch inside of sample container or cap or put anything into the sample containers before collecting storm water samples.

10. Do not overfill sample containers. Overfilling can change the analytical results.

11. Tightly screw on the cap of each sample container without stripping the threads of the cap.

12. Complete and attach a label for each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.

13. Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into shipping containers. Samples should be kept as close to 4 degrees Celsius (39 degrees Fahrenheit) as possible until arriving to the laboratory. Do not freeze samples.

14. Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the Discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.

15. Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers.

16. Dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the sample protocols and laboratory practices.

17. Refer to Table 1 in the General Permit for test methods, detection limits, and reporting units.

18. All sampling and sample preservation shall be in accordance with 40 Code of Federal Regulations part 136 and the current edition of "Standard Methods for

the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including Discharger field instruments for measuring pH or specific conductance if identified as an additional sampling parameter) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses shall be conducted according to approved test procedures under 40 Code of Federal Regulations part 136, unless other test procedures have been specified by the Regional Water Quality Control Board. All metals shall be reported as total metals. Dischargers may conduct their own field analysis of pH (or specific conductance if identified as an additional sampling parameter) if the Discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis. With the exception of field analysis conducted by Dischargers for pH (or specific conductance if identified as an additional sampling parameter), all analyses shall be sent to and conducted at a laboratory certified for such analyses by the California Department of Public Health. Dischargers are required to report to the Water Board any sampling data collected more frequently than required in this General Permit (Section XXI.J.2)

APPENDIX 1

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

NATIONAL POLLUTION DISCHARGE ELIMINTATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

FACILITY NAME:_____

Waste Discharge Identification (WDID) #:_____

	FACILITY CONTACT	Consultant/Qualified Industrial Storm Water Practitioner (QISP)
Name		
Title		
Company		
Street Address		
City, State		
Zip		

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Signed Certification (Section II.A)			
Pollution Prevention Team (Section X.D.1)			
Existing Facility Plans (Section X.D.2)			
Site Map(s) (Section X.E)			
Facility boundaries (Section X.E.3.a)			
Drainage areas (Section X.E.3.a)			
Direction of flow (Section X.E.3.a)			
On-facility water bodies (Section X.E.3.a)			

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Areas of soil erosion (Section X.E.3.a)			
Nearby water bodies (Section X.E.3.a)			
Municipal storm drain inlets (Section X.E.3.a)			
Points of discharge (Section X.E.3.b)			
Sampling Locations (Section X.E.3.b)			
Structural control measures (Section X.E.3.c)			
Impervious areas (Section X.E.3.d)			
Location of Directly Exposed Materials (Section X.E.3.e)			
Locations of significant spills and leaks (Section X.E.3.e)			
Areas of Industrial Activity (Section X.E.3.f)			
Areas of industrial activity (Section X.E.3.f)			
Storage areas/storage tanks (Section X.E.3.f)			
Shipping and receiving areas (Section X.E.3.f)			
Fueling areas (Section X.E.3.f)			
Vehicle and equipment storage/maintenance (Section X.E.3.f)			
Material handling/processing (Section X.E.3.f)			
Waste treatment/disposal (Section X.E.3.f)			
Dust or particulate generation (Section X.E.3.f)			
Cleaning and material reuse (Section X.E.3.f)			

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Other areas of industrial activities (Section X.E.3.f)			
List of Industrial Materials (Section X.F)			
Storage location			
Quantity			
Frequency			
Receiving and shipping location			
Quantity			
Frequency			
Handling location			
Quantity			
Frequency			
Potential Pollution Sources (Section X.G)			
Description of Potential Pollution Sources (Section X.G.1)			
Industrial processes (Section X.G.1.a)			
Material handling and storage areas (Section X.G.1.b)			
Dust & particulate generating activities (Section X.G.1.c)			
Significant spills and leaks (Section X.G.1.d)			
Non-storm water discharges (Section X.G.1.e)			
Erodible surfaces (Section X.G.1.f)			
Assessment of Potential Pollutant Sources (Section X.G.2)			
Narrative assessment of likely sources of pollutants (Section X.G.2.a)			
Narrative assessment of likely pollutants present in storm water discharges (Section X.G.2.a)			
Identification of additional BMPs Section X.G.2.b)			

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Identification of drainage areas with no exposure (Section X.G.2.c)			
Identification of additional parameters (Section X.G.2.d)			
Storm Water Best Management Practices (Section X.H)			
Minimum BMPs (Section X.H.1)			
Good housekeeping (Section X.H.1.a)			
Preventative maintenance (Section X.H.1.b)			
Spill response (Section X.H.1.c)			
Material handling and waste management (Section X.H.1.d)			
Erosion and sediment controls (Section X.H.1.e)			
Employee training program (Section X.H.1.f)			
Quality assurance and record keeping (Section X.H.1.g)			
Advanced BMPs (Section X.H.2)			
Implement advanced BMPs at the facility (Section X.H.2.a)			
Exposure Minimization BMPs (Section X.H.2.b.i)			
Storm Water containment and discharge reduction BMPS (Section X.H.2.b.ii)			
Treatment Control BMPs (Section X.H.2.b.iii)			
Other advance BMPs (Section X.H.2.b.iv)			
Temporary Suspension of Activities (Section X.H.3)			
BMPs necessary for stabilization of the facility (Section X.H.3)			

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
BMP Descriptions (Section X.H.4)			
Pollutant that a BMP reduces or prevents (Section X.H.4.a.i)			
Frequency of BMP implementation (Section X.H.4.a.ii)			
Location of BMP (Section X.H.4.a.iii)			
Person implementing BMP (Section X.H.4.a.iv)			
Procedures/maintenance/ instructions for BMP implementation (Section X.H.4.a.v)			
Equipment and tools for BMP implementation (Section X.H.4.a.vi)			
BMPs needing more frequent inspections (Section X.H.4.a.vii)			
Minimum BMP/applicable advanced BMPs not implemented at the facility (Section X.H.4.b)			
BMPs implemented in lieu of minimum or applicable advanced BMPs (Section X.H.4.c)			
BMP Summary Table (Section X.H.5)			
Monitoring Implementation Plan (Section X.I)			
Team members assisting in developing the MIP (Section X.I.1)			
Summary of visual observation procedures, locations, and details (Section X.I.2)			
Justifications if applicable for: Alternative discharge locations, Representative Sampling Reduction or, Qualified Combined Samples (Section X.I.3)			
Procedures for field instrument calibration (Section X.I.4)			

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Example of Chain of Custody (Section X.I.5)			
Annual Comprehensive Facility Compliance Evaluation (Section XV)			
Review of all visual inspection and monitoring records and sampling and analysis results conducted during the previous reporting year (Section XV.A)			
Visual inspection of all areas of industrial activity and associated potential pollutant sources (Section XV.B)			
Visual inspection of all drainage areas previously identified as having no-exposure to industrial activities and materials in accordance with the definitions in Section XVII (Section XV.C)			
Visual inspection of equipment needed to implement the BMPs (Section XV.D)			
Visual inspection of any structural and/or treatment control BMPs (Section XV.E)			
Review and assessment of all BMPs for each area of industrial activity and associated potential pollutant sources (Section XV.F)			
Assessment of other factors needed to complete the information described in Section XVI.B (Section XV.G)			

APPENDIX 2

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES

(GENERAL PERMIT)

This Attachment provides general guidance instructions and guidance for obtaining NEC coverage. The actual NEC requirements are primarily contained in Section XVII of this General Permit.

A. INSTRUCTIONS:

Who May File for NEC Coverage

Sections 301 and 402(p) of the Clean Water Act (CWA), and Sections 1311 and 1342(p) of 33 United States Code prohibit the discharge of storm water associated with industrial activity to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit. However, NPDES permit coverage is "conditionally excluded" for discharges of storm water associated with industrial activities (industrial storm water discharges) if the Discharger can certify that a condition of "No Exposure" exists at the industrial facility. A condition of "No Exposure" means that a Discharger's industrial activities and materials are not exposed to storm water. Industrial storm water discharges from construction and land disturbance activities are ineligible for the NEC coverage. Dischargers who file valid NECs in accordance with these instructions are not required to implement Best Available Technology Economically Achievable /Best Conventional Pollutant Control Technology and comply with the Storm Water Pollution Prevention Plan (SWPPP) and monitoring requirements of this General Permit.

Obtaining and Maintaining NEC Coverage

A Discharger must electronically certify and submit NEC Permit Registration Documents (PRDs) via State Water Resources Control Board's (State Water Board's) Storm Water Multi-Application and Report Tracking System (SMARTS) to obtain NEC coverage. This conditional exclusion does not become effective until the PRDs are submitted and the annual fee is paid. Upon receipt of the annual fee, the Discharger will electronically receive an NEC acceptance notification via SMARTS, which will include a Waste Discharge Identification (WDID) number. A Discharger must maintain a condition of "No Exposure" at the facility for the conditional exclusion to remain applicable. The Discharger must annually electronically re-certify the NEC via SMARTS to confirm that the conditions of "no exposure" are being maintained. If conditions change resulting in the exposure of materials and activities to storm water, the Discharger must electronically certify and submit PRDs via SMARTS for Notice of Intent (NOI) coverage under the General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit).

Fees

First time NEC coverage PRDs and the annual re-certification require a fee. Fees may be changed by State Water Board regulation, independent of this General Permit.

How to Prepare and Submit PRDs for NEC Coverage

A Discharger must electronically certify and submit PRDs for NEC coverage in accordance with the instructions provided at the State Water Board web site for SMARTS:

https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

A Discharger with multiple facilities that satisfy the conditions of "No Exposure" must certify and submit PRDs for each facility. The Discharger is required to inspect and evaluate each individual facility to determine the condition of No-Exposure. The Discharger must retain an electronic or paper copy of the NEC coverage acceptance notification for their records.

The following information is required in the PRDs:

Discharger Information

1. The legal business name of the business entity, public organization, or any other entity that operates the facility described in the certification. The name of the operator may or may not be the same as the name of the facility. The operator is the legal entity that controls the facility operations, not the plant or site manager.

2. The mailing address of the facility operator, including the city, state, and zip code.

3. The facility operator contact person, telephone number and e-mail address.

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

Facility Information

4. The legal business name of the facility.

5. The total acreage of the facility associated with industrial activity. (Facility size in acres is calculated by taking the square feet and dividing by 43,560.)

6. The complete physical street address (e.g. the street address used for express deliveries), including the city, State, and zip code. Do not use a P.O. Box number. If a physical street address does not exist, describe the location or provide the latitude and longitude of a point within the facility boundary. Latitude and longitude are available from United States Geological Survey quadrangle or topographic maps, or may be found using a mapping site on the internet.

7. The facility contact person, telephone number, and e-mail address.

8. The 4-digit Standard Industrial Classification (SIC) code that represents the facility primary industrial activity. Provide a brief description of the primary industrial activity. If applicable, enter other significant SIC codes and descriptions. To obtain these codes, see the 1987 SIC Manual or the Occupational Health and Safety Administration's site:

   http://www.osha.gov/pls/imis/sicsearch.html

9. If the facility is currently covered under the General Permit, include the WDID number. The WDID number will be used at a later date to terminate the facility's coverage under the General Permit as necessary.

Facility Mailing or Billing Address

Completion of this item is required the facility mailing address or billing address differs from the physical facility address provided above. The Discharger must indicate which address the annual fee invoice must be sent to if the State Water Board is unable to transmit the invoice electronically.

Site Maps

Site maps must be prepared and submitted in accordance with the requirements in Section X.E of this General Permit.

NEC Checklist

The Discharger must evaluate the eleven major areas that storm water exposure may occur, per the listing at the end of this appendix. The Discharger must be able to certify that none of these major areas have potential for exposure. If the Discharger cannot certify that every one of the eleven major areas do not have exposure, a potential for exposure exists at the facility and the facility is not eligible for NEC coverage. The Discharger must obtain (or continue) NOI coverage under this General Permit if the facility is not eligible for NEC coverage. After obtaining NOI coverage, the Discharger may implement facility modifications to eliminate the potential for a discharge of storm water exposed to industrial activity, and then change their NOI coverage to NEC coverage by certifying the conditions of "No Exposure" are met.

Certification

Federal and state statutes provide for severe penalties for Dischargers that submit false information on the PRDs. Dischargers shall certify and submit PRDs via SMARTS for NEC coverage in accordance with Electronic Signature and Certification Requirements in Section XXI.K of this General Permit.

B. GUIDANCE:

Contact your local Regional Water Quality Control Board (Regional Water Board) office with questions regarding this guidance.

1. Who is Eligible to Qualify for the No Exposure Certification (NEC) - Conditional Exclusion?

All industrial categories listed in Attachment A of this General Permit (excluding construction) are eligible to apply for the NEC coverage.

2. Limitations on Eligibility for NEC coverage

In addition to construction projects not being eligible, the following situations limit the applicability of NEC coverage:

a. NEC coverage is available on a facility-wide basis only, not for individual drainage areas or discharge locations. Generally, if any exposed industrial materials or activities exist, or have a potential to exist, anywhere at a facility, NEC coverage is not applicable to the facility. If the Regional Water Board determines that a facility does have exposure or the facility's storm water discharges have a reasonable potential to cause or contribute to an exceedance of applicable water quality objectives/standards, the Regional Water Board can deny NEC coverage.

b. If changes at a facility result in potential exposure of industrial activities or materials, the facility is no longer eligible for NEC coverage. Dischargers

shall register for NOI coverage under this General Permit prior to a planned facility change that will cause exposure, or within seven (7) calendar days after unplanned exposure occurs. If an unplanned exposure occurs due to an emergency response or one-time event that is unlikely to re-occur, a Discharger may contact the Regional Water Board to discuss whether the requirement to obtain NOI coverage can be waived. Unless the Discharger receives a written waiver from the Regional Water Board, the Discharger shall electronically certify and submit PRDs to obtain NOI coverage.

c. Current contamination resulting from historic industrial practices at the facility (e.g., soil contamination, groundwater contamination, etc.) represents a condition of exposure to waters of the United State; therefore a facility with historic contamination is not eligible for NEC coverage.

3. What is the Definition of No Exposure?

a. No Exposure means all industrial materials and activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt and/or runoff.

b. Industrial materials and activities include, but are not limited to, material-handling equipment or activities; industrial machinery; raw materials, intermediate products, by-products, and final products; or waste products.

c. Material handling activities include storage, loading and unloading, transport, or conveyance of any raw material, intermediate product, by-product, final product, or waste product.

d. Final products intended to be used outdoors (e.g., automobiles) typically pose little risk of polluting storm water since not typically contaminated with pollutants that become mobilized by contact with storm water. Final products are exempt from the requirement for protection by a storm-resistant shelter to qualify for no exposure. Similarly, containers, racks, and other transport platforms (e.g., wooden pallets) used for the storage or conveyance of final products may also be stored outside if pollutant-free or pollutants do not mobilize via contact with storm water.

e. Storm-resistant shelters include: (1) completely roofed and walled buildings or structures, (2) structures with only a top cover (no side coverings) supported by permanent supports, provided material within the structure is not subject to wind dispersion (sawdust, powders, etc.) or being tracked out of the facility, and is not a source of pollutants in the industrial storm water discharges.

4. Industrial Materials/Activities Not Requiring a Storm-Resistant Shelter

The intent of the "No Exposure" exclusion is to maintain a condition of permanent "No Exposure". A storm-resistant shelter is not required for the following industrial materials and activities:

a. Drums, Barrels, Tanks, and Similar Containers that are sealed ("sealed" means banded or otherwise secured and without operational taps or valves), are not exposed provided those containers are not deteriorated, do not contain residual materials on the outside surfaces, and do not leak. Drums, barrels, etc., that are not opened while outdoors, or are not deteriorated or leaking, and that do not pose a risk of contaminating storm water runoff. Consider the following when making a "No Exposure" determination:

i. Materials shall not be added or withdrawn to/from containers while outdoors

ii. Simply moving containers while outside does not create exposure unless exposure occurs when pollutants are "tracked out" by the container handling equipment or vehicles.

iii. All outdoor containers shall be inspected to ensure they are not open, deteriorated, or leaking. When an outdoor container is observed as opened, deteriorated, or leaking, the container must immediately be closed, replaced, or sheltered. Frequent detection of open, deteriorated, or leaking containers, or failure to immediately close, replace, or shelter opened, deteriorated or leaking containers will cause a condition of exposure.

iv. Containers, racks, and other transport platforms (e.g., wooden pallets) used with drums, barrels, etc., can be stored outside providing they are contaminant-free and in good repair.

b. Above Ground Storage Tanks (ASTs) In addition to generally being considered as not exposed, ASTs may also be exempt from the prohibition against adding or withdrawing material to/from external containers. ASTs typically use transfer valves to dispense materials that support facility operations (e.g., heating oil, propane, butane, chemical feedstock) or fuel for delivery vehicles (gasoline, diesel, compressed natural gas). For operational

ASTs to qualify for "No Exposure", the following must be satisfied:

i. The tank(s) shall be physically separated from and not associated with vehicle maintenance operations.

ii. There shall be no leaks from piping, pumps, or other equipment that has the potential to come in contact with storm water.

iii. Wherever feasible, the tank(s) shall have secondary containment (e.g., an impervious dike, berm or concrete retaining structure) to prevent runoff in the event of a structural failure or leaking transfer valve. Note: any resulting unpermitted discharge is in violation of the CWA.

c. Lidded Dumpsters. Lidded dumpsters containing waste materials, providing the containers are completely covered and nothing can drain out holes in the bottom, spilled when loaded into the dumpster, or spilled in loading into a garbage truck. Industrial waste materials and trash that is stored uncovered is considered exposed.

d. Adequately maintained vehicles, such as trucks, automobiles, forklifts, trailers or other general-purpose vehicles found onsite - but not industrial machinery that are not leaking, are in good repair or are not otherwise a potential source of contaminants:

i. Vehicles passing between buildings may be exposed to storm water, however if the vehicles are adequately maintained, a condition of exposure may not exist. Similarly, non-leaking vehicles awaiting maintenance at vehicle maintenance facilities are not considered as potential exposure. However, vehicles that have been washed or rinsed that are not completely dry prior to outside exposure have the potential to cause a condition of exposure. Vehicles that track materials out of the facility are considered to be mobilizing pollutants. Vehicles that exit maintenance bays are also considered to cause exposure.

ii. The mere conveyance between buildings of materials / products that are otherwise not allowed to be stored outdoors, does not create a condition of exposure, provided the materials/products are adequately protected from storm water and do not have the potential to be released as a result of a leak or spill.

e. Final products built and intended for use outdoors (e.g., new cars), provided the final products have not deteriorated, are not contaminated, or are not otherwise potential sources of contaminants.

Types of final products not qualifying for a certification of "No Exposure":

i. Products that may be mobilized in storm water discharges (e.g., rock salt).

ii. Products, which may, when exposed, oxidize, deteriorate, leak, or otherwise be a potential source of contaminants (e.g., junk cars, stockpiled train rails).

iii. "Final" products that are, in actuality, "intermediate" products. Intermediate products are those used in the composition of yet another product (i.e., sheet metal, tubing, and paint used in making tractors).

iv. Even if the intermediate product is "final" for a manufacturer and destined for incorporation in a "final product intended for use outdoors," the product is not allowed to be exposed because they may be chemically treated or are insufficiently impervious to weathering.

f. Special Conditions for Construction Activities
Permanent, uninterrupted sheltering of industrial activities or materials may not always be possible during facility renovation or construction. When such circumstances exist, the Discharger is not required to obtain coverage under an NPDES permit as long as the following conditions are met:

i. Materials and activities are protected with temporary covers or shelters (i.e. tarpaulins);

ii. Temporary covers or shelters prevent the contact of storm water to materials and activities;

iii. Materials are subject to wind dispersion are not stored under temporary sheltering;

iv. Temporary shelters are only used when necessary during facility renovation or construction and until permanent storm-resistant shelters as described above are available; and,

v. Temporary shelters are only used for a single period of ninety days or less. (Facilities with construction and renovation projects that will need the use of temporary shelters beyond 90 days, or that will require multiple periods of ninety

days or less, are required to be covered by an NPDES permit.)

5. Other Potential Sources of Contaminants

a. Particulate Emissions from Roof Stacks and/or Vents: Deposits of particles or residuals from roof stacks/vents that have the potential to be mobilized by storm water runoff are considered exposed.

b. Pollutants Potentially Mobilized by Wind Windblown materials cause a condition of exposure. Materials sheltered from precipitation are be deemed exposed if the materials has a potential to be mobilized by wind.

6. Certifying a Condition of "No Exposure"

To obtain the NEC coverage, the Discharger must electronically certify and submit PRDs via SMARTS that the facility meets the definition of "No Exposure" and pay an annual fee. The Discharger must **submit PRDs for NEC coverage even if the Discharger was not previously required to file for NEC coverage under the previous General Permit**. These PRDs include a checklist requiring the Discharger to evaluate eleven major areas to determine whether there is exposure of industrial activities and materials at the facility. To qualify for NEC coverage the Discharger must satisfy all the NEC coverage conditions in this General Permit and certify that there is "No Exposure". The checklist: 1) aids the Discharger in determining if its facility is eligible for NEC coverage, and 2) furnishes the necessary documentation supporting relief from the General Permit's requirement of NOI coverage. Additionally, Dischargers with NEC coverage are not required to develop and implement SWPPPs or comply with the monitoring requirements.

If a Discharger cannot certify that there is "No Exposure" at the facility, the Discharger must make appropriate changes at the facility to eliminate exposure prior to registering for future NEC coverage. Facility changes must remove all potential for pollutant exposure to storm water.

An annual inspection and evaluation, re-certification and fee are required thereafter.

7. Other NEC coverage Facts:

a. NEC coverage is only valid if the condition of "No Exposure" exists and is reasonably expected to continue to exist. Dischargers shall electronically certify and submit PRDs for NOI coverage when the condition of "No Exposure" is no longer expected to exist.

b. Dischargers must file PRDs for NEC coverage for each qualifying facility.

c. An NEC must be submitted for each separate facility qualifying for the "No Exposure" conditional exclusion.

d. An NEC is non-transferable. If a new operator takes over facility operations, the new operator shall electronically certify and submit PRDs and applicable fees for new NEC coverage via SMARTS prior to the operations transfer. NEC coverage cannot be transferred from one physical location to another regardless of ownership.

8. Operators May Be Required to Obtain NOI Coverage Based on the Protection Of Water Quality?

Operators who certified that their facilities qualify for NEC coverage may, nonetheless, be required by the Regional Water Board to obtain NOI coverage if the Regional Water Board determines that the facility's discharge has the potential to cause or contribute to an exceedance of applicable water quality objectives/standards or determines that exposure exists at the facility. The Regional Water Board may request information and/or inspect the facility to assess potential water quality impacts and to determine if NOI coverage is required. The Discharger shall take appropriate actions to ensure compliance with the General Permit.

9. Steps to Obtain NEC coverage

This section will walk you through the process of obtaining NEC coverage.

Step 1: Determine if your facility is subject to this General Permit (refer to Attachment A of this General Permit). If yes, proceed to Step 2. If not, stop here.

If your facility is included in Attachment A and conducts industrial activities, you are required to **either** register for NOI coverage or NEC coverage.

Step 2: Determine if your regulated industrial activity meets the definition of "No Exposure" and qualifies for the exclusion from permitting. If yes, proceed to Step 3. If no, stop here and obtain NOI coverage. An

evaluation of the facility must be conducted by facility personnel familiar with the facility and its operations. Inspect all facility areas and potential pollutant sources to determine whether the facility satisfies the "No Exposure" conditions.

Step 3: Electronically certify and submit the PRDs for NEC coverage via SMARTS and mail the annual fee to the State Water Board at the following address:

SWRCB
Surface Water Permitting Section
PO Box 1977
Sacramento, CA 95812-1977

To maintain NEC coverage, the NEC must re-certify and pay a fee annually. This may only be done if the condition of "No Exposure" continues to exist at the facility.

Step 4: If requested, staff from the Water Boards, local Municipal Separate Storm Sewer System (MS4), or United States Environmental Protection Agency must be allowed to inspect your facility. All inspection reports will be made publicly available.

Step 5: Maintain a condition of "No Exposure".

- NEC coverage is not a blanket exemption. Therefore, if facility physical or operational changes occur which cause exposure of industrial activities or materials to storm water, the Discharger must then immediately comply with all the requirements of this General Permit, including obtaining NOI coverage as applicable.

- To maintain the condition of "No Exposure", the Discharger shall annually evaluate the facility to assure that the conditions of "No Exposure" still exist. More frequent evaluations may be necessary in circumstances when facility operations are rapidly changing.

- Failure to maintain the condition of "No Exposure" or otherwise obtain NOI coverage may lead to the unauthorized discharge of storm water associated with industrial activity to waters of the United States, resulting in penalties under the CWA and Water Code.

C. Frequently Asked Questions:

Q1. Who is eligible for NEC Coverage?

A. Any Discharger operating a facility described in Attachment A may register for NEC coverage if their facility has a condition of "No Exposure".

Q2. How does an eligible Discharger file for NEC coverage and where is the annual fee sent?

A. The PRDs for NEC coverage shall be electronically certified and submitted in accordance with the instructions provided in SMARTS at the State Water Board website at: https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp. The fee is currently $242, but may be changed by regulation. Once NEC coverage is accepted, an invoice will be electronically sent to the Discharger. The annual fee and invoice shall be sent to:

State Water Resources Control Board
Division of Water Quality
Attention: Industrial Storm Water Unit
P.O. Box 1977
Sacramento, CA 95812-1977

Q3. If my facility's storm water discharges are covered by an individual permit, can I file for NEC coverage?

A. Yes. Storm water discharges covered by an individual permit are eligible for NEC coverage if the conditions at the facility satisfy the definition of "No Exposure" and you obtain approval to terminate individual permit coverage from the local Regional Water Board prior to PRD submittal. Approval from the Regional Water Board is mandatory. Many individual permits, for example, contain numeric storm water effluent limitations ("antibacksliding" provisions may prevent these facilities from qualifying for the "No Exposure" conditional exclusion).

Q4. My facility was originally excluded from the Phase I regulations because it was classified as a "light industrial facility". The facility has never had any exposure to storm water runoff. Do I now need to certify that the facility meets the No Exposure Exclusion from NPDES Storm Water Permitting?

A. Yes. See answer provided to question number 9, "What is the exclusion "conditional" upon?"

Q5. Do I have to file a Notice of Termination (NOT) and a register for NEC coverage if my facility has NOI coverage and qualifies for NEC coverage?

A. No. You are only required to register for NEC coverage. You must provide the WDID# in your NEC coverage PRDs in order for the State Water Board to change permit coverage status.

Q6. When and how often is a NEC coverage re-certification required?

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

A. Re-certification of NEC coverage is required annually (assuming the facility maintains its "No Exposure" status). The State Water Board will electronically transmit an NEC re-certification and annual fee notification to each facility operator who has filed for NEC coverage.

New Dischargers must register for NEC coverage before the commencement of facility operations. Dischargers that fail to file for NEC coverage or apply for NOI coverage before the commencement of facility operations will be out of compliance and subject to enforcement.

Existing Dischargers have two options for submitting NECs:

1. Facility operators of "light industrial" facilities who have been operating under their original, no-certification-required permitting exemption must submit the NEC at any time prior to October 1, 2015. Dischargers who have not submitted an NEC or applied for permit coverage by this due date will be considered out of compliance and subject to Water Board enforcement.

2. Dischargers who have NOI coverage may register for NEC coverage at any time following completion of facility changes that result in the condition of "No Exposure".

Q7. What happens if I know of changes that may cause exposure?

A. If exposure has the potential to occur in the near future due to some anticipated change at the facility, the Discharger must obtain NOI coverage to avoid potential enforcement for violations of this General Permit.

Q8. Is the NEC coverage transferable to a new Discharger?

A. No. If a new operator takes over your facility, the new operator must register for new NEC coverage prior to the transfer. A new application fee is required.

Q9. What is the exclusion "conditional" upon?

A. The exclusion from permit coverage requirements is "conditional" upon the certification of the Discharger that the facility does not have exposure of materials or activities to storm water. PRDs for NEC coverage shall be electronically submitted to the State Water Board and will not be accepted if incomplete. The Regional Water Board may review the information, contact and/or inspect the facility, and invalidate the NEC and require the Discharger to obtain NOI coverage. PRDs are public documents and will be available for public review via SMARTS.

Q10. Can secondary containment around an outdoor exposed area qualify for a condition of "No Exposure"?

A. If secondary containment is engineered to always prevent a discharge of collected rainfall (based on the historical rainfall record) and a simultaneous spill of any other industrial materials or liquids, the "No Exposure" condition may be claimed. Note that there must be proper disposal of any water or liquids collected from the containment (i.e., discharged in compliance with another NPDES permit, treated and discharged to the sanitary sewer, or trucked offsite to an appropriate disposal/treatment facility).

D. NEC Checklist

An NEC Checklist must be prepared by the Discharger demonstrating that: (1) the facility has been evaluated, (2) none of the following materials or activities are, or will be in the foreseeable future, exposed to precipitation, and (3) all unauthorized NSWDs have been eliminated:

1. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed;

2. Materials or residuals on the ground or in storm water inlets from spills/leaks;

3. Materials or products from past industrial activity;

4. Material handling equipment (except adequately maintained vehicles);

5. Materials or products during loading/unloading or transporting activities;

6. Materials or products stored outdoors (except final products intended for outside use, i.e., new cars, where exposure to storm water does not result in the discharge of pollutants);

7. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;

8. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;

9. Waste material (except waste in covered, non-leaking containers, i.e., dumpsters);

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

10. Application or disposal of processed wastewater (unless already covered by an NPDES permit); and

11. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.

APPENDIX 3

WATERBODIES WITH CLEAN WATER ACT SECTION 303(D) LISTED IMPAIRMENTS

NATIONAL POLLUTION DISCHARGE ELIMINTATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

The 303(d) impairments below are sourced from the 2010 Integrated Report. The rows in red are impairments for which industrial storm water Dischargers subject to this General Permit are not required to analyze for additional parameters unless directed by the Regional Water Board, because these parameters are typically not associated with industrial storm water. Test methods with substantially similar or more stringent method detection limits may be used if approved by the staff of the State Water Board prior to sampling and analysis and upon approval, will be added into SMARTS. The rows that are not in red are impairments for which Dischargers in the 303(d) impaired watershed are required to analyze for additional parameters, if applicable, because these parameters are more likely to be associated with industrial storm water. See General Permit Section XI.B.6.e. In the event that any of the impairments in this appendix are subsequently delisted, the Dischargers with discharges to that watershed are no longer required to analyze for the additional parameters for those impairments, and the provisions for new Dischargers with discharges to 303(d) impaired water bodies contained in Section VII.B of this General Permit no longer apply for those impairments.

The Excel spreadsheet containing the water bodies with 303(d) impairments is an attachment to this Appendix 3. To view the attachment from an electronic (pdf) version of this Appendix 3, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icon of an Excel spreadsheet. The Excel spreadsheet is also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (http://www.waterboards.ca.gov/).

ATTACHMENT
12

State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
November 8, 2000

ITEM: 6

SUBJECT: AMENDMENT TO RIVERSIDE COUNTY MUNICPAL STORMWATER PERMIT TO BE CONSISTENT WITH REQUIRMENTS ISSUED BY USEPA (TENTATIVE ADDENDUM NO. 1 TO ORDER NO. 98-02. NPDES PERMIT NO. CAS0108766) (Elizabeth Lair)

PURPOSE: To incorporate language developed by the United States Protection Agency into Order No. 98-02

DISCUSSION: In a letter dated March 25, 1998 to the Regional Board, the United States Environmental Protection Agency (USEPA) concluded that the language in the Regional Board draft permit pertaining to receiving water limitations would not comply with the Clean Water Act and its implementing regulations. On May 13, 1998, this Regional Board adopted Order No. 98-02 (NPDES Permit No. CAS0108766), **Permit for Discharges of Storm Water and Urban Runoff from the Storm Water Conveyance systems of Riverside County Flood Control District, the County of Riverside, and the Incorporated Cities of Riverside County within the San Diego Region.** However, on May 26, 1998, in accordance with the program delegation agreement with the State, USEPA Region IX objected to the reissued permit. USEPA's concerns related to the receiving water limitation language in the permit. This objection was not resolved within the 90-day period provided by the delegation agreement. As a result, on September 18, 1998, USEPA Region IX assumed responsibility for the permit and requested the MS4 permit reapplication from the co-permittees. USEPA developed its own permit based on the information submitted by the co-permittees. The USEPA then finalized a permit, which would fully comply with the Clean Water Act. By Letter dated April 28, 1999, the USEPA enclosed a final draft permit, pursuant to 40 CFR 124, which differed slightly from the original permit. The changes which were made were discussed in the final fact sheet and response to public comments where were also enclosed along with the final permit (see attachment 2). The USEPA issued **Authorization to Discharge Under the National Pollutant**

10-7000.02

Discharge Elimination System became effective on May 30, 1999.

In a letter dated June 25, 1999, the USEPA formally advised the RWQCB that permit No. CAS0108766 has been returned to the RWQCB for implementation. This includes the review of annual reports, the special requirements of Appendix 1 of the permit, and overseeing compliance with the permit. For ease of enforcement and regulation, it is recommended that the RWQCB adopt the USEPA developed language in its entirety and replace the language of Order 98-02.

The USEPA Region IX standard permit conditions, as referenced on Page 9 of 18 in NPDES permit No. CAS0108766, have not been updated since May 10, 1990. However, Staff recommends adopting the permit in its entirety, because the permit has gone through the public review process and was adopted by the USEPA.

SIGNIFICANT CHANGES: The significant change between RWQCB Order 98-02 and USEPA issued NPDES permit No. CAS0108766 is the receiving water limitation language. Also, there are more minor differences in wording throughout, but the entire document. However, Staff does not find these differences to significantly change the requirements.

LEGAL CONCERNS: None

COMPLIANCE ISSUES: None

SUPPORTING DOCUMENTS:

1) Tentative Addendum No. 1 to Order No. 98-02, NPDES Permit No. CAS0108766
2) Letter from the USEPA dated April 28, 1999
3) Letter from the USEPA dated March 25, 1998
4) Letter from the USEPA dated May 26, 1998
5) Letter from the USEPA dated June 25, 1999
6) Notice of Public Hearing Proof of Publication

RECOMMENDATION(S): Staff recommends that the Regional Board adopt tentative Addendum No. 1 to Order No. 98-02.

s:/northern watershed/lair/orange/EOSRaddendum96-03

ATTACHMENT 1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

TENTATIVE ADDENDUM NO. 1 TO ORDER NO. 98-02
NPDES PERMIT NO. CAS0108766

AN ADDENDUM MODIFYING ORDER NO. 98-02 TO INCORPORATE LANGUAGE DEVELOPED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. Order No. 98-02 (NPDES Permit No. CAS0108766) specifies Waste Discharge Requirements for **Discharges of Storm Water and Urban Runoff from the Riverside County Flood Control District, the County of Riverside, and the Incorporated Cities of Riverside County within the San Diego Region** (Co-Permittees).

2. NPDES No. CAS0108766 issued by the USEPA on May 30, 1999 established waste discharge requirements for the Co-Permittees.

3. The requirements of Order No. 98-02 must be modified to assure consistency with the NPDES No. CA0108766, issued by the USEPA.

4. This Regional Board has notified all known interested parties of its intent to modify Order No. 98-02 to reflect the addition of the language developed by the United States Environmental Protection Agency.

5. This Regional Board in public hearing heard and considered all comments pertaining to the final draft of the addendum.

IT IS HEREBY ORDERED THAT Order No. 98-02 is modified to reflect the language in it entirety as developed by the United States Environmental Protection Agency in their **Authorization to Discharge Under the National Pollutant Discharge Elimination System** which became effective May 30, 1999.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on November 8, 2000.

Tentative
JOHN H. ROBERTUS
Executive Officer

S:/storm/lair/riverside/order98-02addendum

ATTACHMENT 2

JHR 4/5
FDM 5/5
DSJ 5/5
File

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

CONTROL BOARD
99 MAY -3 P 1:25

In Reply
Refer To: WTR-5

APR 28 1999

USEPA's Final Permit to Riverside
Exp: 11/2003

David P. Zappe
General Manager-Chief Engineer
Riverside County Flood Control
and Water Conservation District
1995 Market Street
Riverside, CA 92501

SDRWQCB Order No 98-02 will be amended to replace current language with this language (EPA's Final).

Dear Mr. Zappe:

Enclosed is a copy of a National Pollutant Discharge Elimination System (NPDES) permit which has been issued to the following discharger:

Municipal Separate Storm Sewer System
Santa Margarita Watershed
NPDES Permit No. CAS0108766

The staff at the U.S. Environmental Protection Agency (EPA) have reviewed the NPDES permit application for this facility and have prepared a draft permit in accordance with the Clean Water Act (CWA). EPA has also published a public notice of its tentative decision to issue a permit to the above discharger and has provided the opportunity for public comment on this permit. After considering the expressed views of all interested persons and agencies, pertinent Federal statutes and regulations, the EPA, pursuant to 40 CFR § 124, has prepared a final permit which differs only slightly from the draft permit. The changes which were made are discussed in the final fact sheet and response to public comments which are enclosed along with the final permit. EPA has also been notified by the San Francisco Bay Regional Board that it is waiving CWA section 401 certification requirements for this permit.

The NPDES permit is hereby issued upon the date of signature and shall become effective 33 days from the date of mailing, unless there is a written request for an evidentiary hearing. Requests for an evidentiary hearing must comply with all of the requirements set forth at 40 CFR §§ 124.74 and 124.76 and must be submitted to me (WTR-5) at the above address within 33 days from the date of this letter.

NPDES regulations at 40 CFR §§ 124.74 and 124.76 require, among other items, that requests for an evidentiary hearing must state each of the legal or factual questions alleged to be at issue, must specifically identify the permit conditions which are contested and those which are

inseverable from the contested conditions, and must identify suggested revised or alternative permit conditions which would be required to implement the purposes and policies of the CWA. In addition, the regulations require that the requester demonstrate one of the following for each issue being raised in the hearing request: (1) that the issue was raised during the public comment period, (2) that the issue was not reasonably ascertainable during the public comment period, or (3) the requester could not have reasonably anticipated the relevance or materiality of the issue during the comment period. Please review 40 CFR §§ 124.74 and 124.76 for a complete description of the requirements applicable to requests for evidentiary hearings.

EPA will routinely deny any request for an evidentiary hearing which is postmarked later than the 33rd day from the date of this letter. Also, EPA will routinely deny any request for an evidentiary hearing which raises only legal issues or does not contain all of the requirements set forth at 40 CFR §§ 124.74 and 124.76. Any denial of a request for an evidentiary hearing may be appealed to the Administrator within 30 days from the date of notice of the denial. The requester must exhaust all administrative review before seeking judicial review.

If you have any questions regarding this matter, please call Eugene Bromley of the CWA Standards and Permits Office at (415) 744-1906.

Sincerely,

Terry Oda, Chief
CWA Standards and Permits Office

Enclosures

cc (w/encl.): Christopher Hans, Riverside County
Eugene Diepholz, City of Murrieta
John Pourkazemi, City of Temecula
Mark Wills, Riverside County Flood Control
Deborah Jayne, San Diego Regional Board
John H. Robertus, San Diego Regional Board
Mike Adackapara, San Ana Regional Board
Walt Pettit, State Board
Bruce Fujimoto, State Board
Betsy Jennings, State Board
Jon Van Rhyn, San Diego County Department of Environmental Health
Bob Wheeler, Elsinore-Murrieta Resource Conservation District
Jayne Joy, USMC, Camp Pendleton
Borre Winkler, Riverside County BIA
Diane Takvorian, Environmental Health Coalition
Richard Watson, Richard Watson and Associates
Ken Moser, San Diego BayKeeper
Bob Collacott, Woodward Clyde Consultants
Everett DeLano, Environmental Law and Litigation
Dave Brent, California Storm Water Quality Task Force
Robert Hale, California Storm Water Quality Task Force
Robert Falk, Morrison & Foerster
Gary Grimm, Law Offices of Gary Grimm
Steve Borroum, Caltrans
Nora Chorover, Law Offices of Nora Chorover
Mark Gold, Heal the Bay
David Beckman, NRDC
Robert Cain, City of San Diego
Mike Lozeau, San Francisco BayKeeper

Permit No. CAS0108766

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et. seq.; the "Act"),

Riverside County Flood Control
and Water Conservation District
1995 Market Street
Riverside, CA 92501

Riverside County
4080 Lemon Street, 12th Floor
Riverside, CA 92501

City of Murrieta
26442 Beckman Court
Murrieta, CA 92562

City of Temecula
P.O. Box 9033
Temecula, CA 92589

are authorized to discharge storm water runoff from the municipal separate storm sewer system (MS4) operated by the permittees to waters of the United States from all outfalls within the permittees' MS4 in accordance with effluent limitations, monitoring requirements and other conditions set forth in Part I, Part II (USEPA Region IX Standard Federal NPDES Permit Conditions dated May 10, 1990) and Appendix 1 of this permit.

This permit shall become effective on MAY 30 1999

This permit and the authorization to discharge shall expire at midnight, November 30, 2003.

Signed this 27th day of April 1999

For the Regional Administrator

John Ong for A.S.

Acting Director, Water Division

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittees are authorized to discharge storm water runoff from all outfalls of the permittees' MS4.

2. Non-Storm Water Discharges

The permittees shall prohibit non-storm water discharges into the MS4. NPDES permitted discharges are exempt from this prohibition.

a. The following discharges need not be prohibited unless they are identified as a source of pollutants by either the permittees or USEPA Region IX:

from riparian habitats and wetlands
diverted stream flows
springs
rising ground waters
uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers

If any of the above discharges are identified as sources of pollutants, the discharges need not be prohibited provided the permittees develop and implement appropriate best management practices to ensure that the discharges are not a source of pollutants as described in Part I.A.2.b of this permit.

b. The following discharges need not be prohibited nor additional control measures implemented by the permittees prior to the effective date of the permit modification discussed below:

water line flushing
landscape irrigation
uncontaminated pumped ground water
discharges from potable water sources
foundation drains
air conditioning condensate
irrigation water
water from crawl space pumps
footing drains

lawn watering
individual residential car washing
discharges from emergency fire fighting activity

For each of the discharges listed above, the permittees shall select one of the following options and submit the required information not later than March 15, 2000:

i. The permittees shall submit information showing that the discharge is not a source of pollutants, or in the case of emergency fire fighting runoff, not a significant source of pollutants;
ii. The permittees shall propose appropriate best management practices to ensure that the discharge is not a source of pollutants, or in the case of emergency fire fighting runoff, not a significant source of pollutants; or
iii. The permittees shall propose a prohibition on the discharge entering the MS4.

Upon receipt of the submittal by USEPA Region IX, this permit shall be reopened and modified to require the implementation of the proposed best management practices, or a modification of the proposals if necessary to comply with the Clean Water Act. This permit shall also be reopened and modified to require that the permittees prohibit each of the above non-storm water discharges for which appropriate best management practices are not proposed, or for which information is not provided showing that the discharge is not a source of pollutants, or not a significant source of pollutants in the case of emergency fire fighting runoff.

3. Storm Water Management Program

The permittees shall control pollutants in storm water discharges to the maximum extent practicable, and to demonstrate compliance with this requirement, the permittees shall implement in its entirety the proposed storm water management program (SWMP) described in the documents listed in Part I.D.11 of this permit. All storm water pollution control measures identified in the SWMP shall be implemented, including existing and proposed measures, and any modifications to the SWMP made during the term of this permit, including those made in accordance with Part I.A.5.b of this permit. Proposed control measures shall be implemented in accordance with the implementation schedules provided in the SWMP, with the effective date of the permit serving, at a minimum, as the starting date for the implementation schedule.

The permittees shall also implement the additional control measures related to the SWMP set forth in Appendix 1 to this permit in the time frame set forth in Appendix 1.

4. Storm Water Monitoring Program

The permittees shall implement the storm water monitoring program described in the documents listed in Part I.D.12 of this permit.

5. Compliance with Water Quality Standards

a. Discharges from the MS4 that cause or contribute to the violation of water quality standards or water quality objectives (collectively WQSs) are prohibited.

b. The permittees shall comply with Part I.A.5.a of this permit through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SWMP and other requirements of this permit including any modifications; the SWMP shall be designed to achieve compliance with Part I.A.5.a of this permit; if exceedance(s) of WQSs persist notwithstanding implementation of the SWMP and other requirements of this permit, the permittees shall assure compliance with Part I.A.5.a of this permit by complying with the following procedure:

i. Upon a determination by either the permittees or USEPA Region IX that discharges are causing or contributing to an exceedance of an applicable WQS, the permittees shall promptly notify and thereafter submit a report to USEPA Region IX that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be incorporated in the annual update to the SWMP unless USEPA Region IX directs an earlier submittal. The report shall include an implementation schedule. USEPA Region IX may require modifications to the report;

ii. Submit any modifications to the report required by USEPA Region IX within 30 days of notification;

iii. Within 30 days following approval of the report described above by USEPA Region IX, the permittees shall revise the SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be

implemented, the implementation schedule, and any additional monitoring required;

iv. Implement the revised SWMP and monitoring program in accordance with the approved schedule.

So long as the permittees have complied with the procedures set forth above and are implementing the revised SWMP, the permittees do not have to repeat the same procedure for continuing or recurring exceedances of the same WQSs unless directed by USEPA Region IX to develop additional BMPs.

B. ANNUAL REPORT

The permittees shall submit an annual report summarizing the storm water program activities including, at a minimum, the following items:

1. The status of implementing the components of the SWMP required by the permit;
2. Any proposed changes to the SWMP;
3. Any revisions or updates to the assessment of controls and fiscal analysis reported in the permit application;
4. A summary of the data, including monitoring data, that is accumulated during the monitoring year;
5. Annual expenditures and budget for the year following each annual report;
6. A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
7. Identification of water quality improvement or degradation.

The annual report is due on September 15 of each year of the term of this permit. The first report is due on September 15, 1999.

C. ENDANGERED SPECIES ACT REQUIREMENTS

This permit does not authorize nor require the construction of any particular structural storm water quality control device that could adversely affect listed or proposed threatened or endangered species.

D. DEFINITIONS

1. Best Management Practices (BMPs) refer to schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

2. "CWA" means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 95-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.

3. "Illicit Discharge" means any discharge to a municipal separate storm sewer system that is not composed entirely of storm water except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges from fire fighting activities.

4. "Major Outfall" means a municipal separate storm sewer outfall from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more, or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

5. "Municipal Separate Storm Sewer" means a conveyance, or system of conveyances (including roads with drainage systems, municipal streams, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
(i) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal or sewage, industrial wastes, storm water, or other wastes, including special districts under State law
such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to water of the United States;
(ii) designed or used for collecting of conveying storm water;

(iii) which is not a combined sewer; and
(iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

6. "Outfall" means a point source where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

7. "Permittees" mean the Riverside County Flood Control and Water Conservation District, Riverside County and the Cities of Murrieta and Temecula.

8. "Point Source" means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.

9. "Representative Storm" means a storm event of greater than 0.1" of rainfall and at least 72 hours after the previously measurable (greater than 0.1" rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in the area.

10. "Storm water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

11. The "storm water management program" (SWMP) consists of the following documents:

    i. SWMP described in sections 4 through 8 of the document entitled "NPDES Municipal Stormwater Application for Permit Renewal, Santa Margarita Watershed" dated January 17, 1995, and further described in the document entitled "Santa Margarita Regional Drainage Area Management Plan" dated March, 1993.

12. The "storm water monitoring program" consists of the following documents:

i. Consolidated program for water quality monitoring described in section 9 of the document entitled " NPDES Municipal Stormwater Application for Permit Renewal, Santa Margarita Watershed" dated January 17, 1995, and further described in the document entitled "Consolidated Program for Water Quality Monitoring" dated October, 1994.

13. "Waters of the United States" means:

(a) all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(b) all interstate waters, including interstate "wetlands":
(c) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
(1) which are or could be used by interstate or foreign travelers for recreational or other purposes;
(2) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
(3) which are used or could be used for industrial purposes by industries in interstate commerce;
(d) all impoundments of waters otherwise defined as waters of the United States under this definition;
(e) tributaries of waters identified in paragraphs (a) through (d) of this definition;
(f) the territory sea; and
(g) wetlands adjacent to areas (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to man-made bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States.

USEPA REGION IX STANDARD FEDERAL NPDES PERMIT CONDITIONS
(Updated as of May 10, 1990)

1. Duty to Reapply [40 CFR 122.21(d)]

The permittee shall submit a new application 180 days before the existing permit expires.

2. Applications [40 CFR 122.22]

a. All permit applications shall be signed as follows:

(1) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes; (I) The chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

b. All reports required by permits and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative or representatives of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this Section;

(2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either named individual or any individual occupying a named position.); and

(3) The written authorization is submitted to the Director.

c. Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or a portion of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly

responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

3. Duty to Comply [40 CFR 122.41(a)]

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

b. The Clean Water Act provides that:

(1) Any person who causes a violation of any condition in this permit is subject to a civil penalty not to exceed $25,000 per day of each violation. Any person who negligently causes a violation of any condition in this permit is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both for a first conviction. For a second conviction, such a person is subject to a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two years, or both. [Updated pursuant to the Water Quality Act of 1987]

(2) Any person who knowingly causes violation of any condition of this permit is subject to fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than three years, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than $100,000 per day of violation, or by imprisonment of not more than six years, or both. [Updated pursuant to the Water Quality Act of 1987]

(3) Any person who knowingly causes a violation of any condition of this permit and,by so doing, knows at that time that he thereby places another in imminent danger of death or serious bodily injury shall be subject to a fine or not more than $250,000, or imprisonment of not more than 15 years, or both. A person who is an organization and violates this provision shall be subject to a fine or not more than $1,000,000 for a first conviction. For a second conviction under this provision, the maximum fine and imprisonment shall be doubled. [Updated pursuant to the Water Quality Act of 1987]

4. Need to Halt or Reduce Activity Not a Defense [40 CFR 122.41 (c)]

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. Duty to Mitigate [40 CFR 122.41(d)]

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance [40 CFR 122.41(e)]

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

7. Permit Actions [40 CFR 122.41(f)]

The permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

8. Property Rights [40 CFR 122.41 (g)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

9. Duty to Provide Information [40 CFR 122.41(h)]

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

10. Inspection and Entry [40 CFR 122.41(i)]

The permittee shall allow the Director, or an authorized representative, upon the presentation of credential and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance

or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

11. Monitoring and Records [40 CFR 122.41(j)]

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application, except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Director at any time.

c. Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;

(2) The individual(s) who performed the sampling or measurements;

(3) The date(s) analyses were performed;

(4) The individual(s) who performed the analyses;

(5) The analytical techniques or methods used; and

(6) The results of such analyses.

d. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless test procedures have been specified in this permit.

e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than $20,000 per day of violation, or imprisonment for not more than four years, or both. [Updated pursuant to the Water Quality Act of 1987]

12. Signatory requirement [40 CFR 122.41(k)]

a. All applications, reports or information submitted to the Director shall be signed and certified. (See 40 CFR 122.22)

b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record other document submitted or required to be

maintained under this permit, including monitoring reports of compliance or noncompliance shall, upon conviction, be punished by a fine or not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, such a person is subject to fine of not more than $20,000 per day of violation, or imprisonment of not more than four years, or both. [Updated pursuant to the Water Quality Act of 1987]

13. Reporting requirements [40 CFR 122.41(l)]

a. Planned changes. The permittee shall give notice to the Director as soon as possible to any planned physical alternations or additions to the permitted facility. Notice is required only when:

(1) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section 122.42(a)(1); or

b. Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility of activity which may result in noncompliance with the permit requirements.

c. Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (See Section 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory).

d. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

e. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

f. Twenty-four hour reporting.

(1) The permittee shall report any noncompliance which may endanger public health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned in order to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

(i) Any unanticipated bypass which exceeds any effluent limitation in the permit. [See 40 CFR 122.41(g).]

(ii) Any upset which exceeds any effluent limitation in the permit.

(iii) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. [See 40 CFR 122.44(g).]

g. Other noncompliance. The permittee shall report all instances of noncompliance not reported under the above paragraphs (i), (ii), and (iii) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed paragraph (iii) of this section.

h Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

14. Bypass [40 CFR 122.41(m)]

a. Definitions

(1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not Exceeding Limitations.The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

c. Notice.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, of possible at least ten days before the date of the bypass.

(2) Unanticipated bypass.The permittee shall submit notice of an unanticipated bypass as required in paragraph (f) of section (13) (24-hour notice).

d. Prohibition of bypass.

(1) Bypasses are prohibited, and the Director may take enforcement action against a permittee for a bypass, unless:

(i) A bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and

(iii) The permittee submitted notices as required under paragraph c of this section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the director determines it will meet the three conditions listed above in paragraph (d) of this section.

15. Upset [40 CFR 122.41(n)]

a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirement of paragraph c of this section are met. No determination made during administrative review of claims that noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;

(2) The permitted facility was at the time being properly operated; and

(3) The permittee submitted notice of the upset as required in paragraph 13(f) (24-hour notice).

(4) The permittee complied with any remedial measures required under 40 CFR 122.41(d).

d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

16. Reopener Clause [40 CFR 122.44(c)]

This permit shall be modified or revoked and reissued to incorporate any applicable effluent standard or limitation or standard for sewage sludge use or disposal under sections 301 (b) (2) (C), and (D), 304 (b) (2), 307 (a) (2) and 405 (d) which is promulgated or approved after the permit is issued if that effluent or sludge standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant or sludge use or disposal practice not limited in the permit.

17. Transfers by Modification [40 CFR 122.61(a)]

Except as provided in section 18, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under 40 CFR 122.62(b)(2)0, or a minor modification made under 40 CFR 122.63(d)), to identify the new permittee and incorporate such other requirements as may be necessary under the CWA.

18. Automatic Transfers [40 CFR 122.61(b)]

An alternative to transfers under section 17, any NPDES permit may be automatically transferred to a new permittee if:

a. The current permittee notifies the Director at least 30 days in advance of the proposed transfer date in paragraph (2) of this section;

b. The notice includes a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

c. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify or revoke and reissue the permit. A modification under this subparagraph may also be a minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph (2) of this section.

19. Minor Modification of Permits [40 CFR 122.63]

Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following the procedures of 40 CFR Part 125. Any permit modification not processed as a minor modification under this section must be made for cause and with 40 CFR Part 124 draft permit and public notice as required in 40 CFR 122.62. Minor modifications may only:

a. Correct typographical errors;

b. Require more frequent monitoring or reporting by the permittee;

c. Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement;

d. Allow for a change in ownership or operational control of a facility where the Director determines that no other change in their permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Director.

e. Change the construction schedule for a discharger which is a new source. No such change shall affect a discharger's obligation prior to discharge under 40 CFR 122.29.

f. Delete a point source outfall when the discharge from the outfall is terminated and does not result in discharge of pollutants from other outfall except in accordance with the permit limits.

g. When the permit becomes final and effective on or after March 9, 1982, conform to changes respecting 40 CFR 122(3), (1), (m)(4)(I)(B), (n)(3)(I), and 122.42 (a) issued September 26, 1984.

h. Incorporate conditions of a POTW pretreatment program that has been approved in accordance with the procedures in 40 CFR 403.11 as enforceable conditions of the POTW's permit.

20. Termination of permits [40 CFR 122.64]

The following are causes for terminating a permit during its term, or for denying a permit renewal application:

a. Noncompliance by the permittee with any condition of the permit;

b. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time;

c. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or

d. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit (for example, plant closure or termination of discharge by connection to a POTW).

21. Availability of Reports [Pursuant to Clean Water Act Section 308]

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Regional Administrator. As required by the Act, permit applications, permits, and effluent data shall not be considered confidential.

22. Removed Substances [Pursuant to Clean Water Act Section 301]

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

23. Severability [Pursuant to Clean Water Act Section 512]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and remainder of the permit, shall not be affected thereby.

24. Civil and Criminal Liability [Pursuant to Clean Water Act Section 309]

Except as provided in permit conditions on "Bypass" (Section 14) and "Upset" (Section 15), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

25. Oil and Hazardous Substance Liability [Pursuant to Clean Water Act Section 311]

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

26. State or Tribal Law [Pursuant to Clean Water Act Section 510]

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State or Tribal law or regulation under authority preserved by Section 510 of the Clean Water Act.

APPENDIX 1 - Additional Permit Requirements

A. Street Sweeping Program

With the first annual report required by this permit, the permittees shall submit to USEPA Region IX a proposal for regular street sweeping of the permittees' municipal roads, including a description of the type of equipment to be used. Upon receipt of the proposal by USEPA Region IX, this permit shall be reopened and modified to include the proposal, or a modification of the proposal as necessary to comply with applicable requirements of the Clean Water Act.

B. Storm Drainage System Inspection and Maintenance

Not later than December 15, 1999, the permittees shall submit to USEPA Region IX a proposal for regular inspection and maintenance (including debris removal) of the permittees' municipal separate storm sewer system (not including municipal roads). Upon receipt of the proposal by USEPA Region IX, this permit shall be reopened and modified to include the proposal, or a modification of the proposal as necessary to comply with applicable requirements of the Clean Water Act.

C. Investigation of Malfunctioning Septic Systems

With the first annual report required by this permit, the permittees shall submit to USEPA Region IX an evaluation of the potential for storm water quality degradation from malfunctioning septic systems within the area covered by the permit. The evaluation shall also include recommendations for reducing pollutants discharged from malfunctioning septic systems if the permittees conclude that malfunctioning septic systems may contribute significant quantities of pollutants in storm water runoff. Upon receipt of the evaluation by USEPA Region IX, this permit may be reopened and modified to include any recommendations from the evaluation, or a modification of the recommendations as necessary to comply with applicable requirements of the Clean Water Act.

D. Source Identification and Prioritization

The permittees shall develop and update annually, at a minimum, a list of facilities within the jurisdiction of the permittees which discharge storm water associated with industrial activity as defined at 40 CFR 122.26(b)(14). The list shall also include non-industrial facilities, or categories of facilities which the permittees believe may discharge significant quantities of pollutants in storm water. The overall list shall be prioritized to indicate the individual sources, or categories of sources which the permittees believe are the most significant sources of pollutants.

E. Inspection Program for Industrial/Commercial Facilities

With the first annual report required by this permit, the permittees shall submit to USEPA Region IX a proposal for inspections of industrial and commercial facilities to evaluate storm

water pollution control efforts at the facilities. The proposal shall describe the types of facilities to be inspected and the frequency of such inspections and followup enforcement of local requirements. Upon receipt of the proposal by USEPA Region IX, this permit shall be reopened and modified to include the proposal, or a modification of the proposal as necessary to comply with applicable requirements of the Clean Water Act.

F. Inspection/Enforcement Program at Construction Sites

With the first annual report required by this permit, the permittees shall submit to USEPA Region IX a proposal for inspection and enforcement of the permittees' grading ordinance at construction sites. The proposal shall describe the frequency of the inspections and the type of follow-up enforcement to be undertaken. Upon receipt of the proposal by USEPA Region IX, this permit shall be reopened and modified to include the proposal, or a modification of the proposal as necessary to comply with applicable requirements of the Clean Water Act.

G. Legal Authority Requirements

Within six months of the effective date of this permit, each permittee shall provide a certification to USEPA Region IX that it has adequate legal authority to do the following:

1) control through ordinance, permit, contract, order or other means discharges of pollutants into the MS4 from storm water discharges associated with industrial activity;
2) prohibit illicit connections to the MS4;
3) control spills or the dumping of materials other than storm water into the MS4;
4) control through interagency agreements the contribution of pollutants from one portion of the MS4 to another;
5) require compliance with ordinances, permits, contracts or orders; and
6) conduct inspections, surveillance and monitoring to ensure compliance with permits or ordinances.

H. Monitoring for Diazinon and Chlorpyrifos

The wet weather monitoring program required by Part I.A.4 of this permit shall include diazinon and chlorpyrifos among the parameters for which sampling and analysis is conducted.

I. Watershed Coordination Report

Not later than March 15, 2000, the permittees shall submit to USEPA Region IX a report which analyzes the appropriateness of the permittees' storm water management program and monitoring program in addressing storm water quality issues within the Santa Margarita Watershed as a whole, including the program's effect on water quality and habitat downstream from the Riverside County line. This analysis shall also include an assessment of the compatibility

with corresponding programs of San Diego County and Camp Pendleton and the needs and opportunities for collaboration with these communities. The report shall also include recommendations for any needed changes to the permittees' storm water management program or monitoring program based on the findings of the report. Upon receipt of the report by USEPA Region IX, this permit may be reopened and modified to include the recommendations, or a modification of the recommendations as necessary to comply with applicable requirements of the Clean Water Act.

April 21, 1999

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FACT SHEET
NPDES PERMIT NO. CAS0108766
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, RIVERSIDE COUNTY, CITIES OF TEMECULA AND MURRIETA

SUMMARY

The Riverside County Flood Control and Water Conservation District, Riverside County, and the Cities of Temecula and Murrieta (the "permittees") have applied to the U.S. Environmental Protection Agency, Region IX (USEPA Region IX) for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge storm water runoff from the permittees' municipal separate storm sewer system (MS4) in the Santa Margarita River drainage area of Riverside County. This drainage area is within the jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB). The NPDES storm water permit is required in accordance with the provisions of the 1987 Water Quality Act (WQA) which require an NPDES permit for storm water discharges from MS4s (including the MS4 operated by the permittees) which serve a population of 100,000 or more. Final regulations were promulgated by EPA on November 16, 1990 (55 Fed. Reg. 47990) which set forth permit application requirements for MS4s affected by the 1987 WQA.

In California, NPDES permits are ordinarily issued by the RWQCBs since the NPDES permit program has been delegated to the State by USEPA Region IX. A storm water permit for the permittees' MS4 was originally issued by the San Diego RWQCB on July 16, 1990, and reissued on May 13, 1998. However, on May 26, 1998, in accordance with the program delegation agreement with the State, USEPA Region IX objected to the reissued permit due to concerns regarding the language in the permit pertaining to receiving water limitations. This objection was not resolved within the 90 day period provided by the delegation agreement. As a result, on September 18, 1998, USEPA Region IX assumed responsibility for the permit and requested the MS4 permit reapplication from the permittees.

EPA's storm water permit application regulations require a 2-part permit application for first round permits for MS4s. On May 17, 1996, EPA also issued a policy memorandum concerning requirements for permit reapplications for MS4s. The policy memorandum was issued in consideration of the fact that much of the information required for MS4 permit applications (such as information concerning rainfall data) had already been submitted with the first round permit application and it would be redundant to require resubmittal of this same information. For the reapplication, the policy memorandum recommends that permittees should provide information such as a revised storm water management program and monitoring program which include changes or improvements based on the permittees' experiences during the first permit term. The policy memorandum also suggests that the fourth year annual report from the MS4 could constitute the bulk of the reapplication package.

The 1987 WQA requires that pollutants in storm water discharges be controlled to the maximum extent practicable (MEP). The storm water management program is the means by which a municipality complies with the MEP standard. However, EPA recognizes that storm water issues and methods for controlling pollutants vary considerably with climatic and other differences around the country. Therefore, while EPA's regulations set forth the basic requirements of a storm water management program, the regulations also provide flexibility in that municipalities are given an opportunity to propose their own program.

USEPA Region IX has reviewed the permit reapplication submitted by the permittees and believes that the permittees' proposals for the storm water management program, monitoring program and other program elements are appropriate (with certain relatively minor exceptions) for the MS4. USEPA Region IX prepared a draft permit based on the reapplication and public noticed its intent to issue an NPDES permit based on the reapplication. The draft permit had basically required that the permittees implement their own proposals which are discussed in the more detail in the reapplication. Appendix 1 of the draft permit also set forth certain additional pollution control measures which USEPA Region IX believed would be needed to ensure compliance with the MEP standard. The draft permit required that these additional controls be implemented by the permittees as well as their own proposals.

After considering the comments received during the public comment period, USEPA Region IX prepared and is issuing a final NPDES permit which differs only slightly from the draft permit. The differences primarily relate to the requirements for non-storm water discharges and are discussed in more detail later in this fact sheet and in the response to public comments which also accompanies the final permit.

I. BACKGROUND

A. Water Quality Act of 1987

The 1987 Water Quality Act (WQA) amended the Clean Water Act (CWA) by adding section 402(p) which requires that NPDES permits be issued for the following five categories of storm water discharges:

(1) discharges permitted prior to February 4, 1987;
(2) discharges associated with industrial activity;
(3) discharges from large municipal separate storm sewer systems (MS4s) (systems serving a population of 250,000 or more);
(4) discharges from medium MS4s (systems serving a population of 100,000 or more, but less than 250,000); and
(5) discharges judged by the permitting authority to be significant sources of pollutants or which contribute to a violation of a water quality standard.

The five categories listed above are generally referred to as Phase I of the storm water program. The program also includes a Phase II, which includes all discharges not included in Phase I. EPA has recently proposed regulations for Phase II sources (63 Fed. Reg. 1536, January 9, 1998). These regulations are scheduled to be finalized by October 29, 1999[1].

The 1987 WQA also clarified that industrial storm water discharges are subject to the BAT/BCT requirements of the CWA and applicable water quality standards. For MS4s, the WQA specifies a new technology-related level of control for pollutants in the discharges - control to the maximum extent practicable (MEP). However, the WQA is silent on the issue of compliance with water quality standards for MS4 discharges and this has given rise to the argument that Congress did not intend for water quality standards to apply to MS4s. In January, 1991, EPA's Office of General Counsel reviewed this issue and concluded that the correct reading of the CWA is that water quality standards apply to municipal as well as industrial storm water discharges.

B. Water Quality Concerns

The 1987 decision by Congress to require NPDES permitting for the storm water discharges listed above was based on a growing awareness of the environmental significance of nonpoint sources of pollutants. For example, EPA's report entitled "National Water Quality Inventory, 1996 Report to Congress" (EPA, 1998) shows that nonpoint sources, including storm water runoff, are the leading cause of existing water quality impairments.

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[1] The proposal of January 9, 1998 had indicated that the Phase II regulations would be promulgated by March 1, 1999 in accordance with a consent decree. However, EPA has recently negotiated an extension of this deadline until October 29, 1999.

ATTACHMENT 3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

In Reply
Refer to: WTR-5

MAR 2 5 1998

John H. Robertus
Executive Officer
California Regional Water Quality Control
Board, San Diego Region
9771 Clairemont Mesa Blvd, Suite A
San Diego, CA 92124-1324

Re: NPDES Permit No. CAS0108766 for Riverside County and Co-Permittees

Dear Mr. Robertus:

The purpose of this letter is to advise the San Diego Regional Water Quality Control Board (SDRWQCB) that we believe that certain provisions of draft NPDES permit No. CAS0108766 are inconsistent with the requirements of the Clean Water Act (CWA) and its implementing regulations. We must, therefore, object to the issuance of the permit as it is. The draft permit is scheduled for adoption on April 8, 1998, and would authorize storm water discharges from the municipal separate storm water system (MS4) operated by Riverside County and several co-permittees within the jurisdiction of the SDRWQCB. As you know, NPDES regulations at 40 CFR § 123.44 and Region 9's Memorandum of Agreement with the State Water Resources Control Board (SWRCB) provide that Region 9 may object to a State-issued NPDES permit under certain circumstances.

Our concerns regarding draft permit No. CAS0108766 pertain to the receiving water limitations (RWLs) included in Condition E. Aside from minor editorial changes, the RWLs language in the draft permit is the same as the language which the SWRCB adopted on January 22, 1998 (Order WQ 98-01) with the intent that the language would be required in all future MS4 permits issued in the State. However, in letters to the SWRCB dated January 21, 1998 and March 17, 1998 (enclosed), Region 9 expressed concern regarding this language and advised the SWRCB of our intent to object to future MS4 permits which include the language.

NPDES regulations at 40 CFR §§ 123.44(c)(1) through (9) set forth the specific grounds upon which an objection to an NPDES permit must be based. The regulations at 40 CFR § 123.44(c)(8) provide that an objection may be based on a permit's failure to ensure compliance with any of the requirements of 40 CFR § 122.44(d). Condition E.2 of the draft permit would only regulate storm water discharges which "cause or substantially (in more than a *de minimis*

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amount) contribute to a continuing or recurring exceedance" of an applicable water quality standard. However, as noted in our letter of March 17, 1998 to the SWRCB, NPDES regulations at 40 CFR § 122.44(d)(1)(i) require that permits regulate "all pollutants or pollutant parameters . . . which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard . . . ." The requirements of 40 CFR § 122.44(d)(1)(i) are applicable to *all* excursions above standards, not just excursions which are "continuing or recurring" and which the permittee causes or "substantially (in more than a *de minimis* amount)" contributes to, as provided by Condition E.2 of the draft permit. As such, Condition E.2 of the draft permit would not comply with 40 CFR § 122.44(d)(1)(i) and would constitute grounds for an objection to the permit.

NPDES regulations at 40 CFR § 123.44(c)(7) also provide for an objection if "the proposed permit would in any other respect be outside the requirements of CWA, or regulations issued under CWA." Our letters to the SWRCB of January 21, 1998 and March 17, 1998 note that the language of Condition E.2 of the draft permit would unacceptably increase the burden of proof in establishing permit violations. We point out that to enforce the permit, a showing would have to be made that the exceedances were "continuing or recurring" and that the permittee either caused the exceedances or contributed "substantially (in more than a *de minimis* amount)" to the exceedances. NPDES regulations at 40 CFR § 123.27(b)(2) require that the "burden of proof and degree of knowledge or intent required under State law for establishing violations . . . shall be no greater than the burden of proof or degree of knowledge or intent EPA must provide when it brings an action" under the CWA. Since EPA would not have to meet the threshold requirements in Condition E.2 of the draft permit in order to establish a violation of a permit that properly required the permittee to meet all water quality standards, the language would be inconsistent with 40 CFR § 123.27(b)(2), and would constitute grounds for objecting to the permit. Region 9's concern is that by complicating the establishment of a violation, we undermine the enforcement program. This in turn weakens the regulatory process which we as regulatory agencies rely on to carry out our mission.

NPDES regulations at 40 CFR § 123.44(b)(2)(ii) also require that when objecting to a permit, Region 9 must specify conditions which would be acceptable. In a letter dated January 16, 1998 to the SWRCB (enclosed), we proposed alternative RWLs language for MS4 permits which we could accept. The proposed language in the January 16, 1998 letter is similar to Condition E.2 in the draft permit, but without the qualifiers "substantially (in more than a *de minimis* amount)" and "continuing or recurring." We have subsequently made certain revisions to our January 16, 1998 proposal which are enclosed for your consideration (see proposal dated March 9, 1998). Our revised proposal would require compliance with water quality standards, but also provide that if exceedances of standards occur, the SDRWQCB need not require a permittee to upgrade their storm water management program provided the exceedances are not "continuing or recurring", or if the permittee's contribution to the exceedances is not "substantial (in more than a *de minimis* amount)." We believe that this provision would comply with the CWA, while simultaneously reducing the potential burden on permittees. Our new proposal also

includes certain revisions to paragraph 3 to bring it more in line with the language in the Order WQ 98-01 adopted by the SWRCB, and Condition E.3 of the draft permit.

To avoid a veto and subsequent takeover of the permit by Region 9, we recommend that the SDRWQCB consider for the final permit the revised proposal for RWLs language which is enclosed in this letter. We are also open to additional suggestions and are willing to work with all interested parties in the development of suitable alternative language.

Thank you for the opportunity to review and comment on the draft permit for Riverside County and its co-permittees. If have any questions regarding this matter, please call me at (415) 744-1860 or refer your staff to Eugene Bromley of the CWA Standards and Permits Office at (415) 744-1906.

Sincerely,

Alexis Strauss
Acting Director
Water Division

Enclosures
cc: Riverside County
cc: Bruce Fujimoto, State Board
Craig Wilson, State Board
Walt Pettit, State Board
Regional Board Executive Officers, Boards 1-8
Robert Hale, State Storm Water Quality Task Force
Libby Lucas, Environmental Health Coalition
Jeffrey Joseph, Caltrans
Richard Boon, Orange County
Frances L. McChesney, State Board
Greg Gearheart, SDRWQCB
Michael Cook, U.S. EPA

ATTACHMENT 4

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

MAY 26 1998

In Reply
Refer to: WTR-5

John H. Robertus
Executive Officer
California Regional Water Quality Control
Board, San Diego Region
9771 Clairemont Mesa Blvd, Suite A
San Diego, CA 92124-1324

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD
1998 JUN -1 P 1:25

Re: NPDES Permit No. CAS0108766 for Riverside County and Co-Permittees

Dear Mr. Robertus:

The purpose of this letter is to formally notify the San Diego Regional Water Quality Control Board (SDRWQCB) that we are objecting to NPDES permit No. CAS0108766 which was adopted by the SDRWQCB on May 13, 1998. When effective, this permit would authorize storm water discharges from the municipal separate storm water system (MS4) operated by Riverside County and its co-permittees within the jurisdiction of the SDRWQCB. However, as noted in Condition F.32 of the permit, the effective date of the permit is stayed if Region 9 objects to the permit.

Region 9's objection to permit No. CAS0108766 is based on 40 CFR § 123.44(c)(1): "[t]he permit fails to apply, or to assure compliance with, any applicable requirements of this part." As explained in our letter of March 25, 1998 (enclosed), we concluded that the language in the permit pertaining to receiving water limitations (RWLs) would not comply with the Clean Water Act (CWA) and its implementing regulations. Specifically, Condition E.2 fails to assure compliance with 40 CFR § 122.44(d), which implements Section 301(b)(1)(C) of the CWA. In letters dated January 21, 1998 and March 17, 1998 (enclosed), we also explained to the State Water Resources Control Board (SWRCB) (with a copy to each Regional Board) why the RWLs language in permit No. CAS0108766 would not be acceptable. These three letters (to the SDRWQCB dated March 25, 1998, and to the SWRCB dated January 21, 1998 and March 17, 1998) are incorporated by reference in this formal notice of objection.

Region 9's Memorandum of Agreement with the SWRCB and NPDES regulations at 40 CFR § 123.44(h) provide 90 days from receipt of this letter for the SDRWQCB or the SWRCB to respond to Region 9's objection to a final permit. Otherwise, authority to issue the permit will pass to Region 9. The SDRWQCB, or any interested person, may also request a public hearing in accordance with 40 CFR § 123.44(e) to further review the objection.

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We recognize that the RWLs language which the SDRWQCB included in permit No. CAS0108766 was a requirement of Order WQ 98-01 which was adopted by the SWRCB on January 22, 1998. However, as noted in our letter of March 17, 1998 to the SWRCB, we believe that the SWRCB may be willing to consider alternatives to the RWLs language in permit No. CAS0108766, despite the apparent precedent setting nature of WQ Order 98-01. Region 9 is also willing to work further with the SDRWQCB and all interested parties in the development of a suitable alternative to the RWLs language in permit No. CAS0108766. However, as noted above, authority to issue the permit will pass to Region 9 in accordance with 40 CFR § 123.44(h) if the issue cannot be resolved in a timely manner.

Thank you for the opportunity to review and comment on the final permit for Riverside County and its co-permittees. If have any questions regarding this matter, please call me at (415) 744-1860 or refer your staff to Eugene Bromley of the CWA Standards and Permits Office at (415) 744-1906.

Sincerely,

Alexis Strauss
Acting Director
Water Division

Enclosures

cc: Walt Pettit, State Board
Craig Wilson, State Board
Regional Board Executive Officers, Boards 1 through 8
Mark Wills, Riverside County Flood Control District
Robert Hale, State Storm Water Quality Task Force
Libby Lucas, Environmental Health Coalition
Frances L. McChesney, State Board
Greg Gearheart, SDRWQCB
Michael Cook, U.S. EPA
Bruce Fujimoto, State Board

ATTACHMENT
13

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RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Gnl-1	GENERAL	
	COMMENT: *Implementation of the Tentative Order and its burdensome, untested regulations will be too costly.* Comments were submitted by members of the Building Industry, Community Planning Groups, Copermittees, Engineering/Design Consultants, State Government, Societies/Associations/Coalitions, and Other Entities generally expressing concerns with costs to implement requirements. Commenters also generally expressed support for practical, cost-effective, and scientifically based regulation.	**Building Industry / Industry** Associated General Contractors of America **Community Planning Groups** Jamul Dulzura Community Planning Group Julian Community Planning Group Pala Pauma Valley Community Sponsor Group Ramona Community Planning Group **Copermittees** County of San Diego San Diego County Fire Authority San Diego Unified Port District **Environmental Organizations** Clean Water Now **Engineering/Design Consultants** Latitude 33 Planning and Engineering **State/Federal Government** Senator Mark Wyland **Societies/Associations/Coalitions** BIOCOM East Otay Mesa Property Owners Association Otay Mesa Property Owners Association San Diego Association of Realtors San Diego County Taxpayers Association South County Economic Development Council **Other Entities** Carol Crossman Continental Maritime of San Diego Gable PR Hughes Marino Marston+Marston, Inc. National Enterprises Inc. Nuffer, Smith, Tucker, Inc. Peter Hekman Jr. San Diego Regional Chamber of Commerce Sheppard, Mullin, Richter & Hampton LLP Southern Cross Property Consultants Transition IT

Gnl-1	GENERAL	
	RESPONSE: The San Diego Water Board understands the concerns expressed by the commenters about the potential costs to implement the requirements, but disagrees that the requirements are burdensome and untested. Most of the requirements in the Tentative Order are not new to the San Diego Region. The Tentative Order incorporates many existing requirements from the MS4 permits for Orange and Riverside Counties. The San Diego Water Board has put considerable effort into developing a draft Regional MS4 permit (referred to as the Tentaitve Order) that that will jointly cover thirty-nine (39) municipal, county government, and special district entities (Copermittees) in San Diego County , southern Orange County abnd southwest Riverside County. The Tentaitve Order significantly modifies the prescriptive action-based regulatory approach of the current municipal storm water permits to an outcome-based approach, with a focus on measuring and achieving improvements in MS4 discharges and receiving water quality. A key feature of the Tentaitve Order is that it provides an adaptive management pathway for the Copermittees to select and address the highest priority water quality issues through a non-punitive iterative process. The proposed adaptive management permit provisions have great promise and will allow the Copermittees to more flexibly deploy resources to achieve goals that will yield the greatest water quality improvements in the most effective and efficient manner to restore and protect the quality of the San Diego Region's receiving waters. The regional approach of the Tentaitve Order offers the opportunity to better achieve regulatory consistency as well as maximum efficiency and economy of resources for both the San Diego Water Board and the Copermittees. The San Diego Water Board has carefully considered costs of both the Tentative Order and the TMDLs included in the Tentative Order and found them to be necessary. Consideration of costs is discussed under the Economic Considerations in Section IV of the Fact Sheet. The commenters assert that the Tentative Order is too expensive, but do not consider the costs of not addressing impacts from discharges from the MS4. In addition, the San Diego Water Board has significantly modified the structure and focus of the requirements in the Tentative Order to allow the Copermittees to more efficiently and cost effectively utilize their resources, which is expected to result in the realization of significant cost savings that could not be realized in the existing MS4 permits. The Tentative Order was developed over a two year period beginning in February 2011 through a participatory approach designed to actively engage key stakeholders, The transparent and comprehensive stakeholder participation process has resulted in a Tentative Order designed to be a strategic, cost-effective, and water	

Gnl-1	GENERAL	
	quality outcome based permit. Strategic in that it allows for identifying the highest priority water quality conditions to be addressed first. Cost-effective in that the Copermittees are allowed to use their limited resources on the highest priority water quality conditions and can look for efficiencies on a watershed scale. The Tentative Order is water quality outcome based in that it has a clearly defined iterative and adaptive management process that fccuses on measuring and achieving improvements in MS4 discharges and receiving water quality. The Tenaitve Order evaluates success based on water quality monitoring data and assessment, not just completing a minimum number of actions without consideration if these actions are succeeding in improving water quality.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Gnl-2	GENERAL	
	COMMENT: *Allow current permit requirements to remain in effect until Water Quality Improvement Plans are developed.* Comments were submitted by members of the Building Industry, Engineering/Design Consultants, Societies/Associations/Coalitions, and Other Entities generally requesting that the Copermittees be allowed to continue implementing the current permit requirements until Water Quality Improvement Plans are developed and implemented.	**Building Industry / Industry** Associated General Contractors of America Otay Land Company **Engineering/Design Consultants** Latitude 33 Planning and Engineering **Societies/Associations/Coalitions** BIOCOM San Diego Association of Realtors **Other Entities** Carol Crossman Continental Maritime of San Diego Gable PR Hughes Marino Marston+Marston, Inc. Nuffer, Smith, Tucker, Inc. San Diego Regional Chamber of Commerce Sheppard, Mullin, Richter & Hampton LLP Southern Cross Property Consultants Transition IT
	RESPONSE: The San Diego Water Board agrees that the jurisdictional runoff management program requirements of the current permits should remain in effect until the Water Quality Improvement Plans are developed and accepted. The jurisdictional runoff management program requirements of the existing MS4 permits will remain in effect until the Water Quality Improvement Plans are developed and implemented. The introductory paragraph to Provision E states, "*Until the Copermittee has updated its jurisdictional runoff management program document with the requirements of Provision E, the Copermittee must continue implementing its current jurisdictional runoff management program*." This includes the development planning requirements. The Copermittees, however, will be required to comply with the prohibitions and limitations, and implement the transitional monitoring requirements, transitional reporting requirements, and TMDL requirements upon adoption of the Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Gnl-3	GENERAL	
	COMMENT: *Regional MS4 Permit approach allowing prioritization may result in the neglect of parts of the watershed.* The Environmental Groups and the South Laguna Civic Association submitted comments expressing support for the Regional MS4 Permit allowing the Copermittees to focus on priorities, but they also expressed concern that the approach may also result in the neglect of parts of the watersheds. The South Laguna Civic Association are particularly concerned that high value habitats and coastal receiving waters of the Aliso Creek watershed will continue to be impacted by runoff from residential developments. The Environmental Groups are concerned that there will be "orphaned" priorities, or one jurisdiction will carry most of the burden of implementing the water quality improvement strategies within the watershed.	**Environmental Organizations** Environmental Groups South Laguna Civic Association
	RESPONSE: The San Diego Water Board understands the concerns, but disagrees that the approach of the Regional MS4 Permit will result in the neglect of parts of the watershed. The San Diego Water Board developed the approach of the Regional MS4 Permit because the Copermittees are no longer focused on achieving outcomes of improved water quality, but compliance with actions that must be implemented. In effect, the current approach is actually resulting in the neglect of the entire watershed because of the "everything, everywhere" approach. When everything is a priority, nothing is a priority. In contrast, the approach of the Regional MS4 Permit is to re-focus the Copermittees' efforts toward achieving outcomes that will result in improvements in MS4 discharges and receiving water quality. While not all priorities will be addressed immediately, all priorities will be addressed at some point. In allowing the Copermittees to focus on the highest priorities, lower priorities may also be addressed by the strategies being implemented to address the highest priorities. The requirements of the Tentative Order also include several elements that are intended to provide the San Diego Water Board and the public the information necessary to determine if each Copermittee is participating in implementing the Water Quality Improvement Plans. The San Diego Water Board encourages the Environmental Organizations to remain involved during the development and implementation of the Water Quality Improvement Plans to provide recommendations to the Copermittees for the priority water quality conditions that should be addressed. By remaining involved, the environmental organizations can also understand the opportunities and constraints that are identified during the prioritization process.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Gnl-4	GENERAL	
	COMMENT: *Meaningful enforcement of permit requirements is necessary to protect receiving waters.* The San Diego Green Building Council, Laguna Bluebelt Association, and South Laguna Civic Association each submitted comments that the Tentative Order must include requirements that result in meaningful enforcement actions. Without requirements for meaningful enforcement actions, the commenters are concerned that discharges from the MS4 and dry weather flows will continue to degrade water quality.	**Building Industry / Industry** San Diego Green Building Council **Environmental Organizations** Laguna Bluebelt Coalition South Laguna Civic Association
	RESPONSE: The San Diego Water Board agrees that meaningful enforcement actions are necessary to protect receiving waters. The requirements of the Tentative Order are all intended to result in the protection of the quality of receiving waters from MS4 discharges. The Tentative Order also includes requirements for the Copermittees to demonstrate that they are issuing enforcement actions in a timely manner to obtain compliance from sources that are discharging to their MS4s. Enforcement of the requirements of the Tentative Order by the San Diego Water Board may be necessary to compel the Copermittees to properly implement and enforce their legal authorities to adequately protect water quality. By issuing the Regional MS4 Permit, the San Diego Water Board expects to be able to reallocate its resources to better enforce permit requirements instead of developing permits and permit requirements.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-5	GENERAL	
	COMMENT: *Include requirements to develop maps or charts to track and monitor coastal receiving waters subject to MS4 runoff flows and impacts.* The Laguna Bluebelt Coalition and South Laguna Civic Association expressed support for the creation of maps to show water quality impacted areas of all creeks and coastal receiving waters within the region. The South Laguna Civic Association would like an interactive map that identifies protected coastal receiving water resources and dominant littoral currents and counter currents to help identify distribution patterns of urban runoff induced algal plumes and thermal plumes.	**Environmental Organizations** Laguna Bluebelt Coalition South Laguna Civic Association
	RESPONSE: The San Diego Water Board has considered the concept, but does not agree this requirement is appropriate or necessary to be included in the requirements of the Tentative Order. The San Diego Water Board understands the desire for such spatial and temporal information to be available in a visual format. However, the creation and maintenance of such map would require the collection and processing of data that is beyond the scope of what is required to be measured and reported for the purposes of the Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Gnl-6	GENERAL	
	COMMENT: *Increase use of recycled water to reduce need for imported water and discharges from MS4s.* The Laguna Bluebelt Coalition and South Laguna Civic Association expressed support for the increasing the use of recycled water to reduce imported water demand. The commenters contend that increasing recycled water use will reduce discharges to the ocean.	**Environmental Organizations** Laguna Bluebelt Coalition South Laguna Civic Association
	RESPONSE: The San Diego Water Board supports and promotes the use of recycled water. The Tentative Order does not prohibit the use of recycled water, but does limit the discharge of recycled water to receiving waters. The requirements of the Tentative Order do not specifically encourage the use of recycled water, nor is it appropriate for the Tentative Order to do so. Recycled water and the discharge of recycled water are regulated by the San Diego Water Board under separate regulatory mechanisms. The San Diego Water Board agrees that the recycling of wastewater, as well as recycling non-storm water discharges and retaining and using storm water runoff has the potential to reduce the need to import water to the San Diego Region. The San Diego Water Board encourages the Environmental Organizations to remain involved during the development and implementation of the Water Quality Improvement Plans to provide recommendations to the Copermittees for identifying opportunities to promote recycled water use and recycling of non-storm water and storm water discharges to and from the MS4.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-7	GENERAL	
	COMMENT: *Portions of San Diego County in the Colorado River Region should not be subject to requirements of San Diego Region.* The Julian Community Planning Group submitted a comment stating that the portion of San Diego County under the jurisdiction of the Colorado River Water Board should not be subject to the requirements of the Tentative Order.	**Community Planning Groups** Julian Community Planning Group
	RESPONSE: The San Diego Water Board agrees. The requirements of the Tentative Order are only applicable to the portion of San Diego County within the jurisdiction of the San Diego Water Board.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-8	GENERAL	
	COMMENT: *Urban runoff is the San Diego Region's most urgent pollution problem.* Several Environmental Organizations, the San Diego Green Building Council, and Other Entities submitted comments stating that urban runoff is the San Diego Region's most urgent problem. Most of the commenters also acknowledged that it is a difficult problem to solve, but they are willing to work together to help solve the problem.	**Building Industry / Industry** San Diego Green Building Council **Environmental Organizations** The Escondido Creek Conservancy Friends of Rose Canyon Creek / Rose Creek Watershed Alliance Laguna Bluebelt Coalition Los Penasquitos Lagoon Foundation Natural Resources Defense Council San Diego Canyonlands San Elijo Lagoon Conservancy **Other Entities** Curious Company Hector Valtierra
	RESPONSE: The San Diego Water Board agrees that runoff from developed and developing areas pose a significant problem to protecting water quality in the San Diego Region. The San Diego Water Board has developed the Regional MS4 Permit approach to allow the Copermittees to tap into the community and the resources the community is willing to provide to help address the problems associated with runoff from developed and developing areas. The San Diego Water Board encourages the community to remain involved during the development and implementation of the Water Quality Improvement Plans to provide recommendations to the Copermittees for identifying opportunities to the public for addressing problems associated with runoff from developed and developing areas.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Gnl-9	GENERAL	
	COMMENT: *The term "prohibit" should be changed to "effectively prohibit" throughout Tentative Order when referring to non-storm water discharges.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting that the language of the Tentative Order be revised to "effectively prohibit" non-storm water discharges to the MS4 instead of just "prohibit" to be consistent with the language of the Clean Water Act. The Natural Resources Defense Council submitted comments that assert that the Clean Water Act and the Code of Federal Regulation require an absolute prohibition of non-storm water discharges, in any amount, to the MS4.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Natural Resources Defense Council
	RESPONSE: The San Diego Water Board agrees that the language of the Tentative Order should be consistent with the Clean Water Act and Code of Federal Regulations. The Clean Water Act requires MS4 permits to include a requirement that non-storm water discharges are to be "effectively prohibited" to the MS4. The Code of Federal Regulations requires each Copermittee to have the legal authority to "prohibit" non-storm water discharges to the MS4. The Phase I Final Rule clarifies what "effectively prohibit" means (55 FR 47995): "*Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer…Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit (other than the permit for the discharge from the municipal separate storm sewer.)*" Where appropriate, the language in the Tentative Order has been revised to be consistent with the language of the Clean Water Act to include the term "effectively prohibit" instead of "prohibit" or "reduce and eliminate." In other cases, the language has been maintained to be consistent with the requirements of the Code of Federal Regulations requiring the Copermittees to establish the legal authority to "prohibit" non-storm water discharges to their MS4s and enforce that legal authority. The establishment and enforcement of the legal authority to "prohibit" non-storm water discharges to their MS4s is how the Copermittees will "effectively prohibit" non-storm water discharges to their MS4s.	

Gnl-10	GENERAL	
	COMMENT: *The requirements of the Tentative Order do not allow Copermittees to adaptively manage their programs.* The Riverside County Copermittees submitted comments contending that the requirements of the Tentative Order will not allow the Copermittees to adaptively manage their programs. In particular, the Riverside County Copermittees cite the prohibitions and limitations of Provision A and the development planning requirements of Provision E.3 as requirements that will limit their ability to adaptively manage.	**Copermittees** Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees that the requirements of the Tentative Order will not allow the Copermittees to adaptively manage their programs. The approach used in developing the requirements in the Tentative Order departs significantly from the approach used in developing the requirements of previous and current permits. The current MS4 permits essentially prescribe the programs that must be implemented by each Copermittee, resulting in a focus on complying with the implementation of required actions. The current permits provide the Copermittees little or no ability to adaptively manage the programs to become more focused on achieving outcomes. In contrast, the requirements of the Tentative Order allow the Copermittees to strategically plan by identifying the highest priority pollutants or conditions in a specific watershed, goals and strategies to address those pollutants or conditions, and resources to implement the strategies. Furthermore, the Copermittees are provided the monitoring and assessment information that allows them to determine when those priorities, goals and strategies should be adjusted or are no longer appropriate. The Tentative Order is predicated on a new emphasis on water quality based outcomes (i.e., restoration or protection of water quality and beneficial uses) instead of a prescriptive action based regulatory approach (e.g., implementation of programs). The flexibility that is provided in the Tentative Order should not be mistaken as the San Diego Water Board wishing to grant full autonomy to the Copermittees to implement their jurisdictional runoff management programs. The requirements of the Clean Water Act and the Code of Federal Regulations must still be incorporated into the requirements of the Tentative Order. The Code of Federal Regulations includes several program components that must be implemented by the Copermittees. The USEPA has also provided guidance as to what minimum requirements should be included in those programs. The San Diego Water Board must balance the Copermittees' desire to have more flexibility to adjust their	

Gnl-10	GENERAL	
	programs with the statutory requirements of the Clean Water Act and the California Water Code which hold the Copermittees accountable for compliance with a minimum set of requirements that are enforceable. Given that the Tentative Order already provides the Copermittees great latitude in adjusting their programs to focus their resources on achieving improved water quality, the San Diego Water Board has extended that flexibility further by incorporating additional opportunities into the revised Tentative Order for identifying and implementing more watershed-specific requirements in areas of the Tentative Order where the Copermittees perceive and assert there is little to no flexibility provided. Please see responses to comments A-1 and E3c-2.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-11	GENERAL	
	COMMENT: *Implementation of current permit requirements and accomplishments of Orange and Riverside County Copermittees not being considered.* The Orange County and Riverside County Copermittees each submitted comments expressing concern that the Tentative Order has been developed without considering the programs and plans being developed under their current permit requirements, and does not acknowledge the accomplishments achieved by the Copermittees during the previous and current permit terms. In addition, the Orange County and Riverside County Copermittees each submitted comments that they must have an opportunity to propose changes to the requirements of the Tentative Order through the Report of Waste Discharge. The San Diego Green Building Council recommended that the Tentative Order also take into account successes that have been achieved in other jurisdictions outside of the San Diego Region.	**Building Industry / Industry** San Diego Green Building Council **Copermittees** Orange County Copermittees Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees that the Tentative Order does not consider the implementation of current permit requirements, and accomplishments and successes of the Orange County and Riverside County Copermittees and other jurisdictions. Most of the requirements included in the Tentative Order are also in the current permits issued to the Orange County and Riverside Copermittees (Order Nos. R9-2009-0002 and R9-2010-0016). The current permits issued to the Orange County and Riverside County Copermittees include prohibitions and limitations, numeric action levels, and the same jurisdictional runoff management program components. The structural BMP performance standards (i.e. storm water pollutant control retention and hydromodification management) are effectively the same as in the Orange County and Riverside County MS4 permits. The Watershed Workplans of the current permits are very similar to, and are expected to serve as the basis of the Water Quality Improvement Plans. The monitoring program requirements are very similar, with potential reductions of monitoring requirements in several instances. The reporting requirements in the Tentative Order have actually been significantly reduced compared to the current permits. The San Diego Water Board expects the Orange County and Riverside County Copermittees' implementation of their current permit requirements will make the transition from to the Tentative Order much easier than the San Diego County Copermittees because so many of the MS4 permit requirements are similar, and in many cases more prescriptive, than the requirements of the Tentative Order. The flexibility of the requirements of the Tentative Order compared to their current permit requirements will provide the Orange County and Riverside	

Gnl-11	GENERAL	
	County Copermittees many opportunities to identify more effective and efficient ways to utilize their resources to improve water quality. However, until the Orange County and Riverside County Copermittees obtain coverage under the Tentative Order, they will remain subject to the more prescriptive requirements of their current permits. Furthermore, the requirements of the Tentative Order were developed with a strong consideration of the current permit requirements being implemented by the Orange County and Riverside County Copermittees, as well the accomplishments of all the Copermittees in the San Diego Region. In fact, the Tentative Order was developed and improved based on comments received from the Orange County and Riverside County Copermittees during the 18 month administrative draft focused meeting and comment process. The Tentative Order was also developed considering the accomplishments and successes of other jurisdictions outside of the San Diego Region. The basis of incorporating an allowance for implementing a true iterative and adaptive management process is because of the accomplishments, successes, and failures observed by the San Diego Region's Copermittees, as well as those observed in other jurisdictions within California and other states. By allowing a true iterative and adaptive management process to be implemented, the San Diego Water Board expects the Copermittees to not only learn from each other's successes and failures within the San Diego Region, but the successes and failures from other jurisdictions outside the San Diego Region. The fact of the matter is that the requirements of the Tentative Order are more similar to the current permits issued to the Orange County and Riverside Copermittees than the current permit issued to the San Diego County Copermittees (Order No. R9-2007-0001). This is because most of these elements in the Tentative Order were developed based on the requirements in the current Orange County and Riverside County MS4 permits. The Tentative Order also allows the Orange County and Riverside County Copermittees to provide additional recommendations and propose changes for consideration by the Board based on their experiences and successes when they submit their Report of Waste Discharge for coverage under the Regional MS4 Permit.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-12	GENERAL	
	COMMENT: *Updating the Basin Plan needs to be a priority of the San Diego Water Board.* The Riverside County Copermittees commented that the San Diego Water Board should make updating the Basin Plan with water quality objectives based on background conditions, beneficial uses of specific water bodies, and specific conditions that influence the water bodies a priority. The Riverside County Copermittees contend that without the updates, the desired outcomes the Copermittees include in the Water Quality Improvement Plans will be arbitrary and may not achieve desired beneficial use improvements, or be appropriate.	**Copermittees** Riverside County Copermittees
	RESPONSE: The San Diego Water Board agrees that updating the Basin Plan should be a priority. Updating the Basin Plan, however, is not within the scope of developing and issuing the Tentative Order. On many occasions, dischargers have asserted that the water quality standards are not achievable, and because they are not achievable they are not appropriate. The San Diego Water Board disagrees. The water quality standards in the Basin Plan are protective of water quality and are therefore appropriate. The San Diego Water Board maintains that because they are appropriate, they must be achieved to protect water quality. If the Copermittees believe a different water quality objective is appropriate and will protect water quality, the San Diego Water Board recommends that the Copermittees collect the data and develop the evidence to support a different water quality objective to be incorporated into the Basin Plan through an amendment to the Basin Plan. Until then, the water quality standards in the Basin Plan are considered appropriate and must be implemented in MS4 permits.	

Gnl-13	GENERAL	
	COMMENT: *"Clarify" responsibilities of the Copermittees under the Tentative Order.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting that the requirements of the Tentative Order "clarify" the responsibilities of the Copermittees, consistent with the requirements of the Clean Water Act. The Copermittees requested revisions throughout the requirements of the Tentative Order to specify that the Copermittees must "effectively prohibit" non-storm water discharges "into the MS4" instead of "into and from the MS4," and control the discharge of "pollutants" not "pollutants in storm water" from the MS4 to the MEP. The Copermittees also requested including several qualifying phrases that the Copermittees could only operate "to the extent allowable" or "as applicable" or other such phrases to "clarify" the Copermittees were only responsible for implementing requirements subject to their legal authority The Natural Resources Defense Council (NRDC) expressed concern that the non-storm water action levels (NALs) may violate the effective prohibition of non-storm water discharges to the MS4. The NRDC requested that the Tentative Order be very clear that the Copermittees are responsible for prohibiting non-storm water discharges to the MS4. The Orange County and Riverside County Copermittees objected to language in the Tentative Order that implied the Copermittees were responsible for "enhancing" and "restoring" water quality in receiving waters, contending that they are only responsible for the discharges from their MS4s. The Orange County Copermittees also objected to the requirements for the Copermittees to evaluate stream channels for restoration, asserting the Copermittees are not responsible for restoring stream channels. The San Diego Unified Port District supported including requirements that result in jurisdictional accountability, recognizing that most of the discharges from the MS4 to San Diego Bay originate from upstream jurisdictions. The San Diego Unified Port District also provided requests for modifications to specify the downstream owners and operators of the MS4 are not responsible and should not be held liable for discharges and pollutants in discharges originating from upstream MS4s. The San Diego Unified Port District requested that the Tentative Order include requirements for the San Diego Water Board to demonstrate a Copermittee caused or contributed to an exceedance of water quality standards. The San Diego Unified Port District also encouraged the San Diego Water Board to include additional monitoring to ensure jurisdictional accountability.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees San Diego Unified Port District San Diego Unified Port District / Brown and Winters **Environmental Organizations** Natural Resources Defense Council

Gnl-13	GENERAL	
	RESPONSE: The San Diego Water Board reviewed and considered the recommendations and requests. The San Diego Water Board has revised the language in the Tentative Order to emphasize the Copermittees are responsible for "effectively prohibiting" non-storm water discharges "to the MS4." The language has not been revised from the control of "pollutants in storm water" to "pollutants" from the MS4 to the MEP. The San Diego Water Board maintains that the Copermittees are required to control "pollutants in storm water" to the MEP. Pollutants in non-storm water discharges are controlled through the effective prohibition of non-storm water discharges to the MS4. Please see the response to comments Gnl-9 and Fnd-3. The Tentative Order has also been revised to replace any language of "restoring water quality standards in receiving waters" to "protecting water quality standards in receiving waters from MS4 discharges." The San Diego Water Board generally did not revise the language with the qualifying phrases requested by the Copermittees. The Copermittees are required to establish the legal authority to implement the requirements of the Tentative Order. The Tentative Order does not require the Copermittees to implement requirements outside of their jurisdictions or outside of their legal authority. Please see response to comments E1-1 and E1-2. The San Diego Water Board appreciates the support expressed for the requirements that result in jurisdictional accountability. The San Diego Water Board agrees that the requirements of the Tentative Order must provide the San Diego Water Board the information necessary to account for each individual Copermittee's contribution toward improving or degrading water quality. This information will allow the San Diego Water Board to provide support to improve the Copermittee's programs, where needed, and the evidence necessary to enforce the requirements of the Tentative Order, when appropriate. The San Diego Water Board generally disagreed with the modifications to the Tentative Order requested by the San Diego Unified Port District. The San Diego Water Board maintains that the Copermittees are responsible for the discharges from their MS4s to receiving waters. If there are sources that originate from outside a Copermittee's jurisdiction, it is the Copermittee's responsibility to demonstrate to the San Diego Water Board that the source is outside of the Copermittee's legal authority to control. The San Diego Water Board considered the request by the San Diego Unified Port District for additional monitoring to ensure jurisdictional accountability. The San Diego Water Board included additional monitoring for this purpose. Please see response to comment D-5.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-14	GENERAL	
	COMMENT: *Request for consistency in MS4 permit requirements for Copermittees under the jurisdiction of multiple Regional Water Boards.* The Orange County Copermittees submitted comments requesting that the requirements in the Tentative Order be as consistent as possible with requirements in MS4 permits from other Regional Water Boards. The Orange County Copermittees include 5 municipalities that are split between 2 Regional Water Boards. The Orange County Copermittees provided recommended revisions to the Tentative Order aimed at creating greater uniformity and implementability for these 5 municipalities under two MS4 permits.	**Copermittees** Orange County Copermittees
	RESPONSE: The San Diego Water Board has reviewed and considered the recommended revisions. The San Diego Water Board understands implementing requirements that are not consistent between multiple Regional Water Board permits can present some challenges for a Copermittee. The requirements in the Tentative Order provide significantly more flexibility that will allow a Copermittee to align the implementation of its programs with the requirements of different permit requirements. The San Diego Water Board, however, has not and will not modify any requirements in the Tentative Order to reduce the accountability, enforceability or protectiveness to be more consistent with another Regional Water Board's permit requirements. For those areas of the MS4 permits where there are inconsistent requirements, the solution for the Copermittee would be to develop jurisdictional runoff management programs that implement the most protective elements of both Regional Water Boards' permit requirements and apply them throughout its jurisdiction. In doing so, the Copermittee will be in compliance with the requirements of both MS4 permits and have programs that will be most protective of water quality.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-15	GENERAL	
	COMMENT: *Findings and Fact Sheet do not provide adequate justification for new or modified requirements.* The Building Industry Association of Southern California and the Orange County Copermittees submitted comments asserting that the Findings and the Fact Sheet do not provide adequate justification for the new or modified requirements in the Tentative Order. The Building Industry Association of Southern California is particularly interested in the justification for the development planning structural BMP performance standards. The Orange County Copermittees provided examples of several specific requirements in the Tentative Order that they assert were not adequately justified.	**Building Industry / Industry** Building Industry Association of Southern California **Copermittees** Orange County Copermittees
	RESPONSE: The San Diego Water Board disagrees that the Findings and Fact Sheet do not provide adequate justification for the new or modified requirements in the Tentative Order. The San Diego Water Board understands that the commenters may not be satisfied with the justification for the requirements of the Tentative Order provided in the Findings and Fact Sheet. The San Diego Water Board maintains that the Findings and the Fact Sheet provide the background information, regulatory and legal citations, references and additional explanatory information and data in support of all the Findings and requirements in the Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-16	GENERAL	
	COMMENT: *Recommendation for revising numbering system in the Tentative Order.* The Orange County Copermittees submitted comments recommending that the numbering system of the provisions in the Tentative Order provide the full number of the provision (e.g. A.1 instead of 1). The recommended revisions would assist and better orient the reader.	**Copermittees** Orange County Copermittees
	RESPONSE: The San Diego Water Board appreciates the recommendation. The San Diego Water Board understands that the length and the numerous subsections of the provisions in the Tentative Order can be difficult to navigate at times. The San Diego Water Board has included footers to assist the reader in navigating through the provisions of the Tentative Order. Additionally, the electronic PDF version of the Tentative Order will have bookmarks for the major provisions to assist in navigating the requirements of the Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-17	GENERAL	
	COMMENT: *Requests for changes to schedules and deadlines in the Tentative Order.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting changes to the schedules and deadlines for developing, submitting, and implementing several requirements in the Tentative Order. In particular, the requests were focused on additional time for developing the Water Quality Improvement Plans. The San Diego Unified Port District supported the requests. The BIA Regulated Community Coalition and Environmental Groups each submitted comments with recommendations to include more time for public participation during the development of the Water Quality Improvement Plans. The commenters provided several recommendations for modifications to the schedules and deadlines in the Tentative Order that would result in more time to develop and implement the Water Quality Improvement Plans and the monitoring and assessment programs.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees San Diego Unified Port District **Environmental Organizations** Environmental Groups
	RESPONSE: The San Diego Water Board reviewed and considered the recommendations to change the schedules and deadlines in the Tentative Order. The San Diego Water Board generally agrees that additional time should be provided to develop the Water Quality Improvement Plans, to allow for a robust public participation process and to provide enough time to implement the optional requirements that have been included in the revised Tentative Order if the Copermittees choose to do so. The San Diego Water Board modified many of the schedules to provide additional flexibility in scheduling the development of several deliverables, as well as including later deadlines for submitting several deliverables. The requirements have also been modified to allow the Copermittees more control in developing the schedules for implementing the monitoring requirements in the Water Quality Improvement Plans. Please see the revisions to Provisions B.3 and F.1 in the revised Tentative Order, as well as the responses to comments B-3 and F1-1.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-18	GENERAL	
	COMMENT: *Requests for additional opportunities to provide comments.* The Riverside County Copermittees, Clean Water Now, and Environmental Groups each submitted comments expressing interest in additional opportunities to provide comments. The Riverside County Copermittees requested an additional public review and comment period after the Tentative Order is revised and the responses to comments are released by the San Diego Water Board. Clean Water Now expressed disappointment with the focused meeting process used in the development of the Tentative Order, and the lack of time available to have protracted discussions. The Environmental Groups requested additional opportunities for the public to participate and provide comments during the development of the Water Quality Improvement Plans.	**Copermittees** Riverside County Copermittees **Environmental Organizations** Clean Water Now Environmental Groups
	RESPONSE: The San Diego Water Board considered the requests for additional opportunities to provide comments. The San Diego Water Board disagrees that an additional public review and comment period needs to be provided after the revised Tentative Order and responses to comments are released. Federal regulations only require that the San Diego Water Board provide at least 30 days for public comment on the Tentative Order. The lengthy public review and comment period that was provided for the Tentative Order complies with and exceeds the statutory and regulatory requirements for bringing the Tentative Order before the Board for consideration and adoption. The San Diego Water Board released an administrative draft of the Tentative Order in April 2012, which went through a 5 month review and comment period, with several focused meetings to discuss the requirements. The administrative draft of the Tentative Order was significantly revised based on the comments and information received during the focused meetings and written comments received. The Tentative Order was released in October 2012 and the public comment period was closed in January 2013. The revised Tentative Order will be the third draft of the permit, with a second round of revisions, and revisions reflected in it were made in direct response to written comments received by the San Diego Water Board. The San Diego Water Board has already provided multiple opportunities to comment on the Tentative Order. An additional opportunity to submit written comments is not required or necessary. There will be an opportunity to make oral comments on the revisions to the Tentative Order at the San Diego Water Board hearing. The San Diego Water Board understands that the commenter wished to have more lengthy discussions during the focused meetings that were held during the administrative draft review and comment period. With the exception of the commenter, the San Diego Water Board has received very positive feedback on the focused	

Gnl-18	GENERAL	
	meetings that were held. The focused meeting process was above and beyond what is required and the discussions that did take place were more inclusive than previous permit renewal processes. At each focused meeting the San Diego Water Board also extended invitations to everyone present for additional meetings outside the focused meetings. The San Diego Water Board had multiple additional in depth discussions with several groups outside of the focused meeting process on specific topics. If the commenter had contacted the San Diego Water Board for an additional meeting, the San Diego Water Board could have scheduled a meeting with the commenter to have more in depth discussions. The San Diego Water Board agrees that additional opportunities should be provided to the public to participate and comment during the development of the Water Quality Improvement Plans. The San Diego Water Board disagrees that Water Quality Improvement Plans are equivalent in meaning to "water quality control plans" as defined in Water Code section 13050, subdivision (j), requiring a public hearing for the acceptance of the Water Quality Improvement Plans. Please see response to comment B-3.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-19	GENERAL	
	COMMENT: *The maximum extent practicable (MEP) standard is the floor, not the limit, for MS4 permit requirements.* The Natural Resources Defense Council (NRDC) submitted comments asserting that the San Diego Water Board has the authority to include MS4 permit requirements that are more stringent than the MEP standard if necessary to ensure that discharges from the Copermittees' MS4s do not cause or contribute to exceedances of water quality standards in receiving waters. The NRDC cited several court decisions that support their position that the MEP standard is the floor for MS4 permit requirements, and the San Diego Water Board has the authority to impose additional more stringent requirements over and above MEP as determined to be appropriate.	**Environmental Organizations** Natural Resources Defense Council
	RESPONSE: The San Diego Water Board agrees that the MEP standard is the floor for permit requirements. In concept, the MEP standard is supposed to evolve and improve and become more stringent over time through an iterative process. In reality, in the current and previous permits issued by the San Diego Water Board, the MEP standard was essentially defined by the requirements of the MS4 permit and the iterative process only occurred when an MS4 permit was renewed by incorporating additional and more stringent requirements. Thus, the MEP standard became static rather than dynamic for each permit term, and only advanced with each permit renewal. This has resulted in multiple MS4 permits by the San Diego Water Board that have different requirements, each a little more stringent that the last one issued. In the Tentative Order the San Diego Water Board has incorporated a new regulatory approach that is expected to result in a more dynamic iterative process to advance the MEP standard during the permit term. Instead of dictating the actions that must be implemented by the Copermittees, and defining the MEP "floor" of requirements that will be utilized to determine compliance, the requirements of the Tentative Order define the iterative process that must be implemented to achieve water quality improvement outcomes through an ever advancing and improving MEP standard. With the exception of the TMDL requirements, the San Diego Water Board disagrees it is necessary to include requirements that are more stringent that the MEP standard. The approach incorporated into the Tentative Order redefines the MEP "floor" from being a "static floor" to a "dynamic floor" that is expected to rise as the Copermittees learn from their failures and successes while working toward achieving tangible improvements in water quality.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Gnl-20	GENERAL	
	COMMENT: *Include graphical representation of areas covered by the Tentative Order.* The San Diego Green Building Council submitted comments recommending that the final permit include a graphic representation of both the political and natural boundaries related to the area under the jurisdiction of the Order.	**Building Industry / Industry** San Diego Green Building Council
	RESPONSE: The San Diego Water Board appreciates the recommendation. Including a graphical representation of the area under the jurisdiction of the Tentative Order is not necessary. The Tentative Order is expected to cover all the Phase I municipalities in the San Diego Region in a phased manner. The Tentative Order will no longer be issued to three separate counties or include requirements separated by political boundaries.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Gnl-21	GENERAL	
	COMMENT: *Federal regulations require that the term of the Tentative Order not exceed five years.* The USEPA submitted comments that expressed concern that the San Diego Water Board was considering a permit term longer than five years. The USEPA supported a permit term that does not exceed five years.	**State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board agrees that the term of the permit will not exceed five years.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Gnl-22	GENERAL	
	COMMENT: *Identification of grammatical and typographical errors.* The San Diego County Copermittees submitted comments noting several grammatical and typographical errors in the text of the Tentative Order that should be corrected.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board appreciates the identification of grammatical and typographical errors. The San Diego Water Board has corrected the grammatical and typographical errors identified by the commenter. The San Diego Water Board has corrected any grammatical and typographical errors to the extent possible in the revised Tentative Order. If there are additional grammatical and typographical errors identified in the revised Tentative Order after adoption, the San Diego Water Board can correct them without re-opening the adopted Order if they are considered minor modifications pursuant to the requirements of Provision H.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Lgl-1	LEGAL	
	COMMENT: *Concerns with strict liability for exceedances of water quality standards and receiving water limitations.* Comments were submitted by members of the Community Planning Groups, Copermittees, Engineering/Design Consultants, State Government, Societies/Associations/Coalitions, and Other Entities generally expressed concerns with the strict liability that the Copermittees are exposed to for exceedances of the water quality standards and receiving water limitations. The Copermittees submitted several comments that a recent Ninth Circuit Court of Appeals decision resulted in a new interpretation of precedential receiving water limitations language, or that it creates any new third party liability risks.	**Community Planning Groups** Jamul Dulzura Community Planning Group Ramona Community Planning Group **Copermittees** City of Dana Point City of Imperial Beach City of Laguna Hills City of Lake Forest City of Mission Viejo City of Rancho Santa Margarita City of San Juan Capistrano County of San Diego County of San Diego Office of County Counsel Orange County Copermittees Riverside County Copermittees San Diego Unified Port District / Brown and Winters **Engineering/Design Consultants** Latitude 33 Planning and Engineering **State/Federal Government** Senator Mark Wyland **Societies/Associations/Coalitions** BIOCOM San Diego Association of Realtors South County Economic Development Council **Other Entities** Carol Crossman Continental Maritime of San Diego Gable PR Hughes Marino Marston+Marston, Inc. Nuffer, Smith, Tucker, Inc. San Diego Regional Chamber of Commerce Sheppard, Mullin, Richter & Hampton LLP Southern Cross Property Consultants Transition IT
	RESPONSE: The San Diego Water Board disagrees that the recent Ninth Circuit Court of Appeals decision in NRDC v. County of Los Angeles (*Natural Resources Defense Council v. County of Los Angeles, et al.* (673 F.3d	

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	1235 (9th Cir. 2011) (revd. on other grounds and remanded,*Los Angeles County Flood Control District v. Natural Resources Defense Council* (133 S.Ct. 710 (2013))), adopted a new interpretation of precedential receiving water limitations language or that it creates any new third party liability risks. Rather the Ninth Circuit's interpretation is consistent with the San Diego Water Board's interpretation of the precedential receiving water limitations language that affords the San Diego Water Board with discretion to take enforcement action for violations of receiving water limitations and discharge prohibitions and also allows for citizen suit enforcement – in other words, engagement in the iterative process does not create a safe harbor from liability for violations of water quality standards. In precedential orders, the State Water Board exercised its discretion to require compliance with water quality standards by directing that MS4 permits contain provision requiring discharges of pollutants in storm water to be controlled so as not to cause or contribute to exceedances of water quality standards in receiving waters. (State Water Baord Order WQ-98-01 (*Environmental Heatlh Coalition*), and WQ 99-05 (*Environmental Health Coalition*.) Consistent with federal law, the State Water Board also found it appropriate to implement best management practices (BMPs) in lieu of imposing numeric water quality-based effluent limitations to meet water quality standards. (See SWRCB Orders WQ 91-03 (*Citizens for a Better Environment*), WQ 98-01 (*Environmental Health Coalition*), WQ 2001-15 (*Building Industry Association of San Diego County*); See also 40 CFR sec. 122.44(k); Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, USEPA, September 1995.) In these orders and USEPA guidance, the State Water Board and USEPA recognize that the storm water program will evolve over time to incorporate more stringent limitations, including improved BMPs, to meet water quality standards or numeric water quality based effluent limitations. While the State Water Board and San Diego Water Board in its recent MS4 permits have directed MS4 dischargers to achieve compliance with water quality standards through an "iterative process," using the State Water Board's precedential receiving water limitations language, the Water Boards have never interpreted the iterative process to provide a "safe harbor" for MS4 dischargers. Thus, the Ninth Circuit's recent opinion is consistent with the Water Boards' interpretation and does not create any new uncertainty or third party liability risks that did not previously exist. The San Diego Water Board recognizes and will continue to follow the State Water Board's process (commenced with a public workshop in November 2012) for reconsidering the precedential receiving water limits language and the possibility of creating a "safe harbor" from enforcement for violations of water quality	

Lgl-1	LEGAL	
	standards while an MS4 discharger engages in an iterative process of improving its controls and practices. However, the Tentative Order has been revised to provide a discharge prohibitions and receiving water limitations compliances option. Please see response to comment A-1.	

Lgl-2	LEGAL	
	COMMENT: *Concerns with the Copermittees' legal authority to impose requirements on development projects where a nexus between impact on the receiving water and the project cannot be established.* Comments were submitted by members of the Copermittees, Societies/ Associations/Coalitions, and Other Entities generally expressed concerns with the Copermittees' legal authority to imposed requirements on development projects where a nexus between impact on the receiving water and the project cannot be established. The Copermittees assert that they would be subject to liability under takings clauses of the US and California Constitutions and the Mitigation Fee Act for requiring hydromodification management BMP requirements on new development or redevelopment projects that discharge to hardened channels where a hydromodification impact would be questionable and difficult to establish. Comments from the Societies/ Associations/Coalitions assert that allowing an in lieu fee for improvements to Priority Development Projects that do not cause hydromodification impacts is a direct violation of CEQA. In contrast, the South Laguna Civic Association asserts that the regulatory and legal nexus is clear between MS4 discharges and creek erosion and infrastructure damage, ocean pollution and public health hazards.	**Copermittees** City of Dana Point City of Imperial Beach City of Rancho Santa Margarita City of San Diego City Attorney County of San Diego Office of County Counsel Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** South Laguna Civic Association **Societies/Associations/Coalitions** East Otay Mesa Property Owners Association Otay Mesa Property Owners Association **Other Entities** National Enterprises Inc.
	RESPONSE: The San Diego Water Board recognizes the concerns of about the Copermittees' legal authority to impose hydromodification management requirements on development that causes no hydromodification impacts. Federal law mandates that permits issued to MS4s require management practices that will result in reducing pollutants to the maximum extent practicable. The state is required, by law, to select the BMPs. (See *NRDC v. USEPA* (9th Cir. 1992) 966 F.2d 1292; *Environmental Defense Center v. USEPA* (9th Cir. 2002) 344 F.3d 832, 855; *Rancho Cucamonga v. Regional Water Quality Control Bd., Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389.) The Tentative Order's requirements for Low Impact Development and hydromodification management controls are authorized by federal law. Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(2) provides that Copermittees develop and implement a management program which is to include "*A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plans shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed*." The Tentative Order does not impose land use regulations, nor does it restrict or control local land-use decision-	

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	making authority. Rather, the Tentative Order requires the permittees to fulfill Clean Water Act requirements and protect water quality in their land use decisions. The requirements in the Tentative Order allow for flexibility in compliance options to the extent allowable under the Clean Water Act. The substantive regulatory requirements of the Clean Water Act are a valid exercise of the federal government's enumerated powers and authority over navigable waters. (*NRDC v. USEPA* (9th Cir. 1998) 863 F.2d 1420, 1436.) Environmental regulation is not land use regulation, and therefore does not infringe upon local authority over land use decisions. (*California Coastal Commission v. Granite Rock* (1987) 480 U.S. 572. In addition, local land use planning must be consistent with general statewide laws. (*County of Los Angeles v.California State Water Resources Control Board* (2006) 143 Cal.App.4th 985, 1003.) Article 11, section 7, of the California Constitution states that a county or city may not enact laws that conflict with general laws. The Porter-Cologne Water Quality Control Act contains the California Legislature's finding that water quality is a matter of state-wide concern, requiring a statewide program administered at a regional level. (See, e.g., Wat. Code, § 13000; see also generally *Southern California Edison v. State Water Resources Control Board* (1981) 116 Cal.App.3d 751, 758.) Section 101 of the CWA has a companion policy statement, where Congress found that water quality is a matter of federal concern. The Tentative Order also does not dictate specific methods of compliance or dictate the manner in which the Copermittees use their land. Where the Tentative Order includes detailed requirements, it is to comply with the Clean Water Act and its regulations. USEPA's regulations mandate that certain requirements be included in MS4 permits in order to achieve the requirements of the Clean Water Act. Thus, federal law mandates that permits issued for MS4s require certain actions that will result in the elimination or reduction of pollutants to receiving waters and the state is required, by federal law, to select the controls necessary to meet this standard. (See *NRDC v. USEPA* (9th Cir. 1992) 966 F .2d 1292, 1308; *City of Rancho Cucamonga v. Regional Water Quality Control Bd., Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389-90.) The requirement that the Copermittees require Priority Development Projects to control post-project runoff flow rates and durations so that they do not exceed pre-development runoff flow rates and durations by more than ten percent is appropriate and necessary to reduce erosion and the discharge of pollutants into receiving waters. It does not require mitigation beyond redevelopment project impacts because the requirement lessens (although does not eliminate) the perpetuating impacts that originated upon initial land alteration (i.e., the project would continue to cause accelerated erosion) absent improved controls of post-project runoff flow rates and durations. The San Diego Water Board maintains that the Copermittees have authority to implement this	

Lgl-2	LEGAL	
	requirement, and that if implemented it would not rise to the level of a taking of private property. The pre-development condition provision is also consistent with the requirements in both the current Orange County and Riverside County MS4 permits. Please see response to comment E3c2-2. However, to remove the question of the nexus between a project's impact on an already hardened channel, the San Diego Water Board has included a hydromodification management exemption for projects that discharge to conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. Please see response to comment E3c2-3. The hydromodification management requirements that may be imposed on projects with no hydromodification impacts has been modified, but in any case would not have violated CEQA because the mitigation requirement was not imposed as a result of a CEQA analysis.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Lgl-3	LEGAL	
	COMMENT: *The Tentative Order must address water quality inconsistencies with the California Coastal Act and California Water Code.* The South Laguna Civic Association submitted comments that asserts the Tentative Order is inconsistent with the California Coastal Act and the water reclamation requirements of the California Water Code. The commenter asserts that the Tentative Order must address the water quality inconsistencies.	**Environmental Organizations** South Laguna Civic Association
	RESPONSE: The Tentative Order is not issued pursuant to the requirements of the California Coastal Act. The Tentative Order is issued pursuant to and consistent with the requirements of the federal Clean Water Act, Code of Federal Regulations, and the California Water Code for discharges of non-storm water and discharges of pollutants in storm water from the Copermittees' MS4s to receiving waters. Compliance with the requirements of the Tentative Order should also allow the Copermittees to be in compliance with the requirements of the California Coastal Act. When and where applicable, however, the Copermittees may be required to comply with the California Coastal Act under other regulatory mechanisms. The Tentative Order is not required to implement the requirements of the California Coastal Act. The Tentative Order also is not the appropriate regulatory mechanism for implementing the water reclamation requirements of the California Water Code. The water reclamation requirements of the California Water Code are implemented by the San Diego Water Board under separate regulatory mechanisms.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Lgl-4	LEGAL	
	COMMENT: *San Diego Water Board has legal authority to not incorporate the Beaches and Creeks Bacteria TMDLs into the Tentative Order.* The County of San Diego and the County of San Diego Office of County Counsel each submitted comments that assert that the San Diego Water Board has the authority to not incorporate the Beaches and Creeks Bacteria TMDLs into the Tentative Order. The comments from the County cite the MEP standard, *Defenders of Wildlife v. Browner*, and a November 2010 USEPA memorandum as providing the the basis for the legal authority. The City of Lake Forest submitted comments that also cited *Defenders of Wildlife v. Browner* as providing the the basis for the legal authority to not incorporate TMDLs into the Tentative Order. The comments from the County also assert that the scientific basis of the Beaches and Creeks Bacteria TMDLs is flawed, the requirements of the TMDLs are not achievable, and the costs to implement the requirements of the TMDLs are not worth the benefits that may be achieved. The County requested that the San Diego Water Board elect not to include the Beaches and Creeks Bacteria TMDLs in the Tentative Order and re-evaluate the TMDL. Clean Water Now submitted comments alluded to "recent legal renderings" that called into question the TMDL provisions included in the Tentative Order. Conversely, the USEPA submitted comments in support of the the San Diego Water Board's approach for incorporating applicable TMDL requirements into the Tentative Order.	**Copermittees** City of Lake Forest County of San Diego County of San Diego Office of County Counsel **Environmental Organizations** Clean Water Now **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board disagrees that it has the legal authority to not incorporate the requirements of the Beaches and Creeks Bacteria TMDLs into the Tentative Order. Federal regulations under 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permit requirements incorporate water quality based effluent limitations (WQBELs) that must be consistent with the requirements and assumptions of any available wasteload allocations (WLAs) developed under TMDLs. The federal regulations do not provide the option or discretion to not incorporate these WQBELs into NPDES permits. The San Diego Water Board is required to adopt and implement TMDLs through the MS4 permit, where the Copermittees' MS4 discharges are a source of the impairment. TMDLs are adopted by the San Diego Water Board pursuant to CWA section 303(d) and CWC sections 13240 and 13242. TMDL implementation programs consist of a description of the nature of actions that are necessary to achieve the WLAs (and LAs), a time schedule for the actions to be taken, and a description of the monitoring and reporting to be undertaken to	

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	determine compliance with the WLAs. Because TMDLs and their programs of implementation are adopted through the Basin Plan amendment process in California, the TMDL implementation program contained in a regional water board's basin plan becomes a regulation upon approval by the State of California Office of Administrative Law. All permits must implement the applicable water quality control plan (i.e. Basin Plan), including any applicable TMDL implementation programs (CWA §§ 303(d), 402(p)(3)(B)(iii); Cal. Water Code §§ 13263, 13377). These Basin Plan provisions thus become the applicable regulations that authorize an MS4 permit to include compliance schedules to achieve effluent limitations derived from TMDL WLAs. It is unclear whether the commenters understand that the TMDL implementation programs are the basis for the compliance schedules and, without the TMDL implementation program, Copermittees would be required to comply with final WQBELs immediately. Further, USEPA has set forth guidance regarding MS4 permits, that such permits must require compliance with applicable TMDLs to meet water quality standards. (See "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) (for Storm Water Sources and NPDES Requirements Based on Those WLAs.'" (USEPA Office of Water, Nov. 10, 2010.) "*Where a TMDL has been established and there is an accompanying implementation plan that provides a schedule for an MS4 to implement the TMDL, the permitting authority* [in this case, the Regional Water Board] *should consider the schedule as it decides whether and how to establish enforceable interim requirements and interim dates in the permit*." (Id.) The San Diego Water Board is aware that the USEPA memorandum is not legally binding, but finds it very instructive and it is appropriate to consider USEPA guidance, even if that guidance *may* be modified in some manner in the future. NPDES permits are intended to support the objective of the federal Clean Water Act "*to restore and maintain the chemical, physical, and biological integrity of the Nation's waters*" (Clean Water Act section 101(a)). Water quality standards, which are the basis for the receiving water limitations in the Tentative Order, are the foundation for achieving this objective. To ensure that discharges do not cause or contribute to exceedances of water quality standards, receiving water limitations provisions are included in all NPDES permits issued pursuant to CWA section 402. Further, Clean Water Act section 402(p)(3)(B)(iii) requires permits for discharges from municipal storm sewers to "require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design, and engineering methods, *and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants*." [Emphasis added.] In its Phase I Stormwater Regulations, Final Rule, USEPA elaborated on these requirements, stating that, "permits for discharges from municipal separate storm sewer systems must require	

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	controls to reduce the discharge of pollutants to the maximum extent practicable, and where necessary, water quality-based controls." (See 55 Fed. Reg. 47990, 47994 (Nov. 16, 1990).) USEPA reiterated in its Phase II Stormwater Regulations, Final Rule, that MS4 "permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL." The Clean Water Act provides the San Diego Water Board, to the same extent as the Administrator of USEPA, the discretion to determine what controls are appropriate to protect water quality and achieve the objectives of the Clean Water Act. (See *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1166.) As explained in the Tentative Order, compliance with the WLAs established in TMDLs is necessary to achieve compliance with water quality standards. The State Water Board and the San Diego Water Board have previously concluded that discharges from the MS4 contain pollutants that have the reasonable potential to cause or contribute to excursion above water quality standards. As such, receiving water limitations are included in the Tentative Order to ensure that individual and collective discharges from the MS4 do not cause or contribute to exceedances of water quality standards necessary to protect the beneficial uses of the receiving waters. Compliance with the WLAs established in TMDLs is necessary to achieve compliance with water quality standards. In recognition of the purpose of the NPDES program in supporting the objective of the Clean Water Act and utilizing its authority provided by CWA section 402(p)(3)(B)(iii), and considering USEPA's statements and guidance, the State Water Board has determined that MS4 permits must include compliance with water quality standards. (See State Water Board Order Nos. WQ91-03, WQ 98-01, WQ 99-05 and WQ 2001-15.) Accordingly, the provisions contained in 40 CFR 122.44(d), are applicable to MS4 permits. The San Diego Water Board also disagrees that incorporation of TMDL requirements is based on state law provisions of the Porter Cologne Water Quality Control Act and that consideration of the factors under Water Code section 13241 is required before the requirements may be implemented. TMDLs implement existing water quality objectives that are designed to protect designated beneficial uses. Numeric targets used by TMDLs to implement water quality standards are not designed to re-balance the policy interests underlying those standards. While policy considerations are important in developing water quality standards in the first instance, they are less important in formulating TMDLs that implement them. The statutory directive to adopt TMDLs in the first instance is to "implement the applicable water quality standards with seasonal variations and a margin of safety." (33 U.S.C. § 1313(c)(2)(A). See also 40 CFR §§ 131.10-13.) While consideration of economic	

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	factors may be appropriate in adopting TMDLs, a section 13241 economic analysis is not required either in the adoption of TMDLs or in the implementation through an NPDES permit. Additionally, the implementation plan included as part of the Beaches and Creeks Bacteria TMDLs requires the San Diego Water Board to incorporate the requirements of the TMDLs into the appropriate regulatory mechanisms to implement the TMDL requirements. If the requirements of the Beaches and Creeks Bacteria TMDLs are not incorporated into any regulatory mechanisms (e.g. NPDES permits), the TMDL requirements will not be implemented and will not be enforceable. Implementation of the TMDL requirements in regulatory mechanisms must be initiated as soon as possible to achieve the requirements of the TMDL within the compliance schedules of the TMDL. The San Diego Water Board is obligated to incorporate the requirements into the MS4 permit. Otherwise, the San Diego Water Board would be in conflict with its own implementation plan requirements within the Basin Plan as well as the requirements of the Code of Federal Regulations. Please also see response to comment Lgl-10.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Lgl-5	LEGAL	
	COMMENT: *San Diego Water Board does not have the legal authority to issue a regional MS4 permit.* The Orange County and Riverside County Copermittees each submitted comments asserting that the San Diego Water Board does not have the authority to issue a regional MS4 permit under the Clean Water Act. The Orange County Copermittees argue that while it geographically abuts San Diego County, there is extensive federal land separating MS4s within its county from other MS4s and the federal regulations to not allow the issuance of a regional MS4 permit without a "connection." The commenters also raised concerns over the regulatory requirement to file a Report of Waste Discharge before obtaining coverage under the Tentative Order.	**Copermittees** Orange County Copermittees Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees that the federal regulations do not authorize the issuance of a region-wide MS4 permit coextensive with the jurisdictional boundaries of the San Diego Region. Despite the geographic separation, the San Diego Water Board has legal authority to issue a regional MS4 permti through its authority in the Clean Water Act. (See Attachement No. 2, September 7, 2012 Letter from San Diego Water Board Counsel on Legal Authority Supporting Issuance of a Regional MS4 Permit) Section 402, subpart (p)(3)(B) of the Clean Water Act states that "Permits for discharges from municipal storm sewers – (i) may be issued on a system- or jurisdiction-wide basis . . . ." The federal storm water regulations in 40 CFR at Part 122.26, subdivision (a)(1)(v) also state that the Director (the San Diego Water Board) may designate dischargers from municipal separate storm sewers on a system-wide or jurisdiction-wide basis, taking into consideration the following factors: (A) location of the the discharge with respect to waters of the United States; (B) the size of the discharge; (C) the quantity and nature of the pollutants discharged to waters of the United States and (D) other relevant factors. Consideration of these factors provides wide discretion to the San Diego Water Board in issuing MS4 permits. More specifically, the regulations permit issuance of system-wide permits covering all MS4s in "adjacent . . . large or medium separate storm sewer systems." (See 40 CFR sec. 122.26(a)(3)(iv). The regulations also support issuance of MS4 permits on watershed or "other basis" contemplating that such permits may "specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas . . . ." (40 CFR Part 122.26(a)(3)(v).) The USEPA responses to comments for the above regulations also make clear that the permitting authority, in this case, the San Diego Water Board, has flexibility to establish system- or region-wide permits. In the Final	

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	Rule published in the Federal Register and containing USEPA's responses to comments, USEPA notes that paragraph (iv) of section 122.26(a)(3) would allow an entire system in a geographical region under the purview of a state agency to be designated under a permit. (National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, 55 Fed.Reg. 47990, 48030-48042 (Nov. 16, 1990).) It is important to note that a regional MS4 permit does not expand the requirements for each municipality beyond its borders as the federal regulations make clear that MS4 permittees need only comply with permit conditions relating to discharges from the MS4s for which they are operators. (40 CFR Part 122.26(a)(3)(vi).) See also September 7, 2012, memorandum from Jessica Jahr and Catherine Hagan, State Water Board's Office of Chief Counsel, to Ryan Baron and David Huff, counsels for Orange and Riverside Counties, respectively which is incorporated into this response. The other objection commenters raise concerns the regulatory requirement to file a Report of Waste Discharge (ROWD). The Tentative Order does not cover or become effective for either the Orange County or Riverside County Copermittees until the earlier of (1) either or both Counties voluntarily seeks to be covered by the permit, once adopted, or (2) Orange or Riverside County timely submits its respective ROWD proposing changes or other recommendations to the Tentative Order and appropriate changes are made concurrent with permit coverage becoming effective as to one or each County. In other words, the obligation to submit a ROWD and for the San Diego Water Board to consider an ROWD has not been abandoned and the Tentative Order reflects that the San Diego Water Board will rely on the ROWD process to frame prospective revisions to the permit. And while neither county has yet filed its next ROWD, both have been provided with ample and extensive opportunities to participate fully in the development of this Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Lgl-6	LEGAL	
	COMMENT: *The requirements of the Tentative Order are more stringent that Federal law and require a CWC 13241 analysis.* The Orange County and Riverside County Copermittees, City of Lake Forest, and the Building Industry Association of Southern California assert that several requirements of the Tentative Order go beyond the requirements of Federal law, thus an analysis pursuant to California Water code section 13241 is required. The commenters also make several assertions about the deficiencies they perceive with the economic considerations discussed in the Fact Sheet, and assert that a cost-benefit analysis needs to be included in the Fact Sheet discussion.	**Building Industry / Industry** Building Industry Association of Southern California **Copermittees** City of Lake Forest Orange County Copermittees Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees that there are "many requirements in the Draft Permit which exceed the federal MEP standard." The San Diego Water Board is charged with construction of and administration of the Clean Water Act in the San Diego Region. In issuing MS4 permits, "*[t]he permitting agency has discretion to decide what practices, techniques, methods and other provisions are appropriate and necessary to control the discharge of pollutants*." (*City of Rancho Cucamonga v. Regional Water Quality Control Board-Santa Ana Region* (2006) 135 Cal.App.4th 1377,1389.) However, the "*Regional Board must comply with federal law requiring detailed conditions for NPDES permits*." (*Ibid.*) Further, USEPA expects the permitting authority to develop the specific practices that comply with the Clean Water Act on a permit-by-permit basis. (*NRDC v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308.) To the extent the Board is exercising discretion in including certain permit requirements, the Board is exercising discretion required and/or authorized by federal law, not state law. (See *City of Rancho Cucamonga, supra,* 135 Cal.App.4th at 1389*; Building Industry Association of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.) Further, the MEP standard is a flexible standard that balances a number of considerations, including technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. (*Id.* at pp. 873, 874, 889.) Such considerations change over time with advances in technology and with experience gained in storm water management. (55 Fed. Reg. 47990, 48052 (Nov. 16, 1990).) Accordingly, a determination of whether the conditions contained in Tentative Order exceed the requirements of federal law cannot be based on a point by point comparison of the permit conditions with federal law. The appropriate focus is whether the permit conditions as a whole exceed the MEP standard. The commenters have failed to cite any evidence that demonstrates how requirements in the Tentative Order exceed the MEP	

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	standard or applicable requriements of federal law. The commenters assert that provisions of the Tentative Order are more stringent than the requirements of the Clean Water Act and therefore require an analysis of the factors, including economic considerations, in Water Code section 13241 before the San Diego Water Board can approve such provisions. As indicated above, the San Diego Water Board disagrees that provisions of the Tentative Order are more stringent than requirements of the Clean Water Act. Because the Tentative Order is not more stringent than federal law, its adoption does not require the San Diego Water Board to consider Water Code section 13241 factors. The California Supreme Court in *City of Burbank v. State Water Resources Control Board, et al.,* ((2005) 35 Cal.4th 613) (*Burbank*), held: [Water Code s]ection 13377 specifies that wastewater discharge permits must meet the federal standards set by federal law. In effect, section 13377 forbids a regional board's consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act. That act prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law (33 U.S.C. § 1322(a)), and publicly operated wastewater treatment plants such as those before us here must comply with the act's clean water standards, regardless of cost [citations]. Because [Water Code] section 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a wastewater discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards." (*Burbank,* 35 Cal.4th at 625.) While the *Burbank* decision does require an analysis of Water Code section 13241 factors when the state adopts permit conditions that are more stringent than federal law (*id.* at 618) the Tentative Order reflects that all of the challenged provisions are necessary to implement federal law. Thus, the San Diego Water Board is not required to consider economic information to justify a "dilution of the requirements" established in federal law. Even when applicable, consideration of economic information pursuant to section 13241 does not require a cost-benefit analysis, as some commenters suggest. And section 13241 neither specifies how regional water boards must consider its enumerated factors nor does it require that regional water boards may specific findings documenting consideration of the factors. (See *California Ass'n of Sanitation Agencies, et al. v. State Water Resources Control Board, et al.,* (208 Cal.App.4th 1438, 1464 (2012).) Nonetheless, the Fact Sheet and Response to Comments reflect economic information that has either been developed or gathered by the San Diego Water Board or has been submitted by Copermittees or others as part of this proceeding. To the extent that economic information in connection with compliance and other costs associated with challenged permit provisions, the San Diego Water Board has fully considered this information. Under these circumstances, *Burbank* does not require more.	

Lgl-7	LEGAL	
	COMMENT: *The San Diego Water Board cannot determine whether a particular mandate is unfunded.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments asserting that the San Diego Water Board does not have the legal authority to determine whether any provisions in the Tentative Order constitute a state mandate, and only the Commission on State Mandates can make the determination.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board does not dispute that the Commission on State Mandate ultimately has jurisdiction to determine whether the State has imposed a mandate requiring state subvention. However, it is entirely appropriate for the San Diego Water Board to set forth its legal basis to support the provisions in the Tentative Order, finding them to be necessary and appropriate to meet the federal Clean Water Act standards. While the Commission may be expert in state mandates, it has no expertise in the field of water law. As indicated in response to comment Lgl-6, above, the San Diego Water Board does not agree that provisions in the Tentative Order exceed federal requirements of the Clean Water Act. The San Diego Water Board is charged by law with administering and constructing the Clean Water Act's requirements and is entitled to considerable deference in its interpretation of the Act. (See *Buidling Industry Ass'n of San Diego, supra,* 124 Cal.App.5th at pp. 873, 879 fn.9; *County of Los Angeles v. California State Water Resources Control Bd.* (2006) 143 Cal.App.4th 985, 997.) In issuing MS4 permits, "[t]he permitting agency has discretion to decide what practices, techniques, methods and other provisions are appropriate and necessary to control the discharge of pollutants." (*City of Rancho Cucamonga v. Regional Water Quality Control Board-Santa Ana Region* (2006) 135 Cal.App.4th 1377,1389.) However, the "Regional Board must comply with federal law requiring detailed conditions for NPDES permits." (*Ibid.*) Further, USEPA expects the permitting authority to develop the specific practices that comply with the Clean Water Act on a permit-by-permit basis. (*NRDC v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308.) To the extent the Board is exercising discretion in including certain permit requirements, the Board is exercising discretion required and/or authorized by federal law, not state law. (See *City of Rancho Cucamonga, supra,* 135 Cal.App.4th at 1389*; Building Industry Association of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.) Further, the MEP standard is a flexible standard that balances a number of considerations, including technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. (*Id.* at pp. 873, 874, 889.) Such considerations change over time with advances in technology and with experience gained in storm water management. (55 Fed. Reg. 47990, 48052 (Nov. 16, 1990).) The San Diego Water Board's findings are the	

Lgl-7	LEGAL	
	expert conclusions of the principal state agency charged with implementing the NPDES program in California. (Cal. Wat. Code §§ 13001, 13370.) The San Diego Water Board is not precluded from including provisions in the Tentative Order which commenters may contend are state mandates and it is well within the San Diego Water Board's authority to conclude, based on its expertise in administering the Clean Water Act, the the Tentative Order does not exceed federal law and is therefore not a state mandate subject to subvention.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Lgl-8	LEGAL	
	COMMENT: *"Waters of the state" should be revised to "waters of the U.S" or "receiving waters" throughout the Tentative Order.* The Riverside County and San Diego County Copermittees each submitted comments objecting to applying the requirements of the Tentative Order to "waters of the state" instead of "waters of the U.S." which is consistent with the Clean Water Act, or "receiving waters." The Copermittees are concerned that "waters of the state" may include groundwater, which exceeds federal requirements. The Copermittees requested several revisions throughout the Tentative Order reflecting this comment.	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees that certain requirements of the Tentative Order should be revised to "waters of the U.S." or "receiving waters." Where applicable and appropriate, the San Diego Water Board revised "waters of the state" to "waters of the U.S." or "receiving waters" to limit the application of a requirement to surface waters. However, because the Tentative Order also serves as waste discharge requirements and incorporates the water quality standards of the Basin Plan (i.e. discharge prohibition A.1.a), the term "waters of the state" remains appropriate where the phrase exists in the applicable Basin Plan provision, incorporated into the Tentative Order. Because the Tentative Order regulates discharges of pollutants to waters of the United States, the San Diego Water Board does not anticipate there being any MS4 discharges to groundwaters that could violate the prohibition as to waters of the state. Additionaly, such provisions are not new to San Diego Region MS4 permits. .	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Lgl-9	LEGAL	
	COMMENT: *The Tentative Order cannot include requirements to regulate storm water flow.* The Riverside County and San Diego County Copermittees, the City of Lake Forest, and the BIA Regulated Community Coalition each submitted comments that assert the Tentative Order cannot include requirements (i.e. hydromodification management requirements) to regulate storm water flow. The commenters cite a recent court decision from Virgina (*Virginia Dept. of Transp. v. U.S. Environmental Protection* Agency) as the basis for this assertion. In contrast, the Los Penasquitos Lagoon Foundation requests that the Tentative Order finds discharges (i.e. flow) from the MS4s can generate and/or contribute to discharges of pollutants downstream of the MS4 outfalls (e.g. discharge of sediment due to scouring of the natural channels).	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** City of Lake Forest Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Los Penasquitos Lagoon Foundation
	RESPONSE: The San Diego Water Board disagrees that the Tentative Order cannot include requirements that will result in decreasing the impact of pollutants in storm water runoff discharged from the MS4s on the physical, chemical, and biological integrity of receiving waters to the maximum extent practicable (MEP). The Tentative Order includes requirements to effectively prohibit non-storm water discharges to the MS4, and control the discharge of pollutants from the MS4 to the MEP, consistent with the requirements of the Clean Water Act and Code of Federal Regulations. If non-storm water discharges are effectively prohibited to the MS4s, there should be little to no flow from the MS4s to receiving waters. Thus, the Tentative Order already includes requirements to regulate non-storm water flow to and from the MS4s. In contrast, the MEP standard is a technologically based effluent limitation (TBEL) that applies specifically to storm water discharges from the MS4s. The Tentative Order includes development planning structural BMP requirements that act as BMP-based TBELs to implement the MEP standard for new development and significant redevelopment projects. While the development planning structural BMP requirements are separated into "*storm water pollutant control*" and "*hydromodification management*" BMP requirements, they are both for the control of pollutants in storm water discharges from the MS4 to the MEP. The hydromodification management BMP requirements of the Tentative Order do, to a significant extent, regulate flow. However, the primary purpose of the hydromodification management BMP requirements still stems from the requirement that MS4 permits include controls to reduce the discharge of pollutants in storm water from the MS4s to receiving waters. The increases in flows and durations caused by new development	

Lgl-9	LEGAL	
	and significant redevelopment also results in increases to pollutants that are discharged in storm water from the MS4s to the receiving waters. The pollutants discharged will always be in excess of what would be generated in a natural environment, even with controls in place. Those increased pollutant loads associated with increased flows and durations of storm water discharging from the MS4s impact the chemical integrity (e.g. salinity, temperature, toxic pollutants), biological integrity (e.g. biological toxicity, supportable flora and fauna, habitat alteration), and physical integrity (e.g. destabilization of stream channels, excessive sediment deposition) of receiving waters. Thus, the hydromodification management BMP requirements of the Tentative Order are necessary to control the discharge of pollutants generated by new development and significant redevelopment projects in storm water discharges from the MS4 to the MEP, even if they do result in the regulation of flow. The recent district court decision from the Eastern District of Virginia (*Virginia Dept. of Transportation, et al. v. United States Environmental Protection Agency,* et al. (2013 WL 53741 (E.D.Va.) (Virginia Decision)) cited by commenters does not support their argument in the context of the Tentative Order. In the Virginia Decision, USEPA had established a TMDL limiting the flow rate of stormwater into a creek to 681.8 ft/acre-day. USEPA characterized the flow rate as a "surrogate" for sediment, a pollutant. USEPA recognized that flow in and of itself is not a pollutant. As some commenters acknowledge, the Virginia Decision is not precedential and does not bind the San Diego Water Board. More importantly, the decision is inapposite as it concerns section 303(d) of the Clean Water Act concerning total daily maximum loads (TMDLs) which sets forth a very specific requirement that for impaired water bodies, states must establish numeric loads "for those *pollutants* which the Administrator identifies under section 1314(a)(2) of this title are suitable for such calculation." Instead of setting a load for a pollutant, USEPA calculated a load for flow as a surrogate for the relevant pollutant. In contrast, as explained above, section 402(p) of the Clean Water Act provides that states issuing MS4 permits shall "require *controls* to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." (CWA, § 402(p)(3)(B)(iii).) Following the directives of this section of the Clean Water Act, the Tentative Order establishes controls discussed above such as best management practices to remove pollutants in storm water, source control and restrictions on the flow rate and duration of post-construction runoff, the latter of which not only can	

Lgl-9	LEGAL	
	contain pollutants but can affect the discharge of pollutants in the runoff. (See State Water Board Order No. WQ 2000-11 (p. 5) (*Cities of Bellflower, et al.*,) and State Water Board Order WQ 2001-15 (fn.23) (*Building Industry Association of San Diego).*). One commenter also cites to the Virginia Decision in requesting that the San Diego Water Board conform the TMDL provisions in the Tentative Order to the Virginia Decision. It is unclear how the commenter believes the Virginia Decision applies to the TMDL provisions in the Tentative Order, but as indicated above, the decision is not binding on the San Diego Water Board and any concerns with the loads established in TMDLs should most appropriately be raised in the context of the TMDL approval proceeding.	

Lgl-10	LEGAL	
	COMMENT: *The numeric WQBELs violate requirements of law because they are infeasible.* The Orange County Copermittees submitted comments that object to the incorporation of numeric WQBELs for TMDLs, and assert that the inclusion of the numeric WQBELs violate the law because they are infeasible (presumably, to achieve). The Copermittees assert that the WQBELs should be BMP-based and not numeric. The Copermittees cite a 2010 USEPA memorandum, 40 CFR 122.44(k), and the Caltrans MS4 permit as justification for BMP-based instead of numeric WQBELs in the Tentative Order.	**Copermittees** Orange County Copermittees
	RESPONSE: The San Diego Water Board disagrees that including numeric WQBELs for the TMDLs in the Tentative Order violate the requirements of law. The federal regulations under 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permit requirements incorporate WQBELs that must be consistent with the requirements and assumptions of any available wasteload allocations (WLAs) developed under TMDLs. The federal regulations under 40 CFR 122.44(k) do not require WQBELs to be BMP-based if numeric effluent limitations are infeasible, but only that WQBELs that implement WLAs may be expressed in the form of BMPs. BMP-based WQBELs may be allowed if BMPs alone adequately implement WLAs, and additional controls are not necessary. This is consistent with a 2002 USEPA memorandum for "*Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs*." WQBELs are required for point source discharges that have the reasonable potential to cause or contribute to an excursion of water quality standards and technology based effluent limitations or standards are not sufficient to achieve water quality standards. Where a WLA has been assigned to a discharge in a TMDL, it is concluded that there is reasonable potential for the discharger to cause or contribute to an excursion of water quality standards. The 2010 USEPA memorandum for "*Revisions to the November 22, 2002 Memoradum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs'"* cited by the Copermittees states, "*For the purpose of this memorandum, numeric WQBELs use numeric parameters such as pollutant concentrations, pollutant loads, or numeric parameters actings as surrogates for pollutants […].*" The memorandum goes on to recommend, "*Where the NPDES authority determine that MS4 discharges have a reasonable potential to cause or contribute to a water quality standard excursion, EPA recommends that, where feasible, the NPDES permitting authority exercise its discretion to include numeric effluent limitations necessary to meet water quality standards*." The "where feasible" in the memorandum applies to the NPDES permitting authority's discretion to include numeric effluent	

Lgl-10	LEGAL	
	limitations necessary to meet water quality standards, not to the feasibility of achieving the numeric effluent limitations. The State Water Board, in Order WQ 2006-0012 (Boeing), has made clear that "infeasibility" in the context of numeric effluent limitations refers to "the ability or propriety of establishing" numeric limits, as opposed to the feasibility of compliance. Please also see response to comment Lgl-4. The Caltrans MS4 permit is issued by the State Water Board. Even though the Caltrans MS4 permit may allow for BMP-based WQBELs, this does not require the San Diego Water Board to include BMP-based WQBELs in the Tentative Order regardless of any potential or apparent conflict. The San Diego Water Board will issue additional requirements to Caltrans with numeric WQBELs when and where warranted. The San Diego Water Board considered the feasibility of incorporating numeric WQBELs to implement the requirements of each of the TMDLs and has determined that they are feasible, and necessary, to include to meet water quality standards, consistent with the 2010 USEPA memorandum. Numeric WQBELs are also "additional controls" necessary to implement the WLAs, consistent with the 2002 USEPA memorandum. Each of the TMDLs in the Tentative Order, however, includes BMP-based WQBELs which must be implemented to achieve the numeric WQBELs. The Tentative Order requires the Copermittees to implement the BMP-based WQBELs to achieve the numeric WQBELs. This is consistent with the 40 CFR 122.44(d)(1)(vii)(B) and 40 CFR 122.44(k), and the recommendations of the 2010 USEPA memorandum. The Tentative Order has also been revised to include interim and final TMDL compliance determination options that allow the Copermittees to demonstrate that the BMP-based WQBELs will achieve the numeric WQBELs. The numeric WQBELs are necessary for the Copermittees to quantitatively demonstrate that the BMPs implemented are achieving the WLAs of the TMDLs. Please see response to comments AttE-1 and AttE-3. Thus, the Tentative Order appropriately includes numeric WQBELs and does not violate any requirements of law.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Lgl-11	LEGAL	
	COMMENT: *Storm water pollutant control retention requirements of the Tentative Order conflict with Rainwater Capture Act of 2012 (AB 1750).* The BIA Regulated Community Coalition commented that the Rainwater Capture Act does not provide the authority to collect and retain storm water from impervious surfaces other than rooftops. Thus, the BIA Regulated Community Coalition asserts that the storm water pollutant control retention requirements of the Tentative Order may be in conflict with the Rainwater Capture Act and the retention requirements of the Tentative Order should not be enforced.	**Building Industry / Industry** BIA Regulated Community Coalition
	RESPONSE: The San Diego Water Board disagrees that the storm water pollutant control retention requirements of the Tentative Order are in conflict with the Rainwater Capture Act. The Rainwater Capture Act provides additional clarification that the collection of rainwater from rooftops does not require a water right permit. The Rainwater Capture Act does not address collection of water from other surfaces, nor does it modify or alter existing law pertaining to appropriative water rights. Retention of rainwater or diffuse surface flow before it flows into a watercourse does not require a water right permit. The storm water pollutant control retention requirements of the Tentative Order are not in conflict with the Rainwater Capture Act or existing water rights law.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Fnd-1	FINDINGS	
	COMMENT: *Requests for additional findings.* The Riverside County Copermittees requested several additional findings be included in the Tentative Order associated with water law, flooding, flood control acts, and limitations on legal authority. The County of San Diego and the County of San Diego Department of Environmental Health requested a finding with vector-related language.	**Copermittees** County of San Diego County of San Diego Department of Environmental Health Riverside County Copermittees
	RESPONSE: The San Diego Water Board considered the requests for the additional findings and determined that including the additional findings is not necessary. The requirements of the Tentative Order are consistent with the federal Clean Water Act, Code of Federal Regulations, and the California Water Code. The additional findings requested associated with water law, flooding, flood control acts, limitations on legal authority and vector-related issues are not necessary to establish that the requirements of the Tentative Order are consistent the federal Clean Water Act, Code of Federal Regulations, and the California Water Code. The San Diego Water Board did not include any additional findings as requested by the commenters. The San Diego Water Board did, however, incorporate an additional requirement under the general requirements of all development projects (new Provision E.3.a.(1)(c)) to avoid the creation of nuisance or pollution associated with vectors. Subsequently, additional discussion was also included in the Fact Sheet to encourage the design and implementation of BMPs in consultation with local vector control agencies and the California Department of Public Health.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Fnd-2	FINDINGS	
	COMMENT: *Findings 2 and 26: Remove language that states the San Diego Water Board has the authority to issue a regional MS4 permit.* The Orange County and Riverside County Copermittees each submitted comments asserting that Findings 2 and 26 were inaccurate and the San Diego Water Board does not have the authority to issues a regional MS4 permit under the Clean Water Act.	**Copermittees** Orange County Copermittees Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees that it does not have the authority to issue a regional MS4 permit. The San Diego Water Board maintains Findings 2 and 26 are accurate and the San Diego Water Board has the authority to issue a regional MS4 permit. Please see the response to comment Lgl-5.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Fnd-3	FINDINGS	
	COMMENT: *Finding 3 and 15 (and elsewhere in the Tentative Order): Remove "in storm water" from "reduce discharges of pollutants in storm water to the maximum extent practicable."* The Riverside County and San Diego County Copermittees each submitted comments that objected to requiring the control of pollutants "in storm water" to the MEP. The Copermittees assert that the Tentative Order is inconsistent with the Clean Water Act and the control of pollutants to the MEP applies to both storm water and non-storm water. The BIA Regulated Community Coalition cited a recent court decision that they assert calls into question several findings, including Findings 3 and 15. Clean Water Now supported the BIA Regulated Community Coalition concerns and also alluded to court decisions that call into question several findings. In both cases, the commenters requested that the Tentative Order be delayed until a definitive interpretation of the legal decisions is made available.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Clean Water Now
	RESPONSE: The San Diego Water Board disagrees that there is any inconsistency with the requirements of the Clean Water Act, or that the adoption of the Tentative Order should be delayed. Comments received assert that the "plain language" of the Clean Water Act states that the MEP standard applies to all pollutants discharged from the MS4, not just pollutants in storm water. The commenter, however, fails to acknowledge the "plain language" of the Clean Water Act that specifically makes a clear distinction that non-storm water discharges are to be effectively prohibited from entering the MS4. Since the "plain language" of the Clean Water Act states that non-storm water discharges to the MS4 are to be effectively prohibited (CWA section 402(p)(3)(B)(ii)), then no pollutants in non-storm water will enter the MS4 if the discharger is in compliance with this requirement. If no pollutants are entering the MS4 because non-storm water discharges are not entering the MS4, then clearly the very next requirement to control pollutant discharges from the MS4 be reduced to the MEP (CWA section 402(p)(3)(B)(iii)) intends that the discharge of pollutants only apply to storm water. Provisions A.1.b and A.3.a are consistent with CWA section 402(p)(3)(B)(ii) and CWA section 402(p)(3)(B)(iii), respectively, and the Fact Sheet further clarifies this distinction between non-storm water discharges and pollutants in storm water discharges. Findings 3 and 15 are consistent with the Clean Water Act have not be modified. The United States Supreme Court decision, *Los Angeles County Flood Control v. Natural Resources Defense Council* (2013) 133 S.Ct. 710 does not require any modifications to the Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Fnd-4	FINDINGS	
	COMMENT: *Finding 7: Finding should be modified to support construction of BMPs in receiving waters.* The BIA Regulated Community Coalition submitted comments requesting revisions to Finding 7 to support the construction of BMPs in receiving waters. The commenter is concerned that the Tentative Order will not allow the construction of BMPs, or implementation of retrofitting or rehabilitation projects in waters of the U.S. or waters of the state to treat pollutants in storm water from areas of existing development. The commenter also requested a revision to Provision E.3.a.(1)(b) to reflect the requested revision to Finding 7.	**Building Industry / Industry** BIA Regulated Community Coalition
	RESPONSE: The San Diego Water Board disagrees revisions to Finding 7 are appropriate or necessary. Finding 7 correctly provides that pursuant to federal regulations under 40 CFR 131.10(a) waste transport or waste assimilation cannot be a designated use for any waters of the U.S. Thus, waters of the U.S. cannot be utilized for the treatment of pollutants in storm water discharges from the MS4s, and treatment control BMPs must not be constructed in waters of the U.S. to treat pollutants in storm water discharges from the MS4s. Finding 7 does not, however, include construction of BMPs for the treatment of pollutants in waters of the state. Thus, the San Diego Water Board has revised Provision E.3.a.(1)(b) to limit the prohibition of constructing structural BMPs in only waters of the U.S. consistent with 40 CFR 131.10(a).	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Fnd-5	FINDINGS	
	COMMENT: *Findings 8, 16 and 17: Findings should not include presumption that discharges from MS4s always contain waste or pollutants.* The Orange County and San Diego County Copermittees objected to Finding 8 stating that discharges from the MS4s contain waste, and does not acknowledge that there may not be pollutants in the discharges from the MS4s. The Copermittees requested revisions to Findings 8, 16 and 17 to reflect this position. The BIA Regulated Community Coalition cited a recent court decision that they assert calls into question several findings, including Finding 8. Clean Water Now supported the BIA Regulated Community Coalition concerns and also alluded to court decisions that call into question several findings. In both cases, the commenters requested that the Tentative Order be delayed until a definitive interpretation of the legal decisions is made available. In contrast, the Los Penasquitos Lagoon Foundation recommended that Finding 8 should also acknowledge pollutant discharges that are caused as a result of discharges from the MS4s (e.g. sediment discharged due to scouring of the receiving waters).	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** Orange County Copermittees San Diego County Copermittees **Environmental Organizations** Clean Water Now Los Penasquitos Lagoon Foundation
	RESPONSE: The San Diego Water Board disagrees that Findings 8, 16, or 17 are inaccurate, or that the adoption of the Tentative Order should be delayed. The Tentative Order is implementing the requirements of the California Water Code as well as the requirements of the Clean Water Act. Under the California Water Code section 13376, any person discharging waste, or proposing to discharge wastes to waters of the state is not authorized to discharge waste unless issued waste discharge requirements. The requirements of the Clean Water Act, specific to discharges of pollutants to waters of the U.S. are also included in the California Water Code, Chapter 5.5 of Division 7. Thus, under the California Water Code, any person discharging pollutants, or proposing to discharge pollutants to waters of the U.S. is not authorized to discharge pollutants unless issued waste discharge requirements that include NPDES requirements. Waste discharge requirements that include NPDES requirements is also an NPDES permit under the Clean Water Act. The Clean Water Act requires municipalities to obtain NPDES permits to authorize discharges of pollutants from their MS4s. Commenters cite the definition of “waste” in the California Water Code to assert that the definition does not include storm water or any discharge that is not created by human activity. Comments received also assert that	

Fnd-5	FINDINGS	
	waste discharge requirements and NPDES permits cannot regulate the discharge of "pure storm water" and that not all discharges from the MS4 contain pollutants. Discharges from the MS4 are not "pure storm water." Storm water that flows over the surface of any developed area, which includes the MS4 itself, do not enter or discharge from the MS4 without coming into contact with pollutants or constituents that alter the storm water such that it is no longer "pure storm water." Thus, storm water discharges from the MS4 contains pollutants and contain waste. It is well-known and documented that urban runoff and storm water contains pollutants. (See, e.g., State Water Board Order WQ 2001-015 ("As we stated in Board Order WQ 95-2, the requirement to adopt permits for urban runoff is undisputed, and Regional Water Boards are not required to obtain any information on the impacts of runoff prior to issuing a permit (citation). It is also undisputed that urban runoff contains 'waste' within the meaning of Water code section 13050(d), and that the federal regulations define 'discharge of a polltuant' to include 'additions of pollutants into waters of the United States from surface runoff which is collected or channeled by man.' (40 C.F.R. § 122.2.) But it is the waste or pollutants in the runoff that meet these definitions of 'waste' and 'pollutant.' And not the runoff itself. [fn]. (p. 5.)) The Tentative Order is not regulating "pure storm water" but the discharge of storm water that is being discharged as a waste and contains pollutants. Finding 8 accurately states that discharges from the MS4s contain waste, as defined in the California Water Code. Finding 8 also accurately states that discharges from the MS4s contain pollutants that adversely affect the quality of waters of the state. Findings 16 and 17 also accurately conclude that BMPs and implementation of BMPs are necessary to remove waste and pollutants in storm water discharges from the MS4s. The San Diego Water Board does not understand the comments concerning the recent United States Supreme Court decision in Los Angeles County Flood Control District v. NRDC (133 S.Ct 710 (2013). The San Diego Water Board has reviewed the opinion and does not believe the opinion necessitates any changes to the Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Fnd-6	FINDINGS	
	COMMENT: *Finding 10: Finding should be modified to specify linear underground projects (LUPs) should not be subject to permanent post construction BMP requirements.* San Diego Gas and Electric and the Southern California Gas Company each submitted comments requesting revisions to Finding 10 to specify that linear underground/overhead (utility) projects (LUPs) are not subject to post construction requirements to be consistent with the State Water Board Construction General Permit findings.	**Building Industry / Industry** San Diego Gas and Electric Southern California Gas Company
	RESPONSE: The San Diego Water Board disagrees that revisions to Finding 10 are appropriate or necessary. Finding 10 accurately states that pollutants are generated by land development. Finding 10 discusses the generation of pollutants by land development in broad and general terms, and does not specify types of land development activities. Incorporating language into Finding 10 specific to LUPs is inappropriate and not necessary.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Fnd-7	FINDINGS	
	COMMENT: *Finding 11: Finding should not classify natural waters as part of the MS4, and cannot be classified as both an MS4 and receiving water.* The Orange County, Riverside County, and San Diego County Copermittees each submitted comments asserting that Finding 11 was inaccurate and the San Diego Water Board cannot classify natural waters as part of the MS4. The BIA Regulated Community Coalition cited a recent court decision that they assert calls into question several findings, including Finding 11. Clean Water Now supported the BIA Regulated Community Coalition concerns and also alluded to court decisions that call into question several findings. In both cases, the commenters requested that the Tentative Order be delayed until a definitive interpretation of the legal decisions is made available. In contrast, the Los Penasquitos Lagoon Foundation recommended that the language of Finding 11 should be maintained.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Clean Water Now Los Penasquitos Lagoon Foundation
	RESPONSE: The San Diego Water Board disagrees that Finding 11 is inaccurate, or that the adoption of the Tentative Order should be delayed. An MS4 is defined in the federal regulations as a conveyance or system of conveyances owned or operated by a Copermittee, and designed or used for collecting or conveying runoff. Therefore, the San Diego Water Board considers natural drainages that are used by the Copermittees as conveyances of runoff, as both part of the MS4 and as receiving waters. The State Water Board supports this approach. In reviewing a Petition on Order No. R9-2001-0001, the State Water Board stated "*We also agree with the Regional Water Board's concern, as stated in its response, that there may be instances where MS4s use 'waters of the United States as part of their sewer system* [...]" State Water Resources Control Board Order WQ 2001-15. Furthermore, the U.S. Supreme Court's 2006 *Rapanos* decision supports the conclusion that natural streams in developed areas can be both receiving waters and MS4s by confirming that ephemeral and intermittent streams can be waters of the U.S. subject to regulation under Clean Water Act section 404 and also be considered point sources of pollution discharges regulated under Clean Water Act section 402. (See *Rapanos, et al. v. United*	

Fnd-7	FINDINGS	
	States and Carabell et al. v. United States Army Corps of Engineers, et al. (2006) 547 U.S. 715, 743-744.) Finding 11 is accurate and consistent with the Clean Water Act and NPDES regulations.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Fnd-8	FINDINGS	
	COMMENT: *Finding 12: Finding should not state that Copermittees provide free and open access to MS4s; Copermittees are not responsible for all discharges not prohibited.* The Orange County and Riverside County Copermittees each submitted comments objecting to Finding 12 stating that the Copermittees provide free and open access to MS4s. The Riverside County Copermittees also objected to Finding 12 stating that the Copermittees cannot passively receive and discharge pollutants from third parties. The Copermittees assert that they are not responsible for discharges from their MS4s that are from third parties that are subject to the jurisdiction of the San Diego Water Board.	**Copermittees** Orange County Copermittees Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees that Finding 12 is inaccurate. The Copermittees have the option to request the authority to discharge from their MS4s under an NPDES permit or comply with the complete prohibition against the discharge of pollutants pursuant to Clean Water Act section 301(a) (33 U.S.C. § 1311(a)). These choices are provided by the federal Clean Water Act, not state laws. The Copermittees have opted to discharge from their MS4s under an NPDES permit. In doing so, they are responsible for discharges from the MS4s. Thus, Finding 12 correctly provides that the Copermittees provide free and open access to their MS4s and they are responsible for discharges into the MS4 that they do not prohibit or otherwise control. Finding 12 also correctly provides that the Copermittees cannot passively receive and discharge pollutants from third parties. The Copermittees have the responsibility of identifying the sources of discharges and pollutants from their MS4s. If the Copermittees are not actively identifying sources and cannot identify sources of discharges and pollutants to and from their MS4s, then the Copermittees are the source of the MS4s discharges and pollutants to receiving waters, even if they believe third parties are responsible for the discharges and pollutants. If, however, the Copermittees identify the sources of discharges and pollutants to or from the MS4s as outside of their legal authority to prohibit or otherwise control, then they are not passively receiving and discharging pollutants, even if they are providing free and open access to the MS4s. The data and information that the Copermittees collect to identify the third party sources can provide the evidence that the Copermittees are not responsible for the discharges and pollutants from the MS4s that can be attributed to third parties. Until the data and information are provided to identify those third parties, and demonstrate those parties are not subject to the Copermittees' legal authority, then the Copermittees are responsible for all of the discharges to and from their MS4s unless such discharges are authorized by a separate NPDES permit.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Fnd-9	FINDINGS	
	COMMENT: *Finding 15: Finding should state that the maximum extent practicable standard applies to both non-storm water and storm water, not just storm water.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments that assert Finding 15 is inaccurate. The Copermittees assert that the Tentative Order is inconsistent with the Clean Water Act and the MEP standard applies to both non-storm and water storm water, not just storm water. The BIA Regulated Community Coalition cited a recent court decision that they assert calls into question several findings, including Finding 15. Clean Water Now supported the BIA Regulated Community Coalition concerns and also alluded to court decisions that call into question several findings. In both cases, the commenters requested that the Tentative Order be delayed until a definitive interpretation of the legal decisions is made available. San Diego Gas and Electric and the Southern California Gas Company each submitted comments requesting revisions to Finding 15 to clarify that non-storm water discharge authorized by a NPDES permit are authorized to be discharged to the MS4s.	**Building Industry / Industry** BIA Regulated Community Coalition San Diego Gas and Electric Southern California Gas Company **Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Clean Water Now
	RESPONSE: The San Diego Water Board disagrees that the MEP standard applies to both non-storm water and storm water. The San Diego Water Board also disagrees that Finding 15 should be revised. Finding 15 accurately states the requirements of the Clean Water Act. The San Diego Water Board maintains that MEP standard only applies to pollutants in storm water. The San Diego Water Board also maintains that Finding 15 does not need to be clarified to state that non-storm water discharge authorized by a NPDES permit are authorized to be discharged to the MS4s. Please see the responses to comments Fnd-3 and Fnd-8, and also see Memorandum from San Diego Water Board Counsel to San Diego Water Board dated 5 November 2009, incorporated by reference herein.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Fnd-10	FINDINGS	
	COMMENT: *Finding 27: Finding should state that implementation of the requirements of the Tentative Order "will" not "may" allow the San Diego Water Board to re-categorize impaired water bodies to Category 4 in the Integrated Report.* The San Diego County Copermittees requested that Finding 27 be revised to state that the requirements of the Tentative Order "will" allow the San Diego Water Board to re-categorize impaired water bodies to Category 4 in the Integrated Report, as opposed to only "may" allow the re-categorization.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees that revising Finding 27 is appropriate. Finding 27 is accurate to state that the implementation of the Water Quality Improvement Plan "may" allow the San Diego Water Board to re-categorize an impaired water body in Category 4 in the Integrated Report meaning a TMDL is not required. The Integrated Report is ultimately approved by the USEPA. The USEPA may not allow the San Diego Water Board to re-categorize an impaired water body from Category 5 (i.e. TMDL required) to Category 4 (i.e. TMDL not required) if they do not agree that the implementation of the requirements of the Tentative Order will result in attainment of the water quality standards.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

Fnd-11	FINDINGS	
	COMMENT: *Finding 28: Finding should state that the requirements of the Tentative Order are more stringent than Federal law and require a CWC 13241 analysis.* The Orange County and Riverside County Copermittees each submitted comments objecting to Finding 28. The Copermittees assert that several requirements of the Tentative Order go beyond the requirements of Federal law, thus an analysis pursuant to California Water code section 13241 is required. The Copermittees make several assertions about the deficiencies they perceive with the economic considerations discussed in the Fact Sheet. The Copermittees assert that a cost-benefit analysis needs to be included in the Fact Sheet discussion. The BIA Regulated Community Coalition cited a recent court decision that they assert calls into question several findings, including Finding 28. Clean Water Now supported the BIA Regulated Community Coalition concerns and also alluded to court decisions that call into question several findings. In both cases, the commenters requested that the Tentative Order be delayed until a definitive interpretation of the legal decisions is made available.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** Orange County Copermittees Riverside County Copermittees **Environmental Organizations** Clean Water Now
	RESPONSE: The San Diego Water Board disagrees that provisions of the Tentative Order go beyond the requirements of the Clean Water Act or Code of Federal Regulations, or that the adoption of the Tentative Order should be delayed. The San Diego Water Board considered economic information in developing the Tentative Order using the best available information, but did not do so in accordance with an analysis pursuant to California Water code section 13241. The provisions of the Tentative Order are based on and fully supported by federal requirements, as demonstrated by the legal authority provided by the Clean Water Act and Code of Federal Regulations sections cited in the Fact Sheet. Thus, the San Diego Water Board maintains that an analysis pursuant to California Water code section 13241 is not required. Federal NPDES regulations do not require that the San Diego Water Board conduct a cost-benefit analysis. Please also see response to comment Lgl-6.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Fnd-12	FINDINGS	
	COMMENT: *Finding 29: San Diego Water Board cannot determine what is a state mandate.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments objecting to Finding 29 generally asserting that the San Diego Water Board does not have the legal authority to determine whether any provisions in the Tentative Order constitute a state mandate, and only the Commission on State Mandates can make the determination. The County of San Diego also submitted a similar comment.	**Copermittees** County of San Diego Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees that the Commission on State Mandates ultimately has jurisdiction to determine that a provision in the Tentative Order constitutes a state mandate. Finding 29 is, nonetheless, appropriate and necessary to express and support the San Diego Water Board's position that the Tentative Order is the result of a federal and not a state mandate. Please see the response to comment Lgl-7.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Fnd-13	FINDINGS	
	COMMENT: *Finding 31: Finding should support implementation of the iterative process to comply with prohibitions and limitations.* The Riverside County Copermittees submitted a comment related to Finding 31 requesting that the Tentative Order be revised to support the iterative process as a means to comply with the discharge prohibitions and receiving water limitations of Provision A. The Copermittees did not request or recommend any revisions to Finding 31, but requested revisions to Provision A to support implementation of the iterative process to comply with the discharge prohibitions and receiving water limitations.	**Copermittees** Riverside County Copermittees
	RESPONSE: The San Diego Water Board agrees that implementation of the iterative process is necessary to achieve compliance with the discharge prohibitions and receiving water limitations of Provision A. The San Diego Water Board did not make any revisions to Finding 31 or Provision A as requested by the commenter. The San Diego Water Board did, however, include an option as part of the Water Quality Improvement Plan requirements that each Copermittee may choose to implement to demonstrate compliance with the discharge prohibitions and receiving water limitations of Provision A. Please see response to comment A-1.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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Fnd-14	FINDINGS	
	COMMENT: *Finding 32: Finding should clarify that NPDES permitted discharges to MS4s that discharge to ASBS are authorized.* San Diego Gas and Electric and Southern California Gas Company requested modifications to Finding 32 to specify that the San Diego Water Board finds that NPDES-permitted discharges to the MS4 that subsequently discharge to ASBS will not alter ocean water quality and the Tentative Order authorizes these NPDES-permitted discharges. The commenters are concerned that the Tentative Order does not clearly state that NPDES permitted discharges to the Copermittees' MS4s that then discharge to ASBS are authorized. The BIA Regulated Community Coalition cited a recent court decision that they assert calls into question several findings, including Finding 32. Clean Water Now supported the BIA Regulated Community Coalition concerns and also alluded to court decisions that call into question several findings. In both cases, the commenters requested that the Tentative Order be delayed until a definitive interpretation of the legal decisions is made available.	**Building Industry / Industry** BIA Regulated Community Coalition San Diego Gas and Electric Southern California Gas Company **Environmental Organizations** Clean Water Now
	RESPONSE: The San Diego Water Board disagrees that revisions to Finding 32 are appropriate or necessary, or that the adoption of the Tentative Order should be delayed. The Tentative Order requires discharges from the Copermittees' MS4 to be consistent with the requirements of Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012 (Special Protections). The Tentative Order includes provisions that apply to the Copermittees' MS4 discharges to ASBS, thus the Copermittees are subject to the requirements of the Special Protections. Incorporating the requested language into Finding 32 to find that the San Diego Water Board authorizes discharges of other NPDES-permitted discharges to the MS4 is inappropriate and not necessary.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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A-1	PROVISION A: PROHIBITIONS AND LIMITATIONS	
	COMMENT: *Revise Provision A to clarify how compliance with prohibitions and limitations can be achieved*. The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting that the requirements of Provision A be modified to provide a clear linkage between the prohibitions and limitations of Provisions A.1 to A.3 with the iterative process required under Provision A.4 to be demonstrated through the implementation of the Water Quality Improvement Plans. The Copermittees are concerned that the language of Provision A, if not modified, will be interpreted as requiring strict and immediate compliance with the prohibitions and limitations, and the implementation of the iterative process would not be enough the demonstrate compliance with the prohibitions and limitations. Among the many recommended modifications to the requirements of Provision A, the Copermittees are generally requesting that the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c and A.2.a specifically state that implementation of Provision A.4 constitutes compliance. Furthermore, the Copermittees have requested that Provision A.4 explicitly state that the implementation of the iterative process constitutes compliance with any of the prohibitions and limitations under Provision A.1 to A.3, including compliance with the effective prohibitions of non-storm water discharges to the MS4s, the special protections for ASBS, and the TMDL requirements. Many Copermittees submitted separate comments in support of the requested modifications. One commenter from the Building Industry also requested similar modifications to the requirements of Provision A. In contrast, commenters from Environmental Organizations were strongly in support of maintaining the existing language and asserted that modifications to Provision A that would "weaken" the requirements, or provide "safe harbor" and would violate federal anti-backsliding requirements.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** City of Del Mar City of Imperial Beach City of Laguna Hills City of Lake Forest City of Mission Viejo City of Rancho Santa Margarita City of San Diego City of San Juan Capistrano County of San Diego County of San Diego Office of County Counsel Orange County Copermittees Riverside County Copermittees San Diego County Copermittees San Diego Unified Port District / Brown and Winters **Environmental Organizations** Environmental Groups Natural Resources Defense Council
	RESPONSE: The San Diego Water Board agrees with the comments from the Copermittees and their supporters, as well as the Environmental Organizations. The San Diego Water Board understands the concerns that the Copermittees have expressed regarding the requirements of Provision A and the apparent lack of a linkage between the iterative process under Provision A.4 and the strict compliance with the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c and A.2.a. This language, however, is consistent with the precedential language that was issued under State Water Board Order WQ-1999-05 and has been implemented in all MS4 permits issued by the San Diego Water Board since 2001. The State Water Board has not issued an order or taken other action to supersede the	

A-1	PROVISION A: PROHIBITIONS AND LIMITATIONS	
	precedential language. Under the Porter-Cologne Water Quality Control Act, waste discharge requirements must implement applicable water quality control plans, including water quality objectives. The discharge prohibitions and receiving water limitations of Provision A.1.a, A.1.c and A.2.a are consistent with this requirement, and are included in all NPDES permits and Waste Discharge Requirements issued by the San Diego Water Board. These are the fundamental requirements that protect water quality by ensuring that discharges comply with applicable water quality standards to ensire protection of receving water benficial uses. The San Diego Water Board does recognize an increasing body of monitoring data indicates that water quality standards are in fact not being met by many of the Copermitees' MS4 discharges. The San Diego Water Board has as a matter of practice chosen not to enforce the discharge prohibitions and receiving water limitations of Provision A.1.a, A.1.c or A.2.a if the Copermittees are actively engaged in implementing the other requirements of the MS4 permit. The focus of the previous MS4 permits and the San Diego Water Board has been on compliance with implementation of the actions required by the permit, rather than the water quality outcomes that are expected to be achieved. The San Diego Water Board has initiated enforcement against the Copermittees on several occasions for noncompliance with permit requirements. As noted by the Copermittees, however, the approach of the Tentative Order is a significant departure from the approach of previous MS4 permits. Previous MS4 permits did not provide the Copermittees enough flexibility to truly implement an iterative process to adaptively manage their programs to identify innovative new ways to improve the quality of discharges from their MS4s or in the receiving waters, because the actions required by the permit were relatively fixed and prescriptive. In contrast, the Tentative Order is structured to allow the Copermittees to take advantage of the iterative process and adaptively manage their programs to focus on achieving outcomes. The Tentative Order has been revised to provde an optional pathaway for the Copermittees to demonstrate compliance with the discharge prohibitions and receiving water limitations of Provision A.1.a, A.1.c or A.2.a through implementation of technically supported iterative and adaptive management processes applicable to specific pollutant/waterbodiy combinations. The appropriate location in the Tentative Order for providing this "compliance mechanism," however, is not under Provision A. Instead, the appropriate location is under Provision B. Under the requirements of Provision B for the development of the Water Quality Improvement Plans, the San Diego Water Board has added Provision B.3.c. Provision B.3.c explicitly provides that a Copermittee will be in compliance with the requirements of Provision A.1.a, A.1.c and A.2.a if a specific set of	

A-1	PROVISION A: PROHIBITIONS AND LIMITATIONS	
	requirements are incorporated and implemented as part of an accepted Water Quality Improvement Plan. Under this option, a Copermittee can demonstrate compliance with the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c and A.2.for specifc pollutant/waterbody combinations if the Water Quality Improvement Plan demonstrates through a robust technical analysis that the water quality improvement strategies the Copermittee plans on implementing will achieve applicable water quality stand based numeric goals by a certain date. The implementation must be verified through monitoring and assessments, and the goals, strategies and schedules in the plan can be adjusted accordingly based on those results. The more specific planning, implementation, monitoring and assessment program required under Provision B.3.c, combined with a clear set of numeric goals, strategies, and schedules that the Copermittee demonstrates will achieve compliance through, becomes the iterative and adaptive management process that the San Diego Water Board may accept as being in compliance with Provisions A.1.a, A.1.c and A.2.a, as well as Provision A.4. As recommended by the Environmental Organizations, the San Diego Water Board did not revise Provisions A.1.a, A.1.c, A.2.a and A.4, and the language of Provision A remains consistent with State Water Board Order WQ 1999-05. The addition of Provision B.3.c provides the linkage for compliance with the discharge prohibitions and receiving water limitations through the iterative process that the Copermittees and their supporters requested. The San Diego Water Board did modify Provision A.1.b to clarify how to demonstrate compliance with the effective prohibition of non-storm water discharges to the MS4s. The San Diego Water Board recognizes that the effective prohibition of non-storm water discharges to the MS4 is specifically required by the federal regulations to be achieved through the implementation of an illicit discharge detection and elimination program as specified under 40CFR122.26(d)(2)(iv)(B). Provision A.1.b has been revised to refer to Provision E.2, which is the illicit discharge detection and elimination program requirements that must be implemented by each Copermittee within its jurisdiction to effectively prohibit non-storm water discharges to its MS4. As for the requests to modify the requirements of Provision A to allow the Copermittees to utilize the Water Quality Improvement Plan to demonstrate compliance with the other requirements of Provision A pertaining to the special protections for ASBS and the TMDL requirements, the San Diego Water Board generally did not agree to modify the requirements as requested.	

A-1	PROVISION A: PROHIBITIONS AND LIMITATIONS	
	The linkage for compliance with the ASBS requirements is provided under Provision A.1.d. Provision A.1.d specifies that discharges from MS4s to ASBS are authorized subject to the Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012. The provisions of the Special Protections are provided in Attachment A to the Order for easy reference, but the Special Protections are actually part of the Ocean Plan. The requirements for the Water Quality Improvement Plan take into account the requirements for the Special Protections. The development and implementation of the Water Quality Improvement Plans should allow the Copermittees that discharge to ASBS to demonstrate that they are in compliance with the Special Protections. As for the linkage for compliance with the TMDL requirements, the linkage is provided under Provision A.3.b. The Copermittees are required to comply with the WQBELs for the TMDLs in Attachment E. The requirements for the Water Quality Improvement Plan take into account the requirements for the TMDLs. The requirements of the TMDLs in Attachment E must be incorporated into the Water Quality Improvement Plan. The development and implementation of the Water Quality Improvement Plans should allow the Copermittees subject to TMDL requirements to demonstrate that they are in compliance with the WQBELs.	

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A-2	PROVISION A: PROHIBITIONS AND LIMITATIONS	
	COMMENT: *The maximum extent practicable (MEP) standard applies to both non-storm water and storm water.* The Riverside County Copermittees submitted comments asserting that the MEP standard of the Clean Water Act and federal regulations applies to reducing pollutants in non-storm water discharges as well as in storm water discharges. Accordingly, non-storm water discharges are authorized to be discharged if pollutants in non-storm water are reduced to the MEP. The Riverside County Copermittees requested that the language be revised to reflect this concept throughout the Tentative Order. In contrast, the Natural Resources Defense Council (NRDC) submitted comments that the non-storm water action levels (NALs) in the permit may contradict the effective prohibition of non-storm water discharges to the MS4. The NRDC is concerned that stating that the NALs are not considered by the San Diego Water Board to be enforceable limitations could be interpreted as an authorization for discharges of non-storm water, which would be in conflict with the effective prohibition requirements of the Clean Water Act for non-storm water discharges to the MS4.	**Copermittees** Riverside County Copermittees **Environmental Organizations** Natural Resources Defense Council
	RESPONSE: The San Diego Water Board disagrees that the MEP standard applies to both non-storm water and storm water. Building on the effective prohibition against non-storm water discharges, the Clean Water Act requirement to reduce pollutants discharged from the MS4 to the MEP standard necessarily is limited to storm water discharges. (See Attachment 1 November 5, 2009 Memorandum from San Diego Water Board Counsel, Non-Storm Water Discharges) The San Diego Water Board disagrees that including the NALs in the permit may contradict the effective prohibition of non-storm water discharges to the MS4. Please see the responses to comments Fnd-3 and C-1.	

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A-3	PROVISION A: PROHIBITIONS AND LIMITATIONS	
	COMMENT: *The Copermittees should only be subject to "applicable" prohibitions and water quality standards in the Basin Plan, plans and policies.* The Riverside County Copermittees are concerned that there are prohibitions and water quality standards included in Provisions A.1.c and A.2.a that do not apply to their jurisdictions. Thus those prohibitions or water quality standards should be deleted or clarified to state that they are only applicable if those discharges or water bodies are within their jurisdictions.	**Copermittees** Riverside County Copermittees
	RESPONSE: The San Diego Water Board does not agree that it is necessary to delete or clarify any of the requirements under Provisions A.1.c or A.2.a. If there are discharge prohibitions that are not applicable, then there should not be any violations of those discharge prohibitions. Likewise, if there are water quality standards that are not applicable, there should not be any violations of those water quality standards. If, however, any of those prohibitions or water quality standards is applicable, the Copermittees are required to comply or demonstrate compliance with those prohibitions and water quality standards.	

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A1-1	PROVISION A.1: Discharge Prohibitions	
	COMMENT: *MS4 discharges to environmentally sensitive area (ESA) shellfish habitat should be prohibited.* The South Laguna Civic Association commented that dry weather discharges and elevated storm water flows are incompatible with the protection of ESA shellfish habitat and should be vigorously regulated and prohibited in the Tentative Order.	**Environmental Organizations** South Laguna Civic Association
	RESPONSE: The San Diego Water Board agrees that dry weather discharges and storm water flows should be regulated to protect ESA shellfish habitats. Provision A.1.a prohibits discharges from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance in receiving waters of the state. Provision A.2.c requires that discharges from MS4s must not cause or contribute to the violation of water quality standards in any receiving waters. And, specifically for dry weather discharges, Provision A.1.b requires the Copermittees to effectively prohibit non-storm water discharges to the MS4s. Thus, the Tentative Order includes requirements for MS4 discharges that are protective of ESAs.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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A1-2	PROVISION A.1: Discharge Prohibitions	
	COMMENT: *Specify that NPDES permitted discharges to MS4s discharging to ASBS are authorized.* San Diego Gas and Electric and Southern California Gas Company requested modifications to Provision A.1.d to specify that storm water and non-storm water discharges from the Copermittees MS4s from ASBS "made pursuant to NPDES permit" are authorized under the Tentative Order. The commenters are concerned that the Tentative Order does not clearly state that NPDES permitted discharges to the Copermittees' MS4s that then discharge to ASBS are authorized.	**Building Industry / Industry** San Diego Gas and Electric Southern California Gas Company
	RESPONSE: The San Diego Water Board disagrees that it is necessary to revise Provision A.1.d. Provision A.1.d requires discharges from the Copermittees' MS4 to be consistent with the requirements of Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012 (Special Protections). Provision A.1.d applies to the Copermittees' MS4 discharges to ASBS, thus the Copermittees are subject to the requirements of the Special Protections. If storm water and non-storm water discharges are authorized under an NPDES permit and discharged to a Copermittee's MS4, the Copermittee is responsible for identifying this NPDES permitted discharge to its MS4 that then discharges to ASBS. If the NPDES permitted discharge does not allow the Copermittees to be consistent with the requirements of the Special Protections, the Copermittees should notify the NPDES permitted discharger and/or the San Diego Water Board that the discharge must be brought into compliance with the requirements of the Special Protections. Additionally, please see the response to comment Fnd-14.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B-1	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	COMMENT: *Link compliance with prohibitions and limitations to development and implementation of Water Quality Improvement Plans.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting that they be allowed to utilize the development and implementation of the Water Quality Improvement Plans as a compliance mechanism for the prohibitions and limitations of Provisions A.1 to A.3. Several Copermittees submitted separate comments in support of the request. Comments submitted by the Environmental Groups were not in support of such an approach, but did support incorporating numeric goals into the Water Quality Improvement Plans that are based on water quality standards and using the Water Quality Improvement Plans to hold the Copermittees accountable for achieving the water quality standards.	**Copermittees** City of Del Mar City of Poway Orange County Copermittees Riverside County Copermittees San Diego County Copermittees San Diego Unified Port District **Environmental Organizations** Environmental Groups
	RESPONSE: The San Diego Water Board agrees with the comments from the Copermittees and the Environmental Organizations. The San Diego Water Board has added Provision B.3.c to provide a "pathway" to compliance with the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c and A.2.a. Please see the response to comment A-1. Several commenters indicated that including an analysis to demonstrate that the implementation of the water quality improvement strategies would achieve compliance with the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c and A.2.a is not necessary. The San Diego Water Board disagrees that the analysis is not necessary. Without the analysis, the San Diego Water Board would not be able to make a determination that the implementation of the water quality improvement strategies would result in the achievement of and compliance with Provisions A.1.a, A.1.c and A.2.a for specific pollutant /waterboady combinations. In addition, the required analysis provides another level of transparency that would allow the public to make a determination that the Copermittees are in fact implementing strategies that are making progress toward achieving the requirements of Provisions A.1.a, A.1.c and A.2.a. Thus, the analysis has been incorporated into the requirements of Provision B.3.c.	

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B-2	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	COMMENT: *Support for the Water Quality Improvement Plan approach.* Comments were submitted by members of the Building Industry, Industry, the Copermittees, Environmental Organizations, Engineering/Design Consultants, Societies/Associations/Coalitions, and Other Entities generally supporting the approach in the Tentative Order to utilize the Water Quality Improvement development and implementation process as a more strategic, cost effective, holistic approach to improving water quality in the San Diego Region.	**Building Industry / Industry** American Society of Landscape Architects Associated General Contractors of America BIA Regulated Community Coalition Industrial Environmental Association Otay Land Company Otay Ranch New Homes **Copermittees** Orange County Copermittees Riverside County Copermittees San Diego Unified Port District **Environmental Organizations** The Escondido Creek Conservancy Friends of Rose Canyon Creek / Rose Creek Watershed Alliance Laguna Bluebelt Coalition San Diego Canyonlands San Elijo Lagoon Conservancy **Engineering/Design Consultants** Latitude 33 Planning and Engineering **Societies/Associations/Coalitions** BIOCOM San Diego Association of Realtors **Other Entities** Carol Crossman Continental Maritime of San Diego Curious Company Hector Valtierra Hughes Marino Marston+Marston, Inc. Nuffer, Smith, Tucker, Inc. San Diego Regional Chamber of Commerce Sheppard, Mullin, Richter & Hampton Southern Cross Property Consultants Transition IT
	RESPONSE: The San Diego Water Board appreciates the support expressed by the commenters for the Water Quality Improvement Plan and the more structured iterative and adaptive management process.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B-3	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	COMMENT: *Ensure adequate public participation in the development and updating of the Water Quality Improvement Plans.* Comments were submitted by members of the Building Industry, Environmental Organizations, Engineering/Design Consultants, USEPA, Societies/Associations/Coalitions, and Other Entities requesting the requirements of the Tentative Order ensure that there is adequate public participation during the development of the Water Quality Improvement Plans. Comments from the Environmental Organizations, the San Diego Green Building Council, and a joint comment letter from San Diego Coastkeeper and the BIA, requested that the Tentative Order require the Copermittees to form a stakeholder advisory group with knowledge of the watersheds. The comments from the Environmental Groups recommending several additional requirements for public participation during the development of the Water Quality Improvement Plans, including: 1) Requiring the Copermittees to create a schedule for developing the Water Quality Improvement Plans, 2) Modifying the required formal public review requirements to occur after identifying priorities, after identifying strategies, and after identifying goals and assessment methods, 3) Requiring Water Quality Improvement Plans to be developed consecutively instead of concurrently, 4) Require approval of the Water Quality Improvement Plans at a public hearing, and 5) Require public participation during the adaptive management process.	**Building Industry / Industry** American Society of Landscape Architects Associated General Contractors of America BIA Regulated Community Coalition San Diego Green Building Council **Environmental Organizations** Environmental Groups The Escondido Creek Conservancy Friends of Rose Canyon Creek / Rose Creek Watershed Alliance Laguna Bluebelt Coalition Los Penasquitos Lagoon Foundation Natural Resources Defense Council San Diego Canyonlands San Diego Coastkeeper and BIA San Elijo Lagoon Conservancy **Engineering/Design Consultants** Latitude 33 Planning and Engineering **State/Federal Government** USEPA **Societies/Associations/Coalitions** BIOCOM San Diego Association of Realtors **Other Entities** Continental Maritime of San Diego Hector Valtierra Curious Company Carol Crossman Gable PR Marston+Marston, Inc. Nuffer, Smith, Tucker, Inc. San Diego Regional Chamber of Commerce Sheppard, Mullin, Richter & Hampton Southern Cross Property Consultants Transition IT
	RESPONSE: The San Diego Water Board agrees that the Tentative Order should ensure adequate public participation during the development and updating of the Water Quality Improvement Plans. The public participation requirements for the development and updates of the Water Quality Improvement Plan	

B-3	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	are contained in Provisions F.1 and F.2.c. The San Diego Water Board has revised Provisions F.1 and F.2.c to include several of the elements into the public participation requirements as recommended by the commenters, and provide additional time for a robust public participation process to be included in the development of the Water Quality Improvement Plans. Provision F.1.a has been modified to include a set of public participation requirements for the development of the Water Quality Improvement Plan under Provision F.1.a.(1). Included in Provision F.1.a.(1) are requirements to: a) develop a publicly available and noticed schedule of the opportunities for the public to participate and provide comments during the development of the Water Quality Improvement Plan; b) form a Water Quality Improvement Consultation Panel that will consist of at least one San Diego Water Board staff, one representative of the environmental community, and one representative of the development community; and c) coordinate the schedules for the public participation process among the Watershed Management Areas to provide the public as much time and opportunity as possible to participate during the development of the Water Quality Improvement Plans. The role of the Water Quality Improvement Consultation Panel is similar to the requested stakeholder advisory group, which will review the elements that the Copermittees propose to include in the Water Quality Improvement Plan after the public is provided an opportunity to provide data, information and recommendations for each element. The elements of the Water Quality Improvement Plan that require public review and comment remain the same, but have been revised and reorganized under Provisions F.1.a.(2) and F.1.a.(3). The Tentative Order required a public review of the priorities and goals and then a public review of the strategies and schedules. The revised Tentative Order has been modified to first require a public review of the priorities and potential water quality improvement strategies and then a review of the goals, strategies that Copermittees plan on implementing, and the schedules. In each case, the public will be provided an opportunity to provide data, information and recommendations and the Water Quality Improvement Consultation Panel will review the elements required to be developed with the Copermittees to provide recommendations or concurrence prior to submitting to the San Diego Water Board for a public review and comment period. Provisions B.2 and B.3 were also revised and reorganized to be consistent with revisions made to Provisions F.1.a.(2) and F.1.a.(3). Provision B.2.e was revised to require the Copermittees to identify the “potential” water quality improvement strategies that could be implemented to address the highest priority water quality conditions	

B-3	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	identified by the Copermittees. The requirements for identifying numeric goals and schedules for achieving the goals were moved to Provision B.3. Thus the requirements of Provision B.2 will be subject to the public participation and development process requirements of Provision F.1.a.(2), and the requirements of Provision B.3 will be subject to the public participation and development process requirements of Provision F.1.a.(3). Provision F.1.b has also been revised to clarify the completed Water Quality Improvement Plan public review and acceptance process. The San Diego Water Board will make the determination if a public hearing to accept the Water Quality Improvement Plans will be required, or if public input will be limited to written comments. Provision F.1.b has been revised to clarify when the Water Quality Improvement Plans will be considered accepted. Finally, Provision F.2.c has been revised to clarify the requirements for public participation during the updates of the Water Quality Improvement Plans. The public will be provided an opportunity to provide data, information and recommendations and the Water Quality Improvement Consultation Panel will review the elements required to be developed with the Copermittees to provide recommendations or concurrence prior to submitting the requested updates to the San Diego Water Board.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B-4	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	COMMENT: *Allow current permit requirements to remain in place until Water Quality Improvement Plans are developed.* Comments were submitted by members of the Building Industry, Engineering/Design Consultants, State Government, Societies/Associations/Coalitions, and Other Entities requesting the Tentative Order allow the requirements of the current permits to remain in place until the Water Quality Improvement Plans were developed. There was general concern that enforcement and implementation of the new requirements of the Tentative Order would preempt the Water Quality Improvement Plans before the Water Quality Improvement Plans had a chance to be developed.	**Building Industry / Industry** Associated General Contractors of America Otay Land Company Otay Ranch New Homes **Engineering/Design Consultants** Latitude 33 Planning and Engineering **State/Federal Government** Senator Mark Wyland **Societies/Associations/Coalitions** BIOCOM San Diego Association of Realtors **Other Entities** Continental Maritime of San Diego Carol Crossman Gable PR Hughes Marino Marston+Marston, Inc. Nuffer, Smith, Tucker, Inc. San Diego Regional Chamber of Commerce Sheppard, Mullin, Richter & Hampton Southern Cross Property Consultants Transition IT
	RESPONSE: The San Diego Water Board agrees that the jurisdictional runoff management program requirements should remain in place until the Water Quality Improvement Plans are developed and accepted by the San Diego Water Board. According to the second paragraph of the opening to Provision E, "*Until the Copermittee has updated its jurisdictional runoff management program document with the requirements of Provision E the Copermittee must continue implementing its current jurisdictional runoff management program*." Provision F.2.c does not require the jurisdictional runoff management program documents to be updated until 3 months after the acceptance of the Water Quality Improvement Plan. The Copermittees will be subject to requirements of Provision A (Prohibitions and Limitations), and responsible for implementing the requirements of Provision D (Monitoring and Assessment Program Requirements), Provision F (Reporting), and Attachment E (Specific Provisions for TMDLs) upon the effective date of the Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B-5	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	COMMENT: *Adopt Water Quality Improvement Plans as Orders to implement the requirements of the Tentative Order.* Comments were submitted by Engineering/Design Consultants, Societies/Associations/Coalitions, and Other Entities requesting that the San Diego Water Board adopt the Water Quality Improvement Plans as Orders to implement the requirements of the Tentative Order.	**Engineering/Design Consultants** Latitude 33 Planning and Engineering **Societies/Associations/Coalitions** BIOCOM San Diego Association of Realtors **Other Entities** Continental Maritime of San Diego Carol Crossman Gable PR Hughes Marino Marston+Marston, Inc. Nuffer, Smith, Tucker, Inc. San Diego Regional Chamber of Commerce Sheppard, Mullin, Richter & Hampton Southern Cross Property Consultants Transition IT
	RESPONSE: The San Diego Water Board disagrees with adopting the Water Quality Improvement Plans as Orders to implement the requirements of the Tentative Order. The Tentative Order, when adopted by the San Diego Water Board, is an Order issued to the Copermittees to implement the requirements of the Clean Water Act and Code of Federal Regulations. The Tentative Order includes specific requirements that must be included in the Water Quality Improvement Plans, which are to be developed by the Copermittees. The Water Quality Improvement Plans themselves, therefore, cannot and should not be adopted as Orders issued by the San Diego Water Board.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B-6	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	COMMENT: *Align Water Quality Improvement Plan requirements with the Jurisdictional Runoff Management Program requirements.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting that requirements in Provision E be allowed to be modified based on what is proposed in the Water Quality Improvement Plans. The Copermittees assert that the jurisdictional runoff management program requirements of Provision E are a "one size fits all" set of requirements, and the requirements of the Water Quality Improvement Plan become "additive" rather than "complimentary." Several Copermittees submitted separate comment letters supporting the concept by requesting the San Diego Water Board align the development and implementation of the Water Quality Improvement Plan better with the jurisdictional runoff management program requirements. The BIA Regulated Community Coalition also submitted comments supporting the concept. The Environmental Groups are concerned with the flexibility of the jurisdictional runoff management program requirements and commented that the Water Quality Improvement Plan should include a detailed list of activities and what activities each Copermittee will implement within its jurisdiction. The Environmental Groups are concerned that without this specificity in the Water Quality Improvement Plans, and the flexibility that is provided in the jurisdictional runoff management program requirements, would result in the burden of achieving water quality improvement within a watershed falling to only one or two Copermittees. The Environmental Groups would like to see a clearer commitment of what will be implemented by each Copermittee either in the Water Quality Improvement Plan or in the jurisdictional runoff management program documents for each Copermittee.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** City of Dana Point City of Laguna Hills City of Lake Forest City of Mission Viejo City of Rancho Santa Margarita City of San Juan Capistrano Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Environmental Groups
	RESPONSE: The San Diego Water Board agrees that the Water Quality Improvement Plans and jurisdictional runoff management program requirements should be better aligned and clearly present the water quality improvement strategies that each Copermittee will implement within its jurisdiction. The San Diego Water Board does not agree that the jurisdictional runoff management program requirements of Provision E should be allowed to be modified by the Water Quality Improvement Plan. The revised Tentative Order requires the Copermittees to clearly present the water quality improvement strategies that each Copermittees will implement within its jurisdiction in the Water Quality Improvement Plan. Each Copermittee must incorporate the strategies that the Copermittee commits to implement, as identified in the Water Quality Improvement Plan, into its jurisdictional runoff management program document. Please see the response to comment E-1.	

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B-7	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	COMMENT: *Recommendations for revisions to the introductory paragraph of Provision B.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments recommending revisions to the introductory paragraph under Provision B. The Copermittees recommended revising the goal statement to be focused more on MS4 discharges and not on receiving waters. The Copermittees also recommended adding a statement about the linkage between the Water Quality Improvement Plan and compliance with the prohibitions and limitations of Provision A.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the recommended revisions to the introductory paragraph of Provision B. The recommended revisions by the Copermittees were not necessary and not appropriate for the introductory paragraph to Provision B. After considering the comments and recommendations from the Copermittees, however, the San Diego Water Board did make one minor revision to the introductory paragraph of Provision B. Please see the revised Tentative Order for the revision to the introductory paragraph to Provision B.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B1-1	PROVISION B.1: Watershed Management Areas	
	COMMENT: *Allow San Diego County to use Watershed Urban Runoff Management Plan (WURMP) for the Santa Margarita River Watershed Management Area until the Riverside County Copermittees are covered under the Tentative Order.* The County of San Diego and the San Diego County Copermittees requested that the requirement to develop a Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area be postponed until the Riverside County Copermittees become covered by the Tentative Order. The Riverside County Copermittees supported the request.	**Copermittees** County of San Diego Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the request. The San Diego Water Board has revised the footnote to Table B-1 to state that the County of San Diego is not required to develop a Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area until the Riverside County Copermittees receive notification of coverage under the Tentative Order. Until then, the County of San Diego will be required to implement their jurisdictional runoff management program in conformance with the requirements of Order No. R9-2007-0001, and implement the transitional monitoring and assessment requirements of Provision D, the transitional reporting requirements of Provisions F.3.b, and the TMDL requirements in Attachment E.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B2e-1	PROVISION B.2.e: Numeric Goals and Schedules	
	COMMENT: *Clearly state that numeric goals are enforceable or not enforceable limitations.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting that the Tentative Order specify that numeric goals are not enforceable limitations. In contrast, the USEPA recommended that the Tentative Order or Fact Sheet clarify that the numeric goals (and the schedule for attainment of the goals) would become enforceable requirements once the Water Quality Improvement Plans are accepted by the San Diego Water Board.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board disagrees that additional revisions are necessary to specify the numeric goals are not enforceable limitations. The San Diego Water Board agrees with the USEPA interpretation, but disagrees with the recommendation. The San Diego Water Board did not modify the language of Provision B.2.e (now Provision B.3.a.(1) in the revised Tentative Order) because the San Diego Water Board will utilize the numeric goals to determine if the Copermittees are making progress toward improving water quality. As part of the iterative and adaptive management process, the Copermittees are allowed to modify the numeric goals and the schedules for achieving the goals if the monitoring and assessments provide the rationale to do so. If, however, the Copermittees did not modify the numeric goals or the schedules to achieve the goals, and an interim or final goal was not achieved pursuant to the schedule, the San Diego Water Board would consider the failure to achieve the numeric goal a point of non-compliance. The non-compliance would include the failure to achieve the numeric goal within the schedule, the failure to implement the iterative and adaptive management process, and a demonstration that one or more prohibitions or limitations under Provision A have been violated. Thus, the numeric goals and schedules are enforceable.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B2e-2	PROVISION B.2.e: Numeric Goals and Schedules	
	COMMENT: *Remove or modify the language for the 10 year limitation of the schedules to achieve numeric goals.* The Orange County and San Diego County Copermittees each submitted comments requesting modifications to the requirement to achieve the numeric goals within 10 years of the effective date of the Tentative Order. The Orange County Copermittees provided several reasons for removing the 10 year requirement. The San Diego County Copermittees requested that the Tentative Order clarify that the 10 year requirement be limited to achieving a goal that represents progress toward attainment of water quality standards.	**Copermittees** Orange County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the request to remove the requirement. The San Diego Water Board has removed the requirement that the Copermittees must include the final dates for achieving the numeric goals that do not initially extend more than 10 years beyond the effective date of the Tentative Order. In its place, the Copermittees must develop a schedule to achieve the numeric goals within a "reasonable period of time" that can be identified during the public participation process required for the development of the Water Quality Improvement Plans. The modifications are provided under Provision B.3.a.(2) of the revised Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B3-1	PROVISION B.3: Water Quality Improvement Strategies and Schedules	
	COMMENT*: Provide a mechanism for compliance with the prohibitions and limitations in Provision A through the Water Quality Improvement Plan.* The San Diego County Copermittees proposed modifications to the requirements of Provision B.3 to include a compliance mechanism that could be included in the Water Quality Improvement Plan to demonstrate compliance with the prohibitions and limitations in Provision A. The San Diego County Copermittees proposed including an option to perform a Reasonable Assurance Analysis to demonstrate that the water quality improvement strategies will attain discharge prohibitions, receiving water limitations, and effluent limitations. The San Diego Unified Port District submitted separate comments that did not support the inclusion of a compliance option utilizing the Water Quality Improvement Plan. The Orange County and Riverside County Copermittees supported the concept of allowing the Copermittees to demonstrate that the water quality improvement strategies in the Water Quality Improvement Plan will attain discharge prohibitions, receiving water limitations, and effluent limitations, but objected to requiring a Reasonable Assurance Analysis.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees San Diego Unified Port District
	RESPONSE: The San Diego Water Board agrees with including an optional mechanism for compliance with the prohibitions and limitations in Provision A as part of Provision B.3. The San Diego Water Board has added Provision B.3.c as an optional mechanism that the Copermittees may utilize to demonstrate compliance with the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c and A.2.a. Please see the responses to comments A-1 and B-1.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B3-2	PROVISION B.3: Water Quality Improvement Strategies and Schedules	
	COMMENT: *Allow the Copermittees to "reduce" instead of "prevent and eliminate" non-storm water discharges through the Water Quality Improvement Plan.* Comments from the Building Industry included a recommendation to modify the language of Provision B.3 to allow the Copermittees to "reduce" non-storm water discharges instead of "prevent and eliminate" these discharges to the MS4.	**Building Industry / Industry** BIA Regulated Community Coalition
	RESPONSE: The San Diego Water Board disagrees with the proposed recommendations. The Clean Water Act requires MS4 permits to include a requirement that the MS4 dischargers must "effectively prohibit" non-storm water discharges to the MS4, not just "reduce" non-storm water discharges to the MS4. Provision B.3 included the phrase "prevent and eliminate" to specify what "effectively prohibit" means. To be consistent with the language in the Clean Water Act, the San Diego Water Board has revised "prevent and eliminate" to "effectively prohibit" in Provision B.3.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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B5-1	PROVISION B.5: Iterative Approach and Adaptive Management Process	
	COMMENT: *Recommendations for minor revisions to the language under iterative and adaptive management process requirements.* The Riverside County and San Diego County Copermittees each submitted comments recommending minor revisions to the language under Provision B.5 to "clarify" the requirements or to be consistent with their comments regarding non-storm water discharges (see comment Gnl-13).	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the recommended revisions to Provision B.5. The San Diego Water Board did not make any of the minor revisions recommended by the Copermittees as they were not necessary, not appropriate, or changed the intent of the requirement. The San Diego Water Board did, however, make several revisions to Provision B.5 to be consistent with the revisions made to Provisions B.2 and B.3, as discussed in the response to comment B-3.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

B6-1	PROVISION B.6: Water Quality Improvement Plan Submittal, Updates, and Implementation	
	COMMENT: *Clarify that the implementation of Water Quality Improvement Plans may demonstrate TMDLs are not required.* The San Diego County Copermittees requested that the Tentative Order, under Finding 27, clarify that the implementation of the requirements "will" not "may" allow the San Diego Water Board to include an impaired water body in Category 4 in the Integrated Report (i.e. TMDL not required). The USEPA recommended including language in the Fact Sheet to clarify that the monitoring and assessments implemented as part of the Water Quality Improvement Plan may demonstrate that TMDLs are not necessary for water bodies listed on the 303(d) List.	**Copermittees** San Diego County Copermittees **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board disagrees with the request by the Copermittees. The San Diego Water Board agrees with the recommendation from the USEPA. Finding 27 is correct to state that the implementation of the Water Quality Improvement Plan "may" allow the San Diego Water Board to re-categorize an impaired water body in Category 4 in the Integrated Report meaning a TMDL is not required. Please see the response to comment Fnd-8. The San Diego Water Board has modified the Fact Sheet discussion for Provision B.6 as recommended by the USEPA.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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C-1	PROVISION C: ACTION LEVELS	
	COMMENT: *Clarify that action levels are enforceable or not enforceable limitations.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting that the Tentative Order clarify that the non-storm water action levels (NALs) and storm water action levels (SALs) developed pursuant to Provision C are not enforceable limitations. San Diego Gas and Electric and the Southern California Gas Company requested that the permit clarify that the NALs and SALs are not applicable to non-storm water discharges that have NPDES permits. The Natural Resources Defense Council is concerned that stating that the NALs are not considered by the San Diego Water Board to be enforceable limitations could be interpreted as an authorization for discharges of non-storm water, which would be in conflict with the effective prohibition requirements of the Clean Water Act for non-storm water discharges to the MS4. The USEPA also expressed concern that action levels based on wasteload allocations (WLAs) established as WQBELs in the TMDL requirements of Attachment E may be interpreted as not enforceable.	**Building Industry / Industry** San Diego Gas and Electric Southern California Gas Company **Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Natural Resources Defense Council **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board agrees that additional clarification of the enforceability of the action levels is necessary. The San Diego Water Board did not revise the footnotes as requested by the Copermittees, but did revise the footnotes to clarify that NALs and SALs are not enforceable limitations unless they are based on WQBELs expressed as interim or final effluent limitations for any TMDLs in Attachment E and the interim or final compliance dates have passed. The San Diego Water Board also revised the introductory paragraph under Provision C.1 to specify that the NALs must be incorporated into the Water Quality Improvement Plans to support the development and prioritization of water quality improvement strategies for "effectively prohibiting" not just "addressing" non-storm water discharges to the MS4, consistent with the requirements of the Clean Water Act. Finally, the San Diego Water Board did not revise the requirements of Provision C to clarify that NALs do not apply to non-storm water discharges that have NPDES permits. The requirements of the Tentative Order, including the NALs and SALs, apply to the Copermittees' MS4 discharges, not to other NPDES permitted discharges, thus it is not necessary or appropriate to specify that the NALs are not applicable to other NPDES permitted discharges.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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C-2	PROVISION C: ACTION LEVELS	
	COMMENT: *Allow the Copermittees to develop action levels instead of prescribing required action levels.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting that they be allowed to develop or propose non-storm water action levels (NALs) and storm water action levels (SALs) as part of the Water Quality Improvement Plan development process rather than being required to include a prescribed set of NALs and SALs in addition to other NALs and SALs that may be developed as part of the Water Quality Improvement Plan. The Copermittees expressed concern that requiring the prescribed NALs and SALs under Provision C would result in unnecessary analyses for constituents that are not a priority identified in the Water Quality Improvement Plan. The Orange County and San Diego County Copermittees are concerned that the inclusion of the chemically-based prescribed action levels under Provision C may not be the best metric to measure progress toward protection and enhancement of receiving waters if the numeric goals are biologically- or physically-based.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the request to remove the requirements to include the prescribed NALs and SALs in the Water Quality Improvement Plans. The NALs and SALs under Provision C have been included to support the development and prioritization of the water quality strategies that will be implemented based on the highest priority water quality conditions identified by the Copermittees in the Water Quality Improvement Plans. The NALs and SALs have been included as a tool that the Copermittees and the San Diego Water Board can utilize to determine if the Copermittees are implementing the requirements of the Clean Water Act for MS4 permits, which is to *effectively prohibit non-storm water discharges to the MS4* and *reduce pollutants in storm water discharges from the MS4 to the MEP*. The NALs and SALs are not new, and are included in both of the current MS4 permits issued to Orange County (Order No. R9-2009-0002) and Riverside County (Order No. R9-2010-0016). The Copermittees are required to effectively prohibit non-storm water discharges to their MS4s, which in turn should result in little to no discharges from their MS4s to receiving waters. If there are non-storm water discharges from the Copermittees' MS4s to receiving waters, those discharges should only be NPDES permitted discharges. Even if those discharges are NPDES permitted discharges, the Copermittees are responsible for demonstrating that those discharges are not illicit discharges by identifying the sources as	

C-2	PROVISION C: ACTION LEVELS	
	NPDES permitted discharges. The prescribed NALs in Table C-1 through C-4 are associated with most if not all the pollutants that are known or suspected to be causing or contributing to impairments in water bodies on the 303(d) List for the San Diego Region. The NALs are appropriately based on water quality objectives because non-storm water discharges that do not contain pollutants at levels in exceedance of the NALs are not expected to cause or contribute to exceedances of water quality standards in receiving waters. Thus, the prescribed NALs have been included to allow the Copermittees to prioritize their efforts in effectively prohibiting unpermitted non-storm water discharges to their MS4s, demonstrate that they have effectively prohibited non-storm water discharges to their MS4s that could cause or contribute to exceedances of water quality standards, or identify NPDES permitted sources that are resulting in discharges from their MS4s that are causing or contributing to exceedances of water quality standards in receiving waters. In any case, the prescribed NALs are necessary to allow the San Diego Water Board to determine if the Copermittees are effectively prohibiting non-storm water discharges to the MS4. In contrast, the prescribed SALs are not based on water quality objectives, but set at higher levels because the San Diego Water Board recognizes that reducing pollutants in wet weather discharges from the MS4s to water quality objectives is difficult. The prescribed SALs, however, will allow the Copermittees to prioritize their efforts in reducing pollutants in storm water discharges from their MS4s, and allow the San Diego Water Board to determine if the Copermittees are reducing pollutants in storm water discharges from their MS4s to the MEP. The San Diego Water Board disagrees with the concerns about monitoring for constituents that are not associated with the highest priority water quality conditions. Periodically analyzing non-storm water and storm water discharges from the Copermittees' MS4 for other pollutants other than those associated with the highest priority water quality conditions is necessary if the Copermittees would like to re-prioritize or identify new priority water quality conditions that will be addressed. The San Diego Water Board does recognize that there is a cost associated with analyzing for additional constituents. Thus, the San Diego Water Board has modified the MS4 outfall monitoring requirements to reduce the number of dry weather MS4 outfall monitoring stations that must be analyzed (see Provision D.2.b.(2)(b) of the revised Tentative Order), and provided the Copermittees some flexibility to modify the analytes for the wet weather MS4 outfall monitoring stations (see Provision D.2.c.(5)(f) of the revised Tentative Order).	

C-2	PROVISION C: ACTION LEVELS	
	As for the concerns about the chemically-based NALs and the biologically- or physically-based numeric goals for receiving waters, the San Diego Water Board disagrees that they cannot be linked or may be incompatible. Biologically- or physically-based numeric goals will likely be measured in the receiving waters. The chemically-based NALs apply to the MS4 outfalls. The quality of the MS4 discharges and the improvement of biological or physical measurements can be linked. Both are likely necessary to demonstrate that MS4 discharges are either not causing or contributing to a biological or physical impairment of the receiving water, or an improvement in MS4 discharges is resulting in improvements in the biological or physical conditions of the receiving water. The San Diego Water Board did not revise Provision C as requested by the Copermittees.	

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C-3	PROVISION C: ACTION LEVELS	
	COMMENT: *Notes to Table C-3 should refer to the California Toxics Rule (CTR) instead of including equations.* The San Diego County Copermittees recommended removing the equations to calculate the non-storm water action levels (NALs) for the priority pollutants from the notes under Table C-3 and instead refer to the CTR under 40 CFR 131.38(b)(2), where the equations can be found.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the recommendations. The San Diego Water Board has revised the notes under Table C-3 to refer to 40 CFR 131.38(b)(2).	

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C-4	PROVISION C: ACTION LEVELS	
	COMMENT: *Action levels should be included for insecticides.* The Los Penasquitos Lagoon Foundation recommended specifying action levels for insecticides.	**Environmental Organizations** Los Penasquitos Lagoon Foundation
	RESPONSE: The San Diego Water Board disagrees with this recommendation. Provision C includes numeric actions levels for specific pollutants consistent with Order Nos. R9-2009-0002 and R9-2010-0016. Provisions C.1.b and C.2.b require the Copermittees to develop additional numeric action levels for pollutants or waste constituents that cause or contribute, or are threatening to cause or contribute to a condition of pollution or nuisance associated with the highest water quality priorities related to non-storm water and storm water discharges from the MS4s, respectively. If insecticides cause or contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan, the Copermittees are required to incorporate numeric action levels into the Water Quality Improvement Plan for insecticides. The San Diego Water Board did not revise Provision C to specify action levels for insecticides.	

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D-1	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	COMMENT: *Revise monitoring and assessment requirements as recommended by San Diego County Copermittees.* The San Diego County, Orange County, and Riverside County Copermittees designed a question driven monitoring and assessment program that would allow the Copermittees to adaptively manage their storm water programs more effectively and efficiently based on the monitoring data collected and the program assessments. The monitoring and reporting program in Provision D of the Tentative Order largely includes the monitoring and assessment program designed by the Copermittees. The commenters requested further revisions be made to the monitoring and assessment program in Provision D of the Tentative Order. Commenters from Environmental Organizations and Industry support the monitoring and assessment program in Provision D, however stress the importance of the Tentative Order requiring enough monitoring so that the Copermittees are able to track specific short, medium, and long term progress towards detecting and eliminating illicit discharges and improving water quality throughout the San Diego Region. Failing to require enough monitoring puts at risk a Copermittee's ability to detect increases in pollutant discharges and their effects on receiving water conditions.	**Building Industry / Industry** Industrial Environmental Association **Copermittees** City of San Diego City of Imperial Beach City of National City **Environmental Organizations** Environmental Groups
	RESPONSE: The San Diego Water Board agrees with the comments from the Copermittees as well as the Environmental Organizations and Industry. Provision D largely includes the question driven monitoring and assessment program collectively designed by the Copermittees. The program requires a sufficient amount of monitoring such that the Copermittees are able to track specific short, medium, and long term progress towards the goals established in the Water Quality Improvement Plan. Through development of the Water Quality Improvement Plans, the monitoring and assessment program required in Provision D can be modified to address specific needs and strategies developed to address the highest priority water quality conditions within each jurisdiction in each Watershed Management Area. The monitoring approach in Provision D has been further refined, based on the specific comments received on the Tentative Order, to allow Copermittees to more efficiently and effectively address the critical questions necessary to adaptively manage their storm water programs and achieve improved water quality within their jurisdiction and each watershed throughout the San Diego Region.	

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D-2	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	COMMENT: *Include requirements to track and monitor progress toward watershed goals and health of watersheds*. The Coastal Environmental Rights Foundation, Environmental Health Coalition, and the San Diego Coastkeeper jointly provided comments expressing concern that the monitoring and assessment requirements of the Tentative Order are not robust enough to: 1) support the Copermittees' ability to track progress towards achieving the goals and requirements of the Clean Water Act and the San Diego Basin Plan (i.e. effectively prohibiting non-storm water discharges, reducing pollutants in storm water to the maximum extent practicable, supporting the beneficial uses of the receiving waters), 2) enable the San Diego Water Board to determine compliance with the requirements of the Tentative Order, and 3) inform the public of the Copermittees' compliance with the requirements of the Tentative Order and progress towards achieving its goals. Other commenters from the Environmental Organizations expressed their support to include more monitoring in the Tentative Order, specifically requesting monitoring that provides assurances that Copermittees are able to detect any increase in pollutant discharges from their MS4 systems and be better able to address them sooner rather than later. Commenters from Industry requested the monitoring approach be iterative, strategic, cost-effective and question–driven so that it can provide the Copermittees with cost-effective informed data to guide their future storm water program actions through coordination with the San Diego Water Board staff. Several other commenters provided topic specific comments related to the need for mapping of coastal receiving waters and creeks. The USEPA commented on the need to bring the toxicity sampling requirements up to date with those recently adopted in other general and regional MS4 permits, as well as clarification to the monitoring locations required for determining compliance with TMDLs.	**Building Industry / Industry** Industrial Environmental Association **Environmental Organizations** South Laguna Civic Association CERF, EHC and SDCK Environmental Groups Laguna Bluebelt Coalition **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board disagrees with commenters from the Environmental Organizations that the monitoring and assessment requirements of the Tentative Order are not robust enough to support the Copermittees' ability to track progress towards achieving goals and requirements of the Clean Water Act (CWA), the California Water Code (CWC), and the San Diego Basin Plan (i.e. effectively prohibiting non-storm water discharges, reducing pollutants in storm water to the maximum extent practicable, and supporting the beneficial uses of the receiving waters). Provision D includes a monitoring program structure that is expected to be refined through the Water Quality	

D-2	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	Improvement Plan. The Provision D monitoring and assessment program should be customized to achieve the desired outcomes of the Water Quality Improvement Plan and ultimately the CWA and the CWC. The desired outcomes of the CWA and the CWC are about conditions in water bodies (chemical, physical, and biological integrity), and information about conditions in water bodies is essential to help guide the work of protection and restoration. The Tentative Order's monitoring and assessment program requires collection of chemical, physical, and biological data from outfalls and receiving waters designed to inform the Copermittees, the San Diego Water Board, and the public about the condition of the discharge and the conditions of the water bodies in the San Diego Region. The Tentative Order's assessment requirements are designed to take the data collected from the monitoring program and convert it to useful information about the successfulness of the Copermittees' storm water management programs to achieve the desired outcomes of the CWA and the CWC. The San Diego Water Board agrees with comments from Industry that the monitoring program needs to be iterative, strategic, cost-effective and question–driven. As part of the iterative approach and adaptive management requirements of the Tentative Order, Provision D.4 requires the Copermittees to integrate: 1) the data collected pursuant to Provision D.1 through D.3; 2) the assessment findings required pursuant to Provision D.4a-c; and, 3) information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision E to assess the effectiveness of, and any necessary modifications to, the Water Quality Improvement Plans. The requirements of the Tentative Order allow the Copermittees to adapt the monitoring based on watershed specific priority conditions within the confines of a robust Water Quality Improvement Plan development and implementation process. The San Diego Water Board agrees that the Tentative Order should be modified to increase clarity of what is required of each Copermittee, thus enabling the San Diego Water Board to better determine compliance. Several commenters provided suggested improvements to Provision D language. Selected modifications to Provision D of the Tentative Order were made to increase clarity of what is expected of the Copermittees throughout the iterative monitoring approach in efforts to increase specificity of what is minimally required and how compliance with the Tentative Order will be determined. The San Diego Water Board also agrees that the Tentative Order should be modified to increase the public's awareness of the Copermittees' compliance and progress towards achieving the goals of the Water Quality Improvement Plans. Provision F.1.a was modified to require the Copermittees implement a robust public participation process with multiple opportunities for public participation throughout the development of each component of the Water Quality Improvement Plan. Provision F.1.b provides the public another opportunity to	

D-2	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	submit comments on the Water Quality Improvement Plan during the acceptance process. The Copermittees are also required to include public participation during any updates to the Water Quality Improvement Plan. Finally, the data and information collected from monitoring, and the findings from the assessments will be reported in the Water Quality Improvement Plan Annual Reports. The San Diego Water Board has revised Provision D to be consistent with the toxicity sampling requirements included in the most recently adopted State Water Board and other Regional Water Board MS4 permits. Modifications were also made to Provision D requirements to clarify the monitoring locations for determining compliance with TMDLs.	

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D-3	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	COMMENT: *Requests for changes to schedules for monitoring and monitoring reports*. The San Diego County Copermittees submitted comments requesting an extension to the duration of the transitional monitoring program to accommodate the acceptance process of the Water Quality Improvement Plan and municipal program budget cycles. The Orange County Copermittees also submitted a comment requesting the commencement of the wet weather transitional outfall monitoring be delayed to year 2 of the transitional period to allow time to inventory and evaluate MS4 outfalls as required by Provision D.2.a.(1).	**Copermittees** Orange County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the comment that the transitional monitoring program should be continued until such time that the monitoring program within a Water Quality Improvement Plan is accepted by the San Diego Water Board. Provision D.1.a. Receiving Water, D.2.a. MS4 Outfall Discharge Monitoring, D.2.a.(2) Dry Weather MS4 Outfall Discharge Field Screening, and D.2.a.(3) Wet Weather MS4 Outfall Discharge Monitoring have been revised to require the Copermittees to conduct the transitional monitoring program until the Water Quality Improvement Plan is accepted. The San Diego Water Board disagrees with the recommendation to begin wet weather transitional monitoring in year two of the transitional period. Municipalities have already mapped the location of their MS4s for operation and maintenance reasons. Municipalities are also already aware of the majority of information listed in Provision D.2.a.(1), therefore delaying the commencement of the transitional wet weather MS4 outfall monitoring is not appropriate and no change to the Tentative Order was necessary.	

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D-4	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	COMMENT: *Require the Copermittees to utilize monitoring data from third party sources.* Comments submitted by Environmental Groups support the position that the Tentative Order should require the Copermittees to use third party data that meets particular criteria in their efforts to assess the watersheds and progress towards achieving water quality standards. The particular criteria would require third parties to maintain and make available for review the quality assurance plan, list of methods used, and standard operating procedures for the data. Additionally, the commenters requested the Tentative Order specify that data is "appropriate" if it has been collected using the latest Standard Methods of Water and Wastewater Analysis. The commenters further requested the Tentative Order require the Copermittees to solicit and evaluate third party data that meets the Tentative Order's criteria for collection, not just the data collected pursuant to Provisions D.1, D.2, and D.3 when evaluating the causes of water quality conditions. Lastly, the commenters support the position that the Copermittees should be allowed to partner with environmental groups or other third parties to complete regional special studies.	**Environmental Organizations** Environmental Groups
	RESPONSE: The San Diego Water Board agrees that the Copermittees should be required to use appropriately collected data from third parties during their efforts to assess conditions of the watershed. During development of the Water Quality Improvement Plan, the Copermittees are required under Provision B.2.a.(6) and Provision B.2.d.(4)(e) to consider available, relevant, and appropriately collected and analyzed data, information, or studies during their efforts to identify water quality priorities based on impacts of MS4 discharges on receiving waters and pollutant sources and/or stressors that contribute to the highest priority water quality conditions. Provision B.2.a.(6) and Provision B.2.d.(4)(e) allow the Copermittees to consider other data, not just data collected by the Copermittees. Additionally, Provision D.2 allows any data, "*not collected specifically for the Order that meet the quality assurance criteria of the Copermittees and the monitoring requirements of the Order*" to be used by the Copermittees in their MS4 outfall monitoring program. Lastly, the assessments required under Provision D.4 require evaluation of the data collected pursuant to Provisions D.1, D.2, and D.3, which isn't restricted to that data which is collected solely by the Copermittees, and which will be heavily influenced by the Water Quality Improvement Plans which are required to use "*other available, relevant, and appropriately collected data, information, and studies*." The San Diego Water Board agrees that the Copermittees should be allowed to partner with Environmental Groups or other third parties to complete regional special studies and additional language has been added to Provision D.3.	

D-5	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	COMMENT: *Include monitoring that will ensure compliance and jurisdictional accountability*. The Coastal Environmental Rights Foundation (CERF), Environmental Health Coalition (EHC), and the San Diego Coastkeeper (SDCK) collectively submitted comments in support of increasing the nature, frequency, and amount of monitoring in the Tentative Order. The commenters expressed concern that the "lax approach" to monitoring currently in the Tentative Order is not adequate to assess compliance with the requirements. The USEPA requested the Tentative Order be more specific with regards to required monitoring locations and minimum monitoring frequencies to determine compliance with the TMDLs in Attachment E. The San Diego Unified Port District specifically requested additional jurisdictional outfall monitoring be required to support the San Diego Water Board's and the Copermittees' ability to determine the sources of any exceedances(s) of water quality standard(s) in receiving waters.	**Copermittees** San Diego Unified Port District / Brown and Winters **Environmental Organizations** CERF, EHC and SDCK **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board generally disagrees with the comments from the Environmental Organizations that the monitoring approach in Tentative Order is too "lax." However, the San Diego Water Board agrees that certain monitoring provisions need additional specificity requiring minimum monitoring frequencies and monitoring at specific locations to track compliance with the TMDLs in Attachment E to the Tentative Order. The monitoring and assessment program in the Tentative Order is a question-driven monitoring approach largely designed to place monitoring resources where they are most needed. In order to answer the questions and accomplish efficiencies, the monitoring approach for non-storm water includes screenings, prioritization, and collection of data through visual observations. The Environmental Organizations call specific attention to the MS4 outfall screening required during the transitional monitoring period and monitoring the 10 highest priority non-storm water persistent flow MS4 outfall locations during the post transitional monitoring period. The San Diego Water Board considers this MS4 outfall screening approach necessary for the Copermittees to identify the highest priority non-storm water persistent flows and eliminate them. Elimination of non-storm water flows is a priority of the Tentative Order because eliminating non-storm water flows is consistent with the Clean Water Act requirement to effectively prohibit non-storm water discharges to the MS4. Elimination of non-storm water flows is the most effective way to prevent 100 percent of the pollutants in the non-storm water discharges from causing or contributing to exceedances in receiving water quality	

D-5	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	standards. Therefore, the Tentative Order requires more attention (monitoring, screening, and sampling) at the outfalls to eliminate non-storm water flows. That attention is based on a prioritization to address the outfalls causing or contributing to the very highest priority water quality conditions first. The monitoring and assessment program is designed to be dynamic with collection of data during both wet and dry weather at the MS4 outfalls and in the receiving water. The San Diego Water Board has made revisions in response to comments to ensure the monitoring program in the Tentative Order will be sufficient to inform all stakeholders and the San Diego Water Board on the Copermittees' progress to effectively eliminate non-storm water flows, reduce pollutants in storm water to the maximum extent practicable, and protect conditions in the receiving waters from MS4 discharges. The monitoring and assessment program is adaptable through the Water Quality Improvement Plan to allow the Copermittees to address the highest water quality priorities in a focused manner, directing resources towards those areas or sources within their jurisdiction causing and contributing to the priority water quality conditions. To address the comment on public transparency, the San Diego Water Board has modified the Water Quality Improvement Plan Development process of Provision F.1.a to require the Copermittees to identify the opportunities for public involvement in the development of the Water Quality Improvement Plans. Provision F.4 requires Copermittees to place data and information available to the public on the Regional Clearinghouse. Additional public participation and notification requirements can be found in Provision F that address comments regarding the public access to information concerning the nexus between the health of the receiving waters and the water quality conditions of the discharges from the Copermittees' MS4s. The USEPA requested the Tentative Order to be more specific with regards to the monitoring required to determine compliance with the TMDLs in Attachment E. Provision D.2.c.(2) now requires wet weather outfall monitoring be conducted at least once per year (during the transitional monitoring the Copermittees are still required to sample twice per year), with a requirement that the Copermittees may need to increase the frequency of monitoring to identify pollutants in storm water discharges from the MS4s in order to, among other things, determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E. Additionally, language in Provision D.2.b.(2)(b) has been modified to require the Copermittees to consider, notwithstanding all other priorities, compliance with applicable TMDLs in Attachment E when selecting MS4 outfall monitoring locations. The San Diego Unified Port District specifically requested additional jurisdictional outfall monitoring be required	

D-5	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	to support the San Diego Water Board's and the Copermittees' ability to determine the sources of any exceedances(s) of water quality standard(s) in receiving waters. The San Diego Water Board modified Provisions D.2.b.(2)(b) and D.2.c.(1)-(2) in response to USEPA's comments, thereby specifying a minimum frequency for MS4 outfall monitoring during wet weather and requiring both MS4 outfall and receiving water monitoring station locations be suitable to determine compliance with TMDLs in Attachment E, as well as suitable to determine progress towards achieving the goals of the Water Quality Improvement Plans. Provision D.4.b requires the Copermittees to utilize a watershed model to calculate or estimate the total flow volume and pollutant loadings during wet weather and dry weather discharges from the Copermittee's jurisdiction within the Watershed Management Area. These modifications to Provision D, along with the newly revised Water Quality Improvement Plan development process, address the comments on requiring more monitoring to determine compliance. Additionally, the Tentative Order does not preclude a Copermittee from collecting additional monitoring above what is required, if they deem it necessary to demonstrate that the sources are outside of their jurisdictional legal authority to control.	

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D-6	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	COMMENT: *Provide the County of San Diego an alternative transitional monitoring and assessment program for the Santa Margarita River Watershed Management Area until the Riverside County Copermittees are covered under the permit.* The monitoring and assessment program requirements should account for the phased coverage of the Riverside County Copermittees at a later date than the San Diego County Copermittees with regards to the Santa Margarita River Watershed Management Area.	**Copermittees** County of San Diego
	RESPONSE: The San Diego Water Board agrees with the commenter. Footnote 3 in Table B-1 of Provision B and Provision D.2.a.(3)(a)(iii), have been revised to allow the County of San Diego to delay development of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area until the Riverside County Copermittees have been notified of coverage under the Tentative Order. Footnote 3 in Table B-1 of Provision B clarifies that the County of San Diego is not required to implement the requirements of Provision B until the Riverside County Copermittees have been notified of coverage, but are required to implement the requirements of Provision D and Attachment E for its jurisdiction within the Santa Margarita River Watershed Management Area. Additionally, Provision D.2.a.(3)(a)(iii) was added to specify that the County of San Diego must select at least two (2) wet weather MS4 outfall discharge monitoring stations, reduced from the 5 stations required in Provision D.2.a.(3)(a)(i), for the portion of the Santa Margarita River Watershed Management Area within its jurisdiction until the Riverside Copermittees are notified of coverage. After the Riverside Copermittees are notified of coverage, the County of San Diego in concert with the County of Riverside Copermittees must comply with Provision B requirements and prepare a Water Quality Improvement Plan and implement the monitoring and assessment requirements according to Provision D for the Santa Margarita River Watershed Management Area.	

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D1-1	PROVISION D.1: Receiving Water Monitoring Requirements	
	COMMENT: *Requests for "clarifications" of receiving water monitoring requirements.* The Riverside County Copermittees provided suggested changes to the language in Provision D to clarify that the receiving water monitoring required pursuant to Provision D.1.a.(3) and D.1.e must be conducted as applicable to the Watershed Management Area and the Copermittees' MS4 discharges. The Riverside County Copermittees want a distinction written into the requirements because some of the monitoring requirements only apply to MS4 discharges to certain water bodies and not all Copermittees within a Watershed Management Area will have discharges to that water body. The USEPA requested the Tentative Order be more specific with regards to the transitional and post transitional receiving water monitoring required (frequency and station location) to determine compliance with the TMDLs in Attachment E.	**Copermittees** Riverside County Copermittees **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board disagrees with the requested changes to Provisions D.1.a.(3) and D.1.e. The requested changes to Provision D.1.a.(3) were not incorporated because the intent is to require the Copermittees, during the transitional monitoring period, to participate in regional receiving water monitoring programs, as applicable to the Watershed Management Area, including participation in (a) Storm Water Monitoring Coalition Regional Monitoring, (b) Southern California Bight Regional Monitoring, and (c) Sediment Quality Monitoring. Provision D.1.a.(3) correctly conditions the requirement by stating, 'as applicable' to the Watershed Management Area. For example, the expectation is that the Riverside County Flood Control and Water Conservation District, a current member of the Southern California Stormwater Monitoring Coalition (SMC), participate in SMC monitoring within the Watershed Management Area(s), in which their jurisdiction lies. The SMC was formed in 2001 by cooperative agreement of the Phase I municipal storm water NPDES lead Copermittees (including the Riverside County Flood Control and Water Conservation District), the NPDES regulatory agencies in southern California (including the San Diego Water Board) and the Southern California Coastal Water Research Project. It is the goal of the SMC to develop the technical information necessary to better understand storm water mechanisms and impacts, and then develop the tools that will effectively and efficiently improve storm water management decision-making. The SMC develops and funds cooperative projects to improve knowledge of storm water quality management for all throughout the San Diego Region.	

D1-1	PROVISION D.1: Receiving Water Monitoring Requirements	
	The requested changes to Provision D.1.e were not incorporated because the existing language is appropriate. Provision D.2.c.(2) has been revised to require wet weather MS4 outfall monitoring be conducted at least once per year after the Water Quality Improvement Plans are accepted, with a requirement that Copermittees may need to increase the frequency of monitoring in order to identify pollutants in storm water discharges from the MS4s in order to, among other things, determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E. During the transitional monitoring period, the Copermittees are still required to conduct wet weather MS4 outfall monitoring twice per year. Additionally, the language in Provision D.2.b.(2)(b) has been modified to require the Copermittees to consider, notwithstanding all other priorities, compliance with applicable TMDLs in Attachment E when selecting MS4 outfall monitoring locations.	

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D1-2	PROVISION D.1: Receiving Water Monitoring Requirements	
	COMMENT: *Requests for modifications to receiving water monitoring stations, frequency, and data collection requirements.* Comments submitted by the Copermittees ranged from a broad request to remove the entire coastal storm drain monitoring program from the receiving water monitoring requirements (San Diego County), adding an alternate compliance option in lieu of the receiving waters monitoring program previously adopted in their current permit (Orange County), to very specific additions to what is recorded during receiving water station field observations (Riverside County). Multiple Environmental Organizations supported the need to increase the amount of monitoring in order to 1) better inform the Copermittees of the nexus between the health of receiving waters and the water quality condition of their discharge, 2) be sufficient to fulfill the San Diego Water Board's need to assess compliance, and 3) be sufficient to fulfill the public's need to stay informed. The USEPA commented on the need for the receiving water requirements to include minimum monitoring frequencies and a minimum number of station locations to measure compliance with the WLAs and associated water quality based effluent limitations of the TMDLs in the Order. The Los Penasquitos Lagoon Foundation requested continuous flow monitoring at the base of tributaries to 303(d) listed water bodies and monitoring of groundwater seepages into 303(d) listed water bodies be added to the monitoring requirements of the Watershed Management Area including the Los Penasquitos Lagoon.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** CERF, EHC, SDCK Los Penasquitos Lagoon Foundation **State / Federal Government** USEPA
	RESPONSE: The San Diego Water Board agrees with the request to discontinue the coastal storm drain monitoring program and has replaced it with the receiving water monitoring program of Provision D.1 along with the transitional outfall monitoring screening and post-transitional outfall monitoring program (Provision D.2). The San Diego Water Board disagrees with the requested changes to the field screening observations required in Tables D-1 and D-6. The requests included adding the requirement to record any observed connectivity between MS4 outfall discharges and flowing receiving waters during receiving water and outfall field screening efforts. This was not added to the required observations listed in Tables D-1 or D-6 because the observations are already required as part of the illicit connection and illegal discharge requirements of Provision E.2. Pursuant to Provision D.1.f Alternative Watershed Monitoring Requirements, the San Diego Water Board may	

D1-2	PROVISION D.1: Receiving Water Monitoring Requirements	
	direct the Copermittees to participate in an effort to develop alternative watershed monitoring with other regulated entities, other interested parties, and the San Diego Water Board to refine, coordinate, and implement regional monitoring and assessment programs to determine status and trends in receiving waters. This requirement calls attention to the San Diego Water Board's plan to involve the Copermittees in the development of regional monitoring and assessment programs. It further calls attention to the San Diego Waters Board's position that a regional monitoring and assessment program must include other regulated entities in addition to the Phase I Copermittees. The Draft Framework for Monitoring and Assessment in the San Diego Region lays out the San Diego Water Board's framework to develop a regional receiving water monitoring program. Prior to development and required implementation of a regional receiving water monitoring program, and to maintain historical water quality monitoring trends, the requirements of Provision D.1.a-f require Copermittees to continue the receiving water monitoring required by their current storm water permits until coverage under the Tentative Order commences, and the Water Quality Improvement Plans are accepted. The monitoring program in Provision D has been modified to include minimums (removing the language "as appropriate"). Required monitoring minimums also address concerns regarding the Copermittees' and the San Diego Water Board's ability to determine compliance with the requirements of the Tentative Order (including TMDLs). Additionally, the Water Quality Improvement Plan development process has been significantly changed to include more public participation. Furthermore, the Tentative Order recognizes that each Copermittee should evaluate the need to increase its monitoring above what is minimally required to the appropriate level necessary to achieve the goals of the Water Quality Improvement Plan. Within the process for a Copermittee to get a Water Quality Improvement Plan developed and accepted by the San Diego Water Board, the Environmental Organizations and the public at large will have opportunities to contribute their expertise and provide comments on the nature and extent of monitoring needed to measure progress towards achieving the goals of the Water Quality Improvement Plans. Each Copermittee must establish a public participation process to solicit data, information, and recommendations to be utilized in the development of the Water Quality Improvement Plan. The Tentative Order also requires the Copermittees to form a Water Quality Improvement Consultation Panel (Panel) to provide recommendations on the priorities, goals, and strategies of the Water Quality Improvement Plan. The Panel must include a member of the environmental community, a member of the development community, and a member of the San Diego Water Board staff. Any recommendations for monitoring specific to a particular Watershed Management Area, receiving water body, pollutant, or stressor could be provided by the Panel and	

D1-2	PROVISION D.1: Receiving Water Monitoring Requirements	
	addressed in the Water Quality Improvement Plan. The minimum monitoring required plus the monitoring needed to attain goals established in the Water Quality Improvement Plans will be sufficient to inform the Copermittees, the San Diego Water Board, the environmental groups, and the public on the nexus between the health of receiving waters and the water quality condition of the discharges, compliance with TMDLs, and progress towards achieving the goals of the Clean Water Act.	

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D1-3	PROVISION D.1: Receiving Water Monitoring Requirements	
	COMMENT: *Require Test of Significant Toxicity to be consistent with other recent MS4 permits.* The USEPA commented that the toxicity monitoring requirements should be modified and to be consistent with the requirements in MS4 permits recently issued by the State Water Resources Control Board (Caltrans MS4 Permit) and the Los Angeles Regional Water Quality Control Board (Los Angeles County MS4 Permit).	**State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board agrees that the toxicity testing and data analysis requirements in the Tentative Orders should be consistent with other recently adopted MS4 Permits. The recently adopted Caltrans and Los Angeles County MS4 Permits include updated toxicity data collection procedures and data analysis methods that are consistent with the Draft State Water Resources Control Board Policy for Toxicity Assessment and Control, June 2012 (Draft State Board Toxicity Policy). Provision D has been updated to remove the acute toxicity test requirements, and only require chronic toxicity test biological endpoint data be analyzed using the Test of Significant Toxicity t-test approach specified in National Pollutant Discharge Elimination System Test of Significant Toxicity Document (USEPA, EPA 833-R-10-003, 2010), and other minor changes to make the Tentative Order consistent with recently adopted MS4 permits.	

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D2-1	PROVISION D.2: MS4 Outfall Discharge Monitoring Requirements	
	COMMENT: *Requests for "clarifications" of MS4 outfall discharge monitoring requirements.* The San Diego County and Riverside County Copermittees requested the dry weather MS4 outfall field screening language in Provision D.2.a.(2) be modified to clarify the number of visual inspections at major outfall locations required per jurisdiction per Watershed Management Area. The Riverside County Copermittees additionally requested that the field screening only apply to those MS4 outfalls in a Copermittee's inventory that are 'accessible,' and clarification to the definition of persistent flow. USEPA supports the Copermittees' comments to improve clarity with respect to identification of MS4 outfall monitoring locations. USEPA further requested language specific enough to assure MS4 outfall monitoring locations are selected to include compliance points for the TMDLs in Attachment E.	**Copermittees** Riverside County Copermittees San Diego County Copermittees **State and Federal Government** USEPA
	RESPONSE: The San Diego Water Board generally agrees with comments from the Copermittees and USEPA. Additional language has been added to improve the clarity of Provision D.2.a.(2) for those jurisdictions with equal to or greater than 500 major MS4 outfalls within their inventory that are located within multiple Watershed Management Areas. The San Diego Water Board specifically retained language to allow for the Copermittees to conduct more than the minimum amount of visual inspections of their major MS4 outfalls should increased inspections be a part of the strategies specified to meet the goals of any Water Quality Improvement Plan. The San Diego Water Board disagrees with the comments requesting modifications to the persistent flow definition in Footnote 19. The San Diego Water Board maintains that the definition, as written, accomplishes the intent of the requested revision and does not need to be explicitly stated. Existing language in Provision D.2.a.(1)(e) addresses the comment about field screening "accessible" inventoried MS4 outfalls. The Copermittees can field screen an MS4 outfall location by screening a manhole just upgradient of the discharge where access is safe. Provisions D.2.b.(2)(b)(i) and D.2.c.(1) were modified to require additional outfall monitoring locations if the 5 chosen MS4 outfall locations were not sufficient to determine compliance with the TMDLs in the Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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D2-2	PROVISION D.2: MS4 Outfall Discharge Monitoring Requirements	
	COMMENT: *Requests for modifications to MS4 outfall monitoring stations, frequency, and data collection requirements.* The Orange County, Riverside County and San Diego County Copermittees each requested modifications to the MS4 outfall monitoring stations, frequency, and data collection requirements. The San Diego County Copermittees requested the MS4 outfall discharge monitoring requirements be changed for the Santa Margarita River Watershed Management Area until the Riverside County Copermittees become covered under the Tentative Order, a reduction to the frequency of outfall sampling during the transitional period from annually to once per 2-year transitional period, a modification to the requirement to sample the 'first flush' during wet weather, a reduction to the number of dry weather outfall monitoring locations from 10 to 5, and an allowance for analytical testing to be reduced if demonstrated by supporting data. The Orange County and Riverside County Copermittees supported most of San Diego County Copermittees' requested revisions. Additionally, the Riverside County Copermittees commented on the disproportionality of the persistent flow MS4 outfall monitoring requirements, and the need to de-emphasize MS outfall monitoring locations if the discharge does not reach a receiving water due to infiltration, evaporation, or treatment. Environmental Organizations supported the need to increase the amount of monitoring in order to better inform the Copermittees of the nexus between the health of receiving waters and the water quality condition of their discharge, be sufficient to fulfill the San Diego Water Board's need to assess compliance, and be sufficient to fulfill the public's need to stay informed. The USEPA commented on the need for the MS4 outfall monitoring requirements to include minimum monitoring frequencies and a minimum number of MS4 outfall locations to measure compliance with the TMDLs.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** CERF, EHC, SDCK **State / Federal Government** USEPA
	RESPONSE: The San Diego Water Board agreed with several of the requested modifications. Revisions to Provision D.2 were made where appropriate. The requirement to monitor at least 10 major outfalls was reduced to monitoring at least 5 major outfalls with persistent flows. To address comments from the USEPA, this requirement was also modified to require additional MS4 outfall monitoring locations, if the 5 chosen outfall locations were not sufficient to determine compliance with the TMDLs. If a smaller jurisdiction has less than 5 major MS4 outfalls with persistent flow,	

D2-2	PROVISION D.2: MS4 Outfall Discharge Monitoring Requirements	
	they would be required to monitor all the MS4 outfalls with persistent flow until such time that they identify and terminate the discharge or met another criteria of Provision D.2.(2)(b)(ii). If any Copermittee eliminates all persistent flows from all of its MS4 outfalls, they would not be required to conduct dry weather MS4 outfall monitoring. The San Diego Water Board accepted most of the requested revisions from the Orange County Copermittees, except those concerning toxicity sampling and coliform sampling. Toxicity sampling was modified in response to comments provided by USEPA to make the toxicity requirements more consistent with recently adopted MS4 permits (i.e. Caltrans and Los Angeles County MS4 Permits). Please see the response to comment D1-3.	

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D3-1	PROVISION D.3: Special Studies	
	COMMENT: *Request to reduce the number of special studies required.* The San Diego County Copermittees submitted a comment requesting a reduction in the number of required special studies from three to two per Watershed Management Area, and from two to one for the San Diego Region to account for the time and resources required to plan and develop the special studies, and integrate the plans for the special studies into the monitoring and assessment programs of the Water Quality Improvement Plans. This comment was supported by the Riverside County Copermittees.	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the commenters. Provision D.3 has been modified to reduce the number of required special studies from three to two per Watershed Management Area, and from two to one for the San Diego Region.	

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D3-2	PROVISION D.3: Special Studies	
	COMMENT: *Allow special studies initiated prior to the term of the Tentative Order to count toward the required special studies.* The San Diego County Copermittees submitted a comment requesting that the special studies initiated prior to the term of the Tentative Order be allowed to count towards the special studies required in Provision D.3, citing that special studies are typically multi-year efforts that require multi-stage planning, funding approval/allocation, and analysis. This comment was supported by the Riverside County Copermittees.	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the commenters. Provision D.3 has been modified to allow the use of special studies initiate prior to adoption of the Tentative Order to comply with the requirements of Provision D.3.	

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D4-1	PROVISION D.4: Assessment Requirements	
	COMMENT: *Requests for "clarifications" of assessment requirements.* The San Diego County and Riverside County Copermittees submitted comments requesting clarifications be made to the assessment requirements of Provisions D.4.b.(1)-(2). The Copermittees concurred that the timing of reporting be compatible with completion of the assessments. The Riverside County Copermittees requested specific revisions to Provision D.4.b.(1)(c)(iv) concerning extrapolation of calculated flow volumes and pollutant loads; and assessment of jurisdictional accountability.	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the commenters. The San Diego Water Board modified Provision D.4.b.(1)(a) to add an annual assessment of data collected during the transition period and reporting as part of the Transitional Monitoring and Assessment Program Annual Report (Provision F.3.b.2). Provision D.4.b.(2)(a) requires assessment of MS4 outfall data collected after the transitional period and reporting as part of the Water Quality Improvement Plan Annual Report (Provision F.3.b.(3)). Requiring an annual report during the transitional years before the acceptance of the Water Quality Improvement Plan will allow Copermittees to perform 'complete' assessments and report on the progress for that year, whether it be a year within the transitional monitoring period or a year in which monitoring is conducted in accordance with the Water Quality Improvement Plan. Provisions D.4.b.(2)(c)(iv)[a]-[b] were modified to address comments concerning extrapolation of calculated flow volume and pollutant loads to outfalls that were not actually monitored. The assessment now requires the use of a model or other method to calculate or estimate the non-storm water volumes and pollutant loads collectively discharged from all the major MS4 outfalls in its jurisdiction identified as having persistent dry weather flows. To address the issue of jurisdictional accountability, the Copermittees are now required to identify and quantify (i.e. volume and pollutant loads) sources of non-storm water not subject to the Copermittee's legal authority that are discharged from the Copermittee's major MS4 outfalls to downstream receiving waters. The San Diego Water Board generally disagrees with the comment to require calculation of pollutant loads only for those priority water quality constituents identified in the Water Quality Improvement Plan. Calculation of all pollutant loads are required until a Copermittee collects sufficient data or other supporting information pursuant to Provision D.2.b.(2)(e)(iii)[e] to demonstrate analysis of a constituent is not necessary.	

D4-1	PROVISION D.4: Assessment Requirements	
	The San Diego Water Board agrees with the comment that MS4 outfall assessments are to be done for the area covered by each Copermittee and that the data to be used by each Copermittee would include the data collected from any Flood Control District MS4 operated within its jurisdiction. The San Diego Water Board has not modified any language within Provision D.4 to address this comment because the language adequately addresses the comment without further modifications.	

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D4-2	PROVISION D.4: Assessment Requirements	
	COMMENT: *Requests for modifications to assessment requirements.* The San Diego County Copermittees commented on the need for a longer assessment term (once per permit term rather than annually) to provide meaningful analysis of the annual pollutant load and flow calculations from MS4 outfalls during dry weather. The Copermittees further commented on the need to modify the requirements to calculate jurisdictional loads during wet weather, as well as modifications to clarify assessments necessary to track jurisdictional accountability. The Riverside County Copermittees agreed in large part with the comments provided by the San Diego County Copermittees. The Riverside County Copermittees also expressed a desire to clarify MS4 outfall assessments are to be done by each municipal Copermittee and that the data to be used by each municipal Copermittee include the data collected from any flood control district within its jurisdiction. Additionally, the Riverside County Copermittees expressed concern that the assessment requirements were requiring evaluations beyond their expertise and suggested pollutant loads only be calculated for priority pollutants. The Los Penasquitos Lagoon Foundation requested that the Tentative Order require the Copermittees to work with local land managers to assess the status and trends of receiving water quality conditions.	**Copermittees** Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Los Penasquitos Lagoon Foundation
	RESPONSE: The San Diego Water Board generally agreed with the need for a longer assessment term (once per permit term rather than annually) to provide meaningful analysis of the annual pollutant load and flow calculations from MS4 outfalls during dry weather and the need to modify the requirements to calculate jurisdictional loads during wet weather to the added area-based jurisdictional computational approach. The San Diego Water Board generally modified the Tentative Order where there was agreement with the comments. The San Diego Water Board, however, disagrees with the requests regarding MS4 outfall assessments for flood control districts, assessment requirements related to critical receiving water beneficial uses, and the suggestion that pollutant loads only be calculated for priority pollutants. The San Diego Water Board agrees with the comments provided by the Los Penasquitos Lagoon Foundation and required increased public participation and formation of a Water Quality Improvement Plan Consultation Panel in Provision F.1.a.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E-1	PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS	
	COMMENT: *Align the Jurisdictional Runoff Management Program requirements with the Water Quality Improvement Plan requirements.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting the requirements in Provision E be allowed to be modified based on what is proposed in the Water Quality Improvement Plans. The Copermittees assert that the requirements of Provision E are a "one size fits all" set of requirements, and the requirements of the Water Quality Improvement Plan become "additive" rather than "complimentary." Several Copermittees submitted separate comment letters supporting the concept by requesting the San Diego Water Board align the development and implementation of the Water Quality Improvement Plan better with the jurisdictional runoff management program requirements. The BIA Regulated Community Coalition also submitted comments supporting the concept. The Environmental Groups submitted comments expressing concern with the flexibility of the jurisdictional runoff management program requirements and requested that the Water Quality Improvement Plan include a detailed list of activities and what activities each Copermittee will implement within its jurisdiction. The Environmental Groups are concerned that without this specificity in the Water Quality Improvement Plans, and the flexibility that is provided in the jurisdictional runoff management program requirements would result in the burden of achieving water quality improvement within a watershed falling to only one or two Copermittees. The Environmental Groups would like to see a clearer commitment of what will be implemented by each Copermittee either in the Water Quality Improvement Plan or in the jurisdictional runoff management program documents for each Copermittee. The USEPA is also concerned with the flexibility that is provided by the requirements of Provision E. The USEPA prefers jurisdictional runoff management program requirements that include specific inspection frequencies.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** City of Dana Point City of Laguna Hills City of Lake Forest City of Mission Viejo City of Rancho Santa Margarita City of San Juan Capistrano Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Environmental Groups **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board agrees that the Water Quality Improvement Plans and jurisdictional runoff management program requirements should be better aligned and clearly present the water quality improvement strategies that each Copermittee will implement within its jurisdiction. The San Diego Water Board does not agree that the jurisdictional runoff management program requirements of Provision E should be allowed to be modified by the Water Quality Improvement Plan.	

E-1	PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS	
	The San Diego Water Board has revised Provision B.3.b in the revised Tentative Order (formerly Provision B.3.a in the Tentative Order) to require the Copermittees to specify which water quality improvement strategies each Copermittee will commit to implementing within its jurisdiction as part of its jurisdictional runoff management program requirements under Provisions E.2-E-7, and the optional water quality improvement strategies that will be implemented by the Copermittee within its jurisdiction when necessary to achieve the numeric goals. The optional water quality improvement strategies are to be implemented by the Copermittee as necessary to contribute toward achieving the numeric goals. Provision B.3.b in the revised Tentative Order also includes requirements for the Copermittees to identify optional Watershed Management Area strategies that the Copermittees will implement when necessary to achieve the numeric goals. Each Copermittee must specify BMPs, education programs, inspection frequencies, incentive and enforcement programs that will be implemented within its jurisdiction as part of its jurisdictional runoff management program requirements under Provisions E.2-E-7. Provisions E.2.e, E.3.g, E.4.f, E.5.e.(1), and E.7.c were removed in the revised Tentative Order, and the introductory paragraphs of Provisions E.2-E.7 were revised to state that each component must be implemented in accordance with the jurisdictional strategies identified in the Water Quality Improvement Plan. These revisions were made to better align the requirements of the Water Quality Improvement Plans and the jurisdictional runoff management programs, and provide an additional layer of transparency to the public for the strategies that the Copermittees will be committing to implement versus those strategies that will be implemented only when necessary to achieve the numeric goals. The San Diego Water Board has not modified the inspection frequency requirements in Provisions E.2-E.7. The inspection frequency requirements provide a sufficient level of guidance and flexibility for allowing the Copermittees to develop appropriate inspection frequencies that will be committed to in the Water Quality Improvement Plans, and a minimum level of effort that is expected for areas associated with the highest priority water quality conditions. The inspection frequencies that the Copermittees commit to implementing as part of the Water Quality Improvement Plans will be utilized by the San Diego Water Board during its audits of the Copermittees' programs to determine compliance with the requirements of the Tentative Order.	

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E-2	PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS	
	COMMENT: *Allow San Diego County to use the Watershed Urban Runoff Management Plan (WURMP) to guide its jurisdictional runoff management program for the Santa Margarita River Watershed Management Area until the Riverside County Copermittees are covered under the Tentative Order.* The County of San Diego and the San Diego County Copermittees requested that the requirement to develop a Water Quality Improvement Plan and implementation of the requirements of Provision E for the Santa Margarita River Watershed Management Area be postponed until the Riverside County Copermittees become covered under the Tentative Order.	**Copermittees** County of San Diego San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the request. The second introductory paragraph of Provision E states, "*Until the Copermittee has updated its jurisdictional runoff management program document with the requirements of Provision E, the Copermittee must continue implementing its current jurisdictional runoff management program*." The County of San Diego will continue to implement the jurisdictional runoff management program requirements of Order No. R9-2007-0001 until the Riverside County Copermittees are notified of coverage under the Order and a Water Quality Improvement Plan is developed pursuant to the requirements of this Order. The County of San Diego may use its WURMP for the Santa Margarita River Watershed to guide its jurisdictional runoff management program until the Water Quality Improvement Plan is developed and accepted. Please also see the response to comment B1-1.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E1-1	PROVISION E.1: Legal Authority Establishment and Enforcement	
	COMMENT: *Specify that the legal authority established by the Copermittees only applies to the Copermittees' jurisdictions.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting that the requirements of Provision E.1 be modified to specify that the legal authority established by the Copermittees only apply "to the extent allowable by law" and only applies to discharges within their jurisdiction. The Julian Community Planning Group also commented that there are jurisdictions that a Copermittee has no authority to require compliance.	**Community Planning Groups** Julian Community Planning Group **Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees that it is necessary to specify that the legal authority established by the Copermittees is only applicable to their jurisdictions. The requirements of Provision E.1 are consistent with the requirements under 40CFR122.26(d)(2)(i)(A)-(F) and do not go beyond those requirements. The legal authority that each Copermittee is required to establish for its jurisdiction is logically only expected to apply to its jurisdiction. Provision E.1.a.(2) is consistent with 40CFR122.26(d)(2)(i)(A), which requires the Copermittee to "*Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity*." 40CFR122.26(d)(2)(i)(A) does not make a distinction between industrial activity (which includes construction activity according to 40 CFR 122.26(b)(14)(x)) that is regulated by an NPDES permit, such as the Statewide Industrial and Construction General Permits, and those that are not. Even if there are industrial and construction sites regulated by the Statewide Industrial or Construction General Permits, those sites are still subject to the Copermittees ordinances and the Copermittee must have the legal authority to control discharges from those sites. Provisions E.1.a.(4) is consistent with 40CFR122.26(d)(2)(i)(D), which requires the Copermittee to "*Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system*." The federal regulations require the Copermittees to enter into interagency agreements to control pollutants from one Copermittee's jurisdiction to another Copermittee's jurisdiction. Provision E.1.a.(4) does not require anything outside of the federal requirements.	

E1-1	PROVISION E.1: Legal Authority Establishment and Enforcement	
	Provision E.1.a.(5) is consistent with the requirements in the Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016. The Copermittees should be working with other entities outside of their jurisdiction to reduce or eliminate pollutants being discharged into their jurisdictions and MS4s, especially if those are significant sources of pollutants. The "where possible" qualifier in the requirement gives the Copermittees some flexibility in working with other entities, but Provision E.1.a.(5) does not require the Copermittees to impose their legal authority upon entities outside their jurisdictions. Provision E.1.a.(10) is consistent with 40CFR122.26(d)(2)(i)(F), which requires the Copermittee to "*Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer*." The San Diego Water Board did not make revisions to the requirements of Provision E.1 requested by the Copermittees.	

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E1-2	PROVISION E.1: Legal Authority Establishment and Enforcement	
	COMMENT: *Requests for "clarifications" for legal authority requirements.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting several "clarification" to requirements of Provision E.1.a to be "consistent" with the requirements under 40CFR122.26(d)(2)(i)(A)-(F).	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees that the legal authority requirements under Provision E.1.a are not consistent with the requirements under 40CFR122.26(d)(2)(i)(A)-(F). The requirements of Provision E.1.a are consistent with the requirements under 40CFR122.26(d)(2)(i)(A)-(F) and do not go beyond those requirements. The requirements under 40CFR122.26(d)(2)(i)(A)-(F) apply to both non-storm water discharges *to* the MS4 and pollutants in storm water discharges *from* the MS4. Provision E.1.a.(1) is consistent with 40CFR122.26(d)(2)(i)(B), which requires the Copermittee to "[*operate pursuant to legal authority established…which authorizes or enables the applicant at a minimum to*…] *Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer*." The requirement under 40CFR122.26(d)(2)(i)(B) does not include the term "*effectively* prohibit" only "prohibit" illicit discharges to the MS4. Provision E.1.a.(2) is consistent with 40CFR122.26(d)(2)(i)(A), which requires the Copermittee to "[*operate pursuant to legal authority established…which authorizes or enables the applicant at a minimum to*…] *Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity*." The requirement under 40CFR122.26(d)(2)(i)(A) does not make a distinction between industrial activity (which includes construction activity according to 40 CFR 122.26(b)(14)(x)) that is regulated by an NPDES permit, such as the Statewide Industrial and Construction General Permits, and those that are not. Provision E.1.a.(3) is consistent with 40CFR122.26(d)(2)(i)(C), which requires the Copermittee to ""[*operate pursuant to legal authority established…which authorizes or enables the applicant at a minimum to*…] *Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water*."	

E1-2	PROVISION E.1: Legal Authority Establishment and Enforcement	
	Provisions E.1.a.(6)-(9) are consistent with 40CFR122.26(d)(2)(i)(E), which requires the Copermittee to "[*operate pursuant to legal authority established…which authorizes or enables the applicant at a minimum to*…] *Require compliance with conditions in ordinances, permits, contracts or orders*." Provisions E.1.a.(6)-(9) provide more specificity about what "compliance with conditions in ordinances, permits, contracts or orders" includes. Provision E.1.a.(10) is consistent with 40CFR122.26(d)(2)(i)(F), which requires the Copermittee to ""[*operate pursuant to legal authority established…which authorizes or enables the applicant at a minimum to*…] *Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer*." The San Diego Water Board did not make revisions to the requirements of Provision E.1.a requested by the Copermittees.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E2-1	PROVISION E.2: Illicit Discharge Detection and Elimination	
	COMMENT: *Non-storm water discharges must be addressed because of the impacts dry weather flows have on receiving waters.* The Los Penasquitos Lagoon Foundation and the South Laguna Civic Association each submitted comments expressing concerns about the impacts on receiving water due to dry weather flows. The Los Penasquitos Lagoon Foundation noted that dry weather discharges can create serious impacts to the beneficial uses of receiving waters that support salt marsh habitats. The South Laguna Civic Association noted that elevated creek flows originating from over-irrigation result in the discharge of several pollutants to protected creek, estuary and coastal receiving waters. The Los Penasquitos Lagoon Foundation requested that the Tentative Order provide mechanisms to allow the Copermittees to address dry weather flows regardless of whether or not constituents of concern are present in the flows. The South Laguna Civic Association advocated for effective enforcement measures by the San Diego Water Board to reduce discharges generated by over-irrigation.	**Environmental Organizations** Los Penasquitos Lagoon Foundation South Laguna Civic Association
	RESPONSE: The San Diego Water Board agrees that non-storm water discharges must be addressed. The approach to regulating non-storm water discharges in the Tentative Order has been modified compared to earlier permits. The Tentative Order focuses on "effectively prohibiting" or preventing and eliminating all non-NPDES-permitted non-storm water discharges to the MS4. The Tentative Order also requires the Copermittees to prohibit non-storm discharges associated with over-irrigation to the MS4. These two changes are expected to result in more actions implemented by the Copermittees to "effectively prohibit" non-storm water discharges to the MS4s and thereby non-storm water and pollutants from the MS4s to receiving waters. The San Diego Water Board agrees that the San Diego Water Board must enforce permit requirements more effectively. By issuing the Tentative Order, the San Diego Water Board expects to be able to reallocate its resources to better enforce permit requirements instead of developing permits and permit requirements. However, the San Diego Water Board also expects the public to provide data, information and evidence that will allow the San Diego Water Board to enforce the requirements of the Tentative Order.	

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E2-2	PROVISION E.2: Illicit Discharge Detection and Elimination	
	COMMENT: *Requests for "clarifications" of illicit discharge detection and elimination requirements.* The Riverside County and San Diego County Copermittees, the Industrial Environmental Association, the BIA Regulated Community Coalition, and the Los Penasquitos Lagoon Foundation each submitted comment letters recommending minor revisions to the language under Provision E.2 to "clarify" the requirements, or to be consistent the comments regarding non-storm water discharges (see comment Gnl-13).	**Building Industry / Industry** Industrial Environmental Association BIA Regulated Community Coalition **Copermittees** Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Los Penasquitos Lagoon Foundation
	RESPONSE: The San Diego Water Board reviewed and considered the requests for minor revisions to "clarify" the requirements under Provision E.2. Where the San Diego Water Board determined a revision requested by a commenter was appropriate and necessary to clarify a requirement, clarify a linkage to another requirement, or make it consistent with other revisions made in the Tentative Order, the San Diego Water Board made a revision under Provision E.2. In many cases, the requested revision was not appropriate, not necessary, or both. In such cases, the San Diego Water Board did not revise the language as requested. Please see Provision E.2 in the revised Tentative Order to see where revisions were made. Please also see the responses to the comments that follow, associated with Provision E.2, for revisions that were made for specific parts under Provision E.2.	

E2-3	PROVISION E.2: Illicit Discharge Detection and Elimination	
	COMMENT: *Requests to more clearly define the responsibility of each Copermittee to address sources non-storm water discharges originating outside of a Copermittee's jurisdiction or control.* The Riverside County and San Diego County Copermittees each submitted comments requesting modifications to the language under Provisions E.2.b and E.2.d to better define or more clearly define the responsibilities of each Copermittee to address sources of non-storm water discharges originating outside of a Copermittee's jurisdiction or control. The San Diego County Copermittees requested a minor revision to Provision E.2.b.(6) changing "must" to "shall." The San Diego County Copermittees also requested a minor revision to Provision E.2.d.(1)(d) to include a consideration for natural sources in its prioritization of investigations. The Riverside County Copermittees did not include the comments in their comment letter, but did include similar revisions in a track changes version of the Tentative Order provided with their comments. The Riverside County Copermittees requested additions to Provision E.2.d.(3) to specify that a Copermittee is no longer responsible for eliminating a non-storm water discharge to its jurisdiction if the source is in an upstream jurisdiction, and allowing the Copermittee to charge the San Diego Water Board for identifying non-storm water discharges subject to the regulatory authority of the San Diego Water Board.	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the requests. Revision of Provision E.2.b.(6) to change "must" to "shall" is unnecessary. In either case, the San Diego Water Board would interpret the language as the Copermittee is required to implement Provision E.2.b.(6). Revision of Provision E.2.d.(1)(d) is unnecessary. Provisions E.2.d.(1)(a)-(e) are the criteria that the Copermittee must consider in its prioritization of follow-up investigations. Nothing in Provisions E.2.d.(1)(a)-(e) prohibit the Copermittee from considering natural sources as part of its prioritization of follow-up investigations. The recommended revisions to Provision E.2.d.(3) are not necessary or appropriate. Provision E.2.b.(6) already requires the Copermittee to coordinate with upstream Copermittees to prevent illicit discharges to the MS4 within its jurisdiction. In addition, Provision E.1.a.(4) requires the Copermittee to "*Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system*." The federal regulations require the Copermittees to enter into	

E2-3	PROVISION E.2: Illicit Discharge Detection and Elimination	
	interagency agreements to control pollutants from one Copermittee's jurisdiction to another Copermittee's jurisdiction. The request to allow a Copermittee to charge the San Diego Water Board for implementing an investigation of non-storm water discharges to its MS4 is inappropriate. Each Copermittee is required to effectively prohibit non-storm water discharges to their MS4s by enforcing its legal authority, unless a non-storm water discharge is authorized under an NPDES permit. If a non-storm water discharge originates from a source that is subject to the San Diego Water Board's authority and requires an NPDES permit, then the Copermittee is still responsible for identifying the source if it is resulting in a non-storm water discharge into and from the Copermittee's MS4. If the non-storm water discharge is not authorized under an NPDES permit, then it is an illicit discharge. The Copermittee must either eliminate the illicit discharge or require the discharger to obtain authorization from the San Diego Water Board under an NPDES permit. If a non-storm water discharge to the Copermittee's MS4 is an NPDES permitted discharge, then the Copermittee is responsible for demonstrating that the non-storm water discharge is not an illicit discharge by identifying the source as an NPDES permitted discharge. The Copermittee must provide the data and documentation to demonstrate that non-storm water discharges from its MS4 are authorized under separate NPDES requirements. Until the Copermittee demonstrates that a non-storm water discharge is an NPDES-permitted discharge, the Copermittee is responsible for the non-storm water discharge. The non-storm water source investigation and identification are part of the Copermittee's responsibility to demonstrate compliance with the requirements in the Tentative Order. The San Diego Water Board did not revise Provisions E.2.b or E.2.d.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E2a-1	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Request to allow the Copermittees to "encourage" instead of "require" air conditioning condensate non-storm water discharges be directed to landscaped areas or other impervious surfaces*. The City of National City, the San Diego County Copermittees, the San Diego Unified Port District, and the San Diego Port Tenants Association each submitted comments expressing concerns with requiring air conditioning condensate non-storm water discharges to be directed to landscaped areas or other permeable surfaces, if feasible. The City of National City, the San Diego County Copermittees, and the San Diego Unified Port District requested the language of Provision E.2.a.(4)(a) be revised to encourage instead of require air conditioning condensate non-storm water discharges be directed to landscaped areas or other permeable surfaces. The San Diego County Copermittees also requested the addition of "or to the sanitary sewer" at the end of the requirement. The City of National City opposed this addition. The San Diego Port Tenants Association requested that the requirement be limited to development or re-development projects.	**Copermittees** City of National City San Diego County Copermittees San Diego Unified Port District **Societies/Associations/Coalitions** San Diego Port Tenants Association
	RESPONSE: The San Diego Water Board agrees to revise the requirements to encourage instead of require air conditioning condensate non-storm water discharges be directed to landscaped areas or other permeable surfaces. The San Diego Water Board also agrees to add "to the sanitary sewer" as an additional option. The San Diego Water Board disagrees with limiting the requirement to development or re-development projects. Air conditioning condensate non-storm water discharges originate primarily from existing development, and the Clean Water Act requires the Copermittees to effectively prohibit non-storm water discharges to the MS4. Please see Provision E.2.a.(4)(a) in the revised Tentative Order to see the revisions.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

E2a-2	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Requests for modifications to requirements of fire-fighting non-storm water discharges.* The Orange County, Riverside County, and San Diego County Copermittees each submitted comments objecting to the requirement to encourage the implementation of BMPs for emergency firefighting discharges and/or the requirement to address non-emergency firefighting discharges from building fire suppression systems as illicit discharges. The County of San Diego and San Diego County Fire Authority also objected to the requirement to encourage implementation of BMPs for emergency firefighting discharges. San Diego Gas and Electric, the Southern California Gas Company, and the San Diego Port Tenants Association also objected to the requirement to address non-emergency firefighting discharges from building fire suppression systems as illicit discharges. The Orange County and Riverside County Copermittees recommended removing Provision E.2.a.(5)(b) and specifying that emergency firefighting non-storm water discharges do not require BMPs and are not prohibited. The San Diego County Fire Authority recommended maintaining the existing requirements in Order No. R9-2007-0001, which is supported by the County of San Diego. The San Diego County Copermittees recommended revising Provision E.2.a.(5)(a)(i) to require the Copermittees to address non-emergency firefighting discharges from building fire suppression systems as illicit discharges "unless BMPs are implemented to prevent the discharge of pollutants to the MS4." The Riverside County Copermittees, County of San Diego, San Diego County Fire Authority, San Diego Gas and Electric, Southern California Gas Company, and San Diego Port Tenants Association supported the recommendation. The Orange County Copermittees did not provide a similar comment, but recommended that other non-emergency firefighting discharges be addressed by a program developed and implemented by the Copermittee "in conjunction with the local Fire Authority/District."	**Building Industry / Industry** San Diego Gas and Electric Southern California Gas Company **Copermittees** County of San Diego Orange County Copermittees Riverside County Copermittees San Diego County Copermittees San Diego County Fire Authority **Societies/Associations/Coalitions** San Diego Port Tenants Association
	RESPONSE: The San Diego Water Board has review and considered the recommendations from the commenters. The San Diego Water Board disagrees that the language in Provision E.2.a.(5)(b) requires the implementation of BMPs for emergency fire fighting discharges, or prohibits emergency fire fighting discharges to the MS4. Provision E.2.a.(5)(b) only requires the Copermittees to "encourage" the implementation of BMPs. Provision E.2.a.(5)(b) is a recommendation for the Copermittees to implement, not a requirement for compliance.	

E2a-2	PROVISION E.2.a: Non-Storm Water Discharges	
	The San Diego Water Board agrees to the recommended revision to Provision E.2.a.(5)(a)(i). The San Diego Water Board does not agree that the recommended revision to Provision E.2.a.(5)(a)(ii) is necessary. The Copermittees would have to develop and implement the program to address non-emergency fire fighting discharges in conjunction or coordination with the local fire authority or fire district. Please see Provision E.2.a.(5) in the revised Tentative Order to see the revisions.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E2a-3	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Clarify that non-storm water discharges authorized by a separate NPDES permit are authorized to be discharged to the MS4.* The San Diego Port Tenants Association, San Diego Gas and Electric, and the Southern California Gas Company each submitted comments requesting language in the Tentative Order to specify that non-storm water discharges authorized by separate NPDES permits are authorized to discharge to the MS4.	**Building Industry / Industry** San Diego Gas and Electric Southern California Gas Company **Societies/Associations/Coalitions** San Diego Port Tenants Association
	RESPONSE: The San Diego Water Board disagrees that revision to the language in the Tentative Order are necessary or appropriate. Provision A.1.b has been revised to refer to Provision E.2, which is the illicit discharge detection and elimination program requirements that must be implemented by each Copermittee within its jurisdiction to effectively prohibit non-storm water discharges to its MS4. Provision A.1.b also specifies that the Copermittees are required to effectively prohibit non-storm water discharges to the MS4 *unless* such discharges are authorized by a separate NPDES permit. The San Diego Water Board did not revise the Tentative Order to include additional language.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E2a-4	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Objections to addressing non-storm water discharges related to extraction of groundwater as illicit discharges.* The Orange County, Riverside County, and San Diego County Copermittees each submitted comments objecting to the requirements to address non-storm water discharges related to extraction of groundwater as illicit discharges if they are not identified as sources of pollutants. The City of National City also submitted a comment with a similar objection. The Copermittees also objected to requiring non-storm water discharges related to extraction of groundwater to be enrolled under the General Groundwater Extraction NPDES Permits issued by the San Diego Water Board. The Copermittees recommended several revisions to Provisions E.2.a.(1) and E.2.a.(3) to modify, remove, and/or reorganize the requirements pertaining to non-storm water discharges related to groundwater extraction.	**Copermittees** City of National City Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the recommendations. The Clean Water Act requires NPDES permit for MS4s to effectively prohibit non-storm water discharges to the MS4. As explained in the Fact Sheet, the Phase I Final Rule clarifies that non-storm water discharges through an MS4 are not authorized under the CWA (55 FR 47995): "*Today's rule defines the term "illicit discharge" to describe any discharge through a municipal separate storm sewer system that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not authorized under the Clean Water Act. Section 402(p(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer…Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit*." Thus, all non-storm water discharges that do not have authorization under an NPDES permit must ultimately be removed (i.e. prevented or eliminated) from the MS4 or become subject to an NPDES permit. The requirements under Provisions E.2.a.(1) and E.2.a.(3) are consistent with the Clean Water Act, the Code of Federal Regulations and the clarification in the Phase I Final Rule for non-storm water discharges. The non-storm water categories listed under Provision E.2.a.(1) can be authorized by an NPDES permit because they are extracting groundwater for the purpose of dewatering, and the San Diego Water Board has two NPDES permits that can authorize these types of non-storm water discharges. These are not "conditionally exempt"	

E2a-4	PROVISION E.2.a: Non-Storm Water Discharges	
	non-storm water discharges as the Copermittees have asserted. If there are non-storm water discharges that result from groundwater extraction for dewatering and do not have authorization under an NPDES permit, the discharge is an illicit discharge. The non-storm water categories listed under Provision E.2.a.(3) generally are expected to be discharged from natural, uncontrollable, or unanticipated sources. Non-storm water discharges from foundation drains and footing drains designed to be above the groundwater table are not generally expected to occur. If they do occur, the Copermittee is expected to implement its illicit discharge detection and elimination program to determine if the discharge is transient or persistent, a source of pollutants or not, and whether the discharge must be eliminated in accordance with its priorities. In general, the requirements under Provision E.2 are focused on the ultimate removal of unauthorized non-storm water discharges to the MS4 to "effectively prohibit" non-storm water discharges to the MS4, as required by the Clean Water Act. The San Diego Water Board is not requiring the Copermittee to enforce any NPDES permits issued by the San Diego Water Board or State Water Board. The Copermittees are only required to enforce their legal authority to prohibit illicit discharges to their MS4s established pursuant to Provision E.1.a.(1). The San Diego Water Board did not revise Provisions E.2.a.(1) or E.2.a.(3).	

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E2a-5	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Request to allow the Copermittees to focus on elimination of "non-storm water discharges that are a source of pollutants" not "non-storm water discharges."* The Orange County and Riverside County Copermittees each requested that the requirements under Provision E.2.a be revised to allow the Copermittees to focus on eliminating non-storm water discharges that are a source of pollutants and not require the elimination of all non-storm water discharges. In contrast, the Los Penasquitos Lagoon Foundation requested that the requirements under Provision E.2 provide the Copermittees a mechanism to address illicit discharges regardless of whether or not constituents of concern are present within the flows.	**Copermittees** Orange County Copermittees Riverside County Copermittees **Environmental Organizations** Los Penasquitos Lagoon Foundation
	RESPONSE: The San Diego Water Board disagrees with the Copermittees' request. Provision E.2 does provide the Copermittees a mechanism to address illicit discharges regardless of whether or not constituents of concern are present within the flows. However, the Copermittees are required to prioritize the non-storm water discharges that they will address, and eliminate the highest priority non-storm water discharges first. Please see the response to comment E2a-4.	

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E2a-6	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Request to allow the Copermittees to encourage the control of residential car washing non-storm water discharges through public education.* The San Diego County Copermittees submitted a comment requesting the requirements of Provision E.2.a.(4)(b) be revised to allow the Copermittees to encourage the control of residential car washing non-storm water discharges through public education.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board reviewed and considered the requested revisions. The San Diego Water Board did not revise Provision E.2.a.(4)(b) as requested, but did make revisions to provide the flexibility to encourage the control of residential car washing non-storm water discharges through public education.	

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E2a-7	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT*: Request for modification to requirements for swimming pool non-storm water discharges.* The San Diego County Copermittees requested a minor modification to Provision E.2.a.(4)(c) to add the phrase "should be managed as to:" for the non-storm water discharge requirements related to dechlorinated swimming pool discharges.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board reviewed and considered the requested revision. The revision to Provision E.2.a.(4)(c) does not provide any additional clarify and is not necessary. The San Diego Water Board did not revise Provision E.2.a.(4)(c) as requested.	

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E2a-8	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Objections to requiring the prohibition of over-irrigation non-storm water discharges.* The Riverside County Copermittees and the County of San Diego each submitted comments objecting to eliminating the non-storm water discharge categories associated with over-irrigation, which results in requiring the Copermittees to prohibit over-irrigation non-storm water discharges to the Copermittees' MS4s. The Copermittees requested that the non-storm water discharge categories associated with over-irrigation be put back into Provision E.2.a. In contrast, the Los Penasquitos Lagoon Foundation and the South Laguna Civic Association each submitted comments expressing concerns about the impacts on receiving water due to dry weather flows associated with over-irrigation. The Los Penasquitos Lagoon Foundation noted that dry weather discharges can create serious impacts to the beneficial uses of receiving waters that support salt marsh habitats. The South Laguna Civic Association noted that elevated creek flows originating from over-irrigation result in the discharge of several pollutants to protected creek, estuary and coastal receiving waters.	**Copermittees** County of San Diego Riverside County Copermittees **Environmental Organizations** Los Penasquitos Lagoon Foundation South Laguna Civic Association
	RESPONSE: The San Diego Water Board disagrees with the Copermittees' request. The Riverside County Copermittees assert that the Copermittees must identify the categories that are sources of pollutants that should be prohibited, not the San Diego Water Board. The San Diego Water Board disagrees. This is the responsibility of both the San Diego Water Board and/or the discharger. Either the San Diego Water Board or the discharger may identify categories that should be prohibited. The Phase I Rule (55 FR 48037) specifies that "*the Director [i.e. San Diego Water Board] may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharges where appropriate*." In this case, the San Diego Water Board has identified non-storm water runoff from landscape irrigation, irrigation water, and lawn watering (collectively, "over-irrigation") as a significant source of pollutants discharging to the MS4. The Fact Sheet cites a number of documents, from the state and all three counties of the San Diego Region, to justify the removal of these categories from the list of categories of non-storm water discharges into the MS4 not required to be prohibited. The San Diego Water Board maintains that the documentation cited in the Fact Sheet supports that removal of these categories. However, the comments from the Los Penasquitos Lagoon Foundation and the South Laguna Civic Association also support this conclusion. In addition, the removal of the non-storm water discharge categories associated with over-irrigation has already	

E2a-8	PROVISION E.2.a: Non-Storm Water Discharges	
	been adopted in the Orange County and Riverside County MS4 Permits (Order Nos. R9-2009-0002 and R9-2016-0016). The Riverside County Copermittees are already subject to the requirement to prohibit non-storm water discharge categories associated with over-irrigation, so the removal of these categories in the Tentative Order is consistent with their current requirements. Furthermore, the removal of the non-storm water discharge categories associated with over-irrigation is consistent with what is already required to be implemented by the Copermittees. The prohibition is consistent with the Water Conservation in Landscaping Act (AB1881), which required cities and counties to adopt landscape water conservation ordinances prohibiting runoff from inefficient landscape irrigation by January 1, 2010. The cities and counties were required to adopt ordinances that prohibit runoff from "the target landscape" to "adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures." The Copermittees should have already adopted these ordinances and are required to enforce these ordinances to prohibit runoff associated with over-irrigation. The San Diego Water Board did not revise Provision E.2.a to include the non-storm water discharge categories associated with over-irrigation.	

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E2a-9	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Objection to requirement to reduce or eliminate non-storm water discharges whether or not a non-storm water discharge has been identified as an illicit discharge.* The Orange County, Riverside County, and San Diego County Copermittees each submitted comments objecting the requirement under Provision E.2.a.(7) to reduce or eliminate non-storm water discharges whether or not a non-storm water discharge has been identified as an illicit discharge. The San Diego County Copermittees recommended removing the phrase "whether or not the non-storm water discharge has been identified as an illicit discharge" and the Orange County and Riverside County Copermittees recommended removing Provision E.2.a.(7). In contrast, the Los Penasquitos Lagoon Foundation requested that the requirements under Provision E.2 provide the Copermittees a mechanism to address illicit discharges regardless of whether or not constituents of concern are present within the flows. The Los Penasquitos Lagoon Foundation noted that dry weather freshwater flows themselves can create serious impacts to the beneficial uses of receiving waters that support salt marsh habitats, especially when those flows have been changed from ephemeral to perennial.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Los Penasquitos Lagoon Foundation
	RESPONSE: The San Diego Water Board disagrees with the request to remove Provision E.2.a.(7), but agrees to modify the language. Provision E.2.a.(7) is consistent with Clean Water Act, the Code of Federal Regulations and the clarification in the Phase I Final Rule for non-storm water discharges. Please see response to comment E2a-4. The San Diego Water Board has revised Provision E.2.a.(7). Please see the revisions in the revised Tentative Order.	

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E2a-10	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Request for modifications to the requirements for water line flushing and water main breaks non-storm water discharges.* The Metropolitan Water District of Southern California submitted a request to modify Provision E.2.a.(2) to specify that non-storm water discharges from water purveyors and community water systems are authorized discharges and not illicit discharge if enrolled or regulated under NPDES Permit No. CAG 679001 (Order No. R9-2010-0003).	**Other Entities** Metropolitan Water District of Southern California
	RESPONSE: The San Diego Water Board disagrees with the request. Provision E.2.a.(2) is specific to the requirement for the Copermittees to identify whether or not a non-storm water discharge resulting from water line flushing or water main breaks are illicit discharges. These are two non-storm water discharge categories specifically identified in the Code of Federal Regulations that the Copermittees are required to address as illicit discharges if they are identified as a source of pollutants. The introductory paragraph to Provision E.2.a already specifies that non-storm water discharges authorized by a separate NPDES permit is not required to be addressed as an illicit discharge. Provision E.2.a.(2) further specifies that water line flushing and water main breaks covered under NPDES Permit No. CAG 679001 (Order No. R9-2010-0003) are not illicit discharges. The San Diego Water Board did not revise Provision E.2.a.(2).	

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E2a-11	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Request to allow the Copermittees to designate BMPs to be implemented if a category of non-storm water discharges is found to be a source of pollutants instead of requiring a prohibition of the category of non-storm water discharges.* San Diego Gas and Electric and the Southern California Gas Company each submitted comments requesting Provision E.2.a.(6) be modified to provide an alternative that would allow the Copermittees to designate BMPs to be implemented if a category of non-storm water discharges is found to be source of pollutants, instead of requiring a prohibition of the category of non-storm water discharges.	**Building Industry / Industry** San Diego Gas and Electric Southern California Gas Company
	RESPONSE: The San Diego Water Board reviewed and considered the requested revision. The San Diego Water Board has revised Provision E.2.a.(6) to allow the Copermittees to propose controls to be implemented if a category of non-storm water discharges is found to be a source of pollutants. Please see Provision E.2.a.(6) in the revised Tentative Order.	

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E3-1	PROVISION E.3: Development Planning	
	COMMENT: *Requests for "clarifications" for development planning requirements.* The Copermittees and others have submitted numerous recommendations for revisions to provide "clarity," improve readability, or correct the language in Provision E.3 of the Tentative Order.	**Building Industry / Industry** Building Industry Association of Southern California San Diego Green Building Council **Copermittees** City of Chula Vista Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Engineering/Design Consultants** Contech Engineered Solutions
	RESPONSE: The San Diego Water Board has reviewed and considered all the recommendations submitted by the commenters. In cases where the San Diego Water Board agreed that the recommendations would improve readability and were consistent with the intent of language or requirement, the recommendations were incorporated. In instances where the San Diego Water Board disagreed with the recommendations, the language in the Tentative Order was not changed.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E3-2	PROVISION E.3: Development Planning	
	COMMENT: *Requests for revisions to allow the construction of BMPs in waters of the state.* The San Diego County Copermittees and the BIA Regulated Community Coalition have requested that Provision E.3.a.(1)(b) be revised to allow the implementation of structural BMPs within waters of the state, since the definition of waters of the state is broad and could be interpreted to prohibit storm drain inserts and other common BMPs. The requested revision that "BMPs must not be constructed within a waters of the U.S. unless authorized by the San Diego Water Board Executive Officer" is consistent with the San Diego Water Board's 401 Certification Program and would protect natural receiving waters from construction and the use of such waters to transport pollutants.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** City of Chula Vista San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with this comment and has modified the language in the Tentative Order accordingly.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E3-3	PROVISION E.3: Development Planning	
	COMMENT: *Requests for revisions to Priority Development Project inventory requirements.* The San Diego County Copermittees have requested that the Tentative Order be revised such that updates to Priority Development Project databases occur "regularly" instead of "at least annually." Additionally, the City of Chula Vista requested the start date for Priority Development Project inventory begin December 2002 instead of January 2002, to reflect the start date for the San Diego County Copermittees' regulatory oversight process pursuant to Order No. 2001-01.	**Copermittees** City of Chula Vista San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees that the frequency of updates to project inventories should be less frequent than on an annual basis. However, the San Diego Water Board agrees with the request that the start date be changed for San Diego County Copermittees and has revised the language in the Tentative Order appropriately.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E3b-1	PROVISION E.3.b: Priority Development Projects	
	COMMENT: *Requests for revisions to development planning requirements to include different requirements for transportation projects.* The San Diego County and Orange County Copermittees, the Riverside County Transportation Department, and others commented that transportation projects should be exempt from the requirement to implement pollutant control and hydromodification management BMPs set forth in the Tentative Order. Commenters contend that transportation projects should be allotted special consideration because, unlike other types of projects, they must also consider various design constraints having to do with limited right-of-way, utilities, street trees, fire truck access, and general public safety. Commenters recommended that transportation projects be held to USEPA Green Streets guidance as the design requirement.	**Building Industry / Industry** San Diego Green Building Council **Copermittees** City of Dana Point City of Imperial Beach Orange County Copermittees Riverside County Transportation Department
	RESPONSE: The San Diego Water Board generally agrees with the commenters regarding the unique constraints associated with existing roadways. The Tentative Order has been revised to provide an exemption from the Priority Development Project designation for projects where retrofitting of existing paved alleys, streets, or roads are designed and constructed in accordance with USEPA Green Street guidance. However, this exemption is only allowed for existing road and not new ones. This is because new roads are not yet spatially constrained and should be able to incorporate the pollutant control and hydromodification management BMPs during the planning stages. The Tentative Order also allows the Copermittees to incorporate alternative compliance options during the planning stages of the new road projects. The San Diego Water Board maintains that controlling pollutants and managing flows coming from roads is critical because roads are significant sources of pollutants and add significant new impervious surfaces. Commenters should also note that routine maintenance activities associated with transportation projects such as maintaining original line and grade, or repairing potholes, is not considered a Priority Development Project and is not subject to any structural BMP requirements.	

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E3b-2	PROVISION E.3.b: Priority Development Projects	
	COMMENT: *Request for a clear definition of "directly discharges to" an Environmentally Sensitive Area (ESA).* The San Diego County Copermittees and the City of Imperial Beach have requested that Provision B.3.b.(1) be revised to clearly define "directly discharges to" an ESA. The Copermittees are concerned that language in the Tentative Order is confusing and can be misinterpreted.	**Copermittees** City of Imperial Beach San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the comment. The San Diego Water Board revised the language in Provision B.3.b.(1) to more clearly define "directly discharges to."	

E3b-3	PROVISION E.3.b: Priority Development Projects	
	COMMENT: *Requests for modifications to the types of projects defined as Priority Development Projects and subject to the storm water pollutant control and hydromodification management structural BMP requirements.* The San Diego County, Orange County, and Riverside County Copermittees, several individual Copermittees, members of the Building Industry, Industry, Clean Water Now, and Engineering/Design Consultants submitted comments regarding the types of projects defined as Priority Development Projects. Clean Water Now expressed concern with the types of projects that are considered Priority Development Projects. The Copermittees, Building Industry, and Engineering/Design Consultants provided recommendations for the types of projects that should be defined as Priority Development Projects and therefore subject to the storm water pollutant control and hydromodification management structural BMP requirements, and the types of projects that should be exempt from those requirements. The Copermittees made several comments on this topic, which are summarized below: • Single family residences should be exempt because the requirements are complex and difficult for the regular homeowner to understand, and that the potential for pollutant generation is considerably less than an industrial or commercial site; • Driveways should not be included as Priority Development Projects because, unlike roads, driveways experience low daily trips. The Copermittees suggest implementing a lower performance standard for BMPs implemented on driveways than other Priority Development Projects; • The Tentative Order should include qualifiers for parking lots that would trigger Priority Development Project status only if they were uncovered; • Maintenance access roads should be exempt; • The Tentative Order should allow exemptions for parking lots and other projects that are constructed with permeable surfaces; • The Tentative Order should allow exemptions for flood control and emergency projects; • The exemptions allowed for LEED certified single family residences is inappropriate because the program encompasses other environmental considerations, and are outside the scope of storm water permitting; • Triggers for Priority Development status should be simultaneously based on soil type and square footage of impervious surface; • The Tentative Order should allow exemptions for "Watershed Protection Projects" that are undertaken to rehabilitate or prevent environmental, social, and economic damage to the watershed;	**Building Industry / Industry** American Society of Landscape Architects San Diego Green Building Council San Diego Gas and Electric Company Southern California Gas Company **Copermittees** City of Chula Vista City of Imperial Beach City of Poway Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Clean Water Now **Engineering/Design Consultants** Contech Engineered Solutions Project Design Consultants

E3b-3	PROVISION E.3.b: Priority Development Projects	
	• The hillside development category should be removed because it is not needed. Some Engineering/Design Consultants suggested that Priority Development Projects be exempt if they are designed and constructed with specific materials or a voluntary certification program. San Diego Gas and Electric and the Southern California Gas Company commented that linear underground/overhead (utility) projects should be exempt from Priority Development Project status due to the nature of their construction.	
	RESPONSE: The San Diego Water Board generally disagrees with the requests to remove some project categories from Provision E.3.b, or to exempt certain types of projects from the requirement to implement storm water pollutant control and hydromodification management BMPs. Such BMPs are needed to protect water quality. The list of project categories in Provision E.3.b represents projects that result in the creation of significant areas of impervious surface and/or are pollutant generating in nature, which in turn contributes to pollutants in storm water discharges and altered flow regimes that cause accelerated erosion of channel bed and banks, and consequently degraded stream conditions. With the exception of driveways, the Priority Development Project categories have not changed substantially in San Diego Water MS4 permits. Provision E.3.b of the Tentative Order is consistent with the Fourth Term MS4 permits adopted by the San Diego Water Board for Orange County and Riverside County. Driveways were added as to the Priority Development Project categories because, although they experience much less traffic than roads, they still generate pollutants and create significant impervious surfaces that can impact downstream receiving waters, and must be mitigated. Similarly, even covered parking lots cause impacts for which mitigation is needed because rooftops also add to the impervious surface footprint. Research shows that even incremental increases in impervious surface, as low as 3-5 percent of the watershed area in the semi-arid climate of southern California, can result in degradation of receiving streams (Stein, E. and Zaleski, S., 2005. Technical Report 475, Managing Runoff to Protect Natural Streams: The Latest Development on Investigation and Management of Hydromodification in California. December 30, 2005.). Creation of impervious surface is a concern to the San Diego Water Board and construction with pervious materials that allow infiltration and other natural hydrologic processes are preferred. There is no need to exempt parking lots and other projects constructed with pervious materials from Priority Development Project status because they are not considered Priority Development Projects in the first place. Similarly, maintenance access roads as well as the majority of linear utility projects are not Priority Development Projects because they do not necessarily result in the placement of impervious surfaces above the threshold square footages	

E3b-3	PROVISION E.3.b: Priority Development Projects	
	associated with Priority Development Projects. Priority Development Project status is based on both the type of project being built and associated pollutants anticipated to be generated, and a threshold for the creation or replacement of impervious surface. Soil type comes into play in terms of meeting the retention requirement, which is discussed in the response to comment E3c1-1. The San Diego Water Board disagrees with the recommendation to define Priority Development Projects by soil type because this is accounted for in the size and type of BMPs as dictated by the retention requirement. The San Diego Water Board disagrees that hillside development projects should be exempt. These projects are susceptible to causing accelerated erosion and therefore must implement structural BMPs. The San Diego Water Board further disagrees that there should be exemptions for emergency projects or flood control projects. Provision E.3 describes requirements that pertain to development planning. Emergency situations, by definition, are not planning exercises and therefore do not involve the design and construction of a building or structure. The San Diego Water Board believes that it may be suitable to relax the structural BMP standards for, or exempt flood control projects, but not before projects are evaluated on a case-by-case basis. In many instances, environmentally friendly practices may be appropriate for implementation in flood control projects, but a variety of options would not be evaluated if the Tentative Order provided a blanket exemption. The San Diego Water Board disagrees that an exemption from the Priority Development Project structural BMP requirements should be provided for all single family residences. The definition of Priority Development Projects in the Tentative Order already excludes a majority of single family residences that may be developed or redeveloped. New single family residences must create 10,000 square feet or more of impervious surface, or 5,000 square feet or more of impervious surface as a Hillside Development, or 2,500 square feet or more of impervious surface if discharging directly to an Environmental Sensitive Area to be defined as a Priority Development Project. Redevelopment single family residence projects must create or replace 5,000 square feet or more of impervious surface, or 2,500 square feet or more of impervious surface if discharging directly to an Environmental Sensitive Area to be defined as a Priority Development Project. Single family residences that are defined as Priority Development Projects can have a significant impact on receiving water quality and it is appropriate for these projects to implement the Priority Development Project structural BMP requirements. The San Diego Water Board removed language pertaining to the option for single family residences to be designed and constructed with LEED certification to qualify as exempt from Priority Development Project status.	

E3b-3	PROVISION E.3.b: Priority Development Projects	
	This is because several commenters stated that including this requirements was outside the scope of water quality regulation, and that the LEED program was too specific of a certification requirement. To avoid any inconsistency regarding equivalent certification programs and for more streamlined requirements, this option, and hence the exemption allowed for single family residences, was removed. Single family residences large enough to trigger the size thresholds associated with Priority Development Projects are a source of pollutants and altered flow regimes, and therefore must be required to implement structural BMPs. The Copermittees must inspect such BMPs as part of their oversight programs to ensure that homeowners are properly maintaining the BMPs and the BMPs continue to operate as designed in order for the Copermittees to meet the MEP standard of the Clean Water Act. Finally, the San Diego Water Board disagrees that there should be an exemption for "Watershed Protection Projects." The commenters should note that Priority Development Projects are not only defined by square footage of impervious surface, but also the type of project being constructed. The types of projects described in the comment, such as erosion mitigation, restoration of rivers and ecosystems, or groundwater recharge, do not need to be explicitly provided exemptions because they would not be considered Priority Development Projects in the first place if they do not create or replace impervious surface in exceedance of the thresholds in the Tentative Order. The San Diego Water Board has also revised the Tentative Order to allow the Copermittees to provide exemptions for all types of projects. The Copermittees have the ability to exempt projects from meeting the hydromodification management requirements in areas where they have deemed it appropriate to do so. However, in order to utilize this option, Copermittees must first perform the optional Watershed Management Area Analysis described in Provision B.3.b.(4). Please see the response to Comment E3c-2 for further discussion of this option.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E3b-4	PROVISION E.3.b: Priority Development Projects	
	COMMENT: *Redevelopment Priority Development Projects that were subject to previous structural BMP requirements should not be subject to new structural BMP requirements*. The San Diego County, Orange County, and Riverside County Copermittees each submitted comments requesting that language be added to the Tentative Order that would specify structural BMP requirements are not applicable to Priority Development Projects (or portions thereof) if the project already has implemented structural BMPs pursuant to requirements of prior MS4 permits.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees in concept with the Copermittees' request. Although some projects may already have structural BMPs onsite, the performance requirements of those BMPs do not necessarily meet the requirements of the Tentative Order. Order No. R9-2007-0001 does not have the numerical storm water pollutant control retention performance standard, therefore redevelopment sites that were subject to Order No. R9-2007-0001 must update their BMPs during the design phase. In some cases, redevelopment projects will already have BMPs that meet the storm water pollutant control and hydromodification management BMP requirements. In these instances, the requirements of the Tentative Order are met and there is no need to change the language.	

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E3c-1	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	COMMENT: *The Tentative Order ignores regional comprehensive plans developed by municipalities and SANDAG.* The Jamul Dulzura Community Planning Group and Julian Community Planning Group assert that the requirements in the Tentative Order are contradictory to plans developed by SANDAG and subsequently included in General Plans that include sound principles such as encouraging redevelopment. The Tentative Order's requirements amount to punishing or dis-incentivizing urban infill projects.	**Community Planning Groups** Jamul Dulzura Community Planning Group Julian Community Planning Group
	RESPONSE: The San Diego Water Board strongly disagrees that the requirements in the Tentative Order are contradictory to principles advocated in regional planning documents. In fact, the Tentative Order is heavily based on planning at the watershed scale, as represented in the Water Quality Improvement Plan requirements. The Tentative Orders increases flexibility for the Copermittees to address urban infill and redevelopment projects by not mandating only on-site BMPs. Redevelopment projects will be required to implement structural BMP requirements that are needed to protect downstream water quality. However, if a Copermittee finds that implementation of the required BMPs fully onsite will not result in meaningful improvements in either pollutant control or hydromodification management, then that Copermittee has the option to allow compliance elsewhere in the watershed where more substantial improvements can take place. There are no additional requirements for redevelopment projects versus new projects, therefore redevelopment projects are not being penalized, as suggested by the commenters. Furthermore, the Tentative Order has been revised to include an exemption from hydromodification management BMP requirements for Priority Development Projects that discharge to conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. Additionally, more exemptions could be included on a watershed-specific basis if the Copermittees in the Watershed Management Area elect to perform the optional Watershed Management Area Analysis as described in Provision B.3.b.(4). Please see the response to Comment E3c-2 for further discussion of these options.	

E3c-2	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	COMMENT: *Request for requirements that allow development of watershed-specific structural BMP performance standards in Water Quality Improvement Plans.* The Orange County and San Diego County Copermittees assert that the Tentative Order requires a "one-size-fits-all" approach and request that the Tentative Order allows for watershed-specific performance requirements for structural BMPs. Members of the Building Industry, the City of Imperial Beach, Engineering/Design Consultants, Societies/Associations/Coalitions, and Other Entities requested or expressed support for a similar concept. The Environmental Groups support including alternative compliance options that provide "off-ramps" for the baseline "one size fits all" structural BMP performance requirements.	**Building Industry / Industry** American Society of Landscape Architects **Copermittees** City of Imperial Beach Orange County Copermittees San Diego County Copermittees **Environmental Organizations** Environmental Groups **Engineering/Design Consultants** Latitude 33 Planning and Engineering Project Design Consultants **Societies/Associations/Coalitions** BIOCOM **Other Entities** Carol Crossman Gable PR Hughes Marino Marston+Marston Nuffer, Smith, and Tucker San Diego Regional Chamber of Commerce Sheppard, Mullin, Richter & Hampton LLP Southern Cross Property Consultants Transition IT
	RESPONSE: The San Diego Water Board disagrees that the Tentative Order requires a "one-size-fits-all" approach for the implementation of structural BMPs. For the Priority Development Project structural BMP performance requirements, site specific conditions must be taken into account upon selecting appropriate BMPs. Provision E.3.c.(1)(a), which describes requirements for storm water pollutant control, the Tentative Order states that: *"Each Priority Development Project must be required to implement LID BMPs that are designed to retain (i.e. intercept, store, infiltrate, evaporate, and evapostranspire) onsite the volume of storm water runoff produced from a 24-hour 85th percentile storm event (design capture volume)."* While each Priority Development Project must retain the volume of storm water runoff produced from the 24-hour 85th percentile storm, the actual volume retained will vary based on site specific factors, namely soil type and associated infiltration rates. The requirement to retain the volume of water associated with this size storm is appropriate for the reasons stated in the response to comment E3c1-1.	

E3c-2	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	Similarly, Provision E.3.c.(2)(a), which describes requirements for hydromodification management, states that: "*Post-project runoff flow rates and durations must not exceed pre-development runoff flow rates and durations by more than 10 percent (for the range of flows that result in increased potential for erosion, or degraded instream habitat conditions downstream of Priority Development Projects).*" This requirement involves implementing BMPs for "the range of flows that result in increased potential for erosion,…" which is necessarily a site-specific requirement. The range of flows that cause downstream erosion from one Priority Development Project may be different than the range of flows that cause erosion from another Priority Development Project located in a different area in the watershed. Therefore, very different BMPs might be required from the two sites. The San Diego Water Board agrees that greater improvements to water quality in the watersheds may be realized if Priority Development Projects were allowed to implement some requirements offsite, as opposed to strictly onsite. For this reason, the Tentative Order allows for "alternative compliance" in instances where the Copermittee determines that offsite measures will have a greater overall water quality benefit for the Watershed Management Area than if the Priority Development Project were to implement structural BMPs onsite. Consequently, watershed-specific structural BMP requirements are present in the Tentative Order in the form of allowable compliance offsite. The "alternative compliance program" has been substantially re-written for simplicity, and also to better align this program with the planning efforts of the Copermittees in the Water Quality Improvement Plans. The alternative compliance program, which is described in Provision E.3.c.(3), is an option for Priority Development Projects where the Copermittee has participated in the development of a Watershed Management Area Analysis as part of the Water Quality Improvement Plan (described in Provision B.3.b.(4)). Such an approach is consistent with the latest findings in hydromodification management by the scientific community. In the Southern California Coastal Water Research Project (SCCWRP) Technical Report No. 667, authors state: "*An effective [hydromodification] management program will likely include combinations of on-site measures (e.g., low-impact development techniques, flow-control basins), in-stream measures (e.g., stream habitat restoration), floodplain and riparian zone actions, and off-site measures. Off-site measures may include compensatory mitigation measures at upstream locations that are designed to help restore and manage flow and sediment yield in the watershed.*" Consistent with the ideas brought forth by the SCCWRP report, in the Watershed Management Area Analysis of Provision B.3.b.(4), which is optional, the Copermittees will develop watershed maps that include as much detail	

E3c-2	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	about factors that affect the hydrology of the watersheds as is available. Such factors included identification of areas suitable for infiltration, coarse sediment supply areas, and locating stream channel structures and constrictions. Once these factors are mapped and studied, the Copermittees can identify areas in the watersheds where "candidate projects" may be implemented that are expected to improve water quality in the watershed by providing more opportunity for infiltration, slowing down storm water flows, or attenuation of pollutants naturally via healthy stream habitat. These projects may be in the form of retrofitting existing development, rehabilitating degraded stream segments, identifying regional BMPs, purchasing land to preserve valuable floodplain functions, and any other projects that the Copermittees identify. Under the alternative compliance program, Priority Development Projects may be allowed to fund, partially fund, or implement a candidate project, in lieu of implementing structural BMPs onsite, if they enter into a voluntary agreement with the Copermittee permitting this arrangement. If compliance involves funding or implementing a project that is outside the jurisdiction of the Copermittee, then that Copermittee may enter into an inter-agency agreement with the appropriate jurisdiction(s). In response to several comments, the Tentative Order has been revised to include an exemption from hydromodification management BMP requirements for Priority Development Projects that discharge to conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. Provision B.2.b.(4) provides an optional Watershed Management Area Analysis that may allow the Copermittees to identify additional areas within the watershed where it is appropriate to exempt Priority Development Projects from implementing hydromodification management BMPs. Exemptions other than the ones specified in the Tentative Order, then, would be applicable on a watershed basis, and would require supporting rationale. In summary, the Tentative Order includes requirements for site-specific structural BMP requirements and exemptions. In order for them to be realized, the Copermittees must perform up-front analysis to support both the alternative compliance program and watershed-specific hydromodification management BMP exemptions. The San Diego Water Board believes that this approach will allow for meaningful improvement to water quality in the watersheds, as well as the efficient use of resources for innovative projects, as opposed to requiring structural BMPs to be fully implemented on all sites.	

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E3c-3	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	COMMENT: *Request for modifications to Priority Development Project structural BMP infiltration and groundwater protection pre-treatment requirements.* The San Diego County Copermittees and the City of National City commented that pre-treatment for infiltration BMPs on areas of industrial or light industrial activity should only be required if significant pollutant levels are present or if source control BMPs will not provide pre-treatment. Contech Engineer Solutions expressed concern that without clear and specific pre-treatment standards for infiltration BMPs, the Copermittees will accept pre-treatment systems that will require significant maintenance to ensure proper operation. Contech Engineer Solutions recommended very specific design standards for pre-treatment systems.	**Copermittees** City of National City San Diego County Copermittees **Engineering/Design Consultants** Contech Engineered Solutions
	RESPONSE: The San Diego Water Board agrees with the Copermittees comments. The San Diego Water Board conceptually agrees with Contech Engineered Solutions, but disagrees that including such specific design standards are necessary. The San Diego Water Board has revised Provision E.3.c.(5)(a)(vi) to allow infiltration BMPs on industrial or light industrial areas if source control BMPs will not expose groundwater to activities that are a high threat. The San Diego Water Board did not revise Provision E.3.c.(5)(a)(i). The Copermittees are required to inspect BMPs at Priority Development Projects to confirm they continue to operate as designed. If structural BMPs on Priority Development Projects are not properly maintained, the Copermittees must enforce its ordinances to achieve compliance with its ordinances and the requirements of the Tentative Order.	

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E3c-4	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	COMMENT: *General concerns associated with the development planning structural BMP performance requirements.* Comments from members of the Building Industry, Community Planning Groups, the Copermittees, Environmental Organizations, State Government, Societies/Associations/Coalitions, and Other Entities expressed various concerns about the development planning structural BMP performance requirements for Priority Development Projects. Several commenters expressed concerns with the potential costs associated with enforcing and implementing the changing requirements for development projects, or the uncertainty of the impacts of those new requirements. The South Laguna Civic Association expressed concern that the current development planning requirements are already resulting in the degradation and destruction of creeks, wetlands, and coastal habitats. David Akers, P.E., expressed concern with current practices and supports requirements that will result in sustainable development. The City of Chula Vista questioned what should be done water collected in rain barrels and other retention facilities if there is a lack of demand during the rainy season.	**Building Industry / Industry** Associated General Contractors of America **Community Planning Groups** Julian Community Planning Group Ramona Community Planning Group **Copermittees** City of Chula Vista County of San Diego Orange County Copermittees **Environmental Organizations** Clean Water Now South Laguna Civic Association **Engineering/Design Consultants** David J. Akers, P.E. **State/Federal Government** Senator Mark Wyland **Societies/Associations/Coalitions** San Diego Association of Realtors South County Economic Development Council **Other Entities** Carol Crossman Continental Maritime of San Diego Nuffer, Smith, and Tucker Sheppard, Mullin, Richter & Hampton LLP Southern Cross Property Consultants
	RESPONSE: The San Diego Water Board understands the concerns that have been expressed by the commenters. Most of the requirements in the Tentative Order are not new to the San Diego Region. The Tentative Order incorporates many existing requirements from the MS4 permits in Orange and Riverside Counties. However, the Tentative Order also provides the Copermittees with more flexibility to use their limited resources in the most effective and efficient manner to protect the quality of the San Diego Region's receiving waters. The commenters generally are concerned with the costs of implementing the development planning structural BMP performance requirements, but do not consider the costs of not addressing impacts that have been caused by existing development, and may be caused by future development. The San Diego Water Board has significantly modified the structure and focus of the requirements in the Tentative Order to allow the	

E3c-4	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	Copermittees to more efficiently and cost effectively utilize their resources, which is expected to result in the realization of significant cost savings that could not be realized in the existing MS4 permits. The development planning structural BMP performance requirements have also evolved significantly since 2001 because of the degradation and destruction of creeks, wetlands, and coastal habitats that have been observed as developed areas have expanded. Thus, the Tentative Order not only includes development planning requirements to protect against impacts to receiving waters that may be caused by future development, but also includes requirements that begin to address impacts that are being caused by existing development. The Tentative Order will allow the Copermittees to address existing development and new develop with a watershed-scale approach that is expected to lead to more sustainable configurations of the watersheds in the San Diego Region over the long term. The question posed regarding the use of retained storm water if there is a lack of demand is not new. The municipalities and several agencies in the San Diego Region have also posed questions about what can be done to address the sustainable water supply concerns that are being expressed as the population grows and demand for water increases. There may be ways to potentially link the two issues to create solutions to address the problems. The Tentative Order was developed to provide the flexibility that will allow the Copermittees to work with other agencies to perhaps identify solutions with mutual benefits.	

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E3c1-1	PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements	
	COMMENT: *Objections with storm water pollutant control retention BMP performance requirements for Priority Development Projects.* The San Diego County, Orange County, and Riverside County Copermittees and Engineering/Design Consultants contend that the storm water pollutant control retention requirement is infeasible for many Priority Development Projects due to poor soil types and other factors. The Industrial Environmental Association asserts that the Tentative Order does not provide sufficient detail for consistency among Copermittees in evaluating conditions for technical infeasibility. The Copermittees have requested that the term "runoff" be included in the description of "design capture volume." Other commenters stated that the retention standard will result in runoff "starved" receiving waters. Commenters also stated that the requirement to increase bioretention by 25 percent is arbitrary and without basis. Conversely, Natural Resources Defense Council argues that retention of the 85th percentile storm event is an appropriate performance standard and should be required at all sites, regardless of the specific site conditions. David Aker, P.E., also supports the requirement to retain storm water and contends that it is essential for sustainable development.	**Building Industry / Industry** BIA Regulated Community Coalition Building Industry Association of Southern California, Inc. Industrial Environmental Association Otay Land Company Otay Ranch New Homes San Diego Green Building Council **Copermittees** City of Chula Vista City of Vista County of San Diego Orange County Copermittees Riverside County Copermittees San Diego County Copermittees San Diego Unified Port District **Environmental Organizations** Natural Resources Defense Council **Engineering/Design Consultants** Contech Engineered Solutions David J. Akers, P.E. **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board disagrees with the Copermittees that the retention standard, as written in the Tentative Order, is inappropriate. The San Diego Water Board has recognized that the retention of the 85th percentile storm event is MEP, and already incorporated the performance standard in both the Orange County and Riverside County MS4 permits. Other MS4 permits in southern California (e.g., Ventura County, Los Angeles County) incorporate similar performance standards, and it is supported by USEPA. Commenters should note that under the Alternative Compliance Program described in Provision E.3.c.(3), Priority Development Projects will have the option to perform mitigation offsite "*if the Copermittee determines that the offsite project will have a greater overall water quality benefit for the Watershed Management Area than implementing BMPs onsite*." Theoretically, a Priority Development Project could make the case that retention of the design capture storm is not feasible, or that doing so would result in an unnatural water balance, therefore	

E3c1-1	PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements	
	offsite compliance is preferred. This option is only available to the Priority Development Project if the Copermittee elects to offer it. The San Diego Water Board disagrees that the Tentative Order should provide detail on what constitutes infeasibility because the Copermittees have the experience to make these determinations, and are free to develop consistency standards if the need arises. Language regarding the application of a site specific retention standard was removed because several commenters argued, and the San Diego Water Board agreed, that the analyses could be subjective and introduce uncertainty for the Copermittees in terms of determining compliance. Moreover, comparing the volume of runoff produced from an undeveloped site to that of a Priority Development Project would not be comparing equivalent pollutant levels, because the pollutants expected to be generated from a Priority Development Project would not have been present in runoff from undeveloped land. For simplicity, the language pertaining to site specific retention standards was removed. The word "runoff" was added to the description of "design capture volume" per the Copermittees' requests. Similarly, the language pertaining to biofiltration LID BMPs was removed because the Alternative Compliance Program was restructured to better coincide with the Copermittee's planning efforts in the Water Quality Improvement Plan.	

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E3c2-1	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Allow San Diego Copermittees to continue implementation of current San Diego Hydromodification Management Plan, as approved under Resolution No. R9-2010-0066.* The San Diego County Copermittees and several other commenters have requested that the *Hydromodification Management Plan for San Diego County* (HMP), which was approved by the San Diego Water Board in 2010 under Resolution No. R9-2010-0066, be memorialized in the Tentative Order as the standard for hydromodification management.	**Building Industry / Industry** Building Industry Association of Southern California, Inc. Otay Land Company Otay Ranch New Homes **Community Planning Groups** Jamul Dulzura Community Planning Group Pala Pauma Valley Community Sponsor Group **Copermittees** City of Chula Vista City of Del Mar City of Poway City of San Diego County of San Diego County of San Diego Office of County Counsel San Diego County Copermittees **Societies/Associations/Coalitions** East Otay Mesa Property Owners Association Otay Mesa Property Owners Association **Other Entities** National Enterprises Inc.
	RESPONSE: The San Diego Water Board disagrees with commenters that it is appropriate to reference the San Diego County HMP in the Tentative Order. The San Diego HMP does not include standards that are currently included in the Fourth Term MS4 permits for Orange and Riverside Counties. However, commenters should note that the requirements in the Tentative Order allow the San Diego Copermittees to use the information and analysis that was used to develop the San Diego HMP. In addition, the San Diego HMP will remain in effect until the Water Quality Improvement Plans are accepted by the San Diego Water Board. The San Diego Water Board is aware that the San Diego County Copermittees spent over $1 million to develop the HMP. This investment is not lost because the Tentative Order allows the Copermittees to build upon the	

E3c2-1	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	findings in the HMP; thus, the information developed is not irrelevant. For example, the San Diego HMP used an analysis to determine the range of flows for which Priority Development Projects must implement hydromodification management BMPs. This analysis includes evaluation of site specific conditions, including the level of susceptibility of the downstream receiving water to erosion. Further, the analysis includes a mechanism for Priority Development Projects to determine appropriately sized BMPs, depending on the condition of the downstream receiving water. This analysis is the crux of the San Diego HMP, and the Tentative Order allows its continued use. There are two important changes in the Tentative Order from Order No. R9-2007-0001 that the San Diego County HMP must make adjustments for. Firstly, the Tentative Order includes a requirement that Priority Development Projects use the "predevelopment" condition for evaluating the baseline hydrology for a specific site. The San Diego HMP, as written, can still be used because this requirement only affects the input variables used in the analysis. The San Diego Water Board is requiring the use of the pre-development condition for the reasons discussed in the Response to Comment E3c2-2. Secondly, in response to several comments, the Tentative Order has been revised to include an exemption from hydromodification management requirements for Priority Development Projects that discharge to conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. Additional exemptions may be allowed on a watershed-basis only if the Copermittees perform a watershed-specific analysis, as part of the Water Quality Improvement Plan that justifies inclusion of exemptions. Much of this work has already been done by the San Diego County Copermittees in the HMP, as the HMP contains many exemptions above and beyond those described in Order No. R9-2007-0001. Again, the investment made in the HMP is not lost; the Copermittees must develop the Watershed Management Area Analysis described in Provision B.3.b.(4) of the Tentative Order and include the exemptions and rationale therein. Finally, the San Diego County Copermittees were notified before completion of the HMP that requirements pertaining to hydromodification management would likely change. As part of the development of the HMP, the Copermittees submitted a first draft on May 1, 2009. In a comment letter dated June 29, 2009, the San Diego Water Board stated that: "*Although the Permit (R9-2007-0001) does not specifically interpret "pre-project" conditions to reference pre-development (naturally occurring) conditions, the Copermittees are not restricted from implementing this more conservative standard. Tentative Order No. R9-2009-0002 (the draft Orange County Municipal Permit) dated June 18, 2009 contains this more restrictive language. The San Diego*	

E3c2-1	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	Copermittees should be aware that the next iteration of the Permit may contain similar language. Additionally, the exceptions for hydromodification management measures included in the Permit (provision D.1.g.(3) for discharges into hardened channels will also likely be eliminated." Although this quote referred to text in the draft Orange County MS4 Permit, the requirements for using the pre-development baseline hydrology for hydromodification management were eventually included in the final versions of the MS4 permits for both Orange and Riverside Counties. Therefore the San Diego County Copermittees were well aware of the evolving requirements before their HMP was finalized.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E3c2-2	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Objections with requiring pre-development versus pre-project hydrology for hydromodification management BMP performance standards.* Comments submitted by Copermittees, Building Industry, Community Planning Groups, Engineering/Design Consultants, Societies/Associations/Coalitions, and Other Entities objected to the use of pre-development hydrology as a baseline for hydrograph matching (and therefore, BMP design) in the case of redevelopment projects, and that the pre-project design standard is the appropriate standard. Commenters argue that including the pre-development standard would be tantamount to requiring a Priority Development Project to mitigate beyond its impacts.	**Building Industry / Industry** San Diego Green Building Council **Community Planning Groups** Julian Community Planning Group Pala Pauma Valley Community Sponsor Group **Copermittees** City of National City City of Poway City of San Diego City of San Diego City Attorney County of San Diego County of San Diego Office of County Counsel Orange County Copermittees Riverside County Copermittees San Diego County Copermittees San Diego Unified Port District **Engineering/Design Consultants** Project Design Consultants **Societies/Associations/Coalitions** East Otay Mesa Property Owners Association Otay Mesa Property Owners Association **Other Entities** National Enterprises Inc.
	RESPONSE: The San Diego Water Board disagrees with the commenters that pre-project hydrology should be used as the baseline hydrology for redevelopment projects. The "pre-development" language in the Tentative Order has not been removed, but the qualifier "naturally occurring" has been removed from the text because some commenters stated that it caused confusion rather than providing clarity. The definition for "pre-development runoff condition" has been revised in Attachment C and discussion pertaining to this definition and how the San Diego Water Board expects Copermittees to interpret this phrase has been added to the Fact Sheet. Fundamentally, the San Diego Water Board believes that using a hydrology baseline that approximates that of an undeveloped, natural watershed is the only way to facilitate the return of more natural hydrological conditions	

E3c2-2	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	to already built-out watersheds. Using the pre-project hydrology as a baseline for redevelopment projects results in propagating the unnatural hydrology of urbanized areas, which is largely made up of impervious surfaces. Flows from impervious surfaces are highly erosive and consequently have detrimental effects on receiving waters in the San Diego Region. Furthermore, propagating the urbanized flow regime does not support conditions for restoring degraded or channelized stream segments, and would forever sentence such streams to the degraded state. Rehabilitating or restoring degraded stream segments is a critical component of the Tentative Order and is expected to be incorporated into Copermittee's strategies for improving water quality in the watersheds. Finally, the predevelopment standard is not requiring Priority Development Projects to mitigate beyond its impacts because the project would be perpetuating impacts that originated upon initial land alteration (i.e., the project would continue to cause accelerated erosion). Commenters have stated that it is impracticable to require hydromodification management BMPs to mimic the "pre-Columbian" hydrology because it would be impossible to know the historical conditions with any certainty. However, estimating the conditions of historical conditions is not the intent of this requirement. Rather, using the characteristics of a more natural hydrological condition than that of an urbanized setting is the intent. In terms of using a pre-development condition for the baseline hydrology, a Priority Development Project has a number of options for estimating this condition when it is not known. For example, a Priority Development Project may consult soil maps, such as those published by the National Resources Conservation Service (NRCS). These readily available maps show the soil types in a given area, regardless of whether or not the land has been developed. This information, along with information regarding existing grade, constitute sufficient data needed to approximate the pre-development condition and intent of the Tentative Order. Another option is for Priority Development Projects to use characteristics of a nearby open space area as an equivalent baseline. Or, a Priority Development Project may be able to research the geotechnical report associated with a structure upon its development. In any case, the San Diego Water Board asserts that the pre-development hydrology of the area in question can be roughly estimated. However, using the hydrology of a more natural condition, even if not precisely known, will provide significant benefit to receiving waters over using the hydrology associated with pervious (developed) surfaces. Therefore in order to support the basic objectives of the Clean Water Act, which are to *restore* and maintain the chemical, *physical*, and biological integrity of the nation's waters [emphasis added], the most appropriate standard to use for hydromodification management is the standard associated with the pre-development runoff condition.	

E3c2-3	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Include exemptions from the implementation of hydromodification management BMPs where there is no threat of erosion to downstream receiving waters or there are special circumstances.* The Copermittees, Building Industry, Engineering/Design Consultants, and others have commented that the Tentative Order should restore exemptions for the implementation of hydromodification management BMPs where there is no threat of erosion to downstream receiving waters, such as concrete-lined or otherwise hardened channels. Commenters also argue that exemptions should be allowed for emergency projects or flood control projects.	**Building Industry / Industry** BIA Regulated Community Coalition Building Industry Association of Southern California **Copermittees** City of Chula Vista City of Dana Point City of Del Mar City of Imperial Beach City of Laguna Hills City of Lake Forest City of Mission Viejo City of Rancho Santa Margarita City of San Juan Capistrano Orange County Copermittees Riverside County Copermittees San Diego County Copermittees San Diego Unified Port District **Engineering/Design Consultants** Contech Engineered Solutions Project Design Consultants **Societies/Associations/Coalitions** East Otay Mesa Property Owners Association Otay Mesa Property Owners Association South County Economic Development Council **Other Entities** National Enterprises Inc.
	RESPONSE: The San Diego Water Board disagrees conceptually that blanket exemptions from hydromodification management BMP requirements should be granted to all redevelopment projects that discharge to hardened channels. Although the San Diego Water Board has not been advocating for the implementation of expensive BMPs to protect stream reaches that are not susceptible to erosion, the idea was to use the resources obtained from these low-threat Priority Development Projects on separate projects located elsewhere in the watershed, where protection from hydromodification is critical. In the most recent findings regarding hydromodification management, found in Southern California Coastal Water Research Project (SCCWRP) Technical Report No. 667, authors state: "*The exemption of many small projects from hydromodification controls can result in cumulative impacts to downstream waterbodies…*"	

E3c2-3	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	

SCCWRP Technical Report No. 667 further states that: "*An effective management program will likely include combinations of on-site measures (e.g., low-impact development techniques, flow-control basins), in-stream measures (e.g., stream habitat restoration), floodplain and riparian zone actions, and off-site measures. Off-site measures may include compensatory mitigation measures at upstream locations that are designed to help restore and manage flow and sediment yield in the watershed* [Emphasis added]."

The Tentative Order released on October 31, 2012 was written to incorporate these important watershed-based concepts. Nevertheless, several commenters voiced concern over the elimination of exemptions to hardened channels and other non-susceptible receiving waters. After careful consideration, the San Diego Water Board revised the Tentative Order to accommodate the re-introduction of exemptions. Provision E.3.c.(2) has been revised to include an exemption from hydromodification management requirements for Priority Development Projects that discharge to conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. Additional exemptions may be allowed; however, they would occur on a watershed-specific basis, and must be defined and defended by the Copermittees.

Under the newly created Provision B.3.b.(4), the Copermittees have been provided the option to perform a Watershed Management Area Analysis for the purpose of 1) characterizing the watersheds, 2) identifying alternative compliance projects that Priority Development Projects may use in lieu of implementing structural BMPs onsite, and 3) identifying areas within the watershed where it is appropriate to exempt Priority Development Projects from implementing hydromodification management BMPs. Exemptions, then, would be applicable on a watershed-specific basis, and would require supporting rationale.

One reason why the San Diego Water Board has reservations regarding the idea of blanket exemptions is that allowing them without some sort of analysis is short-sighted. SCCWRP Technical Report 667 discusses the importance of watershed-based planning. The report states: "*There is usually also an exemption for projects discharging to hardened channels or waterbodies; however these exemptions may not be supportive of future stream restoration possibilities*…"

Although the San Diego Water Board understands that hardened channels may sometimes provide essential flood control, there are situations where stream rehabilitation can take place, and concrete segments can be removed. For this reason, if the Copermittees choose to perform the Watershed Management Area Analysis,

E3c2-3	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	they may be able to differentiate between hardened stream segments where the concrete will likely never be removed, and other stream segments where there is a possibility for future rehabilitation. Nevertheless, an exemption for concrete-lined channels has been added to the Tentative Order. Finally, the Copermittees commented that there should be exemptions allowed for emergency projects or flood control projects. The San Diego Water Board disagrees with the Copermittees in either case. Provision E.3 describes requirements that pertain to development planning. Emergency situations, by definition, are not planning exercises and therefore do not involve the design, approval, and construction of a building or structure. The San Diego Water Board believes that it may be appropriate to relax the structural BMP standards for, or altogether exempt flood control projects, but not before projects are evaluated on a case-by-case basis. In many instances, environmentally friendly practices may be appropriate for implementation in flood control projects, but a variety of options would not be evaluated by the project proponent if the Tentative Order allowed a blanket exemption.	

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E3c2-4	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Objections with requirements to compensate for sediment supply*. The Copermittees, Building Industry, and Engineering/Design Consultants have commented that management of sediment supply is a complicated and challenging issue, and more direction regarding the Tentative Order's intent should be provided. Commenters have also stated that it is inappropriate to require analysis of sediment supply on a site-by-site basis, and that it is better addressed at the regional level.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** City of Chula Vista County of San Diego San Diego County Copermittees **Engineering/Design Consultants** Contech Engineered Solutions Project Design Consultants
	RESPONSE: The San Diego Water Board agrees with the commenters that addressing the sediment supply issue when a Priority Development Project is under review is complicated and challenging. The intent of the Tentative Order is to protect the coarse sediment supply and ensure that Priority Development Projects will not impact the supply. Therefore, language pertaining to "compensating for" sediment supply has been removed. Instead, where a Copermittee is aware of areas where coarse sediment is naturally discharged to downstream receiving waters, then the San Diego Water Board expects the Copermittee to ensure the protection of this natural process by conditioning the Priority Development Project to either avoid the area, or implement measures that would allow the natural hydrologic process to continue. Please see Provision E.3.c.(2)(b) in the revised Tentative Order for the revisions.	

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E3c2-5	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Monitoring and assessment program requirements will not provide information necessary to re-define the range of flows causing erosion.* The City of Chula Vista commented that water quality monitoring as described in Provision D of the Tentative Order will not provide the necessary information to re-define the range of flows thought to cause erosion to receiving waters.	**Copermittees** City of Chula Vista
	RESPONSE: The San Diego Water Board disagrees that the monitoring and assessment program requirements cannot provide information necessary to re-evaluate or re-define the range of flows causing erosion. The water quality monitoring described in Provision D.1.a.(2) represents the minimum level of monitoring needed to comply with the Tentative Order. If the Copermittees elect to re-evaluate the range of flows that are thought to cause erosion to downstream receiving waters, as defined in the San Diego County HMP, then they may design a monitoring program that will provide the necessary information to do so.	

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E3c2-6	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *The low-flow thresholds included in the San Diego County HMP need to be revised.* Project Design Consultants submitted comments suggesting that the schedule for development of the San Diego County HMP was extremely rushed, and technical expertise was ignored. The HMP should be revised and included in the Tentative Order.	**Engineering/Design Consultants** Project Design Consultants
	RESPONSE: The San Diego Water Board does not object to revising the low-flow thresholds included in the San Diego County HMP, provided that revisions are based on data acquired by the Copermittees. However, the process for updating this design standard in the HMP will occur on an ad-hoc basis and need not be referenced in the Tentative Order.	

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E3c2-7	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *The hydromodification management BMP performance standards should allow the use of the erosion potential (Ep) method and in-stream metrics for compliance.* The Building Industry Association of Southern California requests that the performance standards for hydromodification management allow the use of the Ep method. Requiring project-by-project flow duration control may not be as effective as a regionally-coordinated approach that combines upland control with in-stream remedies.	**Building Industry / Industry** Building Industry Association of Southern California
	RESPONSE: The San Diego Water Board considered the request and found that changes are not necessary. Although the language in Provision E.3.c.(2) does not specifically reference the concept of erosion potential, the Copermittees are not prohibited from using such an approach. Provision E.3.c.(2)(a) requires the Copermittees to require implementation of BMPs to ensure that post-project runoff flow rates and durations do not exceed pre-development runoff flow rates and durations by more than 10 percent (for the range of flows that are deemed to cause erosion). However, Provision E.3.c.(2)(c) allows a Priority Development Project to utilize the alternative compliance program in lieu of complying with the requirement to implement structural BMPs onsite. Priority Development Projects are allowed to comply with the hydromodification management requirements by funding, partially funding, or implementing an offsite project, such as stream rehabilitation (which can include stream stabilization). The San Diego Water Board agrees that a regionally-coordinated approach that includes in-stream remedies is more effective than requiring flow duration control BMPs on every Priority Development Project, and for this reason has written the Tentative Order to allow these metrics. However, ultimately, administration of the Alternative Compliance Program is at the discretion of the Copermittees. If the Copermittees find that administering the Alternative Compliance Program is too difficult, costly, or is not in a Copermittee's best interest, than they are not obligated to do so.	

E3c2-8	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *There is insufficient data to suggest a need to change the hydromodification management requirements.* The City of Mission Viejo, Orange County and San Diego County Copermittees have commented that there is no need to include new requirements for hydromodification management, as no new data has emerged suggesting a need for change and the Copermittees have only begun to implement their current HMPs.	**Copermittees** City of Mission Viejo Orange County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees that there have been any fundamental changes to the hydromodification management requirements from those included in the Fourth Term storm water permits. The basic premise, which is requiring hydromodification management for erosive flows as defined by the Copermittees, has not changed. The San Diego County Copermittees spent considerable funds and effort to define the range of flows that cause erosive effects, and the Tentative Order does not trump those efforts. The San Diego Water Board disagrees with the notion that no new data has emerged regarding hydromodification management. Several commenters have referenced Southern California Coastal Water Research Project's latest findings in *Hydromodification Assessment and Management in California* (Technical Report 667). SCCWRP Technical Report 667 clearly states that: "*An effective management program will likely include combinations of on-site measures…in-stream measures…and offsite measures….*" Further, SCCWRP Technical Report 667 states that: "*The exemption of many small projects from hydromodification controls can result in cumulative impacts to downstream waterbodies.*" The requirements in the Tentative Order are consistent with the findings in this report and MS4 permits in Orange and Riverside Counties. The San Diego Water Board agrees with the underlying premise advocated in this report, which is that effective hydromodification programs begin with watershed-scale analysis and planning. Although the Copermittees have just recently begun implanting their HMPs, the changes needed to incorporate the requirements of the Tentative Order will not undermine the mechanics of the HMPs and therefore will not require substantial revisions. The incorporation of the pre-development baseline standards and inclusion of only qualified exemptions, resulting from thorough watershed analyses, is essential for protecting receiving streams from erosion caused by altered flow regimes.	

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E3c3-1	PROVISION E.3.c.(3): Alternative Compliance to Onsite Structural BMP Performance Requirements	
	COMMENT: *Objections to the onsite LID biofiltration treatment control BMP performance standards*. The San Diego County, Orange County, and Riverside County Copermittees and Engineering/Design Consultants have commented that there is no need to include a 1.5 times multiplier on biofiltration LID BMPs, and that doing so is technically unjustified.	**Building Industry / Industry** Building Industry Association of Southern California **Copermittees** City of Vista Orange County Copermittees Riverside County Copermittees **Engineering/Design Consultants** Contech Engineered Solutions Project Design Consultants
	RESPONSE: Provision E.3.c.(3) describing the Alternative Compliance Program has been substantially revised so that it coincides better with the watershed planning efforts of the Copermittees in the Water Quality Improvement Plans. As a result, the requirements related to LID biofiltration BMPs has been removed.	

E3c3-2	PROVISION E.3.c.(3): Alternative Compliance to Onsite Structural BMP Performance Requirements	
	COMMENT: *Modify requirements and process to implement alternative compliance options*. The San Diego County, Orange County, and Riverside County Copermittees, Engineering/Design Consultants, and Environmental Organizations have expressed concern with the process associated with the Alternative Compliance Program to Onsite Structural BMP Implementation. The Copermittees assert that this program should be administered by the San Diego Water Board, that more time than 4 years should be granted for alternative compliance project completion, and that the administrative costs would be prohibitive. The Environmental Organizations suggest that language be added to the Tentative Order to clearly indicate that the Copermittees are responsible for ensuring that alternative compliance projects are completed within the 4 year timeframe, and also expressed concerns as to whether the alternative compliance project would provide equal water quality benefits as implementing structural BMPs onsite. Engineering/Design Consultants submitted recommendations regarding how administration of the Alternative Compliance Program would work.	**Building Industry / Industry** American Society of Landscape Architects BIA Regulated Community Coalition Building Industry Association of Southern California San Diego Green Building Council **Copermittees** City of Imperial Beach County of San Diego Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Environmental Groups Natural Resources Defense Council **Engineering/Design Consultants** Project Design Consultants
	RESPONSE: The San Diego Water Board disagrees with the Copermittees that the Alternative Compliance Program should be administered by the San Diego Water Board and not by the Copermittees. The Alternative Compliance Program is provided as an option to the Copermittees. The Copermittees are not required to implement the Alternative Compliance Program. If, however, the Copermittees do implement the Alternative Compliance Program, it is expected to coincide with the Copermittees' watershed planning efforts and assist the Copermittees in reaching their goals of reducing pollutants in storm water runoff leaving their MS4s. This is because the alternative compliance projects consist of projects such as retrofitting existing development, where pollutant treatment can be an added benefit where no treatment currently exists; or stream rehabilitation, where natural attenuation of pollutants can occur as an ancillary benefit to improved stream habitat. Other example projects are regional BMPs that receive runoff from multiple areas, or the preservation or purchase of critical floodplain land. The Tentative Order establishes requirements for the Copermittees and not the San Diego Water Board. Therefore, it would inappropriate for the San Diego Water Board administer this program, but could assist in its implementation by streamlining permits for stream rehabilitation and restoration... The San Diego Water Board understands that the initial costs for administering this program could be significant; however, there are fiscal benefits in that Priority Development Projects could provide the funding for projects that are expected to improve water quality, thereby negating the need for Copermittees to expend their resources on BMPs to accomplish the	

E3c3-2	PROVISION E.3.c.(3): Alternative Compliance to Onsite Structural BMP Performance Requirements	
	same thing. Finally, the Copermittees are not required to administer this program and can elect to administer BMPs strictly onsite. Provision E.3.c.(3) has been substantially revised for simplicity and to better coincide with the Copermittees' planning efforts, and all references to LEED certification have been removed. The San Diego Water Board further disagrees that more than 4 years should be granted for alternative compliance project completion. First of all, pollutants from the Priority Development Project are being discharged without treatment and there is not necessarily any equivalent treatment until the alternative compliance project is constructed (although temporal mitigation is required when there is a lag between the two projects). Second of all, the Tentative Order explicitly allows more time for projects where the Executive Officer approves additional time. The San Diego Water Board disagrees with the recommendation that the Tentative Order specify that the Copermittees are responsible for ensuring that the alternative compliance projects are completed within the 4 year time frame. The Tentative Order is issued to the San Diego County, Orange County, and Riverside County Copermittees; therefore all of these entities are responsible for complying with the requirements, and further discussion would be redundant. Finally, the San Diego Water Board agrees that the alternative compliance program presents some uncertainty regarding "greater water quality benefit" expected to come from these projects versus implementation of structural BMPs onsite. If the Copermittees elect to implement an Alternative Compliance Program, they are required to develop a list of potential candidate projects that can be implemented with the Watershed Management Area. The candidate projects will be included in the Water Quality Improvement Plans, which will be reviewed by the public and the San Diego Water Board before implementation takes place. The water quality benefits that can be achieved by implementing those candidate projects will likely be made evident during the public participation process in the development of the Water Quality Improvement Plans.	

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E3c3-3	PROVISION E.3.c.(3): Alternative Compliance to Onsite Structural BMP Performance Requirements	
	COMMENT: *Request for modifications to the alternative compliance water quality credit system option*. The Orange County Copermittees have requested that language pertaining to the water quality credit system be revised to remove the no-net impact limitations because certain projects may offer significant environmental benefits that are not necessarily related to water quality. The BIA Regulated Community Coalition recommended that any water quality credit system exercised by the Copermittees be included in the Water Quality Improvement Plans and be approved by the San Diego Water Board and not by its Executive Officer.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** Orange County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the Orange County Copermittees that the no-net impact language should be removed from the Tentative Order. The optional credit system described in Provision E.3.c.(3)(d) is based on meeting the structural BMP performance standards as they pertain to protecting and improving water quality. A credit system that would allow other environmental benefits cannot necessarily ensure that water quality would be protected to the MEP standard, for which the performance standards are structured to achieve. The San Diego Water Board disagrees that a water quality credit system requires approval from San Diego Water Board instead of the Executive Officer because the provisions for such a credit system are clearly outlined in the Tentative Order. The Executive Officer will be able to determine whether or not the Copermittee has met the requirements as dictated in the Tentative Order. However, the public may request that any action taken by the Executive Officer be considered by the San Diego Water Board at any time.	

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E3c3-4	PROVISION E.3.c.(3): Alternative Compliance to Onsite Structural BMP Performance Requirements	
	COMMENT: *Define a list of preferred or "best-in-class" BMPs and include specific guidance regarding evaluation of treatment systems in the Tentative Order.* The San Diego Green Building Council commented that the Tentative Order should clearly define the best-in-class BMPs and require the creation of a system to catalogue the implementation strategies used by the various Copermittees, and that the database should include the measured water quality impacts from each site. Such information can be used as a resource for future projects and development. Contech Engineered Solutions recommended that the Tentative Order include specific guidance regarding evaluation of proprietary treatment systems, and that the Copermittees need to conduct a performance and feasibility assessment of such systems.	**Building Industry / Industry** San Diego Green Building Council **Engineering/Design Consultants** Contech Engineered Solutions
	RESPONSE: The San Diego Water Board disagrees with this comments because 1) the San Diego Water Board cannot dictate the manner of compliance with any requirements or regulation for any of the programs it administers, and 2) a "best-in-class" BMP cannot be concretely defined because the MEP standard is dynamic (see Appendix C for the definition of MEP). The Copermittees may choose to share information regarding BMP performance and evaluation of proprietary treatment systems via the Regional Clearinghouse or other mechanism. The Copermittees have the experience and expertise to define what are the appropriate BMPs.	

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E3c3-5	PROVISION E.3.c.(3): Alternative Compliance to Onsite Structural BMP Performance Requirements	
	COMMENT: *Mitigation should not be required if flow-thru biofiltration LID BMPs are used.* The Building Industry Association of Southern California submitted comments stating that the Tentative Order should not require mitigation for the portion of the design storm volume that is not retained onsite if this volume is treated by biofiltration LID BMPs prior to discharge. This requirement penalizes and dis-incentivizes the use of these BMPs.	**Building Industry / Industry** Building Industry Association of Southern California
	RESPONSE: The San Diego Water Board has included the requirement that mitigation is necessary for the portion of the design storm volume that is not retained onsite because, although this remaining volume of storm water would be treated, the MEP standard as represented by the structural BMP performance requirements would not have been met. The requirement for mitigation is not limited to the use of biofiltration BMPs; mitigation is required no matter what type of flow-thru treatment BMP is utilized by the Priority Development Project. Therefore the San Diego Water Board disagrees that this requirement is penalizing the Priority Development Project for the use of biofiltration LID BMPs, as suggested by the commenter. Retention of the 85th percentile storm is clearly the MEP standard for storm water pollutant control, as represented by the Tentative Order and recently adopted MS4 permits in the San Diego Region, other areas of southern California, and elsewhere in the United States. Retention of anything less than the design storm volume must be mitigated because the MEP standard has not been met.	

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E4-1	PROVISION E.4: Construction Management	
	COMMENT: *Requests for "clarifications" for construction management requirements.* The San Diego County and Riverside County Copermittees submitted requests for specific modifications to the language of Provision E.4 attempting to increase clarity to what is required of the Copermittees and what the Copermittees are to require of private party construction sites within their jurisdiction. The USEPA provided general comments on the need for the construction requirements to include enough specificity to determine compliance with the Tentative Order.	**Copermittees** Riverside County Copermittees San Diego County Copermittees **State and Federal Government** USEPA
	RESPONSE: The San Diego Water Board generally agreed with the specific language modifications requested by the Copermittees and in many instances adjusted the language of Provision E.4 as requested. Specific changes were made to Provision E.4 to: 1) Remove the requirement for the Copermittees to verify a project applicant has obtained coverage under permits, other than the State Water Board's General Construction Storm Water Permit, 2) Use the term 'pollution control plan' consistently; 3) Require the Copermittees to conduct inspections and require BMPs at inventoried construction sites (based on the priority set in Provision E.4.b.2) to 'confirm' rather than 'ensure' the controls at the site reduce the discharge of pollutants in storm water from the site to the MEP; and 4) Require the Copermittees to conduct inspections and require BMPs at inventoried construction sites (based on the priority set in Provision E.4.b.2) that effectively prohibits non-storm water discharges from the site from entering the MS4. Modifications were also made to the opening paragraph of Provision E.4 requiring each Copermittee to implement a construction management program in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1). Additionally, the San Diego Water Board made adjustments to Provision E.4 requirements setting minimum inspection frequencies equivalent to the amount required to confirm compliance with the Clean Water Act. Provision E.4.d(1)(a) specifically requires the Copermittees to conduct inspections at all inventoried sites, including high threat to water quality sites, at an frequency appropriate to confirm the site reduces the discharge of pollutants in storm water from the construction site to the MEP, and effectively prohibits non-storm water	

E4-1	PROVISION E.4: Construction Management	
	discharges from entering the MS4. The San Diego Water Board supports the adaptive management approach in the Tentative Order and has structured the construction inspections to focus on those sites that represent a high priority to maintaining or protecting downstream surface water quality.	

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E4-2	PROVISION E.4: Construction Management	
	COMMENT: *Requests for modifications to construction site inventory, tracking, recordkeeping requirements.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting changes to the construction management requirements that specific construction sites to be inventoried would include only those sites that involve any ground disturbance or soil disturbing activities, include a process for confirming adequate BMP implementation on inventoried sites, specify project 'completion' date not "anticipated completion" date; and 'weather condition during inspection' not 'approximate amount of rainfall since last inspection' on inspection forms, and require construction inventories to be updated quarterly not monthly. The Riverside County Copermittees provided recommended revisions to the construction requirements.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agreed with most of the changes requested by the commenters and modified Provision E.4 accordingly. However, the request to remove the requirement to include 'approximate amount of rainfall since last inspection' on the inspection forms, and the suggestion to include a process for confirming adequate construction BMP implementation for non-inventoried construction site were not incorporated into the revised Tentative Order. The San Diego Water Board is interested in site conditions after a significant rain event(s) therefore documenting the approximate amount of rainfall since the last inspection is required rather than the weather conditions during the inspection. A process for confirming adequate construction BMP implementation for non-inventoried sites can be developed and included in the jurisdictional program, but is not a requirement of the Tentative Order. The San Diego Water Board reviewed all of the recommended revisions provided by the Riverside County Copermittees. See Provision E.4 for those requested revisions that were incorporated into the Tentative Order.	

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E4-3	PROVISION E.4: Construction Management	
	COMMENT: *Request to only require verification of coverage under Construction General Permit, not "applicable permits."* The Copermittees commented that the requirement to verify permits other than the State Water Board's Construction General Permit is unnecessary because applicable permits are included as attachments to a construction projects SWPPP, and redundant with other environmental regulations.	**Copermittees** City of Chula Vista Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the commenters. The San Diego Water Board modified the language in Provision E.4.a to require verification that the project applicant has obtained coverage under the Construction General Permit, only.	

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E5-1	PROVISION E.5: Existing Development Management	
	COMMENT: *Concerns with inspections by volunteers.* The San Diego County Copermittees expressed concern with exposure to significant liability should a volunteer be injured in the course of an unauthorized inspection, or if private property is damaged during that inspection, or other unforeseen legal issues that result from volunteer groups conducting inspections of inventoried existing developments sites. Similar concerns were expressed by the Industrial Environmental Association and the San Diego Port Tenants Association.	**Building Industry / Industry** Industrial Environmental Association **Copermittees** San Diego County Copermittees **Societies/Associations/Coalitions** San Diego Port Tenants Association
	RESPONSE: The San Diego Water Board understands the position presented by the commenters and agrees that changes to the language in Provision E.5.c are necessary. Provision E.5.c was modified to restrict the use of Copermittee-trained volunteer monitoring or patrol programs to visual inspections of those inventoried facilities or areas that are publicly accessible. Additionally, the San Diego Water Board incorporated the Industrial Environmental Association's suggested change to the language of Provision E.5.c.(2). The ability of the Copermittee to use volunteer monitoring or patrol programs was included in the Tentative Order to give the Copermittees additional resources to accomplish the inspection requirements of Provision E.5.c. The Copermittees retain sole discretion on using volunteer monitoring or patrol programs to augment their inspection programs. The Copermittees also retain sole discretion to stipulate conditions (insurance, training, etc.) for which a volunteer monitoring or patrol program must comply in order assist them with inspections.	

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March 27, 2013

E5-2	PROVISION E.5: Existing Development Management	
	COMMENT: *Requests for modifications to existing development inventory and tracking requirements.* The San Diego County Copermittees and City of Santee each requested removal of 'mobile home parks' from the list of residential areas that should be included in its existing development inventory, citing the Mobile Home Park Act preempts a municipality's ability to regulate within the mobile home park. The Copermittees further requested modification to the language of Provision E.5.a to replace the phrase 'may discharge pollutants' with 'has the reasonable potential to discharge pollutants," claiming that the term 'may' is too broad and limits the Copermittees' ability to focus on those sites in their inventories identified as jurisdictional and watershed priorities. A specific comment was submitted by the City of Chula Vista asking that the Tentative Order allow use of more than one data management system to track the required information.	**Copermittees** City of Chula Vista City of Santee San Diego County Copermittees
	RESPONSE: The San Diego Water Board understands that a city does not have full access to regulate mobile home parks pursuant to the Mobile Home Park Act, but disagrees that the Copermittees do not have the legal authority to regulate discharges from and require BMPs at mobile home parks to their MS4s. The requirements of the Tentative Order are that each Copermittee maintain an inventory of its existing development that may discharge a pollutant load to and from the MS4. If a Copermittee has mobile home parks in its jurisdiction it must be included in its inventory so that the mobile home park gets considered in the Water Quality Improvement Plan priorities and strategies to address sources of pollutants. The comments included a description of what a city is allowed to regulate via its police powers, at mobile home parks. This list included access 'streets and roads' and parking. These are areas where potentially BMPs could be located if, through the Water Quality Improvement Plan process, it was determined that pollutants discharged from mobile home parks were a high priority water quality condition. Additionally, other scenarios could exist where discharges from mobile home parks are not considered a high priority, and inspections would occur much less often. Therefore, mobile home parks must remain within a Copermittee's existing development inventories, but can be dealt with according to the priorities, schedules and goals of the Water Quality Improvement Plan. Therefore, no change to the Tentative Order was made. The San Diego Water Board disagrees with the comment that the term 'may' should be replaced with 'reasonable potential.' The term 'may' is used to indicate possibility or probability that a pollutant load is discharged from an inventoried existing development facility or area. The term reasonable potential can imply the need to conduct a reasonable potential analysis, which is a far more involved process than a Copermittee making the determination that a facility possibly or probably discharges a pollutant load into its MS4. Nothing in	

E5-2	PROVISION E.5: Existing Development Management	
	the Tentative Order prevents a Copermittee from conducting a more robust analysis of the potential for pollutant loads to be discharged from its inventoried existing facilities or areas. Therefore, no change to the Tentative Order was made. The use of a GIS database to track inventoried facilities is only "highly recommended" in the Tentative Order, it is not explicitly required. Therefore a Copermittee can use one or more than one data management system to track the required information.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E5-3	PROVISION E.5: Existing Development Management	
	COMMENT: *Requests for modifications to existing development BMP implementation and maintenance requirements.* The Riverside County and San Diego County Copermittees submitted comments requesting a modification to the language of Provision E.5.b to specify each Copermittee only be required to designate a minimum set of BMPs for all inventoried existing development with the reasonable potential to discharge pollutant loads to their MS4. Commenters further suggest clarifying language for the required use of pollutant prevention methods (i.e. designated BMPs) in Provision E.5.b. A specific comment was made by the City of Chula Vista to removed 'freeways' from list of existing facilities the Copermittees are required to properly operate and maintain BMPs. The City of Chula Vista notes that freeways are under the jurisdiction of Caltrans, not a city.	**Copermittees** City of Chula Vista Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the commenters request to modify the language of Provision E.5.b to specify each Copermittee only be required to designate a minimum set of BMPs for all inventoried existing development with the reasonable potential to discharge pollutant loads to their MS4. Provision E.5.b states that each Copermittee must designate a minimum set of BMPs required for all inventoried existing development, including special event venues. Any existing development that gets inventoried has been identified as a facility that may generate pollutant loads to and from the MS4 under Provision E.5.a. Therefore, if a facility is on the inventory, a Copermittee has already made the determination that the existing development possibly or probably generates a pollutant load. Therefore, no change to the Tentative Order was made. The San Diego Water Board agrees with the requests to clarify the language in Provisions E.5.b.(1)(b) and (d) to specify when a Copermittee must require implementation of BMPs at inventoried existing development not owned by the Copermittee, and when a Copermittee must implement BMPs on their own municipal facilities. The San Diego Water Board also agrees with the City of Chula Vista's request to remove 'freeways' from the list of existing facilities the Copermittees are required to properly operate and maintain BMPs.	

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E5-4	PROVISION E.5: Existing Development Management	
	COMMENT: *Requests for modifications to existing development inspection requirements.* The County of San Diego commented on the need for an exemption from the minimum annual inspection requirement of 20 percent for inventoried linear municipal facilities. Riverside County Copermittees requested the requirement to inspect at least 20 percent of its existing development inventory be deleted. The Tentative Order requires each inventoried existing development be inspected once every five years. Both San Diego County and Riverside County Copermittees commented on this minimum. San Diego County Copermittees want it changed to once per permit term, conversely Riverside County Copermittees support existing language of once per five years. The USEPA does not support relaxation to inspection frequencies because it weakens enforceability and the ability to determine compliance. The San Diego County Copermittees requested clarifying language be added to what must be included in a visual inspection of existing development.	**Copermittees** County of San Diego Riverside County Copermittees San Diego County Copermittees **State and Federal Government** USEPA
	RESPONSE: The San Diego Water Board agrees with the County of San Diego's comment concerning the need for exempting linear municipal facilities from the existing development annual inspection requirements due to the number of inspections required if such facilities are considered when calculating 20 percent of the existing development inventory. To address their comments, the language in Provision E.5.c.(1)(a)(iv) includes a footnote, which excludes linear municipal facilities (i.e. MS4 linear channels, sanitary sewer collections systems, streets, roads, and highways). MS4 inlets and basins are not mentioned in this footnote and are still required to be considered when determining 20 percent of inventoried development for the purposes of annual inspections. The San Diego Water Board expects MS4 inlets and basins to be inspected in order to confirm that BMPs are being implemented and maintained to reduce the discharge of pollutants in storm water from the MS4 to the MEP. Comments provided by the USEPA support leaving MS4 inlets and basins in the existing development inventory to strengthen permit enforceability and compliance determinations. The San Diego Water Board kept the existing development minimum inspection requirement of once every five years. This requirement is consistent with comments received by USEPA to include minimum requirements to strengthen permit enforceability and compliance determinations.	

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E5-5	PROVISION E.5: Existing Development Management	
	COMMENT: *Requests to limit existing development requirements to existing development with "reasonable potential" to discharge pollutants.* The San Diego County Copermittees requested the existing development requirements be limited to those existing facilities and areas of development with "reasonable potential" to discharge pollutants.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees that replacing the term 'may' with the phrase 'reasonable potential' in Provisions E.5.a-c will give a Copermittee more flexibility to focus on jurisdictional and watershed priorities. The Water Quality Improvement Plan will establish the priority water quality conditions within a Watershed Management Area to which a Copermittee will customize its jurisdictional program (i.e. inspection location and frequencies, pollutant reduction efforts (BMP implementation), retrofit opportunities, etc.). The term 'may' is used to indicate possibility or probability that a pollutant load is discharged from an inventoried existing development facility or area. The term 'reasonable potential' can imply the need to conduct a reasonable potential analysis, which is a far more involved process than a Copermittee making the determination that a facility or developed area possibly or probably discharges a pollutant load into its MS4. Nothing in the Tentative Order prevents a Copermittee from conducting a more robust analysis of the potential for existing development to discharge pollutant loads to and from the MS4. Therefore, no change to the Tentative Order was made.	

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E5-6	PROVISION E.5: Existing Development Management	
	COMMENT: *Request to allow the Copermittees to reallocate resources required for monitoring for retrofit and/or rehabilitation projects.* The San Diego County Copermittees requested an addition to the requirements of Provision E.5.e to allow the Copermittees to reallocate resources required for monitoring for retrofit and/or rehabilitation projects.	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the request and no change to the Tentative Order was made. Temporarily suspending the monitoring requirements of Provision D to fund a retrofit and/or rehabilitation process is inappropriate. The monitoring requirements in Provision D are the minimum necessary for the Copermittees to demonstrate that the water quality improvement strategies being implemented as part of the Water Quality Improvement Plan are making progress toward achieving the numeric goals.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E5e2-1	PROVISION E.5.e.(2): Retrofitting Areas of Existing Development	
	COMMENT: *Retrofit existing development to improve water quality.* The San Diego Green Building Council and South Laguna Civic Association support retrofitting areas of existing development as a means to achieve mandated water quality objectives.	**Building Industry / Industry** San Diego Green Building Council **Environmental Organizations** South Laguna Civic Association
	RESPONSE: The San Diego Water Board agrees with the commenters and has developed requirements to encourage retrofitting to achieve reductions in pollutants discharged from MS4s and improved water quality conditions in the receiving waters.	

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March 27, 2013

E5e2-2	PROVISION E.5.e.(2): Retrofitting Areas of Existing Development	
	COMMENT: *Requests to remove or modify retrofitting of existing development requirements.* The Riverside County Copermittees generally requested the removal of the retrofit and stream/channel/habitat rehabilitation project requirements. However, the Riverside County Copermittees also submitted requests for specific retrofit language changes.	**Copermittees** Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the requests to remove or modify the retrofitting of existing development requirements. The San Diego Water Board reviewed the requested language changes and did not make any of the revisions recommended as they were not necessary or changed the intent of the requirement. The requirements in the Tentative Order do not require any Copermittee to implement or require the implementation of a retrofitting project. The Tentative Order requires each Copermittee to describe a program that identifies those areas (public, private, or both) as good candidates for retrofitting. In areas where retrofitting projects within certain areas of existing development cannot be implemented by the Copermittee because of ownership (i.e. private property) or permitting, the Copermittee must develop strategies to facilitate the implementation of retrofitting projects if and when the opportunities become available. The San Diego Water Board did not remove or modify the requirements of Provision E.5.e.(2), but the requirements are now under Provision E.5.e.(1) in the revised Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E5e3-1	PROVISION E.5.e.(3): Stream, Channel and/or Habitat Rehabilitation in Areas of Existing Development	
	COMMENT: *Rehabilitate receiving waters to improve water quality.* The Laguna Bluebelt Coalition and South Laguna Civic Association expressed support for rehabilitating high value coastal receiving waters to improve water quality.	**Environmental Organizations** Laguna Bluebelt Coalition South Laguna Civic Association
	RESPONSE: The San Diego Water Board agrees with the commenters that rehabilitation of coastal wetlands and estuaries are important to the improvement of water quality within the San Diego Region.	

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E5e3-2	PROVISION E.5.e.(3): Stream, Channel and/or Habitat Rehabilitation in Areas of Existing Development	
	COMMENT: *Create map to identify creeks and coastal receiving waters impacted by discharges from storm drains and candidate areas for restoration.* The Laguna Bluebelt Coalition and South Laguna Civic Association expressed support for the creation of maps to show water quality impacted areas of all creeks and coastal receiving waters within the region. The commenters also supported identifying degraded land elements, offending storm drain outlets and candidate areas for re-forestation and estuarine/coastal restoration.	**Environmental Organizations** Laguna Bluebelt Coalition South Laguna Civic Association
	RESPONSE: The San Diego Water Board agrees that maps identifying candidate areas for restoration would be useful. The Copermittees have been provided an opportunity to create maps to assist in their efforts to comply with the requirements of the Tentative Order. Specifically, the Copermittees will have the option to generate a map and list of candidate projects, including stream, channel and habitat rehabilitation projects, which could potentially be used as alternative compliance options for Priority Development Projects, to be implemented in lieu of onsite structural BMP performance requirements. The optional Watershed Management Area Analysis is provided in Provision B.3.b.(4).	

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E5e3-3	PROVISION E.5.e.(3): Stream, Channel and/or Habitat Rehabilitation in Areas of Existing Development	
	COMMENT: *Request for modifications to existing development stream, channel and/or habitat rehabilitation requirements.* The Orange County Copermittees requested a modification to the requirements of Provision E.5.e.(3) to allow a Copermittee to identify stream, channel, and/or habitat rehabilitation projects downstream of its jurisdiction. The Orange County Copermittees also requested the removal of Provision E.5.e.(3)(a) requiring each Copermittee to identify streams, channels, and/or habitats in areas of existing development as candidates for rehabilitation.	**Copermittees** Orange County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the requests. The requirements of Provision E.5.e.(3) are to be implemented by each Copermittee within its jurisdiction. Allowing a Copermittee to identify stream, channel, and/or habitat rehabilitation projects downstream of its jurisdiction is not appropriate for this requirement. The Copermittee will, however, be able to identify stream, channel, and/or habitat rehabilitation projects downstream of its jurisdiction as potential alternative compliance options for Priority Development Projects if the Copermittees in the Watershed Management Area perform the optional Watershed Management Area Analysis and include it in the Water Quality Improvement Plan. The removal of Provision E.5.e.(3)(a) is not appropriate because without this requirement, the subsequent requirements could not be implemented by the Copermittee. The San Diego Water Board did not modify the requirements of Provision E.5.e.(3), but the requirements are now under Provision E.5.e.(2) in the revised Tentative Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E6-1	PROVISION E.6: Enforcement Response Plans	
	COMMENT: *Specify criminal penalties are limited to intentional or criminally negligent acts.* The Riverside County and San Diego County Copermittees each submitted comments requesting Provision E.6.b.(5) be modified to specify criminal penalties are limited to intentional or criminally negligent acts.	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees that the revision is necessary. Provision E.6.b requires each Copermittee to list the enforcement response approaches that the Copermittee will implement within its jurisdiction to compel compliance with its statutes, ordinances, permits, contracts, order, or similar means, and the requirements of the Order. The Copermittee may specify in its Enforcement Response Plan that criminal penalties are limited to intentional or criminally negligent acts. The San Diego Water Board did not revise Provision E.6.b.(5).	

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E6-2	PROVISION E.6: Enforcement Response Plans	
	COMMENT: *Notification to San Diego Water Board for "escalated" enforcement should be consistent with Construction General Permit.* The Riverside County and San Diego County Copermittees each submitted comments requesting Provision E.6.e.(1) be modified to be consistent with the notification requirements of the Construction General Permit.	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the request. Provision E.6.e.(1) has been revised as requested.	

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E6-3	PROVISION E.6: Enforcement Response Plans	
	COMMENT: *Revise the term "escalated enforcement" to "progressive enforcement."* The Orange County and Riverside County Copermittees each submitted comments requesting Provision E.6.d be modified to be "Progressive Enforcement" instead of "Escalated Enforcement" because the term is more appropriate.	**Copermittees** Orange County Copermittees Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the request. The Copermittees are expected to implement "progressive enforcement" in all cases of enforcement. For enforcement issues that are associated with the highest priority water quality conditions identified by the Copermittees in the Watershed Management Area, the Copermittees are expected to implement the enforcement more swiftly, meaning escalating its enforcement measures and resources to compel compliance with its statutes, ordinances, permits, contracts, order, or similar means, and the requirements of the Order as soon as possible. The term "escalated enforcement" correctly reflects this added level of urgency and focus to compel compliance. The San Diego Water Board did not revise Provision E.6.d.	

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E6-4	PROVISION E.6: Enforcement Response Plans	
	COMMENT: *Allow the Copermittees to utilize existing guidelines and procedures for enforcement.* The Orange County and Riverside County Copermittees each submitted comments requesting the introductory paragraph of Provision E.6 be modified to specify that a Copermittee may utilize and implement established, equivalent guidelines and procedures for enforcement.	**Copermittees** Orange County Copermittees Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the request. The Copermittees are allowed to utilize and implement their existing procedures if they meet the requirements of Provision E.6. Provision E.6, however, requires each Copermittee to develop an Enforcement Response Plan, included as part of its jurisdictional runoff management program document, which the San Diego Water Board and the public may utilize to determine if the Copermittee is indeed implementing its enforcement program according to its procedures. The Enforcement Response Plan is expected to be a tool the Copermittee can refer to when issuing enforcement actions to compel compliance with its statutes, ordinances, permits, contracts, order, or similar means, and the requirements of the Order. The Enforcement Response Plan is also expected to result in more consistent enforcement and enforcement actions by the Copermittee within its jurisdiction. The San Diego Water Board did not revise the introductory paragraph to Provision E.6.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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E7a-1	PROVISION E.7.a: Public Education	
	COMMENT: *Requests for modifications to public education requirements.* The Orange County, Riverside County and San Diego County Copermittees each submitted comments requesting the requirements in Provision E.7.a be modified to allow the Copermittees to focus their public education efforts on the highest priority water quality conditions, and remove or reduce the emphasis in the language that focuses on pesticides, herbicides and fertilizers.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the requested modifications. The public education requirements under Provision E.7.a provide the Copermittees the flexibility to focus their public education efforts on the highest priority water quality conditions, while being consistent with federal regulations. Provision E.7.a.(1) is consistent with 40CFR122.26(d)(2)(iv)(A)(6), which requires each Copermittee to provide "*A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include…educational activities…*" Provision E.7.a.(1) has been expanded to include "*other pollutants of concern…as determined and prioritized by the Copermittee(s) by jurisdiction and/or watershed to address the highest priority water quality conditions…*" To be consistent with 40CFR122.26(d)(2)(iv)(A)(6), however, each Copermittee must have a program of educational activities to reduce pollutants associated with pesticides, herbicides and fertilizers to the MEP. The San Diego Water Board did not modify Provision E.7.a.	

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E8-1	PROVISION E.8: Fiscal Analysis	
	COMMENT: *Request to remove requirement to secure resources to meet requirements of the Tentative Order.* The Riverside County Copermittees requested that Provision E.8.a, requiring each Copermittee to secure the resources necessary to meet all the requirements of the Order, be removed. The Riverside County Copermittees assert this requirement exceeds the requirements of the Clean Water Act.	**Copermittees** Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the request. The Copermittees are responsible for securing the resources necessary to meet the requirements of the Tentative Order. Without securing the resources necessary to meet all requirements of the Tentative Order, the Copermittee would be unable to meet the requirements of the Tentative Order. Additionally, CWA section 402(p)(3)(B)(iii) requires that NPDES permits for storm water discharges from MS4s to "*require controls to reduce the discharge of pollutants* [in storm water] *to the maximum extent practicable* [MEP], *including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants*." The requirement for each Copermittee to secure the resources necessary to meet all the requirements of the Order is considered "*such other provisions as the Administrator or the State determines appropriate for the control of such pollutants*." The San Diego Water Board did not remove the requirement.	

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F1-1	PROVISION F.1: Water Quality Improvement Plans	
	COMMENT: *Requests for modifications to Water Quality Improvement Plan development process and schedule.* Comments from the Building Industry and the Copermittees requested modifications to the schedules for developing and updating the Water Quality Improvement Plans. Generally, the requests were for more time because of several different factors. The San Diego County Copermittees also requested several modifications to the content of the submittal required for each element of the Water Quality Improvement Plan. Comments from the Environmental Groups and USEPA were primarily concerned with the public participation process during the development of the Water Quality Improvement Plans. The concern was that the requirements of the Tentative Order did not allow for enough public participation, and they requested that additional opportunities be provided during the Water Quality Improvement Plan development and updates. The Environmental Groups also requested that the Water Quality Improvement Plans be required to be developed consecutively instead of concurrently.	**Building Industry / Industry** BIA Regulated Community Coalition **Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees San Diego Unified Port District **Environmental Organizations** Environmental Groups **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board agrees with the request to provide additional time to develop the Water Quality Improvement Plans, but disagrees with requiring the Water Quality Improvement Plans to be developed consecutively instead of concurrently. The San Diego Water Board also agrees with including additional opportunities for public participation during the Water Quality Improvement Plan development and update processes. The San Diego Water Board has modified the requirements of Provision F.1 to provide the Copermittees up to 24 months, instead of 18 months, to develop the Water Quality Improvement Plans. The schedules for developing and submitting the elements of the Water Quality Improvement Plan have also been modified to provide additional time, and additional flexibility to stagger the development of the Water Quality Improvement Plans to provide the public sufficient opportunity to provide data, information and recommendations. Please also see the response to comment B-3.	

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F3b-1	PROVISION F.3.b: Annual Reports	
	COMMENT: *Recommendations for modifications to Annual Report requirements.* Several commenters provided recommendations for modifications to the Annual Report requirements to clarify the requirements, include different requirements, or remove requirements. Ecolayers and the San Diego County Copermittees are concerned with the requirements related to uploading data to the California Environmental Data Exchange Network (CEDEN). Uploading data to CEDEN is not necessary according to Ecolayers. The Copermittees would like to limit the data uploads only to data generated by the Copermittees and not third parties. The Orange County, Riverside County, and San Diego County Copermittees all expressed concern about the transitional reporting period between the time the Tentative Order becomes effective and the date that the first Water Quality Improvement Plan Annual Reports are required. The Orange County Copermittees also expressed concern with the use of the Jurisdictional Runoff Management Program Annual Report Form (Form) in Attachment D to the Tentative Order. The Orange County Copermittees requested continuing the use of the current jurisdictional runoff management program annual reporting format instead of the Form. The Environmental Groups also expressed concern with the Form. The Environmental Groups are concerned that the Form would not adequately reflect the activities that each Copermittee was implementing within its jurisdiction and allow the public to understand how the Copermittees were implementing effective water quality improvement strategies.	**Copermittees** Orange County Copermittees Riverside County Copermittees San Diego County Copermittees **Environmental Organizations** Environmental Groups **Other Entities** Ecolayers
	RESPONSE: The San Diego Water Board agrees that modifying the Annual Report requirements is necessary to clarify transitional reporting requirements and Water Quality Improvement Plan reporting requirements. The San Diego Water Board does not agree that uploading data to CEDEN is unnecessary. Finally, the San Diego Water Board disagrees with replacing the Form with the current jurisdictional runoff management program annual reporting format. The San Diego Water Board has revised the Annual Report requirements under Provision F.3.b to include (1) Transitional Jurisdictional Runoff Management Program Annual Reports, (2) Transitional Monitoring and Assessment Program Annual Reports, and (3) Water Quality Improvement Plan Annual Reports. The Transitional Jurisdictional Runoff Management Program Annual Reports and Transitional Monitoring and	

F3b-1	PROVISION F.3.b: Annual Reports	
	Assessment Program Annual Reports will be submitted by the Copermittees until the first Water Quality Improvement Plan Annual Reports are required. The Form is required for each Copermittee within each Watershed Management Area during the transitional reporting permit. Each Copermittee has the option to continue utilizing the current jurisdictional runoff management program annual reporting format in addition to the Form until the Water Quality Improvement Plan Annual Reports are required. The Form will continue to be required as part of the Water Quality Improvement Plan Annual Reports, but they are expected to be included as an appendix or attachment to the report. The San Diego Water Board will review the Forms to ensure that the Copermittees have certified that they are implementing their jurisdictional runoff management programs in compliance with the requirements. The San Diego Water Board will also utilize the Forms during audits of the Copermittees' jurisdictional runoff management programs and their records. The Water Quality Improvement Plan Annual Reports will provide the information that the Environmental Groups are interested in seeing as part of the annual reporting requirements. Provision F.3.b.(3)(d) requires each Copermittee to report the water quality improvement strategies that were implemented and/or no longer implemented by each of the Copermittees during the reporting period and previous reporting periods, and are planned to be implemented during the next reporting period. Finally, the San Diego Water Board has not removed the requirements to upload data to CEDEN, but has limited the data that is required to be uploaded to CEDEN to just data generated by the Copermittees.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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F3c-1	PROVISION F.3.c: Regional Monitoring and Assessment Report	
	COMMENT: *Requests for modifications to Regional Monitoring and Assessment Report requirements.* The Riverside County and San Diego County Copermittees each submitted requests for modifications to the Regional Monitoring and Assessment Report requirements. The Riverside County Copermittees recommended aligning the requirements with the Integrated Assessment of the Water Quality Improvement Plans. The San Diego County Copermittees recommended removing the requirement for the Regional Monitoring and Assessment Report as it appears to be duplicative with the Integrated Assessment of the Water Quality Improvement Plans. The San Diego County Copermittees also requested, if the Regional Monitoring and Assessment Report requirements remain, that data uploaded to the Regional Clearinghouse be limited only to data generated by the Copermittees and not third parties.	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the requests to modify the Regional Monitoring and Assessment Report requirements. The San Diego Water Board agrees with limiting the data uploaded to the Regional Clearinghouse only to data generated by the Copermittees. The Regional Monitoring and Assessment Report is for the entire San Diego Region, not specific to each Watershed Management Area. The Regional Monitoring and Assessment Report may utilize the findings from the Integrated Assessments of the Water Quality Improvement Plans, but the Regional Monitoring and Assessment Report is intended to provide a "snapshot" of the conditions of the entire San Diego Region. The San Diego Water Board did not remove Provision F.3.c from the requirements. The San Diego Water Board did, however, revise Provision F.3.c.(3) to limit the data that is required to be uploaded to the Regional Clearinghouse to just data generated by the Copermittees.	

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F4-1	PROVISION F.4: Regional Clearinghouse	
	COMMENT: *Request to allow the Copermittees to utilize existing mechanisms and linkages as part of the Regional Clearinghouse.* The Orange County and San Diego County Copermittees each submitted comments requesting the requirements in Provision F.4 be modified to allow the Copermittees to utilize their existing web-based systems. The Orange County and San Diego County Copermittees requested that language be added to Provision F.4 that specifies a Copermittee may elect to develop and maintain clearinghouses provided by other Copermittees or agencies.	**Copermittees** Orange County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees that the Copermittees should be allowed to utilize their existing web-based systems. Provision F.4.a allows the Copermittees to link the Regional Clearinghouse "*to other internet-based data portals and databases where the original documents are stored*." The Regional Clearinghouse, however, must be a single website that is linked to the other web-based systems. Provision G.2.d requires the Principal Watershed Copermittees to coordinate and develop the Regional Clearinghouse. The San Diego Water Board has added a footnote to the opening paragraph of Provision F.4 as requested by the San Diego County Copermittees, which is consistent with the language requested by the Orange County Copermittees.	

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G-1	PROVISION G: PRINCIPAL WATERSHED COPERMITTEE RESPONSIBILITIES	
	COMMENT: *Request for "clarifications" of Copermittee responsibilities.* The San Diego County Copermittees requested that Provision G "clarifies" that all Copermittees have some responsibilities to implement the requirements of the permit, not just the Principal Watershed Copermittees. The San Diego County Copermittees also requested removal of the language recommending that an individual Copermittee should not be designated a Principal Watershed Copermittee for more than two Watershed Management Areas.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees to clarify that all Copermittees are responsible for implementing the requirements. The San Diego Water Board disagrees that it is necessary to remove the recommendation that an individual Copermittee should not be designated a Principal Watershed Copermittee for more than two Watershed Management Areas. Provision G states that an individual Copermittee "should not" be designated a Principal Watershed Copermittee for more than two Watershed Management Areas. "Should not" indicates that it is a recommendation, not a requirement. The recommendation has been included to express the San Diego Water Board's desire for, as well as encourage, more Copermittees to assume leadership positions in developing Water Quality Improvement Plans and coordinating water quality improvement strategies among Copermittees in a Watershed Management Area and in the San Diego Region. The recommendation is not a requirement. Removal of a recommendation is not necessary. The San Diego Water Board has added Provision G.3 to specify that the Principal Watershed Copermittees are not responsible for ensuring that the other Copermittees in the Watershed Management Area are in compliance with the requirements, and that each Copermittee is responsible for implementing the requirements of the Tentative Order.	

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H-1	PROVISION H: MODIFICATION OF PROGRAMS	
	COMMENT: *Request for an explicit re-opener provision in permit for TMDLs.* The Orange County and San Diego County Copermittees and several individual Copermittees requested an explicit re-opener provision be included in the Tentative Order for when TMDLs may be amended.	**Copermittees** City of Dana Point City of Imperial Beach City of Laguna Niguel City of Mission Viejo City of Poway City of Rancho Santa Margarita City of San Diego Orange County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the request. The San Diego Water Board has revised Provision H.4 to explicitly state when the San Diego Water Board will re-open the Order for modifications. Provision H.4.c explicitly states that the San Diego Water Board will re-open the Order if any of the TMDLs in Attachment E are amended in the Basin Plan by the San Diego Water Board, and the amendment is approved by the State Water Board, Office of Administrative Law, and the USEPA.	

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H-2	PROVISION H: MODIFICATION OF PROGRAMS	
	COMMENT: *Request to include language that the permit may be amended outside of the Water Quality Improvement Plan process.* The San Diego County Copermittees have requested the San Diego Water Board include language in Provision H.3 that explicitly states the Tentative Order may be modified outside of the Water Quality Improvement Plan development and implementation process. The San Diego County Copermittees indicated that there may be frequent modifications to the permit requirements based on the Water Quality Improvement Plan development and implementation process.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the request. The Tentative Order has been structured to allow the iterative and adaptive management process to occur within the Water Quality Improvement Plan development and implementation process. The San Diego Water Board does not anticipate any need to modify the Order's requirements as a result of the implementation of the Water Quality Improvement Plans. In the event that the Order's requirements do need to be modified, the language currently in Provision H.3 is adequate for this purpose. Thus, the San Diego Water Board did not revise Provision H.3 as requested by the San Diego County Copermittees.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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AttA-1	ATTACHMENT A: Discharge Prohibitions and Special Protections	
	COMMENT: *Requests for modifications to Areas of Special Biological Significance (ASBS) Special Protections requirements.* San Diego Gas and Electric and Southern California Gas Company requested modifications to Provision I.A.1.e.(2)(ii) of the Special Protections for Areas of Special Biological Significance, Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges (Special Protections) in Attachment A to the Order. San Diego Gas and Electric and Southern California Gas Company requested Provision I.A.1.e.(2)(ii) be revised to include a reference to Finding 32 of the Order to be consistent with their comments regarding authorized non-storm water discharges to MS4s that discharge to ASBS (see comment Fnd-14).	**Building Industry / Industry** San Diego Gas and Electric Southern California Gas Company
	RESPONSE: The San Diego Water Board disagrees with the request. The Special Protections in Attachment A to the Tentative Order were adopted under Resolution No. 2012-0012 by the State Water Board, and are provided verbatim as a reference. Revising the provisions of the Special Protections, which are part of a resolution issued by the State Water Board, is not appropriate or necessary. The San Diego Water Board did not revise the Special Protections in Attachment A.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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AttB-1	ATTACHMENT B: Standard Permit Provisions and General Provisions	
	COMMENT: *Requests for modifications to Standard Permit Provisions.* The Riverside County and San Diego County Copermittees each submitted comments requesting Standard Permit Provision 1.m be removed from the Standard Permit Provisions in Attachment B. The Copermittees are concerned that the bypass provisions of Standard Permit Provision 1.m would require the Copermittees to notify the San Diego Water Board whenever there is an anticipated or unanticipated bypass of storm water treatment BMPs.	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the request. The Standard Permit Provisions in Attachment B are required to be included in all NPDES permits. Thus, it is inappropriate to remove any of the Standard Permit Provisions. Standard Permit Provision 1.m(1)(a) defines a bypass as the intentional diversion of waste streams from any portion of a treatment facility. As most storm water treatment BMPs are not expected to be attended and expected to operate without oversight, there are unlikely to be "intentional" diversions of waste streams. If, however, one or more Copermittees operate a storm water treatment control BMP that requires an "intentional" diversion of the waste stream, the San Diego Water Board expects the Copermittee(s) to comply with the requirements of Standard Permit Provision 1.m. The San Diego Water Board did not revise the Standard Permit Provisions in Attachment B.	

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AttB-2	ATTACHMENT B (Standard Permit Provisions and General Provisions)	
	COMMENT: *Requests for "clarifications" to the General Provisions.* The Riverside County and San Diego County Copermittees each submitted comments requesting "clarifications" to the General Provisions in Attachment B. The Copermittees requested that General Provision 2.h include language that specifies the Copermittees are not responsible for pollutants in its MS4 discharges originating from an NPDES-permitted non-storm water discharge. The Copermittees also requested that recordkeeping requirements of General Provision 2.i.(2) be deleted or revised to be consistent with Standard Permit Provision 1.j.(2).	**Copermittees** Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the requests. Discharges to the Copermittees' MS4s authorized by a separate NPDES permit do not have to be prohibited, as specified in the requirements of Provisions A.1.b and E.2. The Copermittees, however, are responsible for identifying the sources of the discharges from its MS4 if it causes or contributes to exceedances of water quality standards in receiving waters. Please see the response to comment E2-3. The recordkeeping requirements of General Provision 2.i.(2) are not inconsistent with Standard Permit Provision 1.j.(2). Standard Permit Provision 1.j.2 requires records to be kept for a minimum of 3 years unless the San Diego Water Board extends this period, consistent with the Code of Federal Regulations requirement. The San Diego Water Board has extended the recordkeeping requirements of Standard Permit Provision 1.j.(2) with General Provision 2.i.(2) to a period of 5 years. Thus, there is no conflict or inconsistency. The San Diego Water Board did not revise the General Provisions in Attachment B.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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AttC-1	ATTACHMENT C: Acronyms, Abbreviations, and Definitions	
	COMMENT: *Requests for additional or modified definitions.* Several comments were submitted by the Copermittees and Building Industry / Industry requesting modifications to existing definitions and/or the addition of new definitions to Attachment C to the Tentative Order.	**Building Industry / Industry** BIA Regulated Community Coalition San Diego Gas and Electric Southern California Gas Company **Copermittees** City of Chula Vista Orange County Copermittees Riverside County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board reviewed and considered the requested modifications to existing definitions and additional definitions. Where the San Diego Water Board determined a modification to a definition requested by a commenter was appropriate and necessary to clarify a definition or make it consistent with other revisions made in the Tentative Order, the San Diego Water Board made a revision. Where the San Diego Water Board determined the addition of a definition requested by a commenter was appropriate and necessary, the San Diego Water Board added the definition. In several cases, the requested modification or addition was not appropriate, not necessary, or both. In such cases, the San Diego Water Board did not modify or add the definition as requested. Please see Attachment C in the revised Tentative Order to see the revisions that were made.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

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AttE-1	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	COMMENT: *Link compliance with TMDL requirements to development and implementation of Water Quality Improvement Plans.* The San Diego County Copermittees submitted comments requesting that the development and implementation of the Water Quality Improvement Plans be a compliance mechanism for the TMDL requirements of Attachment E. The San Diego Unified Port District submitted separate comments in support of the request. The Orange County Copermittees submitted comments requesting that Provision A.1 and A.2 include language that specifies that compliance with the discharge prohibitions and receiving water limitations will be achieved through implementing the requirements of Attachment E. Comments from Environmental Groups were not in support of allowing compliance with the TMDL requirements through a "reasonable assurance analysis" included in the Water Quality Improvement Plan.	**Copermittees** City of San Diego Orange County Copermittees San Diego County Copermittees San Diego Unified Port District **Environmental Organizations** Environmental Groups
	RESPONSE: The San Diego Water Board agrees with the comments from the Copermittees. The San Diego Water Board disagrees with the comments from the Environmental Groups. The San Diego Water Board acknowledges that monitoring all MS4 outfalls or all receiving waters at all times to demonstrate compliance with the final WQBELs is difficult, likely to be cost prohibitive, and likely to be infeasible. Thus, the San Diego Water Board has included an option to the Compliance Determination requirements allowing the utilization of the Water Quality Improvement Plan to demonstrate compliance with the interim and final TMDL requirements. The compliance determination option provides the Copermittees a mechanism through an analysis to demonstrate that there is "reasonable assurance" that the interim and final numeric WQBELs are being achieved through the implementation of BMPs. Because the Water Quality Improvement Plans will undergo a public participation and review process, the San Diego Water Board is confident that a Water Quality Improvement Plan that includes such an analysis will allow the Copermittees to demonstrate that the final TMDL requirements are being achieved and will be acceptable to the public and the San Diego Water Board. For the interim TMDL compliance determination requirements, the Copermittees are allowed to demonstrate compliance by implementing a Water Quality Improvement Plan that has been accepted by the San Diego Water Board, with a "reasonable assurance" that the implementation of the BMPs will achieve the interim TMDL WQBELs within the interim compliance dates. The Copermittees will be provided considerable flexibility for	

AttE-1	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	demonstrating compliance with achieving the interim WQBELs. For the final TMDL compliance determination requirements, the Copermittees are allowed to demonstrate compliance with the final WQBELs by implementing a Water Quality Improvement Plan that includes an analysis to demonstrate that the implementation of the BMPs required by the TMDL achieves compliance with one or more of the final numeric WQBELs. The Water Quality Improvement Plan must include monitoring and assessments to confirm that the Water Quality Improvement Plan is achieving the final TMDL requirement. The San Diego Water Board must accept and continue to accept the Water Quality Improvement Plan and analysis, and the Copermittees must continue to implement the BMPs and demonstrate through the analysis that the final numeric WQBELs are being achieved.	

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AttE-2	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	COMMENT: *Requests for including TMDL requirements consistent with the TMDLs as developed or "as originally intended."* Several Copermittees submitted comments that the TMDLs have not been incorporated "as originally written and intended" or somehow inconsistent with the TMDLs as they were developed. The Orange County Copermittees specifically referred to the Baby Beach Bacteria TMDLs and the Beaches and Creeks Bacteria TMDLs, noting examples that they identified as "inconsistent" with the TMDLs in the Basin Plan. A comment from Clean Water Now seemed to imply that there was some inconsistencies present in the TMDL requirements "in light of recent legal renderings" though no specific legal interpretations or decisions were provided. The USEPA noted that the Beaches and Creeks Bacteria TMDLs included additional WLAs and compliance endpoints that were not included in Attachment E.	**Copermittees** City of Dana Point City of Imperial Beach City of Laguna Hills City of Lake Forest City of Mission Viejo City of Rancho Santa Margarita City of San Juan Capistrano Orange County Copermittees San Diego Unified Port District **Environmental Organizations** Clean Water Now **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board disagrees that the TMDL requirements in Attachment E are inconsistent with the TMDLs as developed or "as originally intended." The comments from the Copermittees and USEPA noted that several aspects of the TMDLs as they are in the Basin Plan are not included in the Tentative Order. The omission of those aspects of the TMDLs, however, does not mean that the TMDL requirements in Attachment E are inconsistent with the TMDLs as developed or "as originally intended." The TMDLs as developed are all intended to restore the water quality standards in receiving waters impaired by specific pollutants. The WLAs and LAs as developed are all intended to ensure that discharges from point and nonpoint sources to receiving waters will not cause or contribute to exceedances of water quality standards in receiving waters. The TMDL requirements in Attachment E are consistent with the intent of the TMDLs, and the WLAs for MS4s. In other words, the TMDL requirements in Attachment E are intended to ensure that discharges from the Responsible Copermittees' MS4s will not cause or contribute, and will continue to not cause or contribute to exceedances of water quality standards in receiving waters. According to each TMDL, when all point sources and nonpoint sources achieve their WLAs and LAs, including the WLAs for MS4s, the water quality standards in receiving waters will be restored. The San Diego Water Board included TMDL requirements in Attachment E that are entirely consistent with the requirements of the TMDLs as adopted and incorporated into the Basin Plan. The implementation plans of the	

AttE-2	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	TMDLs in the Basin Plan are essentially "instructions" for the San Diego Water Board to incorporate the requirements into the regulatory mechanisms that will implement the requirements of the TMDL to attain the water quality standards that are being impaired by a pollutant in a water body. In each case, the "instructions" provide the permit writer considerable flexibility in how to express the WLAs as WQBELs in the permit, but not as much flexibility in the compliance schedules for achieving the WLAs. Nonetheless, the San Diego Water Board has revised the TMDL requirements in Attachment E to include some of the additional aspects of the TMDLs as developed and included in the Basin Plan. Please see the following responses to comments pertaining to Attachment E.	

AttE-3	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	COMMENT: *Objections with how the Water Quality Based Effluent Limitations are included or expressed in the Tentative Order.* The Orange County and San Diego County Copermittees each submitted comments that objected to how the WQBELs for the TMDLs in Attachment E are included or expressed. The San Diego County Copermittees object to including receiving water limitations as a component of the WQBELs, and requested a clearer linkage between receiving water limitations and effluent limitations. The Orange County Copermittees had a similar objection. The San Diego County Copermittees also requested that the WQBELs expressed as effluent limitations specify that the concentration-based effluent limitations be applied on a watershed basis and not outfall by outfall. The Orange County Copermittees questioned the feasibility of the numeric WQBELs, and asserted that compliance with WQBELs should be based on implementation of BMPs. The Orange County Copermittees assert that a Reasonable Potential Analysis (RPA) is required before including WQBELs into the permit. The Orange County Copermittees also assert that the WQBELs for the Baby Beach Bacteria TMDLs and Beaches and Creeks Bacteria TMDLs are not consistent with the assumptions and requirements of the WLAs. In contrast, the USEPA generally supported the San Diego Water Board's approach for incorporating the TMDL requirements into the Tentative Order.	**Copermittees** Orange County Copermittees San Diego County Copermittees **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board has included WQBELs that are consistent with the requirements and assumptions of the TMDLs. WQBELs can be expressed as (1) conditions in receiving waters that are to be attained to restore or protect water quality standards in receiving waters, (2) conditions in discharges that will not cause or contribute to exceedances of water quality standards in receiving waters, (3) BMPs that will ensure discharges will not cause or contribute to exceedances of water quality standards in receiving waters, or (4) a combination of one or more of (1)-(3). The San Diego Water Board has incorporated (1)-(3) under the WQBEL requirements for each of the TMDLs in Attachment E. In most cases, if the WQBEL expressed as a receiving water limitation is achieved, the discharges from the MS4s are assumed to be in compliance with the TMDL requirements. If not, then the	

AttE-3	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	Copermittees must demonstrate that discharges from the MS4s are not causing or contributing to the exceedances in the receiving waters by achieving the WQBELs expressed as effluent limitations. In every case, the Copermittees are required to implement BMPs to ensure that discharges from their MS4s do not cause or contribute to exceedances of water quality standards in receiving waters. Because there are TMDLs in the Basin Plan that have identified the MS4s as causing or contributing to exceedances of water quality standards, an RPA is not necessary to establish WQBELs. RPAs are only necessary if the San Diego Water Board decides to develop and incorporate WQBELs into an NPDES permit absent a TMDL. The WQBELs are also consistent with the assumptions and requirements of the WLAs. In each case, the WLAs are calculated based on numeric targets that are assumed to be able to restore or protect water quality standards in receiving waters and/or ensure discharges from the Responsible Copermittees' MS4s will not cause or contribute to exceedances of water quality standards in receiving waters. The numeric targets are required to be based on water quality objectives in the Basin Plan. Discharges from the MS4s are required to achieve the numeric targets for their discharges to protect water quality standards in receiving waters to meet the WLAs. The WQBELs for the TMDLs in Attachment E are consistent with the numeric targets, and thus consistent with the underlying assumptions and requirements of the numeric targets that are the basis of the WLAs. For the Baby Beach Bacteria TMDLs and Beaches and Creeks Bacteria TMDLs, the San Diego Water Board has not revised the concentration-based WQBELs, but has included WQBELs expressed as load-based effluent limitations. The Copermittees may utilize the load-based effluent limitations to demonstrate that the BMPs they are implementing are achieving their effluent limitations and not causing or contributing to exceedances of water quality standards in receiving waters. Please see the response to comment AttE-1.	

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AttE-4	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	COMMENT: *Recommendation to reorganize the Specific Provisions for the TMDLs.* The San Diego County Copermittees recommended reorganizing the Specific Provisions of the TMDLs in Attachment E. To clearly outline the interim and final requirements and schedules, the San Diego County Copermittees recommended organizing the compliance dates, WQBELs, and compliance determination by final TMDL requirements and interim TMDL requirements.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the recommendation. The San Diego Water Board reorganized the Specific Provisions for the TMDLs in Attachment E as recommended.	

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AttE-5	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	COMMENT: *The San Diego Water Board does not have the authority to establish TMDLs for non-pollutants (surrogates).* The BIA Regulated Community Coalition requested that that San Diego Water Board revise the TMDLs to conform with a U.S. District Court for the Eastern District of Virginia decision that TMDLs could not be established to regulate non-pollutants as surrogates for pollutants.	**Building Industry / Industry** BIA Regulated Community Coalition
	RESPONSE: The San Diego Water Board disagrees that the TMDLs need to be revised. The TMDLs in Attachment E are all based on reducing pollutant loads in MS4 discharges to ensure the Copermittees' MS4s will not cause or contribute to exceedances of water quality standards in receiving waters. The TMDLs in Attachment E do not establish any requirements to regulate non-pollutants as surrogates for pollutants.	

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AttE6-1	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	COMMENT: *Recommendation to add a provision to address TMDLs approved during the term of the Tentative Order.* The USEPA recommended adding a provision to the requirements of the Tentative Order to address TMDLs approved during the term of the permit to expedite implementation of the TMDLs by the Copermittees.	**State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board agrees with the recommendation. The San Diego Water Board has revised Provision F.2.c to include a requirement for the Copermittees to initiate an update to the applicable Water Quality Improvement Plans to incorporate the requirements of any TMDL Basin Plan amendments, applicable to the Copermittees, approved by the Office of Administrative Law and USEPA within the term of the Tentative Order.	

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AttE1-1	ATTACHMENT E 1: Chollas Creek Diazinon TMDL	
	COMMENT: *Request to revise WQBELs for Chollas Creek Diazinon TMDL based on recalculated criteria.* The San Diego County Copermittees assert that the Chollas Creek Diazinon TMDL is based on erroneous numeric targets due to an error discovered in the criteria used to develop the TMDL. The San Diego County Copermittees requested that the WQBELs for the Chollas Creek Diazinon TMDL be revised based on recalculated criteria, or remove the TMDL until the WQBELs can be "corrected."	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the request. The Chollas Creek Diazinon TMDL was incorporated into the Basin Plan in September 2003. Until the Basin Plan is revised to include the "corrected" criteria as part of the numeric targets, the San Diego Water Board is required to include the TMDL requirements in the Tentative Order consistent with the requirements of the TMDL in the Basin Plan. The criteria utilized in the development of the Chollas Creek Diazinon TMDL are more protective than the "corrected" criteria cited by the commenter. Implementation of the Chollas Creek Diazinon TMDL with the WQBELs consistent with the numeric targets in the TMDL in the Basin Plan is protective of the water quality standards in receiving waters. According to the commenter, the "corrected" criteria were discovered in 2004. The commenter has had almost 9 years to approach the San Diego Water Board to request a revision to the TMDL in the Basin Plan. If the commenter would like to revise the numeric targets of the TMDL in the Basin Plan, the commenter must approach the TMDL and Basin Planning staff of the San Diego Water Board to request the change. Requesting the change through the MS4 permit development process is not the appropriate forum. The WQBELs for the Chollas Creek Diazinon TMDL were not revised.	

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AttE2-1	ATTACHMENT E 2: Shelter Island Yacht Basin Dissolved Copper TMDLs	
	COMMENT: *Request to include San Diego Unified Port District as MS4 operator in SIYB Dissolved Copper TMDL.* The City of San Diego requested that the San Diego Unified Port District be listed as a Responsible Copermittee under the dissolved copper TMDL for Shelter Island Yacht Basin.	**Copermittees** City of San Diego
	RESPONSE: The San Diego Water Board disagrees that the San Diego Unified Port District should be listed as a Responsible Copermittee under the Shelter Island Yacht Basin dissolved copper TMDL. The Shelter Island Yacht Basin dissolved copper TMDL adopted under Resolution No. R9-2005-0019 only listed the City of San Diego as an owner or operator of an MS4 that discharges to Shelter Island Yacht Basin. The TMDL provides a wasteload allocation (WLA) of 30 kg/yr for MS4 discharges by the City of San Diego only. This means that if the San Diego Unified Port District does in fact have MS4 discharges to Shelter Island Yacht Basin, the TMDL currently has assigned MS4 discharges from the San Diego Unified Port District a WLA of 0 kg/yr. Any discharge of dissolved copper from MS4s owned or operated by the San Diego Unified Port District to Shelter Island Yacht Basin would be in violation of its WLA and WQBELs expressed as effluent limitations.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE2-2	ATTACHMENT E 2: Shelter Island Yacht Basin Dissolved Copper TMDLs	
	COMMENT: *Request to revise WQBELs expressed as receiving water limitations for the Shelter Island Yacht Basin Dissolved Copper TMDL to include Water Effects Ratio.* The San Diego County Copermittees noted that the Water Effects Ratio (WER) term was incorporated into the Chollas Creek Dissolved Metals TMDLs and requested that the WQBELs expressed as receiving water limitations for the Shelter Island Yacht Basin Dissolved Copper TMDL include the WER term.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the request. The San Diego Water Board has included a WER multiplier to the WQBELs expressed as receiving water limitations for the Shelter Island Yacht Basin Dissolved Copper TMDL. The WER is assumed to be 1.0 unless there is a site-specific and chemical-specific WER. The WER must be incorporated into the Basin Plan before it can be utilized in the calculation for the WQBELs expressed as receiving water limitations. The footnote includes this clarification. The San Diego Water Board also revised the footnotes for the WER term in the Chollas Creek Dissolved Metals TMDLs to clarify that the WER is assumed to be 1.0 unless a site-specific and chemical-specific WER is provided in the Basin Plan.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE2-3	ATTACHMENT E 2: Shelter Island Yacht Basin Dissolved Copper TMDLs	
	COMMENT: *Revise Shelter Island Yacht Basin Dissolved Copper TMDL requirements to allow for BMP-based compliance.* The San Diego County Copermittees requested that the Shelter Island Yacht Basin Dissolved Copper TMDL requirements be revised to allow for BMP-based compliance.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the request to include a BMP-based compliance determination option. Please see the response to comment AttE-1.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE3-1	ATTACHMENT E 3: Rainbow Creek Total Nitrogen and Total Phosphorus TMDLs	
	COMMENT: *Request to remove the Rainbow Creek Total Nitrogen and Total Phosphorus TMDLs from the Tentative Order.* The County of San Diego and San Diego County Copermittees requested the Rainbow Creek Total Nitrogen and Total Phosphorus TMDLs be removed from Attachment E to the Tentative Order. The Copermittees noted that the TMDL, as it is incorporated in the Basin Plan, only identified a wasteload allocation (WLA) for Caltrans. The TMDL only assigns load allocation (LAs) for land uses to the County of San Diego. The Copermittees assert that only requirements for WLAs can be incorporated into an NPDES permit. The San Diego County Copermittees also requested, if the Rainbow Creek Total Nitrogen and Total Phosphorus TMDLs are not removed from Attachment E, that one of the compliance determination options allow the Responsible Copermittee to demonstrate compliance by "using its legal authority to reduce nutrient discharges from the land uses identified…to the maximum extent practicable."	**Copermittees** County of San Diego San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees with the request to remove the Rainbow Creek Total Nitrogen and Total Phosphorus TMDLs from Attachment E. The San Diego Water Board also disagrees with allowing compliance by only achieving MEP. The Basin Plan states in the Rainbow Creek Total Nitrogen and Total Phosphorus TMDLs, "*In the event that a nonpoint source becomes a permitted discharge, the portion of the load allocation that is associated with the source can become a wasteload allocation*" (page 7-17 of the Basin Plan). The Rainbow Creek Total Nitrogen and Total Phosphorus TMDLs include several LAs that have been assigned to land uses that fall within the jurisdiction of the County of San Diego and discharge non-storm water and storm water to and from its MS4. Because these "nonpoint sources" are discharges subject to the requirements of an NPDES permit, they are permitted discharges. Thus they are effectively and appropriately considered WLAs that must be incorporated into the Tentative Order. The San Diego Water Board has revised and reorganized the format of the TMDL requirements in Attachment E, as requested by the Copermittees (see response to comment AttE-4). The reformatting and reorganization also resulted in the removal of the WLA term from the TMDL requirements. The introductory paragraph has been revised to specify that the TMDLs in Attachment E incorporate provisions that implement the LAs and WLAs applicable to discharges regulated under the Tentative Order.	

AttE3-1	ATTACHMENT E 3: Rainbow Creek Total Nitrogen and Total Phosphorus TMDLs	
	The request by the Copermittees to include a compliance determination option of allowing compliance only by achieving MEP is not appropriate for a TMDL. TMDLs require the achievement of WQBELs when technology-based effluent limitations (TBELs) cannot achieve the attainment of water quality standards in receiving waters. The MEP standard is a TBEL. The Responsible Copermittee must achieve the WQBELs to either restore or protect water quality standards in receiving waters, or ensure discharges from the MS4 do not cause or contribute to exceedances of water quality standards in receiving waters. The San Diego Water Board did not remove the Rainbow Creek Total Nitrogen and Total Phosphorus TMDLs from Attachment E. The San Diego Water Board did not include a compliance determination option that allows compliance only by achieving MEP.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE4-1	ATTACHMENT E 4: Chollas Creek Dissolved Copper, Lead, and Zinc TMDLs	
	COMMENT: *Request to revise the Chollas Creek Dissolved Copper, Lead, and Zinc TMDL requirements to allow for BMP-based compliance.* The San Diego County Copermittees requested that the Chollas Creek Dissolved Copper, Lead, and Zinc TMDL requirements be revised to allow for BMP-based compliance.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the request to include a BMP-based compliance determination option. Please see the response to comment AttE-1.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE5-1	ATTACHMENT E 5: Baby Beach and Shelter Island Shoreline Park Bacteria TMDLs	
	COMMENT: *Request to revise the WQBELs of the Baby Beach and Shelter Island Shoreline Park Bacteria TMDL requirements to allow for load-based compliance.* The Orange County and San Diego County Copermittees, Environmental Groups, and the USEPA each commented that the bacteria TMDLs included load-based WLAs, expressed as mass loads, percent load reductions, or both, and recommended including load-based WQBELs. The Orange County and San Diego County Copermittees requested the WQBELs include load-based effluent limitations and allow compliance to be demonstrated with load-based effluent limitations instead of concentration-based effluent limitations. The Environmental Groups did not support allowing compliance determination solely through mass-loading numbers.	**Copermittees** Orange County Copermittees San Diego County Copermittees **Environmental Organizations** Environmental Groups **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board agrees with the request to include requirements that allow for load-based compliance with the Baby Beach and Shelter Island Shoreline Park Bacteria TMDLs. Please see the responses to comment AttE-1 and AttE-3.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE6-1	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDLs	
	COMMENT: *Water bodies no longer listed on the 303(d) List should not be required to implement or comply with the requirements of the Beaches and Creeks Bacteria TMDLs.* The Orange County and San Diego County Copermittees and the Cities of Carlsbad, Del Mar and Encinitas submitted comments noting that the Beaches and Creeks Bacteria TMDLs included language that beach segments that were delisted from the 303(d) list are not subject to further action and not required to submit Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) as long as monitoring continues to support compliance with REC-1 water quality standards. The Copermittees requested that the Beaches and Creeks Bacteria TMDLs be modified so the beach segments that are not included on the 303(d) list are not required to implement or comply with the Beaches and Creek Bacteria TMDLs requirements.	**Copermittees** City of Carlsbad City of Del Mar City of Encinitas Orange County Copermittees San Diego County Copermittees
	RESPONSE: The San Diego Water Board disagrees that beach segments that are not on the 303(d) List should not be required to implement or comply with the Beaches and Creek Bacteria TMDLs requirements. The Beaches and Creeks Bacteria TMDLs have been incorporated into the Basin Plan and apply to all the water bodies listed in the TMDL. The Copermittees cite the following from the introduction to the Beaches and Creeks TMDLs: "*Specific beach segments from some of the Pacific Ocean shorelines listed in the above table have been delisted from the 2008 303(d) list that was approved by the San Diego Board on December 16, 2009, and therefore are not subject to any further action as long as monitoring data continues to support compliance with water quality standards*" (Basin Plan page 7-60). This does not mean that the TMDLs do not apply to these segments, only that the current BMPs are working and additional actions (i.e. additional BMPs) are not necessary at this time. Under the TMDL Compliance Schedule for the Beaches and Creeks Bacteria TMDLs, the Basin Plan states: "*The TMDLs that address the Pacific Ocean shorelines identified in the 2002 303(d) List are assumed to be applicable to all the beaches located on the shorelines of the hydrologic subareas (HSAs), hydrologic areas (HAs), and hydrologic units (HUs) listed above, or as listed individually in the 2008 and future 303(d) Lists*" (Basin Plan page 7-106). This means that the TMDLs apply to the entire Pacific Ocean Shorelines identified in the TMDL and is not only where there are beach segments that are listed on the 303(d) List. Thus, it does not matter if a particular segment has been delisted, the TMDLs still apply to the entire Pacific Ocean Shoreline identified in the TMDL.	

AttE6-1	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDLs	
	The TMDL Compliance Schedule also states, "*In some cases, receiving water limitations are already being met, resulting in the delisting of those segments or areas from the 2006 and/or 2008 303(d) Lists. The protection of the REC-1 beneficial use of those delisted segments or areas, however, must also be maintained, and those segments or areas must remain off future iterations of the 303(d) List… If receiving water limitations are exceeded in the future in those locations, the BLRPs or CLRPs must include the implementation of a BMP program that will ensure that the TMDLs will be achieved by the end of the TMDL compliance schedules*." (Basin Plan page 7-106). The Basin Plan continues, "*For watersheds in Table 7-52 where there are no longer any impairments listed on the 2008 303(d) List, the Phase I MS4s and Caltrans are not required to submit a BLRP or CLRP within 18 months of the effective date of these TMDLs. If, however, any segment of a waterbody for the watershed (Pacific Ocean shoreline, creek, or mouth as shown in Table7-36) is re-listed on a future 303(d) List for any type of indicator bacteria, the Phase I MS4s and Caltrans will be required to submit a BLRP or CLRP within 6 months of the adoption of the 303(d) List by the San Diego Regional Board*" (page 7-107). This means that a BLRP or CLRP is not required by the Basin Plan to be submitted within 18 months of the effective date of the TMDLs, but it also does not mean that the San Diego Water Board cannot require a BLRP or CLRP to be submitted. The Beaches and Creeks Bacteria TMDLs were developed when it was unknown when the Orange County and San Diego County MS4 Permits would be renewed to incorporate the requirements of the TMDLs. At the time the TMDLs were adopted, the Orange County MS4 Permit had just been renewed in 2009, and the San Diego County MS4 Permit was unlikely to be renewed before 2012. The San Diego Water Board wanted the implementation of the TMDLs to begin with the submittal of BLRPs or CLRPs, before the Orange County and San Diego County MS4 permits were expected to be renewed. Thus, the TMDL included the 18 month period of time for the Copermittees to develop the BLRPs or CLRPs to be required by the San Diego Water Board through an appropriate regulatory mechanism. The regulatory mechanism to compel the submittal of the BLRPs or CLRPs from the Copermittees could have been in the form of an investigative order, enforcement action, or a modification to the existing MS4 permits. The San Diego Water Board removed the 18 month BLRP or CLRP submittal requirement only for the watersheds where there were no bacteria impairments on the 2008 303(d) List because there was not the same level of urgency to begin implementation of the TMDL requirements as for those watersheds where there continue to be bacteria impairments. The removal of the 18 month BLRP or CLRP submittal requirement did not mean that a BLRP or CLRP would not be required to be developed as part of the TMDL requirements in the MS4 permit.	

AttE6-1	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDLs	
	The fact that the Beaches and Creeks Bacteria TMDLs are now part of the Basin Plan means that the TMDLs and the requirements of the TMDLs must be implemented through a regulatory mechanism to restore water quality standards in receiving waters and/or ensure discharges are not causing or contributing to exceedances of water quality standards in receiving waters. In this case, the Tentative Order is the regulatory mechanism that is implementing the requirements of the Beaches and Creeks Bacteria TMDLs to ensure that discharges from the Copermittees' MS4s will comply with the WLAs in the TMDL and not cause or contribute to exceedances of water quality standards in receiving waters. For segments or areas where there is no bacteria impairment identified on the 303(d) List, implementation of the Beaches and Creeks Bacteria TMDL requirements in the Tentative Order will ensure that discharges from the Copermittees' MS4s will continue to not cause or contribute to exceedances of water quality standards in receiving waters and remain off the 303(d) List. The Copermittees will be required to include the monitoring and assessments that are necessary to demonstrate that discharges from the Copermittees MS4s continue to not cause or contribute to exceedances of water quality standards in receiving waters and remain off the 303(d) List. The Copermittees will not be required to include additional BMPs in the Water Quality Improvement Plans if the existing BMPs are allowing the Copermittees to achieve the bacteria TMDL requirements. If, however, bacteria impairments result in the re-listing of any of these beach segments on the 303(d) List, the incorporation of the TMDL requirements in the Water Quality Improvement Plan will fulfill the CLRP requirements, and the Copermittees will be required to update the Water Quality Improvement Plan to ensure that discharges from the Copermittees' MS4s will not cause or contribute to exceedances of water quality standards in receiving waters by the final TMDL compliance date.	

AttE6-2	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDLs	
	COMMENT: *Estimated costs to implement Beaches and Creeks Bacteria TMDLs are very high, and TMDLs may not be attainable.* Several community planning groups, the County of San Diego and the San Diego Taxpayers Association expressed concerns with the estimated costs of implementing the Beaches and Creeks Bacteria TMDLs. There were also concerns expressed about the feasibility of attaining the TMDLs. The commenters generally objected to including the Beaches and Creeks Bacteria TMDLs in the Tentative Order until there was some certainty that the expenses associated with implementing the TMDLs will result in the achievement of the TMDLs.	**Community Planning Groups** Pala Pauma Valley Community Sponsor Group Jamul Dulzura Community Planning Group Ramona Community Planning Group Julian Community Planning Group **Copermittees** County of San Diego County of San Diego Office of County Counsel **Societies/Associations/Coalitions** San Diego Taxpayers Association
	RESPONSE: The San Diego Water Board understands the concerns with the potential costs of implementing the requirements of the TMDLs, as well as the concerns with the feasibility of attaining the TMDLs. The costs associated with achieving the requirements of the Beaches and Creeks Bacteria TMDLs were considered during Basin Plan amendment process. The Beaches and Creeks Bacteria TMDL Basin Plan amendment was made available for public review and comment on several occasions. The San Diego Water Board adopted the Beaches and Creeks Bacteria TMDLs after considering the potential costs. The State Water Board, Office of Administrative Law, and the USEPA also approved the Beaches and Creeks Bacteria TMDLs. At this time it is difficult to predict the actual costs of complying with the Beaches and Creeks Bacteria TMDL requirements. Even the estimates that have been provided by the County of San Diego and the City of San Diego in their Comprehensive Load Reduction Plans acknowledge there is significant uncertainty in their cost estimates. While the cost estimates do provide some idea of the magnitudes of the potential costs for implementing BMPs and programs to achieve the TMDLs, the cost estimates fail to include or consider the potential cost savings or cost benefits that may be achieved or realized by implementing the Beaches and Creeks Bacteria TMDLs. The Beaches and Creeks Bacteria TMDL requirements provide the Copermittees a compliance schedule of up to 20 years. The Copermittees have not truly begun implementing the requirements of the TMDLs and have only questioned and raised concerns over the potential costs and feasibility of attaining the TMDLs before developing any information to demonstrate the TMDLs cannot, in fact, be attained or that the costs exceed the benefits of implementing the TMDLs.	

AttE6-2	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDLs	
	The San Diego Water Board is implementing the requirements of the federal Clean Water Act. The incorporation of the requirements of the Beaches and Creeks Bacteria TMDLs in the Tentative Order is required to implement the WLAs that have been assigned to the MS4s, which is supported by the USEPA. The San Diego Water Board has not removed the Beaches and Creeks Bacteria TMDLs from Attachment E to the Order.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE6-3	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDLs	
	COMMENT: *Request to revise the WQBELs of the Beaches and Creeks Bacteria TMDL requirements to allow for load-based compliance.* The Orange County and San Diego County Copermittees, the City of Laguna Niguel, Environmental Groups, and the USEPA each commented that the bacteria TMDLs included load-based WLAs, expressed as mass loads, percent load reductions, or both, and recommended including load-based WQBELs. Several Copermittees submitted separate letters that supported the inclusion load-based WQBELs. The Orange County and San Diego County Copermittees requested the WQBELs include load-based effluent limitations and allow compliance to be demonstrated with load-based effluent limitations instead of concentration-based effluent limitations. The Environmental Groups did not support allowing compliance determination solely through mass-loading numbers.	**Copermittees** City of Dana Point City of Imperial Beach City of Laguna Niguel City of Mission Viejo City of Poway City of Rancho Santa Margarita City of San Diego Orange County Copermittees San Diego County Copermittees **Environmental Organizations** Environmental Groups **State/Federal Government** USEPA
	RESPONSE: The San Diego Water Board agrees with the request to include requirements that allow for load-based compliance with the Beaches and Creeks Bacteria TMDLs. Please see the responses to comment AttE-1 and AttE-3.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE6-4	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDLs	
	COMMENT: *Request to revise the Beaches and Creeks Bacteria TMDL requirements to allow for BMP-based compliance.* The Orange County and San Diego County Copermittees requested that the Beaches and Creeks Bacteria TMDL requirements be revised to allow for BMP-based compliance. Several Copermittees submitted separate comments supporting the concept. Comments from Environmental Groups were not in support of allowing BMP-based compliance with the TMDL requirements through a "reasonable assurance analysis."	**Copermittees** City of Imperial Beach City of Poway City of San Diego Orange County Copermittees San Diego County Copermittees **Environmental Organizations** Environmental Groups
	RESPONSE: The San Diego Water Board agrees with the Copermittees' request. The San Diego Water Board disagrees with the Environmental Groups that BMP-based compliance option should not be provided. Please see the response to comment AttE-1.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE6-5	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDLs	
	COMMENT: *Request to revise the Beaches and Creeks Bacteria TMDL requirements to allow for adjustment of interim TMDL compliance dates.* The Orange County and San Diego County Copermittees and the City of San Diego submitted comments noting that the Beaches and Creeks Bacteria TMDL included a provision that allows for the Copermittees to propose interim compliance dates if they develop a Comprehensive Load Reduction Plan, and requested the TMDL requirements be modified to allow for the interim TMDL compliance dates to be adjusted. The City of Imperial Beach supported the concept. The Environmental Groups requested that there be an assessment of progress toward achieving the interim goals within the term of the permit.	**Copermittees** City of Imperial Beach City of San Diego Orange County Copermittees San Diego County Copermittees **Environmental Organizations** Environmental Groups
	RESPONSE: The San Diego Water Board agrees with the Copermittees to allow for the interim TMDL compliance dates to be adjusted. The San Diego Water Board also agrees that there should be an assessment or progress toward achieving interim goals within the term of the permit. The Water Quality Improvement Plan is essentially the same as a CLRP. Including language allowing the Copermittees to adjust the interim TMDL compliance dates in the Water Quality Improvement Plan would not be inconsistent with the requirements of the Beaches and Creeks Bacteria TMDLs in the Basin Plan. Thus, the San Diego Water Board has included language in Specific Provision 6.c.(1) of the revised Tentative Order that allows the Copermittees to propose alternative interim TMDL compliance dates in the Water Quality Improvement Plan. The requirements of Provision B.3.a.(2)(b) in the revised Tentative Order also require the Copermittees to establish an interim goal that the Copermittees will work toward achieving within the term of the permit.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE6-6	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDLs	
	COMMENT: *Requests to revise the WQBELs of the Beaches and Creeks Bacteria TMDLs requirements.* The City of Laguna Niguel submitted comments with information from a study being conducted by the Southern California Coastal Waters Research Project (SCCWRP) in cooperation with the Copermittees regarding bacteria loads that can be attributed to natural sources. The information provided by the City of Laguna Niguel was provided to support a request to include load-based WQBELs based on load reductions. The City of Laguna Niguel also requested that the load reductions be calculated using a baseline of 1996-2002 data instead of 2002-2011 data. The San Diego County Copermittees submitted comments noting that the total coliform water quality objectives only apply to ocean waters and should not be applied to creeks. The San Diego County Copermittees requested that the WQBELs expressed as receiving water limitations specify that the total coliform receiving water limitations only apply to beaches and not creeks.	**Copermittees** City of Laguna Niguel San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the requests from the City of Laguna Niguel and the San Diego County Copermittees. The San Diego Water Board has incorporated WQBELs expressed as load-based effluent limitations based on percent load reductions. Please see the response to comments AttE-1 and AttE-3. The San Diego Water Board revised the tables with the WQBELs expressed as receiving water limitations to be consistent with the tables in the Beaches and Creeks Bacteria TMDLs.	

RESPONSES TO COMMENTS RECEIVED ON TENTATIVE ORDER NO. R9-2013-0001

March 27, 2013

AttE6-7	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDLs	
	COMMENT: *Request to revise the Beaches and Creeks Bacteria TMDLs monitoring and assessment requirements to be consistent with TMDL Basin Plan amendment.* The San Diego County Copermittees submitted comments requesting that the Beaches and Creeks Bacteria TMDLs monitoring and assessment requirements in the Order include the procedures to calculate wet weather exceedance frequencies as provided in the TMDL Basin Plan amendment.	**Copermittees** San Diego County Copermittees
	RESPONSE: The San Diego Water Board agrees with the request. Specific Provisions 6.d.(1)(c) and 6.d.(2)(c) have been modified to include the procedures for calculating the dry weather and wet weather exceedance frequencies for beaches and creeks.	

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ATTACHMENT
14

California Regional Water Quality Control Board
San Diego Region

Response to Comments Report

Tentative Order No. R9-2015-0001

An Order Amending Order No. R9-2013-0001, NPDES No. CAS010266 National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges From the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds Within the San Diego Region

January 21, 2015

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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California Regional Water Quality Control Board
San Diego Region

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Response to Comments on Tentative Order No. R9-2015-0001
January 21, 2015

Introduction

This report contains responses to written comments timely received on Tentative Order No. R9-2015-0001, *An Order Amending Order No. R9-2013-0001, NPDES No. CAS010266*, *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region*. The Tentative Order and its attachments were available for public review and comment for 60 days, with the comment period ending on November 19, 2014. Specifically, the San Diego Water Board requested comments on the following three documents:

- Tentative Order No. R9-2015-0001;
- Attachment No. 1 – Revised Order No. R9-2013-0001; and
- Attachment No. 2 – Revised Fact Sheet to Order No. R9-2013-0001.

The phrases "Tentative Order" and "Tentative Order as it amends Order No. R9-2013-0001" in the following response to comments table refers to both Tentative Order No. R9-2015-0001 and the two attachments. Comments and responses are organized by the section of either Attachment 1 or Attachment 2 that is being referenced. Wherever possible, comments are grouped based on content and summarized by the San Diego Water Board. The actual comment letters can be accessed on the San Diego Water Board website at: http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/oc_stormwater.shtml.

List of Commenters:

Comments were submitted by the following organizations, public agencies, or individuals:

1. City of Aliso Viejo
2. City of Del Mar
3. City of Lake Forest
4. City of San Diego
5. Coalition (San Diego Building Industry Association, Building Industry Association of Southern California, Associated General Contractors, Associated Builders and Contractors, San Diego Regional Chamber of Commerce, Business Leadership Alliance, San Diego Association of Realtors, San Diego Apartment Association, National Association of Industrial & Office Properties, Building Office & Management Association, San Diego Chapter of the American Society of Landscape Architects)
6. Coastal Environmental Rights Foundation
7. Construction Industry Coalition on Water Quality (The Associated General Contractors of California, Building Industry Association of Southern California,

Engineering Contractors Association, Southern California Contractors Association, and the United Contractors located in San Ramon in Northern California)
8. County of Orange
9. County of San Diego
10. County of Riverside
11. Industrial Environmental Association
12. San Diego Coastkeeper
13. San Diego Unified Port District
14. Tory R. Walker Engineering, Inc.

Acronyms and Abbreviations

The following acronyms and abbreviations are used in the response to comments table.

ASBS	Area(s) of Special Biological Significance
BMP	Best Management Practice
Basin Plan	Water Quality Control Plan for the San Diego Basin
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWC	California Water Code
LID	Low Impact Development
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NAL	Non-Storm Water Action Level
NPDES	National Pollutant Discharge Elimination System
ROWD	Report of Waste Discharge (application for NPDES reissuance)
SAL	Storm Water Action Level
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
State Water Board	State Water Resources Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
WLA	Waste Load Allocation
WQBEL	Water Quality Based Effluent Limitation

INDEX OF COMMENT SUMMARIES AND RESPONSES ON TENTATIVE ORDER NO. R9-2015-0001

PREVIOUSLY SUBMITTED COMMENT LETTERS

PR-1: Written comments submitted during adoption proceedings of Order No. R9-2013-0001 are applicable to Tentative Order No. R9-2015-0001 and should be considered 8

PR-2: Construction Industry Coalition on Water Quality resubmits its comment letters pertaining to hydromodification management 9

GENERAL COMMENTS

Gnl-1: Remove City of Lake Forest from Table 1b and the associated footnote. 10

Gnl-2: Tentative Order toxicity requirements do not take into account information presented in the Orange County Copermittees ROWD. 11

Gnl-3: Numbering in Tentative Order should explicitly identify the major sections to help the reader. 13

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PR- 1	PREVIOUSLY SUBMITTED COMMENT LETTERS	
	COMMENT: *All prior comments, evidence, and objections made during adoption of Order No. R9-2013-0001 are applicable to Tentative Order No. R9-2015-0001 are requested to be incorporated during consideration of Tentative Order No. R9-2015-0001.* Because of the uncertainty of the legal impact the anticipated adoption of Tentative Order No. R9-2015-0001 might have upon pending appeals with the State Water Resources Control Board (State Board) of the Order being amended (Order No. R9-2013-0001), the commenters wish to renew all objections to various aspects of the Tentative Order as described in any petition already before the State Board and further wish to incorporate all evidence pertaining to those objections.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District • County of San Diego Concurring Cities: Petitioners in proceeding A-2254 • San Diego Unified Port District • Riverside County Copermittees • City of San Diego
	RESPONSE: The San Diego Water Board understands the concerns expressed by the commenters. The San Diego Water Board reviewed Tentative Order No. R9-2015-0001 and its Attachments and has determined that the March 27, 2013 responses to comments document prepared during the 2013 adoption process of Order No. R9-2013-0001 and the oral responses to comments during the workshop and hearings during that process address the renewed comments. The San Diego Water Board incorporates its written responses to comments and oral responses to comments raised during the workshops and hearing on Order No. R9-2013-0001 into these responses. To the extent commenters incorporate issues and objections raised in petitions for review of Order No. R9-2013-0001 filed with the State Board in SWRCB/OCC File A-2254(a)-(p), the San Diego Water Board notes that it has not yet had an opportunity to submit written responses to those petitions for review and is not specifically addressing those petitions for review in these responses to comments. The San Diego Water Board will submit written responses to the petitions for review at the appropriate time in the State Board's petition proceeding. No changes to the Tentative Order or its Attachments were made based on the renewed comments.	

PR-2	PREVIOUSLY SUBMITTED COMMENT LETTERS	
	COMMENT: *The Construction Industry Coalition on Water Quality resubmits its comment letters on hydromodification management cited in letters dated September 14, 2012 and January 11, 2013, which were submitted as part of the May 2013 adoption process of Order No. R9-2013-0001.*	Construction Industry Coalition on Water Quality • San Diego Building Industry Association • Building Industry Association of Southern CA • Associated General Contractors • Associated Builders and Contractors • San Diego Regional Chamber of Commerce • Business Leadership Alliance • San Diego Association of Realtors • San Diego Apartment Association • National Association of Industrial & Office Properties • Building Office & Management Association • San Diego Chapter of American Society of Landscape Architects
	RESPONSE: The San Diego Water Board understands the concerns expressed by the commenter. The San Diego Water Board reviewed Tentative Order No. R9-2015-0001 and its Attachments and has determined that the March 27, 2013 responses to comments document prepared during the 2013 adoption process of Order No. R9-2013-0001 and the oral responses to comments during the workshop and hearings during that process address the renewed comments. The San Diego Water Board incorporates its written responses to comments and oral responses to comments raised during the workshops and hearing on Order No. R9-2013-0001 into these responses. To the extent commenters incorporate issues and objections raised in petitions for review of Order No. R9-2013-0001 filed with the State Board in SWRCB/OCC File A-2254(a)-(p), the San Diego Water Board notes that it has not yet had an opportunity to submit written responses to those petitions for review and is not specifically addressing those petitions for review in these responses to comments. The San Diego Water Board will submit written responses to the petitions for review at the appropriate time in the State Board's petition proceeding. No changes to the Tentative Order or its Attachments were made based on the renewed comments.	

Gnl-1	GENERAL COMMENTS	
	COMMENT: *Remove City of Lake Forest from Table 1b and the associated footnote.* The City of Lake Forest requests changes to the Tentative Order to clarify regulation of the City of Lake Forest by a single water board as described in the agreement between the Santa Ana Water Board and the San Diego Water Board.	City of Lake Forest
	RESPONSE: The San Diego Water Board generally agrees with the City's comment. The City of Lake Forest was removed from the list of Copermittees in Table 1b and a footnote to the Table was added to identify the requirements of the Order that apply to the City of Lake Forest.	

Gnl-2	GENERAL COMMENTS	
	COMMENT: *The Tentative Order toxicity requirements do not take into account information presented in the Orange County Copermittees ROWD.* The County of Orange and Concurring Cities, and Orange County Flood Control District comment that toxicity occurs sporadically in streams and creeks in south Orange County and toxicity is encountered in open (undeveloped) areas at levels equivalent to those in urban areas. They also comment that there is a greater prevalence of toxicity in wet weather and pesticides are implicated as the principal source of this toxicity. This pattern suggests that dry weather toxicity is not caused by urban sources of pollutants. Moreover pesticide use, presents a moving target for MS4 management efforts due to the continuous introduction of new products. Regulation of pesticide use is exclusively within the jurisdiction of state and federal agencies and not the role of MS4s.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with the comment. The San Diego Water Board reviewed and considered the information pertaining to toxicity within the Copermittees' ROWD. Generally speaking, numerous sources of potential pollutants in storm water runoff exist, including contributions from urban activities such as industry, transportation, and residential development or from agricultural activities. Runoff from pervious and impervious areas (i.e., streets, parking lots, lawns, golf courses and agricultural land) carries accumulated contaminants (i.e., atmospheric dust, trace metals, street dirt, hydrocarbons, fertilizers and pesticides) into receiving waters. This problem is exacerbated in Southern California, where urbanization dominates most watersheds. In southern California, the runoff from urbanized watersheds contributes substantial loadings of a variety of constituents to receiving water environments. For example, the Southern California Coastal Water Research Project (SCCWRP) has estimated the cumulative loads of lead and zinc from all of the urbanized watersheds in the Southern California Bight to the coastal oceans represent over half of the combined mass emissions from all sources, which include traditional point sources such as publicly owned treatment works, industrial facilities, and power generating stations. Because of the additive and antagonistic interactions of the many chemical constituents found in storm water runoff, there is a strong potential for receiving water quality impacts related to toxicity. Moreover, the varied structural BMPs in use to reduce pollutant levels in urban runoff are not capable of reducing the most toxic fraction of runoff, the dissolved phase. Metals typically associated with fine particles in storm water runoff also have the potential to accumulate in the sediments of downstream receiving waters where they may contribute to the risk of toxicity. Therefore, even when BMPs have been shown to reduce the larger particulates found in runoff, it cannot be assumed that treatment processes are also reducing toxicity. Consequently, direct	

GnI-2	GENERAL COMMENTS	
	measurement of toxicity in storm water runoff and receiving water sediments is needed. The requirements for toxicity sampling were updated during the adoption of Order No. R9-2013-0001 in response to comments provided by USEPA to make the toxicity requirements more consistent with recently adopted MS4 permits (i.e. Caltrans and Los Angeles County MS4 Permits). The recently adopted Caltrans and Los Angeles County MS4 Permits include updated toxicity data collection procedures and data analysis methods that are consistent with the Draft State Water Resources Control Board Policy for Toxicity Assessment and Control, June 2012 (Draft State Board Toxicity Policy). See also response to comment D-1. Sediment monitoring requirements were also updated in Water Quality Control Plan for Enclosed Bays and Estuaries, Part 1 Sediment Quality (State Plan). Based on these considerations, no revisions to the Tentative Order are needed.	

Gnl-3	GENERAL COMMENTS	
	COMMENT: *Numbering in Tentative Order should explicitly identify the major sections to help the reader.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board agrees that the Tentative Order should explicitly identify the major permit sections to increase readability. Footers throughout the Tentative Order indicate the subsections, e.g. A.1, A.2, to orient the reader. Additionally, the electronic PDF version of the Tentative Order has bookmarks for the major provisions to assist in navigating the requirements. Therefore, the San Diego Water Board did not make the requested revisions because existing footers and navigation capabilities address the comment.	

Gnl-4	GENERAL COMMENTS	
	COMMENT: *The Tentative Order provides an overly broad interpretation of the storm water regulations by requiring MS4s to "enhance" and "restore" beneficial uses as the CWA only requires that Copermittees protect beneficial uses and prevent nuisance.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that the Tentative Order provides an overly broad interpretation of the storm water regulations. The San Diego Water Board reviewed and considered this comment during the adoption process of Order No. R9-2013-0001 (Regional MS4 Permit), making changes that replaced language which referred to "restoring water quality standards in receiving water" to language that required protection of water quality standards in receiving water from MS4 discharges. The Fact Sheet, pages 114-115 to Tentative Order No. R9-2015-0001 clearly states that Provisions E.5.e.(1)-(2) do not require the implementation of channel, streams, and/or habitat rehabilitation projects, but do require the Copermittees to develop a program with strategies to facilitate the implementation of these types of projects in areas of existing development. The strategies are expected to include allowing and encouraging Priority Development Projects to implement retrofitting types of projects as a means of compliance with the structural BMP performance criteria requirements of Provisions E.3.c.(1) and E.3.c.(2). Therefore, no revisions were made to Tentative Order No. R9-2015-0001 or its Attachments.	

GnI-5	GENERAL COMMENTS	
	COMMENT*: The Tentative Order includes language that provides an overly broad use of the term "prohibit."*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that the Tentative Order provides an overly board use of the term prohibit. The Clean Water Act requires MS4 permits to include a requirement that non-storm water discharges are to be "effectively prohibited" to the MS4. The Code of Federal Regulations requires each Copermittee to have the legal authority to "prohibit" non-storm water discharges to the MS4. The Phase I Final Rule clarifies what "effectively prohibit" means (55 FR 47995): "Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer…Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit (other than the permit for the discharge from the municipal separate storm sewer.)" During the 2013 adoption process for Order No. R9-2013-0001, where appropriate, the language in Order No. R9-2013-0001 was revised to be consistent with the language of the Clean Water Act to include the term "effectively prohibit" instead of "prohibit" or "reduce and eliminate." In other cases, the language was maintained to be consistent with the requirements of the Code of Federal Regulations requiring the Copermittees to establish the legal authority to "prohibit" non-storm water discharges to their MS4s and enforce that legal authority. The establishment and enforcement of the legal authority to "prohibit" non-storm water discharges to their MS4s is how the Copermittees will "effectively prohibit" non-storm water discharges to their MS4s. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

RESPONSE TO COMMENTS ON TENTATIVE ORDER NO. R9-2015-0001

January 21, 2015

GnI-6	GENERAL COMMENTS	
	COMMENT: *The Tentative Order's WQBELs were improperly formulated.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: There are TMDLs in the Basin Plan that established wasteload allocations for MS4 discharges causing or contributing to exceedances of water quality standards in specified impaired water bodies. The San Diego Water Board has included WQBELs that are consistent with the requirements and assumptions and requirements of the TMDLs wasteload allocations (WLAs) in accordance with applicable federal regulations at 40 CFR 122.44(d)(1) (vii)(B) and 40 CFR 122.44(k)(2)-(4). TMDLs included in Attachment 1 to the Tentative Order have been approved by USEPA during the TMDL development process and again reviewed by USEPA as part of the Regional MS4 2013 Permit adoption process. NPDES permits must limit and control all pollutants that are or may be discharged at a level that "will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard including narrative criteria." (See 40 CFR 122.44(d)(1)(i)). The analysis that is performed to determine what pollutants require WQBELs is commonly referred to as the "reasonable potential analysis." NPDES permits must include WQBELs for all pollutants with "reasonable potential." (see 40 CFR 122.44(d)(1)(i)) Where a WLA has been assigned to a discharge in a TMDL, it is concluded that there is reasonable potential for the discharger to cause or contribute to an excursion of water quality standards. Because there are TMDLs in the Basin Plan that have identified the established WLAs for MS4s as discharges causing or contributing to exceedances of water quality standards, demonstration of reasonable potential is presumed for the purposes of establishing a WQBEL based on an applicable WLA. (see 40 CFR 122.44(d)(1)(ii))	

Gnl-7	GENERAL COMMENTS	
	COMMENT: *WQBELs should only be defined as effluent limitations.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board has included WQBELs that are consistent with the assumptions and requirements of TMDL wasteload allocations in accordance with applicable federal regulations at 40 CFR 122.44(d)(1)(vii)(B). WQBELs can be expressed as (1) conditions in receiving waters that are to be attained to restore or protect water quality standards in receiving waters, (2) conditions in discharges that will not cause or contribute to exceedances of water quality standards in receiving waters, (3) BMPs that will ensure discharges will not cause or contribute to exceedances of water quality standards in receiving waters, or (4) a combination of one or more of (1)-(3). This is consistent with 40 CFR 122.44(d)(1)(vii)(B) and 122.44(k)(2)-(4). The San Diego Water Board has incorporated options (1)-(3) under the WQBEL requirements for each of the TMDLs in Attachment E. In most cases, if the WQBEL expressed as a receiving water limitation is achieved, the discharges from the MS4s are assumed to be in compliance with the TMDL requirements. If not, then the Copermittees must demonstrate that discharges from the MS4s are not causing or contributing to the exceedances in the receiving waters by achieving the WQBELs expressed as effluent limitations. In every case, the Copermittees are required to implement BMPs to ensure that discharges from their MS4s do not cause or contribute to exceedances of water quality standards in receiving waters.	

Lgl-1	LEGAL COMMENTS	
	COMMENT: *Land Development requirements expose Copermittees to significant litigation risk and will be largely unenforceable. Therefore, predevelopment runoff reference conditions and stream, channel and habitat restoration requirements should be eliminated in their entirety.* Commenters generally expressed concerns with the Copermittees' legal authority to imposed requirements on development projects where a nexus between impact on the receiving water and the project cannot be established. The Copermittees assert that they would be subject to liability under takings clauses of the US and California Constitutions and the Mitigation Fee Act for requiring hydromodification management BMP requirements on new development or redevelopment projects that discharge to hardened channels where a hydromodification impact would be questionable and difficult to establish.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board recognizes the concerns of the Copermittees' legal authority to impose hydromodification management requirements on development that causes no hydromodification impacts and responded to nearly identical comments during the adoption process for Order No. R9-2013-0001. As stated in response to comment Gnl-1, the San Diego Water Board incorporates those responses into this response to comments document. As stated in the 2013 responses to comments document: Federal law mandates that permits issued to MS4s require management practices that will result in reducing pollutants to the maximum extent practicable. The state is required, by law, to select the BMPs. (See NRDC v. USEPA (9th Cir. 1992) 966 F.2d 1292; Environmental Defense Center v. USEPA (9th Cir. 2002) 344 F.3d 832, 855; Rancho Cucamonga v. Regional Water Quality Control Bd., Santa Ana Region (2006) 135 Cal.App.4th 1377, 1389.) The Tentative Order's requirements for Low Impact Development and hydromodification management controls are authorized by federal law. Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(2) provides that Copermittees develop and implement a management program which is to include "A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plans shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed." The Tentative Order does not impose land use regulations, nor does it restrict or control local land-use decision-making authority. Rather, the Tentative Order requires the permittees to fulfill Clean Water Act requirements and protect water quality in their land use decisions. The requirements in the Tentative Order	

Lgl-1	LEGAL COMMENTS	
	allow for flexibility in compliance options to the extent allowable under the Clean Water Act. The substantive regulatory requirements of the Clean Water Act are a valid exercise of the federal government's enumerated powers and authority over navigable waters. (NRDC v. USEPA (9th Cir. 1998) 863 F.2d 1420, 1436.) Environmental regulation is not land use regulation, and therefore does not infringe upon local authority over land use decisions. (California Coastal Commission v. Granite Rock (1987) 480 U.S. 572. In addition, local land use planning must be consistent with general statewide laws. (County of Los Angeles v. California State Water Resources Control Board (2006) 143 Cal.App.4th 985, 1003.) Article 11, section 7, of the California Constitution states that a county or city may not enact laws that conflict with general laws. The Porter-Cologne Water Quality Control Act contains the California Legislature's finding that water quality is a matter of state-wide concern, requiring a statewide program administered at a regional level. (See, e.g., Wat. Code, § 13000; see also generally Southern California Edison v. State Water Resources Control Board (1981) 116 Cal.App.3d 751, 758.) Section 101 of the CWA has a companion policy statement, where Congress found that water quality is a matter of federal concern. The Tentative Order also does not dictate specific methods of compliance or dictate the manner in which the Copermittees use their land. Where the Tentative Order includes detailed requirements, it is to comply with the Clean Water Act and its regulations. USEPA's regulations mandate that certain requirements be included in MS4 permits in order to achieve the requirements of the Clean Water Act. Thus, federal law mandates that permits issued for MS4s require certain actions that will result in the elimination or reduction of pollutants to receiving waters and the state is required, by federal law, to select the controls necessary to meet this standard. (See NRDC v. USEPA (9th Cir. 1992) 966 F .2d 1292, 1308; City of Rancho Cucamonga v. Regional Water Quality Control Bd., Santa Ana Region (2006) 135 Cal.App.4th 1377, 1389-90.) The requirement that the Copermittees require Priority Development Projects to control post-project runoff flow rates and durations so that they do not exceed pre-development runoff flow rates and durations by more than ten percent is appropriate and necessary to reduce erosion and the discharge of pollutants into receiving waters. It does not require mitigation beyond redevelopment project impacts because the requirement lessens (although does not eliminate) the perpetuating impacts that originated upon initial land alteration (i.e., the project would continue to cause accelerated erosion) absent improved controls of post-project runoff flow rates and durations. The San Diego Water Board maintains that the Copermittees have authority to implement this requirement, and that if implemented it would not rise to the level of a taking of private property. The pre-development condition provision is also consistent with the requirements in both the current Orange County and Riverside County MS4 permits.	

Lgl-1	LEGAL COMMENTS	
	To remove the question of the nexus between a project's impacts on an already hardened channel, the Tentative Order includes a hydromodification management exemption for projects that discharge to conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.	

Lgl-2	LEGAL COMMENTS	
	COMMENT: *Tentative Order numeric WQBELs violate the requirements of law because they are infeasible.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that including numeric WQBELs for the TMDLs in the Tentative Order violate the requirements of law. The federal regulations under 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permit requirements incorporate WQBELs that must be consistent with the requirements and assumptions of any available wasteload allocations (WLAs) developed under TMDLs. The federal regulations under 40 CFR 122.44(k) do not require WQBELs to be BMP-based if numeric effluent limitations are infeasible, but only that WQBELs that implement WLAs may be expressed in the form of BMPs. BMP-based WQBELs may be allowed if BMPs alone adequately implement WLAs, and additional controls are not necessary. This is consistent with a 2002 USEPA memorandum for "*Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs*." WQBELs are required for point source discharges that have the reasonable potential to cause or contribute to an excursion of water quality standards and technology based effluent limitations or standards are not sufficient to achieve water quality standards. Where a WLA has been assigned to a discharge in a TMDL, it is concluded that there is reasonable potential for the discharger to cause or contribute to an excursion of water quality standards. The memorandum "*Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs)" issued by USEPA on November 26, 2014 states*, "*Where the NPDES authority determine that MS4 discharges have a reasonable potential to cause or contribute to a water quality standard excursion, EPA recommends that, where feasible, the NPDES permitting authority exercise its discretion to include numeric effluent limitations necessary to meet water quality standards*." The "where feasible" in the memorandum applies to the NPDES permitting authority's discretion to include numeric effluent limitations necessary to meet water quality standards, not to the feasibility of achieving the numeric effluent limitations. The State Water Board, in Order WQ 2006-0012 (Boeing), has made clear that "infeasibility" in the context of numeric effluent limitations refers to "the ability or propriety of establishing" numeric limits, as	

Lgl-2	LEGAL COMMENTS	
	opposed to the feasibility of compliance. The Caltrans MS4 permit is issued by the State Water Board. Even though the Caltrans MS4 permit may allow for BMP-based WQBELs, this does not require the San Diego Water Board to include BMP-based WQBELs in the Tentative Order regardless of any potential or apparent conflict. The San Diego Water Board will issue additional requirements to Caltrans with numeric WQBELs when and where warranted. The San Diego Water Board considered the feasibility of incorporating numeric WQBELs to implement the requirements of each of the TMDLs and has determined that they are feasible, and necessary, to include to meet water quality standards, consistent with the 2014 USEPA memorandum. Numeric WQBELs are also "additional controls" necessary to implement the WLAs, consistent with the 2002 USEPA memorandum. Each of the TMDLs in the Tentative Order, however, includes BMP-based WQBELs which must be implemented to achieve the numeric WQBELs. The Tentative Order requires the Copermittees to implement the BMP-based WQBELs to achieve the numeric WQBELs. This is consistent with the 40 CFR 122.44(d)(1)(vii)(B) and 40 CFR 122.44(k), and the recommendations of the 2014 USEPA memorandum. The Tentative Order has also been revised to include interim and final TMDL compliance determination options that allow the Copermittees to demonstrate that the BMP-based WQBELs will achieve the numeric WQBELs. The numeric WQBELs are necessary for the Copermittees to quantitatively demonstrate that the BMPs implemented are achieving the WLAs of the TMDLs. Thus, the Tentative Order appropriately includes numeric WQBELs and does not violate any requirements of law.	

Lgl-3	LEGAL COMMENTS	
	COMMENT: *San Diego Water Board does not have the legal authority to issue a regional MS4 permit.* The County of Orange and Concurring Cities and Orange County Flood Control District request that they be issued an individual permit. The Commenters claim the San Diego Water Board does not have the legal authority to include Orange County in a Regional Permit because there is no system-wide, jurisdiction-wide, or common watershed basis to do so.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board incorporates its responses to comments for the adoption of Order No. R9-2013-0001 and other documents in the record including the September 7, 2012, legal memorandum prepared by San Diego Water Board counsel. The San Diego Water Board disagrees with the commenters that the federal regulations do not authorize the issuance of a region-wide MS4 permit coextensive with the jurisdictional boundaries of the San Diego Region. The San Diego Water Board reviewed and considered this comment during the adoption process of Order No. R9-2013-0001 (Regional MS4 Permit) and reaffirms its position that despite the geographic separation, the San Diego Water Board has legal authority to issue a regional MS4 permit through its authority in the Clean Water Act. (September 7, 2012 Letter from San Diego Water Board Counsel on Legal Authority Supporting Issuance of a Regional MS4 Permit) Section 402, subpart (p)(3)(B) of the Clean Water Act states that "Permits for discharges from municipal storm sewers – (i) may be issued on a system- or jurisdiction-wide basis . . . ." The federal storm water regulations in 40 CFR at Part 122.26, subdivision (a)(1)(v) also state that the Director (the San Diego Water Board) may designate dischargers from municipal separate storm sewers on a system-wide or jurisdiction-wide basis, taking into consideration the following factors: (A) location of the discharge with respect to waters of the United States; (B) the size of the discharge; (C) the quantity and nature of the pollutants discharged to waters of the United States and (D) other relevant factors. Consideration of these factors provides wide discretion to the San Diego Water Board in issuing MS4 permits. More specifically, the regulations permit issuance of system-wide permits covering all MS4s in "adjacent . . . large or medium separate storm sewer systems." (See 40 CFR sec. 122.26(a)(3)(iv). The regulations also support issuance of MS4 permits on watershed or "other basis" contemplating that such permits may "specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas . . . ." (40 CFR Part 122.26(a)(3)(v).) The USEPA responses to comments for the above regulations also make clear that the permitting authority, in	

Lgl-3	LEGAL COMMENTS	
	this case, the San Diego Water Board, has flexibility to establish system- or region-wide permits. In the Final Rule published in the Federal Register and containing USEPA's responses to comments, USEPA notes that paragraph (iv) of section 122.26(a)(3) would allow an entire system in a geographical region under the purview of a state agency to be designated under a permit. (National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, 55 Fed. Reg. 47990, 48030-48042 (Nov. 16, 1990).) It is important to note that a regional MS4 permit does not expand the requirements for each municipality beyond its borders as the federal regulations make clear that MS4 permittees need only comply with permit conditions relating to discharges from the MS4s for which they are operators. (40 CFR Part 122.26(a)(3)(vi).) See also September 7, 2012, memorandum from Jessica Jahr and Catherine Hagan, State Water Board's Office of Chief Counsel, to Ryan Baron and David Huff, counsels for Orange and Riverside Counties, respectively.	

Lgl-4	LEGAL COMMENTS	
	COMMENT: *The Requirements in the Tentative Order are more stringent than federal law, requiring an economic analysis.* The County of Orange and Concurring Cities and Orange County Flood Control District assert that several requirements of Tentative Order go beyond the requirements of Federal law, thus an analysis pursuant to California Water code section 13241 is required. The commenters also make several assertions about deficiencies in the economic considerations discussed in the Fact Sheet, and assert that a cost-benefit analysis needs to be included in the Fact Sheet discussion.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that "several requirements of Tentative Order go beyond the requirements of Federal law." The San Diego Water Board is charged with construction of and administration of the Clean Water Act in the San Diego Region. In issuing MS4 permits, "[t]he permitting agency has discretion to decide what practices, techniques, methods and other provisions are appropriate and necessary to control the discharge of pollutants." (City of Rancho Cucamonga v. Regional Water Quality Control Board-Santa Ana Region (2006) 135 Cal.App.4th 1377,1389.) However, the "Regional Board must comply with federal law requiring detailed conditions for NPDES permits." (Ibid.) Further, USEPA expects the permitting authority to develop the specific practices that comply with the Clean Water Act on a permit-by-permit basis. (NRDC v. USEPA (9th Cir. 1992) 966 F.2d 1292, 1308.) To the extent the Board is exercising discretion in including certain permit requirements, the Board is exercising discretion required and/or authorized by federal law, not state law. (See City of Rancho Cucamonga, supra, 135 Cal.App.4th at 1389; Building Industry Association of San Diego County v. State Water Resources Control Bd. (2004) 124 Cal.App.4th 866, 882-883.) Further, the MEP standard is a flexible standard that balances a number of considerations, including technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. (Id. at pp. 873, 874, 889.) Such considerations change over time with advances in technology and with experience gained in storm water management. (55 Fed. Reg. 47990, 48052 (Nov. 16, 1990).) Accordingly, a determination of whether the conditions contained in Tentative Order exceed the requirements of federal law cannot be based on a point by point comparison of the permit conditions with federal law. The appropriate focus is whether the permit conditions as a whole exceed the MEP standard. The commenters assert that provisions of the Tentative Order are more stringent than the requirements of the Clean Water Act and therefore require an analysis of the factors, including economic considerations, in Water Code section	

Lgl-4	LEGAL COMMENTS	
	13241 before the San Diego Water Board can approve such provisions. As indicated above, the San Diego Water Board disagrees that provisions of the Tentative Order are more stringent than requirements of the Clean Water Act. Because the Tentative Order is not more stringent than federal law, its adoption does not require the San Diego Water Board to consider Water Code section 13241 factors. The California Supreme Court in *City of Burbank v. State Water Resources Control Board, et al.,* ((2005) 35 Cal.4th 613) (*Burbank*), held: [Water Code] section 13377 specifies that wastewater discharge permits must meet the federal standards set by federal law. In effect, section 13377 forbids a regional board's consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act. That act prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law (33 U.S.C. § 1322(a)), and publicly operated wastewater treatment plants such as those before us here must comply with the act's clean water standards, regardless of cost [citations]. Because [Water Code] section 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a wastewater discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards." (*Burbank,* 35 Cal.4th at 625.) While the *Burbank* decision does require an analysis of Water Code section 13241 factors when the state adopts permit conditions that are more stringent than federal law (*id.* at 618) Tentative Order No. R9-2015-0001 reflects that all of the challenged provisions are necessary to implement federal law. Thus, the San Diego Water Board is not required to consider economic information to justify a "dilution of the requirements" established in federal law. Even when applicable, consideration of economic information pursuant to section 13241 does not require a cost-benefit analysis, as some commenters suggest. And section 13241 neither specifies how regional water boards must consider its enumerated factors nor does it require that regional water boards may specific findings documenting consideration of the factors. (See *California Ass'n of Sanitation Agencies, et al. v. State Water Resources Control Board, et al.,* (208 Cal.App.4th 1438, 1464 (2012).) Nonetheless, the Fact Sheet and Response to Comments reflect economic information that has either been developed or gathered by the San Diego Water Board or has been submitted by Copermittees. To the extent that economic information in connection with compliance and other costs associated with challenged permit provisions, the San Diego Water Board has fully considered this information. Under these circumstances, *Burbank* does not require more. See also comment response Fnd-8.	

Lgl-5	LEGAL COMMENTS	
	COMMENT: *The San Diego Water Board cannot determine whether a particular mandate is unfunded.* The County of Orange and Concurring Cities and the Orange County Flood Control District assert that the San Diego Water Board does not have the legal authority to determine whether any provisions in the Tentative Order constitute a state mandate, and only the Commission on State Mandates can make the determination.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: In proposing Tentative Order No. R9-2015-0001, the San Diego Water Board proposes amendments to Order No. R9-2013-0001 which includes Finding 31 and corresponding discussion in the Fact Sheet setting forth the San Diego Water Board's conclusion and supporting reasoning that Order No. R9-2013-0001 does not constitute an unfunded state mandate requiring subvention. The San Diego Water Board incorporates its responses to comments on the adoption of Order No. R9-2013-0001 into this response. The San Diego Water Board does not dispute that the Commission on State Mandate ultimately has jurisdiction to determine whether the State has imposed a mandate requiring state subvention. However, it remains entirely appropriate for the San Diego Water Board to set forth its legal basis to support its conclusion Order No. R9-2013-0001, as amended by Tentative Order No. R9-2015-0001, contains provisions the Board finds to be necessary and appropriate to meet the federal Clean Water Act standards. While the Commission may be expert in state mandates, it has no expertise in the field of water law. As indicated in response to comment Lgl-5, above, the San Diego Water Board does not agree that Order No. R9-2013-0001 as amended by Tentative Order No. R9-2015-0001 exceed federal requirements of the Clean Water Act. The San Diego Water Board is charged by law with administering and constructing the Clean Water Act's requirements and is entitled to considerable deference in its interpretation of the Act. (See Building Industry Association of San Diego, supra, 124 Cal.App.5th at pp. 873, 879 fn.9; County of Los Angeles v. California State Water Resources Control Bd. (2006) 143 Cal.App.4th 985, 997.) In issuing MS4 permits, "[t]he permitting agency has discretion to decide what practices, techniques, methods and other provisions are appropriate and necessary to control the discharge of pollutants." (City of Rancho Cucamonga v. Regional Water Quality Control Board-Santa Ana Region (2006) 135 Cal.App.4th 1377,1389.) However, the "Regional Board must comply with federal law requiring detailed conditions for NPDES permits." (Ibid.) Further, USEPA expects the permitting authority to develop the specific practices that comply with the Clean Water Act on a permit-by-permit basis. (NRDC v. USEPA (9th Cir. 1992) 966 F.2d 1292, 1308.) To the extent the Board is exercising discretion in including certain permit requirements, the Board is exercising discretion required and/or authorized by federal law, not state law. (See City of Rancho Cucamonga, supra, 135 Cal.App.4th at 1389;	

Lgl-5	LEGAL COMMENTS	
	Building Industry Association of San Diego County v. State Water Resources Control Bd. (2004) 124 Cal.App.4th 866, 882-883.) Further, the MEP standard is a flexible standard that balances a number of considerations, including technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. (Id. at pp. 873, 874, 889.) Such considerations change over time with advances in technology and with experience gained in storm water management. (55 Fed. Reg. 47990, 48052 (Nov. 16, 1990).) The San Diego Water Board's findings are the expert conclusions of the principal state agency charged with implementing the NPDES program in California. (Cal. Wat. Code §§ 13001, 13370.) The San Diego Water Board is not precluded from including provisions in Tentative Order No. R9-2015-0001 which commenters may contend are state mandates and it is well within the San Diego Water Board's authority to conclude, based on its expertise in administering the Clean Water Act, Tentative Order No. R9-2015-0001 does not exceed federal law and is therefore not a state mandate subject to subvention.	

Fnd-1	FINDINGS	
	COMMENT: *Modify findings and/or Fact Sheet to include additional key findings from the Report of Waste Discharge (including the State of the Environment) and use this information as the basis for the Draft Order's requirements.* The County of Orange and Concurring Cities and the Orange County Flood Control District are concerned that the San Diego Water Board did not review and consider the "State of the Environment" discussion in their ROWD based on the Findings and Fact Sheet amendments presented in the Tentative Order and its Attachments.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with the comment. The San Diego Water Board reviewed and considered all information in the Copermittees ROWD, as is documented in the Findings of Tentative Order No. R9-2015-0001 (i.e. Findings 1 through 4). Based on the ROWD review newly proposed requirements specific to southern Orange County Copermittees (i.e. interim hydromodification exemptions for large rivers and engineered channels) are presented in Attachment No. 1 to the Tentative Order (i.e. Order No. R9-2013-0001 as Amended by Order No. R9-2015-0001). San Diego Water Board reviewed the ROWD, including the "State of the Environment" discussion and the San Diego Water Board concluded that many of the ROWD recommendations could be accommodated by the requirements in Order No. R9-2013-0001 with only a limited number of changes required. The new flexible regulatory approach (described in the Fact Sheet for Order No. 2013-0001) and proposed requirements, puts more control in the hands of the Copermittees to develop a watershed-based planning approach. As described in Finding 2 of the Tentative Order, development of a watershed-based planning approach is portrayed in the ROWD as the most important next step to take in the development of the storm water programs in Orange County. The Tentative Order also provides the Copermittees with the flexibility to continue taking advantage of opportunities to reduce dry weather flows (a repeated recommendation throughout the ROWD).	

Fnd-2	FINDINGS	
	COMMENT: *Modify Finding 7 - In-Stream Treatment Control Systems to allow for the implementation of stream restoration or stream rehabilitation projects and constructed wetlands, or maintenance of reconstruction of existing stream restoration or rehabilitation projects, constructed wetlands, and regional BMPs.* The County of Orange and Concurring Cities and the Orange County Flood Control District suggest modify the language in Finding 7 to allow for full flexibility to identify creative solutions that meet the Tentative Order's alternative compliance goals through implementation of stream restoration or rehabilitation.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that the language in Finding 7 of Order No. R9-2013-0001 stifles Copermittee ability to meet the Tentative Order's alternative compliance goals through creative solutions such as implementation of stream restoration or stream rehabilitation projects and constructed wetlands, or prevents maintenance of reconstruction of existing stream restoration or rehabilitation projects, constructed wetlands, and regional BMPs. Finding 7 states that pursuant to federal regulations (40CFR 131.10(a)) states cannot adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of a runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Finding 7 concludes that treatment control best management practices (BMPs) must not be constructed in waters of the U.S. The language of Finding 7 does not impinge upon a Copermittees ability to take full advantage of the flexibility provided in the Tentative Order's alternative compliance option. Permit Provision II.E.3.c.(3) of Order No. R9-2013-0001 enables each Copermittee, at its own discretion, to allow Priority Development Projects (POPs) to participate in an alternative compliance program in lieu of implementing the onsite structural BMP performance requirements of Provisions II.E.3.c.(1) and II.E.3.c.(2). Alternative compliance is only allowed if the Copermittee determines that implementation of an alternative compliance project will result in a greater overall water quality benefit for the Watershed Management Area than fully complying with the onsite performance requirements. This alternative compliance option establishes a mechanism for Copermittees to provide alternative candidate projects for those land development projects that are unable to fully implement controls onsite. Copermittees can develop and make available a variety of candidate alternative compliance projects, including stream restoration and rehabilitation projects within a water body, as long as such projects do not entail placement of a treatment facility or treatment control BMPs within the water body. A vast variety of candidate projects could	

Fnd-2	FINDINGS	
	be proposed under Permit Provision II.E.3.c.(3) and it is expected that candidate projects will not include projects that entail construction, operation, and maintenance of a pollution treatment control facilities or BMPs in a water body. The placement of structures of this type in a water body is contrary to the intent of 40CFR 131.10(a) and; therefore the Tentative Order does not propose any modifications to Finding 7. Many candidate project options exist that could a) achieve the greater overall water quality benefit envisioned by the alternative noncompliance permit provision, and b) support the physical, chemical, and biological integrity, as well as the beneficial uses of a particular water body, and c) not entail constructing treatment facilities or BMPs within a water body. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

Fnd-3	FINDINGS	
	COMMENT: *Modify Finding 8, 16, and 17 to remove presumption that discharges from MS4s always contain waste.* The County of Orange and Concurring Cities and the Orange County Flood Control District object to Finding 8 of Order No. R9-2013-0001 stating that discharges from the MS4s contain waste, and that Finding 8 does not acknowledge that there may not be pollutants in the discharges from the MS4s. The commenters requested revisions to Findings 8, 16 and 17 to reflect this position.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with the commenters that Findings 8, 16, or 17 need revision. The Tentative Order implements the requirements of the California Water Code as well as the requirements of the Clean Water Act. Under California Water Code section 13376, any person discharging waste, or proposing to discharge wastes to waters of the State is not authorized to discharge waste unless issued waste discharge requirements. The requirements of the Clean Water Act, specific to discharges of pollutants to waters of the U.S. are also included in the California Water Code, Chapter 5.5 of Division 7. Thus, under the California Water Code, any person discharging pollutants, or proposing to discharge pollutants to waters of the U.S. is not authorized to discharge pollutants unless issued waste discharge requirements that include NPDES requirements. Waste discharge requirements that include NPDES requirements is also an NPDES permit under the Clean Water Act. The Clean Water Act and the California Water Code requires municipalities to obtain and comply with NPDES permits for authorized discharges of pollutants to waters of the U.S. from their MS4s. Municipalities proposing to discharge pollutants from an MS4 must obtain an NPDES permit before they can lawfully discharge. Comments received assert that the definition of "waste" in California Water Code section 13050 does not include storm water or any discharge that is not created by human activity. Comments received also assert that waste discharge requirements and NPDES permits cannot regulate the discharge of "pure storm water" and that not all discharges from the MS4 contain pollutants. Discharges from the MS4 are not "pure storm water." Storm water that flows over the surface of any developed area, which includes the MS4 itself, do not enter or discharge from the MS4 without coming into contact with pollutants or constituents that alter the storm water such that it is no longer "pure storm water." Thus, storm water discharges from the MS4 contains pollutants and contain waste. It is well-known and documented that urban runoff and storm water contains pollutants. (See, e.g., State Water Board Order WQ	

Fnd-3	FINDINGS	
	2001-015 ("As we stated in Board Order WQ 95-2, the requirement to adopt permits for urban runoff is undisputed, and Regional Water Boards are not required to obtain any information on the impacts of runoff prior to issuing a permit (citation). It is also undisputed that urban runoff contains 'waste' within the meaning of Water Code section 13050(d), and that the federal regulations define 'discharge of a pollutant' to include 'additions of pollutants into waters of the United States from surface runoff which is collected or channeled by man.' (40 C.F.R. § 122.2.) But it is the waste or pollutants in the runoff that meet these definitions of 'waste' and 'pollutant.' And not the runoff itself. [fn]. (p. 5.)) Tentative Order No. R9-2015-0001 (like the current adopted version of Order No. R9-2013-0001) does not regulate "pure storm water." The Tentative Order regulates the discharge of storm water that is being discharged as a waste and contains pollutants. Finding 8 of Order No. R9-2013-0001 accurately states that discharges from the MS4s contain waste, as defined in the California Water Code. Finding 8 also accurately states that discharges from MS4s contain pollutants that adversely affect the quality of waters of the state. Findings 16 and 17 also accurately conclude that BMPs and implementation of BMPs are necessary to remove waste and pollutants in storm water discharges from MS4s. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

Fnd-4	FINDINGS	
	COMMENT: *Delete Finding 11. Natural waters cannot legally be classified as part of the MS4, and a part of both MS4 and receiving water.* The County of Orange and Concurring Cities and the Orange County Flood Control District assert that Finding 11 is inaccurate and the San Diego Water Board cannot classify natural waters as part of the MS4.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with this comment. An MS4 is defined in the federal regulations as a conveyance or system of conveyances owned or operated by a Copermittee, and designed or used for collecting or conveying runoff. Therefore, the San Diego Water Board considers natural drainages that are used by the Copermittees as conveyances of runoff, as both part of the MS4 and as receiving waters. The State Water Board supports this approach. In reviewing a Petition on Order No. R9-2001-0001, the State Water Board stated "*We also agree with the Regional Water Board's concern, as stated in its response, that there may be instances where MS4s use 'waters of the United States as part of their sewer system* [...]" State Water Resources Control Board Order WQ 2001-15. Furthermore, the U.S. Supreme Court's 2006 *Rapanos* decision supports the conclusion that natural streams in developed areas can be both receiving waters and MS4s by confirming that ephemeral and intermittent streams can be waters of the U.S. subject to regulation under Clean Water Act section 404 and also be considered point sources of pollution discharges regulated under Clean Water Act section 402. (See *Rapanos, et al. v. United States and Carabell et al. v. United States Army Corps of Engineers, et al. (2006) 547 U.S. 715, 743-744.)* Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

Fnd-5	FINDINGS	
	COMMENT: *Modify Finding 12 to more accurately describe that Copermittees do not accept free and open access to MS4s, and are not responsible for all discharges not prohibited.* The County of Orange and Concurring Cities and the Orange County Flood Control District object to Finding 12 stating that the Copermittees provide free and open access to MS4s. The Copermittees assert that they are not responsible for discharges from their MS4s that are from third parties that are subject to the jurisdiction of the San Diego Water Board	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that Finding 12 is inaccurate. The Copermittees have the option to request the authority to discharge from their MS4s under an NPDES permit or comply with the complete prohibition against the discharge of pollutants pursuant to Clean Water Act section 301(a) (33 U.S.C. § 1311(a)). These choices are provided by the federal Clean Water Act, not state laws. The Copermittees have opted to discharge from their MS4s under an NPDES permit. In doing so, they are responsible for discharges from the MS4s. Thus, Finding 12 correctly establishes that the Copermittees provide free and open access for third party discharges to their MS4s and that in doing so the Copermittees are responsible for discharges into the MS4 that they do not prohibit or otherwise control. Finding 12 also correctly concludes that the Copermittees cannot passively receive and discharge pollutants from third parties. The Copermittees have the responsibility of identifying the sources of discharges and pollutants from their MS4s. If the Copermittees are not actively identifying sources and cannot identify sources of discharges and pollutants to and from their MS4s, then the Copermittees are the source of the MS4s discharges and pollutants to receiving waters, even if they believe third parties are responsible for the discharges and pollutants. If, however, the Copermittees identify the sources of discharges and pollutants to or from the MS4s as outside of their legal authority to prohibit or otherwise control, then they are not passively receiving and discharging pollutants, even if they are providing free and open access to the MS4s. The data and information that the Copermittees collect to identify the third party sources can provide the evidence that the Copermittees are not responsible for the discharges and pollutants from the MS4s that can be attributed to third parties. Until the data and information are provided to identify those third parties, and demonstrate those parties are not subject to the Copermittees' legal authority, then the Copermittees are responsible for all of the discharges to and from their MS4s unless such discharges are authorized by a separate NPDES permit.	

Fnd-5	FINDINGS	
	Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

Fnd-6	FINDINGS	
	COMMENT: *Modify Finding 15 to recognize that the discharge of all pollutants from the MS4 is subject to the MEP standard.* The County of Orange and Concurring Cities and the Orange County Flood Control District assert Finding 15 is inaccurate. The Copermittees assert that the Tentative Order is inconsistent with the Clean Water Act and the MEP standard applies to both non-storm and water storm water, not just storm water.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with the comment and incorporates its responses to comments on this topic from the San Diego Water Board's adoption proceedings on Order No. R9-2013-0001. The San Diego Water Board disagrees that the MEP standard applies to both non-storm water and storm water. The San Diego Water Board also disagrees that Finding 15 of Order No. R9-2013-0001should be revised. Finding 15 accurately states the requirements of the Clean Water Act. The San Diego Water Board maintains that MEP standard only applies to pollutants in storm water. See also, Memorandum from San Diego Water Board Counsel to San Diego Water Board dated 5 November 2009, incorporated by reference herein. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

Fnd-7	FINDINGS	
	COMMENT: *Modify Finding 29 to clarify single water board regulations of Cities of Lake Forest, Laguna Woods, Laguna Hills.* The City of Lake Forest provided suggested language changes to Finding 29 of the Tentative Order to clarify single water board regulation of the Cities of Lake Forest, Laguna Woods, and Laguna Hills. Suggested language changes were for the most part accepted by the San Diego Water Board.	City of Lake Forest
	RESPONSE: The San Diego Water Board agrees with most of the suggested language changes proposed by the City of Lake Forest. The City of Lake Forest provided suggested language changes to Finding 29 of the Tentative Order to clarify single water board regulation of the Cities of Lake Forest, Laguna Woods, and Laguna Hills. The Tentative Order was modified to reflect, for the most part, the City's recommended changes. The word "wholly" was not added as requested by City of Lake Forest because it is unnecessary to clarify the terms of the Water Code section 13228 agreement. The permit language and the Water Code section 13228 designation agreement specify in detail how the Santa Ana Water Board and the San Diego Water Board will, respectively, regulate the City of Lake Forest as well as the Cities of Laguna Hills and Laguna Woods under each Region's respective MS4 permits. The San Diego Water Board notes that the current Riverside County MS4 permit (Order No. R9-2010-0016) includes the term "wholly" but the San Diego Water Board will consider removing that term when it considers the County of Riverside and Riverside Copermittees' Report of Waste Discharge for the reason set forth above.	

Fnd-8	FINDINGS	
	COMMENT: *Modify Finding 31 to state the Tentative Order is more stringent than Federal Law, requiring an analysis of the factors pursuant to Water Code Section 13241.* The County of Orange and Concurring Cities and the Orange County Flood Control District assert that several requirements of the Tentative Order go beyond the requirements of Federal law, thus an analysis pursuant to California Water code section 13241 is required. The commenters also make several assertions about the deficiencies they perceive with the economic considerations discussed in the Fact Sheet, and assert that a cost-benefit analysis needs to be included in the Fact Sheet discussion.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with this comment and incorporates its responses to comments on this topic from the San Diego Water Board's adoption proceedings on Order No. R9-2013-0001. The provisions of the Tentative Order do not go beyond the requirements of the Clean Water Act or Code of Federal Regulations. The San Diego Water Board again considered economic information in developing the Tentative Order No. R9-2015-0001 using the best available information, but did not do so in accordance with an analysis pursuant to California Water code section 13241. The provisions of the Tentative Order No. R9-2015-0001 are based on and fully supported by federal requirements, as demonstrated by the legal authority provided by the Clean Water Act and Code of Federal Regulations sections cited in the Fact Sheet. Thus, the San Diego Water Board maintains that an analysis pursuant to California Water Code section 13241 is not required. Federal NPDES regulations do not require that the San Diego Water Board conduct a cost-benefit analysis. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted. Please also see response to comment Lgl-4 and Lgl-5.	

Fnd-9	FINDINGS	
	COMMENT: *Delete Finding 32. The San Diego Water Board has no legal ability to determine whether a particular mandate is unfunded.* The County of Orange and Concurring Cities and the Orange County Flood Control District assert that the San Diego Water Board does not have the legal authority to determine whether any provisions in the Tentative Order constitute a state mandate, and only the Commission on State Mandates can make the determination.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: See response to comment Lgl-5.	

A-1	PROVISION A: PROHIBITIONS AND LIMITATIONS	
	COMMENT: *Tentative Order needs to include language that shows a clear pathway to compliance with the discharge prohibitions, receiving water limitations, and effluent limitations in Provision A.1.* Orange County and Concurring Cities, the Orange County Flood Control District, Riverside County Copermittees and the City of San Diego each submitted comments requesting that the requirements of Provision A be modified to provide a clear linkage between the prohibitions and limitations of Provisions A.1 to A.3 with the iterative process required under Provision A.4 to be demonstrated through the implementation of the Water Quality Improvement Plans. The commenters are concerned that the language of Provision A, if not modified, will be interpreted as requiring strict and immediate compliance with the prohibitions and limitations, and the implementation of the iterative process would not be enough the demonstrate compliance with the prohibitions and limitations. Among the many recommended modifications to the requirements of Provision A, the commenters are generally requesting that the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c and A.2.a specifically state that implementation of Provision A.4 constitutes compliance. Furthermore, the Copermittees have requested that Provision A.4 explicitly state that the implementation of the iterative process constitutes compliance with any of the prohibitions and limitations under Provision A.1 to A.3, including compliance with the effective prohibitions of non-storm water discharges to the MS4s, and the TMDL requirements. During adoption of Order No. R9-2013-0001, commenters from environmental organizations were strongly in support of maintaining the existing language and asserted that modifications to Provision A would "weaken" the requirements, or provide "safe harbor" and would violate federal anti-backsliding requirements.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District • Riverside County Copermittees • City of San Diego
	RESPONSE: The San Diego Water Board understands the concerns that the Copermittees have expressed regarding the requirements of Provision A and the apparent lack of a linkage between the iterative process under Provision A.4 and the strict compliance with the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c and A.2.a. This language, however, is consistent with the precedential language that was issued under State Water Board Order WQ-1999-05 and has been implemented in all MS4 permits issued by the San Diego Water Board since 2001. The State Water Board has not yet issued an order or taken other action to supersede this precedential language. Recently, the State Water Board issued a Draft Order on November 21, 2014 in response to petitions challenging the 2012 Los Angeles MS4 Permit in which compliance with receiving water limitations is a major focus. Although the State Water Board's Draft Order generally upholds the Los Angeles Water Board Order, no final decision has been made. The State Water Board held a December 16, 2014 public workshop to receive comments and discuss the Draft Order with	

A-1	PROVISION A: PROHIBITIONS AND LIMITATIONS	
	Copermittees and interested persons. No decision was made at the workshop. The State Water Board did not indicate when a final Order might be issued. Under the Porter-Cologne Water Quality Control Act, waste discharge requirements must implement applicable water quality control plans, including water quality objectives. The discharge prohibitions and receiving water limitations of Provision A.1.a, A.1.c and A.2.a are consistent with this requirement, and are included in all NPDES permits and Waste Discharge Requirements issued by the San Diego Water Board. These are the fundamental requirements that protect water quality by ensuring that discharges comply with applicable water quality standards to ensure protection of receiving water beneficial uses. The San Diego Water Board does recognize an increasing body of monitoring data indicates that water quality standards are in fact not being met by many of the Copermittees' MS4 discharges. The San Diego Water Board has as a matter of practice not sought to enforce the discharge prohibitions and receiving water limitations of Provision A.1.a, A.1.c or A.2.a where the Copermittees are actively engaged in implementing the other requirements of the MS4 permit. The focus of the previous MS4 permits and the San Diego Water Board has been on compliance with implementation of the actions required by the permit, rather than the water quality outcomes that are expected to be achieved. As noted by the Copermittees, however, the approach of the Tentative Order is a significant departure from the approach of previous MS4 permits. Previous MS4 permits did not provide the Copermittees enough flexibility to truly implement an iterative process to adaptively manage their programs to identify innovative new ways to improve the quality of discharges from their MS4s or in the receiving waters, because the actions required by the permit were relatively fixed and prescriptive. In contrast, the Tentative Order is structured to allow the Copermittees to take advantage of the iterative process and adaptively manage their programs to focus on achieving outcomes. Since the State Water Board has yet to issue a final decision response to the petitions challenging the 2012 Los Angeles Water Board MS4 Permit, the San Diego Water Board did not revise Provisions A.1.a, A.1.c, A.2.a and A.4, and the language of Provision A remains consistent with the language in precedential State Water Board Order No. WQ 1999-05. However, the San Diego Water Board supports the concept of an alternative compliance option and considered it during the adoption of the Regional MS4 Permit in 2013. The San Diego Water Board will consider incorporation of the Riverside County Copermittees into the Regional MS4 Permit in late 2015 or early 2016. As part of this process, the San Diego Water Board will also consider the incorporation of a well-defined, transparent, and finite alternative compliance option similar to the option	

A-1	PROVISION A: PROHIBITIONS AND LIMITATIONS	
	proposed in 2013, but also consistent with any decisions/guidance from the State Water Board. A rigorous alternative compliance option would allow the Copermittees that are willing to pursue significant receiving water quality improvements beyond the iterative process to be deemed in compliance with the receiving water limitations. Inclusion of the alternative compliance option during the extensive public process for the Riverside County Copermittees will provide the stakeholders the necessary opportunity to discuss, comment, and suggest changes to any proposed language. An administrative finding documenting the San Diego Water Board's intent to consider incorporation of an alternative compliance option during the MS4 NPDES permit reissuance proceedings for the Riverside County Copermittees has been added to the Tentative Order.	

B-1	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	COMMENT: *Water Quality Improvement Plans should be the foundation for a BMP-based compliance approach.* Orange County and Concurring Cities, the Orange County Flood Control District, Riverside County Copermittees and the City of San Diego request that Copermittees be allowed to utilize the development and implementation of the Water Quality Improvement Plans as a compliance mechanism for the prohibitions and limitations of Provisions A.1 to A.3.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District • Riverside County Copermittees • City of San Diego
	RESPONSE: The San Diego Water Board understands the concerns raised by the comments from the Copermittees. The Tentative Order includes the State Water Board precedential language. At this time the San Diego Water Board has chosen to keep the State Water Board precedential language in Attachment 1 to the Tentative Order until the State Water Board takes action with regards to this issue. Should the State Water Board decide to issue revised precedential language regarding mechanisms for compliance with Provision A.1 to A.3, the San Diego Water Board will then update the Regional MS4 Permit as necessary. Additionally, the discussion in the Fact Sheet under Provision B6 describes the San Diego Water Boards intentions to use the Water Quality Improvement Plans as functionally equivalent documents to TMDL Load Reduction Plans. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted. See also response to comment A-1.	

B-2	PROVISION B: WATER QUALITY IMPROVEMENT PLANS	
	COMMENT: *Water Quality Improvement Plans need to be based on regionally appropriate water quality standards that reflect sustainable conditions for beneficial uses.*	Riverside County Copermittees
	RESPONSE: The San Diego Water Board understands the concerns raised by the Riverside County Copermittees, however the proceedings on the Tentative Order are not the proper forum for addressing proposals to modify Basin Plan water quality standards. Water quality standards and beneficial uses are established in the San Diego Water Board's Basin Plan and not the Tentative Order /. The San Diego Water Board suggests the Riverside County Copermittees bring the comment forth during the San Diego Water Boards process for conducting the Triennial Review of Basin Plan water quality standards which is currently underway. . It is within the Triennial Review process that the San Diego Water Board reviews the Basin Plan water quality standards and beneficial uses. Information on the Triennial Review process can be accessed on the San Diego Water Board website at: http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/tri_review.shtml Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

B1-1	PROVISION B.1: Watershed Management Areas	
	COMMENT: *Revise footnote 2 to Table B-1 to clarify single water regulation of City of Lake Forest.* The City of Lake forest suggests revision to footnote 2 to Table B-1 to clarify single board regulation.	City of Lake Forest
	RESPONSE: The San Diego Water Board understands the City's comment and has modified the footnote language to be consistent with the language in Finding 29. Please see response to Comment Fnd-7.	

B1-2	PROVISION B.1: Watershed Management Areas	
	COMMENT: *Revise language in Tentative Order to clarify NPDES permit is applicable to discharges from Copermittees MS4s.* The City of San Diego requests that the requirements of the Tentative Order "clarify" the responsibilities of the Copermittees to develop a Water Quality Improvement Plan "for their MS4 discharges within" each of the Watershed Management Areas.	City of San Diego
	RESPONSE: The San Diego Water Board disagrees with the comment that clarification is necessary. The San Diego Water Board did not revise the language with the qualifying phrases requested by the Copermittees. The Copermittees are required to establish the legal authority to implement the requirements of the Tentative Order. The Tentative Order does not require the Copermittees to implement requirements outside of their jurisdictions or outside of their legal authority. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

B3-1	PROVISION B.3: Water Quality Improvement Goals, Strategies and Schedules	
	COMMENT: *Provision B.3.a should explicitly state that the action levels, interim goals and final goals are not enforceable limitations.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with the comment. After further clarification with the commenters on their references to footnotes in Provision B and C, Footnote 8 to Provision C.1 for Non-Storm Water Action Levels (NALs) and Footnote 10 to Provision C.2 Storm Water Action Levels (SALs) clearly state NALs and SALs incorporated in the Water Quality Improvement Plans are not considered by the San Diego Water Board to be enforceable effluent limitations, unless the NAL or SAL is based on a WQBEL expressed as an interim or final effluent limitation for a TMDL in Attachment E and the interim or final compliance date has passed. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

C-1	PROVISION C: ACTION LEVELS	
	COMMENT: *The Tentative Order should enable the Copermittees to apply NALs/SALs based on the priorities of the Water Quality Improvement Plan and/or the IDDE program.* The County of Orange and Concurring Cities and the Orange County Flood Control District are concerned that the Tentative Order contradicts itself by stating Copermittees must develop and incorporate numeric NALs and SALs into the Water Quality Improvement Plan and/or IDDE program, then mandates Copermittees include all of the numeric action levels identified in tables C-1 to C-5. The Copermittees expressed concern that requiring the prescribed NALs and SALs under Provision C would result in unnecessary analyses for constituents that are not a priority identified in the Water Quality Improvement Plan.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with the request to modify the requirements as suggested. The NALs and SALs under Provision C have been included to support the development and prioritization of the water quality strategies that will be implemented based on the highest priority water quality conditions identified by the Copermittees in the Water Quality Improvement Plans. The NALs and SALs have been included as a tool that the Copermittees and the San Diego Water Board can utilize to determine if the Copermittees are implementing the requirements of the Clean Water Act for MS4 permits to *effectively prohibit non-storm water discharges to the MS4* and *reduce pollutants in storm water discharges from the MS4 to the MEP*. The NALs and SALs are not new, and are included in both of the current MS4 permits issued to Orange County (Order No. R9-2009-0002) and Riverside County (Order No. R9-2010-0016). The Copermittees are required to effectively prohibit non-storm water discharges to their MS4s, which in turn should result in little to no discharges from their MS4s to receiving waters. If there are non-storm water discharges from the Copermittees' MS4s to receiving waters, those discharges should only be NPDES permitted discharges. Even if those discharges are NPDES permitted discharges, the Copermittees are responsible for demonstrating that those discharges are not illicit discharges by identifying the sources as NPDES permitted discharges. The prescribed NALs in Table C-1 through C-4 are associated with most if not all the pollutants that are known	

C-1	PROVISION C: ACTION LEVELS	
	or suspected to be causing or contributing to impairments in water bodies on the 303(d) List for the San Diego Region. The NALs are appropriately based on water quality objectives because non-storm water discharges that do not contain pollutants at levels in exceedance of the NALs are not expected to cause or contribute to exceedances of water quality standards in receiving waters. Thus, the prescribed NALs have been included to allow the Copermittees to prioritize their efforts in effectively prohibiting unpermitted non-storm water discharges to their MS4s, demonstrate that they have effectively prohibited non-storm water discharges to their MS4s that could cause or contribute to exceedances of water quality standards, or identify NPDES permitted sources that are resulting in discharges from their MS4s that are causing or contributing to exceedances of water quality standards in receiving waters. In any case, the prescribed NALs are necessary to allow the San Diego Water Board to determine if the Copermittees are effectively prohibiting non-storm water discharges to the MS4. The Tentative Order also allows Copermittees the flexibility to develop and include NALs, for which values are not already included provision C-1, for those pollutants that are causing or contributing, or threatening to cause or contribute to a condition of pollution or nuisance in receiving waters associated with the highest priority water quality conditions related to non-storm water discharges from the MS4s into the Water Quality Improvement Plans and IDDE Program. The Tentative Order does not prohibit the Copermittees from using any "previously established NALs" in addition to those listed in C-1 to C-4. In contrast, the prescribed SALs are not based on water quality objectives, but set at higher levels because the San Diego Water Board recognizes that reducing pollutants in wet weather discharges from the MS4s to water quality objectives is challenging. The prescribed SALs, however, will allow the Copermittees to prioritize their efforts in reducing pollutants in storm water discharges from their MS4s, and allow the San Diego Water Board to determine if the Copermittees are reducing pollutants in storm water discharges from their MS4s to the MEP. The San Diego Water Board disagrees with the concerns about monitoring for constituents that are not associated with the highest priority water quality conditions. Periodically analyzing non-storm water and storm water discharges from the Copermittees' MS4 for pollutants other than those associated with the highest priority water quality conditions is necessary if the Copermittees would like to re-prioritize or identify new priority water quality conditions that will be addressed. The San Diego Water Board does recognize that there is a cost associated with analyzing for additional constituents. Thus, the San Diego Water Board has modified the MS4 outfall monitoring requirements to reduce the number of dry weather MS4 outfall monitoring stations that must be analyzed (see Provision D.2.b.(2)(b) of Order No. R9-2013-0001) and provided the Copermittees some flexibility to modify the analytes for the wet weather MS4 outfall monitoring stations (see Provision	

C-1	PROVISION C: ACTION LEVELS	
	D.2.c.(5)(f)). As for the concerns about the chemically-based NALs and the biologically- or physically-based numeric goals for receiving waters, the San Diego Water Board disagrees that they cannot be linked or may be incompatible. Biologically- or physically-based numeric goals will likely be measured in the receiving waters. The chemically-based NALs apply to the MS4 outfalls. The quality of the MS4 discharges and the improvement of biological or physical measurements can be linked. Both are likely necessary to demonstrate that MS4 discharges are either not causing or contributing to a biological or physical impairment of the receiving water, or an improvement in MS4 discharges is resulting in improvements in the biological or physical conditions of the receiving water. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

D-1	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	COMMENT: *Copermittees need to have the flexibility to adjust analytical monitoring in the water quality improvement plans based on assessments of current sources that may contribute to the section 303(d) water body impairments*. The County of Orange and Concurring Cities and Orange County Flood Control District requested relief of analytical monitoring requirements if supporting information can be provided to document the current pollutant concentrations or may provide historic information to support the absence of usage of these constituents in the MS4 drainage area.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with the suggested revisions to the Tentative Order. Monitoring required in Provision D of Attachment No. 1 to the Tentative Order describes the minimum monitoring required to inform the Copermittees, San Diego Water Board, and the public on the progress the Copermittees make within their Phase 1 storm water programs to: 1) effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water from the MS4 to the maximum extent practicable; and 2) implement strategies to control the discharge of pollutants in MS4 discharges and improve receiving water quality. These minimum monitoring requirements do not prohibit the Copermittees from conducting monitoring for which it considers necessary to identify constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan. Each Copermittee is required to achieve compliance with the Basin Plan prohibitions and receiving water limitations (Provision A.1.a, A.1.c, and A.2.a, in Attachment 1 to the Tentative Order) through implementation of control measures and other actions as specified in the Tentative Order. The monitoring and assessment information collected and reported is expected to be key to the iterative approach and adaptive management process required by the Tentative Order (Provision A.4 of Attachment 1). Under the adaptive management provision, Copermittees are expected to change their monitoring programs to collect the necessary data for them to be able to demonstrate that their jurisdictional storm water management programs are making measurable progress towards achieving compliance with Basin Plan prohibitions and receiving water limitations. Changes to the monitoring programs would be presented during the development of or subsequent updates to the Water Quality Improvement Plan. All Copermittees are required to conduct the minimum monitoring described in Provision D, however through the adaptive management approach in Provision A of Attachment 1 to the Tentative Order, Copermittees are allocated sufficient flexibility to make changes to their monitoring program to collect the data most necessary to that their control strategies and other actions are	

D-1	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	making measurable progress towards effectively eliminating non-storm water discharges, and reducing pollutants in storm water to the maximum extent practicable to ultimately achieve compliance with the Basin Plan prohibitions and receiving water limitations (Provision A in Attachment 1 to the Tentative Order). Based on this consideration no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted. See also response to comment Gnl-2.	

D-2	PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS	
	COMMENT: *Modify Tentative Order requirements to be consistent with language in the South Orange County Wastewater Authority permit language.* The San Diego Water Board Monitoring and Assessment staff requests the Tentative Order be modified to update the Unified Beach Water Quality Monitoring language.	San Diego Water Board Staff of the Monitoring and Assessment Group
	RESPONSE: The San Diego Water Board agrees with the comment and has made the suggested language changes to the Tentative Order The Tentative Order language was revised to be consistent with the December 5, 2014 Executive Officer's letter directive, issued pursuant to California Water Code section 13383, requiring Copermittee participation in and shared responsibility for implementation of the Unified Beach Water Quality Program. Effective April 1, 2015, the requirements established through issuance of this Water Code section 13383 letter directive will become an enforceable component of the monitoring and reporting requirements in the Tentative Order.	

E-1	PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS	
	COMMENT: *Water Quality Improvement Plans and related Jurisdictional Runoff Management Programs should be streamlined and focus on the watershed's highest priorities.* The County of Orange and Concurring Cities and the Orange County Flood Control District commented that the Tentative Order, Attachment 1 at Provision E deviates from the strategic and adaptive approach of the Water Quality Improvement Plan concept, and is instead a "one-size-fits-all" approach. The commenters recommend modifying the Tentative Order so that the Water Quality Improvement Plans and jurisdictional runoff management programs can be streamlined and focus on the highest priorities within the watersheds.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board agrees that the Water Quality Improvement Plan framework allows for the identification and development of a storm water management program built around the highest priority water quality conditions within a specific watershed. The Tentative Order is structured so that the Water Quality Improvement Plan identifies the highest priority conditions of concern for a particular watershed, and also strategies, numeric goals, and schedules for making improvements for those conditions of concern. The jurisdictional runoff management programs are meant to be the implementing mechanism for the Water Quality Improvement Plans, i.e. they must incorporate the strategies identified in the Water Quality Improvement Plans. The San Diego Water Board disagrees that the requirements of Provision E deviate from the strategic and adaptive approach of the Water Quality Improvement Plan concept and that modifications are needed. The commenters should note that the requirements of the Provision E of the Tentative Order are substantially less prescriptive than those of the previous Fourth Term MS4 permits. Whereas the requirements of the Fourth Term MS4 permits were very specific, detailed, and prescriptive, the requirements of the Tentative Order include only basic program elements that meet the minimum requirements of 40 CFR 122.26(d)(2)(iv), but include much more flexibility in how the Copermittees implement their programs. The Copermittees can emphasize or de-emphasize different aspects of their programs to accomplish the overarching goals of the Water Quality Improvement Plans. For example, a Copermittee may choose to emphasize a certain program element by increasing the frequency of BMP inspections for discharges that are likely to contribute to the priority conditions of concern, while maintaining other program elements at the minimum required levels. Unlike the Fourth Term MS4 permits, the Tentative Order allows each Copermittee to specify, for example, the minimum inspection frequency for each specific program element. In this way, Copermittees are allowed to run their programs at minimum baseline levels, but also direct their resources where needed to achieve improvements in water quality and to address the highest priority conditions of concern.	

E-1	PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS	
	Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E1-1	PROVISION E.1: Legal Authority Establishment and Enforcement	
	COMMENT: *The Copermittees are only responsible for administering and enforcing the codes and ordinances applicable to their jurisdictions.* The County of Orange and Concurring Cities and the Orange County Flood Control District request that the requirements of Provision E.1 be modified to specify that the legal authority established by the Copermittees applies only to discharges within their jurisdictions, and that it is unnecessary to include language pertaining to discharges regulated by the Statewide Industrial and Construction General Permits.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that it is necessary to specify that the legal authority established by the Copermittees is only applicable to their jurisdictions. The requirements of Provision E.1 are consistent with the requirements under 40 CFR 122.26(d)(2)(i)(A)-(F) and do not go beyond those requirements. The legal authority that each Copermittee is required to establish for its jurisdiction is logically only expected to apply to its jurisdiction. Provision E.1.a.(2) is consistent with 40 CFR 122.26(d)(2)(i)(A), which requires the Copermittee to "*Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity*." 40 CFR 122.26(d)(2)(i)(A) does not make a distinction between industrial activity (which includes construction activity according to 40 CFR 122.26(b)(14)(x) that is regulated by an NPDES permit, such as the Statewide Industrial and Construction General Permits, and those that are not. Even if there are industrial and construction sites regulated by the Statewide Industrial or Construction General Permits, those sites are still subject to the Copermittees ordinances and the Copermittee must have the legal authority to control discharges from those sites. Provision E.1.a.(10) is consistent with 40 CFR 122.26(d)(2)(i)(F), which requires the Copermittee to "*Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer*." Therefore no modifications are warranted, and the San Diego Water Board did not make revisions to the requirements of Provision E.1 requested by the Commenters.	

E1-2	PROVISION E.1: Legal Authority Establishment and Enforcement	
	COMMENT: *The requirement for third party BMP effectiveness documentation is duplicative.* The County of Orange and Concurring Cities and the Orange County Flood Control District state that Provision E.1.a.(8) of the Tentative Order requires the Copermittees to obtain legal authority to require documentation of the effectiveness of BMPs, and that this requirement sets up a process for the establishment of multiple third party monitoring programs and expenditure of public funds to monitor the effectiveness of BMPs. The commenters state that this requirement ignores the fact that Copermittees have already established legal authority for their development standards, and is therefore redundant.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that Provision E.1.a.(8) sets up a process for the establishment of multiple third party monitoring programs and expenditure of significant public funds to monitor the effectiveness of BMPs. The Provision simply states that each Copermittee must establish legal authority that authorizes the Copermittee to require documentation on the effectiveness of BMPs from any of its dischargers. The Copermittee is not required to exercise this legal authority, but the legal authority must be established and available to the Copermittees in the event that the Copermittee could benefit from obtaining this type of information. The requirement is not duplicative because the legal authority to impose development standards is separate from the legal authority to require documentation on BMP effectiveness. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E2-1	PROVISION E.2: Illicit Discharge Detection and Elimination	
	COMMENT: *Modify the Illicit Discharge Detection and Elimination Program provisions so as not to negate the very intent and purpose of the watershed approach and the focus on the highest priorities within each watershed management area.* The County of Orange and Concurring Cities and the Orange County Flood Control District request modification to the introductory paragraph of the Illicit Discharge Detection and Elimination Provisions to better reflect the watershed approach and program focus on highest priority conditions of concern.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that modifications to the Illicit Discharge Detection and Elimination Program Provisions are needed for the reasons stated in the Response to Comment E1-1. Copermittees are afforded flexibility in meeting the requirements of Provision E.2. They are required to meet a minimum baseline program (with limited prescriptiveness compared to previous Fourth Term MS4 permits) as stated in the Tentative Order, and within that framework may focus on the highest priority conditions of concern as described in the Water Quality Improvement Plans. All illicit discharges are to be actively detected and eliminated in a prioritized manner. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E2a-1	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Copermittees should be given flexibility to prioritize their IDDE program to focus on non-storm water discharges likely to be a source of pollutants.* The County of Orange and Concurring Cities and the Orange County Flood Control District request that the requirements under Provision E.2.a be revised to allow the Copermittees to focus on eliminating non-storm water discharges that are a source of pollutants and not require the elimination of all non-storm water discharges.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with the commenter's' request. Provision E.2 does provide the Copermittees with a mechanism to address illicit discharges regardless of whether or not constituents of concern are present within the flows. The Copermittees are required to prioritize the non-storm water discharges that they will address, and eliminate the highest priority non-storm water discharges first. The Clean Water Act requires NPDES permit for MS4s to effectively prohibit non-storm water discharges to the MS4. As explained in the Fact Sheet, the Phase I Final Rule clarifies that non-storm water discharges through an MS4 are not authorized under the CWA (55 FR 47995): "*Today's rule defines the term "illicit discharge" to describe any discharge through a municipal separate storm sewer system that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not authorized under the Clean Water Act. Section 402(p(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer…Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit*." Thus, all non-storm water discharges that do not have authorization under an NPDES permit or are a category of non-storm water discharges that have been identified as a source of pollutants must ultimately be removed (i.e. prevented or eliminated) from the MS4 or become subject to an NPDES permit. The requirements under Provisions E.2.a.(1) and E.2.a.(3) are consistent with the Clean Water Act, the Code of Federal Regulations and the clarification in the Phase I Final Rule for non-storm water discharges. The non-storm water categories listed under Provision E.2.a.(3) generally are expected to be discharged from natural, uncontrollable, or unanticipated sources. Non-storm water discharges from foundation drains and footing drains designed to be above the groundwater table are not generally expected to occur. If they do occur, the Copermittee is expected to implement its illicit discharge detection and elimination program to	

E2a-1	PROVISION E.2.a: Non-Storm Water Discharges	
	determine if the discharge is transient or persistent, a source of pollutants or not, and whether the discharge must be eliminated in accordance with its priorities. In general, the requirements under Provision E.2 are focused on the ultimate removal of unauthorized non-storm water discharges to the MS4 to "effectively prohibit" non-storm water discharges to the MS4, as required by the Clean Water Act. The San Diego Water Board is not requiring the Copermittee to enforce any NPDES permits issued by the San Diego Water Board or State Water Board. The Copermittees are only required to use their legal authority to prohibit illicit discharges to their MS4s established pursuant to Provision E.1.a.(1). The San Diego Water Board did not revise Provision E.2 as recommended by the commenters.	

E2a-2	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *Modify Provision E.2.a.(5) to reflect the language previously adopted by the Regional Board in Order No. R9-2009-0002 regarding emergency firefighting discharges.* The County of Orange and Concurring Cities and the Orange County Flood Control District request that the Tentative Order be modified to clarify that there should not be a circumstance in which the Copermittees or the San Diego Water Board would identify emergency firefighting discharges as illicit discharges or a significant source of pollutants, and therefore in no instance would require BMP implementation.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that the language in Provision E.2.a.(5) requires revision. This Provision does not require the implementation of BMPs for emergency firefighting discharges, nor does it prohibit emergency firefighting discharges to the MS4. Provision E.2.a.(5)(b) only requires the Copermittees to "encourage" the implementation of BMPs in emergency situations. Provision E.2.a.(5)(b) is a recommendation for the Copermittees to implement, not a requirement for compliance.	

E2a-3	PROVISION E.2.a: Non-Storm Water Discharges	
	COMMENT: *The Tentative Order should not require the elimination of non-storm water discharges as a part of the IDDE Program.* The County of Orange and Concurring Cities and the Orange County Flood Control District state that Provision E.2.a.(7) misapplies the federal regulations that require the Copermittees to identify non-storm water discharges as illicit discharges prior to having an obligation to effectively prohibit it, and therefore the Provision should be removed.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that it is appropriate to remove Provision E.2.a.(7) because it is consistent with Clean Water Act, the Code of Federal Regulations and the clarification in the Phase I Final Rule for non-storm water discharges. Please see the response to comment E2a-1 for further discussion.	

E3-1	PROVISION E.3: Development Planning	
	COMMENT: *The Development Planning Provisions must be modified so as not to negate the very intent and purpose of the watershed approach and the focus on the highest priorities within each Watershed Management Area.* The County of Orange and Concurring Cities and the Orange County Flood Control District request modification to the introductory paragraph of the Development Planning Provisions to better reflect the watershed approach and program focus on highest priority conditions of concern.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that modifications to the Development Planning Program Provisions are needed for the reasons stated in the Response to Comment E1-1. Copermittees are afforded flexibility in meeting the requirements of Provision E.3. They are required to meet a minimum baseline program (with limited prescriptiveness compared to Fourth Term MS4 permits) as stated in the Tentative Order, and within that framework may focus on the highest priority conditions of concern as described in the Water Quality Improvement Plans. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3b-1	PROVISION E.3.b: Priority Development Projects	
	COMMENT: *Portions of redevelopment projects that already have water quality treatment BMPS should not be subject to the new PDP requirements.* The County of Orange and Concurring Cities and the Orange County Flood Control District request that language be added to the Tentative Order that would specify structural BMP requirements are not applicable to Priority Development Projects (or portions thereof) if the project already has implemented structural BMPs pursuant to requirements of prior MS4 permits.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees in concept with the Copermittees' request. Although some projects may already have structural BMPs onsite, the performance requirements of those BMPs do not necessarily meet the MEP requirements of the Tentative Order. Priority Development Projects subject to the requirements of older MS4 permits may not have BMPs that meet the numerical storm water pollutant control retention performance standard, or the flow control hydromodification performance standard. Therefore, when redevelopment sites, that were subject to older MS4 permit requirements, want to create and/or replace 5,000 square feet or more of impervious surface on the project site (collectively over the entire project site on an existing site with 10,000 square feet or more of impervious surfaces), the redevelopment site must update the BMPs during the design phase. Furthermore, the commenter should note that the pollutant control and hydromodification management BMP requirements of the Tentative Order are the same as the previous South Orange County MS4 permit, Order No. R9-2009-0002. Therefore Priority Development Projects that were subject to these requirements developed in 2009 should already be in compliance with the requirements of the Tentative Order. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3b-2	PROVISION E.3.b: Priority Development Projects	
	COMMENT: *Tentative Order should include a priority development project exemption for flood control and stream restoration projects.* The County of Orange and Concurring Cities and the Orange County Flood Control District request that the Tentative Order should include exemptions for flood control and stream restoration projects from the requirement to implement structural BMPs since they are not a source of pollutants.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board believes that it may be suitable to relax the structural BMP standards for, or exempt flood control projects, but not before projects are evaluated on a case-by-case basis. In many instances, water quality protective measures may be appropriate for implementation in flood control projects, but such options would not be evaluated if the Tentative Order provided a blanket exemption. Furthermore, 40 CFR 122.26(d)(2)(iv)(A)(4) requires Copermittees to include in their applications mechanisms "to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible." Such evaluations would not occur if flood control projects were provided blanket exemption from Priority Development Project status, therefore a blanket exemption is not appropriate. Stream restoration projects do not fit any of the Priority Development Project categories, therefore no exemptions are needed. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3b-3	PROVISION E.3.b: Priority Development Projects	
	COMMENT: *Tentative Order should include a priority development project exemption for emergency public safety projects.* The County of Orange and Concurring Cities and the Orange County Flood Control District request the Tentative Order include exemptions for emergency public safety projects from the requirement to implement structural BMPs because *a delay due to the development and approval of a Standard Stormwater Mitigation Plan (SSMP) would compromise public safety, public health and/or the environment.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that modifications to the Tentative Order to exempt emergency public safety projects from the requirement to implement structural BMPs is necessary. The Commenters state that emergency projects will be implemented immediately where public safety, public health, and/or the environment is threatened, and that there will be no time for the development, processing, and plan check for these projects. The San Diego Water Board agrees. Provision E.3 describes requirements that pertain to development *planning*. Emergency situations, by definition, are not planned projects and therefore do not involve the design, approval, and construction of a building or structure. Therefore an explicit exemption is not needed. Regardless of the conditions (i.e. emergency conditions) under which a public safety project requires installation, if a public safety project meets the Priority Development Project criteria of Provision E.3.b, then the public safety project needs to include the structural BMP controls of Provision E.3.c. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3c-1	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	COMMENT: *Modify the Tentative Order to allow flexibility in the structural BMP performance standards if watershed-specific performance standards are developed in the water quality improvement plans.* The County of Orange and Concurring Cities and the Orange County Flood Control District submitted comments stating that the Copermittees should be given the opportunity to develop alternative BMP performance standards consistent with the goals of the Water Quality Improvement Plans.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board agrees that greater improvements to water quality in the watersheds may be realized if Priority Development Projects were allowed to implement some requirements offsite, as opposed to strictly onsite. For this reason, the Attachment No. 1 of the Tentative Order allows for "alternative compliance" in instances where the Copermittee determines that offsite measures will have a greater overall water quality benefit for the Watershed Management Area than if the Priority Development Project were to implement structural BMPs onsite. Consequently, watershed-specific structural BMP requirements are present in Attachment No. 1 to the Tentative Order that provide for allowable compliance offsite. Therefore no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted. The alternative compliance program, which is described in Provision E.3.c.(3), is an option for Priority Development Projects where the Copermittee has participated in the development of a Watershed Management Area Analysis as part of the Water Quality Improvement Plan (described in Provision B.3.b.(4)). Such an approach is consistent with the latest findings in hydromodification management by the scientific community. In the Southern California Coastal Water Research Project (SCCWRP) Technical Report No. 667, the authors state: "*An effective [hydromodification] management program will likely include combinations of on-site measures (e.g., low-impact development techniques, flow-control basins), in-stream measures (e.g., stream habitat restoration), floodplain and riparian zone actions, and off-site measures. Off-site measures may include compensatory mitigation measures at upstream locations that are designed to help restore and manage flow and sediment yield in the watershed.*" Consistent with the ideas brought forth by the SCCWRP report, in the optional Watershed Management Area Analysis of Provision B.3.b.(4), the Copermittees must develop watershed maps that include as much detail about factors that affect the hydrology of the watersheds as is available. Such factors included identification of areas suitable for infiltration, coarse sediment supply areas, and locating stream channel structures and constrictions. Once these factors are mapped and studied, the Copermittees can identify areas in the	

E3c-1	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	watersheds where "candidate projects" may be implemented that are expected to improve water quality in the watershed by providing more opportunity for infiltration, slowing down storm water flows, or attenuation of pollutants naturally via healthy stream habitat. These projects may be in the form of retrofitting existing development, rehabilitating degraded stream segments, identifying regional BMPs, purchasing land to preserve valuable floodplain functions, and any other projects that the Copermittees identify. Under the alternative compliance program, Priority Development Project applicants may be allowed to fund, partially fund, or implement a candidate project, in lieu of implementing structural BMPs onsite, if they enter into a voluntary agreement with the Copermittee permitting this arrangement. If compliance involves funding or implementing a project that is outside the jurisdiction of the Copermittee, then that Copermittee may enter into an inter-agency agreement with the appropriate jurisdiction(s). Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3c1-1	PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements	
	COMMENT: *Terminology is inconsistent with the use of "Low Impact Development" BMPs*. The County of Orange and Concurring Cities and the Orange County Flood Control District request modification to the Provision E.3 to provide consistency with the use of "Low Impact Development" terminology.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board has reviewed the suggested edits to Provision E.3 and did not find any suggestions pertaining to Low Impact Development terminology. Based on this consideration no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3c1-2	PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements	
	COMMENT: *The San Diego Water Board is requiring increasingly stringent onsite storm water retention requirements.* The Construction Industry Coalition on Water Quality (CICWQ) submitted comments stating that the San Diego Water Board is requiring increasingly stringent onsite storm water retention requirements without evidence that existing requirements under Order No. R9-2009-0002 are not working to protect water quality and beneficial uses. The commenter asserts that the San Diego Water Board is proposing to enact the most stringent onsite requirements for storm water runoff anywhere in California, and that the requirements are less flexible than earlier MS4 permits.	Construction Industry Coalition on Water Quality • San Diego Building Industry Association • Building Industry Association of Southern CA • Associated General Contractors • Associated Builders and Contractors • San Diego Regional Chamber of Commerce • Business Leadership Alliance • San Diego Association of Realtors • San Diego Apartment Association • National Association of Industrial & Office Properties • Building Office & Management Association • San Diego Chapter of American Society of Landscape Architects
	RESPONSE: The commenter incorrectly asserts that Attachment No. 1 to Tentative Order requires increasingly stringent onsite storm water retention requirements over and above the requirements of Order No. R9-2009-0002, the Fourth Term MS4 permit for Orange County Copermittees. The purpose of the onsite retention requirement in both the Tentative Order and Order No. R9-2009-0002 is to retain onsite the pollutants contained in the volume of storm water runoff produced from a 24-hour 85th percentile storm event. This requirement has not changed from Order No. R9-2009-0002, and therefore the commenter is incorrect in stating that the San Diego Water Board is requiring additional prescriptive performance measures for retaining storm water runoff. This is the MEP standard recognized by the San Diego Water Board and is consistent with the Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), as well as Santa Ana Water Board Order Nos. R8-2009-0030 and R8-2010-0033 (Orange County and Riverside County MS4 Permits, respectively), Los Angeles Water Board Order No. R4-2010-0108 (Ventura County MS4 Permit), and Los Angeles Water Board Order No. R4-2012-0175 (Los Angeles County MS4 Permit). Additionally, the San Diego Water Board disagrees with the commenter's assertion that the retention standard	

E3c1-2	PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements	
	is less flexible in the Tentative Order than in Order No. R9-2009-0002. In fact, the pollutant control and hydromodification management BMP requirements are more flexible in the Tentative Order than in the Fourth Term MS4 permits because the Tentative Order allows Priority Development Projects to comply by mitigating offsite, if doing so would provide greater water quality benefit for the watershed. Please see the response to Comment No. E3c1-2 for a discussion of the Watershed Management Analysis and the ability to perform offsite mitigation.	

E3c1-3	PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements	
	COMMENT: *The Tentative Order and Fact Sheet ignore the findings of the Copermittee's Report of Waste Discharge.* The County of Orange and Concurring Cities and the Orange County Flood Control District submitted comments stating that there is little justification for the requirements of the Tentative Order based on the successes of the Copermittee's storm water programs, as reported in the Report of Waste Discharge (ROWD). The Copermittees report successes in reducing bacterial contamination in coastal waters during dry weather, and also assert that exceedances of total dissolved solids (TDS) and nutrients are unlikely due to urban sources. The commenters also state that the Tentative Order should recognize this uncertainty and not mandate on-site retention of runoff in the first instance where it may exacerbate the exfiltration of shallow groundwater with elevated TDS and nutrients. Finally, the commenters state that toxicity occurs sporadically in receiving waters in Orange County, indicating that the causes are not urban in nature, and that pesticide regulation is not within the Copermittees' jurisdictions.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board recognizes that the Copermittees have made great strides in improvements in water quality and attainment of beneficial uses through rigorous implementation of their storm water management programs, but disagrees that the requirements of Attachment No. 1 to the Tentative Order should be removed. The Copermittees note that bacterial contamination is low during dry weather, but concede that achieving reductions in bacteria concentrations in wet weather is challenging. The San Diego Water Board is charged with protecting the beneficial uses of receiving waters at all times, regardless of season or weather conditions. The fact that there are still impairments with bacterial contamination in the receiving waters during the rainy season is exactly why the requirements in the Tentative Order are necessary. The San Diego Water Board agrees that it is worthwhile to understand the environmental significance TDS and nutrients and their relationship, or lack thereof, to urban sources. The San Diego Water Board disagrees, however, that the Tentative Order does not recognize the need to protect shallow groundwater from exfiltration of TDS and nutrients. Although the Tentative Order at Provision E.3.c.(1)(a) requires onsite retention of the design capture volume, this can be accomplished via several physical mechanisms such as interception, storage, evaporation, and evapotranspiration, in addition to infiltration. Therefore the Tentative Order does not automatically mandate on-site retention of runoff in the form of infiltration in every instance, as the commenter	

E3c1-3	PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements	
	asserts. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted. See also response to comment Gnl-2.	

E3c1-4	PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements	
	COMMENT: *If priority development projects use alternative compliance, onsite conventional BMPs should not also be required.* The County of Orange and Concurring Cities and the Orange County Flood Control District state that there is not adequate technical justification for requiring onsite conventional BMPs when a Priority Development Project is allowed alternative compliance offsite. The commenters state that requiring both is double mitigation that goes well beyond the MEP standard.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with this comment. Onsite pollutant treatment using conventional BMPs is a minimum general requirement to remove pollutants from runoff prior to its discharge to any receiving water. The storm water pollutant control BMP requirement for Priority Development Projects is to retain, onsite, the pollutants contained in the volume of storm water runoff produced from a 24-hour 85th percentile storm event (design capture volume). If it is not technically feasible to retain pollutants within the design capture volume, onsite, then the Tentative Order provides for an alternative means of compliance. If the Priority Development Project proponent is allowed to implement BMPs offsite, then the portion of the design capture volume that is not reliably retained onsite must be treated prior to discharging pollutants into the receiving water. 40 CFR 131.10(a) prohibits use of the receiving water as a treatment system and therefore, requires treatment of runoff to occur prior to the discharge of runoff to receiving waters (See Finding 7 in Attachment 1 of the Tentative Order). If Priority Development Projects are allowed to forgo onsite conventional treatment of runoff, then the Priority Development Projects would discharge untreated runoff from their site into receiving waters which is prohibited under 40 CFR. Retention of the 85th percentile storm is clearly the MEP standard for storm water pollutant control, as represented by the Tentative Order and its Attachments, recently adopted MS4 permits in the state (R8-2009-0030 and R8-2010-0033; North Orange and Riverside County MS4 permits, R4-2010-0108 and R4-2012-0175; Ventura County and Los Angeles County MS4 permits, and San Diego Water Board Order Nos. R9-2009-0030 and R9-2010-0016; South Orange County and Riverside County MS4 permits), and elsewhere in the United States. Retention of anything less than the design storm volume must be mitigated because the MEP standard has not been met. Therefore, Attachment 1 to the Tentative Order includes a requirement that mitigation is necessary for the portion of the design storm volume that is not retained onsite because, although this remaining volume of storm water would be treated to some level, the MEP standard as represented by the structural BMP performance requirements would not have been met.	

E3c1-4	PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements	
	Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3c-5	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	COMMENT: *Biofiltration BMPs should be sized for the design capture volume.* The County of Orange and Concurring Cities and Orange County Flood Control District assert that the requirement to oversize biofiltration BMPs to treat 1.5 times the design capture volume, if used to meet the pollutant control BMP requirements, is an increase over the prior Orange County MS4 permit. The commenters state that the Fact Sheet provides no technical justification for the sizing factor, and that biofiltration should be considered equivalent to onsite retention. The commenters also assert that Priority Development Projects that use biofiltration BMPs must also implement conventional BMPs, effectively requiring double mitigation when it is not needed.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The commenter incorrectly states that the requirement to size biofiltration BMPs to treat 1.5 times the design capture volume not reliably retained onsite is an increase from the prior Orange County MS4 permit (Order No. R9-2009-0002). This methodology of sizing the BMP was included in the Tentative Order *in addition to*, and not *in replacement of*, the methodology of sizing the BMP in Order No. R9-2009-0002. As a result, Priority Development Projects have two options for sizing biofiltration BMPs: 1.5 times the design capture volume not reliably retained onsite, OR a flow-thru design that has a total volume, including pore spaces and pre-filter detention volume, sized to hold at least 0.75 times the portion of the design capture volume not reliably retained onsite. The 1.5 sizing factor was included in the Tentative Order to offer more than one method of complying with the requirement. As described in the Fact Sheet, the 1.5 multiplier is based on the finding in the Ventura County Technical Guidance Manual that biofiltration of 1.5 times the design capture volume not retained onsite will provide approximately the same pollutant removal as retention of the design capture volume on an annual basis. This standard is consistent with the Los Angeles Water Board's Los Angeles County and Ventura County municipal storm water permits (Order Nos. R4-2012-0175 and R4-2010-0108, respectively). The commenter argues that biofiltration should be considered equivalent to other retention BMPs and therefore the 1.5 sizing factor is not needed. However, biofiltration is a flow-thru system, and therefore is not capable of retaining pollutants onsite (and preventing discharges of pollutants to receiving waters) in the equivalent manner as retention BMPs. The commenter compares the performance of harvest and use BMPs to biofiltration BMPs for the removal of total suspended solids, but fails to evaluate the performance of a range of retention BMPs, such as infiltration or evapotranspiration, which are widely accepted as effective pollutant control strategies.	

E3c-5	PROVISION E.3.c: Priority Development Project Structural BMP Performance Requirements	
	The commenter incorrectly asserts that Priority Development Projects that use biofiltration as an alternative compliance option must also implement conventional BMPs, and in effect requires double mitigation. Provision E.3.c.(1)(a)(i) of the Tentative Order allows for the use of biofiltration BMPs where retention of the full design capture volume is not technically feasible, but does not also require the use of conventional treat-and-release BMPs. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3c2-1	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Hydromodification requirements are based on faulty foundational assumptions.* Tory Walker, PE, submitted comments stating that the hydromodification requirements of the Tentative Order are based on faulty foundational assumptions. The commenter states that 1) the requirements cannot be based on a category of stream being either stable or highly dynamic, 2) flow rate reductions caused by dams reduces channel degradation, and runoff from Priority Development Projects may compensate for this and promote a more natural condition, and 3) as a result, the Tentative Order needs to accommodate more site-specific flexibility.	Tory Walker Engineering
	RESPONSE: The San Diego Water Board disagrees that the hydromodification management requirements in the Tentative Order are based on faulty assumptions that preclude the accommodation of site-specific conditions. In fact, the Tentative Order incorporates the ability to accommodate site-specific conditions much more so than previous Fourth Term MS4 permits. The requirements in the Tentative Order provide that post-project runoff conditions must not exceed pre-development runoff conditions by more than 10 percent (for the range of flows that result in increased potential for erosion or degraded instream habitat downstream of the Priority Development Project). Note that the requirement is not to control *all* flows, but only those flows that are expected to cause erosion downstream. Because the downstream receiving water may or may not be susceptible to erosion, then the BMPs needed upstream, on the Priority Development Project will necessarily vary. In essence, when configuring BMPs for a particular Priority Development Project, the project proponent must evaluate both site-specific conditions and runoff conditions expected from the project, as well as the receiving water's susceptibility to erosion. The requirements in the Tentative Order do not specify that channels are to be treated as either stable or highly dynamic. The commenter states that hydromodification impacts caused by dams could actually be offset by runoff from Priority Development Projects. The San Diego Water Board recognizes this possibility, therefore the Tentative Order allows for offsite compliance in lieu of implementing hydromodification management BMPs onsite, where the Copermittee finds offsite compliance to provide a greater water quality benefit to the watershed. In this example, if the Copermittees in the watershed complete the optional Watershed Management Area Analysis described in Provision B.3.b(4) and find that flows generated from Priority Development Projects would actually help offset the runoff impounded by upstream dams, then the Copermittees could allow the Priority Development Projects located downstream of the dams the ability to comply offsite. For these reasons, the	

E3c2-1	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	San Diego Water Board disagrees that the hydromodification management requirements of the Tentative Order should be modified. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted	

E3c2-2	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Hydromodification management requirements should be based on a watershed management approach, be consistent with the WQIPs, and consider the current Copermittee HMPs.* The County of Orange and Concurring Cities and the Orange County Flood Control District state that hydromodification management should be based on the conditions of receiving waters and on the impacts and potential impacts from development projects, and the basis for management should be an understanding of the watershed and specific receiving waters. The commenters state that hydromodification management objectives should be watershed specific and developed through a stakeholder process. The commenters assert that the hydromodification management requirements in the Tentative Order are a one-size-fits-all approach that does not allow consideration of watershed analysis or receiving water information. The commenters state that requirement to use the pre-development runoff conditions as the performance standard goes beyond federal law by taking the Clean Water Act's purpose to restore waters out of context of section 402(p). The requirement does not reflect the developed urban environment and negates the engineering efforts to date to protect life and property from floods. The commenters also state that identifying "naturally occurring" conditions for redevelopment sites is difficult; raising the technical question as to how far back a Copermittee goes historically in determining the proper predevelopment timeframe. The commenters conclude by suggesting an approach to hydromodification management that is consistent with the intent of the Water Quality Improvement Plan approach, and considers the Copermittee's current Hydromodification Management Plans.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that the hydromodification management requirements in the Tentative Order are a one-size-fits all approach and that the requirements do not allow consideration of watershed analysis or receiving water information. The requirements of the Tentative Order provide that post-project runoff conditions must not exceed pre-development runoff conditions by more than 10 percent (for the range of flows that result in increased potential for erosion, or degraded instream habitat downstream of Priority Development Projects). Note that the requirement is not to control *all* post-project flows, but only those that are expected to *cause erosion or degraded habitat* downstream of the Priority Development Project. The performance standards of the Tentative Order are the same as those of the Commenters existing Order No. R9-2009-0002.	

E3c2-2	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	Since each Priority Development Project is expected to result in a specific post-project runoff condition, and the susceptibility of the receiving water to erosion could vary substantially based on location within a watershed, then the range of flows to control, and hence the specific BMPs required, will necessarily vary and is not a one-size-fits all requirement. In this way, the requirements in the Tentative Order specifically address both watershed and receiving water information. The Tentative Order allows for hydromodification management BMP implementation, and also exemptions, specific to the San Juan Watershed Management Area based on Copermittee's analysis of the watershed. See the response to Comment No. E3c1-1 regarding the Watershed Management Area Analysis as part of Water Quality Improvement Plan development, and how the Copermittees can use the results of the analysis to allow watershed-specific offsite mitigation in lieu of structural BMP implementation onsite, and also allow exemptions from the requirements. The Commenters incorrectly assert that the requirements in the Tentative Order attempt to restore waters to pre-Columbian conditions because of the requirement to use pre-development runoff conditions rather than pre-project runoff conditions in evaluating the need for hydromodification management BMPs. The Tentative Order requires the use of pre-development runoff conditions as a means of restoring a more natural hydrology to allow for stream rehabilitation, but there is no requirement to return the landscape to pre-Columbian conditions, nor is there a need to speculate how far back a Copermittee must go in in determining the appropriate timeframe. Because pre-development runoff conditions cannot be precisely known for a redevelopment project, the Tentative Order allows the use of any readily available information to estimate pre-development runoff conditions. Pre-development runoff conditions for redevelopment projects are defined in Attachment C to the Tentative Order as "runoff conditions from the project footprint assuming infiltration characteristic of the underlying soil, and existing grade." A Priority Development Project must use available information to estimate these parameters, and there is no need to perform extensive historical assessments, as the commenter asserts. The requirement to use pre-development runoff conditions as the performance standard is needed because using a hydrology baseline that approximates that of an undeveloped, natural watershed is the only way to facilitate the return of more natural hydrological conditions to already built-out watersheds. Using the pre-project hydrology as a baseline for redevelopment projects results in propagating the unnatural hydrology of urbanized areas, which is largely made up of impervious surfaces. Flows from impervious surfaces are highly erosive and consequently have detrimental effects on receiving waters in the San Diego Region. Furthermore, propagating the urbanized flow regime does not support conditions for restoring degraded or channelized	

E3c2-2	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	stream segments, and would forever sentence such streams to the degraded state. Identification of areas suitable for rehabilitating degraded stream segments is a critical component of the Tentative Order and is expected to be incorporated into Copermittee's strategies for improving water quality in the watersheds. Finally, the Copermittees will be allowed to use the Hydromodification Management Plan developed under Order No. R9-2009-0002. The performance standards of the Tentative Order are the same as those of Order No. R9-2009-0002, therefore there is no need for the Copermittees to develop new requirements or methodologies, or otherwise update their Hydromodification Management Plan. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3c2-3	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *The San Diego Water Board is eliminating exemptions for hydromodification control when storm water runoff is conveyed to significantly hardened or engineered channels.* The Construction Industry Coalition on Water Quality (CICWQ) assert that regulations are tending to require hydromodification controls for Priority Development Projects, regardless of receiving water susceptibility. CICWQ states that this direction is driven by environmental advocacy for removal of all concrete lined channels regardless of existing land uses and feasibility, and that such efforts ignore the vital role that flood control facilities play in urban infrastructure and the protection of life and property. The alignment, grade, and cross section of many urban streams have been irrevocably altered, and a regulatory requirement to return flows to pre-development conditions will not allow stream restoration to occur. CICWQ and the Riverside County Copermittees both submitted comments stating that the interim exemptions from hydromodification controls allowed for engineered channels should be granted outright without further study from the Copermittees.	Construction Industry Coalition on Water Quality • San Diego Building Industry Association • Building Industry Association of Southern CA • Associated General Contractors • Associated Builders and Contractors • San Diego Regional Chamber of Commerce • Business Leadership Alliance • San Diego Association of Realtors • San Diego Apartment Association • National Association of Industrial & Office Properties • Building Office & Management Association • San Diego Chapter of American Society of Landscape Architects Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees that the hydromodification management requirements in the Tentative Order mandate controls on Priority Development Projects, regardless of receiving water susceptibility. The requirements of the Tentative Order provide that post-project runoff conditions must not exceed pre-development runoff conditions by more than 10 percent (for the range of flows that result in increased potential for erosion, or degraded instream habitat downstream of Priority Development Projects). Note that the requirement is not to control *all* post-project flows, but only those that are expected to *cause erosion or degraded habitat* downstream of the Priority Development Project. Since each Priority Development Project is expected to result in a specific post-project runoff condition, and the susceptibility of the receiving water to erosion could vary substantially based on location within a watershed, then the range of flows to control, and hence the specific BMPs required, will necessarily vary and is not a one-size-fits all requirement. In this way, the requirements in the Tentative Order specifically address the susceptibility of the receiving water.	

E3c2-3	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	The commenter correctly asserts that the driver behind the requirement to use the pre-development performance standard is the sustainability of geomorphically stable channels and the ability to return urbanized streams to a more natural state. As explained in the response to Comment No. E.3.c2-2, the requirement to use pre-development runoff conditions as the performance standard is needed because using a hydrology baseline that approximates that of an undeveloped, natural watershed is the only way to facilitate the return of more natural hydrological conditions to already built-out watersheds, which in turn supports conditions for rehabilitating degraded or channelized stream segments. Contrary to what the commenter asserts, the Tentative Order does not require Copermittees to remove concrete from channels that are engineered to relieve flooding and protect life and property. The Tentative Order provides exemptions for Priority Development Projects that discharge to receiving waters where there is little threat of erosion, and subsequently implementing BMPs onsite would do little to protect the beneficial uses of such receiving waters. The commenter correctly states that the exemption for engineered channels is temporary. However, the commenter should note that there is a high likelihood that exemptions for engineered channels will become permanent. The Tentative Order allows for the Copermittees to recommend permanent exemptions based on completion of an optional Watershed Management Area Analysis pursuant to Provision B.3.b.(4). As part of this effort, the Copermittees would identify, for example, areas in the watershed suitable for urban retrofitting, and areas suitable for stream rehabilitation. The Copermittees would also identify areas suitable for exemptions for hydromodification management, such as engineered channels that are needed for the protection of life and property. The interim exemption for engineered channels is not granted outright as permanent exemptions because the areas have not yet been analyzed in the context of stream rehabilitation opportunities. The San Diego Water Board does not anticipate the Watershed Management Area Analysis to be burdensome on the Copermittees because they have already completed a Watershed Management Planning Tool, with similar goals as the Watershed Management Area Analysis, as part of their storm water management programs. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3c2-4	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Hydromodification control requirements to avoid critical sediment yield areas are unnecessarily restrictive.* The Construction Industry Coalition on Water Quality (CICWQ) assert that the hydromodification management requirements of the Tentative Order to "avoid critical sediment yield areas" are unnecessarily restrictive. The commenters state that several Priority Development Projects have been significantly delayed or stopped because of the inability to comply with this requirement.	Construction Industry Coalition on Water Quality • San Diego Building Industry Association • Building Industry Association of Southern CA • Associated General Contractors • Associated Builders and Contractors • San Diego Regional Chamber of Commerce • Business Leadership Alliance • San Diego Association of Realtors • San Diego Apartment Association • National Association of Industrial & Office Properties • Building Office & Management Association • San Diego Chapter of American Society of Landscape Architects
	RESPONSE: The San Diego Water Board disagrees that the requirements to avoid critical sediment yield areas are unnecessarily restrictive. The requirements are necessary to protect receiving waters from erosive flows caused by land development. As explained in the Fact Sheet to the Tentative Order, hydromodification, which is caused by both altered storm water flow and altered sediment flow regimes, is largely responsible for degradation of creeks, streams, and associated habitats in the San Diego Region. In an ongoing study by the Stormwater Monitoring Coalition to assess the health of streams throughout Southern California, researchers found that three of the four highest risk stressors to creeks (percent sands and fines present, channel alteration, and riparian disturbance) were related to physical habitat (Assessing the Health of Southern California Streams, Stormwater Monitoring Coalition, Fact Sheet). Researchers studying flood frequencies in Riverside County have found that increases in watershed imperviousness of only 9-22 percent can result in increases in peak flow rates for the two-year storm event of up to 100 percent (Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds, (Article 66). The Practice of Watershed Protection). Such changes in runoff have significant impacts on channel morphology. Placement of impervious surfaces as a result of urbanization is largely responsible for erosional impacts to	

E3c2-4	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	streams because placement of impervious surfaces encapsulates "good" sediment (such as sand, gravel, rocks and cobbles) that would normally replenish creek beds and banks to help stabilize them. For this reason, the Tentative Order requires Priority Development Projects to avoid critical sediment yield areas, as defined by the Copermittees, or implement measures to allow coarse sediment to be discharged to receiving waters. Such measures are designed to protect receiving waters and avoid impacts experienced by past land development practices. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3c2-5	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Modify Tentative Order to clarify that the interim hydromodification exemptions are in place until the San Diego Water Board approves the BMP Design Manual.* The County of Orange and Concurring Cities and the Orange County Flood Control District recommend that the interim timeframe exemptions for engineered channels and large rivers from hydromodification management remain in place until the BMP Design Manual is approved by the San Diego Water Board, as opposed to when the BMP Design Manual has been updated. The commenters have made this request so that there is no timing gap in coverage for the exemptions.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that any changes are needed to the language in Provision E.3.c.(2)e. The Tentative Order requires the Copermittees to update their BMP Design Manuals in accordance with Provision F.2.b. The Copermittees are required to update their BMP Design Manual, but there is no requirement to seek San Diego Water Board approval before the BMP Design Manual goes into effect 180 days after completing the update. If there is a discrepancy in approving the Water Quality Improvement Plan with recommended exemptions before the BMP Design Manual goes into effect, then the San Diego Water Board could direct the Copermittees to delay implementation of the BMP Design Manual. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3c3-1	PROVISION E.3.c.(3): Alternative Compliance to Onsite Structural BMP Implementation	
	COMMENT: *Requests for the Water Quality Equivalency calculations be included as an optional Copermittee deliverable.* The County of San Diego requests that the Water Quality Equivalency calculations and methodologies currently under development by the Copermittees in support of the Alternative Compliance Program be included in the Tentative Order as an optional deliverable for review and acceptance by the San Diego Water Board's Executive Officer.	County of San Diego
	RESPONSE: The San Diego Water Board agrees with this comment and has modified the Tentative Order at Provision E.3.c.(3) to incorporate the recommendation.	

E3c3-2	PROVISION E.3.c.(3): Alternative Compliance to Onsite Structural BMP Implementation	
	COMMENT: *Copermittees should be allowed flexibility to develop a trading and water quality credit system.* The County of Orange and Concurring Cities and the Orange County Flood Control District requests that language pertaining to the water quality credit system be revised to remove the no-net impact limitations because certain projects may offer significant environmental benefits that are not necessarily related to water quality, and that any water quality trading system should be implemented in accordance with EPA's 2003 Final Water Quality Trading Policy.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with the commenters that the no-net impact language should be removed from the Tentative Order. The optional credit system described in Provision E.3.c.(3)(d) is based on meeting the structural BMP performance standards as they pertain to protecting and improving water quality. A credit system that would allow other environmental benefits cannot necessarily ensure that water quality would be protected to the MEP standard, for which the performance standards are structured to achieve. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3e-1	PROVISION E.3.e: Priority Development Project BMP Implementation and Oversight	
	COMMENT: *Include the date the BMP manual will be implemented to provide clarity.* The City of San Diego requests that the date that the BMP Manual will go into effect for the San Diego County Copermittees (December 24, 2015) be explicitly expressed in the Tentative Order.	City of San Diego
	RESPONSE: The San Diego Water Board disagrees that including the date when the BMP Manual will go into effect is appropriate, because this date will be different for the various Copermittees covered under the Tentative Order (i.e. San Diego County Copermittees, South Orange County Copermittees, and eventually Riverside County Copermittees). Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E3e-2	PROVISION E.3.e: Priority Development Project BMP Implementation and Oversight	
	COMMENT: *Revise the Tentative Order to define when a priority development project has prior lawful approval.* The City of San Diego requests a definition of prior lawful approval be added to the Tentative Order to clarify when it is appropriate to allow Priority Development Projects to comply with BMP standards of previous MS4 permits. The City of San Diego recommends including a definition that can 1) provide a clear, bright line; 2) provide a backstop to ensure that older projects with approvals comply with new requirements unless those approvals confer vested rights; 3) protect vested rights; and 4) preserve Copermittee's land use authority. Similarly, the Coalition provided comments requesting that the Tentative Order be modified to include a definition of prior lawful approval, stating that clarifying the intent of the San Diego Water Board will assist all interested parties in understanding the factors that the Copermittees need to balance in applying their discretion with Provision E.3.e.(1)(a) of the Tentative Order. In contrast, the Coastal Environmental Rights Foundation and San Diego Coastkeeper submitted comments that it is not necessary to take any action to define prior lawful approval, stating that doing so could allow for vested rights that run counter to widely accepted law.	Construction Industry Coalition on Water Quality • San Diego Building Industry Association • Building Industry Association of Southern CA • Associated General Contractors • Associated Builders and Contractors • San Diego Regional Chamber of Commerce • Business Leadership Alliance • San Diego Association of Realtors • San Diego Apartment Association • National Association of Industrial & Office Properties • Building Office & Management Association • San Diego Chapter of American Society of Landscape Architects San Diego Coastkeeper Coastal Environmental Rights Foundation City of San Diego
	RESPONSE: The San Diego Water Board has carefully considered the comments received regarding prior lawful approval, and whether or not it is appropriate to define this term in the Tentative Order. The San Diego Water Board understands the concerns regarding the difficulty the Copermittees face in applying their discretion to the concept of prior lawful approval in a consistent manner that complies with the intent of Provision E.3.e.(1)(a). Therefore, for the reasons presented by the commenters, the San Diego Water Board agrees that clarification regarding the intent of the Provision and the San Diego Water Board's expectation in how the Copermittees use their discretion, would be helpful to all parties. The Tentative Order has been modified to include a definition for prior lawful approval for both private and public Priority Development Projects that is intended to provide guidance and clarification to Copermittees in	

E3e-2	PROVISION E.3.e: Priority Development Project BMP Implementation and Oversight	
	exercising their discretion in this matter. For private development projects, prior lawful approval is a development approval or construction permit that complies with the Priority Development Project requirements of the Fourth Term MS4 permits (Order Nos. R9-2007-0001 for San Diego County, R9-2009-0002 for south Orange County, or R9-2010-0016 for Riverside County) and includes the design of the storm water drainage system for the project in its entirety as accepted by the Copermittee. Alternatively, prior lawful approval is a development approval or construction permit that confers a vested right to Priority Development Projects to proceed under storm water structural BMP requirements of prior MS4 permits. If a Copermittee grants prior lawful approval to a Priority Development Project based on one of the two aforementioned conditions, then the Copermittee must ensure that 1) any subsequent project approvals must be issued within 5 years of the effective date of the BMP Design Manual, and 2) BMP installation under subsequent approvals must remain in substantial conformity with the design of the storm water drainage system included in the initial approval. For public projects, prior approval allowing implementation of Fourth Term MS4 Permit structural BMP requirements in lieu of the requirements of the Tentative Order is acceptable if the storm water drainage system for the project, in its entirety, has been stamped by the City or County Engineer by the time the BMP Design Manual goes into effect. The San Diego Water Board recognizes that the Copermittees will need to determine whether or not a project has prior lawful approval under the Order based on the circumstances of each project. Nevertheless, the San Diego Water Board expects each Copermittee to require the implementation of Provision E.3 of the Tentative Order wherever it can lawfully do so. Some projects will have received prior lawful approval by the effective date of the BMP Design Manual and hence the requirements of the Fourth Term MS4 permits will govern. The San Diego Water Board expects that very few Priority Development Projects, if any, will be allowed to implement BMP requirements from prior MS4 permits. In cases where BMP requirements from the Fourth Term (or earlier) MS4 permits govern the structural BMP design requirements of a Priority Development Project, the San Diego Water Board expects the Copermittees to be able to demonstrate, in a programmatic audit or other means, that the project has prior lawful approval within the meaning of Provision E.3 of this Order. The San Diego Water Board has conducted and will continue to conduct programmatic audits of the Copermittee's land development programs to evaluate MS4 permit compliance. In all cases the San Diego Water Board expects the Copermittees to only approve projects with adequate post construction BMPs that are protective of water quality. In summary, Attachment 1 of the Tentative Order has been modified at Provision E.3.e.(1) to include a definition of the term "prior lawful approval." This language is intended to provide clarity on how the term	

E3e-2	PROVISION E.3.e: Priority Development Project BMP Implementation and Oversight	
	should be interpreted in determining structural BMP requirements for Priority Development Projects, and will also assist the San Diego Water Board in assessing Copermittee compliance with implementing the structural BMP requirements for Priority Development Projects to the maximum extent practicable (MEP) standard.	

E4-1	PROVISION E.4: Construction Management	
	COMMENT: *Modify Construction Management Program provisions so as not to negate the very intent and purpose of the watershed approach and the focus on the highest priorities within each watershed management area.* The County of Orange and Concurring Cities and Orange County Flood Control District requests the introductory paragraph of the Construction Management Provisions be modified to better reflect the watershed approach and program focus on highest priority conditions of concern.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that modifications to the Construction Management Program Provisions are needed for the reasons stated in the Response to Comment E1-1. Copermittees are afforded flexibility in meeting the requirements of Provision E.4. They are required to meet a minimum baseline program (with limited prescriptiveness compared to Fourth Term MS4 permits) as stated in the Tentative Order, and within that framework focus on the highest priority conditions of concern as described in the Water Quality Improvement Plans. Based on this consideration no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E5-1	PROVISION E.5: Existing Development Management	
	COMMENT: *Modify Existing Development Program provisions so as not to negate the very intent and purpose of the watershed approach and the focus on the highest priorities within each watershed management area.* The County of Orange and Concurring Cities and the Orange County Flood Control District request modification to the introductory paragraph of the Existing Development Provisions to better reflect the watershed approach and program focus on highest priority conditions of concern.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that modifications to the Existing Development Management Program Provisions are needed for the reasons stated in the Response to Comment E1-1. Copermittees are afforded flexibility in meeting the requirements of Provision E.5. They are required to meet a minimum baseline program (with limited prescriptiveness compared to Fourth Term MS4 permits) as stated in the Tentative Order, and within that framework focus on the highest priority conditions of concern as described in the Water Quality Improvement Plans. Based on this consideration no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E5-2	PROVISION E.5: Existing Development Management	
	COMMENT: *Delete the requirement to evaluate retrofit of stream channels.* The County of Orange and Concurring Cities and Orange County Flood Control District requested removal of the requirement to evaluate retrofit of stream channels from the Tentative Order because it is not the Copermittee's responsibility to restore receiving waters.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board agrees that it is not the responsibility of the Copermittees to restore receiving waters. None of the provisions in the Tentative Order requires the Copermittees to perform stream restorations. The Tentative Order at Provision E.5.e.(2) requires the Copermittees to describe a program to rehabilitate streams, channels, and habitats in existing developed areas by first identifying viable candidates, then developing a strategy to facilitate the implementation of the rehabilitations. Rehabilitation of streams, channels, and habitats may also serve as candidates for alternative compliance (to implementation of structural BMPs; see Tentative Order at Provision E.3.c.(3)), and is an important element of the Tentative Order in achieving improvements in water quality and watershed functions. Based on this consideration no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E6-1	PROVISION E.6: Enforcement Response Plans	
	COMMENT: *Copermittees should be allowed to utilize existing guidelines and procedures for enforcement.* The County of Orange and Concurring Cities and the Orange County Flood Control District request Provision E.6 be modified to specify that a Copermittee may utilize and implement established, equivalent guidelines and procedures for enforcement.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that any changes to the Tentative Order are needed. A Copermittee will be able to continue using and implementing existing enforcement guidelines and procedures if the Copermittee demonstrates the procedures and guidelines comply with the requirements of Provision E.6. Provision E.6 requires each Copermittee to document enforcement processes and procedures in an Enforcement Response Plan, as part of its jurisdictional runoff management program document and specifically describes what must be included in the Plan. The Enforcement Response Plan will promote transparency and accountability by ensuring that Copermittee enforcement programs and procedures are clear and accessible to the San Diego Water Board and the public, and can be used to evaluate the adequacy of Copermittee enforcement programs and progress towards meeting enforcement goals. Because the Copermittees already have procedures in place for enforcement, there will likely only be minor modifications needed to the programs to meet the requirements of Provision E.6. The Enforcement Response Plan is expected to be a tool the Copermittee can refer to when issuing enforcement actions to compel compliance with its statutes, ordinances, permits, contracts, order, or similar means, and the requirements of the Tentative Order. The Enforcement Response Plan is also expected to result in more consistent enforcement and enforcement actions by the Copermittee within its jurisdiction. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E6-2	PROVISION E.6: Enforcement Response Plans	
	COMMENT: *The definition for "Escalated Enforcement" should be redefined.* The County of Orange and Concurring Cities, and the Orange County Flood Control District request Provision E.6.d be modified to be "Progressive Enforcement" instead of "Escalated Enforcement" because the process should reflect a standard progressive approach.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees with the recommendation to modify the language in Provision E.6.d from "escalated enforcement" to "progressive enforcement". The Copermittees are expected to implement "progressive enforcement" in all cases of enforcement. For enforcement issues that are associated with the highest priority water quality conditions identified by the Copermittees in the Watershed Management Area, the Copermittees are expected to implement enforcement swiftly. "Escalated enforcement" refers to the Copermittee escalating its enforcement measures and resources to a) ensure compliance with local statutes, ordinances, permits, contracts, order, or similar means, and the requirements of the Tentative Order, b) compel prompt correction of violations and the conditions that led to the violations, and c) deter future violations. The term "escalated enforcement" correctly reflects this added level of urgency and focus to compel compliance. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

E7-1	PROVISION E.7: Public Education and Participation	
	COMMENT: *The Public Education Program provisions must be modified so as not to negate the very intent and purpose of the watershed approach and the focus on the highest priorities within each watershed management area.* The County of Orange and Concurring Cities and the Orange County Flood Control District request modification to the introductory paragraph of the Public Education Program Provisions to better reflect the watershed approach and program focus on highest priority conditions of concern.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that modifications to the Public Education Program Provisions are needed for the reasons stated in the Response to Comment E1-1. Copermittees are afforded flexibility in meeting the requirements of Provision E.7. The Copermittees are required to meet a minimum baseline program (with limited prescriptiveness compared to Fourth Term MS4 permits) as stated in the Tentative Order, and within that framework focus on the highest priority conditions of concern as described in the Water Quality Improvement Plans. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted .	

F-1	PROVISION F: REPORTING	
	COMMENT: *Modify Tentative Order to better align reporting requirements with the process for development and updates of the various plans to allow for the time necessary to complete the work and to submit the ROWD.* The County of Orange and Concurring Cities and Orange County Flood Control District suggest the due dates for development of each component of the Water Quality Improvement Plan be linked to the development step that precedes it and not to the commencement of coverage under the Order. The commenters also suggest the timeframe for development of the Water Quality Improvement Plan incorporate adequate time for the Copermittees to review and respond to comments received on the current action before moving on to the next step of development. The Copermittees are also concerned that the schedule proposed in the Tentative Order would impart an overly burdensome schedule on members of the public participating in the Consultation Panels and reviewing documents during the public review periods and do not allow for adequate time to conduct CEQA.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The Tentative Order accommodates the commenters concerns with the amount of time needed to develop the Water Quality Improvement Plan and submit the deliverables by providing a flexible range within which the Copermittees may submit each component of the Water Quality Improvement Plan. Copermittees may submit the requirements of Provision B.2 (i.e. priority water quality conditions, source of conditions, and potential water quality improvement strategies) as early as 6 months and no later than 12 months after commencement of coverage and Provision B.3 (i.e. goals, strategies, and schedules) as early as 9 months, and no later than 18 months after commencement of coverage. By including this range within which the deliverable can be submitted, the San Diego Water Board is allowing adequate time and adequate flexibility for the Copermittees to a) create the deliverable, b) accept and review comments received on the deliverable during development of the Water Quality Improvement Plan, and c) complete any CEQA compliance as the Copermittee determines to be necessary. The San Diego Water Board expects each partial deliverable to be well thought out and complete but also realizes that additional time exists in the process to further incorporate comments and input received during the public comment period and San Diego Water Board staff review. As such the Tentative Order requires the final version of the Water Quality Improvement Plan to be submitted within 24 months after commencement of coverage under the Tentative Order as it amends Order No. R9-2013-0001. By requiring submittal of individual components of the Water Quality Improvement Plan, members of the Consultation Panel, the public, and the San Diego Water Board will be able to provide input early on in the Plan	

F-1	PROVISION F: REPORTING	
	development. The San Diego Water Board expects that any deficiencies in the Water Quality Improvement Plan will be identified early on either during the public review and comment period or during the review by the San Diego Water Board. The Orange County Copermittees may wish to consult with San Diego County Copermittees to benefit from their experience in developing the Water Quality Improvement Plans. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

H-1	PROVISION H: MODIFICATION OF PROGRAMS	
	COMMENT: *Modify Tentative Order to include an explicit re-opener provision.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that additional revisions to the explicit re-opener provisions in the Tentative Order are necessary. Provision H.4.c of the Tentative Order already explicitly states that the San Diego Water Board will re-open the Order if any of the TMDLs in Attachment E are amended in the Basin Plan by the San Diego Water Board, and the amendment is approved by the State Water Board, Office of Administrative Law, and the USEPA. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

AttA-1	ATTACHMENT A: Discharge Prohibitions and Special Protections	
	COMMENT: *The City supports the proposed changes to the Areas of Special Biological Significance.*	City of San Diego
	RESPONSE: The San Diego Water Board acknowledges the City's support of this change.	

AttC-1	ATTACHMENT C: Acronyms, Abbreviations, and Definitions	
	COMMENT: *Request for additional or modified definitions*. Several comments were submitted requesting modifications to existing definitions and/or the addition of new definitions to Attachment C to the Tentative Order.	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board reviewed and considered the requested modifications to existing definitions and additional definitions. All of the requested additions or modifications were submitted during the 2013 adoption process for Order No. R9-2013-0001. The San Diego Water Board reconsidered the requested additions or modifications and determined, in all cases, that the requested modifications or additions were still not appropriate, not necessary, or both. Therefore, no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

AttE-1	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	COMMENT: *Compliance determination for final WQBELs should be based on implementation of BMPs and not numeric effluent limitations.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board has already included a compliance determination option for final WQBELs based on implementation of BMPs in the Tentative Order. WQBELs can be expressed as (1) conditions in receiving waters that are to be attained to restore or protect water quality standards in receiving waters, (2) conditions in discharges that will not cause or contribute to exceedances of water quality standards in receiving waters, (3) BMPs that will ensure discharges will not cause or contribute to exceedances of water quality standards in receiving waters, or (4) a combination of one or more of (1)-(3). This is consistent with 40 CFR 122.44(d)(1)(vii)(B) and 122.44(k)(2)-(4). The San Diego Water Board has incorporated options (1)-(3) under the WQBEL requirements for each of the TMDLs in Attachment E. In most cases, if the WQBEL expressed as a receiving water limitation is achieved, the discharges from the MS4s are assumed to be in compliance with the TMDL requirements. If not, then the Copermittees must demonstrate that discharges from the MS4s are not causing or contributing to the exceedances in the receiving waters by achieving the WQBELs expressed as effluent limitations. In every case, the Copermittees are required to implement BMPs to ensure that discharges from their MS4s do not cause or contribute to exceedances of water quality standards in receiving waters. For the interim TMDL compliance determination requirements, the Copermittees are allowed to demonstrate compliance by implementing a Water Quality Improvement Plan that has been accepted by the San Diego Water Board, with a "reasonable assurance" that the implementation of the BMPs will achieve the interim TMDL WQBELs within the interim compliance dates. The Copermittees will be provided considerable flexibility for demonstrating compliance with achieving the interim WQBELs. For the final TMDL compliance determination requirements, the Copermittees are allowed to demonstrate compliance with the final WQBELs by implementing a Water Quality Improvement Plan that includes an	

AttE-1	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	analysis to demonstrate that the implementation of the BMPs required by the TMDL achieves compliance with one or more of the final numeric WQBELs. The Water Quality Improvement Plan must include monitoring and assessments to confirm that the Water Quality Improvement Plan is achieving the final TMDL requirement. The San Diego Water Board must accept and continue to accept the Water Quality Improvement Plan and analysis, and the Copermittees must continue to implement the BMPs and demonstrate through the analysis that the final numeric WQBELs are being achieved. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

AttE-2	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	COMMENT: *Modify Tentative Order to include a compliance mechanism prior to approval of the Water Quality Improvement Plans.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that it is necessary to include a compliance mechanism prior to approval of the Water Quality Improvement Plan. If a TMDL in Attachment E includes interim or final compliance dates that have passed, the Copermittees are expected to have data to demonstrate that one or more of the compliance determination options have already been met. If interim or final TMDL compliance dates have not passed, compliance with the interim or final TMDL compliance requirements do not have to be demonstrated yet, thus a compliance determination mechanism is not yet required. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

AttE5-1	ATTACHMENT E 5: Baby Beach and Shelter Island Shoreline Park Bacteria TMDL	
	COMMENT: *Correct discrepancies between adopted TMDLs in the Basin Plan and provisions in the Tentative Order.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that there are discrepancies between the TMDLs in the Basin Plan and the provisions in the Tentative Order. The TMDLs as developed are all intended to restore the water quality standards in receiving waters impaired by specific pollutants. The WLAs and LAs as developed are all intended to ensure that discharges from point and nonpoint sources to receiving waters will not cause or contribute to exceedances of water quality standards in receiving waters. The TMDL requirements in Attachment E are consistent with the intent of the TMDLs, and the WLAs for MS4s. In other words, the TMDL requirements in Attachment E are intended to ensure that discharges from the Responsible Copermittees' MS4s will not cause or contribute, and will continue to not cause or contribute to exceedances of water quality standards in receiving waters. According to each TMDL, when all point sources and nonpoint sources achieve their WLAs and LAs, including the WLAs for MS4s, the water quality standards in receiving waters will be restored. The San Diego Water Board included TMDL requirements in Attachment E that are entirely consistent with the requirements of the TMDLs as adopted and incorporated into the Basin Plan. The implementation plans of the TMDLs in the Basin Plan are essentially "instructions" for the San Diego Water Board to incorporate the requirements into the regulatory mechanisms that will implement the requirements of the TMDL to attain the water quality standards that are being impaired by a pollutant in a water body. In each case, the "instructions" provide the permit writer considerable flexibility in how to express the WLAs as WQBELs in the permit, but not as much flexibility in the compliance schedules for achieving the WLAs. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

AttE5-2	ATTACHMENT E 5: Baby Beach and Shelter Island Shoreline Park Bacteria TMDL	
	COMMENT: *WQBELs for Baby Beach TMDL inappropriately include TMDL numeric targets.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board has included WQBELs that are consistent with the requirements and assumptions of the TMDLs. The federal regulations under 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permit requirements incorporate WQBELs that must be consistent with the requirements and assumptions of any available WLAs developed under TMDLs. WQBELs can be expressed as (1) conditions in receiving waters that are to be attained to restore or protect water quality standards in receiving waters, (2) conditions in discharges that will not cause or contribute to exceedances of water quality standards in receiving waters, (3) BMPs that will ensure discharges will not cause or contribute to exceedances of water quality standards in receiving waters, or (4) a combination of one or more of (1)-(3). This is consistent with 40 CFR 122.44(d)(1)(vii)(B) and 122.44(k)(2)-(4). The San Diego Water Board has incorporated options (1)-(3) under the WQBEL requirements for each of the TMDLs in Attachment E. In most cases, if the WQBEL expressed as a receiving water limitation is achieved, the discharges from the MS4s are assumed to be in compliance with the TMDL requirements. If not, then the Copermittees must demonstrate that discharges from the MS4s are not causing or contributing to the exceedances in the receiving waters by achieving the WQBELs expressed as effluent limitations. In every case, the Copermittees are required to implement BMPs to ensure that discharges from their MS4s do not cause or contribute to exceedances of water quality standards in receiving waters. The WQBELs are also consistent with the assumptions and requirements of the WLAs. In each case, the WLAs are calculated based on numeric targets that are assumed to be able to restore or protect water quality standards in receiving waters and/or ensure discharges from the Responsible Copermittees' MS4s will not cause or contribute to exceedances of water quality standards in receiving waters. The numeric targets are required to be based on water quality objectives in the Basin Plan. Discharges from the MS4s are required to	

AttE5-2	ATTACHMENT E 5: Baby Beach and Shelter Island Shoreline Park Bacteria TMDL	
	achieve the numeric targets for their discharges to protect water quality standards in receiving waters to meet the WLAs. The WQBELs for the TMDLs in Attachment E are consistent with the numeric targets, and thus consistent with the underlying assumptions and requirements of the numeric targets that are the basis of the WLAs. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

AttE6-1	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDL	
	COMMENT: *Correct discrepancies between adopted TMDL Basin Plan and provision in Tentative Order.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that there are discrepancies between the TMDLs in the Basin Plan and the provisions in the Tentative Order. The TMDLs as developed are all intended to restore the water quality standards in receiving waters impaired by specific pollutants. The WLAs and LAs as developed are all intended to ensure that discharges from point and nonpoint sources to receiving waters will not cause or contribute to exceedances of water quality standards in receiving waters. The TMDL requirements in Attachment E are consistent with the intent of the TMDLs, and the WLAs for MS4s. In other words, the TMDL requirements in Attachment E are intended to ensure that discharges from the Responsible Copermittees' MS4s will not cause or contribute, and will continue to not cause or contribute to exceedances of water quality standards in receiving waters. According to each TMDL, when all point sources and nonpoint sources achieve their WLAs and LAs, including the WLAs for MS4s, the water quality standards in receiving waters will be restored. The San Diego Water Board included TMDL requirements in Attachment E that are entirely consistent with the requirements of the TMDLs as adopted and incorporated into the Basin Plan. The implementation plans of the TMDLs in the Basin Plan are essentially "instructions" for the San Diego Water Board to incorporate the requirements into the regulatory mechanisms that will implement the requirements of the TMDL to attain the water quality standards that are being impaired by a pollutant in a water body. In each case, the "instructions" provide the permit writer considerable flexibility in how to express the WLAs as WQBELs in the permit, but not as much flexibility in the compliance schedules for achieving the WLAs. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

AttE6-2	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDL	
	COMMENT: *Modify Attachment E.5, WQBELs for Beaches and Creeks TMDL inappropriately include TMDL numeric targets.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board has included WQBELs that are consistent with the requirements and assumptions of the TMDLs. The federal regulations under 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permit requirements incorporate WQBELs that must be consistent with the requirements and assumptions of any available WLAs developed under TMDLs. WQBELs can be expressed as (1) conditions in receiving waters that are to be attained to restore or protect water quality standards in receiving waters, (2) conditions in discharges that will not cause or contribute to exceedances of water quality standards in receiving waters, (3) BMPs that will ensure discharges will not cause or contribute to exceedances of water quality standards in receiving waters, or (4) a combination of one or more of (1)-(3). This is consistent with 40 CFR 122.44(d)(1)(vii)(B) and 122.44(k)(2)-(4). The San Diego Water Board has incorporated options (1)-(3) under the WQBEL requirements for each of the TMDLs in Attachment E. In most cases, if the WQBEL expressed as a receiving water limitation is achieved, the discharges from the MS4s are assumed to be in compliance with the TMDL requirements. If not, then the Copermittees must demonstrate that discharges from the MS4s are not causing or contributing to the exceedances in the receiving waters by achieving the WQBELs expressed as effluent limitations. In every case, the Copermittees are required to implement BMPs to ensure that discharges from their MS4s do not cause or contribute to exceedances of water quality standards in receiving waters. The WQBELs are also consistent with the assumptions and requirements of the WLAs. In each case, the WLAs are calculated based on numeric targets that are assumed to be able to restore or protect water quality standards in receiving waters and/or ensure discharges from the Responsible Copermittees' MS4s will not cause or contribute to exceedances of water quality standards in receiving waters. The numeric targets are required to be based on water quality objectives in the Basin Plan. Discharges from the MS4s are required to	

AttE6-2	ATTACHMENT E 6: Beaches and Creeks Bacteria TMDL	
	achieve the numeric targets for their discharges to protect water quality standards in receiving waters to meet the WLAs. The WQBELs for the TMDLs in Attachment E are consistent with the numeric targets, and thus consistent with the underlying assumptions and requirements of the numeric targets that are the basis of the WLAs. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

AttE7-1	ATTACHMENT E 7: Los Peñasquitos Lagoon Sediment TMDL	
	COMMENT: *Modify the Tentative Order to allow individual jurisdictional compliance with TMDLs.* The City of San Diego requests the Tentative Order be modified so that Final TMDL Compliance Determination using the Water Quality Improvement Plan pathway is based on individual jurisdictional compliance instead of all Copermittees collectively.	City of San Diego
	RESPONSE: The San Diego Water Board disagrees that modifications are needed to the language pertaining to TMDL compliance determination. The commenter correctly asserts that the intent of the language, and in fact, the intent of the Water Quality Improvement Plan concept, is that the Copermittees develop the Water Quality Improvement Plans collectively and evaluate water quality improvement strategies on a watershed basis. The San Diego Water Board recognizes that the Copermittees have no authority over other Copermittees to compel TMDL compliance; therefore, the Tentative Order has multiple compliance pathways available to each Copermittee to achieve compliance. These pathways are presented in each of the 7 Specific (TMDL) Provisions at X.b.(3). These alternative compliance pathways do not rely on actions or inactions of other Copermittees.	

AttE7-2	ATTACHMENT E 7: Los Peñasquitos Lagoon Sediment TMDL	
	COMMENT: *Clarify that waste load allocations include discharges from other responsible parties in addition to Responsible Copermittees.* The City of San Diego, City of Del Mar, and Industrial Environmental Association submitted comments requesting the final effluent limitations expressed in Table 7.1, which were derived from waste load allocations, recognize the contribution of sediment loading to the Los Penasquitos Watershed from dischargers other than the Copermittees. Without this recognition, the other dischargers would have a zero sediment loading allocation, contrary to the intent of the TMDL.	Industrial Environmental Association City of San Diego City of Del Mar
	RESPONSE: Although the Tentative Order is an NPDES permit specifically issued to the Phase I MS4 Copermittees, the San Diego Water Board has nonetheless modified Table 7.1 to state that the effluent limitation of 2,580 tons/year is shared amongst all dischargers identified in Resolution No. R9-2012-0033. Provision 7.b.(2)(c)(ii) has likewise been modified to clarify that the Responsible Copermittees must implement BMPs to achieve only their portion of the effluent limitations, as opposed to other discharger's contributions. The City of San Diego suggested dividing up the collective load in proportion to land area occupied by each discharger, but the San Diego Water Board cannot impose a TMDL distribution methodology through the permitting process that has not been peer reviewed and vetted through the TMDL development stakeholder process. Assigning a waste load allocation and subsequent effluent limitation applicable to all dischargers within a watershed collectively, is consistent with the San Diego Water Board's approach to TMDL expression for other waterbodies and constituents.	

AttE7-3	ATTACHMENT E 7: Los Peñasquitos Lagoon Sediment TMDL	
	COMMENT: *Revise the Final TMDL compliance determination to be consistent with the Basin Plan Amendment and other TMDLs.* The City of Del Mar and the City of San Diego submitted comments requesting the language pertaining to final TMDL compliance determination be modified to be consistent with the Basin Plan Amendment adopted by the San Diego Water Board under Resolution No. R9-2012-0033, and offer multiple compliance pathways similar to other TMDLs.	City of Del Mar City of San Diego
	RESPONSE: The San Diego Water Board agrees to modify the language of Provision 7.b.(3)(a) to match the language of the Basin Plan Amendment (page A-16). However, the San Diego Water Board disagrees that the suggested revisions to add additional language to incorporate a compliance pathway related to "implementation actions" is necessary. Specifically, both the City of San Diego and City of Del Mar requested the following language to be added: "Demonstrate that implementation actions are active on and/or affecting 346 acres with continued monitoring to ensure 80 percent target achievement" This language is not needed because Provision 7.b.(3)(b) regarding the development of the Water Quality Improvement Plan as a compliance pathway serves the same purpose as the suggested language. The phrase "implementation actions" has been added to Provision 7.b.(3)(b)(ii) to incorporate all ideas from the Basin Plan Amendment language into the Water Quality Improvement Plan concept. The San Diego Water Board considered the request to add two additional compliance pathways similar to those included in other TMDLs. As this sediment TMDL is different than other adopted TMDLs because the primary focus is lagoon saltmarsh restoration, as opposed to the quality of the MS4 discharges, the San Diego Water Board did not incorporate the suggested modifications. The intent of the TMDL efforts was to facilitate successful restoration of 346 acres of saltmarsh vegetation, and the Tentative Order appropriately uses this metric as the primary compliance pathway. The schedule to achieve compliance is 20 years, as established by the TMDL. In contrast, the NPDES permit as represented by the Tentative Order is on a 5-year cycle. Revisions to the compliance pathways available to the Responsible Parties can be revisited upon reissuance of the NPDES permit at a later date. The San Diego Water Board believes it is more appropriate to offer multiple compliance pathways after data have been collected showing the effects of sediment reduction efforts on lagoon restoration. If a positive linkage can be	

AttE7-3	ATTACHMENT E 7: Los Peñasquitos Lagoon Sediment TMDL	
	established between the reduction in sediment discharges and the successful restoration of the lagoon, then the Responsible Parties can make this request at subsequent permit reissuance proceedings.	

AttE7-4	ATTACHMENT E 7: Los Peñasquitos Lagoon Sediment TMDL	
	COMMENT: *Correct references in the Los Penasquitos final TMDL compliance determination.* The City of San Diego requested modifications to Specific Provision 7.b(3)(b) to correct errors.	City of San Diego
	RESPONSE: The San Diego Water Board has reviewed the recommendation to change the text to reference 7.b.(2)(a) and has not made changes because the references to Specific Provision 7.b.(3)(a) are correct. The incorrect reference to Specific Provision 2 has been changed to Specific Provision 7	

AttE7-5	ATTACHMENT E 7: Los Peñasquitos Lagoon Sediment TMDL	
	COMMENT: *Revise the interim TMDL compliance determination to be consistent with the Basin Plan Amendment and other TMDLs.* The City of Del Mar and the City of San Diego submitted comments requesting that the language pertaining to interim TMDL compliance determination be modified to be consistent with the Basin Plan Amendment adopted by the San Diego Water Board under Resolution No. R9-2012-0033, and offer multiple compliance pathways similar to other TMDLs.	City of Del Mar City of San Diego
	RESPONSE: The San Diego Water Board agrees with the recommendation and has added multiple compliance options for interim TMDL compliance at Specific Provision 7.c.(2), as suggested by the commenters. Interim TMDL compliance, on or after the interim compliance dates shown in Table 7.2, may be demonstrated via one of the following methods: (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR (b) The final receiving water limitation under Specific Provision 7.b.(2)(a) is met; OR (c) There are no exceedances of the Copermittee's portion of interim effluent limitations under Table 7.2 at the Responsible Copermittee's MS4 outfalls; OR (d) The Responsible Copermittees have submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the Copermittee's portion of the interim TMDL compliance requirements will be achieved by the interim compliance date.	

AttE7-6	ATTACHMENT E 7: Los Peñasquitos Lagoon Sediment TMDL	
	COMMENT: *Revise Tables 7.1 and 7.2 in Specific Provision 7 to Reflect the Basin Plan Amendment.* The City of San Diego and the City of Del Mar submitted comments requesting modifications to Tables 7.1 and 7.2 to 1) change the heading from interim effluent limitations in tons/year to tons/wet season, and 2) add a footnote acknowledging that the effluent limitation is shared by all Responsible Parties identified in Resolution R9-2012-0033.	City of Del Mar City of San Diego
	RESPONSE: The San Diego Water Board reviewed the wasteload allocations in the Basin Plan Amendment and notes that they are reported in tons/year on both page A-6 and the Table on page A-17. Nevertheless, Table 7.2 has been modified to report the effluent limitations in tons per wet season, as the commenters requested. A footnote was also added to acknowledge the other Responsible Parties identified in Resolution R9-2012-0033. The San Diego Water Board agrees that the third column of Table 7.2 is misleading and not useful, therefore it was deleted.	

AttE7-1	ATTACHMENT E 7: Los Peñasquitos Lagoon Sediment TMDL	
	COMMENT: *Revise monitoring start date to be the first full wet season after the Water Quality Improvement Plan is accepted.* The City of San Diego and the City of Del Mar submitted comments requesting that the Assessment and Reporting Requirements in Specific Provision 7.d.(3) be revised so that the first data collection occurs after the San Diego Water Board acceptance of the Water Quality Improvement Plan.	City of Del Mar City of San Diego
	RESPONSE: The San Diego Water Board agrees that the start date for the monitoring requirements should be delayed, but disagrees that acceptance of the Water Quality Improvement Plan is needed first. The language has been changed so that the start date occurs in the 2015-2016 wet season. The monitoring requirements were developed as part of the TMDL Basin Plan Amendment that was adopted by the San Diego Water Board in 2012. The TMDL became effective, and the compliance timeline started, when it was approved by the Office of Administrative Law in July, 2014. The Responsible Parties need not wait for acceptance of the Water Quality Improvement Plan to begin implementing their required monitoring program under the TMDL.	

AttF-1	ATTACHMENT F: Fact Sheet / Technical Report	
	COMMENT: *Based on the successes of the Orange County Storm Water Program, there is little justification for much of the Tentative Order.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: Attachment F to the Tentative Order includes the Fact Sheet. The Fact Sheet sets forth a brief summary of the basis for the draft permit conditions, the principal facts and the significant factual, legal, methodological, and policy questions the San Diego Water Board considered in preparing the Tentative Order. The Fact Sheet. In accordance with the Code of Federal Regulations (CFR) Title 40 Parts 124.8 and 124.56 (40 CFR 124.8 and 40 CFR 124.56), this Fact Sheet includes, but is not limited to, the following information: 1. Contact information 2. Public process and notification procedures 3. Background of municipal storm water permits 4. Regional MS4 Permit approach 5. Economic considerations 6. Applicable statutes, regulations, plans and policies 7. Discussion of the provisions in the Order The Fact Sheet also references the Permit Reissuance Process specific to Orange County Copermittees, and references the San Diego Water Board receipt and consideration of the Report of Waste Discharge during development of the Tentative Order. Based on San Diego Water Board review of the Report of Waste Discharge and consideration of the State of Environment discussion, very few changes to Order No. R9-2013-0001 (Regional MS4 Permit) were necessary in the Tentative Order to accommodate the recommendations made in the Report of Waste Discharge. The Fact Sheet was modified to include a brief summary of the basis for any change made in the Tentative Order either related to the State of the Environment discussion in the Report of Waste Discharge or the comments included herein. The Tentative Order requirements reflect the progress made by the Orange County Copermittees' programs and provides them with considerably more flexibility to further improve water quality. See also comment E3c-1 and Gnl-2.	

AttF-1	ATTACHMENT F: Fact Sheet / Technical Report	
	Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

AttF-2	ATTACHMENT F: Fact Sheet / Technical Report	
	COMMENT: *Modify Fact Sheet to include language explaining the iterative approach and TMDLs.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that additional language is necessary to explain the iterative approach and TMDLs. The iterative approach is for NPDES storm water discharges that are not subject to requirements set forth in TMDLs and are causing or contributing to exceedances of water quality standards in receiving waters. Attachment E to the Tentative Order includes requirements that must be met to be in compliance with the TMDLs. For most of the TMDLs in Attachment E, the requirements also include provisions that provide additional flexibility for determining and achieving compliance with the interim TMDL requirements. The Fact Sheet accurately describes the difference between the iterative approach of the MS4 Permit and compliance with TMDL requirements. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

AttF-3	ATTACHMENT F: Fact Sheet / Technical Report	
	COMMENT: *Modify Fact Sheet to include language explaining the incorporation of new TMDLs into the Water Quality Improvement Plans.*	• County of Orange Concurring Cities: Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, and Mission Viejo • Orange County Flood Control District
	RESPONSE: The San Diego Water Board disagrees that additional language is necessary to explain the incorporation of new TMDLs into the Water Quality Improvement Plans. Going forward, the San Diego Water Board is assuming that the Copermittees will be involved as a stakeholder in the development of any new TMDLs that may include the MS4 as a source of pollutants contributing to impairment. As a stakeholder, the Copermittees are expected to work with the San Diego Water Board TMDL development staff to identify appropriate WLAs and implementation measures to address MS4 discharges. Because of this knowledge, the Copermittees will have the background and information that will be useful during the re-opening of the MS4 Permit to include the new TMDL requirements. Provision F.2.c.(2) requires the Copermittees to "initiate" an update to the Water Quality Improvement Plans after Office of Administrative Law (OAL) and USEPA approval. The Copermittees may "initiate" the update by working with San Diego Water Board MS4 permitting staff to re-open the Regional MS4 Permit and concurrently begin the process of incorporating any new water quality improvement strategies that may be necessary to include into the Water Quality Improvement Plan. In addition, the expectation is that the Water Quality Improvement Plans will reduce the need for new TMDLs in the future. Based on these considerations no changes to the Tentative Order as it amends Order No. R9-2013-0001 are needed or warranted.	

ATTACHMENT
15

California Regional Water Quality Control Board
San Diego Region

Response to Comments Report

Tentative Order No. R9-2015-0100

An Order Amending Order No. R9-2013-0001, NPDES No. CAS010266, As Amended by Order No. R9-2015-0001 National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region

November 4, 2015
Revised November 10, 2015

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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Responses to Comments on
Tentative Order No. R9-2015-0100

November 4, 2015

Revised November 10, 2015

Introduction

This report contains responses to written comments timely received on Tentative Order No. R9-2015-0100, *An Order Amending Order No. R9-2013-0001, NPDES No. CAS010266*, *as Amended by Order No. R9-2015-0001, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region* (Tentative Order). The Tentative Order and its attachments were available for public review and comment for 46 days, with the comment period ending on September 14, 2015. Specifically, the San Diego Water Board requested comments on the following three documents:

- Tentative Order No. R9-2015-0100;
- Attachment No. 1 – Revised Order No. R9-2013-0001; and
- Attachment No. 2 – Revised Fact Sheet to Order No. R9-2013-0001.

The phrases "Tentative Order" and "Regional MS4 Permit" in the following response to comments table refers to both Tentative Order No. R9-2015-0100 and the two attachments. Comments and responses are organized by the section of either Attachment 1 or Attachment 2 that is being referenced. Wherever possible, comments are grouped based on content and summarized by the San Diego Water Board. The actual comment letters can be accessed on the San Diego Water Board website at: http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/index.shtml

List of Commenters:
Comments were submitted by the following organizations, public agencies, or individuals (listed alphabetically):

1. City of Dana Point
2. City of Escondido
3. City of Laguna Beach
4. City of Lake Forest
5. City of Menifee
6. City of San Clemente
7. City of San Diego
8. City of San Juan Capistrano
9. City of Santee
10. Construction Industry Coalition on Water Quality (CICWQ)
11. County of San Diego
12. Environmental Groups (San Diego Coastkeeper, Coastal Environmental Rights Foundation, and Surfrider Foundation San Diego Chapter)
13. Orange County Copermittees
14. Riverside County Copermittees
15. San Diego Coastkeeper and Coastal Environmental Rights Foundation
16. San Diego County Copermittees
17. San Diego Unified Port District
18. South Laguna Civic Association
19. Safari Highlands Ranch

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Gnl-1	GENERAL COMMENTS	
	COMMENT: *Request to incorporate previous written comments and testimony in the record for this Tentative Order.* The Copermittees and other stakeholders requested that previous written comments and testimony be incorporated into the record for this Tentative Order. The comment letters also included copies of the written comments previously submitted during the proceedings to adopt Order No. R9-2013-0001, and the proceedings to adopt Order No. R9-2015-0001 to amend Order No. R9-2013-0001.	Riverside County Copermittees Orange County Copermittees City of Dana Point City of San Diego San Diego Unified Port District South Laguna Civic Association Construction Industry Coalition on Water Quality
	RESPONSE: The San Diego Water Board is incorporating the previous written comments and testimony provided during the proceedings to adopt Order No. R9-2013-0001, and the proceedings to adopt Order No. R9-2015-0001 to amend Order No. R9-2013-0001 into the record for this Tentative Order. The San Diego Water Board reviewed Tentative Order No. R9-2015-0100 and its Attachments and has determined that the March 27, 2013 responses to comments document prepared during the 2013 adoption process of Order No. R9-2013-0001, the January 21, 2015 responses to comments document prepared during the adoption process of Order No. R9-2015-0001, and the oral responses to comments during the workshops and hearings during those proceedings address the previously submitted comments and testimony. The San Diego Water Board is incorporating by this reference as if set forth in full herein its written responses to comments and oral responses to comments raised during the workshops and hearings on Order Nos. R9-2013-0001 and R9-2015-0001 into these responses. To the extent commenters incorporate issues and objections raised in petitions for review of Order No. R9-2013-0001 filed with the State Water Board in SWRCB/OCC File A-2254(a)-(p), or in petitions for review of Order No. R9-2015-0001, amending Order No. R9-2013-0001 (SWRCB/OCC File A-2367(a)-(i)), the San Diego Water Board notes that it has not yet had an opportunity to submit written responses to those petitions for review and is not specifically addressing those petitions for review in these responses to comments. The San Diego Water Board will submit written responses to the petitions for review at the appropriate time in the State Water Board's petition proceeding. No changes to the Tentative Order or its Attachments were made based on the renewed comments.	

Gnl-2	GENERAL COMMENTS	
	COMMENT: *Request for clarification of implementation requirements for the Riverside County Copermittees as a result of late entry into the Regional MS4 Permit.* The Riverside County Copermittees noted that several provisions of the Regional MS4 Permit, including requirements to submit certification of legal authority, assessment and subsequent Water Quality Improvement Plan revision requirements, and requirements to submit a regional monitoring and assessment report, which either require data gathered under a Water Quality Improvement Plan that has been accepted by the San Diego Water Board, or are due for submittal outside of the Regional MS4 Permit's term. The Riverside County Copermittees wanted clarification that: 1) the certification of legal authority which was submitted by the Riverside County Copermittees under Order No. R9-2010-0016 will remain effective until a new certification is submitted with the first Water Quality Improvement Plan Annual Report (after the current Regional MS4 Permit term has ended), 2) any provisions regarding assessments or requiring data gathered under an accepted Water Quality Improvement Plan will not be due until such time that the necessary data are gathered and the assessments made under time periods described in the Regional MS4 Permit, and 3) the regional monitoring and assessment report for the current Regional MS4 Permit term should be completed utilizing data gathered during the transitional monitoring period, as these will be the only data that will be available at that time.	Riverside County Copermittees
	RESPONSE: The San Diego Water Board agrees that: 1) the certification of legal authority which was submitted by the Riverside County Copermittees under Order No. R9-2010-0016 will remain effective until a new certification is submitted with the first Water Quality Improvement Plan Annual Report (after the current Regional MS4 Permit term has ended), 2) any provisions regarding assessments or requiring data gathered under an accepted Water Quality Improvement Plan will not be due until such time that the necessary data are gathered and the assessments made under time periods described in the Regional MS4 Permit, and 3) the regional monitoring and assessment report for the current Regional MS4 Permit term should be completed utilizing data gathered during the transitional monitoring period, as these will be the only data that will be available at that time.	

Gnl-3	GENERAL COMMENTS	
	COMMENT: *Request to remove the City of Menifee from Water Quality Improvement Plan development and implementation.* The Riverside County Copermittees and the City of Menifee requested several modifications to the Regional MS4 Permit that would remove the City of Menifee from the requirement to develop and implement the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area. The Riverside County Copermittees and the City of Menifee assert that the City of Menifee does not own or operate any MS4 within the Santa Margarita River Watershed Management Area, and provided a map showing the City's jurisdictional boundary and MS4.	Riverside County Copermittees City of Menifee
	RESPONSE: The San Diego Water Board reviewed the information provided by the commenters and disagrees that the City of Menifee does not own or operate any MS4 within the Santa Margarita Watershed Management Area. The maps provided by the commenters show a portion of MS4 along Scott Road within the Santa Margarita Watershed Management Area that is indicated to be owned by the City of Menifee. In addition, the maps provided by the commenters show that there is a residential area within the City of Menifee and within the Santa Margarita River Watershed Management Area with streets, curb, and gutter that drain to MS4 owned by the Riverside County Flood Control and Water Conservation District, which discharges to a tributary of Warm Springs Creek. Warm Springs Creek is an impaired water body in the Santa Margarita River Watershed Management Area and may become subject to the requirements of a TMDL in the future. The streets, curb, and gutter in the residential area are also considered part of the City of Menifee's MS4. The maps provided confirm that it is appropriate for the City of Menifee to be required to participate in the development and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area. No changes were made to the Tentative Order as a result of this comment.	

Gnl-4	GENERAL COMMENTS	
	COMMENT: *Stakeholder workshops have been effective.* The Orange County Copermittees expressed appreciation for the efforts of the San Diego Water Board staff to collaboratively engage the Copermittees and other stakeholders through the use of mediated workshops. The workshop format allowed all viewpoints to be expressed with sufficient time provided for discussion of issues regarding the Regional MS4 Permit.	Orange County Copermittees City of Dana Point City of Laguna Beach
	RESPONSE: The San Diego Water Board agrees that the collaborative approach utilized during the Regional MS4 Permit development and amendment processes has been beneficial for the San Diego Water Board staff to better understand the issues of concern to the stakeholders.	

Gnl-5	GENERAL COMMENTS	
	COMMENT: *Requests for the Regional MS4 Permit to acknowledge the potential benefit of developing site specific water quality objectives in concert with development of the Water Quality Improvement Plan.* The Cities of Dana Point and Laguna Beach requested that the Regional MS4 Permit and Fact Sheet specifically acknowledge the benefit of developing site specific objectives in concert with the development of the Water Quality Improvement Plans, even if development of the site specific objectives may extend the period to complete development of the Water Quality Improvement Plans.	City of Dana Point City of Laguna Beach
	RESPONSE: The San Diego Water Board acknowledges that developing site specific water quality objectives (site specific objectives) may be appropriate where there are data that are available to support site specific objectives. The San Diego Water Board, however, disagrees that it is appropriate to delay development and implementation of any Water Quality Improvement Plans with an expectation that site specific objectives will be developed. Any action taken by the San Diego Water Board to establish site specific objectives would require amendment of the Basin Plan to incorporate the site specific objectives before they could be implemented in any NPDES permits or waste discharge requirements issued by the San Diego Water Board. The Basin Planning process requires separate proceedings that need to include the public, the San Diego Water Board, the State Water Board, the Office of Administrative Law, and the USEPA. This process will take much longer to complete than developing the Water Quality Improvement Plan. However, the San Diego Water Board encourages the Copermittees to utilize the Water Quality Improvement Plan development process to identify areas within the Watershed Management Area where developing site specific objectives may be appropriate and include special studies to collect data that can be used to support development of site specific objectives.	

Gnl-6	GENERAL COMMENTS	
	COMMENT: *Request for clarification that location of a MS4 within the Port's jurisdictional boundaries does not render the Port an owner or operator of the MS4.* The San Diego Unified Port District (Port) asserts that just because a MS4 facility falls within its jurisdictional boundaries, which overlap with the Cities of San Diego, National City, Chula Vista, Imperial Beach, and Coronado (Member Cities), that does not mean the Port owns or operates the MS4 facility, and thus the Port would not be responsible for discharges from those MS4 facilities. Therefore, the Port requested revisions to the Tentative Order that clarify this distinction.	San Diego Unified Port District
	RESPONSE: The San Diego Water Board disagrees that the Tentative Order should be revised to include additional clarification. The Port owns and operates MS4 facilities (streets, curbs and gutters, catch basins, etc.) and lands within the tidelands that either convey or discharge storm water runoff into MS4 facilities owned or operated by Member Cities, or directly to receiving waters. The Port is responsible for complying with permit conditions pertaining to discharges from MS4 facilities and lands the Port owns or operates that discharge into MS4 facilities of Member Cities or directly to receiving waters. The Port must provide the evidence to demonstrate that it does not own or operate MS4 facilities or lands that discharge storm water runoff directly or indirectly into the MS4 facilities owned by the Member Cities. No changes were made to the Tentative Order as a result of this comment.	

Gnl-7	GENERAL COMMENTS	
	COMMENT: *Compliance with all the discharge prohibitions in the Regional MS4 Permit under all circumstances is likely impossible.* The Cities of Dana Point and Laguna Beach asserts that compliance with all the discharge prohibitions in the Regional MS4 Permit under all circumstances is not practicable and likely impossible. The Cities go on to assert that the Cities are in a position of being required to comply with the discharge prohibitions under all circumstances, or are being required to meet a "zero discharge standard," both of which are impossible to achieve.	City of Dana Point City of Laguna Beach
	RESPONSE: The San Diego Water Board does not disagree with the assertion that the Copermittees are not in compliance with all the discharge prohibitions in the Regional MS4 Permit under all circumstances. The San Diego Water Board disagrees that it is not practicable and likely impossible to comply with all of the discharge prohibitions under all circumstances. The cases cited in support of the commenters' argument are inapposite and factually distinguishable from Order No. R9-2013-0001 (as amended) and the discharge prohibitions and receiving water limitations provisions therein. To date, the Copermittees have not implemented programs that are capable of complying with all of the discharge prohibitions under all circumstances, but that does not mean it is not practicable nor impossible. The assertion that complying with all the discharge prohibitions in the Regional MS4 Permit under all circumstances is not practicable and impossible cannot be supported without first demonstrating that the Copermittees have implemented all of their programs to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges to the maximum extent practicable (MEP). Moreover, several audits conducted recently by the San Diego Water Board indicate that the Copermittees may not be adequately implementing their basic jurisdictional runoff management program (JRMP) requirements to reduce pollutants in storm water discharges to the MEP standard. Even if the Copermittees implemented the basic JRMP requirements to the MEP standard, the Copermittees can also implement additional practicable actions or programs to comply with all of the discharge prohibitions in the Regional MS4 Permit.	

Gnl-8	GENERAL COMMENTS	
	COMMENT: *Request for clarification by City of Lake Forest for applicability of the Water Quality Improvement Plan development requirements.* The City of Lake Forest requested clarification on its participation in development of the Water Quality Improvement Plan, based on the agreement that discharges from its MS4 in the San Diego Region will be regulated by the Santa Ana Water Board.	City of Lake Forest
	RESPONSE: The San Diego Water Board expects the City of Lake Forest to contribute to development of the Water Quality Improvement Plan and describe the water quality improvement strategies that will be implemented by the City to comply with TMDL requirements. The strategies implemented by the City of Lake Forest are only expected to implement the requirements of the Phase I MS4 Permit issued by the Santa Ana Water Board, except when and where additional strategies (known as optional jurisdictional strategies or Watershed Management Area strategies in the Regional MS4 Permit) may be necessary to achieve TMDL requirements. Likewise, if the Water Quality Improvement Plan includes final numeric goals that are not based on TMDL requirements, the City of Lake Forest is expected to include descriptions of the water quality improvement strategies that the City may implement to contribute toward achieving those final numeric goals.	

Gnl-8	GENERAL COMMENTS	
	COMMENT: *Recommendations for actions that can be implemented to improve water quality.* The South Laguna Civic Association provided several recommended actions that may result in improvements to water quality.	South Laguna Civic Association
	RESPONSE: The San Diego Water Board appreciates the recommendations. The recommendations, however, appear to be actions that could be implemented as part of water quality improvement strategies by the Copermittees, and not necessarily appropriate to include into the requirements of the Tentative Order. The recommended actions provided by the commenter can be brought to the attention of the south Orange County Copermittees during the development of the Water Quality Improvement Plan. No changes were made to the Tentative Order as a result of this comment.	

Gnl-10	GENERAL COMMENTS	
	COMMENT: *The Regional MS4 Permit illegally authorizes compliance schedules for CTR-based TMDLs beyond May 18, 2010.* The Environmental Groups assert the Tentative Order and the Regional MS4 Permit illegally authorize compliance schedules for TMDLs to achieve compliance with the CTR as required by the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP).	Environmental Groups
	RESPONSE: The San Diego Water Board disagrees that the Tentative Order or the Regional MS4 Permit are in conflict with the SIP. The Tentative Order and Regional MS4 Permit are consistent with the TMDLs and the SIP. The Regional MS4 Permit establishes requirements for the regulation of storm water discharges, and the compliance schedule requirements of the SIP do not apply to storm water discharges. Please refer to footnote 1 on page 3 of the SIP which states, "*This Policy does not apply to regulation of storm water discharges. The SWRCB has adopted precedential decisions addressing regulation of municipal storm water discharges in Orders WQ 91-03, 91-04, 96-13, 98-01, 99-05, and 2001-15.*"	

A-1	PROVISION A: PROHIBITIONS AND LIMITATIONS	
	COMMENT: *Requests to include language in the prohibitions and limitations of Provision A that is linked to the alternative compliance pathway under Provision B.3.c.* The Orange County and San Diego County Copermittees, as well as several individual Copermittees, requested the addition of language to Provision A that explicitly states the implementation of the alternative compliance pathway under Provision B.3.c constitutes compliance with the discharge prohibitions and receiving water limitations in Provision A.	Orange County Copermittees City of Lake Forest City of San Clemente City of San Juan Capistrano San Diego County Copermittees City of Santee County of San Diego
	RESPONSE: The San Diego Water Board disagrees that it is appropriate or necessary to include additional language to Provision A. Provision A is consistent with the precedential language that was issued under State Water Board Order WQ 99-05. State Water Board Order WQ 2015-0075, which supports the inclusion of the alternative compliance pathway under Provision B.3.c, also states that Phase I MS4 permits should continue to use the receiving water limitations provisions as directed by Order WQ 99-05. No changes were made to the Tentative Order as a result of this comment.	

A1-1	**PROVISION A.1: Discharge Prohibitions**	
	COMMENT: *Request to correct State Water Board Resolution No. 2012-0012 reference in Provision A.1.d to Resolution No. 2012-0031.* The City of San Diego requested that the reference to State Water Board Resolution No. 2012-0012 in Provision A.1.d be changed to Resolution No. 2012-0031.	City of San Diego
	RESPONSE: The San Diego Water Board agrees that the correction is appropriate. The reference to "State Water Board Resolution No. 2012-0012" under Provision A.1.d has been revised to "State Water Board Resolution No. 2012-0012, as amended by State Water Board Resolution No. 2012-0031."	

A2-1	PROVISION A.2: Receiving Water Limitations	
	COMMENT: *Request for removal of receiving water limitations language from Regional MS4 Permit.* The County of San Diego requested that the San Diego Water Board use its discretion to remove the requirements to comply with receiving water limitations in Provision A.2 of the Regional MS4 Permit.	County of San Diego
	RESPONSE: The San Diego Water Board disagrees that it is appropriate to remove the requirements to comply with receiving water limitations in Provision A.2 of the Regional MS4 Permit. The receiving water limitations are consistent with precedential State Water Board Orders WQ 99-05 and WQ 2015-0075. No changes were made to the Tentative Order as a result of this comment.	

B-1	**PROVISION B: WATER QUALITY IMPROVEMENT PLANS**	
	COMMENT: *Request to revise the language in Provision B.1 to specify the Water Quality Improvement Plans are to address discharges from the MS4.* The City of San Diego requested Provision B.1 be revised to state that the Copermittees must develop a Water Quality Improvement Plan for their MS4 discharges within each of the Watershed Management Areas in Table B-1.	City of San Diego
	RESPONSE: The San Diego Water Board disagrees that the Water Quality Improvement Plans should be specific to just addressing discharges from the MS4. The Regional MS4 Permit is for the regulation of the Copermittees' MS4 discharges, but the Water Quality Improvement Plan is a planning document that requires the Copermittees to evaluate and identify all water quality conditions of concern within a Watershed Management Area. The Copermittees then determine what conditions of concern are the priorities that should be addressed by their individual jurisdictional strategies and/or through watershed-wide strategies. The Water Quality Improvement Plan development process provides the Copermittees flexibility in determining how to address priority issues through establishment of goals that directly improve receiving water quality impacted by MS4 discharges, instead of only limiting goals to MS4 discharges. No changes were made to the Tentative Order as a result of this comment.	

B2-1	**PROVISION B.2: Priority Water Quality Conditions**	
	COMMENT: *Request for revisions to the requirements for identifying priority water quality conditions under Provision B.2.* The South Laguna Civic Association provided proposed revisions to the requirements for identifying priority water quality conditions under Provision B.2. The proposed revisions appeared to include mapping of areas, incorporating areas of concern specific to south Orange County, and identifying issues that may be a concern specific to south Orange County.	South Laguna Civic Association
	RESPONSE: The San Diego Water Board reviewed the requested revisions to the requirements for identifying priority water quality conditions under Provision B.2. The San Diego Water Board did not identify any proposed revisions that were appropriate or necessary. The information requested to be included as part of the proposed revisions is information that should be brought to the attention of the south Orange County Copermittees during the development of the Water Quality Improvement Plan. No changes were made to the Tentative Order as a result of this comment.	

B3c-1	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	COMMENT: *Support for the inclusion of the receiving water limitations alternative compliance pathway in the Regional MS4 Permit.* The Riverside County, Orange County, and San Diego County Copermittees, as well as several individual Copermittees submitted comments that support the inclusion of the receiving water limitations alternative compliance pathway proposed to be incorporated into the Regional MS4 Permit as Provision B.3.c.	Riverside County Copermittees Orange County Copermittees City of Lake Forest City of San Clemente City of San Juan Capistrano City of San Diego City of Santee County of San Diego
	RESPONSE: The San Diego Water Board appreciates the support to include the receiving water limitations alternative compliance pathway into the Regional MS4 Permit.	

B3c-2	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	COMMENT: *Requests for revisions to the requirement for developing and incorporating annual milestones into the schedules for the alternative compliance pathway.* The Riverside County, Orange County, and San Diego County Copermittees, as well as several individual Copermittees requested revisions to the requirement to develop and incorporate annual milestones into the schedules for the alternative compliance pathway under Provision B.3.c. The Copermittees assert that annual milestones are burdensome, unworkable, and not meaningful. The Copermittees requested that milestones be limited to one or two milestones per permit term.	Riverside County Copermittees Orange County Copermittees City of Lake Forest City of San Clemente City of San Juan Capistrano San Diego County Copermittees City of San Diego City of Santee
	RESPONSE: The San Diego Water Board considered the proposed revisions and rationale provided and determined that revisions to the requirement for developing and incorporating annual milestones are appropriate. However, the San Diego Water Board does not agree that milestones should be limited to just one or two per permit term. The development and incorporation of annual milestones into the alternative compliance pathway is necessary for a Copermittee to be able to demonstrate to the San Diego Water Board and the public that there is a commitment to implementing a credible, rigorous, ambitious, and transparent plan to improve the quality of its MS4 discharges and/or receiving waters within its jurisdiction. The San Diego Water Board agrees, however, that annual milestones may become less meaningful after 5 or 10 years. Therefore, Provision B.3.c.(1)(a)(vii) and footnote 9 have been revised as follows: Provision B.3.c.(1)(a)(vii) For each final numeric goal developed pursuant to Provisions B.3.a and B.3.c.(1)(a)(i)-(v), ~~at least one~~ annual milestones[9] and the dates for ~~its~~ their achievement must be included within each of the next five (5) Water Quality Improvement Plan Annual Report reporting periods, or until the final numeric goal is achieved. Annual milestones and the dates for their achievement for the 5 Water Quality Improvement Plan Annual Report reporting periods of the next permit term, or until the final numeric goal is achieved, must be provided as part of the Report of Waste Discharge required pursuant to Provision F.5. Footnote 9 Annual milestones for each final numeric goal must ~~build upon previous milestones and lead to~~ be clearly and directly linked to, or demonstrate progress is being made toward, the achievement of the final numeric	

B3c-2	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	goal. The annual milestones may consist of water quality improvement strategy implementation phases, interim numeric goals, and other acceptable metrics. The annual milestones may address multiple numeric goals and/or multiple water bodies, as applicable and appropriate.	

B3c-3	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	COMMENT: *Requests for revisions to provide additional clarifying language for when a Copermittee is deemed in compliance with receiving water limitations.* The Riverside County Copermittees requested revisions to the alternative compliance pathway requirements under Provision B.3.c.(2) and the iterative process requirements under Provision A.4 to clarify when a Copermittee is deemed in compliance with receiving water limitations, especially relative to other Copermittees if updates are needed. The Environmental Groups requested revisions to Provision B.3.c.(2) to strictly require achievement of annual milestones and remove the potential for updates as a clearer way of determining when a Copermittee is no longer deemed in compliance.	Riverside County Copermittees Environmental Groups
	RESPONSE: The San Diego Water Board disagrees that revisions to Provision B.3.c.(2) are necessary to clarify when a Copermittee is deemed in compliance. The requirements under Provision B.3.c.(2) are clear criteria that the San Diego Water Board will use to determine if a Copermittee can be deemed in compliance with Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b. The commenters did, however, identify a scenario during the period of time a Copermittee has submitted "acceptable rationale and recommends appropriate modifications" and the San Diego Water Board accepts the rationale and recommended modifications where it may not be clear if a Copermittee is or is not in compliance. The intent was to continue deeming the Copermittee in compliance with Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b during this period of time. To clarify this intent, the following has been added to the last paragraph of the discussion of Provision B.3.c on page F-62 in the Fact Sheet: The Copermittee continues to be deemed in compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b during the time the San Diego Water Board reviews the rationale and recommended modifications to the interim numeric goals, and/or water quality improvement strategies, and/or schedules. If and when the San Diego Water Board determines that it does not accept the rationale or recommendations, the Copermittee will be notified they are no longer deemed in compliance with Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b.	

B3c-4	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	COMMENT: *Requests to include compliance with receiving water limitations during the Water Quality Improvement Plan planning and development process.* The Riverside County and Orange County Copermittees, several Orange County cities, as well as the County of San Diego requested that the requirements under Provision B.3.c be revised to include compliance with the prohibitions and limitations of Provision A during the development of the Water Quality Improvement Plans. Several of the comments also assert that including compliance during development of the Water Quality Improvement Plan is consistent with State Water Board Order WQ 2015-0075.	Riverside County Copermittees Orange County Copermittees City of Dana Point City of Laguna Beach City of Lake Forest City of San Clemente City of San Juan Capistrano County of San Diego
	RESPONSE: The San Diego Water Board disagrees that it is appropriate to deem a Copermittee in compliance with any of the prohibitions and limitations under Provision A before a Water Quality Improvement Plan has been submitted and accepted by the San Diego Water Board. The San Diego Water Board also disagrees that State Water Board Order WQ 2015-0075 communicates that the State Water Board expects or requires in any way that Regional Water Boards allow for compliance with receiving water limitations during development of watershed management plans. The San Diego Water Board is concerned that allowing for compliance during the development of the Water Quality Improvement Plan would remove the motivation or incentive for Copermittees to develop a credible, rigorous, ambitious, and transparent plan. Before the San Diego Water Board can make a determination that a Copermittee has a credible, rigorous, ambitious, and transparent plan that can demonstrate discharges from a Copermittee's MS4 will not cause or contribute to exceedances of water quality standards in receiving waters, or that receiving waters will be protected from MS4 discharges, the San Diego Water Board must first have an opportunity to review the proposed plan. In response to the assertion that State Water Board Order WQ 2015-0075 encourages or mandates alternative compliance pathways to include compliance during development of the Water Quality Improvement Plan, the commenters failed to provide a clear citation of this direction. There is nothing within the State Water Board Order that explicitly requires the inclusion of an alternative compliance pathway in Phase I MS4 Permit, let alone compliance during development of the plan for alternative compliance. State Water Board Order WQ 2015-0075 only requires the San Diego Water Board to consider inclusion of an alternative compliance pathway, and include findings in the permit if the San Diego Water Board chooses not to include the alternative compliance pathway. In this case, the San Diego Water Board has chosen to incorporate an alternative compliance	

B3c-4	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	pathway, but without compliance during the development of the Water Quality Improvement Plan. Furthermore, the San Diego Water Board notes that USEPA has provided written comments to the Los Angeles Water Board (click here and here for links to letters), the Santa Ana Water Board (click here for link to letter), and the State Water Board click here for link to letter) that support the San Diego Water Board's approach to alternative compliance with receiving water limitations, specifically supporting the San Diego Water Board's decision not to include compliance during the development period for the Water Quality Improvement Plan. Based on this expressed support from USEPA, and the other reasons cited above, the San Diego Water Board is not allowing for a Copermittee to be deemed in compliance with the prohibitions and limitations under Provision A during the development of the Water Quality Improvement Plans. No changes were made to the Tentative Order as a result of this comment.	

B3c-5	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	COMMENT: *Request to include receiving water limitations for ASBS under Provision A.2.b as part of alternative compliance pathway.* The City of San Diego requested that the alternative compliance pathway be revised to also include compliance with the ASBS receiving water limitations required under Provision A.2.b.	City of San Diego
	RESPONSE: The San Diego Water Board considered the request to include the receiving water limitations for ASBS under Provision A.2.b as part of the alternative compliance pathway under Provision B.3.c and agree it is appropriate. References to "Provisions A.1.a, A.1.c, A.1.d, A.2.a, and A.3.b" under Provision B.3.c have been revised to "Provisions A.1.a, A.1.c, A.1.d, A.2~~.a~~, and A.3.b."	

B3c-6	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	COMMENT: *Requests for revisions to alternative compliance pathway numeric goal requirements proposed under Provision B.3.c.(1)(a)(iii).* The City of San Diego requested a revision to combine Provisions B.3.c.(1)(a)(iii) and B.3.c.(1)(a)(iv) to reduce confusion regarding whether the categories of numeric goals are mandatory or optional. The County of San Diego requested additional language to be added to Provision B.3.c.(1)(a)(iii) to limit the numeric goals for MS4 discharges only to pollutants or conditions where MS4 discharges are causing or contributing to the impairment.	City of San Diego County of San Diego
	RESPONSE: The San Diego Water Board disagrees that the revisions requested are appropriate or necessary. The City of San Diego's requested revision does not provide more clarity, and actually reduces the available options for numeric goals. Provisions B.3.c.(1)(a)(iii) and B.3.c.(1)(a)(iv) allow a Copermittee to choose interim and final numeric goals applicable to the Copermittee's MS4 outfalls, OR interim and final numeric goals applicable to the receiving waters, OR a combination of both. The City's proposed revisions would only allow a Copermittee to choose interim and final numeric goals applicable to the Copermittee's MS4 outfalls, OR interim and final numeric goals applicable to the receiving waters, but NOT a combination of both. The San Diego Water Board disagrees that the County's proposed revision is necessary because if a Copermittee's MS4 discharges do not contain pollutants that are causing or contributing to an impairment listed on the Clean Water Act Section 303(d) List of Water Quality Impaired Segments, the Copermittee should not have difficulty developing and including final numeric goals that can demonstrate their discharges are not causing or contributing to the impairment. The Copermittee will also have to collect data to demonstrate that the final numeric goals have been achieved and continue to be achieved. The data collected, assessed, and reported will demonstrate that the Copermittee is not causing or contributing to the impairment listed on the Clean Water Action Section 303(d) List. No changes were made to the Tentative Order as a result of this comment.	

B3c-7	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	COMMENT: *The alternative compliance pathway would result in safe harbor protection and should be removed from the Regional MS4 Permit.* The Environmental Groups assert that providing the alternative compliance pathway provides the Copermittees with safe harbor protection, and requested the alternative compliance pathway be removed from the Regional MS4 Permit.	Environmental Groups
	RESPONSE: The San Diego Water Board does not agree that the alternative compliance pathway provides the Copermittees with safe harbor protection that "simply mimics the failed iterative approach." Compliance with the alternative compliance pathway means, for compliance determination purposes, that the San Diego Water Board would deem a Copermittee that has fulfilled the requirements of the alternative compliance pathway as in compliance with the receiving water limitations. As long as the Copermittee is in compliance with the requirements under Provision B.3.c, the San Diego Water Board can consider the Copermittee in compliance with the prohibitions and limitations. Complying with the requirements of Provision B.3.c, however, will require a significant commitment, level of effort, and resources from any Copermittee that chooses to implement it. Any Copermittee that can comply with the requirements of Provision B.3.c will also be demonstrating a well defined and transparent commitment to improve water quality. Please also see response~~s~~ to comment~~s Gnl-10 and~~ B3c-8. No changes were made to the Tentative Order as a result of this comment.	

B3c-8	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	COMMENT: *The alternative compliance pathway is inconsistent with the State Water Board's Order.* The Environmental Groups assert that the alternative compliance pathway in the Tentative Order is inconsistent with State Water Board Order WQ 2015-0075. The Environmental Groups assert that the alternative compliance pathway proposed in the Tentative Order is inconsistent because a) it does not contain specific guidance or protocols for a "well defined" and "transparent" analysis, b) it does not require a "finite" period of time to achieve receiving water limitations, and c) it does not include requirements for multi-benefit or storm water resource projects.	Environmental Groups
	RESPONSE: The San Diego Water Board disagrees that the alternative compliance pathway proposed in the Tentative Order is inconsistent with the State Water Board Order. The alternative compliance pathway in the Tentative Order is consistent with the State Water Board Order for the following reasons: a) In response to the assertion that the alternative compliance pathway in the Tentative Order does not include specific guidance or protocols for a "well defined" and "transparent analysis, the approach of the alternative compliance pathway in the Tentative Order is actually more "well defined" and "transparent" than the example provided by the commenter. The commenter provides permit language from the Los Angeles MS4 Permit as an example of specific guidance and protocols for a reasonable assurance analysis. While there is more description as to what components the reasonable assurance analysis must include, fundamentally the analysis is based on a computer model consisting of equations with assumptions which utilize data that are entered into and processed by a computer. Many of the variables in the equations will be based on assumptions, and members of the public may not know or understand how those variables may impact the results. The Los Angeles MS4 Permit does not include provisions that allows for or requires public participation or review of the model, its assumptions, and inputs. In contrast, the alternative compliance pathway in the Tentative Order does require an analysis with "clearly stated assumptions" which must go through a public participation process that allows the public to review and provide comments on the analysis methodology and the assumptions included in the analysis. The main difference in the approaches is that the Copermittee has more flexibility with how to do the analysis, and as long as there is understanding and support from the public and the San Diego Water Board. The Copermittee is not just limited to one or two "acceptable" models, but also is not precluded from the use of those models. The Tentative Order alternative compliance pathway is a truly transparent process for the public and provides for the public to participate in how the analysis is defined. Based on these	

B3c-8	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	considerations, the analysis requirement is "well defined" and "transparent" consistent with the State Water Board Order. b) In response to the assertion that the alternative compliance pathway in the Tentative Order does not require a "finite" period of time to achieve compliance with receiving water limitations, the alternative compliance pathway requires a Copermittee to provide a schedule for when receiving water limitations are expected to be achieved. Any schedule with an expected end date is "finite." However, "finite" should not mean there is not room for making adjustments to the schedule if conditions warrant it. Absent the alternative compliance pathway, no assessments would necessarily be conducted to determine if or when receiving water limitations have been fully achieved. The San Diego Water Board prefers a permit that will provide support, incentive, and motivation for the Copermittees to achieve compliance with receiving water limitations within a foreseeable future rather than a permit that only has the threat of enforcement in the present and the foreseeable future. However, while the alternative compliance pathway removes the immediate threat of enforcement for violations of receiving water limitations, it also includes additional requirements that can be used to hold the Copermittee more accountable for implementing strategies to achieve compliance with receiving water limitations. In the end, the San Diego Water Board believes that the alternative compliance pathway provides a path to compliance with receiving water limitations that is "finite" compared to the "iterative process" that was previously required, consistent with the State Water Board Order. c) In response to the assertion that the alternative compliance pathway in the Tentative Order does not include requirements for multi-benefit or storm water resource projects, the San Diego Water Board acknowledges there is no text in Provision B.3.c that includes the term "multi-benefit." However, the Tentative Order does include several provisions that encourage multi-benefit and regional storm water resource projects without using the term "multi-benefit." The commenter should first review Provisions B.3.b.(1)(b) and B.3.b.(2). While these provisions are not specifically mentioned under Provision B.3.c, they are required to be included in the Water Quality Improvement Plan, which is where the alternative compliance pathway requirements of Provision B.3.c must be included. Provision B.3.b.(1)(b) requires each Copermittee to identify strategies to retrofit areas of existing development and rehabilitate conditions of channels or habitats within its jurisdiction, which are considered multi-benefit strategies. Provision B.3.b.(2) also requires the Copermittees in the Watershed Management Area to identify strategies to retrofit areas of existing development and rehabilitate conditions of	

B3c-8	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	channels or habitats that are regional or multi-jurisdictional. Tied to Provisions B.3.b.(1)(b) and B.3.b.(2) are also the jurisdictional runoff management program (JRMP) requirements under Provisions E.3.c.(3) and E.5.e. Provision E.5.e requires each Copermittee to identify areas of existing development within its jurisdiction for retrofit and rehabilitation projects, and to identify strategies to facilitate implementation of those projects. Provision E.3.c.(3) provides each Copermittee the option to allow development projects to implement candidate projects identified as part of the optional Watershed Management Area Analysis allowed pursuant to Provision B.3.b.(4), also included in the Water Quality Improvement Plan. The candidate projects include several types of multi-benefit and storm water resource type projects, including but not limited to stream or riparian area rehabilitation, retrofitting existing infrastructure to incorporate storm water retention or treatment, regional BMPs, groundwater recharge projects, water supply augmentation, and land purchases to preserve floodplain functions. Therefore, while the alternative compliance pathway requirements under Provision B.3.c do not include the term "multi-benefit" in the text, the Tentative Order includes several provisions that require or encourage the implementation of multi-benefit and storm water resource projects consistent with the State Water Board Order.	

B3c-9	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	COMMENT: *The Tentative Order violates anti-backsliding requirements and the rationale provided does not support an anti-backsliding exception.* The Environmental Groups assert that the Tentative Order violates the anti-backsliding provisions of the Clean Water Act and its implementing regulations because the San Diego Water Board's findings related to the alternative compliance pathway fail to support the use of anti-backsliding exceptions.	Environmental Groups
	RESPONSE: The San Diego Water Board disagrees that the Tentative Order violates anti-backsliding provisions of the Clean Water Act and the federal regulations. The Clean Water Act generally prohibits the relaxation of effluent limitations in a reissued permit. However, as discussed in the Fact Sheet, it remains unresolved whether anti-backsliding provisions are applicable to the incorporation of an alternative compliance pathway into a regional MS4 permit. (please see page F-32 of the Fact Sheet; *please also see* State Board Order WQ 2015-0075 at pp 18-21, stating "it is unnecessary, however, to resolve the ultimate applicability of the regulatory anti-backsliding provisions"). Even if the anti-backsliding provisions do apply, the alternative pathway provisions fit squarely within an exception. There are numerous exceptions to the Clean Water Act's backsliding provisions based on new information. See, e.g., 33 U.S.C. § 1342(o)(2)(B)(i), 40 C.F.R. § 122.44(l)(i(B)(1). Additionally, Under 40 C.F.R. section 122.44(l), anti-backsliding provision do not apply if the circumstances on which the previous permit was based have materially and substantially changed since the time the previous permit was issued and would constitute cause for permit modification or revocation or reissuance under 40 C.F.R. section 122.62. Section 122.62 in turn states that new information not available at the time the previous permit was issued is cause for modification. 40 C.F.R. § 122.62(a)(2). Furthermore, the San Diego Water Board disagrees with the assertion that the new information from the lessons learned and experiences of the Los Angeles Water Board are somehow "unique" to the Los Angeles Region. To the extent that the permitting history in Los Angeles may be considered "unique" in any way, it is still consistent with the San Diego Water Board's experience with storm water permitting over the last decade. The transition to a Regional MS4 Permit in the Fifth Term Permit was driven, in part, by a growing recognition that a watershed management approach required regional action. In the Regional MS4 permit, the San Diego Water Board seeks to provide a consistent set of permit requirements for all of the Copermittees and to promote the efficiencies gained from collective action in jurisdictional runoff management.	

B3c-9	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	The San Diego Water Board structured the Regional MS4 Permit to incorporate new information because there has been a statewide paradigm shift with respect to stormwater management. In June 2015, the State Water Board issued a precedential water quality order, Order WQ 2015-0075. This Order directed all of the Regional Water Boards to consider the Los Angeles Water Board's alternative compliance path to receiving water limits in all Phase I MS4 permits going forward (State Water Board Order WQ 2015-0075 at p 51). Moreover, the State Water Board made it clear that all regional water boards had been informed by the lessons learned in Los Angeles, stating "[f]urther, we [the State Water Board] find that all regional water boards are informed by the information gained in the Los Angeles Region, so that any regional water board that adopts an alternative compliance path in a subsequent Phase I permit would not be in violation of anti-backsliding requirements, regardless of the particular storm water permitting history of that region." Id. at p. 22 fn. 74. Thus, while the State Water Board Order relies heavily on the information and evidence related to the Los Angeles County MS4 Permit and its version of an alternative compliance pathway, the information and evidence are also applicable to and are expected to be utilized in the San Diego Region if an alternative compliance pathway is incorporated into the San Diego Regional MS4 Permit. For all of the reasons stated above, the alternative compliance path provisions do not violate federal anti-backsliding provisions. To clarify, however, the discussion on Anti-Backsliding Requirements on page F-32 in the Fact Sheet has been revised as follows: CWA sections 402(o) and 303(d)(4) and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations or conditions may be relaxed. While this Order allows implementation of an alternative compliance pathway option in Provision B.3.c to constitute compliance with receiving water limitations under certain circumstances, the availability of that alternative and the corresponding availability of additional time to come into compliance with receiving water limitations does not violate the antibacksliding provisions. The receiving water limitations provisions of this Order are imposed under section 402(p)(3)(B) of the Clean Water Act rather than based on best professional judgment, or based on section 301(b)(1)(C) or sections 303(d) or (e), and are accordingly not subject to the anti-backsliding requirements of section 402(o). Although the non-applicability is less clear with respect to the regulatory anti-backsliding provisions in 40 CFR 122.44(l), the regulatory history suggests that USEPA's intent was to establish the anti-backsliding regulations with respect to evolving technology standards for traditional point sources. (See, e.g., 44 Fed.Reg. 32854, 32864 (Jun. 7, 1979)). It	

B3c-9	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	is unnecessary, however, to resolve the ultimate applicability of the regulatory anti-backsliding provisions, because the alternative compliance pathway option in Provision B.3.c qualifies for an exception to backsliding as based on new information. The alternative compliance pathway option in Provision B.3.c of this Order was informed by new information available to the Board from experience and knowledge gained through storm water permitting at the Regional Water Boards in the last ten years. There has been a statewide paradigm shift in storm water management. State Water Board Order WQ 2015-0075 directed all of the Regional Water Boards to consider the Los Angeles Water Board's alternative compliance path to receiving water limitations in all Phase I MS4 permits going forward (State Water Board Order WQ 2015-0075 at page 51). ~~Tt~~, and the Los Angeles Water Board's process of developing over 30 watershed-based TMDLs and implementing several TMDLs since the adoption of the previous permits. In particular, the Los Angeles Water Board recognized the significance of allowing time to plan, design, fund, operate and maintain watershed-based BMPs necessary to attain water quality improvements and additionally recognized the potential for municipal storm water to benefit water supply. Similarly, the San Diego Water Board's experience developing and implementing the Fourth Term MS4 Permits and TMDLs that apply on a regionwide scale (i.e. TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region) has resulted in a similar recognition of the need for a watershed-based approach that allows time to plan, design, fund, operate and maintain BMPs to address impaired waters that have been impacted by MS4 discharges. Thus, even if the receiving water limitations are subject to anti-backsliding requirements, they were revised based on new information that would support an exception to the anti-backsliding provisions. (33 U.S.C. § 1342(o)(2)(B)(i); 40 C.F.R. § 122.44(l)(1); 40 C.F.R. §122.44(l)(2)(i)(B)(1)).	

B3c-10	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	COMMENT: *The Tentative Order violates anti-degradation requirements and the anti-degradation findings are unsupported by evidence.* The Environmental Groups assert that the Tentative Order violates anti-degradation requirements and there is no evidence to support the anti-degradation findings. The Environmental Groups generally assert that anti-degradation findings from State Water Board Order WQ 2015-0075 are not applicable to the Tentative Order and the findings in the Tentative Order are unsupported by evidence.	Environmental Groups
	RESPONSE: Consistent with the direction of the State Water Board Order WQ 2015-0075 adopted in June 2015, the San Diego Water Board considered the inclusion of an alternative compliance pathway into the Regional MS4 Permit. With the inclusion of this new permit component, the federal and state antidegradation policies were considered in light of the evidence in the record and information about the nature of municipal storm water discharges, evolving municipal storm water permits and the State Water Board's precedential order. The Regional MS4 Permit and Fact Sheet were revised to be consistent with all of these considerations. The San Diego Water Board disagrees that the antidegradation findings in the Tentative Order are inadequate and unsupported by evidence in the record. The San Diego Water Board considered relevant information unique to the San Diego Region such as its own storm water permitting history and TMDL adoption and implementation through municipal storm water permits. The San Diego Water Board has adopted seven TMDL Basin Plan amendments that cover at least 30 waterbody-pollutant combinations, similar to the Los Angeles Region. The implementation of these 7 TMDLs through the Regional MS4 Permit is essential for achieving water quality standards in the region. Moreover, the State Water Board's discussion of appropriate antidegradation considerations for the Los Angeles MS4 Permit is equally applicable in the context of the San Diego Water Board's Tentative Order that incorporates an alternative compliance pathway. In its consideration of antidegradation, the State Water Board acknowledges that the Los Angeles MS4 permit "improves on past practices that have been inadequate to protect water quality, and includes a monitoring and assessment program that will identify any changes in water quality. [fn.] In general, under the Los Angeles MS4 Order, we expect to see a trajectory away from any past degradation, even if there may be some continued short-term degradation." (Order WQ 2015-0075, p. 26.) Likewise, the Regional MS4 Permit now requires Copermittees to design watershed based monitoring and assessment programs that promote and track progress towards meeting the relevant water quality objectives. As such, were the State Water Board considering the Tentative Order, it likely would reach the same conclusion about the San Diego Regional MS4 Permit.	

B3c-10	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	The commenters incorrectly assert that the San Diego Water Board is required, but has failed, to follow procedures and requirements set forth in a USEPA document titled "*Interim Economic Guidance for Water Quality Standards Workbook"* (March 1995) (Workbook). USEPA's Workbook provides guidance that states may choose, but are not required, to follow. Although the Workbook does provide some information that states *may* use to consider whether degradation of high-quality waters is warranted from an economic impacts perspective, the guidance was not crafted to be used in the context of permitting of MS4 discharges. (See USEPA Workbook, cover memo, pp. 1-2 and Workbook, p. 1-1.) Instead, the San Diego Water Board has considered available guidance provided by the State Water Board in the Administrative Procedures Update (APU) 90-004 in conjunction with, among other things, available evidence about the quality of the receiving waters for discharges of storm water in finding that the Tentative Order complies with federal and state anti-degradation policies[1]. The antidegradation findings in the Tentative Order, like those adopted in the State Water Board Order for the final Los Angeles MS4 Permit, are supported by substantial evidence in the record for the Regional MS4 Permit. In the stormwater context, a generalized antidegradation analysis is appropriate. As the State Water Board acknowledges, guidance provided in the APU 90-004 "may be construed to exempt [a regional water board] from conducting an extensive pollutant by pollutant analysis for each water body in the region" where, as here, there is insufficient data available to carry out a complete antidegradation analysis for each water body-pollutant combination." (See Order WQ 2015-0075, p. 25.) The State Water Board notes the APU-90-004 "contemplates the appropriate antidegradation analysis for a discrete discharge or facility. It has limited value when considering anti-degradation in the context of storm water discharges from diffuse sources, conveyed through multiple outfalls, with multiple pollutants impacting multiple water bodies within a municipality, or in this case, a region, especially given that reliable data on the baseline water quality from 1968 is not available." (Id., p. 27; see also id., p. 27, n. 90 ["We note that USEPA did not conduct a detailed antidegradation analysis in issuing NPDES Permit No. DC00000221 for MS4 discharges to the District of Columbia, presumably for similar reasons. The court in *Asociacion de Gente Unida* also relied on APU 90-004 in part in rejecting an antidegradation analysis conducted by the Central Valley Regional Water Quality Control Board for discharges of pollutants to groundwater from dairy facilities region-wide, but the court's objection was to the regional water board's reliance on an illusory prohibition of discharge to groundwater in finding that no antidegradation analysis	

[1] See, e.g., 1996, 1998, 2002, 2006, 2010 Clean Water Action section 303(d) Lists for the San Diego Region, and monitoring reports from the San Diego County, Orange County, and Riverside County Copermittees since the First Term MS4 Permits issued in 1990.

B3c-10	PROVISION B.3.c: Prohibitions and Limitations Compliance Option	
	was required, not to the sufficiency of any generalized antidegradation analysis the Board might have conducted in lieu of its reliance on the prohibition. (210 Cal.App.4th at pp. 1271-1273.]" Despite the commenters' assertions, the San Diego Water Board provides a clear statement of the basis for finding that the Tentative Order is consistent with the federal and state antidegradation policies. No revisions to the Tentative Order were made in response to these comments.	

B5-1	**PROVISION B.5: Iterative Approach and Adaptive Management Process**	
	COMMENT: *Request for clarification of timing and conditions for alternative compliance pathway analysis updates.* The San Diego County Copermittees and the County of San Diego requested the addition of a provision under the Iterative Approach and Adaptive Management Process requirements of Provision B.5 to clarify the timing and conditions for when the analysis required for the alternative compliance pathway under Provision B.3.c.(1)(b) has to be updated.	San Diego County Copermittees County of San Diego
	RESPONSE: The San Diego Water Board has considered the requested additional language and determined that adding clarifying language is appropriate. The following text has been added as Provision B.5.d: **d. ADAPTATION OF PROHIBITIONS AND LIMITATIONS COMPLIANCE OPTION** If a Copermittee has implemented the Prohibitions and Limitations Compliance Option allowed to be included in the Water Quality Improvement Plan pursuant to Provision B.3.c, the Copermittee must re-evaluate and adapt the numeric goals, water quality improvement strategies, schedules, and annual milestones required under Provision B.3.c.(1) when significant new information becomes available, or with the Report of Waste Discharge required pursuant to Provision F.5. Significant changes in the numeric goals, water quality improvement strategies, schedules, or annual milestones requires an update to the analysis required under Provision B.3.c.(2).	

D4a-1	PROVISION D.4.a: Receiving Waters Assessments	
	COMMENT: *Recommended revisions to transitional assessment requirements under Provision D.4.a.(1)(a).* The Riverside County Copermittees noted that Provision D.4.a.(1)(a) prescribes that assessments required to be made under Provision D.4.a.(2) must be included in each Copermittees' transitional monitoring and assessment reports; however, Provision D.4.a.(2)(e) requires determination of whether strategies identified in the Copermittees' Water Quality Improvement Plan are progressing towards achieving interim and final numeric goals described in the Water Quality Improvement Plan. The Riverside County Copermittees provided their understanding that transitional monitoring and assessment applies to the time period when the Copermittees' Water Quality Improvement Plan is being developed, and therefore assessments made during this time period cannot provide information on the progress of the Water Quality Improvement Plan. Based on their observations, the Riverside County Copermittees recommended revisions to Provision D.4.a.(1)(a).	Riverside County Copermittees
	RESPONSE: The San Diego Water Board disagrees that the revisions to Provision D.4.a.(1)(a) are necessary. It is true that the transitional monitoring and assessment applies to the time period when the Water Quality Improvement Plan is being developed. The commenters can fulfill the assessment requirement of Provision D.4.a.(2)(e) by either stating that they cannot make a determination until the Water Quality Improvement Plan is accepted and implemented, or assess the strategies that are currently being implemented at the time of the assessment and are expected to be included in the Water Quality Improvement Plan. The San Diego Water Board expects the assessments reported during the transitional period to serve as a baseline for improvements in water quality as the Water Quality Improvement Plans are implemented over time. No changes were made to the Tentative Order as a result of this comment.	

E2-1	PROVISION E.2: Illicit Discharge Detection and Elimination	
	COMMENT: *Requests for revisions to clarify implementation of the illicit discharge and detection program under Provision E.2 is compliance with the requirement to effectively prohibit non-storm water discharges to the MS4.* The Orange County Copermittees, as well as the Cities of Dana Point and Laguna Beach, requested revisions to Provision E.2 to explicitly state that implementation of the illicit discharge detection and elimination requirements under Provision E.2 constitutes compliance with effective prohibition of non-storm water discharges to the MS4 required under Provision A.1.b.	Orange County Copermittees City of Dana Point City of Laguna Beach
	RESPONSE: The San Diego Water disagrees that revisions to Provision E.2 are necessary. Provision A.1.b explicitly states that Copermittees are required to effectively prohibit non-storm water discharges to the MS4 "*through the implementation of Provision E.2*." The Copermittees are already expected to demonstrate compliance with Provision A.1.b through the implementation of Provision E.2. If a Copermittee has not adequately implemented Provision E.2, then the Copermittee is not only, not in compliance with the requirements of Provision E.2, but by default will also not be in compliance with Provision A.1.b. The San Diego Water Board, however, recognizes that additional clarification may be helpful in understanding that implementing the requirements of Provision E.2 is how the San Diego Water Board will assess a Copermittee's compliance with the requirement to effectively prohibit non-storm water discharges to the MS4 under Provision A.1.b. Therefore, the San Diego Water Board has revised the opening paragraph of the discussion for Provision E.2 in the Fact Sheet (page F-81) to the following: Provision E.2.(Illicit Discharge Detection and Elimination) requires each Copermittee to implement an illicit discharge detection and elimination program to effectively prohibit non-storm water discharges to the MS4 by actively detecting and eliminating illicit discharges and disposal into its MS4. If the San Diego Water Board finds that a Copermittee is fully implementing the requirements of Provision E.2, then the Copermittee is deemed in compliance with the effective prohibition of non-storm water discharges to the MS4 required under Provision A.1.b.	

E2-2	PROVISION E.2: Illicit Discharge Detection and Elimination	
	COMMENT: *Request for clarification of discharges of potable water sources under Provision E.2.a.(3)(f).* The Cities of Dana Point and Laguna Beach requested a clarification of the definition of "discharges from potable water sources" under Provision E.2.a.(3)(f). It is not clear to the Cities whether "potable discharges" are intended to include runoff derived from turf or ornamental plant irrigation.	City of Dana Point City of Laguna Beach
	RESPONSE: Discharges from potable water sources are sources of water that have been treated to drinking water standards and discharged to the MS4. Discharges of potable water that are applied to turf or ornamental plant irrigation before running off to the MS4 are not qualified as discharges of potable water under Provision E.2.a.(3)(f).	

E3b1-1	**PROVISION E.3.b.(1): Definition of Priority Development Project**	
	COMMENT: *Request for revisions to the definition of Priority Development Projects under Provision E.3.b.(1).* The City of San Diego requested revisions to combine Provisions E.3.b.(1)(c) and E.3.b.(1)(e) under the provisions defining Priority Development Projects.	City of San Diego
	RESPONSE: The San Diego Water Board disagrees that combining sub-sections (c) and (e) of Provision E.3.b.(1) is appropriate. Sub-section (c) has a minimum square footage trigger for both new development projects and redevelopment projects. In contrast, subsection (e) has a minimum square footage trigger for redevelopment projects only; new development projects consisting of automotive repair shops and retail gasoline outlets are considered Priority Development Projects regardless of size.	

E3b3-1	**PROVISION E.3.b.(3): Priority Development Project Exemptions**	
	COMMENT: *Request for Priority Development Project exemption for "self-remediating" projects.* The Orange County Copermittees requested that the list of Priority Development Project Exemptions under Provision E.3.b.(3) be revised to include projects that are effectively self-remediating (i.e. all rainfall is retained) including, but not limited to, reservoirs and swimming pools.	Orange County Copermittees
	RESPONSE: The San Diego Water Board disagrees that the requested change is necessary. If all rainfall is retained on a project, then the project has met the design standard, and an exemption is not needed. No changes were made to the Tentative Order as a result of this comment.	

E3c1-1	**PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements**	
	COMMENT: *Request for revisions to clarify the biolfiltration storm water pollutant control BMP performance criteria.* The County of San Diego requested a revision to Provision E.3.c.(1)(a)(i)[b] to clarify the intent and applicability of the biolfiltration BMP design criteria.	County of San Diego
	RESPONSE: The San Diego Water Board disagrees that the proposed change is necessary. The wording describing the design requirements adequately describe the intent and applicability of the biofiltration BMP design criteria. Any proposed change incorporated during the adoption proceedings of the Tentative Order could be interpreted as a change in the requirement, when in fact there is no change. No changes were made to the Tentative Order as a result of this comment.	

E3c1-2	PROVISION E.3.c.(1): Storm Water Pollutant Control BMP Requirements	
	COMMENT: *The San Diego Water Board is requiring increasingly stringent on-site storm water retention without evidence that the 2010 Southwest Riverside MS4 Permit requirements are not working.* CICWQ asserts that the Tentative Order has more stringent on-site storm water retention requirements than the 2010 Southwest Riverside County MS4 Permit (Order No. R9-2010-0016) requirements without any evidence that the requirements of Order No. R9-2010-0016 are not working to protect water quality and maintain beneficial uses.	Construction Industry Coalition on Water Quality (CICWQ)
	RESPONSE: The San Diego Water Board disagrees with the assertion that the Tentative Order has more stringent on-site storm water retention requirements over and above the requirements of Order No. R9-2010-0016. The purpose of the on-site retention requirement in both the Tentative Order and Order No. R9-2010-0016 is to retain on-site the pollutants contained in the volume of storm water runoff produced from a 24-hour 85th percentile storm event. This requirement has not changed from Order No. R9-2010-0016, and therefore the commenter is incorrect in stating that the San Diego Water Board is requiring additional prescriptive performance measures for retaining storm water runoff. This is the maximum extent practicable (MEP) standard recognized by the San Diego Water Board and is consistent with the Fourth Term MS4 Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), as well as Santa Ana Water Board Order Nos. R8-2009-0030 and R8-2010-0033 (Orange County and Riverside County MS4 Permits, respectively), Los Angeles Water Board Order Nos. R4-2010-0108 and R4-2012-0175 (Ventura County and Los Angeles County MS4 Permits, respectively). Additionally, the storm water pollutant control and hydromodification management BMP requirements in the Tentative Order are more flexible than in Order No. R9-2010-0016 by providing an optional Alternative Compliance Program under Provision E.3.c.(3) of the Regional MS4 Permit. The Alternative Compliance Program, if developed by a Copermittee, would allow Priority Development Projects to fully comply with storm water pollutant control and hydromodification management BMP requirements either on-site, offsite, or a combination of both, if doing so would provide greater water quality benefit to the watershed.	

E3c2-1	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Request for revisions to requirements to manage critical coarse sediment yield areas.* CICWQ asserts that the Tentative Order requirements for Priority Development Projects to "avoid critical sediment yield areas" are unnecessarily restrictive. The County of San Diego requested that the requirement to manage critical course sediment yield areas be moved from the hydromodification management BMP performance standard requirements under Provision E.3.c.(2)(b) to Provision E.3.d as part of the BMP Design Manual update to be addressed regionally.	County of San Diego Construction Industry Coalition on Water Quality (CICWQ)
	RESPONSE: The San Diego Water Board disagrees that the requirements to avoid critical sediment yield areas are unnecessarily restrictive or that they should be moved from under Provision E.3.c.(2)(b) to Provision E.3.d. The requirements are necessary to protect receiving waters from erosive flows caused by land development. As explained in the Fact Sheet to the Tentative Order, hydromodification, which is caused by both altered storm water flow and altered sediment flow regimes, is largely responsible for degradation of creeks, streams, and associated habitats in the San Diego Region. In an ongoing study by the Stormwater Monitoring Coalition to assess the health of streams throughout Southern California, researchers found that three of the four highest risk stressors to creeks (percent sands and fines present, channel alteration, and riparian disturbance) were related to physical habitat (*Assessing the Health of Southern California Streams, Stormwater Monitoring Coalition*, Fact Sheet). Researchers studying flood frequencies in Riverside County have found that increases in watershed imperviousness of only 9-22 percent can result in increases in peak flow rates for the two-year storm event of up to 100 percent (Schueler and Holland, 2000. *Storm Water Strategies for Arid and Semi-Arid Watersheds*, (Article 66). The Practice of Watershed Protection). Such changes in runoff have significant impacts on channel morphology, and given the current state of science the San Diego Water Board has included these requirements to reduce these potential impacts to receiving waters that may be caused by development projects. Placement of impervious surfaces as a result of urbanization is largely responsible for erosional impacts to streams because placement of impervious surfaces encapsulates "good" sediment (such as sand, gravel, rocks and cobbles) that would normally replenish creek beds and banks to help stabilize them. For this reason, the Tentative Order requires Priority Development Projects to avoid critical sediment yield areas, as defined by the	

E3c2-1	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	Copermittees, or implement measures to allow coarse sediment to be discharged to receiving waters, such that there is no net impact to the receiving water. Such measures are designed to protect receiving waters and avoid impacts experienced as a result of past land development practices. The San Diego Water Board recognizes that implementation of new requirements is challenging, and is supportive of the Copermittees' efforts to develop guidance for land developers in meeting this requirement. Until this guidance is widely available, Copermittees and land developers should recognize that strict avoidance of critical sediment yield areas is not mandated and that compliance may be achieved by other methods, provided that the stream experiences "no net impact." No changes were made to the Tentative Order as a result of this comment.	

E3c2-2	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	COMMENT: *Request for interim timeframe exemptions for hydromodification management BMP requirements to be granted outright without any additional study or consideration.* CICWQ asserts that the Tentative Order is eliminating exemptions for hydromodification control, even when stormwater runoff is conveyed in the MS4 system to significantly hardened or engineered channels. CICWQ requested that the San Diego Water Board revise the Tentative Order to make the interim timeframe exemptions under Provision E.3.c.(2)(e) part of the exemptions under Provision E.3.c.(2)(d) without any additional study or consideration.	Construction Industry Coalition on Water Quality (CICWQ)
	RESPONSE: The San Diego Water Board disagrees that the interim timeframe exemptions for hydromodification management BMP requirements should be granted outright without any additional study or consideration. The commenter correctly deduced that the driver behind the requirement to use the pre-development performance standard is the sustainability of geomorphically stable channels and the ability to return urbanized streams to a more natural state. The requirement to use pre-development runoff conditions as the performance standard is needed because using a hydrology baseline that approximates that of an undeveloped, natural watershed is the only way to facilitate the return of more natural hydrological conditions to already built-out watersheds, which in turn supports conditions for rehabilitating degraded or channelized stream segments. Contrary to what the commenter asserts, the Tentative Order does not require Copermittees to remove concrete from channels that are engineered to relieve flooding and protect life and property. The Tentative Order provides exemptions for Priority Development Projects that discharge to receiving waters where there is little threat of erosion, and subsequently implementing BMPs on-site would do little to protect the beneficial uses of such receiving waters. The commenter correctly states that the exemption for engineered channels is temporary. However, the commenter should note that there is a high likelihood that exemptions for engineered channels can become accepted as applicable for a Watershed Management Area. The Tentative Order allows for the Copermittees to recommend exemptions based on completion of an optional Watershed Management Area Analysis pursuant to Provision B.3.b.(4). As part of this effort, the Copermittees would identify, for example, areas of existing development in the watershed suitable for retrofitting, and areas suitable for stream rehabilitation. The Copermittees would also identify areas suitable for exemptions for hydromodification management, such as engineered channels that are needed for the protection of life and property. The interim	

E3c2-2	PROVISION E.3.c.(2): Hydromodification Management BMP Requirements	
	timeframe exemption for engineered channels is not granted outright as permanent exemptions because the areas have not yet been analyzed in the context of stream rehabilitation opportunities. No changes were made to the Tentative Order as a result of this comment.	

E3c2-3	**PROVISION E.3.c.(2): Hydromodification Management BMP Requirements**	
	COMMENT: *The requirement in the Regional MS4 Permit for Priority Development Projects to avoid coarse sediment yield areas results in a potential "taking" of private property.* Safari Highlands Ranch asserts that the requirement under Provision E.3.c.(2)(b) of the Regional MS4 Permit for Priority Development Projects to avoid critical coarse sediment yield areas known to the Copermittees or identified by the optional Watershed Management Area Analysis will result in a "taking" of the total land value of private property that is located in areas identified as critical coarse sediment yield areas.	Safari Highlands Ranch
	RESPONSE: The San Diego Water Board disagrees with the assertion that the requirements under Provision E.3.c.(2)(b) results in a "taking" of private property if the development project is located in area identified by the Copermittees as a critical coarse sediment area. Provision E.3.c.(2)(b) does not require the Copermittees to prohibit a development project from going forward if it cannot avoid critical coarse sediment yield areas. Provision E.2.c.(2)(b) states that Priority Development Projects are required to avoid critical sediment yield areas *OR* implement measures that allow critical coarse sediment to be discharged to receiving water, such that there is *no net impact* to the receiving waters. Provision E.3.c.(2)(b) provides the Copermittees the ability to allow Priority Development Projects to implement measures other than avoiding coarse sediment yield areas to achieve *no net impact* to the receiving waters. The Copermittees allows this is through the requirements in their BMP Design Manuals. The San Diego Water Board has reviewed the San Diego County Copermittees' Final Model BMP Design Manual (click here for link), dated June 2015, and found that it allows for a development project proponent to "*propose project-specific onsite measures to ensure that critical coarse sediment can be discharged to receiving waters, such that threre is no net impact to the receiving water*" (see section 6.2.4.2 of Model BMP Design Manual). The Final Model BMP Design Manual does not require avoidance of critical coarse sediment areas as the only option for Priority Development Projects and is in compliance with Provision E.3.c.(2)(b) of the Regional MS4 Permit. Please also see response to comment E3c2-1. No changes were made to the Tentative Order as a result of this comment.	

E3d-1	PROVISION E.3.d: BMP Design Manual Update	
	COMMENT: *Request for additional time for San Diego County Copermittees to update and implement their BMP Design Manuals.* The San Diego County Copermittees and the County of San Diego requested revisions to Provision E.3.d which would grant Copermittees up to 180 days to incorporate corrections to the definition of Priority Development Projects under Provision E.3.b.(1) and begin implementing their BMP Design Manuals.	San Diego County Copermittees County of San Diego
	RESPONSE: The San Diego Water Board disagrees that more time is needed to update and implement the BMP Design Manuals. In a letter dated May 29, 2015, the San Diego Water Board forewarned the San Diego County Copermittees that changes to the Priority Development Project categories were necessary in order to clearly reflect the intended definitions. At that time, the San Diego Water Board provided the language that is now proposed in the Tentative Order. The Copermittees have had ample opportunity to initiate and complete their local adoption processes in order to meet the BMP Design Manual implementation date. For this reason, more time is not necessary and a delay in BMP Design Manual implementation is not warranted. However, the San Diego Water Board will use Provision F.2.b.(4) to grant the Copermittees an extra 90 days beyond the original BMP Design Manual implementation date of December 24, 2015 to complete the update and begin implementation of the BMP Design Manual. Please also see response to comment F2b-1.	

E3d-2	PROVISION E.3.d: BMP Design Manual Update	
	COMMENT: *Request for revisions to clarify the effective date of the BMP Design Manual is the same as the implementation date.* The San Diego County Copermittees, the City of San Diego, and the County of San Diego requested revisions to Provision E.3.d to include language that clarifies the effective date of the BMP Design Manual is the same as when the BMP Design Manual begins implementation.	San Diego County Copermittees City of San Diego County of San Diego
	RESPONSE: The San Diego Water Board agrees that the proposed modification would clarify the San Diego Water Board's intention. Provision E.3.d has been modified as follows: a. Each Copermittee must update its BMP Design Manual pursuant to Provision F.2.b. Until the Copermittee has updated its BMP Design Manual pursuant to Provision F.2.b.(1), the Copermittee must continue implementing its current BMP Design Manual. The Copermittee must implement the updated BMP Design Manual within 180 days following completion of the update pursuant to Provision F.2.b.(1), unless directed otherwise by the San Diego Water Board Executive Officer. The date the BMP Design Manual is implemented is the "effective date" of the BMP Design Manual.	

E3e1-1	PROVISION E.3.e.(1): Structural BMP Approval and Verification Process	
	COMMENT: *Requests for revisions to the proposed language to define projects with prior lawful approval under Provision E.3.e.(1)(a).* The City of San Diego requested a revision to the proposed language to define projects with prior lawful approval to also include projects that have received development approvals. San Diego Coastkeeper and Coastal Environmental Rights Foundation requested revisions that would allow a Priority Development Project to proceed under previous land development requirements only if the Copermittee demonstrates that, among other required conditions, construction activities on the Priority Development Project commenced prior to the effective date of the new BMP Design Manual and that all approvals and permits necessary to complete the implementation of the initially approved design also be obtained prior to the effective date of the new BMP Design Manual.	City of San Diego San Diego Coastkeeper and Coastal Environmental Rights Foundation
	RESPONSE: The San Diego Water Board disagrees that any changes are needed to the proposed language in Provision E.3.e.(1)(a). Specifically, reliance on issuance of a development approval alone is not consistent with the San Diego Water Board's goal of requiring most new Priority Development Projects to be subject to the requirements in the new BMP Design Manual unless limited conditions are met. Nor is it consistent with the *Avco* line of cases, which requires commencement of construction and substantial reliance on the permit as the determining factors for grandfathering projects under previous development requirements. Reliance on issuance of a development approval alone may also result in many fewer Priority Development Projects implementing projects based on the new BMP Design Manual required in Order No. R9-2013-0001 as amended. With regard to the Environmental Groups' comment, the San Diego Water Board believes it is appropriate for the Copermitees to have the ability to allow a Priority Development Project meeting all other required conditions in Provision E.3.e.(1)(a) to proceed under previous land use development requirements if the Copermittee demonstrates that construction activities have commenced before, or within 180 days after, the effective date of the new BMP Design Manual. The Board believes it is appropriate to include a grace period of 180 days after the effective date of the BMP Design Manual in order to provide certainty of requirements for projects in process, and allow for scheduling of construction activities under optimal conditions, such as outside of nesting season, or during the dry season, when impacts from storm water runoff are minimized. And, as long as development projects complete construction of all phases in substantial conformity with the approved design, which includes storm water pollutant control and hydromodification management BMPs approved by the	

E3e1-1	PROVISION E.3.e.(1): Structural BMP Approval and Verification Process	
	municipality, it is appropriate that prior lawful approval (the ability to proceed with development in accordance with the previous land use development requirements) remain valid during issuance of subsequent permits that may be necessary to complete the project within 5 years after the effective date of the new BMP Design Manual. Five years is an appropriate and reasonable period of time for those projects meeting all other conditions to be completed. No changes were made to the Tentative Order as a result of these comments.	

E4-1	**PROVISION E.4: Construction Management**	
	COMMENT: *Request for revisions to construction management program inventory and tracking requirements.* The City of San Diego requested that Provisions E.4.b and E.4.d.(3) be combined because both sections contain information that needs to be collected, inventoried, and tracked.	City of San Diego
	RESPONSE: The San Diego Water Board considered the requested revision and determined that it was not necessary. The Copermittees can implement an inventory and tracking system that may be utilized to manage the data that are collected and needed to fulfill the requirements of both Provision E.4.b and E.4.d.(3). No changes were made to the Tentative Order as a result of this comment.	

E5c-1	PROVISION E.5.c: Existing Development Inspections	
	COMMENT: *Request to include an optional third-party certification program into the existing development inspection provisions.* Section F.3.b.(4)(c) of Order No. R9-2010-0016 allowed the Riverside County Copermittees the option to propose a third-party certification program for commercial and industrial inspection programs, subject to San Diego Water Board Executive Officer acceptance. The Riverside County Copermittees noted that a similar provision does not exist in the Tentative Order, and requested inclusion of this option in the Regional MS4 Permit.	Riverside County Copermittees
	RESPONSE: At this time the San Diego Water Board does not support the inclusion of a third-party certification program as part of the existing development inspection provisions. The San Diego Water Board has conducted audits of several Copermittees' existing development and post construction BMP inspection programs in the San Diego Region that utilize self certifications or third-party certifications to verify the proper operation and maintenance of post construction BMPs. These audits have found such programs have not adequately confirmed that BMPs are being properly operated and maintained so they are effective at removing pollutants in storm water discharges from commercial and industrial sites to the MEP. However, the Regional MS4 Permit provides the Copermittees significant flexibility in the implementation of their existing development inspection programs, and does not preclude the use of third-party certification programs during years where inspections are not necessarily required. If the Copermittees can develop a third-party certification program that can demonstrate such a program can be implemented in a way that will ensure BMPs are being properly operated and maintained so they are effective at removing pollutants in storm water discharges from commercial and industrial sites to the MEP, the San Diego Water Board may reconsider including such an option into the Regional MS4 Permit during the renewal process anticipated to begin in early 2018. No changes were made to the Tentative Order as a result of this comment.	

F2b-1	PROVISION F.2.b: BMP Design Manual Updates	
	COMMENT: *Request for revisions to clarify the effective date of the BMP Design Manual.* The San Diego County Copermittees, the City of San Diego, and the County of San Diego requested revisions to Provision F.2.b.(4) to include language that clarifies the effective date of the BMP Design Manual if an update to the BMP Design Manual is required.	San Diego County Copermittees City of San Diego County of San Diego
	RESPONSE: The San Diego Water Board agrees that the proposed modification to the text in Provision F.2.b.(4) would clarify that the BMP Design Manual effective date is no later than 90 days after the San Diego Water Board adopts amendments to Provisions E.3.a-d. Provision F.2.b.(4) will be modified as follows: (4) If the San Diego Water Board amends Provisions E.3.a-d during the permit term but after the Copermittee has completed the update pursuant to Provision F.2.b.(1), the Copermittee must revise its BMP Design Manual to incorporate the amended Provision E.3.a-d requirements as soon as possible but not later than 90 days after the date the San Diego Water Board adopts the amendments to Provisions E.3.a-d, unless otherwise directed by the San Diego Water Board Executive Officer. Under these circumstances, the effective date of the BMP Design Manual is not later than 90 days after the date the San Diego Water Board adopts the amendments to Provisions E.3.a-d, unless otherwise directed by the San Diego Water Board Executive Officer.	

AttC-1	**ATTACHMENT C: Acronyms, Abbreviations, and Definitions**	
	COMMENT: *Request for revisions to definition of Construction Activities.* The City of Escondido requested revisions to the definition of Construction Activities in Attachment C to the Regional MS4 Permit. The commenter requested the removal of the term "phase" from the definition because the term introduces artificial phases during a construction project that cannot be readily tracked.	City of Escondido
	RESPONSE: The San Diego Water Board agrees that the revisions are appropriate. The definition of Construction Activities in Attachment C has been revised as follows: **Construction Activities** – Actions implemented during construction of development or redevelopment projects during the Preliminary Tasks ~~Phase~~ (including rough grading and/or disking, clearing and grubbing operations, or any soil disturbance prior to mass grading), Grading or Land Development ~~Phase~~ (including topography and slope reconfiguration, alluvium removals, canyon cleanouts, rock undercuts, keyway excavations, land form grading, and stockpiling of select material for capping operations), Streets and Utility Installation ~~Phase~~ (including excavation and street paving, lot grading, curbs, gutters and sidewalks, public utilities, public water facilities including fire hydrants, public sanitary sewer systems, storm sewer systems and/or other drainage improvements), or Vertical Construction ~~Phase~~ (including the build out of structures from foundations to roofing, including rough landscaping).	

AttC-2	ATTACHMENT C: Acronyms, Abbreviations, and Definitions	
	COMMENT: *Request for revisions to definition of Redevelopment.* The City of San Diego requested revisions to the definition of Redevelopment in Attachment C to the Regional MS4 Permit to improve the clarity of the definition.	City of San Diego
	RESPONSE: The San Diego Water Board agrees that revisions would provide additional clarity in the definition of Redevelopment. The definition of Redevelopment in Attachment C has been revised as follows: **Redevelopment** – The creation and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure~~, and creation or addition of impervious surfaces~~. Replacement of impervious surfaces includes any activity ~~that is not part of a routine maintenance activity~~ where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include routine maintenance activities, such as trenching and resurfacing associated with utility work; pavement grinding; resurfacing existing roadways~~,~~; ~~new~~ sidewalks ~~construction~~, pedestrian ramps, or bike lanes on existing roads; and routine replacement of damaged pavement, such as pothole repair.	

AttE-1	ATTACHMENT E: Specific Provisions for Total Maximum Daily Loads	
	COMMENT: *Request for revisions to TMDL requirements in Attachment E to the Regional MS4 Permit to allow independent jurisdictional compliance with TMDLs.* The City of San Diego requested revisions to the TMDL requirements in Attachment E to the Regional MS4 Permit that would allow independent jurisdictional compliance instead of requiring all the Copermittees named as responsible to comply with the TMDL requirements.	City of San Diego
	RESPONSE: The San Diego Water Board disagrees that modifications are needed to the language pertaining to TMDL compliance determination. The commenter correctly asserts that the intent of the language, and in fact, the intent of the Water Quality Improvement Plan concept, is that the Copermittees develop the Water Quality Improvement Plans collectively and evaluate water quality improvement strategies on a watershed basis. The San Diego Water Board recognizes that the Copermittees have no authority over other Copermittees to compel TMDL compliance; therefore, the Tentative Order has multiple compliance determination pathways available to each Copermittee to achieve compliance. The final compliance determination pathways are presented in Attachment E Specific (TMDL) Provisions 1.b.(3), 2.b.(3), 3.b.(3), 4.b.(3), 5.b.(3), 6.b.(3), and 7.b.(3). There are several compliance determination pathways that allow a Copermittee to demonstrate independent jurisdictional compliance with water quality based effluent limitations (WQBELs). No changes were made to the Tentative Order as a result of this comment.	

AttE6-1	ATTACHMENT E.6: Beaches and Creeks Bacteria TMDLs	
	COMMENT: *Requests for revisions to clarify that water bodies de-listed from the 303(d) List are not subject to the Beaches and Creeks TMDL requirements.* The Orange County Copermittees requested revisions to the Beaches and Creeks Bacteria TMDLs requirements in Attachment E to state that specific water bodies or beach segments included in Table 6.0 that have been delisted from the 2008 Clean Water Act Section 303(d) List of Water Quality Impaired Segments are not subject to any further action as long as monitoring data continues to support compliance with water quality standards.	Orange County Copermittees
	RESPONSE: The San Diego Water Board disagrees that any revisions are necessary or appropriate. The Orange County Copermittees correctly state that the water bodies listed in Table 6.0 must be in compliance with the final TMDL compliance requirements (and WQBELs). If a water body or beach segment has been de-listed, then the MS4 discharge WQBELs and/or receiving water WQBELs should already be achieved, but the BMP WQBELs and the monitoring and assessment requirements are still required to be implemented to maintain the achievement of the MS4 discharge WQBELs and/or receiving water WQBELs in the de-listed water body or beach segment. No changes were made to the Tentative Order as a result of this comment.	

AttE6-2	ATTACHMENT E.6: Beaches and Creeks Bacteria TMDLs	
	COMMENT: *Request for revisions to compliance dates for the Beaches and Creeks Bacteria TMDLs.* The San Diego County Copermittees, the City of San Diego, and the County of San Diego requested that the compliance dates proposed to be added to Tables 6.1 and 6.4 be removed. The commenters assert that the compliance dates proposed to be added are inconsistent with the requirements of the Beaches and Creeks Bacteria TMDLs. The commenters also assert that the Beaches and Creeks Bacteria TMDLs do not require the development of a Bacteria Load Reduction Plan (BLRP) or Comprehensive Load Reduction Plan (CLRP) for segments of beaches or creeks de-listed from the Clean Water Act Section 303(d) List of Water Quality Limited Segments.	San Diego County Copermittees City of San Diego County of San Diego
	RESPONSE: The San Diego Water Board disagrees that the addition of the compliance dates is inconsistent with the Beaches and Creeks Bacteria TMDLs requirements. The San Diego Water Board also disagrees that segments of beaches or creeks de-listed from the Clean Water Act Section 303(d) List of Water Quality Limited Segments are not required to develop a BLRP or CLRP. The compliance date for the Beaches and Creeks Bacteria TMDLs is specified on page 7-107 of the Basin Plan as follows: *"Full implementation of the TMDLs for indicator bacteria shall be completed as soon as possible, but no later than 10 years from the effective date for both the dry weather and wet weather TMDLs, unless an alternative compliance schedule is approved as part of a Comprehensive Load Reduction Plan, as described in the following section. The effective date of these TMDLs is April 4, 2011.* *The San Diego Water Board will require the Phase I MS4s to submit Bacteria Load Reduction Plan (BLRPs) outlining the proposed BMP program that will be capable of achieving the necessary load reduction required to attain the bacteria TMDLs in the receiving water, acceptable to the Regional Board within 18 months after the effective date of these TMDLs…."* Tables 7-53 and 7-54 on page 7-108 in Chapter 7 of the Basin Plan present the compliance schedules that apply if the Copermittees develop a BLRP. Page 7-109 of the Basin Plan describes the potential for the Copermittees to develop CLRPs. If the Copermittees choose to develop a CLRP, the compliance date and schedule for the Beaches and Creeks Bacteria TMDLs is specified on page 7-109 of the Basin Plan in Table 7-55 and as follows:	

AttE6-2	ATTACHMENT E.6: Beaches and Creeks Bacteria TMDLs	

"….the dischargers may develop and submit a CLRP for all constituents of concern in lieu of the BLRP, and to propose an appropriately tailored alternative compliance schedule. Proposed alternative compliance schedules tailored under this provision may not extend beyond 10 years for the dry weather bacteria TMDLs and 20 years for the wet weather bacteria TMDLs from the effective date …."

Tables 6.1 and 6.4 were revised in the Tentative Order to be consistent with the compliance schedules of Tables 7-53, 7-54, and 7-55 of the Beaches and Creeks Bacteria TMDLs in the Basin Plan. Therefore, the addition of the compliance dates proposed to be added to Tables 6.1 and 6.4 are consistent with the requirements of the Beaches and Creeks Bacteria TMDLs.

As for the assertion that the Beaches and Creeks Bacteria TMDLs do not require BLRPs or CLRPs for segments of beaches or creeks de-listed from the Clean Water Act Section 303(d) List of Water Quality Limited Segments, the commenters appear to be citing text from the TMDL Compliance Schedule section instead of the TMDL Implementation Plan section of the Beaches and Creeks Bacteria TMDLs. It is true that on page 7-107 of the Basin Plan, includes a statement that:

"*For watersheds in Table 7-52 where there are no longer any impairments listed on the 2008 303(d) List, the Phase I MS4s and Caltrans are not required to submit a BLRP or CLRP within 18 months of the effective date of the TMDLs.*"

However, this statement is under the TMDL Compliance Schedule requirements and was only included to indicate that the San Diego Water Board would not require a BLRP or CLRP to be submitted within 18 months of the effective date. It was not intended to mean that a BLRP or CLRP would never be required. If the commenters look under the TMDL Implementation Plan requirements for Phase I MS4s, which begins on page 7-85 of the Basin Plan, there is no statement that a BLRP or CLRP will not be required for "*watersheds … where there are no longer any impairments listed on the 2008 303(d) List."* The TMDL Implementation Plan for Phase I MS4 does, however, state the following on page 7-86 of the Basin Plan:

"*The WQBELs will likely consist of receiving water limitations (based on the numeric targets) and require the implementation of a BMP program to achieve the TMDLs in receiving waters. The Phase I MS4s will be required to submit Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) outlining a proposed BMP program capable of achieving the necessary load reductions required to attain the TMDLs in receiving waters, acceptable to the San Diego Water, within 18 months after the effective date of these TMDLs. The San Diego Water Board will require the BLRPs or CLRPs to be developed on a watershed or region wide scale. The BLRPs or CLRPs should be developed and*

AttE6-2	ATTACHMENT E.6: Beaches and Creeks Bacteria TMDLs	
	incorporated as part of the Watershed Runoff Management Programs required under the Phase I MS4 NPDES requirements…." The TMDL Implementation Plan requirements clearly state the BLRPs or CLRPs are required and do not have any exceptions. The TMDL Compliance Schedule requirements do allow an exception from submitting a BLRP or CLRP within 18 months of the effective date, but do not state that a BLRP or CLRP will never be required. Specific Provision 6.b.(2)(c)(i) is consistent with the TMDL Implementation Plan requirements in the Basin Plan by requiring a CLRP to be on a watershed scale and incorporated into the Water Quality Improvement Plans (i.e. Watershed Runoff Management Program), which includes a BMP implementation program capable of achieving the necessary load reductions required to attain the TMDLs in receiving waters for all the applicable Watershed Management Areas in Table 6.0. Table 6.0 lists all the beaches and areas included in the Beaches and Creeks Bacteria TMDLs from the Basin Plan. Please also see the response to comment AttE6-1. However, the San Diego Water Board recognizes that Specific Provision 6.b.(2)(c)(i) only allows for the Copermittees to incorporate CLRPs into the Water Quality Improvement Plans. Therefore, to be consistent with the Beaches and Creeks Bacteria TMDLs, which allows for BLRPs to be developed and submitted, Specific Provision 6.b.(2)(c)(i) has been revised as follows: (i) The Water Quality Improvement Plans for the applicable Watershed Management Areas in Table 6.0 must incorporate the Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) required to be developed pursuant to Resolution No. R9-2010-0001.	

AttE6-3	ATTACHMENT E.6: Beaches and Creeks Bacteria TMDLs	
	COMMENT: *Request for revisions to clarify that compliance with receiving water limitations in the Beaches and Creek Bacteria TMDLs will be assessed at the compliance points identified in the TMDL Monitoring Plan.* The County of San Diego requested revisions to the Beaches and Creeks Bacteria TMDLs requirements to specify that compliance with receiving water limitations can be determined at the compliance points identified in the TMDL Monitoring Plans that are included in the Water Quality Improvement Plans.	County of San Diego
	RESPONSE: The San Diego Water Board disagrees that the revision is necessary. The Beaches and Creeks Bacteria TMDLs interim and final compliance determination requirements includes a pathway that allows the Copermittees to demonstrate that there are no exceedances of the final (or interim) receiving water limitations in the receiving water "*at, or downstream of the Responsible Copermittee's MS4 outfalls*." The Specific Monitoring and Assessment Requirements of the Beaches and Creeks Bacteria TMDLs specifies the locations where monitoring is required to determine compliance. For beaches, the required monitoring locations are "*at, or downstream of the Responsible Copermittee's MS4 outfalls*." For creeks, the monitoring locations are required to be at or near the mouth and one or more locations upstream of the mouth, both of which should be "*at, or downstream of the Responsible Copermittee's MS4 outfalls*." If the receiving waters are not exceeding the final (or interim) receiving water limitations expressed as exceedance frequencies at the required receiving water monitoring locations, then the Copermittees have demonstrated compliance with the receiving water WQBELs "*at, or downstream of the Responsible Copermittee's MS4 outfalls*." If, however, there are exceedances at a receiving water monitoring location, then the upstream Copermittees will need to demonstrate compliance with another compliance determination pathway. No changes were made to the Tentative Order as a result of this comment.	

AttE7-1	ATTACHMENT E.7: Los Penasquitos Lagoon Sediment TMDL	
	COMMENT: *Request for revisions to incorporate a land use-based compliance pathway into the Los Penasquitos Lagoon Sediment TMDL.* The County of San Diego requested revisions to the Total Maximum Daily Load for Sediment in Los Penasquitos Lagoon (Los Penasquitos Sediment TMDL) in Attachment E to incorporate a land use-based compliance pathway.	County of San Diego
	RESPONSE: The San Diego Water Board disagrees that changes are needed to accommodate a land use-based compliance pathway for the Los Penasquitos Lagoon Sediment TMDL. The commenter states that if the land use has not changed significantly from the 1970s baseline, the timeframe at which water quality standards in the lagoon were met, then the sediment loads from the Copermittee's MS4s are expected to be approximately the same as the baseline levels and within the amount allowed in the wasteload allocation. The San Diego Water Board agrees that under this scenario in which land use has not changed significantly, the sediment levels would be approximately the same as baseline levels. If this is confirmed through water quality monitoring, then the Copermittee has likely met its portion of the final effluent limit described in Provision 7.b.(2)(b) and has achieved compliance. For this reason, changes to the TMDL compliance pathways are not needed or warranted. No changes were made to the Tentative Order as a result of this comment.	

ATTACHMENT 16

See: California Regional Water Quality Control Board, *Water Quality Control Plan for the San Diego Region (Basin Plan)* at http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

FEB 14 2012

Eric Becker
Senior Water Resources Control Engineer
Southern Watershed Unit
San Diego Regional Water Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Re: Draft San Diego Regional MS4 Permit

Dear Mr. Becker:

The following are EPA Region 9's comments on the pre-notice draft MS4 permit for the municipal separate storm sewer systems (MS4s) located within the jurisdiction of the San Diego Regional Board, which was forwarded to us for review on January 31, 2012.

Given the relatively short time period provided for review of the permit (which is complex), our review has been somewhat cursory, and we may have additional comments on future drafts. We would also like to arrange a conference call with you to discuss our comments before the public notice version of the permit is released.

A. Permit Expiration Date

As you know, NPDES regulations at 40 CFR 122.46 require that the term of a permit not exceed five years. Consistent with this requirement, the draft MS4 permit (Attachment B.2.b) provides that the permit would expire five years after the adoption date. However, we are somewhat concerned about the discussion in Finding D.12 for the permit suggesting that the Board may administratively extend (deliberately) the permit for a term of perhaps 10 years or more. NPDES regulations at 40 CFR 122.6 provide that a permit may be administratively extended beyond its expiration date, but only a last resort, for example, when time and resource constraints do not allow timely permit reissuance.

We note that certain permittees in Orange and Riverside Counties, which are currently covered under alternate MS4 permits, would be covered by the new regional MS4 permit when their existing MS4 permits expire (in 2014 for Orange County and 2015 for Riverside County). We also understand that the Board would like to not reissue the regional permit until the Orange and Riverside County permittees have been covered for five years (i.e., in 2020 for Riverside County). Unfortunately, we believe this would

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not be possible in light of the five-year limit for the term of a permit at 40 CFR 122.46. As such, we recommend the permit expire (and be reissued) in 2017 for all permittees.

B. Low Impact Development (LID) Requirements

We generally support the proposed LID requirements (beginning on page 61) in the draft permit. However, during our conference call, it would be helpful to confirm our understanding of the proposed approach for biofiltration. Presumably biofiltration is considered "a flow through LID treatment control BMP." Rather than specifying design parameters, the permit provides that these systems should be designed for an appropriate surface loading rate to prevent erosion, scour and channeling within the BMP. This seems appropriate to us. Also, if biofiltration does not result in meeting the retention standard, offsite mitigation is apparently required (but we would like to confirm our understanding of this matter).

We also support the proposed hydromodification provisions which appear to be condensed from the approach used in the San Diego Regional Board's Orange County permit (no Hydromodification Control Plan preparation). During our conference call, we would be interested in hearing what considerations the San Diego Board gave to these new hydromodification provisions.

The proposed permit (page 68) provides for alternative (i.e., offsite) projects only in the event of technical infeasibility onsite. In other Southern California areas (and as noted in the statewide MS4 workgroup) we are hearing the suggestion that offsite projects should be allowed to facilitate groundwater recharge. We are wondering if that has been suggested within the San Diego Board's jurisdiction, and whether the San Diego Board would be interested in allowing this under its permit. We believe the idea has merit given the importance of groundwater recharge in Southern California.

Finally, it appears there may be a typographical error on page 72 concerning the beginning date for the project inventories. For example, you may have intended January 2012 rather than 2002 for the San Diego inventory.

C. Total Maximum Daily Loads (TMDLs)

We generally support the Board's approach for incorporation of applicable TMDL requirements into the MS4 permit. We are pleased to see applicable wasteload allocations (WLAs) widely incorporated as numeric effluent limits since this approach will enhance enforceability and will most clearly ensure consistency with the WLAs. However, it appears section A.3.b needs some revision; we would suggest the following: "Pollutants in the discharges musts be reduced to comply with any effluent limitations expressed as part of any ~~water~~ WQBELs required . . ."

We have not had sufficient time to fully review the requirements of the applicable TMDLs, and the provisions of Attachment E of the permit to ensure all requirements of the TMDLs have been accurately incorporated into the permit. Thus far however, we did note the following:

- For the Rainbow Creek nutrient TMDL, the interim compliance deadlines are included, but not the final compliance deadline (December 31, 2021).

- For the Shelter Island Yacht Basin copper TMDL, the proposed permit provides the permittee may monitor "any (of) its MS4 outfalls. . . " Rather than allowing "any" outfall, we suggest requiring the permittee to monitor a representative outfall in the Shelter Island drainage area (there are 9 outfalls total according to the TMDL) or at least an outfall which drains similar land uses as found in the Shelter Island drainage area.

There are also certain provisions which are somewhat unclear which we would like to discuss further for clarification:

- Section A.2.b; we are unclear on the intent of the prohibition of exceedances of "receiving water limitations expressed as part of any WQBELs . . ." We believe you mean WLAs, established as a strict numeric WQBEL or not, should not exceed receiving WQS. But we would like clarity on this provision.

- In Attachment E (page E-7, section 3.b.1(a)), we are unclear whether the WQBEL is the same as the receiving water limit; we need to have clear language so there is no confusion on what is a WQBEL, whether it is a receiving water limit or an effluent limit.

Regarding monitoring requirements, we believe it is important to specify a minimum number of samples to be collected at the designated MS4 outfalls, and in the receiving water. For example, appropriate requirements were included for the Beaches and Creeks Bacteria TMDL (page E-31, section 2.a.(i)) and similar requirements should be included for all the TMDLs.

Finally, for TMDLs that are approved during the term of the permit, we suggest a provision similar to that recently proposed by the Central Coast Regional Board for the reissuance of the Salinas MS4 permit (section O of permit No. CA0049981) available at: http://www.waterboards.ca.gov/centralcoast/board_info/agendas/2012/feb/Item_21/attachment_6.pdf. The provision requires the development and submittal (within one year of final TMDL approval) of a plan for complying with applicable WLAs. This provision will expedite compliance with the WLAs by the permittees.

D. Water Quality Improvement Plan Review

The draft permit (section F.1, page 90) requires the development and submittal of Water Quality Improvement Plans by co-permittees no later than 12 months after permit adoption. Although the Plans would be made available for review in the Regional Clearinghouse, we believe this may be insufficient to ensure an adequate opportunity for public participation consistent with 2005 decision by the Second Circuit Court in *Waterkeeper Alliance et al. v. EPA*, 399 F.3d 486, and the 2003 decision by the Ninth Circuit Court in *Environmental Defense Center, Inc. v. EPA*, 344 F.3d 832. In addition to providing the Plans in the Clearinghouse, we recommend the Board actively solicit public comment (e.g., provide a 30-day public comment period when a Plan is submitted) and then respond to the comments as appropriate.

We also note that section D.2.d of the permit provides for alternate watershed monitoring requirements in certain circumstances. For the reasons noted above, the permit (or the fact sheet) should clarify that the Board will solicit public comment prior to the approval of alternate plans of this nature.

E. Inspection Program for Construction Sites

We are still reviewing the proposed requirements for construction site management (section E.4). However, we do have certain concerns with the proposed requirements for construction site inspections in section D.4.d. The proposed permit would require inspections "at an appropriate frequency" for the construction project and its phase. The existing San Diego MS4 permit, however, includes specific frequencies for the inspections (such as once/two weeks, or once/month); other recent California MS4 permits such as the San Ana Board's 2009 MS4 permit for Orange County also commonly include specific inspection frequencies. As you know, we are trying to improve the enforceability of MS4 permits and imprecise terms such as "an appropriate frequency" may make enforcement of the permit more difficult. This is an issue we would like to discuss further during our conference call.

F. Action Levels

Section C of the draft permit includes what are termed "action levels" for certain pollutants. However, there do not appear to be any clear actions associated with these concentrations which would be required to be implemented by the permittees (unlike, for example, the San Diego Board's 2009 MS4 permit for Orange County which requires additional BMPs when an action level is exceeded). For the current draft of the regional permit, the values in section C might be more appropriately termed "assessment levels." If the Board's intent is to use the values as a basis for requiring upgrades to the water quality improvement plans, this should be made clearer in the permit.

We appreciate the opportunity to provide our views on the pre-notice draft permit. If you would like to discuss these comments, please contact me at (415) 972-3464 or John Tinger of the NPDES Permits Office at (415) 972-3519.

Sincerely,

David Smith, Manager
NPDES Permits Office (WTR-5)

ATTACHMENT
17

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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San Francisco, CA 94105-3901

JAN 11 2013

Wayne Chui
San Diego Regional Water Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Re: Draft San Diego Regional MS4 Permit

Dear Mr. Chui:

The following are EPA Region 9's comments on the draft permit for the municipal separate storm sewer system (MS4) located within the jurisdiction of the San Diego Regional Board, which the Board released for public comment on October 31, 2012. We also provided comments on an early draft of this permit in a letter to the Board dated February 14, 2012. For the most part, we are pleased with the latest version of the permit and we commend the Board and its staff for their extensive efforts in developing this draft permit. We also offer the following comments for the Board's consideration:

A. *Total Maximum Daily Loads (TMDLs)*

In our February 14, 2012 letter, we also generally supported the Board's approach for incorporation of applicable TMDL requirements into the permit, i.e., incorporation of applicable wasteload allocations (WLAs) as numeric effluent limits. We urge the Board to retain this approach in the final permit as well since it will enhance enforceability and will most clearly ensure consistency with the WLAs.

Our February 14, 2012 letter had also suggested revisions of certain provisions of the early draft permit related to TMDLs; the October 31, 2012 draft permit has been substantially revised from the early draft and many of our early comments have been addressed. However, as discussed below, we still have certain concerns whether the monitoring requirements of the October 31, 2012 draft permit would be adequate to ensure compliance with the TMDLs.

Sections II.D.1 and 2 set forth the receiving water monitoring and MS4 outfall monitoring requirements of the draft permit. In general, a monitoring program would be developed and conducted by the permittees to assess the impacts of the discharges and the effectiveness of the Water Quality Improvement Plans (WQIPs), focusing on the highest priority water quality conditions. Compliance with applicable WLAs from TMDLs would be one of several competing priorities in selecting monitoring locations in the receiving waters and at MS4 outfalls.

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Attachment E to the draft permit requires monitoring at MS4 outfalls or receiving water locations, but the locations to be monitored are not fully specified. Although TMDL compliance would presumably receive a high ranking in setting the monitoring program priorities, it is still not clear that appropriate monitoring locations would necessarily be selected to measure compliance with WLAs. As such, we recommend that Section II.D of the permit clarify that notwithstanding other monitoring priorities, at a minimum, appropriate monitoring locations must be selected to ensure compliance with all applicable WLAs and associated effluent limitations. The permit should specify that a mix of receiving water and representative end-of-pipe monitoring locations must be selected to ensure that the monitoring data collected will be sufficient to determine compliance with effluent limitations based on WLAs and to determine whether individual copermittees have caused or contributed to observed in-stream noncompliance. The permit should provide that the parties that develop and submit for Regional Board review a monitoring plan for a WQIP agree to the use of monitoring plan results for purposes of compliance determination.

Section II.D.2.c.(2) of the draft permit also requires monitoring at an "appropriate" frequency for the post-transitional period; the transitional monitoring program (Section II.D.2.a.(3)) would require twice/year monitoring during the wet season. We recommend the permit clarify the minimum monitoring frequency for the post-transitional period and suggest maintaining the twice/year frequency.

Attachment E also describes the specific provisions for TMDLs adopted and approved that are applicable to this tentative order. We note that a few of the compliance requirements provided in an existing TMDL were not included in this tentative order. We recommend that all applicable TMDL WLAs and compliance endpoints be included in Attachment E. For instance, the TMDL for Indicator Bacteria Project I – Twenty Beaches and Creeks in San Diego Region (including Tecolote Creek), provided both concentration-based and mass-based TMDLs. All identified TMDL WLAs and endpoints should be included in Attachment E to prevent confusion with the WLA requirements described and adopted in the TMDL.

Provision B.6 identifies the WQIP submittal, updates and implementation. Paragraph 3 under this Provision should clarify that the intent of all monitoring and assessment is to improve our evaluation of the waterbodies' conditions, including the 303(d) listed impaired waterbodies. We recommend paragraph 3 under Provision B.6 be modified to the following:

> *"All State identified impaired waterbodies within the Watershed Management Area should be placed on the 303(d) List as required under CWA Section 303(d) and 40 CFR §130.7(b)(4)). However, in specific cases supported by robust analytical documentation the implementation of the Water Quality Improvement Plans may demonstrate that TMDLs are not necessary for identified impaired waterbodies within the Watershed Management Area if the analytical record demonstrates that technology-based effluent limitations required by the CWA, more stringent effluent*

limitations required by state, local, or federal authority, and/or other pollution control requirements (e.g., best management practices) required by local, state or federal authority are together stringent enough to implement applicable water quality standards associated with the waterbody impairment causes within a reasonable period of time."

Finally, we reiterate our suggestion from the February 14, 2012 letter that a provision be added to the draft permit to address TMDLs approved during the term of the permit; we had suggested a provision similar to section O of the 2012 MS4 permit for the City of Salinas (NPDES permit No. CA0049981) available at: http://www.ci.salinas.ca.us/services/maintenance/pdf/NPDES_Permit.pdf. The provision requires the development and submittal (within one year of final TMDL approval) of a plan for complying with applicable WLAs. Such a provision would expedite compliance with the WLAs by the permittees.

B. Low Impact Development (LID) Requirements

In our February 14, 2012 letter, we generally supported the LID provisions of the early draft permit, and we continue to largely support the proposed LID requirements of the October 31, 2012 draft permit. The proposed requirements in the October 31, 2012 draft (beginning on page 78) are also similar to the requirements in other recent California MS4 permits such as those for Los Angeles and Orange Counties. As you know, Region 9 is encouraging the Boards to include measurable requirements in MS4 permits to enhance clarity and enforceability of the permits. We are pleased to see the inclusion of the measurable requirement for onsite management of the runoff from the 85% storm similar to other recent permits. However, we also note that Section II.E.3.c.(1)(a)(ii) of the October 31, 2012 draft permit provides a new alternative of retaining the volume (determined by modeling) that would retained under natural, undeveloped conditions. We are concerned that this option may create uncertainty and provide opportunities for subjective analyses that would be resource intensive and difficult to review. For this reason, and for consistency with other recent California MS4 permits, we recommend that Section II.E.3.c.(1)(a)(ii) of the proposed permit be removed. However, if this provision is retained, the permit and fact sheet should fully clarify that undeveloped conditions refer to natural conditions prior to any anthropogenic impacts.

We did raise a couple of questions regarding LID in our February 14, 2012 letter which we believe have been adequately addressed in the latest draft. We had been unclear concerning requirements related to biofiltration; the October 31, 2012 permit has been restructured in a way which clarifies the questions we had raised.

We had also suggested that the Board may want to consider off-site water supply augmentation projects as an acceptable alternative when onsite stormwater management is not feasible. Several recent studies have highlighted the many benefits (such as energy

savings) of increased stormwater infiltration for groundwater recharge. We note such a provision has been added to the draft permit, and we support this provision.

C. Water Quality Improvement Plan Review

In our February 14, 2012 letter, we had expressed concern whether the public would have an adequate opportunity to review draft WQIPs consistent with the 2005 decision by the Second Circuit Court in *Waterkeeper Alliance et al. v. EPA*, 399 F.3d 486, and the 2003 decision by the Ninth Circuit Court in *Environmental Defense Center, Inc. v. EPA*, 344 F.3d 832. We are pleased to see the draft permit (section F) and the fact sheet have been revised to clarify that the Board would be soliciting public comment concerning draft WQIPs submitted to the Board for approval during the term of the permit.

The fact sheet and the permit also describe the WQIPs as dynamic and evolving documents which are likely to be updated and modified over time in accordance with the iterative process. Although permittees must solicit public input in developing proposed updates that are submitted to the Board, it does not appear that public comment would necessarily be solicited concerning Board action in approving, disapproving or revising proposed updates; we suggest that an opportunity be provided for public comment on such Board actions similar to that provided when the original WQIPs are submitted.

D. Prescriptive BMP Requirements

In our February 14, 2012 letter, we expressed concern that the early draft permit would only require inspections of construction sites "at an appropriate frequency"; this provision has also been included in the October 31, 2012 draft permit. We noted in our comments that the existing San Diego MS4 permit includes specific frequencies for the inspections (such as once/two weeks, or once/month), as do other recent California MS4 permits such as the San Ana Board's 2009 MS4 permit for Orange County. As noted earlier, we are trying to improve the clarity and enforceability of MS4 permits and terms such as "an appropriate frequency" reduce clarity and make enforcement of the permit more difficult. Such provisions may also be insufficient to ensure compliance with the Clean Water Act's requirement to reduce pollutants in the discharges to the maximum extent practicable (MEP). We recommend that the permit specify the required frequency of construction site inspections.

Certain other provisions of the October 31, 2012 draft permit are also less prescriptive than the existing permit, such as the storm drain maintenance requirements and the inspection requirements for commercial and industrial facilities. We recognize that the Board is attempting to improve the environmental outcome of its stormwater program by shifting the focus from prescriptive BMPs to prescriptive water quality results, and we concur with the increased emphasis on water quality results. However, we are not convinced that the prescriptive BMPs of the existing permit are as significant

a burden as portrayed in the draft fact sheet, and we suggest they be retained for the most part in the new permit to ensure permit clarity, enforceability and compliance with MEP. To the extent the requirements for numeric water quality goals in the WQIPs would also ensure compliance with MEP, such requirements would be acceptable.

We recommend the permit or fact sheet also clarify that the numeric water quality goals (and the schedule for attainment of the goals) in the draft WQIPs would become enforceable permit requirements once the Plans are approved by the Board. EPA's 1999 regulations for Phase II MS4s (64 FR 68722, December 8, 1999) required similar measurable goals for stormwater management programs and intended that "goals" would be enforceable permit requirements once approved. Further, a wide variety of measurable goals were intended to be considered including measurable BMPs and measurable water quality improvements.

E. Action Levels

In our February 14, 2012 letter, we expressed concern that there did not seem to be any clear actions which would be required on the part of permittees if an action level concentration were exceeded. Although the draft fact sheet of October 31, 2012 provides additional insight into the Board's intent, we still believe the clarity and enforceability of the permit would be enhanced by adding clearer provisions for acting upon action level exceedences to the permit similar to the Board's 2009 permit for Orange County.

Footnote 7 in the proposed permit notes that NALs are not intended to be enforceable limitations. Provision II.C.1.b.(2) also provides that some NALs may be based on WLAs established in TMDLs included in Attachment E of the permit. We believe the Board intends the WLAs to be enforceable permit requirements; as such, we recommend NALs not be based on the WLAs. Instead, enforceable effluent limitations should be incorporated that are consistent with and ensure effective implementation of WLAs.

F. Toxicity Testing

The toxicity testing monitoring provisions proposed in the draft permit should be brought up to date with those in MS4 permits recently issued by the State Water Board (Caltrans MS4) and the Los Angeles Regional Water Board (Los Angeles MS4). Following the approach in these permits, only chronic toxicity monitoring should be required and biological toxicity test endpoints should be analyzed using the Test of Significant Toxicity hypothesis testing approach. At minimum, the permit should be revised to reflect the following requirements: (1) monitoring for chronic toxicity in fresh or marine waters shall be estimated as specified in U.S. EPA's short-term chronic toxicity methods in the most recent edition of 40 CFR 136; and (2) for chronic toxicity test samples (either stormwater or non-stormwater), the in-stream waste concentration (IWC) is 100 percent to calculate either a pass or fail test sample result following Appendix A in

National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June 2010). A pass result indicates no toxicity at the IWC. A fail result indicates toxicity at the IWC.

*G. **Permit Expiration Date***

In our letter of February 14, 2012, we had expressed concern that the Board appeared to be considering a permit term longer than five years to accommodate the expiration dates of the current MS4 permits for Orange County and Riverside County. We noted such a provision would conflict with NPDES regulations at 40 CFR 122.46 which require that the term of a permit not exceed five years. We are pleased to see the proposed permit term has been revised to be consistent with this requirement.

We appreciate the opportunity to provide our views on the draft permit. If you would like to discuss these comments, please contact me at (415) 972-3464 or Eugene Bromley of the NPDES Permits Office at (415) 972-3510.

Sincerely,

David Smith, Manager
NPDES Permits Office (WTR-5)

ATTACHMENT
18

MEETING

STATE OF CALIFORNIA

SAN DIEGO REGIONAL WATER QUALITY BOARD

PARTIAL TRANSCRIPT

SAN DIEGO REGIONAL

WATER QUALITY CONTROL BOARD

2375 NORTHSIDE DRIVE, SUITE 100

SAN DIEGO, CALIFORNIA

REPORTED BY: KASEY L. MOBLEY, CSR 13407

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APPEARANCES

BOARD MEMBERS:

Henry Abarbanel, Chair

Gary Strawn, Vice Chair

Betty Olson

Stefanie Warren

Eric Andersen

Tomas Morales

OTHER STAFF PRESENT:

David W. Gibson, Executive Officer

James G. Smith, Assistant Executive Officer

Catherine Hagan, Regional Board Attorney

Wayne Chiu, Water Resource Control Engineer

Christina Arias, Water Resource Control Engineer

Julie Chan, Supervising Engineering Geologist

NOVEMBER 18, 2015, SAN DIEGO, CALIFORNIA

9:03 A.M.

CHAIRMAN ABARBANEL: Good morning. I'd like to call to order the regular meeting of the San Diego Regional Water Quality Control Board on November 18th, 2015.

May we have a roll call.

(Roll call done.)

CHAIRMAN ABARBANEL: The first item on the agenda after being here is our public forum. Anybody can address the Board on any issue that is not on the agenda. So plenty of time to speak to the agenda items as they arise, but very often, the public has important and interesting things to say that I didn't get -- manage to get on the agenda.

Did anybody wish to speak to items not on the agenda?

And you've given Gary a blue card or whatever?

You've given him four?

JIM WHALEN: Yeah, that's how entrenched it is.

CHAIRMAN ABARBANEL: Okay.

JIM WHALEN: Thank you very much. Is this thing on?

Good morning, Mr. Chair, members of the Board. My name is Jim Whalen of J. Whalen Associates, 1660 Hotel Circle, here in Mission Valley. I'm the president of J. Whalen Associates, a land use consulting firm, and chair of the Building associations Legislative Committee.

I've been monitoring the progress of the MS4 permit implications, and I'm concerned that the biological consequences of reducing runoff into certain water bodies, especially the Otay River --

CHAIRMAN ABARBANEL: Excuse me. I believe that is the subject of Item No. 11.

MR. WHALEN: We did talk to your counsel about this is the greatest level of detail you're going to get. I'm done in one second.

MS. HAGAN: Mr. Whalen is talking about the water quality improvement plan process, but he's not going to talk about any details of the specific water quality improvement plan.

CHAIRMAN ABARBANEL: I'm sorry for interrupting, but I --

MR. WHALEN: That's okay. We were careful to make sure we talked to folks in advance, to make sure we didn't --

CHAIRMAN ABARBANEL: Okay. You can start from the beginning, but I think we know who you are now.

MR. WHALEN: I think you do. I've been monitoring the progress of the MS4 permit implication, and I am concerned that the consequences of reducing runoff into certain water bodies for biological reasons may have been overlooked during the permitting process, and I'm simply requesting that the Executive Officer Gibson schedule a public hearing on the San Diego Bay Water Quality Improvement Plan to consider this issue before the full Board. Thank you. That's it.

CHAIRMAN ABARBANEL: Do you have specific requests of the executive officer?

MR. WHALEN: Simply to calendar it. We can't do specific requests. Simply to calendar.

CHAIRMAN ABARBANEL: Okay.

Please. I wouldn't interrupt you.

TORY WALKER: Good morning, Chair and

board members. My name is Tory Walker. I'm at 2559 Vista de Palomar, Fallbrook, California. I'm the principal of Tory R. Walker Engineering, a water resources firm, and I prepared a hydro modification study for the Otay River.

I believe the San Diego Bay Water Quality Improvement Plan does not take into account all the available science --

MS. HAGAN: Excuse me. You need to limit this to no details whatsoever. I was under the impression that folks would be asking for a hearing, but getting into any details is not appropriate today. That's a process for the water quality improvement plan.

MR. WALKER: All right. Thank you. So I would like it to be vetted at a public hearing before the Board.

CHAIRMAN ABARBANEL: Is that enough details?

BOARD MEMBER STRAWN: I think the next one is Nick Dangus.

NICK DANGUS: Good morning, Chair, Board members and Executive Officer. My name is Nick Dangus, 1660 Hotel Circle North, J. Whalen Associates, land use consultants.

I believe there are significant issues with San Diego Bay Water Quality Improvement Plan, and I request that Extensive Officer Gibson schedule a public hearing before this Board to address these issues.

Thank you.

BOARD MEMBER STRAWN: Mr. O'Connor?

JEFF O'CONNOR: Good morning Chair, Board members and staff. My name is Jeff O'Connor. I work for Home Fed Corporation in Carlsbad. We have significant property holdings in Otay Mesa. I've been working with staff over the past several years over the storm water permit and will continue to do so. We believe that San Diego Bay Water Quality Improvement Plan has unresolved issues and should be subject to a public hearing before this Board.

Thank you.

BOARD MEMBER STRAWN: Next, Laura, I have a card from somebody that says they want to follow you, but I have your card for Item 11.

MS. HUNTER: I had to take my card out because I was advised not to speak.

BOARD MEMBER STRAWN: That explains the other mystery of what happened to your card.

Come up to the microphone. Identify yourself.

BOARD MEMBER WARREN: Can I step down before you go.

MS. HAGAN: The matter is a pending matter. It's a 401 certification that's pending. Ms. Hunter wanted to talk about some of the details at the site, and it's not proper for this forum, so I told her that.

CHAIRMAN ABARBANEL: Before we go on, I want to ask Dave if the requests of the first four speakers are sufficient for you to put together a public forum that would meet their various --

EXECUTIVE OFFICER GIBSON: Mr. Chairman, members of the Board, good morning.

Their requests are sufficient for me to look at the issues, the Watershed Water Quality Improvement Plan for San Diego Bay, and to make a determinate, as you have delegated me to do, as to whether or not to schedule that, and I would do so in conference with you, Mr. Chairman, and look at the calendar when that would happen.

Optimistically, it would be into next year, and I think there should be some concerns as

to certain aspects of the permit that would not come into play until that happened.

So I think it would be best to look at this issue and discuss it before making this decision.

CHAIRMAN ABARBANEL: I wanted to ensure the people who were present that it was clear enough.

BOARD MEMBER MORALES: Out of curiosity -- maybe we don't know yet -- is it something that would be scheduled in a regular meeting or.

CHAIRMAN ABARBANEL: Board Member Morales, if we determine the best course of action is to consider it, we would plan it for a regularly scheduled Board meeting in 2016.

CHAIRMAN ABARBANEL: That would be February?

EXECUTIVE OFFICER GIBSON: That would be the earliest it could be.

CHAIRMAN ABARBANEL: Okay. Sorry for keeping you waiting. I wanted to make sure --

MR. MODIANO: That's fine. Ed Modiano, project coordinator for Chatham site, PRP

Group.

BOARD MEMBER WARREN: I need to recuse myself if we're going to talk about the Chatham site.

MR. MODIANO: We're not. Essentially, we're here -- we have a humble relationship with Escondido Neighbors United. I've always been directed to attend these meetings in case the Chatham site does come up. Apparently, Laura is not going to be talking about the Chatham site, so I remove my card.

MS. HUNTER: I put my card back in. From now on, I'm going to put in a request to be after Ed.

Anyway, I'm just going to be asking for a request for a public hearing on the 401 certification for the Oak Creek development project. Thank you.

CHAIRMAN ABARBANEL: Now, we've had several public hearings here on that issue. Are there additional issues that would merit having a hearing of the Board, or would it be a separate occasion?

EXECUTIVE OFFICER GIBSON: Mr. Chairman, this concerns a water quality

certification under Section 401 that's a pending project right now. I will confer with staff to determine whether I should act on that ministerially, as you have delegated me to do, or if indeed it does rise to the occasion where the Board should consider it.

As you know, I have two basic metrics for making that determination, independent of public forum. One is that the impacts are significant, and the other is that there's significant public interest.

We've heard perhaps two requests, if I can interpret it that way, and I'll take that under advisement.

CHAIRMAN ABARBANEL: Thank you.

Anyone else wish to speak on an item that is not on the agenda?

Thank you. We will move on to Item 3.

(Minutes of Board meeting approved.)

CHAIRMAN ABARBANEL: Move on to Item No. 4, which are comments by the Board members.

I guess Fran is not with us today.

EXECUTIVE OFFICER GIBSON: Correct, Mr. Chairman. She is attending a State Board

meeting today.

CHAIRMAN ABARBANEL: She will not have any comments.

Board members and executive officer -- Board members have any comments, reports?

BOARD MEMBER WARREN: I just had a question on the executive officer's report. On Item No. 2, the public meeting at Magnolia Elementary School, if we could take a few minutes to share more details.

Is it our impression that the parents and teachers are getting the answers that they want, and they're feeling that they're in the loop?

CHAIRMAN ABARBANEL: Thank you, Board Member Warren. I will ask if Craig Carlisle or Sean McClain is available -- or Julie Chan. I see Julie is closer to the microphone.

Julie, would you please?

MS. CHAN: Hi. Julie Chan with the Groundwater Protection Unit. I did attend the meeting. I believe the parents and teachers of the school are getting the information that they're looking for, and another public meeting is scheduled for January. DTSC presented -- the DTSC

schools group has installed a pilot remediation system in one of the classrooms, and based on the outcome of the pilot study, they will expand it to the entire school.

Then we continue to work aggressively with Amitech to get the groundwater cleaned up. I would say the discussion at the meeting quickly moved away from the school and to the residents' down gradient of the plume. So at that meeting, it was arranged that we would beef up our public information plan, and since then, we met with Amitech and directed them to prepare a public information plan that deals with the residents not just the school.

Are there any other questions?

BOARD MEMBER WARREN: Will you come back to us and let us know how the January meeting goes.

MS. CHAN: Absolutely.

CHAIRMAN ABARBANEL: Thank you.

BOARD MEMBER STRAWN: As you know, I represent this Board on the San Diego River Conservancy, and we had a really interesting meeting here last week where we began to allocate some of the Prop 1 money for various projects

along the San Diego River. The first increments that's designated for the San Diego River will be $3 million out of a total of 17 for this watershed. This is exclusive of the area-wide money that's being administrated by Coastal Keepers.

The three projects that were presented are worthy of some discussion here. The first one is Mass Park. The City has had a plan, been working on a plan for several years to restore that park. Under Prop 1, they added to that and divided out a section that's going to specifically restore -- I think it's about nine and a half acres of repairing habitat, wetland restoration.

They're moving the old asphalt trail. They're tearing that up and moving it back away from the bank of the river, restoring that bank and adding to the flood plan, replacing the trail with a permeable surface. And they're planting some native grasses and flowers. It's going to be a really nice project.

I was particularly mindful of the idea that that can be a good example of some of the urban projects that can be done under Prop 1, where they take some urban city parks and, at

least, modify them or add to them in such a way we're also taking care of the watershed.

This particular park is surrounded by a lot of high-density, low-income housing. All those parking lots have drained down into the park. So they're building a big bioswale, and they take that and duct it into a gravel bed that actually augments the playground. It will be a big boulder field for the kids to play on when it's dry, and it helps act as an attachment that can recharge the groundwater.

The other project was the County of San Diego had a trash removal pilot project. I think it was 12 sites, and they're -- they worked with some of the other cities in the state to look at some of the other projects that are going on to remove trash from the storm water. In these 12 sites, they'll put a high-tech catchment down in the storm drain catchment area to filter out anything bigger than a cigarette butt, or including a cigarette butt, I guess.

Then they'll pick that up and analyze it, and they're going to match this with some public outreach and education BMPs to look at -- and volunteer cleanups to see how do you decide

where to put these things, what are you catching, what are the big concerns, and how does this physical trap work compared to the other alternatives, which is volunteer cleanups and education.

That one was particularly of interest because the areas of interest are probably the most low-income high-density urban areas that the county's got responsibility for: out in Lakeside, Bostonia, and I don't remember; a couple other sites.

It's going to be an interesting project. It wasn't a whole lot of money but we would hope to expand there, and I think it's safe to say that the impetece behind that is the new State Board mandate on trash removal and going forward with the idea that will probably become incorporated in the MS4 at some future point.

So they're doing a pilot project that I think can be beneficial to all the cities in our area to look at methods of removing trash from the storm water.

San Diego state put in a request to -- for watershed restoration along Alvarado Creek adjacent to Interstate 8 and alongside the new

student housing areas in there. That's kind of a bad area of the stream, so just the physical work of clearing that out, removing some concrete and invasive plants and improving that whole wetland area and watershed is important from a flood avoidance aspect, but the really cool part about that project is Prop 1 has some serious mandates in there that it's targeted for shovel-ready dirt-moving projects, physical restoration projects, and there's not a lot of allowance for data collection and evaluations and studies of the long-range effects. This particular project, because it's sponsored by San Diego State, there's a consortion of four or five professors and their graduate students that doing water monitoring in there, hydrology, absorption studies, bio assessments, and I think they're already working with Chad's team, if that's correct -- or we're providing historical data in there.

So we should, in addition to fixing up a bad part of that watershed, I think we're going to gain a lot of data out of that and be useful in evaluating and selecting future projects like that.

The one thing at this -- going

forward, they've got the another half of that 3 million will probably come up in the next couple months. One of those projects had to do with irration in some of the urban ponds along the San Diego river, to try to raise the DO levels. I had previously asked that to be a future agenda item and information item. I suggest we hold that in abeyance a little bit until we see how this project pans out. Maybe we can get a briefing on what they're doing and how they expect it to work. I want to tie that in with the rigging issue.

I've kind of segued into the next agenda item. I'll leave it at that.

CHAIRMAN ABARBANEL: In a modest break with tradition, the State Board has agreed to consult with the regions on the disposition of the resources that the State gives to the water boards as a whole. And to discuss priorities, as seen by the regions in consultation with the State Board.

That is going to happen three times in three sessions during the coming year, 2016, and the agreement was the chair and one other Board member, as well as the executive officer, and, if available, the assistant executive officer, be in these discussions. We will have, in January, a

staff-and-Board-only discussion of how we will present ourselves in that occasion. And we will also have a public discussion of what is important to the public that you would like us to bring forward with discussion with the regions. That will probably be in February.

Everything is open to discussion. I have no idea what the experiment will result in, but it's an opportunity for everybody, with whatever views you hold on whatever issues are important to you, to come forward and see what we can do statewide.

In particular, cooperation with other regions, I think, should be strongly encouraged. We have many, many overlapping issues. Gary has talked often about the homeless issue. It's a complicated issue. It's not just the water quality issue. It's an ethical issue. It's a legal issue. We don't expect the State Board to solve it. But the other regions, San Francisco and L.A. in particular, probably have a much more severe problem than we, so we'll talk to them about a cooperative activity. There may be many, many others. We don't in any way claim to have figured them out yet.

Anyway, we're going to do that. I think that's all I wanted to say for myself.

Dave, do you want to say anything more about the executive officer's report?

EXECUTIVE OFFICER GIBSON: Thank you, Mr. Chairman. I'd be very happy to. First of all, are there any other questions on this month's report? It is a rather extensive report.

Seeing none at this time, I have a couple of updates for you. First of all, I'm happy to announce that yesterday, the State Water Resources Control Board did act on and approve the basin plan amendment this Board adopted this year for the on-site waste treatment system and groundwater nitrate concentration water quality objectives. That was approved. It's on its way not to EPA and OAL. I think it will ultimately be approved.

We have several new staff. Erica Ryan.

Erica, will you please stand up.

Erica joins us as a water resource control engineer, in the topic du jour. Welcome, Erica. Baptism by fire, as they say -- or ice water bucket, maybe.

We have two new scientific aids with us Anayeli Picasso and Kate Moore. I know Kate is at a class today.

Anayeli, are you here?

She's not here either. Probably hard at work, no doubt.

Today the Commissioner Drusina is convening with Commissioner Salmon at a Minute 320 Binational Corps Group, this afternoon, of course, from 2:00 to 5:00 p.m. If it pleases the Board, I will excuse myself at 1 o'clock to attend on its behalf on that work group to discuss how we're going to manage water quality, sediment and trash bi-nationally under that treaty. That runs today from 2:00 to 5:00 p.m., and I will update you periodically in the executive officer's report.

The operations plan and budget for our office for our next calendar year is under preparation, and I plan to bring that to you for discussion on the plan, the priorities, and indeed our budget, as we did this year, in February of next year.

Just a reminder, Item No. 10 on the San Ysidro point of entry wastewater treatment and reuse, we decided to have that with the recycled

wastewater item on December 16th at Padre Damn Municipal Water District.

I'm very happy to also report, no doubt you know, the City of San Diego approved the significant rate increase, which is very important for the recycled water efforts. So we will be able to count on the City of San Diego to participate in that very important discussion next month.

That concludes my report unless there are any follow-up questions.

Thank you very much.

CHAIRMAN ABARBANEL: Item 5 is the opportunity for Board members to request or suggest future agenda items. Gary is ahead of us by an item or two.

Tom?

CHAIRMAN ABARBANEL: I have one, which is kind of a recycled item. I'm pretty sure it was in 2013 that the executive officer and Board members made many visits to water districts, municipalities, the three counties. I don't know if we got to Riverside county.

BOARD MEMBER ANDERSON: We did indeed. Mr. Strawn and I went several times.

CHAIRMAN ABARBANEL: Good. I would like to suggest that we do that again in 2016. It's been three years. We've had multiple very significant permit modifications and new permits.

By the end of the day, we will possibly -- I think it's time to go back and see how things are going. I personally found those visits to be very productive. And I had a sense that the municipalities, surprised as they were that we showed up on their doorstep, found it productive.

EXECUTIVE OFFICER GIBSON: Yes, indeed, Mr. Chairman, I agree. Debra Jane, our outreach coordinator, and I are working up a plan for next year for that. I am going to suggest that we perhaps have several small group meetings rather than individual meetings, as far as practical for those, in Riverside and Orange Counties to make use of our travel time and of their time to be available. Small groups rather than large groups and emphasis on discussion and listening rather than lecturing.

CHAIRMAN ABARBANEL: That sounds like a good start.

We're now going to move on to Item 6.

(2016 meeting schedule approved.)

CHAIRMAN ABARBANEL: We're going to move on to the consent calendar. I have a potential conflict of interest with Item No. 8. I'm going to turn it over to Vice Chair Strawn and step aside.

BOARD MEMBER STRAWN: First we ask if there's any comments from the Board about the consent item. If not, I would entertain a motion to approve the consent calendar.

BOARD MEMBER MORALES: I move that we approve the consent calendar for Items 7 through 9.

BOARD MEMBER STRAWN: We have a motion and a second.

MS. HAGAN: May I ask a question? Mr. Abarbanel, because you've stepped aside for Item 8, you're not participating in the vote for Items 7 or 9, either?

CHAIRMAN ABARBANEL: That is correct.

MS. HAGAN: Okay.

Ms. Warren?

BOARD MEMBER WARREN: Aye.

MS. HAGAN: Ms. Olson?

BOARD MEMBER OLSON: Aye.

MS. HAGAN: Mr. Anderson?

BOARD MEMBER ANDERSON: Aye.

MS. HAGAN: Mr. Morales?

BOARD MEMBER MORALES: Aye.

MS. HAGAN: Mr. Strawn?

BOARD MEMBER STRAWN: Aye.

MS. HAGAN: Chairman Abarbanel -- excuse me.

BOARD MEMBER STRAWN: Did you get your coffee, Mr. Chairman?

EXECUTIVE OFFICER GIBSON: Mr. Vice Chairman, if I could, I would like to thank and acknowledge the U.S. Navy for coming today and being prepared to engage on Item No. 9, had there been any discussion. And I'd like to observe this is a nice bookend in terms of our relationship with the Navy as to how this permit was handled in 2008 and where we got today. Their assistance was very much appreciated, as was the staff's preparation for this item today, which was not insignificant.

BOARD MEMBER STRAWN: Thank you. I'll

add it's good to see the Navy was here and prepared, as usual. Thank you.

CHAIRMAN ABARBANEL: Okay. We'll now move on to Item 11. As mentioned, Item 10 has been postponed until next month.

I have a formal statement I will read: Now is the time and place for a public hearing on tentative order R92015-0100. If adopted, the tentative order will amend Order NO. R92013 -- 0001. The NPDES permit and waste discharge requirements for discharges in municipal separate storm sewer systems -- that's why we call them "MS4" -- draining the watersheds within the San Diego region, also known as Regional MS4.

The purpose of this hearing is for the Board to hear testimony and comments about the tentative order from staff, the co-electees and their elected officials, the environmental organizations, the building industry and other interested persons.

At this time, I want to allow any Board member to make any disclosures if they have received any ex parte communications or disclose if they have a conflict of interest.

BOARD MEMBER WARREN: Thank you. I

will not be participating in this matter based on work that my firm conducts.

CHAIRMAN ABARBANEL: All right. I do want to clarify, this is a tentative order to amend the existing permit, the regional MS4 permit. The regional MS4 permit was adopted after two days of public hearing with extensive public comment and testimony. The Board also held a public hearing in February of this year to amend the regional MS4 permit to incorporate Copermittees. For the most part, the parties have incorporated their comments from the 2013 comments into this action. And the staff prepared responsive comments that also incorporate the Board's 2013 responses.

Given that, I want to make sure people know that comments and responses to comments from the initial adoption of the regional MS4 permit from 2013 and the February amendment from this year are part of the record, and they don't have to reargue all the points they made earlier to make them part of the record.

Procedures will be the following: The Board will conduct this hearing in a relatively informal matter. We have received several

advanced requests for blocks of presentation time, which we plan to allow, and I will indicate at the end of this formal presentation today. Although, due to time constraints, we will not give Orange County Copermittees all of the time they requested, they will have time to address their issues.

We will consider requests for more time as the hearing moves forward. Interested persons will generally have three minutes each. As noted below, we have set a time for elected officials to speak. Do we have any elected officials that are here?

Then we will have a specific time for that. Elected officials wishing to address the Board, if so, at about 10 o'clock. It may happen before that. Please don't leave.

We also received a request from Orange County and Orange County Flood Control District to ask clarifying questions of staff. We will accommodate the request within their 30-minute block of time.

If other parties want to ask questions of staff or other parties, they may do so within their time of allotment. If any speaker wants to

reserve time for closing arguments or rebuttal, they should indicate the request at the beginning of their presentation.

As always, Board members and counsel can ask questions at any time. Questions and responses won't count against the speaker's time.

Finishing up the formal structure, if you haven't already, all persons wishing to the address the Board must full out a speaker card.

Either color?

We're colorblind as to the cards today. Speaker cards are available on the table at the back of the room. And as a reminder, if you're using an electronic presentation, be sure to give the board's executive assistant a copy so it can be included in the record.

General order of presentations will be as follows: The staff will begin in about 25 minutes.

Wayne, are you leading the staff discussion?

MR. CHIU: I am.

CHAIRMAN ABARBANEL: As the EPA could not attend today, a staff member will speak, in effect, in their place. Elected officials will

get three minutes each, and then we will move on to Riverside County Copermitees, then Orange County Copermittees. The cities of Laguna Beach and Dana Point will have 20 minutes out of the San Diego County time, and San Diego County will have 10 minutes. The Building Association will have 15 minutes. The Coast Keeper and Coast Environmental Rights Foundation, 30 minutes, and additional interested persons not associated with any of the organizations will have three minutes each after about 1 o'clock.

Somewhere in there, we are likely to need a lunch break, and at about 10:30 or so, we'll also have a biological break.

MS. HAGAN: Mr. Chair, I want to clarify. I may have misheard you. The San Diego County Copermittees have 20 minutes. I think you might have said 10.

CHAIRMAN ABARBANEL: I thought 10 minutes of their time went to Laguna Beach and Dana Point.

MS. HAGAN: And then they have the remaining 20.

CHAIRMAN ABARBANEL: All right. Apologies to the County of San Diego.

Each person who was planning to testify at this hearing will need to take the same oath that you will take if you were in a court of law.

Each person testifying shall begin by stating his or her name and affiliation and that they have taken the oath.

All persons who may testify at this hearing, please stand and raise your right hand.

Do you swear that the testimony you will provide is true and correct. If you do, say "I do."

(Simultaneous I do.)

CHAIRMAN ABARBANEL: Thank you very much. We actually don't have an option. Maybe we should.

Okay. With all of that formal stuff over, we will turn this over to staff who will have approximately 25 minutes.

Please come in and have a seat. As long as Wayne is standing there's at least one seat.

MR. CHIU: Feel free to take my seat. I'll leave the room after this.

BOARD MEMBER STRAWN: For your

information, I will have the time there.

MR. CHIU: You're only going to give me only 25 minutes?

BOARD MEMBER STRAWN: I just want you to be able to know how you're doing.

MR. CHIU: Okay.

Good morning, Chair Abarbanel, members of the Board. My name is Wayne Chiu. I'm a water resource control engineer in the storm water management unit, and on the regional MS4 permit team.

On the team with me are Christina Arias -- she's not here right now. She'll come back shortly. Our newest member, Erica Ryan, and, of course, our supervisor, Laurie Walsh.

Today we bring to you for your consideration, tentative order No. R9-2015-0100, an order amending the regional MS4 permit to incorporate the Riverside County Copermittees, and the last piece in an effort that began in 2011 to cover all the Copermittees in the San Diego region under one MS4 permit.

At this time, I'd like to enter the files into the record. Before I go over what you'll be considering today, I'd like to go over

where we came from to get here.

To start, let's review what the regional MS4 permit is regulating. "MS4" is short for municipal separate storm sewer system. It's a mouthful. For most people, the only part of the MS4 they see are the roads, the curbs and gutters and the storm drain inlets. But the storm water and the liquids and materials that go into these storm drain inlets contain pollutants that discharge into creeks, streams and rivers. Those discharges can have a significant impact on the physical, biological and chemical integrity of those waters. Like the trash, that can have -- or an impact on the chemical and biological integrity of the water in the Tijuana River watershed or the impacts that hydro modification can have on these creeks in Temecula and Murrieta in Riverside County.

These creeks, streams and rivers convey and transport the pollutants to downstream water bodies like reservoirs, lakes, estuaries and the ocean. And those pollutants can also have a significant impact on the physical, biological and chemical integrity of the downstream water bodies, which impacts the quality of those downstream

waters for our use and the environment's health.

Now, because these pollutants in the discharges from the MS4s are recognized as a significant source of pollutants, the Federal Clean Water Act requires that the discharges be regulated under the National Pollutant Discharge Elimination.

So MS4 discharges are regulated by an NPS permit, and in California, the state water board and regional water boards issue NPS permits for MS4 discharges. In the San Diego region, we've been issuing MS4 NPS permits since 1990.

So here's an overview of our region: Our region consists of a large watershed that drains the western part of San Diego county, the southern part of Orange County and the southwestern part of Riverside County. The areas in yellow are areas with the highest concentrations of developed areas and MS4s. Red shows the water bodies that have been identified as impaired by pollutants like bacteria, heavy metals, pesticides and trash, among others.

As you can see, most of these impaired water bodies are located within or downstream of these developed areas, where there is the highest

concentration of MS4 discharges.

So there's a strong link between discharges from the MS4s and the impaired water in our region. The MS4 permitting program is one of our most important regulatory programs to address a significant source of pollutants causing our contributing to these impairments.

Beginning in 1990, the San Diego Water Board began issuing MS4 permits, which were based on county and political boundaries. MS4 permits are issued on five-year terms and are supposed to be renewed every five years. The last MS4 permits, based on the political boundaries, were the fourth term MS4 permits issued between 2007 and 2010.

After the renewal of the fourth term Riverside County MS4 permit in November of 2010, we are about to begin the cycle again with renewal of the fifth term of San Diego County MS4 permits. However, we decided at that time is was time to try a new approach to regulating MS4 discharges and water equality improvements faster.

Around the time the fourth term Riverside County MS4 permit was being completed, the San Diego Water Board staff started forming

its practical vision. During the formation of our practical vision, as an organization, we realized we were only focused on the work we were doing today, like the numbers of inspections we had to do, the numbers of reports we had to review or the number of permits we had to issue, but not really knowing if those actions were going to result in improvements to water quality.

So our practical vision focuses our work on water outcomes. We want to achieve through our actions. We want to utilize our resources in the best way possible to improve water quality where it's needed most. We want all the monitoring in our region to be coordinated to allow us to better assess the conditions in our receiving waters, in the most cost-effect possible way for us. We want to recover lost and degraded streams, wetlands and riparian habitats. We want sustainable local water supply, and we want to reach out and better communicate with public about the water quality in our regions so people understand improving water quality improves our future. We believe if we can achieve these outcomes, we will have healthy waters and healthy people.

So while we were forming that practical vision, we began the process of developing the regional MS4 permit. The regional MS4 permit is the embodiment of our practical vision. We shifted the MS4 paradigm from requiring implementation of actions like minimum numbers of inspections and miles of streets swept.

On a jurisdictional scale, to prioritize water quality conditions of concern, require the coordination and implementation strategies on a watershed scale to achieve outcomes that will improve water quality. By threat to obtain areas that are sources of pollutants with BMPs that can remove those pollutants before they get in our waters or restoring and rehabilitating channels and habitats, or implementing projects that can capture storm water to be used as a local water supply resource.

And finally, the watershed base monitoring assessment program to determine if the strategies are working to improve water quality over time. This paradigm shift was supported by San Diego County, Orange County and Riverside County Copermittees, as well as the environmental

counsel.

To transition from regulating MS4 discharges primarily on a jurisdictional scale, under three separate MS4 permits based on county and political boundaries, we began the paradigm shift in May 2013, we got another regional MS4 permit, which superceded the fourth term San Diego County MS4 permit.

Next, the Board amended the regional MS4 permit in February of this year to the extend coverage to the Orange County Copermittees and superceded their regional MS4 permit. Today, we're proposing to amend the MS4 permit to extend coverage to the Riverside County Copermittees and supercede their fourth term MS4 permit and complete the process of having one MS4 discharges in the San Diego region.

This is a portion of Riverside county and the San Diego region that will be covered by the MS4 permit if you adopt the tentative order today. This map is provided, Supporting Document No. 2, in your agenda package.

There are four incorporated cities in Riverside County with all or part of their boundaries within the San Diego region: Temecula,

Murrieta, Wildomar and Menifee.

The remaining area in blue is the unincorporated area in our region. And the creeks shown in that dark blue area are operated and maintained by the Riverside County Flood Control and Water Conservation District.

The cities of Wildomar, Murrieta and Menifee also have parts of their jurisdictions in the Santa Ana region, regulated by our neighboring water boards to the north.

During the development of the fourth term MS4 permit, the San Diego Water Board and the Santa Ana Water Board entered into an agreement to have a single water board regulate the MS4 discharges in the cities. So the tentative order will continue that agreement for the cities of Murrieta and Wildomar to be regulated by the San Diego Water Board, and for the city of Menifee to be regulated by the Santa Ana Water Board. So this is the part of the Menifee that will be regulated by the Santa Ana region, and these are the parts that will be regulated by San Diego Water Board.

At the Orange County amendment adoption hearing in February, the Board requested

we investigate two issues and consider including them as amendments to the regional MS4 permit during the proceedings to extend coverage to the Riverside County Copermittees.

The first issue was language that will define when a development project will be subject to the development planning requirements for the regional MS4 permit or the fourth term MS4 permits, known as prior lawful approval language.

The second issue was including an alternative compliance pathway option that a Copermittee could implement to be deemed in compliance with water prohibitions and limitations in the permit, even if they are actually not in compliance. We held three workshops to discuss these issues of key stakeholders, the Copermittees, the environmental community and the development community.

Board Member Olson attended the workshop in April. Board Member Morales attended the workshop in May, and in June, we provided a final draft for the proposed amendments to the stakeholders.

In May, the Riverside County Copermittees submitted their reported waste

discharge to apply for renewal of their fourth term MS4 permit. We released the tentative order on July 31st for public comment, and that tentative order and attachments are included as supporting Document 1 in your agenda package.

The comment period closed September 14 for a 40 day comment period. We received 18 comment letters before the end of the comment period, included as supporting document three in your agenda package, and one late comment letter which we provided in your supplemental package as supporting document 11. We released a response to comments report and errata sheet on November four, included as supporting documents four and five in your agenda package, and we released a revised responses to comments report and revised errata sheet on November 10 provided in your supplemental agenda package as supporting documents 12 and 13.

Today we are ready for you to consider options of the tentative order. When we released the tentative order in July, the proposed amendments to the MS4 permit can be categorized in five areas. The primary reason for the tentative order was to amend the regional MS4 permits to include the Riverside County Copermittees as well

as continuing the agreement to allow the cities of measure yet, which will do mar and men fee to be regulated by one single water board. The tentative order also proposes to include the prior lawful approval language and alternative compliance pathway option, developed as a result of the public workshops we conducted, and I'll discuss those in a little more detail, and finally we amendment to see make corrections updates and clarifications in the permit, which I'll summarize later for you.

So let's start with the prior lawful approval language. This language was requested by the San Diego Copermittees and the development community. We discussed this topic at length it at the public workshops everyone freeze the permit language should provide a clear understanding for when a development project should be subject to the development requirements of the regional MS4 permit. The project that meets the conditions of prior lawful approval would not be subject to the conditions of the regional MS4 permit but would be allowed to implement the development requirements of the fourth term MS4 permit.

After we released the tentative order

in July, we received two comment letters about this issue. The City of San Diego supported inclusion of the language but requested a significant change that would remove the requirement for the commencement of construction activities as a condition for a project to have prior lawful approval.

San Diego Coast Keeper and the Coastal Environmental Rights Foundation expressed some reservations with the language, and they also requested some significant changes which would remove prior lawful approval for projects that had not begun construction activities -- or have -- for projects that have begun construction activities after the effective date of the BMP design manual and also require a development project to have all approvals and permits in hand to complete a project prior to the effective date. We doesn't receive any comments from the development community on this.

After carefully considering the comments, we decided the conditions for the project to have prior lawful approval developed from the public workshops were reasonable and the language was clear and easy to enforce, so we

didn't make any changes

Next I'll cover the proposed alternative compliance pathway options. This issue is related to an optional compliance pathway that would allow a key to be deemed in compliance with the receiving water prohibitions and limitations of the permit. This is not part of the offsite alternative compliance program that is applicable to development projects; it's part of a completely different discussion. Now, at this point in time the Copermittees are not in compliance with the receiving water prohibitions and limitations and the or at least nobody thinks they are. San Diego County, Riverside County and Orange County Copermittees have repeatedly requested the inclusion of an alternative compliance pathway option they can implement to be deemed in compliance of the receiving water prohibitions and limitations. And even if they are actually not in compliance with those prohibitions and limitations. In contrast, the the environmental community strongly opposes the alternative compliance pathway because their concern that it removes the potential for enforcement for existing violations of receiving

water prohibitions. The version of the alternative compliance pathway was considered by this board at the may 2013 regional MS4 permit adoption hearing. At the Orange County adoption hearing, amendment adoption hearing, the board was very interested in adding the optional compliance pathway to the permit but agreed the issue required additional discussion before it could be included, so we thoroughly discussed topic at the public workshops held in April, May and June of this year with the Copermittees and the environmental community.

At the workshops, the discussions began based on the version of the optional compliance pathway that was considered in May 2013. At the workshop, the Copermittees strongly supported incorporating the optional compliance pathway, but also wanted compliance during the pathway process as well as more language that would clearly state they were in compliance with receiving water prohibitions and limitations.

At the workshop, the environmental community was strongly opposed to putting the optional compliance pathway in the permit, but for discussion, if it had to be included, they wanted

provisions that clearly specified when a Copermittee was no longer in compliance and they were strongly opposed to the pathway preparation process because they believe that compliance during the preparation process would remove the intention to propose a rigorous and comprehensive alternative optional compliance pathway.

Based on the information we received at the workshops, we chose to include the optional compliance pathway into the regional MS4 permit but not to include compliance during the preparation process. As it so happens, on June 15th, the state water board adopted an order, 2015-00075, a presidential order which directs all the regional water boards to consider including an optional compliance pathway in all MS4 permits going forward.

Now, if a regional water board chooses not to include an optional compliance pathway, then they would have to provide findings in the permit that support not including it. If a regional water board chooses to include an optional compliance pathway in the permit, then the optional compliance pathway is expected incorporate certain principals in the order.

Fortunately the requirements of the regional MS4 permit and the optional compliance pathway option we developed as a result of those public workshops are consistent with the state water board's order and incorporates the seven principals. The fact sheet, which is attachment two to the tentative order provided as supporting document one in your agenda package have the requirements of the regional MS4 permit and the optional compliance pathway that incorporated seven principles of the state water board's order starting on page F60 on the fact sheet.

On this topic we received the most written comments. We received comments from the San Diego county, Orange County and Riverside County Copermittees as groups as well as from several individual Copermittees. The Copermittees requested several modifications that, generally, from our point of view, affect the rigor and transparency of the alternative compliance pathway options and would make the conditions much easier to be able to have the privilege of being deemed in compliance with the receiving water prohibitions and limitations.

In particular, the Copermittees

requested a reduction in the number of milestones that were required to be proposed for the alternative compliance pathway schedules from one milestone per year until a numeric goal is achieved to just one or two milestones in a five-year permit term. And they requested language that would deem them to be in compliance during the pathway preparation process.

The environmental community, again, objected to the inclusion of the alternative compliance pathway and asserted there were several legal issues as well as the inconsistencies with the state water board order that justified the removal of the alternative compliance pathway option from the regional MS4 permit.

There were no comments from the development community.

So after carefully considering the comments, they made a few minor modifications to the alternative compliance pathway, but the most significant change was reducing the number of annual milestones required to be included in the alternative compliance pathway schedules from one milestone per year until a final numeric goal was achieved, which we agreed was difficult to project

for 10 or 20 years, to just having five annual milestones per permit term, to be revised and updated with each permit term.

Now, the tentative order also includes several amendments, corrections, updates, and clarifications to the permit language.

CHAIRMAN ABARBANEL: Will you review as well as you can the thought process of the State Board in requiring alternative compliance pathways?

MR. CHIU: Well, okay. The State Board's order doesn't actually require us to have an alternative compliance pathway. It requires that we consider including an alternative compliance pathway into the permit. Now, it is a very strong encouragement that we include it in the permit, and that's why, if we don't include it in the permit, we have to provide good reason for not including it in the permit. That's why we have to provide findings in the permit that say this is why we are not including it in the permit.

Now, on the flip side, for reasons including it in the permit, I think they -- there's a recognition that -- it's unlikely that the dischargers are going to be able to achieve

within our limitations within a five-year period, and there's a recognition that it's probably going to take multiple permit terms in order to get to that end point.

But, you know, I think they wanted to have some fairly rigorous and controlled process in which the regional boards can oversee implementation of some sort of process that will provide some assurance that we can achieve those limitations within a limited period of time, not an unknown period of time.

EXECUTIVE OFFICER GIBSON: Mr. Chair, if I could also offer a point of view another way of looking, I think, at the state board's approach at this is putting some meat on the bones of the process the State Board set out in 1998 and 1999 for achieving water quality objectives through the municipal separate storm sewer system permits and program. That process was open-ended. It had not been exactly clear the across the spectrum of the environmental advocates and municipalities exactly how the process was to be structured, where it starts and stops, et cetera. Our approach in this region permit is for that order and the order itself I believe is to put structure to that

iterative process and to identify a particular target or goals and achieve those.

In this case, with the alternative compliance, we would be looking at all of the outstanding water quality objectives that are not being met that we have impaired water bodies for. It's an option. Not every watershed or municipality may take that approach, but that is the basis for the State Board's approach in the regional permit itself.

CHAIRMAN ABARBANEL: What are the impediments for achieving those water quality objectives in a five-year period?

EXECUTIVE OFFICER GIBSON: Mr. Chairman, I think you will hear there are many reasons why those are hard impediments. Number one will be cost.

CHAIRMAN ABARBANEL: So there's no -- it doesn't violate the laws of physics?

EXECUTIVE OFFICER GIBSON: Not being a physicist --

CHAIRMAN ABARBANEL: They don't have to invent new physical laws in order to make miracles happen. It's a matter of implementing what they know how to do?

EXECUTIVE OFFICER GIBSON: It is a question of technology and function.

BOARD MEMBER MORALES: Maybe to put it in different terms, it's not a matter of impossibility, it's impracticability.

EXECUTIVE OFFICER GIBSON: I am nodding my head in agreement.

CHAIRMAN ABARBANEL: Well, you mentioned technology. If we are unable to implement something that remediates the water quality issue, then it doesn't matter how much money we spend on it, it's not possible. It may be possible in 50 years with different equipment, I don't know. Is that a kind of technical issue?

EXECUTIVE OFFICER GIBSON: I think that's pushing it out to the edge of the envelope, Mr. Chairman. I do think it's practical for us to achieve our water quality objectives. In some cases you may want to consider how those objectives have been set historically in the basin plan, and our permitting approach allows us and the Copermittees to address that question while working on the attainable goals.

The alternative compliance is an option wherein, perhaps, a particular watershed or

with a particular storm water Copermittee, we might actually be able to define the process for getting there, know we've gotten there, and be able to do so in such a way as to merit the significant increase of the costs among one or more Copermittees to achieve that.

And as a evaluation or approach for that, municipalities would like to see some assurance that they would not be held in violation of water quality objectives while they are undertaking that effort both in terms of the implementation of the plan, which will certainly take many years in some cases, and the development of that plan, as you will hear testimony today, what they want in terms of assurances on those.

I will simply point out in summation that this issue has been with us for over 25 years. The federal regulations were issued in 1990, and if there was any ambiguity about the obligation to comply with water quality objectives, those were erased in late 1990s, certainly with state board's order of 9801 to 9805.

Going forward, we have significantly improved our capacity to manage our storm water

systems, far above and beyond what they were 15 years ago. It's now taking those tools and applying them in the watershed and obtaining those goals we are here to talk about today again.

Moving forward with that in a practical way is our next step, whether or not the Board considers the alternative compliance, you have significant testimony on that, and I will be glad to provide a recommendation during the course of the day, but I'd invite you to hear the testimony first.

CHAIRMAN ABARBANEL: I have one more question.

EXECUTIVE OFFICER GIBSON: I hope that I am not stealing Mr. Chiu's thunder for the rest of his presentation.

CHAIRMAN ABARBANEL: Repetition will not be harmful.

In assessing costs of achieving the water quality, is the benefit of having achieved it republic in many dimensions, including health accounted for.

EXECUTIVE OFFICER GIBSON: At the present time, I'm going to say that is an imperfect science an incomplete science.

CHAIRMAN ABARBANEL: So I'll take that as a no.

BOARD MEMBER OLSON: I'd like to ask you, in terms of these milestones, how prescriptive are they?

MR. CHIU: Certainly. The way it's laid out in the permit, a milestone can be almost anything. It's just a way to mark progress. So it could be as simple as saying we need to develop some sort of program. As part of that program, we need to have, you know, a plan developed by such-and-such time.

It could consist of some sort of numeric interim goal for the final goal. It could be implementation of a certain number of BMPs by a certain date.

BOARD MEMBER OLSON: Can it be part of a program that has alternatives?

MR. CHIU: The milestones are simply a way for us and the public to be able to see what the Copermittees are proposing to implement, if they implement it within the time period they have proposed, and then if that implementation is going to move the needle towards achieving the final goal.

BOARD MEMBER OLSON: Well, if you try something, and it doesn't work, then is that allowable, or do you try things that you're guaranteed a success?

MR. CHIU: With the water quality improvement plan, there is an aspect to have adaptive management. If things change, you have the ability to adaptively manage the program and your milestones. That's why we changed the milestones from, you know, one milestone per every year until you achieve your goal, which, like I said, 20 years down, you have 20 annual milestones for one goal, it could get a little bit hard to project 20 years out.

So we reduced it down to a five-year period, which, then every five years, they re-evaluate their milestones and then project the milestones they plan to achieve within the next five-year period.

BOARD MEMBER OLSON: If I understood your language, they still need a milestone a year?

MR. CHIU: Correct.

BOARD MEMBER OLSON: So it's 20 in a 20-year period?

MR. CHIU: No, five. They only have

to propose five that they will try to achieve.

BOARD MEMBER OLSON: Five milestones?

MR. CHIU: Within a permit term.

BOARD MEMBER OLSON: So there's one milestone per five years?

MR. CHIU: No, there's five milestones per five years.

BOARD MEMBER OLSON: I'm confused. Maybe you can repeat it one more time.

MR. CHIU: Initially, the language says you must have an annual milestone for each annual period until you achieve your numeric goal, and you set up a numeric goal that you plan on achieving, say, 25 years from now, you would have to have 25 annual milestones. Now, what we changed it to is instead of saying you have to have 25 annual milestones, you have to have five annual milestones and that final goal.

BOARD MEMBER OLSON: So you still have to have -- I don't see what the difference is.

MR. CHIU: You start out with five, and then as you learn something during those five, when you submit your next five with your report of waste discharge, you have learned something with the first five, hopefully, and then you can

project your next five.

BOARD MEMBER OLSON: But you still require the same number of milestones. What you're saying is different in that you don't have to lay out all 25 milestones.

MR. CHIU: Correct.

BOARD MEMBER OLSON: So -- I'm struggling with this. So we are learning as we go. So we have more knowledge at the end of five years.

MR. CHIU: Hopefully.

BOARD MEMBER OLSON: Hopefully. So it may be just as difficult to obtain an objective after five years even with more knowledge, we may realize there is more natural influence, and there may be issues that we find out, too.

So what is the advantage -- I mean, I can understand, but you could have three milestones for five years. I'm not quite sure exactly what the difference is except you think if you have one milestone every two years, people will not be working toward that milestone?

MR. CHIU: Well, I think, you know, most of our permits -- I should say, the regional permit has an annual reporting cycle, and I think

when it comes to showing progress, they want to have something each year to show the Copermittee or Copermittees as a group are implementing things that are progress. That's why there is some flexibility in what those annual milestones can be, because we understand that implementing some of these projects can take some time. But that doesn't mean that, you know, we should wait five years to hear whether or not it was completed. There are interim steps in any project, so we would like to see that there are ways to see how things are moving along.

BOARD MEMBER OLSON: We all agree the most important outcome is to achieve the objective.

MR. CHIU: I agree.

BOARD MEMBER OLSON: And I want to make sure that what we do doesn't become over burdensome because you would like, and I would like, and I believe the public would like money spent to review the problems, and not hiring a consultant to write a report that you have to --

MR. CHIU: I agree with that. That speaks to the permit that we have tried to change relative to previous permits. We have one annual

report per year now for the entire watershed versus, you know, 50 annual reports that we had the previous permits. So we reduced the amount of paperwork that is necessary in order to record everything.

BOARD MEMBER OLSON: Didn't you just make a larger report? So in that report, you get one big report instead of 60 little reports?

MR. CHIU: I would say we reduced the areas that are unnecessary and increased the areas that are necessary. So what we had in the past was a lot of reports that were provided, a lot of unnecessary information that was very difficult to boil down into useful information. What we've done with the reports now is we've reduced a lot of the jurisdictional reporting requirements such as a set of numbers and focused a lot of the reporting on the monitoring data that is collected and how the information from those assessments can be used to improve the jurisdictional programs and the strategies that are being implemented.

In the past we had a lot of monitoring, but it wasn't really connected to the programs and outcomes, and the programs and outcomes were reporting a lot of the action they

were implementing without seeing how they would improve water quality or contribute towards the improvement of water quality.

We try to strike a balance between what's necessary to report and what's unnecessary.

BOARD MEMBER OLSON: And we'll be evaluating ourselves during this period?

MR. CHIU: Absolutely. This whole process is intended to get everybody involved on trying to achieve outcomes, not just the dischargers, but us as well. We have to figure out how to make our programs more effective, how to make the permit more effective, because we have permits in the past that, while they did move the needle a little bit to improve water quality, it's really hard for us to tell how or where they improved or what actually did the improvements. With what we've done with this permit, we've really tried to change it so that we can figure out what is working and what is not working, and where things work, expand on that, where things don't work, let's decrease that. It's trying to maximize the efficiency that we all want with our resources and our time. That's really what we're trying to do with this permit.

The milestones are part of that. It's hard to track how things are moving if you don't have a way to track. That's partially why we recognize that 25 years of milestones all upfront is difficult. So let's break it down into smaller chunks that are a little more manageable, but let's really use that to think about how that can help us in the future. That's why it's a five-year process can spring from.

BOARD MEMBER MORALES: Staff, anybody out in the audience, feel free to correct me if you think I'm wrong, but in terms of what may have been going through the State Board's head, I wasn't in there, but as I see it, what they may have been thinking is "Regional boards, we are not going to micromanage you. An alternative compliance pathway is something that you don't have to have, but if you do not, it's incumbent upon you to explain to us why you didn't include one. We're not going to give you the benefit of the doubt.

"On the other hand, if you get people together and you adopt an alternative compliance pathway, we'll give the benefit of the doubt."

That's kind of what I took from it. So if anybody disagrees with that, please tell me when you all speak.

MR. CHIU: I'll agree with you.

BOARD MEMBER STRAWN: I stopped the clock when they started asking questions.

MR. CHIU: Thank you.

CHAIRMAN ABARBANEL: The Copermittees that are going to be speaking later, I'm going to ask you -- you heard staff's intentions of reducing the paperwork load and making the reporting more meaningful -- is that a good way to describe it?

I would be very interested in hearing your comment to that, specifically what you think we put here, what we're putting together is going to, in fact, reduce your paperwork load, or are we still dumping some rather useless requirements onto you?

We're not trying to kill trees or burn up ink here. So please let us know your honest belief on how we're doing. I think the proper goal that Wayne stressed, let us know if we're going in the right direction.

MR. CHIU: Can I make a comment on

that particular aspect?

At least for the last two years, we've had these transitional jurisdictional runoff management program annual reports. In the past, we used to get 20 binders about that this thick that we would have a hard time really understanding what's in there. And now each Copermittee has provided to us a two-page annual report.

Going into the future -- we've also been receiving their monitoring reports for the watershed. And where we had one monitoring report for the entire region, we now have eight monitoring reports that are broken up by watershed. So it's a little more watershed specific. Like I said, we've increased some reporting but decreased some reporting, as well.

CHAIRMAN ABARBANEL: It appears to me you have about three minutes left.

MR. CHIU: That should be plenty.

BOARD MEMBER STRAWN: Take what you need up to three minutes.

MR. CHIU: I will. I think I should get three minutes and 14 seconds.

CHAIRMAN ABARBANEL: Take three

minutes and fifteen seconds.

MR. CHIU: Thank you for your generosity.

BOARD MEMBER STRAWN: You're welcome.

MR. CHIU: The amendments included several corrections, updates and clarifications to the permit language. I'll summarize those for you.

The amendments included revisions to the requirements for two TMDLs in the permit. We identified an inadvertent omission of an option to develop a bacterial load reduction plan instead of a comprehensive load reduction plan for the beaches and creeks bacteria TMDLs. So we corrected those TMDL requirements to allow for bacteria load reduction plan to be developed. And then we added some language to the Los Penasquitos lagoon present TMDLs to help compliance.

We also amended the permit to update the requirements for non-storm-water discharges to reference a recently-adopted State Water Board permit which regulates discharges from water line flushing and water main breaks, and then, also, change a reference to a San Diego Water Board permit to a more recently adopted permit for

discharges for groundwater extraction.

And then we also added some language to the fact sheet and response to comment to clarify that if a Copermittee is in compliance with the elicit discharge, detection and elimination requirements, then the Copermittee would be deemed in compliance with the effective prohibition of non-storm-water discharges to the MS4.

Finally, we will made a few amendments to the development and planning requirements. After the amendment to incorporate the Orange County Copermittees into the MS4 permit, we identified an inconsistency in the definition of priority development projects compared to the fourth term Orange County and Riverside County MS4 permits. So we corrected the definition to be consistent with those previous definitions.

And as a result of those corrections, we needed to include some clarifications on how a Copermittee was expected to update their BMP design manual with the corrected definitions. After reviewing the written comments we received, we decided a few initial revisions were warranted, including language to clarify the effective date

of the BMP design manual and the definitions of construction activities and redevelopment. So those revisions we made in response to the comments, along with the other revisions made to the tentative order included in your revised errata sheet provided in Supporting Document 13.

So to conclude, we recommend that you adopt Tentative Order R9-2015-0100 with the revised errata and Supporting Document 13 of the MS4 permit to incorporate the Riverside County Copermittees, as well as incorporate the prior lawful approval language and the alternative compliance pathway option.

BOARD MEMBER STRAWN: 26 seconds.

MR. CHIU: I'm available to answer any questions you may have now.

BOARD MEMBER MORALES: No.

CHAIRMAN ABARBANEL: Thanks to Mr. Chiu and staff for all of their hard work. I really hope that the public -- I know a lot of you that were part of the process will understand what they've done. It's a lot of work that went into this. A lot of effort.

MR. CHIU: Thank you.

Christina is going to read into the

record a statement from the EPA.

CHAIRMAN ABARBANEL: In a second. Because of the time, and the mission of the Water Board, physical, chemical, and biological improvements, I'm going to declare a seven-minute physical, chemical and biological break, after which we will hear from elected officials and Christina. Thank you.

(Recess taken.)

CHAIRMAN ABARBANEL: Are there any elected officials who wish to speak to the information discussion of Item 11?

BOARD MEMBER STRAWN: We have two cards. Mr. Olvera, Mayor of Dana Point.

MR. OLVERA: Thank you very much. Good morning. Carlos Olvera, Mayor of the City of Dana Point, registered mechanical engineer with the state of California.

We are trying to solve a problem, all of us going in the same direction. I would ask you not to give me a box wrench that you do not know the size of the nut that has to be turned. If you give me an adjustable wrench, I can use that and get the job done. So give me the tools that I can do and accomplish the job you want me

to do.

Thank you very much.

BOARD MEMBER STRAWN: Mr. Green.

MR. GREEN: South Coast Water District, Bill Green.

BOARD MEMBER STRAWN: I recognize that face.

MR. GREEN: Good morning, honorable Board. It's good to be here once again.

As a resident of Dana Point, we live in very water-conscious community, and we focus and pride ourselves on water quality. To remind the Board, I started surfing over 50 years ago. I love clean water.

However, I have five unique dimensional perspectives on water quality in California. The first is, my vantage point was from your position. As the governors of the appointed water quality member of this Board, serving with Gary and Eric to establish just policies for the citizens of California.

My perspective has also been when the USA EPA dictates to the state, CAL EPA lawyers interprets them and renders opinions to the regional staff, and the regional staff further

finds and recommends and interprets to your view of the body to set policy and water quality issues.

However, not all regions are setting like policies. If not, why not are all regions not the same in one state? Perhaps all counties are not the same, as well, in one region. No matter, it is a difficult question and a complex answer.

As a second dimension, as a supervisorial appointed commissioner to the Riverside County Flood and Water Conservation District, I have the privilege of implementing policies and mandates and/or CIP programs.

As a third dimension, being an elected official for the South Coast Water District by the people representing them, and having to explain why their taxes and fees are increasing as a result of those mandates.

Four, as a state president for the American Counsel of Engineering Companies, working with the State Water Board to develop water quality certifications for professional engineers.

My fifth dimension of water quality is 33 years as an avocado farmer, a member of the

Riverside County Farm Bureau, and a member of the San Bernardino Irrigated Land where I personally managed BMPs and do reports.

As a coastal community and entity of the water district, water quality is our top priority. Many beach cities work together to implement water quality. Clean beaches mean happy visitors to our community; therefore, we are motivated to keep our constituents satisfied.

The South Coast Water District has reduced water usage by 30 percent this summer, well above the 20 percent target mandated by the state. Aggressive sewer line inspections, as a result of numerous sewer line (inaudible) have included the state park at Doheny and the Dana Point Harbor. We've done our fair share in our community to preserve water quality.

Thank you very much for your time.

BOARD MEMBER STRAWN: Do we have any other elected officials that I missed cards to?

Thank you. We'll go to San Diego County.

CHAIRMAN ABARBANEL: No, we're going to hear from Christina appearing for the EPA.

MS. ARIAS: Good morning, members of

the Board. My name is Christina Arias. I actually stepped out of the room when you were issuing the oath, so I believe I need to take the oath.

CHAIRMAN ABARBANEL: Do you swear the testimony you provide is true and correct. If so, say "I do."

MS. ARIAS: I do.

We've been in contact with U.S. EPA region 9 over the last several weeks, and, specifically, David Smith has sent his regrets he's not able to be here today, but he did ask us to share some thoughts for you to consider. There's two main items.

Number one, alternative compliance pathway. Consistent with our prior comments on proposed MS4 permits developed by the San Diego, Los Angeles and Santa Ana region, EPA strongly supports the proposed provision that permittees would not be considered in compliance with the water quality improvement plan provisions prior to plan approval. Prior to a determination by the regional board that the submitted plan contains specific implementation commitments that are sufficient to provide reasonable assurance that

TMDL and other relevant water quality based requirements will be met. There is insufficient basis to conclude that the permittees are or will be in compliance.

Number two, this has to do with clarifying expectations for the analysis and planning under the alternative compliance pathway. The proposed permit modifications include additional language recognizing the availability of an alternative compliance pathway based on reasonable assurance analysis but provide only limited direction concerning the regional board's technical, analytical inclined expectations that must be met my permittees pursuing this alternative compliance pathway.

We have learned through our observation of other regional board's experiences with implementing this approach that more detailed explanation of the regional board's expectations greatly assists development of analyses and plans that meet permit requirements.

If the Board adopts the proposed language providing for this alternative compliance pathway, we recommend you commit to promptly develop a follow-up guidance to assist permittees

and other stakeholders in interpreting the permit's provisions concerning this pathway.

It will best serve everyone's interest if there are clear understandings about the level of technical rigor necessary to demonstrate reasonable assurance and the specificity of implementation commitment necessary in the associated implementation plans to secure approval.

As EPA is currently working with the state board on reasonable assurance analysis guidance, we may be able to help the regional board in developing guidelines to assist in consistent, effective implementation of the proposed permit alternative compliance pathway.

Thank you for considering these comments. David Smith, manager NPDES, permit section, U.S. EPA, Region 9.

CHAIRMAN ABARBANEL: Thank you. The next speakers listed are the Riverside County Copermittees. You'll have 15 minutes.

MR. MCKIBBON: Thanks. I won't need that long.

Good morning, Mr. Chairman, fellow Board members, I'm Stewart McKibbon with the

Riverside County Flood Control Conservation District.

Our district is the lead permittee for the Riverside County Copermittees, which consist of the cities of Murrieta, Wildomar, Temecula and the unincorporated county.

The first thing I want to do is say we're pleased the staff and the board took this opportunity of our enrollment in the regional permit to include the alternative compliance pathway. It's something we've been asking for for many years, and to see it now is a very good thing.

I also want to say, we are very pleases with how staff has conducted the introduction of the language to the community. I want to say that Lorry Walsh and Wayne Chiu and Mr. Gibson have been extremely helpful in clarifying things that we -- we were trying to understand, and they helped straighten us out a little bit.

We have written comments on the record, but what I want to take this 15 minutes to do is just to focus on three issues that mean quite a bit to our Copermittees. And you also

find out that it may mean something to our other permittee friends in Orange County and San Diego.

The first thing, we believe the permit should include compliance language for receiving waters during the time the WQIP is being developed. I'll be calling this "interim compliance" while developing our plan.

In our conversations with the executive officer and staff, they let us know that they had concerns about it, and we just heard from the EPA know that they had a concern that they don't know people are going to follow through and actually commit to improving water quality.

What I want to propose today, and I provided this in writing to staff, but in more detail is an approach that would provide for rigor and accountability to the Copermittees during that preparation phase. In short, what it is, is simply -- you already have milestones for the WQIP development in the permit. What we propose is simply add deadlines for each one of those milestones. If they're natural check-in points that are already in the permit -- for example, we have to start a public process or public participation process to develop the model. We

have to have a committee, the consultation committee. We have to submit an interim WQIP to the regional board.

What we suggest is that we give specific timeframes for when that has to be done. And consistent with what's in the rest of the permit, if we miss those timeframes and we're not able to provide a rationale why we missed it, for example, "We didn't have the meeting because people were on vacation," instead of day 60, we had it on day 72, that the regional board can say, "That's a good rationale, and you're okay," and we also have to provide some sort of plan to get back on track if we're off track.

But if we don't make it on track, we would recommend that the regional board can look at this and then take away our compliance, because we haven't performed like we said we would. What we want to do is increase our accountability. We want to increase our transparency, and we want to increase our rigor during that formation process.

So like I said earlier, I provided draft language to regional staff. I don't want to go through it now and bog down the hearing, but it's there if this Board is interested in

providing interim compliance to Copermittees.

The second issue I want to bring up is a major issue. We did not include it in our written comments, although I did bring it up in our workshops, and that's the time available to prepare the water quality improvement plan. Right now, it's two years from the time of this adoption that we have to complete the plan.

What I do for a living is I prepare master drainage plans. That's what I do for a living. I've done it six times in my life. Never done one in two years. Never happened. We just did one recently near Lake Elsinore. They only covered 13 square miles. We ended up proposing nine miles of channel and, probably, the total cost of improvements was 50 million dollars. That took us several years, like five, including environment review, and over 9,000 hours of staff.

To try to compress that into two years, my experience says that's going to be really, really tough; it's not practical.

The second thing on why we want more time and we should get more time is we want to have a good plan. The best way to have a good plan is community involvement, public

participation. If we have more time, then there can actually be give and take. They can make a suggestion; we can look at different alternatives.

If you only have two years, you have to be very focused on getting to the finish line. You can't look at better options. You might have already made up your mind or you don't have the time to really investigate what other people are suggesting to you. So as a matter of having a better plan, we recommend more time.

Third just another issue that -- this permit originally came out in 2013. It was recently readopted with our friends in Orange County. This permit adds a public participation process for the modeling, but there was no additional time given. There was two years before, now even more you have to do, you still have two years. It simply was probably not fair, is the right way to put it.

What we think would be a good time period -- it would be tough but 36 to 40 months from the adoption of this permit. That's similar to what L.A. has; I think they have 40 months in their permit. But we think 36- to 40-month, something like that, will give that time

particularly for the interaction with the public, get their input, incorporate their, ideas give it a real shot, real alternative analysis.

The last thing I had is, Mr. Chiu, when he was talking during the presentation talked about the City of Menifee, and that the City of Menifee is going to be governed by Region 8. They need to participate in the process. The City of Menifee has 1.3 square miles that is in the watershed, and has no MS4 major outfalls. We have the only one that's in the city. We control it already.

They do have some curb and gutter, but for the vast majority of the land that is in the city, that is owned by private hands. So it makes senses to us as a practical matter to excuse the City from participation in the WQIP preparation process. They really have nothing to do. They don't even have an MS4 outfall. There's nothing going on, really.

So the City of Menifee wrote a letter that's in your written comments. We support their letter. Also, support the -- there's discussion earlier about milestones. We support having five when we adopt our WQIP -- having the next five

years of milestones laid out. That's something, as publics works agencies, we have capital improvement plans, which normally apply to horizons. Those can be easily foretold. Trying to predict something, year 15, year 20, 10, you're going to end up changing it anyway. It's better if you keep it close where you really have a good control and can protect it better.

Finally, whether the actual reporting increases our load, that was your question. That came up, Ms. Olson. We believe there's some consolidation, and there's a benefit from having all of the information in one watershed and one report. As far as the burden, Riverside county permittees are only in one watershed.

We can definitely see if some of our friends in San Diego -- the county has six or seven watersheds -- this could be a burden on them. For our own particular purposes, it wouldn't be that much.

So I don't know. I've got six minutes left. I can reserve that time for later in case something comes up. I'd like to reserve that time if there's any questions you have, I'm available.

BOARD MEMBER MORALES: Unfortunately,

you're the first speaker from the Copermittees so I'm cutting right to it. Is the reason that the Copermittees want, basically, to be deemed in compliance while they're working on the WQIP so they feel they're shielded from attack or litigation or something like that? Are there other reasons besides that?

MR. MCKIBBON: That's one reason. Another reason is there is going to be a substantial expense. We're talking a million dollars to prepare a model and do all the meetings that are necessary and all the alternatives that we might have to accomplish. To have coverage -- that's real money; real commitment. Since we're making that real commitment, there should be coverage at the same time.

BOARD MEMBER MORALES: This will be a question for everybody. You gave an estimate of 36 to 40 months as the timeframe for Riverside. I am assuming that estimate is based on your understanding for the availability of staff to put into the process, and that will differ from Riverside to San Diego to Orange County. So their window timeframe may be different, may be the same, may be wildly -- they may come in and say

"We can do it in two years." Some may say, "We can't do it for eight. We don't have the resources to get it done." That's a tough one for me.

But I guess the last question I ha?ve -- again, this will be for everybody is, having anticipated that we were going to reach this point today, have you all done any advanced work on the WQIP process? Have any of your staff --

MR. MCKIBBON: Absolutely. We've already gotten inventories, we're working on our outfalls, determining whether they're persistent flows or not; staff is working on that. They're working to have a scope ready so I can go by Thursday to consultants to do the modeling and do the support work for the WQIP. We developed this scope. We developed timelines. We've done a lot of work already.

I've been talking to people that would sit on the consultation panel. What we would like to have is a public works director for the City of Wildomar on this panel, and the city engineer for Temecula on this panel. Why is that? Because we have to make commitments to spending real dollars. You need people to make decisions to do that.

That's not lower-level staff. Nothing against lower-level staff, but they don't have the authority and these people do.

So we have been doing work to do that. We've also been talking to the water districts here at the same time that we're doing this regional planning effort, we should be doing something that's not in the permit, which is storm water recharge. I want to invite the Rancho California Water District and Western Municipal Water District to sit on the consultation panel so we can examine and do storm water recharge at the same time. It may not be in the WQIP, but it would be in an adopted plan that's going to be adopted by our Board.

And then going back to your middle question, which was -- it's not just the fact that the resources -- money is not the only resource; time is an important resource. To have interaction with people, you can't throw money at them and think that's interaction. You have to talk to them; you have to analyze what they propose and have some give-and-take. You can't sit there and say "I know what's best." It won't fly. We want a plan that has community buy-in.

You won't get community buy-in if you stiff-arm them on this process.

BOARD MEMBER MORALES: Maybe it was inartfully phrased but I equated money with staff positions.

MR. MCKIBBON: Right now I've got -- anticipating five people in house, working on it, plus two consultants on the outside. It's going to be a substantial investment in money for Riverside County.

BOARD MEMBER MORALES: Thank you.

BOARD MEMBER STRAWN: I was going to -- with your permission, I'm going to add 30 seconds. I don't want to charge people for answering the question about the paperwork. I want to encourage you.

CHAIRMAN ABARBANEL: Just for the public's information, we bought Gary an atomic clock.

MR. MCKIBBON: Appreciate your consideration.

CHAIRMAN ABARBANEL: I have a question. I understand your argument for extending the time fully creating -- creating a full-blown WQIP. Would an interesting or

acceptable middle position be that in a two-year period, you have to come up with a draft of where you're going but not come up -- that you may still be working, but a final plan would come 12 to 14 months later.

MR. MCKIBBON: That's workable. I want to point out there's no mention of getting SEQA approval in the permit. That takes time as well.

I want to say yes to your middle ground -- I also want to say if you want the permittees, you want them to build BMPs to actually impact water quality, go to places that have been hydomodified, if that's a word, we're going to need a SEQA document, and you're going to have to consider all these things together because one of those SEQA things is the cumulative impact. What is the cumulative impact do in all this?

You don't know until you have that whole plan. And then we can go adopt it. That plan, once adopted, is our Board authority to go get right of way, to build these things, for us to spend funds. So the SEQA is an important element of this plan for the way it's being envisioned.

At no timeframe has been accounted

for. Some of these facilities may come later because we need to do the SEQA, as well.

Thank you.

BOARD MEMBER OLSON: I just wanted to understand this a little better. You have submitted to the staff a plan that would have certain requirements, but would give you -- but would put the agency in compliance during the time period that they're developing the water quality plan.

MR. MCKIBBON: Yes, we developed specific language, looks just like your permit, that can be inserted to the permit. Here are the check-in points. Here are the time frames when we'll check in. We have to have a rationale and plan to get back on track. Then the executive officer can say you're out or whatever. I imagine the executive officer would recommend to this board our compliance be terminated until we adopt a WQIP.

BOARD MEMBER OLSON: So I guess the end of the time for comments was on September 14th. So you -- can you give me a timeframe about when --

MR. MCKIBBON: I submitted it to Lorry

on Monday, and we developed it last week because we knew that -- I don't know how this Board feels about compliance during this time period, but we wanted to have, if this board thought it was acceptable, an option, something you could choose from. "Heres something that's already been thought about to incorporate into the permit." So that's the idea.

We've always been asking for interim compliance, but this is specific language that could make that work, more than just saying: "We want interim compliance," something more. Something more accountable.

BOARD MEMBER OLSON: Thank you.

CHAIRMAN ABARBANEL: The next group of speakers or individual speakers is the Orange County Copermittees. You'll have 30 minutes. Given the time, we will follow that with the cities of Laguna Beach and Dana Point and the San Diego County Copermittees, and then we will have a lunch break.

MS. CORPANICH: Good morning, Mr. Chair, members of the Board. I'm Mary Anne Skorpanich from the County of Orange. I want to thank you for the opportunity to speak with you

once again today and thank you in advance for consideration of our comments and the kickoff for a three-part presentation, to be followed by Ryan Baron, County Counsel, and Jeremy Jungreis, representing some of the city Copermittees. And I did want to make note that our comments are on behalf of all the permittees in South Orange County, and that we would like to save whatever remainder of time we have at the end for questions and answers that may come later.

You may have noticed, but I did the green card today because I'm here to say "Yay for alternative compliance options and thank you." Let me just -- I should also note you won't have the pleasure of hearing from Richard Boon from our staff today. He usually presents many witty insights into the issues that we're talking about, and always ends with quotes. I did begin with a quote from one of my personal heroes.

So I've addressed your Board a number of times asking that we have a permit with which we can be in compliance. This has been a big issue for us over the years. It's something that we take as a point of pride in our careers that we are operating a program, and we have a permit with

which we are in compliance. So we very much do appreciate what you have included in the permit today.

For as much as there's been progress by the Orange County permittees improving water quality in south Orange County, what we have achieved over the years, even if we could achieve a hundred times more than that, we would not be in compliance if there was a single excuse in a single water body on a single day, coming from any discharge, whether it's our own MS4 system or otherwise.

This issue of having a pathway to compliance to extremely important to us. No other area of environmental regulation, to my knowledge, imposes new requirements where the onus is to be in compliance upon adoption. Air quality regulations, for example, there are always targets out in the future are saying "You need to change vehicle fleets by this year. You need to reduce vehicle emissions by this source out in the future." I think this may be unique in the realm of environmental regulations. I think it's a big step forward that permits today are being processed and adopted that have a means by which

we can achieve compliance.

The amendments before you are critcal for the regulated community for a number of reasons. First, this permit establishes a pardigm shift, and it places the permittees in the position of being responsible and being stewards of the entire watershed, including not only our own discharges but the discharges from other parties, and also naturally-occurring conditions.

We do have instances that I think you may be aware of where we have reference streams in the region where numbers are higher than what the basin plan objectives are. There are naturally-occurring conditions or things that come from non-anthropogenic sources that cause exceedances that have nothing to do with what the MS4s do or do not do, or how fast they do it, or how well they do it.

In some cases, the solutions are exceptionally long-term, and you were asked earlier about impediments. We fundamentally need to remake the structure of our communities that have been developed over a hundred years and more including the very patterns that underlie those communities, and that's not something we can

achieve.

I think logistics is probably the biggest impediment. Cost, of course, goes along with that, but we couldn't achieve that in a day or year or permit term. So having that pathway to compliance helps us work around that type of impediment. I would also say it's a long-term process to achieve water quality standards, complicated by vagueries in the science, lack of technology, with some of the issues like wet-weather bacteria, for example, what technology we can use and logistics we can employ getting back to the pure physics of how do you deal with that volume and velocity of water that comes with a storm. We don't have the means to achieve that today. There's also shortfalls in funding and education and development and so on.

You heard us say before the current state of the environmental conditions was not reflected in the permit, which we see as a necessary starting point for what the permit should have in it. Fortunately, with the water quality improvement plan, with alternative pathways we can now use those current conditions going forward as the basis for the water quality

improvement plan. I think we achieved a great deal of progress in that.

Finally, the Clean Water Act does not require MS4s to meet effluent limits, and there are many numbers that I mentioned earlier from naturally-occurring or non-anthropogenic sources that we cannot meet. If we're going to be required to do so under this permit, then we need to have a way to be in compliance.

This watershed planning, the water quality improvement plan now provides the means to achieve this, and the permit finally provides this pathway for us, and is generally supported by the permittees from South Orange County. It provides a measurable profit for attaining compliance with numeric standards, and it allows us permittees to focus our resources on implementation rather than checklists and, potentially, third-party lawsuits.

I'm going to be followed up today by Ryan Baron from County Counsel to talk some more about how we think we can make this better.

Thank you.

CHAIRMAN ABARBANEL: Any questions of Mary?

BOARD MEMBER MORALES: What is Orange

County's response to, say, if somebody were to ask that question, "If you're given this field during that period you're developing the WQIP, what's the incentive for you all to hurry or get it right?"

You know, in fact it could also be phrased as if there's no downside to not hurrying up or not doing it, what's the disincentive to doing very little?

MS. CORPANICH: As I understand it, you have two parts of your question; one is the time urgency, and the one is the level of effort or the degree of effort that we put into it, the rigor with which we approach.

I would say in terms of the timeline, you already have that built into the permits. You already have a deadline for us to prepare this and submit it to your staff.

BOARD MEMBER MORALES: Could Orange County do it in two years?

MS. CORPANICH: We are are going to make every effort to do that in two years. I will say that my colleagues from Riverside County made a very good point that you have better engagement with the public, if you have a little bit more time. I don't know that we would be asking for

more time if we aren't going to have an interim compliance. It just stretches out the amount of time that we are out there.

The other is the rigor with which we prepare these WQIPs. I would say there the incentive is already built in for us. We need to submit something to your staff that your staff will accept, so we also are having to submit something that we believe that we can implement and that we believe from our best analysis that will get us to the finish line. So I really think that incentive is already built into what you have in the permit today.

BOARD MEMBER MORALES: I'm trying to play on all the scenarios.

MS. CORPANICH: In fact, we've had our permit now since February, I believe it was. We've already started our public process. We've already sort of laid out how we're going to attack the work. We are well underway because we know two years is not a lot of time. But I will tell you that, probably, the most criticism we hear from the public is that we're having these public meetings, we're asking for their input, but we're rushing to the next step because we don't have a

lot of time to grind through alternatives, as Mr. McKibbon was pointing out, and to consider that for more discussion and things of that nature.

So we do hear that complaint a lot from the public when we're on a timeline, as with the water quality management plan, as well. We had, I believe it was, two years to do that, and it was a very aggressive schedule, but we did it.

CHAIRMAN ABARBANEL: May I ask you the same question I asked Mr. McKibbon. I have never prepared a WQIP, neither have you, yet there are many things one might be able to do with a longer time period. I think 40 months might be a good time. What would be your response to having a draft of the WQIP in two years to be discussed with the staff but a final a year later, in which you could respond to that, have more public input, whatever you deem.

MS. CORPANICH: I think that would be preferable. I think that would be good, and I think, based on the -- from what I know, the experience with the San Diego permittees has been, it takes some time once they're submitted, until we can get to final approval.

CHAIRMAN ABARBANEL: I wonder if I can ask Mr. Chiu a question in that regard.

MR. CHIU: Yes.

CHAIRMAN ABARBANEL: Suppose the County of Orange came in in two years with a WQIP and came in with a modification, is there a provision to accept that modification in place of the two-year WQIP?

MR. CHIU: The way the process is set up, they are provided up to two years to develop the water quality improvement plan. The water quality improvement plans are given two years to be developed. The permit also allows those water quality improvement plans to be updated on an annual basis, so there's every opportunity to make improvements to the plan itself, on an annual basis, but they have to do it at least once every five years in a report of waste discharge.

CHAIRMAN ABARBANEL: So there's a path to do what I've been trying to explore. Come to you in two years, "This is where we've gotten, but we're not yet satisfied. We want more public input. We want more time for new ideas and so forth," and choose on their own to proceed for another year, for example, and come back and say

"This is where we are after three years."

MR. CHIU: There's -- with the water quality improvement plans, there's the water quality improvement plan process, which has elements that are required be included in the plan, elements that need to be discussed, vetted through the public participation process. There are submittal requirements for us to review and for the public to review along the way, and at the end of the process, we have to determine whether or not they're in compliance with the permit.

The plans themselves, I don't know that we ever call them final plans, right, because they're meant to be adapted over time, and they're intended to be living documents, essentially. So the first plan that they submit may be considered final in terms of what we would accept as a starting point, but it is never considered the end point until water quality has been fully restored and achieved in the watershed and/or region, relevant to MS4 discharges, of course.

If you are looking to have some opportunity for the Copermittees to submit a draft plan of some sort, which we can then allow them to begin implements or -- I'm not exactly sure how we

would transition from planning to implementation. The way we have permits set up, again, once we accept the plan, that is the starting point for implementation. We've seen enough in the plan to understand how they intend to implement their program to achieve their goals.

Now, a plan does not necessarily have to have every single water body combination under the sun be part of the plan in order for it to be accepted. At least for the water quality improvement plan, only under the alternative compliance pathway, there is a certain subset of pollutants that need to be incorporated in the plan, namely that is not every pollutant under the sun, but it is a fairly large set of pollutants.

I understand there are other pollutants that are currently in exceedance of water quality objectives that are not on the 303 list, and they would also like to have coverage for those pollutants, as well. The permit allows for that, or the alternative pathway compliance language allows for that. But that doesn't require them to have every pollutant under the sun under their water quality improvement plan.

They can focus a lot of their work on

those 303 listed to begin with and then adapt their plan in the future to incorporate the other pollutants that they are concerned with, as well, in future generations of the plan.

We need to have someplace where they begin implementation, and that is the part I'm not quite will clear how we would do that if we had a draft plan that would have some additional time for a final plan.

CHAIRMAN ABARBANEL: Lest it leak out that we're looking to the Los Angeles region for leadership, do you understand why they have a longer period than 24 months, as I understand one of the speakers to say.

MR. CHIU: My recollection of their language was that they had 24 months to develop the plan, but it could have been because of their rather long review period, and they had, I guess, some back and forth with the plan developers as to how the final plan should look. May have been extended to 36 to 40 months, but my understanding is they were given 24 months to begin with. And similarly with the Santa Ana region, they've proposed an alternative compliance pathway, as well in their draft permit. That similarly

provides 18 months with an option to extend it an additional 6 months for their plan. I think we are right in there in terms of the amount of time we're allotting to the development of a plan.

If you think about a permit term being five years, if we were to have 40 months of plan development, you would only have you know 20-some months of actual implementation before you would have to start relooking at a plan. I'm a firm believer that planning has its place but implementation is where you get results. I would much rather have a plan that may have been rushed a little bit but has great potential to improve water quality and begin the implementation and start learning from implementation and the mistakes that you may make along the way.

MS. SKORPANICH: If I could just elaborate on what Mr. Chiu said, our permit expires in 2018. So we won't be talking to you next year but it's not going to be a full five years.

CHAIRMAN ABARBANEL: I understand the transition to incorporating all three counties in the same permit, but we'll see you in 2018.

BOARD MEMBER OLSON: I just had one

question. So if you had to say the greatest hardship with meeting what the staff has proposed and what the negatives are for you, can you sort of elaborate on that for us.

MS. SKORPANICH: I think not having that compliance option, and you'll hear more from my fellow speakers on this presentation about what not only can happen but what has happened when we don't have some means of being in compliance with the permit.

BOARD MEMBER OLSON: Do you also have CEQA requirements.

MS. SKORPANICH: We're still sorting out how exactly that would happen. While you're the ones approving the plan, we're the ones implementing it. Who's the lead agency? There's some finite details we need to work out on that.

BOARD MEMBER OLSON: Have you had a chance to look at what Riverside has proposed for an interim compliance where you go -- where you have coverage over the interim compliance which, right now, the proposal before the Board is no interim compliance.

MS. SKORPANICH: Right. So the three counties actually met with your executive officer

two weeks ago or so, two to three weeks ago, and talked about this very point. What we heard from the staff at the time was that they had nothing -- no means by which they could enforce compliance during the period of time the WQIP was being developed, and we suggested that if there were sort of reporting in milestones, deadlines that we had to meet during the development process, that they would then have a clear enforceability built in.

We would agree that milestones during development of the water quality improvement plan should meet the needs of what your staff is looking for.

BOARD MEMBER OLSON: Mr. Chiu, could you comment?

MR. CHIU: I'm sorry, exactly what was the topic we were talking about?

BOARD MEMBER OLSON: What we were talking about was there was a proposal brought forward by, as I understand it, by Riverside and the three counties met with our executive director and it was said that you couldn't have interim compliance because there would be no way to enforce it. They're saying if you had certain

things built into the interim compliance...

I'd like to hear your view on that or what the staff concluded.

MR. CHIU: So we received a proposed set of language from Mr. McKibbon early this week. We reviewed it. The way they have structured their compliance pathway during the plan preparation process essentially boils down to document submittals or process completions. It's not really having to do with improvements to water quality. It is all about process, and as long as they have met some process requirements in the interim time between those processes being completed, they would be deemed in compliance. But compliance would being, essentially, with their submittal of a notice of intent to develop a plan.

For us, at least in this region, we didn't think it was appropriate to be granting the Copermittees -- what we consider a real privilege. I mean, this compliance pathway is not a right. This ability to be deemed in compliance is not a right; it is a privilege. We strongly believe that in order to have a privilege like this, to be deemed in compliance, there has to be something to

show us compliance with receiving water limitations will, in fact, be achieved at some point in the future.

Until we can see a plan and the content of that plan, it's very difficult for us to make that determination. So, you know, in a lot of ways, what we consider as a compliance pathway, it's kind of like a real -- it's kind of like a club. It's a club of very special Copermittees that have made a real commitment to improve water quality.

The way we formed our club is to have some things that need to be completed before you can actually enter the club. In other regions, they make their club a little less exclusive than our club, and we think that to earn a place in our club, you have to show us that you deserve that spot. And for us to say that anybody can be in the club as long as you hand in a slip of paper, we just don't think that rises to the level of an exclusive club that we want.

BOARD MEMBER OLSON: I get confused. Do you not -- do you think people are somehow not serious about trying to improve the water quality? If they meet their goal, continue to meet their

goal, make the environment better, their lives are much easier to deal with. So I understand that you want people to be very serious about what they do. It's my intention or my belief people are serious.

So maybe I'm missing something, and you'll have time to speak, and maybe you can explain it a little better to me because I really would like to be able to be able to understand your viewpoint.

MR. CHIU: I understand how it seems a little odd that we keep on making it seem like there's no real dedication to improving water quality. We see the efforts the Copermittees have gone to in order to improve water quality. At the same time, we have also seen the Copermittees have not taken the opportunity that they've already had to improve water quality. We've had this interim process in place since our 2001 permit, the third term permits.

That interim process was intended to be self-implementing by the Copermittees. They were supposed to tell us when there were exceedances caused by their MS4 discharges, and they were to prepare a plan to tell us how they

would address those exceedances.

Since we've put that language into the permit, not one Copermittee has come forward to say "We are causing this." In fact, it was always the opposite. It is -- there are problems in the receiving water, we acknowledge that. But we don't have data to show we are causing it. We don't believe we should be doing much more than what we're doing today.

It's hard for us, at this point in time, to really believe that they have a true commitment to improving water quality to the level we believe is necessary, because this board has been mandated and given the great responsibility of protecting the waters of this state -- not just protecting, preserving, restoring and enhancing the waters of this state.

We're not just trying to make it was good as it was today. We want to make it as great as it was before and we want to make it better for tomorrow. So it's not that we want to keep the status quo. That's our mission. So in a lot of ways, what we've seen and heard from the Copermittees is they agree with our mission, but they don't agree that they have to help us in our

mission.

The water quality improvement plan was our way of saying, "Well, we've heard from you on many occasions that you know a better way. That can happen, but you need to give us the flexibility to do it because these permit requirements are tying our hands. It's making us do things that are not necessary."

So we changed it. We said, "Here's the flexibility you're looking for, but we want the outcomes."

We've tried to align our objectives as much as possible but the water quality improvement plan and the alternative compliance pathway, again -- the alternative compliance pathway is, in our mind, a privilege. It is something that is going to say you are in compliance. We will consider you in compliance knowing full well that your discharges are actually causing or contributing to impairments, right?

So we need to have some assurance that we will get credible plans, durable plans, rigorous and transparent plans that everybody, including the public, can understand how we will get from today's water quality conditions to water

quality conditions we say we want, and what this Board wants.

I think we're getting a lot by including this alternative compliance pathway to begin with. To actually offer compliance during the preparation process, I think that is asking a little much when we have not seen a record.

BOARD MEMBER OLSON: Thank you very much.

*Mr. Chairman, members of the Board, we're going to hear a range of discussions on this today, and this is a good opportunity to hear from other folks on this very different subject.

CHAIRMAN ABARBANEL: Moving on with Orange County.

MR. BARON: Good morning, Chairman Abarbanel, honorable Board members, Ryan Baron, County Counsel's Office, County of Orange. I think the shot clock is at 25:30, for the record, but who is counting. I'll try to be brief.

I want to begin by saying that we join in the comments of Riverside and San Diego County, but we come with one issue today on behalf of the Orange County permittees. That's been the biggest issue for us since 2013, when the regional permit

was adopted. It's been the biggest issue up and down the state that was dealt with by the state Board order this summer; that is compliance during development and during implementation.

Just to give you a little road map where I'm going. First I'll talk about the background for development and implementation in Orange County. Some of the assumptions and implications about the WQIP planning and development process. A little background on the State Board order on the LA permit, and then some response on EPAs comments, and then Mr. Youngrice is going to follow up with some of the recent litigation of an MS4 permit in South Orange County.

In order to understand our request -- I'm going to refer to as "full compliance" -- compliance during the development process, I want to first talk about the process that's going on right now. Orange County enrolled in the regional permit in February of 2015. It began the WQIP process in August 2015 to, as you'll see there from the first arrow, to determine an approach, identify existing data sources, obtain public input and form a consultation panel.

Under the tentative order, this is over a two-, two-and-a-half-year process from February 2015 or August 2015 when it began to the fall of 2017. The next few years, spent developing a detailed and rigorous implementation plan with the input of 12 Copermittees, various stakeholders and the public. It's a fairly significant effort, which I'll talk about in a second.

The technical consultant costs alone are estimated to be about $500,000 for this two-year period. That does not include internal staff costs, which are usually from 20 to 50 percent of a project, CEQA review and the need for negative declaration or programatic EIR. Those can cost a half million dollars by themselves. And attorney review of the WQIP, looking for compliance, which is going on in L.A., and all the cooperative agreements that both sides might have in house get involved in, trying to put together, multi-party contracts, take them to the 12 city councils and and district boards to enter into these agreements and change scopes of work and consultant contracts and so forth.

So it's a fairly significant effort in

this two-and-a-half-year process. This is a list of the pollutants of concern from 303 impairment that Orange County will be dealing with and south Orange County, that will be preparing final numeric goals for, compliance schedules, other implementation strategies and control measures.

So without compliance during the two-and-a-half-year period of development, the Orange County permittees will need to strictly comply with the numeric limits for each of these pollutants during this development period.

Now, normally when a pollutant has -- or a water body is on the 303D list, the state is required to prepare or establish a total maximum daily load, TMDL. If the state does not do that, they can be sued to be establish the TMDL. If the state fails to do so, the EPA must establish one.

In my opinion, when a county and the permittees are putting together interim and final numeric goals, implementation plans, control other strategies, these are the things that typically go into a TMDL, and it's accompanied by an implementation plan that goes into the permit later on when it's adopted.

Essentially, the permittees through

the WQIP process are preparing TMDLs, time schedule, orders compliance schedules on behalf of the state during this time. TMDLs typically take several years to develop. They can take a decade or more to implement. And we are sort of taking on this responsibility in order to improve water quality and hopefully obtain full compliance during development and during implementation.

Now, most what I'm going to focus on is development, but I will touch briefly on projected implementation costs for coloform in south Orange County. Geo Syntech, the county's consultant, did a rough analysis including that. Inplementation costs alone will be somewhere between 1.6 billion to 2.1 billion for the south Orange County watershed. This will include some other combinations as well, but it's primarily looking at coloform bacteria.

CHAIRMAN ABARBANEL: These are five year costs or annual costs?

MR. BARON: I believe this is the total projected cost for a 10, 20 or 30-year period.

BOARD MEMBER MORALES: That makes a difference.

BOARD MEMBER OLSON: That makes a big difference.

BOARD MEMBER MORALES: Could you give us the background on one of those numbers so we know what went into the reason.

MR. BARON: If I could call up Richard Moon.

MR. MOON: Richard Moon with the County of Orange. I've not taken the oath.

CHAIRMAN ABARBANEL: We can fix that.

Do you swear the testimony you will provide is true and correct. If so, say "I do."

MR. MOON: I do.

So we had we asked Geo Syntech to look at the cost projections prepared for Los Angeles County, and the costs that were available for the WQIPs that have been prepared for San Diego county. And this, as Ryan said, focused principally on bacteria, but they calculated a range of cost for meeting water quality objectives, standardized on impervious areas. So the costs have been pulled from all of these different plans, and I think they looked at between nine and 12 of these watershed management plans.

From those, we arrived at a range, so at the low end, 1.6 billion. The top end of the range, 2 billion, based on figures called from these other plans.

CHAIRMAN ABARBANEL: Did those plans take into account the financial benefits from having implemented the plans?

MR. MOON: No.

CHAIRMAN ABARBANEL: So one can assume there will be benefits, and the numbers will be comensurably smaller.

MR. MOON: That's correct.

BOARD MEMBER MORALES: Again, is it based on per year? Per 10 years? Per 100 years?

MR. MONN: It's the total projected cost. So we would need to spend if we -- regardless, whether you do it over one year or 40 years or 20 years, yes.

CHAIRMAN ABARBANEL: Other questions?

BOARD MEMBER STRAWN: Now year dollars?

MR. MOON: Yes.

MR. BARON: The second issue I wanted to bring up before I get to the punch line, I want to discuss some of the assumptions and legal

issues involving the WQIP process. It's been said compliance is not a right, but, in fact, the way environmental law works, you're deemed to be in compliance until you're out of compliance, and when you're out of compliance there come significant civil penalties and even criminal sanctions under the Clean Water Act. We take compliance as a big deal, and it's sort of my job to worry about it.

By way of legal background, Courts have held that MS4s are not required by the Clean Water Act to strictly comply with the numeric effluent limitations, and the State Board order went through a thorough analysis in this case. It came to the same conclusion. That was also reiterated in an opinion in a circuit court in Maryland, that federal law does not require MS4s to meet strict numeric standards.

Now, EPA has not promulgated any binding regulations to that effect. When EPS has encouraged states to require strict compliance for numeric limits, where feasible, it has been through guidance documents; the most significant of which was 2014 EPA storm water memo on the establishment of TMDL waste load allocations where

it said "This memorandum is guidance and does not impose legally binding requirements on EPA or the states.

The state boards also analyzed this particular memo and came to the same conclusion that I'm articulating today. However, the State Water Board clarified its prior order on receiving water limitations, and it said that regional water boards should require strict compliance with water quality standards.

So, in essence, what I'm trying is say is, it's not a federal issue; it's a state law and policy issue to basically go through the WQIP process, which is premised on meeting numeric limitations at the end of that process. The third point I'd like to discuss is the implications of alternative compliance pathway. The permittees are required to develop watershed improvement plans. They have the option under the tentative order to develop interim compliance and final numeric goals, strategies, compliance schedules, annual milestones, if they choose in order to obtain compliance at the Executive Officer approval of the implementation plan.

So, again, we've talked about this

many times in the workshops last summer: This effectively requires permittees to not just to put together a plan, but to put together a very rigorous, expensive development implementation plan, that is almost identical to developing a TMDL, compliance schedules, time schedule orders by the permittees in this two to two-and-a-half-year period.

Those are typically obligations of the state. The state typically has the responsibility with collaboration of the permittee to establish those.

In this case, the permittees will be taking on all of those costs and responsibilities and submitting it to executive officer, hopefully for approval of these TMDL compliant-schedule-like improvement plans. So we feel, and as Richard Moon has said, you're becoming the ultimate stewards of the watershed in taking on a lot of these obligations.

So I guess with a fear of sounding like my 5-year-old kindergarten daughter, we feel there's a fundamental fairness that should be with being deemed in compliance at the time we tender a notice of intent to develop one of these plans.

This is the path followed in LA. It's also the path being proposed in Santa Ana, and I believe it's the path being heard today in the Bay Area, as well.

If there's extensive planning to deal with state requirements and taking on a lot of the state's obligations, in costs and resources, there should be an incentive to have full compliance from the start of the development process to the end of implementation, so long as the permittee is diligently and rigorously adibing by that development schedule and meeting all those milestones.

Planning and development is fundamental to implementation. I don't believe it can be bifurcated or sort of have this line drawn as to where that approval should be. The planning and development process will include prioritizing pollutants, extensive modeling, setting interim goals, assessing strategies, et cetera.

I wanted to give some background on the State Board order, because that came up early on. The State Board, on page 15 of the order, started out, "We are sympathetic that receiving water limitations may result in many years of

noncompliance."

So the State Board rightfully understood the position that the MS4s were in as transporters of water and not actual dischargers -- industrial dischargers discharge pollutants in their chemical manufacturing process.

But as transporters of water, it would take years, many years of technical efforts to comply with receiving water limitations. It said it was reasonable to provide for an alternative compliance process if seven principles were followed.

The fact sheet states the regional water board is to consider an alternative compliance option. But actually, in my interpretation of the State Board order, which I think is probably with Mr. Morales's interpretation, is Principal 3 says phase 1 permits should provide for a compliance alternative that allows permittees to achieve compliance with receiving water limitations over a period of time. Consider is used on page 51, as part of that "should implement."

To consider the L.A. WMP, EWMP pathway as a potential option. In a footnote, the State

Board order also says you can look at (inaudible) options, so long as those meet the several principles set out.

The idea is that an alternative compliance pathway should be implemented to achieve compliance over a period of time, and if one is not, or one of the other principles aren't followed the region specific or permit specific, the reason should be are articulated. The regional board found that compliance during the development period was sufficiently constraint and reasonable because the permittees were still having to meet the relevant deadlines for watershed management, planning and development. They were still having to implement low-impact development, green streets policies, and other watershed control measures. Those measures were not allowed to be put on hold during that 18-month or 24-month period.

In fact, the initial version of the LA permit was so stringent that if a permittee did not hit one of those development milestones, it was found out of compliance and could not come back into compliance until the implementation plan was approved by the executive officer at the end

of the period.

The State Board found that was too stringent and changed the L.A. permit and allowed dead lines to be adjusted or extended for good cause.

So we believe the tentative order, as written, does not follow their principle 3. Instead of allowing compliance to (inaudible) over time, it requires permittees to strictly comply with the prohibitions and limitations immediately upon enrollment and throughout the two, two-and-a-half-year planning period, or four years, whatever this Board decides to set.

There's no ability right now to prioritize pollutants. WQIPs are premised on prioritizing pollutants so that you are chasing the biggest pollutants of concern. However, that prioritization doesn't come into affect until the WQIP is approved by the executive officer. So there really is a status quo period during this two to two-and-a-half-year time period where we have to worry about each and every one.

We also believe that there's no permit specific or region specific finding for this partial compliance option that's being offered in

the permit and would ask that if the Board chooses not to, then we would need to amend the fact sheet or permit to articulate that reason, consistent with Principle 3 and 4.

I'm going to talk a little bit about the EPA's comment letters. They were mentioned in the response to comments EPA filed --

CHAIRMAN ABARBANEL: Before you go into that, I want to ask you a question.

It seems to me we've been struggling -- I've heard today that we as concerned citizens about water quality, have been struggling for at least 25 years to find a way to achieve what we have in mind as far as water quality. It hasn't worked really well so we're trying different ways. Region 4, Los Angeles, is trying one way. Our MS4 permit gives a lot of responsibility to the individual Copermittees and asks them to develop water quality improvement plans.

In 2018, do you anticipate that the board -- I don't know what the Board composition will be then -- are going to ask you for new water quality improvement plans or relatively simple modifications, which will not be on a new path but a step along that path?

I'm trying to understand whether you see this as a long-term issue in which you will be deemed out of compliance or whether it's a short-term issue from transition to a new method that that we hope is much more effective.

MR. BARON: I think it's definitely a long-term problem. I'm not a scientist, but I believe that there have been improvements in the water quality. And I think there have been significant improvements in dry-weather conditions. The problems still remain with pollutants like bacteria and other wet-weather conditions.

I think that there will be one implementation plan -- now to the WQIP, that will be hopefully approved in 2017, when the permit is renewed, and it will be subject to modification as folks go through an adaptive management process and monitoring gives them the data they need to adjust their programs.

So I think the problem itself is long-term, based on science, technology, funding. Municipalities like Orange County talk about funding because we have to look at budgets. But I think the real issue -- not the real issue but

subsequent to that is also how do you tackle things like bacteria? What types of technology are there for selenium when it's naturally occurring?

So I think the problem is long-term. The compliance issue is definitely short term in the sense that this is a two, two-and-a-half-year period that we fear we will be out of compliance for. If we develop a rigorous plan, we'll be deemed in compliance.

Overall I think it's a long-term issue. I don't for foresee a new plan being developed in 2018 unless they're so poorly fashioned.

BOARD MEMBER MORALES: I hear it's going to be a two, two-and-a-half-year period in which you all will be out of compliance. You're probably, today, not in compliance, correct?

MR. BARON: It was said on the record at the May 2013 hearing that we were out of compliance.

BOARD MEMBER MORALES: And how long has that been?

MR. BARON: I would argue under the federal Clean Water Act, you go through the best

management practice and that is NEP. So to the extent that we're not meeting numeric numbers, yes, that is a compliance issue. I see where you're going. It's not necessarily --

BOARD MEMBER MORALES: Is this anything new, is the basic question. It's being pitched as "Going forward, we're going to be out of compliance for two years." We're just continuing what it is until compliance or the government WQIP is --

MR. BARON: But there --

BOARD MEMBER MORALES: I don't want us to fall into the trap of it being so easy to talk about it in those terms. We all want the same thing; I truly believe that.

MR. BARON: I think that -- I think there was a perception in the storm water community that if you were going through the process and you were implementing your program, the water boards would not enforce against you.

And then NRGC versus L.A. County litigation came about and turned that on its head. It said the permits have receiving water limitations in there, and therefore, the state has determined that you're strictly liable with that

language and you view the permit like a contract.

From that point on, the storm water community woke up and said "We thought we had sort of compliance if we were making reasonable progress."

I don't know if the question has been "You're still out of compliance. You've been out of compliance all this time." It's sort of a pathway forward, and we can articulate that it is impracticable to meet numbers. In some cases, right now it is impossible to do so. So it isn't reasonable under federal or even state law that there shouldn't be some kind of alternative compliance pathway built into that, to light a fire underneath MS4s but also incentivize them to continue these plans and programs.

So I think that strict liability -- I don't mean to sound like a broken record after two years -- but it doesn't really exist anywhere in other parts of the law except with oil spills and things of that nature.

The Clean Air Act and Clean Water Act, that's not the way it was set up to be. I think that's the aftermath of the L.A. litigation, and, sort of, the storm water community is struggling

with that. And Jeremy is going to talk about some of these issues. It is a very real issue for us.

I don't want to be perceived as Chicken Little or "The sky is falling." "We're gonna get sued." We're a very large county. We get sued every other day. But in terms of its impact on the storm water programs, I think --

CHAIRMAN ABARBANEL: You were here in May 2013, and by what you said, you said you weren't in compliance? What happened to you in the last two-and-a-half years because of that?

MR. BARON: Jeremy is going to talk about that after this.

CHAIRMAN ABARBANEL: I wasn't asking for a review of lawsuits every other day. I assume that's just business.

All right. Let's hear the answer. Are you ready to turn over?

MR. BARON: I've got 30 more seconds.

So the major premise as to why not to provide a compliance option, the way I read the response to comments to letters from EPA disapproving of this notion of compliance during the development process. In my opinion, it's sort of a ball conclusion. That bright line should be

drawn there. There's no citation to any federal regulations because there aren't any. So EPA is commenting as a federal preference. It's a state issue, not a federal mandate. I want to point out the State Board did not adopt the EPA's position. It disregarded it. And EPA did not disapprove of the L.A. permit.

So these letters carry a lot of weight because it is the EPA, but at the same time, legally speaking, this Board does not have to give deference to them.

With that, I will conclude. Thank you.

MR. JUNGREIS: Honorable chair, I'm going to go quickly because I know you folks want to go to lunch.

I think Ryan already covered it: The EPA, one of the reasons they would have trouble objecting is because fundamentally, you're still operating under the MEP standard, and you've got the case law Ryan pointed to.

EPA doesn't necessarily have to worry about costs; they don't have to worry about attainability. What they do worry about is "We want to see massive improvements in water

quality." And that's great. We get that. We do, too. But just take the EPA's guidance for what it is. It's guidance; not a requirement.

So the question that's been asked by a couple board members just now is, you've been out of compliance for awhile, and the world has not ended. Big deal. In fact, it really has been, and it started to be a real (inaudible), and the big issue is are we worried about getting sued? Is a Clean Water Act lawsuit that big a deal? The answer is yes. It's not just a Clean Water Act lawsuit. The fact is that being out of compliance is not something -- I represent Laguna Beach and Dana Point. They care deeply about water quality. It's part of their livelihoods. The idea of being out of compliance, of potentially criminal responsibility for not being in compliance, that's a big deal. But the specific issue of lawsuits -- so Laguna Beach was sued by River Watch. Seems like they're picking up the pace of their lawsuits. One of the things they included in their amended complaint was illegal discharges into the MS4 and discharges from the MS4. So they have now brought storm water and storm water compliance into the realm.

So what did that do? Strict liability for non-storm-water discharges, demanded a substantial infrastructure overhaul.

Now why is that significant? Each city is going to have its own capital improvements plan. They're going to prioritize. Does the police department need new police cars? They wanted every pipe over age four years, or whatever it was, they've all got to be replaced within "X" number of years. It gets into -- rather than the regional board, who in many cases understands the systems they're regulating, citizen's groups don't necessarily.

If you look at the River Watch complaints, they all tend to be cookie cutter. Same approach. There's attorneys' fees. The whole thing cost the City about $400,000 for 16 months to settle it.

The bigger issues were staff time. Tracey Inglebrits, who is here today from Laguna Beach, it's practically all she did for a year. Daycia, who you'll hear from later, it was half the stuff she did. She's the water quality administrator. It's a huge amount of staff time.

Not only that, the other issue is with

the regional board, you work things out. Regional boards understand how to interface with cities. Environmental groups, one of the risks with River Watch or others is that you wind up having an environmental group who doesn't understand your city and is not accountability to the voters running your public works department.

So that is the kind of thing that troubles cities. It's one of the things the Board should think about.

Other examples -- as I said, River Watch is one group that seems to be getting more advanced in their tactics. They're not going after bad actors. They're going after cities that presumably have a reputation of being pretty conscientious: Monterey, Carlsbad, Laguna Beach. They're not the top of the list of being bad actors. They're all they serious about their storm water programs.

And lately, the last three permits, Laguna Beach, San Luis Obispo, in the last month, alleging storm water violations and Whittier. It's not just sewage spills.

So is it a risk? Absolutely. Maybe from the regional board's perspective, you figure

out it's another enforcement. I think it's worked really well historically over time, but in this circumstance where everyone is deemed out of compliance, it can cause some problems. Let me talk about that.

I will say right now, the word wrongful should be taken out. Lawsuits, there's a time and place for citizens using the Clean Water Act, no doubt.

Why is it bad for the regional board not to provide interim compliance? One, potentially, the settlement -- each individual settlement is individual. You can have one federal district judges who are very conservative, some who are very liberal. You can go to the same watershed and have very different results and it makes it very tough to implement a water quality improvement plan, to have the kind of synergistic effect that gets you to water quality.

For Laguna Beach, it took up so much time in order to deal with the lawsuit. With the regional board, there's a set program. If you get an NOV, you deal with it; it's a process. You have to go to federal district court. The $400,000, that was one motion. If they had gone

to trial, who knows.

So it's incongruent with the watershed-based approach that the board's practical vision talks about.

One of the things that came up as well as and I've heard suggested is a citizen's suit comes up, the regional board can jump in and intervene and -- because there is a provision in the Clean Water Act that says if there is a current enforced action, that a citizen's suit cannot proceed. Unfortunately, it's not a good fit here. What the regional board would need to do is go to federal court and file a lawsuit. There's case law, the California Sportsfishers Association, which limits what regional boards can do. Does a regional board, a state agency, want to go to federal court and subject itself to the authority of a federal court to begin with. So could it work under some circumstances, potentially. But it's definitely not a clean-cut way of doing business.

What should the regional board do? This regional board, by providing interim compliance, you talk about a hammer hanging over permittees' heads. "You're in compliance now, but

if you don't make that milestone, if you don't provide everything in good faith you've suggested you're going to do, it will be taken away from you." And everybody is out of compliance right now already. Everybody.

So I would suggest to the Board that, one, this provides the Board with much greater control and is a much greater incentive for people to giddy up. "Hey, let's get this thing going. We don't want to lose compliance."

One thing Ryan mentioned, and we believe this to be true -- we checked through other parts of the state. It appears the only region not providing interim compliance, at least considering it, is San Diego. It's really a fairness issue. So I'd ask you to consider that. If there was a particularly compelling reason to do it differently here, I understand, but there really isn't. It's a great incentive.

The idea of losing compliance if you don't do everything you're supposed to do is a huge disincentive to wait around and not do the things we should be doing.

I talked about that incentivizing planning. What the Board should do is what it's

already requiring, requiring data, requiring deadlines, review prior quality water conditions to the consultation panel, draft agreements with watershed partners. Be part of the process.

So I will leave you with our proposed language. We would also be amenable to the proposed language Riverside County has provided. Bottom line is, while we're going through this process that shifts the burden to do what would essentially be done with TMDLs by the state to the Copermittees, allow us to be in compliance while going through that process. If we fail, if we don't do it properly, take it away from us. That's the language we would propose.

With that, I will give one minute back to Mary Anne.

BOARD MEMBER MORALES: Just a few questions. Let me see if I have this correct: Right now you're not in compliance. So what you're asking is "Please revise this and deem us in compliance while we were doing whatever we do to come up with a WQIP."

So it's a change in status that you're requesting to obtain -- one of the reasons is a protection from -- of suits of this type. I think

as you mentioned, somebody presented those facts to me, was that settlement. Was it -- what was the main allegations? Did an attorney just throw in an MS4 violation as one of 50 allegations?

So I'm not going to read into that there was a lawsuit against Laguna Beach for a sewage spill or something that came out of their MS4 system, and they paid $400,000 without more facts.

MR. JUNGREIS: The actual payments were several million dollars. I don't know what the prime claims were.

BOARD MEMBER MORALES: Finally at least there is one lawsuit that you all can point to. I've been asking. Are you claiming this is the sort of data breach (inaudible). But there isn't this rush of lawsuits that have been filed that I'm aware of. It's been years where -- I wouldn't say years -- where conceivably you have not been in compliance and they could have filed these lawsuits.

I also, personally, think it would be a risk for anybody that wanted to file a lawsuit for -- against any of you all because it appears to me that he you're diligently working at

developing (inaudible). And if they had to claim to a judge -- it would be either declaratory relief where they might say "change out all their pipes." Basically, they'd be asking the judge "Make them fix." You all could go to the judge and say, "We have been diligently" -- before they file their 60-day whatever -- "been in the process of fixing this and quite likely there's a possibility it gets fixed during dependency of this lawsuit."

If there are organizations or attorneys out there that are simply interested in making a quick buck, they're going to think long and hard because the judge will have the discretion to tell them "Thank you, but you didn't cause the cities to do what they are doing. It is because of their own nature, their better angles. They're in process. They're doing what everybody would like them do."

And I believe that. I believe you all are -- that's why I asked the question. I was not surprised to hear you've been diligently starting the process in advance.

Am I wrong that what you're requesting is, basically, for us to vote and give a

protection that you don't currently have?

MR. JUNGREIS: I would couch it somewhat differently, Mr. Morales -- Board Member Morales. I'm sorry.

Two things, one is in 2013 -- certainly the cities I represent, Dana Point and Laguna Beach, they've had all sorts of systems -- they thought they were in compliance. We all did. It was certainly a surprise when we found out that the receiving water limitations, the numbers that were in -- from the basin plan of the permit -- that we were going to be held liable and deemed out of compliance.

That's a real seat change for us. We've been following this interim process, and we thought we were improving. I can tell you what we've done in the meantime. At least in the cities of Laguna Beach and Dana Point, they've put in massive amounts of dry weather diversions. They're diverting 80, 90 percent of their nuisance flows. They're all going to the sanitary sewer at very large cost.

Are they doing things? Absolutely. And I think a lot of cities are the same way. The current approach seems troubling because it treats

everyone the same. It treats everyone as if they're bad actors; they're all out of compliance. Whereas, you've got some cities who really went for it, and you have some who have done very little.

In answer to your direct question, I would say I don't think we thought we were out of compliance, and we certainly want to be deemed in compliance. If we're going to go forward and spend, as a region, up to 2 billion dollars, we should be doing it in partnership with the regional board, and we should be doing it without worrying about people suing us.

Just another point: And that was you mentioned the complaints that were seen. I don't know what drives River Watch. I can't speak to their motivation. I can tell you their complaints are nearly identical. So are there cities who probably are legitimately sued? Absolutely. I don't doubt it. I'm not sure that the ones I just listed are legitimately sued. If you look at any city or department, you're always going to find noncompliance somewhere.

Anyway, I hope I answered your question, sir.

CHAIRMAN ABARBANEL: It seems to me that one conclusion, logical but not necessarily practical discussion that we've heard from you and others is that you're out of compliance, you ought to take your water quality improvement plan, work on it really hard and submit it in four months, and not expose yourself for two years. Why don't you do that?

MR. JUNGREIS: That goes back to a point that Mr. McKibbon made from Riverside County. These are the equivalent of TMDLs except you're doing them for multiple pollutants. I sat on a water quality improvement plan. The level of complexity associated with trying to figure out what are the sources and how do you reduce them all? What are the projects you can actually achieve without having undesirable environmental effects? If you can do that in four months, I'd say hire that consultant right away. But if you want to do it right where you can actually implement it, at the end you're confident you can get the numbers you're told to hit, I would be inclined to agree with Mr. McKibbon.

So your point is well taken. We should hustle. We should go as fast as we can.

At the end of that plan, if we don't have something scientifically defensible, what did we achieve?

CHAIRMAN ABARBANEL: And my other is a semi-question. If you're asking the board to identify something as being compliant, when everybody agrees no one is compliant, doesn't that undercut the moral authority of this Board.

MR. JUNGREIS: I would argue it doesn't because I would argue that we -- at least municipalities because the way we are treated under the Clean Water Act, we shouldn't be -- I noticed we would be deemed out of compliance. We heard Mr. Gibson acknowledge he feels differently about different watersheds, but at least in some there's places where of re-evaluation of numbers may be appropriate.

Do I think you lose moral authority? I don't. The state board didn't seem to think so. The other regional boards don't seem to think so. Fundamentally, I don't think you lose moral authority because what you gain in the process is the ability to ensure with about as great a leverage tool as you could ever get by ensuring people have the chance of losing that compliance.

I don't think you loss any moral authority. I understand where you're coming from, but I don't think you do. I don't think the public would perceive it that way.

MS. SKORPANICH: Could I add to that answer very quickly?

How to define compliance is a policy matter that's in your hands. So it is within your purview and your judgment to decide how to define compliance, just as the State Board did with the precedential order. I don't think you lose any moral authority by how you choose to resolve that policy question.

CHAIRMAN ABARBANEL: Thank you.

It's 12:25. We're going to break for lunch and come back with the cities of Laguna Beach and and Dana Point.

(Lunch recess taken.)

CHAIRMAN ABARBANEL: The regional Board's permit is a matter of great importance to the City. Specifically, we are concerned the permit, as currently drafted, will provide no compliance to the City during the interim period prior the adoption of the water quality improvement plan.

The Laguna Beach city council is fully committed to pursuing improvements in water quality. As one of the many examples of the City's strong commitment to improving water quality, will the City has installed 25 water diversion units that divert approximately 83 percent of our entire watershed of the city's drainage area.

This program has consistently earned the City a summer dry weather report card of a grade of A by Heal The Bay at all of our beaches within the City. We are proud of that accomplishment; however, we're concerned the permit proposed for approval today will actually frustrate others improvement programs in the future. Our specific concerns and recommendations are as follows:

Number one, the permit should provide for interim compliance while the City develops a water quality improvement plan for southern Orange County. We think the regional board's mandate to develop the WQIP has positive attributes. To be successful in improving water quality to the maximum extent practicable within the city, the WQIP needs to be a deliberate, scientifically

rigorous collaborative effort between all parties and interested stakeholders that recognize the need for interim compliance and for long-term compliance.

Secondly, the permit should clarify that implementation of the City's elicit prevention and detection program constitutes compliance even when unauthorized discharges enter the City's MS4. As Orange County presented, they illustrated perhaps River Watch and other environmental organizations are going after cities for discharges into the MS4 that may occur notwithstanding a city's full and rigorous implementation of its elicit discharge and protection program. The proposed errata changes in the staff report gave a response to the City's prior comments are a step in the right direction but she should be given the force of the law by placement in Section E.2 of the permit itself.

Accordingly the City asks the Board revise the regional permit to eliminate any inference of strict liability where the City fully implements it's elicit program by adding the clarifying language requested by our legal counsel to Section E.2 of the permit.

Thank you for your consideration of the City's comments. We know the regional board's task is not easy, and the city of Laguna Beach appreciates what this board is doing a balanced need -- is doing to balance needed water quality improvement with the realities of managing a complex municipal storm drain program.

To that, I conclude and state that our city is extremely comitted to water quality. I think no one can argue that as our community demands it. Our city council expects it, and we work every single day to the maximum extent practical.

CHAIRMAN ABARBANEL: Do you agree with an earlier speaker that you are out of compliance?

UNIDENTIFIED SPEAKER: I agree with Mary Ann Skorpanich's response. I think that's a bigger picture. I think we run under a maximum extent practical on a daily basis. From a boots-on-the-ground perspective, which is where we are from a very small community, that's all we have.

If I carry over my six minutes, it's going to be Dana Point and Laguna Beach together, if that's okay.

BOARD MEMBER STRAWN: Together you have 20 minutes. We will not stand at the boundary between your cities and tell you how to do it.

MR. FALLER: My name is Brad Faller. I'm the director of public works for the City of Dana Point. Thank you very much for allowing us to speak today. Both our Dana Point mayor and our South Coast Water District board member that does our water sewer district, Mr. Bill Green spoke this morning. We are a team. Many cities have those entities in one city, but we have both different entities working together.

Many beach cities are working hard to improve water quality. Clean beaches equals happy citizens and visitors. So we're already motivated to meet the needs of our constituents Dana Point has invested heavily in storm water catch basin filters on public streets, we installed 18 diversions to help control dry-weather runoff, and we're the first to use ozone treatment to kill pathogens at Salt Creek and North Creek. The only place where we have untreated runoff during the dry season that goes into the ocean is San Juan Creek. We've banned Styrofoam and plastic bags in

town. We have reduced the cities potable water consumption by 40 percent this summer, well above the 20 percent goal. Three beaches in South Orange County have been delisted through our efforts. We haven't met the final goal yet, it's in the basin plan. Hopefully this tells you we're working hard, and we are making progress.

Moving forward with your concern of the possible lack of interim compliance during the WQIP development and the initial cost between 1.6 and 2.1 billion to reach effective compliance, you're really talking a difference between us spending, over the last 20 years, 20 billion or 30 billion, you're really taking a magnitude up as we move forward to hundreds of millions of dollars. It's daunting for us. It's got everyone's attention.

Regarding interim compliance, what happened in Laguna Beach has been a wakeup call for all of us. Laguna also takes its environmental responsibilities very seriously and has a robust water quality program, so when they were sued by River Watch, it surprised us, and it is great cause for concern. If you look at River Watch's website, they have 8 cities in 2015 that

they're litigating or bringing suit against.

So what we see that's happened, the change that start with the NRDC has now made it relatively easy to say "You're not in compliance."

When we see great cities getting hit, that's a source of concern. We're trying very hard to meet the goals of the Board as well as the requirements of our citizens?

Please give us the opportunity to develop a water quality improvement plan without having to worry about being sued while developing that plan. We think the focus needs to be on developing the water quality improvement plans, not fighting lawsuits. So why penalize the good performers with opportunistic lawsuits.

I'm asking for your help in making sure our taxpayers' dollars are going to effective and beneficial water quality improvements.

We understand the Board's need for leveraging bad performers. But what we're saying is, try and realize that you don't penalize the good with the bad. You have to make that distinction. Where you have bad performers, we're suggesting that you put into the permit that says, "If you aren't producing the plan, and you aren't

making progress over the next few years, then you aren't meeting those requirements."

And remember that this compliance protection does not include compliance enforcement for other areas, such as new development, construction and existing development. The Board staff still has the ability to enforce compliance there. And, also, we're not asking that you take out, for example, A.3(a) in the permit, which still requires, and I quote, "pollutants in storm water discharged from MS4s must be reduced to the maximum extent practicable."

So we're not given a pass. What we're asking you to do is make the choices. Help us that are trying to help you, and you still have the stick if you need it for somebody who's not meeting the requirements.

So we're appealing to the Board to adjust the permit interim compliance protection for both storm water and non-storm-water discharges similar to what the L.A. Board and Santa Ana Board are doing.

Thank you very much for allowing me the time to comment. And to Mr. Strawn's query earlier, we very much think that the

administrative requirements in the permit have been reduced, and that's been helpful.

BOARD MEMBER STRAWN: Can I get a card from you when you get a chance? Just for the record, to make sure she gets your name spelled right.

CHAIRMAN ABARBANEL: Mr. Green from South Coast Water District.

MR. GREEN: Well, thank you. This morning I had to rush through my three minutes' presentation, and I felt a little like the Federal Express presenter this morning. So I'm here. This will be short. I appreciate your time.

We really feel at South Coast Water District, as well as at the City worked very hard in the area to do our best for water quality. In fact, South Coast Water District adopted, a few years ago, a zero tolerance for any kind of spills in your district, and I want to believe we've done a very good job of maintaining that goal.

My message here is, please consider providing -- or providing for the interim compliance, which seems to be reasonable and fair. Make it more like the other regions in the area.

So with this closing, I ask,

respectfully, the Board would be mindful of setting the water quality improvement policies, and do the right thing for the tentative order.

Thank you so much.

CHAIRMAN ABARBANEL: Mr. Green, may I ask you a question?

We've learned this morning that there are really two times where the water quality improvement plans have deadlines: One is their submission, and one is their acceptance by the Board. Which period do you have in mind for what you call "interim compliance"?

MR. GREEN: I would say from now until the final completion of the -- the final WQIP is completed; that would be the period. I can't dictate the timeframe I heard Mr. McKibbon mention up to 40 months might be a reasonable time.

CHAIRMAN ABARBANEL: I thought that was actually an extension of the first submission of the plan, additional time.

MR. GREEN: I can't answer that question for him. Sorry about that.

CHAIRMAN ABARBANEL: Thank you.

MR. GREEN: But I think perhaps Jerry might have an answer for you.

I'd be happy to answer. I think the Board has a great deal of discretion as to when they would want to start interim compliance. I think, as of today -- you don't have to start from scratch. You can look at other models from around the state and see how they've done it.

I think from the approval of the permit would be fair, but I think look at the other processes that have been put out there by the other Boards, and that may provide some guidance, as well.

Does that answer your question, sir?

CHAIRMAN ABARBANEL: Not really, but it's okay.

UNIDENTIFIED SPEAKER: Okay. At this point, we have a short presentation, a short PowerPoint, if we can -- I'm going to go through this very quickly. Just a couple quick points.

So just for a technical comment, this was raised by Dana Point: They've been pretty active participants because it is so important. This slide is meant to illustrate the importance of why it's important to have clear language in the permit itself in 2010, so there's an issue about -- apparently the response to comments, and

this wasn't originally an issue, but in response to comments, it indicates d-listed water bodies are still going to have to have these BLRPs and CLRPs.

That was contrary to what had been the Board's direction in 2010, and there was some ambiguity that might be problematic. We'd like the Board to address that. It should be a pretty minor issue and just clarify -- we can look at the transcript from 2010 as to what the Board's direction was. But also, it illustrates the importance of why the next thing I'm going to ask for for Laguna Beach is so important. The issue for Laguna Beach, one of the allegations that River Watch made in their complaint is, essentially, that if third-party spills or your own spills make it's into your MS4, you own it and you're liable.

So it would be helpful to have some clarification that is not the case. With the language we requested would provide that. Now, staff has been helpful, and has met with Laguna Beach and tried to address some of the concerns. So it just needs to be tweaked a little bit. I'm asking to change the language of the -- it would

be as amended it would read "where a Copermittee is implementing requirements" it would clarify if you're implementing your program fully, you're in compliance. If something gets in it, and you're doing everything reasonable under the permit to prevent spills, you're in compliance and shouldn't be held liable. Otherwise it requires a prior finding by the Board that make it's more difficult.

BOARD MEMBER MORALES: Who gets to decide?

UNIDENTIFIED SPEAKER: Well, it's unclear at this point. You have a requirement under E.2 to do a variety of things under Section E.2 to carry out the requirements of your elicit detection.

BOARD MEMBER MORALES: If the San Diego Water Board -- currently it's the water board or probably staff that makes the finding, the determination. If we revise it to say "when you're in compliance," that's fine, but who decides when you're in compliance or when you're not in compliance.

UNIDENTIFIED SPEAKER: Under the approach we've asked for, staff would essentially

make the finding. They would be deeming you in compliance. Arguably -- this is in the staff report, so it's meant to provide guidance. It provides additional verification you don't need the Board to actually find someone is fully implementing their program. That's one area where clarification would be helpful.

CHAIRMAN ABARBANEL: I was going to ask you about a historical example in this region. The City of San Diego runs a pump station at the edge of Penasquitos Lagoon, which is near Torrey Pines Beach State Park. That pump station is runs when electricity is delivered to it by SDG&E. There was a ground out or power outage in which SDG&E did not deliver power and there was a spill. Everybody was in compliance, but there was a spill and somebody was held responsible.

UNIDENTIFIED SPEAKER: That's a great point. I guess my response to that would be did they have backup generators in place? Did they have a system in place to prevent spills? I don't know anything about the scenario.

CHAIRMAN ABARBANEL: Of course. Only to suggest the unexpected may happen. You could be trying your best and still this went into the

lagoon rather than the MS4 system. These things happen. And I only throw that into the conversation.

UNIDENTIFIED SPEAKER: It's a good point. The point is raised because of the issue. Laguna Beach wasn't frequently appearing before this Board before because they were busy trying to improve water quality. It's been a seat change. They haven't wanted to get into this business they've been dragged into it. Now that they're here, it makes sense to -- to the extent they do what they're supposed to do in the future, they don't wind up in court again. That's what this effort is, an effort to make minor tweaks to help address the concerns. Pleasure of the board, obviously, but that would be our recommendation. The staff report is helpful but I think that clarification would be beneficial. Also similar clarification to the permit itself.

I wanted -- I'm not going to spend much time -- good, my time is back on.

This is the question raised by Board Member Morales about aren't you already out of compliance? Haven't you been out of compliance for a couple years? This summarizes the responses

that Mr. Baron. It's really a question of are we out of compliance and we wish for the privilege of being in compliance, or are we already implementing programs trying to do our best with the interim process and then a regulatory change to put us in a posture where everybody is deemed to be out of compliance. If everybody is in violation of the Clean Water Act, how do you tell the good from the bad?

Anyway, so I think those are just the points I wanted to make. I think Ryan made most of them. It's very expensive. Dana Point, regardless of what you do today, Dana Point, Laguna Beach, the people I'm here on behalf of, they're going to pull out the stops to improve water quality. It's important to them, and it will continue to be. Their citizens demand it. But I think it will -- first of all, it's the fair thing to do but also not having to worry about "are we going to have to devote one person here to dealing with" -- I don't want to malign environmental groups here, either. They're good people. They're trying to do the right thing, too. I get that. But it does make it difficult to try to get the mission accomplished when you

had things that went down in Laguna Beach.

I think that interim compliance -- the task you've given us is very steep. We've got to come up with a lot of money. It will be a big step in the right direction if we have interim. If I could reserve my time -- if you'll permit me to do that.

CHAIRMAN ABARBANEL: Does that end the presentations by the cities of Laguna Beach and Dana Point?

MR. BARON: Yes. We're good to go.

CHAIRMAN ABARBANEL: Before we move on, then, to the San Diego county permittees who have three minutes, I would like to ask a question of Mr. Chiu.

CHAIRMAN ABARBANEL: We have heard that the Copermittees have two years to submit for the inspection of the board, water quality improvement plans. When does that two years begin?

MR. CHIU: Well, it varies, depending on the group, so depends on when they come into the permit, but we set an effective date that is 50 days after you adopt the permit or adopt the amendment to the permit. Orange County when they

came in February, their effective date became two years from April 1st.

CHAIRMAN ABARBANEL: April 1st, 2017.

MR. CHIU: For Riverside county Copermittees, the effective date would be January 7.

CHAIRMAN ABARBANEL: 2018.

MR. CHIU: January 7, 2018.

CHAIRMAN ABARBANEL: San Diego?

MR. CHIU: San Diego went through their water quality improvement plan, and they submitted theirs back in June 26th of this year.

CHAIRMAN ABARBANEL: San Diego county.

MR. VAN RYAN: Good afternoon, members of the Board. I'm John van Ryan. I'm with the County of San Diego. I'm here to represent the 21 Copermittees of the San Diego region portion of the permit. I'm going to be speaking exclusively to the land development requirements of the permit that are in Section E.4.

CHAIRMAN ABARBANEL: Before you do that and without loss of time, your time San Diego county Copermittees went through a two-year process to develop the water quality improvement plans. During that time, you had no alternative

compliance capabilities; is that right -- interim compliance protection; is that correct?

MR. VAN RYAN: That's my understanding.

CHAIRMAN ABARBANEL: What happened?

MR. VAN RYAN: I'm not the best person to ask. I don't deal with that portion of the program.

CHAIRMAN ABARBANEL: Is there somebody who can answer?

UNIDENTIFIED SPEAKER: John is dealing with the development issues.

CHAIRMAN ABARBANEL: Is it a long answer, or is it nothing?

UNIDENTIFIED SPEAKER: We were very busy at work trying to meet the requirements of the permit. We were doing several plans at the same time. I think we worked very hard and diligently.

CHAIRMAN ABARBANEL: During that time when you were exposed and potentially not in compliance with the new MS4 permit, did anything unusual happen to you?

UNIDENTIFIED SPEAKER: We continued running our program, sir.

MR. VAN RYAN: So behind you is a summary of the issues I'll be speaking to. I have a handout that summarizes what we'll be asking for.

So basically, we've got three issues I want to address. First are essentially support. Issue A was support for the fact that staff in the November 4th errata clarified an inconsistency in the dates for the effective date of the BMP design manual, and the updates to that. Thanks to staff for fixing that. We agree with the fix.

B, we also support staff's stated intent to further extend the date of the BMP design manual for San Diego COunty permittees by 90 days from the current effective date of December 24th of this year.

As I'll talk about in a little while, that's something that's only in the response to comment. That's not part of this permit and that's not part of this adoption. We'll have some thoughts how we prefer to see that move forward. The rest of these are the issues I'll be concentrating on for the rest of this presentation. They primarily deal with time, and the time needed to complete updates.

The first is the permit should generally allow the extension of BMP design manual effective date by 180 days instead of 90 days anytime new or modified land development requirements are adopted, which would be the case today.

We specifically would like to see the proposed extensions that are in the tentative order today. The effective dates for those to actually be June 21st, so in other words, 180 days on top of what's already being suggested by staff in response to the comments.

So it would give us a full 180 days beyond the existing December 24th effective date.

So number one, first of all, we just want to see when new requirements are brought in after the initial permit, which is the case now, that we have enough time to do what we need to do to bring those into our programs and implement them. What we're suggesting here is a full 180 days when new requirements come in, instead of 90, which is currently in the draft. The simple edit we're suggesting is the bottom of the slide. Simply change F.2(b)(4) to be 180 days instead of 90 days. Simple edit.

So anytime we have to make modifications to our BMP design manual, a whole lot of other things have to go along with that. This slide breaks it up into three major pieces. We have updates we have to complete. We have a public process we have to go through, and that's fairly well defined. And then we have to actually work with applicants to identify where those changes are going to be applicable, whether it's new applicants or applicants with projects in the pipeline, to work with them to make sure the correct requirements are being applied.

Under the completion of updates, the critical things for us are updates to the BMP design manual. The lion's share of BMP design manual updates have been completed over the last two years.

So, arguably, the new things that are being brought in under this tentative order are, in comparison, not a lot. Keep in mind we have to go through the same process. The critical thing here -- any of these things can take months, sometimes years depending on what it is. We can try to keep the timeframes as collapsed as possible, but for the county of San Diego, as I'm

used to illustrate, our board updates take at a minimum, if all the dates lined up, for us to basically do our administrative process, get an ordinance update through our administrative process to our board, for the first hearing, second hearing and then 30 days for that to be effective. In the best of all possible scenarios, that is 90 days, which is currently provided for updates.

We have to update our watershed protection ordinance to implement the requirements of the BMP design manual. I can't speak for all Copermittees, but some will have the same process, some will have more process. Realistically, if we're being given 90 days to do it all, and this one piece of it ignores the fact we need to reach out to industry, work with people, develop the requirements up front, it's just enough to get us to squeak in.

We're certainly not concerned if we're a few weeks behind the deadline, staff is going to come after us. That's not the case. But we're really concerned this isn't a realistic timeframe. We're not going to be squeaking in. We're going to be much behind it. But that's generally what

we have to go through.

Our second request is -- so in addition to making the general extension of design manual effective dates to 180 days, in this particular case, for the changes that are imposed through today's hearing, we would like the extension date to be 90 days, in addition to what staff suggested in the response to comments. An additional 90 days to what they're suggesting would be a total of 180 days from the current December 24 date. That would take it to June 21, 2016.

I'm providing specific edits at the bottom of this slide. All you would really be doing here is putting a sentence at the end that says "For these specific updates, San Diego Copermittees, the effective date for these requirements will be June 21, 2016" and this slight edit up in the previous sentence to clarify you have the authority to do that. We think that's fair. Let me go through why that's necessary at this point.

So these are the major things -- I'm not going to go through -- these are the major things in the land development requirements right

now that effect what we have to implement. PDP categories have been modified. The definition of redevelopment has been modified, and more importantly, grandfathering or prior lawful approval provisions have been added.

Going back to the timeline I just described, we need that 90-plus days to get through the minimum administrative and adoptive process for our ordinances.

I want to go back to grandfathering provisions here. These are important provisions. We're very happy with staff for where we got with these. We got a reasonable set of provisions moving forward. These are much more useful to the Riverside and Orange County Copermittees. We have very little time to work with applicants to utilize them.

When I worked on this process, Board Member Morales was there, and I think you'll recall one of the things you said when we brought up the issue of timing was you'd have staff look into it. I think staff did will look into it, but unfortunately we didn't come up with anything other than the current schedule. It's not enough to take advantage of these new grandfather

provisions. If we were provided the additional 90 days that are we're suggesting on top of what staff is suggesting, we would be satisfied that's enough to do that. I won't belabor that issue except that was an outstanding issue for us.

CHAIRMAN ABARBANEL: Pardon me. I have a question.

These changes to your ordinances and the design manual must occur every time the MS4 permit changes?

MR. VAN RYAN: Yes.

CHAIRMAN ABARBANEL: The MS4 permit, as we learned from executive officer, has been issued since 1990. And this is the fifth. You've done this four times before in the past?

MR. VAN RYAN: This is the second time. The BMP design manual revision was called Sue Sump and Lass [phonetic] manual, and why bother spelling it out.

It was basically a change in title. What the permit required this time because there were significant changes in the land development requirements you said you guys have a certain period of time to update those after the board accepts those updates, you have half a year to

implement them.

CHAIRMAN ABARBANEL: Under the assumption that the 2018 MS4 permit will be less of a big change from the previous permit -- present one, would you accept the fact that this is a necessity only this time and not in the future?

MR. VAN RYAN: If I agreed with that assumption. We've assumed it every time the permit has been reissued and we've been wrong. I'm not sure that would be the case.

So, again, going back to where we are right now with this particular iteration of the land development requirements, you saw the things that are changing. To go back to the slide you saw a minute ago, the updates are relevant, so we need at least the 90 days plus to get the ordinance updates and all these other things that need to be done.

In addition, there are other outstanding issues that we haven't completed yet at this point. I want to talk about critical coarse sediment yield. These are requirements that were in the 2013 permit when it was adopted.

They think we are hot and heavy into

really trying to come up with reasonable guidelines for developers to implement. As it turns out, they're much, much harder than what we had anticipated. I know the first reaction to this particular thing is, "you had two years." But keep in mind for the first year of this permit, we were doing something called the Watershed Management Area Analysis, where we were figuring out even how these things applied. We didn't know until a year into it the gravity of what these requirements were going to be imposing.

In addition to that, the second year, we were doing things like starting to develop offsite alternative compliance programs. We updated our terms. We updated all of our programs. There's a lot of stuff going on here. The reality is this is where we are right now: We're getting closer, but we're not there yet, and if we don't extend the effective date on these, we're going to be in a position of not having the right requirements in place to be able to implement them.

What I want to point out to you is, we're committed and well into the process of developing these requirements. The county and the

city of San Diego are working cooperatively right now to develop guidance.

Keep in mind, this is not straight engineering; this is environmental science. We're being asked to do really new stuff and it's more than you can simply rely on the applicants to turn in a proposed design and review it to see if we got it right.

The major issues on the left side of this slide, these are the things we will have to develop. I purposely blurred that diagram so it wouldn't evoke any discussion. It's a flowchart to illustrate what the process is applicants will go through once we figure out how to guide them through all these decision points.

We are making progress. I wanted you to see that. It shows we've done something. What we are committing to right now, what we've already started to initiate, the city and county together are taking the draft content that we developed so far, we're are going to put it through a public process. First, we're putting together a technical advisory committee that will include your staff, will include somebody from the industry, NGOs. It will include secular people

that need to be okay with this stuff.

We're thinking two to three tack meetings, and we're thinking a public workshop sometime in April. This, I think, is a fairly aggressive schedule, but we think that we can do it. If we were to do that, we would basically be final guidance by late May. What we asked for is an extension of the effective date that would take us a little bit into June. So with that, we feel like we could be there. It's not going to be perfect but realize what we need to do before we start releasing guidelines and requirements on developers is, we have to have methods that are fully baked. They have to be basically technically and legally defensible.

And to come back to Mr. Chiu's point from earlier, they have to be able to support not action-oriented implementation but results-oriented implementation. And the danger we run if we don't work out these methodologies and they're not scientifically valid, is that all we're doing is basically putting people through a routine of generating results rather than what the permit asked for, which is no-net impact to receiving waters.

That's what we're asking for.

What we would prefer, in terms of how to get the extension, would be that you just make the amendments to the tentative order today. Just put that date in there as we're asking for it. So we provided the language so the staff doesn't have to write it.

If you can't do that or disagree, but you do agree that the effective date should be extended to some date, whatever you agree with, then please, as part of the public record for this proceeding, direct your executive officer to make that change so that we know in leaving this area what we're working with.

That's all. Thank you.

CHAIRMAN ABARBANEL: San Diego has six-and-a-half more minutes.

MS. WEBER: I do have a question.

CHAIRMAN ABARBANEL: Go ahead.

MS. WEBER: Thank you. I'm JoAnn Weber, planning and project manager for the County of San Diego, and I also speak on behalf the San Diego's Copermittees.

The Copermittees, we appreciate the Regional Board has included additional language to

have the ability to have this alternative compliance option. We thank the staff for several changes made in the errata sheet, which make it a more implemental option. Despite these (unintelligible), the San Diego Copermittees are concerned that the specific requirements for annual milestones will still be overly constrictive and burdensome. Each Copermittee could potentially need to establish and track annual milestones for multiple goals within multiple water bodies in each of their Watershed Management areas which could result in dozens of annual milestones.

The Copermittees recognize that milestones would benefit accountability for working toward their goals. These specific milestones would be more meaningful if they would focus on priority water quality conditions and were actually based on a permit cycle, as they currently are in our water quality statement plan, so that would be one milestone per five-year permit term, period, from each water body, including combinations to be covered under the alternative compliance pathway.

The San Diego Copermittees are

requesting the Regional Board to consider modifications to the language to restructure this annual milestone requirement to make it more meaningful. And I have a draft errata sheet that I can hand out to your staff, and it's exactly the same thing that they proposed in our September 14 comment letter.

Thank you.

BOARD MEMBER OLSON: I just wanted to ask a question.

So for your group, the interim compliance is not an issue?

UNIDENTIFIED SPEAKER: We did not have that option on the table when we did our water quality improvement plans. That's just something we're coming in now.

BOARD MEMBER OLSON: So you didn't have any suits or -- I mean, that's what I kind of understood you to say in relationship to the Chair's question.

UNIDENTIFIED SPEAKER: That's correct.

BOARD MEMBER OLSON: You said, well, you were out of compliance, or you --

UNIDENTIFIED SPEAKER: None that I know of.

BOARD MEMBER OLSON: Okay. Thank you very much.

MR. WILE: Good afternoon, Board Chairman, Board member. My name is Clint Wile. I'm with the City of San Diego Transportation and Storm Water Department. I'm the program manager for our Watershed Planning Group. We oversaw the development and took over the lead for three of the new water quality improvement plans here in San Diego, and we participated in another three. So the last two-and-a-half years I have the scars to show putting these plans together. But I think they're good plans.

Let me say for the record that the city of San Diego, our overall goal is improvements to water quality, and we think the WQIPs are going to be our roadmap on how we are collectively here going to get there down the road.

I also want to speak here, generally, in support of the permit amendment but offer a few suggestions for some modifications that I think and the City thinks will make implementation of water quality plant more effective, more achievable and will result in faster and better

improvements to water quality.

I'd also like to quickly thank Board staff for their efforts in working with the Copermittees over the past two years on the development of the of Water Quality Improvement Plans and through this entire permit amendment process.

First, the City of San Diego supports inclusion of the prior lawful approval definition in the permit. Again, we want to acknowledge and thank Board staff efforts in working with us, and other stakeholders, through a public participation workshop that led to developing this definition.

We support the San Diego program chief's comments as presented by the County of San Diego related to changing prohibition and limitations compliance option in the annual milestone requirement to one milestone per permit term.

I wanted to further elaborate on what JoAnn mentioned about why I think that's important from a planner in a city that has to implement these water quality improvement plans and I think with the importance we can see here. The City supports the concept of milestones. It's never

that we didn't agree with them, and we support that for many reasons. They provide opportunity to achieve the outcomes, and they also provide accountability and transparency. They also help me communicate to my management and city leaders budget requests that we need more funding to improve water quality. And so to have milestones and numerical provides that accountability and that justification for increased budget requests that we all know we need to meet these challenging water quality requirements.

However, the annual milestones do not allow the City and the other Copermittees and the MS4s in this room enough time to reprogram activities and secure those necessary fundamental resources that you make program adaptation. So what I mean is, these active management process, cities are just too big to be able to do that on an annual basis. We do our budgeting process a year in advance, so if we find that we don't make annual milestone, it takes us a year to request the necessary resources to make that correction. And that's why during the permit workshops we had advocated for a less frequent annual milestone whether or not we were against milestones, an

annual is just not practical for how cities' -- their budget process works and how we reprogram and implement.

CHAIRMAN ABARBANEL: City of San Diego does not carry a reserve for unexpected expenses?

UNIDENTIFIED SPEAKER: We certainly do. But as far as for the Water Quality Improvement Plans and we're talking about the compliance option that's on the table right, now we are trying new BMPs all the time and we have forecasted out what we think we need to do to meet those numeric goals.

CHAIRMAN ABARBANEL: No, I understood what you said, and I appreciate the answer to the question.

MR. WILE: Okay. The City also supports the San Diego Copermittees' comments about the six-month extension for the effective date of the BMPs design.

Now, as a followup to our written comments, the City of San Diego requests that Board staff amend the permit to allow for individual jurisdictional compliance with TMDLs. Let me elaborate that really quickly because I only have a minute left.

Specifically, language and attachments of the permit precludes any Copermittee from using the WQIP implementation compliance pathway for that TMDLs unless all Copermittees in that watershed are effectively implementing their Water Quality Improvement Plan commitments. This is problematic for two reasons: One, individual Copermittees, or MS4s, have no authority to compel other Copermittees to comply with these requirements.

And second, and more important in my mind as an implementer, is in order to justify and clearly defend requests for additional budget and the resources necessary to implement these BMPs, we, I, the City, Copermittees, need assurance that our compliance is not going to be determined by the actions or inactions of other agencies.

So in closing, I want to thank again Board staff for working with us and the stakeholders during this long process, and we, and I particularly, look forward to transitioning from Water Quality Improvement Plan planning to implementation so that we can start to move toward our collective goal of improving water quality.

Thank you.

CHAIRMAN ABARBANEL: So I note -- are there any questions of Mr. Brown? I know -- this is a question -- the City of the San Diego -- all the San Diego Copermittees are now two and a bit, almost two-and-a-half years into the process of the WQIP's process.

I think this Board, and I think the staff, were very pleased with the idea of Fiori, that allowing the Copermittees to figure out how to achieve the goals was a good one, rather than our sitting up here and telling you what to do. You've been through six out of the seven, 84 percent of the WQIPs. Is that happening? Were we simply too optimistic? Are you and the other on Copermittees happy that you get to decide how to do it?

UNIDENTIFIED SPEAKER: I think it was a -- at the end of the day, at the end of the two years, it was a compromised approach. I think most guys have issues that they can be happy with, and then these plans are not perfect. And I think Mr. Chiu talked about that earlier, about their dynamic documents. We look to improve them and work on the things that maybe didn't work so well for the first two years, we're going to have an

opportunity to do that.

But to specifically answer your question, I think the Copermittees appreciated the flexibility to establish numeric goals, but we had to work in tandem with our stakeholders and with the Regional Board and they pushed back on us and it was a collaborative process.

CHAIRMAN ABARBANEL: If in the future we decide the plans must be perfect, these meeting would be much shorter.

Okay. Mr. Brown, I think there's a question for you.

BOARD MEMBER OLSON: Could you tell me, then, since you're asking that the milestones be changed, so you were happy you didn't have to do them all up front, correct?

MR. BROWN: Yes. So I actually didn't even acknowledge. I agreed with JoAnn's comment that we do appreciate the change in the errata sheet, that we don't have to extrapolate annual milestones out 20, 25 years.

BOARD MEMBER OLSON: But you found it burdensome that you have to do them?

MR. BROWN: My personal feeling, or the City's, I don't know if I would use

"burdensome." The point I was trying to make is simply if we don't attain an annual milestone, the City's internal adaptive management approach -- we're not able to turn on a dime, and doing that on an annual basis is difficult for a large city. And so we were hoping that there could be a little bit longer time between milestones with better alignment with our internal budgeting process.

BOARD MEMBER OLSON: So meeting them doesn't slow down the process, or it doesn't coincide with your budget process, but overtime would you --

MR. BROWN: If we don't meet an annual milestone and we realize that we need to retool or reprogram our storm water program to meet that next annual milestone. We need a longer time to do -- we need more time to do that. That that was the point I was trying to make.

BOARD MEMBER OLSON: Or you need a designated reserve to allow you to you meet those?

MR. BROWN: Yeah.

CHAIRMAN ABARBANEL: So if the City of San Diego decided that they would form a five-year budget and let the city counsel have four years of vacation, would you be asking us for one milestone

every 25 years?

MR. BROWN: I don't know if I can answer that question. I don't think the San Diego city counsel can either.

CHAIRMAN ABARBANEL: Do you have a question you wanted to ask?

BOARD MEMBER MORALES: I have a question for staff, actually.

On the request that we push out a 180 days -- and I think originally, and correct me if I'm wrong, we had said 30 days, and then there was some back and forth, and currently what we've got in the tentative order and recommendation is 90 days. I understand the argument 180 days gives them opportunity to go through public process and that takes set amount of time, 25 years, even the best-case scenario. What does that do to the grandfathering?

BOARD MEMBER MORALES: So we're basically -- they're saying give the grandfathering (intelligible) three more months?

UNIDENTIFIED SPEAKER: That would be how the process would work out, yes.

CHAIRMAN ABARBANEL: Thank you very much.

The next set of speakers are the Building Association, 15 minutes. We understand that there's been a request on the part of some of the speakers in Group 9, the environmentalist group, to speak earlier because of time. In fairness, we set the schedule and we're going to try to keep to it. So if you can please ask other people to make their remarks, that would be helpful.

MR. STRAWN: We can add your time to the other speakers and make a record that you were here, but we really prefer to not change the schedule around.

MR. MCSWEENEY: Before we proceed, Mr. Chairman, I need to be sworn.

CHAIRMAN ABARBANEL: Oh, my goodness. Anybody else not yet sworn in?

Okay. Do you swear that the testimony you will provide is true and correct? If so, say "I do."

MR. MCSWEENEY: I do.

CHAIRMAN ABARBANEL: Thank you.

MR. MCSWEENEY: I'm Michael McSweeney. I'm senior policy advisor to the BIA representing the coalition --

CHAIRMAN ABARBANEL: Is the mic on? I just want to make sure everybody hears you and the record hears you.

MICHAEL MCSWEENEY: I'm Michael McSweeney. I'm senior policy advisor to the BIA. I'm representing the coalition.

Right off the bat I wanted to correct one thing that my friend Wayne Chiu said. When you pointed out about the watershed approach, that is something we also bought into.

MR. CHIU: My omission. I apologize.

MICHAEL MCSWEENEY: Okay. So Board members, I want to use a cultural reference as we start. And I want you to join me, if you could look at the slide. And we'll go back to Mr. Peabody's way-back machine, and we'll go back to 2007.

In 2007, the relationship between my industry and the board was nonexistent. We really didn't engage each other. We opposed the permit in 2007. I didn't work for the BIA at that time, but my understanding was we felt we were singled out; most the requirements were on us. There wasn't any dialogue. It was, "Here's the permit. We're going to do this."

We felt it was unfair. We sued. We spent a million and a half dollars. We lost.

I want to contrast that to what we've done in this permit cycle. At the very beginning, we overcame our fear and decided we wanted to commit to collaborate with all the stakeholders. We decided to help solve this problem by utilizing the engineering skills of our members. We worked collaboratively with the Copermittees, your staff, and the environmentalists. That was a first. We worked closely with Regional Board staff to make specific changes to the plan, and we've spent over a million dollars in hard cash and hours donated to help try and make this permit better and comply.

Well, I talked about the fear. The next thing that comes up is trust. And the first example I think you saw of that is our joint letter with Coast Keeper. And if you look at No. 3, the point there, the one thing that I think both our organizations feared. And you heard it today from two sets of Copermittees that had one watershed they were talking about. We were in fear of doing eight of these plans simultaneously. And why were we in fear of that? Because eight

WQIPs in 24 months -- I'm going to use "WQIPs" because I only have so much time.

There's a limited pool of experts and consultants. So it's hard enough to do one really well, but if you've got a limited pool of brainpower, to do eight simultaneously is a huge challenge. This had never been done before, so there was no template to follow. This was a learn-as-you-went-along. The interesting thing is, each component builds on the next. So in building terms, the first thing is the foundation, and then you set up the walls, and you set the floor joints. That's how you build a building. So each one of these had to be completed.

If there was any hiccup in that schedule, then you're under that much more pressure to try to get it done.

And as technical problems arose, it took additional time to figure those out, and that put already more demands on a tight timeframe.

We agree with your practical vision. And I'm not going to read it to you because you all memorized. So I want you to know that we spent, as of yesterday, $1,059,000. The first line there is actual hard dollars spent on

consultant studies, reviews, policy work. The rest is the people at work at the BIA, and the other two are what our members have donated. Basically, we've put our money on the table behind what it is that your executive officer and your Board is behind.

We're requesting 90 days beyond what the staff had asked you to consider, to do some of the following things:

The BMP Design Manuals, we spent a lot of time on this. We're about 95 percent of the way there. We need a little more time to work out a few bugs, including how coarse sediment plays into that.

The coarse sediment yield, we're working on tools that will give us the ability to practically comply with the requirements in the permit.

The Water Quality Improvement Plans, there's additional science data that is coming online that hasn't been included in those plans, and we want to see that included in those plans.

Public education. There are so many misconceptions out there of when, who, and what takes place where, so much so that I will

illustrate this. The City of Oceanside, we have developers building houses, under construction, and they're being told that if those houses aren't done by the end of December, you're going to have to comply with the new permits. That's completely factually false. But there's so much that nobody really knows what's happening, and so there needs to be more time to educate through both the industry and the city and, basically, all your stakeholders to know when will things go live.

Finally, in 180 days we're not going to get alternative compliance figured out, but we need more time to get that up and running because that's going to be, I feel -- I don't want to say the "silver bullet," but that's what's going to help get us to where we want to end up.

So when you look at the design manual, we want to make sure -- and what we've been working on -- is to make sure that it's easily understood. This is the Bible, the how-to document in each city of how you will comply, what you have to do to comply, development staffs of the cities.

Now, these aren't the storm water managers. These are the people that actually

process plans. They need to understand and get trained on what does all this mean. Because right now they have something of an understanding, but they don't know the specifics. Once complete, we need to make sure that all the people on our side of the table are trained and understand now whatever is basically in cement, codified, going forward.

Most of the work is 95 percent complete, and we need -- and Wayne touched on this in his presentation -- we need a clear procedure so that when problems come up stakeholders and Copermittees can get together with Regional board staff and get it fixed, which brings us to coarse sediment yield.

This area was not well-understood going in. There's not much in the permit about it; it talks about avoidance. Even after the watershed mapping analysis was done, we really didn't understand what that was. And in one of the forums they passed around an 8-and-a-half-by-11 piece of paper with where we think sediment is, and it all looked like it was in east county and everybody figured out, "Ed, we're not building there."

So once we understood where the sediment is -- and if I could just show you, this is the map that came out in June of this year. It's a GIS map. So once we were able to actually see it, it became nicknamed "The Rash Map" because it looks like the county has a rash. So once you started looking at it, it's hard to see -- you can see all in east county, but even down in here there's still pieces of red. So when we start to blow this up -- now, here's a perfect example. Can you see this is Fanita Ranch down here in Otay. So how do you comply?

And so needless to say, when this map came up and property owners and developers looked at it and they honed in on where their red dot was, it was an "Oh, my God" moment. You talk about the anxiety level, my phone and my e-mail blew up.

We have compliance challenges. How are you, meaning an applicant or a Copermittee, going to document the permit so that permit requirements are met? There's practicality on doing this.

So we're suggesting -- and I think John talked about it -- we should have some sort

of a workshop similar to what they did for Hydromodification in 2007 so everybody gets on the same page and we all know what it means.

The other thing is drainage boundaries. Sediment transport is based on drainage boundaries not project boundaries. So your project could be in the middle of something and you gotta figure out on two pieces of property, upstream and downstream of yours, how are you going to get your sediment to the tributary?

So why did this become an issue so late in the process? Well, there was a lack of transparency. And it's not anybody's fault, but when there wasn't an understanding where they talked about there was a small map that went around. And you can see if you reduced that to an 8-and-a-half-by-11 slide, you couldn't see any of those small mounds. All you saw was what looked like the mountains.

The original link that was released, if you had GIS software on your computer and you tried to download the map, it crashed. It was so large a file.

We asked, after three or four weeks of

the map being on the site, for the County to figure out a better way to make it more user-friendly, maybe put in Google Earth, so if you had Google Earth then you could see it. The public couldn't find it easily.

And so what did that do at our end? As soon as we figured it out, my phone blew up. People started to panic. Everybody assumed the worst, which extremed the panic. And then finally, once you factor in the permit timeline, now it's maximum panic. And this is what happens: The engineers freaked out. The hydrologists started sweating profusely. The developers are pulling their hair out, and even our children were stressed because we became overstressed all of a sudden.

So what do we do next? On the left is pretty much what our industry looked like. We freaked out. I called Laurie. Laurie put together a meeting with Wayne and Christina. And their message to us was, "Look, don't panic."

What we were looking for from the permit -- and this is the benefit of the collaboration. I will say right now, a year and a half, two years ago, there was a lot of anxiety.

We've been working with your staff. Whenever we have a question, they answer it. My boss meets with the executive officer on a regular basis. And so what they told us was, "Look, this is what our intent was, was no net impact."

So then what we did was we went to work. We had the meeting with them, then we helped, and we were at other stakeholder meetings. We met at Coastkeeper Inn. We met a couple times with Copermittees. How are we going to get this to work? One of our academics put together a white paper on sediment yield. He developed a dimensional index. I know that the County's consultant was developing something. We went to work. We freaked out, but we got some clarification and we went to work because the time is ticking. And we worked collaboratively because at the end of the day what we want is, we want to have the tools in the toolbox so that we can comply with the permit.

So the Copermittees need additional time to do the following things:

They've got to do public work workshops to educate, solicit input on this particular topic.

We need to coordinate the solutions and then get them into the BMP Design Manuals. Remember, each city has one of these.

Then we've got to review all available sudden since that was not given during consideration on the Water Quality Improvement Plans and include that where applicable.

They've got to have time to schedule counsel meeting and counsel approval, and then we have to conduct concurrent training for development industry staff, as well as the people that work for the different Copermittees.

So how do we get to the goal? We think by adding 180 days total -- the 90 that staff said that they will give, plus an additional 90 -- starting up the December 24th due date, that we can come together and agree on standards and get the course sediment yield figured out, codified, and into the BMP Design Manuals.

We also think that we can get some additional work done on the Water Quality Improvement Plans where they've been deficient.

We can incorporate a fully developed workable model into all the manuals, and we can allow the various jurisdictions to have the time

to adopt what they need to adopt. At the end of the day, this is what we're looking for.

The staff agreed that with sediment with no net impact there's not, like, one answer. There can be other options proposed that demonstrate no impact. We want to have as many of those tools in our toolbox as possible. And it's important and necessary for you as the Board to understand that there is a need to have your staff available to answer questions as we move forward, not to play referee, but there are legitimate questions. "Okay. How are we going to figure this out?" Sometimes they come from us. Sometimes they come from the Copermittee. Sometimes they come from the environmental community. Because at the end of the day, this is what we want: We want a permit that works for everybody. Not necessarily everybody is going to be happy, but we want something that works for everybody. And by doing that, at the end of the day we want results.

Finally, I think that our Copermittees in both Riverside and Orange County touched upon CEQA, and I know that with doing eight of these plans at the same time the City of San Diego

adopted an approach that they said they had a mitigated negative declaration. But most of the other Copermittees have it, and there are definite CEQA requirements, and nobody calculated that into their timeframes as well. So I just wanted to put that out there.

But I appreciate your time. If you have any questions, I'd answer them.

BOARD MEMBER MORALES: Mike, one very quick question.

When you suggested that you would want staff or it's necessary to have staff available to answer questions, were you envisioning something along the lines of the folks on your end designate one person to contact staff? Or are you suggesting that they take calls from everybody who has a question?

No. Typically -- let's use the coarse sediment as the example. That's exactly what we've been doing.

As we've had problems, typically it falls to me. People call me and then I usually call Laurie or one of the staff members. And that's what I do. I think I called you and said, "Hey, we've got a problem with this. We need to

meet with you. How soon can we get in to talk?"

BOARD MEMBER MORALES: Okay. So you're just asking to continue the --

MR. MCSWEENY: Collaborative relationship.

BOARD MEMBER MORALES: -- working relationship that we appear to have now, as opposed to something more.

MR. MCSWEENY: Right, yeah. No, the intent was never to have project applicants calling them, saying "Can we do this? What about this?" Not at all. Not at all. Not at all.

What we're really trying to do is work and have them as a resource. Let's work with the Copermittees to make sure that everybody's on the same page, that we understand what's required in the BMP Design Manual, and then we sell that and educate our folks.

On the other hand, they've got a job of making sure that everybody on their end knows what does all this mean. And it is extremely -- coarse sediment is unbelievably technical. And so at the end of the day when somebody is trying to get a project processed at the City, if they don't understand, they just kind of throw their hands

up, "No," or they go do a study and spend $25,000, which may or may not answer a question, and they don't even know the right question to ask.

So that's why it's important to have time to educate both groups of people.

BOARD MEMBER MORALES: Okay.

CHAIRMAN ABARBANEL: We will move on to the next group.

Mr. O'Malley?

MR. O'MALLEY: Thank you. I also have presentations I'd like to make.

CHAIRMAN ABARBANEL: And you organized it in groups of people?

MR. O'MALLEY: Yeah, actually just one other in our 30-minute time slot. And I'll hopefully cover about 20 minutes.

CHAIRMAN ABARBANEL: You have 30 minutes. You have somebody who will be very friendly until 29.9 minutes.

MR. O'MALLEY: Actually, I would request that Board members shall perhaps give me 30 seconds to respond to Board Member Morales' question up front before we begin.

CHAIRMAN ABARBANEL: Anytime you respond to questions, I try to turn the clock off.

MR. MORALES: I asked a lot of questions.

CHAIRMAN ABARBANEL: Go ahead.

MR. O'MALLEY: This it the -- Excuse me. Matt O'Malley, legal and policy director of San Diego Coastkeeper. First, thank you for having me today.

I want to kind of respond because it seemed like from staff and what you spoke to this morning as far as the interpretation of the State's Board and Order, I want to read the language specific to that you talked about because I interpret it as a very different sort of instruction.

The idea, it seems like --

CHAIRMAN ABARBANEL: The State Board and Order and Alternative Compliance?

MR. O'MALLEY: Correct, yes. And I will be addressing just alternative compliance.

BOARD MEMBER STRAWN: May I ask you -- when you know you have a tendency --

MR. O'MALLEY: Okay. And I'm sorry.

BOARD MEMBER STRAWN: We have a recorder, that if you get ahead of her --

MR. O'MALLEY: I have a tendency, and

I apologize. I have a lot to say, and I'm trying to cover it all.

So the idea was that -- the thinking was that the State Board says you should consider this, but if you don't do it, we need you to justify why.

And obviously, if you read the language, it's pretty clear that that's not exactly what they meant. So I think instead what they're saying is -- and I can read it to you -- but they say, "We direct all Regional Water Boards to consider our approach to receiving water limitations compliance when issuing these permits.

"In doing so, we acknowledge that reasonable differences may dictate a variation in this approach but believe that such variations must nevertheless be guided by a few principles. We expect the Regional Boards to follow these principles, unless a Regional Water Board makes a specific showing that application of a given principle is not appropriate for a region-specific permit."

So instead of saying, "Do this or show us why not," they're saying, "Follow these principles, and if they're not applicable to your

region, then tell us why not."

That's, I think, a very different interpretation. It's very much -- it's a direction or tell us why you're not going to do it. Or, "If you don't follow each these seven principles, if you decide to do it, explain why not," because they want you to follow those principles. And I'll go through some of those later in my presentation. But hopefully, that's just a different take on what the State Board is saying and how he interpreted it versus sort of what I've heard thus far.

So again, I'm going to just cover the alternative compliances. You know we called on Safe Harbors, which is most of us, and our groups, our lawyers, and we get that right from the Ninth Circuit. But this general idea is that this is a provision that gives some sort of out or, you know, compliance of certain provisions or plans, forgive noncompliance and discharge. And that's essentially -- in fact, that's exactly what it says, and that's why the Copermittees are supportive of it. You know, once your compliance has been processed, you're deemed as compliant.

I know that we are looking for

outcomes based permanently. In our opinion, this very much goes back to the model-something plan, get a plan approved and now you're in compliance. It's sort of the opposite. It's sort of more of a process-based approach.

But that's kind of just to sort of give a start-out where I may intend to go here.

And I want to hit two main points in the brief time I have here, but the first is that -- for those of you who were here in 2013, we discussed this, that we do believe that the Safe Harbor approach violates anti-backsliding requirements of the Clean Water Act and federal regulations.

The second is that the tentative order -- and this is something that L.A. didn't have to go through -- the tentative order here, we believe, is fairly inconsistent, if not very inconsistent, with State Board's order and directives. I want to hit each these sort of together here.

The first, again, it goes back to basically the idea of what is anti-backsliding? I've thrown out a lot of language here, but the idea is that federal regulations and Clean Water

Act prohibits backsliding, where we can have permits from previous permits.

The way we look at the Safe Harbors is -- because they no longer require an actual meeting of water quality standards, they are less stringent than existing permits and previous permits, and in fact, they violent this.

Now, Reason 3 has actually spoken to this, especially with time constraints when they say backsliding is permitted, allowing additional time to complete a task that was required in the previous permit constitutes a less stringent condition to violate the provision against anti-backsliding.

So I don't want to go too far into the legalities here because what the L.A. board order did, as well as the San Diego board, what it's saying is, "You know, we're not actually sure if we're violating this or not. But even if we are, there's an exception here and we're going to claim the exception."

So they give this sort of justification as to why they're not violating anti-backsliding, "They do this in L.A., and we're doing it here."

So I really want to talk about more of what those claims exceptions are. I believe that this issue is probably going to be dealt with in court. I think it's already being petitioned up to courts in L.A. on that very issue. And so I really want to talk about the justifications here, what we're claiming here in San Diego, and why, in L.A., what worked in L.A., what's claimed in L.A. is not applicable to us one way or the other.

There is two sort of ways it's not. It's either what exists there on the ground doesn't exist here and so we can't claim this is this new information, or, of course, substantial change, or we've already been doing these things for a while so we can't claim they're new.

But essentially what they're saying is the justification for backsliding there was this new information for the previous permit. But you can imagine they waited 11 years between permits. Of course there's going to be plenty of new information. So you're correct in assuming that, oh, one or seven or 13 and several amendments in between.

But the idea was that we have these paradigm shifts that they want to treat storm

water as an asset rather than a liability. There was a lot they've learned in TMDL. They have something like I think totals about 40-something plus in L.A. region, actual TMDL which serve as sort of a backstop incorporated. So then as far as permit, really will get at the gist of water quality issues. Then the large sort of planning of regional solutions which we've already implemented, and LID benefits, which we've already implemented.

So for a number of reasons, I don't think those exceptions at all apply to San Diego.

The response to comments here basically says, you know, the circumstances have changed here materially substantially, so that should allow us to get around the anti-backsliding.

I would say very clearly the only material change here is that we're adopting a safe harbor. All the rest of the provisions have already been in place, some of them since 2007. And the main justification for what has been in play -- and I'll go through those right now -- really don't apply here either. So I think claiming this new information it just doesn't

apply.

And I'll say this numerous times: We sort of copy and paste justifications sometimes, but we didn't then look to see if those justifications apply here, nor did we copy the methods on the permits, and there are some specifics things I'll address there.

So what are the main things that were said, Look, we expect the L.A. orders TMDL requirements, they're going to be the means to achieve water quality standards for the majority. They have -- I know some places state 33, depending on how you look at it, over 40 I heard the other day. The L.A. board said the exact same thing. They said the majority of pollutants concerned are addressed by 33 TMDLs that are included in the permit. So the whole idea here of part of the justification of doing this up there, we have an enormous amount of TMDL. It wasn't just the fact that they learned lessons from the TMDLs, but that they have them as a backstop to incorporate them. Just to contrast, we have five of them here, right? And then more and more we're looking toward alternatives to TMDLs here, and some of those alternatives are expressly this MS4

permanent, like we're doing in Loma Alta slew and up in Oceanside.

(Court reporter interrupts to slow down the speaker.)

MR. O'MALLEY: So like we're doing in Loma Alta slew, we're looking at the MS4 permits as an implementation measure rather than the TMDL. So we really need that rigorous accountability that we were talking about earlier.

The second justification -- one of the main justifications is, in terms of water supply -- and we all would agree to this -- there's really been this paradigm shift. Look to water as a water supply as an asset rather than a liability. But practically and legally there's a couple of problems with part of that justification here.

One, we just do not have underground basins and recharge basins like we have up north. I would love it if we do. I think we have some great projects here. So it may be that we're instead relying on more traditional storm water measures to deal with storm water. They're saying lack of availability of ground water recharge storage capacity.

The legal problem with that is that our MS4 permit -- and actually, the gentleman from Riverside said this earlier -- it doesn't require the analysis like L.A. permit does, to look into the multi-benefit regional water supply for water supply. There's actually provisions in the L.A. permit that have that. We don't have that. Maybe we should. I would argue we definitely should. But again, that's a problem with copying the justification but not actually having the means in place to deal with that.

And the last two that I think were major justification changes were for anti-backsliding exceptions was that we should adopt this watershed approach. And we also agreed that that is the right approach. And we agreed, actually, in 2007 and took that approach. And this is language from the 2007 permit that says, "The Copermittees within a watershed; there are two developed watershed-based management strategies."

So it was not new information, not anything that's materially and substantially changed here. We've actually been doing this since 2007. And I would say to some degree we've

been doing it with LID, as well. And those really were the main justifications for anti-backsliding.

So I think before I go on, I just want to say, you know, you have -- I think this is the example of where we're copying the justifications from L.A., getting around anti-backsliding, if we do agree that's a problem. And the permit actually doesn't say it is or not. It admits it may be a problem, but we're not actually moving forward with the measures that either exists in L.A. or were recommended in the State Board order.

And I'll get to those next.

So then we're asserting at this point that this order as it stands -- and I'll go through, really, three main ways that it is.

I'm going to go through what the RA is. It's pretty important. It's actually sort of the lynchpin of what the State Board agreed to in the L.A. permit.

There is also, as I mentioned, none of these regional multi-benefit capture and use compliance provisions. We may see them with alternative compliance. But as far as just complying, out there they have an 86 percentile, 24-hour storm capture use and provision, which we

don't have.

And then because of these lack of extensive standards, we want to be able to go back and tweak it, amend it. That's kind of what we have now, and now they're asking for protection of that.

So I just want to go through -- again, I'll reiterate this, that State Board really lays out a very specific pathway to these safe harbors. But what does is it bars the justification in ours but not the approach and methodology, which is RAA, and I'll talk about that moving forward.

It lays out the principles, which you've heard. These are those seven principles which I talked about that says if you're not going to follow these, explain why you didn't, so more specific. What it says is, these things have to be ambitious, rigorous, transparent. Again, they want to encourage multi-benefit water supply projects, compliance projects. There must be rigor and accountability, which I think we all agree, and there really shouldn't deem good-faith engagement from the process as compliance.

So what's the backbone of that whole program is something called the "Reasonable

Assurance Analysis," or RAA. This is really a point of contention in L.A., and in a very big way for anybody following it. I've become much more familiar with the L.A. permit process than I've ever wanted to. My jurisdiction pretty much ends in San Diego, but not anymore, I guess.

So what they -- the people who approved it said, "Look. We need a well-defined transparent way of moving forward."

And we actually heard earlier John van Ryan saying, Look. We're critical. We need the sort of time-tested -- we need ways of moving forward.

All we're saying is the same thing here. There is some groundwork laid for us in the L.A. permit which we did not copy. And really the State Board order gets it and says, Look. The requirement for these things is really just to show that when Copermittees choose a pathway, that the way they site them, the way they design them, their the BMPs, it's just going to work. We have a really good idea that it's going to work that way.

Besides that -- oh, and I will not raise this, but I want you to know this is just

one section of the L.A. permit that talks about what this safe harbor looks like out there. It goes about which models are accessible, all data collected the last 10 years. This is actually not even the whole entire section, but it's very specific in the permit itself saying, "If we're going to accept this, this is the level of rigor that we want to see, at the bare minimum."

On top of that, they have something like 37 to 50 pages of guidelines that were developed. "Now as you're moving forward, these are the detailed, objective criteria that you need to follow moving forward."

Again, this adds to this level of rigor, transparency, and accountability that this State Board order saying we need to see. I'll just read from this section as well: "It must be adequate to identify the required reduction of each water body combination at each compliance deadline and analyze the BMP scenario to achieve that deadline."

So these are guidelines that are very strict, very rigid in moving forward. We just don't have something like that.

The guidelines here, again, this is

really just to show you. And the point of this slide -- I'm not going to read it -- shows some of the type of things that are considered in developing these plans. But the idea is that with this type of guidance anyone in this group, whether it's myself or the consultant, or anyone in this room, or your staff or even you, could look at this stuff and say, "This is what is expected of you. These are the objective, rigorous transparent criteria. Move forward using those," and then you might be okay. But we at least have some sort of criteria with which to gauge that compliance is on, not just "show us what you got," which I'll contrast with our language, "an analysis with clearly stated assumption."

So we go from this, with something of 50 pages of guidance, to this. And I think it's, by argument, very clearly this is not rigorous, it's not transparent. We are trying to be flexible, and I get that. But we're taking flexibility and sacrificing transparency and accountability. Because transparency doesn't just mean at some point the public gets to look at this plan. It means there are objective criteria up

front with which we can then review it together. Your job and my job are not that dissimilar at times, to see our water is safe and clean for people.

The other lack of objective measure here is if they're not in compliance -- the only thing that won't -- I mean, they won't get kicked out right away. They just need to give what's called "acceptable rationale." I don't know what that means. I've got staff that won't know what that means. I don't know that you know what that means, what that "acceptable rationale" would be.

So I think what's happening here is because there's no RAA or guidance we just don't have this objective criteria. We don't have this rigor or transparency or accountability that the State Board order saying we need to have if we're going to do this.

Despite all the problems, at the very least, we need some of these processes. Also, because there is this sort of acceptable rationale, how do we know, then, are we compliant or are just in this inner loop?

I mean, I don't know at what point I will then be able to come up here and say that's

not really acceptable. That's not really a standard that I can point to. I can point to standards in the CFR or Clean Water Act, but "acceptable rationale" or an analysis without more is difficult.

The EPA has actually spoke about this specific issue, and they did so Monday. I know Christina represented their letter earlier. But what they said is, "Look. These proposed permit modifications provide only limited direction concerning specific technical, analytical, and planning expectations. They didn't recommend prompt development of guidance," since what I'm also recommending, "built into the permit." And they say, "It best serves everyone's interest if there's clear understanding about the level of technical rigor necessary to demonstrate reasonable assurance."

And they go on to say, "Look. You guys need to come up with a way -- we all need to come up with a way in this permit, if we're taking this approach -- despite this problem -- that has this rigor and accountability, these guidelines and guidance built in to moving forward."

So just to kind of recap what I very

quickly breezed through -- sorry. We see this as, if not rigorous, transparent, or well-defined without either RAA or upfront guidance built into this permit that we can point to. You know, it allows for non-achievement of PWLs based on what I'm seeing as this nebulous, sensible rationale. And as long as there's acceptable rationale, which I don't know what that is, and I don't know anybody in this room that can clearly tell me what that is.

And then we see this not as ambitious. I think we all agree. But let's put something in the permit that actually is like L.A. that says, "Look, we want to get towards them and so we want to actually have that be part of the analysis. Can you capture, infiltrate, or somehow or other make this water supply as part of this permit?"

We'd love to see it. And I think the gentleman from Riverside said earlier the same thing; they'd love to see it. It might be available in certain parts of north county, as well.

Just the background again. Some of the main justifications is where this has been implemented there's numerous, numerous TMDLs as

backstops to ensure water supply standards will be met. And they also have this much more rigorous RAA requirement moving forward, and neither of those exist here.

You know, this is something from earlier this year -- and they sort of shared the interpretation that I have. That Water Quality Board directs all regional boards to consider the approach but does not require its use. We believe that it would be premature and inappropriate to require the L.A. permit approach throughout the state."

I am mimicking their language and saying the exact same thing.

Now, I want to have a couple proposals here for you. We can remove the safe harbor language and come up with something like a time schedule order and compliance list.

Now, as I understand it, earlier today you guys adopted a time schedule order for the Navy without any, you know, any discussion, kind of went through it. And it's way that -- because the Navy says, you know, "We can't comply with this in this timeframe." You do have mechanisms to deal with that.

You can actually have a couple come up and say, "Look. Yes, we are not in compliance." You can actually have one of them admit, "We are not in compliance. We want to get into compliance. Let's work this out. We have protection from third party lawsuits," if that really is the position that they're worried about, is myself or someone else in this room coming after them.

You can do it another way, and it still lays out the same, you know, protections and methodology forward, if that is what they want.

If you're dead-set on adopting this, what I would say is, I know that the San Diego Water Board are working on statewide guidance issues on the RAA, essentially to say what really is reasonable assurance, what are the basic criteria, how do we calibrate these models. They're working on it right now, and I expect it will probably be done within a year or two.

Why don't we wait until someone actually has developed all of the guidance and methodology first. Or we can look at L.A. and say, "Yes, that's the method we want to do moving forward."

By then, you'll probably have the L.A. lawsuits panned out to determine if this backsliding data is important or not. But it actually gives us a very clear way.

Lastly, and this is not a proposal; this is just if you're going to move forward it's sort of a "Look. Let's add in this RAA language into the permit." We have this L.A. language we can pretty much cut and paste, as we've done that with the justification. And since the whole idea that sort of annual milestones came up, partly in the workshops because I asked for them, but what I asked for, let's say they are not meeting two years in a row, let's just bring them back to status quo. They don't need protection anymore. Well, that language wasn't excessive, for whatever reason. But I'm just calling it the hard out.

If we're going to move forward without guidance, if we're going to move forward giving us protection in any sort of scheme, at least let's have something that says, "But if you keep blowing it, you're out." And it's now out of the permit, it's just out to where we are today, which is not such a bad place. We have these W2 MPs which are moving forward. They are going to be implemented.

On top of that, I would just say, if we are going to move forward that way, we should add the water supply provisions, as well as ramp up some of our allocations in TMDLs, if they really are the backstop in L.A.

I knew that this issue would come up so I just kind of let the EPA speak for myself and my organization. We call this the grace period. Essentially, they want the safe harbor to develop a phase.

Establishing a safe harbor during this phase is not warranted. That's from January this year of Jay Smith, the head of NCDS permits up in San Francisco. And two days ago, "There is insufficient basis to conclude that permit fees are or will be in compliance." I share those sentiments. I echo them. I very certainly agree with them. I just see no reason why, if we are -- you know, it's one of those things where the gift horse in front of us, seeing how we want to put teeth whitening on it. It just doesn't make sense at this point.

So where are we? We've seen the WQIPs, and I've reviewed all of them on this, as close as I can. You know, I think our permit is

pretty good, as far as laying out this path forward. It had some good stuff there, but there was differences in things on how it read. I think we've seen -- and I think you heard recently, and I think you probably heard from your own staff how happy they were with the first draft and the submitted draft of the water quality improvement plan. Without the clear sort of strict guidelines upfront, you're going to get woefully inadequate plans, especially if you're giving people protection. That becomes a main problem. I also want to remind us since 2013 what you have done and what your staff has done.

Since 2013, there have been multiple MS enforcement actions against the City of San Diego, multiple against the City of Escondido, Carlsbad, Chula Vista and Lemon Grove. So now we're talking about having protection when you're still issuing them enforcement actions under MS4.

Since we're considering new information since 2013, these are pictures I took recreating in our water bodies two months ago, any given day. I didn't even pick a special day. This is what we're still looking at. These were pictures sent to me -- on the left, Escondido

Creek Conservancy called me furious after their water check looked this way. These are fish kills up in Oceanside, I think, due to up to nutrient pollution earlier this year in January.

So this is just to point out this is still ongoing. This is since the 2013 permit has been implemented. There's a huge gamble we're taking if you pass this. These guys are going to do everything they need to, and they're going to do it with this level of protection, but they're not going to have the strict guidance that they need moving forward.

I think, you know -- I mentioned the legal issues. We think they're very serious. We don't think there's exceptions to backsliding that apply here. But, also, we think the way moving forward, we're going to copy the justifications, we absolutely have to copy the kind of guidance that's moving forward in L.A.

With that, I think I'm finished, other than just to say, obviously, this tentative order, we cannot and will not support it without at least some of the changes made. I think regardless, there are issues. If you are dead set on passing this sort of alternative compliance, let's put it

off until 2018 when there is statewide guidance on this.

Thank you. Appreciate it.

CHAIRMAN ABARBANEL: Questions?

BOARD MEMBER MORALES: I have just one. You've seen the QWIPs that have been prepared over the last several months here. Are any of them woefully inadequate?

UNIDENTIFIED SPEAKER: I think upon first submittal, yes. I don't know that staff -- I'm not going to point fingers, but I will say I think some of them failed to meet even the minimum requirements of the permit, absolutely.

I don't know that staff or even other Copermittees would disagree with me. There was a period to go back and do some adjustments. I've started looking at those, as well. Some of them are bad and some of them are a way moving forward.

MS. HAGAN: We really need to try not to talk about the separate water qualities. It's a little hard to divorce but there are separate proceedings that are going to be coming before the Board, in terms of the detail. The general question --

CHAIRMAN ABARBANEL: What is that

procedure? Once a QWIP is submitted for consideration by the staff, does it come back to the Board to be approved?

MS. HAGAN: I believe the permit language roughly reads that if "After a process and they have been submitted, if there don't appear to be significant unresolved issues, the executive officer can go ahead and approve them. If there appear to be significant unresolved issues, in his determination, he'll schedule them for a Board hearing.

CHAIRMAN ABARBANEL: Thank you.

MR. GONZALEZ: Mr. Chair, members of the Board, Marco Gonzales of Coast Law Group on behalf Coastal Environmental Rights Foundation.

I've been before this Board a lot over the last 20 years on storm water. It's somewhat interesting to see some of the same players making the arguments that have evolved but come down to the same thing "Don't make me do it or don't make me do it right now."

I'm going to be talking about -- I took the oath earlier. So I'm going to be talking about prior lawful approval. This notion that an applicant, a developer, has done something such

that these equities would result in us giving them the ability to take advantage of the 2007 BMP manual or the storm water control and not require them to comply with the new BMP manual.

That notion of equity is interesting because I heard John Van Ryan, one of those guys who has been doing this as long as I have, come up here and say, "I want even more time" I'm jumping ahead on my comments. "I want more time because we need time to work with the applicants to utilize this."

That's not the point of the prior lawful approval. It's not to say "Give us six more months so we can jam as many people into the pipeline and get them to that point of compliance and get them out of having to comply with the 2013 permit."

Now, fundamentally, before we even start talking about this, we ask ourselves "Why are we doing this? Why are we doing a new permit? Why are we amending our permit? Why did we require, in 2013, the hydromodification changes and new BMP handbook?" Because we said 2007 wasn't good enough.

We know that because we're not in

compliance with the Basin Plan. We haven't done our TMDL. We're still violating water quality standards every single day in every single jurisdiction after 20 years of trying to regulate storm water.

And so at the base, what Mr. Van Ryan is up here saying, "Give us a chance to not have to do more, to not have to do what we already know is required to meet the basic standards."

If you read the language starting at page 102 of the tentative order dealing with the prior lawful approval, we could actually end up five years down the road even more. So we're talking 2007 to the summer of 2013 to the summer of 2018. We're talking 2007 to 2018 before we finally implement the 2013 BMP manual? You've got to be kidding me.

Another interesting comment today, when Wayne got up early on and did his presentation, he said, "We think this is a great change to the permit because it makes it clear and easy to enforce."

Go back and read what the prior lawful approval standard looks like now compared to what it was before. When you look at the footnote in

the 2013 permit that talks about what qualifies as a prior lawful approval, it tracks directly on what the status of the law is.

There's one case that controls this. It's very clear. It says you need two things: You need a permit, and you need to break ground. That's easy. There's nothing easier. As a matter of fact, when I'm not up here representing environmental groups, do you know who I represent? Developers.

And for over a year now, those developers have been asking me -- that's what they do when they get these crazy regulations coming down through the Board to the City. They come to me and say, "What do I need to do?" Since January of last year I've been saying, "You need to comply with the 2013 manual. It's being devised. Here's a draft of it. Design your project to comply with that."

The manual was approved in June of this year. Let's talk about -- anybody that hasn't planned their project to comply with that manual, the price should be paid by that applicant not by the community, who should be able to rely on these ratcheted-down standards that just bring

us to swimmable and fishable waters.

So these clients that I have, they design their projects not knowing for sure when they're going to get final grading approval. I'll tell you what, we just finished a year-and-a-half lawsuit on one of them. We got the ruling last month. We can finally pull a grading permit, and they're saying "Are we going to get our grading permit by December 31st?"

I said, "Go back and look at your engineering. We designed the project to comply with the new manual. We don't even have to worry about it." That's what a prudent, responsible developer would have been doing for the last year that we've been talking about this.

Instead, it's not just December 24th. It's an additional 90 days, as per staff. And if we give into the BIA and the County, we're talking another 180 days so they can shoe-horn as many development projects as possible into a standard that we know doesn't protect water quality standards.

Mr. McSweeny got up here and talked about the BIA folks who call him up, who blow up his phone, people up in Oceanside who don't know

what the standard is.

I'm sorry, but the developers I represent aren't part of the BIA, and maybe we've identified the problem. When they call me up, and they say "What's the standard," I say, "Do you have your grading permit? Have you broken ground?"

Afco is a very clear legal standard. It's a very bright-line standard that gives us all certainty. The reality is, there are very few projects, but they are very big, who really need this prior lawful approval language.

During the workshops, we had a very simple request from the environmental community. We said, "You know what, you guys are the best to tell us how many projects you have in the pipeline who might potentially take advantage of the prior lawful approval language." "Just give us a database so that we can talk apples and oranges. Big projects, small projects, 10 projects, 100 projects. Give us some answers."

How many months later are we still saying we don't even know how many projects would be affected by this. And per the County's representation today, the next six months or

actually the next nine months -- seven, eight, nine months, we're going to shoehorn as many projects as we can in there. That is not what this was intended to do. The notion of prior lawful approval is to say, "If you've contributed significant dollars and you have diligently pursued your project, we're not going to pull the rug out from under you."

But the fact that the 2013 permit had such a huge tail to produce this BMP manual, and we had so much time after approval in June of this year to vet it and bring it to effective date in December, I'm sorry but we have given you enough time.

So I would leave you with the simple notion that the easiest, most simple, most legally-viable solution to this is to go back to Afco and tell the world "If you've got your grading permit, and if you've broken ground by December, you can take advantage of the 2007 hydromod BMP requirements." "If not, it's on you. Redesign your project."

We all went through the recession. My clients did. A lot of the people who are trying to take advantage of this, the law changes

sometimes. Planning changes and regulations change.

This is not a circumstance where we're can say we're protecting water quality standards by allowing an untold number of applicants to take advantage of a standard that, coming up on 10 years now, we've already decided isn't good enough.

CHAIRMAN ABARBANEL: I've heard what you said, and I'd like you, if you would, to repeat your suggestion of what in the tentative order, putting aside the typos and changes, do you recommend that we do not approve?

MR. GONZALEZ: Section big E(3)e 1(a)12. It's entitled structural BMP approval process under priority --

CHAIRMAN ABARBANEL: These are the two items that Mr. Chiu recommended approval of, or his staff did in addition to the time --

MR. GONZALEZ: It's the prior lawful approval language. It's the generic, easy way to describe it.

CHAIRMAN ABARBANEL: I have to say, I've gotten a little bit of cross-talk between prior lawful approval and the alternative

compliance.

Are you speaking to both of those?

MR. GONZALEZ: The alternative compliance has to do with your development of an alternative to meeting water quality standards. That is the big picture. I'm talking about individual projects being able to take advantage of the old BMP manual.

CHAIRMAN ABARBANEL: Okay. Thank you.

Last but absolutely not least, we have interested persons, and I would say tenacious persons, having waited all this time. For each of those persons who have submitted a card, we would offer you three minutes to speak.

Unless there's a particular order here, I was going to start with Ms. Hunter.

MR. MCSWEENY: I have a question. For those of us that had a little bit of time left for rebuttal, when would we be able to do that?

MS. HUNTER: Good late afternoon. Laura Hunter representing Escondido Neighbors United, and yes, I did take the oath. I have a couple points I wanted to mention today.

I agree with my cohorts at Coast Keeper and would urge you to adopt their

recommendation. First thing I want to touch on, I want to offer a realty check on this really ridiculous letter that you received about Safari Highlands Ranch. It basically was a not-so-veiled threat, completely inappropriate attempt to intimidate you out of doing a lot of your job.

CHAIRMAN ABARBANEL: This is not on the specific item that they're discussing?

MS. HAGAN: It refers to a comment letter.

MS. HUNTER: Yeah, and I do think it's instructive.

So first of all, they don't have a project approved of 550 units. It doesn't have a value of 500 million dollars, which they're threatening you have to pay them back. They don't have an annexation approval. They don't have an environment document. They have nothing. They have ink on a piece of paper, really. And they own the land.

They don't even have the entitlement for the 26 homes they could build under their current zoning, which is the County's general plan. They have a lot of fantasy based on pure speculation. But I think it's very instructive

because if you want an example -- one of the reasons you should abandon this whole safe harbor situation, here's Exhibit A. This is how they view it.

I want to say that, in this case, anyway, a short leash with clear direction is the way to deal with these kinds of entities. The second thing I wanted to speak to is, I have been a member of the San Diego River Water Quality Improvement Consultation Committee, and I would like to touch on a couple things.

Regional Board Member Olson, I would like to speak to your request of "Do you think people aren't serious about it?" I've got to tell you, there's a whole lot of RBA, a lot of really bad attitude about it. Up in Escondido, you need to know a majority of the City Council directed their staff to deliberately weaken their recommendation for the water quality improvement plan to make them the minimum to get by for compliance.

One of them said, "Let's just not even comply and see what happens." Another one of them says "Mother nature will take care of it." Bunches of name calling and that kind of thing.

Not everybody is serious about doing it, I'm telling you.

More flexibility is not going to help us get to where we need to go. We really have to say focused on those water quality improvement plans. We need to focus on that. This safe harbor business is a distraction. It's confusing. It betrays the promise of what we were trying to get.

I've been around a long time, too, and I think it's probably bad news, but the entities are not innocent victims that are being promulgated on. These are the entities with land use authority. They make the decisions about whether they should put these developments here, should they issue business licenses again and again to companies that don't comply. They have a responsibility here, and it's not just, you know, something that they're bystanders to.

Thank you very much and please remove the safe harbor.

BOARD MEMBER STRAWN: Mark West. And that will be followed with Jennifer Olm.

MS. SACKETT: Hi. My name is Mandy Sackett. I'm here to speak on behalf of Mark

West. He fractured his C-4 and had to go get an X-ray today. I also have a speaker card. I don't know if you want to add my time here, as well, to do my own. I'll start with Mark's comments here. "Esteemed Board members, ladies and gentlemen of the public, good afternoon. My name is Mark West. I'm a retired naval officer, chair of Surfrider San Diego and resident of Imperial Beach.

"I appreciate the opportunity to speak with you today on behalf of SurfriderSan Diego. Surfrider is dedicated to the protection and enjoyment of oceans, waves and beaches through a powerful activist network. When I say 'activist,' I mean people who take the time off to miss work and to miss time with their family to be here today.

"Our membership is served by volunteers who dedicate their free time to continue to voice their approval of the 2014 MS4 storm water permit as it was originally designed. Our members do not support an alterative compliance without specific time limits and hard outs. We need more guidance and we need it in the permit. Clean water compliance, in our eyes and through the eyes of water users throughout San

Diego, means water safe to swim, fish in and recreate in and on.

"Our members are comitted to preserving water in San Diego. Surfrider encourages people to get involved with projects like these because we believe in the promise of the democratic process.

"The permit and inclusion of alternative compliance which you are discussing today is one that will receive taxpayer money and the public input needs to be respected throughout the process.

"In 2013, we passed a landmark permit. Please do not allow us to backslide on it. Surfrider San Diego enjoys our working relationship with staff from the city and counties associated with managing out coastline and multitude of issues associated with clean water in iconic the San Diego coastline.

"I've participated in conferences that have attracted people from all over the world to discuss items that threaten waves. One very interesting topic that is continually discussed is surfonomics. It's a funny word but a growing area of study relating to economic impact surfing has

on surfing communities. Studies being conducted worldwide found the industry associated with surfing are the biggest on local economy.

"Do we want to jeopardize the water quality of San Diego? I think not. Surfrider San Diego objects to any situation where Copermittees are allowed to come up with a plan, implement and adopt it, and be deemed in compliance with water quality standards. Clean water is clean water and nothing less. We take protection of the ocean waves and beaches seriously.

"Lastly, as a resident of IB, where clean water is a constant battle, please do not take the teeth out of this permit. Our waterways are dirty, and they will get dirtier if we do not hold Copermittees accountable. So thank you very much and have a great day."

BOARD MEMBER STRAWN: Do you want to take your time now?

MS. SACKETT: My name is Mandy Sackett. I am a resident of the City of San Diego. I live in Point Loma. I'm the chapter manager at Surfrider San Diego and also an avid and recreational of the coast -- should I start over? I know the clock hasn't started?

I spend the vast majority of my free time in the ocean. I spend all my time in the water at Sunset Cliffs every possible chance that I get. So I'm always very well aware of the water quality at any given time, especially in Point Loma. As someone with continual health problems. I consider myself a canary in a coma. Because I'm sick immediately. So thank you very much for your time and for listening to me today.

I have four main points I want to make here. I'd like to applaud the regional board for their wisdom and prudent decision-making regarding the 2013 storm water permit and the elimination of safe harbor clause. If you do feel like the State is mandating a means for alternative compliance, I would also encourage you to stand firm and please acknowledge the differences between San Diego and the Los Angeles region. We don't have the same level of TMDLs. Please make sure there are strong limits and automatic outs in the alternative compliance methods so applicants cannot hang out in this interim process forever.

My second point is, we object to any situation where simply coming up with a plan and implementing and adopting it is deemed in

compliance with water quality compliance. Compliance means water are safe and clean to recreate in, period.

Copermittees continue to have the same complaints they have had for the last permit cycles. Including things like cost considerations and difficulty yet we're still not in compliance with the Clean Water Act. There's no room for leeway and we do not see any real water quality improvements. We, the public, are here demanding protection and actual improvement of our water quality.

As the agency is tasked with protecting the use of our water, I urge you to please hold the line in protecting water quality. Lastly, as I mentioned, I rely quite heavily on the coast. I surf, swim kayak, eat fish, and we need strong controls to protect our water bodies and to make sure the water quality standards are (inaudible), not a plan in place to kick the can further down the road.

Hold the line today and amend the alternative compliance to make sure it's not a safe harbor. We need strict guidance and hard outs. Thank you very much.

BOARD MEMBER STRAWN: Jennifer Olm.

UNIDENTIFIED SPEAKER: I will read Jennifer Olm's comments. Jennifer Olm is a resident of Rancho Penasquitos, a Surfrider volunteer, and also a mom. She was here to ask that you make sure alternative compliance is not a safe harbor, while a Surfrider volunteer, I am first a mother. My family likes to swim at to Torrey Pines, kayak in mission bay and care very much about all of our beaches.

I congratulate the Board on developing a watershed permit that allows for focus, time, enforcement and education. We need to ensure that any alternative means of compliance specific, measurable and transparent. Trying isn't enough. We are capable of rigorously ensuring our quality. Don't take the back bone out of this permit.

She's also a volunteer who has read her local water quality improvement plan in detail and has comments for that. That's it for her.

BOARD MEMBER STRAWN: Next I think I have Sam Blick.

MR. BLICK: My name is Sam Blick. I'm the author of the letter Laura was referencing. I didn't mean to offend you. I had about an hour to

get that letter in. The situation I was presented with was "what happens if you can't build at all on the property?" And my engineer was telling me you can't build at all. It's not a matter of complying with the law. That's what our rash map look like on this property. You get nothing. I think if someone told Laura she couldn't use her house at all, she wouldn't like it. The law says it's not fair if you take it all.

All right. I bought this property with my partner, and our approach was simply "We're going to comply with the law, whatever it is." We're envisioning a house that might cost 5- or $600,000. We know if we comply with all the provisions -- the house might cost a million; who knows after it's all done. But that's all right. We're going to comply with the law whatever it is.

We looked at the general plan, what does it allow. We looked at the specific plan, what does it allow. We're about three years into our process with the City. Our tentative map and our EIR process is being considered. It's not approved; it's true. But the project is virtually designed by the City, everything they want, every curb, the way it's designed is what they want. We

did what they want. We took 70 percent of the property and gave it to the public. We're left with 30.

It's all right. We still get to build the houses. People still get to buy those houses; they're just going to cost more. That's how I've approached it. That's the way we have to approach it. So we run across this condition. We look at this. I submitted a letter to you. That's the rash map. That condition says if you abide by those coarse sediment standards, you get to build nothing. Nothing is very different than a 500,000-dollar house. We can live that. If the conditions are so bad it doubles the price of the house, we can deal with that. People will buy it. They need the housing. If it's worth nothing, you can't build. So I had to submit a letter. I'm sorry it was so rough, but it's kind of a rough statement because it's a rough result.

I know you don't want to do that. I've been here all day. Nobody is thinking anything but clear water. You're not thinking of destroying property value. You're not thinking anything along that line. You're doing your job. That's how we designed it, too. I'll say, in

closing, we've contemplated all the water gets reused, each house gets its own water recycling. We've tried everything. It's expensive, but we've done it all. We've done it with water quality in mind. So I would urge you to consider that and not deny any use of the property whatsoever. That's not right. Thank you.

BOARD MEMBER STRAWN: Scott Graves.

MR. GRAVES: Thank you, Board members, for allowing me to speak. I'm a resident that lives in Sanpas Falls, speaking as a concerned citizen who would like to respond to Mr. Blick's late submission. I found it ironic he said he only had an hour to compose his letter when there was a 45-day comment period. I think that theme of "too little, too late" or "I want more time. Want more time" has been seen throughout the day. In my opinion, the veiled threat of litigation has no merit. Sifting through the data of looking up parcel numbers and previous sales and assessor tax information available to the public, Concordia purchased over 1,000 acres for approximately $7 million, based on the tax assessor's taxable values.

When they purchased this property, and

as it currently stands, they're entitled to build 26 or 27 homes. The property has not been annexed by the City of Escondido. The final EIR has not been completed, so their claims of work based on Safari Highlands Ranch completed value, in his words, $500 million are quite a stretch, especially in the light of the exorbitant number of exceptions in hopes of getting approval.

Mr. Blick said they're in compliance. The City hasn't looked at their plans. The City's regs are you can't build anything on a grade steeper than 12 percent. They're asking to do it on a 15-percent grade, which is extremely steep. There's all sort of waivers they're asking for, grading waivers. All the different ratios of grading exceptions. I find it difficult to believe this is in compliance.

The developers' gamble was especially high risk similar development on this land was previously looked at and the project was withdrawn because they rejected the development and the general plan. The general plan and the development of the general plan cost the county about $18 million with significant public input. Please don't let developers intimidate best

practice when it comes to water.

BOARD MEMBER STRAWN: Next I have Rebecca Andrews.

MS. ANDREWS: Good afternoon, Chair, members of the Board. I'm an attorney with the law firm of Best, Best and Krieger. We represent the San Diego Airport Authority, the cities of National City and Chula Vista. The cities and the Airport Authority have a pending petition before the State Board regarding the 2013 permit, and its lack of a compliance pathway.

So we submitted a green card today in support of the amendment and would like to thank the Board and Board staff for all the effort that's gone into developing the compliance pathway. We believe the compliance pathway will enable the Copermittees to work together and develop a prioritized approach to addressing water quality challenges and to coordinate their efforts towards improving water quality.

Thorough planning is essential to developing an effective water quality improvement plan. Developing an effective water quality improvement plan takes time. The State Water Board's recent order reflects an intent to include

that time to develop an effective plan within the compliance pathway.

So as you can imagine, the cities of National City and Chula Vista and the Airport Authority are requesting what they call an "interim compliance pathway," by one of the environment groups has been called a "grace period," as part of the safe harbor. Whatever we call it, including that period of time within the compliance pathway recognizes the importance of the development of the WQIP.

The Airport Authority, Chula Vista and National City, as part of the San Diego Copermittees, join with Orange County and Riverside County in requesting that this Board extend the compliance pathway to cover the time period where the WQIP is being developed.

BOARD MEMBER STRAWN: Thank you. I'm sorry I didn't get you in with the Copermittees earlier.

Mr. Penzick.

MR. PENZICK: Good afternoon, Board members. My name is Jerome Penzick, 14245 Dalhousie Road, San Diego California. I'm also a member of the Surfrider Foundation. I would like

to thank the Board for your work and allowing me the opportunity to address you. I recently retired from the federal aviation administration. I have extensive experience with methods of alternative compliance. In aviation, alternative compliance is a very, very serious issue. Typically, a certificate holder will request something like an air-worthiness directive or relief from a regulation. They have to go through an extremely extensive and rigorous process based on two important concepts: Is the alternative method of compliance in the public interest? And does the alternative method of compliance establish an equivalent level of safety?

Now, trying to stress the applicability, would the equivalent level of alternate pathway provide for an equivalent level that the original requirements would meet. That would be the task before the Board and staff.

I would like to compliment Mr. Chiu in his earlier remarks today; it shows he's focused on the issue in the work he's already established. Hard criteria must exist for realistic acceptance of milestones; there's no way around that. Alternative methods, in order to be successful,

milestones must be are meaningful. They must show real progress. The end result is not reports. The end result is not steps to get there. The end result is clean water at the beach, things that we can surf in.

What I would offer to you is what would look like failure would be for San Diego to turn into New York. I lived, for a while, in Long Island for work. I can't describe how poor the quality of water at the beaches are at someplace like Rockaway Beach in Queens, Point Lookout in Nassau. My son got contact dermatitis there. We came back to California, and I fulfilled a longtime dream to learn to surf with my boys. And I can't describe to you how pleasant it was to surf in Solana Beach at Beacons in clean water with good friends. So these are the tasks before you.

I thank you for your work and thank you for the opportunity to speak today.

BOARD MEMBER STRAWN: Next, I think I have a card from Summer -- maybe it's Smith. She has ceded her time to Julie Chunher.

MS. CHUNHER: Good afternoon. I'm Julie Chunher. I'm the policy manager for

Surfrider San Diego. Thank you for your time. And I wanted to call your attention to our 10 members and volunteers who took time away from work to be here and show their concern for this important issue.

I'd also like to take a minute to sincerely applaud your staff. This has been time-consuming. They have been professional. They have been very thorough, and I've been thoroughly impressed. Whatever decision is made today, they deserve a round of applause. And I want to applaud you for your decision in 2013. That was a hard decision to come to.

And instead of my talking points, I'd like to respond to some of the things we've heard today. We heard early that the purpose of alternative compliance is to provide clarification and structure to this interim process to figure out when it starts and stops.

Unfortunately, as it's currently written today, I don't think that happens. I think it continues that iterative process. And, you know, we heard a lot about the cost of compliance. I think we should all be much more concerned about the cost of noncompliance.

I said it in 2013, and I'll say it again today. Where is the number of lawsuits that everybody is so afraid of? These are meaningful steps in the right direction, but at the same time, we need to maintain accountability to increase motivation to make hard and expensive steps.

I'm a parent now, as well. I have a 14-month-old, and he's starting to learn to test his limits. He likes to see what he can get away with. It's better for him, his safety, and my sanity to have certain limits with him, set clear boundaries. And I see today we're hearing a little bit of limit-testing. What can we get away with? So I would encourage you to hold to those limits; it's better for everyone.

You also heard in the comments today that people need more time for plans. They want compliance while they're planning, and they want compliance if the plan doesn't work out. Where does that leave the public?

History is the best indicator of future behavior. For history, we have to look at what's happened in the previous permit cycle. We have to look at what happened in the WQIP process

recently, and we have the tendency, as city council is saying, to do the bare minimum. So we need to be able to keep everyone motivated.

We also heard today that it's going to take years to come into compliance. Guess what? It hasn't been in years. We need to maintain that accountability. That's exactly why there was a paradigm shift in 2013, so I hope we can maintain that.

We also heard, "Hey, don't worry about it. Water quality is important to us, too. We will take care of it. But we also have lots of priorities, whether its police cars or other things."

I think that's exactly the point. You guys are charged with maintaining water quality. We're trying to make that more of a priority. Decision-makers have to make hard and expensive decisions, and not just to look at storm water and "Oh, well whatever is left over, that's an expensive problem we have to deal with."

If you look at it in a different context away from storm water, when you're trying to protect something, the regulations and laws usually increase. For protecting children, we

have Megan's Law. I don't see how relaxing the process is going to be make water cleaner.

At this point, there's not enough guidance in the permit to do proper analysis. We need that guidance in the permit and not after the fact. I ask you to remove the safe harbor alternative compliance today. Postpone it until the EPA has done a reasonable assurance analysis, and wait until 2018.

If you're going to do it, I suggest it be really thorough and done right. That's our request.

Thank you for your time and consideration.

CHAIRMAN ABARBANEL: I believe there are some speakers that have some additional time. If anyone would like to speak, Gary will tell you how much additional time you have, if you come up and you request that.

County of Orange had a minute. I'll extend that to a 1:10 just for you.

MS. SKORPANICH: So it's not 7:00 p.m. that's a good thing. I just wanted to close up and kind of wrap up a very brief period of time. Harping back to 2013, 2011 when your staff

undertook the initial workshops to develop this permit and what they've been saying all along, and what I think they actually have achieved with this permit is a permit that's aspirational. It's something to inspire, to motivate, to incentivize the permittees to do even more, to take on even more than what the Clean Water Act requires of us.

Along with that was a desire on your part as well as your staff to allow for a permit that allows creativity and innovation, but most importantly for the permittees, it allows prioritization. I know we touched on this earlier, but I don't know that we really drew a fine point with prioritization.

If we have the interim compliance, then we have the freedom to prioritize what those really important water quality objectives are we need to work on and focus on. Without that, we really can't sort of leave the low priority, the things that we know are above natural conditions and so forth.

So I'd like to just draw that point that it ties our hands considerably on being able to do that prioritization process and focus on those most important objectives. It's not unlike

what the State of California did, actually. Back two governors ago, the state set up the Clean Beaches Initiative. They said we know beaches are a high-priority water body. They where are people recreate the most. We want to put emphasis on that. They directed grant programs there. To this day, the beach water quality task force is meeting today. It's made tremendous difference, not only in Southern California but up and down the coast of California. It shows you what you can achieve if you are able to do that prioritization.

The second point I would like to make is that your staff is looking to have a credible, durable and transparent water quality improvement plan developed. This will not be a safe harbor, if you will, a get out of jail free card. The permit also establishes some meritocracy. How do you earn interim compliance? The permittees, they have proposed some enforceable milestones during the development of the water quality improvement plans, but I that addresses those concerns.

What we really all want is one of the other issues that you and your staff set out on this permit, which was to make it so we could have

collaboration. We want to work together and begin to make more progress on water quality.

I thank you very much for your time and consideration today.

MR. MCKIBBON: If I didn't say it in my original comments, I want to thank the staff again. It's been comforting to me as the point person of my industry to know if we have concerns, I can get on the phone or e-mail and get an answer or get an appointment. I appreciate working with you folks and your professionalism.

Matt O'Malley talked about the water quality improvement plans. Just so each you know, each one of those came in between 700 and 1200 pages each, so that's like Warren Peace times eight. I know you've got a limited number of folks in your organization, same thing with us. To try to go through every one of those, it's time consuming.

Both the Copermittees and myself, we laid out for you a reasonable rationale for why we needed more time, to get tools finished, put them in the tool box, and get the job done right. For us, it's more important to get it done right than to just get it done.

As far as the need to time, we, like the environmentalists, believe in the CEQA process. The environmentalists know that for CEQA, you have to adopt ordinances and those take time.

I thought John Van Ryan did a very good job of laying out exactly, in the perfect scenario for them, how long it takes to do that. Finally, the Afco decision was mentioned here, and that decision was 40 years ago, and land use has gotten significantly more complex since that time with development groups and grandfathering provisions.

Again, I appreciate your time.

CHAIRMAN ABARBANEL: Thank you very much. We now have time for staff response, closing remarks. For me, it would be helpful if you could put up the slide with the very specific indicated changes in the tentative order. You had one that addressed alternative compliance, one that addressed -- and then at the bottom was errors, and these are things, if I understand, are in addition to the main theme of the day, about which we've heard very little, which is the enrolling of the County of Riverside as part of

the regional MS4.

What was in the box.

MR. CHIU: So this was the summary.

CHAIRMAN ABARBANEL: I think we have heard primarily about items in the box. Riverside county didn't show up here and say "we don't want to play." I didn't hear any objections. I thought I heard somebody say you did it right. You had very specific language for these two items, if you could put that up.

MR. CHIU: I didn't really put any language more than a kind of a summary of how we responded. So I think you were looking at somebody else's presentation. There were a lot of more dense slides than mine. In this particular situation, I think you heard from both sides on this: What you heard today was actually very similar to what we went through during the public workshops. You heard a lot of lot of positions being put forward, a lot of rationale for those positions, a lot of justification for making specific types of changes or incorporating certain provisions into the permit. We did our best to try to find the proper balance between the different perspectives, and what we came up with

during or after the workshops or as a result of the workshops or for the prior lawful approval language, we felt that we had done our job right.

It's not exactly as the environmental community would like. It's not exactly like the way the development community and the Copermittees would like. Obviously, the Copermittees are now willing to accept it, but the environmental community is still asking for some of the changes that they requested. Even during those workshops, I think our position is still and our recommendation is still to maintain the language that we've put forward for you to consider for adoption today.

I'm going to take this opportunity to kind of touch upon the BMP design manual issues that have been raised by the County and the development community, and it touches upon the prior lawful approval language, as well.

The Copermittees are asking for additional time to make changes, and I think they provided a slide that shows the justification for that is they will need all this time for their process, the changes that they're going to need to make are fairly significant. It's because we're

changing the definition of prior party development process. We've changes the definition of redevelopment and we added prior lawful approval definition language in there.

We informed the Copermittees of this upcoming language back in June. We issued a letter to them informing them of the language that we knew would be incorporated into the permit, and it was also at their request that we move this board meeting up sooner so they could have more time to make changes to their BMP design manuals.

The redevelopment definition was not changed; it was clarified. And the prior lawful approval definition, that simply gives them the parameters in which they would apply the fourth term or 2007 MS4 requirements for developments versus the regional MS4 permit requirements for developments. So they're just basically trying to delay, in our estimation, the effectiveness of these new requirements. I think we're being very reasonable when we said we would provide them an additional 90 days to make those changes, and it's 90 days from the date of the adoption of the permit changes, not 90 days from the December expected effective date. It would make it

February 2016 by which they would have the effective date of their BMP design manuals in San Diego county.

So I understand that everybody wants more time, but we have actually provided them quite a bit of time to prepare and time to get things in place in order to have this adopted. So simply asking for more time is, I think, a default position that many people take. I think you've heard it throughout most of the requests today for more time for everything.

I think in this situation we were very reasonable. We plan on issuing a letter from RGO directing the Copermittees to push back their effective date for the BMP design manual to February 16, which is 90 days from today and that should be sufficient time to make changes to the definition of prior development project. I counted the words that actually is or will be. They have to add 20 words to the definitions. So they're not going to have to have to do a song and dance and go on a road show in order to tell everybody exactly what it needs to be. It's 20 words.

The redevelopment definition, I think

we changed, like, six words. It's not a whole lot. The prior lawful approval is really just giving them some parameters now to work with.

So that is the prior lawful approval language. Let's talk about the coarse sediment yield issue. The coarse sediment yield issue has come to light in recent months. As you've heard, we've had several discussions with the development community, with Copermittees on this issue. From the compliance standpoint, their BMP design manuals are in compliance with out permit requirements. It includes all the language necessary to allow prior redevelopment projects to implement measures to address coarse sediment yield areas, such that there is no net impact to the receiving water. Avoidance is the first and preferred method of providing no net impact to the receiving water, but there are alternatives, and they are currently developing those. There is one being proposed for the City of San Diego's BMP design manual that could be used as a model for other jurisdictions.

That doesn't mean there aren't other methods that can be developed. The guidance that can be developed in future months or future years,

is simply going to be an addition or attachment to the BMP design manuals. I don't think we need to delay the effective date to allow for guidance to be developed, but if they're looking for additional clarity and they want to delay the BMP design manual for clarity, we wouldn't recommend that. We believe we need to have these BMP performance standards and criteria in place as soon as possible and implemented on development projects as soon as possible in order to be protective as possible for water quality going forward.

I will move on to the alternative compliance pathway option. Again, you've heard a lot of things about this particular issue, both sides, and, again, it's very similar to what we've heard during the workshops. I think Board Member Olson heard a lot of this. Board Member Morales has heard a lot of it, and now the rest of the Board has heard pretty much the same things, couple tweaks here and there. And you know, I think there's -- this is one of those issues where the stakeholders are looking to us to provide the leadership on this issue and looking to us to make a decision on how to move forward on this

particular issue.

In listening to what we heard today and during the workshops, I think I fully agree with what the environmental community says. I really do. But then I also agree with a lot of what the Copermittees say, and so we're trying to strike a balance, again, of what we could do as a board to provide a middle ground, a pathway forward that could be workable. And the language that we came up with was what we thought was the path forward. You may have heard annual milestones, the environmental community ask for that. We didn't have it there before. That was to provide that additional level of accountability but the way they would like to see it is those milestones are essentially are your ticket out of the program. If you don't meet a milestone, do it for two years or three years or whatever, you're automatically kicked out, and you have to figure a way to get back in.

But we agreed there needed to be some additional level of accountability and a way to track progress that we as regulators are given the awesome responsibility of trying to make sure that our water quality is going to be protected,

preserved, restored, and enhanced. We needed to figure out how to make sure that we could keep our finger on the pulse, and those annual milestones were our way of doing that. Giving in a little bit to what the environmental community requested, and, again, every time we give something to someone, somebody else doesn't want it. Trying to figure out what we could do. What we have given to the Copermittees is the alternative compliance pathway.

What we have added, which they don't necessarily want, is additional milestone requirements that creates that additional transparency and rigor. I think we've struck the balance. I hope you agree.

And that's the milestone issue, but I also want to get to this being deemed in compliance during preparation. Again, this is one of those things where we try to find the balance. On the one hand, we have the environmental community saying "We don't want it at all. It's not fair to us. You put this in there. We lost all ability to drive the conversation."

On the other hand, Copermittees are telling us "We are always at risk. We need to

figure out a way where we reduce that risk."

We agree. We know there's a lot of risk. We agree there has to be a middle ground. So we provided an alternative compliance pathway as that middle ground. We thought it was a balanced approach by providing compliance during plan implementation but not during plan development, and so that's where we came down on that issue. We thought that was the right approach. And while we have other examples of alternative compliance pathway options in the state, I like to think we lead rather than follow.

So I think we need to set the pace. We need to figure out what we, as a board, believe is the right course, not necessarily believing that other boards should dictate our way of doing things. The State Board order that does not dispute the path that L.A. took does not say we have to use L.A.'s approach. It simply says L.A. can do it in the way they want. That doesn't say all boards must do it this way. I just want to make sure we understand that what we do here is not what L.A. does.

And that kind of takes me to my other point about the analysis portion of it. I know

there's a lot -- there is some concern as to the lack of specifics as what L.A. had, but I think our approach also provides a more flexible approach that allows the public, then, to be part of the process and part of the discussion, where the L.A. approach doesn't quite lend itself to that as much, because of the specifics that have been incorporated and the very specific methods in which they are allowed to do their analyses.

The other aspect of that is, these particular analysis methods or these models are really for fluid and water body. Our permit actually aspires to more. We're not talking about the chemical integrity of our waters. We're talking about the physical, biological and chemical integrity. These water quality models don't lend themselves to restoring a beneficial use. A beneficial use is not just chemical. There could be a physical, biological or toxicity component, which is partially related to chemical constituents, but there are other aspects, as well.

We believe having an analysis with clearly stated assumptions is very clear guidance in that we will not accept an analysis that is

just high in the sky. There has to be something behind it. There has to be something where we can understand how they came to a conclusion and the public as well. The public is part of the process. L.A. does not include that aspect in their particular paradigm.

So, you know -- and you we're not opposed to developing guidance. L.A. didn't have guidance in their permit. They developed guidance after the permit was issued. I think you heard from us and our stakeholders here that we have engaged with our constituents frequently. We communicate with them often. We lend them our expertise on the matter, our regulatory perspective. And once we issue this permit, it's not like we're going to hide in our offices and not engage anymore. We will continue to have these conversations and make sure there's a clear understanding among everyone what our expectations are.

So guidance can be forthcoming, and if you would like to see very specific guidance, we can do that. But if we want to give the Copermittees some flexibility in terms of how they want to approach water quality improvement -- if

they want to go after hydromodification improvements, make sure those hydromodified channels are restored, you can't do it with a model. If you want to improve or increase the amount of wetland area, you can map it but I don't know how a model is going to get you there.

So that brings us to the question of prioritization and I wasn't quite clear how being deemed in compliance during preparation of the pathway would lend itself to prioritizing your water quality concerns. The whole idea of the water quality improvement plan is to prioritize, and the idea of the alternative compliance pathway is to figure out how long is it going to take to get there. You don't have to have the same schedule for every single constituent. It would be staggered schedules for constituents.

So I'm not sure if I should touch on the backsliding. I think we already addressed it through our comments.

MS. HAGAN: I think the response comments addresses that adequately.

MR. CHIU: And then the last thing I want to -- there were three other issues I wanted to cover that I heard that I just wanted -- there

seemed to be some muddling of what permit requirements are and how they're being applied to the alternative compliance pathway.

First Laguna Beach and Dana Point, they were bringing up that lawsuit that was brought against the City of Laguna Beach. That was a lawsuit specific to dry-weather discharges going into their MS4, which is very different than storm water discharges. The permit has a specific requirement to effectively prohibit non-storm-water discharges into the MS4.

Then there is a provision, an effluent limitation. One is a prohibition; one is an effluent limitation. Effluent limitation os discharges from the MS4 shall -- the pollutants shall be reduced to the maximum extent practicable. Those are very different. The alternative compliance pathway doesn't address either one of those. The alternative compliance pathway is for receiving water limitations. The receiving water limitations state discharges from the MS4 shall not cause or contribute to exceedances in the receiving water.

So, you know, when I heard, I think it was Mr. Baron, saying the Clean Water Act -- MS4s

aren't required to meet numeric effluent limitations, that's true. And we don't have numeric effluent limitations that need to be met. We have a narrative of maximum extent practicable standard. But the receiving water limitation is different than a effluent limitations. The receiving water limitation is a condition in the water that needs to be protected or restored, such that the beneficial use is supported.

That's the ultimate end goal that we're trying to achieve. That is a numeric goal that can be proposed as part of the water quality improvement plan but they have the option of proposing effluent limits of some sort that would be self-imposed, and they're not in our permit. We have nothing in our permit that actually requires them to be in compliance with a numeric effluent imitation.

I think, again, it was Mr. Baron who said the permit is placing upon the Copermittees the responsibility of -- placing on the Copermittees responsibilities typically taken by the regional Board, such as developing TMDLs or time schedule orders and those types of things. I would agree. I think we have placed a lot of

these things in their realm of responsibility if they so choose. And we don't require them to develop these things. This is an optional pathway, but the benefit of it is that they get to develop it. They get to develop the model. They will get to develop the numeric goal. They will get to propose it to us for us to buy into it. If it was all us, it would be us doing the modeling. It would be us going to them and trying to convince them, and, typically, it was not an easy convincing process. Trying to convince them this was the best thing for water quality.

This allows them to tell us what is best for water quality, and to avoid TMDLs, which then hand cuffs everybody in the process because then we have things in the basin plan we cannot change easily. This process, it does place a little bit more on the Copermittees, but it's up to them if they want to take on that challenge, and there are a lot of benefits to it. To realize those benefits does take more time and a few more resources.

I think that covers, hopefully, all the comments we heard. Last one: The language request for changing -- if the San Diego Water

Board finds to where a Copermit. I think we're talking semantics at this time. I don't think it's a necessary change. I will leave that to the Board if they would like to see that change.

CHAIRMAN ABARBANEL: Final question?

BOARD MEMBER OLSON: I just have one question. It goes back to what you said. So now I'm confused. It's been referred to many times today that the Copermittees are out of compliance. Are they out of compliance or are they in compliance? The receiving waters maybe out of compliance.

MR. CHIU: So in every permit, there's a set of discharge prohibitions, receiving water limitations and effluent limitations. Effluent limitations are in there, typically, to achieve your discharge prohibitions. In storm water permits, we have what's called a maximum extent practicable standard. Every permit cycle, the maximum extent practical was supposed to get better and better and get to the point where it actually achieves the receiving water limitations and prohibitions, but we're not there.

There is this disconnect in MS4 permits, in particular, where the maximum extent

practicable standard, where they maybe in compliance with that, does not mean they are in compliance with receiving water limitations. I think the Copermittees are in compliance with the maximum extent practicable standard but they can't say they're in compliance with the receiving water limitations.

Any other questions?

BOARD MEMBER STRAWN: This one has to do with the questions for extra time. One part of that argument that the Copermittees made that struck a note with me is the desirability of more public input and having hearings, having more reviews, opening it up more for the public. Rather than this, giving them more time blankly, if, hypothetically, one of the groups had diligently had their WQIP all set for some watershed and came to you and said, "We've drafted this document. We think it's right, but we want 60 days to have three sets of public hearings over a certain period of time," would our Board be in a position to allow that extra time if they were to -- if it was a specific request like that?

MR. CHIU: I don't think that we would be precluded from doing that. Part of the process

is when they submit their water quality improvement plan, before we accept it, we have to review it. If there are things they propose to improve, we can certainly give them more time if it means that we wouldn't accept it. Part of the acceptance means implementation. It kind of starts the implementation process, so providing more time is great if you want to --

BOARD MEMBER STRAWN I'm just looking at an alternative. If you got a specific need for something you think is going to add value, come talk to us.

MR. CHIU: We can still accept something, but give them the ability to obviously improve, if they feel it's necessary.

BOARD MEMBER STRAWN: They can always come to us and ask for that too.

MR. CHIU: Absolutely. I think this board seems to be very receptive to our community.

CHAIRMAN ABARBANEL: Thank you very much. We will close the hearing and open this up to board discussion.

MS. HAGAN: Your acting executive officer --

MR. SMITH: Thank you, Chair

Abarbanel. Jimmy Smith, acting executive officer. I won't recap what Wayne said, but I do want to offer a little perspective. I'll give way my recommendation. I do support staff's recommendation to move forward with the permit as drafted with the errata they proposed. I saw that not lightly. I remind the board this is largely the same permit heard in 2013 and again earlier this year, and I think it's a good sign we've come down to a place with a lot fewer issues. I think it's a sign we are working together with the Copermittees, with the environmental groups, with the USEPA, and some of the other developers that are out there.

Staff has navigated a rather conscientious pathway on these issues with public input and input from Copermittees. What they put forth, I think is reasonable as the water code calls us to be. The big issue for them is more time, and time is always something that is a challenge for us as a board and for the public, as well. As you saw the slides, and we all know, we are not achieving fishable and swimable waters in many areas in our region.

This pathway to compliance, this

alternative compliance pathway, that is a very high bar that staff has set forth, and one that can save the Copermittees time and money and not have to worry about additional TMDLs coming down on them every few years, to allow us as staff to work with them and the public on actual improvements and BMPs that will make water quality better in our region.

With the time issue, the term that comes to mind is don't let the perfect be the enemy of the good. Where we are now is an opportunity to be move forward. The permit is not perfect. We sometimes joke that maybe we achieve a good outcome when nobody likes what we're doing. But in this case I don't think that's the case. I think everybody likes where we're headed but they're have issues with how we're headed there.

This permit will be back before the Board, and we may be back here again for a lengthy hearing, but in the interim, time will be better spent with staff not reworking the permit but getting out there working with staff to make improvements to water quality. The only way that can happen is if we get this permit adopted.

So I reaffirm my recommendation that

the Board adopt it as originally put forth.

CHAIRMAN ABARBANEL: Okay. I think it's time for board discussion.

Tom, I know you have a deadline if you'd like to start here are my thoughts.

BOARD MEMBER MORALES: I think everybody here doesn't want much, you just want more, but at some point we need to move on. It's really only two issues that have been talked about when it comes to this permit. The first is the alternative compliance pathway. That seems to be the biggest of the two. And back when we issued our first MS4 in 2013, that applied to the San Diego folks, we had a lot of the same discussion, and then there was a lot of discussion about safe harbor back then. We didn't give it to the San Diego folks. It wasn't because personally I had anything against them. It was quite the opposite. I had great faith they would do what they need to do in a fairly short order, and they have. They've risen to the task.

If there is an instance where they'll get a plan, it has to pass (unintelligible). If it doesn't, that's going to be another discussion that we have. So I hope that allays some of the

fears that people are going to submit poor plans. I don't expect that will be the norm at all. It seemed to work okay for the San Diego folks. I'm not saying you've got all these great protections and while you're working on this --I think it will work as well the Riverside permittees.

And those of you working on these plans, I know you are deep in the throws of working on that, and I know you're working on these things diligently. So I am comfortable with that portion of the tentative order. With respect to the grandfathering, again, that's no surprise. If it were up to me I would say December 24th. It's no secret. We've been talking about this for years. I will support staff in their recommendation to allow another 60 days, maybe 90 days from the date of adoption. I will, again, support the order even though my personal preference would be December. But as you all did in your meetings, we'll make an accommodation, and that is pretty much where I come down on this stuff.

I'll end by saying when we came up with this whole notion of an outcomes-based MS4, we were trying to get out of the business of

micromanaging you all. I think this alternative compliance pathway is very much in keeping with that. You're all grown ups. You know what works best for you. We're giving you that opportunity.

I have great faith, and when I am long gone from this board, I hope to be able to look back and say great waters we have in Southern California are in a small part due to mostly in large part to the role you all played.

BOARD MEMBER OLSON: I wasn't here in 2013, so I find that there's a lot of history on every Board and every position that you take. I'd like to start by commending the staff. I was on the Board in February when we decided we would look at the alternative pathway and try to pursue it. I heard in my meeting, environmentalists express a viewpoint but I have a very long history of looking at water quality. And so if you look back to where I came in at water quality, we saw our rivers were burning and there were massive fish kills, and thanks to the environmental community and organizations like the regional board and the state board, there have been massive improvements. But I also, in working on a number of standards, have seen taking a little more time

can sometimes reap benefits for everyone.

In this case, I tend to believe that what's been put forward by the staff is probably attainable. We hear this issue of milestones arising from the one group that is working on their water quality improvement plan, and expresses concerns, and so my concern is, if those -- if we now, a year from now or two years from now, see all the agencies with these concerns, how can this board respond?

What I really don't want to see in not giving interim compliance is suits that will take money away from the goals and objectives that everyone in this room is trying to obtain. So I was given assurance from the staff that if we see anything coming forward that looks like extensive legal action, there will be action or this will come back to the Board. I just want to ask again, is that feasible within the manner that the Board operates? That's one of the my biggest concerns, to see money go away from our water quality objectives because people are changing the timetable.

Is there an answer to that?

CHAIRMAN ABARBANEL: I think you're

asking Jimmy.

JIMMY: Yes, I think we can given the option to reopen the permit at any time should the Board direct us to or should staff make that recommendation, we could come back and change the provisions there to open it back up. 2018 isn't that far away. That would be five years after San Diego was first enrolled, so we would be starting on that in 2017 anyway, and that's a little over a year away.

BOARD MEMBER OLSON: One of the things we're trying to get away with is to have people in constant permit in changing and renewals. With reservation, I'm going to support. I would like to see interim compliance given, but I will support the -- the action of the staff in this case, and I would like to thank everyone. I know everyone worked really hard and I really want to stress I appreciate that.

BOARD MEMBER ANDERSEN: I'm very happy that bringing Riverside was not that controversial. It's a tribute to the staff, the Copermittees and the stake holders involved in the process here working together and working hard on it. I'm going to agree with Jimmy's

recommendation and it's not that I didn't consider, carefully, your input on all those paths to alternative compliance. I agree with the EPAs comment and Jimmy's recommendation that we should commit to and follow-up guidance and that would be a good thing. And my only other comment is on the course sediment yield. That stuff should be dealt with within the BMP manuals. It was great to have the input on it, but I think the Copermittees can probably work that out with everybody. So with that, I'm supporting your recommendation.

BOARD MEMBER STRAWN: I'll try to be quick. I want to thank everybody. The staff, the Copermittees, the NGOs. I'm not even going to get into the alternative compliance. It seems to me the Copermittees are all good people, just leave them alone, let them do their job. The environmental groups are we don't need to keep threatening to sue them I don't think anybody here would believe that's true. That's certainly what it sounds like when you get the bickering that went on here today. I want to address one comment and I know it's not even really part of this because it's going to be in the BMP manuals but the comment that we're trying to make somebody's

private property worthless is offensive to me. We don't want to zero out anybody's property. We also don't want what you do on your property to effect the property below you or somebody above you to do something that affects your property. Are when you're dealing with water quality, you're dealing with everybody in the watershed.

Everybody wants to say "my private property." It affects everybody up and down and we have to look at it from that big picture. I'm sure the Copermittees, when you get into the detail of the BMP manual, can work out something that, in effect, takes care of the all of the property owners and all the public in each given watershed. With that, I'm done talking and I will go along with Mr. Smiths recommendation.

CHAIRMAN ABARBANEL: I come from the only city in California that instead of a general plan, the community is taken into account on all decisions, and I see that Gary Strawn is our honorary member.

I was convinced by Mr. Gonzales that prior lawful approval issue is a trivial one. I see no reason to approve it. That isn't what it sounds like is the consensus of my colleagues, and

that's okay. I have, as indicated in one of my questions, I have a moral problem with the alternative compliance pathway announcing as a public agency that somebody is in compliance when we know and they agree they are not. I think it cuts into the moral stature of an agency that is supposed to speak truth.

Do I think those things will make major impediments in the achievement of water quality improvement? I actually don't, but they trouble me. I think what we really heard was the idea the adoption of the methodology of water quality improvement plans is a way to have the Copermittees who join us in a goal tell us how they want to achieve the goal. I thought that was a great idea in 2013. Two and a half years later, it may even be a greater idea. The city of San Diego has done extremely well. Sounds like the County of Orange is well on its way. Laguna Beach and Dana Point and Laguna Niguel, all slightly differently and that's fine. That's what we wanted. The fact it puts more responsibilities on the Copermittees is absolutely one of the goals. So I will -- having said that, I will call for motion. And I will see where I am. Is there a

motion?

BOARD MEMBER MORALES: I will move to adopt Tentative Order No. R9-20150-0100 with the proposed errata.

CHAIRMAN ABARBANEL: Is there a second?

BOARD MEMBER ANDERSEN: I'll second.

CHAIRMAN ABARBANEL: Is there further discussion?

Then I will say that I'm going to vote against it, not because I don't want to include Riverside County Copermittees as part of the overall project, but for the reasons I mentioned. I find them troubling because of that one triviality Mr. Gonzalez has explained, that it's very easy to get a lawful approval by doing what the law says.

I'll call for a vote -- I'm sorry. I can't call for that. I'll call for a roll call vote.

MS. HAGAN: Ms. Olson?

BOARD MEMBER OLSON: Aye.

MS. HAGAN: Mr. Andersen?

BOARD MEMBER ANDERSEN: Aye.

MS. HAGAN: Mr. Strawn?

BOARD MEMBER STRAWN: Aye.

MS. HAGAN: Chair Abarbanel?

CHAIRMAN ABARBANEL: No.

So let me point out that actually saves us having to send our executive officer, in the next six months, off to Sacramento to explain to the State Board why we hummed our nose at them because we didn't. There's no more business before us. We are adjourned.

(Proceedings concluded at 4:39 p.m.)

REPORTER'S CERTIFICATE

I, the undersigned, a Certified Shorthand Reporter of the State of California, do hereby certify:

That the foregoing proceedings were taken before me at the time and place herein set forth; that any witnesses in the foregoing proceedings, prior to testifying, were placed under oath; that a verbatim record of the proceedings was made by me using machine shorthand which was thereafter transcribed under my direction; further, that the foregoing is an accurate transcription thereof.

I further certify that I am neither financially interested in the action nor a relative or employee of any attorney of any of the parties.

IN WITNESS WHEREOF, I have this date subscribed my name.

Dated:_____

_____
KASEY L. MOBLEY
CSR NO. 13407

ATTACHMENT
19

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

May 14, 2009

James Smith
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Re: Draft MS4 Permit for South Orange County (NPDES Permit No. CAS0108740)

Dear Mr. Smith:

Following below are EPA Region 9's comments on the March 13, 2009 Tentative Draft Permit for the South Orange County Municipal Separate Storm Sewer System (MS4) within the jurisdiction of the San Diego Regional Board (NPDES permit No. CAS0108740).

EPA appreciates the efforts made by Regional Board staff to respond to our comments of January 2008 on the previous draft permit. Our comments on the latest draft mainly concern one aspect of the permit, namely the Low Impact Development (LID) requirements. Regarding LID, we still believe the permit needs certain improvements to ensure it contains clear, measurable, and enforceable requirements in this area.

With regards to other issues, we believe a number of clarifications are needed regarding the applicability of TMDLs to the permit. And in response to your request, we are providing comments on two other issues which are the removal of the term "urban runoff" and the use of numeric effluent limits for non-stormwater discharges.

A. Implementation of LID Requirements

First of all, we understand that the Orange County permittees desire consistency between the LID requirements adopted by the Santa Ana and San Diego Regional Boards. As noted in our letter to the Santa Ana Regional Board dated May 8, 2009 (which we provided to you earlier), with a few relatively minor clarifications, we would be comfortable with the requirements of the Santa Ana Regional Board's permit for North Orange County (May 1, 2009 version). As discussed below, however, we have certain concerns with the LID requirements of the March 13, 2009 draft permit proposed by the San Diego Regional Board as well as the tentative update of April 29, 2009. If the adopted Santa Ana Regional Board North Orange County permit satisfactorily addresses EPA's May 8 comments, we would support direct incorporation of the North Orange

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County permit's LID provisions into your South Orange County permit. We will continue to consult with you regarding the status of the North Orange County permit.

1) Concerns with the South Orange County draft permit of March 13, 2009

Our concerns with the South Orange County draft permit of March 13, 2009 include the following:

a) We believe the draft permit should be revised to more clearly incorporate numeric criteria for LID implementation. This has been a priority of ours in our review of draft MS4 permits across the State including the recently-reissued permit for Ventura County and for the North Orange County permit.

In the South Orange County permit, numeric LID criteria should be included in section F.1.d.4 of the permit, entitled "Low Impact Development Site Design BMP Requirements." This section of the draft permit describes LID BMPs, but does not include numeric performance criteria. We recognize that in a subsequent section of the permit, section F.1.h which addresses hydromodification, there is a section entitled "Interim Requirements for Large Projects" (section F.1.h.6) which calls for the reduction of Effective Impervious Area (EIA) to less than 5%. While we support including an interim hydromodification requirement, to avoid confusion over the permit's expectations for LID, we believe the permit would be improved by including numeric criteria in the LID section F.1.d.4.

An example of this recommended approach is the permit adopted by the Los Angeles Regional Board for Ventura County on May 7, 2009. This permit includes numeric criteria in the LID sections of the permits, and also contains appropriate, separate criteria for hydromodification.

b) We would also point out that the South Orange County permit lacks storm sizing criteria to use in conjunction with the EIA requirement. The absence of such criteria resulted in criticism of an early version of the draft Ventura County permit.

Additionally, we would note that the latest draft North Orange County permit no longer contains the 5% EIA requirement, but instead establishes numeric LID performance criteria in terms of a design storm volume. We are supportive of both the design storm volume approach proposed by the Santa Ana Regional Board and the 5% EIA approach used by the Los Angeles Regional Board for the Ventura County permit.

c) We believe the South Orange County permit should include specific requirements for alternative programs when permittees conclude that implementation of LID is infeasible. However, the existing provisions in the permit related to waivers (sections F.1.d.7 and F.1.d.8) do not address this concern. Section F.1.d.7 is entitled "Waiver Provision for Numeric Sizing of Treatment Control BMP Requirements" and provides waivers for treatment requirements rather than LID. Further, section F.1.d.8, entitled "LID Site Design BMP Substitution Program" is written to substitute for "some

or all treatment control BMPs." Our concern is with the draft permit's LID section (section F.1.d.4.a.i) which refers to a "finding of infeasibility" that permittees may make if LID implementation is not practical for a given project; additional clarification is needed concerning the circumstances when LID would be considered "infeasible."

2) Concerns with the tentative revisions to the South Orange County permit of April 29, 2009

Our concerns with the tentative revisions to the South Orange County permit of April 29, 2009 include the following:

a) New language would be added in section F.1.d.(4)(a)(i) which would require LID practices or participation in the LID substitution program of F.1.d.(8)(d). However, the permit still does not clarify the circumstances when LID would be considered infeasible (see comment 1.c above) or require the permittees to develop such criteria for submittal to and approval by the Regional Board (as does the current draft of the Santa Ana Regional Board's permit). Further, the revised section F.1.d.(8)(d) seems misplaced (and is confusing) in that it is located within section F.1.d.(8) which sets forth an optional program to substitute LID for treatment controls.

b) A new section F.1.d.(4)(c) would be added to the permit which would require capture of a design storm. However, the permit also provides a rather open-ended list of acceptable LID BMPs. We would recommend that acceptable LID measures be limited as suggested in the first comment in our May 8 letter to the Santa Ana Regional Board on the proposed North Orange County permit, in which LID is defined in terms of the way the BMP performs. The concern in our May 8 letter is that certain BMPs (even biofiltration which is listed in the North Orange County permit) may not necessarily perform consistent with LID principles, unless additional operational requirements are specified. Such concerns would also apply to certain BMPs on the list in your permit such as detention ponds and constructed wetlands.

B. Total Maximum Daily Loads (TMDLs)

We believe that additional clarification is needed concerning the consistency of the draft permit with approved TMDLs. Finding E.12 for the permit indicates the permit includes applicable wasteload allocations (WLAs) that have been adopted by the Regional Board and approved by the State Board, Office of Administration Law and EPA. However, we are not aware of any such WLAs for the MS4s subject to the permit. Table 1 in the fact sheet for the permit notes that certain TMDLs have been adopted by the Regional Board, but have not yet been approved by EPA. There is also a reference in the fact sheet to dry weather TMDLs included in section C of the draft permit, which apparently have received all the necessary approvals. Again, however, we are not aware of these TMDLs and the fact sheet should provide full and clear information concerning the approval status of TMDLs with WLAs applicable to the MS4s.

Even if no applicable WLAs have been approved by EPA, it is helpful for the fact sheet to clarify this matter. Further, if applicable WLAs are approved by EPA prior to Regional Board adoption of the permit, they should be included in the permit. We are also pleased by the apparent intent of the Regional Board as indicated in Finding E.12 and Section I of the draft permit to express permit effluent limits, when necessary to ensure consistency with applicable WLAs, as numeric effluent limits. Numeric limits provide greater assurance of consistency with WLAs than the alternative of BMPs which are sometimes used, given the uncertainty in the performance of many of the BMPs commonly used for stormwater pollution control.

C. Removal of the Term "Urban Runoff"

You had asked for our views on the proposed replacement of the term "urban runoff", which was commonly used in the previous permit, with the terms "stormwater" and "non-stormwater" as the discharges regulated in the new permit. We would support this revision since it is actually more consistent with the terminology used in the EPA stormwater regulations at 40 CFR 122.26. However, we would point out that the new Finding C.14 and the discussion in the fact sheet incorrectly indicate that industrial stormwater discharges are subject to the maximum extent practicable (MEP) discharge standard in the Clean Water Act (CWA). Section 402(p)(3)(B) of the CWA provides that only municipal stormwater discharges are subject to the MEP standard; section 402(p)(3)(A) provides that industrial runoff is subject to all applicable requirements of sections 402(p) of the CWA, and section 301 of the CWA which includes BAT/BCT effluent limits and water quality standards compliance.

D. Numeric Effluent Limits for Non-Stormwater Discharges

You also asked for our views on whether numeric effluent limits would be appropriate for non-stormwater discharges. As noted above in our comments on LID and TMDLs, we are seeking to ensure that permits include clear, measurable and enforceable requirements. We believe that the use of numeric effluent limits for non-stormwater discharges would be a significant step in the right direction and we support the proposed limits. In previous MS4 permits, the non-stormwater discharges addressed in the permits have typically been regulated through best management practices (BMPs) pursuant to 40 CFR 122.44(k) for the same reason that stormwater discharges themselves are often regulated by BMPs, which is the lack of good information about the discharges and the difficulty in deriving appropriate numeric effluent limits. This issue was recognized in a 1996 EPA guidance on water quality-based effluent limits for stormwater discharges which is cited by the fact sheet. However, the guidance also indicates that as additional information becomes available, more specific limits should be considered. As noted in the fact sheet, additional information has become available to the Board about the discharges over the years, and we agree that the numeric effluent limits are now appropriate.

We appreciate the opportunity to provide input on this draft permit. If you would like to discuss these comments, please contact John Tinger at (415) 972-3518, or Eugene Bromley at 415-972-3510.

Sincerely,

Douglas E. Eberhardt, Chief
NPDES Permits Office

ATTACHMENT
20

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

June 18, 2009

Mr. Ben Neill
Northern Watershed Protection Unit
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Re: Draft MS4 Permit for South Orange County

Dear Mr. Neill:

The following are EPA Region 9's comments on the March 13, 2009 Tentative Draft Permit for the South Orange County Municipal Separate Storm Sewer System (MS4), as amended by the "Draft Updates to LID Language" dated June 8, 2009. EPA most recently commented on the March 13 draft permit in a letter to James Smith dated May 14, 2009. These comments are intended to supplement our May 14 comments.

First, we would like to express our support for one aspect of the March 13, 2009 Tentative Draft Permit which was not covered by our May 14 letter. We recognize that section B, regarding Non-Stormwater Discharges removes "landscape irrigation, irrigation water, and lawn watering" from the listed categories of non-prohibited non-stormwater discharges. We note that the draft Fact Sheet identifies discharges from these categories to be substantial sources of pollutants. We agree that it is valid for the Regional Board to remove these sources from the list of non-prohibited non-stormwater discharges.

We are encouraged by the revisions made to the draft permit's Low Impact Development (LID) provisions in the June 8 update. We have been supportive of the Santa Ana Regional Board's Orange County MS4 permit, which was adopted on May 24, 2009. The LID provisions included in the June 8 update are generally consistent with the Santa Ana Regional Board's permit. We also appreciate that the June 8 update addresses the comments pertaining to LID in our May 14 letter.

We have the following specific comments on the June 8 update.

Section F.1.d requires the submittal of an updated model SUSMP within two years of permit adoption. We note that in other permits, including the May 24, 2009 Santa Ana Regional Board permit for Orange County, similar plans must be submitted within one year of permit issuance.

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Section F.1.d.4.c.ii – The updated LID language includes the term "biofiltration." Although this term is commonly used, as a general matter, its exact meaning is unclear. For example, in some circumstances, distinctions have not been made between infiltration and biofiltration. Conceptually, we believe that a well designed and operated biofiltration system can be consistent with LID principles by reducing flow volumes and protecting water quality. However, without a clear definition of biofiltration, there is the potential for the use of approaches that are contrary to LID. This section of the draft permit takes a step in the right direction by providing a total volume requirement for an acceptable biofilter. We would be interested in conferring further with you to improve the permit's definition of biofiltration.

Lastly, we'd like to refer to our May 14 comment letter's mention of the permit's provisions regarding the incorporation of Total Maximum Daily Loads (TMDLs). We continue to believe that the draft permit's TMDL provisions should be clarified, and would be glad to consult with you on this issue.

Thank you for the productive work you've done to improve this permit. If you'd like to discuss these comments, please contact John Tinger at (415) 972-3518, or Eugene Bromley at (415) 972-3510.

Sincerely,

Douglas E. Eberhardt, Chief
NPDES Permits Office

ATTACHMENT
21

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

FAX TRANSMITTAL

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

September 28, 2009

James Smith
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Re: Draft MS4 Permit for South Orange County (NPDES Permit No. CAS0108740)

Dear Mr. Smith:

The following are EPA Region 9's comments on the August 12, 2009 draft permit for discharges from the South Orange County Municipal Separate Storm Sewer System (MS4) within the jurisdiction of the San Diego Regional Board (SDRB) (NPDES permit No. CAS0108740).

Region 9 submitted comments on the previous draft permit of March 2009 in letters to the SDRB dated May 14, 2009 and June 18, 2009. We believe significant progress has been made in the August 2009 draft permit in addressing our comments on the previous draft. Region 9 supports adoption of the latest draft permit, with a few relatively minor revisions and clarifications as described below.

A. Low Impact Development (LID) Requirements

As we pointed out in our previous letters, Region 9 is seeking clear, measurable, and enforceable LID requirements in MS4 permits. The LID requirements of the latest draft are quite similar to the requirements in the North Orange County MS4 permit adopted in May 2009, with Region 9's support, by the Santa Ana Regional Board (SARB). We believe the SDRB's draft permit would be consistent with our objectives for LID implementation with a few minor revisions discussed below:

1) Page 8 (Finding D.2.c) – We recommend either removing the word "filtration" or replacing it with "retention." This would be consistent with the draft permit's Part F.1.d.(4)(d) which requires LID BMPs to be sized and designed to ensure onsite retention of the design storm event. We believe this would also better mirror the intent of mimicking natural hydrology via infiltration, harvesting and reuse, or evapotranspiration of stormwater, as opposed to the use of filtration systems which result in stormwater flows into the MS4 via underdrains.

2) Page 31 (Part F.1.c.8) – The inclusion of "LID biofiltration" in this section pertaining to large development projects is inconsistent with both section F.1.d.(4)(d) of the draft permit (described above) and with the SARB MS4 permit for Orange County (Part XII.C.2), where "bio-treatment" is only considered to meet that permit's LID provisions if infiltration, harvesting and reuse, or evapotranspiration are not feasible. This section should be revised to clarify that retention BMPs are preferred, and that the use of biofiltration will comply with this provision only if retention BMPs are not feasible.

3) Page 31 (Part F.1.c.8) - At the first mention of the feasibility of onsite retention or "LID biofiltration" there should be a reference to the requirement that feasibility criteria will be proposed by the co-permittees and approved by the Executive Officer (EO). Based on the mention of a "technical feasibility analysis" in section F.1.d.7., it's our understanding that it's the intent of the permit that this analysis must be submitted for the approval of the EO as part of the standard stormwater mitigation plans (SSMPs), and will be subject to public review and comment. The permit should be clarified to explicitly state the expectations for the timing of the submittal of this analysis and the review and approval process. These expectations should be included initially in this section, which is the first instance in the permit where this analysis would apply.

4) Page 34 (Part F.1.d.4.(a)(iv)) – We recommend deletion of the words "filter" and "detain" since they are not consistent with the intent of onsite retention as noted above.

5) Page 36 (Part F.1.d.4.(d)(ii)) - Given the mention of technical infeasibility in this section, it should be noted here that the conclusions on feasibility will be made based on the approved feasibility analysis.

6) Page 36 (Part F.1.d.4.(d)(iii)) – We recommend the word "may" be changed to "must" to ensure conventional treatment is required when LID is determined to be infeasible.

7) Page 39 (Part F.1.d.7) – As noted above, mention of the technical feasibility analysis should clarify expectations for the submittal of this analysis along with the fact that there will be an opportunity for public review and comments, and ultimate approval by the EO.

B. Total Maximum Daily Loads (TMDLs)

As you know, the Baby Beach TMDL has not yet been approved by the State Office of Administrative Law (OAL) or EPA. Accordingly, Finding E.11 is not currently accurate in stating that the permit includes wasteload allocations (WLAs) from fully approved TMDLs. However, we anticipate the Baby Beach TMDL will be approved by OAL and EPA prior to permit adoption, and we suggest you proceed under this assumption.

We also suggest the following clarifications and revisions related to the proposed TMDL requirements of the permit:

1) Page 79 (Part I) – The reference to Finding E.12 appears to be an error, and should be corrected.

2) Page 79 (Part I.1.a) - Although Finding E.11 identifies the particular co-permittees which are affected by the TMDL requirements, it would be helpful for additional clarification to include the names of these co-permittees in Part I.1.a of the permit as well.

3) Page 79 (Part I.1.b) - The permit should contain clear expectations for monitoring to ensure achievement of TMDL WLAs. Given that the referenced TMDL does not include a clear monitoring plan, the permit should require submittal of a monitoring plan, and specify the date by which this plan must be submitted.

4) Page 79 (Part I.1.c.) - Since the date for compliance with the dry weather WLA is five years after permit adoption, it appears erroneous to require both the wet weather and dry weather WLAs to be met by 2019, ten years after permit adoption. It should be noted that dry weather WLAs must be met by the end of 2014.

C. Numeric Effluent Limits for Non-Stormwater Discharges

In our previous letter of May 14, 2009, we supported the inclusion of numeric effluent limits for non-stormwater discharges, and we continue to do so. Establishing these limits is consistent with section 402(p)(3)(B)(ii) of the Clean Water Act, which states that permits for municipal stormwater must effectively prohibit non-stormwater discharges into the storm sewers.

1) Page 22 (Part C.4) - We recommend clarification regarding the "representative percentage" of the major outfalls/stations which will monitored. The permit should provide expectations for the magnitude of required monitoring pursuant to this section.

2) Page 23 (Table 4.a.2) – It appears that the numeric values in the columns for the saltwater AMELs and MDELs should be reversed, i.e., the MDELs should be the larger numbers.

D. Stormwater Action Levels

We fully support the inclusion of stormwater action levels (SALs) in the permit. These requirements help to clarify MEP. We recommend the fact sheet include additional information describing how the particular values for the SALs were derived.

1) Page 25 (Part D.2.) - Again, the permit requires sampling of a "representative percent of the outfalls." Both here and in Part C.4, the permit should provide some degree of specificity so that the permittees and the public have an idea of the expectations for the number of outfalls to be monitored.

E. Retrofitting Existing Development

We fully support the proposed requirements in the permit for retrofitting existing development with additional controls such as LID. The benefits of adding LID measures in particular in new developments have been documented in numerous reports of which the Board is well aware. Such benefits would also accrue from adding LID to existing developments. In addition to the support provided by the fact sheet, we would note that such requirements are encouraged by the State's 2005 report entitled "NPDES Stormwater Cost Survey" which also investigated alternative approaches to stormwater control.

F. Hydromodification

We are pleased to see the draft permit continues to include requirements related to hydromodification, and that clear, measurable requirements are included to address the issue. We believe the requirements are fully supported in the fact sheet and are consistent with the requirements of other recent MS4 permits in California.

We appreciate the opportunity to provide input on the draft permit. If you would like to discuss these comments, please contact John Tinger at (415) 972-3518, or Eugene Bromley at 415-972-3510.

Sincerely,

Douglas E. Eberhardt, Chief
NPDES Permits Office

ATTACHMENT
22

STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. 01-182
NPDES PERMIT NO. CAS004001
WASTE DISCHARGE REQUIREMENTS
FOR
MUNICIPAL STORM WATER AND URBAN RUNOFF DISCHARGES WITHIN THE COUNTY OF LOS ANGELES, AND THE INCORPORATED CITIES THEREIN, EXCEPT THE CITY OF LONG BEACH

December 13, 2001

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STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. 01-182
NPDES PERMIT NO. CAS004001
WASTE DISCHARGE REQUIREMENTS
FOR
MUNICIPAL STORM WATER AND URBAN RUNOFF DISCHARGES WITHIN THE COUNTY OF LOS ANGELES, AND THE INCORPORATED CITIES THEREIN, EXCEPT THE CITY OF LONG BEACH

The California Regional Water Quality Control Board, Los Angeles Region (hereinafter referred to as the Regional Board) finds:

A. Existing Permit

The Los Angeles County Flood Control District, the County of Los Angeles, and 84 incorporated cities within the Los Angeles County Flood Control District (see Attachment A, List of Permittees), hereinafter referred to separately as Permittees and jointly as the Discharger, discharge or contribute to discharges of storm water and urban runoff from municipal separate storm sewer systems (MS4s), also called storm drain systems. The discharges flow to water courses within the Los Angeles County Flood Control District and into receiving waters of the Los Angeles Region. These discharges are covered under countywide waste discharge requirements contained in Order No. 96-054 adopted by this Regional Board on July 15, 1996, which replaced Order No. 90-079 adopted by this Regional Board on June 18, 1990. Order No. 96-054 also serves as a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of municipal storm water.

B. Nature of Discharges and Sources of Pollutant

1. Storm water discharges consist of surface runoff generated from various land uses in all the hydrologic drainage basins that discharge into water bodies of the State. The quality of these discharges varies considerably and is affected by the hydrology, geology, land use, season, and sequence and duration of hydrologic events. The primary constituents of concern currently identified by the Los Angeles County Flood Control District Integrated Receiving Water Impacts Report (1994-2000) are cyanide, indicator bacteria, total dissolved solids, turbidity, total suspended solids, nutrients, total aluminum, dissolved cadmium, copper, lead, total mercury, nickel, zinc, bis(2-ethylhexyl)phthalate, polycyclic aromatic hydrocarbons (PAHs), diazinon, and chlorpyrifos.

2. Certain pollutants present in storm water and/or urban runoff may be derived from extraneous sources that Permittees have no or limited jurisdiction over. Examples of such pollutants and their respective sources are: PAHs which are products of internal combustion engine

operation, nitrates, bis (2-ethylhexyl) phthalate and mercury from atmospheric deposition, lead from fuels, copper from brake pad wear, zinc from tire wear, dioxins as products of combustion, and natural-occurring minerals from local geology. However, the implementation of the measures set forth in this Order is intended to reduce the entry of these pollutants into storm water and their discharge to receiving waters.

3. Water quality assessments conducted by the Regional Board identified impairment, or threatened impairment, of beneficial uses of water bodies in the Los Angeles Region. The causes of impairments include pollutants of concern identified in municipal storm water discharges by the County of Los Angeles in the Integrated Receiving Water Impacts Report (1994-2000). Pollutants in storm water can have damaging effects on both human health and aquatic ecosystems.

4. The Los Angeles County Grand Jury, September 2000, completed an investigation into the health risks of swimming near beaches in Los Angeles County and made several recommendations to reduce public health risks (Final Report, Grand Jury, Los Angeles County, 1999-2000). The Grand Jury recommended that the Regional Board consider among other actions, (i) a focus on setting contaminant limits rather than programmatic evaluations, (ii) audit of MS4 Permittee programs; and (iii) clarifying enforcement responsibilities between the State and local governments.

5. Studies and research conducted by other Regional agencies, academic institutions, and universities have also identified storm water and urban runoff as significant sources of pollutants to surface waters in Southern California. See, e.g., [*Surface Runoff to the Southern California Bight*, Southern California Coastal Water Research Project, (1992); *Impacts of Urban Runoff on Santa Monica Bay and Surrounding Ocean Waters* (Gersberg, R.M., 1995); *State of the Bay 1998*, Santa Monica Bay Restoration Project; *Storm Water Impact*, In, Southern California Environmental Report Card 1999, Institute of the Environment, University of California, Los Angeles (Stenstrom, M.S., 1999); *Distribution of Anthropogenic and Natural Debris on the Mainland Shelf of Southern California Bight,* Shelly L. Moore and M. James Allen (1999); *The Health Effects of Swimming in Ocean Water Contaminated by Storm Drain Runoff*, Haile, R.W. et al. (1999); *Huntington Beach Closure Investigation: Technical Review* (University of Southern California, 2000); *A Regional Survey of the Microbiological Water Quality Along the Shoreline of the Southern California Bight,* Rachel T. Noble *et al.* (2001*); Integrated Receiving Water Impacts Report (1994-2000)*, County of Los Angeles (2001)].

6. Development and urbanization increase pollutant load, volume, and discharge velocity. First, natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing an effective natural purification process. In contrast, pavement and concrete can neither absorb water nor remove pollutants, and thus the natural purification characteristics are

lost. Second, urban development creates new pollution sources as the increased density of human population brings proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage waste, pesticides, household hazardous wastes, pet wastes, trash, and other anthropogenic pollutants. Development and urbanization especially threaten environmentally sensitive areas. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may in a particular sensitive environment become significant. These environmentally sensitive areas designated by the State and/or the County of Los Angeles include Areas of Special Biological Significance (ASBS), water bodies designated as supporting a RARE beneficial use, Significant Natural Areas (SNAs), and Significant Ecological Areas (SEAs).

7. The increased volume, increased velocity, and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion and impair stream habitat in natural drainages. Studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving waters. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as 10 percent conversion from natural to impervious surfaces. Percentage impervious cover is a reliable indicator and predictor of potential water quality degradation expected from new development. (*Impervious Cover as An Urban Stream Indicator and a Watershed Management Tool*, Schueler, T. and R. Claytor, In, Effects of Water Development and Management on Aquatic Ecosystems (1995), ASCE, New York; Leopold, L. B., (1973), *River Channel Change with Time: An Example*, Geological Society of America Bulletin, v. 84, p. 1845-1860; Hammer, T. R., (1972), *Stream Channel Enlargement Due to Urbanization: Water Resources Research*, v. 8, p. 1530-1540; Booth, D. B., (1991), *Urbanization and the Natural Drainage System--Impacts, Solutions and Prognoses*: The Northwest Environmental Journal, v. 7, p. 93-118; Klein, R. D., (1979), *Urbanization and Stream Quality Impairment*: Water Resources Bulletin, v. 15, p. 948-963; May, C. W., Horner, R. R., Karr, J. R., Mar, B. W., and Welch, E. B., (1997), *Effects of Urbanization on Small Streams in the Puget Sound Lowland Ecoregion*: Watershed Protection Techniques, v. 2, p. 483-494; Morisawa, M. and LaFlure, E. *Hydraulic Geometry, Stream Equilibrium and Urbanization* In Rhodes, D. P. and Williams, G. P. *Adjustments to the Fluvial System* p.333-350. (1979); Dubuque, Iowa, Kendall/Hunt. Tenth Annual Geomorphology Symposia Series; and *The Importance of Imperviousness*: Watershed Protection Techniques, 1(3), Schueler, T. (1994).)

8. The County of Los Angeles has identified as the seven highest priority industrial and commercial critical source types, (i) wholesale trade (scrap recycling, auto dismantling); (ii) automotive repair/parking; (iii) fabricated metal products; (iv) motor freight; (v) chemical and allied products; (vi) automotive dealers/gas stations; (vii) primary metal products (*Critical*

Source Selection and Monitoring Report, Los Angeles County Department of Public Works -Sept 1996). Monitoring conducted by Los Angeles County and the Regional Board demonstrates that the priority industrial sectors and auto repair facilities (one of the commercial sectors) on the list, contribute significant concentrations of heavy metals to storm water (*Los Angeles County 1999-2000 Storm Water Monitoring Report*, Los Angeles County Department of Public Works -July 2000; *Compliance Assessment of the Auto Dismantling Industry; Evaluation of the California General Industrial Storm Water Permit*, H. Chang, (2001), 70 pp., California Regional Water Quality Control Board, Los Angeles Region).

9. The discharge of washwaters and contaminated storm water from industries and businesses specified in this Order for inspection by Permittees is an environmental threat and can also adversely impact public health and safety. For example, a review of industrial waste/ pretreatment records performed in 1995 in the County of Los Angeles on illicit discharges indicates that automotive service facilities and food service facilities sometimes discharge polluted washwaters to the MS4. The pollutants of concern in such washwaters include food waste, oil and grease, and toxic chemicals. Other storm water/industrial waste programs in California have reported similar observations. Illicit discharges from automotive service facilities and food service facilities have been identified elsewhere as a major cause of widespread contamination and water quality problems (Washtenaw County Statutory Drainage Board - 1987 Huron River Pollution Abatement Program).

10. Studies indicate that facilities with paved surfaces subject to frequent motor vehicular traffic (such as parking lots and fast food restaurants), or facilities that perform vehicle repair, maintenance, or fueling (automotive service facilities) are potential sources of pollutants of concern in storm water. [References: Pitt *et a*l., *Urban Storm Water Toxic Pollutants: Assessment, Sources, and Treatability*, Water Environment Res., 67, 260 (1995)*; Results of Retail Gas Outlet and Commercial Parking Lot Storm Water Runoff Study*, Western States Petroleum Association and American Petroleum Institute, (1994); *Action Plan Demonstration Project, Demonstration of Gasoline Fueling Station Best Management Practices*, Final Report, County of Sacramento (1993); *Source Characterization*, R. Pitt, In Innovative Urban Wet-Weather Flow Management Systems (2000) Technomic Press, Field, R *et al*. editors; *Characteristics of Parking Lot Runoff Produced by Simulated Rainfall*, , L.L. Tiefenthaler *et al*. Technical Report 343, Southern California Coastal Water Research Project (2001).]

11. Retail Gasoline Outlets (RGOs) are points of convergence for vehicular traffic and are similar to parking lots and urban roads. Studies indicate that storm water discharges from RGOs have high concentrations of hydrocarbons and heavy metals. [*The Quality of Trapped Sediments and Poor Water within Oil Grit Separators in Suburban MD,* Schueler T. and Shepp D. (1992), and *Concentrations of Selected Constituents in Runoff from Impervious Surfaces in Four Urban Catchments of Different*

Landuse, Ranabal, F.I., and T.J. Gizzard (1995), In Proceedings of the Fourth Biennial Stormwater Research Conference, Florida, pp-42-52]. Pilot studies indicate that treatment control best management practices installed at retail gasoline stations are effective in removing pollutants, reasonable in capital cost, easy to operate, and do not present safety risks [*Rouge River National Wet Weather Demonstration Project, Task Product Memorandum – Evaluation of On-line Media Filters RPO-NPS-TPM59.00*, Wayne County, MI, March 1999]. The Regional Board and the San Diego Regional Board have jointly prepared a Technical Report on the applicability of new development BMP design criteria for retail gasoline outlets, (*Retail Gasoline Outlets: New Development Design Standards for Mitigation of Storm Water Impacts*, (June 2001)). Retail Gasoline Outlets in Western U.S. States (such as Washington and Oregon) are already subject to numerical BMP design criteria, as well in other U.S. States.

C. Permit Background

1. The essential components of the Storm Water Management Program, as established by federal regulations [40 CFR 122.26(d)] are: (i) Adequate Legal Authority, (ii) Fiscal Resources, (iii) Storm Water Quality Management Program (SQMP) - (Public Information and Participation Program, Industrial/Commercial Facilities Program, Development Planning Program, Development Construction Program, Public Agency Activities Program, Illicit Connection and Illicit Discharges Elimination Program), and (iv) Monitoring and Reporting Program.

2. The Permittees have filed a Report of Waste Discharge (ROWD), dated February 1, 2001, and applied for renewal of their waste discharge requirements that serves as an NPDES permit to discharge wastes to surface waters. The ROWD includes a proposed SQMP and a Monitoring Program. The proposed SQMP contains programs previously approved under Board Order No. 96-054 in the following areas:

   Public Information and Participation
   Development Planning
   Development Construction
   Public Agency Activities
   Illicit Connection/Illicit Discharge Elimination Program

   These programs are revised pursuant to the provisions of this Order after adoption.

3. The County of Los Angeles has previously conducted source identification and pollutant characterization consistent with 40 CFR 122.26(d)(1)(ii) and (iii) under its storm water Monitoring Program. The Monitoring Program submitted with the ROWD proposes to advance the assessment of receiving water impacts, identification of sources of pollution, evaluation of Best Management Practices (BMPs), and measurement of long term trends in mass emissions.

4. The Regional Board has reviewed the ROWD and has determined it to be complete under the reapplication policy of MS4s issued by the U.S. Environmental Protection Agency (USEPA) (61 *Fed. Reg*. 41697). The Regional Board finds that the Permittees' proposed SQMP, incorporating the additional and/or revised provisions contained in this Order would meet the minimum requirements of federal regulations.

5. The City of Los Angeles has conducted shoreline and nearshore water quality monitoring off the Santa Monica Bay since the 1950s under the monitoring program for the Hyperion Waste Water Treatment Plant (NPDES No. CA0109991). The monitoring results indicate that effluent from Hyperion's 5-Mile Outfall does not impinge the shoreline, and that elevated bacterial counts are associated with runoff from storm drains and discharges from piers. In 1994, the Regional Board approved the relocation of Hyperion's shoreline stations to implement a bay-wide, regional shoreline-monitoring program associated with storm drain outfalls in the Santa Monica Bay. The City of Los Angeles requested that the shoreline-monitoring requirement be incorporated in this Order. The shoreline pathogen monitoring requirements are outlined in the Monitoring Program for this Order.

D. Permit Coverage

1. The requirements in this Order cover all areas within the boundaries of the Permittee municipalities (see Attachment A) over which they have regulatory jurisdiction as well as unincorporated areas in Los Angeles County within the jurisdiction of the Regional Board. The Permittees serve a population of about 9.5 million [Reference: *2000 Census of Population and Housing,* Bureau of the Census, U.S. Department of Commerce (2001)] in an area of approximately 3,100 square miles.

2. Federal, state, regional or local entities within the Permittees' boundaries or in jurisdictions outside the Los Angeles County Flood Control District, and not currently named in this Order, may operate storm drain facilities and/or discharge storm water to storm drains and watercourses covered by this Order. The Permittees may lack legal jurisdiction over these entities under state and federal constitutions. The Regional Board will coordinate with these entities to implement programs that are consistent with the requirements of this Order. The Regional Board will consider such facilities for coverage in 2003 under its NPDES permitting scheme pursuant to USEPA Phase II storm water regulations.

3. Sources of discharges into receiving waters in the County of Los Angeles but in jurisdictions outside its boundary include the following:

   About 34 square miles of unincorporated area in Ventura County, which drain into Malibu Creek and then to Santa Monica Bay,

   About 9 square miles of the City of Thousand Oaks, which also drain into Malibu Creek and then to Santa Monica Bay, and

About 86 square miles of area in Orange County, which drain into Coyote Creek and then into the San Gabriel River.

The Regional Board will ensure that storm water management programs for the areas in Ventura County and the City of Thousand Oaks that drain into Santa Monica Bay are consistent with the requirements of this Order. The Regional Board will coordinate with the Santa Ana Regional Board so that storm water management programs for the areas in Orange County that drain into Coyote Creek are consistent with the requirements of this Order.

4. This permit is intended to develop, achieve, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the Maximum Extent Practicable (MEP) from the permitted areas in the County of Los Angeles to the waters of the U.S. subject to the Permittees' jurisdiction.

5. Permittees have expressed their intention to work cooperatively to control the contribution of pollutants from one portion of the MS4 to another portion of the system. Permittees may control the contribution of pollutants to the MS4 from non-permittee dischargers such as Caltrans, the U.S. Department of Defense, and other state and federal facilities, through interagency agreements.

E. Federal, State, and Regional Regulations

1. The Water Quality Act of 1987 added Section 402(p) to the federal Clean Water Act (CWA) (33 U.S.C. § 1251-1387). This section requires the USEPA to establish regulations setting forth NPDES requirements for storm water discharges in two phases.

   - The USEPA Phase I storm water regulations were directed at MS4s serving a population of 100,000 or more, including interconnected systems and storm water discharges associated with industrial activities, including construction activities. The Phase I Final Rule was published on November 16, 1990 (55 *Fed. Reg*. 47990).

   - The USEPA Phase II storm water regulations are directed at storm water discharges not covered in Phase I, including small MS4s (serving a population of less than 100,000), small construction projects (one to five acres), municipal facilities with delayed coverage under the Intermodal Surface Transportation Efficiency Act of 1991, and other discharges for which the USEPA Administrator or the State determines that the storm water discharge contributes to a violation of a water quality standard, or is a significant contributor of pollutants to waters of the United States. The Phase II Final Rule was published on December 8, 1999 (64 *Fed. Reg*. 68722).

2. The USEPA published an 'Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits' on August 26, 1996 (61 *Fed. Reg.* 43761). This policy discusses the appropriate kinds of

water quality-based effluent limitations to be included in NPDES storm water permits to provide for the attainment of water quality standards.

3. The USEPA published an 'Interpretative Policy Memorandum on Reapplication Requirements' for MS4 permits on August 9, 1996 (61 *Fed. Reg*. 41697). This policy requires that MS4 reapplication for reissuance for a subsequent five-year permit term contain certain basic information and information for proposed changes and improvements to the storm water management program and monitoring program.

4. The USEPA has entered into a Memorandum of Agreement (MOA) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for enhancing coordination regarding the protection of endangered and threatened species under Section 7 of the Endangered Species Act and the CWA's Water Quality Standards and NPDES programs. Among other actions, the MOA establishes a framework for coordination of actions by the USEPA, the Services, and CWA delegated States on CWA permit issuance under Section 402 of the CWA [66 *Fed. Reg*. 11202 – 11217].

5. USEPA regulations at 40 CFR 122.26(d)(2)(iv)(A) and 40 CFR 122.26(d)(2)(iv)(C) require that MS4 permittees implement a program to monitor and control pollutants in discharges to the municipal system from industrial and commercial facilities that contribute a substantial pollutant load to the MS4. The regulations require that permittees establish priorities and procedures for inspection of industrial facilities and priority commercial establishments. This permit, consistent with the USEPA policy, incorporates a cooperative partnership, including the specifications of minimum expectations, between the Regional Board and the Permittees for the inspection of industrial facilities and priority commercial establishments to control pollutants in storm water discharges (58 *Fed. Reg.* 61157).

6. Section 402 (p) of the CWA (33 U.S.C. § 1342(p) provides that MS4 permits must "require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design engineering method and such other provisions as the [EPA] Administrator or the State determines appropriate for the control of such pollutants." The State Water Resources Control Board's (State Board) Office of Chief Counsel (OCC) has issued a memorandum interpreting the meaning of MEP to include technical feasibility, cost, and benefit derived with the burden being on the municipality to demonstrate compliance with MEP by showing that a BMP is not technically feasible in the locality or that BMPs costs would exceed any benefit to be derived (dated February 11, 1993).

7. The CWA authorizes the USEPA to permit a state to serve as the NPDES permitting authority in lieu of the USEPA. The State of California has in-lieu authority for an NPDES program. The Porter-Cologne Water Quality Control Act authorizes the State Board, through the Regional Boards, to regulate and control the discharge of pollutants into waters of the State. The State Board entered into a MOA with the USEPA, on

September 22, 1989, to administer the NPDES Program governing discharges to waters of the U.S.

8. Section 303(d) of the CWA requires that the State identify a list of impaired water-bodies and develop and implement Total Maximum Daily Loads (TMDLs) for these waterbodies (33 U.S.C. §1313(d)(1)). A TMDL specifies the maximum amount of a pollutant that a water-body can receive, still meet applicable water quality standards and protect beneficial uses. The USEPA entered into a consent decree with the Natural Resources Defense Council (NRDC), Heal the Bay, and the Santa Monica BayKeeper on March 22, 1999, under which the Regional Board must adopt all TMDLs for the Los Angeles Region within 13 years from that date. This permit incorporates a provision to implement and enforce approved load allocations for municipal storm water discharges and requires amending the SQMP after pollutants loads have been allocated and approved.

9. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA (16 U.S.C. § 1451-1465) amends the Coastal Zone Management Act of 1972, to address five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The Regional Board addresses septic systems through the administration of other programs.

10. On May 18, 2000, the USEPA established numeric criteria for priority toxic pollutants for the State of California (California Toxics Rule (CTR)) 65 *Fed. Reg*. 31682 (40 CFR 131.38), for the protection of human health and aquatic life. These apply as ambient water quality criteria for inland surface waters, enclosed bays, and estuaries. The State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) – 2000,* on March 2, 2000, for implementation of the CTR (State Board Resolution No. 2000-15 as amended by Board Resolution No. 2000-030). This policy requires that discharges comply with TMDL-derived load allocations as soon as possible but no later than 20 years from the effective date of the policy.

11. The State Board adopted a revised Water Quality Control Plan for Ocean Waters of California (Ocean Plan) on July 23, 1997. The Ocean Plan contains water quality objectives which apply to all discharges to the coastal waters of California.

12. The State Board in *In Re*: California Department of Transportation (State Board Order WQ 2001-08), determined that the discharge of storm water to ASBS is subject to the prohibition in the Ocean Plan against the discharge of wastes to an ASBS.

13. The Regional Board adopted an updated Water Quality Control Plan (Basin Plan) for the Los Angeles Region on June 13, 1994, *'Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*, (1994).' The Basin Plan designates beneficial uses of receiving waters and specifies both narrative and numerical water quality objectives for the receiving waters in Los Angeles County.

14. The Regional Board on September 19, 2001, adopted amendments to the Basin Plan, to incorporate TMDLs for trash in the Los Angeles River (Resolution No. 01-013) and Ballona Creek (Resolution No. 01-014). After approval by the State Board, the Office of Administrative Law, and the USEPA, the TMDLs for trash will be effective and enforceable.

15. The Regional Board on April 13, 1998, approved BMPs for sidewalk rinsing to minimize the discharge of wash waters to the storm drain system (Resolution No. 98-08). By the same resolution, the Regional Board prohibited the discharge of municipal street wash waters to the storm drain system.

16. The Regional Board on April 13, 1998, approved recommended BMPs for industrial/commercial facilities (Resolution No. 98-08).

17. The Regional Board on April 22, 1999, approved a list of BMPs for use in development planning and development construction (Resolution No. 99-03)

18. The Regional Board adopted and approved requirements for new development and significant redevelopment projects in Los Angeles County to control the discharge of storm water pollutants in post-construction storm water, on January 26, 2000, in Board Resolution No. R-00-02. The Regional Board Executive Officer issued the approved Standard Urban Storm Water Mitigation Plans (SUSMPs) on March 8, 2000. The State Board in large part affirmed the Regional Board action and SUSMPs in State Board Order No. WQ 2000-11 issued on October 5, 2000.

    - The State Board's Chief Counsel has issued a statewide policy memorandum (dated December 26, 2000), which interprets the Order to provide broad discretion to Regional Boards and identifies potential future areas for inclusion in SUSMPs and the types of evidence and findings necessary. Such areas include ministerial projects, projects in environmentally sensitive areas, and water quality design criteria for RGOs.

    - The State Board's Chief Counsel interprets the Order to encourage regional solutions and endorses a mitigation fund or "bank" that may be funded by developers who obtain waivers from the numerical design standards for new development and significant redevelopment.

19. 40 CFR 131.10(a) prohibits states from designating waste transport or waste assimilation as a use for any water of the U.S. Authorizing the

construction of a storm water/ urban runoff treatment facility in a jurisdictional water body would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction and operation of a pollution control facility in a water body can impact the physical, chemical, and biological integrity as well as the beneficial uses of the water body. Therefore, storm water treatment and/or mitigation in accordance with SUSMPs and any other requirements of this Order must occur prior to the discharge of storm water into a water of the U.S.

20. The Regional Board supports a Watershed Management Approach to address water quality protection in the region. The objective of the Watershed Management Approach should be to provide a comprehensive and integrated strategy towards water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically defined drainage basin or watershed. It emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with available resources.

21. To promote a watershed management approach, the County of Los Angeles is divided into six Watershed Management Areas (WMAs) as follows:

    Malibu Creek and Rural Santa Monica Bay WMA
    Ballona Creek and Urban Santa Monica Bay WMA
    Los Angeles River WMA
    San Gabriel River WMA
    Dominguez Channel/Los Angeles Harbor WMA, and
    Santa Clara River WMA

    Attachment A shows the list of Permittees under each WMA and some Permittees have expressed an intent to form sub-watershed groups within the WMA to promote regional solutions for the mitigation of storm water discharge pollution.

22. To facilitate compliance with federal regulations, the State Board has issued two statewide general NPDES permits for storm water discharges: one for storm water from industrial sites [NPDES No. CAS000001, General Industrial Activity Storm Water Permit (GIASP)] and the other for storm water from construction sites [NPDES No. CAS000002, General Construction Activity Storm Water Permit (GCASP)]. The GCASP was reissued on August 19, 1999. The GIASP was reissued on April 17, 1997. Facilities discharging storm water associated with industrial activities and construction projects with a disturbed area of five acres or more are required to obtain individual NPDES permits for storm water discharges, or to be covered by a statewide general permit by completing and filing a Notice of Intent (NOI) with the State Board. The USEPA guidance anticipates coordination of the state-administered programs for

industrial and construction activities with the local agency program to reduce pollutants in storm water discharges to the MS4.

The Regional Board is the enforcement authority in the Los Angeles Region for the two statewide general permits regulating discharges from industrial facilities and construction sites, and all NPDES storm water and non-storm water permits issued by the Regional Board. These industrial and construction sites and discharges are also regulated under local laws and regulations.

23. The State Board, on October 28, 1968, adopted Resolution No. 68-16, which established an anti-degradation policy for the State and Regional Boards. This policy restricts the degradation of surface waters and protects waterbodies where existing water quality is higher than is necessary for the protection of beneficial uses.

24. The State Board, on June 17, 1999, adopted Order No. WQ 99-05, which, in a precedential decision, identifies acceptable receiving water limitations language to be included in municipal storm water permits issued by the State and Regional Boards. The receiving water limitations included herein are consistent with the State Board Order, USEPA Policy, and the U.S. Appellate court decision in, *Defenders of Wildlife v. Browner* (9th. Cir, 1999). The State Board OCC has determined that the federal court decision did not conflict with State Board Order No. WQ 99-05 (memorandum dated October 14, 1999)

25. California Water Code (CWC) § 13263(a) requires that waste discharge requirements issued by the Regional Board shall implement any relevant water quality control plans that have been adopted; shall take into consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose; other waste discharges; the need to prevent nuisance; and provisions of CWC § 13241. The Regional Board has considered the requirements of § 13263 and § 13241, and applicable plans, policies, rules, and regulations in developing these waste discharge requirements.

26. CWC § 13370 *et seq.* requires that waste discharge requirements issued by the Regional Boards be consistent with provisions of the federal CWA and its amendments.

27. On March 12, 2001, the U.S. Court of Appeals ruled that it is necessary to obtain a NPDES permit for application of aquatic pesticides to waterways. (*Headwaters, Inc. vs. Talent Irrigation District,* 243 F.3d. 526 (9th Cir., 2001)) This decision is controlling in California for nonagricultural applications of pesticides to waterways. The State Board adopted a general NPDES permit (Order No. 2001-12-DWQ) on July 19, 2001, for public entities that discharge pollutants to waters of the U.S. associated with the application of aquatic pesticides for resource or pest management. Public entities that conduct such activities must seek coverage under the general permit.

F. Implementation

1. The California Environmental Quality Act (CEQA) (Cal. Pub. Resources Code § 21000 *et seq*.) requires that public agencies consider the environmental impacts of the projects they approve for development. CEQA applies to projects that are considered discretionary and does not apply to ministerial projects, which involve the use of established standards or objective measurements. A ministerial project may be made discretionary by adopting local ordinance provisions or imposing conditions to create decision-making discretion in approving the project. In the alternative, Permittees may establish standards and objective criteria administratively for storm water mitigation for ministerial projects. For water quality purposes, the Regional Board considers that all new development and significant redevelopment activity in specified categories, that receive approval or permits from a municipality, are subject to storm water mitigation requirements.

2. The objective of this Order is to protect the beneficial uses of receiving waters in Los Angeles County. To meet this objective, this Order requires that the SQMP specify BMPs that will be implemented to reduce the discharge of pollutants in storm water to the maximum extent practicable. Further, Permittees are to assure that storm water discharges from the MS4 shall neither cause nor contribute to the exceedance of water quality standards and objectives nor create conditions of nuisance in the receiving waters, and that the discharge of non-storm water to the MS4 has been effectively prohibited.

3. The SQMP required in this Order builds upon the programs established in Order Nos. 90-079, and 96-054, consists of the components recommended in the USEPA guidance manual, and was developed with the cooperation of representatives from the regulated community and environmental groups. The SQMP includes provisions that promote customized initiatives, both on a countywide and watershed basis, in developing and implementing cost-effective measures to minimize discharge of pollutants to the receiving water. The various components of the SQMP, taken as a whole rather than individually, are expected to reduce pollutants in storm water and urban runoff to the maximum extent practicable. Provisions of the SQMP are fully enforceable under provisions of this Order.

4. The emphasis of the SQMP is pollution prevention through education, public outreach, planning, and implementation as source control BMPs first and then Structural and Treatment Control BMPs next. Successful implementation of the provisions of the SQMP will require cooperation and coordination of all public agencies in each Permittee's organization, among Permittees, and with the regulated community.

5. The implementation of a Public Information and Participation Program is a critical component of a storm water management program. An informed and knowledgeable community is critical to the success of a storm water management program since it helps insure the following: (i) greater support for the program as the public gains a greater understanding of

the reasons why it is necessary and important, and (ii) greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.

6. This Order includes a Monitoring Program that incorporates Minimum Levels (MLs) established under the SIP. The SIP's MLs represent the lowest quantifiable concentration for priority toxic pollutants that is measurable with the use of proper method-based analytical procedures and factoring out matrix interference. The SIP's MLs therefore represent the best available science for determining MLs and are appropriate for a storm water monitoring program. The use of MLs allows the detection of toxic priority pollutants at concentrations of concern using recent advances in chemical analytical methods.

7. This Order provides flexibility for Permittees to petition the Regional Board Executive Officer to substitute a BMP under the SQMP with an alternative BMP, if they can provide information and documentation on the effectiveness of the alternative, equal to or greater than the prescribed BMP in meeting the objectives of this Order.

8. This Order contemplates that the Permittees are responsible for considering potential storm water impacts when making planning decisions in order to fulfill the Permittees' CWA requirement to reduce the discharge of pollutants in municipal storm water to the MEP from new development and redevelopment activities. However, the Permittees retain authority to make the final land-use decisions and retain full statutory authority for deciding what land uses are appropriate at specific locations within each Permittee's jurisdiction. This Order and its requirements are not intended to restrict or control local land use decision-making authority.

9. This Order is not intended to prohibit the inspection for or abatement of vectors by the State Department of Health Services or local vector agencies in accordance with Cal. Health and Safety Code § 2270 *et seq*. and §116110 *et seq*. Certain Treatment Control BMPs if not properly designed, operated or maintained may create habitats for vectors (e.g. mosquito and rodents). This Order contemplates that the Permittees will closely cooperate and collaborate with local vector control agencies and the State Department of Health Services for the implementation, operation, and maintenance of Treatment Control BMPs in order to minimize the risk to public health from vector borne diseases.

G. Public Process

1. The Regional Board has notified the Permittees and interested agencies and persons of its intent to issue waste discharge requirements for this discharge, and has provided them with an opportunity to submit their written view and recommendations.

2. The Regional Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements.

3. The Regional Board has conducted public workshops to discuss drafts of the permit. On April 24, 2001, Regional Board staff conducted a workshop outlining the reasoning behind the changes proposed for the new permit and received input from the Permittees and the public regarding those proposed changes. On July 26, 2001, a second public workshop was held at a special Regional Board meeting. The Permittees and the public had another opportunity to express their opinions regarding the proposed changes to the permit in front of the Regional Board members. A significant number of working meetings with the Permittees and other interested parties have occurred throughout the period from the submittal of the ROWD and completion of the tentative draft, in an attempt to incorporate and address all the comments presented.

4. The Los Angeles County Flood Control District, the County of Los Angeles and the other municipalities are co-permittees as defined in 40 CFR 122.26 (b)(1). Los Angeles County Flood Control District will coordinate with the other municipalities and facilitate program implementation. Each Permittee is responsible only for a discharge for which it is the operator.

5. This Order shall serve as a NPDES Permit, pursuant to CWA § 402, or amendments thereto, and shall take effect 50 days from Order adoption provided the Regional Administrator of the USEPA has no objections.

6. The action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA (Cal. Pub. Resources Code § 21100 *et seq*.), in accordance with CWC § 13389.

7. Pursuant to CWC §13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. A petition must be sent to: State Water Resources Control Board, P.O. Box 100, Sacramento, California, 95812, within 30 days of adoption of the Order by the Regional Board.

8. This Order may be modified or alternatively revoked or reissued prior to its expiration date, in accordance with the procedural requirements of the NPDES program, and the CWC for the issuance of waste discharge requirements.

IT IS HEREBY ORDERED that the Los Angeles County Flood Control District, Los Angeles County, and the Cities of Agoura Hills, Alhambra, Arcadia, Artesia, Azusa, Baldwin Park, Bell, Bellflower, Bell Gardens, Beverly Hills, Bradbury, Burbank, Calabasas, Carson, Cerritos, Claremont, Commerce, Compton, Covina, Cudahy, Culver City, Diamond Bar, Downey, Duarte, El Monte, El Segundo, Gardena, Glendale, Glendora, Hawaiian Gardens, Hawthorne, Hermosa Beach, Hidden Hills, Huntington Park, Industry, Inglewood, Irwindale, La Cañada Flintridge, La Habra Heights, Lakewood, La Mirada, La Puente, La Verne, Lawndale, Lomita, Los Angeles, Lynwood, Malibu, Manhattan Beach, Maywood, Monrovia, Montebello, Monterey Park, Norwalk, Palos Verdes Estates, Paramount, Pasadena, Pico Rivera, Pomona, Rancho Palos Verdes,

Redondo Beach, Rolling Hills, Rolling Hills Estates, Rosemead, San Dimas, San Fernando, San Gabriel, San Marino, Santa Clarita, Santa Fe Springs, Santa Monica, Sierra Madre, Signal Hill, South El Monte, South Gate, South Pasadena, Temple City, Torrance, Vernon, Walnut, West Covina, West Hollywood, Westlake Village, and Whittier, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, and the provisions of the CWA, as amended, and regulations and guidelines adopted thereunder, shall comply with the following:

Part 1. DISCHARGE PROHIBITIONS

The Permittees shall effectively prohibit non-storm water discharges into the MS4 and watercourses, except where such discharges:

1. Are covered by a separate individual or general NPDES permit for non-storm water discharges; or

2. Fall within one of the categories below, and meet all conditions when specified by the Regional Board Executive Officer:

   a) Category A - Natural flow:

      (1) Natural springs and rising ground water;

      (2) Flows from riparian habitats or wetlands;

      (3) Stream diversions, permitted by the State Board; and

      (4) Uncontaminated ground water infiltration [as defined by 40 CFR 35.2005(20)].

   b) Category B - Flows from emergency fire fighting activity.

   c) Category C - Flows incidental to urban activities:

      (1) Reclaimed and potable landscape irrigation runoff;

      (2) Potable drinking water supply and distribution system releases (consistent with American Water Works Association guidelines for dechlorination and suspended solids reduction practices);

      (3) Drains for foundations, footings, and crawl spaces;

      (4) Air conditioning condensate;

      (5) Dechlorinated/debrominated swimming pool discharges;

      (6) Dewatering of lakes and decorative fountains;

      (7) Non-commercial car washing by residents or by non-profit organizations; and

      (8) Sidewalk rinsing.

   The Regional Board Executive Officer may add or remove categories of non-storm water discharges above. Furthermore, in the event that any of

the above categories of non-storm water discharges are determined to be a source of pollutants by the Regional Board Executive Officer, the discharge will no longer be exempt from this prohibition unless the Permittee implements conditions approved by the Regional Board Executive Officer to ensure that the discharge is not a source of pollutants. Notwithstanding the above, the Regional Board Executive Officer may impose additional prohibitions of non-storm water discharges in consideration of anti-degradation policies and TMDLs.

Part 2. RECEIVING WATER LIMITATIONS

1. Discharges from the MS4 that cause or contribute to the violation of Water Quality Standards or water quality objectives are prohibited.

2. Discharges from the MS4 of storm water, or non-storm water, for which a Permittee is responsible for, shall not cause or contribute to a condition of nuisance.

3. The Permittees shall comply with Part 2.1. and 2.2. through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SQMP and its components and other requirements of this Order including any modifications. The SQMP and its components shall be designed to achieve compliance with receiving water limitations. If exceedances of Water Quality Objectives or Water Quality Standards (collectively, Water Quality Standards) persist, notwithstanding implementation of the SQMP and its components and other requirements of this permit, the Permittee shall assure compliance with discharge prohibitions and receiving water limitations by complying with the following procedure:

   a) Upon a determination by either the Permittee or the Regional Board that discharges are causing or contributing to an exceedance of an applicable Water Quality Standard, the Permittee shall promptly notify and thereafter submit a Receiving Water Limitations (RWL) Compliance Report (as described in the Program Reporting Requirements, Section I of the Monitoring and Reporting Program) to the Regional Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedances of Water Quality Standards. This RWL Compliance Report may be incorporated in the annual Storm Water Report and Assessment unless the Regional Board directs an earlier submittal. The RWL Compliance Report shall include an implementation schedule. The Regional Board may require modifications to the RWL Compliance Report.

   b) Submit any modifications to the RWL Compliance Report required by the Regional Board within 30 days of notification.

   c) Within 30 days following the approval of the RWL Compliance Report, the Permittee shall revise the SQMP and its components and monitoring program to incorporate the approved modified

BMPs that have been and will be implemented, an implementation schedule, and any additional monitoring required.

d) Implement the revised SQMP and its components and monitoring program according to the approved schedule.

4. So long as the Permittee has complied with the procedures set forth above and is implementing the revised SQMP and its components, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Regional Board to develop additional BMPs.

Part 3. STORM WATER QUALITY MANAGEMENT PROGRAM (SQMP) IMPLEMENTATION

A. General Requirements

1. Each Permittee shall, at a minimum, implement the SQMP. The SQMP is an enforceable element of this Order. The SQMP shall be implemented no later than February 1, 2002, unless a later date has been specified for a particular provision in this Order.

2. The SQMP shall, at a minimum, comply with the applicable storm water program requirements of 40 CFR 122.26(d)(2). The SQMP and its components shall be implemented so as to reduce the discharges of pollutants in storm water to the MEP.

3. Each Permittee shall implement additional controls, where necessary, to reduce the discharges of pollutants in storm water to the MEP.

4. Permittees that modify the countywide SQMP (i.e., implement additional controls, implement different controls than described in the countywide SQMP, or determine that certain BMPs in the countywide SQMP are not applicable in the area under its jurisdiction), shall develop a local SQMP, no later than August 1, 2002. The local SQMP shall be customized to reflect the conditions in the area under the Permittee's jurisdiction and shall specify activities being implemented under the appropriate elements described in the countywide SQMP.

B. Best Management Practice Implementation

The Permittees shall implement or require the implementation of the most effective combination of BMPs for storm water/urban runoff pollution control. When implemented, BMPs are intended to result in the reduction of pollutants in storm water to the MEP.

C. Revision of the Storm Water Quality Management Program

The Permittees shall revise the SQMP, at the direction of the Regional Board Executive Officer, to incorporate program implementation amendments so as to comply with regional, watershed specific requirements, and/or waste load

allocations developed and approved pursuant to the process for the designation and implementation of Total Maximum Daily Loads (TMDLs) for impaired water bodies.

D. Designation and Responsibilities of the Principal Permittee

The Los Angeles County Flood Control District is hereby designated as the Principal Permittee. As such, the Principal Permittee shall:

1. Coordinate and facilitate activities necessary to comply with the requirements of this Order, but is not responsible for ensuring compliance of any individual Permittee;

2. Coordinate permit activities among Permittees and act as liaison between Permittees and the Regional Board on permitting issues;

3. Provide personnel and fiscal resources for the necessary updates of the SQMP and its components;

4. Provide technical and administrative support for committees that will be organized to implement the SQMP and its components;

5. Convene the Watershed Management Committees (WMCs) constituted pursuant to Part F, below, upon designation of representatives;

6. Implement the Countywide Monitoring Program required under this Order and evaluate, assess and synthesize the results of the monitoring program;

7. Provide personnel and fiscal resources for the collection, processing and submittal to the Regional Board of annual reports and summaries of other reports required under the SQMP; and

8. Comply with the "Responsibilities of the Permittees" in Part 3.E., below.

E. Responsibilities of the Permittees

Each Permittee is required to comply with the requirements of this Order applicable to discharges within its boundaries (see Findings D.1, D.2. and D.3.) and not for the implementation of the provisions applicable to the Principal Permittee or other Permittees. Each Permittee shall, within its geographic jurisdiction:

1. Comply with the requirements of the SQMP and any modifications thereto;

2. Coordinate among its internal departments and agencies, as appropriate, to facilitate the implementation of the requirements of the SQMP applicable to such Permittee in an efficient and cost-effective manner;

3. Designate a technically knowledgeable representative to the appropriate WMC;

4. Participate in intra-agency coordination (e.g. Fire Department, Building and Safety, Code Enforcement, Public Health, etc.) necessary to successfully implement the provisions of this Order and the SQMP.

5. Prepare an annual Budget Summary of expenditures applied to the storm water management program. This summary shall identify the storm water budget for the following year, using estimated percentages and written explanations where necessary, for the specific categories noted below:

   a) Program management
      - Administrative costs

   b) Program Implementation

      Where information is available, provide an estimated percent breakdown of expenditures for the categories below:
      - Illicit connection/illicit discharge
      - Development planning
      - Development construction
      - Construction inspection activities
      - Industrial/Commercial inspection activities
      - Public Agency Activities
        - Maintenance of Structural BMPs and Treatment Control BMPs
        - Municipal Street Sweeping
        - Catch basin clean-up
        - Trash collection
        - Capital costs

   c) Public Information and Participation

   d) Monitoring Program

   e) Miscellaneous Expenditures

6. Each Permittee, in addition to the Budget Summary, shall report any supplemental dedicated budgets for the same categories.

F. Watershed Management Committees (WMCs)

1. Each WMC shall be comprised of a voting representative from each Permittee in the WMA.

2. The WMC's chair and secretary shall be chosen by the WMC upon Order adoption and on an annual basis, thereafter. In the absence of volunteer Permittee(s) for the positions, the Principal Permittee shall assume those roles until the WMC chooses members of the committee for the positions.

3. Each WMC shall:

   a) Facilitate cooperation and exchange of information among Permittees;

b) Establish additional goals and objectives and associated deadlines for the WMA, as the program implementation progresses;

c) Prioritize pollution control efforts based on beneficial use impairment(s), watershed characteristics and analysis of results from studies and the monitoring program;

d) Develop and/or update and monitor the adequate implementation, on an annual basis, of the tasks identified for the WMA;

e) Assess the effectiveness of, prepare revisions for, and recommend appropriate changes to the SQMP and its components;

f) Continue to prioritize the Industrial/Commercial critical sources for investigation, outreach and follow-up; and

g) Meet four times per year and, as necessary.

G. Legal Authority

1. Permittees shall possess the necessary legal authority to prohibit non-storm water discharges to the storm drain system, including, but not limited to:

a) Illicit discharges and illicit connections and require removal of illicit connections;

b) The discharge of wash waters to the MS4 from the cleaning of gas stations, auto repair garages, or other types of automotive service facilities;

c) The discharge of runoff to the MS4 from mobile auto washing, steam cleaning, mobile carpet cleaning, and other such mobile commercial and industrial operations;

d) The discharge of runoff to the MS4 from areas where repair of machinery and equipment which are visibly leaking oil, fluid or antifreeze, is undertaken;

e) The discharge of runoff to the MS4 from storage areas of materials containing grease, oil, or other hazardous substances, and uncovered receptacles containing hazardous materials;

f) The discharge of chlorinated/ brominated swimming pool water and filter backwash to the MS4;

g) The discharge of runoff from the washing of toxic materials from paved or unpaved areas to the MS4;

h) Washing impervious surfaces in industrial/commercial areas that results in a discharge of runoff to the MS4;

i) The discharge of concrete or cement laden wash water from concrete trucks, pumps, tools, and equipment to the MS4; and

j) Dumping or disposal of materials into the MS4 other than storm water, such as:

(1) Litter, landscape debris and construction debris;

(2) Any state or federally banned or unregistered pesticides;

(3) Food and food processing wastes; and

(4) Fuel and chemical wastes, animal wastes, garbage, batteries, and other materials that have potential adverse impacts on water quality.

2. The Permittees shall possess adequate legal authority to:

a) Require persons within their jurisdiction to comply with conditions in Permittees' ordinances, permits, contracts, model programs, or orders (i.e. hold dischargers to its MS4 accountable for their contributions of pollutants and flows);

b) Utilize enforcement mechanisms to require compliance with Permittees ordinances, permits, contracts, or orders;

c) Control pollutants, including potential contribution, in discharges of storm water runoff associated with industrial activities (including construction activities) to its MS4 and control the quality of storm water runoff from industrial sites (including construction sites). This requirement applies to Source Control, and Treatment Control BMPs;

d) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions, including the prohibition of illicit discharges to the MS4. Permittees must possess authority to enter, sample, inspect, review and copy records, and require regular reports from industrial facilities (including construction sites) discharging polluted or with the potential to discharge polluted storm water runoff into its MS4;

e) Require the use of BMPs to prevent or reduce the discharge of pollutants to MS4s to MEP; and

f) Require that Treatment Control BMPs be properly operated and maintained to prevent the breeding of vectors.

3. Each Permittee shall, no later than November 1, 2002, amend and adopt (if necessary), a Permittee-specific storm water and urban runoff ordinance to enforce all requirements of this permit.

4. Each Permittee shall submit no later than December 2, 2002, a new or updated statement by its legal counsel that the Permittee has obtained all

necessary legal authority to comply with this Order through adoption of ordinances and/or municipal code modifications.

Part 4. SPECIAL PROVISIONS

Maximum Extent Practicable Standard

This permit, and the provisions herein, are intended to develop, achieve, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the MEP from the permitted areas in the County of Los Angeles to the waters of the State.

A. General Requirements

1. Best Management Practice Substitution

   The Regional Board Executive Officer may approve any site-specific BMP substitution upon petition by a Permittee(s), if the Permittee can document that:

   a) The proposed alternative BMP or program will meet or exceed the objective of the original BMP or program in the reduction of storm water pollutants; or

   b) The fiscal burden of the original BMP or program is substantially greater than the proposed alternative and does not achieve a substantially greater improvement in storm water quality; and,

   c) The proposed alternative BMP or program will be implemented within a similar period of time.

B. Public Information and Participation Program (PIPP)

The Principal Permittee shall implement a Public Information and Participation Program (PIPP) that includes, but is not limited to, the requirements listed in this section. The Principal Permittee shall be responsible for developing and implementing the Public Education Program, as described in the SQMP, and shall coordinate with Permittees to implement specific requirements.

The objectives of the PIPP are as follows:

- To measurably increase the knowledge of the target audiences regarding the MS4, the impacts of storm water pollution on receiving waters, and potential solutions to mitigate the problems caused;
- To measurably change the waste disposal and runoff pollution generation behavior of target audiences by encouraging implementation of appropriate solutions; and
- To involve and engage socio-economic groups and ethnic communities in Los Angeles County to participate in mitigating the impacts of storm water pollution.

The Principal Permittee shall convene an advisory committee to provide input and assistance in meeting the goals and objectives of the public education campaign. The advisory committee shall be consulted during the process of developing the PIPP campaign, and shall provide comments and advice during the process of preparing a Request For Proposals for a storm water public education contractor. The committee may participate as a part of a working group that evaluates contractor proposals and other tasks as appropriate. The committee shall be comprised of representatives of the environmental community, Permittee cities, Regional Board staff, and experts in the fields of public education and marketing. The Principal Permittee shall ensure that the committee meets at least once a year.

1. Residential Program

a) "No Dumping" Message

Each Permittee shall mark all storm drain inlets that they own with a legible “no dumping” message. In addition, signs with prohibitive language discouraging illegal dumping must be posted at designated public access points to creeks, other relevant water bodies, and channels no later than February 2, 2004. Signage and storm drain messages shall be legible and maintained as necessary during the term of the permit.

b) Countywide Hotline

The 888-CLEAN-LA hotline will serve as the general public reporting contact for reporting clogged catch basin inlets and illicit discharges/dumping, faded or lack of catch basin stencils, and general storm water management information. Each Permittee may establish its own hotline if preferred. Permittees shall include this information, updated when necessary, in public information, and the government pages of the telephone book, as they are developed or published. The Principal Permittee shall compile a list of the general public reporting contacts from all Permittees and make this information available on the web site (888CleanLA.com) and upon request. Permittees shall provide the Principal Permittee with their reporting contacts no later than March 1, 2002. Permittees are responsible for providing current, updated information to the Principal Permittee.

c) Outreach and Education

(1) The Principal Permittee shall continue to implement the following activities that were components of the first five-year PIPP:

(i) Advertising;

(ii) Media relations;

(iii) Public service announcements;

(iv) "How To" instructional material distributed in a targeted and activity-related manner;

(v) Corporate, community association, environmental organization and entertainment industry tie-ins; and

(vi) Events targeted to specific activities and population subgroups.

(2) The Principal Permittee shall develop a strategy to educate ethnic communities and businesses through culturally effective methods. Details of this strategy should be incorporated into the Public Education Program, and implemented, no later than February 3, 2003.

(3) The Principal Permittee shall enhance the existing outreach efforts to residents and businesses related to the proper disposal of cigarette butts.

(4) Each Permittee shall conduct educational activities within its jurisdiction and participate in countywide events.

(5) The Principal Permittee shall organize Public Outreach Strategy meetings for Permittees on a quarterly basis, beginning no later than May 1, 2002. The Principal Permittee shall provide guidance for Permittees to augment the countywide outreach and education program. Permittees shall coordinate regional and local outreach and education to reduce duplication of efforts. Permittees are encouraged to include other interested parties in the outreach strategy to strengthen and coordinate educational efforts.

(6) The Principal Permittee shall ensure that a minimum of 35 million impressions per year are made on the general public about storm water quality via print, local TV access, local radio, or other appropriate media.

(7) The Principal Permittee, in cooperation with the Permittees, shall provide schools within each School District in the County with materials, including, but not limited to, videos, live presentations, and other information necessary to educate a minimum of 50 percent of all school children (K-12) every 2 years on storm water pollution.

(8) Permittees shall provide the contact information for their appropriate staff responsible for storm water public education activities to the Principal Permittee no later than April 1, 2002, and changes to contact information no later than 30 days after a change occurs.

(9) The Principal Permittee shall develop a strategy to measure the effectiveness of in-school educational programs. The protocol shall include assessment of students' knowledge of storm water pollution problems and

solutions before and after educational efforts are conducted. The protocol shall be developed and submitted to the Regional Board Executive Officer for approval no later than May 1, 2002. It shall be implemented upon approval.

(10) In order to ensure that the PIPP is demonstrably effective in changing the behavior of the public, the Principal Permittee shall develop a behavioral change assessment strategy no later than May 1, 2002. The strategy shall be developed based on sociological data and studies (such as the County Segmentation Study). The Principal Permittee shall submit the assessment strategy to the Regional Board Executive Office for approval. It shall be implemented on approval.

d) Pollutant-Specific Outreach

The Principal Permittee, in cooperation with Permittees, shall coordinate to develop outreach programs that focus on the watershed-specific pollutants listed in Table 1 no later than February 3, 2003. Metals may be appropriately addressed through the Industrial/Commercial Facilities Program (e.g. distribute education materials on appropriate BMPs for metal waste management to facilities that have been identified as a potential source, such as metal fabricating facilities). Region-wide pollutants may be included in the Principal Permittee's mass media outreach efforts.

Table 1.	
Watershed	***Target Pollutants for Outreach***
Ballona Creek	Trash, Indicator Bacteria, Metals, PAHs
Malibu Creek	Trash, Nutrients (Nitrogen), Indicator Bacteria, Sediments
Los Angeles River	Trash, Nutrients (Nitrogen), Indicator Bacteria, Metals, Pesticides, PAHs
San Gabriel River	Trash, Nutrients (Nitrogen), Indicator Bacteria, Metals
Santa Clara River	Nutrients (Nitrogen), Coliform
Dominguez Channel	Trash, Indicator Bacteria, PAHs

Each Permittee shall make outreach materials available to the general public and target audiences, such as schools, community groups, contractors and developers, and at appropriate public counters and events. Outreach material shall include information on pollutants, sources of concern, and source abatement measures.

2. Businesses Program

a) Corporate Outreach

The Principal Permittee shall develop and implement a Corporate Outreach program to educate and inform corporate managers about storm water regulations. The program shall target RGOs and restaurant chains. At a minimum, this program shall include:

(1) Conferring with corporate management to explain storm water regulations;

(2) Distribution and discussion of educational material regarding storm water pollution and BMPs, and provide managers with suggestions to facilitate employee compliance with storm water regulations.

Corporate Outreach for all RGOs and restaurant chain corporations shall be conducted not less than twice during the permit term, with the first outreach contact to begin no later than February 3, 2003.

b) Business Assistance Program

The Principal Permittee and Permittees may implement a Business Assistance Program to provide technical resource assistance to small businesses to advise them on BMPs implementation to reduce the discharge of pollutants in storm water runoff. Programs may include:

(1) On-site technical assistance or consultation via telephone to identify and implement storm water pollution prevention methods and best management practices; and

(2) Making available, distributing, and discussing of applicable BMP and educational materials.

C. Industrial/Commercial Facilities Control Program

Each Permittee shall require implementation of pollutant reduction and control measures at industrial and commercial facilities, with the objective of reducing pollutants in storm water runoff. Except as specified in other sections of this Order, pollutant reduction and control measures can be used alone or in combination, and can include Structural and Source Control BMPs, and operation and maintenance procedures, which can be applied before, during, and/or after pollution generating activities. At a minimum, the Industrial/Commercial Facilities Control Program shall include requirements to: (1) track, (2) inspect, and (3) ensure compliance at industrial and commercial facilities that are critical sources of pollutants in storm water.

1. Track Critical Sources

a) Each Permittee shall maintain a watershed-based inventory or database of all facilities within its jurisdiction that are critical sources of storm water pollution. Critical sources to be tracked are summarized below, and also specified in Attachment B:

(1) Commercial Facilities

- restaurants;
- automotive service facilities; and
- RGOs and automotive dealerships.

(2) USEPA Phase I Facilities (Tier 1 and 2)

(3) Other Federally-mandated Facilities [as specified in 40 CFR 122.26(d)(2)(iv)(C)]

- municipal landfills;
- hazardous waste treatment, disposal, and recovery facilities; and
- facilities subject to SARA Title III (also known as EPCRA).

b) Each Permittee shall include the following minimum fields of information for each industrial and commercial facility:

- name of facility and name of owner/operator;
- address;
- coverage under the GIASP or other individual or general NPDES permits; and
- a narrative description including SIC codes that best reflects the industrial activities at and principal products of each facility.

The Regional Board encourages Permittees to add other fields of information, such as material usage and/or industrial output, and discrepancies between SIC Code designations (as reported by facility operators) and the actual type of industrial activity has the potential to pollute storm water. In addition, the Regional Board recommends use of an automated database system, such as a Geographical Information System (GIS) or Internet-based system; however, this is not required.

c) Each Permittee shall update its inventory of critical sources at least annually. The update may be accomplished through collection of new information obtained through field activities or through other readily available intra-agency informational databases (e.g. business licenses, pretreatment permits, sanitary sewer hook-up permits).

2. Inspect Critical Sources

Each Permittee shall inspect all facilities in the categories and at a level and frequency as specified in the following subsections.

a) Commercial Facilities

(1) Restaurants

Frequency of Inspections: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of inspections: Each Permittee, in cooperation with its appropriate department (such as health or public works), shall inspect all restaurants within its jurisdiction to confirm that storm water BMPs are being effectively implemented in compliance with State law, County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP. At each restaurant, inspectors shall verify that the restaurant operator:

- has received educational materials on storm water pollution prevention practices;
- does not pour oil and grease or oil and grease residue onto a parking lot, street or adjacent catch basin;
- keeps the trash bin area clean and trash bin lids closed, and does not fill trash bins with washout water or any other liquid;
- does not allow illicit discharges, such as discharge of washwater from floormats, floors, porches, parking lots, alleys, sidewalks and street areas (in the immediate vicinity of the establishment), filters or garbage/trash containers;
- removes food waste, rubbish or other materials from parking lot areas in a sanitary manner that does not create a nuisance or discharge to the storm drain.

(2) Automotive Service Facilities

Frequency of Inspections: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of inspections: Each Permittee shall inspect all automotive service facilities within its jurisdiction to confirm that storm water BMPs are effectively implemented in compliance with County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP. At each

automotive service facility, inspectors shall verify that each operator:

- maintains the facility area so that it is clean and dry and without evidence of excessive staining;
- implements housekeeping BMPs to prevent spills and leaks;
- properly discharges wastewaters to a sanitary sewer and/or contains wastewaters for transfer to a legal point of disposal;
- is aware of the prohibition on discharge of non-storm water to the storm drain;
- properly manages raw and waste materials including proper disposal of hazardous waste;
- protects outdoor work and storage areas to prevent contact of pollutants with rainfall and runoff;
- labels, inspects, and routinely cleans storm drain inlets that are located on the facility's property; and
- trains employees to implement storm water pollution prevention practices.

(3) Retail Gasoline Outlets and Automotive Dealerships

Frequency of Inspection: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each RGO and automotive dealership within its jurisdiction, in compliance with the SQMP, Regional Board Resolution 98-08, and the Stormwater Quality Task Force Best Management Practice Guide for RGOs. At each RGO and automotive dealership, inspectors shall verify that each operator:

- routinely sweeps fuel-dispensing areas for removal of litter and debris, and keeps rags and absorbents ready for use in case of leaks and spills;
- is aware that washdown of facility area to the storm drain is prohibited;
- is aware of design flaws (such as grading that doesn't prevent run-on, or inadequate roof covers and berms), and that equivalent BMPs are implemented;
- inspects and cleans storm drain inlets and catch basins within each facility's boundaries no later than October 1st of each year;

- posts signs close to fuel dispensers, which warn vehicle owners/operators against "topping off" of vehicle fuel tanks and installation of automatic shutoff fuel dispensing nozzles;
- routinely checks outdoor waste receptacle and air/water supply areas, cleans leaks and drips, and ensures that only watertight waste receptacles are used and that lids are closed; and
- trains employees to properly manage hazardous materials and wastes as well as to implement other storm water pollution prevention practices.

b) Phase I Facilities

Permittees need not inspect facilities that have been inspected by the Regional Board within the past 24 months. For the remaining Phase I facilities that the Regional Board has not inspected, each Permittee shall conduct compliance inspections as specified below.

Frequency of Inspection

Facilities in Tier 1 Categories: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Facilities in Tier 2 Categories: Twice during the 5-year term of the permit, provided that the first inspection occurs no later than August 1, 2004. Permittees need not perform additional inspections at those facilities determined to have no risk of exposure of industrial activity to storm water. For those facilities that do have exposure of industrial activities to storm water, a Permittee may reduce the frequency of additional compliance inspections to once every 5 years, provided that the Permittee inspects at least 20% of the facilities in Tier 2 each year.

Level of Inspection: Each Permittee shall confirm that each operator:

- has a current Waste Discharge Identification (WDID) number for facilities discharging storm water associated with industrial activity, and that a Storm Water Pollution Prevention Plan is available on-site, and
- is effectively implementing BMPs in compliance with County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP.

c) Other Federally-mandated Facilities

Frequency of Inspection: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of Inspection: Each Permittee shall confirm that each operator:

- has a current Waste Discharge Identification (WDID) number for facilities discharging storm water associated with industrial activity, and that a Storm Water Pollution Prevention Plan is available on-site, and
- is effectively implementing BMPs in compliance with County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP.

3. Ensure Compliance of Critical Sources

a) **BMP Implementation:** In the event that a Permittee determines that a BMP specified by the SQMP or Regional Board Resolution 98-08 is infeasible at any site, that Permittee shall require implementation of other BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges. Likewise, for those BMPs that are not adequate to achieve water quality objectives, Permittees may require additional site-specific controls, such as Treatment Control BMPs.

b) **Environmentally Sensitive Areas and Impaired Waters:** For critical sources that are in ESAs or that are tributary to CWA § 303(d) impaired water bodies, Permittees shall consider requiring operators to implement additional controls to reduce pollutants in storm water runoff that are causing or contributing to the exceedences of Water Quality Objectives.

c) **Progressive Enforcement:** Each Permittee shall implement a progressive enforcement policy to ensure that facilities are brought into compliance with all storm water requirements within a reasonable time period as specified below.

(1) In the event that a Permittee determines, based on an inspection conducted above, that an operator has failed to adequately implement all necessary BMPs, that Permittee shall take progressive enforcement action which, at a minimum, shall include a follow-up inspection within 4 weeks from the date of the initial inspection.

(2) In the event that a Permittee determines that an operator has failed to adequately implement BMPs after a follow-up inspection, that Permittee shall take further enforcement action as established through authority in its municipal code and ordinances or through the judicial system.

(3) Each Permittee shall maintain records, including inspection reports, warning letters, notices of violations, and other enforcement records, demonstrating a good faith effort to bring facilities into compliance.

d) Interagency Coordination

(1) **Referral of Violations of the SQMP, Regional Board Resolution 98-08, and Municipal Storm Water Ordinances:** A Permittee may refer a violation(s) to the Regional Board provided that that Permittee has made a good faith effort of progressive enforcement. At a minimum, a Permittee's good faith effort must include documentation of:

- Two follow-up inspections, and
- Two warning letters or notices of violation.

(2) **Referral of Violations of the GIASP, including Requirements to File a Notice of Intent:** For those facilities in violation of the GIASP, Permittees may escalate referral of such violations to the Regional Board after one inspection and one written notice to the operator regarding the violation. In making such referrals, Permittees shall include, at a minimum, the following documentation:

- Name of the facility;
- Operator of the facility;
- Owner of the facility;
- Industrial activity being conducted at the facility that is subject to the GIASP; and
- Records of communication with the facility operator regarding the violation, which shall include at least an inspection report and one written notice of the violation.

Permittees shall, at a minimum, make such referrals on a quarterly basis.

(3) **Investigation of Complaints Regarding Facilities – Transmitted by the Regional Board Staff:** Each Permittee shall initiate, within one business day, investigation of complaints (other than non-storm water discharges) regarding facilities within its jurisdiction. The initial investigation shall include, at a minimum, a limited

inspection of the facility to confirm the complaint to determine if the facility is effectively complying with the SQMP and municipal storm water/urban runoff ordinances, and to oversee corrective action.

(4) **Support of Regional Board Enforcement Actions:** As directed by the Regional Board Executive Officer, Permittees shall support Regional Board enforcement actions by: assisting in identification of current owners, operators, and lessees of facilities; providing staff, when available, for joint inspections with Regional Board inspectors; appearing as witnesses in Regional Board enforcement hearings; and providing copies of inspection reports and other progressive enforcement documentation.

(5) **Participation in a Task Force:** The Permittees, Regional Board, and other stakeholders may form a Storm Water Task Force, the purpose of which is to communicate concerns regarding special cases of storm water violations by industrial and commercial facilities and to develop a coordinated approach to enforcement action.

D. Development Planning Program

The Permittees shall implement a development-planning program that will require all Planning Priority development and Redevelopment projects to:

- Minimize impacts from storm water and urban runoff on the biological integrity of Natural Drainage Systems and water bodies in accordance with requirements under CEQA (Cal. Pub. Resources Code § 21100), CWC § 13369, CWA § 319, CWA § 402(p), CWA § 404, CZARA § 6217(g), ESA § 7, and local government ordinances ;
- Maximize the percentage of pervious surfaces to allow percolation of storm water into the ground;
- Minimize the quantity of storm water directed to impervious surfaces and the MS4;
- Minimize pollution emanating from parking lots through the use of appropriate Treatment Control BMPs and good housekeeping practices;
- Properly design and maintain Treatment Control BMPs in a manner that does not promote the breeding of vectors; and
- Provide for appropriate permanent measures to reduce storm water pollutant loads in storm water from the development site.

1. Peak Flow Control

The Permittees shall control post-development peak storm water runoff discharge rates, velocities, and duration (peak flow control) in Natural

Drainage Systems (i.e., mimic pre-development hydrology) to prevent accelerated stream erosion and to protect stream habitat. Natural Drainage Systems are located in the following areas:

a) Malibu Creek;

b) Topanga Canyon Creek;

c) Upper Los Angeles River;

d) Upper San Gabriel River;

e) Santa Clara River; and

f) Los Angeles County Coastal streams (see Basin Plan Table 2-1).

The Principal Permittee in consultation with Permittees shall develop numerical criteria for peak flow control, based on the results of the Peak Discharge Impact Study (see Monitoring Program Section II.I).

Each Permittee shall, no later than February 1, 2005, implement numerical criteria for peak flow control.

A Permittee or group of Permittees may substitute for the countywide peak flow control criteria with a Hydromodification Control Plan (HCP), on approval by the Regional Board, in the following circumstances:

(1) Stream or watershed-specific conditions indicate the need for a different peak flow control criteria, and the alternative numerical criteria is developed through the application of hydrologic modeling and supporting field observations; or

(2) A watershed-wide plan has been developed for implementation of control measures to reduce erosion and stabilize drainage systems on a watershed basis.

2. Standard Urban Storm Water Mitigation Plans (SUSMPs)

a) Each Permittee shall amend codes and ordinances not later than August 1, 2002 to give legal effect to SUSMP changes contained in this Order. Changes to SUSMP requirements shall take effect not later than September 2, 2002.

b) Each Permittee shall require that a single-family hillside home:

(1) Conserve natural areas;

(2) Protect slopes and channels;

(3) Provide storm drain system stenciling and signage;

(4) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

(5) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability.

c) Each Permittee shall require that a SUSMP as approved by the Regional Board in Board Resolution No. R 00-02 be implemented for the following categories of developments:

(1) Ten or more unit homes (includes single family homes, multifamily homes, condominiums, and apartments);

(2) A 100,000 or more square feet of impervious surface area industrial/ commercial development;

(3) Automotive service facilities (SIC 5013, 5014, 5541, 7532-7534, and 7536-7539);

(4) Retail gasoline outlets;

(5) Restaurants (SIC 5812);

(6) Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces; and

(7) Redevelopment projects in subject categories that meet Redevelopment thresholds.

d) Each Permittee shall submit an ESA Delineation Map for its jurisdictional boundary, based on the Regional Board's ESA Definition, no later than June 3, 2002, for approval by the Regional Board Executive Officer in consultation with the California Department of Fish and Game, and the California Coastal Commission.

e) Each Permittee shall require the implementation of SUSMP provisions no later than September 2, 2002, for all projects located in or directly adjacent to or discharging directly to an ESA, where the development will:

(1) Discharge storm water and urban runoff that is likely to impact a sensitive biological species or habitat; and

(2) Create 2,500 square feet or more of impervious surface area.

3. Numerical Design Criteria

The Permittees shall require that post-construction Treatment Control BMPs incorporate, at a minimum, either a volumetric or flow based treatment control design standard, or both, as identified below to mitigate (infiltrate, filter or treat) storm water runoff:

a) Volumetric Treatment Control BMP

(1) The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area, from

the formula recommended in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87, (1998*); or

(2) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in *California Stormwater Best Management Practices Handbook – Industrial/ Commercial,* (1993); or

(3) The volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system; or

(4) The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for "treatment" (0.75 inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.

b) Flow Based Treatment Control BMP

(1) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or

(2) The flow of runoff produced from a rain event equal to at least two times the 85th percentile hourly rainfall intensity for Los Angeles County; or

(3) The flow of runoff produced from a rain event that will result in treatment of the same portion of runoff as treated using volumetric standards above.

4. Applicability of Numerical Design Criteria

The Permittees shall require the following categories of Planning Priority Projects to design and implement post-construction treatment controls to mitigate storm water pollution:

a) Single-family hillside residential developments of one acre or more of surface area;

b) Housing developments (includes single family homes, multifamily homes, condominiums, and apartments) of ten units or more;

c) A 100,000 square feet or more impervious surface area industrial/ commercial development;

d) Automotive service facilities (SIC 5013, 5014, 5541, 7532-7534 and 7536-7539) [5,000 square feet or more of surface area];

e) Retail gasoline outlets [5,000 square feet or more of impervious surface area and with projected Average Daily Traffic (ADT) of 100 or more vehicles]. Subsurface Treatment Control BMPs

which may endanger public safety (i.e., create an explosive environment) are considered not appropriate;

f) Restaurants (SIC 5812) [5,000 square feet or more of surface area];

g) Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces;

h) Projects located in, adjacent to or discharging directly to an ESA that meet threshold conditions identified above in 2.e; and

i) Redevelopment projects in subject categories that meet Redevelopment thresholds.

5. Not later than March 10, 2003, each Permittee shall require the implementation of SUSMP and post-construction control requirements for the industrial/commercial development category to projects that disturb one acre or more of surface area.

6. Site Specific Mitigation

Each Permittee shall, no later than September 2, 2002, require the implementation of a site-specific plan to mitigate post-development storm water for new development and redevelopment not requiring a SUSMP but which may potentially have adverse impacts on post-development storm water quality, where one or more of the following project characteristics exist:

a) Vehicle or equipment fueling areas;

b) Vehicle or equipment maintenance areas, including washing and repair;

c) Commercial or industrial waste handling or storage;

d) Outdoor handling or storage of hazardous materials;

e) Outdoor manufacturing areas;

f) Outdoor food handling or processing;

g) Outdoor animal care, confinement, or slaughter; or

h) Outdoor horticulture activities.

7. Redevelopment Projects

The Permittees shall apply the SUSMP, or site specific requirements including post-construction storm water mitigation to all Planning Priority Projects that undergo significant Redevelopment in their respective categories.

a) Significant Redevelopment means land-disturbing activity that results in the creation or addition or replacement of 5,000 square

feet or more of impervious surface area on an already developed site.

Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, the entire project must be mitigated. Where Redevelopment results in an alteration to less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, only the alteration must be mitigated, and not the entire development.

b) Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety.

c) Existing single family structures are exempt from the Redevelopment requirements.

8. Maintenance Agreement and Transfer

Each Permittee shall require that all developments subject to SUSMP and site specific plan requirements provide verification of maintenance provisions for Structural and Treatment Control BMPs, including but not limited to legal agreements, covenants, CEQA mitigation requirements, and or conditional use permits. Verification at a minimum shall include:

a) The developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred; and either

b) A signed statement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance and that it meets all local agency design standards; or

c) Written conditions in the sales or lease agreement, which requires the recipient to assume responsibility for maintenance and conduct a maintenance inspection at least once a year; or

d) Written text in project conditions, covenants and restrictions (CCRs) for residential properties assigning maintenance responsibilities to the Home Owners Association for maintenance of the Structural and Treatment Control BMPs; or

e) Any other legally enforceable agreement that assigns responsibility for the maintenance of post-construction Structural or Treatment Control BMPs.

9. Regional Storm Water Mitigation Program

A Permittee or Permittee group may apply to the Regional Board for approval of a regional or sub-regional storm water mitigation program to substitute in part or wholly SUSMP requirements. Upon review and a determination by the Regional Board Executive Officer that the proposal is technically valid and appropriate, the Regional Board may consider for approval such a program if its implementation will:

a) Result in equivalent or improved storm water quality;

b) Protect stream habitat;

c) Promote cooperative problem solving by diverse interests;

d) Be fiscally sustainable and has secure funding; and

e) Be completed in five years including the construction and start-up of treatment facilities.

Nothing in this provision shall be construed as to delay the implementation of SUSMP requirements, as approved in this Order.

10. Mitigation Funding

The Permittees may propose a management framework, for endorsement by the Regional Board Executive Officer, to support regional or sub-regional solutions to storm water pollution, where any of the following situations occur:

a) A waiver for impracticability is granted;

b) Legislative funds become available;

c) Off-site mitigation is required because of loss of environmental habitat; or

d) An approved watershed management plan or a regional storm water mitigation plan exists that incorporates an equivalent or improved strategy for storm water mitigation.

11. California Environmental Quality Act (CEQA) Document Update

Each Permittee shall incorporate into its CEQA process, with immediate effect, procedures for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents. The procedures shall require consideration of the following:

a) Potential impact of project construction on storm water runoff;

b) Potential impact of project post-construction activity on storm water runoff;

c) Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous

materials handling or storage, delivery areas or loading docks, or other outdoor work areas;

d) Potential for discharge of storm water to impair the beneficial uses of the receiving waters or areas that provide water quality benefit;

e) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and water bodies;

f) Potential for significant changes in the flow velocity or volume of storm water runoff that can cause environmental harm; and

g) Potential for significant increases in erosion of the project site or surrounding areas.

12. General Plan Update

a) Each Permittee shall amend, revise or update its General Plan to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended: (i) Land Use, (ii) Housing, (iii) Conservation, and (iv) Open Space.

b) Each Permittee shall provide the Regional Board with the draft amendment or revision when a listed General Plan element or the General Plan is noticed for comment in accordance with Cal. Govt. Code § 65350 *et seq*.

13. Targeted Employee Training

Each Permittee shall train its employees in targeted positions (whose jobs or activities are engaged in development planning) regarding the development planning requirements on an annual basis beginning no later than August 1, 2002, and more frequently if necessary. For Permittees with a population of 250,000 or more (2000 U.S. Census), training shall be completed no later than February 3, 2003.

14. Developer Technical Guidance and Information

a) Each Permittee shall develop and make available to the developer community SUSMP (development planning) guidelines immediately.

b) The Principal Permittee in partnership with Permittees shall issue no later than February 2, 2004, a technical manual for the siting and design of BMPs for the development community in Los Angeles County. The technical manual may be adapted from the revised California Storm Water Quality Task Force Best Management Practices Handbooks scheduled for publication in September 2002. The technical manual shall at a minimum include:

(1) Treatment Control BMPs based on flow-based and volumetric water quality design criteria for the purposes of countywide consistency;

(2) Peak Flow Control criteria to control peak discharge rates, velocities and duration;

(3) Expected pollutant removal performance ranges obtained from national databases, technical reports and the scientific literature;

(4) Maintenance considerations; and

(5) Cost considerations.

E. Development Construction Program

1. Each Permittee shall implement a program to control runoff from construction activity at all construction sites within its jurisdiction. The program shall ensure the following minimum requirements are effectively implemented at all construction sites:

   a) Sediments generated on the project site shall be retained using adequate Treatment Control or Structural BMPs;

   b) Construction-related materials, wastes, spills, or residues shall be retained at the project site to avoid discharge to streets, drainage facilities, receiving waters, or adjacent properties by wind or runoff;

   c) Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site; and

   d) Erosion from slopes and channels shall be controlled by implementing an effective combination of BMPs (as approved in Regional Board Resolution No. 99-03), such as the limiting of grading scheduled during the wet season; inspecting graded areas during rain events; planting and maintenance of vegetation on slopes; and covering erosion susceptible slopes.

2. For construction sites one acre and greater, each Permittee shall comply with all conditions in section E.1. above and shall:

   a) Require the preparation and submittal of a Local Storm Water Pollution Prevention Plan (Local SWPPP), for approval prior to issuance of a grading permit for construction projects.

   The Local SWPPP shall include appropriate construction site BMPs and maintenance schedules. (A Local SWPPP may substitute for the State SWPPP if the Local SWPPP is at least as inclusive in controls and BMPs as the State SWPPP). The Local SWPPP must include the rationale used for selecting or rejecting BMPs. The project architect, or engineer of record, or authorized

qualified designee, must sign a statement on the Local SWPPP to the effect:

"As the architect/engineer of record, I have selected appropriate BMPs to effectively minimize the negative impacts of this project's construction activities on storm water quality. The project owner and contractor are aware that the selected BMPs must be installed, monitored, and maintained to ensure their effectiveness. The BMPs not selected for implementation are redundant or deemed not applicable to the proposed construction activity."

The landowner or the landowner's agent shall sign a statement to the effect:

"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/or inaccurate information, failing to update the Local SWPPP to reflect current conditions, or failing to properly and/or adequately implement the Local SWPPP may result in revocation of grading and/or other permits or other sanctions provided by law."

The Local SWPPP certification shall be signed by the landowner as follows, for a corporation: by a responsible corporate officer which means (a) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or (b) the manager of the construction activity if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures; for a partnership or sole proprietorship: by a general partner or the proprietor; or for a municipality or other public agency: by an elected official, a ranking management official (e.g., County Administrative Officer, City Manager, Director of Public Works, City Engineer, District Manager), or the manager of the construction activity if authority to sign Local SWPPPs has been assigned or delegated to the manager in accordance with established agency policy.

b) Inspect all construction sites for storm water quality requirements during routine inspections a minimum of once during the wet season. The Local SWPPP shall be reviewed for compliance with local codes, ordinances, and permits. For inspected sites that have not adequately implemented their Local SWPPP, a follow-up inspection to ensure compliance will take place within 2 weeks. If compliance has not been attained, the Permittee will take additional actions to achieve compliance (as specified in municipal

codes). If compliance has not been achieved, and the site is also covered under a statewide general construction storm water permit, each Permittee shall enforce their local ordinance requirements, and if non-compliance continues the Regional Board shall be notified for further joint enforcement actions.

c) Require, no later than March 10, 2003, prior to issuing a grading permit for all projects less than five acres requiring coverage under a statewide general construction storm water permit, proof of a Waste Discharger Identification (WDID) Number for filing a Notice of Intent (NOI) for permit coverage and a certification that a SWPPP has been prepared by the project developer. A Local SWPPP may substitute for the State SWPPP if the Local SWPPP is at least as inclusive in controls and BMPs as the State SWPPP.

3. For sites five acres and greater, each Permittee shall comply with all conditions in Sections E.1. and E.2. and shall:

a) Require, prior to issuing a grading permit for all projects requiring coverage under the state general permit, proof of a Waste Discharger Identification (WDID) Number for filing a Notice of Intent (NOI) for coverage under the GCASP and a certification that a SWPPP has been prepared by the project developer. A Local SWPPP may substitute for the State SWPPP if the Local SWPPP is at least as inclusive in controls and BMPs as the State SWPPP.

b) Require proof of an NOI and a copy of the SWPPP at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going.

c) Use an effective system to track grading permits issued by each Permittee. To satisfy this requirement, the use of a database or GIS system is encouraged, but not required.

4. GCASP Violation Referrals

a) Referral of Violations of the SQMP, Regional Board Resolution 98-08, and municipal storm water ordinances:

A Permittee may refer a violation(s) to the Regional Board provided that the Permittee has made a good faith effort of progressive enforcement. At a minimum, a Permittee's good faith effort must include documentation of:

- Two follow-up inspections within 3 months, and
- Two warning letters or notices of violation.

b) Referral of Violations of GCASP Filing Requirements:

For those projects subject to the GCASP, Permittees shall refer non-filers (i.e., those projects which cannot demonstrate that they have a WDID number) to the Regional Board, within 15 days of

making a determination. In making such referrals, Permittees shall include, at a minimum, the following documentation:

- Project location;
- Developer;
- Estimated project size; and
- Records of communication with the developer regarding filing requirements.

5. Each Permittee shall train employees in targeted positions (whose jobs or activities are engaged in construction activities including construction inspection staff) regarding the requirements of the storm water management program no later than August 1, 2002, and annually thereafter. For Permittees with a population of 250,000 or more (2000 U.S. Census), initial training shall be completed no later than February 3, 2003. Each Permittee shall maintain a list of trained employees.

F. Public Agency Activities Program

Each Permittee shall implement a Public Agency program to minimize storm water pollution impacts from public agency activities. Public Agency requirements consist of:

- Sewage Systems Maintenance, Overflow, and Spill Prevention
- Public Construction Activities Management
- Vehicle Maintenance/Material Storage Facilities/Corporation Yards Management
- Landscape and Recreational Facilities Management
- Storm Drain Operation and Management
- Streets and Roads Maintenance
- Parking Facilities Management
- Public Industrial Activities Management
- Emergency Procedures
- Treatment Feasibility Study

1. Sewage System Maintenance, Overflow, and Spill Prevention

a) Each Permittee shall implement a response plan for overflows of the sanitary sewer system within their respective jurisdiction, which shall consist at a minimum of the following:

(1) Investigation of any complaints received;

(2) Upon notification, immediate response to overflows for containment; and

(3) Notification to appropriate sewer and public health agencies when a sewer overflows to the MS4.

b) In addition to 1.a.1, 1.a.2, and 1.a.3 above, for those Permittees, which own and/or operate a sanitary sewer system, the Permittee shall also implement the following requirements:

(1) Procedures to prevent sewage spills or leaks from sewage facilities from entering the MS4; and

(2) Identify, repair, and remediate sanitary sewer blockages, exfiltration, overflow, and wet weather overflows from sanitary sewers to the MS4.

2. Public Construction Activities Management

a) Each Permittee shall implement the Development Planning Program requirements (Permit Part 4.D) at public construction projects.

b) Each Permittee shall implement the Development Construction Program requirements (Permit Part 4.E) at Permittee owned construction sites.

c) Each Permittee shall obtain coverage under the GCASP for public construction sites 5 acres or greater (or part of a larger area of development) except that a municipality under 100,000 in population (1990 U.S. Census) need not obtain coverage under a separate permit until March 10, 2003.

d) Each Permittee, no later than March 10, 2003, shall obtain coverage under a statewide general construction storm water permit for public construction sites for projects between one and five acres.

3. Vehicle Maintenance/Material Storage Facilities/Corporation Yards Management

a) Each Permittee, consistent with the SQMP, shall implement SWPPPs for public vehicle maintenance facilities, material storage facilities, and corporation yards which have the potential to discharge pollutants into storm water.

b) Each Permittee shall implement BMPs to minimize pollutant discharges in storm water including but not be limited to:

(1) Good housekeeping practices;

(2) Material storage control;

(3) Vehicle leaks and spill control; and

(4) Illicit discharge control.

c) Each Permittee shall implement the following measures to prevent the discharge of pollutants to the MS4:

(1) For existing facilities, that are not already plumbed to the sanitary sewer, all vehicle and equipment wash areas (except for fire stations) shall either be:

(i) Self-contained;

(ii) Equipped with a clarifier;

(iii) Equipped with an alternative pre-treatment device; or

(iv) Plumbed to the sanitary sewer.

(2) For new facilities, or during redevelopment of existing facilities (including fire stations), all vehicle and equipment wash areas shall be plumbed to the sanitary sewer and be equipped with a pre-treatment device in accordance with requirements of the sewer agency.

4. Landscape and Recreational Facilities Management

Each Permittee shall implement the following requirements:

a) A standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers;

b) Consistency with State Board's guidelines and monitoring requirements for application of aquatic pesticides to surface waters (WQ Order No. 2001-12 DWQ);

c) Ensure no application of pesticides or fertilizers immediately before, during, or immediately after a rain event or when water is flowing off the area to be applied;

d) Ensure that no banned or unregistered pesticides are stored or applied;

e) Ensure that staff applying pesticides are certified by the California Department of Food and Agriculture, or are under the direct supervision of a certified pesticide applicator;

f) Implement procedures to encourage retention and planting of native vegetation and to reduce water, fertilizer, and pesticide needs;

g) Store fertilizers and pesticides indoors or under cover on paved surfaces or use secondary containment;

h) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills; and

i) Regularly inspect storage areas.

5. Storm Drain Operation and Management

a) Each Permittee shall designate catch basin inlets within its jurisdiction as one of the following:

Priority A: Catch basins that are designated as consistently generating the highest volumes of trash and/or debris.

Priority B: Catch basins that are designated as consistently generating moderate volumes of trash and/or debris.

Priority C: Catch basins that are designated as generating low volumes of trash and/or debris.

b) Permittees subject to a trash TMDL (Los Angeles River and Ballona Creek WMAs) shall continue to implement the requirements listed below until trash TMDL implementation measures are adopted. Thereafter, the subject Permittees shall implement programs in conformance with the TMDL implementation schedule, which shall include an effective combination of measures such as street sweeping, catch basin cleaning, installation of treatment devices and trash receptacles, or other BMPs. Default requirements include:

(1) Inspection and cleaning of catch basins between May 1 and September 30 of each year;

(2) Additional cleaning of any catch basin that is at least 40% full of trash and/or debris;

(3) Record keeping of catch basins cleaned; and

(4) Recording of the overall quantity of catch basin waste collected.

If the implementation phase for the Los Angeles River and Ballona Creek Trash TMDLs has not begun by October 2003, subject Permittees shall implement the requirements described below in subsection 5(c), until such time programs in conformance with the subject Trash TMDLs are being implemented.

c) Permittees not subject to a trash TMDL shall:

(1) Clean catch basins according to the following schedule:

Priority A: A minimum of three times during the wet season and once during the dry season every year.

Priority B: A minimum of once during the wet season and once during the dry season every year.

Priority C: A minimum of once per year.

In addition to the schedule above, between February 1, 2002 and July 1, 2003, Permittees shall ensure that any catch basin that is at least 40% full of trash and/or debris shall be cleaned out. After July 1, 2003, Permittees shall ensure that any catch basin that is at least 25% full of trash and debris shall be cleaned out.

(2) For any special event that can be reasonably expected to generate substantial quantities of trash and litter, include provisions that require for the proper management of trash and litter generated, as a condition of the special use permit issued for that event. At a minimum, the municipality who issues the permit for the special event shall arrange for either temporary screens to be placed on catch basins or for catch basins in that area to be cleaned out subsequent to the event and prior to any rain event.

(3) Place trash receptacles at all transit stops within its jurisdiction that have shelters no later than August 1, 2002, and at all other transit stops within its jurisdiction no later than February 3, 2003. All trash receptacles shall be maintained as necessary.

d) Each Permittee shall inspect the legibility of the catch basin stencil or label nearest the inlet. Catch basins with illegible stencils shall be recorded and re-stenciled or re-labeled within 180 days of inspection.

e) Each Permittee shall implement BMPs for Storm Drain Maintenance that include:

(1) A program to visually monitor Permittee-owned open channels and other drainage structures for debris at least annually and identify and prioritize problem areas of illicit discharge for regular inspection;

(2) A review of current maintenance activities to assure that appropriate storm water BMPs are being utilized to protect water quality;

(3) Removal of trash and debris from open channel storm drains shall occur a minimum of once per year before the storm season;

(4) Minimize the discharge of contaminants during MS4 maintenance and clean outs; and

(5) Proper disposal of material removed.

6. Streets and Roads Maintenance

a) Each Permittee shall designate streets and/or street segments within its jurisdiction as one of the following:

Priority A: Streets and/or street segments that are designated as consistently generating the highest volumes of trash and/or debris.

Priority B: Streets and/or street segments that are designated as consistently generating moderate volumes of trash and/or debris.

Priority C: Streets and/or street segments that are designated as generating low volumes of trash and/or debris.

b) Each Permittee shall perform street sweeping of curbed streets according to the following schedule:

Priority A: These streets and/or street segments shall be swept at least two times per month.

Priority B: Each Permittee shall ensure that each street and/or street segments is swept at least once per month.

Priority C: These streets and/or street segments shall be swept as necessary but in no case less than once per year.

c) Each Permittee shall require that:

(1) Sawcutting wastes be recovered and disposed of properly and that in no case shall waste be left on a roadway or allowed to enter the storm drain;

(2) Concrete and other street and road maintenance materials and wastes shall be managed to prevent discharge to the MS4; and

(3) The washout of concrete trucks and chutes shall only occur in designated areas and never discharged to storm drains, open ditches, streets, or catch basins.

d) Each Permittee shall, no later than August 1, 2002, train their employees in targeted positions (whose interactions, jobs, and activities affect storm water quality) regarding the requirements of the storm water management program to:

(1) Promote a clear understanding of the potential for maintenance activities to pollute storm water; and

(2) Identify and select appropriate BMPs.

For Permittees with a population of 250,000 or more (2000 U.S. Census) training shall be completed no later than February 1, 2003.

7. Parking Facilities Management

Permittee-owned parking lots exposed to storm water shall be kept clear of debris and excessive oil buildup and cleaned no less than 2 times per month and/or inspected no less than 2 times per month to determine if cleaning is necessary. In no case shall a Permittee-owned parking lot be cleaned less than once a month.

8. Public Industrial Activities Management

Each Permittee shall, for any municipal activity considered a discharge of storm water associated with industrial activity, obtain separate coverage under the GIASP except that a municipality under 100,000 in population (1990 U.S. Census) need not file the Notice Of Intent to be covered by said permit until March 10, 2003 (with the exception of power plants, airports, and uncontrolled sanitary landfills).

9. Emergency Procedures

Each Permittee shall repair essential public services and infrastructure in a manner to minimize environmental damage in emergency situations such as: earthquakes; fires; floods; landslides; or windstorms. BMPs shall be implemented to the extent that measures do not compromise public health and safety. After initial emergency response or emergency repair activities have been completed, each Permittee shall implement BMPs and programs as required under this Order.

10. Treatment Feasibility Study

The Permittees in cooperation with the County Sanitation Districts of Los Angeles County shall conduct a study to investigate the possible diversion of dry weather discharges or the use of alternative Treatment Control BMPs to treat flows from their jurisdiction which may impact public health and safety and/or the environment. The Permittees shall collectively review their individual prioritized lists and create a watershed based priority list of drains for potential diversion or treatment and submit the priority listing to the Regional Board Executive Officer, no later than July 1, 2003.

G. Illicit Connections and Illicit Discharges Elimination Program

Permittees shall eliminate all illicit connections and illicit discharges to the storm drain system, and shall document, track, and report all such cases in accordance

with the elements and performance measures specified in the following subsections.

1. General

   a) Implementation: Each Permittee must develop an Implementation Program which specifies how each Permittee is implementing revisions to the IC/ID Program of the SQMP. This Implementation Program must be documented, and available for review and approval by the Regional Board Executive Officer, upon request.

   b) Tracking: All Permittees shall, no later than February 3, 2003, develop and maintain a listing of all permitted connections to their storm drain system. All Permittees shall map at a scale and in a format specified by the Principal Permittee all illicit connections and discharges on their baseline maps, and shall transmit this information to the Principal Permittee. No later than February 3, 2003, the Principal Permittee shall use this information as well as results of baseline and priority screening for illicit connections (as set forth in subsection 2 below) to start an annual evaluation of patterns and trends of illicit connections and illicit discharges, with the objectives of identifying priority areas for elimination of illicit connections and illicit discharges.

   c) Training: All Permittees shall train all targeted employees who are responsible for identification, investigation, termination, cleanup, and reporting of illicit connections and discharges. For Permittees with a population of less than 250,000 (2000 U.S. Census), training shall be completed no later than August 1, 2002. For Permittees with a population of 250,000 or more (2000 U.S. Census), training shall be completed no later than February 3, 2003. Furthermore, all Permittees shall conduct refresher training on an annual basis thereafter.

2. Illicit Connections

   a) Screening for Illicit Connections

      (1) Field Screening: All Permittees shall field Screen the storm drain system for illicit connections in accordance with the following schedule:

         (i) Open channels: No later than February 3, 2003;

         (ii) Underground pipes in priority areas: No later than February 1, 2005; and

         (iii) Underground pipes with a diameter of 36 inches or greater: No later than December 12, 2006.

      Permittees shall report, to the Principal Permittee, on the location and length of open channels or underground pipes that have been Screened *vis a vis* the entire storm drain

network, and on the status of suspected, confirmed, and terminated illicit connections. Permittees shall maintain a list containing all permitted connections and the status of connections under investigation for possible illicit connection.

(2) Permit Screening: No later than December 12, 2006, Permittees shall complete a review of all permitted connections to the storm drain system, to confirm compliance with Part 1 (Discharge Prohibition).

b) Response to Illicit Connections

(1) Investigation: Upon discovery or upon receiving a report of a suspected illicit connection, Permittees shall initiate an investigation within 21 days, to determine the source of the connection, the nature and volume of discharge through the connection, and the responsible party for the connection.

(2) Termination: Upon confirmation of the illicit nature of a storm drain connection, Permittees shall ensure termination of the connection within 180 days, using enforcement authority as needed.

3. Illicit Discharges

a) Abatement and Cleanup: Permittees shall respond, within one business day of discovery or a report of a suspected illicit discharge, with activities to abate, contain, and clean up all illicit discharges, including hazardous substances.

b) Investigation: Permittees shall investigate illicit discharges as soon as practicable (during or immediately following containment and cleanup activities), and shall take enforcement action as appropriate.

Part 5. DEFINITIONS

The following are definitions for terms applicable to this Order:

"Adverse Impact" means a detrimental effect upon water quality or beneficial uses caused by a discharge or loading of a pollutant or pollutants.

"Anti-degradation policies" means the *Statement of Policy with Respect to Maintaining High Quality Water in California* (State Board Resolution No. 68-16) which protects surface and ground waters from degradation. In particular, this policy protects waterbodies where existing quality is higher than that necessary for the protection of beneficial uses including the protection of fish and wildlife propagation and recreation on and in the water.

"Applicable Standards and Limitations" means all State, interstate, and federal standards and limitations to which a “discharge” or a related activity is subject under the CWA, including

"effluent limitations, "water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," and pretreatment standards under sections 301, 302, 303, 304, 306, 307, 308, 403 and 404 of CWA.

"**Areas of Special Biological Significance (ASBS)**" means all those areas of this state as ASBS, listed specifically within the California Ocean Plan or so designated by the State Board which, among other areas, includes the area from Mugu Lagoon to Latigo Point: Oceanwater within a line originating from Laguna Point at 34° 5' 40" north, 119° 6'30" west, thence southeasterly following the mean high tideline to a point at Latigo Point defined by the intersection of the meanhigh tide line and a line extending due south of Benchmark 24; thence due south to a distance of 1000 feet offshore or to the 100 foot isobath, whichever distance is greater; thence northwesterly following the 100 foot isobath or maintaining a 1,000-foot distance from shore, whichever maintains the greater distance from shore, to a point lying due south of Laguna Point, thence due north to Laguna Point.

"Authorized Discharge" means any discharge that is authorized pursuant to an NPDES permit or meets the conditions set forth in this Order.

"Automotive Service Facilities" means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 5511, 7532-7534, or 7536-7539. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to storm water.

"Basin Plan" means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Board on June 13, 1994 and subsequent amendments.

"Beneficial Uses" means the existing or potential uses of receiving waters in the permit area as designated by the Regional Board in the Basin Plan.

"Best Management Practices (BMPs)" means methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and nonstructural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

"Commercial Development" means any development on private land that is not heavy industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

"Construction" means constructing, clearing, grading, or excavation that results in soil disturbance. Construction includes structure teardown. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility; emergency construction activities required to immediately protect public health and safety; interior remodeling with no outside exposure of construction material or construction waste to storm water; mechanical permit work; or sign permit work.

"Control" means to minimize, reduce, eliminate, or prohibit by technological, legal, contractual or other means, the discharge of pollutants from an activity or activities.

"Dechlorinated/Debrominated Swimming Pool Discharge" means swimming pool discharges which have no measurable chlorine or bromine and do not contain any detergents, wastes, or additional chemicals not typically found in swimming pool water. The term does not include swimming pool filter backwash.

"Development" means any construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

"Directly Adjacent" means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area.

"Director" means the Director of a municipality and Person(s) designated by and under the Director's instruction and supervision.

"Discharge" means when used without qualification the "discharge of a pollutant."

"**Discharging Directly**" means outflow from a drainage conveyance system that is composed entirely or predominantly of flows from the subject, property, development, subdivision, or industrial facility, and not commingled with the flows from adjacent lands.

"Discharge of a Pollutant" means: any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source" or, any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. The term discharge includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

"Disturbed Area" means an area that is altered as a result of clearing, grading, and/or excavation.

"Environmentally Sensitive Areas (ESAs)" means an area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would be easily disturbed or degraded by human activities and developments (California Public Resources Code § 30107.5). Areas subject to storm water mitigation requirements are: areas designated as Significant Ecological Areas by the County of Los Angeles (*Los Angeles County Significant Areas Study, Los Angeles County Department of Regional Planning (1976)* and amendments); an area designated as a Significant Natural Area by the California Department of Fish and Game's Significant Natural Areas Program, provided that area has been field verified by the Department of Fish and Game; an area listed in the

Basin Plan as supporting the "Rare, Threatened, or Endangered Species (RARE)" beneficial use; and an area identified by a Permittee as environmentally sensitive.

"General Construction Activities Storm Water Permit (GCASP)" means the general NPDES permit adopted by the State Board which authorizes the discharge of storm water from construction activities under certain conditions.

"General Industrial Activities Storm Water Permit (GIASP)" means the general NPDES permit adopted by the State Board which authorizes the discharge of storm water from certain industrial activities under certain conditions.

"Hillside" means property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes.

"Illicit Connection" means any man-made conveyance that is connected to the storm drain system without a permit, excluding roof drains and other similar type connections. Examples include channels, pipelines, conduits, inlets, or outlets that are connected directly to the storm drain system.

"Illicit Discharge" means any discharge to the storm drain system that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes all non storm-water discharges except discharges pursuant to an NPDES permit, discharges that are identified in Part 1, "Discharge Prohibitions" of this order, and discharges authorized by the Regional Board Executive Officer.

"Illicit Disposal" means any disposal, either intentionally or unintentionally, of material(s) or waste(s) that can pollute storm water.

"Industrial/Commercial Facility" means any facility involved and/or used in the production, manufacture, storage, transportation, distribution, exchange or sale of goods and/or commodities, and any facility involved and/or used in providing professional and non-professional services. This category of facilities includes, but is not limited to, any facility defined by the Standard Industrial Classifications (SIC). Facility ownership (federal, state, municipal, private) and profit motive of the facility are not factors in this definition.

"Infiltration" means the downward entry of water into the surface of the soil.

"Inspection" means entry and the conduct of an on-site review of a facility and its operations, at reasonable times, to determine compliance with specific municipal or other legal requirements. The steps involved in performing an inspection, include, but are not limited to:

1. Pre-inspection documentation research.;
2. Request for entry;
3. Interview of facility personnel;
4. Facility walk-through.
5. Visual observation of the condition of facility premises;
6. Examination and copying of records as required;
7. Sample collection (if necessary or required);

8. Exit conference (to discuss preliminary evaluation); and,
9. Report preparation, and if appropriate, recommendations for coming into compliance.

In the case of restaurants, a Permittee may conduct an inspection from the curbside, provided that such "curbside" inspection provides the Permittee with adequate information to determine an operator's compliance with BMPs that must be implemented per requirements of this Order, Regional Board Resolution 98-08, County and municipal ordinances, and the SQMP.

"Large Municipal Separate Storm Sewer System (MS4)" means all MS4s that serve a population greater than 250,000 (1990 Census) as defined in 40 CFR 122.26 (b)(4). The Regional Board designated Los Angeles County as a large MS4 in 1990, based on: (i) the U.S. Census Bureau 1990 population count of 8.9 million, and (ii) the interconnectivity of the MS4s in the incorporated and unincorporated areas within the County.

"Local SWPPP" means the Storm Water Pollution Prevention Plan required by the local agency for a project that disturbs one or more acres of land.

"Maximum Extent Practicable (MEP)" means the standard for implementation of storm water management programs to reduce pollutants in storm water. CWA § 402(p)(3)(B)(iii) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. See also State Board Order WQ 2000-11 at page 20.

"Method Detection Limit (MDL)" means the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix B.

"Minimum Level (ML)" means the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

"Municipal Separate Storm Sewer System (MS4)" means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, alleys, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned by a State, city, county, town or other public body, that is designed or used for collecting or conveying storm water, which is not a combined sewer, and which is not part of a publicly owned treatment works, and which discharges to Waters of the United States.

"National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §307, 402, 318, and 405. The term includes an "approved program."

"Natural Drainage Systems" means unlined or unimproved (not engineered) creeks, streams, rivers or similar waterways.

"New Development" means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision.

"Non-Storm Water Discharge" means any discharge to a storm drain that is not composed entirely of storm water.

"Nuisance" means anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.; (3) occurs during, or as a result of, the treatment or disposal of wastes.

"Parking Lot" means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces.

"Permittee(s)" means Co-Permittees and any agency named in this Order as being responsible for permit conditions within its jurisdiction. Permittees to this Order include the Los Angeles County Flood Control District, Los Angeles County, and the cities of Agoura Hills, Alhambra, Arcadia, Artesia, Azusa, Baldwin Park, Bellflower, Bell Gardens, Beverly Hills, Bradbury, Burbank, Calabasas, Carson, Cerritos, Claremont, Commerce, Compton, Covina, Cudahy, Culver City, Diamond Bar, Downey, Duarte, El Monte, El Segundo, Gardena, Glendale, Glendora, Hawaiian Gardens, Hawthorne, Hermosa Beach, Hidden Hills, Huntington Park, Industry, Inglewood, Irwindale, La Canada Flintridge, La Habra Heights, Lakewood, La Mirada, La Puente, La Verne, Lawndale, Lomita, Los Angeles, Lynwood, Malibu, Manhattan Beach, Maywood, Monrovia, Montebello, Monterey Park, Norwalk, Palos Verdes Estates, Paramount, Pasadena, Pico Rivera, Pomona, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Rosemead, San Dimas, San Fernando, San Gabriel, San Marino, Santa Clarita, Santa Fe Springs, Santa Monica, Sierra Madre, Signal Hill, South El Monte, South Gate, South Pasadena, Temple City, Torrance, Vernon, Walnut, West Covina, West Hollywood, Westlake Village, and Whittier.

"Planning Priority Projects" means those projects that are required to incorporate appropriate storm water mitigation measures into the design plan for their respective project. These types of projects include:

1. Ten or more unit homes (includes single family homes, multifamily homes, condominiums, and apartments)
2. A 100,000 or more square feet of impervious surface area industrial/ commercial development (1 ac starting March 2003)
3. Automotive service facilities (SIC 5013, 5014, 5541, 7532-7534, and 7536-7539)
4. Retail gasoline outlets
5. Restaurants (SIC 5812)
6. Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces

7. Redevelopment projects in subject categories that meet Redevelopment thresholds
8. Projects located in or directly adjacent to or discharging directly to an ESA, which meet thresholds; and
9. Those projects that require the implementation of a site-specific plan to mitigate post-development storm water for new development not requiring a SUSMP but which may potentially have adverse impacts on post-development storm water quality, where the following project characteristics exist:

    a) Vehicle or equipment fueling areas;
    b) Vehicle or equipment maintenance areas, including washing and repair;
    c) Commercial or industrial waste handling or storage;
    d) Outdoor handling or storage of hazardous materials;
    e) Outdoor manufacturing areas;
    f) Outdoor food handling or processing;
    g) Outdoor animal care, confinement, or slaughter; or
    h) Outdoor horticulture activities.

"Pollutants" means those "pollutants" defined in CWA §502(6) (33.U.S.C.§1362(6)), and incorporated by reference into California Water Code §13373.

"Potable Water Distribution Systems Releases" means sources of flows from drinking water storage, supply and distribution systems including flows from system failures, pressure releases, system maintenance, distribution line testing, fire hydrant flow testing; and flushing and dewatering of pipes, reservoirs, vaults, and minor non-invasive well maintenance activities not involving chemical addition(s). It does not include wastewater discharges from activities that occur at wellheads, such as well construction, well development (i.e., aquifer pumping tests, well purging, etc.), or major well maintenance.

"Project" means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code §21065).

“Rain Event” means any rain event greater than 0.1 inch in 24 hours except where specifically stated otherwise.

"Rare, Threatened, or Endangered Species (RARE)" means a beneficial use for waterbodies in the Los Angeles Region, as designated in the Basin Plan (Table 2-1), that supports habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

"Receiving Waters" means all surface water bodies in the Los Angeles Region that are identified in the Basin Plan.

“Redevelopment” means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint;

addition or replacement of a structure; replacement of impervious surface area that is not part of a routine maintenance activity; and land disturbing activities related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

"Regional Administrator" means the Regional Administrator of the Regional Office of the USEPA or the authorized representative of the Regional Administrator.

"Restaurant" means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812).

"Retail Gasoline Outlet" means any facility engaged in selling gasoline and lubricating oils.

"Runoff" means any runoff including storm water and dry weather flows from a drainage area that reaches a receiving water body or subsurface. During dry weather it is typically comprised of base flow either contaminated with pollutants or uncontaminated, and nuisance flows.

"Screening" means using proactive methods to identify illicit connections through a continuously narrowing process. The methods may include: performing baseline monitoring of open channels, conducting special investigations using a prioritization approach, analyzing maintenance records for catch basin and storm drain cleaning and operation, and verifying all permitted connections into the storm drains. Special investigation techniques may include: dye testing, visual inspection, smoke testing, flow monitoring, infrared, aerial and thermal photography, and remote control camera operation.

"Sidewalk Rinsing" means pressure washing of paved pedestrian walkways with average water usage of 0.006 gallons per square foot, with no cleaning agents, and properly disposing of all debris collected, as authorized under Regional Board Resolution No. 98-08.

"Significant Ecological Area (SEA)" means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan.[1]
Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.

[1] The 61 existing SEAs represent the findings of a study that was completed in 1976 by England and Nelson, Environmental Consultants, as amended through the adoption of a revised Los Angeles County General Plan in 1980. The results of an update study to evaluate existing SEAs within unincorporated Los Angeles County is currently being proposed to the Los Angeles County Planning Commission (*Los Angeles County Significant Ecological Area Update Study 2000, Background Report*, PCR Services Corporation). The *Update Study 2000*, which contains existing and proposed SEA boundaries, can be downloaded from the Los Angeles County Department of Planning website at http://planning.co.la.ca.us/drp_revw.html#SEA

4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas.[2]

"Significant Natural Area (SNA)" means an area defined by the California Department of Fish and Game (DFG), Significant Natural Areas Program, as an area that contains an important example of California's biological diversity. The most current SNA maps, reports, and descriptions can be downloaded from the DFG website at ftp://maphost.dfg.ca.gov/outgoing/whdab/sna/. These areas are identified using the following biological criteria only, irrespective of any administrative or jurisdictional considerations:

1. Areas supporting extremely rare species or habitats.
2. Areas supporting associations or concentrations of rare species or habitats.
3. Areas exhibiting the best examples of rare species and habitats in the state.

"Site" means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

"Source Control BMP" means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.

"SQMP" means the Los Angeles Countywide Stormwater Quality Management Program.

"State Storm Water Pollution Prevention Plan (State SWPPP)" means a plan, as required by a State General Permit, identifying potential pollutant sources and describing the design, placement and implementation of BMPs, to effectively prevent non-stormwater Discharges and reduce Pollutants in Stormwater Discharges during activities covered by the General Permit.

"Storm Water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

"Storm Water Discharge Associated with Industrial Activity" means industrial discharge as defined in 40 CFR 122.26(b)(14)

"Stormwater Quality Management Program" means the Los Angeles Countywide Stormwater Quality Management Program, which includes descriptions of programs, collectively developed by the Permittees in accordance with provisions of the NPDES Permit, to comply with applicable federal and state law, as the same is amended from time to time.

[2] These criteria from the 1976 study have been modified in the *Update Study 2000*.

"Structural BMP" means any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

"SUSMP" means the Los Angeles Countywide Standard Urban Stormwater Mitigation Plan. The SUSMP shall address conditions and requirements of new development.

"Total Maximum Daily Load (TMDL)" means the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background.

"Toxicity Identification Evaluation (TIE)" means a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

"Toxicity Reduction Evaluation (TRE)" means a study conducted in a step-wise process to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity.

"Treatment" means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media absorption, biodegradation, biological uptake, chemical oxidation and UV radiation.

"Treatment Control BMP" means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

"USEPA Phase I Facilities" means facilities in specified industrial categories that are required to obtain an NPDES permit for storm water discharges, as required by 40 CFR 122.26(c). These categories include:

i. facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR N)
ii. manufacturing facilities
iii. oil and gas/mining facilities
iv. hazardous waste treatment, storage, or disposal facilities
v. landfills, land application sites, and open dumps
vi. recycling facilities
vii. steam electric power generating facilities
viii. transportation facilities
ix. sewage of wastewater treatment works
x. light manufacturing facilities

"Vehicle Maintenance/Material Storage Facilities/Corporation Yards" means any Permittee owned or operated facility or portion thereof that:

i. Conducts industrial activity, operates equipment, handles materials, and provides services similar to Federal Phase I facilities;
ii. Performs fleet vehicle service/maintenance on ten or more vehicles per day including repair, maintenance, washing, and fueling;

iii. Performs maintenance and/or repair of heavy industrial machinery/equipment ; and

iv. Stores chemicals, raw materials, or waste materials in quantities that require a hazardous materials business plan or a Spill Prevention, Control , and Counter-measures (SPCC) plan.

"Water Quality Standards and Water Quality Objectives" means water quality criteria contained in the Basin Plan, the California Ocean Plan, the National Toxics Rule, the California Toxics Rule, and other state or federally approved surface water quality plans. Such plans are used by the Regional Board to regulate all discharges, including storm water discharges.

"Waters of the State" means any surface water or groundwater, including saline waters, within boundaries of the state.

"Waters of the United States" or "Waters of the U.S." means:

a. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
b. All interstate waters, including interstate "wetlands";
c. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

    1. Which are or could be used by interstate or foreign travelers for recreational or other purposes;
    2. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    3. Which are used or could be used for industrial purposes by industries in interstate commerce;

d. All impoundments of waters otherwise defined as waters of the United States under this definition;
e. Tributaries of waters identified in paragraphs (a) through (d) of this definition;
f. The territorial sea; and
g. "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraph (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.22(m), which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to man-made bodies of water, which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with USEPA.

"Wet Season" means the calendar period beginning October 1 through April 15.

Part 6. STANDARD PROVISIONS

A. Standard Requirements

1. Each Permittee shall comply with all provisions and requirements of this permit.

2. Should a Permittee discover a failure to submit any relevant facts or that it submitted incorrect information in a report, it shall promptly submit the missing or correct information.

3. Each Permittee shall report all instances of non-compliance not otherwise reported at the time monitoring reports are submitted.

4. This Order includes the attached Monitoring and Reporting Program, and SUSMP(Regional Board Resolution No. R00-02), which are a part of the permit and must be complied with in the same manner as with the rest of the requirements in the permit.

B. Regional Board Review

Any formal determination or approval made by the Regional Board Executive Officer pursuant to the provisions of this Order may be reviewed by the Regional Board. A Permittee(s) or a member of the public may request such review upon petition within 30 days of the effective date of the notification of such decision to the Permittee(s) and interested parties on file at the Regional Board.

C. Public Review

1. All documents submitted to the Regional Board in compliance with the terms and conditions of this Order shall be made available to members of the public pursuant to the Freedom of Information Act (5 U.S.C. § 552 (as amended) and the Public Records Act (Cal. Government Code § 6250 *et seq.*).

2. All documents submitted to the Regional Board Executive Officer for approval shall be made available to the public for a 30-day period to allow for public comment.

D. Duty to Comply

1. Each Permittee must comply with all of the terms, requirements, and conditions of this Order. Any violation of this order constitutes a violation of the Clean Water Act, its regulations and the California Water Code, and is grounds for enforcement action, Order termination, Order revocation and reissuance, denial of an application for reissuance; or a combination thereof [40 CFR 122.41(a), CWC § 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350].

2. A copy of these waste discharge specifications shall be maintained by each Permittee so as to be available during normal business hours to Permittee employees and members of the public.

3. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

E. Duty to Mitigate [40 CFR 122.41 (d)]

Each Permittee shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

F. Inspection and Entry [40 CFR 122.41(i), CWC § 13267]

The Regional Board, USEPA, and other authorized representatives shall be allowed:

1. Entry upon premises where a regulated facility is located or conducted, or where records are kept under conditions of this Order;

2. Access to copy any records, at reasonable times, that are kept under the conditions of this Order;

3. To inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and,

4. To photograph, sample, and monitor at reasonable times for the purpose of assuring compliance with this Order, or as otherwise authorized by the CWA and the CWC.

G. Proper Operation and Maintenance [40 CFR 122.41 (e), CWC § 13263(f)]

The Permittees shall at all times properly operate and maintain all facilities and systems of treatment (and related appurtenances) that are installed or used by the Permittees to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar system that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order.

H. Signatory Requirements [40 CFR 122.41(k) & 122.22]

Except as otherwise provided in this Order, all applications, reports, or information submitted to the Regional Board shall be signed by the Director of Public Works, City Engineer, or authorized designee and certified as set forth in 40 CFR 122.22.

I. Reopener and Modification [40 CFR 122.41(f) & 122.62]

1. This Order may only be modified, revoked, or reissued, prior to the expiration date, by the Regional Board, in accordance with the procedural requirements of the CWC and CCR Title 23 for the issuance of waste

discharge requirements, 40 CFR 122.62, and upon prior notice and hearing, to:

a) Address changed conditions identified in the required reports or other sources deemed significant by the Regional Board;

b) Incorporate applicable requirements or statewide water quality control plans adopted by the State Board or amendments to the Basin Plan;

c) Comply with any applicable requirements, guidelines, and/or regulations issued or approved pursuant to CWA Section 402(p); and/or,

d) Consider any other federal, or state laws or regulations that became effective after adoption of this Order.

2. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

a) Violation of any term or condition contained in this Order;

b) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts; or,

c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

3. The filing of a request by the Principal Permittee or Permittees for a modification, revocation and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

4. This Order may be modified to make corrections or allowances for changes in the permitted activity listed in this section, following the procedures at 40 CFR 122.63, if processed as a minor modification. Minor modifications may only:

a) Correct typographical errors, or

b) Require more frequent monitoring or reporting by the Permittee.

J. Severability

The provisions of this permit are severable; and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected.

K. Duty to Provide Information [40 CFR 122.41(h)]

The Permittees shall furnish, within a reasonable time, any information the Regional Board or USEPA may request to determine whether cause exists for

modifying, revoking and reissuing, or terminating this Order. The Permittees shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.

L. Twenty-four Hour Reporting [40 CFR 122.41(l)(6)][3]

1. The Permittees shall report to the Regional Board any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time any Permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2. The Regional Board may waive the required written report on a case-by-case basis.

M. Bypass [40 CFR 122.41(m)][4]

Bypass (the intentional diversion of waste streams from any portion of a treatment facility) is prohibited. The Regional Board may take enforcement action against Permittees for bypass unless:

1. Bypass was unavoidable to prevent loss of life, personal injury or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.);

2. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance;

3. The Permittee submitted a notice at least ten days in advance of the need for a bypass to the Regional Board; or,

4. Permittees may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to

[3] This provision applies to incidents where effluent limitations (numerical or narrative) as provided in this Order or in the Los Angeles County SQMP are exceeded, and which endanger public health or the environment.

[4] This provision applies to the operation and maintenance of storm water controls and BMPs as provided in this Order or in the SQMP.

assure efficient operation. In such a case, the above bypass conditions are not applicable. The Permittee shall submit notice of an unanticipated bypass as required.

N. Upset [40 CFR 122.41(n)][5]

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

1. A Permittee that wishes to establish the affirmative defense of an upset in an action brought for non compliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a) An upset occurred and that the Permittee can identify the cause(s) of the upset;

   b) The permitted facility was being properly operated by the time of the upset;

   c) The Permittee submitted notice of the upset as required; and,

   d) The Permittee complied with any remedial measures required.

2. No determination made before an action for noncompliance, such as during administrative review of claims that non-compliance was caused by an upset, is final administrative action subject to judicial review.

3. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

O. Property Rights [40 CFR 122.41(g)]

This Order does not convey any property rights of any sort, or any exclusive privilege.

P. Enforcement

1. Violation of any of the provisions of the NPDES permit or any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalties may be applied for each kind of violation. The CWA provides the following:

   a) Criminal Penalties for:

[5] *Supra*. See footnote number 3.

(1) Negligent Violations:

The CWA provides that any person who negligently violates permit conditions implementing § 301, 302, 306, 307, 308, 318, or 405 is subject to a fine of not less than $2,500 nor more than $25,000 per day for each violation, or by imprisonment for not more than 1 year, or both.

(2) Knowing Violations:

The CWA provides that any person who knowingly violates permit conditions implementing § 301, 302, 306, 307, 308, 318, or 405 is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

(3) Knowing Endangerment:

The CWA provides that any person who knowingly violates permit conditions implementing § 301, 302, 307, 308, 318, or 405 and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than $250,000, or by imprisonment for not more than 15 years, or both.

(4) False Statement:

The CWA provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or by both. (See CWA § 309(c)(4))

b) Civil Penalties

The CWA provides that any person who violates a permit condition implementing § 301, 302, 306, 307, 308, 318, or 405 is subject to a civil penalty not to exceed $27,500 per day for each violation.

2. The CWC provides that any person who violates a waste discharge requirement provision of the CWC is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation; or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation; or some combination thereof, depending on the violation or combination of violations.

Q. Need to Halt or Reduce Activity not a Defense [40 CFR 122.41(c)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.

R. Rescission

Regional Board Order No. 96-054 is hereby rescinded.

S. Expiration

This Order expires on December 12, 2006. The Permittees must submit a Report of Waste Discharges and a proposed Storm Water Quality Management Program in accordance with CCR Title 23 as application for reissuance of waste discharge requirements no later than June 12, 2006.

I, Dennis A. Dickerson, Regional Board Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on December 13, 2001.

Dennis A. Dickerson
Executive Officer

December 13, 2001

ATTACHMENT
23

PERMIT FOR THE DISTRICT OF COLUMBIA
MUNICIPAL SEPARATE STORM SEWER SYSTEM

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9. PERMIT DEFINITIONS

1. DISCHARGES AUTHORIZED UNDER THIS PERMIT

1.1 Permit Area

This permit covers all areas within the jurisdictional boundary of the District of Columbia served by, or otherwise contributing to discharges from, the Municipal Separate Storm Sewer System (MS4) owned or operated by the District of Columbia. This permit also covers all areas served by or contributing to discharges from MS4s owned or operated by other entities within the jurisdictional boundaries of the District of Columbia unless those areas have separate NPDES MS4 permit coverage or are specifically excluded herein from authorization under the District's stormwater program. Hereinafter these areas collectively are referred to as "MS4 Permit Area".

1.2 Authorized Discharges

This permit authorizes all stormwater point source discharges to waters of the United States from the District of Columbia's MS4 that comply with the requirements of this permit. This permit also authorizes the discharge of stormwater commingled with flows contributed by process wastewater, non-process wastewater, or stormwater associated with industrial activity provided such discharges are authorized under separate NPDES permits.

This permit authorizes the following non-stormwater discharges to the MS4 when appropriate stormwater activities and controls required through this permit have been applied and which are: (1) discharges resulting from clear water flows, roof drainage, dechlorinated water line flushing, landscape irrigation, ornamental fountains, diverted stream flows, rising ground waters, uncontaminated ground water infiltration to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation waters, springs, footing drains, lawn watering, individual resident car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, wash water, fire fighting activities, and similar types of activities; and (2) which are managed so that water quality is not further impaired and that the requirements of the federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*, and EPA regulations are met.

1.3 Limitations to Coverage

1.3.1 Non-stormwater Discharges

The permittee, as defined herein, shall effectively prohibit non-stormwater discharges into the MS4, except to the extent such discharges are regulated with an NPDES permit.

1.3.2 Waivers and Exemptions

This permit does not authorize the discharge of any pollutant from the MS4 which arises from or is based on any existing waivers and exemptions that may otherwise apply and are not consistent with the Federal Clean Water Act and other pertinent guidance, policies, and regulations. This narrative prohibition on the applicability of such waivers and exemptions extends to any activity that would otherwise be authorized under District law, regulations or

ordinance but which impedes the reduction or control of pollutants through the use of stormwater control measures and/or prevents compliance with the narrative /numeric effluent limits of this permit. Any such discharge not otherwise authorized may constitute a violation of this permit.

1.4 Discharge Limitations

The permittee must manage, implement and enforce a stormwater management program (SWMP) in accordance with the Clean Water Act and corresponding stormwater NPDES regulations, 40 C.F.R. Part 122, to meet the following requirements:

1.4.1. Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 as necessary to comply with existing District of Columbia Water Quality Standards (DCWQS);

1.4.2. Attain applicable wasteload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body, consistent with 33 U.S.C. § 1342(p)(3)(B)(iii); 40 C.F.R. § 122.44(k)(2) and (3); and

1.4.3. Comply with all other provisions and requirements contained in this permit, and in plans and schedules developed in fulfillment of this permit.

Compliance with the provisions contained in Parts 2 through 8 of this permit, including milestones and final dates for attainment of applicable WLAs, shall constitute adequate progress toward compliance with DCWQS and WLAs for this permit term.

2. LEGAL AUTHORITY, RESOURCES AND STORMWATER PROGRAM ADMINSTRATION

2.1 Legal Authority

2.1.1 The permittee shall use its existing legal authority to control discharges to and from the Municipal Separate Storm Sewer System in order to prevent or reduce the discharge of pollutants to achieve water quality objectives, including but not limited to applicable water quality standards. To the extent deficiencies can be addressed through regulation or other Executive Branch action, the permittee shall remedy such deficiencies within 120 days. Deficiencies that can only be addressed through legislative action shall be remedied within 2 years of the effective date of this permit, except where otherwise stipulated, in accordance with the District's legislative process. Any changes to or deficiencies in the legal authority shall be explained in each Annual Report.

2.1.2 No later than 18 months following the effective date of this permit, the permittee shall update and implement Chapter 5 of Title 21 of District of Columbia Municipal Regulations (Water Quality and Pollution) ("updated DC Stormwater Regulations"), to address the control of stormwater throughout the MS4 Permit Area. Such regulations shall be consistent with this

permit, and shall be at least as protective of water quality as the federal Clean Water Act and its implementing regulations require.

2.1.3 The permittee shall ensure that the above legal authority in no way restricts its ability to enter into inter-jurisdictional agreements with other District agencies and/or other jurisdictions affected through this permit.

2.1.4 Review and revise, where applicable, building, health, road and transportation, and other codes and regulations to remove barriers to, and facilitate the implementation of the following standards: (1) standards resulting from issuance of District stormwater regulations required by Section 2.1, paragraph 1 herein; and (2) performance standards required by this permit.

2.2 Fiscal Resources

The permittee, including all agencies and departments of the District as specified in section 2.3 below, shall provide adequate finances, staff, equipment and support capabilities to implement the existing Stormwater Management Program (SWMP) and the provisions of this permit. For the core program the permittee shall provide a dedicated funding source. Each annual report under Part 6 of this permit shall include a demonstration of adequate fiscal capacity to meet the requirements of this permit.

2.3 Stormwater Management Program Administration/Permittee Responsibilities

2.3.1 The Government of the District of Columbia is the permittee, and all activities of all agencies, departments, offices and authorities of the District must comply with the requirements of this permit. The permittee has designated the District Department of the Environment (DDOE) as the agency responsible for managing the MS4 Stormwater Management Program and all activities necessary to comply with the requirements of this permit and the Comprehensive Stormwater Management Enhancement Amendment Act of 2008 by coordinating and facilitating a collaborative effort among other city agencies and departments including but not limited to departments designated as "Stormwater Agencies" by the Comprehensive Stormwater Management Enhancement Amendment Act of 2008:

District Department of Transportation (DDOT);
Department of Public Works (DPW);
Office of Planning (OP);
Office of Public Education Facilities Modernization (OPEFM);
Department of Real Estate Services (DRES);
Department of Parks and Recreation; and
DC Water and Sewer Authority (also known as and hereinafter referred to as DC Water).

Each named entity is responsible for complying with those elements of the permit within its jurisdictional scope and authorities.

2.3.2 DDOE shall coordinate, and all agencies, offices, departments and authorities shall implement provisions of the existing MS4 Task Force Memorandum of Understanding (MOU) dated 2000, updated matrix of responsibilities (January 2008), and any subsequent updates; the MOU between DDOE and DC Water (2012) and any subsequent updates; and other institutional agreements to coordinate compliance activities among agency partners to implement the provisions of this permit. DDOE's major responsibilities under these MOUs and institutional agreements shall include:

1. Convening regular meetings and communication with MS4 Task Force agencies and other committees established to implement this permit to budget, assign and implement projects, and monitor, inspect and enforce all activities required by the MS4 permit.

2. Providing technical and administrative support for the MS4 Task Force and other committees established to implement this permit

3. Evaluating, assessing, and synthesizing results of the monitoring and assessment programs and the effectiveness of the implementation of management practices and coordinating necessary adjustments to the stormwater management program in order to ensure compliance.

4. Coordinating the completion and submission of all deliverables required by the MS4 Permit.

5. Projecting revenue needs to meet MS4 Permit requirements, overseeing the District's stormwater fees to fulfill revenue needs, and coordinating with DC Water to ensure the District's stormwater fee is collected.

6. Making available to the public and other interested and affected parties, the opportunity to comment on the MS4 stormwater management program.

2.3.3 Within 180 days of permit issuance, the permittee shall complete an assessment of additional governmental agencies and departments, non-governmental organizations, watershed groups or other community organizations in the District and adjacent states to partner with to administer required elements of the permit. Intra- and inter-agency agreements between relevant governmental and nongovernmental organizations shall be established to ensure successful coordination and implementation of stormwater management activities in accordance with the requirements of this permit. Additional government and nongovernmental organizations and programs to consider include; land use planning, brownfields redevelopment, fire department, building and safety, public health, parks and recreation, and federal departments and agencies, including but not limited to, the National Park Service, Department of Agriculture, Department of Defense, and General Services Administration, responsible for facilities in the District.

3. STORMWATER MANAGEMENT PROGRAM (SWMP) PLAN

The permittee shall continue to implement, assess and upgrade all of the controls,

procedures and management practices, described in this permit, and in the SWMP dated February 19, 2009, and any subsequent updates. This Program has been determined to reduce the discharge of pollutants to the maximum extent practicable. The Stormwater Management Program is comprised of all requirements in this permit. All existing and new strategies, elements, initiatives, schedules or programs required by this permit must be documented in the SWMP Plan, which shall be the consolidated document of all stormwater program elements. Updates to the plan shall be consistent with all compliance deadlines in this permit. A current plan shall be posted on the permittee's website at an easily accessible location at all times.

New Stormwater Management Program strategies, elements, initiatives and plans required to be submitted to EPA for review and approval are included in Table 1.

TABLE 1
Elements Requiring EPA Review and/or Approval

Element	**Submittal Date (from effective date of this permit)**
Anacostia River Watershed Trash Reduction Calculation Methodology (4.10)	1 year
Catch Basin Operation and Maintenance Plan (4.3.5.1)	18 months
Outfall Repair Schedule (4.3.5.3)	18 months
Off-site Mitigation/Payment-in-Lieu Program (4.1.3)	18 months
Retrofit Program (4.1.5)	2 years
Consolidated TMDL Implementation Plan (4.10.3)	2 years
Revised Monitoring Program (5.1)	2 years
Revised Stormwater Management Program Plan (3)	4 years

No later than 3 years from the issuance date of this permit the permittee shall public notice a fully updated Plan including all of the elements required in this permit. No later than 4 years from the issuance date of this permit the permittee shall submit to EPA the fully updated plan for review and approval, as part of the application for permit renewal.

The measures required herein are terms of this permit. These permit requirements do not prohibit the use of 319(h) funds for other related activities that go beyond the requirements of this permit, nor do they prohibit other sources of funding and/or other programs where legal or contractual requirements preclude direct use for stormwater permitting activities.

TABLE 2
Legal Authority for Selected Required Program Stormwater Elements

Required Program Application Element	**Regulatory References**
Adequate Legal Authority	40 C.F.R. § 122.26(d)(2)(I)(C)-(F)

Green technology stormwater management practices, which incorporate technologies and practices across District activities.	Chapter 5 of Title 21 of District of Columbia Municipal Regulations (Water Quality and Pollution)
Existing Structural and Source Controls	40 C.F.R. § 122.26(d)(2)(iv)(A)(1)
Roadways	40 C.F.R. § 122.26(d)(2)(iv)(A)(3)
Pesticides, Herbicides, and Fertilizers Application	40 C.F.R. § 122.26(d)(2)(iv)(A)(6)
Municipal Waste Sites	40 C.F.R. § 122.26(d)(2)(iv)(A)(5)
Spill Prevention and Response	40 C.F.R. § 122.26(d)(2)(iv)(B)(4)
Infiltration of Seepage	40 C.F.R. § 122.26(d)(2)(iv)(B)(7)
Stormwater Management Program for Commercial and Residential Areas	40 C.F.R. § 122.26(d)(2)(iv)(A)
Manage Critical Source Areas	40 C.F.R. § 122.26(d)(iii)(B)(6)
Stormwater Management for Industrial Facilities	40 C.F.R. § 122.26(d)(2)(iv)(C)
Industrial and High Risk Runoff	40 C.F.R. § 122.26(d)(2)(iv)(C), (iv)(A)(5)
Identify Priority Industrial Facilities	40 C.F.R. § 122.26(d)(2)(iv)(C)(1)
Illicit Discharges and Improper Disposal	40 C.F.R. § 122.26(d)(2)(iv)(B)(1)-(5), (iv)(B)(7)
Flood Control Projects	40 C.F.R. § 122.26(d)(2)(iv)(A)(4)
Public Education and Participation	40 C.F.R. § 122.26(d)(2)(iv)(A)(6), (iv)(B)(5), (iv)(B)(6)

Monitoring and Assessment and Reporting	40 C.F.R. § 122.26(d)(2)(iv)(D)(v)
Monitoring Program	40 C.F.R. § 122.26(d)(2)(iv)(B)(2), (iii), iv(A), (iv)(C)(2)
Characterization Data	40 C.F.R. § 122.26(d)(2)(iii)(B)-(D), 40 C.F.R. § 122.21(g)(7)
Reporting	40 C.F.R. § 122.41(l)

4. IMPLEMENTATION OF STORMWATER CONTROL MEASURES

4.1 Standard for Long-Term Stormwater Management

The permittee shall continue to develop, implement, and enforce a program in accordance with this permit and the permittee's updated SWMP Plan that integrates stormwater management practices at the site, neighborhood and watershed levels that shall be designed to mimic pre-development site hydrology through the use of on-site stormwater retention measures (e.g., harvest and use, infiltration and evapotranspiration), through policies, regulations, ordinances and incentive programs

4.1.1 Standard for Stormwater Discharges from Development

No later than 18 months following issuance of this permit, the permittee shall, through its Updated DC Stormwater Regulations or other permitting or regulatory mechanisms, implement one or more enforceable mechanism(s) that will adopt and implement the following performance standard for all projects undertaking development that disturbs land greater than or equal to 5,000 square feet:

Require the design, construction and maintenance of stormwater controls to achieve on-site retention of 1.2" of stormwater from a 24-hour storm with a 72-hour antecedent dry period through evapotranspiration, infiltration and/or stormwater harvesting and use for all development greater than or equal to 5,000 square feet.

The permittee may allow a portion of the 1.2" volume to be compensated for in a program consistent with the terms and requirements of Part 4.1.3.

4.1.2 Code and Policy Consistency, Site Plan Review, Verification and Tracking

By the end of this permit term the permittee must review and revise, as applicable, stormwater, building, health, road and transportation, and other codes and regulations to remove barriers to, and facilitate the implementation of the retention performance standard required in

Section 4.1.1. The permittee must also establish/update and maintain a formal process for site plan reviews and a post-construction verification process (e.g., inspections, submittal of as-builts) to ensure that standards are appropriately implemented. The permittee must also track the on-site retention performance of each project subject to this regulatory requirement.

4.1.3 Off-Site Mitigation and/or Fee-in Lieu for all Facilities

Within 18 months of the effective date of this permit the permittee shall develop, public notice, and submit to EPA for review and comment an off-site mitigation and/or fee-in-lieu program to be utilized when projects will not meet stormwater management performance standard as defined in Section 4.1.1. The permittee has the option of implementing an off-site mitigation program, a fee-in-lieu program, or both. Any allowance for adjustments to the retention standard shall be defined in the permittee's regulations. The program shall include at a minimum:

1. Establishment of baseline requirements for on-site retention and for mitigation projects. On-site volume plus off-site volume (or fee-in-lieu equivalent or other relevant credits) must equal no less than the relevant volume in Section 4.1.1;
2. Specific criteria for determining when compliance with the performance standard requirement for on-site retention cannot technically be met based on physical site constraints, or a rationale for why this is not necessary;
3. For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls to account for the difference in the performance standard, and the alternative reduced value calculated; and
4. The necessary tracking and accounting systems to implement this section, including policies and mechanisms to ensure and verify that the required stormwater practices on the original site and appropriate required off-site practices stay in place and are adequately maintained.

The program may also include incentives for achieving other important environmental objectives such as ongoing measurable carbon sequestration, energy savings, air quality reductions in green house gases, or other environmental benefits for which the program can develop methods for quantifying and documenting those outcomes. Controls implemented to achieve those outcomes are subject to the same level of site plan review, inspection, and operation and maintenance requirements as stormwater controls.

District-owned transportation right-of-way projects are subject to a similarly stringent process for determining an alternate performance volume, but for the duration of this permit term need not conduct off-site mitigation or pay into a fee-in-lieu program to compensate for the difference.

4.1.4 Green Landscaping Incentives Program

No later than one year following permit issuance, the permittee shall develop an incentive program to increase the quantity and quality of planted areas in the District while allowing flexibility for developers and designers to meet development standards. The Incentive Program

shall use such methods as a scoring system to encourage green technology practices such as larger plants, permeable paving, green roofs, vegetated walls, preservation of existing trees, and layering of vegetation along streets and other areas visible to the public.

4.1.5 Retrofit Program for Existing Discharges

4.1.5.1 Within two years of the effective date of this permit the permittee shall develop, public notice, and submit to EPA for review and approval a program that establishes performance metrics for retrofit projects. The permittee shall fully implement the program upon EPA approval. The starting point for the performance metrics shall be the standard in Section 4.1.1. Performance metrics may be established generally for all retrofit projects, or for categories of projects, e.g., roads, sidewalks, parking lots, campuses. Specific site conditions may constitute justifications for setting a performance standard at something less than the standard in Section 4.1.1, and a similar calculator or algorithm process may be used in conjunction with a specific site analysis.

4.1.5.2 The permittee, with facilitation assistance from EPA Region III, will also work with major Federal landholders, such as the General Services Administration and the Department of Defense, with the objective of identifying retrofit opportunities, documenting federal commitments, and tracking pollutant reductions from relevant federal actions.

4.1.5.3 For each retrofit project estimate the potential pollutant load and volume reductions achieved through the DC Retrofit program by major waterbody (Rock Creek, Potomac, Anacostia) for the following pollutants: Bacteria (E. coli), Total Nitrogen, Total Phosphorus, Total Suspended Solids, Cadmium, Copper, Lead, Zinc, and Trash. These estimates shall be included in the annual report following implementation of the project.

4.1.5.4 The DC Retrofit Program shall implement retrofits for stormwater discharges from a minimum of 18,000,000 square feet of impervious surfaces during the permit term. A minimum of 1,500,000 square feet of this objective must be in transportation rights-of-way.

4.1.5.5 No later than 18 months following issuance of this permit, the permittee shall, through its Updated DC Stormwater Regulations or other permitting or regulatory mechanisms, implement an enforceable mechanism that will adopt and implement stormwater retention requirements for properties where less than 5,000 square feet of soil is being disturbed but where the buildings or structures have a footprint that is greater than or equal to 5,000 square feet and are undergoing substantial improvement. Substantial improvement, as consistent with District regulations at 12J DCMR § 202, is any repair, alteration, addition, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. The characteristics of these types of projects may constitute justifications for setting a performance standard at something less than the standard in Section 4.1.1.

4.1.5.6 The permittee shall ensure that every major renovation/rehabilitation project for District-owned properties within the inventory of DRES and OPEFM (e.g., schools and school administration buildings) includes on-site stormwater retention measures, including but not

limited to green roofs, stormwater harvest/reuse, and/or other practices that can achieve the retention performance standard.

4.1.6 Tree Canopy

4.1.6.1 No later than one year following issuance of this permit, the permittee shall develop and public notice a strategy to reduce the discharge of stormwater pollutants by expanding tree canopy throughout the city. The strategy shall identify locations throughout the District where tree plantings and expanded tree boxes are technically feasible and commit to specific schedules for implementation at locations throughout the District, with highest priority given to projects that offer the greatest stormwater retention potential. The strategy shall also include the necessary elements to achieve the requirements of Section 4.1.6.2.

4.1.6.2 The permittee shall achieve a minimum net annual tree planting rate of 4,150 plantings annually within the District MS4 area, with the objective of a District-wide urban tree canopy coverage of 40% by 2035. The annual total tree planting shall be calculated as a net increase, such that annual mortality is also included in the estimate. The permittee shall ensure that trees are planted and maintained, including requirements for adequately designed and sized tree boxes, to achieve optimal stormwater retention and tree survival rate. Trees shall be planted in accordance with the Planting Specifications issued by the International Society of Arboriculture as appropriate to the site conditions.

4.1.6.3 The permittee shall annually document the total trees planted and make an annual estimate of the volume of stormwater that is being removed from the MS4 (and combined system, as relevant) in a typical year of rainfall as a result of the maturing tree canopy over the life of the MS4 permit. Also report annually on the status of achieving 40% canopy District-wide.

4.1.7 Green Roof Projects

4.1.7.1 Complete a structural assessment of all District properties maintained by DRES and slated for redevelopment to determine current roof conditions and the feasibility for green roof installation. These assessments shall be performed on an ongoing basis for all properties as they are considered for redevelopment. Based on the structural assessment and other factors, identify all District-owned properties where green roof projects are technically feasible and commit to specific schedules for implementing these projects. Highest priority shall be given to projects that offer the greatest stormwater capture potential.

4.1.7.2 The permittee shall install at a minimum 350,000 square feet of green roofs on District properties during the term of the permit (including schools and school administration buildings).

4.1.7.3 Document the square footage of green roof coverage in the District, whether publicly or privately owned, report any incentive programs implemented during the permit term, and estimate the volume of stormwater that is being removed from the MS4 (and combined

system, as relevant) in a typical year of rainfall as a result of the combined total green roof facilities in the District.

4.2 Operation and Maintenance of Stormwater Capture Practices

4.2.1 District Owned and Operated Practices.

Within two years of the effective date of this permit, develop and implement operation and maintenance protocols and guidance for District-owned and operated on-site retention practices (development and retrofits) to include maintenance needs, inspection frequencies, estimated maintenance frequencies, and a tracking system to document relevant information. Provide training to all relevant municipal employees and contractors, with regular refreshers, as necessary.

4.2.2 Non-District Owned and Operated Practices.

In conjunction with updating of relevant ordinances and policies, develop accountability mechanisms to ensure maintenance of stormwater control measures on non-District property. Those mechanisms may include combinations of deed restrictions, ordinances, maintenance agreements, or other policies deemed appropriate by the permittee. The permittee must also include a long-term verification process of O&M, which may include municipal inspections, 3rd party inspections, owner/operator certification on a frequency deemed appropriate by the permittee, and/or other mechanisms. The permittee must continue to maintain an electronic inventory of practices on private property to include this information.

4.2.3 Stormwater Management Guidebook and Training

4.2.3.1 No later than 18 months from the permit issuance date, the permittee shall finalize a Stormwater Management Guidebook to be available for wide-spread use by land use planners and developers. The Stormwater Management Guidebook shall provide regular updates, as applicable, in a format that facilitates such regular updates, and shall include objectives and specifications for integration of stormwater management technologies, including on site retention practices, in the areas of:

a. Site Assessment.
b. Site Planning and Layout.
c. Vegetative Protection, Revegetation, and Maintenance.
d. Techniques to Minimize Land Disturbance.
e. Techniques to Implement Measures at Various Scales.
f. Integrated Water Resources Management Practices.
g. Designing to meet the required performance standard(s).
h. Flow Modeling Guidance.
i. Hydrologic Analysis.
j. Construction Considerations.
k. Operation and Maintenance

4.2.3.2 The permittee shall continue to provide key industry, regulatory, and other stakeholders with information regarding objectives and specifications of green infrastructure practices contained in the Stormwater Management Guidebook through a training program. The Stormwater Management training program will include at a minimum the following:

a. Stormwater management/green technology practices targeted sessions and materials for builders, design professionals, regulators, resource agencies, and stakeholders.
b. Materials and data from stormwater management/green technology practices pilot projects and demonstration projects including case studies.
c. Design and construction methods for integration of stormwater management/green technology practices measures at various project scales.
d. Guidance on performance and cost of various types of stormwater management/green technology practices measures in the District.

4.3 Management of for District Government Areas

Procedures to reduce the discharge of pollutants in stormwater runoff shall include, but not be limited to:

4.3.1 Sanitary Sewage System Maintenance Overflow and Spill Prevention Response

The permittee shall implement an effective response protocol for overflows of the sanitary sewer system into the MS4. The response protocol shall clearly identify agencies responsible and telephone numbers and e-mail for any contact and shall contain at a minimum, procedures for:

1. Investigating any complaints received within 24 hours of the incident report.
2. Responding within two hours to overflows for containment.
3. Notifying appropriate sewer and public health agencies within 24 hours when the sanitary sewer overflows to the MS4.
4. Notifying the public in a timely and effective manner when SSO discharges to the MS4 may adversely affect public health.

This provision in no way authorizes sanitary sewer overflow discharges either directly or via the MS4.

4.3.2 Public Construction Activities Management

The permittee shall implement and comply with the Development and Redevelopment and the Construction requirements in Part 4.6 of this permit at all permittee-owned or operated public construction projects.

The permittee shall obtain discharge authorization under the applicable EPA Construction General permit for construction activities and comply with provisions therein.

4.3.3 Vehicle Maintenance/Material Storage Facilities/ Municipal Operations.

The permittee shall implement stormwater pollution prevention measures at all permittee-owned, leased facilities and job sites including but not limited to vehicle/ equipment maintenance facilities, and material storage facilities.

For vehicle and equipment wash areas and municipal facilities constructed, redeveloped, or replaced, the permittee shall eliminate discharges of wash waters from vehicle and equipment washing into the MS4 by implementing any of the following measures at existing facilities with vehicle or equipment wash areas:

1. Self-contain, and haul off-site for disposal;
2. Equip with a clarifier; or
3. Equip with an alternative pre-treatment device.

4.3.4 Landscape and Recreational Facilities Management, Pesticide, Herbicide, Fertilizer and Landscape Irrigation

4.3.4.1 The permittee shall further reduce pollutants and pollutant discharges associated with the storage and application of pesticides, fertilizers, herbicides, the use of other toxic substances and landscape irrigation according to an integrated pest management program (IPM). The IPM shall be an ecosystem based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, use of resistant varieties, and use of low or no chemical and irrigation input landscapes, in accordance with the provisions of this permit, procedures and practices described in the SWMP and regulations.

The permittee shall further utilize IPM controls to reduce pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied by employees or contractors, to public rights-of-way, parks, and other District property to ensure that:

a. Pesticides are used only if monitoring indicates they are needed according to established guidelines;

b. Fertilizers are used only when soil tests indicate that they are necessary, and only in minimum amounts and for needed purposes (e.g., seed germination).

c. Treatments are made with the purpose of removing only the target organism;

d. Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial, non-target organisms, and the environment;

e. No pesticides or fertilizers are applied to an area immediately prior to an expected rain event, or during or immediately following a rain event, or when water is flowing off the area;

f. No banned or unregistered pesticides are stored or applied;

g. All staff applying pesticides are certified or are under the direct supervision of a pesticide applicator certified in the appropriate category;

h. Procedures are implemented to encourage the retention and planting of native and/or non-invasive, naturalized vegetation to reduce water, pesticide and fertilizer needs;

i. Pesticides and fertilizers are stored indoors or under cover on paved surfaces or enclosed in secondary containment and storage areas inspected regularly to reduce the potential for spills; and

j. Landscapes that maximize on-site retention of stormwater, while minimizing mowing, chemical inputs and irrigation are given preference for all new landscape installation.

4.3.4.2 The permittee shall coordinate internally among departments for the purpose of ensuring that pesticide and fertilizer use within its jurisdiction does not threaten water quality.

4.3.4.3 The permittee shall partner with other organizations to ensure that pesticide and fertilizer use within their jurisdiction does not threaten water quality.

4.3.4.4 The permittee shall continue to conduct education and outreach, as well as provide incentives, to curtail the use of turf-grass fertilizers for the purpose of reducing nitrogen and phosphorous discharges to surface waters. The program shall incentivize the use of vegetative landscapes other than turf grass and other measures to restrict the use of turf grass fertilizers.

4.3.4.5 The permittee shall use GIS layers of public land and sewersheds, as well as background data, to identify priority areas for a targeted strategy to reduce the sources of pesticides, herbicides, and fertilizers that contaminate the stormwater runoff, and report progress toward completing the screening characterization in the next Updated SWMP.

4.3.4.6 The permittee shall include in each Annual Report a report on the implementation of the above application procedures, a history of the improvements in the control of these materials, and an explanation on how these procedures will meet the requirements of this permit.

4.3.5 Storm Drain System Operation and Management and Solids and Floatables Reduction

4.3.5.1 Within 18 months of the effective date of this permit, the permittee shall complete, public notice and submit to EPA for review and approval a plan for optimal catch basin inspections, cleaning and repairs. The permittee shall fully implement the plan upon EPA approval.

4.3.5.2 Until such time as the catch basin maintenance study has been completed and approved, the permittee shall ensure that each catch basin within the DC MS4 Permit Area is cleaned at least once annually during the life of the permit. The permittee shall continue to use strategies for coordinated catch basin cleaning and street-sweeping that will optimize reduction of stormwater pollutants.

4.3.5.3 Within 18 months of the effective date of this permit, and consistent with the 2006 Outfall Survey, the permittee shall complete, public notice and submit to EPA for review and approval an outfall repair schedule to ensure that approximately 10% of all outfalls needing repair are repaired annually, with the overall objective of having all outfalls in good repair by 2022. This schedule may be combined with the catch basin maintenance study outlined in 4.3.5.1. The repair schedule shall be fully implemented upon EPA approval.

4.3.5.4 The permittee shall comply with the Anacostia River Trash TMDL implementation provisions in Part 4.10 of this permit and apply the technologies and other activities developed in the Anacostia River Watershed Trash TMDL throughout the entire MS4 Permit Area. The permittee shall continue to report the progress of trash reduction in the Consolidated Annual Report.

4.3.6 Streets, Alleys and Roadways

4.3.6.1 Street sweeping shall be conducted on no less than 641 acres of roadway in the MS4 area annually in accordance with the following schedule:

TABLE 3
Street Sweeping

Area/Street Classification	Frequency
Arterials-heavily developed commercial and central business districts with considerable vehicular and pedestrian traffic	At least nine (9) times per year
Industrial areas	At least six (6) times per year
Residential-residential areas with limited throughway and pedestrian traffic AND neighborhood streets which are used for local purposes only	At least four (4) times per year
Central Business District/Commercial-neighborhood business districts and main streets with moderate vehicular and pedestrian traffic	At least one (1) time every two weeks

Environmental hot spots in the Anacostia River Watershed	At least two (2) times per month March through October

4.3.6.2 Standard road repair practices shall include limiting the amount of soil disturbance to the immediate area under repair. Stormwater conveyances which are denuded shall be resodded, reseeded and mulched, or otherwise stabilized for rapid revegetation, and these areas should have effective erosion control until stabilized.

4.3.6.3 The permittee shall continue to evaluate and update the use, application and removal of anti-icers, chemical deicers, salt, sand, and/or sand/deicer mixtures in an effort to minimize the impact of these materials on water quality. The permittee shall investigate and implement techniques available for reducing pollution from deicing salts in snowmelt runoff and runoff from salt storage facilities. The permittee shall evaluate and implement the use of porous/permeable surfaces that require less use of deicing materials and activities. This evaluation shall be made a part of an overall investigation of ways to meet the requirements of the Clean Water Act and reported in each Annual Report.

4.3.6.4 The permittee shall continue to implement and update a program to ensure that excessive quantities of snow and ice control materials do not enter the District's water bodies. The permittee shall report its progress in implementing the program in each Annual Report. Except during a declared Snow Emergency when the permittee determines that the foremost concern of snow removal activities is public health and safety, it shall avoid snow dumping or storage in areas adjacent to water bodies, wetlands, and areas near public or private drinking water wells which would ultimately reenter the MS4.

4.3.7 Infrastructure Maintenance/Pollution Source Control Maintenance

The permittee shall continue to implement an operation and maintenance program that incorporates good housekeeping components at all municipal facilities located in the DC MS4 Permit Area, including but not limited to; municipal waste water treatment facility, potable drinking water facility, municipal fleet operations, maintenance garages, parks and recreation, street and infrastructure maintenance, and grounds maintenance operations, libraries and schools. The permittee shall document the program in the Annual Report, as required at Section 6.2 herein. The permittee shall, at a minimum:

1. Continue to implement maintenance standards at all municipal facilities that will protect the physical, chemical and biological integrity of receiving waters.

2. Continue to implement an inspection schedule in which to perform inspections to determine if maintenance standards are being met. Inspections shall be performed no less than once per calendar year and shall provide guidance in Stormwater Pollution Prevention Plan development and implementation, where needed.

3. Continue to implement procedures for record keeping and tracking inspections and maintenance at all municipal facilities.

4. Continue to implement an inspection and maintenance program for all permittee-owned management practices, including post-construction measures.

5. Continue to ensure proper operation of all treatment management practices and maintain them as necessary for proper operation, including all post-construction measures.

6. Ensure that any residual water following infrastructure maintenance shall be self-contained and disposed of legally in accordance with the Clean Water Act.

4.3.8 Public Industrial Activities Management/Municipal and Hazardous Facilities

For any municipal activity associated with industrial activity, as defined by 40 C.F.R. § 122.26, which discharges stormwater to, from and through the DC MS4, the permittee shall obtain separate coverage under either: (1) the EPA Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP) (As modified May 27, 2009); or (2) an individual permit.

4.3.9 Emergency Procedures

The permittee may conduct repairs of essential public service systems and infrastructure in emergency situations. An emergency includes only those situations included as conditions necessary for demonstration of an upset at 40 C.F.R. 122.41(n). For each claimed emergency, the permittee shall submit to the Permitting Authority a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than required by applicable Clean Water Act regulations.

4.3.10 Municipal Official Training

The permittee shall continue to implement an on-going training program for those employees specified below, and any other employees whose job functions may impact stormwater program implementation. The training program shall address the importance of protecting water quality, the requirements of this permit, design, performance, operation and maintenance standards, inspection procedures, selecting appropriate management practices, ways to perform their job activities to prevent or minimize impacts to receiving waters, and procedures for tracking, inspecting and reporting, including potential illicit discharges. The permittee shall provide follow-up and refresher training at a minimum of once every twelve months, and shall include any changes in procedures, techniques or requirements.

The training program shall include, but is not limited to, those employees who work in the following areas:

1. Municipal Planning
2. Site plan review
3. Design
4. Construction
5. Transportation planning and engineering
6. Street/sewer and right-of-way construction and maintenance
7. Water and sewer departments
8. Parks and recreation department
9. Municipal water treatment and waste water treatment
10. Fleet maintenance
11. Fire and police departments
12. Building maintenance and janitorial
13. Garage and mechanic crew
14. Contractors and subcontractors who may be contracted to work in the above described
15. areas
16. Personnel responsible for answering questions about the permittee's stormwater program,
17. including persons who may take phone calls about the program
18. Any other department of the permittee that may impact stormwater runoff

4.4 Management of Commercial and Institutional Areas

The permittee shall establish and implement policies and procedures to reduce the discharge of pollutants in stormwater runoff from all commercial and institutional (including federal) areas covered by this permit.

The permittee shall ensure maintenance of all stormwater management controls in commercial and institutional land areas in accordance with the following provisions:

1. Tracking all controls;
2. Inspecting all controls on a regular basis, according to an inspection schedule;
3. Ensure compliance with the MS4 permit and municipal ordinances at commercial and institutional facilities.

4.4.1 Inventory of Critical Sources and Source Controls

4.4.1.1 The permittee shall continue to maintain a watershed-based inventory or database of all facilities within its jurisdiction that are critical sources of stormwater pollution. Critical sources to be tracked shall include the following:

a. Automotive service facilities, *e.g.*, service, fueling and salvage facilities;
b. Industrial activities, as defined at 40 C.F.R. §§ 122.26(b)(14); and
c. Construction sites exceeding one acre, or sites under one acre that are part of a larger common plan of development.
d. Dry cleaners

e. Any other facility the permittee has identified as a Critical Source

4.4.1.2 The permittee shall include the following minimum fields of information for each industrial and commercial facility identified as a critical source:

a. Name of facility and name of owner/ operator;
b. Address of facility;
c. Size of facility; and
d. Activities conducted at the facility that could impact stormwater.
e. Practices and/or measures to control pollutants.
f. Inspection and maintenance schedules, dates and findings.

4.4.1.3 The permittee shall update its inventory of critical sources at least annually. The update may be accomplished through collection of new information obtained through field activities or through other readily available inter and intra-agency informational databases (*e.g.*, business licenses, pretreatment permits, sanitary sewer hook-up permits, and similar information).

4.4.2 Inspection of Critical Sources

The permittee shall continue to inspect all commercial facilities identified in Part 4.4.1. herein and any others found to be critical sources twice during the five-year term of the permit. A minimum interval of six months between the first and the second mandatory compliance inspection is required, unless a follow-up inspection to ensure compliance must occur sooner.

4.4.3 Compliance Assurance.

At each facility identified as a critical source, the permittee's inspector(s) shall verify that the operator is implementing a control strategy necessary to protect water quality. Where the permittee determines that existing measures are not adequate to protect water quality, the permittee shall require additional site-specific controls sufficient to protect water quality.

4.5 <u>Management of Industrial Facilities and Spill Prevention</u>

4.5.1 The permittee shall continue to implement a program to monitor and control pollutants in stormwater discharged from Industrial Facilities located within the MS4 Permit Area, as defined herein, pursuant to the requirements in 40 C.F.R. § 122.26(d)(2)(iv)(C). These facilities shall include, but are not limited to:

a. Private Solid Waste Transfer Stations
b. Hazardous Waste Treatment, Disposal, and/or Recovery Plants
c. Industrial Facilities subject to SARA or EPCRA Title III
d. Industrial Facilities with NPDES Permits
e. Industrial facilities with a discharge to the MS4

4.5.2 The permittee shall continue to maintain and update the industrial facilities database.

4.5.3 The permittee shall continue to perform or provide on-site assistance/inspections and outreach focused on the development of stormwater pollution prevention plans and NPDES permit compliance.

4.5.4 The permittee shall continue to refine and implement procedures to govern the investigation of facilities suspected of contributing pollutants to the MS4, including at a minimum: (i) a review, if applicable, of monitoring data collected by the facility pursuant to its NPDES permit; and (ii) wet weather screening as required by Part 5.2.1 herein (including collecting data on discharges from industrial sites). These procedures shall be submitted as part of each Annual Report required by Part 6.2 herein.

4.5.5 The permittee shall continue to implement the prohibition against illicit discharges, control spills, and prohibit dumping. Continue to implement a program to prevent, contain, and respond to spills that may discharge to the MS4, and report on such implementation submitted in each Annual Report. The spill response program may include a combination of spill response actions by the permittee and/or another public or private entity.

4.5.6 The permittee shall report progress in developing and carrying out industrial-related programs in each Annual Report required by Section 6 herein. Provide an explanation as to how the implementation of these procedures will meet the requirements of the Clean Water Act.

4.6 Stormwater Management for Construction Sites

4.6.1 Continue implementation of the Program that reduces the discharge of pollutants from construction sites. In each Annual Report, the permittee shall evaluate and report to determine if the existing practices meet the requirements of 40 C.F.R. § 122.26(d)(2)(iv)(A) and (D).

4.6.2 Continue the review and approval process of the sediment and erosion control plans under this program. Also, the permittee shall ensure that all construction projects impacting one acre or greater, or less than one acre when part of a larger common plan of development or sale equal to or larger than one acre, are not authorized until documentation is provided that they have received EPA NPDES Construction General Permit Coverage.

4.6.3 Continue to implement inspection and enforcement procedures, including but not limited to inspection of permitted construction sites that disturb more than 5,000 square feet of soil as follows:

1. First inspection prior to ground disturbing activities to review planned sediment and erosion control measures;
2. Second inspection to verify proper installation and maintenance of sediment and erosion control measures;

3. Third inspection to review planned installation and maintenance of stormwater management practices;
4. Fourth inspection to verify proper installation of stormwater management practices following final stabilization of the project site; and
5. Other inspections as necessary to ensure compliance with relevant standards and requirements.

4.6.4 When a violation of local erosion and sediment control ordinances occurs, the permittee shall follow existing enforcement procedures and practices using standardized reports as part of the inspection process to provide accurate record keeping of inspections of construction sites. The permittee shall use a listing of all violations and enforcement actions to assess the effectiveness of the Enforcement Program in each Annual Report.

4.6.5 Continue with educational measures for construction site operators (Section 4.9 of this permit) that consist, at a minimum, of providing guidance manuals and technical publications.

4.6.6 Report progress in developing and carrying out the above construction-related programs in each Annual Report required by Parts 6.2 herein, including: (i) an explanation as to how the implementation of these procedures will meet the requirements of the Clean Water Act; (ii) an explanation as to how the implementation of these procedures, particularly with regard to District "waivers and exemptions", will meet the requirements of the Clean Water Act; and (iii) discussion of progress toward meeting TMDL and the District Watershed Implementation Plan deadlines.

4.7 Illicit Discharges and Improper Disposal.

4.7.1 The permittee shall continue to implement an ongoing program to detect illicit discharges, pursuant to the SWMP, and Part 4 of this permit, and to prevent improper disposal into the storm sewer system, pursuant to 40 C.F.R. § 122.26(d)(2)(iv)(B)(1). Such program shall include, at a minimum the following:

a. An updated schedule of procedures and practices to prevent illicit discharges, as defined at 40 C.F.R. § 122.26(b)(2), and, pursuant to 40 C.F.R. § 122.26(d)(2)(iv)(B)(1), to detect and remove illicit discharges as defined herein;

b. An updated inventory (organized by watershed) of all outfalls that discharge through the MS4 including any changes to the identification and mapping of existing permitted outfalls. Such inventory shall include, but not be limited to, the name and address, and a description (such as SIC code) which best reflects the principal products or services provided by each facility which may discharge to the MS4;

c. Continue to implement an illicit connection detection and enforcement program to perform dry weather flow inspections in target areas;

d. Visual inspections of targeted areas;

e. Issuance of fines, tracking and reporting illicit discharges, and reporting progress on stopping targeted illicit discharges, and in appropriate cases, chemical testing immediately after discovery of an illicit discharge;

f. Enforcement procedures for illicit discharges set forth in Part 4 herein;

g. All necessary inspection, surveillance, and monitoring procedures to remedy and prevent illicit discharges. The permittee shall submit an inspection schedule, inspection criteria, documentation regarding protocols and parameters of field screening, and allocation of resources as a part of each Annual Report.

h. The permittee shall continue to implement procedures to prevent, contain, and respond to spills that may discharge into the MS4. The permittee shall provide for the training of appropriate personnel in spill prevention and response procedures.

i. The permittee shall report the accomplishments of this program in each Annual Report.

4.7.2 The permittee shall continue to ensure the implementation of a program to further reduce the discharge of floatables (e.g. litter and other human-generated solid refuse). The floatables program shall include source controls and, where necessary, structural controls.

4.7.3 The permittee shall continue to implement the prohibition against the discharge or disposal of used motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, and animal waste into separate storm sewers. The permittee shall ensure the implementation of programs to collect used motor vehicle fluids (at a minimum oil and anti-freeze) for recycle, reuse, and proper disposal and to collect household hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycle, reuse, or proper disposal. The permittee shall ensure that such programs are readily available within the District, and that they are publicized and promoted on a regular basis, pursuant to Public Education provisions in this permit at Part 4.9 herein.

4.7.4 The permittee shall continue to work with members of the Metropolitan Police Department to enhance illegal dumping enforcement.

4.7.5 The permittee shall implement the District's ban on coal tar pavement products, including conducting outreach and enforcement activities.

4.7.6 The permittee shall implement the Anacostia Clean Up and Protection Act of 2009, to ban the use of disposable non-recyclable plastic carryout bags and restrict the use on disposable carryout bags in certain food establishments.

4.8 Flood Control Projects

4.8.1 The permittee shall update the impervious surface analysis of floodplains six months after the approval of the revised Flood Insurance Rate Maps by the Federal Emergency Management Agency.

4.8.2 The permittee shall assess potential impacts on the water quality and the ability of the receiving water to support beneficial uses for all flood management projects. Evaluate the feasibility of retrofitting existing flood control devices to provide additional pollutant and volume removal from stormwater. Report results of such assessment, mapping program, and feasibility studies in the Annual Report (Part 6.2 herein).

4.8.3 The permittee shall review all development proposed in flood plain areas to ensure that the impacts on the water quality of receiving water bodies have been properly addressed. Information regarding impervious surface area located in the flood plains shall be used (in conjunction with other environmental indicators) as a planning tool. The permittee shall collect data on the percentage of impervious surface area located in flood plain boundaries for all proposed development beginning six months after the effective date of this permit. The permittee shall collect similar data for existing development in flood plain areas, in accordance with the mapping program and other activities designed to improve water quality. Critical unmapped areas shall be prioritized by the permittee with an emphasis on developed and developing acreage. Reports of this work shall be summarized in the Annual Report.

4.9 Public Education and Public Participation

The permittee shall continue to implement a public education program including but not limited to an education program aimed at residents, businesses, industries, elected officials, policy makers, planning staff and other employees of the permittee. The purpose of education is to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. Education initiatives may be developed locally or regionally.

4.9.1 Education and Outreach.

4.9.1.1 The permittee shall continue to implement its education and outreach program for the area served by the MS4 that was established during the previous permit cycle. The outreach program shall be designed to achieve measurable improvements in the target audience's understanding of stormwater pollution and steps they can take to reduce their impacts.

4.9.1.2 The permittee shall assess current education and outreach efforts and identify areas where additional outreach and education are needed. Audiences and subject areas to be considered include:

a. General public

1) General impacts of stormwater flows into surface waters
2) Impacts from impervious surfaces
3) Source control practices and environmental stewardship actions and opportunities in the areas of pet waste, vehicle maintenance, landscaping, and rain water reuse.

4) A household hazardous waste educational and outreach program to control illicit discharges to the MS4 as required herein
5) Information and education on proper management and disposal of used oil, other automotive fluids, and household chemicals
6) Businesses, including home-based and mobile businesses
7) Management practices for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials
8) Impacts of illicit discharges and how to report them including information for industries about stormwater permitting and pollution prevention plans and the requirement that they develop structural and non-structural control systems

b. Homeowners, landscapers and property managers

1) Use of low or no phosphorus fertilizers, alternatives to fertilizers, alternative landscaping requiring no fertilizers
2) Landscape designs to reduce runoff and pollutant loadings
3) Car washing alternatives with the objective of eliminating phosphorus detergent discharges
4) Yard care techniques that protect water quality
5) Management practices for use and storage of pesticides and fertilizers
6) Management practices for carpet cleaning and auto repair and maintenance
7) Runoff Reduction techniques, including site design, on-site retention, pervious paving, retention of forests and mature trees
8) Stormwater pond maintenance

c. Engineers, contractors, developers, review staff and land use planners

1) Technical standards for construction site sediment and erosion control
2) Runoff Reduction techniques, including site design, on-site reduction, pervious pavement, alternative parking lot design, retention of forests and mature trees
3) Stormwater treatment and flow control controls
4) Impacts of increased stormwater flows into receiving water bodies

4.9.2 Measurement of Impacts.

The permittee shall continue to measure the understanding and adoption of selected targeted behaviors among the targeted audiences. The resulting measurements shall be used to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors.

4.9.3 Recordkeeping.

The permittee shall track and maintain records of public education and outreach activities.

4.9.4 Public Involvement and Participation.

The permittee shall continue to include ongoing opportunities for public involvement through advisory councils, watershed associations and/or committees, participation in developing updates to the stormwater fee system, stewardship programs, environmental activities or other similar activities. The permittee shall facilitate opportunities for direct action, educational, and volunteer programs such as riparian planting, volunteer monitoring programs, storm drain marking or stream clean up programs.

4.9.4.1 The permittee shall continue to create opportunities for the public to participate in the decision making processes involving the implementation and update of the permittee's SWMP. In particular, the permittee shall provide meaningful opportunity for the public to participate in the development of the permittee's Consolidated TMDL Implementation Plan. The permittee shall continue to implement its process for consideration of public comments on their SWMP.

4.9.4.2 The permittee shall continue to establish a method of routine communication to groups such as watershed associations and environmental organizations that are located in the same watershed(s) as the permittee, or organizations that conduct environmental stewardship projects located in the same watershed(s) or in close proximity to the permittee. This is to make these groups aware of opportunities for their direct involvement and assistance in stormwater activities that are in their watershed.

4.9.4.3 The permittee shall make all draft and approved MS4 documents required under this permit available to the public for comment. The current draft and approved SWMP and the MS4 annual reports deliverable documents required under this permit shall be posted on the permittee's website.

4.9.4.4 The permittee shall continue to develop public educational and participation materials in cooperation and coordination with other agencies and organizations in the District with similar responsibilities and objectives. Progress reports on public education shall be included in the Annual Report. An explanation shall be provided as to how this effort will reduce pollution loadings to meet the requirements of this permit.

4.9.4.5 The permittee shall periodically, and at least annually, update its website.

4.10 Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation

4.10.1 Anacostia River Watershed Trash TMDL Implementation

The permittee shall attain removal of 103,188 pounds of trash annually, as determined in the Anacostia River Watershed Trash TMDL, as a specific single-year measure by the fifth year of this permit term.

Reductions must be made through a combination of the following approaches:

1. Direct removal from waterbodies, e.g., stream clean-ups, skimmers
2. Direct removal from the MS4, e.g., catch basin clean-out, trash racks
3. Direct removal prior to entry to the MS4, e.g., street sweeping
4. Prevention through additional disposal alternatives, e.g., public trash/recycling collection
5. Prevention through waste reduction practices, regulations and/or incentives, e.g., bag fees

At the end of the first year the permittee must submit the trash reduction calculation methodology with Annual Report to EPA for review and approval. The methodology should accurately account for trash prevention/removal methods beyond those already established when the TMDL was approved, which may mean crediting a percentage of certain approaches. The calculation methodology must be consistent with assumptions for weights and other characteristics of trash, as described in the 2010 Anacostia River Watershed Trash TMDL.

Annual reports must include the trash prevention/removal approaches utilized, as well as the overall total weight (in pounds) of trash captured for each type of approach.

The requirements of this Section, and related elements as appropriate, shall be included in the Consolidated TMDL Implementation Plan (Section 4.10.3).

4.10.2 Hickey Run TMDL Implementation

The permittee shall implement and complete the proposed replacement/rehabilitation, inspection and enforcement, and public education aspects of the strategy for Hickey Run as described in the updated Plan to satisfy the requirements of the oil and grease wasteload allocations for Hickey Run. If monitoring or other assessment determine it to be necessary, the permittee shall install or implement appropriate controls to address oil & grease in Hickey Run no later than the end of this permit term. As appropriate, any requirement of this Section not completed prior to finalization of the Consolidated TMDL Implementation Plan (Section 4.10.3) shall be included in that Plan.

4.10.3 Consolidated TMDL Implementation Plan

For all TMDL wasteload allocations assigned to District MS4 discharges, the permittee shall develop, public notice and submit to EPA for review and approval a consolidated TMDL Implementation Plan within 30 months of the effective date of this permit provision. This Plan shall include, at a minimum, the following TMDLs and any subsequent updates:

1. TMDL for Biochemical Oxygen Demand (BOD) in the Upper and Lower Anacostia River (2001)
2. TMDL for Fecal Coliform Bacteria in the Upper and Lower Anacostia River (2003)
3. TMDL for Organics and Metals in the Anacostia River and Tributaries (2003)
4. TMDL for Fecal Coliform Bacteria in Kingman Lake (2003)
5. TMDL for Total Suspended Solids, Oil and Grease and Biochemical Oxygen Demand in Kingman Lake (2003)

6. TMDL for Fecal Coliform Bacteria in Rock Creek (2004)
7. TMDL for Organics and Metals in the Tributaries to Rock Creek (2004)
8. TMDL for Fecal Coliform Bacteria in the Upper, Middle and Lower Potomac River and Tributaries (2004)
9. TMDL for Organics, Metals and Bacteria in Oxon Run (2004)
10. TMDL for Organics in the Tidal Basin and Washington Ship Channel (2004)
11. TMDL for Sediment/Total Suspended Solids for the Anacostia River Basin in Maryland and the District (2007) [pending resolution of court vacature, Anacostia Riverkeeper, Inc. v. Jackson, No. 09-cv-97 (RCL)]
12. TMDL for PCBs for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland and Virginia (2007)
13. TMDL for Nutrients/Biochemical Oxygen Demand for the Anacostia River Basin in Maryland and the District (2008)
14. TMDL for Trash for the Anacostia River Watershed, Montgomery and Prince George's Counties, Maryland and the District of Columbia (2010)
15. TMDL for Nitrogen, Phosphorus and Sediment for the Chesapeake Bay Watershed (2010)

This Plan shall place particular emphasis on the pollutants in Table 4, but shall also evaluate other pollutants of concern for which relevant WLAs exist. EPA will incorporate elements of the Consolidate TMDL Implementation Plan as enforceable permit provisions, including milestones and final dates for attainment of applicable WLAs. The permittee shall fully implement the Plan upon EPA approval. This Plan shall preempt any existing TMDL implementation plans for the relevant WLAs. To account for any new or revised TMDL established or approved by EPA with wasteload allocations assigned to District MS4 discharges, the permittee shall submit an updated Consolidated TMDL Implementation Plan annually, as necessary. Such updates will account for any actions taken in the 12-month period preceding the date 6 months before the revision is due. If necessary, the first such update will be due 18 months after the submittal of the initial Plan, with subsequent updates due on the anniversary of the submittal date.

The Plan shall include:

1. A specified schedule for attainment of WLAs that includes final attainment dates and, where applicable, interim milestones and numeric benchmarks.
    a. Numeric benchmarks will specify annual pollutant load reductions and the extent of control actions to achieve these numeric benchmarks.
    b. Interim milestones will be included where final attainment of applicable WLAs requires more than five years. Milestone intervals will be as frequent as possible but will in no case be greater than five (5) years.
2. Demonstration using modeling of how each applicable WLA will be attained using the chosen controls, by the date for ultimate attainment.
3. An associated narrative providing an explanation for the schedules and controls included in the Plan.

4. Unless and until an applicable TMDL is no longer in effect (e.g., withdrawn, reissued or the water delisted), the Plan must include the elements in 1-3 above for each TMDL as approved or established.
5. The current version of the Plan will be posted on the permittee's website.

4.10.4 Adjustments to TMDL Implementation Strategies

If evaluation data, as outlined in the monitoring strategy being developed per Part 5.1, indicate insufficient progress towards attaining any WLA covered in 4.10.1, 4.10.2 or 4.10.3, the permittee shall make the appropriate adjustements within six (6) months to address the insufficient progress and document those adjustments in the Consolidated TMDL Implementation Plan. The Plan modification shall include a reasonable assurance demonstration of the additional controls to achieve the incorporated milestones. Annual reports must include a description of progress as evaluated against all implementation objectives, milestones and benchmarks, as relevant, outlined in Part 4.10.

4.11 Additional Pollutant Sources

For any additional pollutant sources not addressed in sections 4.1 through 4.9, the permittee shall continue to compile pertinent information on known or potential pollution sources, including significant changes in:

1. land use activities,
2. population estimates,
3. runoff characteristics,
4. major structural controls,
5. landfills,
6. publicly owned lands, and
7. industries impacting the MS4.

For purposes of this section, “significant changes” are changes that have the potential to revise, enhance, modify or otherwise affect the physical, legal, institutional, or administrative characteristics of the above-listed potential pollution sources. This information shall be submitted in each of the Annual Reports submitted to EPA pursuant to the procedures in Part 6.2 herein. For the Stormwater Model, analysis of data for these pollution sources shall be reported according to Part 7 herein.

The permittee shall implement controls to minimize and prevent discharges of pollutants from additional pollutant sources, including but not limited to Bacteria (*E. coli*), Total Nitrogen, Total Phosphorus, Total Suspended Solids, Cadmium, Copper, Lead, Zinc, and Trash, to receiving waters. Controls shall be designed to prevent and restrict priority pollutants from coming into contact with stormwater, *e.g.*, restricting the use of lawn fertilizers rather than end-of-pipe treatment. These strategies shall include program priorities and a schedule of activities to address those priorities and an outline of which agencies will be responsible for implementing those strategies. The strategies used to reduce or eliminate these pollutants shall be documented in updates to the Stormwater Management Program Plan.

5. MONITORING AND ASSESSMENT OF CONTROLS

5.1 Revised monitoring program

5.1.1 Design of the Revised Monitoring Program

Within 30 months of the effective date of Part 4.10.3 of this permit the permittee shall develop, public notice and submit to EPA for review and approval a revised monitoring program. The permittee shall fully implement the program upon EPA approval. The revised monitoring program shall meet the following objectives:

1. Make wet weather loading estimates of the parameters in Table 4 from the MS4 to receiving waters. Number of samples, sampling frequencies and number and locations of sampling stations must be adequate to ensure data are statistically significant and interpretable.

2. Evaluate the health of the receiving waters, to include biological and physical indicators such as macroinvertebrates and geomorphologic factors. Number of samples, frequencies and locations must be adequate to ensure data are statistically significant and interpretable for long-term trend purposes (not variation among individual years or seasons).

3. Include any additional necessary monitoring for purposes of source identification and wasteload allocation tracking. This strategy must align with the Consolidated TMDL Implementation Plan required in Part 4.10.3 For all pollutants in Table 4 monitoring must be adequate to determine if relevant WLAs are being attained within specified timeframes in order to make modifications to relevant management programs, as necessary.

Table 4
Monitoring Parameters

Parameter
E. coli
Total nitrogen
Total phosphorus
Total Suspended Solids
Cadmium
Copper
Lead
Zinc
Trash

4. All chemical analyses shall be performed in accordance with analytical methods approved under 40 C.F.R. Part 136. When there is not an approved analytical method, the applicant may use any suitable method as described in Section 5.7 herein, but must provide a description of the method.

5.1.2 Utilization of the Revised Monitoring Program

The permittee must use the information to evaluate the quality of the stormwater program and the health of the receiving waters at a minimum to include:

1. The permittee shall estimate annual cumulative pollutant loadings for pollutants listed in Table 4. Pollutant loadings and, as appropriate, event mean concentrations, will be reported in DMRs and annual reports on TMDL implementation for pollutants listed in Table 4 in discharges from the monitoring stations in Table 5.

2. The permittee shall perform the following activities at least once during the permit term, but no later than the fourth year of this permit:

   a. Identify and prioritize additional efforts needed to address water quality exceedances, and receiving stream impairments and threats;

   b. Identify water quality improvements or degradation

Upon approval of the Revised Monitoring Program by EPA Region III, or 2 years from the effective date of this permit, whichever comes first, the permittee shall begin implementation of the Revised Monitoring Program.

5.2 Interim Monitoring

Until such time as EPA has approved the Revised Monitoring Program, the permittee shall implement the following monitoring program:

5.2.1 Wet Weather Discharge Monitoring

The permittee shall monitor for the parameters identified in Table 4 herein, at the locations listed in Table 5 herein. Monitoring frequency for chemical/physical parameters shall be taken by at least three times per year at a minimum. This does not include a geomorphologic assessment and/or physical habitat assessment. The permittee shall conduct sampling as provided in 40 C.F.R. § 122.21(g)(7).

The permittee shall monitor and provide an annual Discharge Monitoring Report for the period of interim monitoring.

TABLE 5
Monitoring Stations

A. Anacostia River Sub Watershed Monitoring Sites
1. Gallatin Street & 14th Street N.E. across from the intersection of 14th St. and Gallatin St. in an outfall (MS-2)
2. Anacostia High School/Anacostia Recreation Center – Corner of 17th St and Minnesota Ave SE
B. Rock Creek Subwatershed Monitoring Sites
1. Walter Reed -- Fort Stevens Drive -- 16th Street and Fort Stevens Road, N.W. at an outfall (MS-6)
2. Soapstone Creek -- Connecticut Avenue and Ablemarle Street N.W. at an outfall (MS-5)
C. Potomac River Subwatershed Monitoring Sites
1. Battery Kemble Creek-49th and Hawthorne Streets, N.W. at an outfall (MS-4)
2. Oxon Run-Mississippi Avenue and 15th Street, S.E. into Oxon Run via an outfall (MS-1)

The permittee may revise this list of sites in accordance with its revised monitoring program in Section 5.1 herein. Otherwise, changes to the above MS4 monitoring stations and/or sites for any reason shall be considered a major modification to the permit subject to the reopener clause.

During the interim monitoring period for the pollutants listed in Table 4, demonstration of compliance will be calculated using the procedures identified in the SWMP, the approved Anacostia River TMDL Implementation Plan, and/or other appropriate modeling tools and data on management practices efficiencies. The annual report will provide all monitoring data, and a brief synthesis of whether the data indicate that relevant wasteload allocations and other relevant targets are being achieved.

5.2.2 Storm Event Data

In addition to the parameters listed above, the permittee shall continue to maintain records of the date and duration (in hours) of the storm events sampled; rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff; the duration (in hours) between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and a calculated flow estimate of the total volume (in gallons) and nature of the discharge sampled.

5.2.3 Sample Type, Collection, and Analysis

The following requirements apply only to samples collected for Part 5.2.1, Representative Monitoring.

1. For discharges from holding ponds or other impoundments with a retention period greater than 24 hours, (estimated by dividing the volume of the detention pond by the estimated volume of water discharged during the 24 hours previous to the time that the sample is collected) a minimum of one sample shall be taken for pollutants listed in Table 4 including temperature, DO, pH and specific conductivity. For all parameters, data shall be reported for the entire event of the discharge pursuant to 40 C.F.R. § 122.26(d)(2)(iii).

2. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Samples may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire discharge, with each aliquot being separated by a minimum period of fifteen minutes.

3. Analysis and collection of samples shall be done in accordance with the most recent EPA approved laboratory methods and procedures specified at 40 C.F.R. Part 136 and its subsequent amendments.

5.2.4 Sampling Waiver

When a discharger is unable to collect samples due to adverse climatic conditions, the discharger must submit in lieu of sampling data a description of why samples could not be collected, including available documentation of the event.

Adverse climatic conditions which may prohibit the collection of samples includes weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.).

5.3 Dry Weather Monitoring

5.3.1 Dry Weather Screening Program

The permittee shall continue with ongoing efforts to detect the presence of illicit connections and improper discharges to the MS4 pursuant to the District SWMP. The permittee shall perform the following: (1) continue to screen known problem sewersheds within the District based on past screening activities; (2) continue to inventory all MS4 outfalls in the District and inspect all outfalls by the end of the permit term; and (3) ensure that the dry weather screening program has addressed all watersheds within the permit term. The screening shall be

sufficient to estimate the frequency and volume of dry weather discharges and their environmental impact.

5.3.2 Screening Procedures

Screening may be developed and/or modified based on experience gained during actual field screening activities. The permittee shall establish a protocol which requires screening to ensure that such procedures are occurring, but such protocol need not conform to the procedures published at 40 C.F.R. § 122.26(d)(1)(iv)(D). The permittee shall describe the protocol actually used in each Annual Report with a justification for its use. The procedures described in the SWMP shall be used as guidance.

5.3.3 Follow-up on Dry Weather Screening Results

The permittee shall continue to implement its enforcement program for locating and ensuring elimination of all suspected sources of illicit connections and improper disposal identified during dry weather screening activities. The permittee shall report the results of such implementation in each Annual Report.

5.4. Area and/or Source Identification Program

The permittee shall continue to implement a program to identify, investigate, and address areas and/or sources within its jurisdiction that may be contributing excessive levels of pollutants to the MS4 and receiving waters, including but not limited to those pollutants identified in Table 4 herein.

5.5 Flow Measurements

The permittee shall continue to select and use appropriate flow measurement devices and methods consistent with accepted scientific practices to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device.

5.6 Monitoring and Analysis Procedures

5.6.1 Monitoring must be conducted according to laboratory and test procedures approved under 40 C.F.R. Part 136 and subsequent amendments, unless other test procedures have been specified in the permit.

5.6.2 The permittee is authorized to use a more current or sensitive (i.e., lower) detection method than the one identified in 40 C.F.R. Part 136 exists for a particular parameter, including but not limited to PCBs (Method 1668B) and mercury (Method 1631E). If used, the permittee shall report using the more current and/or more sensitive method for compliance reporting and monitoring purposes.

5.6.3 EPA reserves the right to modify the permit in order to require a more sensitive method for measuring compliance with any pollutant contamination levels, consistent with 40 CFR, Part 136, should it become necessary.

5.7 Reporting of Monitoring Results

The permittee shall continue to report monitoring results annually in a Discharge Monitoring Report. If NetDMR (http://www.epa.gov/netdmr/) is unavailable to any of the following then the original and one copy of the Report are to be submitted at the following addresses:

NPDES Permits Branch
U.S. EPA Region III (3WP41)
Water Protection Division
1650 Arch Street
Philadelphia, PA 19103-2029

National Marine Fisheries Service/Northeast Region
Protected Resource Division
55 Great Republic Drive
Gloucester, Massachusetts 01930-2276

Monitoring results obtained during the previous year shall be summarized and reported in the Annual Report.

5.8 Additional Monitoring by the Permittee

If the permittee monitors (for the purposes of this permit) any pollutant more frequently than required by this permit, using laboratory and test procedures approved under 40 C.F.R. Part 136 and subsequent amendments or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the annual Discharge Monitoring Report. Such frequency shall also be indicated.

5.9 Retention of Monitoring Information

The permittee shall continue to retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation for a period of at least five(5) years from the date of the sample, measurement or report. This period may be extended by request of EPA at any time.

5.10 Record Content

Records of monitoring information shall include:

1. The date, exact location, time and methods of sampling or measurements;
2. The individual(s) who performed the sampling or measurements;

3. The date(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

6. REPORTING REQUIREMENTS

The permittee shall comply with the reporting requirements identified in this section, including but not limited to the deliverables identified in Table 6 below.

TABLE 6
Reporting Requirements

Submittal	Deadline
Discharge Monitoring Report	Each year on the anniversary of the effective date of the permit (AEDOP)
Annual Report	Each year on the AEDOP.
MS4 Permit Application	Six months prior to the permit expiration date.

6.1 Discharge Monitoring Reports

The permittee shall provide discharge monitoring reports per Part 5.7 of this permit on the quality of stormwater discharges from the MS4 for all analytical chemical monitoring stipulated in Part 5 of this permit.

6.2 Annual Reporting

The permittee shall submit an Annual Report to EPA on or by the effective yearly date of the permit for the duration of the permitting cycle. At the same time the Annual Report it submitted to EPA it shall also be posted on the permittee's website at an easily accessible location. If the annual report is subsequently modified per EPA approval (part 6.2.3 of this permit) the updated report shall be posted on the permittee's website.

6.2.1 Annual Report.

The Annual Report shall follow the format of the permit as written, address each permit requirement, and also include the following elements:

a. A review of the status of program implementation and compliance (or non-compliance) with all provisions and schedules of compliance contained in this

permit, including documentation as to compliance with performance standards and other provisions and deliverables contained in Section 4 herein;

b. A review of monitoring data and any trends in estimated cumulative annual pollutant loadings, including TMDL WLAs and TMDL implementation activities;

c. An assessment of the effectiveness of controls established by the SWMP;

d. An assessment of the projected cost of SWMP implementation for the upcoming year (or longer) and a description of the permittee's budget for existing stormwater programs, including: (i) an overview of the permittee's financial resources and budget, (ii) overall indebtedness and assets, (iii) sources for funds for stormwater programs; and (iv) a demonstration of adequate fiscal capacity to meet the requirements of this permit, subject to the (a) the federal Anti-Deficiency Act, 31 U.S.C. §§ 1341, 1342, 1349, 1351, (b) the District of Columbia Anti-Deficiency Act, D.C. Official Code §§ 47-355.01-355.08 (2001), (c) D.C. Official Code § 47-105 (2001), and (d) D.C. Official Code § 1-204.46 (2006 Supp.), as the foregoing statutes may be amended from time to time;

e. A summary describing the number and nature of enforcement actions, inspections, and public education programs and installation of control systems;

f. Identification of water quality improvements or degradation through application of a measurable performance standard as stated throughout this permit;

g. Results of storm and water quality modeling and its use in planning installation of control systems and maintenance and other activities;

h. An assessment of any SWMP modifications needed to meet the requirements of this permit;

i. Revisions, if necessary, to the assessments of controls and the fiscal analysis reported in the permit application under 40 C.F.R. § 122.26(d)(2)(iv) and (v);

j. Methodology to assess the effects of the Stormwater Management Program (SWMP);

k. Annual expenditures and budget for the year following each annual report;

l. A summary of commitments for the next year and evaluation of the commitments from the previous year;

m. A summary of the monitoring data for stormwater and ambient sampling that is collected in the previous year and the plan, including identification of monitoring locations, to collect additional data for the next year;

n. The amount of impervious cover within the District, and within the three major watersheds in the District (Anacostia, Potomac and Rock Creek);

o. The percentage of effective impervious cover reduced annually, including but not limited to the number and square footage of green roofs installed in the District, including the square footage of drainage managed by practices that meet the performance standard in 4.1.1; and

p. An analysis of the work to be performed in the next successive year, including performance measures for those tasks. In the following year, progress with those performance measures shall be part of the Annual Report. The basis for each of the performance standards, which will be used as tools for evaluating environmental results and determining the success of each MS4 activity, shall be described incorporating an integrated program approach that considers all programs and projects which have a direct as well as an indirect affect on

stormwater management quantity and quality within the District. The report shall also provide an update of the fiscal analysis for each year of the permit as required by 40 C.F.R. § 122.26(d)(2)(vi).

6.2.2 Annual Report Meeting

Within 12 months of the effective date of this permit the permittee shall convene an annual report meeting with EPA to present annual progress and plans for the following year. In conjunction with this meeting the annual written report may consist of presentation materials summarizing all required elements of the annual report rather than a lengthy written report, as long as all required elements are included. Following this first annual reporting meeting EPA and the permittee shall determine if the meeting and associated presentation materials constitute an effective reporting mechanism. With the agreement of both EPA and the permittee the annual reporting meeting and the use of summarized presentation materials in lieu of a lengthy written report may be extended for the remainder of the permit term.

6.2.3 Annual Report Revisions

Each Annual Report may be revised with written approval by EPA. The revised Report will become effective after its approval.

6.2.4 Signature and Certification

The permittee shall sign and certify the Annual Report in accordance with 40 C.F.R §122.22(b), and include a statement or resolution that the permittee's governing body or agency (or delegated representative) has reviewed or been appraised of the content of such submissions. The permittee shall provide a description of the procedure used to meet the above requirement.

6.2.5 EPA Approval

In reviewing any submittal identified in Table 1 or 6, EPA may approve or disapprove each submittal. If EPA disapproves any submittal, EPA shall provide comments to the permittee. The permittee shall address such comments in writing within thirty (30) days of receipt of the disapproval from EPA. If EPA determines that the permittee has not adequately addressed the disapproval/comments, EPA may revise that submittal or portions of that submittal. Such revision by EPA is effective thirty (30) days from receipt by the permittee. Once approved by EPA, or in the event of EPA disapproval, as revised by EPA, each submission shall be an enforceable element of this permit.

6.3 MS4 Permit Application

The permittee develop a permit Application based on the findings presented in each of the Annual SWMP Reports submitted during the permitting cycle to be submitted six months prior to the expiration date of the permit. The permit application shall define the next iterative set of objectives for the program and provide an analysis to demonstrate that these objectives will be achieved in the subsequent permit term.

7. STORMWATER MODEL

The permittee shall continue to update and report all progress made in developing a Stormwater Model and Geographical Information System (GIS) to EPA on an annual basis as an attachment to each Annual Report required herein.

On an annual basis, the permittee shall report on pollutant load reductions throughout the area covered by this permit using the statistical model developed by DDOE or other appropriate model. In the annual update, the permittee shall include, at a minimum, other applicable components which are not only limited to those activities identified in Section 6 herein, but which are necessary to demonstrate the effectiveness of the permittee's Stormwater Management Program toward implementing a sustainable strategy for reducing stormwater pollution runoff to the impaired waters of the District of Columbia.

Assess performance of stormwater on-site retention projects through monitoring, modeling and/or estimating storm retention capacity to determine the volume of stormwater removed from the MS4 in a typical year of rainfall as a result of implementing stormwater controls. This provision does not require all practices to be individually monitored, only that a reasonable evaluation strategy must provide estimates of overall volume reductions by sewershed.

8. STANDARD PERMIT CONDITIONS FOR NPDES PERMITS

8.1 Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and may result in an enforcement action; permit termination, revocation and reissuance, or modification; and denial of a permit renewal application.

8.2 Inspection and Entry

The permittee shall allow EPA, or an authorized representative, and/or the permittee's contractor(s)/subcontractor(s), upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises at reasonable times where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be maintained under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), processes, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

8.3 Civil and Criminal Penalties for Violations of Permit Conditions

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

The Clean Water Act provides that any person who violates Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act, or any permit condition or limitation implementing such section, or any requirement imposed in an approved pretreatment program and any person who violates any Order issued by EPA under Section 301(a) of the Act, shall be subject to a civil penalty not to exceed $25,000 per day for each violation, Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, EPA has raised the statutory maximum penalty for such violations to $37,500 per day for each such violation. 74 Fed. Reg. 626 (Jan. 7, 2009). The Clean Water Act also provides for an action for appropriate relief including a permanent or temporary injunction.

Any person who negligently violates Section 301, 302, 305, 307, 308, 318, or 405 of the Clean Water Act, any permit condition or limitation implementation any such section, shall be punished by a criminal fine of not less than $5,000 nor more than $50,000 per day of such violation, or by imprisonment for not more than 3 years, or by both. Any person who knowingly violates any permit condition or limitation implementing Section 301, 302, 305, 307, 308, 318, or 405 of the Clean Water Act, and who knows at the time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000, or by imprisonment of not more than 15 years, or by both.

8.4 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

In the event that the permittee or permitting authority determines that discharges are causing or contributing to a violation of applicable WQS, the permittee shall take corrective action to eliminate the WQS exceedance or correct the issues and/or problems by requiring the party or parties responsible for the alleged violation(s) comply with Part I.C.1 (Limitations to Coverage) of this permit. The methods used to correct the WQS exceedances shall be documented in subsequent annual reports and in revisions to the Stormwater Management Program Plan.

8.5 Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this permit;

2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

3. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;

4. Information newly acquired by the Agency, including but not limited to the results of the studies, planning, or monitoring described and/or required by this permit;

5. Material and substantial facility modifications, additions, and/or expansions;

6. Any anticipated change in the facility discharge, including any new significant industrial discharge or changes in the quantity or quality of existing industrial discharges that will result in new or increased discharges of pollutants; or

7. A determination that the permitted activity endangers human health or the environment and that it can only be regulated to acceptable levels by permit modification or termination.

The effluent limitations expressed in this permit are based on compliance with the District of Columbia's water quality standards in accordance with the Clean Water Act. In the event of a revision of the District of Columbia's water quality standards, this document may be modified by EPA to reflect this revision.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. When a permit is modified, only conditions subject to modification are reopened.

8.6 Retention of Records

The permittee shall continue to retain records of all documents pertinent to this permit not otherwise required herein, including but not limited copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five (5) years from the expiration date of this permit. This period may be extended by request of EPA at any time.

8.7 Signatory Requirements

All Discharge Monitoring Reports, plans, annual reports, certifications or information either submitted to EPA or that this permit requires be maintained by the permittee shall be signed by either a principal executive officer or ranking elected official, or a duly authorized representative of that person. A person is a duly authorized representative only if: (i) the authorization is made in writing by a person described above and submitted to EPA; and (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for an agency. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new notice satisfying the requirements of this paragraph must be submitted to EPA prior or together with any reports, information, or applications to be signed by an authorized representative.

8.8 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act, 33 U.S.C. § 1321.

8.9 District Laws, Regulations and Ordinances

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable District law, regulation or ordinance identified in the SWMP. In the case of "exemptions and waivers" under District law, regulation or ordinance, Federal law and regulation shall be controlling.

8.10 Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

8.11 Severability

The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

8.12 Transfer of Permit

In the event of any change in ownership or control of facilities from which the authorized discharge emanates, the permit may be transferred to another person if:

1. The current permittee notifies the EPA, in writing of the proposed transfer at least 30 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

3. The EPA does not notify the current permittee and the new permittee of intent to modify, revoke and reissue, or terminate the permit and require that a new application be submitted.

8.13 Construction Authorization

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

8.14 Historic Preservation

During the design stage of any project by the Government of the District of Columbia within the scope of this permit that may include ground disturbance, new and existing or retrofit construction, or demolition of a structure, the permittee shall notify the Historic Preservation liaison and provide the liaison planning documents for the proposed undertaking. The documents shall include project location; scope of work or conditions; photograph of the area/areas to be impacted and the methods and techniques for accomplishing the undertaking. Depending on the complexity of the undertaking, sketches, plans and specifications shall also be submitted for review. The documentation will enable the liaison to assess the applicability of compliance procedures associated with Section 106 of the National Historic Preservation Act. Among the steps in the process are included:

1. The determination of the presence or absence of significant historic properties (architectural, historic or prehistoric). This can include the evaluation of standing structures and the determination of the need for an archaeological survey of the project area.

2. The evaluation of these properties in terms of their eligibility for nomination to the National Register of Historic Places.

3. The determination of the effect that the proposed undertaking will have on these properties.

4. The development of mitigating measures in conjunction with any anticipated effects.

All such evaluations and determinations will be presented to the permittee for its concurrence.

If an alternate Historic Preservation procedure is approved by EPA in writing during the term of this permit, the alternate procedure will become effective after its approval.

8.15 Endangered Species

The U.S. Fish and Wildlife Service (FWS) has indicated that Hay's Spring Amphipod, a Federally listed endangered species, occurs at several locations in the District of Columbia. The National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) has indicated that the endangered shortnose sturgeon occurs in the Potomac River drainage and may occur within the District of Columbia. The FWS and NOAA Fisheries indicate that at the present time there is no evidence that the ongoing stormwater discharges covered by this permit are adversely affecting these Federally-listed species. Stormwater discharges, construction, or any other activity that adversely affects a Federally-listed endangered or threatened species are not authorized under the terms and conditions of this permit.

The monitoring required by this permit will allow further evaluation of potential effects on these threatened and endangered species once monitoring data has been collected and analyzed. EPA requires that the permittee submit to NOAA Fisheries, at the same time it submits to EPA, the Annual Outfall Discharge Monitoring Report of the monitoring data which will be used by EPA and NOAA Fisheries to further assess effects on endangered or threatened species. If this data indicates that it is appropriate, requirements of this NPDES permit may be modified to prevent adverse impacts on habitats of endangered and threatened species.

The above-referenced Report of monitoring data is required under this permit to be sent on an annual basis to:

The United States Environmental Protection Agency
Region III (3WP41)
Water Protection Division
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

National Marine Fisheries Service/Northeast Region
Protected Resource Division
55 Great Republic Drive
Gloucester, Massachusetts 01930-2276

8.16 Toxic Pollutants

If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Act, 33 U.S.C. § 1317(a), for a toxic pollutant which is present in the discharge and such standard or prohibition

is more stringent than any limitation for such pollutant in this permit, the permittee shall comply with such standard or prohibition even if the permit has not yet been modified to comply with the requirement.

8.17 Bypass

8.17.1 Bypass not exceeding limitations. In accordance with 40 C.F.R. § 122.41(m), the permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation.

8.17.2 Notice

1. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it must submit prior notice at least ten days before the date of the bypass. See 40 C.F.R. § 122.41(m)(3)(i).

2. Unanticipated bypass. The permittee must submit notice of an unanticipated bypass as required by 40 C.F.R. § 122.41(l)6) (24-hour notice). See 40 C.F.R. § 122.41(m)(3)(ii).

8.17.3 Prohibition of bypass. See 40 C.F.R. § 122.41(m)(4).

1. Bypass is prohibited, and EPA may take enforcement action against the permittee for bypass, unless:

    a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage as defined herein;

    b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

    c. The permittee submitted notices as required herein.

2. EPA may approve an anticipated bypass, after considering its adverse effects, if EPA determines that it will meet the three conditions listed above.

8.18 Upset

Effect of an upset: An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of 40 C.F.R. § 122.41(n) are met.

8.19 Reopener Clause for Permits

The permit shall be modified or revoked and reissued, including but not limited to, for any of the following reasons:

1. To incorporate any applicable effluent standard or limitation issued or approved under Sections 301, 304, or 307 of the Clean Water Act, and any other applicable provision, such as provided for in the Chesapeake Bay Agreements based on water quality considerations, and if the effluent standard or limitation so issued or approved:

   a. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

   b. Controls any pollutant not limited in the permit. The permit, as modified or reissued under this paragraph, shall also contain any other requirements of the Act then applicable; or

2. To incorporate additional controls that are necessary to ensure that the permit effluent limits are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4 or to incorporate milestones and schedules of a TMDL Implementation Plan; or

3. As specified in 40 C.F.R. §§ 122.44(c), 122.62, 122.63, 122.64, and 124.5.

8.20 Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, it must apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit. EPA may grant permission to submit an application less than 180 days in advance but no longer than the permit expiration date. In the event that a timely and complete reapplication has been submitted and EPA is unable through no fault of he permittee, to issue a new permit before the expiration date of this permit, the terms and conditions of this permit are automatically continued and remain fully effective and enforceable.

9. PERMIT DEFINITIONS

Terms that are not defined herein shall have the meaning accorded them under section 502 of the Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*, or its implementing regulations, 40 C.F.R. Part 122.

"Annual Report" refers to the consolidated Annual Report that the permittee is required to submit annually.

"Benchmark" as used in this permit is a quantifiable goal or target to be used to assess progress toward "milestones" (see separate definition) and WLAs, such as a numeric goal for BMP implementation. If a benchmark is not met, the permittee should take appropriate corrective action to improve progress toward meeting milestones or other objectives. Benchmarks are intended as an adaptive management aid and generally are not considered to be enforceable.

"Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. See 40 C.F.R. § 122.41(m)(1)(i).

"CWA" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. (6-483 and Pub. L. 97-117, 33 U.S.C. §§ 1251 *et seq.*

"Development" is the undertaking of any activity that disturbs a surface area greater than or equal to 5,000 square feet, including new development projects and redevelopment projects. For purposes of Parts 4.1.1 through 4.1.4 of the permit the requirements apply to discharges from sites for which design or construction commenced after 18 months from the effective date of this permit or as required by District of Columbia law, whichever is sooner. The permittee may exempt development projects receiving site plan approval prior to this date from these requirements.

"Director" means the Regional Administrator of USEPA Region 3 or an authorized representative.

"Discharge" for the purpose of this permit, unless indicated otherwise, refers to discharges from the Municipal Separate Storm Sewer System (MS4).

"Discharge Monitoring Report", "DMR" or "Outfall Discharge Monitoring Report" includes the monitoring and assessment of controls identified in Section 5 herein.

"EPA" means USEPA Region 3.

"Green Roof" is a low-maintenance roof system that stores rainwater where the water is taken up by plants and/or transpired into the air.

"Green Technology Practices" means stormwater management practices that are used to mimic pre-development site hydrology by using site design techniques that retain stormwater on-site through infiltration, evapotranspiration, harvest and use.

"Guidance" means assistance in achieving a particular outcome or objective.

"Illicit connection" means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

"Illicit discharge" means any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities, pursuant to 40 C.F.R. § 122.26(b)(2).

“Impaired Water” (or “Water Quality Impaired Water” or “Water Quality Limited Segment”): A water is impaired for purposes of this permit if it has been identified by the District or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State water quality standards (these waters are called “water quality limited segments” under 40 C.F.R. 30.2(j)). Impaired waters include both waters with approved or established TMDLs, and those for which a TMDL has not yet been approved or established.

"Landfill" means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit (i.e., an area where wastes are applied onto or incorporated into the soil surface [excluding manure spreading operations] for treatment or disposal), surface impoundment, injection well, or waste pile.

"Large or Medium municipal separate storm sewer system" means all municipal separate storm sewers that are either: (1) located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and G of 40 C.F.R. Part 122); or (2) located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (these counties are listed in Appendices H and I of 40 C.F.R. Part 122); or (3) owned or operated by a municipality other than those described in paragraph (i) or (ii) and that are designated by the Director as part of the large or medium municipal separate storm sewer system.

"Milestone" as used in this permit is an interim step toward attainment of a WLA that upon incorporation into the permit will become an enforceable limit or requirement to be achieved by a stated date. A milestone should be expressed in numeric terms, i.e. as a volume reduction, pollutant load, specified implementation action or set of actions or other objective metric, when possible and appropriate.

"MS4" refers to either a Large or Medium Municipal Separate Storm Sewer System.

"Municipal Separate Storm Sewer" means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (1) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State Law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes; (2) Designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.); (3) not a combined sewer; and (4) not part of a Publicly-Owned Treatment Works as defined at 40 C.F.R. § 122.2.

"Offset" means a unit of measurement, either used as monetary or non-monetary compensation, as a substitute or replacement for mitigation of a stormwater control practice that has been determined to be impracticable to implement.

"Performance measure" means for purposes of this permit, a minimum set of criteria for evaluating progress toward meeting a standard of performance.

"Performance standard" means for purposes of this permit, a cumulative measure or provision for attainment of an outcome or objective.

"Permittee" refers to the Government of the District of Columbia.

"Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

"Pollutant of concern" means a pollutant in an MS4 discharge that may cause or contribute to the violation of a water quality criterion for that pollutant downstream from the discharge.

"Pre-Development Condition" means the combination of runoff, infiltration and evapotranspiration rates, volumes, durations and temperatures that typically existed on the site with natural soils and vegetation before human-induced land disturbance occurred. In the context of requirements in this permit the environmental objective is a stable, natural hydrologic site condition that protects or restores to the degree relevant for that site, stable hydrology in the receiving water, which will not necessarily be the hydrologic regime of that receiving water prior to any human disturbance in the watershed.

"Retention" means the use of soils, vegetation, water harvesting and other mechanisms and practices to retain a target volume of stormwater on a given site through the functions of: pore space and surface ponding storage; infiltration; reuse, and/or evapotranspiration.

"Retrofit" means improvement in a previously developed area that results in reduced stormwater discharge volumes and pollutant loads and/or improvement in water quality over current conditions.

"Stormwater" means the flow of surface water which results from, and which occurs immediately following, a rainfall event, snow melt runoff, and surface runoff and drainage.

"Stormwater management" means (1) for quantitative control, a system of vegetative or structural measures, or both, which reduces the increased volume and rate of surface runoff caused by man-made changes to the land; and (2) for qualitative control, a system of vegetative, structural, and other measures which reduce or eliminate pollutants which might otherwise be carried by surface runoff.

"SWMP" is an acronym for Stormwater Management Program. For purposes of this permit, the term includes all stormwater activities described in the District's SWMP Plan updated February 19, 2009, or any subsequent update, and all other strategies, plans, documents, reports, studies, agreements and related correspondences developed and used pursuant to the requirements of this permit.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 C.F.R. § 122.41(m)(1)(ii).

"Total Maximum Daily Load (TMDL) Units" means for purposes of this permit, the sum of individual waste load allocations (WLAs) and natural background. Unless specifically permitted otherwise in an EPA-approved TMDL report covered under the permit, TMDLs are expressed in terms of mass per time, toxicity or other appropriate measure such as pollutant pounds of a total average annual load.

"TMDL Implementation Plan" means for purposes of this permit, a plan and subsequent revisions/updates to that plan that are designed to demonstrate how to achieve compliance with applicable waste load allocations as set forth in the permit requirements described in Section 4.10.3.

"Stormwater Management Program (SWMP)" is a modified and improved SWMP based on the existing SWMP and on information in each of the Annual Reports/Discharge Monitoring Reports. The purpose of the SWMP is to describe the list of activities that need to be done to meet the requirements of the Clean Water Act, an explanation as to why these activities will meet the Clean Water Act requirements, and a schedule for those activities.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 C.F.R. § 122.41(n)(1).

"Waste pile" means any non-containerized accumulation of solid, nonflowing waste.

"Water quality standards" refers to the District of Columbia's Surface and Ground Water Quality Standards codified at Code of District of Columbia Regulations §§ 21-1100 *et seq.*, which are effective on the date of issuance of the permit and any subsequent amendments which may be adopted during the life of this permit.

"Waters of the United States" is defined at 40 C.F.R. § 122.2.

ATTACHMENT
24

FACT SHEET

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4)
Permit No. DC0000221 (Government of the District of Columbia)

NPDES PERMIT NUMBER: DC0000221 (Reissuance)

FACILITY NAME AND MAILING ADDRESS:

Government of the District of Columbia
The John A. Wilson Building
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

MS4 ADMINISTRATOR NAME AND MAILING ADDRESS:

Director, District Department of the Environment
1200 First Street, N.E., 6th Floor
Washington, D.C. 20002

FACILITY LOCATION:

District of Columbia's Municipal Separate Storm Sewer System (MS4)

RECEIVING WATERS:

Potomac River, Anacostia River, Rock Creek, and Stream Segments Tributary
To Each Such Water Body

INTRODUCTION:

Today's action finalizes reissuance of the District of Columbia Municipal Separate Storm Sewer System (MS4) Permit. In the Final Permit EPA has continued to integrate the adaptive management approach with enhanced control measures to address the complex issues associated with urban stormwater runoff within the corporate boundaries of the District of Columbia, where stormwater discharges via the Municipal Separate Storm Sewer System (MS4).

Since the United States Environmental Protection Agency, Region III (EPA) issued the District of Columbia (the District) its first MS4 Permit in 2000, the Agency has responded to a number of legal challenges involving both that Permit (as well as amendments thereto) and the second-round MS4 Permit issued in 2004. For the better part of ten years, the Agency has worked with various parties in the litigation, including the District and two non-governmental organizations, Defenders of Wildlife and Friends of the Earth, to address the concerns of the various parties. The Agency has engaged in both litigation and negotiation, including formal

mediation.[1] These activities ultimately led to an enhanced stormwater management strategy in the District, consisting of measurable outputs for addressing the issues raised during the litigation and mediation process.

FACILITY BACKGROUND AND DESCRIPTION:

The Government of the District of Columbia owns and operates its own MS4, which discharges stormwater from various outfall locations throughout the District into its waterways.[2]

On April 21, 2010 EPA public noticed the Draft Permit. The Draft Fact Sheet published with that Draft Permit contains more extensive permit background information, and the reader is referred to that document for the history of the District of Columbia MS4 permit.

The public comment period closed on June 4, 2010. EPA received comments from 21 individual commenters and an additional 53 form letters. The Draft Permit, Draft Fact Sheet, and comments received on those documents are all available at: http://www.epa.gov/reg3wapd/npdes/draft_permits.html. The Final Permit reflects many of the comments received. EPA is simultaneously releasing a responsiveness summary responding to these comments.

ACTION TO BE TAKEN:

EPA is today reissuing the District of Columbia NPDES MS4 Permit. The Final Permit replaces the 2004 Permit, which expired on August 18, 2009 and has been administratively extended since that time. The Final Permit incorporates concepts and approaches developed from studies and pilot projects that were planned and implemented by the District under the 2000 and 2004 MS4 permits and modifying Letters of Agreement, and implements Total Maximum Daily Loads (TMDLs) that have been finalized since the prior permit was issued, including the Chesapeake Bay TMDL. A number of applicable measurable performance standards have been incorporated into the Final Permit. These and other changes between the 2004 Permit and today's Final Permit are reflected in a Comparison Document that is part of today's Permit issuance.

WATER QUALITY IN DISTRICT RECEIVING WATERS:

The District's *2008 Integrated Report to the Environmental Protection Agency and U.S. Congress Pursuant to Sections 305(b) and 303(d) Clean Water Act*[3] documents the serious water

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1 A procedural history of Permit appeals can be viewed at the EPA Environmental Appeals Board web: http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/77355bee1a56a5aa8525711400542d23/b5e5b68e89edabe98525714f00731c6f!OpenDocument&Highlight=2,municipal.

2 Portions of the District are served by a combined sanitary and storm sewer system. The discharges from the combined sewer system are not subject to the MS4 permit, but are covered under NPDES Permit No. xxxx issued to the District of Columbia Water and Sewer Authority.

3 District Department of the Environment, *The District of Columbia Water Quality Assessment, 2008 Integrated Report to the Environmental Protection Agency and U.S. Congress Pursuant to Sections 305(b) and 303(d) Clean Water Act* (hereinafter "2008 Integrated Report").

quality impairments in the surface waters in and around the District. A number of the relevant designated uses are not being met, *e.g.*, aquatic life, fish consumption, and full body contact, and there are a number of specific pollutants of concern that have been identified (for additional discussion on relevant TMDLs *see* Section 4.10 of this Final Fact Sheet).

Commenters on the Draft Permit expressed some frustration over very slow progress or even lack of progress after a decade of implementation of the MS4 program and even longer for other water quality programs. EPA appreciates this concern. Although the District's receiving waters are affected by a range of discharge sources, discharges from the MS4 are a significant contributor of pollutants and cause of stream degradation. EPA also recognizes, however, that stormwater management efforts that achieve a reversal of the ongoing degradation of water quality caused by urban stormwater discharges entail a long term, multi-faceted approach.

Consistent with the federal stormwater regulations for characterizing discharges from the MS4 (40 C.F.R. §122.26(d)(2)(iii)), the first two permit terms for the District's MS4 program required end-of-pipe monitoring to determine the type and severity of pollutants discharging via the system. The monitoring program was not designed to evaluate receiving water quality *per se*, therefore detection of trends or patterns was not reasonably possible. Today's Final Permit includes requirements for a Revised Monitoring Program, and one of the objectives for the program is to use a suite of approaches and indicators to evaluate and track water quality over the long-term (*see* discussion of Section 5.1 in this Final Fact Sheet).
There have been identified improvements in some areas. For example the *2008 Integrated Report* noted improvements in the diversity of submerged aquatic vegetation in the Potomac River, as well as improvements in fish species richness in Rock Creek. Biota metrics are often the best indicators of the integrity of any aquatic system.

EPA also notes that there are a variety of indirect measures indicative of improvement. The federal stormwater regulations foresaw the difficulty, especially in the near-term, of detecting measurable improvement in receiving waters, and relied instead on indirect measures, such as estimates of pollutant load reductions (40 C.F.R. §122.26(d)(2)(v)). The District documents these types of indirect measures in its annual reports, *e.g.*, tons of solids collected from catch basin clean-outs, amount of household hazardous waste collected, number of trees planted, square footage of green roofs installed, and many other measures of success.[4]

EPA believes that documenting trends in water quality, whether improvements, no change, or even further degradation, is an important element of a municipal water quality program. Today's Final Permit recognizes this principle, both in the types of robust measures required as well as the transition to new monitoring paradigms. EPA encourages all interested parties to provide the District with input during the development of these program elements.

THIS FACT SHEET:

(http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/information2/water.reg.leg/DC_IR_2008_Revised_9-9-2008.pdf

4 District MS4 Annual Reports can be found at: http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,495855.asp

This Final Fact Sheet is organized to correspond with the chronological organization and numbering in today's Final Permit. Where descriptions or discussions may be relevant to more than one element of the Final Permit the reader will be referred to the relevant section(s).

To keep today's Final Fact Sheet of readable length, many of the elements included in the fact sheet published with the Draft Permit (Draft Fact Sheet) on April 21, 2010 have not been repeated, but are referenced. Readers are referred to the Draft Fact Sheet published with the Draft Permit for additional discussion on provisions that have been finalized as proposed.[5] The Final Fact Sheet does discuss significant changes since the 2004 Permit (even if discussed in the Draft Fact Sheet). The Final Fact Sheet also contains additional explanation of the Final Permit where commenters requested additional clarification. In addition, this Final Fact Sheet explains modifications to the Final Permit where provisions were changed in response to comments.

In many cases EPA made a number of very simple modifications to the Final Permit, *e.g.*, a word, phrase, or minor reorganization, simply for purposes of clarification. These modifications were not intended to change the substance of the permit provisions, only to clarify them. Most of those types of edits are not discussed in this Final Fact Sheet, but EPA has provided a Comparison Document of the Draft and Final Permits for readers who would like that level of detail.

Many commenters noted that the Draft Permit was not logically organized. EPA agrees. The major reorganization principles include:

1) There is a new Section 3, Stormwater Management Program (SWMP) Plan consolidating the various plans, strategies and other documents developed in fulfillment of permit requirements.
2) All implementation measures, *i.e.*, those stipulating management measures and implementation policies, are included in Section 4 of today's Final Permit. This includes "Source Identification" elements (Section 3 in the Draft Permit) and "Other Applicable Provisions" elements (Section 8 in the Draft Permit), which included TMDL requirements.
3) All monitoring requirements are consolidated in Section 5 of the Final Permit.
4) All reporting requirements are consolidated in Section 6 of the Final Permit.

EPA also refers readers to the Responsiveness Summary released today along with the Final Permit and Final Fact Sheet, for responses to comments and questions received on the Draft Permit. That document contains additional detailed explanations of the rationale for changes made to the Draft Permit in the Final Permit.

Finally, EPA made significant effort to avoid appending or incorporating by reference other documents containing permit requirements into the Final Permit. In the interest of clarity

5 The Permit and Fact Sheet proposed on April 21, 2010 can be viewed at: http://www.epa.gov/reg3wapd/npdes/draft_permits.html

and transparency EPA, to the extent possible, has included all requirements directly in the permit. Thus, EPA reviewed a variety of documents with relevant implementation measures, *e.g.*, TMDL Implementation Plans and the 2008 Modified Letter of Agreement to the 2004 permit[6], and translated elements of those plans and strategies into specific permit requirements that are now contained in the Final Permit. This Fact Sheet provides an explanation of the sources of provisions that are significant and are a direct result of one of those strategies.

1. DISCHARGES AUTHORIZED UNDER THIS PERMIT

(1.2 Authorized Discharges): The Final Permit authorizes certain non-stormwater discharges, including discharges from water line flushing. One commenter noted that many of these discharges, especially from potable water systems, contain concentrations of chlorine that may exceed water quality standards. EPA agrees, and has therefore clarified that dechlorinated water line flushing is authorized to be discharged under the Final Permit.

(1.4 Discharge Limitations): Comments on the language in Part 1.4 varied widely. Some commenters did not believe it was reasonable to require discharges to meet water quality standards. Other commenters believed this to be an unambiguous requirement of the Clean Water Act.

Today's Final Permit is premised upon EPA's longstanding view that the MS4 NPDES permit program is both an iterative and an adaptive management process for pollutant reduction and for achieving applicable water quality standard and/or total maximum daily load (TMDL) compliance. *See generally,* "National Pollutant Discharge Elimination System Permit Application Regulations for Stormwater Discharges," 55 F.R. 47990 (Nov. 16, 1990).

EPA is aware that many permittees, especially those in highly urbanized areas such as the District, likely will be unable to attain all applicable water quality standards within one or more MS4 permit cycles. Rather the attainment of applicable water quality standards as an incremental process is authorized under section 402(p)(3)(B)(iii) of the Clean Water Act, 33 U.S.C. § 1342(p)(3)(B)(iii), which requires an MS4 permit "to reduce the discharge of pollutants to the maximum extent practicable" (MEP) "and such other provisions" deemed appropriate to control pollutants in municipal stormwater discharges. To be clear, the goal of EPA's stormwater program is attainment of applicable water quality standards, but Congress expected that many municipal stormwater dischargers would need several permit cycles to achieve that goal.

Specifically, the Agency expects that attainment of applicable water quality standards in waters to which the District's MS4 discharges, requires staged implementation and increasingly more stringent requirements over several permitting cycles. During each cycle, EPA will continue to review deliverables from the District to ensure that its activities constitute sufficient progress toward standards attainment. With each permit reissuance EPA will continue to increase

6 District Department of the Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

stringency until such time as standards are met in all receiving waters. Therefore today's Final Permit is clear that attainment of applicable water quality standards and consistency with the assumptions and requirements of any applicable WLA are requirements of the Permit, but, given the iterative nature of this requirement under CWA Section 402(p)(3)(B)(iii), the Final Permit is also clear that "compliance with all performance standards and provisions contained in the Final Permit shall constitute adequate progress toward compliance with DCWQS and WLAs for this permit term" (Section 1.4).

EPA believes that permitting authorities have the obligation to write permits with clear and enforceable provisions and thus the determination of what is the "maximum extent practicable" under a permit is one that must be made by the permitting authority and translated into provisions that are understandable and measurable. In this Final Permit EPA has carefully evaluated the maturity of the District stormwater program and the water quality status of the receiving waters, including TMDL wasteload allocations. In determining whether certain measures, actions and performance standards are practicable, EPA has also looked at other programs and measures around the country for feasibility of implementation. Therefore today's Final Permit does not qualify any provision with MEP thus leaving this determination to the discretion of the District. Instead each provision has already been determined to be the maximum extent practicable for this permit term for this discharger.

EPA modified the language in the Final Permit to provide clarity on the expectations consistent with the preceding explanation. Specifically Section 1.4.2 of the Final Permit requires that discharges 'attain' applicable wasteload allocations rather than just 'be consistent' with them, since the latter term is somewhat ambiguous.

In addition, the general discharge limitation 'no increase in pollutant loadings from discharges from the MS4 may occur to receiving waters' was removed because of the difficulty in measuring, demonstrating and enforcing this provision. Instead, consistent with EPA's belief that the Final Permit must include all of the enforceable requirements that would achieve this principle, the following discharge limitation is substituted: "comply with all other provisions and requirements contained in this permit, and in plans and schedules developed in fulfillment of this permit."

In addition, EPA made the following modifications: "Compliance with <u>the</u> performance standards and provisions contained in <u>Parts 2 through 8 of</u> this permit shall constitute adequate progress towards compliance with DCWQS <u>and WLAs for this permit term</u>" (*underlined text added*) (Section 1.4 of the Final Permit). EPA eliminated circularity with the addition of "Parts 2 through 8", clarifying that this requirement does not circle back to include the statements in 1.4.1 and 1.4.2, but rather interprets them. Also, although WLAs are a mechanism for attainment of water quality standards, EPA added the specific language "and WLAs" to make this concept explicit rather than just implicit. In addition this revised language emphasizes that the specific measures contained in the Final Permit, while appropriate for this permit term, will not necessarily constitute full compliance in subsequent permit terms. It is the expectation that with each permit reissuance, additional or enhanced requirements will be included with the objective

of ensuring that MS4 discharges do not cause or contribute to an exceedance of applicable water quality standards, including attainment of relevant WLAs.

2. LEGAL AUTHORITY, RESOURCES, AND STORMWATER PROGRAM ADMINISTRATION

(2.1 Legal Authority): Several commenters pointed out that there were a number of requirements in the Draft Permit without clear compliance schedules or deadlines, or with deadlines that did not correspond well to others in the permit. In the Final Permit, EPA has made several revisions to address these comments. For example, EPA changed a requirement that deficiencies in legal authority must be remedied "as soon as possible" to a 120-day requirement for deficiencies that can be addressed through regulation, and two years for deficiencies that require legislative action (Section 2.1.1). Also, EPA increased the compliance schedule for updating the District's stormwater regulation from twelve months to eighteen months, *id.,* so that this action could be adequately coordinated with the development of the District's new offsite mitigation/payment-in-lieu program (for more discussion see Section 4.1.3 below).

(2.2 Fiscal Resources): One commenter suggested eliminating the reference to the District's Enterprise Fund since funding was likely to come from a number of different budgets within the District. EPA agrees with this comment and has removed this reference.

On the other hand, many commenters noted that the implementation costs of the District's stormwater program will be significant. EPA agrees. The federal stormwater regulations identify the importance of adequate financial resources [40 C.F.R. §122.26(d)(1)(vi) and (d)(2)(vi)]. In addition, after seeing notable differences in the caliber of stormwater programs across the country, EPA recognizes that dedicated funding is critical for implementation of effective MS4 programs.[7,8,9] In 2009 the District established, and in 2010 revised, an impervious-based surface area fee for service to provide core funding to the stormwater program[10] (understanding that stormwater-related financing may still come from other sources as they fulfill multiple purposes, *e.g.,* street and public right-of-way retrofits). In conjunction with the 2010 rule-making to revise the fee the District issued a Frequently Asked Questions document[11] that indicates the intent to restrict this fee to its original purpose, *i.e.*, dedicated funding to implement the stormwater program and comply with MS4 permit requirements. EPA believes this action is essential, and he expects that the District will maintain a dedicated source of funding for the stormwater program.

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7 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

8 National Association of Flood and Stormwater Agencies, Funded by EPA, *Guidance for Municipal Stormwater Funding* (2006) http://www.nafsma.org/Guidance%20Manual%20Version%202X.pdf

9 EPA, *Funding Stormwater Programs* (2008) http://www.epa.gov/npdes/pubs/region3_factsheet_funding.pdf

10 District of Columbia, Rule 21-566 Stormwater Fees, http://www.dcregs.dc.gov/Gateway/RuleHome.aspx?RuleID=474056

11 District of Columbia, FAQ Document *Changes to the District's Stormwater Fee* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/information2/water.reg.leg/Stormwater_Fee_FAQ_10-5-10_-final.pdf

3. STORMWATER MANAGEMENT PROGRAM (SWMP) PLAN

A number of commenters were confused by the wide variety of plans, strategies and other written documents required by the Draft Permit. A number of commenters were also concerned about public access to several of these documents.

In today's Final Permit EPA is clarifying that any written study, strategy, plan, schedule or other element, existing or new, is part of the District Stormwater Management Program Plan. It is EPA's intent that all elements of the program be described in this central 'Plan'. This does not mean that the Plan cannot consist of separate documents. EPA understands that stand-alone elements may aid in implementation in certain situations. However, EPA is clarifying that all such documents are inherent components of the Plan.

To address the accessibility issue EPA is also requiring that the most current version of the Plan be posted on the District website. As such, all elements that may be documented in separate documents and deliverables must be posted at this location (a hyperlink to any element of the program in a different document is sufficient).

Moreover, today's Final Permit requires the District to public notice a fully updated Plan (to include all existing and new elements required by the Final Permit) within three years of the effective date of this Final Permit, and to then submit that Plan to EPA within four years of the effective date of the Final Permit. This schedule will enable this evaluation of the Plan to be part of EPA's evaluation of the Districts stormwater management program in preparation for the next reissuance of the permit.

The Final Permit requires the District to develop a number of new initiatives. Many commenters raised concerns about the rigor and suitability of these new elements in the absence of a requirement for public input, and in the absence of EPA review and approval. In light of those concerns EPA reviewed all elements of the Draft Permit, and where appropriate has added requirements to the Final Permit both for public notice and opportunity to comment and for submittal to EPA for review and approval. Not every new element has been subjected to this requirement. However, EPA agrees that the opportunity for the public and EPA to review new program elements that will become major components of the stormwater management program is reasonable. Thus, for provisions that EPA believes will be important foundations of the program in years to come, EPA has added a requirement for public notice and EPA review and approval. A new Table 1 in the Final Permit summarizes the elements that must now be submitted to EPA for review and approval.

TABLE 1
Elements Requiring EPA Review and Approval

Element	Submittal Date (from effective date of this permit)
Anacostia River Watershed Trash Reduction Calculation Methodology (4.10)	1 year
Catch Basin Operation and Maintenance Plan (4.3.5.1)	18 months
Outfall Repair Schedule (4.3.5.3)	18 months
Off-site Mitigation/Payment-in-Lieu Program (4.1.3)	18 months
Retrofit Program (4.1.6)	2 years
Consolidated TMDL Implementation Plan (4.10.3)	2 years
Revised Monitoring Program (5.1)	2 years
Revised Stormwater Management Program Plan (3)	4 years

4. IMPLEMENTATION OF STORMWATER CONTROL MEASURES

(4.1 Standard for Long-Term Stormwater Management): One of the fundamental differences between today's Final Permit and earlier permits is the inclusion of measurable requirements for green technology practices, sometimes referred to as "low-impact development" or "green infrastructure." These requirements, which include green roofs, enhanced tree plantings, permeable pavements, and a performance standard to promote practices such as bioretention and water harvesting, are designed to increase the effectiveness of stormwater controls by reducing runoff volumes and associated pollutant loads.[12,13] In past years, stormwater management requirements in permits did not include clear performance goals, numeric requirements or environmental objectives. Today's Final Permit stipulates a specific standard for newly developed and redeveloped sites, and also emphasizes the use of "green infrastructure" controls to be used to meet the performance standard. These permit requirements are intended to improve the permit by providing clarity regarding program performance and promoting the use of technologies and strategies that do not rely solely on end-of-pipe detention measures to manage runoff. EPA notes that much of this emphasis is based on changing paradigms in stormwater science, technology and policy (see discussion below), but also points out that the groundwork for this framework was laid during the prior permit term, and all of the green infrastructure elements agreed to in the 2008 Modified Letter of Agreement to the 2004 Permit.[14]

In the natural, undisturbed environment precipitation is quickly intercepted by trees and other vegetation, or absorbed by soils and humic matter on the surface of the ground where it is

12 The performance of green infrastructure control measures is well-established through numerous studies and reports, many of which are available at http://cfpub2.epa.gov/npdes/greeninfrastructure/research.cfm#research

13 Jay Landers, *Stormwater Test Results Permit Side-by-Side Comparisons of BMPs* (2006) Civil Engineering News http://www.unh.edu/erg/civil_eng_4_06.pdf

14 District Department of the Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222*, (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

used by plants, becomes baseflow (shallow groundwater feeding waterways) or infiltrates more deeply to aquifers. During most storms very little rainfall becomes stormwater runoff where the landscape is naturally vegetated or in cases where there are permeable soils. Runoff generally only occurs with larger precipitation events, which constitute a very small proportion of the storms that occur in Washington, DC. In contrast to natural settings, traditional development practices cover large areas of the ground with impervious surfaces such as roads, driveways, sidewalks, and buildings. In addition, the remaining soils are often heavily compacted and are effectively impervious. Under developed conditions, stormwater runs off or is channeled away even during small precipitation events. The collective force of the increased stormwater flows entering the MS4 and discharging through outfalls into receiving streams scours streambeds, erodes stream banks, and causes large quantities of sediment and other entrained pollutants, such as metals, nutrients and trash, to enter the water body each time it rains[15,16,17]. Stormwater research generally shows a high correlation between the level of imperviousness in a watershed and the degree of overall degradation of water quality and habitat. This principle is so well-settled that EPA has not included individual study results here, but refers interested readers to an excellent compendium of relevant studies compiled by the Maryland Department of Natural Resources at http://www.dnr.state.md.us/irc/bibs/effectsdevelopment.html.

To date stormwater management approaches generally have been focused primarily on flood management, in particular extended detention controls, such as wet ponds or dry detention basins, or on in-pipe or end-of-pipe treatment systems. Extended detention approaches are intended to reduce downstream flooding to the extent necessary to protect the public safety and private and public property. End-of-pipe systems are intended to filter or settle specific pollutants, but typically do not reduce the large suite of pollutants in storm water, nor do anything to address degradation attributable to increased discharge volumes. These approaches occurred largely by default since stormwater permits and regulations, including those with water quality objectives, did not stipulate specific, measurable standards or environmental objectives. In addition, water quality was not the primary concern during the early evolution of stormwater management practices.

There are multiple potential problems with extended detention as a water quality management practice, including the fact that receiving stream dynamics are generally based on balances of much more than just discharge rates.[18] Stream stability, habitat protection and water quality are not necessarily protected by the use of extended detention practices and systems. In fact the use of practices such as wet detention basins often results in continued stream bank

15 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

16 Schueler, Thomas R., *The Importance of Imperviousness* (2000) Center for Watershed Protection, http://yosemite.epa.gov/R10/WATER.NSF/840a5de5d0a8d1418825650f00715a27/159859e0c556f1c988256b7f007525b9/$FILE/The%20Importance%20of%20Imperviousness.pdf

17 E. Shaver, R. Horner, J. Skupien, C. May, and G. Ridley. *Fundamentals of Urban Runoff Management: Technical and Institutional Issues – 2nd Edition*, (2007) North American Lake Management Society, Madison, WI. http://www.deq.state.ms.us/mdeq.nsf/0/A8E8B82B89DCDDCE862573530049EEE0/$file/Fundamentals_full_manual_lowres.pdf?OpenElement

18 Low Impact Development Center, *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption* (2007) http://pepi.ucdavis.edu/mapinfo/pdf/CA_LID_Policy_Review_Final.pdf

destabilization and increased pollutant loadings of sediment, phosphorus and other pollutants due to bank and channel erosion. Numerous studies have documented the physical, chemical and biological impairments of receiving waters caused by increased volumes, rates, frequencies, and durations of stormwater discharges, and the critical importance of managing stormwater flows and volumes to protecting and restoring our nation's waters[19,20].

Traditional stormwater management is very heavily focused on extended detention approaches, *i.e.*, collecting water short-term (usually in a large basin), and discharging it to the receiving water over the period of one to several days, depending on the size of the storm. Extended detention practices are first and foremost designed to prevent downstream flooding and not to protect downstream channel stability and water quality. For decades, water quality protection has been a secondary goal, or one omitted entirely during the design of these facilities. Over time it has become apparent through research and monitoring that these traditional practices do not effectively protect the physical, chemical or biological integrity of receiving waters[21]. Furthermore, operation and maintenance of these systems to ensure they perform as designed requires a level of managerial and financial commitment that is often not provided, further diminishing the effectiveness of these practices from a water quality performance perspective. A number of researchers have documented that extended detention practices fail to maintain water quality, downstream habitat and biotic integrity of the receiving waters.[22,23,24,25] As a result, today's Final Permit shifts the District's practices from extended detention approaches to water quality protection approaches based on retention of discharge volumes and reduced pollutant loadings.

(4.1.1 Standard for Stormwater Discharges from Development): The 2008 National Research Council Report (NRC Report) on urban stormwater confirmed that current stormwater control efforts are not fully adequate. Three of the NRC Report's findings on stormwater management approaches are particularly relevant:

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19 Daren M Carlisle, David M Wolock, and Michael R Meador , *Alteration of streamflow magnitudes and potential ecological consequences: a multiregional assessment*, , Front Ecol Environ, (2010)

20 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

21 EPA, *Protecting Water Quality from Urban Runoff* (2003) http://www.epa.gov/npdes/pubs/nps_urban-facts_final.pdf

22 C.R. MacRae, *Experience from Morphological Research on Canadian Streams: Is Control of the Two Year Frequency Runoff Event the Best Basis for Stream Channel Protection?* (1997) in Effects of Watershed Development and Management on Aquatic Ecosystems, ASCE

23 R. Horner, C. May, E. Livingston, D. Blaha, M. Scoggins, J. Tims & J. Maxted, *Structural and Nonstructural BMPs for Protecting Streams* (2002) Seventh Biennial Stormwater Research & Watershed Management Conference http://www.p2pays.org/ref/41/40364.pdf

24 D.B. Booth & C.R. Jackson, *Urbanization of Aquatic Systems – Degradation Thresholds, Stormwater Detention and the Limits of Mitigation* (1997) Journal of the American Water Resources Association 22(5) http://clear.uconn.edu/projects/TMDL/library/papers/BoothJackson_1997.pdf

25 E. Shaver, R. Horner, J. Skupien, C. May, and G. Ridley. *Fundamentals of Urban Runoff Management: Technical and Institutional Issues – 2nd Edition*, (2007) North American Lake Management Society, Madison, WI. http://www.deq.state.ms.us/mdeq.nsf/0/A8E8B82B89DCDDCE862573530049EEE0/$file/Fundamentals_full_manual_lowres.pdf?OpenElement

1) Individual controls on stormwater discharges are inadequate as the sole solution to stormwater impacts in urban watersheds;
2) Stormwater control measures such as product substitution, better site design, downspout disconnection, conservation of natural areas, and watershed and land-use planning can dramatically reduce the volume of runoff and pollutant loadings from new development; and
3) Stormwater control measures that harvest, infiltrate, and evapotranspire stormwater are critical to reducing the volume and pollutant loading of storms.

The NRC Report points out the wisdom of managing stormwater flow not just for the hydrologic benefits as described above, but because it serves as an excellent proxy for pollutants, *i.e.*, by reducing the volume of stormwater discharged, the amount of pollutants typically entrained in stormwater will also be reduced. Reductions in the number of concentrated and erosive flow events will result in decreased mobilization and transport of sediments and other pollutants into receiving waters. The NRC Report also noted that it is generally easier and less expensive to measure flow than the concentration or load of individual pollutant constituents. For all of these reasons EPA has chosen to use flow volume as the management parameter to implement policies, strategies and approaches.

The objective of effective stormwater management is to replicate the pre-development hydrology to protect and preserve both the water resources onsite and those downstream by eliminating or reducing the amount of both water and pollutants that run off a site, enter the MS4, and ultimately are discharged into adjacent water bodies. The fundamental principle is to employ systems and practices that use or mimic natural processes to: 1) infiltrate and recharge, 2) evapotranspire, and/or 3) harvest and use precipitation near to where it falls to earth.

Retaining the volume of all storms up to and including the 95th percentile storm event is approximately analogous to maintaining or restoring the pre-development hydrology with respect to the volume, rate, and duration of the runoff for most sites. In the mid-Atlantic region the 95th percentile approach represents a volume that appears to reasonably represent the volume that is fully infiltrated in a natural condition and thus should be managed onsite to restore and maintain this pre-development hydrology for the duration, rate and volume of stormwater flows. This approach also employs and/or mimics natural treatment and flow attenuation methods, *i.e.*, soil and vegetation, that existed on the site before the construction of infrastructure (*e.g.*, building, roads, parking lots, driveways). The 95th percentile volume is not a “magic” number; there will be variation among sites based on site-specific factors when replicating predevelopment hydrologic conditions. However, this metric represents a good approximation of what is protective of water quality on a watershed scale, it can be easily and fairly incorporated into standards, and can be equitably applied on a jurisdictional basis.

In the Draft Permit EPA proposed two sets of performance standards to be implemented by the District: on-site retention of the 90th percentile volume, or 1.2” for all non-federal projects, and on-site retention of the 95th percentile volume, or 1.7” for all federal projects.

In determining ‘maximum extent practicable’ for discharges from development involving

federal facilities EPA considered several factors in the Draft Permit:

1) Energy Independence and Security Act (EISA) Section 438 and EPA Guidance[26]: Entitled "Storm water runoff requirements for federal development projects," EISA section 438 provides: "The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 share feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow."

   Guidance for federal agencies to implement EISA section 438 has been in place since December 2009, and sets forth two optional approaches to meeting the statutory requirements: a performance objective to retain the volume from the 95th percentile storm on site for any federally sponsored new development or redevelopment project and a site-specific hydrologic analysis to determine the pre-development runoff conditions and to develop the site such that the post-development hydrology replicates those conditions "to the maximum extent technically feasible."

2) Executive Orders:
   a. Executive Order 13508 - Chesapeake Bay Protection and Restoration: Calling the Chesapeake Bay a national treasure, E,O. 13508, issued May 12, 2009, establishes a mandate for federal leadership, action and accountability in restoring the Bay. Among the provisions of the Executive Order, section 202(c) directs the strengthening of stormwater management practices at Federal facilities and on Federal lands within the Chesapeake Bay watershed. In addition, section 501 directs federal agencies to implement controls as expeditiously as practicable on their own properties. As required by section 502, EPA issued guidance for federal land management practices to protect and restore the Bay, which includes guidance for managing existing development, as well as redevelopment, new development Thus federal agencies have an executive directive to be leaders in stormwater management in the District and throughout the Chesapeake Bay watershed.[27]

   b. Executive Order 13514 - Federal Leadership in Environmental, Energy, and Economic Performance E.O 13514, issued Oct. 5, 2009, directs the federal government to "lead by example" and includes a requirement for federal agencies to implement EPA's EISA Section 438 guidance (see Sections 2(d)(iv)[28] and 14).

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26 EPA, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (2009) http://www.epa.gov/owow_keep/nps/lid/section438/

27 EPA, *Guidance for Federal Land Management in the Chesapeake Bay Watershed*, Chapter 3. Urban and Suburban, (2010) 841-R-10-002 (http://www.epa.gov/owow_keep/NPS/chesbay502/pdf/chesbay_chap03.pdf)

28 Sec. 2. Goals for Agencies. In implementing the policy set forth in Section 1 of this order, and preparing and implementing the Strategic Sustainability Performance Plan called for in Section 8 of this order, the head of each agency shall: . . . (d) improve water use efficiency and management by: . . . (iv) implementing and

3) Water Quality**:** These performance standards are aappropriate as water quality-based effluent limitations in the Final Permit. In order to meet the necessary water quality requirements of the Clean Water Act, and to be consistent with the assumptions and requirements of the wasteload allocations for the Chesapeake Bay TMDL, EPA has determined that this performance standard is necessary. In fact, the District's final Phase I WIP acknowledges reasonable assurance demonstration for meeting its obligations to implement the Chesapeake Bay TMDL on an expectation that federal new development and redevelopment projects will achieve a 1.7" stormwater retention objective[29].

EPA concluded in the Draft Permit, and maintains in the Final Permit, that in this first permit in which a performance standard is being required, a retention standard of 1.2" represents the "maximum extent practicable" (MEP) for the District to implement at this time. In the District of Columbia area the 90th percentile event volume is estimated at 1.2 inches. This volume was calculated from 59 years (1948-2006) of rainfall data collected at Reagan National Airport using the methodology detailed in the Energy Independence and Security Act (EISA) Section 438 Guidance[30]. EPA expects that the performance objective shall be accomplished largely by the use of practices that infiltrate, evapotranspire and/or harvest and use rainwater.

EPA's MEP determination included evaluating what has been demonstrated to be feasible in the mid-Atlantic region as well as in other parts of the country. Because on-site retention of the 90th percentile rainfall event volume and analogous approaches have been successfully implemented in other locations across the nation as requirements of stormwater permits, state regulations and local standards [31,32,33,34,35,36,37,38,39] and under a wide variety of climates and

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achieving the objectives identified in the stormwater management guidance referenced in Section 14 of this order. Sec. 14. Stormwater Guidance for Federal Facilities. Within 60 days of the date of this order, the Environmental Protection Agency, in coordination with other Federal agencies as appropriate, shall issue guidance on the implementation of Section 438 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17094).

29 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010)
http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

30 EPA, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (2009)
http://www.epa.gov/owow_keep/nps/lid/section438/

31 EPA, *The Municipality of Anchorage and the Alaska Department of Transportation and Public Facilities Municipal Separate Storm Sewer System Permit*, NPDES No. AKS052558 (2010)
http://yosemite.epa.gov/r10/water.nsf/NPDES+Permits/MS4+requirements+-+Region+10/$FILE/ATTCZX11/AKS052558%20FP.pdf

32 California Regional Water Quality Control Board Los Angeles Region, *Ventura County Municipal Separate Storm Sewer System Permit*, NPDES No. CAS004002 (2009)
http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/ventura_ms4/Final_Ventura_County_MS4_Permit_Order_No.09-0057__01-13-2010.pdf

33 Montana Department of Environmental Quality, *General Permit for Stormwater Discharge Associated with Small Municipal Separate Storm Sewer System*, NPDES No. MTR040000 (2010)
http://www.deq.mt.gov/wqinfo/mpdes/StormWater/ms4.mcpx

34 Tennessee Department of Environment and Conservation, *General Permit for Discharges from Small Municipal Separate Storm Sewer Systems*, NPDES No. TNS000000, (2010)
http://state.tn.us/environment/wpc/stormh2o/finals/tns000000_ms4_phase_ii_2010.pdf

conditions, EPA considers this performance standard to be proven and therefore 'practicable' at this point in time. EPA believes that application of this performance standard will result in a significant improvement to the *status quo* and that it will provide notable water quality benefits. This approach will also provide a sound foundation and framework for future management approaches, strategies, measures and practices as the program evolves over subsequent permit cycles. In this context, EPA notes that there may be a need to improve upon this standard in the future, and expects to evaluate implementation success, performance of practices and the overall program, and water quality in the receiving waters when determining whether or not to modify this requirement in a future permit cycle.

EPA received a number of comments on these proposed development performance standards. Many commenters supported this approach. A few were opposed, largely to the numbers rather than the retention framework. Only one federal agency, the Department of Defense, to whom the 95th percentile standard would apply, opposed this provision, on the basis that they should not be subject to the higher standard.

In response to comments EPA revised the Final Permit to require the District to implement a performance standard of on-site retention of 1.2" for all development projects, regardless of who owns or operates the development. EPA's rationale for including a single performance standard for all development projects is based on the fact that this permit is issued to the District of Columbia and the MEP determination must be based on what is practicable for that permittee even though certain property owners discharging to the District's MS4 may have the ability as well as the mandate to achieve more. EPA concludes that it would be not be inappropriate to include the 1.7" performance standard in a permit to a federal permittee. This permit, however, is being issued to a non-federal permittee.

Therefore today's Final Permit includes a performance standard for stormwater discharges from development that disturbs an area of land greater than or equal to 5,000 square feet. The requirement must be in effect 18 months from today. The Permit requires the design, construction, and maintenance of stormwater management practices to retain rainfall onsite, and

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35 West Virginia Department of Environmental Protection, General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems, NPDES WV0116025 (2009) http://www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Documents/WV%20MS4%202009%20General%20Permit.pdf

36 North Carolina Department of Environment and Natural Resources, *General Permit to Construct Operate and Maintain Impervious Areas and BMPs Associated with a Residential Development Disturbing Less than 1 Acre*, State Permit No. SWG050000 (2008) http://portal.ncdenr.org/c/document_library/get_file?uuid=724171cc-c208-4f39-a68c-b4cd84022cd9&groupId=38364

37 State of Maryland, *Stormwater Management Act of 2007*, Environment Article 4 §201.1 and §203 http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/Pages/Programs/WaterPrograms/SedimentandStormwater/swm2007.aspx

38 City of Philadelphia, *Stormwater Regulations*, §600.0 Stormwater Management (2006) http://www.phillyriverinfo.org/WICLibrary/StormwaterRegulations.pdf

39 EPA, See Chapter 3, *Green Infrastructure Case Studies: Municipal Policies for Managing Stormwater with Green Infrastructure* (2010) http://www.epa.gov/owow/NPS/lid/gi_case_studies_2010.pdf

prevent the off-site discharge of the rainfall volume from all events less than or equal to the 90th percentile rainfall event.

The District's Phase I Watershed Implementation Plan (WIP) for the Chesapeake Bay TMDL[40] based its proposed nutrient and sediment reductions, and the associated reasonable assurance demonstration, on these performance standards, i.e., 1.2" for non-federal projects and 1.7" for federal projects. In establishing the Chesapeake Bay TMDL, EPA used the information in the Bay jurisdictions' final Phase I WIPs, including that of the District, where possible. Thus the wasteload allocations (WLAs) in the TMDL[41] are based, in part, on the expectation that all development in the District will be subject to these standards.

EPA notes that all federal facilities still must comply with the EISA requirements. The District will track the performance of federal development projects subject to the District's stormwater regulations, and therefore document those achieving better than 1.2" onsite retention. However, the District cannot, nor should they be expected to, enforce the EISA requirements.

EPA dropped the option for determination of the predevelopment runoff conditions based on a full hydrologic and hydraulic analysis of the site. EISA guidance had provided this option to federal facilities and EPA did not want to provide an *a priori* limitation to federal projects in the Draft Permit, but rather provide the District with the flexibility to include it if they determined it to be administratively feasible. However, since the Final Permit no longer includes an additional requirement for federal facilities, this provision is no longer necessary to provide federal facilities options consistent with EISA. With respect to non-federal facilities, in the seventeen months since the Draft Permit was proposed the District has continued with the process of finalizing their stormwater regulations, and has determined that inclusion of this option is not necessary or reasonable, and EPA concurs.

Several commenters raised the issue of costs associated with implementation of the performance standard. EPA has responded by noting that there are many locations where this stormwater management framework has already been implemented (*see* footnote 22), and also where costs have been well documented to be competitive or instances where infrastructure costs were less expensive because of avoided costs, *e.g.*, reduced infrastructure, narrower roads and otherwise fewer impervious surfaces, reduced or eliminated curbs and gutters, no or fewer buried storm sewers. In addition, where cost-benefit analyses have been conducted, green infrastructure practices are even more cost effective because of the wide array of additional benefits[42] that do not accrue when traditional stormwater management practices are used.[43,44,45,46,47,48,49,50,51,52,53,54]

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40 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

41 EPA, *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment* (2010) http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html

42 EPA, Managing Wet Weather with Green Infrastructure website, Benefits: (http://cfpub2.epa.gov/npdes/home.cfm?program_id=298)

43 LimnoTech, *Analysis of the Pollution Reduction Potential of DC Stormwater Standards* (2009)

44 EPA, *Reducing Stormwater Costs through Low Impact Development Strategies and Practices* (2007)

Several commenters took issue with the inclusion of any numeric performance standard for discharges from development. As discussed above EPA believes that stormwater discharge permits should include clear and enforceable standards, and where feasible, numeric limits are preferred. As discussed above, for the purpose of requiring the permittee to ensure adequate management of discharges from development, a numeric performance standard is a proven means of establishing a clear and enforceable requirement. EPA recognizes that there will be development projects that may not be able to meet the performance standard on site because of site conditions or site activities that preclude the use of extensive green infrastructure practices. Thus as proposed in the Draft Permit, the Final Permit requires the District to develop an alternative means of compliance for development projects under these circumstances (*see* discussion of Section 4.1.3 Off-Site Mitigation and/or Fee-in-Lieu for all Facilities).

In July 2010 EPA Region III issued *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed*.[55] This document provides direction to all NPDES permitting authorities in the Region and establishes expectations for the next generation of MS4 permits. Based on many of the reasons already articulated in this Final Fact Sheet, EPA directed states to incorporate performance-based standards into permits and regulations with the objective of maintaining or restoring a pre-development hydrologic site condition for newly developed and redeveloped sites. In fact most states with authorized NPDES permit programs in the Chesapeake

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http://www.epa.gov/owow/NPS/lid/costs07/

45 Report to Natural Resources Defense Council and Waterkeeper Alliance, *Economic Costs, Benefits and Achievability of Stormwater Regulations for Construction and Development Activities* (2008)

46 Meliora Environmental Design LLC, *Comparison of Environmental Site Design for Stormwater Management for Three Redevelopment Sites in Maryland* (2008)

47 City of Portland Environmental Services, *Cost-Benefit Evaluation of Ecoroofs* (2008) http://www.portlandonline.com/bes/index.cfm?a=261053&c=50818

48 Natural Resources Defense Council, *Rooftops to Rivers, Green Strategies for Controlling Stormwater and Combined Sewer Overflows* (2006) http://www.nrdc.org/water/pollution/rooftops/rooftops.pdf

49 Riverkeeper, *Sustainable Raindrops* (2006) http://www.riverkeeper.org/wp-content/uploads/2009/06/Sustainable-Raindrops-Report-1-8-08.pdf

50 City of Philadelphia Water Department, *A Triple Bottom Line Assessment of Traditional and Green Infrastructure Options for Controlling CSO Events in Philadelphia's Watersheds* (2009) http://www.epa.gov/npdes/pubs/gi_phil_bottomline.pdf

51 Richard R. Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices for Ventura County,* and *Initial Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area,* and *Supplementary Investigation of the Feasibility and Benefits of Low-Impact Site Development Practices for the San Francisco Bay Area,* (2007) http://docs.nrdc.org/water/files/wat_09081001b.pdf

52 J. Hathaway and W.F. Hunt. *Stormwater BMP Costs*. (2007) www.bae.ncsu.edu/stormwater/PublicationFiles/DSWC.BMPcosts.2007.pdf.

53 Center for Neighborhood Technology and American Rivers, *The Value of Green Infrastructure: A Guide to Recognizing Its Economic, Environmental and Social Benefits* (2010) http://www.cnt.org/repository/gi-values-guide.pdf

54 J. Gunderson, R. Roseen, T. Janeski, J. Houle, M. Simpson. *Cost-Effective LID in Commercial and Residential Development* (2011) Stormwater http://www.stormh2o.com/march-april-2011/costeffective-lid-development-1.aspx

55 EPA, *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed* (2010) http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf

Bay Watershed have incorporated numeric on-site retention standards into final or draft regulations or permits.

In addition, this provision is consistent with the 2008 Modified Letter of Agreement to the 2004 Permit[56] in which the District committed to promulgate stormwater regulations that implement "Low Impact Development", *i.e.*, measures that infiltrate, evapotranspire and harvest stormwater.

(4.1.2 Code and Policy Consistency, Site Plan Review, Verification and Tracking): In Region III's *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed*, EPA emphasized the importance of establishing accountability measures around performance measures. The best standards will not provide the necessary environmental outcomes if they are not properly implemented, and the only way to ensure proper implementation is to ensure that stormwater control measures are properly designed and installed.

Today's Final Permit requires the District to ensure that all codes and policies are consistent with the standards in the Final Permit, and to establish and maintain adequate site plan review procedures, and a post-construction verification process (such as inspections or submittal of as-builts) to ensure that controls are properly installed.

Ensuring that local codes, ordinances and other policies are consistent with the requirements of the permit is critical element of success. A number local governments attempting to implement green infrastructure measures have found their own local policies to be one of the most significant barriers[57], *e.g.*, parking codes that require over-sized parking lots, plumbing codes that don't allow rainwater harvesting for indoor uses, or street design standards that prohibit the use of porous/pervious surfaces. EPA has published a document, the *Water Quality Scorecard*, to assist local governments in understanding and identifying these local policy barriers and also provides options for eliminating them.[58] EPA is not requiring the District to use the *Scorecard* or any other specific method, but recommends a systematic assessment of local policies in the context of the requirements of the Final Permit in order to comply with the provisions of this Section.

EPA and others have long recognized the importance of site plan review in ensuring that development projects are designed according to standards and regulations, and a verification process following construction that projects were constructed as designed and approved.[59,60,61,62]

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56 District Department of Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

57 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

58 EPA, *Water Quality Scorecard, Incorporating Green Infrastructure Practices and the Municipal, Neighborhood and Site Scales* (2009) http://www.epa.gov/smartgrowth/pdf/2009_1208_wq_scorecard.pdf

59 EPA, *Post-Construction Plan Review*, Menu of BMPs http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=factsheet_results&view=specific&bmp=123

Most local governments, including the District, already have some form of site plan review and post-construction verification process for development projects. Today's Final Permit includes them as critical accountability elements of the District stormwater program.

In addition, today's Final Permit requires the District to track volume reductions from all projects. This is a critical element of determining whether wasteload allocations are being achieved.

One commenter noted that EPA had not imposed a clear compliance schedule for this requirement. The Final Permit includes a deadline of the end of the permit term for full compliance with this requirement, acknowledging that updating codes, ordinances and other policies may be a time-consuming process that typically requires consultation and support from elected officials, coordination amongst multiple departments and agencies, e.g., the Office of Planning, the Department of Transportation and the Department of the Environment, as well as public involvement.

(4.1.3 Off-Site Mitigation and/or Fee-in Lieu for all Facilities): Today's Final Permit requires the District to establish a program for Off-site Mitigation and/or Fee-In-Lieu within 18 months of the effective date of the Final Permit. The Final Permit provides the District flexibility to develop a program with either one of those elements or both. Specifically the Permit states:

The program shall include at a minimum:

1) Establishment of baseline requirements for on-site retention and for mitigation projects. On-site volume plus off-site volume (or fee-in-lieu equivalent or other relevant credits) must equal no less than the relevant volume in Section 4.1.1;
2) Specific criteria for determining when compliance with the baseline requirement for on-site retention cannot technically be met based on physical site constraints, or a rationale for why this is not necessary;
3) For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls to account for the difference in the performance standard, and the alternative reduced value calculated; and
4) The necessary tracking and accounting systems to implement this section, including policies and mechanisms to ensure and verify that the required stormwater practices on the original site and appropriate required off-site practices stay in place and are adequately maintained.

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60 Center for Watershed Protection, *Managing Stormwater in Your Community, A Guide for Building an Effective Post-Construction Program* (2008) http://www.cwp.org/documents/cat_view/76-stormwater-management-publications/90-managing-stormwater-in-your-community-a-guide-for-building-an-effective-post-construction-program.html

61 EPA, *MS4 Permit Improvement Guide* (2010) http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf

62 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

This provision is included in today's Final Permit in acknowledgement that meeting the performance standard in 4.1.1 may be challenging in some situations. The NRC Report noted that an offset system is critical to situations when on-site stormwater control measures are not feasible.[63] In cases where a full complement of onsite controls is not feasible, offsite practices should be employed that result in net improvements to watershed function and water quality at the watershed scale. The *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed* contemplates offsets in MS4 programs.[64] EPA has also articulated expectations in the Chesapeake Bay TMDL that it expects the Bay jurisdictions to account for growth via offset programs that are consistent with Section 10 and Appendix S of the Chesapeake Bay TMDL.[65]

EPA received numerous comments on this provision. No commenter was opposed to an offset program *per se*, but there were various opinions on how it should function. Because there was so much general interest in how this program would be shaped, EPA is responding to these comments by requiring the program be subject to public notice followed by submittal to and review by EPA. EPA believes this provides all of those with an interest in this program the opportunity to provide meaningful input. EPA will also review the program to ensure that it has adequate tracking and enforceability components, and meets the water quality objectives of the Final Permit. It is EPA's expectation that these mechanisms will be described by the permittee in the proposed implementation scheme. EPA emphasizes that accountability measures (*e.g.*, inspections, maintenance, tracking) will be critical to ensure the success of the program, and therefore the District's plan will be closely scrutinized for those measures prior to implementation.

The Final Permit includes an option for the District to include incentives for other environmental objectives, e.g., carbon sequestration, in the offset program. As noted, because of the wide array of opinions EPA feels that consideration of some of these other environmental objectives deserve a full vetting by the community. The District is not required to include any incentives or credits along these lines in the program. If it chooses to do so, anything implemented to achieve those other environmental objectives must be subject to the same level of site plan review, inspection, and operation and maintenance requirements as stormwater controls implemented in fulfillment of other permit requirements.

Finally, for the duration of this permit term, the Final Permit exempts District owned and operated transportation rights-of-way projects from the requirement to mitigate stormwater off-site or pay into a fee-in-lieu program for development projects where the on-site performance standard cannot be met. This decision was based on the District request for short-term relief while the District Department of Transportation develops new stormwater management design, construction, and operation and maintenance processes, protocols, requirements and

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63 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

64 EPA, *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed* (2010) http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf

65 EPA, *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment* (2010) http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html

specifications for transportation systems and public rights of way. EPA notes that this exemption does not apply to other District owned projects.

(4.1.4 Green Landscaping Incentives Program): Green infrastructure regulatory and incentive programs are becoming common across the country.[66,67] Landscaping requirements that provide flexibility and a suite of options from which to select appropriate green infrastructure practices and systems, e.g. Seattle's Green Factor[68], have proven to be quite popular with developers, land owners and municipal officials.

The green landscaping provision is consistent with the 2008 Modified Letter of Agreement to the 2004 Permit[69] that articulated a long list of specific green infrastructure measures to be implemented, coupled with the commitment by the District to develop green infrastructure policies and incentives. Because these green landscaping provisions fill an important gap in the District's suite of green infrastructure-related policies, EPA specifically identified landscaping as an important area for development of incentives.

Other than general support EPA received little comment on this provision, thus the Final Permit has not been modified from the Draft Permit.

(4.1.5 Retrofit Program for Existing Discharges): Changes in land cover that occurred when urban and urbanizing areas were developed have changed both the hydrology and pollutant loadings to receiving waters and have led to water quality problems and stream degradation. In order to protect and restore receiving waters in and around the District stormwater volume and pollutant loadings from sites with existing development must be reduced. Due to historical development practices, most of these areas were developed without adequate stormwater pollutant reduction or water quality-related controls. To compensate for the lack of adequate stormwater discharge controls in these areas, EPA is requiring the District to include retrofit elements in the stormwater management program.[70,71,72]

EPA has acknowledged the importance of including retrofit requirements in MS4 permits.[73,74] The Chesapeake Bay TMDL allocations are founded on the expectation of

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66 EPA, *Green Infrastructure Incentive Mechanisms*, Green Infrastructure Municipal Handbook Series, (2009) http://www.epa.gov/npdes/pubs/gi_munichandbook_incentives.pdf

67 EPA, *Green Infrastructure Case Studies: Municipal Policies for Managing Stormwater with Green Infrastructure* (2010) http://www.epa.gov/owow/NPS/lid/gi_case_studies_2010.pdf

68 City of Seattle, *Seattle Green Factor*, http://www.seattle.gov/dpd/Permits/GreenFactor/Overview/

69 District Department of Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

70 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

71 Schueler, Thomas. *Urban Subwatershed Restoration Manual No. 1: An Integrated Framework to Restore Small Urban Watersheds* (2005)

72 EPA, *Green Infrastructure Retrofit Policies*, Managing Wet Weather with Green Infrastructure Municipal Handbook Series (2008) http://www.epa.gov/npdes/pubs/gi_munichandbook_retrofits.pdf

73 EPA, *MS4 Permit Improvement Guide* (2010) EPA 833-R-10-001,

stormwater retrofits in the District (*see* Section 8 of the TMDL[75]), based on actions outlined in the District's final Phase I WIP developed for the Chesapeake Bay TMDL.[76]

EPA received quite a few comments on this set of requirements. Some commenters strongly approved of the retrofit provisions in the Draft Permit, while others expressed concerns.

Today's Final Permit requires the District to develop performance metrics for retrofits, using the performance standard in Section 4.1.1 as the starting point, *i.e.*, if projects can meet the environmental objectives specified in Part 4.1.1 they should. However, understanding the challenges associated with retrofitting some sites, the Final Permit allows that the performance metrics for retrofit projects may vary from the performance standard in 4.1.1, *e.g.*, different requirements may apply to differing sets of circumstances, site conditions or types of projects. EPA believes the most important first step in a robust retrofit program is to set stringent environmental objectives, thus the requirement to develop clear and specific performance standards. EPA fully expects the District to utilize this permit term to develop design, construction and operation and maintenance protocols to meet the requisite performance standards.

Several modifications were made to this provision:

1) Because there was so much interest in this provision EPA added a requirement for public notice.
2) Because there were so many opinions on how this program should function, EPA removed some of the criteria in the Final Permit to allow the community to shape the program. In exchange EPA included a requirement that the relevant performance metrics be submitted to EPA for review and approval.
3) The compliance schedule for development, public notice and submittal to EPA of performance metrics for a retrofit program has been extended from one year to 18 months at the request of the District. EPA believes the additional time will allow better coordination of the offset program with the District's stormwater regulations (also with an 18 month compliance schedule), and allow adequate time for a public notice process and an EPA review.

Also included in the permit is a requirement that the District must work with federal agencies to document federal commitments to retrofitting their properties. Consistent with Executive Order 13508 on the Chesapeake Bay, the federal strategies developed pursuant thereto, and in fulfillment of the Chesapeake Bay TMDL, federal agencies have obligations to

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http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf

74 EPA, *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed* (2010) http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf

75 EPA, *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment* (2010) http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html

76 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

implement substantive stormwater controls. In order to accurately account for loads from federal lands that discharge through the District MS4 system, the District needs to be able to track the pollutant reductions resulting from federal actions. To do so the District will need to identify federal facilities and properties and work with federal agencies to identify retrofit opportunities on federal lands and properties and track progress in retrofitting these lands and properties.

In addition, the Final Permit requires the District to make pollutant load and volume reduction estimates for all retrofit projects for the nine pollutants in Table 4, and by each of the major District watersheds (Anacostia River, Rock Creek, Potomac River).

The Final Permit requires the District to implement retrofits to manage runoff from 18,000,000 square feet of impervious surfaces during the permit term. Of that total, 1,500,000 square feet must be in transportation rights-of-way. Although these initial drainage area objectives are not especially aggressive, EPA believes that a strong foundation for the retrofitting program must first be established. EPA can then set more aggressive drainage area objectives in subsequent permits. In its comments on the Draft Permit the District contended that the requirement in the Draft Permit for the retrofitting of 3,600,000 square feet of impervious surfaces in transportation rights-of-way was more than it could accomplish in a single permit term. The District suggested 1,500,000 square feet, almost 60% less than what was required in the Draft Permit would be achievable. In consideration of these comments, the total square footage of retrofitted impervious surfaces that must be in transportation rights-of-way is 1,500,000 square feet. EPA notes that the total square footage retrofit requirement is unchanged. EPA believes that this requirement will establish a strong foundation for the implementing a retrofitting program overall and in transportation rights-of-way, which can be followed in subsequent permits with more aggressive drainage area objectives. In addition, the Final Permit includes an additional provision that is intended to enhance the District's retrofit opportunities (*see* next paragraph).

The Final Permit establishes a requirement for the District to adopt and implement stormwater retention requirements for properties where less than 5,000 square feet of soil is being disturbed but where the buildings or structures have a footprint that is greater than or equal to 5,000 square feet and are undergoing substantial improvement. Substantial improvement, as consistent with District regulations at 12J DCMR § 202, is any repair, alteration, addition, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. Although this specific element was not included in the Draft Permit, it reflects the fact that the District has already considered this provision in their proposed stormwater regulations, and is consistent with the overall retrofit approach in the Draft Permit. Both the District and EPA believe this will promote retrofitting on smaller sites that would not otherwise be subject to the performance standard in the stormwater regulations.

This section of the Final Permit also requires the District to ensure that every major renovation/ rehabilitation project for District-owned properties within the inventory of Department of Real Estate Services (DRES) and Office of Public Education Facilities Modernization (OPEFM) includes on-site retention measures to manage stormwater. This

requirement is based in part on EPA's understanding that these two agencies have control over most District buildings and renovation projects in the District. This provision was in Section 4.2 Operation and Maintenance of Stormwater Capture Practices of the Draft Permit, and was moved to Section 4.1.5 of the Final Permit since it is a retrofit requirement rather than a maintenance requirement.

(4.1.6 Tree Canopy): Several studies have documented the capacity for planting additional trees in the District and quantified the benefits.[77,78,79,80] The District commitments to the tree planting requirements of the Final Permit are documented in the 2008 Modified Letter of Agreement to the 2004 Permit,[81] and the District's Chesapeake Bay TMDL WIP.[82] The number was derived from the District Urban Tree Canopy Goal[83] of planting 216,300 trees over the next 25 years, an average of 8,600 trees per year District-wide. Adjusting this number for the MS4 area of the District, the Final Permit requires the District to develop a strategy to plant new trees at a rate of at least 4,150 annually.

There was some interest from commenters in providing input to the tree canopy strategy, thus the Final Permit includes a requirement for the District to public notice this strategy. Also, in response to several comments, EPA has clarified the annual number as a net increase in order to account for mortality.

(4.1.7 Green Roof Projects): Quite a few studies have documented the water quality benefits of green roofs.[84,85,86] The Green Build-out Model, a project specifically carried out to

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77 Casey Trees, *The Green Build-out Model: Quantifying the Stormwater Management Benefits of Trees and Green Roofs in Washington, DC* (2007) (http://www.caseytrees.org/planning/greener-development/gbo/index.php).

78 University of Vermont and the U.S. Forest Service, A Report on Washington D.C.'s Existing and Potential Tree Canopy (2009) http://www.caseytrees.org/geographic/key-findings-data-resources/urban-tree-canopy-goals/documents/UnivofVermontUTCReport4-17-09.pdf

79 Casey Trees, et al. *See* several District tree inventories: http://www.caseytrees.org/geographic/tree-inventory/community/index.php

80 Casey Trees, *The Green Build-out Model: Quantifying the Stormwater Management Benefits of Trees and Green Roofs in Washington, D.C.* (2007) http://www.caseytrees.org/planning/greener-development/gbo/documents/GBO_Model_Full_Report_20051607.pdf

81 District Department of Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

82 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

83 Casey Trees, Urban Tree Canopy Goal website: http://www.caseytrees.org/geographic/key-findings-data-resources/urban-tree-canopy-goals/index.php

84 EPA, *Green Roofs for Stormwater Runoff Control* (2009) http://www.epa.gov/nrmrl/pubs/600r09026/600r09026.pdf

85 E. Oberndorfer et al, *Green Roofs as Urban Ecosystems: Ecological Structures, Functions, and Services* (2007) BioScience 57(10):823-833 http://www.bioone.org/doi/full/10.1641/B571005

86 M. Hathaway, W.F. Hunt, G.D. Jennings, *A Field Study of Green Roof Hydrologic and Water Quality Performance* (2008) Transactions of American Society of Agricultural and Biological Engineers, Vol. 51(1): 37-44 http://www.bae.ncsu.edu/people/faculty/jennings/Publications/ASABE%20Hathaway%20Hunt%20Jennings.pdf

evaluate the potential in the District for using green roofs and other green infrastructure measures to reduce flows and pollutants from the District's wet weather systems, documented significant opportunities for green roof implementation.[87]

The District commitments to green roof implementation are documented in the 2008 Modified Letter of Agreement to the 2004 Permit,[88] and the District Chesapeake Bay TMDL Watershed Implementation Plan.[89] The District is required to evaluate the feasibility of installing green roofs on District-owned buildings, and to install at least 350,000 square feet of green roof during the permit term.

(4.2 Operation and Maintenance of Retention Practices): Operation and maintenance, required pursuant to 40 C.F.R. 122.26(d)(2)(iv)(A)(*1*) and (*3*), is critical for the continued performance of stormwater control measures.[90,91] EPA has consistently noted the importance of operation and maintenance in regulatory guidance.[92,93,94] Today's Final Permit requires the District to ensure adequate maintenance of all stormwater control measures, both publicly and privately owned and operated.

The District has two years from the effective date of the Final Permit to develop and implement operation and maintenance protocols for all District owned and operated stormwater management practices. The District is also required to provide regular and ongoing training to all relevant contractors and employees.

The District is required to develop operation and maintenance mechanisms to ensure that stormwater practices are maintained and operated to meet the objectives of the program and that they continue to function over multiple permit cycles to provide the water quality benefits intended by design. Such mechanisms may include deed restrictions, ordinances and/or maintenance agreements to ensure that all non-District owned and operated stormwater control measures are adequately maintained. In addition the District must develop and/or refine

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87 Casey Trees, *The Green Build-out Model: Quantifying the Stormwater Management Benefits of Trees and Green Roofs in Washington, D.C.* (2007) http://www.caseytrees.org/planning/greener-development/gbo/documents/GBO_Model_Full_Report_20051607.pdf

88 District Department of Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

89 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

90 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

91 EPA Website: Stormwater Control Operation and Maintenance. http://www.epa.gov/owow/NPS/ordinance/stormwater.htm

92 EPA, *MS4 Permit Improvement Guide* (2010) EPA 833-R-10-001, http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf

93 EPA, *MS4 Program Evaluation Guidance* (2007) EPA-833-R-07-003, http://www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf

94 EPA, *Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed,* (2010) http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf

verification mechanisms, such as inspections, and an electronic inventory system to ensure the long-term integrity of stormwater controls in the District.

In addition the District is required to develop a Stormwater Management Guidebook and associated training within eighteen months of the effective date of the Final Permit. This requirement is based on commitments in the 2008 Modified Letter of Agreement to the 2004 Permit[95]. Completion of the Guidebook has been delayed pending finalization of the District's revised stormwater regulations. However EPA expects Guidebook completion to parallel finalization of the District's revised stormwater regulations, which incorporate the standards and requirements of the Final Permit.

(4.3 Management of District Government Areas): Requirements in this section of the Final Permit largely continue provisions in the 2004 Permit. EPA received few comments on most elements of this section of the Draft Permit. The following revisions were made:

1) The District now must notify not only public health agencies within 24-hours in the event of a sanitary sewer overflow, but also ensure adequate public notification procedures within that same time period (Section 4.3.1 of the Final Permit). EPA emphasizes that this provision in no way authorizes sanitary sewer overflow discharges either directly or via the MS4. Those discharges are expressly prohibited.
2) Within 18 months of the effective date of the Final Permit, the District shall complete, public notice and submit to EPA for review and approval a plan for optimal catch basin inspections, cleaning and repairs. The District shall fully implement the plan upon EPA approval. This revision is based on comments that the catch basin maintenance provisions on the Draft Permit were vague and not within the context of a comprehensive plan (Section 4.3.5.1 of the Final Permit).
3) Section 3.2 of the Draft Permit required the District to update its outfall inventory. One commenter noted that the District's 2006 Outfall Survey had already essentially accomplished this, and that meanwhile many of these outfalls were in severe disrepair, thus contributing to increased sediment loading to receiving waters. EPA agrees this is a serious concern, and has thus modified the Final Permit to require the District to undertake the following: within 18 months of the effective date of the Final Permit, and consistent with the 2006 Outfall Survey, the District shall complete, public notice and submit to EPA for review and approval an outfall repair schedule to ensure that approximately 10% of all outfalls needing repair are repaired annually, with the overall objective of having all outfalls in good repair by 2022 (Section 4.3.5.3 of the Final Permit).
4) Consistent with the District's *Enhanced Street Sweeping and Fine Particle Removal Strategy*,[96] an additional element has been included in Table 3, Street Sweeping. The

95 District Department of Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

96 District Department of the Environment, *Municipal Separate Storm Sewer System Program Annual Report* (2010)

table now documents that environmental hotspots in the Anacostia River Watershed will now be swept at least two times per month from March through October.

(4.6 Management of Construction Activities): Requirements in this Section of the Final Permit largely continue provisions in the 2004 Permit. Several commenters suggested that these provisions needed to be significantly improved, including specifying more stringent effluent limitations, in order to address the impairments attributable to sediment.

While permitting authorities have a fair amount of latitude to modify many elements of a permit based on public comments, inclusion of a *de novo* numeric effluent limitation, when neither the Draft Permit nor the Draft Fact Sheet suggested such an option would require further public notice. Therefore, this Final Permit does not include a numeric effluent limitation for sediment discharged in stormwater from active construction sites.

However, EPA agrees that construction activities cause serious water quality problems, and has revised this section to require more robust oversight of construction stormwater controls. A significant cause of water quality problems caused by construction activities is the failure of construction site operators to comply with existing regulations. Thus, EPA expects increased inspections and enforcement activity to result in improved compliance and therefore reduced sediment loads.[97] Therefore the Final Permit includes construction site inspection frequency requirements to ensure compliance with the District erosion and sediment requirements.

(4.8 Flood Control Projects): Requirements in this Section of the Final Permit largely continue provisions in the 2004 Permit. EPA received few comments on this section. The following revision was made: a start date of six months after the effective date of the Final Permit was added for the requirement to collect data on the percentage of impervious surface area located in flood plain boundaries for all proposed development.

(4.10 Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation): There are several TMDLs with wasteload allocations that either directly or indirectly affect the District's MS4 discharges. The following are those that EPA has determined to be relevant for purposes of implementation via the Final Permit:

1. TMDL for Biochemical Oxygen Demand (BOD) in the Upper and Lower Anacostia River (2001)
2. TMDL for Total Suspended Solids (TSS) in the Upper and Lower Anacostia River (2002)
3. TMDL for Fecal Coliform Bacteria in the Upper and Lower Anacostia River (2003)
4. TMDL for Organics and Metals in the Anacostia River and Tributaries (2003)
5. TMDL for Fecal Coliform Bacteria in Kingman Lake (2003)
6. TMDL for Total Suspended Solids, Oil and Grease and Biochemical Oxygen Demand in Kingman Lake (2003)

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97 EPA, *Office of Enforcement and Compliance Assurance Accomplishments Report* (2008) http://www.epa.gov/compliance/resources/reports/accomplishments/oeca/fy08accomplishment.pdf

7. TMDL for Fecal Coliform Bacteria in Rock Creek (2004)
8. TMDL for Organics and Metals in the Tributaries to Rock Creek (2004)
9. TMDL for Fecal Coliform Bacteria in the Upper, Middle and Lower Potomac River and Tributaries (2004)
10. TMDL for Organics, Metals and Bacteria in Oxon Run (2004)
11. TMDL for Organics in the Tidal Basin and Washington Ship Channel (2004)
12. TMDL for Sediment/Total Suspended Solids for the Anacostia River Basin in Maryland and the District (2007) [pending resolution of court vacature, Anacostia Riverkeeper, Inc. v. Jackson, No. 09-cv-97 (RCL)]
13. TMDL for PCBs for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland and Virginia (2007)
14. TMDL for Nutrients/Biochemical Oxygen Demand for the Anacostia River Basin in Maryland and the District (2008)
15. TMDL for Trash for the Anacostia River Watershed, Montgomery and Prince George's Counties, Maryland and the District of Columbia (2010)
16. TMDL for Nitrogen, Phosphorus and Sediment for the Chesapeake Bay Watershed (2010)

On July 25, 2011, in connection with a challenge by the Anacostia Riverkeeper and other environmental organizations, the U.S. District Court for the District of Columbia vacated EPA's approval of a total maximum daily load (TMDL) for sediment in the Anacostia River. While the court ruled in EPA's favor on a number of issues of significant importance to the TMDL program and that the TMDL adequately would achieve the designated aquatic life use, the court held that EPA's decision record did not adequately support EPA's determination that the TMDL would lead to river conditions that would support the primary (swimming) and secondary (boating) contact recreation and aesthetic designated uses. Based on its holding regarding the recreational and aesthetic uses, the court vacated the TMDL, but stayed its vacatur for one year to give EPA sufficient time to address the court's concerns. This TMDL is included in the above list (#12), because EPA expects this vacatur to be resolved within the time frame for TMDL efforts outlined in this permit. However, District planning and implementation efforts on this TMDL are not required until such time as the legal challenge is resolved and the TMDL is established.

Most EPA developed TMDLs for the District, as well as all District developed and EPA approved TMDLs can be found at the following website: http://www.epa.gov/reg3wapd/tmdl/dc_tmdl/index.htm.

The Chesapeake Bay TMDL for nitrogen, phosphorus and sediment is available at: http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html.

The District also has a number of TMDL-related documents on its website: http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,495456.asp.

In addition, the tidal Anacostia River is listed as impaired for TSS and BOD, and the Upper Potomac River is listed as impaired for pH. TMDL establishment by EPA is pending for both.

As part of permit reissuance EPA has reviewed several existing TMDL implementation plans, including those for the Potomac River, Anacostia River and Rock Creek. EPA has identified the relevant implementation actions from those Plans and included them as requirements of the Final Permit, *e.g.*, green roofs, tree plantings. This approach provides more clarity for the District and the general public, and is also consistent with the obligation of NPDES permit writers to articulate enforceable provisions in permits to implement TMDL WLAs.

EPA took the same approach with the Anacostia River Watershed Trash TMDL[98] (Trash TMDL) (Part 4.10.1 of the Final Permit), which was finalized in September 2010. This TMDL was well-developed with quantifiable information about the sources and causes of impairment. The Trash TMDL assigned a specific WLA to MS4 discharges: removal of 103,188 pounds of trash annually. The Final Permit requires the District to attain this WLA as a specific single-year measure by the fifth year of this permit term. The Final Permit provision is based on the annual trash WLA for the District MS4. In the TMDL, annual WLAs were divided by 365 days to obtain daily WLAs. Given the fact that the daily and annual WLAs are congruent with each other, use of the annual WLA as the permit metric is consistent with the assumptions and requirements of the TMDL and is a more feasible measure for monitoring purposes.

Because the Anacostia River Watershed Trash TMDL provided a solid foundation for action, EPA determined the implementation requirements and included them in the Final Permit rather than require the District to develop a separate implementation plan. The Permit requires the District to determine a method for estimating trash reductions and submit that to EPA for review and approval within one year of the effective date of the Final Permit. In addition, the District must annually report the trash prevention/removal approaches utilized, and the overall total weight (in pounds) of trash captured for each type of approach.

On December 29, 2010, the U.S. Environmental Protection Agency established the Chesapeake Bay TMDL[99] to restore clean water in the Chesapeake Bay Watershed. The TMDL identifies the necessary reductions of nitrogen, phosphorus and sediment from Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia that, when attained, will allow the Bay to meet applicable water quality standards. EPA based the TMDL allocations, where possible, on information provided by the Bay jurisdictions in their final Phase I WIPs. The TMDL requires the Bay jurisdictions to have in place by 2017 the necessary controls to attain 60% of the reductions called for in the TMDL, and to have all controls in place by 2025. EPA has committed to hold jurisdictions accountable for results along the way, including ensuring that NPDES permits contain provisions and limits that are consistent with the assumptions and requirements of the relevant WLAs.

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98 Maryland Department of the Environment and District of Columbia Department of Environment, *Total Maximum Daily Loads of Trash for the Anacostia River Watershed, Montgomery and Prince George's Counties, Maryland and the District of Columbia* (2010) http://www.epa.gov/reg3wapd/pdf/AnacostiaTMDLPortfolio.pdf

99 EPA, *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment* (2010) http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html

The District's final Phase I Chesapeake Bay WIP proposed very aggressive targets for pollutant reductions in its MS4 program.

Pollutant of Concern	% Reductions in Urban Runoff Loads by 2025 from 2009 Baseline	Reductions in Urban Runoff Loads by 2025 from 2009 Baseline
Total Nitrogen	17	29,310 lbs/yr
Total Phosphorus	33	7,740 lbs/yr
Sediment	35	2,192 tons/yr

These numbers are from the District's final input deck to the Chesapeake Bay Model in association with the final Phase I WIP.

The Final Permit requires a very robust set of measures, based on a determination that these measures are necessary to ultimately achieve the specified reductions. EPA took a similar approach with the Chesapeake Bay TMDL as it did with the aforementioned TMDLs, and incorporated specific implementation measures into the Final Permit. Although EPA did not finalize the Chesapeake Bay TMDL until December 2010, EPA had a reasonably clear understanding of what would be needed even prior to publishing the Draft Permit because of the significant amount of data, modeling output and other information available in advance of its finalization, as well as many months of ongoing discussions with the District about the elements of its final Phase I WIP.[100] Based on the final TMDL , EPA is assured that the Final Permit is consistent with the assumptions and requirements of the WLAs in the TMDL.

In partial fulfillment of attaining the Chesapeake Bay WLAs, the Final Permit contains: a new performance standard for development, a requirement for an offset program for development, numeric requirements for tree plantings and green roof installation, numeric requirements for retrofits, and a variety of other actions. The relevant sections of this Final Fact Sheet discuss those provisions more fully.

There will be two additional permit terms prior to 2025 during which the District will implement many additional and/or more robust measures to attain its Bay TMDL WLAs. Provisions, targets and numeric thresholds in this Final Permit are not necessarily the ones that will be included in subsequent permits. EPA believes, however, that the 2011 Final Permit sets the foundation for a number of actions and policies upon which those future actions will be based.

Section 4.10.2 of the Final Permit requires the District to implement and complete the proposed replacement/rehabilitation, inspection and enforcement, and public education aspects of the strategy for Hickey Run to satisfy the applicable oil and grease TMDL wasteload allocations. In addition, the District is required to install end-of-pipe management practices at four identified outfalls to address oil and grease and trash in Hickey Run no later than the end of this permit term. Implementation requirements to attain these WLAs were initiated during prior

100 District of Columbia Department of Environment, *Chesapeake Bay TMDL Watershed Implementation Plan* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/Final_District_of_Coluimbia_WIP_Bay_TMDL.pdf

permit terms. The requirements of today's Final Permit are intended to bring the District to the concluding stages of attaining the Hickey Run oil and grease and trash WLAs.

The 2003 District of Columbia TMDL for oil and grease in the Anacostia River noted that the waterbody was no longer impaired by oil and grease. In particular data from Hickey Run, which provided the basis for listing the Anacostia River as an impaired water body, had demonstrated consistent compliance with applicable water quality standards for oil and grease: for twenty-one samples taken in Hickey Run between January and December 2002, no values exceeded the 10mg/L standard, and only one sample exceeded a 5 mg/L detection limit value. The 2003 TMDL further concluded that on-going implementation activities, which included public education and automobile shop enforcement actions, caused a significant decrease in ambient pollutant concentrations.[101] The Final Permit includes a provision for additional controls on oil and grease in Hickey Run should monitoring during this permit term indicate it is necessary. However, per the demonstration noted above, EPA believes it likely this may not be necessary.

One commenter indicated that the shift from an aggregate numeric effluent limit for four outfalls into Hickey Run in the 2004 permit to a management practice-based approach in the Draft Permit violated the Clean Water Act's prohibition against backsliding, section 402(o)(1) of the CWA, 33 U.S.C. § 1342(o)(1) ("[A] Permit may not be renewed, reissued, or modified … subsequent to the original issuance of such Permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous Permit"). In response, EPA notes that a non-numeric effluent limitation is not automatically less stringent than a numeric effluent limitation. A different (numeric or non-numeric) effluent limitation only violates the anti-backsliding prohibition if it can be fairly compared to the prior numeric limit and found to be less stringent than that requirement. *See e.g., Communities for a Better Environment v. State Water Resources Control Bd.*, 132 Cal. App. 4th 1313 (August 29, 2005) (finding that no backsliding had occurred where the effluent limit in existing permit was not "comparable" to WQBEL in previous permit). In this case EPA 1) notes that additional controls on oil and grease may not be needed (as explained above), and 2) has determined regardless that compliance with the performance standards in the Final Permit will result in improved water quality protections for the District MS4 receiving streams more effectively than did the previous numeric effluent limitations (see discussions in relevant sections).

Section 4.10.3 of today's Final Permit requires the District to develop a Consolidated TMDL Implementation Plan (Consolidated Plan) for all TMDL wasteload allocations assigned to District MS4 discharges. All applicable WLAs must be considered in this plan, though the TMDLs listed at the beginning of this Section form the basis for District action to meet this requirement. EPA has evaluated these TMDLs along with existing water quality data and has concluded that *E. coli*, total nitrogen, total phosphorus, total suspended solids, copper, lead, zinc and trash are critical pollutants of concern for District waters, and should be the focus of implementation measures as well as of a revised monitoring program (*see* Section 5.1 for a

101 District of Columbia, *Final Total Maximum Daily Load for Oil and Grease in the Anacostia River* (2003) http://www.epa.gov/reg3wapd/tmdl/dc_tmdl/AnacostiaRiver/AnacoatiaOilReport.pdf

discussion of the latter).

The rationale for a Consolidated Plan is to allow for more efficient implementation of control measures. In many cases TMDLs have been developed on a stream segment basis, which is not always the most logical framework for implementation of controls. In addition, the solutions for reducing many pollutants and/or improving water bodies will be the same stormwater control measures and/or policies, and it would be wasteful of resources and duplicative to have separate implementation plans under those circumstances.

The Final Permit requires the Consolidated Plan to include:

1) Specified schedules for attaining applicable wasteload allocations for each TMDL; such schedules must includes numeric benchmarks that specify annual pollutant load reductions and the extent of control actions to achieve these numeric benchmarks.
2) Interim numeric milestones for TMDLs where final attainment of applicable wasteload allocations requires more than one permit cycle. These milestones shall originate with the third year of this permit term and every five years thereafter.
3) Demonstration using modeling of how each applicable WLA will be attained using the chosen controls, by the date for ultimate attainment.
4) The Consolidated TMDL Implementation Plan elements required in this section will become enforceable permit terms upon approval of such Plans, including the interim and final dates in this section for attainment of applicable WLAs.
5) Where data demonstrate that existing TMDLs are no longer appropriate or accurate, the Plan shall include recommended solutions, including, if appropriate, revising or withdrawing TMDLs.

Some of the applicable TMDLs developed within the District were based on limited or old data. In those cases the District may choose to reevaluate these waters and impairments to determine if revising or withdrawing the TMDL, or other action, would be appropriate.

The District has two years from the date of Final Permit issuance to develop, public notice and submit the Consolidated Plan to EPA for review and approval. EPA believes the required elements (1-5, above) will ensure clarity and enforceability, but also encourages interested parties to participate in the public process. EPA added this public notice requirement to the Final Permit because of the significant interest expressed by commenters on District TMDLs.

Section 4.10.4, Adjustments to TMDL Implementation Strategies, requires the District to make mid-course improvements to implementation measures and policies whenever data indicate insufficient progress towards attaining any relevant WLA. The District must adjust its management programs to compensate for the inadequate progress within 6 months, and document the modifications in the Consolidated TMDL Implementation Plan. The Plan modification shall include a reasonable assurance demonstration of the additional controls to achieve the necessary reductions, *i.e.*, quantitatively linking sources and causes to discharge

quality. In addition, annual reports must include a description of progress as evaluated against all implementation objectives, milestones and benchmarks, as relevant.

Finally, with respect to any new or revised TMDL that may be approved during the permit term, the Final Permit makes allowances for reopening the permit to address those WLAs (see Section 8.19 of the Final Permit: Reopener Clause for Permits), if necessary. EPA believes that reopening the permit will not typically be necessary since the Final Permit requires the District to update the Consolidated Plan within six months for any TMDL approved during the permit term with wasteload allocations assigned to District MS4 discharges, and also to include a description of revisions in the next regularly scheduled annual report.

(**4.11 Additional Pollutant Sources)**: Requirements in this Section of the Final Permit largely continue provisions in the 2004 Permit. EPA notes that the provisions of this section were mostly included in Section 3 of the Draft Permit.

5. MONITORING AND ASSESSMENT OF CONTROLS

(5.1 Revised Monitoring Program): As included in the Draft Permit, the monitoring requirements for the District's stormwater program have been significantly updated from the last permit cycle. This revision reflects the fact that the District has already performed broad monitoring of a variety of parameters over the last two permit cycles. The Phase I stormwater regulations require representative sampling for the purpose of discharge characterization in the first permit term, or initial years of the program (40 C.F.R. §122.26(d)(1)(iv)(E)). The District now has a decade worth of this type of data, and it is timely to update the monitoring program to more effectively evaluate the effectiveness of the program, and to more effectively and efficiently use the District's funds for this purpose. As noted in the National Research Council's report *Urban Stormwater Management in the United States* [102], the quality of stormwater from urbanized areas has been well-characterized. Continuing the standard end-of-pipe monitoring typical of most MS4 programs has produced data of limited usefulness because of a variety of shortcomings (as detailed in the report). The NRC Report strongly recommends that MS4 programs modify their evaluation metrics and methods to include biological and physical monitoring, better evaluations of the performance/effectiveness of controls and overall programs, and an increased emphasis on watershed scale analyses to ascertain what is actually going on in receiving waters. The report also emphasizes the link between study design and the ability to interpret data, *e.g.*, having enough samples to ensure that conclusions are statistically significant.

Consistent with these goals, the Final Permit requires the District to develop a Revised Monitoring Program to meet the following objectives:

1) Make wet weather loading estimates of the parameters in Table 4 from the MS4 to receiving waters. Number of samples, sampling frequencies and number and locations of

102 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

sampling stations must be adequate to ensure data are statistically significant and interpretable.

2) Evaluate the health of the receiving waters, to include biological and physical indicators such as macroinvertebrates and geomorphologic factors. Number of samples, frequencies and locations must be adequate to ensure data are statistically significant and interpretable for long-term trend purposes (not variation among individual years or seasons).

3) Any additional necessary monitoring for purposes of source identification and wasteload allocation tracking. This strategy must align with the Consolidated TMDL Implementation Plan required in Part 4.10.3 For all pollutants in Table 4 monitoring must be adequate to determine if relevant WLAs are being attained within specified timeframes in order to make modifications to relevant management programs, as necessary.

The Final Permit requires the District to public notice the Revised Monitoring Program, and to submit it to EPA for review and approval within two years of the effective date of the Final Permit.

EPA also significantly refined the list of required pollutant analytes/parameters for which monitoring is required from over 120 to 9:

(Table 4 from the Final Permit)
Monitoring Parameters

Parameter
E. coli
Total nitrogen
Total phosphorus
Total Suspended Solids
Cadmium
Copper
Lead
Zinc
Trash

These parameters are those for which relevant stormwater wasteload allocations exist, or (in the case of cadmium) where monitoring data indicate that the pollutant is occurring in discharges at concentrations and frequencies to consider it a pollutant of concern. End-of-pipe analytical monitoring is an expensive undertaking, and EPA feels strongly that the District's water quality-related evaluations will be much more robust and actionable with an enhanced focus on true pollutants of concern, along with the elimination of analytes for which monitoring routinely shows non-detect concentrations, and/or those to which notable water quality problems have not been linked.

One modification has been made to this list for the Final Permit from the Draft Permit.

The Draft Permit required evaluation of Trash reductions in the relevant sections for the Anacostia River Watershed Trash TMDL (4.10.1), but failed to include it in Table 4 (Table 3 of the Draft Permit). EPA has added trash as a monitoring parameter to this table to correct that oversight.

(5.2 Interim Monitoring): During the interim period from the effective date of the Final Permit until EPA approves the Revised Monitoring Program, the Final Permit requires the District to largely continue the monitoring program established and updated under the 2000 and 2004 permits, except the monitoring program is only required for the list of monitoring parameters in Table 4, which has been reduced to the nine parameters as discussed above.

EPA received several comments and questions on the interim monitoring requirements. Individual responses are included in the Responsiveness Summary published with the Final Permit and this Final Fact Sheet. EPA chose to not modify the interim monitoring provisions for the Final Permit because: 1) they are largely an extension of the same requirements and methods already approved and established under prior permits, which will ensure that data collected during the interim monitoring period are comparable to data collected during the past decade, thus providing "apples to apples" comparisons in data interpretation; and 2) EPA believes that the District's monitoring-related resources are more effectively spent developing a robust revised program, rather than revising the interim program.

(5.4 Area and/or Source Identification Program): The Final Permit provides that "[t]he permittee shall continue to implement a program to identify, investigate, and address areas and/or sources within its jurisdiction that may be contributing excessive levels of pollutants to the MS4 and receiving waters, including but not limited to those pollutants identified in Table 4 herein." This is identical in substance to section 5.5 in the Draft Permit and essentially continues the requirements from the 2004 MS4 Permit. EPA received a comment that this provision has been inadequate to identify sources contributing pollutants to MS4 discharges. EPA recognizes that this provision is general, but believes that the District's ongoing practices are sufficient during the interim monitoring period. EPA notes that the Final Permit requires the Revised Monitoring Program to include any additional necessary monitoring for purposes of source identification and wasteload allocation tracking. The public will have a chance to comment on the proposed objectives and methods in Plan, and EPA will review and approve this Plan. Therefore there will be several opportunities to ensure that the District has robust methods for identify additional pollutant inputs to District MS4 discharges.

(5.7 Reporting of Monitoring Results): In response to several comments, and because of the potential availability of electronic reporting in the future, EPA made several modifications to this Section of the Final Permit. When available the District may submit monitoring data through NetDMR, a national tool for regulated Clean Water Act permittees to submit discharge monitoring reports (DMRs) electronically via a secure Internet application to EPA. *See* http://www.epa.gov/netdmr/. However, if this system is not available to the National Marine Fisheries Service, then the District must continue to submit hard copies. The Final Permit eliminates the requirement for the District to submit monitoring reports to itself. This section

clarifies (consistent with Section 6.2) that all monitoring results from a given year be summarized in the following annual report.

6. REPORTING REQUIREMENTS

Permit reporting is required pursuant to 40 C.F.R. § 122.41(l). EPA has made a number of minor edits to this section primarily for the purposes of: maintaining consistency with other Sections of the Final Permit (as those provisions necessitated changes in reporting, the Final Fact Sheet discusses those changes in association with the relevant Section); eliminating redundancy; and to provide clarification.

(6.2 Annual Reporting): Consistent with comments from a number of commenters regarding public access to documents, today's Final Permit requires the District to post each Annual Report on its website at the same time the Report is submitted to EPA.

The separate 'Reporting on Funding' in the Draft Permit has been eliminated in the Final Permit because it was largely redundant with other reporting requirements, and because it was beyond the scope of what is needed from the District. The Final Permit requires annual reporting on projected costs and budget for the coming year as well as expenditures and budget for the prior year, including (i) an overview of the District's financial resources and budget, (ii) overall indebtedness and assets, (iii) sources for funds for stormwater programs, and (iv) a demonstration of adequate fiscal capacity to meet the permit requirements. However, EPA has concluded that additional detail would be superfluous. In addition, beyond a demonstration of basic budget considerations as outlined in the Final Permit, how the District chooses to allocate resources to comply with the permit is an internal decision.

EPA has also included a provision for an Annual Report Meeting in this permit in order to improve communication between the District and the Agency. This meeting will provide an opportunity for EPA to obtain more in-depth knowledge of the District's program, and should also enhance feed-back on the program. The permit requires the District to convene the first Annual Report Meeting within 12 months of issuance of the permit. If both parties agree that this first meeting was successful, the Annual Report meeting shall be extended for the duration of the permit term.

7. STORMWATER MODEL

The Stormwater Model and associated Geographical Information System are tools used by the District to help track and evaluate certain components of the water quality program. The Final Permit requires the use and maintenance of this system as a component of the District's Stormwater Management Program. There were no modifications to this Section between the Draft Permit and the Final Permit.

8. STANDARD PERMIT CONDITIONS FOR NPDES PERMITS

The provisions in Part 8 are requirements generally applicable to all NPDES permits, pursuant to 40 C.F.R. § 122.41, as well as other applicable conditions pursuant to § 122.49 and specific statutory or regulatory provisions as noted in the permit. No changes were made to this section of the permit.

9. PERMIT DEFINITIONS

Most changes to this section from the Draft Permit consist of minor clarifications. In addition, several terms were eliminated from this section because they do not appear elsewhere in the Final Permit: 'goal', 'internal sampling station', 'significant spills', and 'significant materials'. The definition of 'MS4 Permit Area' was removed because it is already defined in Part 1.1.

A definition of "development" was added to clarify that development is "the undertaking of any activity that disturbs a surface area greater than or equal to 5,000 square feet." The definition further clarifies that the relevant performance standard for development applies to projects that commence after 18 months from the effective date of the Final Permit or as soon as the District's stormwater regulations go into effect, whichever is sooner.

The definition of 'green roof' was modified to allow for the fact that some types of ecoroofs may be constructed without vegetation or soil media.

The definition of "retrofit" was modified to focus on environmental outcomes, *i.e.*, reductions in discharge volumes and pollutant loads and improvements in water quality, rather than implementation of conveyance measures.

The definition of "predevelopment hydrology" was enhanced to clarify that the phrase refers to a "stable, natural hydrologic site condition that protects or restores to the degree relevant for that site, stable hydrology in the receiving water, which will not necessarily be the hydrologic regime of that receiving water prior to any human disturbance in the watershed." This definition is consistent with several seminal publications on the topic including *Urban Stormwater Management in the United States*[103] and references therein, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*[104], and *Guidance for Federal Land Management in the Chesapeake Bay Watershed*[105], issued in fulfillment of Part 502 of E.O. 13508.

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103 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

104 EPA, *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (2009) http://www.epa.gov/owow_keep/nps/lid/section438/

105 EPA, *Guidance for Federal Land Management in the Chesapeake Bay Watershed*, Chapter 3. Urban

RELATIONSHIP TO NON-POINT SOURCE PROGRAM:

It should be noted that the measures required by the Permit are separate from those projects identified in the District's EPA-approved Non-Point Source Management Plan as being funded wholly or partially by funds pursuant to Section 319(h) of the Clean Water Act. See Section 3 of Permit ("These Permit requirements do not prohibit the use of 319(h) funds for other related activities that go beyond the requirements of this Permit, nor do they prohibit other sources of funding and/or other programs where legal or contractual requirements preclude direct use for stormwater permitting activities.").

ADMINISTRATIVE RECORD:

Copies of the documents that comprise the administrative record for the Permit are available to the public for review at the Martin Luther King, Jr. Public Library, which is located at 901 G Street, N.W. in Washington, D.C. An electronic copy of the proposed and final Permits and proposed and Final Fact Sheets are also available on the EPA Region III website, http://www.epa.gov/reg3wapd/npdes/draft_permits.html. For additional information, please contact Ms. Kaitlyn Bendik, Mail Code 3WP41, NPDES Permits Branch, Office of Permits and Enforcement, EPA Region III, United States Environmental Protection Agency, 1650 Arch Street, Philadelphia, Pennsylvania 19103-2029.

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and Suburban, EPA841-R-10-002, (2010) (http://www.epa.gov/owow_keep/NPS/chesbay502/pdf/chesbay_chap03.pdf)

ATTACHMENT
25

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

APR 10 2008

Ms. Tam M. Doduc, Chair
Ms. Dorothy R. Rice, Executive Director
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Dear Ms. Doduc and Ms. Rice:

I understand that certain specific provisions of the 2001 Municipal Separate Storm Sewer System ("MS4") permit for the County of Los Angeles have been called into question as going beyond what is required under section 402(p) of the CWA. (Commission on State Mandates, File Nos. 03-TC-04, 03-TC-19, 03-TC-20, and 03-TC-21.) The permit conditions at issue are: 1) the requirements for conducting inspections at industrial and commercial facilities including, restaurants and automobile servicing, [Parts 4.C.2.a. and b.] and, 2) the requirement for permittees not subject to the Trash TMDL to locate and maintain trash receptacles at transit stops [Part 4.F.5.c.3.]. California RWQCB, Los Angeles Region, Order No. 01-182, NPDES No. CAS004001 (Dec. 13, 2001). This letter discusses these permit conditions in the context of EPA's expectations for MS4 permits.

Section 402(p) of the Clean Water Act, 33 U.S.C. 1342(p), requires EPA (or authorized states) to issue National Pollutant Discharge Elimination System ("NPDES") permits to regulate the discharge of stormwater from MS4s. Typically, these MS4s are owned and operated by cities and counties. Pursuant to the Clean Water Act, these permits must require the MS4 to: 1) "effectively prohibit" non-stormwater discharges, and 2)"reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." 33 U.S.C. 1342(p)(3)(B)(ii) and (iii).

The NPDES regulations require medium and large MS4s to develop stormwater management programs that the permitting authority will consider when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable. Stormwater permitting has generally relied on the use of best management practices ("BMPs"), including both structural and non-structural controls, for achieving compliance with these requirements. The EPA also expects stormwater permits to follow an iterative process whereby each successive permit becomes more refined, detailed, and expanded as needed, based on experience under the previous permit. See, 55 Fed. Reg. 47990, 48052 ("EPA anticipates that storm water management programs will evolve and mature over time."); 64 Fed. Reg. 68722, 68754 (Dec. 8, 1999) ("EPA envisions application of the MEP standard as an iterative process."); Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits (Sept. 1, 1996) ("The interim permitting approach uses BMPs in first-round storm water permits, and

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expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards"). See also, "Evaluating the Effectiveness of Municipal Stormwater Programs" (January 2008) (http://www.epa.gov/npdes/pubs/region3_factsheet_swmp.pdf). While the standard of "maximum extent practicable" (MEP) allows for flexibility, that flexibility is not boundless and requires some level of vigor. EPA has created a national menu of stormwater BMPs to provide additional guidance concerning appropriate BMPs for stormwater management plans. Other factors to consider in ensuring appropriate controls include "technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness." Building Indus. Ass'n v. State Water Res. Control Bd., 124 Cal. App. 4th 866, 889 (2004). See also "In re Cities of Bellflower, et al.", SWRCB 2000-11.

At the outset, I note the Los Angeles MS4 permit is a third generation Phase I MS4 permit that should be building upon the experiences from previous permits. Both of the provisions at issue here seem well within a reasonable expectation of controls that reduce pollutants to the "maximum extent practicable." EPA regulations at 40 C.F.R. §122.26(d)(2)(iv) set forth the basic elements to be included in a Phase I MS4's stormwater management program. Subparagraph (A) requires a description of "source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the [MS4] that are to be implemented during the life of the permit." Subparagraph (B) requires a program for detection and removal of illicit discharges and improper disposal into the storm sewer, including a program for inspections and enforcement. A program for commercial and industrial facility inspection and enforcement that includes restaurants and automobile facilities, would appear to be both practicable and effective. Such an inspection program ensures that stormwater discharges from such facilities are reducing their contribution of pollutants and that there are no non-stormwater discharges or illicit connections. Thus these programs are founded in both 402(p)(3)(B)(ii) and (iii) and are well within the scope of 40 C.F.R. §122.26(d)(2)(iv)(A) and (B).[1]

Similarly, maintaining trash receptacles at all public transit stops is well within the scope of these regulations. Among the minimum controls required to reduce pollutants from runoff from commercial and residential areas are practices for "operating and maintaining public streets, roads, and highways . . . ." §122.26(d)(2)(iv)(A)(3). I believe these requirements are also practical and effective.[2] Moreover, this permit provision is consistent with EPA's national menu

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[1]EPA's "MS4 Program Evaluation Guidance" (January 2007) envisions that an MS4 permit would include a requirement for an inspection program for common industrial/commercial businesses, such as restaurants and gas stations, within the jurisdiction of the MS4. Id. at 76 - 77, 81. The inspection requirements of the LA MS4 permit are consistent with the recommended activities in the Guide.

[2]The provision applicable to the TMDL permittees is also clearly consistent with EPA's 2002 guidance on TMDLs and storm water permitting. "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit

of BMPs for stormwater management programs, which recommends a number of BMPs to reduce trash discharges. See http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=5. Among the recommendations is "improved infrastructure" for trash management when necessary, which includes the placement of trash receptacles at appropriate locations based on expected need. The requirements of the Los Angeles County MS4 permit are consistent with this recommendation. See also, "MS4 Program Evaluation Guidance" (January 2007) at pp. 50, 79. EPA's expectations of the programs to reduce pollutants to the maximum extent practicable specifically refer to control of litter and trash, regardless of whether the particular receiving water is already impaired for trash.

I hope that this explanation helps clarify EPA's expectations for MS4 permit requirements under the Clean Water Act. I look forward to continuing to work with the State on our shared goal of ensuring consistency and effectiveness in storm water permitting as a vital tool in protecting the quality of our waters. Should you have further questions about these issues, please have your staff contact Douglas Eberhardt of my staff at (415) 972-3420 or have your counsel's office contact Laurie Kermish of the Office of Regional Counsel at (415) 972-3917.

Sincerely,

Alexis Strauss 10 April 2008

Alexis Strauss
Director, Water Division

cc: Mr. Michael Lauffer, Chief Counsel
State Water Resources Control Board

Ms. Paula Higashi, Executive Director
Commission on State Mandates

Requirements Based on Those WLAs" (November 22, 2002) which is available at: http://cfpub.epa.gov/npdes/pubs.cfm?program_id=6

ATTACHMENT
26

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX Southern California Field Office
600 Wilshire Blvd. Suite 1460
Los Angeles, CA 90017

July 31, 2008

Mark A Grey
Director of Environmental Affairs
Building Industry Association of Southern California
1330 South Valley Vista Drive
Diamond Bar, CA 91765

Andrew R. Henderson
Vice President and General Counsel
Building Industry Association of Southern California
1330 South Valley Vista Drive
Diamond Bar, CA 91765

Dear Dr. Grey and Mr. Henderson:

This is in response to your July 1, 2008 letter to Alexis Strauss regarding the incorporation of Low Impact Development (LID) provisions into Municipal Separate Storm Sewer System (MS4) permits in southern California.

Your letter refers to your email communications with Ms. Strauss, as well as to testimony provided at the February 13, 2008 San Diego Regional Water Quality Control Board Hearing by Dr. Cindy Lin and to the April 1, 2008 comments to the Colorado River Basin Regional Water Quality Control Board by Mr. Doug Eberhardt. Your letter asks several questions about the U.S. EPA Region 9 Water Division's positions regarding the incorporation of LID provisions into southern California MS4 permits.

Nationally, U.S. EPA has formally recognized the benefits of LID (also termed "Green Infrastructure") in several policy documents. EPA is advocating green infrastructure as an approach to wet weather management that is cost-effective, sustainable, and environmentally-sound. On April 19, 2007, EPA and four national groups signed an agreement to promote green infrastructure as an environmentally preferable approach to storm water management, and on August 16, 2007 EPA issued a memo encouraging the incorporation of Green Infrastructure into NPDES storm water permits. Ongoing efforts are described in the January 17, 2008 Action Strategy for Managing Wet Weather with Green Infrastructure. All of these materials regarding EPA's policy on green infrastructure can be found at:
http://cfpub.epa.gov/npdes/greeninfrastructure/information.cfm#greenpolicy.

In EPA Region 9, we are promoting LID strategies that infiltrate, evapotranspire, capture, and reuse storm water to maintain or restore natural hydrologies and improve water

quality. We are encouraging permitting agencies across Region 9 to incorporate LID provisions into MS4 permits as clear, measurable and enforceable requirements.

The next round of MS4 permits in the coastal Regions of southern California will be the fourth generation of these permits. It is our expectation that these latest permits be strengthened to take advantage of lessons learned from previous permits, and to contribute to the restoration of impaired waters impacted by MS4s. These new MS4 permits should include quantitative requirements to enable all parties to clearly identify performance expectations for LID implementation.

Your letter asks several questions about our position regarding permit provisions which call for LID implementation to attain a standard of no more than 5% Effective Impervious Area (EIA). Such provisions are included in the current draft (April 29, 2008) MS4 permit for Ventura County proposed by the Los Angeles Regional Water Quality Control Board, and the February 15, 2008 guidelines provided by the Central Coast Regional Water Quality Control Board to those in the Central Coast Region enrolling under the State's Phase II general MS4 permit. We support the inclusion of the 5% EIA provisions for new development and redevelopment projects in both of these examples as clear, measurable, and enforceable requirements. Use of the 5% EIA requirement is not the only acceptable, quantitative approach for incorporating LID into renewed MS4 permits in southern California. As noted in Mr. Eberhardt's April 1, 2008 letter, and his May 13, 2008 follow-up letter to the Colorado River Basin Regional Water Quality Control Board, we are open to other quantitative means for measuring how LID tools reduce storm water discharges.

Your letter asks about our use of a paper by Dr. Richard Horner concluding that the achievement of a 3% EIA standard for development in Ventura County is feasible. Dr. Horner's paper is one of many we have before us. Our positions have been informed by many documents germane to the management of municipal storm water, including the January 21, 2008 paper by your organization entitled "Integration of Low Impact Development Measures and CEQA Approvals." EPA has also considered numerous publications, case studies and guidance manuals in its consideration of LID/Green Infrastructure as a cost-effective, preferable alternative to storm water management. A partial list of these materials may be found at http://cfpub.epa.gov/npdes/greeninfrastructure/research.cfm.

While we cannot attribute our position on future MS4 permits to a single report or analysis, our views on these permits have been most comprehensively informed by the nearly 50 audits of Region 9 MS4 permits we have conducted over the past seven years. These audit reports can be found on our website at http://epa.gov/region09/water/npdes/ms4audits.html#report. Twenty of our audits have been conducted in southern California. These audits have highlighted the need for quantitative, measurable requirements in MS4 permits to ensure effective implementation of storm water controls.

I hope this has answered the questions in your July 1, 2008 letter. If you would like to discuss this further, please call me, here in EPA's Southern California Field Office, at 213-244-1832

Sincerely,

John Kemmerer
Associate Director,
Water Division

cc: Executive Officers, RWQCBs Regions 1-9
Tam Doduc, Chair SWRCB
Dorothy Rice, Executive Director, SWRCB
(all cc's transmitted electronically)

ATTACHMENT
27

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

JUN 20 2014

Adam Fischer
Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501.

Re: Draft MS4 Permit for Orange County (Permit No. CAS618030)

Dear Mr. Fischer:

The following are EPA Region 9's comments on the draft NPDES permit (permit No. CAS618030) for discharges from the municipal separate storm sewer system (MS4) serving the portion of Orange County under the jurisdiction of the Santa Ana Regional Water Quality Control Board (Regional Board), which the Regional Board released for public comment on May 2, 2014. In an email dated January 31, 2014, we provided comments on an earlier "administrative draft" of this permit. We appreciate the opportunity to provide early input during the permit development process. However, we are disappointed that the May 2, 2014 draft permit contains problematic new provisions allowing for compliance with water-quality provisions based on Permittee submittal of draft plans (or providing a notice of intent to submit a plan) to the Executive Officer. Following below are our comments on the latest draft permit.

A. Total Maximum Daily Load (TMDL) Requirements

We have concerns with the draft permit's new options for complying with permit requirements associated with approved TMDLs upon the Permittees' written notification to the Executive Officer of their intent to develop a plan to comply with applicable wasteload allocations (WLAs). Each of the TMDLs listed in Appendices B through H of the draft permit was incorporated into the Santa Ana Regional Board's 2009 Orange County MS4 Permit (R8-2009-0030), so implementation of these TMDLs should be ongoing. We'd prefer that the draft permit be revised to retain the same approach for compliance with WLAs as the 2009 permit, and as is incorporated into the San Diego Regional Board's 2013 Regional MS4 permit (NPDES Permit No.CAS0109266). It's our conclusion that basing TMDL compliance on plans limits enforceability and makes it difficult to confirm that the TMDL water quality targets are being attained. If a plan-based compliance approach is to be included, it's important for the draft permit to be revised to include a more rigorous analysis including how specifically identified BMPs will directly result in achievement of WLAs, and the expectations that interim milestones be provided to track progress towards achieving WLAs. Also, contrary to the draft permit, this option for compliance should only be available upon approval of the plan (following opportunity for public comment) by the Executive Officer.

Per Clean Water Act and federal regulations at 40 CFR 122.44 regarding TMDLs, permit language must be modified in several places to accurately describe that Permittee's discharges must comply with water quality-based effluent limits (WQBELs), not the TMDL WLAs. Specifically, we recommend/request these language changes be made within permit section XVIII – TMDL Implementation and in each of the TMDL Appendices B-H. For example, the responsible Permittees must comply with WQBELs established in this permit; those WQBELs are consistent with WLAs within approved TMDLs.

In our emailed comments of January 31, 2014, we expressed concern that compliance with WLAs (established as WQBELs in the permit as noted above) would be determined in accordance with a schedule (yet-to-be determined) where such determinations could be as infrequent as once every five years. We had recommended WLA compliance determinations at least once/year; we noted this would consistent with the implementation language in at least one TMDL adopted by the Regional Board (organochlorine compounds TMDL). The monitoring requirements of the latest draft permit (Attachment A) have been revised to require monitoring consistent with TMDL assessment periods, but do not specify in detail the monitoring frequency that would be necessary for consistency. To clarify the requirements and to avoid any misunderstandings of the TMDL requirements, we recommend that the permit either include the monitoring frequency that would be required for consistency with each TMDL, or direct the Permittee to a specific document where it could be found.

Furthermore, the permit should be revised to include action levels as part of the permits monitoring and reporting program and, if appropriate, the Permittees' water quality improvement plans. The goal of including both non-stormwater and stormwater action levels is to guide implementation efforts and measure progress towards the protection of water quality and designed beneficial uses of the state from adverse impacts caused or contributed to by MS4 discharges. Notably, action levels were included in the Riverside County MS4 permit (2010, Santa Ana Regional Board) and the San Diego Regional permit (2013).

Section XVIII.B.4 of the draft permit would allow exceedances of a WLA at a frequency that is less than or equal to a site-specific exceedance frequency found in the State's policy guide for developing the CWA section 303(d) list. If retained, this provision should be further discussed and supported in the fact sheet. Our understanding is that the exceedance frequency in the section 303(d) listing guide does not affect the applicability of approved WLAs, and would not justify the proposed exceedances that would be allowed under the permit. Absent adequate justification for section XVIII.B.4, we recommend it be removed from the permit.

The draft permit does not currently include any requirements related to TMDLs that may be approved during the term of the permit. To expedite implementation of additional controls that may be necessary for compliance with such TMDLs, we recommend the permit include a provision similar to section O of the 2012 MS4 permit

for the City of Salinas (permit No. CA0049981) issued by the Central Coast Regional Board. The Salinas permit requires development and submittal within one year of final TMDL approval of a plan for complying with newly approved TMDLs. This is preferable to waiting for the next permit renewal to incorporate newly approved TMDLs. We understand that the Santa Ana Regional Board is currently developing a TMDL for selenium for the Newport Bay Watershed; our recommended provision would expedite compliance with the selenium TMDL and any others that may be approved during the term of the permit.

In Appendix G, we recommend that the second paragraph be modified to clarify that the metals and selenium TMDLs were only promulgated by EPA, and were not developed nor adopted by the Santa Ana Regional Board. We recommend the following edits to the paragraph:

> "The WLAs in this Appendix are based on the Toxic Pollutants (Metals and Se) TMDLs. ~~The Toxic Pollutants TMDL has been approved by Santa Ana Regional Water Quality Control Board, the State Water Resources Control Board, the Office of Administrative Law ("OAL") and USEPA. The Toxic Pollutants TMDL was adopted by the Santa Ana Regional Water Quality Control Board in Resolution No. R8-2003-0039.~~ The metals and Se TMDLs were promulgated by USEPA on June 17, 2002."

B. New Development (Including Significant Redevelopment)

Section XII.A.7 requires the Principal Permittee to submit retrofit studies. While this is a step in the right direction, it falls far short of the retrofit provisions included in the San Diego Regional Board's Regional MS4 permit (CAS019266). We recommend incorporation of the San Diego permit's section II.E.5.(e)(1) "Retrofitting and Rehabilitating Areas of Existing Development." The San Diego permit requires each Co-permittee to identify areas of existing development as candidates for retrofitting, focusing on areas where retrofitting will address pollutants and/or stressors that contribute to the highest priority water quality conditions. This more comprehensive approach will better identify areas within the built environment where retrofits would result in water quality improvements. The San Diego permit also requires a strategy to facilitate implementation of projects identified as potential candidates for retrofits, which is lacking in the draft Orange County permit. Moreover, many of the potential retrofit BMPs (such as bioretention) would provide additional benefits such as groundwater recharge which would help alleviate current and future drought conditions; this factor increases the importance of an effective retrofit program.

Section XII.K discusses off-site treatment controls. We recognize that in some cases off-site projects can effectively address the post-construction control requirements for new development and significant redevelopment projects. This is particularly the case where off-site controls are located to optimize infiltration to replenish groundwater

supplies. However, it is necessary that water quality protections are in place at the site of the triggering development/redevelopment project, and the draft permit should be revised to make this explicitly clear. We recommend the Los Angeles County MS4 permit (CAS004001), which effectively addresses this issue in section VI.D.7.c.iii(7) by specifying Water Quality Mitigation Criteria that must be met for New and Redevelopment Projects that have been approved for offsite projects.

It is not clear whether regional or sub-regional biotreatment facilities would be required to treat 1½ times the capture volume required for retention facilities, as would be the case when on-site biotreatment replaces on-site retention. This requirement should be included in the permit. We further recommend that in situations where there may be a choice in using off-site retention or off-site biotreatment that the permit include a preference for retention (similar to the preference for retention over biotreatmemt for on-site controls).

The draft permit appears to lack any requirements for off-site mitigation when on-site LID is determined to be infeasible and regional or sub-regional facilities are not being used. We recommend that mitigation using off-site LID be required for any portion of the design capture volume for which retention or biotreatment is determined to be infeasible onsite. Such a requirement would be consistent with the 2012 Los Angeles County permit.

Finally, section XII.L of the draft permit provides for a waiver of structural controls under certain circumstances. For example, a waiver could be available if the costs are shown to disproportionately outweigh the benefits. The waiver provisions are not explained in the fact sheet and further explanation and justification should be included. Given the experience throughout California implementing LID controls pursuant to MS4 permits, which has shown the widespread feasibility of implementing LID measures in connection with new development and redevelopment projects, we're very skeptical that this waiver provision is necessary.

C. Receiving Water Limitations

In our emailed comments of January 31, 2014, we expressed support for the receiving water limitations (RWLs) language that had been included in the administrative draft. At the time, this language closely tracked State Water Board WQ Order 99-05 and the Regional Board's 2009 MS4 permit for Orange County. Unfortunately, the May 2, 2014 draft permit (section IV) includes a new provision under which a Permittee would be deemed in compliance with RWLs upon submittal of a draft plan for compliance to the Executive Officer. As an alternative to this new draft permit language, it's our preference that the permit retain the same RWLs language contained in your 2009 Orange County MS4 permit. As you are no doubt aware, at a November 2012 workshop, the State Water Board indicated it may consider revising WQ Order 99-05. The State Board has recommended that MS4 permits include a permit reopener to address potential revisions

to WQ Order 99-05. We suggest incorporation of such a reopener in the Orange County permit; section II.H.4.a of the San Diego permit provides appropriate language.

We are aware that while the State Board considers revisions to WQ Order 99-05, some stakeholders have been urging Regional Boards to develop new approaches for determining how RWLs compliance is determined. While our strong preference is to stick with the approach used in your 2009 permit, we have reviewed one alternative that we could support. During the development of the San Diego Regional Board's Regional MS4 permit, RB9 staff developed an option (referred to as Option 2) that would have made use of detailed Water Quality Improvement Plans to demonstrate measurable progress to achieve RWLs (included in the RB9 staff's Revised Tentative Order posted March 27, 2013). Under Option 2, after Water Quality Improvement Plan approval, its implementation would be the vehicle for achievement of RWLs. Ultimately at its May, 2013 hearing, the San Diego Regional Board chose not to adopt Option 2, and instead, with EPA's full support, adopted its Regional MS4 permit with RWLs language consistent with WQ Order 99-05. The Los Angeles MS4 permit also lays out a thorough, rigorous planning process for determining compliance with RWLs. However, we have gone on record as opposing this approach used by the Los Angeles Regional Board, given that the alternative compliance approach is available before the Plans are approved.

Unlike the San Diego Regional Board's staff proposal (Option 2) or the Los Angeles County MS4 permit, the draft Orange County permit does not provide necessary details on Permittee programs to demonstrate rigorous efforts to achieve RWLs. The deficiencies in the draft permit include the absence of measurable interim milestones and modeling efforts supporting assurances that BMPs will achieve RWLs. Again, our preference is to retain the RWLs language of the 2009 permit, but if a plan-based compliance approach is being seriously considered it should use the methodology developed by the San Diego and Los Angeles Regional Board staff, and should be available for compliance purposes only after plan approval.

D. Other Comments

1. Whole Effluent Toxicity (WET) Requirements

In our emailed comments of January 31, 2014, we had recommended that the Orange County MS4 permit include WET requirements (using EPA's Test for Significant Toxicity (TST) procedure) modeled after those in the 2012 Los Angeles County MS4 permit. The Los Angeles County permit requires tests using 100% effluent and 100% receiving water. However, the Orange County permit requires tests on a series of dilutions (section F.3 of Attachment A), and the selection of these dilutions should be explained in the fact sheet. We note the dilution series in the draft permit was commonly used in the WET data analysis methods used prior to the TST and may have been inadvertently carried over from previous permits.

2. Monitoring Program

The list of parameters in the monitoring program for pesticides appears incomplete (Table 4 of Attachment A), in that only a limited number of organophosphate pesticides would be sampled. We recommend the list be broadened to include a wider variety of pesticide compounds in current use, such as pyrethroids (e.g., bifenthrin, cypermithrin, esfenvalerate, gamma cyhalothrin, permithrin, etc.) and neonicotinoides (e.g., clothianidin, imidocloprid, thiamethoxam).

Section II.D of Attachment A requires monitoring at representative "MS4 outfalls" but does not provide any guidance concerning the required number of locations to be sampled, or the specific locations themselves. We recommend the permit at least clarify that representative sampling locations must be selected that would allow a compliance determination with each applicable WLA. The fact sheet also notes that the intent of the permit is largely to continue the existing monitoring program, and it appears the Regional Board has generally been satisfied with the program in previous years. Nevertheless, we recommend the fact sheet further describe the program (e.g., number and location of sampling sites, frequency of sampling) to provide the public with a better sense of the scope of the program.

Based on information contained in Orange County's 2011-2012 Unified Annual Report, the County did not adequately compare dry weather receiving water composite sample results against the California Toxics Rule (CTR), specifically the chronic criteria, as required by section III.1(a) of the monitoring and reporting program requirements of the 2009 permit. Sampling results reported by Orange County were compared to the CTR acute toxicity criteria only. The lack of adequate sampling and/or analysis of dry weather composite samples against the chronic CTR criteria limits the County's ability to identify trends, potential sources, and appropriate responses to exceedances of applicable water quality standards. For the new permit, the Regional Board should ensure that the County clearly understands it responsibilities on this matter.

Finally, we note that bacteria sampling (section II.I.1.c of Attachment A) is not allowed on days when rain has occurred. The basis for this condition should be explained in the fact sheet.

3. Public Review of Updated Monitoring Program

Section II.B.6 of Attachment A provides that the Executive Officer wlll provide the opportunity for public comment on changes to the initial monitoring program which is submitted, but this opportunity seems missing for the initial submittal itself. We recommend the Executive Officer ensure such an opportunity for the initial submittal as well since it will likely be of greater interest than any changes in subsequent years.

We appreciate the opportunity to provide our views on the draft permit. If you have any questions regarding this matter, please contact Eugene Bromley of the NPDES Permits Office at (415) 972-3510.

Sincerely,

Eugene Bromley

for David Smith, Manager
NPDES Permits Office (WTR-5)

ATTACHMENT
28

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

JAN 15 2014

Mr. Ivar Ridgeway
Los Angeles Regional Water Quality Control Board
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

Re: Draft MS4 Permit for the City of Long Beach (Permit No. CAS004003)

Dear Mr. Ridgeway:

The following are EPA Region 9's comments on the draft NPDES permit (permit No. CAS004003) for discharges from the municipal separate storm sewer system (MS4) serving the City of Long Beach, which the Los Angeles Regional Board released for public comment on November 22, 2013.

We are supportive of many aspects of the draft permit. For example, the draft permit's Planning and Land Development Program (section VII.J) contains valuable provisions for ensuring that when new development and redevelopment activities are planned there are efforts to reduce pollutant impacts from impervious surfaces and make beneficial use of stormwater. We also strongly endorse the Public Agency Activities Program, which incorporates a requirement to develop an Inventory of Existing Development for Retrofitting Opportunities (section VII.K.4). We're also supportive of the draft permit's incorporation of TMDL Waste Load Allocations (WLAs) as numeric effluent limits (section VIII). In addition, we support the monitoring program (Attachment E), particularly the requirement for outfall monitoring in addition to instream monitoring since this will help identify which outfalls may be contributing to exceedances of WLAs or receiving water limitations. Finally, we support the watershed-based approach used in the permit (section VII.C) which we believe will maximize water quality improvement overall by ensuring that best management practices are appropriately customized to the needs of individual watersheds.

Although we're strongly supportive of much of the draft permit, we have concerns with three areas, each of which we raised in testimony at the November 8, 2012 adoption hearing for the Los Angeles County MS4 permit. These concerns, and our recommendations to address them, are discussed below:

A. Compliance with TMDL-based Water Quality-Based Effluent Limits Via Retention of the 85th percentile, 24-Hour Storm

Section VIII.F.1.d of the draft permit provides that a permittee implementing an enhanced watershed management plan (EWMP) will be deemed in compliance with applicable water quality-based effluent limits associated with TMDLs if the runoff from

has happened since then, particularly the approval of a large number of TMDLs with applicable WLAs. While this necessarily complicates the 2012 permit, it also provides a major opportunity for water quality improvement via the implementation of these TMDLs. Our understanding of the benefits of LID has also increased since 2001 and this proposed permit provides another substantial opportunity of water resource benefits. The process for the development of the new draft permit has also been lengthy, but we believe the permit is ready for adoption and again we urge the Board to adopt the permit at its September 2012 meeting. If you would like to discuss this matter further, please contact Eugene Bromley of the NPDES Permits Office at (415) 972-3510.

Sincerely,

Eugene Bromley

for David Smith, Manager
NPDES Permits Office (WTR-5)

ATTACHMENT
29

Administrative Record Page No. 022948

November 18, 2015
Item No. 11
Supporting Document No. 10d
Public Comment
LA MS4 Permit- A-2236(a)-(kk)
Deadline: 01/21/15 by 12:00 noon

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

RECEIVED
1-20-15
SWRCB Clerk

JAN 20 2015

Ms. Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor (95814)
P.O. Box 100
Sacramento, CA 95812-0100

Re: Comments to A-2236(a)-(kk)

Dear Ms. Townsend:

The following are EPA Region 9's comments on the State Water Board's draft WQ Order released on November 21, 2014, responding to the petitions (SWRCB/OCC files A-2236(a) through (kk)) submitted challenging NPDES permit No. CAS004001. This permit was issued in November 2012 by the Los Angeles Regional Board and authorizes discharges from the municipal separate storm sewer system (MS4) serving most of Los Angeles County. Region 9 offers the following comments on certain aspects of the Order.

A. "Safe Harbor" During the Planning Phase for a WMP/EWMP

Section VI.C.3.b of the LA MS4 permit provides that permittees are deemed in compliance with receiving water limitations (RWLs) upon notification to the Regional Board of their intent to develop a watershed management program (WMP) or enhanced watershed management program (EWMP). In our testimony at the November 2012 adoption hearing for the permit (and in a subsequent August 14, 2013 letter to the State Water Board), we recommended a change in the timing of when a permittee would be deemed in compliance. Rather than being deemed in compliance upon notification of intent to prepare a WMP/EWMP, we recommended that a permittee be deemed in compliance only after approval of a WMP/EWMP.

Section II.B.6 of the draft WQ Order supports the LA MS4 permit with regards to the timing of when the "safe harbor" period would begin. Establishing a safe harbor during this planning phase is not warranted. The requirement that LA County permittees meet RWLs was in place for over eleven years prior to the issuance of this permit. We disagree that permittees should be considered in compliance with these limits solely based on a notification of intent to prepare a plan.

A provision consistent with our recommendation was drafted as one option for the draft Regional MS4 permit (NPDES permit No. CAS0109266) proposed by the San Diego Regional Board in April 2013. The San Diego Regional Board chose to stick with

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an approach for compliance with RWLs that closely aligned with State Board Order WQ 99-05 (i.e., not this draft WQ Order's proposed option). In conclusion, the San Diego Board's option for finding permittees in compliance with RWLs only when a plan is approved should be incorporated into the State Water Board's final WQ Order responding to the LA MS4 permit petitions.

B. Compliance with RWLs Via Retention of the 85%, 24-Hour Storm for Drainage Areas with EWMPs

Section VI.E.2.e.i.4 of the LA MS4 permit provides that for drainage areas where a EWMP is developed, retention of the runoff from the 85%, 24-hour storm would constitute compliance with applicable Water Quality Based Effluent Limits (WQBELs) and RWLs for pollutants associated with TMDL Waste Load Allocations (WLAs). We raised concerns with this provision in our testimony at the November 2012 adoption hearing. It has been a long-standing EPA policy that where a MS4 permit does not incorporate TMDL WLAs as numeric limits, the permit's administrative record must demonstrate that specified control measures will be sufficient to ensure compliance with WLAs. In a December 4, 2012 letter, we requested that the Los Angeles Regional Board identify documents in the permit's administrative record which are the basis for the conclusion that the specified retention would result in achieving WLAs. Based on the Regional Board's April 11, 2013 response, we do not believe that the permit's record supports the conclusion that this retention will result in achievement of WLAs.

The draft WQ Order in section II.B.5 recognizes that the LA MS4 permit does not verify that TMDL-specific limitations will be met as a result of retention of the 85%, 24-hour storm. The draft WQ Order addresses this issue by requiring the submittal of a plan of additional control measures if the specified volume is retained, but water quality monitoring shows that RWLs and WQBELs associated with TMDLs are not in fact being achieved. While this is a step in the right direction, we are concerned that only requiring submittal of a plan could lead to an ineffective iterative process without any assurance that water quality will be protected. We recommend that the provision be strengthened to specify that the expectations for this plan must include: (1) a quantitative analysis demonstrating that proposed additional control measures will result in attainment of WLAs, and (2) a provision for the Executive Officer to have the option to require strict compliance with numeric WLAs if continued progress is not being made towards achieving these water quality limitations.

C. Applicability of the WQ Order to All Regional Boards

We note that some commenters on the draft WQ Order recommended that the State Water Board require that all Regional Boards follow the WMP/EWMP approach in the LA MS4 permit when issuing MS4 permits. As drafted, the proposed WQ Order (section II.B.7) directs all Regional Boards to consider the approach in the LA MS4 permit, but does not require its use. We believe it would be premature and inappropriate

to require the LA MS4 permit approach throughout the State, especially considering the previous two issues we've identified in this letter.

We appreciate the opportunity to provide our views on the draft WQ Order. If you have any questions regarding this matter, please contact Eugene Bromley of the NPDES Permits Section at (415) 972-3510.

Sincerely,

David Smith, Manager
NPDES Permits Section (WTR-2-3)

ATTACHMENT
30

MS4 Permit Improvement Guide

U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF WATER

OFFICE OF WASTEWATER MANAGEMENT

WATER PERMITS DIVISION

APRIL 2010

EPA 833-R-10-001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 14 2010

OFFICE OF WATER

Dear NPDES Stormwater Managers,

I am pleased to announce that the Environmental Protection Agency (EPA) has completed the "Municipal Separate Storm Sewer System Permit Improvement Guide." The primary purpose of this guidance document is to assist National Pollutant Discharge Elimination System (NPDES) permit writers in strengthening municipal separate storm sewer system (MS4) permits.

This Guide contains examples of permit conditions and supporting rationale that could be used in fact sheets that accompany NPDES permits. The Guide also includes recommendations for permit writers on how to tailor the language depending on the type of permit. For example, permits covering traditional municipalities may contain different permit provisions than those covering non-traditional entities like departments of transportation, universities, and prisons.

I ask that permit writers review the permit language and corresponding discussion presented in this Guide and consider how to incorporate this, or similar, language into their MS4 permits. Some modification of the language may be necessary to make it suitable for use with specific MS4 permits, and to better tailor it to meet the needs and goals of the various permitting authorities.

The permit language suggested in this Guide is not intended to override already existing, more stringent or differently-worded provisions that are equally as protective in meeting the applicable regulations. EPA expects the permitting authority to continue to make significant progress and ensure that the intent of the regulations or more stringent requirements is captured in the permit.

In addition, EPA would like to particularly stress the following key principles:

- Permit provisions should be clear, specific, measurable, and enforceable. Permits should include specific deadlines for compliance, incorporate clear performance standards, and include measurable goals or quantifiable targets for implementation.
- Permits should contain a performance standard for post-construction that is based on the objective of maintaining or restoring stable hydrology to protect water quality of receiving waters or another mechanism as effective.

EPA has begun a rulemaking to strengthen the stormwater program. Using this Guide to improve permits represents the direction that EPA is taking to strengthen the program. This Guide is a living document that will be updated as new information for improving the stormwater program is obtained.

I appreciate your continued efforts in strengthening the NPDES municipal stormwater program. If you have any questions about this Guide or suggestions for further improvements, please contact Rachel Herbert of my staff at herbert.rachel@epa.gov or call her at 202-564-2649.

Sincerely,

Linda Y. Boornazian

Linda Y. Boornazian, Director
Water Permits Division

CC: State Stormwater Coordinators
Association of State and Interstate Water Pollution Control Administrators

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INTRODUCTION & GETTING STARTED

Purpose

The primary purpose of the MS4 Permit Improvement Guide (Guide) is to assist National Pollutant Discharge Elimination System (NPDES) permit writers in strengthening municipal separate storm sewer system (MS4) stormwater permits. The objective of the Guide is to facilitate the creation of MS4 permits which are clear, consistent with applicable regulations, and enforceable. This Guide contains examples of permit conditions and supporting rationale that could be used in fact sheets that accompany NPDES permits. Permit language should include controls that identify specific actions permittees must perform to comply with the Permit Requirements.

This Guide focuses in large part on permits for small (Phase II) MS4s. However, while the contents of the Guide are generally organized consistent with the six minimum control measures (40 CFR 123.34(b)) applicable to Phase II MS4 permits, however, permit writers may find this Guide useful for Phase I MS4 permits. In addition, the Guide specifically addresses Phase I MS4 Permit Requirements with regard to the industrial program elements set forth in the Phase I regulations at 40 CFR 122.26(d)(2)(ii) and (iv)(C). These are addressed in Chapter 7. The Guide may also be useful for "non-traditional" MS4 permittees, such as departments of transportation (DOTs), universities and prisons.

EPA has developed a Stormwater Phase II Final Rule Fact Sheet Series (www.epa.gov/npdes/stormwater/swfinal) to assist permitting authorities and permittees in understanding the Phase II regulations. Further, EPA has developed the National Menu of Stormwater Best Management Practices (www.epa.gov/npdes/stormwater/menuofbmps) which provides descriptive information in fact sheets about various best management practices associated with the Phase II six minimum control measures.

The Guide was created by reviewing numerous MS4 permits and fact sheets from around the country. Some of the example permit and fact sheet language presented in this Guide has been adapted from these permits; in those instances where existing language that meets the purpose of this document was not available, EPA has crafted new language.

Contents of this Guide

This document is divided into parts, as noted above, based largely on the six minimum control measures required in the Phase II stormwater regulations (see 40 CFR 122.34(b)). Chapters 1 -6 address development and implementation of a stormwater management program (SWMP) and the six minimum control measures that must be included in the SWMP. Chapter 7 addresses industrial facilities programs relevant for Phase I MS4 permits. Chapter 8, Overall Evaluation and Adaptive Management, discusses reporting, evaluation, and tracking requirements. This Guide does not focus on the water quality provisions of the Clean Water Act, which may require more stringent requirements than those programmatic elements specified here.

Each chapter opens with an introduction providing a brief overview of relevant regulatory requirements pertaining to the subject of the chapter. Each chapter is then divided into sections in which the following topics are addressed:

- *Example Permit Provision* – This section includes example MS4 permit language. The language has been formatted and numbered in such a way that each section corresponds directly to a permit structured in accordance with the chapter sequence of this Guide. EPA developed these examples by first surveying existing EPA and State MS4 permit language and drawing upon agency experience in implementing permits. EPA has identified the source of the language (in footnotes) if adapted from specific permits.
- *Example Permit Requirement Rationale for the Fact Sheet* – This section describes the rationale for the example permit provision. This language can assist the permit writer in developing the fact sheet, which accompanies all NPDES permits; however, it is up to the permit writer to ensure that a complete and customized version of the fact sheet accompanies the permit. Example Permit Requirement Rationale for the Fact Sheet sections often describe "requirements" or steps that "must" be taken. To the extent this language is used in these sections, it is intended to describe requirements included in the example permit provisions. It does not mean that all permits "must" include the specific "requirement" described.
- *Recommendations for the Permit Writer* (included where appropriate) – This section discusses issues the permit writer should consider in determining how to use the example permit provisions.

How to Use this Guide

This guidance includes "example" MS4 permit language for specific program elements, but is not intended to be definitive or comprehensive for all MS4 Permit Requirements.[1] EPA recommends that permit writers review the example permit language presented in this guide and consider how to incorporate this, or similar, language into MS4 permits as appropriate. Each state may have different NPDES requirements along with varied experience overseeing MS4 programs, and MS4 permittees vary widely in storm water management experience and sophistication, size, topography, precipitation patterns, land use, receiving water conditions and other factors. In most instances, EPA anticipates that permit writers will modify the language to make it suitable for specific MS4 permits, and to tailor example provisions to meet the various needs and goals that apply.

When possible, this Guide has tried to provide examples that can be used for both Phase I and Phase II permits. However, in some instances EPA has provided suggestions for how the language can be tailored to better fit within the context of a Phase I or Phase II permit. In addition, EPA acknowledges that some language presented in this Guide may be more suitable for an individual permit rather than a general permit. While EPA has presented a discussion for ways the language could be altered to fit these scenarios in Recommendations for the Permit Writer sections, it is up to the permit writer to determine the best use of the material for the permit being crafted.

[1] For example, the guide does not explicitly address provisions for compliance with CWA section 402(p)(3)(B)(ii), water quality standards, applicable wasteload allocations in TMDLs or such other conditions as the permitting authority deems necessary. For information on integrating TMDLs into stormwater permits see USEPA's DRAFT TMDLs to Stormwater Handbook (www.epa.gov/owow/tmdl/stormwater)

The example permit language in this Guide has been written as if the permit is a reissued permit and not an initial permit, since most MS4 permittees have been subject to NPDES permits for at least one permit term. Requirements to develop the initial SWMP are not included in this Guide since they would have been included in the first permit term. It is important that permit writers consider the different stages in the development and implementation of SWMPs when establishing permit conditions as well as the experience learned from other more advance programs. So, for example, this Guide includes brackets to indicate the place for an appropriate schedule or deadline rather than indicating specific timeframes in all instances. These examples are available to the permit writer, along with other resources such as the permittee's draft or existing SMWP document, annual reports, prior permit experience, receiving water quality information and the permit writer's best professional judgment, to issue permits suitable for their specific MS4s.

The permit language suggested in this Guide is not intended to override already existing, more stringent or differently-worded provisions that are equally as compliant in meeting the applicable regulations and protective of water quality standards. EPA expects the permitting authority to ensure that the intent of all applicable regulations is captured in the permit. States with more stringent permit provisions should continue to strengthen these provisions as the permits are reissued. This Guide includes suggestions on how to develop permit language for MS4 permittees. This Guide does not impose any new legally binding requirements on EPA, States, or the regulated community, and does not confer legal rights or impose legal obligations upon any member of the public. In the event of a conflict between the discussion in this Guide and any statute, regulation, or permit the statute, regulation or permit controls.

Terminology: SWMP and SWMP Document
This guide uses the term SWMP to refer to the stormwater management program that is required by the Phase I and Phase II regulations to be developed by MS4 permittees. The SWMP document is the written plan that is used to describe the various control measures and activities the permittee will undertake to implement the stormwater management program.

Preparing to Write an MS4 Permit

Most Phase II MS4 permittees are regulated under a general permit (with some exceptions where individual permits have been used for Phase II and non-traditional MS4 permittees). Phase I MS4 permittees are regulated under individual permits, and can include multiple co-permittees. EPA regulations require that initial MS4 permits (i.e. first permit term) set the foundation of the permittee's SWMP. For Phase II MS4 the focus is on the six minimum control measures in 40 C.F.R. 122.34(b), while the Phase I MS4 permittees are informed by the regulations at 40 C.F.R. 122.26(d). See Chapter 1 of this Guide.

As the permit writer prepares to reissue an MS4 permit, regardless of whether the permit is an individual or general permit, EPA recommends that the permit writer review, at a minimum, the following sources of information:

Past annual reports
For currently regulated MS4s, annual reports submitted by the permittee can include information that will help permit writers develop more specific and measurable Permit Requirements. The most recent annual report is usually the most helpful to review, but additional annual reports can be reviewed if time allows. If the permit writer is developing a general permit, a broad selection of

annual reports from various permittees should be reviewed. In particular, EPA recommends that the permit writer review, at a minimum, the following specific information:

Areas of obvious strengths or weaknesses in the SWMP

- For example, is the permittee vague about specific activities (often an indicator of a weak program area), or is the permittee clearly meeting the requirements of the permit and/or going above and beyond the minimum requirements?

Trends or common compliance problems

- For example, does the permittee analyze the data to assess the most common compliance problems, and then modify their controls/programs to address these problems? For example, do they use the common compliance issues identified to target their training and outreach/education efforts for construction operators?

Level of implementation of SWMP activities (e.g., frequency and numbers of inspections, frequency of catch basin cleaning, street sweeping)

- Does the permittee report the total universe when reporting the quantity of an activity achieved? For example, if the MS4 is required to conduct industrial inspections, does it report it did 100 inspections (which may be good or bad, depending on how many it was required to inspect), or that it did 100 out of 5,000 (only 2% of the total)?

Water quality priorities for the permittee (e.g. impaired waters, TMDLs, high quality waters)

- Does the permittee's annual report describe priority pollutants for impaired waters and other water quality programs and what was done to reduce and/or eliminate their contact with stormwater? Does the SWMP target both impaired and high quality waters?

Specific sources or pollutants of concern permittee is currently focusing on

- Does the SWMP target pollutants of concern in its activities?

Level and type of enforcement currently being used by permittee

- Does the annual report provide data and summary information on the different types of enforcement actions taken (how many verbal warnings, written notes, fines, etc)?

Any trends (i.e. water quality, compliance, control measure implementation levels) being reported by Permittees which indicate success or failure of particular SWMP components

- Does the permittee analyze the data, or just report the data in the MS4 annual report?

Types of measurable goals being applied and achieved by permittees

- Has the permittee met the measurable goals stated in the permit and SWMP?

Stormwater management program (SWMP)
Review the most current SWMP documents for potential gaps that may need to be specifically addressed in the reissued MS4 permit. EPA's *MS4 Program Evaluation Guidance* (available at www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf) can be used to assess the key elements in a SWMP.

NPDES MS4 audit reports, construction/industrial/commercial site inspection reports
Review the findings from any MS4 audits conducted during the past permit term to help identify key issues that should be addressed in the next permit. For example, if the audits identified weak or missing program elements and other controls, these should be addressed in the reissuance of the permit. Construction, industrial, and/or commercial site inspection reports for facilities within the MS4's boundary should be reviewed to determine if there are common compliance issues that should be addressed in the MS4 permit (for example, more training, more frequent inspections, more complete inventory or prioritization, etc.).

Monitoring/Information on Quality of Receiving Waters
Review any monitoring data collected by the permittee or any other entity that has collected useful monitoring data to identify potential pollutants of concern. In addition, the most recent information on impaired waters and total maximum daily loads (TMDLs) for the permit area should be reviewed. If there are waste load allocations (WLAs) applicable to the permittee, these should be addressed in the permit. If no WLA has been assigned to the MS4, the permit writer should still consider pollutants of concern identified in 303(d) lists and TMDLs when developing Permit Requirements. Such information will help identify whether more targeted permit conditions are needed to reduce the discharge of these pollutants. This Guide does not specifically address the inclusion of TMDL requirements in MS4 permits.

Permit renewal application data or past notice of intent (NOI) information
Review any permit renewal applications or NOIs submitted to establish coverage for the previous permit term. Permit writers should consider the recommendations made in the EPA "Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems" (www.epa.gov/npdes/pubs/owm0125.pdf) published in 1996 (40 CFR Part 122; Federal Register, Volume 61, Number 155). This document provides information which clarifies the MS4 reapplication requirements and explains that MS4 permit applicants and NPDES permit writers have discretion to customize appropriate and streamlined reapplication requirements on a case-by-case basis.

Previous MS4 permit
Finally, review any past MS4 permits to identify where permit language should be revised or completely rewritten, for example, because language was vague. This MS4 permit improvement Guide should be used help strengthen key areas in the permit.

Note that if the MS4 permit is being issued for the first time, some of the above information will not exist yet, such as past annual reports or old SWMP documents.

MS4 Permit Writing Tips

There are a few general tips to keep in mind when writing MS4 permits. First, and most importantly, permit provisions should be clear, specific, measurable, and enforceable. Permits should include specific

deadlines for compliance, incorporate clear performance standards, and include measurable goals or quantifiable targets for implementation. Doing so will allow permitting authorities to more easily assess compliance, and take enforcement actions as necessary.

For example, the following permit provision could be strengthened: "The permittee shall demonstrate compliance with this Permit through the timely implementation of control measures and other actions to reduce pollutants in discharges to the maximum extent practicable in accordance with their SWMP…" This permit provision does not define what "timely implementation" is, allowing the permittee to determine what is timely. Timely implementation could be, although it probably was not intended to be, interpreted as meaning up to five years, or it could mean that implementation must occur within six months. In addition, "other actions" are mentioned in this provision, but they are never described. If a permit requires "other actions," these actions should be specifically described in the permit. Finally, it is important to strike a balance of providing specific Permit Requirements while still allowing the permittee come up with innovative controls.

In addition, vague phrases such as "as feasible" and "as possible" should be avoided because they result in inconsistent implementation by permittees and difficulties in permit authority oversight and enforcement. The permit writer's role is to determine what is necessary to achieve in a permit term, and to develop clear, enforceable language that conforms to these determinations. Accordingly, the permit should set forth objective standards, criteria or processes, which will aid the permittee in complying with the permit, as well as the permitting authority in determining compliance in the MS4 permit.

In order for permit language to be clear, specific, measurable and enforceable, each Permit Requirement will ideally specify:

- *What* needs to happen
- *Who* needs to do it
- *How much* they need to do
- *When* they need to get it done
- *Where* it is to be done

For each Permit Requirement: "What" is usually the stormwater control measure or activity required. "Who" in most cases is implied as the permittee (although in some cases the permitting authority may need to specify who exactly will carry out the requirement if there are co-permittees). "How much" is the performance standard the permittee must meet (e.g., how many inspections). "When" is a specific time (or a set frequency) when the stormwater control measure or activity must be completed. "Where" indicates the specific location or area (if necessary). These questions will help determine compliance with the permit requirement.

The Use of Partnerships in MS4 Permits

Since the Phase II Rule applies to all small MS4s within an urbanized area regardless of political boundaries it is very likely that multiple governments and agencies within a single geographic area are subject to MS4 permitting requirements. For example, a city government that operates a small MS4 within an urbanized area may obtain permit coverage under a general Phase II permit while other MS4s in the same vicinity (such as a county, other cities, or a state DOT) may have individual Phase I MS4 permits. All permittees are responsible for permit compliance in their permitted area. Given the

potential for overlapping activities in close proximity, EPA encourages permittees in a geographic area to establish cooperative agreements in implementing their stormwater programs. Partnerships and agreements between permittees and/or other agencies can minimize unnecessarily repeating activities and result in using available resources as efficiently as possible. Using existing tools and programs instead of creating new ones can allow permittees to focus resources on high priority program components instead. In addition by forming partnerships, water quality can be examined and improved on a larger, consolidated scale rather than on a piece-meal, site-by-site basis.

In addition to requiring MS4 permittees to maintain records of program implementation such as inspection forms, monitoring data, dry weather screening reports, and notices of violation, EPA recommends that MS4 permits include requirements for permittees to summarize and analyze data and submit the analysis to the permitting authority. For example, as permittees are required to evaluate program compliance and appropriateness of best management practices, the permit could require permittees to address in annual reports questions such as:

- For illicit discharge data, what are the most prevalent sources and pollutants in the illicit discharge data, and where are these illicit discharges occurring? How many illicit discharges have been identified, and how many of those have been resolved? How many outfalls or screening points were visually screened, how many had dry weather discharges or flows, at how many were field analyses completed and for what parameters, and at how many were samples collected and analyzed? Does the permittee need to conduct more inspections in these areas, or develop more specific outreach targeting these sources and pollutants?
- For the construction data, what are the most common construction violations, and are there any trends in the data (e.g., construction operators who receive more violations than others, areas of the MS4 with more violations, need to refine guidance or standards to more clearly address common violations) How has the permittee responded to these trends? Over the last year, how many construction site SWPPP reviews were completed and approved? How many inspections were conducted, how many noncompliant sites were identified, and how many enforcement actions (and of what type) were taken?

Also, although the stormwater Phase II rule requires reports, after the first permit term, reports are required to be submitted only in years two and four of the permit term. EPA strongly encourages annual reports for all permittees. (See 40 CFR 122.34(g)(3))

CHAPTER 1: ESTABLISHMENT OF THE STORMWATER MANAGEMENT PROGRAM

Introduction

Included Concepts

- Requirement to develop a stormwater management program
- Necessary legal authority
- Enforcement Measures and Tracking
- Adequate resources

An over-arching legal authority framework must be established in order for the SWMP to be effective. Ensuring that the permittee has established the legal authority to meet the requirements of the permit, created a well described enforcement response plan (ERP), and allocated adequate resources will set a necessary foundation for the SWMP.

Legal Authority

Permittees must have the authority to carry out all aspects of their stormwater management programs, including requiring the control of pollutants flowing into the MS4 system, having access to inspect sources of pollutant discharges, and being able to compel compliance and issue citations in the event of violations. Legal authority is especially critical for construction site runoff control, post-construction/permanent runoff control, industrial and commercial inspections, and illicit discharge detection and elimination programs. (See 40 CFR 122.26(d)(2)(i) and 40 CFR 122.34(b)(3)(ii)(B), (b)(4)(ii)(A), and (b)(5)(ii)(B))

A permittee seeking permit coverage under individual permits is required to describe the legal authority it has to implement and enforce the SWMP. EPA recommends that general permits also require regulated MS4s to describe their applicable legal authority in their Notices of Intent (NOIs) (40 CFR 122.26(d)(2)(i), 122.33(b)). This legal authority is typically established through the adoption of one or more ordinances, or by modifying existing ordinances to provide the necessary authority. In some cases, a permittee might already have codified water quality provisions to address previous MS4 Permit Requirements; in this case, the permittee should be required to review existing codes and ordinances and prepare a statement detailing any necessary changes required to address the new MS4 permit requirements. Some permittees, such as, DOTs, universities, and prisons, may not have the authority to create and enforce ordinances. For these entities other mechanisms and authorities that they do possess should be utilized (e.g. DOT right-of-way permits).

Enforcement Measures and Tracking

Permittees are required by the Phase I and Phase II regulations to include in their ordinance, or other regulatory mechanism, penalty provisions to ensure compliance with construction and industrial requirements, to require the removal of illicit discharges, and to address noncompliance with post-construction requirements. In complying with these requirements, EPA recommends the use of enforcement responses that vary with the type of permit violation, and escalate if violations are repeated or not corrected. EPA recommends that the permittee be required to develop and implement an enforcement response plan (ERP), which clearly describes the action to be taken for common violations associated with the construction program, industrial and commercial program, or other SWMP programs. A well-written ERP provides guidance to inspectors on the different enforcement

responses available, actions to address general permit non-filers, when and how to refer violators to the State, and how to track enforcement actions.

Adequate Resources

Each permittee will fund its SWMP differently; therefore, in order to assess whether adequate resources have been allocated to carry out the requirements of the MS4 permit, the permitting authorities should require their permittees to submit an accounting of stormwater-related budgets, costs, and staffing resources updated annually. The fiscal analysis should document and explain changes to budgets from year to year and describe how each type of funding can and cannot be used for stormwater program activities. (See 40 CFR 122.26(d)(2)(vi)).

1.1 Requirement to Develop a Stormwater Management Program

Example Permit Provision

1.1.1 Requirement to Develop Program – The permittee must revise and update its written stormwater management program (SWMP) document and submit the SWMP to the [*insert name of Permitting Authority*] for review by [*insert deadline, e.g., within one year of permit issuance*]. The permittee must continue to implement the current SWMP until the revised SWMP is submitted. The SWMP does not contain effluent limitations; the limitations are contained in Parts [*insert relevant part of the permit*] of the permit.

1.1.2 Contents of the SWMP document – At a minimum, the permittee must include the following information in its SWMP document:

a. Ordinances, or other regulatory mechanisms, providing the legal authority necessary to implement and enforce the requirements of this permit (see Part 1.1);

b. Statement by the permittee's legal counsel certifying to adequacy of legal authority (see Part 1.2);

c. Written procedures describing how the permittee will implement provisions described in Parts 2-8.

1.1.3 Modifications to the SWMP document – The [*insert applicable name of permitting authority*]may notify the permittee of the need to modify the SWMP document to be consistent with the permit, in which case the permittee will have [*insert deadline, e.g. 90 days*] to finalize such changes to the program. The permittee is required to keep the SWMP document up to date during the term of the permit. Where the permittee determines that modifications are needed to address any procedural, protocol, or programmatic change, such changes must be made as soon as practicable, but not later than [*insert deadline, e.g. 90 days*].

Example Permit Requirement Rationale for the Fact Sheet

The permittee is required to develop a SWMP document that describes how the permittee will meet the control requirements in the permit. (See 40 CFR 122.26(d)(2)(iv), 122.34(a)). The SWMP document is a consolidation of all of the permittee's relevant ordinances or other regulatory requirements, the description of all programs and procedures (including standard forms to be used for reports and inspections) that will be implemented and enforced to comply with this permit and to document the selection, design, and installation of all stormwater control measures. The permittee is required to submit its SWMP document to the permitting authority. If modifications to the SWMP are necessary then the permitting authority will notify the permittee.

Recommendation for the Permit Writer

The permit writer should include in this section the relevant parts of the permit that require specific descriptions or justifications to be included in the SWMP document. Also, permit writers may need to include an additional requirement regarding the submittal of the SWMP document since some information contained in the SWMP document is required to be submitted prior to the permittee obtaining permit coverage. In addition, permit writers should refer to the memo entitled *Interim Guidance on Implementation of NPDES Regulations for Storm Water Phase II for Small Municipal Separate Storm Sewer Systems in Response to Recent Ninth Circuit Decision in Environmental Defense Center, et al. v. EPA, No. 00-70014 & consolidated cases (9th Cir.)* for additional guidance on the implementation of regulations for Phase II MS4s (www.epa.gov/npdes/pubs/interim_guidelines_memo_final.pdf).

1.2 Requirement to Develop Adequate Legal Authority to Implement and Enforce Stormwater Management Program

Example Permit Provision

1.2.1 Within [*insert deadline, e.g., one year from permit issuance*] the permittee must review and revise its relevant ordinances or other regulatory mechanisms, or adopt any new ordinances or other regulatory mechanisms that provide it with adequate legal authority to control pollutant discharges into and from its MS4, and to meet the requirements of this permit.

1.2.2 To be considered adequate, this legal authority must, at a minimum, address the following:

a. Authority to Prohibit Illicit Discharges – Prohibit and eliminate illicit connections and discharges to the MS4. Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4. Illicit discharges include all non-stormwater discharges except fire fighting discharges, discharges from NPDES permitted industrial sources and discharges not otherwise authorized under Part 1.2.2.b. of this permit.

b. Allowable Non-Stormwater Discharges –Exceptions to the prohibition in Part 1.2.2.a. may include the following, only if they are considered non-significant contributors of pollutants: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water.

c. Authority to Prohibit Spills or Other Releases – Control the discharge of spills, and prohibit dumping or disposal of materials other than stormwater into the MS4.

d. Authority to Require Compliance – Require compliance with conditions in the permittee's ordinances, permits, contracts, or orders (i.e., hold dischargers accountable for their contributions of pollutants and flows).

e. Authority to Require Installation, Implementation, and Maintenance of Control Measures – Require owners/operators of construction sites, new or redeveloped land, and industrial and commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of stormwater control measures consistent with [*insert references to applicable stormwater control measure manuals, guidance documents, etc.*].

f. Authority to Receive and Collect Information – The permittee must have the authority to request from operators of construction sites, new or redeveloped land, and industrial and commercial facilities information such as stormwater plans, inspection reports, and monitoring results, and other information deemed necessary to assess compliance with this permit. The permittee must also have the authority to review designs and proposals for new development and redevelopment to determine whether adequate stormwater control measures will be installed, implemented, and maintained.

g. Authority to Inspect – The permittee must have the authority to enter private property for the purpose of inspecting at reasonable times any facilities, equipment, practices, or operations related to stormwater discharges to determine whether there is compliance with local stormwater control ordinances/standards or requirements in this Permit.

h. Response to Violations – The permittee must have the ability to promptly require that violators cease and desist illicit discharges or discharges of stormwater in violation of any ordinance or standard and/or cleanup and abate such discharges, including the ability to:

    1. Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within [*insert deadline, e.g. 48 hours*] of notification; or

    2. For uncontrolled sources of pollutants that could pose an environmental threat, require abatement within [*insert timeframe, e.g. 30 days of notification*]; or,

3. Perform the clean up and abatement work and bill the responsible party, if necessary.
4. If a situation persists where pollutant-causing sources or activities are not abated, provide the option to order the cessation of activities until such problems are adequately addressed.
5. When all parties agree that clean-up activities cannot be completed within the timeframe provided, determine a new timeframe and notify the [*insert name of permitting authority*].

i. Monetary Penalties – The permittee must have the ability to:

1. Levy citations or administrative fines against responsible parties either immediately at the site, or within a few days.
2. Require recovery and remediation costs from responsible parties.

j. Civil/Criminal Penalties – The permittee must have the ability to impose more substantial civil or criminal sanctions (including referral to a city or district attorney) and escalate corrective response, consistent with its enforcement response plan developed pursuant to Part 1.3, for persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm.

k. Interagency Agreements – Control of the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements or other similar agreements with other owners of the MS4, such as [*insert other applicable permittees*].

1.2.3 The permittee must include as part of its written SWMP document a statement certified by its chief legal counsel that the permittee has taken the necessary steps to obtain and maintain full legal authority to implement and enforce each of the requirements contained in this permit. This statement must include:

a. Identification of all departments within the permittee's jurisdiction that conduct stormwater-related activities and their roles and responsibilities under this permit. Include an up-to-date organizational chart specifying these departments, key personnel, and contact information.

b. Identification of the local administrative and legal procedures and ordinances available to mandate compliance with stormwater-related ordinances and therefore with the conditions of this permit.

c. A description of how stormwater related-ordinances are implemented and appealed.

d. A description of whether the municipality can issue administrative orders and injunctions, or whether it must go through the court system for enforcement actions.

Example Permit Requirement Rationale for the Fact Sheet

Adequate legal authority is required to implement and enforce most parts of the SWMP. (See 40 CFR 122.26(d)(2)(i) and 40 CFR 122.34(b)(3)(ii)(B), (b)(4)(ii)(A), and (b)(5)(ii)(B)). Without

adequate legal authority the MS4 would be unable to perform many vital SWMP functions such as performing inspections and requiring installation of control measures. In addition, the permittee would not be able to penalize and/or attain remediation costs from violators.

Recommendations for the Permit Writer

A major difference between a traditional MS4 and a non-traditional MS4 (such as a DOT, military base, or university) is often the scope of legal authority available to the MS4. Non-traditional MS4 permittees often cannot pass "ordinances" nor do they have enforcement authority like a typical municipality, so legal authority may consist of policies, standards, or specific contract language. Non-traditional MS4 permittees also do not generally have the authority to impose a monetary penalty. Although these differences exist, just like traditional MS4s, non-traditional MS4s must have the legal authority to develop, implement, and enforce the program. Moreover, the scope of legal authority that may be exercised by MS4 operators that are municipalities may vary from state to state. Therefore, permit writers should tailor the legal authority section depending on the types of permittees covered and the scope of authority that may be exercised by the permittee. For example, non-traditional MS4 permittees often have authority over what their contracts require. Therefore, the permit could require that contracts for construction and maintenance activities include specific stormwater requirements that ensure the permittee's requirements are met. In addition, cooperative agreements could be maintained with those permittees that do possess the legal authorities to enforce stormwater measures within the permittee's MS4 boundary.

The discharge prohibitions listed in Part 1.2.2 are taken from the Phase II regulations and are the minimum requirements. Note that, unlike Phase II MS4s, Phase I MS4 permittees are required to address the sources of non-stormwater discharges in Part 1.2.2.b. when they are identified as sources of pollutants in stormwater discharges. (See 40 CFR 122.26(d)(2)(iv)(B)). The permit writer may choose to apply additional or more stringent prohibitions. For example, some states have chosen to prohibit discharges from street washing activities as they can be significant sources of pollutants such as oil and grease and heavy metals.

1.3 Enforcement Measures and Tracking

Example Permit Provision

1.3.1 The permittee must continue to implement, and revise within [*specify deadline for completion, e.g. 12 months of permit issuance*] if necessary, an enforcement response plan (ERP), which sets out the permittee's potential responses to violations and addresses repeat and continuing violations through progressively stricter responses as needed to achieve compliance. The ERP must describe how the permittee will use each of the following types of enforcement responses based on the type of violation:

a. Verbal Warnings – Verbal warnings are primarily consultative in nature. At a minimum, verbal warnings must specify the nature of the violation and required corrective action.

b. Written Notices – Written notices of violation (NOVs) must stipulate the nature of the violation and the required corrective action, with deadlines for taking such action.

c. Escalated Enforcement Measures – The Permittee must have the legal ability to employ any combination of the enforcement actions below (or their functional equivalent), and to escalate enforcement responses where necessary to address persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm:

   1. Citations (with Fines) – The ERP must indicate when the permittee will assess monetary fines, which may include civil and administrative penalties.
   2. Stop Work Orders – The permittee must have the authority to issue stop work orders that require construction activities to be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate control measures.
   3. Withholding of Plan Approvals or Other Authorizations – Where a facility is in non-compliance, the ERP must address how the permittee's own approval process affecting the facility's ability to discharge to the MS4 can be used to abate the violation.
   4. Additional Measures – The permittee may also use other escalated measures provided under local legal authorities. The permittee may perform work necessary to improve erosion control measures and collect the funds from the responsible party in an appropriate manner, such as collecting against the project's bond or directly billing the responsible party to pay for work and materials.

1.3.2 Enforcement Tracking – The Permittee must track instances of non-compliance either in hard-copy files or electronically. The enforcement case documentation must include, at a minimum, the following:

a. Name of owner/operator of facility or site of violation
b. Location of stormwater source (i.e., construction project, industrial facility)
c. Description of violation
d. Required schedule for returning to compliance
e. Description of enforcement response used, including escalated responses if repeat violations occur or violations are not resolved in a timely manner
f. Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violations)
g. Any referrals to different departments or agencies
h. Date violation was resolved.

1.3.3 Recidivism Reduction – The permittee is required to identify chronic violators of any SWMP component and reduce the rate of noncompliance recidivism. The permittee

must summarize inspection results by these chronic violators and include incentives, disincentives, or an increased inspection frequency at the operator's sites. [2]

Example Permit Requirement Rationale for the Fact Sheet

The permit requires permittees to have an established, escalating enforcement policy that clearly describes the action to be taken for common violations. The policy must describe the procedures to ensure compliance with local ordinances and standards, including the sanctions and enforcement mechanisms that will be used to ensure compliance. (See 40 CFR 122.26(d)(2)(i)). It is critical that the MS4 have the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance. Enforcement responses to individual violations must consider criteria such as magnitude and duration of the violation, effect of the violation on the receiving water, compliance history of the operator, and good faith of the operator in compliance efforts. Particularly for construction sites, enforcement actions must be timely in order to be effective.

Recommendations for the Permit Writer

Typical enforcement mechanisms include verbal warnings, written NOVs, administrative fines and orders, stop work orders, and civil or criminal penalties. Some non-traditional MS4 permittees, such as DOTs and universities, may not have the authority to use the mechanisms described above. Therefore the enforcement requirements in the permit should take the permittee's enforcement limitations and abilities into consideration, allow for alternative mechanisms such as related contract obligations or right-of-way permits, and/or require entities that cannot enforce to coordinate with those entities that can. For example, if a DOT discovers an illicit discharge to the right-of-way, a mechanism should be in place for the DOT to communicate with the adjacent municipality to eliminate the discharge in a timely manner.

Some permit writers include specific language as to when permittees can refer violations of NPDES permits to the permitting authority. Because of the often similar control measures required in MS4 construction programs and NPDES CGP SWPPP requirements, permit writers want the permittee to make an honest effort at achieving compliance with their local requirements before referring a violator to the NPDES permitting authority. An example of permit language on NPDES referrals, which require the MS4 permittee to make a good faith effort at ensuring compliance by conducting at least two inspections and notices of violation, follows:

> NPDES Permit Referrals–For those construction projects or industrial facilities subject to the [*insert name of applicable NPDES general construction/industrial permit*], the permittee must:

[2] Adapted from 2009 San Francisco Bay Municipal Regional Stormwater Permit (Order No. R2-2009-0074; www.swrcb.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2009/R2-2009-0074.pdf) and the Los Angeles MS4 Permit (Part 3; www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/ms4_permits/los_angeles/2001-2007/LA_MS4_Permit2001-2007.pdf)

a. Refer non-filers (i.e., those facilities that cannot demonstrate that they obtained permit coverage) to the [*insert name of permitting authority*] within [*insert number of days, e.g. 30 days*] of making that determination. In making such referrals, the permittee must include, at a minimum, the following documentation:

    1. Construction project or industrial facility location.
    2. Name of owner or operator.
    3. Estimated construction project size or type of industrial activity (including SIC code if known).
    4. Records of communication with the owner or operator regarding filing requirements.

b. Refer violations to the [*insert name of permitting authority*] provided that the permittee has made a good faith effort of progressive enforcement to achieve compliance with its own ordinances. At a minimum, the permittee's good faith effort must include documentation of two follow-up inspections and two warning letters or notices of violation. In making such referrals, the permittee must include, at a minimum, the following documentation:

    1. Construction project or industrial facility location
    2. Name of owner or operator
    3. Estimated construction project size or type of industrial activity (including SIC code if known)
    4. Records of communication with the owner or operator regarding the violation, including at least two follow-up inspections, two warning letters or notices of violation, and any response from the owner or operator

It is important to note that a referral to the permitting authority does not relieve the MS4 from its enforcement obligations. The MS4 must continue to work with the permitting authority, using all available enforcement authority in order to gain compliance.

1.4 Requirement to Ensure Adequate Resources to Comply with MS4 Permit

Example Permit Provision

1.4.1 Secure Resources – The permittee must secure the resources necessary to meet all requirements of this permit.

1.4.2 Annual Fiscal Analysis – The permittee must conduct an annual analysis of the capital and operation and maintenance expenditures needed, allocated, and spent as well as the necessary staff resources needed and allocated to meet the requirements of this permit, including any development, implementation, and

enforcement activities required. The analysis must include estimated expenditures for the reporting period, the preceding period, and the next reporting period and be submitted with the annual report.

a. Each analysis must include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

b. Each analysis must include a narrative description of circumstances resulting in a [*insert percentage, e.g. 25 percent or greater*] annual change for any budget line items.

c. Each analysis must include a description of the staff resources necessary to meet the requirements of this permit.

Example Permit Requirement Rationale for the Fact Sheet

The annual fiscal analysis will show the allocated resources, expenditures, and staff resources necessary to comply with the permit, and implement and enforce the permittee's SWMP. (See 40 CFR 122.26(d)(2)(vi). The annual analysis is necessary to show that the permittee has adequate resources to meet all Permit Requirements. The analysis can also show year-to-year changes in funding for the stormwater program. A summary of the annual analysis must be reported in the annual report (see Section 8.4 and Appendix A). This report will help the Permitting Authority understand the resources that are dedicated to compliance with this permit, and to implementation and enforcement of the SWMP, and track how this changes over time.

Recommendations for the Permit Writer

Permit writers should be specific when requesting financial analysis information from the permittee. The Annual Report Template provided in this Guide includes basic questions that should be adequate for Phase II MS4s. However, more detailed information may be warranted from more established programs and larger Phase I MS4s.

Because stormwater is a component in many different program areas, it can often be difficult to get an accurate accounting of costs. For example, inspection staff may have multiple responsibilities in addition to stormwater inspections. Is it appropriate to count an entire inspector's time (i.e. full-time equivalent (FTE)) as a stormwater cost if the inspector is also doing building inspections? Also, some permittees count street sweeping as a stormwater compliance cost, while others consider their street sweeping costs as an aesthetic or air quality cost. Permittees should provide a detailed breakdown of costs, along with background or additional discussion so the permit writer knows what the costs include.

CHAPTER 2: PUBLIC EDUCATION AND OUTREACH/PUBLIC INVOLVEMENT

Introduction

Included Concepts

- Developing a comprehensive stormwater education/ outreach program
- Involving the public in planning and implementing the SWMP

The Phase II Regulations require MS4 permittees to develop programs to educate the public about the impact of stormwater discharges on local waterways and the steps that citizens, businesses, and other organizations can take to reduce the contamination of stormwater (40 CFR 122.34(b)(1),(2)). Phase I MS4 permittees were also required to describe their proposed public education programs as part of their initial permit application, but the regulations are not as specific as Phase II. (See 40 CFR 122.26(d)(2)(iv) (B), (D)(4) and (A)(6)).

As the public gains a greater understanding of the benefits of stormwater management, an MS4 is likely to gain more support for the SWMP (including financial support) and increased compliance with the applicable regulatory requirements as the public understands how their actions impact water quality. Education and awareness programs help change human behavior with respect to reducing the amount of pollution generated from stormwater sources within the MS4 system. In addition to education, encouraging public participation in local stormwater programs can lead to program improvement as well as enabling people to identify and report a pollution-causing activity, such as spotting an illicit discharge.

2.1 Developing a Comprehensive Stormwater Education/Outreach Program

Example Permit Provision

2.1.1 The permittee must:

a. Continue to implement, and revise if necessary within [s*pecify the time when the development of the program must be completed, e.g., within the first year after permit issuance*], a comprehensive stormwater education/outreach program. The program must, at a minimum:

1. Define the goals and objectives of the program based on at least three high priority, community-wide issues (e.g. reduction of nitrogen in discharges from the MS4, promoting pervious techniques used in the MS4);
2. Identify and analyze the target audience(s);
3. Create an appropriate message(s) based on at least three targeted residential issues and three targeted industrial/commercial issues from the suggested list below (or three issues deemed more appropriate to the MS4):

Residential Community

- Residential car washing and auto maintenance control measures
- Off-pavement automobile parking
- Home and garden care activities (pesticides, herbicides, and fertilizers)
- Disposal of household hazardous waste (e.g. paints, cleaning products)
- Snow removal activities
- Using techniques that keep water onsite and/or reduce imperviousness (rain barrels, rain gardens, porous pavers, permeable concrete, porous asphalt, etc.)
- Litter prevention
- Importance of native vegetation for preventing soil erosion
- Public reporting of water quality issues
- Community activities (monitoring programs, environmental protection organization activities, etc.)
- Pet and other animal wastes

Industrial/Commercial Community

- Automobile repair and maintenance Control measures
- Control measure installation and maintenance
- Lawful disposal of vacuum truck and sweeping equipment waste
- Pollution prevention and safe alternatives
- Snow removal activities
- Using techniques that keep water onsite and/or reduce imperviousness (rain barrels, rain gardens, porous pavers, permeable concrete, porous asphalt, etc.)
- Equipment and vehicle maintenance and repair
- Importance of good housekeeping (e.g. sweeping impervious surfaces instead of hosing)
- Illicit discharge detection and elimination observations and follow-up during daily work activities
- Water quality impacts associated with land development (including new construction and redevelopment)
- Water quality impacts associated with road resurfacing and repaving

4. Develop appropriate educational materials (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, websites);
5. Determine methods and process of distribution;
6. Evaluate the effectiveness of the program; and
7. Utilize public input (e.g., the opportunity for public comment, or public meetings) in the development of the program.

b. During the term of the permit, the permittee must distribute the educational materials, using whichever methods and procedures determined appropriate by the permittee, in such a way that is designed to convey the program's message to [*insert percentage or other appropriate numeric threshold, e.g., 20%*] of the target audience each year.

c. Within [*insert deadline, e.g., within the permit term*], the permittee must assess changes in public awareness and behavior resulting from the implementation of the program such as using a statistically valid survey and modify the education/outreach program accordingly.

d. The permittee must assess its stormwater education/outreach program annually as specified in Part 8.3 of this permit. The permittee must adjust its educational materials and the delivery of such materials to address any shortcomings found as a result of this assessment.

e. Written procedures for implementing this program must be incorporated into the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

Without a focused and comprehensive program, outreach and education efforts will likely be poorly coordinated and possibly ineffective. The permit the permittee to develop an education/outreach program that addresses the six steps listed and also found in EPA's *Getting In Step: A Guide to Effective Outreach in Your Watershed (www.epa.gov/watertrain/gettinginstep/)*. This guide explains the steps in developing an outreach plan, presents information on creating outreach materials, and provides tips in working with the media. The permittee is encouraged to follow this guide in developing its outreach strategy.

The public education and outreach program must be tailored and targeted to specific water quality issues of concern in the relevant community. These community-wide and targeted issues must then guide the development of the comprehensive outreach program, including the creation of appropriate messages and educational materials. The permit includes a list of potential residential and commercial issues, but the permittee may also choose other issues that contribute significant pollutant loads to stormwater.

The permittee is encouraged to use existing public educational materials in its program. Examples of public educational materials for stormwater are available at EPA's *Nonpoint Source Outreach Toolbox (www.epa.gov/nps/toolbox)*. The permittee is also encouraged to leverage resources with other agencies and municipalities with similar public education goals.

Finally, the underlying principle of any public education and outreach effort is to change behaviors. The permittee must develop a process to assess how well its public education and outreach programs is changing public awareness and behaviors and to determine what changes are necessary to make its public education program more effective. This assessment of public education programs is typically conducted via phone surveys, but other assessment methods that quantify results can be used. The permittee is encouraged to use a variety of assessment methods to evaluate the effectiveness of different public education activities. The permit requires that the first evaluation assessment be conducted before the final year of the permittee's coverage under this permit, before the next permit is issued. The allows the permittee to make changes as appropriate before the next permit application is due, EPA's *Getting In Step: A Guide to Effective Outreach in Your Watershed (www.epa.gov/watertrain/gettinginstep/)* can provide useful information on setting up and conducting the evaluations.

Recommendations for the Permit Writer

EPA recommends that the requirement to identify high priority community-wide issues and targeted issues be set at least 3 to 6 months before the stormwater education/outreach program is to be implemented, so the permitting authority can review the issues and provide any feedback before the plan is completed.

The permit can be a means for increasing public awareness and understanding of stormwater impacts on local watersheds, including high quality watersheds that need protecting. EPA recommends that the permit writer consider requiring permittees to identify and describe issues, such as specific pollutants, the sources of those pollutants, impacts on biology, and the physical attributes of stormwater runoff, in their education/outreach program, which affect local watershed(s). Where applicable, the education/outreach program should identify and describe high quality watersheds in need of protection and the issues that may threaten the quality of these waters.

The list in Part 2.1.1.a(3) is not all-inclusive. Therefore, EPA recommends that the permit be written to allow the permittee to indentify priority issue(s) not listed that may contribute a significant pollutant load to stormwater. For Phase I, individual permits, it may be appropriate for the permit writer to specify the priority issues based on known issues, monitoring data, historical trends, etc. Phase II general permits will likely need to allow for more flexibility in selecting priority issues.

In addition, the permit writer will need to consider that DOTs and other "non-traditional" MS4s will likely have different priority concerns than the ones identified in the categories above. In fact, the categories (residential and commercial/industrial) may also need to be changed. In these instances, the permit writer may want to consider having the non-traditional permittees work together with any local government MS4s in their area to maximize the program and cost effectiveness of the outreach.

The permit writer may consider specifying the mechanism the permittee is required to use to measure the awareness of and behavior related to issues concerning stormwater runoff by the general public, or targeted audiences within the general public. Examples of evaluations could include:

- Direct Evaluations
- Surveys
- Tracking the number of attendees
- Interviews
- Review of media clippings
- Tracking the number of stormwater-related calls/emails/letters received

Permit writers should consider whether it is appropriate to require a baseline assessment of the public's awareness of stormwater issues, for example in the second year of the permit term, so that comparisons may be drawn in reference to the baseline. This would likely require the permittee to conduct two assessments in the first permit term that the assessment is required.

2.2 Involving the Public in Planning and Implementing the SWMP

Example Permit Provision

2.2.1 The permittee is required to involve the public in the planning and implementation of activities related to the development and implementation of the SWMP. At a minimum, the permittee must:

a. Establish a citizen advisory group or utilize existing citizen organizations. The permittee may establish a stand-alone group or utilize an existing group or process. The advisory group must consist of a balanced representation of all affected parties, including residents, business owners, and environmental organizations in the MS4 area and/or affected watershed. The permittee must invite the citizen advisory group to participate in the development and implementation of all parts of the community's SWMP.

b. Create opportunities for citizens to participate in the implementation of stormwater controls (e.g., stream clean-ups, storm drain stenciling, volunteer monitoring, and educational activities).

c. Ensure the public can easily find information about the permittee's SWMP.

2.2.2 Written procedures for implementing this program must be incorporated into the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

Stormwater management programs can be greatly improved by involving the community throughout the entire process of developing and implementing the program. Involving the public benefits both the permittee itself as well as the community. B y listening to the public's concerns and coming up with solutions together, the permittee will gain the public's support and the community will become invested in the program. The permittees will likewise gain even more insight into the most effective ways to communicate their messages.

This permit requires the involvement of the public, which includes a citizen advisory group or process to solicit feedback on the stormwater program, and opportunities for citizens to participate in implementation of the stormwater program. The citizen advisory group should meet with the local land use planners and provide input on land use code or ordinance updates so that land use requirements incorporate provisions for better management of stormwater runoff and watershed protection. Public participation in implementation of the stormwater program can include many different activities such as stream clean-ups, storm drain markings, and volunteer monitoring.

Permittees are encouraged to work together with other entities that have an impact on stormwater (for example, schools, homeowner associations, DOTs, other MS4 permittees). Permittees are also encouraged to use existing advisory groups or processes in order to implement these public involvement requirements.

Recommendations for the Permit Writer

Especially for Phase I permittees, permit writers may consider requiring more specific information such as requiring at least one contact that the public can reach (including phone number and/or e-mail address) be clearly posted on the website. The contact may be a general contact or a specific person. The permitting authority may want the MS4 to have a mechanism for the public to comment year round, not just at public meetings. This could be facilitated by a webpage and email or a stormwater hotline.

Some Phase II permittees may find it more difficult to establish and maintain a formal citizen advisory group simply because they tend to have smaller populations. The permit writer may want to provide flexibility for the Phase II permittees to utilize the public involvement mechanism which best suits their individual community. For example, groups which are already involved with other aspects of municipal governance or established events where input could be solicited (i.e. farmers markets, festivals) may serve to meet the objective of this section.

CHAPTER 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION

Introduction

Phase I (see 40 CFR 122.26 (d)(1)(v)(B) and (d)(1)(iv)(B)) and Phase II stormwater management programs (see 40 CFR 122.26(d)(2)(iv)(B)) are required to address illicit discharges into the MS4 system. An illicit discharge is defined as any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater, except allowable discharges pursuant to an NPDES permit (40 CFR 122.26(b)(2)). In addition to requiring permittee to have the legal authority to prohibit non-stormwater discharges from entering storm sewers (CWA Section 402(p)(3)(B)) (see Chapter I), MS4 permits must also require the development of a comprehensive, proactive Illicit Discharge Detection Elimination (IDDE) program.

Included Concepts

- IDDE program development
- MS4 mapping
- Identification of priority areas
- Field screening
- IDDE source investigations and elimination
- Public reporting of non-stormwater discharges and spills
- Illicit discharge education and training

An effective IDDE program is more than just a program to respond to complaints about illicit discharges or spills. Permittees must proactively seek out illicit discharges, or activities that could result in discharges, such as illegal connections to the storm sewer system, improper disposal of wastes, or dumping of used motor oil or other chemicals.

In order to trace the origin of a suspected illicit discharge or connection, the permittee must have an updated map of the storm drain system and a formal plan of how to locate illicit discharges and how to respond to them once they are located or reported. The permittee must provide a mechanism for public reporting of illicit discharges and spills, as well as an effective way for staff to be alerted to such reports. Regular field screening of outfalls for non-stormwater discharges needs to occur in areas determined to have a higher likelihood for illicit discharges and illegal connections. Proper investigation and enforcement procedures must be in place to eliminate the sources of the discharges, as well. Finally, in order for the permittee to adequately detect and eliminate sources of illicit discharges, both field and office staff must be properly trained to recognize and report the discharges to the appropriate parties.

EPA recommends that permittees refer to the Center for Watershed Protection's guide on *Illicit Discharge Detection and Elimination (IDDE): A Guidance Manual for Program Development and Technical Assistance* (IDDE Manual, available at www.cwp.org) when developing an IDDE program.

3.1 IDDE Program Development

Example Permit Provision

3.1.1 The permittee must continue to implement a program to detect, investigate, and eliminate non-stormwater discharges (see Part 1.2.2), including illegal dumping, into its system. The IDDE program must include the following:

a. An up-to-date storm sewer system map (see Part 3.2).
b. Procedures for identifying priority areas within the MS4 likely to have illicit discharges, and a list of all such areas identified in the system (see Part 3.3)
c. Field screening to detect illicit discharges (see Part 3.4)
d. Procedures for tracing the source of an illicit discharge (see Part 3.5)
e. Procedures for removing the source of the discharge (see Part 3.5)
f. Procedures for program evaluation and assessment (see Part 8.3)
g. Procedures to prevent and correct any on-site sewage disposal systems that discharge into the MS4. [3]

3.1.2 In implementing the IDDE program, the permittee may conduct such investigations, contract for investigation, coordinate with storm drain investigation activities of others, or use any combination of these approaches.

3.1.3 For non-traditional MS4 permittees, if illicit connections or illicit discharges are observed related to another operator's municipal storm sewer system then the permittee must notify the other operator within [*insert applicable deadline, e.g., within 48 hours*] of discovery.

3.1.4 If another operator notifies the permittee of an illegal connection or illicit discharge to the municipal separate storm sewer system then the permittee must follow the requirements specified in Part 3.5.4.

3.1.5 Written procedures for implementing this program, including those components described in Parts 3.1 – 3.7 must be incorporated into the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

EPA stormwater regulations define "illicit discharge" as "any discharge to a municipal separate storm sewer that is not composed entirely of stormwater" except discharges resulting from fire fighting activities and discharges from NPDES permitted sources (see 122.26(b)(2)). The applicable regulations state that the following non-stormwater discharges may be allowed if they are not determined to be a significant source of pollutants to the MS4 : water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water. If, however, these discharges are determined to be a significant source of pollution then they are prohibited.

Examples of common sources of illicit discharges in urban areas include apartments and homes, car washes, restaurants, airports, landfills, and gas stations. These so called "generating sites" discharge sanitary wastewater, septic system effluent, vehicle wash water, washdown from

[3] Vermont Phase II General Permit (www.vtwaterquality.org/stormwater/htm/sw_ms4.htm)

grease traps, motor oil, antifreeze, gasoline and fuel spills, among other substances. Although these illicit discharges can enter the storm drain system in various ways, they generally result from either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the storm drain system, spills, or "midnight dumping"). Illicit discharges can be further divided into those discharging continuously and those discharging intermittently.

One way of locating these dry weather discharges is to perform field screening of outfalls. If no rain has occurred prior to the screening then it is likely that any flow observed at an outfall is either groundwater or an illicit discharge. It is important to utilize resources effectively and to target field screening activities in priority areas that are the most common sources of illicit discharges. For example, municipalities with older neighborhoods should prioritize those areas for targeted investigation due to the likelihood of cross connections with the sanitary sewer. Older parts of the storm drain system may also be deteriorating and require repair or replacement.

In addition, it is important that permittees establish clear policies and procedures for tracing and eliminating illicit discharges to ensure that individual incidents are addressed consistently. These policies should include procedures to notify neighboring localities if a discharge is discovered either originating on or discharging to the neighboring storm sewer system.

Additional information is available in the Center for Watershed Protection's *IDDE Manual.*

Recommendations for the Permit Writer

In some instances the permit writer may choose to include more specific requirements. For example, if the priority areas are already known, then Part 3.1.1.a may be more specifically worded. In addition, regulations governing Phase I MS4 permits have somewhat different requirements including specific field screening procedures (40 CFR 122.26(d)(1)(iii)(D) and 122.26(d)(2)(iii)) and a program to detect and remove illicit discharges and improper disposal into the storm sewer (40 CFR 122.26(d)(2)(iv)(B).

3.2 MS4 Mapping

Example Permit Provision

3.2.1 The permittee must maintain an up-to-date and accurate storm sewer system map.

a. The storm sewer system map must show the following, at a minimum:

1. The location of all MS4 outfalls and drainage areas contributing to those outfalls that are operated by the permittee, and that discharge within the permittee's jurisdiction to a receiving water
2. The location (and name, where known to the permittee) of all waters receiving discharges from those outfall pipes. Each mapped outfall must be given an individual alphanumeric identifier, which must be noted on the map. When possible, the outfalls must be located using a geographic

position system (GPS) and photographs should be taken to provide baseline information and track operation & maintenance needs over time.[4]

3. Priority areas identified under Part 3.3
4. Field screening stations identified under Part 3.4.2.a

b. A copy of the storm sewer system map must be available onsite for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

In order to trace the origin of a suspected illicit discharge or connection, the permittee must have an up-to-date map of its storm drain system. This is critical in order to isolate the potential source of the non-stormwater discharges and the areas of potential impact. Ideally, the information would be available as a geographic information system (GIS) layer in a geo-locational database, however, paper maps are sufficient providing they have the necessary reference information.

The permit primarily requires the mapping of outfalls, drainage areas contributing to those outfalls, and receiving waters. The municipal facility inventory created to comply with the pollution prevention/good housekeeping requirements (see Part 6.1) must also be included either on this sewer system map or on a separate MS4 map.

Recommendations for the Permit Writer

Both Phase I and Phase II regulations require permittees to develop a map indicating outfalls and the waters that receive the MS4 discharges. This map is to be used to identify priority areas that have a reasonable potential for illicit discharges. The mapping requirements should be adjusted based on any existing mapping of the MS4 that has already been completed. For example, Phase I mapping should have been initiated during the initial permit application process. This map should not be static, however, since it would need to be updated as development patterns change and new collection and discharge components of the MS4 are added. The mapping requirement could be supplemented by adding a requirement to "modify existing maps to clearly identify all receiving waters."

3.3 Identification of Priority Areas

Example Permit Provision

3.3.1 The permittee must continue to identify the following as priority areas [*insert areas that may be more applicable to the jurisdiction*]:

a. Areas with older infrastructure that are more likely to have illicit connections;

[4] New Jersey Phase II General Permit (www.state.nj.us/dep/dwq/pdf/Tier_A_final.pdf), with modifications

b. Industrial, commercial, or mixed use areas;

c. Areas with a history of past illicit discharges;

d. Areas with a history of illegal dumping;

e. Areas with onsite sewage disposal systems;

f. Areas with older sewer lines or with a history of sewer overflows or cross-connections; and

g. Areas upstream of sensitive waterbodies.

3.3.2 The permittee must document the basis for its selection of each priority area and create a list of all priority areas identified in the system. This priority area list must be updated [*insert frequency, e.g., annually*] to reflect changing priorities and be available for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

The permit requires an evaluation of the permittee's neighborhoods and land uses to identify areas that are more likely to have illicit discharges. These areas must be prioritized for more frequent screening and investigations. Each permittee will have a different set of priority areas: newer communities with modern infrastructure are less likely to have sewer cross-connections and illegal connections to the storm drain system, whereas towns with rural areas may place an emphasis on illegal dumping and onsite sewage disposal systems. Prioritization must be based not only on land use but also on prior history and frequency of problems.

The identification of priority areas must include "hotspots" or areas where dumping, spills, or other illicit discharges are a common occurrence. These hotspots will help identify potential field screening locations and may help target educational activities. For example, if evidence of motor oil dumping is found quite frequently and traced to the same apartment complex, information about motor oil disposal could be distributed to residents in response.

Recommendations for the Permit Writer

Phase I permittees should have been documenting information regarding high priority areas for several permit terms. In these instances the permit writer should require the permittee to continually evaluate and update the priority areas as development patterns change or new "hotspot" areas are found. If the permit writer has information regarding priority areas which are specific to the Phase I permittee (e.g. certain high priority watersheds or land use types which typically discharge a pollutant of concern) then those specific areas should be specified as high priority.

3.4 Field Screening

Example Permit Provision

3.4.1 The permittee must continue to implement and revise if necessary within [*specify deadline for completion*] a written dry weather field screening and analytical monitoring procedures to detect and eliminate illicit discharges to the MS4. These procedures must be included as part of the IDDE program, and incorporated into the permittee's SWMP document. Dry weather field screening and analytical monitoring consists of (1) field observations; (2) field screening monitoring; and (3) analytical monitoring at selected stations.

3.4.2 Conduct dry weather field screening and analytical monitoring. At a minimum, the permittee must:

a. Identify a minimum of [*specify number*] stations within the priority areas it identified in Part 3.3.1 at which field screening and analytical monitoring will take place. In addition, if the permittee is made aware of non-stormwater discharges that occur during the permit term outside of the priority areas, the permittee must include field screening stations in those areas;

b. Conduct dry weather field screening and analytical monitoring at each station identified above at least once [*insert timeframe for dry part of year, or specify annually*].

c. Sample runoff according to requirements outlined in (1) and (2) below if flow or ponded runoff is observed at a field screening station and there has been at least seventy-two (72) hours of dry weather. The permittee must also record general information such as time since last rain, quantity of last rain, site descriptions (e.g., conveyance type, dominant watershed land uses), flow estimation (e.g., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (e.g., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).

1. Field screening requirements: The permittee is required to conduct a field screening analysis for the following constituents. Samples must be collected and analyzed consistent with the procedures required by 40 CFR Part 136.

   [*insert specific indicator pollutants that the permittee is required to monitor for.]*

2. Analytical monitoring requirements: In addition to field screening, the permittee is required to collect samples for analytical laboratory analysis of the following constituents for a minimum of [*insert percentage*] of the samples taken. Samples must be collected and analyzed consistent with the procedures required by 40 CFR Part 136.

   [*insert specific pollutants of concern that the permittee is required to monitor for*]

3. Develop benchmark concentration levels for dry weather field screening and analytical monitoring results whereby exceedance of the benchmark will

require follow-up investigations to be conducted to identify and eliminate the source causing the exceedance of the benchmark.

d. Conduct a follow-up investigation under Part 4.5 if the benchmarks associated with the constituents listed above in Part 3.4.2.c(1) and (2) are exceeded; and

e. Make and record all applicable observations and select another station from the list of alternate stations for monitoring if, after two subsequent field screening tests have been completed, the field screening station is dry (i.e., no flowing or ponded runoff).

3.4.3 The permittee must assess its IDDE program every [*specify deadline for completion, e.g., once per permit term*] to determine if updates are needed. Where updates are found to be necessary, the permittee must make such changes [*insert deadline for finalizing changes*].

Example Permit Requirement Rationale for the Fact Sheet

The permit requires the development of a dry weather field screening and analytical monitoring program. The program must identify stations (e.g., outfalls) within the identified "priority areas" where the field screening will be conducted. At a frequency set by the permitting authority, the permittee must screen outfalls during dry weather and, if flow or ponded water is observed, collect a sample for field screening and analytical monitoring.

Visually screening outfalls during dry weather and conducting field tests, where flow is occurring, of selected chemical parameters as indicators of the discharge source will assist permittees in determining the source of illicit discharges. For example, the presence of surfactants is an indicator that sewage could be present in the discharge (e.g., soaps being discharged into sewer system as an indicator that wastewater is being discharged). Specific conductivity, fluoride and/or hardness concentration, ammonia and/or potassium concentration, surfactant and/or fluorescence concentration, chlorine concentration, pH, and other chemicals may similarly be indicative of industrial sources.

The permit requires the permittee to develop benchmarks for dry weather screening and analytical monitoring results. An exceedance of the benchmark concentration level indicates the need to conduct a follow-up investigation. The results will help the permittee narrow down the possible sources causing the benchmark to be exceeded so that they can then be eliminated. This is a common protocol to trigger additional monitoring and/or implementation of BMPs at stormwater discharges (e.g. MSGP has sector-specific benchmark monitoring requirements).

Recommendations for the Permit Writer

There are many options for field screening programs available to the permit writer that will meet the requirements of the regulations. Phase I regulations require that permittees conduct initial field screening of the entire MS4 during the permit application process as well as on-going field screening activities during the life of the permit. Based on this historical information and data, permit writers may want to specify in Phase I individual permits which priority areas must be screened. They may

also want to specify how many outfalls or what percentage of the outfalls should be inspected during the permit term.

In addition, for new Phase II permittees, permit writers may want to require screening of all priority areas during the first permit term and then require on-going screening in the areas where illicit discharges were identified.

This permit language includes analytical monitoring at dry weather field screening locations. The monitoring required during field screening (Part 3.4.2.c.1.) should include appropriate indicator pollutants, i.e. pollutants that will indicate the presence of some sort of illicit discharge. For example, Phase II NPDES regulations suggest sampling for specific conductivity, ammonia, surfactant and/or fluorescence concentration, pH and other chemicals indicative of industrial sources.

Permit writers should select the additional pollutants to be monitored based upon specific pollutants of concern for the receiving water(s) and/or specific indicator pollutants which can assist the MS4 in the location of particular discharges of concern and the potential water quality impact of the discharge. For example, the Phase I San Diego MS4 Permit requires that permittees monitor the following parameters during field screening: total hardness, oil and grease, diazinon and chlorpyrifos, cadmium (dissolved), lead (dissolved), zinc (dissolved), copper (dissolved), Enterococcus bacteria, total coliform bacteria, and fecal coliform bacteria.

Permit writers should encourage or even require permittees to use the CWP *IDDE Manual* and/ or EPA's 2008 Multi-Sector General Permit (www.epa.gov/npdes/stormwater/msgp) to develop benchmarks for each parameter.

In the *IDDE Manual* it is strongly recommended that benchmarks be developed specifically for each area. As an example, the *IDDE Manual* lists the following benchmark concentrations (Table 3-1) to identify industrial discharges:

Table 3-1. Benchmark concentrations to identify Industrial Discharges (from CWP IDDE Manual, Table 45)

Indicator Parameter	Benchmark Concentration
Ammonia	>= 50 mg/L
Color	>= 500 units
Conductivity	>= 2,000 µS/cm
Hardness	<= 10 mg/L as CaCO3 or >= 2,000 mg/L as CaCO3
pH	<= 5
Potassium	>= 20 mg/L
Turbidity	>= 1,000 NTU

For comparison purposes, the chemical fingerprint for different flow types in Alabama is presented in Table 3-2. The chemical fingerprint for each flow type can differ regionally, so permittees should develop their own "fingerprint" library by sampling each flow type.

Table 3-2. Comparative "Fingerprint" (Mean Values) of Flow Types (from CWP IDDE Manual, Table 1)

Flow Type	Hardness (mg/L as CaCO3)	NH3 (mg/L)	Potassium (mg/L)	Conductivity (µS/cm)	Fluoride (mg/L)	Detergents (mg/L)
Sewage	50 (0.26)	25 (0.53)	12 (0.21)	1215 (0.45)	0.7 (0.1)	9.7 (0.17)
Septage	57 (0.36)	87 (0.4)	19 (0.42)	502 (0.42)	0.93 (0.39)	3.3 (1.33)

Table 3-2. Comparative "Fingerprint" (Mean Values) of Flow Types (from CWP IDDE Manual, Table 1)						
Laundry Washwater	45 (0.33)	3.2 (0.89)	6.5 (0.78)	463.5 (0.88)	0.85 (0.4)	758 (0.27)
Car Washwater	71 (0.27)	0.9 (1.4)	3.6 (0.67)	274 (0.45)	1.2 (1.56)	140 (0.2)
Plating Bath (Liquid Industrial Waste)	14330 (0.32)	66 (0.66)	1009 (1.24)	10352 (0.45)	5.1 (0.47)	6.8 (0.68)
Radiator Flushing (Liquid Industrial Waste)	5.6 (1.88)	26 (0.89)	2801 (0.13)	3280 (0.21)	149 (0.16)	15 (0.11)
Tap Water	52 (0.27)	<0.06 (0.55)	1.3 (0.37)	140 (0.07)	0.94 (0.07)	0 (NA)
Groundwater	38 (0.19)	0.06 (1.35)	3.1 (0.55)	149 (0.24)	0.13 (0.93)	0 (NA)
Landscape Irrigation	53 (0.13)	1.3 (1.12)	5.6 (0.5)	180 (0.1)	0.61 (0.35)	0 (NA)
The number in parentheses after each concentration is the Coefficient of Variation. Source: Robert Pitt data from CWP IDDE Manual						

The permit writer may also want to require the permittee to analyze a certain number of discharge samples to characterize the concentration of certain pollutants in the different drainage areas. This characterization sampling would be in addition to any characterization sampling completed for the Phase I permit application. This type of sampling would not necessarily aid in the elimination of the source of the discharge, however, the data would be useful in characterizing the discharge from the MS4.

For those areas that have ponding or flow during dry weather, permit writers may consider allowing permittees the flexibility to look for indicators of an illicit discharge before conducting water quality tests due to baseline flow (e.g. baseflow, groundwater flow, irrigation return flows) in certain areas. In these cases, permit writers could require that sensory indicators (i.e. odor, color, turbidity, and floatables) be evaluated.

For additional guidance on field screening, the *IDDE Manual* describes an outfall reconnaissance inventory (ORI) to assess outfalls and conduct indicator monitoring to help identify illicit discharges.

Regardless of the field screening scheme, it is also very important to emphasize in the permit conditions that monitoring must be done in compliance with 40 CFR 136.

3.5 IDDE Source Investigation and Elimination

Example Permit Provision

3.5.1 The permittee is required to develop written procedures for conducting investigations into the source of all identified illicit discharges, including approaches to requiring such discharges to be eliminated.

3.5.2 Minimum Investigation Requirements – At a minimum, the permittee is required to conduct an investigation(s) to identify and locate the source of any continuous or

intermittent non-stormwater discharge within [*specify time period*] of becoming aware of the illicit discharge.

a. Illicit discharges suspected of being sanitary sewage and/or significantly contaminated must be investigated first.

b. Investigations of illicit discharges suspected of being cooling water, wash water, or natural flows may be delayed until after all suspected sanitary sewage and/or significantly contaminated discharges have been investigated, eliminated and/or resolved.

c. The permittee must report immediately the occurrence of any dry weather flows believed to be an immediate threat to human health or the environment to [*insert state water quality emergency contact phone number*].

d. The permittee must track all investigations to document at a minimum the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed.

3.5.3 Determining the Source of the Illicit Discharge –The permittee is required to determine and document through its investigations, carried out in Part 3.5.1, the source of all illicit discharges. If the source of the illicit discharge is found to be a discharge authorized under [*insert NPDES discharge permit reference*] of an NPDES permit, no further action is required.

a. If an illicit discharge is found, but within six (6) months of the beginning of the investigation neither the source nor the same non-stormwater discharge has been identified/observed, then the permittee must maintain written documentation for review by the permitting authority.

b. If the observed discharge is intermittent, the permittee must document that a minimum of three (3) separate investigations were made to observe the discharge when it was flowing. If these attempts are unsuccessful, the Permittee must maintain written documentation for review by the permitting authority. However, since this is an ongoing program, the Permittee should periodically recheck these suspected intermittent discharges.[5]

3.5.4 Corrective Action to Eliminate Illicit Discharge – Once the source of the illicit discharge has been determined, the permittee must immediately notify the responsible party of the problem, and require the responsible party to conduct all necessary corrective actions to eliminate the non-stormwater discharge within [*specify deadline*]. Upon being notified that the discharge has been eliminated, the permittee must conduct a follow-up investigation and field screening, consistent with Part 3.4, to verify that the discharge has been eliminated. The permittee is required to document its follow-up investigation. The permittee may seek recovery and remediation costs from responsible parties consistent with Part 1.2, or require compensation for the cost of field screening and investigations. Resulting enforcement actions must follow the SWMP ERP.

[5] New Jersey Phase II Permit (www.state.nj.us/dep/dwq/pdf/Tier_A_final.pdf)

Example Permit Requirement Rationale for the Fact Sheet

The Clean Water Act, section 402(p)(3)(B)(ii) requires MS4 permits to "effectively prohibit non-stormwater discharges into the storm sewers." The permit implements this requirement, in part by requiring the development of procedures to investigate and eliminate illicit discharges. The permittee must develop a clear, step-by-step procedure for conducting the investigation of illicit discharges. The procedure must include an investigation protocol that clearly defines what constitutes an illicit discharge "case" and when a case is considered "closed." In many circumstances, sources of intermittent, illicit discharges are very difficult to locate, and these cases may remain unresolved. The permit requires that each case be conducted in accordance with the SOPs developed to locate the source and conclude the investigation, after which the case may be considered closed. A standard operating procedure (SOP) document is required in order to provide investigators with guidance and any necessary forms to ensure that consistent investigations occur for every illicit discharge incident.

Physical observations and field testing can help narrow the identification of potential sources of a non-stormwater discharge; however it is unlikely that either will pinpoint the exact source. Therefore, the permittee will need to perform investigations "upstream" to identify illicit connections to systems with identified problem outfalls.

Once the source of the non-stormwater discharge is determined through investigation, corrective action is required to eliminate the problem source. Resulting enforcement actions must follow the SWMP ERP. The permittee may conduct remediation activities on its own, in which case the permittee must require compensation for any and all costs related to eliminating the non-stormwater discharge. Non-traditional MS4 permittees may be limited in their ability to seek recovery.

Recommendations for the Permit Writer

Both Phase I and Phase II regulations require permittees to develop a process to trace the source of illicit discharges and eliminate them. The regulations also state that appropriate enforcement procedures and actions must be included in this process.

3.6 Public Reporting of Non-Stormwater Discharges and Spills

Example Permit Provision

3.6.1 The permittee must promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s through a central contact point, including phone numbers for complaints and spill reporting, and publicize to both internal permittee staff and the public. If 911 is selected, the permittee must also create, maintain, and publicize a staffed, non-emergency phone number with voicemail, which is checked daily.

3.6.2 The permittee must develop a written spill/dumping response procedure, and a flow chart or phone tree, or similar list for internal use, that shows the procedures for responding to public notices of illicit discharges, the various responsible agencies

and their contacts, and who would be involved in illicit discharge incidence response, even if it is a different entity other than the permittee.

3.6.3 The permittee must conduct reactive inspections in response to complaints and follow-up inspections as needed to ensure that corrective measures have been implemented by the responsible party to achieve and maintain compliance.[6]

Example Permit Requirement Rationale for the Fact Sheet

This provision serves to implement, in part, the statutory requirement that MS4 permits effectively prohibit non-stormwater discharges. Spills, leaks, sanitary sewer overflows, and illicit dumping or discharges can introduce a range of stormwater pollutants into the storm system. Prompt response to these occurrences is the best way to prevent or reduce negative impacts to waterbodies. The permittee must develop a spill response SOP that includes an investigation procedure similar to or in conjunction with the investigation SOP developed for illicit discharges in general (see Section 3.5). Often, a different entity might be responsible for spill response in a community (i.e. fire department), therefore, it is imperative that adequate communication exists between stormwater and spill response staff to ensure that spills are documented and investigated in a timely manner.

A stormwater hotline can be used to help permittees become aware of and mitigate spills or dumping incidents. Spills can include everything from an overturned gasoline tanker to sediment leaving a construction site to a sanitary sewer overflow entering into a storm drain. Permittees must set up a hotline consisting of any of the following (or combination thereof): a dedicated or non-dedicated phone line, E-mail address, or website.

Recommendations for the Permit Writer

Spills which occur due to municipal staff activities are considered illicit discharges, but, spill prevention could also be addressed in the municipal operations/good-housekeeping portion of the permit as in this Guide (Chapter 6).

Facilitating public reporting of illicit discharges is specifically required in the Phase I regulations and as a part of the plan to detect and address illicit discharge, EPA recommends that Phase II permittees also develop a venue to promote, publicize, and facilitate public reporting of these discharges.

It is also noteworthy that smaller Phase II MS4s may utilize outside agency resources for spill response and/or they may use a neighboring locality. In this case, permittees will need to coordinate with these agencies to ensure appropriate spill response occurs and the necessary documentation is completed.

[6] San Francisco Municipal Regional Stormwater permit (www.swrcb.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2009/R2-2009-0074.pdf), with modifications

3.7 Illicit Discharge Education & Training

Example Permit Requirement

*3.*7.1 The permittee must continue to implement a training program for all municipal field staff, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system. Contact information, including the procedure for reporting an illicit discharge, must be included in the permittee's fleet vehicles that are used by field staff. Training program documents must be available for review by the permitting authority.

3.7.2 By no later than [*insert applicable deadline, e.g., 6 months after permit authorization*], the permittee must train all staff identified in Section 3.7.1 above on the identification of an illicit discharge or connection, and on the proper procedures for reporting and responding to the illicit discharge or connection. Follow-up training must be provided as needed to address changes in procedures, techniques, or staffing. The permittee must document and maintain records of the training provided and the staff trained. [7]

Example Permit Requirement Rationale for the Fact Sheet

The permit requires the permittee to train field staff, who may come into contact or observe illicit discharges, on the identification and proper procedures for reporting illicit discharges. Field staff to be trained may include, but are not limited to, municipal maintenance staff, inspectors, and other staff whose job responsibilities regularly take them out of the office and into areas within the MS4 area. Permittee field staff are out in the community every day and are in the best position to locate and report spills, illicit discharges, and potentially polluting activities. With proper training and information on reporting illicit discharges easily accessible, these field staff can greatly expand the reach of the IDDE program.

Recommendations for the Permit Writer

Permit writers may wish to require training of office staff (or all permittee staff), as well as field staff, as they can act as additional "eyes and ears" since they typically live in the community. The training should consist of how to identify illicit discharges and dumping, as well as the appropriate people to contact based on the type of discharge that is occurring.

Existing permittees (Phase I and Phase II) may have been training staff for several permit terms. For this reason, the permit writer may want the permittee to focus on annual "refresher" trainings for existing staff and new employees within a certain time of their hire date.

[7] Washington State Phase I Permit (www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIpermit/MODIFIEDpermitDOCS/PhaseIpermitSIGNED.pdf)

CHAPTER 4: CONSTRUCTION

Introduction

MS4 permits must address construction-related requirements (and often more specific state requirements) found in the following Federal regulations – Phase I MS4 Regulations 40 CFR 122.26(d)(2)(iv)(D) and Phase II MS4 Regulations 40 CFR 122.34(b)(4). Specific Permit Requirements should vary based on state requirements, rainfall amounts or other site-specific factors, but, in general, the requirements imposed on MS4 permittees for stormwater management of discharges associated with construction activities consist of several common requirements.

Included Concepts

- Construction requirements and control measures
- Construction site inventory
- Construction plan review procedures
- Construction site inspections and enforcement
- MS4 staff training
- Construction site operator education and public involvement

Permits must require that the permittee enact, to the extent allowed by State, Tribal or local law, an ordinance or other regulatory mechanism as part of the construction program that controls runoff from construction sites with a land disturbance of greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale. As part of the ordinance or other regulatory mechanism, the permittee should provide commonly understood and legally binding definitions. These terms should be defined consistently across other related guidance and regulatory documents. Note that EPA's recommended definitions addressing this requirement are included in Appendix B.

Permits must require that MS4 permittees ensure that construction site operators select and implement appropriate erosion and sediment control measures to reduce or eliminate the impacts to receiving waters. The permit can require that permittees develop their own standards and specifications, but often it is preferable to require the permittees to utilize existing guidance that is approved by the permitting authority.

The permit must require that the permittee establish review procedures for construction site plans to determine potential water quality impacts and ensure the proposed controls are adequate. These procedures must include the review of individual pre-construction site plans to ensure consistency with local sediment and erosion control requirements. In addition, the permit must include requirements for inspection and enforcement of erosion and sediment control measures once construction begins.

Finally, Phase I MS4 permits must require the development of educational materials and training for construction site operators, and EPA recommends that training on stormwater controls for construction site operators be mandated in Phase II MS4 permits as well. Training should address site requirements for control measures, local stormwater requirements, enforcement activities, and penalties for non-compliance.

4.1 Construction Requirements and Control Measures

Example Permit Provision

4.1.1 The permittee must continue to implement a program which requires operators of public or private "construction activities" to select, install, implement, and maintain stormwater control measures that comply with [*Insert reference to documents including any and all applicable erosion and sediment control, pollution prevention, and other stormwater requirements, including applicable CGP, State, and local requirements*.] "Construction activity" for this permit includes, at a minimum, all public and private construction sites that result in a total land disturbance of [*insert disturbance threshold – either one or more acres or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale, or an alternative threshold that includes disturbances of less than one acre*]. Written procedures for implementing this program, including the components described in Parts 4.2 – 4.6, must be incorporated into the SWMP document. The permittee's construction program must ensure the following minimum requirements are effectively implemented for all construction activity discharging to its MS4:

[*Insert specific minimum requirements, such as:*

a. **Erosion and Sediment Controls**. Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

(1) Control stormwater volume and velocity within the site to minimize soil erosion;

(2) Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;

(3) Minimize the amount of soil exposed during construction activity;

(4) Minimize the disturbance of steep slopes;

(5) Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;

(6) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible; and

(7) Minimize soil compaction and, unless infeasible, preserve topsoil.

b. **Soil Stabilization**. Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed within a period of

time determined by the permittee. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed as specified by the permittee.

c. **Dewatering**. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.

d. **Pollution Prevention Measures**. Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

(1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;

(2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and

(3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Prohibited Discharges**. The following discharges are prohibited:

(1) Wastewater from washout of concrete, unless managed by an appropriate control;

(2) Wastewater from washout and cleanout of stucco, paint, from release oils, curing compounds and other construction materials;

(3) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and,

(4) Soaps or solvents used in vehicle and equipment washing.

f. **Surface Outlets**. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible.

Example Permit Requirement Rationale for the Fact Sheet

Stormwater discharges from construction sites generally includes sediment and other pollutants such as phosphorus and nitrogen, turbidity, pesticides, petroleum derivatives, construction chemicals, and solid wastes that may become mobilized when land surfaces are disturbed. The permit requires MS4 permittees to require construction site operators at defined sites to meet certain minimum stormwater requirements relating to erosion and sediment control and pollution prevention, and to meet other restrictions imposed on them by the State, or local regulations. These minimum requirements clearly specify the expectations for addressing

erosion control, sediment control, and pollution prevention control measures at construction sites.

EPA's Effluent Limitations Guidelines and Standards for the Construction and Development Point Source Category (74 FR 62996, December 1, 2009) require construction site owners and operators to implement a range of erosion and sediment control measures and pollution prevention practices to control pollutants in discharges from construction sites. These standards will be required in state construction general permits as they are reissued. These standards are broadly applicable to all construction activity disturbing one or more acres. They provide an objective means of describing appropriate erosion and sediment control best management practices, pollution prevention controls on construction site waste and storage of building materials and other reasonable components of the permittee's program to reduce pollutants to the maximum extent practicable in stormwater from construction sites that discharge through the MS4.

Recommendations for the Permit Writer

The Phase II stormwater regulations require permittees to develop a construction site program addressing "land disturbance of greater than or equal to one acre." However, some states may have more stringent requirements that apply to some permittees, or the permit writer may have discretion to lower the one acre threshold if this threshold is too high for particular permittees. For example, smaller, built-out cities may have many small redevelopment projects that fall below the one acre threshold. In such cases, controlling construction site stormwater entering the MS4 to the maximum extent practicable may require stormwater controls at smaller sites. Permit writers should review available construction and planning data from the MS4 to determine an appropriate project size threshold.

The example permit provision's list of minimum requirements for erosion controls, sediment controls, and pollution prevention measures is intended to establish specific requirements to implement the broader requirements in the Phase II rule (40 CFR 122.24(b)(4)). The list of minimum requirements in the example permit provision are from EPA's Construction and Development Effluent Guidelines (published December 1, 2009) which will eventually be required in all NPDES stormwater permits issued to construction site operators. At a minimum, the permit should reference the applicable state standards and, where appropriate, any local standards as well. Permit writers may wish to modify these specific requirements based on current standards or guidance on construction site stormwater controls in the State.

4.2 Construction Site Inventory

Example Permit Provision

4.2.1 The permittee must continue to maintain an inventory of all active public and private construction sites that result in a total land disturbance of [*insert disturbance threshold from Part 4.1.1.*]. The inventory must be continuously updated as new projects are permitted and projects are completed. The inventory must contain

relevant contact information for each project (e.g., name, address, phone, etc.), the size of the project and area of disturbance, whether the project has submitted for permit coverage under [*insert name of applicable NPDES general construction permit*], the date the permittee approved the [*insert name of local erosion and sediment control/stormwater plan]* in accordance with Part 4.3, and the permit tracking number issued by [*insert name of permitting authority*]. The permittee must make it available to the permitting authority upon request.

Example Permit Requirement Rationale for the Fact Sheet

To effectively conduct inspections, the permittee must know where construction activity is occurring. A construction site inventory tracks information such as project size, disturbed area, distance to any waterbody or flow channel, when the erosion and sediment control/stormwater plan was approved by the Permittee, and whether the project is covered by the permitting authority's construction general permit. This inventory will allow the permittee to track and target its inspections.

Recommendations for the Permit Writer

Because of state or local construction permitting requirements, many permittees have some system in place to track construction activity in their jurisdiction. If this is the first MS4 permit issued to the permittee, the permit writer should include a deadline for the development of the initial inventory.

Permit writers may want to request electronic copies of the inventory quarterly or yearly, if that information will be used by the State permitting or inspection staff.

4.3 Construction Plan Review Procedures

Example Permit Provision

4.3.1 The permittee must continue to require each operator of a construction activity to prepare and submit a [*insert name of local erosion and sediment control/stormwater plan*] prior to the disturbance of land for the permittee's review and written approval prior to issuance of a [*insert appropriate permit, i.e. grading or construction*]. The permittee must make it clear to operators of construction activity that they are prohibited from commencing construction activity until they receive receipt of written approval of the the plans. If the [*insert name of local erosion and sediment control/stormwater plan*] is revised, the permittee must review and approve those revisions.

4.3.2 The permittee must continue to implement site plan review procedures that meet the following minimum requirements:

a. The permittee must not approve any [*insert name of local erosion and sediment*

control/stormwater plan] unless it contains appropriate site-specific construction site control measures that meet the minimum requirements in Part 4.1.1 of this permit.

b. The stormwater pollution prevention plan (SWPPP) developed pursuant to [*insert name of applicable NPDES general construction permit*] may substitute for the [*insert name of local erosion and sediment control/stormwater plan*] for projects where a SWPPP is developed. The permittee is responsible for reviewing those portions of the SWPPP that comply with the [*insert name of local erosion and sediment control/stormwater plan*].

c. The [*insert name of local erosion and sediment control/stormwater plan*] must include the rationale used for selecting control measures, including how the control measure protects a waterway or stormwater conveyance.

d. The permittee must use qualified individuals, knowledgeable in the technical review of [*insert name of local erosion and sediment control/stormwater plan*] to conduct such reviews.

e. The permittee must document its review of each [*insert name of local erosion and sediment control/stormwater plan*] using a checklist or similar process. [8]

Example Permit Requirement Rationale for the Fact Sheet

The permit requires the review and prior approval of all local erosion and sediment control plans/stormwater plans to ensure that construction activities adhere to the permittee's minimum stormwater control requirements. Adequate review of erosion and sediment control/stormwater plans is necessary to verify compliance with all applicable requirements in the permittee's ordinance or other regulatory mechanism, as well as compliance with control measure standards and specifications. A formalized review procedure ensures consistent review of plans by specifying the requirements for plans being submitted, the schedule for review, and general conditions for approval. The site plan review process also provides a way to track construction activities and enforce standards.

A good site plan review process provides the permittee with the opportunity to comment – early and often – on a project's proposed number, type, location, and sizing of stormwater control measures that will be in place prior to, during, and at the conclusion of active construction. It is important to keep in mind that a site plan is a "living document" that may change during the life of the project; however, it is critical that the site plan be adequately reviewed and initially based on established policy, guidelines, and standards. The plan is the framework for stormwater control implementation, as well as the basis of any enforcement action on a project site.

The permit requires the permittee to review plans before construction activity begins to ensure that the plans are consistent with the standards specified in Part 4.1.1. The permit language also includes some key requirements during the plan review process:

[8] 2009 Ventura County, CA Phase I MS4 Permit (www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/ventura_ms4/09-0057/Transmittal%20Letter%20and%20MS4%20Permit%20Order%20No%2009%200057.pdf)

- If a SWPPP is developed for the State construction general permit, that plan may substitute for the local plan if it also includes/addresses the local requirements.
- The plan must include the rationale used for selecting or rejecting control measures (for example, why a silt fence was selected or why a sediment trap was not included).
- Finally, plan reviewers must be trained and must document their review. For example, this can be done by using a checklist or similar process.

Recommendations for the Permit Writer

Some MS4 permits include a requirement that, prior to approval of local permits, the permittee must verify that the construction site operator has existing coverage under the State's Construction General Permit, if necessary. This requirement helps to reduce the number of non-filers for the State general permit by providing a check for NPDES CGP permit coverage at the local level.

4.4 Construction Site Inspections and Enforcement

Example Permit Provision

4.4.1 The permittee must continue to implement procedures for inspecting public and private construction projects in accordance with the frequency specified in Table 4-1 below:

Table 4-1: Inspection Frequencies

Site	Inspection Frequency
a. All sites [*insert a size threshold that is considered large for the MS4 if large projects are common, e.g. 5 acres*] or larger in size	Inspection must occur within [*insert number of days/hours, e.g. 48 hours] of a [insert significant rain event size, e.g. ½ inch rain event] and no less than biweekly (every 2 weeks)*]
b. All sites one (1) acre or larger that discharge to a tributary listed by the state/tribe as an impaired water for sediment or turbidity under the CWA section 303(d)	
c. Other sites one (1) acre or more determined by the permittee or permitting authority to be a significant threat to water quality*	
d. All other construction sites with one (1) acre or more of soil disturbance not meeting the criteria specified in (A),(B), or (C) above	Inspection must occur at least monthly
e. Construction sites less than one (1) acre in size	Inspection must occur as needed based on the evaluation of the factors that are a threat to water quality*
*In evaluating the threat to water quality, the following factors must be considered: soil erosion potential; site slope; project size and type; sensitivity of receiving waterbodies; proximity to receiving waterbodies; non-stormwater discharges; past record of non-compliance by the operators of the construction site; and [*insert other factors relevant to particular MS4*].	

4.4.2 The permittee must adequately inspect all phases of construction.

a. Prior to Land Disturbance: Prior to allowing an operator to commence land disturbance, the permittee must perform an inspection to ensure all necessary erosion and sediment controls are in place.

b. During Active Construction: During active construction, the permittee is required to conduct inspections in accordance with the frequencies specified in Table 4-1 in Part 4.4.1.

c. Following Active Construction: At the conclusion of the project, the Permittee must inspect all projects to ensure that all graded areas have reached final stabilization and that all temporary control measures are removed (e.g., silt fence).

4.4.3 The permittee must have trained and qualified inspectors (See Part 4.5). The permittee must also continue to follow, and revise as necessary, written procedures outlining the inspection and enforcement procedures. Inspections of construction sites must, at a minimum:

a. Check for coverage under the [*insert name of applicable NPDES general construction permit*] by requesting a copy of any application or Notice of Intent (NOI) or other relevant application form during initial inspections.

b. Review the applicable [*insert name of local erosion and sediment control/stormwater plan*] and conduct a thorough site inspection to determine if control measures have been selected, installed, implemented, and maintained according to the plan.

c. Assess compliance with the permittee's ordinances and permits related to stormwater runoff, including the implementation and maintenance of designated minimum control measures.

d. Assess the appropriateness of planned control measures and their effectiveness.

e. Visually observe and record non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff.

f. Provide education and outreach on stormwater pollution prevention, as needed.

g. Provide a written or electronic inspection report generated from findings in the field

4.4.4 The permittee must track the number of inspections for the inventoried construction sites throughout the reporting period to verify that the sites are inspected at the minimum frequencies required. Inspection findings must be documented and maintained for review by the permitting authority.

4.4.5 Based on site inspection findings, the permittee must take all necessary follow-up actions (i.e., re-inspection, enforcement) to ensure compliance in accordance with the permittee's enforcement response plan required in Part 1.3. These follow-up and enforcement actions must be tracked and maintained for review by the permitting authority. [9]

[9] 2007 San Diego Phase I MS4 Permit (www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/sd_permit/r9_2007_0001/2007_0001final.pdf)

Example Permit Requirement Rationale for the Fact Sheet

The permit requires inspections of construction sites based on a prioritized ranking of sites (see 40 CFR 122.26(d)(2)(iv)(D)(3) and 122.34(b)(4)(ii)(F)). Larger construction sites and sites that discharge to a sediment impaired waterbody are inspected more frequently than small sites. In addition to inspections at a regular interval, inspections are required within a certain timeframe after a rain event.

Inspections are required before land disturbance to ensure erosion and sediment controls are in place and a plan has been developed, during active construction, and after the site has been stabilized. The permit language also contains specific requirements on what the inspection must include (such as a comparison of control measures in the approved plan to measures installed in the field).

Without adequate implementation and maintenance, stormwater controls will not function as designed. In order to ensure proper implementation and maintenance by site operators, a rigorous inspection protocol is necessary. This protocol must include a written SOP for site inspections and enforcement to ensure inspections and enforcement actions are conducted in a consistent manner. The SOP must include steps to identify priority sites for inspection and enforcement based on the nature and extent of the construction activity, slope of the site, proximity to receiving waters, the characteristics of soils, and the water quality status of the receiving water. This will allow inspection resources and staff time to be used most effectively. Documentation of inspections is critical to track noncompliance and enforcement. Regularly scheduled inspections, as well as post-storm event inspections, are necessary to be sure that regular maintenance occurs as well as repairs after storm events.

Recommendations for the Permit Writer

Selecting an appropriate inspection frequency is, by necessity, a case-by-case exercise. Inspection frequencies for one permittee will not necessarily be appropriate for other permittees. For example, appropriate inspection frequencies may vary among different permittees depending on such factors as topography and rainfall patterns, including whether the MS4 is located in a wet or arid region and/or has distinct wet and dry seasons. Appropriate inspection frequencies may also vary seasonally or geographically within a single MS4 based on seasonal variations in rainfall or snowfall, or differing topographical or geographic conditions in different parts of the MS4 area.

For individual MS4 permits, permit writers should consider seasonal rainfall patterns, the presence and location of impaired streams or sensitive habitats, soils, topography, and other MS4-specific factors. In addition, permit writers should review current inspection frequencies, as well as inspection and enforcement records.

The permit writer should also note that the permit language will need to be modified if the permittee was not previously required to develop written procedures for the inspection and enforcement conducted at construction sites.

4.5 MS4 Staff Training

Example Permit Provision

4.5.1 The permittee must ensure that all staff whose primary job duties are related to implementing the construction stormwater program, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. The training can be conducted by the permittee or outside training can be attended, however, this training must include, at a minimum:

a. Erosion and Sediment Control/Stormwater Inspectors:

1. Initial training, held within the first permit year, regarding proper control measure selection, installation, implementation, and maintenance, as well as administrative requirements such as inspection reporting/tracking and use of the permittee's enforcement responses; and
2. Annual refresher training for existing inspection staff to update them on preferred controls, regulation changes, permit updates, and policy or standards updates. Throughout the year, e-mails and/or memos must be sent out to update the inspectors as changes happen.

b. Other Construction Inspectors: Initial training must be held within the first permit year, on general stormwater issues, basic control measure implementation information, and procedures for notifying the appropriate personnel of noncompliance. Refresher training held at least once every two years.

c. Plan Reviewers:

1. Initial training, held within the first permit year, regarding control measure selection, design standards, and review procedures; and
2. Annual training regarding new control measures, innovative approaches, permit updates, regulation changes, and policy or standard updates.

d. Third-Party Inspectors and Plan Reviewers: If the permittee utilizes outside parties to conduct inspections and/or review plans, these outside staff must be trained per the requirements listed in Part 4.5.1.a (above).

Example Permit Requirement Rationale for the Fact Sheet

By setting up training for the permittee staff, the permittee can ensure that the erosion and sediment control requirements are understood and consistently applied since all staff will have been trained on the same information. The permit requires staff whose primary job duties are related to implementing the construction stormwater program to be trained. The training requirements vary by the type of staff. F or example, erosion and sediment control inspectors must be trained annually on a range of topics, while other construction inspectors (such as building inspectors) will receive more general training.

The permittee can conduct the training or the training can be provided by another entity (such as a State erosion and sediment control class). Ideally, the training should include classroom presentations, in-field training, and follow-up evaluations to determine whether the training was effective.

Also, the permittee should consider providing training to other in-field municipal staff so that problems associated with flooding and sedimentation from construction sites can be properly reported and addressed.

4.6 Construction Site Operator Education & Public Involvement

Example Permit Provision

4.6.1 Construction Operator Education. The permittee must develop and distribute educational materials to construction site operators as follows:

a. Each year, the permittee must either provide information on existing training opportunities or develop new training for construction operators on control measure selection, installation, implementation, and maintenance as well as overall program compliance.

b. The permittee must develop or utilize existing outreach tools (i.e. brochures, posters, website, plan notes, manuals etc.) aimed at educating construction operators on appropriate selection, installation, implementation, and maintenance of stormwater controls, as well as overall program compliance.

c. The permittee must make available appropriate outreach materials to all construction operators who will be disturbing land within the MS4 boundary. The permittees' contact information and website must be included in these materials.

d. The permittee must include information on appropriate selection, installation, implementation, and maintenance of controls, as well as overall program compliance, on the permittee's existing website.

4.6.2 Public Involvement.

a. The permittee must adopt and implement procedures for receipt and consideration of information submitted by the public regarding construction projects. This includes, but is not limited to, the public reporting mechanisms described in Part 3.6.

b. The permittee must hold public meetings for all public projects that have planned disturbance greater than or equal to an acre. [10]

[10] Eastern Washington MS4 Phase II Permit (Part 2 only) (www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseiiEwa/MODIFIEDpermitDOCS/EWpermitMODsigned.pdf)

Example Permit Requirement Rationale for the Fact Sheet

Education of construction site operators regarding stormwater management and regulatory requirements is an essential part of controlling stormwater discharges from construction sites. Making brochures, guidance documents and trainings available will increase the knowledge of operators and compliance in the field and can help them choose the correct structural control and processes, correctly install the controls, and successfully implement control measures. The permit requires the permittee to provide appropriate outreach materials to construction site operators. These materials can be made available during the normal course of business (i.e. in BMP manuals, in plan notes, during meetings) or via brochures or websites. In addition, the permittee must either provide training or notify the operators of available training opportunities.

Public involvement requirements include the development of a hotline or other telephone number for the public to call regarding stormwater concerns at construction sites.

CHAPTER 5: POST-CONSTRUCTION OR PERMANENT/LONG-TERM STORMWATER CONTROL MEASURES

Introduction

Phase I MS4s are required to address new development and significant redevelopment in their SWMPs through controls to reduce pollutants in stormwater discharges after construction is completed. See 40 CFR 122.26(d)(2)(iv)(A)(2).

Included Concepts

- Post-construction stormwater management program
- Site performance standards
- Site plan review
- Long-term maintenance of post-construction stormwater control measures
- Watershed protection
- Tracking of post-construction stormwater control measures
- Inspections and enforcement
- Retrofit plan

The Phase II regulations require regulated small MS4 operators to develop, implement, and enforce a program to address stormwater discharges from new development and redevelopment sites that disturb greater than or equal to one acre to the MS4 (including projects that disturb less than one acre that are part of a larger common plan of development or sale). The regulations also require that the MS4 ensure that control measures are installed and implemented that prevent or minimize water quality impacts. See 40 CFR 122.34(b)(5)(i)

As part of these Phase II requirements, the MS4 must:

- Develop and implement approaches to addressing post-construction stormwater discharges that include a combination of structural and/or non-structural controls;
- Adopt adequate legal authority to enable the MS4 to address post-construction stormwater discharges from new development and redeveloped sites; and
- Ensure adequate long-term operation and maintenance of applicable post-construction control measures. See 40 CFR 122.34(b)(5)(ii).

As of April 2010, most MS4 permits only require permittees to adopt a post-construction program with enforceable requirements designed to reduce stormwater impacts from new development and redevelopment, without specifying a performance standard. To meet this requirement many MS4s have adopted criteria in ordinances or other legally enforceable mechanisms based on already promulgated flood-control based standards (i.e., focused only on discharge rates). However, performance standards can be a very useful and meaningful mechanism in the post-construction toolbox to ensure that water quality objectives are met.

The example permit provisions that follow present the current thinking on how to strengthen the effectiveness of the permittee's stormwater program by preventing the harmful effects of increased stormwater flows and pollutant loads from new development and redeveloped sites on receiving waterbodies. EPA recognizes that there are a wide variety of approaches that some states have already

taken to control discharges from new development and redeveloped sites, some of which are more stringent than the permit language recommended below. The language below includes components that EPA believes would provide focus and enforceability, and would bring about significant improvements in stormwater controls on site. However, the "maximum extent practicable" may be greater than is reflected in the example permit language below for some MS4s, and EPA encourages states, where possible, to go beyond these example provisions and to achieve even better watershed planning and water quality outcomes. For these reasons, this chapter presents the minimum permit provisions EPA currently recommends to be included in permits in order for permittees to reduce their discharges to the maximum extent practicable as well as the optional, more stringent, requirements.

5.1 Post-Construction Stormwater Management Program

Example Permit Provision

5.1.1 The permittee must continue to implement a program to control stormwater discharges from new development and redeveloped sites that disturb at least one acre (including projects that disturb less than one acre that are part of a larger common plan of development or sale) that discharge into an MS4 [*or insert smaller alternative size*]. The program must apply to private and public development sites, including roads.

5.1.2 The program must require that controls are in place that will infiltrate, evapotranspire, or harvest and use stormwater from the site to meet the performance standards in Part 5.2 to protect water quality.

5.1.3 Written procedures for implementing this program, including the components described in Parts 5.2 – 5.8, must be incorporated into the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

The stormwater regulations require that an MS4 develop and implement a program to address post-construction discharges from new development and redeveloped sites, and ensure the long-term operation and maintenance of these controls (see Part 5.4 for the maintenance requirements). (See 40 CFR 122.34(b)(5)). The permit requires the use of specific stormwater controls, i.e., those that infiltrate, evapotranspire, or harvest and use stormwater, with the aim of maintaining or restoring the pre-development stormwater runoff conditions at the site.

Many traditional stormwater management practices, and the permit language that drives them, fail to address the hydrologic modifications that increase the quantity of stormwater discharges, and cause excessive erosion and stream channel degradation. Frequently the volume, duration, and velocity of stormwater discharges cause degradation to aquatic systems. Protecting and restoring the physical, chemical and biological integrity of receiving waters must be a central issue in stormwater permits. The recent report of the National Research Council (*Urban Stormwater Management in the United States*, National Academies Press, 2008, www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf) recommends that the NPDES stormwater

program examine the impacts of stormwater flow, treat flow as a surrogate for other pollutants, and includes the necessary control requirements in stormwater permits. Specifically the report recommends that the volume retention practices of infiltration, evapotranspiration and rainwater harvesting be used as primary stormwater management mechanisms. For this reason, EPA recommends use of a permit condition that is based on maintaining or restoring predevelopment hydrology although other forms of this permit condition maybe appropriate as well.

Additional information on the development of a post-construction program for Phase II permittees can be found in the Center for Watershed Protection's *Managing Stormwater In Your Community: A Guide for Building an Effective Post-Construction Program* (available at www.cwp.org/postconstruction). Also, EPA's green infrastructure website includes information on post-construction controls and programs (see www.epa.gov/greeninfrastructure).

5.2 Site Performance Standards

Example Permit Provision

5.2.1 The permittee must establish, implement and enforce a requirement that owners or operators of new development and redeveloped sites discharging to the MS4, which disturb greater than or equal to one acre (including projects that disturb less than one acre that are part of a larger common plan of development or sale), design, install, implement, and maintain stormwater control measures that infiltrate, evapotranspire, harvest, and use stormwater discharges.

5.2.2 Within [*insert deadline, e.g., 12 months, 24 months, etc.*] the permittee must require that stormwater discharges from such new development and redevelopment sites be managed such that post-development hydrology does not exceed the pre-development hydrology at the site, in accordance with the performance standard set forth in this paragraph. The SWMP must describe the site design strategies, control measures, and other practices deemed necessary by the permittee to maintain or improve pre-development hydrology.[11] [*Insert a new development performance standard, such as one or a combination of the following:*

Basis for Performance Standard	***Description***	***Performance Standard***
Rainfall	*Minimum storm volume to be retained on site.*	*Design, construct, and maintain stormwater management practices that manage rainfall on-site, and prevent the off-site discharge of the precipitation from [insert standards, such as "the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation"]. Discharge volume reduction can be achieved by canopy interception, soil amendments, evaporation, rainfall harvesting, engineered infiltration, extended filtration and/or evapotranspiration and any combination of the aforementioned practices. This first one inch of rainfall*

[11] *Big Darby Creek Watershed CGP, Part III.G.2.d. (web.epa.ohio.gov/dsw/permits/DarbyStormWater_Final_GP_sep06.pdf)*

		must be 100% managed with no discharge to surface waters, except when the permittee chooses to implement the conditions in Part 5.2.5.d below.[12]
Rainfall	*Minimum storm size to be retained on site.*	*Design, construct, and maintain stormwater management practices that manage rainfall on-site, and prevent the off-site discharge of the precipitation from all rainfall events less than or equal to [insert standards, such as "the 95th percentile rainfall event"]. This objective must be accomplished by the use of practices that infiltrate, evapotranspire and/or harvest and reuse rainwater. The 95th percentile rainfall event is the event whose precipitation total is greater than or equal to 95 percent of all storm events over a given period of record.*[13]
Recharge/Runoff	*Hydrologic analysis.*	*Design, construct, and maintain stormwater management practices that preserve the pre-development runoff conditions following construction. The post-construction rate, volume, duration and temperature of discharges must not exceed the pre-development rates and the pre-development hydrograph for 1, 2, 10, 25, 50 and 100 year storms must be replicated through site design and other appropriate practices. These goals must be accomplished through the use of infiltration, evapotranspiration, and/or rainwater harvesting and reuse practices. Defensible and consistent hydrological assessments and modeling methods must be used and documented.* [14]
Recharge	*Groundwater recharge requirement.*	*Any "major development" project, which is one that disturbs [insert standards, such as at least one (1) acre of land or creates at least 0.25 acres of new or additional impervious surface], must comply with one of the following two groundwater recharge requirements:* • *Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100 percent of the average annual pre-construction groundwater recharge volume for the site; or* • *Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater discharges volume from pre-construction to post-construction for the two-year storm is infiltrated.*[15]
Impervious Cover	*Limiting total impermeable surface (or effective impermeable surface)*	*Minimize total impervious cover resulting from new development and redevelopment to [insert standards, such as <10% of disturbed land cover and/or limit total amount of effective impervious surface to no more than 5% of the landscape].*

[12] *West Virginia Small MS4 Permit (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*
[13] *Section 438, Energy Independence & Security Act (EISA) Guidance (www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf)*
[14] *Section 438, Energy Independence & Security Act (EISA) Guidance (www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf)*
[15] *New Jersey Stormwater Management Rules, N.J.A.C. 7:8 (www.nj.gov/dep/rules/adoptions/2004_0202_njpdes.pdf)*

5.2.3 Incentives for Redeveloped Sites. When considered at the watershed scale, certain types of developed sites can either reduce existing impervious surfaces, or at least create less 'accessory' impervious surfaces. The Permittee may develop a program to allow adjustments to the performance standard for new development or redevelopment sites that qualify. A reduction of [*insert the amount of stormwater the Permittee can reduce for utilizing redevelopment principles, e.g. 0.2 inches from the one inch runoff reduction standard*] may be applied to any of the following types of development. Reductions are additive up to a maximum reduction of [*insert amount, such as 0.75 inches*] for a project that meets four or more criteria. The permittee may choose to be more restrictive and allow a reduction of less than [*insert amount, such as 0.75 inches*] if they choose. In no case will the reduction be greater than [*insert amount, such as 0.75 inches*].

1. Redeveloped sites
2. Brownfield redeveloped site
3. High density (>7 units per acre)
4. Vertical Density, (Floor to Area Ratio (FAR) of 2 or >18 units per acre)
5. Mixed use and Transit Oriented Development (within ½ mile of transit)[16]

5.2.4 Additional Requirements and Exceptions: The permittee must implement the following additional requirements where applicable:

a. A site that is a potential hot spot with the reasonable potential for contaminating underground sources of drinking water must provide treatment for associated pollutants (e.g., petroleum hydrocarbons at a vehicle fueling facility).

b. A site that discharges or proposes to discharge to any surface water or ground water that is used as a source of drinking water must comply with all applicable requirements relating to source water protection and must not cause an exceedance of drinking water standards.[17]

c. Sites may not infiltrate stormwater in areas of soil contamination.

d. For projects that cannot meet 100% of the performance standard in Part 5.2.2 on site, two alternatives are available: off-site mitigation and payment in lieu. If these alternatives are chosen, then the permittee must develop and fairly apply criteria for determining the circumstances under which these alternatives will be available and establish reasonable schedules for mitigation and require payment in lieu of prior to project inception. A determination that standards cannot be met on site must include multiple criteria that would rule out fully meeting the performance standard in Part 5.2.2, such as: too small a lot outside of the building footprint to create the necessary infiltrative capacity even with amended soils; soil instability as documented by a thorough geotechnical

[16] *West Virginia Small MS4 Permit (Section C.b.5.a.ii.A.3) (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*
[17] *West Virginia Small MS4 Permit (Section C.b.5.a.ii.A.2) (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*

analysis; a site use that is inconsistent with capture and reuse of stormwater; or too much shade or other physical conditions that preclude adequate use of plants. Sites must still maximize stormwater retention on-site, before applying the remaining stormwater to one of the alternatives. In instances where alternatives are chosen, technical justification as to the infeasibility of on site management is required to be documented.[18]

Example Permit Requirement Rationale for the Fact Sheet

Developed land changes the hydrology of sites, leading to higher stormwater discharge volumes and higher pollutant loads. The purpose of this standard is to maintain or restore stable hydrology in receiving waters thereby protecting water quality by having post-construction hydrology mimic the natural hydrology of the area.

A simpler, but reasonably approximate 'mimicking the natural hydrograph' approach can typically be accomplished by retaining (as opposed to detaining stormwater for later discharge) on a developed site the volume of water that was retained prior to development, through the mechanisms of infiltration, evapotranspiration, and capture and use. By significantly reducing the volume of stormwater discharges, these mechanisms significantly reduce the discharge of pollutants in stormwater, making discharge volumes the ideal all-around focus and metric for stormwater management. These provisions must be clear about the retention requirement, e.g., an underdrained rain garden likely functions more as a detention and filtration system than an infiltration system.

In Part 5.2.3, the five types of development which qualify for incentives are redevelopment, brownfield redevelopment, high density, vertical density, and mixed use with transit oriented development. Redeveloping already degraded sites can reduce regional land consumption and minimize new land disturbance. Minimizing land disturbance and impervious cover is critical to maintaining watershed health. In addition to water quality benefits, cleaning up and reinvesting in brownfield properties increases local tax bases, facilitates job growth, utilizes existing infrastructure, takes development pressures off of undeveloped, open land, and both improves and protects the environment. The effect of low-density urbanization on watersheds and the hydrologic cycle is substantial. High-density development, including vertical density, slows land consumption rates and accommodates more land uses on a smaller footprint. Finally, mixing land uses and promoting transit-oriented development can directly reduce runoff since mixed-use developments have the potential to use surface parking lots and transportation infrastructure more efficiently, requiring less pavement.[19]

In Part 5.2.4.d, the permittee must establish clear and stringent criteria for the conditions under which payment in lieu and off-site mitigation could be used. These criteria must be related to physical constraints such as a combination of soils which limit infiltration opportunities, space or light limited situations restricting the amount of vegetation that can be used, and a land use that is not conducive to capture and use of stormwater. Further, appropriate schedules for

[18] *West Virginia Small MS4 Permit (Section C.b.5.a.ii.A.4) (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*

[19] Adapted from the WV Phase II MS4 Fact Sheet (www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Pages/default.aspx)

payment and implementation of mitigation measures must be established to ensure stormwater impacts are addressed in a timely manner.

Recommendations for Permit Writer

Many communities have adopted criteria based on already promulgated flood-control based standards (i.e., focused only on discharge rates). This example permit language instead promotes the concept that effective standards should be based on the objective of maintaining or restoring stable hydrology to protect the quality of receiving waters by having post-construction hydrology mimic the natural hydrology of the area. The permit language provides a number of example standards that can be used to achieve this objective.

Performance standards should take into account the wide variability in hydrologic conditions in different areas. Ideally, standards should reflect the local naturally-occurring hydrology with respect to runoff, infiltration, evapotranspiration, and storage – that is, the water balance that would be present in the absence of development. Key parameters, such as rainfall patterns, soil characteristics, and topography, can be used to establish likely 'natural' hydrology. Where maintaining or reestablishing such hydrologic conditions is infeasible, off-site mitigation, payment-in-lieu, or fee programs may be used. Based on current (2010) information, EPA recommends that permits allow for a combination of techniques that utilize infiltration, capture and use, and evapotranspiration as appropriate, rather than relying only on infiltration or some other technique alone to meet performance standards.

The permit writer could include a performance standard that stipulates that predevelopment hydrographs match post-development hydrographs. In order for this type of performance standard to be effective, the permit writer should make sure that the permit clearly spells out all variables of the hydrograph (volume, rate, duration, frequency) to be matched, and not just the discharge rate. Many current pre-post hydrology standards focus only on discharge rate, which is primarily a flood control approach. In addition, a pre-development condition should also be defined, and that condition should be one that is reasonably 'natural', rather than simply the conditions (perhaps already fairly impervious) that existed immediately prior to the current developed site. A calculator tool based on key hydrologic parameters (soil, rainfall, slope, and vegetation) or an on-site rainfall retention standard that is appropriate for that area can help the permittee determine what constitutes pre-development hydrology and the means by which it may be matched.

As contemplated in the example permit provisions, permit writers may want to consider the difference between new development and redevelopment sites, as well as differences among some types of developed sites, in establishing performance standards. From the standpoint of imperviousness at a watershed scale, redeveloped sites are usually more desirable than new development sites, which replace relatively naturally functioning green spaces with impervious surfaces such as roads, and parking lots. Certain types of development generate less impervious surfaces than others. For example, typically, there is little or no increase in net stormwater discharges when redeveloping underused properties such as vacant properties, brownfield sites, or greyfield sites, since new impervious cover replaces existing impervious cover. The net discharge increase from already developed properties would likely be zero since the site was already predominately impervious cover. In many cases, redeveloped sites break up or remove some portion of the impervious cover, converting it to pervious cover and allowing for some stormwater infiltration. Redevelopment sites can produce a net improvement in regional water quality by decreasing total impervious area and its

associated stormwater discharges. Redeveloped sites can also reduce regional land consumption. By building on underused, already degraded land, the pressure to convert previously undeveloped land is reduced. Therefore differential standards for new development and redeveloped sites, as well as for different types of developed sites, may be reasonable. However, they should be crafted to minimize creation of imperviousness at the watershed scale, and still include some reasonable level of stormwater management at the site scale.

Redevelopment is the act of improving by renewing or restoring any developed property that results in the land disturbance of one acre or greater, and that has one of the following characteristics:

- Land that currently has an existing structure, such as buildings or houses, or
- Land that is currently covered with an impervious surface, such as a parking lot or roof, or
- Land that is currently degraded and is covered with sand, gravel, stones, or other non-vegetative covering.

Infiltration may not be appropriate in all cases. For example, a site that is a potential hot spot with the reasonable potential for significant pollutant loading(s) may not be appropriate for stormwater infiltration. Hot spots may include commercial, industrial, institutional, municipal, or transportation related operations that may produce higher levels of stormwater pollutants, and/or present a higher level or risk for spills, leaks, or illicit discharges such as: gas stations, petroleum wholesalers, vehicle maintenance and repair, auto recyclers, recycling centers and scrap yards, landfills, solid waste facilities, wastewater treatment plants, airports, railroad stations and associated maintenance facilities, and highway maintenance facilities.

In addition, the permit writer may want to consider what type of flexibility to afford sites where the owner/operator is not able to meet the performance standard on site. For instance, if a site is constrained by size or previous impervious surfaces, such that the use of control measures that infiltrate stormwater is severely limited, the permit could allow alternatives for meeting the performance standard in other ways such as payment in lieu and off-site mitigation within the same watershed.

Off-site mitigation and payment in lieu programs are options that can be used in these instances. Off-site mitigation generally means that control measures may be implemented at another location, in the same sewershed/watershed as the original project, and as approved by the regulatory agency. Payment in lieu programs generally mean that the developer pays a fee to the permittee which will then be applied to a stormwater control project, in lieu of installing the required control measures.

If the permit writer chooses to include an off-site mitigation or payment in lieu program in the permit, the permit writer could specify that the programs meet several criteria, for example, those described in the 2009 West Virginia Phase II General Permit Fact Sheet (www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Pages/default.aspx):

1. The permittee must establish clear and stringent criteria for the conditions under which these options are available that must be related to real physical constraints such as a combination of soils limiting infiltration opportunities, space or light limited situations restricting the amount of vegetation that can be used, and a land use that is not conducive to capture and use of

stormwater. While one or two of these characteristics should not be adequate to qualify for the alternative, the combination of multiple constraints could;

2. A minimal requirement for at least [*0.4 inch*] of stormwater managed on-site;

3. A [*1:1.5 ratio*] of the amount of requisite stormwater not managed on site to the amount of stormwater required to be mitigated at another site, or for which in-lieu payments must be made;

4. If demonstrated to the permittee that it is completely infeasible to manage the remainder [*0.4 inches*], then the ratio for this unmanaged portion is [*1:2*].

5. The necessary tracking systems for both types of programs, including the necessary inventory of public and retrofit projects for off-site mitigation; and,

6. The establishment of a credible valuation structure for payment in lieu, i.e., what is the actual cost for the permittee to provide retrofits for the necessary amount of stormwater, not just a token payment. The purpose of these provisions is to disincentivize the use of alternatives unless really needed, but also to provide a financial foundation for implementation of public stormwater management projects, including retrofits where those needs have been identified.

Additional justification for the development types which qualify for these incentives can be seen in the West Virginia Phase II MS4 Permit Fact Sheet (www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Pages/default.aspx).

5.3 Site Plan Review

Example Permit Provision

5.3.1 To ensure that all applicable new development and redeveloped sites conform to the performance standards required in Part 5.2, the permittee must continue to implement project review, approval, and enforcement procedures that include:

a. Procedures for the site plan review and approval process(es) that include inter-departmental consultations, as needed, and a required re-approval process when changes to an approved plan are desired; and

b. A requirement for submittal of 'as-built' certifications within 90 days of completion of a project.

5.3.2 The permittee must conduct site plan reviews, using the procedures described in Part 5.3.1, of all new development and redeveloped sites which will disturb greater than or equal to one acre [*or a smaller threshold as set by the permitting authority*] and discharge to the MS4 (including sites that disturb less than one acre that are part of a larger common plan of development or sale). The site plan review must specifically address how the project applicant meets the performance standards in Part 5.2 and how the project will ensure long-term maintenance as required in Part 5.4.

Example Permit Requirement Rationale for the Fact Sheet

Specific standards are a critical component of a stormwater management program. However, even the best requirements need to be supported by a review program to ensure that the standards are met. The example permit provision would require permittees to fully implement a comprehensive site plan review and approval program. To meet this requirement, the permittee must have the authority to withhold approvals when standards are not met.

Recommendations for the Permit Writer

The permit writer may want to consider adding a requirement for a pre-application concept plan meeting to occur (in addition to the requirement for the project applicant to submit a site plan for review). During this meeting the project land owner or developer, the project design engineer, and municipal planning staff could discuss the conceptual designs that would be used to ensure that they meet the performance standards. This meeting would ensure that stormwater and performance standards are addressed early in the development process. However, if this pre-application concept plan meeting is not consistent with local planning procedures, the permit writer could consider omitting this requirement.

5.4 Long-Term Maintenance of Post-Construction Stormwater Control Measures

Example Permit Provision

5.4.1 All structural stormwater control measures installed and implemented to meet the performance standards of Part 5.2 must be maintained in perpetuity. The permittee must ensure the long-term maintenance of structural stormwater control measures installed according to this Part through one, or both, of the following approaches:

a. Maintenance performed by the Permittee. See part 6.4.

b. Maintenance performed by the owner or operator of a new development or redeveloped site under a maintenance agreement. The permittee must require the owner or operator of any new development or redeveloped site subject to the performance standards in Part 5.2 to develop and implement a maintenance agreement addressing maintenance requirements for any structural control measures installed on site to meet the performance standards. The agreement must allow the permittee, or its designee, to conduct inspections of the structural stormwater control measures and also account for transfer of responsibility in leases and/or deeds. The agreement must also allow the permittee, or its designee, to perform necessary maintenance or corrective actions neglected by the property owner/operator, and bill or recoup costs from the property owner/operator when the owner/operator has not performed the necessary maintenance within thirty (30) days of notification by the permittee or its designee.

5.4.2 Verification of maintenance responsibilities. The permittee must require that property owners or operators of any new development or redeveloped site subject to the performance standards in Part 5.2 provide verification of maintenance for the approved structural stormwater control measures used to comply with the performance standards. Verification must include one or more of the following as applicable:

a. The owner/operator's signed statement accepting responsibility for maintenance with a provision for transferring maintenance responsibility if the property is legally transferred to another party; and/or

b. Written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance; and/or

c. Written conditions in project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to a home owner's association, or other appropriate group, for maintenance of structural and treatment control stormwater management practices; and/or

d. Any other legally enforceable agreement that assigns permanent responsibility for maintenance of structural or treatment control stormwater management practices.

Example Permit Requirement Rationale for the Fact Sheet

Appropriate operation and maintenance are critical aspects to the function of any suite of controls. In many cases, controls may be located on private property, and it is necessary to establish some provision to assure responsibility and accountability for the operation and maintenance of these controls.

The permittee must ensure maintenance of all structural stormwater control measures. In this Guide, structural controls also include many green infrastructure practices such as rainwater harvesting, rain gardens, permeable pavement, and vegetated swales.

Recommendations for the Permit Writer

Most non-traditional MS4 permittees will probably not have the legal authority to recoup costs where the owner/operator has not completed necessary maintenance. Permit writers may want to be more specific in this requirement to include other options for non-traditional MS4 permittees.

5.5 Watershed Protection

Example Permit Provision

5.5.1 When the Permittee revises its General Plan (or equivalent) or other relevant plans (e.g. Transportation Master, or Community Plan) they must include effective water

quality and watershed protection elements that require implementation of consistent water quality protection measures for new development and redeveloped sites within [*insert deadline*]. Examples of water quality and watershed protection elements to be considered include the following: [*insert principles and/or policies which are appropriate for the watershed such as,*

- Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each watershed, by minimizing the creation, extension and widening of parking lots, roads and associated development.
- Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to; riparian corridors, headwaters, floodplains and wetlands.
- Implement management practices that prevent or reduce thermal impacts to streams, including requiring vegetated buffers along waterways, and disconnecting discharges to surface waters from impervious surfaces such as parking lots.
- Prevent disturbances of natural waterbodies and natural drainage systems caused by development, including roads, highways, and bridges.
- Avoid development in areas that are particularly susceptible to erosion and sediment loss.
- Implement standards to protect trees, and other vegetation with important evapotranspirative qualities.
- Implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.
- Implement water conservation policies that will reduce both stormwater and non- stormwater discharges via storm sewer systems.[20]
- Implement policies that encourage stormwater practices close to the source of the runoff rather than downstream and lower in the watershed.]

Example Permit Requirement Rationale for the Fact Sheet

Imperviousness has been shown to correlate with water quality impacts. In order to minimize water quality impacts, the permittee must examine their planning principles to manage the creation of impervious surfaces at the watershed level, such as reducing the footprint of streets and parking lots. Also, ecologically sensitive areas can protect water quality by acting both as filters that reduce pollutants in stormwater discharges and as sponges to reduce the impact on the ecosystem's hydrology. Thermal pollution is also a concern that can impact biota in waterways. Stormwater discharges from impervious surfaces are often characterized by higher temperatures than natural, pervious surfaces. Reducing the chances of further increasing this temperature by preserving, protecting, and restoring natural features that provide shading for the waterway can further help reduce thermal pollution. Whenever possible natural waterways

[20] *West Virginia Small MS4 Permit (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*

must be protected and not disturbed by stormwater from developed sites. For example, areas that have a high potential for erosion must be avoided for development when possible. Protecting vegetation, native soils, and conserving water can also help ensure the hydrologic qualities of the site remain intact.

Consideration of stormwater impacts from development is critical during the planning phases of development. This not only includes planning on the site-level, but also with respect to discharges from the MS4 on the watershed level. To the extent possible, stormwater management must be an integral part of higher level planning documents that determine where and how development that will result in stormwater discharges to the MS4 should occur since these decisions affect water quality. Using land efficiently can result in better stormwater management by putting development where it is most appropriate. For example, by directing and concentrating new development in areas targeted for growth, communities can reduce or remove development pressure on undeveloped parcels and protect sensitive natural lands and recharge areas. Another strategy is redeveloping already degraded sites such as abandoned shopping centers or underutilized parking lots. In this case, the net increase in discharges from developed sites would likely be zero, and it would likely decrease, depending on the on-site infiltration practices used. Also, by allowing or encouraging denser development, less land is converted overall, and less total impervious area created.

Recommendations for the Permit Writer

Examining stormwater on a watershed basis and including watershed principles is an important part of protecting waterways in a holistic manner. Climate change may increase the size and frequency of storms in some area of the nation. Including watershed-type assessments and considerations as Permit Requirements will help the permittee better focus their efforts to ensure the best water protection outcomes for existing conditions and those anticipated future conditions. Therefore, permit writers should consider including watershed protection principles. Newer programs may not be ready for permit writers to include the exact example permit provision provided. If possible, permit writers should be as specific as possible for the needs of the watershed where the MS4 permittee is located. Permittees should be careful when installing new stormwater BMPs to ensure that there are not any negative, unintended consequences.

5.6 Tracking of Post-Construction Stormwater Control Measures

Example Permit Provision

5.6.1 Inventory of Post-Construction Stormwater Control Measures. The permittee must continue to maintain an inventory of all post-construction structural stormwater control measures installed and implemented at new development and redeveloped sites, including both public and private sector sites located within the permit area. The inventory must be searchable by property location (either on paper or electronic). New entries to the inventory must be made during the site plan review and approval process in Part 5.3.1.

5.6.2 Tracking Information. Each entry to the inventory must include basic information on each project, such as project name, owner's name and contact information, location, start/end date, etc. In addition, inventory entries must include the following for each project:

a. Short description of each stormwater control measure (type, number, design or performance specifications);

b. Latitude and longitude coordinates of each stormwater control measure;

c. Short description of maintenance requirements (frequency of required maintenance and inspections); and

d. Inspection information (date, findings, follow up activities, prioritization of follow-up activities, compliance status).

Based on inspections conducted under Part 5.7, the permittee must update the inventory as appropriate where changes occur in property ownership or the specific control measures implemented at the site. This inventory must be maintained and available for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

Creating an inventory of post-construction structural stormwater control measures, including tracking of specific information, will first enable permittees to know what control measures they are responsible for. Without this information the permittee will not be protecting water quality to their full potential since inspections, maintenance, and follow-up changes cannot be performed. Tracking information such as the latitude/longitude, maintenance and inspection requirements and follow-up will allow the permittee to be able to better allocate their resources for those activities that are immediately necessary. Although not required, including photographs will help the permittee assess how the control measure has changed since it was first created and will likely aid in determining proper maintenance and/or retrofitting opportunities if the measure is no longer providing the water quality benefits it was originally designed.

Recommendations for the Permit Writer

Permit writers may wish to specifically define the types of structural controls that must be included in the inventory. For example, rain barrels may be considered a structural control, but the MS4 likely does not need latitude and longitude coordinates of the rain barrels.

5.7 Inspections and Enforcement

Example Permit Provision

5.7.1 Inspection Frequency. To ensure that all stormwater control measures are operating correctly and are being maintained as required consistent with its applicable maintenance agreement, the permittee must conduct inspections of each project site covered under Part 5.2 performance standards, [*insert inspection frequency, e.g., at least one time during the permit term, 20% of sites per year, etc.*]. The inspections must be in accordance with those specified in the [*insert State manual that describes the maintenance of control measures*]. A description of inspection procedures must be included in the SWMP document.

5.7.2 Post-Construction Inspection. Within [*insert deadline, e.g., 1 week, 2 weeks, etc.*] of completion of construction of any project required to meet the Section 5.2 performance standards, the permittee must conduct a post-construction inspection to verify that the permittee's performance standards have been met. The permittee must include in its SWMP a procedure for being notified by construction operators/owners of their completion of active construction so that the post-construction inspection may be conducted.

5.7.3 Inspection Reports. The permittee must document its inspection findings in an inspection report. Each inspection report must include:

a. Inspection date;

b. Name and signature of inspector;

c. Project location (street address, latitude/longitude, etc.) and inventory reference number (from inventory established in Section 5.6.1)

d. Current ownership information (for example, name, address, phone number, fax, and email)

e. A description of the condition of the structural stormwater control measure including the quality of: vegetation and soils; inlet and outlet channels and structures; embankments, slopes, and safety benches; catch basins; spillways, weirs, and other control structures; and sediment and debris accumulation in storage and forebay areas as well as in and around inlet and outlet structures;

f. Photographic documentation of all critical structural stormwater control measure components; and

g. Specific maintenance issues or violations found that need to be corrected by the property owner or operator along with deadlines and reinspection dates.

The permittee must document and maintain records of inspection findings and enforcement actions and make them available for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

Inspection of post-construction control measures is key to ensuring the protection of water quality. If control measures are not inspected and maintained they could become sources of pollution rather than reducing pollution. By including detailed information in the inspection report, the permittee can better determine if maintenance is required and the permittee can have a snapshot of sorts to know the status of their control measures to prioritize funding.

Recommendations for the Permit Writer

Permit writers should clearly specify the requirements for inspections. Inspecting and properly maintaining structural stormwater controls to ensure they are working as designed is just as important as installing them in the first place. By having specific requirements, permittees will be reminded that they must allocate resources to ensure control measures are properly maintained and functioning. The permit writer may also want to add a prioritization scheme to the requirement to help the permittee determine what maintenance activities are priorities for protecting water quality and which ones are minor changes.

5.8 Retrofit Plan

Example Permit Provision

5.8.1 The permittee must develop a plan to retrofit existing developed sites that are impacting water quality. The retrofit plan must be developed within [*insert deadline, such as within two years of permit issuance*] and must emphasize controls that infiltrate, evapotranspire, or harvest and use stormwater discharges. The plan must include[21]:

a. An inventory of potential retrofit locations, which considers, at a minimum:

- Locations that contribute pollutants of concern to an impaired waterbody
- Locations that contribute to receiving waters that are significantly eroded
- Locations that are tributary to a sensitive ecosystem or protected area
- Locations that are tributary to areas prone to flooding

[21] Orange County Municipal Stormwater Permit (Section F.3.d) (www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/oc_stormwater.shtml)

b. An evaluation and ranking of the inventoried locations to prioritize retrofitting which includes, at a minimum:
   - Feasibility
   - Cost effectiveness
   - Pollutant removal effectiveness
   - Impervious area potentially treated
   - Maintenance requirements
   - Landowner cooperation
   - Neighborhood acceptance
   - Aesthetic qualities, and
   - Efficacy at addressing concern.

Example Permit Requirement Rationale for the Fact Sheet

It is clear that we cannot protect the nation's waters without also addressing degradation caused by stormwater discharges from existing developed sites. For that reason stormwater programs must include substantive retrofit provisions.

It is possible and reasonable to significantly improve water quality in many urban receiving waters. This requires more than just a new development and redeveloped sites program, however, which at best can only hold the line. To actually improve the quality of receiving waters it is necessary to mitigate discharges from existing developed sites, which generally means implementation of measures to bring about the retrofit the stormwater control measures at existing sites to retain most stormwater on site.

In addition, research indicates that most streambank restoration projects that actively stabilize eroding channels should not be implemented until after hydrologic retrofits have been completed that restore the hydrologic regime not concurrently with the implementation of the retrofits.

Municipal projects, such as traffic calming sites could also include stormwater retrofit components, such as curb bump outs that include bioretention features, rain gardens, and curb cuts.

Information on retrofit options and the development of a retrofit plan can be found in the Center for Watershed Protection's guidance on Urban Stormwater Retrofit Practices (available at www.cwp.org as Manual No. 3 under the Urban Subwatershed Restoration Manual Series).

Recommendations for the Permit Writer

Permittees may need a permit term or two to adequately develop and implement a retrofit plan. Some permittees may not be ready to have retrofit plans as part of their requirements. It is up to the permit writer to make this determination based on the specific information they have available on current programs. A retrofit plan should assess the areas where retrofitting is appropriate and will result in increased water quality protection and restoration. The permit writer should determine

the appropriate timeframe and language for a retrofit plan. For example, if the permittee was already required to develop a retrofit plan in a previous permit term the permit may specify a schedule for implementation rather than development.

CHAPTER 6: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Introduction

Federal stormwater regulations (see 40 CFR 122.34(b)(6) and 40 CFR 122.26(d)(2)(iv)(A)) require the operator of a regulated MS4 community to develop a program to:

- Prevent or reduce the amount of stormwater pollution generated by municipal operations and conveyed into receiving waters.
- Train employees on how to incorporate pollution prevention/good housekeeping techniques into municipal operations.
- Identify appropriate control measures and measurable goals for preventing or reducing the amount of stormwater pollution generated by municipal operations.

Included Concepts

- ► Municipal facility and control inventory
- ► Facility assessment
- ► Development of facility-specific stormwater management SOPs and Implementation of facility stormwater controls
- ► Storm sewer system maintenance activities
- ► Flood management
- ► Pesticide, herbicide, and fertilizer application and management
- ► Training and education
- ► Contractor requirements and oversight

The first step for the permittee is to evaluate and assess the areas and municipal facilities that it controls in order to determine which activities may currently have a negative impact on water quality and to find solutions for these activities. The simplest solution is to limit the number of activities that are conducted outside and exposed to stormwater.

Storm sewer systems need maintenance to ensure that structures within the storm sewer that are meant to reduce pollutants do not become sources of pollution. Regularly maintaining catch basins and cleaning storm sewer pipes prevent the accumulation of pollutants that are later released during rain events as well as blockages, backups, and flooding. Most permittees have an existing program to maintain the storm sewer infrastructure. EPA notes, however, that some of these programs have tended to focus on flood avoidance and complaint response rather than reducing water quality impacts from stormwater discharges.

The MS4 permit must require that the system be maintained to prevent the discharge of pollutants into receiving waters. System mapping and a schedule of regular maintenance are key to a successful pollution prevention program. EPA recommends establishing a tiered maintenance schedule for the entire storm sewer system area, with the highest priority areas being maintained at the greatest frequency. Priorities should be driven by water quality concerns and can be based on the land use within the MS4 area, the condition of the receiving water, the amount and type of material that typically accumulates in an area, or other location-specific factors. It is also advisable to use spill and illicit discharge data to track areas that may require immediate sewer infrastructure maintenance. It is also important for material that is collected to be disposed of in a responsible manner.

The procedures for storm sewer system operation and maintenance must be documented in the permittee's SOPs or similar type of documents, which are part of the permittee's SWMP. Employee training to carry out these pollution prevention measures is a required component of the program. The pollution prevention/good housekeeping/maintenance activities should be documented and, where possible, quantified (e.g., number and location of inspections and clean-outs, type and quantity of materials removed). Having permittees characterize the quantity, location, and composition of pollutants removed from catch basins can provide useful data that can later be used to assess the program's overall effectiveness, identify illicit discharges, and help the permittee better prioritize implementation activities in the future.

Specific pollution prevention requirements related to pollutant-generating activities such as landscaping techniques (including the application of pesticides, herbicides, and fertilizer) and operating and maintaining public streets, should also be included in the permit where applicable. For example, typical pollutants associated with street repair and maintenance include heavy metals, chlorides, hydrocarbons (e.g., benzene, toluene, ethylbenzene, xylene), concrete dust, sand, deicers, sediment, and trash. The permitting authority should consider requiring alternative landscaping practices such as integrated pest management (IPM), xeriscaping, or mechanical (non-chemical) removal of unwanted plants. Other landscaping controls, such as mulch management, chemical storage, reduction of soil compaction, and erosion control, should also be considered. Training and educating municipal and contracted staff is also important to ensure that everyone is knowledgeable and proficient in the newest and most effective approaches to minimizing pollutant discharges from municipal facilities and activities.

Additionally, permits should require that water quality be considered when designing flood management projects, and that existing structural flood control devices are evaluated to determine if retrofitting the device to remove/reduce pollutants from stormwater is necessary and practicable.

6.1 Municipal Facility and Control Inventory

Example Permit Provision

6.1.1 Development of a Municipal Facility and Stormwater Control Inventory – The permittee must continue to update and maintain an inventory of municipally-owned or operated facilities and stormwater controls, including but not limited to the following:

- Composting facilities
- Equipment storage and maintenance facilities
- Fuel farms
- Hazardous waste disposal facilities
- Hazardous waste handling and transfer facilities
- Incinerators
- Landfills
- Landscape maintenance on municipal property
- Materials storage yards

- Pesticide storage facilities
- Public buildings, including schools, libraries, police stations, fire stations, municipal buildings, and similar buildings
- Public parking lots
- Public golf courses
- Public swimming pools
- Public works yards
- Recycling facilities
- Salt storage facilities
- Solid waste handling and transfer facilities
- Street repair and maintenance sites
- Vehicle storage and maintenance yards
- Municipally-owned and/or maintained structural stormwater controls

6.1.2 Documentation– The list of municipally-owned or operated facilities and stormwater controls must be maintained and available for review by the permitting authority.

6.1.3 Mapping – On a map of the area covered by the MS4 permit, the permittee must identify where the municipally-owned or operated facilities and stormwater controls are located. The map must identify the stormwater outfalls corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The permittee must also identify the manager of each facility and their contact information. The map must be maintained and updated regularly and be available for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

Municipally-owned or operated facilities serve as hubs of activity for a variety of municipal staff from many different departments. Some municipalities will have one property at which all activities take place (e.g., the municipal maintenance yard), whereas others will have several specialized facilities such as those listed above. A comprehensive list and map of such facilities will help staff responsible for stormwater compliance build a better awareness of their locations within the MS4 service area and their potential to contribute stormwater pollutants. The facility inventory will also serve as a basis for setting up periodic facility assessments (see Part 6.2) and developing, where necessary, facility stormwater pollution prevention plans (see Part 6.3).

Recommendations for the Permit Writer

Permit writers should tailor the facilities listed in the assessment as best they can to include the facilities most likely to be owned or operated by the permittee. It is highly likely that some of the facilities listed in the Permit Requirement would not apply to most non-traditional and/or non-municipal MS4s.

6.2 Facility Assessment

Permit Requirement

6.2.1 Municipally-owned or operated facility assessment:

a. Comprehensive Assessment of Pollutant Discharge Potential –The permittee must review, reassess, and update the comprehensive assessment of all municipally-owned or operated facilities identified in Part 6.1 [*insert frequency, e.g., annually*] for their potential to discharge in stormwater the following typical urban pollutants: sediment, nutrients, metals, hydrocarbons (e.g., benzene, toluene, ethylbenzene and xylene), pesticides, chlorides, and trash. Other pollutants may be associated with, but not generated directly from, the municipally-owned or operated facilities, such as bacteria, chlorine, organic matter, etc. Therefore, the permittee must determine additional pollutants associated with its facilities that could be found in stormwater discharges. A description of the assessment process must be included in the SWMP document.

b. Identification of "High Priority" Facilities – Based on the Part 6.2.1.a comprehensive assessment, the permittee must identify as "high-priority" those facilities that have a high potential to generate stormwater pollutants. Among the factors that must be considered in giving a facility a high priority ranking is the amount of urban pollutants stored at the site, the identification of improperly stored materials, activities that must not be performed outside (e.g., changing automotive fluids, vehicle washing), proximity to waterbodies, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s). High priority facilities must include the permittee's maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in stormwater.

c. Documentation of Comprehensive Assessment Results – The permittee must document the results of the assessments and maintain copies of all site evaluation checklists used to conduct the comprehensive assessment. The documentation must include the results of the permittee's initial assessment, any identified deficiencies and corrective actions taken, and a list of the "high priority" facilities identified per Part 6.2.1.b.

Example Permit Requirement Rationale for the Fact Sheet

The initial ("first time") comprehensive assessment is necessary to identify which of the municipality's facilities are most likely to contribute stormwater pollutants and which are in need of stormwater controls. The assessments will involve a detailed site inspection that can identify improperly stored materials, activities that should not be performed outside (e.g., changing automotive fluids, vehicle washing), and poor housekeeping practices.

Recommendations for the Permit Writer

If the permitting authority has an established site inspection protocol to be used in the comprehensive assessment, it should be included and referenced here. The list of pollutants in this section should be modified or expanded based on pollutants of concern in the permitting authority's jurisdiction.

6.3 Development of Facility-Specific Stormwater Management SOPs and Implementation of Facility Stormwater Controls

Example Permit Provision

6.3.1 Facility-specific Stormwater Management SOPs for "High Priority" Facilities:

a. For each "high priority" facility or operation identified in Part 6.2, the permittee must develop a site-specific SOP that identifies stormwater controls (i.e., structural and non-structural controls, and operational improvements) to be installed, implemented, and maintained to minimize the discharge of pollutants in stormwater. At a minimum, the facility-specific SOP must include the stormwater control measures described below in Part 6.3.2, as well as inspection and visual monitoring procedures and schedules described in Part 6.3.3.

b. A copy of the facility-specific stormwater management SOP must be maintained and be available for review by the permitting authority. The SOP must be kept on-site at each of the municipally-owned or operated facilities' offices for which it was completed. The SOP must be updated as necessary.

c. The permittee must install, implement, and maintain all stormwater controls required per Part 6.3.2 of this permit and included in the facility's site-specific SOP.

6.3.2 Stormwater Controls for "High Priority" Facilities – The following stormwater controls must be implemented at all "high priority" municipally-owned or operated facilities identified in Part 6.2. A description of any controls included in this part and any standard operating procedures developed to comply with this part must be included as part of the of each facility's SOP:

a. General good housekeeping – The following good housekeeping practices must be implemented for all facilities identified as "high priority":

1. The permittee must keep all municipally-owned or operated facilities neat and orderly, minimizing pollutant sources through good housekeeping procedures and proper storage of materials.

2. Materials exposed to stormwater must be covered where feasible (without creating additional impervious surfaces, if possible).

b. De-icing material storage – The permittee must store salt and other de-icing materials in a permanent storage structure, unless stormwater runoff from the storage piles is not discharged, or if discharges from the piles are authorized under another stormwater permit. If a permanent storage structure is required but does not exist, one must be built within [*insert timeframe*], and seasonal

tarping must be used as an interim control measure until the permanent structure is completed. If a permanent storage facility is not feasible, the permittee must provide a rationale to the permitting authority as to why and what alternate BMPs will be utilized instead.

Where a permanent storage structure is present, the permittee must perform regular maintenance and inspections of the permanent storage structure.

c. Fueling operations – The permittee must continue to implement standard operating procedures for vehicle fueling and receiving of bulk fuel deliveries at municipally-owned or operated facilities with the goal of reducing the likelihood of spills, and providing spill controls in the event that accidental spills do occur.

d. Vehicle maintenance – The permittee must continue to implement a standard operating procedure for vehicle maintenance and repair activities that occur at municipally-owned or operated facilities with the goal of reducing the likelihood of spills or releases and providing controls in the event that accidental spills do occur. The standard operating procedures must include regular inspections of all maintenance areas and activities.

e. Equipment and vehicle washing – The discharge of equipment and vehicle wash wastewater to the MS4 or directly to receiving waters from municipal facilities is prohibited. The permittee may meet this requirement by either installing a vehicle wash reclaim system, capturing and hauling the wastewater for proper disposal, connecting to sanitary sewer (where applicable and approved by local authorities), ceasing the activity, and/or applying for and obtaining a separate stormwater permit.[22]

6.3.3 Inspections and Visual Monitoring:

a. Weekly visual inspections – The permittee must perform weekly visual inspections to ensure materials and equipment are clean and orderly, and to minimize the potential for pollutant discharge. The permittee must look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The weekly inspections must be tracked in a log for every facility, and records kept with the SWMP document. The inspection report must also include any identified deficiencies and the corrective actions taken to fix the deficiencies.

b. Quarterly comprehensive inspections – At least once per quarter, a comprehensive inspection of "high priority" facilities, including all stormwater controls, must be performed, with specific attention paid to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The quarterly inspection results must be documented and records kept with the SOP document. This inspection must be done in accordance with the developed SOPs. The inspection report must also include any identified deficiencies and the corrective actions taken to fix the deficiencies.

[22] New Jersey Tier A Phase II MS4 Permit (NJ0141852) (www.state.nj.us/dep/dwq/pdf/Tier_A_final.pdf)

c. Quarterly visual observation of stormwater discharges – At least once per quarter, the permittee must visually observe the quality of the stormwater discharges from the "high priority" facilities (unless climate conditions preclude doing so, in which case the permittee must attempt to evaluate the discharges four times during the wet season). Any observed problems (e.g., color, foam, sheen, turbidity) that can be associated with pollutant sources or controls must be remedied within three days or before the next storm event, whichever is sooner. Visual observations must be documented, and records kept with the SOP document. This inspection must be done in accordance with the developed SOPs. The inspection report must also include any identified deficiencies and the corrective actions taken to fix the deficiencies.

Example Permit Requirement Rationale for the Fact Sheet

Each municipal facility will require a different set of control measures depending on the nature of activities that occur there and the types of materials that are stored and used. Developing and maintaining a site-specific SOP for each facility will help to ensure that employees responsible for facility operation are aware of the stormwater controls required for the site.

There are a number of storage areas and activities that are common at municipal facilities that have a high potential for polluting stormwater:

- Deicing materials, particularly road salt, are easily liberated and transported by rainfall, and constituents such as chloride are not removed by most stormwater controls.
- Fueling and vehicle maintenance and storage areas are prone to spills and drips of various automotive fluids.
- Equipment and vehicle washing areas are designed to mix water with dirt and hydrocarbons, requiring special treatment of the wastewater (including pretreatment and diversion to the sanitary sewer, if allowed) and protection of wash areas from rainfall and runoff.

The best way to avoid pollutant discharges from these sources is to keep precipitation and runoff from coming into contact with stored chemicals and activity areas that use chemicals and materials, which can become sources of stormwater pollutants. For example, the permittee must cover stockpiles, create dedicated structures for stored materials, build berms around areas of pavement to prevent clean runoff from contacting contaminated areas, and maintain a minimum distance between stockpiles and stormwater infrastructure and receiving waters. These are just a few of the ways in which these potential pollutant sources can be protected from precipitation and runoff.

The permit requires that comprehensive site inspections be conducted quarterly, which is an appropriate frequency to ensure that material stockpiles that might be moved or utilized on a seasonal basis are protected from precipitation and runoff. Also, quarterly inspections will allow inspectors to observe different types of operations that occur at different times of the year (e.g., landscape maintenance crews are less active in the winter). Quarterly visual observations are required so that inspectors can see in real time the qualitative nature of the

stormwater discharge and so that corrective action can be taken where necessary to improve on-site stormwater controls.

The permit also specifies that inspection procedures, results, and controls for each facility be documented to ensure that the site inspections are consistent and that maintenance of stormwater controls remains part of the municipality's standard operating procedures. The requirement for an inspection log will allow the permitting authority to verify that periodic site inspections have been performed.

Recommendations for the Permit Writer

Neither Phase I nor Phase II regulations specifically require that MS4 permittees develop facility-specific stormwater management SOPs. However, both Phase I and Phase II require that permittees prevent or reduce pollutant discharge in stormwater from municipal facilities and activities. Requiring permittees to assess high priority facilities and develop appropriate controls for each is an effective way of requiring permittees to address potential sources of pollutants at facilities.

When setting frequency for facility inspections (see Part 6.3.3), the permit writer should consider the number of facilities and the size/complexity of the sites to ensure that enough time is available to complete the assessments.

The list of specific stormwater controls for municipal facilities will vary from place to place based on local and watershed priorities and climate considerations. The permit writer should specify stormwater controls that are appropriate for the local conditions. For example, if a permittee uses satellite locations for temporary storage of deicing materials during snow events, the permit writer may want to consider options other than the permanent storage requirement if the permittee uses the piles within a certain time frame and the piles are covered by temporary tarping or a similar control.

6.4 Storm Sewer System Maintenance Activities

Example Permit Provision

6.4.1 MS4 catch basin maintenance

a. Assessment/prioritization of catch basins – The permittee must assign a priority to each of its catch basin inlets within its jurisdiction as one of the following:

- Priority A – Catch basins that are designated as consistently generating the highest volumes of trash and/or debris
- Priority B – Catch basins that are designated as consistently generating moderate volumes of trash and/or debris
- Priority C – Catch basins that are designated as generating low volumes of trash and/or debris

The permittee must use information compiled from citizen complaints/reports to help in the determination of the appropriate priority level. A description of

the prioritization scheme must be included in the SWMP.

b. Catch basin inspection and cleaning

1. Based on the priorities assigned in Part 6.4.1.a., the permittee must inspect and clean catch basins in accordance with the following schedule:

- Priority A – [*Insert cleanout frequency, e.g., 3 times per year*]
- Priority B – [*Insert cleanout frequency, e.g., 2 times per year*]
- Priority C – [*Insert cleanout frequency, e.g., 1 time per year*]

The permittee must develop a catch basin cleaning schedule based on the frequency specified in this permit, along with a list of each of its catch basins and the priority assigned to them per Part 6.4.1.a.

2. In addition to catch basin cleanings performed above, the permittee must ensure that any catch basin that is inspected and found to be between one third and one half full of trash and/or debris must be cleaned within [*Insert cleanout frequency e.g., 1 week of discovery*].[23] The permittee must maintain a log of all maintenance performed.

3. The permittee must document that it has performed all required catch basin cleanings in a log that is to be made available for review by the permitting authority upon request.

c. Catch basin labeling – The permittee must ensure that each catch basin includes a legible stormwater awareness message (e.g., a label, stencil, marker, or pre-cast message such as "drains to the creek" or "only rain in the drain"). Catch basins with illegible or missing labels must be recorded and re-labeled within [*insert number of days*] of inspection.

d. Maintenance of surface drainage structures – The permittee must visually monitor permittee-owned open channels and other drainage structures for debris at least [*specify frequency, e.g., once per year*] and identify and prioritize problem areas, such as those with recurrent illegal dumping, for inspection at least [*specify frequency, e.g., three times per year*]. Removal of trash and debris from open channels and other drainage structures must occur [*insert frequency of open channel/drainage structure cleaning, e.g., annually*]. The permittee must document its drainage structure maintenance in a log that is to be made available for review by the permitting authority upon request.

e. Disposal of waste materials – The permittee must develop a procedure to dewater and dispose of materials extracted from catch basins. This procedure must ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.

6.4.2 Municipal activities and operations

a. Assessment of municipal activities and operations

[23] EPA's Office of Research and Development documented a threshold sump level of ½ as a break point where solids retainage was either erratic or negative (Catchbasin Technology Overview and Assessment #EPA-600/2-77-051 1977).

1. The permittee must maintain and revise as necessary the operation and maintenance (O&M) activity assessment. The following municipal O&M activities must be included in the assessment for their potential to discharge pollutants in stormwater:
    - Road and parking lot maintenance, including pothole repair, pavement marking, sealing, and re-paving
    - Bridge maintenance, including re-chipping, grinding, and saw cutting
    - Cold weather operations, including plowing, sanding, and application of deicing compounds and maintenance of snow disposal areas
    - Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation
    - Municipally-sponsored events such as large outdoor festivals, parades, or street fairs
2. The permittee must identify all materials that could be discharged from each of these O&M activities. Typical pollutants associated with these activities include metals, chlorides, hydrocarbons (e.g. benzene, toluene, ethylbenzene, xylene), sediment, and trash.
3. The permittee must develop a set of pollution prevention measures that, when applied during municipal O&M activities, will reduce the discharge of pollutants in stormwater. These pollution prevention measures must include, at a minimum:
    - Replacing materials/chemicals with more environmentally benign materials or methods (e.g., use mechanical methods vs. herbicides, or use water-based paints or thermoplastics rather than solvent-based paints for stripping)
    - Changing operations to minimize the exposure or mobilization of pollutants (e.g., mulch, compost or landfill grass clippings) to prevent them from entering surface waters
    - Placing barriers around or conducting runoff away from deicing chemical storage areas to prevent discharge into surface waters), consistent with Part 6.3.2.b

    [*If available in your particular State or the municipality, insert relevant section of SWMP, or other relevant document, that includes specific stormwater controls that must be used*.]
4. The permittee must develop and implement a schedule for instituting the pollution prevention measures. At a minimum, with respect to all roads, highways, and parking lots with more than 5,000 square feet of pollutant-generating impervious surface area that are owned, operated, or maintained, the permittee must implement all pollution prevention measures by [*insert deadline*].
5. The results of the assessments and pollution prevention measures, including schedules for implementation, must be documented and made available for review by the permitting authority upon request.

b. Inspection of pollution prevention measures – All pollution prevention measures implemented at municipal facilities must be visually inspected [*insert frequency, e.g., monthly or quarterly*] to ensure they are working properly; a log of inspections must be maintained and made available for review by the permitting authority upon request.

6.4.3 Street Sweeping and Cleaning

a. The permittee must continue to evaluate and rate all municipally-owned streets, roads, and public parking lots within their jurisdiction. The permittee must include in the evaluation the sweeping frequency, timing, and efficiency of existing street sweeping programs. The street sweeping frequency must be based on land use, trash and stormwater pollutant levels generated. At a minimum, the following areas must be regarded as "high priority," for sweeping activities while the "medium priority" and "low priority" areas are recommended:

- High priority – Streets, road segments, and public parking lots designated as high priority include, but are not limited to, high traffic zones, commercial and industrial districts, shopping malls, large schools, high-density residential dwellings, sport and event venues, and plazas. This designation must include areas that consistently accumulate high volumes of trash, debris, and other stormwater pollutants.
- Medium priority – Streets, road segments and public parking lots designated as medium priority include, but are not limited to, medium traffic zones; warehouse districts; and light, small-scale commercial and industrial areas.
- Low priority – Streets and road segments designated as low priority include, but are not limited to, light traffic zones and residential zones.

b. The permittee must show on a map of its service area how the streets, roads, and public parking lots have been rated in accordance with Part 6.4.3.a.

c. Implementing sweeping schedules – The permittee must sweep streets/roads/public parking lots in accordance with the following frequency:

- High priority – average of at least [*insert frequency, e.g., twice per month*]
- Medium priority – average of at least [*insert frequency, e.g., once per month*]
- Low priority – [*insert frequency, e.g., twice per year*]

If a permittee's existing overall street sweeping effort provides equivalent or greater street sweeping frequency relative to the requirements above, the permittee may continue to implement its existing street sweeping program.

d. For areas where street sweeping is technically infeasible (e.g., streets without curbs), the permittee must increase implementation of other trash/litter control procedures to minimize pollutant discharges to storm drains and creeks. The permittee must show on its Part 6.4.3.b map the location of these areas.

e. Sweeping equipment selection and operation

1. When replacing existing sweeping equipment, the permittee must select and operate high-performing sweepers that are efficient in removing pollutants,

including fine particulates, from impervious surfaces.

2. The permittee must follow equipment design performance specifications to ensure that street sweeping equipment is operated at the proper equipment design speed with appropriate verification, and that it is properly maintained.
3. The permittee must operate sweepers to optimize pollutant removal by permitting sweepers access to the curb through the use of parking restrictions that clear the curb or through effective public outreach to inform citizens of sweeping days and times so that voluntary curb clearing can occur.

f. Sweeper Waste Material Disposal – The permittee must develop a procedure to dewater and dispose of street sweeper waste material. This procedure must ensure that water and material will not reenter the MS4.

g. Operator training – Street sweeper operators must be trained to enhance operations for water quality benefit.

h. The permittee must include the following in the SWMP and update as changes are made:

1. A description of the street sweeping frequency and any significant changes in the sweeping frequency map, along with the basis for those changes
2. The types of sweepers used
3. A summary of the proper sweeping operation verification results and street sweeping methods, including the way in which the permittee specifies and confirms the rate or speed at which street miles are covered by sweeper operators
4. The use of additional resources in sweeping seasonal leaves or pick-up of other material
5. A description of the methods for addressing areas identified in Part 6.4.3, considered infeasible for street sweeping

6.4.4 Maintenance of municipally-owned and/or maintained structural stormwater controls

a. The permittee must inspect at least [*insert frequency, e.g., yearly*], and maintain if necessary, all municipally-owned or maintained structural stormwater controls. The permittee must also maintain all green infrastructure practices through regularly scheduled maintenance activities.

Example Permit Requirement Rationale for the Fact Sheet

MS4 Maintenance

Traditional municipal storm drain systems were designed to quickly collect and convey runoff to receiving waters. The purpose of catch basin, inlet, and storm drain cleanouts is to prevent blockages, flooding, and reduce pollution.

Fine particles and pollutants from run-on, atmospheric deposition, vehicle emissions, breakup of street surface materials, littering, and sanding can accumulate along the curbs of roads in between rainfall events. This results in the accumulation of pollutants such as sediment, nutrients, metals, hydrocarbons, bacteria, pesticides, trash and other toxic chemicals. Storm drain maintenance is often the last opportunity to remove pollutants before they enter the storm drain system. Because they effectively trap solids, they need to be cleaned out periodically to prevent those materials from being transported by high stormwater flows. By doing so the MS4 will prevent trash and litter from ultimately becoming sources of marine debris, which is any man-made, solid material that enters waterways either directly or indirectly.

The permit includes a priority ranking approach for catch basins so that municipal resources are directed to the areas and structures that generate the most pollutants. A priority ranking system is required because some catch basins will accumulate pollutants faster than others based on the nature of the drainage area and whether controls are present upstream of the catch basin. Catch basins with the highest accumulations will need to be cleaned more often than those with low accumulations. The permit language also includes a requirement that triggers catch basin cleaning when a catch basin is one-third full.

Proper storm drain system cleanout includes vacuuming or manually removing debris from catch basins; vacuuming or flushing pipes to increase capacity and remove clogs; removing sediment, debris, and overgrown vegetation from open channels; and repairing structures to ensure the integrity of the drainage system. It is important to conduct regular inspections of all storm sewer infrastructure and perform maintenance as necessary. Though these activities are intended to ensure that the sewer system is properly maintained and that any accumulated pollutants are removed prior to discharge, if not properly executed, cleanout activities can result in pollutant discharges. In selecting maintenance practices, the permittee must carefully evaluate each with an eye towards stormwater pollution potential to minimize unintended pollutant discharges, such as the use of flushing storm drain pipes to remove debris without recapturing the debris further down the pipe.

The materials removed from catch basins may not reenter the MS4. The material must be dewatered in a contained area and the water treated with an appropriate and approved control measure or discharged to the sanitary sewer. The solid material will need to be stored and disposed of properly to avoid discharge during a storm event. Some materials removed from storm drains and open channels may require special handling and disposal, and may not be authorized to be disposed of in a landfill.

Street Sweeping and Cleaning

Street and parking lot sweeping is a practice that most municipalities initially conducted for aesthetic purposes. However, the water quality benefits are now widely recognized. Street sweeping also prevents particulate matter associated with road dust from accumulating on public streets and washing into storm drains.

The permit language addresses a number of important factors that impact the effectiveness of a street sweeping program. The first factor is the type of equipment used; the permit language stipulates that when equipment needs to be replaced, high-performance sweepers are purchased preferentially. Street sweeping has traditionally been more effective at removing large-sized particles, but new equipment has been developed to remove smaller, fine-grained particles. Mechanical sweepers (broom-type) are usually the least expensive and are better suited to pick up

large-grained sediment. Vacuum and regenerative air sweepers are better at removing fine-grained sediment particles, but they are more expensive. Removal efficiency can be improved through tandem sweeping (i.e., two sweepers sweeping the same route, with one following the other to pick up missed material), or if the street sweeper makes multiple passes on a street.

The second factor influencing street sweeping effectiveness is the way in which the equipment is operated; the permit specifies that equipment be operated according to the manufacturers' operating instructions by operators who have been trained to sweep in accordance with the Permit Requirements in order to protect water quality.

The third determining factor is the degree to which parked cars block sweeper access to the curb; one of the best ways to ensure access to the curb is to establish parking restrictions based on sweeping schedules and to inform residents of the schedule so they can voluntarily move their cars. The permit requires that the permittee institute parking restrictions and/or a public outreach campaign requesting that cars be parked elsewhere to accommodate sweeping schedules.

Because not all streets are suitable for sweeping (e.g., those that don't have a curb and gutter), source controls can be used in place of sweeping in those areas.

The permittee is required to maintain documentation of sweeping events and characterize the quantity and composition of pollutants removed from roadways. Street sweeping data are relatively easy to track and maintain, so the permit includes requirements for reporting and assessment of the effectiveness of the sweeping activities based on equipment used, miles swept, and the amount of materials collected.

The street sweeping material may not reenter the MS4. The material must be dewatered in a contained area and the water treated with an appropriate and approved control measure or discharged to the sanitary sewer. The solid material will need to be stored and disposed of properly to avoid discharge during a storm event. Some materials may require special handling and disposal, and my not be authorized to be disposed of in a landfill.

Recommendations for the Permit Writer

MS4 Maintenance

MS4s should have a specific schedule to clean out their storm drains since it will ensure that the debris that is trapped in the system will not move into waterbodies and ultimately become marine debris in the ocean. For additional information to include on marine debris go to the EPA's Marine Debris website (www.epa.gov/owow/oceans/debris).

The frequency and timing of visual assessments and cleaning of storm drains and open channels can be tailored to local climate conditions. For example, one approach would be to require that visual observations and cleanings be conducted before the start of the wet season or before spring snowmelt.

The permitting authority should review and approve dewatering and disposal methods for materials removed from catch basins.

Catch basin labeling is believed to be an effective mechanism for educating residents since it involves a direct reminder that that water or other materials which flow into storm drains is not

treated in any way, but instead drains directly to nearby waterways. There are many methods for labeling catch basins and the permit writer should work with the permittee to determine the most feasible and cost effective method of delivering the "drains to stream" message.

Street Sweeping and Cleaning

Street sweeping frequency and timing can be based on climate conditions and seasonal variation in pollution loading. For example, in cold climates where sand is used for winter road maintenance, the permit language could specify increased sweeping during the winter and prior to the spring snowmelt. In areas with a rainy season, sweeping might be timed to occur before the rainy season starts.

In the fall, sweepers can be used to pick up leaves, as they can contribute 25 percent of nutrient loadings in catch basins. If more substantial piles of leaves are found in the community during the fall, street sweeping activities should be coordinated with leaf pick-up. Equally important is an early spring sweeping before rains begin to pick up sand, de-icing material, and winter debris. More frequent sweeping may reduce the need for catch basin cleaning.

The prioritization of sweeping activities (high, medium, low) should be based on standard categories that are based on traffic frequencies and used to determine service levels for the roadways. The example provided in the permit language is based on specific information for the location.

The permitting authority should review and approve dewatering and disposal methods for street sweeping material.

6.5 Flood Management

Example Permit Provision

6.5.1 Flood Management Projects – Within [*insert deadline, such as two years*] of permit issuance, the permittee must develop and implement a process to assess the water quality impacts in the design of all new flood management projects that are associated with the permittee or that discharge to the MS4. This process must include consideration of controls that can be used to minimize the impacts to site water quality and hydrology while still meeting the project objectives. Beginning [*insert deadline, such as three years*] from date of permit issuance, the permittee must assess at least [*insert number of projects to be evaluated, such as two*] existing flood management projects per year to determine whether changes or additions should be made to improve water quality. [24] A description of this process must be included in the SWMP document.

[24] Eastern Washington Phase II MS4 Permit (www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseiiEwa/MODIFIEDpermitDOCS/EWpermitMODsigned.pdf)

Example Permit Requirement Rationale for the Fact Sheet

This permit requires that existing flood management projects be prioritized and a set number be evaluated to identify opportunities for water quality retrofits. This is because the focus of stormwater management in the past had been to control flooding and mitigate property damage, with less emphasis on water quality protection. These structures may handle a significant amount of stormwater and therefore offer an opportunity to modify their design to include water quality features for less than the cost of building new controls. This requirement applies not only to new flood control projects, but also to existing structures.

6.6 Pesticide, Herbicide, and Fertilizer Application and Management

Example Permit Provision

6.6.1 Landscape maintenance

a. The permittee must evaluate the materials used and activities performed on public spaces such as parks, schools, golf courses, easements, public rights of way, and other open spaces for pollution prevention opportunities. Maintenance activities for the turf landscaped portions of these can include mowing, fertilization, pesticide application, irrigation, etc. Typical pollutants include sediment, nutrients, hydrocarbons, pesticides, herbicides and organic debris.

b. The permittee must implement the following practices to minimize landscaping-related pollutant generation:

   1. Educational activities, permits, certifications, and other measures for municipal applicators and distributors.
   2. Integrated pest management measures that rely on non-chemical solutions, including
      - Use of native plants, xeriscaping in arid/semi-arid regions (reduces water usage and fertilization)
      - Keeping clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling
      - Limiting application of pesticides and fertilizers if precipitation is forecasted within 24 hours or as specified in label instructions
      - Limiting or replacing pesticide use (e.g., manual weed and insect removal)
      - Limiting or eliminating the use of fertilizers, or, if necessary, prohibiting application within 5 feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a waterbody
      - Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing motorist safety
   3. Schedules for chemical application that minimize the discharge of such constituents due to irrigation and expected precipitation.

4. The collection and proper disposal of unused pesticides, herbicides, and fertilizers.[25]

Example Permit Requirement Rationale for the Fact Sheet

The permit focuses on requiring source controls to reduce the amount of chemicals used. The permit specifies the use of integrated pest management, selection of native vegetation that is naturally adapted to local conditions and therefore requires fewer chemical and water inputs, reducing exposure of the chemicals to water by scheduling application according to weather forecasts and plant needs, and ensuring that municipal employees who are responsible for storing and handling these materials are educated about their use, disposal, and possible impacts.

Recommendations for the Permit Writer

EPA is currently developing a general permit to control discharges from the application of pesticides to or over, including near, waters of the U.S. EPA is working closely with state NPDES and pesticide control authorities, the regulated community, and environmental organizations to develop its permit that will be required for such discharges beginning in April 2011. It is important to note that some of the permit language in this section may need to be altered to be consistent with the pesticide permit once it is finalized. For up-to-date information, go to EPA's website (www.epa.gov/npdes/agriculture).

6.7 Training and Education

Example Permit Provision

6.7.1 Employee Training Requirements – Permittees must develop an annual employee training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices in the preceding Parts. All new hires must receive training within the first year of their hire date. This annual training must include a general stormwater education component, any new technologies, operations, or responsibilities that arise during the year, and the Permit Requirements that apply to the staff being trained. A description of the program must be maintained for review by the permitting authority. The permittee must also identify and track all personnel requiring training and records must be maintained. Training must begin [*insert deadline*] from the effective date of permit authorization.

[25] San Diego Phase I MS4 Permit (CAS0108758) (www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/oc_permit/updates_8_13_09/R9-2009-0002_12Aug09.pdf)

Example Permit Requirement Rationale for the Fact Sheet

The regulations found at 40 CFR 122.34(b)(6) specifically requires that the permittee develop a "training component" that trains employees "to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance." This permit requires employee training for existing and new employees who are involved in performing pollution prevention and good housekeeping practices. All training must include a general stormwater educational component, including an overview of the requirements with which the municipality needs to comply. The permittee is responsible for identifying which staff must attend trainings based on the applicability of the topics listed, and they are required to conduct refresher training on an annual basis.

Recommendations for the Permit Writer

The topics included in the trainings should take into consideration the types of activities in which the municipality engages and the extent to which such activities are performed in-house or contracted.

6.8 Contractor Requirements and Oversight

Example Permit Provision

6.8.1 Requirements for Contractors:

a. Any contractors hired by the permittee to perform municipal maintenance activities must be contractually required to comply with all of the stormwater control measures, good housekeeping practices, and facility-specific stormwater management SOPs described above.

b. The permittee must provide oversight of contractor activities to ensure that contractors are using appropriate control measures and SOPs. Oversight procedures must be described in the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

Many municipalities use third-party contractors to conduct municipal maintenance activities in lieu of using municipal employees. Contractors performing activities that can affect stormwater quality must be held to the same standards as the permittee. Not only must these expectations be defined in contracts between the permittee and its contractors, but the permittee is responsible for ensuring, through contractually-required documentation or periodic site visits, that contractors are using stormwater controls and following standard operating procedures.

CHAPTER 7: INDUSTRIAL STORMWATER SOURCES

Introduction

Phase I MS4 permittees are required to develop and implement an inspection and oversight program to monitor and control pollutants in stormwater discharges to the MS4 from industrial facilities. Regulations addressing industrial stormwater management in Phase I MS4 permits is found at 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv). Requirements to regulate the stormwater discharges from commercial facilities are found at 40 CFR 122.26(d)(2)(iv)(A).

Included Concepts

- Facility inventory
- Industrial facility stormwater control measures
- Industrial and commercial facility inspections
- Staff training

This program component typically applies only to Phase I MS4 permittees as Phase II federal regulations (40 CFR 122.34(b)) do not specifically address stormwater discharges from industrial facilities and commercial businesses (other than as part of the education and outreach program). However, EPA recommends that permit writers consider including requirements pertaining to stormwater discharges to the MS4 from industrial sources in Phase II permits to further reduce stormwater pollutants from the MS4.

Phase I MS4 regulations specify that several key elements be included in Phase I MS4 stormwater management programs. These elements include: adequate legal authority to require compliance and inspect sites, inspection of priority industrial and commercial facilities, establishing control measure requirements for facilities that may pose a threat to water quality, and enforcing stormwater requirements. In order to implement these requirements, MS4 permits require the development of an inventory of facilities and prioritization protocol and adequate staff training to ensure proper inspection and enforcement of requirements.

7.1 Facility Inventory

Example Permit Provision

7.1.1 Source Identification

a. The permittee must continue to maintain an inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could discharge pollutants in stormwater to the MS4. The inventory must be updated [*insert frequency, e.g. annually*] and available for review by the permitting authority upon request.

b. The inventory must include the following minimum information for each industrial and commercial site/source:

1. Name

2. Address
3. Physical location of storm drain receiving discharge
4. Name of receiving water
5. Pollutants potentially generated by the site/source
6. Identification of whether the site/source is (1) tributary to an impaired water body segment (i.e., whether it is listed under Section 303(d) of the Clean Water Act) and (2) whether it generates pollutants for which the water body segment is impaired
7. A narrative description including standard industrial classification (SIC) codes, which best reflects the principal products or services provided by each facility.

The use of a geolocational database system is highly recommended.

c. At a minimum, the following sites/sources must be included in the inventory:

1. Commercial Sites/Sources:

[*insert commercial sources that are a priority such as*

- Airplane repair, maintenance, fueling, or cleaning
- Animal facilities
- Automobile and other vehicle body repair or painting
- Automobile (or other vehicle) parking lots and storage facilities
- Automobile repair, maintenance, fueling, or cleaning
- Boat repair, maintenance, fueling, or cleaning
- Building material retailers and storage
- Cement mixing or cutting
- Eating or drinking establishments (e.g., restaurants), including food markets
- Equipment repair, maintenance, fueling, or cleaning
- Golf courses, parks and other recreational areas/facilities
- Landscaping
- Marinas
- Masonry
- Mobile automobile or other vehicle washing
- Mobile carpet, drape or furniture cleaning
- Nurseries and greenhouses
- Painting and coating
- Pest control services
- Pool and fountain cleaning
- Portable sanitary services

- Power washing services
- Retail or wholesale fueling]

2. Industrial Sites/Sources:
   - Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the Multi Sector General Permit or individual NPDES permit
   - Facilities subject to Title III of the Superfund Amendments and Reauthorization Act (SARA)
   - Hazardous waste treatment, disposal, storage and recovery facilities
3. All other commercial or industrial sites/sources tributary to an impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired
4. All other commercial or industrial sites/sources that the permittee determines may contribute a significant pollutant load to the MS4[26]

Example Permit Requirement Rationale for the Fact Sheet

The permit requires the permittee to develop an inventory of all potential commercial and industrial sites/sources that could contribute pollutants to the MS4. A list of specific commercial and industrial sites/sources is included in the permit, and additional sites/sources can be added if they are likely to discharge a pollutant of concern to an impaired waterbody or they are contributing a significant pollutant load to the MS4.

The inventory information will provide the permittee with information on potential pollutant sources that contribute to its MS4 system, and at what locations in the system into which they discharge. This information will also allow the permittee to prioritize inspections and tailor education and outreach efforts, which will best assist the facility in implementing appropriate pollution prevention practices or other on-site stormwater controls. In addition, the inventory data will allow the permittee to determine whether the facilities may discharge pollutants of concern into impaired waters. Finally, the information contained in the inventory will enable permittees to characterize these facilities and prioritize them based on their potential impact on stormwater quality. By prioritizing facilities in such a manner, the permittee may then establish a targeted approach towards conducting inspections (see Part 7.3 for a discussion of inspection frequency).

In addition, data from NPDES pretreatment programs within the MS4 boundary on significant industrial users (SIUs) could also be used to identify and prioritize the industrial sites in the stormwater program.

[26] San Diego MS4 Permit (www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/sd_permit/r9_2007_0001/2007_0001final.pdf), with modifications.

Recommendations for the Permit Writer

The example permit provision lists specific commercial and industrial sources to be included in the inventory, but permit writers should customize this list to meet specific issues in their area. For example, some permittees may have large industrial areas with few commercial businesses, while others may have a large number of restaurants and retail businesses but no industrial facilities at all. Other permittees may have had past water quality problems at certain types of commercial or industrial sites, in which case such facilities should be included in their inventories.

7.2 Industrial Facility Stormwater Control Measures

Example Permit Provision

7.2.1 The permittee must require industrial and commercial facilities included in the Part 7.1 inventory to select, install, implement, and maintain stormwater control measures. At a minimum, these control measures must:

a. Minimize Exposure – Industrial/commercial facilities must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended). The facilities must consider, where appropriate:

1. Using grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas
2. Locating materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)
3. Cleaning up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants
4. Using drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible
5. Using spill/overflow protection equipment
6. Draining fluids from equipment and vehicles prior to on-site storage or disposal
7. Performing all cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray
8. Ensuring that all wash water drains to a proper collection system (i.e., not the stormwater drainage system)

b. Follow Good Housekeeping Practices – Industrial/commercial facilities must keep clean all exposed areas that are potential sources of pollutants, using such

measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.

c. Conduct Maintenance – Industrial/commercial facilities must regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters.

d. Implement Spill Prevention and Response Procedures – Industrial/commercial facilities must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, the facilities must implement:

    1. Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides,") that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur

    2. Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling

    3. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available.

    4. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies [*Insert appropriate contacts for reporting*]

e. Implement Erosion and Sediment Controls – Industrial/commercial facilities must stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants.

f. Manage Runoff – Industrial/commercial facilities must divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff, to minimize pollutants in discharges.

g. Address Salt Storage Piles or Piles Containing Salt – Industrial/commercial facilities must enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. If a permanent storage structure is required but does not exist, one must be built within [*insert timeframe*], and seasonal tarping must be used as an interim control until the permanent structure is completed. Facilities must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if stormwater runoff from the piles is not discharged or if discharges from the piles are authorized under another NPDES permit.

h. Conduct Employee Training – All facility employees who work in areas where industrial materials or activities are exposed to stormwater, or who are

responsible for implementing activities necessary to manage stormwater must be trained. Training must be conducted [*insert frequency, e.g. at least annually*].

i. Address Non-Stormwater Discharges – Industrial/commercial facilities must eliminate non-stormwater discharges not authorized by an applicable NPDES permit.

j. Control Waste, Garbage and Floatable Debris – Facilities must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

k. Control Dust Generation and Vehicle Tracking of Industrial Materials – Industrial/commercial facilities must minimize generation of dust and off-site tracking of raw, final, or waste materials.[27]

7.2.2 Within the [*insert deadline, e.g. first two years of permit term*], the permittee must notify the owner/operator of each industrial and commercial site/source of the stormwater requirements for control measures in Part 7.2.1.

7.2.3 As necessary to minimize any pollutants causing the applicable receiving waterbody to be listed as impaired, the permittee must require implementation of additional controls for industrial and commercial sites/sources that are tributary to the impaired water body segments and that are likely to generate such impairment pollutants.[28]

Example Permit Requirement Rationale for the Fact Sheet

The permittee is required to ensure that the minimum control measures are implemented, as applicable, at every industrial/commercial facility included in its inventory. The minimum measures outlined, when properly selected, designed and implemented, promote prevention and source control, before treatment.

The control measures in this permit are consistent with the control measure requirements found in EPA's 2008 Multi-Sector General Permit (MSGP) for stormwater discharges from industrial activities. The permit writer should ensure that these requirements are consistent with the State's industrial stormwater permit. The control measures in this permit describe specific activities that the permittee must require industrial facilities and commercial sites to implement to minimize stormwater pollution. Another control measure is simply preventing pollutants from coming into contact with precipitation in the first place since this will ensure they are not carried into nearby waterways. General good housekeeping and maintenance procedures are also required. Additional control measures address spill prevention and response, erosion and sediment controls, managing runoff, and controlling discharges from salt storage piles.

[27] 2008 MSGP (Section 2) (www.epa.gov/npdes/pubs/msgp2008_finalpermit.pdf), with modifications
[28] San Diego MS4 Permit (www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/sd_permit/r9_2007_0001/2007_0001final.pdf), with modifications

The control measures must also include employee training, controlling non-stormwater discharges, addressing waste, garbage and floatable debris, and addressing dust generation and vehicle tracking.[29]

The permittee is required to notify industrial and commercial sites of the control measure requirements and their responsibility to implement and comply with the requirements.

Facilities that discharge into impaired waterbodies may be required to implement additional controls as necessary to prevent the discharge of the associated pollutants of concern.

7.3 Industrial and Commercial Facility Inspections

Example Permit Provision

7.3.1 Industrial and Commercial Site Inspection Program

a. The permittee must continue to implement a program to inspect all commercial and industrial facilities included in its Part 7.1(a) inventory. The permittee must describe how this will occur in the SWMP.

b. The inspection program must:

1. Prioritize all facilities into high, medium, and low categories on the basis of the potential for water quality impact using criteria such as pollutant sources on site, pollutants of concern, proximity to a water body, and violation history of the facility. The different priority categories will be assigned different inspection frequencies, with the highest priority facilities receiving more frequent inspections. Describe the process for prioritizing inspections and frequency of inspections. If any geographical areas are to be targeted for inspections due to high potential for stormwater pollution, these areas must be listed in the Inspection Plan.

3. Explain how the priority assigned to any one facility may be modified based on the site inspection findings and the facility's potential to discharge pollutants.

7.3.2 Minimum Inspection Requirements

a. Inspection Frequency – The permittee is required to conduct inspections at the following frequencies, at a minimum:

1. Facilities with high potential for water quality impact must be inspected [*insert frequency, e.g. annually*].

2. Facilities with medium potential for water quality impact must be inspected at least [*insert frequency, e.g. once every three years*].

3. Facilities with low potential for water quality impact must be inspected at least [*insert frequency, e.g. once every 5 years*].

[29] 2008 MSGP Fact Sheet (www.epa.gov/npdes/pubs/msgp2008_finalfs.pdf), with modifications

4. Facilities with either a [*insert violation type*] written violation occurring in the previous year must be inspected at least [*insert frequency, e.g. annually*] until compliance is achieved.
5. For facilities with no exposure of commercial or industrial activities to stormwater, no inspections are required. However, the permittee must continue to track these facilities for significant change in the exposure of their operations to stormwater.

b. Scope of Inspection – Inspections must at a minimum:
   1. Evaluate the facility's compliance with the Part 7.2 requirement to select, design, install, and implement stormwater control measures.
   2. Conduct a visual observation for evidence of unauthorized discharges, illicit connections, and potential discharge of pollutants to stormwater.
   3. Verify whether the facility is required to be authorized under the [*insert applicable NPDES general industrial stormwater permit*], and whether the facility has in fact obtained such permit coverage.[30]
   4. Evaluate the facility's compliance with any other relevant local stormwater requirements.

c. Documentation Requirements – At a minimum, the permittee must document the following for each inspection:

   The inspection date and time;

   The name(s) and signature(s) of the inspector(s);

   1. Weather information and a description of any discharges occurring at the time of the inspection;
   2. Any previously unidentified discharges of pollutants from the site;
   3. Any control measures needing maintenance or repairs;
   4. Any failed control measures that need replacement;
   5. Any incidents of noncompliance observed; and
   6. Any additional control measures needed to comply with the Permit Requirements.

d. Track Inspections – Inspection findings must be tracked to ensure inspections are conducted at the frequency specified in Part 7.3.2.b., highlight and document the recidivism of noncompliant facilities, and aid follow up and enforcement activities.

7.3.3 Enforcement – The permittee must ensure that all necessary follow up and enforcement activities are conducted as necessary to require necessary implementation and maintenance of the control measures described in Part 7.2. The permittee is required to utilize the approved ERP for all enforcement actions.

[30] San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (www.swrcb.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2009/R2-2009-0074.pdf), with modifications

Example Permit Requirement Rationale for the Fact Sheet

The permittee must design an inspection program that facilitates more frequent inspections of the highest priority facilities. (See 40 CFR 122.26(d)(iv)(C)(1)). This will help maximize use of the permittee's existing inspection resources and ensure that the permittee inspectors are the most visible and the most familiar with the facilities with the highest potential for water quality impact.

The permittee must develop a process for prioritizing inspections and designating all facilities in the industrial and commercial inventory as either a high, medium or low priority. The designation could occur by individual facility or by facility type. The prioritization for individual facilities may be adjusted after the first, or any subsequent, inspection (for example, if a facility is a high priority facility and the inspection reveals it has little potential for stormwater pollution, then the facility could be reprioritized as a low priority facility).

It is important that inspections be conducted in a thorough and consistent manner in accordance with a formal protocol for conducting an inspection. This protocol should be the basis for inspector training as well. Inspections should include a thorough walk-through of the facility.

The documentation of inspections is very important, not only when tracking noncompliance, but also to facilitate effective enforcement action when needed. A timeline of noncompliance and subsequent enforcement action is critical when escalating measures to gain compliance. Typically, the use of inspection forms facilitates complete and consistent documentation among inspectors and over time.

Recommendations for the Permit Writer

The permit writer may choose to define what criteria the permittee will use to determine the priority of each facility on its inventory. For example, the Phase I Los Angeles County MS4 permit specifies which facilities are Tier 1 and Tier 2 and provides the required inspection frequency for each. The permit writer could also automatically designate certain sets of industries to a certain priority category (e.g., all facilities subject to the State's Industrial General Permit could be designated as high priority facilities in the permit). If the permit does not define what criteria are to be used when prioritizing facilities, the permittee should be required to develop this protocol and submit it to the permitting authority for review.

The permit writer should review available industrial and commercial inventories to determine if more specific inspection frequencies should be set. For example, an MS4 with only 10 facilities in the inventory could probably inspect those facilities annually. However, an MS4 with over 2,000 facilities in the inventory may need to set the inspection frequency at a less frequent interval.

7.4 Staff Training

Example Permit Provision

7.4.1 The permittee must ensure that all staff whose primary job duties are implementing the industrial stormwater program is trained to conduct facility inspections. The training must cover what is required under this permit in terms of stormwater control measures, the requirements of other applicable Industrial Stormwater general permits or other related local requirements, the permittee's site inspection and documentation protocols, and enforcement procedures. Follow-up training must be provided every other year to address changes in procedures, techniques, or staffing. Permittees must document and maintain records of the training provided and the staff trained.[31]

Example Permit Requirement Rationale for the Fact Sheet

Inspectors responsible for conducting inspections at industrial/commercial facilities must be trained on the applicable stormwater requirements for the different types of facilities (i.e., industrial, commercial, other). Training must include a summary of federal, state, and local stormwater regulations that may apply to industrial/commercial facilities. Inspectors must be familiar with various types of stormwater control measures commonly used at the types of facilities typically found in the MS4 area and must be able to educate facility operators about such stormwater control measures. In addition, inspectors must understand and use the permittee's established enforcement response plan (see Chapter 1 of this Guide) to gain compliance as necessary. The inspection staff must be proficient in the enforcement escalation procedure and must properly document all enforcement actions accordingly per the ERP.

[31] Western Washington Phase I MS4 Permit (www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIpermit/MODIFIEDpermitDOCS/PhaseIpermitSIGNED.pdf), with modifications

CHAPTER 8: MONITORING, EVALUATION, AND REPORTING

Introduction

Phase I MS4s are required to conduct discharge characterization, field screening and develop a monitoring program. Phase I MS4s are also required to conduct an assessment of controls. See 40 CFR 122.26(d)(1)(iii), (d)(2)(iii), and (d)(2)(v).

Phase II MS4 regulations allow, but do not specifically require, monitoring. Phase II MS4s are required to evaluate program compliance, the appropriateness of identified control measures, and progress toward achieving identified measurable goals. See 40 CFR 122.34(g).

Included Concepts

- Consolidated information tracking system
- Development of a comprehensive monitoring and assessment program
- Evaluation of overall program effectiveness
- Requirements for annual reporting of MS4 activities

There are many components involved in monitoring and evaluating the effectiveness of a municipal stormwater program. Any comprehensive monitoring program should have clear monitoring objectives to help determine compliance and water quality impacts. Each monitoring program is unique and should be customized to the specific waterbodies, impairments, and pollutant sources of the MS4.

Evaluating the overall effectiveness of the municipal stormwater program should be done using information from the monitoring program, progress toward meeting measurable goals, and other indicators. Without assessing the effectiveness of the stormwater management program the permittee will not know which parts of the program need to be modified to protect and/or improve water quality and instead will essentially be operating blindly. Establishing a comprehensive monitoring and assessment program will enable the permittee to track progress in complying with permit provisions and implementing a program to protect water quality.

8.1 Consolidated Information Tracking System

Example Permit Provision

8.1.1 Within the first [*insert time frame which corresponds to the development of the monitoring program e.g. first two years of permit*], the permittee must develop a tracking system to track the information required in the permit as well as the information required to be reported in the annual report (see Part 8.4).

Example Permit Requirement Rationale for the Fact Sheet

An important part of any municipal stormwater program is to document and track information on activities the permittee undertakes to comply with the Permit Requirements. Tracking should be integrated into each of the minimum measures. For example, tracking the location of illicit discharges may indicate that a specific area has a high incidence of motor oil being dumped into storm drains. Investigations may reveal that homeowners are changing the motor oil in their cars, but not properly disposing it. Therefore, the permittee will need to educate the homeowners in that area regarding proper disposal.

The permittee must develop a tracking system to monitor implementation of its various programs in order to document the permittee's compliance with its Permit Requirements, such as the number of construction sites and industrial facilities inspected. In addition, the tracking system will allow the permitee to monitor the compliance status of those entities within its jurisdiction, such as construction sites and industrial facilities, and to ensure compliance of municipally-owned and operated facilities.

Any tracking system should be coordinated with the monitoring and evaluation programs developed by the permittee. Ideally, a monitoring and evaluation program will link the "actions" (e.g., the inspections, maintenance, education and other activities the permittee implements) with the "results" (e.g., water quality monitoring data, improvements in environmental indicators) of the monitoring program.

In addition, adequate tracking is necessary to generate and provide reports of program progress not only to the permitting authority, but to a permittee's internal management for planning and funding purposes. Ideally, a MS4 permittee will have at least one person in charge of overall coordination, including tracking. While many departments or agencies might implement various stormwater program components, it is helpful for a single person or department to gather and analyze applicable data. This can be accomplished in a number of ways and will vary based on existing data tracking mechanisms used by a permittee, the data being captured and the reporting requirements the permittee must comply with. Ideally, the program would have a database accessible by all parties which specifies the required data. Lacking this, the permittee will need to coordinate all responsible parties. The permittee will need to ensure that responsible parties "mine" all data necessary to adequately represent the program and permit compliance, and specify adequate internal reporting deadlines to guarantee that the data is available in a timely manner for program planning, effectiveness assessments and permit reporting. Some permittees create reporting forms for program component managers to complete and submit by internal deadlines. Regardless of how the permittee coordinates the effort internally, without adequate tracking of data the permittees will not be able to submit annual reports to the permitting authority that provide the necessary information to determine permit compliance.

Recommendations for the Permit Writer

To assist the permittee in ensuring appropriate data is gathered and analyzed, the permitting authority should be very clear regarding annual reporting requirements. In addition, the text for this section should be tailored depending on the permittee. For example, some permittees may be able to develop a GIS-based system complete with the option to upload pictures and inspection reports versus a spreadsheet. In the text provided either system would meet the requirements, but more detailed information can be obtained with the GIS-based system.

8.2 Development of a Comprehensive Monitoring & Assessment Program

Example Permit Provision

8.2.1 The permittee must continue to implement, and revise as necessary, a comprehensive monitoring and assessment program. A description of this program must be included in the SWMP document. The monitoring and assessment program must be designed to meet the following objectives:

a. Assess compliance with this permit;

b. Measure the effectiveness of the permittee's stormwater management program;

c. Assess the chemical, physical, and biological impacts to receiving waters resulting from stormwater discharges;

d. Characterize stormwater discharges;

e. Identify sources of specific pollutants;

f. Detect and eliminate illicit discharges and illegal connections to the MS4; and

g. Assess the overall health and evaluate long-term trends in receiving water quality.

NOTE: Because monitoring programs and requirements are very specific to the MS4 and local water quality impairments, permit writers are directed to the "Recommendations to the Permit Writer" section below for examples of comprehensive monitoring program Permit Requirements.

Example Permit Requirement Rationale for the Fact Sheet

Without clear monitoring objectives and a detailed monitoring plan, it will be difficult for permittees and permitting authorities to evaluate the effectiveness of the municipal stormwater program.

There are numerous factors that should be examined while setting up the water quality monitoring portion of the comprehensive program. Understanding and considering climatic conditions such as precipitation patterns, temperature, and seasonal variations will ensure the study design will collect data that are representative of typical storms in the area and that sampling occurs during times of the year when it is most logical to do so. Acknowledging the different types of land uses within the area will also help the permittee to prioritize monitoring efforts based on the areas most likely to be impacted by stormwater. The type of waterbody monitored must also be considered when selecting sampling locations since pollutants behave differently depending on the environment thereby impacting sampling protocols. For example, sampling in a freshwater lake involves different protocols than monitoring in a tidally influenced river or a first order stream. Waterbody type can also influence the data results and conclusions (e.g. freshwater wetlands typically have high denitrification rates that will likely impact the results of nitrate sampling).

Selection of specific sampling locations is also very important. If particular sites are of concern, then monitoring both above and below the sites to figure out their contributions to the overall water quality issues may make sense. Also, the actual location in the waterbody is important to specify for consistency. For example, should samples be taken close to the stream bank or in the center of the waterbody, in riffles or pools? The answers to these questions, of course, depend on the goals of the monitoring and the constituents (biological, chemical, hydrological) being examined.

In addition, the number and frequency of samples collected and stream assessments performed will determine how robust the data will be (see page 287 in *National Research Council's Report Urban Stormwater Management in the United States (2009*) available at www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf). Monitoring may or may not be tied to specific wet weather events (i.e. within 72 hours after a rainfall event). A combination of specific wet weather samples and dry weather samples may be appropriate.

Establishing objectives with associated indicators (environmental or administrative) for each minimum measure can help put each component into perspective when considering the overall program. Indicators are one way to evaluate the success of the program from the overall program level. Developing standard environmental indicators is a critical step to evaluate the SWMP. Permittees need practical tools, such as these indicators, in order to determine if their stormwater programs are working, and that help elucidate where additional efforts may be most critical. Environmental indicators should be selected based on the type (estuarine/freshwater/brackish) and condition (impaired/non-impaired) of the waterbody to which stormwater is discharged as well as the intended use of the area where the stormwater is discharged (source water protection area, etc.).

In addition, permittees should document certain administrative efforts associated with developing and implementing their SWMPs. In this context 'administrative' is considered quite broad, including such things as control measures, inspection programs, policies and rules, MS4 system scope and condition, educational efforts and any other variable or outcome that could reflect on the quality of a stormwater program other than the actual environmental quality outcomes, which are covered under 'Environmental Indicators'.

Good administrative indicators are numerous, and good suites of indicators will vary from one community to another. More information can be obtained on each of the environmental and administrative indicators listed by going to the Stormwater Manager's Resource Center (www.stormwatercenter.net) and selecting "Monitor/Assess" on the left navigation bar.

Several protocols have been developed to assess the effectiveness of stormwater control measures:

- Guidance for Evaluating Emerging Stormwater Treatment Technologies, Technology Assessment Protocol - Ecology (TAPE) www.ecy.wa.gov/biblio/0210037.html . This guidance document's primary purpose is to establish a testing protocol and process for evaluating and reporting on the performance and appropriate uses of emerging stormwater treatment technologies.
- Technology Acceptance Reciprocity Partnership (TARP) Protocol for Stormwater Best Management Practice Demonstrations www.dep.state.pa.us/dep/deputate/pollprev/techservices/tarp/pdffiles/Tier2protocol.pdf . The purpose of the TARP

Protocol is to provide a uniform method for demonstrating stormwater technologies and developing test quality assurance (QA) plans for certification or verification of performance claims.

- BMP Performance Verification Checklist. This is a tool that helps permittees provide a consistent set of questions for applicants proposing to use manufactured and proprietary BMP. It is available as Tool # 8 of the Center for Watershed Protection's *Managing Stormwater in Your Community*. The checklist is accompanied by an explanation and instructions for using the checklist, technical appendices, and a matrix that compares existing verification protocols, such as TARP and TAPE.

Additional monitoring resources include:

- CWP, 2008, *Monitoring to Demonstrate Environmental Results: Guidance to Develop Local Stormwater Monitoring Studies Using Six Example Study Designs* (www.cwp.org)
- Geosyntec Consultants and Wright Water Engineers, 2009, *Urban Stormwater BMP Performance Monitoring*, (bmpdatabase.org/MonitoringEval.htm)
- CASQA, 2007, *Municipal Stormwater Program Effectiveness Assessment Guidance* (www.casqa.org)

Recommendations for the Permit Writer

Because of the site-specific nature and variability of these monitoring programs between permittees, the detailed requirements should be provided by each permit writer. For example, the Phase I regulations included specific monitoring requirements while the Phase II regulations allow, but do not specifically require monitoring. To assist permit writers, several examples of monitoring requirements from existing MS4 permits are listed below:

- Baltimore County, MD Phase I MS4 permit (issued 2005); see the watershed assessment and planning requirements (Part II.F) and assessment of controls (Part II.H) www.mde.state.md.us/assets/document/sedimentStormwater/MSSPermit/BA%20final%20permit.pdf
- Southern California Regional Bioassessment Monitoring Program (this is a regional monitoring program involving coastal counties in Southern California) www.socalsmc.org/Docs/SMC-DesignofBioassessmentRegionalMonitoringProgram.pdf
- San Diego, CA Phase I MS4 Permit (issued 2007); see Receiving Waters and Urban Runoff Monitoring and Reporting Program. www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/docs/sd_permit/r9_2007_0001/2007_0001final.pdf

The permit writer could consider the role of partnerships among the MS4s in establishing and implementing the monitoring programs so that any data collected is robust, useful, and meaningful. In addition, communities may benefit more by working with local organizations and/or neighboring communities who are already collecting similar data. By doing so resources may be used more efficiently and results of testing may be more robust.

The permit writer should also require the permittee to assess the effectiveness of the SWMP in meeting applicable Permit Requirements. The sampling protocols developed must support the goals of the monitoring program. The monitoring and assessment program must include water quality monitoring as well as an assessment of environmental and administrative indicators. Along these lines, the permit writer could also add requirements such as the ones provided below:

Water Quality Monitoring

a. *The Permittee must develop a water quality monitoring program that includes [insert specific monitoring programs and requirements, such as:*

- Ambient receiving water monitoring,
- Biological monitoring,
- Control measure performance monitoring, or
- Discharge (wet weather) monitoring

Because the detailed monitoring program requirements are very unique to each MS4, the permitting authority should insert here the specific details of the relevant monitoring program, such as monitoring type, frequency, location, etc.]

b. When determining water quality monitoring components, the permittee must examine and consider a variety of factors, including, but not limited to:

- Climatic conditions, including precipitation patterns, temperature, and seasonal variations
- Land uses in the MS4
- Waterbody type

c. The permittee must consider and address specific sampling quality assurance/quality control protocols, including, but not limited to:

- Specific chemical constituents (pollutants), biological stream indicators, and physical stream indicators that will be monitored to best achieve the purpose of the monitoring
- Sampling locations
- Number and frequency of sample collection and assessments
- Timing of sample collection

d. The permittee must determine if any similar monitoring is occurring within the MS4 and if it is logical to link efforts.

Environmental Indicators

As part of the comprehensive monitoring and assessment program, the permittee must identify and track at least [*insert number of indicators to be tracked*] environmental

indicators from each category listed below (physical and hydrologic indicators; biological indicators; water quality indicators). The indicators must be appropriate to assess if the SWMP is meeting goals and objectives:

Physical and hydrological indicators

- Stream widening/ downcutting
- Physical habitat quality
- Impacted dry weather flows
- Increased flooding frequency
- Stream temperature monitoring

Biological indicators

- Fish assemblage analysis
- Macro-invertebrate assemblage
- Single species indicator
- Composite indicators
- Other biological indicators

Water quality indicators

- Water quality pollutant constituent monitoring
- Toxicity testing
- Non-point source loadings
- Exceedance frequencies of water quality standards
- Sediment contamination
- Human health criteria

Administrative indicators

As part of the comprehensive monitoring and assessment program, the permittee must identify and track at least [*insert number of indicators to be tracked*] administrative indicator from each category listed below (social indicators; programmatic indicators; site indicators). The indicators must be appropriate to assess if the SWMP is meeting goals and objectives:

Social indicators

- Public attitude surveys
- Industrial/commercial pollution prevention
- Public involvement and monitoring
- User perception

Programmatic indicators

- Number of illicit connections identified and corrected
- Number of control measures installed, inspected, and maintained
- Permitting and compliance
- Growth and development

Site indicators

- Control measure performance monitoring
- Industrial site compliance monitoring

Performance Monitoring of Stormwater Controls

When monitoring the performance of stormwater controls, EPA recommends that percent removal efficiencies are not calculated and compared since results can be misleading because the percentages may be based on differing levels of the influent concentration (see cfpub.epa.gov/npdes/stormwater/urbanbmp/bmptopic.cfm#percentremoval for further discussion; also see *National Research Council's Report Urban Stormwater Management in the United States (2009*) available at www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf).

Modeling can also be a useful tool to quantify the impacts of municipal stormwater management. The following resources provide summaries and reviews of different types of models available to

determine existing loading from an MS4 as well as the effects expected from various stormwater controls.

1. USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters
   www.epa.gov/nps/watershed_handbook/

   Chapter 8 of this document focuses on methods for estimating pollutant loads, including the use of watershed models. This chapter provides assistance in selecting and applying watershed models to estimate pollutant loads from existing conditions.

2. USEPA TMDL Model Evaluation and Research Needs
   www.epa.gov/nrmrl/pubs/600r05149/600r05149.htm

   This report documents the review of more than 60 available watershed and receiving water models. It discusses model selection on the basis of model capabilities and provides a series of tables rating the capabilities or applicability the models using the categories of TMDL endpoints, general land and water features, special land processes, special water processes, and application considerations including the selection of appropriate best management practices and their water quality impacts. The document also provides individual fact sheets for each reviewed model.

8.3 Evaluation of Overall Program Effectiveness

Example Permit Provision

8.3.1 *Annual Effectiveness Assessment* – The annual effectiveness assessment must:

a. Use the monitoring and assessment data described in Part 8.2 to specifically assess the effectiveness of each of the following:

   1. Each significant activity/control measures or type of activity/control measure implemented;
   2. Implementation of each major component of the Stormwater Management Program (Public Education/Involvement, Illicit Discharges, Construction, Post-Construction, Good Housekeeping); and
   3. Implementation of the Stormwater Management Program as a whole.

b. Identify and use measurable goals, assessment indicators, and assessment methods for each of the items listed in Part 8.3.1.a above.

c. Document the permittee's compliance with permit conditions.

8.3.2 Based on the results of the effectiveness assessment, the permittee must annually review its activities or control measures to identify modifications and improvements needed to maximize SWMP effectiveness, as necessary to achieve compliance with this permit. The permittee must develop and implement a plan and schedule to address the identified modifications and improvements. Municipal activities/control

measures that are ineffective or less effective than other comparable municipal activities/control measures must be replaced or improved upon by implementation of more effective municipal activities/control measures.

8.3.3 As part of its Annual Reports, the permittee must report on its SWMP effectiveness assessment as implemented under Part 8.3.1 above.

Example Permit Requirement Rationale for the Fact Sheet

A key requirement in the stormwater Phase II rule is a report (40 CFR 122.34(g)(3)) that includes "the status of compliance with permit conditions, an assessment of the appropriateness of identified [control measures] and progress towards achieving identified measurable goals for each of the minimum control measures." This assessment is critical to the stormwater program framework which uses the iterative approach of implementing controls, conducting assessments, and designating refocused controls leading toward attainment of water quality standards.

Building on the monitoring and assessment program developed in Part 8.2, the permittee must conduct an annual effectiveness assessment to assess the effectiveness of significant control measures, SWMP components, and the SWMP as a whole. The California Stormwater Quality Association's (CASQA) *Municipal Stormwater Program Effectiveness Guidance* describes strategies and methods for assessing effectiveness, including examples of effectiveness assessment for each SWMP program component. The CASQA Effectiveness Guidance is available at www.casqa.org for purchase. A two-hour EPA webcast focusing on the CASQA Guide is also available (available at www.epa.gov/npdes/training under "Assessing the Effectiveness of Your Municipal Stormwater Program"). A resources document from the webcast includes a 10 page summary of the Guide and example pages from the municipal chapter (www.epa.gov/npdes/outreach_files/webcast/jun0408/110961/municipal_resources.pdf).

The *Municipal Stormwater Program Effectiveness Assessment Guidance* synthesizes information on designing and conducting program effectiveness assessments. The document also explains how to select certain methods based on programmatic outcomes and goals. The reader is led through a series of questions and case studies to demonstrate how proper assessments are selected. Techniques are related to different level of outcomes: level one – documenting activities, level two – raising awareness, level 3 – changing behavior, level 4 – reducing loads from sources, level 5 – improving runoff quality, and level 6 – protecting receiving water quality. The Guide includes fact sheets for all six NPDES program elements, outlining methods and techniques for assessing effectiveness of each program.

Recommendations for the Permit Writer

Adaptive management is the appropriate process for assessing new opportunities for improving program effectiveness in controlling stormwater pollution. The permit writer should require the permittee to use adaptive management throughout the permit term to assess options for improving controls on stormwater discharges as compared with measurable goals and demonstrated by monitoring and assessment protocols. The permit writer should have the permittee monitor and

assess the data and analyses required under the permit as well as applicable information from other sources in the adaptive management process.

In addition, the permit writer should have the permittee assess and modify, as necessary, any or all existing SWMP components and adopt new or revised SWMP components to optimize reductions in stormwater pollutants through an iterative process. This iterative process should include routine assessment of the need to further improve water quality and protect beneficial uses, review of available technologies and practices to accomplish the needed improvement, and evaluate resources available to implement the technologies and practices.

8.4 Requirements for Annual Reporting of MS4 Activities

Example Permit Provision

8.4.1 Summary Annual Report - The Permittee must submit annual reports on or before [*specify deadline, e.g., the anniversary date of this permit*] for the reporting period [*specify the reporting period, e.g., July 1-June 30*]. The Permittee must use the Summary MS4 Annual Report template in Appendix A to document a summary of the past year activities. All of the information required on this form must be completed.

8.4.2 Detailed Annual Report - The Permittee must also submit a detailed annual report that addresses, for the activities described in the SWMP document required in Part 1.1, the following:

- A summary of past year activities, including where available, specific quantities achieved and summaries of enforcement actions. See Part 8.4.3 for required information specific to certain SWMP areas.
- A description of the effectiveness of each SWMP program component or activity (see Part 8.3); and
- Planned activities and changes for the next reporting period, for each SWMP program component or activity.
- Detailed fiscal analysis described in Part1.4.2.

8.4.3 [*Specify any additional information and/or data pertaining to implementation of priority activities the Permitting Authority would like to see in Annual Reports, e.g. a list of green roofs (with square footage) installed in the MS4, a summary of water quality monitoring data collected for a specific waterbody, etc*.]

The Annual Report must clearly refer to the Permit Requirements, and describe in quantifiable terms, the status of activities undertaken to comply with each requirement.

Example Permit Requirement Rationale for the Fact Sheet

In general, an annual report must document and summarize implementation of the SWMP during the previous year and evaluate program results and describe planned changes towards continuous improvement. The annual report also can serve as a "state of the SWMP" report for the general public or other stakeholders in the community. While records are to be kept and made available to the public, the annual report is an excellent summary document to provide as well.

Recommendations for the Permit Writer

EPA recommends using its Summary Annual Report Template (see Appendix A) in this guidance in order to obtain summary information about the status of MS4 programs. In addition to the summary annual report template, permittees must also submit a more detailed annual report.

The permit writer may determine that additional, more detailed, information is needed to determine compliance with the Permit Requirements. Even if these reporting details are not required within the permit, the permitting authority and enforcement officials can still request them at any time or during a program audit.

MS4 permits should require permittees to summarize and analyze data concerning the effectiveness of the SWMP and submit the analysis to the permitting authority. For example, the permittees should address such questions as:

- For illicit discharge data, what are the most prevalent sources and pollutants in the illicit discharge data, and where are these illicit discharges occurring? How many illicit discharges have been identified, and how many of those have been resolved? How many outfalls or screening points were visually screened, how many had dry weather discharges or flows, at how many were field analyses completed and for what parameters, and at how many were samples collected and analyzed? Does the MS4 need to conduct more inspections in these areas, or develop more specific outreach targeting these sources and pollutants?

- For the construction data, what are the most common construction violations, and are there any trends in the data (e.g., construction operators who receive more violations than others, areas of the MS4 with more violations, need to refine guidance or standards to more clearly address common violations). How has the permittee responded to these trends? Over the last year, how many construction site plan reviews were completed and approved? How many inspections were conducted, how many noncompliant sites were identified, and how many enforcement actions (and of what type) were taken?

At a minimum, the permit should require that the annual report clearly illustrate three key items for each SWMP area:

- **Summary of the Year's Activities**. The summary should describe and quantify program activities for each SWMP component. Responsible persons, agencies, departments or co-permittees should be included. Each activity should be described in relation to achievement of established goals or performance standards.

- **Description of SWMP Effectiveness**. An annual report should not only describe the previous year's activities, but should also highlight the SMWP's effectiveness (see Part 8.3) using the indicators required in Part 8.2.

- **Planned Activities and Changes**. The annual report should describe activities planned for the next year highlighting any changes made to improve control measures or program effectiveness.

Also, although the stormwater Phase II rule requires reports, after the first permit term, to be submitted in only years two and four of the permit term, EPA strongly encourages annual reports for all permittees.

APPENDIX A: SUMMARY ANNUAL REPORT TEMPLATE

National Pollutant Discharge Elimination System Stormwater Program
Small MS4 Report Form

The purpose of this report is to contribute information to an evaluation of the NPDES small municipal separate storm sewer system (MS4) permit program. Consistent with 40 CFR §122.37 the U.S. Environmental Protection Agency is assessing the status of the program nation-wide. A "no" answer to a question does not necessarily mean noncompliance with your permit or with the federal regulations. In order to establish the range of variability in the program it is necessary to ask questions along a fairly broad performance continuum. Your permitting authority may use some of this information as one component of a compliance evaluation.

1. MS4 Information

_____

Name of MS4

_____ _____ _____

Name of Contact Person (First) (Last) (Title)

_____ _____

Telephone (including area code) Email

_____

Mailing Address

_____ ____ _____

City State ZIP code

What size population does your MS4 serve? _____ NPDES number _____

What is the reporting period for this report? (mm/dd/yyyy) From _____ to _____

2. Water Quality Priorities

A. Does your MS4 discharge to waters listed as impaired on a state 303(d) list? ☐ Yes ☐ No

B. If yes, identify each impaired water, the impairment, whether a TMDL has been approved by EPA for each, and whether the TMDL assigns a wasteload allocation to your MS4. Use a new line for each impairment, and attach additional pages as necessary.

Impaired Water	Impairment	Approved TMDL		TMDL assigns WLA to MS4	
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No

C. What specific sources contributing to the impairment(s) are you targeting in your stormwater program?

_____

D. Do you discharge to any high-quality waters (e.g., Tier 2, Tier 3, outstanding natural resource waters, or other state or federal designation)? ☐ Yes ☐ No

E. Are you implementing additional specific provisions to ensure their continued integrity? ☐ Yes ☐ No

3. Public Education and Public Participation

A. Is your public education program targeting specific pollutants and sources of those pollutants? ☐ Yes ☐ No

B. If yes, what are the specific sources and/or pollutants addressed by your public education program?

_____

C. Note specific successful outcome(s) (e.g., quantified reduction in fertilizer use; NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period.

_____

D. Do you have an advisory committee or other body comprised of the public and other stakeholders that provides regular input on your stormwater program? ☐ Yes ☐ No

4. Construction

A. Do you have an ordinance or other regulatory mechanism stipulating:

Erosion and sediment control requirements? ☐ Yes ☐ No

Other construction waste control requirements? ☐ Yes ☐ No

Requirement to submit construction plans for review? ☐ Yes ☐ No

MS4 enforcement authority? ☐ Yes ☐ No

B. Do you have written procedures for:

Reviewing construction plans? ☐ Yes ☐ No

Performing inspections? ☐ Yes ☐ No

Responding to violations? ☐ Yes ☐ No

C. Identify the number of active construction sites ≥ 1 acre in operation in your jurisdiction at any time during the reporting period. _____

D. How many of the sites identified in 4.C did you inspect during this reporting period? _____

E. Describe, on average, the frequency with which your program conducts construction site inspections.

_____

F. Do you prioritize certain construction sites for more frequent inspections? ☐ Yes ☐ No

If Yes, based on what criteria? _____

G. Identify which of the following types of enforcement actions you used during the reporting period for construction activities, indicate the number of actions, or note those for which you do not have authority:

☐ Yes Notice of violation #____ No Authority ☐

☐ Yes Administrative fines #____ No Authority ☐

☐ Yes Stop Work Orders #____ No Authority ☐

☐ Yes Civil penalties #____ No Authority ☐

☐ Yes Criminal actions #____ No Authority ☐

☐ Yes Administrative orders #____ No Authority ☐

☐ Yes Other _____ #____

H. Do you use an electronic tool (e.g., GIS, data base, spreadsheet) to track the locations, inspection results, and enforcement actions of active construction sites in your jurisdiction? ☐ Yes ☐ No

I. What are the 3 most common types of violations documented during this reporting period?

_____

J. How often do municipal employees receive training on the construction program? _____

5. Illicit Discharge Elimination

A. Have you completed a map of all outfalls and receiving waters of your storm sewer system? ☐ Yes ☐ No

B. Have you completed a map of all storm drain pipes and other conveyances in the storm sewer system? ☐ Yes ☐ No

C. Identify the number of outfalls in your storm sewer system. _____

D. Do you have documented procedures, including frequency, for screening outfalls? ☐ Yes ☐ No

E. Of the outfalls identified in 5.C, how many were screened for dry weather discharges during this reporting period?

_____

F. Of the outfalls identified in 5.C, how many have been screened for dry weather discharges at any time since you obtained MS4 permit coverage? _____

G. What is your frequency for screening outfalls for illicit discharges? Describe any variation based on size/type.

_____

H. Do you have an ordinance or other regulatory mechanism that effectively prohibits illicit discharges? ☐ Yes ☐ No

I. Do you have an ordinance or other regulatory mechanism that provides authority for you to take enforcement action and/or recover costs for addressing illicit discharges? ☐ Yes ☐ No

J. During this reporting period, how many illicit discharges/illegal connections have you discovered? _____

K. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated?

_____

L. How often do municipal employees receive training on the illicit discharge program? _____

6. Stormwater Management for Municipal Operations

A. Have stormwater pollution prevention plans (or an equivalent plan) been developed for:

All public parks, ball fields, other recreational facilities and other open spaces ☐ Yes ☐ No

All municipal construction activities, including those disturbing less than 1 acre ☐ Yes ☐ No

All municipal turf grass/landscape management activities ☐ Yes ☐ No

All municipal vehicle fueling, operation and maintenance activities ☐ Yes ☐ No

All municipal maintenance yards ☐ Yes ☐ No

All municipal waste handling and disposal areas ☐ Yes ☐ No

Other _____

B. Are stormwater inspections conducted at these facilities? ☐ Yes ☐ No

C. If Yes, at what frequency are inspections conducted? _____

D. List activities for which operating procedures or management practices specific to stormwater management have been developed (e.g., road repairs, catch basin cleaning).

_____

E. Do you prioritize certain municipal activities and/or facilities for more frequent inspection? ☐ Yes ☐ No

F. If Yes, which activities and/or facilities receive most frequent inspections? _____

G. Do all municipal employees and contractors overseeing planning and implementation of stormwater-related activities receive comprehensive training on stormwater management? ☐ Yes ☐ No

H. If yes, do you also provide regular updates and refreshers? ☐ Yes ☐ No

I. If so, how frequently and/or under what circumstances? _____

7. Long-term (Post-Construction) Stormwater Measures

A. Do you have an ordinance or other regulatory mechanism to require:

Site plan reviews for stormwater/water quality of all new and re-development projects?	☐ Yes	☐ No
Long-term operation and maintenance of stormwater management controls?	☐ Yes	☐ No
Retrofitting to incorporate long-term stormwater management controls?	☐ Yes	☐ No

B. If you have retrofit requirements, what are the circumstances/criteria?

_____

C. What are your criteria for determining which new/re-development stormwater plans you will review (e.g., all projects, projects disturbing greater than one acre, etc.) _____

D. Do you require water quality or quantity design standards or performance standards, either directly or by reference to a state or other standard, be met for new development and re-development? ☐ Yes ☐ No

E. Do these performance or design standards require that pre-development hydrology be met for:

Flow volumes	☐ Yes	☐ No
Peak discharge rates	☐ Yes	☐ No
Discharge frequency	☐ Yes	☐ No
Flow duration	☐ Yes	☐ No

F. Please provide the URL/reference where all post-construction stormwater management standards can be found.

_____

G. How many development and redevelopment project plans were reviewed during the reporting period to assess impacts to water quality and receiving stream protection? _____

H. How many of the plans identified in 7.G were approved? _____

I. How many privately owned permanent stormwater management practices/facilities were inspected during the reporting period? _____

J. How many of the practices/facilities identified in I were found to have inadequate maintenance? _____

K. How long do you give operators to remedy any operation and maintenance deficiencies identified during inspections?

_____

L. Do you have authority to take enforcement action for failure to properly operate and maintain stormwater practices/facilities? ☐ Yes ☐ No

M. How many formal enforcement actions (i.e., more than a verbal or written warning) were taken for failure to adequately operate and/or maintain stormwater management practices? _____

N. Do you use an electronic tool (e.g., GIS, database, spreadsheet) to track post-construction BMPs, inspections and maintenance? ☐ Yes ☐ No

O. Do all municipal departments and/or staff (as relevant) have access to this tracking system? ☐ Yes ☐ No

P. How often do municipal employees receive training on the post-construction program? _____

8. Program Resources

A. What was the annual expenditure to implement MS4 permit requirements this reporting period? _____

B. What is next year's budget for implementing the requirements of your MS4 NPDES permit? _____

C. This year what is/are your source(s) of funding for the stormwater program, and annual revenue (amount or percentage) derived from each?

Source: _____ Amount $_____ OR %_____

Source: _____ Amount $_____ OR %_____

Source: _____ Amount $_____ OR %_____

D. How many FTEs does your municipality devote to the stormwater program (specifically for implementing the stormwater program; not municipal employees with other primary responsibilities)? _____

E. Do you share program implementation responsibilities with any other entities? ☐ Yes ☐ No

Entity	Activity/Task/Responsibility	Your Oversight/Accountability Mechanism

9. Evaluating/Measuring Progress

A. What indicators do you use to evaluate the overall effectiveness of your stormwater management program, how long have you been tracking them, and at what frequency? These are not measurable goals for individual management practices or tasks, but large-scale or long-term metrics for the overall program, such as macroinvertebrate community indices, measures of effective impervious cover in the watershed, indicators of in-stream hydrologic stability, etc.

Indicator	**Began Tracking (year)**	**Frequency**	**Number of Locations**

B. What environmental quality trends have you documented over the duration of your stormwater program? Reports or summaries can be attached electronically, or provide the URL to where they may be found on the Web.

10. Additional Information

In the space below, please include any additional information on the performance of your MS4 program. If providing clarification to any of the questions on this form, please provide the question number (e.g., 2C) in your response.

Certification Statement and Signature

I certify that all information provided in this report is, to the best of my knowledge and belief, true, accurate and complete. ☐ Yes

Federal regulations require this application to be signed as follows: **For a municipal, State, Federal, or other public facility**: by either a principal executive or ranking elected official.

_____ _____

Name of Certifying Official, Title Date (mm/dd/yyyy)

Submit

APPENDIX B: DEFINITIONS

Commencement of Construction – the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material). (Source: 2008 CGP)

Control Measure – any best management practice (BMP) or other method used to prevent or reduce the discharge of pollutants to waters of the United States. (Source: 2008 CGP)

Discharge – when used without qualification means the "discharge of a pollutant." (Source: 2008 CGP)

Discharge of Stormwater Associated with Construction Activity – as used in this permit, refers to a discharge of pollutants in stormwater from areas where soil disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck chute washdown, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located. (Source: 2008 CGP)

Illicit Discharge - any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities. (Source: 40 CFR 122.26)

Large Construction Activity – is defined at 40 CFR §122.26(b)(14)(x) and incorporated here by reference. A large construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than five acres of land or will disturb less than five acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than five acres. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site. (Source: 2008 CGP)

Non-Structural Controls – preventative actions that involve management and source controls. Refer also to 40 CFR 122.34(b)(5)(c)(iii). (Source: 40 CFR 122.26)

Qualified Personnel – A person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the construction activity. (Source: EPA's 2008 Construction General Permit)

Receiving Water – the "Water of the United States" as defined in 40 CFR §122.2 into which the regulated stormwater discharges. (Source: 2008 CGP)

Small Construction Activity –includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb

less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site. (Source: 2008 CGP)

Stormwater control measure – see control measure.

Structural Control - physically designed, installed, and maintained practices used to prevent or reduce the discharge of pollutants in stormwater, to minimize erosion, and/or to minimize the impacts of stormwater on waterbodies.

Wasteload Allocation – the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. Wasteload allocations constitute a type of water quality-based effluent limitation. (40 CFR 130.2)

ATTACHMENT
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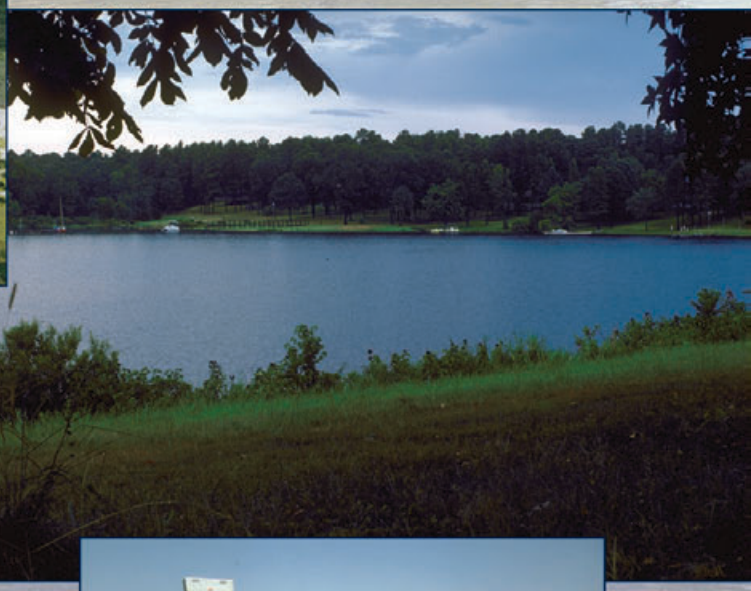
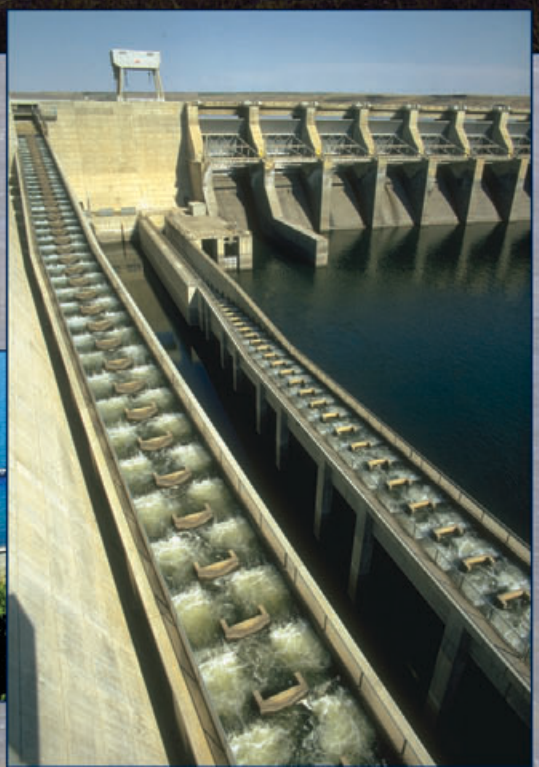
National Management Measures to Control Nonpoint Source Pollution from Hydromodification





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United States Environmental Protection Agency
Office of Water
Washington, DC 20460
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National Management Measures to Control Nonpoint Source Pollution from Hydromodification

Nonpoint Source Control Branch
Office of Wetlands, Oceans and Watersheds
U.S. Environmental Protection Agency
Office of Water

July 2007

Disclaimer

This document provides technical guidance to states, territories, authorized tribes, and the public for managing hydromodification and reducing associated nonpoint source pollution of surface and ground water. At times, this document refers to statutory and regulatory provisions, which contain legally binding requirements. This document does not substitute for those provisions or regulations, nor is it a regulation itself. Thus, it does not impose legally-binding requirements on EPA, states, territories, authorized tribes, or the public and may not apply to a particular situation based upon the circumstances. EPA, state, territory, and authorized tribe decision makers retain the discretion to adopt approaches to manage hydromodification and reduce associated NPS pollution of surface and ground water on a case-by-case basis that differ from this guidance where appropriate. EPA may change this guidance in the future.

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Chapter 1: Introduction

The Nation's aquatic resources are among its most valuable assets. Although environmental protection programs in the United States have improved water quality during the past 35 years, many challenges remain. Significant strides have been made in reducing the impacts of discrete pollutant sources, but some aquatic ecosystems remain impaired, due in part to complex pollution problems caused by nonpoint source (NPS) pollution.[1] Of special concern are the problems in our streams, lakes, estuaries, aquifers, and other water bodies caused by runoff that is inadequately controlled or treated. These problems include changes in flow, increased sedimentation, higher water temperature, lower dissolved oxygen, degradation of aquatic habitat structure, loss of fish and other aquatic populations, and decreased water quality due to increased levels of nutrients, metals, hydrocarbons, bacteria, and other constituents.

What is Hydromodification?

USEPA (1993) defines hydromodification as the "alteration of the hydrologic characteristics of coastal and non-coastal waters, which in turn could cause degradation of water resources." Examples of hydromodification in streams include dredging, straightening, and, in some cases, complete stream relocation. Other examples include construction in or along streams, construction and operation of dams and impoundments, channelization in streams, dredging, and land reclamation activities. Hydromodification can also include activities in streams that are being done to maintain the stream's integrity such as removing snags.[2] Some indirect forms of hydromodification, such as erosion along streambanks or shorelines, are caused by the introduction or maintenance of structures in or adjacent to a waterbody and other activities, including many upland activities, that change the natural physical properties of the waterbody.

EPA has grouped hydromodification activities into three categories: (1) channelization and channel modification, (2) dams, and (3) streambank and shoreline erosion. The following definitions are offered to clarify the hydromodification activities associated with these three categories:

> Channelization and channel modification include activities such as straightening, widening, deepening, and clearing channels of debris and sediment. Categories of channelization and channel modification projects include flood control and drainage, navigation, sediment control, infrastructure protection, mining, channel and bank instability, habitat improvement/enhancement, recreation, and flow control for water supply (Watson et al., 1999). Channelization activities can play a critical role in NPS pollution by increasing the timing and delivery of pollutants, including sediment, that enter the water. Channelization can also be a cause of higher flows during storm events, which potentially increases the risk of flooding.

[1] For more information on NPS pollution, go to EPA's website at http://www.epa.gov/owow/nps.
[2] A tree or branch embedded in a lake or stream bed and constituting a hazard to navigation; a standing dead tree.

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Dams[3] are artificial barriers on waterbodies that impound or divert water and are built for a variety of purposes, including flood control, power generation, irrigation, navigation, and to create ponds, lakes, and reservoirs for uses such as livestock watering, municipal water supply, fish farming, and recreation. While these types of dams are constructed to provide benefits to society, they can contribute to NPS pollution. For example dams can alter flows, which ultimately can cause impacts to water quality (changes to temperature or dissolved gases) and biological/habitat (disruption of spawning or altering of plant and benthic communities) above and below the dam.

Streambank and shoreline erosion are the wearing away of material in the area landward of the bank along non-tidal streams and rivers. Streambank erosion occurs when the force of flowing water in a river or stream exceeds the ability of soil and vegetation to hold the banks in place. Eroded material is carried downstream and redeposited in the channel bottom or in point bars located along bends in the waterway. Shoreline erosion occurs in large open waterbodies, such as the Great Lakes or coastal bays and estuaries, when waves and currents sort coarser sands and gravels from eroded bank materials and move them in both directions along the shore away from the area undergoing erosion. While the underlying forces causing the erosion may be different for streambank and shoreline erosion, the results (erosion and its impacts) are usually similar. It is also important to note that streambank and shoreline erosion are natural processes and that natural background levels of erosion also exist. However, human activities along or adjacent to streambanks or shorelines may increase erosion and other nonpoint sources of pollution.

Why is NPS Guidance on Hydromodification Important?

Hydromodification is one of the leading sources of impairment in our nation's waters. According to the *National Water Quality Inventory: 2000 Report to Congress* (USEPA, 2002a), there are almost 3.7 million miles of rivers and streams[4] in the United States. Approximately 280,000 miles of assessed rivers and streams in the United States are impaired for one or more designated uses, which include aquatic life support, fish consumption, primary and contact recreation, drinking water supply, and agriculture. Many of the pollutants causing impairment are delivered to surface and ground waters from diffuse sources, such as agricultural runoff, urban runoff, hydrologic modification, and atmospheric deposition of contaminants. The leading causes of

[3] Dams are defined according to Title 33 of the Code of Federal Regulations, section 222.6(h) (2003) as all artificial barriers together with appurtenant works which impound or divert water and which (1) are 25-feet or more in height or (2) have an impounding capacity of 50 acre-feet or more. Barriers that are six-feet or less in height, regardless of storage capacity or barriers that have a storage capacity at maximum water storage elevation of fifteen acre-feet or less regardless of height are not included. Federal regulations define dams for the purpose of ensuring public safety. For example, 33 CFR 222.6 states objectives, assigns responsibilities, and prescribes procedures for implementation of a National Program for Inspection of Non-Federal Dams. Most states use this or a very similar definition, which creates a category of dams that requires some form of inspection to ensure that they are structurally sound. Dams smaller than those defined above, such as those used to create farm ponds, are authorized under the NRCS program.

[4] Approximately 700,000 miles (19%) of the total 3.7 million miles of rivers and streams in the United States were assessed for the *National Water Quality Inventory: 2000 Report to Congress* (USEPA, 2002a).

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beneficial use impairment (partially or not supporting one or more uses) are nutrients, sediment, pathogens (bacteria), metals, pesticides, oxygen-depleting materials, and habitat alterations (USEPA, 2002a).

The *National Water Quality Inventory: 2000 Report to Congress* (USEPA, 2002a) identified hydrologic modifications (i.e., hydromodification) as a leading source of water quality impairment in assessed surface waters. Of the 11 pollution source categories listed in the report, hydromodification was ranked as the second leading source of impairment in assessed rivers, second in assessed lakes, and sixth in assessed estuaries (Table 1.1). Three major types of hydromodification activities—channelization and channel modification, dams, and streambank and shoreline erosion—change a waterbody's physical structure as well as its natural functions.

Many hydromodification activities are necessary because of human activities. For example, hardening of streambanks to correct headcutting and streambank erosion is often necessary because of changes in landuse that increase impervious surfaces. While hydromodification activities are intended to provide some form of benefit (e.g., levees for reducing flooding, electricity from hydroelectric dams, or bulkheads to reduce shoreline erosion and protect valuable property), there may be unintended consequences resulting from the activity. To illustrate, levees may provide local flood reduction by keeping storm flows from spreading onto flood plains. However, these same levees may alter riparian wetland habitat that once relied on seasonal flooding.

Table 1.1 Leading Sources of Water Quality Impairment Related to Human Activities for Rivers, Lakes, and Estuaries (USEPA, 2002a)

	Rivers and Streams	Lakes, Ponds, and Reservoirs	Estuaries
Sources[a]	Agriculture (48%)[b]	Agriculture (41%)	Municipal Point Sources (37%)
	Hydrologic Modification (20%)[c]	**Hydrologic Modification (18%)**	Urban Runoff/Storm Sewers (32%)
	Habitat Modification (14%)[d]	Urban Runoff/Storm Sewers (18%)	Industrial Discharges (26%)
	Urban Runoff /Storm Sewers (13%)	Nonpoint Sources (14%)	Atmospheric Deposition (23%)
	Forestry (10%)	Atmospheric Deposition (13%)	Agriculture (18%)
	Municipal Point Sources (10%)	Municipal Point Sources (12%)	**Hydrologic Modification (14%)**
	Resource Extraction (10%)	Land Disposal (10%)	Resource Extraction (12%)

[a] Excluding unknown, natural, and "other" sources.
[b] Values in parentheses represent the approximate percentage of surveyed river miles, lake acres, or estuary square miles that are classified as impaired due to the associated sources.
[c] Hydrologic modifications include flow regulation and modification, dredging, and construction of dams. These activities may alter a lake's habitat in such a way that it becomes less suitable for aquatic life (USEPA, 2002a).
[d] Habitat modifications result from human activities, such as flow regulation, logging, and land-clearing practices. Habitat modifications—changes such as the removal of riparian (stream bank) vegetation—can make a river or stream less suitable for the organisms inhabiting it (USEPA, 2002a).

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Purpose and Scope of the Guidance

National summaries, such as those shown in Table 1.1, are useful in providing an overview of the magnitude of problems associated with hydromodification. Solutions, however, are usually applied at the local level. For example, in Maryland, the Shore Erosion Task Force, after investigating shore erosion in the state, published recommendations to be implemented under a Comprehensive Shore Erosion Control Plan. To initiate statewide planning, the Maryland Department of Natural Resources established partnerships with two coastal counties that were significantly affected by shoreline erosion. These state-local partnerships enable the state to better identify and correct shoreline erosion problems throughout Maryland (MDNR, 2001).

State and local elected officials and agencies, landowners, developers, environmental and conservation groups, and others play a crucial role in working together for protecting, maintaining, and restoring water resources that are impacted by hydromodification activities. These local efforts, in aggregate, form the basis for changing the status of hydromodification as a national problem.

This guidance document provides background information about NPS pollution and offers a variety of solutions for reducing NPS pollution resulting from hydromodification activities. The background information provided in Chapter 2 includes a discussion of sources of NPS pollution associated with hydromodification and how the generated pollutants enter the Nation's waters. Chapter 3 (Channelization and Channel Modification), Chapter 4 (Dams), and Chapter 5 (Streambank and Shoreline Erosion) present technical information about how certain types of NPS pollution can be reduced or eliminated.

Since hydromodification is not associated with localized impacts and solutions, Chapter 6 provides a discussion on the broad concept of assessing and addressing water quality problems on a watershed level. Chapter 7 provides detailed information for practices that can be used to implement the management measures presented in this guidance. Chapter 8 provides a discussion of available models and assessment approaches that could be used to determine the effects of hydromodification activities. Chapter 9 summarizes additional dam removal information, including permitting requirements, process, and techniques for dam removal. The primary goal of this guidance document is to provide technical assistance to states, territories, tribes, local governments, and the public for managing hydromodification and reducing associated NPS pollution.

Document Organization

This document is divided into the following chapters:

- Chapter 1: Introduction
- Chapter 2: Background
- Chapter 3: Channelization and Channel Modification
- Chapter 4: Dams
- Chapter 5: Streambank and Shoreline Erosion

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- Chapter 6: Guiding Principles
- Chapter 7: Practices for Implementing Management Measures
- Chapter 8: Modeling Information
- Chapter 9: Dam Removal Requirements, Process, and Techniques
- References Cited
- Additional Resources
- Appendix A: Federal, State, Nonprofit, and Private Financial and Technical Assistance Programs
- Appendix B: U.S. Environmental Agency Contacts

Activities to Control NPS Pollution

Historical Perspective

During the first 15 years of the national program to abate and control water pollution (1972–1987), EPA and the states focused most of their water pollution control activities on traditional point sources, which are stationary locations or fixed facilities from which pollutants are discharged; any single identifiable source of pollution (e.g., a pipe, ditch). EPA and the states have regulated these point sources through the National Pollutant Discharge Elimination System (NPDES) permit program established by section 402 of the Clean Water Act (CWA).[5] The NPDES program functions as the primary regulatory tool for assuring that state water quality standards are met. NPDES permits, issued by an authorized state or EPA, contain discharge limits designed to meet water quality standards and national technology-based effluent regulations.

In 1987, in view of the progress achieved in controlling point sources and the growing national awareness of the increasingly dominant influence of NPS pollution on water quality, Congress amended the CWA to focus greater national efforts on nonpoint sources.

Federal Programs and Funding

The CWA establishes several reporting, funding, and regulatory programs that address pollutants carried in runoff that is not subject to confinement or treatment. These programs relate to watershed management and nonpoint source control. Readers are encouraged to use the information contained in this guidance to develop nonpoint source management programs/plans that comprehensively address the following EPA programs:

- *Section 319 Grant Program*. Under section 319 of the CWA, EPA awards funds to states and eligible tribes to implement NPS management programs. These funds can be used for projects that address nonpoint source related sources of pollution, including hydromodification.[6]

- *Clean Water State Revolving Fund*. The Clean Water State Revolving Fund (CWSRF) program is an innovative method of financing environmental projects. Under the

[5] For more information on the NPDES program, refer to EPA's NPDES website at http://cfpub.epa.gov/npdes.
[6] More information about the section 319 program is provided at http://www.epa.gov/owow/nps/cwact.html.

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program, EPA provides grants or "seed money" to all 50 states plus Puerto Rico to capitalize state loan funds. The states, in turn, make loans to communities, individuals, and others for high-priority water quality activities. As money is paid back into the revolving fund, new loans are made to other recipients. When funded with a loan from this program, a project typically costs much less than it would if funded through the bond market. Many states offer low or no interest rate loans to small and disadvantaged communities. In recent years, state programs have begun to devote an increasing volume of loans to nonpoint source, estuary management, and other water-quality projects. Eligible NPS projects include almost any activity that a state has identified in its nonpoint source management plan. Such activities include projects to control runoff from agricultural land; conservation tillage and other projects to address soil erosion; development of streambank buffer zones; and wetlands protection and restoration.[7]

- *Total Maximum Daily Loads*. Under section 303(d) of the CWA, states are required to compile a list of impaired waters that fail to meet any of their applicable water quality standards. This list, called a 303(d) list, is submitted to Congress every 2 years, and states are required to develop a Total Maximum Daily Load (TMDL) for each pollutant causing impairment for waterbodies on the list.[8]

- *Water Quality Certification.* Section 401 of the CWA requires that any applicant for a federal license or permit to conduct any activity that "may result in any discharge" into navigable waters must obtain a certification from the state or tribe in which the discharge originates that the discharge will comply with various provisions of the CWA, including sections 301 and 303. The federal license or permit may not be issued unless the state or tribe has granted or waived certification. The certification shall include conditions, e.g., "effluent limitations or other limitations" necessary to assure that the permit will comply with the state's or tribe's water quality standards or other appropriate requirements of state or tribal law. Such conditions must be included in the federal license or permit.

- *National Estuary Program.* Under the National Estuary Program, states work together to evaluate water quality problems and their sources, collect and compile water quality data, and integrate management efforts to improve conditions in estuaries. To date, 28 estuaries have been accepted into the program. Estuary programs can be an excellent source of water quality data and can provide information on management practices.[9]

- *Safe Drinking Water Act.* Many areas, especially urban fringe areas, need to maintain or improve the quality of surface and ground waters that are used as drinking water sources. This act requires states to develop Source Water Assessment Reports and implement Source Water Protection Programs. Low- or no-interest loans are available under the Drinking Water State Revolving Fund (SRF) Program.[10]

[7] Additional information about CWSRF is available at http://www.epa.gov/OWM/cwfinance/cwsrf/index.htm.
[8] More information on the TMDL program and 303(d) lists is provided at http://www.epa.gov/owow/tmdl.
[9] More information on the National Estuary Program is provided at http://www.epa.gov/nep.
[10] More information about the Safe Drinking Water Act and Source Water Protection Programs can be found at http://www.epa.gov/safewater/sdwa/index.html and http://www.epa.gov/safewater/protect.html.

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- *Wildlife Habitat Incentives Program (WHIP)*. WHIP[11] is a voluntary program authorized by the Farm Security and Rural Investment Act of 2002 (Farm Bill)[12] that enables landowners to apply for technical and financial assistance to improve wildlife habitat. The program is administered by the Natural Resources Conservation Service (NRCS), which works with private landowners and operators, conservation districts, and federal, state, and tribal agencies to improve terrestrial and aquatic habitats. NRCS and participants work together to create a wildlife habitat development plan that includes a cost-share agreement. Continued assistance after habitat development includes monitoring, review of management guidelines, and technical advice. WHIP funds may also be used for dam removal. Additional information is available from an NRCS WHIP fact sheet.[13]

Two excellent resources for learning more about the CWA and the many programs established under it are *The Clean Water Act: An Owner's Manual* (Killam, 2005) and *The Clean Water Act Desk Reference* (WEF, 1997).

Introduction to Management Measures

Management measures may be implemented as part of state, tribal, or local programs to control nonpoint source pollution for a variety of purposes, including protection of water resources, aquatic wildlife habitat, and land downstream from increased pollution and flood risks. They can be used to guide in the development of a runoff management program. Management measures establish performance expectations and, in many cases, specify actions that can be taken to prevent or minimize nonpoint source pollution from hydromodification activities. Management measures might control the delivery of NPS pollutants to receiving water resources by:

- Minimizing pollutants available (source reduction)
- Retarding the transport and/or delivery of pollutants, either by reducing water transported, and thus the amount of the pollutant transported, or through deposition of the pollutant
- Remediating or intercepting the pollutant before or after it is delivered to the water resource through chemical or biological transformation

Management measures are generally designed to control a particular type of pollutant from specific activities and land uses. The intent of the six management measures in this guidance document is to provide information for addressing and considering the NPS pollution potential associated with hydromodification activities. Implementation of management measures can minimize and control hydromodification NPS pollution through erosion and sediment control, chemical and pollutant control, management of instream and riparian habitat restoration, and protection of surface water quality.

[11] http://www.nrcs.usda.gov/programs/whip
[12] http://www.nrcs.usda.gov/programs/farmbill/2002
[13] http://www.nrcs.usda.gov/programs/farmbill/2002/pdf/WHIPFct.pdf

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Activities associated with these management measures may be regulated by federal, state, or local law (e.g., section 404 of the Clean Water Act). These measures do not supersede such requirements. Sometimes regulatory authorities may appear to conflict, as is sometimes the case of the CWA and water use and distribution. CWA sections 101(g) and 510 specifically allow for resolution of the conflict by placing water use and its distribution under the authority of the states, thus protecting any state agreements on "water rights." Users of this NPS guidance should recognize that the applicability of the guidance provided in this document will remain subject to state statutes, interstate compacts, and international treaties. As such, this guidance does not recommend or require any management measures or practices that hinder a state's ability to exercise existing water rights, which provide water for municipal, industrial, and agricultural needs. For further information regarding specific state policies on water rights and regulations of water use, contact the appropriate state water agency. Contact information is generally provided on state government Web sites.

This document also lists and describes management practices for each management measure. Management practices are specific actions taken to achieve, or aid in the achievement of, a management measure. A more familiar term might be best management practice (BMP). The word "best" has been dropped for the purposes of this guidance (as it was in the Coastal Management Measures Guidance (USEPA, 1993)) because the adjective is too subjective. The "best" practice in one area or situation might be entirely inappropriate in another area or situation. The practices listed in this document have been found by EPA to be representative of the types of practices that can be applied successfully to achieve the management measures. EPA recognizes that there is often site-specific, regional, and national variability in the selection of appropriate practices, as well as in the design constraints and pollution control effectiveness of practices. The practices presented for each management measure are not all-inclusive. States or local agencies and communities might wish to apply other technically and environmentally sound practices to achieve the goals of the management measures.

Channelization and Channel Modification (Chapter 3)

Channelization can cause a variety of instream flow changes and may result in the faster delivery of pollutants to downstream areas. Channel modification might result in a combination of harmful effects (higher flows or increased risk of downstream flooding) and beneficial effects (local flood control or enhanced flushing in a stream channel). The management measures for channelization and channel modification are intended to protect waterbodies by ensuring proper planning before a proposed project is implemented. Planning and evaluation can help to identify and prevent local and downstream problems before a project is started. An added benefit of planning and evaluation is to correct or prevent detrimental changes to the instream and riparian habitat associated with the project. Implementation of the management measures can also ensure that operation and maintenance programs for existing projects improve physical and chemical characteristics of surface waters and restore or maintain instream and riparian habitat when possible.

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Management Measure 1: Physical and Chemical Characteristics of Surface Water: Ensure that the planning process for new hydromodification projects addresses changes to physical and chemical characteristics of surface waters that may occur as a result of the proposed work. For existing projects, ensure that operation and maintenance programs use any opportunities available to improve the physical and chemical characteristics of surface waters.

Management Measure 2: Instream and Riparian Habitat Restoration: Correct or prevent detrimental changes to instream and riparian habitat from the impacts of channelization and channel modification projects, both proposed and existing.

Dams (Chapter 4)

Because of their instream locations, any construction activities associated with dams have the potential to introduce sediment and other pollutants into adjacent waterbodies. Construction activities, chemical spills during dams operation or maintenance, and changes in the quantity and quality of water held and released by a dam may alter the nature of the waterbody. The management measures for dams are intended to be applied to the construction of new dams, as well as any construction activities associated with the maintenance of existing dams. They can also be applied to dam operations that result in the loss of desirable surface water quality, and instream and riparian habitat.

Management Measure 3: Erosion and Sediment Control: Prevent sediment from entering surface waters during the construction or maintenance of dams.

Management Measure 4: Chemical and Pollutant Control: Prevent downstream contamination from pollutants associated with dam construction and operation and maintenance activities.

Management Measure 5: Protection of Surface Water Quality and Instream and Riparian Habitat: Protect the quality of surface waters and aquatic habitat in reservoirs and in the downstream portions of rivers and streams that are influenced by the quality of water contained in the releases (tailwaters) from reservoir impoundments.

Streambank and Shoreline Erosion (Chapter 5)

NPS pollution might result from the rapid increase in erosion of streambanks caused by increased flow rates associated with urbanization in a watershed. Not only is the land adjacent to these eroding streambanks unnaturally carried away, but these eroded soils are carried downstream and deposited in often undesirable locations. Shorelines erode more severely as the result of poorly planned and implemented shoreline protection projects located nearby. Habitats can be buried and wetlands can be filled. As runoff upstream increases, more erosion results on downstream streambanks. The streambank and shoreline erosion management measure promotes the necessary actions required to correct streambank and shoreline erosion where it must be controlled. Because erosion is a natural process, this management measure is not intended to be applied to all erosion occurring on streambanks and shorelines.

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Management Measure 6: Eroding Streambanks and Shorelines: Protect streambanks and shorelines from erosion and promote institutional measures that establish minimum setback requirements or measures that allow a buffer zone to reduce concentrated flows and promote infiltration of surface water runoff in areas adjacent to the shoreline.

Channelization and channel modification and dams represent forms of hydromodification that are direct results of human activities—someone performs a construction activity directly in or along a stream, river, or shoreline. For example, a town constructs concrete lined channels along a stream passing through the city limits to reduce stream meandering and prevent flooding. Another example is the construction (many years ago) of a dam in a stream for hydropower at a grist mill. Streambank and shoreline erosion are forms of hydromodification that result from direct and indirect human activities. For example, a streambank is eroding at a much faster rate because of recent development activities on shore that result in increased runoff, which is causing increased bank erosion. Another example is a concrete seawall that is protecting property at one location, but causing increased erosion on adjacent properties.

This distinction between forms of hydromodification and impacts from hydromodification is important when contrasting the relationship between Chapter 3 (Channelization and Channel Modification) and Chapter 5 (Streambank and Shoreline Erosion). Many of the operation and maintenance solutions presented in Chapter 3 are also practices that can be used to stabilize streambanks and shorelines as presented in Chapter 5. For example, a stream channel that has been hardened with vertical concrete walls to prevent local flooding and limit the stream to its existing channel (to protect property built along the stream channel), may benefit from operation and maintenance practices that use opportunities to replace the concrete walls with an appropriate vegetative or combined vegetative and non-vegetative structures along the streambank when possible. These same practices may be applicable to stabilize downstream streambanks that are eroding and creating a nonpoint source pollution problem because of the upstream development and hardened streambanks.

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Chapter 2: Background

There are differing views on defining the stability of a stream channel and other waterbodies. From a navigation perspective, a stream channel is considered stable if shipping channels are maintained to enable safe movement of vessels. Landowners with property adjacent to a stream or shoreline might consider the waterbody to be stable if it does not flood and erosion is minimal. Ecologists might find some erosion of streambanks and meandering channels to be a part of natural evolution (i.e., changes that are not induced by humans) and consider long-term changes like these to be quite acceptable (Watson et al., 1999). In any case, new and existing channelization projects, construction and maintenance of dams, and streambank and shoreline erosion problems should be evaluated with these differing perspectives in mind and a balance of these perspectives should be taken into account when constructing or maintaining a project. Often, multiple priorities can be maintained with good up-front planning and communication among the different stakeholders involved.

Key Geomorphic Functions of Streams

Discharge, Slope, and Sinuosity

Figure 2.1 is a cross-section of a typical stream channel. The thalweg is the deepest part of the channel. The sloped bank is known as the scarp. The term discharge is used to describe the volume of water moving down the channel per unit time (usually described in the United States as cubic foot per second (cfs)). Discharge is the product of the area through which the water is flowing (in square feet) and the average velocity of the water (in feet per second). If discharge in a channel increases or decreases, there must be a corresponding change in streamflow velocity and/or flow area.

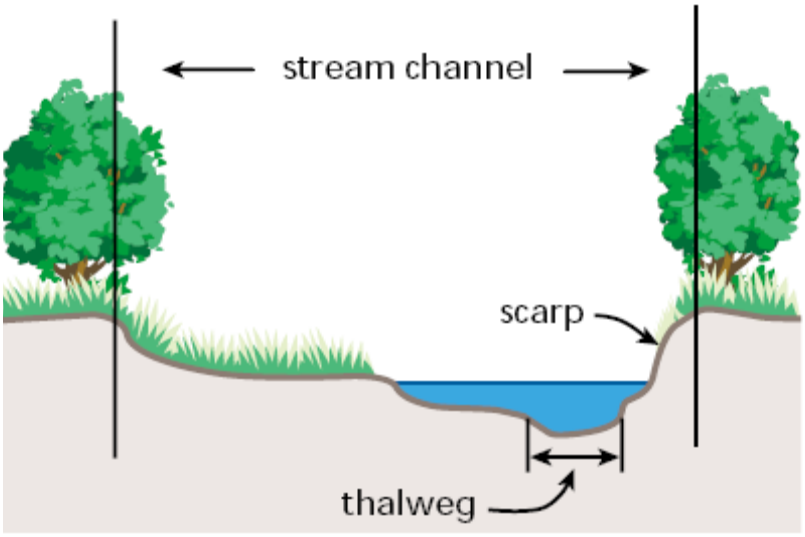

Figure 2.1 Cross-section of a Stream Channel (FISRWG, 1998)

Channel slope is an especially key concept when dealing with hydromodification projects. It is the difference in elevation between two points in the stream divided by the stream length

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between the two points. Stream sinuosity greatly affects stream slope. Sinuosity is the stream length between two points on a stream divided by the valley length between the two points. A meandering stream moving through a valley has a lower slope than a straight stream.

Erosion, Transport, and Deposition of Sediment

All streams accomplish three basic geomorphic tasks:

- *Erosion*—the detachment of soil particles along the stream bed and banks
- *Sediment transport*—the movement of eroded soil particles in streamflow
- *Sediment deposition*—the settling of eroded soil particles in the water or on land as water recedes

These processes largely determine the size and shape of the channel, both laterally and longitudinally. The ability to accomplish these geomorphic tasks is related to stream power, the product of slope and discharge. Slope directly affects flow velocity. Consequently, a shallow, meandering stream with low slope generates less stream power, and has lower erosion and sediment-transport capacity, than a deep, straight stream.

In addition to sinuosity, roughness along the boundaries of a stream area is also important in determining streamflow velocity and stream power. The rougher the channel bottom and banks, the more they are able to slow down the flow of water. The level of roughness is determined by many conditions including:

- Type and spacing of bank vegetation
- Size and distribution of sediment particles
- Bedforms
- Bank irregularities
- Other miscellaneous obstructions

Tractive stress, also known as shear stress, describes the lift and drag forces that work to create erosion along the stream bed and banks. In general, the larger the sediment particle, the more stream power is needed to dislodge it and transport it downstream. When stream power decreases in the channel, larger sediment particles are deposited back to the stream bed.

Dynamic Equilibrium

One of the primary functions of a stream is to move particles out of the watershed. Erosion, sediment transport, and deposition occur all the time at both large and small scales within a channel. A channel is considered stable when the average tractive stress maintains a stable streambed and streambanks. That is, sediment particles that erode and are transported downstream from one area are replaced by particles of the same size and shape that have originated in areas upstream. Lane (1955) qualitatively described this relationship as:

$$Qs * D \propto Qw * S$$

Where: Qs = Sediment discharge, D = Sediment particle size, Qw = Streamflow, S = Stream slope

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When all four variables are in balance, the channel is stable, or in dynamic equilibrium.

Lane's channel variable relationships can be visualized as a pan balance with sliding weights (Figure 2.2). Sediment discharge is placed on one pan and streamflow on the other. The hook holding the sediment load pan can slide back and forth based on changes in sediment size. Likewise, the hook holding the streamflow can slide according to changes in slope.

If a disturbance or stream modification occurs that causes a variable to change, one or more of the other variables must change in order to maintain the balance. During an imbalanced phase, the scale indicator will point to either degradation or aggradation. This indicates that the channel will try to adjust and regain equilibrium by either increasing sediment discharge by scouring the bottom or eroding its banks (degradation) or decreasing sediment discharge by depositing sediment on the bottom (aggradation), depending on the circumstance.

For example, if stream slope is decreased and streamflow remains the same (i.e., streamflow pan slides toward the center), the balance will tip and aggradation will occur (Figure 2.3). Alternatively, if streamflow increases and slope remains the same (i.e., more weight on the streamflow pan), degradation will occur. No matter the scenario, this basic relationship between the variables will hold true and aggradation or degradation will cease only when the system reaches equilibrium. This can occur naturally over time, or through management practices designed to deal with the "balancing" issue.

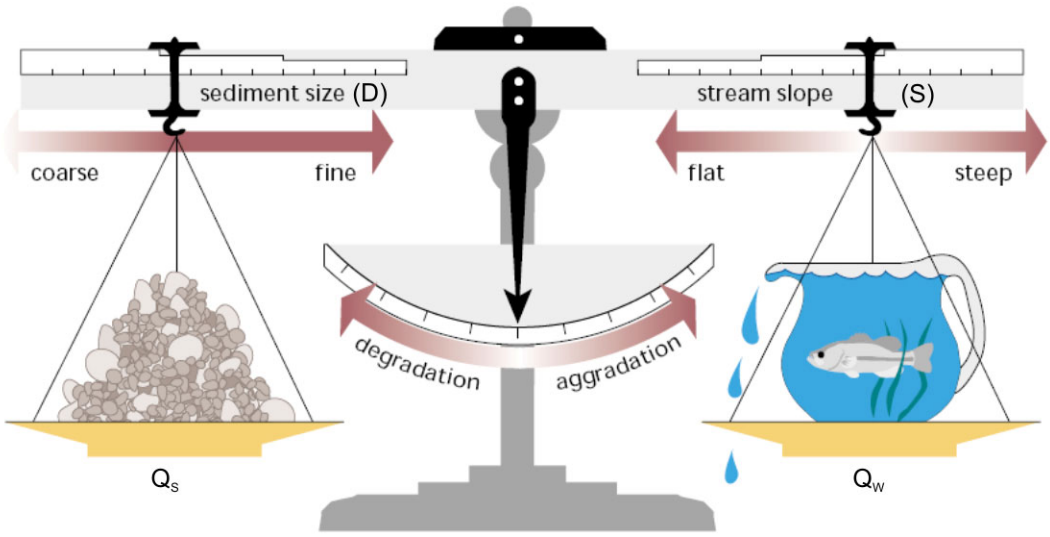

Figure 2.2 Factors Affecting Channel Degradation and Aggradation (FISRWG, 1998)

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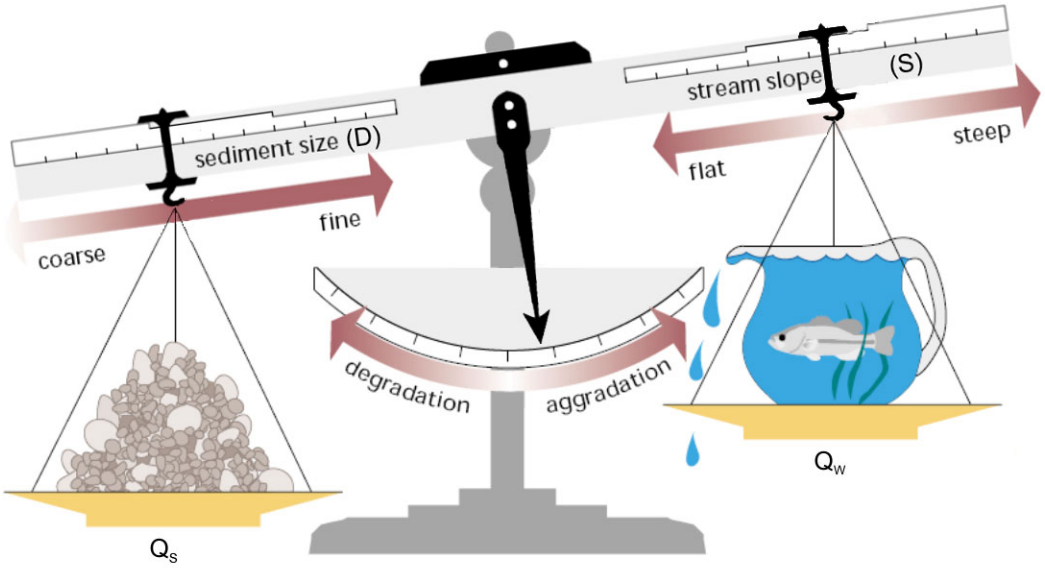

Figure 2.3 Example of Aggradation (Adapted from FISRWG, 1998)

Longitudinal View of Channels

The geomorphic processes that define the size and shape of channels can be observed in large and small scale longitudinal views. The overall longitudinal view of many streams can be divided into three general zones (Schumm, 1977):

- *Headwater zone*—characterized by steep slopes with sediment erosion as the most dominant geomorphic process.
- *Transfer zone*—characterized by more sinuous channel patterns and wider floodplains with sediment transfer as the most dominant geomorphic process.
- *Deposition zone*—characterized by lower slope and higher channel sinuosity than the other zone and is the primary deposition area for watershed sediment.

Key characteristics of each zone are summarized in Figure 2.4.

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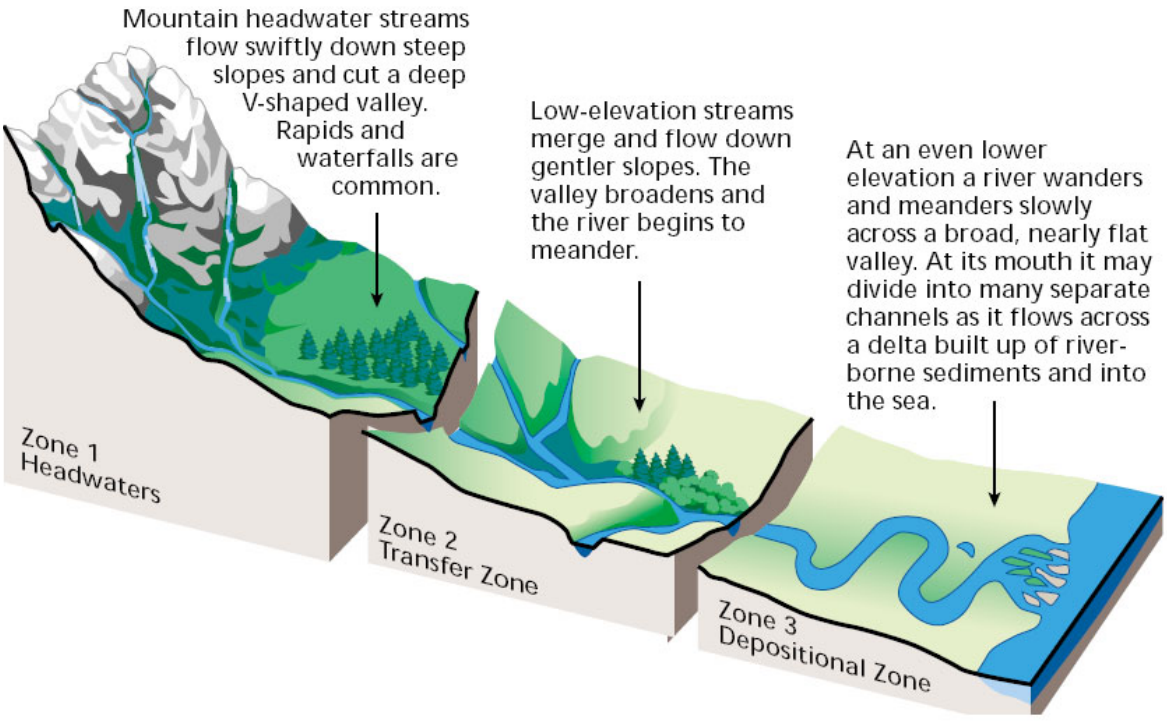

Figure 2.4 Three Longitudinal Profile Zones (FISRWG, 1998)

At a smaller scale, natural-forming channels are usually characterized by a series of riffles, pools, and runs. These structures are primarily associated with the thalweg, which meanders within the channel (Figure 2.5). Riffles are shallow, turbulent, and swiftly flowing stretches of water that flow over partially or totally submerged rocks. Deeper areas at stream bends are the pools and can be classified as large-shallow, large-deep, small-shallow, and small-deep. Runs are the sections of a stream with little or no surface turbulence that connect pools and riffles.

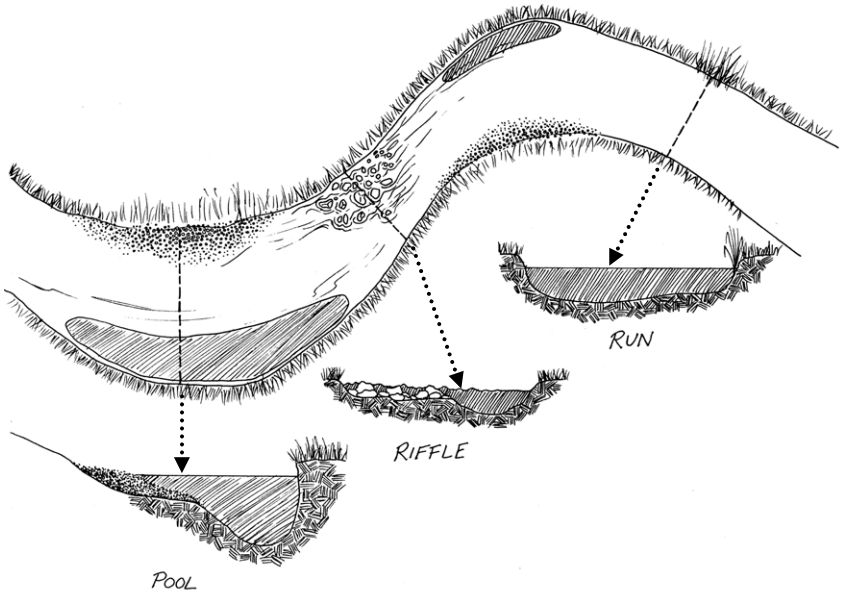

Figure 2.5 Overview of a Pool, Riffle, and Run (USEPA, 1997b)

The distribution in streamflow velocity and stream power throughout the riffle/pool/run sequence impact the geomorphic tasks. The stream bottom of a riffle is at a higher

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elevation than the stream areas surrounding it. Consequently, the water flowing in a run from riffle to pool has the highest velocity near the center of the channel just under the surface (i.e., away from the roughness associated with channel boundaries). On reaching a bend, angular momentum forces the highest velocity flow to the outside of the bend and, given enough tractive stress, causes erosion to the bank (cutbanks). Meanwhile on the inside of the bend deposition often occurs because of decreasing flow velocity. Importantly, these and other characteristics of the riffle/pool/run sequence create unique habitats which allow different species to live, reproduce, and feed.

Disruption of Dynamic Equilibrium

Changes caused by (or exacerbated by) hydromodification projects and other human activities can lead to a disruption of the dynamic equilibrium of the stream channel. If, for example, a modification occurs that causes a change in sediment discharge, channel slope, or streamflow, one or more of the other variables will be imbalanced and the channel will usually try to adjust and regain equilibrium by either increasing sediment discharge by scouring the bottom or eroding its banks (degradation) or decreasing sediment discharge by depositing sediment on the bottom (aggradation) (Biedenharn et al., 1997; Watson et al., 1999). In some cases, alterations to a stream channel can result in local or system-wide channel instability (FISRWG, 1998).

General Impacts of Channelization and Channel Modifications

Channelization and channel modifications are undertaken for many purposes including flood control, navigation, drainage improvement, and reduction of channel migration potential. Modifications also occur in association with the installation of culverts and bridges, urbanization of the watershed, and agricultural drainage. These changes may result in several physical and chemical impacts.

Physical Impacts

The most significant physical impact of channelization and channel modifications is the movement or deposition of sediment. Sediment erodes from stream banks and beds, is washed downstream in faster moving water, deposited in areas of slower flows, and transported into new areas of streams or other receiving waters. Critical habitat can be changed when channelization or channel modification projects alter the dynamic equilibrium of a stream and change sediment transport or deposition characteristics. Re-establishing equilibrium may take some time to occur and have long-lasting effects to habitat and water quality conditions.

Channel modification and channelization can lead to increased erosion in some areas of the stream, which produces sediment. Sediment can be dislodged and transported directly from the waterbody's shoreline, bank, or bottom. Sediment being transported by a stream is referred to as the sediment load, which is further classified as the bed load (those particles moving on or near the bed, or bottom of the channel) and the suspended load (those particles moving in the water column). Hydromodification typically results in more uniform channel cross-sections, steeper stream gradients, and reduced average pool depths.

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An increase in the sediment load could lead to increased turbidity, which then may cause an increase in stream temperature because the darker sediment particles absorb heat (USEPA, 1997b). Changes in water temperature can influence several abiotic chemical processes, such as dissolved oxygen concentrations, sorption of chemicals onto particles, and volatilization rates. Water temperature influences reaeration rates of oxygen from the atmosphere. Dissolved oxygen concentrations in water are inversely related to temperature; solubility of oxygen decreases with increasing water temperature. In addition, sorption of chemicals to particulate matter and volatilization rates are influenced by changes in water temperature. Sorption often decreases with increasing temperature and volatilization increases with increasing temperature (University of Texas, 1998).

An increased sediment load that contains significant organic matter can increase the sediment oxygen demand (SOD). The SOD is the total of all biological and chemical processes in sediment that consume oxygen (USEPA, 2003a). These processes occur at or just below the sediment-water interface. Most of the SOD at the surface of the sediment is due to the biological decomposition of organic material and the bacterially facilitated nitrification of ammonia, while the SOD several centimeters into the sediment is often dominated by the chemical oxidation of species such as iron, manganese, and sulfide (Walker and Snodgrass, 1986 from USGS, 1997; Wang, 1980). Increases in SOD can lead to lower levels of dissolved oxygen, which can be harmful to aquatic life.

A channel that is deepened or widened can result in slower and/or shallower flow. Reduced stream velocities can result in more sediment deposits to a stream segment. When more sediment is deposited in an area of a stream, critical habitats can be buried, channels may become unstable, and flooding increases. In tidal areas, channel modification activities, such as deepening a channel to allow for larger ships to access a shoreline, may require frequent maintenance to remove accumulating sediment because of changes in flow patterns.

Chemical Impacts

A variety of chemicals can be introduced into surface waters when channelization and channel modification activities alter flow and sediment transport characteristics. Nutrients, metals, toxic organic compounds, pesticides, and organic materials can enter the water in eroding soils along banks and move throughout a stream as flow characteristics change. Changing temperatures and dissolved oxygen levels may lead to alterations in the bioavailability of metals and toxic organics. Complex chemical conditions can significantly change when stream flow and sedimentation characteristics change, resulting in new and/or potentially harmful forms of chemicals affecting instream or benthic organisms.

It is important to remember that many of the physical and chemical changes are interrelated. For a more detailed discussion of the impacts associated with chemical and physical changes to surface waters, see *Restoration of Aquatic Ecosystems* (NRC, 1992). The following discussion provides examples of impacts that may be present as a result of different kinds of channelization. For a more detailed discussion of types of channelization projects and potential impacts, see Watson et al. (1999).

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Biological and Habitat Impacts

Pools, riffles, and runs create a mixture of flows and depths and provide a variety of habitats to support fish and invertebrate life (USEPA, 1997b). The shallow, turbulent, and swiftly flowing stretches of riffle water are well oxygenated and have a "patchy distribution of organisms," which means that different types of organisms are naturally found in different parts of the riffle. Pools can also be large or small and shallow or deep and support a wide variety of aquatic species. Sediments can deposit in pools, which can lead to the formation of islands, shoals, or point bars.

Changes in habitat and biological communities following hydromodification of a channel can be highly site-specific and complex. The physical and chemical alterations resulting from channelization impact various habitats and biological communities, including instream algae, fish, macroinvertebrate populations, and bank or floodplain vegetation. Mathias and Moyle (1992) compared unchannelized and channelized sections of the same stream and found a much higher diversity of many organisms, including aquatic invertebrates, fish, and riparian vegetation, in the unchannelized sections of the stream. Adams and Maughan (1986) compared the benthic community in a small headwater stream, prior to and after channelization. They found that the pathways of organic input shifted from materials associated with leaf fall and runoff to materials associated with periphyton production. Accompanying this change was a shift of the assemblage from shredder domination to grazer domination and a decrease in diversity. Biological and habitat impacts caused by channelization can result from increased stream velocity, decreases in pool and riffle habitat complex, decrease in canopy cover, increase in the solar radiation reaching the channel, channel incision, and increases in sediment.

Channelization of a stream may increase velocity due to increased channel slope and decreased friction with the bank and bed material. Changes in the velocity may cause an impact to organisms within the channel. For example, fish may have to expend more energy to stay in swifter currents and their source of food may be swept downstream. Studies have demonstrated that fisheries associated with channelized streams can be far less productive that those of non-channelized streams (Jackson, 1989). Increased rates of erosion as a result of increased velocities downstream of a channelization feature can also create unstable streambanks, which could lead to increased streambank erosion, higher risks of flooding, and ultimately negative impacts to aquatic organisms.

Channelization can result in a more uniform stream channel that is void of the pool and riffle habitat complex or obstructions, such as woody debris inputs. As repeatedly observed, this can result in changes to the biological community. Negishi et al. (2002) observed a decrease in the total density of macroinvertebrates in the middle of a channelized stream and a decrease in taxon richness in the middle and edge of a channelized stream. An overall reduction in habitat heterogeneity is likely responsible for the reduction in species diversity and the increased abundance of those species favored by the altered flows that is typically observed (Allan, 1995). On medium-sized, unregulated rivers, Benke (2001) found that habitat-specific invertebrate biomass was highest on snags, followed by the main channel and then the floodplain. It was concluded that invertebrate productivity from these habitats has likely been significantly diminished as a result of snag removal, channelization, and floodplain drainage (Benke, 2001).

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The survival of the Gulf Coast walleye (*Stizostedion vitreum*) relies on the availability of appropriate spawning habitat, such as large woody debris, that locally reduce current velocity. Channelization and the removal of structures have been identified as activities of concern that could threaten the survival of the species (VanderKooy and Peterson, 1998). In one experiment, an assessment of water quality using environmental indices, such as macroinvertebrate communities, found that channelization and deforestation resulted in a completely different and less varied biocommunity (Bis et al., 2000). A lower persistence of the macroinvertebrate assemblage in the channelized stream was attributed to the lower availability of flow such as backwaters and inundated habitats (Negishi et al., 2002). In a study by Kubecka and Vostradovsky (1995), low fish populations were attributed to channelization of the riverbed.

The channelization of a river can also result in a decrease in canopy cover and an increase in the solar radiation reaching the channel. Bis et al. (2000) found that an increase in incident radiation on a river resulted in increased algal productivity and a significant decrease in scrapers, a macroinvertebrate that feeds on periphyton or algae growing on plant surfaces. Increased water temperatures can also lead to a shift in the algal community to predominately planktonic algal communities, which disrupts the aquatic food chain (Galli, 1991). The combination of increased water temperatures and loss of riparian vegetation falling into the stream (which provides both food and cover) may be responsible for the decrease in macroinvertebrates. Increased solar radiation on a channelized stream can act to decrease productivity by reaching the level of photoinhibition; a decrease in productivity due to excessive amounts of solar radiation. The temperature of the water can also be increased to the extent that it adversely impacts organisms. Elevated temperatures disrupt aquatic organisms that have narrow temperature limits, such as trout, salmon, and many aquatic insects.

Incision of a channel, a common impact of channelization, disconnects the channel from the floodplain by lowering the riverbed relative to the floodplain and decreasing the occurrence of overbank flow. Channel incision or downcutting has rarely been found to directly affect the biotic ecosystem, but indirect changes in habitat conditions are significant. Channel incision decreases habitat heterogeneity and, as a result, biodiversity (Tachet, 1997). An analysis of forest overstory, understory, and herbaceous strata along a channelized and unchannelized stream showed that there was a difference in terms of size-class structure and woody debris quantity (Franklin et al., 2001). Loss of woody vegetation along riparian zones on a channel that is incised because of upstream channelization was attributed to a decrease in over bank flooding and a lowering of the water table as the stream became incised (Steiger et al., 1998). A comparison of a regulated and an unregulated river in Colorado's Green River Basin found a difference in riparian vegetation composition. The regulated river supported banks with wetland species that survive in anaerobic soils and terraces with desert species adapted to xeric soil conditions. The unregulated river supported riparian vegetation that changed along a more gradual environmental continuum from a river channel to a high floodplain (Merritt and Cooper, 2000).

Sediment affects the use of water in many ways. When the rate of erosion changes, transport and deposition of sediment also changes. Excessive quantities of sediment can bury benthic organisms and the habitat of fish and waterfowl. Suspended solids in the water reduce the amount of sunlight available to aquatic plants, cover fish spawning areas and food supplies, fill

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rearing pools, reduce beneficial habitat structure in stream channels, smother coral reefs, clog the filtering capacity of filter feeders, and clog and harm the gills of fish. Those fish species that rely on visual means to get food may be restricted by increased turbidity. Sedimentation effects combine to reduce fish, shellfish, coral, and plant populations and decrease the overall productivity of lakes, streams, estuaries, and coastal waters.

Impacts Associated with Specific Hydromodification Actions

Channel Straightening and Deepening

Channels are straightened for a multitude of reasons, such as directing water away from a particular structure or area and reducing local flooding. Channelization that involves straightening of the stream channel increases the slope of the channel, which results in higher discharge velocities. Impacts associated with increased water velocities include more streambank and streambed erosion, higher sediment loads, changes in pools, riffle, and run structure, and increased transport of nutrients and other pollutants (FISRWG, 1998; Simons and Senturk, 1992).

Channelization can also result in alterations to the base level of the stream, including channel downcutting or incision of a section of the stream, which raise the height of the floodplain relative to the riverbed and decrease the frequency of overbank flow. When streams reach flood stage and flow into the floodplain, velocities decrease. The reduction in overbank flow reduces sediment deposition and the sediment storage potential of the floodplain (Wyzga, 2001). A change in the downstream base level of a stream can create an unstable stream system (Biedenharn et al., 1997).

Headcutting is the deepening of a waterway caused by channelization or localized stream-bed mining. Headcutting severely impacts the physical integrity of a stream, as streambanks become unstable and are more prone to eroding and sloughing. Bank failures may result, removing streamside vegetation and introducing significant amounts of sediment into the waterway. As sediments build on the stream bottom, natural substrate is covered and stream depth decreases. Water quality often diminishes as temperatures rise due to less shading by riparian vegetation and increased water surface area with decreased depth. The rapid alteration to stream habitat caused by headcutting is usually detrimental to aquatic wildlife. Various organizations, such as the U.S. Army Corps of Engineers, the Natural Resources Conservation Service (NRCS), and the Missouri Department of Conservation, are involved in projects to reduce headcutting (CSU, n.d.; MDC, 2007; USGS, 2000).

Channel Lining

The sides of channels can be lined with materials such as metal sheeting, concrete, wood, or stone to prevent erosion of a particular section of stream channel or stream bank. The artificially lined areas can reduce the friction between the channel and flowing water, leading to an increase in velocity. The increased velocity and thus the increased erosive potential of the flowing water are not able to erode the artificially lined channel area and can result in augmented erosion downstream as well as increased downstream flooding (Brookes, 1998). Lining the channel also removes aquatic habitat and important substrates that are essential to aquatic life.

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Channel Narrowing

Narrowing of a stream channel often occurs when flood control measures such as levees and floodwalls are implemented. By narrowing a stream channel, the water is forced to flow through a more confined area and thus travels at an increased velocity (FISRWG, 1998). The increased velocity in turn increases the stream's erosive potential and ability to transport sediment. This can lead to increased erosion of the streambank and shoreline in downstream locations.

When a channel is made narrower, the water depth increases and the surface area exposed to the solar radiation and ambient temperature decreases, especially in the warmer months. This can cause a decrease in the water temperature. Increased depth may also reduce the surface area of the water in contact with the atmosphere and affect the transfer of oxygen into the water.

In a naturally flowing stream, floods are responsible for such processes as redistributing sediment from the river bottom to form sandbars and point bar deposits. Stream channel modifications to reduce flood damage, such as levees and floodwalls, often narrow the stream width, increasing the velocity of the water and thus its erosive potential. This can lead to increased erosion of the streambank and shoreline in downstream locations (FISRWG, 1998).

Channel Widening

Channel widening is often performed to increase a channel's ability to transport a larger volume of water. The design is often based on volumes of water that occur during flood events. The design of a channel modification project to increase the channel's ability to transport a large volume of water will determine the characteristic of the water flow. The widening of a channel can result in a channel with a capacity to transport water that far exceeds the typical daily discharge. This results in a typical flow that is shallow and wide. As a result of increased contact with the streambed and streambank, there is increased friction and a decreased water velocity. The decrease in velocity causes sediment to settle out of the water column and accumulate within the stream channel. This accumulation of sediment can decrease the capacity of the stream channel. The decreased depth and increased surface area of the water exposed to solar radiation and ambient air temperatures can lead to an increase in water temperature. A change in water temperature can influence dissolved oxygen concentrations as dissolved oxygen solubility decreases with increasing water temperature.

Where tidal flow restrictors cause impoundments, there may be a loss of streamside vegetation, disruption of riparian habitat, changes in the historic plant and animal communities, and decline in sediment quality. Restricted flows can impede the movement of fish or other aquatic life. Flow alteration can reduce the level of tidal flushing and the exchange rate for surface waters within coastal embayments, with resulting impacts on the quality of surface waters and on the rates and paths of sediment transport and deposition.

Culverts and Bridges

The presence of culverts and bridges along a channel can have an impact on the physical and chemical qualities of the water. A culvert can be in the form of an arch over a channel or a pipe that encircles a channel, and it functions to direct flow below a roadway or other land use. A culvert or the supports of a bridge can confine the width of a channel forcing the water to flow in a smaller area and thus at a higher velocity. Impacts associated with a higher flow velocity

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include increased erosion. An arch culvert maintains the natural integrity of the stream bottom. In addition, as compared with the natural substrate that can be found using an arch culvert without concrete inverts (floors), a pipe culvert may create less friction with the water flow and result in an increased flow velocity. The chemical and physical changes associated with increased erosion and sediment transport capacity would then result.

The culvert acts as a fixed point with a fixed elevation within the stream channel and as the stream attempts to adjust over time, the culvert remains stationary. Placement of this type of structure disturbs the natural equilibrium of a channel. A culvert sometimes may have beneficial attributes when it acts as a grade control structure, and as such, may serve to prevent upstream migrating incision (headcutting) from moving further up the channel. Depending on the watershed processes, the culvert may act to preserve the natural equilibrium of a channel.

Urbanization

As humans develop watersheds, the proportions of pervious and impervious land within the watershed change (most often increasing impervious areas and decreasing pervious areas). Development also results in reductions in vegetative cover in exchange for increases in houses, buildings, roads, and other non-vegetative cover. The result is a change in the fate of water from rainfall events. Generally, as imperviousness increases and vegetative cover is lost:

- Runoff increases
- Soil percolation decreases
- Evaporation decreases
- Transpiration decreases

Increased volumes of runoff resulting from some types of watershed development can result in hydraulic changes in downstream areas including bank scouring, channel modifications, and flow alterations (Anderson, 1992; Schueler, 1987). The resulting changes to the distribution, amount, and timing of flows caused by flow alterations can affect a wide variety of living resources. As urbanization occurs, changes to the natural hydrology of an area are inevitable. During urbanization, pervious spaces, including vegetated and open forested areas, are converted to land uses that usually have increased areas of impervious surface, resulting in increased runoff volumes and pollutant loadings. Hydrologic and hydraulic changes occur in response to site clearing, grading, and change in landscape. Water that previously infiltrated the ground and was slowly released runs off quickly into stream networks. Development, with corresponding increases in imperviousness, can lead to:

- Increased magnitude and frequency of bankfull and subbankfull floods
- Dimensions of the stream channel that are no longer in equilibrium with its hydrologic regime
- Enlargement of channels
- Highly modified stream channels (from human activity)
- Upstream channel erosion that contributes greater sediment load to the stream
- Reduced dry weather flow to the stream
- Decreased wetland perimeter of the stream
- Degraded in-stream habitat structure

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- Reduced large woody debris
- Increased stream crossings and potential fish barriers
- Fragmented riparian forests that are narrower and less diverse
- Decline in water quality
- Increased summer stream temperatures
- Reduced aquatic diversity

The hydraulic changes associated with urbanization have often been addressed with channelization and channel modification as a solution. Evaluating impacts from urbanization on a watershed scale and planning solutions on the same watershed scale can often prevent the transference of upstream problems to downstream locations. There are a variety of management activities that can reduce the impacts associated with urban development. When these urban impacts are reduced, additional hydromodification impacts, such as channelization and channel modification or streambank and shoreline erosion effects, may be reduced. Changes in urban development practices that result in reduced sediment in runoff can enhance reservoir quality and lessen the need for management activities to reduce nonpoint source impacts associated with the operation of dams.[1]

Agricultural Drainage

Some activities, including channelization and channel modification, that take place within a watershed, can lead to unintended adverse effects on watershed hydrology. Even when the intended effect of the watershed activity is to reduce pollution or erosion for an area within a watershed, the impact of the project to the entire watershed's hydrology should be evaluated. Since hydrology is important to the detachment, transport, and delivery of pollutants, better understanding of these effects can lead to reduction of nonpoint source pollution problems (USEPA, 2003b).

One example of an activity that has been shown to provide localized nonpoint source benefits, but can negatively affect the hydrology of a watershed, is an agricultural drainage system. The main purpose of agricultural drainage is to provide a root environment suitable for plant growth, but it can also be used as a means of reducing erosion and improving water quality. Despite the localized positive effects of drainage, when drainage water is poor in quality or contains elevated levels of pollutants, adverse impacts may occur downstream within a watershed. Concentrations of salts, nutrients, and other crop-related chemicals, such as fertilizers and pesticides can damage downstream aquatic ecosystems. Many agricultural drainage systems include drain tiles placed strategically throughout a field to create a network of gravity fed drains. The drain tiles empty into a collection pipe that drains to a waterbody nearby. With the drain system in place and operating, water will leave the affected area quicker and at one or more focused points. Water from the drainage system may erode the banks of unlined surface drains, contribute to flashier runoff events in the receiving water or downstream, and increase the load of sediment in drainage water (USEPA, 2003b).

[1] For additional information on hydrologic problems associated with urbanization and management practices that address urbanization issues, refer to *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (USEPA, 2005d): http://www.epa.gov/owow/nps/urbanmm/index.html.

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Because of these adverse effects, drainage planners should analyze effluents from these systems for nutrients and pesticides to determine possible downstream impacts. Care should also be taken with drainage water so that it does not negatively alter the hydrology of a watershed (FAO, 1997). The degree to which management activities, such as agricultural drainage systems, affect watersheds beyond their intended purpose should be evaluated. In some cases, a thorough assessment and thoughtful discussion with key stakeholders is enough to evaluate the potential impacts of a project on hydrology. However, in many instances, some form of modeling is probably needed to integrate various small and large impacts of watershed activities. For more information on agricultural drainage and management practices related to agricultural drainage, refer to *National Management Measures for the Control of Nonpoint Pollution from Agriculture* (USEPA, 2003b).[2]

Shorelines

A shoreline is defined as the areas between low tide and the highest land affected by storm waves. The shape and position of shorelines are constantly being modified by the processes of erosion and deposition by waves and currents (Tarbuck and Lutgens, 2005). NOAA's Coastal Services Center defines shoreline as "the line of contact between the land and a body of water. On Coast and Geodetic Survey nautical charts and surveys the shoreline approximates the mean high water line" (NOAA, 2006).

The shoreline can be divided into three major areas:

1) *Coast*—the land inland from the base of the sea cliff (produced by the undercutting of bedrock at sea level by wave erosion).
2) *Beach (shore)*—the area between low tide level and dunes, sea cliff, or permanent vegetation. This can be separated into backshore and foreshore.
3) *Offshore*—the area continuously underwater, which can include a wave build platform.

Shoreline Processes

As mentioned above, the shape and position of shorelines are constantly modified by erosion and deposition by waves and currents. Waves are agents of erosion, transportation, and deposition of sediments. Waves can be formed by the following processes (Tulane University, n.d.; University of Alabama, 2006):

- *Wind-generated waves*—formed by shear stress between water and air when the wind speed is higher than about 3 km/hr. Factors that determine the size of waves are wind velocity, wind duration, and fetch (distance the wind blows over a continuous water surface).
- *Displacement of water*—can be caused by activities such as landslides.
- *Displacement of seafloor*—can be caused by faulting and volcanic eruptions.

[2] Available online at: http://www.epa.gov/owow/nps/agmm/index.html.

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Wave refraction occurs where wave fronts approach the shore at an angle, but are bent to become more parallel to the shoreline by frictional drag on the bottom. The part of the wave in shallow water slows down because of bottom friction, while the part in the deep water keeps moving at regular speed. Wave refraction causes headland erosion and deposition in bays (Tulane University, n.d.; University of Alabama, 2006).

Nearshore currents occur in the area from the shoreline to beyond the surf zone and consist of (Tulane University, n.d.; University of Alabama, 2006):

- *Longshore currents* move parallel to shore in the same general direction as the approaching waves. They are produced by the movement of oblique waves in the surf zone, and can transport large amounts of sediment by longshore drift.
- *Rip currents* are strong, narrow currents of surface water that flow seaward through the surf into deeper water. The currents develop in areas with lower wave heights (deeper water depths).

Deposition and Erosion

Wave erosion and rivers that open into the ocean or lakes can deposit sediment, transported by longshore currents, developing the following depositional features (Tulane University, n.d.; University of Alabama, 2006):

1) *Beaches*—Any strip of sediment that extends from the low-water line inland to a cliff or zone of permanent vegetation, which is built of material eroded by waves from the headlands, and material brought down by rivers that carry the products of weathering and erosion from the land masses. Beaches are protected from the full force of water waves but are continually modified by wave and current erosion.
2) *Spits*—A narrow ridge or embankment of sediment forming a finger-like projection from the shore into the open ocean. Spits typically develop when the sediment being carried by long-shore drift is deposited where water becomes deeper, such as the mouth of a bay.
3) *Baymouth bars*—Sand bars that form as a result of longshore drift and completely cross a bay, sealing it off from the open ocean.
4) *Tombolo*—A ridge of sand that connects two islands or an island with the mainland, formed as the result of wave refraction around an island.
5) *Tidal inlet*—A break in a spit or baymouth bar, caused by storm erosion, through which tidal currents rush.
6) *Barrier islands*—Low offshore ridges of sediments that parallel the coast and are separated from the mainland by lagoons.

Wave erosion can also wear away land features, causing the following types of features to form (Tulane University, n.d.; University of Alabama, 2006):

1) *Sea cliffs*—formed by storm wave erosion which undercuts higher land, making it susceptible to mass wasting. Sea cliffs can erode very slowly or rapidly, depending on the rock type and wave energy.
2) *Wave-cut terrace or platform*—produced by the retreat of a sea cliff which slopes gently in a seaward direction.

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3) *Headlands*—occur due to the seaward projections of shore eroded by wave refraction.

Common Natural and Anthropogenic Causes of Coastal Land Loss

Primary causes of coastal land loss, including both natural and anthropogenic causes, are summarized in Table 2.1 below (USGS, 2004).

Table 2.1 Common Causes of Coastal Land Loss

Agent	Examples
Natural Causes	
Erosion	Waves and currents, storms, landslides
Sediment reduction	Climate change, stream avulsion, source depletion
Submergence	Land subsidence, sea-level rise
Wetland deterioration	Herbivory, freezes, fires, saltwater intrusion
Anthropogenic Causes	
Transportation	Boat wakes, altered water circulation
Coastal construction	Sediment deprivation (bluff retention), coastal structures (jetties, groins, seawalls)
River modification	Control and diversion (dams, levees)
Fluid extraction	Water, oil, gas, sulfur
Climate alteration	Global warming and ocean expansion, increased frequency and intensity of storms
Excavation	Dredging (canals, pipelines, drainage), mineral extraction (sand, shell, heavy mines)
Wetland destruction	Pollutant discharge, traffic, failed reclamation, burning

Shorelines can also experience increased rates of erosion as a result of hydromodification activities. Alterations to the sediment sources for beaches can result in erosion. The sediment supplied to beaches or shorelines can come from a variety of sources including rivers, cliff and rocky foreshores, the seafloor, or windblown dune materials. Beaches and shorelines at the mouth of a river are often replenished by fluvial sediment. When changes within the river system decrease the sediment load carried to the mouth of the river, the result may be decreased sediment supplies to the shoreline or beach. While the design of each hydromodification system determines the impacts that will ensue, streambank and shoreline erosion is a common consequence.

Impacts Associated with Dams

The physical presence and operation of dams can result in changes in water quality and quantity. Some of the water quality impacts include changes in erosion, sedimentation, temperature, dissolved gases, and water chemistry. Examples of biological and habitat impacts, which may result from a combination of physical and chemical changes, include loss of habitat for existing or desirable fish, amphibian, and invertebrate species; changes from cold water to warm water species (or inversely, changes from warm water to cold water species); blockage of fish passage; or loss of spawning or necessary habitat.

The impacts associated with dams occur above (upstream) and below (downstream) the dam. Upstream impacts occur primarily in the impoundment/reservoir created by the presence and operation of the dam. The area and depth of the impoundment will determine the extent and

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complexity of the upstream and downstream impacts. For example, small, low-head dams with little impounded areas will exhibit different impacts than large storage dams. Sedimentation and fish passage issues at the smaller, low-head dam contrast with sedimentation, temperature, fish passage, flow regulation, and water quality issues that may be associated with the larger storage dam. The existence of the dam and associated impoundment results in much different water quality interactions than those associated with the preexisting naturally flowing streams or rivers.

Above dams, activities within the watershed can have significant impacts on water quality within impoundments and in releases from dams to downstream areas. Watershed activities, such as agricultural land use, unpaved rural roads, forestry harvesting, or urbanization can lead to changes in runoff water quantity and quality. Agricultural and forestry practices that lead to sediment-laden runoff may result in increased sediment accumulation within an impoundment. Chemicals (e.g., pesticides and nutrients) that are applied on agricultural crops can be carried with sediment in runoff. Increases in urbanization that result in more impervious areas within a watershed often result in dramatic changes in the quantity and timing of runoff flows. These external sources are integrated by the dam and may result in short- and long-term water quality changes within an impoundment and dam releases.

Water quality in reservoirs and releases from dams are closely linked and scrutinized to uses of the water. Often, there are multiple potential users who may have differing quality needs and perceptions. Management of dams includes balancing dam operations, watershed activities, reservoirs, and downstream water and uses. Dortch (1997) provides an excellent assessment on water quality considerations in *Reservoir Management*. Dortch (1997) notes the following about water quality:

- *Temperature* regulates biotic growth rates and life stages and defines fishery habitat (warm, cool, and cold water).
- *Oxygen* sustains aquatic life.
- *Turbidity* affects light transmission and clarity.
- *Nutrient enrichment* is linked to primary productivity (algal growth) and can cause oxygen depletion, poor taste, and odor problems.
- *Organic chemicals and metals* may be toxic and accumulate when bound to sediment that settles in the reservoir.
- *Total dissolved solids* may be problematic for water supplies and other users.
- *Total suspended solids* are a transport mechanism for nutrients and contaminants. Solids may settle in reservoirs and displace water storage volume.
- *pH* regulates many chemical reactions.
- *Dissolved iron, manganese, and sulfide* can accumulate in reservoir hypolimnions that are depleted of oxygen and can cause water quality problems in the reservoir and release water.
- *Pathogens* include bacteria, viruses, and protozoa that can cause public health problems.

Water uses include water supply, flood control, hydropower, navigation, fish and wildlife conservation, and recreation (Dortch, 1997). All of the uses have varying water quality requirements, ranging from almost none for flood control to high quality needs for water supply, fish and wildlife conservation, and recreation.

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Dams act as a barrier to the flow of water, as well as to materials being transported by the water. This can impact water quality both in the impoundment/reservoir created by the dam and downstream of the dam. Alteration to the chemical and physical qualities of water held behind a dam is often a function of the retention time of a reservoir or the amount of time the water is retained and not able to flow downstream. Water held in a small basin behind a run-of-river dam may undergo minimal alteration. In contrast, water stored for months or even years behind a large storage dam can undergo drastic changes that impact the downstream environment when released (McCully, 2001). A storage dam that impounds a large reservoir of water for an extended time period will cause more extensive impacts to the physical and chemical characteristics of the water than a smaller dam with little storage capacity.

Several physical changes are possible when dams are introduced into a stream or river, including changes in:

- Instream water velocities
- Timing and duration of flows
- Flow rates
- Sediment transport capacities
- Turbidity
- Temperature
- Dissolved gasses

Similarly, changes to water chemistry are possible as a result of damming rivers and streams, including changes to:

- Nutrients
- Alkalinity and pH
- Metals and other toxic pollutants
- Organic matter

The nature and severity of impacts will depend on the location in the river or stream, in relation to the upstream or downstream side of the dam, the storage time of the impounded water, and the operational practices at the dam. Many of the above impacts are also interrelated. For example, changes in temperature may result in changes in dissolved oxygen levels or changes to pH may result in changes to nutrient dynamics and the solubility of metals.

Water Quality in the Impoundment/Reservoir

As water approaches a dam from upstream, the stream velocity slows down considerably, creating a lake-like environment. The water builds up behind the dam and forms a basin (i.e., impoundment, reservoir) that is deeper than the previous stream flow. The height of the dam and its operational characteristics will determine how much water is stored and the length of storage. The extent of impacted stream area above the dam is influenced by the size of the dam installed, how much water is released, and how often water is released. For example, a small run-of-the river dam constructed to divert water for a millrace will have minimal storage capacity and may only store water for several hours or less. In this case, instream water velocities may decrease,

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but with minimal upstream and downstream effects. Thus, the length of upstream channel that is impacted should be relatively small.

In contrast, a large flood control dam and reservoir may have many months of storage and severely alter instream velocities for long distances upstream. Topography surrounding the original stream channel and storage volume will be important parameters determining the length of stream channel affected by the large dam. The volume and frequency of discharges from the dam will also determine how much of the upstream channel is impacted with lower instream velocities as a result of the dam.

Dams act as a physical barrier to the movement of suspended sediments and nutrients downstream (McCully, 2001). When the stream flow behind a dam slows, the sediment carrying capacity of the water decreases and the suspended sediment settles onto the reservoir bottom. Any organic compounds, nutrients, and metals that are absorbed to the sediment also settle and can accumulate on the reservoir bottom.

Turbidity associated with sediment varies, depending on particle sizes of the sediment and the length of time water is held. Longer holding times in the reservoir could result in periodic episodes of high turbidity from upstream storm events that carry sediment rich stormwater, especially if the sediment is predominantly very fine clay particles. Turbidity may also increase as a result of planktonic algal growth in a reservoir.

The increased depth of the water in reservoirs reduces the volume of water exposed to solar radiation and ambient temperatures. Once the flow is controlled by the operation of the dam and the reservoir is mixed primarily by winds, temperature variations can become established within the reservoir. This can cause thermal stratification where, compared to the bottom, surface layers become warmer in the summer and cooler in the winter. In deeper reservoirs, the deepest layers may become nearly constant in temperature throughout the year. Changes in temperature can impact water quality and biological processes in the reservoir, including changes in predominant fish species. Since the density of water is a function of water temperature, thermal stratification creates density gradients within the impoundment. As density gradients become established, exchanges of gases and chemicals between gradients decrease. In a stratified impoundment well aerated surface waters often do not mix with hypolimnetic water and result in poorly oxygenated strata below the surface waters.

Nutrient transport is affected by dams, which can trap the nutrients in the impoundment/reservoir. When nutrients accumulate, the reservoir might become nutrient enriched (i.e., eutrophic). In warmer seasons, concentrated nutrients in waters exposed to light can promote growth of algae and other aquatic plants, which consume nutrients and release oxygen (during photosynthesis) and carbon dioxide (during respiration). When algae and other aquatic plants complete their growth cycles, they die and sink to the bottom of an impoundment. Microbial decomposition of the highly organic dead plant materials may release nutrients back into the water column. Microbial decomposition of the dead plant and algal cells in aerobic conditions consumes oxygen, which can rapidly deplete bottom waters of dissolved oxygen. Under anaerobic conditions, microbial decomposition can produce potentially toxic concentrations of gases, such as hydrogen sulfide.

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The operational characteristics of a dam will influence nutrient levels in water releases. For example, water released from the surface of an impoundment may contain seasonally varying forms and levels of nutrients. During periods of algal growth, releases may contain lower levels of dissolved nutrients and higher levels of organic materials (algae) containing nutrients. When algal growth is not occurring, releases may contain higher levels of dissolved nutrients.

Anaerobic (oxygen-depleted) environments, which are typical of deeper waters in reservoirs, can result in several changes to the water chemistry. For example, as by-products of organic matter decomposition in an anaerobic environment, ammonia and hydrogen sulfide concentrations can become elevated (Freeman, 1977; Pozo et al., 1997). Highly acidic (or highly alkaline) waters tend to convert insoluble metal sulfides to soluble forms, which can increase the concentration of toxic metals in reservoir waters (FISRWG, 1998).

Changes in one water quality parameter in a reservoir/impoundment can impact other water quality parameters, causing a cycling of events to occur. For example, increased sedimentation (from internal or external sources) can lead to more organic matter remaining in the reservoir, resulting in more biochemical oxygen demand, potentially lower dissolved oxygen, and other changes to water chemistry, such as pH and metal solubility. Periodic growth and then die-off of aquatic plants and algae creates additional variable cycling of organic matter in the reservoir. The following references may provide additional detail on the complex water quality changes that can occur in impoundments and reservoirs:

- Holdren, C., W. Jones, and J. Taggart. 2001. *Managing Lakes and Reservoirs*. North American Lake Management Society and Terrene Institute, in cooperation with the Office of Water, Assessment and Watershed Protection Division, U.S. Environmental Protection Agency, Madison, WI.
- Thornton, K.W., B.L. Kimmel, and F.E. Payne. 1990. *Reservoir Limnology: Ecological Perspectives*. John Wiley & Sons, Inc., New York.
- U.S. Army Corps of Engineers. N.d. *The WES Handbook on Water Quality Enhancement Techniques for Reservoirs and Tailwaters*. U.S. Army Corps of Engineer Research and Development Center Waterways Experiment Station, Vicksburg, MS.

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Water Quality Downstream of a Dam

The physical and chemical changes that occur to the water quality in an impoundment/reservoir have a large impact on the water released downstream of a dam. As previously stated, the presence of a dam can alter water velocities above and below the dam. In smaller dams with little storage capacity, velocities may slow locally and recover to an undisturbed state shortly downstream from the dam. When dams store large volumes of water in a reservoir, the operation of the dam will have a major impact on the downstream velocities and flows. Unless the dam is operated to consistently release water at flows near pre-dam levels, downstream areas will have flows and velocities that are directly related to the volume of water released in a given time period. The downstream flow characteristics will become a function of the operation of the dam, including the timing and duration of releases, the depth of reservoir intakes, and other physical characteristics of the release.

On the Columbia River, research found that prior to construction of dams, average water temperatures fluctuated more diurnally with cooler nighttime temperatures as compared with the existing average water temperatures. With the dams in place, cooler weather tends to cool the free flowing river but have little effect on the average temperature of the impounded river (USEPA, 2003c).

When dams trap sediment upstream, water released from the dam may be starved of sediment and have an increase in erosive capacity. Along with trapping sediment, nutrients may also be trapped above the dam. When the nutrients are trapped and unavailable, sensitive downstream habitats and populations may be affected.

Whether the water is released from the surface or bottom of the reservoir can have a large impact on the characteristics of the water. The impacts of water outflows below a dam are an outcome of the seasonal temperature fluctuations and the outflow positioning. Seasonal temperature profiles in reservoirs are highly variable and dependent upon a complex set of factors including tributary inflow, basin morphometry, drawdown and discharge characteristics, and the degree of stratification (Wetzel, 2001). Compared to natural temperatures, in summer elevated temperatures in surface water releases can increase downstream river temperatures, whereas bottom water releases can be expected to decrease water temperatures. The opposite effect is generally observed in the winter due to changes in the water temperature gradient (USACE, 1999 in Fidler and Oliver, 2001).

Suspended Sediment and Reduced Discharge

Whether the release water originates from the surface or the bottom of the reservoir, the suspended sediment has typically settled out of the water column and thus the water released from behind the dam is usually relatively free from sediment (Simons and Senturk, 1992). This sediment-free water can easily pick up and carry a sediment load and have an increase in erosive capacity. Because of the rock lined channels of bank stabilization and navigation projects that usually occur below these reservoirs, the only place that the clear waters can find the sediments they need is in the streambed or navigation channel. This leads to channel deepening or bed degradation, which in turn lowers water tables and drains floodplain channels and backwaters (Rasmussen, 1999). Streambed and streambanks will continue to erode until an equilibrium suspended sediment load is established. Without sediment from upstream sources, downstream streambanks, streambeds, sandbars, and beaches can erode away more quickly (FISRWG, 1998).

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A reduction in the discharge and sediment load generally results in degradation of the channel close to the dam and sedimentation downstream due to the increased supply from the erosion near the dam. Degradation may eventually migrate downstream, but is typically most dramatic the first few years following construction of the dam (Biedenharn et al., 1997). In addition, the physical impact of the discharge will depend, in part, on the channel substrate. A fine silt and sand channel bottom may experience more extensive erosion than a bed rock or cobble substrate.

Lower flow conditions below a dam within a tidally influenced basin can lead to changes in water chemistry. The impact of lower freshwater flow into estuaries was extensively studied in San Francisco Bay. Nichols et al. (1986) provide a detailed history of changes to freshwater inflows to San Francisco Bay. They also provide a summary of the impacts, which include the ecological and water quality effects. A study comparing an unregulated river and a dam regulated river found a significant difference in the water quality chemistry, including an analysis of levels of sodium, potassium, calcium, phosphorus, electrical conductivity, and pH in the middle and lower reaches of the rivers. These differences were attributed to increased tidal influence as a result of lower outflow volumes of fresh water from the dam (Colonnello, 2001). In addition, a decreased discharge from the dam and increased tidal influence can prolong the flushing time or the time it takes water to move through a system. This causes the nutrients and pollutants within the water to remain concentrated in areas below the dam near an estuary.

Biological and Habitat Impacts

The presence of a dam may cause physical and chemical changes to the water quality. These, in turn, can have an impact on the entire biological community including fish, macroinvertebrates, algae, and streamside vegetation. Impacts to the biological community differ upstream and downstream of a dam. Dams may disrupt spawning, increase mortalities from predation, change instream and riparian habitat, and alter plant and benthic communities. Resulting fish populations after dam construction may thrive and become well established, but could be very different than populations prior to installing the dam. For example, upstream of the dam, a fish population may change from a cold-water salmonid fishery to one that is dominated by cool- or warm-water species. A once thriving native trout population may become a largemouth bass (*Micropterus salmoides*) and bluegill (*Lepomis macrochirus*) dominated system. Similarly, downstream conditions may also change. In southern states, streams that once supported catfish and other tolerant warm-water species may now be able to support a trout fishery because of cold-water releases from bottom waters behind a dam. Although the trout fishery may be viewed as positive by some, the displaced native warmwater species may not be perceived as beneficial.

Dams prevent the movement of organisms throughout the river system (Morita and Yamamoto, 2002). Researchers found that fragmenting habitat by damming a river caused the disappearance of a fish species in several upstream locations and further disappearances were predicted (Morita and Yamamoto, 2002). Recently, some individual cases involving movement of invasive, non-native aquatic species note the presence of dams as a positive factor. In these cases, dams have blocked the movement of potentially harmful invasive species.

Flood control and hydropower projects influence a river's hydrograph. For example, in some regions normal river hydrographs featured a rise in water level elevation corresponding to spring

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rains. Other geographic areas had stream hydrographs corresponding to snowmelt in the mountains, or fall rainfall. Native species evolved under these scenarios and used such water level rises to trigger spawning movements onto floodplains and in the case of birds, for nesting on islands. Additionally, the stream water level fluctuations were important in providing feeding and resting areas for spring and fall waterfowl migrations. Under managed scenarios for commercial navigation, river water level elevations are raised in the spring and held stable throughout the navigation season, virtually eliminating the triggering mechanisms native species used to reproduce and complete their life cycles. Because of this, many native riverine species often fail to spawn or nest, and are becoming increasingly threatened (Rasmussen, 1999). Additionally, stabilization of periodic flooding has also lead to the loss of ephemeral wetlands and may lead to the accumulation of sediments in nearshore areas, thus negatively affecting fish spawning areas (NRC, 1992).

Dams may lead to increased predation of fish in several ways. A dam may cause populations of fish to concentrate on the upstream and downstream sides, which might lead to the likelihood of increased predation. Changes in the habitat adjacent to a dam can make conditions more suitable to predation. Dams may cause the migration process to be delayed, which also leads to increased predation (Larinier, 2000).

The physical and chemical changes to water released from a dam, including reduced streamflow variability and decreased sediment loads, may also impact benthic communities. Increased water clarity and reduced streamflow variability just below a dam may result in a greater abundance of periphyton or other plants as compared with other locations in the river (Stanford and Ward, 1996). A slowed stream flow velocity with decreased turbulence can also encourage the growth of phytoplankton blooms (Décamps et al., 1988). In contrast, the operation of some hydroelectric dams with large, sudden releases of water may scour the bottom of the downstream channel to the extent that there is a nearly complete removal of the plant communities (Allan, 1995).

Impacts Associated with Dam Removal

Removing a dam affects the flow of water, movement of sediment and chemical constituents, and the overall channel morphology (Academy of Natural Sciences, 2002) on the waterway where the dam was located. The impacts of removing a dam differ for the upstream and downstream sections of a waterway.

Changes in the biological community following the removal of a dam are difficult to generalize, as they are highly site specific and can vary in recovery time from a few months to

The effects of river damming were evaluated in a study comparing a regulated river to an unregulated river in the Green River Basin in Colorado. Prior to installation of the dam in Green River in 1962, Green River and the Yampa River were similar in riparian vegetation and fluvial processes. Comparison of the now regulated Green River and the free-flowing Yampa River found distinctive vegetation differences between the parks that surround the rivers. The channel form of Green River has undergone three stages of morphologic change that have transformed the historically deep river into a shallow braided channel. The Yampa River has remained relatively unchanged. The land surrounding the Green River now consists of marshes with anaerobic soil that supports wetland species and terraces with desert species adapted to xeric soil conditions. The meandering Yampa River has maintained its original surroundings. Its frequently flooded bars and high floodplains provide a wide range of habitats for succession of riparian vegetation (Merritt and Cooper, 2000).

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more than a decade. With the removal of a dam, there are changes in the vegetative community surrounding the stream channel and changes in the biological community within the stream itself.

Physical Changes: Upstream Impacts

The removal of a dam allows the water formerly held behind the dam to flow and will likely cause the extent of the impoundment area or reservoir area to decrease. As a dam is removed and the water recedes, sediment is scoured from the bottom and a stream channel returns sometimes to its pre-dam pathway and sometimes to a newly carved channel. As a channel is formed, areas that were formerly beneath the impoundment area become exposed. This can leave large areas of unvegetated and unstable land exposed, which makes these areas likely to undergo erosion and gully development, increasing the sediment load to the stream.

In time, vegetation will stabilize the newly formed stream banks, reducing erosion and allowing sediment transport levels to return to natural levels. The nutrient and metal constituents associated with the sediment will also return to natural levels. As the newly established channel-like flow develops and the stagnant and deep conditions are removed, the natural temperature and oxygen levels will be reestablished.

Physical Changes: Downstream Impacts

Once the physical barrier of the dam is removed, a river can flow unrestricted. As the channel is reformed, the water discharge volume and the stream channel can reach equilibrium. As a result, a more natural stream flow rate is maintained.

With the removal of a dam, the fate of the trapped sediments is of concern because flooding and downstream pollution problems can result. On a short-term time scale, the redistribution of the fine silt and sand sediments that accumulated behind the dam wall may cause an increase in turbidity and water quality problems. In addition, the impact can be greater if the sediments contain toxic pollutants, such as metals or bioaccumulative compounds such as mercury or PCBs. On a short-term time scale, the redistribution of the fine silt and sand sediments increases the turbidity and can damage spawning grounds, water quality, habitat, and food quality (American Rivers, 2002a). Suspended sediment loads can have a negative impact on a biological community and reach lethal levels during dam removal if preventive measures are not implemented (Doyle et al., 2000).

After a dam is removed and the sediment that has been trapped behind the dam is redistributed, natural sediment transport levels return. As a result, the constituents typically sorbed to sediment, including nutrients and metals, are no longer found localized in excess. Normal sediment transport levels typically result in a river bottom with a higher percentage of rocky substrate. Gravel and cobblestones located below the sediment may be exposed or may be transported from upstream locations as the flow rate of the river increases. This unrestricted flow and transport of sediment and gravel may also play a key role in restoring sediments to downstream locations and coastal beaches (USDOI, 1995). The removal of a dam and the return of natural flow rates should also help to restore a river's natural water temperature range and oxygen levels.

Short-term chemical changes to the water quality, including the possibility of supersaturation of nitrogen gas directly following the removal of a dam, can cause aquatic animals to experience

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adverse conditions. This can include gas bubble disease, in which nitrogen bubbles form in the blood and tissues and block capillaries by embolism (Colt, 1984; Soderberg, 1995). Adverse effects can be seen when the dissolved nitrogen level reaches 102% and at 105% widespread fish mortalities are possible (Dryden Aqua, 2002). Supersaturation was an issue in the 1992 removal of Little Goose Dam on the Snake River (American Rivers, 2002a). If a reservoir is drawn down slowly, the severity of the impact of supersaturation on aquatic organisms can be lessened (American Rivers, 2002a).

Biological Changes: Upstream Impacts

Following the removal of a dam, a return to the normal temperature range, flow rates, and oxygen levels supports the return of native aquatic vegetation species. Still water impoundments support aquatic vegetation that is free floating or that does not need to be strongly rooted, while free-flowing systems support plants that are rooted strongly enough to resist being uprooted by the water current (WRM, 2000).

As the water recedes and the formerly impounded area becomes exposed, vegetation can begin to colonize the area. Sometimes, the exposed area may be colonized by invasive plant species, which are able to remain for several years and prevent other vegetation from becoming established.

The removal of a dam and the subsequent drawdown of water from the impoundment area can affect the wetlands formerly bordering the impoundment area. As the dam is removed, the water table typically begins to drop. The elevation of the wetlands and the extent of the water table drawdown determine whether the wetland areas dry up and what changes will occur in the wetland species composition. Wetlands that develop alongside the newly carved channel are likely to be different than the wetlands formerly bordering the impoundment area in terms of plant and animal species composition.

The biological changes associated with the removal of a dam can be described in phases, as the waterbody makes the transition from reservoir to river. This includes a pattern of relatively rapid recovery for invertebrates or short-lived taxa, followed by a second phase of slower recovery for fish or longer-lived taxa if the dam removal is not an especially large or disruptive event. Overall, the initial impacts, such as colonization by invasive species, typically determine the ecological recovery that follows (Doyle et al., 2000).

Dam removal can allow for improved fish passage and unrestricted fish movement that provides access to spawning habitat upstream. For coastal rivers, the removal of a dam may enable tidal waters to reach upper portions of the stream that were formerly cut off by the dam, creating a spawning environment preferred by certain fish species. Access to upstream sections is particularly beneficial for some anadromous fish that live most of their lives in saltwater and swim upstream toward freshwater to spawn (Massachusetts River Restore Program, 2002).

A dam can also act as a barrier between upstream and downstream fish populations. If a downstream community of fish is an invasive fish species the dam serves as a physical barrier to separate the invasives from the upstream community (American Rivers, 2002a). Thus, the removal of the dam can negatively impact the ecosystem if it allows for the movement of a

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population of an invasive species that was previously prevented from traveling to a section of the stream because of the presence of a dam.

Biological Changes: Downstream Impacts

Downstream of the former dam, wetlands are likely to reappear along side the stream channel where they occurred prior to the construction of the dam (WRM, 2000). Revegetation of river beds and banks typically occurs within one growing season, following removal of a dam (Massachusetts River Restore Program, 2002).

Recolonization of the stream banks by vegetation affects the biological community within the stream by providing shade, reducing water temperatures, and supplying a source of woody debris and organic matter to the stream.

As streamside vegetation begins to recover and suitable habitat is restored, fish begin to return. Changes in flow as a result of dam removal lead to the development of side channels and ponds that provide habitat for fish and wildlife. Increased flow rates also allow for the transport of larger debris, including gravel and logs, which create spawning beds and pool and riffle habitat (River Recovery, 2001). In addition, the rocky substrate environment, which is typically exposed as a result of dam removal, provides habitat for aquatic insects and spawning fish. In the long term, the return to natural stream temperatures, oxygen levels, and flow rates all contribute to the reestablishment of a healthy aquatic and riparian ecosystem.

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Chapter 3: Channelization and Channel Modification

Channelization and channel modification describe river and stream channel engineering undertaken for flood control, navigation, drainage improvement, and reduction of channel migration potential. Activities that fall into this category include straightening, widening, deepening, or relocating existing stream channels and clearing or snagging operations. These forms of hydromodification typically result in more uniform channel cross-sections, steeper stream gradients, and reduced average pool depths. Channelization and channel modification also refer to the excavation of borrow pits, canals, underwater mining, or other practices that change the depth, width, or location of waterways, or embayments within waterways.

Channelization and channel modification activities can play a critical role in nonpoint source pollution by increasing the downstream delivery of pollutants and sediment that enter the water. Some channelization and channel modification activities can also cause higher flows, which increase the risk of downstream flooding.

Channelization and channel modification can:

- Disturb stream equilibrium
- Disrupt riffle and pool habitats
- Create changes in stream velocities
- Eliminate the function of floods to control channel-forming properties
- Alter the base level of a stream (streambed elevation)
- Increase erosion and sediment load

Many of these impacts are related. For example, straightening a stream channel can increase stream velocities and destroy downstream pool and riffle habitats. As a result of less structure in the stream to retard velocities, downstream velocities may continue to increase and lead to more frequent and severe erosion.

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Management Measure 1: Physical and Chemical Characteristics of Channelized or Modified Surface Waters

Management Measure 1
1) Evaluate the potential effects of proposed channelization and channel modification on the physical and chemical characteristics of surface waters. 2) Plan and design channelization and channel modification to reduce undesirable impacts. 3) Develop an operation and maintenance program for existing modified channels that includes identification and implementation of opportunities to improve physical and chemical characteristics of surface waters in those channels.

This management measure applies to proposed channelization or channel modification projects and is intended to occur concurrently with the implementation of Management Measure 2 (Instream and Riparian Habitat Restoration). The intent of the management measure is for project planners to consider potential changes in surface water characteristics when evaluating proposed channelization or channel modification projects. Also, for existing modified channels, the planning process can include consideration of opportunities to improve the surface water characteristics necessary to support desired fish and wildlife.

The purpose of the management measure is to ensure that the planning process for new hydromodification projects addresses changes to physical and chemical characteristics of surface waters that may occur as a result of proposed work. For existing projects, this management measure can be used to ensure the operation and maintenance program uses any opportunities available to improve the physical and chemical characteristics of the surface waters.

Changes created by channelization and channel modification activities are problematic if they unexpectedly alter environmental parameters to levels outside normal or desired ranges. The physical and chemical characteristics of surface waters that may be influenced by channelization and channel modification include sedimentation, turbidity, salinity, temperature, nutrients, dissolved oxygen, oxygen demand, and contaminants. Changes in natural sediment supplies, reduced freshwater availability, and accelerated delivery of pollutants are examples of the types of changes that can be associated with channelization and channel modification.

Published case studies of existing channelization and channel modification projects describe alterations to physical and chemical characteristics of surface waters (Burch et al., 1984; Petersen, 1990; Reiser et al., 1985; Roy and Messier, 1989; Sandheinrich and Atchison, 1986; Sherwood et al., 1990; Shields et al., 1995). Frequently, the post-project conditions are intolerable to desirable fish and wildlife. The literature also describes instream benefits for fish and wildlife that can result from careful planning of channelization and channel modification

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projects (Bowie, 1981; Los Angeles River Watershed, 1973; Sandheinrich and Atchison, 1986; Shields et al., 1990; Swanson et al., 1987; USACE, 1989).

Management Practices for Management Measure 1

Implementation of this management measure should begin during the planning process for new projects. For existing projects, implementation of this management measure can be included as part of a regular operation and maintenance program. The approach is two-pronged and should include:

1. *Planning and evaluation*, with numerical models for some situations, of the types of nonpoint source (NPS) pollution related to instream changes and watershed development.

2. *Operation and maintenance programs that apply* a combination of nonstructural and structural practices to address some types of NPS problems stemming from instream changes or watershed development.

Planning and Evaluation

Use models/methodologies as one means to evaluate the effects of proposed channelization and channel modification projects on the physical and chemical characteristics of surface waters. Evaluate these effects as part of watershed plans, land use plans, and new development plans.

In planning-level evaluations of proposed hydromodification projects, it is critical to understand that the surface water quality and ecological impact of the proposed project will be driven primarily by the alteration of physical transport processes. In addition, it is critical to realize that the most important environmental consequences of many hydromodification projects will occur over a long-term time scale of years to decades.

The key element in the selection and application of models for the evaluation of the environmental consequences of hydromodification projects is the use of appropriate models to adequately characterize circulation and physical transport processes. Appropriate surface water quality and ecosystem models (e.g., salinity, sediment, cultural eutrophication, oxygen, bacteria, fisheries, etc.) are then selected for linkage with the transport model to evaluate the environmental impact of the proposed hydromodification project. There are several sophisticated two-dimensional (2D) and three-dimensional (3D) time-variable hydrodynamic models available for environmental assessments of hydromodification projects. Two-dimensional depth or laterally averaged hydrodynamic models can be routinely applied to assist with environmental assessments of beneficial and adverse effects on surface water quality by knowledgeable teams of physical scientists and engineers (Hamilton, 1990). Three-dimensional hydrodynamic models are also beginning to be more widely applied for large-scale environmental assessments of aquatic ecosystems (e.g., EPA/USACE-WES Chesapeake Bay 3D hydrodynamic and surface water quality model).

Refer to Chapter 8 for a list of some models available for studying the effects of channelization and channel modification activities (Table 8.1). Chapter 8 also provides examples of channelization and channel modification activities and associated models that can be used in the planning process.

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Operation and Maintenance Programs

Several management practices can be implemented to avoid or mitigate the physical and chemical impacts generated by hydromodification projects. Many of these practices have been engineered and used for several decades, not only to mitigate human-induced impacts but also to rehabilitate hydrologic systems degraded by natural processes.

In cases where existing channelization or channel modification projects can be changed to enhance instream or streamside characteristics, several practices can be included as a part of regular operation and maintenance programs. New channelization and channel modification projects that are predicted to cause unavoidable physical or chemical changes in surface waters can also use one or more practices to mitigate the undesirable changes. Some of the types of practices include:

- Grade control structures
- Levees, setback levees, and floodwalls
- Noneroding roadways
- Streambank protection and instream sediment load controls
- Vegetative cover

Grade Control Structures

There are two basic types of grade control structures. The first type can be referred to as a bed control structure because it is designed to provide a hard point in the streambed that is capable of resisting the erosive forces of the degradational zone. The second type can be referred to as a hydraulic control structure because it is designed to function by reducing the energy slope along the degradational zone to the point where the stream is no longer capable of scouring the bed. The distinction between the operating processes of these two types is important whenever grade control structures are considered (Biedenharn and Hubbard, 2001).

Design considerations for siting of grade control structures include determining the type, location, and spacing of structures along the stream, along with the elevation and dimensions of structures. Siting grade control structures can be considered a simple optimization of hydraulics and economics. However, these factors alone are usually not sufficient to define optimum siting conditions. Hydraulic considerations must be integrated with a host of other factors that can vary from site to site to determine the final structure plan. Some of the more important factors to be considered when siting grade control structures are discussed more specifically in the U.S. Army Corps of Engineers' *Design Consideration for Siting Grade Control Structures* (Biedenharn and Hubbard, 2001).

When carefully applied, grade control structures can be highly versatile in establishing human and environmental benefits in stabilized channels. To be successful, application of grade control structures should be guided by analysis of the stream system both upstream and downstream from the area to be reclaimed (CASQA, 2003).

In some cases, grade control structures can be designed to allow fish passage. However, some grade control structures can obstruct fish passage. In many instances, fish passage is a primary consideration and may lead engineers to select several small fish passable structures in lieu of

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one or more high drops that would restrict fish passage. In some cases, particularly when drop heights are small, fish are able to migrate upstream past a structure during high flows. In situations where structures are impassable, and where the migration of fish is an important concern, openings, fish ladders, or other passageways must be incorporated into the structure's design (Biedenharn and Hubbard, 2001). Fish passage practices are described in Chapter 7.

A type of grade control structure is a check dam. Refer to Chapter 7 for more information about this practice.

Levees, Setback Levees, and Floodwalls

Levees are embankments or shaped mounds constructed for flood control or hurricane protection (USACE, 1981). Setback levees and floodwalls are longitudinal structures used to reduce flooding and minimize sedimentation problems associated with fluvial systems. These practices can be used to reduce the impacts of channelization and channel modification. A more detailed discussion of levees, setback levees, and floodwalls is available in Chapter 7.

Noneroding Roadways

Disturbances along the streambank that result from activities associated with operation and maintenance of channelization projects can lead to additional nonpoint source pollution impacts to the stream. An example of human-induced activities is erosion associated with roadways. Rural road construction, streamside vehicle operation, and stream crossings usually result in significant soil disturbance and create a high potential for increased erosion processes and sediment transport to adjacent streams and surface waters. Erosion during and after construction of roadways can contribute large amounts of sediment and silt to runoff waters, which can deteriorate water quality and lead to fish kills and other ecological problems (USEPA, 1995b).

Road construction involves activities such as clearing of existing native vegetation along the road right-of-way; excavating and filling the roadbed to the desired grade; installation of culverts and other drainage systems; and installation, compaction, and surfacing of the roadbed.

Although most erosion from roadways occurs during the first few years after construction, significant impacts may result from maintenance operations using heavy equipment, especially when the road is located adjacent to a waterbody. In addition, improper construction and lack of maintenance may increase erosion processes and the risk for road failure. To minimize erosion and prevent sedimentation impacts on nearby waterbodies during construction and operation periods, streamside roadway management needs to combine proper design for site-specific conditions with appropriate maintenance practices. A discussion of how roadways can impact fish habitat and passage is available from EPA's *National Management Measures to Control Nonpoint Source Pollution from Forestry* (USEPA, 2005a).

More information about suggested practices to consider during design, construction, operation and maintenance, and general maintenance of noneroding roadways, is available from EPA's *National Management Measures to Control Nonpoint Source Pollution from Forestry* (USEPA, 2005a). This EPA guidance document also provides some suggested permanent control BMPs that may be used to prevent erosion from roadways. Additional information about noneroding roadways is available in Chapter 7 and the Resources section of this document.

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Streambank Protection and Instream Sediment Load Controls

Streambank erosion is a natural process that occurs in fluvial systems. Streambank erosion can also be induced or exaggerated as a result of human activities. There are several factors within a watershed that can contribute to human induced streambank erosion. Accelerated streambank erosion related to human activity can typically be attributed to three major causes including channel modifications, reservoir construction, and land use changes (Henderson, 1986). When possible, streambank erosion problems should be addressed in the context of the entire watershed, using a systems approach that considers and accommodates natural stream processes. Approaches to addressing streambank erosion problems associated with channelization and channel modification activities can involve efforts to identify and address all significant contributing factors in addition to treating the immediate symptom, bank erosion.

In general, the design of streambank protection may involve the use of several techniques and materials. Nonstructural or programmatic management practices for the prevention of streambank failures include:

- Protection of existing vegetation along streambanks
- Careful use or regulation of irrigation near streambanks, such as rerouting of overbank drainage
- Minimization of loads on top of streambanks (such as prevention of building within a defined distance from the streambed)

Several structural practices are used to protect or rehabilitate eroded banks. These practices are usually implemented in combination to provide stability of the stream system, and they can be grouped into direct and indirect methods. Direct methods place protecting material in contact with the bank to shield it from erosion. Indirect methods function by deflecting channel flows away from the bank or by reducing the flow velocities to nonerosive levels (Henderson, 1986; Henderson and Shields, 1984). Indirect bank protection requires less bank grading and tree and snag removal. However, some structural methods like stone toe protection, as discussed below, can be placed with minimal disturbance to existing slope, habitat, and vegetation.

Feasibility of the practices at a site depends on the engineering design of the structure, availability of the protecting material, extent of the bank erosion, and specific site conditions such as the flow velocity, channel depth, inundation characteristics, and geotechnical characteristics of the bank. The use of vegetation alone or in combination with other structural practices, when appropriate, could further reduce the engineering and maintenance efforts.

Vegetation can be considered with respect to site-specific characteristics. When vegetation is combined with low cost building materials or engineered structures, numerous techniques can be created for streambank erosion control. It is important to consider the assets and limitations when planning to use planted vegetation for streambank protection. Advantages of vegetation include the following (Allen and Leech, 1997):

- Reinforces soil (increases bank stability).
- Increases resistance to flow and reduces flow velocities (from exposed stalks), causing the flow to dissipate energy against the plant (rather than the soil).

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- Intercepts water.
- Enhances water infiltration.
- Depletes soil water by uptake and transpiration.
- Acts as a buffer against the abrasive effect of transported materials.
- Induces sediment deposition (from close-growing vegetation).
- Reduces costs, in some cases, when compared to most structural methods.
- Improves conditions for fisheries and wildlife.
- Improves water quality.
- Protects cultural/archeological resources.

Limits of vegetation include failure to grow; being subject to undermining; being uprooted by wind, water, and the freezing and thawing of ice; ingestion by wildlife or livestock; and maintenance requirements. Chapter 3 of *Bioengineering for Streambank Erosion Control* discusses plant acquisition, handling, and timing of planting (Allen and Leech, 1997).

Streambanks can be protected or restored either by increasing resistance of the bank to erosion or by decreasing the energy of the water at the point of contact with the bank, for example by deflecting or interrupting flows (Henderson, 1986). Instream sediment can be controlled by using several structural, vegetative, or bioengineered practices, depending on the management objective and the source of sediment. Streambank protection and channel stabilization practices, including various types of revetments, grade control structures, and flow restrictors, have been effective in controlling sediment production caused by streambank erosion. Designs should match the protection capability of the treatment to the erosion potential of each stream zone. For example, riprap may be needed at the toe of a slope to protect it from undercutting combined with tree revetments to deflect flows and provide protection for live stakings that will develop permanent support. The growing body of research indicates management techniques that emulate nature and work with natural stream processes are more successful and economical.

Significant amounts of instream sediment deposition can be prevented by controlling bank erosion processes and streambed degradation. Channel stabilization structures can also be designed to trap sediment and decrease the sediment delivery to desired areas by altering the transport capacity of the stream and creating sediment storage areas. In regulated streams, alteration of the natural streamflow, particularly the damping of peak flows caused by surface water regulation and diversion projects, can increase streambed sediment deposits by impairing the stream's transport capacity and its natural flushing power. Sediment deposits and reduced flow alter the channel morphology and stability, the flow area, the channel alignment and sinuosity, and the riffle and pool sequence. Such alterations have direct impacts on the aquatic habitat and the fish populations in the altered streams (Reiser et al., 1985).

Vegetative Cover

Streambank protection using vegetation is a commonly used practice, particularly in areas of low water velocities. Vegetative cover, also used in combination with structural practices, is often relatively easy to establish and maintain, and is visually attractive (USACE, 1983). Emergent vegetation provides two levels of protection. First, the root system helps hold soil together and increases overall bank stability by forming a binding network. Second, the exposed stalks, stems, branches, and foliage provide resistance to streamflow, causing the flow to lose part of its energy

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by deforming the plants rather than by removing the soil particles. Above the waterline, vegetation protects against rainfall impact on the banks and reduces the velocity of the overland flow during storm events.

Vegetative controls are not suitable for all sites, especially those sites with severe erosion due to high flow rates or channel velocities. Refer to the Washington State Department of Transportation's (WSDOT's) *Hydraulics Manual*, Chapter 4[1] for information on calculating flow rates or channel velocities. Stabilization measures should only be implemented after a careful evaluation of the stream and the surrounding area. A knowledgeable fluvial geomorphologist may be helpful with this evaluation. In addition, plant species should be selected with care; native plant species should be used whenever possible. Appropriate species can be determined by consulting horticulturalists and botanists for plant selection assistance. The USDA-Forest Service guide, *A Soil Bioengineering Guide for Streambank and Lakeshore Stabilization*[2] provides a list of plants for soil bioengineering associated systems. The International Erosion Control Association (IECA)[3] publishes a products and services directory listing sources of plant material and professional assistance.

In addition to bank stabilization, vegetation can also offer pollutant filtering capacity. Pollutants and sediment transported by overland flow may be partly removed as a result of a combination of processes including reduction in flow pattern and transport capacity, settling and deposition of particulates, and eventual nutrient uptake by plants.

Summary of Physical and Chemical Practices

All of the following practices can be used to address the effects of channelization and channel modification activities on the physical and chemical characteristics of a waterbody:

- Bank shaping and planting
- Branch packing
- Brush layering
- Brush mattressing
- Bulkheads and seawalls
- Check dams
- Coconut fiber roll
- Dormant post plantings
- Erosion and Sediment Control (ESC) Plans
- Joint plantings
- Levees, setback levees, and floodwalls
- Live cribwalls
- Live fascines
- Live staking
- Noneroding roadways
- Return walls

[1] http://www.wsdot.wa.gov/eesc/design/hydraulics/Manual/Rev3Publications/Chapter%204.pdf
[2] http://www.fs.fed.us/publications/soil-bio-guide
[3] http://ieca.org

1991

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- Revetments
- Riprap
- Root wad revetments
- Rosgen's Stream Classification Method
- Setbacks
- Toe protection
- Tree revetments
- Vegetated buffers
- Vegetated gabions
- Vegetated geogrids
- Vegetated reinforced soil slope (VRSS)
- Wing deflectors

Additional information about each of the above practices is available in Chapter 7. The Additional Resources section provides a number of sources for obtaining information about the effectiveness, limitations, and cost estimates for these practices.

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Management Measure 2: Instream and Riparian Habitat Restoration

Management Measure 2
1) Evaluate the potential effects of proposed channelization and channel modification on instream and riparian habitat. 2) Plan and design channelization and channel modification to reduce undesirable impacts. 3) Develop an operation and maintenance program for existing modified channels that includes identification and implementation of opportunities to restore instream and riparian habitat in those channels.

Implementation of this management measure is intended to occur concurrently with the implementation of the Management Measure for Physical and Chemical Characteristics of Channelized or Modified Surface Waters (see previous management measure discussion). This management measure pertains to surface waters where channelization and channel modification have altered or have the potential to alter instream and riparian habitat, such that historically present plants, fish, or wildlife are adversely affected. This management measure is intended to apply to any proposed channelization or channel modification project to determine changes in instream and riparian habitat and to existing modified channels to evaluate possible improvements to instream and riparian habitat. The purpose of this management measure is to correct or prevent detrimental changes to instream and riparian habitat from the impacts of channelization and channel modification projects.

Management Practices for Management Measure 2

Implementation of this management measure should begin during the planning process for new projects. For existing projects, implementation of this management measure can be included as part of a regular operation and maintenance program. Ensuring the involvement and participation of all partners is a place to start on any restoration project. Determining the extent of the restoration activity can help identify potential partners and other interested stakeholders. Each stakeholder may bring a certain expertise, historical information and data, and possibly funding to a project. Development of a stream corridor restoration plan can help organize the group, set goals for implementation of management practices, secure funding or other types of support, and facilitate the sharing of ideas and accomplishments within the group and to others in the community. The approach is two-pronged and should include:

1. *Planning and evaluation*, with numerical models for some situations, of the types of NPS pollution related to instream and riparian habitat changes and watershed development.

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2. *Operation and maintenance* activities that restore habitat through the application of a combination of nonstructural and structural practices to address some types of NPS problems stemming from instream and riparian habitat changes or watershed development.

Planning and Evaluation

Several tools can be used to evaluate the instream and riparian health of a stream system. These approaches include:

- Biological methods/models
- Temperature restoration practices
- Geomorphic assessment techniques
- Expert judgment and checklists

Biological Methods/Models

To assess the biological impacts of channelization, it is necessary to evaluate both physical and biological attributes of the stream system. Assessment studies should be performed before and after channel modification, with samples being collected upstream from, within, and downstream from the modified reach to allow characterization of baseline conditions. It also may be desirable to identify and sample a reference site within the same ecoregion as part of the rapid bioassessment procedures discussed below.

> Use models/methodologies to evaluate the effects of proposed channelization and channel modification projects on instream and riparian habitat and to determine the effects after such projects are implemented.

There are a number of different methods that can be used to assess the biological impacts of channelization. Rapid Bioassessment Protocols (RBPs) were developed as inexpensive screening tools for determining whether a stream is supporting a designated aquatic life use (Barbour et al., 1999; Plafkin et al., 1989). One component of these protocols is an instream habitat assessment procedure that measures physical characteristics of the stream reach (Barbour and Stribling, 1991). An assessment of instream habitat quality based on 12 instream habitat parameters is performed in comparison to conditions at a "reference" site, which represents the "best attainable" instream habitat in nearby streams similar to the one being studied. The RBP habitat assessment procedure has been used in a number of locations across the United States. A small field crew of one or two persons typically can perform the procedure in approximately 20 minutes per sampling site.

Rapid Bioassessment Protocols (Barbour et al., 1999; Plafkin et al., 1989) were designed to be scientifically valid and cost-effective and to offer rapid return of results and assessments. Protocol III (RBP III) focuses on quantitative sampling of benthic macroinvertebrates in riffle/run habitats or on other submerged, fixed structures (e.g., boulders, logs, bridge abutments, etc.) where such riffles may not be available. The data collected are used to calculate various metrics pertaining to benthic community structure, community balance, and functional feeding groups. The metrics are assigned scores and compared to biological conditions as described by either an ecoregional reference database or reference sites chosen to represent the "best attainable" biological community in similarly sized streams. In conjunction with the instream

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habitat quality assessment, an overall assessment of the biological and instream habitat quality at the site is derived. RBP III can be used to determine spatial and temporal differences in the modified stream reach. Application of RBP III requires a crew of two persons; field collections and lab processing require 4 to 7 hours per station and data analysis about 3 to 5 hours, totaling 7 to 12 hours per station. The RBP III has been extensively applied across the United States. More information about biological assessments is available from EPA's Biological Assessment Web site.[4]

Karr et al. (1986) describes an Index of Biological Integrity (IBI), which includes 12 metrics in three major categories of fish assemblage attributes: species composition, trophic composition, and fish abundance and condition. Data are collected at each site and compared to those collected at regional reference sites with relatively unimpacted biological conditions. A numerical rating is assigned to each metric based on its degree of agreement with expectations of biological condition provided by the reference sites. The sum of the metric ratings yields an overall score for the site. Application of the IBI requires a crew of two persons; field collections require 2 to 15 hours per station and data analysis about 1 to 2 hours, totaling 3 to 17 hours per station. The IBI, which was originally developed for Midwestern streams, can be readily adapted for use in other regions. It has been used in several states across the country to assess a wide range of impacts in streams and rivers.

Habitat Evaluation Procedures (HEPs) can be used to document the quality and quantity of available habitat, including aquatic habitat, for selected wildlife species. HEPs provide information for two general types of instream and riparian habitat comparisons:

- The relative value of different areas at the same point in time
- The relative value of the same area at future points in time

By combining the two types of comparisons, the impact of proposed or anticipated land and water use changes on instream and riparian habitat can be quantified (Ashley and Berger, 1997).

Additional information about the assessment methods discussed above, as well as other methods for assessing biological impacts is available in Table 8.2 of Chapter 8.

Temperature Restoration Practices

Channelization and channel modification activities can greatly impact stream temperature. All other factors remaining unchanged, when a channel is narrowed, the water depth increases and the surface area exposed to solar radiation and ambient temperature decreases. This can decrease water temperature. When a channel is widened, the opposite occurs; shallower depths and increased temperatures occur. Temperature may also be increased from increased turbidity because the sediment particles absorb heat. It is important to model how temperature will change in a stream, as a result of channelization and channel modification activities, to determine what other changes and impacts might occur in the stream.

[4] http://www.epa.gov/owow/monitoring/bioassess.html

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Stream temperature has been widely studied, and heat transfer is one of the better-understood processes in natural watershed systems. Most available approaches use energy balance formulations based on the physical processes of heat transfer to describe and predict changes in stream temperature.

More information about temperature restoration models and practices is provided in Chapter 8 (Modeling).

Geomorphic Assessment Techniques

Fluvial geomorphology is the study of stream form and function. Geomorphic assessment focuses on qualitative and quantitative observations of stream form. It provides a "moment-in-time" characterization of the existing morphology of the stream. In addition, geomorphic assessment includes a stability component. Stability assessments place the stream in the context of past, present, and anticipated adjustment processes. Geomorphic assessments can be useful in predicting changes that could be created by channelization and channel modification activities.

Stream classification is a technique that is used to show the relationship between streams and their watersheds. There are several techniques for stream classification, all of which have advantages and limitations. Advantages of geomorphic assessment include (adapted from FISRWG, 1998):

- Promotes communication.
- Enables extrapolation of data collected on a few streams to a number of channels over a broader geographical area.
- Helps the restoration practitioner consider the landscape context and determine expected ranges of parameters.
- Enables practitioners to interpret the channel-forming or dominant processes active at the site.
- Uses reference reaches as the desired outcome of restoration.
- Provides an important cross-check to verify if the selected design values are within a reasonable range.

Limitations of geomorphic assessment include (adapted from FISRWG, 1998):

- Determination of bankfull or channel-forming flow depth may be difficult or inaccurate.
- The dynamic condition or the stream is not indicated in stream classification systems.
- River response to a perturbation or restoration action is normally not determined by classifying it alone.
- Biological health is not directly determined.
- Classifying a stream should not be used alone to determine the type, location, and purpose of restoration activities.

Schumm (1960) identified straight, meandering, and braided channels and related both channel pattern and stability to modes of sediment transport. Schumm recognized that stable straight and meandering channels have mostly suspended sediment loads and cohesive bank materials, as opposed to unstable braided streams characterized by mostly bedload sediment transport and

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wide sandy channels with noncohesive bank materials. Meandering mixed-load channels are found at an intermediate condition (FISRWG, 1998).

Montgomery and Buffington (1993) proposed a classification system similar to Schumm for alluvial, colluvial, and bedrock streams in the Pacific Northwest. This system addresses channel response to sediment inputs throughout the drainage network. Six classes of alluvial channels were identified—cascade, step-pool, plane-bed, riffle-pool, regime, and braided. The stream types are differentiated based on channel response to sediment inputs. For example, steeper channels maintain their morphology while transporting sediment. Streams with lower gradients make more morphological adjustments with increased sediment loads (FISRWG, 1998).

A conceptual model of channel evolution in response to channelization (CEM-channel evolution model) was developed by Simon and Hupp (1986, 1987), Hupp and Simon (1986, 1991), and Simon (1989a, 1989b). The model identifies six geomorphic stages of channel response and was developed and extensively applied to predict empirical stream channel changes following large-scale channelization projects in western Tennessee. Data required for model application include bed elevation and gradient, channel top-width, and channel length before, during, and after modification. Gauging station data can be used to evaluate changes through time of the stage-discharge relationship and bed-level trends. Riparian vegetation is dated to provide ages of various geomorphic surfaces and thereby to deduce the temporal stability of a reach.

A component of Simon and Hupp's (1986, 1987) channel response model is the identification of specific groups of woody plants associated with each of the six geomorphic channel response stages. Their findings for western Tennessee streams suggest that the site preference or avoidance patterns of selected tree species allow their use as indicators of specific bank conditions. This method might require calibration for specific regions of the United States to account for differences in riparian zone plant communities, but it would allow simple vegetative reconnaissance of an area to be used for a preliminary estimate of stream recovery stage (Simon and Hupp, 1987).

Restoring or maintaining streams to a stable form through natural channel design requires detailed information about surface water hydrology and the interactions between rainfall and overland flow or runoff. The Rosgen classification system, developed by David L. Rosgen, and presented in *Applied River Morphology*, is currently the most comprehensive and widely used quantitative assessment method for geomorphology. It represents a compilation of much of the early work in applied fluvial geomorphology and relies largely on the identification of bankfull field indicators. The bankfull discharge is the flow event that fills a stable alluvial channel up to the elevation of the active floodplain (Rosgen, 1996). Dunne and Leopold (1978) first developed hydraulic geometry relationships for the bankfull stage, also called regional curves. Most river engineers and hydrologists work under the assumption that the bankfull discharge is equivalent to the channel forming or dominant discharge in geomorphic classification and in analog and empirical design methods. The bankfull discharge is the only discharge that can be easily identified in the field using physical indicators; therefore it is one of the most commonly used in natural channel design. Additional information about Rosgen is available in Chapter 7.

1997

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Moment-in-time stream classifications provide insights into the existing form of the stream and can help to define design parameters and understand potential modifications in reference to existing conditions. Stream classification offers a way to categorize streams based on channel morphology. The older classification systems were largely qualitative descriptions of stream features and landforms and were difficult to apply universally. In 1994, Rosgen published *A Classification of Natural Rivers*. Because of its relative simplicity and usefulness in stream restoration, the Rosgen classification system has become popular among hydrologists, engineers, geomorphologists, and biologists working to restore the biological function and stability of degraded streams. The classification consists of 41 major stream types for which stream channel stability and stream bank erosion potential can be assessed. From the assessment, structures for in-stream and stream bank restoration or modification can be selected. When planning stream restoration projects, it is important for the planning team to use a multidisciplinary approach that includes consideration of hydraulics, hydrology, water quality, geomorphological processes, and biological interactions to develop and implement a successful restoration. Chapter 7 provides additional detailed information on stream classification practices.

In site selection, geomorphic assessments can determine if a site is unstable and in need of some form of restoration activity. During design, geomorphic assessments can be used in combination with hydrologic, hydraulic, and/or sediment transport analyses to define design elements such as channel slope and hydraulic geometry.

Sediment transport analysis in rivers and streams is used to approximate the amount of sediment being moved by flow event scenarios and to determine where it will be deposited. Modeling the sediment transport capacity of a channel and its predicted sediment deposition patterns are important for assessing existing and proposed channel design projects to estimate potential project impacts. Sediment transport analysis is also useful for determining restoration opportunities in existing channelization and channel modification projects. Sediment transport analysis is often coupled with stable channel analyses methods to refine channel geometries to estimate optimal scour and deposition characteristics (Schulte et al., 2000). A good source of technical information on sediment transport analysis can be found in *River Engineering for Highway Encroachments* (FHWA, 2001).

Sediment transport analysis has been used in many projects, including:

- Channel design projects (Schulte et al., 2000)
- Stream restoration design (Copeland et al., 2001; Shields et al., 2003)
- Flood control projects (USACE, 1994)
- Highway projects that include stream crossings (FHWA, 2001)

In the design of new channelization projects and analysis of existing projects, channels are typically evaluated using channel stability methods and then the analysis is refined using sediment transport models. Sediment transport analysis is used to refine geometry so that scour and deposition are minimized. It is also used to determine the optimum grade control structure elevation and placement and to find the excavation depths in depositional zones to minimize operational costs for maintaining the channel geometry (Schulte et al., 2000).

1998

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The methods and techniques used to accomplish a geomorphic assessment should be project-specific and conducted by personnel trained in applied fluvial geomorphology. Geomorphic assessment of streams has evolved rapidly over the past 10–15 years. Initial methodologies tended to be tailored for localized applications and required extensive data collection and validation. Rosgen's methodology provides a more universal approach to stream classification that represents trade-offs between data collection needs and ease of application for many different stream types. The challenge to this type of modeling and assessment has always been to balance the complexity and need for extensive data collection with ease of use and reliability of the results. The key is that the geomorphic assessment must provide a fundamental understanding of the linkage between river form and process. The assessment should provide insight into where the stream has been, is now, and in what direction it is moving. It should also place the project reach in the context of broader system wide adjustment processes. Geomorphic assessment can be used to select sites for restoration and develop designs.

Expert Judgment and Checklists

Approaches using expert judgment and checklists developed based on experience acquired in previous projects and case studies may be very helpful in integrating environmental goals into project development. The USACE used this concept of incorporating environmental goals into project design (Shields and Schaefer, 1990) in the development of a computer-based system for the environmental design of waterways (ENDOW). The ENDOW system is composed of three modules: a streambank protection module, a flood control channel module, and a streamside levee module. The three modules require the definition of the pertinent environmental goals to be considered in the identification of design features. Depending on the environmental goals selected for each module, ENDOW will display a list of comments or cautions about anticipated impacts and other precautions to be taken into account in the design.

Another example of using expert judgment is the Proper Functioning Condition (PFC) technique. PFC was developed by the Bureau of Land Management (BLM) to rapidly assess whether a stream riparian area is functioning properly in terms of hydrology, landform/soils, channel characteristics, and vegetation. The assessment is performed by an interdisciplinary team and involves completing a checklist evaluating 17 factors concerning hydrology, vegetation, and erosional/depositional characteristics. The PFC field technique is not quantitative, but with adequate training, results are reproducible to a high degree (FISRWG, 1998).

Operation and Maintenance Activities

Implementation practices for instream and riparian habitat restoration in planned or existing modified channels are consistent with those management practices for physical and chemical characteristics of channelized or modified surface waters. To prevent future impacts to instream or riparian habitat or to solve current problems caused by channelization or channel modification projects, include one or more of the following practices to mitigate the undesirable changes:

- Bank shaping and planting
- Branch packing
- Brush layering
- Brush mattressing
- Bulkheads and seawalls

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- Check dams
- Coconut fiber roll
- Dormant post plantings
- Erosion and Sediment Control (ESC) Plans
- Establish and protect stream buffers
- Joint plantings
- Levees, setback levees, and floodwalls
- Live cribwalls
- Live fascines
- Live staking
- Marsh creation and restoration
- Noneroding roadways
- Return walls
- Revetments
- Riparian improvements
- Riprap
- Root wad revetments
- Rosgen's Stream Classification Method
- Setbacks
- Toe protection
- Tree revetments
- Vegetated buffers
- Vegetated gabions
- Vegetated geogrids
- Vegetated reinforced soil slope (VRSS)
- Wing deflectors

Additional information about each of the above practices is available in Chapter 7. The Additional Resources section provides a number of sources for obtaining information about the effectiveness, limitations, and cost estimates for these practices.

Operation and maintenance programs should weigh the benefits of including practices such as those for mitigating any current or future impairments to instream or riparian habitat. Additional information about these practices can be found in Chapter 7. Also, Fischenich and Allen (2000) provide a comprehensive summary of practices that can be evaluated for use in operation and maintenance programs.

2000

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Chapter 4: Dams

Dams are a common form of hydromodification. The National Research Council estimated that there were more than 2.5 million dams in the United States in 1992 (NRC, 1992). These dams range in size from berms across small streams that create farm ponds to large concrete structures across major rivers for hydropower and flood control. The USACE estimates (of these 2.5 million dams in the United States) about 79,000 are large enough to be included in the National Inventory of Dams (USACE, n.d.b.).[1]

Dams generally were built to store and provide water for mechanical power generation (e.g., waterwheels to mill grain), industrial cooling, hydroelectric power generation, agricultural irrigation, municipal water supplies for human consumption, and impoundment-based recreation (e.g., boating and sport fishing). Dams are also used for flood control and to maintain channel depths for barge transportation.

Dams can be associated with a number of effects, including changes to hydrology, water quality, habitat, and river morphology. Lakes and reservoirs integrate many processes that take place in their contributing watersheds, including processes that contribute energy (heat), sediment, nutrients, and toxic substances. Human activities, such as agricultural and urban land use, contribute to contaminant and sediment loads to reservoirs. The presence and operation of dams can determine the fate of these pollutants in a reservoir or impoundment and potentially downstream as water is released from the dam. For example, the presence of a dam may lead to sediment accumulation in a reservoir. However, there are management practices that can mitigate this integrative effect of a reservoir. One example is selective withdrawals, which are an operational technique that can be used by some dam operators to provide water quality and temperatures necessary to sustain downstream fish populations.

When dams are built, depending on size and design, they may alter the river system structure, causing it to change from a river (flowing) to lake (static) and back to a river (flowing) system.

[1] With the National Dam Inspection Act (P.L. 92-367) of 1972, Congress authorized the U.S. Army Corps of Engineers (USACE) to inventory U.S. dams. The Water Resources Development Act of 1986 (P.L 99-662) authorized USACE to maintain and periodically publish an updated National Inventory of Dams (NID).

2001

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Dams with large storage capacities will, by design, retain water longer than those with little storage. This can change system flow patterns, which can affect water quality and habitat upstream and downstream of the dam. Most effects from dams are observed downstream. Table 4.1 provides a description of several common types of dams.

Table 4.1 Types of Dams (FEMA, 2003)

Type of Dam	Description
Ambursen dam	A buttress dam in which the upstream part is a relatively thin, flat slab usually made of reinforced concrete
Arch dam	A concrete, masonry, or timber dam with the alignment curved upstream so as to transmit the major part of the water load to the abutments
Buttress dam	A dam consisting of a watertight part supported at intervals on the downstream side by a series of buttresses
Crib dam	A gravity dam built up of boxes, crossed timbers, or gabions, filled with earth or rock
Diversion dam	A dam built to divert water from a waterway or stream into a different watercourse
Double curvature arch dam	An arch dam that is curved both vertically and horizontally
Earth dam	An embankment dam in which more than 50% of the total volume is formed of compacted earth layers that are generally smaller than 3-inch size
Embankment dam	Any dam constructed of excavated natural materials, such as both earthfill and rockfill dams, or of industrial waste materials, such as a tailings dam
Gravity dam	A dam constructed of concrete and/or masonry, which relies on its weight and internal strength for stability
Hollow gravity dam	A dam constructed of concrete and/or masonry on the outside but having a hollow interior and relying on its weight for stability
Hydraulic fill dam	An earth dam constructed of materials, often dredged, which are conveyed and placed by suspension in flowing water
Industrial waste dam	An embankment dam, usually built in stages, to create storage for the disposal of waste products from an industrial process
Masonry dam	Any dam constructed mainly of stone, brick, or concrete blocks pointed with mortar
Mine tailings dam (or tailings dam)	An industrial waste dam in which the waste materials come from mining operations or mineral processing
Multiple arch dam	A buttress dam comprised of a series of arches for the upstream face
Overflow dam	A dam designed to be overtopped
Regulating dam (or afterbay dam)	A dam impounding a reservoir from which water is released to regulate the flow downstream
Rock-fill dam	An embankment dam in which more than 50% of the total volume is comprised of compacted or dumped cobbles, boulders, rock fragments, or quarried rock generally larger than 3-inch size
Roller compacted concrete dam	A concrete gravity dam constructed by the use of a dry mix concrete transported by conventional construction equipment and compacted by rolling, usually with vibratory rollers
Rubble dam	A stone masonry dam in which the stones are unshaped or uncoursed
Saddle dam (or dike)	A subsidiary dam of any type constructed across a saddle or low point on the perimeter of a reservoir

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Siting, construction, operation, maintenance, and removal of dams can lead to nonpoint source (NPS) effects. For example, siting of dams can result in inundation of wetlands, riparian areas, and fastland in areas upstream of the dam. During construction or maintenance, erosion and soil loss occurs. Proper siting and design help prevent erosion prone areas from being developed. For dams actively controlled by human operators, dam operation and the amount of water released can affect downstream areas when flood waters necessary to deliver sediment are restricted, or when controlled releases from dams change the timing, quantity, or quality of downstream flow. While removal of dams can lead to physical and biological impacts, such as temporary increased turbidity from redistribution of sediment previously stored behind the dam or displacement of warm-water species that prefer lake-like conditions, dam removal has many biological and habitat benefits, such as allowing for easier fish movement and a return of natural stream temperatures and dissolved oxygen. Sometimes, however, dams limit passage of undesirable invasive species. Therefore, a comprehensive evaluation of the benefits and limitations resulting from the presence of a dam should be completed when evaluating operation and maintenance procedures, as well as options for removal. A more detailed discussion of water quality, biological, habitat, physical, and chemical changes from dam removal is provided in Chapter 2.

One opportunity to evaluate and address the NPS impacts of some larger dams that are used for hydropower occurs during the licensing/relicensing process. The Federal Power Act (FPA) requires all nonfederal hydropower projects located on navigable waters to be licensed. The FPA (16 U.S.C. 791-828c) was originally enacted as the Federal Water Power Act in 1920 and was made part of the FPA in 1935. The Federal Energy Regulatory Commission (FERC) is the independent regulatory agency within the Department of Energy that has exclusive authority, under the FPA, to license such projects. The hydropower dam relicensing process offers an opportunity to assess the balance between natural resources and the generation of electricity and to address some areas that are determined to be problematic. Stakeholders, including dam owners and operators, local governments, environmental groups, and the public, often have different interests to be balanced. Through the FPA and the relicensing process, these varied interests can be evaluated and a balanced outcome can be derived. In conjunction with FPA licensing requirements, states and authorized tribes certify that discharges (including those that originate from dams) meet water quality standards under section 401 of the Clean Water Act (CWA).

The FPA also requires relicensing to be conducted in light of recent laws and regulations that are in effect at the time of renewal. As regulations related to hydropower dams change, it is possible that many dams that were previously licensed and are up for relicensing may no longer be in compliance with current regulatory standards. For example, many dams were built prior to the CWA, which includes regulatory requirements for protecting and maintaining designated uses (such as protecting desired aquatic life or maintaining bacterial water quality that is protective of human health for all recreational activities). Other regulatory requirements that may be evaluated during relicensing include protections for wetlands, aquatic habitat, and endangered species.[2]

[2] Additional information about FERC and hydropower licensing/relicensing is available at http://www.ferc.gov.

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Management Measure 3: Erosion and Sediment Control for the Construction of New Dams and Maintenance of Existing Dams

Management Measure 3
1) Reduce erosion and, to the extent practicable, retain sediment onsite during and after construction. 2) Prior to land disturbance, prepare and implement an approved erosion and sediment control plan or similar administrative document that contains erosion and sediment control provisions.

The purpose of this management measure is to prevent sediment from entering surface waters during the construction or maintenance of dams. This management measure emphasizes the importance of minimizing sediment loss to surface waters during both dam construction and maintenance. It is essential that proper erosion and sediment control practices be used to protect surface water quality because of the high potential for sediment loss directly to surface waters. Sediment and erosion control practices can be borrowed from other applications, such as urban development and construction activities.

Two broad performance goals constitute this management measure: minimizing erosion and maximizing the retention of sediment onsite. These performance goals allow for site-specific flexibility in specifying practices appropriate for local conditions. Regular inspections of a dam are valuable opportunities for dam owners to identify erosion problems and implement sediment controls to protect the integrity of the dam. Since the number of new dam construction projects is relatively small compared to the number of existing dams, operation and maintenance activities offer significantly more opportunities to prevent NPS problems associated with erosion and sediment control.

Dam owners are encouraged to establish a program of regular safety inspection of the dam's infrastructure and dam maintenance. Safety inspection of a dam is a program of regular visual inspection using simple equipment and techniques. These inspections are often an economical means of ensuring the long-term safety and survival of a dam structure. By regularly monitoring the condition and performance of the dam and its surroundings, adequate warning of potentially unsafe conditions will enable timely maintenance. Being able to recognize the signs of potential problems and failure, as well as what to do and whom to contact, is vital. Partial or total failure of a dam may cause extensive damage to downstream areas, including loss of life, property damage, and impacts to wetlands, riparian areas, stream channels, and other ecologically important lands, for which the owner may be held liable. There are also potentially expensive repair costs and lost income that may result from failures or poorly maintained dam structures.

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The primary areas of dam structural failure are:

- Loss of clay soils used in berms and other earthen structures
- Seepage and leakage at the base or along pipes
- Erosion, including wave action, stock damage and spillways
- Cracking and movement of structural components
- Defects in associated structures
- Vegetation, including catchment protection and weed control

Operation and maintenance should be applied to small, as well as large dams. Many owners of small dams, like those on farm ponds, should regularly inspect their dams for maintenance needs. Local NRCS staff can provide technical assistance to small dam owners for operation and maintenance activities.[3]

Regular operation and maintenance efforts can lead to some dams being in need of repairs and/or upgrades. Designs for repairs and upgrades can involve replacing reinforced concrete risers and impact basins, replacing rusted out corrugated metal pipe principal spillways, raising the top of the dams, widening the auxiliary spillways, and removing sediment from the flood pools. Examples of project costs for these types of maintenance activities reported in Ohio have ranged from $175,000 on a small dam to $775,000 on the largest dam (Brate, 2004).

At the state and local levels, this measure can be incorporated into existing erosion and sediment control (ESC) programs. This measure can also be effectively implemented as part of safety inspection requirements. Erosion and sediment control is also intended to be part of a comprehensive land use or watershed management program.

Management Practices for Management Measure 3

The management measure can be implemented by applying one or more management practices appropriate to the source, location, and climate. The practices described below can be applied successfully to implement the management measure for erosion and sediment control for construction of new dams and maintenance of existing dams.

Erosion Control Practices

Successful control of erosion and sedimentation from construction and maintenance activities can involve a system of management practices that targets each stage of the erosion process. The most efficient approach involves minimizing the potential sources of sediment from the onset. This means limiting the extent and duration of land disturbance to the minimum needed, and protecting surfaces once they are exposed. The second stage of the management practice system involves controlling the amount of runoff and its ability to carry sediment by diverting incoming flows and impeding internally generated flows. The third stage involves retaining sediment that is picked up on the project site through the use of sediment-capturing devices. On most sites

[3] Contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app) to access NRCS in your community.

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successful erosion and sedimentation control requires a combination of structural and vegetative practices. All of these stages are better performed using advanced planning and good scheduling.

The timing of land disturbing activities and installation of erosion control measures must be coordinated to minimize water quality impacts. For large scale activities, the management practice system is typically installed in reverse order, starting with sediment capturing devices, followed by key runoff control measures and runoff conveyances, and then land clearing activities. Often, construction or maintenance activities that generate significant off-site sediment have failed to sequence activities in the proper order.

Erosion controls reduce the amount of sediment lost during dam construction and prevent sediment from entering surface waters. Erosion control is based on (1) minimizing the area and time of land disturbance and (2) quickly stabilizing disturbed soils to prevent erosion.

The effectiveness of erosion control practices can vary based on land slope, the size of the disturbed area, rainfall frequency and intensity, wind conditions, soil type, use of heavy machinery, length of time soils are exposed and unprotected, and other factors. In general, a system of erosion and sediment control practices can more effectively reduce offsite sediment transport than a single practice. Numerous nonstructural measures such as protecting natural or newly planted vegetation, minimizing the disturbance of vegetation on steep slopes and other highly erodible areas, maximizing the distance eroded material must travel before reaching the drainage system, and locating roads away from sensitive areas may be used to reduce erosion.

The following practices have proven to be useful in controlling erosion and can be incorporated into ESC plans and used during dam construction as appropriate. These practices can be used during and after construction and throughout ongoing maintenance activities.

- Bank shaping and planting
- Branch packing
- Brush layering
- Brush mattressing
- Bulkheads and seawalls
- Check dams
- Coconut fiber roll
- Construct runoff intercepts
- Construction management
- Dormant post plantings
- Erosion and sediment control (ESC) plans
- Erosion control blankets
- Joint planting
- Live cribwalls
- Live fascines
- Live staking
- Locate potential land disturbing activities away from critical areas
- Mulching

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- Noneroding roadways
- Phase construction
- Preserve onsite vegetation
- Retaining walls
- Revegetate
- Revetment
- Riparian improvements
- Riprap
- Rootwad revetments
- Scheduling projects
- Sediment fences
- Seeding
- Site fingerprinting
- Sodding
- Soil protection
- Surface roughening
- Training—erosion and sediment control
- Tree armoring, fencing, and retaining walls or tree walls
- Tree revetments
- Vegetated buffers
- Vegetated filter strips
- Vegetated gabions
- Vegetated geogrids
- Vegetated reinforced soil slope (VRSS)
- Wildflower cover
- Wind erosions controls

A more detailed discussion of each of the above practices is provided in Chapter 7.

Runoff Control

To prevent the entry of sediment used during construction into surface waters, these precautionary steps should be followed:

- Identify areas with steep slopes, unstable soils, inadequate vegetation density, insufficient drainage, or other conditions that give rise to a high erosion potential.
- Identify measures to reduce runoff from such areas if disturbance of these areas cannot be avoided (Hynson et al., 1985).

Runoff diversions are structures that channel upslope runoff away from erosion source areas, divert sediment-laden runoff to appropriate traps or stable outlets, or capture runoff before it leaves the site, diverting it to locations where it can be used or released without erosion or flood damage. Diversions can be either temporary or permanent in nature.

Runoff control measures, mechanical sediment control measures, grassed filter strips, mulching, and/or sediment basins could be used to control runoff from the construction site. Scheduling

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construction during drier seasons, exposing areas for only the time needed for completion of specific activities, and avoiding stream fording also help to reduce the amount of runoff created during construction.

The largest surface water pollution problem during construction is suspended sediment resulting from aggregate processing, excavation, and concrete work. Preventing the entry of these materials above and/or below a dam is always the preferable alternative because runoff due to these types of construction activities can add more sediment to a reservoir, harm aquatic life above and below the dam, or affect habitat in streams below a dam. Filtration and gravitational settling during detention are the main processes used to remove sediment from construction site runoff. Methods used to control runoff and associated sedimentation from construction sites include:

- Check dams
- Constructing runoff intercepts
- Locate potential land disturbing activities away from critical areas
- Preserve onsite vegetation
- Retaining walls
- Sediment basins/rock dams
- Sediment fences
- Sediment traps
- Vegetated buffers
- Vegetated filter strips

A more detailed discussion of each of the above practices is provided in Chapter 7.

Erosion and Sediment Control (ESC) Plans

ESC plans can be used to control erosion and sediment and incorporate such control in planning. Some states call for specific requirements to be included in state ESC plans. Table 4.2 provides examples of several state ESC plan requirements. Additional detail about ESC plans, including general objectives, and management techniques for ensure proper administration of plans, is available in Chapter 7.

Table 4.2 Examples of Erosion and Sediment Control Plan Requirements for Select States

Location	General Requirements for ESC Plan
Delaware	ESC plans required for sites over 5,000 ft^2. Temporary or permanent stabilization must occur within 14 days of disturbance.
Florida	ESC plans required on all sites that need a runoff management permit.
Georgia	ESC plan required for all land-disturbing activities.
Indiana	ESC plan required for sites over 5 acres.
Maine	ESC plans required for sites adjacent to a wetland or waterbody. Stabilization must occur at completion or if no construction activity is to occur for 7 days. If temporary stabilization is used, permanent stabilization must be implemented within 30 days.
Maryland	ESC plans required for sites over 5,000 ft^2 or 100 yd^3.
Michigan	ESC plans required for sites over 1 acre or within 500 ft of a waterbody. Permanent stabilization must occur within 15 days of final grading. Temporary stabilization is required within 30 days if construction ceases.

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Location	General Requirements for ESC Plan
Minnesota	ESC plans required for land development over 1 acre.
New Jersey	ESC plans required for sites over 5,000 ft^2.
North Carolina	ESC plans required for sites over 1 acre. Controls must retain sediment on-site. Stabilization must occur within 30 days of completion of any phase of development.
Ohio	ESC plans required for sites over 5 acres. Permanent stabilization must occur within 7 days of final grading or when there is no construction activity for 45 days.
Oklahoma	ESC plans required for sites over 5 acres.
Pennsylvania	ESC plans required for all sites, but the state reviews only plans for sites over 25 acres. Permanent stabilization must occur as soon as possible after final grading. Temporary stabilization is required within 70 days if construction ceases for more than 30 days. Permanent stabilization is required if the site will be inactive for more than 1 year.
South Carolina	ESC plans required for all sites unless specifically exempted. Perimeter controls must be installed. Temporary or permanent stabilization is required for topsoil stockpiles and all other areas within 7 days of disturbance.
Virginia	For areas within the jurisdiction of the Chesapeake Bay Preservation Act, no more land is to be disturbed than necessary for the project. Indigenous vegetation must be preserved to the greatest extent possible.
Washington	ESC provisions are incorporated into the state runoff management plan.
Wisconsin	ESC plans required for all sites over 4,000 ft^3. Temporary or permanent stabilization is required within 7 days.

(Adapted from Environmental Law Institute, 1998; USEPA, 1993)

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Management Measure 4: Chemical and Pollutant Control at Dams

Management Measure 4
1) Limit application, generation, and migration of toxic substances. 2) Ensure the proper storage and disposal of toxic materials. 3) Apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters.

This management measure is intended to be applied to the construction of new dams, as well as to construction activities associated with the maintenance of dams. This management measure addresses fuel and chemical spills associated with dam construction and operation and maintenance activities, as well as concrete washout and related construction activities. The purpose of this management measure is to prevent downstream contamination from pollutants associated with dam construction and maintenance activities.

Although suspended sediment is the major pollutant generated at a construction site, other pollutants that may be present around dams (especially during construction and operation and maintenance activities) include:

- Petroleum products—fuels and lubricants, specifically gasoline, diesel oil, kerosene, lubricating oils, grease, and asphalt
- Pesticides—insecticides, herbicides, fungicides, and rodenticides
- Fertilizers
- Construction chemicals—acids, soil additives, and concrete-curing compounds
- Wastewater—aggregate wash water, herbicide wash water, concrete-curing water, core-drilling wastewater, or clean-up water from concrete mixers
- Solid wastes—paper, wood, metal, rubber, plastic, and roofing materials
- Garbage
- Sanitary wastes
- Cement
- Lime

This management measure is important because most erosion and sediment control practices are ineffective at retaining soluble NPS pollutants on a construction site. Many of the NPS pollutants, other than suspended sediment, generated at a construction site are carried offsite in solution or attached to clay particles in runoff. Some metals (e.g., manganese, iron, and nickel) attach to larger sediment particles and usually can be retained onsite. Other metals (e.g., copper, cobalt, and chromium) attach to fine clay particles and have greater potential to be carried offsite. Insoluble pollutants (e.g., oils, petrochemicals, and asphalt) form a surface film on runoff water and can be easily washed away (USEPA, 1973; USEPA, 2002b; USEPA, 2005d). Factors that influence the pollution potential of construction chemicals include:

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- The nature of the construction and maintenance activity
- The physical characteristics of the construction site
- The characteristics of the receiving water

Dam construction sites are particularly sensitive areas and have the potential to severely impact surface waters with runoff containing construction chemical pollutants. Because dams are located on rivers or streams, pollutants generated at these construction sites have a much shorter distance to travel before entering surface waters. Therefore, chemicals and other NPS pollutants generated at a dam construction site should be controlled.

Management Practices for Management Measure 4

The management measure generally will be implemented by applying one or more management practices appropriate to the source, location, and climate. The practices described below can be applied successfully to implement the control of chemicals and pollutants at dams. This includes dam construction as well as routine maintenance. Practices for controlling chemicals and pollutants include the following:

- Equipment runoff control
- Fuel and maintenance staging areas
- Locate potential land disturbing activities away from critical areas
- Pesticide and fertilizer management
- Pollutant runoff control
- Spill prevention and control program

A more detailed discussion of each of the above practices is provided in Chapter 7.

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Management Measure 5: Protection of Surface Water Quality and Instream and Riparian Habitat

Management Measure 5
Develop and implement a program to manage the operation of dams that includes an assessment of: 1) Surface water quality and instream and riparian habitat and potential for improvement. 2) Significant nonpoint source pollution problems that result from excessive surface water withdrawals.

This management measure is intended to be applied to dam operation, maintenance, and removal activities that result in the loss of desirable surface water quality, and of desirable instream and riparian habitat.

The purpose of the management measure is to protect the quality of surface waters and aquatic habitat (including riparian habitat) in the portion of rivers and streams that are impacted by dams. Operation, maintenance, and dam removal activities can be assessed to determine opportunities for potential improvements in water quality and aquatic habitat. These activities, as well as actions within the watershed, that contribute NPS pollutants to an impoundment should be collectively and periodically evaluated to help identify opportunities for cost-effective change.

The recommended overall programmatic approach is to evaluate a set of practices that can be applied individually or in combination to protect and improve surface water quality and aquatic habitat in reservoirs, as well as in areas downstream of dams. Then, a program can be implemented using the most cost-effective operation, maintenance, and removal activities to protect and improve surface water quality and aquatic and riparian habitat.

The individual application of any particular technique, such as aeration, change in operational procedure, restoration of an aquatic or riparian habitat, or implementation of a watershed protection best management practice (BMP), will, by itself, probably not improve water quality to an acceptable level within the reservoir impoundment or in tailwaters flowing through downstream areas. The individual practices discussed in this portion of the guidance may have to be implemented in some combination in order to improve water quality in the impoundment or in tailwaters to acceptable levels.

Selection of the management measure for the protection of surface water and instream and riparian habitat was based on:

- The availability and demonstrated effectiveness of practices to improve water quality in impoundments and in tailwaters of dams.

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- The level of improvement in water quality of impoundments and tailwaters that can be measured from implementation of engineering practices, operational procedures, watershed protection approaches, or aquatic or riparian habitat improvements.

Successful implementation of the management measure should generally involve the following categories of practices undertaken individually or in combination to improve water quality and aquatic and riparian habitat in reservoir impoundments and in tailwaters:

- Artificial destratification and hypolimnetic aeration of reservoirs with deep withdrawal points that do not have multilevel outlets to improve dissolved oxygen (DO) levels in the impoundment and to decrease levels of other types of NPS pollutants, such as manganese, iron, hydrogen sulfide, methane, ammonia, and phosphorus in reservoir releases.

- Aeration of reservoir releases, through turbine venting, injection of air into turbine releases, installation of reregulation weirs, use of selective withdrawal structures, or modification of other turbine start-up or pulsing procedures.

- Providing both minimum flows to enhance the establishment of desirable instream habitat and scouring flows as necessary to maintain instream habitat.

- Establishing adequate fish passage or alternative spawning ground and instream habitat for fish species.

- Improving watershed protection by installing and maintaining BMPs in the drainage area above the dam to remove phosphorus, suspended sediment, and organic matter and otherwise improve the quality of surface waters flowing into the impoundment.

- Removing dams, which are unsafe, unwanted, or obsolete, after careful consideration of alternatives.

Since the presence and operation of a dam have the potential to cause impacts, periodic assessments of reservoir water quality, watershed activities, and operational practices may provide valuable information for evaluating management strategies. The types and severity of the impacts can serve as an indicator of the frequency and magnitude of the assessments. There are a variety of assessment tools that are available to assist decision-makers in the evaluation of impacts associated with dams. Watershed-related impacts and management activities can be evaluated with a variety of models. EPA supports several models that may be useful for watershed assessments, such as BASINS.[4]

[4] More information about EPA-supported watershed assessment tools can be found at http://www.epa.gov/waterscience/wqm.

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Reservoir water quality can also be assessed with various models. Table 8-1 in this document provides a list of models that may be used to assess reservoir water quality. Also presented in Table 8-1 are models that could be used to evaluate downstream impacts of dams.[5]

Management Practices for Management Measure 5

The management measure generally can be implemented by applying one or more management practices appropriate to the source, location, and climate. Management practices that can be used to achieve the management measure include practices to improve water quality, restore or maintain aquatic and riparian habitat, and maintain fish passage, as well as possible removal of dams. The subsection on dam removal includes planning and evaluation considerations, descriptions of the removal process, permitting requests, sediment removal techniques, descriptions of changes associated with dam removal, and a discussion of potential biological impacts.

Practices for Improving Water Quality

Management practices for improving water quality associated with the operation and maintenance of dams can be categorized as:

- Watershed Protection Practices—activities to reduce NPS pollution that take place within the watershed surrounding a dam. Reduced NPS pollutant inputs, such as sediment or nutrients, can have a significant, positive effect on water quality within a reservoir and often in reservoir releases, as well.

- Practices for Aeration of Reservoir Water—aeration activities within the reservoir. The primary goal for aerating a large portion of reservoir water is to increase oxygen levels throughout the reservoir. Other water quality factors may also improve, including levels of dissolved metals and nutrients, destratification of the water column, and improved oxygen levels in releases.

- Practices for Aeration of Reservoir Releases — a variety of aeration techniques for improving water quality, specifically dissolved oxygen levels, are presented.

Improving water quality in impoundments and tailwaters often requires consideration of the interaction of several different factors. For example, achievement of desired DO levels at specific projects may require evaluation of several different technologies and management activities. The U.S. Army Corps of Engineers created a computer-modeling program, AERATE, that performs calculations to

Management practices to protect surface water quality and instream and riparian habitat are discussed in the following subsections:

- Improving Water Quality
  - Watershed Protection
  - Aeration of Reservoir Water
  - Aeration of Reservoir Releases
- Improving Aquatic Habitat
- Maintaining Fish Passage
- Dam Removal

[5] The USACE Environmental Laboratory develops and supports several models, such as QUAL2E, Bathtub, and CE-QUAL-RI that can be found at http://el.erdc.usace.army.mil/products.cfm?Topic=none.

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evaluate several direct (e.g., active aeration technologies) and indirect (e.g., activities such as watershed management to reduce nitrogen and phosphorous runoff, which result in improved DO) reservoir aeration techniques. The program considers the following aeration techniques: improving water quality in the reservoir, modifying the withdrawal outlet location (and thereby changing which water is withdrawn and released from the reservoir), treating the release water to eliminate the poor quality as the flow passes through the outlet structure, and treating the release water in the tail water area (Wilhelms and Yates, 1995).

Watershed Protection Practices

Many NPS pollution problems in reservoirs and dam tailwaters frequently result from sources in the contributing watershed (e.g., sediment, nutrients, metals, and toxics). Management of pollution sources from a watershed has been found to be a cost-effective solution for improving reservoir and dam tailwater water quality (TVA, 1988). Watershed protection practices can be effective in producing long-term water quality benefits and lack the high operation and maintenance costs associated with structural controls.

> Additional information about watershed protection, specifically developing and implementing watershed plans, is available from EPA's draft *Handbook for Developing Watershed Plans to Restore and Protect Our Waters*. The handbook is available at http://www.epa.gov/nps.

Watershed protection is a technique that provides long-term water quality benefits, and many states and local communities have adopted this practice. Numerous state and local governments have already legislated and implemented detailed watershed planning programs that are consistent with this management measure. For example, Oregon, New Jersey, Delaware, and Florida have passed legislation that requires county and municipal governments to adopt comprehensive plans, including requirements to direct future development away from sensitive areas. Many municipalities and regions have adopted land use and growth controls, including the towns of Amherst and Norwood and the Cape Cod region of Massachusetts; Narragansett, Rhode Island; King County, Washington; and many others.

Watershed protection management practices fall under the following four categories:

- Encourage drainage protection—includes descriptions and applications of zoning techniques that can be used to limit development density or redirect density to less environmentally sensitive areas.
- Establish and protect stream buffers—describes important steps for protecting or establishing riparian buffer zones to enhance water quality and pollutant removal.
- Identify and address NPS contributions—involves identifying potential upstream sources of nonpoint source pollution, as well as providing solutions to minimize those impacts.
- Identify and preserve critical areas—entails identifying properties that if preserved or enhanced could maintain or improve water quality and reduce the impacts of urban runoff, as well as, preserving environmentally significant areas (includes land acquisition, easements, and development restrictions of various types).

Refer to Chapter 7 for additional information about each of the above practices.

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Reservoir Aeration Practices

Systems that have been developed and tested for reservoir aeration rely on atmospheric air, compressed air, or liquid oxygen to increase DO concentrations in reservoir waters. Mixing of reservoir water to destratify warmer, oxygen rich, epilimnion and cooler, oxygen poor, hypolimnion waters can be used. However, this practice has not been used at large hydropower reservoirs because of the associated cost in deep, large volume reservoirs. Refer to Chapter 7 for additional information about reservoir aeration practices.

Practices to Improve Oxygen Levels in Tailwaters

Aeration of water as it passes through the dam or through the portion of the waterway immediately downstream from the dam is another approach to improving DO in water releases from dams. The systems in this category rely on agitation and turbulence to mix the reservoir releases with atmospheric air. One approach involves the increased use of spillways, which release surface water to prevent it from overtopping the dam. An alternative approach is to install barriers called weirs in the downstream areas. Weirs are designed to allow water to overtop them, which can increase DO through surface agitation and increased surface area contact. Some of these downstream systems create supersaturation of dissolved gases and may require additional modifications to prevent supersaturation, which may be harmful to aquatic organisms.

The quality of reservoir releases can be improved through adjustments in the operational procedures at dams. These include scheduling of releases or of the duration of shutoff periods, instituting procedures for the maintenance of minimum flows, making seasonal adjustments in the pool levels or in the timing and variation of the rate of drawdown, selecting the turbine unit that most increases DO (often increasing the DO levels by 1 mg/L), and operating more units simultaneously (often increasing DO levels by about 2 mg/L). The magnitude and duration of reservoir releases also should be evaluated to determine impacts to the salinity regime in coastal waters, which could be substantially altered from historical patterns.

Two factors should be considered when evaluating the suitability of hydraulic structures such as spillways and weirs for their application in raising the DO concentration in waterways:

- Most of the measurements of DO increases associated with hydraulic structures have been collected at low-head facilities. The effectiveness of these devices may be limited as the level of discharge increases (Wilhelms, 1988).

- The hydraulic functioning of these types of structures should be carefully considered since undesirable flow conditions may occur in some instances (Wilhelms, 1988).

Practices that improve oxygen levels in tailwaters include:

- Gated conduits
- Labyrinth weirs
- Modifying operational procedures
- Reregulation weirs
- Selective withdrawal

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- Spillway modifications
- Turbine operation
- Turbine venting
- Water conveyances

Additional information about each of these practices is available in Chapter 7.

Practices to Restore or Maintain Aquatic and Riparian Habitat

Several options are available for the restoration or maintenance of aquatic and riparian habitat in the area of a reservoir impoundment or in portions of the waterway downstream from a dam. One set of practices is designed to augment existing flows that result from normal operation of the dam. These include operation of the facility to produce flushing flows, minimum flows, or turbine pulsing. Another approach to producing minimum flows is to install small turbines that operate continuously. Installation of reregulation weirs in the waterway downstream from the dam can also achieve minimum flows. Finally, riparian improvements are discussed for their importance and effectiveness in restoring or maintaining aquatic and riparian habitat in portions of the waterway affected by the location and operation of a dam.

A 2004 report from the National Academies' National Research Council (NRC, 2004) illustrates the importance of maintaining instream flows and critical wildlife habitat in streams where dams are present and notes that areas along Nebraska's Platte River are properly designated as "critical habitats" for the river's endangered whooping crane and threatened piping plover. A series of dams and reservoirs have been constructed in the river basin for flood control and to provide water for farm irrigation, power generation, recreation, and municipal use. The alterations to the river and surrounding land caused by this extensive water-control system, however, resulted in habitat changes that were at odds with the protection of the listed species.

Conflicts over the protection of federally listed species and water management in the Platte River Basin have existed for more than 25 years. In recent years, the Fish and Wildlife Service of the U.S. Department of the Interior issued a series of biological opinions indicating that new water depletions would have to be balanced by mitigation measures, and a lawsuit forced the designation of "critical habitat" for the piping plover. These and other controversies prompted the Department of the Interior and the Governance Committee of the Platte River Endangered Species Partnership to request that the National Research Council examine whether the current designations of "critical habitat" for the whooping crane and piping plover are supported by existing science. The National Research Council was also asked to assess whether current habitat conditions are affecting the survival of listed species or limiting their chances of recovery, and to examine the scientific basis for the department's instream-flow recommendations, habitat-suitability guidelines, and other decisions. The report concludes that in most instances habitat conditions are indeed affecting the likelihood of species survival and recovery.

Additional information about the following practices to restore or maintain aquatic and riparian habitat are available in Chapter 7:

- Constructed spawning beds
- Flow augmentation

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- Riparian improvements
- Spillway modifications

Practices to Maintain Fish Passage

Migrating fish populations may be unable to travel up or downstream because of the presence of a dam or suffer losses when passing through the turbines of hydroelectric dams at facilities that have not been equipped with special design features to accommodate fish passage. The effect of dams and hydraulic structures on migrating fish has been studied since the early 1950s in an effort to develop systems or identify operating conditions that would minimize mortality rates. Selecting a device or management strategy for optimal fish passage in a stream or river with a dam requires careful analysis of a variety of factors, such as species, type and operational strategy of the dam, and the physical characteristics of the river system.

Larinier (2000) reports that devices such as fish ladders and bypass channels can help fish travel past dams, but may result in increased mortality due to the hardship and stress involved with passing through these structures. In addition, the fish passage structures have to be placed in a suitable entrance location, have a flow that is attractive to the species of concern, be continually maintained, and possess the hydraulic conditions necessary for the target species (Larinier, 2000). With all of these requirements, the success of a fish ladder or similar device is often uncertain. Passage through the hydraulic turbines of a hydropower dam can cause increased stress as a result of changes in velocity or pressure and the possibility of electric shocks from the turbines and can lead to increased mortality (Larinier, 2000).

The safe passage of fish either upstream or downstream through a dam requires a balance between operation of the facility for its intended uses and implementation of practices that will ensure safe passage of fish. The United States Congress' Office of Technology Assessment (OTA) report on fish passage technologies at hydropower facilities provides an excellent overview of fish passage technologies and discusses some of the economic considerations associated with the safe passage of fish (OTA, 1995).

The U.S. Fish and Wildlife Service and its partners have created a database that makes information about barriers to fish passage in the United States available to policy makers and the public. The database, known as the Fish Passage Decision Support System (FPDSS),[6] is part of the U.S. Fish and Wildlife Service's National Fish Passage Program.[7]

Available fish-protection systems for hydropower facilities fall into one of four categories based on their mode of action (Stone and Webster, 1986): behavioral barriers, physical barriers, collection systems, and diversion systems. These are discussed in separate sections below, along with additional practices that have been successfully used to maintain fish passage: spill and water budgets, fish ladders, fish lifts, advanced hydroelectric turbines, transference of fish runs, and constructed spawning beds.

[6] https://ecos.fws.gov/fpdss/index.do
[7] http://www.fws.gov/fisheries/fwma/fishpassage

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Upstream fish passage systems have been constructed at approximately 10 percent of the FERC licensed hydropower plants. Upstream fish passage systems such as fish ladders and lifts are considered adequately developed for anadromous species such as salmon, American shad (*Alosa sapidissima*), alewives (*Alosa pseudoharengus*), and blueback herring (*Alosa aestivalis*). Fish passage systems for riverine fish have not been specifically designed, although some of these species will use fish passage systems designed for anadromous species (OTA, 1995).

Practices include:

- Advanced hydroelectric turbines
- Behavioral barriers
- Collection systems
- Fish ladders
- Fish lifts
- Physical barriers
- Spill and water budgets
- Transference of fish runs

Additional information about the above practices is available in Chapter 7.

Removal of Dams

Dam Removal Resource

American Rivers is a nonprofit organization focusing on the health of U.S. river systems, fish, and wildlife. American Rivers' website hosts a variety of information related to hydromodification, including past and recent estimates of dam removals in the United States. http://www.americanrivers.org

The removal of dams has become an accepted practice for dam owners to deal with unsafe, unwanted, or obsolete dams. Dam removal may be necessary as dams deteriorate, sediments accumulate behind dams in reservoirs, human needs shift, and economics dictate (NRC, 1992). Dams serve a variety of important social and environmental purposes (e.g., water supply, flood control, power generation, wildlife habitat, and recreation). As a result, dam removal is often infrequent.

Migratory fish passage throughout United States rivers and streams is obstructed by over 2 million dams and many other barriers such as blocked, collapsed, and perched culverts. The National Oceanic and Atmospheric Administration (NOAA) is expanding its community-based approach to restoring fish habitat through the recently developed Open Rivers Initiative (ORI).[8] Administered by NOAA Fisheries Service Office of Habitat Conservation, ORI is designed to help communities correct fish passage problems by focusing financial and technical resources on the removal of obsolete dams and other blockages. ORI strives to restore vital habitat for migrating fish like salmon, striped bass, sturgeon, and shad, as well as improve community safety and stimulate economic revitalization of riverfront communities. Through its more broadly focused Community-based Restoration Program (CRP), NOAA Fisheries Service has opened over 700 miles of stream habitat with financial and technical assistance provided to fish passage

[8] http://www.nmfs.noaa.gov/habitat/restoration/ORI

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projects. Examples of successfully completed CRP projects that fit the Open Rivers Initiative model include:

- Culvert removal in the John Smith Creek (Mendocino County, CA)
- Mt. Scott Creek dam removal (Happy Valley, OR)
- Wyomissing Creek dam removal (Reading, PA)
- Town Brook dam removal and fish ladder (Plymouth, MA)
- Sennebec dam removal (Union, ME)

There are many things to consider when removing a dam, one of which is the function(s) of the dam and the status of that function (active vs. inactive). As discussed above, dams are used for various purposes, including water supply, hydroelectric power, recreation, and flood control benefits. When proposals are made to remove a dam with one or more of these active functions, the way in which these functions and benefits will be replaced or mitigated must be addressed (FOR, 1999). An example of this process can be seen with the Jackson Street Dam, located on Bear Creek in Medford, Oregon. The dam diverted water from the creek into the irrigation canals of Rogue River Valley Irrigation District (RRVID). Since the dam created a partial barrier to migratory fish, a loss of stream habitat, and an algae-filled impoundment near the city park, a consensus was reached that removing the dam was the most cost-efficient means of eliminating the problem. However, since the dam was currently providing irrigation diversion, another cost-efficient diversion had to be devised for RRVID. The decision was made to replace the old dam with a less damaging diversion structure. The new structure is approximately one-fourth the height of the Jackson Street Dam (about 3 feet) and is located 1,200 feet upstream. The new structure is also removed at the end of the irrigation season, which coincides with the time of the year when most upstream migration occurs. When the new structure is in place during the irrigation season, it allows fish to migrate (by well-designed fish ladders and screens), and it was designed so that little water will back up behind it. It is also equipped with fish screens to keep fish out of the irrigation canal (FOE et al., 1999).

It is also important to consider the cost of removing a dam, and who will pay for the removal. Removal costs can vary from tens of thousands of dollars to hundreds of millions of dollars, depending on the size and location of the dam. Who pays for dam removal can be a complex issue. Removal in the past has often been financed by the dam owner; local, state, and federal government; and in some cases agreements where multiple stakeholders cover the costs (American Rivers, n.d.a.). A guide to selected funding sources (*Paying for Dam Removal: A Guide to Selected Funding Sources)*[9] is available from American Rivers.

> Dam owners are responsible to keep the dam safe. When a dam begins to fail or breach, a decision must be made as to whether to keep or repair the structure. When a dam generates no revenue, the long-term costs of liability insurance, dam and impoundment maintenance, and operation weigh heavily on the side of dam removal. On average, dam removal costs 3–5 times less than repair.
>
> Source: Delaware Riverkeeper, n.d.

[9] http://www.americanrivers.org/site/DocServer/pdr-color.pdf?docID=727

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In the case of the Jackson Street Dam, the most cost-effective alternative to solving the problems associated with the dam was to remove it. However, since it was currently functioning, an alternative means to provide that function was needed. In some instances, it is not more beneficial to remove the dam if it is functioning. For example, USACE expressed concern over the costs of air pollution created by fuel-burning power plants needed to replace the lost power from dams in the debate over the removal of the Snake River dams (Lee, 1999). There was much controversy over whether it was more cost-efficient to remove the dams, especially due to the functions the dams provided. USACE found that replacing the dams would be costly, both monetarily and ecologically. The estimated costs to replace the lower Snake hydropower were between $180 million to $380 million a year for 100 years (Lee, 1999). In addition, the cost of the resulting increase in pollution due to natural gas or coal replacement plants was very high, yet an actual amount was not determined.

Evaluations made by the USACE found that the costs associated with removing the Snake River dams greatly exceeded the costs of maintaining, improving, and keeping them (Associated Press, 2002). Therefore, the dams along the Snake River remain and have been repaired. USACE plans to pursue technical and operational changes at the Snake River dams to improve fish survival, in addition to barging or trucking juvenile salmon around the dams (Associated Press and the Herald Staff, 2002).

The entire decision-making process is a delicate balance that involves many stakeholders. One important step in this process is to decide if the ecological benefits of removing the dam outweigh the benefits of maintaining the dam.

When deciding whether to remove a dam, interested parties should collect as much information as possible about the potential removal project. American Rivers has published a fact sheet (*Data Collection: Researching Dams and Rivers Prior to Removal*),[10] which contains a variety of sources to help begin researching the particular dam that might be removed and the river on which it is located (American Rivers, n.d.b.).

American Rivers and Trout Unlimited have published a guide to help decide whether to remove a dam or not, *Exploring Dam Removal: A Decision-Making Guide* (American Rivers and Trout Unlimited, 2002).[11]

Repercussions of Unsafe Dams (American Rivers, 1999)

Unsafe dams may result in:

1. Loss of life from surging flows if a dam fails
2. Destruction of property
3. Harm to the downstream river environment (e.g., erosion)
4. Release of toxic sediments (e.g., dioxins, PCBs)
5. Risk to users of the river (i.e., users may not be able to avoid life threatening hazards if in close approximation to a failing dam)
6. Jeopardizing delivery of critical services to communities (e.g., power generation, flood control)

The decision-making process related to dam removal is often complex with inputs from stakeholders with opposing desired outcomes. Additional resources related to dam removal are available in the Resources chapter.

[10] http://www.americanrivers.org/site/DocServer/Reseaching_a_Dam_Data_Collection.pdf?docID=981
[11] http://www.americanrivers.org/site/DocServer/Exploring_Dam_Removal-A_Decision-Making_Guide.pdf?docID=3641

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Chapter 5: Streambank and Shoreline Erosion

Figure 5.1 Shoreline Erosion: Before and After Photos (SEAS, 2007)

Streambanks and shorelines naturally erode. Water flowing along (parallel to) streambanks dislodges sediment and other materials that constitute the streambank. Similarly, water flowing perpendicular to shorelines, due to waves or tides, transports sediment and other materials away from the shoreline. Anthropogenic influences change the natural erosion processes, often increasing erosion locally and sedimentation downstream, along adjacent shorelines, or offshore. Many human activities change the hydraulic characteristics of stream flows or transfer energy to adjacent shorelines and contribute to increased streambank and shoreline erosion, for example:

- *Urbanization* that leads to changes in imperviousness creates changes in the hydraulics of water during wet weather events. Increased imperviousness can result in flashier runoff events that are shorter in duration with greater flow rates and more erosive force.
- *Agricultural practices*, such as drainage ditches, can change the characteristics of subsurface water flows into receiving streams. These changes result in less subsurface water storage and often increase stream flows during and after storms.
- *Livestock grazing* may reduce vegetative cover, which can result in more erosion on uplands and increased sediment and other pollutant loads in streams. Livestock that are allowed direct access to streams can significantly increase streambank erosion and destroy important riparian habitat.
- *Roads* built in rural areas, such as forest and recreational roads, alter the natural landscape and can destroy riparian habitat. If not properly installed and maintained, these types of roads erode and supply increased sediment and pollutants to adjacent streams. Additionally, roads may increase imperviousness, which leads to flashier runoff events. Stream crossings associated with rural roads can block fish passage, trap debris during storms, and lead to increased streambank erosion in nearby areas.
- *Marinas* can alter local wave and tidal flow patterns, resulting in transference of wave and tidal energy to adjacent shorelines.
- *Channelization or channel straightening* sometimes results in an increase in the slope of a channel, which causes an increase in stream flow velocities. Channel modifications to reduce flood damage, such as levees and floodwalls, often narrow the stream width, increasing the velocity of the water and thus its erosive potential. In addition, newly

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constructed banks are generally more prone to erosion than "seasoned" banks and are more likely to require bank stabilization.

- *Dams* alter the flow of water, sediment, organic matter, and nutrients, resulting in both direct physical and indirect biological effects. The impact of a dam on a stream corridor can vary, depending on the purposes of the dam and its size in relation to stream flow. Varying discharges released from a hydropower dam can be a significant factor increasing streambank erosion. When dams are a barrier to the flow of sediment and organic materials, the decreased suspended sediment load in release waters may lead to scouring of downstream streambeds and streambanks.

In summary, these anthropogenic factors can affect the state of equilibrium in streams or along shorelines. The typical chain of events that follows the disturbance to a stream corridor or shoreline can be described as changes in:

- Hydrology
- Stream hydraulics
- Morphology
- Factors such as sediment transport and storage
- Alterations to the biological community
- Impervious cover

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Management Measure 6: Eroding Streambanks and Shorelines

Management Measure 6
1) Where streambank or shoreline erosion is a nonpoint source (NPS) pollution problem, streambanks and shorelines should be stabilized. Vegetative methods are strongly preferred unless structural methods are more effective, considering the severity of stream flow discharge, wave and wind erosion, and offshore bathymetry, and the potential adverse impact on other streambanks, shorelines, and offshore areas. 2) Protect streambank and shoreline features with the potential to reduce NPS pollution. 3) Protect streambanks and shorelines from erosion due to uses of either the shorelands or adjacent surface waters.

Typically, several streambank and shoreline stabilization techniques may be used to effectively control erosion wherever it is a source of nonpoint pollution. Often a combination of techniques may be necessary to effectively control conditions that are causing the increased erosion. Techniques involving marsh creation and vegetative bank stabilization ("soil bioengineering") will usually be effective at sites with limited exposure to strong currents or wind-generated waves. In cases with increased erosional forces, an integrated approach that employs the use of structural systems in combination with soil bioengineering techniques can be utilized. The use of harder, more structural approaches, including beach nourishment and coastal or riparian structures, may need to be considered in areas facing severe water velocities or wave energy. In addition to controlling the sources of sediment contributed to surface waters, which are causing nonpoint source (NPS) pollution, these techniques can halt the destruction of wetlands and riparian areas located along the shoreline. Once affected streambanks and shorelines are protected, they can serve as a filter for surface water runoff from upland areas, or as a temporary sink for nutrients, contaminants, or sediment already present as NPS pollution in surface waters.

Stabilization practices involving vegetation or engineering structures should be properly designed and installed. These techniques should be applied only when there will be no adverse effects to aquatic or riparian habitat, or to the stability of adjacent shorelines. In addition to activities that are applied directly to an eroding streambank or shoreline, there may be opportunities to promote institutional measures that establish minimum setback requirements or a buffer zone to reduce concentrated flows and promote infiltration of surface water runoff in areas adjacent to the shoreline.

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Stream-friendly Project Tips

Before Construction
Involve your neighbors to increase project success
Get the necessary permits
Flag and avoid disturbing wetlands
Preserve existing native trees and shrubs
Cut trees and shrubs rather than ripping them out of the ground (many may resprout)
Make a plan to replant disturbed areas and use native plants
Install sediment-control practices (e.g., coffer dams)

During Construction
Stockpile fertile topsoil for later use for plants
Use hand equipment rather than heavy equipment
If using heavy equipment, use wide-tracks or rubberized tires
Work from the streambank, preferably on the higher, non-wetland side
Avoid instream work except as authorized by your local fishery and wildlife authority
Stay 100 feet away from water when refueling or adding oil
Avoid using wood treated with creosote or copper compounds

After Construction
Keep out people and livestock during plant establishment
Check project after high flows
Water plants during *droughts*
Control grass until trees and shrubs overtop grass, usually two to three years

Source: SWCD. No date. *Protecting Streambanks from Erosion: Tips for Small Acreages in Oregon*. Washington County Soil and Water Conservation District and the Small Acreage Steering Committee, Oregon Association of Conservation Districts. http://www.or.nrcs.usda.gov/news/factsheets/fs4.pdf. Accessed June 2003.

Initially project planners can consider whether a complete removal or reversal of the causative effects is possible. For example, when evaluating restoration sites affected by upstream armoring and urbanization, rather than adding armoring to the downstream site that is eroding, the planning team may consider whether changes to operations up stream can be made. Next, activities to improve existing erosion damage may be examined. The alteration of operation approaches in combination with management and restoration efforts can reduce future impacts. Similarly, removal of channelization structures may allow for a greater recovery of the integrity of a stream corridor. If feasible, the objective of a restoration design should be to eliminate or moderate disruptive influences to allow for equilibrium (NRC, 1992). If this is not possible, restoration may have limited effectiveness in the long term or may require a closer look at an entire watershed to determine alternate restoration activities. See Chapter 6 for additional information on watershed planning and restoration information.

A glossary of stream restoration terms is available from U.S. Army Corps of Engineers' Ecosystem Management and Restoration Research Program at http://el.erdc.usace.army.mil/elpubs/pdf/sr01.pdf.

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This management measure was selected for the following reasons:

- Many anthropogenic activities can destabilize streambanks and shorelines, resulting in erosion that contributes significant amounts of NPS pollution in surface waters.
- The loss of coastal land and streambanks due to shoreline and streambank erosion results in reduction of riparian areas and wetlands that have NPS pollution abatement potential.
- A variety of activities related to use of shorelands or adjacent surface waters can result in erosion of land along coastal bays or estuaries and loss of land along rivers and streams.

Preservation and protection of shorelines and streambanks can be accomplished through many approaches, but preference in this guidance is for vegetative practices, such as soil bioengineering and marsh creation, where their use is appropriate.

Management Practices for Management Measure 6

The management measure generally will be implemented by applying one or more management practices appropriate to the source, location, and climate. A variety of vegetative and structural practices are presented and are examples of activities that can be used as a single practice or in combination with other practices to achieve the desired project goals. An example of a source of information is the USACE publication *Stream Management* (Fischenich and Allen, 2000), which provides a good summary of vegetative and structural practices as well as a comprehensive review of processes related to stream and streambank erosion. The document also presents a thorough overview of planning activities for approaching streambank erosion issues.

The types of practices that can be used to accomplish the elements of Management Measure 6, including the following groups of practices:

- Vegetative practices
- Structural practices
- Integrated systems
- Planning and regulatory approaches

Vegetative Practices

Vegetative practices have a long history of use in Europe for streambank and shoreline protection and for slope stabilization. Prior to the 1980s, they have been practiced in the United States only to a limited extent, primarily because other engineering options, such as the use of riprap, have been more commonly accepted practices (Allen and Klimas, 1986). The use of vegetative streambank and shoreline stabilization practices have become more common in the United States over the past several decades as their implementation has shown to be physically and ecologically successful. Economically, less costly alternatives of stabilization, such as vegetative practices, are being pursued as alternatives to engineering structures for controlling erosion of streambanks and shorelines.

Vegetative practices, sometimes referred to as soil bioengineering, refer to the installation of plant materials as a main structural component in controlling problems of land instability where

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erosion and sedimentation are occurring (USDA-NRCS, 1992). Vegetative practices can be defined as, "the use of live and dead plant materials, in combination with natural and synthetic support materials, for slope stabilization, erosion reduction, and vegetative establishment" (FISRWG, 1998).

Basic principles of soil bioengineering include the following (USDA-NRCS, 1992):

- Fit the soil bioengineering system to the site
  - Topography and exposure (e.g., note the degree of slope, presence of moisture)
  - Geology and soils (e.g., determine soil depth and type)
  - Hydrology (e.g., calculate peak flows in the project area)
- Retain existing vegetation whenever possible
- Limit removal of vegetation
- Stockpile and protect topsoil
- Protect areas exposed during construction
- Divert, drain, or store excess water

Additionally, vegetative approaches have the advantage of providing food, cover, and instream and riparian habitat for fish and wildlife and result in a more aesthetically appealing environment than traditional engineering approaches (Allen and Klimas, 1986). Many planners of vegetative practices try to utilize native plants and materials that can be obtained from local stands of species. These plants are already well adapted to the climate and soil conditions of the area and thus have an increased chance of becoming established and surviving. The use of locally available plants also cuts the costs of a restoration project (Gray and Sotir, 1996). Vegetative systems that use locally available plants have the added advantage of blending in with natural vegetation over time.

Additional benefits of using bioengineering methods include (USEPA, 2003c):

- Designed to be low maintenance or maintenance-free in the long run
- Enhance habitat not only by providing food and cover sources, but by serving as a temperature control for aquatic and terrestrial animals
- If successful, can stabilize slopes effectively in a short period of time (e.g., one growing season)
- Self-repairing after establishment
- Filter overland runoff, increase infiltration, and attenuate flood peaks

The limitations of vegetative practices include the need for skilled laborers and the difficulty of locating plant materials, particularly during the dormant season, which is the optimal time for installation. To properly establish a soil bioengineering planting, orientation, on-site training, and careful supervision of the labor crews are required. Another limitation, which is avoidable, is that projects that promote the growth of thick vegetation may increase roughness values or increase friction and raise floodwater elevations. This should be taken into consideration during the planning stages of a project and prevented.

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Additional information about soil bioengineering principles is available from the *Engineering Field Handbook, Chapter 18* (USDA-NRCS, 1992).[1] Local agencies, such as the USDA Natural Resources Conservation Service (NRCS) and the Cooperative Extension Service, can be useful sources of information on appropriate native plant species to consider in bioengineering projects.

The USDA Forest Service has published *A Soil Bioengineering Guide for Streambank and Lakeshore Stabilization*,[2] which provides information on how to successfully plan and implement a soil bioengineering project, including the application of soil bioengineering techniques. The guide also provides specific tips for using soil bioengineering techniques successfully.

Specific vegetative practices include (USDA-NRCS, 1992):

- Branch packing
- Brush layering
- Brush mattressing
- Coconut fiber roll
- Dormant post plantings
- Live fascines
- Live staking
- Marsh creation and restoration
- Tree revetments
- Vegetated buffers

Refer to Chapter 7 for additional information about the above practices. The Additional Resources section provides a number of sources for obtaining information about the effectiveness, limitations, and cost estimates for these practices.

Structural Approaches

Soil bioengineering alone is not suitable in all instances. When considering an approach to streambank or shoreline stabilization, it is important to take several factors into account. For example, it is inappropriate to stabilize slopes with vegetative systems in areas that would not support plant growth, such as those areas with soils that are toxic to plants, areas of high water velocity, or where there is significant wave action (Gray and Sotir, 1996). Shores subject to wave erosion will usually require structures or beach nourishment to dampen wave or stream flow energy.

Properly designed and constructed shoreline and streambank erosion control structures are used in areas where higher water velocity or wave energy make vegetative stabilization and marsh creation ineffective. In addition to careful consideration of the engineering design, the proper planning for a shoreline or streambank protection project will include a thorough evaluation of

[1] The soil bioengineering chapter of the handbook is available at http://www.info.usda.gov/CED/ftp/CED/EFH-Ch18.pdf.
[2] Available at http://www.fs.fed.us/publications/soil-bio-guide.

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the physical processes causing the erosion. To complete the analysis of physical factors, the following steps are suggested (Hobbs et al., 1981):

- Determine the limits of the shoreline reach
- Determine the rates and patterns of erosion and accretion and the active processes of erosion within the reach
- Determine, within the reach of the sites of erosion-induced sediment supply, the volumes of that sediment supply available for redistribution within the reach, as well as the volumes of that sediment supply lost from the reach
- Determine the direction of sediment transport and, if possible, estimation of the magnitude of the gross and net sediment transport rates
- Estimate factors such as ground-water seepage or surface water runoff that contribute to erosion

Some of the most widely accepted alternative engineering practices for streambank or shoreline erosion control are described below. These practices will have varying levels of effectiveness depending on the strength of waves, tides, streamflow, or currents at the project site. They will also have varying degrees of suitability at different sites and may have varying types of secondary impacts. One important impact that must always be considered is secondary effects, such as the transfer of wave or streamflow energy, which can cause erosion elsewhere, either offshore or alongshore. Finding a satisfactory balance between these three factors (effectiveness, suitability, and secondary impacts) is often the key to a successful streambank or shoreline erosion control project.

Examples of structural approaches include:

- Beach nourishment
- Breakwaters
- Bulkheads and seawalls
- Check dams
- Groins
- Levees, setback levees, and floodwalls
- Return walls
- Revetment
- Riprap
- Toe protection
- Wing deflectors

Refer to Chapter 7 for additional information about the above practices. The Additional Resources section provides a number of sources for obtaining information about the effectiveness, limitations, and cost estimates for these practices.

Integrated Systems

The use of structural systems alone may raise concern because these systems lack vegetation, which can be effective at stabilizing soils in most conditions. Additionally, vegetated systems

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can help to restore damaged habitat along shorelines and streambanks. Integrated systems, which combine structural systems and vegetation, can be very effective in many settings where vegetation adds support and habitat to structural systems. An example of an integrated system is the use of stones for toe protection (structural) and soil bioengineering techniques (vegetative) for the upper banks of a waterway. Integrated slope protection designs that employ the traditional structural methods and the soil bioengineering techniques have proven to be more cost effective than either method independently. Where construction methods are labor-intensive and labor costs are reasonable, the combination of methods may be especially cost effective (Gray and Sotir, 1996).

Integrated systems include:

- Bank shaping and planting
- Joint planting
- Live cribwalls
- Riparian improvements
- Root wad revetments
- Vegetated gabions
- Vegetated geogrids
- Vegetated reinforced soil slope (VRSS)

Refer to Chapter 7 for additional information regarding the above practices. The Additional Resources section provides a number of sources for obtaining information about the effectiveness, limitations, and cost estimates for these practices.

Planning and Regulatory Approaches

In addition to the vegetative, structural, and integrated practices discussed above, another group of practices that can be used to protect streambanks and shorelines includes planning and regulatory approaches. The variety of planning activities include practices in waters adjacent to eroding streambanks and shorelines (e.g., evaluating the erosion potential) and on land areas adjacent to eroding streambanks and shorelines (e.g., watershed planning processes). There are also a variety of local policy and regulatory activities that can be used to protect sensitive or eroding streambanks and shorelines ranging from setback requirements and vegetated buffer minimum widths to requirements for erosion and sediment control plans for various types of construction activities. The following are examples (with complete descriptions located in Chapter 7) of planning and regulatory protection activities that could be used to protect vulnerable streambanks or shorelines:

- Erosion and sediment control plans
- Establishment and protection of stream buffers
- Rosgen's stream classification method
- Setbacks
- Shoreline sensitivity assessment

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Chapter 6: Guiding Principles

Many of the management measures and practices recommended by EPA to reduce the nonpoint source (NPS) pollutant impacts associated with hydromodification activities stress the need to incorporate planning as a tool. States, local governments, or community groups should begin the planning process early when trying to determine how to address a particular NPS issue associated with a new or existing hydromodification project. The planning process should bring key stakeholders together so that a variety of options can be explored to adequately define the problem and potential solutions. Once the issues are identified according to the various perspectives, project goals can be established to solve one or more environmental problems.

One important part of the planning process is the identification of the goals of the different stakeholders. Once these goals, which are sometimes different for the different groups of stakeholders, are identified and defined, the planning team can strive to achieve a balance among the needs of the various stakeholders. Often restoration compromises can be made to meet differing goals of the stakeholders to achieve a balance of the needs of the different groups. For example, changes in hydroelectric dam operation may be possible to produce minimum base flows downstream from the dam to support a variety of aquatic habitats, while still providing energy in a profitable manner. In addition, solutions that only allow for complete removal of the dam and restoration to preexisting stream conditions may not be possible because of other changes in the watershed (e.g., urbanization, other hydromodification projects, or the need for affordable and environmentally friendly electricity). A compromise solution that enables the dam to continue to operate while minimizing environmental impacts and to enhance critical downstream habitats that support a desirable fish population may be the best solution.

Part of the planning process and achievement of balance when evaluating techniques for restoring areas impacted by NPS pollution associated with hydromodification activities can be termed "creating opportunities." For example, an opportunity may be found by working with stakeholders such as local homeowners who are concerned about the unsightly algae present in a community reservoir. Reducing runoff containing an abundant supply of nitrogen and phosphorous pollutants from lawns surrounding the reservoir may lead to reductions in the algal bloom. Changes in land use that result in increasing the permeability of land adjacent to a channelized stream can reduce the overall volume and velocity of water in the stream. As flooding conditions are reduced, "hard" structures like bulkheads can be replaced with softer, vegetative solutions along the stream channel. The combination of reduced scouring flows associated with the greater stream velocities and vegetated channel banks can lead to improved instream ecological conditions. There are many other possible opportunities waiting to be found and implemented when projects are evaluated at the watershed level.

Project planning and analysis are essential parts of success when trying to reduce the impact of NPS pollution from new or existing hydromodification activities. One example of a planning process is explained in the EPA document *Ecological Restoration: A Tool to Manage Stream Quality* (USEPA, 1995a). This document outlines the key steps in the ecological restoration decision framework as:

- Identification of impaired or threatened watersheds

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- Inventory of the watershed
- Identification of the restoration goals
- Selection of candidate restoration techniques
- Implementation of selected restoration techniques
- Monitoring

Other EPA guidance documents offer similar approaches to the restoration planning process, including *Community-Based Environmental Protection: A Resource Book for Protecting Ecosystems and Communities* (USEPA, 1997a). Both guidance documents offer a variety of case studies to provide readers with examples of the frameworks as they are applied to real-world situations. EPA's *Draft Handbook for Developing Watershed Plans to Restore and Protect Our Waters* (USEPA, 2005c) also provides useful planning information related to watershed plans.

The Natural Resources Conservation Service (NRCS) is also a source of information for planning. NRCS provides assistance through their Watershed Protection and Flood Prevention Program, whose purpose is to assist federal, state, local agencies, local government sponsors, tribal governments, and program participants to protect and restore watersheds from damage caused by erosion, floodwater, and sediment; to conserve and develop water and land resources; and to solve natural resource and related economic problems on a watershed basis. The program provides technical and financial assistance to local people or project sponsors, builds partnerships, and requires local and state funding contribution.[1]

NRCS uses locally-led conservation programs, which are an extension of the agency's traditional assistance to individual farmers and ranchers, for planning and installing conservation practices for soil erosion control, water management, and other purposes. Through this effort, local people, generally with the leadership of conservation districts along with NRCS technical assistance, will assess their natural resource conditions and needs, set goals, identify ways to solve resource problems, utilize a broad array of programs to implement solutions, and measure their success.

When planning any new development activities or restoration of already developed or impacted activities, it is important to account for the guiding principles:

- Using a watershed approach
- Smart growth principles
- Project design principles
- Monitoring and maintenance of structures

Each of these principles is discussed in more detail below.

[1] Additional information about this program, as well as contact information is available at http://www.nrcs.usda.gov/programs/watershed.

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Using a Watershed Approach

EPA recommends the use of a watershed approach as the key framework for dealing with problems caused by runoff and other sources that impair surface waters (USEPA, 1998). The watershed protection approach is a comprehensive planning process that considers all natural resources in the watershed, as well as social, cultural, and economic factors. Using a watershed approach, multiple stakeholders integrate regional and locally-led activities with local, state, tribal, and federal environmental management programs. EPA works with federal agencies, states, tribes, local communities, and non-governmental sectors to make a watershed approach the key coordinating framework of planning, restoration, and protection efforts to achieve "clean and safe" water and healthy aquatic habitat.

The watershed approach framework can be applied to address impacts caused by hydromodification activities throughout a watershed. Additionally, the watershed approach can help to identify and address problems within a watershed that increase NPS pollution associated with hydromodification activities.

Major elements of successful watershed approaches include:

- Focusing on hydrologically-defined areas—watersheds and aquifers have hydrologic features that converge to a common point of flow; watersheds range in size from very large (e.g., the Mississippi River Basin) to a drainage basin for a small creek.

- Using an integrated set of tools and programs (regulatory and voluntary, federal/state/tribal/local and non-governmental sectors) to address the myriad problems facing the Nation's water resources, including NPS and point source pollution, habitat degradation, invasive species, and air deposition of pollutants (e.g., mercury and nutrients).

- Involving all parties that have a stake or interest in developing collaborative solutions to a watershed's water resource problems.

- Using an iterative planning or adaptive management process of assessment and setting environmental, water quality, and habitat goals (e.g., water quality standards).

- Planning, implementation, and monitoring to ensure that plans and implementation actions are revised to reflect new data.

- Breaking down barriers between plan development and implementation to enhance prospects for success.

A key attribute of the watershed approach is that it can be applied with equal success to large- and small-scale watersheds. Federal agencies, states, interstate commissions, and tribes usually apply the approach on larger scales, such as in watersheds greater than 100 square miles in size.

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However, local agencies and urban communities can apply the approach to watersheds as small as several acres in size.

Although specifics may vary from large scale to small scale, the basic goals of the watershed approach remain the same—protecting, maintaining, and restoring water resources, based on the geomorphology, ecology, and other natural characteristics of the waterbody. Local runoff management program officials must be especially conscious of watershed scale when planning and implementing specific management practices. For example, programmatic practices, such as stream protection ordinances and public education campaigns, are usually applied community wide. Consequently, the results benefit many small watersheds. In contrast, structural practices, such as vegetative approaches, usually provide direct benefits to a single stream. Regional structural management practices such as headland breakwater systems for larger watersheds can be used, but they do not protect smaller contributing streams. Given limited resources, program officials must often analyze cost and benefits and choose between large- and small-scale practices. Often, a combination of nonstructural and structural practices implemented across the watershed and at regional and local levels is the most cost effective approach.

An example of the watershed approach being used for hydromodification activities is the South Myrtle Creek Ditch Project. South Myrtle Creek, which flows into the South Umpqua River in Oregon, was historically populated with cutthroat trout (*Oncorhynchus clarki*) and coho salmon (*Oncorhynchus kisutch*). However, since the early 20th century, diversion structures, used primarily to provide water for irrigating agricultural crops, have blocked the passage of fish through creek waters (USEPA, 2002c). One example of the diversion structures was a diversion dam with a concrete apron, which was installed in a portion of South Myrtle Creek to raise the water level in an impoundment to provide irrigation water for adjacent and downstream landowners. During the summer, water levels in the creek would elevate 14 feet above natural levels and were diverted into a 2.5 mile irrigation ditch. Ultimately, hydromodification of this stream caused flow modifications and high stream temperatures, which degraded water quality for the native trout and salmon populations.

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9 Elements of Watershed Planning

EPA has identified a minimum of nine elements that are critical for achieving improvements in water quality. EPA requires that these nine elements be addressed for section 319-funded watershed plans and strongly recommends that they be included in all other watershed plans that are intended to remediate water quality impairments. Additional information is available from FY 2004 Guidelines for the Award of Section 319 Nonpoint Source Grants to States and Territories *at* http://www.epa.gov/owow/nps/cwact.html*. The nine elements are listed below:*

a. Identification of causes of impairment and pollutant sources or groups of similar sources that need to be controlled to achieve needed load reductions, and any other goals identified in the watershed plan. Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X linear miles of eroded streambank needing remediation).

b. An estimate of the load reductions expected from management measures.

c. A description of the nonpoint source management measures that will need to be implemented to achieve load reductions and a description of the critical areas in which those measures will be needed to implement this plan.

d. Estimate of the amounts of technical and financial assistance needed, associated costs, and/or the sources and authorities that will be relied upon to implement this plan.

e. An information and education component used to enhance public understanding of the project and encourage their early and continued participation in selecting, designing, and implementing the nonpoint source management measures that will be implemented.

f. Schedule for implementing the nonpoint source management measures identified in this plan that is reasonably expeditious.

g. A description of interim measurable milestones for determining whether nonpoint source management measures or other control actions are being implemented.

h. A set of criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made toward attaining water quality standards.

i. A monitoring component to evaluate the effectiveness of the implementation efforts over time, measured against the criteria established under item h immediately above.

In 1998 one of the landowners initiated a project to restore flow and improve water quality in South Myrtle Creek. The project used the guiding principles of the watershed approach to restore the health of the creek.

- *Partnership*. The project was a collaborative effort of landowners, who donated services and supplies. The project received funding and support from government agencies, such as the U.S. Fish and Wildlife Service, the Oregon Water Resources Department, the Oregon Watershed Enhancement Board, the Bureau of Land Management, the Natural Resources Conservation Service, and the Douglas County Watermaster.

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- *Geographic focus*. Resource management activities were directed specifically to the creek and the drainage ditch, where flow restoration and improved water quality were desired.

- *Sound management techniques based on strong science and data*. An assessment of South Myrtle Creek identified water quality problems from flow modification and high stream temperatures as the priority problems in the creek. The diversion dam and concrete apron were found to be causing the problems. Landowners, the Water Resources Department, and the Watershed Enhancement Board developed a plan, the goal of which was to restore flow and improve water quality in the creek. The plan was implemented by removing the diversion dam and concrete apron. The irrigation system was switched to a sprinkler type system, which is more efficient than the original ditch irrigation. In addition, the denuded riparian area was revegetated to help lower stream temperatures and new seedlings were protected with fencing to keep away livestock.

With the cooperation of the landowners, the county and state governments, and other interested parties, the South Myrtle Creek Ditch Project was a success. Water temperatures have improved and flows have increased by 2.5 cubic feet per second during the summer. Restoration of the streambed to its historical level has allowed passage of salmon and trout to the 10 miles of stream above the dam (USEPA, 2002c).[2]

Smart Growth

Smart growth practices cover a range of development and conservation strategies that are environmentally sensitive, economically viable, community-oriented, and sustainable. Environmental impacts of development can be reduced with techniques that include compact development, reduced impervious surfaces and improved water detention, safeguarding of environmentally sensitive areas, mixing of land uses (e.g., homes, offices, and shops), transit accessibility, and better pedestrian and bicycle amenities.

Through smart growth approaches that enhance neighborhoods and involve local residents in development decisions, these communities are creating vibrant places to live, work, and play. The high quality of life in these communities makes them economically competitive, creates business opportunities, and improves the local tax base. Smart growth practices have also been shown to help protect water quality by reducing the amount of paved surfaces and allowing natural lands to filter rainwater and runoff before it reaches downstream areas.

Based on the experience of communities around the nation that have used smart growth approaches to create and maintain great neighborhoods, the Smart Growth Network[3] developed a set of ten basic principles:

[2] Additional information about the project is available at http://www.epa.gov/owow/nps/Section319III/OR.htm.
[3] Smart Growth Network (SGN) is a partnership of government, business, and civic organizations that support smart growth. The SGN Web site, Smart Growth Online (http://www.smartgrowth.org/Default.asp?res=1024), features an extensive array of smart growth-related news, events, information, research, presentations, and publications.

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1. Mix land uses
2. Take advantage of compact building design
3. Create a range of housing opportunities and choices
4. Create walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Strengthen and direct development towards existing communities
8. Provide a variety of transportation choices
9. Make development decisions predictable, fair, and cost effective
10. Encourage community and stakeholder collaboration in development decisions

EPA offers help to communities through the EPA smart growth program to improve development practices and get the type of development they want. They work with local, state, and national experts to discover and encourage successful, environmentally sensitive development strategies. EPA is engaged in conducting research, publishing reports and other publications,[4] showcasing outstanding communities, working with communities through grants[5] and technical assistance (Smart Growth Implementation Assistance Program),[6] and bringing together diverse interests to encourage better growth and development.[7]

Low Impact Development

Low Impact Development (LID) is an innovative stormwater management approach. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source (Low Impact Development Center, Inc., n.d.).

LID is based on the paradigm that stormwater management should not be viewed as stormwater disposal and that numerous opportunities exist within the developed landscape to control stormwater runoff close to the source. These principles include (NRDC, n.d.):

- Integrate stormwater management early in site planning activities
- Use natural hydrologic functions as the integrating framework
- Focus on prevention rather than mitigation
- Emphasize simple, low-tech, and low cost methods
- Manage as close to the source as possible
- Distribute small-scale practices throughout the landscape
- Rely on natural features and processes
- Create a multifunctional landscape

[4] http://www.epa.gov/piedpage/publications.htm
[5] http://www.epa.gov/piedpage/grants/index.htm
[6] http://www.epa.gov/piedpage/sgia.htm
[7] Links to technical assistance, tools, partnerships and grants and other funding are at "Making Smart Growth Happen" at http://www.epa.gov/piedpage/sg_implementation.htm.

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The use of LID practices offers both economic and environmental benefits. LID measures result in less disturbance of the development area and conservation of natural features, and they can be less cost intensive than traditional stormwater control mechanisms. Cost savings for control mechanisms are not only for construction, but also for long-term maintenance and life cycle cost considerations (USEPA, 2000).

Ten common LID practices are the following (NRDC, n.d.):

- Impervious surface reduction and disconnection
- Permeable pavers
- Pollution prevention and good housekeeping
- Rain barrels and cisterns
- Rain gardens and bioretention
- Roof leader disconnection
- Rooftop gardens
- Sidewalk storage
- Soil amendments
- Tree preservation
- Vegetated swales, buffers, and strips

Project Design Considerations

General Design Factors

When designing any type of restoration project, it is important to consider the watershed as a whole as well as the specific site where restoration will occur. A watershed survey, or visual assessment, evaluates an entire watershed and can be used to help identify and verify pollutants, sources, and causes of impairments that lead to changes in streambank erosion. Additional monitoring of chemical, physical, and biological conditions may be necessary to determine if water quality is actually being affected by observed pollutants and sources. Watershed surveys can provide an accurate picture of what is occurring in the watershed. EPA's *Volunteer Stream Monitoring: A Methods Manual*[8] provides a watershed survey visual assessment form that may be used. In addition to EPA's method, a variety of visual assessment protocols have been developed by states and agencies. Designers of watershed restoration plans should look for assessment protocols that are already being used in their state or local area (USEPA, 2005c). Another general resource for planning and implementing restoration projects associated with hydromodification activities is EPA's *National Management Measures to Protect and Restore Wetlands* (USEPA, 2005b).

Photographs may also be a powerful tool that can be incorporated into watershed surveys. Photos serve as a visual reference for the site and provide before and after pictures that may be used to analyze restoration or remediation activities. In addition to taking individual photographs, aerial photographs may also provide important before and after information and can be obtained from

[8] http://www.epa.gov/owow/monitoring/volunteer/stream/vms32.html

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USGS (Earth Science Information Center), USDA (Consolidated Farm Service Agencies, Aerial Photography Field Office), and other agencies (USEPA, 2005c). Refer to EPA's draft *Handbook for Developing Watershed Plans to Restore and Protect Our Waters* (USEPA, 2005c) for more information about watershed assessments.

Assessment

Tools to analyze channels on a site-by-site basis may include geomorphic assessments such as the methodology developed by Rosgen. Geomorphic assessments help to determine river and stream characteristics such as channel dimensions, reach slope, and channel enlargement and stability. This information about stream physical characteristics might help the restoration team to understand current stream conditions and may be evaluated over time to describe degradation or improvements in the stream. Geomorphic assessment may also be useful for predicting future stream conditions, which can help in selecting suitable restoration or protection approaches (USEPA, 2005c).

The Rosgen geomorphic assessment approach groups streams into different geomorphic classes, based on a set of criteria that include entrenchment ratio, width/depth ratio, sinuosity, channel slope, and channel materials. Assessment methodologies, such as Rosgen's Stream Classification System, can help identify streams at different levels of impairment, determine the types of hydrologic and physical factors affecting stream morphologic conditions, and choose appropriate management measures to implement if needed.[9] Another common geomorphic assessment method is the Modified Wolman Pebble Count (Harrelson et al., 1994), which characterizes the texture (particle size) in the stream or riverbeds of flowing surface waters. It can be used alone or with Rosgen-type assessments. The composition of the streambed can provide information about the characteristics of the stream, including effects of flooding, sedimentation, and other physical impacts on a stream (USEPA, 2005c). Other assessment methods may be available from state agencies or environmental organizations.

The physical conditions of a site can provide important information about factors affecting overall stream integrity, such as agricultural activities and urban development. Runoff from cropland and feedlots can carry sediment into streams, clog existing habitat, and change geomorphological characteristics. An understanding of stream physical conditions can facilitate identification of sources and pollutants and allow for designing and implementing more effective restoration and protection strategies. Physical characterization should also extend beyond the streambanks or shore and include a look at conditions in riparian areas (USEPA, 2005c).

Before choosing a practice to restore an area impacted by hydromodification activities, it is also important to determine what biological endpoints are desired and to consider other environmental or water quality goals. Biological endpoints may include metrics such as the number of fish surviving, number of offspring produced, impairment of reproductive capability, or morbidity. Biological endpoints can be used to evaluate the effectiveness of treatment schemes and can serve as a design parameter during restoration planning. Water quality goals, such as increasing low dissolved oxygen levels, reducing nitrogen or phosphorous pollutant

[9] More information about the Rosgen Stream Classification System is available at http://www.epa.gov/watertrain/stream_class/index.htm.

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levels, or decreasing turbidity, are also important to consider when planning restoration. For example, if turbidity is a major problem in the waterbody, planners will want to choose a method of restoration that prevents erosion, is efficient at trapping sediment before it enters the waterbody, or one that will help sediment to settle in desired locations of the stream or river. Looking at endpoints and goals before designing the method of restoration can help planners and stakeholders achieve the desired results.

Engineering Considerations

When choosing from the various alternatives of engineering practices for addressing impacts associated with hydromodification, such as protecting and restoring eroding streambanks and shorelines, the following factors should be taken into consideration:

- Foundation conditions
- Level of exposure to erosive forces
- Availability of materials
- Initial and annual costs
- Past performance

Foundation conditions may have a significant influence on the selection of the specific practice or combination of practices to be used for restoring areas impacted by hydromodification, including shoreline or streambank stabilization. Foundation characteristics at the site must be compatible with the structure that is to be installed for erosion control. A structure such as a bulkhead, which must penetrate through the existing substrate for stability, will generally not be suitable for shorelines with a rocky bottom. Where foundation conditions are poor or where little penetration is possible, a gravity-type structure such as a stone revetment may be preferable. However, all vertical protective structures (revetments, seawalls, and bulkheads) built on sites with soft or unconsolidated bottom materials can experience scouring as incoming waves are reflected off the structures. In the absence of additional toe protection in these circumstances, the level of scouring and erosion of bottom sediments at the base of the structure may be severe enough to contribute to structural failure at some point in the lifetime of the installation.

Along streambanks, the erosive force of the current during periods of high streamflow will influence the selection of bank stabilization techniques and details of the design. For shorelines, the levels of wave exposure at the site will also generally influence the selection of shoreline stabilization techniques and details of the design. In areas of severe levels of exposure to erosive forces, such as strong wave action or currents, light structures such as vegetative techniques, timber cribbing, or light riprap revetment may not provide adequate protection. The effects of winter ice along the shoreline or streambank may also need to be considered in the selection and design of erosion control projects.

The availability of materials is another key factor influencing the selection of suitable techniques for protecting and restoring areas affected by hydromodification activities. For a vegetative approach, availability of plant materials of sufficient quantity and quality is an important design consideration. A particular type of bulkhead, seawall, or revetment may not be economically feasible if materials are not readily available near the construction site. Installation methods may also preclude the use of specific structures in certain situations. For instance, the installation of

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bulkhead pilings in coastal areas near wetlands may not always be permissible due to disruptive impacts in locating pile-driving equipment at the project site.

Costs should also be included in the decision making process for implementing hydromodification practices. The total cost of a project should be viewed as including both the initial costs (materials, labor, and planning) and the annual costs of operation and maintenance. To the extent possible, practices should be compared by their total costs. Although a particular practice may be cheaper initially, it could have operation and maintenance costs that make it more expensive in the long run. For example, in some parts of the country, the initial costs of timber bulkheads may be less than the cost of stone revetments. However, stone structures typically require less maintenance and have a longer life than timber structures. Other types of structures whose installation costs are similar may actually have a wide difference in overall cost when annual maintenance and the anticipated lifetime of the structure are considered (USACE, 1984). Environmental benefits, such as creation of habitat, should also be factored into cost evaluations.

An example of a valuable resource that provides specific cost information for practices to protect or reduce streambank and shoreline erosion is your local USDA Service Center, which makes available services provided by the NRCS.[10]

The engineering designers should also evaluate similar existing projects and practice designs to determine how well they performed compared to design specifications. An important consideration for determining past performance is to compare the physical, water quality, and biological endpoints specified in the design with the corresponding endpoints that were observed in the monitoring results. For example, if an operation and maintenance program for an urban channelization project incorporates establishment of vegetative cover along many of the low energy areas of an urban stream, the long-term performance of the vegetative cover can be evaluated with metrics such as:

- Percent of riparian area with erosion problems
- Number of recreationally important fish species present
- Annual operation and maintenance costs
- Changes in important water quality parameter values (e.g., dissolved oxygen, turbidity)

Incorporating Monitoring and Maintenance of Structures

Generally, the monitoring program will help to determine how well the project is performing with respect to the design goals and the extent of any maintenance activities needed (NRC, 1992). The project monitoring plan should be an integral part of the overall design and will be an important consideration for developing long-term project costs and resource needs. Once the project's goals are established, performance indicators are then matched to the goals to create the

[10] A list of USDA Service Centers is available at http://offices.sc.egov.usda.gov/locator/app. A list of regional and state NRCS offices is available at http://www.nrcs.usda.gov/about/organization/regions.html#state.

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monitoring program (NRC, 1992). The monitoring program should also be appropriate to the scope of the project (NRC, 1992) by including considerations such as:

- The area covered by the monitoring compared to the area of the overall project—both should be similar.
- The frequency and intensity of sampling to provide reliable assessments of the performance indicators.
- The cost and resources required for monitoring should reflect the overall cost and resources of the project.
- The performance indicators provide information to enable effective assessments of the project goals and decision-making for project maintenance activities.

Each project will have unique goals and corresponding monitoring needs. Chapter 3 of The National Research Council's document *Restoration of Aquatic Ecosystems* (NRC, 1992) provides detailed advice on considerations for planning a monitoring program for restoration activities such as those associated with hydromodification activities. Some additional monitoring considerations can be found in the USDA Forest Service document *A Soil Bioengineering Guide for Streambank and Lakeshore Stabilization* (USDA-FS, 2002):

- Keeping track of where plants were harvested—is there a correlation between growth rate of certain cuttings and the "mother" plants?
- Is the installation functioning as designed?
- Which areas are maturing more rapidly than others?
- Are seeds sprouting in the newly formed beds?
- Which plants have invaded the site through natural succession?
- What has sprouted in the second season?
- Which areas are experiencing difficulty and why?
- Is the bank stabilizing or washing away and why?
- Is something occurring that is unexpected?
- Which techniques are succeeding?
- Are any of the structures failing?

USDA NRCS' *The Practical Streambank Bioengineering Guide*[11] (Bentrup and Hoag, 1998) provides an example monitoring form. The monitoring sheet is also available in Appendix C of *A Soil Bioengineering Guide for Streambank and Lakeshore Stabilization* (USDA-FS, 2002).[12]

During the first few years after installation, maintenance is necessary until vegetation becomes established and the bank stabilizes. Structures may shift or you may notice something that was left undone. Once vegetation is established, projects should become self-sustaining and require little or no maintenance. Be sure the site is managed to give the treatment every chance to be effective over a long period of time (USDA-FS, 2002).

[11] http://www.engr.colostate.edu/~bbledsoe/CE413/idpmcpustguid.pdf
[12] http://www.fs.fed.us/publications/soil-bio-guide/guide/appendices.pdf

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Common maintenance tasks include (USDA-FS, 2002; Bentrup and Hoag, 1998):

- Remove debris and weeds that may shade and compete with cuttings
- Secure stakes, wire, twine, etc.
- Control weeds
- Repair weakened or damaged structures (including fences)
- Replant and reseed as necessary (it is not uncommon for a flood to occur days after installation)

Planting success varies from project to project. Bentrup and Hoag (1998) provide the following potential growth success rates:

Pole Plantings	*70-100%*
Live Fascines	*20-50%*
Brush Layering	*10-70%*
Post Plantings	*50-70%*

It is beneficial to inspect the project every other week for the first 2 months after installation, once a month for the next 6 months, and then every other month for 2 years, at least. One should also inspect the project after heavy precipitation, flooding, snowmelt, drought, or any extraordinary occurrence. Assess damage from flooding, wildlife, grazing, boat wakes, trampling, drought, and high precipitation (USDA-FS, 2002). Additional information about monitoring is available from USDA NRCS' *The Practical Streambank Bioengineering Guide* (Bentrup and Hoag, 1998).

Plan and design all streambank, shoreline, and navigation structures so that they do not transfer erosion energy or otherwise cause visible loss of surrounding streambanks or shorelines.

Maintenance varies with the structural type. For stone revetments, the replacement of stones that have been dislodged is necessary; timber bulkheads need to be backfilled if there has been a loss of upland material, and broken sheet pile should be replaced as necessary. Gabion baskets should be inspected for corrosion failure of the wire, usually caused either by improper handling during construction or by abrasion from the stones inside the baskets. Baskets should be replaced as necessary since waves will rapidly empty failed baskets.

Steel, timber, and aluminum bulkheads should be inspected for sheet pile failure due to active earth pressure or debris impact and for loss of backfill. For all structural types not contiguous to other structures, lengthening of flanking walls may be necessary every few years. Through periodic monitoring and required maintenance, a substantially greater percentage of coastal structures will perform effectively over their design life. Since streambank or shoreline protection projects can transfer energy from one area to another, which causes increased erosion in the adjacent area, the possible effects of erosion control measures on adjacent properties should be routinely monitored.

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Chapter 7: Practices for Implementing Management Measures

Many of the operation and maintenance solutions presented in Chapter 3 (Channelization and Channel Modification) are also practices that can be used to stabilize streambanks and shorelines as presented in Chapter 5 (Streambank and Shoreline Erosion). For example, a stream channel that has been hardened with vertical concrete walls to prevent local flooding and limit the stream to its existing channel (to protect property built along the stream channel), may benefit from operation and maintenance practices that use opportunities to replace the concrete walls with appropriate vegetative or combined vegetative and non-vegetative structures along the streambank when possible. These same practices may be applicable to stabilize downstream streambanks that are eroding and creating a nonpoint source (NPS) pollution problem because of the upstream development and hardened streambanks.

The following practices apply to one or more management measures. The descriptions and illustrations presented in this chapter are intended to provide a starting point for stakeholders and decision-makers for selecting possible practices to address NPS pollution problems associated with hydromodification activities. Table 7.1 provides a cross-reference of the practices with possible applications for the various hydromodification management measure components (e.g., instream and riparian restoration corresponds to the second component of Management Measures 1 and 2 described in detail in Chapter 3). Users of the information provided in the following table and descriptions evaluate the attributes of the possible practices with site-specific conditions in mind.

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Table 7.1 Practices for Hydromodification Management Measures

	Channelization		Dams								Streambanks				Shorelines			
Practices	Physical & chemical	Instream/riparian restoration	Erosion control	Runoff control	Chemical/pollutant control	Watershed protection	Aerate reservoir water	Improve tailwater oxygen	Restore/maintain habitat	Maintain fish passage	Vegetative	Structural	Integrated	Planning & regulatory	Vegetative	Structural	Integrated	Planning & regulatory
	MM1	MM2	MM3		MM4	MM5					MM6							
Advanced Hydroelectric Turbines (7-7)										●								
Bank Shaping and Planting (7-9)	●	●	●										●				●	
Beach Nourishment (7-10)												●				●		
Behavioral Barriers (7-12)										●								
Branch Packing (7-14)	●	●	●								●							
Breakwaters (7-15)																●		
Brush Layering (7-17)	●	●	●								●							
Brush Mattressing (7-19)	●	●	●								●							
Bulkheads and Seawalls (7-21)	●	●	●									●				●		
Check Dams (7-22)	●	●	●	●								●						
Coconut Fiber Roll (7-23)	●	●	●								●							
Collection Systems (7-25)										●								
Construct Runoff Intercepts (7-26)			●	●														
Constructed Spawning Beds (7-27)									●									
Construction Management (7-28)			●															
Dormant Post Plantings (7-29)	●	●	●								●				●			

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	Channelization		Dams								Streambanks				Shorelines			
	Physical & chemical	Instream/riparian restoration	Erosion control	Runoff control	Chemical/pollutant control	Watershed protection	Aerate reservoir water	Improve tailwater oxygen	Restore/maintain habitat	Maintain fish passage	Vegetative	Structural	Integrated	Planning & regulatory	Vegetative	Structural	Integrated	Planning & regulatory
Encourage Drainage Protection (7-30)						●												
Equipment Runoff Control (7-31)					●													
Erosion and Sediment Control (ESC) Plans (7-32)	●	●	●											●				●
Erosion Control Blankets (7-35)			●															
Establish and Protect Stream Buffers (7-37)		●				●								●				
Fish Ladders(7-38)										●								
Fish Lifts (7-40)										●								
Flow Augmentation (7-41)									●									
Fuel and Maintenance Staging Areas (7-43)					●													
Gated Conduits (7-44)								●										
Groins (7-45)																●		
Identify and Address NPS Contributions (7-46)						●												
Identify and Preserve Critical Areas (7-48)						●												
Joint Planting (7-50)	●	●	●										●					
Labyrinth Weir (7-51)								●										
Levees, Setback Levees, and Floodwalls (7-52)	●	●										●				●		

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	Channelization		Dams								Streambanks				Shorelines			
	Physical & chemical	Instream/riparian restoration	Erosion control	Runoff control	Chemical/pollutant control	Watershed protection	Aerate reservoir water	Improve tailwater oxygen	Restore/maintain habitat	Maintain fish passage	Vegetative	Structural	Integrated	Planning & regulatory	Vegetative	Structural	Integrated	Planning & regulatory
Live Cribwalls (7-54)	●	●	●										●					
Live Fascines (7-56)	●	●	●								●							
Live Staking (7-58)	●	●	●								●							
Locate Potential Land Disturbing Activities Away from Critical Areas (7-60)			●	●	●													
Marsh Creation and Restoration (7-61)		●									●				●			
Modifying Operational Procedures (7-62)								●										
Mulching (7-63)			●															
Noneroding Roadways (7-64)	●	●	●															
Pesticide and Fertilizer Management (7-67)					●													
Phase Construction (7-69)			●															
Physical Barriers (7-70)										●								
Pollutant Runoff Control (7-72)					●													
Preserve Onsite Vegetation (7-73)			●	●														
Reregulation Weir (7-74)								●										
Reservoir Aeration (7-75)							●											
Retaining Walls (7-77)			●	●														
Return Walls (7-78)	●	●										●				●		
Revegetate (7-79)			●															

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	Channelization		Dams								Streambanks				Shorelines			
	Physical & chemical	Instream/riparian restoration	Erosion control	Runoff control	Chemical/pollutant control	Watershed protection	Aerate reservoir water	Improve tailwater oxygen	Restore/maintain habitat	Maintain fish passage	Vegetative	Structural	Integrated	Planning & regulatory	Vegetative	Structural	Integrated	Planning & regulatory
Revetment (7-80)	●	●	●									●				●		
Riparian Improvements (7-82)		●	●						●				●				●	
Riprap (7-83)	●	●	●									●				●		
Root Wad Revetments (7-84)	●	●	●										●					
Rosgen's Stream Classification Method (7-86)	●	●												●				
Scheduling Projects (7-88)			●															
Sediment Basins/Rock Dams (7-89)				●														
Sediment Fences (7-91)			●	●														
Sediment Traps (7-92)				●														
Seeding (7-93)			●															
Selective Withdrawal (7-94)								●										
Setbacks (7-95)	●	●												●				●
Shoreline Sensitivity Assessment (7-97)																		●
Site Fingerprinting (7-99)			●															
Sodding (7-100)			●															
Soil Protection (7-101)			●															
Spill and Water Budgets (7-102)										●								
Spill Prevention and Control Program (7-103)					●													
Spillway Modifications (7-104)								●	●									
Surface Roughening (7-105)			●															

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	Channelization		Dams								Streambanks				Shorelines			
	Physical & chemical	Instream/riparian restoration	Erosion control	Runoff control	Chemical/pollutant control	Watershed protection	Aerate reservoir water	Improve tailwater oxygen	Restore/maintain habitat	Maintain fish passage	Vegetative	Structural	Integrated	Planning & regulatory	Vegetative	Structural	Integrated	Planning & regulatory
Toe Protection (7-106)	●	●										●				●		
Training—ESC (7-107)			●															
Transference of Fish Runs (7-108)										●								
Tree Armoring, Fencing, and Retaining Walls or Tree Wells (7-109)			●															
Tree Revetments (7-110)	●	●	●								●				●			
Turbine Operation (7-112)								●										
Turbine Venting (7-113)								●										
Vegetated Buffers (7-114)	●	●	●	●							●				●			
Vegetated Filter Strips (7-115)			●	●														
Vegetated Gabions (7-116)	●	●	●										●				●	
Vegetated Geogrids (7-118)	●	●	●										●				●	
Vegetated Reinforced Soil Slope (VRSS) (7-120)	●	●	●										●				●	
Water Conveyances (7-121)								●										
Wildflower Cover (7-122)			●															
Wind Erosion Controls (7-123)			●															
Wing Deflectors (7-124)	●	●										●				●		

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Advanced Hydroelectric Turbines

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☑ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Hydroelectric turbines can be designed to reduce impacts to juvenile fish passing through the turbine as it operates. Most research on advanced hydroelectric turbines is being carried out by power producers in the Columbia River basin (U.S. Army Corps of Engineers (USACE) and public utility districts) who are looking to improve the survival of hydroelectric turbine-passed juvenile fish by modifying the operation and design of turbines. Development of low impact turbines is also being pursued on a national scale by the U.S. Department of Energy (DOE) (Cada, 2001).

In the last few years, field studies have shown that improvements in the design of turbines have increased the survival of juvenile fish. Researchers continue to examine the causes and extent of injuries from turbine systems, as well as the significance of indirect mortality and the effects of turbine passage on adult fish. Overall, improvements in turbine design and operation, and new field, laboratory, and modeling techniques to assess turbine-passage survival, are contributing towards improving downstream fish passage at hydroelectric power plants (Cada, 2001).

The redesign of conventional turbines for fish passage has focused on strategies to reduce obstructions and to narrow the gaps between moveable elements of the turbine that are thought to injure fish. The effects of changes in the number, size, orientation, or shape of the blades that make up the runner (the rotating element of a turbine which converts hydraulic energy into mechanical energy) are being investigated (Cada, 2001).

The USACE has put considerable resources into improving turbine passage survival. The USACE Turbine Passage Survival Program (TSP) was developed to investigate means to improve the survival of juvenile salmon as they pass through turbines located at Columbia and Snake River dams. The TSP is organized along three functional elements that are integrated to achieve the objectives (Cada, 2001):[1]

- Biological studies of turbine passage at field sites
- Hydraulic model investigations
- Engineering studies of the biological studies, hydraulic components, and optimization of turbine operations

DOE supports development of low impact turbines under the Advanced Hydropower Turbine System (AHTS) Program. The AHTS program explores innovative concepts for turbine design that will have environmental benefits and maintain efficient electrical generation. The AHTS program awarded contracts for conceptual designs of advanced turbines to different firms/companies. Early in the development of conceptual designs, it became clear that there were

[1] Additional information about USACE efforts with advanced hydroelectric turbines is available at http://hydropower.inel.gov/turbines/pdfs/amfishsoc-fall2001.pdf.

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significant gaps in the knowledge of fish responses to physical stresses (injury mechanisms) experienced during turbine passage. Consequently, the AHTS program expanded its activities to include studies to develop biological criteria for turbines (Cada, 2001).[2]

[2] Additional information about DOE efforts with advanced hydroelectric turbines is available at http://hydropower.inel.gov/turbines/pdfs/amfishsoc-fall2001.pdf.

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Bank Shaping and Planting

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☑ Integrated
  - ☐ Planning & regulatory

Bank shaping and planting involve regrading a streambank to establish a stable slope angle, placing topsoil and other material needed for plant growth on the streambank, and selecting and installing appropriate plant species on the streambank. This design is most successful on streambanks where moderate erosion and channel migration are anticipated. Reinforcement at the toe of the bank is often required, particularly where flow velocities exceed the tolerance range for plantings and where erosion occurs below base flows. To determine the appropriate slope angle, slope stability analyses that take into account streambank materials, groundwater fluctuations, and bank loading conditions are recommended (FISRWG, 1998).

Additional Resources

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Bank Shaping and Vegetating.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://www.abe.msstate.edu/csd/NRCS-BMPs/pdf/streams/bank/bankshaping.pdf.

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Beach Nourishment

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
- ☐ Vegetative
- ☑ Structural
- ☐ Integrated
- ☐ Planning & regulatory

The creation or nourishment of existing beaches provides protection to the eroding area and can also provide a riparian habitat function, particularly when portions of the finished project are planted with beach or dune grasses (Woodhouse, 1978). Beach nourishment (Figures 7.1 through 7.4) requires a readily available source of suitable fill material that can be effectively transported to the erosion site for reconstruction of the beach (Hobson, 1977). Dredging or pumping from offshore deposits is the method most frequently used to obtain fill material for beach nourishment. A second possibility is the mining of suitable sand from inland areas and overland hauling and dumping by trucks. To restore an eroded beach and stabilize it at the restored position, fill is placed directly along the eroded sector (USACE, 1984). In most cases, plans must be made to periodically obtain and place additional fill on the nourished beach to replace sand that is carried offshore into the zone of breaking waves or alongshore in littoral drift (Houston, 1991; Pilkey, 1992).

One important task that should not be overlooked in the planning process for beach nourishment projects is the proper identification and assessment of the ecological and hydrodynamic effects of obtaining fill material from nearby submerged coastal areas. Removal of substantial amounts of bottom sediments in coastal areas can disrupt populations of fish, shellfish, and benthic organisms (Atlantic States Marine Fisheries Commission, 2002). Grain size analysis should be performed on sand from both the borrow area and the beach area to be nourished. Analysis of grain size should include both size and size distribution, and fill material should match both of these parameters (Stauble, 2005). Fill materials should also be analyzed for the presence of contaminants, and contaminated sediment should not be used (CA Department of Boating and Waterways and State Coastal Conservancy, 2002). Turbidity levels in the overlying waters can also be raised to undesirable levels (EUCC, 1999). Certain

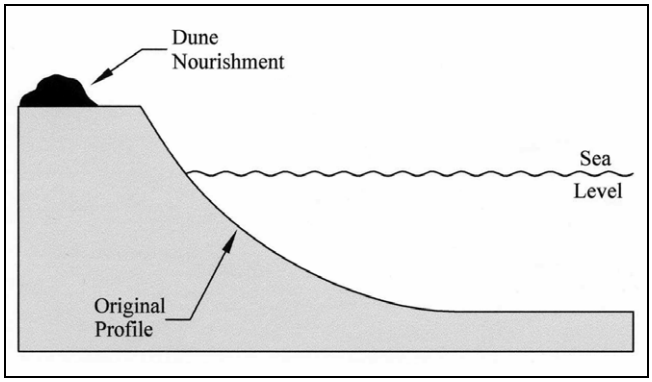

Figure 7.1 Dune Nourishment (CA Dept. of Boating and Waterways and State Coastal Conservancy, 2002)

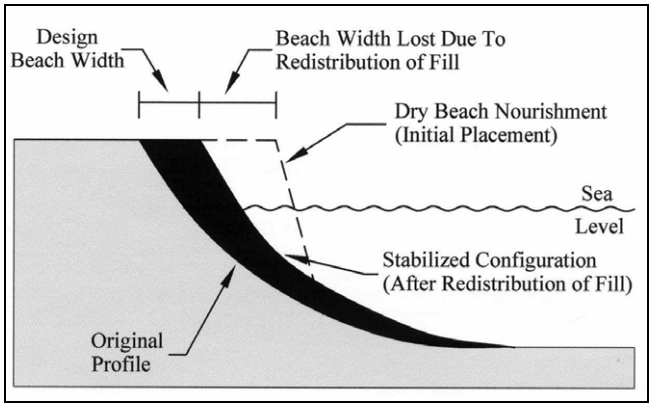

Figure 7.2 Dry Beach Nourishment (CA Dept. of Boating and Waterways and State Coastal Conservancy, 2002)

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areas may have seasonal restrictions on obtaining fill from nearby submerged areas (TRB, 2001). Timing of nourishment activities is frequently a critical factor since the recreational demand for beach use frequently coincides with the best months for completing the beach nourishment. These may also be the worst months from the standpoint of impacts to aquatic life and the beach community such as turtles seeking nesting sites.

Design criteria should include proper methods for stabilizing the newly created beach and provisions for long-term monitoring of the project to document the stability of the newly created beach and the recovery of the riparian habitat and wildlife in the area.

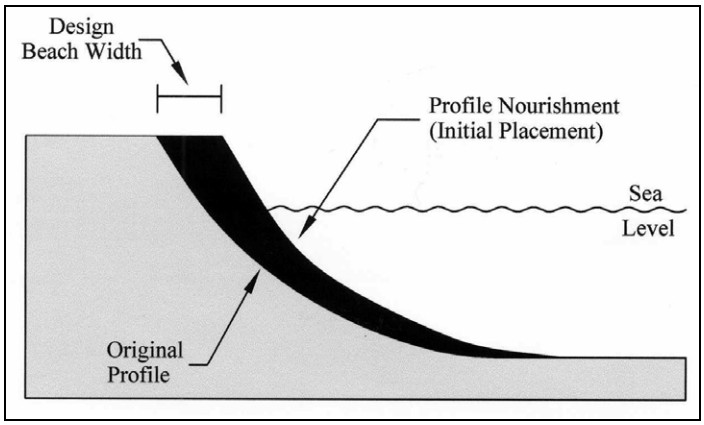

Figure 7.3 Profile Nourishment (CA Dept. of Boating and Waterways and State Coastal Conservancy, 2002)

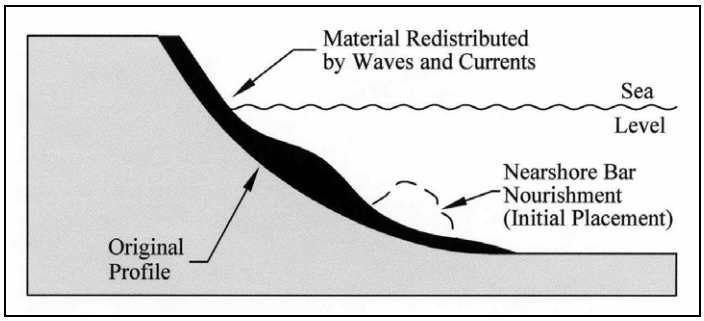

Figure 7.4 Nearshore Bar Nourishment (CA Dept. of Boating and Waterways and State Coastal Conservancy, 2002)

Additional Resources

- Barber, D. No date. *Beach Nourishment Basics.* http://www.brynmawr.edu/geology/geomorph/beachnourishmentinfo.html.

- NOAA. No date. *Beach Nourishment: A Guide for Local Government Officials.* U.S. Department of Commerce, NOAA Coastal Services Center. http://www.csc.noaa.gov/beachnourishment.

- Scottish National Heritage. No date. *A Guide to Managing Coastal Erosion in Beach/Dune Systems: Beach Nourishment.* http://www.snh.org.uk/publications/on-line/heritagemanagement/erosion/appendix_1.7.shtml.

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Behavioral Barriers

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☑ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Behavioral barriers use fish responses to external stimuli to keep fish away from intakes or to attract them to a bypass. Since fish behavior is notably variable both within and among species, behavioral barriers cannot be expected to prevent all fish from entering hydropower intakes. Environmental conditions such as high turbidity levels can obscure some behavioral barriers, such as lighting systems and curtains. Competing behaviors such as feeding or predator avoidance can also be a factor influencing the effectiveness of behavioral barriers at a particular time.

Electric screens, bubble and chain curtains, light, sound, and water jets have been evaluated in laboratory or field studies and show mixed results. Despite numerous studies, very few permanent applications of behavioral barriers have been realized (EPRI, 1999). Some authors suggest using behavioral barriers in combination with physical barriers (Mueller et al., 1999).

Electrical screens keep fish away from structures and guide them into bypass areas for removal. Fish seem to respond to the electrical stimulus best when water velocities are low. Tests of an electrical guidance system at the Chandler Canal diversion (Yakima River, Washington) showed efficiency ranging from 70 to 84 percent for velocities of less than 1 ft/sec. Efficiencies decreased to less than 50 percent when water velocities were higher than 2 ft/sec (Pugh et al., 1971). Success of electrical screens may be specific to species and fish size. An electrical field strength suitable to deter small fish may result in injury or death to large fish, since total fish body voltage is directly proportional to fish body length (Stone and Webster, 1986). Electrical screens require constant maintenance of electrodes and associated underwater hardware to maintain effectiveness. Surface water quality can affect the life and performance of electrodes.

Bubble and chain curtains are created by pumping air through a diffuser to create a continuous, dense curtain of bubbles, which can cause an avoidance response. Many factors affect fish response to the curtains, including temperature, turbidity, light, and water velocity. Bubbler systems should be constructed from corrosion-resistant materials and be installed with adequate positioning of the diffuser away from areas where siltation might clog the air ducts. Hanging chains provide a physical, visible obstacle that fish avoid. They are species-specific and lifestage-specific. Efficiency of hanging chains is affected by such variables as velocity, instream flow, turbidity, and illumination levels. Debris can limit their performance. In particular, buildup of debris can deflect chains into a nonuniform pattern and disrupt hydraulic flow patterns.

Strobe lights repel fish by producing an avoidance response. A strobe light system at Saunders Generating Station in Ontario, Canada was found to be 67 to 92 percent effective at repelling or diverting eels (EPRI, 1999). Turbidity levels can affect strobe light efficiency. The intensity and duration of the flash can also affect the response of the fish; for instance, an increase in flash duration has been associated with less avoidance. Strobe lights have the potential for far-field

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fish attraction, since they can appear to fish as a constant light source due to light attenuation over a long distance (Stone and Webster, 1986). Strobe lights at Hiram M. Chittenden Locks in Seattle, Washington were examined to determine how fish respond, depending on strobe light distance. Vertical avoidance was 90 to 100 percent when lights were 0.5 meters away, 45 percent when 2.5 meters away, and 19 percent when 4.5 to 6.5 meters away (EPRI, 1999).

Mercury lights have successfully attracted fish to passage systems and repelled them from dams. Studies suggest their effectiveness is species-specific; alewives (*Alosa pseudoharengus*) were attracted to mercury light, whereas coho salmon (*Oncorhynchus kisutch*) and rainbow trout (*Oncorhynchus mykiss*) displayed no attraction to the light (Stone and Webster, 1986). In a test on the Susquehanna River (Maryland, Pennsylvania, and New York), mercury lights attracted gizzard shad (OTA, 1995). Although results have been mixed, low overall cost of the systems has led to continued research on their effectiveness (Duke Engineering & Services, Inc., 2000).

Underwater sound, broadcast at different frequencies and amplitudes, has been effective in attracting fish away from dams or repelling fish from dangers around dams, although the results of field tests are not consistent. Fish have been attracted, repelled, or guided by the sound. A study prepared for DOE showed that low-frequency, high particle motion was effective at invoking flight and avoidance responses in salmonids (Mueller et al., 1998). These finding agree with Knudsen et al. (1994), who found that low frequencies are efficient for evoking awareness reactions and avoidance responses in juvenile Atlantic salmon. Not all fish possess the ability to perceive sound or localized acoustical sources (Harris and Van Bergeijk, 1962). Fish also frequently seem to become habituated to the sound source.

Poppers are pneumatic sound generators that create a high-energy acoustic output to repel fish. Poppers have effectively repelled warm-water fish from water intakes. Laboratory and field studies in California indicate avoidance by several freshwater species such as alewives (*Alosa pseudoharengus*), perch, and smelt. Salmonids do not seem to be effectively repelled (Stone and Webster, 1986). Operation and maintenance considerations include frequent replacement of "O" rings, air entrainment in water inlets, and vibration of structures associated with the inlets.

Water jet curtains create hydraulic conditions that repel fish. Effectiveness is influenced by the angle at which water is jetted. Although effectiveness averages 75 percent (Stone and Webster, 1986), not enough is known to determine what variables affect performance of water jet curtains. Important operation and maintenance concerns would be clogging of the jet nozzles by debris or rust and the acceptable range of stream flow conditions, which contribute to effective results.

Hybrid barriers or combinations of different barriers can enhance the effectiveness of individual behavioral barriers. Laboratory studies showed a chain net barrier combined with strobe lights to be up to 90 percent effective at repelling some species and sizes of fish. Tests of combining rope-net and chain-rope barriers have shown good results. Barriers with horizontal and vertical components in the water column are more effective than those with vertical components alone. Barriers with a large diameter are more effective than those with a small diameter, and thicker barriers are more effective than thinner barriers. Effectiveness of hanging chains was increased when used in combination with strobe lights. Effectiveness also increased when strobe lights were added to air bubble curtains and poppers (Stone and Webster, 1986).

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Branch Packing

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
  - ☑ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Branch packing consists of alternating layers of live branch cuttings and compacted backfill to repair small, localized slumps and holes in slopes (Figure 7.5). Live branch cuttings may range from 0.5 to 2 inches in diameter. They should be long enough to touch undisturbed soil at the back of the trench and extend slightly outward from the rebuilt slope face. Wooden stakes should be 5 to 8 feet long, depending on the depth of the slump or hole being repaired. Stakes should also be made from poles that are 3 to 4 inches in diameter or 2 by 4 feet lumber. Live posts can be substituted. As plant tops begin to grow, the branch packing system becomes more effective in retarding runoff and reducing surface erosion. Trapped sediment refills the localized slumps or holes, while roots spread throughout the backfill and surrounding earth to form a unified mass. Branch packing is not effective in slump areas greater than 4 feet deep or 5 feet wide (USDA-NRCS, 1992). Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002) and the USDA Natural Resources Conservation Service's (NRCS's) *Engineering Field Handbook, Chapter 18* (USDA-NRCS, 1992).

Additional Resources

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- ISU. 2006. *How to Control Streambank Erosion: Branchpacking.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/streambank/branchpacking.pdf.

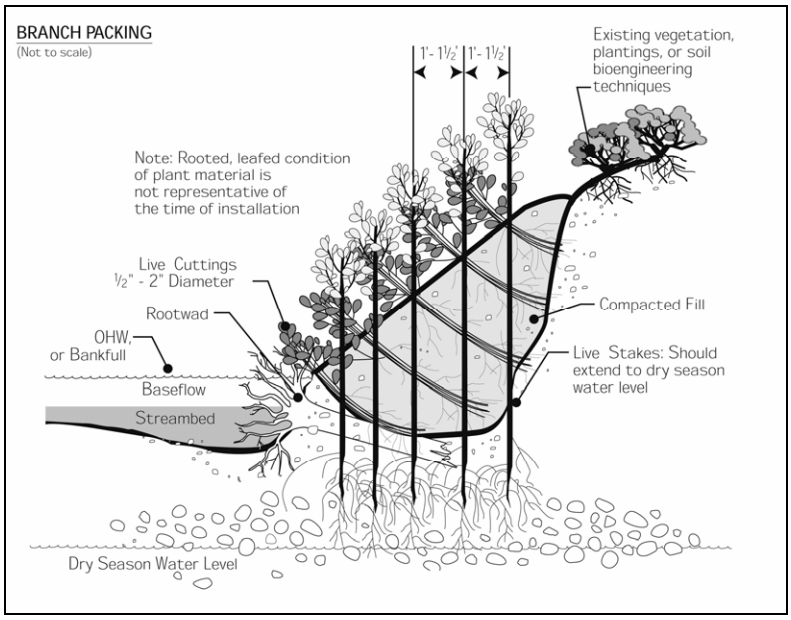

Figure 7.5 Branch Packing (USDA-FS, 2002)

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Breakwaters

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☑ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Breakwaters are wave energy barriers designed to protect the land or nearshore area behind them from the direct assault of waves. Breakwaters have traditionally been used only for harbor protection and navigational purposes; in recent years, however, designs of shore-parallel segmented breakwaters have been used for shore protection purposes (Fulford, 1985; Hardaway and Gunn, 1989; Hardaway and Gunn, 1991; USACE, 1990). Segmented breakwaters can be used to provide protection over longer sections of shoreline than is generally affordable through the use of bulkheads or revetments. Wave energy is able to pass through the breakwater gaps, allowing for the maintenance of some level of longshore sediment transport, as well as mixing and flushing of the sheltered waters behind the structures. The cost per foot of shore for the installation of segmented offshore breakwaters is generally competitive with the costs of stone revetments and bulkheads (Hardaway et al., 1991).

Figure 7.6 provides a view of breakwaters off the coast of Pennsylvania and Figure 7.7 illustrates single and multiple breakwaters.

Figure 7.6 Breakwaters – View of Presque Isle, Pennsylvania (USACE, 2003)

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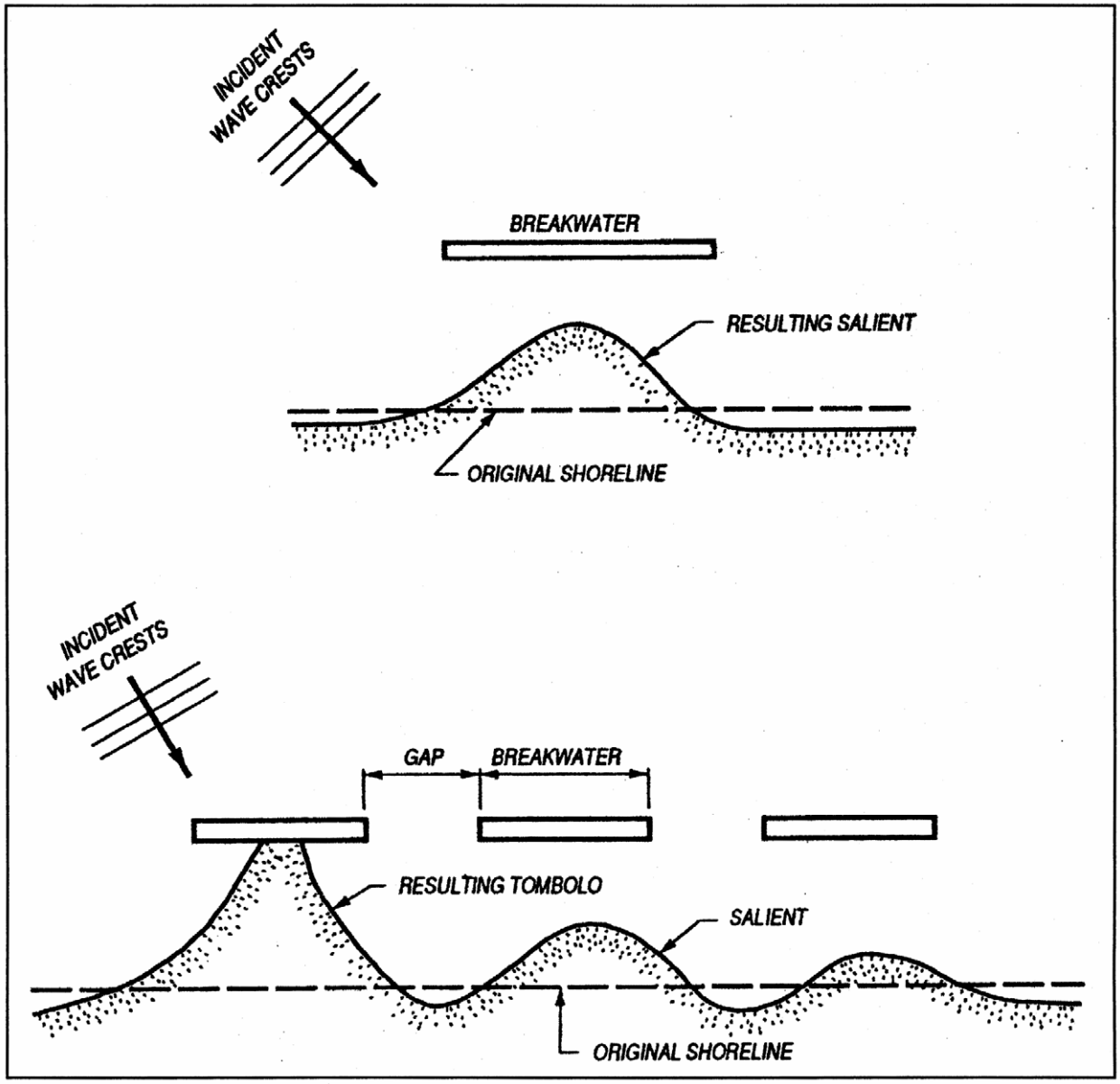

Figure 7.7 Single and Multiple Breakwaters (USACE, 2003)

Additional Resource

- USACE. No date. *Breakwaters.* http://www.usna.edu/NAOE/courses/en420/bonnette/breakwater_design.html.

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Brush Layering

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
  - ☑ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Brush layering consists of placing live branch cuttings interspersed between layers of soil on cut slopes or fill slopes (Figures 7.8 and 7.9). These systems are recommended on slopes up to 2:1 in steepness and not to exceed 15 feet in vertical height. Branch cuttings, which are placed in a crisscross or overlapping pattern, should be long enough to reach the back of the bench and still protrude from the bank (growing tips facing the outside of the slope). The portions of the brush that protrude from the slope face assist in retarding runoff and reducing surface erosion. Backfill is then placed on the branches and compacted.

Brush layering can be used to stabilize a slope against shallow sliding or mass wasting, as well as to provide erosion protection. Brush layers can stabilize and reinforce the outside edge or face of drained earthen buttresses placed against cut slopes or embankment fills. Brush layering works better on fill slopes than cut slopes, because much longer stems can be used in fill (Mississippi State University, 1999). It is most applicable for areas subjected to cut or fill operations or areas that are highly disturbed and/or eroded (ECY, 2007)

Brush layering is somewhat similar to live fascine systems because both involve the cutting and placement of live branch cuttings on slopes. The two techniques differ principally in the orientation of the branches and the depth to which they are placed in the slope. In brush layering, the cuttings are oriented more or less perpendicular to the slope contour. In live fascine systems, the cuttings are oriented more or less parallel to the slope contour. The perpendicular orientation is more effective from the point of view of earth reinforcement and mass stability of the slope (USDA-NRCS, 1992). Thus, brush layering is more effective than live fascines in terms of earth reinforcement and mass stability (Mississippi State University, 1999). When used on a fill slope, brush layering is similar to vegetated geogrids, except the technique does not use geotextile fabric (USDA-FS, 2002).

Brush layering can disrupt native soils. Therefore, installation should be completed in phases and no more area should be excavated than is necessary (ECY, 2007).

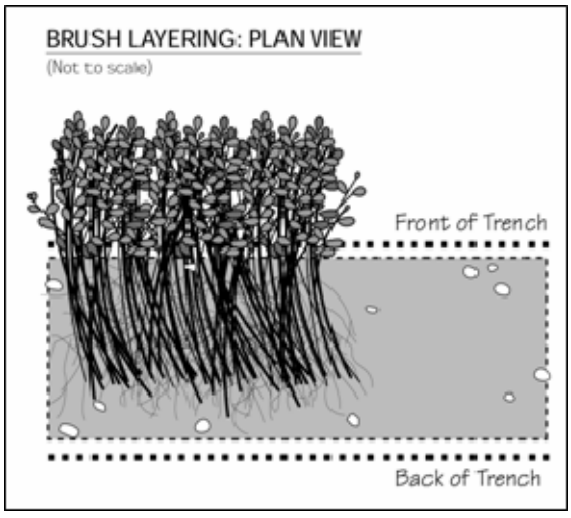

Figure 7.8 Brush Layering: Plan View (USDA-FS, 2002)

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Additional Resources

- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Brush Layering.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://www.abe.msstate.edu/csd/NRCS-BMPs/pdf/streams/bank/brushlayer.pdf.

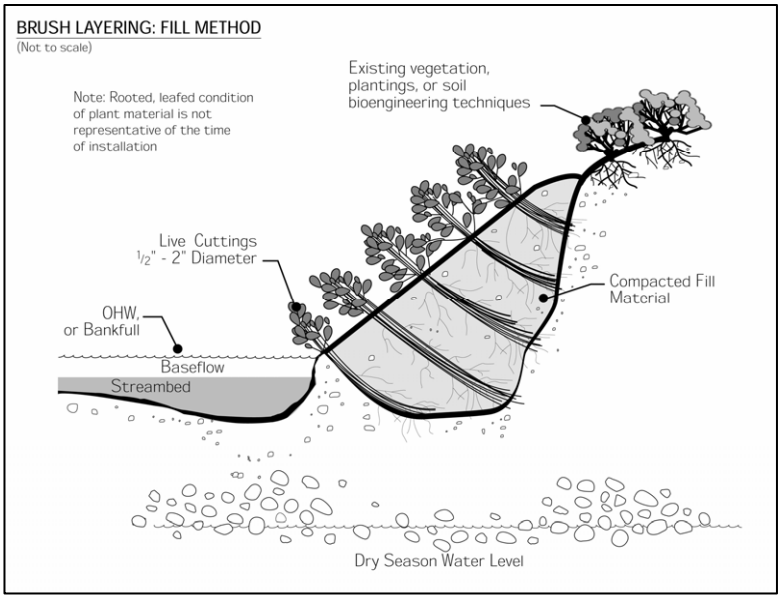

Figure 7.9 Brush Layering: Fill Method (USDA-FS, 2002)

- Myers, R.D. 1993. *Slope Stabilization and Erosion Control Using Vegetation: A Manual of Practice for Coastal Property Owners: Brush Layering.* Shorelands and Coastal Zone Management Program, Washington Department of Ecology. Olympia, WA. Publication 93-30. http://www.ecy.wa.gov/programs/sea/pubs/93-30/brush.html.

- Walter, J., D. Hughes, and N.J. Moore. 2005. *Streambank Revegetation and Protection: A Guide for Alaska. Revegetation Techniques: Brush/Hedge – Brush Layering.* Revised Edition. Alaska Department of Fish and Game, Division of Sport Fish. http://www.sf.adfg.state.ak.us/SARR/restoration/techniques/hedgebrush.cfm.

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Brush Mattressing

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
  - ☑ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Brush mattressing is commonly used in Europe for streambank protection (Figure 7.10). It involves digging a slight depression on the bank and creating a mat or mattress from woven wire or single strands of wire and live, freshly cut branches from sprouting trees or shrubs. Branches approximately 1 inch in diameter are normally cut 6 to 9 feet long (the height of the bank to be covered) and laid in criss-cross layers with the butts in alternating directions to create a uniform mattress with few voids. The mattress is then covered with wire secured with wooden stakes 2.5 to 4 feet long. It is then covered with soil and watered repeatedly to fill voids with soil and facilitate sprouting; however, some branches should be left partially exposed on the surface. The structure may require protection from undercutting by placement of stones or burial of the lower edge. Brush mattresses are generally resistant to waves and currents and provide protection from the digging out of plants by animals. Disadvantages include possible burial with sediment in some situations and difficulty in making later plantings through the mattress.

Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002). Under the Ecosystem Management and Restoration Research Program (EMRRP), the USACE has presented research on brush mattresses in a technical note (*Brush Mattresses for Streambank Erosion Control*).[3]

Additional Resources

- Allen, H.H. and C. Fischenich. 2001. *Brush Mattresses for Streambank Erosion Control.* U.S. Army Corps of Engineers, Ecosystem Management and Restoration Research Program. http://el.erdc.usace.army.mil/elpubs/pdf/sr23.pdf.

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- ISU. 2006. *How to Control Streambank Erosion*: *Brushmattress.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/streambank/brushmattress.pdf.

- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Brush Mattress.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://www.abe.msstate.edu/csd/NRCS-BMPs/pdf/streams/bank/brushmattress.pdf.

[3] http://el.erdc.usace.army.mil/elpubs/pdf/sr23.pdf

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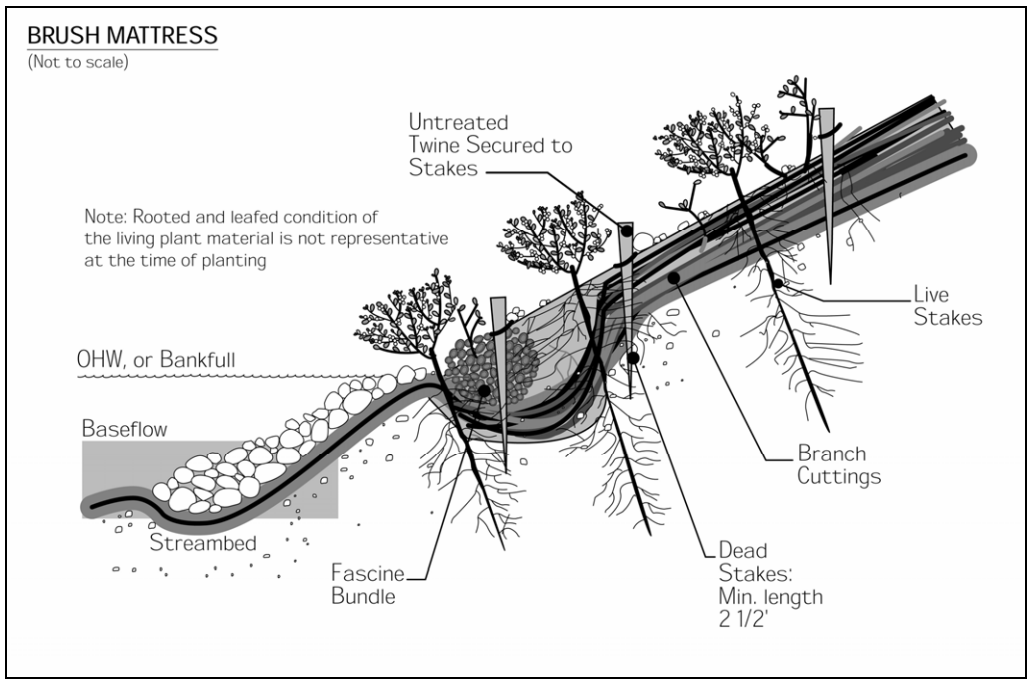

Figure 7.10 Brush Mattress (USDA-FS, 2002)

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Bulkheads and Seawalls

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☑ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Bulkheads (Figure 7.11) are primarily soil-retaining structures designed to also resist wave attack. Seawalls are principally structures designed to resist wave attack, but they also may retain some soil (USACE, 1984). Both bulkheads and seawalls may be built of many materials, including steel, timber, or aluminum sheet pile, gabions, or rubble-mound structures. Although bulkheads and seawalls protect the upland area against further erosion and land loss, they often create a local problem. Downward forces of water, produced by waves striking the wall, can produce a transfer of wave energy and rapidly remove sand from the wall (Pilkey and Wright, 1988). A stone apron is often necessary to prevent scouring and undermining. With vertical protective structures built from treated wood, there are also concerns about the leaching of chemicals used in the wood preservatives. Chromated copper arsenate (CCA), the most popular chemical used for treating the wood used in docks, pilings, and bulkheads, contains elements of chromium, copper, and arsenic that are toxic above trace levels (CSWRCB, 2005; Kahler et al., 2000).

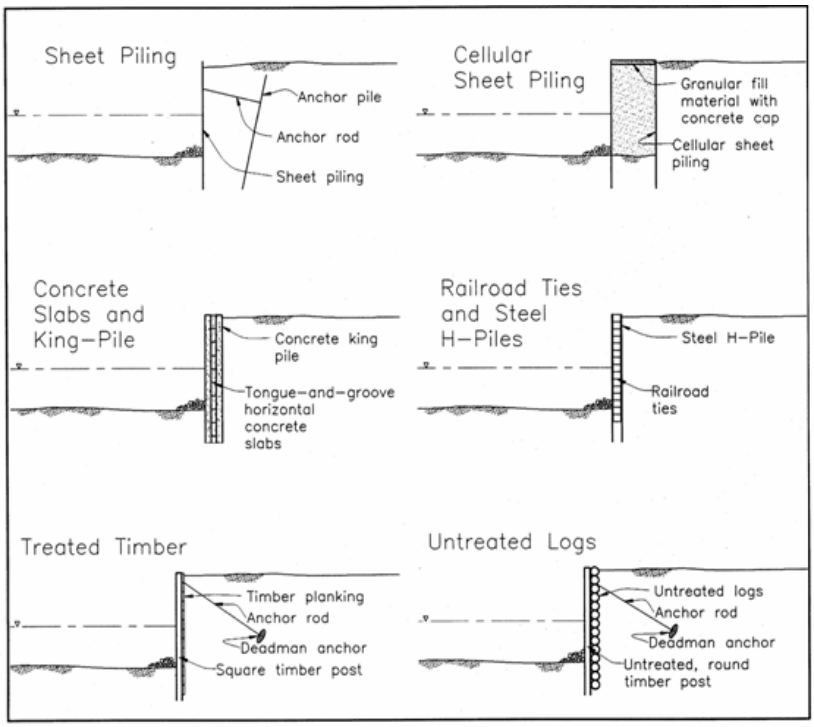

Figure 7.11 Typical Bulkhead Types (USACE, 2003)

Additional Resources

- Scottish National Heritage. No date. *A Guide to Managing Coastal Erosion in Beach/Dune Systems: Seawalls.* http://www.snh.org.uk/publications/on-line/heritagemanagement/erosion/appendix_1.12.shtml.

- USACE. No date. *Bulkheads and Seawalls.* http://www.usna.edu/NAOE/courses/en420/bonnette/Seawall_Design.html.

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Check Dams

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☑ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☑ Structural
- ☐ Integrated
- ☐ Planning & regulatory

Check dams, a type of grade control structure, are small dams constructed across an influent, intermittent stream, or drainageway to reduce channel erosion by restricting flow velocity. They can serve as emergency or temporary measures in small eroding channels that will be filled or permanently stabilized at a later date. Check dams can be installed in eroding gullies as permanent measures that fill up with sediment over time. In permanent usage, when the impounded area is filled, a relatively level surface or delta is formed over which water flows at a noneroding gradient. The water then cascades over the dam through a spillway onto a hardened apron. A series of check dams may be constructed along a stream channel of comparatively steep slope or gradient to create a channel consisting of a succession of gentle slopes with cascades in between.

Check dams can be nonporous (constructed from concrete, sheet steel, or wet masonry) or porous (using available materials such as straw bales, rock, brush, wire netting, boards, and posts). Porous dams release part of the flow through the structure, decreasing the head of flow over the spillway and the dynamic and hydrostatic forces against the dam. Nonporous dams are durable, permanent, and more expensive, while porous dams are simpler, more economical to construct, and temporary. Maintenance of check dams is important, especially the areas to the sides of the dam. Regular inspections, particularly after high flow events, should be performed to observe and repair erosion at the sides of the check dams. Excessive erosion could dislodge the check dam, create additional channel erosion, and add more sediment to the streambed.

Additional Resources

- CASQA. 2003. *California Stormwater BMP Construction Handbook*: *Check Dams.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/SE-4.pdf.
- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Check Dam.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/3.3_check_dam.pdf.
- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Check Dam.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://www.abe.msstate.edu/csd/NRCS-BMPs/pdf/water/erosion/checkdam.pdf.
- SMRC. No date. *Stream Restoration: Grade Control Practices.* The Stormwater Manager's Resource Center. http://www.stormwatercenter.net/Assorted%20Fact%20Sheets/Restoration/grade_control.htm.
- Tennessee Department of Environment and Conservation. 2002. *Erosion and Sediment Control Handbook: Check Dams*. Tennessee Department of Environment and Conservation, Nashville, TN. http://state.tn.us/environment/wpc/sed_ero_controlhandbook/cd.pdf.

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Coconut Fiber Roll

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
  - ☑ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

The coconut fiber roll technique consists of cylindrical structures composed of coconut husk fibers held together with twine woven from coconut material (Figures 7.12 and 7.13). The fiber rolls are typically manufactured in 12-inch diameters and lengths of 20 feet, which serves to protect slopes from erosion, trap sediment, and as a result, encourage plant growth within the fiber roll. The system is typically installed near the toe of the streambank with dormant cuttings and rooted plants inserted into holes cut into the fiber rolls. Once installed, the system provides a good substrate for promoting plant growth and is appropriate where short-term moderate toe stabilization is needed. Installation of this design requires minimal site disturbance and is ideal for sites that are especially sensitive to disturbance. A limitation of this system is that it cannot withstand high velocities or large ice buildup, and it can be fairly expensive to construct. Coconut fiber rolls have an effective life of 6 to 10 years. In some locations, similar and abundant locally available materials, such as corn stalks, are being used instead of coconut materials (FISRWG, 1998).

Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002). Under EMRRP, the USACE has presented research on coconut rolls in a technical note (*Coir Geotextile Roll and Wetland Plants for Streambank Erosion Control*), which is available at http://el.erdc.usace.army.mil/elpubs/pdf/sr04.pdf.

Figure 7.12 Coconut Fiber Roll (Montgomery Watson, 2001)

Additional Resources

- CASQA. 2003. *California Stormwater BMP Construction Handbook: Fiber Rolls.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/SE-5.pdf.
- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.
- ISU. 2006. *How to Control Streambank Erosion: Coconut Fiber Rolls.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/streambank/coconut_fiber.pdf.

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- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Coconut Fiber Roll.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://www.abe.msstate.edu/csd/NRCS-BMPs/pdf/streams/bank/coconutfiberroll.pdf.

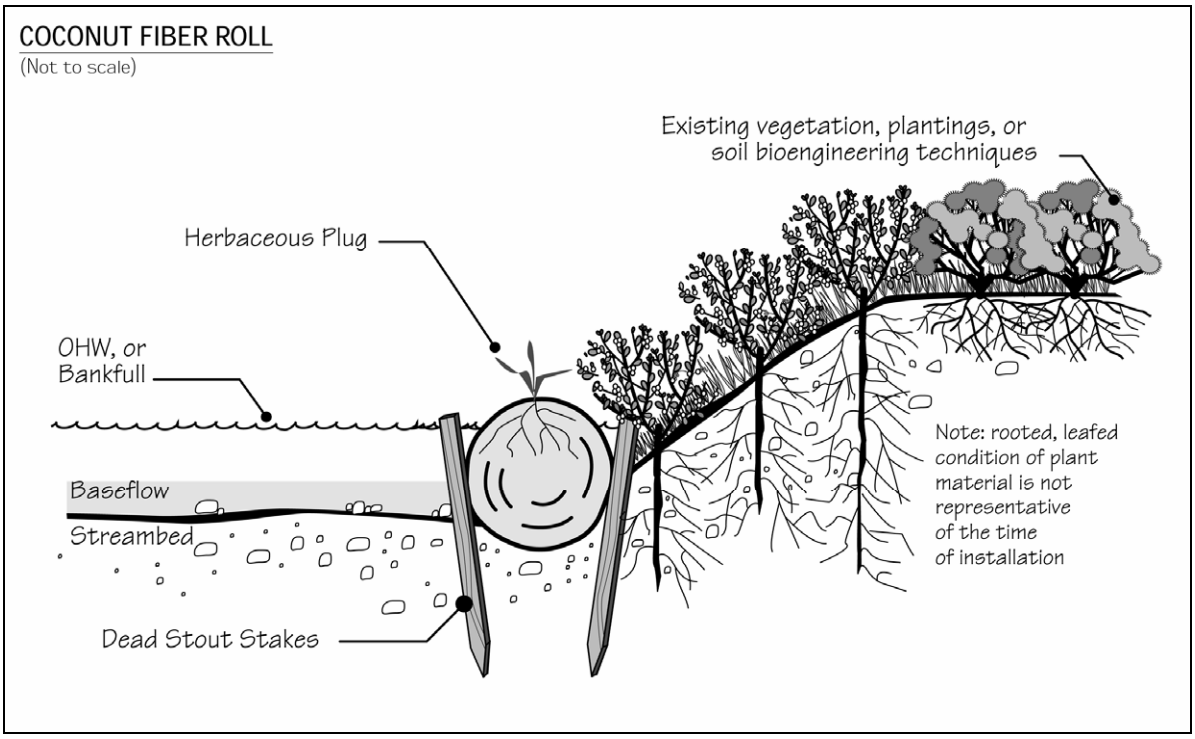

Figure 7.13 Coconut Fiber Roll (USDA-FS, 2002)

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Collection Systems

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☑ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Collection systems involve capture of fish by screening and/or netting followed with transport by truck or barge to a downstream location. Since the late 1970s, the USACE has successfully implemented a program that takes juvenile salmon from the uppermost dams in the Columbia River system (Pacific Northwest) and transports them by barge or truck to below the last dam. The program improves the travel time of fish through the river system, reduces most of the exposure to reservoir predators, and eliminates the mortality associated with passing through a series of turbines (van der Borg and Ferguson, 1989). Survivability rates for the collected fish are in excess of 95 percent, as opposed to survival rates of about 60 percent when the fish remain in the river system and pass through the dams (Dodge, 1989). However, the collection efficiency can range from 70 percent to as low as 30 percent. At the McNary Dam on the Columbia River, spill budgets are also implemented to improve overall passage (discussed in greater detail below) when the collection rate achieves less than 70 percent efficiency (Dodge, 1989).

Additional Resource

- Chelan County Public Utility District. No date. *Juvenile Fish Bypass*. http://www.chelanpud.org/juvenile-fish-passage.html.

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Construct Runoff Intercepts

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☑ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Benches, terraces, or ditches break up a slope by providing areas of low slope in the reverse direction. This keeps water from proceeding down the slope at increasing volume and velocity. Instead, the flow is directed to a suitable outlet or protected drainage system. The frequency of benches, terraces, or ditches will depend on the erodibility of the soils, steepness and length of the slope, and rock outcrops. This practice can be used if there is a potential for erosion along the slope.

Earth dikes, perimeter dikes or swales, or diversions can intercept and convey runoff from above disturbed areas to undisturbed areas or drainage systems. An earth dike is a temporary berm or ridge of compacted soil that channels water to a desired location. A perimeter dike/swale or diversion is a swale with a supporting ridge on the lower side that is constructed from the soil excavated from the adjoining swale (Delaware DNREC, 2003). These practices can intercept flow from denuded areas or newly seeded areas and keep clean runoff away from disturbed areas. The structures can be stabilized within 14 days of installation. A pipe slope drain, also known as a pipe drop structure, is a temporary pipe placed from the top of a slope to the bottom of the slope to convey concentrated runoff down the slope without causing erosion (Delaware DNREC, 2003).

Additional Resources

- CASQA. 2003. *California Stormwater BMP Construction Handbook*: *Earth Dikes and Drainage Swales.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/EC-9.pdf.

- Fifield, J. 2000. *Design and Implementation of Runoff Control Structures: Diversion Dikes and Swales.* http://www.forester.net/ec_0001_design.html#diversion.

- Lake Superior/Duluth Streams. 2005. *Grassed Swales.* http://www.duluthstreams.org/stormwater/toolkit/swales.html.

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Constructed Spawning Beds

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☑ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

When a dam adversely affects the aquatic habitat of an anadromous fish species, one option may be to construct replacement spawning beds. Additional facilities such as electric barriers, fish ladders, or bypass channels would be required to channel the fish to these spawning beds.

Merz et al., (2004) tested whether spawning bed enhancement increases survival and growth of Chinook salmon (*Oncorhynchus tshawytscha*) embryos in a regulated stream with a gravel deficit. The authors also examined a dozen physical parameters correlated with spawning sites (e.g., stream velocity, average turbidity, distance from the dam) and how they predicted survival and growth of Chinook salmon and steelhead (*Oncorhynchus mykiss*). The results suggest that spawning bed enhancement can improve embryo survival in degraded habitat. Measuring observed physical parameters before and after spawning bed manipulation can also accurately predict benefits. The National Oceanic and Atmospheric Administration's (NOAA's) S*tatus Review of Chinook Salmon from Washington, Idaho, Oregon, and California* (1998) states that artificial spawning beds for ocean-type Chinook salmon operated near three different dams was discontinued because of high pre-spawning mortality in adult fish and poor egg survival in the spawning beds. Success of constructed spawning beds in increasing survival and development of fish varies and often depends on the site.

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Construction Management

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Construction areas can be managed properly to control erosion by stabilizing entrances and proper traffic routing. A construction entrance is a pad of gravel or rock over filter cloth located where traffic enters and leaves a construction site. As construction vehicles drive over the gravel, mud and sediment are collected from the vehicles' wheels. To maximize effectiveness, the rock pad should be at least 50 feet long and 10 to 12 feet wide. The gravel should be 1- to 2-inch aggregate 6 inches deep laid over a layer of filter fabric. Maintenance might include pressure washing the gravel to remove accumulated sediment and adding more rock to maintain thickness. Runoff from this entrance should be treated before exiting the site. This practice can be combined with a designated truck wash-down station to ensure sediment is not transported off-site.

Where possible, construction traffic should be directed to avoid existing or newly planted vegetation. Instead, it should be directed over areas that must be disturbed for other construction activity. This practice reduces the net total area that is cleared and susceptible to erosion.

Additional Resources

- CASQA. 2003. *California Stormwater BMP Construction Handbook*: *Stabilized Construction Entrance/Exit.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/TR-1.pdf.

- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Stabilized Construction Entrance.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/3.14_stabilized_entrance.pdf.

Dormant Post Plantings

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
- ☑ Vegetative
- ☐ Structural
- ☐ Integrated
- ☐ Planning & regulatory

Dormant post plantings include planting of either cottonwood, willow, poplar, or other sprouting species embedded vertically into streambanks to increase channel roughness, reduce flow velocities near the slope face, and trap sediment (Figure 7.14). Dormant posts are made up of large cuttings installed in streambanks in square or triangular patterns. Live posts should be 7 to 20 feet long and 3 to 5 inches in diameter. This method is effective for quickly establishing riparian vegetation particularly in arid regions. By decreasing near bank flow velocities, this design causes sediment deposition and reduces streambank erosion. This design is more resistant to erosion than live staking or similar designs that use smaller cuttings. Success of this design is most likely on streambanks that are not gravel dominated and where ice build up is not common. The exclusion of certain herbivores aids in the success of this design. This method should be combined with other soil bioengineering techniques to achieve a comprehensive streambank restoration design (FISRWG, 1998). Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002).

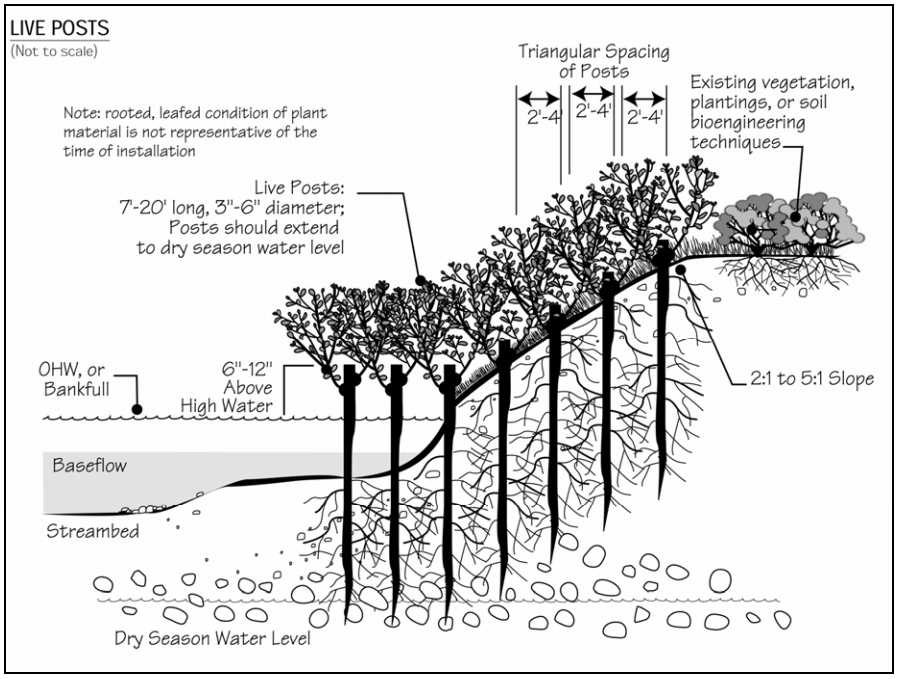

Figure 7.14 Live Posts (USDA-FS, 2002)

Additional Resources

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- ISU. 2006. *How to Control Streambank Erosion: Dormant Post Plantings.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/streambank/dormant_post.pdf.

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Encourage Drainage Protection

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☑ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

A complete understanding of watershed protection should include the implementation of practices that guide future development and land use activities. This will not only help to identify existing sources of NPS pollution but also to prevent future impairments that may impact dam construction or operations and reservoir management. Watershed protection practices can include zoning for natural resource protection. Several zoning techniques are:

- Use cluster zoning and planned unit development
- Consider resource protection zones
- Practice performance-based zoning
- Establish overlay zones
- Establish bonus or incentive zoning
- Consider large lot zoning
- Practice agricultural protection zoning
- Use watershed-based zoning
- Delineate urban growth boundaries

More details about these techniques and case studies can be found in *Protecting Wetlands: Tools for Local Governments in the Chesapeake Bay Region* (Chesapeake Bay Program, 1997).

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Equipment Runoff Control

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☑ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

During construction and maintenance activities at dams, equipment and machinery can be a potential source of pollution to the surface and ground water. Thinners or solvents should not be discharged into sanitary or storm sewer systems or into surface water systems, when cleaning machinery. Use alternative methods for cleaning larger equipment parts, such as high-pressure, high-temperature water washes or steam cleaning. Equipment-washing detergents can be used and wash water appropriately discharged. Small parts should be cleaned with degreasing solvents that can be reused or recycled. Washout from concrete trucks should never be dumped directly into surface waters or into a drainage leading to surface waters but can be disposed of into:

- A designated area that will later be backfilled
- An area where the concrete wash can harden, can be broken up, and can then be appropriately disposed
- A location not subject to surface water runoff and more than 50 feet away from a receiving water

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Erosion and Sediment Control (ESC) Plans

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☑ Planning & regulatory

ESC plans are important for controlling the adverse impacts of dam construction. ESC plans ensure that provisions for control measures are incorporated into the site planning stage of development. ESC plans also provide for prevention of erosion and sediment problems and accountability if a problem occurs (MDEP, 1990). In many municipalities, ESC plans are required under ordinances enacted to protect water resources. These plans describe the activities construction and maintenance personnel will use to reduce soil erosion and contain and treat runoff that is carrying eroded sediments. ESC plans typically include descriptions and locations of soil stabilization practices, perimeter controls, and runoff treatment facilities that will be installed and maintained before and during construction activities. In addition to special area considerations, the full ESC plan review inventory should include:

- Topographic and vicinity maps
- Site development plan
- Construction schedule
- Erosion and sedimentation control plan drawings
- Detailed drawings and specifications for practices
- Design calculations
- Vegetation plan
- Detailed drawings and specifications for control or management practices

Some erosion and soil loss is unavoidable during land-disturbing activities. Although proper siting and design help prevent areas prone to erosion from being developed, construction activities invariably produce conditions where erosion can occur. To reduce the adverse impacts associated with construction activities at dams, the construction management measure suggests a system of nonstructural and structural ESCs for incorporation into an ESC plan.

Nonstructural controls address erosion control by decreasing erosion potential, whereas structural controls are both preventive and mitigative because they control erosion and sediment movement. Brown and Caraco (1997) identified several general objectives that should be addressed in an effective ESC plan:

- *Minimize clearing and grading* – clearing and grading should occur only where absolutely necessary to build and provide access to structures and infrastructure. Clearing should be done immediately before construction, rather than leaving soils exposed for months or years (SQI, 2000).
- *Protect waterways and stabilize drainage ways* – all natural waterways within a development site should be clearly identified before construction activities begin. Clearing should generally be prohibited in or adjacent to waterways. Sediment control

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practices such as check dams might be needed to stabilize drainage ways and retain sediment on-site.

- *Phase construction to limit soil exposure* – construction phasing is a process where only a portion of the site is disturbed at any one time to complete the required building in that phase. Other portions of the site are not cleared and graded until exposed soils from the earlier phase have been stabilized and the construction nearly completed.
- *Stabilize exposed soils immediately* – seeding or other stabilization practices should occur as soon as possible after grading. In colder climates, a mulch cover is needed to stabilize the soil during the winter months when grass does not grow or grows poorly.
- *Protect steep slopes and cuts* - wherever possible, clearing and grading of existing steep slopes should be completely avoided. If clearing cannot be avoided, practices should be implemented to prevent runoff from flowing down slopes.
- *Install perimeter controls to filter sediments* – perimeter controls are used to retain sediment-laden runoff or filter it before it exits the site. The two most common perimeter control options are silt fences and earthen dikes or diversions.
- *Employ advanced sediment-settling controls* – traditional sediment basins are limited in their ability to trap sediments because fine-grained particles tend to remain suspended and the design of the basin themselves is often simplistic. Sediment basins can be designed to improve trapping efficiency through the use of perforated risers; better internal geometry; the installation of baffles, skimmers, and other outlet devices; gentler side slopes; and multiple-cell construction.

ESC plans ensure that provisions for control measures that are incorporated into the site planning stage of development help to reduce the incidence of erosion and sediment problems, and improve accountability if a problem occurs. An effective plan for runoff management on construction sites controls erosion, retains sediments on-site to the extent practicable, and reduces the adverse effects of runoff. Climate, topography, soils, drainage patterns, and vegetation affect how erosion and sediment should be controlled on a site (Washington State Department of Ecology, 1989).

ESC plans should be flexible to account for unexpected events that occur after the plans have been approved, including:

- Discrepancies between planned and as-built grades
- Weather conditions
- Altered drainage
- Unforeseen construction requirements

Changes to an ESC plan should be made based on regular inspections that identify whether the ESC practices were appropriate or properly installed or maintained. Inspecting an ESC practice after storm events shows whether the practice was installed or maintained properly. Such inspections also show whether a practice requires cleanout, repair, reinforcement, or replacement with a more appropriate practice. Inspecting after storms is the best way to ensure that ESC practices remain in place and effective at all times during construction activities.

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Because funding for ESC programs is not always dedicated, budgetary and staffing constraints may thwart effective program implementation. Brown and Caraco (1997) recommend several management techniques to ensure that ESC programs are properly administered:

- Local leadership committed to the ESC program
- Redeployment of existing staff from the office to the field or training room
- Cross-training of local review and inspection staff
- Submission of erosion prevention elements for early planning reviews.
- Prioritization of inspections based on erosion risk
- Requirement of designers to certify the initial installation of ESC practices
- Investment in contractor certification and private inspector programs
- Use of public-sector construction projects to demonstrate effective ESC controls
- Enlistment of the talents of developers and engineering consultants in the ESC program
- Revision and update of the local ESC manual

An allowance item that acts as an additional "insurance policy" for complying with the erosion and sediment control plan can be added to bid or contract documents (Deering, 2000a). This allowance covers costs to repair storm damage to ESC measures as specified in the ESC plan. This allowance does not cover storm damage to property that is not related to the ESC plan, because this would be covered under traditional liability insurance. Damage caused by severe and continuous rain events, windblown objects, fallen trees or limbs, or high-velocity, short-term rain events on steep slopes and existing grades would be covered by the allowance, as would deterioration from exposure to the elements or excessive maintenance for silt removal. The contractor is responsible for being in compliance with the ESC plan by properly implementing and maintaining all specified measures and structures. The allowance does not cover damage to practices caused by improper installation or maintenance.

Additional Resources

- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Infiltration Basin and Trench.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/4.1_infiltration.pdf.

- Milwaukee River Basin Partnership. 2003. *Detention & Infiltration Basins.* http://clean-water.uwex.edu/plan/drbasins.htm.

- Tennessee Department of Environment and Conservation. 2002. *Erosion and Sediment Control Handbook: Vegetative Practices*. Tennessee Department of Environment and Conservation, Nashville, TN. http://state.tn.us/environment/wpc/sed_ero_controlhandbook/2.%20Vegetative%20Practices.pdf.

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Erosion Control Blankets

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☐ Integrated
- ☐ Planning & regulatory

Turf reinforcement mats (TRMs) combine vegetative growth and synthetic materials to form a high-strength mat that helps prevent soil erosion in drainage areas and on steep slopes (Figure 7.15) (USEPA, 1999). TRMs enhance vegetation's natural ability to protect soil from erosion. They are composed of interwoven layers of nondegradable geosynthetic materials (e.g., nylon, polypropylene) stitched together to form a three-dimensional matrix. They are thick and porous enough to allow for soil filling and retention. In addition to providing scour protection, the mesh netting of TRMs is designed to enhance vegetative root and stem development. By protecting the soil from scouring forces and enhancing vegetative growth, TRMs can raise the threshold of natural vegetation to withstand higher hydraulic forces on stabilization slopes, streambanks, and channels. In addition to reducing flow velocities, natural vegetation removes particulates through sedimentation and soil infiltration and improves site aesthetics. In general, TRMs should not be used for the following:

- To prevent deep-seated slope failure due to causes other than surficial erosion
- If anticipated hydraulic conditions are beyond the limits of TRMs and natural vegetation
- Directly beneath drop outlets to dissipate impact force (can be used beyond impact zone)
- Where wave height might exceed 1 foot (can protect areas upslope of wave impact zone)

The performance of a TRM-lined conveyance system depends on the duration of the runoff event. For short-term events, TRMs are typically effective at flow velocities of up to 15 feet per second and shear stresses of up to 8 lb/ft^2. However, specific high-performance TRMs may be effective under more severe hydraulic conditions. Practitioners should check with manufacturers for specifications and performance limits of different products. Factors influencing the cost of TRMs include the type of material required, site conditions (e.g., underlying soils, slope steepness), and installation-specific factors (e.g., local construction costs). TRMs typically cost considerably less than concrete and riprap solutions.

Figure 7.15 Erosion Control Blanket (Conwed Fibers, n.d.)

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Additional Resources

- Barr Engineering Company. 2001. *Minnesota Urban Small Sites BMP Manual: Stormwater Best Management Practices for Cold Climates. Soil Erosion Control: Mulches, Blankets and Mats.* Prepared for the Metropolitan Council by Barr Engineering Company, St. Paul, MN. http://www.metrocouncil.org/Environment/Watershed/BMP/CH3_RPPSoilMulch.pdf.

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- California Department of Transportation. 1999. *Soil Stabilization Using Erosion Control Blankets.* Construction Storm Water Pollution Prevention Bulletin. Vol. 3, No. 8. California Department of Transportation, Division of Environmental Analysis, Sacramento, CA. http://www.dot.ca.gov/hq/env/stormwater/publicat/const/Aug_1999.pdf.

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Administrative Record Page No. 036159

Establish and Protect Stream Buffers

Channelization
- ☐ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☑ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☐ Integrated
- ☑ Planning & regulatory

Riparian buffers and wetlands can provide long-term pollutant removal capabilities without the comparatively high costs usually associated with constructing and maintaining structural controls. Conservation or preservation of these areas is important to water quality protection. Land acquisition programs help to preserve areas considered critical to maintaining surface water quality. Adequate buffer strips along streambanks provide protection for stream ecosystems, help stabilize the stream, and can prevent streambank erosion (Holler, 1989). Buffer strips can also protect and maintain near-stream vegetation that attenuates the release of sediment into stream channels. Levels of suspended solids have been shown to increase at a slower rate in stream channel sections with well-developed riparian vegetation (Holler, 1989).

Stream buffers should be protected and preserved as a conservation area because these areas provide many important functions and benefits, including:

- Providing a "right-of-way" for lateral movement
- Conveying floodwaters
- Protecting streambanks from erosion
- Treating runoff and reducing drainage problems from adjacent areas
- Providing nesting areas and other wildlife habitat functions
- Mitigating stream warming
- Protecting wetlands
- Providing recreational opportunities and aesthetic benefits
- Increasing adjacent property values

Specific stream buffer practices could include:

- Establishing a stream buffer ordinance
- Developing vegetative and use strategies within management zones
- Establishing provisions for stream buffer crossings
- Integration of structural runoff management practices where appropriate
- Developing stream buffer education and awareness programs

More information on establishing and protecting stream buffers is available from EPA's *National Management Measures to Control Nonpoint Source Pollution from Urban Areas*,[4] a document for use by state, local, and tribal managers in the implementation of nonpoint source pollution management programs. It contains a variety of practices and management activities for reducing pollution of surface and ground water from urban areas (USEPA, 2005d).

[4] http://www.epa.gov/owow/nps/urbanmm/index.html

Administrative Record Page No. 036160

Fish Ladders

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☑ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☐ Integrated
- ☐ Planning & regulatory

Fish ladders have been a commonly used structure to enable the safe upstream and downstream passage of mature fish (see Figure 7.16). There are four basic designs: pool-weir, Denil, vertical slot, and steeppass.

Pool-weir fish ladders are one of the oldest and most commonly designed fish passage structures, which consists of stepped pools and weirs that allow fish to pass from pool to pool over the weirs that separate each. Pool-weir fish ladders are normally used on slopes of about 10-degrees. Some pool-weir fish ladders can be modified to increase the possible number of fish that are passed by including submerged orifices that allow fish to pass the fish ladder without cresting the weirs.

Pool-weir fish ladders will pass many different species of fish if they are designed correctly for the environment in which they are employed. OTA (1995) provides details on design and operation of various forms of fish ladders.

Figure 7.16 Fish Ladder at Feather River Hatchery, Oroville Dam, CA (Feather River, n.d.)

Denil fish ladders are elongated rectangular channels that use internal baffles to dissipate flow energy and allow fish passage. They are widely used in the eastern United States due to their ability to pass a wide range of species (from salmonids to riverine) over a wider range of flows than pool-weir ladders. Denil ladders can be used on slopes from 10 to 25 degrees although 10 to 15 degrees is optimal. Most Denil fish ladders are 2–4 feet wide and 4–8 feet deep. This fish ladder design allows fish to pass at a preferred depth instead of through a jumping action. Denil ladders do not have resting areas and therefore fish must either be able to pass the ladder in one burst or resting pools must be provided between sections. Resting pools should be provided every 16 to 50 feet depending upon the species being passed. The high flow rates and turbulence

associated with Denil fish ladders reduces the demand for attraction flow, which is commonly added to insure good attraction over varying flow rates.

Vertical slot fish ladders are elongated rectangular channels that use regularly spaced baffles to create steps and resting pools. The vertically oriented slots in the baffles allow fish to pass through the ladder at a preferred depth. Unlike Denil fishways, vertical slot fishways provide a resting area behind each baffle allowing fish to pass in a "burst-rest" manner instead of one sustained motion. The channel created by the baffles is off-center making the baffles on one side of the ladder wider than the opposing side. Eddies that form behind longer baffles allow fish to rest and end the need for resting areas. Although vertical slot ladders are usually operated at slopes of about 10 degrees, they can be operated over a larger variety of flows. The vertical slots create a water jet that is regulated by the pool on the downstream side of it. This creates a uniform, level flow throughout the ladder.

The steeppass fish ladder, often referred to as the "Alaska steeppass," is a modified Denil fish ladder most commonly used in remote areas for the passage of salmonids. Steeppass fish ladders are usually constructed of lightweight materials such as aluminum and can operate on slopes up to 33 percent. The construction materials and design allow this type of fish ladder to be deployed as a single unit to remote areas. The baffles used in steeppass ladders are more aggressively designed, which allow the ladder to more effectively control water flow. The steeppass ladder is not without its limitations. Due to their narrow design, steeppass ladders are more susceptible to clogging due to debris and changes in flow upstream or downstream of the ladder.

Although fish ladders can be extremely efficient at passing fish, small changes in design have been shown to significantly improve their functionality. A good example of this is the John Day Dam located on the Columbia River. The original design focused on the passage of salmonids and therefore only passed about 17 percent of the American shad (*Alosa sapidissima*) using the ladder. Research indicated that simple design changes could allow for the passage of riverine species such as American shad. By changing the placement of the weirs within the fish ladder, the fish ladder was able to pass 94 percent of the salmonids, and American shad passage increased to 74 percent (Monk et al., 1989).

According to the USACE, Portland District (1997), the success rate for adults negotiating fish ladders at dams in the Columbia River Basin is about 95 percent. The U.S. Fish and Wildlife Agency designs fishways assuming a 90 percent efficiency rate. Few studies document actual efficiency of fish ladders, but it is recognized that not all fishways are equally effective (for various reasons, such as predation or physical damage to passing fish). Some fishways installed in the last 20 years are less effective than newer ones (when federal licenses began to include fish passage requirements). Maine Department of Marine Resources (DMR) estimates efficiency between 75 and 90 percent (Presumpscot River Plan Steering Committee, 2002).

Additional Resource

- Michigan DNR. No date. *What is a fish ladder?* Michigan Department of Natural Resources, Lansing, MI. http://www.michigan.gov/dnr/0,1607,7-153-10364_19092-46291--,00.html.

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Fish Lifts

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☑ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Fish lifts describe both fish elevators and locks, which are used to capture fish at the downstream side of a structure and then move them above the structure. Like fish ladders, these systems require sufficient attraction flow to move fish into the lift area. Lift systems can be advantageous because they are not species or flow specific. They can also be employed at structures too tall for fish ladders and to pass species with reduced swimming ability.

Lift systems have the potential to move large numbers of fish if they are operated efficiently. These systems can be automated to allow operation much like fish ladders. Fish lift systems do require additional operation and maintenance costs and are subject to mechanical failures not associated with fish ladders.

Most lift systems require either an active or passive bypass system to move fish far enough upstream to avoid entrainment in the flow through the dam. Passive bypass systems may include constructed waterways or pipes that discharge passed fish sufficiently up-steam of the structure. Active bypass systems include trucking and pumping operations that discharge the fish safely upstream of the structure. Active bypass systems, especially pumping systems, have come under scrutiny for fish behavior and health reasons. During the pumping process, fish may be subject to descaling and/or death due to overcrowding. After release, the fish may have orientation problems and therefore be subject to higher rates of predation mortality. Due to these concerns the United States Fish and Wildlife service has generally opposed the use of fish pumps (OTA, 1995).

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Flow Augmentation

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☑ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Operational procedures such as flow regulation, flood releases, or fluctuating flow releases all have the potential for detrimental impacts on downstream aquatic and riparian habitat. When evaluating solutions associated with degraded aquatic and riparian habitat, stakeholders must balance operational procedures to address the needs of downstream aquatic and riparian habitat with the requirements of dam operation. There are often legal and jurisdictional requirements for an operational procedure at a particular dam that should also be considered (USDOI, 1988).

A flushing flow is a high-magnitude, short-duration release for the purpose of maintaining channel capacity and the quality of instream habitat by scouring the accumulation of fine-grained sediments from the streambed. Availability of suitable instream habitat is a key factor limiting spawning success. Flushing flows wash away the sediments without removing the gravel. Flushing flows also prevent the encroachment of riparian vegetation.

However, it is important to keep in mind that flushing flows are not recommended in all cases. Flushing flows of a large magnitude may cause flooding in the old floodplain or depletion of gravel below a dam. Flushing flows are more efficient and predictable for small, shallow, high-velocity mountain streams unaltered by dams, diversions, or intensive land use. Routine maintenance generally requires a combination of practices including high flows coupled with sediment dams or channel dredging, rather than simply relying on flushing or scouring flows (Nelson et al., 1988).

Several options exist for creating minimum flows in the tailwaters below dams. The selection of any particular technique as the most cost-effective is site-specific and depends on several factors including adequate performance to achieve the desired instream and riparian habitat characteristic, compatibility with other requirements for operation of the hydropower facility, availability of materials, and cost.

Sluicing is the practice of releasing water through the sluice gate rather than through the turbines. For portions of the waterway immediately below the dam, the steady release of water by sluicing provides minimum flows with the least amount of water expenditure. At some facilities, this practice may dictate that modifications be made to the existing sluice outlets to maintain continuous low releases. Continuous low-level sluice releases at Eufala Lake and Fort Gibson Lake (Oklahoma) provided minimum flows needed to sustain downstream fish populations. The sluicing also had the benefit of improving DO levels in tailwaters downstream of these two dams such that fish mortalities, which had been experienced in the tailwaters below these two dams prior to initiating this practice, no longer occurred (USDOE, 1991).

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Turbine pulsing is a practice involving the release of water through the turbines at regular intervals to improve minimum flows. In the absence of turbine pulsing, water is released from large hydropower dams only when the turbines are operating, which is typically when the demand for power is high.

A study undertaken at the Douglas Dam (French Broad River, Tennessee) suggests some of the site-specific factors that should be considered when evaluating the advantages of practices such as turbine pulsing, sluicing, or other alternatives for providing minimum flows and improving dissolved oxygen (DO) levels in reservoir releases. Two options for maintaining minimum flows (turbine pulsing and sluicing), and two aeration alternatives (operation of surface water pumps and diffusers) were evaluated for their effectiveness, advantages, and disadvantages in providing minimum flows and aeration of reservoir releases. Computer modeling indicated that either turbine pulsing or sluicing could improve DO concentrations in releases by levels ranging from 0.7 to 1.5 mg/L. This is slightly below the level of improvement that might be expected from operation of a diffuser system for aeration. A trade-off can also be expected at this facility between water saved by frequent short-release pulses and the higher maintenance costs due to operating turbines on and off frequently (Hauser et al., 1989). Hauser et al. (1989) found that schemes of turbine pulsing ranging from 15-minute intervals to 60-minute intervals every 2 to 6 hours were found to provide fairly stable flow regimes after the first 3 to 8 miles downstream at several Tennessee Valley Authority (TVA) projects. However, at points farther downstream, less overall flow would be produced by sluicing than by pulsing. Turbine pulsing may also cause waters to rise rapidly, which could endanger people wading or swimming in the tailwaters downstream of the dam (TVA, 1990).

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Fuel and Maintenance Staging Areas

Proper maintenance of equipment and installation of proper stream crossings will further reduce pollution of water by these sources. Vehicles need to be inspected for leaks. To prevent runoff, fuel and maintain vehicles on site only in a bermed area or over a drip pan. Fuel tanks should be protected and have containment systems. Stream crossings can be minimized through proper planning of access roads. This will help to keep potential sources of pollution away from direct contact with surface waters.

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☑ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

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Gated Conduits

Gated conduits are hydraulic structures that divert the flow of water under the dam. They are designed to create turbulent mixing to enhance oxygen transfer. Gates are used to control the cross-sectional area of flow. Gated conduits have been extensively analyzed for their performance and effectiveness (Wilhelms and Smith, 1981), although the available data are mostly from high-head projects (Wilhelms, 1988). An example of the effectiveness found that gated conduit structures were able to achieve 90 percent aeration and a minimum DO standard of 5 mg/L (Wilhelms and Smith, 1981).

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☑ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Administrative Record Page No. 036167

Groins

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☑ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Groins are structures that are built perpendicular to the shore and extend into the water. Examples of possible planform shapes for groins are illustrated in Figure 7.17. They are generally constructed in series, referred to as a groin field, along the entire length of shore to be protected. Groins trap sand in littoral drift and halt its longshore movement along beaches. The sand trapped by each groin acts as a protective barrier that waves can attack and erode without damaging previously unprotected upland areas. Unless the groin field is artificially filled with sand from other sources, sand is trapped in each groin by interrupting the natural supply of sand moving along the shore in the natural littoral drift. This frequently results in an inadequate natural supply of sand to replace the sand carried away from beaches located farther along the shore in the direction of the littoral drift. If "downdrift" beaches are kept starved of sand for long periods of time, severe beach erosion in unprotected areas can result. As with bulkheads and revetments, the most durable materials for construction of groins are timber and stone. Less expensive techniques for building groins use sand- or concrete-filled bags or tires. It must be recognized that the use of lower-cost materials in the construction of bulkheads, revetments, or groins frequently results in less durability and reduced project life. Figure 7.18 illustrates transition from a groin field to a natural shoreline.

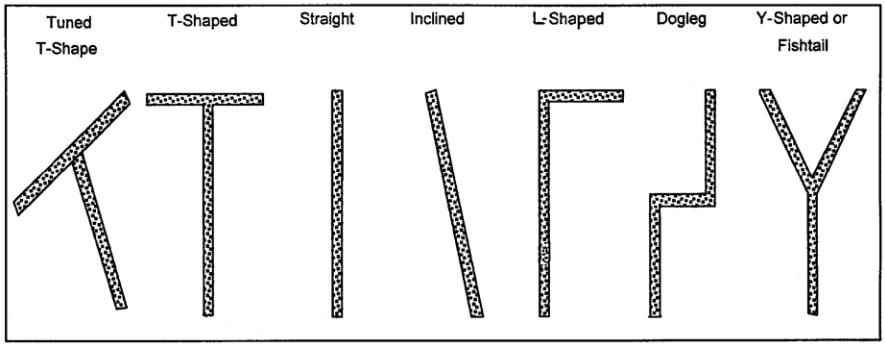

Figure 7.17 Possible Planform Shapes for Groins (USACE, 2003)

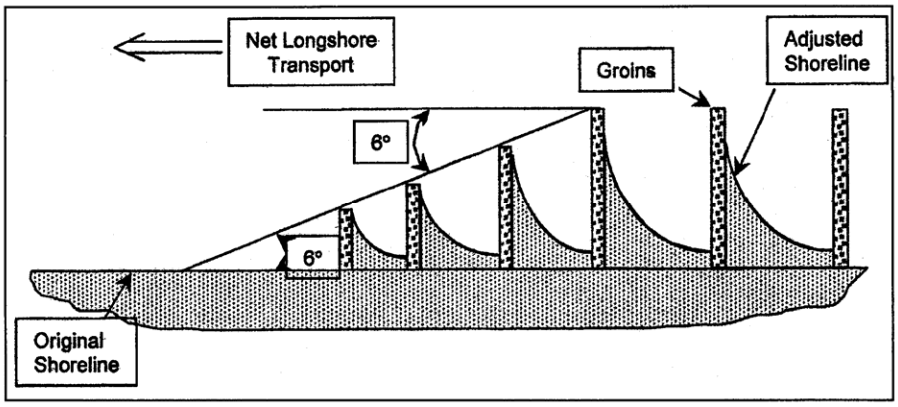

Figure 7.18 Transition from Groin Field to Natural Shoreline (USACE, 2003)

Additional Resource

- USACE. No date. *Groins.* U.S. Army Corps of Engineers, Coastal & Hydraulics Laboratory. http://chl.erdc.usace.army.mil/chl.aspx?p=s&a=ARTICLES!188.

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Identify and Address NPS Contributions

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☑ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Another watershed protection practice involves the evaluation of the total NPS pollution contributions in the watershed. NPS contributions can stem from different land use activities upstream from a dam. For example, the analysis and interpretation of stereoscopic color infrared aerial photographs can be used to find and map specific areas of concern where a high probability of NPS pollution exists from septic tank systems, animal wastes, soil erosion, and other similar types of NPS pollution (TVA, 1988). Other remote sensing techniques, such as analysis of satellite imagery, can be used to map areas of concern within a watershed. Historically, TVA has used analysis of aerial photography images to survey about 25 percent of the Tennessee Valley to identify sources of nonpoint pollution in a period of less than 5 years at a cost of a few cents per acre (TVA, 1988). Modern geographic information systems (GIS) enable watershed planners and modelers to rapidly assess large watersheds in a cost-effective manner.

The development of Total Maximum Daily Loads (TMDLs) in watersheds with impaired waterbodies is a way to identify all sources of pollution. TMDLs are planning documents that provide load allocations, for both point and nonpoint sources, and identify potential contributions of pollutants to an impaired waterbody. TMDLs often include the involvement of stakeholders throughout the watershed, in not only the development, but also with implementation of specific activities within the watershed. TMDL documents can provide a plan for addressing pollution sources throughout a watershed.

Different practices can be used to control NPS pollution once sources have been identified. These practices may include the following:

Soil Erosion Control

Soil erosion has been determined to be the major source of suspended solids, nutrients, organic wastes, pesticides, and sediment that combined form the most problematic form of NPS pollution (TVA, 1988). Soil erosion and runoff controls have been addressed throughout earlier management measures in this document.

Mine Reclamation

Abandoned mines may have the potential to contribute significant sediment, metals, acidified water, and other pollutants to reservoirs (TVA, 1988). Old mines need to be located and reclaimed to reduce NPS pollutants emanating from them. Revegetation is a cost-effective method of reclaiming denuded strip-mined lands, and agencies such as the Natural Resource Conservation Service (NRCS) can provide technical insight for revegetation practices.

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Animal Waste Control

A major contributor to reservoir pollution in some watersheds is waste from animal confinement facilities. TVA (1988) estimated that in the Tennessee Valley, farms produced about six times the organic wastes of the population of the valley. EPA also has available the *National Management Measures to Control Nonpoint Source Pollution from Agriculture*,[5] which is a technical guidance and reference document for use by state, local, and tribal managers in the implementation of NPS pollution management programs. It contains information on a variety of practices and management strategies for reducing pollution of surface and ground water from agriculture (USEPA, 2003b).

Correcting Failing Septic Systems

The objective of this practice is to protect waterbodies from pollutants discharged by onsite sewage disposal systems (OSDS). They should be sited, designed, and installed so that impacts to waterbodies will be reduced to the extent practicable. Factors such as soil type, soil depth, depth to water table, rate of sea level rise, and topography should be considered. The installation of OSDS should be prevented in areas where soil absorption systems will not provide adequate treatment of effluents containing solids, phosphorus, pathogens, nitrogen, and nonconventional pollution prior to entry into surface waters and ground water. Setbacks, separation distances, and maintenance requirements should be established.

Failing septic tank or OSDS are another source of NPS pollution in reservoirs. TVA has found septic tank failures to be a problem in some of its reservoirs and has identified them through an aerial survey (TVA, 1988). Additional guidance on OSDS is available from EPA's *Onsite Wastewater Treatment Systems Manual* (EPA 625-R-00-008), which is available through EPA's National Service Center for Environmental Publications.[6]

Land Use Planning

Land use plans that establish guidelines for permissible uses of land within a watershed serve as a guide for reservoir management programs addressing NPS pollution (TVA, 1988). Watershed land use plans identify suitable uses for land surrounding a reservoir, establish sites for economic development and natural resource management activities, and facilitate improved land management (TVA, 1988). Land use plans must be flexible documents that account for the needs of the landowners, state and local land use goals, the characteristics of the land and its ability to support various uses, and the control of NPS pollution (TVA, 1988).

Comprehensive planning is an effective nonstructural tool to control NPS pollution. Where possible, growth should be directed toward areas where it can be sustained with minimal impact on the environment (Meeks, 1990). Poorly planned growth and development have the potential to degrade and destroy natural drainage systems and surface waters (Mantell et al., 1990). Proper planning and zoning decisions allow water quality managers to direct development and land disturbance away from areas that drain to sensitive waters. Land use designations and zoning laws can also be used to protect environmentally sensitive areas such as riparian corridors and wetlands.

[5] http://www.epa.gov/owow/nps/pubs.html
[6] http://www.epa.gov/ncepihom

Administrative Record Page No. 036170

Identify and Preserve Critical Areas

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☑ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Protection of sensitive areas and areas that provide water quality benefits (e.g., natural wetlands and riparian areas) is integral to maintaining or minimizing the impacts of development on receiving waters and associated habitat. Without a comprehensive planning approach that includes the use of riparian buffers, open space, bioretention, and structural controls to maintain the predevelopment hydrologic characteristics of the site, significant water quality and habitat impacts are likely. The experience of various communities has shown that the use of structural controls in the absence of adequate local land use planning and zoning often does not adequately protect water quality and might even cause detrimental effects, such as increased temperature.

An initial step for incorporating targeted land conservation into a runoff management program is to identify critical conservation areas on a watershed map and superimpose this information on a tax map. Owners of potential conservation lands could include a mix of individuals, corporations or other business entities, homeowner associations, government agencies, and land trusts.

Land conservation includes more than simply preserving land in its current state. It also means that an individual or organization should take responsibility for restoration of areas of the property that are contributing to runoff problems or have been adversely affected by runoff. Stewardship activities for land conservation might include:

- Resource monitoring
- General maintenance
- Control of exotic species
- Installation of structural runoff management practices and maintenance

There are several options for landowners who would like to retain ownership of the parcel but relinquish stewardship and conservation management to another organization. These nonexclusive management options, discussed below, include establishing conservation easements, leases, deed restrictions, covenants, or transfer of development rights (TDRs).

Conservation Easements

A conservation easement is a legal agreement that transfers specific rights concerning the use of land by sale or donation to a government agency (municipal, county, or state), a qualified nonprofit organization (e.g., land trust or conservancy), or other legal entity without transferring title of the land (Cwikiel, 1996).

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Leases

Even though government agencies, land trusts, and other nonprofit organizations would prefer that conservation lands be acquired by donation or that conservation easements be placed on the property, some lands hold so much value as conservation areas that leasing is worth the expense and effort. Leasing a property allows the agency, trust, or organization to actively manage the land for conservation.

Deed Restrictions

Restrictions can be included in deeds for the purpose of constraining use of the land. In theory, deed restrictions are designed to perform functions similar to those of conservation easements. In practice, however, deed restrictions have proven to be much weaker substitutes because unlike conservation easements, deed restrictions do not necessarily designate or convey oversight responsibilities to a particular agency or organization to enforce protection and maintenance provisions. Also, deed restrictions can be relatively easy to modify or vacate through litigation. Modifying or nullifying an easement is difficult, especially if tax benefits have already been realized. For these reasons, conservation easements are generally preferred over deed restrictions.

Covenants

A covenant is similar to a deed restriction in that it restricts activities on a property, but it is in the form of a contract between the landowner and another party. The term *mutual covenants* is used to describe a situation where one or more nearby or adjacent landowners are contracted and covered by the same restrictions.

Transfer of Development Rights (TDRs)

The concept of TDRs as a watershed protection tool is based on the premise that ownership of land includes a "bundle" of property rights. One of these rights is the right to develop the property to its "highest and best use." Although this right can be restricted by zoning building codes, environmental constraints, and other types of restrictions, the basic right to develop remains. A TDR system creates an opportunity for property owners to transfer development potential or density at one property, called a sending area to another property, called a receiving area. In the context of watershed planning objectives, TDR programs can be an effective way to transfer development potential from sensitive subwatersheds to subwatersheds that can better deal with increased imperviousness.

Administrative Record Page No. 036172

Joint Planting

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☑ Integrated
- ☐ Planning & regulatory

Joint planting (or vegetated riprap) involves tamping live cuttings of rootable plant material into soil between the joints or open spaces in rocks that have previously been placed on a slope (Figure 7.19). Alternatively, the cuttings can be tamped into place at the same time that rock is being placed on the slope face. Joint planting is useful where rock riprap is required or already in place. It is successful 30 to 50 percent of the time, with first year irrigation improving survival rates. Live cuttings must have side branches removed and bark intact. They should range from 0.5 to 1.5 inches in diameter and be long enough to extend well into the soil, reaching into the dry season water level. Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002) and the USDA NRCS *Engineering Field Handbook, Chapter 18* (USDA-NRCS, 1992).

Additional Resources

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- ISU. 2006. *How to Control Streambank Erosion: Joint Planting.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/streambank/joint_planting.pdf.

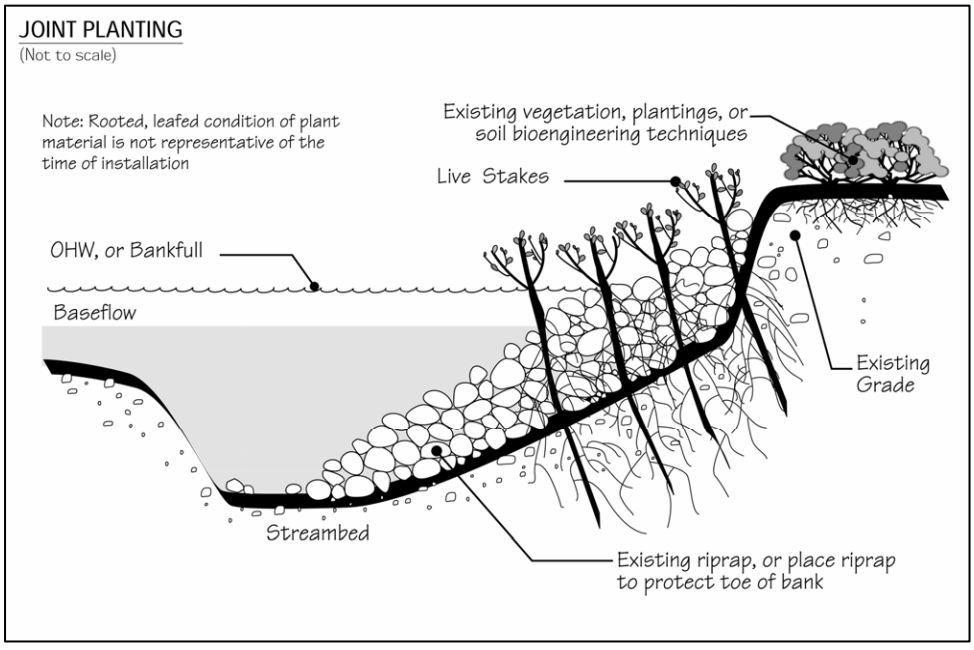

Figure 7.19 Joint Planting (USDA-FS, 2002)

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Labyrinth Weir

Labyrinth weirs have extended crest length and are usually W-shaped. These weirs spread the flow out to prevent dangerous undertows in the plunge pool. A labyrinth weir at South Holston Dam (Tennessee) was constructed for the dual purpose of providing minimum flows and improving DO in reservoir releases. The weir aerates to up to 60 percent of the oxygen deficit. For instance, projected performance at the end of the summer is an increase in the DO from 3 mg/L to 7 mg/L (or an increase of 4 mg/L) (Hauser, 1992). Actual increases in the DO will depend on the temperature and the level of DO in the incoming water.

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☑ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

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Levees, Setback Levees, and Floodwalls

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☑ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Many valuable techniques can be used, when applied correctly, to protect, operate, and maintain levees (Hynson et al., 1985). Evaluation of site-specific conditions and the use of best professional judgment are the best methods for selecting the proper levee protection and operation and maintenance plan. According to Hynson and others (1985), maintenance activities generally consist of vegetation management, burrowing animal control, upkeep of recreational areas, and levee repairs.

Care must be taken during construction to prevent disturbing the natural channel vegetation, cross section, or bottom slope. No immediate instream effects from sedimentation are usually caused by implementing this type of modification. The potential for long-term channel adjustments can be evaluated using methods outlined in *Channel Stability Assessment for Flood Control Projects* (USACE, 1994).

Methods to control vegetation include mowing, grazing, burning, and using chemicals. Selection of a vegetation control method should consider the existing and surrounding vegetation, desired instream and riparian habitat types and values, timing of controls to avoid critical periods, selection of livestock grazing periods, and timing of prescribed burns to be consistent with historical fire patterns. Additionally, a balance between the vegetation management practices for instream and riparian habitat and engineering considerations should be maintained to avoid structural compromise. Animal control methods are most effective when used as a part of an integrated pest management program and might include instream and riparian habitat manipulation or biological controls. Recreational area management includes upkeep of planted areas, disposal of solid waste, and repairing of facilities (Hynson et al., 1985).

The prevention of floods by dams and levees can eliminate or diminish essential ecological functions. Dams, levees and channel training structures have dramatically altered or eliminated the frequency, duration, magnitude, and timing of periodic high flows. These projects significantly reduce the likelihood of floodplain inundation, block the transfer of organic matter and nutrients between river and floodplain, block plant succession, eliminate fish access to spawning areas, and rob rivers of the erosive power to restore and create a diversity of habitats (Environmental Defense, 2002). Levees have had several impacts on the Snake River in Wyoming. Anthony (1998) found habitat losses, including changes in vegetation (including losses of cottonwood and riparian habitats from 1956) and changes in channel and floodplain complexity from a braided to a single channel pattern.

Siting of levees and floodwalls should be addressed prior to design and implementation of these types of projects. Proper siting of such structures can avoid several types of problems. First, construction activities should not disturb the physical integrity of adjacent riparian areas and/or

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wetlands. Second, by setting back the structures (offsetting them from the streambank), the relationship between the channel and adjacent riparian areas can be preserved. Proper siting and alignment of proposed structures can be established based on hydraulic calculations, historical flood data, and geotechnical analysis of riverbank stability.

Additional Resource

- LSU AgCenter. 1999. *Floodwalls*. Louisiana State University Agricultural Center, Louisiana Cooperative Extension Service. http://www.louisianafloods.org/NR/rdonlyres/7A01F7C8-703B-47D1-BCCD-63CD0A57721F/2995/pub2745Floodwall6.pdf.

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Live Cribwalls

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☑ Integrated
- ☐ Planning & regulatory

A live cribwall is used to rebuild a bank in a nearly vertical setting. It consists of a hollow, box-like interlocking arrangement of untreated log or timber members (Figure 7.20). The structure is filled with suitable backfill material and layers of live branch cuttings, which root inside the crib structure and extend into the slope. Logs or untreated timbers should range from 4 to 6 inches in diameter. Lengths will vary with the size of the crib structure. Fill rock should be 6 inches in diameter. Live branch cuttings should be 0.5 to 2.5 inches in diameter and long enough to reach the back of the wooden crib structure. Once the live cuttings root and become established, the subsequent vegetation gradually takes over the structural functions of the wood members. Live cribwalls are appropriate where space is limited and at the base of a slope where a low wall may be required to stabilize the toe of the slope and to reduce its steepness. They are also appropriate above and below the water level where stable streambeds exist. They are not designed for or intended to resist large, lateral earth stress. Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002) and the USDA NRCS *Engineering Field Handbook, Chapter 18* (USDA-NRCS, 1992).

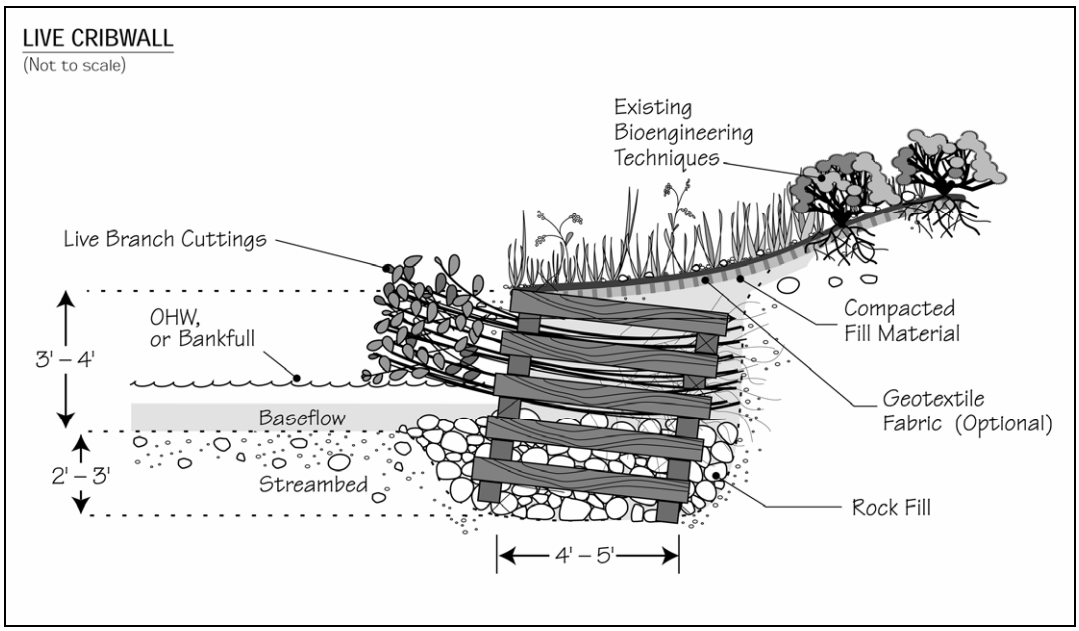

Figure 7.20 Live Cribwall (USDA-FS, 2002)

Additional Resources

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- ISU. 2006. *How to Control Streambank Erosion: Live Cribwall.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/streambank/live_cribwall.pdf.

- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Live Cribwall.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://www.abe.msstate.edu/csd/NRCS-BMPs/pdf/streams/bank/livecribwall.pdf.

- Ohio DNR. No date. *Ohio Stream Management Guide: Live Cribwalls.* Ohio Department of Natural Resources. http://www.ohiodnr.com/water/pubs/fs_st/stfs17.htm.

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Live Fascines

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
  - ☑ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Live fascines are long bundles of branch cuttings bound together in a cylindrical structure (Figure 7.21). They are suited to steep, rocky slopes, where digging is difficult (USDA-NRCS, 1992). When cut from appropriate species (e.g., young willows or shrub dogwoods) that root easily and have long straight branches, and when properly installed, they immediately begin to stabilize slopes. The cuttings (0.5 to 1.5 inches in diameter) form live fascine bundles that vary in length from 5 to 10 feet or longer, depending on site conditions and handling limitations. Completed bundles should be 6 to 8 inches in diameter. The goal is for natural recruitment to follow once slopes are secured. Live fascines should be placed in shallow contour trenches on dry slopes and at an angle on wet slopes to reduce erosion and shallow face sliding. Live fascines should be applied above ordinary high-water mark or bankfull level except on very small drainage area sites. In arid climates, they should be used between the high and low water marks on the bank. This system, installed by a trained crew, does not cause much site disturbance.

Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002) and the USDA NRCS *Engineering Field Handbook, Chapter 18* (USDA-NRCS, 1992). Under their Ecosystem Management and Restoration Research Program (EMRRP), the U.S. Army Corps of Engineers presents research on live fascines in a technical note (*Live and Inert Fascine Streambank Erosion Control*).[7]

Additional Resources

- Massachusetts DEP. 2006. *Massachusetts Nonpoint Source Pollution Management Manual: Live Fascines.* Massachusetts Department of Environmental Protection, Boston, MA. http://projects.geosyntec.com/NPSManual/Fact%20Sheets/Live%20Fascines.pdf.

- Greene County Soil & Water Conservation District. No date. *Construction Specification VS-01: Live Fascines.* http://www.gcswcd.com/stream/library/pdfdocs/vs-01.pdf.

- ISU. 2006. *How to Control Streambank Erosion: Live Fascine.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/streambank/live_fascine.pdf.

- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Live Fascine.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://abe.msstate.edu/csd/NRCS-BMPs/pdf/streams/bank/livefacine.pdf.

[7] http://el.erdc.usace.army.mil/elpubs/pdf/sr31.pdf

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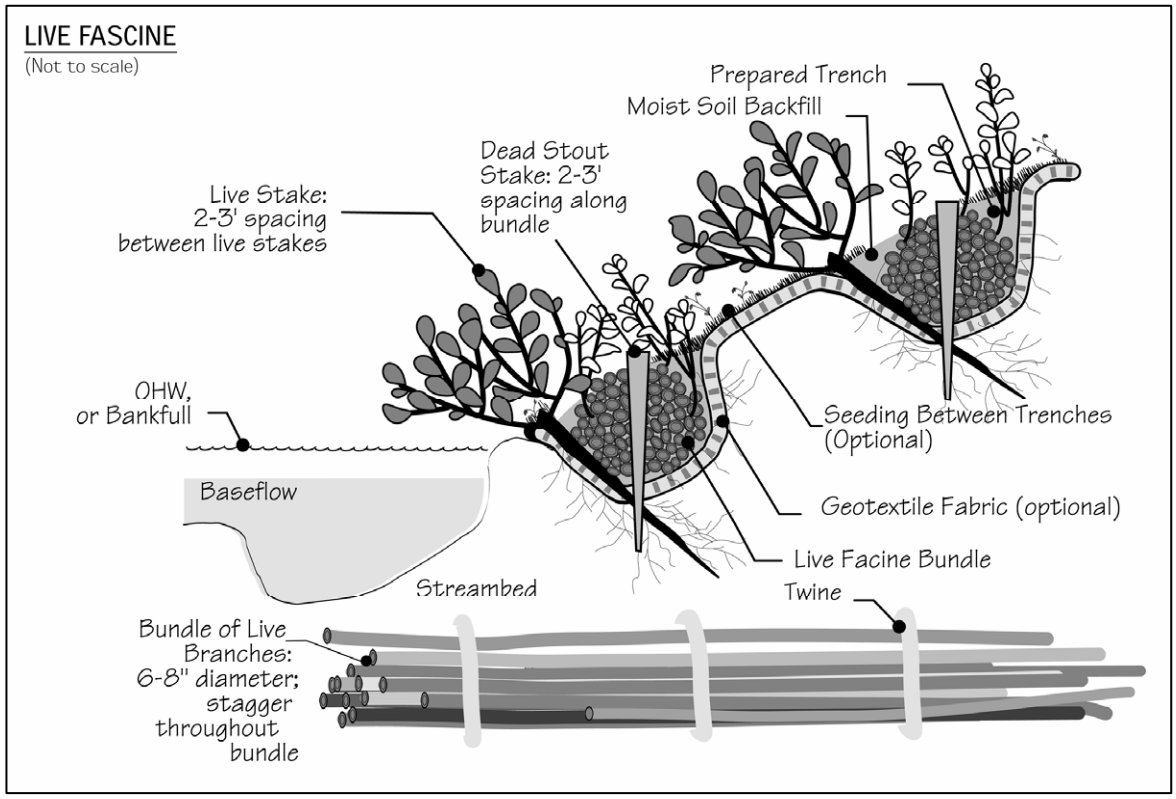
- Ohio DNR. No date. *Ohio Stream Management Guide: Live Fascines.* Ohio Department of Natural Resources. http://www.ohiodnr.com/water/pubs/fs_st/stfs14.pdf.



Note: OHW (Ordinary High Water) is the mark along a streambank where the waters are common and usual. This mark is generally recognized by the difference in the character of the vegetation above and below the mark or the absence of vegetation below the mark (USDA-FS, 2002).

Figure 7.21 Live Fascine (USDA-FS, 2002)

Live Staking

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
  - ☑ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Live staking (Figure 7.22) is appropriate for relatively uncomplicated site conditions when construction time is limited. It can also be used to stabilize intervening areas between other soil bioengineering techniques (USDA-NRCS, 1992). Live staking involves the insertion and tamping of live, rootable vegetative cuttings into the ground. If correctly prepared and placed, the live stake will root and grow. A system of stakes creates a living root mat that stabilizes the soil by reinforcing and binding soil particles together and by extracting excess soil moisture. Stakes are generally 1 to 2 inches in diameter and 2 to 3 feet long. Specific site requirements and available cutting source will determine size. Vegetation selected should be able to withstand the degree of anticipated inundation, provide year round protection, have the capacity to become well established under sometimes adverse soil conditions, and have root, stem, and branch systems capable of resisting erosive flows. Most willow species are ideal for live staking because they root rapidly and begin to dry out a slope soon after installation. Sycamore and cottonwood are also species commonly used for live staking. This is an appropriate technique for repair of small earth slips and slumps that are frequently wet. Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002) and the USDA NRCS *Engineering Field Handbook, Chapter 18* (USDA-NRCS, 1992).

Additional Resources

- ISU. 2006. *How to Control Streambank Erosion: Live Stakes.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/streambank/live_stakes.pdf.

- Myers, R.D. 1993. *Slope Stabilization and Erosion Control Using Vegetation: A Manual of Practice for Coastal Property Owners. Live Staking.* Shorelands and Coastal Zone Management Program, Washington Department of Ecology. Olympia. Publication 93-30. http://www.ecy.wa.gov/programs/sea/pubs/93-30/livestaking.html.

- Walter, J., D. Hughes, and N.J. Moore. 2005. *Streambank Revegetation and Protection: A Guide for Alaska. Revegetation Techniques: Live Staking.* Revised Edition. Alaska Department of Fish and Game, Division of Sport Fish. http://www.sf.adfg.state.ak.us/SARR/restoration/techniques/livestake.cfm.

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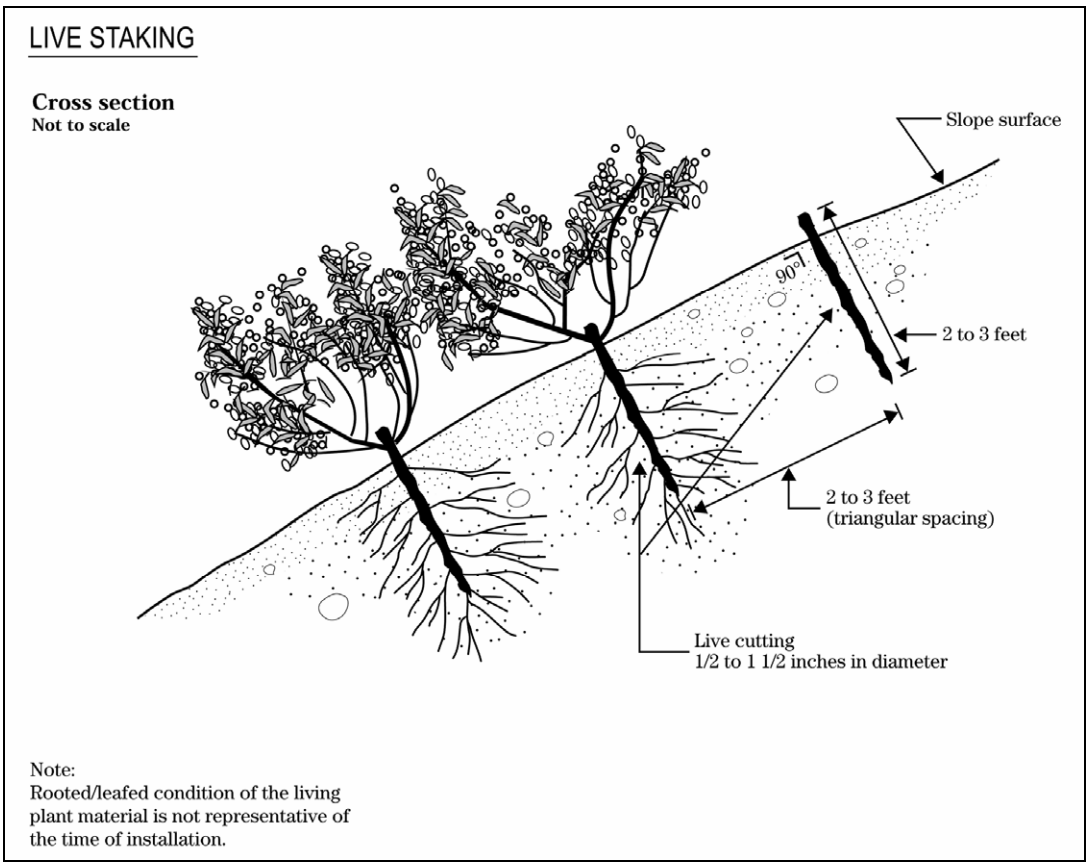

Figure 7.22 Live Staking (USDA-NRCS, 1992)

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Locate Potential Land Disturbing Activities Away from Critical Areas

Material stockpiles, borrow areas, access roads, and other land-disturbing activities can often be located away from critical areas such as steep slopes, highly erodible soils, and areas that drain directly into sensitive waterbodies.

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☑ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

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Marsh Creation and Restoration

Channelization
- ☐ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☑ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Marsh creation and restoration is a useful vegetative technique that can address problems with erosion of shorelines. Marsh plants perform two functions in controlling shore erosion (Knutson, 1988). First, their exposed stems form a flexible mass that dissipates wave energy. As wave energy is diminished, the offshore transport and longshore transport of sediment are reduced. Ideally, dense stands of marsh vegetation can create a depositional environment, causing accretion of sediments along the intertidal zone rather than continued shore erosion. Second, marsh plants form a dense mat of roots, which can add stability to the shoreline sediments. The basic approach for marsh creation is to plant a shoreline area in the vicinity of the tide line with appropriate marsh grass species. Suitable fill material may be placed in the intertidal zone to create a wetlands planting terrace of sufficient width (at least 18 to 25 feet) if such a terrace does not already exist at the project site. For shoreline sites that are highly sheltered from the effects of wind, waves, or boat wakes, the fill material is usually stabilized with small structures, similar to groins, which extend out into the water from the land. For shorelines with higher levels of wave energy, the newly planted marsh can be protected with an offshore installation of stone that is built either in a continuous configuration or in a series of breakwaters.

Additional Resource

- Maryland Department of the Environment. 2006. *Shore Erosion Control Guidelines: Marsh Creation*. http://www.mde.state.md.us/assets/document/wetlandswaterways/Shoreerosion.pdf.

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Modifying Operational Procedures

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☑ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

A useful tool for evaluating the effects of operational procedures on the quality of tailwaters is computer modeling. For instance, computer models can describe the vertical withdrawal zone that would be expected under different scenarios of turbine operation (Smith et al., 1987). Zimmerman and Dortch (1989) modeled release operations for a series of dams on a Georgia river and found that procedures that were maintaining cool temperatures in summer were causing undesirable decreases in DO and increases in dissolved iron in autumn. The suggested solution was a seasonal release plan that is flexible, depending on variations in the in-pool water quality and predicted local weather conditions. Care should be taken with this sort of approach to accommodate the needs of both the fishery resource and reservoir recreationalists, particularly in late summer.

Modeling has also been undertaken for a variety of TVA and USACE facilities to evaluate the downstream impacts on DO and temperature that would result from changes in several operational procedures, including (Hauser et al., 1990a; Hauser et al., 1990b; Higgins and Kim, 1982; Nestler et al., 1986):

- Maintenance of minimum flows
- Timing and duration of shutoff periods
- Seasonal adjustments to the pool levels
- Timing and variation of the rate of drawdown

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Mulching

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Newly established vegetation does not have as extensive a root system as existing vegetation and therefore is more prone to erosion, especially on steep slopes. Additional stabilization should be considered during the early stages of seeding. This extra stabilization can be accomplished using mulches or mulch mats, which are applied to disturbed soil surfaces and can protect the area while vegetation becomes established.

Mulches and mulch mats include tacked straw, wood chips, and jute netting and are often covered by blankets or netting. Mulching alone should be used only for temporary protection of the soil surface or when permanent seeding is not feasible. The useful life of mulch varies with the material used and the amount of precipitation, but, generally, is approximately 2 to 6 months. Mulching and/or sodding may be necessary as slopes become moderate to steep, as soils become more erosive, and as areas become more sensitive. During the times of the year when vegetation cannot be established, mulch can be applied to moderate slopes and soils that are not highly erodible. On steep slopes or highly erodible soils, mulching may need to be reapplied if washed away.

Additional Resources

- Barr Engineering Company. 2001. *Minnesota Urban Small Sites BMP Manual: Stormwater Best Management Practices for Cold Climates. Soil Erosion Control: Mulches, Blankets and Mats.* Prepared for the Metropolitan Council by Barr Engineering Company, St. Paul, MN. http://www.metrocouncil.org/Environment/Watershed/BMP/CH3_RPPSoilMulch.pdf.

- CASQA. 2004. *California Stormwater BMP Construction Handbook*: *Hydraulic Mulch.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/EC-3.pdf.

- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Mulching.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/2.3_mulching.pdf.

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Noneroding Roadways

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☐ Integrated
- ☐ Planning & regulatory

General Road Construction Considerations

Road design and construction activities that are tailored to topography and soils and take into consideration the overall drainage pattern in the watershed where the road is being constructed can prevent road-related water quality problems. Lack of adequate consideration of watershed and site characteristics, road system design, and construction techniques appropriate to the site can result in mass soil movements, extensive surface erosion, and severe sedimentation in nearby waterbodies. The effect that a road network has on stream networks largely depends on the extent to which the networks are interconnected. Road networks can be hydrologically connected to stream networks where road surface runoff is delivered directly to stream channels (at stream crossings or via ditches or gullies that direct flow off the road into a stream) and where road cuts transform subsurface flow into surface flow (in road ditches or on road surfaces that deliver sediment and water to streams much more quickly than without a road present). The combined effects of these drainage network connections are increased sedimentation and peak flows that are higher and arrive more quickly after storms. This can lead to increased instream erosion and stream channel changes, especially in small watersheds (USEPA, 2005a).

Site characteristics should be considered during construction planning. On-site verification of information from topographic maps, soil maps, and aerial photos can ensure that locations where roads are to be cut into slopes or built on steep slopes or where skid trails, landings, and equipment maintenance areas are to be located are appropriate to the use. If an on-site visit indicates that construction changes can reduce the risk of erosion, the project manager can make these changes prior to construction, and in some cases as the project progresses (USEPA, 2005a).

Road drainage features tailored to the site prevent water from pooling or collecting on road surfaces. This prevents saturation of the road surface, which can lead to rutting, road slumping, and channel washout. Many roads associated with channelization projects are temporary or seasonal-use roads, and their construction should not involve the high level of disturbance generated by construction of permanent, high-standard roads. However, these types of roads still need to be constructed and maintained to prevent erosion and sedimentation (USEPA, 2005a).

Erosion control practices need to be applied while a road is being constructed, when soils are most susceptible to erosion, to minimize soil loss to waterbodies. Since sedimentation from roads often does not occur incrementally and continuously, but in pulses during large rainstorms, it is important that road, drainage structure, and stream crossing design take into consideration a sufficiently large design storm that has a good chance of occurring during the life of the project. Such a storm might be the 10-year, 25-year, 50-year, or even 100-year, 12- to 24-hour return period storm. Sedimentation cannot be completely prevented during or after road construction,

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but the process is exacerbated if the road construction and design are inappropriate for the site conditions or if the road drainage or stream crossing structures are insufficient (USEPA, 2005a).

When constructing a new road, it is useful to consider road surface shape and composition, slope stabilization, and wetlands. A more detailed discussion of these topics is provided below. More information about potential impacts to fish habitat and passage are provided in EPA's *National Management Measures to Control Nonpoint Source Pollution from Forestry*.[8]

Road Shape and Composition

The shape of a road is an important runoff control component. Road drainage and runoff control are obtained by shaping the road surface to be insloping, outsloping, or crowned. Insloping roads can be effective where soils are highly erodible and directing runoff directly to the fill slope would be detrimental. Outsloped roads tend to dissipate runoff more than insloped roads, which concentrate runoff at cross drain locations, and are useful where erosion of backfill or ditch soil might be a problem. Crowned roads are suited to two lane roads and to steep single-lane roads that have frequent cross drains or ditches and ditch relief culverts (USEPA, 2005a). These road surface shapes are illustrated in Figure 7.23. Maintain one of these shapes to ensure good drainage. Crowns, inslopes, and outslopes will quickly lose effectiveness if not maintained frequently, due to ruts created by traffic when the road surface is damp or wet (USEPA, 2005a).

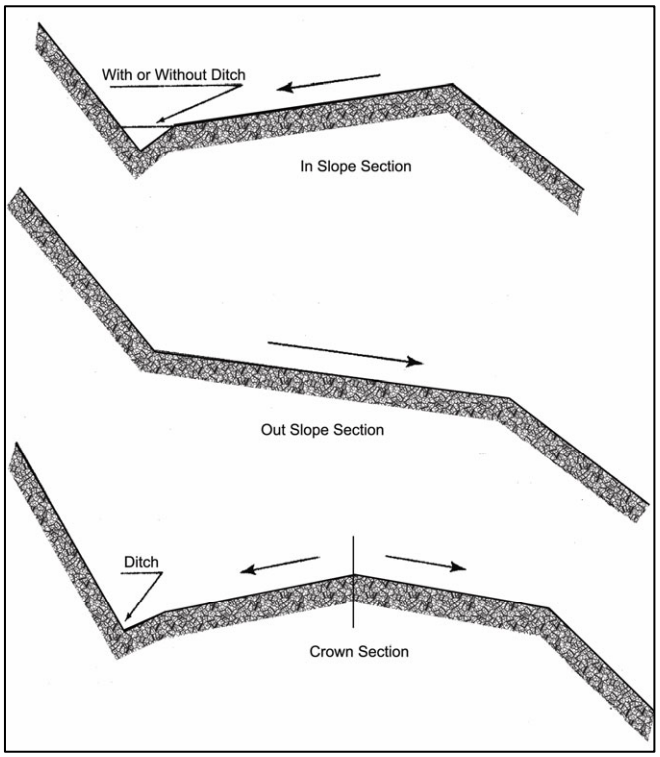

Figure 7.23 Types of Road Surface Shapes (USEPA, 2005a)

Road surface composition can effectively control erosion from road surfaces and slopes. It is important to choose a surface that is suitable to the topography, soils, and intended use. Surface protection of the roadbed and cut-and-fill slopes with a suitable material can minimize soil losses during storms, reduce frost heave erosion production, restrain downslope movement of soil slumps, and minimize erosion from softened roadbeds (USEPA, 2005a).

Slope Stabilization

Road cuts and fills can be a large source of sediment when constructing a rural road. Stabilizing back slopes and fill slopes as they are constructed is important in minimizing erosion from these areas. Combined with gravel or other surfacing, establishing grass or another form of slope stabilization can significantly reduce soil loss from road construction. If constructing on an unstable slope is necessary, consider consulting with an engineering geologist or geotechnical

[8] Available online at http://www.epa.gov/owow/nps/forestrymgmt.

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engineer for recommended construction methods and to develop plans for the road segment. Unstable slopes that threaten water quality should be considered unsuitable for road building.

Planting grass on cut-and-fill slopes of new roads can effectively reduce erosion, and placing forest floor litter or brush barriers on downslopes in combination with establishing grass is also effective for reducing downslope sediment transport. Grass-covered fill is generally more effective than mulched fill in reducing soil erosion from newly constructed roads because of the roots that hold the soil in place, which are lacking with other cover. Because grass needs some time to establish itself, a combination of straw mulch with netting to hold it in place can be used to cover a seeded area and effectively reduce erosion while grass is growing. The mulch and netting provide immediate erosion control and promote grass growth (USEPA, 2005a).

Wetland Road Considerations

Sedimentation is a concern when considering road construction through wetlands. It is better to avoid putting a road through a wetland when an alternative route exists. If no alternative exists, make sure to implement best management practices (BMPs) suggested by the state. Road construction or maintenance for certain farming, forestry, or mining activities might be exempt under Clean Water Act (CWA) section 404. However, to qualify for the exemption, the roads must be constructed and maintained following application of specific BMPs designed to protect the aquatic environment (USEPA, 2005a).

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Pesticide and Fertilizer Management

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☑ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Chemicals used in dam management include pesticides (insecticides, herbicides, and fungicides) and fertilizers. Since pesticides can be toxic, they have to be mixed, transported, loaded, and applied correctly and their containers disposed properly to prevent potential nonpoint source pollution. Since fertilizers can also be toxic or can damage the ecosystem, it is important that they be handled and applied properly, according to label instructions.

Even though a limited number of applications might be made at a specific dam site, consider that throughout a watershed many sites could receive applications of fertilizers and pesticides, which can accumulate in soils and in waterbodies. Application techniques also partly determine the potential risk to the aquatic environment from infrequent applications of pesticides and fertilizers. These chemicals can directly enter surface waters through five major pathways—direct application, drift, mobilization in ephemeral streams, overland flow, and leaching. Direct application is the most important source of increased chemical concentrations and is also one of the most easily controlled.

Some more specific implementation practices for pesticide maintenance include:

- Apply pesticides during favorable atmospheric conditions. Do not apply pesticides when wind conditions increase the likelihood of significant drift. It is also best to avoid pesticide application when temperatures are high or relative humidity is low because these conditions influence the rate of evaporation and enhance losses of volatile pesticides.
- Ensure that pesticide users abide by the current pesticide label, which might specify whether users be trained and certified in the proper use of the pesticide; allowable use rates; safe handling, storage, and disposal requirements; and whether the pesticide may be used under the provisions of an approved State Pesticide Management Plan.
- Locate mixing and loading areas, and clean all mixing and loading equipment thoroughly after each use, where pesticide residues will not enter streams or other waterbodies.
- Dispose of pesticide wastes and containers according to state and federal laws.
- Consider the use of pesticides as only one part of an overall program to control pest problems. Integrated Pest Management (IPM) strategies have been developed to control pests without total reliance on chemical pesticides.
- Base selection of pesticide on site factors and pesticide characteristics. These factors include vegetation height, target pest, adsorption (attachment) to soil organic matter, persistence or half-life, toxicity, and type of formulation.
- Check all equipment carefully, particularly for leaking hoses and connections and plugged or worn nozzles. Calibrate spray equipment periodically to achieve uniform pesticide distribution and rate.

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- Always use pesticides in accordance with label instructions, and adhere to all federal and state policies and regulations governing pesticide use.

Specific implementation practices for fertilizer maintenance include:

- Apply slow-release fertilizers when possible. This practice reduces potential nutrient leaching to ground water, and it increase the availability of nutrients for plant uptake.
- Apply fertilizer during favorable atmospheric conditions. Do not apply fertilizer when wind conditions increase the likelihood of significant drift.
- Apply fertilizers during maximum plant uptake periods to minimize leaching.
- Base fertilizer type and application rate on soil and/or foliar analysis.

Administrative Record Page No. 036191

Phase Construction

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Construction site phasing involves disturbing only small portions of a site at a time to prevent erosion from dormant parts (CWP, 1997c). Grading activities and construction are completed and soils are effectively stabilized on one part of the site before grading and construction commence at another. This is different from the more traditional practice of construction site sequencing, in which construction occurs at only one part of the site at a time but site grading and other site-disturbing activities typically occur all at once, leaving portions of the disturbed site vulnerable to erosion. To be effective, construction site phasing must be incorporated into the overall site plan early. Elements to consider when phasing construction activities include (CWP, 1997c):

- Managing runoff separately in each phase
- Determining whether water and sewer connections and extensions can be accommodated
- Determining the fate of already completed downhill phases
- Providing separate construction and residential accesses to prevent conflicts between residents living in completed stages of the site and construction equipment working on later stages

A comparison of sediment loss from a typical development and from a comparable phased project showed a 42 percent reduction in sediment export in the phased project (CWP, 1997c). Phasing can also provide protection from complete enforcement and shutdown of the entire project. If a contractor is in noncompliance in one phase or zone of a site, that will be the only zone affected by enforcement. This approach can help to minimize liability exposure and protect the contractor financially (Deering, 2000b).

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Physical Barriers

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☑ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Physical barriers are diversion systems that lead or force fish to bypasses that transport them above or below the dam (FAO, 2001). Physical diversion structures deployed at dams include angled screens, drum screens, inclined plane screens, louvers, and traveling screens. The success and effectiveness of physical barriers has been found to be specific to individual hydropower facilities (Mattice, 1990).

Angled screens are used to guide fish to a bypass by guiding them through the channel at some angle to the flow. Coarse-mesh angled screens have been shown to be highly effective with numerous warm- and cold-water species at adult life stages. Fine-mesh angled screens have been shown in laboratory studies to be highly effective in diverting larval and juvenile fish to a bypass with resultant high survival. Performance of angled screens can vary by species, stream velocity, fish length, screen mesh size, screen type, and temperature (Stone and Webster, 1986). Clogging from debris and fouling organisms is a maintenance problem associated with angled screens.

Angled rotary drum screens oriented perpendicular to the flow direction have been used extensively to lead fish to a bypass. Angled rotary drum screens tend not to experience the major operational and maintenance clogging problems of stationary screens, such as angled vertical screens. Maintenance of angled rotary drum screens typically consists of routine inspection, cleaning, lubrication, and periodic replacement of the screen mesh (Stone and Webster, 1986).

An inclined plane screen is used to divert fish upward in the water column into a bypass. Once concentrated, the fish are transported to a release point below the dam. An inclined plane pressure screen at the T.W. Sullivan Hydroelectric Project (Willamette Falls, Oregon) is located in the penstock of one unit. The design is effective in diverting fish, with a high survival rate. However, this device has been linked to injuries in some species of migrating fish, and it has not been accepted for routine use (Stone and Webster, 1986).

Louvers consist of an array of evenly spaced, vertical slats aligned across a channel at an angle leading to a bypass. The turbulence they create is sensed and avoided by the fish (Stone and Webster, 1986). Louver systems rely on a fish's instincts to use senses other than sight to move around obstacles. Once the louver is sensed, the fish tend to reverse their head first downstream orientation (to head upstream, tail to the louver) and move laterally along it until they reach the bypass (OTA, 1995).

Submerged traveling screens are used to divert downstream migrating fish out of turbine intakes to adjoining gatewell structures, where the fish are concentrated for release downstream. This device has been tested extensively at hydropower facilities on the Snake and Columbia Rivers. Because of their complexity, submerged traveling screens must be continually maintained. The

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screens must be serviced seasonally, depending on the debris load, and trash racks and bypass orifices must be kept free of debris (Stone and Webster, 1986).

Physical barrier fish diversion systems have been found to work best when specifically designed to the structure and fish being passed. Small differences in design, such as the spacing or depth of the louvers, can mean the difference in success and failure. A successful louver system has been installed at the Holyoke Hydroelectric Power Station, on the Connecticut River. This partial depth louver system was installed in the intake channel at the power plant and successfully passed 86 percent of the juvenile clupeids and 97 percent of the Atlantic salmon (*Salmo salar*) smolts (Marmulla, 2001). Another partial depth louver system on the same river has experienced less successful results. The system installed at the Vernon Dam on the Connecticut River is successfully passing about 50 percent of the Atlantic salmon smolts (OTA, 1995).

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Pollutant Runoff Control

Store, cover, and isolate construction materials, refuse, garbage, sewage, debris, oil and other petroleum products, mineral salts, industrial chemicals, and topsoil to prevent runoff of pollutants and contamination of ground water.

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☑ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

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Preserve Onsite Vegetation

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☑ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Preserving onsite vegetation retains soil and limits runoff of water, sediment, and pollutants. The destruction of existing onsite vegetation can be minimized by initially surveying the site to plan access routes, locations of equipment storage areas, and the location and alignment of the dam. Construction workers can be encouraged to limit activities to designated areas only. Reducing the disturbance of vegetation also reduces the need for revegetation after construction is completed, including the required fertilization, replanting, and grading that are associated with revegetation. Additionally, as much natural vegetation as possible should be left next to the waterbody where construction is occurring. This vegetation provides a buffer to reduce the NPS pollution effects of runoff originating from areas associated with the construction activities.

Additional Resource

- CASQA. 2004. *California Stormwater BMP Construction Handbook*: *Preservation of Existing Vegetation.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/EC-2.pdf.

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Reregulation Weir

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☑ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Reregulation weirs have been constructed from stone, wood, and aggregate. In addition to increasing the levels of DO in the tailwaters, reregulation weirs result in a more constant rate of flow farther downstream during periods when turbines are not in operation. A reregulation weir constructed downstream of the Canyon Dam (Guadalupe River, Texas) increased DO levels in waters leaving the turbine from 3.3 mg/L to 6.7 mg/L (EPRI, 1990).

The USACE Waterways Experiment Station (Wilhelms, 1988) has compared the effectiveness with which various hydraulic structures accomplished the reaeration of reservoir releases. The study concluded that, whenever operationally feasible, more discharge should be passed over weirs to improve DO concentrations in releases. Results indicated that overflow weirs aerate releases more effectively than low-sill spillways (Wilhelms, 1988).

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Reservoir Aeration

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☑ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Some techniques for reservoir aeration include:

- Air injection systems
- Diffused air systems
- Oxygen injection systems
- U-tube design

Air injection systems mix water from different strata in the impoundment by using air or pure oxygen injected into a pumping system. Air injection systems are categorized as partial air lift systems and full air lift systems. In the partial air lift system, compressed air is injected at the bottom of the unit; then the air and water are separated at depth and the air is vented to the surface. In the full air lift system, compressed air is injected at the bottom of the unit (as in the partial air lift system), but the air-water mixture rises to the surface. The full air lift design has a higher efficiency than the partial-air lift and has a lesser tendency to elevate dissolved nitrogen levels (Thornton et al., 1990).

Diffused air systems provide effective transfer of oxygen to water by forcing compressed air through small pores in diffuser systems to form bubbles. One diffuser system test in the Delaware River near Philadelphia, Pennsylvania in 1969–1970 demonstrated the efficiency of this practice. Coarse-bubble diffusers were deployed at depths ranging from 13 to 38 feet. Depending on the depth of deployment, the oxygen transfer efficiency varied from 1 to 12 percent. When compared with other systems discussed below, this efficiency rate is rather low. But the results of this test determined that river aeration was more economical than advanced wastewater treatment as a strategy for improving the levels of DO in the river (EPRI, 1990). Another type of oxygen injection system, which pumps gaseous oxygen into the hypolimnion through diffusers, has effectively improved DO levels in the reservoir behind the Richard B. Russell Dam (Savannah River, on the Georgia-South Carolina border). The system is operated 1 mile upstream of the dam, with occasional supplemental injection of oxygen at the dam face when DO levels are especially low. The system has successfully maintained DO levels above 6 mg/L in the releases, with an average oxygen transfer efficiency of 75 percent (EPRI, 1990; Gallagher and Mauldin, 1987).

The diffused air system has been found to be a cost-effective method to raise low DO levels within a reservoir (Henderson and Shields, 1984). However, the costs of air diffuser operation may be high for deep reservoirs because of hydraulic pressures that must be overcome. Destratification that results from deployment of an air diffuser system may also mix nutrient-rich waters located deep in the impoundment into layers located closer to the surface, increasing the potential for stimulation of algal populations. Barbiero et al. (1996), in a study on the effects of artificial circulation on a small northeastern impoundment, found that artificial circulation ultimately had no effect on the magnitude of summer phytoplankton populations. However, the authors note that intermittent mixing events tend to promote increased transport of phosphorus

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into the epilimnion. While this had no effect on phytoplankton populations in the studied lake, it demonstrates the potential of artificial circulation to impact water quality and the need for careful evaluation of potential impacts.

Oxygen injection systems use pure oxygen to increase levels of dissolved oxygen in reservoirs. One type of design, termed side stream pumping, carries water from the impoundment onto the shore and through a piping system into which pure oxygen is injected. After passing through this system, the water is returned to the impoundment (EPRI, 1990).

The U-tube design, in which water from deep in the impoundment is pumped to the surface layer, provides a means to aerate reservoir waters. Oxygen transfer is increased as a mixture of water and oxygen gas is subjected to greater hydrostatic pressure. Water moves down the U-tube and pressure increases as a function of depth, dissolving the oxygen gas into the water. The oxygenated water then travels back up through the system and is released to the waterway (Jones and Stokes, 2004). The inducement of artificial circulation through aeration of the impoundment may also provide the opportunity for a "two-story" fishery, reduce internal phosphorus loading, and eliminate problems with iron and manganese in drinking water (Thornton et al., 1990).

If the principal objective is to improve DO levels only in the reservoir releases and not throughout the entire impoundment, then aeration can be applied selectively to discrete layers of water immediately surrounding the intakes or as water passes through release structures such as hydroelectric turbines. Localized mixing is a practice to improve releases from thermally stratified reservoirs by destratifying the reservoir in the immediate vicinity of the outlet structure. This practice differs from the practice of artificial destratification, where mixing is designed to destratify all or most of the reservoir volume (Holland, 1984). Localized mixing is provided by forcing a jet of high-quality surface water downward into the hypolimnion. Pumps used to create the jet generally fall into two categories, axial flow propellers and direct drive mixers (Price, 1989). Axial flow pumps usually have a large-diameter propeller (6 to 15 feet) that produces a high-discharge, low-velocity jet. Direct drive mixers have small propellers (1 to 2 feet) that rotate at high speeds and produce a high-velocity jet. The axial flow pumps are suitable for shallow reservoirs because they can force large quantities of water down to shallow depths. The high-momentum jets produced by direct drive mixers are necessary to penetrate deeper reservoirs (Price, 1989).

Additional Resource

- Thornton, K.W., B.L. Kimmel, and F.E. Payne. 1990. *Reservoir Limnology: Ecological Perspectives*. John Wiley & Sons, Inc., New York.

Administrative Record Page No. 036199

Retaining Walls

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☑ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Retaining walls are used in areas where soils are unstable, where slopes are steeper than the angle of repose, and where the horizontal distance is limited. They help stabilize slopes and can decrease the steepness of a slope. If the steepness of a slope is reduced, the runoff velocity is decreased and, therefore, the erosion potential is decreased.

According to the *Iowa Construction Site Erosion Control Manual*, a variety of materials can be used for construction of retaining walls, including concrete masonry, concrete cribbing, steel piling, gabions, precast stone, rock riprap, reinforced earth, stone drywall, and treated wood timbers. Costs vary by the material selected for construction. When designing a retaining wall, the following factors should be taken into account: drainage, bearing value of the soil, wall thickness, stress, foundation design, and wall height.

Additional Resources

- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Retaining Wall.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/3.13_retaining_wall.pdf.

- Leposky, R.E. 2004. *Retaining Walls: What You See and What You Don't.* http://www.forester.net/ecm_0401_retaining.html.

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Return Walls

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☑ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Whenever shorelines or streambanks are "hardened" through the installation of bulkheads, seawalls, or revetments, the design process must include consideration that waves and currents can continue to dislodge the substrate at both ends of the structure, resulting in very concentrated erosion and rapid loss of fastland. This process is called flanking. To prevent flanking, return walls should be provided at either end of a vertical protective structure and should extend landward for a horizontal distance consistent with the local erosion rate and the design life of the structure.

Additional Resource

- USACE. 1985. *Coastal Engineering Technical Note: Determining Lengths of Return Walls*. U.S. Army Engineer Waterways Experiment Station. http://chl.erdc.usace.army.mil/library/publications/chetn/pdf/cetn-iii-25.pdf.

Revegetate

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Revegetation of construction sites during and after construction is the most effective way to permanently control erosion (Hynson et al., 1985). To select the right plants for your bioengineering project, note what native plant communities grow in the area. Avoid planting noxious or invasive grasses, such as reed canary grass or ryegrass. Remove invasive plants such as yellow starthistle, English ivy, deadly nightshade, field morning glory, scotch broom, cheatgrass, and purple loosestrife. Use more of the same native plants in the bioengineering design, as these plants are most likely adapted to conditions to the area.

Plants like willow, red osier dogwood, alder, ash, and cottonwood can be well suited for bioengineering. They establish easily, grow quickly, and have thick root systems. Cuttings are available from native plant nurseries. They may also be collected next to the project site, if the area is well vegetated (Oregon Association of Conservation Districts, 2004).

Ecological and vegetational areas vary throughout the country. Therefore, other plant materials may be more suitable for a project. Contact local cooperative extension services for more plant information.[9]

Additional Resources

- Barr Engineering Company. 2001. *Minnesota Urban Small Sites BMP Manual: Stormwater Best Management Practices for Cold Climates. Soil Erosion Control: Vegetative Methods.* Prepared for the Metropolitan Council by Barr Engineering Company, St. Paul, MN. http://www.metrocouncil.org/environment/Watershed/BMP/CH3_RPPSoilVeget.pdf.

- Ohio DNR. No date. *Ohio Stream Management Guide: Restoring Streambanks with Vegetation.* Ohio Department of Natural Resources. http://www.ohiodnr.com/water/pubs/fs_st/stfs07.htm.

[9] http://www.csrees.usda.gov/qlinks/partners/state_partners.html

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Revetment

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
- ☐ Vegetative
- ☑ Structural
- ☐ Integrated
- ☐ Planning & regulatory

A revetment (Figure 7.24) is a type of vertical protective structure used for shoreline protection. One revetment design contains several layers of randomly shaped and randomly placed stones, protected with several layers of selected armor units or quarry stone. The armor units in the cover layer should be placed in an orderly manner to obtain good wedging and interlocking between individual stones. The cover layer may also be constructed of specially shaped concrete units (USACE, 1984). Sometimes gabions (stone-filled wire baskets) or interlocking blocks of precast concrete are used in the construction of revetments. In addition to the surface layer of armor stone, gabions, or rigid blocks, successful revetment designs also include an underlying layer composed of either geotextile filter fabric and gravel or a crushed stone filter and bedding layer. This lower layer functions to redistribute hydrostatic uplift pressure caused by wave action in the foundation substrate. Precast cellular blocks, with openings to provide drainage and to allow vegetation to grow through the blocks, can be used in the construction of revetments to stabilize banks. Vegetation roots add additional strength to the bank. In situations where erosion can occur under the blocks, fabric filters can be used to prevent the erosion. Technical assistance should be obtained to properly match the filter and soil characteristics. Typically blocks are hand placed when mechanical access to the bank is limited or costs need to be minimized. Cellular block revetments have the additional benefit of being flexible to conform to minor changes in the bank shape (USACE, 1983).

Additional Resource

- Ohio DNR. No date. *Ohio Stream Management Guide: Riprap Revetments*. Ohio Department of Natural Resources. http://www.ohiodnr.com/water/pubs/fs_st/stfs16.pdf.

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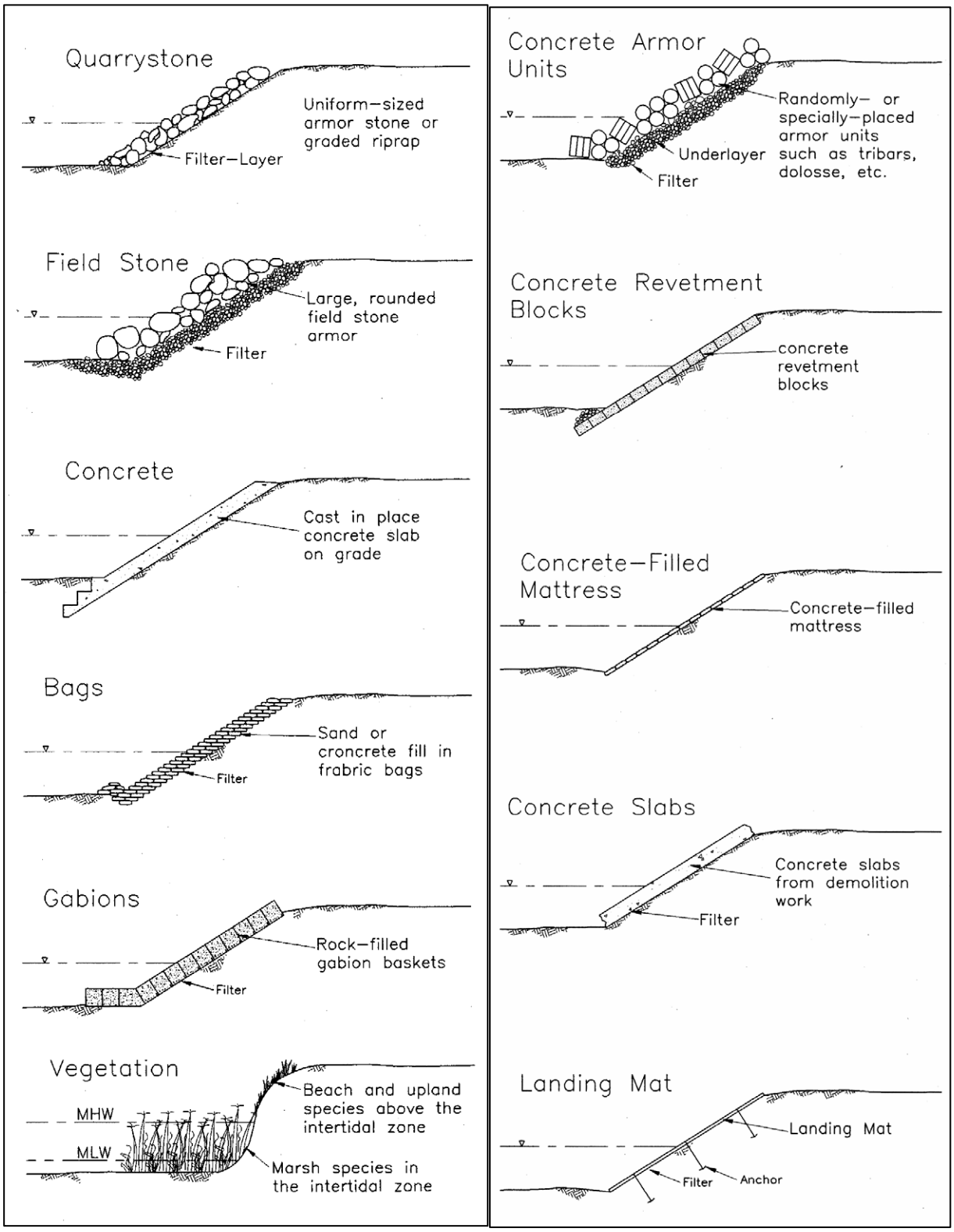

Figure 7.24 Revetment Alternatives (USACE, 2003)

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Riparian Improvements

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☑ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☑ Integrated
  - ☐ Planning & regulatory

Riparian improvements are another strategy that can be used to restore or maintain aquatic and riparian habitat around reservoir impoundments or along the waterways downstream from dams. In fact, Johnson and LaBounty (1988) found that riparian improvements were more effective, in some cases, than flow augmentation for protection of instream habitat. In the Salmon River (Idaho), a variety of instream and riparian habitat improvements have been recommended to improve the indigenous stocks of Chinook salmon (*Oncorhynchus tshawytscha*). These improvements include reducing sediment loading in the watershed, improving riparian vegetation, eliminating barriers to fish migration (see sections discussing this practice below), and providing greater instream and riparian habitat diversity (Andrews, 1988).

Maintaining and improving riparian areas upstream of a dam may also be an important consideration for reducing flow-related impacts to dams. Riparian areas along brooks and smaller streams are sometimes altered in a manner that impairs their ability to detain and absorb floodwater and stormwater (e.g., removal of forest cover or increased imperviousness). The cumulative impact of the riparian changes results in the smaller streams discharging increased volumes and velocities of water, which then result in more severe downstream flooding and increased storm damage and/or maintenance to existing structures (such as dams). These downstream impacts may occur even though main stem floodplains and riparian areas are safeguarded and remain close to their natural condition (Cohen, 1997).

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Riprap

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
- ☐ Vegetative
- ☑ Structural
- ☐ Integrated
- ☐ Planning & regulatory

Riprap is a layer of appropriately sized stones designed to protect and stabilize areas subject to erosion, slopes subject to seepage, or areas with poor soil structure. Riprap extends from the toe of the slope to a height needed for long term durability (Figure 7.25).

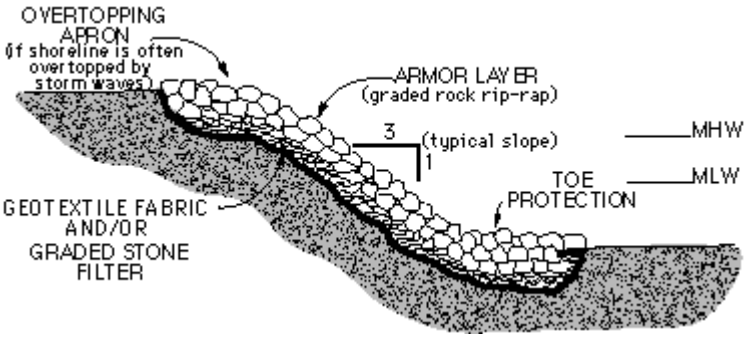
Riprap can be used where vegetation cannot be established or in combination with vegetative approaches. This method is suitable where stream flow velocity is high or where there is a threat to life or property. This method can be expensive, particularly if materials are not locally available. This method should be combined with soil bioengineering techniques, particularly revegetation efforts, to achieve a comprehensive streambank restoration design (FISRWG, 1998).

Additional Resources

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Riprap.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/3.15_riprap.pdf.

- Tennessee Department of Environment and Conservation. 2002. *Erosion and Sediment Control Handbook: Riprap*. Tennessee Department of Environment and Conservation, Nashville, TN. http://state.tn.us/environment/wpc/sed_ero_controlhandbook/rr.pdf.



Proper riprap placement (MHW=mean high water, MLW=mean low water).

Figure 7.25 Riprap Diagram (http://www.extension.umn.edu/distribution/naturalresources/components/DD6946g.html)

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Root Wad Revetments

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☑ Integrated
- ☐ Planning & regulatory

Root wads armor a bank by keeping faster moving currents away from the bank (Figures 7.26 and 7.27). They are most useful for low energy streams that meander and have out-of-bank flow conditions. Root wads should be used in combination with other soil bioengineering techniques to stabilize a bank and ensure plant establishment on the upper portions of the streambank. Stabilizing the bank will reduce streambank erosion, trap sediment, and improve habitat diversity. There are a number of ways to install root wads. The trunk can be driven into the bank, laid in a deep trench, or installed as part of a log and boulder revetment. Use tree wads that have brushy top and durable wood, such as Douglas fir, oak, hard maple, juniper, spruce, cedar, red pine, white pine, larch, or beech. Ponderosa pine and aspen are too inflexible, and alder decomposes rapidly.

With the added support of a log and boulder revetment, root wads can stabilize banks of high-energy streams. Root wad span should be approximately 5 feet with numerous root protrusions. The trunk should be at least 8 to 12 feet long. Boulders should be as large as possible, but at least one and a half times the log's diameter. They should also have an irregular surface. Logs are to be used as footers or revetments and should be over 16 inches in diameter.

When logs and root wads are well anchored, this design will tolerate high boundary shear stress. However, local scour and erosion is possible. Varying with climate and tree species used, the decomposition of the logs and rootwads will limit the life span of this design. If colonization of streambank vegetation does not take place, replacement may be required. The project site must be accessible to heavy equipment. Locating materials may be difficult in some locations and this method can be expensive (FISRWG, 1998).

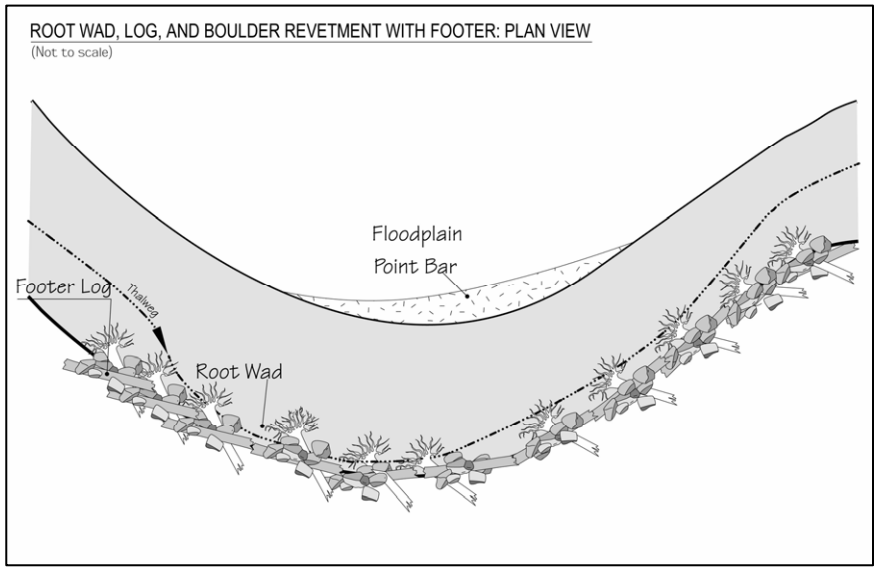

Figure 7.26 Root Wad, Log, and Boulder Revetment with Footer: Plan View (USDA-FS, 2002)

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Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002). Under EMRRP, the USACE has presented research on rootwad composites in a technical note (*Rootwad Composites for Streambank Erosion Control and Fish Habitat Enhancement*).[10]

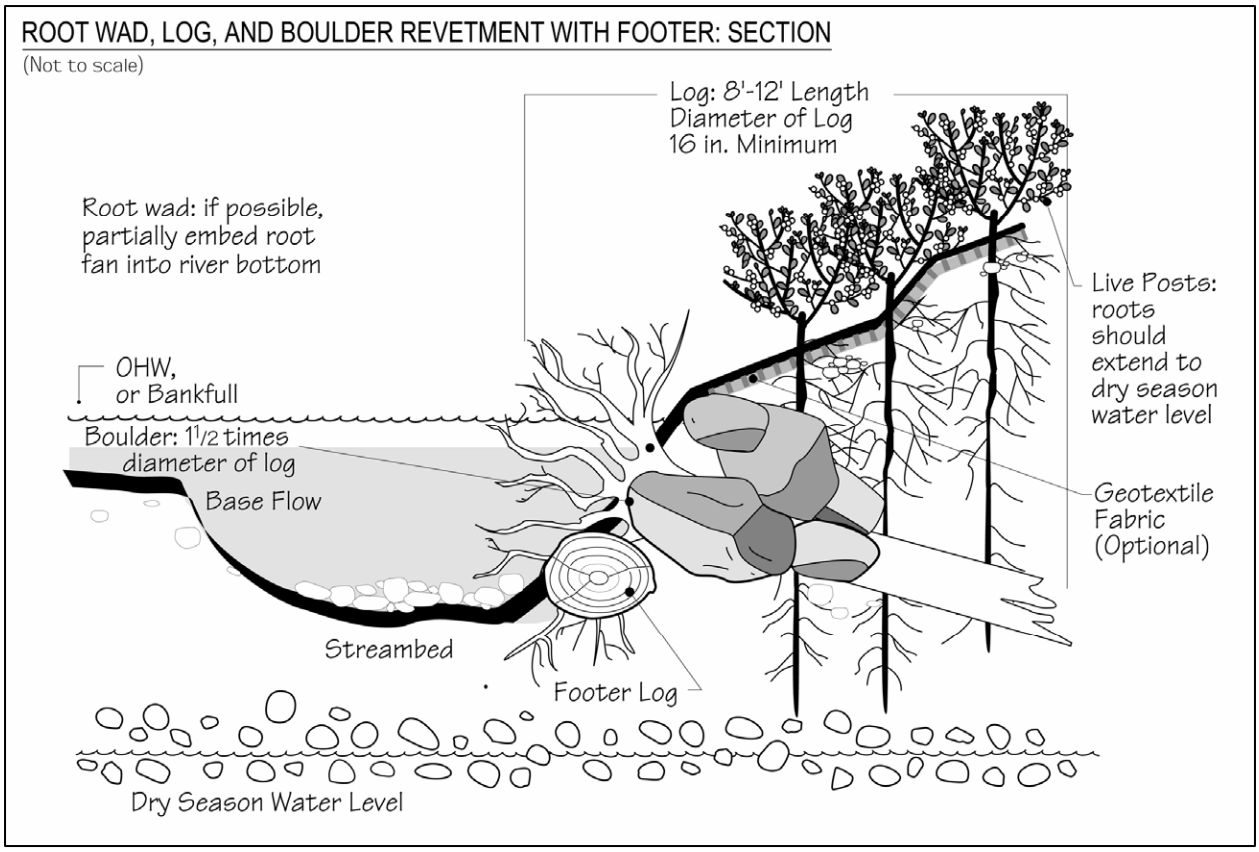

Figure 7.27 Rootwad, Log, and Boulder Revetment with Footer: Section (USDA-FS, 2002)

Additional Resources

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- Harmon, W.A. and R. Smith. 2000. *Using Root Wads and Rock Vanes for Streambank Stabilization.* River Course Fact Sheet Number 4. North Carolina Cooperative Extension Service. http://www.bae.ncsu.edu/programs/extension/wqg/sri/rv-crs-4.pdf.

- Walter, J., D. Hughes, and N.J. Moore. 2005. *Streambank Revegetation and Protection: A Guide for Alaska. Revegetation Techniques: Root Wads.* Revised Edition. Alaska Department of Fish and Game, Division of Sport Fish. http://www.sf.adfg.state.ak.us/SARR/restoration/techniques/rootwad.cfm.

[10] http://el.erdc.usace.army.mil/elpubs/pdf/sr21.pdf

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Rosgen's Stream Classification Method

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☐ Integrated
- ☑ Planning & regulatory

Rosgen's stream channel stability method provides a sequence of steps for the field practitioner to use in reaching final conclusions and making recommendations for management, stream design, or restoration. The field practitioner uses field-measured variables to assess:

- Stream state or channel condition variables
- Vertical stability (degradation/aggradation)
- Lateral stability
- Channel patterns
- Stream profile and bed features
- Channel dimension factor
- Channel scour/deposition (with competence calculations of field verified critical dimensionless shear stress and change in bed and bar material size distribution)
- Stability ratings adjusted by stream type
- Dimensionless ratio sediment rating curves by stream type and stability ratings
- Selection of position in stream type evolutionary scenario as quantified by morphological variables by stream type to determine state and potential of stream reach.

The stability assessment is conducted on a reference reach and a departure analysis is performed when compared to an unstable reach of the same stream type. Changes in the variables controlling river channel form, primarily streamflow, sediment regime, riparian vegetation, and direct physical modifications can cause stream channel instability. Separating the differences between anthropogenic versus geologic processes in channel adjustment is a key to prevention, mitigation, and restoration of disturbed systems.

Rosgen (1996) has also created a river inventory hierarchy involving four levels that would allow a stream assessment to be conducted at various levels, ranging from broad qualitative descriptions to detailed quantitative descriptions. The idea is to provide documented measurements, coupled with consistent, quantitative indices of stability, to make the approach to stream assessments less subjective and more consistent and reproducible. Level I and Level II are used to do the initial stratification of a reach by valley and stream type. Level III is used to predict stability. Level IV is used for validation, and requires the greatest amount of detail over a longer time period. For example, vertical stability and bank erosion can be estimated at Level III. But, in a Level IV assessment, permanent cross-sections are revisited over time to verify shifts in bed elevation and measure actual erosion that occurred.

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The four hierarchal levels, and the measurements and determinations they include, are shown below along with their objectives.

Level I—Geomorphic characterization: Used to describe generalized fluvial features using remote sensing and existing inventories of geology, landform evolution, valley morphology, depositional history and associated river slopes, relief and patterns utilized for generalized categories of major stream types, and associated interpretations.

Level II—Morphological description: To delineate homogeneous stream types that describe specific slopes, channel materials, dimensions and patterns from reference reach measurements and provide a more detailed level of interpretation than Level I. Includes measurements such as sinuosity, width/depth ration, slope, entrenchment ratio, and channel patterns and material.

Level III—Stream "state" or condition: The "state" of streams further describes existing conditions that influence the response of channels to imposed change and provide specific information for prediction methodologies (such as stream bank erosion calculations). Provides for very detailed descriptions and associated interpretation and predictions. Includes such measurements and/or characterizations of vegetation, deposition, debris, meander patterns, channel stability index, and flow regime.

Level IV—Reach specific studies (validation level): Provides reach-specific information on channel processes. Used to evaluate prediction methodologies; to provide sediment, hydraulic and biological information related to specific stream types; and to evaluate effectiveness of mitigation and impact assessments for activities by stream type. Involves direct measurements of sediment transport, bank erosion rates, aggradation/degradation, hydraulics, and biological data.

Rosgen's stream classification methodologies can assist in stream restoration design by:

- Enabling more precise estimates of quantitative hydraulic relationships associated with specific stream and valley morphologies.
- Establishing guidelines for selecting stable stream types for a range of dimensions, patterns, and profiles that are in balance with the river's valley slope, valley confinement, depositional materials, streamflow, and sediment regime of the watershed.
- Providing a method for extrapolating hydraulic parameters and developing empirical relationships for use in the resistance equations and hydraulic geometry equations needed for restoration design.
- Developing a series of meander geometry relationships that are uniquely related to stream types and their bankfull dimensions.
- Identifying the stable characteristics for a given stream type by comparing the stable form to its unstable or disequilibrium condition.

Refer to *Applied River Morphology* (Rosgen, 1996) for more information on this stream classification system and potential applications.

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Scheduling Projects

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Often clearing and grading for a project can be scheduled during the time of year that the erosion potential of the site is relatively low. In many parts of the country, there is a certain period of the year when erosion potential is relatively low and construction scheduling could be very effective. For example, in the Pacific region if construction can be completed during the 6-month dry season (e.g., May 1 to October 31), temporary erosion and sediment controls might not be needed. In some parts of the country erosion potential is very high during certain parts of the year, such as the spring thaw in northern and high-elevation areas. During that time of year, snowmelt generates a constant runoff that can erode soil. In addition, construction vehicles can easily turn the soft, wet ground into mud, which is more easily washed off-site. Therefore, in the north, limitations could be placed on clearing and grading during the spring thaw (Goldman et al., 1986).

Additional Resource

- CASQA. 2004. *California Stormwater BMP Construction Handbook: Scheduling.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/EC-1.pdf.

Administrative Record Page No. 036211

Sediment Basins/Rock Dams

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☑ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

An earthen or rock embankment that is located to capture sediment from runoff and retain it on the construction site.

Sediment basins, also known as silt basins, are engineered impoundment structures that allow sediment to settle out of the urban runoff. They are installed prior to full-scale grading and remain in place until the disturbed portions of the drainage area are fully stabilized. They are generally located at the low point of sites, away from construction traffic, where they will be able to trap sediment-laden runoff. Basin dewatering is achieved either through a single riser and drainage hole leading to a suitable outlet on the downstream side of the embankment or through the gravel of the rock dam. In both cases, water is released at a substantially slower rate than would be possible without the control structure.

The following are general specifications for sediment basin design criteria as presented in Schueler (1997):

- Provide 1,800 to 3,600 ft^3 of storage per contributing acre (a number of states, including Maryland, Pennsylvania, Georgia, and Delaware, recently increased the storage requirement to 3,600 ft^3 or more [CWP, 1997b]).
- Surface area equivalent to 1 percent of drainage area (optional, seldom required).
- Riser with spillway capacity of 0.2 $ft^3/s/ac$ of drainage area (peak discharge for 2-year storm with 1-foot freeboard).
- Length-to-width ratio of 2 or greater.
- Basin side slopes no steeper than 2:1 (h:v).
- Safety fencing, perforated riser, dewatering (optional, seldom required).

Sediment basins can be classified as either temporary or permanent structures, depending on the length of service of the structure. If they are designed to function for less than 36 months, they are classified as temporary; otherwise, they are considered permanent. Temporary sediment basins can also be converted into permanent runoff management ponds. When sediment basins are designed as permanent structures, they must meet all standards for wet ponds. It is important to note that even the best-designed sediment basin seldom exceeds 60 to 75 percent total suspended solids (TSS) removal, which should be considered when selecting a sediment control practice.

Basins are most commonly used at the outlets of diversions, channels, slope drains, or other runoff conveyances that discharge sediment-laden water.

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Additional Resources

- CASQA. 2003. *California Stormwater BMP Construction Handbook*: *Sediment Basin.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/SE-2.pdf.

- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Sediment Basin.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/3.17_sediment_basin.pdf.

- Michigan Department of Environmental Quality. 1992. *SESC Training Manual*: *Sedimentation Basin*. Michigan Department of Environmental Quality, Lansing, MI. http://www.deq.state.mi.us/documents/deq-swq-nps-sb.pdf.

- Tennessee Department of Environment and Conservation. 2002. *Erosion and Sediment Control Handbook: Sediment Basin*. Tennessee Department of Environment and Conservation, Nashville, TN. http://state.tn.us/environment/wpc/sed_ero_controlhandbook/sb.pdf.

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Sediment Fences

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☑ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☐ Integrated
- ☐ Planning & regulatory

Silt fence, also known as filter fabric fence, is available in several mesh sizes from many manufacturers. Sediment is filtered out as runoff flows through the fabric. Such fences should be used only where there is sheet flow (no concentrated flow), and the maximum drainage area to the fence should be 0.5 acre or less per 100 feet of fence. To ensure sheet flow, a gravel collar or level spreader can be used upslope of the fence. Many types of fabrics are available commercially. The characteristics that determine a fence's effectiveness include filtration efficiency, permeability, tensile strength, tear strength, ultraviolet resistance, pH effects, and creep resistance. The longevity of silt fences depends heavily on proper installation and maintenance, however they typically last 6 to 12 months. CWP (1997d) identified several conditions that increase the effectiveness of silt fences:

- The length of the slope does not exceed 50 feet for slopes of 5 to 10 percent, 25 feet for slopes of 10 to 20 percent, or 15 feet for slopes greater than 20 percent.
- The silt fence is aligned parallel to the slope contours.
- Edges of the silt fence are curved uphill, which does not allow flow to bypass the fence.
- The contributing length to the fence is less than 100 feet.
- The fence has reinforcement if receiving concentrated flow.
- The fence was installed above an outlet pipe or weir.
- The fence is down slope of the exposed area and alignment considers construction traffic.
- Sediment is not allowed to accumulate behind the fence (increases capacity and decreases breach potential).
- Alignment of the silt fence mirrors the property line or limits of disturbance.

Additional Resources

- CASQA. 2003. *California Stormwater BMP Construction Handbook: Straw Bale Barrier.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/SE-9.pdf.

- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Sediment Barrier.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/3.16_sediment_barrier.pdf.

- Missouri Department of Natural Resources. 2006. *Protecting Water Quality, A Construction Site Water Quality Field Guide: Sediment Fence*. Missouri Department of Natural Resources. http://www.dnr.mo.gov/env/wpp/field-guide/fg05_06_sedimentcontrol.pdf.

- Tennessee Department of Environment and Conservation. 2002. *Erosion and Sediment Control Handbook: Silt Fence*. Tennessee Department of Environment and Conservation, Nashville, TN. http://state.tn.us/environment/wpc/sed_ero_controlhandbook/sf.pdf.

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Sediment Traps

Sediment traps are small impoundments that allow sediment to settle out of runoff water. They are typically installed in a drainage way or other point of discharge from a disturbed area. Temporary diversions can be used to direct runoff to the sediment trap. Sediment traps are ideal for sites 1 acre and smaller and should not be used for areas greater than 5 acres. They typically have a useful life of approximately 18 to 24 months. A sediment trap should be designed to maximize surface area for infiltration and sediment settling. This design increases the effectiveness of the trap and decreases the likeliness of backup during and after periods of high runoff intensity. The approximate storage capacity of each trap should be at least 1,800 ft^3/acre of disturbed land draining into the trap (Smolen et al., 1988).

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☑ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Additional Resources

- British Columbia Ministry of Agriculture, Food and Fisheries. 2004. *Constructed Ditch Fact Sheet: Sediment Traps.* No. 9. http://www.agf.gov.bc.ca/resmgmt/publist/600Series/641310-1.pdf.

- CASQA. 2003. *California Stormwater BMP Construction Handbook*: *Sediment Traps.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/SE-3.pdf.

- Tennessee Department of Environment and Conservation. 2002. *Erosion and Sediment Control Handbook: Sediment Trap*. Tennessee Department of Environment and Conservation, Nashville, TN. http://www.state.tn.us/environment/wpc/sed_ero_controlhandbook/st.pdf.

Administrative Record Page No. 036215

Seeding

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☐ Integrated
- ☐ Planning & regulatory

Seeding establishes a vegetative cover on disturbed areas and is very effective in controlling soil erosion once a dense vegetative cover has been established. Seeding establishes permanent erosion control in a relatively short amount of time and has been shown to decrease solids load by 99 percent (CWP, 1997a). The three most common seeding methods are (1) broadcast seeding, in which seeds are scattered on the soil surface; (2) hydroseeding, in which seeds are sprayed on the surface of the soil with a slurry of water; and (3) drill seeding, in which a tractordrawn implement injects seeds into the soil surface. Broadcast seeding is most appropriate for small areas and for augmenting sparse and patchy grass covers. Hydroseeding is often used for large areas (in excess of 5,000 square feet) and is typically combined with tackifiers, fertilizers, and fiber mulch. Drill seeding is expensive and is cost-effective only on sites greater than 2 acres. For best results, bare soils should be seeded or otherwise stabilized within 15 calendar days after final grading. Denuded areas that are inactive and will be exposed to rain for 15 days or more can also be temporarily stabilized, usually by planting seeds and establishing vegetation during favorable seasons in areas where vegetation can be established. In very flat, nonsensitive areas with favorable soils, stabilization may involve simply seeding and fertilizing. The Soil Quality Institute (SQI, 2000) recommends that soils that have been compacted by grading should be broken up or tilled before vegetating.

To establish a vegetative cover, it is important to use seeds from adapted plant species and varieties that have a high germination capacity. Supplying essential plant nutrients, testing the soil for toxic materials, and applying an adequate amount of lime and fertilizer can overcome many unfavorable soil conditions and establish adequate vegetative cover. Specific information about seeds, various species, establishment techniques, and maintenance can be obtained from *Erosion Control & Conservation Plantings on Noncropland* (Landschoot, 1997) or a local Cooperative State Research, Education, and Extension Service[11] or Natural Resources Conservation Service[12] office.

Additional Resources

- CASQA. 2003. *California Stormwater BMP Construction Handbook: Hydroseeding.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Construction/EC-4.pdf.

- Wisconsin Department of Natural Resources. 2003. *Seeding for Construction Site Erosion Control.* Wisconsin Department of Natural Resources, Madison, WI. http://dnr.wi.gov/org/water/wm/nps/pdf/stormwater/techstds/erosion/Seeding%20For%20Construction%20Site%20Erosion%20Control%20_1059.pdf.

[11] http://www.csrees.usda.gov
[12] http://www.nrcs.usda.gov

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Selective Withdrawal

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☑ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Temperature control in reservoir releases depends on the volume of water storage in the reservoir, the timing of the release relative to storage time, and the level from which the water is withdrawn. Dams capable of selectively releasing waters of different temperatures can provide cooler or warmer water temperatures downstream at times that are critical for other instream resources, such as during periods of fish spawning and development of fry (Fontane et al., 1981; Hansen and Crumrine, 1991). Stratified reservoirs are operated to meet downstream temperature objectives such as to enhance a cold-water or warm-water fishery or to maintain preproject stream temperature conditions. Release temperature may also be important for irrigation (Fontane et al., 1981).

Multilevel intake devices in storage reservoirs allow selective withdrawal of water based on temperature and DO levels. These devices minimize the withdrawal of surface water high in blue-green algae, or of deep water enriched in iron and manganese. Care should be taken in the design of these systems not to position the multilevel intakes too far apart because this will increase the difficulty with which withdrawals can be controlled, making the discharge of poor-quality hypolimnetic water more likely (Howington, 1990; Johnson and LaBounty, 1988; Smith et al., 1987).

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Setbacks

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☑ Planning & regulatory

Where setbacks have been implemented to reduce the hazard of coastal land loss, they have also included requirements for the relocation of existing structures located within the designated setback area. Setbacks can also include restrictions on uses of waterfront areas that are not related to the construction of new buildings (Davis, 1987). Upland drainage from development should be directed away from bluffs and banks so as to avoid accelerating slope erosion.

In most cases, states have used the local unit of government to administer the program on either a mandatory or voluntary basis. This allows local government to retain control of its land use activities and to exceed the minimum state requirements if this is deemed desirable (NRC, 1990).

Technical standards for defining and delineating setbacks also vary from state to state. One approach is to establish setback requirements for any "high hazard area" eroding at greater than 1 foot per year. Another approach is to establish setback requirements along all erodible shores because even a small amount of erosion can threaten homes constructed too close to the streambank or shoreline. Several states have general setback requirements that, while not based on erosion hazards, have the effect of limiting construction near the streambank or shoreline.

The basis for variations in setback regulations between states seems to be based on several factors, including (NRC, 1990):

- The language of the law being enacted
- The geomorphology of the coast
- The result of discretionary decisions
- The years of protection afforded by the setback
- Other variables decided at the local level of government

From the perspective of controlling NPS pollution resulting from erosion of shorelines and streambanks, the use of setbacks has the immediate benefit of discouraging concentrated flows and other impacts of storm water runoff from new development in areas close to the streambank or shoreline. In particular, the concentration of storm water runoff can aggravate the erosion of shorelines and streambanks, leading to the formation of gullies, which are not easily repaired. Therefore, drainage of storm water from developed areas and development activities located along the shoreline should be directed inland to avoid accelerating slope erosion.

The most significant NPS benefits are provided by setbacks that not only include restrictions on new construction along the shore but also contain additional provisions aimed at preserving and protecting coastal features such as beaches, wetlands, and riparian forests. This approach

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promotes the natural infiltration of surface water runoff before it passes over the edge of the bank or bluff and flows directly into the coastal waterbody. Setbacks also help protect zones of naturally occurring vegetation growing along the shore. As discussed in the section on "bioengineering practices," the presence of undisturbed shoreline vegetation itself can help to control erosion by removing excess water from the bank and by anchoring the individual soil particles of the substrate.

Almost all states and territories with setback regulations have modified their original programs to improve effectiveness or correct unforeseen problems (NRC, 1990). Experiences have shown that procedures for updating or modifying the setback width need to be included in the regulations. For instance, application of a typical 30-year setback standard in an area whose rate of erosion is 2 feet per year results in the designation of a setback width of 60 feet. This width may not be sufficient to protect the beaches, wetlands, or riparian forests whose presence improves the ability of the streambank or shoreline to respond to severe wave and flood conditions, or to high levels of surface water runoff during extreme precipitation events. A setback standard based on the landward edge of streambank or shoreline vegetation is one alternative that has been considered (NRC, 1990; Davis, 1987).

From the standpoint of NPS pollution control, an approach that designates streambanks, shorelines, wetlands, beaches, or riparian forests as a special protective feature, allows no development on the feature, and measures the setback from the landward side of the feature is recommended (NRC, 1990). In some cases, provisions for soil bioengineering, marsh creation, beach nourishment, or engineering structures may also be appropriate since the special protective features within the designated setbacks can continue to be threatened by uncontrolled erosion of the shoreline or streambank. Finally, setback regulations should recognize that some special features of the streambank or shoreline will change position. For instance, beaches and wetlands can be expected to migrate landward if water levels continue to rise. Alternatives for managing these situations include flexible criteria for designating setbacks, vigorous maintenance of beaches and other special features within the setback area, and frequent monitoring of the rate of streambank or shoreline erosion and corresponding adjustment of the setback area.

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Shoreline Sensitivity Assessment

Currently there are no complete, universal assessment methodologies that apply to all shorelines and assess erosion vulnerabilities in various types of lakes, reservoirs, estuaries, and coasts. The methods presented by NOAA and the U.S. Geological Survey (USGS) were originally developed for other purposes and are being applied for other shoreline assessments:

- Environmental Sensitivity Mapping
- USGS Coastal Classification (Coastal & Marine Geology Program)
- Coastal Vulnerability Index (CVI) (focus is on SLR—the "erosion" factor may be the only relevant factor in CVI)

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☑ Planning & regulatory

Environmental Sensitivity Mapping

The Environmental Sensitivity Index (ESI) was originally created for NOAA to prioritize areas for environmental cleanup (mainly oil-spills), to assist spill-response coordinators in evaluating the potential impact of oil along a shoreline, and to facilitate the allocation of resources during and after a spill.

ESI maps are comprised of three general types of information (NOAA, 1997):

- Shoreline Classification—ranked according to a scale relating to sensitivity, natural persistence of oil, and ease of cleanup.
- Biological Resources—including oil-sensitive animals and rare plants as well as habitats that are used by oil-sensitive species or are themselves sensitive to oil spills, such as submersed aquatic vegetation and coral reefs.
- Human-Use Resources—specific areas that have added sensitivity and value because of their use, such as beaches, parks and marine sanctuaries, water intakes, and archaeological sites.

The standardized ESI shoreline guideline rankings include estuarine, lacustrine, riverine, and palustrine habitats (NOAA, 1997). The classification scheme is based on an understanding of the physical and biological character of the shoreline environment, not just the substrate type and grain size. Relationships among physical processes, substrate type, and associated biota produce specific geomorphic/ecologic shoreline types, sediment transport patterns, and predictable patterns in oil behavior and biological impact. The concepts relating natural factors to the relative sensitivity of coastline, mostly developed in the estuarine setting, were slightly modified for lakes and rivers. The sensitivity ranking is controlled by the following factors:

- Relative exposure to wave and tidal energy
- Shoreline slope

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- Substrate type (grain size, mobility, penetration and/or burial, and trafficability)
- Biological productivity and sensitivity

ESI maps have proven to have a long-term use, and they are excellent tools for studying shoreline change and its effects on the distribution and concentration of plants and animals living near the coast. Environmental sensitivity mapping is still evolving, and NOAA researchers are working with federal, state, and private industry partners to improve the ESI mapping system to extend beyond spill response.

USGS Coastal Classification (Coastal & Marine Geology Program)

The objective of the Coastal Classification Map is to determine the hazard vulnerability of an area. The coastal geomorphic classification scheme utilizes morphology and human modifications of the coast as the primary basis for hazard assessment. It emphasizes physical factors that influence erosion, overwash of sandy beaches and barrier islands, and landward sediment transport during storms along and across those features (USGS, 2004).

USGS National Assessment of Coastal Vulnerability to Sea-Level Rise

The USGS Coastal and Marine Geology Program's National Assessment, seeks to determine the relative risks due to future sea-level rise for the U.S. Atlantic, Pacific, and Gulf of Mexico coasts USGS, 2002). Through the use of a CVI, the relative risk that physical changes will occur as sea-level rises is quantified based on the following criteria: tidal range, wave height, coastal slope, shoreline change, geomorphology, and historical rate of relative sea-level rise. This approach combines a coastal system's susceptibility to change with its natural ability to adapt to changing environmental conditions, and yields a relative measure of the system's natural vulnerability to the effects of sea-level rise.

In 2001, USGS in partnership with the National Park Service (NPS) Geologic Resources Division, began conducting hazard assessments and creating map products to assist the NPS in managing vulnerable coastal resources. One of the most important and practical issues in coastal geology is determining the physical response of coastal environments to water-level changes.

Additional Resources

- NOAA. 1997. *Environmental Sensitivity Index Guidelines (Version 3)* Chapter 2. Seattle, WA. http://response.restoration.noaa.gov/book_shelf/876_chapter2.pdf.

- USGS. 2002. *Vulnerability of US National Parks to Sea-Level Rise and Coastal Change*. U.S. Geological Survey. http://pubs.usgs.gov/fs/fs095-02/fs095-02.html.

- USGS. 2004. *Coastal Classification Mapping Project*. U.S. Geological Survey, Coastal & Marine Geology Program. http://coastal.er.usgs.gov/coastal-classification/class.html.

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Site Fingerprinting

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Often areas of a construction site are unnecessarily cleared. The total amount of disturbed area can be reduced with site fingerprinting, which involves placing development in the most environmentally sound locations on the site and minimizing the size of disturbed area. With site fingerprinting, only those areas essential for completing construction activities are cleared. The remaining area is left undisturbed.

Fingerprinting places development away from environmentally sensitive areas (wetlands, steep slopes, etc.), areas for future open space and restoration, areas where trees are to be saved, and temporary and permanent vegetative buffer zones.

The proposed limits of land disturbance can be physically marked off to ensure that only the land area required for buildings, roads, and other infrastructure is cleared. Existing vegetation, especially vegetation on steep slopes, can be avoided.

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Sodding

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Sodding permanently stabilizes an area with a thick vegetative cover. Sodding provides immediate stabilization of an area and can be used in critical areas or where establishing permanent vegetation by seeding and mulching would be difficult. Sodding is also a preferred option when there is high erosion potential during the period of vegetative establishment from seeding. According to the Soil Quality Institute (SQI, 2000), soils that have been compacted by grading should be broken up or tilled before placing sod.

Additional Resources

- Barr Engineering Company. 2001. *Minnesota Urban Small Sites BMP Manual: Stormwater Best Management Practices for Cold Climates. Soil Erosion Control: Vegetative Methods.* Prepared for the Metropolitan Council by Barr Engineering Company, St. Paul, MN. http://www.metrocouncil.org/environment/Watershed/BMP/CH3_RPPSoilVeget.pdf.

- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Sodding.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/2.6_sodding.pdf.

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Soil Protection

Unprotected stockpiles are very prone to erosion, and they must be protected. Small stockpiles can be covered with a tarp to prevent erosion. Large stockpiles can be stabilized by erosion blankets, seeding, or mulching.

Because of the high organic content of topsoil, it is not recommended for use as fill material or under pavement. After a site is cleared, the topsoil is typically removed. Since topsoil is essential to establish new vegetation, it should be stockpiled and then reapplied to the site for revegetation, if appropriate. Although topsoil salvaged from the existing site can often be used, it must meet certain standards, and topsoil might need to be imported onto the site if the existing topsoil is not adequate for establishing new vegetation.

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

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Spill and Water Budgets

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☑ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Although often used together, spill and water budgets are independent methods of facilitating downstream fish migration. Spill budgets provide alternative methods for fish passage that are less dangerous than passage through turbines. Spillways are used to allow fish to leave the reservoir by passing over the dam rather than through the turbines. The spillways must be designed to ensure that hydraulic conditions do not induce injury to the passing fish from scraping and abrasion, turbulence, rapid pressure changes, or supersaturation of dissolved gases in water passing through plunge pools (Stone and Webster, 1986).

In the Columbia River basin (Pacific Northwest), the USACE provides spill on a limited basis to pass fish around specific dams to improve survival rates. At key dams, spill is used in special operations to protect hatchery releases or provide better passage conditions until bypass systems are fully developed or, in some cases, improved (van der Borg and Ferguson, 1989). The cost of this alternative depends on the volume of water lost for power production (Mattice, 1990). Analyses of this practice, using a USACE model called FISHPASS, historically has shown that application of spill budgets in the Columbia River basin is consistently the most costly and least efficient method of improving overall downstream migration efficiency (Dodge, 1989).

In 1995 the National Marine Fisheries Service (NMFS) released a draft biological opinion to save Columbia River Basin salmon. The opinion was issued after concluding that current operations of the hydropower system were jeopardizing Columbia Basin salmon. The opinion addresses safer passage for young fish through the dams and modification to a number of hydropower operations and facilities. It calls for using as much water as possible during fish-passage season to improve flow for fish moving through the system. Specifically the draft called for spilling water over dams to increase passage of juvenile salmon via non-turbine routes to at least 80 percent. The USACE now runs the Juvenile Fish Transportation Program in cooperation with NMFS (NOAA, 1995; USACE, 2002b).

Water budgets increase flows through dams during the out-migration of anadromous fish species. They are used to speed smolt migration through reservoirs and dams. Water normally released from the impoundment during the winter period to generate power is instead released in May or June, when it can be sold only as secondary energy. This concept has been used in some regions of the United States, although quantification of the overall benefits is lacking (Dodge, 1989).

The volume of a typical water budget is generally not adequate to sustain minimum desirable flows for fish passage during the entire migration period. The Columbia Basin Fish and Wildlife Authority has proposed replacement of the water budget on the Columbia River system with a minimum flow requirement to prevent problems of inadequate water volume in discharge during low-flow years (Muckleston, 1990).

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Spill Prevention and Control Program

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☑ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Spill procedure information can be posted, and persons trained in spill handling should be onsite or on call at all times. Materials for cleaning up spills can be kept onsite and easily available. Spills should be cleaned up immediately and the contaminated material properly disposed.

In general, a spill prevention, control, and countermeasure (SPCC) plan can include guidance to site personnel on:

- Proper notification when a spill occurs
- Site responsibility with respect to addressing the cleanup of a spill
- Stopping the source of a spill
- Cleaning up a spill
- Proper disposal of materials contaminated by the spill
- Location of spill response equipment programs
- Training program for designated on-site personnel

A periodic spill "fire drill" can be conducted to help train personnel on proper responses to spill events and to keep response actions fresh in the minds of personnel. It is important to maintain an adequate spill and cleaning kit, which could include the following:

- Detergent or soap, hand cleaner, and water
- Activated charcoal, adsorptive clay, vermiculite, kitty litter, sawdust, or other adsorptive materials
- Lime or bleach to neutralize pesticides or other spills in emergency situations
- Tools such as a shovel, broom, and dustpan and containers for disposal
- Proper protective clothing

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Spillway Modifications

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☑ Improve tailwater oxygen
- ☑ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Spill at hydroelectric dams is routinely required during periods of high runoff when the river discharge exceeds what can be passed through the powerhouse turbines. In some cases, spill has been associated with gas supersaturation problems. The USACE has proposed several practices for solving the gas supersaturation problem. These include (1) passing more headwater storage through turbines, installing new fish bypass structures, and installing additional power units to reduce the need for spill; (2) incorporating "flip-lip" deflectors in spillway-stilling basins, transferring power generation to high-dissolved-gas-producing dams, and altering spill patterns at individual dams to minimize nitrogen mass entrainment; and (3) collecting and transporting juvenile salmonids around affected river reaches. Only a few of these practices have been implemented (Tanovan, 1987). As more attention is being paid to maintaining minimum flows in rivers for fish passage and spawning, mangers are balancing the need for spills with the potential impacts of gas supersaturation (Anderson, 2004; Anderson, 1995; DeHart, 2003; USFWS, 2001; Van Holmes and Anderson, 2004). For example, the U.S. Fish and Wildlife Service has routinely monitored gas supersaturation in reaches below Bonneville Dam (Columbia River, Oregon) to protect migrating salmon, many of which are endangered species (USFWS, 2001).

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Surface Roughening

Roughening is the scarifying of a bare sloped soil surface with horizontal grooves or benches running across the slope. Roughening aids the establishment of vegetative cover, improves water infiltration, and decreases runoff velocity.

Additional Resource

- Tennessee Department of Environment and Conservation. 2002. *Erosion and Sediment Control Handbook: Surface Roughening*. Tennessee Department of Environment and Conservation, Nashville, TN. http://www.state.tn.us/environment/wpc/sed_ero_controlhandbook/sr.pdf.

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Administrative Record Page No. 036228

Toe Protection

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☑ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

A number of qualitative advantages are to be gained by providing toe protection for vertical bulkheads. Toe protection usually takes the form of a stone apron installed at the base of the vertical structure to reduce wave reflection and scour of bottom sediments during storms. The installation of rubble toe protection should include filter cloth and perhaps a bedding of small stone to reduce the possibility of rupture of the filter cloth. Ideally, the rubble should extend to an elevation such that waves will break on the rubble during storms.

Additional Resources

- Massachusetts DEP. 2006. *Massachusetts Nonpoint Source Pollution Management Manual: Stone Toe Protection.* Massachusetts Department of Environmental Protection, Boston, MA. http://projects.geosyntec.com/NPSManual/Fact%20Sheets/Stone%20Toe%20Protection.pdf.

- Wisconsin Department of Natural Resources. 2006. *Vegetated Armoring Erosion Control Methods.* http://dnr.wi.gov/org/water/fhp/waterway/erosioncontrol-vegetated.html.

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Training—ESC

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Provide education and training opportunities for designers, developers, and contractors. One of the most important factors determining whether ESCs will be properly installed and maintained on a construction site is the knowledge and experience of the contractor and onsite personnel. Many communities require certification for key on-site employees who are responsible for implementing the ESC plan. Certification can be accomplished through municipally sponsored training courses; more informally, municipalities can hold mandatory preconstruction or prewintering meetings and conduct regular and final inspection visits to transfer information to contractors (Brown and Caraco, 1997). Information that can be covered in training courses and meetings includes the importance of ESC for water quality protection; developing and implementing ESC plans; the importance of proper installation, regular inspection, and diligent maintenance of ESC practices; and record keeping for inspections and maintenance activities.

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Transference of Fish Runs

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☑ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Transference of fish runs involves inducing anadromous fish species to use different spawning grounds in the vicinity of an impoundment. To implement this practice, the nature and extent of the spawning grounds that were lost due to the blockage in the river need to be assessed, and suitable alternative spawning grounds need to be identified. The feasibility of successfully collecting the fish and transporting them to alternative tributaries also needs to be carefully determined.

One strategy for mitigating the impacts of diversions on fisheries is the use of ephemeral streams as conveyance channels for all or a portion of the diverted water. If flow releases are controlled and uninterrupted, a perennial stream is created, along with new instream and riparian habitat. However, the biota that had been adapted to preexisting conditions in the ephemeral stream will probably be eliminated.

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Tree Armoring, Fencing, and Retaining Walls or Tree Wells

Tree armoring protects tree trunks and natural vegetation from being damaged by construction equipment. Fencing can also protect tree trunks, but it should be placed at the tree's drip line so that construction equipment is kept away from the tree. A tree's drip line is the minimum area around the tree in which the tree's root system should not be disturbed by cut, fill, or soil compaction caused by heavy equipment. When cutting or filling must be done near a tree, a retaining wall or tree well can be used to minimize the cutting of the tree's roots or the quantity of fill placed over the tree's roots. It is recommended that cutting or filling be done only when absolutely necessary. Fill placement over the tree root flare or within the dripline will eventually kill the tree.

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

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Tree Revetments

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
- ☑ Vegetative
- ☐ Structural
- ☐ Integrated
- ☐ Planning & regulatory

Tree revetments consist of a row of interconnected trees anchored to the toe of the streambank or to the upper streambank (Figures 7.28 and 7.29). This serves to reduce flow velocities along eroding streambanks, trap sediment, and provide a substrate for plant establishment and erosion control. This design relies on the installation of an adequate anchoring system and is best suited for streambank heights under 12 feet and bankfull velocities under 6 feet per second. In addition, this structure should occupy no more than 15 percent of the channel at bankfull. Toe protection is needed to accompany this design if scour is anticipated and upper bank soil bioengineering techniques are recommended to ensure streamside regeneration. This design allows for the use of local materials if they are readily available. Decay resistant species are recommended for the logs to extend the life of the structure and thus the ability of vegetation to become established. Due to decomposition, these structures have a limited life and might require periodic replacement. It is considered beneficial that decomposition of the logs over time allows the streambank to return to a natural state with protection provided by mature streambank vegetation. There is a potential for the logs to dislodge, and these structures should not be located upstream of bridges or other structures sensitive to damage. Tree revetments are susceptible to damage by ice (FISRWG, 1998). Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002).

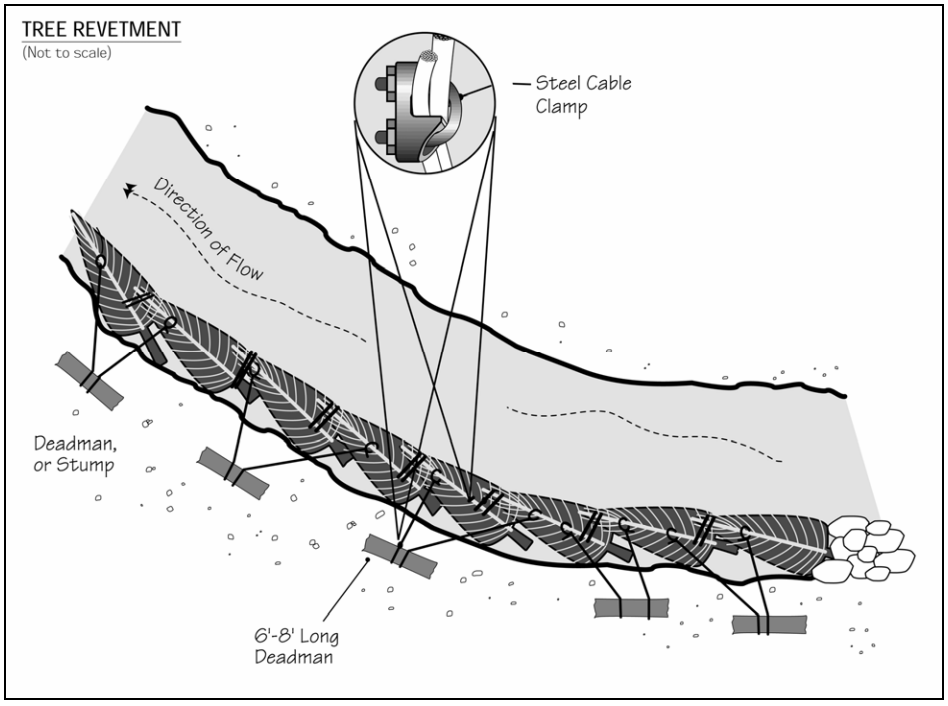

Figure 7.28 Tree Revetment (USDA-FS, 2002)

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Additional Resources

- Alaska Department of Fish and Game. 2005. *Spruce Tree Revetment.* http://www.sf.adfg.state.ak.us/sarr/restoration/techniques/images/csbs_strevet.pdf.

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- Goard, D. 2006. *Riparian Forest Best Management Practices: Tree Revetments.* Kansas State University, Manhattan, KS. http://www.oznet.ksu.edu/library/forst2/MF2750.pdf.

- Gough, S. 2004. *Tree Revetments for Streambank Revitalization.* Missouri Department of Conservation, Fisheries Division, Jefferson City, MO. http://mdc.mo.gov/fish/streams/revetmen/.

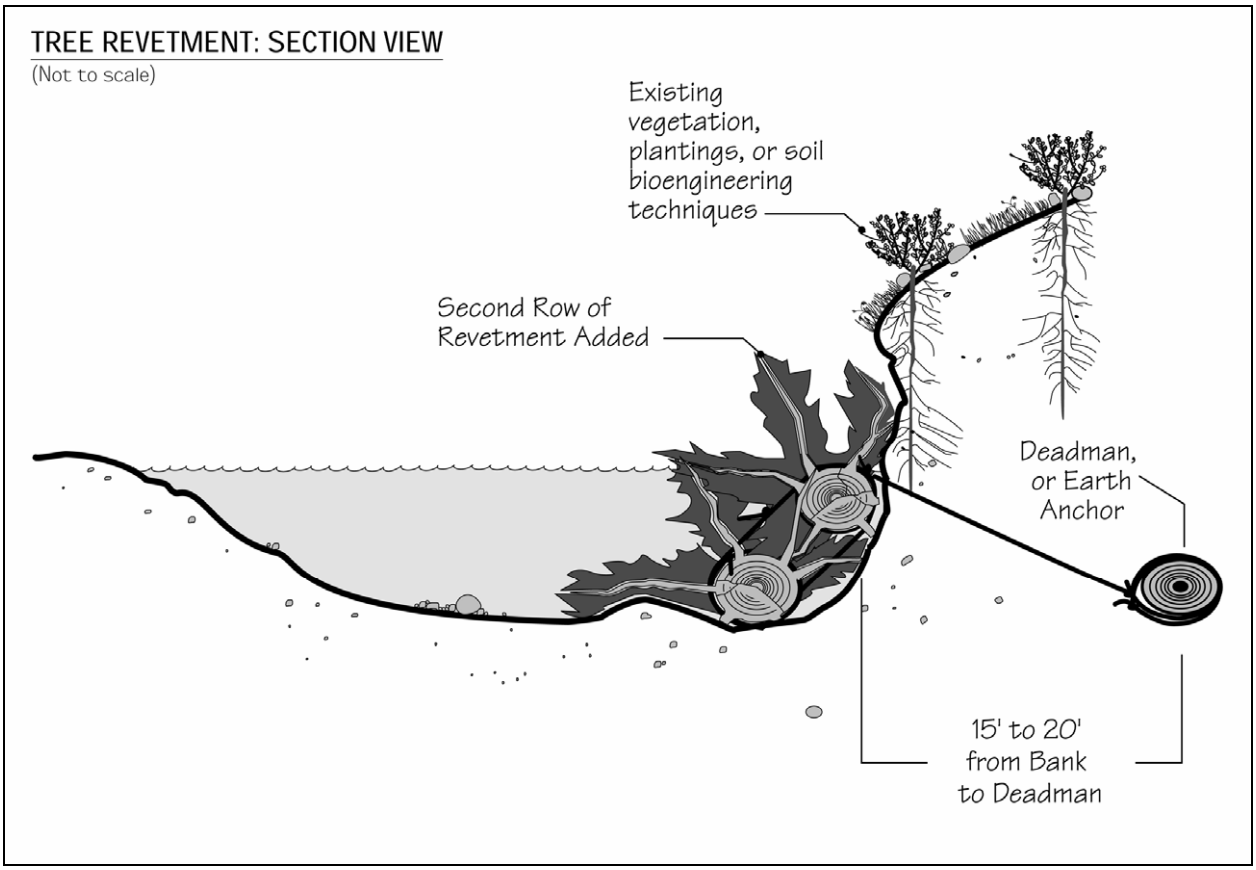

Figure 7.29 Tree Revetment: Section View (USDA-FS, 2002)

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Turbine Operation

Implementation of changes in the turbine start-up procedures can also enlarge the zone of withdrawal to include more of the epilimnetic waters in the downstream releases. Monitoring of the releases at the Walter F. George lock and dam (Chattahoochee River, Georgia), showed levels of DO declined sharply at the start-up of hydropower production. The severity and duration of the DO drop were found to be reduced by starting up all the generator units within a minute of each other (Findley and Day, 1987).

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☑ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Administrative Record Page No. 036235

Turbine Venting

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☑ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Turbine venting is the practice of injecting air into water as it passes through a turbine. If vents are provided inside the turbine chamber, the turbine will aspirate air from the atmosphere and mix it with water passing through the turbine as part of its normal operation. In early designs, the turbine was vented through existing openings, such as the draft tube opening or the vacuum breaker valve in the turbine assembly. Air forced by compressors into the draft tube opening enriched reservoir waters with little detectable DO to concentrations of 3 to 4 mg/L. Overriding the automatic closure of the vacuum breaker valve (at high turbine discharges) increased DO by only 2 mg/L (Harshbarger, 1987).

Turbine venting uses the low-pressure region just below the turbine wheel to aspirate air into the discharges (Wilhelms, 1984). Autoventing turbines are constructed with hub baffles, or deflector plates placed on the turbine hub upstream of the vent holes to enhance the low-pressure zone in the vicinity of the vent and thereby increase the amount of air aspirated through the venting system. Turbine efficiency relates to the amount of energy output from a turbine per unit of water passing through the turbine. Efficiency decreases as less power is produced for the same volume of water. In systems where the water is aerated before passing through the turbine, part of the water volume is displaced by the air, thus leading to decreased efficiency. Hub baffles have also been added to autoventing turbines at the Norris Dam (Clinch River, Tennessee) to further improve the DO levels in the turbine releases (Jones and March, 1991).

Developments in autoventing turbine technology show that it may be possible to aspirate air with no resulting decrease in turbine efficiency. In one test of an autoventing turbine at the Norris Dam, the turbine efficiency increased by 1.8 percent (March et al., 1991; Waldrop, 1992). Technologies like autoventing turbines are very site-specific and outcomes will vary considerably.

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Vegetated Buffers

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☑ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☑ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Like filter strips, vegetated buffers provide a physical separation between a construction site and a waterbody. The difference between a filter strip and a vegetated buffer area is that a filter strip is an engineered device, whereas a buffer is a naturally occurring filter system. Vegetated buffers remove nutrients and other pollutants from runoff, trap sediments, and shade the waterbody to optimize light and temperature conditions for aquatic plants and animals (Welsch, n.d.). Preservation of vegetation for a buffer can be planned before any site-disturbing activities begin so as to minimize the impact of construction activities on existing vegetation. Trees can be clearly marked at the dripline to preserve them and to protect them from ground disturbances around the base of the tree.

Proper maintenance of buffer vegetation is important. Maintenance requirements depend on the plant species chosen, soil types, and climatic conditions. Maintenance activities typically include fertilizing, liming, irrigating, pruning, controlling weeds and pests, and repairing protective markers (e.g., fluorescent fences and flags).

Additional Resources

- CASQA. 2003. *California Stormwater BMP Construction Handbook: Vegetated Buffer Strips.* California Stormwater Quality Association, Sacramento, CA. http://www.cabmphandbooks.com/Documents/Development/TC-31.pdf.

- Ohio DNR. No date. *Ohio Stream Management Guide: Forested Buffer Strips.* Ohio Department of Natural Resources. http://www.ohiodnr.com/water/pubs/fs_st/stfs13.htm.

- River Alliance of Wisconsin. No date. *Benefits of Vegetated Buffers.* River Alliance of Wisconsin, Madison, WI. http://www.wisconsinrivers.org/documents/policy/Fact%20Sheet%20-%20Benefits%20of%20Vegetated%20Buffers.pdf.

- Tennessee Department of Environment and Conservation. 2002. *Erosion and Sediment Control Handbook: Vegetative Practices*. Tennessee Department of Environment and Conservation, Nashville, TN. http://state.tn.us/environment/wpc/sed_ero_controlhandbook/2.%20Vegetative%20Practices.pdf.

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Vegetated Filter Strips

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☑ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☐ Integrated
- ☐ Planning & regulatory

Vegetated filter strips are low-gradient vegetated areas that filter overland sheet flow. Runoff must be evenly distributed across the filter strip. Channelized flows decrease the effectiveness of filter strips. Level spreading devices are often used to distribute the runoff evenly across the strip (Dillaha et al., 1989).

Vegetated filter strips should have relatively low slopes and adequate length to provide optimal sediment control and should be planted with erosion-resistant plant species. The main factors that influence the removal efficiency are the vegetation type, soil infiltration rate, and flow depth and travel time. These factors are dependent on the contributing drainage area, slope of strip, degree and type of vegetative cover, and strip length. Maintenance requirements for vegetated filter strips include sediment removal and inspections to ensure that dense, vigorous vegetation is established and concentrated flows do not occur. For more information on vegetated filter strips, refer to EPA's *National Management Measures to Protect and Restore Wetlands and Riparian Areas for the Abatement of Nonpoint Source Pollution* (USEPA, 2005b).

Additional Resources

- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Vegetative Filter Strip.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/2.8_veg_filter_strip.pdf.

- Leeds, R., L.C. Brown, M.R. Sulc, and L. VanLieshout. No date. *Vegetative Filter Strips: Application, Installation and Maintenance*. The Ohio State University, Food, Agriculture and Biological Engineering, Columbus, OH. http://ohioline.osu.edu/aex-fact/0467.html.

- USDA. 2003. *Grass Filter Strips.* U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.oh.nrcs.usda.gov/programs/Lake_Erie_Buffer/filter_strips.html.

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Vegetated Gabions

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☑ Integrated
- ☐ Planning & regulatory

Vegetated gabions (Figure 7.30) start with wire-mesh, rectangular baskets filled with small to medium rock and soil. The baskets are then laced together to form a structural toe or sidewall. Live branches (0.5 to 1 inch in diameter) are then placed on each consecutive layer between the rock filled baskets to take root, join together the structure, and bind it to the slope. This method is effective for protecting steep slopes where scouring or undercutting is occurring. However, this method is not appropriate in streams with heavy bed load or where severe ice damage occurs. This method provides moderate structural support and should be placed at the base of a slope to stabilize the slope and reduce slope steepness. A stable foundation is required for the installation of these structures. When the rock size needed is not locally available, this design is effective because smaller rocks can be used. A limiting factor of this method is that it is expensive to install and to replace. These structures are relatively expensive to construct and frequently require costly repairs. This method should be combined with other soil bioengineering techniques, particularly revegetation efforts, to achieve a comprehensive streambank restoration design (FISRWG, 1998). There is often opposition to these structures based on their inability to blend in with natural settings and their general lack of aesthetically pleasing qualities (Gore, 1985).

Installation guidelines are available from the USDA NRCS *Engineering Field Handbook, Chapter 18* (USDA-NRCS, 1992). Under EMRRP, the USACE has presented research on vegetated gabions in a technical note (*Gabions for Streambank Erosion Control*).[13]

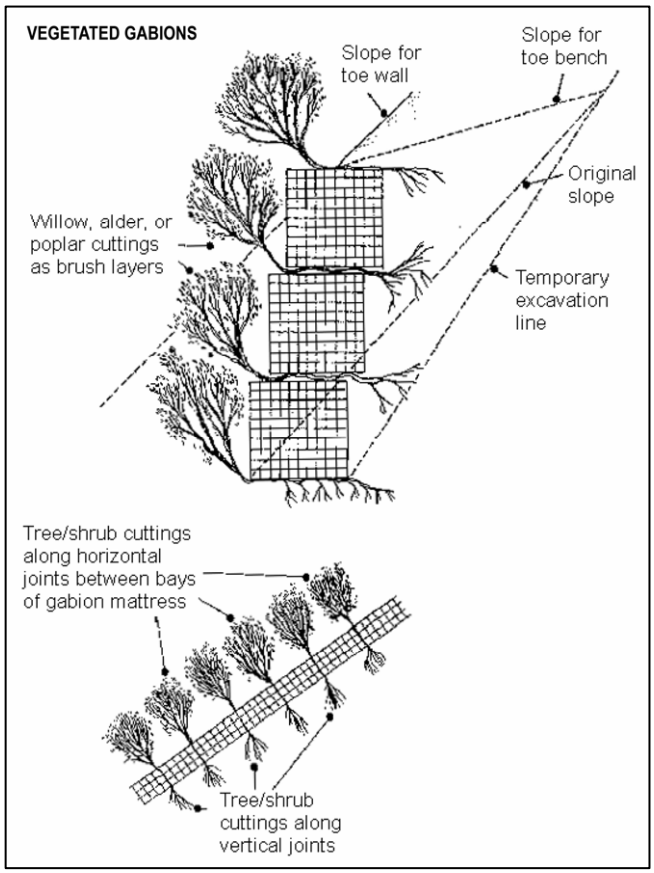

Figure 7.30 Vegetated Gabion (Allen and Leech, 1997)

[13] http://el.erdc.usace.army.mil/elpubs/pdf/sr22.pdf

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Additional Resources

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- ISU. 2006. *Iowa Construction Site Erosion Control Manual: Gabion.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/construction/3.8_gabion.pdf.

- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Vegetated Rock Gabions/Gabions.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://www.abe.msstate.edu/csd/NRCS-BMPs/pdf/streams/bank/veg_rockgabions.pdf.

- MMG Civil Engineering Systems, Ltd. 2001. *Vegetated Gabions*. MMG Civil Engineering Systems, Ltd., St. Germans, Kings Lynn, Norfolk, England. http://www.verdantsolutions.ltd.uk/acrobat/vegsod.pdf.

- Ohio DNR. No date. *Ohio Stream Management Guide: Gabion Revetments.* Ohio Department of Natural Resources. http://www.ohiodnr.com/water/pubs/fs_st/stfs15.htm.

- Tennessee Department of Environment and Conservation. 2002. *Erosion and Sediment Control Handbook: Gabion*. Tennessee Department of Environment and Conservation, Nashville, TN. http://state.tn.us/environment/wpc/sed_ero_controlhandbook/ga.pdf.

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Vegetated Geogrids

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
- ☐ Vegetative
- ☐ Structural
- ☑ Integrated
- ☐ Planning & regulatory

Vegetated geogrids consist of layers of live branch cuttings and compacted soil with natural or synthetic geotextile materials wrapped around each soil layer (Figure 7.31). This serves to rebuild and vegetate eroded streambanks, particularly on outside bends where erosion can be a problem. This system is designed to capture sediment providing a substrate for plant establishment and if properly designed and installed, these systems help to quickly establish riparian vegetation. Its benefits are similar to those of brush layering (e.g., dries excessively wet sites, reinforces soil as roots develop, which adds significant resistance to sliding or shear displacement). Due to the strength of this design and the higher initial tolerance to flow velocity, these systems can be installed on a 1:1 or steeper streambank or lakeshore. Limitations of this design include the complexity involved with constructing this system and the fairly high expense (FISRWG, 1998). When constructing this type of system, use live branch cuttings that are brushy and root readily. Also use cuttings that are 0.5 to 2 inches in diameter and 4 to 6 feet long. This type of system requires biodegradable erosion control fabric. Installation guidelines are available from the USDA-FS Soil Bioengineering Guide (USDA-FS, 2002).

Additional Resources

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- Massachusetts DEP. 2006. *Massachusetts Nonpoint Source Pollution Management Manual: Vegetated Geogrids.* Massachusetts Department of Environmental Protection, Boston, MA. http://projects.geosyntec.com/NPSManual/Fact%20Sheets/Vegetated%20Geogrids.pdf.

- ISU. 2006. *How to Control Streambank Erosion: Vegetated Geogrids.* Iowa State University. http://www.ctre.iastate.edu/erosion/manuals/streambank/vegetated_geogrids.pdf.

- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Vegetated Geogrids.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://www.abe.msstate.edu/csd/NRCS-BMPs/pdf/streams/bank/vegegeogrids.pdf.

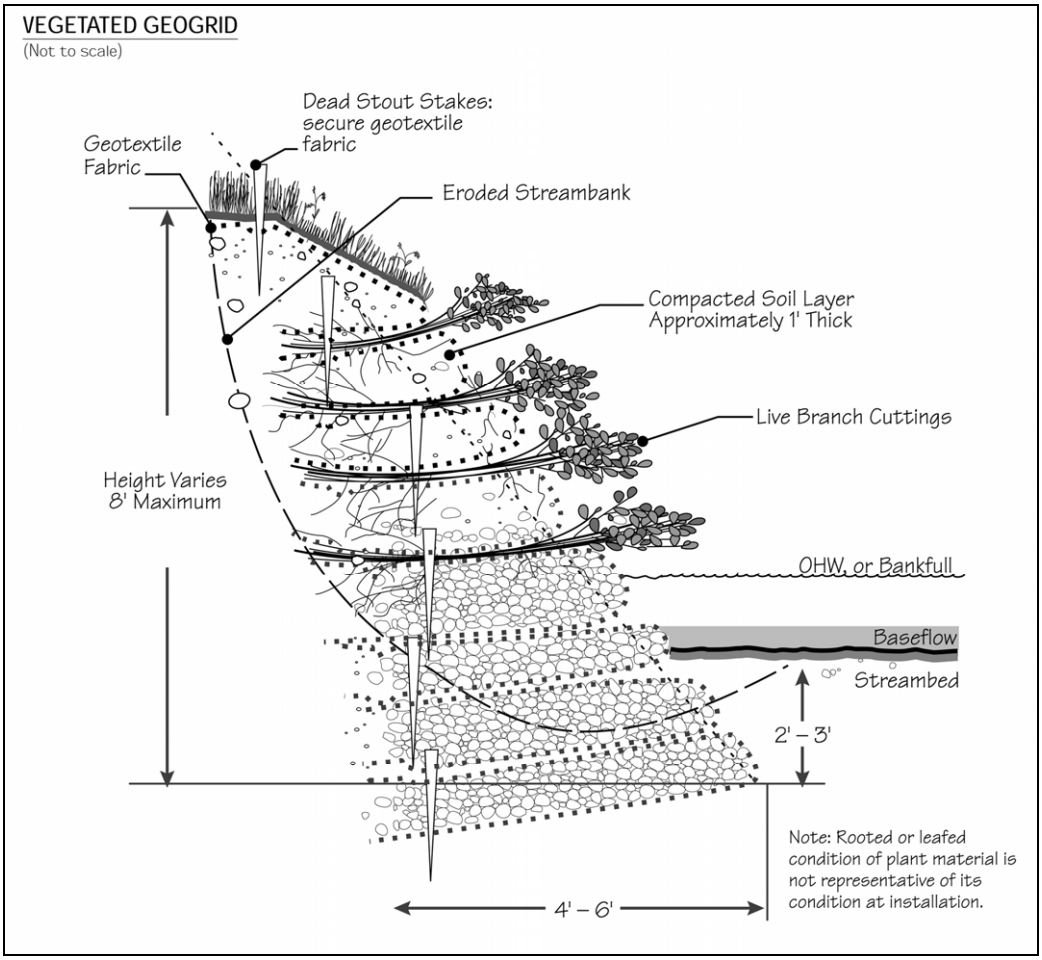

Figure 7.31 Vegetated Geogrid (USDA-FS, 2002)

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Vegetated Reinforced Soil Slope (VRSS)

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☑ Integrated
  - ☐ Planning & regulatory

The vegetated reinforced soil slope (VRSS) soil system (Figures 7.32 and 7.33) is an earthen structure constructed from living, rootable, live-cut, woody plant material branches, bare root, tubling or container plant stock, along with rock, geosynthetics, geogrids, and/or geocomposites. The VRSS system is useful for immediately repairing or preventing deeper failures, providing a structurally sound system with soil reinforcement, drainage, and erosion control (typically on steepened slope sites with limited space). Living cut branches and plants grow and perform additional soil reinforcement via the roots and surface protection via the top growth (Sotir and Fischenich, 2003).

Live vegetation is typically installed from just above baseflow elevation and up the face of the reconstructed streambank, acting to protect the bank through immediate soil reinforcement and confinement, drainage, and, in the toe area, with rock. The system extends below the depth of scour, typically with rock, which improves infiltration and supports the riparian zone. Internal systems (e.g., rock, live cut branches) can be configured to act as drains that redirect or collect internal bank seepage and transport water to the stream via a rock toe (Sotir and Fischenich, 2003).

Figure 7.32 VRSS Structure After Construction
(Sotir and Fischenich, 2003)

Plants may be selected to provide color, texture, and other attributes to add a natural landscape appearance. Examples of plants include dogwood, willow, hybiscus, and *Viburnum* spp. Check with your local NRCS office to make sure these are appropriate for the location. If a compound channel cross section is desirable near or just below the baseflow elevation, a step-back terrace may be incorporated to offer an enhanced riparian zone where emergent aquatic plants may invade over time. Although the total mass uptake may be small, they assimilate contaminants within the water column. Aquatic wetland plants that may be installed adjacent to the stream include blueflag, monkey flower, and pickerelweed. Again, check with your local NRCS office to ensure these are appropriate. VRSS systems can be constructed on slopes ranging from 1V on 2H (1:2) to 1:0.5. When constructed in step or terrace fashion, they improve pollutant control by intercepting sediment and attached pollutants during overbank flows (Sotir and Fischenich, 2003). Additional information about VRSS systems is available from USACE's *Vegetated Reinforced Soil Slope Streambank Erosion Control*.[14]

Figure 7.33 Established VRSS Structure (Sotir and Fischenich, 2003)

[14] http://el.erdc.usace.army.mil/elpubs/pdf/sr30.pdf

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Water Conveyances

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☑ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

These are the open or closed channel, conduit, or drop structure used to convey water from a reservoir. The USACE has studied the performance of spillways and overflow weirs at its facilities to determine the importance of these structures in improving DO levels. For example, data have been analyzed for the test spill done in 1999 at Canyon Ferry Dam in Montana, which found that allowing a portion of the releases to go over the spillways resulted in a significant increase in DO in the river downstream of the dam. Initially the use of spillways appeared to be a viable solution to the problem of low dissolved oxygen in the river below the dam. However, there was a problem with nitrogen supersaturation.

The operation of some types of hydraulic structures has been linked to problems of the supersaturation. An unexpected fish kill occurred in spring 1978 due to supersaturation of nitrogen gas in the Lake of the Ozarks (Missouri) within 5 miles of Truman Dam, caused by water plunging over the spillway and entraining air. The vertical drop between the spillway crest and the tailwaters was only 5 feet. The maximum total gas saturation was 143 percent, which is well above desired saturation levels. In this case, the spillway was modified by cutting a notch to prevent water from plunging directly into the stilling basin (ASCE, 1986).

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Wildflower Cover

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

Because of the hardy, drought-resistant nature of wildflowers, they may be more beneficial as an erosion control practice than turf grass. Though not as dense as turfgrass, wildflower thatches and associated grasses are expected to be as effective in erosion control and contaminant absorption. An additional benefit of wildflower thatches is that they provide habitat for wildlife, including insects and small mammals. Because thatches of wildflowers do not need fertilizers, pesticides, or herbicides and watering is minimal, implementation of this practice may result in cost savings.

A wildflower stand requires several years to become established, but maintenance requirements are minimal once established. Prices vary greatly, from less than $15 (Stock Seed Farms, n.d.) to $40 (Albright Seed Company, 2002) a pound, for wildflower seed mixes. The amount of wildflower seeds applied depends on the desired coverage of wildflowers. However, Stock Seed Farms recommends that one pound of seed can cover 3,500 ft^2 (Stock Seed Farms, n.d.). Keep in mind that species selection should focus on those wildflowers and grasses native to the given area or appropriate to the site.

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Wind Erosion Controls

Wind erosion controls limit the movement of dust from disturbed soil surfaces and include many different practices. Wind barriers block air currents and are effective in controlling soil blowing. Many different materials can be used as wind barriers, including solid board fences, snow fences, and bales of hay. Sprinkling moistens the soil surface with water and must be repeated as needed to be effective for preventing wind erosion (Delaware DNREC, 2003); however, applications must be monitored to prevent excessive runoff and erosion.

Channelization
- ☐ Physical & chemical
- ☐ Instream/riparian restoration

Dams
- ☑ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☐ Streambanks ☐ Shorelines
  - ☐ Vegetative
  - ☐ Structural
  - ☐ Integrated
  - ☐ Planning & regulatory

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Wing Deflectors

Channelization
- ☑ Physical & chemical
- ☑ Instream/riparian restoration

Dams
- ☐ Erosion control
- ☐ Runoff control
- ☐ Chemical/pollutant control
- ☐ Watershed protection
- ☐ Aerate reservoir water
- ☐ Improve tailwater oxygen
- ☐ Restore/maintain habitat
- ☐ Maintain fish passage

Erosion
- ☑ Streambanks ☑ Shorelines
- ☐ Vegetative
- ☑ Structural
- ☐ Integrated
- ☐ Planning & regulatory

Wing deflectors are structures that protrude from either streambank but do not extend entirely across a channel. The structures are designed to deflect flows away from the bank, and create scour pools by constricting the channel and accelerating flow. The structures can be installed in series on alternative streambanks to produce a meandering thalweg and stream diversity. The most common design is a rock and rock-filled log crib deflector structure. The design bases the size of the structure on anticipated scour. These structures need to be installed far enough downstream from riffle areas to avoid backwater effects that could drown out or damage the riffle. This design should be employed in streams with low physical habitat diversity, particularly channels that lack pool habitats. Construction on a sand bed stream may be susceptible to failure and should be constructed with the use a filter layer or geotextile fabric beneath the wing deflector structure (FISRWG, 1998).

Additional Resources

- FISRWG. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Federal Interagency Stream Restoration Working Group. http://www.nrcs.usda.gov/technical/stream_restoration/PDFFILES/APPENDIX.pdf.

- Massachusetts DEP. 2006. *Massachusetts Nonpoint Source Pollution Management Manual: Wing Deflectors.* Massachusetts Department of Environmental Protection, Boston, MA. http://projects.geosyntec.com/NPSManual/Fact%20Sheets/Wing%20Deflectors.pdf.

- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Single Wing Deflector.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://www.abe.msstate.edu/csd/NRCS-BMPs/pdf/streams/bank/singlewing.pdf.

- Mississippi State University, Center for Sustainable Design. 1999. *Water Related Best Management Practices in the Landscape: Double Wing Deflector.* Created for United States Department of Agriculture, Natural Resource Conservation Service, Watershed Science Institute. http://abe.msstate.edu/csd/NRCS-BMPs/pdf/streams/bank/doublewing.pdf.

- Ohio DNR. No date. *Ohio Stream Management Guide: Deflectors.* Ohio Department of Natural Resources. http://www.ohiodnr.com/water/pubs/fs_st/stfs19.pdf.

- SMRC. No date. *Stream Restoration: Flow Deflection/Concentration Practices.* The Stormwater Manager's Resource Center. http://www.stormwatercenter.net/Assorted%20Fact%20Sheets/Restoration/flow_deflection.htm.

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Chapter 8: Modeling Information

Physical and chemical effects of hydraulic and hydrologic changes to streams, rivers, or other surface water systems can often be estimated with models and past experience (expert judgment). Several different models are available that can simulate many of the complex physical, chemical, and biological interactions that occur when hydraulic changes are imposed on surface water systems. Additionally, models can sometimes be used to determine a combination of practices to mitigate the unavoidable effects that occur even when a project is properly planned. Models, however, cannot be used independently of expert judgment gained through past experience. When properly applied models are used in conjunction with expert judgment, the effects of hydromodification activities (both potential and existing projects) can be evaluated and many undesirable effects prevented or eliminated. Models combined with expert judgment can also be used to evaluate existing hydromodification activities as part of operation and maintenance programs to identify possible opportunities to reduce or eliminate water quality impacts.

In the U.S. Army Corps of Engineers' (USACE's) report, *Review of Watershed Water Quality Models*[1] (Deliman et al., 1999), the authors compare and evaluate existing hydrologic and watershed water quality models, make recommendations for base model(s) for predicting nonpoint source (NPS) pollution, and identify areas for model improvement. The authors review commonly used and well validated models used in urban or nonurban settings. Users of the models can use the report to obtain basic model information and to review how well the models simulate NPS pollution and where the authors think improvements could be made. This information might be useful to readers who are trying to select the best model for analyzing how to reduce NPS pollution in their watersheds (Deliman et al., 1999).

Tables 8.1 and 8.2 below provided example of models and assessment approaches that could be used to determine the effects of hydromodification activities.

[1] http://el.erdc.usace.army.mil/elpubs/pdf/trw99-1.pdf

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Available Models and Assessment Approaches

Table 8.1 lists some of the models available for studying the effects of channelization and channel modification activities, as well as models to analyze watershed runoff and to assess BMPs and low impact development to reduce impacts (of hydromodification activities.) The table also provides a quick description of each model and the dimension in which it models, as well as source and contact information.

Table 8.1 Models Applicable to Hydromodification Activities

Model	Dimension	Description	Model Resources
Channelization and Channel Modification Models			
BRANCH	1	The Branch-Network Dynamic Flow Model is used to simulate steady state flow in a single open channel reach or throughout a system of branches connected in a dendritic or looped pattern. The model is typically applied to assess flow and transport in upland rivers where flows are highly regulated or backwater effects are evident, or in coastal networks of open channels where flow and transport are governed by the interaction of freshwater inflows, tidal action, and meteorological conditions. (Last updated: 1997)	http://water.usgs.gov/cgi-bin/man_wrdapp?branch
CE-QUAL-RIV1	1	CE-QUAL-RIV1 is a one-dimensional (cross-sectionally averaged) hydrodynamic and water quality model, meaning that the model resolves longitudinal variations in hydraulic and quality characteristics and is applicable where lateral and vertical variations are small. CE-QUAL-RIV1 consists of two parts, a hydrodynamic code (RIV1H) and a water quality code (RIV1Q). The hydrodynamic code is applied first to predict water transport and its results are written to a file, which is then read by the quality model. It can be used to predict one-dimensional hydraulic and water quality variations in streams and rivers with highly unsteady flows, although it can also be used for prediction under steady flow conditions.	http://www.wes.army.mil/el/elmodels/riv1info.html

Model	Dimension	Description	Model Resources
CE-QUAL-W2	2	CE-QUAL-W2 is a two-dimensional, laterally averaged, finite difference hydrodynamic and water quality model for rivers, reservoirs, and estuaries. Because the model assumes lateral homogeneity, it is best suited for relatively long and narrow waterbodies exhibiting longitudinal and vertical water quality gradients. Branched networks can be modeled. The model accommodates variable grid spacing (segment lengths and layer thicknesses) so that greater resolution in the grid can be specified where needed.	http://smig.usgs.gov/cgi-bin/SMIC/model_home_pages/model_home?selection=cequalw2 http://www.ce.pdx.edu/w2
CH3D-SED	1, 2, or 3	The CH3D numerical modeling system can be used to investigate sedimentation on bendways, crossings, and distributaries. Applications address dredging, channel evolution, and channel training structure evaluations.	http://chl.erdc.usace.army.mil/chl.aspx?p=s&a=Software;22
EFDC	1, 2, or 3	The Environmental Fluid Dynamics Code is a single source, three-dimensional, finite-difference modeling system having hydrodynamic, water quality-eutrophication, sediment transport and toxic contaminant transport components linked together.	John Hamrick developed this at the Virginia Institute of Marine Science 1990-1991. Dr. John Hamrick, Tetra Tech, Inc. 10306 Eaton Place, Suite 340 Fairfax, VA 22030
EFM	1	Ecosystem Functions Model (EFM) is a planning tool that analyzes ecosystem response to changes in flow regime. EFM allows environmental planners, biologists, and engineers to determine whether proposed alternatives (e.g., reservoir operations, levee alignments) would maintain, enhance, or diminish ecosystem health. Project teams can use EFM software to visualize existing ecologic conditions, highlight promising restoration sites, and assess and rank alternatives according to the relative enhancement (or decline) of ecosystem aspects. The hydraulic modeling portion of the EFM process is performed by existing independent software, such as HEC-RAS.	http://el.erdc.usace.army.mil/elpubs/pdf/smartnote04-4.pdf

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Model	Dimension	Description	Model Resources
FESWMS-2DH	2	FESWMS-2DH is a finite element surface water modeling system for two-dimensional flow in a horizontal plane. The model can simulate steady and unsteady surface water flow and is useful for simulating two-dimensional flow where complicated hydraulic conditions exist (e.g., highway crossings of streams and flood rivers). It can also be applied to many types of steady or unsteady flow problems. (Last updated: 1995)	http://water.usgs.gov/cgi-bin/man_wrdapp?feswms-2dh
HEC-6	1	HEC-6 is a one-dimensional, moveable boundary, open channel flow numeric model designed to simulate and predict changes in river profiles resulting from scour and deposition over moderate time periods, typically years. Latest revision occurred in 1993.	http://www.hec.usace.army.mil/software/legacysoftware/hec6/hec6.htm
HEC-HMS	1	The HEC-HMS model is designed to simulate the precipitation-runoff processes of dendritic watershed systems. It is applicable in a wide range of geographic areas for solving the widest possible range of problems, including large river basin water supply and flood hydrology, and small urban or natural watershed runoff. Hydrographs produced by the program are used directly or in conjunction with other software for studies of water availability, urban drainage, flow forecasting, future urbanization impact, reservoir spillway design, flood damage reduction, floodplain regulation, and systems operation.	http://www.hec.usace.army.mil/software/hec-hms/index.html http://el.erdc.usace.army.mil/elpubs/pdf/smartnote04-3.pdf

Model	Dimension	Description	Model Resources
HEC-RAS	1	HEC-RAS is an integrated system of software, designed for interactive use in a multi-tasking, multi-user network environment. The system is comprised of a graphical interface (GUI), separate hydraulic analysis components, data storage and management capabilities, graphics and reporting facilities. The model performs one-dimensional steady flow, unsteady flow, and sediment transport calculations. The key element is that all three components will use a common geometric data representation and common geometric and hydraulic computation routines. In addition to the three hydraulic analysis components, the system contains several hydraulic design features that can be invoked once basic water surface profiles are computed. The HEC-RAS modeling system was developed as a part of the Hydrologic Engineering Center's "Next Generation" (NexGen) of hydrologic engineering software. The NexGen project encompasses several aspects of hydrologic engineering, including: rainfall-runoff analysis; river hydraulics; reservoir system simulation; flood damage analysis; and real-time river forecasting for reservoir operations.	http://www.hec.usace.army.mil/software/hec-ras
HIVEL2D	1, 2	HIVEL2D is a free-surface, depth averaged model designed specifically to simulate flow in typical high-velocity channels.	http://chl.erdc.usace.army.mil/CHL.aspx?p=s&a=Software;6
RiverWare™	1	RiverWare™ is a reservoir and river modeling software decision support tool. With RiverWare™, users can model the topology, physical processes and operating policies of river and reservoir systems, and make better decisions about how to operate these systems by understanding and evaluating the trade-offs among the various management objectives. Water management professionals can improve their management of river and reservoir systems by using the software. The Bureau of Reclamation, the Tennessee Valley Authority, and the USACE sponsor ongoing RiverWare™ research and development.	http://cadswes.colorado.edu/riverware

Model	Dimension	Description	Model Resources
SAM	1	The model calculates the width, depth, slope and n-values for stable channels in alluvial material. SAM can be used to evaluate erosion, entrainment, transportation, and deposition in alluvial streams. Channel stability can be evaluated, and the evaluation used to determine the cost of maintaining a constructed project. The model is currently being improved and enhanced at WES.	http://chl.erdc.usace.army.mil/CHL.aspx?p=s&a=Software;2
SIAM	N/A	SIAM is a model designed to simulate the movement of sediment through a drainage network from source to outlet. It allows for evaluation of numerous sediment management alternatives relatively quickly. The model provides an intermediate level of analysis more quantitative than a conventional geomorphic evaluation, but less specific than a numerical, mobile-boundary simulation. SIAM is to be incorporated into a future release of HEC-RAS.	http://www.usbr.gov/pmts/sediment/model/srhsiam/index.html http://www.wes.army.mil/rsm/pubs/pdfs/RSM-2-WS04.pdf
SMS (RMA2 and RMA4)	1, 2	The Surface-Water Modeling System is a generalized numerical modeling system for open-channel flows, sedimentation, and constituent transport.	http://chl.erdc.usace.army.mil/CHL.aspx?p=s&a=Software;4
TABS-MD (RMA2, RMA4, RMA10, SED2D)	1, 2, or 3	The multi-dimensional numerical modeling system is a collection of generalized computer programs and utility codes, designed for studying multidimensional hydrodynamics in rivers, reservoirs, bays, and estuaries. The models can be applied to study project impacts of flows, sedimentation, constituent transport, and salinity.	http://chl.erdc.usace.army.mil/CHL.aspx?p=s&a=Software;10
WASP	1, 2, or 3	Water Quality Analysis Simulation Program. Framework for modeling contaminant fate and transport in surface waters. The WASP framework can be used to model biochemical oxygen demand and dissolved oxygen dynamics, nutrients and eutrophication, bacterial contamination, and organic chemical and heavy metal contamination.	http://www.epa.gov/athens/wwqtsc/html/wasp.html

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Model	Dimension	Description	Model Resources
Models to Analyze Watershed Runoff and Assess Practices to Reduce Impacts of Hydromodification			
BMP Decision Support System (BMP-DSS)	1	BMP-DSS is a decision-making tool for placement of BMPs/LID practices at strategic locations in urban watersheds based on integrated data collection and hydrologic/hydraulic/water quality modeling. The system uses GIS technology, integrates BMP processes simulation models, and applies system optimization techniques for BMP placement and selection. The system also provides interfaces for BMP placement, BMP attribute data input, and decision optimization management. The system includes a stand-alone BMP simulation and evaluation module, which complements both research and regulatory nonpoint source control assessment efforts and allows flexibility in examining various BMP design alternatives.	Developed by the EPA and Prince George's County Department of Environmental Resources. Contact Dr. Mow-Soung Cheng at 301-883-5836 for more information.
HSPF	1	Hydrological Simulation Program—FORTRAN (HSPF) is a comprehensive package for simulation of watershed hydrology and water quality for both conventional and toxic organic pollutants. HSPF incorporates watershed-scale ARM and NPS models into a basin-scale analysis framework that includes fate and transport in one dimensional stream channels. It is the only comprehensive model of watershed hydrology and water quality that allows the integrated simulation of land and soil contaminant runoff processes with In-stream hydraulic and sediment-chemical interactions. The result of this simulation is a time history of the runoff flow rate, sediment load, and nutrient and pesticide concentrations, along with a time history of water quantity and quality at any point in a watershed. HSPF simulates three sediment types (sand, silt, and clay) in addition to a single organic chemical and transformation products of that chemical.	http://www.epa.gov/ceampubl/swater/hspf/index.htm

Model	Dimension	Description	Model Resources
LSPC	1	LSPC is the Loading Simulation Program in C++, a watershed modeling system that includes streamlined Hydrologic Simulation Program Fortran (HSPF) algorithms for simulating hydrology, sediment, and general water quality on land as well as a simplified stream transport model. LSPC is derived from the Mining Data Analysis System (MDAS), which was developed by EPA Region 3 and has been widely used for mining applications and TMDLs. A key data management feature of this system is that it uses a Microsoft Access database to manage model data and weather text files for driving the simulation. The system also contains a module to assist in TMDL calculation and source allocations. For each model run, it automatically generates comprehensive text-file output by subwatershed for all land-layers, reaches, and simulated modules, which can be expressed on hourly or daily intervals. Output from LSPC has been linked to other model applications such as EFDC, WASP, and CE-QUAL-W2.	http://www.epa.gov/ATHENS/wwqtsc/html/lspc.html
Program for Predicting Polluting Particle Passage through Pits, Puddles, and Ponds—Urban Catchment Model (P8–UCM)	1	P8–UCM is a model for predicting the generation and transport of stormwater pollutants in urban watersheds. Continuous water balance and mass balance calculations are performed on a user-defined system consisting of watersheds, devices (runoff storage/treatment areas, BMPs), particle classes, and water quality components. Simulations are driven by continuous hourly rainfall and daily air temperature time series data. The model simulates pollutant transport and removal in a variety of treatment devices (BMPs).	http://wwwalker.net/p8

Model	Dimension	Description	Model Resources
Storm Water Management Model (SWMM)	1	SWMM is a dynamic rainfall-runoff simulation model used for single event or long-term (continuous) simulation of runoff quantity and quality from primarily urban areas. The runoff component of SWMM operates on a collection of subcatchment areas that receive precipitation and generate runoff and pollutant loads. The routing portion of SWMM transports this runoff through a system of pipes, channels, storage/treatment devices, pumps, and regulators. SWMM tracks the quantity and quality of runoff generated within each subcatchment, and the flow rate, flow depth, and quality of water in each pipe and channel during a simulation period comprised of multiple time steps.	http://www.epa.gov/ednnrmrl/models/swmm/index.htm

Table 8.2 lists some of the available assessment models and approaches for assessing the biological impacts of channelization. The table also provides a quick description of the model or approach, as well as sources of additional information.

Table 8.2 Assessment Models and Approaches

Model or Assessment Approach	Description	Model Resources
Assessment Models		
AQUATOX	A freshwater ecosystem simulation model designed to predict the fate of various pollutants such as nutrients and organic toxicants and their effects on the ecosystem, including fish, invertebrates, and aquatic plants (including periphyton).	http://epa.gov/waterscience/models/aquatox
Cornell Mixing Zone Expert System (CORMIX)	A water quality modeling and decision support system designed for environmental impact assessment of mixing zones resulting from wastewater discharge from point sources. The system emphasizes the role of boundary interaction to predict plume geometry and dilution in relation to regulatory mixing zone requirements.	http://www.epa.gov/waterscience/models/cormix.html
HEC-HMS, Hydrologic Modeling System	A system designed to simulate the precipitation-runoff processes of dendritic watershed systems. In addition to unit hydrograph and hydrologic routing options, capabilities include a linear quasi-distributed runoff transform (ModClark) for use with gridded precipitation, continuous simulation with either a one-layer or more complex five-layer soil moisture method, and a versatile parameter estimation option.	http://www.hec.usace.army.mil/software/hec-hms/index.html
HEC-RAS, River Analysis System	The HEC-RAS system is used to calculate water surface profiles for both steady and unsteady gradually varied flow. The system can handle a full network of channels, a dendritic system, or a single river reach.	http://www.hec.usace.army.mil/software/hec-ras/hecras-hecras.html http://www.wsi.nrcs.usda.gov/products/W2Q/H&H/Tools_Models/Ras.html

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Model or Assessment Approach	Description	Model Resources
Physical Habitat Simulation Model (PHABSIM)	A set of computer programs designed to predict the microhabitat (depth, velocities, channel indices) conditions in rivers at different flow levels and the relative suitability of those conditions for different life stages of aquatic life. (Serves as the key microhabitat simulation component of IFIM.)	http://www.fort.usgs.gov/Products/Software/PHABSIM
Riverine Community Habitat Assessment and Restoration Concept (RCHARC)	A simulation approach using computer models to compare hydraulic conditions and microhabitats of a reference reach to alternative study reach(es).	Nestler, J., T. Schneider, and D. Latka. 1993. RCHARC: A new method for physical habitat analysis. *Engineering Hydrology*, 294-99.
RiverWare™	RiverWare™ is a reservoir and river modeling software decision support tool. With RiverWare™, users can model the topology, physical processes, and operating policies of river and reservoir systems, and make better decisions about how to operate these systems by understanding and evaluating the trade-offs among the various management objectives. Water management professionals can improve their management of river and reservoir systems by using the software. The Bureau of Reclamation, the Tennessee Valley Authority, and the Army Corps of Engineers sponsor ongoing RiverWare™ research and development.	http://cadswes.colorado.edu/riverware
Salmonid Population Model (SALMOD)	A computer model that simulates the dynamics (spawning, growth, movement, and mortality) of freshwater salmonid populations, both anadromous and resident, under various habitat quality and capacities.	http://www.fort.usgs.gov/Products/Software/SALMOD
Assessment Approaches		
A Procedure to Estimate the Response of Aquatic Systems to Changes in Phosphorus and Nitrogen Inputs	A simple tool to estimate the responsiveness of a waterbody to changes in the loading of phosphorus and nitrogen using a dichotomous key that classifies it according to key characteristics.	ftp://ftp.wcc.nrcs.usda.gov/downloads/wqam/aqusens.pdf

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Model or Assessment Approach	Description	Model Resources
EPA Volunteer Stream Monitoring Methods	A series of methods geared for volunteer monitoring programs offering simple to advanced techniques for monitoring macroinvertebrates, habitat, water quality, and physical conditions.	http://www.epa.gov/owow/monitoring/volunteer/stream
Habitat Evaluation Procedures/Habitat Suitability Index (HEP/HSI)	HEP is an evaluation method that determines the suitability of available habitat for select aquatic and terrestrial wildlife species and measures the impact of proposed land or water use changes on that habitat. HSI is a measure of habitat suitability.	http://policy.fws.gov/870fw1.html http://www.fort.usgs.gov/Products/Software/HEP http://www.fort.usgs.gov/Products/Software/HSI
Index of Biological Integrity (IBI)	An aquatic ecosystem health index using measures of total native fish species composition, indicator species composition, pollutant intolerant and tolerant species composition, and fish condition.	http://www.epa.gov/owow/wetlands/wqual/bio_fact/fact5.html
Indicators of Hydrologic Alteration (IHA)	A method for assessing the degree of hydrologic alteration attributable to human impacts within an ecosystem. The method takes daily stream flow values and calculates indices relating to the five components of flow regime critical for ecological processes: magnitude, frequency, duration, timing, and rate of change of hydrologic conditions.	http://www.nature.org/initiatives/freshwater/conservationtools/art17004.html
Instream Flow Incremental Methodology (IFIM)	A river network analysis that incorporates fish habitat, recreational opportunity, and woody vegetation responses to alternative water management schemes. Information is presented as a time series of flow and habitat at select points within the network.	http://www.fort.usgs.gov/Products/Software/IFIM
Invertebrate Community Index (ICI)	An invertebrate community health index using ten structural and compositional invertebrate community metrics including number of mayfly, caddisfly, and dipteran taxa.	http://www.epa.state.oh.us/dsw/bioassess/BioCriteriaProtAqLife.html

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Model or Assessment Approach	Description	Model Resources
(Modified) Index of Well-Being (IWB)	The IWB is a fish community health index using measures of fish species abundance and diversity estimates. The *modified* index of well being factors out 13 pollutant tolerant species of fish from certain calculations to prevent false high readings on polluted streams which have large populations of pollutant tolerant fish.	http://www.epa.state.oh.us/dsw/bioassess/BioCriteriaProtAqLife.html
Rapid Bioassessment Protocols (RBP)	A set of protocols that offer cost-effective techniques of varying complexity to characterize the biological integrity of streams and rivers using the collection and analysis of biological, physical, and chemical data. It focuses on periphyton, benthic macroinvertebrates, and fish assemblages, and on assessing the quality of the physical habitat.	http://www.epa.gov/owow/monitoring/rbp
Rapid Channel Assessment (RCA)	A reference stream/integrated ranking approach to evaluate the physical condition of a stream channel based on channel geometry, percent channel-bank scour, sediment size distribution and embeddedness, large wood debris, and thalweg profiles.	CWP. 1998. *Rapid Watershed Planning Handbook: A Comprehensive Guide for Managing Urbanizing Watersheds*. Center for Watershed Protection, Ellicott City, MD. For a copy contact: The Center for Watershed Protection, 8391 Main Street Ellicott City, MD 21043, email: center@cwp.org.
Rapid Stream Assessment Technique (RSAT)	A reference stream/integrated ranking approach to evaluate steam health based on chemical stability, channel scouring/sediment deposition, physical instream habitat, water quality, riparian habitat, and biological indicators.	CWP. 1998. *Rapid Watershed Planning Handbook: A Comprehensive Guide for Managing Urbanizing Watersheds*. Center for Watershed Protection, Ellicott City, MD. For a copy contact: The Center for Watershed Protection, 8391 Main Street Ellicott City, MD 21043, email: center@cwp.org. http://www.stormwatercenter.net
Rosgen's Stream Classification Method	A classification method that uses morphological stream characteristics to organize streams into relatively homogeneous stream types to predict stream behavior and to apply interpretive information.	Reference: Rosgen, D. 1996. *Applied River Morphology*. Wildland Hydrology, Pagosa Springs, CO. For a copy contact: Wildland Hydrology Books, 1481 Stevens Lake Road, Pagosa Springs, CO 81147.

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Model or Assessment Approach	Description	Model Resources
Stream Network/Stream Segment Temperature Models (SNTEMP/SSTEMP)	Developed to help predict the consequences of stream manipulation on water temperatures, these computer models simulate mean daily water temperatures for streams and rivers from data describing the stream's geometry, meteorology, and hydrology. SNTEMP is for a stream network with multiple tributaries for multiple time periods. SSTEMP is a scaled down version suitable for single (to a few) reaches and single (to a few) time periods.	http://www.fort.usgs.gov/Products/Software/SNTEMP
Stream Visual Assessment Protocol (SVAP)	A simple procedure to evaluate the condition of a stream based on visual characteristics. It also identifies opportunities to enhance biological value and conveys information on how streams function.	ftp://ftp.wcc.nrcs.usda.gov/downloads/wqam/svapfnl.pdf
Systems Impact Assessment Model (SIAM)	An integrated set of models used to aid the evaluation of water management alternatives, it address significant interrelationships among selected physical (temperature, microhabitat), chemical (dissolved oxygen, water temperature), and biological variables (young-of-year Chinook salmon production), and stream flow. Developed for the Klamath River in northern California.	http://www.fort.usgs.gov/Products/Software/SIAM
Time-Series Library (TSLIB)	A set of DOS-based computer programs to create monthly or daily habitat time-series and habitat-duration curves using the habitat-discharge relationship produced by PHABSIM. (Can serve as the hydraulic component of IFIM).	http://www.fort.usgs.gov/Products/Software/TSLIB
TR-20, Computer Program for Project Formulation Hydrology	A physically based watershed scale runoff event model that computes direct runoff and develops hydrographs resulting from any synthetic or natural rainstorm. Developed hydrographs are routed through stream and valley reaches as well as through reservoirs.	http://www.wsi.nrcs.usda.gov/products/W2Q/H&H/Tools_Models/WinTR20.html
TR-55, Urban Hydrology for Small Watersheds	Simplified procedures to calculate storm runoff volume, peak rate of discharge, hydrographs, and storage volumes required for floodwater reservoirs.	http://www.info.usda.gov/CED/ftp/CED/tr55.pdf

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Examples of Channel Modification Activities and Associated Models/Practices

Modeling for Impoundments

A low-complexity option for modeling impoundments is to use simple models like the Bathtub model to simulate the waterbody. Compared to more complex multi-dimensional models, which use multiple computational cells to estimate volumetric and contaminant fluxes between the cells, Bathtub-type models typically use a single cell. This single cell, while a simplification of the system, may be appropriate if the system is fully mixed in both the horizontal and vertical dimensions. This approach can also be economically developed using spreadsheets (such as Excel) to calculate the results. However, a Bathtub-type model has limited utility if the water body is stratified or if results are required at more than one location in the system.

Another example of a modeling tool that has the ability to simulate impoundments is CE-QUAL-W2, a two-dimensional hydrodynamic water quality model. CE-QUAL-W2 provides results for either a horizontal or cross-sectional, two-dimensional plane. Because the model assumes a vertically or horizontally-mixed environment, it is best suited for relatively long and narrow water bodies (rivers, lakes, reservoirs, and estuaries) that exhibit longitudinal or vertical water quality stratification. The water quality portion of CE-QUAL-W2 includes the major processes of eutrophication kinetics and a single algal compartment. The bottom sediment compartment stores settled particles, releases nutrients to the water column, and exerts sediment oxygen demand based on user-supplied fluxes; a full sediment diagenesis (i.e., the process of chemical and physical change in deposited sediment during its conversion to rock) model is under development.

The Environmental Fluid Dynamics Code (EFDC) is a general-purpose modeling package for simulating one- or multi-dimensional flow, transport, and bio-geochemical processes in surface water systems including rivers, lakes, estuaries, reservoirs, wetlands, and coastal regions. The EFDC model was originally developed by Hamrick in 1992 at the Virginia Institute of Marine Science for estuarine and coastal applications and is considered public domain software. This model is now EPA-supported as a component of EPA Region 2's PRVI BASINS software system and EPA's TMDL Toolbox,[2] and has been used extensively to support TMDL development throughout the country. In addition to hydrodynamic, salinity, and temperature transport simulation capabilities, EFDC is capable of simulating cohesive and non-cohesive sediment transport, near field and far field discharge dilution from multiple sources, eutrophication processes, the transport and fate of toxic contaminants in the water and sediment phases, and the transport and fate of various life stages of finfish and shellfish.

Modeling for Estuary Tidal Flow Restrictions

Artificial hydraulic structures have the ability to alter natural flow patterns (hydrodynamic) in an estuary, which may modify erosion patterns, salinity regimes, and the fate and transport of pollutants. Some examples of artificial hydraulic structures include culverts, bridges, tide gates,

[2] http://www.epa.gov/athens/wwqtsc/html/efdc.html

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and weir structures. Installation or removal of these structures may cause a significant change in local hydrodynamics, and tools may be used to estimate the impacts prior to the modification.

The EFDC model, as described above, allows modelers to evaluate the impacts of hydraulic structures, such as culverts, bridges, tide gates, and weirs. Due to the flexibility of EFDC, each of these structures can also be conceptually represented in a variety of ways. For example, the weir equation can be applied to locations in the modeling grid to estimate water surface-dependent flow through one or more grid cells. This enables a modeler to evaluate the effect of placement of structures that modify surface flow patterns (such as a weir). Structures such as piers and impermeable barriers (e.g. jetties, breakwaters) can also be simulated using this code.

Another modeling tool that can address estuary tidal flow restrictions is the Finite Element Surface Water Modeling System (FESWMS) model. This modeling code was developed by the Federal Highway Administration (FHA) and is distributed by the U.S Geological Survey (USGS). FESWMS is a hydrodynamic modeling code that simulates two-dimensional, depth-integrated, steady or unsteady surface-water flows. It supports both super and subcritical flow analysis, and area wetting and drying. FESWMS is also suited for modeling regions involving flow control structures, such as are encountered at the intersection of roadways and waterways. Specifically, the FESWMS model allows the user to include weirs, culverts, drop inlets, and bridge piers into a standard two-dimensional finite element model. FESWMS does not have three-dimensional capabilities.

Modeling for Estuary Flow Regime Alterations

A number of structures or processes can alter the flow regime of a system. Flow contributions to an estuary can be altered by upstream rediversions or basin transfers, dams and dam releases, or other channel modifications. For example, when freshwater flows patterns are altered by the presence and operation of a dam, EFDC can be used to model the impact to downstream estuaries. EFDC can provide modelers with a time series representation of flow that is withdrawn from a simulated reservoir/dam system. Coupling the time series flow projections with hydrodynamic analysis of the receiving esturay enables modelers to determine potential impacts of altered flow patterms and to evaluate various spill options for the dam operation. Structures within the estuary that may alter the flow patterns include marinas, piers, jetties, and other similar type structures. Flow regime alterations due to these structures can be simulated using the same modeling tools described in the Flow Restrictions section above. Flow restrictions are the cause of most changes in the flow regime, so the simulation of the causes of restriction using a process-based modeling tool produces the desired flow alterations. Therefore, EFDC and FESWMS can be utilized in the same manner to obtain flow regime results.

Temperature Restoration Practices

Several computer models that predict instream water temperature are currently available. These models vary in the complexity of detail with which site characteristics, including meteorology, hydrology, stream geometry, and riparian vegetation, are described. The U.S. Fish and Wildlife Service developed an instream surface water temperature model (Theurer et al., 1984) to predict mean daily temperature and diurnal fluctuations in surface water temperatures throughout a stream system. The model, Stream Network Temperature Model (SNTEMP), can be applied to any size watershed or river system. This predictive model uses either historical or synthetic

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hydrological, meteorological, and stream geometry characteristics to describe the ambient conditions. The purpose of the model is to predict the longitudinal temperature and its temporal variations. The instream surface water temperature model has been used satisfactorily to evaluate the impacts of riparian vegetation, reservoir releases, and stream withdrawal and returns on surface water temperature. In the Upper Colorado River Basin, the model was used to study the impact of temperature on endangered species (Theurer et al., 1982). It also has been used in smaller ungauged watersheds to study the impacts of riparian vegetation on salmonid habitat.[3]

The Stream Segment Temperature Model (SSTEMP) is a much-scaled down version of the SNTEMP model developed by the USGS Biological Resource Division. Unlike the large network model (SNTEMP), this program only handles single stream segments for a single time period (e.g., month, week, day) for any given "run." Initially designed as a training tool, SSTEMP may be used satisfactorily for a variety of simple cases that one might face on a day-to-day basis. It is especially useful to perform sensitivity and uncertainty analysis. The model predicts minimum 24-hour temperatures, mean 24-hour temperatures, and maximum 24-hour stream temperatures for a given day, as well as a variety of intermediate values. The SSTEMP model identifies current stream and/or watershed characteristics that control stream temperatures. The model also quantifies the maximum loading capacity of the stream to meet water quality standards for temperature. This model is important for estimating the effect of changing controls or factors (such as riparian grazing, stream channel alteration, and reduced streamflow) on stream temperature. The model can also be used to help identify possible implementation activities to improve stream temperature by targeting those factors causing impairment to the stream. Good input data and an awareness of the model's assumptions are critical to obtaining reliable predictions. SSTEMP may be used to evaluate alternative reservoir release proposals, analyze the effects of changing riparian shade or the physical features of a stream, and examine the effects of different withdrawals and returns on instream temperature.[4]

Selecting Appropriate Models

Although a wide range of adequate hydrodynamic and surface water quality models are available, the central issue in selecting appropriate models for evaluating hydromodification projects is the appropriate match of the financial and geographical scale of the proposed project with the cost required to perform a credible technical evaluation of the projected environmental impact. It is highly unlikely, for example, that a proposal for a relatively small stream channel modification project, such as installing culverts in a stream segment, would be expected or required to contain a state-of-the-art hydrodynamic and surface water quality analysis that requires one or more person-years of effort. In such projects, a simplified, desktop approach (e.g., HEC-RAS Model) requiring less time and money would most likely be sufficient (USACE, 2002a). In contrast, substantial technical assessment of the long-term environmental impacts would be expected for channelization proposed as part of construction of a major harbor facility or as part of a system of navigation and flood control locks and dams. The assessment should

[3] For more information or to download SNTEMP, see the U.S. Geological Survey Web site: http://www.fort.usgs.gov/Products/Software/SNTEMP.

[4] More information about the model is available on the U.S. Geological Survey Web site: http://www.mesc.usgs.gov/products/software/default.asp (navigate to Stream Network Temperature Model and Stream Segment Temperature Model).

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incorporate the use of detailed 2D or 3D hydrodynamic models coupled with sediment transport and surface water quality models.

In general, six criteria can be used to review available models for potential application in a given hydromodification project:

1. Time and resources available for model application
2. Ease of application
3. Availability of documentation
4. Applicability of modeled processes and constituents to project objectives and concerns
5. Hydrodynamic modeling capabilities
6. Demonstrated applicability to size and type of project

The Center for Exposure Assessment Modeling (CEAM),[5] EPA Environmental Research Laboratory, Athens, Georgia, provides continual support for several hydrodynamic and surface water quality models, such as HSCTM2D, HSPF, PRZM3, and SED3D. Another source of information and technical support is the Waterways Experiment Station, USACE, Vicksburg, Mississippi.[6] Although a number of available models are in the public domain, costs associated with setting up and operating these models may exceed the project's available resources. For a simple to moderately difficult application, the approximate level of effort varies, but could range from 1 to 12 person-months.

Several factors need to be considered in the application of mathematical models to predict impacts from hydromodification projects including:

- Variations and uncertainties in the accuracy of these models when they are applied to the short- and long-term response of natural systems.
- Availability of relevant information (data collection) to derive the simulations and validate the modeling results.

The cost of a given modeling project depends on a number of factors. Questions need to be asked prior to the start of a modeling project to determine the purpose and future use of the model, and/or its results. For example, the modeler needs to know if the model results are to be used deterministically (the model assumes there is only one possible result that is known for each alternative course or action), or if the model is to be used for a heuristic (involving or serving as an aid to learning, discovery, or problem-solving by experimental and especially trial-and-error methods) scoping exercise to identify data gaps in a system. In a deterministic study, the results are traditionally compared to observed data in an effort regarded as calibration and validation. The model must therefore be rigorous enough to represent the system accurately. The complexity of the system under study is also a consideration that must be made prior to the project. The complexity of the system generally correlates well with the level of complexity of the model required to simulate it. Likewise, the more complex the model is, the more intensive it is to develop and run, and the more costly the modeling project is.

[5] http://www.epa.gov/ceampubl
[6] http://www.erdc.usace.army.mil

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A number of approaches are available to model a given system, and the discussion above only highlights a few of the modeling tools currently available. The cost to set up a model for a given system varies tremendously, based not only on the modeling code selected, but also on what the modeler decides to simulate. For example, a modeler may aim to obtain flow results for an estuary using a given model. In reality, surface winds in that estuary may or may not be influencing the flow regime. If observed wind data is available from a weather station nearby, the modeler may choose to incorporate these data into the model to better represent that influence. The modeler may also choose not to incorporate these data, or the data may not be available. Although the modeler is utilizing the same modeling code, the decision regarding whether or not to simulate the wind conditions is not only a question regarding the model's purpose, but also what the development of this model will cost.

Modeling tools can range from simple spreadsheet tools using "back of the envelope" type calculations, to complex processed based models that must be run on high performance computing systems. As discussed previously, the tool selected for a given modeling project needs to be chosen with a number of questions in mind. As a result, each system can be modeled in a number of different ways with a number of different modeling codes. Therefore, the range in cost for even a single estuary or impoundment may range tenfold depending on the model's purpose. Typically, the cost of developing a model may range from a few thousand dollars for a simple spreadsheet model, to in excess of one million dollars for a more robust modeling system.

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Chapter 9: Dam Removal Requirements, Process, and Techniques

Chapter 2 provided a discussion of specific impacts from dams, water quality above and below the dam, suspended sediment and recharge issues, and biological and habitat impacts. Chapter 4 then provided a discussion of types of dams, Federal Energy Regulatory Commission (FERC) requirements, management measures and practices that can be used to mitigate for some of the effects of dams, and information to consider when contemplating removing a dam. Chapter 9 focuses on what occurs after the decision has been made to remove a dam. This chapter provides a more detailed discussion on some permitting requirements for removing dams, the dam removal process, and sediment removal techniques to consider when removing a dam.

Requirements for Removing Dams

Removing a dam may require evaluations and permits from state, federal, and local authorities. These requirements are typically to ensure that the removal is done is a manner that is safe and minimizes short and long term impacts to the river and floodplain. States and local governments have different requirements. The following federal requirements may apply to dam removal:

- Rivers and Harbors Act Permit
- FERC License Surrender or Non-power License Approval
- National Environmental Policy Act (NEPA) Review
- Federal Consultations (Endangered Species Act Section 7 Consultation, Magnuson-Stevenson Act Consultation, National Historic Preservation Act Compliance)
- State Certifications (Water Quality Certification, Coastal Zone Management Act Certification)

The following state requirements might apply to dam removal:

- Clean Water Act (CWA) Section 404 Dredge and Fill Permit
- Waterway Development Permits
- Dam Safety Permits
- State Environmental Policy Act Review
- Historic Preservation Review
- Resetting the Floodplain
- State Certifications

Demolition and building permits may also be required for dam removal. Individual state and local governments may have additional requirements as well.

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Tips for a Successful Permitting Process (American Rivers, 2002b)

Dam removal is relatively new and the permitting process can be difficult. Most state and federal agencies are not yet practiced at moving dam removal through the permitting process. The relevant permitting requirements were designed for more destructive activities, and dam removal does not easily fit into the requirements. Tips to help make the process smoother include:

Schedule Time

- *Expect dam removal projects to take longer than construction efforts.*
- *Schedule more lead-time into the permitting process to avoid delays and frustrations.*

Establish a Relationship with the Permitting Agencies

- *Hold a pre-application meeting with key agency staff once your project is well thought out.*
- *Do not attempt to circumvent the process and stick with the permitting timeline.*
- *Do not provide inconsistent information.*
- *A single point of contact for the group applying for the permit will help avoid confusion and maintain communication.*

Providing Information about the Proposed Project

- *Create clear and simple descriptions and drawings (to scale) of the proposed project.*
- *Be sure to identify complicating conditions, schedules, seasonal constraints, etc.*
- *Provide and discuss alternatives, but make it clear why the chosen approach should be used.*
- *Assume the reviewers know nothing about your project.*

Dam Removal Process

The complexity of the removal process of a dam is specific to each particular case of removal. There are two major components of the removal process: the stakeholders involved in the decision-making process of removing the dam and the actual physical removal of the dam itself. The authorities that govern dams are numerous, yet overlapping. These entities include: USACE, Bureau of Reclamation, FERC, and other federal agencies; interest groups; and state and local governments. There are also various state programs that have been created to keep dams safe and environmentally friendly, as well as to help owners finance dam removal. A study by the Aspen Institute (2002) provides a list of priority issues to consider when dam removal may be a possibility. Among the considerations listed are dam and public safety, economics, environmental concerns, risk, social values and community interests, scientific information, and stakeholder participation. This report suggests that success of dam removal is dependent upon a thorough analysis of these competing factors and input from all interested parties (Aspen Institute, 2002). Often, the dam owner makes the decision to remove a dam, deciding that the costs of continuing operation and maintenance are greater than the cost of removing the dam. However, state dam safety offices can order for a dam to be removed if there are safety concerns; FERC can order removal of dams under their jurisdiction for environmental and safety reasons (American Rivers, n.d.a.).

State governments have authority over the dams in their jurisdiction. Other state and local government agencies dealing with issues such as water quality, water rights, and fish and wildlife protection can also play a role in overseeing dams within their jurisdiction if they so choose

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(FOE et al., 1999). Certain states have implemented stringent rules for dams that are and are not regulated by FERC or USACE. For example, the state of Wisconsin has a Dam Safety Inspection Program that requires dams to be inspected every 10 years by the Wisconsin Department of Natural Resources (WDNR) (Doyle et al., 2000). Any dam that fails to meet safety requirements set by WDNR must be repaired or removed. The state of Pennsylvania has implemented a law that was written under the order of the Pennsylvania Fish and Boat Commission that states that any newly constructed or existing dam that requires a state permit for construction or modification must also include provisions for fish passage (Doyle et al., 2000).

Some states have programs that aid dam owners in the process of removing their structures. The Pennsylvania Department of Environmental Protection (DEP) has adopted procedures to make it easier and less expensive for dam owners to remove unsafe, unused, or unwanted dams. In this process, owners of dams on third order or larger streams are contacted and asked if they are interested in removing their dams. If they are, then all the landowners affected by the removal are contacted, and a public meeting is held if interest warrants one. After public comments, an engineering design is created, followed by an environmental assessment, then sediment and erosion control (ESC) plans are established, and finally approval is sought by the USACE. This program was used in the removal of seven dams on Conestoga River and also in the removal of the Williamsburg Station Dam on the Juniata River. This approval process takes between 12 and 18 weeks (FOE et al., 1999). However, the physical decommissioning and removing of a dam can still be a lengthy and diversified process.

Sediment Removal Techniques

Large dams can trap thousands to millions of cubic yards of sediment over time, eliminating the flood control or storage capacity of the dam. Removal or control of sediment behind a dam can represent a large portion of the cost and planning effort of a dam removal project. There are several methods available to project planners and dam owners that target different pollution concerns and budgetary limitations (International Rivers Network, 2003). The options in terms of sediment removal range from complete removal and relocation of all accumulated material from the inundated regions; removing sediment only from the anticipated channel of the river, or allowing the river to erode a new channel through the sediment (Wunderlich et al., 1994).

If the sediment is basically clean and the main concern is turbidity and clogging downstream streambed spawning areas, gradual incremental drawdowns of the reservoir behind the dam allow the sediment to be transported downstream in smaller portions and avoids the release one large, lethal volume of sediment. If contaminated sediment is the main concern, dredging is an option that can be used. While the use of silt curtains can minimize turbidity during dredging, silt curtains do not contain dissolved substances such as metals, which can pose a threat to downstream ecosystems (EMC2, 2001). Another option for contaminated sediments is to stabilize the sediment in place within the stream. This can be accomplished by leaving a portion of the dam in place to hold back an area of sediment that is of concern. The strategic placement of boulders can also contain the sediment from moving downstream.

For more information on issues associated with dam removal, see the Additional Resources section of this document.

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Welsch, J.D. No date. *Riparian Forest Buffers: Function and Design for Protection and Enhancement of Water Resources*. U.S. Department of Agriculture Forest Service, Northeastern Area State and Private Forestry, Randnor, PA.

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Woodhouse, W.W., Jr. 1978. *Dune Building and Stabilization with Vegetation*. Special Report No. 3. U.S. Army Corps of Engineers Coastal Engineering Center, Fort Belvoir, VA.

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Additional Resources

The following are additional resources that may be used to obtain supplementary information for topics presented in this document.

Background on Streams, Restoration, and Hydrology

The following are basic references regarding stream ecology, restoration, and hydrology:

Allan, J.D. 1995. *Stream Ecology—Structure and Function of Running Waters*. Chapman and Hall, New York.

Brookes, A. and F.D. Shields, eds. 1999. *River Channel Restoration: Guiding Principles for Sustainable Projects*. John Wiley and Sons, Chichester, U.K.

Cooke, G.D., E.B. Welch, S.A. Peterson, and P.R. Newroth. 1993. *Restoration and Management of Lakes and Reservoirs*. 2nd ed. Lewis Publishers, Boca Raton, FL.

Fischenich, C. 2000. *Glossary of Stream Restoration Terms*. http://el.erdc.usace.army.mil/elpubs/pdf/sr01.pdf. Accessed October 2004.

Gordon, N.D., T.A. McMahon, and B.L. Finlayson. 1992. *Stream Hydrology: An Introduction for Ecologists*. John Wiley and Sons, Chichester, U.K.

Kondolf, G.M. 1995. Five elements for effective evaluation of stream restoration. *Restoration Ecology* 3(2):133-136.

Kondolf, G.M., and E.R. Micheli. 1995. Evaluating stream restoration projects. *Environmental Management* 19(1):1-15.

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Poff, N., J.D. Allan, M.B. Bain, J.R. Karr, K.L. Prestegaard, B.D. Richter, R.E. Sparks, and J.C. Stromberg. 1997. The natural flow regime: A paradigm for river conservation and restoration. *BioScience* 47:769-784.

Ponce, V.M. 1989. *Engineering Hydrology: Principles and Practices*. Prentice-Hall, Englewood Cliffs, New Jersey.

Rosgen, D.L. 1996. *Applied River Morphology*. Wildland Hydrology, Colorado.

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USEPA. 1995. *Ecological Restoration: A Tool to Manage Stream Quality*. EPA 841-F-95-007, U.S. Environmental Protection Agency, Office of Wetlands, Oceans, and Watersheds, Washington, DC. http://www.epa.gov/owow/nps/Ecology.

Detailed Information for Practices to Achieve Management Measures

Additional information about practices, their effectiveness, limitations, and cost estimates are available from a number of sources, including:

Allen, H.H. and J.R. Leech. 1997. *Bioengineering for Streambank Erosion Control: Report 1 Guidelines*. U.S. Army Corps of Engineers, Environmental Impact Research Program, Technical Report EL-97-8. http://el.erdc.usace.army.mil/elpubs/pdf/trel97-8.pdf.

American Society of Civil Engineers and the U.S. Environmental Protection Agency (ASCE and USEPA). 2007. *International Stormwater Best Management Practices (BMPs) Database*. http://www.bmpdatabase.org.

Center for Watershed Protection (CWP). 2007. *The Stormwater Manager's Resource Center*. http://www.stormwatercenter.net.

Federal Interagency Stream Restoration Working Group (FISRWG). 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. http://www.nrcs.usda.gov/technical/stream_restoration.

Fischenich, J. C. and H. Allen. 2000. *Stream Management*. ERDC/EL SR-W-00-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS. http://el.erdc.usace.army.mil/elpubs/pdf/srw00-1/srw00-1.pdf. Accessed October 2004.

Knutson, P.L., and M.R. Inskeep. 1982. *Shore Erosion Control with Salt Marsh Vegetation*. Coastal Engineering Technical Aid No. 82-3. U.S. Army Corps of Engineers Coastal Engineering Research Center, Vicksburg, MS.

National Association of Home Builders (NAHB). 1995. *Storm Water Runoff & Nonpoint Source Pollution Control Guide for Builders and Developers*. National Association of Home Builders, Washington, DC. http://www.nahbrc.org.

Oregon Association of Conservation Districts. 1999. *Protecting Streambanks from Erosion: Tips for Small Acreages in Oregon*. http://www.or.nrcs.usda.gov/news/factsheets/fs4.pdf.

Urban Drainage and Flood Control District. 1999. *Urban Storm Drainage Criteria Manual: Volume 3—Best Management Practices*. Urban Drainage and Flood Control District, Denver, CO. http://www.udfcd.org.

U.S. Army Corps of Engineers (USACE). 2007. *Engineer Research and Development Center (ERDC) Web site*. http://www.erdc.usace.army.mil.

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U.S. Department of Agriculture, Forest Service (USDA-FS). 2002. *A Soil Bioengineering Guide for Streambank and Lakeshore Stabilization*. http://www.fs.fed.us/publications/soil-bio-guide.

U.S. Environmental Protection Agency (USEPA). 2002. *Development Document for Proposed Effluent Guidelines and Standards for the Construction and Development Category*. EPA-821-R-02-007. http://www.epa.gov/waterscience/guide/construction/devdoc.htm.

U.S. Environmental Protection Agency (USEPA). 2007. *National Menu of Stormwater Best Management Practices*. http://cfpub.epa.gov/npdes/stormwater/menuofbmps/menu.cfm.

Additional information about hydromodification, soil bioengineering, and restoration is available from the following:

- *Ann Riley, Urban Stream Restoration: A Video Tour of Ecological Restoration Techniques* (http://www.noltemedia.com/nm/urbanstream): This video, which can be ordered online, is a documentary tour of six urban stream restoration sites. It provides background information on funding, community involvement, and the history and principles of restoration. The demonstration includes examples of stream restoration in very urbanized areas, re-creating stream shapes and meanders, creek daylighting, soil bioengineering, and ecological flood control projects. Ann Riley, a nationally known hydrologist, stream restoration professional, and executive director of the Waterways Restoration Institute in Berkley, California, leads the tour.

- *California Forest Stewardship Program*. Bioengineering to Control Streambank Erosion (http://ceres.ca.gov/foreststeward/html/bioengineering.html): This fact sheet discusses various bioengineering techniques applicable to California streams.

- *Lower American River Corridor River Management Plan* (http://www.safca.com): The plan provides information on aquatic habitat management goals, including restoration to improve aquatic habitat impaired by low flows from channel modification of the Lower American River.

- *Natural Resources Conservation Service, Watershed Technology Electronic Catalog* (http://www.wcc.nrcs.usda.gov/wtec/wtec.html): This online catalog is a source of technical guidance on a variety of restoration techniques and management practices, to provide direction for watershed managers and restoration practitioners. The site is focused on providing images and conceptual diagrams.

- *North Delta Improvements Project* (http://ndelta.water.ca.gov/index.html): The North Delta Improvements Project (NDIP), which is under the California Department of Water Resources, presents unique opportunities for synergy in achieving flood control and ecosystem restoration goals.

- *Ohio Department of Natural Resources*. Stream Management Guide Fact Sheets (http://www.dnr.state.oh.us/water/pubs/fs_st/streamfs.htm): This is a compilation of fact sheets offering technical guidance for streambank and instream practices, general stream management, and stream processes.

- *Sacramento River Riparian Habitat Program* (http://www.sacramentoriver.ca.gov): The Sacramento River Riparian Habitat Program is working to ensure that riparian habitat management along the river addresses the dynamics of the riparian ecosystem and the reality of the local agricultural economy.

- Schueler, T. 1987. *Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs*. Metropolitan Washington Council of Governments, Washington, DC.

- *South Delta Improvements Program* (http://baydeltaoffice.water.ca.gov/sdb/sdip/index_sdip.cfm): The purpose of the South Delta Improvements Program (SDIP) is to incrementally maximize diversion capability into Clifton Court Forebay, while providing an adequate water supply for diverters within the South Delta Water Agency and reducing the effects of State Water Project exports on both aquatic resources and direct losses of fish in the South Delta.

- *South Sacramento County Streams Project* (http://www.spk.usace.army.mil): South Sacramento County Streams Project provides flood damage reduction to the urban areas of the Morrison Creek and Beach Stone Lake drainage basins in the southern area of Sacramento, as well as around the Sacramento Regional Waste Water Treatment Plant. The project will fund stream restoration in southern Sacramento County.

- *USDA Natural Resources Conservation Service, Stream Visual Assessment Protocol* (http://www.nrcs.usda.gov/technical/ECS/aquatic/svapfnl.pdf): This document outlines methods for field conservationists and landowners to evaluate stream ecological conditions.

- *Washington State Department of Transportation, Soil Bioengineering Web site* (http://www.wsdot.wa.gov/eesc/design/roadside/sb.htm): This is a comprehensive Web site, with information on cost, specifications for project design, funding, and case studies.

- *WATERSHEDSS:Water, Soil and Hydro-Environmental Decision Support System* (http://www.water.ncsu.edu/watershedss): The "Educational Component" of this Web site contains fact sheets with information on a variety of techniques for management practices, including soil bioengineering and structural streambank stabilization.

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Resources for Dams

Thornton, K.W., B.L. Kimmel, and F.E. Payne, eds. 1990. *Reservoir Limnology: Ecological Perspectives*. John Wiley and Sons, Inc., New York, NY.

U.S. Army Corps of Engineers. No date. *The WES Handbook on Water Quality Enhancement Techniques for Reservoirs and Tailwaters*. U.S. Army Engineer Research and Development Center Waterways Experiment Station, Vicksburg, MS.

Web sites for dam removal include the following:

- American Rivers' Rivers Unplugged Program: http://www.americanrivers.org/site/PageServer?pagename=AMR_content_1270
- Association of State Dam Safety Officials: http://www.damsafety.org
- Friends of the Earth's River Restoration: http://www.foe.org/camps/reg/nw/river/index.html
- International River Network's River Revival Program: http://www.irn.org/revival/decom
- Massachusetts Department of Fisheries, Wildlife, and Environmental Law Enforcement River Restore Program: http://www.mass.gov/dfwele/river/programs/riverrestore/riverrestore.htm
- National Performance of Dams Program Stanford University: http://www.stanford.edu/group/strgeo/researchcenters.html
- New Hampshire Department of Environmental Services: http://www.des.state.nh.us/dam.htm
- Pennsylvania Department of Environmental Protection, Division of Dam Safety, Dam Safety Program: http://www.dep.state.pa.us/dep/deputate/watermgt/we/damprogram/Main.htm
- Pennsylvania Fish & Boat Commission: http://www.fish.state.pa.us
- River Recovery—Restoring Rivers through Dam Decommissioning: http://www.recovery.bcit.ca/index.html
- United States Society on Dams: http://www.ussdams.org
- Wisconsin Department of Natural Resources: http://www.dnr.state.wi.us/org/water/wm/dsfm/dams/removal.html

Additional information about dam removal is available from the following resources:

- ASCE. 1997. *Guidelines for the Retirement of Hydroelectric Facilities*. American Society of Civil Engineers.
- Bednarek, A.T. 2001. Undamming rivers: A review of the ecological impacts of dam removal. *Environmental Management* 27(6):803-814.
- Bioscience. 2002. Dam removal and river restoration: Linking scientific, socioeconomic, and legal perspectives. Summer (special issue).
- Born, S.M., et al. 1998. Socioeconomic and institutional dimensions of dam removals: The Wisconsin experience. *Environmental Management* 22(3):359-370.

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- Hart, D.D. and N.L. Poff. 2002. A special section on dam removal and river restoration. *BioScience* 52:653-655.
- Heinz Center. 2002. *Dam Removal: Science and Decision Making*. Available at: http://www.heinzctr.org/Programs/SOCW/dam_removal.htm.
- International Rivers Network: http://www.irn.org/pubs/wrr.
- Niemi, G.J., et al. 1990. Overview of case studies on recovery of aquatic systems from disturbance. *Environmental Management* 14(5):571-587.
- United States Society on Dams Publications: http://www.ussdams.org/pubs.html.
- University of Wisconsin-Madison/Extension. 1996. *The Removal of Small Dams: An Institutional Analysis of the Wisconsin Experience*. Extension Report 96-1, May. Department of Urban and Regional Planning.
- Wisconsin Department of Natural Resources Projects: http://www.dnr.state.wi.us/org/gmu/sidebar/iem/lowerwis/index.htm#baraboo or http://www.dnr.state.wi.us/org/gmu/lowerwis/baraboo.htm; http://www.dnr.state.wi.us/org/gmu/sidebar/iem/milw/index.htm; http://www.dnr.state.wi.us/org/gmu/sidebar/iem/superior/index.htm; http://www.dnr.state.wi.us/org/gmu/sidebar/iem/sheboygan/index.htm

Noneroding Roadways

The following sources may be used to obtain additional information on noneroding roadways:

- *Controlling Nonpoint Source Runoff Pollution from Roads, Highways, and Bridges* http://www.epa.gov/owow/nps/roads.html
- *Erosion, Sediment, and Runoff Control for Roads and Highways* http://www.epa.gov/owow/nps/education/runoff.html
- *Gravel Roads: Maintenance and Design Manual*—the purpose of the manual is to provide clear and helpful information for doing a better job of maintaining gravel roads. The manual is designed for the benefit of elected officials, mangers, and grader operators who are responsible for designing and maintaining gravel roads. http://www.epa.gov/owow/nps/gravelroads
- *Low-Volume Roads Engineering Best Management Practices Field Guide* http://zietlow.com/manual/gk1/web.doc
- *Massachusetts Unpaved Roads BMP Manual* http://berkshireplanning.org/4/download/dirt_roads.pdf
- *Planning Considerations for Roads, Highways, and Bridges* http://www.epa.gov/owow/nps/education/planroad.html
- *Pollution Control Programs for Roads, Highways, and Bridges* http://www.epa.gov/owow/nps/education/control.html
- *Recommended Practices Manual: A Guideline for Maintenance and Service of Unpaved Roads* http://www.epa.gov/owow/nps/unpavedroads.html
- The "Road Maintenance Video Set" is a five-part video series developed for USDA Forest Service equipment operators that focuses on environmentally sensitive ways of maintaining low volume roads. http://www.epa.gov/owow/nps/maint_videoset.html

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Additional Information

Barbour, M.T., J. Gerritsen, B.D. Snyder, and J.B. Stribling. 1999. *Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates and Fish*, Second Edition. EPA 841-B-99-002. U.S. Environmental Protection Agency; Office of Water; Washington, D.C. http://www.epa.gov/owow/monitoring/rbp/ Accessed July 2007.

International Commission on Large Dams
http://www.icold-cigb.org

International Rivers Network
http://www.irn.org

U.S. Army Corps of Engineers, Engineer Research and Development Center
http://www.erdc.usace.army.mil

U.S. Department of Agriculture, Farm Service Agency
http://www.fsa.usda.gov/pas

U.S. Department of Agriculture, Natural Resources Conservation Service
http://www.nrcs.usda.gov

U.S. Department of the Interior, Bureau of Reclamation
http://www.usbr.gov

U.S. Department of the Interior, National Park Service
http://www.nps.gov

U.S. Department of the Interior, U.S. Fish and Wildlife Service
http://www.fws.gov

U.S. Department of the Interior, U.S. Geological Survey
http://www.usgs.gov

USEPA. 1994. *A State and Local Government Guide to Environmental Program Funding Alternatives*. EPA 841-K-94-001. http://www.epa.gov/owow/nps/MMGI/funding.html

USEPA. 1994. *A Tribal Guide to the Section 319(h) Nonpoint Source Grant Program*. EPA 841-S-94-003.

USEPA. 1994. *Section 319 Success Stories: Volume I*. EPA 841-S-94-004.
http://www.epa.gov/owow/nps/Success319

USEPA. *Catalog of Federal Funding Sources for Watershed Protection*
http://cfpub.epa.gov/fedfund

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USEPA. 1997. *Section 319 Success Stories: Volume II—Highlights of State and Tribal Nonpoint Source Programs*. EPA 841-R-97-001.
http://www.epa.gov/owow/nps/Section319II

USEPA. 2002. *Section 319 Success Stories: Volume III*.
http://www.epa.gov/owow/nps/Section319III

USEPA Clean Lakes Program
http://www.epa.gov/owow/lakes/cllkspgm.html

USEPA Environmental Finance Information Network (EFIN)
http://www.epa.gov/efinpage/efin.htm

USEPA Nonpoint Source Pollution Control Program Homepage
http://www.epa.gov/OWOW/NPS

USEPA Surf Your Watershed
http://www.epa.gov/surf

USEPA Watershed Academy
http://www.epa.gov/owow/watershed/wacademy

Watershedss, (Water, Soil, and HydroEnvironmental Decision Support System)—North Carolina State University
http://www.water.ncsu.edu/watershedss

Appendix A
U.S. Environmental Protection Agency Contacts

This appendix provides wetlands contacts, nonpoint source regional contacts, and Clean Water State Revolving Fund Contacts.

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U.S. Environmental Protection Agency Contacts

EPA is grouped into 10 Regions. For questions about a particular state, contact the appropriate EPA Regional Coordinator listed below.

EPA Region	Wetland Contact	Nonpoint Source Regional Coordinators	Clean Water State Revolving Fund Regional Coordinators
Region 1: CT, MA, ME, NH, RI, VT http://www.epa.gov/region01/	U.S. EPA-Region 1 Wetlands Protection Unit One Congress Street Boston, MA 02114-2023 http://www.epa.gov/region01/topics/ecosystems/wetlands.html	U.S. EPA-Region 1 Nonpoint Source Coordinator One Congress Street, Boston, MA 02114-2023 http://www.epa.gov/region01/topics/water/npsources.html	U.S. EPA-Region 1 SRF Program Contact One Congress Street Boston, MA 02114-2023 http://www.epa.gov/ne/cwsrf/index.html
Region 2: NJ, NY, PR, VI http://www.epa.gov/Region2	U.S. EPA-Region 2 Water Programs Branch Wetlands Section 290 Broadway New York, NY 10007-1866 http://www.epa.gov/region02/water/wetlands/	U.S. EPA-Region 2 Water Programs Branch Nonpoint Source Coordinator 290 Broadway New York, NY 10007-1866 http://www.epa.gov/region02/water/npspage.htm	U.S. EPA-Region 2 Water Programs Branch SRF Program Contact 290 Broadway New York, NY 10007-1866 http://www.epa.gov/Region2/water/wpb/staterev.htm
Region 3: DC, DE, MD, PA, VA, WV http://www.epa.gov/region03	U.S. EPA-Region 3 Wetlands Protection Section 1650 Arch Street (3WP12) Philadelphia, PA 19103 http://www.epa.gov/reg3esd1/hydricsoils/index.htm	U.S. EPA-Region 3 Nonpoint Source Coordinator 1650 Arch Street (3WP12) Philadelphia, PA 19103 http://www.epa.gov/reg3wapd/nps/	U.S. EPA-Region 3 Construction Grants Branch SRF Program Contact 1650 Arch Street (3WP12) Philadelphia, PA 19103 http://www.epa.gov/reg3wapd/srf/index.htm
Region 4: AL, FL, GA, KY, MS, NC, SC, TN http://www.epa.gov/region4/	U.S. EPA-Region 4 Wetlands Section 61 Forsyth Street, SW Atlanta, GA 30303 http://www.epa.gov/region4/water/wetlands/	U.S. EPA-Region 4 Nonpoint Source Coordinator 61 Forsyth Street, SW Atlanta, GA 30303 http://www.epa.gov/region4/water/nps/	U.S. EPA-Region 4 Surface Water Permits & Facilities SRF Program Contact 61 Forsyth St. Atlanta GA, 30303 http://www.epa.gov/Region4/water/gtas/grantprograms.html
Region 5: IL, IN, MI, MN, OH, WI http://www.epa.gov/region5/	U.S. EPA-Region 5 Watersheds and Wetlands Water Division (W-15J) 77 West Jackson Blvd. Chicago, IL 60604 http://www.epa.gov/region5/water/wshednps/topic_wetlands.htm	U.S. EPA-Region 5 Nonpoint Source Coordinator Water Division (W-15J) 77 West Jackson Blvd. Chicago, IL 60604 http://www.epa.gov/region5/water/wshednps/topic_nps.htm	U.S. EPA-Region 5 SRF Program Contact Water Division (W-15J) 77 West Jackson Blvd. Chicago, IL 60604 http://www.epa.gov/region5/business/fs-cwsrf.htm

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EPA Region	Wetland Contact	Nonpoint Source Regional Coordinators	Clean Water State Revolving Fund Regional Coordinators
Region 6: AR, LA, NM, OK, TX http://www.epa.gov/region6	U.S. EPA-Region 6 Marine and Wetlands Section 1445 Ross Ave., Suite 1200 Dallas, TX 75202 http://www.epa.gov/region6/water/ecopro/index.htm	U.S. EPA-Region 6 Nonpoint Source Coordinator 1445 Ross Ave., Suite 1200 Dallas, TX 75202 http://www.epa.gov/region6/water/ecopro/watershd/nonpoint/	U.S. EPA-Region 6 SRF Program Contact 1445 Ross Ave., Suite 1200 Dallas, TX 75202 http://www.epa.gov/Arkansas/6en/xp/enxp2c4.htm
Region 7: IA, KS, MO, NE http://www.epa.gov/region7	U.S. EPA-Region 7 Wetlands Protection Section (ENRV) 901 N. 5th St. Kansas City, KS 66101 http://www.epa.gov/region7/wetlands/index.htm	U.S. EPA-Region 7 Nonpoint Source Coordinator 901 N. 5th St. Kansas City, KS 66101	U.S. EPA-Region 7 SRF Program Contact 901 N. 5th St. Kansas City, KS 66101 http://www.epa.gov/Region7/water/srf.htm
Region 8: CO, MT, ND, SD, UT, WY http://www.epa.gov/region8	U.S. EPA-Region 8 Wetlands Program 999 18th Street, Suite 500 Denver, CO 80202-2405 http://www.epa.gov/region8/water/wetlands/wetlands.html	U.S. EPA-Region 8 Nonpoint Source Coordinator 999 18th Street, Suite 300 Denver, CO 80202-2405 http://www.epa.gov/region8/water/nps/contacts.html	U.S. EPA-Region 8 SRF Program Contact 999 18th Street, Suite 300 Denver, CO 80202-2405
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General Program Information	U.S. EPA Wetlands Division (4502F) Mail Code RC-4100T 1200 Pennsylvania Ave., NW Washington, DC 20460 http://www.epa.gov/owow/wetlands/	U.S. EPA Nonpoint Source Control Branch (4503-T) Ariel Rios Bldg. 1200 Pennsylvania Ave., NW Washington, DC 20460 http://www.epa.gov/owow/nps	U.S. EPA The Clean Water State Revolving Fund Branch (4204M) 1201 Constitution Ave., NW Washington, DC 20004 http://www.epa.gov/owm/cwfinance/cwsrf/index.htm

ATTACHMENT
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Technical Report 475
December 2005

Managing Runoff to Protect Natural Streams: The Latest Developments on Investigation and Management of Hydromodification in California

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Southern California Coastal Water Research Project

Administrative Record Page No. 039254

Managing Runoff to Protect Natural Streams: The Latest Developments on Investigation and Management of Hydromodification in California

Proceedings of a Special Technical Workshop
Co-sponsored by:

- ***California Stormwater Quality Association (CASQA)***
- ***Stormwater Monitoring Coalition (SMC)***
- ***University of Southern California Sea Grant (USC Sea Grant)***

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EXECUTIVE SUMMARY

Stream channel downcutting, widening, and erosion due to increased surface runoff present the most profound and difficult to manage problems resulting from conversion of natural land surfaces to developed areas. Land use changes that reduce the capacity for infiltration and evapotranspiration of rainfall may result in an increase in the magnitude and frequency of erosive flows and changes in the proportion and timing of sediment delivery downstream. These effects, termed *hydromodification*, can adversely impact the physical structure, biologic condition, and water quality of streams.

This document summarizes the presentations and discussions from a workshop convened to provide an overview of key technical and managerial issues associated with hydromodification, with specific focus on California's climatic setting. The goal of this workshop was to identify key conclusions regarding the mechanisms and causes of hydromodfication and to provide managers and decision makers with a list of recommended priorities for future work in terms of both technical and managerial products.

Recent studies indicate that California's intermittent and ephemeral streams are more susceptible to the effects of hydromodification than streams from other parts of the United States (US). Physical degradation of stream channels in the central and eastern US can initially be detected when watershed impervious cover approaches 10%, although biological effects (which may be more difficult to detect) may occur at lower levels. In contrast, initial response of streams in the semi-arid portions of California appears to occur between 3% and 5% impervious cover.

Managing the effects of hydromodification requires attention to changes in runoff volume, magnitude of flows, frequency of erosive events, duration of flows, timing of high flows, magnitude and duration of base flows, and patterns of flow variability. Slope, composition of bed and bank materials, underlying geology, watershed position, and connections between streams and adjacent floodplains are also key considerations in the management of hydromodification effects.

A contemporary toolbox for assessing the effects of hydromodification consists of three technical approaches: continuous simulation modeling, physical process modeling using geomorphic metrics, and risk-based modeling. Independently and in a range of combinations, these approaches are instrumental to understanding and predicting channel responses. In conjunction with these approaches, the following research areas are recommended for enhanced understanding and assessment of hydromodification:

- Establishment of appropriate reference conditions for various stream types
- Establishment of linkage between geomorphic changes and biologic effects
- Development and calibration of linked models that provide long-term simulation of hydrologic, and resultant physical changes in channel morphology

Furthermore, ongoing monitoring programs should be established for reference streams, streams subject to effects of hydromodification, and streams where various hydromodification management strategies have been employed.

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Hydromodification is best addressed with a suite of strategies including site design, on-site controls, regional controls, in-stream controls, and restoration of degraded stream systems. To improve the effectiveness of hydromodification management, it is important to identify the most appropriate set of strategies based on the type of channel, setting, stage of channel adjustment, and amount of existing and expected impervious cover in drainage catchments. Management of hydromodification could be improved by integrating it into a multi-objective strategy that addresses hydrology, water quality, flood control, and stream ecology. In addition, streams should be surveyed and classified in order to identify areas with the greatest risk of impact from hydromodification. Output from dynamic modeling can be used to develop easy to use management guides, and standard monitoring protocols and performance criteria need to be developed. These management tools should be geared toward application by land-use planners and regulators at the municipal and state levels. Finally, a hydromodification workgroup should be formed to facilitate communication and exchange of ideas and information on technical and management strategies relevant to hydromodification.

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ACKNOWLEDGEMENTS

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WORKSHOP OVERVIEW

The process of urbanization has the potential to affect stream courses by altering watershed hydrology. Development and redevelopment can increase impervious surfaces on formerly undeveloped (or less developed) landscapes and reduce the capacity of remaining pervious surfaces to capture and infiltrate rainfall. In addition, in semi-arid regions, development is usually accompanied by significant supplemental landscape irrigation that maintains high soil moisture conditions. Development practices also tend to reduce or eliminate native vegetation, thus reducing evapotranspiration of rainfall. Consequently, as watersheds develop, a larger percentage of rainfall becomes runoff during any given storm; runoff reaches stream channels much more rapidly, resulting in peak discharge rates that are higher than those for an equivalent rainfall prior to development. These changes to the runoff hydrograph have been termed *hydromodification*.

Hydromodification can result in adverse effects to stream habitat and water supply, and stream erosion associated with hydromodification often threatens infrastructure, homes, and businesses. In response to these effects, state and local agencies have developed, or are developing, standards and management approaches to control and/or mitigate the effects of hydromodification on natural and semi-natural stream courses.

On October 2 and 3, 2005, 26 speakers and 175 participants gathered in Ontario, California to discuss the results of recent research inside and outside of California. This technical workshop was convened to provide an overview of the key technical and managerial issues associated with hydromodification, with specific focus on California's climatic setting. The specific objectives of the workshop were:

- Exchange of information on technical and managerial approaches to hydromodification
- Identification of common conclusions regarding a general understanding of hydromodification
- Recommendation of priority needs for future work relevant to technical and managerial products in response to hydromodification issues

The workshop consisted of two evening and one all-day session. The first night, a small group of scientists and managers gathered to discuss key knowledge gaps and technical information needs. The day session was open to all attendees, who interacted with a slate of speakers summarizing technical, regulatory, and management approaches to responding to the effects of hydromodification. The workshop concluded with an evening session in which a small group discussed priority needs for future research and management tool development. The agenda for the workshop is provided in Appendix A.

This document summarizes key conclusions resulting from the presentations and discussions that occurred during the workshop. The document also provides managers and decision makers with a list of recommend priorities for future work in terms of both technical and managerial products related to hydromodification response.

INTRODUCTION TO HYDROMODIFICATION

Hydromodification is defined by the Environmental Protection Agency (EPA) as the "alteration of flow characteristics through a landscape which has the capacity to result in degradation of water resources" (http://www.epa.gov/owm/mtb/cwns/1996rtc/glossary.htm). Most often, hydromodification results from changes in land use practices or direct management of surface runoff. Consequences of hydromodification can include stream channel incision, aggradation, desiccation, and/or inundation.

Land use practices over the past several hundred years have resulted in hydromodification of western landscapes (Haltiner et al. 1996, Leopold 1968). Historically, many small streams were not connected to main river channels, but rather existed as shallow swales and wetland systems connected to larger rivers via subsurface flow. Surface hydrologic connections occurred intermittently following periodic large storm events. Increased surface runoff and channel disturbance, beginning during the cattle-grazing era circa 1700 – 1900, resulted in many of these systems becoming permanently channelized (Cooke and Reeves 1976). Channel modification through either direct alteration, or as a consequence of changes in patterns of surface runoff, e.g. through increases in impervious cover, continues today.

Hydromodification has typically resulted in channel incision and bank erosion in the upper and middle portions of the watershed, and in deposition, aggradation, and increased channel meandering in the downstream, flatter portions of the watershed. Often, as the main channel has incised, the lowered base level results in the formation of "knickpoints" (abrupt drops in the channel floor) that migrate upstream into the headwater areas. Often, these migrating "knickpoints" result in severe gully formation in lower order streams, i.e. first- through third-order streams, based on the Strahler stream ordering system. These smaller headwater streams are important from a watershed perspective because much of the sediment generation, carbon export, and initial nutrient processing occur in the upper watershed (Rheinhardt et al. 1999). The vast majority of stream miles in any given watershed exist as small headwater streams (Beschta and Platts 1986); consequently, impacts to these streams can result in profound cumulative effects to sediment and water movement patterns throughout the watershed. In many areas, the majority of remaining semi-intact streams is in the upper portions of watersheds. Notably, these areas are the most susceptible to land use change and associated effects of hydromodification. When development occurs in headwater areas rather than lower in the watershed, it tends to result in larger increases in peak discharge due to cumulative decreases in the time of concentration of rainfall to runoff (Beighley and Moglen, 2002).

Small, frequent runoff events, i.e. two-year frequency storms and smaller, demonstrate the most dramatic effects due to increased imperviousness, effects of supplemental irrigation, or other changes in land use practices (Beighley et al. 2003, Donigian and Love 2005, Hollis 1975). These small events account for the majority of long-term movement of sediment and consequently are the most deterministic of the geomorphic stability of the stream channels (Wolman and Miller 1960). However, small increases in basin impervious cover can also result in dramatic increases in runoff during 0.5-5 year flow events. For example, an increase of a few percent in impervious cover can increase the magnitude of a 1- or 2-year flood event by 20-fold (Hollis 1975, Urbonas and Roesner 1992).

Studies from parts of the country with climates more humid than California's indicate that physical degradation of stream channels can initially be detected when watershed impervious cover approaches 10%, although biological effects, which may be more difficult to detect, may

occur at lower levels (CWP 2003). Recent studies from both northern and southern California indicate that intermittent and ephemeral streams in California are more susceptible to the effects of hydromodification than streams from other regions of the US, with stream degradation being recognized when catchment's impervious cover is as little as 3-5%[1] (Coleman et al. 2005). Furthermore, supplemental landscape irrigation in semi-arid regions, like California, can substantially increase the frequency of erosive flows (AQUA TERRA Consultants 2004). However, because all streams are constantly undergoing change and adjustment, effects of impervious cover should be investigated in terms of changes in the rate of channel response in addition to the absolute magnitude of response.

Managing the effects of hydromodification requires attention to more than just the peak runoff. The work (or energy) that affects physical and biological channel structure results from movement of water and sediment controlled by runoff volume, flow magnitude and duration, frequency of erosive events, timing of high flows, and magnitude and duration of base flows (Konrad and Booth 2005, Montgomery and MacDonald 2002, Paul and Meyer 2001, Roesner and Bledsoe 2003). Changes in patterns of flow variability and increases in the frequency of high flows have been shown to have measurable effects on the community composition of stream biota (Konrad and Booth 2005). Because streams are coupled hydrologic, geomorphic, biologic systems, it is important to understand the various effects of all changes in surface runoff patterns and to develop appropriate management strategies for each potential effect.

As channels incise, they often go through a series of adjustment stages from initial downcutting, to widening, to establishing new floodplains at lower elevations (Figure 1). This process can occur over years or decades depending on the type of channel and flow regime. Sand-dominated channels may pass through the full sequence of stages in a few decades, whereas channels in more resistant materials, such as clay, may take much longer, in some cases 50–100 years (Roesner and Bledsoe 2003). Therefore, it is important to understand a channel's stage of adjustment, and target management strategies to account for current and expected future evolution of the channel form.

[1] Most studies evaluate the response of stream channels to "total impervious cover". However, a more appropriate assessment would be based on "effective impervious cover", i.e., the amount of impervious cover that is hydrologically connected to the stream channel. Assessment based on effective impervious cover is more likely to result in observed channel response at lower levels of imperviousness.

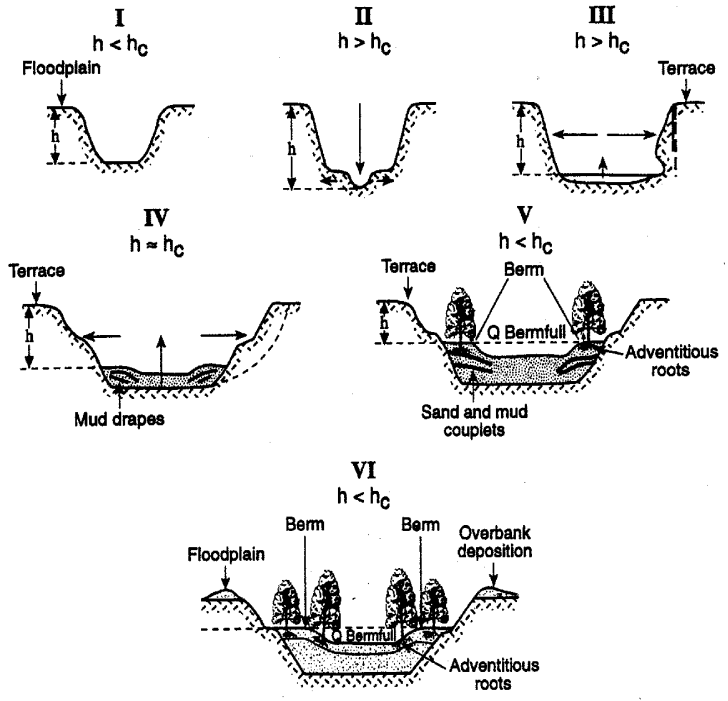

Figure 1: Stages of sand-bed channel adjustment (Schumm et al. 1984).

The pattern and rate of channel response to hydromodification will vary based on channel type and recent disturbance history (Montgomery and MacDonald 2002). Underlying geology, composition of bed and bank materials, slope, watershed position, and floodplain connectivity all affect channel response. Several stream classification systems have been developed over the years, including Shumm (1963), Montgomery and Buffington (1993), Rosgen (1994), and Church (2002). Most of these systems classify streams based on their sensitivity to change and therefore can be used to help assess, prioritize, and customize hydromodification management approaches. For example, Montgomery and Buffington (1993) define the following five channel types, listed from most to least resilient:

- Cascade
- Step pool
- Plane bed
- Pool riffle
- Dune ripple

Classification systems provide a useful starting point for evaluation of channel response to hydromodification; however, the classification systems above were developed in regions more humid and/or mountainous than those typical to California. Given differences in substrate and the extreme range of flows typically observed in arid regions, it is important to develop and regionally calibrate a classification system for dryland channels. Furthermore, the assessment of channel condition and the development of management strategies must be interpreted in terms of both spatial context (i.e. valley slope and position within the watershed) and temporal context (i.e. disturbance history) of the stream (Montgomery and MacDonald 2002). For example,

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channel incision may be most dramatic in the middle portions of the watershed; however, these reaches may have stabilized, while the most active erosion and sediment production is occurring in smaller headwater channels. For these reasons, simplistic classification and assessment schemes based on channel appearance must be supported by in-depth geomorphic assessment, historical studies, and thorough understanding of physical and hydrologic processes.

Ultimately, some management strategies may vary based on the channel type, as well as the degree of current and anticipated hydromodification, while others may be more uniformly applied. For example, controlling the magnitude and duration of runoff may be an effective strategy for all stream types, while bioengineered streambank stabilization may only be effective for specific stream types under specific circumstances.

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TECHNICAL APPROACHES TO ASSESSING HYDROMODIFICATION

The contemporary toolbox for assessing the effects of hydromodification consists of several technical approaches that may be combined in various ways. Continuous simulation hydrologic models can be used to assess elements in rainfall-runoff cycles and to describe conditions of flow in stream channels. These approaches can be used to assess the way changes in land cover may affect stream flow and to develop management strategies aimed at preventing or reducing such effects. A second, more involved approach, physical process modeling uses hydrologic models to predict changes in stream flow and to predict how these changes may affect the physical structure of the channel itself. This approach may couple hydraulic and sediment transport models, and/or incorporate geomorphic metrics to predict whether or not a channel will remain stable when subjected to the effects of hydromodification. Finally, risk-based assessments are used to account for the uncertainty associated with long-term cumulative effects of altered hydrology on stream channel flow, sediment transport, and stream geomorphology.

Continuous Simulation Modeling

Continuous simulation modeling provides a powerful tool for investigating the way rainfall-runoff patterns change over time with respect to normal climatic cycles and changes in land use practices. Hydrologic models integrate land use, precipitation, soils, topography, and other physical factors to simulate resultant runoff patterns. These models can be used to evaluate the way changes in the extent and distribution of impervious cover may affect flow magnitude, timing, frequency, and duration. In addition, continuous simulation models can be used to assess changes in the shear stress of channel beds and banks over time. Predicted shear stress (τ_{actual}) values can be compared to critical shear stress ($\tau_{critical}$) values associated with the onset of erosion in order to predict conditions that may result in initiation of scour. Recent studies in Ventura County have successfully used $\tau_{actual}/\tau_{critical}$ values between 1.2 - 1.5 as a threshold for initiation of channel scour along with an assessment of the frequency of occurrence of these erosive flow events (AQUA TERRA Consultants 2004). When using hydrologic models it is important to simulate runoff and erosion patterns over periods of at least 20-30 years. Short-term or single-event modeling is not sufficient to capture the continuous erosion and aggradation processes that occur during large and small storm events over extended periods of time.

Physical Process Modeling/Geomorphic Metrics

Physical process modeling aims to establish relationships between impervious cover, runoff patterns, and channel response based on field observations of changes in channel form over time. These field observations are used to derive mathematical relationships that can be used to predict channel response to changes in land use practices. Erosion Potential (E_p) is a geomorphic metric that has been used in several recent studies relevant to the effects of increased runoff associated with increases in impervious cover. The E_p represents the ratio of pre- and post-development erosive forces for a given stream type, expressed as:

$$E_p = \frac{W_{post}}{W_{pre}}$$

Where: W_{post} = Cumulative erosive energy or work after development
W_{pre} = Cumulative erosive energy or work before development

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Where: Erosive energy is defined as the energy that is above the threshold of erosion for the stream boundary materials, also referred to as excess specific stream power

Values for E_p are derived for both the channel bed and bank, and the boundary that is more susceptible to erosion is used as the basis of setting response thresholds. The E_p of a stream channel should be evaluated based on long-term simulations (e.g. 50 yrs) or based on empirical data collected over extended periods of time. Geomorphic metrics can be used to project changes in channel cross-section area over time in response to increases in impervious cover, as shown in Figure 2, which describes the expected effect of increases in total impervious cover (TIMP) on channel cross-sectional area. Channel response thresholds can be inferred according to inflection points on the curve. In this plot, the upper curve is derived from southern California data; the lower curve is derived from data observed in other parts of the US. Expected threshold of response for southern California streams is approximately 4% (Coleman et al. 2005).

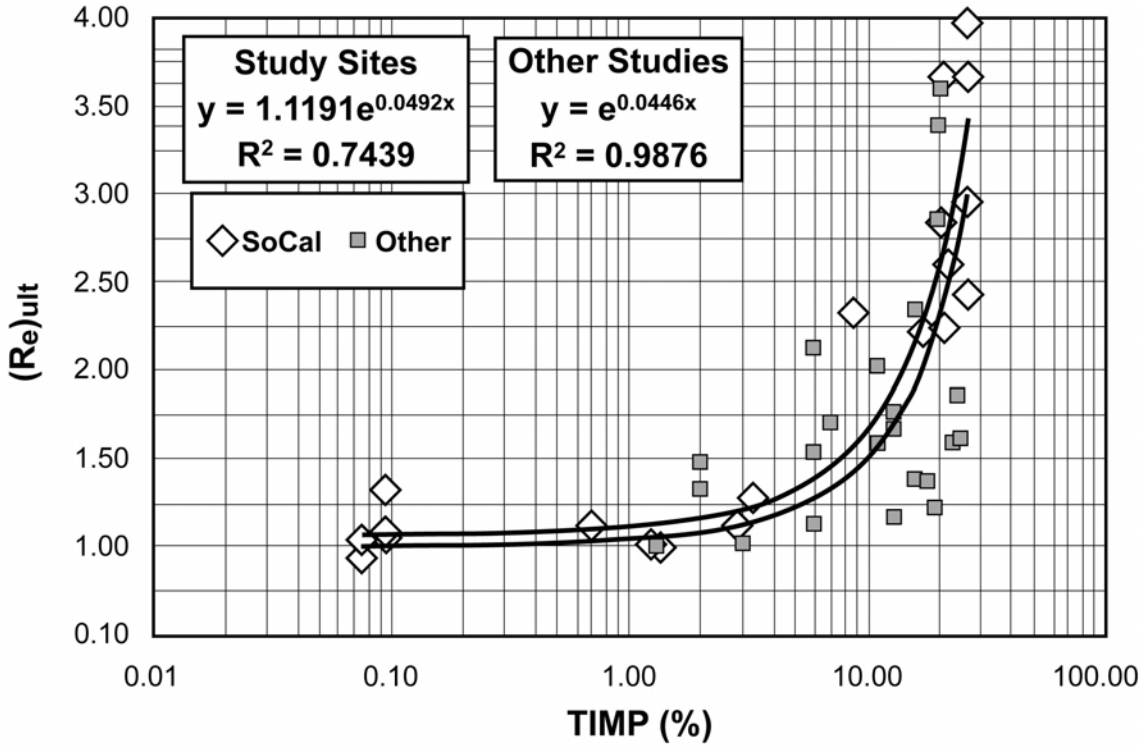

Figure 2: Enlargement curve showing expected effect of increases in total impervious cover (TIMP) on channel cross-sectional area. (Re) is the ratio of ultimate channel cross-sectional area to current cross sectional area. Upper curve is derived from data from southern California, lower curve is derived from data from other parts of the US. Expected threshold of response for southern California streams is approximately 4% (from Coleman et al. 2005 and C. MacRae).

It is important to note that curves such as those shown in Figure 2 assume a consistent hydrologic response to increased impervious cover. Long-term hydrologic simulations should be coupled with physical process models to fully explore these relationships and help validate the curves. Furthermore, different channel types respond differently to changes in runoff. Therefore, an enlargement curve, such as the one shown in Figure 2 for a single channel type, should be developed for each major channel type in a region in order to help focus the timing and location of strategic runoff management measures.

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Risk-based Modeling

Unlike physical process modeling, which aims to establish response thresholds, risk-based modeling estimates the probability of channel response to increases in erosion potential associated with anticipated changes in runoff as a result of increases in impervious cover. Managers can then determine acceptable risk levels. Typically, risk-based modeling uses the output of continuous simulation or physical process models to generate time-series data relevant to flow and sediment transport. Often this type of modeling includes linear and logistic regressions, in addition to probability networks. These data are then used to estimate the risk of channel response with respect to anticipated changes in runoff volume and sediment. Figure 3 provides an example of the way logistic regression analysis can be used to estimate the likelihood of channel instability based on progressive degrees of erosion potential.

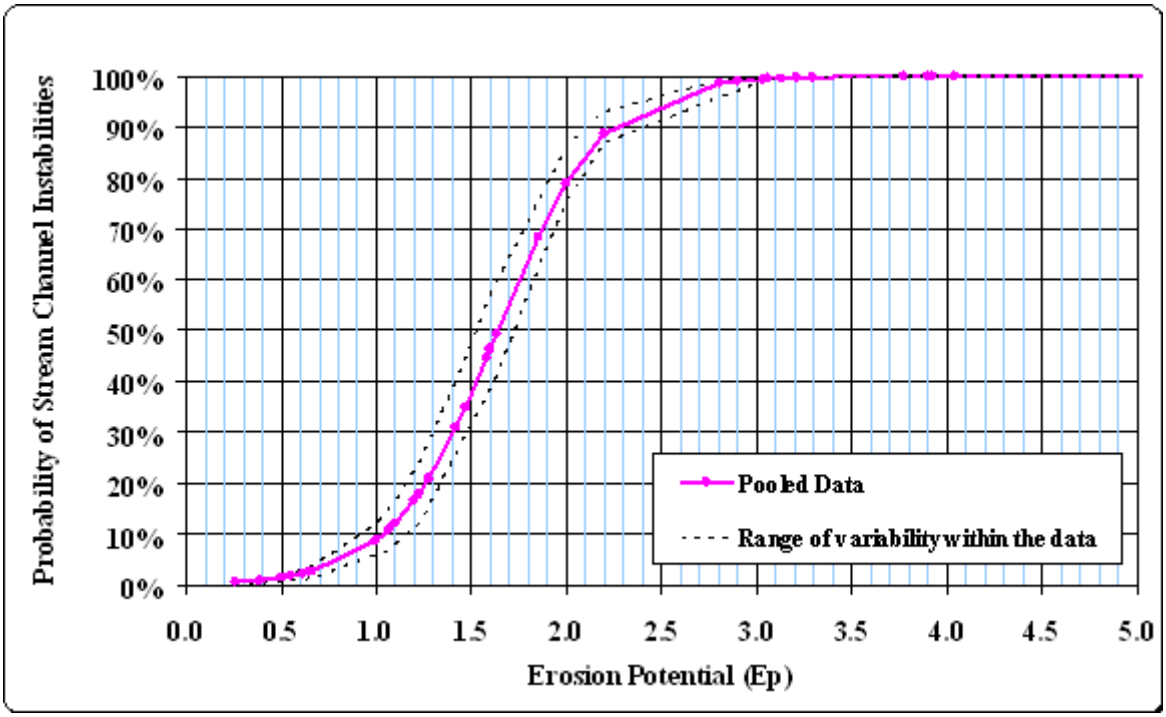

Figure 3: Logistic regression analysis showing the probability of various channel erosion potentials (from B. Bledsoe).

For studies conducted in the San Francisco Bay Area, an E_p value of 1.2 was proposed as an acceptable threshold based on a 15% probability of channel instability[2]. This was typically associated with approximately 3 - 6% impervious cover for channels in sand substrates and 10-12% for channels in clay substrates.

[2] The negotiated Ep value of 1.0 was adopted for the final Hydromodification Management Plan for Santa Clara Valley and included in a permit amendment for agencies in that area.

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PRIORITY TECHNICAL NEEDS AND INFORMATION GAPS

Workshop participants identified five priority areas for additional research and data collection:

- Regional reference conditions for various stream channel types
- Links between geomorphic change and biologic effects
- Dynamic simulation models calibrated for local conditions
- Potential consequences of increased storm water infiltration from urbanized areas
- Ongoing monitoring programs to assess hydromodification impacts and to develop effective management strategies

Regional reference conditions for various stream channel types need to be established

Because most areas in the western US have been subjected to historic grazing or logging, many channels in this region have undergone some degree of change over time. Furthermore, the dynamic nature of this region's fluvial systems means that these streams are constantly undergoing some degree of change. Understanding the historic conditions of stream channels can provide valuable insight; however, historic conditions may not be the most appropriate "reference" in light of current constraints. Rather, reference should be considered a condition where stream channels are in a state of dynamic equilibrium under contemporary natural watershed processes. Once a regional reference condition is defined, data on flow, sediment movement, and geomorphology should be collected on an ongoing basis from representative reference stream reaches. These data will facilitate modeling that more effectively differentiates natural cycles from human-induced changes, especially during long wet or dry cycles where changes may be dramatic but infrequent.

Links between geomorphic change and biologic effects need to be more clearly defined

Hydromodification can cause a variety of physical changes to streams. However, hydrologic changes that are most relevant to biologic communities have not been well defined. For example, it is unclear how changes in base flow duration; peak flow magnitude, duration, and timing; or flow variability affect the structure and function of stream communities. Ultimately, there is a need to develop biologic indices to assess the effects of hydromodification and more effectively direct management strategies.

Dynamic simulation models need to be developed and calibrated for local conditions

Although continuous hydrologic simulation and physical process models have been developed for California streams, these models have not been routinely linked to the assessment of stream channel response to various forms of hydromodification. Hydrologic, physical process, and risk-based models are much more effective when used in combination and appropriately calibrated and validated for California streams. The resultant tool(s) can greatly improve assessments that predict the likelihood of stream channel response to anticipated changes in hydrology associated with changes in land use patterns. Model output may also be useful in the development of objective criteria for establishing land use practices that minimize

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hydromodification effects, designing tools for best management practices (BMP) design, and evaluating the performance of management measures.

Potential consequences of increased storm water infiltration from urbanized areas need to be investigated

Infiltration of substantial volumes of storm water runoff from developed land surfaces may introduce unacceptable levels of contaminants into groundwater and/or shallow aquifers. The risk of groundwater contamination and the fate of pollutants introduced into subsurface waters need to be investigated by increased monitoring, development of coupled surface water-groundwater models, and implementation of demonstration projects.

Ongoing monitoring programs to assess hydromodification impacts and develop effective management strategies need to be designed and implemented

First, more extensive flow monitoring needs to be instituted to compensate for the difficulty of calibrating hydrologic models for un-gauged headwater streams. Second, regular geomorphic data needs to be collected from reference streams as well as streams subject to the effects of hydromodification. Routine measurement of channel cross-sections and substrate will greatly improve understanding of channel adjustment processes and allow better discrimination between natural and anthropogenic changes. Third, streams subject to various hydromodification management strategies need to be monitored and documented to support adaptive management and education on emerging techniques and strategies.

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REGULATORY AND MANAGEMENT STRATEGIES

Regulatory Approaches to Address Potential Effects of Hydromodification

A variety of regulatory programs and tools exist to help in the regulation of hydromodification effects, including:

- Clean Water Act Section 401 certifications
- Total Maximum Daily Loads (TMDLs)
- Municipal storm water (MS4) permits under Section 402 of the Clean Water Act, and the associated Standard Urban Storm Water Mitigation Program (SUSMP) requirements
- Watershed Urban Runoff Management Plans (WURMPs) and the Watershed Management Initiative (WMI) which encourage municipalities to work cooperatively to manage issues such as hydromodification

In addition, California Environmental Quality Act/National Environmental Policy Act (CEQA/NEPA) processes can be used to better address hydromodification issues, especially with regard to cumulative effects.

Looking to the future, Regional Water Boards in California are considering development of numeric criteria and objectives for new development and redevelopment projects to offset and/or mitigate hydromodification effects. These objectives may involve requirements for managing flow and/or reducing effective impervious cover as well as strategies to maximize infiltration and reuse of storm water. Some Regional Boards are also considering ways to better coordinate with other regulatory agencies that have authority over hydromodification and stream alteration. Similarly, some State and Regional Water Boards are evaluating their existing regulatory authority over hydromodification and considering ways to strengthen their authority, particularly under section 401 of the Clean Water Act, or as part of
Basin Plans.

Management Approaches to Address the Effects of Hydromodification

Hydromodification is best addressed by using a suite of strategies, including site-design, restoration of degraded stream systems, as well as in-stream, on-site control, and regional controls. Managers need to identify the most appropriate set of strategies based on channel type and setting, channel adjustment stage, and amount of existing and anticipated impervious cover in the drainage catchment. However, attempting to have the post-development condition match pre-development runoff magnitude and duration should be an initial consideration for all circumstances.

Management strategies should address not only changes in peak flows but also changes in flow duration and sediment yield. Research to support development of several recent Hydromodification Management Plans indicates that post-project BMPs should ensure no change in runoff volume and cumulative duration of all flows greater than the critical flow for bed or bank mobility. Case studies of three Hydromodification Management Plans/Strategies are provided in Appendix B.

Over the long term, land-use planning, runoff management, as well as channel and floodplain restoration, should be the cornerstones of any hydromodification management strategy. The planning cycle for new development or re-development projects should begin with

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hydromodification management assessment as part of the preparation of General and Specific Plans, master drainage plans, and zoning designations. Hydromodification effects must be managed with respect to long-term cycles; therefore, strategies should be adaptive. As conditions change and stream channels evolve, the management approaches must be adjusted. However, it is important to recognize that because changes to watershed hydrology are continual; it is unlikely that any management strategy will be able to achieve full hydrologic mitigation. Over the long term, some lasting physical and biological effects should be expected. Management goals should realistically reflect these anticipated changes.

The Center for Watershed Protection, the National Association of Homebuilders, the Water Environment Research Foundation, the Bay Area Stormwater Management Agencies Association, and others have developed resources that land managers can use to guide improved site design. A list of some of these resources is provided in Appendix C.

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PRIORITY MANAGEMENT NEEDS

In response to rapidly developing technical tools, regulations, and management goals, workshop participants identified the following management and information priorities:

1. Establish mapping and classification of streams based on their susceptibility to hydromodification effects. Susceptibility should be evaluated with respect to both stream properties, potential for future increases in impervious cover, and concomitant changes in land use practices, such as supplemental irrigation. Such a system would help managers prioritize streams requiring protection and hydromodification management.
2. Model stream systems in ways that are useful for regulators to make decisions. Once models are validated with local data, output should be:
    - Readily understandable and usable by planners and managers
    - Easily interpreted by regulators for development of consistent requirements and evaluation criteria for the specific region
    - Readily used to develop standardized flow control sizing and design tools for BMPs, where applicable
3. Develop a series of management tools that can be easily used to make recommendations or set requirements relative to hydromodification for new development and re-development projects. These tools would utilize the results of monitoring, modeling, and assessment completed under previous projects to develop a series of plots, nomographs, checklists, or similar managerial tools. It is envisioned that ideally, tools should be developed for three different levels of analysis:

    Screening tools – Checklists or similar tools that allow planners and managers to evaluate whether or not a project is likely to involve substantial hydromodification issues.

    Effects tools – For projects that are considered likely to have hydromodification effects based on the results of the screening tool, this tool would serve as a nomograph or series of plots used to evaluate the expected magnitude or intensity of effects associated with a particular project. This tool could also be used to identify projects that should be subjected to subsequent in-depth analysis.

    Mitigation tools – Once the expected magnitude of effects are determined, this tool would be used to guide recommended mitigation and management measures. This tool could be a series of fact sheets, design criteria, and sizing standards to be used to aid in the development of standards or mitigation requirements.
4. Construct metrics and monitoring protocols to measure the effects of hydromodification on biological communities including riparian habitat.
5. Determine standard monitoring protocols for hydromodification effects and facilitate regional information sharing on project performance.
6. Evaluate the relative costs and benefits of hydromodification management at the site level (e.g. low impact development), and at the regional level (e.g. large retention and infiltration facilities). The economic costs of hydromodification have not been well documented, nor have the economic benefits of managing the physical and biological

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effects of hydromodification. Information is also needed on the cost to maintain and manage hydromodification BMPs.

7. Establish recommended short-term measures for use while longer-term solutions, such as low-impact development and alternative site design are evolving.

In addition to management and information priorities, several institutional barriers were identified that may hinder effective management of hydromodification effects. Steps to overcome such barriers include:

A. Hydromodification management needs to be part of an integrated multi-objective management strategy. Stream planning and management should integrate hydromodification, water quality, flood control, and habitat management strategies as a whole rather than addressing each issue in isolation. Increased coordination between agencies, departments, and stakeholders should be strongly supported. Specifically, agencies that have authority over hydromodification and stream alteration should work toward coordinating regulatory approaches to achieve greater consistency.

B. Local ordinances need to be revised to facilitate integrating water quality and water quantity management into project design. These ordinances should be flexible enough to allow for variances from standard design requirements, such as curb and gutter and street width parameters, to help reduce impervious cover and increase infiltration.

C. Hydromodification needs to be addressed in both General and Specific Plans in terms of the location and design of new development. Site-by-site or project-specific approaches tend to be less effective and more costly to implement.

D. Better linkage between theory and practice need to be established through case studies, academic research, demonstration projects, and long-term BMPs monitoring.

E. Management of hydromodification needs to be incorporated into regional resource planning efforts, such as the Corps of Engineers Special Area Management Plans (SAMPs) or US Fish and Wildlife Service's Multi-species Habitat Conservation Plans. These regional planning efforts may be effective tools to address cumulative effects of hydromodification at the watershed scale.

F. A more effective public communication and education strategy needs to be developed. Property owners, local businesses, and community groups need to be better educated about the causes and effects of hydromodification in the context of the watersheds where they live and work. Simple definitions of streams and watersheds should be provided as part of the education strategy. Hydromodification effects need to be linked to health, aesthetic, recreational, and economic endpoints. Citizens should be made aware of simple actions, such as redirecting downspouts, using xeriscaping, and installing planter boxes, that help reduce hydromodification effects.

G. An ongoing working group should be established to coordinate research, monitoring, technology transfer, education, and management approach evaluation that includes all stakeholder groups.

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CONCLUSIONS AND RECOMMENDATIONS

Presentations and discussions during the two-day hydromodification workshop resulted in the following key conclusions and recommendations:

Conclusions

- Physical degradation of stream channels in semi-arid climates of California may be detectable when basin impervious cover is between 3% and 5%. However, biological effects are probably occurring at lower levels.
- Frequent, 0.5-5 years, small runoff events, are most affected by hydromodification.
- Not all streams will respond in the same manner. Certain management strategies need to account for differences in stream type, stage of channel adjustment, current and expected amount of basin impervious cover, and existing or planned BMPs.
- Management strategies should address effects on flow magnitude, duration, and volume.
- Assessment of potential effects and suitability of possible management approaches must account for decadal scale climatic cycles and associated stream channel response.
- Improved site design is likely to be the most effective hydromodification management strategy and should be incorporated at the planning stage of a project.
- It is unlikely that all the effects of hydromodification can be fully mitigated. Changes in impervious cover will result in some changes to the flow patterns and ecology of the affected stream. Realistic management goals should be established to acknowledge long-term effects of increased impervious cover.

Recommendations

- Integrate management of hydromodification into a multi-objective strategy that addresses hydrology, water quality, flood control, stream ecology, and overall watershed and land use planning.
- Institute interim management measures until runoff management becomes a more standard and accepted element of site design, for example, low impact development principles become commonly accepted and implemented in all site designs.
- Establish and implement a stream channel classification system based on expected vulnerability of different streams to hydromodification-induced change.
- Establish appropriate regional reference conditions should for each stream type based on the established classification system.
- Develop and calibrate dynamic simulation models for local streams. Models that combine continuous hydrologic simulations, physical process models, and risk-based modeling will be the most effective.
- Establish ongoing regional hydromodification monitoring programs. These programs should collect flow and geomorphic data from reference streams, unmitigated streams impacted by hydromodification, and streams subject to hydromodification management measures. Helping to separate natural variability from urban-induced changes in stream condition should be a primary goal of such ongoing monitoring programs.
- Develop indices to assess the biological effects of hydromodification.

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- Develop protocols for measuring the economic costs and benefits of hydromodification management. Assemble case studies that document these economic costs and benefits.
- Initiate a hydromodification workgroup to facilitate exchange of ideas and information on technical and managerial approaches.
- Increase public education about what can be done at homes, businesses, and in the community to address hydromodification effects.

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APPENDIX A – WORKSHOP AGENDA

HYDROMODIFICATION WORKSHOP AGENDA – October 2-3, 2005

SUNDAY EVENING, INVITED SESSION

5:00- 5:15 **Welcome and Introductions** – Eric Stein (Chair), *Southern California Coastal Water Research Project*

5:15 – 5:30 **Regulatory Perspective** – John Robertus, *San Diego Regional Water Quality Control Board*

5:30 – 6:30 ***Status of Science on Evaluating/Studying Hydromodification*** (panel discussion)

- Jeff Haltiner, *Philip Williams and Associates*
- Gary Palhegyi, *Geosytec Consultants*
- Craig MacCrae, *Aquafor Beech*
- Brian Bledsoe, *Colorado State University*
- Derek Booth, *University of Washington*

7:30 – 8:30 **Dinner and Open Discussion of Data Gaps and Areas for Future Research**

MONDAY, OPEN SESSION

8:30 – 8:40 **Welcome and Opening Remarks** – Chris Crompton (Chair), *SMC*

8:40 – 9:15 **Introduction to Hydromodification** – Jeff Haltiner, *Philip Williams and Associates*

9:15 – 10:15 ***Why is Hydromodification Such a Big Deal?*** (mini-panel discussion)

- Policy Perspective – Susan Cloke, *Los Angeles Regional Water Quality Control Board*
- Regulatory Perspective – John Robertus, *San Diego Regional Water Quality Control Board*
- Homebuilders Perspective – Marolyn Parson, *National Association of Home Builders*
- Natural Resource Perspective – Shelley Luce, *Santa Monica Bay Restoration Commission*

10:15 – 10:30 **Break ~**

10:30 – 12:30 **Hydromodification Research and Studies**

- Risk-Based Channel Stability Analysis for Urbanizing Watersheds – Brian Bledsoe, *Colorado State University*
- Changes in Streamflow Patterns from Urbanization: A Humid-Region Perspective – Derek Booth, *University of Washington*
- Modeling Urbanization Impacts and Channel Stability in Ventura County – Tony Donigian, *AQUA TERRA Consultants*
- Southern California Peak Flow study results and conclusions – Craig MacRae, *Aquafor Beech*
- Santa Clara Valley HMP Studies- Gary Palhegyi, *GeoSyntec Consultants*

12:30 – 1:30 **Lunch ~**

1:30 – 2:15 **Regulatory Response to Hydromodification**

- Northern California Perspectives – Larry Kolb, *San Francisco Bay Regional Water Quality Control Board*
- Southern California Perspectives – Xavier Swamikannu, *Los Angeles Regional Water Quality Control Board*

2:15 – 3:30 **Implementation of Hydromodification Management Practices**

- Contra Costa County – Dan Cloak, *Dan Cloak Consulting (for Contra Costa County)*
- Santa Clara Valley – Jill Bicknell, *Santa Clara Valley Urban Runoff Program*
- Newhall Land and Farming– Mark Subbotin, *Newhall Land and Farming Company*
- Control of Hydromodification Through Land Planning – Laura Coley-Eisenberg, *Rancho Mission Viejo*

3:30 – 4:30 **Panel Discussion on Implementation Issues** – Facilitated by Matt Yeager, *San Bernardino County Flood Control District*

- Rene DeShazo, *Los Angeles Regional Water Quality Control Board*
- Mark Abramson, *Heal the Bay*
- Marolyn Parson, *National Association of Home Builders*
- Jeff Haltiner, *Philip Williams and Associates*
- Jill Bicknell, *Santa Clara Valley Urban Runoff Program*

MONDAY EVENING, INVITED SESSION

5:30 – 6:00 **Welcome & Summary of Open Session** – Matt Yeager, *San Bernardino County Flood Control District*

6:00 – 7:00 **Dinner ~**

7:00 – 8:00 **Key Needs of Managers for Addressing Hydromodification** (panel discussion)

- Jeff Pratt, *Ventura County Watershed Protection District*
- Bill DePoto, *Los Angeles County Dept. of Public Works*
- Aaron Allen, *US Army Corps of Engineers - Regulatory Branch*
- Laura Coley-Eisenberg, *Rancho Mission Viejo*
- Jon Bishop, *Los Angeles Regional Water Quality Control Board*
- Rebecca Drayse, *TreePeople*

8:00 – 8:30 **General Conclusions and Outline for Workshop Report**

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APPENDIX B – CASE STUDIES

Case Study 1 – Contra Costa County

Contra Costa County's Hydromodification Management Plan was developed in response to the National Pollutant Discharge Elimination System (NPDES) permit requirements from the San Francisco Bay Regional Water Quality Control Board. The goal of this Hydro-modification Management Plan (HMP) is to protect urban watersheds from ongoing hydro-modification by applying these requirements to development projects that are greater than or equal to 1 acre. They assist applicants to comply by providing designs and sizing factors. Permit conditions require municipalities to propose a plan to manage increases in flow and volume where increases could:

- Increase erosion
- Generate silt pollution
- Impact beneficial uses

The goal of these plans is to ensure that post-project runoff does not exceed pre-project rates and durations. Contra Costa's plan encourages Low Impact Development Integrated Management Practices (LID IMPs) and allows proposals for stream restoration in lieu of flow control where benefits clearly outweigh potential impacts. The plan includes four options for compliance:

1. Demonstrate project will not increase directly connected impervious area
2. Implement pre-designed hydrograph modification IMPs
3. Use a continuous simulation model to compare post- to pre-project flows
4. Demonstrate increased flows will not accelerate stream erosion

Management approaches are selected according to risk:

- Low risk = channelized systems
- Medium risk = channels in substrates with high bed and bank resistance
- High risk = all other channels

Project proponents need to develop a comprehensive analysis of management options for all high risk channels.

Case Study 2 – Santa Clara Valley

The Santa Clara Valley Urban Runoff Pollution Prevention Program's (SCVURPPP's) NPDES permit requires that increases in runoff peak flow, volume, and duration shall be managed for all projects involving one or more acres of impervious cover, where increased flow and/or volume can cause increased erosion of creek beds and banks. SCVURPPP's overall approach to creating a HMP was to conduct geomorphic and hydrologic assessments of three representative watersheds in the valley, conduct channel stability analyses to establish thresholds

for hydromodification control, develop design criteria for flow control measures, and provide guidance for best management practice implementation[3].

The performance criteria in the HMP state that post-project runoff shall not exceed estimated pre-project rates and/or durations, where the increased storm water discharge rates and/or durations will result in increased potential for erosion. Projects shall not cause an increase in Ep of the receiving stream over the pre-project (existing) condition. Furthermore, the Ep value should not be increased at any point downstream of the project. These requirements can be met with a combination of on-site and off-site control measures.

On-site controls should be designed to match flow-duration curves of post-development conditions to pre-development conditions for all flows between 10% of the 2-year peak flow and the 10-year peak flow. Example sizing of flow-duration basins are shown in Table B-1. Management measures are considered "practicable" if construction cost of treatment plus flow controls is less than or equal to 2% of project cost, excluding land value.

Table B-1: Basin Sizing Case Studies from the Santa Clara Valley Urban Runoff Program Hydromodification Management Plan (SCVURPPP Final HMP Report, 2005).

	Thompson	San Jose	Alameda
Basin Depth	4 feet	2.25 feet	2 feet
Basin Area	30 acres	0.06 acre	0.8 acre
Basin Size % DCIA	5.7% (4% catchment)	3.7% (1.7% catchment)	10% (7% catchment)
Drain Time	3 days (90% of the time)	< 1 day	1 day
Q_{cp} (low flow)	2.4 cfs	0.1 cfs	0.25 cfs
Infiltration Rate (rainfall)	0.2 inch/hour	0.2 inch/hour	0.5 inch/hour
Infiltration Rate (flow)	5.5 cfs	0.012 cfs	--

*cfs = cubic feet per second

This hydromodification management plan lays out on-site and in-stream options. Projects in highly urbanized areas with more than 90 % build out and a large percentage of impervious cover are exempt. Additional information on this program is available at www.SCVURPPP.org.

Case Study 3 – Newhall Land

Newhall Ranch is a specific plan approved for 26,000 homes in the Santa Clara watershed. Runoff from the proposed new development will be addressed by a Natural River Management Plan and a Newhall Ranch Stormwater Plan developed by the land owner.

[3] The Final HMP Report (April 2005) is available at http://www.eoainc.com/hmp_final_draft

The Natural River Management Plan is a long-term (20-year) master plan that provides for the construction of various infrastructure improvements to the Santa Clara River and tributaries. The plan maintains 15 miles of the Santa Clara River and its tributaries in a natural state with 75- to 200-foot setbacks from the river that sustains habitat quality and meets requirements for flood control. The plan calls for buried bank stabilization, instead of hardened systems, to meet county flood protection requirements and maintain habitat functions in riparian areas. Trenches have been dug far up from the streambed, filled with a compound called "sand cement" – similar to sandstone, then topped with soil, and replanted with native plant species.

The Newhall Ranch Stormwater Plan is a regional approach to storm water management that incorporates both water quality treatment and hydromodification control. The goals of this plan include:

- Reduction in percentage of impervious cover in the upper watershed using cluster design of development and maximizing open space
- Utilization of BMPs for both water quality and hydromodification source control
- Design of in-stream solutions that protect or enhance habitat.
- Incorporation of the "avoidance, minimization, mitigation" hierarchy in plan development

Case Study 4 – Rancho Mission Viejo

Rancho Mission Viejo, a private landowner, has voluntarily developed a set of land planning principles as part of a comprehensive land-use planning and resource management program for 25,000 acres in Orange County California. These planning principles will serve as self-imposed requirements, intended to minimize the effects of future development on natural streams in planning areas. Using these principles, the landowners are proposing to focus development on ridges, which are underlain by less pervious material, thereby preserving valleys which contain pervious areas that support infiltration important to creek functions.

Planning Principles:

Geomorphology/Terrains

- Recognize and account for the hydrologic response of different terrains at the sub-basin and watershed scale

Hydrology

- Emulate, to the extent feasible, the existing runoff and infiltration patterns in consideration of specific terrains, soil types, and ground cover
- Address potential effects of future land use changes on hydrology
- Minimize alterations of the timing of peak flows of each sub-basin relative to the mainstem creeks
- Maintain and/or restore the inherent geomorphic structure of major tributaries and their floodplains

Sediment Sources, Storage, and Transport

- Maintain coarse sediment yields, storage and transport processes

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Groundwater Hydrology

- Utilize infiltration properties of sandy terrains for groundwater recharge and to offset potential increases in surface runoff and adverse effects to water quality
- Protect existing groundwater recharge areas supporting slope wetlands and riparian zones and maximize alluvial groundwater recharge to the extent consistent with aquifer capacity and habitat management goals

Water Quality

- Protect water quality using a variety of strategies, with particular emphasis on natural treatment systems, water quality wetlands, swales, and infiltration areas

APPENDIX C – ADDITIONAL RESOURCES

BASMAA's Start at the Source: Design Guidance Manual for Stormwater Quality Protection, 1999. Prepared by Tom Richman & Associates and CDM. Available from www.basmaa.org .

BASMAA's Using Site Design Techniques to Meet Development Standards for Stormwater Quality: A Companion Document to Start at the Source, 2003. Prepared by CDM. Available from www.basmaa.org

Better Site Design: A Handbook for Changing Development Rules in Your Community
Available for $35.00 from the Center for Watershed Protection at www.cwp.org, under the "Publications" tab.

Redevelopment Roundtable, Consensus Agreement, Smart Practices for Redevelopment and Infill Projects.
Available for free download from the Center for Watershed Protection at www.cwp.org, under the "Publications" tab; it is listed with the "Better Site Design" publications.

Builders for the Bay Program
Information about this program, which is joint project of the Alliance for the Chesapeake Bay, the Center for Watershed Protection and the National Association of Home Builders, can be found at http://www.cwp.org/builders_for_bay.htm.

The Practice of Low Impact Development
Available for $5.00 from the U.S. Department of Housing and Urban Development, at http://www.huduser.org/publications/alpha/alpha.html. It is also available for $50.00 from the NAHB Research Center's bookstore at www.nahbrc.org.

National Association of Homebuilders Research Center
"Builder's Guide to Low Impact Development" and "Municipal Guide to Low Impact Development". Available for free download from
http://www.toolbase.org/tertiaryT.asp?TrackID=&CategoryID=36&DocumentID=3834

"Growing Greener: Putting Conservation into Local Codes". Available for free download from http://www.dcnr.state.pa.us/growinggreener/growinggreener.htm.

Low-Impact Development Design Strategies: An Integrated Approach; Low-Impact Development Hydrologic Analysis
Both are available for free download from US Environmental Protection Agency's website at http://www.epa.gov/owow/nps/lid/.

Truckee Meadows Structural Control Design Manual: Guidance on Source and Treatment Controls for Storm Water Quality Management - Kennedy/Jenks Consultants
http://ci.reno.nv.us/gov/pub_works/stormwater/management/controls/pdfs/TOC.pdf

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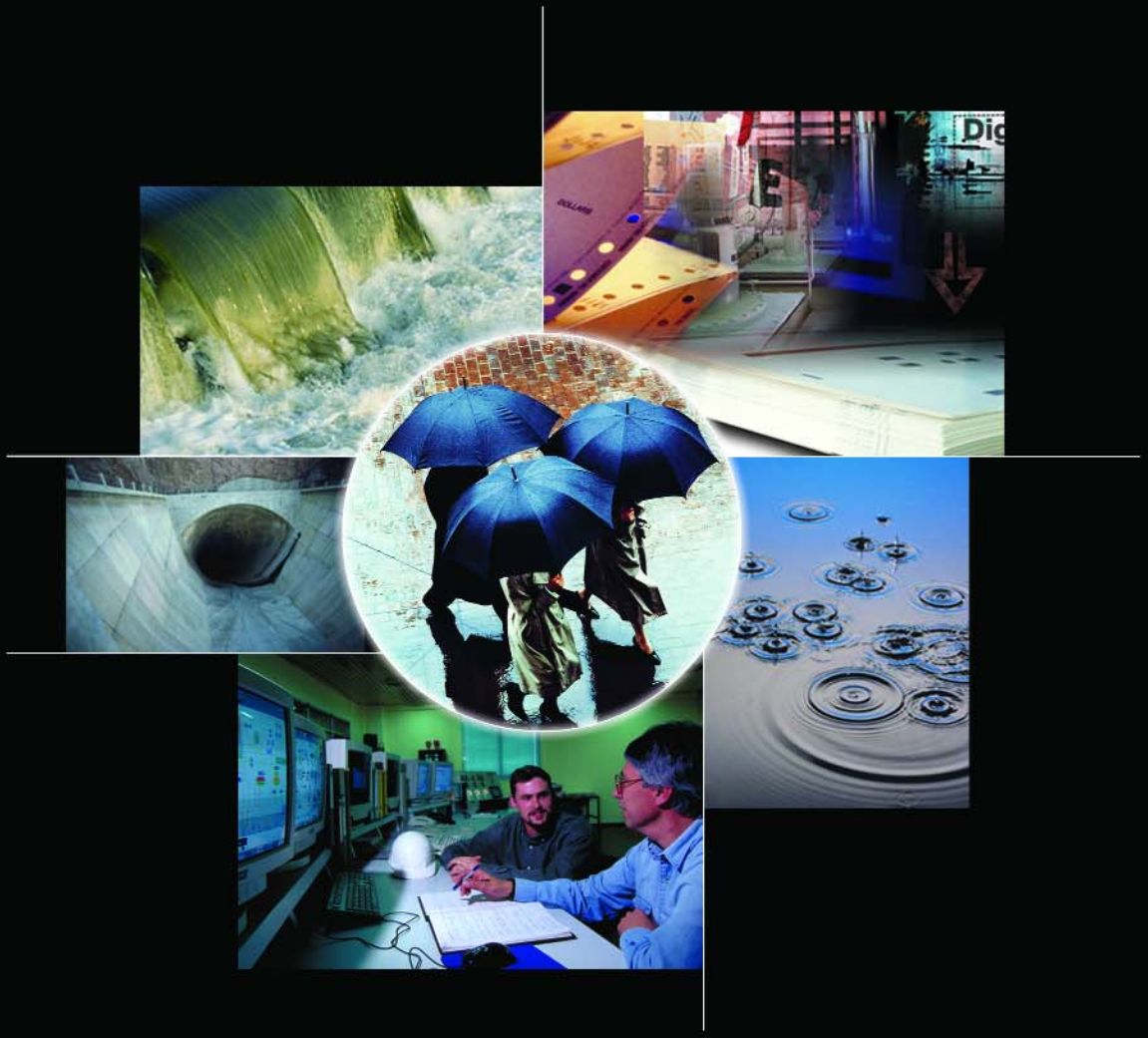
National NEMO (Non Point Education for Municipal Officials) Network - Educational Materials on the link between land use and water quality
http://nemonet.uconn.edu/

Physical Effects of Wet Weather Flows on Aquatic Habitats: Present Knowledge and Research Needs , by L.A. Roesner and B.P. Bledsoe – Water Environment Research Foundation, 2003.
http://www.werf.org

Impacts of Impervious Cover on Aquatic Systems – Center for Watershed Protection, 2003.
http://www.cwp.org/

ATTACHMENT
33

2005 STORMWATER UTILITY SURVEY



BLACK & VEATCH
building a world of difference™

ENERGY WATER INFORMATION GOVERNMENT

Black & Veatch is pleased to provide the results of its sixth national Stormwater Utility Survey, to help those involved in the stormwater industry stay well-informed across a range of issues. The survey results offer insight into the following topics:

- Organization/Administration
- Planning
- Operations
- Finance/Accounting
- Stormwater User Fees and Billing
- Quality Issues – Best Management Practices
- Public Information/Education
- Major Challenges Recently Faced
- Significant Events Affecting Utilities

These results can be used for numerous purposes, from performance management to financial planning to organization strengthening. At Black & Veatch, we understand the value of knowing what others are doing in the industry. For 90 years, meeting the needs of the utility industry has been at the core of our business. We are happy to discuss any questions you might have regarding this survey.

Profile of Respondents

- Responses were received from 99 utilities in 21 states and one Canadian province. All of these utilities are funded in whole or in part through user fees.
- Approximately 86 percent of the respondents serve a city, rather than a county or region.
- The population served by the respondents ranges from 1,400 (Atlantic Beach, FL) to 3.9 million people (Los Angeles, CA) and the area served varies from 3 to 1,500 square miles. Eighty-one percent indicate they are responsible for stormwater facilities only, while the balance report they are responsible for combined sanitary/stormwater facilities. Approximately 88 percent indicate that they use their own staff to provide a majority of operation and maintenance services.
- For those utilities that base charges on gross property area, equivalent residential units ranged from 1,600 square feet total area to 11,000 square feet, with a mean of 6,964 square feet. For those utilities that base charges on impervious area, impervious areas per equivalent residential unit ranged from 1,500 square feet to 10,000 square feet, with a mean of 2,647 square feet.

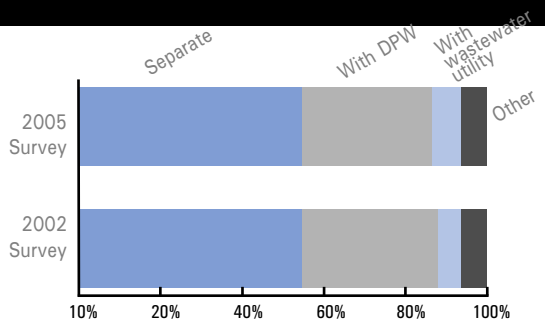
What's New

Feedback from participants prompted us to add a new question to the 2004-2005 version of the Stormwater Utility Survey. In recent years, a number of stormwater treatment systems have become commercially available. Fifty-six percent of respondents have installed at least one of these devices with the most popular being Stormceptor, StormFilter, and CDS Separator. Thirty-six percent have had a favorable experience with these devices in terms of treatment efficiency and ease of maintenance, while 41 percent are still in the evaluation process.

Organization / Administration

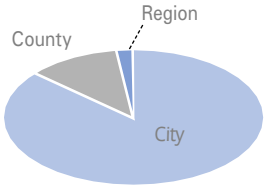
How is your operation organized?

55% Separate utility
32% Combined with Department of Public Works
7% Combined with wastewater utility
6% Other



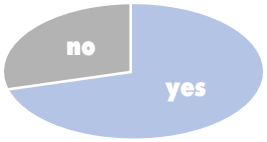
What area does your utility serve?

86% Within city limits
12% County
2% Region



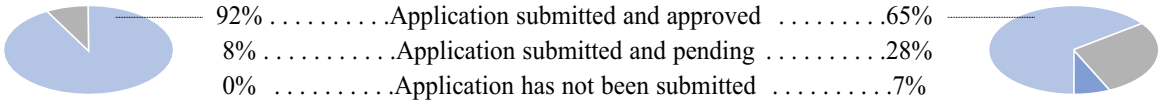
Does your state have specific statutes that govern the formation of stormwater utility and user fee financing?

71% Yes
29% No



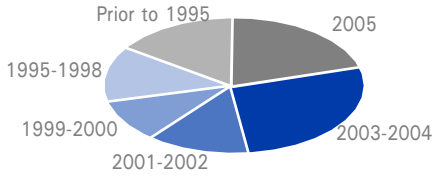
Planning

What is the status of your NPDES permit?



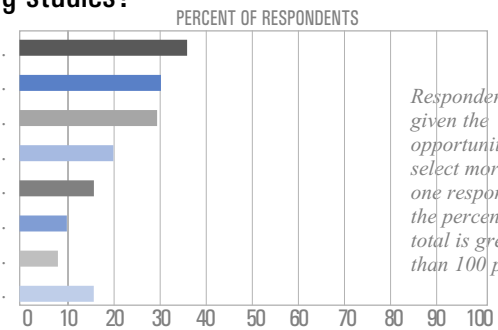
When was your most recent stormwater plan or stormwater facilities plan?

21% 2005
27% 2003–2004
13% 2001–2002
10% 1999–2000
13% 1995–1998
16% Prior to 1995



What stormwater computer models do you use for planning studies?

36% HEC-2
30% XP-SWMM
29% HEC-1
20% TR-55
16% EPA SWMM
10% HEC-RAS
7% HEC-HMS
15% Other

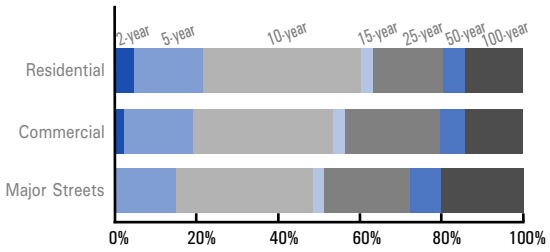


Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.

Planning (continued)

What return periods do you use to design your major stormwater structures?

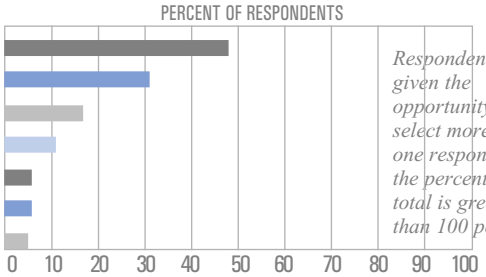
	Residential	Commercial	Major Streets
2-year	3%	1%	0%
5-year	18%	17%	14%
10-year	39%	35%	34%
15-year	3%	3%	3%
25-year	17%	23%	21%
50-year	6%	7%	8%
100-year	14%	14%	20%



Several respondents provided a range of return period.
The percentages above represent the smallest return period provided.

Which performance indicators do you consider most important in measuring improvement in stormwater management success?

47%	Flood control
31%	Monitoring pollutants
17%	Customer complaints/satisfaction
11%	Cost control measures
6%	Erosion control
6%	Maintenance
5%	Habitat

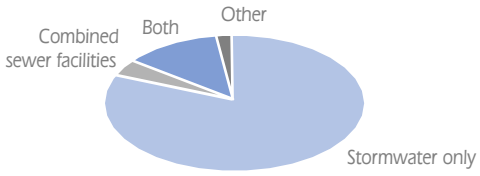


Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.

Operations

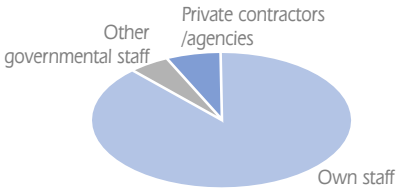
What is your utility responsible for?

81%	Stormwater facilities only
4%	Combined sewer (sanitary/stormwater) facilities
13%	Both
2%	Other



Who provides the majority of your O&M services?

88%	Own Staff
5%	Other Governmental Staff
7%	Private contractors/agencies

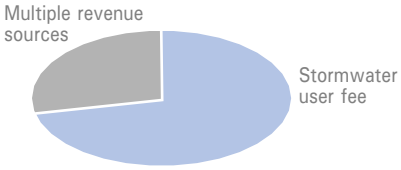


Finance/Accounting

What are your major (at least 90 percent of total income) revenue sources?

(Excludes 7 utilities that reported no single major source)

72% Stormwater user fee
28% Multiple revenue sources



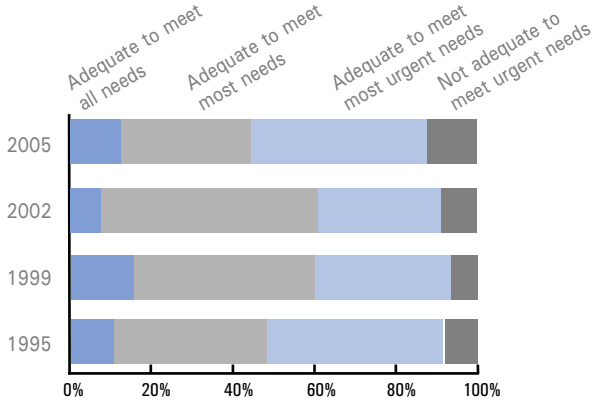
How adequate is available funding?

13% Adequate to meet all needs
2002 = 8% • 1999 = 16% • 1995 = 11%

32% Adequate to meet all needs
2002 = 53% • 1999 = 44% • 1995 = 38%

43% Adequate to meet most urgent needs
2002 = 30% • 1999 = 34% • 1995 = 44%

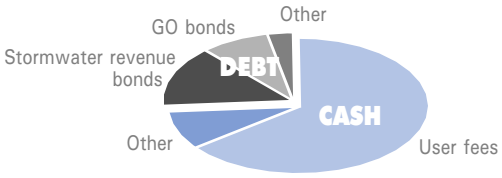
12% Not adequate to meet urgent needs
2002 = 9% • 1999 = 6% • 1995 = 7%



How is the majority of capital improvement needs financed?

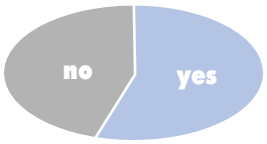
74% Cash financed
- 65% From user fees
- 0% From ad valorem taxes
- 9% Other

26% Debt financed
- 14% Stormwater revenue bonds
- 9% General obligation bonds
- 0% Combined bonds
- 3% Other



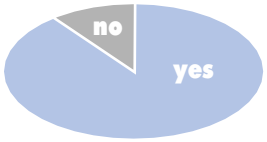
Does your accounting system permit cost tracking by operating activity (e.g., inlet cleaning)?

55% Yes
45% No



Does your accounting system identify user fee revenues by customer class (e.g., residential)?

89% Yes
11% No

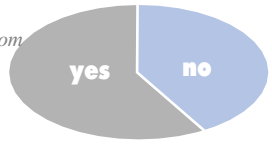


Stormwater User Fees and Billing

Q Were your rates revised in the last 12 months?

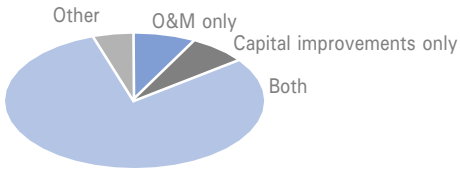
41% No
59% Yes

Increases ranged from 1% minimum to 117% maximum



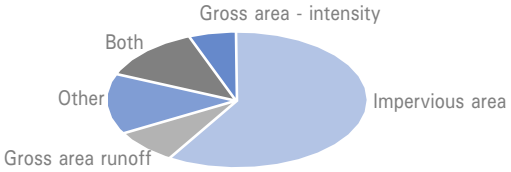
Q What are your user fees designed to pay for?

8% Operation and maintenance (O&M) expenses only
7% Capital improvements only
80% Both O&M expenses and capital improvements
5% Other



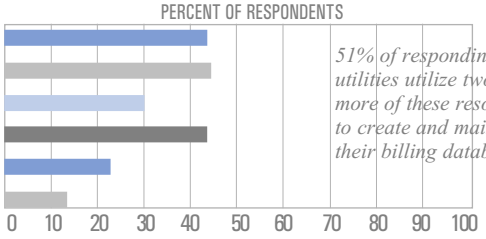
Q What is the basis for your user fees?

59% Impervious area
8% Gross area with intensity of development factor
14% Both impervious and gross areas
13% Other (e.g., number of rooms, water use, flat fee)
6% Gross area with runoff factor

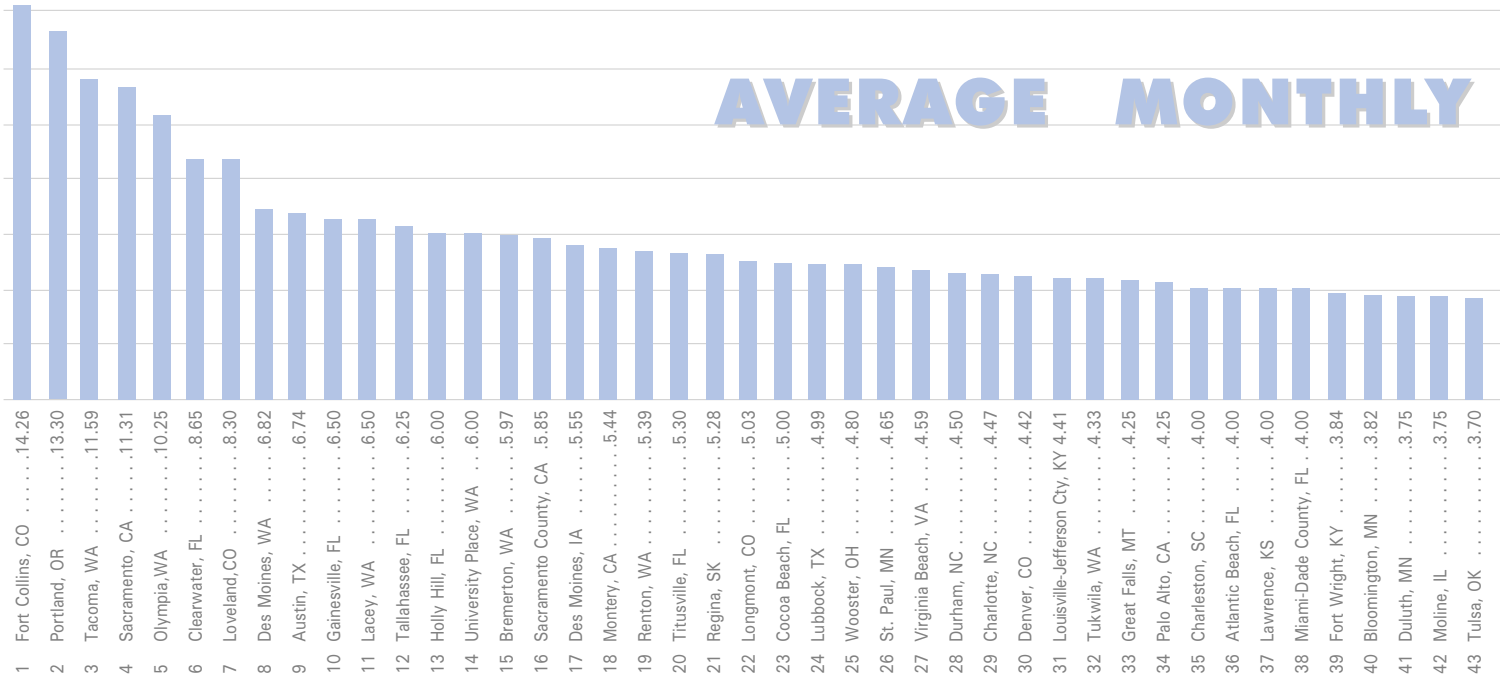


Q If user fees are area-based, what principal resources were employed to create and maintain the customer database used to compute charges?

42% Property tax assessor records
43% Aerial photographs
29% On-site property measurement
42% Geographic Information System (GIS)
22% Planimetric map take-offs
13% Other (e.g., building permits, site plans)



51% of responding utilities utilize two or more of these resources to create and maintain their billing database



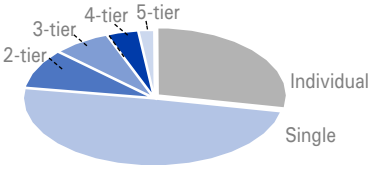
Q Are your stormwater charges based on individual or class average characteristics?

Residential

27% Individual parcel

73% Class average as:

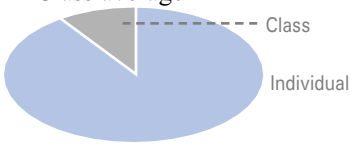
- 48% Single tier
- 9% 2-Tier rate
- 7% 3-Tier rate
- 4% 4-Tier rate
- 2% 5-Tier rate



Non-Residential

90% Individual parcel

10% Class average



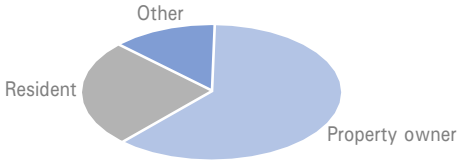
3% of respondents who answered class average did not provide the number of rate tiers.

Q Who is responsible for the payment of user fees?

62% Property owner

25% Resident

13% Other (e.g., water or other utility bill recipient)



Q How frequently do you bill?

56% Monthly

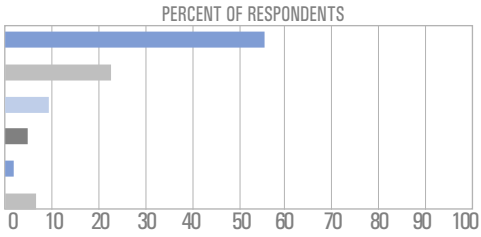
22% Annually

9% Bi-monthly

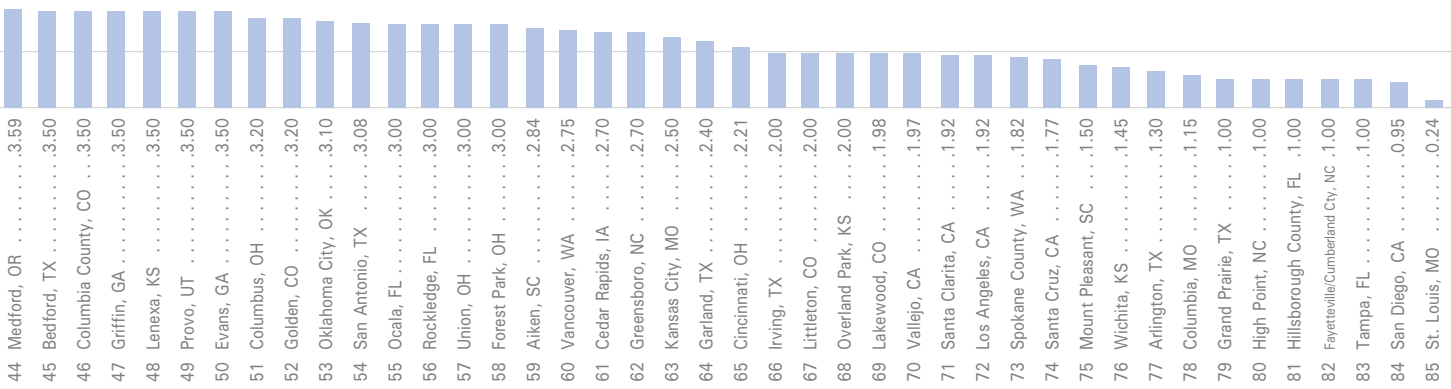
5% Quarterly

2% Semi-annually

6% Other

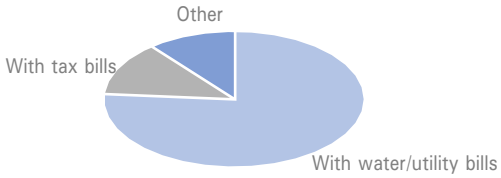


RESIDENTIAL CHARGE



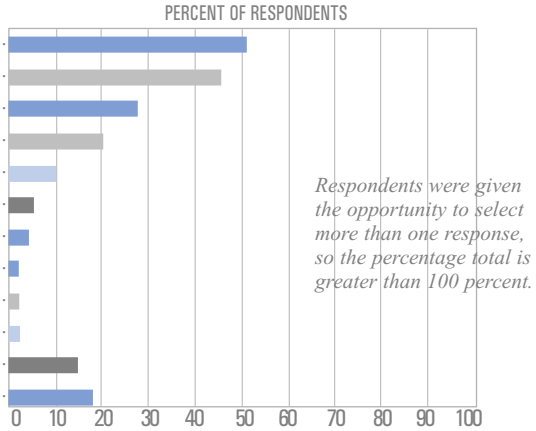
Stormwater User Fees and Billing (continued)

How are your user fees billed?



76% With water or other utility bills
13% With tax bills
11% Other

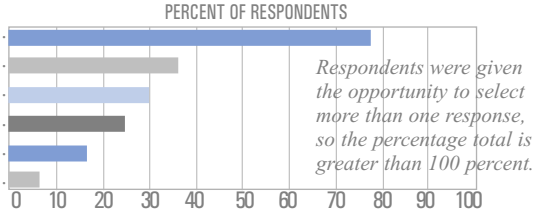
What types of properties are exempt from user fees?



Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.

51% Streets/highways
46% Undeveloped land
27% Rail rights-of-way
20% Public parks
10% Government
5% School districts
4% Churches
2% Airports
2% Colleges/universities
2% Water front
14% None
17% Other

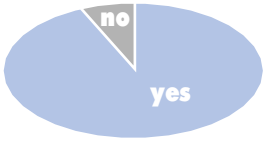
What customer classifications are recognized in your stormwater fee structure?



Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.

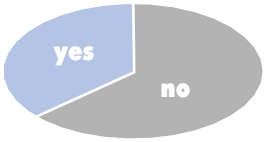
77% Residential
36% Commercial
30% Combined commercial/industrial
25% Other
17% Industrial
7% No designation

Are rates the same for all service areas or watersheds?



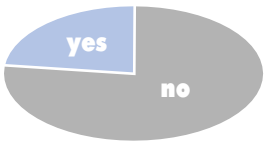
93% Yes
7% No

Are your user fees for single family dwellings the same as for individual multiple residential units, such as apartments and condominiums?



64% No
36% Yes

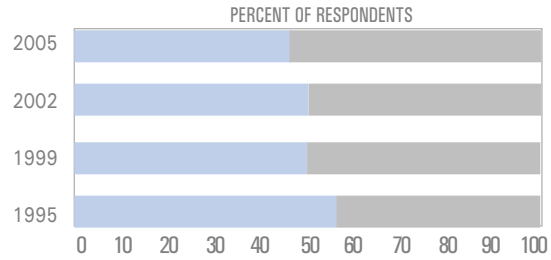
Are one-time impact/capital recovery fees applied to new stormwater utility customers or new development?



77% No
23% Yes

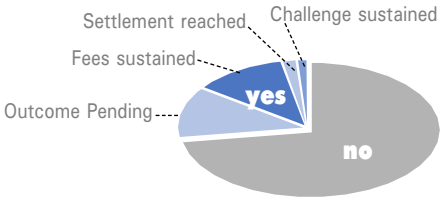
Are credits provided for private detention/retention facilities?

46% Yes
2002 = 53% • 1999 = 50% • 1995 = 57%
54% No



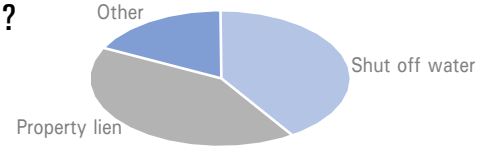
Have your user fees faced a legal challenge?

72% No
28% Yes
12% Outcome pending
12% Fees sustained
2% Settlement reached
1% Challenge sustained (2 later remedied by legislation)



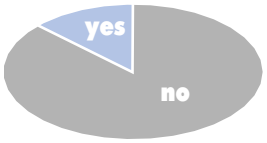
On what basis is payment of your user fees enforced?

41% Lien on property
42% Shut off water
18% Other



Is a significant share of your utility costs attributable to stormwater from outside your service area?

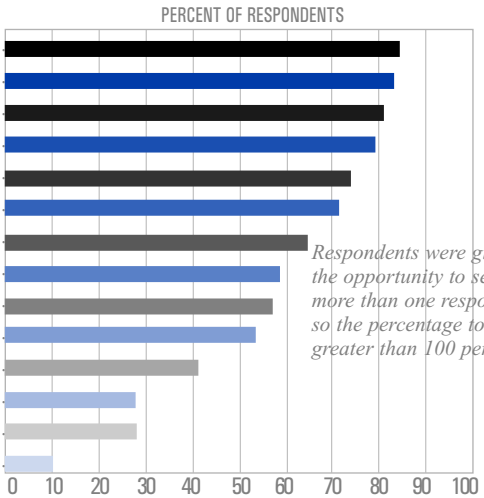
87% No
13% Yes



Quality Issues — Best Management Practices

Which programs and practices are being used to protect or improve water quality?

84% Public education
83% Erosion/sediment controls
81% Street sweeping
79% Detention/retention basins
73% Inlet stenciling
71% Illegal discharge detection
64% Stormwater quality monitoring
59% Public volunteer involvement
58% Residential toxins collection
53% Commercial/industrial regulation
41% Constructed wetlands
28% Lawn herbicide/pesticide control
28% Treatment
10% Other

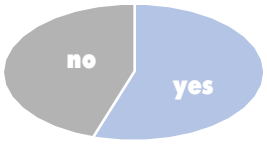


Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.

Quality Issues Best Management Practice (continued)

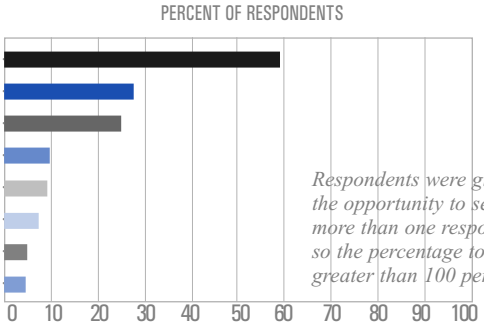
Q Have you installed any stormwater treatment systems in your stormwater conveyance system?

55% Yes
45% No



Devices installed:

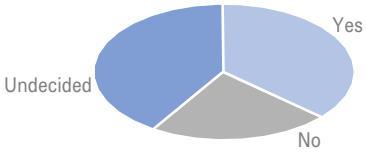
59% Stormceptor
28% CDS Separator
24% StormFilter
9% Downstream Defend
9% Vortechnics
7% Bay Saver
4% Abtech
4% SunTree Technologies



Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.

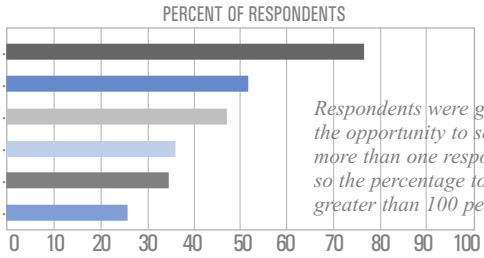
Have these devices met your expectations?

36% Yes
23% No
41% Undecided



Q What contaminants are your greatest concern?

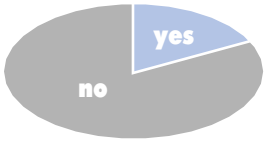
76% Sediments
51% Nutrients
47% Oil and grease
35% Heavy metals
34% Pesticides
25% Other



Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.

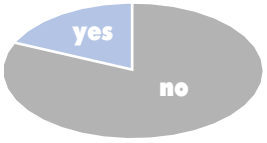
Q Are quality-based user fee credits or other incentives provided to encourage customers to control or reduce stormwater pollution?

18% Yes
82% No



Q Are your user fees specifically designed to provide for the separate recognition and equitable recovery of costs associated with stormwater quality management and quantity(runoff) management, respectively?

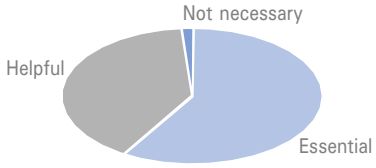
81% No
19% Yes



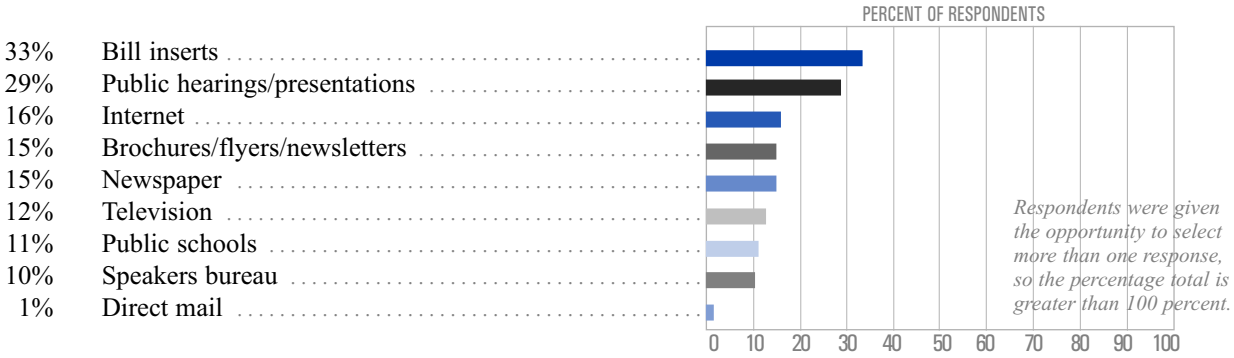
Public Information/Education

How important is an organized public information/education effort to the continuing success of a user fee funded stormwater utility?

59% Essential
40% Helpful
1% Not necessary



What means have you found to be the most effective in educating the public about utility services, program needs and financing, and citizen responsibilities?



Major Challenges Recently Faced

Financial, rate, and billing related issues ..... 19 utilities
(e.g., financing growth, capital replacements, NPDES and other environmental mandates; rate increases, rate equitability, rate challenges; and billing database updating or conversion to GIS)

Weather and flooding issues ..... 10 utilities
(e.g., high amounts of rainfall, standing water, West Nile concerns, localized flooding)

Erosion control ..... 8 utilities
(e.g., run-off, erosion problems)

Regulatory and quality control compliance ..... 8 utilities
(e.g., illicit discharges, quality monitoring, and difficulties of complying with more stringent state and federal quality mandates related to Endangered Species Act, TMDLs, et al.)

Infrastructure planning issues ..... 7 utilities
(e.g., need for integrated flood, quality and environmental planning; remedy of specific infiltration/inflow or local flooding problems; and system-wide flood control master planning)

Jurisdictional issues ..... 3 utilities
(e.g., incorporation of added cities into service area and co-permittee coordination)

Public education ..... 2 utilities
(e.g., need for increased education regarding new programs or rate increases)

Significant Events Affecting Utilities in Past Two Years

NPDES compliance ..... 21 utilities

CIP related (funding, projects started/completed) ..... 14 utilities

User fee related (increases, lack of increases) ..... 14 utilities

Weather related (heavy rains, storms, drought) ..... 8 utilities

Organization/administration/staffing changes ..... 7 utilities

Public education/awareness ..... 4 utilities

Urban growth/decline in service area ..... 4 utilities

Legal challenges ..... 2 utilities

Some respondents listed the same events as positive, negative, or both (e.g., heavy rains or flooding brought both damage and increased public awareness of needs).

Stormwater Management

From run-off to potential revenue stream, stormwater management is uniquely challenging. It is often not source-specific, not metered or monitored closely within the community, and not tied to customers' daily decisions. Black & Veatch's Enterprise Management Solutions team assists utilities nationwide in stormwater management issues to help provide stable funding for operations as well as capital projects.

ABOUT ENTERPRISE MANAGEMENT SOLUTIONS

Black & Veatch is pleased to provide this survey as an industry service. For 90 years, meeting the needs of utilities nationwide has been at the core of our business. We understand the value of knowing how others are addressing the industry's complex issues. From organization effectiveness to financial structuring to risk management, it helps to know the industry's trusted business partner. Black & Veatch brings it all together.

BLACK & VEATCH
building a world of difference™

ENERGY WATER INFORMATION GOVERNMENT

For custom strategies, proven processes and high-value results, contact:
Anna White
Black & Veatch • 11401 Lamar Avenue • Overland Park, KS 66211 USA
Tel: 913-458-4322
Stormwater@bv.com

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ATTACHMENT
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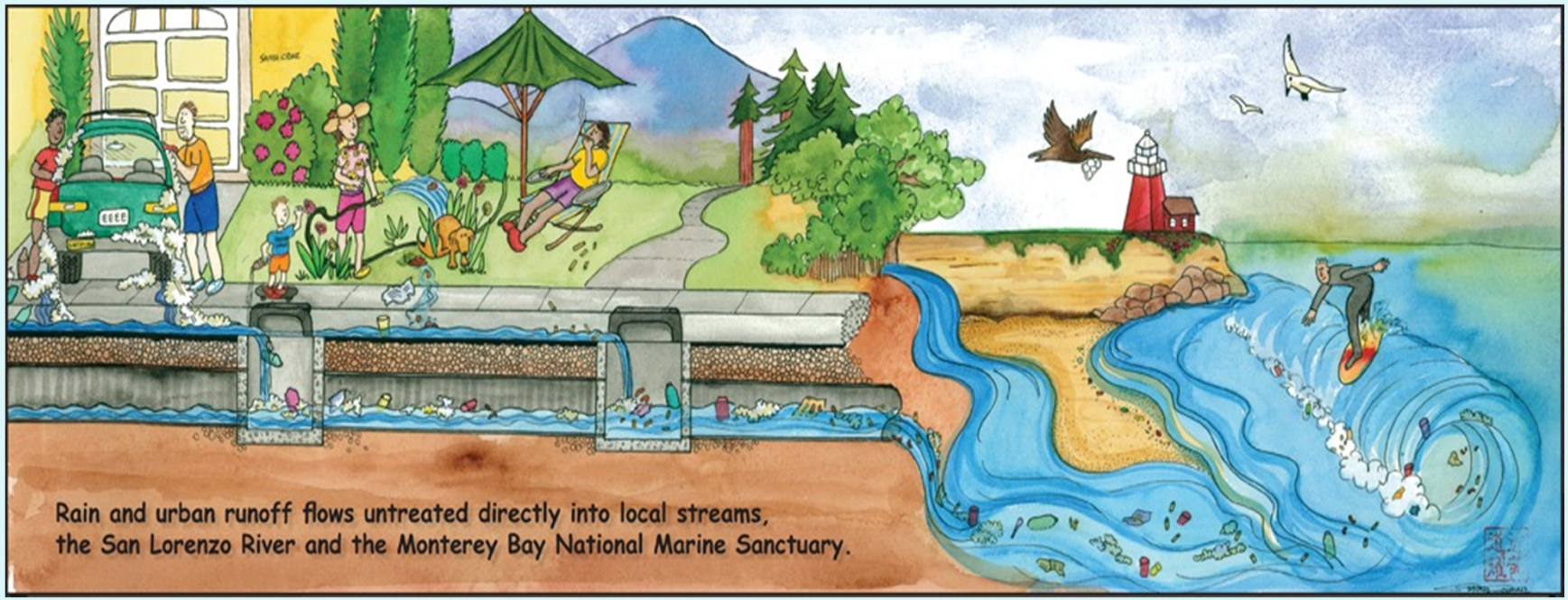
City Storm Water Program and Measure E: Clean River, Beaches and Ocean Fund

FY 2015 Highlights

Dedicated funding for programs
to prevent pollution from reaching our waterways and beaches

Urban Runoff



Rain and urban runoff flows untreated directly into local streams, the San Lorenzo River and Monterey Bay

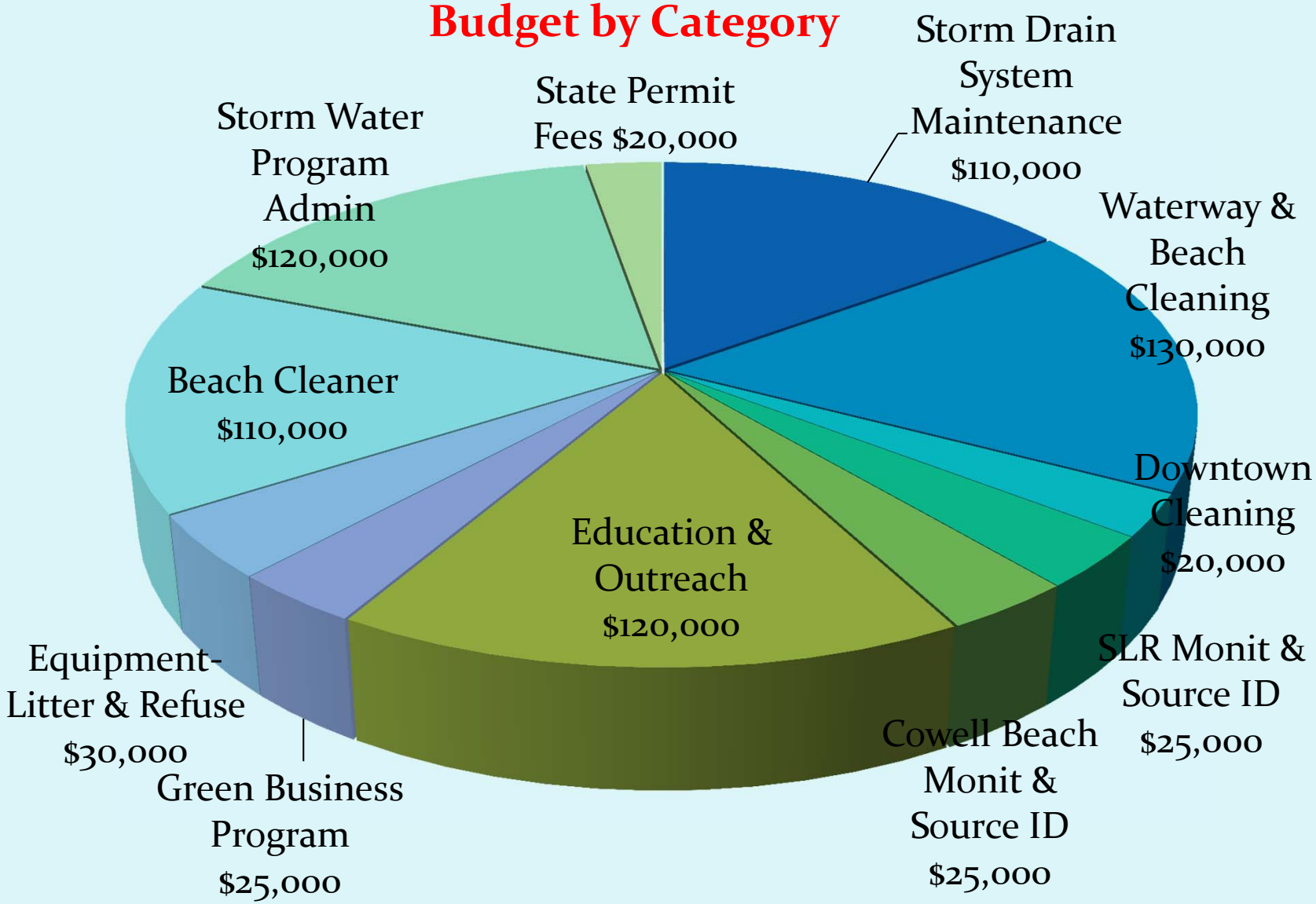
FY 2015 Expenses

- Storm Drain System Maintenance: $110,000
- Waterway & Beach Cleaning: $130,000
- Downtown Cleaning: $20,000
- San Lorenzo River Monitoring & Source ID: $25,000
- Cowell Beach Monitoring & Source ID: $25,000
- Education & Outreach: $120,000
- Green Business Program: $25,000
- Equipment: Litter & Refuse: $30,000
- Beach Cleaner: $110,000*
- Storm Water Program Staff: $120,000
- State Permit Fees=$20,000

Revenue: $630,000 Expenses: $740,000

FY 2015 Expenses

Budget by Category



Municipal Operations

Focus on cleaning:

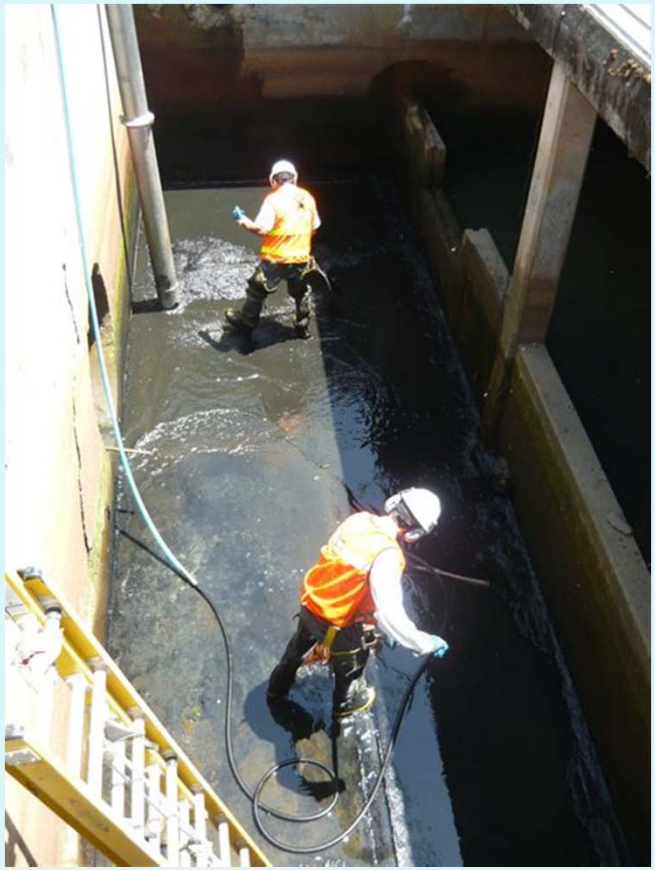
To keep debris & pollutants from flowing into the San Lorenzo River and Monterey Bay

- Storm drain pipelines
- Pump Stations
- River Toe Ditches
- Street Catch basins

Municipal Operations

City Crews clean:

- Storm drain pipelines-9 miles
- River pump stations-5 vaults



Municipal Operations

Storm Drain System Inspection & Cleaning:

- Extensive catch basin inspection & cleaning program. All downtown catch basins plus outlying areas inspected & cleaned.
  - Labor costs
  - Vactor Operation
  - Debris Disposal
  - Televising storm drain lines

Cost: $110,000

Waterway, River Levee & Beach Cleaning

Ongoing Maintenance Efforts:

- San Lorenzo River
  - Parks Temp Staff-$70,000
  - Contracted cleanups-$25,000

  Subtotal: $95,000

- Cowell & Main Beaches
  - Wharf Temp Staff $35,000

Cost: $130,000

Beach Cleaning

Beach Cleaning Machine for Cowell & Main Beaches

Cherrington Beach Cleaner
Cost: $110,000

Waterway, River Levee & Beach Cleaning

Parks Rangers Temp Staff-cleanups & restoration efforts

Cost=$70,000

Municipal Operations

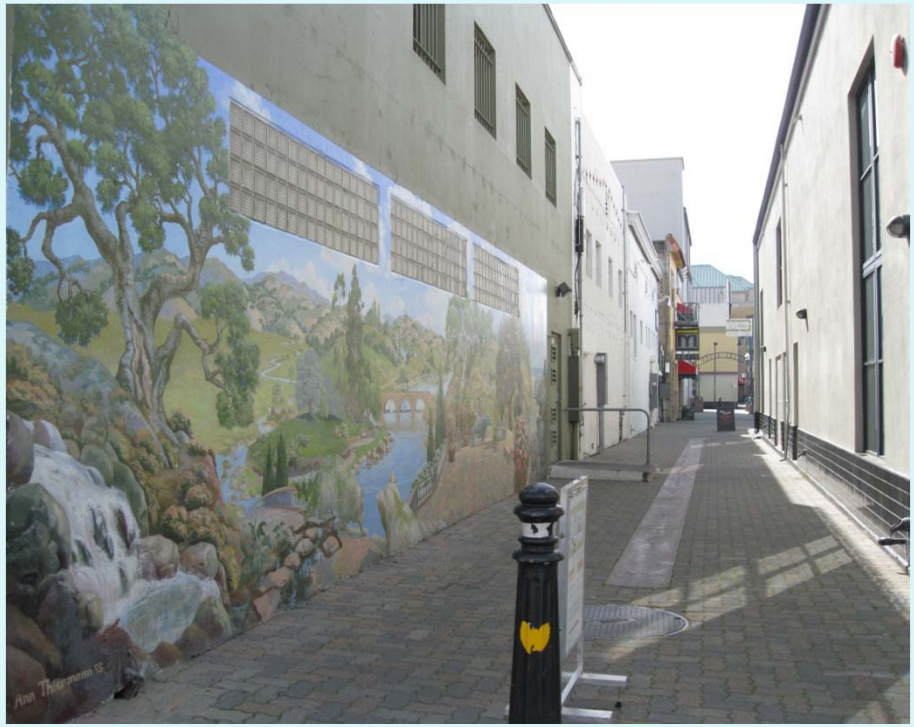
Downtown Cleaning:

Hand Sweeping-Hope Services

Cost=$20,000

Municipal Operations

Downtown Cleaning: Alleyways



Cleaned by contractors

River Levee & Beach Volunteer Cleanups

Save Our Shores:

- San Lorenzo River-Adopt a Levee cleanups
- San Lorenzo River-4 seasonal cleanups
- Annual Coastal Cleanup Day-beach & river cleanups
- July 4th & 5-beach outreach & cleanups
- Disposal of debris

Cost=$25,000

Education & Outreach Program

School Programs:

- O'Neil Sea Odyssey-Field trip & class 4-5th grades
- Save The Whales-K-12th Grade class presentations
- Save Our Shores-Middle & High School assemblies and classes
- ZunZun-Musical Assemblies K-6th grades

Cost=$35,000

Education & Outreach Program

Volunteer Monitoring & Stewardship:

- CWC Snapshot Day
- CWC San Lorenzo River Alliance

Cost=$15,000

Education & Outreach Program

Residential Outreach:

- Arana Gulch Watershed Coordinator
- EA-Our Water Our World: pesticides & herbicides
- EA-Green Gardner Program
- RCD-Low Impact Development
- SW agencies-Region-wide TV ads

Cost=$15,000

Education & Outreach Program

Business Outreach & Recognition:

- City Clean Ocean Business Program
- Monterey Bay Green Business Program
- Green Gardner/ Landscaping Program

Cost=$30,000

Education & Outreach Program

Litter & Illegal Dumping:

Catch Basin Labeling (SOS)

Cost=$10,000

Cigarette Butt "Bait Tank" containers

San Lorenzo River Pollution Prevention

Litter & Illegal Dumping

- Trash/Recycling and Cigarette Butt containers on SLR levee & other areas

Cost=$15,000

SLR Watershed Monitoring

State Total Maximum Daily Load Limits: San Lorenzo River

- **TMDL: Bacteria and Sediment**
- State requires monitoring, remedial measures & reports
- Monitoring of SLR, Branciforte & Carbonera Creeks by City Lab & Env Compliance Program
- Results indicate birds and sediment are primary sources of elevated bacteria levels in SLR
- City is an active partner in the SLRA led by Coastal Watershed Council (staff time, funding, specialized lab work, data sharing)

Cost= $25,000 (Lab)

Cowell Beach

- City participates in Cowell Beach Working Group
- City & County both monitor Cowell Beach
- Results show low bacteria levels during winter months
- Sewer source unlikely since levels not high year round

In 2014, City added caffeine test as indicator of sewage (none found so far)
In 2015, City conducted a preliminary bacteria gradient study

New State Requirements
Outfall Inventory and Sampling

- Staff checked 236 storm drain outfalls
- 26 outfalls had flows during summer and were sampled
- Results showed 1 suspect outfall which led staff to identify a cracked storm drain

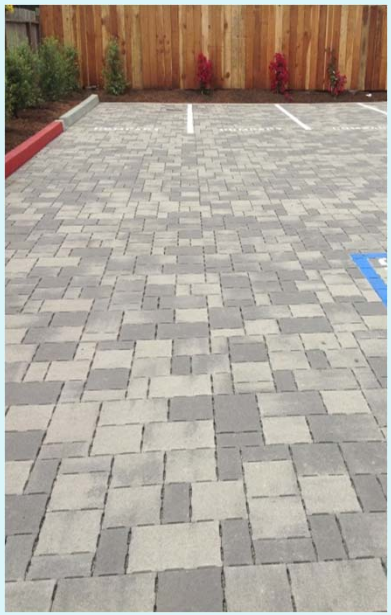
New State Requirements Construction: Erosion Control

- Grading ordinance revised June 2014: Projects need to submit erosion & sediment control plans
- Increased PW and Building staff oversight of construction projects

New State Requirements Development: Low-Impact Design

- New (2014) requirements to collect & infiltrate (sink) storm runoff on property
- Applies to private developments, retrofits, and City projects
- *Examples of LID techniques:*

Pervious Pavement



Bio-retention

Drainage Swale

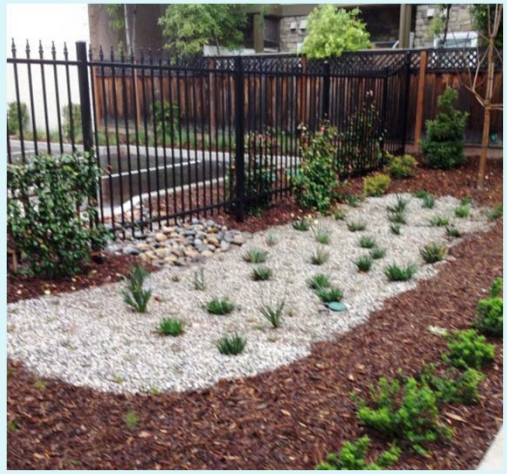
Rain Barrel

Low-Impact Development on Recent Private Projects

Madrone Street (Sports Authority)

Frederick Street (Multi-family)

West Cliff Drive (Multi-family



Low-Impact Development on Recent City Projects

Kaiser Permanente Arena

Wharf Roundabout (not vegetated yet)

Arana Gulch Multi-Use Trail

Tannery Arts New Parking Lot

Grants & Projects

State Prop 84 Grant: Low Impact Development Design & Build Parking Lot #9

- Goal to reduce runoff & pollutant loads to River
- LID to sink rain runoff and divert pollutants into soil

Construction completed August 2015

Grants & Projects

State Prop 84 Grant: Low Impact Development Parking Lot #9

- Sloping & curb cuts to bio-swales redirect 75% of lot runoff

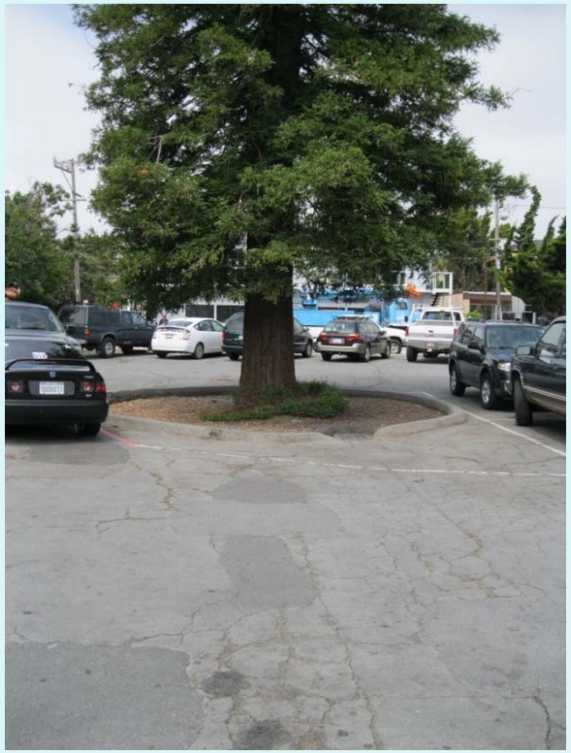
Grants & Projects

Bio-swales installed to sink rain runoff & filter pollutants

Vegetated bio-swale with curb cuts

Grants & Projects

Bio-swales installed to sink rain runoff & filter pollutants



Vegetated bio-swale with curb cuts

Grants & Projects

State Prop 84 Grant: Low Impact Development Design & Build Parking Lot #9

- Lot repaved as part of project
- Match $40,000 from FY14 budget

Grants & Projects

State Clean Beaches Initiative Grant & CIP Project

- Neary Lagoon Storm Drain Improvement Project
- Goal: Reduce bacteria levels at Cowell Beach
- Storm drain pipes exit at Cowell Beach-buried under sand in summer

Neary Lagoon Beach Outlet Vault

Grants & Projects

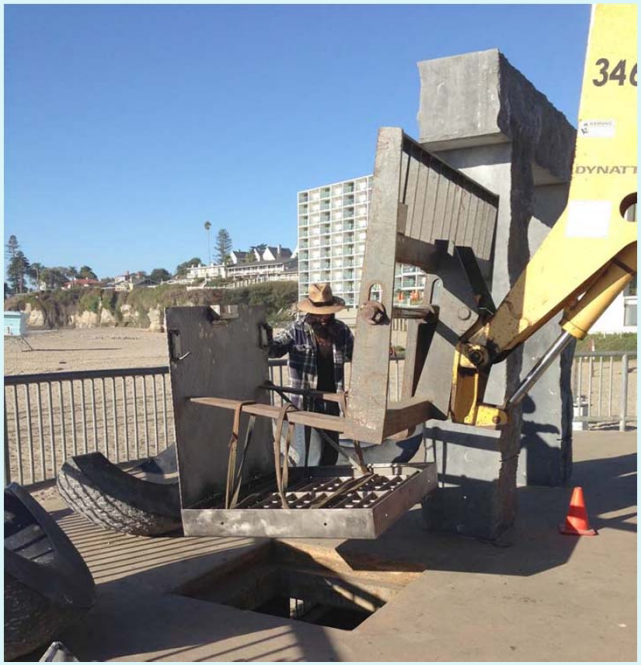
Neary Lagoon

Gates closed in Summer & opened in Winter

Installed Spring 2014

Grants & Projects

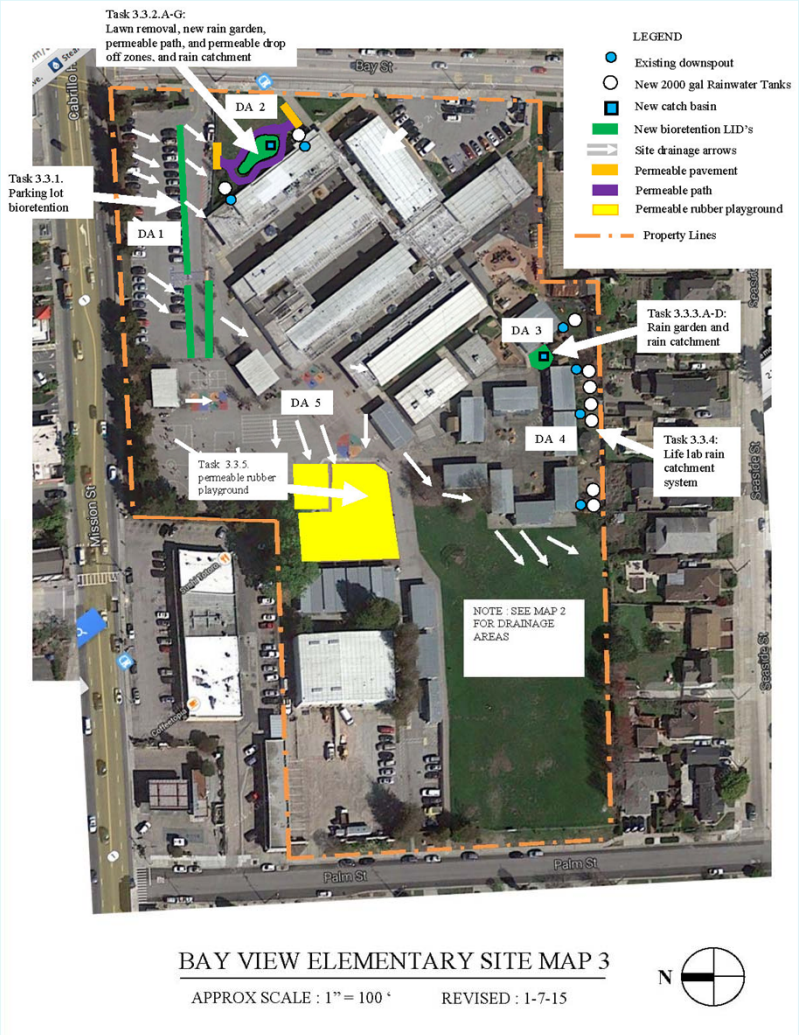
- New hatch at beach outlet vault
- Temp steel plate on gravity pipe opening at beach during summer
- Neary pump station & storm drain lines now cleaned late Spring & Fall



Grants & Projects

State DROPS Grant: Low Impact Design for Schools

- City partnered w/Santa Cruz City Schools and UCSC IDEASS
- $486,000 Grant Awarded to SC City Schools for Bay View Elementary
- Retrofit LID project: Bio-swales, pervious playground, and rain water catchment/cisterns
- City cost $15,000 (FY16) towards large rain garden and educational signage



The End

ATTACHMENT
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Environment

Commercial Sewer Service Charge

Residential Sewer Service Charge

Contact Us

City of San José
Revenue Management – Sewer Billing Unit

200 East Santa Clara Street
4th Floor
San José, CA 95113

Phone: (408) 535-7055

Home > Environment > Utility Services > Stormwater > Storm Sewer Service Charge

Storm Sewer Service Charge

Storm Sewer Service Charge Rate

The Storm Sewer Service Charge rate structure charges users of the storm sewerage system in San José based on the relative quality and quantity of stormwater runoff contributed by residential, commercial, institutional, and industrial properties. The rate structure apportions the costs of storm sewer service to properties in proportion to their relative contribution of flow and pollution to the storm sewer system.

Rates are computed to recover projected costs of the following:

- Stormwater pollution control and permit compliance
- Management, operation, maintenance, and rehabilitation of the storm sewer system
- Improvements to the storm sewer system
- Street sweeping
- Administrative services

Storm Sewer Service Charge rates are reviewed and adjusted annually, as cost and service demand levels change. The current rate structure for storm sewerage services described below became effective July 1, 2011, with San José City Council adoption of Resolution No. 75857 on June 14, 2011. The rates are structured for the estimated cost recovery requirements and the service demand levels of Fiscal Year 2011-12. View the current residential rates and commercial rates.

For Fiscal Years 2013-14, 2014-15, and 2015-16, no rate increases were adopted. Rates maintain at the same level as Fiscal Year 2011-12.

If you have questions regarding rates for storm sewerage service, please call us at (408) 535-7055.

ATTACHMENT
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City of San Clemente Clean Ocean Program & Fee
Frequently Asked Questions

What is the Clean Ocean Program?
It is the City's effort to prevent stormwater and urban runoff pollution from entering the storm drain system and being discharged at the beach.

Why does the City need a Clean Ocean Program?
- To protect the environment (water quality in local channels and coastal waters);
- To protect public health and safety (from bacteria and other pollution that could reach the beach);
- To protect local quality of life (local business/tourism, "beach town" reputation, etc.); and
- To meet State Water Code and Federal Clean Water Act permit requirements issued to South Orange County cities by the State.

Who developed the Clean Ocean Program?
The City prepared an Urban Runoff Management Plan (URMP), which included participation and feedback from the community as well as the City's Coastal Advisory Committee (local citizens appointed by the City Council to consider and provide advice on coastal and water quality issues). The URMP guides the Clean Ocean Program, and outlines activities and projects to meet the State and Federal water quality requirements and protect local water quality.

What does the Clean Ocean Program include?
- *Runoff treatment projects*
  - Poche Beach: A treatment system was constructed and is maintained to filter and kill bacteria in the runoff before it reaches the beach. Construction was completed in March of 2009. The system treats up to 1.1 million gallons per day. Weekly water quality tests indicate that the UV treatment removes between 95% - 99% of the bacteria in the storm drain runoff before it discharges to the beach. The current water quality grade at Poche Beach is an A+.
  - North Beach: A system was constructed to divert dry weather runoff away from North Beach and send it to the City's Water Reclamation Plant for treatment. The system started operating on June 1, 2009. It diverts and filters about 350,000 gallons per day. The current water quality grade at North Beach is an A+.
  - Underground storm drain units were installed to remove trash, oil & grease and sediment from runoff before it gets to the beach. Six units have been installed. They are located near Calafia Beach, in the Pier Bowl area, at the west ends of El Portal, at the end of Linda Lane and at Mariposa. In 2013, 35 cubic yards of material was captured and removed by these units. This is material that would have otherwise have ended up in the ocean.
- *Pollution prevention activities*
  - Street Sweeping: the City sweeps public residential streets twice per month and major streets and business areas about 3 times per week. Over 22,000 tons of material has been collected over the last ten several years, enough to fill 550 large (40 cubic yard) trash bins.
  - Catch Basin Inspection and Cleaning: the City inspects at least 2,205 catch basins annually, cleaning them as needed. In 2013, 2,432 catch basins were cleaned and a total of 914 cubic feet of material was removed.
  - Water Quality Testing: water samples from over 20 locations throughout town are sampled each year to help identify potential problem areas and monitor quality progress over time. Flow measurements are also taken to help measure progress in reducing urban runoff flows.
  - Special Studies: the City consulted with scientists to conduct an in depth investigation to find sources of bacteria in the Poche Beach watershed. A year long study which included molecular

marker testing culminated in focused recommendations and a strategic plan for reducing bacteria at Poche Beach. The final report of the study is located on the Clean Ocean Program website at www.sccleanocean.org.

- Commercial, Industrial and Construction Site Inspections: Inspections of businesses, industrial facilities and construction sites are conducted to make sure these sites are using proper Best Management Practices (BMPs) to prevent pollution from entering the storm drain system and reaching the beach. Over 9,000 inspections have been completed in the last 10 years.
- Spill Cleanups and Storm Drain Maintenance: A 24/7 hotline number (**366-1553**) is in place to respond to and cleanup spills or investigate reported illegal discharges. In addition, the City performs ongoing maintenance to ensure proper function of the storm drain system and inspects all public catch basins annually and removes materials that might be discharge into the system.
- Enforcement of Anti-pollution Ordinances: Dedicated officials enforce water quality laws to identify and correct violations. Depending on the severity of the violation, enforcement may include verbal warnings, written correction orders, and/or fines of $100, $200, or $500 per violation.
- Public Outreach and Education: Efforts promote awareness of stormwater and urban runoff pollution impacts, and ways the public can help prevent this pollution from happening in the first place.

What is the cost of implementing the Clean Ocean Program?
The cost to implement the program is about $2.2 million per year.

What is the cost of not implementing the Clean Ocean Program?
The City could be liable for large fines if the State finds that the City is not meeting the requirements of the stormwater permit regulations. Also, there are potential economic impacts (tourism, real estate values, etc.) if the City does not work to protect its healthy beach town reputation.

How is the Clean Ocean Program funded?
By a Clean Ocean utility fee charged to property owners. The fee is collected as a line item on the monthly utility bill for owners that get water service from the City. The fee is charged monthly but collected via a separate twice-yearly bill to San Clemente property owners that get water service from other providers (e.g. South Coast Water District or Santa Margarita Water District).

Why do property owners get charged the Clean Ocean Fee?
Developed and graded properties contribute runoff to the storm drain system (which includes pipes, channels, drain inlets and street gutters). This runoff contains or picks up pollution before it enters the storm drain, which the City must then address. Since providing storm drain and water quality services is like other utility services provided by the City (e.g. drinking water and sewer service), it is appropriate that property owners pay for the cost of this service.

How long will the continued fee be in effect? When will it end?
If approved by San Clemente property owners, the existing Clean Ocean Fee would be continued for an additional six and one-half (6.5) years, and would expire on June 30, 2020.

How much will the fee increase over the next 6.5 years?
The continued Clean Ocean Fee would be fixed and would not increase over the entire period.

Why are property owners voting on this fee?

Under the provisions of California Proposition 218, property owners must approve new property fees adopted by cities.

What is the change from the existing to the proposed Clean Ocean Fee?

Single Family Residential Monthly Fee		
	Current Fee	**Proposed New Fee**
Private street	$ 4.39	**$ 5.10**
Public street	$ 5.02	**$ 6.23**

Multi-Family Residential Monthly Fee		
	Current Fee (per residential unit)	**Proposed New Fee (per residential unit)**
Private street	$3.51	**$4.08**
Public street	$4.01	**$4.98**

Non-Residential (Commercial, Industrial, Business Park) Monthly Fee		
	Current Fee (per acre or fraction thereof)	**Proposed New Fee (per acre or fraction thereof)**
Private street	$43.90	**$51.00**
Public street	$50.20	**$62.30**
Note: Almost all non-residential streets within the City are public streets.		

Undeveloped, Graded Property Monthly Fee				
	Current Fee		**Proposed New Fee**	
	2 acres or less	*Each acre over 2 add:*	*2 acres or less*	*Each acre over 2 add:*
Private street	$2.20	$0.44	**$2.55**	**$0.51**
Public street	$2.51	$0.50	**$3.12**	**$0.62**
Note: There is no clean ocean fee charge for undeveloped, ungraded parcels.				

Note: Properties on private streets are charged a lower rate since the City doesn't provide street sweeping service on private streets.

How is the fee calculated?
The fee is based on a parcel's expected contribution of runoff, which is determined by an estimate of the impervious area on that parcel. Impervious areas include such things as buildings and pavement, which prevent or restrict storm water from getting into the soil and increase runoff from a parcel.

Why is the existing Clean Ocean Fee being proposed to be continued?
The fee funds a stormwater quality program that the State requires the City to implement. Since the fee was last approved, the State revised and adopted a new stormwater permit for the south Orange County area that contains more rigorous requirements. Also, the State recently adopted new requirements for bacteria pollution for which the City must comply.

What happens if continuation of the existing Clean Ocean Fee is not approved?
If the Clean Ocean Fee is not continued, the City will need to support the Clean Ocean Program with some other funding source. The most likely source would be the General Fund, which would result in about $2 million each year that would not be available for other needed projects and programs within the City.

How and when will the vote occur?
All record owners of property within the City that are directly subject to the proposed fee will receive an official mail-in ballot with a postage paid addressed return envelope. The ballots will be mailed to property owners on October 25, 2013. Return ballots are due on December 10, 2013.

How do I cast my vote?
Simply fill out the ballot and mail or deliver it to the San Clemente City Clerk by the due date noted on the ballot.

How do I get more information?
More information about the proposed fee continuation is available on the City's website at www.sccleanocean.org. You may also call the Environmental Programs Section at (949) 361-8204 or send an email to cleanwater@san-clemente.org.

What's the difference between storm drains and sewers – doesn't it all get treated?
Like most other cities, the City of San Clemente owns and operates a storm drain system, which is the network of channels and pipes that collect stormwater and urban runoff and discharges it into the ocean. Unlike sewer systems that send sewage to a treatment plant before being discharged, most storm drain systems, including the City's, were built to collect and convey runoff to prevent flooding but not to treat urban water runoff. Therefore, any pollutants that runoff carries into the storm drain system are discharged untreated along the City's shoreline.

Do other cities have a Clean Ocean Program?
They may call it something else, but all cities in the urbanized areas of Southern California are required by the State to implement stormwater and urban runoff programs to prevent discharges of pollution to creeks, rivers and the ocean.

How do we know that the Clean Ocean Program is working?
- The City records amounts of trash picked up by street sweepers and removed from underground treatment devices.
- Larger treatment projects include monitoring to compare water quality before and after treatment.
- The City tracks the number of enforcement actions and inspections to document these efforts.

Why should San Clemente property owners pay to clean up pollution from upstream cities?
Unlike most cities in Southern California, San Clemente's city boundary is very similar to the local watershed boundary. This means that San Clemente is a self-contained watershed, and that there are no upstream cities that contribute pollution through our local watershed. So the pollution in our storm drains comes from San Clemente properties, and not from out-of-town areas.

How can I help?
To learn about simple tips to help prevent urban runoff pollution, please visit www.sccleanocean.org or www.ocwatersheds.com.
To learn about potential volunteer opportunities (e.g. beach cleanups), please visit www.scwatersheds.com.

ATTACHMENT
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News

Palo Alto proceeds with storm water management fee increase

By **JACQUELINE LEE** | jlee1@bayareanewsgroup.com |
PUBLISHED: August 30, 2016 at 2:48 pm | UPDATED: August 31, 2016 at 7:56 am

PALO ALTO — Money from a proposed increase in storm water management fees would be spent more on operating costs than capital improvements, Palo Alto City Council decided on Monday, reversing a decision made earlier this year.

The council previously approved a resolution calling for a monthly fee of $13.65, up from $13.03.

The breakdown of the increased bill was going to be $6.62 as the base amount and $7.03 for capital improvements. Now, the allocation is reversed so that $7.48 is the base and $6.17 is for improvements.

City staff told council members that initial calculations were off because they were based on fiscal year 2016, rather than 2017, and more money is needed for operating costs.

A public protest hearing on the rate hike is set for Oct. 24. Property owners can file written opposition to the fee increase until then. If a majority does so, then the council has to terminate the fee increase process.

If there is no majority opposition, then the city will conduct a mail ballot election on the fee increase between Jan. 11 and Feb. 28.

If approved, the new fees would go into effect June 1 and generate about $6.9 million in revenue annually for the next 15 years.

In early 2015, the city identified about $37 million worth of capital improvements that are needed.

Property owners currently pay about $12.63 per month in storm drain bills.

Current fees will expire in June. If no action is taken to approve updated fees, then the rates will revert to $4.25, an amount property owners approved in 2005, which city leaders say is not enough to maintain operations.

Email Jacqueline Lee at jlee1@bayareanewsgroup.com or call her at 650-391-1334; follow her at twitter.com/jleenews.

Jacqueline Lee Jacqueline Lee is a reporter covering Palo Alto for the Bay Area News Group. Lee is an LA native and alum of USC Annenberg.

Follow Jacqueline Lee @jleenews

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ATTACHMENT
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Sewer and Storm Water Fees

The charts below provide information on Sewer Fees and Storm Water Fees in the City of Alameda.

SEWER SERVICE FEE, CITY OF ALAMEDA

	FY2016	FY2017 % Increase 3.0%	FY2018 % Increase 3.0%	FY2019 % Increase 3.0%	FY2020 % Increase 3.0%
Single Family ($/month)	**$23.93**	$24.65	$25.39	$26.15	$26.93
Multi-Family ($/month)	**$21.54**	$22.19	$22.86	$23.55	$24.26
Commercial Fixed Charge ($/month) (includes first 730 cubic feet)	**$21.54**	$22.19	$22.86	$23.55	$24.26
Flow-Based Rate ($ per Hundred cubic feet)	**$2.96**	$3.05	$3.14	$3.23	$3.33

STORM WATER FEE, CITY OF ALAMEDA

The Fee is based on the amount of pollution that the City estimates enters the municipal storm water system as a result of the installation or maintenance of impervious surfaces.
2,000 square feet of impervious surface = 1 Impervious Surface Unit (ISU)

The Fee is calculated according to the following formula:
Number of Impervious Surface Units **(ISU)**
multiplied by
Fee per Equivalent Residential Unit **(ERU)**

	Storm Water Fee
Typical Single Family Residential Parcel A typical residential parcel has 5,000 square feet of surface area. 40 percent, or 2,000 square feet, is comprised of impervious surface (1 ISU).	**$56.15** (1 Equivalent Residential Unit fee)
Condominium (per unit) A typical condo unit has 600 square feet of impervious surface area (0.3 ISU).	**$16.85** (0.3 x 1 ERU)

Other parcels with Impervious Surfaces are subject to the Fee based upon stated formula Fee: Number of ISUs **multiplied by** Fee per ERU.

DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

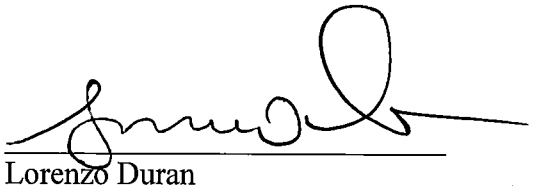
I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On September 27, 2017, I served the:

- **SWRCB and SDRWQCB Comments on the Test Claim filed September 22, 2017**

  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03
  County of Riverside, Riverside County Flood Control and Water Conservation District, Cities of Murrieta, Temecula, and Wildomar, Co-Claimants

By making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.
I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on September 27, 2017 at Sacramento, California.



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Last Updated: 9/21/17

Claim Number: 11-TC-03

Matter: California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

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City of Temecula
City of Wildomar
County of Riverside
Riverside County Flood Control and Water Conservation District

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December 14, 2017

VIA DROP BOX

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Re: *California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016,* 11-TC-03, Filing of Rebuttal Comments

Dear Ms. Halsey:

I am filing herewith the Rebuttal Comments of test claimants Riverside County Flood Control and Water Conservation District, County of Riverside and the Cities of Murrieta, Temecula and Wildomar ("Joint Test Claimants") with respect to the above-referenced Joint Test Claim.

The documents being filed are the Rebuttal Comments, Attachments (1 to 3) in Support of the Rebuttal Comments and Documents in Support of Rebuttal Comments.

Please have your staff contact me if they have any questions with respect to this filing or if there is any difficulty in reading the filing. Thank you.

Very truly yours,

David W. Burhenn

DB:dwb

REBUTTAL COMMENTS OF JOINT TEST CLAIMANTS, CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION, ORDER NO. R9-2010-0016, 11-TC-03

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REBUTTAL COMMENTS OF JOINT TEST CLAIMANTS, CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION, ORDER NO. R9-2010-0016, 11-TC-03

Joint Test Claimants Riverside County Flood Control and Water Conservation District ("District"), County of Riverside and Cities of Murrieta, Temecula and Wildomar (collectively, "Claimants"), herewith file this Rebuttal to the comments of the State Water Resources Control Board and the California Regional Water Quality Control Board, San Diego Region ("San Diego Water Board") (collectively, "Water Boards") and the Department of Finance ("DOF") concerning Test Claim 11-TC-03, *California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016* (the "Joint Test Claim").

This Rebuttal will address each of the comments made by the Water Boards and the DOF concerning the validity of the Joint Test Claim. In summary, the Water Boards contend that Claimants are not entitled to a subvention of state funds for the mandates contained in Order No. R9-2010-0016 (the "2010 Permit") because (a) the mandates were neither "new programs" nor represent "higher levels of service;" (b) the mandates were federal, not state in nature; (c) the 2010 Permit did not impose requirements unique to local agencies and the Claimants voluntarily agreed to the Permit; and (d) Claimants had fee authority to fund the mandates. Water Boards' Comments ("WB Comments") at 9-18. The DOF argues only that the Claimants had fee authority to fund the mandates, and does not otherwise address the validity of the Joint Test Claim. (DOF Comments at 1-2).

These arguments have already been made, and addressed, in other test claims pending before the Commission, including with respect to a municipal stormwater permit also issued by the San Diego Water Board in 2009 to municipalities in South Orange County (California Regional Water Quality Control Board, San Diego Region, Order No. R9-9009-0002, 10-TC-11). These Rebuttal Comments address the comments of the Water Boards and the DOF and demonstrate that their arguments lack factual or legal support and that a subvention of funds for the mandates contained in the Permit is required under article XIII B, section 6 of the California Constitution.

REBUTTAL TO COMMENTS OF WATER BOARDS

I. GENERAL COMMENTS

This section addresses general arguments made by the Water Boards. Most of those arguments are addressed further in Section II below, which responds to comments on each mandate in the 2010 Permit. This section generally addresses a number of misstatements of fact and law in general comments made by the Water Boards (WB Comments at 1-19).

A. *The Supreme Court's Decision in* Department of Finance v. Commission on State Mandates *is Directly Applicable to this Joint Test Claim*

The Water Boards argue (WB Comments at 2-4) that the issues in this Joint Test Claim can be distinguished from the case before the California Supreme Court in *Department of Finance v.*

Commission on State Mandates (2016) 1 Cal. 5th 749 ("*Dept. of Finance*"), the seminal case on what constitutes a state, versus a federal, mandate in determining the existing of an unfunded state mandate. While some of these alleged distinctions are simply irrelevant to this Joint Test Claim,[1] the Water Boards argue that the San Diego Water Board made the findings required under *Dept. of Finance* to establish that "each of the challenged permit terms was *necessary* to comply with the federal requirement that MS4 permits impose controls that reduce the discharge of pollutants to the MEP [maximum extent practicable], and were based entirely on federal authority." WB Comments at 3 (emphasis in original) (footnote omitted). The San Diego Water Board did not in fact make such findings, as will be discussed below.

The holdings in *Dept. of Finance* are directly applicable to this Joint Test Claim, and most particularly the following three holdings:[2]

- *How is a mandate in a stormwater permit to be determined to be a "federal" or a "state" mandate?*

The Supreme Court set forth this test:

> If federal law compels the state to impose, or itself imposes, a requirement, that requirement is a federal mandate. On the other hand, if federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a "true choice," that requirement is not federally mandated.

1 Cal. 5th at 765. In particular, the Court noted the wide discretion afforded the State in determining what requirements would meet the MEP standard. *Id.* at 768.

- *Must the Commission defer to the Water Boards' determination of what constitutes a federal mandate?*

The Supreme Court emphatically refused to grant such deference. The Court found that in issuing the Los Angeles County permit at issue in that case, "the Regional Board was implementing both state and federal law and was authorized to include conditions more exacting than federal law required. [citation omitted]. It is simply not the case that, because a condition was in the Permit, it was, ipso facto, required by federal law." *Id.* at 768. The Court cited as authority its decision in *City of Burbank v. State Water Resources Control Board* (2005) 5 Cal. 4th 613, 627-28,[3] where it held that a federal National Pollution Discharge Elimination System ("NPDES") permit issued by a regional water board (such as the 2010 Permit) may contain State-imposed conditions that are more stringent than federal law requirements.

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[1] For example, the 2010 Permit does not contain a TMDL, or "Total Maximum Daily Load" provision, as alleged in the WB Comments at 3.

[2] *See also* the discussion in Claimants' Section 5 Narrative Statement at 10-15.

[3] Attached in Documents in Support of Rebuttal Comments of Joint Test Claimants ("Rebuttal Documents"), Tab 1.

The Court squarely addressed the Water Boards' argument here that the Commission should defer to the San Diego Water Board's determination that the challenged requirements in the 2010 Permit were federally mandated. Finding that this determination "is largely a question of law," the Court distinguished situations where the question involved the regional board's authority to *impose* specific permit conditions from those involving the question of who would *pay* for such conditions. In the former situation, "the board's findings regarding what conditions satisfied the federal [MEP] standard would be entitled to deference." 1 Cal. 5th at 768. But, the Court held,

> Reimbursement proceedings before the Commission are different. The question here was not whether the Regional Board had authority to impose the challenged requirements. It did. The narrow question here was who will pay for them. In answering that legal question, the Commission applied California's constitutional, statutory, and common law to the single issue of reimbursement. In the context of these proceedings, the State has the burden to show the challenged conditions were mandated by federal law.

Id. at 769.

- *Who Has the Burden of Establishing an Exception to Reimbursement of State-Mandated Costs?*

The Supreme Court placed the burden of establishing that a mandate was federal, rather than state, on the Water Boards. In placing that burden, the Court held that because article XIII B, section 6 of the Constitution established a "general rule requiring reimbursement of all state-mandated costs," a party claiming an exception to that general rule, such as the federal mandate exception in Govt. Code § 17556(c), "bears the burden of demonstrating that it applies." *Id.* at 769.

The Supreme Court concluded that "requiring the Commission to defer to the Regional Board" would "leave the Commission with no role to play on the narrow question of who must pay. Such a result would fail to honor the Legislature's intent in creating the Commission." *Id.* Looking to the policies underlying article XIII B, section 6, the Court concluded that the Constitution "would be undermined if the Commission were required to defer to the Regional Board on the federal mandate question." *Id.*

The only circumstance under which the Court found that deference to the Water Boards' expertise would be appropriate was if a regional board had "found, when imposing the disputed permit conditions, that those conditions were the only means by which the [MEP] standard could be implemented," which must be a "case specific" finding, taking into account "local factual circumstances." 1 Cal. 5th at 768 and n.15. As discussed below, there are no such explicit findings in the 2010 Permit, despite assertions by the Water Boards to the contrary.

The Supreme Court further found that in assessing whether federal law or regulation required the imposition of a particular requirement, it was important to examine the scope of the regulatory language. In discussing inspection requirements in the federal stormwater regulations, for example, the Court rejected the Water Boards' argument that all permit-required inspections

were federally mandated "because the CWA [Clean Water Act] required the Regional Board to impose permit controls, and the EPA regulations contemplated that some kind of operator inspections would be required." *Id.* at 771. In response, the Court held that the mere fact that the federal regulations "contemplated some form of inspections, however, does not mean that federal law required the scope and detail of inspections required by the Permit conditions." *Id.*

This last holding is important for the Commission in assessing the federal versus state character of the specific requirements at issue in the Joint Test Claim. Repeatedly, the Water Boards cite general regulatory language as providing federal authority to impose specific and prescriptive requirements in the 2010 Permit. However, as the Supreme Court held, the existence of general federal regulatory language does not mean that those regulations "required the scope and detail" of the 2010 Permit provisions at issue in this Joint Test Claim.

B. *The 2010 Permit is Not an "MEP" Permit – Its Overriding Compliance Requirement, to Meet Water Quality Standards, is a State Requirement*

The Water Boards contend that since the San Diego Water Board made various general findings relating to the alleged adherence of 2010 Permit requirements to the MEP standard, this showed that the permit requirements at issue in this Joint Test Claim were mandated by federal, not state, requirements. *See, e.g.*, WB Comments at 13-14. In Section II, Claimants demonstrate that the record reflects that these requirements were imposed by the Water Board without any particularized examination of whether the requirements constituted the only way to attain the MEP standard, the Supreme Court's test for affording deference to the Water Boards' claim of this defense to subvention.

But, as importantly, the 2010 Permit itself is not an "MEP Permit," where the MEP standard found in Section 402(p) of the Clean Water Act ("CWA"), 33 U.S.C. § 1342(p)(3)(B)(iii), governs the conduct of the permittees under the 2010 Permit. This is so because, as the San Diego Water Board set forth in the permit language and accompanying Fact Sheet,[4] the permittees were required to meet water quality standards established in State-developed Basin Plans. The decision to require such compliance was an exercise of state, not federal, authority.

1. It is Settled That Under Federal Law, Municipal Stormwater Permittees Must Meet The MEP Standard to Control Pollutants in Discharges From Their MS4s; It is Also Settled That States Have the *Discretion* to Require Adherence to Water Quality Standards By Those Permittees

The CWA prescribes different requirements for NPDES permits covering municipal stormwater permittees and industrial dischargers. The latter are required to have permits requiring discharges to adhere to strict numeric effluent limitations. Thus, if discharges from a steel mill or oil refinery are subject to a permit condition restricting the concentration of a particular pollutant,

[4] Fact Sheets in NPDES permits are required, *inter alia*, to set forth a "brief summary of the basis for the draft permit conditions including references to applicable statutory and regulatory provisions . . . ." 40 CFR § 124.8(b)(4) (Rebuttal Documents, Tab 2).

a monitored exceedance of that pollutant renders the steel mill and refinery in violation of the permit condition and the CWA. *See* 33 U.S.C. § 1342(p) and discussion next below.

Municipal stormwater permits are different. As the United States Court of Appeals for the Ninth Circuit held in *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159 (9th Cir.), the CWA establishes different standards for industrial and municipal stormwater permittees. With respect to the former, because they were required to "meet all applicable provisions of . . . . section 1311 of this title," this meant that industrial discharges were subject to the requirement to meet water quality standard. *Id.* at 1164-65 (industrial discharges "*shall . . . achieve . . . any more stringent limitation*, including those necessary to meet water quality standards, treatment standards or schedules of compliance, established pursuant to any State law or regulation (under authority preserved by section 1370 of this title)" (quoting 33 U.S.C. § 1311(b)(1)(C) (emphasis by Ninth Circuit).

By contrast, the Ninth Circuit noted that the compliance standard for municipal stormwater dischargers was completely different, in that they must "*require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator . . . determines appropriate for the control of such pollutants*." 191 F.3d at 1164 (*quoting* 33 U.S.C. § 1342(p) (emphasis by Ninth Circuit).

The court held that the specific "MEP" language in Section 1342(p)(3)(B) quoted above, the structure of the CWA, as well as previous decisions of the Ninth Circuit, "all demonstrate that Congress did not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C)." 191 F.3d at 1166.

Browner went on, however, to hold that the Administrator of the federal Environmental Protection Agency had *discretion* under the "such other provisions as the Administrator" clause of Section 1342(p)(3)(B)(iii) to require municipal stormwater permittees to meet numeric water quality standards. 191 F.3d at 1166. The Administrator's discretionary power devolves to the states when, as in California, they are authorized under CWA § 1342(b) to issue NPDES permits, such as the 2010 Permit.

2. The 2010 Permit's Overarching Compliance Standard is Not the Federal MEP Requirement But a State-Imposed Requirement to Meet Water Quality Standards

As discussed, the State has the power to mandate that municipalities comply with numeric water quality standards[5] applicable in the receiving waters into which their MS4s discharge. The 2010 Permit in fact requires this, in Section A.3:

[5] This power is not independent, however, of the need to comply with State law in so doing. *City of Burbank, supra,* 35 Cal.4th at 627.

> Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses, water quality objectives developed to protect beneficial uses, and the State policy with respect to maintaining high quality waters) are prohibited.

In addition, the 2010 Permit contained numerous new individual provisions in Section F that required permittees, in the development and execution of various substantive permit programs, to achieve a level of control to prevent "discharges from the MS4 from causing or contributing to a violation of water quality standards." *E.g.*, 2010 Permit Section F.3.d (discussed in Section II.M, below).

While 2010 Permit Finding E.1 states that compliance with water quality standards "is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time,"[6] the permit actually required strict compliance with the water quality standards from the first day of the permit's effectiveness. This strict compliance requirement is clear from the San Diego Water Board's explanation of Finding E.1 in the Fact Sheet:

> While implementation of the iterative BMP process is a means to achieve compliance with water quality objectives for storm water MS4 discharges, it does not shield the discharger from enforcement actions for continued non-compliance with water quality standards. Consistent with USEPA guidance, regardless of whether or not an iterative process is being implemented, discharges that cause or contribute to a violation of water quality standards are in violation of Order No. R9-20120-0016.

Fact Sheet at 90 (footnote omitted).[7]

Thus, the guiding principle and compliance standard for the requirements of the 2010 Permit at issue in this Joint Test Claim is a State-imposed standard requiring achievement of water quality standards, not the federal MEP standard referenced in the WB Comments.

C. *The Mandates in the 2010 Permit Set Forth in the Joint Test Claim Were In Fact New Programs and/or Represented Requirements for Higher Levels of Service*

The Water Boards assert that the 2010 Permit provisions contained in the Joint Test Claim do not impose new programs or require higher levels of service by the Claimants (WB Comments at 9-12). This assertion is belied by the facts and the law.

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[6] This requirement does not reference the MEP standard, and should not, because the requirement even to implement iterative BMPs is one that exceeds the MEP standard, which does not require attainment of water quality standards. Because the 2010 Permit makes that requirement, it exceeds the MEP standard. *See Browner, supra*, 191 F.3d at 1166-67 (finding that a similar requirement in an EPA-issued Arizona NPDES stormwater permit to use BMPs to attain water quality standards was within the EPA Administrator's discretion).

[7] The 1998 "USEPA guidance" referenced in the Fact Sheet was, in light of the *Browner* case decided one year later, erroneous. As a matter of federal law, municipal stormwater discharges do not have to meet water quality standards.

First, as set forth in the Narrative Statement filed in support of the Joint Test Claim dated April 28, 2017 ("Narrative Statement"), the requirements of the 2010 Permit at issue here were new programs because they were not contained in the previous, 2004 MS4 permit issued by the San Diego Water Board. These are the provisions relating to: the removal of categorical exemptions for irrigation runoff, non-stormwater action levels ("NALs"), stormwater action levels ("SALs"), BMP maintenance tracking requirements, new requirements for sediment control and the review of monitoring data at construction sites, requirements relating to best management practices ("BMPs") for unpaved roads, the review of monitoring data in the inspection of industrial/commercial facilities, requirements relating to the retrofitting of existing residential development, requirements to conduct special studies, and various requirements requiring standards of performance for Permit programs. Alternatively, the requirements were new programs through the addition of new obligations to requirements first established in the 2004 Permit. These additional requirements include for watershed water quality workplans and JRMP annual reports.

In Section II, Claimants respond specifically on whether specific 2010 Permit requirements represented a new program or higher level of service. But the following points can be made here.

1. The Mandated Programs Set Forth in the Joint Test Claim Represented "New Programs" as a Matter of Fact and Law

As the Water Boards concede, a "program is 'new' if the local government had not previously been required to institute it." WB Comments at 10-11, citing *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal. App.4th 1176, 1189. As noted above, all of the mandated programs identified in the Joint Test Claim are "new" in that they were not previously required to be performed by Claimants under the previous MS4 permit or were new obligations imposed on existing permit requirements.

Arguing that the requirements of the 2010 Permit were not new programs, the Water Boards cite "more than two decades" of NPDES stormwater permits which included such provisions as management plans, monitoring, reporting, land development, enforcement obligations and the afore-described State requirement "to comply with receiving water limitations and prohibitions through an iterative process." WB Comments at 11. That is not the point. The fact that such permits may have included such programs does not mean that the *specific requirements* of the 2010 Permit at issue in this Joint Test Claim were also included in previous stormwater permits. They were not.

The question is whether such specific requirements were newly mandated through an executive order, *i.e.*, the 2010 Permit. The Commission, in previous test claims, has held that any new requirements not contained in a previous permit, even when those programs were expanding on a program contained in the previous permit, were a new program or higher level of service. *See, e.g., Statement of Decision,* Case No. 07-TC-09, *In re San Diego Regional Water Quality Control Board Order No. R9-2007-0001* ("SD County SOD"),[8] at 53-54 (even though previous MS4 permit required adoption of Model Standard Urban Storm Water Mitigation Plan ("SUSMP") and local SUSMPs, requirement in succeeding permit to submit an Model SUSMP with specific

[8] Rebuttal Documents, Tab 4.

Low Impact Development BMP requirements constituted a new program or higher level of service).

2. The Mandated Programs Identified in the Joint Test Claim Represented Higher Levels of Service on the Claimants

Claimants have previously demonstrated that all of the requirements of the 2010 Permit at issue here represented new programs, eligible for a subvention of funds. Having established this, Claimants need go no further. Yet, to the extent that such requirements instead represented a "higher level of service," this fact also has been established. In the Narrative Statement, Claimants set forth precisely how the requirements of the 2010 Permit at issue were additional to the requirements of the 2004 Permit. These additional requirements imposed separate and additional costs on Claimants, as set forth in the Narrative Statement. These requirements were not simply a reallocation of existing Claimant responsibilities, as the Water Boards argue. WB Comments at 12.

As noted, the Commission has determined that requirements new to a municipal stormwater permit constitute both a new program and a higher level of service. For example, the Water Boards contend that the "iterative" process for improvement of the MEP standard means that higher levels of permit specificity are "consistent" with EPA guidance. WB Comments at 11. The Commission, however, has already rejected a similar argument. In the San Diego County test claim, the DOF argued that since additional permit requirements were necessary for the claimants to continue to comply with the CWA and reduce pollutants to the MEP, they were not new requirements. SD County SOD at 49. In response, the Commission stated that it did "not read the federal [CWA] so broadly" and that "[u]nder the standard urged by Finance, anything the state imposes under the permit would not be a new program or higher level of service." *Id.* The Commission rejected that standard and found that the requirements in question in fact represented a new program or higher level of service. *Id.* at 49-50.

The Water Boards also argue that the "costs incurred must involve programs previously funded exclusively by the state." WB Comments at 11. This argument, and the cited cases, are inapposite to the issues in this Joint Test Claim. For example, *City of San Jose v. State of California* (1996) 45 Cal. App.4th 1802 involved a statute which authorized counties to charge cities and other local entities for the costs of booking persons into county jails. The court determined that the financial and administrative responsibility for the operation of county jails and detention of prisoners had been the sole responsibility of counties even before adoption of the statute. The shifting of responsibility was thus from the county to the cities, not from the state to the cities. *Id.* at 1812. As such, the statute did not represent an imposition of a state mandate. *Id.* Here, the requirements in the Joint Test Claim involve imposition of a mandate by a state agency on local government, *e.g.*, the San Diego Water Board on Claimants.

Similarly, *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264 is inapposite. The court found there that the statute at issue merely reallocated property tax revenues for public education, which for years had been a shared state and local responsibility, and that there was no evidence of any increased costs imposed on local government by operation of the statute. *Id. at* 1283. Again, this Joint Test Claim involves the adoption of specific new

provisions in an executive order which require the Claimants to incur new costs. *See* Narrative Statement at 15-67.

The requirements of the 2010 Permit at issue in this Joint Test Claim represent the imposition of a higher level of service on the Claimants.

D. *The Water Boards Have Not Met the Burden of Establishing That Federal Law Mandated the Requirements in the 2010 Permit*

The Supreme Court has held that the water boards have the burden of establishing that a requirement in a stormwater permit is federally mandated. *Dept. of Finance*, 1 Cal.5th at 769. The Water Boards have not met that burden here.

The Water Boards assert that because the CWA authorized it to "exercise its discretion, as required by federal law" to "meet the MEP standard in this Permit supports the conclusion that the permit provisions are federal, not state mandates." WB Comments at 13. This statement, however, ignores *Dept. of Finance.* It is the very exercise of that discretion (and as discussed elsewhere, the discretion to impose requirements that *exceed* the MEP standard) which the Supreme Court found to be a state mandate.

Additionally, the record does not reflect any finding by the San Diego Water Board that in adopting the 2010 Permit mandates at issue in this Joint Test Claim, the Board found that such mandates represented the *only* method for achieving the MEP standard.

1. The San Diego Water Board's Findings as to the Federal Law Basis for 2010 Permit Requirements Are Not Entitled to Deference

The Water Boards contend that the San Diego Water Board was "exercising its duty under federal law" to adopt the 2010 Permit (WB Comments at 12) and that the Board made a specific finding that "when issuing the Permit, the San Diego Water Board implemented *only federal law."* WB Comments at 13, emphasis in original. The Water Boards then go on to quote various findings in Section E of the 2010 Permit and Fact Sheet, including from a finding stating that "*it is entirely federal authority that forms the legal basis to establish the permit provisions."* WB Comments at 14, emphasis in original. Citing this language, the Water Boards conclude that the "San Diego Water Board made findings in connection with specific challenged provisions, that such provisions were necessary to implement the maximum extent practicable standard." *Id.*

The record, however, does not support this conclusion nor does it reveal findings which meet the Supreme Court's exacting standard for giving deference to a regional board, which requires the board to find that "those conditions were the *only* means by which the maximum extent practicable standard could be implemented." 1 Cal. 5th at 768 (emphasis supplied).

In addition to the fact that the 2010 Permit's compliance standard is not adherence to the federal MEP standard but rather to water quality standards established in a State basin plan (*see* Section I.B.2 above), the language of the 2010 Permit and Fact Sheet establish that *both* federal *and* state law provisions formed the basis for the provisions at issue in this Joint Test Claim. And,

the language cited by the Water Boards (WB Comments at 13-14) as support for the alleged "federal law only" finding is boilerplate, inserted in multiple stormwater permits across the state (*See* Declaration of David W. Burhenn, filed herewith as Attachment 1, and exhibits thereto).

2. The 2010 Permit Recites That It Is Based on Both Federal And State Law

The San Diego Water Board's first finding in the 2010 Permit, Finding A.1, states:

> This Order is based on the federal Clean Water Act (CWA), the *Porter-Cologne Water Quality Control Act (Division 7 of the Water Code, commencing with Section 13000)*, applicable *State* and federal regulations, *all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the State Water Resources Control Board (State Water Board), the Water Quality Control Plan for the San Diego Basin adopted by the San Diego Water Board (Basin Plan)*, the California Toxics Rule, and the *California Toxics Rule Implementation Plan.*

2010 Permit at 1 (emphasis supplied). Each of the italicized authorities in Finding A.1 represents *California*, not *federal*, authority. *See also* 2010 Permit, Attachment A (setting forth Basin Plan prohibitions pursuant to Water Code § 13243).

In addition to the express language of Finding A.1, further evidence that the 2010 Permit was in fact based on California law is provided in the Fact Sheet. In discussing Finding A.1, the Fact Sheet specifically cites the San Diego Water Board's authority under both federal *and* state law to adopt the Permit. As to state law authority, it states:

> Porter-Cologne (section 13240) directs the Regional Water Boards to set water quality objectives via adoption of Water Quality Control Plans (Basin Plans) that conform to all State policies for water quality control.
>
> As a means for achieving those water quality objectives, Porter-Cologne (section 13243) further authorizes the Regional Water Boards to establish waste discharge requirements (WDRs) to prohibit waste discharges in certain conditions or areas. . . . The Order will renew Order No. R9-2004-001 to comply with the CWA *and attain water quality objectives in the Basin Plan. . . .*

Fact Sheet at 20 (emphasis supplied). The Porter-Cologne Water Quality Act ("Porter-Cologne Act"), Water Code § 13000 *et seq.*, was adopted, *inter alia*, to protect the quality of the waters of the state. Water Code § 13000.[9]

The italicized reference to the Basin Plan, a State-required water quality control plan for the San Diego region, reflects again that the 2010 Permit was adopted to meet both California and federal requirements, not simply the latter. Moreover, Fact Sheet Section VII, discussing the legal authority for the 2010 Permit, cites as authority California Water Code § 13377, which provides that when a regional board issues NPDES permits, the board can include not only federal requirements but also *more stringent state requirements, i.e.,* "any more stringent effluent

[9] Rebuttal Documents, Tab 3.

standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." Fact Sheet at 19.

As will be discussed in Section II, Water Code § 13377 was frequently cited by the San Diego Water Board as authority for the requirements of the 2010 Permit at issue in this Joint Test Claim.

3. The 2010 Permit Finding E.6 Language Cited by the Water Boards Is Boilerplate Language, Not Entitled to Deference

Despite textual evidence that the 2010 Permit is based on both federal and state law, the Water Boards contend that language found in Finding E.6 is entitled to deference. Permit Finding E.6 begins: "This Order does not constitute an unfunded local governmental mandate subject to subvention under Article XIIIB, Section 6 of the California Constitution" and then lists five arguments in support. 2010 Permit at 14.

This finding is entitled to no deference or weight for several reasons. First, as noted above, *Dept. of Finance* explicitly rejected the Water Boards' contention that board findings on whether a requirement is federal or state are entitled to deference: "We also disagree that the Commission should have deferred to the Regional Board's conclusion that the challenged requirements were federally mandated." 1 Cal. 5th at 768. "The State's proposed rule, requiring the Commission to defer to the Regional Board, would leave the Commission with no role to play on the narrow question of who must pay. Such a result would fail to honor the Legislature's intent in creating the Commission." *Id.* at 769.

Second, the Water Boards' argument (and the finding) ignore the Commission's exclusive jurisdiction to determine if a mandate is entitled to reimbursement under article XIII B, section 6. Govt. Code § 17552; *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 333.

Third, the finding (and the longer explanation contained in the Fact Sheet at 93-95) does not refer to, nor appear to be based on, the specific requirements of the 2010 Permit. The San Diego Water Board made no reference to evidence in the record to support the finding. Instead, the finding repeated, almost word for word, findings placed in other municipal stormwater permits issued across the state. For example, Finding E.7 in the municipal stormwater permit issued by the Los Angeles Regional Board to Ventura County dischargers, issued in May 2009 *prior* to the issuance of the 2010 Permit, contains nearly the same language as in the 2010 Permit's Fact Sheet explanation of Finding E.6.[10] The Ventura County permit was not the first where this language appeared. One year earlier, on June 12, 2008, the Central Valley Regional Board incorporated a

[10] *Compare* Ventura County Municipal Separate Storm Sewer System Permit, Order No. 09-0057, Finding E.7 (pages 11-13) *with* 2010 Permit Fact Sheet at 93-95. An excerpt of the permit is attached as Exhibit A to the Declaration of David W. Burhenn ("Burhenn Dec."), attached hereto as Attachment 1. As with all such exhibits, the Commission may take administrative notice of this evidence pursuant to Evidence Code § 452(c) (official acts of the legislative departments of any state of the United States) (Rebuttal Documents, Tab 3), Govt. Code § 11515 (Rebuttal Documents, Tab 3) and Cal. Code Regs., tit.2, section 1187.5, subd. (c).

finding in the municipal stormwater permit for the City of Modesto that again tracks with the discussion of Finding E.6 in the Fact Sheet.[11]

Other water boards have inserted this same language. In the municipal stormwater permit issued by the San Francisco Bay Regional Board for San Francisco Bay municipalities (as revised in 2011), the Fact Sheet discussion of why the Permit "does not constitute an unfunded local government mandate" is again nearly the same as the Fact Sheet discussion of Finding E.6.[12] A fourth regional board, the Santa Ana Regional Board, adopted a nearly identical discussion in a fact sheet for a permit issued to Riverside County municipalities in early 2010.[13] Finally, a nearly identical finding and fact sheet discussion was adopted by the San Diego Water Board in a municipal stormwater permit issued to dischargers in Orange County in 2009.[14]

This pattern establishes that Finding E.6, despite the claims made for it by the Water Boards, is not based on any specific San Diego Water Board determination as to the alleged federal mandate requirements of the 2010 Permit, but rather was a boilerplate finding inserted by regional boards across the state.

For all of these reasons, Finding E.6 is not the kind of specific finding which the Supreme Court identified in *Dept. of Finance* as one as to which the Commission should defer, *i.e.,* where a regional board finds that the requirements "were the only means by which the maximum extent practicable standard could be implemented" a case specific finding taking into account local circumstances. 1 Cal.5th at 768 and n.15.

4. The Lessons of *Dept. of Finance* Apply as Well to the Requirement to Effectively Prohibit the Discharge of Non-Stormwater into MS4s

The Water Boards contend (WB Comments at 15) that *Dept. of Finance* was limited to a consideration of the MEP standard as it applied to trash receptacle and inspection requirements in a Los Angeles County MS4 permit. Thus, they argue, the holdings in that case do not extend to

[11] *Compare* Waste Discharge Requirements for City of Modesto, Order No. R5-2008-0092, Finding 30 *with* 2010 Permit Fact Sheet at 93-95. An excerpt of this permit is attached as Exhibit B to the Burhenn Dec., attached hereto.

[12] *Compare* Fact Sheet, Municipal Regional Stormwater Permit, Order No. R2-2009-0074 (as revised November 28, 2011), Pages App I-12 to 14 *with* 2010 Permit Fact Sheet at 93-95. An excerpt of this fact sheet is attached as Exhibit C to the Burhenn Dec., attached hereto.

[13] *Compare* Order No. R8-2010-0033, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside County within the Santa Ana Region, Finding B.10, *with* 2010 Permit Fact Sheet at 93-95. An excerpt of this permit is attached as Exhibit D to the Burhenn Dec., attached hereto.

[14] *Compare* Order No. R9-2009-0002, Water Discharge Requirements for Discharges of Runoff from the Municipal Separate Storm Sewer Systems (MS4) Draining the Watershed of the County of Orange, The Incorporated Cites of Orange County, and The Orange County Flood Control District Within the San Diego Region ("OC Permit"), Finding E.6, *with* 2010 Permit Finding E.6 and *compare* OC Permit Fact Sheet, pages 91-92 *with* 2010 Permit Fact Sheet at 93-95. An excerpt of this permit and fact sheet are attached as Exhibit E to Burhenn Dec., attached hereto.

the federal CWA requirement that MS4 permittees effectively prohibit the discharge of non-stormwater to the MS4.

This argument, however, ignores both the plain language of *Dept. of Finance* and how the Supreme Court derived the test for when a mandate is federal, as opposed to state. The Court derived its test from three unfunded mandates cases, none of which involved stormwater permits, *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, *County of Los Angeles v. Commission on State Mandates* (1995) 32 Cal. App. 4th 805 and *Hayes v. Commission on State Mandates* (1992) 11 Cal. App. 4th 1564. *Dept. of Finance,* 1 Cal. 5th at 765 ("From *City of Sacramento, County of Los Angeles, and Hayes,* we distill the following principle").

The Supreme Court's statement of that principle, that if "federal law gives the state discretion whether to impose a particular implement requirement, and the state exercises its discretion to impose the requirement by virtue of a 'true choice,' the requirement is not federally mandated," is without any linkage to stormwater permit requirements, much less the specific MEP standard. And, to illustrate the principle, the Court went on to cite yet another non-CWA case, *Division of Occupational Safety & Health v. State Bd. Of Control* (1987) 189 Cal. App. 3d 794.[15]

It is thus incorrect for the Water Boards to argue that "the Supreme Court decision has limited application when the federal standard compelling a challenged permit provision is wholly separate from the MEP standard and those specific implementing regulations." WB Comments at 15. To the contrary, the Supreme Court spoke broadly and in light of existing mandates jurisprudence when it formulated its test. That test is as applicable to provisions allegedly justified by the "effective prohibition" requirement for non-stormwater as it is to requirements allegedly based on the MEP standard.

5. The One EPA-Issued Permit Cited by the Water Boards Does Not Support the Water Boards' Argument that the Mandates in this Joint Test Claim are Federally Mandated

The Water Boards further contend (WB Comments at 15-16) that U.S. EPA has "issued permits requiring substantially similar provisions" to some of the mandates in the Joint Test Claim, thus demonstrating that "[i]f the State had not issued the Permit, the U.S. EPA would have done so," and that "the San Diego Water Board effectively administered federal requirements concerning permit requirements."

The Water Boards made a similar argument before the Supreme Court, and it was rejected:

> [T]he State contends the Permit itself is the best indication of what requirements *would have been imposed* by the EPA if the Regional Board had not done so . . . .
>
> We disagree that the Permit itself demonstrates what conditions would have been imposed had the EPA granted the Permit. In issuing the Permit, the Regional Board was implementing both state and federal law and was authorized to include conditions more exacting than federal law required.

[15] Rebuttal Documents, Tab 1.

Dept. of Finance, 1 Cal. 5th at 768 (emphasis in original). As discussed above, the 2010 Permit explicitly incorporates both federal and state authority as the basis for its provisions.

Moreover, as set forth in the Declaration of Karen Ashby filed herewith and the exhibits thereto (Attachment 3 to these Rebuttal Comments), the specific mandates in the Joint Test Claim are *not* contained in the one permit cited by the Water Boards, one covering stormwater discharges in the District of Columbia ("D.C. permit"). The Supreme Court rightly cited the lack of such evidence as undermining "the argument that the requirement was federally mandated." *Id.* at 772. The non-applicability of the requirements of the D.C. permit, and other permits issued by the U.S. EPA, to the specific mandates set forth in this Joint Test Claim are discussed in Section II below.

Similarly, the inclusion by the Water Boards (WB Comments at 16) of comments from a letter written by an EPA official does not mean that the Commission must be guided by such comments in their determination of the MEP issue. In fact, that same letter was mentioned by the Supreme Court in *Dept. of Finance* (1 Cal. 5th at 761). The letter proved unpersuasive to the Supreme Court. It is unpersuasive when cited by the Water Boards now.[16]

E. *The 2010 Permit Imposed Unique Requirements on Local Agencies*

The Water Boards argue that the requirements of the 2010 Permit are "not imposed uniquely upon local government." WB Comments at 16. This is a remarkable statement, given that the Commission previously has held that such permits do in fact impose unique requirements on local agencies. *See* SD County SOD at 36 (regarding municipal stormwater permit issued to San Diego County and cities therein). The 2010 Permit, issued as it is only to local agencies operating MS4s (an acronym which stands for "*municipal* separate storm sewer systems"), and whose scope applies only to such local agencies (*see* 2010 Permit, Finding B), is an executive order applying uniquely to local agencies.

F. *The 2010 Permit Was Not Voluntary*

Another argument made by the Water Boards which has been previously rejected by the Commission is that the obtaining of the 2010 Permit by Claimants was somehow "voluntary." WB Comments at 17.

The issuance of the 2010 Permit was not the result of a voluntary act by the permittees. Under federal and state law, all operators of municipal storm sewer systems are required to have an NPDES permit and/or Waste Discharge Requirements issued by the Regional Board.[17]

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[16] The Water Boards argue, in a single sentence and without citation to any evidence, that the costs to implement the mandates at issue in the Joint Test Claim "are *de minimis"* and therefore not entitled to subvention. WB Comments at 16. As a matter of fact, the actual costs to implement those mandated requirements are not *de minimis. See* Section 6 Declarations filed in Support of Joint Test Claim, at Paragraphs 5(a)-(m).

[17] 33 U.S.C. § 1342(p); Water Code §§ 13260, 13263, 13376 and 13377. See also 40 CFR §§ 122.21(a) and 123.25(a)(4) (requiring any person who discharges or proposes to discharge pollutants to submit an application for issuance of a permit). An NPDES permit is required where there is a discharge of a pollutant

As the Commission found in the test claims on the 2001 Los Angeles Regional Water Quality Control Board permit (*Statement of Decision,* Case Nos. 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21, *In re Los Angeles Regional Water Quality Control Board Order No. 01-182* ("LA County SOD"),[18] at 19-21) and the 2007 San Diego Regional Water Quality Control Board permit for the County of San Diego and certain cities contained therein (SD County SOD at 33-35), municipal stormwater permittees do not voluntarily participate in the NPDES permit and therefore the content of prescriptive permit conditions imposed by regional boards were not the result of the permittees' discretion.

There is no support for the Water Boards' argument, as the Commission previously has found.

G. *Claimants Lack Fee Authority to Fund the Mandates at Issue in the Joint Test Claim*

The Claimants respond to the funding arguments made by the Water Boards on pages 18-19 of the WB Comments in the Response to the Comments of the DOF and the Water Boards' Regarding Fund Issues ("Funding Rebuttal"), below.

II. SPECIFIC RESPONSES

Below, Claimants respond to the Water Boards' comments on the specific provisions of the 2010 Permit at issue in the Joint Test Claim. While the individual provisions raise individual issues, the common themes discussed in Section I apply equally to the discussion of these provisions:

- The 2010 Permit is not an "MEP Permit," and instead enforces a State-imposed requirement for compliance with water quality standards;
- The mandates at issue in the Joint Test Claim represent new programs and/or higher levels of service imposed on Claimants;
- The findings made by the San Diego Water Board in adopting the 2010 Permit as to its allegedly federal character are not entitled to deference under the Supreme Court's test in *Dept. of Finance*;
- The 2010 Permit is an order imposing unique requirements on local agencies and was not entered into voluntarily by Claimants; and
- Claimants do not have fee authority to fund the mandates at issue in the Joint Test Claim.

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from a "point source" to a water of the United States. 33 U.S.C. § 1342(a). Copies of statutes and regulations not originally submitted with the Joint Test Claim are included in Tabs 2 and 3 of the Rebuttal Documents.

[18] Rebuttal Documents, Tab 4.

A. *Removal of Categories of Irrigation Runoff from Non-Prohibited Non-Stormwater Discharges*

Section B.1 of the 2010 Permit provides that the Claimants must effectively prohibit all types of non-stormwater discharges into their MS4. Section B.2 sets forth several categories of non-stormwater discharges which are excepted from this prohibition, but no longer includes three categories of irrigation runoff which had been excepted under the 2004 Permit: landscape irrigation, irrigation water, and lawn water.

1. The Removal of Categories of Irrigation Runoff Was Not Federally Mandated

The federal stormwater regulations require a permit application to contain a description of a program to implement and enforce an ordinance, orders or similar means to prevent "illicit discharges" to the MS4. Under the regulation, however, certain categories of non-stormwater discharges or flows need be addressed only "where such discharges are identified by the municipality as sources of pollutants to waters of the United States. 40 CFR § 122.26(d)(2)(iv)(B)(1). Included in these exempt categories are "landscape irrigation," "irrigation water," and "lawn watering." *Id*.

The Water Boards contend that Claimants identified landscape irrigation, irrigation water and lawn watering as sources of pollutants to waters of the United States, citing the County of Riverside's "Only Rain in the Storm Drain" educational program. WB Comments at 20. The Water Boards also rely on a state statute, the Water Conservation and Landscaping Act, Govt. Code § 65591 *et seq*. ("A.B. 1881").[19]

The evidence cited by the Water Boards does not support a finding that the Claimants identified irrigation waters as a source of pollutants of waters of the United States. As set forth in the Narrative Statement at 17, the "Only Rain in the Storm Drain" educational outreach materials were prepared as a preventative measure, to educate the public and prevent these discharges from becoming problematic. These materials were not specific to the Santa Margarita River watershed covered by the 2010 Permit, and nothing in these materials constituted a finding that irrigation waters were a source of pollutants to waters of the United States in this watershed.

Indeed, in comments submitted to the San Diego Water Board in response to this proposed finding, the permittees stated that they had not identified these irrigation waters as a source of pollutants or conveyance of pollutants to waters of the United States.[20] Indeed, Claimants noted that the Santa Margarita Region is an ephemeral watershed that includes Marietta and Temecula Creeks which in some places the flow is continuous but in others it is ephemeral. *Id*. These educational materials were not a finding that these irrigation waters were a source of pollutants to waters of the United States in the watershed.

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[19] Rebuttal Documents, Tab 3.

[20] *See* Comments of District on behalf of all permittees on Tentative Order No. R9-2010-0016, September 7, 2010 ("District Comment Letter"), Attachment 6, at 2 (attached as Tab 6 to documents in support of Joint Test Claim, filed November 10, 2011).

The Water Board's citation to A.B. 1881 is inapposite. This is a state statute, not an identification of a source of pollutants by Claimants, and therefore does not fall within the ambit of 40 CFR § 122.26(d)(2)(iv)(B)(1) ("where such discharges are identified by the municipality as sources of pollutants"). Moreover, A.B. 1881 was enacted to facilitate water conservation, not stormwater pollution. As the Legislature stated in its findings and declarations in support of the Act, "It is the policy of the state to promote the conservation and efficient use of water and to prevent the waste of this valuable resource." 2006 Cal. Stats. Ch. 559 sec. 3. Accordingly, this statute is not evidence that the Claimants found irrigation waters to be a source of pollutants to waters of the United States in the Santa Margarita watershed.

Indeed, A.B. 1881 specifically recognized that it may be imposing a state mandate. "If the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to [Government Code § 17500 et. seq.]."[21] 2006 Cal. Stats. Ch. 559 sec. 6.

Moreover, there is additional evidence demonstrating that this requirement is not federally mandated. First, the federal stormwater regulation requires that if there is a finding of a significant pollutant source, the Claimants must *address* the discharge. *See* Narrative Statement at 18. This can be done through public information and education or other means. The regulations do not require a strict prohibition of such discharges. By mandating that Claimants must prohibit these discharges, the San Diego Water Board usurped Claimants' ability to design their own program and imposed requirements that exceed the federal regulation. *See Long Beach Unified*, 225 Cal.App.3d at 173.

Second, EPA's Guidance Manual indicates that the control of non-stormwater discharges can be directed towards individual dischargers of irrigation waters, not the entire category of irrigation waters (*see* discussion in Narrative Statement at 17). This is evidence that the federal regulations did not compel the Regional Board to address irrigation waters as it did. Instead it was a discretionary decision by the Board. As the Supreme Court found in *Dept. of Finance,* "If federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a 'true choice,' the requirement is not federally mandated." 1 Cal.5th at 765.

Finally, none of the stormwater permits issued by EPA contains this prohibition, including permits issued to Albuquerque in 2014, to Boise in 2012, to Washington D.C. in 2011 (modified in 2012) to Boston in 1999 and Worcester in 1998. *See* Declaration of Karen Ashby, ¶ 8. As the

[21] In the Fact Sheet, the San Diego Water Board also asserted that Orange County and the City of Carlsbad in San Diego County, as well as certain other cities in San Diego County, found irrigation water to be a source of pollutants. Fact Sheet at 108-11. The 2010 Permit, however, covers the Santa Margarita River watershed in Riverside County, not watersheds in Orange or San Diego County. As discussed above, the 2010 Permit addresses a completely different type of watershed. *See* District Comment Letter, Attachment 6, at 1. The Fact Sheet's reference (Fact Sheet at 110-11) to a letter from the California Department of Water Resources addressing the model ordinance adopted pursuant to the Water Conservation and Landscaping Act is also inapposite. It, like A.B. 1881, does not constitute a finding by Claimants that irrigation waters are a source of pollutants to waters of the United States, as required under 40 CFR § 122.26(d)(2)(iv)(B)(1).

Supreme Court observed, the fact that EPA-issued permits do not contain similar prohibitions undermines the argument that the requirement is federally mandated. *Dept. of Finance,* 1 Cal. 5th at 772.

Accordingly, there is no evidence that any of the Claimants found the irrigation waters to be sources of pollutants to waters of the United States in the area covered by the 2010 Permit or that the prohibition against irrigation waters is federally mandated. The San Diego Water Board's imposition of this requirement is a state, not a federal mandate. *Dept. of Finance*, 1 Cal.5th at 765. The State has the burden of proving that a mandate is federal. *Id*. at 769. The Water Boards have not met their burden here.

2. The Prohibition of these Categories of Irrigation Runoff from Entering the MS4 Represented a New Program or Higher Level of Service

A mandate is "new" if the local government entity had not previously been required to institute it. *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 877-78. A "higher level of service" exists where the mandate results in an increase in the actual level or quality of governmental services provided. *Id*. These determinations are made by comparing the mandate with pre-existing requirements. *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835. *See also San Diego Unified School Dist., supra,* 33 Cal.4th at 878.

The Water Boards contend that the prohibition of these irrigation categories is not a new program or higher level of service, arguing that there is a general requirement to effectively prohibit non-stormwater discharges, and this general prohibition existed under the 2004 Permit WB Comments at 21. The Water Boards concede, however, that, under the 2004 Permit, these three irrigation categories were excepted from this prohibition. *Id.* This mandate is thus new.

Moreover, even were it not new, this mandate certainly imposes a higher level of service; Claimants did not have to address this irrigation water before, but now have to do so. *San Diego Unified School Dist.*, 33 Cal.4th at 878 (requirements constitute a higher level of service where "the requirements are new in comparison with the preexisting scheme in view of the circumstance that they did not exist prior to enactment of [the statutes]."

B. *Requirement to Meet Non-Stormwater Action Levels ("NALs")*

Sections C and F.4.d and e of the 2010 Permit required Claimants to analyze non-stormwater discharges to determine if those discharges contained pollutants above permit-designated "non-stormwater dry weather action levels" or "NALs." If exceedances of NALs were found, Claimants were then required to conduct follow-up source investigations, undertake reporting obligations (including a possible prioritization plan and timeline) as well as potential enforcement actions (Sections C.1 and 2).

1. The Permit's NALs Requirements Were Not Federally Mandated

No federal statute or regulation required the programs set forth in Section C and F of the 2010 Permit, and the Water Boards identify none. Indeed, the Water Boards themselves state that

the action levels "are based on applicable water quality objectives from the Basin Plan and other water quality control plans . . ." and are included "to result in compliance with applicable water quality standards." WB Comments at 21-22. The Water Boards cite to the California Ocean Plan as the "other water quality control plan." WB Comments at 21 n.106.

The Basin Plan and Ocean Plan are State, not federal, water quality plans. *See* Water Code § 13170.2 (Ocean Plan); § 13240 (Basin Plan).[22] Measures included in a stormwater permit to implement California water quality control plans obviously cannot constitute a federal mandate. Moreover, as discussed in Section I.B above, discharges from municipal storm sewers are not required to meet water quality standards. *Browner, supra,* 191 F.3d at 1166. A water board may impose such requirements, but it does so as a matter of its discretion, not as part of a federal mandate to meet a CWA requirement. *See also* Narrative Statement at 22-23.

These requirements, moreover, constituted a shift of responsibility from the San Diego Water Board to Claimants of the Board's responsibility under the Porter-Cologne Act to investigate and regulate discharges under Water Code §§ 13263 and 13267. The shifting of this responsibility constitutes a state mandate. *Dept. of Finance*, 1 Cal.5th at 770-71; *Hayes*, 11 Cal.App.4th at 1594.

The Water Boards assert that the federal nature of the NALs requirements was supported by U.S. EPA staff comments made on a different permit or to a different regional board (on the 2013 San Diego County regional permit and to the Santa Ana Regional Board) that were supportive of the action level concept. WB Comments at 22. Neither of these comments suggests that EPA viewed action levels as a federally mandated requirement, but simply a concept that EPA staff thought was a good idea. Mere statements of agency support or desired preferences do not constitute a legal or binding regulatory determination that NALs are required by the CWA. *Dept. of Finance,* 1 Cal.5th at 771 n.16. Indeed, no EPA-issued permit contains NALs or their related requirements. *See* Ashby Dec., ¶ 9. The absence of NALs and their related requirements in EPA regulations and permits undermines the argument that these requirements are federally mandated. *Dept. of Finance,* 1 Cal. 5th at 772.

Finally, the Water Boards have not shown that the NALs and associated programs are the only way to effectively prohibit pollutants in non-stormwater from being discharged into the MS4. The San Diego Water Board, by imposing specific permit requirement instead of allowing Claimants to design their own programs, usurped the discretion that Claimants are given under the CWA regulations. *See* 40 CFR § 122.26(d)(2)(iv)(A) (permittees are to submit program to detect and remove illicit discharges, i.e. non-stormwater discharges into the storm sewer system). By usurping Claimants' ability to design and implement their own programs and instead mandating what Claimants must do, the Board imposed state mandates that exceeded federal requirements. *Long Beach Unified, supra,* 225 Cal.App.3d at 173.

NALs were not included in the 2004 Permit, were not required by any federal statute or regulation, and are not present in EPA-issued permits. The Water Boards have not shown that NALs and the accompanying programs are compelled by federal law. As specific requirements

[22] Rebuttal Documents, Tab 3.

imposed on Claimants at the discretion of the Regional Board, the NALs requirements are state mandates. *Dept. of Finance, supra,* 1 Cal.5th at 765.

2. The NALs Requirements Were a New Program and/or Higher Level of Service

The Water Boards do not dispute that the NALs requirements were new requirements, not having previously been imposed on Claimants. Instead, they argue that the requirements "are designed to help achieve compliance with the federal standard [the effective prohibition of non-stormwater discharges into MS4s]," and for that reason should not be considered new. WB Comments at 23. In this regard, the Water Boards point to the fact that the 2004 Permit required Claimants to review their monitoring results to identify water quality problems, to conduct "follow-up" investigations as necessary and develop numeric criteria to determine when follow-up action should be taken. WB Comments at 23, n. 114.

The 2004 Permit, however, gave Claimants substantial discretion as to the design of their non-stormwater program and the steps they could take. Under the 2004 Permit, it was the permittees who determined when a follow-up investigation was required, as well as the scope of that investigation. *See* 2004 Permit, Sections B.4 and J.4. In the 2010 Permit, the San Diego Water Board established the NALs and required that permittees "must investigate and seek to identify the source of the exceedance . . ." and set forth detailed steps permittees "must" take, including elimination of the source and reporting (Section C. 2.b). Sections C.1-2 and F.4.d-e were much more extensive than the analogous 2004 Permit requirements and eliminated much of the discretion previously given to the permittees. Sections C.1-2 and F.4d-e constituted new programs. *Lucia Mar Unified School Dist., supra,* 44 Cal.3d at 835 (requirements are new when they impose obligations that did not previously exist)

Indeed, even if these requirements were not viewed as a new program, they certainly constituted a "higher level of service" in that they reflect an increase in the actual level or quality of the governmental services being provided. *San Diego Unified School District,* 33 Cal.4th at 877. Sections C.1-2 and F.4.d-e also require of Claimants a higher level of service within the meaning of article XIII B, section 6.

3. No Other Mandate Exceptions Apply

In addition to the arguments addressed above, the Water Boards contend that other mandate exceptions apply. Specifically, the Water Boards contend that Claimants proposed a "similar process" to the NALs in Claimants' report of waste discharge ("ROWD"), citing to Claimant's proposed development of "municipal action levels" to assist in assessment of Claimants' programs. WB Comments at 23.

The NAL provisions in the 2010 Permit were far different than the municipal action levels referenced in Claimant's ROWD. First, the proposed municipal action levels were to be developed by Claimants themselves instead of being required by the San Diego Water Board, as was the case

in the 2010 Permit (AR 3095-96).[23] Second, the proposed municipal action levels were to be a measure of the effectiveness of programs, not trigger investigation of specific non-stormwater discharges. *Compare* AR 3095-96 and Appendix C *with* 2010 Permit Section C.2. Third, and most significantly, the ROWD specifically stated that a reasonable municipal action level *cannot* be developed with respect to percentage of non-stormwater discharge events that exceed criteria and require follow-up (AR 3135). Thus, the Water Boards' contention that the Claimants proposed a process similar to NALs is not correct.

The Water Boards also contend that Claimants could assess fees to fund the program necessary to carry out the NAL requirements. This contention is addressed below in the Funding Rebuttal comments below. As set forth therein, Claimants do not have the authority to assess fees or service charges to fund this program.

C. *Requirement to Meet Stormwater Action Levels ("SALs")*

Section D of the 2010 Permit required Claimants to comply with a number of new requirements triggered by the presence of "Stormwater Action Levels" ("SALs"). Beginning in year three, when a running average of twenty percent or greater discharges exceed the designated SALs, claimants were required to adopt additional control measures to reduce the levels of pollutants in the discharges. Claimants also were required to develop a monitoring plan to sample discharges from major outfalls, including those at which the SALs have been exceeded, and to conduct that monitoring. Neither the SALs nor these requirements were contained in the 2004 Permit.

1. The Permit Requirements Associated with SALs Were Not Federally Mandated

No federal statute or regulation required the SALs requirements set forth in 2010 Permit Section D, and the Water Boards identify none. Instead, the Water Boards contend that the SALs are *required* "to encourage the Copermittees to take appropriate measures to control of pollutants in storm water to the maximum extent practicable standard." WB Comments at 24.

The Water Boards have not met their burden of showing that SALs were required by federal law to meet the MEP standard. *Dept. of Finance,* 1 Cal.5th at 769. First, the Water Boards' argument is belied by the language in the 2010 Permit itself. According to the permit, the purpose of the SALs is not to meet the MEP standard, but that "through the iterative and MEP process, outfall storm water discharges will meet *all applicable water quality standards*." 2010 Permit, Section D.5. at 25 (emphasis added). *See also* Fact Sheet, Finding D.1.h, at 68 ("Storm Water Action Levels are set at such a level that any exceedance of a SAL will clearly indicate BMPs being implemented are insufficient to protect the Beneficial Uses of waters of the State.") Beneficial Uses are a component of water quality standards adopted by a regional board as part of its Basin Plan. Water Code §§ 13050(j)[24] and 13240.

[23] "AR" refers to the San Diego Water Board's administrative record on the 2010 Permit, received by the Commission on September 22, 2017.

[24] Rebuttal Documents, Tab 3.

Thus, the purpose of the SALs was to meet state water quality standards. As set forth above, however, federal law does *not* require discharges from municipal storm water permittees to meet water quality standards. *Browner*, *supra*, 191 F.3d at 1164-65. Thus, the text of 2010 Permit Section D.5 itself establishes that SALs are a state, not federal, mandate.[25]

Second, even if SALs were directed toward encouraging compliance with the MEP standard, the Water Boards have not cited any evidence to support their contention that SALs and the SAL-related programs were required to meet the MEP standard. In order to meet this burden, the Water Boards must support their contention with case-specific evidence addressing local conditions. *Dept. of Finance*, 1 Cal.5th at 768 n. 15. The Water Boards, however, cite to no evidence in the record regarding the Santa Margarita River watershed or the outfalls or discharges being regulated that would establish that SALs were required to meet the MEP standard. Not having cited to such evidence, the Water Boards have not met their burden of proving that SALs and their related programs were federally mandated.

The Water Boards also argue that Permit Finding E.6 and U.S. EPA's support for the inclusion of SALs show that SALs are federally mandated. WB Comments at 25. As discussed in Section I.D.3 above, however, Finding E.6 is entitled to no weight. Indeed, it does not even mention SALs, and is not supported with case-specific evidence regarding the importance of SALs.

The September 7, 2010 EPA comment letter cited by the Water Boards (WB Comments at 25) also does not support the contention that SALs were federally required. EPA simply stated that it supported their inclusion, not that they were required by federal law.[26] In fact, no EPA issued permit contains SALs or their related requirements. *See* Ashby Dec., ¶ 10. The absence of SALs and SAL-related requirements in EPA-issued permits undermines the argument that these requirements were federally mandated. *Dept. of Finance*, 1 Cal. 5th at 772.

Finally, as with the NALs, the Water Boards have not shown that the SALs and the SAL-related programs were the only ways to effectively reduce pollutants and discharges to the MEP standard. The San Diego Water Board, by directing that Claimants must implement SALs and SAL-related programs, which are not compelled by federal law, as opposed to allowing Claimants to design their own programs, has imposed a state mandate. *Long Beach Unified*, 225 Cal.App.3d at 173.

SALs were not included in the 2004 Permit, were not required by any federal statute or regulation, and were not present in EPA-issued permits. The text of the 2010 Permit states that the SALs were included for the purpose of meeting water quality standards, not MEP, and the Water Boards have not submitted case-specific evidence indicating that SALs were required to meet the MEP standard. The SALs and the SAL-related programs are state mandates.

[25] To the extent that the SALs act as numeric effluent limits themselves, these limits would also not be federally mandated. *See* Narrative Statement at 25.

[26] Though cited by the Water Boards, this letter was not included in the Attachments to the WB Comments. The letter can be found at AR 5749, and the SALs comment is at AR 5751.

2. Programs Associated with SALs or Triggered by Their Exceedance Represented New Programs and/or a Higher Level of Service

While the Water Boards argue that the SAL requirements are "necessary to achieve the decades-old federal standard applicable to municipal stormwater discharges" and are consistent with federal application requirements (WB Comments at 25), they do not dispute that these requirements are new requirements that had never been previously imposed on Claimants. Indeed, like the NALs, even if these requirements were not viewed as new program, they certainly constitute a "higher level of service" in that they reflect an increase in the actual level or quality of governmental services being provided. These requirements are a new program or higher level of service within the meaning of article XIII B, section 6. *San Diego Unified School District*, 33 Cal.4th at 877.

3. No Other Mandate Exceptions Apply

Contrary to the Water Boards' contentions (WB Comments at 26), Claimants cannot raise fees to pay for the SALs and SAL-related programs, and the costs are not *de minimis*. Claimants' inability to raise fees to pay for these programs is addressed in the Funding Rebuttal comments below. As set forth in Claimants' declarations, Claimants incurred increased costs in implementing these programs of more than $24,000 in FY 2010-11 and more than $26,000 in FY 20111-12. These costs are not *de minimis*. Govt. Code § 17564(a).

D. *Priority Development Project and Hydromodification Requirements*

As set forth in the Narrative Statement at 25-37, the 2010 Permit required Claimants to update their Standard Stormwater Mitigation Plans ("SSMPs"), designed to mitigate the volume of stormwater discharged from Priority Development Projects ("PDPs"), and apply the updated SSMPs to two new categories of PDPs, municipal projects that resulted in the disturbance of 1 acre or more and municipal projects that created 10,000 square feet or more of impervious surface (Sections F.1.d(1)(c) and (2)(a)). The permit also required Claimants to develop a Low Impact Development ("LID") waiver program, and apply that program to Claimants' municipal projects that meet the definition of PDPs (Section F.1.d(7)). Finally, the permit required the development of a hydromodification plan ("HMP"), also designed to mitigate the volume of stormwater discharged from PDPs, and apply that HMP to municipal PDPs (Section F.1.h).

1. The Priority Development and Hydromodification Requirements were not Federally Mandated

No federal statute or regulation required the 2010 Permit's Priority Development or HMP requirements and the Water Boards do not identify any such statute or regulation. Instead, the Water Boards again simply argue that these requirements are consistent with the MEP standard and EPA supported their inclusion. WB Comments at 26-28.

The Commission has already considered and rejected the Water Board's contention that Priority Development and HMP requirements such as the ones at issue in this Joint Test Claim are federal mandates. In the San Diego County stormwater test claim, the Commission considered

permit provisions required by the same San Diego Water Board that required the updating of Standard Urban Stormwater Mitigation Plans ("SUSMPs") to include LID requirements similar to the SSMP update requirements at issue here, and HMP requirements almost identical to those at issue here. *See* SD County SOD at 11-16 (HMP) and 16-18 (LID). The Water Boards made the same arguments in that test claim as they make here (SD County SOD at 42-44 (HMP) and 50 (LID)). After considering those arguments, the Commission found that

> nothing in the federal regulation (40 C.F.R. §122.26) . . . requires local agencies to collectively review and update the BMP requirements listed in their SUSMPs, or to develop, submit and implement 'an updated Model SUSMP' that defines minimum LID and other BMP requirements for incorporation into the SUSMPs. Thus, the LID requirements in the permit 'exceed the mandate in that federal law or regulation." As in *Long Beach Unified School Dist. v. State of California,* the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen to impose these requirements. Thus, the Commission finds that [the LID provisions] of the permit is not a federal mandate.

SD County SOD at 51.

The Commission reached the same conclusion with respect to HMPs, finding that

> there is nothing in the federal regulations that requires a municipality to adopt or implement a hydromodification plan. Thus, the HMP requirement in the permit 'exceeds[s] the mandate in that federal law or regulation.' As in *Long Beach Unified School Dist. v. State of California*, the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen to impose these requirements.

SD County SOD at 44-45 (citations omitted).

There is another reason the Priority Development and HMP requirements are not federally mandated. These requirements seek to regulate the volume of water being discharged from development projects. The NPDES program, however, regulates the "discharge of pollutants," not the flow or volume of water. *See* 33 U.S.C. § 1342(p)(3)(B)(iii) (municipal stormwater permits shall require controls "to reduce the discharge of pollutants to the maximum extent practicable"). *See also* 33 U.S.C. § 1342(a)(1) ("The Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants").

"Discharge of pollutants" is defined to be "the addition of any pollutant to navigable waters from any point source . . ." 33 U.S.C. § 1362(12).[27] "Pollutant" is defined to mean "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." 33 U.S.C. §

[27] Rebuttal Documents, Tab 2.

1362(6).[28] The volume of water is not included in this definition. Moreover, under the CWA, the Water Boards may not regulate flow as a surrogate for CWA-regulated pollutants. *See Virginia Dept. of Transp. v. EPA*, Civil Action No. 1:12-CV-775 (U.S. District Court, E.D. Va.) (January 3, 2013) (slip op.)[29] (invalidating EPA TMDL which sought to regulate flow of water as a surrogate for pollutants such as sediment). Because volume of water is not subject to NPDES regulation, the 2010 Permit's Priority Development and HMP programs that addresses such volume are not derived from federal law.

The Water Boards nevertheless argue that that the San Diego Water Board found that these requirements are based exclusively on federal law, citing Permit Findings E.6 and D.1.a, and are necessary to meet the MEP standard. WB Comments at 26. As discussed above, however, Finding E.6 is boilerplate and not case specific and the Water Boards cite to no evidence that supports the finding with respect to the Priority Development and HMP requirements. The Water Boards cite no evidence that would support a reversal of the Commission's decision in the San Diego County SOD. Indeed, Finding E.6 does not mention Priority Development and HMP requirements.

Similarly, Permit Finding D.1.a is simply a general statement that the permit contained requirements necessary to meet the MEP standard. It does not address these two specific requirements or any evidence that would establish that these are the only means to implement MEP. The other findings cited by the Water Boards (WB Comments at 27) likewise are general statements about the efficacy of LID and hydromodification principles; they do not establish that federal law compelled the LID and HMP requirements at issue here. *Dept. of Finance*, 1 Cal.5th at 765 (federal mandate only if federal law compels the state to impose the requirement.)

Moreover, a general statement that the permit contains requirements to meet MEP is not equivalent to a finding that *all* permit requirements are necessary to MEP. As noted, the 2010 Permit is based on both federal and state authority and the permit's compliance standard is not adherence to the MEP standard but rather the attainment of water quality standards. *See* Section I.B, above. Thus, these findings are entitled to no deference. *Dept. of Finance*, 1 Cal. 5th at 768 (deference required only when a determination is made that these requirements are the only means by which the MEP standard could be implemented).

The same is true with regard to the Water Boards' citation to U.S. EPA's comments on the permit. EPA "encouraged" or supported these requirements, but did not say that they were mandatory. EPA Comments, September 7, 2010, at 3 (AR 5749). Indeed, no EPA-issued permit contains these same detailed requirements, which they would be if they were mandated by federal law. *See* Ashby Dec., ¶¶ 11-12.[30] The Water Boards' citation to EPA's comments on other permits

[28] Rebuttal Documents, Tab 2.

[29] Rebuttal Documents, Tab 1.

[30] As set forth in the Ashby Declaration, neither the Boston nor Worcester permits include the detailed requirements of 2010 Permit Section F.1.d. The Albuquerque, D.C., and Boise permits contain LID requirements, but not the extensive requirements that are present in the 2010 permit. The Albuquerque permit seeks to encourage use of LID, but does not require on site or off site mitigation projects. The D.C. permit contains LID requirements, but they are not as prescriptive as those in the 2010 Permit. Similarly, the Boise permit contains requirements for LID and green infrastructure strategy, but does not contain the two PDP definitions or the requirement to create a LID waiver program. With respect to the requirements

(WB Comments at 28-29) is entitled to no weight. The comments are not specific to the characteristics of Claimants' watershed and the 2010 Permit, and thus do not establish that the CWA compelled these requirements in this permit. *Dept. of Finance*, 1 Cal.5th 768 n.15. The Washington Pollution Control Board Hearing decision cited by the Water Boards (WB Comments at 28-29) is likewise inapplicable. As the Water Boards themselves concede, that decision addressed federal and Washington state law. WB Comments at 28.

In the San Diego County stormwater test claim, the Commission did distinguish LID and HMP requirements as applied to municipal projects. Whereas the Commission found that permit's provisions requiring LID and HMP on private developments to be a state mandate, the Commission determined that requiring LID and HMP for municipal projects would not. The Commission reasoned that compliance with LID and HMP for municipal projects was voluntary because it arose only when the permittees built a project and there was no legal requirement to do so, citing *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.)* (2003) 30 Cal.4th 727. (SD County SOD at 45, 51.)

As set forth in the Narrative Statement (at 33-35), the Commission's reasoning is not applicable to the 2010 Permit. The 2010 Permit required the preparation of an updated SSMP, without regard to whether Claimants were going to construct a municipal PDP. Moreover, as also set forth in the Narrative Statement, the rationale of *City of Merced v. State of California* (1984) 153 Cal.App.3d 777, relied upon by the court in *Kern High School Dist.*, is not applicable and has been limited to its facts by the Supreme Court in *San Diego Unified School Dist., supra*, 33 Cal.4th at 887-88. *See* Narrative Statement at 33-35.

2. The Priority Development and Hydromodification Requirements Represented New Programs and/or Higher Levels of Service

The 2004 Permit did not contain requirements relating to Priority Development or hydromodification. It did not require an update of the SSMPs and did not impose those requirements on municipal projects that resulted in the disturbance of 1 acre or more or new development projects that created 10,000 square feet or more of impervious service. The 2004 Permit also did not require the development of a HMP and application of the HMP requirements on municipal projects.

The Water Boards do not dispute that the 2010 Permit extended LID and hydromodification requirements to these two new categories of projects, and do not dispute that the 2010 Permit requires the development and application of a HMP to municipal projects. Instead, the Water Boards contend that these requirements are "refinements" of the 2004 Permit's requirement that Claimants develop numeric criteria to ensure discharges from priority development projects

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of 2010 Permit Section F.1.h, none of the Albuquerque, D.C., Boston or Worcester permits contain such provisions. The Boise permit contains requirements for LID and green infrastructure strategy, but does not apply it to the range of PDPs to which the 2010 Permit applies, including municipal projects, but instead requires only the development of a strategy and application to three pilot projects. No EPA-issued permit has provisions as extensive and prescriptive as the San Diego permit.

maintain or reduce pre-development downstream erosion and protect stream habitat. WB Comments at 29.

The 2004 Permit, however, did not apply its requirements to projects that fall within the 2010 Permit's 1 acre threshold or to projects that create 10,000 square feet or more of impervious surface (2010 Permit, Section F.1.d(1)(c) and (2)(a). Thus, these requirements represent not simply a refinement of a prior permit requirement. They represent an *expansion* of prior permit requirements. These new requirements are new programs, or a "higher level of service," in that they require an increase in the actual level or quality of the governmental services being provided. *San Diego Unified School Dist.*, 33 Cal.4th at 877. These new priority development project and hydromodification plan requirements thus are a new program or higher level of service within the meaning of article XIII B, section 6.

3. No Other Mandate Exceptions Apply

No other mandate exceptions apply. Contrary to the Water Boards' assertion (WB Comments at 29), Claimants did not propose application of the Priority Development and HMP requirements to municipal projects that resulted in the disturbance of one acre or more or that created 10,000 square feet or more of impervious surface. Claimants' ROWD, cited by the Water Boards, only states that the permittees will revise the Riverside County Stormwater Quality Best Management Practice design handbook to better incorporate LID concepts and guidance, and that the permittees will use completed guidance or hydromodification to update their water quality management plan and BMP design handbook (AR at 3112-13).

The ROWD says nothing about expanding the definition of PDPs, development of a LID waiver program or development of an HMP, as required by the 2010 Permit. Indeed, a comparison of the ROWD to the 2010 Permit requirements shows how the San Diego Water Board usurped the Claimant's ability to design their own program, and instead substituted its own directives and requirements. As such, the San Diego Water Board imposed requirements that exceeded federal law. *Long Beach Unified*, 225 Cal.App.3d at 173.

The Water Boards also contend that Claimants can assess fees to fund these requirements. WB Comments at 30. This contention is addressed in the Funding Rebuttal comments below. As set forth in Claimant's declarations, Claimants incurred increased costs in implementing these programs over $60,000 in FY 2010-11 and over $685,000 in FY 2011-12. These costs are not *de minimis*. *See* Govt. Code § 17564(a).

E. *BMP Maintenance Tracking Requirements*

The 2010 Permit required Claimants to develop and maintain a watershed-based database to track all approved post-construction BMPs and to inspect these BMPs to verify that they had been implemented and were conducting BMP maintenance within its jurisdiction (Permit, Section F.1).

1. The BMP Maintenance Tracking Requirements Were Not Federally Mandated

No federal statute or regulation required the BMP maintenance tracking program. The Water Boards cite federal regulations requiring MS4 dischargers to develop a program to reduce pollutants from new development and redevelopment construction and certain industrial or land use sites. WB Comments at 30, *citing* 40 CFR § 122.26(d)(2)(iv)(A)-(D). None of these regulations, however, requires the extensive BMP maintenance tracking and inspection program at issue here, and the Water Boards cite to no such portion of the regulations that requires it.

Instead, the Water Boards again repeat the argument they make with respect to the other mandates in this Joint Test Claim, that this program is necessary to meet the MEP standard. WB Comments at 30-31. The Water Boards, however, only cite to a general permit finding regarding the nature of MEP (*id.* at 31), not to a finding specific to this watershed or this BMP maintenance tracking requirement. The finding does not assert that this program is the *only* way to meet the MEP standard and thus is not entitled to any deference. *Dept. of Finance*, 1 Cal.5th at 768.

With respect to requirements of EPA-issued permits, neither the Albuquerque, Boston nor Worcester permits contain requirements that permittees develop and maintain a watershed-based database to track all approved post-construction BMPs and to inspect those BMPs to verify that they have been implemented and are operating. The D.C. permit contains a requirement to inventory BMPs, but it is not as prescriptive as the requirements in the 2010 Permit and does not require 100% of high priority projects to be annually inspected or the same frequency of verification and inspection as required by the 2010 Permit. The Boise permit contains BMP maintenance tracking requirements, but are not as prescriptive as those in the 2010 Permit. *See* Ashby Dec., ¶ 13.

Indeed, the requirement to inspect BMPs on private developments in the 2010 Permit is similar to the requirement to inspect commercial, industrial and construction sites that was at issue in *Dept. of Finance*. In that case, the Supreme Court noted that "neither the CWA's 'maximum extent practicable' provision nor the EPA regulations on which the State relies expressly required the Operators to inspect these particular facilities or construction sites." 1 Cal. 5th at 770. The Court also rejected the argument that the inspection requirements were federally mandated because the CWA required the Los Angeles Water Board to impose permit controls to the MEP and that EPA regulations contemplated that some kind of inspections would be required. The Supreme Court found that while "the EPA regulations contemplated some form of inspections, however, does not mean that federal law required the scope and detail of inspections required by the Permit conditions." *Id.* at 771.

The same rule applies here. Nothing in the MEP standard or the federal regulations cited by the Water Boards requires the BMP maintenance and tracking program set forth in the 2010 Permit. This program imposes requirements that exceed federal law. *See Long Beach Unified School Dist.*, 25 Cal.App.3d at 173.

The BMP maintenance tracking program is a state mandate for another reason. As discussed in Section I.D.2 above, the Porter-Cologne Act regulates discharges of waste to waters of the state. Under Porter-Cologne, water boards are obliged to control such discharges from all dischargers, including any private property developments subject to the BMP maintenance tracking program. Water Code §§ 13260 and 13263. Under Porter-Cologne, it is the regional

boards' obligation to track and verify these private discharges and private BMPs. The San Diego Water Board could have performed this task itself. When the Board freely chose to shift this obligation onto the Claimants, it created a state mandate. *Hayes, supra*, 11 Cal.App.4th at 1594.

The Water Boards also contend that this requirement is consistent with U.S. EPA's MS4 Permit Improvement Guide. WB Comments at 31. That Guide, however, is not a statute or regulation and is not intended to create any legal obligation. As the Guide itself states,

> This Guide does not impose any new legally binding requirements on EPA, States, or the regulated community, and **does not confer legal rights or impose legal obligations upon any member of the public**.

EPA MS4 Permit Improvement Guide at 3 (emphasis added). The test of whether a requirement is federally mandated is if federal law compels the state to impose, or itself imposes the requirement. *Dept. of Finance*, 1 Cal.5th at 765. The guide itself states that it does not.

2. The BMP Maintenance Tracking Requirement Represented a New Program and/or Higher Level of Service

These requirements were not present in the 2004 Permit. The Water Boards do not contend otherwise. As such, they are a new program.

3. No Other Mandate Exceptions Apply

The Water Boards contend that Claimants proposed an approach for inspecting and verifying post construction BMPs in their ROWD. WB Comments at 32. That proposal, however, was not as extensive as the 2010 Permit requirements and was not to commence immediately, but only when resources became available (AR at 3113-14).

The Water Boards also contend that Claimants can assess fees to fund these requirements. This contention is addressed in the Funding Rebuttal comments below. As set forth in Claimant's declarations, Claimants incurred increased costs in implementing these programs in the amount of over $50,000 in both FYs 2010-11 and FY 2011-12. These costs are not *de minimis*. *See* Govt. Code § 17564(a).

F. *Construction Site Requirements*

2010 Permit Section F.2.d(3) required Claimants to require Active/Passive Sediment Treatment ("AST") at construction sites, both private and municipal, determined to be an exceptional threat to water quality and, when inspecting construction sites. Section F.2.e(6e) required Claimants to review site monitoring data results for compliance purposes, including compliance with provisions the San Diego Water Board in the permit has ordered Claimants to impose on that site.

1. The Construction Site Requirements Were Not Federally Mandated

As set forth in the Narrative Statement, nothing in the CWA or its implementing regulations required the installation of AST at construction sites or that the Claimants were required to review a construction site's monitoring data. Narrative Statement at 40. The San Diego Water Board freely chose to impose these requirements in the permit, imposing requirements that exceeded federal law. *Dept. of Finance,* 1 Cal.5th at 765; *Hayes,* 11 Cal.App.4th at 1594. *See also Long Beach Unified,* 225 Cal.App.3d at 173 (state mandate created where state removes local agency's discretion and directs program to be implemented).

Moreover, under the Porter-Cologne Act, it is a regional board's responsibility to inspect and control the discharge of pollutants into the waters of the State, including from private construction sites. Water Code §§ 13263 and 13267(c). The San Diego Water Board chose to shift that obligation to Claimants, creating a state mandate when doing so. *Hayes,* 11 Cal.App.4th at 1593.

The Water Boards nevertheless contend that these construction requirements are necessary to implement the MEP standard, citing to findings made by the San Diego Water Board. WB Comments at 32-33.[31] These findings, however, do not stipulate that AST measures are the only means to implement the MEP standard. As such, they are not entitled to deference. *Dept. of Finance,* 1 Cal.5th at 768. Instead, imposition of this requirement usurped Claimants' ability to design their own program. The San Diego Water Board directed that Claimants must require these construction sites to utilize Active/Passive Sediment Treatment. By mandating this requirement, the San Diego Water Board directed how Claimants must act and imposed a requirement that exceeded federal law. *Long Beach Unified,* 225 Cal.App.3d at 173.

The Water Boards also contend that the monitoring data inspection requirement falls within the federal regulation that Claimants control discharges from industrial and construction sites. WB Comments at 33-34. The Water Boards made this same argument in *Dept. of Finance* with respect to the facility inspections at issue there. 1 Cal. 5th at 760 n.11. The Supreme Court rejected that argument, holding that nothing in the general regulations required the specific number or type of inspections. *Id.* at 770. That same rule applies here.

Finally, 40 CFR § 122.42(c), cited by the Water Boards, does not require that municipalities review third-party monitoring data. The regulation states that a municipality must submit an annual report that includes, *inter alia,* monitoring data that is accumulated throughout the year. The reporting, however, is of monitoring performed by the municipality *itself,* not monitoring performed by *third parties.* (The federal stormwater regulations require a municipality to have a monitoring program for representative data collection of its discharges. 40 CFR § 122.26(d)(2)(iii)(D).) The fact that this reporting requirement is applicable to Claimants' own monitoring and not that performed by third parties at construction sites is evidenced by the fact that the 2010 Permit does not require Claimants to include in their annual report the construction site monitoring data that they are directed to review. *See, e.g.,* Fact Sheet at 175 ("Reporting

[31] In fact, while the Fact Sheet discussion of Section F.2.d, states that "AST is . . . considered MEP for the discharges from these sites," the same discussion concluded that AST was required both "[t]o ensure the MEP standard and [that] *water quality standards* are met." Fact Sheet at 147 (emphasis supplied). Again, as with so many of the requirements of the 2010 Permit, the AST requirement was not a function of MEP compliance.

requirements in the Order focus on results and responses to the effectiveness assessments conducted by the Copermittees.")

Finally, none of the EPA-issued stormwater permits contain the requirements set forth in the 2010 Permit regarding construction sites. *See* Ashby Dec., ¶ 14.

2. The Construction Site Requirements Represented a New Program and/r Higher Level of Service

The Water Boards concede that these requirements were not contained in the 2004 Permit. WB Comments at 34. Nevertheless, they contend that they were not a new or a higher level of service because the 2004 Permit required permittees to require construction sites located near or adjacent to "sensitive" waters to control pollutants. In the view of the Water Boards, the requirements in the 2010 Permit "build" on that earlier requirement, and because the 2004 Permit required inspections for compliance with local ordinances. *Id.*

The test of whether a mandate is a new program or higher level of service is whether the local agency had previously been required to do it, or whether it results in an increase in the actual level or quality of governmental services provided. *Lucia Mar, supra,* 44 Cal. 3d at 836; *San Diego Unified School Dist.,* 33 Cal. 4th at 877. Here, Claimants did not have to require AST at construction sites (and did not have to include it in municipal projects) and did not have to review monitoring results until the San Diego Water Board ordered it in the 2010 Permit. These requirements certainly are an increase in the actual level or quality of governmental services provided. These requirements are a new program or higher level of service.[32]

3. No Other Mandate Exceptions Apply

The Water Boards contend that the Claimants have fee authority, that municipal projects are voluntary, and that the costs to implement these requirements are de minimis. For the reasons set forth in the Funding Rebuttal comments set forth below, the Claimants do not have such fee authority. Nor are the costs incurred in complying with these requirements at municipal projects voluntary (*see* Narrative Statement at 33-35).

The costs of complying with these requirements are also not "de minimis." As set forth in the Joint Test Claimant's Section 6 Declarations, the Claimants incurred increased costs in implementing these programs of over $3,000 in both FYs 2010-11 and 2011-12. These costs are not *de minimis*. *See* Govt. Code § 17564(a).

[32] The Water Boards also contend that there is no shifting of inspection costs because the inspections are not for compliance with the State's General Construction Stormwater Permit. WB Comments at 35. The inspections, however, are for determining compliance with permittees' ordinances, permits, and "this Order." (2010 Permit, Section F.2.e.) Because the inspections are to determine compliance with "this Order," i.e., the 2010 Permit, the San Diego Water Board shifted to the Claimants the obligation to determine if private construction sites were complying with the requirements the San Diego Water Board has ordered to be imposed on them.

G. *Unpaved Roads BMP Requirements*

Sections F.1.i. and F.3.a.10 of the 2010 Permit required Claimants to develop and implement BMPs to address erosion and sediment and other impacts from the development and maintenance of unpaved roads. Claimants were also required to develop and implement BMPs for erosion and sediment control during maintenance of unpaved roads, maintain such roads to reduce erosion and sediment transport, re-grade the roads in specified manners or employ alternative equally effective BMPs, and examine the feasibility of replacing existing culverts or the design of new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology.

1. These Requirements Were Not Federally Mandated

The specific requirements relating to unpaved road BMPs (set forth in the Narrative Statement at 41-42) represent the exercise of discretion by the San Diego Water Board to impose a particular implementing requirement by virtue of a true choice by the Board. It thus represents a state, not federal, mandate under the Supreme Court's test in *Dept. of Finance.* 1 Cal. 5th at 765.

The Water Boards cite no federal regulatory requirement mandating such BMPs. They instead argue (WB Comments at 35) that "design and source control BMPs for unpaved roads are needed to minimize the discharge of sediment to the MS4s and receiving waters, implementing the federal mandate to control pollutants in storm water discharges to the MEP." The Boards cite 2010 Permit Finding D.1.f (which does not even mention the unpaved road requirements)[33] as authority to conclude that the BMP requires are "necessary to implement the federal requirement." *Id.*

The Boards further cite Finding D.1.c as evidence of a determination by the San Diego Water Board that the unpaved road BMP requirements were "necessary to meet MEP." WB Comments at 36. That finding, however, references not only the MEP standard but also the achievement of water quality standards:

> This Order contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in storm water runoff to the MEP *and achieve water quality standards*.

2010 Permit at 7 (emphasis supplied).

Importantly, the Board's finding also does not state that the 2010 Permit requirements for unpaved roads were the "only" means by which the MEP standard could be met, the test laid down by the Supreme Court as to whether deference should be given to such a finding by a water board. 1 Cal. 5th at 765. Given the explicit reference to the achievement of water quality standards in Finding D.1.c, it is clear from the record that the San Diego Water Board went further than what the MEP standard required, and that deference cannot be given to such findings.

The Water Boards argue (WB Comments at 35, n.171) that the 2010 Permit could not have required the control of sediment from roads "that do not qualify as MS4s or do not discharge into MS4s," as was set forth in Claimants' Narrative Statement at 42, because this assertion is

[33] And was not cited by the San Diego Water Board as authority for the unpaved road BMPs requirement in the Fact Sheet. *See* Fact Sheet at 144.

"unsupported by the overarching purpose of and legal basis for issuing an MS4 permit to Claimants."

The actual text of the 2010 Permit and the relevant Findings, however, belie this argument by including requirements relating not to discharges from or to MS4s but rather discharges into natural waterbodies (which are not MS4) or to Waters of the United States (which are not a CWA "point source," such as MS4s).

In the examples below, relevant Permit sections reflecting that the requirements applied to natural waterbodies are italicized for emphasis. 2010 Permit Section F.1.i(4) required road and culvert designs "that do not impact *creek functions* and where applicable, . . . *maintain migratory fish passage*." Section F.3.a.10(a) required development of BMPs for the maintenance of unpaved roads "particularly in or adjacent to *receiving waters*." Section F.3.a.10(b) required development and implementation of BMPs "to minimize impacts on *streams and wetlands*" during unpaved road maintenance activities. Section F.3.a.10(c) required erosion and sediment transport protections during maintenance of unpaved roads "adjacent to *streams and riparian habitat*." Finally, Section F.3.a.10(e) required the permittees to examine the feasibility of replacing culverts or designing new culverts or bridge crossings to "maintain *natural stream* geomorphology."

Similarly, the Fact Sheet discussion of Finding D.1.c noted that "[r]oad construction, culvert installation, and other maintenance activities can disturb the soil and drainage patterns *to streams in undeveloped areas . . .*" Fact Sheet at 58. The Fact Sheet further noted that "[p]oorly designed roads" can "carry runoff and sediment into *natural streams* . . . ." *Id.* at 59.

These permit provisions appear to flow from an assertion of jurisdiction made by the San Diego Water Board that exceeds the definition of "MS4" in the CWA. In Finding D.3.c, the Board extended the concept of the "MS4" to "natural . . . streams," even though the federal regulatory definition of "MS4" is of a "conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) . . . "Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of . . . storm water . . . including . . . a . . . .flood control district." 40 CFR § 122.26(b)(8).

"Natural streams" are not "owned or operated" by any municipal body, and certainly do not fall within the anthropogenic water courses identified in the regulatory language (e.g., "man-made channels" or "storm drains."). Extending the scope of the 2010 Permit to such streams may have allowed the Water Boards to argue that the permit regulated only discharges to or from the "MS4," but that is an "MS4" which exceeds the bounds of the CWA's definition.

Nothing in the text of the 2010 Permit or the Fact Sheet suggests any limitation on discharges from unpaved roads which the BMP requirements are supposed to address. Thus, those requirements in fact exceed the requirements of an MS4 permit issued under Section 402(p)(3)(B) of the Clean Water Act and cannot represent a federal mandate.

Even were it to be conceded that the scope of the 2010 Permit and its unpaved roads requirements extended only to what would be considered a CWA-defined "MS4," those requirements still were not federally mandated. Nothing in the CWA or its regulations requires the specific mandate set forth in the unpaved roads construction, design and maintenance requirements. The San Diego Water Board here made the "true choice" to mandate such

requirements. *Dept. of Finance,* 1 Cal. 5th at 765. And, nowhere in the record is there any finding by the Water Board that these specific requirements were the only means by which the MEP requirement could be met, as noted above.[34]

Finally, a review of EPA-issued stormwater permits disclosed none that contained unpaved road BMP requirements. Ashby Dec., ¶ 15. As noted previously, the absence of such provisions in EPA-issued permits undermines the argument that the provisions were federally mandated. *Dept. of Finance,* 1 Cal. 5th at 772.

2. The Unpaved Roads BMP Requirements Represented a New Program And/Or Higher Level of Service

The Water Boards contend (WB Comments at 36-37 and n.179) that the unpaved road BMP requirements were not a new program because the 2004 Permit required BMPs for construction projects. The 2004 Permit, however, contained no specific requirements for unpaved road construction or maintenance nor in it did the San Diego Water Board identify unpaved roads as a pollutant source of concern.

In fact, the Finding D.1.c cited by the Water Boards states that the 2010 Permit "contains *new or modified requirements*" and that the unpaved road requirements were the result of the San Diego Water Board's "identification of water quality problems through investigations and complaints *during the previous permit period."* (emphasis supplied). Obviously, had these requirements been part of the previous 2004 Permit, the San Diego Water Board would not have been able to make such findings.

The unpaved road BMP requirements of the 2010 Permit were a new program and/or represented a higher level of service mandated on the Claimants.

3. No Other Mandate Exceptions Apply

The Water Boards again argue that the Claimants had fee authority to pay for the unpaved road BMP mandates. For the reasons set forth elsewhere in this Rebuttal, that assertion is incorrect. *See* Funding Rebuttal comments, below. Similarly, there is no support (and the Water Boards offer none) for the assertion that the costs of compliance are *de minimis.* WB Comments at 37. In fact, as set forth in the Narrative Statement at 43, the increased costs of compliance with the unpaved roads requirements were substantial, totaling nearly $500,000 in FY 2010-11 and nearly $600,000 in FY 2011-12. These costs are far from being *de minimis. See* Govt. Code § 17564(a).

H. *Industrial/Commercial Inspection Requirement*

Section F.3.b.4(a)(ii) of the 2010 Permit required that Claimants review self-monitoring data produced by commercial and industrial facilities as part of the inspection of such facilities.

1. The Inspection Requirements Were Not Federally Mandated

The Water Boards (WB Comments at 37-38) argue that this requirement is necessary to meet the MEP standard. The Water Boards cite 40 CFR § 122.26(d)(2)(i)(A), which requires

[34] The reference to the need to achieve water quality standards in the Water Boards-referenced Finding D.1.c, of course, belies any argument that the intent of the unpaved roads requirements (or other related requirements in the 2010 Permit) were intended only to meet the MEP standard.

permittees to control through "ordinance, permit, contact, order or similar means" stormwater discharges associated with industrial activity. This regulation does not even mention commercial facilities. This requirement, moreover, does not go to inspections of industrial facilities, which are specifically addressed by 40 CFR § 122.26(d)(2)(iv)(C). And, those industrial facilities required by the regulation to be inspected are only a small subset of all industrial facilities, plus those facilities determined by the *municipality*, not the permitting agency, to be contributing a substantial pollutant loading to the MS4. *See* discussion in Narrative Statement at 44.

The Water Boards cite 2010 Permit Finding D.3.b, which does not specifically mention inspections, as further authority for their MEP argument. WB Comments at 37-38. Nothing in Finding D.3.b or the discussion in the Fact Sheet of that finding makes the case that inspections of industrial and commercial facilities which involve review of their self-monitoring data was the *only* way by which the MEP standard can be met, the test set forth by the Supreme Court in *Dept. of Finance.*

The Water Boards also quote part of a finding (without citation) and then add text not found in the 2010 Permit or Fact Sheet to the effect that inspections are "*a necessary part of the process to achieve MEP."* WB Comments at 38. This is not evidence that the Commission can rely upon, but rather the erroneous characterization of the law and facts by the Water Boards.

With respect to the provisions of EPA-issued stormwater permits, the requirement to review facility monitoring data when inspecting a range of industrial and commercial sites are found in no EPA-issued permit. Although EPA-issued permits require review of monitoring data when inspecting municipal landfills, hazardous waste treatment storage or disposal facilities, facilities subject to EPCRA Title III, or industrial sites that have NPDES permits that discharged to the MS4, none of the EPA-issued permits require inspections of the extensive list of commercial and industrial facilities required by the Permit, and thus none required review of monitoring data of the extensive list of facilities required by the San Diego permit. *See* Ashby Dec., ¶ 16.

2. The Inspection Requirements Represented a New Program and/or Higher Level of Service

The Water Boards argue that the state had not shifted its own responsibility for inspecting industrial and commercial sources, claiming that the Industrial General Permit ("IGP") in effect when the 2010 Permit was adopted "did not require the regional water boards to review monitoring data if sites monitor their runoff." WB Comments at 38. This assertion is simply incorrect.

First, the IGP in effect in 2010 (and through most of the 2010 Permit's term), State Board Order No. 97-03-DWQ,[35] specifically required monitoring by industrial discharger permittees in Section B. Second, as the Commission itself has found, the regional boards, including the San Diego Water Board, were required to enforce that IGP: "The state has issued a statewide general activity industrial permit . . . that is enforced through the regional boards." LA County SOD at 39. *See also* Section F of the Order, which required that "Regional Water Boards shall: (a) Implement the provisions of this General Permit, including, but not limited to, reviewing SWPPs, reviewing annual reports, *conducting compliance inspections*, and taking enforcement actions." (emphasis supplied). As the enforcing agency, the San Diego Water Board was charged with the

[35] Relevant excerpts of which are attached in the Rebuttal Documents, Tab 2.

responsibility of ensuring that monitoring had been undertaken, since that was a specific requirement of the IGP.

Third, the Fact Sheet specifically noted that "BMP implementation plans *and monitoring data* are expected to *be available for any facility that is covered under the General Industrial Permit.*" Fact Sheet at 156 (emphasis supplied). To argue, without citation, that the permit "did not require the regional water boards to review monitoring data" ignores the San Diego Water Board's own findings that such data would be available for IGP-covered facilities. Moreover, the San Diego Water Board had the authority under the Porter-Cologne Act, Water Code § 13267, to require any discharger (including any industrial or commercial facility) to provide information, including monitoring data, to the Board. By shifting the responsibility to review that monitoring data to the Claimants, the Water Board created a state mandate. *Hayes, supra*, 11 Cal. App. 4th at 1593-94.

While agreeing that the requirement to review monitoring data "was absent in the prior [2004] permit" the Water Boards argue the MEP requirement "is the same." WB Comments at 38. This argument apparently repeats the argument, already rejected by the Commission, that additional requirements intended to meet the MEP standard are not new programs. *See* discussion in Section I.C.2 above. Finally, the Water Boards argue that because the permittees were required under the 2004 Permit check for various items during inspections, "reviewing available monitoring data is wholly consistent with the prior requirements . . . ." (WB Comments at 39.) As already has been pointed out, that is not the test for a new mandate. The requirement to review monitoring data was a new requirement (as admitted by the Water Boards) and thus constitutes a new program or higher level of service.

3. No Other Mandate Exceptions Apply

The Water Boards again argue (WB Comments at 39) that Claimants have not shown that they must use tax money or have fee authority for the costs of the monitoring data review. In fact, the Declarations supporting the Joint Test Claim establish the first issue and the second is addressed in the Funding Rebuttal comments, below. The Water Boards argue that the costs of the mandate are "*de minimis*," but this too is rebutted by the evidence in the Section 6 Declarations, which indicate that Claimants incurred increased costs of over $15,000 in each of FYs 2010-11 and 2011-12 in response to this mandate. *See* Narrative Statement at 45. The Water Boards have not met their burden of establishing the existence of any exceptions to the requirement for a subvention of funds for this mandate.

I. *Retrofitting Requirements for Existing Development*

Section F.3.d of the 2010 Permit required Claimants to identify areas of existing developments, including municipal developments, as candidates for retrofitting, evaluate and rank candidates according to pre-established criteria, prioritize work plans for implementation according to the evaluation, cooperate with landowners to encourage retrofit of private improvements, and track and inspect retrofitting projects. Permittees were required to invest significant staff time and other valuable resources into developing and implementing this new program.

1. The Retrofitting Requirements Were Not Federally Mandated

The Water Boards concede that the federal stormwater regulations "do not explicitly require these provisions be included in the permit." WB Comments at 39. That should be the end of the inquiry. Nonetheless, the Water Boards argue that the retrofitting requirements in the 2010 Permit are necessary to meet the federal MEP standard. WB Comments at 39-41. The record indicates otherwise.

First, in addition to the fact that the 2010 Permit is itself not an "MEP permit" (see discussion in Section I.B, above), the permit language cited by the San Diego Water Board as to the purpose of the retrofitting program itself refers not only to the reduction of discharges of stormwater pollutants to the MEP but also the prevention of "discharges from the MS4 from causing or contributing to a violation of water quality standards." 2010 Permit, Section F.3.d. As previously discussed, the decision by the San Diego Water Board to exercise its discretion, its "true choice" to require such provisions is not federally mandated. *Dept. of Finance*, 1 Cal. 5th at 765.

Second, citation to the MS4 Permit Improvement Guide does not support the Water Boards' argument because, as discussed above in Section II.F.2, the Guide has no regulatory weight and indeed imposes "no legal obligations" on any party. The Guide therefore is not evidence upon which the Water Boards can base an argument that the retrofitting requirements for existing development represents a federally required step to achieve the MEP standard.

Third, Finding D.3.h, cited by the Water Boards (WB Comments at 40-41), does not rise to the type of finding required by the Supreme Court to afford deference to the San Diego Water Board's determination of what constitutes compliance with the MEP standard. The finding itself belies such an interpretation, as there is no language indicating that the Board specifically found that the retrofitting required by Section F.3.d was the *only* means by which the MEP standard could be achieved. The finding only indicates that, in the view of the San Diego Water Board, the type of retrofitting required by the 2010 Permit "meets MEP." The finding *never* states, as do the Water Boards (WB Comments at 41), that the retrofitting provisions "are necessary to satisfy the MEP standard" or that they are "based entirely federal law."[36]

With respect to stormwater permits issued by the EPA, neither the Boston nor the Worcester permits requires the provisions set forth in 2010 Permit Section F.3.d. The Albuquerque permit encourages evaluation of retrofitting of municipal properties and flood control devices but does not extend to private development. The Boise permit is likewise limited to municipal existing stormwater control devices. The D.C. permit is likewise not as broad as the San Diego permit. *See* Ashby Dec., ¶ 17.

[36] As discussed in Section I.D above, the San Diego Water Board made no 2010 Permit-specific finding that the permit is based entirely on federal law nor is there evidence in the record to support such a finding. In fact, in the Fact Sheet for the 2010 Permit, the San Diego Water Board cited not only the federal CWA as authority for the existing development retrofitting requirements (33 U.S.C. § 1342(p)(3)(B)(ii-iii)), but also California Water Code § 13377 which specifically allows the water boards to exceed the requirements of the CWA. Fact Sheet at 158.

2. The Retrofitting Requirements Represented a New Program and/or Higher Level of Service

The Water Boards appear to argue (WB Comments at 42) that no new program or higher level of service was required by the retrofitting requirements (even though the Water Boards do not dispute that the requirements were not contained in the 2004 Permit or even required by the federal stormwater regulations) because the Claimants were under "the same federal standards" to which they "have been subject for decades." Of course under that theory (which, as explained above, ignores the nature of the 2010 Permit and is not supported by the record before the Commission), there could never be any new program in a stormwater permit, since anything new required of the permittees by a water board was simply subject to the "same federal standards."

This same argument was considered and rejected by the Commission in the SD County SOD, where the DOF had contended that the permit at issue there was not a new program or higher level of service "because additional activities, beyond those required [by the previous permit], are necessary for the claimants to continue to comply with the Clean Water Act and reduce pollutants to the Maximum Extent Practicable." SD County SOD at 48-49.

The Commission rejected this argument, indicating that it analyzing the provisions of the permit at issue in the test claim against the previous permit "to determine which provisions are a new program or higher level of service. Under the standard urged by Finance, anything the state imposes under the permit would not be a new program or high level of service. The Commission does not read the federal Clean Water Act so broadly." San Diego County SOD at 49.

The retrofitting requirements for existing development was a new program or a higher level of service.

3. No Other Mandate Exceptions Apply

The Water Boards, again without support, argue that the costs for the Claimants to implement the retrofitting requirements mandated by Section F.3.d of the 2010 Permit are "*de minimis.*" As a factual matter, this argument is wrong. As set forth in the Narrative Statement at 48, the Claimants incurred more than $190,000 in increased costs during FY 2011-12 alone. These increased costs are not *de minimis. See* Govt. Code § 17564(a). The arguments regarding alleged fee authority are addressed in the Funding Rebuttal comments, below.

J. *Watershed Water Quality Workplan Requirements*

Section G of the 2010 Permit required Claimants to develop and implement a Watershed Water Quality Workplan to identify, prioritize, address and mitigate the "highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed." 2010 Permit at 74. As set forth in Claimants' Narrative Statement at 48-50, the permit requires several activities and components as part of the development and implementation of this plan. And, as further set forth in the Narrative Statement at 50-51, the 2010 Permit requirements in this area were significantly different and more demanding than those in the 2004 Permit.

1. The Watershed Water Quality Workplan Requirements Were a New Program or Higher Level of Service

As set forth above, the test of whether a mandate is a new program or higher level of service is whether the local agency had previously been required to do it, or whether it results in an increase in the actual level or quality of governmental services provided. *Lucia Mar*, 44 Cal.3d at 836; *San Diego Unified School Dist.*, 33 Cal.4th at 877.

The Water Boards do not dispute that the 2010 Permit is much more specific and much more demanding than the 2004 Permit with respect to its basic thrust. Indeed the 2010 Permit's Fact Sheet itself states that "the implementation approach has changed." Fact Sheet at 166. Instead, the Water Boards argue that the 2004 Permit required a storm water management program and the 2010 permit's requirements are "a refocused implementation approach." WB Comments at 44.

The Water Boards first argue that the watershed workplan requirements were designed to consolidate watershed planning in a more efficient and effective manner, and therefore did not represent a new program or higher level of service. The Water Boards also contend that the specific activities were "in substantial part" previously required. WB Comments at 44.

As the Fact Sheet states, however, the specific requirements imposed on Claimants in the 2010 Permit did change. The 2004 Permit required "selection and implementation of watershed activities," but the San Diego Water Board found that program to be unsatisfactory. Fact Sheet at 166. The San Diego Water Board thus revised those requirements, requiring co-permittees to develop a workplan that would now assess receiving waterbody conditions, prioritize the highest water quality problems, implement effective BMPs and measure water quality improvement, and in doing so, state that the "implementation approach has changed." Fact Sheet at 166-67. Thus, it is not correct to generally state that the 2004 Permit contained the same requirements, when the Fact Sheet itself states that the San Diego Water Board was not satisfied with those permit requirements and imposed new ones (*Id.*).

If the San Diego Water Board did not intend Claimants to initiate new programs or a higher level of service under Section G, the Board would have just continued the requirements in the 2004 Permit. The Board did not do so. Instead, it found that the 2004 Permit requirements "were not able to demonstrate improvements to water quality." Fact Sheet at 166. The Regional Board therefore revised and supplemented the requirements in the 2004 Permit. The San Diego Water Board's dissatisfaction with the prior permit's stormwater management program and its revision and supplementation of that program in the 2010 Permit is evidence that the Board did intend a change from the prior permit, *i.e.*, did intend a new program or higher level of service.

Although this evidence, as well as a comparison of 2010 Permit Section G to the counterpart requirements of the 2004 Permit should be sufficient to show that Section G is a new program or higher level of service, particularly in light the of the Fact Sheet statement that the "implementation approach has changed," the Water Boards have parsed individual elements of the water quality work plan in their comments. WB Comments at 44-49. Claimants will therefore respond to each of the Water Boards' contentions with respect these individual elements.

a. Characterizing Watershed Receiving Water Quality Including Analyzing Monitoring Data Collected under the 2010 Permit from Other Public and Private Organizations

Section G's first requirement (Section G.1.a) is the requirement to characterize receiving water quality in the watershed based on data from Claimants' monitoring program and applicable information available from other public and private organizations. The Water Boards contend that under the 2004 Permit, Claimants were also required to assess receiving water quality and thereafter annually assess water quality data from Claimants' monitoring program and other "reliable sources." WB Comments at 45.

The activities required under the 2004 Permit, however, were not part of the much more robust analysis and workplan efforts, including public participation, required by the 2010 Permit. The Watershed Water Quality Workplan, of which the characterization is a part, was a "refocused implementation approach," for the purpose of increasing the level and quality of governmental services provided (Fact Sheet at 166-67). It thus is part of the "higher level of service" mandated by Section G.

b. Prioritizing Water Quality Problems by Constituent and Location

Section G.1.b required Claimants to prioritize water quality problems by constituent and location. The 2004 Permit did not contain any such requirement (*compare* 2004 Permit, Directive K, pp. 30-31.) The Water Boards nevertheless contend that the 2004 Permit contained comparable requirements. WB Comments at 46.

The 2004 Permit, however, did not require Claimants to do an analysis by constituent and location. This requirement is new, part of the 2010 Permit's refocused implementation approach and mandated because the San Diego Water Board was not satisfied with the results being obtained under the 2004 Permit (Fact Sheet at 166). This requirement was directed towards increasing the level and quality of Claimants' program, *i.e*, the services being rendered. It thus is part of the higher level of service mandated by Section G.

c. Identifying Likely Sources Causing Highest Water Quality Problems

Section G.1.c required Claimants to identify the likely sources, pollutant discharges and/or other factors causing the highest water quality problems within the watershed. The Water Boards contend that Claimants were already required to address and mitigate the highest priority water quality issues in the watershed and identify major water quality problems and sources. WB Comments at 46. The 2004 Permit, however, did not require the extensive analysis required by the 2010 Permit.

Under Section G.1.c, Claimants were required to include in their analysis an examination of information from construction, industrial, commercial, municipal and residential source identification programs, water quality monitoring data collected as part of the receiving water monitoring and reporting program required by the 2010 Permit, and additional focused water

quality monitoring performed to identify specific sources within the watershed. The 2004 Permit did not require this scope of analysis, and did not require additional focused water quality monitoring to identify specific sources. (*Compare* 2010 Permit Section G.1.c *with* 2004 Permit, Section K.2.c and d.) Section G.1.c mandated an increased level and quality of governmental services as part of the higher level of service required by Section G.

d. Development of a Watershed BMP Implementation Strategy

Section G.1.d required Claimants to develop a watershed BMP implementation strategy to attain receiving water quality objectives in the highest priority water quality locations. The implementation strategy was to include a schedule for implementation to abate specific receiving water quality problems and a list of criteria to be used to evaluate BMP effectiveness.

The 2004 Permit did not require this watershed BMP implementation strategy. *Compare* 2004 Permit Section K, at 30-31. Although the Water Boards contend that the 2004 Permit required identification and prioritization of major water quality problems, short and long term activities and certain specific BMPs such as an education program (WB Comments at 47), the 2004 Permit did not require development of a BMP implementation strategy "to attain receiving water quality objectives." (2010 Permit, Section G.1.d).

Again, as the Fact Sheet stated, the purpose of these requirements was to change the implementation approach because the San Diego Water Board determined that the requirements of the 2004 Permit did not suffice to show improvements in water quality. As the Fact Sheet stated, the purpose of these new requirements was not to continue the prior permit's requirements approach but to change it. Fact Sheet at 166. Like the other requirements in Section G, this requirement was also directed towards increasing the level and quality of Claimant's program, *i.e.*, the services being rendered. Thus Section G. 1.d is also a part of the higher level of service mandated by Section G.

e. Establish a Schedule for Development and Implementation of the Watershed Work Plan Including Annual Public Meetings

Section G.1.f required Claimants to establish a schedule for development and implementation of the watershed work plan and hold annual public meetings to review that plan and receive public comment. There is no dispute that the 2004 Permit did not require annual public meetings. The Water Boards concede that the public meeting to review the plan and receive comments was a "new requirement." WB Comments at 47. Annual public meetings is a new requirement and a higher level of service.

f. Implementation of the Watershed Work Plan

Section G.2 required Claimants to implement the watershed work plan within 90 days of submittal. The Water Boards contend that the 90 day requirement is similar to the 2004 Permit's requirement to implement the 2004 Permit sufficiently early to begin implementation of a short term strategy. WB Comments at 48. The Water Boards miss the point. It is not the 90 days, but

the implementation of this entirely new watershed work plan, with all its new requirements, which is the new program or higher level of service.

g. Co-Permittee Collaboration, Including Frequent Meetings and Pursuit of Interagency Agreements with Non-Permittee MS4 Operators

Section G.3 required Claimants to collaborate in the development and implementation of the watershed work plan and to have frequent, regularly scheduled meetings to do so. Section G.3 also required Claimants to pursue efforts to obtain interagency agreements or coordinate efforts with non-permittee MS4 operators.

The 2004 Permit did not contain these requirements. First, under the 2004 Permit, permittees were required to meet only annually. The 2010 Permit required Claimants to meet more than once a year. Second, the 2004 Permit did not require Claimants to obtain interagency agreements. The 2004 Permit only required the watershed SWMP to describe such agreements if they existed (2004 Permit, Section K.2.b.). The 2010 Permit required Claimants to "pursue efforts" to obtain such agreements.

These requirements were new. They certainly constituted an increase in the level and quality of the governmental services that are required to be provided.

h. Public Participation

Section G.4 required Claimants to implement a watershed-specific public participation mechanism within each watershed. Included in this mechanism was a minimum 30-day public review and opportunity to comment on the watershed work plan prior to its submittal to the San Diego Water Board.

It is undisputed that the 2004 Permit contained no such requirement. The Water Boards only contend that the 2010 Permit did not require Claimants to consider the public comment, not that public participation was not a new requirement. WB Comments at 48.

i. Annual Public Watershed Plan Review Meeting

Section G.5 required Claimants to annually review and update the watershed work plan. All updates were to be presented during a public annual watershed review meeting. Claimants were also required to review and modify their own programs to be consistent with the updated watershed workplan.

The Water Boards do not dispute that the 2004 Permit did not require public meetings for consideration of updates to the 2004 Permit's watershed stormwater management plan. WB Comments at 49. Public meetings were new and were part of the higher level of service required by Section G as a whole.

2. The Watershed Water Quality Workplan Requirements Were Not Federally Mandated

As set forth in the Narrative Statement at 50, nothing in the CWA or its implementing regulations required a Watershed Quality Workplan. The Water Boards nevertheless contend that this requirement was necessary to meet the MEP standard. WB Comments at 42-43. Section G itself, however, states that the watershed plan is required to have a BMP implementation strategy that is to "attain receiving water quality objectives," not to meet the MEP standard (2010 Permit, Section G.1.d). As discussed in Section I, it is well established that the CWA does not require municipal stormwater discharges to meet water quality standards or objectives, but instead to only to reduce pollutants in their discharge to the MEP. 33 U.S.C. § 1342(p)(3)(B)(iii); *Browner, supra,* 191 F.3d at 1166. In that sense, as also discussed above, the compliance standard in the 2010 Permit (and the compliance standard for Section G of that permit) is not an "MEP" standard but rather a State-required standard to achieve water quality standards.

The Water Boards also cite to the 2010 Permit's findings and discussion in the Fact Sheet, and suggest that the findings and discussion establish Section G as necessary to meet the MEP standard. WB Comments at 42-44. None of those findings or the Fact Sheet, however, states that the requirements of Section G constituted the only means by which the MEP standard could be achieved, and there is no evidence in the record to support such a finding. Thus, these findings and discussion are entitled to no deference. *Dept. of Finance,* 1 Cal. 5th at 768.

Nothing in the CWA or its implementing regulations requires a Watershed Quality Workplan as set forth in Section G and the Water Boards have identified no such legal requirement. Instead, the San Diego Water Board freely chose to impose these requirements in the 2010 Permit, imposing requirements that exceeded federal law. *Dept. of Finance,* 1 Cal.5th at 765; *Hayes,* 11 Cal.App.4th at 1594. *See also Long Beach Unified,* 225 Cal.App.3d at 173 (state mandate created where state removes local agency's discretion and directs program to be implemented).

With respect to EPA-issued stormwater permits, the Albuquerque, D.C., Boston, and Worcester permits do not contain the requirement to develop and implement a watershed water quality workplan. The Boise permit contains a requirement for watershed plans, but not the extensive requirements set forth in the 2010 Permit. The Boise permit is focused on identifying beneficial uses and implementing LID and infiltration principles. The 2010 Permit, on the other hand, is more extensive, requiring permittees to characterize the watershed, prioritize water quality problems, identify sources and develop strategies to monitor and improve water quality. These requirements are not included in the Boise permit work plan requirements. *See* Ashby Dec., ¶ 18.

3. No Other Mandate Exceptions Apply

The Water Boards contend that Claimants have fee authority to pay for the water quality workplans and that the costs to implement these requirements are *de minimis.* WB Comments at 49. As discussed in the Funding Rebuttal comments below, Claimants do not have such fee authority.

Moreover, the costs of complying with these requirements, including the costs of public participation and annual public meetings, are also not *de minimis*. As set forth in Claimants' declarations, Claimants incurred increased costs in implementing these programs of more than $11,000 in FY 2010-11 and more than $21,000 in FY 2011-12. These increased costs are not *de minimis*. *See* Govt. Code § 17564(a).

K. *JRMP Annual Report Requirements*

Section K.3 of the 2010 Permit (including Table 5) and a checklist set forth in Attachment D to the permit required the provision of information not required by federal regulation on the JRMP Annual Reports required to be filed by the Claimants. In their comments, the Water Boards argue that the these requirements are entitled to deference under *Dept. of Finance*, that the requirements are reflected in the D.C. Permit and that they do not represent a new program or higher level of service. WB Comments at 49-54. For the reasons set forth below, these arguments are not supported by the law or the facts.

1. The Requirements Are Not Necessary to Meet the MEP Standard

In their Narrative Statement (at 53), Claimants acknowledged that the federal stormwater regulations include annual reporting requirements in 40 CFR § 122.42(c). The reporting requirements at issue in the Joint Test Claim, however, encompass a scope and detail in the JRMP Annual Reports that goes beyond the federal requirements. As such, they are state mandated requirements. *Dept. of Finance*, 1 Cal. 5th at 771.

The Water Boards contend that the items required by Section K.3 and the checklist are included within the items required by Section 122.42(c). WB Comments at 50. However, as already set forth in the Narrative Statement at 53-54, the 2010 Permit requires far more detail as well as additional types of information that are not required by the stormwater regulations.

The Water Boards also assert that since "the San Diego Water Board found that the provisions in the 2010 Permit are exclusively based on federal law and found that the underlying substantive provisions to be reported upon were necessary to meet the MEP standard," and that the annual reporting requirements included in the permit "'are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs,'" the "San Diego Water Board's findings are entitled to deference under *Department of Finance."* WB Comments at 50 (quoting 2010 Permit Finding D.1.g).

This assertion ignores several facts. First, the Water Boards again attempt to "bootstrap" a finding as to the alleged federal-only nature of the 2010 Permit to apply to the annual reporting requirements. In fact, the boilerplate finding referred to, but not cited by, the Water Boards, Finding E.6, is not entitled to deference for the reasons set forth in Section I.D.3. Second, Finding E.6 itself could not apply to the annual reporting requirements in the 2010 Permit because, as the Fact Sheet states, a second and independent grant of authority for those requirements is California Water Code § 13267, which provides that "'the San Diego Water Board may require than [sic] any person who has discharged [. . .] shall furnish, upon penalty of perjury, technical or monitoring reports which the regional board requires.'" Fact Sheet at 174 (quoting Water Code § 13267). Third, Finding D.1.g makes no reference to the MEP standard but merely states that the reporting requirements are "necessary to meet federal requirements." This is not the case-specific finding

determining that the permit conditions "were the only means by which the [MEP] standard could be implemented. " *Dept. of Finance,* 1 Cal. 5th at 768 and n.15.

It is the Commission, not the San Diego Water Board, which has the duty to determine whether the additional scope and detail of the mandated requirements in the Section K.3 and the checklist represent a state, rather than federal, mandate.

With respect to EPA-issued stormwater permits, while such permits require the preparation of annual reports (which are required under the federal stormwater regulations, as noted above), none require the extensive reporting required by the 2010 Permit. *See* Ashby Dec., ¶ 19. This fact undermines any argument that the JRMP annual reporting requirements were mandated by federal law.

2. The JRMP Annual Reporting Requirements Represented a New Program and/or Higher Level of Service

The Water Boards argue that the JRMP annual reporting requirements were not a new program or higher level of service, not through a comparison of reporting requirements in the 2004 Permit, but rather by simply reproducing the annual reporting requirements of the 2004 Permit. WB Comments at 51-54.

In their Narrative Statement at 54, the Claimants have already summarized the new JRMP annual reporting requirements in the 2010 Permit that were additional to the requirements in the 2004 Permit. To assist the Commission in their review of those requirements, the new requirements not set forth in the 2004 Permit include:

- *With respect to new development projects:* All revisions to the Standard Stormwater Mitigation Plans ("SSMPs"), including identification and summary of where the SSMP failed to meet the requirements of the 2010 Permit, updating procedures for identifying pollutants of concern in each PDP, updated treatment BMP ranking matrix, updated site design and treatment control BMP standards; the number of PDPs reviewed and approved during the reporting period, including brief descriptions of BMPs required at PDPs and verification that site design, source control and treatment BMPs were required on all applicable PDPs; the name and location of all PDPs granted a waiver from implementing LID BMPs; an updated watershed-based BMP maintenance tracking database of approved treatment control BMPs and treatment control BMP maintenance, including updates to the list of high-priority PDPs and verification that the requirements of the Permit were met during the reporting period; the name and brief description of all approved PDPs required to implement hydrologic control measures in compliance with 2010 Permit Section F.1.h, including a description of management measures planned to protect downstream beneficial uses and adverse physical changes to downstream channels; and, the number and a description of all enforcement activities applicable to the new development and redevelopment component of the Permit and a summary of the effectiveness of those activities.

- *With respect to construction activities:* Any updated ordinances or planned ordinance updates; a description of any changes to procedures used to identify inspection priorities and enforcing control measures that consider the nature of the construction activity, a topography and the characteristics of soils and receiving water quality; any

changes to designated minimum and enhanced BMPs; and, the number and date of inspections and the number and date and types of enforcement actions for each facility, a description of high-level enforcement actions and a requirement for maintenance of supporting paper or electronic files, including a record of inspection dates, the results of the inspection, any photographs and a summary of any enforcement actions taken.

- *With respect to municipal activities:* An updated source inventory; all changes to designated municipal BMPs; descriptions of any changes to procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies; a summary and assessment of BMP retrofits implemented at flood control structures, including list of retrofitted projects, list and descriptions of structures evaluated for retrofitting and a list of structure still needing to be evaluated and the schedule for evaluation; summary of municipal structural treatment control operations and maintenance activities, including types of facilities inspected and summary of findings; summary of the MS4 and MS4 facilities operations and maintenance, including the number and types of facilities maintained, amount of material removed and list of facilities planned for bi-annual inspections and the justification therefore; summary of municipal areas/programs inspections, including the date of inspections conducted at each facility, BMP violations identified by facility, the number, date and types of enforcement actions by facility and summary of inspection findings and follow-up activities for each facility; description of activities implemented to address sewage infiltration into the MS4; and, description of BMPs and their implementation for unpaved roads construction and maintenance.

- *With respect to commercial/industrial facilities*: An updated inventory of such sources; summary of the inspection program, including number and date of inspections conducted at each facility or mobile business, BMP violations identified during the inspection by facility, the number, date and types of enforcement by facility or mobile business, brief description of each high-level enforcement actions at commercial/industrial sites, including the effectiveness of the enforcement and followup activities for each facility; all changes to designated minimum and enhanced BMPs; and, a list of industrial sites by name, address and SIC code, that the permittee suspects may require coverage under the General Industrial Permit, but has not submitted a Notice of Intent.

- *With respect to residential areas*: All updated minimum BMPs required for residential areas and activities; a summary of enforcement actions taken with residential areas and activities; and, a description of efforts to manage runoff and stormwater pollution in common interest areas and mobile home parks.

- *With respect to the retrofitting of existing development:* An updated inventory and prioritization of existing developments identified as candidates for retrofitting; description of efforts to retrofit existing developments during the reporting year; description of efforts taken to encourage private landowners to retrofit existing development; list of all retrofit projects that have been implemented, including site location, description of the project, pollutants expected to be treated and the tributary

acreage of runoff that will be treated; any proposed retrofit or regional mitigation projects and timelines for future implementation; and, any proposed changes to the permittee's overall retrofitting program.

- *With respect to illicit discharge detection and elimination ("IDDE")*: Any changes to the legal authority to implement IDDE activities; any changes to established investigation procedures; any changes to public reporting mechanisms, including phone numbers and web pages; summaries to how each significant illicit discharge case was resolved; description of instances when field screening and analytical data exceeded action levels, including instances where no investigation was conducted; and, a description of followup and enforcement actions taken in response to investigations of illicit discharges and a description of the outcome of the investigation/enforcement actions.

- *With respect to workplans:* Any updated workplans, including priorities, strategy, implementation, schedule and effectiveness evaluation.

- *Checklist:* Additionally, Claimants were required for the first time in the 2010 Permit to submit a checklist that required the listing of the number of a variety of categories, including with regard to construction sites, the numbers of active and inactive sites, sites inspected, inspections, violations and enforcement actions taken; with regard to new development, numbers of development plan reviews, grading permits issued and projected exempted from hydromodification requirements; for post construction development, numbers of PDPs as well as SUSMP Required Post-Construction BMP inspections, BMP violations and BMP enforcement actions taken; for Illicit Discharges and Illicit Connections ("IC/ID"), the numbers of IC/ID inspections, IC/ID detections by staff, IC/ID detections from the public, IC/ID eliminations, IC/ID violations and IC/ID enforcement actions taken; for MS4 maintenance, the number of inspections conducted, amount of waste removed and total miles of MS4 inspected; and, for municipal/commercial/industrial facilities, numbers of facilities, inspections conducted, facilities inspected, violations and enforcement actions taken.

While certain items in the checklist were also required by the 2004 Permit, such as numbers of inspections and enforcement actions taken, no checklist was required for the items identified above in that permit.

All of the items set forth above represent new requirements contained in the 2010 Permit which were not required in the previous 2004 Permit. A number of the requirements identified for the annual reports reflected new programs in the 2010 Permit, such as regarding the retrofitting of existing development or BMPs concerning unpaved roads. *See* Sections II.G and II.I.

3. No Other Mandates Exceptions Apply

The Water Boards again contend that the Claimants had fee authority "for many, if not all of the related substantive provisions underlying the required elements," that the reporting of municipal projects, such projects were undertaken voluntarily and that the costs are *de minimis.* WB Comments at 54.

The lack of fee authority is discussed in the Funding Rebuttal comments below. The issue of municipal projects as being "voluntary" is addressed in the Narrative Statement in Support of Joint Test Claim filed April 28, 2017 at 33-35, and will not be repeated here. Finally, the increased costs of the JRMP annual reporting mandates are not *de minimis,* as identified in the Narrative Statement at 55, as those costs exceeded $130,000 in each of FYs 2010-11 and 2011-12. *See* Govt. Code § 17564(a).

L. *Special Studies Requirements*

The Monitoring and Reporting Program ("MRP") for the 2010 Permit, Attachment E, required the Claimants to conduct several "special studies" regarding waters in the Santa Margarita River watershed. These studies went beyond the "core monitoring" requirements for MS4 permittees in the CWA regulations and represent the "true choice" of the San Diego Water Board to impose such requirements in the absence of any controlling federal requirement.

Five special studies are at issue: (1) a sediment toxicity study, (2) a trash and litter study, (3) a study on agricultural federal and tribal lands' discharges into the Claimants' MS4, (4) an MS4 and Receiving Water Maintenance Study and (5) a study on the impacts of the implementation of LID protections on downstream flows to Camp Pendleton and potential impacts on downstream beneficial uses. As to the last, which replaced a study into intermittent and ephemeral stream conversion to perennial streams, the Water Boards contend that it is not a state mandate "because it is not required by the permit itself." WB Comments at 60, n.244.

This fifth study was, however, required by the San Diego Water Board. Attached as exhibits to these Rebuttal Comments is a letter to the San Diego Water Board from Jason Uhley of the District (on behalf of itself and the other permittees) dated May 29, 2012, describing the study and its costs and a letter from the Water Board approving performance of that study in lieu of the intermittent and ephemeral stream study and performance of monitoring in the MS4 and Receiving Waters Maintenance Study. That correspondence is discussed further below. As such, the performance of the LID impacts study was as much a mandate as the studies set forth in the 2010 Permit (for which the Claimants remained liable).

With respect to EPA-issued permits, while some required assessment of the effectiveness of certain structural controls or LID requirements, none required the special studies identified in the 2010 Permit. *See* Ashby Dec., ¶ 20.

1. Adherence to the "MEP Standard" Has No Applicability to the Requirement to Conduct Special Studies

The Water Boards argue (WB Comments at 55-57) that the special studies were "necessary" to meet the MEP standard. In making this argument, the Water Boards bootstrap findings unrelated to the MRP and ignore evidence in the record. With respect, the Water Boards make unsupported assertions of fact in an attempt to establish a federal mandate for the special studies.

First, the Water Boards cite Finding D.1.c, which refers to "runoff management programs" and moreover references both the reduction of "the contribution of storm water pollutants in runoff to the MEP" and the meeting of "water quality standards." WB Comments at 55. As discussed above, the 2010 Permit is not an "MEP Permit" and this finding does not support an argument that

the requirements of the 2010 Permit at issue in this Joint Test Claim are necessary to meet the MEP standard (much less qualify as the kind of finding as to which the Supreme Court would afford deference). And, the finding does not even mention the special studies required by the MRP. As such, the statement that the San Diego Water Board's "determination to require these special studies was an essential part of this effort (to achieve the MEP standard and to effectively prohibit non-stormwater discharges to the MS4)" is simply without factual basis, as is the Water Boards' conclusion that there is an "overarching federal basis" for the MRP "(of which the special studies requirements are part)." WB Comments at 56.

In fact, nowhere in the 2010 Permit or the Fact Sheet is there any indication that the special studies were intended to meet any federally mandated requirements, including the MEP standard. There are, as Claimants acknowledged in the Narrative Statement, federal regulatory requirements for monitoring programs (Narrative Statement at 57-58), but these requirements nowhere required or even mentioned the expansive special studies required in the 2010 Permit. As the State Supreme Court held in *Dept. of Finance*, "[t]hat the EPA regulations contemplated some form of inspections, however, does not mean that federal law required the scope and detail of inspections required by the Permit conditions." 1 Cal.5th at 771. There is even less support for the argument that the federal stormwater monitoring regulations required the "scope and detail" of the special studies.

Both the 2010 Permit and the Fact Sheet cite as authority for the MRP requirements several state statutes. In discussing the requirements of the MRP, including the special studies, the Fact Sheet cites Water Code § 13377 which, as discussed above, enables the water boards to exceed the requirements of federal law in issuing NPDES permits. Fact Sheet at 185. The Fact Sheet also cites as authority California Water Code § 13267, a statute which gives the water boards, under color of state, not federal, law the authority to "'require than [sic] any person who has discharged [. . .] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.'" Fact Sheet at 185 (quoting Water Code § 13267). In addition, the 2010 Permit itself, in Finding E.11, states that the "monitoring and reporting required under [the Permit] is required pursuant to authority under CWC section 13383." This statute[37] provides, *inter alia,* that the State Board or a regional board "may establish monitoring . . . reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 . . . for any person who discharges, or proposes to discharge, to navigable waters."

Significantly, the Fact Sheet (which contains the only discussion of the legal basis for the MRP), cites no federal regulatory provisions as authority for the special studies. This is to be contrasted to the citation of such provisions as support for wet weather MS4 discharge monitoring, non-storm water dry weather action level monitoring or source identification monitoring. *Compare* Fact Sheet at 193-95 *with* Fact Sheet at 196-98.

The special studies contained in the 2010 Permit's MRP, plus the additional LID impacts study set forth in the San Diego Water Board's September 14, 2012 letter to the permittees (discussed below), are not federally mandated. They are, as the Water Boards comments indicate, additional monitoring mandates intended to address "receiving water questions . . . not addressed by *core monitoring programs.*" (WB Comments at 55, *quoting* Responses to Comments at 150

[37] Rebuttal Documents, Tab 3.

(emphasis supplied)). The special studies are not part of the "core monitoring programs" as reflected by their absence in the previous 2004 Permit. That the San Diego Water Board might have authority under the state Porter-Cologne Act to order such studies to be conducted is not the issue before the Commission. It is whether such studies were required by federal law or regulation. They were not.

Each of the special studies represents a discretionary act, the exercise of a "free choice" by the San Diego Water Board to impose these mandates on the Claimants in the absence of any federal law or regulation requiring such studies. As such, they fall well within the Supreme Court's definition of a state mandate in *Dept. of Finance.*

2. The Sediment Toxicity Study Was a State Mandate

The Water Boards conclude (WB Comments at 57) that the sediment toxicity study "was necessary to implement the federal MS4 requirements." As the discussion above illustrates, there is no support for this conclusion. The San Diego Water Board has the discretion, subject to the requirements of state law, to require persons who discharge waste (including MS4 operators) to conduct studies of those discharges. Water Code § 13267; Water Code § 13383.

The Water Boards ignore the point made in the Narrative Statement, that an investigation of sediment toxicity (which is of statewide concern and was more identified with discharges from perennial streams and in estuaries, not the intermittent and ephemeral streams in the Santa Margarita River watershed) was a shifting of the responsibility of the San Diego Water Board to undertake such a study to the Claimants. Under *Dept. of Finance* and *Hayes,* such a shifting of a state obligation represents a state mandate.

3. The Trash and Litter Study Was a State Mandate

The Water Boards argue (WB Comments at 57) that "the trash and litter study was intended to inform the need for improved BMPs as part of the iterative process of achieving the federal MEP standard." As with other assertions made by the Water Boards, this statement is not supported by the record. Moreover, the rationale cited by the Water Boards found in the Fact Sheet (WB Comments at 57-58) makes no reference at all to compliance with the MEP standard, much less makes a finding that conducting the trash and litter study was the *only* means by which the MEP standard could be achieved.

The D.C. permit includes provision for the control of trash, but that is not the same as a special study. As noted above, there is no requirement for a trash and litter study in the D.C. permit (Ashby Dec., ¶ 20.) In addition, there is no support for the assertion by the Water Boards that a trash control provision in the D.C. permit "supports the San Diego Water Board's conclusion that this study was necessary to meet MEP." WB Comments at 58. In fact, there is *no such conclusion* in the record.[38] The trash and litter study, like the other special studies mandated by the San Diego Water Board, is a state mandate.

[38] And, the quote from the D.C. permit makes no reference to MEP in any event. The issue is not that trash cannot be a pollutant discharged from MS4s. The issue is whether the San Diego Water Board was following a federal mandate in requiring a study of how trash and litter got into receiving waters, a study

4. The Agricultural, Federal and Tribal Input Study Was a State Mandate

The Water Boards themselves admit that with respect to this study, which required Claimants to investigate the quality of waters discharged by jurisdictions beyond the control of the Claimants, the San Diego Water Board "could have directed other entities to investigate" the discharges. WB Comments at 58. At the same time, the Water Boards claim that the San Diego Water Board "is not responsible for undertaking the investigation required in the special study and did not shift its responsibility to Claimants." *Id.*

This special study required the permittees under the 2010 Permit to sample discharges from non-permittee sources that were not, by definition, within the control of the permittees. None of these sources, agricultural runoff, federal land runoff and tribal lands runoff, are within the jurisdictional control of the Claimants. Thus, the unsupported assertion (WB Comments at 58) that "such discharges into Copermittees' MS4s are squarely their responsibility to evaluate in efforts to meet the MEP standard for storm water discharges and the independent federal law requirement that Copermittees' [sic] effectively prohibit non-storm water discharges into the Ms4s" is irrelevant to the argument that the special study requirement is federally mandated. And, there was no finding by the San Diego Water Board to support the assertion made by the Water Boards. The only rationale for the study provided by the Board was a concern about the impacts of storm water discharged from these non-permittee areas, and how they might affect the overall water quality in two watersheds. Fact Sheet at 197.

The Water Boards also assert that the study "also originated from information voluntarily provided by Copermittees." WB Comments at 59. It is not clear if the Water Boards are attempting to argue that the special study was voluntarily undertaken, but the record shows that it was not.[39] The Claimants identified in their ROWD a problem stemming from outside of their jurisdiction. Fact Sheet at 197. Instead of requiring the sources of that problem to investigate, the San Diego Water Board simply placed that burden on Claimants. For these and the other reasons discussed above, the study was a state mandate.

5. MS4 and Receiving Waters Maintenance Study Was a State Mandate

This study required that the Claimants investigate "receiving waters" that were also considered "part of the MS4" under the 2010 Permit's unique expansion of what constitutes an MS4 (*see* Finding D.3.c). As previously discussed, this finding expands the definition of "MS4" beyond its federal bounds.

The Water Boards cite a footnote in a Ninth Circuit decision involving the Los Angeles County MS4 system for the proposition that an MS4 can also be a receiving water. (WB Comments at 60, citing *NRDC v. Los Angeles County Flood Control Dist.* (9th Cir. 2013) 725 F.3d 1194, 1200 n.12). That footnote (which constitutes dicta since it was not necessary predicate for the Ninth Circuit's ruling) goes no further than stating that it "appears" that certain reaches of the Los Angeles and San Gabriel rivers constituted both MS4 and receiving water. The Ninth Circuit

not limited to whether that trash was entering via the MS4, which is the focus of the 2010 Permit. *See* 2010 Permit, Attachment E, Section E.3.

[39] *See* District Comment Letter, Attachment 4.

unambiguously concluded, however that the monitoring stations at issue in that case were within the receiving water, i.e., the Los Angeles and San Gabriel Rivers. The court further cited U.S. EPA's statement in the preamble to the proposed stormwater regulations that "[i]n many situations, waters of the United States that receive discharges from municipal storm sewers can be *mistakenly considered* to be part of the storm sewer system." *Id.* at 1200 n.12 (quoting 53 Fed. Reg. 49416, 49442 (Dec. 7, 1988) (emphasis supplied). That preamble further noted that "waters of the United States are not storm sewers for purposes of this rule." 53 Fed. Reg. at 49442.[40]

The footnote cited by the Water Boards is hardly a ringing endorsement of the notion that a waterbody can be both an MS4 (which is defined as a "point source" which discharges into a receiving water through an "outfall." (*see* 40 CFR § 122.26(b)(9) ("*Outfall* means a *point source* . . . at the point where a [MS4] discharges to waters of the United States.")). The stormwater regulations, and indeed the structure of the NPDES permit program under Section 1342 of the CWA, contemplates that a point source must be separate from the navigable water into which it discharges.

In any event, whether or not the San Diego Water Board's finding concerning what constituted a "MS4" unlawfully conflated a "point source" with a "receiving water," the Water Boards cite no authority in the record for their assertion that the "purposes" of the study "are wholly consistent with the goal of ensuring that Copermittees' efforts are effective achieving the MED [sic] standard." WB Comments at 59. No linkage is made in the record of the 2010 Permit, including in the Fact Sheet, and the Water Boards do not cite to such a finding. The decision by the San Diego Water Board to require such a study was an exercise of the Board's discretion under state authority, i.e., those Water Code sections cited in the Permit and Fact sheet as additional authority for the MRP.

6. The LID Impacts Study Was a State Mandate

As indicated in the Narrative Statement at 60, the Claimants reached an agreement with the San Diego Water Board to substitute a special study on LID BMP impacts for performance of monitoring in the MS4 and Receiving Waters maintenance special study (the Claimants already incurred some $12,670 in locating monitoring sites and developing a monitoring plan for that study, *see* Letter dated May 29, 2012 to David Gibson of the San Diego Water Board, Exhibit B, attached hereto as Exhibit A to the Declaration of Claudio M. Padres, P.E. (Attachment 2)) and a special study on intermittent and ephemeral streams (as to which no funds were expended and which has been dropped from this Joint Test Claim).

While this LID impacts study was not required by the 2010 Permit, it is clear that its performance was required by the San Diego Water Board. In a letter dated September 14, 2012 from San Diego Water Board Assistant Executive Officer James G. Smith (Exhibit B to Padres Dec.), Mr. Smith stated that he would not recommend that the Board enforce the special study requirements in Sections II.E.5 and E.6 of the 2010 Permit (which correspond to the MS4 and receiving waters and intermittent and ephemeral stream special studies). This non-enforcement agreement was subject to the requirement that the LID impacts study be performed, however.

[40] Excerpts of the Preamble to the proposed stormwater regulations are in Tab 2 of the Rebuttal Documents.

Thus, the LID impacts study was a mandate of the San Diego Water Board, of equal dignity to the mandates set forth in the 2010 Permit.

7. The Special Studies Were a New Program

The Water Boards contend that because the 2004 Permit contained a requirement that the permittees perform one special study on a subject unrelated to the subjects of the multiple special studies required by the 2010 Permit, the latter requirement did not represent a new program or higher level of service mandated on the Claimants. WB Comments at 60.

As noted above in Section I.C, similar arguments were addressed, and rejected, by the Commission. None of the special studies required by the 2010 Permit were required by the San Diego Water Board in the 2004 Permit. As such, they were "new programs." *County of Los Angeles, surpa,* 110 Cal. App.4th at 1189.

8. No Other Mandates Exceptions Apply

The Water Boards argue that the special studies "were largely based on information voluntarily provided by Copermittees as water quality concerns." WB Comments at 60. This is neither an exception to a mandate nor accurate. While the Claimants may have identified certain conditions in receiving waters as part of their ROWD or annual monitoring reports, this required reporting does not constitute a voluntary agreement to undertake the special studies which were *ordered* by the San Diego Water Board in response. With respect to funding issues, please see the Funding Rebuttal comments, below.[41]

M. *Requirements that 2010 Permit Programs Ensure No Violation of Water Quality Standards and Other Requirements*

Various provisions in Section F of the 2010 Permit contained language that required Claimants, in developing and implementing programs required in Section F, to meet various standards, including that of preventing discharges from the MS4 (or from certain projects) from "causing or contributing to a violation of water quality standards" or "preventing" illicit discharges or non-stormwater discharges While the CWA's implementing regulations require permittees, in some cases, to develop various programs designed to reduce pollutants in runoff, the 2010 Permit instead made specific reductions enforceable under the Permit, and subjected Claimants to sanctions, including civil penalties and injunctive relief, for the programs' failure to achieve the goals. These requirements both go beyond the federally mandated MEP standard as well as specify a standard of compliance not found in federal stormwater regulations. As such, these requirements are state mandates imposed by the San Diego Water Board that went beyond the MEP requirement in the CWA, as the 2010 Permit did not limit the efforts of Claimants to achieving such goals to the MEP.

[41] The Water Boards contend that "it is likely that cost savings can be achieved by coordination of efforts or use of information for dual purposes." (WB Comments at 60.) No evidence of such savings is adduced, and the comment is without support. As set forth in the Narrative Statement, increased costs of more than $27,000 in FY 2010-11 and more than $103,000 in FY 2911-12 were incurred by Claimants. Narrative Statement at 61.

1. The Requirements in Section F of the 2010 Permit Were Not Required by Federal Law and Constituted a New Program or Higher Level of Service

The provisions at issue in this Joint Test Claim are specific requirements applicable to various programmatic requirements in Section F of the 2010 Permit. The Water Boards, however (WB Comments at 61-67) argue at length that the issue before the Commission is instead provisions in Section A of the 2010 Permit relating to the so-called "receiving water limitations language." Claimants, however, do not include the Section A receiving water limitations language in this Joint Test Claim. Thus, the extended discussion by the Water Boards about the derivation of that Section A language and its alleged presence in prior stormwater permits issued to Claimants is not relevant. That discussion does, however, confirm that the 2010 Permit is not an "MEP Permit," and that the attainment of water quality standards, a state-mandated requirement, is the overall controlling Permit compliance standard.

The 2010 Permit contains an explicit requirement that in promulgating the development planning component, Standard Storm Water Mitigation Plans, the construction component, the program for municipal areas and activities, the commercial/industrial program, the residential program and retrofitting of existing development, that Claimants must meet the requirement to "prevent . . . discharges from the MS4 from causing or contributing to a violation of water quality standards."[42]

As Claimants explained in the Narrative Statement (at 63-66), the federal stormwater regulations applicable to these programs (there is no federal requirement to retrofit existing development, as discussed in Section II.I above) do not require the achievement of water quality standards as a compliance objective. By requiring this standard, the San Diego Water Board compelled Claimants to design those programs in a fashion not required by federal law or regulation.

The Water Boards claim that the receiving water limitations language (which they assert is the basis for the Section F requirements) is "required by federal law and is expected to be achieved through an iterative process over time." WB Comments at 63. This claim is belied by the law and the facts. Under *Browner, supra*, MS4 dischargers are *not* required under federal law to take steps not to "cause or contribute" to the exceedance of water quality standards with respect to MS4 dischargers, but rather to reduce pollutants in those discharges to the MEP.[43] The 2010 Permit contains the "cause or contribute" language and does not, despite the Water Boards' language regarding the "iterative process," excuse the permittees for liability for continuing violation of those standards, as also discussed in Section I.B.2 above. The Water Boards acknowledge this lack of a "safe harbor" in their discussion of the receiving water limitations language, making the "iterative process over time" language irrelevant for purposes of CWA enforcement. WB Comments at 62-63.

[42] *See generally*, Narrative Statement at 61-63.

[43] The "precedential language" initially developed by U.S. EPA in fact got it wrong by finding that MS4 discharges had to meet water quality standards. The legal reasoning in the EPA letters referred to in the WB Comments at 61 was rejected by the Ninth Circuit the next year in *Browner*. Nevertheless, the State Water Board, in Order No. 99-05 cited by the Water Boards, acted on its own authority to establish the "precedential" receiving water limitations language.

Again, citing the receiving water limitations language in Section A, the Water Boards claim that the Section F requirements at issue here are not new programs or represent a higher level of service. WB Comments at 64. That argument, however, ignores the fact that these requirements were *not* contained in the previous 2004 Permit. To the contrary, and in contradiction of the Water Boards' claim that the 2010 Permit did not "impose any stringent level of compliance than previously existed" (WB Comments at 64), the 2004 Permit set forth a very different level of compliance.

For example, the industrial/commercial program required the implementation of BMPs "to reduce the discharge of pollutants in runoff to the MEP." 2004 Permit, Section H.2.c. The BMP program programs for residential areas and municipal facilities, too were required to reduce pollutants "to the MEP." 2004 Permit, Sections H.1.c(1); H.3.c. The construction program in the 2004 Permit required the permittees to implement a program "to address construction sites to reduce pollutants in runoff to the MEP during all construction phases." 2004 Permit, Section G. As noted above in Section II.I, the 2004 Permit contained no provision requiring retrofitting of existing development. These provisions in the 2004 Permit were ignored by the Water Boards in their comments.

The "guarantee" provisions in Section F of the 2010 Permit were not required by federal law and constituted a new program or higher level of service as compared to the previous MS4 permit.[44]

2. The Prohibition of Non-Stormwater Discharges in the Section F provisions Was Not Federally Mandated and Was a New Program or Higher Level of Service

The Water Boards contend (WB Comments at 65-66) that the requirement in the Section F provisions to prevent or eliminate illicit discharges into the MS4 were federally mandated and did not constitute a new program or higher level of service. These contentions, however, ignore the law and the facts. First, the CWA requires that MS4 permittees "effectively prohibit" the discharge of non-stormwater into the MS4. 33 U.S.C. § 1342(p)(3)(B)(ii). The regulatory language cited by the Water Boards refers to programs that are to be implemented over time, not the immediate "prevents illicit discharges into the MS4" language found in the Section F provisions. For example, regulations regarding the proposed stormwater management program require the description of a program "including a *schedule*, to detect and remove . . . illicit discharges." 40 CFR § 122.26(d)(2)(iv)(B) (emphasis supplied). In the preamble to the final stormwater regulations, quoted by the Water Boards (WB Comments at 66, n.272), the requirement is that *"[u]ltimately*, such non-storm water discharges through a municipal storm sewer must either be

[44] With respect to EPA-issued stormwater permits, the D.C. permit does not have the requirements in 2010 Permit Section F. The other permits state that the intent is to control discharge from the MS4 to the MEP, but contain language indicating that permittees should select programs to prevent or which are intended to prevent a violation of state water quality standards. The Albuquerque and Boise permits provide that discharges should not cause an exceedance of water quality standards. *See* Ashby Dec., ¶ 21. As discussed in Section I.B.1 above, the EPA Administrator has discretion, under *Browner*, to require MS4 permits to protect water quality standards. 191 F.3d at 1166. Therefore, the presence of such language in these permits does not indicate that it is required by the CWA.

removed from the system . . . ." (quoting 55 Fed. Reg. 47990, 47995 (November 16, 1990) (emphasis supplied)).

And, the specific counterpart provisions in the 2004 Permit also did not contain language requiring the prevention or elimination of such non-stormwater discharges. *See* 2004 Permit, Section F (Development Planning); Section G (Construction); Section H (Existing Development, including H.1 (municipal facilities), H.2 (industrial/commercial facilities) and H.3 (residential)); or Section I (Education). It is those specific counterparts that the Commission must evaluate in determining whether the Section F requirements of the 2010 Permit were a new program or higher level of service than that required under the previous 2004 Permit. The record reflects that they were.

3. No Other Mandates Exceptions Apply

The Water Boards (WB Comments at 67) again argue (without evidence) that the costs of the Section F requirements are *de minimis* and that the Claimants have fee authority to fund this requirements. The first argument is rebutted by the evidence in the Section 6 Declarations (Paragraph 5(m)) and the Narrative Statement at 67, indicating that the increased costs of the mandates exceeded $500,000 in each of FYs 2010-11 and 2011-12, and the second in the Funding Rebuttal Comments, below.

REBUTTAL TO COMMENTS OF DEPARTMENT OF FINANCE AND TO COMMENTS OF WATER BOARDS ON FEE AUTHORITY (FUNDING REBUTTAL COMMENTS)

A. *The Claimants Do Not Have Authority to Levy Service Charges, Fees or Assessments to Fund the Mandated Programs*

Test claimants are not entitled to reimbursement if they have the authority to levy service charges, fees or assessments sufficient to pay for the mandated program or increased level of service. Govt. Code § 17556(d). Like the exception for federal mandates set forth in Govt. Code § 17556(c), the State bears the burden of proving that Claimants have this authority. As the Supreme Court said with respect to the federal mandate exception, "the State must explain why" the Claimants can assess service charges, fees or assessments to pay for mandates set forth above. *Dept. of Finance,* 1 Cal.5th at 769.

The Water Boards and the DOF have not met this burden. The Water Boards' chief contention is that Claimants can assess a general fee to pay for the 13 programs at issue in this Joint Test Claim. WB Comments at 18-19. DOF's chief contention, also raised by the Water Boards, is that the fact that Claimants must seek voter approval pursuant to Proposition 218, articles XIII C and D of the California Constitution, to assess a fee or tax does not mean that they do not have authority to do so within the meaning of Govt. Code § 17556(d). (DOF Comments at 1-2.)

Neither of these contentions meets the State's burden of explaining why Claimants can assess charges, fees or assessments to fund the mandates in this Joint Test Claim. First, under article XIII C of the California Constitution, when providing services or conferring benefits, Claimants cannot assess a fees that covers more than the reasonable cost of providing the benefit,

privilege, service or product. Additionally, the manner in which those costs are allocated to a payor must bear a fair and reasonable relationship to the payor's burdens or benefits received from the governmental activity. In this regard, when assessing a fee, Claimants bear the burden of proving by a preponderance of the evidence that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity. Cal. Const., article XIII C § 1(e). Otherwise the fee would be considered a tax subject to the requirements of article XIII C of the California Constitution. Cal. Const., article XIII C § 1(e). *See Jacks v. City of Santa Barbara* (2017) 3 Cal. 5th 248, 261.[45]

The mandates at issue in this Joint Test Claim are not the types of programs for which the Claimants can assess a fee. The removal of irrigation run-off from non-prohibited non-stormwater discharges, the NALs and SALs programs, BMP maintenance tracking requirements, unpaved road program, retrofit program, watershed water quality work plan requirements, JRMP Annual Report requirements, special studies, and water quality standard programs, described in Section II of these Rebuttal Comments, all are programs intended to improve the overall water quality in the Santa Margarita River watershed, which benefits all persons within the jurisdiction. It is not possible to identify benefits that any individual resident, business or property owner within the jurisdiction would be receiving that is distinct from benefits that all other persons within the jurisdiction are receiving.

Likewise, the 2010 Permit's requirements that apply to Claimants' own activities as municipal governments address requirements imposed on Claimants themselves. Again, there is no individual resident, business or property owner upon whom a fee can be assessed to pay for these requirements. These requirements includes LID, hydromodification costs and construction costs incurred in conjunction with municipal projects. *See* Narrative Statement at 33-35. Nor are these costs voluntarily incurred.

Similarly, no fee can be assessed for inspection of industrial or construction sites, at least to the extent those sites hold general industrial or general construction stormwater permits for which the State Board already assesses a fee, which includes a fee to pay for inspections. This issue is relevant to the mandate in the 2010 Permit for inspection of industrial and commercial facilities (*see* discussion in Section II.H. above). Because the State is already assessing a fee for these inspections, pursuant to Water Code Code § 13260(d)(2)(B), the Claimants would have difficulty demonstrating that their fees would bear a fair and reasonable relationship to the payors' burdens or benefits; the State has already collected a fee for that activity. Likewise, there is no party on which to assess the cost of creating the inventory and databases of industrial and commercial sites.

Second, any assessment would be considered to be a "special tax," and, as such, could not be imposed without a vote of the electorate. Under the Constitution a tax is defined to be "any levy, charge, or exaction of any kind imposed by a local government . . . ." Cal. Const., article XIII C § 1(e). A "special tax" is defined to be "any tax imposed for specific purposes, including a tax imposed for specific purposes, which is placed into a general fund." *Id.*, article XIII C § 1(d).

[45] Rebuttal Documents, Tab 1.

Under the Constitution, "No local government may impose, extend, or increase any special tax unless and until that tax is submitted to the electorate and approved by a two-thirds vote." Cal. Const., article XIII C § 2(d).

Article XIII C, section 1(e), sets forth certain charges that are excepted from the definition of a tax. Those exceptions are:

(1) A charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege.
(2) A charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product.
(3) A charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof.
(4) A charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property.
(5) A fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law.
(6) A charge imposed as a condition of property development.
(7) Assessments and property-related fees imposed in accordance with the provisions of Article XIII D.

Cal. Const., Article XIII C § 1(e).

None of these exceptions applies here. As discussed above, any fee or assessment to pay for the removal of irrigation run-off from non-prohibited non-stormwater discharges, NALs and SALs programs, BMP maintenance tracking requirements, unpaved road program, retrofit program, watershed water quality work plan requirements, JRMP Annual Report requirements, special studies, and water quality standard programs, would be a fee or assessment to pay for the costs of a general program, not one directed towards a specific benefit, privilege, service or product. As for the other mandates, such as discharges from commercial, industrial or construction sites, the State is already regulating or has the authority to regulate those activities.

Article XIII D of the California Constitution also restricts the Claimants' ability to assess property-related fees. Under article XIII D, section 3(a), no tax, assessment, fee, or charge shall be assessed by any agency upon any parcel of property or upon any person as an incident of property ownership, unless it is for "property-related services"[46] or certain other exceptions, except upon a two-thirds vote of the electorate. Under article XIII D, section 6(c), except for fees or charges for sewer, water, and refuse collection services, no property related fee or charge shall be imposed unless approved by a majority vote of property owners of the property subject to the fee or charge or by two-thirds vote of the electorate residing the affected area. In *Howard Jarvis*

[46] "Property-related services" means "a public service having a direct relationship to property ownership." Article XIII D, § 2(h).

Taxpayers Association v. City of Salinas (2002) 98 Cal.App.4th 1351, 1354, the Court of Appeal held that a general stormwater fee is a property-related fee that is not excepted as a charge for water or sewer services, but instead is a property-related fee subject to the two-thirds electoral vote requirement. *Id.* at 1354-55, 1357-59.

Accordingly, the Claimants do not have the authority to levy fees or assessments to pay for the mandates that are the subject of this Test Claim. Such fees or assessments can be levied only upon the vote of the electorate.

The DOF and the Water Boards contend that even though Cal. Const. articles XIII C and D require Claimants to submit a fee to the electorate for approval, this does not mean that Claimants lack authority to assess a fee. This contention also lacks merit. Indeed, the Commission has already considered and rejected this contention. In the San Diego County test claim, DOF and the Water Boards made the same contention that they make here, that municipalities have authority to levy service charges, fees or assessments within the meaning of Govt. Code § 17556(d), even though they lack such authority under articles XIII C and D unless the charges, fees or assessments are submitted to the electorate and approved by a two-thirds vote. The Commission held:

> The Commission finds that a local agency does not have sufficient fee authority within the meaning of Government Code section 17556 if the fee or assessment is contingent on the outcome of an election by voters or property owners. The plain language of subdivision (d) of this section prohibits the Commission from finding that the permit imposes 'costs mandated by the state' if 'The local agency . . . has the *authority* to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.' . . . Under Proposition 218, the local agency has no authority to impose the fee without the consent of the voters or property owners.
>
> Additionally, it is possible that the local agency's voters or property owners may never adopt the proposed fee or assessment, but the local agency would still be required to comply with the state mandate. Denying reimbursement under these circumstances would violate the purpose of article XIII B, section 6, which is to "preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of taxing and spending limitations that articles XIII A and XIII B impose."

SD County SOD at 106 (emphasis in original; citation omitted).

In reaching this result, the Commission rejected the Water Boards' contention, also made here, that *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, in which the court held that economic impracticability is not a bar to levying charges or fees within the meaning of section 17556, was applicable. The Commission held:

> The Proposition 218 election requirement is not like the economic hurdle to fees in *Connell. Absent compliance with the Proposition 218 election and other procedures, there is no legal authority to impose or raise fees within the meaning of Government Code section 17556, subdivision (d).* The voting requirement of Proposition does not impose a mere

> practical or economic hurdle, as in *Connell*, but a legal and constitutional one. Without voter or property owner approval, the local agency lacks the "authority," i.e., the right or power, to levy fees sufficient to cover the costs of the state-mandated program.

SD County SOD at 107 (emphasis added).

As a result, the Commission found the following state mandates in the San Diego County stormwater permit to be reimbursable: (1) street sweeping; (2) street sweeping reporting; (3) conveyance system cleaning; (4) conveyance system cleaning reporting; (5) educational programs; (6) watershed activities and collaboration in the Watershed Urban Runoff Management Program; (7) the Regional Urban Runoff Management Program; (8) program effectiveness assessment; (9) long-term effectiveness assessment; and (10) permittee collaboration requirements. *Id.* at 1-2.

The Commission reached the same conclusion in that test claim with respect to property-related fees under article XIII D of the Constitution. To the extent that any fees imposed for the programs at issue here would be considered property-related fees, rather than a special tax, the fee would still be subject to voter approval or approval by a majority of property owners under article XIII D, section 6(c). *See Howard Jarvis Taxpayers Assn., supra,* 98 Cal. App. 4th at 1354. As the Commission found in the San Diego County Test Claim, this requirement also means that Claimants lack authority to impose fees for property-related services. SD County SOD at 106-07.

The Commission reiterated this principle in *In Re Test Claim on Water Code Division 6, Part 2.5 [Sections 10608 through 10608.41] and Part 2.8 [Sections 10800 through 10853] as added by Statutes 2009-2010, 7th Extraordinary Session, Chapter 4,* Test Claim Nos. 10-TC-12 and 12-TC-01 (December 5, 2014).[47] In these test claims, certain water suppliers sought reimbursement for new activities imposed on urban and agricultural water suppliers. With respect to the application of article XIII D, the Commission found that the water suppliers had fee authority, in that their fees were for water services within the meaning of article XIII D, section 6(e), and therefore the fee was subject only to a majority protest, not a vote of the electorate or property owners. *Id.* at 78. In doing so, the Commission noted that the San Diego County Stormwater Test Claim was distinguishable and that, with respect to in the mandates in that test claim, "absent compliance with the Proposition 218 election and other procedures, there is no legal authority to impose or raise fees within the meaning of Government Code section 17556, subdivision (d)." Test Claim Nos. 10-TC-12 and 12-TC-01, Decision at 77.

The Water Boards and DOF nevertheless contend that Claimants have the ability to submit fees to the voters for approval, and that under *Clovis Unified School District v. Chiang* (2010) 188 Cal.App.4th 794, this ability by itself meets the requirements of Govt. Code § 17556(d). (WB comments at 19; DOF comments at 1).

Clovis is not applicable. In *Clovis* the school district was authorized to collect health fees but voluntarily chose not to do so. 188 Cal. App. 4th at 810. In those circumstances, the Court of Appeal held that the Controller's office properly offset the authorized fees, whether the school district collected them or not, because the district had the authority to assess those fees. *Id*. at 812.

[47] Rebuttal Documents, Tab 4.

Here, Claimants have not been authorized to collect fees or taxes; they currently have no such power as such authority resides directly with the electorate, pursuant to Prop 218, for any stormwater related pollution control charge. Therefore this is not a circumstance in which Claimants can assess fees but have voluntarily chosen not to do so. Indeed, if one accepted this argument, article XIII B, section 6 would be written out of the Constitution because the argument could always be made that a city or county could submit a tax or fee to the electorate. If that ability was all that was required to meet Government Code § 17556(d), a city or county could never obtain a subvention of funds. Such a result would be contrary to the people of California's intent in adopting article XIII B, section 6.[48]

The Water Boards and DOF have not met their burden of showing that Claimants have the authority to levy service charges, fees or assessments sufficient to pay for the mandated programs at issue here. Section 17556(d) does not apply.

CONCLUSION

For the foregoing reasons, each of the 13 mandates at issue in this Joint Test Claim are state mandates for which Claimants are entitled to reimbursement. The Commission should find that Claimants are entitled to a subvention of funds for each mandate in accordance with article XIII B, section 6, of the California Constitution.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my personal knowledge.

Dated: December 14, 2017

David W. Burhenn

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[48] The Water Boards reference the decision made by some jurisdictions to impose local stormwater fees. WB Comments at 18. The Water Boards do not provide evidence of the nature of such fees, i.e., whether they were in fact voted in by the residents in compliance with the requirements of the California Constitution. In any event, absent such evidence, the isolated excerpts attached to the comments, apparently obtained from municipal websites, does not rise to evidence that should be considered by the Commission.

ATTACHMENTS IN SUPPORT OF REBUTTAL COMMENTS OF JOINT TEST CLAIMANTS

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION

ORDER NO. R9-2010-0016, 11-TC-03

ATTACHMENT 1: Declaration of David W. Burhenn and Exhibits A-E thereto

ATTACHMENT 2: Declaration of Claudio M. Padres, P.E. and Exhibits A-B thereto

ATTACHMENT 3: Declaration of Karen Ashby and Exhibits 1-6 thereto

ATTACHMENT 1

DECLARATION OF DAVID W. BURHENN ON BEHALF OF JOINT TEST CLAIMANTS IN SUPPORT OF REBUTTAL COMMENTS

I, DAVID W. BURHENN, hereby declare and state as follows:

1. I am a partner in the firm of Burhenn & Gest LLP and am the representative for the Joint Test Claimants in Test Claim 11-TC-03, California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016. As such, I have personal knowledge of the matters set forth in this Declaration and could, if called upon, testify competently thereto.

2. Exhibit A to this Declaration is a true and correct copy of excerpts of a municipal stormwater permit issued by the California Regional Water Quality Control Board, Los Angeles Region ("LARWQCB") to permittees in the County of Ventura on or about May 7, 2009. On December 8, 2017, I downloaded that excerpt from the website of the LARWQCB at the following address: https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/ventura_ms4/Final_Ventura_County_MS4_Permit_Order_No.09-0057__01-13-2010.

3. Exhibit B to this Declaration is a true and correct copy of excerpts of a municipal stormwater permit issued by the California Regional Water Quality Control Board, Central Valley Region ("CVRWQCB") to the City of Modesto on or about June 12, 2008. On December 8, 2017, I downloaded that excerpt from the website of the CVRWQCB at the following address: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/stanislaus/r5-2008-0092.pdf

4. Exhibit C to this Declaration is a true and correct copy of excerpts of a municipal stormwater permit Fact Sheet issued by the California Regional Water Quality Control Board, San Francisco Bay Region ("SFBRWQCB") to permittees in the San Francisco Bay area on or

about October 14, 2009. On December 8, 2017, I downloaded that excerpt from the website of the SFBRWQCB at the following address: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/Municipal/R2-2009-0074_Revised.pdf

5. Exhibit D to this Declaration is a true and correct copy of excerpts of a municipal stormwater permit Fact Sheet issued by the California Regional Water Quality Control Board, Santa Ana Region ("SARWQCB") to permittees in Riverside County on or about January 29, 2010. On December 8, 2017, I downloaded that excerpt from the website of the SARWQCB at the following address: https://www.waterboards.ca.gov/santaana/board_decisions/adopted_orders/orders/2010/10_033_RC_MS4_Permit_01_29_10.pdf

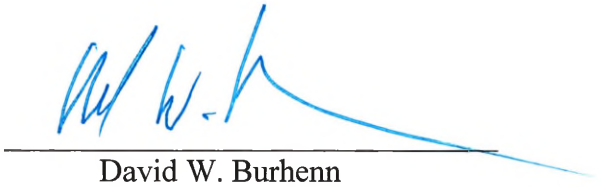
6. Exhibit E to this Declaration is a true and correct copy of excerpts of a municipal stormwater permit and Fact Sheet issued by the California Regional Water Quality Control Board, San Diego Region ("SDRWQCB") to permittees in Orange County on or about December 16, 2009. On December 8, 2017, I downloaded those excerpts from the website of the SDRWQCB at the following addresses: https://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/docs/oc_permit/updates_012710/FINAL_R9_2009_0002.pdf (permit) https://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/docs/oc_permit/updates_012710/FINAL_R9_2009_0002_Fact%20Sheet.pdf (fact sheet)

5. I reviewed the permit issued by the LARWQCB to the Ventura County permittees and determined that corrections to the permit dated January 13, 2010 did not include revisions to Finding E.7, which is included in Exhibit A.

6. I have reviewed the permit issued by the SFBRWQCB to the San Francisco Bay permittees and determined that revisions to the permit dated November 28, 2011 did not include revisions to those provisions in the Fact Sheet included in Exhibit C.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed December 14, 2017 at Los Angeles, California.



David W. Burhenn

EXHIBIT A

STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER 09-0057
NPDES PERMIT NO. CAS004002
WASTE DISCHARGE REQUIREMENTS
FOR
STORM WATER (WET WEATHER) AND NON-STORM WATER (DRY WEATHER) DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS WITHIN THE VENTURA COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN.

May 7, 2009

May 7, 2009
Final – Corrected January 13, 2010

contain certain basic information and information for proposed changes and improvements to the storm water management program and monitoring program.

3. The U.S. EPA has entered into a Memorandum of Agreement (MOA) with the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service for enhancing coordination regarding the protection of endangered and threatened species under section 7 of the Endangered Species Act, and the CWA's water quality standards and NPDES programs. Among other actions, the MOA establishes a framework for coordination of actions by the U.S. EPA, the Services, and CWA delegated States on CWA permit issuance under § 402 of the CWA [66 Fed. Reg. 11202-11217].

4. The CWA allows the U.S. EPA to authorize states with an approved environmental regulatory program to administer the NPDES program in lieu of the U.S. EPA. The State of California is a delegated State. The Porter-Cologne Water Quality Control Act (California Water Code) authorizes the State Water Resources Control Board (State Water Board), through the Regional Water Boards, to regulate and control the discharge of wastes that could affect the quality of waters of the State, including waters of the United States, and tributaries thereto.

5. Under CWA § 303(d) of the CWA, States are required to identify a list of impaired water-bodies and develop and implement TMDLs for these waterbodies (33 USC § 1313(d)(1)). The most recent 303(d) list's U.S. EPA approval date was June 28, 2007. The U.S. EPA entered into a consent decree with the Natural Resources Defense Council (NRDC), Heal the Bay, and the Santa Monica Baykeeper on March 22, 1999, under which the Regional Water Board must adopt all TMDLs for the Los Angeles Region within 13 years from that date. This Order incorporates provisions incorporating approved WLAs for municipal storm water discharges and requires amending the SMP after subsequent pollutant loads have been allocated and approved.

6. Collectively, the restrictions contained in the TMDL Provisions for Storm Water (Wet Weather) Discharges and Non-Storm Water (Dry Weather) Discharges of this Order on individual pollutants are no more stringent than required to implement the provisions of the TMDL, which have been adopted and approved in a manner that is consistent with the CWA. Where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the assumptions and requirements of the available WLAs in TMDLs (40 CFR122.44(d)(1)(vii)(B)).

7. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. This Order implements federally mandated requirements under CWA § 402, subdivision (p)(3)(B)(33 U.S.C. § 1342(p)(3)(B)) This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State

determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (Natural Resources Defense Council, Inc. v. U.S. E.P.A. (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.) The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (cf. Burbank v. State Water Resources Control Bd. (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region (2006) 135 Cal.App.4th 1377, 1389; Building Industry Ass'n of San Diego County v. State Water Resources Control Bd. (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for waterbodies that do not meet federal water quality standards (33 U.S.C. § 1313(d)). Once the U.S. EPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation.
(40 CFR 122.44(d)(1)(vii)(B)).

Second, the local agency Permittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the Clean Water Act regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (Wat. Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The Clean Water Act and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, in many respects this Order does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Order, therefore, regulates the

discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the local agency Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order subject to certain voting requirements contained in the California Constitution. (See California Constitution XIII D, section 6, subdivision (c); see also *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal. App. 4th 1351, 1358-1359.). The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. (See finding C.5., supra.) To the extent that the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) Likewise, where MS4 Permittees are regulated under a Best Management Practices (BMP) based storm water management program rather than end-of-pipe numeric limits, there exists no compulsion of a specific regulatory scheme that would violate the 10th Amendment to the United States Constitution. (See *City of Abilene v. U.S. E.P.A.* (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The local agencies' voluntary decision to file a report of waste discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIIIB, Section (6) of the California Constitution.

8. Under § 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Coastal States with approved coastal zone management programs are required to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: 1) agriculture; 2) silviculture; 3) urban; 4) marinas; and 5) hydromodification. This Waste Discharge Requirement addresses the management measures required for the urban category and the hydromodification category, with the exception of septic systems.

EXHIBIT B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2008-0092

NPDES NO. CAS083526

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF MODESTO
STORM WATER DISCHARGE FROM
MUNICIPAL SEPARATE STORM SEWER SYSTEM
STANISLAUS COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Regional Water Board) finds that:

1. The City of Modesto submitted a Report of Waste Discharge (ROWD) on 2 April 2007 and requested reissuance of Waste Discharge Requirements (WDR) under the National Pollutant Discharge Elimination System (NPDES) area-wide municipal separate storm sewer system (MS4) permit to discharge storm water runoff from storm drains and watercourses within the jurisdiction of the Discharger and to implement a Storm Water Management Plan (hereafter SWMP) for the City of Modesto.

2. Prior to issuance of this Order, the City of Modesto was covered under the NPDES area-wide MS4 permit, Order No. R5-2002-0182 (NPDES No. CA0083526) adopted on 1 October 2002.

3. The City of Modesto is located in Stanislaus County at the confluence of Dry Creek and the Tuolumne River (tributaries of the San Joaquin River). The City encompasses 36 square miles[1] with an average elevation of 91 feet above sea level. The average annual precipitation is approximately 12.2 inches.[2] The storm drain system has approximately 77 miles of storm drain lines and 20 pump stations within the City. Storm water discharges from the City drain to detention/retention basins (13 detention and 11 retention basins in the City), approximately 18 major outfalls to receiving waters (Tuolumne River or Dry Creek), Modesto Irrigation District (MID) laterals/drains, or rock wells (approximately 11,000). **Attachment A** shows a map of the City of Modesto and the service area covered under this permit.

4. Surface water discharges occur generally in the older areas of the City or those areas immediately adjacent to the Tuolumne River, Dry Creek or irrigation canals. Forty percent of storm water discharges to detention/retention basins, twenty percent to

[1] U.S. Census Bureau, 2000.
[2] Modesto Irrigation District, Water Years 2002-2007.

municipal, or industrial activities. Any person discharging waste or proposing to discharge waste that could affect the quality of the waters of the state must file a ROWD (California Water Code (CWC) § 13260(a)(1).). Any person operating an injection well must file a ROWD. (CWC § 13260(a)(3).). The Regional Water Board shall prescribe requirements that implement the Basin Plan, take into consideration the beneficial uses to be protected and the water quality reasonably required for that purpose (CWC § 13263).

27. The Discharger's publicly-owned rock wells are Class 5 injection wells under the U.S. EPA's Underground Injection Control program. The U.S. EPA does not provide regulation of these wells beyond registration.

28. Due to the discharge of storm water to shallow groundwater through rock wells and the large number of these wells operated by the City of Modesto, this discharge represents a potential threat to groundwater quality. It is the intent of these requirements to quantify the magnitude of this threat, determine if historic discharge to groundwater has impacted groundwater and to minimize the discharge of pollutants to groundwater. Privately-owned rock wells (a.k.a. spin-out or backhole wells) within the Modesto urbanized area are not regulated as storm water discharges as part of this Order, because they are not part of the MS4 regulated by this Order. However, if the groundwater assessment determines that other rock wells (including individual rock wells, or rock well systems smaller than the Discharger's 11,000 wells) pose a threat to groundwater, such wells will be subject to requirements for the protection of shallow groundwater.

STATUTORY AND REGULATORY CONSIDERATIONS

29. The CWA authorizes the U.S. EPA to permit a state to serve as the NPDES permitting authority in lieu of the U.S. EPA. The State of California has in-lieu authority for an NPDES program. The Porter-Cologne Water Quality Control Act authorizes the State Water Resource Control Board (State Water Board), through the Regional Water Boards, to regulate and control the discharge of pollutants into waters of the State. The State Water Board entered into a Memorandum of Agreement with the U.S. EPA, on September 22, 1989, to administer the NPDES Program governing discharges to waters of the United States.

30. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under federal Clean Water Act section 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B).) This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (*Natural Resources Defense*

Council, Inc. v. U.S. E.P.A. (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.) The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (*cf. Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Order to implement total maximum daily loads (TMDLs) are federal mandates. The federal Clean Water Act requires TMDLs to be developed for water bodies that do not meet federal water quality standards. (33 U.S.C. § 1313(d).) Once the U.S. Environmental Protection Agency or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 C.F.R. § 122.44(d)(1)(vii)(B).)]

Second, the local agency Discharger's obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges or waste discharge requirements for discharges to underground injection wells. With a few inapplicable exceptions, the Clean Water Act regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (Wat. Code, §§ 13260, 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].). As noted above, private dischargers to underground injection wells who cause similar threats to groundwater would be subject to similar regulation.

The Clean Water Act and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Board decisions, this Order does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Order, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the local agency Discharger has the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488).

Fourth, the Discharger has requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. To the extent, the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) Likewise, the Discharger has voluntarily sought a program-based municipal storm water permit in lieu of a numeric limits approach. (See *City of Abilene v. U.S. E.P.A.* (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The local agency's voluntary decision to file a report of waste discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agency's responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIIIB, Section (6) of the California Constitution.

31. The Water Quality Act of 1987 added Section 402(p) to the CWA (33 U.S.C. § 1251-1387). This section requires the U.S. EPA to establish regulations setting forth NPDES requirements for storm water discharges in two phases:

    a. The U.S. EPA Phase I storm water regulations were directed at MS4s serving a population of 100,000 or more, including interconnected systems and storm water discharges associated with industrial activities, including construction activities. The Phase I Final Rule was published on November 16, 1990 (55 *Fed. Reg.* 47990).

    b. The U.S. EPA Phase II storm water regulations are directed at storm water discharges not covered in Phase I, including small MS4s (serving a population of less than 100,000), small construction projects (one to five acres), municipal facilities with delayed coverage under the Intermodal Surface Transportation Efficiency Act of 1991, and other discharges for which the U.S. EPA Administrator or the State determines that the storm water discharge contributes

EXHIBIT C

California Regional Water Quality Control Board
San Francisco Bay Region
Municipal Regional Stormwater NPDES Permit

Order R2-2009-0074
NPDES Permit No. CAS612008
Adopted October 14, 2009
Revised November 28, 2011

FACT SHEET/RATIONALE
TECHNICAL REPORT

for

ORDER NO. R2-2009-0074

NPDES Permit No. CAS612008

Municipal Regional Stormwater NPDES Permit
and
Waste Discharge Requirements

for

The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City, Alameda County, the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District, which have joined together to form the Alameda Countywide Clean Water Program

The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District, which have joined together to form the Contra Costa Clean Water Program

The cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale, the towns of Los Altos Hills and Los Gatos, the Santa Clara Valley Water District, and Santa Clara County, which have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program

The cities of Belmont, Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, the towns of Atherton, Colma, Hillsborough, Portola Valley, and Woodside, the San Mateo County Flood Control District, and San Mateo County, which have joined together to form the San Mateo Countywide Water Pollution Prevention Program

The cities of Fairfield and Suisun City, which have joined together to form the Fairfield-Suisun Urban Runoff Management Program

The City of Vallejo and the Vallejo Sanitation and Flood Control District

inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer."

40 CFR 122.26(d)(2)(iv) – Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) requires "a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. [...] Proposed programs may impose controls on a system wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. [...] Proposed management programs shall describe priorities for implementing controls."

40 CFR 122.26(d)(2)(iv)(A -D) – Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in urban runoff from new development and significant redevelopment, construction, and commercial, residential, industrial, and municipal land uses or activities. Control of illicit discharges is also required.

CWC 13377 – CWC section 13377 requires that "Notwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the CWA, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with anymore stringent effluent standards or limitation necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance."

Order No. R2-2009-0074 is an essential mechanism for achieving the water quality objectives that have been established for protecting the beneficial uses of the water resources in the San Francisco Bay Region. Federal NPDES regulation 40 CFR 122.44(d)(1) requires MS4 permits to include any requirements necessary to "achieve water quality standards established under CWA section 303, including State narrative criteria for water quality." The term "water quality standards" in this context refers to a water body's beneficial uses and the water quality objectives necessary to protect those beneficial uses, as established in the Basin Plan.

State Mandates

This Permit does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Permit implements federally mandated requirements under CWA section 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B).) This includes federal requirements to effectively prohibit non-stormwater discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held that these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (Natural Resources Defense Council, Inc. v. USEPA

(9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.) The authority exercised under this Permit is not reserved state authority under the CWA's savings clause (cf. Burbank v. State Water Resources Control Bd. (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements that are not less stringent than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for MS4. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region (2006) 135 Cal.App.4th 1377, 1389; Building Industry Association of San Diego County v. State Water Resources Control Bd. (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Permit to implement total maximum daily loads (TMDLs) are federal mandates. The CWA requires TMDLs to be developed for waterbodies that do not meet federal water quality standards. (33 U.S.C. § 1313(d).) Once USEPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable WLA. (40 CFR 122.44(d)(1)(vii)(B).)

Second, the local agencies' (Permittees') obligations under this Permit are similar to, and in many respects less stringent than, the obligations of nongovernmental dischargers who are issued NPDES permits for stormwater discharges. With a few inapplicable exceptions, the CWA regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (Water Code, section 13263), both without regard to the source of the pollutant or waste. As a result, the costs incurred by local agencies to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See County of Los Angeles v. State of California (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The CWA and the Porter-Cologne Water Quality Control Act largely regulate stormwater with an even hand, but to the extent that there is any relaxation of this evenhanded regulation, it is in favor of the local agencies. Except for MS4s, the CWA requires point source dischargers, including discharges of stormwater associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), Defenders of Wildlife v. Browner (1999) 191 F.3d 1159, 1164-1165 [noting that industrial stormwater discharges must strictly comply with water quality standards].) As discussed in prior State Water Board decisions, this Permit does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Permit, therefore, regulates the discharge of waste in municipal stormwater more leniently than the discharge of waste from nongovernmental sources.

Third, the Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Permit. The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the MS4. Permittees can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., Apartment Association of Los Angeles County, Inc. v. City of Los Angeles (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising

taxes indicates that a program does not entail a cost subject to subvention. (County of Fresno v. State of California (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. To the extent Permittees have voluntarily availed themselves of the Permit, the program is not a state mandate. (Accord County of San Diego v. State of California (1997) 15 Cal.4th 68, 107-108.) Likewise, the Permittees have voluntarily sought a program-based municipal stormwater permit in lieu of a numeric limits approach. (See City of Abilene v. USEPA (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The Permittees' voluntary decision to file a report of waste discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See Environmental Defense Center v. USEPA (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the Permittees' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under State law predates the enactment of Article XIIIB, Section (6) of the California Constitution.

This Permit is based on the federal CWA, the Porter-Cologne Water Quality Control Act (Division 7 of the CWC, commencing with Section 13000), applicable State and federal regulations, all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the State Water Board, the Basin Plan, the California Toxics Rule, and the California Toxics Rule Implementation Plan.

Discussion: In 1987, Congress established CWA Amendments to create requirements for storm water discharges under the NPDES program, which provides for permit systems to regulate the discharge of pollutants. Under the Porter-Cologne Water Quality Control Act, the State Water Board and Regional Water Quality Control Boards (Water Boards) have primary responsibility for the coordination and control of water quality, including the authority to implement the CWA. Porter-Cologne (section 13240) directs the Water Boards to set water quality objectives via adoption of Basin Plans that conform to all state policies for water quality control. As a means for achieving those water quality objectives, Porter-Cologne (section 13243) further authorizes the Water Boards to establish waste discharge requirements (WDRs) to prohibit waste discharges in certain conditions or areas. Since 1990, the Water Board has issued area-wide MS4 NPDES permits. The Permit will re-issue Order Nos. 99-058, 99-059, 01-024, R2-2003-0021, R2-2003-0034 to comply with the CWA and attain water quality objectives in the Basin Plan by limiting the contributions of pollutants conveyed by urban runoff. Further discussions of the legal authority associated with the prohibitions and directives of the Permit are provided in section V. of this document.

This Permit supersedes NPDES Permit Nos. CAS029718, CAS029831, CAS029912, CAS029921, CAS612005, and CAS612006.

EXHIBIT D

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

ORDER NO. R8-2010-0033
NPDES NO. CAS 618033

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, THE COUNTY OF RIVERSIDE, AND THE INCORPORATED CITIES OF RIVERSIDE COUNTY WITHIN THE SANTA ANA REGION

AREA-WIDE URBAN RUNOFF MANAGEMENT PROGRAM

The following Discharger(s) are subject to waste discharge requirements as set forth in this Order:

Table 1. Municipal Permittees (Dischargers)

Principal Permittee	Riverside County Flood Control and Water Conservation District (RCFC&WCD)*	
Co–Permittees	1. Beaumont	9. Moreno Valley
	2. Calimesa	10. Murrieta
	3. Canyon Lake	11. Norco
	4. Corona	12. Perris
	5. County of Riverside (County)	13. Riverside
	6. Hemet	14. San Jacinto
	7. Lake Elsinore	15. Wildomar
	8. Menifee	

The Principal Permittee and the Co-Permittees are collectively referred to as the Permittees or the Dischargers.

Table 2. - Administrative Information

This Order was adopted by the Regional Water Board on:	**January 29, 2010**
This Order will become effective on:	**January 29, 2010**
This Order will expire on:	**January 29, 2015**
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board have classified this discharge as a major discharge.	
The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than 180 days in advance of the Order expiration date.	

APPENDIX 6

FACT SHEET

ORDER NO. R8-2010-0033

The CWA prohibits the discharge of any Pollutant to navigable waters from a Point Source unless an NPDES permit authorizes the discharge. Efforts to improve water quality under the NPDES program traditionally and primarily focused on reducing Pollutants in discharges of industrial process wastewater and municipal sewage. The 1987 amendments to the CWA required MS4s and industrial facilities, including construction sites, to obtain NPDES permits for storm water runoff from their facilities. On November 16, 1990, the USEPA promulgated the final NPDES Phase I storm water regulations. The storm water regulations are contained in 40 CFR Parts 122, 123 and 124.This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under federal Clean Water Act section 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B).) This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (*Natural Resources Defense Council, Inc. v. U.S.E.P.A.* (9th Cir. 1992) 966 F.2d 1292, 1308, fn.17). The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (*cf. Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Order to implement total maximum daily loads (TMDLs) are federal mandates. The federal Clean Water Act requires TMDLs to be developed for water bodies that do not meet federal water quality standards. (33 U.S.C. § 1313(d).) Once the U.S. Environmental Protection Agency or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 C.F.R. § 122.44(d)(1)(vii)(B).)

Second, the local agency permittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the Clean Water Act regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the

discharge of waste (Wat. Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The Clean Water Act and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, this Order does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Order, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the local agency permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. To the extent, the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) Likewise, the Permittees have voluntarily sought a program-based municipal storm water permit in lieu of a numeric limits approach. (See *City of Abilene v. U.S. E.P.A.* (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The local agencies' voluntary decision to file a report of waste discharge proposing a program-based

permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIIIB, Section (6) of the California Constitution.

On July 13, 1990, the Regional Board adopted the first term Riverside County Area-wide MS4 Permit, Order No. 90-104 (NPDES No. CA 8000192), for Urban Runoff from areas in Riverside County within the Permit Area. On March 8, 1996, the Regional Board renewed Order No. 90-104 by adopting the second term area-wide MS4 Permit, Order No. 96-30, (NPDES No. CAS618033). On October 25, 2002, the Regional Board renewed Order No. 96-30 by adopting the third term area-wide MS4 Permit, Order No. R8-2002-0011.

This Order renews the area-wide NPDES MS4 Permit for the Permit Area for the fourth-term, in accordance with Section 402 (p) of the CWA and all requirements applicable to an NPDES permit issued under the issuing authority's discretionary authority. The requirements included in this Order are consistent with the CWA, the federal regulations governing urban storm water discharges, the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan), the California Water Code, and the State Water Resources Control Board's (State Board) Plans and Policies.

The Basin Plan is the basis for the Regional Board's regulatory programs. The Basin Plan was developed and is periodically reviewed and updated in accordance with relevant federal and state law and regulation, including the CWA and the California Water Code. As required, the Basin Plan designates the Beneficial Uses of the waters of the Region and specifies Water Quality Objectives intended to protect those uses. (Beneficial Uses and Water Quality Objectives, together with an anti-degradation policy, comprise federal "Water Quality Standard"). The Basin Plan also specifies an implementation plan, which includes certain discharge prohibitions. In general, the Basin Plan makes no distinctions between wet and dry weather conditions in designating Beneficial Uses and setting Water Quality Objectives, i.e., the Beneficial Uses, and correspondingly, the Water Quality Objectives are assumed to apply year-round. (Note: In some cases, Beneficial Uses for certain surface waters are designated as "I", or intermittent, in recognition of the fact that surface flows (and Beneficial Uses) may be present only during wet weather.) Most Beneficial Uses and Water Quality Objectives were established in the 1971, 1975, 1983, and 1995 Basin Plans. The 1995 Basin Plan was updated in February 2008[5]. Amendments to the Basin Plan included new nitrate-nitrogen and TDS objectives for specified

[5] http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml

EXHIBIT E

California Regional Water Quality Control Board
San Diego Region

Waste Discharge Requirements for Discharges of Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watershed of the County of Orange, The Incorporated Cities of Orange County, and The Orange County Flood Control District Within the San Diego Region

Order No. R9-2009-0002
NPDES NO. CAS0108740

December 16, 2009

4. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Copermittee from developing a non-point source plan, for the urban category, under CZARA. The Regional Board addresses septic systems through the administration of other programs.

5. Section 303(d)(1)(A) of the CWA requires that "Each state must identify those waters within its boundaries for which the effluent limitations…are not stringent enough to implement any water quality standard (WQS) applicable to such waters." The CWA also requires states to establish a priority ranking of impaired water bodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired water bodies is called the Section 303(d) List. The current Section 303(d) List was approved by the State Board on October 25, 2006. On June 28, 2007 the 2006 303(d) list for California was given final approval by the United States Environmental Protection Agency (USEPA).

6. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under federal Clean Water Act section 402. (33 U.S.C. § 1342(p)(3)(B).) Second, the local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges. Third, the local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their storm water discharges. Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under State law predates the enactment of Article XIIIB, Section (6) of the California Constitution. Likewise, the provisions of this Order to implement total maximum daily loads (TMDLs) are federal mandates. The federal Clean Water Act requires TMDLs to be developed for water bodies that do not meet federal water quality standards. (33 U.S.C. sec. 1313(d).) Once the U.S. Environmental Protection Agency or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 C.F.R. sec. 122.44(d)(1)(vii)(B).)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

FACT SHEET / TECHNICAL REPORT

FOR

ORDER NO. R9-2009-0002
NPDES NO. CAS0108740

WASTE DISCHARGE REQUIREMENTS

FOR

DISCHARGES OF RUNOFF FROM
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)
DRAINING THE WATERSHEDS OF THE
COUNTY OF ORANGE,
THE INCORPORATED CITIES OF ORANGE COUNTY,
AND THE ORANGE COUNTY FLOOD CONTROL DISTRICT
WITHIN THE SAN DIEGO REGION

December 16, 2009

Discussion of Finding E.6. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under federal Clean Water Act section 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B).) This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants in storm water to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (Natural Resources Defense Council, Inc. v. U.S. E.P.A. (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.)

The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (cf. Burbank v. State Water Resources Control Bd. (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region (2006) 135 Cal.App.4th 1377, 1389; Building Industry Ass'n of San Diego County v. State Water Resources Control Bd. (2004) 124 Cal.App.4th 866, 882-883.)

Second, the local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the Clean Water Act regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (Wat. Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See County of Los Angeles v. State of California (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The Clean Water Act and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), Defenders of Wildlife v. Browner (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, this Order does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Order, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (County of Fresno v. State of California (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their storm water discharges. To the extent, the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord County of San Diego v. State of California (1997) 15 Cal.4th 68, 107-108.) Likewise, the Copermittees have voluntarily sought a program-based municipal storm water permit in lieu of a numeric limitations approach on their storm water discharge. (See City of Abilene v. U.S. E.P.A. (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limitations].) The local agencies' voluntary decision to file a report of waste discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See Environmental Defense Center v. USEPA (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIIIB, Section (6) of the California Constitution.

ATTACHMENT 2

DECLARATION OF CLAUDIO M. PADRES, P.E.
IN SUPPORT OF REBUTTAL COMMENTS

I, CLAUDIO M. PADRES, P.E., hereby declare and state as follows:

1. I am Chief of the Design and Construction Division of the Riverside County Flood Control and Water Conservation District ("District"). In 2012, I was an Senior Civil Engineer in the Watershed Protection Division of the District, with responsibility for, among other things, compliance of permittees subject to California Regional Water Quality Control Board, San Diego Region ("San Diego Water Board") Order No. R9-2010-0016 (the "2010 Permit."). As such, I have personal and first-hand knowledge of the matters set forth in this Declaration and could, if called upon, testify competently thereto.

2. Exhibit A to my Declaration is a true and correct copy of a letter dated May 29, 2012 sent by Jason Uhley, then Chief of the District's Watershed Protection Division, to David Gibson, Executive Officer of the San Diego Water Board, regarding proposed adjustments to special studies required by the 2010 Permit. I obtained this copy of the letter from District files.

3. Exhibit B to my Declaration is a true and correct copy of a letter dated September 14, 2012 sent by James G. Smith, Assistant Executive Officer of the San Diego Water Board, regarding a modification of the special study requirements in Attachment E of the 2010 Permit. I obtained this copy of the letter from District files.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on December 13, 2017 at Riverside, California.

Claudio M. Padres, P.E.

EXHIBIT A

WARREN D. WILLIAMS
General Manager-Chief Engineer

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RIVERSIDE, CA 92501
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www.rcflood.org

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

May 29, 2012

Mr. David Gibson, Executive Officer
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Attn: David Barker

Dear Mr. Gibson:

Re: Order R9-2010-0016 – Revised Proposal for Adjustments to Special Study Requirements

On November 10, 2010, the San Diego Regional Water Quality Control Board (Regional Board) adopted Order R9-2010-0016 (Order) for the County of Riverside, the Riverside County Flood Control and Water Conservation District (District), and the Cities of Murrieta, Temecula and Wildomar (collectively 'Copermittees'). The District serves as Principal Permittee, and through an agreement among the Copermittees, conducts many elements of the Monitoring and Reporting Program described in the Order on their behalf.

The Order includes requirements that the Copermittees perform six Special Studies (Attachment E, Provision II.E.) identified by Regional Board staff to, among other things, assess impacts to beneficial uses that may be caused by discharges from the Copermittees' MS4. The Regional Board also received testimony before and at the November 10th adoption hearing from the Copermittees, Camp Pendleton Marine Corps Base and other stakeholders regarding concerns that the LID Retention Standard specified in the Order (Provision F.1.d.(4)(c)(i)) may cause adverse impacts to beneficial uses in the lower Santa Margarita River Watershed.

Pursuant to Board direction at the hearing, Regional Board staff has met with the Copermittees, Camp Pendleton and other interested stakeholders on several occasions to identify and investigate potential impacts of the LID Retention Standard on beneficial uses, including water supply in the lower Santa Margarita River Watershed. The stakeholders are recommending additional data collection, modeling and analysis to more accurately evaluate the potential impacts of implementation of the LID Retention Standard. A scope of work and estimated budget for performing the proposed study, hereinafter referred to as the "LID Retention Impacts Study", has been developed, and is attached hereto.

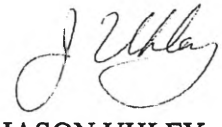
As is shown in the attached scope, the estimated total cost for performing this study is $98,000. As requested by Regional Board staff, this cost is being shared equally between Camp Pendleton and the Copermittees; accordingly the Copermittees' share is estimated at $50,000.

In addition, Regional Board staff has requested the LID Retention Impacts Study to be peer reviewed by an independent third-party. The Southern California Coastal Water Research Project (SCCWRP) has agreed to facilitate the peer review at an estimated additional cost of $20,000, bringing the total cost to the Copermittees to at least $70,000.

The Copermittees are proposing to fund the Copermittees' share of the proposed study in exchange for Regional Board relief from some of the other Special Study monitoring requirements. Please see the attachments to this letter which outline the proposal.

The Copermittees appreciate your prompt consideration of this proposal. If you or your staff should have any questions, please feel free to contact me at 951.955.1273 or Claudio Padres of my staff at 951.955.8602.

Very truly yours,



JASON UHLEY
Chief of Watershed Protection Division

Attachments:

- Proposal - Attachment A
- Scope of Work for the proposed 'LID Retention Impacts Study' - Attachment B
- Cost estimates for Special Studies II.E.5. and II.E.6. - Attachment C

CP:cw
P8/145258

Proposal

Consistent with direction from the Regional Board at the Order R9-2010-0016 adoption hearing, Regional Board staff has met with the Copermittees, Camp Pendleton and other interested stakeholders to identify and investigate potential impacts of the LID Retention Standard upon beneficial uses and water supply in the lower Santa Margarita River Watershed. The stakeholders recommend additional data collection, modeling and analysis to more accurately evaluate the potential impacts of the LID Retention Standard. A scope of work and estimated budget for performing the proposed study, hereinafter referred to as the "LID Retention Impacts Study", has been developed, and is attached hereto.

The total cost of the study is estimated at $98,000, which would be paid for jointly by Marine Corps Base Camp Pendleton and the Copermittees, with the Copermittees' share being $50,000. In addition, Regional Board staff has requested the LID Retention Impacts Study to be peer reviewed by an independent third-party. The Southern California Coastal Water Research Project (SCCWRP) has agreed to facilitate the peer review at an estimated additional cost of $20,000, bringing the total cost to the Copermittees to at least $70,000. To cover contingencies for additional and/or alternative analyses that may arise from the peer review, the Copermittees have also included in the contract being executed with Stetson Engineers additional on-call capacity beyond the $70,000.

With the level of stakeholder and Regional Board staff interest in the LID Retention Impacts Study, and its relevance to the protection of beneficial uses, the Copermittees believe that funding of the proposed study and peer review should be a priority in the Santa Margarita Watershed. The Copermittees therefore request the following adjustments be made to the Order to allow the Copermittees to provide for funding of this study:

- Modify the following requirements of the Monitoring and Reporting Plan (Appendix E to the Order) as follows:
    - Substitute:
        - MS4 and Receiving Water Maintenance Study (II.E.5)
        - Intermittent & Ephemeral Stream Perennial Conversion (II.E.6)
    - With
        - "LID Retention Impacts Study" as a new special study within Section II.E.

The combined remaining cost for the two studies proposed for replacement is estimated at $83,538 as shown in Attachment C. Any cost savings realized by the Copermittees due to the difference in cost between the LID Retention Impacts Study and the two studies proposed for replacement will be applied to cover contingency work that may arise due to the peer review.

Basis for Proposed Changes

As described in testimony to the Board at and before the November 10th adoption hearing, the extensive compliance requirements specified in the Order are already beyond the fiscal resources available to the Copermittees. The requested adjustments to the Order are necessary to allow the

redirection of Copermittee resources from other monitoring and special study efforts specified in the Order to fund the proposed "LID Retention Impacts Study".

Authorization to make Changes

There are several provisions in the Order that authorize the Executive Officer to make changes to the special study requirements. In particular the following are the relevant provisions:

- **Provision A, footnote 4:** *"The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to CWC 13223. Therefore the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC 13223 or this Order explicitly states otherwise."*
- **Provision K.**: *"The Copermittees may propose alternate reporting criteria and schedules, as part of their updated JRMP, for the Executive Officer's acceptance."*
- **Appendix E, footnote 10 on page 10**: *"For the purposes of Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016, review and approval by the San Diego Water Board of draft monitoring plans, proposals or protocols shall be conducted by the San Diego Water Board Executive Officer."*
- **Appendix E, Provisions II.E.2., II.E.5 and II.E.6 each state**: *"The Copermittees must implement the special study unless otherwise directed by the San Diego Water Board".*
- **Fact Sheet page 198:** *"For the purposes of Receiving Waters and MS4 Discharge Monitoring and Reporting Program, required reviews and approvals by the San Diego Water Board of draft monitoring plans, proposals or protocols shall be conducted by the San Diego Water Board Executive Officer."*

Selection of Special Studies for Replacement

In assessing which special studies to propose for replacement, the District identified studies where the current estimated cost is comparable to, or for which the intrinsic value of the study was less than that of the proposed LID Retention Impacts Study. Additionally, the District consulted with Regional Board staff regarding special studies that staff considered as appropriate for this proposal. Based on this evaluation and discussions with Regional Board staff, the Copermittees recommend substituting the following special studies with the LID Retention Impacts Study:

> II.E.5. MS4 and Receiving Water Maintenance Study: The effects of MS4 maintenance activities within Murrieta Creek have already been assessed by an independent study published by the Water Environment Federation (WEF) in 2007. A copy of this study was provided to Chiara Clemente of your staff on August 19, 2011. As maintenance practices have not substantively changed since the study was performed, the Copermittees do not believe that a repeat of this assessment is necessary at this time.

II.E.6. Intermittent & Ephemeral Stream Perennial Conversion: The Intermittent and Ephemeral Stream Perennial Conversion Study is similar to the proposed LID Retention Impacts Study in that both are assessing the impacts on beneficial uses caused by changes in runoff over the long term. However, these studies are designed to test slightly different hypotheses. II.E.6. presumes that urbanization has increased base flows and made naturally ephemeral streams into perennial streams. Decades of water rights litigation within the Santa Margarita River Watershed has demonstrated that the opposite has occurred - that the stream systems in the upper Santa Margarita Watershed are now *drier* than they historically have been due to a number of factors. Accordingly, the LID Retention Impacts Study is designed to answer a more pertinent question of whether the retention requirements in the Order will further impact flows in the Santa Margarita River.

ATTACHMENT B

DRAFT Scope of Work and Cost Proposal

Investigation of Regional Board Order R9-2010-0016
Municipal Separate Storm Sewer Systems Permit
Riverside County, California

May 1, 2012

Prepared for

Riverside County Flood Control and
Water Conservation District,
Riverside County

Prepared by

Stetson Engineers Inc.
San Rafael, Covina, and Bakersfield California

PROPOSAL

This proposal is submitted by Stetson Engineers Inc. to Riverside County Flood Control and Water Conservation District (RCFCWCD). The purpose of the proposed study is to investigate the potential impact to flows, including their relationship to beneficial uses, in the Santa Margarita River Watershed that may result from San Diego Regional Water Quality Control Board (Board) Order R9-2010-0016 (Order). The Board Order addresses requirements for the Municipal Separate Storm Sewer Systems (MS4) for Southern Riverside County. Provision P of the Order specifically requires:

> *"The Executive Officer shall meet with Camp Pendleton and other stakeholders at six (6) month intervals to identify and investigate water quality impacts, flow impacts, and impacts to water rights that may derive from the implementation of Low Impact Development BMPs required by Order R9-2010-0016 as they are developed by the storm water Copermittees. Any key issues or amendments to the Order that derive from those analyses and discussions will be promptly brought to the San Diego Water Board for their consideration."*

The scope of work presented herein by Stetson Engineers, which incorporates input received from Camp Pendleton, RCFCWCD, Regional Board staff, and other interested parties during the study scoping process, outlines the tasks necessary to evaluate potential impacts to surface flow that may derive from the implementation of the Order.

Contractor Information:

Stetson Engineers Inc.
2171 E. Francisco Blvd. Suite K
San Rafael, California 94901
(415) 457-0701
(415) 457-1638 (FAX)
stever@stetstonengineers.com (e-mail)

Contract Person: Steve Reich
Tax Payer Identification No. (TIN) 94-2452155

AREA OF EXPERTISE

Stetson Engineers has worked on a wide range of water rights, water supply and quality, stormwater, and monitoring projects in the Santa Margarita River Watershed and is familiar with the water resources, hydrology, and infrastructure in southern Riverside County. Stetson will provide supervisors and support staff experienced in water resource engineering, including, civil engineering, water quality, hydrogeology, and water reuse.

STATEMENT OF WORK

The MS4 order issued under R9-2010-0016 specifies low impact development (LID) and other mitigation measures to improve water quality in creeks and rivers in southern Riverside County. These measures are intended to protect or improve water quality in the surface waters through increased retention requirements. Whether on-site or regionally developed, increased stormwater retention has the potential to reduce the quantity of water available for downstream beneficial use, including use on Camp Pendleton for water supply and other beneficial uses. There is particular concern that the proposed Order could significantly reduce small- to mid-size storm flow frequency at and below the SMR Gorge due to implementation of on-site retention requirements for stormwater that may retain more water onsite than would occur in nature. The purpose of this scope of work is to evaluate and address whether implementation of the Order will affect the surface flow of the Santa Margarita River at the confluence of Murrieta and Temecula Creeks. Specific attention will be focused on potential impacts to the beneficial use of surface flows, including, but not limited to: in-stream flow requirements for habitat, species and water rights.

The proposed scope of work is for a joint study by RCFCWCD and Camp Pendleton. The work includes collecting rainfall-runoff data from two MS4 facilities that exist in southwestern Riverside County. These representative data will then be used as input to a Storm Water Management Model (SWMM) to develop site specific in-situ rainfall-runoff curves. These relationships will then be used to calibrate infiltration parameters in the Murrieta-Temecula groundwater model that has been jointly developed by Rancho California Water District and Camp Pendleton. The regional groundwater model and the site-specific rainfall-runoff curves will then be used to assess potential impact to streamflow due to increased retention requirements under R9-2010-0016.

There are seven tasks associated with the study, plus an additional on-call task. The on-call task is for facilitating a third-party peer review, responding to and performing additional analysis based on the peer review, and other services as directed by the District. The following eight tasks outline specific requirements for this proposed scope of work. [Note: work has started on some tasks, as discussed below, under separate contract with Camp Pendleton.]

TASK 1 – COLLECT DATA AND REVIEW AS-BUILD DAWINGS

Stetson Engineers will collect all available hydrologic, land use, and planning data for the Upper Basin area of the Santa Margarita River Watershed in southern Riverside County. Based on a review of data, specific MS4 facilities will be identified for further investigation. Digital elevation terrain models will be developed to analyze the surface water runoff tributary to MS4 facilities. As-built drawings will be reviewed to identify potential areas for site specific investigation. This task will include, but not be limited to: meeting with RCFCWCD personnel to investigate representative sites for sample collection; collecting available hydrologic data; processing elevation and topographic data, and; collecting and reviewing as-built engineering drawings of MS4 facilities.

A meeting, site visit, and identification of two sites for measuring runoff will be performed upon completion of this task.

TASK 2 SELECT SITES

Based on the available data collected in Task 2, Stetson and RCFCWCD will select two sites in Southwestern Riverside County to measure rainfall and runoff data during the 2011-12 winter period. The data will be used to develop rainfall-runoff relationships for areas of known land use and future calibration of the SWMM model. This task will include, but not be limited to: on-site surveying and instrument installation; coordination with RCFCWCD for identification of existing MS4 facilities; review and cataloging existing stormwater structures and characteristics; and analyzing land use and soils pertinent to use for basin wide application.

A meeting, inventory of available MS4 facilities, and land surveying to support runoff calculations will be performed upon completion of this task.

TASK 3 CALIBRATE SWMM

Following collection of actual rainfall and runoff data, Stetson will develop and calibrate a SWMM model at each of the two sites identified in the previous task. The purpose of developing a SWMM at each site is to identify the various hydrologic processes that control surface runoff and subsurface infiltration derived from time-dependent rainfall events. Specifically, the sites will be chosen so that different rainfall-runoff relationships may be derived based on different depths to groundwater, soils characteristics, and urban development.

The SWMM calibration task includes the following two model runs:

1) Undeveloped

1a) Historical

The purpose of this model run will be to develop a rainfall-runoff relationship that characterizes each site under undeveloped conditions that are consistent with elevated groundwater levels and natural soil cover.

1b) Historical with Existing Groundwater Level Drawdown

Similar to Historical Undeveloped Model run, this model run will simulate the rainfall-runoff relationship based on historical conditions except for the use of existing groundwater levels. The purpose of this model run will be to determine the rainfall-runoff relationship at each site under existing groundwater conditions as if no land use development existed.

2) Existing Conditions

Each SWMM will be calibrated to existing conditions that are characteristic of groundwater levels, urban development, population, and MS4 facilities that existed between 2008 and 2011.

A Draft Technical Memorandum describing the SWMM calibration will be presented to RCFCWCD and Camp Pendleton upon the completion of Task 4.

TASK 4 DEVELOP MANAGEMENT SCENARIOS AND RUN MODEL

Stetson and RCFCWCD/CPEN will establish various management scenarios to test the future build-out scenarios. There will be at least three management scenarios developed to characterize rainfall-runoff relationships under three different future condition assumptions. The purpose of these runs is to assess potential impacts of the MS4 Permit against baseline conditions previously identified. The proposed three scenarios include:

3) Full Build-Out

Each SWMM will be updated to reflect full buildout conditions based on the MS4 facilities that exist for Model Run 2 (Existing Conditions). City and county-wide general plans will be used to update the soils and land use properties that affect the rainfall-runoff relationship. Build-out – and associated stormwater runoff – under this model run will presume no onsite retention.

4) LID Scenario – No Retrofit

Building upon Model Run 3, each SWMM will be updated to simulate surface water runoff based on installation of LID BMPs on new development only.

The purpose of this simulation is to create rainfall-runoff relationships that are characteristic of build-out conditions with partial (only new development) implementation of LID BMPs identified in the Order.

5) Full LID Scenario

Building upon Model Run 3, each SWMM will be updated to simulate surface water runoff based on complete replacement/retrofit of all urban land use (existing and future) to reflect R9-2010-0016 requirements. The purpose of this simulation is to create rainfall-runoff relationships that are characteristic of build-out conditions with 100% implementation of LID BMPs identified in the Order.

The results from three SWMM management scenarios for Model Runs 3, 4, and 5 will be presented in a Draft Technical Memorandum upon completion of this task.

TASK 5 EXPAND SWMM RESULTS TO BASIN LEVEL

Stetson will develop a methodology to apply the rainfall-runoff relationship developed at the investigative sites for application to the basin-wide GSFLOW model. The rainfall-runoff relationships developed at each site for the three future scenarios will be applied to a basin-wide groundwater flow model. The GSFLOW groundwater model, which accounts for both surface and groundwater flow, will be used to expand the site specific data to a basin wide scale so potential impacts to surface flow at the Gorge may be assessed. The GSFLOW model is dependent upon rainfall-runoff relationships and will reflect changes in groundwater storage and surface flow based on time-dependent rainfall events.

The GSFLOW model has been developed by Rancho California Water District through a collaborative process under supervision of the SMR Watermaster. The purpose of the model is to assess the effects of urban and water related impacts to flow at the Gorge. The surface water potion of the groundwater model accounts for the rainfall-runoff relationship outside the two SWMM model control points to assure a mass balance exists between various future management scenarios. Specifically, the groundwater model will assure that the sum of basin-wide runoff and infiltration, based on total rainfall, remains equal between model runs.

While the groundwater model run reflecting undeveloped conditions (no dams or groundwater pumping) has been previously completed, this study will investigate future build out conditions identified in Task 4. Task 5 will develop data sets to be incorporated into the existing GSFLOW model to simulate flow at the Gorge. Three groundwater model scenarios are currently contemplated:

GW Run A – Full Build-Out

The first model run will calibrate the GSFLOW model to the newly developed rainfall-runoff relationships based on an assumption of full build-out without onsite retention.

GW Run B – LID with No Retrofit

The second model run will reflect fully functioning LID BMPs for new development in the future build-out scenario in accordance with the MS4 permit conditions.

GW Run C – LID with 100% Retrofit

The third model run will add an assumption of 100% retrofit of existing land uses to the previous scenario of adding LID BMPs to all new developments and redevelopments in accordance with the MS4 permit conditions.

This task will result in three datasets formatted for input to GSFLOW. The final recommendation for groundwater modeling will be based on the outcome and analysis of the SWMM modeling effort and the actual costs for the GSFLOW consultant to conduct each modeling scenario. If additional funds become available, alternative model runs to investigate undeveloped conditions under existing groundwater levels will be pursued with the groundwater model group.

TASK 6 GSFLOW COORDINATION

Stetson will work with the Cooperative Water Resource Management Agreement (CWRMA) Technical Advisory Committee (TAC) and the CWRMA groundwater model group to refine the model runs described above for using GSFLOW and MODFLOW. Following delivery of Task 5 datasets to the GSFLOW consultant, Task 6 will include meeting with the groundwater model group to coordinate data and result implementation into the existing GSFLOW model. Rancho California Water District's consultant, Geoscience Support Services Inc., will perform the GSFLOW model scenarios based on the datasets developed in Task 5. The results of these model run will be simulated streamflow records that may be used to assess whether R9-2010-0016 impacts flow at the Gorge. This task will include, but not be limited to: coordination with the CWRMA TAC; preparation of groundwater model input data; and analysis of results from the GSFLOW model run.

GSFLOW model results for each management scenario performed will be prepared upon the completion of this task. The model results will describe flow at the Gorge based

different rainfall-runoff relationships identified from each management scenario. These results will be described in the Task 7 technical memorandum.

TASK 7 TECHNICAL MEMORANDUM AND PROJECT MANAGEMENT

A draft and final Technical Memorandum will be provided that describes the methodologies used to develop the relationship, if any, between the requirements of the Order and flow at the Gorge under the different management scenarios described above. Changes to flow downstream of the Gorge due to impacts from implementation of the Order will be assessed qualitatively and discussed in terms of potential impacts on beneficial uses, including (if applicable) potential impacts on in-stream species requirements and water availability during different times of the year. A PowerPoint presentation and final report of the results will be created for presentation to RCFCWCD, CPEN, and the Regional Board along with recommendations for potential changes, if justified, to the Order that will minimize or otherwise avoid potentially adverse effects.

TASK 8 FACILITATION OF THIRD PARTY PEER REVIEW AND ASSOCIATED ANALYSIS

This on-call task includes facilitating a third-party peer review, responding to and performing additional analysis based on the peer review, and other services as directed by the District. Facilitation of the Peer Review process includes identifying potential expert reviewers; coordinating the selection process with the District, Camp Pendleton, and the Regional Board; administering the contract with the selected reviewers; and managing the work of the reviewers in a manner not to interfere with the Regional Board's supervision and interaction with the third party peer reviewers. Additional work, if directed, may include analyses required to address issues raised by the peer reviewers regarding study methods and findings, as well as other services as directed by the District.

PROJECT SCHEDULE AND DELIVERABLES

The following milestones define the project schedule. Work started in January 2012 under contract with Camp Pendleton. During March, Camp Pendleton temporarily halted work pending ongoing negotiations with the Regional Water Quality Control Board regarding acceptance of a study swap that would enable RCFCWCD to fund its participation in the study. When work is restarted, Stetson will coordinate new completion dates with RCFCWCD and Camp Pendleton.

- Completed - Task 1
- Completed – Task 2
- TBD – Task 3 completed (work temporarily halted while in progress)
- TBD - Task 4 completed and Draft Technical Memorandum delivered (work temporarily halted while in progress)

- 21 Days – Client Review Period. Presentation and Review of Draft Technical Memorandum
- TBD – Task 5 completed. Submit materials to GSFLOW Model group.
- TBD – Task 6 completed. GSFLOW model runs completed.
- TBD – Final Technical Memorandum delivered.
- TBD – Presentation to Regional Board
- TBD - Task 8. Facilitation of Peer Review and related services (if directed)

These deliverables will be provided each to RCFCWCD and Camp Pendleton:
(3) hard copies and (1) electronic Draft Technical Memorandum
(3) hard copies and (1) electronic Final Technical Memorandum
PowerPoint presentation and final meeting.

SUMMARY OF COSTS

Stetson's cost for performing the three tasks described in this scope of work is outlined below.

SUMMARY OF COSTS FOR SOUTHERN RIVERSIDE COUNTY MS4 PERMIT RCFCWCD AND MARINE CORPS BASE CAMP PENDLETON, CA

Task	Overall Cost
Task 1: Collect Data and Review As-Built Drawings	$6,000
Task 2: Select and Survey Sites	$17,000
Task 3: Calibrate SWMM Model	$16,000
Task 4: Develop Management Scenarios and Run Model	$9,000
Task 5: Expand SWMM Results to Basin Level	$11,000
Task 6: Coordinate with GSFLOW Model	$15,000
Task 7: TM and Project Management	$24,000
Total Cost	$98,000

The additional cost for the additional on-call Task 8 Facilitating a Third Party Peer Review and Associated Analysis, if directed, is up to $50,000.00. This work would be performed on a time and materials basis. The subcontractor charge for administering the on-call third party peer reviewers is 5%.

COST ESTIMATE SUMMARY

Santa Margarita Region Consolidated Monitoring Plan
MS4 and Receiving Water Maintenance Special Study

	Task	Labor	Direct	Analytical	Total
~~1~~	~~**Site Determination**~~	~~**$4,240**~~	~~**$428**~~	~~**$0**~~	~~**$4,668**~~
	~~Monitoring Location Siting~~				
	~~Post-survey site determination~~				
~~2~~	~~**Monitoring Plan Development**~~	~~**$8,002**~~	~~**$0**~~	~~**$0**~~	~~**$8,002**~~
3	**Pre-Maintenance Monitoring**	**$12,414**	**$279**	**$999**	**$13,692**
	Conventionals & Nutrients			$633	
	Indicator Bacteria			$366	
4	**Post-Maintenance Monitoring**	**$12,414**	**$279**	**$999**	**$13,692**
	Conventionals & Nutrients			$633	
	Indicator Bacteria			$366	
5	**Continuous Monitoring**	**$18,760**	**$2,679**	**$0**	**$21,439**
	Total	**$55,830**	**$3,665**	**$3,996**	**$48,823**

NOTE As of the date of this proposal, Tasks 1 and 2 of the MS4 and Receiving Water Maintenance Special Study have already been completed in accordance with the deadlines identified in Order R9-2010-0016. The total shown above reflects cost estimates for the remaining work in Tasks 3 through 5.

Attachment C

COST ESTIMATE SUMMARY
Santa Margarita Region Consolidated Monitoring Plan
Intermittent and Ephemeral Stream Perennial Conversion Special Study

	Task	Labor	Direct	Analytical	Total
1	**Research**	**$16,000**	**$428**	**$0**	**$16,428**
	Historical Research & Data Collection Field Surveys Site Analysis and Determination				
2	**Monitoring Plan Development**	**$8,044**	**$0**	**$0**	**$8,044**
3	**Monitoring**	**$6,184**	**$75**	**$3,984**	**$10,243**
	Conventionals & Nutrients			$1,764	
	Metals			$1,488	
	Indicator Bacteria			$732	
	Total	**$30,228**	**$503**	**$3,984**	**$34,715**

EXHIBIT B

California Regional Water Quality Control Board, San Diego Region

September 14, 2012

Certified Mail – Return Receipt Requested
Article Number: 7011 0470 0002 8961 6480

Mr. Jason Uhley
Chief of Watershed Protection Division
Riverside County Flood Control
And Water Conservation District
1995 Market Street
Riverside, CA 92501

In reply refer to:
Place ID: 252906:dquach

Subject: Modification of Special Study Requirements in Attachment E of Order No. R9-2010-0016

Mr. Uhley:

By letter dated May 29, 2012, you requested modification to the Special Studies reporting requirements, contained in Attachment E, Section II.E. of Order No. 2010-0016 (Order), to allow submittal of a "Low Impact Development Retention Impacts Study" in lieu of the required "MS4 and Receiving Water Maintenance Study" (required under Attachment E, Section II.E.5 of the Order) and the "Intermittent and Ephemeral Stream Perennial Conversion Study" (required under Attachment E, Section II.E.6 of the Order). The Low Impact Development (LID) Retention Impacts Study is being conducted jointly by the Riverside County Flood Control (District) and the Cities of Murrieta, Temecula and Wildomar (collectively Copermittees) and Camp Pendleton to identify and investigate potential impacts to stream flows, including their relationship to beneficial uses in the lower Santa Margarita River Watershed, resulting from implementation of LID retention requirements of the Order. The San Diego Water Board is participating in the development of the LID Retention Impacts Study pursuant to Provision P of the Order.

I understand that if the requested study swap is approved, the Copermittees will use the funding originally earmarked for the "MS4 and Receiving Water Maintenance Study" and the "Intermittent and Ephemeral Stream Perennial Conversion Study" to fund the "LID Retention Impacts Study". Any cost savings realized by the Copermittees due to the difference in cost between the LID Retention Impacts Study and the two studies proposed for replacement will be applied to cover contingency work that may arise due to the peer review of the LID Retention Impacts Study.

Attachment B to your letter contains an expanded draft scope of work and estimated budget, dated May 1, 2012, for the LID Retention Impacts Study to more accurately evaluate the potential impacts of implementation of the LID retention requirements of the Order. The stated purpose of this draft scope of work is to evaluate and address whether implementation of the Order will affect the surface flow of the Santa Margarita River at the confluence of Murrieta and

Temecula Creeks under various storm water management model scenarios. Specific attention will be focused on potential impacts to the beneficial uses of surface flows including but not limited to in-stream analyses for habitat, species, and water rights. The draft scope of work also includes provision for the Southern California Coastal Water Research Project (SCCWRP) to facilitate the scientific peer review of the LID Retention Impacts Study by independent experts as well as provision for the preparation of any analyses required to address issues raised by the peer reviewers regarding study methods and findings.

The draft scope of work does not include a schedule of specific milestone dates for the completion of the LID Retention Impacts Study. I understand that work on the study has been temporarily halted but will be resumed if the proposed study swap is approved. I anticipate that a schedule of specific milestone dates for the completion of the study will be coordinated with the San Diego Water Board when work is resumed.

Based on the foregoing, I have no objections to your proposed study swap in concept. I have been advised by Counsel that the proposed study swap would require modification of the Special Studies requirements of the Order by the San Diego Water Board at a publicly noticed hearing. Due to resource limitations this matter is unlikely to be scheduled for San Diego Water Board consideration in the near future. However, in the interim period until the matter can be scheduled for San Diego Water Board consideration, I will not recommend that the Board enforce the Special Studies requirements in Sections II.E.5 and E.6. of the Order pertaining to the "MS4 and Receiving Water Maintenance Study" or the "Intermittent and Ephemeral Stream Perennial Conversion Study". Please note that my decision to not recommend any enforcement action on these provisions of the Order during the interim period is not a restriction or shield against third party lawsuits under the citizen suit provisions of the Clean Water Act.

In the subject line of any response, please include the reference number 252906:dquach. For questions or comments, please contact Mr. Dat Quach by phone at (858) 467-2978, or by email at dquach@waterboards.ca.gov.

Respectfully,

James G. Smith
Assistant Executive Officer
JS: db:kd:dq

Tech Staff Info & Use	
Order No.	R9-2010-0016
Party (GT/CIWQS) ID	373608
File No.	
WDID	9 0000512S4
NPDES No.	CAS0108766
Reg. Measure ID	213857
Place ID	252906

ATTACHMENT 3

DECLARATION OF KAREN ASHBY

I, Karen Ashby, hereby declare:

1. I am a Vice President at Larry Walker Associates, Inc., an environmental engineering and consulting firm that specializes in, amongst other matters, water quality management. In my capacity as a Vice President I serve as a Project Manager for stormwater and watershed management projects.

2. I have a Bachelor of Science (BS) from the University of California at Irvine and am certified as a Professional in Storm Water Quality (CPSWQ) from Envirocert International, Inc. I have been an active member of the California Stormwater Quality Association (CASQA) since 1999 as well as a Board of Director, Vice Chair and Chair of the Association. I have over 25 years of experience in stormwater quality matters, including but not limited to providing regulatory assistance; facilitating stakeholder groups; developing and implementing stormwater management programs and Total Maximum Daily Loads (TMDLs); developing and conducting training modules; evaluating and reporting on stormwater program effectiveness; and preparing various technical reports on stormwater management issues. Prior to joining Larry Walker Associates, I managed the area-wide municipal stormwater program for the County of Orange.

3. I have personal knowledge of the matters set forth herein and, if called to testify, could and would testify competently thereto.

4. I was requested to perform a survey of Phase I National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer systems (MS4) permits issued by the United States Environmental Protection Agency (EPA). I was further asked to review those permits to determine if they included any of the requirements that are the subject of the Test Claim filed with the Commission on State Mandates by the County of Riverside and certain cities located within the County.

5. EPA currently issues Phase I NPDES MS4 permits in four jurisdictions: Idaho, Massachusetts, New Mexico and Washington, D.C. I reviewed five currently effective Phase I

permits issued to municipalities in those jurisdictions, Albuquerque, Boise/Garden City Area (Boise), Washington, D.C. (D.C.), Boston, and Worcester.

6. EPA issued the currently effective Albuquerque permit in 2014 and the currently effective Boise permit in 2012. EPA issued the currently effective D.C. permit in 2011 and modified this permit in 2012. The Boston and Worcester permits are older, EPA having issued the Boston Permit in 1999 and the Worcester Permit in 1998.

7. I reviewed these five EPA-issued permits to determine if they included any of the provisions that are the subject of the test claim filed by Riverside County and certain cities concerning provisions in San Diego Regional Board Order No. R9-2010-0016 (the "Permit"). Attached as Exhibit 1 is a chart that summarizes my review. The Albuquerque, Boise, Washington D.C., Boston and Worcester permits are attached hereto as Exhibits 2, 3, 4, 5, and 6 respectively.

8. **Removal of Categories of Irrigation Runoff from Non-Prohibited Non-Stormwater Discharges**. Permit Section B.1 provides that permittees must effectively prohibit all types of non-stormwater discharges into their MS4 unless such discharges are otherwise authorized. Permit Section B.2 sets forth several categories of non-stormwater discharges which are excepted from this prohibition, but does not include three categories of irrigation runoff: landscape irrigation, irrigation water, and lawn watering. In contrast, all of the EPA-issued permits include landscape irrigation, irrigation water, and lawn watering within the categories of non-stormwater discharges that are excepted from the prohibition.

9. **Requirement to Respond to Non-Stormwater Action Levels or "NALs"**. Permit Sections C and F.4.d and e require permittees to analyze non-stormwater discharges and compare those discharges against "non-stormwater dry weather action levels" ("NALs"). If exceedances of NALs are found, permittees are then required to take certain follow-up source investigations and other actions. No EPA-issued permit contains these requirements.

10. **Requirement to Respond to Stormwater Action Levels or "SALs"**. Permit Section D requires permittees to analyze stormwater discharges and compare those discharges

against permit-designated "Stormwater Action Levels" ("SALs"). When a running average of twenty percent or greater of any discharge exceed the designated SALs, permittees are required to adopt additional control measures to reduce the levels of pollutants in the discharges. The permittee's monitoring plan must also sample discharges from those major outfalls at which SALs have been exceeded. No EPA-issued permit contains these requirements.

11. **Priority Development Project Requirements**. Permit Section F.1.d requires permittees to update their standard stormwater mitigation plan (SSMP). Permit Section F.1.d (1)(c) and (2)(a) set forth two new priority development projects (which are subject to the SSMP requirements), all projects that result in the disturbance of one acre or more and all projects that create ten thousand square feet or more of impervious surfaces. Permit Section F.1.d(7) requires permittees to develop a low impact development (LID) Best Management Practices ("BMPs") Waiver program.

The Boston and Worcester permits do not contain any such provisions. The Albuquerque, D.C., and Boise permits contain LID requirements, but not the extensive requirements that are present in the San Diego permit. The Albuquerque permit seeks to encourage use of LID, but does not require on site or off site mitigation projects. The D.C. permit contains LID requirements, but not as prescriptive as the San Diego permit. Similarly, the Boise permit contains requirements for LID and green infrastructure strategy, but does not contain the two priority development project definitions or the requirement to create a LID waiver program.

12. **Hydromodification Requirements**. Permit Section F.1.h requires the development of a hydromodification plan designed to mitigate the volume of the stormwater discharge from priority development projects. No EPA-issued permit has provisions as extensive and prescriptive as the San Diego permit. The Albuquerque and Boise permit encourage hydromodification concepts but do not require them. Neither the D.C., Boston nor Worcester permits contain such provisions.

13. **BMP Maintenance Tracking Requirements**. Permit Section F.1.f. requires permittees to develop and maintain a watershed-based database to track all approved post-construction BMPs and to inspect those BMPs to verify that they have been implemented and are operating. No such requirement is contained in the Albuquerque, Boston, or Worcester permits. The D.C. permit contains a requirement to inventory BMPs, but is not as prescriptive and does not require 100% of high priority projects to be annually inspected or the same frequency of verification and inspection that the Permit requires. The Boise permit contains BMP maintenance tracking requirements, but are not as prescriptive.

14. **Construction Site Requirements**. Permit Section F.2.d (3) requires permittees to require Active/Passive sediment treatment at construction sites, both private and municipal, determined to be an exceptional threat to water quality. Permit Section F.2.e (6)(e) requires permittees to review site monitoring data results for compliance purposes. No EPA-issued permit contains these requirements.

15. **Unpaved Roads BMP Requirements**. Permit Sections F.1.i and F.3.a.10 require permittees to develop and implement erosion and sediment control BMPs that apply to unpaved roads. No EPA-issued permits contains these requirements.

16. **Industrial/Commercial Inspection Requirements**. Permit Section F.3.b.4 requires permittees to review facility monitoring data when inspecting the range of industrial and commercial sites required to be inspected under the permit. The Boise and D.C. permits have inspection requirements but not as prescriptive as the Permit. Although EPA-issued permits require review of monitoring data when inspecting municipal landfills, hazardous waste treatment storage or disposal facilities, facilities subject to EPCRA Title III, or industrial sites that have NPDES permits that discharged to the MS4, none of the EPA-issued permits require review of monitoring data of the extensive list of facilities required by the San Diego permit.

17. **Requirement to Develop Program to Retrofit Existing Development**. Permit Section F.3.d requires permittees to identify areas of existing developments, including municipal developments, as candidates for retrofitting, evaluate those candidates and to prioritize and

encourage retrofitting projects to reduce discharges from the sites. Neither the Boston nor Worcester permits contain such provisions. The Albuquerque permit encourages evaluation of retrofitting of municipal properties and flood control devices but does not extend to private development. The Boise permit is likewise limited to municipal existing stormwater control devices. The D.C. permit is likewise not as broad as the San Diego permit.

18. **Watershed Water Quality Work Plan Requirements**. Permit Section G requires permittees to develop and implement a watershed water quality work plan. The Albuquerque, D.C., Boston, and Worcester permits do not contain this requirement. The Boise permit contains a requirement for watershed plans, but not extensive requirements as those required by the Permit. The Boise Permit is focused on identifying beneficial uses and implementing LID and infiltration principles. The Permit, on the other hand, is more extensive, requiring permittees to characterize the watershed, prioritize water quality problems, identify sources and develop strategies to monitor and improve water quality. These requirements are not included in the Boise permit work plan requirements.

19. **JRMP Annual Report Requirements**. Permit Section K.3 and attachment D require an extensive JRMP Annual Report covering implementation of jurisdictional activities as well as other requirements. EPA-issued permits require the preparation of annual reports. They do not, however, require the extensive reporting required by the Permit.

20. **Special Studies Requirements**. Attachment E to the Permit includes requirements that permittees conduct several special studies, including a sediment toxicity study; trash and litter investigation; agricultural, federal and tribal runoff; and MS4 and receiving water maintenance study. Although EPA-issued permits may require assessment of the effectiveness of certain structural controls or LID requirements, neither the Boise, D.C., Boston or Worcester permits require a sediment toxicity study; trash and litter investigation; agricultural, federal and tribal runoff; or a MS4 and receiving water maintenance study. The Albuquerque permit requires monitoring of Dissolved Oxygen and temperature and monitoring/assessing of floatable material in discharges but also does not require the studies required by the Permit.

21. **Requirement that 2010 Permit Programs Attempt to Ensure no Violation of Water Quality Standards**. Several provisions of Permit Section F require permittees to develop programs that attempt to ensure that discharges do not cause a violation of water quality standards. The D.C. permit does not contain this requirement. The other EPA-issued permits state that the intent is to control discharges from the MS4 to the maximum extent practicable, but do contain language indicating that permittees should select programs to prevent or intended to prevent a violation of state water quality standards. The Albuquerque and Boise permits provide that discharges should not cause an exceedance of water quality standards.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 12th day of December, 2017 at Davis, California.

Karen Ashby

Karen Ashby

Exhibit 1

Summary of USEPA Phase I Permit Requirements

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City - State	Permit Type	Permit Number	Year Issued	Internet Link
Albuquerque, NM	MS4-Phase I (Watershed based permit)	NMR04A000	2014	Albuquerque MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI.A	**Removal of Categories of Irrigation Runoff from Non-Prohibited Non-Stormwater Discharges** Section B.2	No	Page 7 of Part I Page 40 of Part I	**"Landscape irrigation", "irrigation water", and "lawn watering" among the exempted non-stormwater discharges identified within the permit.**
VI. B	**Requirement to Respond to Non-Stormwater Action Levels or "NALs"** - Section C and portions of F.4 - New requirements related to "Non-Stormwater Dry Weather Action Levels" which included programmatic investigation, monitoring, and reporting requirements as well as action items stemming from a NAL exceedance.	No	-	**No requirements to respond to Non-Stormwater Action Levels.**
VI. C	**Requirement to Respond to Stormwater Action Levels or "SALs"** - Section D - Monitoring major MS4 outfalls into receiving waters for the presence of pollutants that exceeded SALs (if such pollutants were detected, to address the exceedances).	No	-	**No requirements to respond to Stormwater Action Levels.**
VI. D	**Priority Development Project and Hydromodification Requirements** - Portions of Section F.1.d - New program to ensure that new development and significant redevelopment comply with strict low impact development ("LID")	Similar provisions, but not as stringent	Pages 26, 29, and 45-46 of Part I	**- Requirements to identify/elminate barriers to LID or Hydrologic Conditions of Concern** **- Encourage use of LID and green infrastructure concepts into plans, however it does not require on-site or off-site mitigation projects.**
	Priority Development Project and Hydromodification Requirements - Portions of Section F.1.h - New program to ensure that new development and significant redevelopment comply with strict hydromodification prevention requirements (including development and implementation of a Hydromodification Management Plan ("HMP")).	No	-	**Encouragement of hydromodification concepts**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Albuquerque, NM	MS4-Phase I (Watershed based permit)	NMR04A000	2014	Albuquerque MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. E	**BMP Maintenance Tracking Requirements** - Provisions in Section F.1.f - Developing and maintaining a watershed-based database to track all projects that have a final approved SSMP and structural BMPs.	No	-	**No requirement to develop and maintain a watershed-based database to track projects constructed as well as the related structural post-construction BMPs.**
VI. F	**Construction Site Requirements** - Provisions of Section F.2 - Claimants to require Active/Passive Sediment Treatment ("AST") at construction sites determined to be "an exceptional threat to water quality".	No	-	**No requirement for Active/Passive Sediment Treatment at construction sites.**
	Construction Site Requirements - Provisions of Section F.2 - Claimants to review site monitoring data results during inspections of construction sites if the site monitored its runoff.	No	-	**No requirement for reviewing construction site runoff monitoring data.**
VI. G	**Unpaved Roads BMP Requirements** - Sections F.1.i. and F.3.a.10 - Developing and implementing BMPs to address erosion and sediment and other impacts from the development and maintenance of unpaved roads.	No	-	**No specific requirements to develop and implement BMPs for the development and maintenance of unpaved roads.**
VI. H	**Industrial/Commercial Inspection Requirement** - Section F.3.b.4(a)(ii) - Review facility monitoring data as part of an inspection program of commercial/industrial facilities if the facility monitored its runoff.	No	Pages 37-38 of Part I and Page 4-5 of Part III	**Requirement to develop/implement a program to monitor industrial/commercial facilities. However, this requirement is limited to municipal landfills; other treatment, storage, or disposal facilities for municipal waste (e.g. transfer stations, incinerators, etc.); hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge the permittee(s) determines are contributing a substantial pollutant loading to the MS4.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Albuquerque, NM	MS4-Phase I (Watershed based permit)	NMR04A000	2014	Albuquerque MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. I	**Requirement to Develop Program to Retrofit Existing Development** - Section F.3.d - Developing and implementing a new program to retrofit existing development. - Identifying areas of existing developments, including municipal developments, as candidates for retrofitting, evaluate and rank candidates according to pre-established criteria, prioritize work plans for implementation according to the evaluation, cooperate with landowners to encourage retrofit of private improvements, and track and inspect retrofitting projects.	Similar provisions only required for MS4-owned property	Pages 31 and 36 of Part I	**Retrofitting inventory, evaluation, prioritization required for MS4 properties and infrastructure and flood control devices, however it does not include existing development (or private properties) as a category.**
VI. J	**Watershed Water Quality Workplan Requirements** - Section G - Developing and implementing a Watershed Water Quality Workplan ("Watershed Workplan") to identify, prioritize, address and mitigate "the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed."	No	-	**Permittees may participate in locally-based watershed planning efforts. No requirement to develop and implement a Watershed Workplan. Requirements focused on plans, strategies, and goals for pollutant specific issues.**
VI. K	**Requirements Relating to JRMP Annual Report** - Section K.3 and a checklist in Attachment D - Requirements relating to the preparation of an extensive Jurisdictional Runoff Management Program (JRMP) Annual Report covering implementation of jurisdictional activities, as well as extensive other requirements.	Smiliar provisions, not as prescriptive	Pages 7 and 8 of Part III	**Includes basic and pollutant specific annual reporting requirements, however it does not include details regarding the specific values that need to be reported for the major stormwater program elements.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Albuquerque, NM	MS4-Phase I (Watershed based permit)	NMR04A000	2014	Albuquerque MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. L	**Special Studies Requirements** - Attachment E - Mandated "special studies" regarding waters within the Santa Margarita Region.	Similar provision, but not as stringent	Page 21-22 of Part I Page 4 of Part III	**Requirement for DO and temperature monitoring and floatable monitoring. However, no requirements for special studies related to sediment toxicity; agricultural, federal, or tribal inputs; or MS4 and receiving water maintenance.**
VI. M	**Requirements that 2010 Permit Programs Attempt to Ensure No Violations of Water Quality Standards and Other Requirements** Developing and implementing programs required in Section F of the Permit, to meet various standards, including that of preventing discharges from the MS4 (or from certain projects) from "causing or contributing to a violation of water quality standards" or "preventing" illicit discharges or non-stormwater discharges	Similar	Page 12 and 23 of Part I Page 2 of Part VII	**Intent of the Permit is to control discharges from the MS4 to the MEP. However, the discharges can not cause or contirubte to exceedances of water quality standards.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Boise/Garden City, ID	Medium MS4	IDS-027561	2012	Boise MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI.A	**Removal of Categories of Irrigation Runoff from Non-Prohibited Non-Stormwater Discharges** Section B.2	No	Pages 4-5 of 66	**"Landscape irrigation", "irrigation water", and "lawn watering" among the exempted non-stormwater discharges identified within the permit.**
VI. B	**Requirement to Respond to Non-Stormwater Action Levels or "NALs"** - Section C and portions of F.4 - New requirements related to "Non-Stormwater Dry Weather Action Levels" which included programmatic investigation, monitoring, and reporting requirements as well as action items stemming from a NAL exceedance.	No	-	**No requirements to respond to Non-Stormwater Action Levels.**
VI. C	**Requirement to Respond to Stormwater Action Levels or "SALs"** - Section D - Monitoring major MS4 outfalls into receiving waters for the presence of pollutants that exceeded SALs (if such pollutants were detected, to address the exceedances).	No	-	**No requirements to respond to Stormwater Action Levels.**
VI. D	**Priority Development Project and Hydromodification Requirements** - Portions of Section F.1.d - New program to ensure that new development and significant redevelopment comply with strict low impact development ("LID")	Similar provisions, not as prescriptive	Pages 7-8, 16, 30-31, and 44-45 of 66.	**Requirements for LID and Green Infrastructure Strategy and Pilot Projects**
	Priority Development Project and Hydromodification Requirements - Portions of Section F.1.h - New program to ensure that new development and significant redevelopment comply with strict hydromodification prevention requirements (including development and implementation of a Hydromodification Management Plan ("HMP")).	No	-	**Encouragement of hydromodification concepts, but not required**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Boise/Garden City, ID	Medium MS4	IDS-027561	2012	Boise MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. E	**BMP Maintenance Tracking Requirements** - Provisions in Section F.1.f - Developing and maintaining a watershed-based database to track all projects that have a final approved SSMP and structural BMPs.	Similar provisions, but not as stringent	Page 18 of 66	**Requirements for developing a database (not watershed-based) to track new and existing permanent storm water controls**
VI. F	**Construction Site Requirements** - Provisions of Section F.2 - Claimants to require Active/Passive Sediment Treatment ("AST") at construction sites determined to be "an exceptional threat to water quality".	No	-	**No requirement for Active/Passive Sediment Treatment at construction sites.**
	Construction Site Requirements - Provisions of Section F.2 - Claimants to review site monitoring data results during inspections of construction sites if the site monitored its runoff.	No	-	**No requirement for reviewing construction site runoff monitoring data.**
VI. G	**Unpaved Roads BMP Requirements** - Sections F.1.i. and F.3.a.10 - Developing and implementing BMPs to address erosion and sediment and other impacts from the development and maintenance of unpaved roads.	No	-	**No specific requirements to develop and implement BMPs for the development and maintenance of unpaved roads.**
VI. H	**Industrial/Commercial Inspection Requirement** - Section F.3.b.4(a)(ii) - Review facility monitoring data as part of an inspection program of commercial/industrial facilities if the facility monitored its runoff.	Similar provisions, not as prescriptive	Pages 20-21 of 66	**Requirement to develop/implement a program to monitor industrial/ commercial facilities.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Boise/Garden City, ID	Medium MS4	IDS-027561	2012	Boise MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. I	**Requirement to Develop Program to Retrofit Existing Development** - Section F.3.d - Developing and implementing a new program to retrofit existing development. - Identifying areas of existing developments, including municipal developments, as candidates for retrofitting, evaluate and rank candidates according to pre-established criteria, prioritize work plans for implementation according to the evaluation, cooperate with landowners to encourage retrofit of private improvements, and track and inspect retrofitting projects.	Similar provisions for MS4-owned property, but not as stringent	Page 25 of 66	**Retrofitting for storm water control devices, not existing development as a category.**
VI. J	**Watershed Water Quality Workplan Requirements** - Section G - Developing and implementing a Watershed Water Quality Workplan ("Watershed Workplan") to identify, prioritize, address and mitigate "the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed."	Similar provisions, not as stringent	Pages 7-8 of 66	**Requirements to develop and implement two subwatershed plans.**
VI. K	**Requirements Relating to JRMP Annual Report** - Section K.3 and a checklist in Attachment D - Requirements relating to the preparation of an extensive Jurisdictional Runoff Management Program (JRMP) Annual Report covering implementation of jurisdictional activities, as well as extensive other requirements.	Similar provisions, not as prescriptive	Pages 45-47 of 66	**Includes basic annual reporting requirements, however it does not include details regarding the specific values that need to be reported for the major stormwater program elements.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Boise/Garden City, ID	Medium MS4	IDS-027561	2012	Boise MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. L	**Special Studies Requirements** - Attachment E - Mandated "special studies" regarding waters within the Santa Margarita Region.	No	-	**Requirement to conduct an effectiveness assessment of structural controls as well as green infrastructure/LID projects. However, no requirements for special studies related to sediment toxicity; trash and litter; agricultural, federal, or tribal inputs; or MS4 and receiving water maintenance.**
VI. M	**Requirements that 2010 Permit Programs Attempt to Ensure No Violations of Water Quality Standards and Other Requirements** Developing and implementing programs required in Section F of the Permit, to meet various standards, including that of preventing discharges from the MS4 (or from certain projects) from "causing or contributing to a violation of water quality standards" or "preventing" illicit discharges or non-stormwater discharges	Similar	Pages 5-6 and 61 of 66	**Intent of the Permit is to control discharges from the MS4 to the MEP. However, discharges can not cause or contribute to excursions above the water quality standards.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
District of Columbia	MS4-Phase I	DC0000221, Modification #1	2011 (modified in 2012)	DC MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI.A	**Removal of Categories of Irrigation Runoff from Non-Prohibited Non-Stormwater Discharges** Section B.2	No	Page 4	**"Landscape irrigation", "irrigation water", and "lawn watering" among the exempted non-stormwater discharges identified within the permit.**
VI. B	**Requirement to Respond to Non-Stormwater Action Levels or "NALs"** - Section C and portions of F.4 - New requirements related to "Non-Stormwater Dry Weather Action Levels" which included programmatic investigation, monitoring, and reporting requirements as well as action items stemming from a NAL exceedance.	No	-	**No requirements to respond to Non-Stormwater Action Levels.**
VI. C	**Requirement to Respond to Stormwater Action Levels or "SALs"** - Section D - Monitoring major MS4 outfalls into receiving waters for the presence of pollutants that exceeded SALs (if such pollutants were detected, to address the exceedances).	No	-	**No requirements to respond to Stormwater Action Levels.**
VI. D	**Priority Development Project and Hydromodification Requirements** - Portions of Section F.1.d - New program to ensure that new development and significant redevelopment comply with strict low impact development ("LID")	Similar provisions, but not as prescriptive	Pages 11-14 and 15	**- LID/Green infrastructure-based requirements** **- Green landscaping incentives program** **- Green roofs for District owned properties**
	Priority Development Project and Hydromodification Requirements - Portions of Section F.1.h - New program to ensure that new development and significant redevelopment comply with strict hydromodification prevention requirements (including development and implementation of a Hydromodification Management Plan ("HMP")).	No	-	**No specific hydromodification requirements**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
District of Columbia	MS4-Phase I	DC0000221, Modification #1	2011 (modified in 2012)	DC MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. E	**BMP Maintenance Tracking Requirements** - Provisions in Section F.1.f - Developing and maintaining a watershed-based database to track all projects that have a final approved SSMP and structural BMPs.	Similar provisions, but not as stringent	Page 14	**Similar requirement to develop an inventory and ensure that O&M occurs for stormwater capture practices, however the requirements are not as prescriptive and are not watershed-based.**
VI. F	**Construction Site Requirements** - Provisions of Section F.2 - Claimants to require Active/Passive Sediment Treatment ("AST") at construction sites determined to be "an exceptional threat to water quality".	No	-	**No requirement for Active/Passive Sediment Treatment at construction sites.**
	Construction Site Requirements - Provisions of Section F.2 - Claimants to review site monitoring data results during inspections of construction sites if the site monitored its runoff.	No	-	**No requirement for reviewing construction site runoff monitoring data.**
VI. G	**Unpaved Roads BMP Requirements** - Sections F.1.i. and F.3.a.10 - Developing and implementing BMPs to address erosion and sediment and other impacts from the development and maintenance of unpaved roads.	No	-	**No specific requirements to develop and implement BMPs for the development and maintenance of unpaved roads.**
VI. H	**Industrial/Commercial Inspection Requirement** - Section F.3.b.4(a)(ii) - Review facility monitoring data as part of an inspection program of commercial/industrial facilities if the facility monitored its runoff.	Similar provisions, not as prescriptive	Pages 22-23	**Requirement to develop/implement a program to monitor industrial/ commercial facilities and to reivew monitoring data.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
District of Columbia	MS4-Phase I	DC0000221, Modification #1	2011 (modified in 2012)	DC MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. I	**Requirement to Develop Program to Retrofit Existing Development** - Section F.3.d - Developing and implementing a new program to retrofit existing development. - Identifying areas of existing developments, including municipal developments, as candidates for retrofitting, evaluate and rank candidates according to pre-established criteria, prioritize work plans for implementation according to the evaluation, cooperate with landowners to encourage retrofit of private improvements, and track and inspect retrofitting projects.	Similar provisions	Pages 12 and 26	**Retrofit program required for Existing Discharges.** **Retrofitting shall be considered for flood control devices owned/operated by the Permittee.**
VI. J	**Watershed Water Quality Workplan Requirements** - Section G - Developing and implementing a Watershed Water Quality Workplan ("Watershed Workplan") to identify, prioritize, address and mitigate "the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed."	No	-	**Some watershed focus within the Permit, but no specific requirement to develop and implement a Watershed Workplan.** **Requirements focused on plans and strategies for TMDL-related issues.** **Permit issued to single discharger.**
VI. K	**Requirements Relating to JRMP Annual Report** - Section K.3 and a checklist in Attachment D - Requirements relating to the preparation of an extensive Jurisdictional Runoff Management Program (JRMP) Annual Report covering implementation of jurisdictional activities, as well as extensive other requirements.	Similar provisions, not as prescriptive	Pages 38 and 39	**Includes basic annual reporting requirements, however it does not include details regarding the specific values that need to be reported for the major stormwater program elements.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
District of Columbia	MS4-Phase I	DC0000221, Modification #1	2011 (modified in 2012)	DC MS4

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. L	**Special Studies Requirements** - Attachment E - Mandated "special studies" regarding waters within the Santa Margarita Region.	No	-	**No special studies requirements**
VI. M	**Requirements that 2010 Permit Programs Attempt to Ensure No Violations of Water Quality Standards and Other Requirements** Developing and implementing programs required in Section F of the Permit, to meet various standards, including that of preventing discharges from the MS4 (or from certain projects) from "causing or contributing to a violation of water quality standards" or "preventing" illicit discharges or non-stormwater discharges	No	-	**Intent of the Permit is to control discharges from the MS4 to the MEP.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Boston, MA	MS4-Phase I	MAS010001	1999* [Still valid]	Boston MS4

* EPA currently developing a permit to replace the older one.

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI.A	**Removal of Categories of Irrigation Runoff from Non-Prohibited Non-Stormwater Discharges** Section B.2	No	Pages 6-7 of 20	**"Landscape irrigation", "irrigation water", and "lawn watering" among the exempted non-stormwater discharges identified within the permit.**
VI. B	**Requirement to Respond to Non-Stormwater Action Levels or "NALs"** - Section C and portions of F.4 - New requirements related to "Non-Stormwater Dry Weather Action Levels" which included programmatic investigation, monitoring, and reporting requirements as well as action items stemming from a NAL exceedance.	No	-	**No requirements to respond to Non-Stormwater Action Levels.**
VI. C	**Requirement to Respond to Stormwater Action Levels or "SALs"** - Section D - Monitoring major MS4 outfalls into receiving waters for the presence of pollutants that exceeded SALs (if such pollutants were detected, to address the exceedances).	No	-	**No requirements to respond to Stormwater Action Levels.**
VI. D	**Priority Development Project and Hydromodification Requirements** - Portions of Section F.1.d - New program to ensure that new development and significant redevelopment comply with strict low impact development ("LID")	No	-	**No requirements to comply with LID requirements.**
	Priority Development Project and Hydromodification Requirements - Portions of Section F.1.h - New program to ensure that new development and significant redevelopment comply with strict hydromodification prevention requirements (including development and implementation of a Hydromodification Management Plan ("HMP")).	No	-	**No requirements to comply with hydromodification prevention requirements.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Boston, MA	MS4-Phase I	MAS010001	1999* [Still valid]	Boston MS4

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Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. E	**BMP Maintenance Tracking Requirements** - Provisions in Section F.1.f - Developing and maintaining a watershed-based database to track all projects that have a final approved SSMP and structural BMPs.	No	-	**No requirement to develop and maintain a watershed-based database to track projects constructed as well as the related structural post-construction BMPs.**
VI. F	**Construction Site Requirements** - Provisions of Section F.2 - Claimants to require Active/Passive Sediment Treatment ("AST") at construction sites determined to be "an exceptional threat to water quality".	No	-	**No requirement for Active/Passive Sediment Treatment at construction sites.**
	Construction Site Requirements - Provisions of Section F.2 - Claimants to review site monitoring data results during inspections of construction sites if the site monitored its runoff.	No	-	**No requirement for reviewing construction site runoff monitoring data.**
VI. G	**Unpaved Roads BMP Requirements** - Sections F.1.i. and F.3.a.10 - Developing and implementing BMPs to address erosion and sediment and other impacts from the development and maintenance of unpaved roads.	No	-	**No specific requirements to develop and implement BMPs for the development and maintenance of unpaved roads.**
VI. H	**Industrial/Commercial Inspection Requirement** - Section F.3.b.4(a)(ii) - Review facility monitoring data as part of an inspection program of commercial/industrial facilities if the facility monitored its runoff.	No	Page 8 of 20	**Requirement to develop/implement a program to monitor industrial/ commercial facilities. However, this requirement is limited to municipal landfills; hazardous waste treatment, storage, disposal and recovery facilities and facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge the permittee determines is contributing a substantial pollutant loading to the MS.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Boston, MA	MS4-Phase I	MAS010001	1999* [Still valid]	Boston MS4

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Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. I	**Requirement to Develop Program to Retrofit Existing Development** - Section F.3.d - Developing and implementing a new program to retrofit existing development. - Identifying areas of existing developments, including municipal developments, as candidates for retrofitting, evaluate and rank candidates according to pre-established criteria, prioritize work plans for implementation according to the evaluation, cooperate with landowners to encourage retrofit of private improvements, and track and inspect retrofitting projects.	No	-	**No requirement to develop a retrofitting program for areas of existing development.** **However, retrofitting shall be considered for flood control devices owned/operated by the Permittee.**
VI. J	**Watershed Water Quality Workplan Requirements** - Section G - Developing and implementing a Watershed Water Quality Workplan ("Watershed Workplan") to identify, prioritize, address and mitigate "the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed."	No	-	**No requirement to develop and implement a Watershed Workplan.**
VI. K	**Requirements Relating to JRMP Annual Report** - Section K.3 and a checklist in Attachment D - Requirements relating to the preparation of an extensive Jurisdictional Runoff Management Program (JRMP) Annual Report covering implementation of jurisdictional activities, as well as extensive other requirements.	Similar provisions, not as stringent	Pages 11 and 18 of 20	**Includes basic annual reporting requirements, however it does not include details regarding the specific values that need to be reported for the major stormwater program elements.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Boston, MA	MS4-Phase I	MAS010001	1999* [Still valid]	Boston MS4

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Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. L	**Special Studies Requirements** - Attachment E - Mandated “special studies” regarding waters within the Santa Margarita Region.	No	-	**Requirement for an effectiveness assessment study. However, no requirements for special studies related to sediment toxicity; trash and litter; agricultural, federal, or tribal inputs; or MS4 and receiving water maintenance.**
VI. M	**Requirements that 2010 Permit Programs Attempt to Ensure No Violations of Water Quality Standards and Other Requirements** Developing and implementing programs required in Section F of the Permit, to meet various standards, including that of preventing discharges from the MS4 (or from certain projects) from “causing or contributing to a violation of water quality standards” or “preventing” illicit discharges or non-stormwater discharges	Similar	Pages 3 and 5 of 20 Fact Sheet - Pages 2-3, 9-10	**Intent of the Permit is to control discharges from the MS4 to the MEP. However, the discharges can not cause a violation of State water quality standards.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Worcester, MA	MS4-Phase I	MAS010002	1998* [Still valid]	Worcester MS4

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Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI.A	**Removal of Categories of Irrigation Runoff from Non-Prohibited Non-Stormwater Discharges** Section B.2	No	Page 8 of 21	**"Landscape irrigation", "irrigation water", and "lawn watering" among the exempted non-stormwater discharges identified within the permit.**
VI. B	**Requirement to Respond to Non-Stormwater Action Levels or "NALs"** - Section C and portions of F.4 - New requirements related to "Non-Stormwater Dry Weather Action Levels" which included programmatic investigation, monitoring, and reporting requirements as well as action items stemming from a NAL exceedance.	No	-	**No requirements to respond to Non-Stormwater Action Levels.**
VI. C	**Requirement to Respond to Stormwater Action Levels or "SALs"** - Section D - Monitoring major MS4 outfalls into receiving waters for the presence of pollutants that exceeded SALs (if such pollutants were detected, to address the exceedances).	No	-	**No requirements to respond to Stormwater Action Levels.**
VI. D	**Priority Development Project and Hydromodification Requirements** - Portions of Section F.1.d - New program to ensure that new development and significant redevelopment comply with strict low impact development ("LID")	No	-	**No requirements to comply with LID requirements.**
	Priority Development Project and Hydromodification Requirements - Portions of Section F.1.h - New program to ensure that new development and significant redevelopment comply with strict hydromodification prevention requirements (including development and implementation of a Hydromodification Management Plan ("HMP")).	No	-	**No requirements to comply with hydromodification prevention requirements.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
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VI. F	**Construction Site Requirements** - Provisions of Section F.2 - Claimants to require Active/Passive Sediment Treatment ("AST") at construction sites determined to be "an exceptional threat to water quality".	No	-	**No requirement for Active/Passive Sediment Treatment at construction sites.**
	Construction Site Requirements - Provisions of Section F.2 - Claimants to review site monitoring data results during inspections of construction sites if the site monitored its runoff.	No	-	**No requirement for reviewing construction site runoff monitoring data.**
VI. G	**Unpaved Roads BMP Requirements** - Sections F.1.i. and F.3.a.10 - Developing and implementing BMPs to address erosion and sediment and other impacts from the development and maintenance of unpaved roads.	No	-	**No specific requirements to develop and implement BMPs for the development and maintenance of unpaved roads.**
VI. H	**Industrial/Commercial Inspection Requirement** - Section F.3.b.4(a)(ii) - Review facility monitoring data as part of an inspection program of commercial/industrial facilities if the facility monitored its runoff.	No	Pages 9-10 of 21	**Requirement to develop/implement a program to monitor industrial/ commercial facilities. However, this requirement is limited to municipal landfills; hazardous waste treatment, storage , disposal and recovery facilities and facilities that are subject to EPCRA Title III, section 313; and any other industrial or commercial discharge the permittee determines is contributing a substantial pollutant loading to the MS4.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Worcester, MA	MS4-Phase I	MAS010002	1998* [Still valid]	Worcester MS4

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VI. J	**Watershed Water Quality Workplan Requirements** - Section G - Developing and implementing a Watershed Water Quality Workplan ("Watershed Workplan") to identify, prioritize, address and mitigate "the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed."	No	-	**No requirement to develop and implement a Watershed Workplan.**
VI. K	**Requirements Relating to JRMP Annual Report** - Section K.3 and a checklist in Attachment D - Requirements relating to the preparation of an extensive Jurisdictional Runoff Management Program (JRMP) Annual Report covering implementation of jurisdictional activities, as well as extensive other requirements.	Similar provisions, not as stringent	Pages 13 and 19 of 21	**Includes basic annual reporting requirements, however it does not include details regarding the specific values that need to be reported for the major stormwater program elements.**

City - State	Permit Type	Permit Number	Year Issued	Internet Link
Worcester, MA	MS4-Phase I	MAS010002	1998* [Still valid]	Worcester MS4

* EPA currently developing a permit to replace the older one.

Item # in Narrative Statement	Riverside Permit Mandated Activity	Does this Permit have the Same Requirement as the Requirement in the Permit Issued to the Riverside Claimants?	Page Number	Description
VI. L	**Special Studies Requirements** - Attachment E - Mandated "special studies" regarding waters within the Santa Margarita Region.	No	-	**No special studies requirements**
VI. M	**Requirements that 2010 Permit Programs Attempt to Ensure No Violations of Water Quality Standards and Other Requirements** Developing and implementing programs required in Section F of the Permit, to meet various standards, including that of preventing discharges from the MS4 (or from certain projects) from "causing or contributing to a violation of water quality standards" or "preventing" illicit discharges or non-stormwater discharges	Similar	Pages 3 and 5-6 of 21	**Intent of the Permit is to control discharges from the MS4 to the MEP. However, discharges can not cause a violation of State water quality standards.**

Exhibit 2

Albuquerque, NM – Middle Rio Grande Watershed Based MS4 Permit (NPDES General Permit No. NMR04A000)

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Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

NPDES General Permit No. NMR04A000

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"), except as provided in Part I.A.5 of this permit, operators of municipal separate storm sewer systems located in the area specified in Part I.A.1 are authorized to discharge pollutants to waters of the United States in accordance with the conditions and requirements set forth herein.

Only operators of municipal separate storm sewer systems in the general permit area who submit a Notice of Intent and a storm water management program document in accordance with Part I.A.6 of this permit are authorized to discharge storm water under this general permit.

This is a renewal NPDES permit issued for these portions of the small municipal separate storm sewer systems covered under the NPDES permit No NMR040000 and NMR04000I and the large municipal separate storm sewer systems covered under the NPDES permit No NMS000101.

This permit is issued on and shall become effective on the date of publication in the Federal Register. DEC 2 2 2014

This permit and the authorization to discharge shall expire at, midnight, December 19, 2019.

Signed by

William K. Honker, P.E.
Director
Water Quality Protection Division

Prepared by

Nelly Smith
Environmental Engineer
NPDES Permits and TMDLs Branch

MIDDLE RIO GRANDE WATERSHED BASED MUNICIPAL SEPARATE STORM SEWER SYSTEM PERMIT

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PART I. INDIVIDUAL PERMIT CONDITIONS

A. DISCHARGES AUTHORIZED UNDER THIS PERMIT

1. **Permit Area**. This permit is available for MS4 operators within the Middle Rio Grande Sub-Watersheds described in Appendix A. This permit may authorize stormwater discharges to waters of the United States from MS4s within the Middle Rio Grande Watershed provided the MS4:

   a. Is located fully or partially within the corporate boundary of the City of Albuquerque;

   b. Is located fully or partially within the Albuquerque urbanized area as determined by the 2000 and 2010 Decennial Census. Maps of Census 2010 urbanized areas are available at: http://water.epa.gov/polwaste/npdes/stormwater/Urbanized-Area-Maps-for-NPDES-MS4-Phase-II-Stormwater-Permits.cfm;

   c. Is designated as a regulated MS4 pursuant to 40 CFR 122.32; or

   d. This permit may also authorize an operator of a MS4 covered by this permit for discharges from areas of a regulated small MS4 located outside an Urbanized Areas or areas designated by the Director provided the permittee complies with all permit conditions in all areas covered under the permit.

2. **Potentially Eligible MS4s.** MS4s located within the following jurisdictions and other areas, including any designated by the Director, are potentially eligible for authorization under this permit:

   - City of Albuquerque
   - AMAFCA (Albuquerque Metropolitan Arroyo Flood Control Authority)
   - UNM (University of New Mexico)
   - NMDOT (New Mexico Department of Transportation District 3)
   - Bernalillo County
   - Sandoval County
   - Village of Corrales
   - City of Rio Rancho
   - Los Ranchos de Albuquerque
   - KAFB (Kirtland Air Force Base)
   - Town of Bernalillo
   - EXPO (State Fairgrounds/Expo NM)
   - SSCAFCA (Southern Sandoval County Arroyo Flood Control Authority)
   - ESCAFCA (Eastern Sandoval County Arroyo Flood Control Authority)
   - Sandia Laboratories, Department of Energy (DOE)
   - Pueblo of Sandia
   - Pueblo of Isleta
   -Pueblo of Santa Ana

3. **Eligibility**. To be eligible for this permit, the operator of the MS4 must provide:

   a. Public Participation: Prior submitting the Notice of Intent (NOI), the operator of the MS4 must follow the local notice and comment to procedures at Part I.D.5.h.(i).

   b. National Historic Preservation Act (NHPA) Eligibility Provisions

   In order to be eligible for coverage under this permit, the applicant must be in compliance with the National Historic Preservation Act. Discharges may be authorized under this permit only if:

(i) Criterion A: storm water discharges, allowable non-storm water discharges, and discharge-related activities do not affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior; or

(ii) Criterion B: the applicant has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) (or equivalent tribal authority) that outlines all measures the MS4 operator will undertake to mitigate or prevent adverse effect to the historic property.

Appendix C of this permit provides procedures and references to assist with determining permit eligibility concerning this provision. You must document and incorporate the results of your eligibility determination in your SWMP.

The permittee shall also comply with the requirements in Part IV.U.

4. **Authorized Non-Stormwater Discharges**. The following non-stormwater discharges need not be prohibited unless determined by the permittees, U.S. Environmental Protection Agency (EPA), or New Mexico Environment Department (NMED) to be significant contributors of pollutants to the municipal separate storm sewer system (MS4). Any such discharge that is identified as significant contributor pollutants to the MS4, or as causing or contributing to a water quality standards violation, must be addressed as an illicit discharge under the illicit discharge and improper disposal practices established pursuant to Part I.D.5.e of this permit. For all of the discharges listed below, not treated as illicit discharges, the permittee must document the reason these discharges are not expected to be significant contributors of pollutants to the MS4. This documentation may be based on either the nature of the discharge or any pollution prevention/treatment requirements placed on such discharges by the permittee.

- potable water sources, including routine water line flushing;
- lawn, landscape, and other irrigation waters provided all pesticides, herbicides and fertilizers have been applied in accordance with approved manufacturing labeling and any applicable permits for discharges associated with pesticide, herbicide and fertilizer application;
- diverted stream flows;
- rising ground waters;
- uncontaminated groundwater infiltration (as defined at 40 CFR §35.2005 (20));
- uncontaminated pumped groundwater;
- foundation and footing drains;
- air conditioning or compressor condensate;
- springs;
- water from crawl space pumps;
- individual residential car washing;
- flows from riparian habitats and wetlands;
- dechlorinated swimming pool discharges;
- street wash waters that do not contain detergents and where no un-remediated spills or leaks of toxic or hazardous materials have occurred;
- discharges or flows from fire fighting activities (does not include discharges from fire fighting training activities); and,
- other similar occasional incidental non-stormwater discharges (e.g. non-commercial or charity car washes, etc.)

5. **Limitations of Coverage**. This permit does not authorize:

a. Non-Storm Water*:* Discharges that are mixed with sources of non-storm water unless such non-storm water discharges are:

(i) In compliance with a separate NPDES permit; or

(ii) Exempt from permitting under the NPDES program; or

(iii) Determined not to be a substantial contributor of pollutants to waters of the United States. See Part I.A.4.

b. Industrial Storm Water*:* Storm water discharges associated with industrial activity as defined in 40 CFR §122.26(b)(14)(i)-(ix) and (xi).

c. Construction Storm Water*:* Storm water discharges associated with construction activity as defined in 40 CFR §122.26(b)(14)(x) or 40 CFR §122.26(b)(15).

d. Currently Permitted Discharges*:* Storm water discharges currently covered under another NPDES permit.

e. Discharges Compromising Water Quality*:* Discharges that EPA, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. Where such a determination is made prior to authorization, EPA may notify you that an individual permit application is necessary in accordance with Part IV.M. However, EPA may authorize your coverage under this permit after you have included appropriate controls and implementation procedures in your SWMP designed to bring your discharge into compliance with water quality standards.

f. Discharges Inconsistent with a TMDL*:* You are not eligible for coverage under this permit for discharges of pollutants of concern to waters for which there is an applicable total maximum daily load (TMDL) established or approved by EPA unless you incorporate into your SWMP measures or controls that are consistent with the assumptions and requirements of such TMDL. To be eligible for coverage under this general permit, you must incorporate documentation into your SWMP supporting a determination of permit eligibility with regard to waters that have an EPA-established or approved TMDL. If a wasteload allocation has been established that would apply to your discharge, you must comply with the requirements established in Part I.C.2.b.(i). Where an EPA-approved or established TMDL has not specified a wasteload allocation applicable to municipal storm water discharges, but has not specifically excluded these discharges, adherence to a SWMP that meets the requirements in Part I.C.2.b.(ii) of this general permit will be presumed to be consistent with the requirements of the TMDL. If the EPA-approved or established TMDL specifically precludes such discharges, the operator is not eligible for coverage under this general permit.

6. **Authorization Under This General Permit**

a. Obtaining Permit Coverage.

(i) An MS4 operator seeking authorization to discharge under this general permit must submit electronically a complete notice of intent (NOI) to the e-mail address provided in Part I.B.3 (see suggested EPA R6 MS4 NOI format located in EPA website at http://epa.gov/region6/water/npdes/sw/ms4/index.htm), in accordance with the deadlines in Part I.B.1 of this permit. The NOI must include the information and attachments required by Parts I.B.2, Part I.A.3, Part I.D.5.h.(i), and I.A.5.f of this permit. By submitting a signed NOI, the applicant certifies that all eligibility criteria for permit coverage have been met. If EPA notifies a discharger (either directly, by public notice, or by making information available on the Internet) of other NOI options that become available at a later date, such as electronic submission of forms or information, the MS4 operator may take advantage of those options to satisfy the NOI submittal requirements.

(ii) If an operator changes or a new operator is added after an NOI has been submitted, the operator must submit a new or revised NOI to EPA.

(iii) An MS4 operator who submits a complete NOI and meets the eligibility requirements in Part I of this permit is authorized to discharge storm water from the MS4 under the terms and conditions of this general permit only upon written notification by the Director. After review of the NOI and any public comments on the NOI, EPA may condition permit coverage on correcting any deficiencies or on including a schedule to respond to any public comments. (See also Parts I.A.3 and Part I.D.5.h.(i).)

(iv) If EPA notifies the MS4 operator of deficiencies or inadequacies in any portion of the NOI (including the SWMP), the MS4 operator must correct the deficient or inadequate portions and submit a written statement to EPA certifying that appropriate changes have been made. The certification must be submitted within the time-frame specified by EPA and must specify how the NOI has been amended to address the identified concerns.

(v) The NOI must be signed and certified in accordance with Parts IV.H.1 and 4. Signature for the NOI, which effectively takes the place of an individual permit application, may not be delegated to a lower level under Part IV.H.2

b. Terminating Coverage.

(i) A permittee may terminate coverage under this general permit by submitting a notice of termination (NOT). Authorization to discharge terminates at midnight on the day the NOT is post-marked for delivery to EPA.

(ii) A permittee must submit an NOT to EPA within 30 days after the permittee:

(a) Ceases discharging storm water from the MS4,

(b) Ceases operations at the MS4, or

(c) Transfers ownership of or responsibility for the facility to another operator.

(iii) The NOT will consist of a letter to EPA and must include the following information:

(a) Name, mailing address, and location of the MS4 for which the notification is submitted;

(b) The name, address and telephone number of the operator addressed by the NOT;

(c) The NPDES permit number for the MS4;

(d) An indication of whether another operator has assumed responsibility for the MS4, the discharger has ceased operations at the MS4, or the storm water discharges have been eliminated; and

(e) The following certification:

I certify under penalty of law that all storm water discharges from the identified MS4 that are authorized by an NPDES general permit have been eliminated, or that I am no longer the operator of the MS4, or that I have ceased operations at the MS4. I understand that by submitting this Notice of Termination I am no longer authorized to discharge storm water under this general permit, and that discharging pollutants in storm water to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by an NPDES permit. I also understand that the submission of this Notice of Termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

(f) NOTs, signed in accordance with Part IV.H.1 of this permit, must be sent to the e-mail address in Part I.B.3. Electronic submittal of the NOT required in the permit using a compatible Integrated Compliance Information System (ICIS) format would be allowed if available.

B. NOTICE OF INTENT REQUIREMENTS

1. **Deadlines for Notification**.

a. Designations: Small MS4s automatically designated under 40 CFR 122.32(a)(1), large MS4s located within the corporate boundary of the COA including the COA and former co-permittees under the NPDES permit No

NMS000101, and MS4s designated under 40 CFR 122.26(a)(1)(v), 40 CFR 122.26(a)(9)(i)(C) or (D), or 40 CFR 122.32(a)(2) are required to submit individual NOIs by the dates listed in Table 1. Any MS4 designated as needing a permit after issuance of this permit will be given an individualized deadline for NOI submittal by the Director at the time of designation.

In lieu of creating duplicate program elements for each individual permittee, implementation of the SWMP, as required in Part I.D, may be achieved through participation with other permittees, public agencies, or private entities in cooperative efforts to satisfy the requirements of Part D. For these programs with cooperative elements, the permittee may submit individual NOIs as established in Table 1. See also "Permittees with Cooperative Elements in their SWMP " under Part.I.B.4 and "Shared Responsibilities and Cooperative Programs" under Part I.D.3.

Table 1 Deadlines to Submit NOI

Permittee Class Type	**NOI Deadlines**
Class A: MS4s within the Cooperate Boundary of the COA including former co-permittees under the NPDES permit No NMS000101	90 days from effective date of the permit or 180 days from effective date of the permit if participating in cooperative programs for one or more program elements.
Class B: MS4s designated under 40 CFR 122.32(a)(1). Based on 2000 Decennial Census Map	90 days from effective date of the permit or 180 days from effective date of the permit if participating in cooperative programs for one or more program elements.
Class C: MS4s designated under 40 CFR 122.26(a)(1)(v), 40 CFR 122.26(a)(9)(i)(C) or (D), or 40 CFR 122.32(a)(2) or MS4s newly designated under 122.32(a)(1) based on 2010 Decennial Census Map	180 days from effective date of the permit or notice of designation, unless the notice of designation grants a later date or; 180 days from effective date of the permit if participating in cooperative programs for one or more program elements.
Class D: MS4s within Indian Country Lands designed under 40 CFR 122.26(a)(1)(v), 122.26(a)(9)(i)(C) or (D), 122.32(a)(1), or 122.32(a)(2)	180 days from effective date of the permit or notice of designation, unless the notice of designation grants a later date or; 180 days from effective date of the permit if participating in cooperative programs for one or more program elements.

See Appendix A for list of potential permittees in the Middle Rio Grande Watershed

b. New Operators. For new operators of all or a part of an already permitted MS4 (due to change on operator or expansion of the MS4) who will take over implementation of the existing SWMP covering those areas, the NOI must be submitted 30 days prior to taking over operational control of the MS4. Existing permittees who are expanding coverage of their MS4 area (e.g., city annexes part of unincorporated county MS4) are not required to submit a new NOI, but must comply with Part I.D.6.d.

c. Submitting a Late NOI. MS4s not able to meet the NOI deadline in Table I and Part I.B.1.b due to delays in determining eligibility should notify EPA of the circumstance and progress to date at the address in Part I.B.3 and then proceed with a late NOI. MS4 operators are not prohibited from submitting an NOI after the dates provided in Table 1 and Part I.B.1.b. If a late NOI is submitted, the authorization is only for discharges that occur after permit coverage is effective. The permitting authority reserves the right to take appropriate enforcement actions for any unpermitted discharges.

d. End of Administrative Continued Coverage under Previous Permit. Administrative continuance is triggered by a timely reapplication. Discharges submitting an NOI for coverage under this permit are considered to have met

the timely reapplication requirement if NOI is submitted by the deadlines included in Table 1 of Part I.B.1. For MS4s previously covered under either NMS000101 or NMR040000, continued coverage under those permits ends: a) the day after the applicable deadline for submittal of an NOI if a complete NOI has not been submitted or b) upon notice of authorization under this permit if a complete and timely NOI is submitted.

2. **Contents of Notice of Intent**. An MS4 operator eligible for coverage under this general permit must submit an NOI to discharge under this general permit. The NOI will consist of a letter to EPA containing the following information (see suggested EPA R6 MS4 NOI Format located in EPA website at http://www.epa.gov/region6/water/npdes/sw/ms4/index.htm) and must be signed in accordance with Part IV.H of this permit:

   a. The legal name of the MS4 operator and the name of the urbanized area and core municipality (or Indian reservation/pueblo) in which the operator's MS4 is located;

   b. The full facility mailing address and telephone number;

   c. The name and phone number of the person or persons responsible for overall coordination of the SWMP;

   d. An attached location map showing the boundaries of the MS4 under the applicant's jurisdiction. The map must include streets or other demarcations so that the exact boundaries can be located;

   e. The area of land served by the applicant's MS4 (in square miles);

   f. The latitude and longitude of the approximate center of the MS4;

   g. The name(s) of the waters of the United States that receive discharges from the system.

   h. If the applicant is participating in a cooperative program element or is relying on another entity to satisfy one or more permit obligations (see Part I.D.3), identify the entity(ies) and the element(s) the entity(ies) will be implementing;

   i. Information on each of the storm water minimum control measures in Part I.D.5 of this permit and how the SWMP will reduce pollutants in discharges to the Maximum Extent Practicable. For each minimum control measure, include the following:

      (i) Description of the best management practices (BMPs) that will be implemented;

      (ii) Measurable goals for each BMP; and

      (iii) Time frames (i.e., month and year) for implementing each BMP;

   j. Based on the requirements of Part I.A.3.b describe how the eligibility criteria for historic properties have been met;

   k. Indicate whether or not the MS4 discharges to a receiving water for which EPA has approved or developed a TMDL. If so, describe how the eligibility requirements of Part I.A.5.f and Part I.C.2 have been met.

      Note: If an individual permittee or a group of permittees seeks an alternative sub-measureable goal for TMDL controls under Part I.C.2.b.(i).(c).B, the permittee or a group of permittees must submit a preliminary proposal with the NOI. This proposal shall include, but is not limited to, the elements included in Appendix B under Section B.2.

   l. Signature and certification by an appropriate official (see Part IV.H). The NOI must include the certification statement from Part IV.H.4.

3. **Where to Submit.** The MS4 operator must submit the signed NOI to EPA via e-mail at R6_MS4Permits@epa.gov (note: there is an underscore between R6 and MS4) and NMED to the address provided in Part III.D.4. See also Part III.D.4 to determine if a copy must be **p**rovided to a Tribal agency.

   The following MS4 operators: AMAFCA, Sandoval County, Village of Corrales, City of Rio Rancho, Town of Bernalillo, SSCAFCA, and ESCAFCA must submit the signed NOI to the Pueblo of Sandia to the address provided in Part III.D.4.

   Note: See suggested EPA R6 MS4 NOI Format located in EPA website at http://www.epa.gov/region6/water/npdes/sw/ms4/index.htm. A complete copy of the signed NOI should be maintained on site. Electronic submittal of the documents required in the permit using a compatible Integrated Compliance Information System (ICIS) format would be allowed if available.

4. **Permittees with Cooperative Elements in their SWMP.** Any MS4 that meets the requirements of Part I.A of this general permit may choose to partner with one or more other regulated MS4 to develop and implement a SWMP or SWMP element. The partnering MS4s must submit separate NOIs and have their own SWMP, which may incorporate jointly developed program elements. If responsibilities are being shared as provided in Part I.D.3 of this permit, the SWMP must describe which permittees are responsible for implementing which aspects of each of the minimum measures. All MS4 permittees are subject to the provisions in Part I.D.6.

   Each individual MS4 in a joint agreement implementing a permit condition will be independently assessed for compliance with the terms of the joint agreement. Compliance with that individual MS4s obligations under the joint agreement will be deemed compliance with that permit condition. Should one or more individual MS4s fail to comply with the joint agreement, causing the joint agreement program to fail to meet the requirements of the permit, the obligation of all parties to the joint agreement is to develop within 30 days and implement within 90 days an alternative program to satisfy the terms of the permit.

C. SPECIAL CONDITIONS

1. **Compliance with Water Quality Standards**. Pursuant to Clean Water Act §402(p)(3)(B)(iii) and 40 CFR §122.44(d)(1), this permit includes provisions to ensure that discharges from the permittee's MS4 do not cause or contribute to exceedances of applicable surface water quality standards, in addition to requirements to control discharges to the maximum extent practicable (MEP) set forth in Part I.D. Permittees shall address stormwater management through development of the SWMP that shall include the following elements and specific requirements included in Part VI.

   a. Permittee's discharges shall not cause or contribute to an exceedance of surface water quality standards (including numeric and narrative water quality criteria) applicable to the receiving waters. In determining whether the SWMP is effective in meeting this requirement or if enhancements to the plan are needed, the permittee shall consider available monitoring data, visual assessment, and site inspection reports.

   b. Applicable surface water quality standards for discharges from the permittees' MS4 are those that are approved by EPA and any other subsequent modifications approved by EPA upon the effective date of this permit found at New Mexico Administrative Code §20.6.4. Discharges from various portions of the MS4 also flow downstream into waters with Pueblo of Isleta and Pueblo of Sandia Water Quality Standards;

   c. The permittee shall notify EPA and the Pueblo of Isleta in writing as soon as practical but not later than thirty (30) calendar days following each Pueblo of Isleta water quality standard exceedance at an in-stream sampling location. In the event that EPA determines that a discharge from the MS4 causes or contributes to an exceedance of applicable surface water quality standards and notifies the permittee of such an exceedance, the permittee shall, within sixty (60) days of notification, submit to EPA, NMED, Pueblo of Isleta (upon request) and Pueblo of Sandia (upon request), a report that describes controls that are currently being implemented and additional controls that will be implemented to prevent pollutants sufficient to ensure that the discharge will no longer cause or contribute to an exceedance of applicable surface water quality standards. The permittee shall implement such additional controls upon notification by EPA and shall incorporate such measures into their SWMP as described in Part I.D of this permit. NMED or the affected Tribe may provide information

documenting exceedances of applicable water quality standards caused or contributed to by the discharges authorized by this permit to EPA Region 6 and request EPA take action under this paragraph.

d. Phase I Dissolved Oxygen Program (Applicable only to the COA and AMAFCA as a continuation of program in 2012 NMS000101 individual permit): Within one year from effective date of the permit , the permittees shall revise the May 1, 2012 Strategy to continue taking measures to address concerns regarding discharges to the Rio Grande by implementing controls to eliminate conditions that cause or contribute to exceedances of applicable dissolved oxygen water quality standards in waters of the United States. The permittees shall:

(i) Continue identifying structural elements, natural or man-made topographical and geographical formations, MS4 operations activities, or oxygen demanding pollutants contributing to reduced dissolved oxygen in the receiving waters of the Rio Grande. Both dry and wet weather discharges shall be addressed. Assessment may be made using available data or collecting additional data;

(ii) Continue implementing controls, and updating/revising as necessary, to eliminate structural elements or the discharge of pollutants at levels that cause or contribute to exceedances of applicable water quality standards for dissolved oxygen in waters of the United States;

(iii) To verify the remedial action in the North Diversion Channel Embayment, the COA and AMAFCA shall continue sampling for DO and temperature until the data indicate the discharge does not exceed applicable dissolved oxygen water quality standards in waters of the United States; and

(iv) Submit a revised strategy to FWS for consultation and EPA for approval from a year of effective date of the permit and progress reports with the subsequent Annual Reports. Progress reports to include:

(a) Summary of data.

(b) Activities undertaken to identify MS4 discharge contribution to exceedances of applicable dissolved oxygen water quality standards in waters of the United States. Including summary of findings of the assessment required in Part I.C.1.d.(i).

(c) Conclusions drawn, including support for any determinations.

(d) Activities undertaken to eliminate MS4 discharge contribution to exceedances of applicable dissolved oxygen water quality standards in waters of the United States.

(e) Account of stakeholder involvement.

e. PCBs (Applicable only to the COA and AMAFCA as a continuation of program in 2012 NMS000101 individual permit and Bernalillo County): The permittee shall address concerns regarding PCBs in channel drainage areas specified in Part I.C.1.e.(vi) by developing or continue updating/revising and implementing a strategy to identify and eliminate controllable sources of PCBs that cause or contribute to exceedances of applicable water quality standards in waters of the United States. Bernalillo County shall submit the proposed PCB strategy to EPA within two (2) years from the effective date of the permit and submit a progress report with the third and with subsequent Annual Reports. COA and AMAFCA shall submit a progress report with the first and with the subsequent Annual Reports. The progress reports shall include:

(i) Summary of data.

(ii) Findings regarding controllable sources of PCBs in the channel drainages area specified in Part I.C.1.e.(vi) that cause or contribute to exceedances of applicable water quality standards in waters of the United States via the discharge of municipal stormwater.

(iii) Conclusions drawn, including supporting information for any determinations.

(iv) Activities undertaken to eliminate controllable sources of PCBs in the drainage areas specified in Part I.C.1.e.(vi) that cause or contribute to exceedances of applicable water quality standards in waters of the United States via the discharge of municipal stormwater including proposed activities that extend beyond the five (5) year permit term.

(v) Account of stakeholder involvement in the process.

(vi) Channel Drainage Areas: The PCB strategy required in Part I.C.1.e is only applicable to:

COA and AMAFCA Channel Drainage Areas:
- San Jose Drain
- North Diversion Channel

Bernalillo County Channel Drainage Areas:
- Adobe Acres Drain
- Alameda Outfall Channel
- Paseo del Norte Outfall Channel
- Sanchez Farm Drainage Area

A cooperative strategy to address PCBs in the COA, AMAFCA and Bernalillo County's drainage areas may be developed between Bernalillo County, AMAFCA, and the COA. If a cooperative strategy is developed, the cooperative strategy shall be submitted to EPA within three (3) years from the effective date of the permit and submit a progress report with the fourth and with subsequent Annual Reports,

Note: COA and AMAFCA must continue implementing the existing PCB strategy until a new Cooperative PCB Strategy is submitted to EPA.

f. Temperature (Applicable only to the COA and AMAFCA as a continuation of program in 2012 NMS000101 individual permit): The permittees must continue assessing the potential effect of stormwater discharges in the Rio Grande by collecting and evaluating additional data. If the data indicates there is a potential of stormwater discharges contributing to exceedances of applicable temperature water quality standards in waters of the United States, within thirty (30) days such as findings, the permittees must develop and implement a strategy to eliminate conditions that cause or contribute to these exceedances. The strategy must include:

(i) Identify structural controls, post construction design standards, or pollutants contributing to raised temperatures in the receiving waters of the Rio Grande. Both dry and wet weather discharges shall be addressed. Assessment may be made using available data or collecting additional data;

(ii) Develop and implement controls to eliminate structural controls, post construction design standards, or the discharge of pollutants at levels that cause or contribute to exceedances of applicable water quality standards for temperature in waters of the United States; and

(iii) Provide a progress report with the first and with subsequent Annual Reports. The progress reports shall include:

(a) Summary of data.

(b) Activities undertaken to identify MS4 discharge contribution to exceedances of applicable temperature water quality standards in waters of the United States.

(c) Conclusions drawn, including supporting information for any determinations.

(d) Activities undertaken to reduce MS4 discharge contribution to exceedances of applicable temperature water quality standards in waters of the United States.

(e) Accounting of stakeholder involvement.

2. **Discharges to Impaired Waters with and without approved TMDLs**. Impaired waters are those that have been identified pursuant to Section 303(d) of the Clean Water Act as not meeting applicable surface water quality standards. This may include both waters with EPA-approved Total Maximum Daily Loads (TMDLs) and those for which a TMDL has not yet been approved. For the purposes of this permit, the conditions for discharges to impaired waters also extend to controlling pollutants in MS4 discharges to tributaries to the listed impaired waters in the Middle Rio Grande watershed boundary identified in Appendix A.

   a. Discharges of pollutant(s) of concern to impaired water bodies for which there is an EPA approved total maximum daily load (TMDL) are not eligible for this general permit unless they are consistent with the approved TMDL. A water body is considered impaired for the purposes of this permit if it has been identified, pursuant to the latest EPA approved CWA §303(d) list, as not meeting New Mexico Surface Water Quality Standards.

   b. The permittee shall control the discharges of pollutant(s) of concern to impaired waters and waters with approved TMDLs as provided in sections (i) and (ii) below, and shall assess the success in controlling those pollutants.

      (i) Discharges to Water Quality Impaired Water Bodies with an Approved TMDL
      If the permittee discharges to an impaired water body with an approved TMDL (see Appendix B), where stormwater has the potential to cause or contribute to the impairment, the permittee shall include in the SWMP controls targeting the pollutant(s) of concern along with any additional or modified controls required in the TMDL and this section. The SWMP and required annual reports must include information on implementing any focused controls required to reduce the pollutant(s) of concern as described below:

         (a) Targeted Controls: The SWMP submitted with the first annual report must include a detailed description of all targeted controls to be implemented, such as identifying areas of focused effort or implementing additional Best Management Practices (BMPs) that will be implemented to reduce the pollutant(s) of concern in the impaired waters.

         (b) Measurable Goals: For each targeted control, the SWMP must include a measurable goal and an implementation schedule describing BMPs to be implemented during each year of the permit term. Where the impairment is for bacteria, the permittee must, at minimum comply with the activites and schedules described in Table 1.a of Part I.C.2.(iii).

         (c) Identification of Measurable Goal: The SWMP must identify a measurable goal for the pollutant(s) of concern. The value of the measurable goal must be based on one of the following options:

            A. If the permittee is subject to a TMDL that identifies an aggregate Waste Load Allocation (WLA) for all or a class of permitted MS4 stormwater sources, then the SWMP may identify such WLA as the measurable goal. Where an aggregate WLA measurable goal is used, all affected MS4 operators are jointly responsible for progress in meeting the measurable goal and shall (jointly or individually) develop a monitoring/assessment plan. This program element may be coordinated with the monitoring required in Part III.A.

            B. Alternatively, if multiple permittees are discharging into the same impaired water body with an approved TMDL (which has an aggregate WLA for all permitted stormwater MS4s), the MS4s may combine or share efforts, in consultation with/and the approval of NMED, to determine an alternative sub-measurable goal derived from the WLA for the pollutant(s) of concern (e.g., bacteria) for their respective MS4. The SWMP must clearly define this alternative approach and must describe how the sub-measurable goals would cumulatively support the aggregate WLA. Where an aggregate WLA measurable goal has been broken into sub-measurable goals for individual MS4s, each permittee is only responsible for progress in meeting its WLA sub-measurable goal.

C. If the permittee is subject to an individual WLA specifically assigned to that permittee, the measurable goal must be the assigned WLA. Where WLAs have been individually assigned, or where the permittee is the only regulated MS4 within the urbanized area that is discharging into the impaired watershed with an approved TMDL, the permittee is only responsible for progress in meeting its WLA measurable goal.

(d) Annual Report: The annual report must include an analysis of how the selected BMPs have been effective in contributing to achieving the measurable goal and shallll include graphic representation of pollutant trends, along with computations of annual percent reductions achieved from the baseline loads and comparisons with the target loads.

(e) Impairment for Bacteria: If the pollutant of concern is bacteria, the permittee shall include focused BMPs addressing the five areas below, as applicable, in the SWMP and implement as appropriate. If a TMDL Implementation Plan (a plan created by the State or a Tribe) is available, the permittee may refer to the TMDL Implementation Plan for appropriate BMPs. The SWMP and annual report must include justification for not implementing a particular BMP included in the TMDL Implementation Plan. The permittee may not exclude BMPs associated with the minimum control measures required under 40 CFR §122.34 from their list of proposed BMPs. The BMPs shall, as appropriate, address the following:

A. Sanitary Sewer Systems
- Make improvements to sanitary sewers;
- Address lift station inadequacies;
- Identify and implement operation and maintenance procedures;
- Improve reporting of violations; and
- Strengthen controls designed to prevent over flows

B. On-site Sewage Facilities (for entities with appropriate jurisdiction)
- Identify and address failing systems; and
- Address inadequate maintenance of On-Site Sewage Facilities (OSSFs).

C. Illicit Discharges and Dumping
- Place additional effort to reduce waste sources of bacteria; for example, from septic systems, grease traps, and grit traps.

D. Animal Sources
- Expand existing management programs to identify and target animal sources such as zoos, pet waste, and horse stables.

E. Residential Education: Increase focus to educate residents on:
- Bacteria discharging from a residential site either during runoff events or directly;
- Fats, oils, and grease clogging sanitary sewer lines and resulting overflows;
- Decorative ponds; and
- Pet waste.

(f) Monitoring or Assessment of Progress: The permittee shall monitor or assess progress in achieving measurable goals and determining the effectiveness of BMPs, and shall include documentation of this monitoring or assessment in the SWMP and annual reports. In addition, the SWMP must include methods to be used. This program element may be coordinated with the monitoring required in Part III.A. The permittee may use the following methods either individually or in conjunction to evaluate progress towards the measurable goal and improvements in water quality as follows:

A. Evaluating Program Implementation Measures: The permittee may evaluate and report progress towards the measurable goal by describing the activities and BMPs implemented, by identifying the appropriateness of the identified BMPs, and by evaluating the success of implementing the measurable goals. The permittee may assess progress by using program implementation indicators

such as: (1) number of sources identified or eliminated; (2) decrease in number of illegal dumping; (3) increase in illegal dumping reporting; (4) number of educational opportunities conducted; (5) reductions in SSOs; or, 6) increase in illegal discharge detection through dry screening, etc.; and

B. Assessing Improvements in Water Quality: The permittee may assess improvements in water quality by using available data for segment and assessment units of water bodies from other reliable sources, or by proposing and justifying a different approach such as collecting additional instream or outfall monitoring data, etc. Data may be acquired from NMED, local river authorities, partnerships, and/or other local efforts as appropriate. Progress towards achieving the measurable goal shall be reported in the annual report. Annual reports shall report the measurable goal and the year(s) during the permit term that the MS4 conducted additional sampling or other assessment activities.

(g) Observing no Progress towards the Measurable Goal: If, by the end of the third year from the effective date of the permit, the permittee observes no progress toward the measurable goal either from program implementation or water quality assessments, the permittee shall identify alternative focused BMPs that address new or increased efforts towards the measurable goal. As appropriate, the MS4 may develop a new approach to identify the most significant sources of the pollutant(s) of concern and shall develop alternative focused BMPs (this may also include information that identifies issues beyond the MS4's control). These revised BMPs must be included in the SWMP and subsequent annual reports.

Where the permittee originally used a measurable goal based on an aggregated WLA, the permittee may combine or share efforts with other MS4s discharging to the same impaired stream segment to determine an alternative sub-measurable goal for the pollutant(s) of concern for their respective MS4s, as described in Part I.C.2.b.(i).(c).B above. Permittees must document, in their SWMP for the next permit term, the proposed schedule for the development and subsequent adoption of alternative sub-measurable goals for the pollutant(s) of concern for their respective MS4s and associated assessment of progress in meeting those individual goals.

(ii) Discharges Directly to Water Quality Impaired Water Bodies without an Approved TMDL:
The permittee shall also determine whether the permitted discharge is directly to one or more water quality impaired water bodies where a TMDL has not yet been approved by NMED and EPA. If the permittee discharges directly into an impaired water body without an approved TMDL, the permittee shall perform the following activities:

(a) Discharging a Pollutant of Concern: The permittee shall:

A. Determine whether the MS4 may be a source of the pollutant(s) of concern by referring to the CWA §303(d) list and then determining if discharges from the MS4 would be likely to contain the pollutant(s) of concern at levels of concern. The evaluation of CWA §303(d) list parameters should be carried out based on an analysis of existing data (e.g., Illicit Discharge and Improper Disposal Program) conducted within the permittee's jurisdiction.

B. Ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that the permittee will implement, to reduce, the discharge of pollutant(s) of concern that contribute to the impairment of the water body. (note: Only applicable if the permittee determines that the MS4 may discharge the pollutant(s) of concern to an impaired water body without a TMDL. The SWMP submitted with the first annual report must include a detailed description of proposed controls to be implemented along with corresponding measurable goals.

C. Amend the SWMP to include any additional BMPs to address the pollutant(s) of concern.

(b) Impairment for Bacteria: Where the impairment is for bacteria, the permittee shall identify potential significant sources and develop and implement targeted BMPs to control bacteria from those sources (see Part I.C.2.b.(i).(e).A through E.. The permittee must, at minimum comply with the activities and

schedules described in Table 1.a of Part I.C.2.(iii). The annual report must include information on compliance with this section, including results of any sampling conducted by the permittee.

Note: Probable pollutant sources identified by permittees should be submitted to NMED on the following form: ftp://ftp.nmenv.state.nm.us/www/swqb/Surveys/PublicProbableSourceIDSurvey.pdf

(c) Impairment for Nutrients: Where the impairment is for nutrients (e.g., nitrogen or phosphorus), the permittee shall identify potential significant sources and develop and implement targeted BMPs to control nutrients from potential sources. The permittee must, at minimum comply with the activities and schedules described in Table 1.b of Part I.C,2, (iii). The annual report must include information on compliance with this section, including results of any sampling conducted by the permittee.

(d) Impairment for Dissolved Oxygen: See Endangered Species Act (ESA) Requirements in Part I.C.3. These program elements may be coordinated with the monitoring required in Part III.A.

(iii) Program Development and Implementation Schedules: Where the impairment is for nutrient constituent (e.g., nitrogen or phosphorus) or bacteria, the permittee must at minimum comply with the activities and schedules in Table 1.a and Table 1.b.

Table 1.a. Pre-TMDL Bacteria Program Development and Implementation Schedules

Activity	Class Permittee				
	A Phase I MS4s	**B** Phase II MS4s (2000 Census)	**C** New Phase II MS4s (2010 Census **)	**D** MS4s within Indian Lands	**Cooperative (*)** Any Permittee with cooperative programs
Identify potential significant sources of the pollutant of concern entering your MS4	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a public education program to reduce the discharge of bacteria in municipal storm water contributed by (if applicable) by pets, recreational and exhibition livestock, and zoos.	Twelve (12) months from effective date of permit	Twelve (12) months from effective date of permit	Fourteen (14) months from effective date of permit	Fourteen (14) months from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a program to reduce the discharge of bacteria in municipal storm water contributed by areas within your MS4 served by on-site wastewater treatment systems.	Fourteen (14) months from effective date of permit	Fourteen (14) moths from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Review results to date from the Illicit Discharge Detection and Elimination program (see Part I.D.5.e) and modify as necessary to prioritize the detection and elimination of discharges contributing bacteria to the MS4	Fourteen (14) months from effective date of permit	Fourteen (14) months from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit

Develop (or modify an existing program ***) and implement a program to reduce the discharge of bacteria in municipal storm water contributed by other significant source identified in the Illicit Discharge Detection and Elimination program (see Part I.D.5.e)	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit	Eighteen (18) months from effective date of permit	Twenty (20) months from effective date of permit
Include in the Annual Reports progress on program implementation and reducing the bacteria and updates their measurable goals as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs
(**) or MS4s designated by the Director
(***) Permittees previously covered under permit NMS000101 or NMR040000
Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

Table 1.b. Pre-TMDL Nutrient Program Development and Implementation Schedules

Activity	**Class Permittee**				
	A **Phase I MS4s**	**B** **Phase II MS4s (2000 Census)**	**C** **New Phase II MS4s (2010 Census **)**	**D** **MS4s within Indian Lands**	**Cooperative (*)** **Any Permittee with cooperative programs**
Identify potential significant sources of the pollutant of concern entering your MS4	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a public education program to reduce the discharge of pollutant of concern in municipal storm water contributed by residential and commercial use of fertilizer	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a program to reduce the discharge of the pollutant of concern in municipal storm water contributed by fertilizer use at municipal operations (e.g., parks, roadways, municipal facilities)	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit

Develop (or modify an existing program ***) and implement a program to reduce the discharge of the pollutant of concern in municipal storm water contributed by municipal and private golf courses within your jurisdiction	One (1) year from effective date of permit	One (1)year from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Develop (or modify an existing program ***) and implement a program to reduce the discharge of the pollutant of concern in municipal storm water contributed by other significant source identified in the Illicit Discharge Detection and Elimination program (see Part I.D.5.e)	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Include in the Annual Reports progress on program implementation and reducing the nutrient pollutant of concern and updates their measurable goals	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs
(**) or MS4s designated by the Director
(***) Permittees previously covered under permit NMS000101 or NMR040000
Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

These program elements may be coordinated with the monitoring required in Part III.A**.**

3. **Endangered Species Act (ESA) Requirements**. Consistent with U.S. FWS Biological Opinion dated August 21, 2014 to ensure actions required by this permit are not likely to jeopardize the continued existence of any currently listed as endangered or threatened species or adversely affect its critical habitat, permittees shall meet the following requirements and include them in the SWMP:

   a. Dissolved Oxygen Strategy in the Receiving Waters of the Rio Grande:

      (i) The permittees must identify (or continue identifying if previously covered under permit NMS000101) structural controls, natural or man-made topographical and geographical formations, MS4 operations, or oxygen demanding pollutants contributing to reduced dissolved oxygen in the receiving waters of the Rio Grande. The permittees shall implement controls, and update/revise as necessary, to eliminate discharge of pollutants at levels that cause or contribute to exceedances of applicable water quality standards for dissolved oxygen in waters of the Rio Grande. The permittees shall submit a summary of findings and a summary of activities undertaken under Part I.C.3.a.(i) with each Annual Report. The SWMP submitted with the first and fourth annual reports must include a detailed description of controls implemented (or/and proposed control to be implemented) along with corresponding measurable goals. (Applicable to all permittees).

      (ii) As required in Part I.C.1.d, the COA and AMAFCA shall revise the May 1, 2012 Strategy for dissolved oxygen to address dissolved oxygen at the North Diversion Channel Embayment and/or other MS4 locations. The permittees shall submit the revised strategy to FWS and EPA for approval within a year of permit issuance and progress reports with the subsequent Annual Reports (see also Part I.C.1.d.(iv)). The permittees shall **e**nsure that actions to reduce pollutants or remedial activities selected for the North Diversion Channel Embayment and its watershed are implemented such that there is a reduction in

frequency and magnitude of all low oxygen storm water discharge events that occur in the Embayment or downstream in the MRG as indicated in Table 1.c. Actions to meet the year 3 measurable goals must be taken within 2 years from the effective date of the permit. Actions to meet the year 5 measurable goals must be taken within 4 years from the effective date of the permit.

Table 1.c Measurable Goals of Anoxic and Hypoxia Levels Measured by Permit Year

Permit Year	*Anoxic Events*, max*	*Hypoxic Events**, max*
Year 1	*18*	*36*
Year 2	*18*	*36*
Year 3	*9*	*18*
Year 4	*9*	*18*
Year 5	*4*	*9*

Notes:

- * Anoxic Events: See Appendix G, for oxygen saturation and dissolved oxygen concentrations at various water temperatures and atmospheric pressures for the North Diversion Channel area that are considered anoxic and associated with the Rio Grande Silvery minnow lethality.
- ** Hypoxic Events: See Appendix for G, for oxygen saturation and dissolved oxygen concentrations at various water temperatures and atmospheric pressures for the North Diversion Channel area that are considered hypoxic and associated with the Rio Grande silvery minnow harassment.

(a) The revised strategy shall include:

A. A Monitoring Plan describing all procedures necessary to continue conducting continuous monitoring of dissolved oxygen (DO) and temperature in the North Diversion Channel Embayment and at one (1) location in the Rio Grande downstream of the mouth of the North Diversion Channel within the action area (e.g., Central Bridge). The monitoring plan to be developed will describe the methodology used to assure its quality, and will identify the means necessary to address any gaps that occur during monitoring, in a timely manner (that is, within 24 to 48 hours).

B. A Quality Assurance and Quality Control (QA/QC) Plan describing all standard operating procedures, quality assurance and quality control plans, maintenance, and implementation schedules that will assure timely and accurate collection and reporting of water temperature, dissolved oxygen, oxygen saturation, and flow. The QA/QC plan should include all procedures for estimating oxygen data when any oxygen monitoring equipment fail. Until a monitoring plan with quality assurance and quality control is submitted by EPA, any data, including any provisional or incomplete data from the most recent measurement period (e.g. if inoperative monitoring equipment for one day, use data from previous day) shall be used as substitutes for all values in the calculations for determinations of incidental takes. Given the nature of the data collected as surrogate for incidental take, all data, even provisional data (e.g., oxygen/water temperature data, associated metadata such as flows, date, times), shall be provided to the Service in a spreadsheet or database format within two weeks after formal request.

(b) Reporting: The COA and AMAFCA shall provide

A. An Annual Incidental Take Report to EPA and the Service that includes the following information: beginning and end date of any qualifying stormwater events, dissolved oxygen values and water temperature in the North Diversion Channel Embayment, dissolved oxygen values and water temperature at a downstream monitoring station in the MRG, flow rate in the North Diversion Channel, mean daily flow rate in the MRG, evaluation of oxygen and temperature data

as either anoxic or hypoxic using Table 2 of the BO, and estimate the number of silvery minnows taken based on Appendix A of the BO**.** Electronic copy of The Annual Incidental Take Report should be provided with the Annual Report required under Part III.B no later than December 1 for the proceeding calendar year.

B. A summary of data and findings with each Annual Report to EPA and the Service. All data collected (including provisional oxygen and water temperature data, and associated metadata), transferred, stored, summarized, and evaluated shall be included in the Annual Report. If additional data is requested by EPA or the Service, The COA and AMAFCA shall provide such as information within two weeks upon request,

The revised strategy required under Part I.C.3.a.(ii),the Annual Incidental Take Reports required under Part I.C.3.a.(ii).(b).A, and Annual Reports required under Part III.B can be submitted to FWS via e-mail nmesfo@fws.gov and joel_lusk@fws.gov, or by mail to the New Mexico Ecological Services field office, 2105 Osuna Road NE, Albuquerque, New Mexico 87113. (Only Applicable to the COA and AMAFCA

b. Sediment Pollutant Load Reduction Strategy (Applicable to all pemittees): The permittee must develop, implement, and evaluate a sediment pollutant load reduction strategy to assess and reduce pollutant loads associated with sediment (e.g., metals, etc. adsorbed to or traveling with sediment, as opposed to clean sediment) into the receiving waters of the Rio Grande. The strategy must include the following elements:

(i) Sediment Assessment: The permittee must identify and investigate areas within its jurisdiction that may be contributing excessive levels (e.g., levels that may contribute to exceedance of applicable Water Quality Standards) of pollutants in sediments to the receiving waters of the Rio Grande as a result of stormwater discharges. The permittee must identify structural elements, natural or man-made topographical and geographical formations, MS4 operations activities, and areas indicated as potential sources of sediments pollutants in the receiving waters of the Rio Grande. At the time of assessment, the permittee shall record any observed erosion of soil or sediment along ephemeral channels, arroyos, or stream banks, noting the scouring or sedimentation in streams. The assessment should be made using available data from federal, state, or local studies supplemented as necessary with collection of additional data. The permittee must describe, in the first annual report, all standard operating procedures, quality assurance plans to assure that accurate data are collected, summarized, evaluated and reported.

(ii) Estimate Baseline Loading: Based on the results of the sediment pollutants assessment required in Part I.C.3.b.(i) above the permittee must provide estimates of baseline total sediment loading and relative potential for contamination of those sediments by urban activities for drainage areas, sub-watersheds, Impervious Areas (IAs), and/or Directly Connected Impervious Area (DCIAs) draining directly to a surface waterbody or other feature used to convey waters of the United States. Sediment loads may be provided for targeted areas in the entire Middle Rio Grande Watershed (see Appendix A) using an individual or cooperative approach. Any data available and/or preliminary numeric modeling results may be used in estimating loads.

(iii) Targeted Controls: Include a detailed description of all proposed targeted controls and BMPs that will be implemented to reduce sediment pollutant loads calculated in PartI.C.3.b.(ii) above during the next ten (10) years of permit issuance. For each targeted control, the permittee must include interim measurable goals (e.g., interim sediment pollutant load reductions) and an implementation and maintenance schedule, including interim milestones, for each control measure, and as appropriate, the months and years in which the MS4 will undertake the required actions. Any data available and/or preliminary numeric modeling results may be used in establishing the targeted controls, BMPs, and interim measurable goals. The permittee must prioritize pollutant load reduction efforts and target areas (e..g. drainage areas, sub-watersheds, IAs, DCIAs) that generate the highest annual average pollutant loads.

(iv) Monitoring and Interim Reporting: The permittee shall monitor or assess progress in achieving interim measurable goals and determining the effectiveness of BMPs, and shall include documentation of this

monitoring or assessment in the SWMP and annual reports. In addition, the SWMP must include methods to be used. This program element may be coordinated with the monitoring required in Part III.A.

(v) Progress Evaluation and Reporting: The permittee must assess the overall success of the Sediment Pollutant Load Reduction Strategy and document both direct and indirect measurements of program effectiveness in a Progress Report to be submitted with the fifth Annual Report. Data must be analyzed, interpreted, and reported so that results can be applied to such purposes as documenting effectiveness of the BMPs and compliance with the ESA requirements specified in Part I.C.3.b. The Progress Report must include:

(a) A list of species likely to be within the action area:

(b) Type and number of structural BMPs installed;

(c) Evaluation of pollutant source reduction efforts;

(d) Any recommendation based on program evaluation;

(e) Description of how the interim sediment load reduction goals established in Part I.C.3.b.(iii) were achieved; and

(f) Future planning activities needed to achieve increase of sediment load reduction required in Part I.C.3.d.(iii).

(vi) Critical Habitat (Applicable to all permittees): Verify that the installation of stormwater BMPs will not occur in or adversely affect currently listed endangered or threatened species critical habitat by reviewing the activities and locations of stormwater BMP installation within the location of critical habitat of currently listed endangered or threatened species at the U.S. Fish and Wildlife service website http://criticalhabitat.fws.gov/crithab/.

D. STORMWATER MANAGEMENT PROGRAM (SWMP)

1. **General Requirements**. The permittee must develop, implement, and enforce a SWMP designed to reduce the discharge of pollutants from a MS4 to the maximum extent practicable (MEP), to protect water quality (including that of downstream state or tribal waters), and to satisfy applicable surface water quality standards. The permittees shall continue implementation of existing SWMPs, and where necessary modify or revise existing elements and/or develop new elements to comply with all discharges from the MS4 authorized in Part I.A. The updated SWMP shall satisfy all requirements of this permit, and be implemented in accordance with Section 402(p)(3)(B) of the Clean Water Act (Act), and the Stormwater Regulations (40 CFR §122.26 and §122.34). This permit does not extend any compliance deadlines set forth in the previous permits (NMS000101 with effective date March 1, 2012 and permits No: NM NMR040000 and NMR04000I with effective date July 1, 2007).

   If a permittee is already in compliance with one or more requirements in this section because it is already subject to and complying with a related local, state, or federal requirement that is at least as stringent as this permit's requirement, the permittee may reference the relevant requirement as part of the SWMP and document why this permit's requirement has been satisfied. Where this permit has additional conditions that apply, above and beyond what is required by the related local, state, or federal requirement, the permittee is still responsible for complying with the~~se~~ additional conditions in this permit.

2. **Legal Authority**. Each permittee shall implement the legal authority granted by the State or Tribal Government to control discharges to and from those portions of the MS4 over which it has jurisdiction. The difference in each co-permittee's jurisdiction and legal authorities, especially with respect to third parties, may be taken into account in developing the scope of program elements and necessary agreements (i.e. Joint Powers Agreement, Memorandum of Agreement, Memorandum of Understanding, etc.). Permittees may use a combination of statute, ordinance, permit, contract, order, interagency or inter-jurisdictional agreement(s) with other permittees to:

a. Control the contribution of pollutants to the MS4 by stormwater discharges associated with industrial activity and the quality of stormwater discharged from sites of industrial activity (applicable only to MS4s located within the corporate boundary of the COA);

b. Control the discharge of stormwater and pollutants associated with land disturbance and development activities, both during the construction phase and after site stabilization has been achieved (post-construction), consistent with Part I.D.5.a and Part I.D.5.b;

c. Prohibit illicit discharges and sanitary sewer overflows to the MS4 and require removal of such discharges consistent with Part I.D.5.e;

d. Control the discharge of spills and prohibit the dumping or disposal of materials other than stormwater (e.g. industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the MS4;

e. Control, through interagency or inter-jurisdictional agreements among permittees, the contribution of pollutants from one (1) portion of the MS4 to another;

f. Require compliance with conditions in ordinances, permits, contracts and/or orders; and

g. Carry out all inspection, surveillance and monitoring procedures necessary to maintain compliance with permit conditions.

3. **Shared Responsibility and Cooperative Programs**.

a. The SWMP, in addition to any interagency or inter-jurisdictional agreement(s) among permittees, (e.g., the Joint Powers Agreement to be entered into by the permittees), shall clearly identify the roles and responsibilities of each permittee.

b. Implementation of the SWMP may be achieved through participation with other permittees, public agencies, or private entities in cooperative efforts to satisfy the requirements of Part I.D in lieu of creating duplicate program elements for each individual permittee.

(i) Implementation of one or more of the control measures may be shared with another entity, or the entity may fully take over the measure. A permittee may rely on another entity only if:

(a) the other entity, in fact, implements the control measure;

(b) the control measure, or component of that measure, is at least as stringent as the corresponding permit requirement; or,

(c) the other entity agrees to implement the control measure on the permittee's behalf. Written acceptance of this obligation is expected. The permittee must maintain this obligation as part of the SWMP description. If the other entity agrees to report on the minimum measure, the permittee must supply the other entity with the reporting requirements in Part III.D of this permit. The permittee remains responsible for compliance with the permit obligations if the other entity fails to implement the control measure component.

c. Each permittee shall provide adequate finance, staff, equipment, and support capabilities to fully implement its SWMP and all requirements of this permit.

4. **Measurable Goals**. The permittees shall control the discharge of pollutants from its MS4. The permittee shall implement the provisions set forth in Part I.D.5 below, and shall at a minimum incorporate into the SWMP the control measures listed in Part I.D.5 below. The SWMP shall include measurable goals, including interim milestones, for each control measure, and as appropriate, the months and years in which the MS4 will undertake the required actions and the frequency of the action.

5. **Control Measures**.

a. Construction Site Stormwater Runoff Control.

(i) The permittee shall develop, revise, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. **Permittees previously covered under permit NMS000101 or NMR040000 must continue existing programs, updating as necessary, to comply with the requirements of this permit**. (Note: Highway Departments and Flood Control Authorities may only apply the construction site stormwater management program to the permittees's own construction projects)

(ii) The program must include the development, implementation, and enforcement of, at a minimum:

(a) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal or local law;

(b) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices (both structural and non-structural);

(c) Requirements for construction site operators to control waste such as, but not limited to, discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality (see EPA guidance at http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=117);

(d) Procedures for site plan review which incorporate consideration of potential water quality impacts. The site plan review must be conducted prior to commencement of construction activities, and include a review of the site design, the planned operations at the construction site, the planned control measures during the construction phase (including the technical criteria for selection of the control measures), and the planned controls to be used to manage runoff created after the development;

(e) Procedures for receipt and consideration of information submitted by the public;

(f) Procedures for site inspection (during construction) and enforcement of control measures, including provisions to ensure proper construction, operation, maintenance, and repair. The procedures must clearly define who is responsible for site inspections; who has the authority to implement enforcement procedures; and the steps utilized to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and the quality of the receiving water. If a construction site operator fails to comply with procedures or policies established by the permittee, the permittee may request EPA enforcement assistance. The site inspection and enforcement procedures must describe sanctions and enforcement mechanism(s) for violations of permit requirements and penalties with detail regarding corrective action follow-up procedures, including enforcement escalation procedures for recalcitrant or repeat offenders. Possible sanctions include non-monetary penalties (such as stop work orders and/or permit denials for non-compliance), as well as monetary penalties such as fines and bonding requirements;

(g) Procedures to educate and train permittee personnel involved in the planning, review, permitting, and/or approval of construction site plans, inspections and enforcement. Education and training shall also be provided for developers, construction site operators, contractors and supporting personnel, including requiring a stormwater pollution prevention plan for construction sites within the permitee's jurisdiction;

(h) Procedures for keeping records of and tracking all regulated construction activities within the MS4, i.e. site reviews, inspections, inspection reports, warning letters and other enforcement documents. A

summary of the number and frequency of site reviews, inspections (including inspector's checklist for oversight of sediment and erosion controls and proper disposal of construction wastes) and enforcement activities that are conducted annually and cumulatively during the permit term shall be included in each annual report; and

(iii) Annually conduct site inspections of 100 percent of all construction projects cumulatively disturbing one (1) or more acres within the MS4 jurisdiction. Site inspections are to be followed by any necessary compliance or enforcement action. Follow-up inspections are to be conducted to ensure corrective maintenance has occurred; and, all projects must be inspected at completion for confirmation of final stabilization.

(iv) The permittee must coordinate with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private construction projects/activities within the permit area to ensure that the construction stormwater runoff controls eliminate erosion and maintain sediment on site. Planning documents include, but are not limited to: comprehensive or master plans, subdivision ordinances, general land use plan, zoning code, transportation master plan, specific area plans, such as sector plan, site area plans, corridor plans, or unified development ordinances.

(v) The site plan review required in Part I.D.5.a.(ii)(d) must include an evaluation of opportunities for use of GI/LID/Sustainable practices and when the opportunity exists, encourage project proponents to incorporate such practices into the site design to mimic the pre-development hydrology of the previously undeveloped site. For purposes of this permit, pre-development hydrology shall be met according to Part I.D.5.b of this permit. (consistent with any limitations on that capture). Include a reporting requirement of the number of plans that had opportunities to implement these practices and how many incorporated these practices.

(vi) The permittee must include in the SWMP a description of the mechanism(s) that will be utilized to comply with each of the elements required in Part I.D.5.a.(i) throughout Part I.D.5.a.(v), including description of each individual BMP (both structural or non-structural) or source control measures and its corresponding measurable goal.

(vii) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report. The permittee must include in each annual report:

(a) A summary of the frequency of site reviews, inspections and enforcement activities that are conducted annually and cumulatively during the permit term.

(b) The number of plans that had the opportunity to implement GI/LID/Sustainable practices and how many incorporated the practices.

Program Flexibility Elements

(viii) The permittee may use storm water educational materials locally developed or provided by the EPA (refer to http://water.epa.gov/polwaste/npdes/swbmp/index.cfm, http://www.epa.gov/smartgrowth/parking.htm, http://www.epa.gov/smartgrowth/stormwater.htm), the NMED, environmental, public interest or trade organizations, and/or other MS4s.

(ix) The permittee may develop or update existing construction handbooks (e.g., the COA NPDES Stormwater Management Guidelines for Construction and Industrial Activities Handbook) to be consistent with promulgated construction and development effluent limitation guidelines.

(x) The construction site inspections required in Part I.D.5.a.(iii) may be carried out in conjunction with the permittee's building code inspections using a screening prioritization process.

Table 2. Construction Site Stormwater Runoff Control - Program Development and Implementation Schedules

Activity	Permittee Class				
	A **Phase I MS4s**	**B** **Phase II MS4s (2000 Census)**	**C** **New Phase II MS4s (2010 Census **)**	**D** **MS4s within Indian Lands**	**Cooperative (*)** **Any Permittee with cooperative programs**
Development of an ordinance or other regulatory mechanism as required in Part I.D.5.a.(ii)(a)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of the permit
Develop requirements and procedures as required in Part I.D.5.a.(ii)(b) through in Part I.D.5.a.(ii)(h)	Ten (10) months from effective date of permit	Thirteen (13) months from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Annually conduct site inspections of 100 percent of all construction projects cumulatively disturbing one (1) or more acres as required in Part I.D.5.a.(iii)	Ten (10) months from effective date of permit	Start Thirteen (13) months from effective date of permit and annually thereafter	Start Sixteen (16) months from effective date of permit and annually thereafter	Start eighteen (18) months from effective date of permit and thereafter	Start two (2) years from effective date of permit and thereafter
Coordinate with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private construction projects/activities within the permit area as required in Part I.D.5.a.(iv)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Twelve (12) months from effective date of permit	Twelve (12) months from effective date of permit	Fourteen (14) months from effective date of permit
Evaluation of GI/LID/Sustainable practices in site plan reviews as required in Part I.D.5.a.(v)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Twelve (12) months from effective date of permit	Twelve (12) months from effective date of permit	Fourteen (14) months from effective date of permit
Update the SWMP document and annual report as required in Part I.D.5.a.(vi) and in Part I.D.5.a.(vii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include program elements in Part I.D.5.a.(viii) through Part I.D.5.a.(x)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.
(**) or MS4s designated by the Director
Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

b. Post-Construction Stormwater Management in New Development and Redevelopment

(i) The permittee must develop, revise, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts. **Permittees previously covered under NMS000101 or NMR040000 must continue existing programs, updating as necessary, to comply with the requirements of this permit**. (Note: Highway Departments and Flood Control Authorities may only apply the post-construction stormwater management program to the permittee's own construction projects)

(ii) The program must include the development, implementation, and enforcement of, at a minimum:

(a) Strategies which include a combination of structural and/or non-structural best management practices (BMPs) to control pollutants in stormwater runoff.

(b) An ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law. The ordinance or policy must:

Incorporate a stormwater quality design standard that manages on-site the 90th percentile storm event discharge volume associated with new development sites and 80th percentile storm event discharge volume associated with redevelopment sites, through stormwater controls that infiltrate, evapotranspire the discharge volume, except in instances where full compliance cannot be achieved, as provided in Part I.D.5.b.(v). The stormwater from rooftop discharge may be harvested and used on-site for non-commercial use. Any controls utilizing impoundments that are also used for flood control that are located in areas where the New Mexico Office of the State Engineer requirements at NMAC 19.26.2.15 (see also Section 72-5-32 NMSA) apply must drain within 96 hours unless the state engineer has issued a waiver to the owner of the impoundment.

Options to implement the site design standard include, but not limited to: management of the discharge volume achieved by canopy interception, soil amendments, rainfall harvesting, rain tanks and cisterns, engineered infiltration, extended filtration, dry swales, bioretention, roof top disconnections, permeable pavement, porous concrete, permeable pavers, reforestation, grass channels, green roofs and other appropriate techniques, and any combination of these practices, including implementation of other stormwater controls used to reduce pollutants in stormwater (e.g., a water quality facility).

Estimation of the 90th or 80th percentile storm event discharge volume is included in EPA Technical Report entitled "*Estimating Predevelopment Hydrology in the Middle Rio Grande Watershed, New Mexico, EPA Publication Number 832-R-14-007*". Permittees can also estimate:

Option A: a site specific 90th or 80th percentile storm event discharge volume using methodology specified in the referenced EPA Technical Report.

Option B: a site specific pre-development hydrology and associated storm event discharge volume using methodology specified in the referenced EPA technical Report.

(c) The permittee must ensure the appropriate implementation of the structural BMPs by considering some or all of the following: pre-construction review of BMP designs; inspections during construction to verify BMPs are built as designed; post-construction inspection and maintenance of BMPs; and penalty provisions for the noncompliance with preconstruction BMP design; failure to construct BMPs

in accordance with the agreed upon pre-construction design; and ineffective post-construction operation and maintenance of BMPs;

(d) The permittee must ensure that the post-construction program requirements are constantly reviewed and revised as appropriate to incorporate improvements in control techniques;

(e) Procedure to develop and implement an educational program for project developers regarding designs to control water quality effects from stormwater, and a training program for plan review staff regarding stormwater standards, site design techniques and controls, including training regarding GI/LID/Sustainability practices. Training may be developed independently or obtained from outside resources, i.e. federal, state, or local experts;

(f) Procedures for site inspection and enforcement to ensure proper long-term operation, maintenance, and repair of stormwater management practices that are put into place as part of construction projects/activities. Procedure(s) shall include the requirement that as-built plans be submitted within ninety (90) days of completion of construction projects/activities that include controls designed to manage the stormwater associated with the completed site (post-construction stormwater management). Procedure(s) may include the use of dedicated funds or escrow accounts for development projects or the adoption by the permittee of all privately owned control measures. This may also include the development of maintenance contracts between the owner of the control measure and the permittee. The maintenance contract shall include verification of maintenance practices by the owner, allows the MS4 owner/operator to inspect the maintenance practices, and perform maintenance if inspections indicate neglect by the owner;

(g) Procedures to control the discharge of pollutants related to commercial application and distribution of pesticides, herbicides, and fertilizers where permittee(s) hold jurisdiction over lands not directly owned by that entity (e.g., incorporated city). The procedures must ensure that herbicides and pesticides applicators doing business within the permittee's jurisdiction have been properly trained and certified, are encouraged to use the least toxic products, and control use and application rates according to the applicable requirements; and

(h) Procedure or system to review and update, as necessary, the existing program to ensure that stormwater controls or management practices for new development and redevelopment projects/activities continue to meet the requirements and objectives of the permit.

(iii) The permittee must coordinate with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private new development and redevelopment projects/activities within the permit area to ensure the hydrology associated with new development and redevelopment sites mimic to the extent practicable the pre-development hydrology of the previously undeveloped site, except in instances where the pre-development hydrology requirement conflicts with applicable water rights appropriation requirements. For purposes of this permit, pre-development hydrology shall be met by capturing the 90th percentile storm event runoff (consistent with any limitations on that capture) which under undeveloped natural conditions would be expected to infiltrate or evapotranspirate on-site and result in little, if any, off-site runoff. (Note: This permit does not prevent permittees from requiring additional controls for flood control purposes.) Planning documents include, but are not limited to: comprehensive or master plans, subdivision ordinances, general land use plan, zoning code, transportation master plan, specific area plans, such as sector plan, site area plans, corridor plans, or unified development ordinances.

(iv) The permittee must assess all existing codes, ordinances, planning documents and other applicable regulations, for impediments to the use of GI/LID/Sustainable practices. The assessment shall include a list of the identified impediments, necessary regulation changes, and recommendations and proposed schedules to incorporate policies and standards to relevant documents and procedures to maximize infiltration, recharge, water harvesting, habitat improvement, and hydrological management of stormwater runoff as allowed under the applicable water rights appropriation requirements. The permittee must develop a report of the assessment findings, which is to be used to provide information to the permittee, of the regulation changes necessary to remove impediments and allow implementation of these practices.

(v) Alternative Compliance for Infeasibility due to Site Constrains:

(a) Infeasibility to manage the design standard volume specified in Part I(D)(5)(b)(ii)(b), or a portion of the design standard volume, onsite may result from site constraints including the following:

A. too small a lot outside of the building footprint to create the necessary infiltrative capacity even with amended soils;

B. soil instability as documented by a thorough geotechnical analysis;

C. a site use that is inconsistent with capture and reuse of storm water;

D. other physical conditions; or,

E. to comply with applicable requirements for on-site flood control structures leaves insufficient area to meet the standard.

(b) A determination that it is infeasible to manage the design standard volume specified in Part I.D.5.b.(ii)(b), or a portion of the design standard volume, on site may not be based solely on the difficulty or cost of implementing onsite control measures, but must include multiple criteria that rule out an adequate combination of the practices set forth in Part I.D,5.b.(v).

(c) This permit does not prevent imposition of more stringent requirements related to flood control. Where both the permittee's site design standard ordinance or policy and local flood control requirements on site cannot be met due to site conditions, the standard may be met through a combination of on-site and off-site controls.

(d) Where applicable New Mexico water law limits the ability to fully manage the design standard volume on site, measures to minimize increased discharge consistent with requirements under New Mexico water law must still be implemented.

(e) In instances where an alternative to compliance with the standard on site is chosen, technical justification as to the infeasibility of on-site management of the entire design standard volume, or a portion of the design standard volume, is required to be documented by submitting to the permittee a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect, and/or landscape architect.

(f) When a Permittee determines a project applicant has demonstrated infeasibility due to site constraints specified in Part I.D.5.b.(v) to manage the design standard volume specified in Part I.D.5.b.(ii).(b) or a portion of the design standard volume on-site, the Permittee shall require one of the following mitigation options:

A. Off-site mitigation. The off-site mitigation option only applies to redevelopment sites and cannot be applied to new development. Management of the standard volume, or a portion of the volume, may be implemented at another location within the MS4 area, approved by the permittee. The permittee shall identify priority areas within the MS4 in which mitigation projects can be completed. The permittee shall determine who will be responsible for long-term maintenance on off-site mitigation projects.

B. Ground Water Replenishment Project: Implementation of a project that has been determined to provide an opportunity to replenish regional ground water supplies at an offsite location.

C. Payment in lieu. Payment in lieu may be made to the permittee, who will apply the funds to a public stormwater project. MS4s shall maintain a publicly accessible database of approved projects for which these payments may be used.

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D. Other. In a situation where alternative options A through C above are not feasible and the permittee wants to establish another alternative option for projects, the permitte may submit to the EPA for approval, the alternative option that meets the standard.

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(vi) The permittee must estimate the number of acres of impervious area (IA) and directly connected impervious area (DCIA). For the purpose of his part, IA includes conventional pavements, sidewalks, driveways, roadways, parking lots, and rooftops. DCIA is the portion of IA with a direct hydraulic connection to the permittee's MS4 or a waterbody via continuous paved surfaces, gutters, pipes, and other impervious features. DCIA typically does not include isolated impervious areas with an indirect hydraulic connection to the MS4 (e.g., swale or detention basin) or that otherwise drain to a pervious area.

(vii) The permittee must develop an inventory and priority ranking of MS4-owned property and infrastructure (including public right-of-way) that may have the potential to be retrofitted with control measures designed to control the frequency, volume, and peak intensity of stormwater discharges to and from its MS4. In determining the potential for retrofitting, the permittee shall consider factors such as the complexity and cost of implementation, public safety, access for maintenance purposes, subsurface geology, depth to water table, proximity to aquifers and subsurface infrastructure including sanitary sewers and septic systems, and opportunities for public use and education under the applicable water right requirements and restrictions. In determining its priority ranking, the permittee shall consider factors such as schedules for planned capital improvements to storm and sanitary sewer infrastructure and paving projects; current storm sewer level of service and control of discharges to impaired waters, streams, and critical receiving water (drinking water supply sources);

(viii) The permittee must incorporate watershed protection elements into relevant policy and/or planning documents as they come up for regular review. If a relevant planning document is not scheduled for review during the term of this permit, the permittee must identify the elements that cannot be implemented until that document is revised, and provide to EPA and NMED a schedule for incorporation and implementation not to exceed five years from the effective date of this permit. As applicable to each permittee's MS4 jurisdiction, policy and/or planning documents must include the following:

(a) A description of master planning and project planning procedures to control the discharge of pollutants to and from the MS4.

(b) Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each watershed, by controlling the unnecessary creation, extension and widening of impervious parking lots, roads and associated development. The permittee may evaluate the need to add impervious surface on a case-by-case basis and seek to identify alternatives that will meet the need without creating the impervious surface.

(c) Identify environmentally and ecologically sensitive areas that provide water quality benefits and serve critical watershed functions within the MS4 and ensure requirements to preserve, protect, create and/or restore these areas are developed and implemented during the plan and design phases of projects in these identified areas. These areas may include, but are not limited to critical watersheds, floodplains, and areas with endangered species concerns and historic properties. Stakeholders shall be consulted as appropriate.

(d) Implement stormwater management practices that minimize water quality impacts to streams, including disconnecting direct discharges to surface waters from impervious surfaces such as parking lots.

(e) Implement stormwater management practices that protect and enhance groundwater recharge as allowed under the applicable water rights laws.

(f) Seek to avoid or prevent hydromodification of streams and other water bodies caused by development, including roads, highways, and bridges.

(g) Develop and implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.

(h) The program must be specifically tailored to address local community needs (e.g. protection to drinking water sources, reduction of water quality impacts) and must be designed to attempt to maintain pre-development runoff conditions.

(ix) The permittee must update the SWMP as necessary to include a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.b.(i) throughout Part I.D.5.b.(viii) as well as the citations and descriptions of design standards for structural and non-structural controls to control pollutants in stormwater runoff, including discussion of the methodology used during design for estimating impacts to water quality and selecting structural and non-structural controls. Description of measurable goals for each BMP (structural or non-structural) or each stormwater control must be included in the SWMP.

(x) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report. The following information must be included in each annual report:

(a) Include a summary and analysis of all maintenance, inspections and enforcement, and the number and frequency of inspections performed annually.

(b) A cumulative listing of the annual modifications made to the Post-Construction Stormwater Management Program during the permit term, and a cumulative listing of annual revisions to administrative procedures made or ordinances enacted during the permit term.

(c) According to the schedule presented in the Program Development and Implementation Schedule in Table 3, the permittee must

A. Report the number of MS4-owned properties and infrastructure that have been retrofitted with control measures designed to control the frequency, volume, and peak intensity of stormwater discharges. The permittee may also include in its annual report non-MS4 owned property that has been retrofitted with control measures designed to control the frequency, volume, and peak intensity of stormwater discharges.

B. As required in Part I.D.5.b.(vi), report the tabulated results for IA and DCIA and its estimation methodology. In each subsequent annual report, the permittee shall estimate the number of acres of IA and DCIA that have been added or removed during the prior year. The permittee shall include in its estimates the additions and reductions resulting from development, redevelopment, or retrofit projects undertaken directly by the permittee; or by private developers and other parties in a voluntary manner on in compliance with the permittee's regulations.

Program Flexibility Elements:

(xi) The permittee may use storm water educational materials locally developed or provided by EPA (refer to http://water.epa.gov/polwaste/npdes/swbmp/index.cfm, http://www.epa.gov/smartgrowth/parking.htm, and http://www.epa.gov/smartgrowth/stormwater.htm); the NMED; environmental, public interest or trade organizations; and/or other MS4s.

(xii) When choosing appropriate BMPs, the permittee may participate in locally-based watershed planning efforts, which attempt to involve a diverse group of stakeholders including interested citizens. When developing a program that is consistent with this measure's intent, the permittee may adopt a planning process that identifies the municipality's program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures.

(xiii) The permittee may incorporate the following elements in the Post-Construction Stormwater Management in New Development and Redevelopment program required in Part I.D.5.b.(ii)(b):

(a) Provide requirements and standards to direct growth to identified areas to protect environmentally and ecologically sensitive areas such as floodplains and/or other areas with endangered species and historic properties concerns;

(b) Include requirements to maintain and/or increase open space/buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; and

(c) Encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure.

Table 3. Post-Construction Stormwater Management in New Development and Redevelopment - Program Development and Implementation Schedules

Activity	**Permittee Class**				
	A **Phase I MS4s**	**B** **Phase II MS4s (2000 Census)**	**C** **New Phase II MS4s (2010 Census **)**	**D** **MS4s within Indian Lands**	**Cooperative (*)** **Any Permittee with cooperative programs**
Development of strategies as required in Part I.D.5.b.(ii).(a)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Twelve (12) months from effective date of permit	Twelve (12) months from effective date of permit	Fourteen (14) months from effective date of permit
Development of an ordinance or other regulatory mechanism as required in Part I.D.5.b.(ii).(b)	Twenty (24) months from effective date of permit	Thirty (30) months from effective date of permit	Thirty six (36) months from effective date of permit	Thirty six (36) months from effective date of permit	Thirty six (36) months from effective date of permit
Implementation and enforcement, via the ordinance or other regulatory mechanism, of site design standards as required in Part I.D.5.b.(ii).(b)	Within thirsty six (36) months from effective date of the permit	Within forty two (42) months from the effective date of the permit	Within forty eight (48) months from effective date of the permit	Within forty eight (48) months from effective date of the permit	Within forty eight (48) months from effective date of the permit
Ensure appropriate implementation of structural controls as required in Part I.D.5.b.(ii).(c) and Part I.D.5.b.(ii).(d)	Ten (10) months from effective date of permit	One (1) year from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop procedures as required in Part I.D.5.b.(ii).(e), Part I.D.5.b.(ii).(f), Part I.D.5.b.(ii).(g), and Part I.D.5.b.(ii).(h)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit

Coordinate internally with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private construction projects/activities within the permit area as required in Part I.D.5.b.(iii)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Eleven (11) months from effective date of permit	Eleven (11) months from effective date of permit	One (1) year from effective date of permit
As required in Part I.D.5.b.(iv), the permittee must assess all existing codes, ordinances, planning documents and other applicable regulations, for impediments to the use of GI/LID/Sustainable practices	Ten (10) months from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit	Eighteen (18) months from effective date of permit	Two (2) years from effective date of permit
As required in Part I.D.5.b.(iv), develop and submit a report of the assessment findings on GI/LID/Sustainable practices.	Eleven (11) months from effective date of permit	Eighteen (18) months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Twenty seven (27) months from effective date of permit
Estimation of the number of acres of IA and DCIA as required in Part I.D.5.b.(vi)	Ten (10) months from effective date of permit	One (1) year from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Inventory and priority ranking as required in section in Part I.D.5.b.(vii)	Within fifteen (15) months from effective date of the permit	Within twenty four (24) months from effective date of the permit	Within thirty six (36) months from effective date of the permit	Within thirty six (36) months from effective date of the permit	Within forty two (42) months from effective date of the permit
Incorporate watershed protection elements as required in Part I.D.5.b.(viii)	Ten (10) months from effective date of permit	One (1) year from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Update the SWMP document and annual report as required in Part I.D.5.b.(ix) and Part I.D.5.b.(x).	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include program elements in Part I.D.5.b.(xi) and Part I.D.5.b.(xii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.
(**) or MS4s designated by the Director
Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

c. Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations.

(i) The permittee must develop, revise and implement an operation and maintenance program that includes a training component and the ultimate goal of preventing or reducing pollutant runoff from municipal operations. **Permittees previously covered under NMS000101 or NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit**. The program must include:

(a) Development and implementation of an employee training program to incorporate pollution prevention and good housekeeping techniques into everyday operations and maintenance activities. The employee training program must be designed to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. The permittee must also develop a tracking procedure and ensure that employee turnover is considered when determining frequency of training;

(b) Maintenance activities, maintenance schedules, and long term inspections procedures for structural and non-structural storm water controls to reduce floatable, trash, and other pollutants discharged from the MS4.

(c) Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations, snow disposal areas operated by the permittee, and waste transfer stations;

(d) Procedures for properly disposing of waste removed from the separate storm sewers and areas listed in Part I.D.5.c.(i).(c) (such as dredge spoil, accumulated sediments, floatables, and other debris); and

(e) Procedures to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices.

Note: The permittee may use training materials that are available from EPA, NMED, Tribe, or other organizations.

(ii) The Pollution Prevention/Good Housekeeping program must include the following elements:

(a) Develop or update the existing list of all stormwater quality facilities by drainage basin, including location and description;

(b) Develop or modify existing operational manual for de-icing activities addressing alternate materials and methods to control impacts to stormwater quality;

(c) Develop or modify existing program to control pollution in stormwater runoff from equipment and vehicle maintenance yards and maintenance center operations located within the MS4;

(d) Develop or modify existing street sweeping program. Assess possible benefits from changing frequency or timing of sweeping activities or utilizing different equipment for sweeping activities;

(e) A description of procedures used by permittees to target roadway areas most likely to contribute pollutants to and from the MS4 (i.e., runoff discharges directly to sensitive receiving water, roadway receives majority of de-icing material, roadway receives excess litter, roadway receives greater loads of oil and grease);

(f) Develop or revise existing standard operating procedures for collection of used motor vehicle fluids (at a minimum oil and antifreeze) and toxics (including paint, solvents, fertilizers, pesticides, herbicides,

and other hazardous materials) used in permittee operations or discarded in the MS4, for recycle, reuse, or proper disposal;

(g) Develop or revised existing standard operating procedures for the disposal of accumulated sediments, floatables, and other debris collected from the MS4 and during permittee operations to ensure proper disposal;

(h) Develop or revised existing litter source control programs to include public awareness campaigns targeting the permittee audience; and

(i) Develop or review and revise, as necessary, the criteria, procedures and schedule to evaluate existing flood control devices, structures and drainage ways to assess the potential of retrofitting to provide additional pollutant removal from stormwater. Implement routine review to ensure new and/or innovative practices are implemented where applicable.

(j) Enhance inspection and maintenance programs by coordinating with maintenance personnel to ensure that a target number of structures per basin are inspected and maintained per quarter;

(k) Enhance the existing program to control the discharge of floatables and trash from the MS4 by implementing source control of floatables in industrial and commercial areas;

(l) Include in each annual report, a cumulative summary of retrofit evaluations conducted during the permit term on existing flood control devices, structures and drainage ways to benefit water quality. Update the SWMP to include a schedule (with priorities) for identified retrofit projects;

(m) Flood management projects: review and revise, as necessary, technical criteria guidance documents and program for the assessment of water quality impacts and incorporation of water quality controls into future flood control projects. The criteria guidance document must include the following elements:

A. Describe how new flood control projects are assessed for water quality impacts.

B. Provide citations and descriptions of design standards that ensure water quality controls are incorporated in future flood control projects.

C. Include method for permittees to update standards with new and/or innovative practices.

D. Describe master planning and project planning procedures and design review procedures.

(n) Develop procedures to control the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied, by the permittee's employees or contractors, to public right-of-ways, parks, and other municipal property. The permittee must provide an updated description of the data monitoring system for all permittee departments utilizing pesticides, herbicides and fertilizers.

(iii) Comply with the requirements included in the EPA Multi Sector General Permit (MSGP) to control runoff from industrial facilities (as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi)) owned or operated by the permittees and ultimately discharge to the MS4. The permittees must develop or update:

(a) A list of municipal/permittee operations impacted by this program,

(b) A map showing the industrial facilities owned and operated by the MS4,

(c) A list of the industrial facilities (other than large construction activities defined as industrial activity) that will be included in the industrial runoff control program by category and by basin. The list must include the permit authorization number or a MSGP NOI ID for each facility as applicable.

(iv) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.c.(i) throughout Part I.D.5.c.(iii) and its corresponding measurable goal.

(v) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.

Table 4. Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations - Program Development and Implementation Schedules

Activity	Permittee Class				
	A **Phase I MS4s**	**B** **Phase II MS4s (2000 Census)**	**C** **New Phase II MS4s (2010 Census **)**	**D** **MS4s within Indian Lands**	**Cooperative (*)** **Any Permittee with cooperative programs**
-Develop or update the Pollution Prevention/Good House Keeping program to include the elements in Part I.D.5.c.(i)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit	Fourteen (14) months from effective date of the permit	Fourteen (14) months from effective date of the permit	Eighteen (18) months from effective date of the permit
-Enhance the program to include the elements in Part I.D.5.c.(ii)	Ten (10) months from effective date of the permit	One (1) year from effective date of the permit	Two (2) years from effective date of the permit	Two (2) years from effective date of the permit	Thirty (30) months from effective date of the permit
-Develop or update a list and a map of industrial facilities owned or operated by the permittee as required in Part I.D.5.c.(iii)	Ten (10) months from effective date of the permit	Eleven (11) months from effective date of the permit	One (1) year from effective date of the permit	One (1) year from effective date of the permit	Eighteen (18) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.c.(iv) and Part I.D.5.c.(v)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs (**) or MS4s designated by the Director
Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

d. Industrial and High Risk Runoff (Applicable only to Class A permittees)

(i) The permittee must control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi). If no such industrial activities are in a permittees jurisdiction, that permittee may certify that this program element does not apply.

(ii) The permittee must continue implementation and enforcement of the Industrial and High Risk Runoff program, assess the overall success of the program, and document both direct and indirect measurements of program effectiveness in the annual report. The program shall include:

(a) A description of a program to identify, monitor, and control pollutants in stormwater discharges to the MS4 from municipal landfills; other treatment, storage, or disposal facilities for municipal waste (e.g. transfer stations, incinerators, etc.); hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge the permittee(s) determines are contributing a substantial pollutant loading to the

MS4. (Note: If no such facilities are in a permittees jurisdiction, that permittee may certify that this program element does not apply.); and

(b) Priorities and procedures for inspections and establishing and implementing control measures for such discharges.

(iii) Permittees must comply with the monitoring requirements specified in Part III.A.4;

(iv) The permittee must modify the following as necessary:

(a) The list of the facilities included in the program, by category and basin;

(b) Schedules and frequency of inspection for listed facilities. Facility inspections may be carried out in conjunction with other municipal programs (e.g. pretreatment inspections of industrial users, health inspections, fire inspections, etc.), but must include random inspections for facilities not normally visited by the municipality;

(c) The priorities for inspections and procedures used during inspections (e.g. inspection checklist, review for NPDES permit coverage; review of stormwater pollution prevention plan; etc.); and

(d) Monitoring frequency, parameters and entity performing monitoring and analyses (MS4 permittees or subject facility). The monitoring program may include a waiver of monitoring for parameters at individual facilities based on a "no-exposure" certification;

(v) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.d.(i) throughout Part I.D.5.d.(iv) and its corresponding measurable goal.

(vi) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.

Program Flexibility Elements:

(vii) The permittee may:

(a) Use analytical monitoring data, on a parameter-by-parameter basis, that a facility has collected to comply with or apply for a State or NPDES discharge permit (other than this permit), so as to avoid unnecessary cost and duplication of effort;

(b) Allow the facility to test only one (1) outfall and to report that the quantitative data also apply to the substantially identical outfalls if:

A. A Type 1 or Type 2 industrial facility has two (2) or more outfalls with substantially identical effluents, and

B. Demonstration by the facility that the stormwater outfalls are substantially identical, using one (1) or all of the following methods for such demonstration. The NPDES Stormwater Sampling Guidance Document (EPA 833-B-92-001), available on EPA's website at provides detailed guidance on each of the three options: (1) submission of a narrative description and a site map; (2) submission of matrices; or (3) submission of model matrices.

(c) Accept a copy of a "no exposure" certification from a facility made to EPA under 40 CFR §122.26(g), in lieu of analytic monitoring.

Table 5: Industrial and High Risk Runoff - Program Development and Implementation Schedules:

Activity	Permittee Class	
	A **Phase I MS4s**	**Cooperative (*)** **Any Permittee with cooperative programs**
Ordinance (or other control method) as required in Part I.D.5.d.(i)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit
Continue implementation and enforcement of the Industrial and High Risk Runoff program, assess the overall success of the program, and document both direct and indirect measurements of program effectiveness in the annual report as required in Part I.D.5.d.(ii)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit
Meet the monitoring requirements in Part I.D.5.d.(iii)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit
Include requirements in Part I.D.5.d.(iv)	Ten (10) months from permit effective date of the permit	Twelve (12) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.d.(v) and Part I.D.5.d.(vi)	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.d.(vii)	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs. Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

e. Illicit Discharges and Improper Disposal

(i) The permittee shall develop, revise, implement, and enforce a program to detect and eliminate illicit discharges (as defined at 40 CFR 122.26(b)(2)) entering the MS4. **Permittees previously covered under NMS000101 or NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit**. The permittee must:

(a) Develop, if not already completed, a storm sewer system map, showing the names and locations of all outfalls as well as the names and locations of all waters of the United States that receive discharges from those outfalls. Identify all discharges points into major drainage channels draining more than twenty (20) percent of the MS4 area;

(b) To the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into the MS4, and implement appropriate enforcement procedures and actions;

(c) Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumpling, to the MS4. The permittee must include the following elements in the plan:

A. Procedures for locating priority areas likely to have illicit discharges including field test for selected pollutant indicators (ammonia, boron, chlorine, color, conductivity, detergents, *E. coli*, enterococci, total coliform, fluoride, hardness, pH, potassium, conductivity, surfactants), and visually screening outfalls during dry weather;

B. Procedures for enforcement, including enforcement escalation procedures for recalcitrant or repeat offenders;

C. Procedures for removing the source of the discharge;

D. Procedures for program evaluation and assessment; and

E. Procedures for coordination with adjacent municipalities and/or state, tribal, or federal regulatory agencies to address situations where investigations indicate the illicit discharge originates outside the MS4 jurisdiction.

(d) Develop an education program to promote, publicize, and facilitate public reporting of illicit connections or discharges, and distribution of outreach materials. The permittee shall inform public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste.

(e) Establish a hotline to address complaints from the public.

(f) Investigate suspected significant/severe illicit discharges within forty-eight (48) hours of detection and all other discharges as soon as practicable; elimination of such discharges as expeditiously as possible; and, requirement of immediate cessation of illicit discharges upon confirmation of responsible parties.

(g) Review complaint records for the last permit term and develop a targeted source reduction program for those illicit discharge/improper disposal incidents that have occurred more than twice in two (2) or more years from different locations. (Applicable only to class A and B permittees)

(h) If applicable, implement the program using the priority ranking develop during last permit term

(ii) The permittee shall address the following categories of non-stormwater discharges or flows (e.g., illicit discharges) only if they are identified as significant contributors of pollutants to the MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(90)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water.

Note: Discharges or flows from fire fighting activities are excluded from the effective prohibitions against non-stormwater and need only be addressed where they are identified a significant sources of pollutants to water of the United States).

(iii) The permittee must screen the entire jurisdiction at least once every five (5) years and high priority areas at least once every year. High priority areas include any area where there is ongoing evidence of illicit discharges or dumping, or where there are citizen complaints on more than five (5) separate events within twelve (12) months. The permittee must:

(a) Include in its SWMP document a description of the means, methods, quality assurance and controls protocols, and schedule for successfully implementing the required screening, field monitoring, laboratory analysis, investigations, and analysis evaluation of data collected.

(b) Comply with the dry weather screening program established in Table 6 and the monitoring requirements specified in Part III.A.2.

(c) If applicable, implement the priority ranking system develop in previous permit term.

(iv) Waste Collection Programs: The permittee must develop, update, and implement programs to collect used motor vehicle fluids (at a minimum, oil and antifreeze) for recycle, reuse, or proper disposal, and to collect household hazardous waste materials (including paint, solvents, fertilizers, pesticides, herbicides, and other hazardous materials) for recycle, reuse, or proper disposal. Where available, collection programs operated by third parties may be a component of the programs. Permittees shall enhance these programs by establishing the following elements as a goal in the SWMP:

A. Increasing the frequency of the collection days hosted;

B. Expanding the program to include commercial fats, oils and greases; and

C. Coordinating program efforts between applicable permittee departments.

(v) Spill Prevention and Response. The permittee must develop, update and implement a program to prevent, contain, and respond to spills that may discharge into the MS4. The permittees must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit. The Spill Prevention and Response program shall include:

(a) Where discharge of material resulting from a spill is necessary to prevent loss of life, personal injury, or severe property damage, the permittee(s) shall take, or insure the party responsible for the spill takes, all reasonable steps to control or prevent any adverse effects to human health or the environment: and

(b) The spill response program may include a combination of spill response actions by the permittee (and/or another public or private entity), and legal requirements for private entities within the permittee's municipal jurisdiction.

(vi) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.e.(i) throughout Part I.D.5.e.(v) and its corresponding measurable goal. A description of the means, methods, quality assurance and controls protocols, and schedule for successfully implementing the required screening, field monitoring, laboratory analysis, investigations, and analysis evaluation of data collected

(vii) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.

(viii) The permittee must expeditiously revise as necessary, within nine (9) months from the effective date of the permit, the existing permitting/certification program to ensure that any entity applying for the use of Right of Way implements controls in their construction and maintenance procedures to control pollutants entering the MS4. (Only applicable to NMDOT)

Program Flexibility Elements

(ix) The permittee may:

(a) Divide the jurisdiction into assessment areas where monitoring at fewer locations would still provide sufficient information to determine the presence or absence of illicit discharges within the larger area;

(b) Downgrade high priority areas after the area has been screened at least once and there are citizen complaints on no more than five (5) separate events within a twelve (12) month period;

(c) Rely on a cooperative program with other MS4s for detection and elimination of illicit discharges and illegal dumping;

(d) If participating in a cooperative program with other MS4s, required detection program frequencies may be based on the combined jurisdictional area rather than individual jurisdictional areas and may use assessment areas crossing jurisdictional boundaries to reduce total number of screening locations (e.g., a shared single screening location that would provide information on more than one jurisdiction); and

(e) After screening a non-high priority area once, adopt an "in response to complaints only" IDDE for that area provided there are citizen complaints on no more than two (2) separate events within a twelve (12) month period.

(f) Enhance the program to utilize procedures and methodologies consistent with those described in "Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments."

Table 6. Illicit Discharges and Improper Disposal - Program Development and Implementation Schedules

Activity	**Permittee Class**				
	A **Phase I MS4s**	**B** **Phase II MS4s (2000 Census)**	**C** **New Phase II MS4s (2010 Census ***)**	**D** **MS4s within Indian Lands**	**Cooperative (*)** **Any Permittee with cooperative programs**
Mapping as required in Part I.D.5.e.(i)(a)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Eleven (11) months from effective date of permit	Eleven (11) months from effective date of permit	Fourteen (14) months from effective date of permit
Ordinance (or other control method) as required in Part I.D.5.e.(i)(b)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop and implement a IDDE plan as required in Part I.D.5.e.(i)(c)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop an education program as required in Part I.D.5.e.(i)(d)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Establish a hotline as required in Part I.D.5.e.(i)(e)	Update as necessary	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Investigate suspected significant/severe illicit discharges as required in Part I.D.5.e.(i)(f)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Review complaint records and develop a targeted source reduction program as required in Part I.D.5.e.(i)(g)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	N/A	N/A	One (1) year from effective date of permit

Screening of system as required in Part I.D.5.e.(iii) as follows: a.) High priority areas**	1 / year	1 / year	1 / year	1 / year	1 / year
b.) Whole system	-Screen 20% of the MS4 per year	- Screen 20% of the MS4 per year	-Years 1 – 2: develop procedures as required in Part I.D.5.e.(i)(c) -Year 3: screen 30% of the MS4 -Year 4: screen 20% of the MS4 -Year 5: screen 50% of the MS4	-Years 1 – 2: develop procedures as required Part I.D.5.e.(i)(c) -Year 3: screen 30% of the MS4 -Year 4: screen 20% of the MS4 -Year 5: screen 50% of the MS4	-Years 1 – 3: develop procedures as require in Part I.D.5.e.(i)(c) -Year 4: screen 30% of the MS4 -Year 5: screen 70% of the MS4
Develop, update, and implement a Waste Collection Program as required in Part I.D.5.e.(iv)	Ten (10) months from effective date of permit	Eighteen (18) months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop, update and implement a Spill Prevention and Response program to prevent, contain, and respond to spills that may discharge into the MS4 as required in Part I.D.5.e.(v)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Update the SWMP document and annual report as required in Part I.D.5.e.(iii), Part I.D.5.e.(vi), and Part I.D.5.e.(vii).	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.e.(ix)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.
(**) High priority areas include any area where there is ongoing evidence of illicit discharges or dumpling, or where there are citizen complaints on more than five (5) separate events within twelve (12) months
(***) or MS4s designated by the Director
Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

f. Control of Floatables Discharges

(i) The permittee must develop, update, and implement a program to address and control floatables in discharges into the MS4. The floatables control program shall include source controls and, where necessary, structural controls. **Permittees previously covered under NMS000101 or NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit.** The following elements must be included in the program:

(a) Develop a schedule for implementation of the program to control floatables in discharges into the MS4 (Note: AMAFCA and the City of Albuquerque should update the schedule according to the findings of the 2005 AMAFCA/COA Floatable and Gross Pollutant Study and other studies); and

(b) Estimate the annual volume of floatables and trash removed from each control facility and characterize the floatable type.

(ii) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.f.(i).

(iii) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.

Table 7. Control of Floatables Discharges - Program Development and Implementation Schedules

Activity	**Permittee Class**				
	A **Phase I MS4s**	**B** **Phase II MS4s (2000 Census)**	**C** **New Phase II MS4s (2010 Census **)**	**D** **MS4s within Indian Lands**	**Cooperative (*)** **Any Permittee with cooperative programs**
- Develop a schedule to implement the program as required in Part I.D.5.f.(i)(a)	Ten (10) months from the effective date of the permit	Ten (10) months from the effective date of the permit	One (1) year from the effective date of the permit	One (1) year from the effective date of the permit	Eighteen (18) months from the effective date of the permit
-Estimate the annual volume of floatables and trash removed from each control facility and characterize the floatable type as required in Part I.D.5.f.(i)(b)	Ten (10) months from the effective date of the permit	One (1) year from the effective date of the permit	Two (2) years from the effective date of the permit	Two (2) years from the effective dae of the permit	Thirty (30) months from the effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.f.(ii) and Part I.D.5.f.(iii).	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.
(**) or MS4s designated by the Director
Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

g. Public Education and Outreach on Stormwater Impacts

(i) The permittee shall, individually or cooperatively, develop, revise, implement, and maintain a comprehensive stormwater program to educate the community, employees, businesses, and the general public of hazards associated with the illegal discharges and improper disposal of waste and about the impact that stormwater discharges on local waterways, as well as the steps that the public can take to reduce pollutants in stormwater. **Permittees previously covered under NMS000101 and NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit**.

(ii) The permittee must implement a public education program to distribute educational knowledge to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff. The permittee must:

(a) Define the goals and objectives of the program based on high priority community-wide issues;

(b) Develop or utilize appropriate educational materials, such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, and websites;

(c) Inform individuals and households about ensuring proper septic system maintenance, ensuring the proper use and disposal of landscape and garden chemicals including fertilizers and pesticides, protecting and restoring riparian vegetation, and properly disposing of used motor oil or household hazardous wastes;

(d) Inform individuals and groups how to become involved in local stream and beach restoration activities as well as activities that are coordinated by youth service and conservation corps or other citizen groups;

(e) Use tailored public education program, using a mix of locally appropriate strategies, to target specific audiences and communities. Examples of strategies include distributing brochures or fact sheets, sponsoring speaking engagements before community groups, providing public service announcements, implementing educational programs targeted at school age children, and conducting community-based projects such as storm drain stenciling, and watershed cleanups; and

(f) Use materials or outreach programs directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant stormwater impacts. For example, providing information to restaurants on the impact of grease clogging storm drains and to garages on the impact of oil discharges. The permittee may tailor the outreach program to address the viewpoints and concerns of all communities, particularly minority and disadvantaged communities, as well as any special concerns relating to children. The permittee must make information available for non-English speaking residents, where appropriate.

(iii) The permittee must include the following information in the Stormwater Management Program (SWMP) document:

(a) A description of a program to promote, publicize, facilitate public reporting of the presence of illicit discharges or water quality associated with discharges from municipal separate storm sewers;

(b) A description of the education activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials; and

(c) A description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.g.(i) and Part I.D.5.g.(ii) and its corresponding measurable goal.

(iv) The permittee must assess the overall success of the program, and document both direct and indirect measurements of program effectiveness in the Annual Report.

Program Flexibility Elements

(v) Where necessary to comply with the Minimum Control Measures established in Part I.D.5.g.(i) and Part I.D.5.g.(ii), the permittee should develop a program or modify/revise an existing education and outreach program to:

(a) Promote, publicize, and facilitate the use of Green Infrastructure (GI)/Low Impact Development (LID)/Sustainability practices; and

(b) Include an integrated public education program (including all permittee departments and programs within the MS4) regarding litter reduction, reduction in pesticide/herbicide use, recycling and proper

disposal (including yard waste, hazardous waste materials, and used motor vehicle fluids), and GI/LID/Sustainable practices (including xeriscaping, reduced water consumption, water harvesting practices allowed by the New Mexico State Engineer Office).

(vi) The permittee may collaborate or partner with other MS4 operators to maximize the program and cost effectiveness of the required outreach.

(vii) The education and outreach program may use citizen hotlines as a low-cost strategy to engage the public in illicit discharge surveillance.

(viii) The permittee may use stormwater educational materials provided by the State, Tribe, EPA, environmental, public interest or trade organizations, or other MS4s. The permittee may also integrate the education and outreach program with existing education and outreach programs in the Middle Rio Grande area. Example of existing programs include:

(a) Classroom education on stormwater;

A. Develop watershed map to help students visualize area impacted.

B. Develop pet-specific education

(b) Establish a water committee/advisor group;

(c) Contribute and participate in Stormwater Quality Team;

(d) Education/outreach for commercial activities;

(e) Hold regular employee trainings with industry groups

(f) Education of lawn and garden activities;

(g) Education on sustainable practices;

(h) Education/outreach of pet waste management;

(i) Education on the proper disposal of household hazardous waste;

(j) Education/outreach programs aimed at minority and disadvantaged communities and children;

(k) Education/outreach of trash management;

(l) Education/outreach in public events;

A. Participate in local events—brochures, posters, etc.

B. Participate in regional events (i.e., State Fair, Balloon Fiesta).

(m) Education/outreach using the media (e.g. publish local newsletters);

(n) Education/outreach on water conservation practices designed to reduce pollutants in storm water for home residences.

Table 8. Public Education and Outreach on Stormwater Impacts - Program Development and Implementation Schedules

Activity	Permittee Class				
	A **Phase I MS4s**	**B** **Phase II MS4s (2000 Census)**	**C** **New Phase II MS4s (2010 Census **)**	**D** **MS4s within Indian Lands**	**Cooperative (*)** **Any Permittee with cooperative programs**
Develop, revise, implement, and maintain an education and outreach program as required in Part I.D.5.g.(i) and Part I.D.5.g.(ii)	Ten (10) months from the effective date of the permit	Eleven (11) months from the effective date of the permit	Twelve (12) months from effective date of the permit	Twelve (12) months from effective date of the permit	Fourteen (14) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.g.(iii) and Part I.D.5.g.(iv)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.g.(v) through Part I.D.5.g.(viii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.
(**) or MS4s designated by the Director
Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

h. Public Involvement and Participation

(i) The permittee must provide local public notice of and make available for public review a copy of the complete NOI and attachments (see Part I.B.2). Local public notice may be made by newspaper notice, notice at a council meeting, posting on the internet, or other method consistent with state/tribal/local public notice requirements.

The permittee must consider all public comments received during the public notice period and modify the NOI, or include a schedule to modify the SWMP, as necessary, or as required by the Director modify the NOI or/and SWMP in response to such comments. The Permittees must include in the NOI any unresolved public comments and the MS4's response to these comments. Responses provided by the MS4 will be considered as part of EPA's decision-making process. See also Appendix E Providing Comments or Requesting a Public Hearing on an Operator's NOI.

(ii) The permittee shall develop, revise, implement and maintain a plan to encourage public involvement and provide opportunities for participation in the review, modification and implementation of the SWMP; develop and implement a process by which public comments to the plan are received and reviewed by the person(s) responsible for the SWMP; and, make the SWMP available to the public and to the operator of any MS4 or Tribal authority receiving discharges from the MS4. **Permittee previously covered under NMS000101 or NMR040000 must continue existing public involvement and participation programs while updating those programs, as necessary, to comply with the requirements of this permit**.

(iii) The plan required in Part I.D.5.h.(ii) shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The permittee must include the following elements in the plan:

(a) A detailed description of the general plan for informing the public of involvement and participation opportunities, including types of activities; target audiences; how interested parties may access the SWMP; and how the public was involved in development of the SWMP;

(b) The development and implementation of at least one (1) assessment of public behavioral change following a public education and/or participation event;

(c) A process to solicit involvement by environmental groups, environmental justice communities, civic organizations or other neighborhoods/organizations interested in water quality-related issues, including but not limited to the Middle Rio Grande Water Quality Work Group, the Middle Rio Grande Bosque Initiative, the Middle Rio Grande Endangered Species Act Collaborative Program, the Middle Rio Grande-Albuquerque Reach Watershed Group, the Pueblos of Santa Ana, Sandia and Isleta, Albuquerque Bernalillo County Water Utility Authority, UNM Colleges and Schools, and Chartered Student Organizations; and

(d) An evaluation of opportunities to utilize volunteers for stormwater pollution prevention activities and awareness throughout the area.

(iv) The permittee shall comply with State, Tribal and local public notice requirements when implementing a public involvement/ participation program.

(v) The public participation process must reach out to all economic and ethnic groups. Opportunities for members of the public to participate in program development and implementation include serving as citizen representatives on a local stormwater management panel, attending public hearings, working as citizen volunteers to educate other individuals about the program, assisting in program coordination with other pre-existing programs, or participating in volunteer monitoring efforts.

(vi) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Parts I.D.5.h.(i) throughout Part I.D.5.h.(iv) and its corresponding measurable goal.

(vii) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.

(viii) The permittee must provide public accessibility of the Storm Water Management Program (SWMP) document and Annual Reports online via the Internet and during normal business hours at the MS4 operator's main office, a local library, posting on the internet and/or other readily accessible location for public inspection and copying consistent with any applicable federal, state, tribal, or local open records requirements. Upon a showing of significant public interest, the MS4 operator is encouraged to hold a public meeting (or include in the agenda of in a regularly scheduled city council meeting, etc.) on the NOI, SWMP, and Annual Reports. (See Part III B)

Program Flexibility Elements

(ix) The permittee may integrate the public Involvement and participation program with existing education and outreach programs in the Middle Rio Grande area. Example of existing programs include: Adopt-A-Stream Programs; Attitude Surveys; Community Hotlines (e.g. establishment of a "311"-type number and system established to handle storm-water-related concerns, setting up a public tracking/reporting

system, using phones and social media); Revegetation Programs; Storm Drain Stenciling Programs; Stream cleanup and Monitoring program/events.

Table 9. Public Involvement and Participation - *Program Development and Implementation Schedules*

Activity	**Permittee Class**				
	A **Phase I MS4s**	**B** **Phase II MS4s (2000 Census)**	**C** **New Phase II MS4s (2010 Census **)**	**D** **MS4s within Indian Lands**	**Cooperative (*)** **Any Permittee with cooperative programs**
Develop (or update), implement, and maintain a public involvement and participation plan as required in Part I.D.5.h.(ii) and Part I.D.5.h.(iii)	Ten (10) months from effective date of the permit	Ten (10) months from effective date of the permit	Eleven (11) months from effective date of the permit	Eleven (11) months from effective date of the permit	One (1) year from effective date of the permit
Comply with State, Tribal, and local notice requirements when implementing a Public Involvement and Participation Program as required in Part I.D.5.h.(iv)	Ten (10) months from effective date of the permit	Eleven (11) months from effective date of the permit	Twelve (12) months from effective date of the permit	Twelve (12) months from effective date of the permit	Fourteen (14) months from effective date of the permit
Include elements as required in Part I.D.5.h.(v)	Ten (10) months from effective date of the permit	Eleven (11) months from effective date of the permit	One (1) year from effective date of the permit	One (1) year from effective date of the permit	Eighteen (18) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.h.(vi), Part I.D.5.h.(vii), and Part I.D.5.h.(viii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.h.(ix)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.
(**) or MS4s designated by the Director
Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

6. **Stormwater Management Program Review and Modification**.

a. Program Review. Permittee shall participate in an annual review of its SWMP in conjunction with preparation of the annual report required in Part III.B. Results of the review shall be discussed in the annual report and shall include an assessment of:

(i) SWMP implementation, progress in achieving measurable goals, and compliance with program elements and other permit conditions;

(ii) the effectiveness of its SWMP, and any necessary modifications, in complying with the permit, including requirements to control the discharge of pollutants, and comply with water quality standards and any applicable approved TMDLs; and the adequacy of staff, funding levels, equipment, and support capabilities to fully implement the SWMP and comply with permit conditions.

(a) Project staffing requirements, in man hours, for the implementation of the MS4 program during the upcoming year.

(b) Staff man hours used during the previous year for implementing the MS4 program. Man hours may be estimated based on staff assigned, assuming a forty (40) hour work week.

b. Program Modification. The permittee(s) may modify its SWMP with prior notification or request to the EPA and NMED in accordance with this section.

(i) Modifications adding, but not eliminating, replacing, or jeopardizing fulfillment of any components, controls, or requirements of its SWMP may be made by the permittee(s) at any time upon written notification to the EPA.

(ii) Modifications replacing or eliminating an ineffective or unfeasible component, control or requirement of its SWMP, including monitoring and analysis requirements described in Parts III.A and V, may be requested in writing at any time. If request is denied, the EPA will send a written explanation of the decision. Modification requests shall include the following:

(a) a description of why the SWMP component is ineffective, unfeasible (including cost prohibitions), or unnecessary to support compliance with the permit;

(b) expectations on the effectiveness of the proposed replacement component; and

(c) an analysis of how the proposed replacement component is expected to achieve the goals of the component to be replaced.

(iii) Modifications resulting from schedules contained in Part VI may be requested following completion of an interim task or final deadline.

(iv) Modification requests or notifications shall be made in writing, signed in accordance with Part IV.H.

c. Program Modifications Required by EPA. Modifications requested by EPA shall be made in writing, set forth the time schedule for the permittee(s) to develop the modifications, and offer the permittee(s) the opportunity to propose alternative program modifications to meet the objective of the requested modification. The EPA may require changes to the SWMP as needed to:

(i) Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;

(ii) Include more stringent requirements necessary to comply with new State or Federal statutory or regulatory requirements;

(iii) Include such other conditions deemed necessary by the EPA to comply with the goals and requirements of the Clean Water Act; or

(iv) If, at any time, EPA determines that the SWMP does not meet permit requirements.

d. Transfer of Ownership, Operational Authority, or Responsibility for SWMP Implementation: The permittee(s) shall implement the SWMP:

(i) On all new areas added to their portion of the MS4 (or for which they become responsible for implementation of stormwater quality controls) as expeditiously as possible, but not later than one (1) year from addition of the new areas. Implementation may be accomplished in a phased manner to allow additional time for controls that cannot be implemented immediately;

(ii) Within ninety (90) days of a transfer of ownership, operational authority, or responsibility for SWMP implementation, the permittee(s) shall have a plan for implementing the SWMP on all affected areas. The plan may include schedules for implementation; and information on all new annexed areas and any resulting updates required to the SWMP shall be submitted in the annual report.

7. **Retention of Program Records**. The permittee shall retain SWMP records developed in accordance with Part I.D, Part IV.P, and Part VI for at least five (5) years after coverage under this permit terminates.

8. **Qualifying State, Tribal or Local Program**. The permittee may substitute the BMPs and measurable goals of an existing storm water pollution control program to qualify for compliance with one or more of the minimum control measures if the existing measure meets the requirements of the minimum control measure as established in Part I.D.5

PART II. NUMERIC DISCHARGE LIMITATIONS

A. DISCHARGE LIMITATIONS. Reserved

PART III. MONITORING, ASSESSMENT, AND REPORTING REQUIREMENTS:

A. MONITORING AND ASSESSMENT

The permittee must develop, in consultation with NMED and EPA (and affected Tribes if monitoring locations would be located on Tribal lands), and implement a comprehensive monitoring and assessment program designed to meet the following objectives:

- Assess compliance with this permit;
- Assess the effectiveness of the permittee's stormwater management program;
- Assess the impacts to receiving waters resulting from stormwater discharges;
- Characterize stormwater discharges;
- Identify sources of elevated pollutant loads and specific pollutants;
- Detect and eliminate illicit discharges and illegal connections to the MS4; and
- Assess the overall health and evaluate long-term trends in receiving water quality.

The permittee shall be select specific monitoring locations sufficient to assess effects of storm water discharges on receiving waters. The monitoring program may take advantage of monitoring stations/efforts utilized by the permittees or others in previous stormwater monitoring programs or other water quality monitoring efforts. Data collected by others at such stations may be used to satisfy part, or all, of the permit monitoring requirements provided the data collection by that party meets the requirements established in Part III.A.1 throughout Part III.A.5. The comprehensive monitoring and assessment program shall be described in the SWMP document and the results must be provided in each annual report.

Implementation of the comprehensive monitoring and assessment program may be achieved through participation with other permittees to satisfy the requirements of Part III.A.1 throughout Part III.A.5 below in lieu of creating duplicate program elements for each individual permittee.

1. **Wet Weather Monitoring**: The permittees shall conduct wet weather monitoring to gather information on the response of receiving waters to wet weather discharges from the MS4 during both wet season (July 1 through October 31) and dry Season (November 1 through June 30). Wet Weather Monitoring shall be conducted at outfalls, internal sampling stations, and/or in-stream monitoring locations at each water of the US that runs in each entity or entities' jurisdiction(s). Permittees may choose either Option A or Option B below:

   a. *Option A*: Individual monitoring

      (i) Class A: Perform wet weather monitoring at a location coming into the MS4 jurisdictional area (upstream) and leaving the MS4 jurisdictional area (downstream), see Appendix D. Monitor for TSS, TDS, COD, BOD_5, DO, oil and grease, *E.coli*, pH, total kjeldahl nitrogen, nitrate plus nitrite, dissolved phosphorus, total ammonia plus organic nitrogen, total phosphorus, PCBs and gross alpha. Monitoring of temperature shall be also conducted at outfalls and/or Rio Grande monitoring locations. Phase I permittees must include additional parameters from monitoring conducted under permit NMS000101 (from last 10 years) whose mean values are at or above a WQS. Permittee must sample these pollutants a minimum of 10 events during the permit term with at least 5 events in wet season and 4 events in dry season.

      (ii) Class B, C, and D: Perform wet weather monitoring at a location coming into the MS4 jurisdictional area (upstream) and leaving the MS4 jurisdictional area (downstream), see Appendix D. Monitor for TSS, TDS, COD, BOD_5, DO, oil and grease, *E.coli*, pH, total kjeldahl nitrogen, nitrate plus nitrite, dissolved phosphorus, total ammonia plus organic nitrogen, total phosphorus, PCBs and gross alpha. Monitoring of temperature shall be also

conducted at outfalls and/or Rio Grande monitoring locations. If applicable, include additional parameters from monitoring conducted under permits NMR040000 or/and NMR04000I whose mean values are at or above a WQS; sample these pollutants a minimum of 8 events per location during the permit term with at least 4 events in wet season and 2 events in dry season.

b. *Option B*: Cooperative Monitoring Program

Develop a cooperative wet weather monitoring program with other permittees in the Middle Rio Grande watershed (see map in Appendix A). The program will monitor waters coming into the watershed (upstream) and leaving the watershed (downstream), see suggested sampling locations in Appendix D. The program must include sampling for TSS, TDS, COD, BOD5, DO, oil and grease, *E.coli*, pH, total kjeldahl nitrogen, nitrate plus nitrite, dissolved phosphorus, total ammonia plus organic nitrogen, total phosphorus, PCBs and Gross alpha. Monitoring of temperature shall be also conducted at outfalls and/or Rio Grande monitoring locations. Permittees must include additional parameters from monitoring conducted under permits NMS000101, NMR040000 or/and NMR04000I whose mean values are at or above a WQS. The monitoring program must sample the pollutants for a minimum of 7 storm events per location during the permit term with at least 3 events wet season and 2 events in dry season.

Note: Seasonal monitoring periods are: Wet Season: July 1 through October 31; Dry Season: November 1 through June 30.

c. Wet weather monitoring shall be performed only when the predicted (or actual) rainfall magnitude of a storm event is greater than 0.25 inches and an antecedent dry period of at least forty-eight (48) hours after a rain event greater than 0.1 inch in magnitude is satisfied. Monitoring methodology will consist of collecting a minimum of four (4) grab samples spaced at a minimum interval of fifteen (15) minutes each (or a flow weighted automatic composite, see Part III.A.5.a.(i)). Individual grab samples shall be preserved and delivered to the laboratory where samples will be combined into a single composite sample from each monitoring location.

d. Monitoring methodology at each MS4 monitoring location shall be collected during any portion of the monitoring location's discharge hydrograph (i.e. first flush, rising limb, peak, and falling limb) after a discernible increase in flow at the tributary inlet.

e. The permittee must comply with the schedules contained in Table 10. The results of the Wet Weather Monitoring must be provided in each annual report.

f. DO, pH, conductivity, and temperature shall be analyzed in the field within fifteen (15) minutes of sample collection.

g. Alternate wet weather monitoring locations established in Part III.A.1.a or Part III.A.1.b may be substituted for just cause during the term of the permit. Requests for approval of alternate monitoring locations shall be made to the EPA and NMED in writing and include the rationale for the requested monitoring station relocation. Unless disapproved by the EPA, use of an alternate monitoring location (except for those with numeric effluent limitations) may commence thirty (30) days from the date of the request. For monitoring locations where numeric effluent limitations have been established, the permit must be modified prior to substitution of alternate monitoring locations. At least six (6) samples shall be collected during the first year of monitoring at substitute monitoring locations. If there are less than six sampleable events, this should be document for reporting purposes.

h. Response to monitoring results: The monitoring program must include a contingency plan for collecting additional monitoring data within the MS4 or at additional appropriate instream locations should monitoring results indicate that MS4 discharges may be contributing to instream exceedances of WQS. The purpose of this additional monitoring effort would be to identify sources of elevated pollutant loadings so they could be addressed by the SWMP.

Table 10. Wet Weather Monitoring Program Implementation Schedules:

Activity	**Permittee Class**				
	A **Phase I MS4s**	**B** **Phase II MS4s (2000 Census)**	**C** **New Phase II MS4s (2010 Census **)**	**D** **MS4s within Indian Lands**	**Cooperative (*)** **Any Permittee with cooperative programs**
Submit wet weather monitoring preference to EPA (i.e., individual monitoring program vs. cooperative monitoring program) with NOI submittals	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)
Submit a detailed description of the monitoring scheme to EPA and NMED for approval. The monitoring scheme should include: a list of pollutants; a description of monitoring sites with an explanation of why those sites were selected; and a detailed map of all proposed monitoring sites	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Eleven (11) months from effective date of permit	Eleven (11) months from effective date of permit	Twelve (12) months from effective date of permit
Submit certification that all wet weather monitoring sites are operational and begin sampling	Eleven (11) months from effective date of permit	Eleven (11) months from effective date of permit	Thirteen (13) months from effective date of permit	Thirteen (13) months from effective date of permit	Fourteen (14) months from effective date of permit
Update SWMP document and submit annual reports	Annually	Annually	Annually	Annually	Annually

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

2. **Dry Weather Discharge Screening of MS4**: Each permittee shall identify, investigate, and address areas within its jurisdiction that may be contributing excessive levels of pollutants to the Municipal Separate Storm Sewer System as a result of dry weather discharges (i.e., discharges from separate storm sewers that occur without the direct influence of runoff from storm events, e.g. illicit discharges, allowable non-stormwater, groundwater infiltration, etc.). Due to the arid and semi-arid conditions of the area, the dry weather discharges screening program may be carried out during both wet season (July 1 through October 31) and dry Season (November 1 through June 30). Results of the assessment

shall be provided in each annual report. This program may be coordinated with the illicit discharge detection and elimination program required in Part I.D.5.e. The dry weather screening program shall be described in the SWMP and comply with the schedules contained in Part I.D.5.e.(iii). The permittee shall

a. Include sufficient screening points to adequately assess pollutant levels from all areas of the MS4.

b. Screen for, at a minimum, BOD_5, sediment or a parameter addressing sediment (e.g., TSS or turbidity), E. coli, Oil and Grease, nutrients, any pollutant that has been identified as cause of impairment of a waterbody receiving discharges from that portion of the MS4, including temperature.

c. Specify the sampling and non-sampling techniques to be issued for initial screening and follow-up purposes. Sample collection and analysis need not conform to the requirements of 40 CFR Part 136; and

d. Perform monitoring only when an antecedent dry period of at least seventy-two (72) hours after a rain event greater than 0.1 inch in magnitude is satisfied. Monitoring methodology shall consist of collecting a minimum of four (4) grab samples spaced at a minimum interval of fifteen (15) minutes each. Grab samples will be combined into a single composite sample from each station, preserved, and delivered to the laboratory for analysis. A flow weighted automatic composite sample may also be used.

3. **Floatable Monitoring:** The permittees shall establish locations for monitoring/assessing floatable material in discharges to and/or from their MS4. Floatable material shall be monitored at least twice per year at priority locations and at minimum of two (2) stations except as provided in Part III.A.3. below. The amount of collected material shall be estimated in cubic yards.

a. One (1) station should be located in the North Diversion (only applicable to the COA and AMAFCA).

b. Non-traditional MS4 as defined in Part VII shall sample/assess at one (1) station.

c. Phase II MS4s shall sample/assess at one (1) station within their jurisdiction or participate in a cooperative floatable monitoring plan addressing impacts on perennial waters of the US on a larger watershed basis.

A cooperative monitoring program may be established in partnership with other MS4s to monitor and assess floatable material in discharges to and/or from a joint jurisdictional area or watershed basis.

4. **Industrial and High Risk Runoff Monitoring** (Applicable only to Class A permittees): The permittees shall monitor stormwater discharges from Type 1 and 2 industrial facilities which discharge to the MS4 provided such facilities are located in their jurisdiction. (Note: if no such facilities are in the permittee's jurisdiction, the permittee must certify that this program element does not apply). The permittee shall:

a. Conduct analytical monitoring of Type 1 facilities that discharge to the MS4. Type 1 facilities are municipal landfills; hazardous waste treatment, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313; and industrial facilities the permittee(s) determines are contributing a substantial pollutant loading to the MS4.

(i) The following parameters shall be monitored:
- any pollutants limited in an existing NPDES permit to a subject facility;

- oil and grease;
- chemical oxygen demand (COD);
- pH;
- biochemical oxygen demand, five-day (BOD_5);
- total suspended solids (TSS);
- total phosphorous;
- total Kjeldahl nitrogen (TKN);
- nitrate plus nitrite nitrogen;
- any discharge information required under 40 CFR §122.21(g)(7)(iii) and (iv);
- total cadmium;
- total chromium;
- total copper;
- total lead;
- total nickel;
- total silver;
- total zinc; and,
- PCBs.

(ii) Frequency of monitoring shall be established by the permittee(s), but may not be less than once per year;

(iii) In lieu of the above parameter list, the permittee(s) may alter the monitoring requirement for any individual Type 1 facility:

(a) To coincide with the corresponding industrial sector-specific monitoring requirements of the 2008 Multi-Sector General Stormwater Permit or any applicable general permit issued after September 2008. This exception is not contingent on whether a particular facility is actually covered by the general permit; or

(b) To coincide with the monitoring requirements of any individual permit for the stormwater discharges from that facility, and

(c) Any optional monitoring list must be supplemented by pollutants of concern identified by the permittee(s) for that facility.

b. Conduct appropriate monitoring (e.g. analytic, visual), as determined by the permittee(s), at Type 2 facilities that discharge to the MS4. Type 2 facilities are other municipal waste treatment, storage, or disposal facilities (e.g. POTWs, transfer stations, incinerators) and industrial or commercial facilities the permittee(s) believed contributing pollutants to the MS4. The permittee shall include in each annual report, a list of parameters of concern and monitoring frequencies required for each type of facility.

c. May use analytical monitoring data, on a parameter-by-parameter basis, that a facility has collected to comply with or apply for a State or NPDES discharge permit (other than this permit), so as to avoid unnecessary cost and duplication of effort;

d. May allow the facility to test only one (1) outfall and to report that the quantitative data also apply to the substantially identical outfalls if:

(i) A Type 1 or Type 2 industrial facility has two (2) or more outfalls with substantially identical effluents, and

(ii) Demonstration by the facility that the stormwater outfalls are substantially identical, using one (1) or all of the following methods for such demonstration. The NPDES Stormwater Sampling Guidance Document (EPA 833-B-92-001), available on EPA's website at provides detailed guidance on each of the three options: (1) submission of a narrative description and a site map; (2) submission of matrices; or (3) submission of model matrices.

b. May accept a copy of a "no exposure" certification from a facility made to EPA under 40 CFR §122.26(g), in lieu of analytic monitoring.

5. **Additional Sample Type, Collection and Analysis**:

a. Wet Weather (or Storm Event) Discharge Monitoring: If storm event discharges are collected to meet the objectives of the Comprehensive Monitoring and Assessment Program required in Part III.A (e.g., assess compliance with this permit; assess the effectiveness of the permittee's stormwater management program; assess the impacts to receiving waters resulting from stormwater discharges), the following requirements apply:

(i) Composite Samples: Flow-weighted composite samples shall be collected as follows:

(a) Composite Method – Flow-weighted composite samples may be collected manually or automatically. For both methods, equal volume aliquots may be collected at the time of sampling and then flow-proportioned and composited in the laboratory, or the aliquot volume may be collected based on the flow rate at the time of sample collection and composited in the field.

(b) Sampling Duration – Samples shall be collected for at least the first three (3) hours of discharge. Where the discharge lasts less than three (3) hours, the permittee should report the value. .

(c) Aliquot Collection – A minimum of three (3) aliquots per hour, separated by at least fifteen (15) minutes, shall be collected. Where more than three (3) aliquots per hour are collected, comparable intervals between aliquots shall be maintained (e.g. six aliquots per hour, at least seven (7) minute intervals).

(ii) Grab Samples: Grab samples shall be taken during the first two (2) hours of discharge.

b. Analytical Methods: Analysis and collection of samples shall be done in accordance with the methods specified at 40 CFR §136. Where an approved 40 CFR §136 method does not exist, any available method may be used unless a particular method or criteria for method selection (such as sensitivity) has been specified in the permit. The minimum quantification levels (MQLs) in Appendix F are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

Screening level tests may utilize less expensive "field test kits" using test methods not approved by EPA under 40 CFR 136, provided the manufacturers published detection ranges are adequate for the illicit discharge detection purposes.

EPA Method 1668 shall be utilized when PCB water column monitoring is conducted to determine compliance with permit requirements. For purposes of sediment sampling in dry weather as part of a screening program to identify area(s) where PCB control/clean-up efforts may need to be focused, either the Arochlor test (EPA Method 8082) or USGS test method (8093) may be utilized, but must use EPA Method 1668 (latest revision) for confirmation and determination of specific PCB levels at that location.

EPA Method 900.0 shall be utilized when gross alpha water column monitoring is conducted to determine compliance with permit requirements.

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B. ANNUAL REPORT

The permittees shall submit an annual report to be submitted by no later than **December 1st.** See suggested form at http://epa.gov/region6/water/npdes/sw/ms4/index.htm**.** The report shall cover the previous year from **July 1st to June 30rd** and include the below separate sections. Additionally, the year one (1) and year four (4) annual report shall include submittal of a complete SWMP revision.

At least forty five (45) days prior to submission of each Annual Report, the permittee must provide public notice of and make available for public review and comment a draft copy of the Annual Report. All public input must be considered in preparation of the final Annual Reports and any changes to the SWMP.

Note: A complete copy of the signed Annual Report should be maintained on site.

1. **SWMP(s) status of implementation**: shall include the status of compliance with all schedules established under this permit and the status of actions required in Parts I, III, and VI.

2. **SWMP revisions**: shall include revisions, if necessary, to the assessments of controls or BMPs reported in the permit application (or NOI for coverage under this permit) under 40 CFR §122.26(d)(2)(v) and §122.34(d)(1)(i) are to be included, as well as a cumulative list of all SWMP revisions during the permit term.

   Class A permittees shall include revisions, if necessary, to the fiscal analysis reported in the permit application (or NOI for coverage under this permit) under §122.26(d)(2)(vi).

3. **Performance assessment**: shall include:

   a. an assessment of performance in terms of measurable goals, including, but not limited to, a description of the number and nature of enforcement actions and inspections, public education and public involvement efforts;

   b. a summary of the data, including monitoring data, that is accumulated throughout the monitoring year (July 1 to June 30); actual values of representative monitoring results shall be included, if results are above minimum quantification level (MQL); and

   c. an identification of water quality improvements or degradation.

4. **Annual expenditures**: for the reporting period, with a breakdown for the major elements of the stormwater management program and the budget for the year following each annual report. (Applicable only to Class A permittees)

5. **Annual Report Responsibilities for Cooperative Programs:** preparation of a system-wide report with cooperative programs may be coordinated among cooperating MS4s and then used as part of individual Annual Reports. The report of a cooperative program element shall indicate which, if any, permittee(s) have failed to provide the required information on the portions of the MS4 for which they are responsible to the cooperation permittees.

   a. Joint responsibility for reports covering cooperative programs elements shall be limited to participation in preparation of the overview for the entire system and inclusion of the identity of any permittee who failed to provide input to the annual report.

b. Individual permittees shall be individually responsible for content of the report relating to the portions of the MS4 for which they are responsible and for failure to provide information for the system-wide annual report no later than July 31st of each year.

6. **Public Review and Comment**: a brief summary of any issues raised by the public on the draft Annual Report, along with permittee's responses to the public comments.

7. **Signature on Certification of Annual Reports**: The annual report shall be signed and certified, in accordance with Part IV.H and include a statement or resolution that the permittee's governing body or agency (or delegated representative) has reviewed or been apprised of the content of the Annual Report. Annual report shall be due no later than December 1st of each year. A complete copy of the signed Annual Report should be maintained on site.

C. CERTIFICATION AND SIGNATURE OF RECORDS.

All reports required by the permit and other information requested by the EPA shall be signed and certified in accordance with Part IV.H.

D. REPORTING: WHERE AND WHEN TO SUBMIT

1. Monitoring results (Part III.A.1, Part III.A.3, Part III.A.5.a) obtained during the reporting period running from July 1st to June 30th shall be submitted on discharge monitoring report (DMR) forms along with the annual report required by Part III.B. A separate DMR form is required for each monitoring period (season) specified in Part III.A.1. If any individual analytical test result is less than the minimum quantification level (MQL) listed for that parameter, then a value of zero (0) may be used for that test result for the discharge monitoring report (DMR) calculations and reporting requirements. The annual report shall include the actual value obtained, if test result is less than the MQL (See Appendix F).

2. Signed copies of DMRs required under Part III, the Annual Report required by Part III.B, and all other reports required herein, shall be submitted in electronic form to R6_MS4Permits@epa.gov (note: there is an underscore between R6 and MS4).

   Copy of a suggested Annual Report Format is located in EPA R6 website: http://epa.gov/region6/water/npdes/sw/ms4/index.htm.

   Electronic submittal of the documents required in the permit using a compatible Integrated Compliance Information System (ICIS) format would be allowed if available.

3. Requests for SWMP updates, modifications in monitoring locations, or application for an individual permit shall, be submitted to,:

   U.S. EPA, Region 6
   Water Quality Protection Division
   Operations Support Office (6WQ-O)
   1445 Ross Avenue
   Dallas, Texas 75202-2733

4. Additional Notification. Permittee(s) shall also provide copies of NOIs, DMRs, annual reports, NOTs, requests for SWMP updates, items for compliance with permit requirements for Compliance with Water Quality Standards in Part I.C.1, TMDL's reports established in Part I.C.2, monitoring scheme, reports, and certifications required in Part III.A.1, programs or changes in monitoring locations, and all other reports required herein, to:

New Mexico Environment Department
Attn: Bruce Yurdin, Program Manager
Surface Water Quality Bureau
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

Pueblo of Sandia Environment Department
Attn: Scott Bulgrin, Water Quality Manager
481 Sandia Loop
Bernalillo, NM 87004
(Note: Only those MS4s with discharges upstream of or to waters under the jurisdictional of the Pueblo of Sandia: AMAFCA, Sandoval County, Village of Corrales, City of Rio Rancho, Town of Bernalillo, SSCAFCA, and ESCAFCA)

Pueblo of Isleta
Attn: Ramona M. Montoya, Environment Division Manager
P.O. Box 1270
Isleta NM 87022

(Notes: Only the City of Albuquerque, Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), New Mexico Department of Transportation (NMDOT) District 3, KAFB (Kirtland Air Force Base), Sandia Labs (DOE), and Bernalillo County). All parties submitting an NOI or NOT shall notify the Pueblo of Isleta in writing that a NOI or NOT has been submitted to EPA

Water Resources Division Manager
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, New Mexico 87004
(Note: Only those MS4s with discharges upstream of or to waters under the jurisdictional of the Pueblo of Santa Ana)

PART IV. STANDARD PERMIT CONDITIONS

A. DUTY TO COMPLY.

The permittee(s) must comply with all conditions of this permit insofar as those conditions are applicable to each permittee, either individually or jointly. Any permit noncompliance constitutes a violation of the Clean Water Act (The Act) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

B. PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS.

The EPA will adjust the Civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (Federal Register: Dec. 31, 1996, Volume 61, No. 252, pages 69359-69366, as corrected, March 20, 1997, Volume 62, No. 54, pages 13514-13517) as mandated by the Debt Collection Improvement Act of 1996 for inflation on a periodic basis. This rule allows EPA's penalties to keep pace with inflation. The Agency is required to review its penalties at least once every four years thereafter and to adjust them as necessary for inflation according to a specified formula. The civil and administrative penalties listed below were adjusted for inflation starting in 1996.

1. **Criminal Penalties**.
   a. Negligent Violations: The Act provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one (1) year, or both.

   b. Knowing Violations: The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than three (3) years, or both.

   c. Knowing Endangerment: The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than $250,000, or by imprisonment for not more than fifteen (15) years, or both.

   d. False Statement: The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two (2) years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both. (See Section 309(c)(4) of the Act).

2. **Civil Penalties**. The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed $27,500 per day for each violation.

3. **Administrative Penalties**. The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

   a. Class I penalty: Not to exceed $11,000 per violation nor shall the maximum amount exceed $27,500.

b. Class II penalty: Not to exceed $11,000 per day for each day during which the violation continues nor shall the maximum amount exceed $137,500.

C. DUTY TO REAPPLY. If the permittee wishes to continue an activity regulated by this permit after the permit expiration date, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days prior to expiration of this permit. The EPA may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated at 40 CFR §122.6 and any subsequent amendments.

D. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

E. DUTY TO MITIGATE. The permittee(s) shall take all reasonable steps to control or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. DUTY TO PROVIDE INFORMATION. The permittee(s) shall furnish to the EPA, within a time specified by the EPA, any information which the EPA may request to determine compliance with this permit. The permittee(s) shall also furnish to the EPA upon request copies of records required to be kept by this permit.

G. OTHER INFORMATION. When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in any report to the EPA, he or she shall promptly submit such facts or information.

H. SIGNATORY REQUIREMENTS. For a municipality, State, or other public agency, all DMRs, SWMPs, reports, certifications or information either submitted to the EPA or that this permit requires be maintained by the permittee(s), shall be signed by either a:

1. Principal executive officer or ranking elected official; or

2. Duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the EPA.

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

3. If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new written authorization satisfying the requirements of this paragraph must be submitted to the EPA prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification: Any person signing documents under this section shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. PENALTIES FOR FALSIFICATION OF MONITORING SYSTEMS. The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by fines and imprisonment described in Section 309 of the Act.

J. OIL AND HAZARDOUS SUBSTANCE LIABILITY. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the Act or section 106 of CERCLA.

K. PROPERTY RIGHTS. The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

L. SEVERABILITY. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

M. REQUIRING A SEPARATE PERMIT.

1. The EPA may require any permittee authorized by this permit to obtain a separate NPDES permit. Any interested person may petition the EPA to take action under this paragraph. The Director may require any permittee authorized to discharge under this permit to apply for a separate NPDES permit only if the permittee has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form (as necessary), a statement setting a deadline for the permittee to file the application, and a statement that on the effective date of the separate NPDES permit, coverage under this permit shall automatically terminate. Separate permit applications shall be submitted to the address shown in Part III.D. The EPA may grant additional time to submit the application upon request of the applicant. If an owner or operator fails to submit, prior to the deadline of the time extension, a separate NPDES permit application as required by the EPA, then the applicability of this permit to the permittee is automatically terminated at the end of the day specified for application submittal.

2. Any permittee authorized by this permit may request to be excluded from the coverage of this permit by applying for a separate permit. The permittee shall submit a separate application as specified by 40 CFR §122.26(d) for Class A permittees and by 40 CFR §122.33(b)(2) for Class B, C, and D permittees, with reasons supporting the request to the Director. Separate permit applications shall be submitted to the address shown in Part III.D.3. The request may be granted by the issuance of a separate permit if the reasons cited by the permittee are adequate to support the request.

3. When an individual NPDES permit is issued to a discharger otherwise subject to this permit, or the permittee is authorized to discharge under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to an operator otherwise subject to this permit, or the operator is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the permitting authority.

N. STATE / ENVIRONMENTAL LAWS.

1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by section 510 of the Act.

2. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

O. PROPER OPERATION AND MAINTENANCE. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of stormwater management programs. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

P. MONITORING AND RECORDS.

1. The permittee must retain records of all monitoring information, including, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, copies of Discharge Monitoring Reports (DMRs), a copy of the NPDES permit, and records of all data used to complete the NOI for this permit, for a period of at least three years from the date of the sample, measurement, report or application, or for the term of this permit, whichever is longer. This period may be extended by request of the permitting authority at any time.

2. The permittee must submit its records to the permitting authority only when specifically asked to do so. The permittee must retain a description of the SWMP required by this permit (including a copy of the permit language) at a location accessible to the permitting authority. The permittee must make its records, including the NOI and the description of the SWMP, available to the public if requested to do so in writing.

3. Records of monitoring information shall include:
   a. The date, exact place, and time of sampling or measurements;
   b. The initials or name(s) of the individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed;
   d. The time(s) analyses were initiated;
   e. The initials or name(s) of the individual(s) who performed the analyses;
   f. References and written procedures, when available, for the analytical techniques or methods used; and
   g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

4. The permittee must maintain, for the term of the permit, copies of all information and determinations used to document permit eligibility under Parts I.A.5.f and Part I.A.3.b.

Q. MONITORING METHODS. Monitoring must be conducted according to test procedures approved under 40 CFR §136, unless other test procedures have been specified in this permit. The minimum quantification levels (MQLs) in Appendix F are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

R. INSPECTION AND ENTRY. The permittee shall allow the EPA or an authorized representative of EPA, or the State, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Act, any substance or parameters at any location.

S. PERMIT ACTIONS. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

T. ADDITIONAL MONITORING BY THE PERMITTEE(S). If the permittee monitors more frequently than required by this permit, using test procedures approved under 40 CFR §136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR). Such increased monitoring frequency shall also be indicated on the DMR.

U. ARCHEOLOGICAL AND HISTORIC SITES (Applicable to areas within the corporate boundary of the City of Albuquerque and Tribal lands). This permit does not authorize any stormwater discharges nor require any controls to control stormwater runoff which are not in compliance with any historic preservation laws.

1. In accordance with the Albuquerque Archaeological Ordinance (Section 2-12-2, 14-16-5, and 14-14-3-4), an applicant for either:

   a. A preliminary plan for any subdivision that is five acres or more in size; or

   b. A site development plan or master development plan for a project that is five acres or more in size on property that is zoned SU-1 Special Use, IP Industrial Park, an SU-2 zone that requires site plan review, PC Planned Community with a site, or meets the Zoning Code definition of a Shopping Center must first obtain either a Certificate of No Effect or a Certificate of Approval from the City Archaeologist. Details of the requirements for a Certificate of No Effect or a Certificate of Approval are described in the ordinance. Failure to obtain a certificate as required by ordinance shall subject the property owner to the penalties of §1-1-99 ROA 1994.

2. If municipal excavation and/or construction projects implementing requirements of this permit will result in the disturbance of previously undisturbed land, and the project is not required to have a separate NPDES permit (e.g. general permit for discharge of stormwater associated with construction activity), then the permittee may seek authorization for stormwater discharges from such sites of disturbance by:

   a. Submitting, thirty (30) days prior to commencing land disturbance, the following to the State Historic Preservation Officer (SHPO) and to appropriate Tribes and Tribal Historic Preservation Officers for evaluation of possible effects on properties listed or eligible for listing on the National Register of Historic Places:

      (i) A description of the construction or land disturbing activity and the potential impact that this activity may have upon the ground, and

      (ii) A copy of a USGS topographic map outlining the location of the project and other ancillary impact areas.

      (iii) The addresses of the SHPO. Sandia Pueblo, and Isleta Pueblo are:

      State Historic Preservation Officer
      New Mexico Historic Preservation Division

Bataan Memorial Building
407 Galisteo Street, Ste. 236
Santa Fe, New Mexico 87501

Pueblo of Sandia Environment Department
Attn: Frank Chaves, Environment Director
481 Sandia Loop
Bernalillo, New Mexico 87004

Pueblo of Isleta
Department of Cultural and Historic Preservation
Attn: Daniel Waseta, Director
P.O. Box 1270
Isleta NM 87022

Water Resources Division Manager
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, New Mexico 87004

3. If the permittee receives a request for an archeological survey or notice of adverse effects from the SHPO, the permittee shall delay such activity until:

   a. A cultural resource survey report has been submitted to the SHPO for a review and a determination of no effect or no adverse effect has been made, and

   b. If an adverse effect is anticipated, measures to minimize harm to historic properties have been agreed upon between the permittee and the SHPO.

4. If the permittee does not receive notification of adverse effects or a request for an archeological survey from the SHPO within thirty (30) days, the permittee may proceed with the activity.

5. Alternately, the permittee may obtain authorization for stormwater discharges from such sites of disturbance by applying for a modification of this permit. The permittee may apply for a permit modification by submitting the following information to the Permitting Authority 180 days prior to commencing such discharges:

   a. A letter requesting a permit modification to include discharges from activities subject to this provision, in accordance with the signatory requirements in Part IV.H.

   b. A description of the construction or land disturbing activity and the potential impact that this activity may have upon the ground; County in which the facility will be constructed; type of facility to be constructed; size area (in acres) that the facility will encompass; expected date of construction; and whether the facility is located on land owned or controlled by any political subdivision of New Mexico; and

   c. A copy of a USGS topographic map outlining the location of the project and other ancillary impact areas.

V. **CONTINUATION OF THE EXPIRED GENERAL PERMIT**. If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedures Act and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earlier of:

1. Reissuance or replacement of this permit, at which time the permittee must comply with the Notice of Intent conditions of the new permit to maintain authorization to discharge; or

2. Issuance of an individual permit for your discharges; or

3. A formal permit decision by the permitting authority not to reissue this general permit, at which time the permittee must seek coverage under an alternative general permit or an individual permit.

W. **PERMIT TRANSFERS**: This permit is not transferable to any person except after notice to the permitting authority. The permitting authority may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

X. **ANTICIPATED NONCOMPLIANCE**. The permittee must give advance notice to the permitting authority of any planned changes in the permitted small MS4 or activity which may result in noncompliance with this permit. (see

Y. **PROCEDURES FOR MODIFICATION OR REVOCATION**: Permit modification or revocation will be conducted according to 40 CFR 122.62, 122.63, 122.64 and 124.5.

PART V. PERMIT MODIFICATION

A. MODIFICATION OF THE PERMIT. The permit may be reopened and modified, in accordance with 40 CFR §122.62, §122.63, and §124.5, during the life of the permit to address:

1. Changes in the State's Water Quality Management Plan, including Water Quality Standards;

2. Changes in applicable water quality standards, statutes or regulations;

3. A new permittee who is the owner or operator of a portion of the MS4;

4. Changes in portions of the SWMP that are considered permit conditions;

5. Construction activities implementing requirements of this permit that will result in the disturbance of previously undisturbed land and not required to have a separate NPDES permit; or

6. Other modifications deemed necessary by the EPA to meet the requirements of the Act.

B. MODIFICATION OF THE SWMP(s). Only those portions of the SWMPs specifically required as permit conditions shall be subject to the modification requirements of 40 CFR §124.5. Addition of components, controls, or requirements by the permittee(s); replacement of an ineffective or infeasible control implementing a required component of the SWMP with an alternate control expected to achieve the goals of the original control; and changes required as a result of schedules contained in Part VI shall be considered minor changes to the SWMP and not modifications to the permit. (See also Part I.D.6)

C. CHANGES IN REPRESENTATIVE MONITORING SITES. Changes in monitoring sites, other than those with specific numeric effluent limitations (as described in Part III.A.1.g), shall be considered minor modifications to the permit and shall be made in accordance with the procedures at 40 CFR §122.63.

PART VI. SCHEDULES FOR IMPLEMENTATION AND COMPLIANCE.

A. IMPLEMENTATION AND AUGMENTATION OF THE SWMP(s). The permittee(s) shall comply with all elements identified in Parts I and III for SWMP implementation and augmentation, and permit compliance. The EPA shall have sixty (60) days from receipt of a modification or augmentation made in compliance with Part VI to provide comments or request revisions. During the initial review period, EPA may extend the time period for review and comment. The permittee(s) shall have thirty (30) days from receipt of the EPA's comments or required revisions to submit a response. All changes to the SWMP or monitoring plans made to comply with schedules in Parts I and III must be approved by EPA prior to implementation.

B. COMPLIANCE WITH EFFLUENT LIMITATIONS. Reserved.

C. REPORTING COMPLIANCE WITH SCHEDULES. No later than fourteen (14) days following a date for a specific action (interim milestone or final deadline) identified in the Part VI schedule(s), the permittee(s) shall submit a written notice of compliance or noncompliance to the EPA in accordance with Part III.D.

D. MODIFICATION OF THE SWMP(s). The permittee(s) shall modify its SWMP, as appropriate, in response to modifications required in Part VI.A. Such modifications shall be made in accordance with Part V.B.

PART VII. DEFINITIONS

All definitions contained in Section 502 of the Act shall apply to this permit and are incorporated herein by reference. Unless otherwise specified, additional definitions of words or phrases used in this permit are as follows:

(1) **Baseline Load** means the load for the pollutant of concern which is present in the waterbody before BMPs or other water quality improvement efforts are implemented.

(2) **Best Management Practices (BMPs)** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

(3) **Bioretention** means the water quality and water quantity stormwater management practice using the chemical, biological and physical properties of plants, microbes and soils for the removal of pollution from stormwater runoff.

(4) **Canopy Interception** means the interception of precipitation, by leaves and branches of trees and vegetation that does not reach the soil.

(5) **Contaminated Discharges:** The following discharges are considered contaminated:
- Has had a discharge resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at any time since November 16, 1987; or
- Has had a discharge resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or
- Contributes to a violation of an applicable water quality standard**.**

(6) **Controls** or **Control Measures** or **Measures** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or control the pollution of waters of the United States. Controls also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

(7) **Controllable Sources**: Sources, private or public, which fall under the jurisdiction of the MS4.

(8) **CWA** or **The Act** means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et.seq.

(9) **Co-permittee** means a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.

(10) **Composite Sample** means a sample composed of two or more discrete samples. The aggregate sample will reflect the average water quality covering the compositing or sample period.

(11) **Core Municipality** means, for the purpose of this permit, the municipality whose corporate boundary (unincorporated area for counties and parishes) defines the municipal separate storm sewer system. (ex. City of Dallas for the Dallas Municipal Separate Storm Sewer System, Harris County for unincorporated Harris County).

(12) **Direct Connected Impervious Area (DCIA)** means the portion of impervious area with a direct hydraulic connection to the permitee's municipal separate storm sewer system or a waterbody via continuous paved surfaces, gutters, pipes, and other impervious features. Direct connected impervious area typically does not include isolated impervious areas with an indirect hydraulic connection to the municipal separate storm sewer system (e.g., swale or detention basin) or that otherwise drain to a pervious area.

(13) **Director** means the Regional Administrator or an authorized representative.

(14) **Discharge** for the purpose of this permit, unless indicated otherwise, means discharges from the municipal separate storm sewer system.

(15) **Discharge-related activities"** include: activities which cause, contribute to, or result in storm water point source pollutant discharges; and measures to control storm water discharges, including the sitting, construction and operation of best management practices (BMPs) to control, reduce or prevent storm water pollution.

(16) **Engineered Infiltration** means an underground device or system designed to accept stormwater and slowly exfiltrates it into the underlying soil. This device or system is designed based on soil tests that define the exfiltration rate.

(17) **Evaporation** means rainfall that is changed or converted into a vapor.

(18) **Evapotranspiration** means the sum of evaporation and transpiration of water from the earth's surface to the atmosphere. It includes evaporation of liquid or solid water plus the transpiration of plants.

(19) **Extended Filtration** means a structural stormwater practice which filters stormwater runoff through vegetation and engineered soil media. A portion of the stormwater runoff drains into an underdrain system which slowly releases it after the storm is over.

(20) **Facility** means any NPDES "point source" or any other facility (including land or appurtenances thereto) that is subject to regulation under the NPDES program.
(21) **Flood Control Projects** mean major drainage projects developed to control water quantity rather than quality, including channelization and detention.
(22) **Flow-weighted composite sample** means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.
(23) **Grab Sample** means a sample which is taken from a wastestream on a one-time basis without consideration of the flow rate of the wastestream and without consideration of time.
(24) **Green Infrastructure** means an array of products, technologies, and practices that use natural systems – or engineered systems that mimic natural processes – to enhance overall environmental quality and provide utility services. As a general principal, Green Infrastructure techniques use soils and vegetation to infiltrate, evapotranspirate, and/or recycle stormwater runoff. When used as components of a stormwater management system, Green Infrastructure practices such as green roofs, porous pavement, rain gardens, and vegetated swales can produce a variety of environmental benefits. In addition to effectively retaining and infiltrating rainfall, these technologies can simultaneously help filter air pollutants, reduce energy demands, mitigate urban heat islands, and sequester carbon while also providing communities with aesthetic and natural resource benefits.
(25) **Hydromodification** means the alteration of the natural flow of water through a landscape, and often takes the form of channel straightening, widening, deepening, or relocating existing, natural stream channels. It also can involve excavation of borrow pits or canals, building of levees, streambank erosion, or other conditions or practices that change the depth, width or location of waterways. Hydromodification usually results in water quality and habitat impacts.
(26) **Illicit connection** means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.
(27) **Illicit discharge** means any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.
(28) **Impervious Area (IA)** means conventional pavements, sidewalks, driveways, roadways, parking lots, and rooftops.
(29) **Indian Country** means:
   a. All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation;
   b. All dependent Indian communities within the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and
   c. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. This definition includes all land held in trust for an Indian tribe.
(30) **Individual Residence** means, for the purposes of this permit, single or multi-family residences. (e.g. single family homes and duplexes, town homes, apartments, etc.)
(31) **Infiltration** means the process by which stormwater penetrates the soil.
(32) **Land application unit** means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.
(33) **Landfill** means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.
(34) **Land Use** means the way in which land is used, especially in farming and municipal planning.
(35) **Large or medium municipal separate storm sewer system** means all municipal separate storm sewers that are either: (i) located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendix F of 40 CFR §122); or (ii) located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers are located in the incorporated places, townships, or towns within such counties (these counties are listed in Appendices H and I of 40 CFR §122); or (iii) owned or operated by a municipality other than those described in Paragraph (i) or (ii) and that are designated by the Regional Administrator as part of the large or medium municipal separate storm sewer system.
(36) **MEP** means maximum extent practicable, the technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in storm water discharges. A discussion of MEP as it applies to small MS4s is found at 40 CFR 122.34. CWA section 402(p)(3)(B)(iii) requires that a municipal permit "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system design, and engineering methods, and other provisions such as the Administrator or the State determines appropriate for the control of such pollutants.
(37) **Measurable Goal** means a quantitative measure of progress in implementing a component of storm water management program.

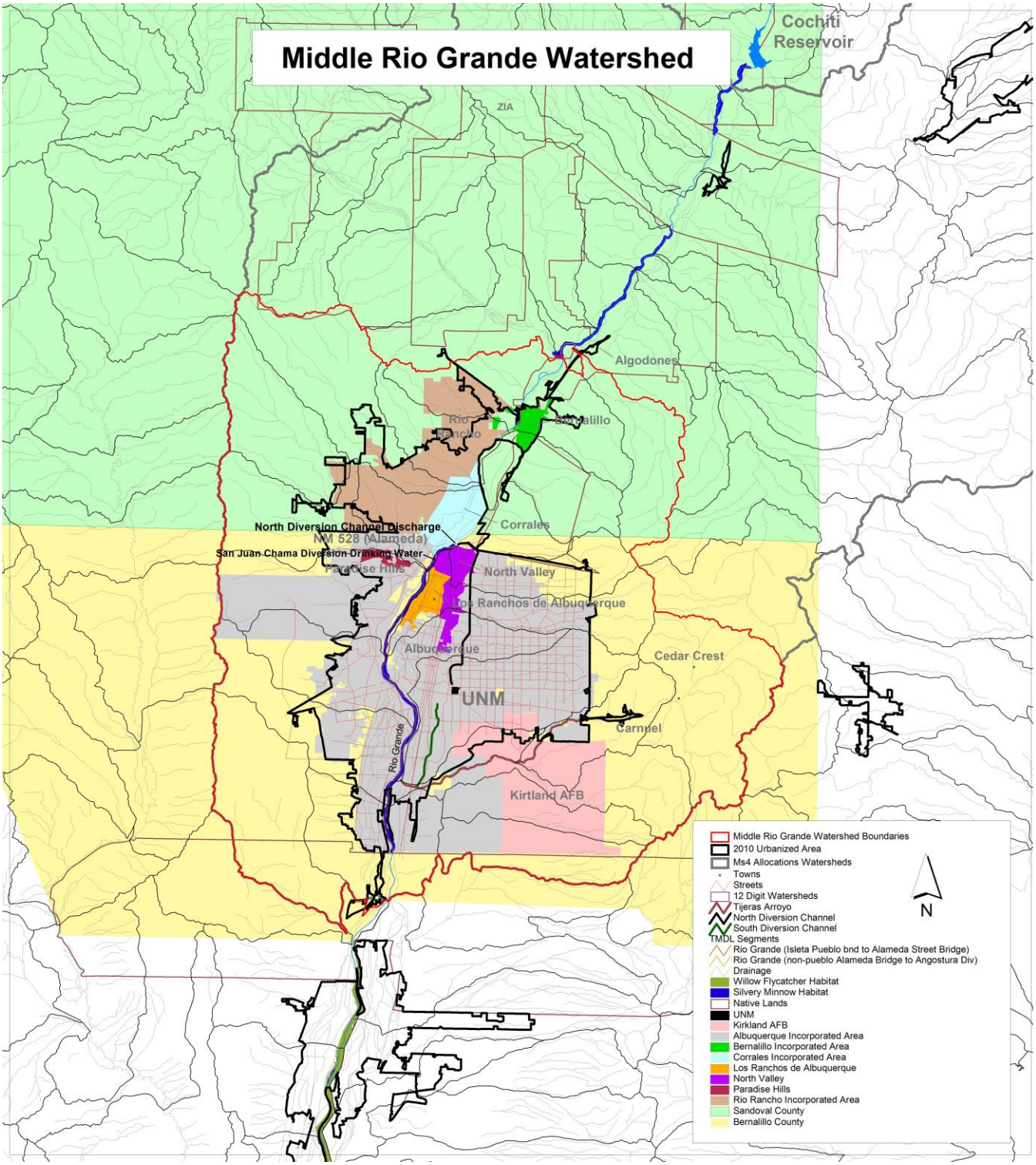
(38) **Municipal Separate Storm Sewer (MS4)** means all separate storm sewers that are defined as "large" or "medium" or "small" municipal separate storm sewer systems pursuant to paragraphs 40 CFR §122.26(b)(4), (b)(7), and (b)(16), or designated under paragraph 40 CFR §122.26(a)(1)(v).
(39) **Non-traditional MS4** means systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. 40 CFR 122.26(a)(16)(iii).
(40) **NOI** means Notice of Intent to be covered by this permit (see Part I.B of this permit)
(41) **NOT** means Notice of Termination.
(42) **Outfall** means a *point source* as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.
(43) **Percent load reduction** means the difference between the baseline load and the target load divided by the baseline load.
(44) **Owner or operator** means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.
(45) **Permittee** refers to any person (defined below) authorized by this NPDES permit to discharge to Waters of the United States.
(46) **Permitting Authority** means EPA, Region 6.
(47) **Person** means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.
(48) **Point Source** means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.
(49) **Pollutant** is defined at 40 CFR 122.2. Pollutant means dredged spoil, solid waste, incinerator residue, filter back-wash, sewage, garbage, sewage sludge. Munitions, chemical waste, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011), heat, wrecked or discarded equipment, rock sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.
(50) **Pre-development Hydrology**, Predevelopment hydrology is generally the rain volume at which runoff would be produced when a site or an area is in its natural condition, prior to development disturbances. For the Middle Rio Grande area, EPA considers predevelopment conditions to be a mix of woods and desert shrub.
(51) **Rainfall and Rainwater Harvesting** means the collection, conveyance, and storage of rainwater. The scope, method, technologies, system complexity, purpose, and end uses vary from rain barrels for garden irrigation in urban areas, to large-scale collection of rainwater for all domestic uses.
(52) **Soil amendment** means adding components to in-situ or native soils to increase the spacing between soil particles so that the soil can absorb and hold more moisture. The amendment of soils changes various other physical, chemical and biological characteristics so that the soils become more effective in maintaining water quality.
(53) **Storm drainage projects** include stormwater inlets, culverts, minor conveyances and a host of other structures or devices.
(54) **Storm sewer**, unless otherwise indicated, means a municipal separate storm sewer.
(55) **Stormwater** means stormwater runoff, snow melt runoff, and surface runoff and drainage.
(56) **Stormwater Discharge Associated with Industrial Activity** means the discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant (See 40 CFR §122.26(b)(14) for specifics of this definition).
(57) **Target load** means the load for the pollutant of concern which is necessary to attain water quality goals (e.g. applicable water quality standards).
(58) **Stormwater Management Program (SWMP)** means a comprehensive program to manage the quality of stormwater discharged from the municipal separate storm sewer system. For the purposes of this permit, the Stormwater Management Program is considered a single document, but may actually consist of separate programs (e.g. "chapters") for each permittee.
(59) **Targeted controls** means practices implemented to address particular pollutant of concern. For example litter program targets floatables.
(60) **Time-weighted composite** means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.
(61) **Total Maximum Daily Load (TMDL)** means a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. A TMDL is the sum of individual wasteload allocations for point sources (WLA), load allocations for non-point sources and natural background (LA), and must consider seasonal variation and include a margin of safety. The TMDL comes in the form of a technical document or plan.

(62) **Toxicity** means an LC50 of <100% effluent.
(63) **Waste load allocation (WLA)** means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.
(64) **Wetlands** means those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
(65) **Whole Effluent Toxicity (WET)** means the aggregate toxic effect of an effluent measured directly by a toxicity test.

PART VIII PERMIT CONDITIONS APPLICABLE TO SPECIFIC AREAS OR INDIAN COUNTY LANDS

Reserved

Appendix A - Middle Rio Grande Watershed Jurisdictions and Potential Permittees



Middle Rio Grande Watershed Jurisdictions and Potential Permittees

Class A:
City of Albuquerque
AMAFCA (Albuquerque Metropolitan Arroyo Flood Control Authority)
UNM (University of New Mexico)
NMDOT (New Mexico Department of Transportation District 3)

Class B:
Bernalillo County
Sandoval County
Village of Corrales
City of Rio Rancho
Los Ranchos de Albuquerque
KAFB (Kirtland Air Force Base)
Town of Bernalillo
EXPO (State Fairgrounds/Expo NM)
SSCAFCA (Southern Sandoval County Arroyo Flood Control Authority)
NMDOT (New Mexico Department of Transportation District 3)

Class C:
ESCAFCA (Eastern Sandoval County Arroyo Flood Control Authority)
Sandia Labs (DOE)

Class D:
Pueblo of Sandia
Pueblo of Isleta
Pueblo of Santa Ana

Note: There could be additional potential permittees.
NMDOT Dist. 3 falls into the Class A type permittee, if an individual program is developed or/and implemented. The timelines for cooperative programs should be used, if NMDOT Dist. 3 cooperates with other permittees.

Appendix B - Total Maximum Daily Loads (TMDLs)

B.1. Approved Total Maximum Daily Loads (TMDLs) Tables

A bacteria TMDL for the Middle Rio Grande was approved by the New Mexico Water Quality Control Commission on April 13, 2010, and by EPA on June 30, 2010. The new TMDL modifies: 1) the indicator parameter for bacteria from fecal coliform to *E. coli*, and 2) the way the WLAs are assigned

Discharges to Impaired Waters – TMDL Waste Load Allocations (WLAs)[2] for *E. coli*: Rio Grande[1]

Stream Segment	Stream Name	Permittee Class	FLOW CONDITIONS & ASSOCIATED WLA (cfu/day)[3]				
			High	Moist	Mid-Range	Dray	Low
2105_50	Isleta Pueblo boundary to Alameda Street Bridge (based on flow at USGS Station NM08330000)	Class A [4]	$3.36x10^{10}$	$8.41 x10^{10}$	$5.66 x10^{10}$	$2.09 x10^{10}$	$4.67 x10^{9}$
		Class B[5] Class C[6]	$3.73 x10^{9}$	$9.35 x10^{9}$	$6.29 x10^{9}$	$2.32 x10^{9}$	$5.19 x10^{8}$
2105.1_00	non-Pueblo Alameda Bridge to Angostura Diversion (based on flow at USGS Station NM08329928)	Class A	$5.25 x10^{10}$	$1.52 x10^{10}$	_	$5.43 x10^{9}$	$2.80 x10^{9}$
		Class B Class C	$2.62 x10^{11}$	$7.59 x10^{10}$	_	$2.71 x10^{10}$	$1.40 x10^{10}$

1 Total Maximum Daily Load for the Middle Rio Grande Watershed, NMED, 2010.
2 The WLAs for the stormwater MS4 permit was based on the percent jurisdiction area approach. Thus, the MS4 WLAs are a percentage of the available allocation for each hydrologic zone, where the available allocation = TMDL – WLA – MOS.
3 Flow conditions relate to percent of days the flow in the Rio Grande at a USGS Gauge exceeds a particular level: High 0-10%; Moist 10-40%; Mid-Range 40-60%; Dry 60-90%; and Low 90-100%. (Source: Figures 4.3 and 4.4 in 2010 Middle Rio Grande TMDL)
4 Phase I MS4s
5 Phase II MS4s (2000 Census)
6 New Phase II MS4s (2010 Census or MS4s designated by the Director)

Estimating Target Loadings for Particular Monitoring Location:

The Table in B.2 below provides a mechanism to calculate, based on acreage within a drainage area, a target loading value for a particular monitoring location.

B.2. Calculating Alternative Sub-measurable Goals

Individual permittees or a group of permittees seeking alternative sub-measureable goals under C.2.b.(i).(c).B should consult NMED. Preliminary proposals should be submitted with the Notice of Intent (NOI) under Part I.B.2.k according to the due dates specified in Part I.B.1.a of the permit. This proposal shall include, but is not limited to, the following items

B.2.1 **Determine base loading for subwatershed areas consistent with TMDL**

a. Using the table below, the permittee must develop a target load consistent with the TMDL for any sampling point in the watershed (even if it includes area outside the jurisdictional area of the permit).

E. coli loading on a per area basis (cfu/sq mi/day)

	high	moist	mid	dry	low
Alameda to Isleta	1.79E+09	4.48E+08	3.02E+08	1.11E+08	2.58E+07
Angostura to Alameda	3.25E+09	9.41E+08	5.19E+08	3.37E+08	1.74E+08

b. An estimation of the pertinent, subwatershed area that the permittee is responsible for and the basis for determining that area, including the means for excluding any tributary inholdings;

c. Using the total loading for the watershed (from part a) and the percentage of the watershed area that is part of the permitee(s) jurisdiction (part b) to calculate a base WLA for this subwatershed.

B.2.2 Set Alternative subwatershed targets

a. Permittee(s) may reallocate WLA within and between subwatershed based on factors including:

- Population density within the pertinent watershed area;
- Slope of the waterway;
- Percent impervious surface and how that value was determined;
- Stormwater treatment, installation of green infrastructure for the control or treatment of stormwater and stormwater pollution prevention and education programs within specific watersheds

b. A proposal for an alternative subwatershed target must include the rationale for the factor(s) used

B.2.3 Ensure overall compliance with TMDL WLA allocation

The permitee(s) will provide calculations demonstrating the total WLA under the alternative proposed in (Part II) is consistent with the baseline calculated in (Part I) based on their total jurisdictional area. Permittee(s) will not be allowed to allocate more area within the watershed than is accorded to them under their jurisdictional area. For permittees that work cooperatively, WLA calculations may be combined and used where needed within the sub-watershed amongst the cooperating parties.

WLA calculations must be sent as part of the Notice of Intent to EPA via e-mail at R6_MS4Permits@epa.gov. These calculations must also be sent to:

Sarah Holcomb
Industrial and Stormwater Team Leader
NMED Surface Water Quality Bureau
P.O. Box 5469,

Appendix C - Historic Properties Eligibility Procedures

MS4 operators must determine whether their MS4's storm water discharges, allowable non-storm water discharges, or construction of best management practices (BMPs) to control such discharges, have potential to affect a property that is either listed or eligible for listing on the National Register of Historic Places.

For existing dischargers who do not need to construct BMPs for permit coverage, a simple visual inspection may be sufficient to determine whether historic properties are affected. However, for MS4s which are new storm water dischargers and for existing MS4s which are planning to construct BMPs for permit eligibility, MS4 operators should conduct further inquiry to determine whether historic properties may be affected by the storm water discharge or BMPs to control the discharge. In such instances, MS4 operators should first determine whether there are any historic properties or places listed on the National Register or if any are eligible for listing on the register (e.g., they are “eligible for listing”).

Due to the large number of entities seeking coverage under this permit and the limited number of personnel available to State and Tribal Historic Preservation Officers nationwide to respond to inquiries concerning the location of historic properties, EPA suggests that MS4 operators first access the “National Register of Historic Places” information listed on the National Park Service's web page (www.nps.gov/nr/). Addresses for State Historic Preservation Officers and Tribal Historic Preservation Officers are listed in Parts II and III of this appendix, respectively. In instances where a Tribe does not have a Tribal Historic Preservation Officer, MS4 operators should contact the appropriate Tribal government office when responding to this permit eligibility condition. MS4 operators may also contact city, county or other local historical societies for assistance, especially when determining if a place or property is eligible for listing on the register. Tribes that do not currently reside in an area may also have an interest in cultural properties in areas they formerly occupied. Tribal contact information is available at http://www.epa.gov/region06/6dra/oejta/tribalaffairs/index.html

The following three scenarios describe how MS4 operators can meet the permit eligibility criteria for protection of historic properties under this permit:

(1) If historic properties are not identified in the path of an MS4's storm water and allowable non-storm water discharges or where construction activities are planned to install BMPs to control such discharges (e.g., diversion channels or retention ponds), then the MS4 operator has met the permit eligibility criteria under Part I.A.3.b.(i).

(2) If historic properties are identified but it is determined that they will not be affected by the discharges or construction of BMPs to control the discharge, the MS4 operator has met the permit eligibility criteria under Part.I.A.3.b.(ii).

(3) If historic properties are identified in the path of an MS4's storm water and allowable non-storm water discharges or where construction activities are planned to install BMPs to control such discharges, and it is determined that there is the potential to adversely affect the property, the MS4 operator can still meet the permit eligibility criteria under Part I.A.3.b.(ii) if he/she obtains and complies with a written agreement with the appropriate State or Tribal Historic Preservation Officer which outlines measures the MS4 operator will follow to mitigate or prevent those adverse effects. The operator should notify EPA before exercising this option.

The contents of such a written agreement must be included in the MS4's Storm Water Management Program.

In situations where an agreement cannot be reached between an MS4 operator and the State or Tribal Historic Preservation Officer, MS4 operators should contact EPA for assistance.

The term “adverse effects” includes but is not limited to damage, deterioration, alteration or destruction of the historic property or place. EPA encourages MS4 operators to contact the appropriate State or Tribal Historic Preservation Officer as soon as possible in the event of a potential adverse effect to a historic property.

MS4 operators are reminded that they must comply with applicable State, Tribal and local laws concerning the protection of historic properties and places.

I. Internet Information on the National Register of Historic Places
An electronic listing of the ``National Register of Historic Places,'' as maintained by the National Park Service on its National Register Information System (NRIS), can be accessed on the Internet at www.nps.gov/nr/.

II. State Historic Preservation Officers (SHPO)
SHPO List for areas covered by the permit:

NEW MEXICO
Historic Preservation Div, Office of Cultural Affairs
Bataan Memorial Building, 407 Galisteo Street, Suite 236
Santa Fe, NM 87501
505-827-6320 FAX: 505-827-6338

III. Tribal Historic Preservation Officers
(THPO)
In instances where a Tribe does not have a Tribal Historic Preservation Officer, please contact the appropriate Tribal government office when responding to this permit eligibility condition.

Tribal Historic Preservation Officers:
Mescalero Apache Tribe
P.O. Box 227
Mescalero, New Mexico 88340

Pueblo of Sandia Environment Department
Attn: Frank Chaves, Environment Director
481 Sandia Loop
Bernalillo, New Mexico 87004

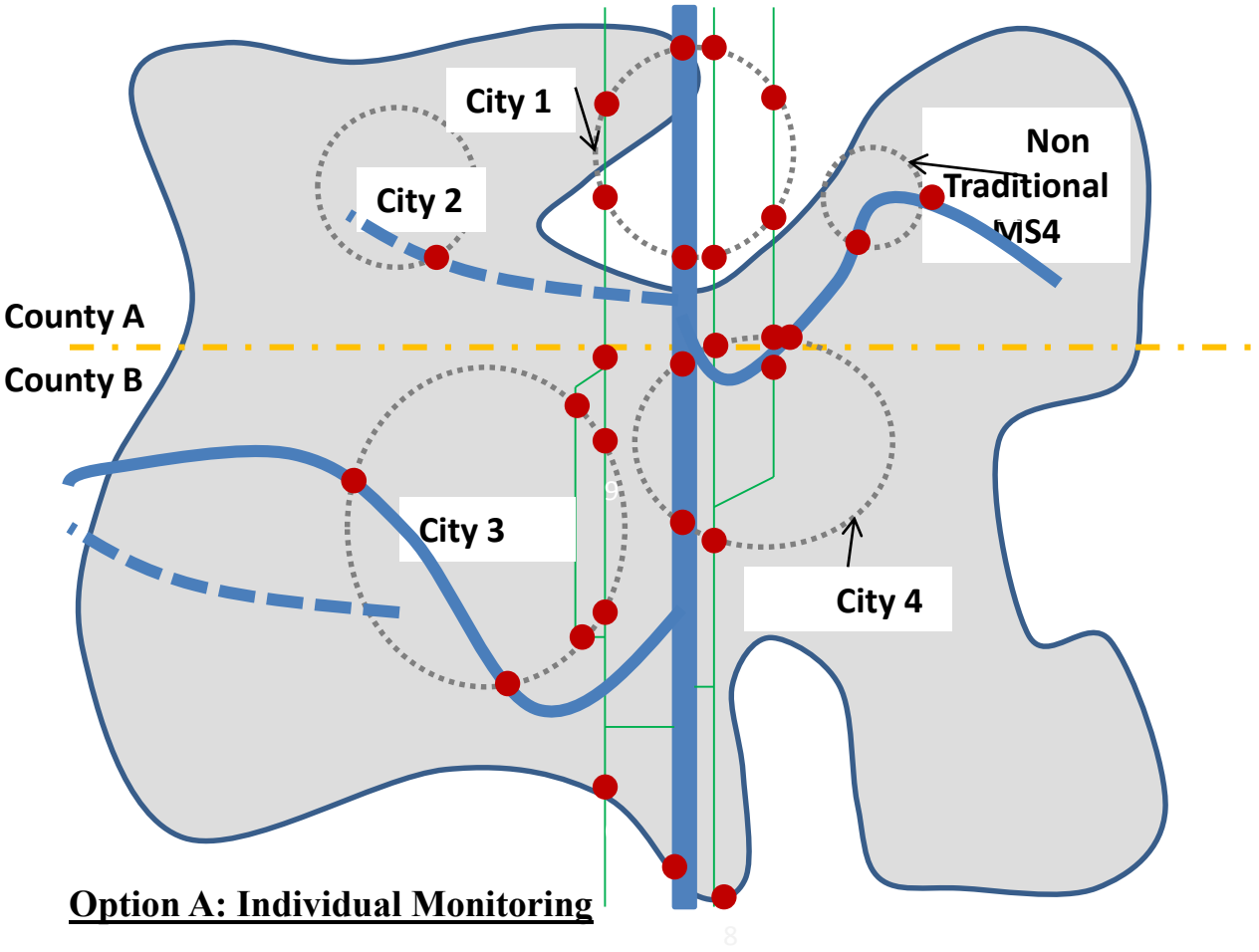
Pueblo of Isleta
Department of Cultural and Historic Preservation
Attn: Dr. Henry Walt, THPO
P.O. Box 1270
Isleta NM 87022

Water Resources Division Manager
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, New Mexico 87004

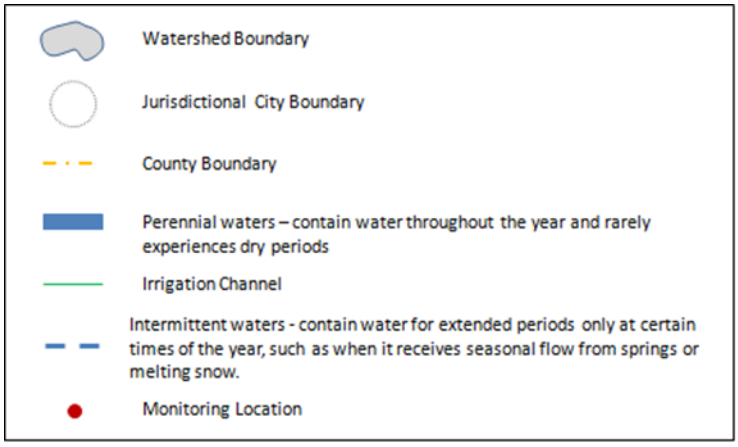
For more information:
National Association of Tribal Historic
Preservation Officers
P.O. Box 19189
Washington, DC 20036-9189
Phone: (202) 628-8476
Fax: (202) 628-2241

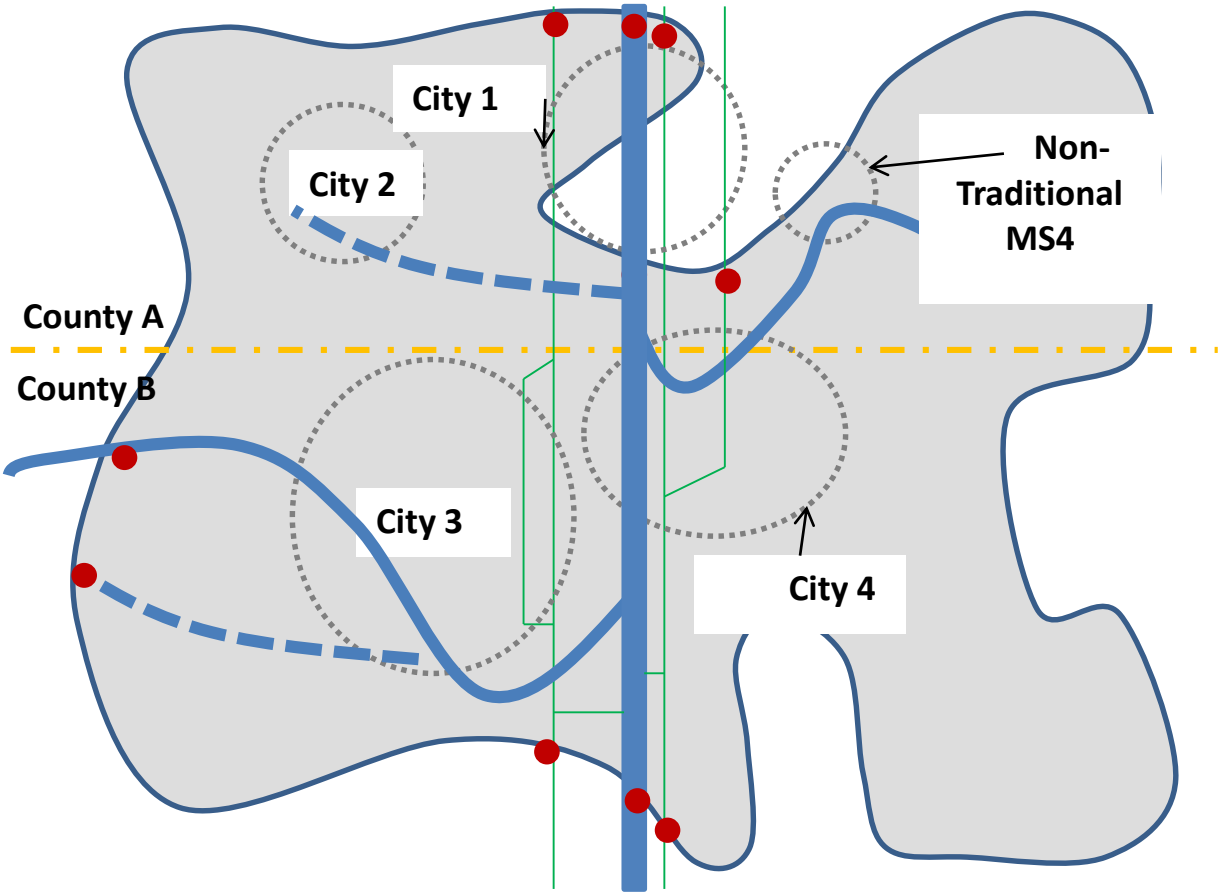
IV. Advisory Council on Historic Preservation
Advisory Council on Historic Preservation, 1100 Pennsylvania Avenue, NW., Suite 803, Washington, DC 20004 Telephone: (202) 606-8503, Fax: (202) 606-8647/8672, E-mail: achp@achp.gov

Appendix D - Suggested Initial Phase Sampling Location Concepts – Wet Weather Monitoring

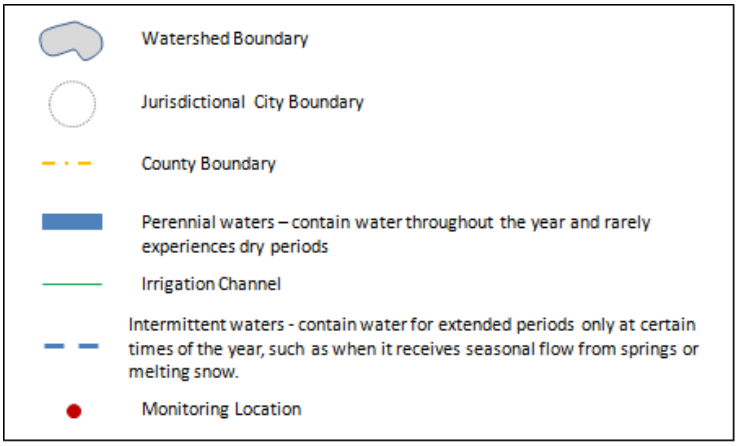


Option A: Individual Monitoring





Option B: Cooperative Monitoring



Appendix E - Providing Comments or Requesting a Public Hearing on an MS4 Operator's NOI

NOTE: Appendix E is for public information only and does not impose conditions on the permittee.

Any interested person may provide comments or request a public hearing on a Notice of Intent (NOI) submitted under this general permit. The general permit itself is not reopened for comment during the period an NOI is available for review and comment.

A. How Will I Know A MS4 is Filing an NOI and How Can I Get a Copy?
The permittee is required to provide a local public notice that they are filing an NOI and make a copy of the draft NOI submittal available locally. EPA will put basic information from all NOIs received on the Internet at: **http://www.epa.gov/region6/6wq/npdes/sw/sms4/index.htm .** You may contact the listed MS4 representative for local access to the NOI. You may also request a copy from EPA by contacting Ms. Dorothy Brown at 214-665-8141 or **brown.dorothy@epa.gov** or via mail at the Address in Item D below, attention Dorothy Brown.

B. When Can I File Comments or a Hearing Request?
You can file comments and/or request a hearing as soon as a NOI is filed, but your request must be postmarked or physically received by EPA within thirty (30) calendar days of the date the NOI is posted on the web site in Section A.

C. How Do I File Comments or Make My Hearing Request?
Your comments and/or hearing request must be in writing and must state the nature of the issues proposed to be raised in the hearing. You should be as specific as possible and include suggested remedies where possible. You should include any data supporting your position(s). If you are submitting the request on behalf of a group or organization, you should describe the nature and membership of the group or organization. Electronic format comments in MS-WORD or PDF format are preferred.

D. Where Do I Send Copies of My Comments or Hearing Request?
Electronic Format: Submit one copy of your comments or hearing request via e-mail to Ms. Dorothy Brown at **brown.dorothy@epa.gov** and copy the Operator of the MS4 at the address on the NOI (send hard copy to MS4 Operator if no e-mail address provided). You may also submit via compact disk or diskette formatted for PCs to addresses for hard copy below. (Hard Copy: You must send an original and one copy of your comments or hearing request to EPA at the address below and a copy to the Operator of the MS4 at the address provided on the NOI)

U.S. EPA Region 6
Water Quality Protection Division (6WQ-NP)
Attn: Dorothy Brown
1445 Ross Ave., Suite 1200
Dallas, TX 75202

E. How Will EPA Determine Whether or Not To Hold a Public Hearing?
EPA will evaluate all hearing requests received on an NOI to determine if a significant degree of public interest exists and whether issues raised may warrant clarification of the MS4 Operator's NOI submittal. EPA will hold a public hearing if a significant amount of public interest is evident. EPA may also, at the Agency's discretion, hold either a public hearing or an informal public meeting to clarify issues related to the NOI submittal. EPA may hold a single public hearing or public meeting covering more than one MS4 (e.g., for all MS4s in an Urbanized Area, etc.).

F. How Will EPA Announce a Pubic Hearing or Public Meeting?
EPA will provide public notice of the time and place for any public hearing or public meeting in a major newspaper with local distribution and via the Internet at **http://www.epa.gov/region6/6wq/npdes/sw/sms4/index.htm**.

G. What Will EPA Do With Comments on an NOI?
EPA will take all comments made directly or in the course of a public hearing or public meeting into consideration in determining whether or not the MS4 that submitted the NOI is appropriately covered under the general permit. The MS4 operator will have the opportunity to provide input on issues raised. The Director may require the MS4 operator to supplement or amend the NOI submittal in order to be authorized under the general permit or may direct the MS4 Operator to submit an individual permit application. A summary of issues raised and EPA's responses will be made available online at **http://www.epa.gov/region6/6wq/npdes/sw/sms4/index.htm.** A hard copy may also be requested by contacting Ms. Dorothy Brown (see paragraph D)

Appendix F - Minimum Quantification Levels (MQL's)

The following Minimum Quantification Levels (MQL's) are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

POLLUTANTS	MQL µg/l	POLLUTANTS	MQL µg/l
METALS, RADIOACTIVITY, CYANIDE and CHLORINE			
Aluminum	2.5	Molybdenum	10
Antimony	60	Nickel	0.5
Arsenic	0.5	Selenium	5
Barium	100	Silver	0.5
Beryllium	0.5	Thalllium	0.5
Boron	100	Uranium	0.1
Cadmium	1	Vanadium	50
Chromium	10	Zinc	20
Cobalt	50	Cyanide	10
Copper	0.5	Cyanide, weak acid dissociable	10
Lead	0.5	Total Residual Chlorine	33
Mercury (*)	0.0005 0.005		
DIOXIN			
2,3,7,8-TCDD	0.00001		
VOLATILE COMPOUNDS			
Acrolein	50	1,3-Dichloropropylene	10
Acrylonitrile	20	Ethylbenzene	10
Benzene	10	Methyl Bromide	50
Bromoform	10	Methylene Chloride	20
Carbon Tetrachloride	2	1,1,2,2-Tetrachloroethane	10
Chlorobenzene	10	Tetrachloroethylene	10
Clorodibromomethane	10	Toluene	10
Chloroform	50	1,2-trans-Dichloroethylene	10
Dichlorobromomethane	10	1,1,2-Trichloroethane	10
1,2-Dichloroethane	10	Trichloroethylene	10
1,1-Dichloroethylene	10	Vinyl Chloride	10
1,2-Dichloropropane	10		
ACID COMPOUNDS			
2-Chlorophenol	10	2,4-Dinitrophenol	50
2,4-Dichlorophenol	10	Pentachlorophenol	5
2,4-Dimethylphenol	10	Phenol	10
4,6-Dinitro-o-Cresol	50	2,4,6-Trichlorophenol	10

POLLUTANTS	MQL µg/l	POLLUTANTS	MQL µg/l
		BASE/NEUTRAL	
Acenaphthene	10	Dimethyl Phthalate	10
Anthracene	10	Di-n-Butyl Phthalate	10
Benzidine	50	2,4-Dinitrotoluene	10
Benzo(a)anthracene	5	1,2-Diphenylhydrazine	20
Benzo(a)pyrene	5	Fluoranthene	10
3,4-Benzofluoranthene	10	Fluorene	10
Benzo(k)fluoranthene	5	Hexachlorobenzene	5
Bis(2-chloroethyl)Ether	10	Hexachlorobutadiene	10
Bis(2-chloroisopropyl)Ether	10	Hexachlorocyclopentadiene	10
Bis(2-ethylhexyl)Phthalate	10	Hexachloroethane	20
Butyl Benzyl Phthalate	10	Indeno(1,2,3-cd)Pyrene	5
2-Chloronapthalene	10	Isophorone	10
Chrysene	5	Nitrobenzene	10
Dibenzo(a,h)anthracene	5	n-Nitrosodimethylamine	50
1,2-Dichlorobenzene	10	n-Nitrosodi-n-Propylamine	20
1,3-Dichlorobenzene	10	n-Nitrosodiphenylamine	20
1,4-Dichlorobenzene	10	Pyrene	10
3,3'-Dichlorobenzidine	5	1,2,4-Trichlorobenzene	10
Diethyl Phthalate	10		
		PESTICIDES AND PCBS	
Aldrin	0.01	Beta-Endosulfan	0.02
Alpha-BHC	0.05	Endosulfan sulfate	0.02
Beta-BHC	0.05	Endrin	0.02
Gamma-BHC	0.05	Endrin Aldehyde	0.1
Chlordane	0.2	Heptachlor	0.01
4,4'-DDT and derivatives	0.02	Heptachlor Epoxide	0.01
Dieldrin	0.02	PCBs **	0.2
Alpha-Endosulfan	0.01	Toxaphene	0.3

(MQL's Revised November 1, 2007)

(*) Default MQL for Mercury is 0.005 unless Part I of your permit requires the more sensitive Method 1631 (Oxidation / Purge and Trap / Cold vapor Atomic Fluorescence Spectrometry), then the MQL shall be 0.0005.

(**) EPA Method 1668 should be utilized when PCB water column monitoring is conducted to determine compliance with permit requirements. Either the Arochlor test (EPA Method 8082) or USGS test method (8093) may be utilized for purposes of sediment sampling as part of a screening program, but must use EPA Method 1668 (latest revision) for confirmation and determination of specific PCB levels at that location.

Appendix G – Oxygen Saturation and Dissolved Oxygen Concentrations North Diversion Channel Area

Concentrations of dissolved oxygen in water at various atmospheric pressures and temperatures with 100 percent oxygen saturation, 54.3 percent oxygen saturation (associated with hypoxia and harassment of silvery minnows), and 8.7 percent oxygen saturation (associated with anoxia and lethality of silvery minnows) at the North Diversion Channel (NDC) (based on USGS DO website <http://water.usgs.gov/software/DOTABLES/> for pressures between 628 to 648 millimeters of mercury (Hg)). Source: Biological Consultation Cons. #22420-2011-F-0024-R001

Water temp.	100°/o Oxygen Saturation at NDC			54.3% saturation = Harassmen			8.7% saturation= 50%Lethality		
("C)	628mmHg	638mmHg	648mmHg	628mmHg	638mmHg	648mmHg	628mmHg	638mmHg	64BmmHg
0	12.1	12.3	12.5	66	6.7	6.8	1.1	1.1	1.1
1	11.7	11.9	12.1	64	6.5	6.6	1.0	1.0	11
2	11.4	11.6	11.8	6.2	6.3	8.4	1.0	1.0	1.0
▼	11.1	11.3	11.5	6.0	6.1	6.2	1.0	1.0	1.0
4	10.8	11	11.2	5.9	6.0	6.1	0.9	1.0	1.0
5	10.5	10.7	10.9	5.7	5.8	59	0.9	0.9	0.9
6	10.3	10.4	10.6	5.6	5.8	5.0	0.9	0.9	0.9
7	10	10.2	10.3	5.4	5.5	5.6	0.9	09	0.9
8	9.8	9.9	10.1	5.3	5.4	5.5	0.9	0.9	0.9
8	9.5	9.7	9.6	52	53	5.3	08	0.8	0.9
▼▼	93	9.5	96	50	5.2	5.2	0.0	0.8	0.8
11	9.1	9.2	9.4	4.9	5.0	5.1	0.8	0.8	08
12	8.9	9	9.2	4.8	4.9	5.0	0.8	0.8	08
13	8.7	8.8	9	4.7	4.8	4.9	0.8	0.8	0.8
14	8.5	8.6	8.8	4.8	4.7	4.8	0.7	0.7	0.0
15	8.3	8.4	8.8	4.5	4.6	4.7	0.7	0.7	0.7
16	0.1	83	0.4	4.4	4.5	4.6	07	0.7	0.7
17	8	8.1	8.2	4.3	4.4	4.5	0.7	0.7	0.7
16	7.8	7.9	8	4.2	43	43	07	0.7	0.7
19	76	7.8	7.9	4.1	4.2	4.3	0.7	07	0.7
20	7.5	76	7.7	4.1	4.1	42	07	07	0.7
21	7.3	7.4	7.6	4.0	4.0	4.1	0.6	0.6	0.7
22	7.2	7.3	7.4	3.9	4.0	4.0	0.6	0.6	0.6
23	7	72	7.3	3.8	3.9	4.0	0.6	0.6	0.6
24	6.9	7	7.1	3.7	3.8	3.9	0.6	0.6	0.6
25	6.8	69	7	3.7	3.7	3.6	0.6	0.6	0.6
26	6.7	68	6.9	3.6	3.7	3.7	0.6	0.6	06
27	6.5	8.6	8.8	3.5	3.6	3.7	06	0.6	0.8
26	6.4	8.5	8.6	3.5	3.5	3.6	0.6	0.8	08
29	6.3	8.4	6.5	3.4	3.5	3.5	0.5	06	0.8
20	82	8.3	6.4	3.4	3.4	3.5	0.5	0.5	0.8
31	6.1	6.2	6.3	3.3	3.4	3.4	0.5	0.5	OS
32	6	6.1	6.2	3.3	3.3	34	0.5	0.5	0.5
33	5.0	6	6.1	3.2	3.3	3.3	0.5	0.5	0.5
34	5.8	5.9	6	3.1	3.2	3.3	0.5	0.5	0.5
	5.7	5.6	5.9	31	3.1	3.2	0.5	0.5	0.5

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Exhibit 3

Boise, ID – Boise/Garden City Area MS4 Permit (Permit No. IDS-027561)

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United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101

Authorization to Discharge Under the
National Pollutant Discharge Elimination System

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 *et seq.*, as amended by the Water Quality Act of 1987, P.L. 100-4, the "Act",

Ada County Highway District,
Boise State University,
City of Boise,
City of Garden City.
Drainage District #3,
and the Idaho Transportation Department District #3,

(hereinafter "the Permittees")

are authorized to discharge from all municipal separate storm sewer system (MS4) outfalls existing as of the effective date of this Permit to waters of the United States, including the Boise River and its tributaries, in accordance with the conditions set forth herein.

This Permit will become effective February 1, 2013.

This Permit, and the authorization to discharge, expires at midnight, January 30, 2018.

Permittees must reapply for permit reissuance on or before August 3, 2017, 180 days before the expiration of this Permit, if the Permittees intend to continue operations and discharges from the MS4s beyond the term of this Permit.

Signed this 12th day of December, 2012.

Daniel D. Opalski, Director
Office of Water and Watersheds, Region 10
U.S. Environmental Protection Agency

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I. Applicability

A. Permit Area. This Permit covers all areas within the corporate boundary of the City of Boise and Garden City, Idaho, which are served by the municipal separate storm sewer systems (MS4s) owned or operated by the Ada County Highway District, Boise State University, City of Boise, City of Garden City, Drainage District #3, and/or the Idaho Transportation Department District #3 (the Permittees).

B. Discharges Authorized Under This Permit. Subject to the conditions set forth herein, the Permittees are authorized to discharge storm water to waters of the United States from the MS4s identified in Part I.A.

As provided in Part I.D, this Permit also authorizes the discharge of flows from the MS4s which are categorized as allowable non-storm water discharge, storm water discharge associated with industrial activity, and storm water discharge associated with construction activity.

C. Permittees' Responsibilities

1. **Individual Responsibility**. Each Permittee is individually responsible for Permit compliance related only to portions of the MS4 owned or operated solely by that Permittee, or where this Permit requires a specific Permittee to take an action.
2. **Joint Responsibility.** Each Permittee is jointly responsible for Permit compliance:
   a) related to portions of the MS4 where operational or storm water management program (SWMP) implementation authority has been transferred to all of the Permittees in accordance with an intergovernmental agreement or agreement between the Permittees;
   b) related to portions of the MS4 where Permittees jointly own or operate a portion of the MS4;
   c) related to the submission of reports or other documents required by Parts II and IV of this Permit; and
   d) Where this Permit requires the Permittees to take an action and a specific Permittee is not named.
3. **Intergovernmental Agreement.** The Permittees must maintain an intergovernmental agreement describing each organization's respective roles and responsibilities related to this Permit. Any previously signed agreement may be updated, as necessary, to comply with this requirement. An updated intergovernmental agreement must be completed no later than July 1, 2013. A copy of the updated intergovernmental agreement must be submitted to the Environmental Protection Agency (EPA) with the 1st Year Annual Report.

D. Limitations on Permit Coverage

1. **Non-Storm Water Discharges**. Permittees are not authorized to discharge non-storm water from the MS4, except where such discharges satisfy one of the following three conditions:

   a) The non-storm water discharges are in compliance with a separate NPDES permit;

   b) The non-storm water discharges result from a spill and:

      (i) are the result of an unusual and severe weather event where reasonable and prudent measures have been taken to prevent and minimize the impact of such discharge; or

      (ii) consist of emergency discharges required to prevent imminent threat to human health or severe property damage, provided that reasonable and prudent measures have been taken to prevent and minimize the impact of such discharges;

   or

   c) The non-storm water discharges satisfy each of the following two conditions:

      (i) The discharges consist of uncontaminated water line flushing; potable water sources; landscape irrigation (provided all pesticides, herbicides and fertilizer have been applied in accordance with manufacturer's instructions); lawn watering; irrigation water; flows from riparian habitats and wetlands; diverted stream flows; springs; rising ground waters; uncontaminated ground water infiltration (as defined at 40 CFR § 35.2005(20)) to separate storm sewers; uncontaminated pumped ground water or spring water; foundation and footing drains (where flows are not contaminated with process materials such as solvents); uncontaminated air conditioning or compressor condensate; water from crawlspace pumps; individual residential car washing; dechlorinated swimming pool discharges; routine external building wash down which does not use detergents; street and pavement wash waters, where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed); fire hydrant flushing; or flows from emergency firefighting activities; and

      (ii) The discharges are not sources of pollution to waters of the United States. A discharge is considered a source of pollution to waters of the United States if it:

         1) Contains hazardous materials in concentrations found to be of public health significance or to impair beneficial uses in receiving waters. (Hazardous materials are those

that are harmful to humans and animals from exposure, but not necessarily ingestion);

2) Contains toxic substances in concentrations that impair designated beneficial uses in receiving waters. (Toxic substances are those that can cause disease, malignancy, genetic mutation, death, or similar consequences);

3) Contains deleterious materials in concentrations that impair designated beneficial uses in receiving waters. (Deleterious materials are generally substances that taint edible species of fish, cause taste in drinking waters, or cause harm to fish or other aquatic life);

4) Contains radioactive materials or radioactivity at levels exceeding the values listed in 10 CFR Part 20 in receiving waters;

5) Contains floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or in concentrations that may impair designated beneficial uses in receiving waters;

6) Contains excessive nutrients that can cause visible slime growths or other nuisance aquatic growths that impair designated beneficial uses in receiving waters;

7) Contains oxygen-demanding materials in concentrations that would result in anaerobic water conditions in receiving waters; or

8) Contains sediment above quantities specified in IDAPA 58.01.02.250.02.e or in the absence of specific sediment criteria, above quantities that impair beneficial uses in receiving waters; or

9) Contains material in concentrations that exceed applicable natural background conditions in receiving waters (IDAPA 58.01.02.200. 09). Temperature levels may be increased above natural background conditions when allowed under IDAPA 58.01.02.401.

2. **Discharges Threatening Water Quality.** Permittees are not authorized to discharge storm water that will cause, or have the reasonable potential to cause or contribute to, an excursion above the Idaho water quality standards.

3. **Snow Disposal to Receiving Waters**. Permittees are not authorized to push or dispose of snow plowed within the Permit area directly into waters of the United States, or directly into the MS4(s). Discharges from any Permittee's snow disposal and snow management practices are authorized under this Permit only when such sites and practices are designed, conducted, operated, and maintained to prevent and reduce pollutants in the discharges to the maximum

extent practicable so as to avoid excursions above the Idaho water quality standards.

4. **Storm Water Discharge Associated with Industrial and Construction Activity.** Permittees are authorized to discharge storm water associated with industrial activity (as defined in 40 CFR 122.26(b)(14)), and storm water associated with construction activity (as defined in 40 CFR 122.26(b)(14)(x) and (b)(15)), from their MS4s, only when such discharges are otherwise authorized under an appropriate NPDES permit.

II. Storm Water Management Program (SWMP) Requirements

A. General Requirements

1. **Reduce pollutants to the maximum extent practicable.** The Permittees must implement and enforce a SWMP designed to reduce the discharge of pollutants from their MS4 to the maximum extent practicable (MEP), and to protect water quality in receiving waters. The SWMP as defined in this Permit must include best management practices (BMPs), controls, system design, engineering methods, and other provisions appropriate to control and minimize the discharge of pollutants from the MS4s.

   a) **SWMP Elements**. The required SWMP control measures are outlined in Part II.SWMP assessment/monitoring requirements are described in Part IV. Each Permittee must use practices that are selected, implemented, maintained, and updated to ensure that storm water discharges do not cause or contribute to an exceedance of an applicable Idaho water quality standard.

   b) **SWMP Documentation.** Each Permittee must prepare written documentation of the SWMP as implemented within their jurisdiction. The SWMP documentation must be organized according to the program components in Parts II and IV of this Permit, and must provide a current narrative physical description of the Permittee's MS4, illustrative maps or graphics, and all related ordinances, policies and activities as implemented within their jurisdiction. Each Permittee's SWMP documentation must be submitted to EPA with the 1st Year Annual Report.

      (i) Each Permittee must provide an opportunity for public review and comment on their SWMP documentation, consistent with applicable state or local requirements and Part II.B.6 of this Permit.

      (ii) Each Permittee's SWMP documentation must be updated at least annually and submitted as part of each subsequent Annual Report. (The document format used for Annual Report(s) submitted to EPA by the Permittees' prior to the effective date of this Permit may be modified to meet this requirement.)

   c) **SWMP Information.** The SWMP must include an ongoing program for gathering, tracking, maintaining, and using information to set priorities, evaluate SWMP implementation and Permit compliance.

d) **SWMP Statistics**. Permittees must track the number of inspections, official enforcement actions and types of public education activities and outcomes as stipulated by the respective program component. This information must be included in the Annual Report.

2. **Shared Implementation with outside entities.** Implementation of one or more of the SWMP minimum control measures may be shared with or delegated to another entity other than the Permittee(s). A Permittee may rely on another entity only if:

   a) The other entity, in fact, implements the minimum control measure;

   b) The action, or component thereof , is at least as stringent as the corresponding Permit requirement; and

   c) The other entity agrees to implement the minimum control measure on the Permittee's behalf. A binding written acceptance of this obligation is required. Each Permittee must maintain and record this obligation as part of the SWMP documentation. If the other entity agrees to report on the minimum control measure, the Permittees must supply the other entity with the reporting requirements in Part IV.C of this Permit. The Permittees remain responsible for compliance with the Permit obligation if the other entity fails to implement the required minimum control measure.

3. **Modification of the SWMP**. Minor modifications to the SWMP may be made in accordance with Part II.E of this Permit.

4. **Subwatershed Planning.** No later than September 30, 2016, the Permittees must jointly complete at least two individual sub-watershed plans for areas served by the MS4s within the Permit area. For the purposes of this Permit, the terms "subwatershed" and "storm sewershed" are defined as in Part VII. For each plan document, the subwatershed planning area must drain to at least one of the water bodies listed in Table II.C.

   Selected subwatersheds must be identified in the 1st Year Annual Report. Two completed subwatershed plan documents must be submitted to EPA as part of the 4th Year Annual Report.

   a) The Permittees must actively engage stakeholders in the development of each plan, and must provide opportunities for public input, consistent with Part II.B.6.

   b) The Permittees may modify and update any existing watershed planning document(s) to address the requirements of this Part.

   c) Each subwatershed plan must describe the extent and nature of the existing storm sewershed, and identify priority aquatic resources and beneficial uses to be protected or restored within the subwatershed planning area. Each subwatershed plan must contain a prioritized list of potential locations or opportunities for protecting or restoring such resources or beneficial uses through storm water infiltration, evapotranspiration or rainfall

harvesting/reuse, or other site-based low impact development (LID) practices. See Parts II.B.2.a, and II.B.2.c.

d) Each subwatershed plan must include consideration and discussion of how the Permittees will provide incentives, or enforce requirements, through their respective Stormwater Management Programs to address the following principles:

(i) Minimize the amount of impervious surfaces (roads, parking lots, roofs) within each watershed, by minimizing the creation, extension and widening of roads and associated development.

(ii) Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to; riparian corridors, headwaters, floodplains and wetlands.

(iii) Prevent or reduce thermal impacts to water bodies, including requiring vegetated buffers along waterways, and disconnecting discharges to surface waters from impervious surfaces such as parking lots.

(iv) Seek to avoid or prevent hydromodification of streams and other water bodies caused by development, including roads, highways, and bridges.

(v) Preserve and protect trees, and other vegetation with important evapotranspirative qualities.

(vi) Preserve and protect native soils, prevent topsoil stripping, and prevent compaction of soils.

B. Minimum Control Measures. The following minimum control measures must be accomplished through each Permittee's Storm Water Management Program:

1. **Construction Site Runoff Control Program.** The Permittees must implement a construction site runoff control program to reduce discharges of pollutants from public and private construction activity within its jurisdiction.

The Permittees' construction site management program must include the requirements described below:

a) **Ordinance and/or other regulatory mechanism**. To the extent allowable under local or state law, Permittees must adopt, implement, and enforce requirements for erosion controls, sediment controls, and materials management techniques to be employed and maintained at each construction project from initial clearing through final stabilization. Each Permittee must require construction site operators to maintain adequate and effective controls to reduce pollutants in storm water discharges from construction sites. The Permittees must use enforcement actions (such as, written warnings, stop work orders or fines) to ensure compliance.

No later than September 30, 2015, each Permittee must update their ordinances or other regulatory mechanisms, as necessary, to be consistent with this Permit and with the current version of the *NPDES General Permit for Storm Water Discharges from Construction Activities*, Permit #IDR12-0000 (NPDES Construction General Permit or CGP).

b) **Manuals Describing Construction Storm Water Management Controls and Specifications.** The Permittees must require construction site operators within their jurisdiction to use construction site management controls and specifications as defined within manuals adopted by the Permittees.

No later than September 30, 2015, the Permittees must update their respective manuals, as necessary, to include requirements for the proper installation and maintenance of erosion controls, sediment controls, and material containment/pollution prevention controls during all phases of construction activity. The manual(s) must include all acceptable control practices, selection and sizing criteria, illustrations, and design examples, as well as recommended operation and maintenance of each practice. At a minimum, the manual(s) must include requirements for erosion control, sediment control, and pollution prevention which complement and do not conflict with the current version of the CGP. If the manuals previously adopted by the individual Permittee do not meet these requirements, the Permittee may create supplemental provisions to include as part of the adopted manual in order to comply with this Permit.

c) **Plan Review and Approval.** The Permittees must review and approve preconstruction site plans from construction site operators within their jurisdictions. Permittees must ensure that the construction site operator is prohibited from commencing construction activity prior to receipt of written approval.

(i) The Permittees must not approve any erosion and sediment control (ESC) plan or Storm Water Pollution Prevention Plan (SWPPP) unless it contains appropriate site-specific construction site control measures meeting the Permittee's requirements as outlined in Part II.B.1.b.

(ii) Prior to the start of a construction project disturbing one or more acres, or disturbing less than one acre but is part of a larger common plan of development, the Permittees must advise the construction site operator(s) to seek or obtain necessary coverage under the NPDES Construction General Permit.

(iii) Permittees must use qualified individuals, knowledgeable in the technical review of ESC plans/SWPPPs, to conduct such reviews.

(iv) Permittees must document the review of each ESC plan and/or SWPPP using a checklist or similar process.

d) **Construction Site Inspections**. The Permittees must inspect construction sites occurring within their jurisdictions to ensure compliance with their

applicable requirements. The Permittees may establish an inspection prioritization system to identify the frequency and type of inspection based upon such factors as project type, total area of disturbance, location, and potential threat to water quality. If a prioritization system is used, the Permittee must include a description of the current inspection prioritization in the SWMP document required in Part II.A, and summarize the nature and number of inspections conducted during the previous reporting period in each Annual Report.

(i) Inspections of construction sites must include, but not be limited to:

- As applicable, a check for coverage under the Construction General Permit by reviewing any authorization letter or Notice of Intent (NOI) during initial inspections;
- Review the applicable ESC plan/SWPPP to determine if control measures have been installed, implemented, and maintained as approved;
- Assessment of compliance with the Permittees' ordinances/requirements related to storm water runoff, including the implementation and maintenance of required control measures;
- Assessment of the appropriateness of planned control measures and their effectiveness;
- Visual observation of non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;
- Education or instruction related to on storm water pollution prevention practices, as needed or appropriate; and
- A written or electronic inspection report.

(ii) The Permittees must track the number of construction site inspections conducted throughout the reporting period, and verify that the sites are inspected at the minimum frequencies required by the inspection prioritization system. Construction site inspections must be tracked and reported with each Annual Report.

(iii) Based on site inspection findings, each Permittee must take all necessary follow-up actions (i.e., re-inspection, enforcement) to ensure compliance. Follow-up and enforcement actions must be tracked and reported with each Annual Report.

e) **Enforcement Response Policy for Construction Site Management Program**. No later than September 30, 2016, each Permittee must develop and implement a written escalating enforcement response policy (ERP) appropriate to their organization. Upon implementation of the policy in its jurisdiction, each Permittee must submit its completed ERP to EPA with the 4th Year Annual Report. The ERP for City of Boise, City of Garden City, and Ada County Highway District must address enforcement of construction site runoff controls for all currently regulated construction projects within their jurisdictions. The ERP for Idaho Transportation Department District 3, Drainage District 3, and Boise State University must address contractual enforcement of construction site runoff controls at construction sites within their jurisdictions. Each ERP must describe the Permittee's potential responses to violations with an appropriate educational or enforcement response. The ERP must address repeat violations through progressively stricter responses as needed to achieve compliance. Each ERP must describe how the Permittee will use the following types of enforcement response, as available, based on the type of violation:

(i) Verbal Warnings: Verbal warnings are primarily consultative in nature. At a minimum, verbal warnings must specify the nature of violation and required corrective action.

(ii) Written Notices: Written notices must stipulate the nature of the violation and the required corrective action, with deadlines for taking such action.

(iii) Escalated Enforcement Measures: The Permittees must have the legal ability to employ any combination of the enforcement actions below (or their functional equivalent):

- The ERP must indicate when the Permittees will initiate a Stop Work Order. Stop work orders must require that construction activities be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate control measures.
- The Permittees must also use other escalating measures provided under local or state legal authorities, such as assessing monetary penalties. The Permittees may perform work necessary to improve erosion control measures and collect the funds from the responsible party in an appropriate manner, such as collecting against the project's bond, or directly billing the responsible party to pay for work and materials.

f) **Construction General Permit Violation Referrals.** For those construction projects which are subject to the NPDES Construction General Permit and do not respond to Permittee educational efforts, the Permittee may provide to EPA information regarding construction project operators which cannot demonstrate that they have appropriate NPDES Permit

coverage and/or site operators deemed by the Permittee as not complying with the NPDES Construction General Permit. Permittees may submit such information to the EPA NPDES Compliance Hotline in Seattle, Washington, by telephone, at (206) 553-1846, and include, at a minimum, the following information:

- Construction project location and description;
- Name and contact information of project owner/ operator;
- Estimated construction project disturbance size; and
- An account of information provided by the Permittee to the project owner/ operator regarding NPDES filing requirements.

(i) **Enforcement Tracking.** Permittees must track instances of non-compliance either in hard-copy files or electronically. The enforcement case documentation must include, at a minimum, the following:

- Name of owner/operator;
- Location of construction project;
- Description of violation;
- Required schedule for returning to compliance;
- Description of enforcement response used, including escalated responses if repeat violations occur;
- Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violations, etc.); and
- Any referrals to different departments or agencies.

g) **Construction Program Education and Training.** Throughout the Permit term, the Permittees must ensure that all staff whose primary job duties are related to implementing the construction program (including permitting, plan review, construction site inspections, and enforcement) are trained to conduct such activities. The education program must also provide regular training opportunities for construction site operators. This training must include, at a minimum:

(i) *Erosion and Sediment Control/Storm Water Inspectors*:

- Initial training regarding proper control measure selection, installation and maintenance as well as administrative requirements such as inspection reporting/tracking and the implementation of the enforcement response policy; and

- Annual refresher training for existing inspection staff to update them on preferred BMPs, regulation changes, Permit updates, and policy or standards updates.

(ii) *Other Construction Inspectors*: Initial training on general storm water issues, basic control measure implementation information, and procedures for notifying the appropriate personnel of noncompliance.

(iii) *Plan Reviewers*:

- Initial training regarding control measure selection, design standards, review procedures;

- Annual training regarding new control measures, innovative approaches, Permit updates, regulation changes and policy or standard updates.

(iv) *Third-Party Inspectors and Plan Reviewers*. If the Permittee utilizes outside parties to either conduct inspections and or review plans, these outside staff must be trained per the requirements listed in Part II.B.1.f.i.-iii above.

(v) *Construction Operator Education*. At a minimum, the Permittees must educate construction site operators within the Permit area as follows:

- At least once per year, the Permittees must either provide information to all construction companies on existing training opportunities or develop new training for construction operators regarding appropriate selection, installation, and use of required construction site control measures at sites within the Permit area.
- The Permittees must require construction site operators to have at least one person on-site during construction that is appropriately trained in erosion and sediment control.
- The Permittees must require construction operators to attend training at least once every three years.
- The Permittees must provide appropriate information and outreach materials to all construction operators who may disturb land within their jurisdiction.

2. Storm Water Management for Areas of New Development and Redevelopment. At a minimum, the Permittees must implement and enforce a program to control storm water runoff from new development and redevelopment projects that result in land disturbance of 5,000 square feet or more, excluding individual one or two family dwelling development or redevelopment. This program must apply to private and public sector development, including roads and streets. The program implemented by the Permittees must ensure that permanent controls or practices are utilized at each new development and redevelopment site to protect water quality. The program must include, at a minimum, the elements described below:

a) **Ordinance or other regulatory mechanisms**. No later than the expiration date of this Permit, each Permittee must update its applicable ordinance or regulatory mechanism which requires the installation and long-term maintenance of permanent storm water management controls at new development and redevelopment projects. Each Permittee must update their ordinance/regulatory mechanism to the extent allowed by local and state law, consistent with the individual Permittee's respective legal authority. Permittees must submit their revised ordinance/regulatory mechanism as part of the 5th Year Annual Report.

(i) The ordinance/regulatory mechanism must include site design standards for all new and redevelopment that require, in combination or alone, storm water management measures that keep and manage onsite the runoff generated from the first 0.6 inches of rainfall from a 24-hour event preceded by 48 hours of no measureable precipitation. Runoff volume reduction can be achieved by canopy interception, soil amendments, bioretention, evapotranspiration, rainfall harvesting, engineered infiltration, extended filtration, and/or any combination of such practices that will capture the first 0.6 inches of rainfall. An Underground Injection Control permit may be required when certain conditions are met. The ordinance or regulatory mechanism must require that the first 0.6 inches of rainfall be 100% managed with no discharge to surface waters, except when the Permittee chooses to implement the conditions of II.B.2.a.ii below.

(ii) For projects that cannot meet 100% infiltration/evapotranspiration/reuse requirements onsite, the Permittees' program may allow offsite mitigation within the same subwatershed, subject to siting restrictions established by the Permittee. The Permittee allowing this option must develop and apply criteria for determining the circumstances under which offsite mitigation may be allowed. A determination that the onsite retention requirement cannot be met must be based on multiple factors, including but not limited to technical feasibility or logistic practicality (e.g. lack of available space, high groundwater, groundwater contamination, poorly infiltrating soils, shallow bedrock, and/or a land use that is inconsistent with

capture and reuse or infiltration of storm water). Determinations may not be based solely on the difficulty and/or cost of implementing such measures. The Permittee(s) allowing this option must create an inventory of appropriate mitigation projects and develop appropriate institutional standards and management systems to value, estimate and track these situations. Using completed subwatershed plans or other mechanisms, the Permittee(s) must identify priority areas within subwatersheds in which off-site mitigation may be conducted.

(iii) The ordinance or regulatory mechanism must include the following water quality requirements:

- Projects with potential for excessive pollutant loading(s) must provide water quality treatment for associated pollutants before infiltration.
- Projects with potential for excessive pollutant loading(s) that cannot implement adequate preventive or water quality treatment measures to ensure compliance with Idaho surface water standards must properly convey storm water to a NPDES permitted wastewater treatment facility or via a licensed waste hauler to a permitted treatment and disposal facility.

(iv) The ordinance or other regulatory mechanism must include procedures for the Permittee's review and approval of permanent storm water management plans for new development and redevelopment projects consistent with Part II.B.1.d.

(v) The ordinance or other regulatory mechanism must include sanctions (including fines) to ensure compliance, as allowed under state or local law.

b) **Storm Water Design Criteria Manual.** No later than September 30, 2015, each Permittee must update as necessary their existing Storm Water Design Criteria Manual specifying acceptable permanent storm water management and control practices. The manual must contain design criteria for each practice. In lieu of updating a manual, a Permittee may adopt a manual created by another entity which complies with this section. The manual must include:

(i) Specifications and incentives for the use of site-based practices appropriate to local soils and hydrologic conditions;

(ii) A list of acceptable practices, including sizing criteria, performance criteria, design examples, and guidance on selection and location of practices; and

(iii) Specifications for proper long term operation and maintenance, including appropriate inspection interval and self-inspection checklists for responsible parties.

c) **Green Infrastructure/Low Impact Development (LID) Incentive Strategy and Pilot Projects**. No later than September 30, 2015, the Permittees must develop a strategy to provide incentives for the increased use of LID techniques in private and public sector development projects within each Permittee's jurisdiction. Permittees must comply with applicable State and local public notice requirements when developing this Strategy. Pursuant to Part IV.A.2.a, the Strategy must reference methods of evaluating at least three (3) Green Infrastructure/LID pilot projects as described below. Permittees must implement the Green Infrastructure/LID Incentive Strategy, and complete an effectiveness evaluation of at least three pilot projects, prior to the expiration date of this Permit.

(i) As part of the 3rd Year Annual Report, the Permittees must submit the written Green Infrastructure /LID Incentive Strategy; the Strategy must include a description of at least three selected pilot projects, and a narrative report on the progress to evaluate the effectiveness of each selected LID technique or practice included in the pilot project. Each pilot project must include an evaluation of the effectiveness of LID technique(s) or practice(s) used for on-site control of water quality and/or quantity. Each Pilot Project must involve at least one or more of the following characteristics:

- The project manages runoff from at least 3,000 square feet of impervious surface;
- The project involves transportation related location(s) (including parking lots);
- The drainage area of the project is greater than five acres in size; and/or
- The project involves mitigation of existing storm water discharges to one or more of the water bodies listed in Table II.C.

(ii) Consistent with Part IV.A.10, the Permittees must evaluate the performance of LID technique(s) or practice(s) in each pilot project, and include a progress report on overall strategy implementation in the 4th Annual Report. Final pilot project evaluations must be submitted in the 5th Year Annual Report. The Permittees must monitor, calculate or model changes in runoff quantities for each of the pilot project sites in the following manner:

- For retrofit projects, changes in runoff quantities shall be calculated as a percentage of 100% pervious surface before and after implementation of the LID technique(s) or practice(s).
- For new construction projects, changes in runoff quantities shall be calculated for development scenarios both with LID technique(s) or practice(s) and without LID technique(s) or practice(s).

- The Permittees must measure runoff flow rate and subsequently prepare runoff hydrographs to characterize peak runoff rates and volumes, discharge rates and volumes, and duration of discharge volumes. The evaluation must include quantification and description of each type of land cover contributing to surface runoff for each pilot project, including area, slope, vegetation type and condition for pervious surfaces, and the nature of impervious surfaces.
- The Permittees must use these runoff values to evaluate the overall effectiveness of various LID technique(s) or practice(s) and to develop recommendations for future adoption of LID technique(s) or practice(s) that address appropriate use, design, type, size, soil type and operation and maintenance practices.

(iii) **Riparian Zone Management and Outfall Disconnection.** No later than September 30, 2015, the Permittees must identify and prioritize riparian areas appropriate for Permittee acquisition and protection. Prior to the expiration date of this Permit, the Permittees must undertake and complete at least one project designed to reduce the flow of untreated urban storm water discharging through the MS4 system through the use of vegetated swales, storm water treatment wetlands and/or other appropriate techniques. The Permittees must submit the list of prioritized riparian protection areas, and a status report on the planning and implementation of the outfall disconnection project, as part of the 3rd Year Annual Report. Documentation of the completed outfall disconnection project must be included in the 5th Year Annual Report.

(iv) **Repair of Public Streets, Roads and Parking Lots.** When public streets, roads or parking lots are repaired (as defined in Part VII), the Permittees performing these repairs must evaluate the feasibility of incorporating runoff reduction techniques into the repair by using canopy interception, bioretention, soil amendments, evaporation, rainfall harvesting, engineered infiltration, rain gardens, infiltration trenches, extended filtration and/or evapotranspiration and/or any combination of the aforementioned practices. Where such practices are found to be technically feasible, the Permittee performing the repair must use such practices in the design and repair. These requirements apply only to projects whose design process is started after the effective date of this Permit. As part of the 5th Year Annual Report, the Permittees must list the locations of street, road and parking lot repair work completed since the effective date of the Permit that have incorporated such runoff reduction practices, and the receiving water body(s) benefitting from such practices. This documentation must include a general description of the project design, estimated total cost, and estimates of total flow

volume and pollutant reduction achieved compared to traditional design practices.

d) **Plan Review and Approval.** The Permittees must review and approve pre-construction plans for permanent storm water management. The Permittees must review plans for consistency with the ordinance/regulatory mechanism and Storm Water Design Criteria Manual required by this Part. The Permittees must ensure that the project operator is prohibited from commencing construction activity prior to receipt of written approval from the Permittee.

(i) The Permittees must not approve or recommend for approval any plans for permanent storm water controls that do not contain appropriate permanent storm water management practices that meet the minimum requirements specified in this Part.

(ii) Permittees must use qualified individuals, knowledgeable in the technical review of plans for permanent storm water controls to conduct such reviews.

(iii) Permittees must document the review of each plan using a checklist or similar process.

e) **Operation and Maintenance (O&M) of Permanent Storm Water Management Controls.**

(i) **Inventory and Tracking.** The Permittees must maintain a database tracking all new public and private sector permanent storm water controls. No later than January 30, 2018, all of the available data on existing permanent storm water controls known to the Permittees must be included in the inventory database. For the purposes of this Part, new permanent controls are those installed after February 1, 2013; existing permanent controls are those installed prior to February 1, 2013. The tracking must begin in the plan review stage with a database that incorporates geographic information system (GIS) information. The tracking system must also include, at a minimum: type and number of practices; O&M requirements, activity and schedule; responsible party; and self-inspection schedule.

(ii) **O&M Agreements.** Where parties other than the Permittees are responsible for operation and maintenance of permanent storm water controls, the Permittees must require a legally enforceable and transferable O&M agreement with the responsible party, or other mechanism, that assigns permanent responsibility for maintenance of structural or treatment control storm water management practices.

f) **Inspection and Enforcement of Permanent Storm Water Management Controls.** The Permittees must ensure proper long term operation and

maintenance of all permanent storm water management practices within the Permittees' respective jurisdiction. The Permittees must implement an inspection program, and define and prioritize new development and redevelopment sites for inspections of permanent storm water management controls. Factors used to prioritize sites must include, but not be limited to: size of new development or redevelopment area; sensitivity and/or impaired status of receiving water(s); and, history of non-compliance at the site during the construction phase.

(i) No later than September 30, 2017, all high priority locations must be inventoried and associated inspections must be scheduled to occur at least once annually. The inspections must determine whether storm water management or treatment practices have been properly installed (i.e., an "as built" verification). The inspections must evaluate the operation and maintenance of such practices, identify deficiencies and potential solutions, and assess potential impacts to receiving waters.

(ii) No later than September 30, 2017, the Permittees must develop checklists to be used by inspectors during these inspections, and must maintain records of all inspections conducted on new development and redevelopment sites.

(iii) No later than September 30, 2017, the Permittees must develop and implement an enforcement strategy similar to that required in Section II.B.1.e to maintain the integrity of permanent storm water management and treatment practices.

g) **Education and Training on Permanent Storm Water Controls**. No later than September 30, 2015, the Permittees must begin a training program for appropriate audiences regarding the selection, design, installation, operation and maintenance of permanent storm water controls. The training program and materials must be updated as necessary to include information on updated or revised storm water treatment standards, design manual specifications, Low Impact Development techniques or practices, and proper operation and maintenance requirements.

(i) No later than September 30, 2016, and annually thereafter, all persons responsible for reviewing plans for new development and redevelopment and/or inspecting storm water management practices and treatment controls must receive training sufficient to determine the adequacy of storm water management and treatment controls at proposed new development and redevelopment sites.

(ii) No later than September 30, 2016, and at least annually thereafter, Permittees must provide training to local audiences on the storm water management requirements described in this Part.

3. Industrial and Commercial Storm Water Discharge Management. The Permittees must implement a program to reduce to the MEP the discharge of pollutants from industrial and commercial operations within their jurisdiction. Throughout the Permit term, the Permittees must conduct educational and/or enforcement efforts to reduce the discharge of pollutants from those industrial and commercial locations which are considered to be significant contributors of phosphorus, bacteria, temperature, and/or sediment to receiving waters. At a minimum, the program must include the following elements:

a) **Inventory of Industrial and Commercial Facilities/Activities**. No later than September 30, 2016, the Permittees must update the inventory and map of facilities and activities discharging directly to their MS4s.

(i) At a minimum, the inventory must include information listing the watershed/receiving water body, facility name, address, nature of business or activity, and North American or Standard Industrial Classification code(s) that best reflect the facility's product or service;

(ii) The inventory must include the following types of facilities: municipal landfills (open and closed); Permittee-owned maintenance yards and facilities; hazardous waste recovery, treatment, storage and disposal facilities; facilities subject to Section 313 of the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11023; all industrial sectors listed in 40 CFR §122.26(b)(14); vehicle or equipment wash systems; commercial animal facilities, including kennels, race tracks, show facilities, stables, or other similar commercial locations where improper management of domestic animal waste may contribute pollutants to receiving waters or to the MS4; urban agricultural activities; and other industrial or commercial facility that the Permittees determine is contributing a substantial pollutant loading to the MS4 and associated receiving waters.

(iii) The Permittees must collectively identify at least two specific industrial/commercial activities or sectors operating within the Permit area for which storm water discharges are not being adequately addressed through existing programs. No later than September 30, 2016, the Permittees must develop best management practices for each activity, and educate the selected industrial/commercial audiences regarding these performance expectations. Example activities for consideration include, but are not limited to: landscaping businesses; wholesale or retail agricultural and construction supply businesses; urban agricultural activities; power washers; commercial animal facilities; commercial car/truck washing operations; and automobile repair shops.

b) **Inspection of Industrial and Commercial Facilities/Activities**. The Permittees must work cooperatively throughout the Permit term to prioritize

and inspect selected industrial and commercial facilities/activities which discharge to receiving waters or to the MS4. No later than September 30, 2016, any existing agreements between the Permittees to accomplish such inspections must be updated as necessary to comply with this permit. At a minimum, the industrial and commercial facility inspection program must include:

(i) Priorities and procedures for inspections, including inspector training, and compliance assistance or education materials to inform targeted facility/activity operators of applicable requirements;

(ii) Provisions to record observations of a facility or activity;

(iii) Procedures to report findings to the inspected facility or activity, and to follow-up with the facility/activity operator as necessary;

(iv) A monitoring (or self monitoring) program for facilities that assesses the type and quantity of pollutants discharging to the MS4s;

(v) Procedures to exercise legal authorities to ensure compliance with applicable local storm water ordinances.

c) **Maintain Industrial and Commercial Facility/Activity Inventory**. The industrial and commercial facility/activity inventory must be updated at least annually. The updated inventory and a summary of the compliance assistance and inspection activities conducted, as well as any follow-up actions, must be submitted to EPA with each Annual Report.

4. Storm Water Infrastructure and Street Management. The Permittees must maintain their MS4 and related facilities to reduce the discharge of pollutants from the MS4 to the MEP. All Permittee-owned and operated facilities must be properly operated and maintained. This maintenance requirement includes, but is not limited to, structural storm water treatment controls, storm sewer systems, streets, roads, parking lots, snow disposal sites, waste facilities, and street maintenance and material storage facilities. The program must include the following:

a) **Storm Sewer System Inventory and Mapping**. No later than January 30, 2018, the Permittees must update current records to develop a comprehensive inventory and map of the MS4s and associated outfall locations. The inventory must identify all areas over which each Permittee has responsibility. The inventory must include:

(i) the location of all inlets, catch basins and outfalls owned/operated by the Permittee;

(ii) the location of all MS4 collection system pipes (laterals, mains, etc.) owned/operated by the Permittee, including locations where the MS4 is physically interconnected to the MS4 of another operator ;

(iii) the location of all structural flood control devices, if different from the characteristics listed above;

(iv) the names and locations of receiving waters of the U.S. that receive discharges from the outfalls;

(v) the location of all existing structural storm water treatment controls;

(vi) identification of subwatersheds, associated land uses, and approximate acreage draining into each MS4 outfall; and

(vii) the location of Permittee-owned vehicle maintenance facilities, material storage facilities, maintenance yards, and snow disposal sites; Permittee-owned or operated parking lots and roadways.

A summary description of the Permittees' storm sewer system inventory and a map must be submitted to EPA as part of the reapplication package required by Part VI.B

b) **Catch Basin and Inlet Cleaning.** No later than September 30, 2016, the Permittees must initiate an inspection program to inspect all Permittee-owned or operated catch basins and inlets at least every two years and take appropriate maintenance action based on those inspections. Inspection records must be maintained and summarized in each Annual Report.

c) **Street and Road Maintenance.** No later than September 30, 2015, the Permittees responsible for road and street maintenance must update any standard operating procedures for storm water controls to ensure the use of BMPs that, when applied to the Permittee's activity or facility, will protect water quality, and reduce the discharge of pollutants to the MEP. The operating procedures must contain, for each activity or facility, inspection and maintenance schedules specific to the activity, and appropriate pollution prevention/good housekeeping procedures for all of the following types of facilities and/or activities listed below. Water conservation measures should be considered for all landscaped areas.

(i) **Streets, roads, and parking lots**. The procedures must address, but are not limited to: road deicing, anti-icing, and snow removal practices; snow disposal areas; street/road material (e.g. salt, sand, or other chemical) storage areas; maintenance of green infrastructure/low impact development practices; and BMPs to reduce road and parking lot debris and other pollutants from entering the MS4. Within four years of the effective date of this permit, the Permittees must implement all of the pollution prevention/good housekeeping practices established in the SOPs for all streets, roads, highways, and parking lots with more than 3,000 square feet of impervious surface that are owned, operated, or maintained by the Permittees.

(ii) **Inventory of Street Maintenance Materials.** Throughout the Permit term, all Permittees with street maintenance

responsibilities must maintain an inventory of street /road maintenance materials, including use of sand and salt, and document the inventory in the corresponding Annual Reports.

(iii) **Manage Sand with Salt and Salt Storage Areas.** No later than September 30, 2017, the Permittees must address any sand, salt, or sand with salt material stockpiles at each of their materials storage locations to prevent pollutants in stormwater runoff from discharging to the MS4 or into any receiving waterbody. Examples how the Permittee may choose to address runoff from their material storage areas include, but are not limited to: building covered storage areas; fully containing the material stockpile area in a manner that prevents runoff from discharging to the MS4 or a receiving waterbody; relocating and/or otherwise consolidating material storage piles to alternative locations which prevents discharges to the MS4 or a receiving waterbody. The Permittees must identify their material storage locations in the SWMP documentation submitted to EPA with the 1st year Annual Report and reference the average quantity of material stored at each location in the inventory required in Part II.B.4.c.ii. Permittees must document in the 5th Year Annual Report how their material stockpiles have been addressed to prevent runoff from discharging to the MS4 or a receiving waterbody.

d) **Street, Road and Parking Lot Sweeping**. Each Permittee with street, road, and/or public parking lot maintenance responsibilities must update their respective sweepings management plans no later than September 30, 2015. Each updated plan must designate all streets, roads, and/or public parking lots which are owned, operated or maintained by that Permittee to fit within one of the following categories for sweeping frequency based on land use, traffic volumes or other factors:

- Residential – Streets and road segments that include, but are not limited to, light traffic zones and residential zones.
- Arterial and all other – Streets and road segments with high traffic volumes serving commercial or industrial districts.
- Public Parking Lots – large lots serving schools and cultural facilities, plazas, sports and event venues or similar facilities.

(i) No later than September 30, 2014, each Permittee with street, road, and/or public parking lot maintenance responsibilities must inventory and map all of their designated streets, roads, and public parking lots for sweeping frequency. The resulting inventory and map must be submitted as part of the 2nd Year Annual Report.

(ii) No later than September 30, 2015, Permittees with street, road, and/or public parking lot maintenance responsibilities must

sweep all streets, roads, and public parking lots that are owned, operated or maintained by that Permittee according to the following schedule:

Table II.B-2

Roadway Type	Sweeping Schedule			
	Two Times Per Month	**Every Six Weeks**	**Four Times Per Year**	**One Time Per Year**
Downtown Areas of Boise and Garden City	**X**			
Arterial and Collector Roadways (non-downtown)		**X**		
Residential Roadways			**X**	
Paved Alleys and Public Parking Lots				**X**

(iii) If a Permittee's existing overall street/road/parking lot sweeping program provides equivalent or greater street sweeping frequency to the requirements above, the Permittee must continue to implement its existing street/road/parking lot sweeping program.

(iv) For areas where sweeping is technically infeasible, the Permittees with street, road, and/or public parking lot maintenance responsibilities must document in the 1st Year Annual Report each area and indicate why sweeping is infeasible. The Permittee must document what alternative sweeping schedule will be used, or how the Permittee will increase implementation of other trash/litter control procedures to minimize pollutant discharges to the MS4 and to receiving waters.

(v) The Permittees with street, road, and/or public parking lot maintenance responsibilities must estimate the effectiveness of their street sweeping activities to minimize pollutant discharges to the MS4 and receiving waters, and document the following in each Annual Report:

- Identify any significant changes to the designated road/street/parking lot inventory and map, and the basis for those changes;
- Report annually on types of sweepers used, swept curb and/or lane miles, dates of sweeping by general location and frequency category, volume or weight of materials removed and a representative sample of the particle size distribution of swept material;
- Report annually on any public outreach efforts or other means to address excess leaves and other material as well as areas that are infeasible to sweep.

e) **Implement appropriate requirements for pesticide, herbicide, and fertilizer applications**. Permittees must continue to implement practices to reduce the discharge of pollutants to the MS4 associated with the application, storage and disposal of pesticides, herbicides and fertilizers from municipal areas and activities. Municipal areas and activities include, at a minimum, municipal facilities, public right-of-ways, parks, recreational facilities, golf courses, and landscaped areas. All employees or contractors of the Permittees applying restricted use pesticides must be registered as certified applicators.

f) **Develop and implement Storm Water Pollution Prevention Plans.** No later than September 30, 2015, the Permittees must develop and implement SWPPPs for all Permittee-owned material storage facilities, and maintenance yards located within the Permit area and identified in the inventory required in Parts II.B.3.a and II.B.4.a.viii. Permittee-owned facilities discharging storm water associated with industrial activity as defined in 40 CFR 122.26(b)(14) must obtain separate NPDES permit coverage as required in Part I.D.4 of this permit.

g) **Storm Water Management.** Each Permittee must ensure that any storm water management projects it undertakes after the effective date of this Permit are designed and implemented to prevent adverse impacts on water quality.

(i) Permittees must evaluate the feasibility of retrofitting existing storm water control devices to provide additional pollutant removal from collected storm water.

(ii) No later than the expiration date of this Permit, Permittees must identify and define all locations where such retrofit project opportunities are feasible, identify appropriate funding sources, and outline project timelines or schedule(s) for retrofit projects designed to better control the discharge of pollutants of concern to the Boise River and its tributaries.

h) **Litter Control.** Throughout the Permit term, each Permittee must continue to implement effective methods to reduce litter within their jurisdiction. Permittees must work with others as appropriate to control litter on a

regular basis and after major public events to reduce the discharge of pollutants to receiving waters.

i) **Training.** The Permittees must provide regular training to appropriate Permittee staff on all operations and maintenance procedures designed to prevent pollutants from entering the MS4 and receiving waters. Appropriate Permittee staff must receive training no later than September 30, 2015, and annually thereafter.

5. Illicit Discharge Management. An illicit discharge is any discharge to an MS4 that is not composed entirely of storm water. Exceptions are described in Part I.D. of this permit. The Permittees must continue to implement their illicit discharge management program to reduce to the MEP the unauthorized and illegal discharge of pollutants to the MS4. The program must include:

a) **Ordinance or other regulatory mechanisms.** Upon the effective date of this Permit, the Permittees must effectively prohibit non-storm water discharges to the MS4 (except those identified in Part 1.D of this permit) through enforcement of relevant ordinances or other regulatory mechanisms. Such ordinances/regulatory mechanisms must be updated prior to the expiration date of this Permit as necessary to provide adequate controls. To be considered adequate, an ordinance or regulatory mechanism must:

(i) Authorize the Permittee to prohibit, at a minimum, the following discharges to the MS4, unless otherwise authorized in Part 1.D:

- Sewage;
- Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
- Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility, including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
- Discharges of wash water from mobile operations, such as mobile automobile or truck washing, steam cleaning, power washing, and carpet cleaning, etc.;
- Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas - including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc. - where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);
- Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;

- Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
- Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
- Discharges of food-related wastes (grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).

(ii) Prohibit and eliminate illicit connections to the MS4;

(iii) Control the discharge of spills, and prohibit dumping or disposal of materials other than storm water into the MS4.

b) **Illicit Discharge Complaint Reporting and Response Program.** At a minimum, Permittees must respond to reports of illicit discharges from the public in the following manner:

(i) **Complaint/ReportingHotline.** The Permittees must maintain the dedicated telephone number and email address, or other publicly available and accessible means in addition to the website required in Part II.B.6, for use by the public to report illicit discharges. This complaint hotline must be answered by trained staff during normal business hours. During non-business hours, a system must be in place to record incoming calls to the hotline and a system must be in place to guarantee timely response. The telephone number must be printed on appropriate education, training, and public participation materials produced under Part II.B.6, and clearly listed in the local telephone book as appropriate.

(ii) **Response to Complaints/Reports.** The Permittees must respond to all complaints or reports of illicit discharges as soon as possible, but no later than within two working days.

(iii) **Maintain log of complaints/reports received and actions taken.** The Permittees must maintain a record documenting all complaints or reports of illicit discharges and responses taken by the Permittees.

c) **Illicit Discharge Mapping.** No later than September 30, 2014, the Permittees must develop a map of reported and documented illicit discharges or illicit connections to identify priority areas. The map must identify, at a minimum, the location, type and relative quantity or severity of the known, recurrent or ongoing non-storm water discharges to the MS4. This map must be updated annually and used to target the specific outfall locations for that field screening season.

d) **Dry Weather Outfall Screening Program.** Permittees must implement, and update as necessary, a dry weather analytical and field screening monitoring program. This dry weather outfall screening program must emphasize frequent, geographically widespread monitoring to detect illicit discharges and illegal connections, and to reinvestigate potentially

problematic outfalls. At a minimum, the procedures must be based on the following guidelines and criteria:

(i) **Outfall Identification.** The Permittees must update as necessary the storm water outfall identification and screening plan, describing the reconnaissance activities that must be performed and information used to prioritize targeted outfalls and associated land uses.. The plan must discuss how chemical and microbiological analysis will be conducted on any flows identified during dry weather screening, including field screening methodologies and associated trigger thresholds to be used for determining follow-up action.

(ii) **Monitoring Illicit Discharges.** No later than September 30, 2015, dry weather analytical and field screening monitoring must be conducted at least once annually (or more often if the Permittees deem necessary). One third of the outfalls to be screened annually must be conducted within the June 1 and September 30th timeframe.

- Upon the effective date of the Permit, the Permittees must conduct visual dry weather screening of at least 20% of their total outfalls per year.
- The outfalls must be geographically dispersed across the MS4 and must represent all major land uses in the Permit area. In addition, the Permittees must ensure that dry weather screening includes, but is not limited to, screening of 20% outfalls discharging to impaired waters listed in Table II.C.
- When flows during dry weather are identified the Permittees must collect grab samples of the discharge for in-field analysis of the following indicator constituents: pH; total chlorine; detergents as surfactants; total copper; total phenols; *E. coli*; total phosphorus; turbidity; temperature; and suspended solids concentrations (to be measured in mg/L).
- Photos may be used to document conditions.
- Results of field sampling must be compared to established trigger threshold levels and/or existing state water quality standards. If the outfall is dry (no flowing or ponded runoff), the Permittees must make and record all applicable visual observations.
- All dry weather flows previously identified or documented by the Permittees to be associated with irrigation flows or ground water seepage must be sampled to assess pollutant loading associated with such flows. The results must be evaluated to identify feasible actions necessary to eliminate such flows and ensure compliance with Part I.D of this Permit. If field sample

results of such irrigation or groundwater seepage comply with Part I.D of this permit, annual sampling of that dry weather flow at that outfall is no longer required. Permittees must document in the SWMP document the specific location(s) of outfalls associated with these results as well as the Permittee's rationale for the conclusion to discontinue future dry weather screening at that location..

(iii) **Maintain Records of Dry Weather Screening.** The Permittees must keep detailed records of the dry weather screening with the following information at a minimum: time since last rain event; quantity of last rain event; site description (e.g., conveyance type, dominant watershed land uses); flow estimation (e.g., width of water surface, approximate depth of water, approximate flow velocity, flow rate); visual observations (e.g., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology); results of any in field sampling; and recommendations for follow-up actions to address identified problems, and documentation of completed follow-up actions.

e) **Follow-up.** The Permittees must investigate recurring illicit discharges identified as a result of complaints or as a result of dry weather screening inspections and sampling within fifteen (15) days of its detection to determine the source. Permittees must take appropriate action to address the source of the ongoing illicit discharge within 45 days of its detection.

f) **Prevent and Respond to Spills to the MS4.** Throughout the Permit term, the Permittees must coordinate appropriate spill prevention, containment and response activities throughout all appropriate departments, programs and agencies to ensure maximum water quality protection at all times. The Permittees must respond to, contain and clean up all sewage and other spills that may discharge into the MS4 from any source (including private laterals and failing septic systems).

g) **Facilitate Disposal of Used Oil and Toxic Materials.** The Permittees must continue to coordinate with appropriate agencies to ensure the proper management and disposal or recycling of used oil, vehicle fluids, toxic materials, and other household hazardous wastes by their employees and the public. Such a program must include educational activities, public information activities, and establishment of collection sites operated by the Permittees or other entity. The program must be implemented throughout the Permit term.

h) **Training.** No later than September 30, 2014, and annually thereafter, the Permittees must develop and provide training to staff on identifying and eliminating illicit discharges, spill, and illicit connections to the MS4. At a minimum, the Permittee's construction inspectors, maintenance field staff, and code compliance officers must be sufficiently trained to respond to illicit discharges and spills to the MS4.

6. Education, Outreach and Public Involvement.

a) **Comply with Applicable Requirements.** The Permittees must comply with applicable State and local public notice requirements when implementing their SWMP public involvement activities.

b) **Implement an Ongoing Education Outreach and Involvement Program.** The Permittees must conduct, or contract with other entities to conduct, an ongoing joint education, outreach and public involvement program aimed at residents, businesses, industries, elected officials, policy makers, and Permittee planning staff /other employees.

The goal of the education and outreach program is to reduce or eliminate behaviors and practices that cause or contribute to adverse storm water impacts. The goal of the public involvement program is to engage interested stakeholders in the development and implementation of the Permittees' SWMP activities to the extent allowable pursuant to the respective authority granted individual Permittees under Idaho law.

The Permittees' joint education and public involvement program must be designed to improve each target audience's understanding of the selected storm water issues, engage stakeholders, and help target audiences understand what they can do to positively impact water quality by preventing pollutants from entering the MS4.

(i) No later than September 30, 2014, the Permittees must implement or participate in an education, outreach and public involvement program using a variety of methods to target each of the audiences and at least one or more of the topics listed below:

1) General Public

- Watershed characteristics and subwatershed planning efforts as required in Part II.A.4;
- General impacts of storm water flows into surface water;
- Impacts from impervious surfaces;
- Source control best management practices and environmental stewardship, actions and opportunities for pet waste control/disposal, vehicle maintenance, landscaping and vegetative buffers;
- Water wise landscaping, water conservation, water efficiency.

2) General public and businesses, including home based and mobile businesses

- Best management practices for use and storage of automotive chemicals, hazardous cleaning supplies, vehicle wash soaps and other hazardous materials;

- Proper use and application of pesticides, herbicides and fertilizers;
- Impacts of illicit discharges and how to report them;
- Water wise landscaping, water conservation, water efficiency.

3) Homeowners, homeowner's associations, landscapers, and property managers
   - Yard care techniques protective of water quality, such as composting;
   - Best management practices for use and storage of pesticides, herbicides, and fertilizers;
   - Litter and trash control and recycling programs;
   - Best management practices for power washing, carpet cleaning and auto repair and maintenance;
   - Low Impact Development techniques, including site design, pervious paving, retention of mature trees and other vegetation;
   - Storm water treatment and flow/volume control practices;
   - Water wise landscaping, water conservation, water efficiency.
4) Engineers, contractors, developers, review staff, and land use planners
   - Technical standards for storm water site plans;
   - Low Impact Development techniques, including site design, pervious paving, retention of mature trees and other vegetation;
   - Storm water treatment and flow/volume control practices;
   - Water wise landscaping, water conservation, water efficiency.
5) Urban farmers and managers of public and private community gardens
   - Water wise landscaping, water conservation, and water efficiency.

(ii) The Permittees must assess, or participate in an effort to assess understanding and adoption of behaviors by the target audiences.

The resulting assessments must be used to direct storm water education and outreach resources most effectively.

(iii) The Permittees must track and maintain records of public education, outreach and public involvement activities.

c) **Targeted Education and Training.** For the specific topics identified in the Permit sections listed below, the Permittees must develop and implement, or contract with other entities to implement, targeted training programs to educate appropriate Permittee staff or other audiences within their jurisdiction. Where joint, cooperative education efforts to address these topics are not feasible, the individual Permitttee must ensure that the necessary education and training occurs for the following topics:

(i) II.B.1.f - Construction Storm Water Management Training for construction site operators and Permittee staff;

(ii) II.B.2.g – Permanent Storm Water Control Training for project operators and Permittee staff;

(iii) II.B.4.i– Storm Water Infrastructure and Street Management/ Maintenance training for the Permittee staff; and

(iv) II.B.5.h – Illicit Discharge Management Training for Permittee staff.

d) **Storm Water Website.** The Permittees must maintain and promote at least one publicly-accessible website that identifies each Permittee's SWMP activities and seeks to educate the audiences listed in Part II.B.6.b.i. The website(s) must describe and provide relevant information regarding the activities of all Permittees. The website must be updated no later than February 1, 2014, and updated at least quarterly thereafter as new material is available. The website must incorporate the following features:

(i) All reports, plans, or documents generated by each Permittee in compliance with this Permit must be posted on the website in draft form when input from the public is being solicited, and in final form when the document is completed.

(ii) Information and/or links to key sites that provide education, training, licensing, and permitting related to construction and post-construction storm water management controls and requirements for each jurisdiction. The website must include links to all applicable ordinances, policies and/or guidance documents related to the Permittees' construction and post-construction stormwater management control programs.

(iii) Information and/or links to appropriate controls for industrial and commercial activities,

(iv) Information and/or links to assist the public to report illicit connections and illegal dumping activity;

(v) Appropriate Permittee contact information, including phone numbers for relevant staff and telephone hotline, mailing addresses, and electronic mail addresses.

C. Discharges to Water Quality Impaired Receiving Waters.

1. The Permittees must conduct a storm water discharge monitoring program as required in Part IV.
2. For the purposes of this Permit and as listed in Table II.C, the Clean Water Act §303 (d) listed water bodies are those cited in the IDEQ 2010 Integrated Report including, but not limited to the Lower Boise River, and its associated tributaries. "Pollutant(s) of concern" refer to the pollutant(s) identified as causing or contributing to the water quality impairment. Pollutants of concern for the purposes of this Permit are: total phosphorus, sediment, temperature, and *E. coli*.
3. Each Permittees' SWMP documentation must include a description of how the activities of each minimum control measure in Part II.B are implemented by the Permittee to control the discharge of pollutants of concern and ensure that the MS4 discharges will not cause or contribute to an excursion above the applicable Idaho water quality standards. This discussion must specifically identify how the Permittee evaluates and measures the effectiveness of the SWMP to control the pollutants of concern. For those activities identified in Part II.B requiring multiple years to develop and implement, the Permittee must provide interim updates on progress to date. Consistent with Part II.A.1.b, each Permittee must submit this description of the SWMP implementation to EPA and IDEQ as part of the 1st Year Annual Report required in Part IV.C, and must update its description annually in subsequent Annual Reports.

Table II.C

Clean Water Act §303 (d) listed Water Bodies and Pollutants of Concern

Receiving Water Body Assessment Unit/ Description	Pollutants of Concern Causing Impairment
ID17050114SW011a_06 ***Boise River – Diversion Dam to River Mile 50***	Temperature
ID17050114SW005_06 ***Boise River – River Mile 50 to Star Bridge***	Temperature, Sediment, *E. coli.*
ID17050114SW005_06a ***Boise River – Star to Middleton***	Temperature, Sediment, *E. coli.*
ID17050114SW005_06b ***Boise River- Middleton to Indian Creek***	Temperature, Total phosphorus, Sediment, *E. coli.*
ID17050114SW001_06 ***Boise River- Indian Creek to the mouth***	Temperature, Total phosphorus, Sediment, *E. coli.*
ID17050114SW008_03 ***Tenmile Creek - 3rd order below Blacks Creek Reservoir***	Sediment, *E. coli.*
ID17050114SW010_02 ***Fivemile Creek - 1st & 2nd order tributaries***	*E. coli.*
ID17050114SW010_03 ***Fivemile Creek - 3rd order-tributaries***	Sediment, *E. coli.*

D. Reviewing and Updating the SWMP.

1. Permittees must annually review their SWMP actions and activities for compliance with this Permit as part of the preparation of the Annual Report required under Part IV.C.2.

2. Permittees may request changes to any SWMP action or activity specified in this Permit in accordance with the following procedures:
   a) Changes to delete or replace an action or activity specifically identified in this Permit with an alternate action or activity may be requested by the Permittees at any time. Modification requests to EPA must include:
      (i) An analysis of why the original action or activity is ineffective, infeasible, or cost prohibitive;
      (ii) Expectations on the effectiveness of the replacement action or activity; and
      (iii) An analysis of why the replacement action or activity is expected to better achieve the Permit requirements.
   b) Change requests must be made in writing and signed by the Permittees in accordance with Part VI.E.
   c) Documentation of any of the actions or activities required by this Permit must be submitted to EPA upon request.
   d) EPA may review Annual Reports or other such documentation and subsequently notify the Permittees that changes to the SWMP actions and activities are necessary to:
      (i) Address discharges from the MS4 that are causing or contributing to water quality impacts;
      (ii) Include more stringent requirements necessary to comply with new federal or state statutory or regulatory requirements; or
      (iii) Include other conditions deemed necessary by EPA to comply with water quality standards, and/or other goals and requirements of the CWA.
   e) If EPA notifies the Permittees that changes are necessary pursuant to Parts II.D.2.a or II.D.2.d, the notification will offer the Permittees an opportunity to propose alternative program changes to meet the objectives of the requested modification. Following this opportunity, the Permittees must implement any required changes according to the schedule set by EPA.

4. Any modifications to this Permit will be accomplished according to Part VI.A of this Permit.

E. Transfer of Ownership, Operational Authority, or Responsibility for SWMP Implementation. The Permittees must implement the actions and activities of the SWMP in all new areas added or transferred to the Permittee's MS4 (or for which a Permittee becomes responsible for implementation of storm water quality controls) as expeditiously as practicable, but not later than one year from the date upon which the new areas were added. Such additions and schedules for implementation must be documented in the next Annual Report following the transfer.

F. SWMP Resources. The Permittees must continue to provide adequate finances, staff, equipment and other support capabilities to implement their SWMP actions and activities outlined in this permit. The Permittees must report on total costs associated with SWMP implementation over the prior 12 month reporting period in each Annual Report. Permittees are encouraged to consider establishing consistent funding sources for continued program implementation.

G. Legal Authority. To the extent allowable pursuant to the respective authority granted individual Permittees under Idaho law, each Permittee must operate to, at a minimum:

- Prohibit and eliminate, through statute, ordinance, policy, permit, contract, court or administrative order or other similar means, the contribution of pollutants to the MS4 by illicit connections and discharges to the MS4. Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4. Illicit discharges include all non-storm water discharges not otherwise authorized under Part I.D. of this Permit;
- Control through statute, ordinance, policy, permit, contract, court or administrative order, or other similar means, the discharge to the MS4 of spills, dumping or disposal of materials other than storm water;
- Control through interagency agreements among the Permittees the contribution of pollutants from one portion of the MS4 to another portion of the MS4;
- Require compliance with conditions in statutes, ordinances, policy, permits, contracts, or court or administrative orders; and
- Carry out all inspection, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with Permit conditions including the prohibition on illicit discharges to the MS4.

No later than January 30, 2014, each Permittee must review and revise its relevant ordinances or other regulatory mechanisms, (or adopt new ordinances or regulatory mechanisms that provide it with adequate legal authority as allowed and authorized pursuant to applicable Idaho law), to control pollutant discharges into and from its MS4 and to meet the requirements of this permit. As part of the SWMP documentation that accompanies the 1st Year Annual Report, each Permittee must summarize all of its unique legal authorities which satisfy the five criteria listed above.

III. Schedule for Implementation and Required Submissions

The Permittees must complete SWMP actions, and/or submit documentation, to EPA and IDEQ as summarized below. Unless otherwise noted, Annual Reports must include the interim or completed status of required SWMP activities occurring during the corresponding reporting period as specified in Part IV.C.3, and include program summary statistics, copies of interim or final documents, and/or other supporting information.

Table III. Schedule for Implementation and Required Submissions

Permit Part	Item/Action	Due Date
I.C.3	Update intergovernmental agreement no later than July 1, 2013.	Submit updated intergovernmental agreement with the 1st Year Annual Report.
II.A.1.b, II.C.3	SWMP documentation	Submit SWMP documentation with the 1st Year Annual Report. Include updated documentation in each subsequent Annual Report.
II.A.4	Complete two subwatershed planning documents	Identify subwatersheds in 1st Year Annual Report; Submit two completed planning documents with the 4rd Year Annual Report.
II.B.1.a	Update construction runoff control ordinances/ regulatory mechanisms, if necessary	September 30, 2015; submit any updated ordinances etc w/ 3rd Year Annual Report.
II.B.1.b	Update Construction Stormwater Management Manual(s)	September 30, 2015; submit any updated documents with 3rd Year Annual Report.
II.B.1.e	Develop & Implement Enforcement Response Policy (ERP)	September 30, 2016; submit final ERPs w/ 4th Year Annual Report
II.B.2.a	Update ordinance or regulatory mechanism requiring long term onsite stormwater management controls	January 30, 2018; submit ordinance or regulatory mechanism with 5th Year Annual Report.
II.B.2.b	Update Stormwater Design Criteria Manual(s)	September 30, 2015; submit any updated ordinances etc w/ 3rd Year Annual Report
II.B.2.c	Develop & Implement Green Infrastructure/Low Impact Development (LID) Incentive Strategy;	September 30, 2015;
II.B.2.c.i	Evaluate Effectiveness of LID Practices via three Pilot Projects;	Submit strategy document, identify 3 pilot projects in the 3rd Year Annual Report.
II.B.2.c.ii, IV.A.10	Identify recommendations for specific LID practices to be adopted within the Permit area	Progress report on strategy implementation/ Pilot Project evaluations w/4rd Year Annual Report. Submit final evaluations & recommendations with the 5th Year Annual Report.
II.B.2.c.iii	Develop Priority Riparian Area List	September 30, 2015; Submit priority area list with the 3rd Year Annual Report.
II.B.2.c.iii	Complete Outfall Disconnection Project	Document progress on outfall disconnection project w/3rd Year Annual Report. Complete outfall disconnection project by January 30, 2018; document completed project in 5th Year Annual Report.

Table III. Schedule for Implementation and Required Submissions, continued

Permit Part	Item/Action	Due Date
II.B.2.c.iv	Consider/install stormwater runoff reduction techniques for streets, roads & parking lot repair work entering design phase after February 1, 2013 where feasible	Document all locations of street/road/parking lot repair projects where runoff reduction techniques were installed w/5th Year Annual Report.
II.B.2.e.i	O&M Database of new permanent stormwater controls; Incorporate all existing controls into database	Include new controls beginning February 1, 2013; Existing controls, no later than January 30, 2018.
II.B.2.f.i	Identify high priority locations; annual inspections	September 30, 2017
II.B.2.f.ii	Develop inspection checklists	September 30, 2017
II.B.2.f.iii	Enforcement Response Policy for SW controls	September 30, 2017
II.B.2.g	Conduct Education/Training on Permanent SW Controls	September 30, 2015; staff training & training for local audiences, September 30, 2016.
II.B.3.a	Inventory Industrial & Commercial facilities/activities	September 30, 2016
II.B.3.a.iii	Identify two specific activities, develop BMPs, and begin compliance assistance education program	September 30, 2016
II.B.3.b	Update Permittee agreements; inspect selected industrial & commercial facilities/activities	September 30, 2016
II.B.3.c	Document industrial & commercial inspection and compliance assistance activities	Annually
II.B.4.a	Update MS4 system inventory & map	No later than January 30, 2018; include w/5th Year Annual Report
II.B.4.b	Inspect of catch basins at least every two years	September 30, 2016
II.B.4.c	Update SOPs for Street & Road Maintenance	September 30, 2015
II.B.4.c.iii	Cover storage facilities for sand/salt storage areas	September 30, 2017; Identify locations in SWMP w/1st year Annual Report; Final documentation w/5th Year Annual Report
II.B.4.d	Update Street/Road/Parking Lot Sweeping Plans	September 30, 2015
II.B.4.d.i	Inventory/map designated areas	September 30, 2014; submit w/2st Year Annual Report
II.B.4.d.ii	Sweep according to schedule	September 30, 2015
II.B.4.d.iv,	Identify infeasible sweeping areas, alternative schedule or other program	Document in 1st Year Annual Report
II.B.4.d.v	Estimate sweeping effectiveness	Document in each Annual Report
II.B.4.f	Develop facility& maintenance yards SWPPPs	September 30, 2015
II.B.4.i	Train Permittee staff	September 30, 2016; annually thereafter
II.B.4.g	Evaluate the feasibility of retrofitting existing control devices	January 30, 2018; submit evaluation with 5th Year Annual Report

Table III. Schedule for Implementation and Required Submissions, continued

Permit Part	Item/Action	Due Date
II.B.5.c	Inventory/Map Illicit Discharge Reports	September 30, 2014, update annually
II.B.5.d.ii, IV.A.11	Conduct dry weather outfall screening; update screening plan; inspect 20% of outfalls per year	September 30, 2015; inspect 20% annual ly
II.B.6.b	Conduct public education & assess understanding to specific audiences	September 30, 2014; ongoing
II.B.6.d	Maintain, Promote, and Update Storm water Website	September 30, 2014, quarterly thereafter
II.C.3, II.A.1.b	Identify how Permittee controls are implemented to reduce discharge of pollutants of concern, measure SWMP effectiveness	Include discussion in SWMP documentation submitted with 1st Year Annual Report
II.E	Implement SWMP in all geographic areas newly added or annexed by Permittee	No later than one year from date new areas are added to Permittee's jurisdiction
II.F	Report SWMP implementation costs for the corresponding 12 month reporting period	Within each Annual Report
II.G	Review & Summarize legal authorities or regulatory mechanisms used by Permittee to implement & enforce SWMP & Permit requirements	No later than January 30, 2014, summarize legal authorities within the required SWMP documentation submitted with 1st Annual Report
IV.A.1	Assess & Document Permit Compliance	Annually; submit with Annual Reports
IV.A.2	Develop & Complete Stormwater Monitoring & Evaluation Plan	September 30, 2014; Submit Completed Plan with 2nd Year Annual Report
IV.A.7.a	Update *Boise NPDES Municipal SW Monitoring Plan*	September 30, 2015
IV.A.7.b	Monitor Five Representative Outfalls During Wet Weather; sample three times per year thereafter	No later than September 30, 2014
IV.A.8	If Applicable: update SW Monitoring & Evaluation Plan to include WQ Monitoring and/or Fish Tissue Sampling	If applicable: Update SW Monitoring & Evaluation Plan by September 30, 2014 to include WQ Monitoring and/or Fish Tissue Sampling; submit with 2nd Year Annual Report
IV.A.9	Evaluate Effectiveness of 2 Structural Control Techniques Currently Required by the Permittees	Begin evaluations no later than September 30, 2015; document in Annual Report(s)
IV.C.1	Submit Stormwater Outfall Discharge Data	2nd Year Annual Report, annually thereafter
IV.C.2	Submit WQ Monitoring or Fish Tissue Sampling Data Report (if applicable)	2nd Year Annual Report, annually thereafter
IV.C.3	Submit Annual Reports	1st Year Annual Report due January 30, 2014; all subsequent Annual Reports are due annually no later than January 30th; See Table IV.C.
VI.B	Submit Permit Renewal Application	No later than 180 days prior to Permit Expiration Date; see cover page. Alternatively, Renewal Application may be submitted as part of the 4th Year Annual Report.

IV. Monitoring, Recordkeeping and Reporting Requirements.

A. Monitoring

1. **Assess Permit Compliance.** At least once per year, each Permittee must individually evaluate their respective organization's compliance with these Permit conditions, and progress toward implementing each of the control measures defined in Part II. The compliance evaluation must be documented in each Annual Report required in Part IV.C.2.

2. **Stormwater Monitoring and Evaluation Program Plan and Objectives.** The Permittees must conduct a wet weather monitoring and evaluation program, or contract with another entity to implement such a program. This stormwater monitoring and evaluation program must be designed to characterize the quality of storm water discharges from the MS4, and to evaluate overall effectiveness of selected storm water management practices.

   a) No later than September 30, 2014, the Permittees must develop a stormwater monitoring and evaluation plan that includes the quality assurance requirements, outfall monitoring, in-stream and/or fish tissue monitoring (as appropriate), evaluation of permanent storm water controls and evaluation of LID pilot project effectiveness as described later in this Part. In general, the Permittees must develop and conduct a stormwater monitoring and evaluation program to:

      (i) Broadly estimate reductions in annual pollutant loads of sediment, bacteria, phosphorus and temperature discharged to impaired receiving waters from the MS4s, occurring as a result of the implementation of SWMP activities;

      (ii) Assess the effectiveness and adequacy of the permanent storm water controls and LID techniques or controls selected for evaluation by the Permittees and which are intended to reduce the total volume of storm water discharging from impervious surfaces and/or improve overall pollutant reduction in stormwater discharges; and

      (iii) Identify and prioritize those portions of each Permittee's MS4 where additional controls can be accomplished to further reduce total volume of storm water discharged and/or reduce pollutants in storm water discharges to waters of the U.S.

   b) The final, updated stormwater monitoring and evaluation plan must be submitted to EPA with the 2nd Year Annual Report.

3. **Representative Sampling.** Samples and measurements must be representative of the nature of the monitored discharge or activity**.**

4. **Analytical Methods.** Sample collection, preservation, and analysis must be conducted according to sufficiently sensitive methods/test procedures approved under 40 CFR Part 136, unless otherwise approved by EPA. Where an approved 40 CFR Part 136 method does not exist, and other test procedures

have not been specified, any available method may be used after approval from EPA**.**

5. **Quality Assurance Requirements.** The Permittees must develop or update a quality assurance plan (QAP) for all analytical monitoring conducted in accordance with this Part. The QAP must be developed concurrently as part of the stormwater monitoring and evaluation plan. The Permittees must submit the QAP as part of the stormwater monitoring and evaluation plan to EPA and IDEQ in the 2nd Year Annual Report. Any existing QAP may be modified for the requirements under this section**.**

   a) The QAP must be designed to assist in the collection and analysis of storm water discharges in support of this Permit and in explaining data anomalies when they occur.

   b) Throughout all sample collection, analysis and evaluation activities, Permittees must use the EPA-approved QA/QC and chain-of-custody procedures described in the most current version of the following documents:

      (i) *EPA Requirements for Quality Assurance Project Plans EPA-QA/R-5* (EPA/240/B-01/003, March 2001). A copy of this document can be found electronically at: http://www.epa.gov/quality/qs-docs/r5-final.pdf;

      (ii) *Guidance for Quality Assurance Project Plans EPA-QA/G-5*, (EPA/600/R-98/018, February, 1998). A copy of this document can be found electronically at: http://www.epa.gov/r10earth/offices/oea/epaqag5.pdf ;

      (iii) *Urban Storm BMP Performance Monitoring*, (EPA-821-B-02-001, April 2002). A copy of this document can be found electronically at: http://www.epa.gov/npdes/pubs/montcomplete.pdf

      The QAP should be prepared in the format specified in these documents.

   c) At a minimum, the QAP must include the following:

      (i) Organization chart reflecting responsibilities of key Permittee staff;

      (ii) Details on the number of samples, type of sample containers, preservation of samples, holding times, analytical methods, analytical detection and quantitation limits for each target compound, type and number of quality assurance field samples, precision and accuracy requirements, sample representativeness and completeness, sample preparation requirements, sample shipping methods, and laboratory data delivery requirements;

      (iii) Data quality objectives;

(iv) Map(s) and associated documentation reflecting the location of each sampling point and physical description including street address or latitude/longitude;

(v) Qualification and training of personnel;

(vi) Name(s), address(es) and telephone number(s) of the laboratories, used by or proposed to be used by the Permittees;

(vii) Data management;

(viii) Data review, validation and verification; and

(ix) Data reconciliation.

d) The Permittees must amend the QAP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAP. The amended QAP must be submitted to EPA as part of the next Annual Report.

e) Copies of any current QAP must be maintained by the Permittees and made available to EPA and/or IDEQ upon request.

6. **Additional Monitoring by Permittees.** If the Permittees monitor more frequently, or in more locations, than required by this Permit, the results of any such additional monitoring must be included and summarized with other data submitted to EPA and IDEQ as required in Part IV.C.

7. **Storm Water Outfall Monitoring**

a) No later than September 30, 2015, the Permittees must update the existing *Boise NPDES Municipal Storm Water Permit Monitoring Plan* to be consistent with the monitoring and evaluation program objectives and plan as described in Part IV.A.2. At a minimum, the plan must describe five outfall sample locations, and any additional or alternative locations, as defined by the Permittees. The outfalls selected by the Permittees to be monitored must be identified as representative of all major land uses occurring within the Permit area.

b) No later than September 30, 2014, the Permittees must begin monitoring discharges from the identified five storm water outfalls during wet weather events at least three times per year. The specific minimum monitoring requirements are outlined in Table IV.A, but may be augmented based on the Permittees' updated stormwater monitoring and evaluation plan required by Part IV.A.2. The Permittees must include any additional parameters to be sampled in an updated Table IV.A within the final updated stormwater monitoring and evaluation plan submitted to EPA with the 2nd Annual Report.

Table IV.A – Outfall Monitoring Requirements[1, 2]
PARAMETER SAMPLING
Ammonia
Total Kjeldahl Nitrogen (TKN) (mg/l)
Nitrate + Nitrite
Total Phosphorus (mg/l)
Dissolved Orthophosphate (mg/l)
E. coli
Biological Oxygen Demand (BOD5) (mg/l)
Chemical Oxygen Demand (COD) (mg/l)
Total Suspended Solids (TSS) (mg/l)
Total Dissolved Solids (TDS) (mg/l)
Dissolved Oxygen
Turbidity (NTU)
Temperature
pH (S.U)
Flow/Discharge, Volume, in cubic feet
Arsenic – Total
Cadmium- Total and Dissolved
Copper – Dissolved
Lead – Total and Dissolved
Mercury – Total
Zinc – Dissolved
Hardness (as CaCO3) (mg/l)

[1] Five or more outfall locations will be identified in the Permittees' updated stormwater monitoring and evaluation plan

[2] A minimum of ***three (3) samples*** must be collected during wet weather storm events in each reporting year, assuming the presence of storm events sufficient to produce a discharge.

8. **Water Quality Monitoring and/or Fish Tissue Sampling**. At the Permittees' option and to augment the storm water discharge data collection required in Part IV.A.7 above, one or more of the Permittees may conduct, or contract with others to conduct, water quality monitoring and/or fish tissue sampling within the Lower Boise River Watershed.

   a) If the Permittees elect to conduct in-stream water quality monitoring and/or fish tissue sampling within the Lower Boise River Watershed, the Permittees must revise the stormwater monitoring and evaluation plan and QAP to describe the monitoring and/or sampling effort(s) per Part IV.A.2 and IV.A.5, no later September 30, 2014.

   b) The documentation of the Permittees' intended in-stream water quality monitoring and/or fish tissue sampling activities must be included in the final updated stormwater monitoring and evaluation plan submitted with the 2nd Year Annual Report as required in Part IV.A.2.b.

   c) The Permittees are encouraged to engage in cooperative efforts with other organizations to collect reliable methylmercury fish tissue data within a specific geographic area of the Lower Boise River Watershed. The objective of the cooperative effort is to determine if fish tissue concentrations of methylmercury in the Lower Boise River are compliant with Idaho's methylmercury fish tissue criterion of 0.3 mg/kg.

      (i) In particular, the Permittees are encouraged to cooperate with other organizations to collect data through implementation of the Methylmercury Fish Tissue Sampling requirements specified in NPDES Permits # ID-002044-3 and ID-002398-1 as issued to the City of Boise. Beginning with the 2nd Year Annual Report, the Permittees' may (individually or collectively) submit documentation in each Annual Report which describes their specific involvement over the prior reporting period, and may reference fish tissue sampling plans and data reports as developed or published by others through the cooperative watershed effort.

9. **Evaluate the Effectiveness of Required Structural Controls**. Within two years of the effective date of this Permit, the Permittees must select and begin to evaluate at least two different types of permanent structural storm water management controls currently mandated by the Permittees at new development or redevelopment sites. For each selected control, this evaluation must determine whether the control is effectively treating or preventing the discharge of one or more of the pollutants of concern into waterbodies listed in Table II.C. The results of this evaluation, and any recommendations for improved treatment performance, must be submitted to EPA in subsequent Annual Reports as the evaluation projects are implemented and completed.

10. **Evaluate the Effectiveness of Green Infrastructure/Low Impact Development Pilot Projects**. The Permittees must evaluate the performance and effectiveness of the three pilot projects required in Part II.B.2.c of this Permit, or contract with another entity to conduct such evaluations. An evaluation summary of the LID technique or control and any recommendations

of improved treatment performance must be submitted in subsequent Annual Reports as the evaluation projects are implemented and completed.

11. **Dry Weather Discharge Screening.** The Permittees must implement a dry weather screening program, or contract with another entity to implement such a program, as required in Part II.B.5.d.

B. Recordkeeping

1. **Retention of Records.** The Permittees must retain records and copies of all information (e.g., all monitoring, calibration, and maintenance records; all original strip chart recordings for any continuous monitoring instrumentation; copies of all reports required by this Permit; storm water discharge monitoring reports; a copy of the NPDES permit; and records of all data or information used in the development and implementation of the SWMP and to complete the application for this Permit;) for a period of at least five years from the date of the sample, measurement, report or application, or for the term of this Permit, whichever is longer. This period may be extended at the request of the EPA at any time.
2. **Availability of Records.** The Permittees must submit the records referred to in Part IV.B.1 to EPA and IDEQ only when such information is requested. At a minimum, the Permittees must retain all records comprising the SWMP required by this Permit (including a copy of the Permit language and all Annual Reports) in a location and format that are accessible to EPA and IDEQ. The Permittees must make all records described above available to the public if requested to do so in writing. The public must be able to view the records during normal business hours. The Permittees may charge the public a reasonable fee for copying requests**.**

C. Reporting Requirements

1. **Storm Water Discharge Monitoring Report.** Beginning with the 2nd Year Annual Report, and in subsequent Annual Reports, all storm water discharge monitoring data collected to date must be submitted as part of the Annual Report. At a minimum, this Storm Water Discharge Monitoring Report must include:
   a) Dates of sample collection and analyses;
   b) Results of sample analyses;
   c) Location of sample collection. and
   d) Summary discussion and interpretation of the data collected, including a discussion of quality assurance issues and comparison to previously collected information, as appropriate.
2. **Water Quality Monitoring and/or Fish Tissue Sampling Report(s).** If the Permittees elect to conduct water quality monitoring and/or fish tissue sampling as specified in Part IV.A.8, all relevant monitoring data collected to date must

be submitted as part of each Annual Report beginning with the 2nd Year Annual Report. Summary data reports as prepared by other organizations with whom the Permittee(s) cooperate may be submitted to fulfill this requirement. At a minimum, this Water Quality Monitoring and/or Fish Tissue Sampling Report must include:

a) Dates of sample collection and analyses;

b) Results of sample analyses;

c) Locations of sample collection; and

d) Summary discussion and interpretation of the data collected, including discussion of quality assurance issues and comparison to previously collected information, as appropriate.

3. **Annual Report.**

a) No later than January 30th of each year beginning in 2014, and annually thereafter, each Permittee must submit an Annual Report to EPA and IDEQ. The reporting period for the 1st Year Annual Report will be from February 1, 2013, through September 30, 2013. Reporting periods for subsequent Annual Reports are specified in Table IV.C. Copies of all Annual Reports, including each Permittee's SWMP documentation, must be available to the public, through a Permittee-maintained website, and/or through other easily accessible means.

Table IV.C - Annual Report Deadlines

Annual Report	Reporting Period	Due Date
1st Year Annual Report	February 1, 2013–September 30, 2013	January 30, 2014
2nd Year Annual Report	October 1, 2013-September 30, 2014	January 30, 2015
3rd Year Annual Report	October 1, 2014-September 30, 2015	January 30, 2016
4th Year Annual Report	October 1, 2015-September 30, 2016	January 30, 2017
5th Year Annual Report	October 1, 2016-December 31, 2017	January 30, 2018

b) Preparation and submittal of the Annual Reports must be coordinated by Ada County Highway District. Each Permittee is responsible for content of their organization's SWMP documentation and Annual Report(s) relating to SWMP implementation for portions of the MS4s for which they are responsible.

c) The following information must be submitted in each Annual Report:

(i) A updated and current document describing the SWMP as implemented by the specific Permittee, in accordance with Part II.A.1.b;

(ii) A narrative assessment of the Permittee's compliance with this Permit, describing the status of implementing the control measures in Parts II and IV. The status of each control measure must be addressed, even if activity has previously been completed, has not yet been implemented, does not apply to the Permittee's jurisdiction or operation, or is conducted on the Permittee's behalf by another entity;

(iii) Discussion of any information collected and analyzed during the reporting period, including but not limited to storm water monitoring data not included with the Storm Water Discharge Monitoring Report; dry weather monitoring results; Green Infrastructure/LID pilot project evaluation results, structural control evaluation results, and any other information collected or used by the Permittee(s) to assess the success of the SWMP controls at improving receiving water quality to the maximum extent practicable;

(iv) A summary of the number and nature of public education programs; the number and nature of complaints received by the Permittee(s), and follow-up actions taken; and the number and nature of inspections, formal enforcement actions, or other similar activities as performed by the Permittee(s) during the reporting period;

(v) Electronic copies of new or updated education materials, ordinances (or other regulatory mechanisms), inventories, guidance materials, or other products produced as required by this Permit during the reporting period;

(vi) A description and schedule of the Permittee's implementation of additional controls or practices deemed necessary by the Permittee, based on monitoring or other information, to ensure compliance with applicable water quality standards;

(vii) Notice if the Permittee is relying on another entity to satisfy any of the Permit obligations, if applicable; and

(viii) Annual expenditures for the reporting period, and estimated budget for the reporting period following each Annual Report.

d) If, after the effective date of this Permit, EPA provides the Permittees with an alternative Annual Report format, the Permittees may use the alternative format in lieu of the required elements of Part IV.C.3.c.

D. Addresses

Reports and other documents required by this Permit must be signed in accordance with Part VI.E and submitted to each of the following addresses:

IDEQ: Idaho Department of Environmental Quality
Boise Regional Office
Attn: Water Program Manager
1410 North Hilton
Boise, ID 83854

EPA: United States Environmental Protection Agency
Attention: Storm Water MS4 Compliance Program
NPDES Compliance Unit
1200 6th Avenue, Suite 900 (OCE-133)
Seattle, WA 98101

Any documents and/or submittals requiring formal EPA approval must also be submitted to the following address:

United States Environmental Protection Agency
Attention: Storm Water MS4 Permit Program
NPDES Permits Unit
1200 6th Avenue, Suite 900 (OWW-130)
Seattle, WA 98101

V. Compliance Responsibilities.

A. Duty to Comply. The Permittees must comply with all conditions of this Permit. Any Permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, for Permit termination, revocation and reissuance, or modification, or for denial of a Permit renewal application.

B. Penalties for Violations of Permit Conditions

1. Civil and Administrative Penalties. Pursuant to 40 CFR Part 19 and the Act, any person who violates Section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701) (currently $37,500 per day for each violation).

2. Administrative Penalties. Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of this Act. Pursuant to 40 CFR Part 19

and the Act, administrative penalties for Class I violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701) (currently $16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $37,500). Pursuant to 40 CFR Part 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701) (currently $16,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $177,500).

3. Criminal Penalties

a) **Negligent Violations**. The Act provides that any person who negligently violates Sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two years, or both.

b) **Knowing Violations**. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six years, or both.

c) **Knowing Endangerment**. Any person who knowingly violates Section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

d) **False Statements.** The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Permit shall, upon conviction, be

punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for the Permittees in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Permit.

D. Duty to Mitigate. The Permittees must take all reasonable steps to minimize or prevent any discharge or disposal in violation of this Permit that has a reasonable likelihood of adversely affecting human health or the environment**.**

E. Proper Operation and Maintenance. The Permittees must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittees to achieve compliance with the conditions of this Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the Permittees only when the operation is necessary to achieve compliance with the conditions of the Permit.

F. Toxic Pollutants. The Permittees must comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the Permit has not yet been modified to incorporate the requirement.

G. Planned Changes. The Permittee(s) must give notice to the Director and IDEQ as soon as possible of any planned physical alterations or additions to the permitted facility whenever:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR §122.29(b); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in the Permit.

H. Anticipated Noncompliance. The Permittee(s) must give advance notice to the Director and IDEQ of any planned changes in the permitted facility or activity that may result in noncompliance with this Permit.

I. Twenty-four Hour Notice of Noncompliance Reporting

1. The Permittee(s) must report the following occurrences of noncompliance by telephone within 24 hours from the time the Permittee(s) becomes aware of the circumstances:

a) any noncompliance that may endanger health or the environment;

b) any unanticipated bypass that exceeds any effluent limitation in the permit (See Part IV.F., "Bypass of Treatment Facilities");

c) any upset that exceeds any effluent limitation in the permit (See Part IV.G., "Upset Conditions"); or

d) any overflow prior to the stormwater treatment facility over which the Permittee(s) has ownership or has operational control. An overflow is any spill, release or diversion of municipal sewage including:

(1) an overflow that results in a discharge to waters of the United States; and

(2) an overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately owned sewer or building lateral) that does not reach waters of the United States.

2. The Permittee(s) must also provide a written submission within five days of the time that the Permittee(s) becomes aware of any event required to be reported under subpart 1 above. The written submission must contain:

a) a description of the noncompliance and its cause;

b) the period of noncompliance, including exact dates and times;

c) the estimated time noncompliance is expected to continue if it has not been corrected; and

d) steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

e) if the noncompliance involves an overflow, the written submission must contain:

(1) The location of the overflow;

(2) The receiving water (if there is one);

(3) An estimate of the volume of the overflow;

(4) A description of the sewer system component from which the release occurred (e.g., manhole, constructed overflow pipe, crack in pipe);

(5) The estimated date and time when the overflow began and stopped or will be stopped;

(6) The cause or suspected cause of the overflow;

(7) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;

(8) An estimate of the number of persons who came into contact with wastewater from the overflow; and

(9) Steps taken or planned to mitigate the impact(s) of the overflow and a schedule of major milestones for those steps.

3. The Director of the Office of Compliance and Enforcement may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the NPDES Compliance Hotline in Seattle, Washington, by telephone, (206) 553-1846.

4. Reports must be submitted to the addresses in Part IV.D ("Addresses").

J. Bypass of Treatment Facilities

1. Bypass not exceeding limitations. The Permittee(s) may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this Part.

2. Notice.

a) **Anticipated bypass**. If the Permittee(s) knows in advance of the need for a bypass, it must submit prior written notice, if possible at least 10 days before the date of the bypass.

b) **Unanticipated bypass.** The Permittee(s) must submit notice of an unanticipated bypass as required under Part III.G ("Twenty-four Hour Notice of Noncompliance Reporting").

3. Prohibition of bypass.

a) Bypass is prohibited, and the Director of the Office of Compliance and Enforcement may take enforcement action against the Permittee(s) for a bypass, unless:

(1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The Permittee(s) submitted notices as required under paragraph 2 of this Part.

b) The Director of the Office of Compliance and Enforcement may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 3.a. of this Part.

K. Upset Conditions

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the Permittee(s) meets the requirements of paragraph 2 of this Part. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. Conditions necessary for a demonstration of upset. To establish the affirmative defense of upset, the Permittee(s) must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a) An upset occurred and that the Permittee(s) can identify the cause(s) of the upset;

b) The permitted facility was at the time being properly operated;

c) The Permittee(s) submitted notice of the upset as required under Part V.I, "*Twenty-four Hour Notice of Noncompliance Reporting;*" and

d) The Permittee(s) complied with any remedial measures required under Part V.D, "*Duty to Mitigate.*"

3. Burden of proof. In any enforcement proceeding, the Permittee(s) seeking to establish the occurrence of an upset has the burden of proof.

VI. General Provisions

A. Permit Actions.

1. This Permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR **§§** 122.62, 122.64, or 124.5. The filing of a request by the Permittee(s) for a Permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any Permit condition.

2. Permit coverage may be terminated, in accordance with the provisions of 40 CFR §§122.64 and 124.5, for a single Permittee without terminating coverage for the other Permittees subject to this Permit.

B. Duty to Reapply. If the Permittees intend to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittees must apply for and obtain a

new permit. In accordance with 40 CFR §122.21(d), and unless permission for the application to be submitted at a later date has been granted by the Director, the Permittees must submit a new application at least 180 days before the expiration date of this Permit, or alternatively in conjunction with the 4th Year Annual Report. The reapplication package must contain the information required by 40 CFR §122.21(f), which includes: name and mailing address(es) of the Permittees(s) that operate the MS4(s), and names and titles of the primary administrative and technical contacts for the municipal Permittees(s). In addition, the Permittees must identify any previously unidentified water bodies that receive discharges from the MS4(s); a summary of any known water quality impacts on the newly identified receiving waters; a description of any changes to the number of applicants; and any changes or modifications to the Storm Water Management Program as implemented by the Permittees. The re-application package may incorporate by reference the 4th Year Annual Report when the reapplication requirements have been addressed within that report.

C. Duty to Provide Information. The Permittees must furnish to the Director and IDEQ, within the time specified in the request, any information that the Director or IDEQ may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittees must also furnish to the Director or IDEQ, upon request, copies of records required to be kept by this Permit.

D. Other Information. When the Permittees become aware that it failed to submit any relevant facts in a Permit application, or that it submitted incorrect information in a Permit application or any report to the Director or IDEQ, the Permittees must promptly submit the omitted facts or corrected information.

E. Signatory Requirements. All applications, reports or information submitted to the Director and IDEQ must be signed and certified as follows.

1. All Permit applications must be signed as follows:
   a) For a corporation: by a responsible corporate officer.
   b) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
   c) For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the Permit and other information requested by the Director or the IDEQ must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
   a) The authorization is made in writing by a person described above;
   b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or

position having overall responsibility for environmental matters for the organization; and

c) The written authorization is submitted to the Director and IDEQ.

3. **Changes to Authorization.** If an authorization under Part VI.E.2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part VI.E.2 must be submitted to the Director and IDEQ prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. **Certification.** Any person signing a document under this Part must make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

F. Availability of Reports. In accordance with 40 CFR Part 2, information submitted to EPA pursuant to this Permit may be claimed as confidential by the Permittees. In accordance with the Act, permit applications, permits and effluent data are not considered confidential. Any confidentiality claim must be asserted at the time of submission by stamping the words “confidential business information” on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice to the Permittees. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2, Subpart B (Public Information) and 41 Fed. Reg. 36902 through 36924 (September 1, 1976), as amended.

G. Inspection and Entry. The Permittees must allow the Director, IDEQ, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the Permittees' premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purpose of assuring Permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

H. Property Rights. The issuance of this Permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, nor any infringement of state or local laws or regulations.

I. Transfers. This Permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittees and incorporate such other requirements as may be necessary under the Act. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory.)

J. State/Tribal Environmental Laws

1. Nothing in this Permit shall be construed to preclude the institution of any legal action or relieve the Permittees from any responsibilities, liabilities, or penalties established pursuant to any applicable State/Tribal law or regulation under authority preserved by Section 510 of the Act**.**
2. No condition of this Permit releases the Permittees from any responsibility or requirements under other environmental statutes or regulations.

K. Oil and Hazardous Substance Liability Nothing in this Permit shall be constructed to preclude the institution of any legal action or relieve the Permittees from any responsibilities, liabilities, or penalties to which the Permittees is or may be subject under Section 311 of the CWA or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

L. Severability The provisions of this Permit are severable, and if any provision of this permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to the circumstances, and the remainder of this Permit shall not be affected thereby.

VII. Definitions and Acronyms

All definitions contained in Section 502 of the Act and 40 CFR Part 122 apply to this Permit and are incorporated herein by reference. For convenience, simplified explanations of some regulatory/statutory definitions have been provided but, in the event of a conflict, the definition found in the statute or regulation takes precedence.

“Administrator” means the Administrator of the EPA, or an authorized representative.

“Animal facility” see “commercial animal facility.”

“Annual Report” means the periodic self –assessment submitted by the Permittee(s) to document incremental progress towards meeting the storm water management requirements and implementation schedules as required by this Permit. See Part IV.C.

"Best Management Practices (BMPs)" means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. See 40 CFR § 122.2. BMP refers to operational activities, physical controls or educational measures that are applied to reduce the discharge of pollutants and minimize potential impacts upon receiving waters, and accordingly, refers to both structural and nonstructural practices that have direct impacts on the release, transport, or discharge of pollutants. See also "storm water control measure (SCM)."

"Bioretention" is the water quality and water quantity storm water management practice using the chemical, biological and physical properties of plants, microbes and soils for the removal of pollution from storm water runoff.

"Canopy Interception**"** is the interception of precipitation, by leaves and branches of trees and vegetation that does not reach the soil.

"CGP" and "Construction General Permit" means the current available version of EPA's *NPDES General Permit for Storm Water Discharges for Construction Activities in Idaho*, Permit No. IDR12-0000. EPA's CGP is posted on EPA's website at *www.epa.gov/npdes/stormwater/cgp*.

"Commercial Animal Facility" as used in this Permit, means a business that boards, breeds, or grooms animals including but not limited to dogs, cats, rabbits or horses.

"Common Plan of Development**"** is a contiguous construction project or projects where multiple separate and distinct construction activities may be taking place at different times on different schedules but under one plan. The "plan" is broadly defined as any announcement or piece of documentation or physical demarcation indicating construction activities may occur on a specific plot; included in this definition are most subdivisions and industrial parks.

"Construction activity" includes, but is not limited to, clearing, grading, excavation, and other site preparation work related to the construction of residential buildings and non-residential buildings, and heavy construction (e.g., highways, streets, bridges, tunnels, pipelines, transmission lines and industrial non-building structures).

"Control Measure" as used in this Permit, refers to any action, activity, Best Management Practice or other method used to prevent or reduce the discharge of pollutants in stormwater to waters of the United States.

"CWA" or "The Act" means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.

"Director" means the Environmental Protection Agency Regional Administrator, the EPA Director of the Office of Water and Watersheds, or an authorized representative.

"Discharge" when used without a qualifier, refers to "discharge of a pollutant" as defined at 40 CFR §122.2.

"Discharge of a pollutant" means (a) any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or (b) any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

"Discharge of Storm Water Associated with Construction Activity" as used in this Permit, refers to a discharge of pollutants in storm water runoff from areas where soil disturbing activities (*e.g.*, clearing, grading, or excavation), construction materials or equipment storage or maintenance (*e.g.*, fill piles, borrow areas, concrete truck washout, fueling) or other industrial storm water directly related to the construction process are located, and which are required to be managed under an NPDES permit. See the regulatory definitions of storm water discharge associated with large and small construction activity at 40 CFR §122.26(b)(14)(x) and 40 CFR §122.26(b)(15), respectively

"Discharge of Storm Water Associated with Industrial Activity" as used in this Permit, refers to the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant included in the regulatory definition of storm water discharge associated with industrial activity at 40 CFR §122.26(b)(14).

"Discharge-related Activities" include: activities which cause, contribute to, or result in storm water point source pollutant discharges and measures to control storm water discharges, including the siting, construction, and operation of best management practices to control, reduce or prevent storm water pollution.

"Disconnect" for the purposes of this permit, means the change from a direct discharge into receiving waters to one in which the discharged water flows across a vegetated surface, through a constructed water or wetlands feature, through a vegetated swale, or other attenuation or infiltration device before reaching the receiving water.

"Engineered Infiltration" is an underground device or system designed to accept storm water and slowly exfiltrates it into the underlying soil. This device or system is designed based on soil tests that define the infiltration rate.

"Erosion" means the process of carrying away soil particles by the action of water.

"Evaporation" means rainfall that is changed or converted into a vapor.

"Evapotranspiration" means the sum of evaporation and transpiration of water from the earth's surface to the atmosphere. It includes evaporation of liquid or solid water plus the transpiration from plants.

"Extended Filtration" is a structural storm water device which filters storm water runoff through a soil media and collects it in an underdrain which slowly releases it after the storm is over.

"EPA" means the Environmental Protection Agency Regional Administrator, the EPA Director of the Office of Water and Watersheds, or an authorized representative.

"Entity" means a governmental body, or a public or private organization.

"Existing Permanent Controls," in the context of this Permit, means post- construction or permanent storm water management controls designed to treat or control runoff on a permanent basis and that were installed prior to the effective date of this Permit.

"Facility or Activity" generally means any NPDES "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

"Fish Tissue Sampling" see "Methylmercury Fish Tissue Sampling"

"Green infrastructure" means runoff management approaches and technologies that utilize, enhance and/or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration and reuse.

"Hydromodification" means changes to the storm water runoff characteristics of a watershed caused by changes in land use.

"IDEQ" means the Idaho Department of Environmental Quality or its authorized representative.

"Illicit Connection" means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

"Illicit Discharge" is defined at 40 CFR §122.26(b)(2) and means any discharge to a municipal separate storm sewer that is not entirely composed of storm water, except discharges authorized under an NPDES permit (other than the NPDES Permit for discharges from the MS4) and discharges resulting from fire fighting activities.

"Impaired Water**"** (or "Water Quality Impaired Water") for purposes of this Permit means any water body identified by the State of Idaho or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State water quality standards. Impaired waters include both waters with approved or established Total Maximum Daily Loads (TMDLs), and those for which a TMDL has not yet been approved or established.

"Industrial Activity" as used in this Permit refers to the eleven categories of industrial activities included in the definition of discharges of "storm water associated with industrial activity" at 40 CFR §122.26(b)(14).

"Industrial Storm Water" as used in this Permit refers to storm water runoff associated with the definition of "discharges of storm water associated with industrial activity".

"Infiltration" is the process by which storm water penetrates into soil.

"Low Impact Development" or "LID" means storm water management and land development techniques, controls and strategies applied at the parcel and subdivision scale that emphasize conservation and use of on-site natural features integrated with engineered, small scale hydrologic controls to more closely mimic pre-development hydrologic functions.

"Major outfall" is defined in 40 CFR §122.26(b)(5) and in general, means a municipal storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more.

"MEP" or "maximum extent practicable," means the technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in storm water discharges that was established by Section 402(p) of the Clean Water Act, 33 U.S.C §1342(p).

"Measurable Goal" means a quantitative measure of progress in implementing a component of a storm water management program.

"Methylmercury Fish Tissue Sampling" and "Methylmercury Fish Tissue Sampling Requirements" means the IDEQ-recommended cooperative data collection effort for the Lower Boise River Watershed. In particular, Methylmercury Fish Tissue Sampling requirements are otherwise specified in NPDES Permits # ID-002044-3 and ID-002398-1, as issued by EPA to the City of Boise and available online at http://yosemite.epa.gov/r10/water.nsf/NPDES+Permits/Current+ID1319

"Minimize" means to reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry or municipal practices.

"MS4" means "municipal separate storm sewer system," and is used to refer to either a Large, Medium, or Small Municipal Separate Storm Sewer System as defined in 40 CFR 122.26(b). The term, as used within the context of this Permit, refers to those portions of the municipal separate storm sewer systems within the corporate limits of the City of Boise and City of Garden City that are owned and/or operated by the Permittees, namely: Ada County Highway District, Boise State University, City of Boise, City of Garden City, Drainage District #3 and/or the Idaho Transportation Department District #3.

"Municipality" means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA.

"Municipal Separate Storm Sewer" is defined in 40 CFR §122.26(b) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to

State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

"National Pollutant Discharge Elimination System" or "NPDES" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the CWA. The term includes an 'approved program.'

"New Permanent Controls," in the context of this Permit, means post- construction or permanent storm water management controls designed to treat or control runoff on a permanent basis that are installed after the effective date of this permit.

"Outfall" is defined at 40 CFR §122.26(b)(9) means a point source (see definition below) at the point where a municipal separate storm sewer discharges to waters of the United States, and does not include open conveyances connecting two municipal separate storm sewers or pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

"Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

"Permanent storm water management controls" see "post-construction storm water management controls."

"Permitting Authority" means the U.S. Environmental Protection Agency (EPA)

"Point Source" is defined at 40 CFR §122.2 and means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

"Pollutant" is defined at 40 CFR §122.2. A partial listing from this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

"Pollutant(s) of concern" includes any pollutant identified by IDEQ as a cause of impairment of any water body that will receive a discharge from a MS4 authorized under this Permit. See Table II.C.

"Post- construction storm water management controls" or "permanent storm water management controls" means those controls designed to treat or control runoff on a permanent basis once construction is complete. See also "new permanent controls" and "existing permanent controls."

"QA/QC" means quality assurance/quality control.

"QAP" means Quality Assurance Plan.

"Rainfall and Rainwater Harvesting**"** is the collection, conveyance, and storage of rainwater. The scope, method, technologies, system complexity, purpose, and end uses vary from rain barrels for garden irrigation in urban areas, to large-scale collection of rainwater for all domestic uses.

"Redevelopment" for the purposes of this Permit, means the alteration, renewal or restoration of any developed land or property that results in land disturbance of 5,000 square feet or more, and that has one of the following characteristics: land that currently has an existing structure, such as buildings or houses; or land that is currently covered with an impervious surface, such as a parking lot or roof; or land that is currently degraded and is covered with sand, gravel, stones, or other non-vegetative covering.

"Regional Administrator" means the Regional Administrator of Region 10 of the EPA, or the authorized representative of the Regional Administrator.

"Repair of Public Streets, Roads and Parking Lots" means repair work on Permittee-owned or Permittee-managed streets and parking lots that involves land disturbance, including asphalt removal or regrading of 5,000 square feet or more. This definition excludes the following activities: pot hole and square cut patching; overlaying existing asphalt or concrete pacing with asphalt or concrete without expanding the area of coverage; shoulder grading; reshaping or regrading drainage ditches; crack or chip sealing; and vegetative maintenance.

"Runoff Reduction Techniques" means the collective assortment of storm water practices that reduce the volume of storm water from discharging off site.

"Storm Sewershed" means, for the purposes of this Permit, all the land area that is drained by a network of municipal separate storm sewer system conveyances to a single point of discharge into a water of the United States.

"Significant contributors of pollutants" means any discharge that causes or could cause or contribute to a violation of surface water quality standards.

"Small Construction Activity" – is defined at 40 CFR §122.26(b)(15) and incorporated here by reference. A small construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.
"Snow management" means the plowing, relocation and collection of snow.

"Soil amendments" are components added to in situ or native soils to increase the spacing between soil particles so that the soil can absorb and hold more moisture. The amendment of soils changes

various other physical, chemical and biological characteristics so that the soils become more effective in maintaining water quality.

"Source control" storm water management means practices that control storm water *before* pollutants have been introduced into storm water

"Storm event" or "measurable storm event" for the purposes of this Permit means a precipitation event that results in an actual discharge from the outfall and which follows the preceding measurable storm event by at least 48 hours (2 days).

"Storm water" and "storm water runoff" as used in this Permit means storm water runoff, snow melt runoff, and surface runoff and drainage, and is defined at 40 CFR §122.26(b)(13). "Storm water" means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels, or pipes into a defined surface water channel or a constructed infiltration facility.

"Storm Water Control Measure" (SCM) or "storm water control device," means physical, structural, and/or managerial measures that, when used singly or in combination, reduce the downstream quality and quantity impacts of storm water. Also, SCM means a permit condition used in place of or in conjunction with effluent limitations to prevent or control the discharge of pollutants. This may include a schedule of activities, prohibition of practices, maintenance procedures, or other management practices. SCMs may include, but are not limited to, treatment requirements; operating procedures; practices to control plant site runoff, spillage, leaks, sludge, or waste disposal; or drainage from raw material storage. See "best management practices (BMPs)."

"Storm Water Facility" means a constructed component of a storm water drainage system, designed or constructed to perform a particular function or multiple functions. Storm water facilities include, but are not limited to, pipes, swales, ditches, culverts, street gutters, detention basins, retention basins, constructed wetlands, infiltration devices, catch basins, oil/water separators, sediment basins, and modular pavement.

"Storm Water Management Practice**"** or "Storm Water Management Control" means practices that manage storm water, including structural and vegetative components of a storm water system.

"Storm Water Management Project" means a project that takes into account the effects on the water quality of the receiving waters and whether a structural storm water control device can be retrofitted to control water quality.

"Storm Water Management Program (SWMP)" refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system. For the purposes of this Permit, the SWMP consists of the actions and activities conducted by the Permittees as required by this Permit and described in the Permittees' SWMP documentation. A "SWMP document" is the written summary describing the unique and/or cooperative means by which an individual Permittee or entity implements the specific storm water management controls Permittee within their jurisdiction.

"Storm Water Pollution Prevention Plan (SWPPP)" means a site specific plan designed to describe the control of soil, raw materials, or other substances to prevent pollutants in storm water runoff; a SWPPP is generally developed for a construction site, or an industrial facility. For the purposes of this permit, a SWPPP means a written document that identifies potential sources of pollution, describes practices to reduce pollutants in storm water discharges from the site, and identifies procedures or controls that the operator will implement to reduce impacts to water quality and comply with applicable Permit requirements.

"Structural flood control device" means a device designed and installed for the purpose of storm drainage during storm events.

"Subwatershed" for the purposes of this Permit means a smaller geographic section of a larger watershed unit with a drainage area between 2 to 15 square miles and whose boundaries include all the land area draining to a point where two second order streams combine to form a third order stream. A subwatershed may be located entirely within the same political jurisdiction.

"TMDL" means Total Maximum Daily Load, an analysis of pollutant loading to a body of water detailing the sum of the individual waste load allocations for point sources and load allocations for non-point sources and natural background. See 40 CFR §130.2.

"Treatment control" storm water management means practices that 'treat' storm water after pollutants have been incorporated into the storm water.

"Urban Agriculture" and "Urban Agricultural Activities" means the growing, processing, and distribution of food and other products through intensive plant cultivation and animal husbandry in and around cities. For the purposes of this Permit, the term includes activities allowed and/or acknowledged by the Permittees through a local comprehensive plan ordinance, or other regulatory mechanism. For example, see: *Blueprint Boise* online at *http://www.cityofboise.org/BluePrintBoise/pdf/Blueprint%20Boise/0_Blueprint_All.pdf*, and/or *City of Boise Urban Agriculture ordinance amendment, ZOA11-00006.*

"Waters of the United States," as defined in 40 CFR 122.2, means:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

2. All interstate waters, including interstate "wetlands";

3. All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

a. Which are or could be used by interstate or foreign travelers for recreational or other purposes;
b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

c. Which are used or could be used for industrial purposes by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the United States under this definition;

5. Tributaries of waters identified in paragraphs 1 through 4 of this definition;

6. The territorial sea; and

7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs 1 through 6 of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds for steam electric generation stations per 40 CFR Part 423) which also meet the criteria of this definition are not waters of the United States. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

“Watershed” is defined as all the land area that is drained by a waterbody and its tributaries.

“Wetlands” means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Exhibit 4

Washington, D.C. – District of Columbia MS4 Permit (Permit No. DC0000221)

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PERMIT FOR THE DISTRICT OF COLUMBIA
MUNICIPAL SEPARATE STORM SEWER SYSTEM

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9. PERMIT DEFINITIONS

1. DISCHARGES AUTHORIZED UNDER THIS PERMIT

1.1 Permit Area

This permit covers all areas within the jurisdictional boundary of the District of Columbia served by, or otherwise contributing to discharges from, the Municipal Separate Storm Sewer System (MS4) owned or operated by the District of Columbia. This permit also covers all areas served by or contributing to discharges from MS4s owned or operated by other entities within the jurisdictional boundaries of the District of Columbia unless those areas have separate NPDES MS4 permit coverage or are specifically excluded herein from authorization under the District's stormwater program. Hereinafter these areas collectively are referred to as "MS4 Permit Area".

1.2 Authorized Discharges

This permit authorizes all stormwater point source discharges to waters of the United States from the District of Columbia's MS4 that comply with the requirements of this permit. This permit also authorizes the discharge of stormwater commingled with flows contributed by process wastewater, non-process wastewater, or stormwater associated with industrial activity provided such discharges are authorized under separate NPDES permits.

This permit authorizes the following non-stormwater discharges to the MS4 when appropriate stormwater activities and controls required through this permit have been applied and which are: (1) discharges resulting from clear water flows, roof drainage, dechlorinated water line flushing, landscape irrigation, ornamental fountains, diverted stream flows, rising ground waters, uncontaminated ground water infiltration to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation waters, springs, footing drains, lawn watering, individual resident car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, wash water, fire fighting activities, and similar types of activities; and (2) which are managed so that water quality is not further impaired and that the requirements of the federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*, and EPA regulations are met.

1.3 Limitations to Coverage

1.3.1 Non-stormwater Discharges

The permittee, as defined herein, shall effectively prohibit non-stormwater discharges into the MS4, except to the extent such discharges are regulated with an NPDES permit.

1.3.2 Waivers and Exemptions

This permit does not authorize the discharge of any pollutant from the MS4 which arises from or is based on any existing waivers and exemptions that may otherwise apply and are not consistent with the Federal Clean Water Act and other pertinent guidance, policies, and regulations. This narrative prohibition on the applicability of such waivers and exemptions extends to any activity that would otherwise be authorized under District law, regulations or

ordinance but which impedes the reduction or control of pollutants through the use of stormwater control measures and/or prevents compliance with the narrative /numeric effluent limits of this permit. Any such discharge not otherwise authorized may constitute a violation of this permit.

1.4 Discharge Limitations

The permittee must manage, implement and enforce a stormwater management program (SWMP) in accordance with the Clean Water Act and corresponding stormwater NPDES regulations, 40 C.F.R. Part 122, to meet the following requirements:

1.4.1. Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 as necessary to comply with existing District of Columbia Water Quality Standards (DCWQS);

1.4.2. Attain applicable wasteload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body, consistent with 33 U.S.C. § 1342(p)(3)(B)(iii); 40 C.F.R. § 122.44(k)(2) and (3); and

1.4.3. Comply with all other provisions and requirements contained in this permit, and in plans and schedules developed in fulfillment of this permit.

Compliance with the provisions contained in Parts 2 through 8 of this permit, including milestones and final dates for attainment of applicable WLAs, shall constitute adequate progress toward compliance with DCWQS and WLAs for this permit term.

2. LEGAL AUTHORITY, RESOURCES AND STORMWATER PROGRAM ADMINSTRATION

2.1 Legal Authority

2.1.1 The permittee shall use its existing legal authority to control discharges to and from the Municipal Separate Storm Sewer System in order to prevent or reduce the discharge of pollutants to achieve water quality objectives, including but not limited to applicable water quality standards. To the extent deficiencies can be addressed through regulation or other Executive Branch action, the permittee shall remedy such deficiencies within 120 days. Deficiencies that can only be addressed through legislative action shall be remedied within 2 years of the effective date of this permit, except where otherwise stipulated, in accordance with the District's legislative process. Any changes to or deficiencies in the legal authority shall be explained in each Annual Report.

2.1.2 No later than 18 months following the effective date of this permit, the permittee shall update and implement Chapter 5 of Title 21 of District of Columbia Municipal Regulations (Water Quality and Pollution) ("updated DC Stormwater Regulations"), to address the control of stormwater throughout the MS4 Permit Area. Such regulations shall be consistent with this

permit, and shall be at least as protective of water quality as the federal Clean Water Act and its implementing regulations require.

2.1.3 The permittee shall ensure that the above legal authority in no way restricts its ability to enter into inter-jurisdictional agreements with other District agencies and/or other jurisdictions affected through this permit.

2.1.4 Review and revise, where applicable, building, health, road and transportation, and other codes and regulations to remove barriers to, and facilitate the implementation of the following standards: (1) standards resulting from issuance of District stormwater regulations required by Section 2.1, paragraph 1 herein; and (2) performance standards required by this permit.

2.2 Fiscal Resources

The permittee, including all agencies and departments of the District as specified in section 2.3 below, shall provide adequate finances, staff, equipment and support capabilities to implement the existing Stormwater Management Program (SWMP) and the provisions of this permit. For the core program the permittee shall provide a dedicated funding source. Each annual report under Part 6 of this permit shall include a demonstration of adequate fiscal capacity to meet the requirements of this permit.

2.3 Stormwater Management Program Administration/Permittee Responsibilities

2.3.1 The Government of the District of Columbia is the permittee, and all activities of all agencies, departments, offices and authorities of the District must comply with the requirements of this permit. The permittee has designated the District Department of the Environment (DDOE) as the agency responsible for managing the MS4 Stormwater Management Program and all activities necessary to comply with the requirements of this permit and the Comprehensive Stormwater Management Enhancement Amendment Act of 2008 by coordinating and facilitating a collaborative effort among other city agencies and departments including but not limited to departments designated as "Stormwater Agencies" by the Comprehensive Stormwater Management Enhancement Amendment Act of 2008:

District Department of Transportation (DDOT);
Department of Public Works (DPW);
Office of Planning (OP);
Office of Public Education Facilities Modernization (OPEFM);
Department of Real Estate Services (DRES);
Department of Parks and Recreation; and
DC Water and Sewer Authority (also known as and hereinafter referred to as DC Water).

Each named entity is responsible for complying with those elements of the permit within its jurisdictional scope and authorities.

2.3.2 DDOE shall coordinate, and all agencies, offices, departments and authorities shall implement provisions of the existing MS4 Task Force Memorandum of Understanding (MOU) dated 2000, updated matrix of responsibilities (January 2008), and any subsequent updates; the MOU between DDOE and DC Water (2012) and any subsequent updates; and other institutional agreements to coordinate compliance activities among agency partners to implement the provisions of this permit. DDOE's major responsibilities under these MOUs and institutional agreements shall include:

1. Convening regular meetings and communication with MS4 Task Force agencies and other committees established to implement this permit to budget, assign and implement projects, and monitor, inspect and enforce all activities required by the MS4 permit.

2. Providing technical and administrative support for the MS4 Task Force and other committees established to implement this permit

3. Evaluating, assessing, and synthesizing results of the monitoring and assessment programs and the effectiveness of the implementation of management practices and coordinating necessary adjustments to the stormwater management program in order to ensure compliance.

4. Coordinating the completion and submission of all deliverables required by the MS4 Permit.

5. Projecting revenue needs to meet MS4 Permit requirements, overseeing the District's stormwater fees to fulfill revenue needs, and coordinating with DC Water to ensure the District's stormwater fee is collected.

6. Making available to the public and other interested and affected parties, the opportunity to comment on the MS4 stormwater management program.

2.3.3 Within 180 days of permit issuance, the permittee shall complete an assessment of additional governmental agencies and departments, non-governmental organizations, watershed groups or other community organizations in the District and adjacent states to partner with to administer required elements of the permit. Intra- and inter-agency agreements between relevant governmental and nongovernmental organizations shall be established to ensure successful coordination and implementation of stormwater management activities in accordance with the requirements of this permit. Additional government and nongovernmental organizations and programs to consider include; land use planning, brownfields redevelopment, fire department, building and safety, public health, parks and recreation, and federal departments and agencies, including but not limited to, the National Park Service, Department of Agriculture, Department of Defense, and General Services Administration, responsible for facilities in the District.

3. STORMWATER MANAGEMENT PROGRAM (SWMP) PLAN

The permittee shall continue to implement, assess and upgrade all of the controls,

procedures and management practices, described in this permit, and in the SWMP dated February 19, 2009, and any subsequent updates. This Program has been determined to reduce the discharge of pollutants to the maximum extent practicable. The Stormwater Management Program is comprised of all requirements in this permit. All existing and new strategies, elements, initiatives, schedules or programs required by this permit must be documented in the SWMP Plan, which shall be the consolidated document of all stormwater program elements. Updates to the plan shall be consistent with all compliance deadlines in this permit. A current plan shall be posted on the permittee's website at an easily accessible location at all times.

New Stormwater Management Program strategies, elements, initiatives and plans required to be submitted to EPA for review and approval are included in Table 1.

TABLE 1
Elements Requiring EPA Review and/or Approval

Element	**Submittal Date (from effective date of this permit)**
Anacostia River Watershed Trash Reduction Calculation Methodology (4.10)	1 year
Catch Basin Operation and Maintenance Plan (4.3.5.1)	18 months
Outfall Repair Schedule (4.3.5.3)	18 months
Off-site Mitigation/Payment-in-Lieu Program (4.1.3)	18 months
Retrofit Program (4.1.5)	2 years
Consolidated TMDL Implementation Plan (4.10.3)	2 years
Revised Monitoring Program (5.1)	2 years
Revised Stormwater Management Program Plan (3)	4 years

No later than 3 years from the issuance date of this permit the permittee shall public notice a fully updated Plan including all of the elements required in this permit. No later than 4 years from the issuance date of this permit the permittee shall submit to EPA the fully updated plan for review and approval, as part of the application for permit renewal.

The measures required herein are terms of this permit. These permit requirements do not prohibit the use of 319(h) funds for other related activities that go beyond the requirements of this permit, nor do they prohibit other sources of funding and/or other programs where legal or contractual requirements preclude direct use for stormwater permitting activities.

TABLE 2
Legal Authority for Selected Required Program Stormwater Elements

Required Program Application Element	**Regulatory References**
Adequate Legal Authority	40 C.F.R. § 122.26(d)(2)(I)(C)-(F)

Green technology stormwater management practices, which incorporate technologies and practices across District activities.	Chapter 5 of Title 21 of District of Columbia Municipal Regulations (Water Quality and Pollution)
Existing Structural and Source Controls	40 C.F.R. § 122.26(d)(2)(iv)(A)(1)
Roadways	40 C.F.R. § 122.26(d)(2)(iv)(A)(3)
Pesticides, Herbicides, and Fertilizers Application	40 C.F.R. § 122.26(d)(2)(iv)(A)(6)
Municipal Waste Sites	40 C.F.R. § 122.26(d)(2)(iv)(A)(5)
Spill Prevention and Response	40 C.F.R. § 122.26(d)(2)(iv)(B)(4)
Infiltration of Seepage	40 C.F.R. § 122.26(d)(2)(iv)(B)(7)
Stormwater Management Program for Commercial and Residential Areas	40 C.F.R. § 122.26(d)(2)(iv)(A)
Manage Critical Source Areas	40 C.F.R. § 122.26(d)(iii)(B)(6)
Stormwater Management for Industrial Facilities	40 C.F.R. § 122.26(d)(2)(iv)(C)
Industrial and High Risk Runoff	40 C.F.R. § 122.26(d)(2)(iv)(C), (iv)(A)(5)
Identify Priority Industrial Facilities	40 C.F.R. § 122.26(d)(2)(iv)(C)(1)
Illicit Discharges and Improper Disposal	40 C.F.R. § 122.26(d)(2)(iv)(B)(1)-(5), (iv)(B)(7)
Flood Control Projects	40 C.F.R. § 122.26(d)(2)(iv)(A)(4)
Public Education and Participation	40 C.F.R. § 122.26(d)(2)(iv)(A)(6), (iv)(B)(5), (iv)(B)(6)

Monitoring and Assessment and Reporting	40 C.F.R. § 122.26(d)(2)(iv)(D)(v)
Monitoring Program	40 C.F.R. § 122.26(d)(2)(iv)(B)(2), (iii), iv(A), (iv)(C)(2)
Characterization Data	40 C.F.R. § 122.26(d)(2)(iii)(B)-(D), 40 C.F.R. § 122.21(g)(7)
Reporting	40 C.F.R. § 122.41(l)

4. IMPLEMENTATION OF STORMWATER CONTROL MEASURES

4.1 Standard for Long-Term Stormwater Management

The permittee shall continue to develop, implement, and enforce a program in accordance with this permit and the permittee's updated SWMP Plan that integrates stormwater management practices at the site, neighborhood and watershed levels that shall be designed to mimic pre-development site hydrology through the use of on-site stormwater retention measures (e.g., harvest and use, infiltration and evapotranspiration), through policies, regulations, ordinances and incentive programs

4.1.1 Standard for Stormwater Discharges from Development

No later than 18 months following issuance of this permit, the permittee shall, through its Updated DC Stormwater Regulations or other permitting or regulatory mechanisms, implement one or more enforceable mechanism(s) that will adopt and implement the following performance standard for all projects undertaking development that disturbs land greater than or equal to 5,000 square feet:

Require the design, construction and maintenance of stormwater controls to achieve on-site retention of 1.2" of stormwater from a 24-hour storm with a 72-hour antecedent dry period through evapotranspiration, infiltration and/or stormwater harvesting and use for all development greater than or equal to 5,000 square feet.

The permittee may allow a portion of the 1.2" volume to be compensated for in a program consistent with the terms and requirements of Part 4.1.3.

4.1.2 Code and Policy Consistency, Site Plan Review, Verification and Tracking

By the end of this permit term the permittee must review and revise, as applicable, stormwater, building, health, road and transportation, and other codes and regulations to remove barriers to, and facilitate the implementation of the retention performance standard required in

Section 4.1.1. The permittee must also establish/update and maintain a formal process for site plan reviews and a post-construction verification process (e.g., inspections, submittal of as-builts) to ensure that standards are appropriately implemented. The permittee must also track the on-site retention performance of each project subject to this regulatory requirement.

4.1.3 Off-Site Mitigation and/or Fee-in Lieu for all Facilities

Within 18 months of the effective date of this permit the permittee shall develop, public notice, and submit to EPA for review and comment an off-site mitigation and/or fee-in-lieu program to be utilized when projects will not meet stormwater management performance standard as defined in Section 4.1.1. The permittee has the option of implementing an off-site mitigation program, a fee-in-lieu program, or both. Any allowance for adjustments to the retention standard shall be defined in the permittee's regulations. The program shall include at a minimum:

1. Establishment of baseline requirements for on-site retention and for mitigation projects. On-site volume plus off-site volume (or fee-in-lieu equivalent or other relevant credits) must equal no less than the relevant volume in Section 4.1.1;
2. Specific criteria for determining when compliance with the performance standard requirement for on-site retention cannot technically be met based on physical site constraints, or a rationale for why this is not necessary;
3. For a fee-in-lieu program, establishment of a system or process to assign monetary values at least equivalent to the cost of implementation of controls to account for the difference in the performance standard, and the alternative reduced value calculated; and
4. The necessary tracking and accounting systems to implement this section, including policies and mechanisms to ensure and verify that the required stormwater practices on the original site and appropriate required off-site practices stay in place and are adequately maintained.

The program may also include incentives for achieving other important environmental objectives such as ongoing measurable carbon sequestration, energy savings, air quality reductions in green house gases, or other environmental benefits for which the program can develop methods for quantifying and documenting those outcomes. Controls implemented to achieve those outcomes are subject to the same level of site plan review, inspection, and operation and maintenance requirements as stormwater controls.

District-owned transportation right-of-way projects are subject to a similarly stringent process for determining an alternate performance volume, but for the duration of this permit term need not conduct off-site mitigation or pay into a fee-in-lieu program to compensate for the difference.

4.1.4 Green Landscaping Incentives Program

No later than one year following permit issuance, the permittee shall develop an incentive program to increase the quantity and quality of planted areas in the District while allowing flexibility for developers and designers to meet development standards. The Incentive Program

shall use such methods as a scoring system to encourage green technology practices such as larger plants, permeable paving, green roofs, vegetated walls, preservation of existing trees, and layering of vegetation along streets and other areas visible to the public.

4.1.5 Retrofit Program for Existing Discharges

4.1.5.1 Within two years of the effective date of this permit the permittee shall develop, public notice, and submit to EPA for review and approval a program that establishes performance metrics for retrofit projects. The permittee shall fully implement the program upon EPA approval. The starting point for the performance metrics shall be the standard in Section 4.1.1. Performance metrics may be established generally for all retrofit projects, or for categories of projects, e.g., roads, sidewalks, parking lots, campuses. Specific site conditions may constitute justifications for setting a performance standard at something less than the standard in Section 4.1.1, and a similar calculator or algorithm process may be used in conjunction with a specific site analysis.

4.1.5.2 The permittee, with facilitation assistance from EPA Region III, will also work with major Federal landholders, such as the General Services Administration and the Department of Defense, with the objective of identifying retrofit opportunities, documenting federal commitments, and tracking pollutant reductions from relevant federal actions.

4.1.5.3 For each retrofit project estimate the potential pollutant load and volume reductions achieved through the DC Retrofit program by major waterbody (Rock Creek, Potomac, Anacostia) for the following pollutants: Bacteria (E. coli), Total Nitrogen, Total Phosphorus, Total Suspended Solids, Cadmium, Copper, Lead, Zinc, and Trash. These estimates shall be included in the annual report following implementation of the project.

4.1.5.4 The DC Retrofit Program shall implement retrofits for stormwater discharges from a minimum of 18,000,000 square feet of impervious surfaces during the permit term. A minimum of 1,500,000 square feet of this objective must be in transportation rights-of-way.

4.1.5.5 No later than 18 months following issuance of this permit, the permittee shall, through its Updated DC Stormwater Regulations or other permitting or regulatory mechanisms, implement an enforceable mechanism that will adopt and implement stormwater retention requirements for properties where less than 5,000 square feet of soil is being disturbed but where the buildings or structures have a footprint that is greater than or equal to 5,000 square feet and are undergoing substantial improvement. Substantial improvement, as consistent with District regulations at 12J DCMR § 202, is any repair, alteration, addition, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. The characteristics of these types of projects may constitute justifications for setting a performance standard at something less than the standard in Section 4.1.1.

4.1.5.6 The permittee shall ensure that every major renovation/rehabilitation project for District-owned properties within the inventory of DRES and OPEFM (e.g., schools and school administration buildings) includes on-site stormwater retention measures, including but not

limited to green roofs, stormwater harvest/reuse, and/or other practices that can achieve the retention performance standard.

4.1.6 Tree Canopy

4.1.6.1 No later than one year following issuance of this permit, the permittee shall develop and public notice a strategy to reduce the discharge of stormwater pollutants by expanding tree canopy throughout the city. The strategy shall identify locations throughout the District where tree plantings and expanded tree boxes are technically feasible and commit to specific schedules for implementation at locations throughout the District, with highest priority given to projects that offer the greatest stormwater retention potential. The strategy shall also include the necessary elements to achieve the requirements of Section 4.1.6.2.

4.1.6.2 The permittee shall achieve a minimum net annual tree planting rate of 4,150 plantings annually within the District MS4 area, with the objective of a District-wide urban tree canopy coverage of 40% by 2035. The annual total tree planting shall be calculated as a net increase, such that annual mortality is also included in the estimate. The permittee shall ensure that trees are planted and maintained, including requirements for adequately designed and sized tree boxes, to achieve optimal stormwater retention and tree survival rate. Trees shall be planted in accordance with the Planting Specifications issued by the International Society of Arboriculture as appropriate to the site conditions.

4.1.6.3 The permittee shall annually document the total trees planted and make an annual estimate of the volume of stormwater that is being removed from the MS4 (and combined system, as relevant) in a typical year of rainfall as a result of the maturing tree canopy over the life of the MS4 permit. Also report annually on the status of achieving 40% canopy District-wide.

4.1.7 Green Roof Projects

4.1.7.1 Complete a structural assessment of all District properties maintained by DRES and slated for redevelopment to determine current roof conditions and the feasibility for green roof installation. These assessments shall be performed on an ongoing basis for all properties as they are considered for redevelopment. Based on the structural assessment and other factors, identify all District-owned properties where green roof projects are technically feasible and commit to specific schedules for implementing these projects. Highest priority shall be given to projects that offer the greatest stormwater capture potential.

4.1.7.2 The permittee shall install at a minimum 350,000 square feet of green roofs on District properties during the term of the permit (including schools and school administration buildings).

4.1.7.3 Document the square footage of green roof coverage in the District, whether publicly or privately owned, report any incentive programs implemented during the permit term, and estimate the volume of stormwater that is being removed from the MS4 (and combined

system, as relevant) in a typical year of rainfall as a result of the combined total green roof facilities in the District.

4.2 Operation and Maintenance of Stormwater Capture Practices

4.2.1 District Owned and Operated Practices.

Within two years of the effective date of this permit, develop and implement operation and maintenance protocols and guidance for District-owned and operated on-site retention practices (development and retrofits) to include maintenance needs, inspection frequencies, estimated maintenance frequencies, and a tracking system to document relevant information. Provide training to all relevant municipal employees and contractors, with regular refreshers, as necessary.

4.2.2 Non-District Owned and Operated Practices.

In conjunction with updating of relevant ordinances and policies, develop accountability mechanisms to ensure maintenance of stormwater control measures on non-District property. Those mechanisms may include combinations of deed restrictions, ordinances, maintenance agreements, or other policies deemed appropriate by the permittee. The permittee must also include a long-term verification process of O&M, which may include municipal inspections, 3rd party inspections, owner/operator certification on a frequency deemed appropriate by the permittee, and/or other mechanisms. The permittee must continue to maintain an electronic inventory of practices on private property to include this information.

4.2.3 Stormwater Management Guidebook and Training

4.2.3.1 No later than 18 months from the permit issuance date, the permittee shall finalize a Stormwater Management Guidebook to be available for wide-spread use by land use planners and developers. The Stormwater Management Guidebook shall provide regular updates, as applicable, in a format that facilitates such regular updates, and shall include objectives and specifications for integration of stormwater management technologies, including on site retention practices, in the areas of:

a. Site Assessment.
b. Site Planning and Layout.
c. Vegetative Protection, Revegetation, and Maintenance.
d. Techniques to Minimize Land Disturbance.
e. Techniques to Implement Measures at Various Scales.
f. Integrated Water Resources Management Practices.
g. Designing to meet the required performance standard(s).
h. Flow Modeling Guidance.
i. Hydrologic Analysis.
j. Construction Considerations.
k. Operation and Maintenance

4.2.3.2 The permittee shall continue to provide key industry, regulatory, and other stakeholders with information regarding objectives and specifications of green infrastructure practices contained in the Stormwater Management Guidebook through a training program. The Stormwater Management training program will include at a minimum the following:

a. Stormwater management/green technology practices targeted sessions and materials for builders, design professionals, regulators, resource agencies, and stakeholders.
b. Materials and data from stormwater management/green technology practices pilot projects and demonstration projects including case studies.
c. Design and construction methods for integration of stormwater management/green technology practices measures at various project scales.
d. Guidance on performance and cost of various types of stormwater management/green technology practices measures in the District.

4.3 Management of for District Government Areas

Procedures to reduce the discharge of pollutants in stormwater runoff shall include, but not be limited to:

4.3.1 Sanitary Sewage System Maintenance Overflow and Spill Prevention Response

The permittee shall implement an effective response protocol for overflows of the sanitary sewer system into the MS4. The response protocol shall clearly identify agencies responsible and telephone numbers and e-mail for any contact and shall contain at a minimum, procedures for:

1. Investigating any complaints received within 24 hours of the incident report.
2. Responding within two hours to overflows for containment.
3. Notifying appropriate sewer and public health agencies within 24 hours when the sanitary sewer overflows to the MS4.
4. Notifying the public in a timely and effective manner when SSO discharges to the MS4 may adversely affect public health.

This provision in no way authorizes sanitary sewer overflow discharges either directly or via the MS4.

4.3.2 Public Construction Activities Management

The permittee shall implement and comply with the Development and Redevelopment and the Construction requirements in Part 4.6 of this permit at all permittee-owned or operated public construction projects.

The permittee shall obtain discharge authorization under the applicable EPA Construction General permit for construction activities and comply with provisions therein.

4.3.3 Vehicle Maintenance/Material Storage Facilities/ Municipal Operations.

The permittee shall implement stormwater pollution prevention measures at all permittee-owned, leased facilities and job sites including but not limited to vehicle/ equipment maintenance facilities, and material storage facilities.

For vehicle and equipment wash areas and municipal facilities constructed, redeveloped, or replaced, the permittee shall eliminate discharges of wash waters from vehicle and equipment washing into the MS4 by implementing any of the following measures at existing facilities with vehicle or equipment wash areas:

1. Self-contain, and haul off-site for disposal;
2. Equip with a clarifier; or
3. Equip with an alternative pre-treatment device.

4.3.4 Landscape and Recreational Facilities Management, Pesticide, Herbicide, Fertilizer and Landscape Irrigation

4.3.4.1 The permittee shall further reduce pollutants and pollutant discharges associated with the storage and application of pesticides, fertilizers, herbicides, the use of other toxic substances and landscape irrigation according to an integrated pest management program (IPM). The IPM shall be an ecosystem based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, use of resistant varieties, and use of low or no chemical and irrigation input landscapes, in accordance with the provisions of this permit, procedures and practices described in the SWMP and regulations.

The permittee shall further utilize IPM controls to reduce pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied by employees or contractors, to public rights-of-way, parks, and other District property to ensure that:

a. Pesticides are used only if monitoring indicates they are needed according to established guidelines;

b. Fertilizers are used only when soil tests indicate that they are necessary, and only in minimum amounts and for needed purposes (e.g., seed germination).

c. Treatments are made with the purpose of removing only the target organism;

d. Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial, non-target organisms, and the environment;

e. No pesticides or fertilizers are applied to an area immediately prior to an expected rain event, or during or immediately following a rain event, or when water is flowing off the area;

f. No banned or unregistered pesticides are stored or applied;

g. All staff applying pesticides are certified or are under the direct supervision of a pesticide applicator certified in the appropriate category;

h. Procedures are implemented to encourage the retention and planting of native and/or non-invasive, naturalized vegetation to reduce water, pesticide and fertilizer needs;

i. Pesticides and fertilizers are stored indoors or under cover on paved surfaces or enclosed in secondary containment and storage areas inspected regularly to reduce the potential for spills; and

j. Landscapes that maximize on-site retention of stormwater, while minimizing mowing, chemical inputs and irrigation are given preference for all new landscape installation.

4.3.4.2 The permittee shall coordinate internally among departments for the purpose of ensuring that pesticide and fertilizer use within its jurisdiction does not threaten water quality.

4.3.4.3 The permittee shall partner with other organizations to ensure that pesticide and fertilizer use within their jurisdiction does not threaten water quality.

4.3.4.4 The permittee shall continue to conduct education and outreach, as well as provide incentives, to curtail the use of turf-grass fertilizers for the purpose of reducing nitrogen and phosphorous discharges to surface waters. The program shall incentivize the use of vegetative landscapes other than turf grass and other measures to restrict the use of turf grass fertilizers.

4.3.4.5 The permittee shall use GIS layers of public land and sewersheds, as well as background data, to identify priority areas for a targeted strategy to reduce the sources of pesticides, herbicides, and fertilizers that contaminate the stormwater runoff, and report progress toward completing the screening characterization in the next Updated SWMP.

4.3.4.6 The permittee shall include in each Annual Report a report on the implementation of the above application procedures, a history of the improvements in the control of these materials, and an explanation on how these procedures will meet the requirements of this permit.

4.3.5 Storm Drain System Operation and Management and Solids and Floatables Reduction

4.3.5.1 Within 18 months of the effective date of this permit, the permittee shall complete, public notice and submit to EPA for review and approval a plan for optimal catch basin inspections, cleaning and repairs. The permittee shall fully implement the plan upon EPA approval.

4.3.5.2 Until such time as the catch basin maintenance study has been completed and approved, the permittee shall ensure that each catch basin within the DC MS4 Permit Area is cleaned at least once annually during the life of the permit. The permittee shall continue to use strategies for coordinated catch basin cleaning and street-sweeping that will optimize reduction of stormwater pollutants.

4.3.5.3 Within 18 months of the effective date of this permit, and consistent with the 2006 Outfall Survey, the permittee shall complete, public notice and submit to EPA for review and approval an outfall repair schedule to ensure that approximately 10% of all outfalls needing repair are repaired annually, with the overall objective of having all outfalls in good repair by 2022. This schedule may be combined with the catch basin maintenance study outlined in 4.3.5.1. The repair schedule shall be fully implemented upon EPA approval.

4.3.5.4 The permittee shall comply with the Anacostia River Trash TMDL implementation provisions in Part 4.10 of this permit and apply the technologies and other activities developed in the Anacostia River Watershed Trash TMDL throughout the entire MS4 Permit Area. The permittee shall continue to report the progress of trash reduction in the Consolidated Annual Report.

4.3.6 Streets, Alleys and Roadways

4.3.6.1 Street sweeping shall be conducted on no less than 641 acres of roadway in the MS4 area annually in accordance with the following schedule:

TABLE 3
Street Sweeping

Area/Street Classification	Frequency
Arterials-heavily developed commercial and central business districts with considerable vehicular and pedestrian traffic	At least nine (9) times per year
Industrial areas	At least six (6) times per year
Residential-residential areas with limited throughway and pedestrian traffic AND neighborhood streets which are used for local purposes only	At least four (4) times per year
Central Business District/Commercial-neighborhood business districts and main streets with moderate vehicular and pedestrian traffic	At least one (1) time every two weeks

Environmental hot spots in the Anacostia River Watershed	At least two (2) times per month March through October

4.3.6.2 Standard road repair practices shall include limiting the amount of soil disturbance to the immediate area under repair. Stormwater conveyances which are denuded shall be resodded, reseeded and mulched, or otherwise stabilized for rapid revegetation, and these areas should have effective erosion control until stabilized.

4.3.6.3 The permittee shall continue to evaluate and update the use, application and removal of anti-icers, chemical deicers, salt, sand, and/or sand/deicer mixtures in an effort to minimize the impact of these materials on water quality. The permittee shall investigate and implement techniques available for reducing pollution from deicing salts in snowmelt runoff and runoff from salt storage facilities. The permittee shall evaluate and implement the use of porous/permeable surfaces that require less use of deicing materials and activities. This evaluation shall be made a part of an overall investigation of ways to meet the requirements of the Clean Water Act and reported in each Annual Report.

4.3.6.4 The permittee shall continue to implement and update a program to ensure that excessive quantities of snow and ice control materials do not enter the District's water bodies. The permittee shall report its progress in implementing the program in each Annual Report. Except during a declared Snow Emergency when the permittee determines that the foremost concern of snow removal activities is public health and safety, it shall avoid snow dumping or storage in areas adjacent to water bodies, wetlands, and areas near public or private drinking water wells which would ultimately reenter the MS4.

4.3.7 Infrastructure Maintenance/Pollution Source Control Maintenance

The permittee shall continue to implement an operation and maintenance program that incorporates good housekeeping components at all municipal facilities located in the DC MS4 Permit Area, including but not limited to; municipal waste water treatment facility, potable drinking water facility, municipal fleet operations, maintenance garages, parks and recreation, street and infrastructure maintenance, and grounds maintenance operations, libraries and schools. The permittee shall document the program in the Annual Report, as required at Section 6.2 herein. The permittee shall, at a minimum:

1. Continue to implement maintenance standards at all municipal facilities that will protect the physical, chemical and biological integrity of receiving waters.

2. Continue to implement an inspection schedule in which to perform inspections to determine if maintenance standards are being met. Inspections shall be performed no less than once per calendar year and shall provide guidance in Stormwater Pollution Prevention Plan development and implementation, where needed.

3. Continue to implement procedures for record keeping and tracking inspections and maintenance at all municipal facilities.

4. Continue to implement an inspection and maintenance program for all permittee-owned management practices, including post-construction measures.

5. Continue to ensure proper operation of all treatment management practices and maintain them as necessary for proper operation, including all post-construction measures.

6. Ensure that any residual water following infrastructure maintenance shall be self-contained and disposed of legally in accordance with the Clean Water Act.

4.3.8 Public Industrial Activities Management/Municipal and Hazardous Facilities

For any municipal activity associated with industrial activity, as defined by 40 C.F.R. § 122.26, which discharges stormwater to, from and through the DC MS4, the permittee shall obtain separate coverage under either: (1) the EPA Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP) (As modified May 27, 2009); or (2) an individual permit.

4.3.9 Emergency Procedures

The permittee may conduct repairs of essential public service systems and infrastructure in emergency situations. An emergency includes only those situations included as conditions necessary for demonstration of an upset at 40 C.F.R. 122.41(n). For each claimed emergency, the permittee shall submit to the Permitting Authority a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than required by applicable Clean Water Act regulations.

4.3.10 Municipal Official Training

The permittee shall continue to implement an on-going training program for those employees specified below, and any other employees whose job functions may impact stormwater program implementation. The training program shall address the importance of protecting water quality, the requirements of this permit, design, performance, operation and maintenance standards, inspection procedures, selecting appropriate management practices, ways to perform their job activities to prevent or minimize impacts to receiving waters, and procedures for tracking, inspecting and reporting, including potential illicit discharges. The permittee shall provide follow-up and refresher training at a minimum of once every twelve months, and shall include any changes in procedures, techniques or requirements.

The training program shall include, but is not limited to, those employees who work in the following areas:

1. Municipal Planning
2. Site plan review
3. Design
4. Construction
5. Transportation planning and engineering
6. Street/sewer and right-of-way construction and maintenance
7. Water and sewer departments
8. Parks and recreation department
9. Municipal water treatment and waste water treatment
10. Fleet maintenance
11. Fire and police departments
12. Building maintenance and janitorial
13. Garage and mechanic crew
14. Contractors and subcontractors who may be contracted to work in the above described
15. areas
16. Personnel responsible for answering questions about the permittee's stormwater program,
17. including persons who may take phone calls about the program
18. Any other department of the permittee that may impact stormwater runoff

4.4 Management of Commercial and Institutional Areas

The permittee shall establish and implement policies and procedures to reduce the discharge of pollutants in stormwater runoff from all commercial and institutional (including federal) areas covered by this permit.

The permittee shall ensure maintenance of all stormwater management controls in commercial and institutional land areas in accordance with the following provisions:

1. Tracking all controls;
2. Inspecting all controls on a regular basis, according to an inspection schedule;
3. Ensure compliance with the MS4 permit and municipal ordinances at commercial and institutional facilities.

4.4.1 Inventory of Critical Sources and Source Controls

4.4.1.1 The permittee shall continue to maintain a watershed-based inventory or database of all facilities within its jurisdiction that are critical sources of stormwater pollution. Critical sources to be tracked shall include the following:

a. Automotive service facilities, *e.g.*, service, fueling and salvage facilities;
b. Industrial activities, as defined at 40 C.F.R. §§ 122.26(b)(14); and
c. Construction sites exceeding one acre, or sites under one acre that are part of a larger common plan of development.
d. Dry cleaners

e. Any other facility the permittee has identified as a Critical Source

4.4.1.2 The permittee shall include the following minimum fields of information for each industrial and commercial facility identified as a critical source:

a. Name of facility and name of owner/ operator;
b. Address of facility;
c. Size of facility; and
d. Activities conducted at the facility that could impact stormwater.
e. Practices and/or measures to control pollutants.
f. Inspection and maintenance schedules, dates and findings.

4.4.1.3 The permittee shall update its inventory of critical sources at least annually. The update may be accomplished through collection of new information obtained through field activities or through other readily available inter and intra-agency informational databases (*e.g.*, business licenses, pretreatment permits, sanitary sewer hook-up permits, and similar information).

4.4.2 Inspection of Critical Sources

The permittee shall continue to inspect all commercial facilities identified in Part 4.4.1. herein and any others found to be critical sources twice during the five-year term of the permit. A minimum interval of six months between the first and the second mandatory compliance inspection is required, unless a follow-up inspection to ensure compliance must occur sooner.

4.4.3 Compliance Assurance.

At each facility identified as a critical source, the permittee's inspector(s) shall verify that the operator is implementing a control strategy necessary to protect water quality. Where the permittee determines that existing measures are not adequate to protect water quality, the permittee shall require additional site-specific controls sufficient to protect water quality.

4.5 Management of Industrial Facilities and Spill Prevention

4.5.1 The permittee shall continue to implement a program to monitor and control pollutants in stormwater discharged from Industrial Facilities located within the MS4 Permit Area, as defined herein, pursuant to the requirements in 40 C.F.R. § 122.26(d)(2)(iv)(C). These facilities shall include, but are not limited to:

a. Private Solid Waste Transfer Stations
b. Hazardous Waste Treatment, Disposal, and/or Recovery Plants
c. Industrial Facilities subject to SARA or EPCRA Title III
d. Industrial Facilities with NPDES Permits
e. Industrial facilities with a discharge to the MS4

4.5.2 The permittee shall continue to maintain and update the industrial facilities database.

4.5.3 The permittee shall continue to perform or provide on-site assistance/inspections and outreach focused on the development of stormwater pollution prevention plans and NPDES permit compliance.

4.5.4 The permittee shall continue to refine and implement procedures to govern the investigation of facilities suspected of contributing pollutants to the MS4, including at a minimum: (i) a review, if applicable, of monitoring data collected by the facility pursuant to its NPDES permit; and (ii) wet weather screening as required by Part 5.2.1 herein (including collecting data on discharges from industrial sites). These procedures shall be submitted as part of each Annual Report required by Part 6.2 herein.

4.5.5 The permittee shall continue to implement the prohibition against illicit discharges, control spills, and prohibit dumping. Continue to implement a program to prevent, contain, and respond to spills that may discharge to the MS4, and report on such implementation submitted in each Annual Report. The spill response program may include a combination of spill response actions by the permittee and/or another public or private entity.

4.5.6 The permittee shall report progress in developing and carrying out industrial-related programs in each Annual Report required by Section 6 herein. Provide an explanation as to how the implementation of these procedures will meet the requirements of the Clean Water Act.

4.6 Stormwater Management for Construction Sites

4.6.1 Continue implementation of the Program that reduces the discharge of pollutants from construction sites. In each Annual Report, the permittee shall evaluate and report to determine if the existing practices meet the requirements of 40 C.F.R. § 122.26(d)(2)(iv)(A) and (D).

4.6.2 Continue the review and approval process of the sediment and erosion control plans under this program. Also, the permittee shall ensure that all construction projects impacting one acre or greater, or less than one acre when part of a larger common plan of development or sale equal to or larger than one acre, are not authorized until documentation is provided that they have received EPA NPDES Construction General Permit Coverage.

4.6.3 Continue to implement inspection and enforcement procedures, including but not limited to inspection of permitted construction sites that disturb more than 5,000 square feet of soil as follows:

1. First inspection prior to ground disturbing activities to review planned sediment and erosion control measures;
2. Second inspection to verify proper installation and maintenance of sediment and erosion control measures;

3. Third inspection to review planned installation and maintenance of stormwater management practices;
4. Fourth inspection to verify proper installation of stormwater management practices following final stabilization of the project site; and
5. Other inspections as necessary to ensure compliance with relevant standards and requirements.

4.6.4 When a violation of local erosion and sediment control ordinances occurs, the permittee shall follow existing enforcement procedures and practices using standardized reports as part of the inspection process to provide accurate record keeping of inspections of construction sites. The permittee shall use a listing of all violations and enforcement actions to assess the effectiveness of the Enforcement Program in each Annual Report.

4.6.5 Continue with educational measures for construction site operators (Section 4.9 of this permit) that consist, at a minimum, of providing guidance manuals and technical publications.

4.6.6 Report progress in developing and carrying out the above construction-related programs in each Annual Report required by Parts 6.2 herein, including: (i) an explanation as to how the implementation of these procedures will meet the requirements of the Clean Water Act; (ii) an explanation as to how the implementation of these procedures, particularly with regard to District "waivers and exemptions", will meet the requirements of the Clean Water Act; and (iii) discussion of progress toward meeting TMDL and the District Watershed Implementation Plan deadlines.

4.7 Illicit Discharges and Improper Disposal.

4.7.1 The permittee shall continue to implement an ongoing program to detect illicit discharges, pursuant to the SWMP, and Part 4 of this permit, and to prevent improper disposal into the storm sewer system, pursuant to 40 C.F.R. § 122.26(d)(2)(iv)(B)(1). Such program shall include, at a minimum the following:

a. An updated schedule of procedures and practices to prevent illicit discharges, as defined at 40 C.F.R. § 122.26(b)(2), and, pursuant to 40 C.F.R. § 122.26(d)(2)(iv)(B)(1), to detect and remove illicit discharges as defined herein;

b. An updated inventory (organized by watershed) of all outfalls that discharge through the MS4 including any changes to the identification and mapping of existing permitted outfalls. Such inventory shall include, but not be limited to, the name and address, and a description (such as SIC code) which best reflects the principal products or services provided by each facility which may discharge to the MS4;

c. Continue to implement an illicit connection detection and enforcement program to perform dry weather flow inspections in target areas;

d. Visual inspections of targeted areas;

e. Issuance of fines, tracking and reporting illicit discharges, and reporting progress on stopping targeted illicit discharges, and in appropriate cases, chemical testing immediately after discovery of an illicit discharge;

f. Enforcement procedures for illicit discharges set forth in Part 4 herein;

g. All necessary inspection, surveillance, and monitoring procedures to remedy and prevent illicit discharges. The permittee shall submit an inspection schedule, inspection criteria, documentation regarding protocols and parameters of field screening, and allocation of resources as a part of each Annual Report.

h. The permittee shall continue to implement procedures to prevent, contain, and respond to spills that may discharge into the MS4. The permittee shall provide for the training of appropriate personnel in spill prevention and response procedures.

i. The permittee shall report the accomplishments of this program in each Annual Report.

4.7.2 The permittee shall continue to ensure the implementation of a program to further reduce the discharge of floatables (e.g. litter and other human-generated solid refuse). The floatables program shall include source controls and, where necessary, structural controls.

4.7.3 The permittee shall continue to implement the prohibition against the discharge or disposal of used motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, and animal waste into separate storm sewers. The permittee shall ensure the implementation of programs to collect used motor vehicle fluids (at a minimum oil and anti-freeze) for recycle, reuse, and proper disposal and to collect household hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycle, reuse, or proper disposal. The permittee shall ensure that such programs are readily available within the District, and that they are publicized and promoted on a regular basis, pursuant to Public Education provisions in this permit at Part 4.9 herein.

4.7.4 The permittee shall continue to work with members of the Metropolitan Police Department to enhance illegal dumping enforcement.

4.7.5 The permittee shall implement the District's ban on coal tar pavement products, including conducting outreach and enforcement activities.

4.7.6 The permittee shall implement the Anacostia Clean Up and Protection Act of 2009, to ban the use of disposable non-recyclable plastic carryout bags and restrict the use on disposable carryout bags in certain food establishments.

4.8 Flood Control Projects

4.8.1 The permittee shall update the impervious surface analysis of floodplains six months after the approval of the revised Flood Insurance Rate Maps by the Federal Emergency Management Agency.

4.8.2 The permittee shall assess potential impacts on the water quality and the ability of the receiving water to support beneficial uses for all flood management projects. Evaluate the feasibility of retrofitting existing flood control devices to provide additional pollutant and volume removal from stormwater. Report results of such assessment, mapping program, and feasibility studies in the Annual Report (Part 6.2 herein).

4.8.3 The permittee shall review all development proposed in flood plain areas to ensure that the impacts on the water quality of receiving water bodies have been properly addressed. Information regarding impervious surface area located in the flood plains shall be used (in conjunction with other environmental indicators) as a planning tool. The permittee shall collect data on the percentage of impervious surface area located in flood plain boundaries for all proposed development beginning six months after the effective date of this permit. The permittee shall collect similar data for existing development in flood plain areas, in accordance with the mapping program and other activities designed to improve water quality. Critical unmapped areas shall be prioritized by the permittee with an emphasis on developed and developing acreage. Reports of this work shall be summarized in the Annual Report.

4.9 Public Education and Public Participation

The permittee shall continue to implement a public education program including but not limited to an education program aimed at residents, businesses, industries, elected officials, policy makers, planning staff and other employees of the permittee. The purpose of education is to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. Education initiatives may be developed locally or regionally.

4.9.1 Education and Outreach.

4.9.1.1 The permittee shall continue to implement its education and outreach program for the area served by the MS4 that was established during the previous permit cycle. The outreach program shall be designed to achieve measurable improvements in the target audience's understanding of stormwater pollution and steps they can take to reduce their impacts.

4.9.1.2 The permittee shall assess current education and outreach efforts and identify areas where additional outreach and education are needed. Audiences and subject areas to be considered include:

a. General public

1) General impacts of stormwater flows into surface waters
2) Impacts from impervious surfaces
3) Source control practices and environmental stewardship actions and opportunities in the areas of pet waste, vehicle maintenance, landscaping, and rain water reuse.

4) A household hazardous waste educational and outreach program to control illicit discharges to the MS4 as required herein
5) Information and education on proper management and disposal of used oil, other automotive fluids, and household chemicals
6) Businesses, including home-based and mobile businesses
7) Management practices for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials
8) Impacts of illicit discharges and how to report them including information for industries about stormwater permitting and pollution prevention plans and the requirement that they develop structural and non-structural control systems

b. Homeowners, landscapers and property managers

1) Use of low or no phosphorus fertilizers, alternatives to fertilizers, alternative landscaping requiring no fertilizers
2) Landscape designs to reduce runoff and pollutant loadings
3) Car washing alternatives with the objective of eliminating phosphorus detergent discharges
4) Yard care techniques that protect water quality
5) Management practices for use and storage of pesticides and fertilizers
6) Management practices for carpet cleaning and auto repair and maintenance
7) Runoff Reduction techniques, including site design, on-site retention, pervious paving, retention of forests and mature trees
8) Stormwater pond maintenance

c. Engineers, contractors, developers, review staff and land use planners

1) Technical standards for construction site sediment and erosion control
2) Runoff Reduction techniques, including site design, on-site reduction, pervious pavement, alternative parking lot design, retention of forests and mature trees
3) Stormwater treatment and flow control controls
4) Impacts of increased stormwater flows into receiving water bodies

4.9.2 Measurement of Impacts.

The permittee shall continue to measure the understanding and adoption of selected targeted behaviors among the targeted audiences. The resulting measurements shall be used to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors.

4.9.3 Recordkeeping.

The permittee shall track and maintain records of public education and outreach activities.

4.9.4 Public Involvement and Participation.

The permittee shall continue to include ongoing opportunities for public involvement through advisory councils, watershed associations and/or committees, participation in developing updates to the stormwater fee system, stewardship programs, environmental activities or other similar activities. The permittee shall facilitate opportunities for direct action, educational, and volunteer programs such as riparian planting, volunteer monitoring programs, storm drain marking or stream clean up programs.

4.9.4.1 The permittee shall continue to create opportunities for the public to participate in the decision making processes involving the implementation and update of the permittee's SWMP. In particular, the permittee shall provide meaningful opportunity for the public to participate in the development of the permittee's Consolidated TMDL Implementation Plan. The permittee shall continue to implement its process for consideration of public comments on their SWMP.

4.9.4.2 The permittee shall continue to establish a method of routine communication to groups such as watershed associations and environmental organizations that are located in the same watershed(s) as the permittee, or organizations that conduct environmental stewardship projects located in the same watershed(s) or in close proximity to the permittee. This is to make these groups aware of opportunities for their direct involvement and assistance in stormwater activities that are in their watershed.

4.9.4.3 The permittee shall make all draft and approved MS4 documents required under this permit available to the public for comment. The current draft and approved SWMP and the MS4 annual reports deliverable documents required under this permit shall be posted on the permittee's website.

4.9.4.4 The permittee shall continue to develop public educational and participation materials in cooperation and coordination with other agencies and organizations in the District with similar responsibilities and objectives. Progress reports on public education shall be included in the Annual Report. An explanation shall be provided as to how this effort will reduce pollution loadings to meet the requirements of this permit.

4.9.4.5 The permittee shall periodically, and at least annually, update its website.

4.10 Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA) Planning and Implementation

4.10.1 Anacostia River Watershed Trash TMDL Implementation

The permittee shall attain removal of 103,188 pounds of trash annually, as determined in the Anacostia River Watershed Trash TMDL, as a specific single-year measure by the fifth year of this permit term.

Reductions must be made through a combination of the following approaches:

1. Direct removal from waterbodies, e.g., stream clean-ups, skimmers
2. Direct removal from the MS4, e.g., catch basin clean-out, trash racks
3. Direct removal prior to entry to the MS4, e.g., street sweeping
4. Prevention through additional disposal alternatives, e.g., public trash/recycling collection
5. Prevention through waste reduction practices, regulations and/or incentives, e.g., bag fees

At the end of the first year the permittee must submit the trash reduction calculation methodology with Annual Report to EPA for review and approval. The methodology should accurately account for trash prevention/removal methods beyond those already established when the TMDL was approved, which may mean crediting a percentage of certain approaches. The calculation methodology must be consistent with assumptions for weights and other characteristics of trash, as described in the 2010 Anacostia River Watershed Trash TMDL.

Annual reports must include the trash prevention/removal approaches utilized, as well as the overall total weight (in pounds) of trash captured for each type of approach.

The requirements of this Section, and related elements as appropriate, shall be included in the Consolidated TMDL Implementation Plan (Section 4.10.3).

4.10.2 Hickey Run TMDL Implementation

The permittee shall implement and complete the proposed replacement/rehabilitation, inspection and enforcement, and public education aspects of the strategy for Hickey Run as described in the updated Plan to satisfy the requirements of the oil and grease wasteload allocations for Hickey Run. If monitoring or other assessment determine it to be necessary, the permittee shall install or implement appropriate controls to address oil & grease in Hickey Run no later than the end of this permit term. As appropriate, any requirement of this Section not completed prior to finalization of the Consolidated TMDL Implementation Plan (Section 4.10.3) shall be included in that Plan.

4.10.3 Consolidated TMDL Implementation Plan

For all TMDL wasteload allocations assigned to District MS4 discharges, the permittee shall develop, public notice and submit to EPA for review and approval a consolidated TMDL Implementation Plan within 30 months of the effective date of this permit provision. This Plan shall include, at a minimum, the following TMDLs and any subsequent updates:

1. TMDL for Biochemical Oxygen Demand (BOD) in the Upper and Lower Anacostia River (2001)
2. TMDL for Fecal Coliform Bacteria in the Upper and Lower Anacostia River (2003)
3. TMDL for Organics and Metals in the Anacostia River and Tributaries (2003)
4. TMDL for Fecal Coliform Bacteria in Kingman Lake (2003)
5. TMDL for Total Suspended Solids, Oil and Grease and Biochemical Oxygen Demand in Kingman Lake (2003)

6. TMDL for Fecal Coliform Bacteria in Rock Creek (2004)
7. TMDL for Organics and Metals in the Tributaries to Rock Creek (2004)
8. TMDL for Fecal Coliform Bacteria in the Upper, Middle and Lower Potomac River and Tributaries (2004)
9. TMDL for Organics, Metals and Bacteria in Oxon Run (2004)
10. TMDL for Organics in the Tidal Basin and Washington Ship Channel (2004)
11. TMDL for Sediment/Total Suspended Solids for the Anacostia River Basin in Maryland and the District (2007) [pending resolution of court vacature, Anacostia Riverkeeper, Inc. v. Jackson, No. 09-cv-97 (RCL)]
12. TMDL for PCBs for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland and Virginia (2007)
13. TMDL for Nutrients/Biochemical Oxygen Demand for the Anacostia River Basin in Maryland and the District (2008)
14. TMDL for Trash for the Anacostia River Watershed, Montgomery and Prince George's Counties, Maryland and the District of Columbia (2010)
15. TMDL for Nitrogen, Phosphorus and Sediment for the Chesapeake Bay Watershed (2010)

This Plan shall place particular emphasis on the pollutants in Table 4, but shall also evaluate other pollutants of concern for which relevant WLAs exist. EPA will incorporate elements of the Consolidate TMDL Implementation Plan as enforceable permit provisions, including milestones and final dates for attainment of applicable WLAs. The permittee shall fully implement the Plan upon EPA approval. This Plan shall preempt any existing TMDL implementation plans for the relevant WLAs. To account for any new or revised TMDL established or approved by EPA with wasteload allocations assigned to District MS4 discharges, the permittee shall submit an updated Consolidated TMDL Implementation Plan annually, as necessary. Such updates will account for any actions taken in the 12-month period preceding the date 6 months before the revision is due. If necessary, the first such update will be due 18 months after the submittal of the initial Plan, with subsequent updates due on the anniversary of the submittal date.

The Plan shall include:

1. A specified schedule for attainment of WLAs that includes final attainment dates and, where applicable, interim milestones and numeric benchmarks.
   a. Numeric benchmarks will specify annual pollutant load reductions and the extent of control actions to achieve these numeric benchmarks.
   b. Interim milestones will be included where final attainment of applicable WLAs requires more than five years. Milestone intervals will be as frequent as possible but will in no case be greater than five (5) years.
2. Demonstration using modeling of how each applicable WLA will be attained using the chosen controls, by the date for ultimate attainment.
3. An associated narrative providing an explanation for the schedules and controls included in the Plan.

4. Unless and until an applicable TMDL is no longer in effect (e.g., withdrawn, reissued or the water delisted), the Plan must include the elements in 1-3 above for each TMDL as approved or established.
5. The current version of the Plan will be posted on the permittee's website.

4.10.4 Adjustments to TMDL Implementation Strategies

If evaluation data, as outlined in the monitoring strategy being developed per Part 5.1, indicate insufficient progress towards attaining any WLA covered in 4.10.1, 4.10.2 or 4.10.3, the permittee shall make the appropriate adjustements within six (6) months to address the insufficient progress and document those adjustments in the Consolidated TMDL Implementation Plan. The Plan modification shall include a reasonable assurance demonstration of the additional controls to achieve the incorporated milestones. Annual reports must include a description of progress as evaluated against all implementation objectives, milestones and benchmarks, as relevant, outlined in Part 4.10.

4.11 Additional Pollutant Sources

For any additional pollutant sources not addressed in sections 4.1 through 4.9, the permittee shall continue to compile pertinent information on known or potential pollution sources, including significant changes in:

1. land use activities,
2. population estimates,
3. runoff characteristics,
4. major structural controls,
5. landfills,
6. publicly owned lands, and
7. industries impacting the MS4.

For purposes of this section, “significant changes” are changes that have the potential to revise, enhance, modify or otherwise affect the physical, legal, institutional, or administrative characteristics of the above-listed potential pollution sources. This information shall be submitted in each of the Annual Reports submitted to EPA pursuant to the procedures in Part 6.2 herein. For the Stormwater Model, analysis of data for these pollution sources shall be reported according to Part 7 herein.

The permittee shall implement controls to minimize and prevent discharges of pollutants from additional pollutant sources, including but not limited to Bacteria (*E. coli*), Total Nitrogen, Total Phosphorus, Total Suspended Solids, Cadmium, Copper, Lead, Zinc, and Trash, to receiving waters. Controls shall be designed to prevent and restrict priority pollutants from coming into contact with stormwater, *e.g.*, restricting the use of lawn fertilizers rather than end-of-pipe treatment. These strategies shall include program priorities and a schedule of activities to address those priorities and an outline of which agencies will be responsible for implementing those strategies. The strategies used to reduce or eliminate these pollutants shall be documented in updates to the Stormwater Management Program Plan.

5. MONITORING AND ASSESSMENT OF CONTROLS

5.1 Revised monitoring program

5.1.1 Design of the Revised Monitoring Program

Within 30 months of the effective date of Part 4.10.3 of this permit the permittee shall develop, public notice and submit to EPA for review and approval a revised monitoring program. The permittee shall fully implement the program upon EPA approval. The revised monitoring program shall meet the following objectives:

1. Make wet weather loading estimates of the parameters in Table 4 from the MS4 to receiving waters. Number of samples, sampling frequencies and number and locations of sampling stations must be adequate to ensure data are statistically significant and interpretable.

2. Evaluate the health of the receiving waters, to include biological and physical indicators such as macroinvertebrates and geomorphologic factors. Number of samples, frequencies and locations must be adequate to ensure data are statistically significant and interpretable for long-term trend purposes (not variation among individual years or seasons).

3. Include any additional necessary monitoring for purposes of source identification and wasteload allocation tracking. This strategy must align with the Consolidated TMDL Implementation Plan required in Part 4.10.3 For all pollutants in Table 4 monitoring must be adequate to determine if relevant WLAs are being attained within specified timeframes in order to make modifications to relevant management programs, as necessary.

Table 4
Monitoring Parameters

Parameter
E. coli
Total nitrogen
Total phosphorus
Total Suspended Solids
Cadmium
Copper
Lead
Zinc
Trash

4. All chemical analyses shall be performed in accordance with analytical methods approved under 40 C.F.R. Part 136. When there is not an approved analytical method, the applicant may use any suitable method as described in Section 5.7 herein, but must provide a description of the method.

5.1.2 Utilization of the Revised Monitoring Program

The permittee must use the information to evaluate the quality of the stormwater program and the health of the receiving waters at a minimum to include:

1. The permittee shall estimate annual cumulative pollutant loadings for pollutants listed in Table 4. Pollutant loadings and, as appropriate, event mean concentrations, will be reported in DMRs and annual reports on TMDL implementation for pollutants listed in Table 4 in discharges from the monitoring stations in Table 5.

2. The permittee shall perform the following activities at least once during the permit term, but no later than the fourth year of this permit:

    a. Identify and prioritize additional efforts needed to address water quality exceedances, and receiving stream impairments and threats;

    b. Identify water quality improvements or degradation

Upon approval of the Revised Monitoring Program by EPA Region III, or 2 years from the effective date of this permit, whichever comes first, the permittee shall begin implementation of the Revised Monitoring Program.

5.2 Interim Monitoring

Until such time as EPA has approved the Revised Monitoring Program, the permittee shall implement the following monitoring program:

5.2.1 Wet Weather Discharge Monitoring

The permittee shall monitor for the parameters identified in Table 4 herein, at the locations listed in Table 5 herein. Monitoring frequency for chemical/physical parameters shall be taken by at least three times per year at a minimum. This does not include a geomorphologic assessment and/or physical habitat assessment. The permittee shall conduct sampling as provided in 40 C.F.R. § 122.21(g)(7).

The permittee shall monitor and provide an annual Discharge Monitoring Report for the period of interim monitoring.

TABLE 5
Monitoring Stations

A. Anacostia River Sub Watershed Monitoring Sites
1. Gallatin Street & 14th Street N.E. across from the intersection of 14th St. and Gallatin St. in an outfall (MS-2)
2. Anacostia High School/Anacostia Recreation Center – Corner of 17th St and Minnesota Ave SE
B. Rock Creek Subwatershed Monitoring Sites
1. Walter Reed -- Fort Stevens Drive -- 16th Street and Fort Stevens Road, N.W. at an outfall (MS-6)
2. Soapstone Creek -- Connecticut Avenue and Ablemarle Street N.W. at an outfall (MS-5)
C. Potomac River Subwatershed Monitoring Sites
1. Battery Kemble Creek-49th and Hawthorne Streets, N.W. at an outfall (MS-4)
2. Oxon Run-Mississippi Avenue and 15th Street, S.E. into Oxon Run via an outfall (MS-1)

The permittee may revise this list of sites in accordance with its revised monitoring program in Section 5.1 herein. Otherwise, changes to the above MS4 monitoring stations and/or sites for any reason shall be considered a major modification to the permit subject to the reopener clause.

During the interim monitoring period for the pollutants listed in Table 4, demonstration of compliance will be calculated using the procedures identified in the SWMP, the approved Anacostia River TMDL Implementation Plan, and/or other appropriate modeling tools and data on management practices efficiencies. The annual report will provide all monitoring data, and a brief synthesis of whether the data indicate that relevant wasteload allocations and other relevant targets are being achieved.

5.2.2 Storm Event Data

In addition to the parameters listed above, the permittee shall continue to maintain records of the date and duration (in hours) of the storm events sampled; rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff; the duration (in hours) between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and a calculated flow estimate of the total volume (in gallons) and nature of the discharge sampled.

5.2.3 Sample Type, Collection, and Analysis

The following requirements apply only to samples collected for Part 5.2.1, Representative Monitoring.

1. For discharges from holding ponds or other impoundments with a retention period greater than 24 hours, (estimated by dividing the volume of the detention pond by the estimated volume of water discharged during the 24 hours previous to the time that the sample is collected) a minimum of one sample shall be taken for pollutants listed in Table 4 including temperature, DO, pH and specific conductivity. For all parameters, data shall be reported for the entire event of the discharge pursuant to 40 C.F.R. § 122.26(d)(2)(iii).

2. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Samples may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire discharge, with each aliquot being separated by a minimum period of fifteen minutes.

3. Analysis and collection of samples shall be done in accordance with the most recent EPA approved laboratory methods and procedures specified at 40 C.F.R. Part 136 and its subsequent amendments.

5.2.4 Sampling Waiver

When a discharger is unable to collect samples due to adverse climatic conditions, the discharger must submit in lieu of sampling data a description of why samples could not be collected, including available documentation of the event.

Adverse climatic conditions which may prohibit the collection of samples includes weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.).

5.3 Dry Weather Monitoring

5.3.1 Dry Weather Screening Program

The permittee shall continue with ongoing efforts to detect the presence of illicit connections and improper discharges to the MS4 pursuant to the District SWMP. The permittee shall perform the following: (1) continue to screen known problem sewersheds within the District based on past screening activities; (2) continue to inventory all MS4 outfalls in the District and inspect all outfalls by the end of the permit term; and (3) ensure that the dry weather screening program has addressed all watersheds within the permit term. The screening shall be

sufficient to estimate the frequency and volume of dry weather discharges and their environmental impact.

5.3.2 Screening Procedures

Screening may be developed and/or modified based on experience gained during actual field screening activities. The permittee shall establish a protocol which requires screening to ensure that such procedures are occurring, but such protocol need not conform to the procedures published at 40 C.F.R. § 122.26(d)(1)(iv)(D). The permittee shall describe the protocol actually used in each Annual Report with a justification for its use. The procedures described in the SWMP shall be used as guidance.

5.3.3 Follow-up on Dry Weather Screening Results

The permittee shall continue to implement its enforcement program for locating and ensuring elimination of all suspected sources of illicit connections and improper disposal identified during dry weather screening activities. The permittee shall report the results of such implementation in each Annual Report.

5.4. Area and/or Source Identification Program

The permittee shall continue to implement a program to identify, investigate, and address areas and/or sources within its jurisdiction that may be contributing excessive levels of pollutants to the MS4 and receiving waters, including but not limited to those pollutants identified in Table 4 herein.

5.5 Flow Measurements

The permittee shall continue to select and use appropriate flow measurement devices and methods consistent with accepted scientific practices to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device.

5.6 Monitoring and Analysis Procedures

5.6.1 Monitoring must be conducted according to laboratory and test procedures approved under 40 C.F.R. Part 136 and subsequent amendments, unless other test procedures have been specified in the permit.

5.6.2 The permittee is authorized to use a more current or sensitive (i.e., lower) detection method than the one identified in 40 C.F.R. Part 136 exists for a particular parameter, including but not limited to PCBs (Method 1668B) and mercury (Method 1631E). If used, the permittee shall report using the more current and/or more sensitive method for compliance reporting and monitoring purposes.

5.6.3 EPA reserves the right to modify the permit in order to require a more sensitive method for measuring compliance with any pollutant contamination levels, consistent with 40 CFR, Part 136, should it become necessary.

5.7 Reporting of Monitoring Results

The permittee shall continue to report monitoring results annually in a Discharge Monitoring Report. If NetDMR (http://www.epa.gov/netdmr/) is unavailable to any of the following then the original and one copy of the Report are to be submitted at the following addresses:

NPDES Permits Branch
U.S. EPA Region III (3WP41)
Water Protection Division
1650 Arch Street
Philadelphia, PA 19103-2029

National Marine Fisheries Service/Northeast Region
Protected Resource Division
55 Great Republic Drive
Gloucester, Massachusetts 01930-2276

Monitoring results obtained during the previous year shall be summarized and reported in the Annual Report.

5.8 Additional Monitoring by the Permittee

If the permittee monitors (for the purposes of this permit) any pollutant more frequently than required by this permit, using laboratory and test procedures approved under 40 C.F.R. Part 136 and subsequent amendments or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the annual Discharge Monitoring Report. Such frequency shall also be indicated.

5.9 Retention of Monitoring Information

The permittee shall continue to retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation for a period of at least five(5) years from the date of the sample, measurement or report. This period may be extended by request of EPA at any time.

5.10 Record Content

Records of monitoring information shall include:

1. The date, exact location, time and methods of sampling or measurements;
2. The individual(s) who performed the sampling or measurements;

3. The date(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

6. REPORTING REQUIREMENTS

The permittee shall comply with the reporting requirements identified in this section, including but not limited to the deliverables identified in Table 6 below.

TABLE 6
Reporting Requirements

Submittal	Deadline
Discharge Monitoring Report	Each year on the anniversary of the effective date of the permit (AEDOP)
Annual Report	Each year on the AEDOP.
MS4 Permit Application	Six months prior to the permit expiration date.

6.1 Discharge Monitoring Reports

The permittee shall provide discharge monitoring reports per Part 5.7 of this permit on the quality of stormwater discharges from the MS4 for all analytical chemical monitoring stipulated in Part 5 of this permit.

6.2 Annual Reporting

The permittee shall submit an Annual Report to EPA on or by the effective yearly date of the permit for the duration of the permitting cycle. At the same time the Annual Report it submitted to EPA it shall also be posted on the permittee's website at an easily accessible location. If the annual report is subsequently modified per EPA approval (part 6.2.3 of this permit) the updated report shall be posted on the permittee's website.

6.2.1 Annual Report.

The Annual Report shall follow the format of the permit as written, address each permit requirement, and also include the following elements:

a. A review of the status of program implementation and compliance (or non-compliance) with all provisions and schedules of compliance contained in this

permit, including documentation as to compliance with performance standards and other provisions and deliverables contained in Section 4 herein;

b. A review of monitoring data and any trends in estimated cumulative annual pollutant loadings, including TMDL WLAs and TMDL implementation activities;

c. An assessment of the effectiveness of controls established by the SWMP;

d. An assessment of the projected cost of SWMP implementation for the upcoming year (or longer) and a description of the permittee's budget for existing stormwater programs, including: (i) an overview of the permittee's financial resources and budget, (ii) overall indebtedness and assets, (iii) sources for funds for stormwater programs; and (iv) a demonstration of adequate fiscal capacity to meet the requirements of this permit, subject to the (a) the federal Anti-Deficiency Act, 31 U.S.C. §§ 1341, 1342, 1349, 1351, (b) the District of Columbia Anti-Deficiency Act, D.C. Official Code §§ 47-355.01-355.08 (2001), (c) D.C. Official Code § 47-105 (2001), and (d) D.C. Official Code § 1-204.46 (2006 Supp.), as the foregoing statutes may be amended from time to time;

e. A summary describing the number and nature of enforcement actions, inspections, and public education programs and installation of control systems;

f. Identification of water quality improvements or degradation through application of a measurable performance standard as stated throughout this permit;

g. Results of storm and water quality modeling and its use in planning installation of control systems and maintenance and other activities;

h. An assessment of any SWMP modifications needed to meet the requirements of this permit;

i. Revisions, if necessary, to the assessments of controls and the fiscal analysis reported in the permit application under 40 C.F.R. § 122.26(d)(2)(iv) and (v);

j. Methodology to assess the effects of the Stormwater Management Program (SWMP);

k. Annual expenditures and budget for the year following each annual report;

l. A summary of commitments for the next year and evaluation of the commitments from the previous year;

m. A summary of the monitoring data for stormwater and ambient sampling that is collected in the previous year and the plan, including identification of monitoring locations, to collect additional data for the next year;

n. The amount of impervious cover within the District, and within the three major watersheds in the District (Anacostia, Potomac and Rock Creek);

o. The percentage of effective impervious cover reduced annually, including but not limited to the number and square footage of green roofs installed in the District, including the square footage of drainage managed by practices that meet the performance standard in 4.1.1; and

p. An analysis of the work to be performed in the next successive year, including performance measures for those tasks. In the following year, progress with those performance measures shall be part of the Annual Report. The basis for each of the performance standards, which will be used as tools for evaluating environmental results and determining the success of each MS4 activity, shall be described incorporating an integrated program approach that considers all programs and projects which have a direct as well as an indirect affect on

stormwater management quantity and quality within the District. The report shall also provide an update of the fiscal analysis for each year of the permit as required by 40 C.F.R. § 122.26(d)(2)(vi).

6.2.2 Annual Report Meeting

Within 12 months of the effective date of this permit the permittee shall convene an annual report meeting with EPA to present annual progress and plans for the following year. In conjunction with this meeting the annual written report may consist of presentation materials summarizing all required elements of the annual report rather than a lengthy written report, as long as all required elements are included. Following this first annual reporting meeting EPA and the permittee shall determine if the meeting and associated presentation materials constitute an effective reporting mechanism. With the agreement of both EPA and the permittee the annual reporting meeting and the use of summarized presentation materials in lieu of a lengthy written report may be extended for the remainder of the permit term.

6.2.3 Annual Report Revisions

Each Annual Report may be revised with written approval by EPA. The revised Report will become effective after its approval.

6.2.4 Signature and Certification

The permittee shall sign and certify the Annual Report in accordance with 40 C.F.R §122.22(b), and include a statement or resolution that the permittee's governing body or agency (or delegated representative) has reviewed or been appraised of the content of such submissions. The permittee shall provide a description of the procedure used to meet the above requirement.

6.2.5 EPA Approval

In reviewing any submittal identified in Table 1 or 6, EPA may approve or disapprove each submittal. If EPA disapproves any submittal, EPA shall provide comments to the permittee. The permittee shall address such comments in writing within thirty (30) days of receipt of the disapproval from EPA. If EPA determines that the permittee has not adequately addressed the disapproval/comments, EPA may revise that submittal or portions of that submittal. Such revision by EPA is effective thirty (30) days from receipt by the permittee. Once approved by EPA, or in the event of EPA disapproval, as revised by EPA, each submission shall be an enforceable element of this permit.

6.3 MS4 Permit Application

The permittee develop a permit Application based on the findings presented in each of the Annual SWMP Reports submitted during the permitting cycle to be submitted six months prior to the expiration date of the permit. The permit application shall define the next iterative set of objectives for the program and provide an analysis to demonstrate that these objectives will be achieved in the subsequent permit term.

7. STORMWATER MODEL

The permittee shall continue to update and report all progress made in developing a Stormwater Model and Geographical Information System (GIS) to EPA on an annual basis as an attachment to each Annual Report required herein.

On an annual basis, the permittee shall report on pollutant load reductions throughout the area covered by this permit using the statistical model developed by DDOE or other appropriate model. In the annual update, the permittee shall include, at a minimum, other applicable components which are not only limited to those activities identified in Section 6 herein, but which are necessary to demonstrate the effectiveness of the permittee's Stormwater Management Program toward implementing a sustainable strategy for reducing stormwater pollution runoff to the impaired waters of the District of Columbia.

Assess performance of stormwater on-site retention projects through monitoring, modeling and/or estimating storm retention capacity to determine the volume of stormwater removed from the MS4 in a typical year of rainfall as a result of implementing stormwater controls. This provision does not require all practices to be individually monitored, only that a reasonable evaluation strategy must provide estimates of overall volume reductions by sewershed.

8. STANDARD PERMIT CONDITIONS FOR NPDES PERMITS

8.1 Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and may result in an enforcement action; permit termination, revocation and reissuance, or modification; and denial of a permit renewal application.

8.2 Inspection and Entry

The permittee shall allow EPA, or an authorized representative, and/or the permittee's contractor(s)/subcontractor(s), upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises at reasonable times where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be maintained under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), processes, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

8.3 Civil and Criminal Penalties for Violations of Permit Conditions

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

The Clean Water Act provides that any person who violates Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act, or any permit condition or limitation implementing such section, or any requirement imposed in an approved pretreatment program and any person who violates any Order issued by EPA under Section 301(a) of the Act, shall be subject to a civil penalty not to exceed $25,000 per day for each violation, Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, EPA has raised the statutory maximum penalty for such violations to $37,500 per day for each such violation. 74 Fed. Reg. 626 (Jan. 7, 2009). The Clean Water Act also provides for an action for appropriate relief including a permanent or temporary injunction.

Any person who negligently violates Section 301, 302, 305, 307, 308, 318, or 405 of the Clean Water Act, any permit condition or limitation implementation any such section, shall be punished by a criminal fine of not less than $5,000 nor more than $50,000 per day of such violation, or by imprisonment for not more than 3 years, or by both. Any person who knowingly violates any permit condition or limitation implementing Section 301, 302, 305, 307, 308, 318, or 405 of the Clean Water Act, and who knows at the time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000, or by imprisonment of not more than 15 years, or by both.

8.4 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

In the event that the permittee or permitting authority determines that discharges are causing or contributing to a violation of applicable WQS, the permittee shall take corrective action to eliminate the WQS exceedance or correct the issues and/or problems by requiring the party or parties responsible for the alleged violation(s) comply with Part I.C.1 (Limitations to Coverage) of this permit. The methods used to correct the WQS exceedances shall be documented in subsequent annual reports and in revisions to the Stormwater Management Program Plan.

8.5 Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this permit;

2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

3. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;

4. Information newly acquired by the Agency, including but not limited to the results of the studies, planning, or monitoring described and/or required by this permit;

5. Material and substantial facility modifications, additions, and/or expansions;

6. Any anticipated change in the facility discharge, including any new significant industrial discharge or changes in the quantity or quality of existing industrial discharges that will result in new or increased discharges of pollutants; or

7. A determination that the permitted activity endangers human health or the environment and that it can only be regulated to acceptable levels by permit modification or termination.

The effluent limitations expressed in this permit are based on compliance with the District of Columbia's water quality standards in accordance with the Clean Water Act. In the event of a revision of the District of Columbia's water quality standards, this document may be modified by EPA to reflect this revision.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. When a permit is modified, only conditions subject to modification are reopened.

8.6 Retention of Records

The permittee shall continue to retain records of all documents pertinent to this permit not otherwise required herein, including but not limited copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five (5) years from the expiration date of this permit. This period may be extended by request of EPA at any time.

8.7 Signatory Requirements

All Discharge Monitoring Reports, plans, annual reports, certifications or information either submitted to EPA or that this permit requires be maintained by the permittee shall be signed by either a principal executive officer or ranking elected official, or a duly authorized representative of that person. A person is a duly authorized representative only if: (i) the authorization is made in writing by a person described above and submitted to EPA; and (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for an agency. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new notice satisfying the requirements of this paragraph must be submitted to EPA prior or together with any reports, information, or applications to be signed by an authorized representative.

8.8 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act, 33 U.S.C. § 1321.

8.9 District Laws, Regulations and Ordinances

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable District law, regulation or ordinance identified in the SWMP. In the case of "exemptions and waivers" under District law, regulation or ordinance, Federal law and regulation shall be controlling.

8.10 Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

8.11 Severability

The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

8.12 Transfer of Permit

In the event of any change in ownership or control of facilities from which the authorized discharge emanates, the permit may be transferred to another person if:

1. The current permittee notifies the EPA, in writing of the proposed transfer at least 30 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

3. The EPA does not notify the current permittee and the new permittee of intent to modify, revoke and reissue, or terminate the permit and require that a new application be submitted.

8.13 Construction Authorization

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

8.14 Historic Preservation

During the design stage of any project by the Government of the District of Columbia within the scope of this permit that may include ground disturbance, new and existing or retrofit construction, or demolition of a structure, the permittee shall notify the Historic Preservation liaison and provide the liaison planning documents for the proposed undertaking. The documents shall include project location; scope of work or conditions; photograph of the area/areas to be impacted and the methods and techniques for accomplishing the undertaking. Depending on the complexity of the undertaking, sketches, plans and specifications shall also be submitted for review. The documentation will enable the liaison to assess the applicability of compliance procedures associated with Section 106 of the National Historic Preservation Act. Among the steps in the process are included:

1. The determination of the presence or absence of significant historic properties (architectural, historic or prehistoric). This can include the evaluation of standing structures and the determination of the need for an archaeological survey of the project area.

2. The evaluation of these properties in terms of their eligibility for nomination to the National Register of Historic Places.

3. The determination of the effect that the proposed undertaking will have on these properties.

4. The development of mitigating measures in conjunction with any anticipated effects.

All such evaluations and determinations will be presented to the permittee for its concurrence.

If an alternate Historic Preservation procedure is approved by EPA in writing during the term of this permit, the alternate procedure will become effective after its approval.

8.15 Endangered Species

The U.S. Fish and Wildlife Service (FWS) has indicated that Hay's Spring Amphipod, a Federally listed endangered species, occurs at several locations in the District of Columbia. The National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) has indicated that the endangered shortnose sturgeon occurs in the Potomac River drainage and may occur within the District of Columbia. The FWS and NOAA Fisheries indicate that at the present time there is no evidence that the ongoing stormwater discharges covered by this permit are adversely affecting these Federally-listed species. Stormwater discharges, construction, or any other activity that adversely affects a Federally-listed endangered or threatened species are not authorized under the terms and conditions of this permit.

The monitoring required by this permit will allow further evaluation of potential effects on these threatened and endangered species once monitoring data has been collected and analyzed. EPA requires that the permittee submit to NOAA Fisheries, at the same time it submits to EPA, the Annual Outfall Discharge Monitoring Report of the monitoring data which will be used by EPA and NOAA Fisheries to further assess effects on endangered or threatened species. If this data indicates that it is appropriate, requirements of this NPDES permit may be modified to prevent adverse impacts on habitats of endangered and threatened species.

The above-referenced Report of monitoring data is required under this permit to be sent on an annual basis to:

The United States Environmental Protection Agency
Region III (3WP41)
Water Protection Division
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

National Marine Fisheries Service/Northeast Region
Protected Resource Division
55 Great Republic Drive
Gloucester, Massachusetts 01930-2276

8.16 Toxic Pollutants

If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Act, 33 U.S.C. § 1317(a), for a toxic pollutant which is present in the discharge and such standard or prohibition

is more stringent than any limitation for such pollutant in this permit, the permittee shall comply with such standard or prohibition even if the permit has not yet been modified to comply with the requirement.

8.17 Bypass

8.17.1 Bypass not exceeding limitations. In accordance with 40 C.F.R. § 122.41(m), the permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation.

8.17.2 Notice

1. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it must submit prior notice at least ten days before the date of the bypass. See 40 C.F.R. § 122.41(m)(3)(i).

2. Unanticipated bypass. The permittee must submit notice of an unanticipated bypass as required by 40 C.F.R. § 122.41(l)6) (24-hour notice). See 40 C.F.R. § 122.41(m)(3)(ii).

8.17.3 Prohibition of bypass. See 40 C.F.R. § 122.41(m)(4).

1. Bypass is prohibited, and EPA may take enforcement action against the permittee for bypass, unless:

    a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage as defined herein;

    b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

    c. The permittee submitted notices as required herein.

2. EPA may approve an anticipated bypass, after considering its adverse effects, if EPA determines that it will meet the three conditions listed above.

8.18 Upset

Effect of an upset: An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of 40 C.F.R. § 122.41(n) are met.

8.19 Reopener Clause for Permits

The permit shall be modified or revoked and reissued, including but not limited to, for any of the following reasons:

1. To incorporate any applicable effluent standard or limitation issued or approved under Sections 301, 304, or 307 of the Clean Water Act, and any other applicable provision, such as provided for in the Chesapeake Bay Agreements based on water quality considerations, and if the effluent standard or limitation so issued or approved:

   a. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

   b. Controls any pollutant not limited in the permit. The permit, as modified or reissued under this paragraph, shall also contain any other requirements of the Act then applicable; or

2. To incorporate additional controls that are necessary to ensure that the permit effluent limits are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4 or to incorporate milestones and schedules of a TMDL Implementation Plan; or

3. As specified in 40 C.F.R. §§ 122.44(c), 122.62, 122.63, 122.64, and 124.5.

8.20 Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, it must apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit. EPA may grant permission to submit an application less than 180 days in advance but no longer than the permit expiration date. In the event that a timely and complete reapplication has been submitted and EPA is unable through no fault of he permittee, to issue a new permit before the expiration date of this permit, the terms and conditions of this permit are automatically continued and remain fully effective and enforceable.

9. PERMIT DEFINITIONS

Terms that are not defined herein shall have the meaning accorded them under section 502 of the Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*, or its implementing regulations, 40 C.F.R. Part 122.

"Annual Report" refers to the consolidated Annual Report that the permittee is required to submit annually.

"Benchmark" as used in this permit is a quantifiable goal or target to be used to assess progress toward "milestones" (see separate definition) and WLAs, such as a numeric goal for BMP implementation. If a benchmark is not met, the permittee should take appropriate corrective action to improve progress toward meeting milestones or other objectives. Benchmarks are intended as an adaptive management aid and generally are not considered to be enforceable.

"Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. See 40 C.F.R. § 122.41(m)(1)(i).

"CWA" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. (6-483 and Pub. L. 97-117, 33 U.S.C. §§ 1251 *et seq.*

"Development" is the undertaking of any activity that disturbs a surface area greater than or equal to 5,000 square feet, including new development projects and redevelopment projects. For purposes of Parts 4.1.1 through 4.1.4 of the permit the requirements apply to discharges from sites for which design or construction commenced after 18 months from the effective date of this permit or as required by District of Columbia law, whichever is sooner. The permittee may exempt development projects receiving site plan approval prior to this date from these requirements.

"Director" means the Regional Administrator of USEPA Region 3 or an authorized representative.

"Discharge" for the purpose of this permit, unless indicated otherwise, refers to discharges from the Municipal Separate Storm Sewer System (MS4).

"Discharge Monitoring Report", "DMR" or "Outfall Discharge Monitoring Report" includes the monitoring and assessment of controls identified in Section 5 herein.

"EPA" means USEPA Region 3.

"Green Roof" is a low-maintenance roof system that stores rainwater where the water is taken up by plants and/or transpired into the air.

"Green Technology Practices" means stormwater management practices that are used to mimic pre-development site hydrology by using site design techniques that retain stormwater on-site through infiltration, evapotranspiration, harvest and use.

"Guidance" means assistance in achieving a particular outcome or objective.

"Illicit connection" means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

"Illicit discharge" means any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities, pursuant to 40 C.F.R. § 122.26(b)(2).

“Impaired Water” (or “Water Quality Impaired Water” or “Water Quality Limited Segment”): A water is impaired for purposes of this permit if it has been identified by the District or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State water quality standards (these waters are called “water quality limited segments” under 40 C.F.R. 30.2(j)). Impaired waters include both waters with approved or established TMDLs, and those for which a TMDL has not yet been approved or established.

"Landfill" means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit (i.e., an area where wastes are applied onto or incorporated into the soil surface [excluding manure spreading operations] for treatment or disposal), surface impoundment, injection well, or waste pile.

"Large or Medium municipal separate storm sewer system" means all municipal separate storm sewers that are either: (1) located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and G of 40 C.F.R. Part 122); or (2) located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (these counties are listed in Appendices H and I of 40 C.F.R. Part 122); or (3) owned or operated by a municipality other than those described in paragraph (i) or (ii) and that are designated by the Director as part of the large or medium municipal separate storm sewer system.

"Milestone" as used in this permit is an interim step toward attainment of a WLA that upon incorporation into the permit will become an enforceable limit or requirement to be achieved by a stated date. A milestone should be expressed in numeric terms, i.e. as a volume reduction, pollutant load, specified implementation action or set of actions or other objective metric, when possible and appropriate.

"MS4" refers to either a Large or Medium Municipal Separate Storm Sewer System.

"Municipal Separate Storm Sewer" means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (1) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State Law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes; (2) Designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.); (3) not a combined sewer; and (4) not part of a Publicly-Owned Treatment Works as defined at 40 C.F.R. § 122.2.

“Offset” means a unit of measurement, either used as monetary or non-monetary compensation, as a substitute or replacement for mitigation of a stormwater control practice that has been determined to be impracticable to implement.

“Performance measure” means for purposes of this permit, a minimum set of criteria for evaluating progress toward meeting a standard of performance.

“Performance standard” means for purposes of this permit, a cumulative measure or provision for attainment of an outcome or objective.

"Permittee" refers to the Government of the District of Columbia.

"Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

“Pollutant of concern” means a pollutant in an MS4 discharge that may cause or contribute to the violation of a water quality criterion for that pollutant downstream from the discharge.

“Pre-Development Condition” means the combination of runoff, infiltration and evapotranspiration rates, volumes, durations and temperatures that typically existed on the site with natural soils and vegetation before human-induced land disturbance occurred. In the context of requirements in this permit the environmental objective is a stable, natural hydrologic site condition that protects or restores to the degree relevant for that site, stable hydrology in the receiving water, which will not necessarily be the hydrologic regime of that receiving water prior to any human disturbance in the watershed.

“Retention” means the use of soils, vegetation, water harvesting and other mechanisms and practices to retain a target volume of stormwater on a given site through the functions of: pore space and surface ponding storage; infiltration; reuse, and/or evapotranspiration.

“Retrofit” means improvement in a previously developed area that results in reduced stormwater discharge volumes and pollutant loads and/or improvement in water quality over current conditions.

“Stormwater” means the flow of surface water which results from, and which occurs immediately following, a rainfall event, snow melt runoff, and surface runoff and drainage.

“Stormwater management” means (1) for quantitative control, a system of vegetative or structural measures, or both, which reduces the increased volume and rate of surface runoff caused by man-made changes to the land; and (2) for qualitative control, a system of vegetative, structural, and other measures which reduce or eliminate pollutants which might otherwise be carried by surface runoff.

"SWMP" is an acronym for Stormwater Management Program. For purposes of this permit, the term includes all stormwater activities described in the District's SWMP Plan updated February 19, 2009, or any subsequent update, and all other strategies, plans, documents, reports, studies, agreements and related correspondences developed and used pursuant to the requirements of this permit.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 C.F.R. § 122.41(m)(1)(ii).

"Total Maximum Daily Load (TMDL) Units" means for purposes of this permit, the sum of individual waste load allocations (WLAs) and natural background. Unless specifically permitted otherwise in an EPA-approved TMDL report covered under the permit, TMDLs are expressed in terms of mass per time, toxicity or other appropriate measure such as pollutant pounds of a total average annual load.

"TMDL Implementation Plan" means for purposes of this permit, a plan and subsequent revisions/updates to that plan that are designed to demonstrate how to achieve compliance with applicable waste load allocations as set forth in the permit requirements described in Section 4.10.3.

"Stormwater Management Program (SWMP)" is a modified and improved SWMP based on the existing SWMP and on information in each of the Annual Reports/Discharge Monitoring Reports. The purpose of the SWMP is to describe the list of activities that need to be done to meet the requirements of the Clean Water Act, an explanation as to why these activities will meet the Clean Water Act requirements, and a schedule for those activities.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 C.F.R. § 122.41(n)(1).

"Waste pile" means any non-containerized accumulation of solid, nonflowing waste.

"Water quality standards" refers to the District of Columbia's Surface and Ground Water Quality Standards codified at Code of District of Columbia Regulations §§ 21-1100 *et seq.*, which are effective on the date of issuance of the permit and any subsequent amendments which may be adopted during the life of this permit.

"Waters of the United States" is defined at 40 C.F.R. § 122.2.

Exhibit 5

Boston, MA – Boston Water and Sewer Commission MS4 Permit
(Permit No. MAS010001)

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AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the federal Clean Water Act, as amended, 33 U.S.C. §§1251 et seq., and the Massachusetts Clean Waters Act, as amended, Mass. Gen. Laws. ch. 21, §§26-53, the

Boston Water and Sewer Commission

is authorized to discharge from all of its new or existing separate storm sewers: **195 identified Separate Storm Sewer Outfalls and associated receiving waters are Listed in Attachment A** to receiving waters named: **Belle Island Inlet, Boston Harbor, Boston Inner Harbor, Brook Farm Brook, Bussey Brook, Canterbury Brook, Chandler's Pond, Charles River, Chelsea River, Cow Island Pond, Dorchester Bay, Fort Point Channel, Goldsmith Brook, Jamaica Pond, Little Mystic Channel, Mill Pond, Millers River, Mother Brook, Muddy River, Mystic River, Neponset River, Old Harbor, Patten's Cove, Reserved Channel, Sprague Pond, Stony Brook, Turtle Pond and unnamed wetlands, brooks and streams.**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective 30 days from date of signature.

This permit and the authorization to discharge expire at midnight, five years from the effective date.

This permit consists **of 20** pages and **Attachment A** in Part I including monitoring requirements, etc., and 35 pages in Part II including General Conditions and Definitions.

Signed this 29 day of September, 1999

Director
Office of Ecosystem Protection
Environmental Protection Agency
Region I
Boston, MA

Director, Division of
Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

PART I. MUNICIPAL SEPARATE STORM SEWER SYSTEM

A. DISCHARGES THROUGH THE MUNICIPAL SEPARATE STORM SEWER SYSTEM AUTHORIZED UNDER THIS PERMIT

1. Permit Area. This permit covers all areas within the corporate boundary of the City of Boston or otherwise contributing to new or existing separate storm sewers owned or operated by the Boston Water and Sewer Commission, the "permittee".

2. Authorized Discharges. This permit authorizes all storm water discharges to waters of the United States from all existing or new separate storm sewer outfalls owned or operated by the permittee (existing outfalls are identified in Attachment A). This permit also authorizes the discharge of storm water commingled with flows contributed by wastewater or storm water associated with industrial activity provided such discharges are authorized under separate NPDES permits and are in compliance with applicable Federal, State and Boston Water and Sewer Commission regulations (Regulations Regarding the Use of Sanitary and Combined Sewers and Storm Drains of the Boston Water and Sewer Commission). The permittee shall provide a notification to EPA and MA DEP of all new separate storm sewer outfalls as they are activated and of all existing outfalls which are de-activated. The annual report (Part I.E.) will reflect all of the changes to the number of outfalls throughout the year.

3. Limitations on Coverage. Discharges of non-storm water or storm water associated with industrial activity through outfalls listed at Attachment A are not authorized under this permit except where such discharges are:

   a. authorized by a separate NPDES permit; or

   b. identified by and in compliance with Part I.B.2.g.2 of this permit.

B. STORM WATER POLLUTION PREVENTION & MANAGEMENT PROGRAMS

The permittee is required to develop and implement a storm water pollution prevention and management program designed to reduce, to the maximum extent practicable the discharge of pollutants from the Municipal Separate Storm Sewer System. The permittee may implement Storm Water Management Program (SWMP) elements through participation with other public agencies or private entities in cooperative efforts satisfying the requirements of this permit in lieu of creating duplicate program elements. Either cumulatively, or separately, the permittee's storm water pollution prevention and management programs shall satisfy the requirements of Part I.B.1-7. below for all portions of the Municipal Separate Storm Sewer System (MS4) authorized to discharge under this permit and shall reduce the discharge of pollutants to the maximum extent practicable. The storm water pollution prevention and management program requirements of this Part shall be implemented through the SWMP submitted as part of the permit application and revised as necessary.

1. POLLUTION PREVENTION REQUIREMENTS The permittee shall develop and implement the following pollution prevention measures as they relate to discharges to the separate storm sewer:

a. Development The permittee shall assist and coordinate with the appropriate municipal agencies with jurisdiction over land use to ensure that municipal approval of all new development and significant redevelopment projects within the City of Boston which discharge to the MS4 is conditioned on due consideration of water quality impacts. The permittee shall cooperate with appropriate municipal agencies to ensure that development activities conform to applicable state and local regulations, guidance and policies relative to storm water discharges to separate storm sewers. Such requirements shall limit increases in the discharge of pollutants in storm water as a result of new development, and reduce the discharge of pollutants in storm water as a result of redevelopment.

b. Used Motor Vehicle Fluids The permittee shall coordinate with appropriate municipal agencies or private entities to assist in the implementation of a program to collect used motor vehicle fluids (including, at a minimum, oil and antifreeze) for recycle, reuse, or proper disposal. Such program shall be readily available to all residents of the City of Boston and publicized and promoted at least annually.

c. Household Hazardous Waste (HHW) The permittee shall coordinate with appropriate municipal agencies or private entities to assist in the implementation of a program to collect household hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycle, reuse, or proper disposal and promote proper handling and disposal. Such program shall be readily available to all private residents. This program shall be publicized and promoted at least annually.

2. STORM WATER MANAGEMENT PROGRAM REQUIREMENTS: The permittee shall continue to implement the Storm Water Management Program (SWMP) which it described in its May 17, 1993 storm water permit application and updated June 1995 and June 1998 in accordance with Section 402(p)(3)(B) of the Clean Water Act (CWA or "the Act"). This SWMP outlined in the permit application, including all updates, is approvable upon issuance of this permit.

In accordance with Part I.E. Annual Report, no later than **March 1, 2000** the permittee shall describe all the updates which it has conducted and all additional measures it will take to satisfy the requirements of this permit and the goals of the storm water management program. The Controls and activities identified in the SWMP shall clearly identify goals, a description of the controls or activities, and a description of the roles and responsibilities of other entities' areas of applicability on a system, jurisdiction, or specific area basis. The permittee will specifically address its roles and activities as they relate to portions of the SWMP which are not under its direct control (e.g. street sweeping, HHW collection, development, redevelopment). The permit may be modified to designate the agencies that administer these programs as co-permittees or require a separate permit. These entities would then be responsible for applicable permit conditions and requirements. The SWMP, and all approved updates, are hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

a. Statutory Requirements: The SWMP shall include controls necessary to reduce the discharge of pollutants from the Municipal Separate Storm Sewer System to the Maximum Extent Practicable (MEP). Controls may consist of a combination of best management practices, control techniques, system design and engineering methods, and such other provisions as the permittee, Director or the State determines appropriate. The various components of the SWMP, taken as a whole (rather than individually), shall be sufficient to meet this standard. The SWMP shall be updated as necessary to ensure conformance with the requirements of CWA § 402(p)(3)(B). The permittee shall select measures or controls to satisfy the following water quality prohibitions:

No discharge of toxics in toxic amounts.

No discharge of pollutants in quantities that would cause a violation of State water quality standards.

No discharge of either a visible oil sheen, foam, or floating solids, in other than trace amounts.

b. Structural Controls: The permittee shall operate and maintain all storm water structural controls which it owns or operates in a manner so as to reduce the discharge of pollutants to the MEP.

c. Areas of New Development and Significant Redevelopment: The permittee shall continue to implement its site plan review process and ensure compliance with its existing regulations. The permittee shall also coordinate with appropriate municipal agencies to assist in the development, implementation, and enforcement of controls to minimize the discharge of pollutants to the separate storm sewer system from areas of new development and significant re-development during and after construction. The permittee shall assist appropriate municipal agencies to ensure that development activities conform to applicable state and local regulations, guidance and policies relative to storm water discharges to separate storm sewers.

d. Roadways: The permittee shall coordinate with appropriate agencies to assist in the implementation of measures to ensure that roadways and highways are operated and maintained in a manner so as to minimize the discharge of pollutants to the separate storm sewer system (including those related to deicing or sanding activities).

e. Flood Control Projects: The permittee shall ensure that any flood management projects within its direct control are completed after consideration of impacts on the water quality of receiving waters. The permittee shall also evaluate the feasibility of retro-fitting existing structural flood control devices it owns or operates to provide additional pollutant removal from storm water.

f. Pesticide, Herbicide, and Fertilizer Application: The permittee shall cooperate with appropriate municipal agencies to evaluate existing measures to reduce the discharge of pollutants related to the application of pesticides, herbicides, and fertilizers applied by municipal or public agency employees or contractors to public right of ways, parks, and other municipal facilities. The permittee shall evaluate the necessity to implement controls to reduce discharge of pollutants related to the application and distribution of pesticides, herbicides, and fertilizers by commercial and wholesale distributors and applicators. The permittee shall require controls, within its authority, as necessary.

g. Illicit Discharges and Improper Disposal: The permittee shall continue to implement its program to detect and remove illicit discharges (or require the discharger to the MS4 to remove or obtain a separate NPDES permit for the discharge) and improper disposal into the separate storm sewer.

1. The permittee shall effectively prohibit non-storm water discharges to the Municipal Separate Storm Sewer System, other than those authorized under this permit or a separate NPDES permit.

2. Unless identified by either the permittee, the Director, or the State as significant sources of pollutants to waters of the United States, the following non-storm water discharges are authorized to enter the MS4. As necessary, the permittee may incorporate appropriate control measures in the SWMP to ensure these discharges are not significant sources of pollutants to waters of the United States.

(a) water line flushing;
(b) landscape irrigation;
(c) diverted stream flows;
(d) rising ground waters;
(e) uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers;

(f) uncontaminated pumped ground water;
(g) discharges from potable water sources;
(h) foundation drains;
(i) uncontaminated air conditioning or compressor condensate;
(j) irrigation water;
(k) uncontaminated springs;
(l) water from crawl space pumps;
(m) footing drains;
(n) lawn watering;
(o) non-commercial car washing;
(p) flows from riparian habitats and wetlands;
(q) swimming pool discharges which have been dechlorinated;
(r) street wash waters;
(s) discharges or flows from emergency fire fighting activities;
(t) fire hydrant flushing; and
(u) building washdown water which does not contain detergents.

3. The permittee shall prevent unpermitted discharges of dry and wet weather overflows from sanitary sewers into the MS4. The permittee shall implement a program to identify and limit the infiltration of seepage from sanitary sewers into the MS4.

4. The permittee shall prohibit the discharge or disposal of used motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, and animal wastes into separate storm sewers. The permittee must demonstrate that the prohibition is publicized at least annually, and that the information is available for non-English speaking residents of the City.

5. The permittee shall require the elimination of illicit connections as expeditiously as possible and the immediate cessation of improper disposal practices upon identification of responsible parties. The permittee shall describe its procedure for identification and elimination of illicit discharges. This information shall be included in the annual report required under Part I.E. below. Where elimination of an illicit connection within sixty (60) days is not possible, the permittee shall establish a schedule for the expeditious removal of the discharge. In the interim, the permittee shall take all reasonable and prudent measures to minimize the discharge of pollutants to the MS4.

h. Spill Prevention and Response: The permittee shall cooperate with appropriate federal, state, and municipal agencies in the development and implementation of a program to prevent, contain, and respond to spills that may discharge into or through the MS4. The spill response program may include a combination of spill response actions by the permittee (and/or other public or private entities), and requirements for private entities through the permittee's sewer use regulations. Except as explicitly authorized, materials from spills may not be discharged to Waters of the United States.

i. Industrial & High Risk Runoff: In cooperation with the DEP and EPA, the permittee shall implement a program to identify, monitor, and control pollutants in storm water discharges to the MS4 from municipal landfills; hazardous waste treatment, storage, disposal and recovery facilities and facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge the permittee determines is contributing a substantial pollutant loading to the MS4. The program shall include:

1. priorities and procedures for inspections and establishing and implementing control measures for such discharges;

2. a monitoring (or self-monitoring) program for facilities identified under this section, including the collection of quantitative data on the following constituents:

(a) any pollutants for which the discharger may monitor or which are limited in an existing NPDES permit for an identified facility;

(b) any information on discharges required under 40 CFR 122.21(g)(7)(iii) and (iv);

(c) any pollutant the permittee has a reasonable expectation is discharged in substantial quantity from the facility to the separate storm sewer system.

Data collected by the industrial facility to satisfy the monitoring requirements of an NPDES or State discharge permit may be used to satisfy this requirement. The permittee may require the industrial facility to conduct self-monitoring to satisfy this requirement.

j. Construction Site Runoff: The permittee shall continue to implement its site plan review process and ensure compliance with its existing regulations. The permittee shall also cooperate with appropriate municipal agencies in the development and implementation of a program to reduce the discharge of pollutants from construction sites to the MS4, including:

1. requirements for the use and maintenance of appropriate structural and non-structural best management practices to reduce pollutants discharged to the MS4 during the time construction is underway;

2. procedures for site planning which incorporate considerations for potential short term and long term water quality impacts and measures to minimize these impacts;

3. prioritized inspection of construction sites and enforcement of control measures as required by the permittee;

4. providing assistance to appropriate municipal agencies in the development of education and training measures for construction site operators; and

5. providing assistance to appropriate municipal agencies in the development of a notification to appropriate building permit applicants of their potential responsibilities under the NPDES permitting program for construction site runoff.

k. Public Education: The permittee, in coordination with other appropriate municipal agencies, shall implement a public education program including, but not limited to:

1. A program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or improper disposal of materials (e.g. industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the MS4 (e.g. curb inlet stenciling, citizen "streamwatch" groups, "hotlines" for reporting dumping, outreach materials included in billings, advertising on public access/government cable channels, etc.);

2. a program to promote, publicize, and facilitate the proper management and disposal of used oil, vehicle fluids and lubricants, and household hazardous wastes;

3. a program to promote, publicize, and facilitate the proper use, application, and disposal of pesticides, herbicides, and fertilizers;

4. where applicable and feasible, the permittee should publicize those best management practices (including but not limited to the use of reformulated or redesigned products, substitution of less toxic materials, and improvements in housekeeping) developed by municipal agencies or environmental organizations that facilitate better use, application, and/or disposal of materials identified in k.1 - k.3 of this section.

3. DEADLINES FOR PROGRAM COMPLIANCE: Except as provided in PART II, and Part I.B.7. the permittee shall continue to implement its Storm Water Management Program.

4. ROLES AND RESPONSIBILITIES OF PERMITTEE: The Storm Water Management Program shall clearly identify the roles and responsibilities of the permittee and appropriate municipal agencies impacting its efforts to comply with this permit.

5. LEGAL AUTHORITY: The permittee has demonstrated and shall maintain legal authority to control discharges to and from those portions of the MS4 which it owns or operates. This legal authority may be a combination of statute, regulation, permit, contract, or an order to:

a. Control the contribution of pollutants to the MS4 by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity;

b. Prohibit illicit discharges to the MS4;

c. As necessary, control the discharge of spills and the dumping or disposal of materials other than storm water (e.g. industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the MS4;

d. Control through interagency or inter-jurisdictional agreements the contribution of pollutants from one portion of the MS4 to another;

e. Require compliance with conditions in regulations, permits, contracts or orders; and

f. Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance with permit conditions.

6. STORM WATER MANAGEMENT PROGRAM RESOURCES The permittee shall provide adequate finances, staff, equipment, and support capabilities to implement its SWMP.

7. STORM WATER MANAGEMENT PROGRAM REVIEW AND MODIFICATION

a. Demonstration Project: Within **180** days of the effective date of the permit, the permittee shall submit a plan to assess the effectiveness of existing non-structural BMPs. This plan shall identify a drainage area or sub-area which has undergone an investigation for illicit connections and is believed to be reasonably free of sanitary sewer influence. The plan shall clearly specify activities to be conducted, responsible parties and method of assessment. The project shall commence within one year of the effective date of the permit and continue for at least one year. Within **90** days of project completion the permittee shall submit a report which identifies measures undertaken and effectiveness of those measures.

b. Program Review: The permittee shall participate in an annual review of its current SWMP in conjunction with preparation of the annual report required under Part I.E. This annual review shall include:

1. A review of the status of program implementation and compliance with program elements and other permit conditions as necessary;

2. An assessment of the effectiveness of controls established by the SWMP;

3. A review of monitoring data and any trends in estimated cumulative annual pollutant loadings;

4. An assessment of any SWMP modifications needed to comply with the CWA §402(p)(3)(B)(iii) requirement to reduce the discharge of pollutants to the maximum extent practicable (MEP).

5. An assessment of staff and funding levels adequate to comply with the permit conditions.

c. Program Modification: The permittee may modify the SWMP in accordance with the following procedures:

1. The approved SWMP shall not be modified by the permittee(s) without the prior approval of the Director, unless in accordance with items c.2. or c.3. below.

2. Modifications adding (but not subtracting or replacing) components, controls, or requirements to the approved SWMP may be made by the permittee at any time upon written notification to the Director.

3. Modifications replacing or eliminating an ineffective or infeasible BMP specifically identified in the SWMP with an alternative BMP may be requested at any time. Unless the Director comments on or denies the request within 60 days from submittal, the permittee shall implement the modification and proposed schedule. Such requests must include the following:

(a) an analysis of why the BMP is ineffective or infeasible (including cost considerations),

(b) expectations on the effectiveness of the replacement BMP and proposed schedule for implementation, and

(c) an analysis of why the replacement of the BMP is expected to achieve the goals of the BMP to be replaced,

(d) in the case of an elimination of the BMP, an analysis of why the elimination is not expected to cause or contribute to a water quality impact.

4. Modification requests and/or notifications must be made in writing and signed in accordance with Part II.D.2.

d. Modifications required by the Permitting Authority: The Director or the State may require the permittee to modify the SWMP as needed to:

1. Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;

2. Include more stringent requirements necessary to comply with new State or Federal statutory or regulatory requirements; or

3. Include such other conditions deemed necessary by the Director to comply with the goals and requirements of the Clean Water Act.

Modifications required by the Director shall be made in writing and set forth a time schedule for the permittee to develop the modification(s).

C. WET WEATHER MONITORING AND REPORTING REQUIREMENTS

1. Storm Event Discharges. The permittee shall implement a wet-weather monitoring program for the MS4 to provide data necessary to assess the effectiveness and adequacy of control measures implemented under the SWMP; estimate annual cumulative pollutant loadings from the MS4; estimate event mean concentrations and seasonal pollutants in discharges from all outfalls; identify and prioritize portions of the MS4 requiring additional controls, and identify water quality improvements or degradation. Improvement in the quality of discharges from the MS4 will be assessed based on the monitoring information required by this section, along with any additional pertinent information. There have been no numeric effluent limits established for this permit. Further monitoring or effluent limits may be established to ensure compliance with the goals of the Clean Water Act, appropriate Water Quality Standards, or applicable technology based requirements.

a. Representative Monitoring: Within **90** days after the effective date of this permit, the permittee shall submit a proposed sampling plan. The permittee shall monitor a minimum of five (5) representative drainage areas to characterize the quality of storm water discharges from the MS4. The proposed sampling plan shall consider monitoring each site three (3) times a year for a period of at least two years. All five sites shall be completed within the five year permit term and may be done partially or consecutively. The permittee shall choose locations representing the different land uses or is representative of drainage areas served by the MS4. The permittee may submit an alternative plan for sampling frequency only subject to the approval of EPA and DEP. At a minimum, the monitoring program shall analyze for the following parameters: pH, Temperature, Dissolved Oxygen, Total Suspended Solids, BOD5, COD, Fecal Coliform, Total Nitrogen, Nitrate/Nitrite, Ammonia (as N), Total Phosphorous, Ortho-Phosphate, Oil and Grease, Total Petroleum Hydrocarbons, Surfactants, Fluoride, Copper, and Zinc. Unless commented on or denied by the Director within **60** days after its submittal, the proposed sampling plan shall be deemed approved. This monitoring program shall commence no later than **180** days from the effective date of the permit unless otherwise specified by EPA and DEP. Subsequent monitoring locations and parameters for the remainder of the permit term shall be determined based upon the results of these sampling locations and other water quality information available to EPA, DEP and the permittee.

b. Receiving Water Quality Monitoring. The permittee shall monitor a minimum of four (4) receiving waters three (3) times a year throughout the permit term to characterize the water quality impacts of storm water discharges from the MS4. Sampling shall be conducted during a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (0.1 inch) storm event. Within **90** days after the effective date of this permit, the permittee shall submit its proposed sampling plan. At a minimum, the monitoring program shall analyze for the following parameters: pH, Temperature, Dissolved Oxygen, Total Suspended Solids, BOD5, COD, Fecal Coliform, Total Nitrogen, Nitrate/Nitrite, Ammonia (as N), Total Phosphorous, Ortho-Phosphate, Oil and Grease, Total Petroleum Hydrocarbons, Surfactants, Fluoride, Copper, and Zinc. Unless commented on or denied by the Director within **60** days after its submittal, the proposed sampling plan shall be deemed approved. This monitoring program shall commence no later than six months after the effective date of the permit.

c. Alternate Representative Monitoring: Monitoring locations may be substituted for just cause during the term of the permit. Requests for alternate monitoring locations by the permittee shall be made to the Director in writing and include the rationale for the requested monitoring station relocation. Unless commented on or denied by the Director, use of an alternate monitoring location may commence sixty (60) days from the date of the request.

2. Storm Event Data: For Part I.C.1.a Data shall be collected to estimate pollutant loadings and event mean concentrations for each parameter sampled. The permittee shall maintain records of the date and duration (hours) of the storm event sampled; rainfall measurements or estimates (inches) of the storm event which generated the sampled runoff; the duration (hours) between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and the total estimated volume (in gallons) of the discharge sampled. If manual sampling is employed, the permittee shall record physical observations of the discharge such as color and smell; and visible water quality impacts such as floatables, oil sheen, or evidence of sedimentation in the vicinity of the outfall (e.g. sandbars).

3. Sample Type, Collection, and Analysis: The following requirements apply to samples collected pursuant to Part I.C.1.a.

a. For discharges from holding ponds or other impoundments with a retention period greater than 24 hours, (estimated by dividing the volume of the detention pond by the estimated volume of water discharged during the 24 hours previous to the time that the sample is collected) a minimum of one grab sample may be taken.

b. Grab samples shall be used for the analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil & grease, fecal coliform, and fecal streptococcus. For all other parameters, data shall be reported for flow weighted composite samples of the entire event or, at a minimum, the first three hours of discharge.

c. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Composite samples may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes.

d. Analysis and collection of samples shall be conducted in accordance with the methods specified at 40 CFR Part 136. Where an approved Part 136 method does not exist, any available method may be used.

4. Sampling Waiver. When the permittee is unable to collect samples required by Part I.C.1.a due to adverse climatic conditions, the discharger must submit, in lieu of sampling data, a description of why samples could not be collected, including available documentation of the event. Adverse climatic conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

5. Sampling Results. The permittee shall record the results of sampling and assessment of the data in a report and submit results with its Annual Report.

6. Wet Weather Screening: The permittee shall develop and implement a program to identify, investigate, and address areas within their jurisdiction that may be contributing excessive levels of pollutants to the MS4 as a result of rainfall or snow melt. Screening shall be conducted at anytime precipitation causes a flow from the storm sewer. At a minimum the wet weather screening program:

a. shall screen all major outfalls at least once during the permit term;

b. shall record the structural integrity of the outfall (if visible); physical observations of the discharge (if visible) such as color and smell; and visible water quality impacts such as floatables, oil sheen, or evidence of sedimentation in the vicinity of the outfall (e.g. sandbars).

c. shall summarize the results of the program in its Annual Report.

d. The permittee may submit an alternate wet weather screening pilot program on a watershed or sub-watershed basis. The pilot project concept must be submitted to EPA and DEP within 90 days of the effective date of the permit. The permittee shall identify reasons it believes that a system wide screening program would not be effective. The pilot project may be conducted in conjunction with Receiving Water Quality Monitoring (C.1.b.), but not Representative Monitoring(C.1.a.)

D. DRY WEATHER DISCHARGES

1. Dry Weather Screening Program: At least once during the permit term, the permittee shall inspect all major outfalls, or nearest upstream location not subject to tidal influence or backflow, during dry weather to identify those outfalls with dry weather flow. Dry weather screening shall be conducted when there has been no greater than 0.10 inches of precipitation in the 72 hours prior to screening. The permittee shall record the structural integrity of the outfall (if visible). If flow is observed, the permittee shall record physical observations such as color, visible sheen, turbidity, floatables, smell, and an estimate of flow. If sewage is suspected, the permittee shall develop a schedule for follow-up activities to eliminate the source as soon as is practicable. The permittee shall summarize the results in its Annual Report

2. Screening Procedures: Screening methodology need not conform to the protocol at 40 CFR §122.26(d)(1)(iv)(D) or sample and collection methods of 40 CFR §136.

3. Follow-up on Dry Weather Screening Results: Follow-up activities shall be prioritized on the basis of:

   a. magnitude and nature of the suspected discharge;

   b. sensitivity of the receiving water; and

   c. other factors the permittee deems appropriate.

4. The permittee shall summarize the results of dry weather screening and submit with its Annual Report.

E. ANNUAL REPORT:

The permittee shall prepare and submit an annual report to be submitted by no later than **March 1, 2000** and annually thereafter. The report shall include the following separate sections, with an overview for the entire MS4:

1. The status of implementing the storm water management program(s);

2. Proposed changes to the storm water management program(s);

3. Revisions, if necessary, to the assessments of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and (d)(2)(v);

4. A summary of the data, including monitoring or screening data, that is accumulated throughout the reporting year;

5. A revised list of all current separate storm sewer outfalls and their locations, reflecting changes of the previous year.

6. Annual expenditures for the reporting period, with a breakdown of the major elements of the storm water management program, and the budget for the year following each annual report as well as an assessment of adequacy of staffing and equipment;

7. A summary describing the number and nature of enforcement actions, inspections, and public education programs;

8. Identification of water quality improvements or degradation attributable to the permittee;

9. An analysis of the effectiveness and removal efficiencies of structural controls owned or operated by the permittee (such as the off-line particle separator in Fenwood Road); and,

10. An update on the illicit connection program to include the total number of identified connections with an estimate of flow for each, total number of connections found in the reporting period to include how they were found (i.e. citizen complaint, routine inspection), number of connections corrected in the reporting period to include total estimated flow, and the costs of such repairs to include how the repairs were financed (i.e. by the permittee, costs provided to the permittee by the responsible party, repairs effected and financed by the responsible party). As an attachment to the report, the permittee should submit any existing tracking system information.

F. CERTIFICATION AND SIGNATURE OF REPORTS

All reports required by the permit and other information requested by the Director shall be signed and certified in accordance with the General Conditions-Part II of this permit.

G. REPORT SUBMISSION

1. Original signed copies of all notifications and reports required herein, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
NPDES PROGRAMS (SPA)
P.O. Box 8127
Boston, MA 02114

2. Signed copies of all notifications and reports shall be submitted to the State at:

Massachusetts Department of Environmental Protection
1 Winter Street
Boston, MA 02108
Attn: Mr. Steve Lipman

and

Massachusetts Department of Environmental Protection
Metro Boston/Northeast Regional Office
205A Lowell Street
Wilmington, MA 01887
Attn: Mr. Sabin Lord

H. RETENTION OF RECORDS

The permittee shall retain all records of all monitoring information, copies of all reports required by this permit and records of all other data required by or used to demonstrate compliance with this permit, until at least three years after coverage under this permit terminates. This period may be modified by alternative provisions of this permit or extended by request of the Director at any time. The permittee shall retain the latest approved version of the SWMP developed in accordance with Part I of this permit until at least three years after coverage under this permit terminates.

I. STATE PERMIT CONDITIONS

1. This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the Massachusetts DEP pursuant to M.G.L. Chap. 21, §43.

2. Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.

ATTACHMENT A
BOSTON WATER AND SEWER COMMISSION
STORMWATER OUTFALLS

OUTFALL NUMBER	OUTFALL TYPE	LOCATION	NEIGHBORHOOD	SIZE (INCHES)	TIDEGATES No. OF GATES / NUMBER	RECEIVING WATER
08B066	MAJOR	EASEMENT/VFW PARKWAY	WEST ROXBURY	18		CHARLES RIVER
08B122	MAJOR	EASEMENT/NORTH OF SPRING STREET	WEST ROXBURY	30		CHARLES RIVER
08B126	MINOR	SPRING STREET EXTENDED	WEST ROXBURY	24		CHARLES RIVER
09B049	MAJOR	EASEMENT/RIVERMOOR STREET	WEST ROXBURY	30		COW ISLAND POND/ CHARLES RIVER
10B015	MAJOR	EASEMENT/CHARLES PARK ROAD	WEST ROXBURY	21		COW ISLAND POND/ CHARLES RIVER
11B123	MAJOR	EASEMENT/EAST OF BAKER ST. EXT.	WEST ROXBURY	72		BROOK FARM BROOK
12B010	MINOR	BAKER STREET	WEST ROXBURY	15		BROOK FARM BROOK
12B014	MINOR	BAKER STREET	WEST ROXBURY	12		BROOK FARM BROOK
12B031	MINOR	EASEMENT/BAKER STREET	WEST ROXBURY	18		BROOK FARM BROOK
12B033	MINOR	EASEMENT/BAKER STREET	WEST ROXBURY	18		BROOK FARM BROOK
12B124	MAJOR	EASEMENT/LaGRANGE STREET	WEST ROXBURY	120x102		BROOK FARM BROOK
13B002	MINOR	LaGRANGE STREET	WEST ROXBURY	15		UNNAMED STREAM
13B011	MINOR	LaGRANGE STREET	WEST ROXBURY	12		UNNAMED STREAM
06C110	MAJOR	EASEMENT/PLEASANTDALE ST. EXT.	WEST ROXBURY	60		NONE SHOWN
07C006	MAJOR	EASEMENT/VFW PARKWAY/BELLE AVENUE	WEST ROXBURY	126x126		CHARLES RIVER
08C318	MAJOR	WEDGEMERE ROAD	WEST ROXBURY	24		NONE SHOWN
08C319	MINOR	WEDGEMERE ROAD	WEST ROXBURY	24		UNNAMED STREAM
14C009	MAJOR	EASEMENT/WESTGATE ROAD	WEST ROXBURY	36		UNNAMED WETLANDS
21C212	MINOR	EASEMENT/LAKE SHORE ROAD	ALLSTON/BRIGHTON	30		CHANDLERS POND
22C384	MAJOR	EASEMENT/LAKE SHORE ROAD	ALLSTON/BRIGHTON	36		CHANDLERS POND
24C174	MINOR	EASEMENT/NEWTON STREET	ALLSTON/BRIGHTON	9x20		CHARLES RIVER
24C031	MAJOR	PARSONS STREET	ALLSTON/BRIGHTON	60X60		CHARLES RIVER
06D057	MINOR	CEDAR CREST CIRCLE	WEST ROXBURY	21		NEPONSET RIVER
06D083	MINOR	MARGARETTA DRIVE	WEST ROXBURY	15		WETLANDS/CHARLES RIVER
06D084	MINOR	EASEMENT/MARGARETTA DRIVE	WEST ROXBURY	12		WETLANDS/CHARLES RIVER
06D085	MINOR	GEORGETOWN DRIVE	WEST ROXBURY	12		WETLANDS/CHARLES RIVER
06D086	MINOR	GEORGETOWN DRIVE	WEST ROXBURY	10		WETLANDS/CHARLES RIVER
06D091	MINOR	GEORGETOWN DRIVE	WEST ROXBURY	10		WETLANDS/CHARLES RIVER
06D184	MINOR	GEORGETOWN DRIVE	WEST ROXBURY	18		WETLANDS/CHARLES RIVER
06D187	MAJOR	EASEMENT/GROVE STREET	WEST ROXBURY	36		BROOK GROVE STREET CEMETERY
13D077/078	MAJOR	WEST ROXBURY PARKWAY/VFW PARKWAY	WEST ROXBURY	2-60		BUSSEY BROOK
24D032	MAJOR	NORTH BEACON STREET, ABOUT 800' EAST OF PARSONS STREET	ALLSTON/BRIGHTON	119X130	1 / 24D032-18	CHARLES RIVER
24D150	MAJOR	SOLDIERS FIELD PLACE	ALLSTON/BRIGHTON	36		CHARLES RIVER
25D033	MAJOR	ABOUT 390' NORTH OF INTERSECTION OF SOLDIERS FIELD ROAD & WESTERN AVENUE	ALLSTON/BRIGHTON	36		CHARLES RIVER
01E024	MAJOR	EASEMENT/LAKESIDE	HYDE PARK	15		SPRAGUE POND/NEPONSET RIVER
03E185	MAJOR	NORTON STREET	HYDE PARK	2-18		WETLANDS/NEPONSET RIVER
03E186	MINOR	RIVER STREET	HYDE PARK	24		MILL POND/MOTHER BROOK
03E207	MINOR	RIVER STREET	HYDE PARK			MILL POND/MOTHER BROOK

ATTACHMENT A
BOSTON WATER AND SEWER COMMISSION
STORMWATER OUTFALLS

04E064	MINOR	ALVARADO AVE./RIVER STREET BRIDGE	HYDE PARK	12		MILL POND/MOTHER BROOK
04E069	MAJOR	KNIGHT STREET DAM	HYDE PARK	36		MOTHER BROOK
05E180	MINOR	GEORGETOWN DRIVE	HYDE PARK	12		NONE SHOWN/CHARLES RIVER
05E181	MINOR	GEORGETOWN DRIVE	HYDE PARK	12		NONE SHOWN/CHARLES RIVER
05E182	MINOR	DEDHAM STREET	HYDE PARK	21		UNNAMED STREAM/CHARLES RIVER
05E183	MINOR	GEORGETOWN PLACE/DEDHAM PARKWAY	HYDE PARK	12		UNNAMED STREAM
08E031	MINOR	TURTLE POND PARKWAY	WEST ROXBURY	18		TURTLE POND
08E033	MINOR	TURTLE POND PARKWAY	WEST ROXBURY	UNKNOWN		TURTLE POND
08E035	MINOR	WASHINGTON STREET	WEST ROXBURY	15		TURTLE POND
09E229	MINOR	GRANDVIEW STREET	WEST ROXBURY	12		NONE SHOWN
09E243	MAJOR	BLUE LEDGE TR./EASEMENT	WEST ROXBURY	30		UNNAMED STREAM
13E174	MINOR	EASEMENT/VFW PARKWAY	ROSLINDALE	24		BUSSEY BROOK
13E175	MAJOR	EASEMENT/VFW PARKWAY	ROSLINDALE	108X86		BUSSEY BROOK
13E176	MAJOR	EASEMENT/WELD STREET	ROXBURY	15		NONE SHOWN
25E037	MAJOR	EASEMENT/TELFORD STREET EXTENDED	ALLSTON/BRIGHTON	66		CHARLES RIVER
01F031	MAJOR	EASEMENT/MILLSTONE ROAD	HYDE PARK	48x24		NEPONSET RIVER
02F085	MINOR	LAWTON STREET	HYDE PARK	12		NEPONSET RIVER RESERVATION
02F093	MAJOR	EASEMENT/SIERRA ROAD	HYDE PARK	15		NEPONSET RIVER
02F120	MAJOR	EASEMENT/WOLCOTT CT./HYDE PARK AVE. EXT.	HYDE PARK	54		NEPONSET RIVER
04F016	MAJOR	EASEMENT RIVER STREET	HYDE PARK	30		MOTHER BROOK/NEPONSET RIVER
04F118	MINOR	MASON STREET EXT.	HYDE PARK	18		NEPONSET RIVER
04F119	MAJOR	EASEMENT/HYDE PARK AVE./RESERVATION RD.	HYDE PARK	24		NEPONSET RIVER
04F189	MAJOR	RESERVATION ROAD	HYDE PARK	36		MOTHER BROOK/NEPONSET RIVER
04F191	MINOR	FARADAY STREET	HYDE PARK	24		NONE SHOWN/NEPONSET RIVER
04F203	MINOR	GLENWOOD AVE	HYDE PARK	28		NEPONSET RIVER
04F204	MAJOR	TRUMAN HWY./CHITTICK STREET	HYDE PARK	36		NEPONSET RIVER
05F117	MAJOR	EASEMENT/TRUMAN HWY./WILLIAMS AVE.	HYDE PARK	33		NEPONSET RIVER
05F244	MINOR	HYDE PARK AVENUE BRIDGE	HYDE PARK	20		MOTHER BROOK/NEPONSET RIVER
05F245	MINOR	HYDE PARK AVENUE	HYDE PARK	33		MOTHER BROOK/NEPONSET RIVER
05F253	MAJOR	EASEMENT/BUSINESS ST., NEAR BUSINESS TERRACE	HYDE PARK	48x24		MOTHER BROOK/NEPONSET RIVER
05F254	MINOR	DANA AVENUE	HYDE PARK	12		NEPONSET RIVER
05F265	MAJOR	BEHIND L.E. MASON CO.	HYDE PARK	15		MOTHER BROOK/NEPONSET RIVER
06F233	MINOR	MOUNT ASH ROAD	HYDE PARK	UNK		WETLAND - STONY BROOK RESERVATION
12F322	MINOR	EASEMENT/WALTER STREET	ROSLINDALE	18		NONE SHOWN
13F095	MINOR	EASEMENT/BUSSEY STREET	ROSLINDALE	12		BUSSEY BROOK
14F181	MAJOR	CENTER STREET EXTENSION	ROSLINDALE	38X86		GOLDSMITH BROOK
14F185	MINOR	ALLANDALE STREET	ROSLINDALE	12		BUSSEY BROOK
15F288	MAJOR	ARNOLD ARBORETUM/MURRAY CIRCLE	JAMAICA PLAIN	54		GOLDSMITH BROOK
15F307	MAJOR	ARNOLD ARBORETUM, 100' EAST OF ARBORWAY & SAINT JOSEPH STREET	JAMAICA PLAIN	36X36		GOLDSMITH BROOK
17F012	MINOR	FRANCIS PARKMAN DRIVE	JAMAICA PLAIN	15		JAMAICA POND

ATTACHMENT A
BOSTON WATER AND SEWER COMMISSION
STORMWATER OUTFALLS

26F038	MAJOR	HARVARD STREET EXT.	ALLSTON/BRIGHTON	36		CHARLES RIVER
05G112	MAJOR	EASEMENT/RR ROW/WATER ST. EXT.	HYDE PARK	30		NEPONSET RIVER
05G115	MINOR	FAIRMOUNT AVENUE BRIDGE (NORTH BANK)	HYDE PARK	24		NEPONSET RIVER
05G116	MINOR	FAIRMOUNT AVE, BRIDGE (SOUTH BANK)	HYDE PARK	24		NEPONSET RIVER
05G116A	MINOR	WARREN AVENUE	HYDE PARK	24		NEPONSET RIVER
06G108	MAJOR	EASEMENT/WEST OF WOOD AVE. EXT.	HYDE PARK	69		NEPONSET RIVER
06G109	MAJOR	RIVER TERRACE EXT. NEAR ROSA STREET	HYDE PARK	48		NEPONSET RIVER
06G110	MAJOR	EASEMENT/WEST STREET EXT.	HYDE PARK	30		NEPONSET RIVER
06G111	MINOR	EASEMENT/VOSE STREET EXT., TRUMAN HWY.	HYDE PARK	24		NEPONSET RIVER
06G165	MINOR	TRUMAN HIGHWAY/METROPOLITAN AVE	HYDE PARK	10		NEPONSET RIVER
06G166	MAJOR	ABOUT 30 FEET FROM GUARDRAIL NORTHERLY SIDE OF TRUMAN HIGHWAY NEAR MILTON LINE.	HYDE PARK	36x36		NEPONSET RIVER
11G318	MINOR	CULVERT UNDER WALK HILL STREET	ROSLINDALE	24		CANTERBURY BROOK
11G319	MINOR	CULVERT UNDER WALK HILL STREET	ROSLINDALE	18		CANTERBURY BROOK
11G344	MAJOR	CULVERT UNDER WALK HILL STREET	ROSLINDALE	162X78		CANTERBURY BROOK
18G233	MINOR	WILLOW POND ROAD	JAMAICA PLAIN	15		MUDDY RIVER
19G043	MAJOR	HUNTINGTON AVENUE	ROXBURY/MISSION HALL	45x45		MUDDY RIVER
19G194	MINOR	HUNTINGTON AVENUE	ROXBURY/MISSION HILL	24		MUDDY RIVER
19G199	MINOR	JAMAICA WAY	ROXBURY/MISSION HILL	10		MUDDY RIVER
20G161	MAJOR	EASEMENT/BROOKLINE AVENUE	ROXBURY/MISSION HILL	36		MUDDY RIVER
20G163	MINOR	EASEMENT/RIVERWAY	ROXBURY/MISSION HILL	20		MUDDY RIVER
23G132	MAJOR	EASEMENT/MASS TURNPIKE/WEST OF B.U. BRIDGE	ALLSTON/BRIGHTON	60		CHARLES RIVER
24G034	MAJOR	SOLDIER'S FIELD ROAD, SOUTH OF CAMBRIDGE STREET	ALLSTON/BRIGHTON	36	1 / 24G034-1	CHARLES RIVER
24G035	MAJOR	SOLDIERS FIELD ROAD/BABCOCK STREET	ALLSTON/BRIGHTON	90x84		CHARLES RIVER
25G005	MINOR	FROM WESTERN AVENUE BRIDGE	ALLSTON/BRIGHTON	12		CHARLES RIVER
25G041	MINOR	SOLDIERS FIELD ROAD/NORTH OF WESTERN AVENUE BRIDGE	ALLSTON/BRIGHTON	24		CHARLES RIVER
06H106	MINOR	OSCEOLA STREET	HYDE PARK	24		NEPONSET RIVER
06H107	MAJOR	EASEMENT/BELNEL ROAD	HYDE PARK	24		NEPONSET RIVER
07H105	MAJOR	EASEMENT/EDGEWATER/SOUTH RIVER STREET	NEPONSET/MATTAPAN	102x72		NEPONSET RIVER
07H285	MAJOR	BLUE HILL AVENUE	NEPONSET/MATTAPAN	106x63		NEPONSET RIVER
07H287	MINOR	RIVER STREET/EDGEWATER DRIVE	NEPONSET/MATTAPAN	12		NEPONSET RIVER
07H346	MINOR	EDGEWATER DRIVE/HOLMFIELD AVENUE	HYDE PARK	18		NEPONSET RIVER
07H347	MINOR	EDGEWATER DRIVE/BURMAH ROAD	NEPONSET/MATTAPAN	21		NEPONSET RIVER
07H348	MINOR	EDGEWATER DRIVE/TOPALIAN STREET	NEPONSET/MATTAPAN	24		NEPONSET RIVER
12H085	MINOR	MORTON STREET	ROSLINDALE	15		CANTERBURY BROOK
	MAJOR	AMERICAN LEGION HIGHWAY	WEST ROXBURY	24		CANTERBURY BROOK
21H047	MINOR	PALACE ROAD EXT.	BOSTON PROPER	24		MUDDY RIVER

21H048	MINOR	EASEMENT/FENWAY/EVANS WAY	BOSTON PROPER	15		MUDDY RIVER
21H201	MINOR	PALACE ROAD EXT.	BOSTON PROPER	6		MUDDY RIVER
23H040	MINOR	RALEIGH STREET EXT.	BOSTON PROPER	24		CHARLES RIVER
23H042	MAJOR	DEERFIELD STREET	BOSTON PROPER	116x120		CHARLES RIVER
08I153	MINOR	DUXBURY ROAD	NEPONSET/MATTAPAN	15		NEPONSET RIVER
08I154	MINOR	EASEMENT/RIVER STREET/GLADSIDE AVE	NEPONSET/MATTAPAN	18		NEPONSET RIVER
08I155	MINOR	EASEMENT/RIVER STREET/MAMELON CIR	NEPONSET/MATTAPAN	24		NEPONSET RIVER
08I156	MINOR	EASEMENT/RIVER STREET/MAMELON CIR	NEPONSET/MATTAPAN	24		NEPONSET RIVER
08I158	MINOR	EASEMENT/RIVER STREET/FREMONT ST.	NEPONSET/MATTAPAN	18		NEPONSET RIVER
08I207	MINOR	MEADOWBANK AVENUE EXT.	NEPONSET/MATTAPAN	15		NEPONSET RIVER
08I209	MINOR	MEADOWBANK AVENUE EXT.	NEPONSET/MATTAPAN	12		NEPONSET RIVER
11I577	MAJOR	HARVARD STREET	NEPONSET/MATTAPAN	102x102		CANTERBURY BROOK
08J041	MINOR	RIVER STREET	DORCHESTER	18		NEPONSET RIVER
08J102	MINOR	ADAMS STREET	DORCHESTER	15x15		NEPONSET RIVER
08J103	MAJOR	EASEMENT/CENTRAL AVENUE BRIDGE	DORCHESTER	30		NEPONSET RIVER
08J49/50	MAJOR	DESMOND ROAD	DORCHESTER	2-18&24		NEPONSET RIVER
26J052	MINOR	MONSIGNOR O'BRIEN HIGHWAY	BOSTON PROPER	12		CHARLES RIVER
26J055	MINOR	LEVERETT CIRCLE	BOSTON PROPER	12	1 / NOT MAPPED	CHARLES RIVER
27J001	MAJOR	EASEMENT/INTERSTATE 93	CHARLESTOWN	72		MILLERS RIVER
27J044	MAJOR	PRISON POINT BRIDGE	CHARLESTOWN	15		MILLERS RIVER
27J096	MAJOR	EASEMENT/INTERSTATE 93	CHARLESTOWN	54		MILLERS RIVER
29J029	MINOR	ALFORD STREET/RYAN PLGD. EXT.	CHARLESTOWN	15		MYSTIC RIVER
29J129	MINOR	ALFORD STREET	CHARLESTOWN	15		MYSTIC RIVER
29J212	MAJOR	EASEMENT/MEDFORD STREET (ALSO OF017)	CHARLESTOWN	72		MYSTIC RIVER
30J006	MAJOR	EASEMENT/ALFORD STREET	CHARLESTOWN	18		MYSTIC RIVER
30J019	MAJOR	ALFORD STREET	CHARLESTOWN	15		MYSTIC RIVER
30J030	MAJOR	EASEMENT/ARLINGTON AVENUE	CHARLESTOWN	42	1 / NOT MAPPED	MYSTIC RIVER
08K049	MINOR	BEARSE AVENUE	DORCHESTER	12		NEPONSET RIVER
09K016	MINOR	EASEMENT/BEARSE AVENUE EXT.	DORCHESTER	15		NEPONSET RIVER
09K100	MAJOR	EASEMENT/MELLISH ROAD	DORCHESTER	34X24		NEPONSET RIVER
09K101	MINOR	EASEMENT/HUNTOON STREET EXT.	DORCHESTER	24		NEPONSET RIVER
21K069	MAJOR	EAST BERKELEY STREET	BOSTON PROPER	48	1 / 21K069-1	FORT POINT CHANNEL
26K099	MAJOR	CHELSEA STREET EXT.	CHARLESTOWN	84		CHARLES RIVER

ATTACHMENT A
BOSTON WATER AND SEWER COMMISSION
STORMWATER OUTFALLS

26K245	MINOR	EASEMENT	CHARLESTOWN	15		CHARLES RIVER
28K018	MAJOR	OLD LANDING WAY EXT.	CHARLESTOWN	42	1 / 28K058	LITTLE MYSTIC CHANNEL
28K061	MAJOR	EASEMENT/MEDFORD STREET	CHARLESTOWN	42	1 / 28K062	LITTLE MYSTIC CHANNEL
28K386	MAJOR	EASEMENT/TERMINAL STREET	CHARLESTOWN	30	1 / 28K385	LITTLE MYSTIC CHANNEL
10L094	MAJOR	EASEMENT/GALLIVAN BOULEVARD	DORCHESTER	74x93		NEPONSET RIVER VIA DAVENPORT BROOK
10L096	MAJOR	HILLTOP AND LENOXDALE STREETS	DORCHESTER	36		NEPONSET RIVER
12L092	MAJOR	PINE NECK CREEK STORM DRAIN TENEAN STREET WEST OF LAWLEY	DORCHESTER	72	2 / 12L294	NEPONSET RIVER
16L097	MAJOR	EASEMENT/OFF SAVIN HILL AVENUE	DORCHESTER	24		PATTEN'S COVE
20L081	MINOR	EAST FIRST STREET	SOUTH BOSTON	20		RESERVED CHANNEL
20L083	MINOR	EAST FIRST STREET	SOUTH BOSTON	20		RESERVED CHANNEL
21L077	MAJOR	CLAFLIN STREET EXT./EAST STREET EXT.	SOUTH BOSTON	24	1 / NOT MAPPED	RESERVED CHANNEL
23L016	MINOR	NORTHERN AVENUE	SOUTH BOSTON	2-15&16		BOSTON INNER HARBOR
23L074	MINOR	SUMMER STREET BRIDGE	SOUTH BOSTON	15		FORT POINT CHANNEL
23L075	MAJOR	CONGRESS STREET BRIDGE	SOUTH BOSTON	54		FORT POINT CHANNEL
23L140	MINOR	NORTHERN AVENUE	SOUTH BOSTON	10		BOSTON INNER HARBOR
23L145	MINOR	NORTHERN AVENUE	SOUTH BOSTON	10		BOSTON INNER HARBOR
23L164	MAJOR	CONGRESS STREET BRIDGE	BOSTON PROPER	48	1 / 23L164 IN CHANNEL WALL	FORT POINT CHANNEL
23L195	MAJOR	NORTHERN AVENUE	SOUTH BOSTON	36		BOSTON INNER HARBOR
23L196	MAJOR	NEW NORTHERN AVENUE BRIDGE	SOUTH BOSTON	36		FORT POINT CHANNEL
23L202	MAJOR	NORTHERN AVENUE	SOUTH BOSTON	36		BOSTON INNER HARBOR
24L057	MINOR	STATE STREET EXT.	BOSTON PROPER	18x18		BOSTON INNER HARBOR
24L233	MAJOR	ROWE'S WHARF/ATLANTIC AVENUE	BOSTON PROPER	42		BOSTON HARBOR
25L058	MAJOR	CHRISTOPHER COLUMBUS PARK - WATERFRONT	BOSTON PROPER	84		BOSTON INNER HARBOR
25L144	MINOR	CLARK STREET	BOSTON PROPER	12		BOSTON INNER HARBOR
26L055	MAJOR	NEAR BATTERY WHARF	BOSTON PROPER	24X24		BOSTON INNER HARBOR
26L070	MAJOR	HANOVER STREET EXT.	BOSTON PROPER	36		BOSTON INNER HARBOR
26L84	MINOR	LEWIS STREET	EAST BOSTON	18		BOSTON INNER HARBOR
27L020	MAJOR	PIER NO. 4 EASEMENT - NAVY YARD	CHARLESTOWN	2-20&24	1 / 27K020-1	BOSTON INNER HARBOR
28L073	MINOR	EASEMENT/4TH STREET - NAVY YARD	CHARLESTOWN	6		LITTLE MYSTIC CHANNEL
28L074/075/076	MAJOR	16TH STREET/4TH AVENUE - NAVY YARD	CHARLESTOWN	3-30		LITTLE MYSTIC CHANNEL
28L077	MINOR	EASEMENT/4TH AVENUE - NAVY YARD	CHARLESTOWN	10		LITTLE MYSTIC CHANNEL
11M093	MAJOR	NEPONSET AVENUE AT NROTHWEST END OF NEPONSET AVENUE BRIDGE	DORCHESTER	48		NEPONSET RIVER
12M091	MAJOR	ERICSSON/WALNUT ST.	NEPONSET/MATTAPAN	36		NEPONSET RIVER
17M033	MAJOR	HARBOR POINT PARK (RELOCATED MT. VERNON ST. DRAIN)	DORCHESTER	72		DORCHESTER BAY
21M005	MAJOR	SUMMER STREET	SOUTH BOSTON	18		RESERVED CHANNEL

29M032	MINOR	CONDOR STREET	EAST BOSTON	30		CHELSEA RIVER
29M041	MAJOR	EASEMENT/CONDOR STREET	EAST BOSTON	36x30		CHELSEA RIVER
29M049	MINOR	CONDOR STREET	EAST BOSTON	24		CHELSEA RIVER
29N135	MAJOR	ADDISON STREET	EAST BOSTON	30x30		CHELSEA RIVER
28N156	MINOR	COLERIDGE STREET EXT.	EAST BOSTON	12		BOSTON HARBOR
29O001	MAJOR	BENNINGTON STREET	EAST BOSTON	66	1 / 290062	BOSTON HARBOR NEAR CONSTITUTION BEACH
31O004	MINOR	EASEMENT/WALDEMAR AVENUE	EAST BOSTON	15		CHELSEA RIVER
28P001	MINOR	EASEMENT	EAST BOSTON	12		BOSTON HARBOR NEAR CONSTITUTION BEACH
29P015	MINOR	EASEMENT/BARNES AVENUE	EAST BOSTON	12		BELLE ISLE INLET
29P044	MINOR	SHAWSHEEN STREET	EAST BOSTON	12		BOSTON HARBOR
30P062	MINOR	PALERMO AVENUE EXTENSION	EAST BOSTON	12		WETLANDS
31P084	MINOR	EASEMENT/BENNINGTON STREET	EAST BOSTON	30		BELLE ISLE INLET, REVERE

Major* : 93

Minor : 102

Total: 195

* Major outfall means : An outfall that discharges from a single pipe of 36" or larger in diameter or a non-circular pipe which is associated with drainage area of more than 50 acres; or an outfall that discharges from a single pipe of 12" or larger in diameter serving lands zoned for industrial activity or a non-circular pipe which is associated with drainage area of 2 acres or more.

ATTACHMENT A
BOSTON WATER AND SEWER COMMISSION
STORMWATER OUTFALLS

OUTFALL NUMBER	OUTFALL TYPE	LOCATION	NEIGHBORHOOD	SIZE (INCHES)	TIDEGATES No. OF GATES / NUMBER	RECEIVING WATER
08B066	MAJOR	EASEMENT/VFW PARKWAY	WEST ROXBURY	18		CHARLES RIVER
08B122	MAJOR	EASEMENT/NORTH OF SPRING STREET	WEST ROXBURY	30		CHARLES RIVER
08B126	MINOR	SPRING STREET EXTENDED	WEST ROXBURY	24		CHARLES RIVER
09B049	MAJOR	EASEMENT/RIVERMOOR STREET	WEST ROXBURY	30		COW ISLAND POND/ CHARLES RIVER
10B015	MAJOR	EASEMENT/CHARLES PARK ROAD	WEST ROXBURY	21		COW ISLAND POND/ CHARLES RIVER
11B123	MAJOR	EASEMENT/EAST OF BAKER ST. EXT.	WEST ROXBURY	72		BROOK FARM BROOK
12B010	MINOR	BAKER STREET	WEST ROXBURY	15		BROOK FARM BROOK
12B014	MINOR	BAKER STREET	WEST ROXBURY	12		BROOK FARM BROOK
12B031	MINOR	EASEMENT/BAKER STREET	WEST ROXBURY	18		BROOK FARM BROOK
12B033	MINOR	EASEMENT/BAKER STREET	WEST ROXBURY	18		BROOK FARM BROOK
12B124	MAJOR	EASEMENT/LaGRANGE STREET	WEST ROXBURY	120x102		BROOK FARM BROOK
13B002	MINOR	LaGRANGE STREET	WEST ROXBURY	15		UNNAMED STREAM
13B011	MINOR	LaGRANGE STREET	WEST ROXBURY	12		UNNAMED STREAM
06C110	MAJOR	EASEMENT/PLEASANTDALE ST. EXT.	WEST ROXBURY	60		NONE SHOWN
07C006	MAJOR	EASEMENT/VFW PARKWAY/BELLE AVENUE	WEST ROXBURY	126x126		CHARLES RIVER
08C318	MAJOR	WEDGEMERE ROAD	WEST ROXBURY	24		NONE SHOWN
08C319	MINOR	WEDGEMERE ROAD	WEST ROXBURY	24		UNNAMED STREAM
14C009	MAJOR	EASEMENT/WESTGATE ROAD	WEST ROXBURY	36		UNNAMED WETLANDS
21C212	MINOR	EASEMENT/LAKE SHORE ROAD	ALLSTON/BRIGHTON	30		CHANDLERS POND
22C384	MAJOR	EASEMENT/LAKE SHORE ROAD	ALLSTON/BRIGHTON	36		CHANDLERS POND
24C174	MINOR	EASEMENT/NEWTON STREET	ALLSTON/BRIGHTON	9x20		CHARLES RIVER
24C031	MAJOR	PARSONS STREET	ALLSTON/BRIGHTON	60X60		CHARLES RIVER
06D057	MINOR	CEDAR CREST CIRCLE	WEST ROXBURY	21		NEPONSET RIVER
06D083	MINOR	MARGARETTA DRIVE	WEST ROXBURY	15		WETLANDS/CHARLES RIVER
06D084	MINOR	EASEMENT/MARGARETTA DRIVE	WEST ROXBURY	12		WETLANDS/CHARLES RIVER
06D085	MINOR	GEORGETOWN DRIVE	WEST ROXBURY	12		WETLANDS/CHARLES RIVER
06D086	MINOR	GEORGETOWN DRIVE	WEST ROXBURY	10		WETLANDS/CHARLES RIVER
06D091	MINOR	GEORGETOWN DRIVE	WEST ROXBURY	10		WETLANDS/CHARLES RIVER
06D184	MINOR	GEORGETOWN DRIVE	WEST ROXBURY	18		WETLANDS/CHARLES RIVER
06D187	MAJOR	EASEMENT/GROVE STREET	WEST ROXBURY	36		BROOK GROVE STREET CEMETERY
13D077/078	MAJOR	WEST ROXBURY PARKWAY/VFW PARKWAY	WEST ROXBURY	2-60		BUSSEY BROOK
24D032	MAJOR	NORTH BEACON STREET, ABOUT 800' EAST OF PARSONS STREET	ALLSTON/BRIGHTON	119X130	1 / 24D032-18	CHARLES RIVER
24D150	MAJOR	SOLDIERS FIELD PLACE	ALLSTON/BRIGHTON	36		CHARLES RIVER
25D033	MAJOR	ABOUT 390' NORTH OF INTERSECTION OF SOLDIERS FIELD ROAD & WESTERN AVENUE	ALLSTON/BRIGHTON	36		CHARLES RIVER
01E024	MAJOR	EASEMENT/LAKESIDE	HYDE PARK	15		SPRAGUE POND/NEPONSET RIVER
03E185	MAJOR	NORTON STREET	HYDE PARK	2-18		WETLANDS/NEPONSET RIVER
03E186	MINOR	RIVER STREET	HYDE PARK	24		MILL POND/MOTHER BROOK
03E207	MINOR	RIVER STREET	HYDE PARK			MILL POND/MOTHER BROOK

ATTACHMENT A
BOSTON WATER AND SEWER COMMISSION
STORMWATER OUTFALLS

04E064	MINOR	ALVARADO AVE./RIVER STREET BRIDGE	HYDE PARK	12		MILL POND/MOTHER BROOK
04E069	MAJOR	KNIGHT STREET DAM	HYDE PARK	36		MOTHER BROOK
05E180	MINOR	GEORGETOWN DRIVE	HYDE PARK	12		NONE SHOWN/CHARLES RIVER
05E181	MINOR	GEORGETOWN DRIVE	HYDE PARK	12		NONE SHOWN/CHARLES RIVER
05E182	MINOR	DEDHAM STREET	HYDE PARK	21		UNNAMED STREAM/CHARLES RIVER
05E183	MINOR	GEORGETOWN PLACE/DEDHAM PARKWAY	HYDE PARK	12		UNNAMED STREAM
08E031	MINOR	TURTLE POND PARKWAY	WEST ROXBURY	18		TURTLE POND
08E033	MINOR	TURTLE POND PARKWAY	WEST ROXBURY	UNKNOWN		TURTLE POND
08E035	MINOR	WASHINGTON STREET	WEST ROXBURY	15		TURTLE POND
09E229	MINOR	GRANDVIEW STREET	WEST ROXBURY	12		NONE SHOWN
09E243	MAJOR	BLUE LEDGE TR./EASEMENT	WEST ROXBURY	30		UNNAMED STREAM
13E174	MINOR	EASEMENT/VFW PARKWAY	ROSLINDALE	24		BUSSEY BROOK
13E175	MAJOR	EASEMENT/VFW PARKWAY	ROSLINDALE	108X86		BUSSEY BROOK
13E176	MAJOR	EASEMENT/WELD STREET	ROXBURY	15		NONE SHOWN
2SE037	MAJOR	EASEMENT/TELFORD STREET EXTENDED	ALLSTON/BRIGHTON	66		CHARLES RIVER
01F031	MAJOR	EASEMENT/MILLSTONE ROAD	HYDE PARK	48x24		NEPONSET RIVER
02F085	MINOR	LAWTON STREET	HYDE PARK	12		NEPONSET RIVER RESERVATION
02F093	MAJOR	EASEMENT/SIERRA ROAD	HYDE PARK	15		NEPONSET RIVER
02F120	MAJOR	EASEMENT/WOLCOTT CT./HYDE PARK AVE. EXT.	HYDE PARK	54		NEPONSET RIVER
04F016	MAJOR	EASEMENT RIVER STREET	HYDE PARK	30		MOTHER BROOK/NEPONSET RIVER
04F118	MINOR	MASON STREET EXT.	HYDE PARK	18		NEPONSET RIVER
04F119	MAJOR	EASEMENT/HYDE PARK AVE./RESERVATION RD.	HYDE PARK	24		NEPONSET RIVER
04F189	MAJOR	RESERVATION ROAD	HYDE PARK	36		MOTHER BROOK/NEPONSET RIVER
04F191	MINOR	FARADAY STREET	HYDE PARK	24		NONE SHOWN/NEPONSET RIVER
04F203	MINOR	GLENWOOD AVE	HYDE PARK	28		NEPONSET RIVER
04F204	MAJOR	TRUMAN HWY./CHITTICK STREET	HYDE PARK	36		NEPONSET RIVER
05F117	MAJOR	EASEMENT/TRUMAN HWY./WILLIAMS AVE.	HYDE PARK	33		NEPONSET RIVER
05F244	MINOR	HYDE PARK AVENUE BRIDGE	HYDE PARK	20		MOTHER BROOK/NEPONSET RIVER
05F245	MINOR	HYDE PARK AVENUE	HYDE PARK	33		MOTHER BROOK/NEPONSET RIVER
05F253	MAJOR	EASEMENT/BUSINESS ST., NEAR BUSINESS TERRACE	HYDE PARK	48x24		MOTHER BROOK/NEPONSET RIVER
05F254	MINOR	DANA AVENUE	HYDE PARK	12		NEPONSET RIVER
05F265	MAJOR	BEHIND L.E. MASON CO.	HYDE PARK	15		MOTHER BROOK/NEPONSET RIVER
06F233	MINOR	MOUNT ASH ROAD	HYDE PARK	UNK		WETLAND - STONY BROOK RESERVATION
12F322	MINOR	EASEMENT/WALTER STREET	ROSLINDALE	18		NONE SHOWN
13F095	MINOR	EASEMENT/BUSSEY STREET	ROSLINDALE	12		BUSSEY BROOK
14F181	MAJOR	CENTER STREET EXTENSION	ROSLINDALE	38X86		GOLDSMITH BROOK
14F185	MINOR	ALLANDALE STREET	ROSLINDALE	12		BUSSEY BROOK
15F288	MAJOR	ARNOLD ARBORETUM/MURRAY CIRCLE	JAMAICA PLAIN	54		GOLDSMITH BROOK
15F307	MAJOR	ARNOLD ARBORETUM, 100' EAST OF ARBORWAY & SAINT JOSEPH STREET	JAMAICA PLAIN	36X36		GOLDSMITH BROOK
17F012	MINOR	FRANCIS PARKMAN DRIVE	JAMAICA PLAIN	15		JAMAICA POND

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26F038	MAJOR	HARVARD STREET EXT.	ALLSTON/BRIGHTON	36		CHARLES RIVER
05G112	MAJOR	EASEMENT/RR ROW/WATER ST. EXT.	HYDE PARK	30		NEPONSET RIVER
05G115	MINOR	FAIRMOUNT AVENUE BRIDGE (NORTH BANK)	HYDE PARK	24		NEPONSET RIVER
05G116	MINOR	FAIRMOUNT AVE, BRIDGE (SOUTH BANK)	HYDE PARK	24		NEPONSET RIVER
05G116A	MINOR	WARREN AVENUE	HYDE PARK	24		NEPONSET RIVER
06G108	MAJOR	EASEMENT/WEST OF WOOD AVE. EXT.	HYDE PARK	69		NEPONSET RIVER
06G109	MAJOR	RIVER TERRACE EXT. NEAR ROSA STREET	HYDE PARK	48		NEPONSET RIVER
06G110	MAJOR	EASEMENT/WEST STREET EXT.	HYDE PARK	30		NEPONSET RIVER
06G111	MINOR	EASEMENT/VOSE STREET EXT., TRUMAN HWY.	HYDE PARK	24		NEPONSET RIVER
06G165	MINOR	TRUMAN HIGHWAY/METROPOLITAN AVE	HYDE PARK	10		NEPONSET RIVER
06G166	MAJOR	ABOUT 30 FEET FROM GUARDRAIL NORTHERLY SIDE OF TRUMAN HIGHWAY NEAR MILTON LINE.	HYDE PARK	36x36		NEPONSET RIVER
11G318	MINOR	CULVERT UNDER WALK HILL STREET	ROSLINDALE	24		CANTERBURY BROOK
11G319	MINOR	CULVERT UNDER WALK HILL STREET	ROSLINDALE	18		CANTERBURY BROOK
11G344	MAJOR	CULVERT UNDER WALK HILL STREET	ROSLINDALE	162X78		CANTERBURY BROOK
18G233	MINOR	WILLOW POND ROAD	JAMAICA PLAIN	15		MUDDY RIVER
19G043	MAJOR	HUNTINGTON AVENUE	ROXBURY/MISSION HALL	45x45		MUDDY RIVER
19G194	MINOR	HUNTINGTON AVENUE	ROXBURY/MISSION HILL	24		MUDDY RIVER
19G199	MINOR	JAMAICA WAY	ROXBURY/MISSION HILL	10		MUDDY RIVER
20G161	MAJOR	EASEMENT/BROOKLINE AVENUE	ROXBURY/MISSION HILL	36		MUDDY RIVER
20G163	MINOR	EASEMENT/RIVERWAY	ROXBURY/MISSION HILL	20		MUDDY RIVER
23G132	MAJOR	EASEMENT/MASS TURNPIKE/WEST OF B.U. BRIDGE	ALLSTON/BRIGHTON	60		CHARLES RIVER
24G034	MAJOR	SOLDIER'S FIELD ROAD, SOUTH OF CAMBRIDGE STREET	ALLSTON/BRIGHTON	36	1 / 24G034-1	CHARLES RIVER
24G035	MAJOR	SOLDIERS FIELD ROAD/BABCOCK STREET	ALLSTON/BRIGHTON	90x84		CHARLES RIVER
25G005	MINOR	FROM WESTERN AVENUE BRIDGE	ALLSTON/BRIGHTON	12		CHARLES RIVER
25G041	MINOR	SOLDIERS FIELD ROAD/NORTH OF WESTERN AVENUE BRIDGE	ALLSTON/BRIGHTON	24		CHARLES RIVER
06H106	MINOR	OSCEOLA STREET	HYDE PARK	24		NEPONSET RIVER
06H107	MAJOR	EASEMENT/BELNEL ROAD	HYDE PARK	24		NEPONSET RIVER
07H105	MAJOR	EASEMENT/EDGEWATER/SOUTH RIVER STREET	NEPONSET/MATTAPAN	102x72		NEPONSET RIVER
07H285	MAJOR	BLUE HILL AVENUE	NEPONSET/MATTAPAN	106x63		NEPONSET RIVER
07H287	MINOR	RIVER STREET/EDGEWATER DRIVE	NEPONSET/MATTAPAN	12		NEPONSET RIVER
07H346	MINOR	EDGEWATER DRIVE/HOLMFIELD AVENUE	HYDE PARK	18		NEPONSET RIVER
07H347	MINOR	EDGEWATER DRIVE/BURMAH ROAD	NEPONSET/MATTAPAN	21		NEPONSET RIVER
07H348	MINOR	EDGEWATER DRIVE/TOPALIAN STREET	NEPONSET/MATTAPAN	24		NEPONSET RIVER
12H085	MINOR	MORTON STREET	ROSLINDALE	15		CANTERBURY BROOK
	MAJOR	AMERICAN LEGION HIGHWAY	WEST ROXBURY	24		CANTERBURY BROOK
21H047	MINOR	PALACE ROAD EXT.	BOSTON PROPER	24		MUDDY RIVER

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21H048	MINOR	EASEMENT/FENWAY/EVANS WAY	BOSTON PROPER	15		MUDDY RIVER
21H201	MINOR	PALACE ROAD EXT.	BOSTON PROPER	6		MUDDY RIVER
23H040	MINOR	RALEIGH STREET EXT.	BOSTON PROPER	24		CHARLES RIVER
23H042	MAJOR	DEERFIELD STREET	BOSTON PROPER	116x120		CHARLES RIVER
08I153	MINOR	DUXBURY ROAD	NEPONSET/MATTAPAN	15		NEPONSET RIVER
08I154	MINOR	EASEMENT/RIVER STREET/GLADSIDE AVE	NEPONSET/MATTAPAN	18		NEPONSET RIVER
08I155	MINOR	EASEMENT/RIVER STREET/MAMELON CIR	NEPONSET/MATTAPAN	24		NEPONSET RIVER
08I156	MINOR	EASEMENT/RIVER STREET/MAMELON CIR	NEPONSET/MATTAPAN	24		NEPONSET RIVER
08I158	MINOR	EASEMENT/RIVER STREET/FREMONT ST.	NEPONSET/MATTAPAN	18		NEPONSET RIVER
08I207	MINOR	MEADOWBANK AVENUE EXT.	NEPONSET/MATTAPAN	15		NEPONSET RIVER
08I209	MINOR	MEADOWBANK AVENUE EXT.	NEPONSET/MATTAPAN	12		NEPONSET RIVER
11I577	MAJOR	HARVARD STREET	NEPONSET/MATTAPAN	102x102		CANTERBURY BROOK
08J041	MINOR	RIVER STREET	DORCHESTER	18		NEPONSET RIVER
08J102	MINOR	ADAMS STREET	DORCHESTER	15x15		NEPONSET RIVER
08J103	MAJOR	EASEMENT/CENTRAL AVENUE BRIDGE	DORCHESTER	30		NEPONSET RIVER
08J49/50	MAJOR	DESMOND ROAD	DORCHESTER	2-18&24		NEPONSET RIVER
26J052	MINOR	MONSIGNOR O'BRIEN HIGHWAY	BOSTON PROPER	12		CHARLES RIVER
26J055	MINOR	LEVERETT CIRCLE	BOSTON PROPER	12	1 / NOT MAPPED	CHARLES RIVER
27J001	MAJOR	EASEMENT/INTERSTATE 93	CHARLESTOWN	72		MILLERS RIVER
27J044	MAJOR	PRISON POINT BRIDGE	CHARLESTOWN	15		MILLERS RIVER
27J096	MAJOR	EASEMENT/INTERSTATE 93	CHARLESTOWN	54		MILLERS RIVER
29J029	MINOR	ALFORD STREET/RYAN PLGD. EXT.	CHARLESTOWN	15		MYSTIC RIVER
29J129	MINOR	ALFORD STREET	CHARLESTOWN	15		MYSTIC RIVER
29J212	MAJOR	EASEMENT/MEDFORD STREET (ALSO OF017)	CHARLESTOWN	72		MYSTIC RIVER
30J006	MAJOR	EASEMENT/ALFORD STREET	CHARLESTOWN	18		MYSTIC RIVER
30J019	MAJOR	ALFORD STREET	CHARLESTOWN	15		MYSTIC RIVER
30J030	MAJOR	EASEMENT/ARLINGTON AVENUE	CHARLESTOWN	42	1 / NOT MAPPED	MYSTIC RIVER
08K049	MINOR	BEARSE AVENUE	DORCHESTER	12		NEPONSET RIVER
09K016	MINOR	EASEMENT/BEARSE AVENUE EXT.	DORCHESTER	15		NEPONSET RIVER
09K100	MAJOR	EASEMENT/MELLISH ROAD	DORCHESTER	34X24		NEPONSET RIVER
09K101	MINOR	EASEMENT/HUNTOON STREET EXT.	DORCHESTER	24		NEPONSET RIVER
21K069	MAJOR	EAST BERKELEY STREET	BOSTON PROPER	48	1 / 21K069-1	FORT POINT CHANNEL
26K099	MAJOR	CHELSEA STREET EXT.	CHARLESTOWN	84		CHARLES RIVER

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26K245	MINOR	EASEMENT	CHARLESTOWN	15		CHARLES RIVER
28K018	MAJOR	OLD LANDING WAY EXT.	CHARLESTOWN	42	1 / 28K058	LITTLE MYSTIC CHANNEL
28K061	MAJOR	EASEMENT/MEDFORD STREET	CHARLESTOWN	42	1 / 28K062	LITTLE MYSTIC CHANNEL
28K386	MAJOR	EASEMENT/TERMINAL STREET	CHARLESTOWN	30	1 / 28K385	LITTLE MYSTIC CHANNEL
10L094	MAJOR	EASEMENT/GALLIVAN BOULEVARD	DORCHESTER	74x93		NEPONSET RIVER VIA DAVENPORT BROOK
10L096	MAJOR	HILLTOP AND LENOXDALE STREETS	DORCHESTER	36		NEPONSET RIVER
12L092	MAJOR	PINE NECK CREEK STORM DRAIN TENEAN STREET WEST OF LAWLEY	DORCHESTER	72	2 / 12L294	NEPONSET RIVER
16L097	MAJOR	EASEMENT/OFF SAVIN HILL AVENUE	DORCHESTER	24		PATTEN'S COVE
20L081	MINOR	EAST FIRST STREET	SOUTH BOSTON	20		RESERVED CHANNEL
20L083	MINOR	EAST FIRST STREET	SOUTH BOSTON	20		RESERVED CHANNEL
21L077	MAJOR	CLAFLIN STREET EXT./EAST STREET EXT.	SOUTH BOSTON	24	1 / NOT MAPPED	RESERVED CHANNEL
23L016	MINOR	NORTHERN AVENUE	SOUTH BOSTON	2-15&16		BOSTON INNER HARBOR
23L074	MINOR	SUMMER STREET BRIDGE	SOUTH BOSTON	15		FORT POINT CHANNEL
23L075	MAJOR	CONGRESS STREET BRIDGE	SOUTH BOSTON	54		FORT POINT CHANNEL
23L140	MINOR	NORTHERN AVENUE	SOUTH BOSTON	10		BOSTON INNER HARBOR
23L145	MINOR	NORTHERN AVENUE	SOUTH BOSTON	10		BOSTON INNER HARBOR
23L164	MAJOR	CONGRESS STREET BRIDGE	BOSTON PROPER	48	1 / 23L164 IN CHANNEL WALL	FORT POINT CHANNEL
23L195	MAJOR	NORTHERN AVENUE	SOUTH BOSTON	36		BOSTON INNER HARBOR
23L196	MAJOR	NEW NORTHERN AVENUE BRIDGE	SOUTH BOSTON	36		FORT POINT CHANNEL
23L202	MAJOR	NORTHERN AVENUE	SOUTH BOSTON	36		BOSTON INNER HARBOR
24L057	MINOR	STATE STREET EXT.	BOSTON PROPER	18x18		BOSTON INNER HARBOR
24L233	MAJOR	ROWE'S WHARF/ATLANTIC AVENUE	BOSTON PROPER	42		BOSTON HARBOR
25L058	MAJOR	CHRISTOPHER COLUMBUS PARK - WATERFRONT	BOSTON PROPER	84		BOSTON INNER HARBOR
25L144	MINOR	CLARK STREET	BOSTON PROPER	12		BOSTON INNER HARBOR
26L055	MAJOR	NEAR BATTERY WHARF	BOSTON PROPER	24X24		BOSTON INNER HARBOR
26L070	MAJOR	HANOVER STREET EXT.	BOSTON PROPER	36		BOSTON INNER HARBOR
26L84	MINOR	LEWIS STREET	EAST BOSTON	18		BOSTON INNER HARBOR
27L020	MAJOR	PIER NO. 4 EASEMENT - NAVY YARD	CHARLESTOWN	2-20&24	1 / 27K020-1	BOSTON INNER HARBOR
28L073	MINOR	EASEMENT/4TH STREET - NAVY YARD	CHARLESTOWN	6		LITTLE MYSTIC CHANNEL
28L074/075/076	MAJOR	16TH STREET/4TH AVENUE - NAVY YARD	CHARLESTOWN	3-30		LITTLE MYSTIC CHANNEL
28L077	MINOR	EASEMENT/4TH AVENUE - NAVY YARD	CHARLESTOWN	10		LITTLE MYSTIC CHANNEL
11M093	MAJOR	NEPONSET AVENUE AT NROTHWEST END OF NEPONSET AVENUE BRIDGE	DORCHESTER	48		NEPONSET RIVER
12M091	MAJOR	ERICSSON/WALNUT ST.	NEPONSET/MATTAPAN	36		NEPONSET RIVER
17M033	MAJOR	HARBOR POINT PARK (RELOCATED MT. VERNON ST. DRAIN)	DORCHESTER	72		DORCHESTER BAY
21M005	MAJOR	SUMMER STREET	SOUTH BOSTON	18		RESERVED CHANNEL

ATTACHMENT A
BOSTON WATER AND SEWER COMMISSION
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29M032	MINOR	CONDOR STREET	EAST BOSTON	30		CHELSEA RIVER
29M041	MAJOR	EASEMENT/CONDOR STREET	EAST BOSTON	36x30		CHELSEA RIVER
29M049	MINOR	CONDOR STREET	EAST BOSTON	24		CHELSEA RIVER
29N135	MAJOR	ADDISON STREET	EAST BOSTON	30x30		CHELSEA RIVER
28N156	MINOR	COLERIDGE STREET EXT.	EAST BOSTON	12		BOSTON HARBOR
29O001	MAJOR	BENNINGTON STREET	EAST BOSTON	66	1 / 29O062	BOSTON HARBOR NEAR CONSTITUTION BEACH
31O004	MINOR	EASEMENT/WALDEMAR AVENUE	EAST BOSTON	15		CHELSEA RIVER
28P001	MINOR	EASEMENT	EAST BOSTON	12		BOSTON HARBOR NEAR CONSTITUTION BEACH
29P015	MINOR	EASEMENT/BARNES AVENUE	EAST BOSTON	12		BELLE ISLE INLET
29P044	MINOR	SHAWSHEEN STREET	EAST BOSTON	12		BOSTON HARBOR
30P062	MINOR	PALERMO AVENUE EXTENSION	EAST BOSTON	12		WETLANDS
31P084	MINOR	EASEMENT/BENNINGTON STREET	EAST BOSTON	30		BELLE ISLE INLET, REVERE

Major* : 93

Minor : 102

Total: 195

* Major outfall means : An outfall that discharges from a single pipe of 36" or larger in diameter or a non-circular pipe which is associated with drainage area of more than 50 acres; or an outfall that discharges from a single pipe of 12" or larger in diameter serving lands zoned for industrial activity or a non-circular pipe which is associated with drainage area of 2 acres or more.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES.

NPDES PERMIT NO.: MAS010001

NAME AND ADDRESS OF APPLICANT:

Boston Water and Sewer Commission
425 Summer Street
Boston, Massachusetts 02210

NAME AND ADDRESS OF FACILITIES WHERE DISCHARGES OCCUR:

195 Storm water Outfalls listed in Permit Attachment A

RECEIVING WATERS:

Belle Isle Inlet, Boston Harbor, Boston Inner Harbor, Brook Farm Brook, Bussey Brook, Canterbury Brook, Chandler Pond, Charles River, Chelsea River, Dorchester Bay, Fort Point Channel, Goldsmith Brook, Jamaica Pond, Little Mystic Channel, Mill Pond, Millers River, Mother Brook, Muddy River, Mystic River, Neponset River, Old Harbor, Patten's Cove, Reserved Channel, Sprague Pond, Stony Brook, Turtle Pond, and unnamed wetlands, brooks and streams .

CLASSIFICATION: **Class SB and B**

I. Proposed Action, Type of Facility and Discharge Location.

The Boston Water and Sewer Commission(BWSC), the permittee, is empowered to promulgate rules and regulations regarding the use of its common sewers, including its sanitary sewers, combined sewers and storm drains. BWSC applied for its Municipal Separate Storm Sewer System(MS4) permit, which will discharge storm water from 195 identified separate storm sewer outfalls to receiving waters listed in Attachment A.

1. Discharge Characteristics

At the time of this draft, BWSC operates 195 identified separate storm sewer outfalls. Locations, size, and receiving waters for these outfalls are identified in Attachment A. Storm water discharge sampling results from five representative outfalls are shown on Table 3-21 of the permit application (Part II) dated May 17, 1993 and are included as Attachment B. A discussion of the results of sampling can be found in Part II Chapter 3 of the application.

2. Limitations and Conditions.

Permit conditions and all other requirements described herein may be found in Part I of the draft permit. No numeric effluent limitations have been established for this draft permit.

3. Permit Basis and Explanation of Permit Conditions.

As authorized by Section 402(p) of the Act, this permit is being proposed on a system-wide basis. This permit covers all areas under the jurisdiction of BWSC or otherwise contributing to discharges from municipal separate storm sewers owned or operated by the permittee.

a. Statutory basis for permit conditions. The conditions established by this permit are based on Section §402(p)(3)(B) of the Act which mandates that a permit for discharges from MS4s must: effectively prohibit the discharge of non-storm water to the MS4 and require controls to reduce pollutants in discharges from the MS4 to the maximum extent practicable including best management practices, control techniques, and system design and engineering methods, and such other provisions determined to be appropriate. MS4s are required to achieve compliance with Water Quality Standards. Section 301(b)(1)(C) of the Act, requires that NPDES permits include limitations, including those necessary to meet water quality standards. The intent of the permit conditions is to meet the statutory mandate of the Act.

EPA has determined that under the provisions of 40 CFR 122.44(k) the permit will include Best Management Practices (BMPs). A comprehensive Storm Water Management Program (SWMP) includes BMPs to demonstrate compliance with the maximum extent practicable standard. Section 402(p)(3)(B)(iii) of the Act clearly includes structural controls as a component of the maximum extent practicable requirement as necessary to achieve compliance with Water Quality Standards.

EPA encourages the permittee to explore opportunities for pollution prevention measures, while reserving the more costly structural controls for higher priority watersheds, or where pollution prevention measures prove unfeasible or ineffective in achieving water quality goals and standards.

b. Regulatory basis for permit conditions. As a result of the statutory requirements of the Act the EPA promulgated the MS4 Permit application regulations, 40 CFR 122.26(d). These regulations describe in detail the permit application requirements for operators of MS4s. The information in the application (Parts 1 and 2) and supplemental information provided in June 1995 and June 1998 was used to develop the draft permit conditions.

4. Discharges Authorized By This Permit.

a. Storm water. This permit authorizes all existing or new storm water point source discharges to waters of the United States from the MS4.

b. Non-storm water. This permit authorizes the discharge of storm water commingled with flows contributed by wastewater, or Storm Water Associated with Industrial Activity, provided such discharges are authorized by separate NPDES permits and in compliance with the permittee's regulations regarding the use of storm drains. Nothing in this draft permit conveys a right to discharge to the permittee's system without the permittee's authorization. In addition, certain types of non-storm waters identified in the draft permit at Part I.B.2.g. are authorized if appropriately addressed in the permittee's Storm Water Management Program.

The following demonstrates the difference between the Act's statutory requirements for discharges from municipal storm sewers and industrial sites:

i. Section 402(p)(3)(B) of the Act requires an effective prohibition on non-storm water discharges to a MS4 and controls to reduce the discharge of pollutants from the MS4 to the Maximum Extent Practicable (MEP).

ii. Section 402(p)(3)(A) of the Act requires compliance with treatment technology (BAT/BCT) and Section 301 water quality requirements on discharges of Storm Water Associated with Industrial Activity.

The Act requires Storm Water Associated with Industrial Activity discharging to the MS4 to be covered by a separate NPDES permit. However, the permittee is responsible for the quality of the ultimate discharge, and has a vested interest in locating uncontrolled and unpermitted discharges to the system.

c. Spills. This permit does not authorize discharges of material resulting from a spill. If discharges from a spill are unavoidable to prevent imminent threat to human life, personal injury, or severe property damage, the permittee has the responsibility to take (or insure the party responsible for the spill takes) reasonable and prudent measures to minimize the impact of discharges on human health and the environment.

5. Receiving Stream Segments and Discharge Locations.

The permittee discharges to the receiving waters listed in Attachment A, which are classified according to the Massachusetts Surface Water Quality Standards as Class B, B_{CSO}, SB, and SB_{CSO} water bodies. Despite variance conditions and CSO designation, storm water discharges shall achieve compliance with Class B and SB standards. Class B and SB waters shall be of such quality that they are suitable for the designated uses of protection and propagation of fish, other aquatic life and wildlife; and for primary and secondary contact recreation. Notwithstanding specific conditions of this permit, the discharges must not lower the quality of any classified water body below such classification, or lower the existing quality of any water body if the existing quality is higher than the classification, except in accordance with Massachusetts' Antidegradation Statutes and Regulations.

6. SWMP.

The following prohibitions apply to discharges from MS4s and were considered in review of the current management programs which the permittee is operating. In implementing the SWMP, the permittee is required to select measures or activities intended to achieve the following prohibitions.

No discharge of toxics in toxic amounts. The discharge of toxics in toxic amounts is prohibited (Section 101(a)(3) of the Act).

No discharge of pollutants in quantities that would cause a violation of State water quality standards. Section 301(b)(1)(C) of the Act and 40 CFR 122.44(d) require that NPDES permits include "...any more stringent limitations, including those necessary to meet water quality standards, treatment standards, or schedule of compliance, established pursuant to State law or regulations..." Implementation of the SWMP is reasonably expected to provide for protection of State water quality standards.

No discharge of non-storm water from the municipal separate storm sewer system, except in accordance with Part II.B.2. Permits issued to MS4s are specifically required by Section 402(p)(3)(B) of the Act to "...include a requirement to effectively prohibit non-storm water discharges into the storm sewers..." The regulations (40 CFR 122.26(d)(2)(iv)(B)(1)) allow the permittee to accept certain non-storm water discharges where they have not been identified as significant sources of pollutants. Any discharge allowed by the permittee and authorized by a separate NPDES permit is not subject to the prohibition on non-storm water discharges.

No numeric effluent limitations are proposed in the draft permit. In accordance with 40 CFR §122.44(k), the EPA has required a series of Best Management Practices, in the form of a comprehensive SWMP, in lieu of numeric limitations.

7. Storm Water Management Program.

BWSC provided updates to its SWMP in June 1995 and June 1998. The current SWMP addresses all required elements. Some of the elements of the SWMP are wholly or in part the responsibility of the City of Boston rather than BWSC. The permit requires the permittee to cooperate with appropriate municipal agencies to assure that the goals of the SWMP are achieved by building upon existing programs and procedures which address activities impacting storm water discharges to the MS4.

EPA has requested permit application information from the City of Boston. This information will be used to develop permit conditions for the City to implement the SWMP measures which are under its control. This will be effected through a permit modification identifying the City as a co-permittee and specifying its responsibilities or through the issuance of a separate permit to the City.

Table A identifies the required elements of the SWMP, the regulatory cite, and the relevant draft permit condition.

Table A - Storm Water Management Program Elements

Required Program Element	Permit Parts	Regulatory References (40 CFR 122.26...)
Structural Controls	I.B.2.b	(d)(2)(iv)(A)(1)
Areas of new development & significant redevelopment	I.B.2.c	(d)(2)(iv)(A)(2)
Roadways	I.B.2.d	(d)(2)(iv)(A)(3)
Flood Control Projects	I.B.2.e	(d)(2)(iv)(A)(4)
Pesticides, Herbicides, & Fertilizers Application	I.B.2.f	(d)(2)(iv)(A)(6)
Illicit Discharges and Improper Disposal	I.B.2.g	(d)(2)(iv)(B)(1)-(3), (iv)(B)(7)
Spill Prevention and Response	I.B.2.h	(d)(2)(iv)(B)(4)
Industrial and High Risk Runoff	I.B.2.i	(d)(2)(iv)(C), (iv)(A)(5)
Construction Site Runoff	I.B.2.j	(d)(2)(iv)(D)
Public Education	I.B.2.k	(d)(2)(iv)(A)(6), (iv)(B)(5), (iv)(B)(6)
Monitoring Program	I.C	(d)(2)(iv)(B)(2), (iii), (iv)(A), (iv)(C)(2)

Attachment C provides a discussion of the permit condition and the permittee's existing SWMP.

8. Legal Authority. BWSC has demonstrated its authority to promulgate regulations regarding the use of its common sewers, including its sanitary sewers, combined sewers and storm drains. Regulations Governing the Use of Sanitary and Combined Sewers and Storm Drains of the Boston Water and Sewer Commission were adopted January 15, 1998 and effective February 27, 1998.

9. Resources. Part I.B.6 of the permit requires the permittee to provide adequate support capabilities to implement its activities under the SWMP. Compliance with this requirement will be demonstrated by the permittee's ability to fully implement the SWMP, monitoring programs, and other permit requirements. The permit does not require specific funding or staffing levels, thus providing the permittee with the ability, and incentive, to adopt the most efficient and cost effective methods to comply with the permit requirements. The draft permit also requires an Annual Report (Part I.E.) which includes an evaluation of resources to implement the plan.

10. Monitoring and Reporting.

a. Monitoring. The BWSC sampled five locations which were selected to provide representative data on the quality and quantity of discharges from the MS4 as a whole. Parameters sampled included conventional, non-conventional, organic toxics, and other toxic pollutants. The EPA reviewed this information during the permitting process. Monitoring data is intended to be used by the BWSC to assist in its determination of appropriate storm water management practices. EPA used the data to identify the minimum parameters for sampling under Part I.C of the permit.

The BWSC is required (40 CFR §122.26(d)((2)(iii)(C) and (D)) to monitor the MS4 to provide data necessary to assess the effectiveness and adequacy of SWMP control measures; estimate annual cumulative pollutant loadings from the MS4; estimate event mean concentrations and seasonal pollutants in discharges from major outfalls; identify and prioritize portions of the MS4 requiring additional controls, and identify water quality improvements or degradation. The BWSC is responsible for conducting any additional monitoring necessary to accurately characterize the quality and quantity of pollutants discharged from the MS4.

EPA will make future permitting decisions based on the monitoring data collected during the permit term and available water quality information. Where the required permit term monitoring proves insufficient to show pollutant reductions, the EPA may require more stringent Best Management Practices, or where necessary to protect water quality, establish numeric effluent limitations.

1. Representative monitoring: The monitoring of the discharge of representative outfalls during actual storm events will provide information on the quality of runoff from the MS4, a basis for estimating annual pollutant loadings, and a mechanism to evaluate reductions in pollutants discharged from the MS4. Results from the monitoring program will be submitted annually with the annual report.

2. Requirements: The BWSC shall monitor representative discharges to characterize the quality of storm water discharges from the MS4. Within **90** days after the effective date of this permit, the BWSC will submit its proposed sampling plan. The BWSC shall choose five locations representing the different land uses or drainage areas representative of the system, with a focus on what it considers priority areas, such as an outfall in the vicinity of a public beach or a shellfish bed. This submittal shall also include any related monitoring which the BWSC has done since its MS4 permit application was submitted. Unless commented on or denied by the Director within **60** days after its submittal, the proposed sampling plan shall be deemed approved.

3. Parameters: The EPA established minimum permit parameter monitoring requirements based on the information available regarding storm water discharges and potential impacts of these discharges. The basic parameter list allows satisfaction of the regulatory requirement [40 CFR §122.26(d)(2)(iii)] to provide estimates of pollutant loadings for each major outfall.

4. Frequency: The frequency of annual monitoring is based on monitoring at least one representative storm event three times a year. The plan should consider sampling events in the spring, summer, and fall (excluding January to March). Monitoring frequency is based on permit year, not a calendar year. The first complete calendar year monitoring could be less than the stated frequency.

5. Receiving Water Quality Monitoring: The draft permit is conditioned to include four sampling stations to assess the impact of storm water discharges from the MS4 to receiving waters. The permittee shall submit a plan to sample four locations three times a year for the permit term within 90 days of the effective date of the permit. The minimum parameters for analysis are consistent with the representative monitoring requirements.

b. Screening. The draft permit requires two screening programs. Part I.C.6 requires the permittee to develop a Wet Weather Screening Program. This screening shall record physical observations of wet weather flows from all major outfalls at least once during the permit term. The program will identify discharges which may be contributing to water quality impairments short of analytical monitoring. Part I.D. requires a dry weather screening program.

c. Reporting. The permittee is required (40 CFR §122.42(c)(1)) to contribute to the preparation of an annual system-wide report including the status of implementing the SWMP; proposed changes to the SWMP; revisions, if necessary, to the assessments of controls and the fiscal analysis reported in the permit application; a summary of the data, including monitoring data, that is accumulated throughout the reporting year; annual expenditures and the budget for the year following each annual report; a summary describing the number and nature of enforcement actions, inspections, and public education programs; and identification of water quality improvements or degradation. Part I.E. of the draft permit requires the permittee to do annual evaluations on the effectiveness of the SWMP, and institute or propose modifications necessary to meet the overall permit standard of reducing the discharge of pollutants to the maximum extent practicable. In order to allow the orderly collection of budgetary and monitoring data it was determined to establish the annual report due date relative to the permittee's annual fiscal year. BWSC's fiscal year ends on **December 31** and the annual report is due on **March 1** each year commencing March 1, 1999.

11. Permit Modifications.

a. Reopener Clause. The EPA may reopen and require modifications to the permit (including the SWMP) based on the following factors: changes in the State's Water Quality Management Plan and State or Federal requirements; adding co-permittee(s); SWMP changes impacting compliance with permit requirements; other modifications deemed necessary by the EPA to adhere to the requirements of the Clean Water Act. Co-permittees may be incorporated into this permit or separate permits may be required as necessary to achieve the goals of the SWMP. Implementation of the SWMP is expected to result in the protection of water quality. The draft permit contains a reopener clause should new information indicate that the discharges from the MS4 are causing, or are significantly contributing to, a violation of the State's water quality standards.

b. SWMP Changes. The SWMP is intended to be a tool to achieve the maximum extent practicable and water quality standards. Therefore, minor changes and adjustments to the various SWMP elements are expected and encouraged where necessary. Changes may be necessary to more successfully adhere to the goals of the permit. Part I.B.7.c of the draft permit describes the allowable procedure for the permittee to make changes to the SWMP. Any changes requested by a permittee shall be reviewed by the EPA and DEP. The EPA and DEP have 60 days to respond to the permittee and inform the permittee if the suggested changes will impact or change the SWMP's compliance with a permit requirement.

c. Additions. The EPA intends to allow the permittee to annex lands, activate new outfalls, deactivate existing outfalls, and accept the transfer of operational authority over portions of the MS4 without mandating a permit modification. Implementation of appropriate SWMP elements for these additions (annexed land or transferred authority) is required. Upon notification of the additions in the Annual Report, the EPA shall review the information to determine if a modification to the permit is necessary based on changed circumstances.

The remaining conditions of the permit are based on the NPDES regulations, 40 CFR Parts 122 though 125, and consist primarily of management requirements common to all permits.

II. State Certification Requirements.

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving waters certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the Massachusetts Department of Environmental Protection has reviewed the draft permit and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State and expects that the draft permit will be certified.

III. Comment Period, Hearing Requests and Procedures for Final Decisions.

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Planning and Administration (SPA), P.O. Box 8127, Boston, MA 02114. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit the Regional Administrator will respond to all significant comments and make those responses available to the public at EPA's Boston Office.

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and to each person who has submitted written comments or requested notice. Within 30 days following the notice of the final permit decision any interested person any submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of 40 CFR §124.74, 48 Fed. Reg. 14279-14280 (April 1, 1983).

IV. EPA Contact

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

Jay Brolin
U.S. Environmental Protection Agency
John F. Kennedy Federal Building
Office of Ecosystem Protection (CMA)
Boston, MA 02203-0001
Telephone: (617) 565-9453 Fax: (617) 565-4940

September 2, 1998
Date

Linda M. Murphy, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

Attachment C

Structural Controls: The permittee shall operate the separate storm sewer system and any storm water structural controls in a manner to reduce the discharge of pollutants to the Maximum Extent Practicable. The permittee's existing SWMP includes operation and maintenance procedures to include an inspection schedule of storm water structural controls adequate to satisfy the permit condition.

Areas of New Development and Significant Redevelopment: The permittee has no authority over land use issues. The draft permit is conditioned to require the permittee to coordinate with the appropriate municipal agencies as it relates to discharges to the MS4. The permittee has its own site plan review process relating to new or modified connections for water, sewer, and drains and has the authority to require controls on discharges to the storm drain system during and after construction.

Roadways: The permittee has no authority to ensure that public streets, roads, and highways are operated and maintained in a manner to minimize discharge of pollutants, including those pollutants related to deicing or sanding activities. The draft permit is conditioned to require the permittee to coordinate with appropriate municipal agencies as it relates to discharge to the MS4.

Pesticide, Herbicide, and Fertilizer Application: The permittee shall coordinate with appropriate municipal agencies to evaluate existing measures to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied to public property.

Non-Storm Water discharges: Non-storm water discharges shall be effectively prohibited. However, the permittee may allow certain non-storm water discharges as listed in 122.26(d)(2)(iv)(B)(1) and Part I.B.2 of the draft permit. The permittee has identified allowable non-storm water discharges in its regulations.

The permittee shall implement controls to prevent discharges of dry and wet weather overflows from sanitary sewers into the MS4. The permittee shall also control the infiltration of seepage from sanitary sewers into the MS4. This is presently accomplished through the permittee's illicit connection program and it's Inflow/Infiltration program.

The discharge or disposal of used motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, and animal wastes into the MS4 is prohibited in accordance with the permittee's regulations. The permittee shall coordinate with appropriate

regulations. The permittee shall coordinate with appropriate public and private agencies to ensure continued implementation of programs to collect used motor vehicle fluids (at a minimum, oil and antifreeze) for recycle, reuse, or proper disposal and to collect household hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycle, reuse, or proper disposal. The City of Boston has an existing program.

Illicit Discharges and Improper Disposal: The BWSC shall continue to implement its program to locate and eliminate illicit discharges and improper disposal into the MS4. This program shall include dry weather screening activities to locate portions of the MS4 with suspected illicit discharges and improper disposal. Follow-up activities to eliminate illicit discharges and improper disposal may be prioritized on the basis of magnitude and nature of the suspected discharge; sensitivity of the receiving water; and/or other relevant factors. This program shall establish priorities and schedules for screening the entire MS4 at least once every five years. At present the permittee has on-going programs in Brighton (BOS 032) discharges to the Charles River, discharges to Brookline's Village and Tannery Brook drainage systems, and discharges through Dedham to Mother Brook. Facility inspections may be carried out in conjunction with other programs (e.g. pretreatment inspections of industrial users, health inspections, fire inspections, etc.).

The BWSC shall eliminate illicit discharges as expeditiously as possible and require the immediate termination of improper disposal practices upon identification of responsible parties. Where elimination of an illicit discharge within sixty (60) days is not possible, the BWSC shall establish an expeditious schedule for removal of the discharge. In the interim, the BWSC shall take all reasonable and prudent measures to minimize the discharge of pollutants to the MS4.

Spill Prevention and Response: The permittee shall coordinate with appropriate municipal agencies to implement a program to prevent, contain, and respond to spills that may discharge into the MS4. The existing spill response program in the City includes a combination of spill response actions by the permittee, municipal agencies and private entities. The permittee's regulations include legal requirements for public and private entities within the permittee's jurisdiction.

Industrial & High Risk Runoff: The permittee shall coordinate with EPA and DEP to develop a program to identify and control pollutants in storm water discharges to the MS4 from municipal landfills; other treatment, storage, or disposal facilities for municipal waste (e.g. transfer stations, incinerators, etc.);

hazardous waste treatment, storage, disposal and recovery facilities and facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge which the permittee determine is contributing a substantial pollutant loading to the MS4 shall be implemented. The program shall include inspections, a monitoring program and a list of industrial storm water sources discharging to the MS4 which shall be maintained and updated as necessary. This requirement is not meant to cover all such discharges, but is intended to prioritize those discharges from this group which are believed to be contributing pollutants to the MS4 and to identify those dischargers which may require NPDES permit coverage or are not in compliance with existing permits.

Construction Site Runoff: The permittee shall coordinate with appropriate municipal agencies to implement a program to reduce the discharge of pollutants from construction sites to the separate storm sewer. This program shall include: requirements for the use and maintenance of appropriate structural and non-structural control measures to reduce pollutants discharged to the MS4 from construction sites; inspection of construction sites and enforcement of control measure requirements required by the permittee; appropriate education and training measures for construction site operators; and notification of appropriate building permit applicants of their potential responsibilities under the NPDES permitting program for construction site runoff and any post-construction permitting.

Public Education: The permittee shall coordinate with appropriate municipal agencies to implement a public education program with the following elements: (a) a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or improper disposal of materials into the MS4; (b) a program to promote, publicize, and facilitate the proper management and disposal of used oil and household hazardous wastes; and (c) a program to promote, publicize, and facilitate the proper use, application, and disposal of pesticides, herbicides, and fertilizers.

Exhibit **6**

Worcester, MA – Department of Public Works MS4 Permit
(Permit No. MAS010002)

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AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the federal Clean Water Act, as amended, 33 U.S.C. §§1251 et seq., and the Massachusetts Clean Waters Act, as amended, Mass. Gen. Laws. ch. 21, §§26-53, the

City of Worcester
Department of Public Works

and is authorized to discharge from all new or existing separate storm sewers: **existing Separate Storm Sewer Outfalls which are listed in Attachment A (93 major outfalls) and all other known outfalls (170 minor outfalls)**

to receiving waters (in the BLACKSTONE RIVER BASIN) named: **Beaver Brook, Blackstone River, Broad Meadow Brook, Coal Mine Brook, Coes Pond, Curtis Pond, Fitzgerald Brook, Indian Lake, Kendrick Brook, Kettle Brook, Lake Quinsigamond, Leesville Pond, Middle River, Mill Brook, Mill Brook Tributary, Tatnuck Brook, Patch Reservoir, Poor Farm Brook, Smiths Pond, Weasel Brook and Williams Millpond** in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective thirty (30) days after the date of signature.

This permit and the authorization to discharge expire at midnight, five years from the effective date.

This permit consists of **21** pages and **Attachment A** in Part I including wet and dry weather monitoring requirements, etc., and 35 pages in Part II including General Conditions and Definitions.

Signed this 30 day of September, 1998

Director
Office of Ecosystem Protection
Environmental Protection Agency
Region I
Boston, MA

Director, Division of
Watershed Management
Department of Environmental
Protection
Commonwealth of Massachusetts
Boston, MA

PART I. MUNICIPAL SEPARATE STORM SEWER SYSTEM

A. DISCHARGES THROUGH THE MUNICIPAL SEPARATE STORM SEWER SYSTEM AUTHORIZED UNDER THIS PERMIT

1. Permit Area. This permit covers all areas within the corporate boundary of the City of Worcester served by, or otherwise contributing to discharges from new or existing separate storm sewers owned or operated by the Department of Public Works, the "permittee".

2. Authorized Discharges. This permit authorizes all storm water discharges to waters of the United States from all existing or new outfalls owned or operated by the permittee (existing outfalls are identified in Attachment A). This permit also authorizes the discharge of storm water commingled with flows contributed by process wastewater, non-process wastewater, or storm water associated with industrial activity provided such discharges are authorized under separate NPDES permits and in compliance with applicable Federal, State and local regulations.

   Storm water discharges related to industrial activity which are not under the jurisdiction of the storm water program are authorized. The permittee shall provide in the annual report (Part I.E.) to EPA and MA DEP a review of all new separate storm sewer outfalls that are activated and of all existing outfalls which are de-activated.

3. Limitations on Coverage. The following discharges are not authorized by this permit:

   a. Discharges of non-storm water or storm water associated with industrial activity through outfalls listed in Attachment A are not authorized under this permit except where such discharges are:

      I. authorized by a separate NPDES permit; or

      ii. identified by and in compliance with Part B.2.g of this permit.

B. STORM WATER POLLUTION PREVENTION & MANAGEMENT PROGRAMS

The permittee is required to continue to develop, implement and revise as necessary, a storm water pollution prevention and management program designed to reduce, to the maximum extent practicable, the discharge of pollutants from the Municipal Separate Storm Sewer System (MS4). The permittee may implement Storm Water Management Program (SWMP) elements through participation with other public agencies or private entities in cooperative efforts satisfying the requirements of this permit in lieu of creating duplicate program elements. Either cumulatively, or separately, the permittee's storm water pollution prevention and management programs shall satisfy the requirements of Part I.B.1-7. below for all portions of the MS4.

1. POLLUTION PREVENTION REQUIREMENTS The permittee shall develop and implement the following pollution prevention measures:

a. Development The permittee, in cooperation with the agency with jurisdiction over land use, shall include requirements to consider water quality impacts of new development and significant re-development. The permittee shall ensure that development activities conform to applicable state and local regulations, guidance and policies relative to the discharge of storm water into the MS4. The goals of these requirements shall be to limit increases in the discharge of pollutants into the MS4 from new development and to reduce the discharge of pollutants into the MS4 from existing sources due to re-development.

b. Used Motor Vehicle Fluids The permittee shall describe educational activities, public information activities and other appropriate activities to facilitate the proper management, including recycling, reuse and disposal, of used motor vehicle fluids. The permittee shall coordinate with appropriate public agencies or private agencies where necessary. Such activities shall be readily available to all private residents and be publicized and promoted on a regular basis (at least annually).

c. Household Hazardous Waste (HHW) The permittee shall coordinate with the appropriate public agency or private entities to ensure the implementation of a program to collect household hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycle, reuse, or proper disposal. Such program shall be readily

available to all private residents and be publicized and promoted on a regular basis (at least annually).

2. STORM WATER MANAGEMENT PROGRAM REQUIREMENTS: The permittee shall continue to implement the current elements of its' Storm Water Management Program (SWMP) which was described in the May 11, 1993 Part II application in accordance with Section 402(p)(3)(B) of the Clean Water Act (CWA or "the Act"), including any updates.

The current SWMP does not adequately address all the required elements described on Pages 5-11 below. The EPA sent a letter to the City of Worcester on June 6, 1997 specifying which portions of the current SWMP needed more description, effort, or clarification. The items included were the illicit connection program, a discussion of the City's indebtedness and funding for storm water programs, geographic mapping, reevaluation of wet weather sampling locations, construction area oversight, and public education. The City submitted a letter addressing these concerns on March 25, 1998. Although most issues were discussed, there is still some detail and proposed effort that is insufficient.

In particular, the sampling plan proposes grab samples at five different outfalls, three times per year. In order to get a sense of any trend and how parameter concentrations change over time during storm events, the permittee must conduct composite sampling or a series of grab samples for the summer sampling event at each of the five outfalls, as described later. In Section C. below, this permit includes minimum expectations for outfall monitoring and instream monitoring during wet weather. Instream monitoring could provide information on both the pollutant concentration peaks as well as the pollutant loading increases that occur as a result of storm events.

More detail and effort is needed for the catch basin cleaning and inspection program, as shown on Page 6. This last issue was not raised in the letter of June 6, 1997, but this program was found to be deficient upon further review.

Within **120** days after the effective date of this permit, the permittee shall submit a written description of all additional measures it will take, relative to items mentioned above, to satisfy the requirements of this permit and the goals of the proposed SWMP. **This submittal will include the entire SWMP effort, including all the original items as included in Worcester's Part II application.** This

shall be submitted to the EPA the MA DEP at the addresses in Section G. Unless disapproved by EPA or the MA DEP within 60 days after its submittal, the SWMP shall be deemed approved. The permittee shall respond to all written comments by EPA and the MA DEP and shall make all changes to the SWMP required for its approval. As noted later, compliance with the SWMP shall occur no later than 180 days after the effective date of the permit or no later than EPA and DEP's approval of the SWMP. This SWMP shall be displayed at a convenient location accessible to the public.

The Controls and activities identified in the SWMP shall clearly identify goals, a description of the controls or activities, and a description of the roles and responsibilities of other entities' areas of applicability on a system, jurisdiction, or specific area basis.

The permittee will specifically address how it will have input on any portions of the SWMP which may not be under its direct control (i.e. Mass Highway Department's maintenance of interstate highway) and how it will cooperate with such entities to achieve the goals of the SWMP.

If, during the life of this permit, EPA and the DEP determine that the permittee cannot substantively operate these programs to effectively reduce pollutants to the MS4, then the permit may be modified to designate one or more agencies that administer these programs as co-permittees. These entities would then be responsible for applicable permit conditions and requirements. Alternatively, one or more entities may be required to apply for and obtain an individual storm water permit for their discharges. The SWMP, and all approved updates, are hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

a. Statutory Requirements: SWMPs shall include controls necessary to reduce the discharge of pollutants from the MS4 to the Maximum Extent Practicable,"MEP". Controls may consist of a combination of best management practices, control techniques, system design and engineering methods, and such other provisions as the permittee, the Director or the State determines appropriate. The various components of the SWMP, taken as a whole (rather than individually), shall be sufficient to meet this "MEP" standard. The SWMPs shall be updated as necessary to ensure conformance with the requirements of CWA § 402(p)(3)(B). In implementing the SWMP, the permittee

is required to select measures or activities intended to meet these requirements:

No discharge of toxics in toxic amounts.

No discharge of pollutants in quantities that would cause a violation of State water quality standards.

No discharge of either a visible oil sheen, foam, or floating solids, in other than trace amounts, at any time.

No discharge of suspended or settleable solids in concentrations or combinations that would impair the uses of the class of receiving waters.

b. Structural Controls: The permittee shall operate and maintain any storm water structural controls, for which it is the owner or operator, in a manner so as to reduce the discharge of pollutants to the MEP. Each catch basin shall be cleaned at least every other year as described in the SWMP.

The cleaning program must include the recording and inputting of all activities in an automated database for all catch basins, including the date of cleaning, the location of each catch basin, and an estimate of how full the catch basin was when it was cleaned. For those catch basins which are found to be more than approximately 50% full, a follow up inspection will be conducted within 3 - 6 months and cleaning schedules modified as appropriate.

During the life of this permit, the permittee shall conduct a structural control demonstration. Within 180 days after the effective date of the permit, the permittee shall submit a demonstration proposal and schedule to the EPA and MA DEP. Unless disapproved by the EPA or the MA DEP within 30 days after its submittal, the proposed demonstration project shall be deemed approved.

The permittee can reference the MA DEP document titled, Stormwater Management, Volume 1: Stormwater Policy Handbook and Stormwater Management, Volume II: Stormwater BMP Handbook. This provides an overview of storm water controls, including ranges of removal for typical storm water pollutants. This proposal shall measure the removal efficiency of a particular structural control in the MS4 area for several pollutants with influent and effluent sampling during the life of this permit.

c. Areas of New Development and Significant Redevelopment: The permittee and/or cooperating agencies shall develop, implement, and enforce controls to minimize the discharge of pollutants to the separate storm sewer system from areas of new development and significant re-development during and after construction. The permittee and/or cooperating agencies shall ensure development activities conform to applicable state and local regulations, guidance and policies. The permittee and/or cooperating agencies shall consider water quantity and water quality impacts related to development and significant redevelopment. The permittee and/or cooperating agencies shall conform to the policy of the MA DEP titled **Performance Standards and Guidelines for Stormwater Management in Massachusetts.**

d. Roadways: The permittee shall coordinate with appropriate agencies to implement measures to ensure that roadways and highways are operated and maintained in a manner so as to minimize the discharge of pollutants to the separate storm sewer system (including discharges related to deicing and sanding activities and snow removal and disposal).

The permittee shall conduct an investigation of the drainage from roadways that are owned or operated by other entities, primarily the Massachusetts Highway Department. Within 180 days after the effective date of the permit, **the permittee shall report to the EPA and the MA DEP, which of these roadway drainage systems are connected to the MS4.** The SWMP will also include a description of how the permittee will coordinate with such entities to assure that discharges to the MS4 through such drainage meets the requirements of the permit.

e. Flood Control Projects: The permittee shall ensure any flood management projects consider impacts on the water quality of receiving waters. The permittee shall also evaluate the feasibility of retro-fitting existing structural flood control devices to provide additional pollutant removal from storm water.

f. Pesticide, Herbicide, and Fertilizer Application: The permittee shall implement measures to reduce the discharge of pollutants to the MS4 related to the application and storage of pesticides, herbicides, and fertilizers applied by municipal or public agency employees or contractors to public right of ways, parks, and other municipal facilities. The permittee, in cooperation with the entity with jurisdiction over land use (e.g. Parks Department), shall implement

controls to reduce discharge of pollutants to the MS4 related to the application and distribution of pesticides, herbicides, and fertilizers by commercial and wholesale distributors and applicators and its own employees.

g. Authorized Non-Storm Water Discharges: Unless identified by either the permittee, the EPA, or the State as significant sources of pollutants to waters of the United States, the following non-storm water discharges are authorized to enter the MS4. As necessary, the permittee shall incorporate appropriate control measures in the SWMP to insure that these discharges are not significant sources of pollutants to waters of the United States.

(a) water line flushing;
(b) landscape irrigation;
(c) diverted stream flows;
(d) rising ground waters;
(e) uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers;
(f) uncontaminated pumped ground water;
(g) discharges from potable water sources;
(h) foundation drains;
(I) uncontaminated air conditioning or compressor condensate;
(j) irrigation water;
(k) uncontaminated springs;
(l) water from crawl space pumps;
(m) footing drains;
(n) lawn watering;
(o) non-commercial car washing;
(p) flows from riparian habitats and wetlands;
(q) swimming pool discharges which have been dechlorinated;
(r) street wash waters; and
(s) discharges or flows from emergency fire fighting activities.
(t) fire hydrant flushing
(u) building washdown water which does not contain detergents

h. Illicit Discharges and Improper Disposal: The permittee shall continue to implement its ongoing program to detect and remove (or require the discharger to the MS4 to remove or obtain a separate NPDES permit for) illicit discharges and improper disposal into the separate storm sewer.

1. The permittee shall effectively prohibit unpermitted, industrial storm water discharges which are required to have a federal storm water permit, to the MS4.

2. The permittee shall prohibit unpermitted discharges of dry and wet weather overflows from sanitary sewers into the MS4. The permittee shall identify and limit the infiltration of seepage from sanitary sewers into the MS4.

3. The permittee shall prohibit the discharge or disposal of used motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, and animal wastes into separate storm sewers. Public education programs for proper disposal of these materials shall be included in the SWMP and publicized at least annually and shall include material for non-English speaking residents.

4. The permittee shall require the elimination of illicit connections as expeditiously as possible and the immediate cessation of improper disposal practices upon identification of responsible parties. The permittee shall describe its procedure for the identification, costing and elimination of illicit discharges. This information shall be included in the annual report required under Part I.E. below. Where elimination of an illicit connection within thirty (30) days is not possible, the permittee shall establish a schedule for the expeditious removal of the discharge. In the interim, the permittee shall take all reasonable and prudent measures to minimize the discharge of pollutants to the MS4.

i. Spill Prevention and Response: The permittee shall implement procedures to prevent, contain, and respond to spills that may discharge into the MS4. The spill response procedures may include a combination of spill response actions by the permittee (and/or other public or private entities), and requirements for private entities through the permittee's sewer use ordinances. The discharges of materials resulting from spills is prohibited.

j. Industrial & High Risk Runoff: The permittee shall implement a program to identify, monitor, and control pollutants in storm water discharges to the MS4 from municipal landfills; hazardous waste treatment,

storage, disposal and recovery facilities and facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge the permittee determines is contributing a substantial pollutant loading to the MS4. A list of these facilities which discharge to the MS4 shall be maintained and updated as necessary. This shall include industrial activities which are listed at 40 CFR §122.26(b)(14), which are required to obtain federal storm water permit coverage. The program shall include:

1. priorities and procedures for inspections and establishing and implementing control measures for such discharges;

2. a monitoring (or self-monitoring) program for facilities identified under this section, including the collection of quantitative data on the following constituents:

(a) any pollutants which the discharger may monitor for or are limited to in an existing NPDES permit for an identified facility;

(b) any information on discharges required under 40 CFR 122.21(g)(7)(iii) and (iv).

(c) any pollutant the permittee has a reasonable expectation is discharged in substantial quantity from the facility to the separate storm sewer system

Data collected by the industrial facility to satisfy the monitoring requirements of an NPDES or State discharge permit may be used to satisfy this requirement. The permittee may require the industrial facility to conduct self-monitoring to satisfy this requirement.

3. Alternative Certification: In lieu of monitoring, the permittee may accept a certification from a facility stating that raw and waste materials, final and intermediate products, by-products, material handling equipment or activities, and/or loading/unloading operations are not expected to be exposed to storm water for the certification period. The permittee shall still reserve the right to conduct and shall consider conducting site inspections for these facilities during the life of this permit.

k. Construction Site Runoff: The permittee shall implement a program to reduce the discharge of pollutants from construction sites into the MS4, including:

1. requirements for the use and maintenance of appropriate structural and non-structural best management practices to reduce pollutants discharged to the MS4 during the time construction is underway;

2. procedures for site planning which incorporate considerations for potential short term and long term water quality impacts to the MS4 and minimizes these impacts;

3. prioritized inspections of construction sites and enforcement of control measures;

4. appropriate education and training measures for construction site operators;

5. notification to appropriate building permit applicants of their potential responsibilities under the NPDES permitting program for construction site runoff.

l. Public Education: The permittee shall implement a public education program including, but not limited to the following items. Cooperation should be sought with city and state agencies where necessary. This program shall also include material for non-English speaking residents.

1. A program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or improper disposal of materials (e.g. floatables, industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the MS4 (e.g. curb inlet stenciling, citizen "streamwatch" groups, "hotlines" for reporting dumping, outreach materials included in billings, public access/government cable channels, etc.);

2. a program to promote, publicize, and facilitate the proper management and disposal of used oil and household hazardous wastes;

3. a program to promote, publicize, and facilitate the proper use, application, and disposal of

pesticides, herbicides, and fertilizers by the public and commercial and private applicators and distributors;

4. where applicable and feasible, the permittee should publicize those best management practices (including but not limited to the use of reformulated or redesigned products, substitution of less toxic materials, and improvements in housekeeping) used by the permittee that facilitate better use, application, and/or disposal of materials identified in 1.1 and 1.2 above.

2. Deadlines for Program Compliance. Except as provided in PART II, and Part I.B.7. compliance with the storm water management program shall be required within **180** days from the effective date of the permit.

3. Roles and Responsibilities of Permittee: The Storm Water Management Program shall clearly identify the roles and responsibilities of the permittee and any party impacting its efforts to comply with this permit.

4. Legal Authority: The permittee and/or cooperating agencies shall ensure that they have and maintain legal authority to control discharges to and from those portions of the MS4 which it owns or operates. This legal authority may be a combination of statute, ordinance, permit, contract, or an order to:

a. Control the contribution of pollutants to the MS4 by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity;

b. Prohibit illicit discharges to the MS4;

c. Control the discharge of spills and the dumping or disposal of materials other than storm water (e.g. industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the MS4;

d. Control through interagency or inter-jurisdictional agreements the contribution of pollutants from one portion of the MS4 to another;

e. Require compliance with conditions in ordinances, permits, contracts or orders; and

f. Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance with permit conditions.

5. Storm Water Management Program Resources The permittee shall provide adequate finances, staff, equipment, and support capabilities to implement its SWMP.

6. Storm Water Management Program Review and Modification

a. Program Review: The permittee shall participate in an annual review of its current or modified SWMP in conjunction with preparation of the annual report required under Part I.E. This annual review shall include:

1. A review of the status of program implementation and compliance with program elements and other permit conditions as necessary;

2. An assessment of the effectiveness of controls established by the SWMP;

3. A review of monitoring data and any trends in estimated cumulative annual pollutant loadings;

4. An assessment of any SWMP modifications needed to comply with the CWA §402(p)(3)(B)(iii) requirement to reduce the discharge of pollutants to the maximum extent practicable (MEP).

5. An annual public informational meeting held within two months of submittal of the Annual report.

b. Program Modification: The permittee may modify the SWMP in accordance with the following procedures:

1. The approved SWMP shall not be modified by the permittee(s) without the prior approval of the Director, unless in accordance with items 2. or 3. below.

2. Modifications adding (but not subtracting or replacing) components, controls, or requirements to the approved SWMP may be made by the permittee at any time upon written notification to the Director.

3. Modifications replacing an ineffective or unfeasible BMP specifically identified in the SWMP with an alternative BMP may be requested at any time. Unless denied by the Director, the modification shall be deemed approved and shall be implemented by the permittee 60 days from submittal of the request. Such requests must include the following:

(a) an analysis of why the BMP is ineffective or infeasible (including cost prohibitive),

(b) expectations on the effectiveness of the replacement BMP, and

(c) an analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.

4. Modification requests and/or notifications must be made in writing and signed in accordance with Part I.F.

c. Modifications required by the Permitting Authority: The permitting authority may require the permittee to modify the SWMP as needed to:

1. Address impacts on receiving water quality caused or contributed to by discharges from the MS4;

2. Include more stringent requirements necessary to comply with new State or Federal statutory or regulatory requirements; or

3. Include such other conditions deemed necessary by the Director to comply with the goals and requirements of the Clean Water Act.

Modifications requested by the Director shall be made in writing and set forth a time schedule for the permittee to develop the modification(s).

C. WET WEATHER MONITORING AND REPORTING REQUIREMENTS

1. Storm Event Discharges. The permittee shall implement a wet weather monitoring program for the MS4 to provide data necessary to assess the effectiveness and adequacy of control measures implemented under the SWMP; estimate annual cumulative pollutant loadings from the MS4; estimate event mean concentrations and seasonal pollutants in discharges from all major outfalls; identify and prioritize portions of the MS4 requiring additional controls, and identify water quality improvements or degradation.

The permittee is responsible for conducting any additional monitoring necessary to accurately characterize the quality and quantity of pollutants discharged from the MS4. Improvement in the quality of discharges from the MS4 will be assessed based on the

necessary monitoring information required by this section, along with any additional monitoring which is made available. There have been no effluent limits established for this draft permit. Numeric effluent limits may be established in the next permit to control impacts on water quality, to improve aesthetics, or for other reasons as necessary.

a. Representative Monitoring: The permittee shall monitor representative outfalls, internal sampling stations, and/or instream monitoring locations to characterize the quality of storm water discharges from the MS4. Within **90** days after the effective date of this permit, the permittee will submit its proposed sampling plan to the EPA and MA DEP for review. The permittee shall choose locations representing different land uses, with a focus on what it considers priority areas, such as an outfall in the vicinity of a public beach. The plan shall outline the parameters to be sampled, the frequency of sampling and reporting of results. This submittal shall also include any related monitoring which the permittee has done since its MS4 permit application was originally submitted. Unless disapproved by the EPA or MA DEP within **30** days after its submittal, the proposed sampling plan shall be deemed approved.

The sampling locations which the permittee submitted in its letter of March 25, 1998 to EPA appear to be adequate. These locations shall be monitored at least three times per year (spring, summer and fall) for all the parameters suggested, including cadmium and replacing oil & grease with Total Petroleum Hydrocarbons (TPH). The summer sampling event shall consist of composite samples, which shall be composed of, at a minimum, samples taken at hours 0 (pre-runoff), 4, 8, 12, 16 and 20. These samples shall be flow composited.

Instream sampling: This sampling is required as a supplement to the outfall monitoring as follows:

1) The mouth of the Mill Brook Conduit shall be grab sampled for fecal coliform during the spring and summer sampling seasons;

2) the high zinc load that was found during the Blackstone River Initiative (BRI) sampling from the Mill Brook conduit shall be investigated. Findings shall be reported in the annual report;

3) the two instream locations to be sampled are:

   a. Sampling station 00 from the BRI study; and

   b. A station downstream of where Beaver Brook and Tatnuck Brook completely mix, but above the Kettle Brook confluence

These two stations will be monitored during the spring and summer sampling events. The sampling parameters will be identical to those of the outfall sampling, with the addition of flow at station 00. Similar to the outfall monitoring, the summer sampling event shall

be conducted with composite samples. At station 00, flow can be determined from measuring the distance from a fixed point on the bridge to the water surface. The EPA will provide information on the relationship between this stage measurement and stream flows. The second sampling station can be flow composited using flow data derived from Station 00. For all instream sampling events, sampling shall be conducted during wet weather.

b. Alternate representative monitoring locations may be substituted for just cause during the term of the permit. Requests for approval of alternate monitoring locations shall be made to the Director in writing and include the rationale for the requested monitoring station relocation. Unless disapproved by the Director, use of an alternate monitoring location may commence thirty (30) days from the date of the request.

2. Storm Event Data: For Part I.C.1.a - Representative Monitoring only - quantitative data shall be collected to estimate pollutant loadings and event mean concentrations for each parameter sampled. In addition to the parameters which are to be sampled for in the sampling plan to be submitted, the permittee shall maintain records of the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff; the duration (in hours) between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; an estimate of the total volume (in gallons) of the discharge sampled and a description of the presence and extent of floatable debris, oils, scum, foam, solids or grease in any storm water discharges or in the receiving waters.

3. Sample Type, Collection, and Analysis: The following requirements apply only to samples collected for Part C.1.a - Representative Monitoring.

a. For discharges from holding ponds or other impoundments with a retention period greater than 24 hours, (estimated by dividing the volume of the detention pond by the estimated volume of water

discharged during the 24 hours previous to the time that the sample is collected) a minimum of one grab sample may be taken.

b. Grab samples taken during the first two hours of discharge shall be used for the analysis of pH, temperature, Total Petroleum Hydrocarbons (TPH), fecal coliform and residual chlorine. For all other parameters, data shall be reported for flow weighted composite samples as described on Page 15.

c. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.25 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Composite samples may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes.

d. Analysis and collection of samples shall be conducted in accordance with the methods specified at 40 CFR Part 136. Where an approved Part 136 method does not exist, any available method may be used.

4. Sampling Waiver. When a discharger is unable to collect samples required by Part I.C.1.a (Representative Monitoring) due to adverse climatic conditions, the discharger must submit in lieu of sampling data a description of why samples could not be collected, including available documentation of the event. Adverse climatic conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms,etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

5. Wet Weather Screening Program: The permittee shall implement a program to identify, investigate, and address areas within their jurisdiction that may be contributing excessive levels of pollutants to the MS4. The wet weather screening program:

   a. Shall screen the MS4, in accordance with the procedures specified in the SWMP, at least once during the permit term.

   b. Shall specify the sampling and non-sampling techniques (such as observations or quantitative methods), to be used for initial screening and follow-up purposes. For samples collected for screening purposes only, sample collection and analysis need not conform to the requirements of 40 CFR Part 136 and are not subject to the requirements of Paragraphs 1, 2, and 3 above.

D. DRY WEATHER DISCHARGES

1. Dry Weather Screening Program: The permittee shall continue ongoing efforts to detect the presence of illicit connections and improper discharges to the MS4. All major outfalls identified in the Part I application and all other areas (but not necessarily all outfalls) of the MS4 must be screened at least once during the permit term. A schedule of inspections shall be identified to support activities undertaken in accordance with Part I.B.2.g. and may be in conjunction with any activities undertaken in accordance with Part I.C.. The schedule of inspections shall be included in the annual report Part I.E.

2. Screening Procedures: Screening methodology may be developed and/or modified based on experience gained during actual field screening activities and need not conform to the protocol at 40 CFR §122.26(d)(1)(iv)(D).

3. Follow-up on Dry Weather Screening Results: The permittee shall implement a program to locate and eliminate suspected sources of illicit connections and improper disposal identified during dry weather screening activities. Follow-up activities shall be prioritized on the basis of:

   a. magnitude and nature of the suspected discharge;

   b. sensitivity of the receiving water; and

   c. other relevant factors.

E. ANNUAL REPORT:

The permittee shall prepare an annual system-wide report to be submitted no later than April 1, 2000 and annually thereafter. The report shall include the following separate sections, with an overview for the entire MS4:

1. The status of implementing the storm water management program(s) (status of compliance with any schedules established under this permit shall be included in this section);

2. Proposed changes to the storm water management program(s);

3. Revisions, if necessary, to the assessments of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and (d)(2)(v);

4. An evaluation of all the authorized non-storm water discharges at Part I.B.2.g. and whether it was determined that any controls or restrictions are necessary for any of these and descriptions of such;

5. A summary of the data, including monitoring data, that is accumulated throughout the reporting year; a portion of this data shall be compared to National Urban Runoff Program (NURP) values, as was done in the Part II application and to ambient water quality criteria.

6. A revised list of all current separate storm sewer outfalls and their locations, reflecting changes of the previous year and justification for any new outfalls.

7. Annual expenditures for the reporting period, with a breakdown of the major elements of the storm water management program, and the budget for the year following each annual report;

8. A summary describing the number and nature of enforcement actions, inspections, and public education programs;

9. Identification of water quality improvements or degradation; and,

10. Update on the illicit connection program to include the total number of identified connections with an estimate of flow for each, total number of connections found in the reporting period to include how they were found (i.e. citizen complaint, routine inspection), number of connections corrected in the reporting period to include total estimated flow, and the financing required for such to include how the repairs were financed (i.e. by the permittee, costs provided to the permittee by the responsible party, repairs effected and financed by the responsible party). As an attachment to the report, the permittee should submit any existing tracking system information. Also include updates to schedules and a summary of activities conducted under Parts I.C. and I.D.

F. CERTIFICATION AND SIGNATURE OF REPORTS

All reports required by the permit and other information requested by the Director shall be signed and certified in accordance with the General Conditions - Part II of this permit.

G. REPORT SUBMISSION

1. All original, signed notifications and reports required herein, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, MA 02114
Attn: George Papadopoulos, Permit Writer

2. Signed copies of all other notifications and reports shall be submitted to the State at:

Massachusetts Department of Environmental Protection
Division of Watershed Management
Watershed Planning and Permitting Section
627 Main Street
Worcester, Massachusetts 01608

H. RETENTION OF RECORDS

The permittee shall retain all records of all monitoring information, copies of all reports required by this permit and records of all other data required by or used to demonstrate compliance with this permit, until at least three years after coverage under this permit terminates. This period may be modified by alternative provisions of this permit or extended by request of the Director at any time. The permittee shall retain the latest approved version of the SWMP developed in accordance with Part I of this permit until at least three years after coverage under this permit terminates.

I. STATE PERMIT CONDITIONS

1. This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the Massachusetts DEP pursuant to M.G.L. Chap. 21, §43.

2. Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.

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ATTACHMENT A

CITY OF WORCESTER
OUTFALL INFORMATION

OUTFALL ID	GRID	LOCATION	OUTFALL SIZE	RECEIVING
2	5F	MOUNTAIN ST WEST	48 inch storm drain	KENDRICK B
6	6F	ARARAT ST	48 inch storm drain	UNNAMED B
7	7F	BROOKS ST	24 inch storm drain	KENDRICK B
8	6D	GROVE ST	36 inch storm drain	UNNAMED B
10	8F	W BOYLSTON DR/HWY	15 inch storm drain	MILL BROOK
11	7F	NEW BOND ST	24 inch storm drain	MILL BROOK
12	7E	INDIAN HILL RD NEAR NASHOBA PL	18 inch storm drain	INDIAN LAK
16	7E	INDIAN LAKE RD	36 inch storm drain	INDIAN LAK
17	7E	SHOREHAM RD	42 inch storm drain	INDIAN LAK
27	10B	EDWIDGE ST	48 inch storm drain	UNNAMED B
32	10C	MOWER ST	42 inch storm drain	TATNUCK BI
38	10C	MAPLE LEAF RD	48 inch storm drain	TATNUCK BI
39	11D	CHANDLER ST	42 inch storm drain	OVERLAND
40	12D	BEAV BK PLAYGROUND	42 inch storm drain	BEAVER BRO
45	13D	BEAVER BROOK PKWY	60 inch storm drain	BEAVER BRO
46	12E	BEAVBK PLG/CHANDLER	48 inch storm drain	BEAVER BRO
56	12E	BEAVBK PLG/CHANDLER	15 inch storm drain	BEAVER BRO
58	13E	MID BEAV BK PLG	33 X 48 inch storm drain	BEAVER BRO
62	14D	LAKESIDE AVE	21 inch storm drain	COES POND
65	15D	STAFFORD ST	48 inch storm drain	CURTIS PON
68	14D	MILL/PARK/MAIN	21 inch storm drain	BEAVER BRO
69	14D	MILL/PARK/MAIN	12 inch storm drain	BEAVER BRO
70	14D	MAIN ST	24 inch storm drain	BEAVER BRO
72	13D	OLIVER ST/PARK AVE	24 X 36 inch storm drain	BEAVER BRO
74	14D	WEBSTER ST	18 inch storm drain	MIDDLE RIVI
75	15D	CAMBRIDGE ST	24 inch storm drain	MIDDLE RIVI
77	15D	LYMAN ST	24 inch storm drain	CURTIS PON
78	15C	MAIN ST/TOWN LINE	12 inch storm drain	UNNAMED P
80	16C	STAFFORD ST	39 inch storm drain	KETTLE BRO
81	16C	JAMES ST	36 inch storm drain	KETTLE BRO
84	16E	SOUTHBRIDGE ST	54 inch storm drain	OVERLAND
85	15D	HWY/RR/S OF RIVER	36 inch storm drain	MIDDLE RIVE

CITY OF WORCESTER
OUTFALL INFORMATION

OUTFALL ID	GRID	LOCATION	OUTFALL SIZE	RECEIVING WATER
86	16E	SOUTHBRIDGE ST	24 inch storm drain	OVERLAND FLOW TO MIDDLE RIVER
87	15E	CAMP ST	24 X 36 inch storm drain	MIDDLE RIVER
88	15E	SOUTHBRIDGE ST/HWY	18 inch storm drain	BLACKSTONE RIVER
90	16F	FALMOUTH ST NEAR RR	24 inch storm drain	BLACKSTONE RIVER
91	17F	WISER AVE NEAR RR	30 inch storm drain	OVERLAND FLOW TO BLACKSTONE RIVER
92	17F	AGRAND ST/WARMLAND	36 inch storm drain	OVERLAND FLOW TO BLACKSTONE RIVER
93	18F	SEWAGE TMT PLANT	36 inch storm drain	WORCESTER SEWAGE TREATMENT PLANT
94	16G	MILLBURY ST	42 inch storm drain	BLACKSTONE RIVER
95	17G	MILLBURY ST	21 inch storm drain	BLACKSTONE RIVER
108	14H	JOLMA ROAD	12 inch storm drain	UNNAMED BROOK TO QUINSIGAMOND LAKE
109	14H	BRANDY LANE	36 inch storm drain	UNNAMED BROOK TO QUINSIGAMOND LAKE
110	12H	AYRSHIRE/COBURN	60 inch storm drain	UNNAMED BROOK TO QUINSIGAMOND LAKE
114	11H	BELMONT/LAKE	36 inch storm drain	QUINSIGAMOND LAKE
115	11H	SHERBROOK/LAKE AVE	36 inch storm drain	QUINSIGAMOND LAKE
119	9H	PLANT ST	36 inch storm drain	COAL MINE BROOK
124	7F	W BOYLSTON ST/BOURNE ST	36 inch storm drain	MILL BROOK
125	7F	W BOYLSTON ST/SUMMERHILL ST	36 inch storm drain	MILL BROOK TRIB
128	7G	CONSTITUTION AVE	42 inch storm drain	POOR FARM BROOK
129	7H	PLANT/W BOYLSTON	30 inch storm drain	POOR FARM BROOK
130	7F	BROOKS ST	30 inch storm drain	KENDRICK BROOK
131	6G	CLARK ST	36 inch storm drain	POOR FARM BROOK
134	6F	W BOYLSTON ST	36 inch storm drain	KENDRICK BROOK
135	6F	EAMES ST	24 inch storm drain	KENDRICK BROOK
138	5F	HIGGINS ST	30 inch storm drain	KENDRICK BROOK
139	8F	NEPONSET/W BOYLSTON	12 inch storm drain	MILL BROOK
140	9F	W BOYLSTON TER/GOLD STAR	18 inch storm drain	MILL BROOK
141	9F	W BOYLSTON TER/GOLD STAR	24 inch storm drain	MILL BROOK
142	9F	GENNIE ST/DIST CTR	36 inch storm drain	MILL BROOK
143	9F	GENNIE ST/DIST CTR	66 inch storm drain	MILL BROOK
144	9F	GENNIE ST	15 inch storm drain	MILL BROOK
192	15F	PERRY/MILLBURY ST	12 inch storm drain	BLACKSTONE RIVER
194	15F	MAXWELL/MILLBURY ST	12 inch storm drain	BLACKSTONE RIVER

CITY OF WORCESTER
OUTFALL INFORMATION

OUTFALL ID	GRID	LOCATION	OUTFALL SIZE	RECEIVING WATER
202	8D	SALISBURY ST	36 inch storm drain	UNNAMED BROOK TO FLAGG ST SCHOOL
1007	13C	WILLIAMSBURG DR	60 inch storm drain	UNNAMED BROOK TO WILLIAMS MILLPOND
1008	15D	JACQUES ST	15 inch storm drain	MIDDLE RIVER
1012	17G	MILLBURY ST	12 inch storm drain	BLACKSTONE RIVER
1013	17G	MILLBURY ST	12 inch storm drain	BLACKSTONE RIVER
1014	18G	MILLBURY ST	12 inch storm drain	BLACKSTONE RIVER
1015	18G	MILLBURY ST	12 inch storm drain	BLACKSTONE RIVER
1016	16E	HOPE AVE/HWY	24 inch storm drain	LEESVILLE POND
1019	15E	MIDDLE RIV/HWY	12 inch storm drain	MIDDLE RIVER
1020	15E	MIDDLE RIV/HWY	12 inch storm drain	MIDDLE RIVER
1021	15E	MIDDLE RIV/HWY	48 inch storm drain	MIDDLE RIVER
1022	15E	MIDDLE RIV/HWY	48 inch storm drain	MIDDLE RIVER
1039	7F	STORES ST/SHORE RD	24 inch storm drain	DITCH TO MILL BROOK TRIB
1040	7F	STORES ST/SHORE DR	24 inch storm drain	DITCH TO MILL BROOK TRIB
1043	17H	ROUTE 20	12 inch storm drain	BROAD MEADOW BROOK
1045	8H	LAKE AVE	36 inch storm drain	QUINSIGAMOND LAKE
1046	9H	LAKE AVE	36 inch storm drain	QUINSIGAMOND LAKE
1048	15D	STAFFORD ST	30 inch storm drain	CURTIS POND
1049	17G	MILLBURY ST	12 inch storm drain	BLACKSTONE RIVER
1050	17G	MILLBURY ST	12 inch storm drain	BLACKSTONE RIVER
1051	8F	RT 190/WEST OF KENWOOD AVE	18 inch storm drain	MILL BROOK
1052	6F	HIGGINS ST	12 inch storm drain	KENDRICK BROOK
2003	16C	STAFFORD ST	30 inch storm drain	KETTLE BROOK
2004	16C	JAMES ST	12 inch storm drain	KETTLE BROOK
2006	17G	MILLBURY ST	30 inch storm drain	BLACKSTONE RIVER
3000	15G	DUNKIRK AND HAMPTON	60 inch storm drain	BROAD MEADOW BROOK
3001	5F	MOUNTAIN ST WEST	3.5 X 4 inch storm drain	KENDRICK BROOK
3002	10B	BAILEY ST AT AIRPORT DR	36 inch storm drain	UNNAMED BROOK TO TATNUCK BROOK
3003	6F	ARARAT ST	18 inch storm drain	UNNAMED BROOK TO KENDRICK BROOK

DOCUMENTS IN SUPPORT OF REBUTTAL COMMENTS OF JOINT TEST CLAIMANTS

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION

ORDER NO. R9-2010-0016, 11-TC-03

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Tab 1, Cases

Jacks v. City of Santa Barbara (2017) 3 Cal. 5th 248

City of Burbank v. State Water Resources Control Board (2005) 5 Cal. 4th 613

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Tab 2, Federal Statutes and Regulations

33 U.S.C. § 1311

33 U.S.C. § 1362

40 C.F.R. § 122.21

40 C.F.R. § 122.42

40 C.F.R. § 123.25

40 C.F.R. § 124.8

Proposed rule, National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, 53 Fed. Reg. 49416 (December 7, 1988) (excerpts)

Tab 3, California Statutes

Evid. Code § 452

Govt. Code § 11515

Water Code § 13000

Water Code § 13050

Water Code § 13170.2

Water Code § 13240

Water Code § 13376

Water Code § 13377

Water Code § 13383

2006 Cal. Stats. Ch. 559 (A.B. 1881)

Tab 4, Administrative Decisions and Orders

Commission on State Mandates, In re Test Claim on: 10-TC-12 and 12-TC-01

Commission on State Mandates, In re Test Claim on: San Diego Regional Water Quality Control Board Order No. R9-2007-0001 Permit CAS0108758

Commission on State Mandates, In re Test Claim on: Los Angeles Regional Quality Control Board Order No. 01-182 Permit CAS004001

State Water Resources Control Board, Water Quality Order No. 97-03-DWQ (excerpts)

TAB 1

Jacks v. City of Santa Barbara

Supreme Court of California

June 29, 2017, Filed

S225589

Reporter

3 Cal. 5th 248 *; 397 P.3d 210 **; 219 Cal. Rptr. 3d 859 ***; 2017 Cal. LEXIS 4769 ****; 2017 WL 2805638

ROLLAND JACKS et al., Plaintiffs and Appellants, v. CITY OF SANTA BARBARA, Defendant and Respondent.

Subsequent History: Reported at Jacks v. City of Santa Barbara, 2017 Cal. LEXIS 5545 (Cal., June 29, 2017)

Rehearing denied by Jacks v. City of Santa Barbara, 2017 Cal. LEXIS 6402 (Cal., Aug. 16, 2017)

Prior History: [****1] Superior Court of Santa Barbara County, No. 1383959, Thomas Pearce Anderle, Judge. Court of Appeal, Second Appellate District, Division Six, No. B253474.

Jacks v. City of Santa Barbara, 234 Cal. App. 4th 925, 184 Cal. Rptr. 3d 539, 2015 Cal. App. LEXIS 178 (Cal. App. 2d Dist., Feb. 26, 2015)

Core Terms

customers, franchise, franchise fee, surcharge, charges, taxes, electricity, Ordinance, City's, purposes, ratepayers, local government, value of the franchise, voter approval, negotiations, costs, reasonable relation, courts, rates, requires, incidence, gross receipts, italics, voters, municipality, payor, collected, services, parties, bills

Case Summary

Overview

HOLDINGS: [1]-In a case in which plaintiffs challenged a city's imposition of a 1 percent surcharge on an electric utility's gross receipts from the sale of electricity within the city, the Supreme Court held that to constitute a valid franchise fee under Proposition 218, the amount of the franchise fee must bear a reasonable relationship to the value of the property interests transferred; [2]-Liberally construed, the first amended complaint and the stipulated facts adequately alleged the basis for a claim that the surcharge bore no reasonable relationship to the value of the franchise, and was therefore a tax requiring voter approval under Proposition 218; accordingly, the trial court erred in granting judgment on the pleadings to the city; [3]-However, the facts on which plaintiffs relied in seeking summary adjudication did not establish their claim that the surcharge was a tax.

Outcome

Judgment of court of appeal affirmed in part and reversed in part; case remanded with directions.

LexisNexis® Headnotes

Governments > Local Governments > Finance

HN1[] **Local Governments, Finance**

A charge imposed in exchange for franchise rights is a valid fee rather than a tax only if the amount of the charge is reasonably related to the value of the franchise.

Governments > Local Governments > Finance

Tax Law > State & Local Taxes > Real Property Taxes > Assessment & Valuation

Governments > State & Territorial Governments > Finance

Governments > State & Territorial Governments > Legislatures

HN2[] Local Governments, Finance

State voters have imposed various limitations upon the authority of state and local governments to impose taxes and fees. Proposition 13, which was adopted in 1978, set the assessed value of real property as the full cash value on the owner's 1975-1976 tax bill, limited increases in the assessed value to 2 percent per year unless there was a change in ownership, and limited the rate of taxation on real property to 1 percent of its assessed value. Cal. Const., art. XIII A, §§ 1, 2. In addition, to prevent tax savings related to real property from being offset by increases in state and local taxes, Proposition 13 required approval by two-thirds of the members of the legislature in order to increase state taxes, and required approval by two-thirds of the local electors of a city, county, or special district in order for such a local entity to impose special taxes. Cal. Const., art. XIII A, §§ 3, 4.

Governments > Local Governments > Finance

HN3[] Local Governments, Finance

The term "special taxes" in Cal. Const., art. XIII A, § 4, means taxes which are levied for a specific purpose. In addition, a "special tax" does not include any fee which does not exceed the reasonable cost of providing the service or regulatory activity for which the fee is charged and which is not levied for general revenue purposes. Gov. Code, § 50076.

Governments > Local Governments > Finance

HN4[] Local Governments, Finance

Proposition 62, which added a new article to the California Government Code, Gov. Code, §§ 53720-53730, requires that all new local taxes be approved by a vote of the local electorate.

Governments > Local Governments > Charters

Governments > Local Governments > Finance

HN5[] Local Governments, Charters

Proposition 218 amended the California Constitution to add voter approval requirements for general and special taxes, thereby binding charter jurisdictions. Cal. Const., art. XIII C, §§ 1, 2.

Evidence > Burdens of Proof > Allocation

Governments > Local Governments > Finance

Tax Law > State & Local Taxes > Real Property Taxes > Assessment & Valuation

HN6[] Burdens of Proof, Allocation

Proposition 13 was not intended to limit traditional benefit assessments. It requires an agency proposing an assessment on property to determine the proportionate special benefit to be derived by each parcel subject to the assessment; to support the assessment with an engineer's report; to give written notice to each parcel owner of the amount of the proposed assessment and the basis of the calculation; and to provide each owner with a ballot to vote in favor of or against the proposed assessment. It also requires the agency to hold a public hearing, and bars imposition of the assessment if a majority of parcel owners within the assessment area submit ballots in opposition to the assessment, with each ballot weighted based on the proposed financial obligation of the affected parcel.

In the event legal action is brought contesting an assessment, the agency has the burden to establish that the burdened properties receive a special benefit and the assessment is proportional to the benefits conferred. Cal. Const., art. XIII D, §§ 2, subd. (b).

Constitutional Law > State Constitutional Operation

Evidence > Burdens of Proof > Allocation

Governments > Local Governments > Finance

Tax Law > State & Local Taxes > Real Property Taxes > Assessment & Valuation

HN7[] Constitutional Law, State Constitutional Operation

Proposition 26 amended the California Constitution to provide that for purposes of article XIII C, which addresses voter approval of local taxes, "tax" means any levy, charge, or exaction of any kind imposed by a local government, Cal. Const., art. XIII C, § 1, subd. (e), except (1) a charge imposed for a specific benefit or privilege received only by those charged, which does not exceed its reasonable cost, (2) a charge for a specific government service or product provided directly to the payor and not provided to those not charged, which does not exceed its reasonable cost, (3) charges for reasonable regulatory costs related to the issuance of licenses, permits, investigations, inspections, and audits, and the enforcement of agricultural marketing orders, (4) charges for access to or use, purchase, rental, or lease of local government property, (5) fines for violations of law, (6) charges imposed as a condition of developing property, and (7) property-related assessments and fees as allowed under article XIII D. The local government bears the burden of establishing the exceptions. Cal. Const., art. XIII C, § 1, subd. (e).

Governments > Local Governments > Finance

Tax Law > State & Local Taxes > Real Property Taxes > Assessment & Valuation

HN8[] Local Governments, Finance

If an assessment for improvements provides a special benefit to the assessed properties, then the assessed property owners should pay for the benefit they receive. But if the assessment exceeds the actual cost of the improvement, the exaction is a tax and not an assessment. With respect to costs, Proposition 13's goal of providing effective property tax relief is promoted rather than subverted by shifting costs to those who generate the costs. However, if the charges exceed the reasonable cost of the activity on which they are based, the charges are levied for unrelated revenue purposes, and are therefore taxes.

Governments > Local Governments > Finance

HN9[] Local Governments, Finance

Restricting allowable fees to the reasonable cost or value of the activity with which the charges are associated serves Proposition 13's purpose of limiting taxes. If a state or local governmental agency were allowed to impose charges in excess of the special benefit received by the payor or the cost associated with the payor's activities, the imposition of fees would become a vehicle for generating revenue independent of the purpose of the fees. Therefore, to the extent charges exceed the rationale underlying the charges, they are taxes.

Governments > Public Improvements > Bridges & Roads

Governments > Local Governments > Finance

HN10[] Public Improvements, Bridges & Roads

A franchise to use public streets or rights-of-way is a form of property, and a franchise fee is the purchase price of the franchise. Historically, franchise fees have not been considered taxes. Nothing in Proposition 218 reflects an intent to change the historical characterization of franchise fees, or to limit the authority of government to sell or lease its property and spend the compensation received for whatever purposes it chooses. Cal. Const., arts. XIII A, § 3, subd. (b)(4), XIII C. This understanding that restrictions on taxation do not encompass amounts paid in exchange for property interests is confirmed by Proposition 26, the purpose of which was to reinforce the voter approval requirements set forth in Propositions 13 and 218. Although Proposition 26 strengthened restrictions on taxation by expansively defining "tax" as any levy, charge, or exaction of any kind imposed by a local government, Cal. Const., art. XIII C, § 1, subd. (e), it provided an exception for a charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property. Art. XIII C, § 1, subd. (e)(4).

Governments > Public Improvements > Bridges & Roads

Governments > Local Governments > Finance

HN11[] **Public Improvements, Bridges & Roads**

The Broughton Act's provision that a franchise fee be based on the receipts from the use, operation, or possession of the franchise results in a complicated calculation of franchise fees. Usually, some portion of a utility's rights-of-way are on private property or property outside the jurisdiction of the city or county granting the franchise, and the utility's gross receipts attributable to a particular franchise must be reduced in proportion to the utility's rights-of-way that are not within the franchise agreement. In addition, because gross receipts arise from all of a utility's operative property, such as equipment and warehouses, the portion of gross receipts attributable to property other than the franchise must be excluded from the calculation of the franchise fee. Finally, if a utility also provides service under a constitutional franchise - for example, where it provides artificial light under a constitutional franchise in the same area in which it provides electricity under a franchise agreement entered pursuant to the Broughton Act - the franchise fee applies only to the gross receipts from the provision of services under the nonconstitutional franchise.

Energy & Utilities Law > Regulators > Public Utility Commissions > Authorities & Powers

Energy & Utilities Law > Utility Companies > Rates

HN12[] **Public Utility Commissions, Authorities & Powers**

The California Public Utilities Commission sets the rates of a publicly regulated utility to permit the utility to recover its costs and expenses in providing its service, and to receive a fair return on the value of the property it uses in providing its service. Among a utility's costs and expenses are government fees and taxes.

Energy & Utilities Law > Regulators > Public Utility Commissions > Authorities & Powers

Energy & Utilities Law > Utility Companies > Rates

HN13[] **Public Utility Commissions, Authorities & Powers**

The California Public Utilities Commission has established a procedure by which utilities may obtain approval to impose disproportionate charges on ratepayers within the jurisdiction that imposed the charges. When a local government imposes

taxes or fees which in the aggregate significantly exceed the average aggregate of taxes or fees imposed by the other local governmental entities within the public utility's service territory, a utility may file an advice letter seeking approval to charge local government fee surcharges. Such surcharges shall be included as a separate item or items to bills rendered to applicable customers. Each surcharge shall be identified as being derived from the local governmental entity responsible for it.

Civil Procedure > Appeals > Standards of Review > De Novo Review

Governments > Local Governments > Finance

Civil Procedure > Appeals > Standards of Review > Questions of Fact & Law

HN14[] **Standards of Review, De Novo Review**

Whether a charge is a tax or a fee is a question of law for the appellate courts to decide on independent review of the facts.

Governments > Local Governments > Finance

Governments > Legislation > Interpretation

HN15[] **Local Governments, Finance**

The provisions of Proposition 218 shall be liberally construed to effectuate its purposes of limiting local government revenue and enhancing taxpayer consent.

Governments > Public Improvements > Bridges & Roads

Governments > Local Governments > Finance

HN16[] **Public Improvements, Bridges & Roads**

Sums paid for the right to use a jurisdiction's rights-of-way are fees rather than taxes. But to constitute compensation for the value received, the fees must reflect a reasonable estimate of the value of the franchise.

Governments > Local Governments > Finance

HN17[] **Local Governments, Finance**

In general, taxes are imposed for revenue purposes, rather than in return for a specific benefit conferred or privilege granted. In determining whether a charge is a tax or a fee, a court looks to whether the primary purpose of a charge was to generate revenue. In contrast, a fee paid for an interest in government property is compensation for the use or purchase of a government asset rather than compensation for a cost. Consequently, the revenue generated by the fee is available for whatever purposes the government chooses rather than tied to a public cost. The aspect of the transaction that distinguishes the charge from a tax is the receipt of value in exchange for the payment.

Governments > Local Governments > Finance

HN18[] **Local Governments, Finance**

A franchise fee must be based on the value of the franchise conveyed in order to come within the rationale for its imposition without approval of the voters. Its value may be based on bona fide negotiations concerning the property's value, as well as other indicia of worth. Consistent with the principles that govern other fees, to constitute a valid franchise fee under Proposition 218, the amount of the franchise fee must bear a reasonable relationship to the value of the property interests transferred.

Civil Procedure > Appeals > Standards of Review > De Novo Review

Civil Procedure > ... > Pleadings > Complaints > Requirements for Complaint

Civil Procedure > Judgments > Pretrial Judgments > Judgment on Pleadings

HN19[↓] **Standards of Review, De Novo Review**

A motion for judgment on the pleadings presents the question of whether the plaintiff's complaint states facts sufficient to constitute a cause of action against the defendant. The trial court generally considers only the allegations of the complaint, but may also consider matters that are subject to judicial notice. Moreover, the allegations must be liberally construed with a view to attaining substantial justice among the parties. The court's primary task is to determine whether the facts alleged provide the basis for a cause of action against defendants under any theory. An appellate court independently reviews a trial court's order on such a motion.

Headnotes/Syllabus

Summary

[*248] CALIFORNIA OFFICIAL REPORTS SUMMARY

Plaintiffs filed a class action complaint challenging a city's imposition of a 1 percent surcharge on an electric utility's gross receipts from the sale of electricity within the city. The utility transferred the revenues from the surcharge to the city. The city contended this separate charge was the fee paid by the utility for the privilege of using city property in connection with the delivery of electricity. The superior court granted the city's motion for judgment on the pleadings, concluding that the surcharge was not a tax and therefore was not subject to the voter approval requirements of Prop. 218. (Superior Court of Santa Barbara County, No. 1383959, Thomas Pearce Anderle, Judge.) The Court of Appeal, Second Dist., Div. Six, No. B253474, reversed the trial court's judgment, holding that the surcharge was a tax, and therefore required approval under Prop. 218.

The Supreme Court affirmed the judgment of the Court of Appeal to the extent it reversed the trial court's grant of the city's motion for judgment on the pleadings, reversed the judgment to the extent the Court of Appeal directed the trial court to grant plaintiffs' motion for summary adjudication, and remanded the case with directions. The court held that to constitute a valid franchise fee under Prop. 218, the amount of the franchise fee must bear a reasonable relationship to the value of the property interests transferred. Liberally construed, the first amended complaint and the stipulated facts adequately alleged the basis for a claim that the surcharge bore no reasonable relationship to the value of the franchise, and was therefore a tax requiring voter approval under Prop. 218. Accordingly, the trial court erred in granting judgment on the pleadings to the city. However, the facts on which plaintiffs relied in seeking summary adjudication did not establish their claim that the surcharge was a tax. (Opinion by Cantil-Sakauye, C. J., with Werdegar, Corrigan, Liu, Cuéllar, and Krueger, JJ., concurring. Dissenting opinion by Chin, J. (see p. 274).)

Headnotes

CALIFORNIA OFFICIAL REPORTS HEADNOTES

CA(1)[↓] **(1)**

Municipalities § 96—Franchise Fee—Tax—Reasonable Relationship—Value of Franchise.

A charge imposed in exchange for franchise rights is a valid fee rather than a tax only if the amount of the charge is reasonably related to the value of the franchise.

CA(2)[↓] **(2)**

Taxation § 1—Constitutional Limitations—Voter Approval—Special Taxes.

State voters have imposed various limitations upon the authority of state and local governments to impose taxes and fees. Prop. 13, which was adopted in 1978, set the assessed value of real property as the full cash value on the owner's 1975–1976 tax bill, limited increases in the assessed value to 2 percent per year unless there was a change in ownership, and limited the rate of taxation on real property to 1 percent of its assessed value (Cal. Const., art. XIII A, §§ 1, 2). In addition, to prevent tax savings related to real property from being offset by increases in state and local taxes, Prop. 13 required approval by two-thirds of the members of the Legislature in order to increase state taxes, and required approval by two-thirds of the local electors of a city, county, or special district in order for such a local entity to impose special taxes (Cal. Const., art. XIII A, §§ 3, 4).

CA(3)[] **(3)**

Municipalities § 34—Fiscal Affairs—Special Taxes—Reasonable Cost.

The term "special taxes" in Cal. Const., art. XIII A, § 4, means taxes which are levied for a specific purpose. In addition, a "special tax" does not include any fee which does not exceed the reasonable cost of providing the service or regulatory activity for which the fee is charged and which is not levied for general revenue purposes (Gov. Code, § 50076).

CA(4)[] **(4)**

Municipalities § 34—Fiscal Affairs—New Taxes—Voter Approval.

Prop. 62 requires that all new local taxes be approved by a vote of the local electorate.

CA(5)[] **(5)**

Municipalities § 34—Fiscal Affairs—General and Special Taxes—Voter Approval—Charter Jurisdictions.

Prop. 218 amended the California Constitution to add voter approval requirements for general and special taxes, thereby binding charter jurisdictions (Cal. Const., art. XIII C, §§ 1, 2).

CA(6)[] **(6)**

Taxation § 1—Assessment on Property—Special Benefit.

Prop. 13 was not intended to limit traditional benefit assessments. It requires an agency proposing an assessment on property to determine the proportionate special benefit to be derived by each parcel subject to the **[*250]** assessment; to support the assessment with an engineer's report; to give written notice to each parcel owner of the amount of the proposed assessment and the basis of the calculation; and to provide each owner with a ballot to vote in favor of or against the proposed assessment. It also requires the agency to hold a public hearing, and bars imposition of the assessment if a majority of parcel owners within the assessment area submit ballots in opposition to the assessment, with each ballot weighted based on the proposed financial obligation of the affected parcel. In the event legal action is brought contesting an assessment, the agency has the burden to establish that the burdened properties receive a special benefit and the assessment is proportional to the benefits conferred (Cal. Const., art. XIII D, §§ 2, subd. (b), 4).

CA(7)[] **(7)**

Municipalities § 34—Fiscal Affairs—Local Taxes—Voter Approval—Specific Benefit—Reasonable Cost.

Prop. 26 amended the California Constitution to

provide that for purposes of article XIII C, which addresses voter approval of local taxes, "tax" means any levy, charge, or exaction of any kind imposed by a local government (Cal. Const., art. XIII C, § 1, subd. (e)), except (1) a charge imposed for a specific benefit or privilege received only by those charged, which does not exceed its reasonable cost, (2) a charge for a specific government service or product provided directly to the payor and not provided to those not charged, which does not exceed its reasonable cost, (3) charges for reasonable regulatory costs related to the issuance of licenses, permits, investigations, inspections, and audits, and the enforcement of agricultural marketing orders, (4) charges for access to or use, purchase, rental, or lease of local government property, (5) fines for violations of law, (6) charges imposed as a condition of developing property, and (7) property-related assessments and fees as allowed under article XIII D. The local government bears the burden of establishing the exceptions (Cal. Const., art. XIII C, § 1, subd. (e)).

CA(8)[] **(8)**

Taxation § 1—Assessment on Property—Special Benefit—Reasonable Cost.

If an assessment for improvements provides a special benefit to the assessed properties, then the assessed property owners should pay for the benefit they receive. But if the assessment exceeds the actual cost of the improvement, the exaction is a tax and not an assessment. With respect to costs, Prop. 13's goal of providing effective property tax relief is promoted rather than subverted by shifting costs to those who generate the costs. However, if the charges exceed the reasonable cost of the activity on which they are based, the charges are levied for unrelated revenue purposes, and are therefore taxes.

CA(9)[] **(9)**

Taxation § 1—Special Benefit—Reasonable Cost—Payor's Activities.

Restricting allowable fees to the reasonable cost or value of the activity **[*251]** with which the charges are associated serves Prop. 13's purpose of limiting taxes. If a state or local governmental agency were allowed to impose charges in excess of the special benefit received by the payor or the cost associated with the payor's activities, the imposition of fees would become a vehicle for generating revenue independent of the purpose of the fees. Therefore, to the extent charges exceed the rationale underlying the charges, they are taxes.

CA(10)[] **(10)**

Municipalities § 96—Franchise Fee—Use of Rights-of-way.

A franchise to use public streets or rights-of-way is a form of property, and a franchise fee is the purchase price of the franchise. Historically, franchise fees have not been considered taxes. Nothing in Prop. 218 reflects an intent to change the historical characterization of franchise fees, or to limit the authority of government to sell or lease its property and spend the compensation received for whatever purposes it chooses (Cal. Const., arts. XIII A, § 3, subd. (b)(4), XIII C). This understanding that restrictions on taxation do not encompass amounts paid in exchange for property interests is confirmed by Prop. 26, the purpose of which was to reinforce the voter approval requirements set forth in Props. 13 and 218. Although Prop. 26 strengthened restrictions on taxation by expansively defining "tax" as any levy, charge, or exaction of any kind imposed by a local government (Cal. Const., art. XIII C, § 1, subd. (e)), it provided an exception for a charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property (Art. XIII C, § 1, subd. (e)(4)).

CA(11)[] **(11)**

Municipalities § 96—Franchise Fee—Calculation—Gross Receipts.

The Broughton Act's (Pub. Util. Code, § 6001 et seq.) provision that a franchise fee be based on the receipts from the use, operation, or possession of the franchise results in a complicated calculation of franchise fees. Usually, some portion of a utility's rights-of-way are on private property or property outside the jurisdiction of the city or county granting the franchise, and the utility's gross receipts attributable to a particular franchise must be reduced in proportion to the utility's rights-of-way that are not within the franchise agreement. In addition, because gross receipts arise from all of a utility's operative property, such as equipment and warehouses, the portion of gross receipts attributable to property other than the franchise must be excluded from the calculation of the franchise fee. Finally, if a utility also provides service under a constitutional franchise—for example, where it provides artificial light under a constitutional franchise in the same area in which it provides electricity under a franchise agreement entered pursuant to the Broughton Act—the franchise fee applies only to the gross receipts from the provision of services under the nonconstitutional franchise.

CA(12)[] **(12)**

Public Utilities § 9—Public Utilities Commission—Rates—Costs and Expenses.

The Public Utilities Commission sets the rates of a publicly regulated utility to permit the utility to recover its costs and expenses in providing its service, and to receive a fair return on the value of the property it uses in providing its service. Among a utility's costs and expenses are government fees and taxes.

CA(13)[] **(13)**

Public Utilities § 9—Public Utilities Commission—Rates—Surcharge.

The Public Utilities Commission has established a procedure by which utilities may obtain approval to impose disproportionate charges on ratepayers within the jurisdiction that imposed the charges. When a local government imposes taxes or fees which in the aggregate significantly exceed the average aggregate of taxes or fees imposed by the other local governmental entities within the public utility's service territory, a utility may file an advice letter seeking approval to charge local government fee surcharges. Such surcharges must be included as a separate item or items to bills rendered to applicable customers. Each surcharge must be identified as being derived from the local governmental entity responsible for it.

CA(14)[] **(14)**

Municipalities § 34—Fiscal Affairs—Taxes—Proposition 218—Liberal Construction.

The provisions of Prop. 218 must be liberally construed to effectuate its purposes of limiting local government revenue and enhancing taxpayer consent.

CA(15)[] **(15)**

Municipalities § 96—Franchise Fee—Use of Rights-of-way—Value of Franchise.

Sums paid for the right to use a jurisdiction's rights-of-way are fees rather than taxes. But to constitute compensation for the value received, the fees must reflect a reasonable estimate of the value of the franchise.

CA(16)[] **(16)**

Municipalities § 34—Fiscal Affairs—Taxes—Revenue Purposes—Fee.

In general, taxes are imposed for revenue purposes, rather than in return for a specific benefit conferred or privilege granted. In determining whether a charge is a tax or a fee, a court looks to whether the

primary purpose of a charge was to generate revenue. In contrast, a fee paid for an interest in government property is compensation for the use or purchase of a government asset rather than compensation for a cost. Consequently, the revenue generated by the fee is available for whatever purposes the government chooses rather than tied to a public cost. The aspect of the transaction that distinguishes the charge from a tax is the receipt of value in exchange for the payment.

CA(17)[] **(17)**

Municipalities § 96—Franchise Fee—Tax—Voter Approval—Reasonable Relationship—Value of Franchise.

A franchise fee must be based on the value of the franchise conveyed in order to come within the rationale for its imposition without approval of the voters. Its value may be based on bona fide negotiations concerning the property's value, as well as other indicia of worth. Consistent with the principles that govern other fees, to constitute a valid franchise fee under Prop. 218, the amount of the franchise fee must bear a reasonable relationship to the value of the property interests transferred.

CA(18)[] **(18)**

Municipalities § 34—Fiscal Affairs—Tax—Surcharge—Sale of Electricity—Reasonable Relationship—Value of Franchise—Voter Approval.

In a case in which plaintiffs challenged a city's imposition of a 1 percent surcharge on an electric utility's gross receipts from the sale of electricity within the city, the first amended complaint and the stipulated facts adequately alleged the basis for a claim that the surcharge bore no reasonable relationship to the value of the franchise, and was therefore a tax requiring voter approval under Prop. 218. Accordingly, the trial court erred in granting judgment on the pleadings to the city.

[Cal. Forms of Pleading and Practice (2017) ch. 540, Taxes and Assessments, § 540.131; 9 Witkin, Summary of Cal. Law (10th ed. 2005) Taxation, § 1.]

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Ariel Pierre Calonne, City Attorney, Tom R. Shapiro, Assistant City Attorney; Colantuono, Highsmith & Whatley, Michael G. Colantuono, Ryan Thomas Dunn, Leonard P. Aslanian; Jarvis, Fay, Doporto & Gibson, Benjamin P. Fay, Rick W. Jarvis and Andrea Saltzman for Defendant and Respondent.

Hanson Bridgett, Adam W. Hofmann and Caroline E. Lee for League of California Cities as Amicus Curiae on behalf of Defendant and Respondent.

Judges: Opinion by Cantil-Sakauye, C. J., with Werdegar, Corrigan, Liu, Cuéllar, and Kruger, JJ., concurring. Dissenting Opinion by Chin, J.

Opinion by: Cantil-Sakauye

Opinion

[*254]

[212] [***862] CANTIL-SAKAUYE, C. J.**—Pursuant to an agreement between Southern California Edison (SCE) and defendant City of Santa Barbara (the City), SCE includes on its electricity **[****2]** bills to customers within the City a separate charge equal to 1 percent of SCE's gross receipts from the sale of electricity within the City, and transfers the revenues to the City. The City contends this separate charge, together with

another charge equal to 1 percent of SCE's gross receipts that SCE includes in its electricity rates, is the fee paid by SCE for the privilege of using City property in connection with the delivery of electricity. Plaintiffs Rolland **[**213]** Jacks and Rove Enterprises, Inc., contend the 1 percent charge that is separately stated on electricity bills is not compensation for the privilege of using City property, but is instead a tax imposed without voter approval, in violation of Proposition 218. (Cal. Const., art. XIII C, § 2, added by Prop. 218.)

As we explain below, the right to use public streets or rights-of-way is a property interest, and Proposition 218 does not limit the authority of government to sell or lease its property and spend the compensation it receives for whatever purposes it chooses. Therefore, charges that constitute compensation for the use of government property are not subject to Proposition 218's voter approval requirements. To constitute compensation for a property **[****3]** interest, however, the amount of the charge must bear a reasonable relationship to the value of the property interest; to the extent the charge exceeds any reasonable value of the interest, it is a tax and therefore requires voter approval.

The litigation below did not address whether the charges bear a reasonable relationship to the value of the property interests. Therefore, we affirm the judgment of the Court of Appeal to the extent it reversed the trial court's grant of the City's motion for judgment on the pleadings, but we reverse the Court of Appeal's order that the trial court grant summary adjudication to plaintiffs.

[***863] I. FACTS

The parties stipulated to the following facts in the trial court. Beginning in 1959, the City and SCE entered into a series of franchise agreements granting SCE the privilege to construct and use equipment along, over, and under the City's streets to distribute electricity. [1] At issue in this case is an agreement **[*255]** the City and SCE began negotiating in 1994, when their 1984 agreement was about to expire. The 1984 agreement required SCE to pay to the City a fee equal to 1 percent of the gross annual receipts from SCE's sale of electricity within the City in **[****4]** exchange for the franchise granted by the City. During the course of extended negotiations regarding a new agreement, the City and SCE extended the terms of the 1984 agreement five times, from September 1995 to December 1999.

In the negotiations for a long-term agreement, the City pursued a fee equal to 2 percent of SCE's gross annual receipts from the sale of electricity within the City. At some point in the negotiations, SCE proposed that it would remit to the City as a franchise fee 2 percent of its gross receipts if the Public Utilities Commission (PUC) consented to SCE's inclusion of the additional 1 percent as a surcharge on its bills to customers. Based on SCE's proposal, the City and SCE tentatively agreed to a 30-year agreement that included the provisions for payment of 2 percent of gross receipts. Following notice and a hearing, the City Council of Santa Barbara adopted the agreement as City Ordinance No. 5135 on December 7, 1999, with a term beginning on January 1, 2000 (the 1999 agreement). The ordinance was not submitted to the voters for their approval.

The 1999 agreement divides its 30-year period into two terms. The first two years **[****5]** were the "initial term," during which SCE was required to pay the City an "initial term fee" equal to 1 percent of its gross receipts from the sale of electricity

[1] A franchise is a privilege granted by the government to a particular individual or entity rather than to all as a common right. A utility franchise is a privilege to use public streets or rights-of-way in connection with the utility's provision of services to residents within the governmental entity's jurisdiction. (***Spring Valley W. W. v. Schottler* (1882) 62 Cal. 69, 106–108**; ***Santa Barbara County Taxpayer Assn. v. Board of Supervisors* (1989) 209 Cal.App.3d 940, 949 [257 Cal.Rptr. 615]** (*Santa Barbara County Taxpayer Assn.*); 12 McQuillin, The Law of Municipal Corporations (3d ed. 2017) § 34.2, p. 15.)

within the City. The subsequent 28 years are the "extension term," during which SCE is to pay the additional 1 percent charge on its gross receipts, denominated the "recovery portion," for a total "extension term fee" of 2 percent of SCE's gross receipts from the sale of electricity within the City. At issue in this case is the recovery portion, which we, like the parties, refer to as the surcharge.

[214]** The agreement required SCE to apply to the PUC by April 1, 2001, for approval to include the surcharge on its bills to ratepayers within the City, and to use its best efforts to obtain PUC approval by April 1, 2002. Approval was to be sought in accordance with the PUC's "Re Guidelines for the Equitable Treatment of Revenue-Producing Mechanisms Imposed by Local Government Entities on Public Utilities." (*Investigation on the Commission's Own Motion To Establish Guidelines for the Equitable Treatment of Revenue-producing Mechanisms Imposed by Local Government Entities on Public Utilities* (1989) 32 Cal.P.U.C.2d 60, 63 **[****6]** (*PUC Investigation*).) The agreement further provided that, in **[***864]** the event the PUC did not give its approval by the end of the initial term, either party could terminate the agreement. Thereafter, **[*256]** the City agreed to delay the time within which SCE was required to seek approval from the PUC, but SCE eventually obtained PUC approval, and began billing its customers within the City for the full extension term fee in November 2005.

The agreement provided that half of the revenues generated by the surcharge were to be allocated to the City's general fund and half to a City undergrounding projects fund. In November 2009, however, the City Council decided to reallocate the revenues from the surcharge, directing that all of the funds be placed in the City's general fund without any limitation on the use of these funds.

In 2011, plaintiffs filed a class action complaint challenging the surcharge. In their first amended complaint, they alleged the surcharge was an illegal tax under Proposition 218, which requires voter approval for all local taxes. (Cal. Const., art. XIII C.) Plaintiffs sought refunds of the charges collected, as well as declaratory relief and injunctive relief requiring the City to discontinue collection **[****7]** of the surcharge.

On cross-motions for summary adjudication and the City's motion for summary judgment, the trial court ruled that a franchise fee is not a tax under Proposition 218. Its ruling was based largely on *Santa Barbara County Taxpayer Assn., supra*, 209 Cal.App.3d 940, which held that franchise fees are not "proceeds of taxes" for purposes of calculating limits on state and local appropriations under article XIII B of the California Constitution. Notwithstanding this ruling, the trial court denied the motions, based on its view that Proposition 26, which was approved by the voters in 2010, retroactively altered the definition of a tax under Proposition 218 to encompass franchise fees. Therefore, the court concluded, the City had failed to establish that the surcharge did not violate Proposition 218 during the period *after* Proposition 26 was adopted in 2010.

Thereafter, the City moved for judgment on the pleadings, contending that Proposition 26 does not apply retroactively to the surcharge. The trial court agreed, citing *Brooktrails Township Community Services Dist. v. Board of Supervisors of Mendocino County* (2013) 218 Cal.App.4th 195 [159 Cal. Rptr. 3d 424], which held that Proposition 26 does not apply retroactively. Based on its earlier conclusion that the surcharge, as a franchise fee, was not a tax under Proposition 218 (see *Santa Barbara County Taxpayer Assn., supra*, 209 Cal.App.3d 940), and its additional conclusion that a franchise fee, as negotiated compensation, need **[****8]** not be based on the government's costs, the trial court ruled that the surcharge was not subject to the voter approval requirements of Proposition 218. Therefore, it granted the City's motion for judgment on the pleadings.
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The Court of Appeal reversed the judgment. It

looked to our opinion in *Sinclair Paint Co. v. State Bd. of Equalization* (1997) 15 Cal.4th 866 [64 Cal. Rptr. 2d 447, 937 P.2d 1350] (*Sinclair Paint*), which considered whether a charge imposed by the state on those engaged in the stream of commerce of lead-containing products was a tax or a fee under Proposition 13, an earlier voter initiative that requires voter approval of various taxes. (Cal. Const., art. XIII A.) Noting that our analysis in *Sinclair Paint* focused on whether the primary **[***865]** purpose of the charge was to raise revenue or to regulate those charged, the Court of Appeal considered whether the primary purpose of the surcharge is to raise revenue or to compensate the City for allowing SCE to use its streets **[**215]** and rights-of-way. Based on its conclusion that the surcharge's "primary purpose is for the City to raise revenue from electricity users for general spending purposes rather than for SCE to obtain the right-of-way to provide electricity," the Court of Appeal held that the surcharge is a tax, and therefore requires voter approval under **[****9]** Proposition 218. (Cal. Const., art. XIII C, § 2, subd. (b).)

We granted review to address whether the surcharge is a tax subject to Proposition 218's voter approval requirement, or a fee that may be imposed by the City without voter consent.

II. DISCUSSION

CA(1)[↑] **(1)** Over the past four decades, California voters have repeatedly expanded voter approval requirements for the imposition of taxes and assessments. These voter initiatives have not, however, required voter approval of certain charges related to a special benefit received by the payor or certain costs associated with an activity of the payor. Whether the surcharge required voter approval hinges on whether it is a valid charge under the principles that exclude certain charges from voter approval requirements. Our evaluation of this issue begins with a review of four voter initiatives that require voter approval of taxes, and the legal principles underlying the exclusion of certain charges from the initiatives' requirements. We then describe the historical characteristics of franchise fees, the Legislature's history of regulating the calculation of franchise fees, and the PUC's requirements concerning the imposition of franchise fees that exceed the average charges imposed by other **[****10]** local governments in the utility's service area. Finally, we analyze whether the surcharge is a valid franchise fee or a tax, and we hold that HN1[↑] a charge imposed in exchange for franchise rights is a valid fee rather than a tax only if the amount of the charge is reasonably related to the value of the franchise. **[*258]**

A. *Restrictions on Taxes and Other Charges*

1. *Voter Initiatives*

CA(2)[↑] **(2)** Beginning in 1978, HN2[↑] state voters have imposed various limitations upon the authority of state and local governments to impose taxes and fees. Proposition 13, which was adopted that year, set the assessed value of real property as the "full cash value" on the owner's 1975–1976 tax bill, limited increases in the assessed value to 2 percent per year unless there was a change in ownership, and limited the rate of taxation on real property to 1 percent of its assessed value. (Cal. Const., art. XIII A, §§ 1, 2.) In addition, to prevent tax savings related to real property from being offset by increases in state and local taxes, Proposition 13 required approval by two-thirds of the members of the Legislature in order to increase state taxes, and required approval by two-thirds of the local electors of a city, county, or special district in order for such **[****11]** a local entity to impose special taxes. (Cal. Const., art. XIII A, §§ 3, 4; *Sinclair Paint, supra*, 15 Cal.4th at p. 872; *Amador Valley Joint Union High Sch. Dist. v. State Bd. of Equalization* (1978) 22 Cal.3d 208, 231 [149 Cal. Rptr. 239, 583 P.2d 1281] (*Amador Valley*).)

CA(3)[↑] **(3)** Proposition 13 did not define "special taxes," but this court addressed the initiative's **[***866]** restrictions on such taxes in

two early cases. In *Los Angeles County Transportation Com. v. Richmond* (1982) 31 Cal.3d 197 [182 Cal. Rptr. 324, 643 P.2d 941], we held that the requirement that "special districts" obtain two-thirds voter approval for special taxes applied only to those special districts empowered to levy property taxes. (*Id.* at p. 207.) In *City and County of San Francisco v. Farrell* (1982) 32 Cal.3d 47 [184 Cal. Rptr. 713, 648 P.2d 935] (*Farrell*), "we construe[d] HN3[↑] the term 'special taxes' in section 4 [of article XIII A] to mean taxes which are levied for a specific purpose." (*Id.* at p. 57.) In addition, the Legislature provided that "'special tax' shall not include any fee which does not exceed the reasonable cost of providing the service or regulatory activity for which the fee is charged and which is not levied for general revenue purposes." (Gov. Code, § 50076.)

CA(4)[↑] **(4)** Thereafter, in 1986, the voters approved HN4[↑] Proposition 62, which "added a new article to the Government Code (§§ 53720–53730) requiring **[**216]** that all new local taxes be approved by a vote of the local electorate." (*Santa Clara County Local Transportation Authority v. Guardino* (1995) 11 Cal.4th 220, 231 [45 Cal. Rptr. 2d 207, 902 P.2d 225], fn. omitted.) The initiative embraced the definition of special taxes set forth in *Farrell*, *supra*, 32 Cal.3d 47 (Gov. Code, § 53721; see *Guardino*, at p. 232), but applied its voter approval requirements to any district rather than only to special districts, and defined "district" **[****12]** broadly. (Gov. Code, § 53720, subd. (b) ["'district' means an agency of the state, formed ... for the local performance of governmental **[*259]** or proprietary functions within limited boundaries"].) By the time Proposition 62 was proposed, courts as well as the Legislature had recognized that various fees were not taxes for purposes of Proposition 13 (see *Beaumont Investors v. Beaumont-Cherry Valley Water Dist.* (1985) 165 Cal.App.3d 227 [211 Cal. Rptr. 567]; *Mills v. County of Trinity* (1980) 108 Cal.App.3d 656 [166 Cal. Rptr. 674]), but Proposition 62 was silent with respect to the imposition of fees.

CA(5)[↑] **(5)** Next, in 1996, state voters approved Proposition 218, known as the "Right to Vote on Taxes Act." (*Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 835 [102 Cal. Rptr. 2d 719, 14 P.3d 930] (*Apartment Assn.*).) Proposition 218 addressed two principal concerns. First, it was not clear whether Proposition 62, which enacted statutory provisions, bound charter jurisdictions. [2] (*Howard Jarvis Taxpayers Assn. v. City of San Diego* (2004) 120 Cal.App.4th 374, 390–391 [15 Cal. Rptr. 3d 457].) Therefore, HN5[↑] Proposition 218 amended the Constitution to add voter approval requirements for general and special taxes, thereby binding charter jurisdictions. (Cal. Const., art. XIII C, §§ 1, 2.)

CA(6)[↑] **(6)** Second, HN6[↑] Proposition 13 was "not intended to limit 'traditional' benefit assessments." (*Knox v. City of Orland* (1992) 4 Cal.4th 132, 141 [14 Cal. Rptr. 2d 159, 841 P.2d 144] (*Knox*) [upholding property-based assessments for public landscaping and lighting improvements].) Proposition 218 **[***867]** was adopted in part to address *Knox*'s holding. (*Greene v. Marin County Flood Control & Water Conservation Dist.* (2010) 49 Cal.4th 277, 284 [109 Cal. Rptr. 3d 620, 231 P.3d 350].) It requires an agency proposing an assessment on property to determine the proportionate special **[****13]** benefit to be derived by each parcel subject to the assessment; to support the assessment with an engineer's report; to give written notice to each parcel owner of the amount of the proposed assessment and the basis of the calculation; and to provide each owner with a ballot to vote in favor of or against the proposed assessment. It also requires the agency to hold a public hearing, and bars imposition of the assessment if a majority of parcel

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[2] "For its own government, a county or city may adopt a charter by majority vote of its electors voting on the question." (Cal. Const., art. XI, § 3, subd. (a).) County charters "supersede ... all laws inconsistent therewith" (*ibid.*), and city charters supersede all inconsistent laws "with respect to municipal affairs." (*Id.*, § 5, subd. (a); see ***Johnson v. Bradley* (1992) 4 Cal.4th 389, 394–400 [14 Cal. Rptr. 2d 470, 841 P.2d 990]**.)

owners within the assessment area submit ballots in opposition to the assessment, with each ballot weighted based on the proposed financial obligation of the affected parcel. In the event legal action is brought contesting an assessment, the agency has the burden to establish that the burdened properties receive a **[*260]** special benefit and the assessment is proportional to the benefits conferred. (Cal. Const., art. XIII D, §§ 2, subd. (b), 4; see *Apartment Assn., supra*, 24 Cal.4th 830.) [3]

[217]** CA(7)[↑] **(7)** Most recently, in 2010, after the charge at issue in this case was adopted, state voters approved Proposition 26. HN7[↑] That measure amended the Constitution to provide that for purposes of article XIII C, which addresses voter approval of local taxes, " 'tax' means any levy, charge, or exaction of any kind imposed by a local government" (Cal. Const., art. XIII C, § 1, subd. (e)), *except **[****14]*** (1) a charge imposed for a specific benefit or privilege received only by those charged, which does not exceed its reasonable cost, (2) a charge for a specific government service or product provided directly to the payor and not provided to those not charged, which does not exceed its reasonable cost, (3) charges for reasonable regulatory costs related to the issuance of licenses, permits, investigations, inspections, and audits, and the enforcement of agricultural marketing orders, (4) charges for access to or use, purchase, rental, or lease of local government property, (5) fines for violations of law, (6) charges imposed as a condition of developing property, and (7) property-related assessments and fees as allowed under article XIII D. The local government bears the burden of establishing the exceptions. (Cal. Const., art. XIII C, § 1, subd. (e).) [4]

2. *Characteristics of Valid Fees*

As noted above, following the enactment of Proposition 13, the Legislature and courts viewed various fees as outside the **[***868]** scope of the initiative. (Gov. Code, § 50076; *Evans v. City of San Jose* (1992) 3 Cal.App.4th 728, 736–737 [4 Cal. Rptr. 2d 601] (*Evans*), and cases cited therein.) In *Sinclair Paint, supra*, 15 Cal.4th 866, we summarized three categories of charges that are fees rather than taxes, and therefore are not subject to the voter approval requirements of Proposition **[****15]** 13. First, special assessments may be imposed "in amounts reasonably reflecting the value of the benefits conferred by improvements." (*Sinclair Paint*, at p. 874.) Second, development fees, which are **[*261]** charged for building permits and other privileges, are not considered taxes "if the amount of the fees bears a reasonable relation to the development's probable costs to the community and benefits to the developer." (*Id.* at p. 875.) Third, regulatory fees are imposed under the police power to pay for the reasonable cost of regulatory activities. (*Id.* at pp. 875–876.)

CA(8)[↑] **(8)** The commonality among these categories of charges is the relationship between the charge imposed and a benefit or cost related to the payor. With respect to charges for benefits received, we explained in *Knox, supra*, 4 Cal.4th 132, that HN8[↑] "if an assessment for ... improvements provides a special benefit to the assessed properties, then the assessed property owners should pay for the benefit they receive." (*Id.* at p. 142; see *Evans, supra*, 3 Cal.App.4th at p. 738 [when a "discrete group is specially benefitted

[3] Proposition 218 also imposed restrictions on the imposition of fees and charges for property-related services, such as sewer and water services, but provided that "fees for the provision of electrical or gas service shall not be deemed charges or fees imposed as an incident of property ownership." (Cal. Const., art. XIII D, § 3, subd. (b); *id.*, § 6; see ***Silicon Valley Taxpayers' Assn., Inc. v. Santa Clara County Open Space Authority* (2008) 44 Cal.4th 431, 443 [79 Cal. Rptr. 3d 312, 187 P.3d 37]**.) Based on its conclusion that the charges imposed by the 1999 agreement are compensation for the franchise rights conveyed to SCE, the trial court further concluded the charges are for the provision of electrical service, and therefore are not imposed as an incident of property ownership. Plaintiffs do not contend on appeal that the surcharge is a property-related fee.

[4] Plaintiffs and the City both view Proposition 26 as confirming their view of the law before Proposition 26 was enacted, but no party contends that it applies to the charges in this case, which were imposed prior to the enactment of Proposition 26.

... [, t]he public should not be required to finance an expenditure through taxation which benefits only a small segment of the population"].) But "if the assessment exceeds the actual cost of the improvement, the exaction is a **[****16]** tax and not an assessment." (*Knox*, at p. 142, fn. 15.) With respect to costs, we explained in *Sinclair Paint, supra*, 15 Cal.4th 866, 879, that Proposition 13's goal of providing effective property tax relief is promoted rather than subverted by shifting costs to those who generate the costs. (See *San Diego Gas & Electric Co. v. San Diego County Air Pollution Control Dist.* (1988) 203 Cal.App.3d 1132, 1148 [250 Cal. Rptr. 420].) However, if the charges exceed the reasonable cost of the activity on which they are based, the charges are levied for unrelated revenue purposes, and are therefore taxes. (*Sinclair Paint*, at pp. 874, 881.)

CA(9)[↑] **(9)** In sum, HN9[↑] restricting allowable fees to the reasonable cost or value of the activity with which the charges are associated serves **[**218]** Proposition 13's purpose of limiting taxes. (See *Amador Valley, supra*, 22 Cal.3d at p. 231 [Prop. 13's restrictions on real property taxes "could be withdrawn or depleted by additional or increased state or local levies of other than property taxes"].) If a state or local governmental agency were allowed to impose charges in excess of the special benefit received by the payor or the cost associated with the payor's activities, the imposition of fees would become a vehicle for generating revenue independent of the purpose of the fees. Therefore, to the extent charges exceed the rationale underlying the charges, they are taxes.

Although *Sinclair Paint, supra*, 15 Cal.4th 866, focused on restrictions imposed by Proposition 13, its analysis **[****17]** of the characteristics of fees that may be imposed without voter approval remains sound. According **[***869]** to Proposition 218's findings and declarations, "Proposition 13 was intended to provide effective tax relief and to require voter approval of tax increases. However, local governments have subjected taxpayers to *excessive* tax, assessment, fee **[*262]** and charge increases that ... frustrate the purposes of voter approval for tax increases ... ." (Prop. 218, § 2, reprinted at Historical Notes, 2B West's Ann. Cal. Const. (2013) foll. art. XIII C, § 1, p. 363, italics added.) As relevant here, this finding reflects a concern with excessive fees, not fees in general. In addition, although Proposition 218 imposed additional restrictions on the imposition of assessments, that initiative did not impose additional restrictions on other fees. (Cal. Const., arts. XIII C, §§ 1, 2, XIII D, § 4.) Finally, *Sinclair Paint*'s understanding of fees as charges reasonably related to specific costs or benefits is reflected in Proposition 26, which exempted from its expansive definition of tax (1) charges imposed for a specific benefit or privilege which do not exceed its reasonable cost, (2) charges for a specific government service or product provided which do not exceed **[****18]** its reasonable cost, and (3) charges for reasonable regulatory costs related to specified regulatory activities. [5] (Cal. Const., art. XIII C, § 1, subd. (e).)

To determine how franchise fees fit within these principles, we next consider the nature of franchise fees. We also describe the regulatory framework related to their calculation and imposition.

B. *Franchise Fees*

1. *Nature of Franchise Fees*

HN10[↑] CA(10)[↑] **(10)** A franchise to use public streets or rights-of-way is a form of property (*Stockton Gas etc. Co. v. San Joaquin Co.* (1905) 148 Cal. 313, 319 [83 P. 54]), and a franchise fee is the purchase price of the franchise. (*City & Co. of S. F. v. Market St. Ry. Co.* (1937) 9 Cal.2d 743, 749 [73 P.2d 234].) Historically, franchise fees have not been considered taxes. (See *County of Tulare v. City of Dinuba* (1922) 188 Cal. 664, 670 [206 P.

[5] Proposition 26's description of valid charges based on regulatory costs does not mirror our discussion of such costs in ***Sinclair Paint, supra*, 15 Cal.4th 866**. (See Cal. Const., art. XIII C, § 1, subd. (e)(3).) We express no opinion on the breadth of the regulatory costs that Proposition 26 allows to be imposed without voter approval.

983] [franchise fee based on gross receipts of utility is not a tax]; *City & Co. of S. F. v. Market St. Ry. Co.*, *supra*, 9 Cal.2d at p. 749 [payments for franchises are not taxes]; *Santa Barbara County Taxpayer Assn., supra*, 209 Cal.App.3d 940, 949–950 [franchise fees are not proceeds of taxes].) Nothing in Proposition 218 reflects an intent to change the historical characterization of franchise fees, or to limit the authority of government to sell or lease its property and spend the compensation received for whatever purposes it chooses. (See Cal. Const., arts. XIII A, § 3, subd. (b)(4), XIII C.)

This understanding that restrictions on taxation do not encompass amounts paid in exchange for property interests is confirmed by Proposition 26, the **[*263]** purpose of which was to *reinforce* the voter approval requirements set forth in **[****19]** Propositions 13 and 218. (Prop. 26, § 1, subd. (f), Historical Notes, reprinted at 2B West's Ann. Cal. Const., *supra*, foll. art. XIII A, § 3, p. 297 ["'to ensure the effectiveness of these constitutional limitations, [Proposition 26] defines a "tax" ... so that neither the Legislature nor local governments can circumvent these restrictions on **[**219]** increasing taxes by simply defining new or expanded taxes as "fees"'"].) Although Proposition 26 **[***870]** strengthened restrictions on taxation by expansively defining "tax" as "any levy, charge, or exaction of any kind imposed by a local government" (Cal. Const., art. XIII C, § 1, subd. (e)), it provided an exception for "[a] charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property." (*Id.*, subd. (e)(4).) [6]

2. *Laws Governing the Calculation of Franchise Fees*

The Legislature has taken several approaches to the issue of the amount of compensation to be paid to local jurisdictions in exchange for rights-of-way over the jurisdictions' land relating to the provision of services such as electricity. As described more fully below, it initially barred the imposition of franchise fees due to perceived abuses by local governments. Thereafter, it authorized local agencies to grant franchises, **[****20]** and established two formulas with which to calculate franchise fees. These formulas do not bind charter jurisdictions, such as the City, but they provide helpful background to the PUC's regulation of charges imposed on ratepayers.

The California Constitution as adopted in 1879 provided that "[i]n any city where there are no public works owned and controlled by the municipality for the supplying the same with water or artificial light, any individual, or any company duly incorporated for such purpose ... , shall ... have the privilege of using the public streets and thoroughfares thereof, and of laying down pipes and conduits therein, and connections therewith, so far as may be necessary for introducing into and supplying such city and its inhabitants either with gaslight or other illuminating light, or with fresh water for domestic and all other purposes, upon the condition that the municipal government shall have the right to regulate the charges thereof." (Cal. Const., former art. XI, § 19.) The provision was intended to prevent a municipality from creating a monopoly within its jurisdiction by imposing burdens on parties who wanted to compete with an existing private utility. Although **[****21]** cities could not impose franchise fees on these "constitutional franchises," they were authorized to tax a franchise on the basis that a franchise constitutes real property within the city. (*Stockton Gas etc. Co. v. San Joaquin [*264] Co., supra*, 148 Cal. at pp. 315–321; *City of Santa Cruz v. Pacific Gas & Electric Co.* (2000) 82 Cal.App.4th 1167 [1171, 99 Cal. Rptr. 2d 198].) In 1911, this constitutional provision was replaced with a provision that authorized the private establishment of public works for providing services such as light, water, and power "upon such conditions and under such regulations as the municipality may prescribe under its organic law." (Sen. Const. Amend. No.

[6] We are concerned only with the validity of the surcharge under Proposition 218. Proposition 26's exception from its definition of "tax" with respect to local government property is not before us. (See Cal. Const., art. XIII C, § 1, subd. (e)(4).)

49, Stats. 1911 (1911 Reg. Sess.) res. ch. 67, p. 2180.) The constitutional amendment did not impair rights under existing constitutional franchises. (*Russell v. Sebastian* (1914) 233 U.S. 195, 210 [58 L.Ed. 912, 34 S.Ct. 517].)

In the meantime, in 1905, the Legislature enacted the Broughton Act (Pub. Util. Code, § 6001 et seq.), which authorized cities and counties to enter franchise agreements for the provision of electricity and various other services not encompassed by the constitutional restrictions **[***871]** on franchise fees. (Stats. 1905, ch. 578, p. 777; *County of Alameda v. Pacific Gas & Electric Co.* (1997) 51 Cal.App.4th 1691, 1694–1695 [60 Cal. Rptr. 2d 187] (*County of Alameda*).) The legislation provided that when an application for a franchise was received by a city or county, the governing body was to advertise for bids and award the franchise to the highest bidder. The successful bidder was **[****22]** required to pay, in addition to the amount bid, 2 percent of the gross annual receipts from the "use, operation or possession" of the franchise after the first five years of the term of the franchise agreement had passed. (Stats. 1905, ch. 578, §§ 2–3, pp. 777–778.)

HN11[↑] CA(11)[↑] **(11)** The Broughton Act's provision that the fee be based on the receipts from the use, operation or possession of the franchise results in a complicated calculation of franchise **[**220]** fees. Usually, some portion of a utility's rights-of-way are on private property or property outside the jurisdiction of the city or county granting the franchise, and the utility's gross receipts attributable to a particular franchise must be reduced in proportion to the utility's rights-of-way that are not within the franchise agreement. (*County of Tulare v. City of Dinuba, supra*, 188 Cal. at pp. 673–676.) In addition, because gross receipts arise from all of a utility's operative property, such as equipment and warehouses, the portion of gross receipts attributable to property other than the franchise must be excluded from the calculation of the franchise fee. (*County of L. A. v. Southern etc. Gas Co.* (1954) 42 Cal.2d 129, 133–134 [266 P.2d 27].) Finally, if a utility also provides service under a constitutional franchise—for example, where it provides artificial light under a constitutional franchise **[****23]** in the same area in which it provides electricity under a franchise agreement entered pursuant to the Broughton Act—the franchise fee applies only to the gross receipts from the provision of services under the nonconstitutional franchise. (*Oakland v. Great Western Power Co.* (1921) 186 Cal. 570, 578–583 [200 P. 395].)

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In 1937, apparently due in part to the complexity involved in calculating franchise fees under the Broughton Act, the Legislature enacted an alternative scheme by which cities could grant franchises for the transmission of electricity and gas. [7] (Stats. 1937, ch. 650, p. 1781; see Pub. Util. Code, § 6201 et seq. (1937 Act); *County of Alameda, supra*, 51 Cal.App.4th at pp. 1695–1696.) Instead of a bidding process, the 1937 Act requires only a public hearing before the local government that will decide whether to grant an application for a franchise, at which objections to the granting of the franchise may be made. (Pub. Util. Code, §§ 6232–6234.) In addition, although the 1937 Act reiterates the Broughton Act formula for calculating franchise fees, it also provides an alternative formula: "this payment shall be not less than 1 percent of the applicant's gross annual receipts derived from the sale within the limits of the municipality of the utility service for which the franchise is awarded." (Pub. Util. Code, § 6231, subd. (c).) [8] According to a review of that year's

[7] In 1971, the Legislature amended the act to provide that "municipality includes counties." (Pub. Util. Code, § 6201.5.) In addition, the Act has been extended to franchises for the transmission of oil and oil products, and the transmission of water. (Pub. Util Code, § 6202.)

[8] The 1937 Act includes a second alternative formula if the franchise is "complementary to a franchise derived under" the California Constitution. In that circumstance, the alternative payment is "one-half of 1 percent of the applicant's gross annual receipts from the sale of electricity within the limits of the municipality under both the electric franchises." (Pub. Util. Code, § 6231, subd. (c).)

legislation, the new franchise **[****24] [***872]** system was "expected to bring more adequate returns to cities, while lessening disputes concerning amounts to be paid." (David, *The Work of the 1937 California Legislature: Municipal Matters* (1937–1938) 11 S.Cal. L.Rev. 97, 107.)

As noted above, these statutory provisions do not bind jurisdictions governed by a charter, such as the City, but charter jurisdictions are free to follow the procedures set forth in the 1937 Act. (Pub. Util. Code, § 6205.) [9] However, the 1937 Act's provisions "relating to the payment of a percentage of gross receipts shall not be construed as a declaration of legislative judgment as to the proper compensation to be paid a chartered municipality for the right to exercise franchise privileges therein." (Pub. Util. Code, § 6205.) We explain below that although a charter jurisdiction's franchise fees are not limited by these statutory formulas, the PUC has concluded that it is not fair or reasonable to allow a utility to recoup from all of its utility customers charges imposed by a jurisdiction whose charges exceed the average amount of charges imposed by other local governments. Therefore, the PUC has established a procedure by which a utility may **[**221]** obtain approval **[*266]** to impose a surcharge on the bills of only those customers within the particular **[****25]** jurisdiction that imposes higher-than-average charges.

3. *PUC Scrutiny of Utility Charges*

HN12[↑] CA(12)[↑] **(12)** The PUC sets the rates of a publicly regulated utility to permit the utility to recover its costs and expenses in providing its service, and to receive a fair return on the value of the property it uses in providing its service. (*Southern Cal. Gas Co. v. Public Utilities Com.* (1979) 23 Cal.3d 470, 474–476 [153 Cal. Rptr. 10, 591 P.2d 34].) Among a utility's costs and expenses are government fees and taxes. Historically, "fees and taxes imposed upon the utility itself by the various governmental entities within the utility's service territory ... tended to average out, with the total derived from each taxing jurisdiction tending to be approximately equal. Therefore, rather than impose a special billing procedure upon utilities to account for the small differences historically involved, the [PUC] ... permitted a utility to simply average them and allowed them to be 'buried' in the rate structure applicable to the entire system." (*PUC Investigation, supra*, 32 Cal.P.U.C.2d at p. 63.) As voters restricted the taxing authority of local governments, however, some local jurisdictions increased the charges they imposed in connection with the provision of utility services. "As the number and increasing amounts of these local revenue-producing mechanisms **[****26]** began to multiply, the [PUC] became concerned that averaging these costs among all ratepayers would create inequities among ratepayers." (*Ibid.*)

CA(13)[↑] **(13)** In response to this concern, HN13[↑] the PUC established a procedure by which utilities may obtain approval to impose disproportionate charges on ratepayers within the jurisdiction that imposed the charges. **[***873]** (*PUC Investigation, supra*, 32 Cal.P.U.C.2d at pp. 62, 69.) When a local government imposes taxes or fees "which in the aggregate significantly exceed the average aggregate of taxes or fees imposed by the other local governmental entities within the public utility's service territory," a utility may file an advice letter seeking approval to charge "local government fee surcharges." (*Id.* at p. 73.) Such surcharges "shall be included as a separate item or items to bills rendered to applicable customers. Each surcharge shall be identified as being derived from the local governmental entity responsible for it." (*Ibid.*)

The purpose of the PUC's procedure concerning local government fee surcharges is to ensure that utility rates are just, reasonable, and

[9] The trial court ruled that as a charter jurisdiction, the City is not subject to general laws concerning franchises. (See ***Southern Pacific Pipe Lines, Inc. v. City of Long Beach* (1988) 204 Cal.App.3d 660, 667–670 [251 Cal. Rptr. 411]** [except where the nature of the utility services reflects a matter of statewide concern, the granting of franchises is a municipal affair].) Plaintiffs do not challenge that conclusion.

nondiscriminatory. (*PUC Investigation, supra*, 32 Cal.P.U.C.2d at p. 69; see Pub. Util. Code, §§ 451 [all public utility charges shall be just and reasonable], 453 [no public utility shall discriminate], 728 [if PUC **[****27]** finds rates are unreasonable or discriminatory, it shall order just and reasonable rates].) "Basic rates ... are those designed to recoup a utility's costs incurred to serve all its customers." **[*267]** (*PUC Investigation, supra*, 32 Cal.P.U.C.2d at p. 69.) If disproportionate taxes and fees are incorporated into all customers' basic rates, "some of these ratepayers would be subsidizing others but are not themselves benefiting from such increased taxes or fees." (*Ibid.*)

The PUC's decision does not concern the validity of any charges imposed by local government. The PUC explained that it "[did] not dispute or seek to dispute the authority or right of any local governmental entity to impose or levy any form of tax or fee upon utility customers or the utility itself, which that local entity, as a matter of general or judicial decision, has jurisdiction to impose, levy, or increase. Any issue relating to such local authority is a matter for the Superior Court, not this Commission." (*PUC Investigation, supra*, 32 Cal.P.U.C.2d at p. 69.)

C. *Validity of the Surcharge*

1. *Relationship Between Franchise Rights and Franchise Fees*

CA(14)[↑] **(14)** Plaintiffs contend the surcharge is a tax rather than a fee under Proposition 218, and therefore requires voter approval. HN14[↑] Whether a charge is a tax or a fee **[****28]** "is a question of law for the appellate courts to decide on independent review of the facts." (*Sinclair Paint, supra*, 15 Cal.4th at p. 874.) In resolving this issue, HN15[↑] the provisions of Proposition 218 "shall be liberally construed to effectuate **[**222]** its purposes of limiting local government revenue and enhancing taxpayer consent." (Prop. 218, § 5, reprinted at Historical Notes, *supra*, 2B West's Ann. Cal. Const., foll. Art. XIII C, § 1, at p. 363; see *Silicon Valley Taxpayers' Assn., Inc. v. Santa Clara County Open Space Authority, supra*, 44 Cal.4th at pp. 446, 448 [express purpose of Prop. 218 was to limit methods of exacting revenue from taxpayers; its provisions are to be liberally construed].)

CA(15)[↑] **(15)** As explained earlier, a franchise is a form of property, and a franchise fee is the price paid for the franchise. Moreover, historically, franchise fees have not been considered taxes, and nothing in Proposition 218 reflects an intention to treat amounts paid in exchange for property interests as taxes. Finally, like the receipt by a discrete group of a special benefit from the government, the receipt of an **[***874]** interest in public property justifies the imposition of a charge on the recipient to compensate the public for the value received. Therefore, HN16[↑] sums paid for the right to use a jurisdiction's rights-of-way are fees rather than taxes. But as explained below, to constitute compensation for the value **[****29]** received, the fees must reflect a reasonable estimate of the value of the franchise.

Each of the categories of valid fees we recognized in *Sinclair Paint, supra*, 15 Cal.4th 866, was restricted to an amount that had a reasonable relationship **[*268]** to the benefit or cost on which it was based. We observed that special assessments were allowed "in amounts reasonably reflecting the value of the benefits conferred" (*id.* at p. 874), development fees were allowed "if the amount of the fees bears a reasonable relation to the development's probable costs to the community and benefits to the developer" (*id.* at p. 875), and regulatory fees were allowed where the fees reflected bear a "reasonable relationship to the social or economic 'burdens' that [the payor's] operations generated" (*id.* at p. 876; see *Pennell v. City of San Jose* (1986) 42 Cal.3d 365, 375 [228 Cal. Rptr. 726, 721 P.2d 1111]). To the extent fees exceed a reasonable amount in relation to the benefits or costs underlying their imposition, they are taxes. (*Sinclair Paint*, at p. 881; *Knox, supra*, 4 Cal.4th at p. 142, fn. 15.)

CA(16)[↑] **(16)** In the course of our analysis, we observed that, HN17[↑] "[i]n general, taxes are imposed for revenue purposes, rather than in return for a specific benefit conferred or privilege granted," and we looked to whether the primary purpose of a charge was to generate revenue. (*Sinclair Paint, supra*, 15 Cal.4th at p. 874; see *id.* at pp. 879–880.) The issue of whether the funds generated by the types of fees **[****30]** considered in *Sinclair Paint* were used primarily for revenue purposes was relevant because the fees were related to an expenditure by the government or a cost borne by the public. More particularly, in connection with special assessments, the government seeks to recoup the costs of the program that results in a special benefit to particular properties, and in connection with development fees and regulatory fees, the government seeks to offset costs borne by the government or the public as a result of the payee's activities.

In contrast, a fee paid for an interest in government property is compensation for the use or purchase of a government *asset* rather than compensation for a cost. Consequently, the revenue generated by the fee is available for whatever purposes the government chooses rather than tied to a public cost. The aspect of the transaction that distinguishes the charge from a tax is the receipt of value in exchange for the payment. (See *Sinclair Paint*, 15 Cal.4th at p. 874 [contrasting taxes from charges imposed in return for a special benefit or privilege]; 9 Witkin, Summary of Cal. Law (10th ed. 2005) Taxation, § 1, p. 25 ["in taxation, ... no compensation is given to the taxpayer except by way of governmental **[****31]** protection and other general benefits"].)

Plaintiffs observe, however, that SCE customers pay the surcharge, but SCE receives the franchise rights; therefore, they contend, the ratepayers do not receive any value in exchange for their **[***875]** payment of the **[**223]** charge. As noted above, publicly regulated utilities are allowed to recover their costs and expenses by passing them on to their ratepayers. Among the charges included in the rates charged to customers within the City is the initial 1 percent of **[*269]** gross receipts paid in exchange for franchise rights, yet plaintiffs do not contend that this initial 1 percent is a tax because ratepayers do not receive the franchise rights. The fact that the surcharge is placed on customers' bills pursuant to the franchise agreement rather than a unilateral decision by SCE does not alter the substance of the surcharge; like the initial 1 percent charge, it is a payment made in exchange for a property interest that is needed to provide electricity to City residents. [10] Because a publicly regulated utility is a conduit through which government charges are ultimately imposed on ratepayers, we would be placing form over substance if we precluded the City from establishing **[****32]** that the surcharge bears a reasonable relationship to the value of the property interest it conveyed to SCE because the City expressed in its ordinance what was implicit—that once the PUC gave its approval, SCE would place the surcharge on the bills of customers within the City.

Although *Sinclair Paint*'s consideration of the purposes to which revenues will be put is not relevant in the context of transfers of public property interests, its broader focus on the relationship between a charge and the rationale underlying the charge provides guidance in evaluating whether the surcharge is a tax. Just as the amount of fees imposed to compensate for the expense of providing government services or the cost to the public associated with a payer's activities must bear a reasonable relationship to the costs and benefits that justify their imposition, fees imposed in exchange for a property interest must bear a reasonable relationship to the value received

[10] As explained above, the division of the charge into two parts, with one included in the rates paid by customers and the other separately stated on the bill, was driven by the PUC's effort to ensure that a local government's higher-than-average charges are not unfairly imposed on ratepayers outside of the local government's jurisdiction; this division of the charges is unrelated to the character or validity of the charges.

from the government. To the extent a franchise fee exceeds any reasonable value of the franchise, the excessive portion of the fee does not come within the rationale that justifies the imposition of fees without voter approval. Therefore, the **[****33]** excessive portion is a tax. If this were not the rule, franchise fees would become a vehicle for generating revenue independent of the purpose of the fees. In light of the PUC's investigation of local governments' attempts to produce revenue through charges imposed on public utilities, this concern is more than merely speculative. (See *PUC Investigation, supra*, 32 Cal.P.U.C.2d 60.)

We recognize that determining the value of a franchise may present difficulties. Unlike the cost of providing a government improvement or program, which may be calculated based on the expense of the personnel and materials used to perform the service or regulation, the value of property may vary greatly, depending on market forces and negotiations. Where a utility has an incentive to negotiate a lower fee, the negotiated fee may reflect the **[*270]** value of the franchise rights, just as the negotiated rent paid by the lessor of a publicly owned building reflects its market value, despite the fact that a different lessor might have negotiated a different rental rate. In the absence of bona fide negotiations, **[***876]** however, or in addition to such negotiations, an agency may look to other indicia of value to establish a reasonable value of franchise rights. [11]

CA(17)[↑] **(17)** In **[****34]** sum, HN18[↑] a franchise fee must be based on the value of the franchise conveyed in order to come within the rationale for its imposition without approval of the voters. Its value may be based on bona fide negotiations concerning the property's value, as well as other indicia of worth. Consistent with the principles that govern other fees, we hold that to constitute a valid franchise fee under Proposition 218, the amount of the franchise fee must bear a reasonable relationship to the value of the property interests transferred. **[**224]** (See *Sinclair Paint, supra*, 15 Cal.4th at pp. 874–876.)

2. *The City's Alternative Theories To Support the Surcharge*

We find the City's remaining arguments in defense of the surcharge to be without merit.

The City contends that the surcharge is not a tax imposed on ratepayers because it is a burden SCE voluntarily assumed. The terms of the 1999 agreement belie the contention that SCE assumed a burden to pay the surcharge. The 1999 agreement states that SCE "shall collect" the surcharge from all SCE customers within the City, and the collection shall be based on electricity consumption. Arguably, these provisions are ambiguous as to whether the mandatory language imposes a duty to collect the surcharge, or imposes a **[****35]** duty, *if* it collects the surcharge, to apply it to all customers within the City based on consumption. However, the next paragraph of the 1999 agreement refers to "[t]he conditions precedent to *the obligation of* [*SCE*] *under this Section 5 to levy, collect, and deliver* to City the [surcharge]." In addition, the parties stipulated that "[t]he SCE assessments, collections and remittance of the [surcharge] were required by Santa Barbara Ordinance 5135." Finally, as noted above, public utilities are allowed to pass along to their customers expenses the utilities incur in producing their services, and SCE could terminate the 1999 agreement if the PUC did not agree to the inclusion of the surcharge on customers' bills. Thus, it does not appear that SCE assumed any burden to pay the surcharge from its assets.

We also reject the City's contention that imposition of the surcharge on customers is the result of a decision by SCE and the PUC. As discussed **[*271]** above, the purpose of the PUC's involvement in the process was to ensure that higher-than-average fees were not imposed on customers who reside outside the City. The fact that

[11] The parties' briefs do not consider the means by which franchise rights might be valued. We leave this issue to be addressed by expert opinion and subsequent case law.

the 1999 agreement required SCE to seek the approval of the PUC to include the charge on **[****36]** customers' bills, and allowed either party to terminate the agreement if the PUC's approval was not obtained, reflects that SCE was not willing to assume the burden of paying the surcharge, and that both parties to the agreement understood that the charge would be collected from ratepayers. These conclusions are confirmed by the parties' negotiations, which reflect that SCE was willing only to collect the charge from its customers and remit the revenue to the City. Finally, the City stipulated that the parties reached their **[***877]** agreement on the condition that the surcharge would become payable only if SCE obtained the PUC's consent to include the surcharge as a customer surcharge. In sum, the City and SCE agreed that SCE would impose the surcharge on customers and remit the revenues to the City.

In a similar vein, the City contends we should look to a revenue measure's legal incidence—who is required to pay the revenues—rather than its economic incidence—who bears the economic burden of the measure. The City's contention is based on its view that SCE bears the legal incidence of the charges and, therefore, the charges are not a tax on the ratepayers. In support of its theory, the City **[****37]** cites case law holding that nonresidents do not have taxpayer standing under Code of Civil Procedure section 526a to challenge a jurisdiction's actions based on their payment of taxes within the jurisdiction. (See *Cornelius v. Los Angeles County etc. Authority* (1996) 49 Cal.App.4th 1761, 1777–1778 [57 Cal. Rptr. 2d 618] [plaintiff who did not live in Los Angeles County was denied taxpayer standing to challenge a county affirmative action program based in part on payment of sales and gasoline taxes in Los Angeles County]; *Torres v. City of Yorba Linda* (1993) 13 Cal.App.4th 1035, 1048 [17 Cal. Rptr. 2d 400] [plaintiffs who did not live within a city were denied taxpayer standing to challenge a redevelopment plan based on the payment of sales taxes in the city].) These cases would support an argument that individuals who live outside the City do not have taxpayer standing to challenge the surcharge, but they do not provide guidance concerning what constitutes a tax under various voter initiatives restricting taxation.

In any event, all that the City ultimately contends in this regard is that the **[**225]** economic incidence of a charge does not determine whether it is a tax. We agree. Valid fees do not become taxes simply because their cost is passed on to the ratepayers. As our discussion above reflects, the determination of whether a charge that is nominally a franchise fee constitutes a tax depends on whether it is **[****38]** reasonably related to the value of the franchise rights.
[*272]

Finally, the City asserts that the negotiated value of the franchise is entitled to deference because the City's adoption of the 1999 agreement was a legislative act and because charter jurisdictions have broad discretion to enter franchise agreements. (See Gov. Code, § 50335 [the legislative body of a local agency may grant utility easements "upon such terms and conditions as the parties thereto may agree"].) The record does not adequately disclose the negotiations that occurred with respect to the value of the franchise, and we are therefore unable to evaluate what deference, if any, might be due.

III. THE JUDGMENT OF THE COURT OF APPEAL

As noted above, the Court of Appeal concluded that the surcharge's primary purpose was to raise revenue for general spending purposes rather than to compensate the City for the rights-of-way. Therefore, it held, the surcharge is a tax, and requires voter approval under Proposition 218. Based on these conclusions, it reversed the trial court's grant of the City's motion for judgment on the pleadings, and "directed the trial court to grant [plaintiffs'] motion for summary adjudication because the City imposed the **[****39]** 1% surcharge without complying with Proposition

218." As explained below, we agree that the judgment on the pleadings must be reversed, **[***878]** but we conclude that plaintiffs did not establish a right to summary adjudication.

HN19[↑] A motion for judgment on the pleadings presents the question of whether "the plaintiff's complaint state[s] facts sufficient to constitute a cause of action against the defendant." (*Smiley v. Citibank* (1995) 11 Cal.4th 138, 145 [44 Cal. Rptr. 2d 441, 900 P.2d 690].) The trial court generally considers only the allegations of the complaint, but may also consider matters that are subject to judicial notice. (*Id.* at p. 146.) "'Moreover, the allegations must be liberally construed with a view to attaining substantial justice among the parties.' [Citation.] 'Our primary task is to determine whether the facts alleged provide the basis for a cause of action against defendants under any theory.'" (*Alliance Mortgage Co. v. Rothwell* (1995) 10 Cal.4th 1226, 1232 [44 Cal. Rptr. 2d 352, 900 P.2d 601].) "An appellate court independently reviews a trial court's order on such a motion." (*Smiley, supra*, at p. 146.)

CA(18)[↑] **(18)** The first amended complaint alleges that the surcharge is not a franchise fee, but is instead a tax that requires voter approval under Proposition 218. In addition, with the parties' consent, the trial court took judicial notice of the written stipulation of facts submitted in connection **[****40]** with the motions for summary adjudication and summary judgment, and a second stipulation of facts submitted in connection with the City's motion for judgment on the pleadings. As described above, the stipulated facts reflect that the City and SCE agreed to double the amount to be paid for the privilege of using the rights-of-way and to pass these charges on to the **[*273]** ratepayers, but they do not address the relationship, if any, between the surcharge and the value of the franchise. Liberally construed, the first amended complaint and the stipulated facts adequately allege the basis for a claim that the surcharge bears no reasonable relationship to the value of the franchise, and is therefore a tax requiring voter approval under Proposition 218. Accordingly, the trial court erred in granting judgment on the pleadings to the City.

Next we consider the Court of Appeal's direction to the trial court to grant plaintiffs' motion for summary adjudication. A plaintiff moving for summary adjudication with respect to a claim must establish each element of the claim. The burden then shifts to the defendant to demonstrate a triable issue of fact exists as to the claim. (Code Civ. Proc., § 437c, subd. (p)(1).) Like a ruling on a motion **[****41]** for judgment on the pleadings, a ruling on a motion for summary adjudication is reviewed de novo. (*Kendall v. Walker* (2009) **[**226]** 181 Cal.App.4th 584, 591 [104 Cal. Rptr. 3d 262].)

Plaintiffs sought summary adjudication of the allegation that the surcharge is a tax. (Code Civ. Proc., § 437c, subd. (f).) They asserted that the tests set forth in *Sinclair Paint, supra*, 15 Cal.4th 866, remain good law, but like the Court of Appeal, they drew from *Sinclair Paint* the principle that if the primary purpose of a charge is to raise revenue, the charge is a tax. Plaintiffs also challenged the surcharge on the ground that it was not based on a determination that there was a reasonable relationship between the charge and any costs borne by the City. In response, the City noted that *Sinclair Paint, supra*, 15 Cal.4th 866, **[***879]** addressed the distinction between regulatory fees and taxes. The City relied instead on *Santa Barbara County Taxpayer Assn., supra*, 209 Cal.App.3d 940, which held that franchise fees are not "proceeds of taxes" for purposes of calculating limits on state and local appropriations under article XIII B of the California Constitution. The trial court concluded that "[b]ecause the measure of compensation [for a franchise] is a matter of contractual negotiation, the amount of the franchise fee need not be based on costs."

Although plaintiffs' allegations and the stipulated facts adequately allege the basis for a contention that the surcharge bears no reasonable relationship

to the value **[****42]** of the franchise, plaintiffs' motion for summary adjudication did not *establish* this contention. As explained in our discussion of franchise fees, cities are free to sell or lease their property, and the fact that a franchise fee is collected for the purpose of generating revenue does not establish that the compensation paid for the property interests is a tax. In addition, in contrast to fees imposed for the purpose of recouping the costs of government services or programs, which are limited to the reasonable costs of the services or programs, franchise fees are not based on the costs incurred in affording a **[*274]** utility access to rights-of-way. Therefore, the facts on which plaintiffs relied in seeking summary adjudication did not establish their claim that the surcharge is a tax.

IV. DISPOSITION

We affirm the judgment of the Court of Appeal to the extent it reversed the trial court's judgment, and we reverse the judgment to the extent it directed the trial court to grant plaintiffs' motion for summary adjudication. The case is remanded to the Court of Appeal with directions to remand the matter to the trial court for further proceedings consistent with this opinion.

Cantil-Sakauye, C. J., **[****43]** Werdegar, J., Corrigan, J., Liu, J., Cuéllar, J., and Kruger, J., concurred.

Dissent by: Chin

Dissent

CHIN, J., Dissenting.—Since 1970, the City of Santa Barbara (the City) has imposed "a tax" on those using electricity in the City. Since 1977, the amount of the tax has been "six percent (6%) of the charges made for" energy use. (Santa Barbara Mun. Code, § 4.24.030.) In 1999, the City, in order to raise revenues for general governmental purposes, passed an ordinance—City Ordinance No. 5135 (the Ordinance)—separately requiring those receiving electricity within the City from Southern California Edison (SCE) to pay *an additional* 1 percent of the amount of their electrical bill. I conclude that this additional charge constitutes a tax that the City imposed in violation of the voter approval requirements of article XIII C of the California Constitution, as adopted by the voters at the November 5, 1996 General Election through passage of Proposition 218 (Proposition 218). The City's arguments to the contrary are unpersuasive.

The majority agrees that most of the City's arguments fail, but it largely agrees **[***880]** with the City that the charge is a "valid franchise fee ... rather than a tax." (Maj. **[**227]** opn., *ante*, at p. 257.) Putting its own gloss on the City's argument—a gloss the City expressly **[****44]** rejects—the majority concludes that the charge is a valid franchise fee to the extent it "bear[s] a reasonable relationship to," as alternatively phrased, "the value of the property interests transferred" (maj. opn., *ante*, at p. 270), "the value of the franchise conveyed" (*ibid.*), or "the value of the franchise rights" (*id.* at p. 271).

There is a fundamental problem with this approach: The electricity users upon whom the City imposes the charge, and who actually pay it, do not receive the franchise, any franchise rights, or any property interests. The Ordinance grants those valuable rights and interests *only to SCE*, the electricity supplier. Because the Ordinance requires SCE's customers to pay for rights and interests the City has granted to SCE, the charge does not **[*275]** constitute a "franchise fee" for purposes of the rule that "franchise fees [are not] considered taxes." (Maj. opn., *ante*, at p. 262.) In reality, it is just an increase in the City's user tax, which the City *calls* a franchise fee. It thus constitutes *precisely* what the voters adopted article XIII C of the California Constitution to preclude: a "tax increase[] disguised via euphemistic relabeling as 'fees,' 'charges,' or 'assessments.'" (*Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 839 [102 Cal. Rptr. 2d 719, 14 P.3d

930].) Consistent with our *duty*, as established **[****45]** by the voters themselves, to "liberally construe[]" article XIII C of the California Constitution "to effectuate [the] purpose[] of limiting local government revenue and enhancing taxpayer consent" (Prop. 218, § 5, reprinted at 1 Stats. 1996, p. A-299), I conclude that the charge is invalid because the City imposed it on SCE's customers without voter approval.

The majority cites no support for its conclusion that a charge imposed on and paid by someone who is granted nothing in return is not tax as to that person so long as *someone else* receives franchise rights for the payment. Indeed, as I explain below, the majority's analysis is inconsistent with our case law. And the line the majority draws between a valid franchise fee and a tax—whether the amount of the charge to a utility's customers bears a reasonable relationship to the value the entity receives—is problematic in many ways and renders long-standing statutory provisions regarding utility franchises vulnerable to constitutional challenge. For all of these reasons, I dissent.

I. Factual and Legal Background

In 1887, SCE's predecessor, the Santa Barbara Electric Company, began supplying electricity in the City. In 1959, the City, pursuant to an agreement with SCE, adopted Ordinance **[****46]** No. 2728 granting SCE a 25-year franchise to use public property to transmit and distribute electricity. The ordinance required SCE to pay the City 2 percent of its "gross annual receipts ... arising from the use, operation or possession of [the] franchise," with a minimum payment of one-half percent of SCE's "gross annual receipts derived ... from the sale of electricity within the [City's] limits ... under both" the franchise being granted by the ordinance and SCE's separate and preexisting "constitutional franchise." The ordinance specified that the City was granting the franchise "under and in accordance with the provisions of **[***881]** [the] Franchise Act of 1937." [1]

In 1985, after the 1959 franchise expired, the City, pursuant to another agreement with SCE, adopted Ordinance No. 4312 granting SCE a 10-year **[*276]** franchise to use public property to transmit and distribute electricity. "[A]s compensation," the ordinance required SCE to pay to the City 2 percent of its "annual gross receipts ... arising from the use, operation or possession of th[e] franchise," with a minimum payment of 1 percent of SCE's "annual gross receipts derived ... from the sale of electricity within the limits of [the] **[****47]** City under both" the franchise being granted by the ordinance and SCE's separate and preexisting "constitutional franchise." **[**228]** The 1985 ordinance also required SCE to "collect for [the] City any utility users tax imposed by [the] City." This provision reflected the City's imposition in 1970 of "a tax" on "every person in" the City using electricity in the City. (Santa Barbara Ord. No. 3436.) The amount of the tax was initially three percent "of the charges made for" use of electricity. (*Ibid.*) In 1977, the City doubled the tax to 6 percent. (Santa Barbara Ord. No. 3927, amending Santa Barbara Mun. Code, § 4.24.030; see Santa Barbara Ord. No. 4289 (1984), amending Santa Barbara Mun. Code, tit. 4.)

The year after the City doubled its electricity users tax, California voters passed Proposition 13. As the majority notes, Proposition 13 amended our Constitution to limit increases in the assessed value of real property to 2 percent per year (absent a change in ownership) and to limit the rate of taxation on real property to 1 percent of its assessed value. (Maj. opn., *ante*, at p. 258.) In order to prevent these tax savings from being offset by increases in state and local taxes, Proposition 13 also amended **[****48]** our Constitution to require approval by two-thirds of the local electors of a

[1] Charter cities are not required to apply the Franchise Act of 1937 (the 1937 Act) (Pub. Util. Code, § 6201 et seq.), but may voluntarily follow its provisions. (Pub. Util. Code, § 6205; all further unlabeled statutory references are to the Public Utilities Code.)

city, county, or special district in order for such a local entity to impose or raise special taxes. (Maj. opn., *ante*, at p. 258.) Since the voters enacted these limits on the City's taxing powers, the City has not *formally* increased the percentage of its electricity users tax.

However, in 1999, the City informally and effectively increased this tax by passing the Ordinance, which codified a new franchise agreement with SCE and required users of electricity within the City to pay an additional 1 percent of their electrical bill. According to the parties' stipulated facts, this charge began as a proposal from "City staff," "[d]uring the negotiations for the new franchise agreement," to "increase[] [the] annual 'franchise fee'" from 1 percent of SCE's gross receipts for electricity sold within the City—the amount under the expiring agreement—to 2 percent. "City staff" proposed the increase in order "to raise additional revenues for the City for general City governmental purposes." "After a period of negotiations," SCE said it would agree "to remit to the City a two percent ... franchise fee provided that the City **[****49]** agreed that the increase in the franchise fee would be payable to the City only if the California Public Utilities Commission ... consented to SCE's request that it be allowed to include the additional 1% amount as a customer surcharge on the bills of SCE to its customers in the City." City **[***882]** staff and SCE **[*277]** reached agreement "[o]n that basis" and the City Council later adopted the tentative agreement as Ordinance No. 5135 (Dec. 7, 1999).

The Ordinance granted SCE a franchise to use public property to construct and operate an electric transmission system. It provided for an: "'Initial Term'" of three years—January 1, 2000, through December 31, 2002—and set the payment for that term at 1 percent of SCE's "Gross Annual Receipts." (Ord., §§ 3.A, 5.) The Ordinance also provided for an "'Extension Term'" beginning 60 days after the Public Utilities Commission (PUC) approved an "Extension Term Fee" and ending December 31, 2029. (Ord., § 3.B.) The total Extension Term Fee was 2 percent of SCE's Gross Annual Receipts, and comprised two elements: (1) the 1 percent Initial Term Fee; and (2) a 1 percent "Recovery Portion." (Ord., § 5.B.) Like the City's electricity users tax, the Recovery Portion **[****50]** was to be collected from "all electric utility customers served by [SCE] within the boundaries of the City" and was "based on consumption or use of electricity." (*Ibid.*) SCE's "obligation" was "to levy" the Recovery Portion on its customers, "collect" this payment from its customers, and "deliver" the collected amount "to [the] City." (Ord., § 5.C.) In other words, according to the parties' stipulated facts, the Ordinance "obligate[d]" all persons in the City receiving electricity from SCE "to pay" the Recovery Portion, and "require[d] [SCE] to collect" the Recovery Portion "from" its City customers "and remit [it] to" the City. The Ordinance made PUC approval of the Extension Term Fee a "condition[] precedent to" SCE's "obligation ... to levy, collect, and deliver to [the] City the Recovery Portion." [2] **[**229]** If that approval was not obtained by the end of the Initial Term—December 31, 2002—the franchise would "continue on a year to year basis at the Initial Term Fee"—1 percent of gross revenues—until terminated by either party upon written notice.

In April 2001, the City and **[****51]** SCE agreed to delay for up to two years the filing with the PUC of a request for approval of the Extension Term Fee. In December 2004, almost three years later, the City directed SCE to submit the request. During that period, the only compensation SCE paid the

[2] A utility may, "at its discretion," request permission from the PUC to set forth separate charges on certain of their customers' bills when a local governmental entity imposes upon the utility "[f]ranchise, general business license, or special taxes and/or fees ... [that] in the aggregate significantly exceed the average aggregate of taxes or fees imposed by the other local governmental entities within the public utility's service territory." (*Re Guidelines for the Equitable Treatment of Revenue-Producing Mechanisms Imposed by Local Government Entities on Public Utilities* (1989) 32 Cal.P.U.C.2d 60, 73.)

City for the franchise was the Initial Term Fee. SCE eventually submitted the request on March 30, 2005, asking for approval "to bill and collect from its customers within the City ... a 1.0% electric franchise surcharge to be remitted to the City by SCE as a pass-through fee, pursuant to SCE's new franchise agreement with the City." The request explained that the new franchise **[*278]** agreement "expressly provides for the additional amount to be surcharged to SCE's customers within the City," and requires PUC approval "in order for SCE to bill and collect the additional franchise surcharge for the City." The request also explained that, upon the PUC's approval, SCE would "bill and collect the surcharge revenues and pass through the revenues directly to the City." **[***883]** On April 20, 2005, the PUC granted SCE's request.

In November 2005, SCE began billing the Recovery Portion to, and collecting it from, customers in the City, and remitting **[****52]** those revenues in their entirety to the City. At first, the City apportioned the revenues in accordance with the Ordinance, i.e., half to the City's general fund and half to a City undergrounding projects fund. In November 2009, the City directed that all revenues from the Recovery Portion be placed in its general fund without any limitation on use.

II. Discussion

Plaintiffs Rolland Jacks and Rove Enterprises, Inc., claim that the City, by imposing the Recovery Portion through adoption of the Ordinance, violated article XIII C of the California Constitution. As here relevant, article XIII C provides that "local government[s]" may not "impose ... any general tax ... until that tax is submitted to the electorate and approved by a majority vote" (Cal. Const., art. XIII C, § 2, subd. (b)), and may not "impose ... any special tax ... until that tax is submitted to the electorate and approved by a two-thirds vote" (*id.*, § 2, subd. (d)). Plaintiffs argue that the Recovery Portion is a tax within the meaning of these provisions and that the City violated article XIII C by imposing it without voter approval.

In opposition to this argument, the City focuses heavily on the word "impose" in California Constitution, article XIII C's provisions, asserting that the Recovery Portion was not "imposed" *by the City* on anyone. According **[****53]** to the City, the Recovery Portion is, as to SCE, a "voluntary" payment to which SCE, a "sophisticated, commercial entit[y] with substantial market power," "willingly agreed" in order "to obtain use of valuable public rights of way in its for-profit business." As to SCE's customers, SCE and/or the PUC "imposed" the Recovery Portion, and the City "played no part in" the decisions of those entities.

The majority correctly rejects these arguments, explaining that the terms of the agreement and the Ordinance require that the Recovery Portion "be collected from" SCE's customers and impose on SCE only an obligation "to collect the charge from its customers and remit the revenue to the City." (Maj. opn., *ante*, at p. 271.) Indeed, the City's arguments necessarily fail in light of its stipulation that "[p]ursuant to City Ordinance [No.] 5135, all **[*279]** persons in the City receiving electricity from SCE *are obligated to pay* the 1% Recovery Portion." (Italics added.)

In a related argument, the City asserts that the Recovery Portion is not "imposed" **[**230]** on SCE's customers because its "legal incidence"—i.e., the "legal duty to pay it"—"is on SCE." According to the City, that SCE's customers in fact "ultimately bear[]" the Recovery **[****54]** Portion's "economic burden" is irrelevant because, under the law, "whether a charge is a tax is determined by its legal incidence."

The City is correct to focus on the Recovery Portion's legal incidence, but its argument fails because, under the Ordinance, both the legal incidence and the economic burden of the Recovery Portion fall on SCE's customers, not on SCE. The rule in California is that where the government *mandates* payment of a charge by one party, and imposes a duty on some other party to collect the

payment and remit it to the government, the legal incidence of the charge falls, not on the party **[***884]** collecting the payment—who acts merely as the government's collection agent or conduit—but on the party from whom the payment is, by law, collected. (*Western States Bankcard Assn. v. City and County of San Francisco* (1977) 19 Cal.3d 208, 217 [137 Cal. Rptr. 183, 561 P.2d 273] (*Western States*) [tax ordinances lacked "mandatory pass-on provisions" that would "shift the legal incidence of the tax"]; *Bunker Hill Associates v. City of Los Angeles* (1982) 137 Cal.App.3d 79, 87 [186 Cal. Rptr. 719] ["'the legal incidence of a tax does not necessarily fall on the party who acts as conduit by forwarding collected taxes to the state,'" and charge imposed on tenants, that lessors were legally required to collect and transmit to the government, was not a tax on lessors]; *Occidental Life Ins. Co. v. State Bd. of Equalization* (1982) 135 Cal.App.3d 845, 850 [185 Cal. Rptr. 779] (*Occidental Life*) [whether "'pass **[****55]** on'" of charge is "mandatory" is "legally significant" in determining who bears the charge's "legal incidence"].) Consistent with this rule, in *City of Modesto v. Modesto Irrigation Dist.* (1973) 34 Cal.App.3d 504, 506 [110 Cal. Rptr. 111], the court held that a monthly charge imposed by the City of Modesto for use of water, gas, electricity, and telephone service, "paid by the service user (the consumer), but ... collected by the service supplier," was "a tax against the utility user, not the utility supplier."

Under these principles, the legal incidence of the Recovery Portion falls on SCE's customers, not, as the City asserts, on SCE. As noted above, the City has stipulated that SCE's customers "are obligated to pay" the Recovery Portion "[p]ursuant to City Ordinance [No.] 5135," and that SCE's duty under the Ordinance is "to collect" the Recovery Portion "from all SCE electricity users in the City and remit those funds to the City." The terms of the Ordinance and the representations in SCE's application for PUC approval, **[*280]** as set forth above, fully support this stipulation. On this record, it is clear that the Ordinance mandates payment of the Recovery Portion by SCE's customers and makes SCE the City's collection agent and conduit regarding this payment. Accordingly, the legal incidence **[****56]** of the Recovery Portion is on SCE's customers.

The City's final argument is that the Recovery Portion is a "franchise fee"—i.e., "a bargained-for price for use of the City's rights of way in SCE's search for profits"—and that under California case law, a franchise fee "is not a tax." The majority essentially agrees with the City. "Historically," the majority begins, "franchise fees have not been considered" by California courts to be "taxes," and "[n]othing in Proposition 218 reflects an intent to change" this rule. (Maj. opn., *ante*, at p. 262.) Putting its own gloss on the City's argument, the majority then concludes that the Recovery Portion is a "franchise fee" and not a tax insofar as its amount "is reasonably related to the value of the franchise." (Maj. opn., *ante*, at p. 257.) "To the extent [it] exceeds any reasonable value of the franchise," it "is a tax" rather than a "franchise fee," because "the excessive portion ... does not come within the rationale that justifies the imposition of fees without voter approval." (*Id.* at p. 269.)

Whether a charge constitutes a "tax" for purposes of the Constitution "is a question of law for the appellate courts to decide on independent review of the facts." **[****57]** (*Sinclair Paint Co. v. State Bd. of Equalization* (1997) 15 Cal.4th 866, 874 [64 Cal. Rptr. 2d 447, 937 P.2d 1350].) **[***885]** In answering this question, we **[**231]** should not, as the majority appears to do, rely on the circumstance that the charge is "nominally a franchise fee." (Maj. opn., *ante*, at p. 271.) In determining whether a charge is a tax, courts "are not bound by what the parties may have called the liability" (*Bank of America v. State Bd. of Equal.* (1962) 209 Cal.App.2d 780, 801 [26 Cal. Rptr. 348] (*Bank of America*)), and are "not to be guided by labels" (*Beamer v. Franchise Tax Board* (1977) 19 Cal.3d 467, 475 [138 Cal. Rptr. 199, 563 P.2d 238]) or "bare legislative assertion" (*Flynn v. San Francisco*

(1941) 18 Cal.2d 210, 215 [115 P.2d 3]). Instead, their "task is to determine the[] true nature" of the charge (*Beamer v. Franchise Tax Board*, *supra*, at p. 475), based on "'its incidents'" and "'the natural and legal effect of the language employed in'" the enactment (*Ainsworth v. Bryant* (1949) 34 Cal.2d 465, 473 [211 P.2d 564]). This general principle is especially applicable here for two reasons: (1) Proposition 218's "main concern" was "perhaps" the "euphemistic relabeling" of taxes "as 'fees,' 'charges,' or 'assessments'" (*Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles*, *supra*, 24 Cal.4th at p. 839), and (2) Proposition 218 expressly required courts to "liberally construe[]" article XIII C "to effectuate its purposes of limiting local government revenue and enhancing taxpayer consent" (Prop. 218, § 5, reprinted at 1 Stats. 1996, p. A-299).
[*281]

Given the City's argument, the question here is whether the Recovery Portion, in light of its incidents, constitutes the type of charge we have declared **[****58]** to be a franchise fee instead of a tax. One of our earliest decisions to discuss this type of charge is *County of Tulare v. City of Dinuba* (1922) 188 Cal. 664 [206 P. 983] (*Tulare*). There, we held that the annual payment imposed by the Broughton Act (§ 6001 et seq.) on the successful bidder for a franchise to provide electricity—2 percent of gross annual receipts from the use, operation or possession of the franchise—is "neither a tax nor a license." (*Tulare*, at p. 670.) Instead, it is a "charge" that "the holder of the franchise undertakes to pay as part of the consideration for the privilege of using the avenues and highways occupied by the public utility .... [¶] It is purely a matter of contract. ... [I]t is a matter of option with the applicant whether he will accept the franchise on those terms. His obligation to pay is not imposed by law but by his acceptance of the franchise." (*Ibid.*)

Tulare makes clear that the Recovery Portion, irrespective of its relationship to the value of the franchise SCE received, is not a franchise fee for purposes of the rule that a franchise fee is not a tax. As explained above, the Recovery Portion is not a charge that "the holder of the franchise"—SCE—"undert[ook] to pay." (*Tulare*, *supra*, 188 Cal. at p. 670.) Indeed, as the majority correctly states, the terms **[****59]** of the Ordinance "belie" this characterization, establishing instead that SCE did not "assume[] a burden to pay" the Recovery Portion. (Maj. opn., *ante*, at p. 270.) And the City's factual stipulation that the Ordinance "obligated" SCE's customers "to pay" the Recovery Portion conclusively establishes that *their* "obligation to pay" the Recovery Portion was, in fact, "imposed by law," not by *their* "acceptance of the franchise." (*Tulare*, at p. 670.) Indeed, SCE's customers did not receive a franchise, which, as the majority explains, "is a privilege granted by the **[***886]** government to a particular individual or entity rather than to all as a common right." (Maj. opn., *ante*, at p. 254, fn. 1.) The Ordinance granted them no legal right to make any use of the City's property or to conduct a franchise for supplying electricity. In short, the Recovery Portion simply lacks the incidents of a franchise fee for purposes of the rule that franchise fees are not taxes. "To call it a fee" rather than a tax is simply "a transparent evasion." (*Fatjo v. Pfister* (1897) 117 Cal. 83, 85 [48 P. 1012].)

Although the majority recognizes the principles underlying the rule that franchise fees are not taxes, it fails to apply them. The majority observes that "a franchise fee is the **[****60]** purchase price of the franchise" (maj. opn., *ante*, at p. 262), but it does not explain how the Recovery Portion, which the City has imposed on **[**232]** someone *other than the purchaser* of the franchise, meets this test. The majority explains that "sums paid for the right to use a jurisdiction's rights-of-way are fees rather than taxes" because "the receipt of an interest in public property justifies the imposition of a charge *on the recipient* to compensate the public for the value received." (*Id.* at p. 267, italics added.) **[*282]** But the Recovery Portion is not imposed "on the recipient" of the interest in public property. (*Ibid.*) The majority explains that

"restrictions on taxation do not encompass amounts *paid in exchange for* property interests" (*id.* at p. 262, italics added), and that what "distinguishes" a valid charge "from a tax is the receipt of value *in exchange for the payment*" (*id.* at p. 268, italics added). But SCE's customers do not receive any property interest or value "in exchange for" paying the Recovery Portion. (*Ibid.*) In short, the Recovery Portion lacks the "historical characteristics of franchise fees" that the majority identifies from our decisions. (*Id.* at p. 257.) It therefore **[****61]** does not, to use the majority's own words, "come within the rationale that justifies" (*id.* at p. 269) the rule that franchise fees are not taxes.

According to the majority, in determining whether the Recovery Portion is a franchise fee rather than a tax, it is irrelevant that SCE's customers "pay the surcharge" while "SCE receives the franchise rights," that SCE's customers "do not receive any value in exchange for their payment," and that the City is requiring SCE's customers "to compensate the City for *the utility's* use of public property." (See maj. opn., *ante*, at pp. 268–269, italics added.) The stated basis for this view is that "publicly regulated utilities are allowed to recover their costs and expenses by passing them on to their ratepayers," and are therefore merely "conduit[s] through which government charges are ultimately imposed on ratepayers." (*Ibid.*) Given this circumstance, the majority reasons, it makes no difference that the Recovery Portion is an obligation the City imposes directly on SCE's customers, instead of a contractual obligation of SCE that SCE "unilateral[ly]" decides to pass on to its customers. (*Id.* at p. 269.) The City, the majority asserts, should not be "precluded" from showing that the Recovery Portion **[****62]** bears a reasonable relationship to the value of the property interest it conveyed to SCE merely because the Ordinance *expressly mandates* what would have been "implicit" had SCE agreed to pay the Recovery Portion itself—"that once the PUC gave its approval, **[***887]** SCE would place the surcharge on the bills of customers within the City." (*Ibid.*)

For a number of reasons, I disagree. First, the majority's view is inconsistent with our case law, which, as explained above, establishes that a franchise fee—as distinguished from a tax—is a "charge [that] *the holder of the franchise undertakes to pay*," i.e., an "obligation to pay" that is "purely a matter of contract" and that is "imposed" on the payor "not ... by law but by *his* acceptance of the franchise." (*Tulare*, *supra*, 188 Cal. at p. 670, italics added.) As also explained above, the Recovery Portion is *not* a charge that "the holder of the franchise undert[ook] to pay," and it *is* imposed by the City on SCE's customers "by law" instead of by *their* "acceptance of [any] franchise." (*Ibid.*) The majority cites no authority for its conclusion that a **[*283]** charge imposed by law on one person to pay for *someone else's* right to use public property in a business is a franchise fee rather than a tax. **[****63]** [3]

[233]** Second, the majority fails to explain why SCE's purported unfettered ability to pass on to customers charges it contractually agrees to pay means that whether the charge is a tax *on its customers* depends on the value of the franchise *to SCE*. Had SCE contractually agreed to pay the Recovery Portion itself, it could *not* assert that the charge was a tax to the extent it exceeds the value of the franchise rights. As we have explained, because a municipality's power to permit utilities to

[3] According to the majority, by adding a definition of "tax" to California Constitution, article XIII C and excepting from that definition "'[a] charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property,'" Proposition 26, approved by voters at the November 2, 2010 General Election, "confirmed" that "restrictions on taxation do not encompass amounts paid in exchange for property interests." (Maj. opn., *ante*, at p. 263.) As the majority elsewhere acknowledges, Proposition 26 is not at issue here because "no party contends that it applies to the charges in this case." (Maj. opn., *ante*, at p. 260, fn. 4.) Moreover, nothing in Proposition 26 indicates that a charge imposed on one party for *someone else's* use of government property comes within the exception the majority quotes. To the extent the majority's analysis suggests otherwise, it is dictum. Nor does anything in Proposition 26 support the majority's rule that payments for the privilege to use public property *are* taxes to the extent they exceed "the value of the franchise conveyed." (Maj. opn., *ante*, at p. 270.)

use public property "on such terms as are satisfactory to it" includes the power to "'require the payment of such compensation as seems proper,'" courts do not "question whether or not the amount charged is a reasonable charge." (*Sunset Tel. and Tel. Co. v. Pasadena* (1911) 161 Cal. 265, 285 [118 P. 796] (*Sunset*).) And if, as the majority asserts, the utility in this scenario is merely "a conduit through which government charges are ultimately imposed on ratepayers" (maj. opn., *ante*, at p. 269), then there is no logical reason why the value of the benefit *to the utility* would be the proper measure of whether the charge is a tax *as to the utility's customers*. Nor is there any logical reason for making this the test where, as here, a municipality imposes **[****64]** the charge directly on those customers.

Indeed, the majority's conclusion in this regard is inconsistent with its own discussion of the very case law on which it principally relies. As the majority explains, our prior decisions identify "categories of charges" that constitute valid "fees rather **[***888]** than taxes" for purposes of applying Proposition 13. (Maj. opn., *ante*, at p. 260.) "The commonality among these categories," the majority states, "is the relationship between the charge imposed and a benefit ... *to the payor*." (*Id.* at p. 261, italics added.) For example, the majority observes, "we [have] explained ... that 'if an assessment for ... improvements provides a special benefit to the assessed properties, then the assessed property owners should pay for the benefit *they receive*.'" (*Ibid.*, italics added.) Under these cases, the majority states, a purported fee is a tax for **[*284]** purposes of Proposition 13 to the extent it exceeds "the special benefit received *by the payor*." (Maj. opn., *ante*, at p. 261, italics added.)

A closer look at our assessment decisions reveals that a nexus between the benefit conferred and the person *paying the charge* is a prerequisite to concluding that the charge is not a tax. As we explained **[****65]** over 100 years ago, "the compensating benefit to the property owner" on whom the government imposes a charge for an improvement "is the warrant, and the sole warrant, for" finding that the charge is a valid assessment rather than a tax. (*Spring Street Co. v. City of Los Angeles* (1915) 170 Cal. 24, 30 [148 P. 217].) Thus, "if we are not able to say that the owner for the specific charge imposed is compensated by the increased value of the property, then most manifestly we have a special tax." (*Ibid.*) In other words, an assessment levied upon property owners "without regard to the benefit actually accruing *to them* by means of the improvement, is a tax." (*Creighton v. Manson* (1865) 27 Cal. 613, 627, italics added.) The majority purports to reaffirm and follow these decisions insofar as they set forth "the characteristics of fees that may be imposed without voter approval" (maj. opn., *ante*, at p. 261), but it then eliminates the *principal* characteristic it itself identifies: "the relationship between the charge imposed and a benefit ... *to the payor*" (*ibid.*, italics added). [4]

The charge the majority here says is a valid fee differs in another significant respect **[**234]** from the charges we have previously held to be permissible fees instead of taxes: the **[****66]** measure of what is permissible. As the majority observes, as to all of the charges for benefits we have dealt with in prior cases, we have held that they are "taxes" to the extent they "exceed the reasonable *cost* of the activity on which they are based." (Maj. opn., *ante*, at p. 261, italics added.) This is true even of property assessments; although a given property may be assessed based on the proportionate share of the benefit it receives from a government improvement, the assessment is a valid fee rather than a tax only to the extent it does not exceed the proportionate *cost* of the improvement

[4] The majority's analysis is likewise out of step with decisions from other jurisdictions holding that, to constitute a valid fee instead of a tax, a charge must be "based on a special benefit conferred *on the person paying the fee*." (*Home Builders Assn. v. West Des Moines* (Iowa 2002) 644 N.W.2d 339, 347, italics added; see *American Council of Life Insurers v. DC Health* (D.C. Cir. 2016) 815 F.3d 17, 19 [whether charge is a fee or a tax depends on whether there is a "match between the sum paid and the ... benefit provided, *as seen from the payers' perspective*" (italics added)].)

to the government. (*Knox v. City of Orland* (1992) 4 Cal.4th 132, 142, fn. 15 [14 Cal. Rptr. 2d 159, 841 P.2d 144].) In other words, "an assessment **[***889]** is not measured by the precise amount of special benefits enjoyed by the assessed property," but "reflects costs allocated according to relative benefit received." (*Town of Tiburon v. Bonander* (2009) 180 **[*285]** Cal.App.4th 1057, 1081 [103 Cal. Rptr. 3d 485].) Thus, "an assessment exceeding the cost of the improvement, so as to furnish revenue to the city" constitutes a tax. (*City of Los Angeles v. Offner* (1961) 55 Cal.2d 103, 109 [10 Cal. Rptr. 470, 358 P.2d 926].) Consistent with these common law principles, Proposition 218 amended the state Constitution to provide that "[n]o assessment shall be imposed on any parcel which exceeds the reasonable cost of the proportional special benefit conferred on that parcel." (Cal. Const., art. XIII D, § 4, subd. (a).) Thus, **[****67]** were a city, in order to raise revenue for general purposes, to impose a charge to recover the amount by which the benefit conferred by a government improvement exceeds the cost, the charge would be a tax.

The majority here affords different treatment to the general revenue-raising measure at issue. It holds that cost is irrelevant, and that a charge labeled a "franchise fee" becomes a tax as to a utility's customers only to the extent the charge exceeds "the value" to the utility of "the property interests transferred" (maj. opn., *ante*, at p. 270), "the value of the franchise conveyed" (*ibid.*), or "the value of the franchise rights" (*id.* at pp. 270–271). Contrary to the majority's analysis, our prior decisions clearly do *not* provide support for the line the majority draws between a valid fee and a tax, or for its conclusion that the method the City used here to raise money for general purposes is, uniquely, not a tax. And because there is no existing authority for the majority's newly minted approach, the majority is incorrect that focusing on the fact the Recovery Portion is directly imposed by the City on SCE's customers "preclude[s]" the City from doing something it otherwise could, i.e., proving the charge **[****68]** is a fee rather than a tax by "establishing that [it] bears a reasonable relationship to the value of the property interest it conveyed to SCE." (*Id.* at p. 269.)

Third, there is no factual or legal basis for the majority's assumption that a utility, through price increases, *necessarily* can and will pass on to its customers charges it is legally required to pay. With respect to the sales tax, we have observed that a retailer "may choose simply to absorb the sales tax" imposed by statute instead of passing it on to its customers. (*Loeffler v. Target Corp.* (2014) 58 Cal.4th 1081, 1103 [171 Cal. Rptr. 3d 189, 324 P.3d 50].) A utility could make a similar business decision with respect to higher payments it has become contractually obligated to pay in exchange for its right to operate; it could, for reasons related to the marketplace, simply decline to pass the increase on to its customers.

Moreover, in order to pass charges on to customers through a price increase, a utility would have to apply for and obtain approval from the PUC. Under our Constitution, the PUC has both the power and the duty to "fix rates" for California public utilities (Cal. Const., art. XII, § 6), such that the **[*286]** charges they demand for service are "just and reasonable" (§ 451; see *Southern California Edison Co. v. Peevey* (2003) 31 Cal.4th 781, 792 [3 Cal. Rptr. 3d 703, 74 P.3d 795]). This constitutional power, we have observed, **[****69]** includes the "power to prevent a utility from passing on to the ratepayers unreasonable costs for materials and services." (*Pac. Tel. & Tel. Co. v. Public Utilities Com.* (1950) 34 Cal.2d 822, 826 [215 P.2d 441] (*Pac. Tel.*).) **[***890]** We have also **[**235]** observed that where "the safeguards provided by arms-length bargaining are absent," the PUC, in exercising its constitutional power, has "been vigilant to protect the rate-payers from excessive rates reflecting excessive payments." (*Ibid.*)

In one especially relevant example of its exercise of this power, the PUC disallowed, for purposes of a requested rate increase, contractual payments a utility made to its controlling parent company for

various services. (*Pac. Tel.*, *supra*, 34 Cal.2d at p. 825.) The contract between the two entities specified that the amount of the payment was 1 percent of the utility's gross receipts. (*Ibid.*) In disallowing these payments as a basis for a rate increase, the PUC reasoned that the utility "exercise[d] no real, untrammeled and independent judgment in its negotiations" with its parent company and that "arms-length bargaining" between the two entities was "not, in fact, engaged in, although ... in some instances" they had "made [an attempt] to simulate the same." (Dec. No. 42529 (1949) 48 Cal.P.U.C. 461, 470.) The PUC further reasoned that the formula for the amount **[****70]** of the payments—a "percentage of gross revenues"—was "a false measuring rod": it was "totally unrealistic and [bore] no rational relationship to the reasonable cost of services rendered, reflect[ed] no causal or proximate connection or relationship between payments made thereunder and reasonable value of the services rendered and [was] neither supported by law, logic nor elementary common sense." (*Id.* at p. 472.) The utility's "payment of these excessive amounts," the PUC concluded, did not support the utility's request for a rate increase. (*Ibid.*)

Nothing would preclude the PUC from finding, for similar reasons, that it would not be just and reasonable for a utility, having agreed to pay a city double what it had paid for many years as compensation for using public property, to raise its rates in order to recoup from customers the doubled cost to which it agreed. Nor would anything preclude the PUC from finding that where the utility's duty to pay the increase was expressly made contingent on the utility's ability to recoup the expense from its customers, the increase was not "based on bona fide negotiations." (Maj. opn., *ante*, at p. 270.) Indeed, the majority rightly questions whether "the negotiations" **[****71]** here, which placed responsibility for paying the Recovery Portion on SCE's ratepayers and imposed no financial responsibility for that charge on SCE, reasonably reflect "the value" of what SCE received from the City. (*Id.* at p. 271.) And where the payment is set as a percentage of a utility's gross annual receipts, the PUC could also find that the formula is "a false measuring rod," i.e., it "bears **[*287]** no rational relationship to" the value of what the utility is receiving. (Dec. No. 42529, *supra*, 48 Cal.P.U.C. at p. 472.) In short, had SCE agreed to pay the Recovery Portion and then applied for a rate increase to pass on the charge to its customers, the PUC could have "disallow[ed] expenditures that it [found] unreasonable, thus insuring that any excessive costs [would] be met from [SCE's] profits. The effect of the payments on rates and services [would have been] no greater than in any other case where the [PUC] and management disagree on the reasonableness of an expenditure, and the management concludes that it is good business judgment to make such payments from its profits despite the fact that it cannot recoup them from its rate payers." (*Pac. Tel.*, *supra*, 34 Cal.2d at p. 832.) **[***891]** The majority ignores this precedent in assuming that **[****72]** a utility, through rate increases, necessarily can pass on to its customers any and all charges it has agreed to pay.

Indeed, the facts in the record indicate that SCE and the City did not share the majority's assumption. As the majority explains, the record shows "that SCE was not willing to assume the burden of paying" the additional 1 percent the City demanded, and "was willing only to collect the charge from its customers and remit the revenue to the City." (Maj. opn., *ante*, at p. 271.) It is for this reason that the agreement and the Ordinance provided that "the charge would be collected from ratepayers" and "would become payable only if SCE obtained the PUC's consent to include the surcharge as a customer surcharge." (Maj. opn., *ante*, at p. 271.) Moreover, as explained **[**236]** above, although the agreement required SCE to *obtain* PUC approval by December 31, 2002, SCE and the City agreed not even to *apply* for PUC approval until over two years later, in March 2005. According to a letter from the City to SCE, the delay was "[b]ased" in part "upon the tremendous uncertainty associated with the end of the [California] deregulation transition period ... and the volatility and

uncertainty of rates." Were it true, as the **[****73]** majority assumes, that SCE necessarily could have passed on the Recovery Portion to its customers, there would have been no reason for SCE to have refused legal responsibility for the proposed charge, for SCE and the City to have made the Recovery Portion contingent on "the PUC's consent to include the surcharge as a customer surcharge" (maj. opn., *ante*, at p. 271), or for SCE and the City to have delayed submission of the application for PUC approval. In other words, as plaintiffs assert, the facts in the record indicate that, unlike the majority, SCE and the City did not consider the PUC to be "a mere rubber stamp of financial burdens" SCE and the City "might try to impose upon utility users."

Fourth, the majority's approach, in addition to being inconsistent with our case law, is fundamentally inconsistent with Proposition 218's purpose. The majority, partially quoting the first two sentences of Proposition 218's findings and declarations, suggests that the voters were "concern[ed] with excessive fees, not fees in general." (Maj. opn., *ante*, at p. 262.) But the **[*288]** majority ignores the very next sentence of the findings and declarations: "This measure protects taxpayers by limiting the methods by **[****74]** which local governments exact revenue from taxpayers without their consent." (Prop. 218, § 2, reprinted at 1 Stats. 1996, p. A-295.) Proposition 218 expressly provided that article XIII C "shall be liberally construed to effectuate" this goal, i.e., "limiting local government revenue and enhancing taxpayer consent." (Prop. 218, § 5, reprinted at Historical Notes, 2B West's Ann. Cal. Const. (2013), foll. Art. XIII C, § 1, at p. 363.) The majority also ignores the ballot arguments in favor of Proposition 218, which (1) warned that "politicians [had] created a loophole in the law that allows them to raise taxes without voter approval by calling taxes 'assessments' and 'fees,'" and (2) stated that "Proposition 218 guarantees your right to vote on local tax increases—even when they are called something else, like 'assessments' or 'fees' and imposed on homeowners." (Ballot Pamp., Gen. Elec. (Nov. 5, 1996) argument in favor of Prop. 218, p. 76.) The record here shows that the City imposed the Recovery Portion on SCE's customers in order to raise revenue for **[***892]** general governmental purposes. The charge clearly constitutes one of the "'revenue-producing mechanisms'" that, as the majority explains, local governments **[****75]** adopted because "voters restricted [their] taxing authority." (Maj. opn., *ante*, at p. 266.) By holding that the City may raise revenue from SCE's consumers by calling the charge a franchise fee, even though those paying the fee receive no franchise, the majority sanctions this obvious evasion of Proposition 218 and allows the City to use the utility as a middleman for what is a tax disguised as a fee, in derogation of Proposition 218's express purpose and liberal construction clause.

Fifth, the majority's concern about the *possible* treatment of charges passed on to ratepayers by a utility's "unilateral decision" does not justify its refusal to recognize the significance under our case law of the fact that SCE's customers do not receive franchise rights in exchange for paying the Recovery Portion, and its focus instead on the value of those rights to an entity that is not paying for them. (Maj. opn., *ante*, at p. 269.) Initially, the facts of this case do not present that scenario, and holding here that the Recovery Portion is a tax rather than a franchise fee because SCE's customers receive no franchise rights in return for their payment would not preclude ratepayers from arguing *in a* ***[****76]*** *future case* that we should *expand* California Constitution, article XIII C's reach to franchise charges that a utility, having contractually agreed to pay, unilaterally decides to pass on to its customers. The majority's concern about this scenario does not justify its *contraction* of article XIII C so as to make it inapplicable where it clearly does and should apply: direct **[**237]** government imposition of a charge on those who receive nothing in return.

In any event, the majority's analysis is contrary to decades of California case law establishing that, for

purposes of determining whether a charge is a tax or a fee as to the payor, charges passed on to the payor by the unilateral **[*289]** and discretionary decision of some third party are, in fact, different from charges legally imposed on the payor by the government. (E.g. *Western States*, *supra*, 19 Cal.3d at pp. 217–218; *Western L. Co. v. State Bd. of Equalization* (1938) 11 Cal.2d 156, 162–164 [78 P.2d 731] (*Western L.*).) The majority simply ignores these cases in reasoning that the two types of charges must be treated the same. (Maj. opn., *ante*, at p. 269.)

Indeed, the effect of the majority's approach is to allow claims that this long-standing and unbroken line of precedent precludes. Under that precedent, a charge that is not imposed by the government on the payor—either directly or by inclusion of a **[****77]** *mandatory* pass-on provision—and that is passed on to the payor by the unilateral and discretionary decision of some third party, is not a tax, even if it is "implicit" (maj. opn., *ante*, at p. 269) that the third party on whom the charge is imposed will pass it on to the payor. Notably, in *Howard Jarvis Taxpayers Assn. v. City of Fresno* (2005) 127 Cal.App.4th 914, 927 [26 Cal. Rptr. 3d 153], the court applied this principle to hold that a charge the City of Fresno had imposed on a utility, and that the utility had passed on to its customers, was not "a tax *on utilities consumers*" within the meaning of California Constitution article XIII C. The court explained that "[a]n exaction imposed on any particular ratepayer in an amount established in the discretion of the utility … is not an exercise of the city's taxing power." (*Howard Jarvis*, at p. 927.) **[***893]** Applying this principle, it held that the charge at issue was "not a tax upon consumers of utilities" because the legislation establishing it placed "the 'levy' directly upon the utility" and did "not require[]" the utility "to recover the … fee from ratepayers in any particular manner." (*Ibid.*) [5]

Courts applying the federal Constitution's prohibition on state taxation of the federal government have used the same analysis specifically with respect to so-called utility **[****78]** franchise fees. In *U.S. v. City of Leavenworth, Kan.* (D.Kan. 1977) 443 F.Supp. 274, 280–281, a city ordinance provided that an electrical **[*290]** utility would pay, as a franchise fee, "'three percent (3%) of its gross revenue from the sale of electric energy to all customers within city limits, and the utility in turn billed its customers 'a three percent franchise fee.' The United States, as a purchaser of electricity from the utility, argued that the fee it had been charged constituted 'an impermissible tax upon the federal government.' (*Id.* at p. 281.) The court rejected the argument because the ordinance imposed '[l]egal liability for payment of the exaction' on the utility and 'contain[ed] no provisions for collection directly from' the utility's customers and 'no requirement that [the utility] pass on to' its customers 'all or any part of the financial burden of the franchise fee.'" (*Id.* at p. 282.)

Following this decision, in *U.S. v. State of Md.* (D.Md. 1979) 471 F.Supp. 1030, 1032, another federal court rejected the claim of **[**238]** the United States, again as a purchaser of electricity, that an environmental surcharge the State of Maryland had imposed was a constitutionally invalid tax on the federal government. Although agreeing that the surcharge was a tax—i.e., "an 'enforced contribution to provide for the support of

[5] See ***Western States*, *supra*, 19 Cal.3d at page 217** (charge imposed on nonprofit corporation providing services to banks, that was "recoup[ed]" from banks "by raising" fees, was not a tax on the banks because local ordinance imposing the charge did not "requir[e]" that it "be passed on" to customers); ***Western L.*, *supra*, 11 Cal.2d at page 163** (state sales tax is not a tax on consumers even though retailers pass it on to consumers, because tax statute laid "the tax solely on the retailer"); ***Occidental Life*, *supra*, 135 Cal.App.3d at page 849** (sales tax on retailer is a tax on purchasers from whom retailer recoups the charge only if it "'*must*,'" "'by its terms,'" "'be passed on to the purchaser'"); ***Rio Grande Oil Co. v. Los Angeles* (1935) 6 Cal.App.2d 200, 201 [44 P.2d 451]** (charge on sale of gasoline is a tax as to the seller, but not as to the consumer, even though statute allows sellers to add the charge to the sale process and "'in effect collect the tax from the consumer'"); see also ***Bank of America*, *supra*, 209 Cal.App.2d at pages 792–793** (bank's statutory liability for use tax on checks it sold to customers, which by statute was imposed upon the purchaser rather than the seller, was not a tax on the bank).

[the] government'" (*id.* at p. 1036)—the court **[****79]** denied relief because the surcharge was not a tax *on the federal government* (*id.* at pp. 1037–1041). By statute, the court first reasoned, the surcharge was "directly imposed on the electric companies" and was their "'direct obligation.'" (*Id.* at p. 1038.) As to whether the surcharge was a tax on customers of the electric companies, the determinative factor, the court explained, was whether the law "*required* [the companies] to pass [the charge] on to their customers for payment." (*Ibid.*, italics added.) The surcharge was not a tax on the federal government, the court then held, because the utilities, although "[authorized] ... to pass [it] on to their customers" (*id.* at p. 1039), were "not required" by law to do so (*id.* at p. 1038.) Notably, in reaching this conclusion, the **[***894]** court both followed the Kansas franchise fee decision discussed above and distinguished a Minnesota decision holding that "a franchise fee imposed" upon a gas company by a city *was* an unconstitutional tax "as applied to purchases of natural gas by an agency of the United States ... because the city *required* the utility to add the franchise tax to its rates." (*Id.* at p. 1040, italics added.)

This long-standing and consistent precedent from both California and elsewhere no doubt explains why, as the majority **[****80]** notes, "plaintiffs do not contend" in this case that the Initial Term Fee "is a tax" that was imposed in violation of the state Constitution. (Maj. opn., *ante*, at p. 269.) However, under the majority's holding that charges passed on by utilities are the same, for tax purposes, as charges imposed directly on ratepayers, plaintiffs now can, and surely will, make this argument. Indeed, the majority expressly states that the differences between the Initial Term Fee and the Recovery **[*291]** Portion are "unrelated to the character or validity" of these charges. (Maj. opn., *ante*, at p. 269, fn. 10.) Thus, plaintiffs may now allege that even the Initial Term Fee is a tax because it is passed on to them through SCE's rates and it exceeds the value of the franchise rights SCE received. [6]

In the same way, the majority's holding renders both the Broughton Act and the 1937 Act vulnerable to constitutional challenge. Notwithstanding our holding almost 100 years ago that the fees utilities must pay under the Broughton Act are *not* taxes under the state Constitution (*Tulare*, *supra*, 188 Cal. at p. 670), under the majority's holding, both these payments and similar payments required by the 1937 Act are invalid taxes to the extent **[****81]** they are passed on by utilities to customers through rates and they exceed the value of the franchise rights conveyed. Notably, nothing suggests that these statutorily established charges reflect the value of a franchise. Moreover, the majority's holding that the Constitution *requires* courts to determine the value of a franchise would seem to render the 1937 Act unconstitutional insofar as it provides that "[n]o franchise granted under this chapter shall ever be given any value before any court ... in any proceeding of any character in excess of the cost to the grantee of the necessary publication and any other sum paid by it to the municipality therefor at the time of acquisition." (§ 6263.)

Finally, as a practical matter, the majority's approach is problematic in a number of ways. The majority mentions one: the inherent "difficulties" in "determining the value of a franchise." (Maj. opn., *ante*, at p. 269.) The majority references several factors it says may bear on value: "market forces" and **[**239]** "bona fide negotiations." (*Id.* at pp. 269–270.) It suggests there may be "other indicia of value" (*id.* at p. 270), but it declines to offer any

[6] According to the majority, the Ordinance's treatment of the Recovery Portion "was driven by the PUC's effort to ensure that a local government's higher-than-average charges are not unfairly imposed on ratepayers outside of the local government's jurisdiction." (Maj. opn., *ante*, at p. 269, fn. 10.) As far as the record discloses, this is true only in the sense that the separate billing procedure the PUC permits, but does not require, utilities to employ enabled the City *to use SCE* to collect the additional 1 percent—which is a disguised tax—only from the City's taxpayers, and not from those who do not pay taxes to the City.

guidance as to what those other indicia might be, instead "leav[ing] th[e] issue to be ad **[***895]** dressed **[****82]** by expert opinion and subsequent case law" (*id.* at p. 270, fn. 11). But as we noted over 100 years ago, "[t]here are few subjects on which witnesses are more likely to differ than that of the value of property, and few are more difficult of satisfactory determination." (*O'Hara v. Wattson* (1916) 172 Cal. 525, 528 [157 P. 608].) We also long ago recognized that "the value of franchises may be as various as the objects for which they exist, and the methods by which they are employed, and may change with every moment of time." (*San Jose Gas Co. v. January* (1881) 57 Cal. 614, 616.) There are also uncertainties **[*292]** regarding the other side of the majority's equation, i.e., the amount of the payment. As we have recognized, a utility's annual receipts are "a most indefinite," "elusive," and "uncertain quantity" that is "dependent upon many conditions." (*Thompson v. Board of Supervisors* (1896) 111 Cal. 553, 558 [44 P. 230].) Moreover, the total compensation the Ordinance requires for granting the franchise is *2* percent of SCE's "Gross Annual Receipts." Given the majority's view that all costs are necessarily passed along to customers, this entire 2 percent—not just the one percent Recovery Portion—will have to be considered in determining the amount of the charge and whether it bears a "reasonable relationship" to "value." (Maj. opn., *ante*, at p. 254.) And even were it possible to determine **[****83]** with any certainty the value of the franchise and the amount of the charge, the majority fails to explain what constitutes a "reasonable relationship" between these amounts. (*Ibid.*) Presumably, exact correspondence is unnecessary, but what is necessary, the majority does not say. As we have explained, "the question whether a contract" that impacts a utility's rates and services "is reasonable is one on which, except in clear cases, there is bound to be conflicting evidence and considerable leeway for conflicting opinions." (*Pac. Tel.*, *supra*, 34 Cal.2d at p. 828.)

Perhaps to justify its failure to offer any real guidance on this admittedly "difficult[]" issue (maj. opn., *ante*, at p. 269), the majority notes that "[t]he parties' briefs do not consider the means by which franchise rights might be valued." (*Id.* at p. 270, fn. 11.) But there is a simple explanation for this silence: Neither party has suggested that the value of the franchise should even be a consideration in determining whether the Recovery Portion is a tax or a fee. On the contrary, upon the court's inquiry at oral argument, the City expressly disclaimed this approach. It asserted that, as to fees voluntarily negotiated for the use of government property, courts should not be concerned **[****84]** about whether the fee is reasonably related to the benefits, and should not second-guess what a utility is willing to pay for its use of public property. Nor, the City argued, are courts well positioned to second-guess the economic decisions of other branches of government. The City also noted, like the majority, the inherent difficulties of making this kind of determination, asking rhetorically, "what's the fair and rational rate of a parking meter," or "to rent a duck boat on the lake at the county fairgrounds," or "to rent a meeting room at the community center?" Bringing the question back to the facts of this case, the City rightly asked, "What are the limits of [a municipality's] ability to monetize its rights of way?" Instead, the City urges us to follow "well settled" law by focusing on the "legal incidence" of the Recovery Portion, "i.e., who has a legal duty to pay it." This test, the City asserts, is "logical" **[***896]** and "predictable," is "within the competence of courts to distinguish fees from taxes," and "better serves the needs of courts and the society they serve."

[*293]

I agree with the City. Indeed, regarding the City's comment about monetizing its rights of way, we have explained, **[****85]** as noted above, that a municipality's power to permit utilities to use public property "on such terms as are satisfactory to it" includes the power to "'require the payment of such compensation as seems proper,'" and that courts therefore do not "question whether or not the amount charged is a reasonable charge." (*Sunset*,

supra, 161 Cal. at p. 285.) It is for these reasons, among others, **[**240]** that I focus my analysis, as our precedent directs, on the legal incidence of the Recovery Portion, and do not endorse a vague, unprecedented, unworkable, and standardless test that requires courts to determine the extent to which a charge "bear[s] a reasonable relationship to the value of the property interests transferred" (maj. opn., *ante*, at p. 270), "the value of the franchise conveyed" (*ibid.*), or "the value of the franchise rights" (*id.* at p. 271).

There are myriad other ways in which the majority's approach—determining whether the amount of the charge bears a reasonable relationship to the value of the franchise conveyed—is problematic. It essentially requires courts to determine the adequacy of consideration, in contravention of the well-established "'general contract principle that courts should *not* inquire into the adequacy of consideration.'" **[****86]** (*Foley v. Interactive Data Corp.* (1988) 47 Cal.3d 654, 679 [254 Cal. Rptr. 211, 765 P.2d 373], italics added; see *Whelan v. Swain* (1901) 132 Cal. 389, 391 [64 P. 560] ["'The law does not weigh the *quantum* of the consideration'"].) The majority's approach also essentially transfers responsibility for determining the reasonableness of a utility's rates from the PUC to the courts, thus usurping the PUC's *constitutional* power and duty to "fix [utility] rates" (Cal. Const., art. XII, § 6) and supplanting the PUC's far superior ability, relative to courts, to review the reasonableness of rates (*Hansen v. City of San Buenaventura* (1986) 42 Cal.3d 1172, 1183 [233 Cal. Rptr. 22, 729 P.2d 186] ["judicial review of rates is not comparable to regulation by the P.U.C."]; *County of Inyo v. Public Utilities Com.* (1980) 26 Cal.3d 154, 159–160 [161 Cal. Rptr. 172, 604 P.2d 566] ["PUC maintains an expert, independent staff to investigate rate requests" and "renders an independent decision on each record that it examines," whereas courts "must limit ... review to the rates established by the involved utility and must depend upon the expert testimony presented by the parties"]; *Sale v. Railroad Commission* (1940) 15 Cal.2d 612, 617–618 [104 P.2d 38]).

Given these difficulties and the lack of authority for the majority's approach, I disagree with the majority's conclusion that the Recovery Portion is not a tax unless it exceeds the reasonable value of the franchise. Instead, based on long-standing precedent, the purpose of Proposition 218 to limit local government revenue and enhance taxpayer consent, and the command **[*294]** that we liberally **[****87]** construe California Constitution, article XIII C to effectuate this purpose, I conclude that the Recovery Portion is a tax that the City may not impose without voter approval. I therefore dissent.

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City of Burbank v. State Water Resources Control Bd.

Supreme Court of California

April 4, 2005, Filed

S119248

Reporter

35 Cal. 4th 613 *; 108 P.3d 862 **; 26 Cal. Rptr. 3d 304 ***; 2005 Cal. LEXIS 3486 ****; 2005 Cal. Daily Op. Service 2861; 2005 Daily Journal DAR 3870; 35 ELR 20071; 60 ERC (BNA) 1470

CITY OF BURBANK, Plaintiff and Appellant, v. STATE WATER RESOURCES CONTROL BOARD et al., Defendants and Appellants. CITY OF LOS ANGELES, Plaintiff and Respondent, v. STATE WATER RESOURCES CONTROL BOARD et al., Defendants and Appellants.

Subsequent History: Time for Granting or Denying Rehearing Extended Burbank, City of v. State Water Resources Control Board, 2005 Cal. LEXIS 4271 (Cal., Apr. 21, 2005)

Rehearing denied by, Request denied by City of Burbank v. State Water Res. Control Bd., 2005 Cal. LEXIS 7185 (Cal., June 29, 2005)

Prior History: [****1] Superior Court of Los Angeles County, Nos. BS060960, BS060957, Dzintra I. Janavs, Judge. Court of Appeal, Second Dist., Div. Three, Nos. B150912, B151175 & B152562.

City of Burbank v. State Water Resources Control Bd., 111 Cal. App. 4th 245, 4 Cal. Rptr. 3d 27, 2003 Cal. App. LEXIS 1236 (Cal. App. 2d Dist., 2003)

Disposition: Judgment affirmed in part and remanded in part..

Core Terms

pollutant, regional board, wastewater, clean water, permits, water quality, water quality standards, requirements, federal law, Cities, effluent limitation, restrictions, basin, discharged, regional, limitations, Plant, narrative, stringent, economic factors, numeric, sections, River, issuing, water quality control, federal standard, concentrations, factors, navigable waters, beneficial use

Case Summary

Procedural Posture

Plaintiff cities sought review of a judgment of the Court of Appeal of California, Second Appellate District, Division Three, holding that Cal. Water Code §§ 13241 and 13263 required a regional water control quality board to take into account economic considerations when it adopted water quality standards in a basin plan but not when the board set specific pollutant restrictions in wastewater discharge permits intended to satisfy those standards.

Overview

The cities owned three treatment plants that discharged wastewater under National Pollutant Discharge Elimination System permits issued by the regional board. The court held that whether the regional board should have complied with Cal. Water Code §§ 13263 and 13241 of California's Porter-Cologne Water Quality Control Act, Cal. Water Code § 13000 et seq., by taking into account "economic considerations," such as the costs the permit holder would incur to comply with the numeric pollutant restrictions set out in the permits depended on whether those restrictions met or exceeded the requirements of the federal Clean Water Act, 33 U.S.C.S. § 1251 et seq. To comport

with the principles of federal supremacy, California law could not authorize California's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the mandates of federal law. The federal Clean Water Act did not prohibit a state, when imposing effluent limitations that were more stringent than required by federal law, from taking into account the economic effects of doing so.

Outcome

The court affirmed the judgment of the court of appeal, reinstating the wastewater discharge permits to the extent that the specified numeric limitations on chemical pollutants were necessary to satisfy federal Clean Water Act requirements for treated wastewater. The court remanded for further proceedings to determine whether the pollutant limitations in the permits met or exceeded federal standards.

LexisNexis® Headnotes

Environmental Law > Water Quality > General Overview

Real Property Law > Water Rights > Beneficial Use

HN1[] **Environmental Law, Water Quality**

Whereas the State Water Resources Control Board establishes statewide policy for water quality control, Cal. Water Code § 13140, the regional boards formulate and adopt water quality control plans for all areas within a region. Cal. Water Code § 13240. The regional boards' water quality plans, called "basin plans," must address the beneficial uses to be protected as well as water quality objectives, and they must establish a program of implementation. Cal. Water Code § 13050(j). Basin plans must be consistent with state policy for water quality control. Cal. Water Code § 13240.

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

Environmental Law > Water Quality > Clean Water Act > General Overview

Environmental Law > ... > Clean Water Act > Enforcement > General Overview

HN2[] **Discharge Permits, Effluent Limitations**

Under the federal Clean Water Act, 33 U.S.C.S. § 1251 et seq., each state is free to enforce its own water quality laws so long as its effluent limitations are not less stringent than those set out in the Clean Water Act. 33 U.S.C.S. § 1370.

Business & Corporate Compliance > ... > Water Quality > Clean Water Act > Water Quality Standards

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

HN3[] **Clean Water Act, Water Quality Standards**

The Clean Water Act, 33 U.S.C.S. § 1251 et seq., provides for two sets of water quality measures. Effluent limitations are promulgated by the Environmental Protection Agency and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources. 33 U.S.C.S. §§ 1311, 1314. Water quality

standards are, in general, promulgated by the states and establish the desired condition of a waterway. 33 U.S.C.S. § 1313. These standards supplement effluent limitations so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.

Environmental Law > ... > Clean Water Act > Coverage & Definitions > Point Sources

Environmental Law > Water Quality > General Overview

HN4[] Coverage & Definitions, Point Sources

See 33 U.S.C.S. § 1362(14).

Business & Corporate Compliance > ... > Water Quality > Clean Water Act > Water Quality Standards

Environmental Law > Water Quality > General Overview

HN5[] Clean Water Act, Water Quality Standards

The Environmental Protection Agency (EPA) provides states with substantial guidance in the drafting of water quality standards. Moreover, the Clean Water Act, 33 U.S.C.S. § 1251 et seq., requires, inter alia, that state authorities periodically review water quality standards and secure the EPA's approval of any revisions in the standards. If the EPA recommends changes to the standards and the state fails to comply with that recommendation, the Act authorizes the EPA to promulgate water quality standards for the state. 33 U.S.C.S. § 1313(c).

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

Environmental Law > Water Quality > Clean Water Act > General Overview

Environmental Law > ... > Enforcement > Discharge Permits > General Overview

Environmental Law > ... > Clean Water Act > Enforcement > General Overview

HN6[] Discharge Permits, Effluent Limitations

Part of the federal Clean Water Act, 33 U.S.C.S. § 1251 et seq., is the National Pollutant Discharge Elimination System (NPDES), the primary means for enforcing effluent limitations and standards under the Clean Water Act. The NPDES sets out the conditions under which the federal Environmental Protection Agency or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. 33 U.S.C.S. § 1342(a), (b). In California, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law. Cal. Water Code § 13374.

Environmental Law > Water Quality > General Overview

Real Property Law > Water Rights > Beneficial Use

HN7[] Environmental Law, Water Quality

See Cal. Water Code § 13263(a).

Environmental Law > ... > Enforcement > Discharge

Environmental Law > Water Quality > General Overview

Real Property Law > Water Rights > Beneficial Use

HN8[] Environmental Law, Water Quality

See Cal. Water Code § 13241.

Governments > Legislation > Interpretation

HN9[] Legislation, Interpretation

When construing any statute, the reviewing court's task is to determine the legislature's intent when it enacted the statute so that the court may adopt the construction that best effectuates the purpose of the law. In doing this, the court looks to the statutory language, which ordinarily is the most reliable indicator of legislative intent.

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

HN10[] Discharge Permits, Effluent Limitations

Cal. Water Code § 13263 directs regional boards, when issuing wastewater discharge permits, to take into account various factors including those set out in Cal. Water Code § 13241. Listed among the § 13241 factors is economic considerations. Cal. Water Code § 13241(d).

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

HN11[] Discharge Permits, Effluent Limitations

Cal. Water Code § 13377 specifies that wastewater discharge permits issued by California's regional boards must meet the federal standards set by federal law. In effect, § 13377 forbids a regional board's consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act. That act prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law, 33 U.S.C.S. § 1311(a), and publicly operated wastewater treatment plants must comply with the act's clean water standards, regardless of cost. 33 U.S.C.S. §§ 1311(a), (b)(1)(B), (C), 1342(a)(1), (3).

Constitutional Law > Supremacy Clause > General Overview

Environmental Law > Water Quality > General Overview

HN12[] Constitutional Law, Supremacy Clause

Because Cal. Water Code § 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a wastewater discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards. Such a construction of § 13263 would not only be inconsistent with federal law, it would also be inconsistent with the Legislature's declaration in Cal. Water Code § 13377 that all discharged wastewater must satisfy federal standards. Moreover, under the federal Constitution's Supremacy Clause, U.S. Const. art. VI, cl. 2, a state law that conflicts with federal law is without effect. To comport with the principles of federal supremacy, California law cannot authorize the state's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the

mandates of federal law.

Environmental Law > ... > Enforcement > Discharge Permits > Effluent Limitations

Environmental Law > Water Quality > General Overview

Environmental Law > ... > Clean Water Act > Enforcement > General Overview

HN13[] Discharge Permits, Effluent Limitations

The federal Clean Water Act, 33 U.S.C.S. § 1251 et seq., reserves to the states significant aspects of water quality policy, 33 U.S.C.S. § 1251(b), and it specifically grants the states authority to "enforce any effluent limitation" that is not "less stringent" than the federal standard, 33 U.S.C.S. § 1370. It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority, and thus it does not prohibit a state-when imposing effluent limitations that are more stringent than required by federal law-from taking into account the economic effects of doing so.

Headnotes/Syllabus

Summary

CALIFORNIA OFFICIAL REPORTS SUMMARY

The trial court ruled that California law required a regional water quality control board to weigh the economic burden on a wastewater treatment facility against the expected environmental benefits of reducing pollutants in the wastewater discharge. The cities owned three treatment plants that discharged wastewater under National Pollutant Discharge Elimination System permits issued by the regional board. (Superior Court of Los Angeles County, Nos. BS060960 and BS060957, Dzintra I. Janavs, Judge.) The Court of Appeal, Second Dist., Div. Three, Nos. B150912, B151175 and B152562, concluded that Wat. Code, §§ 13241 and 13263, required a regional board to take into account "economic considerations" when it adopted water quality standards in a basin plan but not when the regional board set specific pollutant restrictions in wastewater discharge permits intended to satisfy those standards.

The Supreme Court affirmed the judgment of the Court of Appeal, reinstating the wastewater discharge permits in part and remanding for further proceedings. The court held that whether the regional board should have complied with Wat. Code, §§ 13263 and 13241, of California's Porter-Cologne Water Quality Control Act, Wat. Code, § 13000 et seq., by taking into account "economic considerations," such as the costs the permit holder would incur to comply with the numeric pollutant restrictions set out in the permits, depended on whether those restrictions met or exceeded the requirements of the federal Clean Water Act, 33 U.S.C. § 1251 et seq. To comport with the principles of federal supremacy, California law could not authorize California's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the mandates of federal law. The federal Clean Water Act did not prohibit a state, when imposing effluent limitations that were more stringent than required by **[*614]** federal law, from taking into account the economic effects of doing so. (Opinion by Kennard, J., with George, C. J., Baxter, Werdegar, Chin, and Moreno, JJ., concurring. Concurring opinion by Brown, J. (see p. 629).)

Headnotes

CALIFORNIA OFFICIAL REPORTS HEADNOTES

Classified to California Digest of Official Reports

CA(1)[] (1)

Pollution and Conservation Laws § 5—Water—"Basin Plans."

Whereas the State Water Resources Control Board establishes statewide policy for water quality control, Wat. Code, § 13140, the regional boards formulate and adopt water quality control plans for all areas within a region, Wat. Code, § 13240. Under Wat. Code, § 13050, subd. (j), the regional boards' water quality plans, called "basin plans," must address the beneficial uses to be protected as well as water quality objectives, and they must establish a program of implementation. Basin plans must be consistent with state policy for water quality control under Wat. Code, § 13240.

CA(2)[] (2)

Pollution and Conservation Laws § 5—Water—Federal and State Standards.

Under 33 U.S.C. § 1370, of the federal Clean Water Act, 33 U.S.C. § 1251 et seq., each state is free to enforce its own water quality laws so long as its effluent limitations are not less stringent than those set out in the Clean Water Act.

CA(3)[] (3)

Pollution and Conservation Laws § 5—Water—Federal and State Standards.

The Clean Water Act, 33 U.S.C. § 1251 et seq., provides for two sets of water quality measures. Pursuant to 33 U.S.C. §§ 1311 and 1314, effluent limitations are promulgated by the Environmental Protection Agency and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources. Water quality standards are, in general, promulgated by the states and establish the desired condition of a waterway under 33 U.S.C. § 1313. These standards supplement effluent limitations so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.

CA(4)[] (4)

Pollution and Conservation Laws § 5—Water—Federal and State Standards.

The Environmental Protection Agency (EPA) provides states with substantial guidance in the drafting of water quality standards. Moreover, the Clean Water Act, 33 U.S.C. § 1251 et seq., requires, inter alia, that state authorities periodically review water quality **[*615]** standards and secure the EPA's approval of any revisions in the standards. If the EPA recommends changes to the standards and the state fails to comply with that recommendation, 33 U.S.C. § 1313(c), authorizes the EPA to promulgate water quality standards for the state.

CA(5)[] (5)

Pollution and Conservation Laws § 5—Water—National Pollutant Discharge Elimination System.

Part of the federal Clean Water Act, 33 U.S.C. § 1251 et seq., is the National Pollutant Discharge Elimination System (NPDES), the primary means for enforcing effluent limitations and standards under the Clean Water Act. Title 33 U.S.C. § 1342(a), (b), of the NPDES sets out the conditions under which the federal Environmental Protection Agency or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. Under California law, Wat. Code, § 13374, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law.

CA(6)[] (6)

Statutes § 21—Construction—Legislative Intent.

When construing any statute, the reviewing court's task is to determine the Legislature's intent when it enacted the statute so that the court may adopt the construction that best effectuates the purpose of the law. In doing this, the court looks to the statutory language, which ordinarily is the most reliable indicator of legislative intent.

CA(7)[⬇] (7)

Pollution and Conservation Laws § 5—Water—Wastewater Discharge Permits—Economic Considerations.

Wat. Code, § 13263, directs regional boards, when issuing wastewater discharge permits, to take into account various factors, including those set out in Wat. Code, § 13241. Listed among the § 13241 factors is economic considerations, in § 13241, subd. (d).

CA(8)[⬇] (8)

Pollution and Conservation Laws § 5—Water—Wastewater Discharge Permits—Economic Considerations.

Wat. Code, § 13377, specifies that wastewater discharge permits issued by California's regional boards must meet the federal standards set by federal law. In effect, § 13377 forbids a regional board's consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act. That act prohibits the discharge of pollutants into the navigable waters of **[*616]** the United States unless there is compliance with federal law (33 U.S.C. § 1311(a)), and publicly operated wastewater treatment plants must comply with the act's clean water standards under 33 U.S.C. §§ 1311(a), (b)(1)(B) and (C), 1342(a)(1) and (3), regardless of cost.

CA(9)[⬇] (9)

Pollution and Conservation Laws § 5—Water—Wastewater Discharge Permits—Economic Considerations.

Because Wat. Code, § 13263, cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a wastewater discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards. Such a construction of § 13263 would not only be inconsistent with federal law, it would also be inconsistent with the Legislature's declaration in Wat. Code, § 13377, that all discharged wastewater must satisfy federal standards. Moreover, under the federal Constitution's supremacy clause, U.S. Const., art. VI, a state law that conflicts with federal law is without effect. To comport with the principles of federal supremacy, California law cannot authorize the state's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the mandates of federal law.

CA(10)[⬇] (10)

Pollution and Conservation Laws § 5—Water—Federal and State Standards.

The federal Clean Water Act, 33 U.S.C. § 1251 et seq., reserves to the states significant aspects of water quality policy under 33 U.S.C. § 1251(b), and it specifically grants the states authority to enforce any effluent limitation that is not less stringent than the federal standard under 33 U.S.C. § 1370. It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority, and thus it does not prohibit a state—when imposing effluent limitations that are more stringent than required by federal law—from taking into account the economic effects of doing so. Thus, a regional board, when issuing a wastewater discharge permit, may not consider economic factors to justify imposing pollutant restrictions that

are less stringent than the applicable federal standards require. When, however, a regional board is considering whether to make the pollutant restrictions in a wastewater discharge permit more stringent than federal law requires, California law allows the board to take into account economic factors, including the wastewater discharger's cost of compliance.

[4 Witkin, Summary of Cal. Law (9th ed. 1987) Real Property, §§ 68, 69.]

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Judges: Kennard, J., with George, C. J., Baxter, Werdegar, Chin, and Moreno, JJ., concurring. Concurring opinion by Brown, J.

Opinion by: KENNARD **[**864]**

Opinion

KENNARD, J.—Federal law establishes national water quality standards but allows the states to enforce their own water quality laws so long as they comply with federal standards. Operating within this federal-state framework, California's nine Regional Water Quality Control Boards establish water quality policy. They also issue permits for the discharge of treated wastewater; these permits specify the maximum allowable concentration of chemical **[****4]** pollutants in the discharged wastewater.

The question here is this: When a regional board issues a permit to a wastewater treatment facility, must the board take into account the facility's costs of complying with the board's restrictions on pollutants in the wastewater to be discharged? The trial court ruled that California law required a regional board to weigh the economic burden on the facility against the expected environmental benefits of reducing pollutants in the wastewater discharge. The Court of Appeal disagreed. On petitions by the municipal operators of three wastewater treatment facilities, we granted review.

We reach the following conclusions: Because both California law and federal law require regional boards to comply with federal clean water standards, and because the supremacy clause of the United States Constitution requires state law to yield to federal law, a regional board, when issuing a wastewater discharge permit, may not consider economic factors to justify imposing pollutant restrictions that are *less stringent* than the applicable federal standards require. When, however, a regional board is considering whether to make the pollutant restrictions in **[****5]** a wastewater discharge permit *more stringent* than federal law requires, California law allows the board to take into account economic **[**865]** factors, including the wastewater discharger's cost of compliance. We remand this case for further proceedings to determine whether the pollutant limitations in the permits challenged here meet or exceed federal standards.

[*619] I. Statutory Background

The quality of our nation's waters is governed by a "complex statutory and regulatory scheme ... that implicates both federal and state administrative responsibilities." (*PUD No. 1 of Jefferson County v. Washington Department of Ecology* (1994) 511 U.S. 700, 704 [128 L. Ed. 2d 716, 114 S. Ct. 1900].) We first discuss California law, then federal law.

A. California Law

In California, the controlling law is the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), which was enacted in 1969. (Wat. Code, § 13000 et seq., added by Stats. 1969, ch. 482, § 18, p. 1051.) [1] Its goal is "to attain the highest water **[***307]** quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and **[****6]** detrimental, economic and social, tangible and intangible." (§ 13000.) The task of accomplishing this belongs to the State Water Resources Control Board (State Board) and the nine Regional Water Quality Control Boards; together the State Board and the regional boards comprise "the principal state agencies with primary responsibility for the coordination and control of water quality." (§ 13001.) As relevant here, one of those regional boards oversees the Los Angeles region (the Los Angeles Regional Board). [2]

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[1] Further undesignated statutory references are to the Water Code.

[2] The Los Angeles water region "comprises all basins draining into the Pacific Ocean between the southeasterly boundary, located in the westerly part of Ventura County, of the watershed of Rincon Creek and a line which coincides with the southeasterly boundary of Los Angeles County from the ocean to San Antonio Peak and follows thence the divide between San Gabriel River and Lytle Creek drainages to the divide between Sheep Creek and San Gabriel River

[****7] CA(1)[↑] (1) HN1[↑] Whereas the State Board establishes statewide policy for water quality control (§ 13140), the regional boards "formulate and adopt water quality control plans for all areas within [a] region" (§ 13240). The regional boards' water quality plans, called "basin plans," must address the beneficial uses to be protected as well as water quality objectives, and they must establish a program of implementation. (§ 13050, subd. (j).) Basin plans must be consistent with "state policy for water quality control." (§ 13240.)

B. Federal Law

In 1972, Congress enacted amendments (Pub.L. No. 92-500 (Oct. 18, 1972) 86 Stat. 816) to the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), which, as amended in 1977, is commonly known as the Clean [*620] Water Act. The Clean Water Act is a "comprehensive water quality statute designed to 'restore and maintain the chemical, physical, and biological integrity of the Nation's waters.' " (*PUD No. 1 of Jefferson County v. Washington Dept. of Ecology, supra*, 511 U.S. at p. 704, quoting 33 U.S.C. § 1251(a).) The act's national goal was to eliminate by the year 1985 [****8] "the discharge of pollutants into the navigable waters" of the United States. (33 U.S.C. § 1251(a)(1).) To accomplish this goal, the act established "effluent limitations," which are restrictions on the "quantities, rates, and concentrations of chemical, physical, biological, and other constituents"; these effluent limitations allow the discharge of pollutants only when the water has been satisfactorily treated to conform with federal water quality standards. (33 U.S.C. §§ 1311, 1362(11).)

CA(2)[↑] (2) HN2[↑] Under the federal Clean Water Act, each state is free to enforce its own water quality laws so long as its effluent limitations are not "less stringent" than those set out in the Clean Water Act. (33 U.S.C. § 1370.) This led the California Legislature in 1972 to amend the state's Porter-Cologne Act "to ensure consistency with the requirements for state programs implementing the Federal Water Pollution Control Act." (§ 13372.)

[**866] CA(3)[↑] (3) Roughly a dozen years ago, the United States Supreme Court, in *Arkansas v. Oklahoma* (1992) 503 U.S. 91 [117 L. Ed. 2d 239, 112 S. Ct. 1046], described the distinct roles of the state and federal agencies [****9] in enforcing water quality: "The Clean Water Act anticipates a partnership between the States and the Federal Government, animated by a shared objective: 'to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.' 33 U.S.C. § 1251(a). Toward [***308] this end, HN3[↑] [the Clean Water Act] provides for two sets of water quality measures. 'Effluent limitations' are promulgated by the [Environmental Protection Agency (EPA)] and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources.[3] See §§ 1311, 1314. '[W]ater quality standards' are, in general, promulgated by the States and establish the desired condition of a waterway. See § 1313. These standards supplement effluent limitations 'so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.' *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 205, n. 12 [48 L. Ed. 2d 578, 96 S. Ct. 2022, 2025, n. 12] (1976).

[****10] [*621] CA(4)[↑] (4) "HN5[↑] The EPA provides States with substantial guidance in the drafting of water quality standards. See generally 40 CFR pt. 131 (1991) (setting forth model water quality standards). Moreover, [the Clean Water Act] requires, *inter alia*, that state authorities periodically review water quality

drainages." (§ 13200, subd. (d).)

[3] A "HN4[↑] point source" is "any discernible, confined and discrete conveyance" and includes "any pipe, ditch, channel ... from which pollutants ... may be discharged." (33 U.S.C. § 1362 (14).)

standards and secure the EPA's approval of any revisions in the standards. If the EPA recommends changes to the standards and the State fails to comply with that recommendation, the Act authorizes the EPA to promulgate water quality standards for the State. 33 U.S.C. § 1313(c)." (*Arkansas v. Oklahoma, supra,* 503 U.S. at p. 101.)

CA(5)[↑] **(5)** HN6[↑] Part of the federal Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), "[t]he primary means" for enforcing effluent limitations and standards under the Clean Water Act. (*Arkansas v. Oklahoma, supra,* 503 U.S. at p. 101.) The NPDES sets out the conditions under which the federal EPA or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. (33 U.S.C. § 1342(a) & (b).) In California, wastewater **[****11]** discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law. (§ 13374.)

With this federal and state statutory framework in mind, we now turn to the facts of this case.

II. Factual Background

This case involves three publicly owned treatment plants that discharge wastewater under NPDES permits issued by the Los Angeles Regional Board.

The City of Los Angeles owns and operates the Donald C. Tillman Water Reclamation Plant (Tillman Plant), which serves the San Fernando Valley. The City of Los Angeles also owns and operates the Los Angeles-Glendale Water Reclamation Plant (Los Angeles-Glendale Plant), which processes wastewater from areas within the City of Los Angeles and the independent cities of Glendale and Burbank. Both the Tillman Plant and the Los Angeles-Glendale Plant discharge wastewater directly into the Los Angeles River, now a concrete-lined flood control channel that runs through the City of Los Angeles, ending at the Pacific Ocean. The State Board and the Los Angeles Regional Board consider the Los Angeles River to be a navigable water of the United States for purposes of the federal Clean Water **[****12]** Act.

The third plant, the Burbank Water Reclamation Plant (Burbank Plant), is owned and operated by the City of Bur **[***309]** bank, serving residents and businesses within that city. The Burbank Plant discharges wastewater into the Burbank Western Wash, which drains into the Los Angeles River.

[*622] All three plants, which together process hundreds of millions of gallons of sewage **[**867]** each day, are tertiary treatment facilities; that is, the treated wastewater they release is processed sufficiently to be safe not only for use in watering food crops, parks, and playgrounds, but also for human body contact during recreational water activities such as swimming.

In 1998, the Los Angeles Regional Board issued renewed NPDES permits to the three wastewater treatment facilities under a basin plan it had adopted four years earlier for the Los Angeles River and its estuary. That 1994 basin plan contained general narrative criteria pertaining to the existing and potential future beneficial uses and water quality objectives for the river and estuary. [4] The narrative criteria included municipal and domestic water supply, swimming and other recreational water uses, and fresh water habitat. The plan further provided: **[****13]** "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life." The 1998 permits sought to reduce these narrative criteria to specific numeric requirements setting daily maximum limitations for more than 30 pollutants present in

[4] This opinion uses the terms "narrative criteria" or descriptions, and "numeric criteria" or effluent limitations. Narrative criteria are broad statements of desirable water quality goals in a water quality plan. For example, "no toxic pollutants in toxic amounts" would be a narrative description. This contrasts with numeric criteria, which detail specific pollutant concentrations, such as parts per million of a particular substance.

the treated wastewater, measured in milligrams or micrograms per liter of effluent. [5]

[**14]** The Cities of Los Angeles and Burbank (Cities) filed appeals with the State Board, contending that achievement of the numeric requirements would be too costly when considered in light of the potential benefit to water quality, and that the pollutant restrictions in the NPDES permits were unnecessary to meet the narrative criteria described in the basin plan. The State Board summarily denied the Cities' appeals.

Thereafter, the Cities filed petitions for writs of administrative mandate in the superior court. They alleged, among other things, that the Los Angeles Regional Board failed to comply with sections 13241 and 13263, part of California's Porter-Cologne Act, because it did not consider the economic burden on the Cities in having to reduce substantially the pollutant content of their discharged wastewater. They also alleged that compliance with the pollutant restrictions set out in the NPDES permits issued by the regional **[*623]** board would greatly increase their costs of treating the wastewater to be discharged into the Los Angeles River. According to the City of Los Angeles, its compliance costs would exceed $ 50 million annually, representing more than 40 percent of its entire budget **[****15]** for operating its four wastewater treatment plants and its sewer system; the City of Burbank estimated its added costs at over $ 9 million annually, a nearly 100 percent increase above its $ 9.7 million annual budget for wastewater treatment.

[*310]** The State Board and the Los Angeles Regional Board responded that sections 13241 and 13263 do not require consideration of costs of compliance when a regional board issues a NPDES permit that restricts the pollutant content of discharged wastewater.

The trial court stayed the contested pollutant restrictions for each of the three wastewater treatment plants. It then ruled that sections 13241 and 13263 of California's Porter-Cologne Act required a regional board to consider costs of compliance not only when it adopts a basin or water quality plan but also when, as here, it issues an NPDES permit setting the allowable pollutant content of a treatment plant's discharged wastewater. The court found no evidence that the Los Angeles Regional Board had considered economic factors at either stage. Accordingly, the trial court granted the Cities' petitions for writs of mandate, and it ordered the Los Angeles Regional Board to vacate the contested restrictions **[****16]** on pollutants in the wastewater discharge permits issued to the three municipal plants here and to conduct hearings **[**868]** to consider the Cities' costs of compliance before the board's issuance of new permits. The Los Angeles Regional Board and the State Board filed appeals in both the Los Angeles and Burbank cases. [6]

The Court of Appeal, after consolidating the cases, reversed the trial court. It concluded that sections 13241 and 13263 require a regional board to take into account "economic **[****17]** considerations" when it adopts water quality standards in a basin plan but not when, as here, the regional board sets specific pollutant restrictions in wastewater discharge permits intended to satisfy those standards. We granted the Cities' petition for review.

[*624] III. Discussion

[5] For example, the permits for the Tillman and Los Angeles-Glendale Plants limited the amount of fluoride in the discharged wastewater to 2 milligrams per liter and the amount of mercury to 2.1 micrograms per liter.

[6] Unchallenged on appeal and thus not affected by our decision are the trial court's rulings that (1) the Los Angeles Regional Board failed to show how it derived from the narrative criteria in the governing basin plan the specific numeric pollutant limitations included in the permits; (2) the administrative record failed to support the specific effluent limitations; (3) the permits improperly imposed daily maximum limits rather than weekly or monthly averages; and (4) the permits improperly specified the manner of compliance.

A. Relevant State Statutes

The California statute governing the issuance of *wastewater permits* by a regional board is section 13263, which was enacted in 1969 as part of the Porter-Cologne Act. (See *ante*, at p. 619.) Section 13263 provides in relevant part: "HN7[↑] *The regional board*, after any necessary hearing, *shall prescribe requirements as to the nature of any proposed discharge* [of wastewater]. *The requirements* shall implement any relevant water quality control plans that have been adopted, and *shall take into consideration* the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and *the provisions of Section 13241*." (§ 13263, subd. (a), italics added.)

Section 13241 states: "HN8[↑] Each regional board shall establish such water quality objectives in water quality control **[****18]** plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:

[*311]** "(a) Past, present, and probable future beneficial uses of water.

"(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

"(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.

"(d) *Economic considerations*.

"(e) The need for developing housing within the region.

"(f) The need to develop and use recycled water." (Italics added.)

The Cities here argue that section 13263's express reference to section 13241 requires the Los Angeles Regional Board to consider section 13241's listed factors, notably "[e]conomic considerations," before issuing NPDES permits requiring specific pollutant reductions **[****19]** in discharged effluent or treated wastewater.

[*625] Thus, at issue is language in section 13263 stating that when a regional board "prescribe[s] requirements as to the nature of any proposed discharge" of treated wastewater it must "take into consideration" certain factors including "the provisions of Section 13241." According to the Cities, this statutory language requires that a regional board make an independent evaluation of the section 13241 factors, including "economic considerations," before restricting the pollutant content in an NPDES permit. This was the view expressed in the trial court's ruling. The Court of Appeal rejected that view. It held that a regional board need consider the section 13241 factors only when it adopts a basin or water quality plan, but not when, as in this case, it issues a wastewater discharge **[**869]** permit that sets specific numeric limitations on the various chemical pollutants in the wastewater to be discharged. As explained below, the Court of Appeal was partly correct.

B. Statutory Construction

CA(6)[↑] **(6)** HN9[↑] When construing any statute, our task is to determine the Legislature's intent when it enacted the statute "so that we may adopt the construction that **[****20]** best effectuates the purpose of the law." (*Hassan v. Mercy American River Hospital* (2003) 31 Cal.4th 709, 715 [3 Cal. Rptr. 3d 623, 74 P.3d 726]; see *Esberg v. Union Oil Co.* (2002) 28 Cal.4th 262, 268 [121 Cal. Rptr. 2d 203, 47 P.3d 1069].) In doing this, we look to the statutory language, which ordinarily is "the most reliable indicator of

legislative intent." (*Hassan, supra,* at p. 715.)

CA(7)[↑] **(7)** As mentioned earlier, our Legislature's 1969 enactment of the Porter-Cologne Act, which sought to ensure the high quality of water in this state, predated the 1972 enactment by Congress of the precursor to the federal Clean Water Act. Included in California's original Porter-Cologne Act were sections 13263 and 13241. HN10[↑] Section 13263 directs regional boards, when issuing wastewater discharge permits, to take into account various factors, including those set out in section 13241. Listed among the section 13241 factors is "[e]conomic considerations." (§ 13241, subd. (d).) The plain language of sections 13263 and 13241 indicates the Legislature's intent in 1969, when these statutes were enacted, that a regional board consider the cost of compliance when setting effluent limitations in a wastewater discharge permit.

Our **[****21]** construction of sections 13263 and 13241 does not end with their plain statutory language, however. We must also analyze them in the context of the statutory scheme of which they are a part. (*State Farm Mutual Automobile Ins. Co. v. Garamendi* (2004) 32 Cal.4th 1029, 1043 [12 **[***312]** Cal. Rptr. 3d 343, 88 P.3d 71].) Like sections 13263 and 13241, section 13377 is part of the Porter-Cologne Act. But unlike the former two statutes, section 13377 was **[*626]** not enacted until 1972, shortly after Congress, through adoption of the Federal Water Pollution Control Act Amendments, established a comprehensive water quality policy for the nation.

CA(8)[↑] **(8)** HN11[↑] Section 13377 specifies that wastewater discharge permits issued by California's regional boards must meet the federal standards set by federal law. In effect, section 13377 forbids a regional board's consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act. That act prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law (33 U.S.C. § 1311(a)), and publicly operated wastewater **[****22]** treatment plants such as those before us here must comply with the act's clean water standards, regardless of cost (see *id.,* §§ 1311(a), (b)(1)(B) & (C), 1342(a)(1) & (3)). HN12[↑] CA(9)[↑] **(9)** Because section 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a wastewater discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards. [7] **[****24]** Such a construction of section 13263 would not only be inconsistent with federal law, it would also be inconsistent with the Legislature's **[**870]** declaration in section 13377 that all discharged wastewater must satisfy federal standards. [8] This was also the conclusion of the Court of Appeal. Moreover, under the federal Constitution's supremacy clause (art. VI), a state law that conflicts with federal law is " 'without

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[7] The concurring opinion misconstrues both state and federal clean water law when it describes the issue here as "whether the Clean Water Act prevents or prohibits the regional water board from considering economic factors to justify pollutant restrictions *that meet the clean water standards in more cost-effective and economically efficient ways.*" (Conc. opn. of Brown, J., *post,* at p. 629, some italics added.) This case has nothing to do with meeting federal standards in more cost effective and economically efficient ways. State law, as we have said, allows a regional board to consider a permit holder's compliance cost to *relax* pollutant concentrations, as measured by numeric standards, for pollutants in a wastewater discharge permit. (§§ 13241 & 13263.) Federal law, by contrast, as stated above in the text, "prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law (33 U.S.C. § 1311(a)), and publicly operated wastewater treatment plants such as those before us here must comply with the [federal] act's *clean water standards, regardless of cost* (see *id.*, §§ 1311(a), (b)(1)(B) & (C), 1342(a)(1) & (3))." (Italics added.)

[8] As amended in 1978, section 13377 provides for the issuance of waste discharge permits that comply with federal clean water law "together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." We do not here decide how this provision would affect the cost-consideration requirements of sections 13241 and 13263 when more stringent effluent standards or limitations in a permit are justified for some reason independent of compliance with federal law.

effect.' " (*Cipollone v. Liggett Group, Inc.* (1992) 505 U.S. 504, 516 [120 L. Ed. 2d 407, 112 S. Ct. 2608]; see *Dowhal v. SmithKline Beecham Consumer Healthcare* (2004) 32 Cal.4th 910, 923 [12 Cal. Rptr. 3d 262, 88 P.3d 1].) To comport with the principles of federal supremacy, California law cannot authorize this **[*627]** state's regional boards to allow the discharge of pollutants **[****23]** into the navigable waters of the United States in concentrations that would exceed the mandates of federal law.

[*313]** Thus, in this case, whether the Los Angeles Regional Board should have complied with sections 13263 and 13241 of California's Porter-Cologne Act by taking into account "economic considerations," such as the costs the permit holder will incur to comply with the numeric pollutant restrictions set out in the permits, depends on whether those restrictions meet or exceed the requirements of the federal Clean Water Act. We therefore remand this matter for the trial court to resolve that issue.

C. Other Contentions

The Cities **[****25]** argue that requiring a regional board at the wastewater discharge permit stage to consider the permit holder's cost of complying with the board's restrictions on pollutant content in the water is consistent with federal law. In support, the Cities point to certain provisions of the federal Clean Water Act. They cite section 1251(a)(2) of title 33 United States Code, which sets, as a national goal "*wherever attainable,*" an interim goal for water quality that protects fish and wildlife, and section 1313(c)(2)(A) of the same title, which requires consideration, among other things, of waters' "*use and value* for navigation" when revising or adopting a "water quality standard." (Italics added.) These two federal statutes, however, pertain not to permits for wastewater discharge, at issue here, but to establishing water quality standards, not at issue here. Nothing in the federal Clean Water Act suggests that a state is free to disregard or to weaken the federal requirements for clean water when an NPDES permit holder alleges that compliance with those requirements will be too costly.

CA(10)[↑] **(10)** At oral argument, counsel for amicus curiae National Resources Defense Council, which argued on **[****26]** behalf of California's State Board and regional water boards, asserted that the federal Clean Water Act incorporates state water policy into federal law, and that therefore a regional board's consideration of economic factors to justify greater pollutant concentration in discharged wastewater would conflict with the federal act even if the specified pollutant restrictions were not less stringent than those required under federal law. We are not persuaded. HN13[↑] The federal Clean Water Act reserves to the states significant aspects of water quality policy (33 U.S.C. § 1251(b)), and it specifically grants the states authority to "enforce any effluent limitation" that is not "*less stringent*" than the federal standard (33 U.S.C. § 1370, italics added). It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority, and thus it does not prohibit **[*628]** a state—when imposing effluent limitations that are *more stringent* than required by federal law—from taking into account the economic effects of doing so.

Also at oral argument, counsel for the Cities asserted that if the three municipal wastewater treatment facilities ceased **[****27]** releasing their treated wastewater into the concrete channel that makes up the Los Angeles River, it would (other than during the rainy season) contain no water at all, and thus would not be a "navigable water" of the **[**871]** United States subject to the Clean Water Act. (See *Solid Waste Agency v. United States Army Corps of Engineers* (2001) 531 U.S. 159, 172 [148 L. Ed. 2d 576, 121 S. Ct. 675] ["The term 'navigable' has at least the import of showing us what Congress had in mind as its authority for enacting the CWA: its traditional jurisdiction over waters that were or had been navigable in fact or

which could reasonably be so made."].) It is unclear when the Cities first raised this issue. The Court of Appeal did not discuss it in its opinion, and the Cities did not seek rehearing on this ground. (See Cal. Rules of Court, rule **[***314]** 28(c)(2).) Concluding that the issue is outside our grant of review, we do not address it.

Conclusion

Through the federal Clean Water Act, Congress has regulated the release of pollutants into our national waterways. The states are free to manage their own water quality programs so long as they do not compromise the federal clean **[****28]** water standards. When enacted in 1972, the goal of the Federal Water Pollution Control Act Amendments was to *eliminate* by the year 1985 the discharge of pollutants into the nation's navigable waters. In furtherance of that goal, the Los Angeles Regional Board indicated in its 1994 basin plan on water quality the intent, insofar as possible, to remove from the water in the Los Angeles River toxic substances in amounts harmful to humans, plants, and aquatic life. What is not clear from the record before us is whether, in limiting the chemical pollutant content of wastewater to be discharged by the Tillman, Los Angeles-Glendale, and Burbank wastewater treatment facilities, the Los Angeles Regional Board acted only to implement requirements of the federal Clean Water Act or instead imposed pollutant limitations that exceeded the federal requirements. This is an issue of fact to be resolved by the trial court.

Disposition

We affirm the judgment of the Court of Appeal reinstating the wastewater discharge permits to the extent that the specified numeric limitations on chemical pollutants are necessary to satisfy federal Clean Water Act requirements for treated wastewater. **[****29]** The Court of Appeal is directed to remand this **[*629]** matter to the trial court to decide whether any numeric limitations, as described in the permits, are "more stringent" than required under federal law and thus should have been subject to "economic considerations" by the Los Angeles Regional Board before inclusion in the permits.

George, C. J., Baxter, J., Werdegar, J., Chin, J., and Moreno, J., concurred.

Concur by: BROWN

Concur

BROWN, J., Concurring.—I write separately to express my frustration with the apparent inability of the government officials involved here to answer a simple question: How do the federal clean water standards (which, as near as I can determine, are the state standards) prevent the state from considering economic factors? The majority concludes that because "the supremacy clause of the United States Constitution requires state law to yield to federal law, a regional board, when issuing a wastewater discharge permit, may not consider economic factors to justify imposing pollutant restrictions that are *less stringent* than the applicable federal standards require." (Maj. opn., *ante*, at p. 618.) That seems a pretty self-evident proposition, but not a useful one. **[****30]** The real question, in my view, is whether the Clean Water Act prevents or prohibits the regional water board from considering economic factors to justify pollutant restrictions that *meet* the clean water standards in more cost-effective and economically efficient ways. I can see no reason why a federal law—which purports to be an example of cooperative federalism—would decree such a result. I do not think the majority's reasoning is at fault here. Rather, the agencies involved seemed to have worked hard to make this simple question impenetrably obscure.

A brief review of the statutory framework at issue is necessary to understand my concerns. **[***315]**

[872] I. Federal Law**

"In 1972, Congress enacted the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), commonly known as the Clean Water Act (CWA) [Citation.] ... [¶] Generally, the CWA 'prohibits the discharge of any pollutant except in compliance with one of several statutory exceptions. [Citation.]' ... The most important of those exceptions is pollution discharge under a valid NPDES [National Pollution Discharge Elimination System] permit, which can be issued either by the Environmental **[****31]** Protection Agency (EPA), or by an EPA-approved state permit program such as California's. [Citations.] NPDES permits are valid for five years. [Citation.] [¶] Under the CWA's NPDES permit system, the states are required to develop *water quality standards*. [Citations.] A water quality standard 'establish[es] the desired condition of a waterway.? [Citation.] A water quality standard for any **[*630]** given waterway, or 'water body,' has two components: (1) the designated beneficial uses of the water body and (2) the *water quality criteria* sufficient to protect those uses. [Citations.] [¶] Water quality criteria can be either *narrative* or *numeric*. [Citation.]" (*Communities for a Better Environment v. State Water Resources Control Bd.* (2003) 109 Cal.App.4th 1089, 1092–1093 [1 Cal. Rptr. 3d 76].)

With respect to satisfying water quality standards, "a polluter must comply with *effluent limitations*. The CWA defines an effluent limitation as 'any restriction established by a State or the [EPA] Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, **[****32]** the waters of the contiguous zone, or the ocean, including schedules of compliance.' [Citation.] 'Effluent limitations are a means of *achieving* water quality standards.' [Citation.] [¶] NPDES permits establish effluent limitations for the polluter. [Citations.] CWA's NPDES permit system provides for a two-step process for the establishing of effluent limitations. First, the polluter must comply with *technology-based effluent limitations*, which are limitations based on the best available or practical technology for the reduction of water pollution. [Citations.] [¶] Second, the polluter must also comply with more stringent *water quality-based effluent limitations* (WQBEL's) where applicable. In the CWA, Congress 'supplemented the "technology-based" effluent limitations with "water quality-based" limitations "so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels." ' [Citation.] [¶] The CWA makes WQBEL's applicable to a given polluter whenever WQBEL's are 'necessary to meet water quality standards, treatment standards, or schedules of compliance, **[****33]** established pursuant to any State law or regulations ... .' [Citations.] Generally, NPDES permits must conform to state water quality laws insofar as the state laws impose more stringent pollution controls than the CWA. [Citations.] Simply put, WQBEL's implement water quality standards." (*Communities for a Better Environment v. State Water Resources Control Bd.*, *supra*, 109 Cal.App.4th at pp. 1093–1094, fns. omitted.)

This case involves water quality-based effluent limitations. As set forth above, "[u]nder the CWA, states have the primary role in promulgating water quality standards." (*Piney Run Preservation Ass'n v. Commrs. of Carroll Co.* (4th Cir. 2001) 268 F.3d 255, 265, fn. 9.) "Under the CWA, the water quality standards referred to in section 301 [see 33 U.S.C. § 1311] are primarily the states' handiwork." **[***316]** (*American Paper Institute, Inc. v. U.S. Envtl. Protection Agency* (D.C. Cir. 1993) 302 U.S. App. D.C. 80 [996 F.2d 346, 349] (*American Paper*).) In fact, upon the 1972 passage of the CWA, "[s]tate water quality standards in effect at the time ... were deemed to be the initial water **[****34]** quality benchmarks for CWA purposes ... . The states were to revisit and, if **[*631]** necessary, revise those initial standards at least once every three years." (*American Paper*, at

p. 349.) Therefore, "once a water quality standard has been promulgated, section 301 of the CWA requires all NPDES permits for point sources to incorporate discharge limitations necessary to satisfy that standard." (*American Paper*, at p. 350.) Accordingly, it appears that in most instances, **[**873]** state water quality standards are identical to the federal requirements for NPDES permits.

II. State Law

In California, pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.; Stats. 1969, ch. 482, § 18, p. 1051; hereafter Porter-Cologne Act), the regional water quality control boards establish water quality standards—and therefore federal requirements for NPDES permits—through the adoption of water quality control plans (basin plans). The basin plans establish water quality objectives using enumerated factors—including economic factors—set forth in Water Code section 13241.

In addition, as one court observed: "The Porter-Cologne **[****35]** Act ... established nine regional boards to prepare water quality plans (known as basin plans) and issue permits governing the discharge of waste. (Wat. Code, §§ 13100, 13140, 13200, 13201, 13240, 13241, 13243.) The Porter-Cologne Act identified these permits as 'waste discharge requirements,' and provided that the waste discharge requirements must mandate compliance with the applicable regional water quality control plan. (Wat. Code, §§ 13263, subd. (a), 13377, 13374.) [¶] Shortly after Congress enacted the Clean Water Act in 1972, the California Legislature added Chapter 5.5 to the Porter-Cologne Act, for the purpose of adopting the necessary federal requirements to ensure it would obtain EPA approval to issue NPDES permits. (Wat. Code, § 13370, subd. (c).) As part of these amendments, the Legislature provided that the state and regional water boards 'shall, as required or authorized by the [Clean Water Act], issue **[****36]** waste discharge requirements ... which apply and ensure compliance with all applicable provisions [of the Clean Water Act], together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.' (Wat. Code, § 13377.) Water Code section 13374 provides that '[t]he term "waste discharge requirements" as referred to in this division is the equivalent of the term "permits" as used in the [Clean Water Act].' [¶] California subsequently obtained the required approval to issue NPDES permits. [Citation.] Thus, the waste discharge requirements issued by the regional water boards ordinarily also serve as NPDES permits under federal law. (Wat. Code, § 13374.)" (*Building Industry Assn. of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 875 [22 Cal. Rptr. 3d 128].)

[*632] Applying this federal-state statutory scheme, it appears that throughout this entire process, the Cities of Burbank and Los Angeles (Cities) were unable to have economic factors considered because the Los **[****37]** Angeles Regional Water Quality Control Board (Board)—the body responsible to enforce the statutory framework—failed to comply with its statutory mandate.

[*317]** For example, as the trial court found, the Board did not consider costs of compliance when it initially established its basin plan, and hence the water quality standards. The Board thus failed to abide by the statutory requirement set forth in Water Code section 13241 in establishing its basin plan. Moreover, the Cities claim that the initial narrative standards were so vague as to make a serious economic analysis impracticable. Because the Board does not allow the Cities to raise their economic factors in the permit approval stage, they are effectively precluded from doing so. As a result, the Board appears to be playing a game of "gotcha" by allowing the Cities to raise economic considerations when it is not practical, but precluding them when they have the ability to do

so.

Moreover, the Board acknowledges that it has neglected other statutory provisions that might have provided an additional opportunity to air these concerns. As set forth above, pursuant to the CWA, "[t]he states were to revisit **[****38]** and, if necessary, revise those initial standards at least once every three years—a process commonly known as triennial review. [Citation.] Triennial reviews consist of public hearings in which current water quality standards are examined to assure that they 'protect the public health or welfare, enhance the quality of water and serve the purposes' of the Act. [Citation.] Additionally, the CWA directs **[**874]** states to consider a variety of competing policy concerns during these reviews, including a waterway's 'use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes.' " (*American Paper, supra*, 996 F.2d at p. 349.)

According to the Cities, "[t]he last time that the narrative water quality objective for toxicity contained in the Basin Plan was reviewed and modified was 1994." The Board does not deny this claim. Accordingly, the Board has failed its duty to allow public discussion—including economic considerations—at the required intervals when making its determination of proper water quality standards.

What is unclear is why this process should be viewed as a contest. State **[****39]** and local agencies are presumably on the same side. The costs will be paid by taxpayers and the Board should have as much interest as any other agency in fiscally responsible environmental solutions.

[*633] Our decision today arguably allows the Board to continue to shirk its statutory duties. The majority holds that when read together, Water Code sections 13241, 13263, and 13377 do not allow the Board to consider economic factors when issuing NPDES permits to satisfy federal CWA requirements. (Maj. opn., *ante*, at pp. 625–627.) The majority then bifurcates the issue when it orders the Court of Appeal "to remand this matter to the trial court to decide whether any numeric limitations, as described in the permits, are 'more stringent' than required under federal law and thus should have been subject to 'economic considerations' by the Los Angeles Regional Board before inclusion in the permits." (*Id.* at pp. 628–629.)

The majority overlooks the feedback loop established by the CWA, under which federal standards are linked to state-established water quality standards, including narrative water quality criteria. (See 33 U.S.C. § 1311 **[****40]** (b)(1)(C); 40 C.F.R. § 122.44(d)(1) (2004).) Under the CWA, NPDES permit requirements include the state narrative criteria, which are incorporated into the Board's basin plan under the description "no toxins in toxic amounts." As far as I can determine, NPDES permits **[***318]** designed to achieve this narrative criteria (as well as designated beneficial uses) will usually implement the state's basin plan, while satisfying federal requirements as well.

If federal water quality standards are typically identical to state standards, it will be a rare instance that a state exceeds its own requirements and economic factors are taken into consideration. [1] In light of the Board's initial failure to consider costs of compliance and its repeated failure to conduct required triennial reviews, the result here is an unseemly bureaucratic bait-and-switch that we should not endorse. The likely outcome of the majority's decision is that the Cities will be economically burdened to meet standards imposed on them in a highly questionable manner. [2] In these

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[1] (But see *In the Matter of the Petition of City and County of San Francisco, San Francisco Baykeeper et al.* (Order No. WQ 95-4, Sept. 21, 1995) 1995 WL 576920.)

[2] Indeed, given the fact that "water quality standards" in this case are composed of broadly worded components (i.e., a narrative criteria and "designated beneficial uses of the water body"), the Board possessed a high degree of discretion in setting NPDES permit requirements. Based on the Board's past performance, a proper exercise of this discretion is uncertain.

times of tight fiscal budgets, it is difficult to imagine imposing additional financial burdens on municipalities without at least **[****41]** allowing them to present alternative views.

Based on the facts of this case, our opinion today appears to largely retain the status quo for the Board. If the Board can actually demonstrate that only the precise limitations at issue here, implemented in only one way, will achieve the desired water standards, perhaps its obduracy is justified. That case has yet to be made.

[*634] Accordingly, I cannot conclude that the majority's decision is wrong. The analysis **[**875]** may provide a **[****42]** reasonable accommodation of conflicting provisions. However, since the Board's actions "make me wanna holler and throw up both my hands," [3] I write separately to set forth my concerns and concur in the judgment—*dubitante*. [4]

The petitions of all appellants and respondent for a rehearing were denied June 29, 2005. Brown, J., did not participate therein.

End of Document

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[3] Marvin Gaye (1971) "Inner City Blues."

[4] I am indebted to Judge Berzon for this useful term. (See *Credit Suisse First Boston Corp. v. Grunwald* (9th Cir. 2005) 400 F.3d 1119 [2005 WL 466202] (conc. opn. of Berzon, J.).)

Div. of Occupational Safety & Health v. State Bd. of Control

Court of Appeal of California, Third Appellate District

February 19, 1987

No. C000006

Reporter

189 Cal. App. 3d 794 *; 234 Cal. Rptr. 661 **; 1987 Cal. App. LEXIS 1410 ***; 1987 OSHD (CCH) P27,921

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH, Plaintiff and Respondent, v. STATE BOARD OF CONTROL, Defendant and Respondent; ARCADE FIRE DISTRICT, Real Party in Interest and Appellant

Subsequent History: [***1] A Petition for a Rehearing was Denied March 17, 1987.

Prior History: Superior Court of Sacramento County, No. 299306, Roger K. Warren, Judge.

Disposition: The order granting the Division's petition for a writ of mandate is affirmed.

Core Terms

regulation, costs, executive order, reimbursable, mandated, occupational safety, levels, costs mandated, local agency, requires, standby, atmosphere, implements, increases, costs incurred, federal mandate, state-mandated, firefighting, subdivisions, federal government, state regulation, confined space, increased cost, respiratory, interprets, Appeals, service level, local fire, companies, districts

Case Summary

Procedural Posture

Defendant board found that Cal. Admin. Code, tit. 8, § 5144 (g), which imposed higher safety standards, created a reimbursable state mandated cost; therefore defendant approved appellant fire district's reimbursement claim. Plaintiff division sought review of defendant's decision by mandamus and the Superior Court of Sacramento County (California), granted the writ. Appellant then filed a writ of mandamus challenging the trial court's decision.

Overview

Appellant fire district filed a claim with defendant board asserting that Cal. Admin. Code, tit. 8, § 5144 (g) (Regulation), imposed additional manpower requirements upon it and other local fire protection districts and therefore it was entitled to state reimbursement under former Cal. Rev. & Tax. Code § 2231. Defendant board held that the Regulation created a reimbursable state mandated cost and approved appellant's reimbursement claim. Plaintiff division sought review of defendant's decision, by mandamus and the trial court granted its request. Appellant petitioned the court for a peremptory writ of mandate directing defendant's decision to be set aside. On appeal, the court applied the substantial evidence standard of review and affirmed the trial court's decision. The court held that since plaintiff was not required to promulgate the Regulation in order to comply with federal law, the exemption for federally mandated costs did apply. The court further found that the regulation did not mandate an increase in appellant's fire protection costs, and therefore the trial court did not err when it directed defendant to vacate its decision.

Outcome

The court affirmed the trial court's decision granting defendant board's petition for a writ mandamus. The court held that the regulation, which raised safety requirements, did not create a reimbursable interest, because the regulation did

not mandate an increase in appellant's fire protection costs.

LexisNexis® Headnotes

Business & Corporate Compliance > ... > State & Local Taxes > Tax Law > State & Local Taxes

HN1[] Tax, State & Local Taxes

See Cal. Rev. & Tax. Code § 2207.

Governments > Legislation > Types of Statutes

HN2[] Legislation, Types of Statutes

Cal. Admin. Code, tit. 8, § 5144 (g), requires only two persons to be on the job when atmospheres immediately hazardous to life or health are encountered -- one person to stand by in a location unaffected by likely incidents and the other to encounter the dangerous atmosphere itself.

Administrative Law > Judicial Review > Standards of Review > General Overview

Labor & Employment Law > Occupational Safety & Health > Administrative Proceedings > Jurisdiction

Administrative Law > Judicial Review > Remedies > Mandamus

Administrative Law > Judicial Review > Standards of Review

Labor & Employment Law > ... > Administrative Proceedings > Judicial Review > Standards of Review

HN3[] Judicial Review, Standards of Review

In an administrative mandamus proceeding, the court is bound by the State Board of Control findings on all issues of fact within its jurisdiction which are supported by substantial evidence on the record. Cal. Gov't Code, § 17559. The interpretation of an administrative regulation, however, like the interpretation of a statute, is a question of law ultimately to be resolved by the courts.

Administrative Law > Judicial Review > Reviewability > Factual Determinations

Administrative Law > Judicial Review > Standards of Review

Administrative Law > Judicial Review > Standards of Review > Substantial Evidence

HN4[] Reviewability, Factual Determinations

Where the substantial evidence test applies, the court exercises an essentially appellate function in determining whether the administrative findings are supported by substantial evidence and the proceedings free from legal error; the scope of our appellate review is coextensive with that of the superior court.

Business & Corporate Compliance > ... > State & Local Taxes > Tax Law > State & Local Taxes

HN5[] Tax, State & Local Taxes

As defined by Cal. Rev. & Tax. § 2206, costs mandated by the federal government include any increased costs mandated upon a local agency after January 1, 1973, in order to comply with the requirements of federal statute or regulation. Although an executive order implementing a

federal law may result in federally mandated costs in this general definitional sense, former § 2253.2(b)(3), as amended in 1978 (see now Cal. Gov't. Code, § 17556 (c), provided that state reimbursement is available to a claimant if the executive order mandates costs which "exceed the mandate" of federal law or regulation.

Business & Corporate Compliance > ... > Labor & Employment Law > Occupational Safety & Health > Industry Standards

Governments > Legislation > General Overview

HN6[] **Occupational Safety & Health, Industry Standards**

See 29 C.F.R. § 1910.134(e)(3) (1986).

Business & Corporate Compliance > ... > Labor & Employment Law > Occupational Safety & Health > Industry Standards

Labor & Employment Law > Employment Relationships > At Will Employment > Definition of Employers

Labor & Employment Law > Occupational Safety & Health > General Overview

Labor & Employment Law > Occupational Safety & Health > Administrative Proceedings > Jurisdiction

HN7[] **Occupational Safety & Health, Industry Standards**

By definition, regulated employers under federal OSHA do not include the political subdivisions of a state. 29 U.S.C.S § 652(5), 29 C.F.R. § 1910.2(c). On the other hand, the state OSHA broadly defines the "places of employment" over which the Division of Occupational Safety and Health of the Department of Industrial Relations exercises safety jurisdiction to include public agency employers within the state. Cal. Lab. Code § 6303 (a).

Business & Corporate Compliance > ... > Occupational Safety & Health > Administrative Proceedings > Federal Preemption

Labor & Employment Law > Occupational Safety & Health > Administrative Proceedings > Jurisdiction

Labor & Employment Law > Occupational Safety & Health > General Overview

Business & Corporate Compliance > ... > Occupational Safety & Health > Administrative Proceedings > OSHA Rulemaking

HN8[] **Administrative Proceedings, Federal Preemption**

Where a state chooses to adopt its own occupational safety and health plan, the federal OSHA requires as a condition for approval of the plan that the state establish and maintain a comprehensive program which extends, to the extent permitted by state law, to all employees of public agencies of the state and its political subdivisions. 29 U.S.C.S § 667(c)(6), 29 C.F.R. § 1902.3(j).) A state plan, if approved, must also provide for the development and enforcement of safety standards at least as effective as the standards promulgated under federal OSHA. 29 U.S.C.S. § 667(c)(2).) The initial decision to establish locally a federally approved plan is an option which the state exercises freely. In no sense is the state compelled to enter a compact with the federal government to extend jurisdiction over occupational safety to local government employers in exchange for the removal of federal preemption. 29 U.S.C.S. § 667(b).

Labor & Employment Law > Occupational Safety & Health > General Overview

Transportation Law > Private Vehicles > Safety Standards > Seat Belts

HN9[] Labor & Employment Law, Occupational Safety & Health

Regulation 5182 provides: (b) An approved safety belt with a life line attached or other approved device shall be used by employees wearing respiratory equipment within tanks, vessels, or confined spaces. At least one employee shall stand by on the outside while employees are inside, ready to give assistance in case of emergency. If entry is through a top opening, at least one additional employee, who may have other duties, shall be within sight and call of the stand-by employee. (c) When conditions require the wearing of respiratory equipment in a confined space, at least two men equipped with approved respiratory equipment, exclusive of the employees that may be necessary to operate blowers and perform stand-by duties, shall be on the job. One or more of the employees so equipped may be within the confined space at the same time, provided, however, that this shall not apply to tanks of less than 12 feet in diameter, when entrance is through a side manhole. Cal. Admin. Notice Register, tit. 8, Register 72, No. 6, dated Feb. 5, 1972.

Business & Corporate Compliance > ... > State & Local Taxes > Tax Law > State & Local Taxes

HN10[] Tax, State & Local Taxes

See Cal. Rev. & Tax. Code § 2207.

Headnotes/Syllabus

Summary
CALIFORNIA OFFICIAL REPORTS SUMMARY

The trial court granted the petition of the State Division of Occupational Safety and Health challenging a decision of the State Board of Control approving the claim of a local fire control district for reimbursement, under Rev. & Tax. Code, § 2207 (state reimbursement of state-mandated local costs), for expenses incurred in maintaining additional firefighters on duty at fires requiring the use of artificial breathing devices pursuant to a regulation delineating standby and rescue procedures. The district construed the regulation as requiring, in addition to the "buddy system" pairs of firefighters with respirators it employed as a standard firefighting practice, a third standby firefighter prepared to undertake rescue of the others, if necessary. The division took the position that the regulation merely passed on nonreimbursable standards mandated by the federal government. (Superior Court of Sacramento County, No. 299306, Roger K. Warren, Judge.)

The Court of Appeal affirmed, holding that Rev. & Tax. Code, § 2207, subd. (f), which did not become effective until after the fiscal years for which reimbursement was sought, was not intended to be retroactive and could not support the claim. Turning to Rev. & Tax. Code, § 2207, subd. (c), which was in effect during those fiscal years, the court deferred to the division's interpretation of the regulation, concluding that, so construed, it did not require the district to increase its respirator-equipped manpower; rather, it contemplated that one firefighter so equipped be maintained on standby, whether two "buddies" or a single firefighter entered the hazardous atmospheres to which the regulation applied. Thus, the court held that the district sought reimbursement for its own interpretation that the "buddy system" was a minimum standard to which the standby requirement had been added, not an express state mandate that three firefighters be deployed at every hazardous-atmosphere fire. (Opinion by Puglia, P. J., with Regan and Sparks, JJ., concurring.)

Headnotes
CALIFORNIA OFFICIAL REPORTS

HEADNOTES

Classified to California Digest of Official Reports, 3d Series

CA(1)[] **(1)**

Mandamus and Prohibition § 74—Mandamus—Review—Administrative Regulation.

--The interpretation of an administrative regulation, like the interpretation of a statute, is a question of law ultimately to be resolved by the courts. Where the substantial evidence test applies, the superior court exercises an essentially appellate function in determining whether the administrative findings are supported by substantial evidence and the proceedings are free from legal error. The scope of the Court of Appeal's review is coextensive with that of the superior court.

CA(2)[] **(2)**

Fires and Fire Districts § 2—Statutes and Ordinances—Occupational Safety and Health—Reimbursement of State-mandated Local Costs.

--The 1974 legislative finding of federal mandate underlying the state Occupational Safety and Health Act (Lab. Code, § 6300 et seq.) has been superseded by former Rev. & Tax. Code, § 2253, subds. (b) and (c), as amended, and does not in and of itself preclude an administrative finding that there is no federal mandate preventing reimbursement to a local fire district for state-mandated costs.

CA(3a)[] **(3a)** CA(3b)[] **(3b)**

Fires and Fire Districts § 2—Statutes and Ordinances—Health and Safety Regulations—State-mandated Local Costs—Federally Mandated Costs.

--Because the state was not required to promulgate a health and safety regulation requiring certain manpower and equipment minimums for firefighting in hazardous atmospheres in order to comply with federal law, the exception for federally mandated costs, to the requirement that the state reimburse local agencies for costs incurred by compliance with state-mandated standards, did not apply to a local fire district's claim for reimbursement for the costs of compliance with the state regulation.

CA(4)[] **(4)**

Labor § 6**—Regulation of Working Conditions—Occupational Safety and Health Regulations—Federal Preemption.**

--Under § 667 of the federal Occupational Safety and Health Act (OSHA) (29 U.S.C. § 651 et seq.), California is preempted from regulating matters covered by the federal OSHA standards unless the state has adopted a federally approved plan. The federal law does not, however, confer federal power upon a state that has adopted such a plan. It merely removes federal preemption so that the state may exercise its own sovereign powers over occupational safety and health. There is no indication in the language of the act that a state with an approved plan may not establish more stringent standards than those developed by the federal OSHA, or grant to its own occupational safety and health agency more extensive jurisdiction than that enjoyed by the federal OSHA.

CA(5)[] **(5)**

State of California § 11—Fiscal Matters—Reimbursement of Local Governments—Reimbursement for Increased Program Levels.

--State regulations that do not increase program levels above those required prior to January 1, 1973, do not result in "costs mandated by the state" within the meaning of Rev. & Tax. Code, § 2207, subd. (c), which requires that the state reimburse

local governments for costs incurred in meeting state mandates.

CA(6)[] (6)

State of California § 11—Fiscal Matters—Reimbursement of Local Governments for State-mandated Costs—Statute—Construction—Retroactivity of Amendments.

--The 1980 amendment to Rev. & Tax. Code, § 2207 (reimbursement of local agency for "costs mandated by the state"), was substantive in nature, rather than procedural or remedial, since it significantly expanded the situations in which a claimant could seek reimbursement for such costs. Nothing in the legislative history of the 1980 amendment expressed a legislative intent that the amendment's provisions be applied retroactively. A statute affecting substantive rights is presumed not to have retrospective application unless the courts can clearly discern from the express language of the statute or extrinsic interpretive aids that the Legislature intended otherwise.

CA(7)[] (7)

State of California § 11—Fiscal Matters—Reimbursement of Local Governments—State-mandated Costs—Retroactivity.

-- Rev. & Tax. Code, § 2207, subd. (f), which provides for state reimbursement of local governmental agencies for costs incurred as a result of enactments after January 1, 1973, that remove options previously available to such agencies, thereby increasing program or service levels, or that prohibit specific activities with the result that such agencies use more costly alternatives, applies prospectively only to costs incurred by local agencies after its effective date, by Jan. 1, 1981. The statute cannot support a claim for reimbursement arising before its effective date.

CA(8)[] (8)

Statutes § 31—Construction—Language—Words and Phrases—Singular and Plural.

--As a general rule of construction, words used in the singular include the plural and vice versa.

CA(9)[] (9)

Statutes § 44—Construction—Aids—Contemporaneous Administrative Construction—Ambiguous Statutes.

--In view of inherent ambiguities in a regulation of the state Division of Occupational Safety and Health (Division) delineating firefighting manpower and equipment safety and health standards, the interpretation given the regulation by the Division, which is charged with its enforcement, was entitled to great weight. Thus, it was proper to defer to that agency's interpretation that the regulation requires the presence of only two persons using respiratory equipment in work places involving hazardous atmospheres, not withstanding that the State Board of Control, in ruling on a claim of reimbursement, had adopted a different interpretation.

CA(10)[] (10)

Fires and Fire Districts § 2—Statutes and Ordinances—Hazardous Atmospheres Regulations—Standby Regulation—State-mandated Costs.

--Increased local program levels, such as would be reimbursable by the state under Rev. & Tax. Code, § 2207, subd. (c), were not mandated by the adoption of hazardous atmospheres firefighting regulations by the Division of Occupational Safety and Health. Although division inspectors previously gave firefighting agencies the impression that three-person teams equipped with respirators would be required, rather than the standard-practice two-person teams, the practice of

continuing to use the two-person teams while adding a third to stand by was a choice made by local fire districts. The regulation did not expressly require three-person teams, and no agency had been cited for failure to use them. Verbal exchanges between regulators and the agencies do not rise to the level of a legislative mandate or official policy.

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Judges: Opinion by Puglia, P. J., with Regan and Sparks, JJ., concurring.

Opinion by: PUGLIA

Opinion

[*797] [663]** In this appeal we consider whether a safety regulation promulgated by the Division of Occupational Safety and Health (Division) of the Department of Industrial Relations mandates increased costs to local **[*798]** government such that they are reimbursable under the provisions of Revenue and Taxation Code section 2201 et seq. [1] With respect to the period of time in issue, we conclude that the regulation does not create reimbursable state-mandated costs.

[*2]** On October 8, 1980, Arcade Fire District (Arcade) filed a test claim with the State Board of Control (Board) asserting that title 8, section 5144, subdivision (g), of the California Administrative Code (hereafter referred to as Regulation) imposed additional manpower requirements upon it and other local fire protection districts beyond service levels required prior to January 1, 1973. [2] A local governmental agency (§ 2211), Arcade sought state reimbursement under former section 2231. (Repealed Stats. 1986, ch. 879, § 23; see now Gov. Code, § 17561.) Arcade claimed it incurred additional manpower costs during **[**664]** fiscal years 1978-1979 and 1979-1980 as a result of Regulation 5144, subdivision (g), and that these costs were mandated by the state within the meaning of section 2207.

[*3]** HN1[↑]

Section 2207 defines reimbursable "'Costs mandated by the state.'" They include "any increased costs which a local agency is required to incur as a result of . . . (c) Any executive order issued after January 1, 1973, which (i) implements or interprets a state statute and (ii), by such implementation or interpretation, increases program levels above the levels required prior to January 1, 1973." An "'executive order'" includes a regulation issued by a state agency such as the Division (§ 2209, subd. (c)). Specifically excluded from the definition of "'[costs] mandated by the State'" are "'[costs] mandated by the federal government'" as defined in section 2206 and former section 2253.2, subdivision (b)(3) (repealed Stats. 1986, ch. 879, § 41; see now Gov. Code, § 17556, subd. (c)).

Regulation 5144, subdivision (g), was first adopted by the Division effective August 11, 1974. As amended effective October 14, 1978, the regulation provides: "In atmospheres immediately hazardous to life or health, at least two persons equipped with approved respiratory equipment shall be on the job. Communications shall be maintained between both or all individuals present. Standby persons, **[***4]** at least one of which shall be in a location which **[*799]** will not be affected by any likely incidents, shall be present with suitable rescue

[1] All references to sections or former sections of an unspecified code are to the Revenue and Taxation Code.

[2] In 1985, administrative jurisdiction to hear and decide claims for reimbursement of state-mandated costs was transferred from the State Board of Control to the newly created Commission on State Mandates. (Gov. Code, § 17500 et seq.)

equipment including self-contained breathing apparatus." [3]

At the administrative hearing, Arcade established that it has always adhered to a practice, known as the "buddy system," whereby two firefighters enter a burning structure together. Arcade also presented evidence that the buddy system is considered essential to the safety of both firefighters and the public and is practiced by firefighting agencies nationwide. Prior to the 1974 effective date of Regulation 5144, subdivision (g), Arcade was unaware of any standby requirement and used only two-person teams in its engine companies. After its effective date, Arcade interpreted the regulation to mandate a minimum firefighting team **[***5]** of at least three persons equipped with respiratory equipment, one of whom was required to stand by outside a burning structure while the other two operated together under the "buddy system." In support of this interpretation, Arcade presented evidence that Division inspectors had previously informed local fire protection districts that Regulation 5144, subdivision (g), requires a minimum of three fire fighters at the scene.

In opposition to Arcade's claim, the Division maintained that any costs incurred as a result of Regulation 5144, subdivision (g), were federally mandated because the state regulation merely implemented a federal regulation under the 1979 Federal Occupational Safety and Health Act. (29 U.S.C. § 651 et seq.) Even if a state mandate were involved, the Division contended, Arcade's interpretation of the regulation was erroneous. In the Division's view, HN2[↑] Regulation 5144, subdivision (g), requires only two persons to be on the job when atmospheres immediately hazardous to life or health are encountered -- one person to stand by in a location unaffected by likely incidents and the other to encounter the dangerous atmosphere itself. While the Division would certainly **[***6]** encourage the use of three-person teams at the option of local fire districts, it takes the position that additional manpower is neither mandated by the express language of the regulation nor, as a matter of official policy, a firefighting standard which the Division seeks to enforce.

The Board found the regulation created a reimbursable state-mandated cost and approved Arcade's claim. The Board apparently concluded the regulation did not "explicitly require three-person companies" but considered its effect nonetheless "was to remove the previously existing option of public fire departments to deploy two-person **[**665]** companies," and that this requirement "exceeded federal and prior state safety regulations."

[*800] The Division sought mandamus to review the Board's ruling. (See former § 2253.5 repealed Stats. 1986, ch. 879, § 44; see now Gov. Code, § 17559; Code Civ. Proc., § 1094.5.) The superior court found the Board had abused discretion in allowing Arcade's claim and issued a peremptory writ of mandate directing the Board to set aside its decision.

Arcade appeals from the order granting the Division mandamus relief. In challenging the court's conclusion that **[***7]** Regulation 5144, subdivision (g), did not create state-mandated costs, Arcade contends the court (1) applied the wrong standard of review, (2) improperly considered new evidence and legal issues which were not presented at the administrative hearing, and (3) erred in ruling that section 2207, subdivision (f), did not apply.

I

Preliminarily, we set forth the applicable standard of review. HN3[↑] In an administrative mandamus proceeding, we are bound by the Board's findings on all issues of fact within its jurisdiction which are supported by substantial evidence on the record. (See former § 2253.5; Gov. Code, § 17559.) CA(1)[↑] **(1)** The interpretation of an administrative regulation, however, like the

[3] The 1978 amendment deleted from the last sentence the concluding clause "in accordance with Section 5182, Confined Spaces," which had been included in the original version in 1974.

interpretation of a statute, is a question of law ultimately to be resolved by the courts. (*Carmona* v. *Division of Industrial Safety* (1975) 13 Cal.3d 303, 310 [118 Cal.Rptr. 473, 530 P.2d 161]; *Skyline Homes, Inc.* v. *Occupational Safety & Health Appeals Bd.* (1981) 120 Cal.App.3d 663, 669 [174 Cal.Rptr. 665]; see also *People* ex rel. *Fund American Companies* v. *California Ins. Co.* (1974) 43 Cal.App.3d 423, 431 [117 Cal.Rptr. 623].)

HN4[↑] Where the substantial evidence test applies, **[***8]** the superior court exercises an essentially appellate function in determining whether the administrative findings are supported by substantial evidence and the proceedings free from legal error; the scope of our appellate review is coextensive with that of the superior court. (*Bank of America* v. *State Water Resources Control Bd.* (1974) 42 Cal.App.3d 198, 207 [116 Cal.Rptr. 770]; *City of Sacramento* v. *State of California* (1984) 156 Cal.App.3d 182, 190 [203 Cal.Rptr. 258], disapproved on other grounds in *County of Los Angeles* v. *State of California* (1987) 43 Cal.3d 46, 58, fn. 10 [233 Cal.Rptr. 38].; see also *Swaby* v. *Unemployment Ins. Appeals Bd.* (1978) 85 Cal.App.3d 264, 269 [149 Cal.Rptr. 336].) We therefore focus our review on the administrative proceedings, declining to consider specific claims of error committed by the superior court.

We shall also consider, as a preliminary matter, whether a federal mandate or an equally or more restrictive pre-1973 state regulation exists which would **[*801]** bar Arcade's claim for reimbursement. (See §§ 2206; 2207, subds. (c), (f); former § 2253.2, subd. (b)(3).) Although these legal theories may **[***9]** not have been thoroughly developed by the Division in the administrative proceedings, we are not foreclosed from addressing them on appeal. (See *City of Merced* v. *State of California* (1984) 153 Cal.App.3d 777, 781 [200 Cal.Rptr. 642]; *Frink* v. *Prod* (1982) 31 Cal.3d 166, 170-171 [181 Cal.Rptr. 893, 643 P.2d 476].) Such consideration will not involve receipt of evidence not before the Board. The Board found Regulation 5144, subdivision (g), exceeded the requirements of both federal and pre-1973 state safety regulations. Our review necessarily requires that we take judicial notice of any statutes and published administrative regulations which impact upon the contentions of the parties. (See Evid. Code, § 451, subds. (a), (b); Gov. Code, § 11343.6; 44 U.S.C. § 1507.) In any event, Arcade is not prejudiced by our consideration of these issues on appeal because, as will appear, we reject the Division's arguments that a federal mandate or a pre-1973 state regulation bars Arcade's claim.

II

CA(2)[↑] **(2)** The California Occupational Safety and Health Act (state OSHA; Lab. Code, **[**666]** § 6300 et seq.), from which the Division derives its regulatory authority, was enacted **[***10]** in 1973 (Stats. 1973, ch. 993, §§ 39-107) as a state plan under the Federal Occupational Safety and Health Act of 1970 (federal OSHA; see 29 U.S.C. § 667). In 1974, an uncodified amendment to state OSHA was enacted which provided: "Notwithstanding Section 2231 of the Revenue and Taxation Code [providing for reimbursement to local governments for state-mandated costs], there shall be no reimbursement pursuant to this section . . . because the Legislature finds that this act and any executive regulations or safety orders issued pursuant thereto merely implement federal law and regulations." (Stats. 1974, ch. 1284, § 36, adding § 106 to ch. 993 of the Stats. of 1973.) [4] However, this legislative disclaimer of any reimbursable mandate with respect to state OSHA and regulations thereunder is not controlling here. Former section 2253, subdivisions (b) and (c) as amended (Stats. 1978, ch. 794, § 6; repealed Stats. 1986, ch. 879, § 40), permitted reimbursement claims for costs incurred after January 1, 1978, under an executive order or a bill chaptered after January 1, 1973, even though the bill or executive order contained a

[4] Chapter 993 of Statutes 1973 already had a section 106 as part of the original enactment. The original section 106 disclaimed any obligation to reimburse local costs incurred in complying with state OSHA "because the cost of implementing this act is minimal on a statewide basis in relation to the effect on local tax rates." (P. 1954.)

provision making inoperative former section 2231. Thus **[***11]** the legislative finding of federal mandate underlying **[*802]** state OSHA (Stats. 1974, ch. 1284, § 36) has been superseded and does not in and of itself preclude a finding such as the Board made here that there is no federal mandate preventing reimbursement of Arcade.

CA(3a)[↑] **(3a)** Having disposed of the express legislative declaration on the subject, we next consider whether state OSHA, under authority of which Regulation 5144, subdivision (g), was promulgated, in fact did no more than impose costs mandated by federal law.

HN5[↑] As defined by section 2206, "'[costs] mandated by the federal government'" include "any increased costs mandated . . . upon a local agency . . . after January **[***12]** 1, 1973, in order to comply with the requirements of federal statute or regulation." Although an executive order implementing a federal law may result in federally mandated costs in this general definitional sense, former section 2253.2, subdivision (b)(3), as amended in 1978 (see now Gov. Code, § 17556, subd. (c)), provided that state reimbursement is available to a claimant if the executive order mandates costs which "exceed the mandate" of federal law or regulation. (Stats. 1978, ch. 794, § 10, eff. Sept. 18, 1978.) [5]

[*13]** We accept for purposes of discussion the Division's assertion that Regulation 5144, subdivision (g), simply mandates a safety standard patterned after and commensurate with a regulation promulgated under federal OSHA. Also governing the use of respirators, HN6[↑] 29 Code of Federal Regulations, section 1910.134(e)(3) (1986) reads in pertinent part: ". . . (i) In areas where the wearer, with failure of the respirator, could **[**667]** be overcome by a toxic or oxygen-deficient atmosphere, at least one additional man shall be present. Communications . . . shall be maintained between both or all individuals present. Planning shall be such that one individual will be unaffected by any likely incident and have the proper rescue equipment to be able to assist the other(s) in case of emergency. [para.] (ii) When self-contained apparatus or hose **[*803]** masks with blowers are used in atmospheres immediately dangerous to life or health, standby men must be present with suitable rescue equipment."

The federal regulation, unlike the state regulation in issue, has no applicability to local fire departments such as Arcade. HN7[↑] By definition, regulated employers under federal OSHA do not include **[***14]** the political subdivisions of a state. (29 U.S.C. § 652(5); 29 C.F.R. § 1910.2(c).) [6] On the other hand, the state OSHA broadly defines the "places of employment" over which the Division exercises safety jurisdiction to include public agency employers within the state. (Lab. Code, § 6303, subd. (a); see also *United Air Lines, Inc.* v. *Occupational Safety & Health Appeals Bd.* (1982) 32 Cal.3d 762, 767 [187 Cal.Rptr. 387, 654 P.2d 157].)

HN8[↑] Where a state chooses to adopt its own occupational safety and health plan, the federal OSHA requires as a condition for approval of the

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[5] Effective January 1, 1981, section 2206 was amended to limit the definition of "costs mandated by the federal government" to increased costs mandated *specifically* by the federal government upon a local agency and to exclude from that definition those costs which result from programs or services "implemented at the option of the state, . . ." (Stats. 1980, ch. 1256, § 3.) Correspondingly, subdivision (d) was added to section 2207 to include within the definition of "costs mandated by the state" any increased costs a local agency is required to incur as a result of a post-1973 executive order which implements or interprets a federal or state regulation and by such implementation or interpretation "increases program or service levels above the levels required by such federal statute or regulation." (Stats. 1980, ch. 1256, § 4; see also Gov. Code, § 17513, which excludes from "'[costs] mandated by the federal government'" "programs or services which may be implemented at the option of the state, ...") While these amendments are supportive of the conclusion we reach, we assume for present purposes they have no retrospective operation with respect to costs incurred by Arcade during fiscal years 1978-1979 and 1979-1980.

[6] Indeed, to our knowledge the federal government did not assert safety jurisdiction over "private fire brigades until federal regulations on the subject were first published in September 1980. (See 29 C.F.R. § 1910.156(a)(2) and (f)(1)(i); 45 Fed. Reg. 60706, amended May 1, 1981, 46 Fed. Reg. 24557.)

plan that the state establish and maintain a comprehensive program which extends, to the extent permitted by state law, "to all **[***15]** employees of public agencies of the State and its political subdivisions." (29 U.S.C. § 667(c)(6); 29 C.F.R. § 1902.3(j).) A state plan, if approved, must also provide for the development and enforcement of safety standards "at least as effective" as the standards promulgated under federal OSHA. (29 U.S.C. § 667(c)(2).) However, these conditions for approval do not render costs incurred by a local agency as a result of a state safety regulation federally mandated costs within the meaning of former section 2253.2, subdivision (b)(3). Clearly, the initial decision to establish locally a federally approved plan is an option which the state exercises freely. In no sense is the state *compelled* to enter a compact with the federal government to extend jurisdiction over occupational safety to local government employers in exchange for the removal of federal preemption. (29 U.S.C. § 667(b).) (Accord, *City of Sacramento* v. *State of California, supra*, 156 Cal.App.3d at pp. 194-199.)

CA(4)[↑] **(4)** In *United Air Lines, Inc.* v. *Occupational Safety & Health Appeals Bd., supra*, 32 Cal.3d 762, the court expressed this principle as follows: "Under the [29 United States Code] section [***16] 667 scheme, California is preempted from regulating matters covered by Fed/OSHA [Federal Occupational Safety and Health Administration] standards unless the state has adopted a federally approved plan. The section does not, however, confer federal power on a state -- like California -- that has adopted such a plan; it merely removes federal preemption so that the state may exercise its own sovereign powers **[*804]** over occupational safety and health. (See, e.g., *American Federation of Labor*, etc. v. *Marshall* (D.C.Cir. 1978) 570 F.2d 1030, 1033; *Green Mt. Power* v. *Com'r of Labor and Industry* (1978) 136 Vt. 15 [383 A.2d 1046, 1051]. See also 29 U.S.C. § 651(b)(11).) There is no indication in the language of the act that a state with an approved plan may not establish more stringent standards than those developed by Fed/OSHA (see *Skyline Homes, Inc.* v. *Occupational Safety & Health Appeals Bd.* (1981) 120 Cal.App.3d 663, 671 . . .) or grant to its own occupational safety and health agency more extensive jurisdiction than that enjoyed by Fed/OSHA." (*United Air Lines, Inc.*, supra, 32 Cal.3d at pp. 772-773.) CA(3b)[↑] **(3b)** Thus since Division was not required to promulgate **[***17]** **[**668]** Reguation 5144, subdivision (g), to comply with federal law, the exemption for federally mandated costs does not apply.

III

CA(5)[↑] **(5)** State regulations which do not *increase* program levels above the levels required prior to January 1, 1973, do not result in "costs mandated by the state" within the meaning of section 2207, subdivision (c). The Division submits that former Regulation 5182, which existed prior to 1973, provided standby personnel requirements which were equal to, if not more stringent than, those set forth in Regulation 5144, subdivision (g). A comparison of the two regulations, however, convinces us that former Regulation 5182 was limited to employees working within tanks, vessels, and similar "confined spaces" and was never intended more broadly to encompass fire fighters working in burning structures.

Subdivision (c) of former Regulation 5182 expressly required at least two persons on the job in addition to the standby employee when conditions necessitated the wearing of respiratory equipment in a confined space. [7] It was not replaced until

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[7] As pertinent here, former HN9[↑] Regulation 5182 provided: ". . . (b) An approved safety belt with a life line attached or other approved device shall be used by employees wearing respiratory equipment within tanks, vessels, or confined spaces . . . At least one employee shall stand by on the outside while employees are inside, ready to give assistance in case of emergency. If entry is through a top opening, at least one additional employee, who may have other duties, shall be within sight and call of the stand-by employee. [para.] (c) When conditions require the wearing of respiratory equipment in a confined space, at least two men equipped with approved respiratory equipment, exclusive of the employees that may be necessary to operate blowers and perform stand-by duties,

1978, when new article 108 (Regulations 5156-5159, Cal. Admin. Code, tit. 8), entitled "Confined Spaces," was added. **[***18]** (Cal. Admin. Notice Register, tit. 8, Register 78, No. 37.) We do not agree with the Division that Regulation 5182 covered fire fighters (see *Carmona* v. **[*805]** *Division of Industrial Safety, supra*, 13 Cal.3d at p. 310). Moreover, we note that the Division's reading of the regulation would undermine, if not invalidate, its alternative position that it has always required only a minimum two-person, firefighting team. Thus if Regulation 5144, subdivision (g), properly interpreted, requires a minimum of three persons as contended by Arcade, it does increase program levels above those required prior to January 1, 1973. Before we address that issue directly, we consider the rationale of the Board's decision.

[*19]** IV

The Board's approval of Arcade's claim was based on the conclusion that, although Regulation 5144, subdivision (g), did not expressly require three-person engine companies, its effect was to remove a previous option of local fire districts to use only two person companies. In so concluding, the Board apparently relied on the definition of "'[costs] mandated by the state'" as expressed in subdivision (f) rather than subdivision (c) of section 2207. Under subdivision (f), costs are mandated and reimbursable when they result from "Any . . . executive order issued after January 1, 1973, which . . . *removes an option previously available to local agencies* and thereby increases program or service levels . . . ." (Italics added.)

Because subdivision (f) did not become effective until January 1, 1981 (Stats. 1980, ch. 1256, § 4), the Division contends the Board could not retroactively apply the removal-of-an-option criterion to Arcade's October 1980 reimbursement claim for costs incurred during fiscal years 1978-1979 and 1979-1980. We agree.

CA(6)[↑] **(6)** We observe first that the amendment which added subdivisions (d) through (h) to section 2207 significantly expanded the situations in **[***20]** which a claimant could seek reimbursement for "'[costs] mandated by the state.'" (See *County of Los Angeles* v. **[**669]** *State of California* (1984) 153 Cal.App.3d 568, 572 [200 Cal.Rptr. 394].) Before 1981, the entire spectrum of state-mandated costs was confined to those defined in subdivisions (a) through (c) of section 2207. [8] As

shall be on the job. One or more of the employees so equipped may be within the confined space at the same time, provided, however, that this shall not apply to tanks of less than 12 feet in diameter, when entrance is through a side manhole." (Cal. Admin. Notice Register, tit. 8, Register 72, No. 6, dated Feb. 5, 1972.)

[8] HN10[↑] As amended, section 2207 now reads in full: "'Costs mandated by the state' means any increased costs which a local agency is required to incur as a result of the following:

"(a) Any law enacted after January 1, 1973, which mandates a new program or an increased level of service of an existing program;

"(b) Any executive order issued after January 1, 1973, which mandates a new program;

"(c) Any executive order issued after January 1, 1973, which (i) implements or interprets a state statute and (ii), by such implementation or interpretation, increases program levels above the levels required prior to January 1, 1973.

"(d) Any statute enacted after January 1, 1973, or executive order issued after January 1, 1973, which implements or interprets a federal statute or regulation and, by such implementation or interpretation, increases program or service levels required by such federal statute or regulation.

"(e) Any statute enacted after January 1, 1973, or executive order issued after January 1, 1973, which implements or interprets a statute or amendment adopted or enacted pursuant to the approval of a statewide ballot measure by the voters and, by such implementation or interpretation, increases program or service levels above the levels required by such ballot measure.

"(f) Any statute enacted after January 1, 1973, or executive order issued after January 1, 1973, which (i) removes an option previously available to local agencies and thereby increases program or service levels or (ii) prohibits a specific activity which results in the local agencies using a more costly alternative to provide a mandated program or service.

"(g) Any statute enacted after January 1, 1973, or executive order issued after January 1, 1973, which requires that an existing program or service be provided in a shorter time period and thereby increases the costs of such program or service.

"(h) Any statute enacted after January 1, 1973, or executive order issued after January 1, 1973, which adds new requirements to an existing optional program or service and thereby increases the cost of

the 1980 amendment necessarily increased the state's liability for **[*806]** locally incurred costs, it must be construed as substantive rather than procedural or remedial in nature. (See *Alta Loma School Dist.* v. *San Bernardino County Com. on School Dist. Reorganization* (1981) 124 Cal.App.3d 542, 553 [177 Cal.Rptr. 506].) A statute affecting substantive rights is presumed not to have retrospective application unless the courts can clearly discern from the express language of the statute or extrinsic interpretive aids that the Legislature intended otherwise. (*In re Marriage of Bouquet* (1976) 16 Cal.3d 583, 587 [128 Cal.Rptr. 427, 546 P.2d 1371]; *Thompson* v. *Modesto City High School Dist.* (1977) 19 Cal.3d 620, 625, fn. 3 [139 Cal.Rptr. 603, 566 P.2d 237]; *Alta Loma School Dist., supra*, at p. 553.)

[*21]** Although all of the new subdivisions added by the 1980 amendment to section 2207 expressly deal with executive orders issued after January 1, 1973, nothing has been brought to our attention which would indicate the Legislature intended retroactive operation of the expanded definition to resulting costs *incurred* before the 1981 effective date of the amendment. When section 2207 was originally enacted in 1975, the Legislature provided that subdivisions (a) through (c) were "declaratory of existing law." (Stats. 1975, ch. 486, § 18.6.) However, the 1980 amendment adding subdivisions (d) through (h) conspicuously omits any such statement or other indication of retrospective application. CA(7)[↑] **(7)** Moreover, other related statutory provisions make it clear that the Legislature intended strictly to limit the time period within which a reimbursement claim may be brought for costs incurred during a prior fiscal year. (Former § 2218.5, see now Gov. Code, § 17560; former § 2231, subd. (d)(2), see now Gov. Code, § 17561, subd. **[*807]** (d)(2); former § 2253; former § 2253.8, repealed Stats. 1986, ch. 879, § 45, see now Gov. Code, § 17557.) Hence, we presume that subdivision (f) of section **[***22]** 2207 applies prospectively only to costs incurred by local agencies after its effective date, January 1, 1981, and not before. (Accord, *City of Sacramento* v. *State of California, supra*, 156 Cal.App.3d at p. 194, disapproved on other **[**670]** grounds in *County of Los Angeles* v. *State of California, supra*, 43 Cal.3d at p. 58, fn. 10.) Subdivision (f) therefore is not available to support Arcade's claim.

V

The remaining issue is whether Arcade incurred state-mandated costs within the meaning of subdivision (c) of section 2207. It will be recalled that under subdivision (c) of section 2207, reimbursable costs mandated by the state include "any increased costs which a local agency is required to incur as a result of . . . (c) Any executive order issued after January 1, 1973, which (i) implements or interprets a state statute and (ii), by such implementation or interpretation, increases program levels above the levels required prior to January 1, 1973."

As recognized by the Board, the problem resides in the ambiguity of Regulation 5144, subdivision (g). No one contests the regulation's applicability to the occupation of fire fighting. CA(8)[↑] **(8)** (See fn. 9) But depending on the significance **[***23]** ascribed to certain of its language, e.g., "*In* atmospheres," "on the job," "Communications . . . between *both* or all" (italics added) and "standby persons," the regulation is reasonably susceptible to alternative interpretations: (1) at least two persons must *enter* a dangerous atmosphere, (i.e., to be "on the job" one must be "*in*" the atmosphere) while a third remains outside, (2) at least two persons must stand by (i.e., "standby persons") while others(s) perform a job in a dangerous atmosphere, [9] or (3) a total of two persons -- one active and one standing by -- is all that is required when working in a

such program or service if the local agencies have no reasonable alternatives other than to continue the optional program."

[9] Notwithstanding the use of the plural ("standby persons"), a general rule of construction is that words used in the singular include the plural and vice versa. (See Lab. Code, § 13; Civ. Code, § 14.) Arcade does not contend the regulation requires more than one standby person.

dangerous atmosphere.

CA(9)[↑] **(9)** In view of these inherent ambiguities, the interpretation given the regulation by the Division **[***24]** as the administrative agency charged with its enforcement is entitled to great weight. (*People* v. *French* (1978) 77 Cal.App.3d 511, 521 [143 Cal.Rptr. 782]; see also *Pacific Legal Foundation* v. *Unemployment Ins. Appeals Bd.* (1981) 29 Cal.3d 101 111 [172 Cal.Rptr. 194, 624 P.2d 244]; *Carmona* v. *Division of Industrial Safety, supra*, 13 Cal.3d at p. 310.) We shall defer to the Division's interpretation that the **[*808]** intended meaning of the regulation, when considered generally and in the abstract, is to require the presence of only two persons using respiratory equipment in workplaces involving hazardous atmospheres. Such deference does not undercut the authority vested in the Board to determine the existence of state-mandated costs under section 2201 et seq. In the exercise of that authority the Board also owes a duty of deference to the administrative agency's interpretation of its regulation. The Board is not licensed to impress its own interpretation upon an administrative regulation in derogation of the reasonable construction of the responsible agency.

CA(10)[↑] **(10)** In this regard, Arcade contends that substantial evidence supports the conclusion that the **[***25]** practical consequence of Regulation 5144, subdivision (g), is to mandate an increase in firefighting manpower from two to three persons. Viewing as we must the evidence at the hearing in a light most favorable to Arcade, we accept as true the proposition that fire fighting agencies universally consider the two-person "buddy" system essential to the safety of the workers. We also accept as true that Division inspectors previously gave firefighting agencies the impression that three-person teams are a necessary safeguard.

It does not follow, however, that the regulation in question *mandates* an increase in "program levels above the levels *required* prior to January 1, 1973" as defined by section 2207, subdivision (c). (Italics added.) Although founded on safety reasons, the continued practice of using two fire fighters to enter a burning structure **[**671]** while adding a third to meet the requirement of a standby was a choice which rested with the local fire districts. As the Board recognized, the regulation does not expressly require three-person teams nor has the Division issued a citation for failure to use the additional manpower. Verbal exchanges between Division **[***26]** personnel and the fire districts do not rise to the level of a legislative mandate or official policy. Failing proof that it is impossible to fight fires without the use of "buddies," Arcade cannot inject its own safety standards into a state regulation and say it is a "requirement" of the state.

We conclude that Regulation 5144, subdivision (g), did not mandate an increase in Arcade's fire protection costs for the 1978-1979 and 1979-1980 fiscal years. Accordingly, there was no error in the superior court's order directing the Board to vacate its decision allowing Arcade's claim.

The order granting the Division's petition for a writ of mandate is affirmed.

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CLERK, U.S. DISTRICT COURT
ALEXANDRIA, VIRGINIA

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division

VIRGINIA DEPARTMENT OF TRANSPORTATION, ET AL, Plaintiffs, -v- UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, ET AL, Defendants.	Civil Action No. 1:12-CV-775

Memorandum Opinion

Before the Court is the Plaintiffs' motion for judgment on the pleadings under Federal Rule of Civil Procedure 12(c). The Defendants opposed the motion, and the Plaintiffs replied. The Court heard oral arguments on December 14, 2012 and now issues this memorandum opinion and accompanying order granting the Plaintiffs' motion.

Background

The Clean Water Act, 33 U.S.C. § 1251 et seq., establishes the basic structure for regulating discharge of pollutants into the waters of the United States, and provides certain mechanisms to improve and maintain the quality of surface waters.

One such mechanism is the requirement that states identify "designated uses" for each body of water within their borders, as well as "water quality criteria" sufficient to support those uses. 33 U.S.C. § 1313(c)(2)(A). The Environmental Protection Agency ("EPA") evaluates the uses and criteria developed by the states, and either approves them or else proposes and

promulgates its own set of standards. § 1313(c)(3).

Once the standards are in place, each state is required to maintain a list—also subject to approval or modification by EPA—of its waterbodies that are "impaired" because they do not meet their respective water quality criteria. 33 U.S.C. § 1313(d)(1)(A). For each waterbody on the impaired list, the state is required to establish a set of total maximum daily loads ("TMDLs") sufficient to bring the body back into compliance with its water quality criteria. § 1313(d)(1)(C). Each TMDL establishes the maximum amount of a pollutant that may be added to the waterbody daily from all sources (runoff, point sources, etc.). EPA is required to publish a list of pollutants suitable for maximum daily load measurement, § 1314(a)(2)(D), and it has determined that *all* pollutants are suitable for TMDLs, *see* Total Maximum Daily Loads Under Clean Water Act, 43 Fed. Reg. 60,662. Therefore, any pollutant that falls within the relatively broad definition of "pollutant" set forth in § 1362(6) may be regulated via TMDL. EPA can approve or modify as it sees fit TMDLs proposed by the states. § 1313(d)(2).

Here the state in question is Virginia, and the waterbody is a 25-mile long tributary of the Potomac River, located in Fairfax County, called Accotink Creek. The creek has been the subject of litigation in the past that is not relevant to this matter except the result: EPA was required to set TMDLs for Accotink Creek once Virginia failed to do so by a certain date. Specifically, the creek had been identified as having "benthic impairments," which is to say the community of organisms that live on or near the bottom of the creek were not as numerous or healthy as they should be. EPA was to set appropriate TMDLs to improve the health of the benthic community in Accotink Creek.

On April 18, 2011, EPA established a TMDL for Accotink Creek which limited the flow rate of stormwater into Accotink Creek to 681.8 ft^3/acre-day. The TMDL was designed to

regulate the amount of sediment in the Accotink, because EPA believed sediment was a primary cause of the benthic impairment. Both parties agree that sediment is a pollutant, and that stormwater is not. EPA refers to stormwater flow rate as a "surrogate" for sediment.

The Plaintiffs are now challenging the TMDL on multiple grounds, but presently before the Court is a single issue: Does the Clean Water Act authorize the EPA to regulate the level of a pollutant in Accotink Creek by establishing a TMDL for the flow of a nonpollutant into the creek?

Analysis

I. Standard of Review

Count I of the complaint, at issue here, is brought under the Administrative Procedures Act. *See* Comp. ¶ 169. The APA "confines judicial review of executive branch decisions to the administrative record of proceedings before the pertinent agency." *Shipbuilders Council of Am. V. U.S. Dept. of Homeland Sec.*, 770 F. Supp. 2d 793, 802 (E.D. Va. 2011). As such, the district court "sits as an appellate tribunal," and APA claims can be resolved equally well in the context of Rule 12 or Rule 56. *Univ. Med. Ctr. Of S. Nev. V. Shalala*, 173 F.3d 438, 441 n. 3 (D.C. Cir. 1999).

Because Count I presents a question of statutory interpretation, the Court reviews EPA's decision using the two-step analysis set forth in *Chevron, U.S.A., Inc. v. NRDC, Inc.*, 467 U.S. 837 (1984). For a given question of statutory interpretation, the first step under *Chevron* is to determine whether Congress addressed the "precise question at issue." 467 U.S. at 842. "If the intent of Congress is clear, that is the end of the matter . . . ." *Id.* If the Court cannot find that Congress has squarely addressed the question, the Court must move to Chevron's second step. In

the second step of statutory construction under *Chevron*, the Court must determine whether the agency's interpretation of the statute is "permissible." *Id.* at 843. The agency's construction is permissible if it is reasonable, but it need not be what the Court considers the *best* or *most reasonable* construction. *See id.* at 845. The Court is not to simply impose its own construction on the statute, but instead it gives deference to any reasonable statutory construction by the agency. *Id.* at 843.

II. Chevron Step One

Whether statutory ambiguity exists so that the issue cannot be settled at *Chevron's* first step is for the Court to decide, and the Court "owe[s] the agency no deference on the existence of ambiguity." *Am. Bar Ass'n v. FTC*, 430 F.3d 457, 468 (D.C. Cir. 2005). The Court begins the inquiry by "employing traditional tools of statutory construction." *Chevron*, 467 U.S. at 843 n.9. As always, the analysis begins with the text of the statute. *Nat'l Elec. Mfrs. Ass'n v. U.S. Dept't of Energy*, 654 F.3d 496, 504 (4th Cir. 2011).

The text of the statute that requires states to establish their own TMDLs, 33 U.S.C. § 1313(d)(1)(C), is:

> Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, **the total maximum daily load, for those pollutants which the Administrator identifies** under section 1314(a)(2) of this title as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. (emphasis added)

The next subsection, § 1313(d)(2), grants EPA the authority to set TMDLs when the state

has not done so adequately. "Pollutant" is a statutorily defined term. 33 U.S.C. § 1362(6).

The Court sees no ambiguity in the wording of this statute. EPA is charged with establishing TMDLs for the appropriate pollutants; that does not give them authority to regulate nonpollutants. The parties agree that sediment is a pollutant under 33 U.S.C. § 1362(6), and stormwater is not. Then how does EPA claim jurisdiction over setting TMDLs for stormwater?

EPA frames the stormwater TMDL as a surrogate. EPA's research apparently indicates that the "[sediment] load in Accotink Creek is a function of the amount of stormwater runoff generated within the watershed." Def. Opp. at 8. And EPA believes that framing the TMDL in terms of stormwater flow rate is superior to simply expressing it in terms of maximum sediment load.

The DC Circuit has considered and rejected a similar attempt by EPA to take liberties with the way Congress intended it to express its TMDLs. In *Friends of the Earth, Inc. v. Env. Protection Agency*, EPA had promulgated TMDLs for the Anacostia River that expressed the maximum load of certain pollutants in terms of annual and seasonal amounts. 446 F.3d 140, 143 (D.C. Cir. 2006). The court found that expressing a TMDL in terms of annual or seasonal maximums was not allowed, because the statute granted authority only for daily loads. *Id.* at 148. The court reached its conclusion even though EPA apparently made a strong argument that expressing TMDLs in terms of annual or seasonal loads was an effective and reasonable approach. *See id.* Presumably a daily load could have been derived by simply dividing the annual load by 365, yet the court still required expression in the terms dictated by Congress.

Here too, EPA hopes to express a TMDL in terms other than those contemplated by the statute, arguing that such an expression is the most effective method. But, as *Friends of the Earth* illustrates, EPA may not regulate something over which it has no statutorily granted power—

annual loads or nonpollutants—as a proxy for something over which it *is* granted power—daily loads or pollutants.

EPA's argument that its surrogate approach should be allowed because the statute does not specifically forbid it fails. EPA is not explicitly forbidden from establishing total maximum *annual* loads any more than they are explicitly barred from establishing TMDLs for nonpollutants. The question is whether the statute grants the agency the authority it is claiming, not whether the statute explicitly withholds that authority. And in this case, as in *Friends of the Earth*, the statute simply does not grant EPA the authority it claims.

The dicta in *Weyerhaeuser Co. v. Costle* is not as helpful to EPA's case as it would like. 590 F.2d 1011, 1022 n.6 (D.C. Cir. 1978). It is true that the court said in a footnote "[i]t is well recognized that EPA can use pollution parameters that are not harmful in themselves, but act as indicators of harm." *Id.* But in that case, the non-harmful pollution parameters the EPA sought to regulate were components of the effluent commonly discharged from paper mills, *id.* at 1022, making them effluents themselves. And power to regulate effluents is expressly granted to the EPA in the relevant statutory section. *See* 33 U.S.C. § 1314(b).

EPA would like to create the impression that Congress has given it loose rein to determine exactly what it could and could not regulate. On page 16 of its opposition to this motion, EPA points out that "Congress authorized EPA to determine which pollutants were suitable for TMDL calculation and measurement." (Internal quotes removed). While this may be true, EPA glosses over the fact that 33 U.S.C. § 1314(a)(2)(D) only gives EPA the power to regulate pollutants as that term is defined—by Congress—elsewhere in the statute. And, as discussed above, sediment is a pollutant for these purposes, but stormwater is not.

In a similar vein, EPA regulations which imply that the agency has discretion to set the

TMDL as it sees fit do not bear on the question now before the Court. EPA has promulgated a regulation allowing TMDLs to be "expressed in terms of either mass per time, toxicity, or other appropriate measure," 40 C.F.R. § 130.2(i), and another that allows TMDLs to be expressed as a "property of pollution," 50 Fed. Reg. 1774, 1776 (Jan. 11, 1985). But, EPA citing these regulations to demonstrate that the surrogate TMDL approach is permissible is mere bootstrapping. To the extent the regulations allow EPA to set TMDLs for nonpollutants, they exceed the statutory authority of EPA.

The plain language of the statute trumps all, but legislative history also supports Plaintiffs' argument. Congress's intent to limit EPA's discretion in this context is evidenced by the committee record cited by Plaintiffs, which has also been used by the Ninth Circuit, in which Senator Randolph, Chairman of the Senate committee that amended the act in 1972, explained, "We have written into law precise standards and definite guidelines on how the environment should be protected. We have done more than just provide broad directives [for] administrators to follow." Pl. Mot. 7, *citing Nw. Envtl. Def. Ctr. v. Brown*, 640 F.3d 1063, 1072 (9th Cir. 2011). Congress created a statutory scheme that included a precise definition of the word "pollutant," and then gave EPA authority to set TMDLs for those pollutants. Senator Randolph's comments strongly imply that Congress did not intend anything more or less than what is written in the statute.

The Court considers the language of 33 U.S.C. § 1313(d)(1)(C) to be unambiguous. Congress has spoken directly on the question at issue, and its answer is that EPA's authority does not extend to establishing TMDLs for nonpollutants as surrogates for pollutants. The legislative history of the CWA is consistent with this reading. Therefore, this Court finds EPA's interpretation of § 1313 and the related provisions to be impermissibly broad based on analysis

under the first step of *Chevron* analysis.

III. Chevron Step Two

Because the Court considers Congress's intent to be clear and unambiguously expressed by the language of the statute, it need not move to the second step of *Chevron* analysis. But the Court notes that there is substantial reason to believe EPA's motives go beyond "permissible gap-filling."

Page 9 of EPA's opposition says, "stormwater flow rates as a surrogate would more effectively address the process by which sediment impairs aquatic life in Accontink Creek." If the sediment levels in Accotink Creek have become dangerously high, what better way to address the problem than by limiting the amount of sediment permitted in the creek? If sediment level is truly "a function of" the amount of stormwater runoff, as EPA claims, then the TMDL could just as easily be expressed in terms of sediment load.

In fact, the Board of Supervisors of Fairfax County argued at the December 14th hearing (without objection from EPA) that EPA has approved 3,700 TMDLs for sediment nationwide, and in Virginia has addressed 111 benthic impairments with TMDLs. None of them regulated the flow rate of stormwater. By comparison, EPA has tried out its novel approach of regulating sediment via flow in only four instances nationwide, and all four attempts were challenged in court. One has settled, the other three are still pending.

The Court suspects that the decision to regulate stormwater flow as a surrogate for sediment load would not constitute a permissible construction of § 1313(d)(1)(C), even given the deference due at *Chevron's* second step. This is especially likely because EPA is attempting to increase the extent of its own authority via flow TMDLs, which courts must examine carefully.

See Brown & Williamson Tobacco Corp. v. Food & Drug Admin., 153 F.3d 155, 161-62 (4th Cir. 1998). EPA's attempt to set TMDLs for nonpollutants probably goes beyond "permissible gap-filling" and is instead an impermissible construction of the statute.

Conclusion

The language of § 1313(d)(1)(C) is clear. EPA is authorized to set TMDLs to regulate pollutants, and pollutants are carefully defined. Stormwater runoff is not a pollutant, so EPA is not authorized to regulate it via TMDL. Claiming that the stormwater maximum load is a surrogate for sediment, which is a pollutant and therefore regulable, does not bring stormwater within the ambit of EPA's TMDL authority. Whatever reason EPA has for thinking that a stormwater flow rate TMDL is a better way of limiting sediment load than a sediment load TMDL, EPA cannot be allowed to exceed its clearly limited statutory authority. For these reasons, the Plaintiffs' motion for Rule 12(c) judgment on the pleadings on Count I of their complaint is granted.

January 3, 2013
Alexandria, Virginia

/s/ LOG
Liam O'Grady
United States District Judge

TAB 2

§ 1311. Effluent limitations

(a) Illegality of pollutant discharges except in compliance with law. Except as in compliance with this section and sections 302, 306, 307, 318, 402, and 404 of this Act [33 USCS §§ 1312, 1316, 1317, 1328, 1342, 1344], the discharge of any pollutant by any person shall be unlawful.

(b) Timetable for achievement of objectives. In order to carry out the objective of this Act there shall be achieved--

(1) (A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of this Act [33 USCS § 1314(b)], or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 307 of this Act [33 USCS § 1317]; and

(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 203 of this Act [33 USCS § 1283] prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 304(d)(1) of this Act [33 USCS § 1314(d)(1)]; or,

(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 510 [33 USCS § 1370]) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this Act.

(2) (A) for pollutants identified in subparagraphs (C), (D), and (F) of this paragraph, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 304(b)(2) of this Act [33 USCS § 1314(b)(2)], which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 315 [33 USCS § 1325]), that such

elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to section 304(b)(2) of this Act [33 USCS § 1314(b)(2)], or (ii) in the case of the introduction of a pollutant into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, shall require compliance with any applicable pretreatment requirements and any other requirement under section 307 of this Act [33 USCS § 1317];

(B) [Repealed]

(C) with respect to all toxic pollutants referred to in table 1 of Committee Print Numbered 95-30 of the Committee on Public Works and Transportation of the House of Representatives compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 304(b) [33 USCS § 1314(b)], and in no case later than March 31, 1989;

(D) for all toxic pollutants listed under paragraph (1) of subsection (a) of section 307 of this Act [33 USCS § 1317] which are not referred to in subparagraph (C) of this paragraph compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable, but in no case later than three years after the date such limitations are promulgated under section 304(b) [33 USCS § 1314(b)], and in no case later than March 31, 1989;

(E) as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 304(b) [33 USCS § 1314(b)], and in no case later than March 31, 1989, compliance with effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which in the case of pollutants identified pursuant to section 304(a)(4) of this Act [33 USCS § 1314(a)(4)] shall require application of the best conventional pollutant control technology as determined in accordance with regulations issued by the Administrator pursuant to section 304(b)(4) of this Act [33 USCS § 1314(b)(4)]; and

(F) for all pollutants (other than those subject to subparagraphs (C), (D), or (E) of this paragraph) compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable but in no case later than 3 years after the date such limitations are established, and in no case later than March 31, 1989.

(3) (A) for effluent limitations under paragraph (1)(A)(i) of this subsection promulgated after January 1, 1982, and requiring a level of control substantially greater or based on fundamentally different control technology than under permits for an industrial category issued before such date, compliance as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 304(b) [33 USCS § 1314(b)], and in no case later than March 31, 1989; and

(B) for any effluent limitation in accordance with paragraph (1)(A)(i), (2)(A)(i), or (2)(E) of this subsection established only on the basis of section 402(a)(1) [33 USCS § 1342(a)(1)] in a permit issued after enactment of the Water Quality Act of 1987 [enacted Feb. 4, 1987], compliance as expeditiously as practicable but in no case later than three years after the date such limitations are established, and in no case later than March 31, 1989.

(c) Modification of timetable. The Administrator may modify the requirements of subsection (b)(2)(A) of this section with respect to any point source for which a permit application is filed after July 1, 1977, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants.

(d) Review and revision of effluent limitations. Any effluent limitation required by paragraph (2) of subsection (b) of this section shall be reviewed at least every five years and, if appropriate, revised pursuant to the procedure established under such paragraph.

(e) All point discharge source application of effluent limitations. Effluent limitations established pursuant to this section or section 302 of this Act [33 USCS § 1312] shall be applied to all point sources of discharge of pollutants in accordance with the provisions of this Act [33 USCS §§ 1251 et seq.].

(f) Illegality of discharge of radiological, chemical, or biological warfare agents, high-level radioactive waste or medical waste. Notwithstanding any other provisions of this Act [33 USCS §§ 1251 et seq.] it shall be unlawful to discharge any radiological, chemical, or biological warfare agent, any high-level radioactive waste, or any medical waste, into the navigable waters.

(g) Modifications for certain nonconventional pollutants.

(1) General authority. The Administrator, with the concurrence of the State, may modify the requirements of subsection (b)(2)(A) of this section with respect to the discharge from any point source of ammonia, chlorine, color, iron, and total phenols (4AAP) (when determined by the Administrator to be a pollutant covered by subsection (b)(2)(F)) and any other pollutant which the Administrator lists under paragraph (4) of this subsection.

(2) Requirements for granting modifications. A modification under this subsection shall be granted only upon a showing by the owner or operator of a point source satisfactory to the Administrator that--

(A) such modified requirements will result at a minimum in compliance with the requirements of subsection (b)(1)(A) or (C) of this section, whichever is applicable;

(B) such modified requirements will not result in any additional requirements on any other point or nonpoint source; and

(C) such modification will not interfere with the attainment or maintenance of that water quality which shall assure protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities, in and on the water and such modification will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

(3) Limitation on authority to apply for subsection (c) modification. If an owner or operator of a point source applies for a modification under this subsection with respect to the discharge of any pollutant, such owner or operator shall be eligible to apply for modification under

subsection (c) of this section with respect to such pollutant only during the same time period as he is eligible to apply for a modification under this subsection.

(4) Procedures for listing additional pollutants.

(A) General authority. Up on petition of any person, the Administrator may add any pollutant to the list of pollutants for which modification under this section is authorized (except for pollutants identified pursuant to section 304(a)(4) of this Act [33 USCS § 1314(a)(4)], toxic pollutants subject to section 307(a) of this Act [33 USCS § 1317(a)], and the thermal component of discharges) in accordance with the provisions of this paragraph.

(B) Requirements for listing.

(i) Sufficient information. The person petitioning for listing of an additional pollutant under this subsection shall submit to the Administrator sufficient information to make the determinations required by this subparagraph.

(ii) Toxic criteria determination. The Administrator shall determine whether or not the pollutant meets the criteria for listing as a toxic pollutant under section 307(a) of this Act [33 USCS § 1317(a)].

(iii) Listing as toxic pollutant. If the Administrator determines that the pollutant meets the criteria for listing as a toxic pollutant under section 307(a) [33 USCS § 1317(a)], the Administrator shall list the pollutant as a toxic pollutant under section 307(a) [33 USCS § 1317(a)].

(iv) Nonconventional criteria determination. If the Administrator determines that the pollutant does not meet the criteria for listing as a toxic pollutant under such section and determines that adequate test methods and sufficient data are available to make the determinations required by paragraph (2) of this subsection with respect to the pollutant, the Administrator shall add the pollutant to the list of pollutants specified in paragraph (1) of this subsection for which modifications are authorized under this subsection.

(C) Requirements for filing of petitions. A petition for listing of a pollutant under this paragraph--

(i) must be filed not later than 270 days after the date of promulgation of an applicable effluent guideline under section 304 [33 USCS § 1314];

(ii) may be filed before promulgation of such guideline; and

(iii) may be filed with an application for a modification under paragraph (1) with respect to the discharge of such pollutant.

(D) Deadline for approval of petition. A decision to add a pollutant to the list of pollutants for which modifications under this subsection are authorized must be made within 270 days after the date of promulgation of an applicable effluent guideline under section 304 [33 USCS § 1314].

(E) Burden of proof. The burden of proof for making the determinations under subparagraph (B) shall be on the petitioner.

(5) Removal of pollutants. The Administrator may remove any pollutant from the list of pollutants for which modifications are authorized under this subsection if the Administrator determines that adequate test methods and sufficient data are no longer available for determining whether or not modifications may be granted with respect to such pollutant under paragraph (2) of this subsection.

(h) Modification of secondary treatment requirements. The Administrator, with the concurrence of the State, may issue a permit under section 402 [33 USCS § 1342] which modifies the requirements of subsection (b)(1)(B) of this section with respect to the discharge of any pollutant from a publicly owned treatment works into marine waters, if the applicant demonstrates to the satisfaction of the Administrator that--

(1) there is an applicable water quality standard specific to the pollutant for which the modification is requested, which has been identified under section 304(a)(6) of this Act [33 USCS § 1314(a)(6)];

(2) the discharge of pollutants in accordance with such modified requirements will not interfere, alone or in combination with pollutants from other sources, with the attainment or maintenance of that water quality which assures protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife, and allows recreational activities, in and on the water;

(3) the applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota, to the extent practicable, and the scope of such monitoring is limited to include only those scientific investigations which are necessary to study the effects of the proposed discharge;

(4) such modified requirements will not result in any additional requirements on any other point or nonpoint source;

(5) all applicable pretreatment requirements for sources introducing waste into such treatment works will be enforced;

(6) in the case of any treatment works serving a population of 50,000 or more, with respect to any toxic pollutant introduced into such works by an industrial discharger for which pollutant there is no applicable pretreatment requirement in effect, sources introducing waste into such works are in compliance with all applicable pretreatment requirements, the applicant will enforce such requirements, and the applicant has in effect a pretreatment program which, in combination with the treatment of discharges from such works, removes the same amount of such pollutant as would be removed if such works were to apply secondary treatment to discharges and if such works had no pretreatment program with respect to such pollutant;

(7) to the extent practicable, the applicant has established a schedule of activities designed to eliminate the entrance of toxic pollutants from nonindustrial sources into such treatment works;

(8) there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

(9) the applicant at the time such modification becomes effective will be discharging effluent which has received at least primary or equivalent treatment and which meets the criteria

established under section 304(a)(1) of this Act [33 USCS § 1314(a)(1)] after initial mixing in the waters surrounding or adjacent to the point at which such effluent is discharged.

For the purposes of this subsection the phrase "the discharge of any pollutant into marine waters" refers to a discharge into deep waters of the territorial sea or the waters of the contiguous zone, or into saline estuarine waters where there is strong tidal movement and other hydrological and geological characteristics which the Administrator determines necessary to allow compliance with paragraph (2) of this subsection, and section 101(a)(2) of this Act [33 USCS § 1251(a)(2)]. For the purposes of paragraph (9), "primary or equivalent treatment" means treatment by screening, sedimentation, and skimming adequate to remove at least 30 percent of the biological oxygen demanding material and of the suspended solids in the treatment works influent, and disinfection, where appropriate. A municipality which applies secondary treatment shall be eligible to receive a permit pursuant to this subsection which modifies the requirements of subsection (b)(1)(B) of this section with respect to the discharge of any pollutant from any treatment works owned by such municipality into marine waters. No permit issued under this subsection shall authorize the discharge of sewage sludge into marine waters. In order for a permit to be issued under this subsection for the discharge of a pollutant into marine waters, such marine waters must exhibit characteristics assuring that water providing dilution does not contain significant amounts of previously discharged effluent from such treatment works. No permit issued under this subsection shall authorize the discharge of any pollutant into saline estuarine waters which at the time of application do not support a balanced indigenous population of shellfish, fish and wildlife, or allow recreation in and on the waters or which exhibit ambient water quality below applicable water quality standards adopted for the protection of public water supplies, shellfish, fish and wildlife or recreational activities or such other standards necessary to assure support and protection of such uses. The prohibition contained in the preceding sentence shall apply without regard to the presence or absence of a causal relationship between such characteristics and the applicant's current or proposed discharge. Notwithstanding any other provisions of this subsection, no permit may be issued under this subsection for discharge of a pollutant into the New York Bight Apex consisting of the ocean waters of the Atlantic Ocean westward of 73 degrees 30 minutes west longitude and northward of 40 degrees 10 minutes north latitude.

(i) Municipal time extensions.

(1) Where construction is required in order for a planned or existing publicly owned treatment works to achieve limitations under subsection (b)(1)(B) or (b)(1)(C) of this section, but (A) construction cannot be completed within the time required in such subsection, or (B) the United States has failed to make financial assistance under this Act [33 USCS §§ 1251 et seq.] available in time to achieve such limitations by the time specified in such subsection, the owner or operator of such treatment works may request the Administrator (or if appropriate the State) to issue a permit pursuant to section 402 of this Act [33 USCS § 1342] or to modify a permit issued pursuant to that section to extend such time for compliance. Any such request shall be filed with the Administrator (or if appropriate the State) within 180 days after the date of enactment of the Water Quality Act of 1987 [enacted Feb. 7, 1987]. The Administrator (or if appropriate the State) may grant such request and issue or modify such a permit, which shall contain a schedule of compliance for the publicly owned treatment works based on the earliest date by which such financial assistance will be available from the United States and construction can be completed, but in no event later than July 1, 1988, and shall contain such

other terms and conditions, including those necessary to carry out subsections (b) through (g) of section 201 of this Act [33 USCS § 1281(b)-(g)], section 307 of this Act [33 USCS § 1317], and such interim effluent limitations applicable to that treatment works as the Administrator determines are necessary to carry out the provisions of this Act [33 USCS §§ 1251 et seq.].

(2) (A) Where a point source (other than a publicly owned treatment works) will not achieve the requirements of subsections (b)(1)(A) and (b)(1)(C) of this section and--

(i) if a permit issued prior to July 1, 1977, to such point source is based upon a discharge into a publicly owned treatment works; or

(ii) if such point source (other than a publicly owned treatment works) had before July 1, 1977, a contract (enforceable against such point source) to discharge into a publicly owned treatment works; or

(iii) if either an application made before July 1, 1977, for a construction grant under this Act [33 USCS §§ 1251 et seq.] for a publicly owned treatment works, or engineering or architectural plans or working drawings made before July 1, 1977, for a publicly owned treatment works, show that such point source was to discharge into such publicly owned treatment works,

and such publicly owned treatment works is presently unable to accept such discharge without construction, and in the case of a discharge to an existing publicly owned treatment works, such treatment works has an extension pursuant to paragraph (1) of this subsection, the owner or operator of such point source may request the Administrator (or if appropriate the State) to issue or modify such a permit pursuant to such section 402 [33 USCS § 1342] to extend such time for compliance. Any such request shall be filed with the Administrator (or if appropriate the State) within 180 days after the date of enactment of this subsection [enacted Dec. 27, 1977] or the filing of a request by the appropriate publicly owned treatment works under paragraph (1) of this subsection, whichever is later. If the Administrator (or if appropriate the State) finds that the owner or operator of such point source has acted in good faith, he may grant such request and issue or modify such a permit, which shall contain a schedule of compliance for the point source to achieve the requirements of subsections (b)(1)(A) and (C) of this section and shall contain such other terms and conditions, including pretreatment and interim effluent limitations and water conservation requirements applicable to that point source, as the Administrator determines are necessary to carry out the provisions of this Act [33 USCS §§ 1251 et seq.].

(B) No time modification granted by the Administrator (or if appropriate the State) pursuant to paragraph (2)(A) of this subsection shall extend beyond the earliest date practicable for compliance or beyond the date of any extension granted to the appropriate publicly owned treatment works pursuant to paragraph (1) of this subsection, but in no event shall it extend beyond July 1, 1988; and no such time modification shall be granted unless (i) the publicly owned treatment works will be in operation and available to the point source before July 1, 1988, and will meet the requirements of subsections (b)(1)(B) and (C) of this section after receiving the discharge from that point source; and (ii) the point source and the publicly owned treatment works have entered into an enforceable contract requiring the point source to discharge into the publicly owned treatment works, the owner or operator of such point

source to pay the costs required under section 204 of this Act [33 USCS § 1284], and the publicly owned treatment works to accept the discharge from the point source; and (iii) the permit for such point source requires that point source to meet all requirements under section 307(a) and (b) [33 USCS § 1317(a), (b)] during the period of such time modification.

(j) Modification procedures.

(1) Any application filed under this section for a modification of the provisions of--

(A) subsection (b)(1)(B) under subsection (h) of this section shall be filed not later that [than] the 365th day which begins after the date of enactment of the Municipal Wastewater Treatment Construction Grant Amendments of 1981 [enacted Dec. 29, 1981], except that a publicly owned treatment works which prior to December 31, 1982, had a contractual arrangement to use a portion of the capacity of an ocean outfall operated by another publicly owned treatment works which has applied for or received modification under subsection (h), may apply for a modification of subsection (h) in its own right not later than 30 days after the date of the enactment of the Water Quality Act of 1987 [enacted Feb. 7, 1987], and except as provided in paragraph (5);

(B) subsection (b)(2)(A) as it applies to pollutants identified in subsection (b)(2)(F) shall be filed not later than 270 days after the date of promulgation of an applicable effluent guideline under section 304 [33 USCS § 1314] or not later than 270 days after the date of enactment of the Clean Water Act of 1977 [enacted Dec. 27, 1977], whichever is later.

(2) Subject to paragraph (3) of this section, any application for a modification filed under subsection (g) of this section shall not operate to stay any requirement under this Act [33 USCS §§ 1251 et seq.], unless in the judgment of the Administrator such a stay or the modification sought will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity, or teratogenicity), or synergistic propensities, and that there is a substantial likelihood that the applicant will succeed on the merits of such application. In the case of an application filed under subsection (g) of this section, the Administrator may condition any stay granted under this paragraph on requiring the filing of a bond or other appropriate security to assure timely compliance with the requirements from which a modification is sought.

(3) Compliance requirements under subsection (g).

(A) Effect of filing. An application for a modification under subsection (g) and a petition for listing of a pollutant as a pollutant for which modifications are authorized under such subsection shall not stay the requirement that the person seeking such modification or listing comply with effluent limitations under this Act [33 USCS §§ 1251 et seq.] for all pollutants not the subject of such application or petition.

(B) Effect of disapproval. Disapproval of an application for a modification under subsection (g) shall not stay the requirement that the person seeking such modification comply with all applicable effluent limitations under this Act [33 USCS §§ 1251 et seq.].

(4) Deadline for subsection (g) decision. An application for a modification with respect to a pollutant filed under subsection (g) must be approved or disapproved not later than 365 days after the date of such filing; except that in any case in which a petition for listing such pollutant as a pollutant for which modifications are authorized under such subsection is approved, such application must be approved or disapproved not later than 365 days after the date of approval of such petition.

(5) Extension of application deadline.

(A) In general. In the 180-day period beginning on the date of the enactment of this paragraph [enacted Oct. 31, 1994], the city of San Diego, California, may apply for a modification pursuant to subsection (h) of the requirements of subsection (b)(1)(B) with respect to biological oxygen demand and total suspended solids in the effluent discharged into marine waters.

(B) Application. An application under this paragraph shall include a commitment by the applicant to implement a waste water reclamation program that, at a minimum, will--

(i) achieve a system capacity of 45,000,000 gallons of reclaimed waste water per day by January 1, 2010; and

(ii) result in a reduction in the quantity of suspended solids discharged by the applicant into the marine environment during the period of the modification.

(C) Additional conditions. The Administrator may not grant a modification pursuant to an application submitted under this paragraph unless the Administrator determines that such modification will result in removal of not less than 58 percent of the biological oxygen demand (on an annual average) and not less than 80 percent of total suspended solids (on a monthly average) in the discharge to which the application applies. A

(D) Preliminary decision deadline. The Administrator shall announce a preliminary decision on an application submitted under this paragraph not later than 1 year after the date the application is submitted.

(k) Innovative technology. In the case of any facility subject to a permit under section 402 [33 USCS § 1342] which proposes to comply with the requirements of subsection (b)(2)(A) or (b)(2)(E) of this section by replacing existing production capacity with an innovative production process which will result in an effluent reduction significantly greater than that required by the limitation otherwise applicable to such facility and moves toward the national goal of eliminating the discharge of all pollutants, or with the installation of an innovative control technique that has a substantial likelihood for enabling the facility to comply with the applicable effluent limitation by achieving a significantly greater effluent reduction than that required by the applicable effluent limitation and moves toward the national goal of eliminating the discharge of all pollutants, or by achieving the required reduction with an innovative system that has the potential for significantly lower costs than the systems which have been determined by the Administrator to be economically achievable, the Administrator (or the State with an approved program under section 402 [33 USCS § 1342], in consultation with the Administrator) may establish a date for compliance under subsection (b)(2)(A) or (b)(2)(E) of this section no later than two years after the date for compliance with such effluent limitation which would otherwise be applicable under such

subsection, if it is also determined that such innovative system has the potential for industry-wide application.

(l) Toxic pollutants. Other than as provided in subsection (n) of this section, the Administrator may not modify any requirement of this section as it applies to any specific pollutant which is on the toxic pollutant list under section 307(a)(1) of this Act [33 USCS § 1317(a)(1)].

(m) Modification of effluent limitation requirements for point sources.

(1) The Administrator, with the concurrence of the State, may issue a permit under section 402 [33 USCS § 1342] which modifies the requirements of subsections (b)(1)(A) and (b)(2)(E) of this section, and of section 403 [33 USCS § 1343], with respect to effluent limitations to the extent such limitations relate to biochemical oxygen demand and pH from discharges by an industrial discharger in such State into deep waters of the territorial seas, if the applicant demonstrates and the Administrator finds that--

(A) the facility for which modification is sought is covered at the time of the enactment of this subsection [enacted Jan. 8, 1983] by National Pollutant Discharge Elimination System permit number CA0005894 or CA0005282;

(B) the energy and environmental costs of meeting such requirements of subsections (b)(1)(A) and (b)(2)(E) and section 403 [33 USCS § 1343] exceed by an unreasonable amount the benefits to be obtained, including the objectives of this Act [33 USCS §§ 1251 et seq.];

(C) the applicant has established a system for monitoring the impact of such discharges on a representative sample of aquatic biota;

(D) such modified requirements will not result in any additional requirements on any other point or nonpoint source;

(E) there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

(F) the discharge is into waters where there is strong tidal movement and other hydrological and geological characteristics which are necessary to allow compliance with this subsection and section 101(a)(2) of this Act [33 USCS § 1251(a)(2)];

(G) the applicant accepts as a condition to the permit a contractural [contractual] obligation to use funds in the amount required (but not less than $ 250,000 per year for ten years) for research and development of water pollution control technology, including but not limited to closed cycle technology;

(H) the facts and circumstances present a unique situation which, if relief is granted, will not establish a precedent or the relaxation of the requirements of this Act [33 USCS §§ 1251 et seq.] applicable to similarly situated discharges; and

(I) no owner or operator of a facility comparable to that of the applicant situated in the United States has demonstrated that it would be put at a competitive disadvantage to the applicant (or the parent company or any subsidiary thereof) as a result of the issuance of a permit under this subsection.

(2) The effluent limitations established under a permit issued under paragraph (1) shall be sufficient to implement the applicable State water quality standards, to assure the protection of public water supplies and protection and propagation of a balanced, indigenous population of shellfish, fish, fauna, wildlife, and other aquatic organisms, and to allow recreational activities in and on the water. In setting such limitations, the Administrator shall take into account any seasonal variations and the need for an adequate margin of safety, considering the lack of essential knowledge concerning the relationship between effluent limitations and water quality and the lack of essential knowledge of the effects of discharges on beneficial uses of the receiving waters.

(3) A permit under this subsection may be issued for a period not to exceed five years, and such a permit may be renewed for one additional period not to exceed five years upon a demonstration by the applicant and a finding by the Administrator at the time of application for any such renewal that the provisions of this subsection are met.

(4) The Administrator may terminate a permit issued under this subsection if the Administrator determines that there has been a decline in ambient water quality of the receiving waters during the period of the permit even if a direct cause and effect relationship cannot be shown: *Provided,* That if the effluent from a source with a permit issued under this subsection is contributing to a decline in ambient water quality of the receiving waters, the Administrator shall terminate such permit.

(n) Fundamentally different factors.

(1) General rule. The Administrator, with the concurrence of the State, may establish an alternative requirement under subsection (b)(2) or section 307(b) [33 USCS § 1317(b)] for a facility that modifies the requirements of national effluent limitation guidelines or categorical pretreatment standards that would otherwise be applicable to such facility, if the owner or operator of such facility demonstrates to the satisfaction of the Administrator that--

(A) the facility is fundamentally different with respect to the factors (other than cost) specified in section 304(b) or 304(g) and considered by the Administrator in establishing such national effluent limitation guidelines or categorical pretreatment standards;

(B) the application--

(i) is based solely on information and supporting data submitted to the Administrator during the rule-making for establishment of the applicable national effluent limitation guidelines or categorical pretreatment standard specifically raising the factors that are fundamentally different for such facility; or

(ii) is based on information and supporting data referred to in clause (i) and information and supporting data the applicant did not have a reasonable opportunity to submit during such rulemaking;

(C) the alternative requirement is no less stringent than justified by the fundamental difference; and

(D) the alternative requirement will not result in a nonwater quality environmental impact which is markedly more adverse than the impact considered by the Administrator in establishing such national effluent limitation guideline or categorical pretreatment standard.

(2) Time limit for applications. An application for an alternative requirement which modifies the requirements of an effluent limitation or pretreatment standard under this subsection must be submitted to the Administrator within 180 days after the date on which such limitation or standard is established or revised, as the case may be.

(3) Time limit for decision. The Administrator shall approve or deny by final agency action an application submitted under this subsection within 180 days after the date such application is filed with the Administrator.

(4) Submission of information. The Administrator may allow an applicant under this subsection to submit information and supporting data until the earlier of the date the application is approved or denied or the last day that the Administrator has to approve or deny such application.

(5) Treatment of pending applications. For the purposes of this subsection, an application for an alternative requirement based on fundamentally different factors which is pending on the date of the enactment of this subsection [enacted Feb. 7, 1987] shall be treated as having been submitted to the Administrator on the 180th day following such date of enactment [enacted Feb. 7, 1987]. The applicant may amend the application to take into account the provisions of this subsection.

(6) Effect of submission of application. An application for an alternative requirement under this subsection shall not stay the applicant's obligation to comply with the effluent limitation guideline or categorical pretreatment standard which is the subject of the application.

(7) Effect of denial. If an application for an alternative requirement which modifies the requirements of an effluent limitation or pretreatment standard under this subsection is denied by the Administrator, the applicant must comply with such limitation or standard as established or revised, as the case may be.

(8) Reports. By January 1, 1997, and January 1 of every odd-numbered year thereafter, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report on the status of applications for alternative requirements which modify the requirements of effluent limitations under section 301 or 304 of this Act [33 USCS § 1311 or 1314] or any national categorical pretreatment standard under section 307(b) of this Act [33 USCS § 1317(b)] filed before, on, or after such date of enactment [enacted Feb. 7, 1987].

(o) Application fees. The Administrator shall prescribe and collect from each applicant fees reflecting the reasonable administrative costs incurred in reviewing and processing applications for modifications submitted to the Administrator pursuant to subsections (c), (g), (i), (k), (m), and (n) of section 301, section 304(d)(4), and section 316(a) of this Act [33 USCS §§ 1311(c), (g), (i), (k), (m), (n), 1314(d)(4), 1316(a)]. All amounts collected by the Administrator under this subsection shall be deposited into a special fund of the Treasury entitled "Water Permits and Related Services" which shall thereafter be available for appropriation to carry out activities of the Environmental Protection Agency for which such fees were collected.

(p) Modified permit for coal remining operations.

(1) In general. Subject to paragraphs (2) through (4) of this subsection, the Administrator, or the State in any case which the State has an approved permit program under section 402(b) [33 USCS § 1342(b)], may issue a permit under section 402 [33 USCS § 1342] which modifies the

requirements of subsection (b)(2)(A) of this section with respect to the pH level of any pre-existing discharge, and with respect to pre-existing discharges of iron and manganese from the remined area of any coal remining operation or with respect to the pH level or level of iron or manganese in any pre-existing discharge affected by the remaining operation. Such modified requirements shall apply the best available technology economically achievable on a case-by-case basis, using best professional judgment, to set specific numerical effluent limitations in each permit.

(2) Limitations. The Administrator or the State may only issue a permit pursuant to paragraph (1) if the applicant demonstrates to the satisfaction of the Administrator or the State, as the case may be, that the coal remining operation will result in the potential for improved water quality from the remining operation but in no event shall such a permit allow the pH level of any discharge, and in no event shall such a permit allow the discharges of iron and manganese, to exceed the levels being discharged from the remined area before the coal remining operation begins. No discharge from, or affected by, the remining operation shall exceed State water quality standards established under section 303 of this Act [33 USCS § 1313].

(3) Definitions. For purposes of this subsection--

(A) Coal remining operation. The term "coal remining operation" means a coal mining operation which begins after the date of the enactment of this subsection [enacted Feb. 4, 1987] at a site on which coal mining was conducted before the effective date of the Surface Mining Control and Reclamation Act of 1977.

(B) Remined area. The term "remined area" means only that area of any coal remining operation on which coal mining was conducted before the effective date of the Surface Mining Control and Reclamation Act of 1977.

(C) Pre-existing discharge. The term "pre-existing discharge" means any discharge at the time of permit application under this subsection.

(4) Applicability of strip mining laws. Nothing in this subsection shall affect the application of the Surface Mining Control and Reclamation Act of 1977 to any coal remining operation, including the application of such Act to suspended solids.

History

(June 30, 1948, ch 758, Title III, § 301, as added Oct. 18, 1972, P.L. 92-500, § 2, 86 Stat. 844; Dec. 27, 1977, P.L. 95-217, §§ 42-47, 53(c), 91 Stat. 1582-1586, 1590; Dec. 29, 1981, P.L. 97-117, §§ 21(a) in part, (b), 22(a)-(d), 95 Stat. 1631, 1632; Jan. 8, 1983, P.L. 97-440, 96 Stat. 2289; Feb. 4, 1987, P.L. 100-4, Title III, §§ 301(a)-(e), 302(a)-(d), 303(a), (b)(1), (c)-(f), 304(a), 305, 306(a), (b), 307, 101 Stat. 29; Nov. 18, 1988, P.L. 100-688, Title III, Subtitle B, § 3202(b), 102 Stat. 4154; Oct. 31, 1994, P.L. 103-431, § 2, 108 Stat. 4396; Dec. 21, 1995, P.L. 104-66, Title II, Subtitle B, § 2021(b), 109 Stat. 727.)

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§ 1362. Definitions

Except as otherwise specifically provided, when used in this Act [33 USCS §§ 1251 et seq.]:

(1) The term "State water pollution control agency" means the State agency designated by the Governor having responsibility for enforcing State laws relating to the abatement of pollution.

(2) The term "interstate agency" means an agency of two or more States established by or pursuant to an agreement or compact approved by the Congress, or any other agency of two or more States, having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator.

(3) The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Trust Territory of the Pacific Islands.

(4) The term "municipality" means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of this Act [33 USCS § 1288].

(5) The term "person" means an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a state, or any interstate body.

(6) The term "pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. This term does not mean (A) " sewage from vessels or a discharge incidental to the normal operation of a vessel of the Armed Forces" within the meaning of section 312 of this Act [33 USCS § 1322]; or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if such State determines that such injection or disposal will not result in the degradation of ground or surface water resources.

(7) The term "navigable waters" means the waters of the United States, including the territorial seas.

(8) The term "territorial seas" means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of three miles.

(9) The term "contiguous zone" means the entire zone established or to be established by the United States under article 24 of the Convention of the Territorial Sea and the Contiguous Zone [15 UST § 1606].

(10) The term "ocean" means any portion of the high seas beyond the contiguous zone.

(11) The term "effluent limitation" means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.

(12) The term "discharge of a pollutant" and the term "discharge of pollutants" each means (A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.

(13) The term "toxic pollutant" means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

(14) The term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

(15) The term "biological monitoring" shall mean the determination of the effects on aquatic life, including accumulation of pollutants in tissue, in receiving waters due to the discharge of pollutants (A) by techniques and procedures, including sampling of organisms representative of appropriate levels of the food chain appropriate to the volume and the physical, chemical, and biological characteristics of the effluent, and (B) at appropriate frequencies and locations.

(16) The term "discharge" when used without qualification includes a discharge of a pollutant, and a discharge of pollutants.

(17) The term "schedule of compliance" means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard.

(18) The term "industrial user" means those industries identified in the Standard Industrial Classification Manual, Bureau of the Budget, 1967, as amended and supplemented, under the category "Division D--Manufacturing" and such other classes of significant waste producers as, by regulation, the Administrator deems appropriate.

(19) The term "pollution" means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

(20) The term "medical waste" means isolation wastes; infectious agents; human blood and blood products; pathological wastes; sharps; body parts; contaminated bedding; surgical wastes and potentially contaminated laboratory wastes; dialysis wastes; and such additional medical items as the Administrator shall prescribe by regulation.

(21) Coastal recreation waters.

(A) In general. The term "coastal recreation waters" means--

(i) the Great Lakes; and

(ii) marine coastal waters (including coastal estuaries) that are designated under section 303(c) [33 USCS § 1313(c)] by a State for use for swimming, bathing, surfing, or similar water contact activities.

(B) Exclusions. The term "coastal recreation waters" does not include--

(i) inland waters; or

(ii) waters upstream of the mouth of a river or stream having an unimpaired natural connection with the open sea.

(22) Floatable material.

(A) In general. The term "floatable material" means any foreign matter that may float or remain suspended in the water column.

(B) Inclusions. The term "floatable material" includes--

(i) plastic;

(ii) aluminum cans;

(iii) wood products;

(iv) bottles; and

(v) paper products.

(23) Pathogen indicator. The term "pathogen indicator" means a substance that indicates the potential for human infectious disease.

(24) Oil and gas exploration and production. The term "oil and gas exploration, production, processing, or treatment operations or transmission facilities" means all field activities or operations associated with exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities.

(25) Recreational vessel.

(A) In general. The term "recreational vessel" means any vessel that is--

(i) manufactured or used primarily for pleasure; or

(ii) leased, rented, or chartered to a person for the pleasure of that person.

(B) Exclusion. The term "recreational vessel" does not include a vessel that is subject to Coast Guard inspection and that--

(i) is engaged in commercial use; or

(ii) carries paying passengers.

(26) Treatment works. The term "treatment works" has the meaning given the term in section 212 [33 USCS § 1292].

History

(June 30, 1948, ch 758, Title V, § 502, as added Oct. 18, 1972,P.L. 92-500, § 2, 86 Stat. 886; Dec. 27, 1977, P.L. 95-217, § 33(b), 91 Stat. 1577; Feb. 4, 1987, P.L. 100-4, Title V, §§ 502(a), 503, 101 Stat. 75; Nov. 18, 1988, P.L. 100-688, Title III, Subtitle B, § 3202(a), 102 Stat. 4154; Feb. 10, 1996, P.L. 104-106, Div A, Title III, Subtitle C, § 325(c)(3), 110 Stat. 259; Oct. 10, 2000, P.L. 106-284, § 5, 114 Stat. 875; Aug. 8, 2005, P.L. 109-58, Title III, Subtitle C, § 323, 119 Stat. 694; July 30, 2008, P.L. 110-288, § 3, 122 Stat. 2650.)

(As amended June 10, 2014,P.L. 113-121, Title V, Subtitle B, § 5012(b), 128 Stat. 1328.)

UNITED STATES CODE SERVICE
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End of Document

This document is current through the December 11, 2017 issue of the Federal Register. Pursuant to 82 FR 8346 ("Regulatory Freeze Pending Review"), certain regulations will be delayed pending further review. See Publisher's Note under affected rules. Title 3 is current through December 4, 2017.

§ 122.21 Application for a permit (applicable to State programs, see § 123.25).

(a) Duty to apply.

(1) Any person who discharges or proposes to discharge pollutants or who owns or operates a "sludge-only facility" whose sewage sludge use or disposal practice is regulated by part 503 of this chapter, and who does not have an effective permit, except persons covered by general permits under § 122.28, excluded under § 122.3, or a user of a privately owned treatment works unless the Director requires otherwise under § 122.44(m), must submit a complete application to the Director in accordance with this section and part 124 of this chapter. The requirements for concentrated animal feeding operations are described in § 122.23(d).

(2) Application Forms: (i) All applicants for EPA-issued permits must submit applications on EPA permit application forms. More than one application form may be required from a facility depending on the number and types of discharges or outfalls found there. Application forms may be obtained by contacting the EPA water resource center at (202) 260-7786 or Water Resource Center, U.S. EPA, Mail Code 4100, 1200 Pennsylvania Ave., NW., Washington, DC 20460 or at the EPA Internet site www.epa.gov/owm pdes.htm. Applications for EPA-issued permits must be submitted as follows:

(A) All applicants, other than POTWs and TWTDS, must submit Form 1.

(B) Applicants for new and existing POTWs must submit the information contained in paragraph (j) of this section using Form 2A or other form provided by the director.

(C) Applicants for concentrated animal feeding operations or aquatic animal production facilities must submit Form 2B.

(D) Applicants for existing industrial facilities (including manufacturing facilities, commercial facilities, mining activities, and silvicultural activities), must submit Form 2C.

(E) Applicants for new industrial facilities that discharge process wastewater must submit Form 2D.

(F) Applicants for new and existing industrial facilities that discharge only nonprocess wastewater must submit Form 2E.

(G) Applicants for new and existing facilities whose discharge is composed entirely of storm water associated with industrial activity must submit Form 2F, unless exempted by § 122.26(c)(1)(ii). If the discharge is composed of storm water and non-storm water, the applicant must also submit, Forms 2C, 2D, and/or 2E, as appropriate (in addition to Form 2F).

(H) Applicants for new and existing TWTDS, subject to paragraph (c)(2)(i) of this section must submit the application information required by paragraph (q) of this section, using Form 2S or other form provided by the director.

(ii) The application information required by paragraph (a)(2)(i) of this section may be electronically submitted if such method of submittal is approved by EPA or the Director.

(iii) Applicants can obtain copies of these forms by contacting the Water Management Divisions (or equivalent division which contains the NPDES permitting function) of the EPA Regional Offices. The Regional Offices' addresses can be found at § 1.7 of this chapter.

(iv) Applicants for State-issued permits must use State forms which must require at a minimum the information listed in the appropriate paragraphs of this section.

(b) Who applies? When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit.

(c) Time to apply.

(1) Any person proposing a new discharge, shall submit an application at least 180 days before the date on which the discharge is to commence, unless permission for a later date has been granted by the Director. Facilities proposing a new discharge of storm water associated with industrial activity shall submit an application 180 days before that facility commences industrial activity which may result in a discharge of storm water associated with that industrial activity. Facilities described under § 122.26(b)(14)(x) or (b)(15)(i) shall submit applications at least 90 days before the date on which construction is to commence. Different submittal dates may be required under the terms of applicable general permits. Persons proposing a new discharge are encouraged to submit their applications well in advance of the 90 or 180 day requirements to avoid delay. See also paragraph (k) of this section and § 122.26(c)(1)(i)(G) and (c)(1)(ii).

(2) Permits under section 405(f) of CWA. All TWTDS whose sewage sludge use or disposal practices are regulated by part 503 of this chapter must submit permit applications according to the applicable schedule in paragraphs (c)(2)(i) or (ii) of this section.

(i)A TWTDS with a currently effective NPDES permit must submit a permit application at the time of its next NPDES permit renewal application. Such information must be submitted in accordance with paragraph (d) of this section.

(ii) Any other TWTDS not addressed under paragraphs (c)(2)(i) of this section must submit the information listed in paragraphs (c)(2)(ii)(A) through (E) of this section to the Director within 1 year after publication of a standard applicable to its sewage sludge use or disposal practice(s), using Form 2S or another form provided by the Director. The Director will determine when such TWTDS must submit a full permit application.

(A) The TWTDS's name, mailing address, location, and status as federal, State, private, public or other entity;

(B) The applicant's name, address, telephone number, and ownership status;

(C)A description of the sewage sludge use or disposal practices. Unless the sewage sludge meets the requirements of paragraph (q)(8)(iv) of this section, the description must include the name and address of any facility where sewage sludge is sent for treatment or disposal, and the location of any land application sites;

(D) Annual amount of sewage sludge generated, treated, used or disposed (estimated dry weight basis); and

(E) The most recent data the TWTDS may have on the quality of the sewage sludge.

(iii) Notwithstanding paragraphs (c)(2)(i) or (ii) of this section, the Director may require permit applications from any TWTDS at any time if the Director determines that a permit is necessary to protect public health and the environment from any potential adverse effects that may occur from toxic pollutants in sewage sludge.

(iv) Any TWTDS that commences operations after promulgation of an applicable "standard for sewage sludge use or disposal" must submit an application to the Director at least 180 days prior to the date proposed for commencing operations.

(d) Duty to reapply.

(1) Any POTW with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

(2) All other permittees with currently effective permits shall submit a new application 180 days before the existing permit expires, except that:

(i) The Regional Administrator may grant permission to submit an application later than the deadline for submission otherwise applicable, but no later than the permit expiration date; and

(3)[Reserved]

(e) Completeness.

(1) The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits. An application for a permit is complete when the Director receives an application form and any supplemental information which are completed to his or her satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity. For EPA administered NPDES programs, an application which is reviewed under § 124.3 of this chapter is complete when the Director receives either a complete application or the information listed in a notice of deficiency.

(2)A permit application shall not be considered complete if a permitting authority has waived application requirements under paragraphs (j) or (q) of this section and EPA has disapproved the waiver application. If a waiver request has been submitted to EPA more than 210 days

prior to permit expiration and EPA has not disapproved the waiver application 181 days prior to permit expiration, the permit application lacking the information subject to the waiver application shall be considered complete.

(3) Except as specified in 122.21(e)(3)(ii), a permit application shall not be considered complete unless all required quantitative data are collected in accordance with sufficiently sensitive analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter I, subchapter N or O.

(i) For the purposes of this requirement, a method approved under 40 CFR part 136 or required under 40 CFR chapter I, subchapter N or O is "sufficiently sensitive" when:

(A) The method minimum level (ML) is at or below the level of the applicable water quality criterion for the measured pollutant or pollutant parameter; or

(B) The method ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

(C) The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter.

Note to paragraph (e)(3)(i): Consistent with 40 CFR part 136, applicants have the option of providing matrix or sample specific minimum levels rather than the published levels. Further, where an applicant can demonstrate that, despite a good faith effort to use a method that would otherwise meet the definition of "sufficiently sensitive", the analytical results are not consistent with the QA/QC specifications for that method, then the Director may determine that the method is not performing adequately and the applicant should select a different method from the remaining EPA-approved methods that is sufficiently sensitive consistent with 40 CFR 122.21(e)(3)(i). Where no other EPA-approved methods exist, the applicant should select a method consistent with 40 CFR 122.21(e)(3)(ii).

(ii) When there is no analytical method that has been approved under 40 CFR part 136, required under 40 CFR chapter I, subchapter N or O, and is not otherwise required by the Director, the applicant may use any suitable method but shall provide a description of the method. When selecting a suitable method, other factors such as a method's precision, accuracy, or resolution, may be considered when assessing the performance of the method.

(f) Information requirements. All applicants for NPDES permits, other than POTWs and other TWTDS, must provide the following information to the Director, using the application form provided by the Director. Additional information required of applicants is set forth in paragraphs (g) through (k) of this section.

(1) The activities conducted by the applicant which require it to obtain an NPDES permit.

(2) Name, mailing address, and location of the facility for which the application is submitted.

(3) Up to four SIC codes which best reflect the principal products or services provided by the facility.

(4) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.

(5) Whether the facility is located on Indian lands.

(6)A listing of all permits or construction approvals received or applied for under any of the following programs:

(i) Hazardous Waste Management program under RCRA.

(ii)UIC program under SDWA.

(iii)NPDES program under CWA.

(iv) Prevention of Significant Deterioration (PSD) program under the Clean Air Act.

(v) Nonattainment program under the Clean Air Act.

(vi) National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act.

(vii) Ocean dumping permits under the Marine Protection Research and Sanctuaries Act.

(viii) Dredge or fill permits under section 404 of CWA.

(ix) Other relevant environmental permits, including State permits.

(7)A topographic map (or other map if a topographic map is unavailable) extending one mile beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant in the map area.

(8)A brief description of the nature of the business.

(g) Application requirements for existing manufacturing, commercial, mining, and silvicultural dischargers. Existing manufacturing, commercial mining, and silvicultural dischargers applying for NPDES permits, except for those facilities subject to the requirements of § 122.21(h), shall provide the following information to the Director, using application forms provided by the Director.

(1) Outfall location. The latitude and longitude to the nearest 15 seconds and the name of the receiving water.

(2) Line drawing. A line drawing of the water flow through the facility with a water balance, showing operations contributing wastewater to the effluent and treatment units. Similar processes, operations, or production areas may be indicated as a single unit, labeled to correspond to the more detailed identification under paragraph (g)(3) of this section. The water balance must show approximate average flows at intake and discharge points and between units, including treatment units. If a water balance cannot be determined (for example, for certain mining activities), the applicant may provide instead a pictorial description of the nature and amount of any sources of water and any collection and treatment measures.

(3) Average flows and treatment. A narrative identification of each type of process, operation, or production area which contributes wastewater to the effluent for each outfall, including process wastewater, cooling water, and stormwater runoff; the average flow which each

process contributes; and a description of the treatment the wastewater receives, including the ultimate disposal of any solid or fluid wastes other than by discharge. Processes, operations, or production areas may be described in general terms (for example, "dye-making reactor", "distillation tower"). For a privately owned treatment works, this information shall include the identity of each user of the treatment works. The average flow of point sources composed of storm water may be estimated. The basis for the rainfall event and the method of estimation must be indicated.

(4) Intermittent flows. If any of the discharges described in paragraph (g)(3) of this section are intermittent or seasonal, a description of the frequency, duration and flow rate of each discharge occurrence (except for stormwater runoff, spillage or leaks).

(5) Maximum production. If an effluent guideline promulgated under section 304 of CWA applies to the applicant and is expressed in terms of production (or other measure of operation), a reasonable measure of the applicant's actual production reported in the units used in the applicable effluent guideline. The reported measure must reflect the actual production of the facility as required by § 122.45(b)(2).

(6) Improvements. If the applicant is subject to any present requirements or compliance schedules for construction, upgrading or operation of waste treatment equipment, an identification of the abatement requirement, a description of the abatement project, and a listing of the required and projected final compliance dates.

(7) Effluent characteristics.

(i) Information on the discharge of pollutants specified in this paragraph (g)(7) (except information on storm water discharges which is to be provided as specified in § 122.26). When "quantitative data" for a pollutant are required, the applicant must collect a sample of effluent and analyze it for the pollutant in accordance with analytical methods approved under Part 136 of this chapter unless use of another method is required for the pollutant under 40 CFR subchapters N or O. When no analytical method is approved under Part 136 or required under subchapters N or O, the applicant may use any suitable method but must provide a description of the method. When an applicant has two or more outfalls with substantially identical effluents, the Director may allow the applicant to test only one outfall and report that quantitative data as applying to the substantially identical outfall. The requirements in paragraphs (g)(7)(vi) and (vii) of this section state that an applicant must provide quantitative data for certain pollutants known or believed to be present do not apply to pollutants present in a discharge solely as the result of their presence in intake water; however, an applicant must report such pollutants as present. When paragraph (g)(7) of this section requires analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform (including E. coli), and Enterococci (previously known as fecal streptococcus at § 122.26 (d)(2)(iii)(A)(3)), or volatile organics, grab samples must be collected for those pollutants. For all other pollutants, a 24-hour composite sample, using a minimum of four (4) grab samples, must be used unless specified otherwise at 40 CFR Part 136. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period greater than 24 hours. In addition, for discharges other than storm water discharges, the Director may waive composite sampling for any outfall for which the applicant demonstrates that the use of an automatic sampler is infeasible and that the minimum of

four (4) grab samples will be a representative sample of the effluent being discharged. Results of analyses of individual grab samples for any parameter may be averaged to obtain the daily average. Grab samples that are not required to be analyzed immediately (see Table II at 40 CFR 136.3 (e)) may be composited in the laboratory, provided that container, preservation, and holding time requirements are met (see Table II at 40 CFR 136.3 (e)) and that sample integrity is not compromised by compositing.

(ii) Storm water discharges. For storm water discharges, all samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inch and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in that area. For all applicants, a flow-weighted composite shall be taken for either the entire discharge or for the first three hours of the discharge. The flow-weighted composite sample for a storm water discharge may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes (applicants submitting permit applications for storm water discharges under § 122.26(d) may collect flow-weighted composite samples using different protocols with respect to the time duration between the collection of sample aliquots, subject to the approval of the Director). However, a minimum of one grab sample may be taken for storm water discharges from holding ponds or other impoundments with a retention period greater than 24 hours. For a flow-weighted composite sample, only one analysis of the composite of aliquots is required. For storm water discharge samples taken from discharges associated with industrial activities, quantitative data must be reported for the grab sample taken during the first thirty minutes (or as soon thereafter as practicable) of the discharge for all pollutants specified in § 122.26(c)(1). For all storm water permit applicants taking flow-weighted composites, quantitative data must be reported for all pollutants specified in § 122.26 except pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus. The Director may allow or establish appropriate site-specific sampling procedures or requirements, including sampling locations, the season in which the sampling takes place, the minimum duration between the previous measurable storm event and the storm event sampled, the minimum or maximum level of precipitation required for an appropriate storm event, the form of precipitation sampled (snow melt or rain fall), protocols for collecting samples under part 136 of this chapter, and additional time for submitting data on a case-by-case basis. An applicant is expected to "know or have reason to believe" that a pollutant is present in an effluent based on an evaluation of the expected use, production, or storage of the pollutant, or on any previous analyses for the pollutant. (For example, any pesticide manufactured by a facility may be expected to be present in contaminated storm water runoff from the facility.)

(iii) Reporting requirements. Every applicant must report quantitative data for every outfall for the following pollutants:

Biochemical Oxygen Demand (BOD5)

Chemical Oxygen Demand

Total Organic Carbon

Total Suspended Solids

Ammonia (as N)

Temperature (both winter and summer)

pH

(iv) The Director may waive the reporting requirements for individual point sources or for a particular industry category for one or more of the pollutants listed in paragraph (g)(7)(iii) of this section if the applicant has demonstrated that such a waiver is appropriate because information adequate to support issuance of a permit can be obtained with less stringent requirements.

(v) Each applicant with processes in one or more primary industry category (see appendix A of this part) contributing to a discharge must report quantitative data for the following pollutants in each outfall containing process wastewater:

(A) The organic toxic pollutants in the fractions designated in table I of appendix D of this part for the applicant's industrial category or categories unless the applicant qualifies as a small business under paragraph (g)(8) of this section. Table II of appendix D of this part lists the organic toxic pollutants in each fraction. The fractions result from the sample preparation required by the analytical procedure which uses gas chromatography/mass spectrometry. A determination that an applicant falls within a particular industrial category for the purposes of selecting fractions for testing is not conclusive as to the applicant's inclusion in that category for any other purposes. See Notes 2, 3, and 4 of this section.

(B) The pollutants listed in table III of appendix D of this part (the toxic metals, cyanide, and total phenols).

(vi)

(A) Each applicant must indicate whether it knows or has reason to believe that any of the pollutants in table IV of appendix D of this part (certain conventional and nonconventional pollutants) is discharged from each outfall. If an applicable effluent limitations guideline either directly limits the pollutant or, by its express terms, indirectly limits the pollutant through limitations on an indicator, the applicant must report quantitative data. For every pollutant discharged which is not so limited in an effluent limitations guideline, the applicant must either report quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

(B) Each applicant must indicate whether it knows or has reason to believe that any of the pollutants listed in table II or table III of appendix D of this part (the toxic pollutants and total phenols) for which quantitative data are not otherwise required under paragraph (g)(7)(v) of this section are discharged from each outfall. For every pollutant expected to be discharged in concentrations of 10 ppb or greater the applicant must report quantitative data. For acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4, 6 dinitrophenol, where any of these four pollutants are expected to be discharged in concentrations of 100 ppb or greater the applicant must report quantitative data. For every pollutant expected to be discharged in concentrations less

than 10 ppb, or in the case of acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4, 6 dinitrophenol, in concentrations less than 100 ppb, the applicant must either submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged. An applicant qualifying as a small business under paragraph (g)(8) of this section is not required to analyze for pollutants listed in table II of appendix D of this part (the organic toxic pollutants).

(vii) Each applicant must indicate whether it knows or has reason to believe that any of the pollutants in table V of appendix D of this part (certain hazardous substances and asbestos) are discharged from each outfall. For every pollutant expected to be discharged, the applicant must briefly describe the reasons the pollutant is expected to be discharged, and report any quantitative data it has for any pollutant.

(viii) Each applicant must report qualitative data, generated using a screening procedure not calibrated with analytical standards, for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) if it:

(A) Uses or manufactures 2,4,5-trichlorophenoxy acetic acid (2,4,5,-T); 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5,-TP); 2-(2,4,5-trichlorophenoxy) ethyl, 2,2-dichloropropionate (Erbon); O,O-dimethyl O-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel); 2,4,5-trichlorophenol (TCP); or hexachlorophene (HCP); or

(B) Knows or has reason to believe that TCDD is or may be present in an effluent.

(8) Small business exemption. An application which qualifies as a small business under one of the following criteria is exempt from the requirements in paragraph (g)(7)(v)(A) or (g)(7)(vi)(A) of this section to submit quantitative data for the pollutants listed in table II of appendix D of this part (the organic toxic pollutants):

(i) For coal mines, a probable total annual production of less than 100,000 tons per year.

(ii) For all other applicants, gross total annual sales averaging less than $ 100,000 per year (in second quarter 1980 dollars).

(9) Used or manufactured toxics. A listing of any toxic pollutant which the applicant currently uses or manufactures as an intermediate or final product or byproduct. The Director may waive or modify this requirement for any applicant if the applicant demonstrates that it would be unduly burdensome to identify each toxic pollutant and the Director has adequate information to issue the permit.

(10)[Reserved]

(11) Biological toxicity tests. An identification of any biological toxicity tests which the applicant knows or has reason to believe have been made within the last 3 years on any of the applicant's discharges or on a receiving water in relation to a discharge.

(12) Contract analyses. If a contract laboratory or consulting firm performed any of the analyses required by paragraph (g)(7) of this section, the identity of each laboratory or firm and the analyses performed.

(13) Additional information. In addition to the information reported on the application form, applicants shall provide to the Director, at his or her request, such other information as the Director may reasonably require to assess the discharges of the facility and to determine

whether to issue an NPDES permit. The additional information may include additional quantitative data and bioassays to assess the relative toxicity of discharges to aquatic life and requirements to determine the cause of the toxicity.

(h) Application requirements for manufacturing, commercial, mining and silvicultural facilities which discharge only non-process wastewater. Except for stormwater discharges, all manufacturing, commercial, mining and silvicultural dischargers applying for NPDES permits which discharge only non-process wastewater not regulated by an effluent limitations guideline or new source performance standard shall provide the following information to the Director, using application forms provided by the Director:

(1) Outfall location. Outfall number, latitude and longitude to the nearest 15 seconds, and the name of the receiving water.

(2) Discharge date (for new dischargers). Date of expected commencement of discharge.

(3) Type of waste. An identification of the general type of waste discharged, or expected to be discharged upon commencement of operations, including sanitary wastes, restaurant or cafeteria wastes, or noncontact cooling water. An identification of cooling water additives (if any) that are used or expected to be used upon commencement of operations, along with their composition if existing composition is available.

(4) Effluent characteristics. (i) Quantitative data for the pollutants or parameters listed below, unless testing is waived by the Director. The quantitative data may be data collected over the past 365 days, if they remain representative of current operations, and must include maximum daily value, average daily value, and number of measurements taken. The applicant must collect and analyze samples in accordance with 40 CFR Part 136. When analysis of pH, temperature, residual chlorine, oil and grease, or fecal coliform (including E. coli), and Enterococci (previously known as fecal streptococcus) and volatile organics is required in paragraphs (h)(4)(i)(A) through (K) of this section, grab samples must be collected for those pollutants. For all other pollutants, a 24-hour composite sample, using a minimum of four (4) grab samples, must be used unless specified otherwise at 40 CFR Part 136. For a composite sample, only one analysis of the composite of aliquots is required. New dischargers must include estimates for the pollutants or parameters listed below instead of actual sampling data, along with the source of each estimate. All levels must be reported or estimated as concentration and as total mass, except for flow, pH, and temperature.

(A) Biochemical Oxygen Demand (BOD[5]).

(B) Total Suspended Solids (TSS).

(C) Fecal Coliform (if believed present or if sanitary waste is or will be discharged).

(D) Total Residual Chlorine (if chlorine is used).

(E) Oil and Grease.

(F) Chemical Oxygen Demand (COD) (if non-contact cooling water is or will be discharged).

(G) Total Organic Carbon (TOC) (if non-contact cooling water is or will be discharged).

(H) Ammonia (as N).

(I) Discharge Flow.

(J)pH.

(K) Temperature (Winter and Summer).

(ii) The Director may waive the testing and reporting requirements for any of the pollutants or flow listed in paragraph (h)(4)(i) of this section if the applicant submits a request for such a waiver before or with his application which demonstrates that information adequate to support issuance of a permit can be obtained through less stringent requirements.

(iii) If the applicant is a new discharger, he must complete and submit Item IV of Form 2e (see § 122.21(h)(4)) by providing quantitative data in accordance with that section no later than two years after commencement of discharge. However, the applicant need not complete those portions of Item IV requiring tests which he has already performed and reported under the discharge monitoring requirements of his NPDES permit.

(iv) The requirements of parts i and iii of this section that an applicant must provide quantitative data or estimates of certain pollutants do not apply to pollutants present in a discharge solely as a result of their presence in intake water. However, an applicant must report such pollutants as present. Net credit may be provided for the presence of pollutants in intake water if the requirements of § 122.45(g) are met.

(5) Flow. A description of the frequency of flow and duration of any seasonal or intermittent discharge (except for stormwater runoff, leaks, or spills).

(6) Treatment system. A brief description of any system used or to be used.

(7) Optional information. Any additional information the applicant wishes to be considered, such as influent data for the purpose of obtaining "net" credits pursuant to § 122.45(g).

(8) Certification. Signature of certifying official under § 122.22.

(i) Application requirements for new and existing concentrated animal feeding operations and aquatic animal production facilities. New and existing concentrated animal feeding operations (defined in § 122.23) and concentrated aquatic animal production facilities (defined in § 122.24) shall provide the following information to the Director, using the application form provided by the Director:

(1) For concentrated animal feeding operations:

(i) The name of the owner or operator;

(ii) The facility location and mailing addresses;

(iii) Latitude and longitude of the production area (entrance to production area);

(iv)A topographic map of the geographic area in which the CAFO is located showing the specific location of the production area, in lieu of the requirements of paragraph (f)(7) of this section;

(v) Specific information about the number and type of animals, whether in open confinement or housed under roof (beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, ducks, turkeys, other);

(vi) The type of containment and storage (anaerobic lagoon, roofed storage shed, storage ponds, underfloor pits, above ground storage tanks, below ground storage tanks, concrete pad, impervious soil pad, other) and total capacity for manure, litter, and process wastewater storage(tons/gallons);

(vii) The total number of acres under control of the applicant available for land application of manure, litter, or process wastewater;

(viii) Estimated amounts of manure, litter, and process wastewater generated per year (tons/gallons);

(ix) Estimated amounts of manure, litter and process wastewater transferred to other persons per year (tons/gallons); and

(x)A nutrient management plan that at a minimum satisfies the requirements specified in § 122.42(e), including, for all CAFOs subject to 40 CFR part 412, subpart C or subpart D, the requirements of 40 CFR 412.4(c), as applicable.

(2) For concentrated aquatic animal production facilities:

(i) The maximum daily and average monthly flow from each outfall.

(ii) The number of ponds, raceways, and similar structures.

(iii) The name of the receiving water and the source of intake water.

(iv) For each species of aquatic animals, the total yearly and maximum harvestable weight.

(v) The calendar month of maximum feeding and the total mass of food fed during that month.

(j) Application requirements for new and existing POTWs. Unless otherwise indicated, all POTWs and other dischargers designated by the Director must provide, at a minimum, the information in this paragraph to the Director, using Form 2A or another application form provided by the Director. Permit applicants must submit all information available at the time of permit application. The information may be provided by referencing information previously submitted to the Director. The Director may waive any requirement of this paragraph if he or she has access to substantially identical information. The Director may also waive any requirement of this paragraph that is not of material concern for a specific permit, if approved by the Regional Administrator. The waiver request to the Regional Administrator must include the State's justification for the waiver. A Regional Administrator's disapproval of a State's proposed waiver does not constitute final Agency action, but does provide notice to the State and permit applicant(s) that EPA may object to any State-issued permit issued in the absence of the required information.

(1) Basic application information. All applicants must provide the following information:

(i) Facility information. Name, mailing address, and location of the facility for which the application is submitted;

(ii) Applicant information. Name, mailing address, and telephone number of the applicant, and indication as to whether the applicant is the facility's owner, operator, or both;

(iii) Existing environmental permits. Identification of all environmental permits or construction approvals received or applied for (including dates) under any of the following programs:

(A) Hazardous Waste Management program under the Resource Conservation and Recovery Act (RCRA), Subpart C;

(B) Underground Injection Control program under the Safe Drinking Water Act (SDWA);

(C)NPDES program under Clean Water Act (CWA);

(D) Prevention of Significant Deterioration (PSD) program under the Clean Air Act;

(E) Nonattainment program under the Clean Air Act;

(F) National Emission Standards for Hazardous Air Pollutants (NESHAPS) preconstruction approval under the Clean Air Act;

(G) Ocean dumping permits under the Marine Protection Research and Sanctuaries Act;

(H) Dredge or fill permits under section 404 of the CWA; and

(I) Other relevant environmental permits, including State permits;

(iv) Population. The name and population of each municipal entity served by the facility, including unincorporated connector districts. Indicate whether each municipal entity owns or maintains the collection system and whether the collection system is separate sanitary or combined storm and sanitary, if known;

(v) Indian country. Information concerning whether the facility is located in Indian country and whether the facility discharges to a receiving stream that flows through Indian country;

(vi) Flow rate. The facility's design flow rate (the wastewater flow rate the plant was built to handle), annual average daily flow rate, and maximum daily flow rate for each of the previous 3 years;

(vii) Collection system. Identification of type(s) of collection system(s) used by the treatment works (i.e., separate sanitary sewers or combined storm and sanitary sewers) and an estimate of the percent of sewer line that each type comprises; and

(viii) Outfalls and other discharge or disposal methods. The following information for outfalls to waters of the United States and other discharge or disposal methods:

(A) For effluent discharges to waters of the United States, the total number and types of outfalls (e.g, treated effluent, combined sewer overflows, bypasses, constructed emergency overflows);

(B) For wastewater discharged to surface impoundments:

(1) The location of each surface impoundment;

(2) The average daily volume discharged to each surface impoundment; and

(3) Whether the discharge is continuous or intermittent;

(C) For wastewater applied to the land:

(1) The location of each land application site;

(2) The size of each land application site, in acres;

(3) The average daily volume applied to each land application site, in gallons per day; and

(4) Whether land application is continuous or intermittent;

(D) For effluent sent to another facility for treatment prior to discharge:

(1) The means by which the effluent is transported;

(2) The name, mailing address, contact person, and phone number of the organization transporting the discharge, if the transport is provided by a party other than the applicant;

(3) The name, mailing address, contact person, phone number, and NPDES permit number (if any) of the receiving facility; and

(4) The average daily flow rate from this facility into the receiving facility, in millions of gallons per day; and

(E) For wastewater disposed of in a manner not included in paragraphs (j)(1)(viii)(A) through (D) of this section (e.g., underground percolation, underground injection):

(1)A description of the disposal method, including the location and size of each disposal site, if applicable;

(2) The annual average daily volume disposed of by this method, in gallons per day; and

(3) Whether disposal through this method is continuous or intermittent;

(2) Additional Information. All applicants with a design flow greater than or equal to 0.1 mgd must provide the following information:

(i) Inflow and infiltration. The current average daily volume of inflow and infiltration, in gallons per day, and steps the facility is taking to minimize inflow and infiltration;

(ii) Topographic map. A topographic map (or other map if a topographic map is unavailable) extending at least one mile beyond property boundaries of the treatment plant, including all unit processes, and showing:

(A) Treatment plant area and unit processes;

(B) The major pipes or other structures through which wastewater enters the treatment plant and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable;

(C) Each well where fluids from the treatment plant are injected underground;

(D) Wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the treatment works' property boundaries;

(E) Sewage sludge management facilities (including on-site treatment, storage, and disposal sites); and

(F) Location at which waste classified as hazardous under RCRA enters the treatment plant by truck, rail, or dedicated pipe;

(iii) Process flow diagram or schematic.

(A)A diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. This includes a water balance showing all treatment units, including disinfection, and showing daily average flow rates at influent and discharge points, and approximate daily flow rates between treatment units; and

(B)A narrative description of the diagram; and

(iv) Scheduled improvements, schedules of implementation. The following information regarding scheduled improvements:

(A) The outfall number of each outfall affected;

(B)A narrative description of each required improvement;

(C) Scheduled or actual dates of completion for the following:

(1) Commencement of construction;

(2) Completion of construction;

(3) Commencement of discharge; and

(4) Attainment of operational level;

(D)A description of permits and clearances concerning other Federal and/or State requirements;

(3) Information on effluent discharges. Each applicant must provide the following information for each outfall, including bypass points, through which effluent is discharged, as applicable:

(i) Description of outfall. The following information about each outfall:

(A) Outfall number;

(B) State, county, and city or town in which outfall is located;

(C) Latitude and longitude, to the nearest second;

(D) Distance from shore and depth below surface;

(E) Average daily flow rate, in million gallons per day;

(F) The following information for each outfall with a seasonal or periodic discharge:

(1) Number of times per year the discharge occurs;

(2) Duration of each discharge;

(3) Flow of each discharge; and

(4) Months in which discharge occurs; and

(G) Whether the outfall is equipped with a diffuser and the type (e.g., high-rate) of diffuser used;

(ii) Description of receiving waters. The following information (if known) for each outfall through which effluent is discharged to waters of the United States:

(A) Name of receiving water;

(B) Name of watershed/river/stream system and United States Soil Conservation Service 14-digit watershed code;

(C) Name of State Management/River Basin and United States Geological Survey 8-digit hydrologic cataloging unit code; and

(D) Critical flow of receiving stream and total hardness of receiving stream at critical low flow (if applicable);

(iii) Description of treatment. The following information describing the treatment provided for discharges from each outfall to waters of the United States:

(A) The highest level of treatment (e.g., primary, equivalent to secondary, secondary, advanced, other) that is provided for the discharge for each outfall and:

(1) Design biochemical oxygen demand (BOD[5] or CBOD[5]) removal (percent);

(2) Design suspended solids (SS) removal (percent); and, where applicable,

(3) Design phosphorus (P) removal (percent);

(4) Design nitrogen (N) removal (percent); and

(5) Any other removals that an advanced treatment system is designed to achieve.

(B)A description of the type of disinfection used, and whether the treatment plant dechlorinates (if disinfection is accomplished through chlorination);

(4) Effluent monitoring for specific parameters.

(i) As provided in paragraphs (j)(4)(ii) through (x) of this section, all applicants must submit to the Director effluent monitoring information for samples taken from each outfall through which effluent is discharged to waters of the United States, except for CSOs. The Director may allow applicants to submit sampling data for only one outfall on a case-by-case basis, where the applicant has two or more outfalls with substantially identical effluent. The Director may also allow applicants to composite samples from one or more outfalls that discharge into the same mixing zone;

(ii) All applicants must sample and analyze for the pollutants listed in Appendix J, Table 1A of this part;

(iii) All applicants with a design flow greater than or equal to 0.1 mgd must sample and analyze for the pollutants listed in Appendix J, Table 1 of this part. Facilities that do not use chlorine for disinfection, do not use chlorine elsewhere in the treatment process, and have no reasonable potential to discharge chlorine in their effluent may delete chlorine from Table 1;

(iv) The following applicants must sample and analyze for the pollutants listed in Appendix J, Table 2 of this part, and for any other pollutants for which the State or EPA have established water quality standards applicable to the receiving waters:

(A) All POTWs with a design flow rate equal to or greater than one million gallons per day;

(B) All POTWs with approved pretreatment programs or POTWs required to develop a pretreatment program;

(C) Other POTWs, as required by the Director;

(v) The Director should require sampling for additional pollutants, as appropriate, on a case-by-case basis;

(vi) Applicants must provide data from a minimum of three samples taken within four and one-half years prior to the date of the permit application. Samples must be representative of the seasonal variation in the discharge from each outfall. Existing data may be used, if available, in lieu of sampling done solely for the purpose of this application. The Director should require additional samples, as appropriate, on a case-by-case basis.

(vii) All existing data for pollutants specified in paragraphs (j)(4)(ii) through (v) of this section that is collected within four and one-half years of the application must be included in the pollutant data summary submitted by the applicant. If, however, the applicant samples for a specific pollutant on a monthly or more frequent basis, it is only necessary, for such pollutant, to summarize all data collected within one year of the application.

(viii) Applicants must collect samples of effluent and analyze such samples for pollutants in accordance with analytical methods approved under 40 CFR Part 136 unless an alternative is specified in the existing NPDES permit. When analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform (including E. coli), or volatile organics is required in paragraphs (j)(4)(ii) through (iv) of this section, grab samples must be collected for those pollutants. For all other pollutants, 24-hour composite samples must be used. For a composite sample, only one analysis of the composite of aliquots is required.

(ix) The effluent monitoring data provided must include at least the following information for each parameter:

(A) Maximum daily discharge, expressed as concentration or mass, based upon actual sample values;

(B) Average daily discharge for all samples, expressed as concentration or mass, and the number of samples used to obtain this value;

(C) The analytical method used; and

(D) The threshold level (i.e., method detection limit, minimum level, or other designated method endpoints) for the analytical method used.

(x) Unless otherwise required by the Director, metals must be reported as total recoverable.

(5) Effluent monitoring for whole effluent toxicity.

(i) All applicants must provide an identification of any whole effluent toxicity tests conducted during the four and one-half years prior to the date of the application on any of the applicant's discharges or on any receiving water near the discharge.

(ii) As provided in paragraphs (j)(5)(iii)-(ix) of this section, the following applicants must submit to the Director the results of valid whole effluent toxicity tests for acute or chronic toxicity for samples taken from each outfall through which effluent is discharged to surface waters, except for combined sewer overflows:

(A) All POTWs with design flow rates greater than or equal to one million gallons per day;

(B) All POTWs with approved pretreatment programs or POTWs required to develop a pretreatment program;

(C) Other POTWs, as required by the Director, based on consideration of the following factors:

(1) The variability of the pollutants or pollutant parameters in the POTW effluent (based on chemical-specific information, the type of treatment plant, and types of industrial contributors);

(2) The ratio of effluent flow to receiving stream flow;

(3) Existing controls on point or non-point sources, including total maximum daily load calculations for the receiving stream segment and the relative contribution of the POTW;

(4) Receiving stream characteristics, including possible or known water quality impairment, and whether the POTW discharges to a coastal water, one of the Great Lakes, or a water designated as an outstanding natural resource water; or

(5) Other considerations (including, but not limited to, the history of toxic impacts and compliance problems at the POTW) that the Director determines could cause or contribute to adverse water quality impacts.

(iii) Where the POTW has two or more outfalls with substantially identical effluent discharging to the same receiving stream segment, the Director may allow applicants to submit whole effluent toxicity data for only one outfall on a case-by-case basis. The Director may also allow applicants to composite samples from one or more outfalls that discharge into the same mixing zone.

(iv) Each applicant required to perform whole effluent toxicity testing pursuant to paragraph (j)(5)(ii) of this section must provide:

(A) Results of a minimum of four quarterly tests for a year, from the year preceding the permit application; or

(B) Results from four tests performed at least annually in the four and one half year period prior to the application, provided the results show no appreciable toxicity using a safety factor determined by the permitting authority.

(v) Applicants must conduct tests with multiple species (no less than two species; e.g., fish, invertebrate, plant), and test for acute or chronic toxicity, depending on the range of receiving water dilution. EPA recommends that applicants conduct acute or chronic testing based on the following dilutions:

(A) Acute toxicity testing if the dilution of the effluent is greater than 1000:1 at the edge of the mixing zone;

(B) Acute or chronic toxicity testing if the dilution of the effluent is between 100:1 and 1000:1 at the edge of the mixing zone. Acute testing may be more appropriate at the higher end of this range (1000:1), and chronic testing may be more appropriate at the lower end of this range (100:1); and

(C) Chronic testing if the dilution of the effluent is less than 100:1 at the edge of the mixing zone.

(vi) Each applicant required to perform whole effluent toxicity testing pursuant to paragraph (j)(5)(ii) of this section must provide the number of chronic or acute whole effluent toxicity tests that have been conducted since the last permit reissuance.

(vii) Applicants must provide the results using the form provided by the Director, or test summaries if available and comprehensive, for each whole effluent toxicity test conducted pursuant to paragraph (j)(5)(ii) of this section for which such information has not been reported previously to the Director.

(viii) Whole effluent toxicity testing conducted pursuant to paragraph (j)(5)(ii) of this section must be conducted using methods approved under 40 CFR part 136. West coast facilities in Washington, Oregon, California, Alaska, Hawaii, and the Pacific Territories are exempted from 40 CFR part 136 chronic methods and must use alternative guidance as directed by the permitting authority.

(ix) For whole effluent toxicity data submitted to the Director within four and one-half years prior to the date of the application, applicants must provide the dates on which the data were submitted and a summary of the results.

(x) Each POTW required to perform whole effluent toxicity testing pursuant to paragraph (j)(5)(ii) of this section must provide any information on the cause of toxicity and written details of any toxicity reduction evaluation conducted, if any whole effluent toxicity test conducted within the past four and one-half years revealed toxicity.

(6) Industrial discharges. Applicants must submit the following information about industrial discharges to the POTW:

(i) Number of significant industrial users (SIUs) and categorical industrial users (CIUs) discharging to the POTW; and

(ii)POTWs with one or more SIUs shall provide the following information for each SIU, as defined at 40 CFR 403.3(v), that discharges to the POTW:

(A) Name and mailing address;

(B) Description of all industrial processes that affect or contribute to the SIU's discharge;

(C) Principal products and raw materials of the SIU that affect or contribute to the SIU's discharge;

(D) Average daily volume of wastewater discharged, indicating the amount attributable to process flow and non-process flow;

(E) Whether the SIU is subject to local limits;

(F) Whether the SIU is subject to categorical standards, and if so, under which category(ies) and subcategory(ies); and

(G) Whether any problems at the POTW (e.g., upsets, pass through, interference) have been attributed to the SIU in the past four and one-half years.

(iii) The information required in paragraphs (j)(6)(i) and (ii) of this section may be waived by the Director for POTWs with pretreatment programs if the applicant has submitted either of the following that contain information substantially identical to that required in paragraphs (j)(6)(i) and (ii) of this section.

(A) An annual report submitted within one year of the application; or

(B)A pretreatment program;

(7) Discharges from hazardous waste generators and from waste cleanup or remediation sites. POTWs receiving Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or RCRA Corrective Action wastes or wastes generated at another type of cleanup or remediation site must provide the following information:

(i) If the POTW receives, or has been notified that it will receive, by truck, rail, or dedicated pipe any wastes that are regulated as RCRA hazardous wastes pursuant to 40 CFR part 261, the applicant must report the following:

(A) The method by which the waste is received (i.e., whether by truck, rail, or dedicated pipe); and

(B) The hazardous waste number and amount received annually of each hazardous waste;

(ii) If the POTW receives, or has been notified that it will receive, wastewaters that originate from remedial activities, including those undertaken pursuant to CERCLA and sections 3004(u) or 3008(h) of RCRA, the applicant must report the following:

(A) The identity and description of the site(s) or facility(ies) at which the wastewater originates;

(B) The identities of the wastewater's hazardous constituents, as listed in Appendix VIII of part 261 of this chapter; if known; and

(C) The extent of treatment, if any, the wastewater receives or will receive before entering the POTW;

(iii) Applicants are exempt from the requirements of paragraph (j)(7)(ii) of this section if they receive no more than fifteen kilograms per month of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e).

(8) Combined sewer overflows. Each applicant with combined sewer systems must provide the following information:

(i) Combined sewer system information. The following information regarding the combined sewer system:

(A) System map. A map indicating the location of the following:

(1) All CSO discharge points;

(2) Sensitive use areas potentially affected by CSOs (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems, and outstanding national resource waters); and

(3) Waters supporting threatened and endangered species potentially affected by CSOs; and

(B) System diagram. A diagram of the combined sewer collection system that includes the following information:

(1) The location of major sewer trunk lines, both combined and separate sanitary;

(2) The locations of points where separate sanitary sewers feed into the combined sewer system;

(3) In-line and off-line storage structures;

(4) The locations of flow-regulating devices; and

(5) The locations of pump stations;

(ii) Information on CSO outfalls. The following information for each CSO discharge point covered by the permit application:

(A) Description of outfall. The following information on each outfall:

(1) Outfall number;

(2) State, county, and city or town in which outfall is located;

(3) Latitude and longitude, to the nearest second; and

(4) Distance from shore and depth below surface;

(5) Whether the applicant monitored any of the following in the past year for this CSO:

(i) Rainfall;

(ii)CSO flow volume;

(iii)CSO pollutant concentrations;

(iv) Receiving water quality;

(v)CSO frequency; and

(6) The number of storm events monitored in the past year;

(B)CSO events. The following information about CSO overflows from each outfall:

(1) The number of events in the past year;

(2) The average duration per event, if available;

(3) The average volume per CSO event, if available; and

(4) The minimum rainfall that caused a CSO event, if available, in the last year;

(C) Description of receiving waters. The following information about receiving waters:

(1) Name of receiving water;

(2) Name of watershed/stream system and the United States Soil Conservation Service watershed (14-digit) code (if known); and

(3) Name of State Management/River Basin and the United States Geological Survey hydrologic cataloging unit (8-digit) code (if known); and

(D)CSO operations. A description of any known water quality impacts on the receiving water caused by the CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shellfish bed closings, fish kills, fish advisories, other recreational loss, or exceedance of any applicable State water quality standard);

(9) Contractors. All applicants must provide the name, mailing address, telephone number, and responsibilities of all contractors responsible for any operational or maintenance aspects of the facility; and

(10) Signature. All applications must be signed by a certifying official in compliance with § 122.22.

(k) Application requirements for new sources and new discharges. New manufacturing, commercial, mining and silvicultural dischargers applying for NPDES permits (except for new discharges of facilities subject to the requirements of paragraph (h) of this section or new discharges of storm water associated with industrial activity which are subject to the requirements of § 122.26(c)(1) and this section (except as provided by § 122.26(c)(1)(ii)) shall provide the following information to the Director, using the application forms provided by the Director:

(1) Expected outfall location. The latitude and longitude to the nearest 15 seconds and the name of the receiving water.

(2) Discharge dates. The expected date of commencement of discharge.

(3) Flows, sources of pollution, and treatment technologies --

(i) Expected treatment of wastewater. Description of the treatment that the wastewater will receive, along with all operations contributing wastewater to the effluent, average flow contributed by each operation, and the ultimate disposal of any solid or liquid wastes not discharged.

(ii) Line drawing. A line drawing of the water flow through the facility with a water balance as described in § 122.21(g)(2).

(iii) Intermittent flows. If any of the expected discharges will be intermittent or seasonal, a description of the frequency, duration and maximum daily flow rate of each discharge occurrence (except for stormwater runoff, spillage, or leaks).

(4) Production. If a new source performance standard promulgated under section 306 of CWA or an effluent limitation guideline applies to the applicant and is expressed in terms of production (or other measure of operation), a reasonable measure of the applicant's expected actual production reported in the units used in the applicable effluent guideline or new source performance standard as required by § 122.45(b)(2) for each of the first three years. Alternative estimates may also be submitted if production is likely to vary.

(5) Effluent characteristics. The requirements in paragraphs (h)(4)(i), (ii), and (iii) of this section that an applicant must provide estimates of certain pollutants expected to be present do not apply to pollutants present in a discharge solely as a result of their presence in intake water; however, an applicant must report such pollutants as present. Net credits may be provided for the presence of pollutants in intake water if the requirements of § 122.45(g) are

met. All levels (except for discharge flow, temperature, and pH) must be estimated as concentration and as total mass.

(i) Each applicant must report estimated daily maximum, daily average, and source of information for each outfall for the following pollutants or parameters. The Director may waive the reporting requirements for any of these pollutants and parameters if the applicant submits a request for such a waiver before or with his application which demonstrates that information adequate to support issuance of the permit can be obtained through less stringent reporting requirements.

(A) Biochemical Oxygen Demand (BOD).

(B) Chemical Oxygen Demand (COD).

(C) Total Organic Carbon (TOC).

(D) Total Suspended Solids (TSS).

(E) Flow.

(F) Ammonia (as N).

(G) Temperature (winter and summer).

(H)pH.

(ii) Each applicant must report estimated daily maximum, daily average, and source of information for each outfall for the following pollutants, if the applicant knows or has reason to believe they will be present or if they are limited by an effluent limitation guideline or new source performance standard either directly or indirectly through limitations on an indicator pollutant: all pollutants in table IV of appendix D of part 122 (certain conventional and nonconventional pollutants).

(iii) Each applicant must report estimated daily maximum, daily average and source of information for the following pollutants if he knows or has reason to believe that they will be present in the discharges from any outfall:

(A) The pollutants listed in table III of appendix D (the toxic metals, in the discharge from any outfall: Total cyanide, and total phenols);

(B) The organic toxic pollutants in table II of appendix D (except bis (chloromethyl) ether, dichlorofluoromethane and trichlorofluoromethane). This requirement is waived for applicants with expected gross sales of less than $ 100,000 per year for the next three years, and for coal mines with expected average production of less than 100,000 tons of coal per year.

(iv) The applicant is required to report that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) may be discharged if he uses or manufactures one of the following compounds, or if he knows or has reason to believe that TCDD will or may be present in an effluent:

(A)2,4,5-trichlorophenoxy acetic acid (2,4,5-T) (CAS #93-76-5);

(B)

2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP) (CAS #93-72-1);

(C)

2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon) (CAS #136-25-4);

(D)0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel) (CAS #299-84-3);

(E)2,4,5-trichlorophenol (TCP) (CAS #95-95-4); or

(F) Hexachlorophene (HCP) (CAS #70-30-4);

(v) Each applicant must report any pollutants listed in table V of appendix D (certain hazardous substances) if he believes they will be present in any outfall (no quantitative estimates are required unless they are already available).

(vi) No later than two years after the commencement of discharge from the proposed facility, the applicant is required to complete and submit Items V and VI of NPDES application Form 2c (see § 122.21(g)). However, the applicant need not complete those portions of Item V requiring tests which he has already performed and reported under the discharge monitoring requirements of his NPDES permit.

(6) Engineering Report. Each applicant must report the existence of any technical evaluation concerning his wastewater treatment, along with the name and location of similar plants of which he has knowledge.

(7) Other information. Any optional information the permittee wishes to have considered.

(8) Certification. Signature of certifying official under § 122.22.

(l) Special provisions for applications from new sources.

(1) The owner or operator of any facility which may be a new source (as defined in § 122.2) and which is located in a State without an approved NPDES program must comply with the provisions of this paragraph (l)(1).

(2)

(i) Before beginning any on-site construction as defined in § 122.29, the owner or operator of any facility which may be a new source must submit information to the Regional Administrator so that he or she can determine if the facility is a new source. The Regional Administrator may request any additional information needed to determine whether the facility is a new source.

(ii) The Regional Administrator shall make an initial determination whether the facility is a new source within 30 days of receiving all necessary information under paragraph (l)(2)(i) of this section.

(3) The Regional Administrator shall issue a public notice in accordance with § 124.10 of this chapter of the new source determination under paragraph (l)(2) of this section. If the Regional Administrator has determined that the facility is a new source, the notice shall state that the applicant must comply with the environmental review requirements of 40 CFR 6.600 through 6.607.

(4) Any interested party may challenge the Regional Administrator's initial new source determination by requesting review of the determination under § 124.19 of this chapter within

30 days of the public notice of the initial determination. If all interested parties agree, the Environmental Appeals Board may defer review until after a final permit decision is made, and consolidate review of the determination with any review of the permit decision.

(m) Variance requests by non-POTWs. A discharger which is not a publicly owned treatment works (POTW) may request a variance from otherwise applicable effluent limitations under any of the following statutory or regulatory provisions within the times specified in this paragraph:

(1) Fundamentally different factors. (i) A request for a variance based on the presence of "fundamentally different factors" from those on which the effluent limitations guideline was based shall be filed as follows:

(A) For a request from best practicable control technology currently available (BPT), by the close of the public comment period under § 124.10.

(B) For a request from best available technology economically achievable (BAT) and/or best conventional pollutant control technology (BCT), by no later than:

(1) July 3, 1989, for a request based on an effluent limitation guideline promulgated before February 4, 1987, to the extent July 3, 1989 is not later than that provided under previously promulgated regulations; or

(2)180 days after the date on which an effluent limitation guideline is published in the FEDERAL REGISTER for a request based on an effluent limitation guideline promulgated on or after February 4, 1987.

(ii) The request shall explain how the requirements of the applicable regulatory and/or statutory criteria have been met.

(2) Non-conventional pollutants. A request for a variance from the BAT requirements for CWA section 301(b)(2)(F) pollutants (commonly called "non-conventional" pollutants) pursuant to section 301(c) of CWA because of the economic capability of the owner or operator, or pursuant to section 301(g) of the CWA (provided however that a § 301(g) variance may only be requested for ammonia; chlorine; color; iron; total phenols (4AAP) (when determined by the Administrator to be a pollutant covered by section 301(b)(2)(F)) and any other pollutant which the Administrator lists under section 301(g)(4) of the CWA) must be made as follows:

(i) For those requests for a variance from an effluent limitation based upon an effluent limitation guideline by:

(A) Submitting an initial request to the Regional Administrator, as well as to the State Director if applicable, stating the name of the discharger, the permit number, the outfall number(s), the applicable effluent guideline, and whether the discharger is requesting a section 301(c) or section 301(g) modification or both. This request must have been filed not later than:

(1) September 25, 1978, for a pollutant which is controlled by a BAT effluent limitation guideline promulgated before December 27, 1977; or

(2)270 days after promulgation of an applicable effluent limitation guideline for guidelines promulgated after December 27, 1977; and

(B) Submitting a completed request no later than the close of the public comment period under § 124.10 demonstrating that the requirements of § 124.13 and the applicable requirements of part 125 have been met. Notwithstanding this provision, the complete application for a request under section 301(g) shall be filed 180 days before EPA must make a decision (unless the Regional Division Director establishes a shorter or longer period).

(ii) For those requests for a variance from effluent limitations not based on effluent limitation guidelines, the request need only comply with paragraph (m)(2)(i)(B) of this section and need not be preceded by an initial request under paragraph (m)(2)(i)(A) of this section.

(3)-(4) [Reserved]

(5) Water quality related effluent limitations. A modification under section 302(b)(2) of requirements under section 302(a) for achieving water quality related effluent limitations may be requested no later than the close of the public comment period under § 124.10 on the permit from which the modification is sought.

(6) Thermal discharges. A variance under CWA section 316(a) for the thermal component of any discharge must be filed with a timely application for a permit under this section, except that if thermal effluent limitations are established under CWA section 402(a)(1) or are based on water quality standards the request for a variance may be filed by the close of the public comment period under § 124.10. A copy of the request as required under 40 CFR part 125, subpart H, shall be sent simultaneously to the appropriate State or interstate certifying agency as required under 40 CFR part 125. (See § 124.65 for special procedures for section 316(a) thermal variances.)

(n) Variance requests by POTWs. A discharger which is a publicly owned treatment works (POTW) may request a variance from otherwise applicable effluent limitations under any of the following statutory provisions as specified in this paragraph:

(1) Discharges into marine waters. A request for a modification under CWA section 301(h) of requirements of CWA section 301(b)(1)(B) for discharges into marine waters must be filed in accordance with the requirements of 40 CFR part 125, subpart G.

(2)[Reserved]

(3) Water quality based effluent limitation. A modification under CWA section 302(b)(2) of the requirements under section 302(a) for achieving water quality based effluent limitations shall be requested no later than the close of the public comment period under § 124.10 on the permit from which the modification is sought.

(o) Expedited variance procedures and time extensions.

(1) Notwithstanding the time requirements in paragraphs (m) and (n) of this section, the Director may notify a permit applicant before a draft permit is issued under § 124.6 that the draft permit will likely contain limitations which are eligible for variances. In the notice the Director may require the applicant as a condition of consideration of any potential variance request to submit a request explaining how the requirements of part 125 applicable to the variance have been met and may require its submission within a specified reasonable time after receipt of the notice. The notice may be sent before the permit application has been submitted.

The draft or final permit may contain the alternative limitations which may become effective upon final grant of the variance.

(2)A discharger who cannot file a timely complete request required under paragraph (m)(2)(i)(B) or (m)(2)(ii) of this section may request an extension. The extension may be granted or denied at the discretion of the Director. Extensions shall be no more than 6 months in duration.

(p) Recordkeeping. Except for information required by paragraph (d)(3)(ii) of this section, which shall be retained for a period of at least five years from the date the application is signed (or longer as required by 40 CFR part 503), applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under this section for a period of at least 3 years from the date the application is signed.

(q) Sewage sludge management. All TWTDS subject to paragraph (c)(2)(i) of this section must provide the information in this paragraph to the Director, using Form 2S or another application form approved by the Director. New applicants must submit all information available at the time of permit application. The information may be provided by referencing information previously submitted to the Director. The Director may waive any requirement of this paragraph if he or she has access to substantially identical information. The Director may also waive any requirement of this paragraph that is not of material concern for a specific permit, if approved by the Regional Administrator. The waiver request to the Regional Administrator must include the State's justification for the waiver. A Regional Administrator's disapproval of a State's proposed waiver does not constitute final Agency action, but does provide notice to the State and permit applicant(s) that EPA may object to any State-issued permit issued in the absence of the required information.

(1) Facility information. All applicants must submit the following information:

(i) The name, mailing address, and location of the TWTDS for which the application is submitted;

(ii) Whether the facility is a Class I Sludge Management Facility;

(iii) The design flow rate (in million gallons per day);

(iv) The total population served; and

(v) The TWTDS's status as Federal, State, private, public, or other entity;

(2) Applicant information. All applicants must submit the following information:

(i) The name, mailing address, and telephone number of the applicant; and

(ii) Indication whether the applicant is the owner, operator, or both;

(3) Permit information. All applicants must submit the facility's NPDES permit number, if applicable, and a listing of all other Federal, State, and local permits or construction approvals received or applied for under any of the following programs:

(i) Hazardous Waste Management program under the Resource Conservation and Recovery Act (RCRA);

(ii)UIC program under the Safe Drinking Water Act (SDWA);

(iii)NPDES program under the Clean Water Act (CWA);

(iv) Prevention of Significant Deterioration (PSD) program under the Clean Air Act;

(v) Nonattainment program under the Clean Air Act;

(vi) National Emission Standards for Hazardous Air Pollutants (NESHAPS) preconstruction approval under the Clean Air Act;

(vii) Dredge or fill permits under section 404 of CWA;

(viii) Other relevant environmental permits, including State or local permits;

(4) Indian country. All applicants must identify any generation, treatment, storage, land application, or disposal of sewage sludge that occurs in Indian country;

(5) Topographic map. All applicants must submit a topographic map (or other map if a topographic map is unavailable) extending one mile beyond property boundaries of the facility and showing the following information:

(i) All sewage sludge management facilities, including on-site treatment, storage, and disposal sites; and

(ii) Wells, springs, and other surface water bodies that are within 1/4 mile of the property boundaries and listed in public records or otherwise known to the applicant;

(6) Sewage sludge handling. All applicants must submit a line drawing and/or a narrative description that identifies all sewage sludge management practices employed during the term of the permit, including all units used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each such unit, and all processes used for pathogen reduction and vector attraction reduction;

(7) Sewage sludge quality. The applicant must submit sewage sludge monitoring data for the pollutants for which limits in sewage sludge have been established in 40 CFR part 503 for the applicant's use or disposal practices on the date of permit application.

(i) The Director may require sampling for additional pollutants, as appropriate, on a case-by-case basis;

(ii) Applicants must provide data from a minimum of three samples taken within four and one-half years prior to the date of the permit application. Samples must be representative of the sewage sludge and should be taken at least one month apart. Existing data may be used in lieu of sampling done solely for the purpose of this application;

(iii) Applicants must collect and analyze samples in accordance with analytical methods approved under SW-846 unless an alternative has been specified in an existing sewage sludge permit;

(iv) The monitoring data provided must include at least the following information for each parameter:

(A) Average monthly concentration for all samples (mg/kg dry weight), based upon actual sample values;

(B) The analytical method used; and

(C) The method detection level.

(8) Preparation of sewage sludge. If the applicant is a "person who prepares" sewage sludge, as defined at 40 CFR 503.9(r), the applicant must provide the following information:

(i) If the applicant's facility generates sewage sludge, the total dry metric tons per 365-day period generated at the facility;

(ii) If the applicant's facility receives sewage sludge from another facility, the following information for each facility from which sewage sludge is received:

(A) The name, mailing address, and location of the other facility;

(B) The total dry metric tons per 365-day period received from the other facility; and

(C)A description of any treatment processes occurring at the other facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics;

(iii) If the applicant's facility changes the quality of sewage sludge through blending, treatment, or other activities, the following information:

(A) Whether the Class A pathogen reduction requirements in 40 CFR 503.32(a) or the Class B pathogen reduction requirements in 40 CFR 503.32(b) are met, and a description of any treatment processes used to reduce pathogens in sewage sludge;

(B) Whether any of the vector attraction reduction options of 40 CFR 503.33(b)(1) through (b)(8) are met, and a description of any treatment processes used to reduce vector attraction properties in sewage sludge; and

(C)A description of any other blending, treatment, or other activities that change the quality of sewage sludge;

(iv) If sewage sludge from the applicant's facility meets the ceiling concentrations in 40 CFR 503.13(b)(1), the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33(b)(1) through (b)(8), and if the sewage sludge is applied to the land, the applicant must provide the total dry metric tons per 365-day period of sewage sludge subject to this paragraph that is applied to the land;

(v) If sewage sludge from the applicant's facility is sold or given away in a bag or other container for application to the land, and the sewage sludge is not subject to paragraph (q)(8)(iv) of this section, the applicant must provide the following information:

(A) The total dry metric tons per 365-day period of sewage sludge subject to this paragraph that is sold or given away in a bag or other container for application to the land; and

(B)A copy of all labels or notices that accompany the sewage sludge being sold or given away;

(vi) If sewage sludge from the applicant's facility is provided to another "person who prepares," as defined at 40 CFR 503.9(r), and the sewage sludge is not subject to paragraph (q)(8)(iv) of this section, the applicant must provide the following information for each facility receiving the sewage sludge:

(A) The name and mailing address of the receiving facility;

(B) The total dry metric tons per 365-day period of sewage sludge subject to this paragraph that the applicant provides to the receiving facility;

(C)A description of any treatment processes occurring at the receiving facility, including blending activities and treatment to reduce pathogens or vector attraction characteristic;

(D)A copy of the notice and necessary information that the applicant is required to provide the receiving facility under 40 CFR 503.12(g); and

(E) If the receiving facility places sewage sludge in bags or containers for sale or give-away to application to the land, a copy of any labels or notices that accompany the sewage sludge;

(9) Land application of bulk sewage sludge. If sewage sludge from the applicant's facility is applied to the land in bulk form, and is not subject to paragraphs (q)(8)(iv), (v), or (vi) of this section, the applicant must provide the following information:

(i) The total dry metric tons per 365-day period of sewage sludge subject to this paragraph that is applied to the land;

(ii) If any land application sites are located in States other than the State where the sewage sludge is prepared, a description of how the applicant will notify the permitting authority for the State(s) where the land application sites are located;

(iii) The following information for each land application site that has been identified at the time of permit application:

(A) The name (if any), and location for the land application site;

(B) The site's latitude and longitude to the nearest second, and method of determination;

(C)A topographic map (or other map if a topographic map is unavailable) that shows the site's location;

(D) The name, mailing address, and telephone number of the site owner, if different from the applicant;

(E) The name, mailing address, and telephone number of the person who applies sewage sludge to the site, if different from the applicant;

(F) Whether the site is agricultural land, forest, a public contact site, or a reclamation site, as such site types are defined under 40 CFR 503.11;

(G) The type of vegetation grown on the site, if known, and the nitrogen requirement for this vegetation;

(H) Whether either of the vector attraction reduction options of 40 CFR 503.33(b)(9) or (b)(10) is met at the site, and a description of any procedures employed at the time of use to reduce vector attraction properties in sewage sludge; and

(I) Other information that describes how the site will be managed, as specified by the permitting authority.

(iv) The following information for each land application site that has been identified at the time of permit application, if the applicant intends to apply bulk sewage sludge subject to the cumulative pollutant loading rates in 40 CFR 503.13(b)(2) to the site:

(A) Whether the applicant has contacted the permitting authority in the State where the bulk sewage sludge subject to § 503.13(b)(2) will be applied, to ascertain whether bulk sewage sludge subject to § 503.13(b)(2) has been applied to the site on or since July 20, 1993, and if so, the name of the permitting authority and the name and phone number of a contact person at the permitting authority;

(B) Identification of facilities other than the applicant's facility that have sent, or are sending, sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) to the site since July 20, 1993, if, based on the inquiry in paragraph (q)(iv)(A), bulk sewage sludge subject to cumulative pollutant loading rates in § 503.13(b)(2) has been applied to the site since July 20, 1993;

(v) If not all land application sites have been identified at the time of permit application, the applicant must submit a land application plan that, at a minimum:

(A) Describes the geographical area covered by the plan;

(B) Identifies the site selection criteria;

(C) Describes how the site(s) will be managed;

(D) Provides for advance notice to the permit authority of specific land application sites and reasonable time for the permit authority to object prior to land application of the sewage sludge; and

(E) Provides for advance public notice of land application sites in the manner prescribed by State and local law. When State or local law does not require advance public notice, it must be provided in a manner reasonably calculated to apprize the general public of the planned land application.

(10) Surface disposal. If sewage sludge from the applicant's facility is placed on a surface disposal site, the applicant must provide the following information:

(i) The total dry metric tons of sewage sludge from the applicant's facility that is placed on surface disposal sites per 365-day period;

(ii) The following information for each surface disposal site receiving sewage sludge from the applicant's facility that the applicant does not own or operate:

(A) The site name or number, contact person, mailing address, and telephone number for the surface disposal site; and

(B) The total dry metric tons from the applicant's facility per 365-day period placed on the surface disposal site;

(iii) The following information for each active sewage sludge unit at each surface disposal site that the applicant owns or operates:

(A) The name or number and the location of the active sewage sludge unit;

(B) The unit's latitude and longitude to the nearest second, and method of determination;

(C) If not already provided, a topographic map (or other map if a topographic map is unavailable) that shows the unit's location;

(D) The total dry metric tons placed on the active sewage sludge unit per 365-day period;

(E) The total dry metric tons placed on the active sewage sludge unit over the life of the unit;

(F)A description of any liner for the active sewage sludge unit, including whether it has a maximum permeability of 1 x 10<-7> cm/sec;

(G)A description of any leachate collection system for the active sewage sludge unit, including the method used for leachate disposal, and any Federal, State, and local permit number(s) for leachate disposal;

(H) If the active sewage sludge unit is less than 150 meters from the property line of the surface disposal site, the actual distance from the unit boundary to the site property line;

(I) The remaining capacity (dry metric tons) for the active sewage sludge unit;

(J) The date on which the active sewage sludge unit is expected to close, if such a date has been identified;

(K) The following information for any other facility that sends sewage sludge to the active sewage sludge unit:

(1) The name, contact person, and mailing address of the facility; and

(2) Available information regarding the quality of the sewage sludge received from the facility, including any treatment at the facility to reduce pathogens or vector attraction characteristics;

(L) Whether any of the vector attraction reduction options of 40 CFR 503.33(b)(9) through (b)(11) is met at the active sewage sludge unit, and a description of any procedures employed at the time of disposal to reduce vector attraction properties in sewage sludge;

(M) The following information, as applicable to any ground-water monitoring occurring at the active sewage sludge unit:

(1)A description of any ground-water monitoring occurring at the active sewage sludge unit;

(2) Any available ground-water monitoring data, with a description of the well locations and approximate depth to ground water;

(3)A copy of any ground-water monitoring plan that has been prepared for the active sewage sludge unit;

(4)A copy of any certification that has been obtained from a qualified ground-water scientist that the aquifer has not been contaminated; and

(N) If site-specific pollutant limits are being sought for the sewage sludge placed on this active sewage sludge unit, information to support such a request;

(11) Incineration. If sewage sludge from the applicant's facility is fired in a sewage sludge incinerator, the applicant must provide the following information:

(i) The total dry metric tons of sewage sludge from the applicant's facility that is fired in sewage sludge incinerators per 365-day period;

(ii) The following information for each sewage sludge incinerator firing the applicant's sewage sludge that the applicant does not own or operate:

(A) The name and/or number, contact person, mailing address, and telephone number of the sewage sludge incinerator; and

(B) The total dry metric tons from the applicant's facility per 365-day period fired in the sewage sludge incinerator;

(iii) The following information for each sewage sludge incinerator that the applicant owns or operates:

(A) The name and/or number and the location of the sewage sludge incinerator;

(B) The incinerator's latitude and longitude to the nearest second, and method of determination;

(C) The total dry metric tons per 365-day period fired in the sewage sludge incinerator;

(D) Information, test data, and documentation of ongoing operating parameters indicating that compliance with the National Emission Standard for Beryllium in 40 CFR part 61 will be achieved;

(E) Information, test data, and documentation of ongoing operating parameters indicating that compliance with the National Emission Standard for Mercury in 40 CFR part 61 will be achieved;

(F) The dispersion factor for the sewage sludge incinerator, as well as modeling results and supporting documentation;

(G) The control efficiency for parameters regulated in 40 CFR 503.43, as well as performance test results and supporting documentation;

(H) Information used to calculate the risk specific concentration (RSC) for chromium, including the results of incinerator stack tests for hexavalent and total chromium concentrations, if the applicant is requesting a chromium limit based on a site-specific RSC value;

(I) Whether the applicant monitors total hydrocarbons (THC) or Carbon Monoxide (CO) in the exit gas for the sewage sludge incinerator;

(J) The type of sewage sludge incinerator;

(K) The maximum performance test combustion temperature, as obtained during the performance test of the sewage sludge incinerator to determine pollutant control efficiencies;

(L) The following information on the sewage sludge feed rate used during the performance test:

(1) Sewage sludge feed rate in dry metric tons per day;

(2) Identification of whether the feed rate submitted is average use or maximum design; and

(3)A description of how the feed rate was calculated;

(M) The incinerator stack height in meters for each stack, including identification of whether actual or creditable stack height was used;

(N) The operating parameters for the sewage sludge incinerator air pollution control device(s), as obtained during the performance test of the sewage sludge incinerator to determine pollutant control efficiencies;

(O) Identification of the monitoring equipment in place, including (but not limited to) equipment to monitor the following:

(1) Total hydrocarbons or Carbon Monoxide;

(2) Percent oxygen;

(3) Percent moisture; and

(4) Combustion temperature; and

(P)A list of all air pollution control equipment used with this sewage sludge incinerator;

(12) Disposal in a municipal solid waste landfill. If sewage sludge from the applicant's facility is sent to a municipal solid waste landfill (MSWLF), the applicant must provide the following information for each MSWLF to which sewage sludge is sent:

(i) The name, contact person, mailing address, location, and all applicable permit numbers of the MSWLF;

(ii) The total dry metric tons per 365-day period sent from this facility to the MSWLF;

(iii)A determination of whether the sewage sludge meets applicable requirements for disposal of sewage sludge in a MSWLF, including the results of the paint filter liquids test and any additional requirements that apply on a site-specific basis; and

(iv) Information, if known, indicating whether the MSWLF complies with criteria set forth in 40 CFR part 258;

(13) Contractors. All applicants must provide the name, mailing address, telephone number, and responsibilities of all contractors responsible for any operational or maintenance aspects of the facility related to sewage sludge generation, treatment, use, or disposal;

(14) Other information. At the request of the permitting authority, the applicant must provide any other information necessary to determine the appropriate standards for permitting under 40 CFR part 503, and must provide any other information necessary to assess the sewage sludge use and disposal practices, determine whether to issue a permit, or identify appropriate permit requirements; and

(15) Signature. All applications must be signed by a certifying official in compliance with § 122.22.

[Note 1: At 46 FR 2046, Jan. 8, 1981, the Environmental Protection Agency suspended until further notice § 122.21(g)(7)(v)(A) and the corresponding portions of Item V-C of the NPDES application Form 2C as they apply to coal mines. This suspension continues in effect.]

[Note 2: At 46 FR 22585, Apr. 20, 1981, the Environmental Protection Agency suspended until further notice § 122.21(g)(7)(v)(A) and the corresponding portions of Item V-C of the NPDES application Form 2C as they apply to:

a.Testing and reporting for all four organic fractions in the Greige Mills Subcategory of the Textile Mills industry (subpart C -- Low water use processing of 40 CFR part 410), and testing and reporting for the pesticide fraction in all other subcategories of this industrial category.

b.Testing and reporting for the volatile, base eutral and pesticide fractions in the Base and Precious Metals Subcategory of the Ore Mining and Dressing industry (subpart B of 40 CFR part 440), and testing and reporting for all four fractions in all other subcategories of this industrial category.

c.Testing and reporting for all four GC/MS fractions in the Porcelain Enameling industry.

This revision continues that suspension.] n1

[Note 3: At 46 FR 35090, July 1, 1981, the Environmental Protection Agency suspended until further notice § 122.21(g)(7)(v)(A) and the corresponding portions of Item V-C of the NPDES application Form 2C as they apply to:

a.Testing and reporting for the pesticide fraction in the Tall Oil Rosin Subcategory (subpart D) and Rosin-Based Derivatives Subcategory (subpart F) of the Gum and Wood Chemicals industry (40 CFR part 454), and testing and reporting for the pesticide and base-neutral fractions in all other subcategories of this industrial category.

b.Testing and reporting for the pesticide fraction in the Leather Tanning and Finishing, Paint and Ink Formulation, and Photographic Supplies industrial categories.

c.Testing and reporting for the acid, base eutral and pesticide fractions in the Petroleum Refining industrial category.

d.Testing and reporting for the pesticide fraction in the Papergrade Sulfite subcategories (subparts J and U) of the Pulp and Paper industry (40 CFR part 430); testing and reporting for the base eutral and pesticide fractions in the following subcategories: Deink (subpart Q), Dissolving Kraft (subpart F), and Paperboard from Waste Paper (subpart E); testing and reporting for the volatile, base eutral and pesticide fractions in the following subcategories: BCT Bleached Kraft (subpart H), Semi-Chemical (subparts B and C), and Nonintegrated-Fine Papers (subpart R); and testing and reporting for the acid, base eutral, and pesticide fractions in the following subcategories: Fine Bleached Kraft (subpart I), Dissolving Sulfite Pulp (subpart K), Groundwood-Fine Papers (subpart O), Market Bleached Kraft (subpart G), Tissue from Wastepaper (subpart T), and Nonintegrated-Tissue Papers (subpart S).

e.Testing and reporting for the base eutral fraction in the Once-Through Cooling Water, Fly Ash and Bottom Ash Transport Water process wastestreams of the Steam Electric Power Plant industrial category.

This revision continues that suspension.] n1

n1 EDITORIAL NOTE: The words "This revision" refer to the document published at 48 FR 14153, Apr. 1, 1983.

(r) Application requirements for facilities with cooling water intake structures -- (1)(i) New facilities with new or modified cooling water intake structures. New facilities (other than offshore oil and gas extraction facilities) with cooling water intake structures as defined in part 125, subpart I of this chapter, must submit to the Director for review the information required under paragraphs (r)(2) (except (r)(2)(iv)), (3), and (4) (except (r)(4)(ix), (x), (xi), and (xii)) of this section and § 125.86 of this chapter as part of the permit application. New offshore oil and gas extraction facilities with cooling water intake structures as defined in part 125, subpart N, of this chapter that are fixed facilities must submit to the Director for review the information required under paragraphs (r)(2) (except (r)(2)(iv)), (3), and (4) (except (r)(4)(ix), (x), (xi), and (xii)) of this section and § 125.136 of this chapter as part of their permit application.

(ii) Existing facilities. (A) All existing facilities. The owner or operator of an existing facility defined at 40 CFR 125.92(k) must submit to the Director for review the information required under paragraphs (r)(2) and (3) of this section and applicable provisions of paragraphs (r)(4), (5), (6), (7), and (8) of this section.

(B) Existing facilities greater than 125 mgd AIF. In addition, the owner or operator of an existing facility that withdraws greater than 125 mgd actual intake flow (AIF), as defined at 40 CFR 125.92 (a), of water for cooling purposes must also submit to the Director for review the information required under paragraphs (r)(9), (10), (11), (12), and (13) of this section. If the owner or operator of an existing facility intends to comply with the BTA (best technology available) standards for entrainment using a closed-cycle recirculating system as defined at 40 CFR 125.92(c), the Director may reduce or waive some or all of the information required under paragraphs (r)(9) through (13) of this section.

(C) Additional information. The owner or operator of an existing facility must also submit such additional information as the Director determines is necessary pursuant to 40 CFR 125.98(i).

(D) New units at existing facilities. The owner or operator of a new unit at an existing facility, as defined at 40 CFR 125.92(u), must submit or update any information previously provided to the Director by submitting the information required under paragraphs (r)(2), (3), (5), (8), and (14) of this section and applicable provisions of paragraphs (r)(4), (6), and (7) of this section. Requests for and approvals of alternative requirements sought under 40 CFR 125.94(e)(2) or 125.98(b)(7) must be submitted with the permit application.

(E) New units at existing facilities not previously subject to Part 125. The owner or operator of a new unit as defined at 40 CFR 125.92(u) at an existing facility not previously subject to part 125 of this chapter that increases the total capacity of the existing facility to more than 2 mgd DIF must submit the information required under paragraphs (r)(2), (3), (5), and (8) of this section and applicable provisions of paragraphs (r)(4), (6), and (7) of this section at the time of the permit application for the new unit. Requests for alternative

requirements under 40 CFR 125.94(e)(2) or 125.98(b)(7) must be submitted with the permit application. If the total capacity of the facility will increase to more than 125 mgd AIF, the owner or operator must also submit the information required in paragraphs (r)(9) through (13) of this section. If the owner or operator of an existing facility intends to comply with the BTA (best technology available) standards for entrainment using a closed-cycle recirculating system as defined at 40 CFR 125.92(c), the Director may reduce or waive some or all of the information required under paragraphs (r)(9) through (13) of this section.

(F) If the owner or operator of an existing facility plans to retire the facility before the current permit expires, then the requirements of paragraphs (r)(1)(ii)(A), (B), (C), (D), and (E) of this section do not apply.

(G) If the owner or operator of an existing facility plans to retire the facility after the current permit expires but within one permit cycle, then the Director may waive the requirements of paragraphs (r)(7), (9), (10), (11), (12), and (13) of this section pending a signed certification statement from the owner or operator of the facility specifying the last operating date of the facility.

(H) All facilities. The owner or operator of any existing facility or new unit at any existing facility must also submit with its permit application all information received as a result of any communication with a Field Office of the Fish and Wildlife Service and/or Regional Office of the National Marine Fisheries Service.

(2) Source water physical data. These include:

(i)A narrative description and scaled drawings showing the physical configuration of all source water bodies used by your facility, including areal dimensions, depths, salinity and temperature regimes, and other documentation that supports your determination of the water body type where each cooling water intake structure is located;

(ii) Identification and characterization of the source waterbody's hydrological and geomorphological features, as well as the methods you used to conduct any physical studies to determine your intake's area of influence within the waterbody and the results of such studies;

(iii) Locational maps; and

(iv) For new offshore oil and gas facilities that are not fixed facilities, a narrative description and/or locational maps providing information on predicted locations within the waterbody during the permit term in sufficient detail for the Director to determine the appropriateness of additional impingement requirements under § 125.134(b)(4).

(3) Cooling water intake structure data. These include:

(i)A narrative description of the configuration of each of your cooling water intake structures and where it is located in the water body and in the water column;

(ii) Latitude and longitude in degrees, minutes, and seconds for each of your cooling water intake structures;

(iii)A narrative description of the operation of each of your cooling water intake structures, including design intake flows, daily hours of operation, number of days of the year in operation and seasonal changes, if applicable;

(iv)A flow distribution and water balance diagram that includes all sources of water to the facility, recirculating flows, and discharges; and

(v) Engineering drawings of the cooling water intake structure.

(4) Source water baseline biological characterization data. This information is required to characterize the biological community in the vicinity of the cooling water intake structure and to characterize the operation of the cooling water intake structures. The Director may also use this information in subsequent permit renewal proceedings to determine if your Design and Construction Technology Plan as required in § 125.86(b)(4) or § 125.136(b)(3) of this chapter should be revised. This supporting information must include existing data (if they are available). However, you may supplement the data using newly conducted field studies if you choose to do so. The information you submit must include:

(i)A list of the data in paragraphs (r)(4)(ii) through (vi) of this section that are not available and efforts made to identify sources of the data;

(ii)A list of species (or relevant taxa) for all life stages and their relative abundance in the vicinity of the cooling water intake structure;

(iii) Identification of the species and life stages that would be most susceptible to impingement and entrainment. Species evaluated should include the forage base as well as those most important in terms of significance to commercial and recreational fisheries;

(iv) Identification and evaluation of the primary period of reproduction, larval recruitment, and period of peak abundance for relevant taxa;

(v) Data representative of the seasonal and daily activities (e.g., feeding and water column migration) of biological organisms in the vicinity of the cooling water intake structure;

(vi) Identification of all threatened, endangered, and other protected species that might be susceptible to impingement and entrainment at your cooling water intake structures;

(vii) Documentation of any public participation or consultation with Federal or State agencies undertaken in development of the plan; and

(viii) If you supplement the information requested in paragraph (r)(4)(i) of this section with data collected using field studies, supporting documentation for the Source Water Baseline Biological Characterization must include a description of all methods and quality assurance procedures for sampling, and data analysis including a description of the study area; taxonomic identification of sampled and evaluated biological assemblages (including all life stages of fish and shellfish); and sampling and data analysis methods. The sampling and/or data analysis methods you use must be appropriate for a quantitative survey and based on consideration of

methods used in other biological studies performed within the same source water body. The study area should include, at a minimum, the area of influence of the cooling water intake structure.

(ix) In the case of the owner or operator of an existing facility or new unit at an existing facility, the Source Water Baseline Biological Characterization Data is the information in paragraphs (r)(4)(i) through (xii) of this section.

(x) For the owner or operator of an existing facility, identification of protective measures and stabilization activities that have been implemented, and a description of how these measures and activities affected the baseline water condition in the vicinity of the intake.

(xi) For the owner or operator of an existing facility, a list of fragile species, as defined at 40 CFR 125.92(m), at the facility. The applicant need only identify those species not already identified as fragile at 40 CFR 125.92(m). New units at an existing facility are not required to resubmit this information if the cooling water withdrawals for the operation of the new unit are from an existing intake.

(xii) For the owner or operator of an existing facility that has obtained incidental take exemption or authorization for its cooling water intake structure(s) from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service, any information submitted in order to obtain that exemption or authorization may be used to satisfy the permit application information requirement of paragraph 40 CFR 125.95(f) if included in the application.

(5) Cooling Water System Data. The owner or operator of an existing facility must submit the following information for each cooling water intake structure used or intended to be used:

(i)A narrative description of the operation of the cooling water system and its relationship to cooling water intake structures; the proportion of the design intake flow that is used in the system; the number of days of the year the cooling water system is in operation and seasonal changes in the operation of the system, if applicable; the proportion of design intake flow for contact cooling, non-contact cooling, and process uses; a distribution of water reuse to include cooling water reused as process water, process water reused for cooling, and the use of gray water for cooling; a description of reductions in total water withdrawals including cooling water intake flow reductions already achieved through minimized process water withdrawals; a description of any cooling water that is used in a manufacturing process either before or after it is used for cooling, including other recycled process water flows; the proportion of the source waterbody withdrawn (on a monthly basis);

(ii) Design and engineering calculations prepared by a qualified professional and supporting data to support the description required by paragraph (r)(5)(i) of this section; and

(iii) Description of existing impingement and entrainment technologies or operational measures and a summary of their performance, including but not

limited to reductions in impingement mortality and entrainment due to intake location and reductions in total water withdrawals and usage.

(6) Chosen Method(s) of Compliance with Impingement Mortality Standard. The owner or operator of the facility must identify the chosen compliance method for the entire facility; alternatively, the applicant must identify the chosen compliance method for each cooling water intake structure at its facility. The applicant must identify any intake structure for which a BTA determination for Impingement Mortality under 40 CFR 125.94 (c)(11) or (12) is requested. In addition, the owner or operator that chooses to comply via 40 CFR 125.94 (c)(5) or (6) must also submit an impingement technology performance optimization study as described below:

(i) If the applicant chooses to comply with 40 CFR 125.94(c)(5), subject to the flexibility for timing provided in 40 CFR 125.95(a)(2), the impingement technology performance optimization study must include two years of biological data collection measuring the reduction in impingement mortality achieved by the modified traveling screens as defined at 40 CFR 125.92(s) and demonstrating that the operation has been optimized to minimize impingement mortality. A complete description of the modified traveling screens and associated equipment must be included, including, for example, type of mesh, mesh slot size, pressure sprays and fish return mechanisms. A description of any biological data collection and data collection approach used in measuring impingement mortality must be included:

(A) Collecting data no less frequently than monthly. The Director may establish more frequent data collection;

(B) Biological data collection representative of the impingement and the impingement mortality at the intakes subject to this provision;

(C)A taxonomic identification to the lowest taxon possible of all organisms collected;

(D) The method in which naturally moribund organisms are identified and taken into account;

(E) The method in which mortality due to holding times is taken into account;

(F) If the facility entraps fish or shellfish, a count of entrapment, as defined at 40 CFR 125.92(j), as impingement mortality; and

(G) The percent impingement mortality reflecting optimized operation of the modified traveling screen and all supporting calculations.

(ii) If the applicant chooses to comply with 40 CFR 125.94(c)(6), the impingement technology performance optimization study must include biological data measuring the reduction in impingement mortality achieved by operation of the system of technologies, operational measures and best management practices, and demonstrating that operation of the system has been optimized to minimize impingement mortality. This system of technologies, operational measures and best management practices may include flow reductions, seasonal operation, unit closure, credit for intake location, and behavioral deterrent systems. The applicant must document how each system element contributes to the system's performance.

The applicant must include a minimum of two years of biological data measuring the reduction in impingement mortality achieved by the system. The applicant must also include a description of any sampling or data collection approach used in measuring the rate of impingement, impingement mortality, or flow reductions.

(A) Rate of Impingement. If the demonstration relies in part on a credit for reductions in the rate of impingement in the system, the applicant must provide an estimate of those reductions to be used as credit towards reducing impingement mortality, and any relevant supporting documentation, including previously collected biological data, performance reviews, and previously conducted performance studies not already submitted to the Director. The submission of studies more than 10 years old must include an explanation of why the data are still relevant and representative of conditions at the facility and explain how the data should be interpreted using the definitions of impingement and entrapment at 40 CFR 125.92(n) and (j), respectively. The estimated reductions in rate of impingement must be based on a comparison of the system to a once-through cooling system with a traveling screen whose point of withdrawal from the surface water source is located at the shoreline of the source waterbody. For impoundments that are waters of the United States in whole or in part, the facility's rate of impingement must be measured at a location within the cooling water intake system that the Director deems appropriate. In addition, the applicant must include two years of biological data collection demonstrating the rate of impingement resulting from the system. For this demonstration, the applicant must collect data no less frequently than monthly. The Director may establish more frequent data collection.

(B) Impingement Mortality. If the demonstration relies in part on a credit for reductions in impingement mortality already obtained at the facility, the applicant must include two years of biological data collection demonstrating the level of impingement mortality the system is capable of achieving. The applicant must submit any relevant supporting documentation, including previously collected biological data, performance reviews, and previously conducted performance studies not already submitted to the Director. The applicant must provide a description of any sampling or data collection approach used in measuring impingement mortality. In addition, for this demonstration the applicant must:

(1) Collect data no less frequently than monthly. The Director may establish more frequent data collection;

(2) Conduct biological data collection that is representative of the impingement and the impingement mortality at an intake subject to this provision. In addition, the applicant must describe how the location of the cooling water intake structure in the waterbody and the water column are accounted for in the points of data collection;

(3) Include a taxonomic identification to the lowest taxon possible of all organisms to be collected;

(4) Describe the method in which naturally moribund organisms are identified and taken into account;

(5) Describe the method in which mortality due to holding times is taken into account; and

(6) If the facility entraps fish or shellfish, a count of the entrapment, as defined at 40 CFR 125.92(j), as impingement mortality.

(C) Flow reduction. If the demonstration relies in part on flow reduction to reduce impingement, the applicant must include two years of intake flows, measured daily, as part of the demonstration, and describe the extent to which flow reductions are seasonal or intermittent. The applicant must document how the flow reduction results in reduced impingement. In addition, the applicant must describe how the reduction in impingement has reduced impingement mortality.

(D) Total system performance. The applicant must document the percent impingement mortality reflecting optimized operation of the total system of technologies, operational measures, and best management practices and all supporting calculations. The total system performance is the combination of the impingement mortality performance reflected in paragraphs (r)(6)(ii)(A), (B), and (C) of this section.

(7) Entrainment Performance Studies. The owner or operator of an existing facility must submit any previously conducted studies or studies obtained from other facilities addressing technology efficacy, through-facility entrainment survival, and other entrainment studies. Any such submittals must include a description of each study, together with underlying data, and a summary of any conclusions or results. Any studies conducted at other locations must include an explanation as to why the data from other locations are relevant and representative of conditions at your facility. In the case of studies more than 10 years old, the applicant must explain why the data are still relevant and representative of conditions at the facility and explain how the data should be interpreted using the definition of entrainment at 40 CFR 125.92(h).

(8) Operational Status. The owner or operator of an existing facility must submit a description of the operational status of each generating, production, or process unit that uses cooling water, including but not limited to:

(i) For power production or steam generation, descriptions of individual unit operating status including age of each unit, capacity utilization rate (or equivalent) for the previous 5 years, including any extended or unusual outages that significantly affect current data for flow, impingement, entrainment, or other factors, including identification of any operating unit with a capacity utilization rate of less than 8 percent averaged over a 24-month block contiguous period, and any major upgrades completed within the last 15 years, including but not limited to boiler replacement, condenser replacement, turbine replacement, or changes to fuel type;

(ii) Descriptions of completed, approved, or scheduled uprates and Nuclear Regulatory Commission relicensing status of each unit at nuclear facilities;

(iii) For process units at your facility that use cooling water other than for power production or steam generation, if you intend to use reductions in flow or changes in operations to meet the requirements of 40 CFR 125.94(c), descriptions of individual production processes and product lines, operating status including age of each line, seasonal operation, including any extended or unusual outages that significantly affect current data for flow, impingement, entrainment, or other factors, any major upgrades completed within the last 15 years, and plans or schedules for decommissioning or replacement of process units or production processes and product lines;

(iv) For all manufacturing facilities, descriptions of current and future production schedules; and

(v) Descriptions of plans or schedules for any new units planned within the next 5 years.

(9) Entrainment Characterization Study. The owner or operator of an existing facility that withdraws greater than 125 mgd AIF, where the withdrawal of cooling water is measured at a location within the cooling water intake structure that the Director deems appropriate, must develop for submission to the Director an Entrainment Characterization Study that includes a minimum of two years of entrainment data collection. The Entrainment Characterization Study must include the following components:

(i) Entrainment Data Collection Method. The study should identify and document the data collection period and frequency. The study should identify and document organisms collected to the lowest taxon possible of all life stages of fish and shellfish that are in the vicinity of the cooling water intake structure(s) and are susceptible to entrainment, including any organisms identified by the Director, and any species protected under Federal, State, or Tribal law, including threatened or endangered species with a habitat range that includes waters in the vicinity of the cooling water intake structure. Biological data collection must be representative of the entrainment at the intakes subject to this provision. The owner or operator of the facility must identify and document how the location of the cooling water intake structure in the waterbody and the water column are accounted for by the data collection locations;

(ii) Biological Entrainment Characterization. Characterization of all life stages of fish, shellfish, and any species protected under Federal, State, or Tribal law (including threatened or endangered species), including a description of their abundance and their temporal and spatial characteristics in the vicinity of the cooling water intake structure(s), based on sufficient data to characterize annual, seasonal, and diel variations in entrainment, including but not limited to variations related to climate and weather differences, spawning, feeding, and water column migration. This characterization may include historical data that are representative of the current operation of the facility and of biological conditions at the site.

Identification of all life stages of fish and shellfish must include identification of any surrogate species used, and identification of data representing both motile and non-motile life-stages of organisms;

(iii) Analysis and Supporting Documentation. Documentation of the current entrainment of all life stages of fish, shellfish, and any species protected under Federal, State, or Tribal law (including threatened or endangered species). The documentation may include historical data that are representative of the current operation of the facility and of biological conditions at the site. Entrainment data to support the facility's calculations must be collected during periods of representative operational flows for the cooling water intake structure, and the flows associated with the data collection must be documented. The method used to determine latent mortality along with data for specific organism mortality or survival that is applied to other life-stages or species must be identified. The owner or operator of the facility must identify and document all assumptions and calculations used to determine the total entrainment for that facility together with all methods and quality assurance/quality control procedures for data collection and data analysis. The proposed data collection and data analysis methods must be appropriate for a quantitative survey.

(10) Comprehensive Technical Feasibility and Cost Evaluation Study. The owner or operator of an existing facility that withdraws greater than 125 mgd AIF must develop for submission to the Director an engineering study of the technical feasibility and incremental costs of candidate entrainment control technologies. In addition, the study must include the following:

(i) Technical feasibility. An evaluation of the technical feasibility of closed-cycle recirculating systems as defined at 40 CFR 125.92(c), fine mesh screens with a mesh size of 2 millimeters or smaller, and water reuse or alternate sources of cooling water. In addition, this study must include:

(A)A description of all technologies and operational measures considered (including alternative designs of closed-cycle recirculating systems such as natural draft cooling towers, mechanical draft cooling towers, hybrid designs, and compact or multi-cell arrangements);

(B)A discussion of land availability, including an evaluation of adjacent land and acres potentially available due to generating unit retirements, production unit retirements, other buildings and equipment retirements, and potential for repurposing of areas devoted to ponds, coal piles, rail yards, transmission yards, and parking lots;

(C)A discussion of available sources of process water, grey water, waste water, reclaimed water, or other waters of appropriate quantity and quality for use as some or all of the cooling water needs of the facility; and

(D) Documentation of factors other than cost that may make a candidate technology impractical or infeasible for further evaluation.

(ii) Other entrainment control technologies. An evaluation of additional technologies for reducing entrainment may be required by the Director.

(iii) Cost evaluations. The study must include engineering cost estimates of all technologies considered in paragraphs (r)(10)(i) and (ii) of this section. Facility costs must also be adjusted to estimate social costs. All costs must be presented as the net present value (NPV) and the corresponding annual value. Costs must be clearly labeled as compliance costs or social costs. The applicant must separately discuss facility level compliance costs and social costs, and provide documentation as follows:

(A) Compliance costs are calculated as after-tax, while social costs are calculated as pre-tax. Compliance costs include the facility's administrative costs, including costs of permit application, while the social cost adjustment includes the Director's administrative costs. Any outages, downtime, or other impacts to facility net revenue, are included in compliance costs, while only that portion of lost net revenue that does not accrue to other producers can be included in social costs. Social costs must also be discounted using social discount rates of 3 percent and 7 percent. Assumptions regarding depreciation schedules, tax rates, interest rates, discount rates and related assumptions must be identified;

(B) Costs and explanation of any additional facility modifications necessary to support construction and operation of technologies considered in paragraphs (r)(10)(i) and (ii) of this section, including but not limited to relocation of existing buildings or equipment, reinforcement or upgrading of existing equipment, and additional construction and operating permits. Assumptions regarding depreciation schedules, interest rates, discount rates, useful life of the technology considered, and any related assumptions must be identified; and

(C) Costs and explanation for addressing any non-water quality environmental and other impacts identified in paragraph (r)(12) of this section. The cost evaluation must include a discussion of all reasonable attempts to mitigate each of these impacts.

(11) Benefits Valuation Study. The owner or operator of an existing facility that withdraws greater than 125 mgd AIF must develop for submission to the Director an evaluation of the benefits of the candidate entrainment reduction technologies and operational measures evaluated in paragraph (r)(10) of this section including using the Entrainment Characterization Study completed in paragraph (r)(9) of this section. Each category of benefits must be described narratively, and when possible, benefits should be quantified in physical or biological units and monetized using appropriate economic valuation methods. The benefits valuation study must include, but is not limited to, the following elements:

(i) Incremental changes in the numbers of individual fish and shellfish lost due to impingement mortality and entrainment as defined in 40 CFR 125.92, for all life stages of each exposed species;

(ii) Description of basis for any estimates of changes in the stock sizes or harvest levels of commercial and recreational fish or shellfish species or forage fish species;

(iii) Description of basis for any monetized values assigned to changes in the stock size or harvest levels of commercial and recreational fish or shellfish species, forage fish, and to any other ecosystem or non use benefits;

(iv)A discussion of mitigation efforts completed prior to October 14, 2014 including how long they have been in effect and how effective they have been;

(v) Discussion, with quantification and monetization, where possible, of any other benefits expected to accrue to the environment and local communities, including but not limited to improvements for mammals, birds, and other organisms and aquatic habitats;

(vi) Discussion, with quantification and monetization, where possible, of any benefits expected to result from any reductions in thermal discharges from entrainment technologies.

(12) Non-water Quality Environmental and Other Impacts Study. The owner or operator of an existing facility that withdraws greater than 125 mgd AIF must develop for submission to the Director a detailed facility-specific discussion of the changes in non-water quality environmental and other impacts attributed to each technology and operational measure considered in paragraph (r)(10) of this section, including both impacts increased and impacts decreased. The study must include the following:

(i) Estimates of changes to energy consumption, including but not limited to auxiliary power consumption and turbine backpressure energy penalty;

(ii) Estimates of air pollutant emissions and of the human health and environmental impacts associated with such emissions;

(iii) Estimates of changes in noise;

(iv)A discussion of impacts to safety, including documentation of the potential for plumes, icing, and availability of emergency cooling water;

(v)A discussion of facility reliability, including but not limited to facility availability, production of steam, impacts to production based on process unit heating or cooling, and reliability due to cooling water availability;

(vi) Significant changes in consumption of water, including a facility-specific comparison of the evaporative losses of both once-through cooling and closed-cycle recirculating systems, and documentation of impacts attributable to changes in water consumption; and

(vii)A discussion of all reasonable attempts to mitigate each of these factors.

(13) Peer Review. If the applicant is required to submit studies under paragraphs (r)(10) through (12) of this section, the applicant must conduct an external peer review of each report to be submitted with the permit application. The applicant must select peer reviewers and notify the Director in advance of the peer review. The Director may

disapprove of a peer reviewer or require additional peer reviewers. The Director may confer with EPA, Federal, State and Tribal fish and wildlife management agencies with responsibility for fish and wildlife potentially affected by the cooling water intake structure, independent system operators, and state public utility regulatory agencies, to determine which peer review comments must be addressed. The applicant must provide an explanation for any significant reviewer comments not accepted. Peer reviewers must have appropriate qualifications and their names and credentials must be included in the peer review report.

(14) New Units. The applicant must identify the chosen compliance method for the new unit. In addition, the owner or operator that selects the BTA standards for new units at 40 CFR 125.94 (e)(2) as its route to compliance must submit information to demonstrate entrainment reductions equivalent to 90 percent or greater of the reduction that could be achieved through compliance with 40 CFR 125.94(e)(1). The demonstration must include the Entrainment Characterization Study at paragraph (r)(9) of this section. In addition, if data specific to your facility indicates that compliance with the requirements of § 125.94 of this chapter for each new unit would result in compliance costs wholly out of proportion to the costs EPA considered in establishing the requirements at issue, or would result in significant adverse impacts on local air quality, significant adverse impacts on local water resources other than impingement or entrainment, or significant adverse impacts on local energy markets, you must submit all supporting data as part of paragraph (r)(14) of this section. The Director may determine that additional data and information, including but not limited to monitoring, must be included as part of paragraph (r)(14) of this section.

Statutory Authority

The Clean Water Act, 33 U.S.C. 1251 et seq.

History

[48 FR 14153, Apr. 1, 1983, as amended at 49 FR 31842, Aug. 8, 1984; 49 FR 38046, Sept. 26, 1984; 50 FR 6940, 6941, Feb. 19, 1985; 50 FR 35203, Aug. 29, 1985; 51 FR 26991, July 28, 1986; 53 FR 4158, Feb. 12, 1988; 53 FR 33007, Sept. 6, 1988; 54 FR 254, Jan. 4, 1989; 54 FR 18782, May 2, 1989; 55 FR 30128, July 24, 1990; 55 FR 48062, Nov. 16, 1990; 60 FR 17956, Apr. 7, 1995, as withdrawn at 60 FR 40235, Aug. 7, 1995; 60 FR 33931, June 29, 1995; 60 FR 40235, Aug. 7, 1995; 64 FR 42434, 42462, Aug. 4, 1999, as corrected at 64 FR 43426, Aug. 10, 1999; 64 FR 68722, 68838, Dec. 8, 1999; 65 FR 30886, 30905, May 15, 2000; 66 FR 65256, 65337, Dec. 18, 2001; 68 FR 7176, 7265, Feb. 12, 2003; 69 FR 41576, 41682, July 9, 2004; 70 FR 60134, 60191, Oct. 14, 2005; 71 FR 6978, 6983, Feb. 10, 2006; 71 FR 35006, 35039, June 16, 2006; 72 FR 11200, 11211, Mar. 12, 2007; suspended in part at 72 FR 37107, 37109, July 9, 2007; 72 FR 40245, 40250, July 24, 2007; 73 FR 70418, 70480, Nov. 20, 2008; 79 FR 48300, 48424, Aug. 15, 2014; 79 FR 49001, 49013, Aug. 19, 2014, as corrected at 79 FR 56274, 56275, Sept. 19, 2014]

Annotations

Notes

[EFFECTIVE DATE NOTE72 FR 37107, 37109, July 9, 2007, suspended paragraphs (r)(1)(ii) and (r)(5) for an indefinite period of time, effective July 9, 2007; 79 FR 48300, 48424, Aug. 15, 2014, lifted the suspension affecting paragraphs (r)(1)(ii) and (r)(5) published at 72 FR 37107, July 9, 2007, and amended paragraph (r), effective Oct. 14, 2014; 79 FR 49001, 49013, Aug. 19, 2014, added paragraph (e)(3), effective Sept. 18, 2014.]

Case Notes

LexisNexis® Notes

Case Notes Applicable to Entire Part
Administrative Law : Informal Agency Actions
Contracts Law : Negotiable Instruments : General Overview
Environmental Law : Hazardous Wastes & Toxic Substances : Toxic Substances
Environmental Law : Hazardous Wastes & Toxic Substances : Treatment, Storage & Disposal
Environmental Law : Litigation & Administrative Proceedings : Jurisdiction & Procedure
Environmental Law : National Environmental Policy Act : Environmental Assessments
Environmental Law : Water Quality : General Overview
Environmental Law : Water Quality : Clean Water Act : Coverage & Definitions : General Overview
Environmental Law : Water Quality : Clean Water Act : Coverage & Definitions : Discharges
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Environmental Law : Water Quality : Clean Water Act : Water Quality Standards
Real Property Law : Zoning & Land Use : Special Permits & Variances
Transportation Law : Air Transportation : Charters

Case Notes Applicable to Entire Part

Part Note

Administrative Law : Informal Agency Actions

This document is current through the December 11, 2017 issue of the Federal Register. Pursuant to 82 FR 8346 ("Regulatory Freeze Pending Review"), certain regulations will be delayed pending further review. See Publisher's Note under affected rules. Title 3 is current through December 4, 2017.

§ 122.42 Additional conditions applicable to specified categories of NPDES permits (applicable to State NPDES programs, see § 123.25).

The following conditions, in addition to those set forth in § 122.41, apply to all NPDES permits within the categories specified below:

(a) Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under § 122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

(1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(i) One hundred micrograms per liter (100 X mg/l);

(ii) Two hundred micrograms per liter (200 X mg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 X mg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with § 122.21(g)(7); or

(iv) The level established by the Director in accordance with § 122.44(f).

(2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(i) Five hundred micrograms per liter (500 X mg/l);

(ii) One milligram per liter (1 mg/l) for antimony;

(iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with § 122.21(g)(7).

(iv) The level established by the Director in accordance with § 122.44(f).

(b) Publicly owned treatment works. All POTWs must provide adequate notice to the Director of the following:

(1) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and

(2) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(3) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(c) Municipal separate storm sewer systems. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under § 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. As of December 21, 2020 all reports submitted in compliance with this section must be submitted electronically by the owner, operator, or the duly authorized representative of the MS4 to the Director or initial recipient, as defined in 40 CFR 127.2(b), in compliance with this section and 40 CFR part 3 (including, in all cases, subpart D to part 3), § 122.22, and 40 CFR part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the owner, operator, or the duly authorized representative of the MS4 may be required to report electronically if specified by a particular permit or if required to do so by state law. The report shall include:

(1) The status of implementing the components of the storm water management program that are established as permit conditions;

(2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; and

(3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part;

(4)A summary of data, including monitoring data, that is accumulated throughout the reporting year;

(5) Annual expenditures and budget for year following each annual report;

(6)A summary describing the number and nature of enforcement actions, inspections, and public education programs;

(7) Identification of water quality improvements or degradation;

(d) Storm water discharges. The initial permits for discharges composed entirely of storm water issued pursuant to § 122.26(e)(7) of this part shall require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.

(e) Concentrated animal feeding operations (CAFOs). Any permit issued to a CAFO must include the requirements in paragraphs (e)(1) through (e)(6) of this section.

(1) Requirement to implement a nutrient management plan. Any permit issued to a CAFO must include a requirement to implement a nutrient management plan that, at a minimum, contains best management practices necessary to meet the requirements of this paragraph and applicable effluent limitations and standards, including those specified in 40 CFR part 412. The nutrient management plan must, to the extent applicable:

(i) Ensure adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities;

(ii) Ensure proper management of mortalities (i.e., dead animals) to ensure that they are not disposed of in a liquid manure, storm water, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities;

(iii) Ensure that clean water is diverted, as appropriate, from the production area;

(iv) Prevent direct contact of confined animals with waters of the United States;

(v) Ensure that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants;

(vi) Identify appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the United States;

(vii) Identify protocols for appropriate testing of manure, litter, process wastewater, and soil;

(viii) Establish protocols to land apply manure, litter or process wastewater in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater; and

(ix) Identify specific records that will be maintained to document the implementation and management of the minimum elements described in paragraphs (e)(1)(i) through (e)(1)(viii) of this section.

(2) Recordkeeping requirements.

(i) The permittee must create, maintain for five years, and make available to the Director, upon request, the following records:

(A) All applicable records identified pursuant paragraph (e)(1)(ix) of this section;

(B) In addition, all CAFOs subject to 40 CFR part 412 must comply with record keeping requirements as specified in § 412.37(b) and (c) and § 412.47(b) and (c).

(ii)A copy of the CAFO's site-specific nutrient management plan must be maintained on site and made available to the Director upon request.

(3) Requirements relating to transfer of manure or process wastewater to other persons. Prior to transferring manure, litter or process wastewater to other persons, Large CAFOs must provide the recipient of the manure, litter or process wastewater with the most current

nutrient analysis. The analysis provided must be consistent with the requirements of 40 CFR part 412. Large CAFOs must retain for five years records of the date, recipient name and address, and approximate amount of manure, litter or process wastewater transferred to another person.

(4) Annual reporting requirements for CAFOs. The permittee must submit an annual report to the Director. As of December 21, 2020 all annual reports submitted in compliance with this section must be submitted electronically by the permittee to the Director or initial recipient, as defined in 40 CFR 127.2(b), in compliance with this section and 40 CFR part 3 (including, in all cases, subpart D to part 3), § 122.22, and 40 CFR part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the permittee may be required to report electronically if specified by a particular permit or if required to do so by state law. The annual report must include:

(i) The number and type of animals, whether in open confinement or housed under roof (beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, ducks, turkeys, other);

(ii) Estimated amount of total manure, litter and process wastewater generated by the CAFO in the previous 12 months (tons/gallons);

(iii) Estimated amount of total manure, litter and process wastewater transferred to other person by the CAFO in the previous 12 months (tons/gallons);

(vi) Summary of all manure, litter and process wastewater discharges from the production area that have occurred in the previous 12 months, including, for each discharge, the date of discovery, duration of discharge, and approximate volume; and

(v) Total number of acres under control of the CAFO that were used for land application of manure, litter and process wastewater in the previous 12 months;

(vi) Summary of all manure, litter and process wastewater discharges from the production area that have occurred in the previous 12 months, including date, time, and approximate volume; and

(vii)A statement indicating whether the current version of the CAFO's nutrient management plan was developed or approved by a certified nutrient management planner; and

(viii) The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, litter, and process wastewater, the results of calculations conducted in accordance with paragraphs (e)(5)(i)(B) and (e)(5)(ii)(D) of this section, and the amount of manure, litter, and process wastewater applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of application in accordance with paragraph (e)(5)(ii) of this section, the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with paragraph (e)(5)(ii)(D) of this section, and the amount of any supplemental fertilizer applied during the previous 12 months.

(5) Terms of the nutrient management plan. Any permit issued to a CAFO must require compliance with the terms of the CAFO's site-specific nutrient management plan. The terms of the nutrient management plan are the information, protocols, best management practices, and other conditions in the nutrient management plan determined by the Director to be necessary to meet the requirements of paragraph (e)(1) of this section. The terms of the nutrient management plan, with respect to protocols for land application of manure, litter, or process wastewater required by paragraph (e)(1)(viii) of this section and, as applicable, 40 CFR 412.4(c), must include the fields available for land application; field-specific rates of application properly developed, as specified in paragraphs (e)(5)(i) through (ii) of this section, to ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater; and any timing limitations identified in the nutrient management plan concerning land application on the fields available for land application. The terms must address rates of application using one of the following two approaches, unless the Director specifies that only one of these approaches may be used:

(i) Linear approach. An approach that expresses rates of application as pounds of nitrogen and phosphorus, according to the following specifications:

(A) The terms include maximum application rates from manure, litter, and process wastewater for each year of permit coverage, for each crop identified in the nutrient management plan, in chemical forms determined to be acceptable to the Director, in pounds per acre, per year, for each field to be used for land application, and certain factors necessary to determine such rates. At a minimum, the factors that are terms must include: The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field; the crops to be planted in each field or any other uses of a field such as pasture or fallow fields; the realistic yield goal for each crop or use identified for each field; the nitrogen and phosphorus recommendations from sources specified by the Director for each crop or use identified for each field; credits for all nitrogen in the field that will be plant available; consideration of multi-year phosphorus application; and accounting for all other additions of plant available nitrogen and phosphorus to the field. In addition, the terms include the form and source of manure, litter, and process wastewater to be land-applied; the timing and method of land application; and the methodology by which the nutrient management plan accounts for the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied.

(B) Large CAFOs that use this approach must calculate the maximum amount of manure, litter, and process wastewater to be land applied at least once each year using the results of the most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application; or

(ii) Narrative rate approach. An approach that expresses rates of application as a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied, according to the following specifications:

(A) The terms include maximum amounts of nitrogen and phosphorus derived from all sources of nutrients, for each crop identified in the nutrient management plan, in

chemical forms determined to be acceptable to the Director, in pounds per acre, for each field, and certain factors necessary to determine such amounts. At a minimum, the factors that are terms must include: the outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field; the crops to be planted in each field or any other uses such as pasture or fallow fields (including alternative crops identified in accordance with paragraph (e)(5)(ii)(B) of this section); the realistic yield goal for each crop or use identified for each field; and the nitrogen and phosphorus recommendations from sources specified by the Director for each crop or use identified for each field. In addition, the terms include the methodology by which the nutrient management plan accounts for the following factors when calculating the amounts of manure, litter, and process wastewater to be land applied: Results of soil tests conducted in accordance with protocols identified in the nutrient management plan, as required by paragraph (e)(1)(vii) of this section; credits for all nitrogen in the field that will be plant available; the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied; consideration of multi-year phosphorus application; accounting for all other additions of plant available nitrogen and phosphorus to the field; the form and source of manure, litter, and process wastewater; the timing and method of land application; and volatilization of nitrogen and mineralization of organic nitrogen.

(B) The terms of the nutrient management plan include alternative crops identified in the CAFO's nutrient management plan that are not in the planned crop rotation. Where a CAFO includes alternative crops in its nutrient management plan, the crops must be listed by field, in addition to the crops identified in the planned crop rotation for that field, and the nutrient management plan must include realistic crop yield goals and the nitrogen and phosphorus recommendations from sources specified by the Director for each crop. Maximum amounts of nitrogen and phosphorus from all sources of nutrients and the amounts of manure, litter, and process wastewater to be applied must be determined in accordance with the methodology described in paragraph (e)(5)(ii)(A) of this section.

(C) For CAFOs using this approach, the following projections must be included in the nutrient management plan submitted to the Director, but are not terms of the nutrient management plan: The CAFO's planned crop rotations for each field for the period of permit coverage; the projected amount of manure, litter, or process wastewater to be applied; projected credits for all nitrogen in the field that will be plant available; consideration of multi-year phosphorus application; accounting for all other additions of plant available nitrogen and phosphorus to the field; and the predicted form, source, and method of application of manure, litter, and process wastewater for each crop. Timing of application for each field, insofar as it concerns the calculation of rates of application, is not a term of the nutrient management plan.

(D)CAFOs that use this approach must calculate maximum amounts of manure, litter, and process wastewater to be land applied at least once each year using the methodology required in paragraph (e)(5)(ii)(A) of this section before land applying manure, litter, and process wastewater and must rely on the following data:

(1)A field-specific determination of soil levels of nitrogen and phosphorus, including, for nitrogen, a concurrent determination of nitrogen that will be plant available consistent with the methodology required by paragraph (e)(5)(ii)(A) of this section, and for phosphorus, the results of the most recent soil test conducted in accordance with soil testing requirements approved by the Director; and

(2) The results of most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application, in order to determine the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied.

(6) Changes to a nutrient management plan. Any permit issued to a CAFO must require the following procedures to apply when a CAFO owner or operator makes changes to the CAFO's nutrient management plan previously submitted to the Director:

(i) The CAFO owner or operator must provide the Director with the most current version of the CAFO's nutrient management plan and identify changes from the previous version, except that the results of calculations made in accordance with the requirements of paragraphs (e)(5)(i)(B) and (e)(5)(ii)(D) of this section are not subject to the requirements of paragraph (e)(6) of this section.

(ii) The Director must review the revised nutrient management plan to ensure that it meets the requirements of this section and applicable effluent limitations and standards, including those specified in 40 CFR part 412, and must determine whether the changes to the nutrient management plan necessitate revision to the terms of the nutrient management plan incorporated into the permit issued to the CAFO. If revision to the terms of the nutrient management plan is not necessary, the Director must notify the CAFO owner or operator and upon such notification the CAFO may implement the revised nutrient management plan. If revision to the terms of the nutrient management plan is necessary, the Director must determine whether such changes are substantial changes as described in paragraph (e)(6)(iii) of this section.

(A) If the Director determines that the changes to the terms of the nutrient management plan are not substantial, the Director must make the revised nutrient management plan publicly available and include it in the permit record, revise the terms of the nutrient management plan incorporated into the permit, and notify the owner or operator and inform the public of any changes to the terms of the nutrient management plan that are incorporated into the permit.

(B) If the Director determines that the changes to the terms of the nutrient management plan are substantial, the Director must notify the public and make the proposed changes and the information submitted by the CAFO owner or operator available for public review and comment. The process for public comments, hearing requests, and the hearing process if a hearing is held must follow the procedures applicable to draft permits set forth in 40 CFR 124.11 through 124.13. The Director may establish, either by regulation or in the CAFO's permit, an appropriate period of time for the public to comment and request a hearing on the proposed changes that differs from the time period specified in 40 CFR 124.10. The

Director must respond to all significant comments received during the comment period as provided in 40 CFR 124.17, and require the CAFO owner or operator to further revise the nutrient management plan if necessary, in order to approve the revision to the terms of the nutrient management plan incorporated into the CAFO's permit. Once the Director incorporates the revised terms of the nutrient management plan into the permit, the Director must notify the owner or operator and inform the public of the final decision concerning revisions to the terms and conditions of the permit.

(iii) Substantial changes to the terms of a nutrient management plan incorporated as terms and conditions of a permit include, but are not limited to:

(A) Addition of new land application areas not previously included in the CAFO's nutrient management plan. Except that if the land application area that is being added to the nutrient management plan is covered by terms of a nutrient management plan incorporated into an existing NPDES permit in accordance with the requirements of paragraph (e)(5) of this section, and the CAFO owner or operator applies manure, litter, or process wastewater on the newly added land application area in accordance with the existing field-specific permit terms applicable to the newly added land application area, such addition of new land would be a change to the new CAFO owner or operator's nutrient management plan but not a substantial change for purposes of this section;

(B) Any changes to the field-specific maximum annual rates for land application, as set forth in paragraphs (e)(5)(i) of this section, and to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop, as set forth in paragraph (e)(5)(ii) of this section;

(C) Addition of any crop or other uses not included in the terms of the CAFO's nutrient management plan and corresponding field-specific rates of application expressed in accordance with paragraph (e)(5) of this section; and

(D) Changes to site-specific components of the CAFO's nutrient management plan, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the U.S.

(iv) For EPA-issued permits only. Upon incorporation of the revised terms of the nutrient management plan into the permit, 40 CFR 124.19 specifies procedures for appeal of the permit decision. In addition to the procedures specified at 40 CFR 124.19, a person must have submitted comments or participated in the public hearing in order to appeal the permit decision.

Statutory Authority

The Clean Water Act, 33 U.S.C. 1251 et seq.

History

[48 FR 14153, Apr. 1, 1983, as amended at 49 FR 38049, Sept. 26, 1984; 50 FR 4514, Jan. 31, 1985; 55 FR 48073, Nov. 16, 1990; 57 FR 60448, Dec. 18, 1992; 68 FR 7176, 7268, Feb. 12, 2003; 71 FR 6978, 6984, Feb. 10, 2006; 72 FR 40245, 40250, July 24, 2007; 73 FR 70418, 70483, Nov. 20, 2008; 80 FR 64064, 64098, Oct. 22, 2015]

Annotations

Notes

[EFFECTIVE DATE NOTE:

72 FR 40245, 40250, July 24, 2007, amended paragraph (e)(1), effective July 24, 2007; 73 FR 70418, 70483, Nov. 20, 2008, amended paragraph (e), effective Dec. 22, 2008; 80 FR 64064, 64098, Oct. 22, 2015, revised introductory text in paragraphs (c) and (e)(4) and paragraph (e)(4)(vi), effective Dec. 21, 2015.]

Case Notes

LexisNexis® Notes

Case Notes Applicable to Entire Part
Environmental Law : Hazardous Wastes & Toxic Substances : Toxic Substances
Environmental Law : Hazardous Wastes & Toxic Substances : Treatment, Storage & Disposal
Environmental Law : Solid Wastes : Disposal Standards
Environmental Law : Water Quality : General Overview
Environmental Law : Water Quality : Clean Water Act : Discharge Permits : General Overview
Environmental Law : Water Quality : Clean Water Act : Discharge Permits : Effluent Limitations
Environmental Law : Water Quality : Clean Water Act : Discharge Permits : Public Participation
Environmental Law : Water Quality : Clean Water Act : Recordkeeping & Reporting

Case Notes Applicable to Entire Part

Part Note

Environmental Law : Hazardous Wastes & Toxic Substances : Toxic Substances

Mcclellan Ecological Seepage Situation (mess) v. Weinberger, 707 F. Supp. 1182, 1988 U.S. Dist. LEXIS 16103 (ED Cal June 20, 1988).

This document is current through the December 11, 2017 issue of the Federal Register. Pursuant to 82 FR 8346 ("Regulatory Freeze Pending Review"), certain regulations will be delayed pending further review. See Publisher's Note under affected rules. Title 3 is current through December 4, 2017.

§ 123.25 Requirements for permitting.

(a) All State Programs under this part must have legal authority to implement each of the following provisions and must be administered in conformance with each, except that States are not precluded from omitting or modifying any provisions to impose more stringent requirements:

(1)§ 122.4 -- (Prohibitions):

(2)§ 122.5(a) and (b) -- (Effect of permit);

(3)§ 122.7(b) and (c) -- (Confidential information);

(4)§ 122.21 (a)-(b), (c)(2), (e)-(k), (m)-(p), (q), and (r) -- (Application for a permit);

(5)§ 122.22 -- (Signatories);

(6)§ 122.23 -- (Concentrated animal feeding operations);

(7)§ 122.24 -- (Concentrated aquatic animal production facilities);

(8)§ 122.25 -- (Aquaculture projects);

(9)§ 122.26 -- (Storm water discharges);

(10)§ 122.27 -- (Silviculture);

(11)§ 122.28 -- (General permits), Provided that States which do not seek to implement the general permit program under § 122.28 need not do so.

(12) Section 122.41 (a)(1) and (b) through (n) -- (Applicable permit conditions) (Indian Tribes can satisfy enforcement authority requirements under § 123.34);

(13)§ 122.42 -- (Conditions applicable to specified categories of permits);

(14)§ 122.43 -- (Establishing permit conditions);

(15)§ 122.44 -- (Establishing NPDES permit conditions);

(16)§ 122.45 -- (Calculating permit conditions);

(17)§ 122.46 -- (Duration);

(18)§ 122.47(a) -- (Schedules of compliance);

(19)§ 122.48 -- (Monitoring requirements);

(20)§ 122.50 -- (Disposal into wells);

(21)§ 122.61 -- (Permit transfer);

(22)§ 122.62 -- (Permit modification);

(23)§ 122.64 -- (Permit termination);

(24)§ 124.3(a) -- (Application for a permit);

(25)§ 124.5 (a), (c), (d), and (f) -- (Modification of permits);

(26)§ 124.6 (a), (c), (d), and (e) -- (Draft permit);

(27)§ 124.8 -- (Fact sheets);

(28)§ 124.10 (a)(1)(ii), (a)(1)(iii), (a)(1)(v), (b), (c), (d), and (e) -- (Public notice);

(29)§ 124.11 -- (Public comments and requests for hearings);

(30)§ 124.12(a) -- (Public hearings); and

(31)§ 124.17 (a) and (c) -- (Response to comments);

(32)§ 124.56 -- (Fact sheets);

(33)§ 124.57(a) -- (Public notice);

(34)§ 124.59 -- (Comments from government agencies);

(35)§ 124.62 -- (Decision on variances);

(36) Subparts A, B, D, H, I, J, and N of part 125 of this chapter;

(37)40 CFR parts 129, 133, and subchapter N;

(38) For a Great Lakes State or Tribe (as defined in 40 CFR 132.2), 40 CFR part 132 (NPDES permitting implementation procedures only);

(39)§ 122.30 (What are the objectives of the storm water regulations for small MS4s?);

(40)§ 122.31 (For Indian Tribes only) (As a Tribe, what is my role under the NPDES storm water program?);

(41)§ 122.32 (As an operator of a small MS4, am I regulated under the NPDES storm water program?);

(42)§ 122.33 (If I am an operator of a regulated small MS4, how do I apply for an NPDES permit? When do I have to apply?);

(43)§ 122.34 (As an operator of a regulated small MS4, what will my NPDES MS4 storm water permit require?);

(44)§ 122.35 (As an operator of a regulated small MS4, may I share the responsibility to implement the minimum control measures with other entities?);

(45)§ 122.36 (As an operator of a regulated small MS4, what happens if I don't comply with the application or permit requirements in §§ 122.33 through 122.35?); and

(46)40 CFR part 3 (Cross-Media Electronic Reporting Regulation) and 40 CFR part 127 (NPDES Electronic Reporting Requirements).

Note to paragraph (a): Except for paragraph (a)(46) of this section, states need not implement provisions identical to the above listed provisions. Implemented provisions must, however, establish requirements at least as stringent as the corresponding listed provisions. While States may impose more stringent requirements, they may not make one requirement more lenient as a tradeoff for making another requirement more stringent; for example, by requiring that public hearings be held prior to issuing any permit while reducing the amount of advance notice of such a hearing.

State programs may, if they have adequate legal authority, implement any of the provisions of parts 122 and 124. See, for example, §§ 122.5(d) (continuation of permits) and 124.4 (consolidation of permit processing) of this chapter.

For example, a State may impose more stringent requirements in an NPDES program by omitting the upset provision of § 122.41 of this chapter or by requiring more prompt notice of an upset.

(b) State NPDES programs shall have an approved continuing planning process under 40 CFR 130.5 and shall assure that the approved planning process is at all times consistent with the CWA.

(c) State NPDES programs shall ensure that any board or body which approves all or portions of permits shall not include as a member any person who receives, or has during the previous 2 years received, a significant portion of income directly or indirectly from permit holders or applicants for a permit.

(1) For the purposes of this paragraph:

(i) Board or body includes any individual, including the Director, who has or shares authority to approve all or portions of permits either in the first instance, as modified or reissued, or on appeal.

(ii) Significant portion of income means 10 percent or more of gross personal income for a calendar year, except that it means 50 percent or more of gross personal income for a calendar year if the recipient is over 60 years of age and is receiving that portion under retirement, pension, or similar arrangement.

(iii) Permit holders or applicants for a permit does not include any department or agency of a State government, such as a Department of Parks or a Department of Fish and Wildlife.

(iv) Income includes retirement benefits, consultant fees, and stock dividends.

(2) For the purposes of paragraph (c) of this section, income is not received "directly or indirectly from permit holders or applicants for a permit" when it is derived from mutual fund payments, or from other diversified investments for which the recipient does not know the identity of the primary sources of income.

Statutory Authority

AUTHORITY NOTE APPLICABLE TO ENTIRE PART:

Clean Water Act, 33 U.S.C. 1251 et seq.

History

[48 FR 14178, Apr. 1, 1983; 50 FR 6941, Feb. 19, 1985; 50 FR 7912, Feb. 27, 1985, as amended at 54 FR 18784, May 2, 1989; 55 FR 48075, Nov. 16, 1990; 58 FR 67981, Dec. 22, 1993; 60 FR 15386, Mar. 23, 1995; 63 FR 45114, 45122, Aug. 24, 1998; 64 FR 42434, 42470, Aug. 4, 1999, as corrected at 64 FR 43426, Aug. 10, 1999; 64 FR 68722, 68849, Dec. 8, 1999; 65 FR 30886, 30909, May 15, 2000; 66 FR 65256, 65338, Dec. 18, 2001; 69 FR 41576, 41682, July 9, 2004; 70 FR 59848, 59888, Oct. 13, 2005; 71 FR 35006, 35040, June 16, 2006; 80 FR 64064, 64099, Oct. 22, 2015]

Annotations

Notes

[EFFECTIVE DATE NOTE:

70 FR 59848, 59888, Oct. 13, 2005, amended paragraph (a), effective Jan. 11, 2006; 71 FR 35006, 35040, June 16, 2006, revised paragraph (a)(36), effective July 17, 2006; 80 FR 64064, 64099, Oct. 22, 2015, revised paragraph (a)(46) and the note immediately following it, effective Dec. 21, 2015.]

Case Notes

LexisNexis® Notes

Case Notes Applicable to Entire Part
Administrative Law : Judicial Review : Administrative Record : General Overview
Business & Corporate Law : Corporations : Governing Documents & Procedures : Records & Inspection Rights :
Civil Procedure : Federal & State Interrelationships : General Overview
Constitutional Law : Supremacy Clause : General Overview
Environmental Law : Assessment & Information Access : Public Participation
Environmental Law : Hazardous Wastes & Toxic Substances : Toxic Substances
Environmental Law : Hazardous Wastes & Toxic Substances : Treatment, Storage & Disposal
Environmental Law : Litigation & Administrative Proceedings : Nuisances, Trespasses & Strict Liability
Environmental Law : Water Quality : General Overview
Environmental Law : Water Quality : Clean Water Act : General Overview
Environmental Law : Water Quality : Clean Water Act : Coverage & Definitions : Point Sources
Environmental Law : Water Quality : Clean Water Act : Discharge Permits
Environmental Law : Water Quality : Clean Water Act : Discharge Permits : General Overview
Environmental Law : Water Quality : Clean Water Act : Discharge Permits : Effluent Limitations
Environmental Law : Water Quality : Clean Water Act : Discharge Permits : General Permits

40 CFR 124.8

This document is current through the December 11, 2017 issue of the Federal Register. Pursuant to 82 FR 8346 ("Regulatory Freeze Pending Review"), certain regulations will be delayed pending further review. See Publisher's Note under affected rules. Title 3 is current through December 4, 2017.

§ 124.8 Fact sheet.

(Applicable to State programs, see §§ 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).)

(a)A fact sheet shall be prepared for every draft permit for a major HWM, UIC, 404, or NPDES facility or activity, for every Class I sludge management facility, for every 404 and NPDES general permit (§§ 237.37 and 122.28), for every NPDES draft permit that incorporates a variance or requires an explanation under § 124.56(b), for every draft permit that includes a sewage sludge land application plan under 40 CFR 501.15(a)(2)(ix), and for every draft permit which the Director finds is the subject of wide-spread public interest or raises major issues. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. The Director shall send this fact sheet to the applicant and, on request, to any other person.

(b) The fact sheet shall include, when applicable:

(1)A brief description of the type of facility or activity which is the subject of the draft permit;

(2) The type and quantity of wastes, fluids, or pollutants which are proposed to be or are being treated, stored, disposed of, injected, emitted, or discharged.

(3) For a PSD permit, the degree of increment consumption expected to result from operation of the facility or activity.

(4)A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by § 124.9 (for EPA-issued permits);

(5) Reasons why any requested variances or alternatives to required standards do or do not appear justified;

(6)A description of the procedures for reaching a final decision on the draft permit including:

(i) The beginning and ending dates of the comment period under § 124.10 and the address where comments will be received;

(ii) Procedures for requesting a hearing and the nature of that hearing; and

(iii) Any other procedures by which the public may participate in the final decision.

(7) Name and telephone number of a person to contact for additional information.

(8) For NPDES permits, provisions satisfying the requirements of § 124.56.

(9) Justification for waiver of any application requirements under § 122.21(j) or (q) of this chapter.

Statutory Authority

AUTHORITY NOTE APPLICABLE TO ENTIRE PART:

Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq.; Safe Drinking Water Act, 42 U.S.C. 300f et seq.; Clean Water Act, 33 U.S.C. 1251 et seq.; Clean Air Act, 42 U.S.C. 7401 et seq.

History

[48 FR 14264, Apr. 1, 1983, as amended at 54 FR 18786, May 2, 1989; 64 FR 42434, 42470, Aug. 4, 1999, as corrected at 64 FR 43426, Aug. 10, 1999; 65 FR 43586, 43661, July 13, 2000, withdrawn at 68 FR 13608, 13614, Mar. 19, 2003; 66 FR 53044, 53048, Oct. 18, 2001]

Annotations

Case Notes

LexisNexis® Notes

Administrative Law : Agency Rulemaking : Rule Application & Interpretation : General Overview
Administrative Law : Judicial Review : Administrative Record : General Overview
Contracts Law : Negotiable Instruments : General Overview
Environmental Law : Litigation & Administrative Proceedings : Jurisdiction & Procedure
Environmental Law : Water Quality : General Overview
Environmental Law : Water Quality : Clean Water Act : Discharge Permits : Public Participation

Administrative Law : Agency Rulemaking : Rule Application & Interpretation : General Overview

United States v. Metropolitan Dist. Com., 1985 U.S. Dist. LEXIS 16232 (D Mass Sept. 5, 1985).

53 FR 49416

December 7, 1988

Proposed Regulations

Reporter
53 FR 49416

Federal Register > 1988 > December > December 7, 1988 > Proposed Regulations

Title: ENVIRONMENTAL PROTECTION AGENCY
National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges

Action: Proposed rule.

Identifier: [FRL 3376-8]

Administrative Code Citation

40 CFR Parts 122, 123, 124 and 504

Synopsis

SUMMARY: Section 405 of the Water Quality Act of 1987 (WQA) added Section 402(p) of the Clean Water Act (CWA) to require the Environmental Protection Agency (EPA) to establish regulations setting forth National Pollutant Discharge Elimination System (NPDES) permit application requirements for: storm water discharges associated with industrial activity; discharges from a municipal separate storm sewer system serving a population of 250,000 or more; and discharges from a municipal separate storm sewer system serving a population of 100,000 or more, but less than 250,000. Today's notice requests comments on proposed permit application requirements for these discharges and for storm water discharges which are designated on a case-by-case basis for a permit for which the Administrator, or State, as the case may be, determines contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

Section 401 of the WQA amended Section 402(1)(2) to provide that NPDES permits shall not be required for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities, which are not contaminated by contact with, or do not come into contact with, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of such operations. Today's notice requests comments on regulations proposed to clarify and implement this provision.

Text

remain in place after the construction activity is completed, as continued maintenance, after the permit has expired, is more feasible.

EPA requests comments on the use of no limit or other limits such as 2, 10 or 20 acres. In addition, limitations could be based on or modified by other factors. Time limitations which consider the length of the construction activity or the season during which the activity occurs may provide a more workable administrative system while still addressing the major water quality impacts associated with construction activities. Other factors, such as steep slopes at the site, which affect the nature of the runoff, may be appropriate for defining special cases which would be addressed in this rulemaking. EPA also requests comments on other factors, such as the intensity of the development within the watershed, which affect the water quality impacts in receiving waters. Such site specific factors may be difficult to define in federal regulations. For example, a definition based on relatively easily interpreted criteria such as Census designated urban areas may not provide adequate protection for rapidly developing areas which are located outside the urban area. EPA requests comments on other factors which can be used to develop a limit on storm water discharges from construction sites which are classified as storm water discharges associated with industrial activity.

Proposed 122.26(a) would specify that storm water discharges, including construction site runoff, that discharge to municipal storm sewers are not required to obtain individual or group permits unless specifically designated by the Director. Under today's proposal, municipal permittees will be responsible for developing a proposed management plan to control pollutants in runoff from construction sites which discharge to large and medium municipal separate storm sewer systems (see § VII.G.8.d of the preamble). The Agency believes that the majority of construction sites do not discharge storm water directly to waters of the United States, but rather discharge to a municipal storm sewer or manage storm water on-site. For example, construction site runoff from a new subdivision which discharges to the drainage system of an existing road or a road that is being built by a developer for a municipality is, under this proposal, discharging to a municipal storm sewer.

9. Application Requirements for New Sources and New Discharges

Today's proposed permit application requirements provide that new sources and new discharges which discharge storm water include estimates of pollutants or parameters for which other storm water discharges are required to submit data. Under the proposal, operators of such discharges are required to provide the quantitative data which is required for other similar existing storm water discharges within two years after the commencement of the discharge, unless the data has already been reported under the monitoring requirements of the NPDES permit for the discharge.

F. Municipal Separate Storm Sewer Systems

1. Municipal Separate Storm Sewers

Today's notice proposes to define "municipal separate storm sewer" at § 122.26(b)(8) as any conveyance or system of conveyances that is owned or operated by a State or local government entity and is used for collecting and conveying storm water which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

It is important to note that the proposed permit application requirements for discharges from municipal separate storm sewers do not apply to discharges from combined sewers that are designed as both a

sanitary sewer and a storm sewer. Discharges from combined sewer systems are not regulated under this proposed rule.

The Agency also wants to clarify that streams, wetlands and other water bodies that are waters of the United States are not storm sewers for the purpose of this rule. This use of the term "storm sewer" differs from the way that the term has often been used in the context of flood control, where natural streams and other water bodies are sometimes considered storm sewers. Activities such as stream channelization, and stream bed stabilization, which occur in waters of the United States would generally not be subject to permits issued under § 402 of the CWA. However, such activities occurring within waters of the United States may be subject to dredge and fill permits required under section 404 of the CWA by the Corps of Engineers. Applicants should consult the regulatory definition of "waters of the United States" at 40 CFR 122.2 to distinguish between storm sewers and waters of the United States.

Some municipalities have maintained in previous comments that difficulties may arise with determining owners or operators of municipal storm sewers as clear title to the storm sewer may not exist. Often, where the ownership of such conveyances is in question, the storm sewer is not maintained and hence an "operator" criteria is not particularly useful. EPA requests comments on different wording for the definition of municipal separate storm sewer to clarify responsibility under the NPDES permit system. Do legal classifications such as storm sewers that are not private (e.g., public, district or joint district sewers) provide a clearer definition than an owner or operator criteria? Does the definition need to be clarified by explicitly stating that municipal streets and roads with drainage systems (curb and gutter, ditches, etc.) are part of the municipal storm sewer system, and the owners or operators of such roads are responsible for such discharges? To what extent should the owner or operator concept apply to municipal governments with land-use authority over lands which contribute storm water runoff to the municipal storm sewer system, and how should this responsibility be clarified?

2. Effective Prohibition on Non-Storm Water Discharges

Section 402(p)(3)(B)(ii) of the amended CWA requires that permits for discharges from municipal storm sewers shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers.

EPA does not interpret the effective prohibition on non-storm water discharges to municipal separate storm sewers to apply to discharges that are not composed entirely of storm water, as long as such discharge has been issued a separate NPDES permit. Rather, an "effective prohibition" would require separate NPDES permits for non-storm water discharges to municipal storm sewers. In many cases in the past, applicants for NPDES permits for process wastewaters and other non-storm water discharges have been granted approval to discharge into municipal separate storm sewers, provided that the permit conditions for the discharge are met at the point where the discharge enters into the separate storm sewer. Permits for such discharges must meet applicable technology-based and water-quality based requirements of Sections 402 and 301 of the CWA. If the permit for a non-storm water discharge to a municipal separate storm sewer contains water-quality based limitations, then such limitations should generally be based on meeting applicable water quality standards at the boundary of a State mixing zone (for States with mixing zones) located in a water of the United States. Water-quality based limitations would also generally be established during dry weather conditions, when the discharge would not be mixed with storm water in the municipal separate storm sewer (unless receiving water conditions during wet weather dictate more stringent water-quality based limitations).

TAB 3

Deering's California Codes are current with all legislation of the 2017 Regular Session (Chapters 1-859).

§ 452. Matters which may be judicially noticed

Judicial notice may be taken of the following matters to the extent that they are not embraced within Section 451:

(a) The decisional, constitutional, and statutory law of any state of the United States and the resolutions and private acts of the Congress of the United States and of the Legislature of this state.

(b) Regulations and legislative enactments issued by or under the authority of the United States or any public entity in the United States.

(c) Official acts of the legislative, executive, and judicial departments of the United States and of any state of the United States.

(d) Records of (1) any court of this state or (2) any court of record of the United States or of any state of the United States.

(e) Rules of court of (1) any court of this state or (2) any court of record of the United States or of any state of the United States.

(f) The law of an organization of nations and of foreign nations and public entities in foreign nations.

(g) Facts and propositions that are of such common knowledge within the territorial jurisdiction of the court that they cannot reasonably be the subject of dispute.

(h) Facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy.

History

Enacted Stats 1965 ch 299 § 2, operative January 1, 1967.

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§ 11515. Official notice

In reaching a decision official notice may be taken, either before or after submission of the case for decision, of any generally accepted technical or scientific matter within the agency's special field, and of any fact which may be judicially noticed by the courts of this State. Parties present at the hearing shall be informed of the matters to be noticed, and those matters shall be noted in the record, referred to therein, or appended thereto. Any such party shall be given a reasonable opportunity on request to refute the officially noticed matters by evidence or by written or oral presentation of authority, the manner of such refutation to be determined by the agency.

History

Added Stats 1945 ch 867 § 1.

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§ 13000. Legislative findings and declarations

The Legislature finds and declares that the people of the state have a primary interest in the conservation, control, and utilization of the water resources of the state, and that the quality of all the waters of the state shall be protected for use and enjoyment by the people of the state.

The Legislature further finds and declares that activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.

The Legislature further finds and declares that the health, safety and welfare of the people of the state requires that there be a statewide program for the control of the quality of all the waters of the state; that the state must be prepared to exercise its full power and jurisdiction to protect the quality of waters in the state from degradation originating inside or outside the boundaries of the state; that the waters of the state are increasingly influenced by interbasin water development projects and other statewide considerations; that factors of precipitation, topography, population, recreation, agriculture, industry and economic development vary from region to region within the state; and that the statewide program for water quality control can be most effectively administered regionally, within a framework of statewide coordination and policy.

History

Added Stats 1969 ch 482 § 18, operative January 1, 1970.

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§ 13050. Terms used in this division

As used in this division:

(a) "State board" means the State Water Resources Control Board.

(b) "Regional board" means any California regional water quality control board for a region as specified in Section 13200.

(c) "Person" includes any city, county, district, the state, and the United States, to the extent authorized by federal law.

(d) "Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

(e) "Waters of the state" means any surface water or groundwater, including saline waters, within the boundaries of the state.

(f) "Beneficial uses" of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

(g) "Quality of the water" refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use.

(h) "Water quality objectives" means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

(i) "Water quality control" means the regulation of any activity or factor which may affect the quality of the waters of the state and includes the prevention and correction of water pollution and nuisance.

(j) "Water quality control plan" consists of a designation or establishment for the waters within a specified area of all of the following:

(1) Beneficial uses to be protected.

(2) Water quality objectives.

(3) A program of implementation needed for achieving water quality objectives.

(k) "Contamination" means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.

(l)

(1) "Pollution" means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following:

(A) The waters for beneficial uses.

(B) Facilities which serve these beneficial uses.

(2) "Pollution" may include "contamination."

(m) "Nuisance" means anything which meets all of the following requirements:

(1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

(2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

(3) Occurs during, or as a result of, the treatment or disposal of wastes.

(n) "Recycled water" means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefor considered a valuable resource.

(o) "Citizen or domiciliary" of the state includes a foreign corporation having substantial business contacts in the state or which is subject to service of process in this state.

(p)

(1) "Hazardous substance" means either of the following:

(A) For discharge to surface waters, any substance determined to be a hazardous substance pursuant to Section 311(b)(2) of the Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.).

(B) For discharge to groundwater, any substance listed as a hazardous waste or hazardous material pursuant to Section 25140 of the Health and Safety Code, without regard to whether the substance is intended to be used, reused, or discarded, except that "hazardous substance" does not include any substance excluded from Section 311(b)(2) of the Federal Water Pollution Control Act because it is within the scope of Section 311(a)(1) of that act.

(2) "Hazardous substance" does not include any of the following:

(A) Nontoxic, nonflammable, and noncorrosive stormwater runoff drained from underground vaults, chambers, or manholes into gutters or storm sewers.

(B) Any pesticide which is applied for agricultural purposes or is applied in accordance with a cooperative agreement authorized by Section 116180 of the Health and Safety

Code, and is not discharged accidentally or for purposes of disposal, the application of which is in compliance with all applicable state and federal laws and regulations.

(C) Any discharge to surface water of a quantity less than a reportable quantity as determined by regulations issued pursuant to Section 311(b)(4) of the Federal Water Pollution Control Act.

(D) Any discharge to land which results, or probably will result, in a discharge to groundwater if the amount of the discharge to land is less than a reportable quantity, as determined by regulations adopted pursuant to Section 13271, for substances listed as hazardous pursuant to Section 25140 of the Health and Safety Code. No discharge shall be deemed a discharge of a reportable quantity until regulations set a reportable quantity for the substance discharged.

(q)

(1) "Mining waste" means all solid, semisolid, and liquid waste materials from the extraction, beneficiation, and processing of ores and minerals. Mining waste includes, but is not limited to, soil, waste rock, and overburden, as defined in Section 2732 of the Public Resources Code, and tailings, slag, and other processed waste materials, including cementitious materials that are managed at the cement manufacturing facility where the materials were generated.

(2) For the purposes of this subdivision, "cementitious material" means cement, cement kiln dust, clinker, and clinker dust.

(r) "Master recycling permit" means a permit issued to a supplier or a distributor, or both, of recycled water, that includes waste discharge requirements prescribed pursuant to Section 13263 and water recycling requirements prescribed pursuant to Section 13523.1.

History

Added Stats 1969 ch 482 § 18, operative January 1, 1970. Amended Stats 1969 ch 800 § 2.5; Stats 1970 ch 202 § 1; Stats 1980 ch 877 § 1; Stats 1989 ch 642 § 2; Stats 1991 ch 187 § 1 (AB 673); Stats 1992 ch 211 § 1 (AB 3012); Stats 1995 ch 28 § 17 (AB 1247), ch 847 § 2 (SB 206); Stats 1996 ch 1023 § 429 (SB 1497), effective September 29, 1996.

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Cal Wat Code § 13170.2

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Deering's California Codes Annotated > WATER CODE > Division 7 Water Quality > Chapter 3 State Water Quality Control > Article 4 Other Powers and Duties of the State Board

§ 13170.2. California Ocean Plan

(a) The state board shall formulate and adopt a water quality control plan for ocean waters of the state which shall be known as the California Ocean Plan.

(b) The plan shall be reviewed at least every three years to guarantee that the current standards are adequate and are not allowing degradation to indigenous marine species or posing a threat to human health.

(c) In formulating the plan, the state board shall develop bioassay protocols to evaluate the effect of municipal and industrial waste discharges on the marine environment.

(d) The state board shall adopt the bioassay protocols and complementary chemical testing methods and shall require their use in the monitoring of complex effluent ocean discharges. For purposes of this section, "complex effluent" means an effluent in which all chemical constituents are not known or monitored. The state board shall adopt bioassay protocols and complementary chemical testing methods for complex effluent ocean monitoring by January 1, 1990, and shall require their use in monitoring complex effluent ocean discharges by entities discharging 100 million gallons per day or more by January 1, 1991. The state board shall also adopt a schedule for requiring the use of these protocols for complex effluent ocean discharges of under 100 million gallons per day by January 1, 1992.

History

Added Stats 1986 ch 1478 § 2.

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§ 13240. Formulation, adoption, and revision of plans

Each regional board shall formulate and adopt water quality control plans for all areas within the region. Such plans shall conform to the policies set forth in Chapter 1 (commencing with Section 13000) of this division and any state policy for water quality control. During the process of formulating such plans the regional boards shall consult with and consider the recommendations of affected state and local agencies. Such plans shall be periodically reviewed and may be revised.

History

Added Stats 1969 ch 482 § 18, operative January 1, 1970.

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Cal Wat Code § 13376

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Deering's California Codes Annotated > WATER CODE > Division 7 Water Quality > Chapter 5.5 Compliance With the Provisions of the Federal Water Pollution Control Act as Amended in 1972

§ 13376. Reports as to discharge of pollutants to navigable waters

A person who discharges pollutants or proposes to discharge pollutants to the navigable waters of the United States within the jurisdiction of this state or a person who discharges dredged or fill material or proposes to discharge dredged or fill material into the navigable waters of the United States within the jurisdiction of this state shall file a report of the discharge in compliance with the procedures set forth in Section 13260. Unless required by the state board or a regional board, a report need not be filed under this section for discharges that are not subject to the permit application requirements of the Federal Water Pollution Control Act, as amended. A person who proposes to discharge pollutants or dredged or fill material or to operate a publicly owned treatment works or other treatment works treating domestic sewage shall file a report at least 180 days in advance of the date on which it is desired to commence the discharge of pollutants or dredged or fill material or the operation of the treatment works. A person who owns or operates a publicly owned treatment works or other treatment works treating domestic sewage, which treatment works commenced operation before January 1, 1988, and does not discharge to navigable waters of the United States, shall file a report within 45 days of a written request by a regional board or the state board, or within 45 days after the state has an approved permit program for the use and disposal of sewage sludge, whichever occurs earlier. The discharge of pollutants or dredged or fill material or the operation of a publicly owned treatment works or other treatment works treating domestic sewage by any person, except as authorized by waste discharge requirements or dredged or fill material permits, is prohibited. This prohibition does not apply to discharges or operations if a state or federal permit is not required under the Federal Water Pollution Control Act, as amended.

History

Added Stats 1987 ch 1189 § 6. Amended Stats 2010 ch 288 § 32 (SB 1169), effective January 1, 2011.

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Cal Wat Code § 13377

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Deering's California Codes Annotated > WATER CODE > Division 7 Water Quality > Chapter 5.5 Compliance With the Provisions of the Federal Water Pollution Control Act as Amended in 1972

§ 13377. Boards' issuance of requirements pursuant to federal act

Notwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.

History

Added Stats 1972 ch 1256 § 1, effective December 19, 1972. Amended Stats 1978 ch 746 § 3.

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§ 13383. Monitoring, inspection, entry, reporting, and recordkeeping requirements

(a) The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge.

(b) The state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required.

(c) The state board or a regional board may inspect the facilities of any person subject to this section pursuant to the procedure set forth in subdivision (c) of Section 13267.

History

Added Stats 1987 ch 1189 § 8. Amended Stats 2003 ch 683 § 6 (AB 897).

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2006 Cal AB 1881

Enacted, September 28, 2006

Reporter
2006 Cal ALS 559; 2006 Cal AB 1881; 2006 Cal Stats. ch. 559

DEERING'S CALIFORNIA ADVANCE LEGISLATIVE SERVICE > 2006 REGULAR SESSION > CHAPTER 559 > (ASSEMBLY BILL NO. 1881)

Notice

Urgency legislation is effective immediately, Non-urgency legislation will become effective January 1, 2007

[A> Uppercase text within these symbols is added <A]

* * * indicates deleted text

Digest

Water conservation.

(1) Existing law, the Davis-Sterling Common Interest Development Act, defines and regulates common interest developments, which include community apartment projects, condominium projects, planned developments, and stock cooperatives.

This bill would provide that the architectural guidelines of a common interest development shall not prohibit or include conditions that have the effect of prohibiting the use of low water-using plants as a group.

(2) The Water Conservation in Landscaping Act requires the Department of Water Resources to appoint an advisory task force to work with the department to draft a model local water efficient landscape ordinance that local agencies may adopt, requires the task force to submit the ordinance to the department on or before May 1, 1991, and requires the task force to cease to exist on the date the department adopts the model ordinance or January 1, 1992, whichever occurs first. The act requires the department, not later than January 1, 1992, to adopt a model local water efficient landscape ordinance which each local agency may adopt. The act makes the model local water efficient landscape ordinance adopted by the department applicable within the jurisdiction of a local agency if that local agency, by January 1, 1993, has not adopted a water efficient landscape ordinance or has not adopted certain findings that the adoption of the ordinance is unnecessary.

This bill would specify that the provision making the model ordinance applicable to a local agency on and after January 1, 1993, does not apply to chartered cities. The bill would require the department, to the extent funds are appropriated, not later than January 1, 2009, by regulation, to update the model ordinance in accordance with specified requirements. The bill would require the department to prepare and submit to

the Legislature a prescribed report before the adoption of the updated model ordinance. The bill would require a local agency, not later than January 1, 2010, to adopt the updated model ordinance or other water efficient landscape ordinance that is at least as effective in conserving water as the updated model ordinance. The bill would make the updated model ordinance applicable within the jurisdiction of a local agency, including a chartered city, if, by January 1, 2010, the local agency has not adopted its own water efficient landscape ordinance or the updated model ordinance. The bill would require each local agency, not later than January 31, 2010, to notify the department as to whether the local agency is subject to the department's updated model ordinance and, if not, to submit to the department a copy of the water efficient landscape ordinance adopted by the local agency, among other documents. The bill would require the department, to the extent funds are appropriated, not later than January 31, 2011, to prepare and submit a report to the Legislature relating to the status of water efficient landscape ordinances adopted by local agencies.

By imposing requirements on local agencies in connection with the adoption of water efficient landscape ordinances, the bill would impose a state-mandated local program.

(3) Existing law requires the State Energy Resources Conservation and Development Commission (Energy Commission), after one or more public hearings, to take specified action to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy. Existing law requires the Energy Commission, by January 1, 2004, to amend specified regulations to require that residential clothes washers manufactured on or after January 1, 2007, be at least as water efficient as commercial clothes washers, and to take certain other related action.

This bill would require the Energy Commission, in consultation with the department, to adopt, to the extent funds are available, by regulation performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water. The bill would require the Energy Commission to adopt those requirements for landscape irrigation controllers and moisture sensors by January 1, 2010, and, on and after January 1, 2012, would prohibit the sale or installation of an irrigation controller or moisture sensor for landscape use unless the controller or sensor meets those adopted requirements. The bill would require the Energy Commission, on or before January 1, 2010, to prepare and submit to the Legislature a report that sets forth a proposed schedule for adopting performance standards and labeling requirements for emission devices and valves.

(4) Existing law generally requires an urban water supplier to install water meters on all municipal and industrial service connections located within its service area on or before January 1, 2025.

This bill would require a water purveyor as defined, to require as a condition of new retail water service on and after January 1, 2008, the installation of separate water meters to measure the volume of water used exclusively for landscape purposes. The bill would make this requirement applicable to specified service connections.

(5) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that, if the Commission on State Mandates determines that the bill contains costs mandated by the state, reimbursement for those costs shall be made pursuant to these statutory provisions.

Synopsis

An act to add Section 1353.8 to the Civil Code, to repeal and add Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code, to add Section 25401.9 to the Public Resources Code, and to add Article 4.5 (commencing with Section 535) to Chapter 8 of Division 1 of the Water Code, relating to water conservation.

Text

The people of the State of California do enact as follows:

SECTION 1.
Section 1353.8 is added to the Civil Code, to read:

§ 1353.8.

The architectural guidelines of a common interest development shall not prohibit or include conditions that have the effect of prohibiting the use of low water-using plants as a group.

SEC. 2.
Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code is repealed.
Article 10.8

SEC. 3.
Article 10.8 (commencing with Section 65591) is added to Chapter 3 of Division 1 of Title 7 of the Government Code, to read:
Article 10.8 Water Conservation in Landscaping

§ 65591.

This article shall be known and may be cited as the Water Conservation in Landscaping Act.

§ 65592.

Unless the context requires otherwise, the following definitions govern the construction of this article:

(a) "Department" means the Department of Water Resources.

(b) "Local agency" means any city, county, or city and county, including a charter city or charter county.

(c) "Water efficient landscape ordinance" means an ordinance or resolution adopted by a local agency, or prepared by the department, to address the efficient use of water in landscaping.

§ 65593.

The Legislature finds and declares all of the following:

(a) The waters of the state are of limited supply and are subject to ever increasing demands.

(b) The continuation of California's economic prosperity is dependent on adequate supplies of water being available for future uses.

(c) It is the policy of the state to promote the conservation and efficient use of water and to prevent the waste of this valuable resource.

(d) Landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development.

(e) Landscape design, installation, maintenance, and management can and should be water efficient.

(f) Section 2 of Article X of the California Constitution specifies that the right to use water is limited to the amount reasonably required for the beneficial use to be served and the right does not and shall not extend to waste or unreasonable use or unreasonable method of use.

(g) (1) The Legislature, pursuant to Chapter 682 of the Statutes of 2004, requested the California Urban Water Conservation Council to convene a stakeholders work group to develop recommendations for improving the efficiency of water use in urban irrigated landscapes.

(2) The work group report includes a recommendation to update the model water efficient landscape ordinance adopted by the department pursuant to Chapter 1145 of the Statutes of 1990.

(3) It is the intent of the Legislature that the department promote the use of this updated model ordinance.

(h) Notwithstanding Article 13 (commencing with Section 65700), this article addresses a matter that is of statewide concern and is not a municipal affair as that term is used in Section 5 of Article XI of the California Constitution. Accordingly, it is the intent of the Legislature that this article, except as provided in Section 65594, apply to all cities and counties, including charter cities and charter counties.

§ 65594.

(a) Except as provided in Section 65595, if by January 1, 1993, a local agency did not adopt a water efficient landscape ordinance and did not adopt findings based on climatic, geological, or topographical conditions, or water availability that state that a water efficient landscape ordinance is unnecessary, the model water efficient landscape ordinance adopted by the department pursuant to Chapter 1145 of the Statutes of 1990 shall apply within the jurisdiction of the local agency as of that date, shall be enforced by the local agency, and shall have the same force and effect as if adopted by the local agency.

(b) Notwithstanding subdivision (b) of Section 65592, subdivision (a) does not apply to chartered cities.

(c) This section shall apply only until the department updates the model ordinance.

§ 65595.

(a) (1) To the extent funds are appropriated, not later than January 1, 2009, by regulation, the department shall update the model water efficient landscape ordinance adopted pursuant to Chapter 1145 of the Statutes of 1990, after holding one or more public hearings. The updated model ordinance shall be based on the recommendations set forth in the report prepared pursuant to Chapter 682 of the Statutes of 2004 and shall meet the requirements of Section 65596.

(2) Before the adoption of the updated model ordinance pursuant to paragraph (1), the department shall prepare and submit to the Legislature a report relating to both of the following:

(A) The extent to which local agencies have complied with the model water efficient landscape ordinance adopted pursuant to Chapter 1145 of the Statutes of 1990.

(B) The department's recommendations regarding the landscape water budget component of the updated model ordinance described in subdivision (b) of Section 65596.

(b) Not later than January 31, 2009, the department shall distribute the updated model ordinance adopted pursuant to subdivision (a) to all local agencies and other interested parties.

(c) On or before January 1, 2010, a local agency shall adopt one of the following:

(1) A water efficient landscape ordinance that is, based on evidence in the record, at least as effective in conserving water as the updated model ordinance adopted by the department pursuant to subdivision (a).

(2) The updated model ordinance described in paragraph (1).

(d) If the local agency has not adopted, on or before January 1, 2010, a water efficient landscape ordinance pursuant to subdivision (c), the updated model ordinance adopted by the department pursuant to subdivision (a) shall apply within the jurisdiction of the local agency as of that date, shall be enforced by the local agency, and shall have the same force and effect as if adopted by the local agency.

(e) Nothing in this article shall be construed to require the local agency's water efficient landscape ordinance to duplicate, or to conflict with, a water efficiency program or measure implemented by a public water system, as defined in Section 116275 of the Health and Safety Code, within the jurisdictional boundaries of the local agency.

§ 65596.

The updated model ordinance adopted pursuant to Section 65595 shall do all the following in order to reduce water use:

(a) Include provisions for water conservation and the appropriate use and groupings of plants that are well-adapted to particular sites and to particular climatic, soil, or topographic conditions. The model ordinance shall not prohibit or require specific plant species, but it may include conditions for the use of plant species or encourage water conserving plants. However, the model ordinance shall not include conditions that have the effect of prohibiting or requiring specific plant species.

(b) Include a landscape water budget component that establishes the maximum amount of water to be applied through the irrigation system, based on climate, landscape size, irrigation efficiency, and plant needs.

(c) Promote the benefits of consistent local ordinances in neighboring areas.

(d) Encourage the capture and retention of stormwater onsite to improve water use efficiency or water quality.

(e) Include provisions for the use of automatic irrigation systems and irrigation schedules based on climatic conditions, specific terrains and soil types, and other environmental conditions. The model ordinance shall include references to local, state, and federal laws and regulations regarding standards for water-conserving irrigation equipment. The model ordinance may include climate information for irrigation scheduling based on the California Irrigation Management Information System.

(f) Include provisions for onsite soil assessment and soil management plans that include grading and drainage to promote healthy plant growth and to prevent excessive erosion and runoff, and the use of mulches in shrub areas, garden beds, and landscaped areas where appropriate.

(g) Promote the use of recycled water consistent with Article 4 (commencing with Section 13520) of Chapter 7 of Division 7 of the Water Code.

(h) Seek to educate water users on the efficient use of water and the benefits of doing so.

(i) Address regional differences, including fire prevention needs.

(j) Exempt landscaping that is part of a registered historical site.

(k) Encourage the use of economic incentives to promote the efficient use of water.

(l) Include provisions for landscape maintenance practices that foster long-term landscape water conservation. Landscape maintenance practices may include, but are not limited to, performing routine irrigation system repair and adjustments, conducting water audits, and prescribing the amount of water applied per landscaped acre.

(m) Include provisions to minimize landscape irrigation overspray and runoff.

§ 65597.

Not later than January 31, 2010, each local agency shall notify the department as to whether the local agency is subject to the department's updated model ordinance adopted pursuant to Section 65595, and if not, shall submit to the department a copy of the water efficient landscape ordinance adopted by the local agency, and a copy of the local agency's findings and evidence in the record that its water efficient landscape ordinance is at least as effective in conserving water as the department's updated model ordinance. Not later than January 31, 2011, the department shall, to the extent funds are appropriated, prepare and submit a report to the Legislature summarizing the status of water efficient landscape ordinances adopted by local agencies.

§ 65598.

Any model ordinance adopted pursuant to this article shall exempt cemeteries from all provisions of the ordinance except those set forth in subdivisions (h), (k), and (*l*) of Section 65596. In adopting language specific to cemeteries, the department shall recognize the special landscape management needs of cemeteries.

§ 65599.

Any actions or proceedings to attach, review, set aside, void, or annul the act, decision, or findings of a local agency on the ground of noncompliance with this article shall be brought pursuant to Section 1085 of the Code of Civil Procedure.

SEC. 4.
Section 25401.9 is added to the Public Resources Code, to read:

§ 25401.9.

(a) To the extent that funds are available, the commission, in consultation with the Department of Water Resources, shall adopt by regulation, after holding one or more public hearings, performance standards and labeling requirements for landscape irrigation equipment, including, but not limited to, irrigation controllers, moisture sensors, emission devices, and valves, for the purpose of reducing the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

(b) For the purposes of complying with subdivision (a), the commission shall do all of the following:

(1) Adopt performance standards and labeling requirements for landscape irrigation controllers and moisture sensors on or before January 1, 2010.

(2) Consider the Irrigation Association's Smart Water Application Technology Program testing protocols when adopting performance standards for landscape irrigation equipment, including, but not limited to, irrigation controllers, moisture sensors, emission devices, and valves.

(3) Prepare and submit a report to the Legislature, on or before January 1, 2010, that sets forth on a proposed schedule for adopting performance standards and labeling requirements for emission devices and valves.

(c) On and after January 1, 2012, an irrigation controller or moisture sensor for landscape irrigation uses may not be sold or installed in the state unless the controller or sensor meets the performance standards and labeling requirements established pursuant to this section.

SEC. 5.
Article 4.5 (commencing with Section 535) is added to Chapter 8 of Division 1 of the Water Code, to read:
Article 4.5 Irrigated Landscape

§ 535.

(a) A water purveyor shall require as a condition of new retail water service on and after January 1, 2008, the installation of separate water meters to measure the volume of water used exclusively for landscape purposes.

(b) Subdivision (a) does not apply to either of the following:

(1) Single-family residential connections.

(2) Connections used to supply water for the commercial production of agricultural crops or livestock.

(c) Subdivision (a) applies only to a service connection for which both of the following apply:

(1) The connection serves property with more than 5,000 square feet of irrigated landscape.

(2) The connection is supplied by a water purveyor that serves 15 or more service connections.

(d) For the purposes of this section, "new retail water service" means the installation of a new water meter where water service has not been previously provided, and does not include applications for new water service submitted before January 1, 2007.

SEC. 6.

If the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code.

History

Approved by Governor September 28, 2006.

Filed with Secretary of State September 28, 2006.

DEERING'S CALIFORNIA ADVANCE LEGISLATIVE SERVICE
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TAB 4

BEFORE THE

COMMISSION ON STATE MANDATES

STATE OF CALIFORNIA

IN RE TEST CLAIM ON: 10-TC-12 Water Code Division 6, Part 2.55 [Sections 10608 through 10608.64] and Part 2.8 [Sections 10800 through 10853] as added by Statutes 2009-2010, 7th Extraordinary Session, Chapter 4; Filed on June 30, 2011; By, South Feather Water and Power Agency, Paradise Irrigation District, Richvale Irrigation District, Biggs-West Gridley Water District, Claimants; *Consolidated with* 12-TC-01 Filed on February 28, 2013; California Code of Regulations, title 23, sections 597, 597.1 597.2, 597.3, and 597.4, Register 2012, No. 28; By, Richvale Irrigation District, Biggs-West Gridley Water District, Oakdale Irrigation District, Glenn-Colusa Irrigation District, Claimants.	Case Nos.: 10-TC-12 and 12-TC-01 *Water Conservation* DECISION PURSUANT TO GOVERNMENT CODE SECTION 17500 ET SEQ.; CALIFORNIA CODE OF REGULATIONS, TITLE 2, DIVISION 2, CHAPTER 2.5, ARTICLE 7. (*Adopted December 5, 2014*) (*Served December 12, 2014*)

DECISION

The Commission on State Mandates (Commission) heard and decided this test claim during a regularly scheduled hearing on December 5, 2014. Dustin Cooper, Peter Harman, and Alexis Stevens appeared on behalf of the claimants. Donna Ferebee and Lee Scott appeared on behalf of the Department of Finance. Spencer Kenner appeared on behalf of the Department of Water Resources. Dorothy Holzem of the California Special Districts Association and Geoffrey Neill of the California State Association of Counties also appeared on behalf of interested persons and parties.

The law applicable to the Commission's determination of a reimbursable state-mandated program is article XIII B, section 6 of the California Constitution, Government Code sections 17500 et seq., and related case law.

The Commission adopted the proposed decision to deny the test claim by a vote of six to zero.

Summary of the Findings

The Commission finds that the two original agricultural water supplier claimants named in each test claim, Richvale Irrigation District and Biggs-West Gridley Water District, are not eligible to claim reimbursement under article XIII B, section 6, because they do not collect or expend tax revenue, and are therefore not subject to the limitations of articles XIII A and XIII B. However, two substitute agricultural water supplier claimants, Oakdale Irrigation District and Glenn-Colusa Irrigation District, are subject to articles XIII A and XIII B and are therefore claimants eligible to seek reimbursement under article XIII B, section 6. As a result, the Commission has jurisdiction to hear and determine test claims 10-TC-12 and 12-TC-01.

The Commission finds that the Water Conservation Act of 2009 (Act), and the Agricultural Water Measurement regulations promulgated by the Department of Water Resources (DWR) to implement the Act, impose some new required activities on urban water suppliers and agricultural water suppliers, including measurement requirements, conservation and efficient water management requirements, notice and hearing requirements, and documentation requirements, with specified exceptions and limitations.

However, the Commission finds that several agricultural water suppliers are either exempted from the requirements of the test claim statutes and regulations or are subject to alternative and less expensive compliance alternatives because the activities were already required by a regime of federal statutes and regulations, which apply to most agricultural water suppliers within the state.[1]

Additionally, to the extent that the test claim statute and regulations impose any new state-mandated activities, they do not impose costs mandated by the state because the Commission finds that urban water suppliers and agricultural water suppliers possess fee authority, sufficient as a matter of law to cover the costs of any new required activities. Therefore, the test claim statute and regulations do not impose costs mandated by the state pursuant to Government Code section 17556(d), and are not reimbursable under article XIII B, section 6 of the California Constitution.

COMMISSION FINDINGS

I. Chronology

06/30/2011	Co-claimants, South Feather Water and Power Agency (South Feather), Paradise Irrigation District (Paradise), Biggs-West Gridley Water District (Biggs), and Richvale Irrigation District (Richvale) filed test claim 10-TC-12 with the Commission.[2]
10/07/2011	Department of Finance (Finance) requested an extension of time to file comments, which was approved.

[1] See Public Law 102-565 and the Reclamation Reform Act of 1982 and the specific exceptions and alternate compliance provisions in the test claim statutes for those subject to these federal requirements, as discussed in greater detail in the analysis below.

[2] Exhibit A, *Water Conservation Act* Test Claim, 10-TC-12.

12/06/2011	Department of Water Resources (DWR) requested an extension of time to file comments, which was approved.
02/01/2012	DWR requested an extension of time to file comments, which was approved.
03/30/2012	DWR requested an extension of time to file comments, which was approved.
05/30/2012	DWR requested an extension of time to file comments, which was approved.
08/02/2012	DWR requested an extension of time to file comments, which was approved.
10/02/2012	DWR requested an extension of time to file comments, which was approved.
12/03/2012	DWR requested an extension of time to file comments, which was approved.
12/07/2012	Finance requested an extension of time to file comments, which was approved.
02/04/2013	DWR requested an extension of time to file comments, which was approved.
02/06/2013	Finance requested an extension of time to file comments, which was approved.
02/28/2013	Richvale and Biggs filed test claim 12-TC-01 with the Commission.[3]
03/06/2013	The executive director consolidated the test claims for analysis and hearing, and renamed them *Water Conservation*.
03/29/2013	DWR requested an extension of time to file comments, which was approved.
06/07/2013	Finance submitted written comments on the consolidated test claims.[4]
06/07/2013	DWR submitted written comments on the consolidated test claims.[5]
07/09/2013	Claimants requested an extension of time to file rebuttal comments, which was approved.
08/07/2013	Claimants filed rebuttal comments.[6]
08/22/2013	Commission staff issued a request for additional information regarding the eligibility status of the claimants.[7]
09/19/2013	Finance submitted comments in response to staff's request.[8]
09/20/2013	The State Controller's Office (SCO) submitted a request for extension of time to comments, which was approved for good cause.
09/23/2013	DWR submitted comments in response to staff's request.[9]

[3] Exhibit B, *Agricultural Water Measurement* Test Claim, 12-TC-01.

[4] Exhibit C, Finance Comments on Consolidated Test Claims.

[5] Exhibit D, DWR Comments on Consolidated Test Claims.

[6] Exhibit E, Claimant Rebuttal Comments.

[7] Exhibit F, Request for Additional Information.

[8] Exhibit G, Finance Response to Commission Request for Comments.

09/23/2013	The claimants submitted comments in response to staff's request.[10]
10/07/2013	SCO submitted comments in response to staff's request.[11]
11/12/2013	Commission staff issued a Notice of Pending Dismissal of 12-TC-01, and a Notice of Opportunity for a Local Agency, Subject to the Tax and Spend Limitations of Articles XIII A and B of the California Constitution and Subject to the Requirements of the Alleged Mandate to Take Over the Test Claim by a Substitution of Parties.[12]
11/22/2013	Co-claimants Richvale and Biggs filed an appeal of the executive director's decision to dismiss test claim 12-TC-01.[13]
11/25/2013	The executive director issued notice that the appeal would be heard on March 28, 2014.[14]
01/13/2014	Oakdale Irrigation District (Oakdale) requested to be substituted in as a party to 10-TC-12 and 12-TC-01, and designated Dustin C. Cooper, of Minasian, Meith, Soares, Sexton & Cooper, LLP, as its representative.[15]
01/13/2014	Glenn-Colusa Irrigation District (Glenn-Colusa) requested to be substituted in as a party to 10-TC-12 and 12-TC-01, and designated Andrew M. Hitchings and Alexis K. Stevens of Somach, Simmons & Dunn as its representative.[16]
01/15/2014	Commission staff issued a Notice of Substitution of Parties and Notice of Hearing which mooted the appeal.[17]
07/31/2014	Commission staff issued a draft proposed statement of decision.[18]
08/13/2014	South Feather Water and Power Agency, Paradise Irrigation District, Richvale Irrigation District, and Biggs West Gridley Water District filed a request for an extension of time to comment and postponement of hearing to December 5, 2014, which was granted for good cause shown.

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[9] Exhibit H, DWR Response to Commission Request for Comments.

[10] Exhibit I, Claimant Response to Commission Request for Comments.

[11] Exhibit J, SCO Response to Commission Request for Comments.

[12] Exhibit K, Notice of Pending Dismissal.

[13] Exhibit L, Appeal of Executive Director's Decision.

[14] Exhibit M, Appeal of Executive Director Decision and Notice of Hearing.

[15] Exhibit N, Request for Substitution of Parties by Oakdale Irrigation District.

[16] Exhibit O, Request for Substitution of Parties by Glenn-Colusa Irrigation District.

[17] Exhibit P, Notice of Substitution of Parties and Notice of Hearing. Note that matters are only tentatively set for hearing until the draft staff analysis is issued which actually sets the matter for hearing pursuant to section 1187(b) of the Commission's regulations. Staff inadvertently omitted the word "tentative" in this notice.

[18] Exhibit Q, Draft Proposed Decision.

08/14/2014	Glenn Colusa Irrigation District filed a request for an extension of time to comment and postponement of hearing to December 5, 2014, which was granted for good cause shown.
10/16/2014	Claimant filed comments on the draft proposed decision.[19]
10/17/2014	California Special Districts Association (CSDA) filed comments on the draft proposed decision.[20]
10/17/2014	Environmental Law Foundation (ELF)filed comments on the draft proposed decision.[21]
10/17/2014	DWR filed comments on the draft proposed decision.[22]
10/22/2014	Northern California Water Association (NCWA) filed late comments on the draft proposed decision.[23]
11/07/2014	Claimants filed late comments.[24]

II. Background

These consolidated test claims allege that Water Code Part 2.55 [Sections 10608 through 10608.64] and Part 2.8 [Sections 10800 through 10853] enacted by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7) (10-TC-12) impose reimbursable state-mandated increased costs resulting from activities required of urban water suppliers and agricultural water suppliers. The claimants also allege that the Agricultural Water Measurement regulations issued by DWR (12-TC-01), codified at California Code of Regulations, title 23, sections 597-597.4, impose additional reimbursable state-mandated increased costs on agricultural water suppliers only.

The Water Conservation Act of 2009, pled in test claim 10-TC-12, calls for a 20 percent reduction in urban per capita water use on or before December 31, 2020, and an interim reduction of at least 10 percent on or before December 31, 2015.[25] In order to achieve these reductions, the Act requires urban retail water suppliers, both publicly and privately owned, to develop urban water use targets and interim targets that cumulatively result in the desired 20 percent reduction by December 31, 2020.[26] Prior to adopting its urban water use targets, each supplier is required to conduct at least one public hearing to allow community input regarding the supplier's implementation plan to meet the desired reductions, and to consider the economic

[19] Exhibit R, Claimant Comments on Draft Proposed Decision.

[20] Exhibit S, CSDA Comments on Draft Proposed Decision.

[21] Exhibit T, Environmental Law Foundation Comments on Draft Proposed Decision.

[22] Exhibit U, DWR Comments on Draft Proposed Decision.

[23] Exhibit V, NCWA Comments on Draft Proposed Decision.

[24] Exhibit W, Claimants Late Rebuttal Comments.

[25] Water Code section 10608.16 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[26] Water Code section 10608.20 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

impacts of the implementation plan.[27] This hearing may be combined with the hearing required under prior law (Water Code 10631) for adoption of the urban water management plan (UWMP).[28] An urban retail water supplier is also required to include in its UWMP, which is required to be updated every five years in accordance with pre-existing Water Code section 10621, information describing the baseline per capita water use; interim and final urban water use targets;[29] and a report on the supplier's progress in meeting urban water use targets.[30]

With respect to agricultural water suppliers, the Act requires implementation of specified critical efficient water management practices, including measuring the volume of water delivered to customers and adopting a volume-based pricing structure; and additional efficient water management practices that are locally cost effective and technically feasible.[31] In addition, the Act requires agricultural water suppliers (with specified exceptions)[32] to prepare and adopt, and every five years update, an agricultural water management plan (AWMP),[33] describing the service area, water sources and supplies, water uses within the service area, previous water management activities; and including a report on which efficient water management practices have been implemented or are planned to be implemented, and information documenting any determination that a specified efficient water management practice was not locally cost effective or technically feasible.[34]

Prior to preparing and adopting or updating an AWMP, the Act requires an agricultural water supplier to notify the city or county within which the supplier provides water that it will be preparing or considering changes to the AWMP;[35] and to make the proposed plan available for

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[27] Water Code section 10608.26 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[28] Exhibit X, Department of Water Resources, *Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan*, pp. A-2 and 3-4.

[29] Water Code section 10608.20 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[30] Water Code section 10608.40 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[31] Water Code section 10608.48 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[32] See Water Code sections 10608.8(d) (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)) [agricultural water suppliers that are parties to the Quantification Settlement Agreement, as defined in Statutes 2002, chapter 617 are exempt from the requirements of Part 2.55 (Water Code sections 10608-10608.64)]; 10608.48(f); 10828 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)) [an agricultural water supplier may meet requirements of AWMPs by submitting its water conservation plan approved by United States Bureau of Reclamation]; 10827 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)) [members of Agricultural Water Management Council and submit water management plans to council pursuant to the Memorandum of Understanding may rely on those plans to satisfy AWMP requirements]; 10829 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)) [adoption of an urban water management plan or participation in an areawide, regional, watershed, or basinwide water management plan will satisfy the AWMP requirements].

[33] Water Code section 10820 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[34] Water Code sections 10608.48; 10820 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[35] Water Code section 10821 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

public inspection and hold a noticed public hearing.[36] An agricultural water supplier is then required to implement the AWMP in accordance with the schedule set forth in the AWMP;[37] and to submit a copy of the AWMP to DWR and a number of specified local entities, and make the plan available on the internet, within 30 days of adoption.[38]

Finally, to aid agricultural water suppliers in complying with their measurement requirements and developing a volume-based pricing structure as required by section 10608.48, DWR adopted in 2012 the Agricultural Water Measurement Regulations,[39] which are the subject of test claim 12-TC-01. These regulations provide a range of options for agricultural water suppliers to implement accurate measurement of the volume of water delivered to customers. The regulations provide for measurement at the delivery point or farm gate of an individual customer, or at a point upstream of the delivery point where necessary, and provide for specified accuracy standards for measurement devices employed by the supplier, whether existing or new, as well as field testing protocols and recordkeeping requirements, to ensure ongoing accuracy of volume measurements.

To provide some context for how the the test claim statute and implementing regulations fit into the state's water conservation planning efforts, a brief discussion of the history of water conservation law in California follows.

A. Prior California Conservation and Water Supply Planning Requirements.

1. Constitutional and Statutory Framework of Water Conservation.

Article X, section 2 of the California Constitution prohibits the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water. It also declares that the conditions in the state require "that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare." Moreover, article X, section 2 provides that "[t]he right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and *such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.*"[40] Although article X, section 2 provides that it is self-executing; it also provides that the Legislature may enact statutes to advance its policy.

The Legislature has implemented these constitutional provisions in a number of enactments over the course of many years, which authorize water conservation programs by water suppliers, including metered pricing. For example:

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[36] Water Code section 10841 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[37] Water Code section 10842 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[38] Water Code sections 10843; 10844 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[39] Code of Regulations, title 23, sections 597-597.4 (Register 2012, No. 28).

[40] Adopted June 8, 1976. Derivation, former article 14, section 3, added November 6, 1928 and amended November 5, 1974 [emphasis added].

- Water Code section 1009 provides that water conservation programs are an authorized water supply function for all municipal water providers in the state.[41]
- Water Code section 1011 furthers the water conservation policies of the state by providing that a water appropriator does not lose an appropriative water right because of water conservation programs. [42]
- Water Code sections 520 -529.7 require water meters and recognize that metered water rates are an important conservation tool.[43]
- Water Code section 375(b) provides that public water suppliers may encourage conservation through "rate structure design." The bill amending the Water Code to add this authority was adopted during the height of a statewide drought. In an uncodified portion of the bill, the Legislature specifically acknowledged that conservation is an important part of the state's water policy and that water conservation pricing is a best management practice.[44]
- Water Code sections 370-374 provide additional, alternate authority (in addition to a water supplier's general authority to set rates) for public entities to encourage conservation rate structure design consistent with the proportionality requirements of Proposition 218.[45]
- Water Code section 10631(f)(1)(K) establishes water conservation pricing as a recognized water demand management measure for purposes of UWMPs, and other conservation measures including metering, leak detection and retrofits for pipes and plumbing fixtures.[46]

In addition, the Legislature has long vested water districts with broad authority to manage water to furnish a sustained, reliable supply. For example:

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[41] Statutes 1976, chapter 709, p. 1725, section 1.

[42] Added by statutes 1979, chapter 1112, p. 4047, section 2, amended by Statutes, 1982, chapter 876, p. 3223, section 4, Statutes 1996, chapter 408, section 1, and Statutes 1999, chapter 938, section 2.

[43] Added by Statutes 1991, chapter 407 and amended by Statutes 2004, chapter 884, section 3 and Statutes 2005, chapter 22. See especially, Water Code section 521 (b) and (c)).

[44] Statutes 1993, chapter 313, section 1.

[45] Statutes 2008, chapter 610 (AB 2882). See Exhibit X, Senate Floor Analysis AB 2882; Assembly Floor Analysis AB 2882.

[46] Water Code section 10631(f)(1)(K) (Stats. 1995, ch. 854 (SB 1011); Stats. 2000, ch. 712 (SB 553); Stats. 2001, ch. 643 (SB 610); Stats. 2001, ch. 644 (AB 901); Stats. 2002, ch. 664 (AB 3034); Stats. 2002, ch. 969 (SB 1384); Stats. 2004, ch. 688 (SB 318); Stats. 2006, ch. 538 (SB 1852)).

- Irrigation Districts have the power to take any act necessary to furnish sufficient water for beneficial uses and to control water.[47] They have general authority to fix and collect charges for any service of the district.[48]
- County Water Districts have similar power to take any act necessary to furnish sufficient water and express authority to conserve.[49]
- Municipal Water Districts also have broad power to control water for beneficial uses and express power to conserve.[50]

2. Existing Requirements to Prepare, Adopt, and Update Urban Water Management Plans.

The Urban Water Management Act of 1983 required urban water suppliers to prepare and update an UWMP every five years.[51] This Act has been amended numerous times between its original enactment in 1983 and the enactment of the test claim statute in 2009.[52] The law pertaining to UWMPs in effect immediately prior to the enactment of the test claim statute consisted of sections 10610 through 10657 of the California Water Code, which detail the information that must be included in UWMPs, as well as who must file them.

According to the Act, as amended prior to the test claim statute, "[t]he conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level."[53] The Legislature declared as state policy that:

> (a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
>
> (b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

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[47] Water Code section 22075 added by Statutes 1943, chapter 372 and section 22078 added by Statutes 1953, chapter 719, p. 187, section 1.

[48] Water Code section 22280, as amended by statutes 2007, chapter 27, section 19.

[49] Water Code sections 31020 and 31021 added by Statutes 1949, chapter 274, p. 509, section 1.

[50] Water Code sections 71610 as amended by Statutes 1995, chapter 28 and 71610.5 as added by Statutes 1975, chapter 893, p. 1976, section 1.

[51] Statutes 1983, chapter 1009 added Part 2.6 to Division 6 of the Water Code, commencing at section 10610.

[52] Enacted, Statutes 1983, chapter 1009; Amended, Statutes 1990, chapter 355 (AB 2661); Statutes 1991-92, 1st Extraordinary Session, chapter 13 (AB 11); Statutes 1991, chapter 938 (AB 1869) Statutes 1993, chapter 589 (AB 2211); Statutes 1993, chapter 720 (AB 892); Statutes 1994, chapter 366 (AB 2853); Statutes 1995, chapter 28 (AB 1247); Statutes 1995, chapter 854 (SB 1011); Statutes 2000, chapter 712 (SB 553); Statutes 2001, chapter 643 (SB 610); Statutes 2001, chapter 644 (AB 901); Statutes 2002, chapter 664 (AB 3034); Statutes 2002, chapter 969 (SB 1384); Statutes 2004, chapter 688 (SB 318); Statutes 2006, chapter 538 (SB 1852); Statutes 2009, chapter 534 (AB 1465).

[53] Water Code section 10610.2 (Stats. 2002, ch. 664 (AB 3034)).

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.[54]

The Act specified that each urban water supplier that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplies more than 3,000 acre feet of water annually shall prepare, update, and adopt its urban water management plan at least once every five years on or before December 31, in years ending in five and zero.[55]

a. Contents of Plans

The required contents of an UWMP are provided in sections 10631 through 10635. These statutes are prior law and have not been pled in this test claim. As last amended by Statutes 2009, chapter 534 (AB 1465), section 10631 requires that an adopted UWMP contain information describing the service area of the supplier, reliability of supply, water uses over five year increments, water demand management measures currently being implemented or being considered or scheduled for implementation, and opportunities for development of desalinated water.[56] Section 10631 further provides that urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," may submit those annual reports to satisfy the requirements of section 10631(f) and (g), pertaining to current, proposed, and future demand management measures.[57]

Section 10632 requires that an UWMP provide an urban water shortage contingency analysis, which includes actions to be taken in response to a supply shortage; an estimate of minimum supply available during the next three years; actions to be taken in the event of a "catastrophic interruption of water supplies," such as a natural disaster; additional prohibitions employed during water shortages; penalties or charges for excessive use; an analysis of impacts on revenues and expenditures; a draft water shortage contingency resolution or ordinance; and a mechanism for determining actual reductions in water use.[58]

Section 10633, as amended by Statutes 2002, chapter 261, specifies that the plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include: a description of wastewater collection and treatment systems; a description of the quantity of treated wastewater that meets recycled water standards; a description of recycled water currently used in the supplier's service area; a description and quantification of the potential uses of recycled water; projected use of recycled water over five year increments for the next 20 years; a description of actions that may be taken to encourage the

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[54] Water Code section 10610.4 (Stats. 1983, ch. 1009; Stats. 1995, ch. 854 (SB 1011)).

[55] Water Code sections 10617 (Stats. 1996, ch. 1023(SB 1497)); 10621(a) (Stats. 2007, ch. 64 (AB 1376)).

[56] Water Code section 10631 (Statutes 2009, chapter 534 (AB 1465)).

[57] Water Code section 10631(i) (Statutes 2009, chapter 534 (AB 1465)).

[58] Water Code section 10632 (Stats. 1995, ch. 854 (SB 1011)).

use of recycled water; and a plan for optimizing the use of recycled water in the supplier's service area.[59]

As added by Statutes 2001, chapter 644, and continuously in law up to the adoption of the test claim statute, section 10634 requires the UWMP to include, to the extent practicable, information relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in Section 10631(a); and to describe the manner in which water quality affects water management strategies and supply reliability.[60]

And finally, section 10635, added by Statutes 1995, chapter 330, requires an urban water supplier to include in its UWMP an assessment of the reliability of its water service to customers during normal and dry years, projected over the next 20 years, in five year increments.[61]

b. Adoption and Implementation of Plans

Sections 10640 through 10645, as added by Statutes 1983, chapter 1009 and Statutes 1990, chapter 355, provide the requirements for adoption and implementation of UWMPs, including public notice and recordkeeping requirements associated with the adoption of each update of the UWMP.

Section 10640 provides that every urban water supplier required to prepare an UWMP pursuant to this part shall prepare its UWMP pursuant to Article 2 (commencing with Section 10630), and shall "periodically review the plan ... and any amendments or changes required as a result of that review shall be adopted pursuant to this article."[62] Section 10641 provides that an urban water supplier required to prepare an UWMP may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.[63]

Section 10642 provides that each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of its UWMP. Prior to adopting an UWMP, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to section 6066 of the Government Code. A privately owned water supplier is required to provide a similar degree of notice, and the plan shall be adopted after the hearing either "as prepared or as modified..."[64]

Section 10643 provides that an UWMP shall be implemented "in accordance with the schedule set forth in [the] plan."[65] As amended by Statutes 2007, chapter 628, section 10644 requires an

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[59] Water Code section 10633 (Stats. 2002, ch. 261 (SB 1518)).

[60] Water Code section 10634 (Stats. 2001, ch. 644 (AB 901)).

[61] Water Code section 10635 (Stats. 1995, ch. 330 (AB 1845)).

[62] Water Code section 10640 (Stats. 1983, ch. 1009).

[63] Water Code section 10640 (Stats. 1983, ch. 1009; Stats. 1995, ch. 854 (SB 1011)).

[64] Water Code section 10642 (Stats. 1983, ch. 1009; Stats. 1995, ch. 854 (SB 1011); Stats. 2000, ch. 297 (AB 2552)).

[65] Water Code section 10643 (Stats. 1983, ch. 1009).

urban water supplier to submit to DWR, the State Library, and any city or county within which the supplier provides water supplies, a copy of its plan and copies of any changes or amendments to the plans no later than 30 days after adoption. Section 10644 also requires DWR to prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the UWMPs adopted pursuant to this part. The report is required to identify the outstanding elements of the individual UWMPs. DWR is also required to provide a copy of the report to each urban water supplier that has submitted its UWMP to DWR.[66] And lastly, in accordance with section 10645, not later than 30 days after filing a copy of its UWMP with DWR, the urban water supplier and DWR shall make the plan available for public review during normal business hours.[67]

c. Miscellaneous Provisions Pertaining to the UWMP Requirement

While sections 10631 through 10635 provide for the lengthy and technical content requirements of UWMPs, and sections 10640 through 10645 provide the requirements of a valid adoption of a UWMP, several remaining provisions of the Urban Water Management Planning Act provide for the satisfaction of the UWMP requirements by other means, and provide for the easing of certain other regulatory requirements and the recovery of costs.

- Section 10631, as amended by Statutes 2009, chapter 534 (AB 1465), provides that urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the demand management provisions of the UWMP "by complying with all the provisions of the 'Memorandum of Understanding Regarding Urban Water Conservation in California'...and by submitting the annual reports required by Section 6.2 of that memorandum."[68] These suppliers, then, are not separately required to comply with sections 10631(f) and (g), which require a description and evaluation of the supplier's "demand management measures" that are currently or could be implemented.[69]
- Section 10652 streamlines the adoption of UWMPs by exempting plans from the California Environmental Quality Act (CEQA). However, section 10652 does not exempt any project (that might be contained in the plan) that would significantly affect water supplies for fish and wildlife.[70]
- Section 10653 provides that the adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water

[66] Water Code section 10644 (Stats. 1983, ch. 1009; Stats. 1990, ch. 355 (AB 2661); Stats. 1992, ch. 711 (AB 2874); Stats. 1995, ch. 854 (SB 1011); Stats. 2000, ch. 297 (AB 2552); Stats. 2004, ch. 497 (AB 105); Stats. 2007, ch. 628 (AB 1420)).

[67] Water Code section 10645 (Stats. 1990, ch. 355 (AB 2661)).

[68] Water Code section 10631 (as amended, Stats. 2009, ch. 534 (AB 1465)).

[69] Water Code section 10631(f-g) (as amended, Stats. 2009, ch. 534 (AB 1465)).

[70] Water Code section 10652 (Stats. 1983, ch. 1009; Stats. 1991-1992, 1st Ex. Sess., ch. 13 (AB 11); Stats. 1995, ch. 854 (SB 1011)).

management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. In addition, section 10653 provides that "[t]he requirements of this part *shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part*, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part."[71] The plain language of section 10653 therefore exempts an urban retail water supplier that is already required to prepare a water demand management plan from any requirements of an UWMP added by the test claim statutes.

- Section 10654 provides expressly that an urban water supplier "may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan." Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" (discussed below) is deemed to be reasonable for the purposes of this section.[72] Therefore, suppliers are expressly authorized to recover the costs of implementing "reasonable water conservation measures" or any "best water management practice...identified in [the MOU for Urban Water Conservation]."

3. Prior Requirements to Prepare, Adopt, and Update Agricultural Water Management Plans, Which Became Inoperative by their own Terms in 1993.

The Agricultural Water Management Planning Act was enacted in 1986 and became inoperative, by its own terms, in 1993.[73] The 1986 Act stated in its legislative findings and declarations that "[t]he Constitution requires that water in the state be used in a reasonable and beneficial way..." and that "[t]he conservation of agricultural water supplies are of great concern." The findings and declarations further stated that "[a]gricultural water suppliers that receive water from the federal Central Valley Water Project are required by federal law to develop and implement water conservation plans," as are "[a]gricultural water suppliers applying for a permit to appropriate water from the State Water Resources Control Board..." Therefore, the act stated that "it is the policy of the state as follows:"

(a) The conservation of water shall be pursued actively to protect both the people of the state and their water resources.

(b) The conservation of agricultural water supplies shall be an important criterion in public decisions on water.

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[71] Water Code section 10653 (Stats. 1983, ch. 1009; Stats. 1995, ch. 854 (SB 1011)) [emphasis added].

[72] Water Code section 10654 (Stats. 1983, ch. 1009; Stats. 1994, ch. 609 (SB 1017)).

[73] Statutes 1986, chapter 954 (AB1658). See Former Water Code section 10855 (Stats. 1986, ch. 954 (AB 1658)).

(c) Agricultural water suppliers, who determine that a significant opportunity exists to conserve water or reduce the quantity of highly saline or toxic drainage water, shall be required to develop water management plans to achieve conservation of water.[74]

Specifically, the 1986 Act provided that every agricultural water supplier serving water directly to customers "shall prepare an informational report based on information from the last three irrigation seasons on its water management and conservation practices..." That report "shall include a determination of whether the supplier has a significant opportunity to conserve water or reduce the quantity of highly saline or toxic drainage water through improved irrigation water management..." If a "significant opportunity exists" to conserve water or improve the quality of drainage water, the supplier "shall prepare and adopt an agricultural water management plan..." (AWMP).[75] The Act provided, however, that an agricultural water supplier "may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide agricultural water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use and where those plans satisfy the requirements of this part." The requirements of an AWMP or an informational report, where required, included quantity and sources of water delivered to and by the supplier; other sources of water used within the service area, including groundwater; a general description of the delivery system and service area; total irrigated acreage within the service area; acreage of trees and vines within the service area; an identification of current water conservation practices being used, plans for implementation of water conservation practices, and conservation educational practices being used; and a determination of whether the supplier has a significant opportunity to save water by means of reduced evapotranspiration, evaporation, or reduction of flows to unusable water bodies, or to reduce the quantity of highly saline or toxic drainage water.[76] In addition, an AWMP "shall address all of the following:" quantity and source of surface and groundwater delivered to and by the supplier; a description of the water delivery system, the beneficial uses of the water supplied, conjunctive use programs, incidental and planned groundwater recharge, and the amounts of delivered water that are lost to evapotranspiration, evaporation, or surface flow or percolation; an identification of cost-effective and economically feasible measures for water conservation; an evaluation of other significant impacts; and a schedule to implement those water management practices that the supplier determines to be cost-effective and economically feasible.[77]

The Act further provided that an agricultural water supplier required to prepare an AWMP "may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water conservation and management methods and techniques."[78] And, "[p]rior to adopting a plan, the agricultural water supplier shall make the plan available for public inspection and shall hold a public hearing thereon." This requirement

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[74] Former Water Code section 10802 (Stats. 1986, ch. 954 (AB 1658)).

[75] Former Water Code section 10821 (as added, Stats. 1986, ch. 954 (AB 1658)).

[76] Former Water Code section 10825 (as added, Stats. 1986, ch. 954 (AB 1658)).

[77] Former Water Code section 10826 (as added, Stats. 1986, ch. 954 (AB 1658)).

[78] Former Water Code section 10841(as added, Stats. 1986, ch. 954 (AB 1658)).

applies also to privately owned water suppliers.[79] In addition, the Act states that an agricultural water supplier shall implement its AWMP in accordance with the schedule set forth in the plan, and "shall file with [DWR] a copy of its plan no later than 30 days after adoption."[80] Finally, the 1986 Act provided for funds to be appropriated to prepare the informational reports and agricultural water management plans, as required, and provided that "[t]his part shall remain operative only until January 1, 1993, except that, if an agricultural water supplier fails to submit its information report or agricultural water management plan prior to January 1, 1993, this part shall remain operative with respect to that supplier until it has submitted its report or plan, or both."[81]

As noted above, the AWMP requirements provided by the Agricultural Water Management Planning Act became inoperative as of January 1, 1993,[82] and therefore do not constitute the law in effect immediately prior to the test claim statute, even though, as shown below, the test claim statute reenacted substantially similar plan requirements. However, the federal requirement to submit water conservation plans to the United States Bureau of Reclamation pursuant to either the federal Central Valley Project Improvement Act (Public Law 102-565) or the federal Reclamation Reform Act of 1982, remained the law throughout and does constitute the law in effect immediately prior to the test claim statute, with respect to those suppliers subject to one or both federal requirements.[83]

4. The Water Measurement Law, Statutes 1991, chapter 407, applicable to Urban and Agricultural Water Suppliers.

The Water Measurement Law (Water Code sections 510-535) requires standardized water management practices and water measurement, and is applicable to Urban and Agricultural Water Suppliers, as follows:[84]

- Every water purveyor that provides potable water to 15 or more service connections or 25 or more yearlong residents must require meters as a condition of *new* water service.[85]
- Urban water suppliers, except those that receive water from the federal Central Valley Project, must install meters on all municipal (i.e., residential and governmental) and industrial (i.e., commercial) service connections on or before January 1, 2025 and shall charge each customer that has a service connection for which a meter has been installed based on the actual volume of deliveries beginning on or before January 1, 2010 service. A water purveyor, including an

[79] Former Water Code section 10842(as added, Stats. 1986, ch. 954 (AB 1658)).

[80] Former Water Code sections 10843 and 10844 (as added, Stats. 1986, ch. 954 (AB 1658)).

[81] Former Water Code sections 10853; 10854; 10855 (as added, Stats. 1986, ch. 954 (AB 1658)).

[82] Former Water Code section 10855 (Stats. 1986, ch. 954 (AB 1658)).

[83] See Water Code section 10828 (added, Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[84] The Water Measurement Law was added by Statutes 1991, chapter 407.

[85] Section 525 as amended by statutes 2005, chapter 22.

urban water supplier, may recover the cost of the purchase, installation, and operation of a water meter from rates, fees, or charges.[86]

- Urban water suppliers receiving water from the federal Central Valley Project (CVP) shall install water meters on all residential and non-agricultural commercial service connections constructed prior to 1992 on or before January 1, 2013 and charge customers for water based on the actual volume of deliveries, as measured by a water meter, beginning March 1, 2013, or according to the CVP water contract. Urban water suppliers that receive water from the CVP are also specifically authorized to "recover the cost of providing services related to the purchase, installation, and operation and maintenance of water meters from rates, fees or charges.[87]
- Agricultural water providers shall report annually to DWR summarizing aggregated farm-gate delivery data, on a monthly or bi-monthly basis. However, the Water Measurement Law does not require implementation of water measurement programs or practices that are not locally cost effective.[88]

The test claim statute, as noted above, requires agricultural water suppliers to measure the volume of water delivered to customers and to adopt a volume-based pricing structure. However, the test claim statute also contemplates a water supplier that is both an agricultural and an urban water supplier, by definition: section 10829 provides that an agricultural water supplier may satisfy the AWMP requirements by adopting an UWMP pursuant to Part 2.6 of Division 6 of the Water Code; and the definitions of "agricultural" and "urban retail" water suppliers in section 10608.12 are not, based on their plain language, mutually exclusive. The record on this test claim is not sufficient to determine how many, if any, agricultural water suppliers are also urban retail water suppliers,[89] and consequently would be required to install water meters on new and existing service connections in accordance with Water Code sections 525-527, and to charge customers based on the volume of water delivered. In addition, the record is not sufficient to determine whether and to what extent some agricultural water suppliers may already have implemented water measurement programs which were locally cost effective, in accordance with section 531.10. However, to the extent that an agricultural water supplier is also an urban water supplier, sections 525-527 may constitute a prior law requirement to accurately measure water delivered and charge customers based on volume, and the test claim statute may not impose new requirements or costs on some entities. And, to the extent that water measurement programs or practices were previously implemented pursuant to section 531.10, some of the activities required by the test claim statute and regulations may not be newly required, with respect to certain agricultural suppliers. These caveats and limitations are noted where relevant in the analysis below.

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[86] Section 527 as amended by statutes 2005, chapter 22.

[87] Section 526 as amended by Statutes 2004, chapter 884.

[88] Section 531.10 as added by Statutes 2007, chapter 675.

[89] See Water Code section 10608.12, as added by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7) for definitions of "agricultural water supplier" and "urban retail water supplier."

III. Positions of the Parties

A. Claimants' Positions:

The four original claimants together alleged a total of $72,194.48 in mandated costs for fiscal year 2009-2010 (although Paradise maintains a different fiscal year than the remaining claimants). In addition, claimants project that program costs for fiscal year 2010-2011, and for 2011-2012, will be "higher," but claimants allege that they are unable to reasonably estimate the amount.

South Feather Water and Power Agency and Paradise Irrigation District

South Feather and Paradise allege that they are urban retail water suppliers, as defined in Water Code section 10608.12. As such, they allege that they are required to establish urban water use targets "by July 1, 2011 by selecting one of four methods to achieve the mandated water conservation." South Feather and Paradise further allege that they are "mandated to adopt expanded and more detailed urban water management plans in 2010 that include the baseline daily per capita water use, urban water use target, interim urban water use target, compliance daily per capita water use, along with the bases for determining estimates, including supporting data."[90] South Feather and Paradise allege that thereafter, UWMPs are to be updated "in every year ending in 5 and 0," and the 2015 plan "must describe the urban retail water supplier's progress towards [*sic*] achieving the 20% reduction by 2020."[91] Finally, South Feather and Paradise allege that they are required to conduct at least one noticed public hearing to allow community input, consider economic impacts, and adopt a method for determining a water use baseline "from which to measure the 20% reduction."[92]

Prior to the Act, South Feather and Paradise allege that there was no requirement to achieve a 20 percent per capita reduction in water use by 2020. They allege that they were required to adopt UWMPs prior to the Act, but not to include 'the baseline per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with bases for determining those estimates, including supporting data."[93] And they allege that "[f]inally, prior to the Act, there was no requirement to conduct at least one public hearing to allow for community input regarding conservation, consider economic impacts…or to adopt a method for determining an urban water use target."[94]

Biggs-West Gridley Water District and Richvale Irrigation District

Richvale and Biggs allege that they are required to "measure the volume of water delivered to their customers using best professional practices to achieve a minimum level of measurement accuracy at the farm-gate," in accordance with regulations adopted by DWR pursuant to the Act.[95] They further allege that they are required to adopt a pricing structure for water customers

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[90] Exhibit A, 10-TC-12, page 3.

[91] *Ibid.*

[92] Exhibit A, 10-TC-12, page 4.

[93] Exhibit A, 10-TC-12, pages 7-8.

[94] Exhibit A, 10-TC-12, page 8.

[95] Exhibit A, 10-TC-12, page 4.

based on the quantity of water delivered, and that "[b]ecause Richvale and Biggs are local public agencies, the change in pricing structure would have to be authorized and approved by its [*sic*] customers through the Proposition 218 process."[96]

In addition, Richvale and Biggs allege that "[i]f 'locally cost effective' and technically feasible, agricultural water suppliers are required to implement fourteen additional efficient management practices," as specified. They additionally allege that on or before December 31, 2012, they are required to prepare AWMPs that include a report on the implementation and planned implementation of efficient water management practices, and documentation supporting any determination made that certain conservation measures were held to be not locally cost effective or technically feasible.[97] Finally, Richvale and Biggs allege that prior to adoption of an AWMP, they are required to notice and hold a public hearing; and that after adoption the plan must be distributed to "various entities" and posted on the internet for public review.[98]

Prior to the Act, Richvale and Biggs assert, agricultural water suppliers "were not required to have a pricing structure based, at least in part, on the quantity of water delivered." In addition, prior to the Act, "there was no requirement to implement up to 14 additional conservation measures if locally cost effective and technically feasible." And, Richvale and Biggs allege that prior to the Act the number of agricultural water suppliers subject to the requirement to develop an AWMP was significantly fewer, and now the "contents of the plans" are "more encompassing than plans required under the former law."[99] Richvale and Biggs allege that "[f]inally, prior to the Act, there was no requirement to conduct at least one public hearing prior to adopting the plan, make copies of it available for public inspection, or to publish the time and place of the hearing once per week for two successive weeks in a newspaper of general circulation."[100]

As discussed below, in the early stages of Commission staff's review and analysis of these consolidated test claims, it became apparent that Richvale and Biggs, the two claimants representing agricultural water suppliers, are not subject to the revenue limits of article XIII B, and do not collect or expend "proceeds of taxes," within the meaning of articles XIII A and XIII B.[101] After additional briefing and further review, it was concluded that Richvale and Biggs are indeed not eligible for reimbursement under article XIII B, section 6. The Commission's executive director therefore issued a notice of pending dismissal and offered an opportunity for another eligible local claimant, subject to the tax and spend limitations of articles XIII A and XIII B, to take over the test claim.[102] Richvale and Biggs filed an appeal of that decision, and maintain that they are eligible local government claimants pursuant to Government Code section 17518, and that the fees or assessments that the districts would be required to establish or increase to comply with the requirements of the test claim statute and regulations would be

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[96] *Ibid.*

[97] Exhibit A, 10-TC-12, pages 4-6.

[98] Exhibit A, 10-TC-12, page 6.

[99] Exhibit A, 10-TC-12, page 8.

[100] Exhibit A, 10-TC-12, page 9.

[101] Exhibit F, Commission Request for Additional Information, page 1.

[102] Exhibit K, Notice of Pending Dismissal.

characterized as taxes under article XIII B, section 8, because such fees or assessments would exceed the reasonable costs of providing water services.[103] This decision addresses these issues.

Glenn-Colusa Irrigation District and Oakdale Irrigation District

Glenn-Colusa and Oakdale requested to be substituted in as parties to these consolidated test claims, in place of Richvale and Biggs.[104] Both Glenn-Colusa and Oakdale submitted declarations asserting that they receive an annual share of property tax revenue, and therefore are subject to articles XIII A and XIII B of the California Constitution. Both additionally allege that they incur at least $1000 in increased costs as a result of the test claim statute and regulations, and that they are subject to the requirements of the test claim statutes and regulations as described in the test claim narrative.[105]

Claimants' Collective Response to the Draft Proposed Decision

In comments on the draft proposed decision, the claimants focus primarily on the findings regarding the ineligibility of Richvale and Biggs to claim reimbursement based on the evidence in the record indicating that neither agency collects or expends tax revenues subject to the limitations of articles XIII A and XIII B. The claimants also address the related findings that all claimants have sufficient fee authority under law to cover the costs of the mandate, and thus the Commission cannot find costs mandated by the state, pursuant to section 17556(d).

Specifically, the claimants argue that "[f]ees and charges for sewer, water, or refuse collection services are excused from the formal election process, but not from the majority protest process."[106] Therefore, claimants conclude that "[a]gencies that provide water, sewer, or refuse collection services, including Claimants, lack sufficient authority to unilaterally impose new or increased fees or charges in light of Proposition 218's majority protest procedure."[107]

In addition, claimants note the Commission's analysis in 07-TC-09, *Discharge of Stormwater Runoff*, and argue that the Commission should not "ignore a prior Commission decision that is directly on point..." The claimants assert that "as this Commission has already recognized..." Proposition 218 "created a legal barrier to establishing or increasing fees or charges..." and as a result claimants "can do no more than merely propose new or increased fees for customer approval and the customers have the authority to then accept or reject..." a fee increase.[108]

The claimants assert that the reasoning of the draft proposed decision "would prohibit state subvention for every enterprise district in the state that is subject to Proposition 218..."[109] and "would create a class of local agencies that are per se ineligible for reimbursement under this test

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[103] Exhibit L, Appeal of Executive Director's Decision.

[104] Exhibit N, Request for Substitution of Parties by Oakdale Irrigation District; Exhibit O, Request for Substitution of Parties by Glenn-Colusa Irrigation District.

[105] *Ibid.*

[106] Exhibit R, Claimant Comments on Draft Proposed Decision, page 10.

[107] Exhibit R, Claimant Comments on Draft Proposed Decision, page 11.

[108] Exhibit R, Claimant Comments on Draft Proposed Decision, page 11.

[109] Exhibit R, Claimant Comments on Draft Proposed Decision, page 14.

claim, all potential future test claims, and all previous test claims dating back to Proposition 218's passage in 1996."[110] The claimant calls this a "sea change in Constitutional interpretation…"[111]

The claimants argue, based on this interpretation of the effect of Proposition 218, that the draft proposed decision inappropriately excluded Richvale and Biggs from subvention, "because they do not currently collect or expend tax revenues."[112] The claimants argue that "this additional 'requirement' [is] based on an outdated case that predates Proposition 218 and on an inapplicable line of cases that apply only to redevelopment agencies, while ignoring the strong policy underlying the voters' approval of the subvention requirement."[113] The claimants argue that after articles XIII C and XIII D, "assessments and property-related fees and charges have joined tax revenues as among local entities' 'increasingly limited revenue sources…'"[114]

The claimants further argue that: "Agencies like Richvale and Biggs that need additional revenue to pay for new mandates but are subject to the limitations of Proposition 218 are faced with three problematic options: (a) do not implement the mandates in light of revenue limitations; (b) implement the mandates with existing revenue; or (c) propose a new or increased fee or charge, assessment, or special tax to implement the mandates."[115] The claimants argue for the Commission to take action to expand the scope of reimbursement: "the subvention provision should be read in harmony with later Constitutional enactments and protect not just tax revenue, but assessment and fee revenue as well."[116]

Finally, in late comments, the claimants challenge DWR's reasoning, including the figures cited by the department, that due to the existence of a substantial number of private water suppliers, the test claim statutes do not impose a "program" within the meaning of article XIII B, section 6.[117]

B. State Agency Positions:

Department of Finance

Finance maintains that "the Act and Regulations do not impose a reimbursable mandate on local agencies within the meaning of Article XIII B, section 6."[118] Finance asserts that each of the claimants is a special district authorized to charge a fee for delivery of water to its users, and therefore has the ability to cover the costs of any new required activities.[119] Finance further

[110] Exhibit R, Claimant Comments on Draft Proposed Decision, page 15.

[111] Exhibit R, Claimant Comments on Draft Proposed Decision, page 15.

[112] Exhibit R, Claimant Comments on Draft Proposed Decision, page 15.

[113] Exhibit R, Claimant Comments on Draft Proposed Decision, page 16.

[114] Exhibit R, Claimant Comments on Draft Proposed Decision, page 17.

[115] Exhibit R, Claimant Comments on Draft Proposed Decision, page 20.

[116] Exhibit R, Claimant Comments on Draft Proposed Decision, page 21.

[117] Exhibit W, Claimant Late Comments, pages 1-4.

[118] Exhibit C, Finance Comments, page 1.

[119] Exhibit C, Finance Comments, page 1.

asserts that the conservation efforts required by the test claim statute and regulations will result in surplus water accruing to the claimant districts, which are authorized to sell water. Finance concludes that "each district will likely have the opportunity to cover all or a portion of costs related to implementation of the Act or Regulations with revenue from surplus water sales."[120] Moreover, Finance argues that "special districts are only entitled to reimbursement if they are subject to the tax and spend limitations under articles XIII A and XIII B...*and only when the mandated costs in question can be recovered solely from the proceeds of taxes*."[121] Finance argues that the claimants "should be directed to provide information that will enable the Commission on State Mandates to determine if they are subject to tax and spending limitations."[122] Finance did not submit comments on the draft proposed decision.

State Controller's Office

In response to Commission staff's request for additional information regarding the uncertain eligibility of the test claimants, the SCO submitted written comments confirming that the "Butte County Auditor-Controller has confirmed for fiscal years 2010-2011, 2011-2012, and 2012-2013," that South Feather and Paradise both received proceeds of taxes, but Richvale and Biggs did not.[123] However, the SCO also noted that none of the four claimants reported an appropriations limit for fiscal years 2010-2011, 2011-2012, and 2012-2013. The SCO stated that "Government Code section 7910 requires each local government entity to annually establish its appropriations limit by resolution of its governing board," and that "Government Code section 12463 requires the annual appropriations limit to be reported in the financial transactions report submitted to the SCO." However, the SCO noted that it "has the responsibility to review each report for reasonableness, yet we are not required to audit any of the data reported." The SCO concluded, therefore, that "we are unable to determine which special district is subject to report an annual appropriations limit." The SCO did not comment on the draft proposed decision.

Department of Water Resources

DWR argues, in comments on the consolidated test claims, first, that the Water Conservation Act of 2009 applies to public and private entities alike, and is therefore not a "program" within the meaning of article XIII B, section 6. In addition, DWR argues that the Act is not a "new program," because it is "a refinement of urban and agricultural water conservation requirements that have been part of the law for years." DWR further asserts that even if the Act "were an unfunded state mandate, it would not be reimbursable since the water suppliers have sufficient non-tax sources to offset any implementation costs." And, DWR asserts that the test claim regulations on agricultural water measurement do not impose any requirements on water suppliers because "they are free to choose alternative measurement methods." And finally, DWR argues that the Act does not impose any new programs or higher levels of service "because what is required is compliance with general and evolving water conservation standards based on

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[120] Exhibit C, Finance Comments, page 2.

[121] Exhibit C, Finance Comments, page 2 [emphasis in original].

[122] Exhibit C, Finance Comments, page 2.

[123] Exhibit J, SCO Comments, pages 1-2.

the foundational reasonable and beneficial water use principle dating from before the 1928 amendment – Article X, section 2 – to California's Constitution revising water use standards."[124]

In comments on the draft proposed decision, DWR "concurs with and fully supports the ultimate conclusion reached…", but reiterates and expands upon its earlier comments with respect to whether the alleged test claim requirements constitute a new program or higher level of service that is uniquely imposed upon local government.[125] DWR argues that "a law that governs private and public entities alike is not a 'program' for purposes of article XIII B…"[126] DWR continues:

> Claimants, in their Rebuttal Comments, ignore DWR's reference to the language of the Water Conservation Act, which by its plain terms is made applicable to both public and private entities. Instead, Claimants seek to shift attention away from the nature of the activity and focus instead on the number of entities engaged in that activity. Claimants concede that the law and regulations adopted pursuant to that law do in fact apply to both private and public entities, but argue that because (according to their calculation) "only 7.67%" of urban retail water suppliers are private, the requirements of the Water Conservation Act ought to be treated as reimbursable "programs" because those requirements "fall overwhelmingly on local governmental agencies."[127]

DWR maintains that "there are, in fact, 72 private wholesale and retail suppliers out of a total of 369…so the proportion of private water suppliers is actually 16.3 percent." And, "based on data submitted in the 2010 urban water management plans, it turns out that private retail water suppliers serve 19.7 percent of the population and account for 17.3 percent of water delivered."[128]

DWR acknowledges that there are more public than private water suppliers, but asserts that "[u]nder the Supreme Court's test in *County of Los Angeles v. State of California* the question is not whether an activity is more likely to be undertaken by a governmental entity, but whether the activity implements a state policy and imposes unique requirements on local governments, but is one that does not apply generally to all residents and entities in the state."[129] DWR explains that "generally," in this context, is not synonymous with "commonly," and therefore the prevalence of public water suppliers as to private is not relevant to the issue; rather, "generally" refers to

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[124] Exhibit D, DWR Comments, page 2.

[125] Exhibit U, DWR Comments on Draft Proposed Decision, page 1.

[126] Exhibit U, DWR Comments on Draft Proposed Decision, page 2 [citing Exhibit D, DWR Comments, filed June 7, 2013; *Carmel Valley Fire Protection District v. State* (1987) 190 Cal.App.3d 521, 537].

[127] Exhibit U, DWR Comments on Draft Proposed Decision, page 3 [quoting Exhibit E, Claimant's Rebuttal Comments, pages 3-4].

[128] Exhibit U, DWR Comments on Draft Proposed Decision, page 3.

[129] Exhibit U, DWR Comments on Draft Proposed Decision, page 3. See also, *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46.

laws of general application, meaning "those that apply to all persons or entities of a particular class."[130] The Water Conservation Act, DWR maintains, "does just that."[131]

In addition, DWR disputes that the provision of water services is a "classic governmental function," as asserted by the claimants.[132] The California Supreme Court has held that reimbursement should be limited to new "programs" that carry out the governmental function of providing services to the public.[133] DWR maintains that there is an important distinction between public purposes, and private or corporate purposes, and that that distinction should control in the analysis of a new program or higher level of service. In particular, DWR identifies the provision of utilities to municipal customers as a corporate activity, rather than a governmental purpose:

> Of the myriad services provided by government, although some may be difficult to categorize, at either end of the spectrum the categories are fairly clear. At one end, such things as police and fire protection have long been recognized as true governmental functions, those that implicate the notion of the "government as sovereign." At the other end, however, are public utilities such as power generation, and, of particular significance to this claim, municipal water districts.[134]

DWR argues that "California law thus draws a distinction between the many utilitarian services that could as easily be (and often are) undertaken by the private sector, and those that implicate the unique authority vested in the state and its political subdivisions." DWR continues: "Maintaining a police force, for instance, is easily understood as something fundamental to the government *as government.*" "On the other hand," DWR reasons, "there is nothing intrinsically governmental about a government entity operating a utility and providing services such as electricity, natural gas, sewer, garbage collection, or water delivery."[135]

DWR thus "urges the Commission to give full consideration to the fact that the Water Conservation Act is a law of general application that applies to private as well as public water

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[130] Exhibit U, DWR Comments on Draft Proposed Decision, page 3 [citing *McDonald v. Conniff* (1893) 99 Cal.386, 391.

[131] Exhibit U, DWR Comments on Draft Proposed Decision, page 3.

[132] Exhibit U, DWR Comments on Draft Proposed Decision, page 4 [citing Exhibit E, Claimant Rebuttal Comments, page 4].

[133] Exhibit U, DWR Comments on Draft Proposed Decision, page 4 [citing *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 50].

[134] Exhibit U, DWR Comments on Draft Proposed Decision, page 5 [citing *Chappelle v. City of Concord* (1956) 144 Cal.App.2d 822, 825; *County of Sacramento v. Superior Court* (1972) 8 Cal.3d 479, 481; *Davoust v. City of Alameda* (1906) 149 Cal. 69, 72; *City of South Pasadena v. Pasadena Land & Water Co.* (1908) 152 Cal. 579, 593; *Nourse v. City of Los Angeles* (1914) 25 Cal.App. 384, 385; *Mann Water & Power Co. v. Town of Sausalito* (1920) 49 Cal.App. 78, 79; *In re Bonds of Orosi Public Utility Dist.* (1925) 196 Cal. 43, 58; *Glenbrook Development Co. v. City of Brea* (1967) 253 Cal.App.2d 267, 274].

[135] Exhibit U, DWR Comments on Draft Proposed Decision, page 6.

suppliers alike." And, DWR reiterates: "contrary to Claimants' suggestion, water delivery, while clearly an important service, is not a classic "governmental function" in the constitutional sense."[136]

C. Interested Person Positions:[137]

California Special Districts Association

CSDA asserts that "the Proposed Decision fails to appropriately analyze the provisions of Article XIII B Section 6...as amended by Proposition 1A in 2004..."[138] CSDA argues that the draft proposed decision "rather analyzes the original language of Article XIII B Section 6 adopted as Proposition 4 in 1978, before the adoption of Proposition 218 adding articles XIII C and XIII D to the Constitution and before the adoption of Proposition 1A amending Article XIII B Section 6."[139]

CSDA argues that the plain language of article XIII B, section 6, as amended by Proposition 1A, "indicates that the mandate provisions are applicable to all cities, counties, cities and counties, and special districts without restriction."[140] CSDA further asserts that "[t]he plain language also mandates the state to appropriate the 'full payment amount' of costs incurred by local government in complying with state mandated programs, without any qualification as to the types of revenues utilized by local governments in paying the costs of such compliance."[141] CSDA reasons that "there are no words of limitation indicating that suspension of mandates is only applicable to those local government agencies which receive proceeds of taxes and expend those proceeds of taxes in complying with state mandated programs." Therefore, absent "such limiting language, the holding of the Proposed Decision which limits eligibility for claiming reimbursement...to those local agencies receiving proceeds of taxes is contradicted by the mandate provisions of Proposition 1A, and is therefore incorrect as a matter of law."[142]

CSDA also argues that the voters' intent and understanding in adopting Proposition 1A is controlling, and can be determined by examining the LAO analysis in the ballot pamphlet.[143] CSDA argues that "[t]he LAO analysis of Proposition 1A in the ballot pamphlet fails to mention any restriction or limitation on state mandates to be reimbursed or suspended, and such analysis is totally silent as to any requirement that reimbursable mandates be limited to those mandates imposed on local governments which receive and expend proceeds of taxes..." In fact, CSDA argues, the LAO analysis indicates that Proposition 1A "expand(s) the circumstances under

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[136] Exhibit U, DWR Comments on Draft Proposed Decision, page 7.

[137] "Interested person" is defined in the Commission's regulations to mean "any individual, local agency, school district, state agency, corporation, partnership, association, or other type of entity, having an interest in the activities of the Commission." (Cal. Code Regs., tit. 2, § 1181.2(j).)

[138] Exhibit S, CSDA Comments on Draft Proposed Decision, page 6.

[139] Exhibit S, CSDA Comments on Draft Proposed Decision, page 6.

[140] Exhibit S, CSDA Comments on Draft Proposed Decision, page 8.

[141] Exhibit S, CSDA Comments on Draft Proposed Decision, page 8.

[142] Exhibit S, CSDA Comments on Draft Proposed Decision, page 8.

[143] Exhibit S, CSDA Comments on Draft Proposed Decision, page 8.

which the state is responsible for reimbursing cities, counties and special districts for complying with state mandated programs by including all programs for which the state even had partial financial responsibility before such transfer."[144] CSDA maintains that "[t]herefore the voters who approved Proposition 1A by 82% of the popular vote had no understanding of this limitation on reimbursement of state mandates to local governments which is the basic holding of the Proposed Decision."[145] CSDA relies on the language of the ballot pamphlet, which states: "if the state does not fund a mandate within any year, the state must eliminate local government's duty to implement it for that same time period."[146] CSDA concludes that "[t]he plain words of Proposition 1A support this voter intent to require the state to fully reimburse the costs incurred by all cities, counties, cities and counties and special districts in implementing any state program in which the complete or partial financial responsibility for that program has been transferred from the state to local government, not just those cities, counties, cities and counties, and special districts which receive proceeds of taxes."[147]

In addition, CSDA argues that the Commission's analysis must read together and harmonize articles XIII A, XIII B, XIII C, and XIII D.[148] Specifically, CSDA argues that pursuant to article XIII C, added by Proposition 218, property-related fees are subject to "majority protest procedures" and "may not be expended for general governmental services…which are available to the public at large in substantially the same manner as they are to property owners..." [149] And, revenues from property-related fees "may not be used for any purpose other than that for which the fee was imposed;" and "may not exceed the costs required to provide the property related service."[150] In addition, CSDA asserts that the amount of a property-related fee must not exceed the proportional cost of providing the service to each individual parcel subject to the fee.[151] CSDA also notes that "Article XIII D includes similar provisions restricting the ability of local governments to raise and expend assessment revenue."[152] CSDA argues that "[a]nalyzed together, all of these restrictions on the raising and expenditure of property related fees and charges by local government agencies specified in Articles XIII C and D of the Constitution severely limit the ability of local government agencies to utilize revenue for property related fees and charges to fund the costs of state mandated programs."[153] CSDA goes on to argue that "[t]hose restrictions are more onerous and stringent than the restrictions imposed on local government agencies in expending proceeds of taxes by virtue of the appropriations limit in

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[144] Exhibit S, CSDA Comments on Draft Proposed Decision, page 9.

[145] Exhibit S, CSDA Comments on Draft Proposed Decision, page 9.

[146] Exhibit S, CSDA Comments on Draft Proposed Decision, page 10.

[147] Exhibit S, CSDA Comments on Draft Proposed Decision, page 10.

[148] Exhibit S, CSDA Comments on Draft Proposed Decision, page 10.

[149] Exhibit S, CSDA Comments on Draft Proposed Decision, page 11.

[150] Exhibit S, CSDA Comments on Draft Proposed Decision, page 11.

[151] Exhibit S, CSDA Comments on Draft Proposed Decision, page 11.

[152] Exhibit S, CSDA Comments on Draft Proposed Decision, page 12.

[153] Exhibit S, CSDA Comments on Draft Proposed Decision, page 12.

Article XIII B."[154] CSDA concludes that "[t]he Proposed Decision should be modified to recognize these restrictions imposed by Articles XIII C and D."[155]

Environmental Law Foundation Position

ELF states, in its comments, that it agrees with the draft proposed decision, however, "[t]o aid the Commission in developing its final decision, we would like to present an additional ground upon which the Commission could rely in denying the test claim..."[156] ELF asserts that "the Commission should find that charges for irrigation water are not 'property-related fees' for the purposes of Article XIII D of the California Constitution."[157] Specifically, ELF agrees that the test claim statutes are exempt from the voter-approval requirements of article XIII D, section 6(c);[158] however, ELF also argues that "charges for irrigation water are not 'property-related fees' at all." ELF reasons: "As a result, raising them does not trigger the substantive or procedural requirements contained in Article XIII D, and the claimant districts may increase them free of any constitutional obstacle."[159]

ELF continues: "Article XIII D, § 3 restricts local governments' ability to levy a new "assessment, fee, or charge" without complying with the substantive and procedural requirements of section 4 (assessments) and section 6 (property-related fees)." However, ELF asserts that "Section 2 of Article XIII D makes Proposition 218's relatively limited reach abundantly clear."[160] ELF notes that section 2 defines a fee or charge as "any levy other than an ad valorem tax, a special tax, or an assessment, imposed by an agency upon a parcel or upon a person as an incident of property ownership, including a user fee or charge for a property related service."[161] ELF therefore reasons that "[f]ees that are not 'imposed upon a parcel' or that are not imposed upon a 'person as an incident of property ownership' or that are not a 'user fee or charge for a property related service' are not subject to Article XIII D."[162] ELF notes that in *Apartment Association of Los Angeles County v. City of Los Angeles*[163] the court held that an inspection fee imposed upon landlords was not imposed upon them as property owners, but as business owners and, therefore the fee was not subject to article XIII D.[164] The court, ELF

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[154] Exhibit S, CSDA Comments on Draft Proposed Decision, page 12.

[155] Exhibit S, CSDA Comments on Draft Proposed Decision, page 12.

[156] Exhibit T, ELF Comments on Draft Proposed Decision, page 1.

[157] Exhibit T, ELF Comments on Draft Proposed Decision, page 1.

[158] Exhibit T, ELF Comments on Draft Proposed Decision, page 3 [citing Exhibit Q, Draft Proposed Decision, page 80].

[159] Exhibit T, ELF Comments on Draft Proposed Decision, page 3.

[160] Exhibit T, ELF Comments on Draft Proposed Decision, page 3.

[161] California Constitution, article XIII D, section 2; Exhibit T, ELF Comments on Draft Proposed Decision, page 3.

[162] Exhibit T, ELF Comments on Draft Proposed Decision, pages 3-4.

[163] (2001) 24 Cal.4th 830.

[164] Exhibit T, ELF Comments on Draft Proposed Decision, page 4.

explains, found that this type of fee was "not 'property related' because it was dependent on the property's use – it was not imposed on the property simply as an incident of ownership."[165]

ELF goes on to note that "no case has squarely addressed the issue…" but the courts have recognized that not all water service charges are necessarily subject to article XIII D. In *Pajaro Valley Water Management Agency v. Amrheim*,[166] the court held that a groundwater augmentation charge was a property-related fee, but "it rested that conclusion on the fact that the majority of users were residential users, not large-scale irrigators."[167] And, ELF notes, other cases have found that domestic water use is "necessary for 'normal ownership and use of property.'"[168] ELF concludes that these cases, and others, "present no obstacle to the conclusion that irrigation water is not a property-related service."[169] ELF concludes that fees for irrigation water are not "property-related" but a business-related fee, and that therefore the Commission should deny this test claim.[170]

Northern California Water Association Position

In late comments on the draft proposed decision, NCWA seeks to "highlight and emphasize how onerous and expensive these new state mandates are in the Sacramento Valley."[171] NCWA argues that "[t]hese statewide benefits, achieved through implementation of incredibly expensive mandates, ought to be funded by the state and not borne exclusively by the impacted local agencies' landowners."[172] NCWA continues: "The draft proposed decision, in an effort to circumvent the clear requirements to reimburse for these types of state mandates, has attempted to avoid reimbursement by exerting exclusions that are not appropriate for the facts before the Commission."[173] NCWA denies that any "exemptions" apply to the test claim statutes, and "urge[s] the Commission to modify the draft proposed decision to reimburse these and other similarly affected water suppliers."[174]

IV. Discussion

Article XIII B, section 6 of the California Constitution provides in relevant part the following:

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[165] Exhibit T, ELF Comments on Draft Proposed Decision, page 4.

[166] (2007) 150 Cal.App.4th 1364.

[167] Exhibit T, ELF Comments on Draft Proposed Decision, pages 4-5.

[168] Exhibit T, ELF Comments on Draft Proposed Decision, page 5 [citing *Richmond v. Shasta Community Services District* (2004) 32 Cal.4th 409, 427; *Bighorn Desert View Water Agency v. Verjil* (2006) 39 Cal.4th 205].

[169] Exhibit T, ELF Comments on Draft Proposed Decision, page 5.

[170] Exhibit T, ELF Comments on Draft Proposed Decision, page 5.

[171] Exhibit V, NCWA Comments on Draft Proposed Decision, page 1.

[172] Exhibit V, NCWA Comments on Draft Proposed Decision, page 2.

[173] Exhibit V, NCWA Comments on Draft Proposed Decision, page 2.

[174] Exhibit V, NCWA Comments on Draft Proposed Decision, page 2.

Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such programs or increased level of service, except that the Legislature *may, but need not*, provide a subvention of funds for the following mandates:

(1) Legislative mandates requested by the local agency affected.

(2) Legislation defining a new crime or changing an existing definition of a crime.

(3) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975.

The purpose of article XIII B, section 6 is to "preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose."[175] Thus, the subvention requirement of section 6 is "directed to state-mandated increases in the services provided by [local government] ..."[176]

Reimbursement under article XIII B, section 6 is required when the following elements are met:

1. A state statute or executive order requires or "mandates" local agencies or school districts to perform an activity.[177]
2. The mandated activity either:
    a. Carries out the governmental function of providing a service to the public; or
    b. Imposes unique requirements on local agencies or school districts and does not apply generally to all residents and entities in the state.[178]
3. The mandated activity is new when compared with the legal requirements in effect immediately before the enactment of the test claim statute or executive order and it increases the level of service provided to the public.[179]
4. The mandated activity results in the local agency or school district incurring increased costs, within the meaning of section 17514. Increased costs, however, are not

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[175] *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81.

[176] *County of Los Angeles v. State of California* (*County of Los Angeles I*) (1987) 43 Cal.3d 46, 56.

[177] *San Diego Unified School Dist. v. Commission on State Mandates* (*San Diego Unified School Dist.*) (2004) 33 Cal.4th 859, 874.

[178] *Id.* at 874-875 (reaffirming the test set out in *County of Los Angeles*, *supra*, 43 Cal.3d 46, 56).

[179] *San Diego Unified School Dist.*, *supra*, 33 Cal.4th 859, 874-875, 878; *Lucia Mar Unified School District v. Honig* (1988) 44 Cal.3d 830, 835.

reimbursable if an exception identified in Government Code section 17556 applies to the activity.[180]

The determination whether a statute or executive order imposes a reimbursable state-mandated program is a question of law.[181] The Commission is vested with exclusive authority to adjudicate disputes over the existence of state-mandated programs within the meaning of article XIII B, section 6.[182] In making its decisions, the Commission must strictly construe article XIII B, section 6, and not apply it as an "equitable remedy to cure the perceived unfairness resulting from political decisions on funding priorities."[183]

The parties raise the following issues in their comments:

- The test claim statute and executive order do not impose a new program or higher level of service that is subject to article XIII B, section 6 because the Water Conservation Law and implementing regulations apply to both public and private water suppliers alike, and do not impose requirements uniquely upon local government.
- The test claim statute and executive order do not impose a new program or higher level of service because the provision of water and other utilities is an activity that could be, and often is, undertaken by private enterprise, and is therefore not a quintessentially governmental service in the manner that police and fire protection are generally accepted to be.
- The test claim does not result in costs mandated by the state for agricultural water suppliers because fees or charges for the provision of irrigation water are not "property-related" fees or charges subject to the limitations of articles XIII C and XIII D.

As described below, the Commission denies this claim on the grounds that most of the code sections and regulations pled do not impose new mandated activities, and all affected claimants have sufficient fee authority as a matter of law to cover the costs of any new requirements. Therefore, this decision does not make findings on the additional potential grounds for denial raised in comments on the draft proposed decision summarized above.

A. South Feather Water and Power Agency, Paradise Irrigation District, Oakdale Irrigation District, and Glenn-Colusa Irrigation District are Subject to the Revenue Limitations of Article XIII B, and are Therefore Eligible for Reimbursement Pursuant to Article XIII B, Section 6.

1. To be eligible for reimbursement, a local agency must be subject to the taxing and spending limitations of articles XIII A and XIII B.

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[180] *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487; *County of Sonoma v. Commission on State Mandates* (Cal. Ct. App. 1st Dist. 2000) 84 Cal.App.4th 1265, 1284; Government Code sections 17514 and 17556.

[181] *County of San Diego, supra*, 15 Cal.4th 68, 109.

[182] *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 332.

[183] *County of Sonoma, supra*, 84 Cal.App.4th 1265, 1280 [citing *City of San Jose, supra*].

An interpretation of article XIII B, section 6 requires an understanding of articles XIII A and XIII B. "Articles XIII A and XIII B work in tandem, together restricting California governments' power both to levy and to spend taxes for public purposes."[184]

In 1978, the voters adopted Proposition 13, which added article XIII A to the California Constitution. Article XIII A drastically reduced property tax revenue previously enjoyed by local governments by providing that "the maximum amount of any ad valorem tax on real property shall not exceed one percent (1%) of the full cash value of such property," and that the one percent (1%) tax was to be collected by counties and "apportioned according to law to the districts within the counties..."[185] In addition to limiting the property tax, section 4 also restricts a local government's ability to impose special taxes by requiring a two-thirds approval by voters.[186]

Article XIII B was adopted by the voters as Proposition 4 less than 18 months after the addition of article XIII A to the state Constitution, and was billed as "the next logical step to Proposition 13."[187] While article XIII A is aimed at controlling ad valorem property taxes and the imposition of new special taxes, "the thrust of article XIII B is toward placing certain limitations on the growth of appropriations at both the state and local government level; in particular, Article XIII B places limits on the authorization to expend the 'proceeds of taxes.'"[188]

Article XIII B established an "appropriations limit," or spending limit for each "entity of local government" beginning in fiscal year 1980-1981.[189] Specifically, the appropriations limit provides as follows:

> The total annual appropriations subject to limitation of the State and of each local government shall not exceed the appropriations limit of the entity of government for the prior year adjusted for the change in the cost of living and the change in population, except as otherwise provided in this article.[190]

No "appropriations subject to limitation" may be made in excess of the appropriations limit, and revenues received in excess of authorized appropriations must be returned to the taxpayers within the following two fiscal years.[191] Article XIII B does not limit the ability to expend government funds collected from *all sources*; the appropriations limit is based on "appropriations subject to limitation," which means, pursuant to article XIII B, section 8, "any authorization to

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[184] *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 486 (*County of Fresno*).

[185] California Constitution, article XIII A, section 1 (effective June 7, 1978).

[186] California Constitution, article XIII A, section 4 (effective June 7, 1978).

[187] *County of Placer v. Corin* (1980) 113 Cal.App.3d 443, 446 (*County of Placer*).

[188] *Ibid.*

[189] California Constitution, article XIII B, section 8(h) (added, Nov. 7, 1979).

[190] California Constitution, article XIII B, section 1 (added, Nov. 7, 1979; amended by Proposition 111, June 5, 1990).

[191] California Constitution, article XIII B, section 2 (added, Nov. 7, 1979).

expend during a fiscal year the *proceeds of taxes* levied by or for that entity."[192] Appropriations subject to limitation do not include "local agency loan funds or indebtedness funds"; "investment (or authorizations to invest) funds...of an entity of local government in accounts at banks...or in liquid securities";[193] "[a]ppropriations for debt service"; "[a]ppropriations required to comply with mandates of the courts or the federal government"; and "[a]ppropriations of any special district which existed on January 1, 1978 and which did not as of the 1977-78 fiscal year levy an ad valorem tax on property in excess of 12 [and one half] cents per $100 of assessed value; or the appropriations of any special district then existing or thereafter created by a vote of the people, which is totally funded by other than the proceeds of taxes."[194]

Proposition 4 also added article XIII B, section 6 to require the state to reimburse local governments for any additional expenditures that might be mandated by the state, and which would rely solely on revenues subject to the appropriations limit. The California Supreme Court, in *County of Fresno v. State of California*,[195] explained:

> Section 6 was included in article XIII B in recognition that article XIII A of the Constitution severely restricted the taxing powers of local governments. (See *County of Los Angeles I, supra,* 43 Cal.3d at p. 61.) The provision was intended to preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that were ill equipped to handle the task. (*Ibid.*; see *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 836, fn. 6.) Specifically, it was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues. Thus, although its language broadly declares that the "state shall provide a subvention of funds to reimburse ... local government for the costs [of a state-mandated new] program or higher level of service," read in its textual and historical context section 6 of article XIII B requires subvention only when the costs in question can be recovered *solely from tax revenues*.[196]

Not every local agency is subject to the restrictions of article XIII B, and therefore not every local agency is entitled to reimbursement. Redevelopment agencies, for example, have been identified by the courts as being exempt from the restrictions of article XIII B. In *Bell Community Redevelopment Agency v. Woolsey*, the Second District Court of Appeal concluded that a redevelopment agency's power to issue bonds, and to repay those bonds with its tax increment, was not subject to the spending limit of article XIII B. The court reasoned that to construe tax increment payments as appropriations subject to limitation "would be directly contrary to the mandate of section 7," which provides that "[n]othing in this Article shall be construed to impair the ability of the state or of any local government to meet its obligations with

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[192] California Constitution, article XIII B, section 8 (added, Nov. 7, 1979; amended by Proposition 111, June 5, 1990) [emphasis added].

[193] California Constitution, article XIII B, section 8.

[194] California Constitution, article XIII B, section 9 (added, Nov. 7, 1979; amended by Proposition 111, June 5, 1990).

[195] *County of Fresno*, *supra*, (1991) 53 Cal.3d 482.

[196] *Id*, at p. 487. Emphasis in original.

respect to existing or future bonded indebtedness."[197] In addition, the court found that article XVI, section 16, addressing the funding of redevelopment agencies, was inconsistent with the limitations of article XIII B:

> Article XVI, section 16, provides that tax increment revenues "may be irrevocably pledged" to the payment of tax allocation bonds. If bonds must annually compete for payment within an annual appropriations limit, and their payment depend upon complying with the such limit [*sic*], it is clear that tax allocation proceeds cannot be irrevocably pledged to the payment of the bonds. Annual bond payments would be contingent upon factors extraneous to the pledge. That is, bond payments would be revocable every year of their life to the extent that they conflicted with an annual appropriation limit. The untoward effect would be that bonds would become unsaleable because a purchaser could not depend upon the agency having a sure source of payment for such bonds.[198]

The court therefore concluded that redevelopment agencies could not reasonably be subject to article XIII B, and therefore upheld Health and Safety Code section 33678, and ordered that the writ issue to compel Woolsey to publish the notice.

Accordingly, in *Redevelopment Agency of San Marcos v. Commission on State Mandates*,[199] the court held that redevelopment agencies were not eligible to claim reimbursement because Health and Safety Code section 33678 exempted tax increment financing, their primary source of revenue, from the limitations of article XIII B.

> Because of the nature of the financing they receive, tax increment financing, redevelopment agencies are not subject to this type of appropriations limitations or spending caps; they do not expend any "proceeds of taxes." Nor do they raise, through tax increment financing, "general revenues for the local entity." The purpose for which state subvention of funds was created, to protect local agencies from having the state transfer its cost of government from itself to the local level, is therefore not brought into play when redevelopment agencies are required to allocate their tax increment financing in a particular manner...
>
> For all these reasons, we conclude the same policies which support exempting tax increment revenues from article XIII B appropriations limits also support denying reimbursement under section 6... [The] costs of depositing tax increment revenues in the Housing Fund are attributable not directly to tax revenues, but to the benefit received by the Agency from the tax increment financing scheme, which is one step removed from other local agencies' collection of tax revenues.[200]

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[197] (1985) 169 Cal.App.3d 24, at p. 31 [quoting article XIII B, section 7].

[198] *Id*, at p. 31.

[199] (1997) 55 Cal.App.4th 976.

[200] *Redevelopment Agency of San Marcos*, *supra*, 55 Cal.App.4th at pp. 986-987 [internal citations omitted].

In 2000, the Third District Court of Appeal, in *City of El Monte v. Commission on State Mandates,* affirmed the reasoning of the *San Marcos* decision, holding that a redevelopment agency cannot accept the benefits of an exemption from article XIII B's spending limit while asserting an entitlement to reimbursement under article XIII B, section 6.[201]

Therefore, pursuant to the plain language of article XIII B, section 9 and the decisions in *County of Fresno*, *supra*, *Redevelopment Agency of San Marcos*, *supra*, and *City of El Monte*, *supra*, a local agency that does not collect and expend "proceeds of taxes" is not subject to the tax and spend limitations of articles XIII A and B, and therefore is not entitled to claim reimbursement pursuant to article XIII B, section 6.

Nevertheless, claimants argue that *County of Fresno* and the redevelopment agency cases do not apply in this case. Specifically, claimants argue that *County of Fresno*, *supra*, predates Proposition 218, which added articles XIII C and XIII D to the California Constitution, and is factually distinguishable from this test claim because the test claim statute at issue in *County of Fresno* specifically authorized user fees to pay for the mandated activities. With respect to the redevelopment cases (*Bell Community Redevelopment Agency*, *Redevelopment Agency of San Marcos*, and *City of El Monte*), the claimants argue that the courts' findings rely on Health and Safety Code section 33678, which specifically excepts the revenues of redevelopment agencies from the scope of revenue-limited appropriations under article XIII B.[202] In addition, the claimants argue that the above reasoning "would prohibit state subvention for every enterprise district in the state that is subject to Proposition 218…" and "would create a class of local agencies that are per se ineligible for reimbursement under this test claim, all potential future test claims, and all previous test claims dating back to Proposition 218's passage in 1996."[203] In addition, both the claimants and CSDA suggest that the Commission broaden the scope of reimbursement eligibility under article XIII B, section 6, beyond that articulated by the courts, and beyond the plain language of articles XIII A and XIII B.[204] The claimants and CSDA urge the Commission to consider the restrictions placed on special districts' authority to impose assessments, fees, or charges by articles XIII C and XIII D to be part of the "increasingly limited revenues sources" that subvention under section 6 was intended to protect. The claimants and CSDA would have the Commission broadly interpret and extend the subvention requirement and treat fee authority subject to proposition 218 as proceeds of taxes, "to advance the goal of 'preclud[ing] the state from shifting financial responsibility for carrying out governmental functions onto local entities that [are] ill equipped to handle the task."[205]

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[201] (2000) 83 Cal.App.4th 266, 281-282 (*El Monte*).

[202] Exhibit R, Claimant Comments on Draft Proposed Decision, pages 17-18.

[203] Exhibit R, Claimant Comments on Draft Proposed Decision, pages 14-15.

[204] See Exhibit R, Claimant Comments on Draft Proposed Decision, page 21; Exhibit S, CSDA Comments on Draft Proposed Decision, pages 10-12 [Arguing that the restrictions of articles XIII C and XIII D are more onerous than the revenue limits of article XIII B, and the Commission should "recognize these restrictions…" and "Articles XIII A, B, C, and D should be read together and harmonized…"].

[205] Exhibit R, Claimant Comments on Draft Proposed Decision, page 21 [quoting *County of Fresno*, *supra* 53 Cal.3d, at p. 487.].

The claimant's comments do not alter the above analysis. The factual distinction that claimants allege between this test claim and *County of Fresno* is not dispositive.[206] Specific fee authority provided by the test claim statute is not necessary: so long as a local government's statutory fee authority can be legally applied to alleged activities mandated by the test claim statute, there are no *costs mandated by the state* within the meaning of Government Code section 17514 and article XIII B, section 6, to the extent of that fee authority.[207] If the local entity is not compelled to rely on *appropriations subject to limitation* to comply with the alleged mandate, no reimbursement is required.[208]

The claimant's comments addressing the redevelopment cases are similarly unpersuasive. Those cases are discussed above not as analogues for the types of special districts represented in this test claim, but only to demonstrate that *not all local government entities* are subject to articles XIII A and XIII B, and that an agency that is not bound by article XIII B cannot assert an entitlement to reimbursement under section 6.[209]

Moreover, enterprise districts, and indeed any local government entity funded exclusively through user fees, charges, or assessments, *are* per se ineligible for mandate reimbursement. This is so because only a mandate to expend revenues that are subject to the appropriations limit, as defined and expounded upon by the courts,[210] can entitle a local government entity to mandate reimbursement. In other words, a local agency that is funded solely by user fees or charges, (or tax increment revenues, as discussed above), or appropriations for debt service, or any combination of revenues "other than the proceeds of taxes" is an agency that is not subject to the appropriations limit, and therefore not entitled to subvention.[211]

This interpretation is supported by decades of mandates precedent and is consistent with the purpose of article XIII B. As discussed above, "Section 6 was included in article XIII B in recognition that article XIII A...severely restricted the *taxing* powers of local governments."[212] Article XIII B "was not intended to reach beyond taxation..." and "would not restrict the growth in appropriations financed from other [i.e., nontax] sources of revenue..."[213] The issue, then, is

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[206] Exhibit R, Claimant Comments on Draft Proposed Decision, pages 17-18. *County of Fresno*, *supra*, 53 Cal.3d at p. 485.

[207] See also, *Clovis Unified School District v. Chiang* (2010) 188 Cal.App.4th 794, 812 ["Claimants can choose not to required these fees, but not at the state's expense."

[208] See *Redevelopment Agency of San Marcos*, *supra*, 55 Cal.App.4th at p. 987 ["No state duty of subvention is triggered where the local agency is not required to expend its proceeds of taxes."].

[209] *City of El Monte*, *supra*, (2000) 83 Cal.App.4th 266, 281-282 [citing *Redevelopment Agency of San Marcos*, *supra*, (1997) 55 Cal.App.4th 976].

[210] See *Placer v. Corin* (1980) 113 Cal.App.3d 443; *Bell Community Redevelopment Agency*, *supra* (1985) 169 Cal.App.3d 24; *County of Fresno*, *supra* (1991) 53 Cal.3d 482; *Redevelopment Agency of San Marcos*, *supra*, (1997) 55 Cal.App.4th 976.

[211] California Constitution, article XIII B, section 9 (Adopted Nov. 6, 1979; Amended June 5, 1990).

[212] See *County of Fresno*, *supra*, 53 Cal.3d at p. 487 [emphasis added].

[213] *Ibid.*

not *how many* different sources of revenue a local entity has at its disposal, as suggested by claimants;[214] it is whether and to what extent those sources of revenue (and the appropriations to be made) are *limited* by articles XIII A and XIII B. Based on the foregoing, nothing in claimants' comments alters the above analysis.

The Commission also disagrees with the interpretation offered by CSDA. CSDA argues in its comments that Proposition 1A, adopted in 2004, made changes to article XIII B, section 6, which must be considered by the Commission, and that the voters' intent and understanding when adopting Proposition 1A should weigh heavily on the Commission's interpretation of the amended text.[215] However, the amendments made by Proposition 1A require the Legislature to either pay or suspend a mandate for local agencies, and expand the definition of a new program or higher level of service. The plain language of Proposition 1A does not address which entities are eligible to claim reimbursement, and does not require reimbursement for all special districts, including those that do not receive property tax revenue and are not subject to the appropriations limitation of article XIII B.[216] CSDA's comments do not alter the above analysis.

Based on the foregoing, a local agency that does not collect and expend "proceeds of taxes" is not subject to the tax and spend limitations of articles XIII A and B, and therefore is not entitled to claim reimbursement pursuant to article XIII B, section 6.

2. Biggs-West Gridley Water District and Richvale Irrigation District are not subject to the taxing and spending limitations of articles XIII A and XIII B, and are therefore not eligible for reimbursement under article XIII B, section 6 of the California Constitution. However, Oakdale Irrigation District and Glenn-Colusa Irrigation District are subject to the taxing and spending limitations, have been substituted in as claimants for both of the consolidated test claims, and are eligible for reimbursement under article XIII B, section 6 of the California Constitution.

10-TC-12 was originally filed by four co-claimants: South Feather, Paradise, Biggs, and Richvale.[217] 12-TC-01 was filed by Richvale and Biggs only,[218] and the two test claims were consolidated for analysis and hearing and renamed *Water Conservation*. Based on the analysis herein, the Commission finds that Richvale and Biggs are ineligible to claim reimbursement under article XIII B, section 6, and test claim 12-TC-01 would have to be dismissed for want of an eligible claimant.[219] However, Oakdale and Glenn-Colusa have requested to be substituted in on both test claims in the place of the ineligible claimants.[220] The analysis below will therefore address the eligibility of each of the six co-claimants, and will show that South Feather, Paradise,

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[214] Exhibit R, Claimant Comments on Draft Proposed Decision, pages 20-21.

[215] See, e.g., Exhibit S, CSDA Comments on Draft Proposed Decision, page 7.

[216] See California Constitution, article XIII B, section 6 (b-c).

[217] Exhibit A, Test Claim 10-TC-12.

[218] Exhibit B, Test Claim 12-TC-01.

[219] See Exhibit K, Notice of Pending Dismissal.

[220] Exhibit N, Request for Substitution of Parties by Oakdale Irrigation District; Exhibit O, Request for Substitution of Parties by Glenn-Colusa Irrigation District.

Oakdale, and Glenn-Colusa are all eligible to claim reimbursement under article XIII B, section 6, and therefore the Commission maintains jurisdiction over both of the consolidated test claims.

a. Biggs-West Gridley Water District and Richvale Irrigation District are not eligible to claim reimbursement under article XIII B, section 6.

The Districts have acknowledged that "Richvale and Biggs do not receive property tax revenue."[221] With respect to Richvale, that statement is consistent with the original test claim filing, in which Richvale stated that it "does not receive an annual share of property tax revenue."[222] However, Biggs had earlier stated in a declaration by Karen Peters, the District's Executive Administrator, that "Biggs receives an annual share of property tax revenue," and for "Fiscal Year 2011 the amount of property tax revenue is expected to be approximately $64,000."[223] Biggs has since determined that the Peters declaration was in error, and a more recent declaration from Eugene Massa, the District's General Manager, states that "[t]hat revenue estimate actually reflects Biggs' *assessment*, equating to $2 per acre within Biggs' boundaries." Mr. Massa goes on to state that "Biggs does not currently receive any share of ad valorem *property tax* revenue."[224,225]

Even though Richvale and Biggs acknowledge that they receive no property tax revenue, they argue that they and "other similarly situated public agencies should not be deemed ineligible for subvention due to a historical quirk that resulted in those agencies not receiving a share of ad valorem property taxes."[226] The "historical quirk" to which Richvale and Biggs refer, it is assumed, is the fact that Richvale and Biggs either did not exist or did not share in ad valorem property tax revenue as of the 1977-78 fiscal year, which would render at least some portion of

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[221] Exhibit I, Claimant Response to Request for Additional Information, page 1.

[222] Exhibit A, South Feather Water and Power Test Claim, page 22.

[223] Exhibit A, 10-TC-12, page 30.

[224] Exhibit I, Claimant Response to Request for Additional Information, page 393 [emphasis added].

[225] See also Exhibit X, Special Districts Annual Report 2010-2011, pages 184; 389; 1051 [The Special Districts Annual Report for 2010-2011 is consistent with Richvale's statement that it does not receive property tax revenue. Table 8 indicates no property tax receipts, and Table 1 does not indicate an appropriations limit. Biggs did not submit the necessary information to the SCO, and therefore does not appear in Tables 1 or 8 of the 2010-2011 Special Districts Annual Report. Based on that report, and the admissions of the Districts, a notice of dismissal was issued on November 12, 2013 for test claim 12-TC-01, for which Richvale and Biggs were the only named claimants. In response to the Notice of Pending Dismissal, the Districts submitted an Appeal of Dismissal, in which they argue that Proposition 218 undermines a local agency's fee authority, and that the Districts are eligible for reimbursement "for the reasons already explained in the Districts' 'Claimants' Response to Request for Additional Information 10-TC-12 and 12-TC-01.'" (Exhibit K, Notice of Pending Dismissal; Exhibit L, Appeal of Executive Director's Decision)].

[226] Exhibit R, Claimant Comments on Draft Proposed Decision, page 20.

their revenues subject to the appropriations limit, in accordance with article XIII B, section 9.[227] They argue that all public agencies are ill-equipped to cover the costs of new mandates, whether they are subject to the tax and spend limits of articles XIII A and XIII B, or the fee and assessment restrictions of articles XIII C and XIII D.[228] In addition, Richvale and Biggs assert that to the extent they do have authority to raise revenues other than taxes, any increased fees or assessments necessary to cover the costs of the required activities would, by definition, be classified as proceeds of taxes under article XIII B, section 8.[229]

The Districts' reasoning is both circular and fundamentally unsound. Article XIII B, section 8 provides that "proceeds of taxes" includes "all tax revenues and the proceeds to an entity of government from (1) regulatory licenses, user charges, and user fees *to the extent that those proceeds exceed the costs reasonably borne by that entity in providing the regulation, product, or service*, and (2) the investment of tax revenues."[230] The districts argue, therefore, that "proceeds of taxes" includes not only revenues directly derived from taxes, "but also revenues exceeding the costs to fund the services provided by the agency." The Districts argue that Richvale and Biggs are unable, under Proposition 218, to impose new fees as a matter of law, and must reallocate existing fees, which constitute "proceeds of taxes" under article XIII B, section 8. But Proposition 218 added article XIII D to expressly provide that fees or charges "*shall not be extended, imposed, or increased*" if revenues derived from the fee or charge exceed the funds needed to provide the property-related service; and "shall not be used for any purpose other than that for which the fee or charge was imposed."[231] Therefore, Proposition 218 imposes an absolute bar to raising fees beyond those necessary to provide the property-related service, or "reallocating" fees for a purpose other than that for which the fee or charge was imposed.

Moreover, Richvale and Biggs' reasoning that such fees *would automatically and by definition* constitute proceeds of taxes under article XIII B, section 8, rests on the initial presumption that such fees or charges would "exceed" those necessary to provide the service. In other words, the Districts presume that the costs of the mandate are unrelated to, or exceed, the costs of providing water service to the districts' users.[232] On the contrary, any fees or charges, whether *new or existing*, imposed by Richvale and Biggs are imposed for the purpose of providing irrigation water. The alleged mandated activities imposed upon irrigation districts by the test claim statute and regulations are required for those districts to *continue* providing irrigation water. Therefore, utilizing revenues from fees or charges to comply with the alleged new requirements is not

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[227] Section 9 states that appropriations subject to limitation do not include: "Appropriations of any special district which existed on January 1, 1978, and which did not as of the 1977–78 fiscal year levy an ad valorem tax on property in excess of 12 1/2 cents per $100 of assessed value; or the appropriations of any special district then existing or thereafter created by a vote of the people, which is totally funded by other than the proceeds of taxes."

[228] Exhibit R, Claimant Comments on Draft Proposed Decision, page 20.

[229] Exhibit I, Claimant Response to Request for Additional Information, page 3.

[230] Exhibit I, Claimant Response to Request for Additional Information, page 3 [citing California Constitution, article XIII B, section 8 (emphasis added)].

[231] Article XIII D, section 6(b) (added November 5, 1996, by Proposition 218).

[232] Exhibit I, Claimant Response to Request for Additional Information, pages 4-5.

"divert[ing] existing revenues from their authorized purposes..."[233] Rather, the increased or reallocated fees are merely being used to ensure that claimants can continue to provide water service consistently with all applicable legal requirements. Claimants' assertion that an increase or reallocation of fees alters the legal significance of such fees pursuant to article XIII B, section 8 is not supported by the law or the record.

Simply put, Richvale and Biggs do not impose or collect taxes[234] and the Commission cannot say, as a matter of law, that fees increased or imposed to comply with the alleged mandate would constitute proceeds of taxes, within the meaning of article XIII B, section 8. Unless or until a court determines that article XIII B, section 8 can be applied in this manner, the Commission must presume that only those local government entities that collect and expend proceeds of taxes, within the meaning of article XIII A, are subject to the spending limits of article XIII B, including section 6.

Based on the foregoing, the Commission finds that Richvale Irrigation District and Biggs-West Gridley Water District are not subject to the taxing and spending limitations of articles XIII A and XIII B, and are therefore not eligible to claim reimbursement under article XIII B, section 6.

b. South Feather Water and Power Agency and Paradise Irrigation District are eligible to claim reimbursement under article XIII B, section 6.

Claimants state that "South Feather and Paradise receive property tax revenue," and "are in the process of establishing their appropriations limits for their current fiscal years."[235]

Declarations attached to claimants' response state that both South Feather and Paradise are in the process of determining and adopting an appropriations limit. Kevin Phillips, Finance Manager of Paradise, stated that during his tenure, "I have not calculated or otherwise established Paradise's appropriation limit as set forth in Proposition 4." Mr. Phillips further states that "[a]t the request of Paradise's legal counsel, I have begun working to establish Paradise's appropriation limit and intend...to ask Paradise's Board of Directors to adopt a resolution...for its current fiscal year."[236] Similarly, Steve Wong, Finance Division Manager of South Feather, states that he has not "calculated or otherwise established South Feather's appropriation limit" during his employment with South Feather. Mr. Wong further states that "[a]t the request of South Feather's legal counsel, I have begun working to establish South Feather's appropriation limit and intend, after the requisite public review period, to ask South Feather's Board of Directors to adopt a resolution establishing South Feather's appropriation limit for its current fiscal year."[237]

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[233] See Exhibit I, Claimant Response to Request for Additional Information, pages 4-5.

[234] Note that special districts generally have statutory authorization to impose special taxes, but only with two-thirds voter approval (See article XIII A, section 4). However, there is no evidence in the record indicating that Richvale or Biggs currently collects or expends special taxes.

[235] Exhibit I, Claimant Response to Request for Additional Information, pages 1-2.

[236] See Exhibit I, Claimant Response to Request for Additional Information, page 394.

[237] See Exhibit I, Claimant Response to Request for Additional Information, page 427.

Based on the foregoing, the Commission finds that both South Feather and Paradise are subject to the tax and spend limitations of articles XIII A and XIII B, and are therefore eligible to claim reimbursement under article XIII B, section 6.

3. Oakdale Irrigation District and Glenn-Colusa Irrigation District are eligible to claim reimbursement under article XIII B, section 6 and are thus substituted in as claimants in the consolidated test claims in place of Biggs-West Gridley Water District and Richvale Irrigation District.

Pursuant to the Notice of Pending Dismissal, Oakdale submitted a request to be substituted in as a party on 10-TC-12 and 12-TC-01 on January 13, 2014. Oakdale states that it is subject to the tax and spend limitations of articles XIII A and XIII B, and that it is an agricultural water supplier "subject to the mandates imposed by the Agricultural Water Measurement Regulations...and the Water Conservation Act of 2009."[238] The declaration of Steve Knell, Oakdale's General Manager, attached to the Request for Substitution, states that Oakdale "receives an annual share of ad valorem property tax revenue from Stanislaus and San Joaquin counties." The declaration further states that the District "received $5,701,730 in property taxes for 2011-2013 and expects to receive approximately $1.9 million in 2014."

The Special Districts Annual Reports for 2010-2011 and 2011-2012 do not indicate an appropriations limit for Oakdale in Table 1,[239] but they do indicate that Oakdale received property tax revenue in Table 8 for 2010-2011 and 2011-2012.[240]

Similarly, Glenn-Colusa submitted a request to be substituted in as a party on both test claims. Glenn-Colusa asserted in its request that it "is subject to the tax and spend limitations of Articles XIII A and XIII B of the California Constitution," and is an agricultural water supplier, subject to "the mandates imposed by the Water Conservation Act of 2009...and the Agricultural Water Measurement Regulations."[241] In declarations attached to the Request for Substitution, Thaddeus Bettner, General Manager of Glenn-Colusa, asserts that the District "received $520,420 in property taxes in 2013 and expects to receive $528,300 in 2014."[242]

Table 8 of the Special Districts Annual Report indicates that Glenn-Colusa collected property taxes in 2010-2011 and 2011-2012,[243] but Table 1 does not indicate an appropriations limit for the district.[244]

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[238] Exhibit N, Request for Substitution of Parties by Oakdale Irrigation District, page 2.

[239] Exhibit X, Special Districts Annual Reports for 2010-2011 and 2011-2012, pages 159 and 157, respectively.

[240] Exhibit X, Special Districts Annual Reports for 2010-2011 and 2011-2012, pages 381 and 379, respectively.

[241] Exhibit O, Request for Substitution of Parties by Glenn-Colusa Irrigation District, pages 1-2.

[242] Exhibit O, Request for Substitution of Parties by Glenn-Colusa Irrigation District, page 7.

[243] Exhibit X, Special Districts Annual Report, 2010-2011 and 2011-2012, pages 357 and 355, respectively.

[244] Exhibit X, Special Districts Annual Report, 2010-2011 and 2011-2012, pages 104 and 101, respectively.

Based on the evidence in the record, including the declarations of the General Managers of Oakdale and Glenn-Colusa, as well as the information reported to the SCO in the Special Districts Annual Reports for fiscal years 2010-2011 and 2011-2012, both the substitute claimants collect some amount of property tax revenue. In turn, because property tax revenue is subject to the appropriations limit, both claimants also expend revenues subject to the appropriations limit, in accordance with article XIII B. A local government entity that is subject to both articles XIII A and XIII B is eligible for subvention under article XIII B, section 6, and is an eligible claimant before the Commission.

The Commission concludes that both Oakdale and Glenn-Colusa are subject to article XIII B as a matter of law, because they have authority to collect and expend property tax revenue.

Based on the foregoing, the Commission finds that Oakdale and Glenn-Colusa are subject to the tax and spend limitations of articles XIII A and XIII B, and are therefore eligible to claim reimbursement under article XIII B, section 6.

B. Some of the Test Claim Statutes and Regulations Impose New Requirements on Urban Retail Water Suppliers.

Test claim 10-TC-12 alleged all of Part 2.55 of Division 6 of the Water Code, which consists of sections 10608 through 10608.64. The following analysis addresses only those sections of Part 2.55 containing mandatory language, and those sections specifically alleged in the test claim narrative. Sections 10608.22, 10608.28, 10608.36, 10608.43, 10608.44, 10608.50, 10608.56, 10608.60, and 10608.64 are not analyzed below, because those sections were not specifically alleged to impose increased costs mandated by the state, and because they do not impose new requirements on local government.

1. Water Code sections 10608, 10608.4(d), 10608.12(a; p), and 10608.16(a), as added by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7), do not impose any new requirements on local government.

Water Code section 10608 states the Legislature's findings and declarations, including: "Water is a public resource that the California Constitution protects against waste and unreasonable use..." and "Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions." Subdivision (g), specifically invoked by the claimants,[245] states that "[t]he Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020."[246] The plain language of this section establishes a goal, but does not, itself, impose any new requirements on local government.

Water Code section 10608.4 as added, states the "intent of the legislature," including, as highlighted by the claimants,[247] to "[e]stablish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in

[245] Exhibit A, Test Claim 10-TC-12, page 3.

[246] Water Code section 10608(a; d; g) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[247] Exhibit A, Test Claim 10-TC-12, page 3.

accordance with the Governor's goal of a 20 percent reduction."[248] The plain language of this section expresses legislative intent, and does not impose any new activities on local government

Water Code section 10608.16(a), as added, states that "[t]he state shall achieve a 20 percent reduction in urban per capita water use in California on or before December 31, 2020." In addition, section 10608.16(b) provides that the state "shall make incremental progress towards the state target specified in subdivision (a) by reducing urban per capita water use by at least 10 percent on or before December 31, 2015."[249] The plain language of this section is directed to the State generally, and does not impose any new mandated activities on local government.

Water Code section 10608.12 provides that "the following definitions govern the construction of this part:" An "urban retail water supplier " is defined as "a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes."[250] The claimants allege that the Water Conservation Act imposes unfunded state mandates on urban retail water suppliers, and that South Feather and Paradise "are 'urban retail water suppliers,' as defined."[251] Likewise, under section 10608.12, an "agricultural water supplier" is defined as "a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water."[252] The claimants allege that this definition "expanded the definition of what constitutes an agricultural water supplier," and thus required a greater number of entities to adopt AWMPs and perform other activities under the Water Code.[253] However, whatever new activities may be required by the test claim statutes, the plain language of amended section 10608.12 does not impose any new requirements on urban retail water suppliers or agricultural water suppliers; section 10608.12 merely prescribes the applicability and scope of the other requirements of the test claim statutes.

Based on the foregoing, the Commission finds that sections 10608, 10608.4 10608.12, and 10608.16, pled as added, do not impose any new requirements on local government, and are therefore denied.

2. Water Code sections 10608.20(a; b; e; and j), 10608.24, and 10608.40, as added by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7) impose new required activities on urban water suppliers.

Prior law required the preparation of an urban water management plan, and required urban water suppliers to update the plan every five years. The test claim statutes add additional information related to conservation goals to that required to be included in a supplier's UWMP, and authorize an extension of time from December 31, 2010 to July 1, 2011 for the adoption of the next UWMP. As added by the test claim statute, section 10608.20 provides, in pertinent part:

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[248] Water Code section 10608.4 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[249] Water Code section 10608.16(a; b) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[250] Water Code section 10608.12(p) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[251] Exhibit A, 10-TC-12, page 2.

[252] Water Code section 10608.12(a) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[253] Exhibit A, 10-TC-12, page 8.

(a)(1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.

(2) It is the intent of the Legislature that the urban water use targets described in subdivision (a) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.

(b) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):

(1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.

(2) The per capita daily water use that is estimated using the sum of the following performance standards:

(A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.

(B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.

(C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.

(3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.

(4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010...[254]

In addition, section 10608.20(e) provides that an urban retail water supplier "shall include in its urban water management plan due in 2010...the baseline daily per capita water use, urban water

[254] Water Code section 10608.20 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining estimates, including references to supporting data."[255]

And, section 10608.20(j) provides that an urban retail water supplier "shall be granted an extension to July 1, 2011..." to adopt a complying water management plan, and that an urban retail water supplier that adopts an urban water management plan due in 2010 "that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011 to comply with this part."[256]

Section 10608.40 provides that an urban retail water supplier shall also "report to [DWR] on their progress in meeting their urban water use targets as part of their [UWMPs] submitted pursuant to Section 10631."[257]

Section 10608.24 provides that each urban retail water supplier "shall meet its interim urban water use target by December 31, 2015," and "shall meet its [final] urban water use target by December 31, 2020."[258]

As discussed above, prior law required the adoption of an UWMP, which, pursuant to section 10631, included a detailed description and analysis of water supplies within the service area, including reliability of supply in normal, dry, and multiple dry years, and a description and evaluation of water demand management measures currently being implemented and scheduled for implementation.[259] Pursuant to existing section 10621, that plan was required to be updated "once every five years...in years ending in five and zero."[260] And, existing section 10631(e) also required identification and quantification of past, current and projected water use over a five-year period including, but not necessarily limited to, all of the following uses:

> (A) Single-family residential.
>
> (B) Multifamily.
>
> (C) Commercial.
>
> (D) Industrial.
>
> (E) Institutional and governmental.
>
> (F) Landscape.
>
> (G) Sales to other agencies.
>
> (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

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[255] Water Code section 10608.20(e) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[256] Water Code section 10608.20(j) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[257] Water Code section 10608.40 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[258] Water Code section 10608.24(a; b) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[259] Water Code section 10631 (Stats. 2009, ch. 534 (AB 1465)).

[260] Water Code section 10621 (Stats. 2007, ch. 64 (AB 1376)).

(I) Agricultural.[261]

However, nothing in prior law required the adoption of urban water use targets, baseline information on a per capita basis (as opposed to on a type of use basis), interim and final water use targets, assessment of present and proposed measures to achieve the targeted reductions, or a report on the supplier's progress toward meeting the reductions.

Based on the foregoing, the Commission finds that Water Code sections 10608.20, 10608.24, and 10608.40, as added by the test claim statute, impose new requirements on urban retail water suppliers, as follows:

- Develop urban water use targets and an interim urban water use targets by July 1, 2011.[262]
- Adopt one of the methods specified in section 10608.20(b) for determining an urban water use target.[263]
- Include in its urban water management plan due in 2010 the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.[264]
- Report to DWR on their progress in meeting urban water use targets as part of their UWMPs.[265]
- Amend its urban water management plan, by July 1, 2011, to allow use of technical methodologies developed by the department pursuant to subdivisions (b) and (h) of section 10608.20.[266]
- Meet interim urban water use target by December 31, 2015.[267]
- Meet final urban water use target by December 31, 2020.[268]

The activities required to meet the interim and final urban water use targets are intended to vary significantly among local governments based upon differences in climate, population density, levels of per capita water use according to plant water needs, levels of commercial, industrial, and institutional water use, and the amount of hardening that has occurred as a result of prior conservation measures implemented in different regions

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[261] Water Code section 10631 (Stats. 2009, ch. 534 (AB 1465)).

[262] Water Code section 10608.20(a) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[263] Water Code section 10608.20(b) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[264] Water Code section 10608.20(e) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[265] Water Code section 10608.40 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[266] Water Code section 10608.20(i) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[267] Water Code section 10608.24(a) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[268] Water Code section 10608.24(b) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

throughout the state. Local variations, therefore, are not expressly stated in the test claim statutes.

3. Water Code section 10608.26, as added by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7), requires urban water suppliers to conduct at least one public hearing to allow community input regarding an urban retail water supplier's implementation plan.

Section 10608.26 provides that "[i]n complying with this part," an urban retail water supplier shall conduct at least one public hearing "to accomplish all of the following:" (1) allow community input regarding the urban retail water supplier's implementation plan; (2) consider the economic impacts of the urban retail water supplier's implementation plan; and (3) adopt one of the four methods provided in section 10608.20(b) for determining its urban water use target.[269]

The claimants assert that "prior to the Act, there was no requirement to conduct at least one public hearing to allow for community input regarding conservation, consider economic impacts of the implementing the 20% reduction [*sic*], or to adopt a method for determining an urban water use target."[270]

Section 10642, added by Statutes 1983, chapter 1009, required a public hearing prior to *adopting an UWMP*, as follows:

> Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code...[271]

However, section 10608.26 requires a public hearing for purposes of allowing public input regarding an implementation plan, considering the economic impacts of an implementation plan, or adopting a method for determining the urban water supplier's water use targets, as required by section 10608.20(b). DWR, the agency with responsibility for implementing the Water Conservation Act, has interpreted these two requirements as only requiring one hearing.[272] As the implementing agency, DWRs interpretation of the Act is entitled to great weight.[273]

Based on the foregoing, the Commission finds that section 10608.26 imposes a new and additional requirement on urban retail water suppliers, as follows:

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[269] Water Code section 10608.26(a) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[270] Exhibit A, 10-TC-12, page 8 [citing Water Code section 10608.26(a)(1-3)].

[271] Water Code section 10642 (Stats. 1983, ch. 1009) [citing Government Code section 6066 (Stats. 1959, ch. 954), which provides for publication once per week for two successive weeks in a newspaper of general circulation].

[272] Exhibit X, Department of Water Resources, *Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan*, pp. A-2 and 3-4.

[273] *Yamaha Corporation of America v. State Board of Equalization* (1998) 19 Cal.4th 1, 10-11.

Include in the public hearing on the adoption of the UWMP an opportunity for community input regarding the urban retail water supplier's implementation plan; consideration of the economic impacts of the implementation plan; and the adoption of a method, pursuant to section 10608.20(b), for determining urban water use targets.[274]

4. Water Code section 10608.42, as added by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7), does not impose any new requirements on local government.

Section 10608.42 provides:

> The department shall review the 2015 urban water management plans and report to the Legislature by December 31, 2016, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets in order to achieve the 20-percent reduction and to reflect updated efficiency information and technology changes.[275]

The claimants allege that section 10608.42 requires an UWMP, adopted by an urban retail water supplier, to "describe the urban retail water supplier's progress toward achieving the 20% reduction by 2020."[276] However, the plain language of this section is directed to DWR, and does not, itself, impose any new activities or requirements on local government.

Based on the foregoing, the Commission finds that section 10608.42 does not impose any new requirements on local government, and is therefore denied.

5. Water Code sections 10608.56 and 10608.8, as added by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7), do not impose any new requirements on local government.

Section 10806.56 provides that "[o]n and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part."[277] The plain language of this section does not impose any new requirements on local government; the section only states the consequence of failing to comply with all other requirements of the Act.

Section 10608.8 provides that "[b]ecause an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021."[278] The plain language of

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[274] Water Code section 10608.26 ((Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)). See also Exhibit X, Department of Water Resources, *Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan*, pp. A-2 and 3-4.

[275] Water Code section 10608.42 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[276] Exhibit A, 10-TC-12, page 3.

[277] Water Code section 10608.56 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[278] Water Code section 10608.8 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

this section does not impose any new requirements on local government; rather, the section states that no violation of law shall occur until after the date that urban water use targets are supposed to be met.

The claimants allege that Water Code section 10608.56 imposes reimbursable state-mandated costs, alleging that "[f]ailure to comply with the aforementioned mandates by South Feather and Paradise will result, on and after July 1, 2016, in ineligibility for water grants or loans awarded or administered by the State of California." In addition, the claimants allege that "a failure to meet the 20% target shall be a violation of law on and after January 1, 2021," citing Water Code section 10608.8.[279] The plain language of sections 10608.8 and 10608.56, as described above, do not impose any new activities or tasks on local government; the provisions that the claimants allege only state the consequences of failing to comply with all other requirements of the Act.

Based on the foregoing, the Commission finds that sections 10806.56 and 10806.8 do not impose any new requirements on local government, and are therefore denied.

C. Some of the Test Claim Statutes and Regulations Impose New Requirements on Non-exempt Agricultural Water Suppliers.

Chapter 4 of Part 2.55 of Division 6 of the Water Code consists of a single code section that addresses water conservation requirements for agricultural water suppliers: section 10608.48. The remaining provisions of the test claim statute addressing agricultural water suppliers were added in Part 2.8 of Division 6 of the Water Code, consisting of sections 10800-10853, and address agricultural water management planning requirements. Sections 10608.8 and 10828 provide for exemptions from the requirements of Part 2.55 and Part 2.8, respectively, under certain circumstances, which are addressed where relevant below.

1. Water Code section 10608.48(a-c), as amended by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7), imposes new requirements on some agricultural water suppliers to implement efficient water management practices, including measurement and a pricing structure based in part on quantity of water delivered; and to implement up to fourteen other efficient water management practices, if locally cost effective and technically feasible.

Section 10608.48 provides for the implementation by agricultural water suppliers of specified critical efficient water management practices, including measurement and volume-based pricing; and *additional* efficient water management practices, where locally cost effective and technically feasible, as follows:

> (a) On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).
>
> (b) Agricultural water suppliers shall implement *all of the following critical efficient management practices*:
>
> (1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).

[279] Exhibit A, 10-TC-12, page 4.

(2) Adopt a pricing structure for water customers based at least in part on quantity delivered.

(c) Agricultural water suppliers shall implement *additional efficient management practices*, including, but not limited to, practices to accomplish all of the following, *if the measures are locally cost effective and technically feasible*:

(1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.

(2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.

(3) Facilitate the financing of capital improvements for on-farm irrigation systems.

(4) Implement an incentive pricing structure that promotes one or more of the following goals:

(A) More efficient water use at the farm level.

(B) Conjunctive use of groundwater.

(C) Appropriate increase of groundwater recharge.

(D) Reduction in problem drainage.

(E) Improved management of environmental resources.

(F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.

(5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.

(6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.

(7) Construct and operate supplier spill and tailwater recovery systems.

(8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.

(9) Automate canal control structures.

(10) Facilitate or promote customer pump testing and evaluation.

(11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.

(12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:

(A) On-farm irrigation and drainage system evaluations.

(B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.

(C) Surface water, groundwater, and drainage water quantity and quality data.

(D) Agricultural water management educational programs and materials for farmers, staff, and the public.

(13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.

(14) Evaluate and improve the efficiencies of the supplier's pumps.[280]

The claimants allege that section 10608.48 requires agricultural water suppliers (Oakdale and Glenn-Colusa) to "measure the volume of water delivered to their customers using best professional practices to achieve a minimum level of measurement accuracy at the farm-gate." In addition, they allege, agricultural water suppliers are required to "adopt a pricing structure for water customers based on the quantity of water delivered." The claimants further allege that "[i]f 'locally cost effective' and technically feasible, agricultural water suppliers are required to implement fourteen additional efficient management practices" specified in section 10608.48(c).[281]

The claimants argue that prior to the test claim statute, agricultural water suppliers "were not required to have a pricing structure based, at least in part, on the quantity of water delivered," and were not required to measure the volume of water delivered if it was not locally cost effective to do so. The claimants assert that "[w]hile subdivision (a) of Water Code section 531.10 was a preexisting obligation, subdivision (b) of that same section gave an exception to the farm-gate measurement requirement if the measurement devices were not locally cost effective." The claimants conclude that now "[t]he Act requires compliance with subdivision (a) regardless of whether it is locally cost effective."[282] In addition, the claimants assert that prior to the Act, "there was no requirement to implement up to 14 additional conservation measures if locally cost effective and technically feasible."[283]

Section 531.10 of the Water Measurement Law, as added by Statutes 2007, chapter 675 provides, in its entirety:

(a) An agricultural water supplier shall submit an annual report to the department that summarizes aggregated farm-gate delivery data, on a monthly or bimonthly basis, using best professional practices.

(b) Nothing in this article shall be construed to require the implementation of water measurement programs or practices that are not locally cost effective.

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[280] Water Code section 10608.48(a-c) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)) [emphasis added].

[281] Exhibit A, Test Claim 10-TC-12, page 4.

[282] Exhibit A, 10-TC-12, page 8.

[283] Exhibit A, 10-TC-12, page 8.

(c) It is the intent of the Legislature that the requirements of this section shall complement and not affect the scope of authority granted to the department or the board by provisions of law other than this article.

The plain language of section 531.10 required agricultural water suppliers to submit an annual report to DWR summarizing aggregated data on water delivered to individual agricultural customers using best professional practices, but only if water measurement programs or practices were locally cost effective.[284] Therefore, to the extent that water measurement programs or practices *were* locally cost effective, such activities were required to comply with prior law. Section 10608.48(b), in turn, does not impose a *new* requirement to "[m]easure the volume of water delivered to customers with sufficient accuracy to comply with [section 531.10(a),]" if such water measurement activities were already performed. However, section 10608.48(b) also requires an agricultural water supplier, *regardless of local cost-effectiveness*, to "[m]easure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 *and to implement paragraph (2)*," which requires suppliers to implement a pricing structure based at least in part on volume of water delivered. Therefore, section 10608.48(b) imposes a new requirement to the extent that prior law activities were not sufficient to also implement a pricing structure based at least in part on quantity of water delivered.

Moreover, Water Code section 10608.8 provides that "[t]he requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement" (QSA), as defined in Statutes 2002, chapter 617, section 1, for as long as the QSA remains in effect.[285] The local agency parties to the QSA include the San Diego County Water Authority, Coachella Valley Water District, Imperial Irrigation District, and Metropolitan Water District of Southern California.[286] As a result, by the plain language of Water Code section 10608.8 those entities are exempt and are not mandated by the state to comply with the requirements of Part 2.55 of Division 6 of the Water Code, including section 10608.48.

Based on the foregoing, the Commission finds that section 10608.48 imposes new requirements on agricultural water suppliers, except those that are parties to the Quantification Settlement Agreement, as defined in Statutes 2002, chapter 617, section 1, for as long as QSA remains in effect, as follows:

- Measure the volume of water delivered to customers with sufficient accuracy to (1) comply with subdivision (a) of Water Code section 531.10, which previously imposed the requirement, with specified exceptions, for agricultural water suppliers to submit an annual report summarizing aggregated farm-gate delivery data, on a monthly or bi-monthly basis, using best professional practices; and (2) implement a pricing structure for water customers based at least in part on quantity of water delivered.[287]

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[284] Water Code section 531.10 (Stats. 2007, Ch. 675 (AB 1404)).

[285] Water Code section 10608.8 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[286] Exhibit X, Quantification Settlement Agreement, dated October 10, 2003.

[287] Water Code section 10608.48(b)(1) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

This activity is only newly required if measurement of farm-gate delivery data was not previously performed by the agricultural water supplier pursuant to a determination under section 531.10(b) that such measurement programs or practices were not locally cost effective, or if measurement data was not sufficient to implement a pricing structure based at least in part on quantity of water delivered.[288]

- Implement a pricing structure for water customers based at least in part on quantity of water delivered.[289]
- *If the measures are locally cost effective and technically feasible,* implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following:

  (1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.

  (2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.

  (3) Facilitate the financing of capital improvements for on-farm irrigation systems.

  (4) Implement an incentive pricing structure that promotes one or more of the following goals:

  (A) More efficient water use at the farm level.

  (B) Conjunctive use of groundwater.

  (C) Appropriate increase of groundwater recharge.

  (D) Reduction in problem drainage.

  (E) Improved management of environmental resources.

  (F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.

  (5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.

  (6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.

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[288] Water Code section 531.10(a-b) previously required reporting annually to the Department of Water Resources aggregated farm-gate delivery data, summarized on a monthly or bi-monthly basis, unless such measurement programs or practices were not locally cost effective. If an agricultural water supplier had not determined that such practices were not locally cost effective, then the prior law, Section 531.10(a) would have required measurement, and the activity is not therefore new.

[289] Water Code section 10608.48(b)(2) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

(7) Construct and operate supplier spill and tailwater recovery systems.

(8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.

(9) Automate canal control structures.

(10) Facilitate or promote customer pump testing and evaluation.

(11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.

(12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:

(A) On-farm irrigation and drainage system evaluations.

(B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.

(C) Surface water, groundwater, and drainage water quantity and quality data.

(D) Agricultural water management educational programs and materials for farmers, staff, and the public.

(13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.

(14) Evaluate and improve the efficiencies of the supplier's pumps.[290]

2. Water Code sections 10608.48(d-f) and 10820-10829, as added by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7), impose new requirements on agricultural water suppliers, as defined pursuant to section 10608.12, to prepare and adopt on or before December 31, 2012, and to update on or before December 31, 2015, and every five years thereafter, an agricultural water management plan, as specified. However, many agricultural water suppliers, including all participants in the Central Valley Project and United States Bureau of Reclamation water contracts, are exempt from the requirement to *prepare and adopt* an agricultural water management plan pursuant to 10826, because they were already required by existing federal law to prepare a water conservation plan, which they may submit to satisfy this requirement.

As noted above, the test claim statute repealed and added Part 2.8 of Division 6 of the Water Code, commencing with section 10800. While a number of the activities alleged in these consolidated test claims were required by the prior provisions of the Water Code that were repealed and replaced by the test claim statute, those provisions were by their own terms no longer operative immediately prior to the effective date of the test claim statute. Former Water Code section 10855, as added by Statutes 1986, chapter 954, provided that "[t]his part shall

[290] Water Code section 10608.48(c) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

remain operative only until January 1, 1993..." Therefore, the provisions added by the test claim statute, which became effective on February 3, 2010, impose new requirements or activities.[291]

Section 10820, as added, provides that all agricultural water suppliers *shall prepare and adopt* an AWMP on or before December 31, 2012, and shall update that plan on December 31, 2015, and on or before December 31 every five years thereafter.[292]

Section 10826, as added, provides that the plan "shall do all of the following:"

> (a) Describe the agricultural water supplier and the service area, including all of the following:
>
> (1) Size of the service area.
>
> (2) Location of the service area and its water management facilities.
>
> (3) Terrain and soils.
>
> (4) Climate.
>
> (5) Operating rules and regulations.
>
> (6) Water delivery measurements or calculations.
>
> (7) Water rate schedules and billing.
>
> (8) Water shortage allocation policies.
>
> (b) Describe the quantity and quality of water resources of the agricultural water supplier, including all of the following:
>
> (1) Surface water supply.
>
> (2) Groundwater supply.
>
> (3) Other water supplies.
>
> (4) Source water quality monitoring practices.
>
> (5) Water uses within the agricultural water supplier's service area, including all of the following:
>
> (A) Agricultural.
>
> (B) Environmental.
>
> (C) Recreational.
>
> (D) Municipal and industrial.
>
> (E) Groundwater recharge.
>
> (F) Transfers and exchanges.

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[291] Bills introduced in an extraordinary session take effect 91 days after the final adjournment of that extraordinary session. (Cal. Const. Art. IV, Sec. 8(c)(1).) The 7th Extraordinary Session concluded on November 4, 2009. Thus, the effective date of SB X7 7 is February 3, 2010.

[292] Water Code section 10820 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

(G) Other water uses.

(6) Drainage from the water supplier's service area.

(7) Water accounting, including all of the following:

(A) Quantifying the water supplier's water supplies.

(B) Tabulating water uses.

(C) Overall water budget.

(8) Water supply reliability.

(c) Include an analysis, based on available information, of the effect of climate change on future water supplies.

(d) Describe previous water management activities.

(e) Include in the plan the water use efficiency information required pursuant to Section 10608.48.[293]

Meanwhile, section 10608.48(d) provides that agricultural water suppliers "shall include in the agricultural water management plans required pursuant to [section 10820] a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future."[294]

Furthermore, section 10608.48 provides that if a supplier "determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination."[295] And, the section further provides that "[t]he data shall be reported using a standardized form developed pursuant to Section 10608.52."[296]

In addition, section 10828 provides that:

> (a) Agricultural water suppliers that are required to submit water conservation plans to the United States Bureau of Reclamation pursuant to either the Central Valley Project Improvement Act (Public Law 102-575) or the Reclamation Reform Act of 1982, or both, *may submit those water conservation plans to satisfy the requirements of Section 10826, if both of the following apply*:
>
> (1) The agricultural water supplier has adopted and submitted the water conservation plan to the United States Bureau of Reclamation within the previous four years.
>
> (2) The United States Bureau of Reclamation has accepted the water conservation plan as adequate.

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[293] Water Code section 10826 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[294] Water Code section 10608.48(d) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[295] Water Code section 10608.48(d) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[296] *Ibid.*

> (b) This part does not require agricultural water suppliers that are required to submit water conservation plans to the United States Bureau of Reclamation pursuant to either the Central Valley Project Improvement Act (Public Law 102-575) or the Reclamation Reform Act of 1982, or both, to prepare and adopt water conservation plans according to a schedule that is different from that required by the United States Bureau of Reclamation.[297]

And, section 10829 provides that an agricultural water supplier may satisfy the requirements "of this part" by adopting an UWMP pursuant to Part 2.6 or by participating in areawide, regional, watershed, or basinwide water management planning, so long as those plans meet or exceed the requirements of this part.[298]

Based on the plain language of section 10828, those local agencies who are CVP or USBR contractors may submit a copy of their water conservation plan already submitted to USBR in satisfaction of the requirements of section 10826 (which provides for the contents of an AWMP). In addition, section 10828(b) provides that CVP or USBR contractors are not required to adhere to the "schedule" for preparing and adopting AWMPs, as provided in section 10820, above. Therefore, the requirements of section 10820, to prepare and adopt an AWMP on or before December 31, 2012, and to update the AWMP on or before December 31, 2015 and every five years thereafter, do not apply to CVP or USBR contractors, who may instead rely on the schedule for updating and readopting their water conservation plans.

Both Glenn-Colusa and Oakdale are contractors with the United States Bureau of Reclamation (USBR) and as a result are required by federal law to prepare water conservation plans. Glenn-Colusa and Oakdale are also CVP contractors, as are dozens of other local agencies.[299]

As noted above, Water Code section 10608.8 provides that "[t]he requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement" (QSA), as defined in Statutes 2002, chapter 617, section 1 for as long as QSA remains in effect.[300] Therefore, a supplier that is a party to the QSA is not mandated by the state to include the water use efficiency reporting requirements in the plan pursuant to section 10680.48.

Additionally, section 10608.48(f) provides that an agricultural water supplier "may meet the requirements of subdivisions (d) and (e) by submitting to [DWR] a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828."[301] Therefore, the requirements to include in a supplier's AWMP a report on efficient water management practices and documentation on those practices determined not to be cost effective or technically feasible, pursuant to section 10608.48(d-e), do not apply to CVP or

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[297] Water Code section 10828 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[298] Water Code section 10829 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[299] Exhibit X, Bureau of Reclamation, Mid-Pacific Region, Central Valley Project (CVP) Water Contractors, dated March 4, 2014.

[300] Water Code section 10608.8 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[301] Water Code section 10608.48(e; f) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

USBR contractors that prepare and submit water conservation plans to USBR.[302] The *Guidebook to Assist Agricultural Water Suppliers to Prepare a 2012 Agricultural Water Management Plan*, issued by DWR, "encourages" suppliers to file certain "documentation as an attachment with the USBR-accepted water management/conservation plan."[303] However, the plain language of section 10608.48(f) states that a supplier may satisfy the requirements of section 10608.48(d) and (e) by submitting to DWR its water conservation plan prepared for USBR. And, section 10828, as shown above, exempts CVP and USBR contractors from the requirement to prepare an AWMP in the first instance. Finally, pursuant to section 10829, the requirement to adopt an AWMP in the first instance does not apply if the supplier adopts a UWMP, or participates in regional water management planning.

Based on the foregoing, the Commission finds that newly added sections 10820 and 10826, and 10608.48(d-f), impose the following new requirements on agricultural water suppliers, except for suppliers that adopt a UWMP or participate in areawide, regional, watershed, or basinwide water management planning, and CVP and USBR contractors:

- On or before December 31, 2012, prepare and adopt an agricultural water management plan in accordance with section 10826.[304]
- On or before December 31, 2015, and every five years thereafter, update the agricultural water management plan, in accordance with section 10820 et seq.[305]
- If a supplier becomes an agricultural water supplier, as defined, after December 31, 2012, that agricultural water supplier shall prepare and adopt an agricultural water management plan within one year after the date that it has become an agricultural water supplier.[306]
- Include in the agricultural water management plans required pursuant to Water Code section 10800 et seq. a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report,

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[302] Water Code section 10608.48(f) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[303] Exhibit X, *Guidebook to Assist Agricultural Water Suppliers to Prepare a 2012 Agricultural Water Management Plan*, page 11, "The agricultural water suppliers that submit a plan to USBR may meet the requirements of section 10608.48 (d) and (e) [report of EWMPs implemented, planned for implementation, and estimate of efficiency improvements, as well as documentation for not locally cost effective EWMPs] by submitting the USBR-accepted plan to DWR. "DWR *encourages* CVPIA/RRA water suppliers to also provide a report on water use efficiency information (required by section 10608.48(d);see Section 3.7 of this Guidebook)." Emphasis added.

[304] Water Code sections 10820; 10826 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[305] Water Code sections 10820; 10826 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[306] Water Code section 10820 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future.[307]

In addition, an agricultural water supplier that is a party to the Quantification Settlement Agreement (QSA), as defined in Statutes 2002, chapter 617, section 1 is not subject to this requirement for as long as the QSA remains in effect.[308]

- If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.[309]

  In addition, an agricultural water supplier that is a party to the Quantification Settlement Agreement (QSA), as defined in Statutes 2002, chapter 617, section 1 is not subject to this requirement for as long as the QSA remains in effect.[310]

- Report the data using a standardized form developed pursuant to Water Code section 10608.52.[311]

  An agricultural water supplier that is a party to the Quantification Settlement Agreement (QSA), as defined in Statutes 2002, chapter 617, section 1 is not subject to this requirement for as long as the QSA remains in effect.[312]

3. Section 10608.48(g-i), as added by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7), does not impose any new activities on local government.

Section 10608.48(g) provides that on or before December 31, 2013, DWR shall submit to the Legislature a report on agricultural efficient water management practices that have been implemented or are planned to be implemented, and an assessment of those practices and their effects on agricultural operations. Section 10608.48(h) states that DWR "may update the efficient water management practices required pursuant to [section 10608.48(c)]," but only after conducting public hearings. Section 10608.48(i) provides that DWR "shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement" of section 10608.48(b).

The plain language of these sections section 10608.48(g-i) is directed to DWR, and does not impose any activities or requirements on local government.

4. Sections 10821, 10841, 10842, 10843, and 10844, as added by Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7), impose new requirements on agricultural water suppliers.

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[307] Water Code section 10608.48(d) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[308] Water Code section 10608.8 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[309] Water Code section 10608.48(d) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[310] Water Code section 10608.8 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[311] Water Code section 10608.48(e) (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[312] Water Code section 10608.8 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

Water Code section 10821, as added, provides that an agricultural water supplier required to prepare an AWMP pursuant to this part, "shall notify each city or county within which the supplier provides water supplies that the agricultural water supplier will be preparing the plan or reviewing the plan and considering amendments or changes to the plan."[313]

In addition, newly added section 10841 requires that the plan be made available for public inspection and that a public hearing shall be held as follows:

> Prior to adopting a plan, the agricultural water supplier shall make the proposed plan available for public inspection, and shall hold a public hearing on the plan. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned agricultural water supplier pursuant to Section 6066 of the Government Code. A privately owned agricultural water supplier shall provide an equivalent notice within its service area and shall provide a reasonably equivalent opportunity that would otherwise be afforded through a public hearing process for interested parties to provide input on the plan...[314]

Section 10842 provides that an agricultural water supplier shall implement its AWMP "in accordance with the schedule set forth in its plan."[315]

Following adoption of an AWMP, section 10843 requires an agricultural water supplier to submit a copy of its AWMP, no later than 30 days after adoption, to DWR and to the following affected or interested entities:

> (2) Any city, county, or city and county within which the agricultural water supplier provides water supplies.
>
> (3) Any groundwater management entity within which jurisdiction the agricultural water supplier extracts or provides water supplies.
>
> (4) Any urban water supplier within which jurisdiction the agricultural water supplier provides water supplies.
>
> (5) Any city or county library within which jurisdiction the agricultural water supplier provides water supplies.
>
> (6) The California State Library.
>
> (7) Any local agency formation commission serving a county within which the agricultural water supplier provides water supplies.[316]

Finally, newly added section 10844 requires an agricultural water supplier to make its water management plan available for public review via the internet, as follows:

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[313] Water Code section 10821 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[314] Water Code section 10841 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[315] Water Code section 10842 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[316] Water Code section 10843 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

(a) Not later than 30 days after the date of adopting its plan, the agricultural water supplier shall make the plan available for public review on the agricultural water supplier's Internet Web site.

(b) An agricultural water supplier that does not have an Internet Web site shall submit to [DWR], not later than 30 days after the date of adopting its plan, a copy of the adopted plan in an electronic format. [DWR] shall make the plan available for public review on [its] Internet Web site.[317]

The prior provisions of the Water Code pertaining to the adoption and implementation of AWMPs, as explained above, were inoperative by their own terms as of January 1, 1993.[318] Therefore, the requirements to hold a public hearing, to implement the plan in accordance with the schedule, to submit copies to DWR and other specified local entities, and to make the plan available by either posting the plan on the supplier's web site, or by sending an electronic copy to DWR for posting on its web site, are new activities with respect to prior law.

However, section 10828, as discussed above, provides that USBR or CVP contractors may satisfy the requirements of section 10826 by submitting their water conservation plans adopted within the previous four years pursuant to the Central Valley Improvement Act or the Reclamation Reform Act of 1982.[319] This section does not expressly exempt CVP or USBR contractors from all requirements of Part 2.8, but only from the content requirements of the plan itself, and the requirement to adopt according to the "schedule" set forth in section 10820, as discussed above. Accordingly, DWR's *Guidebook to Assist Agricultural Water Suppliers to Prepare a 2012 [AWMP]* provides:

> All agricultural water suppliers required to prepare new agricultural water management/conservation plans must prepare and complete their plan in accordance with Water Code Part 2.8, Article 1 and Article 3 requirements for notification, public participation, adoption, and submittal (refer to Section 3.1 for details). *The federal review process may incorporate many requirements specified in Part 2.8, Articles 1 and 3; as such the federal process may meet the requirements of Part 2.8, otherwise, the agricultural water supplier would have to complete those requirements in Part 2.8, Articles 1 and 3 that are not already a part of the federal review process.*[320]

Article 1 of Part 2.8 includes section 10821, which requires an agricultural water supplier to notify the city or county that it will be preparing an AWMP. Therefore, to the extent that the "federal process" of adopting a water conservation plan for USBR or CVP also requires notice to the city or county, this activity is not newly required. Article 3 of Part 2.8 includes sections 10840-10845, pertaining to the adoption and implementation of AWMPs. Those requirements include, as discussed above, noticing and holding a public hearing; implementing the plan in

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[317] Water Code section 10844 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[318] See former Water Code sections 10840-10845; 10855 (Stats. 1986, ch. 954).

[319] Water Code section 10828 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[320] Exhibit X, *Guidebook to Assist Agricultural Water Suppliers to Prepare a 2012 Agricultural Water Management Plan*, page 94 [emphasis added].

accordance with the schedule set forth in the plan; submitting a copy of the AWMP to specified state and local entities within 30 days after adoption; and making the AWMP available on the supplier's website, or submitting the AWMP for posting on DWR's website. To the extent that the "federal process" satisfies those requirements, they are not newly required by the test claim statutes.

In addition, as noted above, section 10829 provides that an agricultural water supplier may satisfy the requirements "of this part" by adopting an UWMP pursuant to Part 2.6 or by participating in areawide, regional, watershed, or basinwide water management planning, so long as those plans meet or exceed the requirements of this part.[321] That exception would include all of the notice and hearing requirements identified below.

Based on the foregoing, the Commission finds that Water Code sections 10821, 10841, 10842, 10843, and 10844 impose new requirements on agricultural water suppliers, except those that adopt an UWMP or participate in areawide, regional, watershed, or basinwide water management planning, and except to the extent that suppliers that are USBR or CVP contractors have water conservation plans that satisfy the AWMP adoption requirements, as follows:

- Notify the city or county within which the agricultural supplier provides water supplies that it will be preparing the AWMP or reviewing the AWMP and considering amendments or changes.[322]
- Prior to adopting a plan, the agricultural water supplier shall make the proposed plan available for public inspection, and shall hold a public hearing on the plan.[323]
- Prior to the hearing, notice of the time and place of hearing shall be published in a newspaper within the jurisdiction of the publicly owned agricultural water supplier once a week for two successive weeks, as specified in Government Code 6066.[324]
- Implement the AWMP in accordance with the schedule set forth in the AWMP.[325]
- An agricultural water supplier shall submit to the following entities a copy of its plan no later than 30 days after the adoption of the plan. Copies of amendments or changes to the plans shall be submitted to the entities identified within 30 days after the adoption of the amendments or changes.
    - DWR.
    - Any city, county, or city and county within which the agricultural water supplier provides water supplies.
    - Any groundwater management entity within which jurisdiction the agricultural water supplier extracts or provides water supplies.

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[321] Water Code section 10829 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[322] Water Code section 10821(Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[323] Water Code section 10841 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[324] Water Code section 10841 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[325] Water Code section 10842 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

- Any urban water supplier within which jurisdiction the agricultural water supplier provides water supplies.
- Any city or county library within which jurisdiction the agricultural water supplier provides water supplies.
- The California State Library.
- Any local agency formation commission serving a county within which the agricultural water supplier provides water supplies.[326]

- An agricultural water supplier shall make its agricultural water management plan available for public review on its web site not later than 30 days after adopting the plan, or for an agricultural water supplier that does not have a web site, submit an electronic copy to the Department of Water Resources not later than 30 days after adoption, and the Department shall make the plan available for public review on its web site.[327]

5. Agricultural Water Measurement Regulations, California Code of Regulations, Title 23, Division 6, sections 597 through 597.4, Register 2012, Number 28.

California Code of Regulations, title 23, section 597 provides that under authority included in Water Code section 10608.48(i), DWR is required to adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirements of section 10609.48(b).[328] The plain language of this section does not impose any new activities or requirements on local government.

Section 597.1 provides that an agricultural water supplier providing water to less than 10,000 irrigated acres, excluding acres that receive only recycled water, is not subject to this article, and a supplier providing water to 10,000 or more irrigated acres but less than 25,000 irrigated acres, excluding acres that receive only recycled water, is not subject to this article unless sufficient funding is provided pursuant to Water Code section 10853. A supplier providing water to 25,000 irrigated acres or more, excluding acres that receive only recycled water, is subject to this article. A supplier providing water to wildlife refuges or habitat lands, as specified, is subject to this article. A *wholesale* agricultural water supplier is subject to this article at the location at which control of the water is transferred to the receiving water supplier, but the wholesale supplier is not required to measure the ultimate deliveries to customers. A canal authority or other entity that conveys water through facilities owned by a federal agency is not subject to this article. An agricultural water supplier that is a party to the QSA, as defined in Statutes 2002, chapter 617, section 1, is not subject to this article. And finally, DWR is not subject to this article.[329] None of the above-described provisions of section 597.1 impose any new requirements or activities on local government.

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[326] Water Code section 10843 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[327] Water Code section 10844 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[328] Code of Regulations, title 23, section 597 (Register 2012, No. 28).

[329] Code of Regulations, title 23, section 597.1 (Register 2012, No. 28).

Section 597.2 provides definitions of "accuracy," "agricultural water supplier," "approved by an engineer," "best professional practices," "customer," "delivery point," "existing measurement device," "farm-gate," "irrigated acres," "manufactured device," "measurement device," "new or replacement measurement device," "recycled water," and "type of device."[330] Based on the plain language of 597.2, the definitions provided in section 597.2 do not impose any new requirements or activities on local government.

Section 597.3 requires an agricultural water supplier to measure surface water and groundwater that it delivers to its customers and provides a range of options to comply with section 10608.48(i), as follows:

> An agricultural water supplier subject to this article shall measure surface water and groundwater that it delivers to its customers pursuant to the accuracy standards in this section. The supplier may choose any applicable single measurement option or combination of options listed in paragraphs (a) or (b) of this section. Measurement device accuracy and operation shall be certified, tested, inspected and/or analyzed as described in §597.4 of this article.
>
> **(a) Measurement Options at the Delivery Point or Farm-gate of a Single Customer**
>
> An agricultural water supplier shall measure water delivered at the delivery point or farm-gate of a single customer using one of the following measurement options. The stated numerical accuracy for each measurement option is for the volume delivered. If a device measures a value other than volume, for example, flow rate, velocity or water elevation, the accuracy certification must incorporate the measurements or calculations required to convert the measured value to volume as described in §597.4(e).
>
> (1) An existing measurement device shall be certified to be accurate to within +12% by volume,
>
> and,
>
> (2) A new or replacement measurement device shall be certified to be accurate to within:
>
> (A) ±5% by volume in the laboratory if using a laboratory certification;
>
> (B) ±10% by volume in the field if using a non-laboratory certification.
>
> **(b) Measurement Options at a Location Upstream of the Delivery Points or Farm-gates of Multiple Customers**
>
> (1) An agricultural water supplier may measure water delivered at a location upstream of the delivery points or farm-gates of multiple customers using one of the measurement options described in §597.3(a) if the downstream individual customer's delivery points meet either of the following conditions:

[330] Code of Regulations, title 23, section 597.2 (Register 2012, No. 28).

(A) The agricultural water supplier does not have legal access to the delivery points of individual customers or group of customers needed to install, measure, maintain, operate, and monitor a measurement device.

(B) An engineer determines that, due to small differentials in water level or large fluctuations in flow rate or velocity that occur during the delivery season at a single farm-gate, accuracy standards of measurement options in §597.3(a) cannot be met by installing a measurement device or devices (manufactured or on-site built or in-house built devices with or without additional components such as gauging rod, water level control structure at the farm-gate, etc.). If conditions change such that the accuracy standards of measurement options in §597.3(a) at the farm-gate can be met, an agricultural water supplier shall include in its Agricultural Water Management Plan, a schedule, budget and finance plan to demonstrate progress to measure water at the farm-gate in compliance with §597.3(a) of this article.

(2) An agricultural water supplier choosing an option under paragraph (b)(l) of this section shall provide the following current documentation in its Agricultural Water Management Plan(s) submitted pursuant to Water Code §10826:

(A) When applicable, to demonstrate lack of legal access at delivery points of individual customers or group of customers downstream of the point of measurement, the agricultural water supplier's legal counsel shall certify to the Department that it does not have legal access to measure water at customers delivery points and that it has sought and been denied access from its customers to measure water at those points.

(B) When applicable, the agricultural water supplier shall document the water measurement device unavailability and that the water level or flow conditions described in §597.3(b)(l)(B) exist at individual customer's delivery points downstream of the point of measurement as approved by an engineer.

(C) The agricultural water supplier shall document all of the following criteria about the methodology it uses to apportion the volume of water delivered to the individual downstream customers:

(i) How it accounts for differences in water use among the individual customers based on but not limited to the duration of water delivery to the individual customers, annual customer water use patterns, irrigated acreage, crops planted, and on-farm irrigation system, and;

(ii) That it is sufficient for establishing a pricing structure based at least in part on the volume delivered, and;

(iii) That it was approved by the agricultural water supplier's governing board or body.[331]

Thus, one option under these regulations, in order to measure the volume of water delivered, as required by section 10608.48, is measurement "at the delivery point or farm-gate of a single customer" using an existing measurement device certified to be accurate to within 12 percent by volume, or a new measurement device certified to be accurate within 5 percent if certified in a laboratory or within 10 percent if certified in the field. Another option is to measure upstream of a delivery point or farm gate if the supplier does not have legal access to the delivery point for an individual customer, or if the standards of measurement cannot be met due to large fluctuations in flow rate or velocity during the delivery season. If this option is chosen, appropriate documentation explaining the option must be provided, as described above.

The claimants allege that section 597.3 requires agricultural water suppliers to measure at a delivery point or farm gate "by either (1) using an existing measurement device, certified to be accurate within ±12% by volume or (2) a new or replacement measurement device, certified to be accurate within ±5% by volume in the laboratory if using a laboratory certification or ±10% by volume in the field if using a non-laboratory certification." In addition, the claimants allege that the regulations provide for "limited exceptions" if the supplier is unable to measure at the farm-gate, which allow, in certain circumstances, for upstream measurement.[332] The claimants assert that prior to these regulations, "there was no requirement to measure water delivered to the farm-gate of *each* single customer, with limited exception."[333]

DWR argues that these regulations merely provide options, and are not therefore a mandate. Specifically, DWR asserts that "[n]o local government is required to comply with those regulations." DWR asserts that "the regulations exist as a resource for agricultural water suppliers who wish to comply with certain requirements…described in the 2009 Water Law." DWR concludes that "[the regulations] are optional, and the suppliers are free to comply with the law in other ways."[334]

Section 10608.48(i) provides that DWR "shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement" to comply with the measurement requirements of subdivision (b).[335] The phrase "may use or implement" suggests that the regulations provide a choice for agricultural water suppliers, rather than a mandate.

However, Section 10608.48(b) states that agricultural water suppliers "shall implement all of the following critical efficient management practices…(1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to [adopt a pricing structure based in part on quantity of water delivered]."[336] Moreover, the plain language of section 597.3 of the regulations, as cited above, states that an agricultural water

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[331] Code of Regulations, title 23, section 597.3 (Register 2012, No. 28).

[332] Exhibit B, 12-TC-01, page 4.

[333] Exhibit B, 12-TC-01, page 6.

[334] Exhibit D, DWR Comments, page 11.

[335] Water Code section 10608.48 (Stats. 2009-2010, 7th Ex. Sess., ch. 4 (SBX7 7)).

[336] *Ibid.*

supplier "shall measure surface water and groundwater that it delivers to customers pursuant to the accuracy standards in this section." The language states that the supplier "may choose any applicable single measurement option or combination of options listed in paragraphs (a) or (b) of this section."[337] There is no express provision for choosing a measurement option or combination of options not listed in section 597.3. Although an agricultural water supplier may pick which one of the regulatory options to comply with, it "shall" pick one of them based on the plain language of section 597.3. As a result, most agricultural water suppliers are required to implement one of the measurement options provided by 597.3. As discussed above though, there are several water suppliers exempt from this requirement, including parties to the QSA, suppliers providing water to less than 10,000 irrigated acres, excluding acres that receive only recycled water, and suppliers providing water to more than 10,000 irrigated acres but less than 25,000 irrigated acres, excluding acres that receive only recycled water, unless sufficient funding is provided pursuant to Water Code section 10853. Thus, section 597.3 requires the following for those agencies which are not exempt:

- Measure water delivered at the delivery point or farm-gate of a single customer using one of the following options.
    - An existing measurement device certified to be accurate to within ±12% by volume.
    - A new or replacement measurement device certified to be accurate to within:
        - ±5% by volume in the laboratory if using a laboratory certification;
        - ±10% by volume in the field if using a non-laboratory certification.

    If a device measures a value other than volume (e.g., flow rate, velocity or water elevation) the accuracy certification must incorporate the measurements or calculations required to convert the measured value to volume.[338]
- Measure water delivered at a location upstream of the delivery points or farm-gates of multiple customers if:
    - The supplier does not have legal access to the delivery points of individual customers or group of customers needed to install, measure, maintain, operate, and monitor a measurement device; or
    - An engineer determines that, due to small differentials in water level or large fluctuations in flow rate or velocity that occur during the delivery season, accuracy standards of measurement cannot be met by installing a measurement device or devices.[339]
- And, when a supplier chooses to measure water delivered at an upstream location:

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[337] Code of Regulations, title 23, section 597.3 (Register 2012, No. 28).

[338] Code of Regulations, title 23, section 597.3(a) (Register 2012, No. 28).

[339] Code of Regulations, title 23, section 597.3(b) (Register 2012, No. 28).

- Provide, where applicable, documentation to demonstrate the lack of legal access at delivery points of individual or groups of customers downstream of the point of measurement; or documentation of the water measurement device unavailability and that water level or flow conditions exist that prohibit meeting accuracy standards, as approved by an engineer.
- Document the following about its apportionment of water delivered to individual customers:
  - How the supplier accounts for differences in water use among individual customers based on the duration of water delivery to the individual customers, annual customer water use patterns, irrigated acreage, crops planted, and on-farm irrigation system;
  - That it is sufficient for establishing a pricing structure based at least in part on the volume of water delivered; and
  - That it was approved by the agricultural water supplier's governing board or body.[340]

Section 597.4, also alleged in this consolidated test claim, requires that measurement devices be certified and documented as follows:

(a) Initial Certification of Device Accuracy

The accuracy of an existing, new or replacement measurement device or type of device, as required in §597.3, shall be initially certified and documented as follows:

(1) For existing measurement devices, the device accuracy required in section 597.3(a) shall be initially certified and documented by either:

(A) Field-testing that is completed on a random and statistically representative sample of the existing measurement devices as described in §597.4(b)(1) and §597.4(b)(2). Field-testing shall be performed by individuals trained in the use of field-testing equipment, and documented in a report approved by an engineer.

Or,

(B) Field-inspections and analysis completed for every existing measurement device as described in §597.4(b)(3). Field-inspections and analysis shall be performed by trained individuals in the use of field inspection and analysis, and documented in a report approved by an engineer.

(2) For new or replacement measurement devices, the device accuracy required in sections 597.3 (a)(2) shall be initially certified and documented by either:

[340] Code of Regulations, title 23, section 597.3(b) (Register 2012, No. 28).

(A) Laboratory Certification prior to installation of a measurement device as documented by the manufacturer or an entity, institution or individual that tested the device following industry-established protocols such as the National Institute for Standards and Testing (NIST) traceability standards. Documentation shall include the manufacturer's literature or the results of laboratory testing of an individual device or type of device.

Or,

(B) Non-Laboratory Certification after the installation of a measurement device in the field, as documented by either:

(i) An affidavit approved by an engineer submitted to the agricultural water supplier of either (1) the design and installation of an individual device at a specified location, or (2) the standardized design and installation for a group of measurement devices for each type of device installed at specified locations.

Or,

(ii) A report submitted to the agricultural water supplier and approved by an engineer documenting the field-testing performed on the installed measurement device or type of device, by individuals trained in the use of field testing equipment.

(b) Protocols for Field-Testing and Field-Inspection and Analysis of Existing Devices

(1) Field-testing shall be performed for a sample of existing measurement devices according to manufacturer's recommendations or design specifications and following best professional practices. It is recommended that the sample size be no less than 10% of existing devices, with a minimum of 5, and not to exceed 100 individual devices for any particular device type. Alternatively, the supplier may develop its own sampling plan using an accepted statistical methodology.

(2) If during the field-testing of existing measurement devices, more than one quarter of the samples for any particular device type do not meet the criteria pursuant to §597.3(a), the agricultural water supplier shall provide in its Agricultural Water Management Plan, a plan to test an additional 10% of its existing devices, with a minimum of 5, but not to exceed an additional 100 individual devices for the particular device type. This second round of field-testing and corrective actions shall be completed within three years of the initial field-testing.

(3) Field-inspections and analysis protocols shall be performed and the results shall be approved by an engineer for every existing measurement device to demonstrate that the design and installation standards used for the installation of existing measurement devices meet the accuracy standards

of §597.3(a) and operation and maintenance protocols meet best professional practices.

(c) Records Retention

Records documenting compliance with the requirements in §597.3 and §597.4 shall be maintained by the agricultural water supplier for ten years or two Agricultural Water Management Plan cycles.

(d) Performance Requirements

(1) All measurement devices shall be correctly installed, maintained, operated, inspected, and monitored as described by the manufacturer, the laboratory or the registered Professional Engineer that has signed and stamped certification of the device, and pursuant to best professional practices.

(2) If an installed measurement device no longer meets the accuracy requirements of §597.3(a) based on either field-testing or field-inspections and analysis as defined in sections 597.4 (a) and (b) for either the initial accuracy certification or during operations and maintenance, then the agricultural water supplier shall take appropriate corrective action, including but not limited to, repair or replacement to achieve the requirements of this article.

(e) Reporting in Agricultural Water Management Plans

Agricultural water suppliers shall report the following information in their Agricultural Water Management Plan(s):

(1) Documentation as required to demonstrate compliance with §597.3 (b), as outlined in section §597.3(b)(2), and §597.4(b)(2).

(2) A description of best professional practices about, but not limited to, the (1) collection of water measurement data, (2) frequency of measurements, (3) method for determining irrigated acres, and (4) quality control and quality assurance procedures.

(3) If a water measurement device measures flow rate, velocity or water elevation, and does not report the total volume of water delivered, the agricultural water supplier must document in its Agricultural Water Management Plan how it converted the measured value to volume. The protocols must follow best professional practices and include the following methods for determining volumetric deliveries:

(A) For devices that measure flow-rate, documentation shall describe protocols used to measure the duration of water delivery where volume is derived by the following formula: Volume = flow rate x duration of delivery.

(B) For devices that measure velocity only, the documentation shall describe protocols associated with the measurement of the cross-sectional area of flow and duration of water delivery, where volume is

derived by the following formula: Volume = velocity x cross-section flow area x duration of delivery.

(C) For devices that measure water elevation at the device (e.g. flow over a weir or differential elevation on either side of a device), the documentation shall describe protocols associated with the measurement of elevation that was used to derive flow rate at the device. The documentation will also describe the method or formula used to derive volume from the measured elevation value(s).

(4) If an existing water measurement device is determined to be out of compliance with §597.3, and the agricultural water supplier is unable to bring it into compliance before submitting its Agricultural Water Management Plan in December 2012, the agricultural water supplier shall provide in its 2012 plan, a schedule, budget and finance plan for taking corrective action in three years or less.

Thus, the plain language of section 597.4 requires agricultural water suppliers to certify and document the initial accuracy of "existing, new or replacement measurement device[s]," as specified.[341] In addition, section 597.4 provides that field-testing "shall be performed" following "best professional practices," and either sampling "no less than 10% of existing devices," as recommended by the department, or developing a "sampling plan using an accepted statistical methodology." Then, if field testing results in more than a quarter of any particular devices failing the accuracy criteria described in section 597.3(a), above, the supplier "shall provide in its Agricultural Water Management Plan, a plan to test an additional 10% of its existing devices..."[342] In addition, section 597.4 provides that records documenting compliance "shall be maintained...for ten years or two Agricultural Water Management Plan cycles."[343] Section 597.4 further provides that "all measurement devices shall be correctly installed, maintained, operated, inspected, and monitored," and if a device no longer meets the accuracy requirements of section 597.3, the supplier "shall take appropriate corrective action," including repair or replacement, if necessary.[344] And finally, section 597.4 requires agricultural water suppliers to report additional information regarding their compliance and "best professional practices" for water measurement in their agricultural water measurement plan.[345]

As noted above, some agricultural water suppliers may have been required pursuant to section 531.10 to measure farm-gate water deliveries.[346] To the extent that those measurement programs or practices satisfy the requirements of these regulations, the regulations do not impose new activities.[347] In addition, for any agricultural water supplier that is also an urban water supplier,

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[341] Code of Regulations, title 23, section 597.4(a) (Register 2012, No. 28).

[342] Code of Regulations, title 23, section 597.4(b) (Register 2012, No. 28).

[343] Code of Regulations, title 23, section 597.4(c) (Register 2012, No. 28).

[344] Code of Regulations, title 23, section 597.4(d) (Register 2012, No. 28).

[345] Code of Regulations, title 23, section 597.4(e) (Register 2012, No. 28).

[346] Water Code section 531.10 (Stats. 2007, ch. 675 (AB 1404)).

[347] See discussion above addressing section 10608.48(a-c).

existing sections 525 through 527 required those entities to install water meters on new and existing service connections, as specified.[348] To the extent that any such water meter on an agricultural service connection satisfies the measurement requirements of these regulations, the regulations do not impose any new activities or requirements.

Based on the foregoing, the Commission finds that section 597.4 imposes new requirements on agricultural water suppliers not exempt from the water measurement requirements, and not already required by existing law to take part in the programs or practices of water measurement, discussed above, that would satisfy the accuracy standards of these regulations, as follows:

- Certify the initial accuracy of existing measurement devices by either:
    - Field-testing that is completed on a random and statistically representative sample of the existing measurement devices, performed by individuals trained in the use of field-testing equipment, and documented in a report approved by an engineer; or
    - Field inspections and analysis for every existing measurement device, performed by individuals trained in the use of field inspection and analysis, and documented in a report approved by an engineer.[349]
- Certify the initial accuracy of new or replacement measurement devices by either:
    - Laboratory certification prior to installation of the device as documented by the manufacturer or an entity, institution, or individual that tested the device following industry-established protocols such as the National Institute of Standards and Testing traceability standards. Documentation shall include the manufacturer's literature or the results of laboratory testing of an individual device or type of device; or
    - Non-laboratory certification after installation of a measurement device in the field, documented by either:
        - An affidavit approved by an engineer submitted to the agricultural water supplier of either (1) the design and installation of an individual device at a specified location, or (2) the standardized design and installation for a group of measurement devises for each type of device installed at specified locations; or
        - A report submitted to the agricultural water supplier and approved by an engineer documenting the field-testing performed on the installed measurement device or type of device, by individuals trained in the use of field testing equipment.[350]
- Ensure that field-testing is performed as follows:

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[348] Section 525 as amended by statutes 2005, chapter 22; Section 527 as amended by statutes 2005, chapter 22; Section 526 as amended by Statutes 2004, chapter 884.

[349] Code of Regulations, title 23, section 597.4(a)(1) (Register 2012, No. 28).

[350] Code of Regulations, title 23, section 597.4(a)(2) (Register 2012, No. 28).

- Field-testing shall be performed for a sample of existing measurement devices according to the manufacturer's recommendations or design specifications and following best professional practices.
- If more than one quarter of the samples for any particular device type do not meet the accuracy criteria specified in section 597.3(a), the supplier shall provide in its Agricultural Water Management Plan a plan to test an additional 10% of its existing devices, with a minimum of 5, but not to exceed 100 additional devices for the particular device type, and shall complete the second round of field-testing and corrective actions within three years of the initial field-testing.
- Field inspections and analysis protocols shall be performed and the results shall be approved by an engineer for every existing measurement device to demonstrate that the design and installation standards used for the installation of existing measurement devices meet the accuracy standards specified in section 597.3(a) and that operation and maintenance protocols meet best professional practices.[351]

- Maintain records documenting compliance with the requirements of sections 597.3 and 597.4 for ten years or two Agricultural Water Management Plan cycles.[352]
- Ensure that all measurement devices are correctly installed, maintained, operated, inspected, and monitored as described by the manufacturer, the laboratory or the registered Professional Engineer that has signed and stamped certification of the device, and pursuant to best professional practices.[353]
- If an installed measurement device no longer meets the accuracy requirements of section 597.3(a) based on either field-testing or field-inspections and analysis for either the initial accuracy certification or during operations and maintenance, take appropriate corrective action, including but not limited to, repair or replacement of the device.[354]
- Report the information listed below in its Agricultural Water Management Plan(s). :
  - Documentation, as required, to demonstrate that an agricultural water supplier that chooses to measure upstream of a delivery point or farm-gate for a customer or group of customers has complied justified the reason to do so, and has taken appropriate steps to ensure that measurements can be allocated to the customer or group of customers sufficiently to support a pricing structure based at least in part on quantity of water delivered.

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[351] Code of Regulations, title 23, section 597.4(b) (Register 2012, No. 28).

[352] Code of Regulations, title 23, section 597.4(c) (Register 2012, No. 28).

[353] Code of Regulations, title 23, section 597.4(d)(1) (Register 2012, No. 28).

[354] Code of Regulations, title 23, section 597.4(d)(2) (Register 2012, No. 28).

- A description of best professional practices about, but not limited to, the (1) collection of water measurement data, (2) frequency of measurements, (3) method for determining irrigated acres, and (4) quality control and quality assurance procedures.
- If a water measurement device measures flow rate, velocity or water elevation, and does not report the total volume of water delivered, the agricultural water supplier must document in its Agricultural Water Management Plan how it converted the measured value to volume. The protocols must follow best professional practices and include the following methods for determining volumetric deliveries:
    - For devices that measure flow-rate, documentation shall describe protocols used to measure the duration of water delivery where volume is derived by the following formula: Volume = flow rate x duration of delivery.
    - For devices that measure velocity only, the documentation shall describe protocols associated with the measurement of the cross-sectional area of flow and duration of water delivery, where volume is derived by the following formula: Volume = velocity x cross-section flow area x duration of delivery.
    - For devices that measure water elevation at the device (e.g. flow over a weir or differential elevation on either side of a device), the documentation shall describe protocols associated with the measurement of elevation that was used to derive flow rate at the device. The documentation will also describe the method or formula used to derive volume from the measured elevation value(s).
- If an existing water measurement device is determined to be out of compliance with §597.3, and the agricultural water supplier is unable to bring it into compliance before submitting its Agricultural Water Management Plan in December 2012, the agricultural water supplier shall provide in its 2012 plan, a schedule, budget and finance plan for taking corrective action in three years or less.[355]

D. The Test Claim Statutes and Regulations do not Result in Increased Costs Mandated by the State, Because the Claimants Possess Fee Authority Sufficient as a Matter of Law to Cover the Costs of any New Mandated Activities.

As the preceding analysis indicates, many of the requirements of the test claim statutes are not new, at least with respect to *some* urban or agricultural water suppliers, because suppliers were previously required to perform substantially the same activities under prior law. Additionally, many of the alleged test claim statutes do not impose any requirements at all, based on the plain language. However, even if the new requirements identified above could be argued to mandate a new program or higher level of service, the Commission finds that the costs incurred to comply

[355] Code of Regulations, title 23, section 597.4(e) (Register 2012, No. 28).

with those requirements are not costs mandated by the state, within the meaning of article XIII B, section 6 and Government Code section 17514, because all affected entities have fee authority, sufficient as a matter of law to cover the costs of any mandated activities.

Government Code section 17556(d) provides that the Commission shall not find costs mandated by the state, as defined in section 17514, if the local government claimant "has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service." The California Supreme Court upheld the constitutionality of Government Code section 17556, subdivision (d), in *County of Fresno v. State of California.*[356] The Court, in holding that the term "costs" in article XIII B, section 6 excludes expenses recoverable from sources other than taxes, stated:

> Section 6 was included in article XIII B in recognition that article XIII A of the Constitution severely restricted the taxing powers of local governments. (See *County of Los Angeles I, supra,* 43 Cal.3d at p. 61.) The provision was intended to preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that were ill equipped to handle the task. (*Ibid.*; see *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 836, fn. 6 [244 Cal.Rptr. 677, 750 P.2d 318].) Specifically, it was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues. Thus, although its language broadly declares that the "state shall provide a subvention of funds to reimburse ... local government for the costs [of a state-mandated new] program or higher level of service," read in its textual and historical context section 6 of article XIII B requires subvention only when the costs in question can be recovered *solely from tax revenues.*[357]

Accordingly, in *Connell v. Superior Court of Sacramento County*,[358] the Santa Margarita Water District, among others, was denied reimbursement based on its authority to impose fees on water users. The water districts submitted evidence that funding the mandated costs with fees was not practical: "rates necessary to cover the increased costs [of pollution control regulations] would render the reclaimed water unmarketable and would encourage users to switch to potable water."[359] The court concluded that "[t]he question is whether the Districts have authority, i.e., the right or power, to levy fees sufficient to cover the costs." Water Code section 35470 authorized the levy of fees to "correspond to the cost and value of the service," and "to defray the ordinary operation or maintenance expenses of the district and for any other lawful district purpose."[360] The court held that the Districts had not demonstrated "that anything in Water Code section 35470 limits the authority of the Districts to levy fees 'sufficient' to cover their costs,"

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[356] *County of Fresno v. State of California, supra,* 53 Cal.3d 482.

[357] *Id*, at p. 487 [emphasis added].

[358] (Cal. Ct. App. 3d Dist. 1997) 59 Cal.App.4th 382.

[359] *Id*, at p. 399.

[360] *Ibid.*

and that therefore "the economic evidence presented by SMWD to the Board [of Control] was irrelevant and injected improper factual questions into the inquiry."[361]

Likewise, in *Clovis Unified School District v. Chiang*, the court found that the SCO was not acting in excess of its authority in reducing reimbursement claims to the full extent of the districts' authority to impose fees, even if there existed practical impediments to collecting the fees. In making its decision the court noted that the concept underlying Government Code sections 17514 and 17556(d) is that "[t]o the extent a local agency or school district 'has the authority' to charge for the mandated program or increased level of service, that charge cannot be recovered as a state-mandated cost."[362] The court further noted that, "this basic principle flows from common sense as well." The court reasoned: "As the Controller succinctly puts it, 'Claimants can choose not to require these fees, but not at the state's expense.'"[363]

1. The claimants have statutory authority to levy fees or charges for the provision of water.

Both Finance and DWR asserted, in comments on the test claim, that the test claim statutes are not reimbursable pursuant to section 17556(d). Finance argued that the claimants are "statutorily authorized to charge a fee for the delivery of water," and thus "each of these water agencies has the ability to cover any potential initial and ongoing costs related to the Act and Regulations with fee revenue."[364] DWR asserted that "Senate Bill 1017, which amended the [Urban Water Management Act] in 1994," provides authority for an urban water supplier "to recover the costs of preparing its [urban water management plan] and implementing the reasonable water conservation measures included in the plan in its water rates."[365]

For the following reasons, the Commission finds that the claimants have statutory authority to establish and increase fees or assessments for the provision of water services.

Water Code section 35470 provides generally that "[a]ny [water] district formed on or after July 30, 1917, may, in lieu in whole or in part of raising money for district purposes by assessment, make water available to the holders of title to land or the occupants thereon, and may fix and collect charges therefor." Section 35470 further provides that "[t]he charges may vary in different months and in different localities of the district to correspond to the cost and value of the service, and the district *may use so much of the proceeds of the charges as may be necessary to defray the ordinary operation or maintenance expenses of the district and for any other lawful purpose*."[366] In addition, section 50911 provides that an irrigation district may "[a]dopt a schedule of rates to be charged by the district for furnishing water for the irrigation of district lands."[367]

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[361] *Connell, supra*, (1997) 59 Cal.App.4th at p. 401.

[362] *Clovis Unified School Dist. v. Chiang* (2010) 188 Cal.App.4th 794, at p. 812.

[363] *Ibid.*

[364] Exhibit C, Finance Comments on Test Claim, page 1.

[365] Exhibit D, DWR Comments on Test Claim, pages 8-9 [citing Water Code section 10654].

[366] Water Code section 35470 (Stats. 2007, ch. 27 (SB 444)) [emphasis added].

[367] Water Code section 50911 (Stats. 2007, ch. 27 (SB 444)).

More specifically, and pertaining to the requirements of the test claim statutes, Water Code section 10654 permits an urban water supplier to "recover in its rates" for the costs incurred in preparing and implementing water conservation measures.[368] And, section 10608.48 expressly requires agricultural water suppliers to "[a]dopt a pricing structure for water customers based at least in part on quantity delivered."[369] This provision indicates that the Legislature intended user fees to be an essential component of the water conservation practices called for by the Act. And finally, Water Code section 10608.32, as added *within the test claim statute*, provides that all costs incurred pursuant to this part may be recoverable in rates subject to review and approval by the Public Utilities Commission.[370]

Based on the foregoing, the Commission finds that both agricultural and urban water suppliers have statutory authority to impose or increase fees to cover the costs of new state-mandated activities.

2. Nothing in Proposition 218, case law, or any prior Commission Decision, alters the analysis of the claimants' statutory fee authority.

The claimants argue that both Finance and DWR cite *Connell v. Superior Court* and "ignore the most recent rulings on the subject of Proposition 218 where their exact arguments were considered and overruled by the Commission in *Discharge of Stormwater Runoff*, 07-TC-09." The claimants argue that "under Proposition 218, Claimants' customers could reject the Board's action to establish or increase fees or assessments, yet Claimants would still be obligated to implement the mandates."[371] In comments on the draft proposed decision, the claimants reiterate, more urgently:

> The Commission should not accept its staff's invitation to ignore a prior Commission decision that is directly on point, and which was based on a plain reading of the California Constitution, all in order to reject the test claim here. To do so would undermine the Commission' s credibility, eviscerate the Commission's Constitutional duty to reimburse agencies for new state mandates, and have far-reaching negative effects.[372]

For the following reasons, the claimant's argument is unsound. In *Connell v. Superior Court, supra* the court held that "[t]he question is whether the Districts have authority, i.e., the right or power, to levy fees sufficient to cover the costs," and that the economic viability of the necessary rate increases "was irrelevant and injected improper factual questions into the inquiry."[373] *Connell* did not address the possible impact of Proposition 218 on the districts' fee authority, because the districts did not "contend that the services at issue...are among the 'many services'

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[368] Water Code section 10654 (Stats. 1994, ch. 609 (SB 1017)).

[369] Water Code section 10608.48 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[370] Water Code section 10608.32 (Stats. 2009-2010, 7th Ex. Sess. ch. 4 (SBX7 7)).

[371] Exhibit E, Claimant Rebuttal Comments, pages 11-12 [citing *Discharge of Stormwater Runoff*, 07-TC-09, page 107].

[372] Exhibit R, Claimant Comments on Draft Proposed Decision, page 14.

[373] *Connell, supra*, (1997) 59 Cal.App.4th at p. 401.

impacted by Proposition 218."[374] The claimants here argue that *Connell* is no longer good authority, because Proposition 218 has changed the landscape of special districts' legal authority to impose fees or charges.

Proposition 218, adopted by the voters in 1996, also known as the "Right to Vote on Taxes Act," declared its purpose to protect taxpayers "by limiting the methods by which local governments exact revenue from taxpayers without their consent." Proposition 218 added articles XIII C and XIII D to the Constitution;[375] article XIII C addresses assessments, while article XIII D addresses user fees and charges. The claimants allege that article XIII D, section 6, specifically, imposes a legal or constitutional hurdle to imposing or increasing fees, which undermines any analysis of statutory fee authority under Government Code section 17556(d).

The requirements of article XIII D, section 6 to which claimants refer provide as follows:

> Property Related Fees and Charges. (a) Procedures for New or Increased Fees and Charges. An agency shall follow the procedures pursuant to this section in imposing or increasing any fee or charge as defined pursuant to this article, including, but not limited to, the following:
>
> (1) The parcels upon which a fee or charge is proposed for imposition shall be identified. The amount of the fee or charge proposed to be imposed upon each parcel shall be calculated. The agency shall provide written notice by mail of the proposed fee or charge to the record owner of each identified parcel upon which the fee or charge is proposed for imposition, the amount of the fee or charge proposed to be imposed upon each, the basis upon which the amount of the proposed fee or charge was calculated, the reason for the fee or charge, together with the date, time, and location of a public hearing on the proposed fee or charge.
>
> (2) The agency shall conduct a public hearing upon the proposed fee or charge not less than 45 days after mailing the notice of the proposed fee or charge to the record owners of each identified parcel upon which the fee or charge is proposed for imposition. At the public hearing, the agency shall consider all protests against the proposed fee or charge. *If written protests against the proposed fee or charge are presented by a majority of owners of the identified parcels, the agency shall not impose the fee or charge.*
>
> [¶…¶]
>
> (c) Voter Approval for New or Increased Fees and Charges. *Except for fees or charges for sewer, water, and refuse collection services*, no property related fee or charge shall be imposed or increased unless and until that fee or charge is submitted and approved by a majority vote of the property owners of the property subject to the fee or charge or, at the option of the agency, by a two-thirds vote of the electorate residing in the affected area. The election shall be conducted not less than 45 days after the public hearing. An agency may adopt procedures

[374] 59 Cal.App.4th at p. 403.

[375] Exhibit X, Text of Proposition 218.

similar to those for increases in assessments in the conduct of elections under this subdivision.[376]

The claimants have acknowledged that they have fee authority, absent the restrictions of articles XIII C and XIII D: "Claimants do not deny that, before the passage Proposition 218, the Water Code would have provided Claimants sufficient authority, pursuant to their governing bodies' discretion, to unilaterally establish or increase fees or charges for the provision of water services."[377] After Proposition 218, the claimants argue they are now "authorized to do no more than *propose* a fee increase that can be rejected" by majority protest.[378] Furthermore, the claimants maintain that the Commission's decision in *Discharge of Stormwater Runoff* recognized the limitations imposed by article XIII D, section 6, and the effect on local governments' fee authority: "[f]inding *Connell* inapposite, the Commission observed that 'The voting requirement of Proposition 218 does not impose a mere practical or economic hurdle, as in *Connell*, but a legal and constitutional one.'"[379]

However, claimants' reliance on the Commission's prior action is misplaced, and claimants' assertions about the effect of Proposition 218 on the law of *Connell* are overstated. Commission decisions are not precedential, and in any event the current test claim is distinguishable from the analysis in *Discharge of Stormwater Runoff*. The Commission, in *Discharge of Stormwater Runoff*, deviated from the rule of *Connell*, and found that Proposition 218, as *applied to the claimants* and *the mandated activities in that test claim*, constituted a legal and constitutional barrier to increasing fees. The test claim was brought by the County of San Diego and a number of cities, and alleged various mandated activities and costs related to reducing stormwater pollution.[380] The Commission found that although the County and the Cities had a generalized fee authority based on regulatory and police powers,[381] "[w]ith some exceptions, local government fees or assessments that are incident to property ownership are subject to voter approval under article XIII D of the California Constitution, as added by Proposition 218 in 1996."[382] The Commission reasoned that "it is possible that the local agency's voters or property owners may never adopt the proposed fee or assessment, but the local agency would still be required to comply with the state mandate,"[383] and that "[a]bsent compliance with the Proposition 218 election and other procedures, there is no legal authority to impose or raise fees within the meaning of Government Code section 17556, subdivision (d)."[384] Thus, the

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[376] California Constitution, article XIII D, section 6 (added, November 5, 1996, by Proposition 218) [emphasis added].

[377] Exhibit R, Claimant Comments on Draft Proposed Decision, page 11.

[378] Exhibit R, Claimant Comments on Draft Proposed Decision, page 15.

[379] Exhibit E, Claimant Rebuttal Comments, page 12 [citing *Discharge of Stormwater Runoff*, 07-TC-09, page 107].

[380] Exhibit X, Statement of Decision, *Discharge of Stormwater Runoff*, 07-TC-09, page 1.

[381] Exhibit X, Statement of Decision, *Discharge of Stormwater Runoff*, 07-TC-09, page 103.

[382] Exhibit X, Statement of Decision, *Discharge of Stormwater Runoff*, 07-TC-09, page 105.

[383] Exhibit X, Statement of Decision, *Discharge of Stormwater Runoff*, 07-TC-09, page 106.

[384] Exhibit X, Statement of Decision, *Discharge of Stormwater Runoff*, 07-TC-09, page 107.

Commission concluded that "[t]he voting requirement of Proposition 218 does not impose a mere practical or economic hurdle, as in *Connell*, but a legal and constitutional one."[385]

Here, Proposition 218 does not impose a legal and constitutional hurdle, because fees for the provision of water services are expressly exempt from the voter approval requirements of Proposition 218.[386] The Proposition 218 Omnibus Implementation Act, enacted specifically to construe Proposition 218, defines "water" as "any system of public improvements intended to provide for the production, storage, supply, treatment, or distribution of water."[387] Thus, an urban or agricultural water supplier that undertakes measures to ensure the conservation of water, to produce more water, and enhance the quality and reliability of its supply, is providing water service, within the meaning of the Omnibus Act. The statutory and regulatory metering and other conservation practices required of the claimants therefore describe "water service." Unlike the test claimants in *Discharge of Stormwater Runoff* (cities and counties), the services for which fees or charges would be increased are expressly exempt from the voter approval requirements in article XIII D, section 6(c), and the decision and reasoning of the Commission in *Discharge of Stormwater Runoff* is not relevant. Therefore, the Commission's earlier decision is distinguishable on the very same ground that renders *Connell* significantly poignant. The claimants cannot rely on the unwillingness of voters to raise fees, because the fees in question fall, based on the plain language of the Constitution, outside voter-approval requirement of article XIII D, section 6(c).

Claimants acknowledge that fees for water service "are excused from the formal election requirement under article XIII D section 6(c), [but] the majority protest provision in subdivision (a)(2) still applies and constitutes a legal barrier to Claimants' fee authority."[388] Claimants therefore argue that they "find themselves required to implement and pay for the newly mandated activities, yet are authorized to do no more than *propose* a fee increase that can be rejected by a simple majority of affected customers."[389]

However, the so-called "majority protest provision," which claimants allege constitutes a legal barrier to claimants' fee authority, presents either a mixed question of fact and law, which has not been demonstrated based on the evidence in the record, or a legal issue that is incumbent on the courts first to resolve. In order for the Commission to make findings that the claimants' fee authority has been diminished, or negated, pursuant to article XIII D, section 6(a), the claimants would have to provide evidence that they tried and failed to impose or increase the necessary fees,[390] or provide evidence that a court determined that Proposition 218 represents a

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[385] Exhibit X, Statement of Decision, *Discharge of Stormwater Runoff*, 07-TC-09, page 107 [citing *Connell v. Superior Court*, *supra*, 59 Cal.App.4th 382, at p. 401].

[386] See California Constitution, article XIII D, section 6(c).

[387] Government Code section 53750(m) (Stats. 2002, ch. 395).

[388] Exhibit R, Claimant Comments on Draft Proposed Decision, page 14.

[389] Exhibit R, Claimant Comments on Draft Proposed Decision, page 15.

[390] If a claimant were to provide evidence that it had tried and failed to impose or increase fees, that evidence could constitute costs "first incurred," within the meaning of Government Code section 17551, and a claimant otherwise barred from reimbursement under section 17556(d) could thus potentially demonstrate that it had incurred costs mandated by the state, as defined in

constitutional hurdle to fee authority as a matter of law. The Commission cannot now say, as a matter of law, that the claimants' fee authority is insufficient based on the speculative and uncertain threat of a "written protests against the proposed fee or charge [being] presented by a majority of owners of the identified parcels..."[391]

Based on the foregoing analysis, the Commission cannot find costs mandated by the state, within the meaning of Government Code section 17514, because the claimants have sufficient fee authority, as a matter of law, to establish or increase fees or charges to cover the costs of any new required activities.

V. Conclusion

Based on the foregoing analysis, the Commission finds that the Water Conservation Act of 2009, enacted as Statutes 2009-2010, 7th Extraordinary Session, chapter 4 (SBX7 7), and the Agricultural Water Measurement Regulations issued by the Department of Water Resources, found at Code of Regulations, title 23, section 597 et seq., do not impose a reimbursable state-mandated program on urban retail water suppliers or agricultural water suppliers within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. The Commission therefore denies this test claim.

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section 17514. The Commission does not make findings on this issue, but merely observes the potentiality.

[391] See article XIII D, section 6(a)(2).

STATE OF CALIFORNIA
COMMISSION ON STATE MANDATES
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RE: **Decision**

Water Conservation, 10-TC-12 and 12-TC-01
Water Conservation Act of 2009 et al.
South Feather Water and Power Agency, Paradise Irrigation District,
Oakdale Irrigation District, and Glenn-Colusa Irrigation District, Claimants

On December 5, 2014, the foregoing decision of the Commission on State Mandates was adopted in the above-entitled matter.

Dated: December 12, 2014

Heather Halsey, Executive Director

BEFORE THE

COMMISSION ON STATE MANDATES

STATE OF CALIFORNIA

IN RE TEST CLAIM ON: San Diego Regional Water Quality Control Board Order No. R9-2007-0001 Permit CAS0108758 Parts D.1.d.(7)-(8), D.1.g., D.3.a.(3), D.3.a.(5), D.5, E.2.f, E.2.g, F.1, F.2, F.3, I.1, I.2, I.5, J.3.a.(3)(c)iv-viii & x-xv, and L. Filed June 20, 2008, by the County of San Diego, Cites of Carlsbad, Del Mar, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, San Diego, and Vista, Claimants.	Case No.: 07-TC-09 *Discharge of Stormwater Runoff - Order No. R9-2007-0001* STATEMENT OF DECISION PURSUANT TO GOVERNMENT CODE SECTION 17500 ET SEQ.; TITLE 2, CALIFORNIA CODE OF REGULATIONS, DIVISION 2, CHAPTER 2.5, ARTICLE 7. *(Adopted on March 26, 2010)*

STATEMENT OF DECISION

The Commission on State Mandates ("Commission") heard and decided this test claim during a regularly scheduled hearing on March 26, 2010. Tim Barry, John VanRhyn, Helen Peak, Shawn Hagerty and James Lough appeared on behalf of the claimants. Elizabeth Jennings appeared on behalf of the State Water Resources Control Board. Carla Shelton and Susan Geanacou appeared on behalf of the Department of Finance.

The law applicable to the Commission's determination of a reimbursable state-mandated program is article XIII B, section 6 of the California Constitution, Government Code section 17500 et seq., and related case law.

The Commission adopted the staff analysis to partially approve the test claim at the hearing by a vote of 6-1.

Summary of Findings

The test claim, filed by the County of San Diego and several cities, alleges various activities related to reducing stormwater pollution in compliance with a permit issued by the San Diego Regional Water Quality Control Board, a state agency.

The Commission finds that the following activities in the permit (as further specified on pp. 122-132 below) are a reimbursable state-mandated new program or higher level of service within the meaning of article XIII B, section 6 of the California Constitution:

- street sweeping (permit part D.3.a(5));
- street sweeping reporting (part J.3.a.(3)(c) x-xv);
- conveyance system cleaning (part D.3.a.(3));
- conveyance system cleaning reporting (J.3.a.(3)(c)(iv)-(viii));
- educational component (part D.5.a.(1)-(2) & D.5.b.(1)(c)-(d) & D.5.(b)(3));
- watershed activities and collaboration in the Watershed Urban Runoff Management Program (part E.2.f & E.2.g);
- Regional Urban Runoff Management Program (parts F.1., F.2. & F.3);
- program effectiveness assessment (parts I.1 & I.2);
- long-term effectiveness assessment (part I.5) and
- all permittee collaboration (part L.1.a.(3)-(6)).

The Commission also finds that the following test claim activities are not reimbursable because the claimants[1] have fee authority sufficient (within the meaning of Gov. Code § 17556, subd. (d)) to pay for them: hydromodification management plan (part D.1.g) and low-impact development (parts D.1.d.(7) & D.1.d.(8)), as specified below.

Further, the Commission finds the following would be identified as offsetting revenue in the parameters and guidelines:

- Any fees or assessments approved by the voters or property owners for any activities in the permit, including those authorized by Public Resources Code section 40059 for street sweeping or reporting on street sweeping, and those authorize by Health and Safety Code section 5471, for conveyance-system cleaning, or reporting on conveyance-system cleaning; and
- Any proposed fees that are not subject to a written protest by a majority of parcel owners and that are imposed for street sweeping.
- Effective January 1, 2010, fees imposed pursuant to Water Code section 16103 only to the extent that a local agency voluntarily complies with Water Code section 16101 by developing a watershed improvement plan pursuant to Statutes 2009, chapter 577, and the Regional Board approves the plan and incorporates it into the test claim permit to satisfy the requirements of the permit.

BACKGROUND

The claimants allege various activities for reducing stormwater pollution in compliance with a permit issued by the California Regional Water Quality Control Board, San Diego Region, (Regional Board), a state agency. Before discussing the specifics of the permit, an overview of the permit's purpose, and municipal stormwater pollution in general, puts the permit in context.

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[1] In this analysis, claimants and the permit term "copermittees" are used interchangeably, even though two of the copermittees (the San Diego Unified Port District and San Diego County Regional Airport Authority) are not claimants. The following are the claimants and copermittees that are subject to the permit requirements: Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista, County of San Diego.

Municipal Stormwater

The purpose of the permit is to specify "requirements necessary for the copermittees[2] to reduce the discharge of pollutants in urban runoff to the maximum extent practicable (MEP)." Each of the copermittees or dischargers "owns or operates a municipal separate storm sewer system (MS4),[3] through which it discharges urban runoff into waters of the United States within the San Diego region."

Stormwater[4] runoff flowing untreated from urban streets directly into creeks, streams, rivers, lakes and the ocean, creates pollution, as the Ninth Circuit Court of Appeal has stated:

> Storm water runoff is one of the most significant sources of water pollution in the nation, at times "comparable to, if not greater than, contamination from industrial and sewage sources." [Citation omitted.] Storm sewer waters carry suspended metals, sediments, algae-promoting nutrients (nitrogen and phosphorus), floatable trash, used motor oil, raw sewage, pesticides, and other toxic contaminants into streams, rivers, lakes, and estuaries across the United States. [Citation omitted.] In 1985, three-quarters of the States cited urban storm water runoff as a major cause of waterbody impairment, and forty percent reported construction site runoff as a major cause of impairment. Urban runoff has been named as the foremost cause of impairment of surveyed ocean waters. Among the sources of storm water contamination are urban development, industrial facilities, construction sites, and illicit discharges and connections to storm sewer systems.[5]

Because of these stormwater pollution problems described by the Ninth Circuit, both California and the federal government regulate stormwater runoff.

California Law

The California Supreme Court summarized the state statutory scheme and regulatory agencies applicable to this test claim as follows:

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[2] "Copermittees" are entities responsible for National Pollutant Discharge Elimination System (NPDES) permit conditions pertaining to their own discharges. (40 C.F.R. § 122.26 (b)(1).)

[3] Municipal separate storm sewer system means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2. (40 C.F.R. § 122.26 (b)(8).)

[4] Storm water means "storm water runoff, snow melt runoff, and surface runoff and drainage." (40 C.F.R. § 122.26 (b)(13).)

[5] *Environmental Defense Center, Inc. v. U.S. E.P.A.* (2003) 344 F.3d 832, 840-841.

> In California, the controlling law is the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), which was enacted in 1969. (Wat. Code, § 13000 et seq., added by Stats.1969, ch. 482, § 18, p. 1051.) Its goal is "to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." (§ 13000.) The task of accomplishing this belongs to the State Water Resources Control Board (State Board) and the nine Regional Water Quality Control Boards; together the State Board and the regional boards comprise "the principal state agencies with primary responsibility for the coordination and control of water quality." (§ 13001.)
>
> Whereas the State Board establishes statewide policy for water quality control (§ 13140), the regional boards "formulate and adopt water quality control plans for all areas within [a] region" (§ 13240).[6]
>
> In California, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits [national pollutant discharge elimination system] required by federal law. (§ 13374.)[7]

As to waste discharge requirements, section 13377 of the California Water Code states:

> Notwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.

Much of what the Regional Board does, especially that pertains to permits like the one in this claim, is based in the federal Clean Water Act.

Federal Law

The Federal Clean Water Act (CWA) was amended in 1972 to implement a permitting system for all discharges of pollutants[8] from point sources[9] to waters of the United States, since

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[6] *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 619.

[7] *Id.* at page 621. State and regional board permits allowing discharges into state waters are called "waste discharge requirements." (Wat. Code, § 13263).

[8] According to the federal regulations, "Discharge of a pollutant" means: (a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or (b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other

discharges of pollutants are illegal except under a permit.[10] The permits, issued under the national pollutant discharge elimination system, are called NPDES permits. Under the CWA, each state is free to enforce its own water quality laws so long as its effluent limitations[11] are not "less stringent" than those set out in the CWA (33 USCA 1370). The California Supreme Court described NPDES permits as follows:

> Part of the federal Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), "[t]he primary means" for enforcing effluent limitations and standards under the Clean Water Act. (*Arkansas v. Oklahoma, supra,* 503 U.S. at p. 101, 112 S.Ct. 1046.) The NPDES sets out the conditions under which the federal EPA or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. (33 U.S.C. § 1342(a) & (b).) In California, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law. (§ 13374.)[12]

In the Porter-Cologne Water Quality Control Act (Wat. Code, §§ 13370 et seq.), the Legislature found that the state should implement the federal law in order to avoid direct regulation by the federal government. The Legislature requires the permit program to be consistent with federal law, and charges the State and Regional Water Boards with implementing the federal program (Wat. Code, §§ 13372 & 13370). The State Water Resources Control Board (State Board) incorporates the regulations from the U.S. EPA for implementing the federal permit program, so both the Clean Water Act and U.S. EPA regulations apply to California's permit program (Cal.Code Regs., tit. 23, § 2235.2).

When a Regional Board adopts an NPDES permit, it must adopt as stringent a permit as U.S. EPA would have (federal Clean Water Act, § 402 (b)). As the California Supreme Court stated:

> The federal Clean Water Act reserves to the states significant aspects of water quality policy (33 U.S.C. § 1251(b)), and it specifically grants the states authority

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conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger." (40 C.F.R. § 122.2.)

[9] A point source is "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. § 1362(14).

[10] 40 Code of Federal Regulations, section 122.21 (a). The section applies to U.S. EPA-issued permits, but is incorporated into section 123.25 (the state program provision) by reference.

[11] *Effluent limitation* means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean. (40 C.F.R. § 122.2.)

[12] *City of Burbank v. State Water Resources Control Bd., supra,* 35 Cal.4th 613, 621. State and regional board permits allowing discharges into state waters are called "waste discharge requirements" (Wat. Code, § 13263).

> to "enforce any effluent limitation" that is not "*less stringent*" than the federal standard (*id.* § 1370, italics added). It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority, and thus it does not prohibit a state-when imposing effluent limitations that are *more stringent* than required by federal law-from taking into account the economic effects of doing so.[13]

Actions that dischargers must implement as prescribed in permits are commonly called "best management practices" or BMPs.[14]

Stormwater was not regulated by U.S. EPA in 1973 because of the difficulty of doing so. This exemption from regulation was overturned in *Natural Resources Defense Council v. Costle* (1977) 568 F.2d 1369, which ordered U.S. EPA to require NPDES permits for stormwater runoff. By 1987, U.S. EPA still had not adopted regulations to implement a permitting system for stormwater runoff. The Ninth Circuit Court of Appeals explained the next step as follows:

> In 1987, to better regulate pollution conveyed by stormwater runoff, Congress enacted Clean Water Act § 402(p), 33 U.S.C. § 1342(p), "Municipal and Industrial Stormwater Discharges." Sections 402(p)(2) and 402(p)(3) mandate NPDES permits for stormwater discharges "associated with industrial activity," discharges from large and medium-sized municipal storm sewer systems, and certain other discharges. Section 402(p)(4) sets out a timetable for promulgation of the first of a two-phase overall program of stormwater regulation.[15]

NPDES permits are required for "A discharge from a municipal separate storm sewer system serving a population of 250,000 or more."[16] The federal Clean Water Act specifies the following criteria for municipal storm sewer system permits:

> (i) may be issued on a system- or jurisdiction-wide basis;
>
> (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
>
> (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.[17]

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[13] *City of Burbank v. State Water Resources Control Bd., supra,* 35 Cal.4th 613, 627-628.

[14] Best management practices are "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage." (40 CFR § 122.2.)

[15] *Environmental Defense Center, Inc. v. U.S. E.P.A., supra,* 344 F.3d 832, 841-842.

[16] 33 USCA section 1342 (p)(2)(C).

[17] 33 USCA section 1342 (p)(3)(B).

In 1990, U.S. EPA adopted regulations to implement Clean Water Act section 402(p), defining which entities need to apply for permits and the information to include in the permit application. The permit application must propose management programs that the permitting authority will consider in adopting the permit. The management programs must include the following:

> [A] comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate.[18]

General State-Wide Permits

In addition to the regional stormwater permit at issue in this claim, the State Board has issued two general statewide permits,[19] as described in the permit as follows:

> In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (state and local) storm water regulation. Under this dual system, the Regional Board is responsible for enforcing the General Construction Activities Storm Water Permit, SWRCB Order 99-08 DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, SWRCB Order 97-03 DWQ, NPDES No. CAS000001 (General Industrial Permit), and each municipal Copermittee is responsible for enforcing its local permits, plans, and ordinances, which may require the implementation of additional BMPs than required under the statewide general permits.

The State and Regional Boards have statutory fee authority to conduct inspections to enforce the general statewide permits.[20]

The Regional Board Permit (Order No. R9-2007-001, Permit CAS0108758)

Under Part A, "Basis for the Order," the permit states:

> This Order Renews National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108758, which was first issued on July 16, 1990 (Order No. 90-42), and then renewed on February 21, 2001 (Order No. 2001-01). On August 25, 2005, in accordance with Order NO. 2001-01, the County of San Diego, as the Principal Permittee, submitted a Report of Waste Discharge (ROWD) for renewal of their MS4 Permit.

Attachment B of the permit (part 7(q)) states that "This Order expires five years after adoption." Attachment B also says (part 7 (r)) that the terms and conditions of the permit "are automatically

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[18] 40 Code of Federal Regulations section 122.26 (d)(2)(iv).

[19] A general permit means "an NPDES 'permit' issued under [40 CFR] §122.28 authorizing a category of discharges under the CWA within a geographical area." (40 CFR § 122.2.)

[20] Water Code section 13260, subdivision (d)(2)(B)(i) - (iii).

continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of the expired permits (40 CFR 122.6) are complied with."[21]

Part J.2.d. of the permit requires the Principal Permittee (County of San Diego) to "submit to the Regional Board, no later than 210 days in advance of the expiration of this order, a report of Waste Discharge (ROWD) as an application for issuance of new waste discharge requirements." The permit specifies the contents of the ROWD.

The permit is divided into 16 sections. It prohibits discharges from MS4s that contain pollutants that "have not been reduced to the maximum extent practicable" as well as discharges "that cause or contribute to the violation of water quality standards." The permit also prohibits non-storm water discharges unless they are authorized by a separate NPDES permit, or fall within specified exemptions. The copermittees are required to "establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means." The copermittees are also required to develop and implement an updated Jurisdictional Urban Runoff Management Program (JURMP) for their jurisdictions that meets the requirements specified in the permit as well as a Watershed Urban Runoff Management Program (watersheds are defined in the permit) and a Regional Urban Runoff Management Program, each of which are to be assessed annually and reported on. Annual fiscal analyses are also required of the copermittees. The principal permittee has additional responsibilities, as specified.

The Regional Board prepared a 115-page Fact Sheet/Technical Report for this permit in which are listed, among other things, Regional Board findings, the federal law, and the reasons for the various permit requirements.

The 2001 version of the Regional Board's permit (treated as prior law in this analysis) was challenged by the Building Industry Association of San Diego County, among others. They alleged that the permit provisions violate federal law because they prohibit the municipalities from discharging runoff from storm sewers if the discharge would cause a water body to exceed the applicable water quality standard established under state law.[22] The court held that the Clean Water Act's "maximum extent practicable" standard did not prevent the water boards from including provisions in the permit that required municipalities to comply with state water quality standards.[23]

Attached to the claimants' February 2009 comments is a document entitled "Comparison Between the Requirement of Tentative Order 2001-01, the Federal NPDES Storm Water Regulations, the Existing San Diego Municipal Storm Water Permit (Order 90-42), and Previous Drafts of the San Diego Municipal Stormwater Permit" that compares the 2001 permit with the 1990 and earlier permits. One of the document's conclusions regarding the 2001 permit is: "40% of the requirements in Tentative Order 2001-01 which 'exceed the federal regulations' are based

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[21] California Code of Regulations, title 23, section 2235.4.

[22] *Building Industry Assoc. of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 880.

[23] *Id.* at page 870.

almost exclusively on (1) guidance documents developed by USEPA and (2) SWRCB's [State Board's] orders describing statewide precedent setting decision on MS4 permits."

Claimants' Position

Claimants assert that various parts of the Regional Board's 2007 permit constitute a reimbursable state mandate within the meaning of article XIII B, section 6, and Government Code section 17514. The parts of the permit pled by claimants are quoted below:

I. Regional Requirements for Urban Runoff Management Programs

A. Copermittee collaboration

Parts F.2. and F.3. (F. Regional Urban Runoff Management Program) of the permit provide:

> Each Copermittee shall collaborate with the other Copermittees to develop, implement, and update as necessary a Regional Urban Runoff Management Program. The Regional Urban Runoff Management Program shall meet the requirements of section F of this Order, reduce the discharge of pollutants[24] from the MS4 to the MEP, and prevent urban runoff[25] discharges from the MS4 from causing or contributing to a violation of water quality standards.[26] The Regional Urban Runoff Management Program shall, at a minimum: [¶]...[¶]
>
> 2. Develop the standardized fiscal analysis method required in section G of this Order.[27]
>
> 3. Facilitate the assessment of the effectiveness of jurisdictional, watershed,[28] and regional programs.

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[24] Pollutant is defined in Attachment C of the permit as "Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated."

[25] Urban Runoff is defined in Attachment C of the permit as "All flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water illicit discharges (dry weather flows).

[26] Water Quality Standards is defined in Attachment C of the permit as "The beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.) of water and the water quality objectives necessary to protect those uses.

[27] Section G requires the permittees to "collectively develop a standardized method and format for annually conducting and reporting fiscal analyses of their urban runoff management programs in their entirety (including jurisdictional, watershed, and regional activities)." Specific components of the method and time tables are specified in the permit (Permit parts G.2 & G.3).

[28] Watershed is defined in Attachment C of the permit as "That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as a drainage area, catchment, or river basin)."

Part L (All Copermittee Collaboration) of the Permit states:

> 1. Each Copermittee collaborate [sic] with all other Copermittees regulated under this Order to address common issues, promote consistency among Jurisdictional Urban Runoff Management Programs and Watershed Urban Runoff Management Programs, and to plan and coordinate activities required under this Order.
>
> a. Management structure – All Copermittees shall jointly execute and submit to the Regional Board no later than 180 days after adoption of this Order, a Memorandum of Understanding, Joint Powers Authority, or other instrument of formal agreement which at a minimum:
>
> (1) Identifies and defines the responsibilities of the Principal Permittee[29] and Lead Watershed Permittees;[30]
> (2) Identifies Copermittees and defines their individual and joint responsibilities, including watershed responsibilities;
> (3) Establishes a management structure to promote consistency and develop and implement regional activities;
> (4) Establishes standards for conducting meetings, decision-making, and cost-sharing.
> (5) Provides guidelines for committee and workgroup structure and responsibilities;
> (6) Lays out a process for addressing Copermittee non-compliance with the formal agreement;
> (7) Includes any and all other collaborative arrangements for compliance with this order.

Claimants stated that the Copermittees' costs to comply with this activity for fiscal year 2007-2008 was $260,031.29.

B. Copermittee collaboration – Regional Residential Education Program Development and Implementation

Part F.1 of the Permit provides:

The Regional Urban Runoff Management Program shall, at a minimum:

> 1. Develop and implement a Regional Residential Education Program. The program shall include:
>
> a. Pollutant specific education which focuses educational efforts on bacteria, nutrients, sediment, pesticides, and trash. If a different pollutant is determined to be more critical for the education program, the pollutant can be substituted for one of these pollutants.
>
> b. Education efforts focused on the specific residential sources of the pollutants listed in section F.1.a.

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[29] The Principal Permittee is the County of San Diego.

[30] According to the permit: "Watershed Copermittees shall identify the Lead Watershed Permittee for their WMA [Watershed Management Area]."

Claimants stated that the Copermittees' costs to comply with this activity was $131,250 in fiscal year 2007-2008.

C. Hydromodification[31]

Part D.1.g. of the Permit (D. Jurisdictional Urban Runoff Management Program, 1. Development Planning Component, g. Hydromodification – Limits on Increases of Runoff Discharge Rates and Durations) states:

> g. HYDROMODIFICATION – LIMITATIONS ON INCREASES OF RUNOFF DISCHARGE RATES AND DURATIONS
>
> Each Copermittee shall collaborate with the other Copermittees to develop and implement a hydromodification management plan (HMP) to manage increases in runoff discharge rates and durations from all priority development projects,[32]

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[31] Hydromodification is defined in Attachment C of the permit as "The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes."

Hydromodification is also defined as changes in the magnitude and frequency of stream flows as a result of urbanization, and the resulting impacts on the receiving channels in terms of erosion, sedimentation and degradation of in-stream habitat." *Draft Hydromodification Management Plan for San Diego County*, page 4. <http://www.projectcleanwater.org/pdf/susmp/sd_hmp_2009.pdf> as of May 28, 2009 .

[32] According to the permit, "Priority Development Projects" are: a) all new Development Projects that fall under the project categories or locations listed in section D.1.d.(2), and b) those redevelopment projects that create, add or replace at least 5,000 square feet of impervious surfaces on an already developed site that falls under the project categories or locations listed in section D.1.d.(2).

[¶]...[¶] [Part D.1.d.(2):] (2) Priority Development Project Categories (a) Housing subdivisions of 10 or more dwelling units. This category includes single-family homes, multi-family homes, condominiums, and apartments. (b) Commercial developments greater than one acre. This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than one acre. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities. (c) Developments of heavy industry greater than one acre. This category includes, but is not limited to, manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.). (d) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539. (e) Restaurants. This

where such increased rates and durations are likely to cause increased erosion[33] of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses[34] and stream habitat due to increased erosive force. The HMP, once approved by the Regional Board, shall be incorporated into the local SUSMP [Standard Urban Storm Water Mitigation Plan][35] and implemented by each Copermittee so that post-project runoff discharge rates and durations shall not exceed estimated pre-project discharge rates and durations where the increased discharge rates and durations will result in increased potential for

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category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement D.1.d.(6)(c) and hydromodification requirement D.1.g. (f) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater. (g) Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands. (h) Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce. (i) Street, roads, highways, and freeways. This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles. (j) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

[33] Erosion is defined in Attachment C of the permit as "When land is diminished or worn away due to wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via storm water runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building and timber harvesting."

[34] Beneficial Uses is defined in Attachment C of the permit as "the uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote tangible and intangible economic, social, and environmental goals. ... "Beneficial Uses" are equivalent to "Designated Uses" under federal law." (Wat. Code, § 13050, subd. (f).)

[35] The Standard Urban Storm Water Mitigation Plan is defined in Attachment C of the permit as "A plan developed to mitigate the impacts of urban runoff from Priority Development Projects."

erosion or other significant adverse impacts to beneficial uses, attributable to changes in the discharge rates and durations.

(1) The HMP shall:

(a) Identify a standard for channel segments which receive urban runoff discharges from Priority Development Projects. The channel standard shall maintain the pre-project erosion and deposition characteristics of channel segments receiving urban runoff discharges from Priority Development Projects as necessary to maintain or improve the channel segments' stability conditions.

(b) Utilize continuous simulation of the entire rainfall record to identify a range of runoff flows for which Priority Development Project post-project runoff flow rates and durations[36] shall not exceed pre-project runoff flow rates and durations,[37] where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the flow rates and durations. The lower boundary of the range of runoff flows identified shall correspond with the critical channel flow[38] that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks. The identified range of runoff flows may be different for specific watersheds, channels, or channel reaches.

(c) Require Priority Development Projects to implement hydrologic control measures so that Priority Development Projects' post-project runoff flow rates and durations (1) do not exceed pre-project runoff flow rates and durations for the range of runoff flows identified under section D.1.g.(1)(b), where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the flow rates and durations, and (2) do not result in channel conditions which do not meet the channel standard developed under section D.1.g.(1)(a) for channel segments downstream of Priority Development Project discharge points.

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[36] Flow duration is defined in Attachment C of the permit as "The long-term period of time that flows occur above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams (not a single storm event duration). ... Flow duration within the range of geomorphologically significant flows is important for managing erosion.

[37] Attachment C of the permit defines "Pre-project or pre-development runoff conditions (discharge rates, durations, etc.) as "Runoff conditions that exist onsite immediately before the planned development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development."

[38] Critical channel flow, according to Attachment C of the permit, is "the channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc [critical channel flow], it should be based on the weakest boundary material – either bed or bank."

(d) Include other performance criteria (numeric or otherwise) for Priority Development Projects as necessary to prevent urban runoff from the projects from increasing erosion of channel beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

(e) Include a review of pertinent literature.

(f) Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from Priority Development Projects.

(g) Include a description of how the Copermittees will incorporate the HMP requirements into their local approval processes.

(h) Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations and address potential hydromodification impacts.

(i) Include technical information supporting any standards and criteria proposed.

(j) Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.

(k) Include a description of pre- and post-project monitoring and other program evaluations to be conducted to assess the effectiveness of implementation of the HMP.

(l) Include mechanisms for addressing cumulative impacts within a watershed on channel morphology.

(m) Include information on evaluation of channel form and condition, including slope, discharge, vegetation, underlying geology, and other information, as appropriate.

(2) The HMP may include implementation of planning measures (e.g., buffers and restoration activities, including revegetation, use of less-impacting facilities at the point(s) of discharge, etc.) to allow expected changes in stream channel cross sections, vegetation, and discharge rates, velocities, and/or durations without adverse impacts to channel beneficial uses. Such measures shall not include utilization of non-naturally occurring hardscape materials such as concrete, riprap, gabions, etc.

(3) Section D.1.g.(1)(c) does not apply to Development Projects[39] where the project discharges stormwater runoff into channels or storm drains where the preexisting channel or storm drain conditions result in minimal potential for erosion or other impacts to beneficial uses. Such situations may include discharges into channels that are concrete-lined or significantly hardened (e.g.,

[39] Development projects, according to Attachment C of the permit, are "New development or redevelopment with land disturbing activities; structural development, including construction or installation of a building or structure, the creation of impervious surfaces, public agency projects, and land subdivision."

with rip-rap, sackrete, etc.) downstream to their outfall in bays or the ocean; underground storm drains discharging to bays or the ocean; and construction of projects where the sub-watersheds below the projects' discharge points are highly impervious (e.g., >70%) and the potential for single-project and/or cumulative impacts is minimal. Specific criteria for identification of such situations shall be included as a part of the HMP. However, plans to restore a channel reach may reintroduce the applicability of HMP controls, and would need to be addressed in the HMP.

(4) HMP Reporting

The Copermittees shall collaborate to report on HMP development as required in section J.2.a of this Order.[40]

(5) HMP Implementation

180 days after approval of the HMP by the Regional Board, each Copermittee shall incorporate into its local SUSMP and implement the HMP for all applicable Priority Development Projects. Prior to approval of the HMP by the Regional Board, the early implementation of measures likely to be included in the HMP shall be encouraged by the Copermittees.

(6) Interim Hydromodification Criteria for Projects Disturbing 50 Acres or More

Within 365 days of adoption of this Order, the Copermittees shall collectively identify an interim range of runoff flow rates for which Priority Development Project post-project runoff flow rates and durations shall not exceed pre-project runoff flow rates and durations (Interim Hydromodification Criteria), where the increased discharge flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in flow rates and durations. Development of the Interim Hydromodification Criteria shall include identification of methods to be used by Priority Development Projects to exhibit compliance with the criteria, including continuous simulation of the entire rainfall record. Starting 365 days after adoption of this Order and until the final Hydromodification Management Plan standard and criteria are implemented, each Copermittee shall require Priority Development Projects disturbing 50 acres or more to implement hydrologic controls to manage post-project runoff flow rates and durations as required by the Interim Hydromodification Criteria. Development Projects disturbing 50 acres or more are exempt from this requirement when:

(a) the project would discharge into channels that are concrete-lined or significantly hardened (e.g., with rip-rap, sackcrete, etc.) downstream to their outfall in bays or the ocean;

[40] Section J.2.a of the permit requires collaborating with other copermittees to develop the HMP, and submitting it for approval by the Regional Board. Part J.2.a also includes timelines for HMP completion and approval.

(b) the project would discharge into underground storm drains discharging directly to bays or the ocean; or

(c) the project would discharge to a channel where the watershed areas below the project's discharge points are highly impervious (e.g. >70%).

Claimants stated that the total cost of this activity is $1.05 million, of which $630,000 was spent in fiscal year 2007-2008, and the remaining $420,000 will be spent in fiscal year 2008-2009.

D. Low-Impact Development[41] ("LID") and Standard Urban Storm Water Mitigation Plan ("SMUSP")

Part D.1.d. of the Permit (D. Jurisdictional Urban Runoff Management Program, 1. Development Planning Component, d. Standard Urban Storm Water Mitigation Plans – Approval Process Criteria and Requirements for Priority Development Projects), paragraphs (7) and (8) state as follows:

(7) Update of SUSMP BMP Requirements

The Copermittees shall collectively review and update the BMP requirements that are listed in their local SUSMPs. At a minimum, the update shall include removal of obsolete or ineffective BMPs, addition of LID and source control BMP[42] requirements that meet or exceed the requirements of sections D.1.d.(4)[43] and D.1.d.(5),[44] and addition of LID BMPs that can be used for treatment, such as bioretention cells, bioretention swales, etc. The update shall also add appropriate LID BMPs to any tables or discussions in the local SUSMPs addressing pollutant removal efficiencies of treatment control BMPs.[45] In addition, the update shall

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[41] Low Impact Development (LID) is defined in Attachment C of the permit as "A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions."

[42] Source Control BMPs are defined in Attachment C of the permit as "Land use or site planning practices, or structural or nonstructural measures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff."

[43] Part D.1.d.(4) of the permit includes LID BMP requirements: "Each Copermittee shall require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas and promote infiltration at Priority Development Projects:" The Permit lists various LID site design BMPs that must be implemented at all Priority Development Projects, and other LID BMPs that must be implemented at all Priority Development Projects "where applicable and feasible."

[44] Part D.1.d.(5), regarding "Source control BMP Requirements" requires permittees to require each Priority Development Project to implement source control BMPs that must "Minimize storm water pollutants of concern in urban runoff" and include five other specific criteria.

[45] A treatment control BMP, according to Attachment C of the permit, is "Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants,

include review, and revision where necessary, of treatment control BMP pollutant removal efficiencies.

(8) Update of SUSMPs to Incorporate LID and Other BMP Requirements

(a) In addition to the implementation of the BMP requirements of sections D.1.d.(4-7) within one year of adoption of this Order, the Copermittees shall also develop and submit an updated Model SUSMP that defines minimum LID and other BMP requirements to be incorporated into the Copermittees' local SUSMPs for application to Priority Development Projects. The purpose of the updated Model SUSMP shall be to establish minimum standards to maximize the use of LID practices and principles in local Copermittee programs as a means of reducing stormwater runoff. It shall meet the following minimum requirements:

i. Establishment of LID BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(4) above.
ii. Establishment of source control BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(5) above.
iii. Establishment of treatment control BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(6) above.
iv. Establishment of siting, design, and maintenance criteria for each LID and treatment control BMP listed in the Model SUSMP, so that implemented LID and treatment control BMPs are constructed correctly and are effective at pollutant removal and/or runoff control. LID techniques, such as soil amendments, shall be incorporated into the criteria for appropriate treatment control BMPs.
v. Establishment of criteria to aid in determining Priority Development Project conditions where implementation of each LID BMP listed in section D.1.d.(4)(b) is applicable and feasible.
vi. Establishment of a requirement for Priority Development Projects with low traffic areas and appropriate or amendable soil conditions to construct a portion of walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such a pervious concrete, porous asphalt, unit pavers, and granular materials.
vii. Establishment of restrictions on infiltration of runoff from Priority Development Project categories or Priority Development Project areas that generate high levels of pollutants, if necessary.

(b) The updated Model SUSMP shall be submitted within 18 months of adoption of this Order. If, within 60 days of submittal of the updated Model SUSMP, the Copermittees have not received in writing from the Regional Board either

(1) a finding of adequacy of the updated Model SUSMP or (2) a modified schedule for its review and revision, the updated Model SUSMP shall be deemed adequate, and the Copermittees shall implement its provisions in accordance with section D.1.d.(8)(c) below.

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filtration, biological uptake, media absorption or any other physical, biological, or chemical process."

(c) Within 365 days of Regional Board acceptance of the updated Model SUSMP, each Copermittee shall update its local SUSMP to implement the requirements established pursuant to section D.1.d.(8)(a). In addition to the requirements of section D.1.d.(8)(a), each Copermittee's updated local SUSMP shall include the following:

i. A requirement that each Priority Development Project use the criteria established pursuant to section D.1.d.(8)(a)v to demonstrate applicability and feasibility, or lack thereof, of implementation of the LID BMPs listed in section D.1.d.(4)(b).
ii. A review process which verifies that all BMPs to be implemented will meet the designated siting, design, and maintenance criteria, and that each Priority Development Project is in compliance with all applicable SUSMP requirements.

Claimants stated that the total cost of this activity is $52,200 to be spent in fiscal year 2007-2008.

E. Long Term Effectiveness Assessment

Part I.5 (I. Program Effectiveness Assessment) of the permit states:

5. Long-term Effectiveness Assessment

a. Each Copermittee shall collaborate with the other Copermittees to develop a Longterm Effectiveness Assessment (LTEA), which shall build on the results of the Copermittees' August 2005 Baseline LTEA. The LTEA shall be submitted by the Principal Permittee to the Regional Board no later than 210 days in advance of the expiration of this Order.

b. The LTEA shall be designed to address each of the objectives listed in section I.3.a.(6) of this Order, and to serve as a basis for the Copermittees' Report of Waste Discharge for the next permit cycle.

c. The LTEA shall address outcome levels 1-6, and shall specifically include an evaluation of program implementation to changes in water quality (outcome levels 5 and 6).[46]

d. The LTEA shall assess the effectiveness of the Receiving Waters Monitoring Program in meeting its objectives and its ability to answer the five core management questions. This shall include assessment of the frequency of monitoring conducted through the use of power analysis and other pertinent statistical methods. The power analysis shall identify the frequency and intensity of sampling needed to identify a 10% reduction in the concentration of constituents causing the high priority water quality problems within each watershed over the next permit term with 80% confidence.

e. The LTEA shall address the jurisdictional, watershed, and regional programs, with an emphasis on watershed assessment.

The claimants state that this activity is budgeted to cost $210,000.

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[46] See footnote 50, page 21.

II. Jurisdictional Urban Runoff Management Program

A. Street Sweeping

Part D.3.a.(5) of the Permit (D.3 Existing Development Component, a. Municipal) provides:

> (5) Sweeping of Municipal Areas
>
> Each Copermittee shall implement a program to sweep improved (possessing a curb and gutter) municipal roads, streets, highways, and parking facilities. The program shall include the following measures:
>
> (a) Roads, streets, highways, and parking facilities identified as consistently generating the highest volumes of trash and/or debris shall be swept at least two times per month.
>
> (b) Roads, streets, highways, and parking facilities identified as consistently generating moderate volumes of trash and/or debris shall be swept at least monthly.
>
> (c) Roads, streets, highways, and parking facilities identified as generating low volumes of trash and/or debris shall be swept as necessary, but no less than once per year.

Part J.3.a.(3)(c)x-xv (J. Reporting, 3. Annual Reports, a. jurisdictional urban runoff management program annual reports (3) Minimum contents (c) Municipal) requires annual reports to include the following:

> x. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating the highest volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
> xi. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating moderate volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
> xii. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating low volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
> xiii. Identification of the total distance of curb-miles swept.
> xiv. Identification of the number of municipal parking lots, the number of municipal parking lots swept, and the frequency of sweeping.
> xv. Amount of material (tons) collected from street and parking lot sweeping.

Claimants state the following costs for this activity: in fiscal year 2007-2008: Equipment: $2,080,245, Staffing: $1,014,321, Contract costs: $382,624; for 2008-2009: Equipment: $3,566,139 (for 2008-2012), Staffing $1,054,893 (4% increase), Contract costs: $382,624.

B. Conveyance System Cleaning

Part D.3.a.(3) of the Permit (D.3. Existing Development Component, a. Municipal) provides:

> (3) Operation and Maintenance of Municipal Separate Storm Sewer System and Structural Controls
>
> (a) Each Copermittee shall implement a schedule of inspection and maintenance activities to verify proper operation of all municipal structural treatment controls designed to reduce pollutant discharges to or from its MS4s and related drainage structures.
>
> (b) Each Copermittee shall implement a schedule of maintenance activities for the MS4 and MS4 facilities (catch basins, storm drain inlets, open channels, etc). The maintenance activities shall, at a minimum, include:
>
> i. Inspection at least once a year between May 1 and September 30 of each year[47] for all MS4 facilities that receive or collect high volumes of trash and debris. All other MS4 facilities shall be inspected at least annually throughout the year.
> ii. Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year.
> iii. Any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of design capacity shall be cleaned in a timely manner. Any MS4 facility that is designed to be self cleaning shall be cleaned of any accumulated trash and debris immediately. Open channels shall be cleaned of observed anthropogenic litter[48] in a timely manner.
> iv. Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed.
> v. Proper disposal of waste removed pursuant to applicable laws.
> vi. Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

Part J.3.a.(3)(c) iv-viii (J. Reporting, 3. Annual Reports, a. jurisdictional urban runoff management program annual reports (3) Minimum contents (c) Municipal) requires annual reports to include the following:

> iv. Identification of the total number of catch basins and inlets, the number of catch basins and inlets inspected, the number of catch basins and inlets found with accumulated waste exceeding cleaning criteria, and the number of catch basins and inlets cleaned.
> v. Identification of the total distance (miles) of the MS4, the distance of the MS4 inspected, the distance of the MS4 found with accumulated waste exceeding cleaning criteria, and the distance of the MS4 cleaned.

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[47] According to Attachment C of the permit, May 1 through September 30 is the dry season.

[48] Attachment C of the permit defines "anthropogenic litter" as "trash generated from human activities, not including sediment."

vi. Identification of the total distance (miles) of open channels, the distance of the open channels inspected, the distance of the open channels found with anthropogenic litter, and the distance of open channels cleaned.
vii. Amount of waste and litter (tons) removed from catch basins, inlets, the MS4, and open channels, by category.
viii. Identification of any MS4 facility found to require inspection less than annually following two years of inspection, including justification for the finding.

The claimants state that this activity costs $3,456,087 in fiscal year 2007-2008, and increases 4% in subsequent years.

C. Program Effectiveness Assessment

Part I.1 and I.2 of the permit states:

1. Jurisdictional

a. As part of its Jurisdictional Urban Runoff Management Program, each Copermittee shall annually assess the effectiveness of its Jurisdictional Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:

(1) Specifically assess the effectiveness of each of the following:

(a) Each significant jurisdictional activity/BMP or type of jurisdictional activity/BMP implemented;

(b) Implementation of each major component of the Jurisdictional Urban Runoff Management Program (Development Planning, Construction, Municipal, Industrial/Commercial, Residential, Illicit Discharge[49] Detection and Elimination, and Education); and

(c) Implementation of the Jurisdictional Urban Runoff Management Program as a whole.

(2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.1.a.(1) above.

(3) Utilize outcome levels 1-6[50] to assess the effectiveness of each of the items listed in section I.1.a.(1) above, where applicable and feasible.

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[49] Illicit discharge, as defined in Attachment C of the permit, is "any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from firefighting activities [40 C.F.R. 122.26 (b)(2)]."

[50] Effectiveness assessment outcome levels are defined in Attachment C of the permit as follows: Effectiveness assessment outcome level 1 – Compliance with Activity-based Permit Requirements – Level 1 outcomes are those directly related to the implementation of specific activities prescribed by this Order or established pursuant to it. Effectiveness assessment outcome level 2 – Changes in Attitudes, Knowledge, and Awareness – Level 2 outcomes are measured as increases in knowledge and awareness among target audiences such as residents, business, and municipal employees. Effectiveness assessment outcome level 3 – Behavioral

(4) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.1.a.(1) above, where applicable and feasible.

(5) Utilize Implementation Assessment,[51] Water Quality Assessment,[52] and Integrated Assessment,[53] where applicable and feasible.

b. Based on the results of the effectiveness assessment, each Copermittee shall annually review its jurisdictional activities or BMPs to identify modifications and improvements needed to maximize Jurisdictional Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Jurisdictional activities/BMPs that are ineffective or less effective than other comparable jurisdictional activities/BMPs shall be replaced or improved upon by implementation of more effective jurisdictional activities/BMPs. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, jurisdictional activities or BMPs applicable to the water quality problems shall be modified and improved to correct the water quality problems.

c. As part of its Jurisdictional Urban Runoff Management Program Annual Reports, each Copermittee shall report on its Jurisdictional Urban Runoff

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Changes and BMP Implementation – Level 3 outcomes measure the effectiveness of activities in affecting behavioral change and BMP implementation. Effectiveness assessment outcome level 4 – Load Reductions – Level 4 outcomes measure load reductions which quantify changes in the amounts of pollutants associated with specific sources before and after a BMP or other control measure is employed. Effectiveness assessment outcome level 5 – Changes in Urban Runoff and Discharge Quality – Level 5 outcomes are measured as changes in one or more specific constituents or stressors in discharges into or from MS4s. Effectiveness assessment outcome level 6 – Changes in Receiving Water Quality – Level 6 outcomes measure changes to receiving water quality resulting from discharges into and from MS4s, and may be expressed through a variety of means such as compliance with water quality objectives or other regulatory benchmarks, protection of biological integrity [i.e., ecosystem health], or beneficial use attainment.

[51] Implementation Assessment is defined in Attachment C of the permit as an "Assessment conducted to determine the effectiveness of copermittee programs and activities in achieving measureable targeted outcomes, and in determining whether priority sources of water quality problems are being effectively addressed."

[52] Water Quality Assessment is defined in Attachment C of the permit as an "Assessment conducted to evaluate the condition of non-storm water discharges, and the water bodies which receive these discharges."

[53] Integrated Assessment is defined in Attachment C of the permit as an "Assessment to be conducted to evaluate whether program implementation is properly targeted to and resulting in the protection and improvement of water quality."

Management Program effectiveness assessment as implemented under each of the requirements of sections I.1.a and I.1.b above.

2. Watershed

a. As part of its Watershed Urban Runoff Management Program, each watershed group of Copermittees (as identified in Table 4)[54] shall annually assess the effectiveness of its Watershed Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:

(1) Specifically assess the effectiveness of each of the following:

(a) Each Watershed Water Quality Activity implemented;
(b) Each Watershed Education Activity implemented; and
(c) Implementation of the Watershed Urban Runoff Management Program as a whole.

(2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.2.a.(1) above.

(3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in sections I.2.a.(1)(a) and I.2.a.(1)(b) above, where applicable and feasible.

(4) Utilize outcome levels 1-4 to assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, where applicable and feasible.

(5) Utilize outcome levels 5 and 6 to qualitatively assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, focusing on the high priority water quality problem(s) of the watershed. These assessments shall attempt to exhibit the impact of Watershed Urban Runoff Management Program implementation on the high priority water quality problem(s) within the watershed.

(6) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.2.a.(1) above, where applicable and feasible.

(7) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.

b. Based on the results of the effectiveness assessment, the watershed Copermittees shall annually review their Watershed Water Quality Activities, Watershed Education Activities, and other aspects of the Watershed Urban Runoff Management Program to identify modifications and improvements needed to maximize Watershed Urban Runoff Management Program effectiveness, as

[54] Table 4 of the permit divides the copermittees into nine watershed management areas. For example, the San Luis Rey River watershed management area lists the city of Oceanside, Vista and the County of San Diego as the responsible watershed copermittees. Table 4 also lists the hydrologic units and major receiving water bodies.

necessary to achieve compliance with section A of this Order.[55] The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Watershed Water Quality Activities/Watershed Education Activities that are ineffective or less effective than other comparable Watershed Water Quality Activities/Watershed Education Activities shall be replaced or improved upon by implementation of more effective Watershed Water Quality Activities/Watershed Education Activities. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, Watershed Water Quality Activities and Watershed Education Activities applicable to the water quality problems shall be modified and improved to correct the water quality problems.

c. As part of its Watershed Urban Runoff Management Program Annual Reports, each watershed group of Copermittees (as identified in Table 4) shall report on its Watershed Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of section I.2.a and I.2.b above.

Claimants state that this activity in I.1. and I.2 costs $392,363 in fiscal year 2007-2008, is expected to increase to $862,293 in fiscal year 2008-2009, and is expected to increase 4% annually thereafter.

D. Educational Surveys and Tests

Part D.5 of the permit (under D. Jurisdictional Urban Runoff Management Program) states:

5. Education Component

Each Copermittee shall implement an education program using all media as appropriate to (1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum, the education program shall meet the requirements of this section and address the following target communities:

· Municipal Departments and Personnel
· Construction Site Owners and Developers
· Industrial Owners and Operators
· Commercial Owners and Operators
· Residential Community, General Public, and School Children

a. GENERAL REQUIREMENTS

(1) Each Copermittee shall educate each target community on the following topics where appropriate:

[55] Section A is "Prohibitions and Receiving Water Limitations."

Table 3. Education

Laws, Regulations, Permits, & Requirements	Best Management Practices
• Federal, state, and local water quality laws and regulations • Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction). • Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities • Regional Board's General NPDES Permit for Ground Water Dewatering • Regional Board's 401 Water Quality Certification Program • Statewide General NPDES Utility Vault Permit • Requirements of local municipal permits and ordinances (e.g., storm water and grading ordinances and permits)	• Pollution prevention and safe alternatives • Good housekeeping (e.g., sweeping impervious surfaces instead of hosing) • Proper waste disposal (e.g., garbage, pet/animal waste, green waste, household hazardous materials, appliances, tires, furniture, vehicles, boat/recreational vehicle waste, catch basin/ MS4 cleanout waste) • Non-storm water disposal alternatives (e.g., all wash waters) • Methods to minimized the impact of land development and construction • Erosion prevention • Methods to reduce the impact of residential and charity car-washing • Preventive Maintenance • Equipment/vehicle maintenance and repair • Spill response, containment, and recovery • Recycling • BMP maintenance
General Urban Runoff Concepts	**Other Topics**
• Impacts of urban runoff on receiving waters • Distinction between MS4s and sanitary sewers • BMP types: facility or activity specific, LID, source control, and treatment control • Short-and long-term water quality impacts associated with urbanization (e.g., land-use decisions, development, construction) • Non-storm water discharge prohibitions • How to conduct a storm water inspections	• Public reporting mechanisms • Water quality awareness for Emergency/ First Responders • Illicit Discharge Detection and Elimination observations and follow-up during daily work activities • Potable water discharges to the MS4 • Dechlorination techniques • Hydrostatic testing • Integrated pest management • Benefits of native vegetation • Water conservation •Alternative materials and designs to maintain peak runoff values •Traffic reduction, alternative fuel use

(2) Copermittee educational programs shall emphasize underserved target audiences, high-risk behaviors, and "allowable" behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources.

b. SPECIFIC REQUIREMENTS

(1) Municipal Departments and Personnel Education

(a) Municipal Development Planning – Each Copermittee shall implement an education program so that its planning and development review staffs (and Planning Boards and Elected Officials, if applicable) have an understanding of:

i. Federal, state, and local water quality laws and regulations applicable to Development Projects;
ii. The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization);
iii. How to integrate LID BMP requirements into the local regulatory program(s) and requirements; and
iv. Methods of minimizing impacts to receiving water quality resulting from development, including:

[1] Storm water management plan development and review;
[2] Methods to control downstream erosion impacts;
[3] Identification of pollutants of concern;
[4] LID BMP techniques;
[5] Source control BMPs; and
[6] Selection of the most effective treatment control BMPs for the pollutants of concern.

(b) Municipal Construction Activities – Each Copermittee shall implement an education program that includes annual training prior to the rainy season so that its construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of the following topics, as appropriate for the target audience:

i. Federal, state, and local water quality laws and regulations applicable to construction and grading[56] activities.
ii. The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization and impacts from construction material such as sediment).
iii. Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities.
iv. The Copermittee's inspection, plan review, and enforcement policies and procedures to verify consistent application.
v. Current advancements in BMP technologies.
vi. SUSMP Requirements including treatment options, LID BMPs, source control, and applicable tracking mechanisms.

[56] Attachment C of the permit defines grading as "the cutting and/or filling of the land surface to a desired slope or elevation."

(c) Municipal Industrial/Commercial Activities - Each Copermittee shall train staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year. Training shall cover inspection and enforcement procedures, BMP implementation, and reviewing monitoring data.

(d) Municipal Other Activities – Each Copermittee shall implement an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed.

(2) New Development and Construction Education

As early in the planning and development process as possible and all through the permitting and construction process, each Copermittee shall implement a program to educate project applicants, developers, contractors, property owners, community planning groups, and other responsible parties. The education program shall provide an understanding of the topics listed in Sections D.5.b.(1)(a) and D.5.b.(1)(b) above, as appropriate for the audience being educated. The education program shall also educate project applicants, developers, contractors, property owners, and other responsible parties on the importance of educating all construction workers in the field about stormwater issues and BMPs through formal or informal training.

(3) Residential, General Public, and School Children Education

Each Copermittee shall collaboratively conduct or participate in development and implementation of a plan to educate residential, general public, and school children target communities. The plan shall evaluate use of mass media, mailers, door hangers, booths at public events, classroom education, field trips, hands-on experiences, or other educational methods.

Claimants state that this activity in D.5 will cost $62,617 in fiscal year 2007-2008, and is expected to increase to $171,319 in fiscal year 2008-2009, and rise 4% annually thereafter.

III. Watershed Urban Runoff Management Program

A. Copermittee Collaboration

Parts E.2.f and E.2.g of the permit state:

2. Each Copermittee shall collaborate with other Copermittees within its WMA(s) [Watershed Management Area] as in Table 4 below to develop and implement an updated Watershed Urban Runoff Management Program for each watershed. Each updated Watershed Urban Runoff Management Program shall meet the requirements of section E of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. At a minimum, each Watershed Urban Runoff Management Program shall include the elements described below: [¶]...[¶]

f. Watershed Activities[57]

(1) The Watershed Copermittees shall identify and implement Watershed Activities that address the high priority water quality problems in the WMA. Watershed Activities shall include both Watershed Water Quality Activities and Watershed Education Activities. These activities may be implemented individually or collectively, and may be implemented at the regional, watershed, or jurisdictional level.

(a) Watershed Water Quality Activities are activities other than education that address the high priority water quality problems in the WMA. A Watershed Water Quality Activity implemented on a jurisdictional basis must be organized and implemented to target a watershed's high priority water quality problems or must exceed the baseline jurisdictional requirements of section D of this Order.

(b) Watershed Education Activities are outreach and training activities that address high priority water quality problems in the WMA.

(2) A Watershed Activities List shall be submitted with each updated Watershed Urban Runoff Management Plan (WURMP) and updated annually thereafter. The Watershed Activities List shall include both Watershed Water Quality Activities and Watershed Education Activities, along with a description of how each activity was selected, and how all of the activities on the list will collectively abate sources and reduce pollutant discharges causing the identified high priority water quality problems in the WMA.

(3) Each activity on the Watershed Activities List shall include the following information:

(a) A description of the activity;
(b) A time schedule for implementation of the activity, including key milestones;
(c) An identification of the specific responsibilities of Watershed Copermittees in completing the activity;
(d) A description of how the activity will address the identified high priority water quality problem(s) of the watershed;
(e) A description of how the activity is consistent with the collective watershed strategy;
(f) A description of the expected benefits of implementing the activity; and
(g) A description of how implementation effectiveness will be measured.

(4) Each Watershed Copermittee shall implement identified Watershed Activities pursuant to established schedules. For each Permit year, no less than two Watershed Water Quality Activities and two Watershed Education Activities shall be in an active implementation phase. A Watershed Water Quality Activity is in an active implementation phase when significant pollutant load reductions, source

[57] In their rebuttal comments submitted in February 2009, claimants mention part E.(3) of the permit that requires a detailed description of each activity on the Watershed Activities List. Part E.(3), however, was not in the test claim so staff makes no findings on it.

abatement, or other quantifiable benefits to discharge or receiving water quality can reasonably be established in relation to the watershed's high priority water quality problem(s). Watershed Water Quality Activities that are capital projects are in active implementation for the first year of implementation only. A Watershed Education Activity is in an active implementation phase when changes in attitudes, knowledge, awareness, or behavior can reasonably be established in target audiences.

g. Copermittee Collaboration

Watershed Copermittees shall collaborate to develop and implement the Watershed Urban Runoff Management Programs. Watershed Copermittee collaboration shall include frequent regularly scheduled meetings.

Claimants state that the copermittees' staffing costs for watershed program implementation in fiscal year 2007-2008 is $1,033,219 and is expected to increase to $1,401,765 in fiscal year 2008-2009, and are expected to increase four percent annually. For consultant services, the costs are $599,674 in fiscal year 2007-2008 and are expected to be $657,101 in 2008-2009, and are expected to rise five percent annually. For Watershed Urban Runoff Management Program implementation, claimants allege that the cost in fiscal year 2008-2009 is $1,053,880.

Claimants filed a 60-page rebuttal to Finance's and the State Board's comments on February 9, 2009, which is addressed in the analysis below.

Claimant County of San Diego filed comments on the draft staff analysis in January 2010 that disagrees with the findings regarding fee authority for certain permit activities involving development. These arguments are discussed further below.

State Agency Positions

Department of Finance: In comments filed November 16, 2008, Finance alleges that the permit does not impose a reimbursable mandate within the meaning of section 6 of article XIII B of the California Constitution because the permit conditions are required by federal laws so they are not reimbursable pursuant to Government Code section 17556, subdivision (c). Finance asserts that the State and Regional Water Boards "act on behalf of the federal government to develop, administer, and enforce the NPDES program in compliance with Section 402 of the CWA." Finance also states that more activities were included in the 2007 permit than the prior permit because "it appears ... they were necessary to comply with federal law."

Finance also argues that the claimants had discretion over the activities and conditions to include in the permit application. The copermittees elected to use "best management practices" to identify alternative practices to reduce water pollution. Since the local agencies proposed the activities to be included in the permit, the requirements are a downstream result of the local agencies' decision to include the particular activities in the permit. Finance cites the *Kern* case,[58] which held that if participation in the underlying program is voluntary, the resulting new consequential requirements are not reimbursable mandates.

[58] *Department of Finance v. Commission on State Mandates (Kern High School Dist.)* (2003) 30 Cal.4th 727.

As to the claimants' identifying NPDES permits approved by other states to show the permit exceeds federal law, Finance states that this "demonstrates the variation envisioned by the federal authority in granting the administering agencies flexibility to address specific regional needs in the most practical manner."

Finally, Finance states that some local agencies are using fees for funding the claimed permit activities, so should the Commission find that the permit constitutes a reimbursable mandate, the fees should be considered as offsetting revenues.

Finance commented on the draft staff analysis in February 2010, echoing the comments of the State Board, which are summarized and addressed below.

State Water Resources Control Board: The State Board and Regional Board filed joint comments on the test claim on October 27, 2008, alleging that the permit is mandated on the local agencies by federal law, and that it is not unique to government because NPDES permits apply to private dischargers also. The State Board also states that the requirements are consistent with the minimum requirements of federal law, but even if the permit is interpreted as going beyond federal law, any additional state requirements are de minimis. In addition, the State Board alleges that the costs are not subject to reimbursement because most of the programs were proposed by the cities and County themselves, and because the claimants may comply with the permit requirements by charging fees and are not required to raise taxes.

The State Board further comments that the 2007 permit mirrors or is identical to the requirements in the 2001 permit, only providing more detail to the requirements already in existence and to implement the MEP performance standard. Like earlier permits, the 2007 permit implements the federal standard of reducing pollutants from the MS4 to the MEP (maximum extent practicable), but according to the State Board, "what *has* changed in successive permits is the level of specificity included in the permit to define what constitutes MEP." [Emphasis in original.] The State Board asserts that this level of specificity does not make the permit a state mandate, but that even if it is, the additional requirements are de minimis. The State Board also states that the local agencies have fee authority to pay for the permit requirements.

The State Board also addresses specific allegations in the test claim, as discussed below.

The State Board submitted comments on the draft staff analysis in January 2010, arguing that the test claim should not be reimbursable because (1) federal law requires local agencies to obtain NPDES permits from California Water Boards; (2) federal law mandates the permit that was issued, which is less stringent than permits for private industry; (3) the draft staff analysis incorrectly applies the *Hayes* case because the state did not shift the cost of the federal mandate to the local agencies; rather the federal mandate was imposed directly on local agencies and not on the state; (4) the permit provisions are not in addition to, but are required by federal law; (5) even though municipalities are singled out in the federal storm water law, the law is one of general application; and (6) potential limitations on the exercise of fee authority due to Proposition 218 do not invalidate claimants' fee authority because Government Code section 17556, subdivision (d), does not require unlimited or unilateral fee authority. These arguments are addressed below.

Interested Party Comments

Bay Area Stormwater Management Agencies Association (BASMAA): In comments submitted February 4, 2009, BASMAA speaks generally about California's municipal stormwater permitting program, stating that "increased requirements entail both new programs and higher levels of service." BASMAA also states:

> [T]he State essentially asserts that the federal minimum for stormwater permitting is anything one of its Water Boards says it is. Likewise, the State's assertion that its 'discretion to exceed MEP [the maximum extent practicable standard] originates in federal law' and 'requires [it], as a matter of law, to include other such permit provisions as it deems appropriate' is nothing more than an oxymoron that begs the question of what the federal Clean Water Act actually mandates rather than allows a delegated state permit writer to require as a matter of discretion. [Emphasis in original.]

BASMAA emphasizes that the water boards have wide discretion in determining the content of a municipal stormwater permit beyond the federal minimum requirements, and says that the boards need to work "proactively and collaboratively" with local governments in "prioritizing and phasing in actions that realistically can be implemented given existing and projected local revenues."

League of California Cities (League) and California State Association of Counties (CSAC): The League and CSAC filed joint comments on the draft staff analysis on January 26, 2010, expressing support for it "and its recognition of the constraints placed on cities and counties with respect to adopting new or increased property-related fees."

The League and CSAC disagree, however, with the finding that the hydromodification management plan (HMP, part D.1.g.), the requirement to include low impact development (LID) in the Standard Urban Stormwater Mitigation Plans (SUSMPs) (part D.1.d.(7)-(8)), and parts of the education component (part D.5) are not reimbursable because the claimants have fee authority (under Gov. Code, § 66000 et seq., The Mitigation Fee Act) sufficient to pay for them. The League and CSAC point out examples where a city or county constructs a priority development project for which no third party is available upon whom to assess a fee. They also assert that for these city or county projects, a nexus requirement cannot be demonstrated "because no private development impact have generated the need for the projects."

COMMISSION FINDINGS

The courts have found that article XIII B, section 6 of the California Constitution[59] recognizes the state constitutional restrictions on the powers of local government to tax and spend.[60] "Its

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[59] Article XIII B, section 6, subdivision (a), provides:

> (a) Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service, except that the Legislature may, but need not, provide a subvention of funds for the following mandates: (1) Legislative mandates requested by the local agency affected. (2) Legislation defining a new

purpose is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose."[61] A test claim statute or executive order may impose a reimbursable state-mandated program if it orders or commands a local agency or school district to engage in an activity or task.[62]

In addition, the required activity or task must be new, constituting a "new program," or it must create a "higher level of service" over the previously required level of service.[63]

The courts have defined a "program" subject to article XIII B, section 6, of the California Constitution, as one that carries out the governmental function of providing public services, or a law that imposes unique requirements on local agencies or school districts to implement a state policy, but does not apply generally to all residents and entities in the state.[64] To determine if the program is new or imposes a higher level of service, the test claim legislation must be compared with the legal requirements in effect immediately before the enactment of the test claim legislation.[65] A "higher level of service" occurs when the new "requirements were intended to provide an enhanced service to the public."[66]

Finally, the newly required activity or increased level of service must impose costs mandated by the state.[67]

The Commission is vested with exclusive authority to adjudicate disputes over the existence of state-mandated programs within the meaning of article XIII B, section 6.[68] In making its

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crime or changing an existing definition of a crime. (3) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975.

[60] *Kern High School Dist., supra,* 30 Cal.4th 727, 735.

[61] *County of San Diego v. State of California (County of San Diego)*(1997) 15 Cal.4th 68, 81.

[62] *Long Beach Unified School Dist. v. State of California* (1990) 225 Cal.App.3d 155, 174.

[63] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 878 (*San Diego Unified School Dist.)*; *Lucia Mar Unified School District v. Honig* (1988) 44 Cal.3d 830, 835-836 (*Lucia Mar*).

[64] *San Diego Unified School Dist., supra,* 33 Cal.4th 859, 874, (reaffirming the test set out in *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56; *Lucia Mar, supra,* 44 Cal.3d 830, 835.)

[65] *San Diego Unified School Dist., supra,* 33 Cal.4th 859, 878; *Lucia Mar, supra*, 44 Cal.3d 830, 835.

[66] *San Diego Unified School Dist., supra,* 33 Cal.4th 859, 878.

[67] *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487; *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1265, 1284 (*County of Sonoma*); Government Code sections 17514 and 17556.

decisions, the Commission must strictly construe article XIII B, section 6, and not apply it as an "equitable remedy to cure the perceived unfairness resulting from political decisions on funding priorities."[69]

The permit provisions in the test claim are discussed separately to determine whether they are reimbursable state-mandates.

Issue 1: Is the permit subject to article XIII B, section 6, of the California Constitution?

The issues discussed here are whether the permit provisions are an executive order within the meaning of Government Code section 17516, whether they are discretionary, whether they constitute a program, and whether they are a federal mandate or a state-mandated new program or higher level of service.

A. Is the permit an executive order within the meaning of Government Code section 17516?

The Commission has jurisdiction over test claims involving statutes and executive orders as defined by Government Code section 17516, which describes "executive order" for purposes of state mandates, as "any order, plan, requirement, rule, or regulation issued by any of the following: (a) The Governor. (b) Any officer or official serving at the pleasure of the Governor. (c) Any agency, department, board, or commission of state government."[70]

The California Regional Water Board, San Diego Region, is a state agency.[71] The permit it issued is a plan for reducing water pollution, and contains requirements for local agencies toward that end. Therefore, the Commission finds that the permit is an executive order within the meaning of article XIII B, section 6 and Government Code section 17516.

B. Is the permit the result of claimants' discretion?

The permit requires claimants to undertake various activities to reduce stormwater pollution in compliance with a permit issued by the Regional Board.

The Department of Finance, in comments submitted November 6, 2008, asserts that the claimants "had the option to use best management practices that would identify alternative practices to reduce pollution in water to the maximum extent practicable" Finance asserts that the claimants proposed permit requirements when they submitted the application for the permit,

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[68] *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 331-334; Government Code sections 17551, 17552.

[69] *County of Sonoma, supra,* 84 Cal.App.4th 1265, 1280, citing *City of San Jose v. State of California* (1996) 45 Cal.App.4th 1802, 1817.

[70] Section 17516 also states: ""Executive order" does not include any order, plan, requirement, rule, or regulation issued by the State Water Resources Control Board or by any regional water quality control board pursuant to Division 7 (commencing with Section 13000) of the Water Code." The Second District Court of Appeal has held that this statutory language is unconstitutional. *County of Los Angeles v. Commission on State Mandates, supra,* 150 Cal.App.4th 898, 904.

[71] Water Code section 13200 et seq.

and that increased costs due to downstream activities of an underlying discretionary activity are not reimbursable.

Similarly, the State Board, in its October 27, 2008 comments, states that the copermittees proposed the concepts that were incorporated into and form the basis of the permit provisions for which they now seek reimbursement.

In rebuttal comments submitted February 9, 2009, claimants dispute that the Report of Waste Discharge (ROWD, or permit application) "represents a copermittee proposal for 2007 Permit content or that the adopted 2007 Permit is 'based on the ROWD." According to claimants, the 2007 permit provisions "were not taken directly from, nor are they generally consistent with the intent of, most of the specific ROWD content upon which the state contends they are based."

In determining whether the permit provisions at issue are a downstream activity resulting from the discretionary decision by the local agencies, the following rule stated by the Supreme Court in the *Kern High School Dist.* case applies:

> [A]ctivities undertaken at the option or discretion of a local government entity … do not trigger a state mandate and hence do not require reimbursement of funds—even if the local entity is obliged to incur costs as a result of its discretionary decision to participate in a particular program or practice.[72]

The Commission finds that the permit activities at issue were not undertaken at the option or discretion of the claimants. The claimants are required by law to submit the NPDES permit application in the form of a Report of Waste Discharge.[73] Submitting it is not discretionary, as shown in the following federal regulation:

> a) *Duty to apply.* (1) Any person[74] who discharges or proposes to discharge pollutants … and who does not have an effective permit … must submit a complete application to the Director in accordance with this section and part 124 of this chapter.[75]

Moreover, the ROWD (tantamount to an NPDES permit application) is required by California law, as follows: "Any person discharging pollutants or proposing to discharge pollutants to the navigable water of the United States within the jurisdiction of this state … shall file a report of the discharge in compliance with the procedures set forth in Section 13260 …"[76] Thus, submitting the ROWD is not discretionary because the claimants are required to do so by both federal and California law.

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[72] *Kern High School Dist., supra,* 30 Cal.4th 727, 742.

[73] The Report of Waste Discharge is attachment 36 of the State Water Resources Control Board comments submitted October 2008.

[74] *Person* means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof (40 CFR § 122.2).

[75] 40 Code of Federal Regulations, section 122.21 (a). The section applies to U.S. EPA-issued permits, but is incorporated into section 123.25 (the state program provision) by reference.

[76] Water Code section 13376.

In addition to federal and state law, the 2001 permit required submission of the ROWD. The 2007 permit, under Part A "Basis for the Order," states: "On August 25, 2005, in accordance with Order No. 2001-01 [the 2001 Permit], the County of San Diego, as the Principal Permittee, submitted a Report of Waste Discharge (ROWD) for renewal of their MS4 Permit."[77]

And although the ROWD provides a basis for some (but not all) of the 2007 permit provisions at issue in this test claim, there is a substantial difference between what was included in the claimants' ROWD and the specific requirements the Regional Board adopted (e.g., copermittee collaboration, parts F.2., F.3 & L, Regional Residential Education Program Development, part F.1., Low Impact Development, part D.1.d(7)-(8), long-term effectiveness assessment, part I.5, program effectiveness assessment, parts I.1 & I.2, educational surveys and tests, part D.5, and the Watershed Urban Runoff Management Program, parts E.2.f & E.2.g). Other permit activities were not proposed in the ROWD (e.g., hydromodification, part D.1.g., street sweeping, parts D.2.a(5) & J.3.a(3)(c)x-xv, conveyance system cleaning, part D.3.a(3) & J.3.a(3)(c)iv-viii).

Because the claimants do not voluntarily participate in the NPDES program, the Commission finds that the *Kern High School Dist.* case does not apply to the permit, the contents of which are not the result of the claimants' discretion.

C. Does the permit constitute a program within the meaning of article XIII B, section 6 of the California Constitution?

As to whether the permit provisions in the test claim constitute a "program," courts have defined a "program" for purposes of article XIII B, section 6, of the California Constitution, as one that carries out the governmental function of providing public services, or a law that imposes unique requirements on local agencies or school districts to implement a state policy, but does not apply generally to all residents and entities in the state.[78]

The State Board, in its October 2008 comments, argues that the NPDES program is not a program because the NPDES permit program, and the stormwater requirements specifically, are not peculiar to local government in that industrial and construction facilities must also obtain NPDES stormwater permits.

The State Board reiterates this argument in its January 2010 comments, asserting that the draft analysis "fails to consider that private entities, as well as certain state ... and ... federal agencies also receive NPDES permits for storm water discharges." The State Board and Finance also cite *City of Richmond v. Commission on State Mandates* (1998) 64 Cal.App.4th 1190, for the proposition that "where municipalities have separate but not more stringent requirements than private entities, there is no program subject to reimbursement." Finance, in its February 2010 comments, asserts that "the requirements within the test claim permit apply generally to state and private dischargers."

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[77] The 2001 Permit is attached to the State Water Resources Control Board, comments submitted October 2008, Attachment 25.

[78] *San Diego Unified School Dist., supra,* 33 Cal.4th 859, 874, (reaffirming the test set out in *County of Los Angeles v. State of California, supra,* 43 Cal.3d 46, 56; *Lucia Mar, supra,* 44 Cal.3d 830, 835.)

Claimants, in their February 2009 rebuttal comments, disagree with the State Board and assert that an MS4 permit is unique to government and subject to unique regulations. Claimants cite the definition of an MS4 in 40 C.F.R. § 122.26(b)(8) as "a conveyance or system of conveyances ... owned or operated by a State, city, town, borough, county, parish, district, association, or other public body ...." Claimants argue that prohibiting "non-stormwater discharges into the storm sewers"[79] is a uniquely government function that provides for the health, safety, and welfare of the citizens in a community. Claimants also point out that the federal regulations for MS4 permits are in 40 C.F.R. §122.26(d), while the regulations pertaining to private industrial dischargers are in 40 C.F.R. § 122.26(c), different regulations that apply the Best Available Technology standard rather than the Maximum Extent Practicable standard imposed on MS4s.

The Commission finds that the permit activities constitute a program within the meaning of article XIII B, section 6. In *County of Los Angeles v. Commission on State Mandates*, the State Board argued that an NPDES permit[80] issued by the Los Angeles Regional Water Quality Control Board does not constitute a "program." The court dismissed this argument, stating: "[T]he applicability of permits to public and private dischargers does not inform us about whether a particular permit or an obligation thereunder imposed on local governments constitutes a state mandate necessitating subvention under article XIII B, section 6."[81] In other words, whether the law regarding NPDES permits generally constitute a "program" within the meaning of article XIII B, section 6 is not relevant. The only issue before the Commission is whether the permit in this test claim constitutes a program.

The permit activities in this claim (order no. R9-2007-001, NPDES no. CAS0108758) are limited to the local governmental entities specified in the permit. The permit defines the "permittees" as the County of San Diego and 18 incorporated cities, along with the San Diego Unified Port District and San Diego County Regional Airport Authority. [82] No private entities are regulated under this permit, so it is not a law (or executive order) of general application. That fact distinguishes this claim from the *City of Richmond* case cited by Finance and the State Board, in which the workers' compensation law was found to be one of general application. The same cannot be said of the permit in this claim (order no. R9-2007-001, NPDES no. CAS0108758) because no private entities are regulated by it.

Moreover, the permit provides a service to the public by preventing or abating pollution in waterways and beaches in San Diego County. As stated in the permit: "This order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in urban runoff to the maximum extent practicable."

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[79] 33 U.S.C. § 1342(p)(3).

[80] Los Angeles Regional Quality Control Board Order No. 01-182, Permit CAS004001. The Commission issued a decision on parts 4C2a, 4C2b, 4E and 4Fc3 of this permit (test claims 03-TC-09, 03-TC-19, 03-TC-20, 03-TC-21) at its July 31, 2009 hearing.

[81] *County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4th 898, 919.

[82] The cities are Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, and Vista.

Thus, the permit carries out the governmental function of providing public services, and also imposes unique requirements on local agencies in San Diego County to implement a state policy that does not apply generally to all residents and entities in the state. Therefore, the Commission finds that the permit is a program within the meaning of article XIII B, section 6.

D. Are the permit provisions in the test claim a federal mandate or a state-mandated new program or higher level of service?

The next issue is whether the parts of the permit alleged in the test claim are a state mandate, or federally mandated, as asserted by the State Board and the Department of Finance. If so, the permit would not constitute a state mandate. The California Supreme Court has stated that "article XIII B, section 6, and the implementing statutes ... by their terms, provide for reimbursement only of *state*-mandated costs, not *federally* mandated costs."[83]

Also discussed is whether the permit is a new program or higher level of service. To determine whether the permit is a new program or higher level of service, the permit is compared to the legal requirements in effect immediately before its adoption, in this case, the 2001 permit.[84]

When analyzing federal law in the context of a test claim under article XIII B, section 6, the court in *Hayes v. Commission on State Mandates* held that "[w]hen the federal government imposes costs on local agencies those costs are not mandated by the state and thus would not require a state subvention. Instead, such costs are exempt from local agencies' taxing and spending limitations" under article XIII B.[85] When federal law imposes a mandate on the state, however, and the state "freely [chooses] to impose the costs upon the local agency as a means of implementing a federal program, then the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government."[86]

Similarly, Government Code section 17556, subdivision (c), states that the Commission shall not find "costs mandated by the state" if "[t]he statute or executive order imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation."

In *Long Beach Unified School Dist. v. State of California*,[87] the court considered whether a state executive order involving school desegregation constituted a state mandate. The regulations required, for example, conducting mandatory biennial racial and ethnic surveys, developing a reasonably feasible plan every four years to alleviate and prevent segregation to include specifics

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[83] *San Diego Unified School Dist. v. Commission on State Mandates, supra,* 33 Cal.4th 859, 879-880, emphasis in original.

[84] *San Diego Unified School Dist., supra,* 33 Cal.4th 859, 878; *Lucia Mar, supra,* 44 Cal.3d 830, 835.

[85] *Hayes v. Commission on State Mandates* (1992) 11 Cal. App. 4th 1564, 1593, citing *City of Sacramento v. State of California, supra,* 50 Cal.3d 51, 76; see also, Government Code sections 17513 and 17556, subdivision (c).

[86] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1594.

[87] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

elements, and taking mandatory steps to involve the community including public hearings. The state argued that its Executive Order did not mandate a new program because school districts in California have a constitutional duty to make an effort to eliminate racial segregation in the public schools. The court held that the executive order did require school districts to provide a higher level of service than required by federal constitutional or case law because the state requirements went beyond federal requirements imposed on school districts.[88] The court stated:

> A review of the Executive Order and guidelines shows that a higher level of service is mandated because their requirements go beyond constitutional and case law requirements. ...[T]he executive Order and guidelines require specific actions ... [that were] required acts. These requirements constitute a higher level of service."[89]

In analyzing the permit under the federal Clean Water Act, we keep the following in mind. First, each state is free to enforce its own water quality laws so long as its effluent limitations are not "less stringent" than those set out in the Clean Water Act.[90] The federal Clean Water Act allows for more stringent state-imposed measures, as follows:

> Permits for discharges from municipal storm sewers [¶]...[¶] (iii) shall require controls to reduce the discharges of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the ... State determines appropriate for the control of such pollutants. (33 U.S.C.A. 1342 (p)(3)(B)(iii).)

Second, the California Supreme Court has acknowledged that an NPDES permit may contain terms that are federally mandated and terms that exceed federal law.[91]

California in the NPDES program: Under the federal statutory scheme, a stormwater permit may be administered by the Administrator of U.S. EPA or by a state-designated agency, but states are not required to have an NPDES program. Subdivision (b) of section 1324 of the federal Clean Water Act, which describes the NPDES program (and subdivision (p), which describes the requirements for the municipal stormwater system permits) states in part:

> At any time after the promulgation of the guidelines required by subsection (i)(2) of section 1314 of this title, the Governor of each State desiring to administer its own permit program for discharges into navigable waters within its jurisdiction may submit to the Administrator [of U.S. EPA] a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. [Emphasis added.]

And the federal stormwater statute states that the permits:

> [S]hall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and

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[88] *Id.* at 173.

[89] *Ibid.*

[90] 33 U.S.C. section 1370.

[91] *City of Burbank v. State Water Resources Control Board, supra,* 35 Cal.4th 613, 618, 628.

> system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. (33 USCA § 1342 (p)(3)(B)(iii). [Emphasis added].)

The federal statutory scheme indicates that California is not required to have its own NPDES program nor to issue stormwater permits. According to section 1342 (p) quoted above, the Administrator of U.S. EPA would do so if California had no program. The California Legislature, when adopting the NPDES program[92] to comply with the Federal Water Pollution Control Act of 1972, stated the following findings and declaration in Water Code section 13370:

(a) The Federal Water Pollution Control Act [citation omitted] as amended, provides for permit systems to regulate the discharge of pollutants ... to the navigable waters of the United States and to regulate the use and disposal of sewage sludge.

(b) The Federal Water Pollution Control Act, as amended, provides that permits may be issued by states which are authorized to implement the provisions of that act.

(c) It is in the interest of the people of the state, in order to avoid direct regulation by the federal government, of persons already subject to regulation under state law pursuant to this division, to enact this chapter in order to authorize the state to implement the provisions of the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto, and federal regulations and guidelines issued pursuant thereto, provided, that the state board shall request federal funding under the Federal Water Pollution Act for the purpose of carrying out its responsibilities under this program.

Based on this statute, in which California voluntarily adopts the permitting program, and on the federal statutes quoted above that authorize but do not expressly require states to have this program, the state has freely chosen[93] to effect the stormwater permit program. Further discussion in this analysis of federal "requirements" should be construed in the context of California's choice to participate in the federal regulatory NPDES program.

Finance, in its February 2010 comments on the draft staff analysis, states:

> The state's role as a permitting authority acting on behalf of the federal government negates the existence of a state mandate because the test claim permit is issued in compliance with federal law. ...[N]o state mandate exists if the state requirements, in the absence of state statute, would still be imposed upon local agencies by federal law.

Similarly, the State Board's January 2010 comments argue that the *Hayes* case is distinguishable from this test claim because NPDES permits do not impose a federal mandate on the state. Rather, federal law requires municipalities to comply with the permit. The State Board also states:

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[92] Water Code section 13374 states: "The term 'waste discharge requirements' as referred to in this division is the equivalent of the term 'permits' as used in the Federal water Pollution Control Act, as amended."

[93] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

> This [draft staff analysis'] approach fails to recognize that NPDES storm water permits, whether issued by U.S. EPA or California's Water Boards, are designed to translate the general federal mandate into specific programs and enforceable requirements. Whether issued by U.S. EPA or the California's Water Boards, the federal NPDES permit will identify specific requirements for municipalities to reduce pollutants in their storm water to the maximum extent practicable. The federally required pollutant reduction is a federal mandate. ... The fact that state agencies have responsibility for specifying the federal permit requirements for municipalities does not indicate that requirements extend beyond federal law, as in *Long Beach,* or convert the federal mandate into a state mandate.[94]

The Commission disagrees. As discussed above, the federal Clean Water Act[95] authorizes states to impose more stringent measures than required by federal law. The California Supreme Court has also recognized that permits may include state-imposed, in additional to federally required measures.[96] Those state measures that may constitute a state mandate if they "exceed the mandate in ... federal law."[97] Thus, although California opted into the NPDES program, further analysis is needed to determine whether the state requirements exceed the federal requirements imposed on local agencies.

The permit provisions are discussed below in context of the following federal law governing stormwater permits: Clean Water Act section 402 (p) (33 USCA 1342 (p)(3)(B)) and Code of Federal Regulations, title 40, section 122.26. The federal stormwater statute states:

> Permits for discharges from municipal storm sewers--
>
> (i) may be issued on a system- or jurisdiction-wide basis;
>
> (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
>
> (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator[98] or the State determines appropriate for the control of such pollutants. (33 USCA § 1342 (p)(3)(B)).

The issues are whether the parts of the permit in the test claim are federal mandates or state mandates, and whether they are a new program or higher level of service.

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[94] State Board comments submitted January 2010.

[95] 33 U.S.C. sections 1370 and 1342 (p)(3)(B)(iii).

[96] *City of Burbank v. State Water Resources Control Board, supra,* 35 Cal.4th 613, 618, 628.

[97] Government Code section 17556, subdivision (b). *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155, 173.

[98] Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative. (40 CFR § 122.2.)

I. Jurisdictional Urban Runoff Management Program and Reporting (Parts D & J)

Part D of the permit describes the Jurisdictional Urban Runoff Management Program (JURMP) of which each copermittee "shall develop and implement" an updated version (p.15). Part J of the permit ("Reporting") requires the JURMP to be updated and revised to include specified information. The test claim includes parts D.1.g (hydromodification management plan), D.1.d.(7)-(8) (low-impact development or LID), D3a(5) (street sweeping) and J.3.a(3)x-xv (reporting on street sweeping), D.3.a.(3) (conveyance system cleaning) and J.3.a.(3)(c)(iv)-(viii) (reporting on conveyance system cleaning), and D.5 (educational surveys and tests).

Hydromodification (part D.1.g.): Part D.1 of the permit is entitled "Development Planning." Part D.1.g. requires developing and implementing, in collaboration with other copermittees, a hydromodification management plan (HMP) "to manage increases in runoff discharge rates and durations from all Priority Development Projects."[99] Priority development projects can include both private projects, and municipal (city or county) projects. The purpose of the HMP is:

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[99] According to the permit, Priority Development Projects are: a) all new Development Projects that fall under the project categories or locations listed in section D.1.d.(2), and b) those redevelopment projects that create, add or replace at least 5,000 square feet of impervious surfaces on an already developed site that falls under the project categories or locations listed in section D.1.d.(2)..

[¶]...[¶] [Section D.1.d.(2):] (2) Priority Development Project Categories (a) Housing subdivisions of 10 or more dwelling units. This category includes single-family homes, multi-family homes, condominiums, and apartments. (b) Commercial developments greater than one acre. This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than one acre. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities. (c) Developments of heavy industry greater than one acre. This category includes, but is not limited to, manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.). (d) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539. (e) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement D.1.d.(6)(c) and hydromodification requirement D.1.g. (f) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater. (g) Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment

> [T]o manage increases in runoff discharge rates and durations from all Priority Development Projects, where such rates and durations are likely to cause increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

Hydromodification is defined in Attachment C of the permit as "The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes."[100]

As detailed in the permit and on pages 12-17 above, the HMP must have specified content, including "a description of how the copermittees will incorporate the HMP requirements into their local approval processes." Also required is collaborative reporting on the HMP and implementation 180 days after the HMP is approved by the Regional Water Board, with earlier implementation encouraged.

According to the State Board's comments submitted in October 2008 the requirement to develop and implement a HMP is necessary to meet the minimum federal MEP standard. The Board states that "broad federal legal authority is contained in CWA sections 402(p)(3)(B)(ii)-(iii), CWA section 402(a), and in 40 C.F.R. sections 122.26 (d)(2)(i)(B)-(C), (E), and (F), 131.12, and 122.26(d)(2)(iv)(A)(2), which states:

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will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands. (h) Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce. (i) Street, roads, highways, and freeways. This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles. (j) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

[100] It is also defined as "changes in the magnitude and frequency of stream flows as a result of urbanization, and the resulting impacts on the receiving channels in terms of erosion, sedimentation and degradation of in-stream habitat." Draft Hydromodification Management Plan for San Diego County, page 4. <http://www.projectcleanwater.org/pdf/susmp/sd_hmp_2009.pdf> as of May 28, 2009.

(d) Application requirements for large and medium municipal separate storm sewer discharges. The operator[101] of a discharge[102] from a large or medium municipal separate storm sewer or a municipal separate storm sewer that is designated by the Director under paragraph (a)(1)(v) of this section, may submit a jurisdiction-wide or system-wide permit application. ... Permit applications for discharges from large and medium municipal storm sewers or municipal storm sewers designated under paragraph (a)(1)(v) of this section shall include; [¶]...[¶]

(2) *Part 2.* Part 2 of the application shall consist of: [¶]...[¶]

(iv) *Proposed management program.* A proposed management program covers the duration of the permit. It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable. Proposed management programs shall describe priorities for implementing controls. Such programs shall be based on:

(A) A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls. At a minimum, the description shall include: [¶]...[¶]

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[101] "*Owner or operator* means the owner or operator of any "facility or activity" subject to regulation under the NPDES program." (40 CFR § 122.2)

[102] "*Discharge* when used without qualification means the "discharge of a pollutant. *Discharge of a pollutant* means: (a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or (b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger." (40 CFR § 122.2.)

> (*2*) A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed. ...

The State Board also cited the U.S. Supreme Court decision, *P.U.D. No. 1 v. Washington Department of Ecology* (1994) 511 U.S. 700, for the state's authority to regulate flow under the federal Clean Water Act in order to protect water quality standards.

In response, the claimants' February 2009 comments state that the permit's Fact Sheet did not cite any federal authorities to justify the HMP portion of the permit, and that none exists. Claimants also assert that no other jurisdiction in the United States that was surveyed for the claim has a permit that requires a HMP. Claimants call the HMP requirement a flood control measure that is not a requirement in any other permit outside of California, and that the HMP exceeds the federal requirements and constitutes a state mandate. Claimants also point to the language in section 122.26(d)(2)(iv)(A)(2) that they say is:

> [A]imed directly at controlling pollutant discharges from an MS4 that originate in areas of new development. [The regulation] does not mention the need to include controls to reduce the *volume* of storm water discharged from these areas. ... controls designed only to limit volume are not expressly required.

As to the *P.U.D. No. 1 v. Washington Department of Ecology* decision cited by the State Board, the claimants distinguish it as being decided under section 401 of the Clean Water Act, wherein the permit was issued under section 402. Claimants state that the *P.U.D.* case recognized state authority under the Clean Water Act rather than a federal mandate.

The Commission agrees with claimants about the applicability of the *P.U.D.* case, which determined whether the state of Washington's environmental agency properly conditioned a permit for a federal hydroelectric project on the maintenance of specific minimum stream flows to protect salmon and steelhead runs. The U.S. Supreme Court determined that Washington could do so, but the decision was based on section 401 of the Clean Water Act, which involves certifications and wetlands. Even if the decision could be applied to section 402 NPDES permits, it merely recognized state authority to regulate flows. The issue here is not whether the state has authority to regulate flows, but whether a federal mandate requires it. This was not addressed in the *P.U.D.* decision.

Overall, there is nothing in the federal regulations that requires a municipality to adopt or implement a hydromodification plan. Thus, the HMP requirement in the permit "exceed[s] the mandate in that federal law or regulation."[103] As in *Long Beach Unified School Dist. v. State of California*,[104] the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen[105] to

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[103] Government Code section 17556, subdivision (c).

[104] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[105] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

impose these requirements. Thus, the Commission finds that part D.1.g. of the permit is not a federal mandate.

All of part D.1.g. of the permit requires the HMP to have specified contents except part D.1.g.(2), which states that the HMP "*may* include implementation of planning measures ..." as specified. As the plain language of this part does not require the implementation of planning measures, the Commission finds that part D.1.g.(2) of the permit is not a state mandate.

The Commission also finds that HMP is not a state mandate for municipal (city or county) projects that are priority development projects, such as a hospital, laboratory or other medical facility, recreational facility, airfield, parking lot, street, road, highway, and freeway, a project over an acre, and a project located in an environmentally sensitive area.[106] Although these projects would be subject to the compliance with HMP requirements, there is no legal requirement to build municipal projects.[107] Thus, municipal projects are built by cities or counties voluntarily, and their decision triggers the requirements to comply with the HMP. In *Kern High School Dist.*,[108] the California Supreme Court decided whether the state must reimburse the costs of school site councils and advisory committees complying with the Brown (Open Meetings) Act for schools who participate in various school-related education programs. The court determined that participation in the underlying school site council program was not legally compelled and so mandate reimbursement was not required for the downstream compliance with the Brown Act. The court said:

> Activities undertaken at the option or discretion of a local government entity (that is, actions undertaken without any legal compulsion or threat of penalty for nonparticipation) do not trigger a state mandate and hence do not require reimbursement of funds-even if the local entity is obliged to incur costs as a result of its discretionary decision to participate in a particular program or practice.[109]

As with the voluntary programs in *Kern,* there is no requirement for municipalities to undertake any of the priority development projects described in the permit. Thus, the Commission finds that the costs of complying with the HMP in part D.1.g., is not a state mandate for priority development projects undertaken by a city or county.

Based on the mandatory language of the remainder of part D.1.g. of the permit (except part D.1.g.(2) and except for municipal projects), the Commission finds that it is a state mandate on the claimants to do the following:

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[106] The County of San Diego, in its January 2010 comments on the draft staff analysis, raises the issue of its fee authority for municipal projects. The League of California Cities, in its January 2010 comments on the draft staff analysis, also discusses municipal projects, citing examples "where a city or county constructs a Priority Development Project for which no third party is available to assess a fee against."

[107] California Constitution, article XI, section 7. "A county or city may make and enforce within its limits all local, police, sanitary, and other ordinances and regulations not in conflict with general laws."

[108] *Kern High School Dist., supra,* 30 Cal.4th 727.

[109] *Kern High School Dist., supra,* 30 Cal.4th 727, 742.

Each Copermittee shall collaborate with the other Copermittees to develop and implement a Hydromodification Management Plan (HMP) to manage increases in runoff discharge rates and durations from all Priority Development Projects, where such increased rates and durations are likely to cause increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force. The HMP, once approved by the Regional Board, shall be incorporated into the local SUSMP [Standard Urban Storm Water Mitigation Plan] and implemented by each Copermittee so that post-project runoff discharge rates and durations shall not exceed estimated pre-project discharge rates and durations where the increased discharge rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the discharge rates and durations.

(1) The HMP shall:

(a) Identify a standard for channel segments which receive urban runoff discharges from Priority Development Projects. The channel standard shall maintain the pre-project erosion and deposition characteristics of channel segments receiving urban runoff discharges from Priority Development Projects as necessary to maintain or improve the channel segments' stability conditions.

(b) Utilize continuous simulation of the entire rainfall record to identify a range of runoff flows for which Priority Development Project post-project runoff flow rates and durations shall not exceed pre-project runoff flow rates and durations, where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the flow rates and durations. The lower boundary of the range of runoff flows identified shall correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks. The identified range of runoff flows may be different for specific watersheds, channels, or channel reaches.

(c) Require Priority Development Projects to implement hydrologic control measures so that Priority Development Projects' post-project runoff flow rates and durations (1) do not exceed pre-project runoff flow rates and durations for the range of runoff flows identified under section D.1.g.(1)(b), where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the flow rates and durations, and (2) do not result in channel conditions which do not meet the channel standard developed under section D.1.g.(1)(a) for channel segments downstream of Priority Development Project discharge points.

(d) Include other performance criteria (numeric or otherwise) for Priority Development Projects as necessary to prevent urban runoff from the projects from increasing erosion of channel beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

(e) Include a review of pertinent literature.

(f) Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from Priority Development Projects.

(g) Include a description of how the Copermittees will incorporate the HMP requirements into their local approval processes.

(h) Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations and address potential hydromodification impacts.

(i) Include technical information supporting any standards and criteria proposed.

(j) Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.

(k) Include a description of pre- and post-project monitoring and other program evaluations to be conducted to assess the effectiveness of implementation of the HMP.

(l) Include mechanisms for addressing cumulative impacts within a watershed on channel morphology.

(m) Include information on evaluation of channel form and condition, including slope, discharge, vegetation, underlying geology, and other information, as appropriate.

[¶]...[¶]

(3) Section D.1.g.(1)(c) does not apply to Development Projects where the project discharges stormwater runoff into channels or storm drains where the preexisting channel or storm drain conditions result in minimal potential for erosion or other impacts to beneficial uses. Such situations may include discharges into channels that are concrete-lined or significantly hardened (e.g., with rip-rap, sackrete, etc.) downstream to their outfall in bays or the ocean; underground storm drains discharging to bays or the ocean; and construction of projects where the sub-watersheds below the projects' discharge points are highly impervious (e.g., >70%) and the potential for single-project and/or cumulative impacts is minimal. Specific criteria for identification of such situations shall be included as a part of the HMP. However, plans to restore a channel reach may reintroduce the applicability of HMP controls, and would need to be addressed in the HMP.

(4) HMP Reporting

The Copermittees shall collaborate to report on HMP development as required in section J.2.a of this Order.[110]

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[110] Section J.2.a of the permit requires collaborating with other copermittees to develop the HMP, and submitting it for approval by the Regional Board. Part J.2.a also includes timelines for HMP completion and approval.

(5) HMP Implementation

180 days after approval of the HMP by the Regional Board, each Copermittee shall incorporate into its local SUSMP and implement the HMP for all applicable Priority Development Projects. Prior to approval of the HMP by the Regional Board, the early implementation of measures likely to be included in the HMP shall be encouraged by the Copermittees.

(6) Interim Hydromodification Criteria for Projects Disturbing 50 Acres or More

Within 365 days of adoption of this Order, the Copermittees shall collectively identify an interim range of runoff flow rates for which Priority Development Project post-project runoff flow rates and durations shall not exceed pre-project runoff flow rates and durations (Interim Hydromodification Criteria), where the increased discharge flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in flow rates and durations. Development of the Interim Hydromodification Criteria shall include identification of methods to be used by Priority Development Projects to exhibit compliance with the criteria, including continuous simulation of the entire rainfall record. Starting 365 days after adoption of this Order and until the final Hydromodification Management Plan standard and criteria are implemented, each Copermittee shall require Priority Development Projects disturbing 50 acres or more to implement hydrologic controls to manage post-project runoff flow rates and durations as required by the Interim Hydromodification Criteria. Development Projects disturbing 50 acres or more are exempt from this requirement when:

(a) The project would discharge into channels that are concrete-lined or significantly hardened (e.g., with rip-rap, sackcrete, etc.) downstream to their outfall in bays or the ocean;

(b) The project would discharge into underground storm drains discharging directly to bays or the ocean; or

(c) The project would discharge to a channel where the watershed areas below the project's discharge points are highly impervious (e.g. >70%).

As to whether part D.1.g. of the permit (except for D.1.g.(2)) is a new program or higher level of service, the claimants, in their February 2009 comments, assert that it is.

> The 2001 Permit only included general statements regarding the need to control downstream erosion with post construction BMPs. The 2007 Permit increased these requirements by requiring the copermittees to, among other things, draft and implement interim and long-term hydromodification plans, and impose specific, strict post construction BMPs on new development projects within their jurisdiction.

The State Board, in its October 2008 comments, argues that part D.1 "expands upon and makes more specific the hydromodification requirements in the 2001 Permit."

Finance argues, in its February 2010 comments on the draft staff analysis, that the entire permit is not a new program or higher level of service because additional activities, beyond those

required by the 2001 permit, are necessary for the claimants to continue to comply with the federal Clean Water Act and reduce pollutants to the Maximum Extent Practicable.

The Commission disagrees with Finance. This analysis measures the 2007 permit against the 2001 permit to determine which provisions are a new program or higher level of service. Under the standard urged by Finance, anything the state imposes under the permit would not be a new program or higher level of service. The Commission does not read the federal Clean Water Act so broadly. In *Building Industry Assoc. of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, the court held that the Clean Water Act's "maximum extent practicable" standard did not prevent the water boards from including provisions in the permit that required municipalities to comply with state water quality standards.[111]

The Regional Board prepared a Fact Sheet/Technical Report[112] for the permit that lists the federal authority and reasons the permit provisions were adopted. Regarding part D.1.g. of the permit, the Fact Sheet/Technical Report does not expressly mention the 2001 permit, but states:

> This section of the Order expands the requirements for control of hydromodification caused by changes in runoff resulting from development and urbanization. Expansion of these requirements is needed due to the current lack of a clear standard for controlling hydromodification resulting from modification. While the Model SUSMP[113] [adopted in 2002] developed by the Copermittees requires project proponents to control hydromodification, it provides no standard or performance criteria for how this is to be achieved.

The Commission finds that part D.1.g. of the permit (except for D.1.g.(2)) with respect to private priority development projects is a new program or higher level of service. The Fact Sheet/Technical Report describes the section as an "expansion" of hydromodification control requirements. The 2001 permit (in part F.1.b.(2)(j)) included only the following on hydromodification:

> Downstream Erosion – As part of the model SUSMP [Standard Urban Storm Water Mitigation Plan] and the local SUSMPs, the Copermittees shall develop criteria to ensure that discharges from new development and significant redevelopment maintain or reduce pre-development downstream erosion and protect stream habitat. At a minimum, criteria shall be developed to control peak storm water discharge rates and velocities in order to maintain or reduce pre-development downstream erosion and protect stream habitat. Storm water discharge volumes and durations should also be considered.

The requirements in the 2007 permit, however, are much more expansive and detailed, requiring development and implementation of a hydromodification management plan (HMP) to be approved by the Regional Board. And while the 2001 permit contained a broad description of

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[111] *Building Industry Assoc. of San Diego County v. State Water Resources Control Board, supra,* 124 Cal.App.4th 866, 870.

[112] The Fact Sheet/Technical Report was attached to the test claim.

[113] According to the Fact Sheet/Technical Report, the Model SUSMP was completed and adopted in 2002.

the criteria required, part D.1.g. of the 2007 permit contains a detailed description of the contents of the HMP, including identifying standards for channel segments, using continuous simulation of the entire rainfall record to identify runoff flows, requiring priority development projects to implement hydrologic control measures, including other performance criteria for priority development projects to prevent urban runoff from the projects, and 9 other components to include in the HMP. Therefore, the Commission finds that part D.1.g. of the permit (except for D.1.g.(2)) is a new program or higher level of service over the 2001 permit.

In sum, the Commission finds that part D.1.(g) of the permit (except for D.1.g.(2)) is a state-mandated new program or higher level of service for private priority development projects. Reimbursement is not required for complying with the HMP for municipal priority development projects.

B. Low Impact Development (LID) and Standard Urban Storm Water Mitigation Plan (part D.1.d.): Also under part D.1 "Development Planning" is part D.1.d, which requires the copermittees to review and update their SUSMPs (Standard Urban Storm Water Mitigation Plans)[114]and (in paragraphs 7 and 8) add low impact development (LID) and source control BMP requirements for each priority development project, and to implement the updated SUSMP, as specified on pages 17-19 above. The purpose of LID is to "collectively minimize directly connected impervious areas and promote infiltration at Priority Development Projects." LID best management practices include draining a portion of impervious areas into pervious areas prior to discharge into the storm drain, and constructing portions of priority development projects with permeable surfaces (*Id.*)

According to the State Board's comments submitted in October 2008, the requirement in part D.1.d. is necessary to meet the minimum federal MEP standard, and is supported by 40 C.F.R. section 122.26 (d)(2)(iv)(A)-(D), part of which is quoted in the discussion of hydromodification above. Part (d)(2)(iv)(A)(2) of the regulation requires part of the permit application to include:

> (2) A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.

The State Board asserts that these regulations "require municipalities to implement controls to reduce pollutants in urban runoff from new development and significant redevelopment, construction, and commercial, residential, industrial and municipal land uses or activities." The Board cites a decision of the Washington Pollution Control Hearings Board that found that permit provisions to promote but not require low impact development "failed to satisfy the federal MEP standard and Washington state law because it ... did not require LID at the parcel and subdivision level."

In their February 2009 rebuttal comments, the claimants assert: "while federal regulations require the large MS4 permits to include programs to reduce the discharge of pollutants from the

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[114] The Permit defines the Standard Urban Storm Water Mitigation Plan as "A plan developed to mitigate the impacts of urban runoff from Priority Development Projects."

MS4 that originate in areas of new development, federal regulations do not require or even mention LID or LID principles." And "while requiring post-construction controls that limit pollutant discharges originating in areas of new development is clearly within the requirements of Section 122.26(d)(2)(iv)(A), the 2007 Permit's specific LID requirements are not." Claimants also address the Washington State Pollution Control Board decision by noting that the Board's decision "explicitly recognized that LID requirements are not federally mandated." The claimants also point out EPA-issued NPDES permits in Washington, D.C. and Albuquerque, New Mexico that make no reference to LID.

The Commission finds nothing in the federal regulation (40 C.F.R. § 122.26) that requires local agencies to collectively review and update the BMP requirements listed in their SUSMPs, or to develop, submit and implement "an updated Model SUSMP" that defines minimum LID and other BMP requirements for incorporation into the SUSMPs. Thus, the LID requirements in the permit "exceed the mandate in that federal law or regulation."[115] As in *Long Beach Unified School Dist. v. State of California,*[116] the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen[117] to impose these requirements. Thus, the Commission finds that part D.1.d. of the permit is not a federal mandate.

The Commission further finds that the LID requirements are not a state-mandated program for municipal projects for the same reason as discussed in the HMP discussion above: there is no requirement for cities or counties to build priority development projects, which would trigger the downstream requirement to comply with parts D.1.d.(7) and D.1.d.(8) of the permit, the LID portions of the permit.

As to non-municipal projects, however, because of the mandatory language on the face of the permit, the Commission finds that part D.1.d. of the permit is a state mandate for the claimants to do all of the following:

> (7) Update of SUSMP BMP Requirements
>
> The Copermittees shall collectively review and update the BMP requirements that are listed in their local SUSMPs. At a minimum, the update shall include removal of obsolete or ineffective BMPs, addition of LID and source control BMP requirements that meet or exceed the requirements of sections D.1.d.(4) and D.1.d.(5), and addition of LID BMPs that can be used for treatment, such as bioretention cells, bioretention swales, etc. The update shall also add appropriate LID BMPs to any tables or discussions in the local SUSMPs addressing pollutant removal efficiencies of treatment control BMPs. In addition, the update shall include review, and revision where necessary, of treatment control BMP pollutant removal efficiencies.

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[115] Government Code section 17556, subdivision (c).

[116] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[117] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

(8) Update of SUSMPs to Incorporate LID and Other BMP Requirements

(a) In addition to the implementation of the BMP requirements of sections D.1.d.(4-7) within one year of adoption of this Order, the Copermittees shall also develop and submit an updated Model SUSMP that defines minimum LID and other BMP requirements to be incorporated into the Copermittees' local SUSMPs for application to Priority Development Projects. The purpose of the updated Model SUSMP shall be to establish minimum standards to maximize the use of LID practices and principles in local Copermittee programs as a means of reducing stormwater runoff. It shall meet the following minimum requirements:

i. Establishment of LID BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(4) above.[118]

ii. Establishment of source control BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(5) above.[119]

iii. Establishment of treatment control BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(6) above.[120]

iv. Establishment of siting, design, and maintenance criteria for each LID and treatment control BMP listed in the Model SUSMP, so that implemented LID and treatment control BMPs are constructed correctly and are effective at pollutant removal and/or runoff control. LID techniques, such as soil amendments, shall be incorporated into the criteria for appropriate treatment control BMPs.

v. Establishment of criteria to aid in determining Priority Development Project conditions where implementation of each LID BMP listed in section D.1.d.(4)(b) is applicable and feasible.

vi. Establishment of a requirement for Priority Development Projects with low traffic areas and appropriate or amendable soil conditions to construct a portion of walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such a pervious concrete, porous asphalt, unit pavers, and granular materials.

vii. Establishment of restrictions on infiltration of runoff from Priority Development Project categories or Priority Development Project areas that generate high levels of pollutants, if necessary.

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[118] Part D.1.d.(4) of the permit includes LID BMP requirements: "Each Copermittee shall require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas and promote infiltration at Priority Development Projects:" The Permit lists various LID site design BMPs that must be implemented at all Priority Development Projects, and other LID BMPs that must be implemented at all Priority Development Projects "where applicable and feasible."

[119] Part D.1.d.(5) of the permit lists source control BMP requirements.

[120] Part D.1.d.(6) of the permit lists treatment control BMP requirements.

(b) The updated Model SUSMP shall be submitted within 18 months of adoption of this Order. If, within 60 days of submittal of the updated Model SUSMP, the Copermittees have not received in writing from the Regional Board either (1) a finding of adequacy of the updated Model SUSMP or (2) a modified schedule for its review and revision, the updated Model SUSMP shall be deemed adequate, and the Copermittees shall implement its provisions in accordance with section D.1.d.(8)(c) below.

(c) Within 365 days of Regional Board acceptance of the updated Model SUSMP, each Copermittee shall update its local SUSMP to implement the requirements established pursuant to section D.1.d.(8)(a). In addition to the requirements of section D.1.d.(8)(a), each Copermittee's updated local SUSMP shall include the following:

i. A requirement that each Priority Development Project use the criteria established pursuant to section D.1.d.(8)(a)v to demonstrate applicability and feasibility, or lack thereof, of implementation of the LID BMPs listed in section D.1.d.(4)(b).

ii. A review process which verifies that all BMPs to be implemented will meet the designated siting, design, and maintenance criteria, and that each Priority Development Project is in compliance with all applicable SUSMP requirements.

The State Board, in its October 2008 comments on the test claim, argues that the requirements in part D.1.d.(7) of the permit are not a new program or higher level of service because they "merely add definition to the scope of the local SUSMP already required in the 2001 Permit (see Section F.1.b.(2))." As to part D.1.d.(8), the State Board asserts that it:

> [P]rovides a framework for the Copermittees to develop criteria to be used in the application of LID requirements to Priority Development Projects. The Copermittees must develop their LID programs through an update to the Model SUSMP, the document that guides (and guided the 2001 Permit cycle) post-construction BMP implementation at Priority Development Projects.

According to the State Board, these parts of the permit are not a new program or higher level of service because they merely add additional detail in implementing the same minimum federal MEP standard and add specificity to already existing BMPs.

The claimants, in their February 2009 comments, assert that by adding requirements and increasing the specificity of existing requirements, the 2007 LID permit requirements are a new program or higher level of service.

The Commission finds that part D.1.d.(7) is a new program or higher level of service because it calls for a collective review and update of BMP requirements listed in the claimants' SUSMPs (presumably those drafted under the 2001 permit) that was not required under the 2001 permit.

The Commission also finds that part D.1.d.(8) is a new program or higher level of service because it requires developing, submitting, and implementing "an updated Model SUSMP" that defines minimum LID and other BMP requirements for incorporation into the copermittees SUSMPs. Although the 2001 permit required adopting a Model SUSMP and local SUSMP, it

did not require developing and submitting an updated Model SUSMP with the specified LID BMP requirements.

In sum, the Commission finds that parts D.1.d.(7) and D.1.d.(8) of the 2007 permit constitute a state-mandated new program or higher level of service for private priority development projects. Reimbursement is not required for complying with the LID requirements for municipal priority development projects.

C. Street sweeping and reporting (parts D.3.a.(5) & J.3.a(3)x-xv): Part D.3 is entitled "Existing Development." Part D.3.a.(5) requires regular street sweeping based on the amount of trash generated on the road, street, highway, or parking facility. Those identified as generating the highest volumes of trash are to be swept at least two times per month, those generating moderate volumes of trash are to be swept at least monthly, and those generating low volumes of trash are to be swept as necessary, but not less than once per year. The copermittees determine what constitutes high, moderate, and low trash generation.

In addition, section J.3.a.(3)(c) x-xv requires the copermittees, as part of their annual reporting, to identify the total distance of curb-miles of improved roads in each priority category, the total distance of curb-miles swept, the number of municipal parking lots and the number swept, the frequency of sweeping, and the tons of material collected from street and parking lot sweeping.

The State Board, in its comments submitted in October 2008, states that requiring minimum sweeping frequencies for streets determined by the copermittees to have high volumes of trash or debris is necessary to meet the minimum federal MEP standard. The State Board cites C.F.R. section 122.26(d)(2)(i)(B)-(C), (E) and (F) and 40 C.F.R. section 122.26(d)(2)(iv), and more specifically, section 122.26(d)(2)(iv)(A)(1), which states that the proposed management program include "[a] description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers." Also, section 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include:

> [a] description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.

The State Board also cites section 122.44(d)(1)(i), which states as follows regarding NPDES permits: "limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State Water quality standard, including narrative criteria for water quality." And section 122.26(d)(2)(iv)(A)(3) states that the proposed management program include "A description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities."

In their February 2009 rebuttal comments, the claimants point out that street sweeping as a BMP to control "floatables" is not required by federal law in that none of the federal regulations

specifically require street sweeping. The claimants quote the following from *Hayes v. Commission on State Mandates*:[121] "if the state freely chose to impose the costs upon the local agency as a means of implementing a federal program then the costs are the result of a reimbursable state mandate."

The Commission agrees with claimants. The permit requires activities that fall within the federal regulations to include: "[a] description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers."[122] And they also require: "A description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems…"[123]

Yet the more specific requirements in the permit include variable street sweeping schedules for areas impacted by different amounts of trash. They also require reporting on the amount of trash collected, which is not required by the federal regulations. These activities "exceed the mandate in that federal law or regulation."[124] As in *Long Beach Unified School Dist. v. State of California*,[125] the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen[126] to impose these requirements. Therefore, the Commission finds that parts D.3.a.(5) and J.3.a.(3)(c)x-xv of the permit are not a federal mandate.

Because of the mandatory language on the face of the permit, the Commission also finds part D.3.a(5) of the permit is a state mandate for the claimants to do all of the following:

> (5) Sweeping of Municipal Areas
>
> Each Copermittee shall implement a program to sweep improved (possessing a curb and gutter) municipal roads, streets, highways, and parking facilities. The program shall include the following measures:
>
> (a) Roads, streets, highways, and parking facilities identified as consistently generating the highest volumes of trash and/or debris shall be swept at least two times per month.
>
> (b) Roads, streets, highways, and parking facilities identified as consistently generating moderate volumes of trash and/or debris shall be swept at least monthly.
>
> (c) Roads, streets, highways, and parking facilities identified as generating low volumes of trash and/or debris shall be swept as necessary, but no less than once per year.

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[121] *Hayes v. Commission on State Mandates, supra,* 11 Cal.App.4th 1564.

[122] 40 Code of Federal Regulations, section 122.26(d)(2)(iv)(A)(1).

[123] 40 Code of Federal Regulations, section 122.26(d)(2)(iv)(A)(3).

[124] Government Code section 17556, subdivision (c).

[125] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[126] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

And as stated in part J.3.a(3)(c)x-xv (on p. 68) of the permit, the claimants report annually on:

> x. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating the highest volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
>
> xi. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating moderate volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
>
> xii. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating low volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
>
> xiii. Identification of the total distance of curb-miles swept.
>
> xiv. Identification of the number of municipal parking lots, the number of municipal parking lots swept, and the frequency of sweeping.
>
> xv. Amount of material (tons) collected from street and parking lot sweeping.

The State Board, in its October 2008 comments, argues that requiring minimum street sweeping frequencies does not result in a new program or higher level of service. According to the State Board:

> The 2001 Permit required Copermittees to perform street sweeping, but did not specify minimum frequencies. While the minimum frequencies may exceed some Copermittees' existing programs, the Claimants acknowledge than many Copermittees meet or exceed the mandatory requirements on a voluntary basis. To the extent the frequencies are already being met and the Permit imposes the same MEP standard as its predecessor ... the 2007 Permit does not impose a higher level of service.

In their February 2009 rebuttal comments, the claimants cite Government Code section 17565 to argue that whether or not they were sweeping streets at frequencies equal or more than the permit requires is not relevant. Government Code section 17565 states: "If a local agency ... at its option, has been incurring costs which are subsequently mandated by the state, the state shall reimburse the local agency ... for those costs incurred after the operative date of the mandate." The claimants also state that the 2001 permit did not in fact require street sweeping, "[a]t best it only included general statements regarding the need to control pollutants in streets and other impervious areas and, in any event, minimum frequencies were not required."

The Regional Board's Fact Sheet/Technical Report on part D.3.a.(5) of the 2007 permit states that street sweeping "has been added to ensure that the Copermittees are implementing this effective BMP at all appropriate areas."

The Commission finds that the street sweeping provision (part D.3.a.(5)) in the permit is a new program or higher level of service. The Commission agrees that Government Code section 17565 makes it irrelevant (for purposes of mandate reimbursement) whether or not claimants

were performing the activity prior to the permit, since voluntary activities do not affect reimbursement of an activity that is subsequently mandated by the state.

The 2001 permit, in part F.3.a.(3) and (4) stated:

> (a) To establish priorities for oversight of municipal areas and activities required under this Order, each Copermittee shall prioritize each watershed inventory in F.3.a.2. above by threat to water quality and update annually. Each municipal area and activity shall be classified as high, medium, or low threat to water quality. In evaluating threat to water quality, each Copermittee shall consider (1) type of municipal area or activity; (2) materials used (3) wastes generated; (4) pollutant discharge potential; (5) non-storm water discharges; (6) size of facility or area; (7) proximity to receiving water bodies; (8) sensitivity of receiving water bodies; and (9) any other relevant factors.
>
> (b) At a minimum, the high priority municipal areas and activities shall include the following:
>
> (i) Roads, Streets, Highways, and Parking Facilities. [¶]...[¶]
>
> F.3.a.(4) BMP Implementation (Municipal)
>
> (a) Each Copermittee shall designate a set of minimum BMPs for high, medium, and low threat to water quality municipal areas and activities (as determined under section F.3.a.(3)).The designated minimum BMPs for high threat to water quality municipal areas and activities shall be area or activity specific as appropriate.

Street sweeping is not expressly required in this 2001 permit provision, nor does it specify any frequencies or required reporting. Thus, the Commission finds that part D.3.a.(5) of the 2007 permit that requires street sweeping, as specified, is a new program or higher level of service, as well as part J.3.a(3)x-xv that requires reporting on street-sweeping activities.

D. Conveyance system cleaning and reporting (parts D.3.a.(3) & J.3.a.(3)(c)(iv)-(viii)): Also under part D.3 "Existing Development," part D.3.a.(3) requires conveyance system cleaning, including the following:

- Verifying proper operation of all municipal structural treatment controls designed to reduce pollutant discharges to or from the MS4s and related drainage structures.
- Cleaning any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of the design capacity in a timely manner.
- Cleaning any MS4 facility that is designed to be self cleaning of any accumulated trash and debris immediately.
- Cleaning open channels of observed anthropogenic litter in a timely manner.

In J.3.a.(3)(c)(iv)-(viii), as part of the annual reporting requirements, copermittees shall provide a detailed accounting of the numbers of MS4 facilities in inventory, and the numbers of facilities inspected, exceeding cleaning criteria, and cleaned. In addition, copermittees must report by category tons of waste and litter removed from the facilities.

The State Board, in its comments submitted in October 2008, disagrees that the requirements exceed federal law, saying that "the same broad authorities applicable to the street sweeping requirement also apply to the conveyance system cleaning requirements." According to the State Board, specificity in inspection and cleaning requirements is consistent with and supported by U.S. EPA guidance. Also, to the extent that permit requirements are more specific than the federal regulations, the State Board asserts that the requirements are an appropriate exercise of the San Diego Water Board's discretion to define the MEP standard.

The claimants, in their February 2009 comments, state that "the requirements to inspect and perform maintenance to insure compliance with these standards is not limited by the 'regular schedule of maintenance' obligation but rather must be done as frequently as is necessary to comply with these specific standards." Also, claimants note that the content and detail in the reporting is more than required by the 2001 permit. As to the MEP standard required by the federal regulations, claimants assert that the U.S. EPA documents cited by the State Board provide guidance, not mandates, and the permit Fact Sheet does not specifically set forth mandatory annual inspection and maintenance requirements. According to the claimants, the only mandatory requirement is that a maintenance program exist, and that the applicant provide an inspection schedule if maintenance depends on the results of inspections or occurs infrequently. Yet the 2007 permit includes "very specific requirements that go beyond the U.S. EPA guidance and are not included within the federal regulations." Finally, claimants note that the State Board has acknowledged that the 2007 permit requirements are more specific than federal regulations, and cites the *Long Beach Unified School District* case to conclude that the specificity makes the requirements state mandates.

The Commission agrees with claimants. Like street sweeping, the permit requires conveyance system cleaning activities that fall within the federal regulations to include: "[a] description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers."[127] And they also require: "A description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems…"[128]

Yet the permit requirements are more specific. Part D.3.a.(3) requires verifying proper operation of all municipal structural treatment controls, cleaning any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of the design capacity in a timely manner, cleaning any MS4 facility that is designed to be self cleaning of any accumulated trash and debris immediately, and cleaning open channels of observed anthropogenic litter in a timely manner. In addition, the reporting in part J requires a detailed accounting of the numbers of MS4 facilities in inventory, and the numbers of facilities inspected, exceeding cleaning criteria, and cleaned, and reporting by category tons of waste and litter removed from the facilities. These activities, "exceed[s] the mandate in that federal law or regulation."[129] As in *Long Beach*

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[127] 40 Code of Federal Regulations, section 122.26(d)(2)(iv)(A)(1).

[128] 40 Code of Federal Regulations, section 122.26(d)(2)(iv)(A)(3).

[129] Government Code section 17556, subdivision (c).

Unified School Dist. v. State of California,[130] the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen[131] to impose these requirements. Therefore, the Commission finds that parts D.3.a.(3) and J.3.a.(3)(c)iv-viii of the permit are not a federal mandate.

Rather, the Commission finds that part D.3.a.(3) of the 2007 permit is a state mandate on the claimants to do the following:

> (a) Implement a schedule of inspection and maintenance activities to verify proper operation of all municipal structural treatment controls designed to reduce pollutant discharges to or from its MS4s and related drainage structures.
>
> (b) Implement a schedule of maintenance activities for the MS4 and MS4 facilities (catch basins, storm drain inlets, open channels, etc). The maintenance activities shall, at a minimum, include:
>
> i. Inspection at least once a year between May 1 and September 30 of each year for all MS4 facilities that receive or collect high volumes of trash and debris. All other MS4 facilities shall be inspected at least annually throughout the year.
>
> ii. Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year.
>
> iii. Any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of design capacity shall be cleaned in a timely manner. Any MS4 facility that is designed to be self cleaning shall be cleaned of any accumulated trash and debris immediately. Open channels shall be cleaned of observed anthropogenic litter in a timely manner.
>
> iv. Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed.
>
> v. Proper disposal of waste removed pursuant to applicable laws.
>
> vi. Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

The Commission also finds that part J.3.a.(3)(c) iv-viii is a state mandate to report the following information in the JURMP annual report:

> iv. Identification of the total number of catch basins and inlets, the number of catch basins and inlets inspected, the number of catch basins and inlets found with accumulated waste exceeding cleaning criteria, and the number of catch basins and inlets cleaned.
>
> v. Identification of the total distance (miles) of the MS4, the distance of the MS4 inspected, the distance of the MS4 found with accumulated waste exceeding cleaning criteria, and the distance of the MS4 cleaned.

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[130] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[131] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

vi. Identification of the total distance (miles) of open channels, the distance of the open channels inspected, the distance of the open channels found with anthropogenic litter, and the distance of open channels cleaned.

vii. Amount of waste and litter (tons) removed from catch basins, inlets, the MS4, and open channels, by category.

viii. Identification of any MS4 facility found to require inspection less than annually following two years of inspection, including justification for the finding.

As to whether these provisions are a new program or higher level of service, the State Board, in its October 2008 comments, states that the 2001 permit contained "*more* frequent inspection and removal requirements than required in the 2007 Permit. It also contained record keeping requirements to document the facilities cleaned and the quantities of waste removed." [Emphasis in original.]

Claimants, in their February 2009 comments, argue that the 2001 permit, in part F.3.a.(5) required each copermittee to 'implement a schedule of maintenance activities at all structural controls designed to reduce pollutant discharges. By contrast, the 2007 permit requires each copermittee to 'implement a schedule of **inspection and** maintenance' and to '**verify proper operation of all municipal** structural controls...." [Emphasis in original.] Claimants also point out that the 2007 permit requires copermittees to:

- Clean any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of the design capacity in a timely manner.
- Clean any MS4 facility that is designed to be self cleaning of any accumulated trash and debris immediately.
- Clean open channels of observed anthropogenic litter in a timely manner.

According to claimants, these requirements were not included in the 2001 permit. Claimants also state that the requirement to inspect and perform maintenance "is not limited by the 'regular schedule of maintenance' obligation but rather must be done as frequently as is necessary to comply with these specific standards."

As to reporting, claimants state that the language in part D.3.a.(3)(b)(iv),(v) and (vi) of the 2007 permit and part F.3.a.(5)(c)(iii), (iv) and (v) of the 2001 permit track each other, but part J.3.a.(3)(c) iv through viii detail the information that the reports must now contain that was not in the 2001 permit, such as identifying the number of catch basins and inlets, the number inspected, the number found with accumulated waste exceeding the cleaning criteria, the distance of the MS4 cleaned, and other detail.

In analyzing whether parts D.3.a.(3) and J.3.a.(3)(c)(iv) – (viii) are a new program or higher level of service, we compare those provisions to the prior permit and look at the Regional Board's Fact Sheet/Technical Report, which states why Part D.3.a.(3) was added:

> **Section D.3.a.(3)** ... requires the Copermittees to inspect and remove waste from their MS4s prior to the rainy season. Additional wording has been added to clarify the intent of the requirements. The Copermittees will be required to inspect all storm drain inlets and catch basins. This change will assist the Copermittees in determining which basins/inlets need to be cleaned and at what

priority. Removal of trash has been identified by the copermittees as a priority issue in their long-term effectiveness assessment. To address this issue, wording has been added to require the Copermittees, at a minimum, inspect [sic] and remove trash from all their open channels at least once a year.

The 2001 permit contained the following in part F.3.a.(5)(b) and (c):

> (b) Each Copermittee shall implement a schedule of maintenance activities for the municipal separate storm sewer system.
> (c) The maintenance activities must, at a minimum, include:
> i. Inspection and removal of accumulated waste (e.g., sediment, trash, debris and other pollutants) between May 1 and September 30 of each year;
> ii. Additional cleaning as necessary between October 1 and April 30 of each year;
> iii. Record keeping of cleaning and the overall quantity of waste removed;
> iv. Proper disposal of waste removed pursuant to applicable laws;
> v. Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

The Commission finds that some provisions in the 2007 permit are the same as in the 2001 permit. Specifically, part D.3.a(3)(a) is not a new program or higher level of service because the 2001 permit also required maintenance and inspection in part F.3.a.(5)(b) and (c). The Commission also finds that part D.3.a.(3)(b)(i),(iv)- (vi) of the 2007 permit is the same as part F.3.a.(5)(c)(i)(iii) - (v) in the 2001 permit, both of which require:

- Annual inspection of MS4 facilities (D.3.a(3)(b)(i));
- Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed (D.3.a(3)(b)(iv));
- Proper disposal of waste removed pursuant to applicable laws (D.3.a(3)(b)(v)); and
- Measures to eliminate waste discharges during MS4 maintenance and cleaning activities (D.3.a(3)(b)(vi)).

Therefore, the Commission finds that these provisions are not a new program or higher level of service.

The Commission also finds that part D.3.a.(3)(b)(ii) is not a new program or higher level of service. It gives the claimants the flexibility, after two years of inspections, to inspect MS4 facilities that require inspection and cleaning less than annually, but not less than every other year. Part F.3.a.(5)(c)(i) of the 2001 permit stated: "The maintenance activities must, at a minimum, include: i. inspection and removal of accumulated waste (e.g., sediment, trash, debris and other pollutants) between May 1 and September 30 of each year." Potentially less frequent inspections under the 2007 permit is not a new program or higher level of service.

The Commission finds that part D.3.a.(3)(b)(iii) of the 2007 permit is a new program or higher level of service on claimants to clean in a timely manner "Any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of design capacity.... Any MS4 facility that is designed to be self cleaning shall be cleaned of any accumulated trash and debris immediately. Open channels shall be cleaned of observed anthropogenic litter in a timely

manner." This part contains specificity, e.g., a standard of accumulation greater than 33% of design capacity, which was not in the 2001 permit.

Further, the Commission finds that the reporting in part J.3.a.(3)(c) (iv) – (viii) is a new program or higher level of service. The 2001 permit did not require this information in the content of the annual reports.

E. Educational component (part D.5): Part D.5 requires the copermittees to perform the activities on pages 25-28 above, which can be summarized as:

- Implement an educational program so that copermittees' planning and development review staffs (and planning board/elected officials, if applicable) understand certain laws and regulations related to water quality.
- Implement an educational program that includes annual training before the rainy season so that the copermittees' construction, building, code enforcement, and grading review staffs, inspectors, and others will understand certain specified topics.
- At least annually, train staff responsible for conducting stormwater compliance inspections and enforcement of industrial and commercial facilities on specified topics.
- Implement an education program so that municipal personnel and contractors performing activities that generate pollutants understand the activity specific BMPs for each activity to be performed.
- Implement a program to educate project applicants, developers, contractors, property owners, community planning groups, and others relating to specified topics.

The State Board, in its October 2008 comments on the test claim, states that federal regulations authorize the inclusion of an education component, in that the proposed management program must "include a description of appropriate educational and training measures for construction site operations" (40 C.F.R. § 122.26(d)(2)(iv)(D)(4)) and a "description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors…(40 C.F.R. § 122.26(d)(2)(iv)(A)(6)). The federal regulations also require a "description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers" (40 C.F.R. § 122.26(d)(2)(iv)(B)(5)) and a "description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials." (40 C.F.R. § 122.26(d)(2)(iv)(B)(6)). The State Board also says that according to the U.S. EPA's Phase II stormwater regulations, the MEP standard requires the copermittees to implement public education programs. According to the State Board, the regulations apply to copermittees with less developed storm water programs, and require the programs to include a public education and outreach program (40 C.F.R. § 122.34(b)(1)) and a public involvement/participation program (40 C.F.R. § 122.26(b)(2)). To the extent the permit requirements are more specific than federal law, the State Board calls them an appropriate use of the Regional Board's discretion "to require more specificity in establishing the MEP standard."

Claimants, in their February 2009 comments, characterize the federal regulations as only requiring them "to describe educational, public information, and other appropriate activities associated with their jurisdictional, watershed or stormwater management programs." By contrast, under the permit claimants argue that they are required to "implement specific educational and training programs that achieve measurable increases in specific target community knowledge and to ensure a measurable change in the behavior of such target communities rather than simply report on the ... educational programs on an annual basis." Claimants state that they are required to perform testing and surveys and "new program elements to secure the measureable changes in knowledge and behavior."

The Commission agrees with claimants. As quoted in the State Board's comments, the federal regulations require nonspecific descriptions of educational programs, for example, requiring the permit application to "include appropriate educational and training measures for construction site operations" and "controls such as educational activities." The permit, on the other hand, requires implementation of an educational program with target communities and specified topics. These requirements "exceed the mandate in that federal law or regulation."[132] As in *Long Beach Unified School Dist. v. State of California,*[133] the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen[134] to impose these requirements. Thus, the Commission finds that part D.5 of the permit is not federally mandated.

Based on the mandatory language on the face of the permit, the Commission finds that part D.5 of the permit constitutes a state mandate on the copermittees to do all of the following:

> Each Copermittee shall implement an education program using all media as appropriate to (1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum, the education program shall meet the requirements of this section and address the following target communities:
>
> · Municipal Departments and Personnel
> · Construction Site Owners and Developers
> · Industrial Owners and Operators
> · Commercial Owners and Operators
> · Residential Community, General Public, and School Children
>
> a. GENERAL REQUIREMENTS
>
> (1) Each Copermittee shall educate each target community on the following topics where appropriate:

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[132] Government Code section 17556, subdivision (c).

[133] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[134] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

Table 3. Education

Laws, Regulations, Permits, & Requirements	Best Management Practices
• Federal, state, and local water quality laws and regulations • Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction). • Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities • Regional Board's General NPDES Permit for Ground Water Dewatering • Regional Board's 401 Water Quality Certification Program • Statewide General NPDES Utility Vault Permit • Requirements of local municipal permits and ordinances (e.g., storm water and grading ordinances and permits)	• Pollution prevention and safe alternatives • Good housekeeping (e.g., sweeping impervious surfaces instead of hosing) • Proper waste disposal (e.g., garbage, pet/animal waste, green waste, household hazardous materials, appliances, tires, furniture, vehicles, boat/recreational vehicle waste, catch basin/ MS4 cleanout waste) • Non-storm water disposal alternatives (e.g., all wash waters) • Methods to minimized the impact of land development and construction • Erosion prevention • Methods to reduce the impact of residential and charity car-washing • Preventive Maintenance • Equipment/vehicle maintenance and repair • Spill response, containment, and recovery • Recycling • BMP maintenance
General Urban Runoff Concepts	**Other Topics**
• Impacts of urban runoff on receiving waters • Distinction between MS4s and sanitary sewers • BMP types: facility or activity specific, LID, source control, and treatment control • Short-and long-term water quality impacts associated with urbanization (e.g., land-use decisions, development, construction) • Non-storm water discharge prohibitions • How to conduct a storm water inspections	• Public reporting mechanisms • Water quality awareness for Emergency/ First Responders • Illicit Discharge Detection and Elimination observations and follow-up during daily work activities • Potable water discharges to the MS4 • Dechlorination techniques • Hydrostatic testing • Integrated pest management • Benefits of native vegetation • Water conservation •Alternative materials and designs to maintain peak runoff values •Traffic reduction, alternative fuel use

(2) Copermittee educational programs shall emphasize underserved target audiences, high-risk behaviors, and "allowable" behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources.

b. SPECIFIC REQUIREMENTS

(1) Municipal Departments and Personnel Education

(a) Municipal Development Planning – Each Copermittee shall implement an education program so that its planning and development review staffs (and Planning Boards and Elected Officials, if applicable) have an understanding of:

i. Federal, state, and local water quality laws and regulations applicable to Development Projects;
ii. The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization);
iii. How to integrate LID BMP requirements into the local regulatory program(s) and requirements; and
iv. Methods of minimizing impacts to receiving water quality resulting from development, including:
[1] Storm water management plan development and review;
[2] Methods to control downstream erosion impacts;
[3] Identification of pollutants of concern;
[4] LID BMP techniques;
[5] Source control BMPs; and
[6] Selection of the most effective treatment control BMPs for the pollutants of concern.

(b) Municipal Construction Activities – Each Copermittee shall implement an education program that includes annual training prior to the rainy season so that its construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of the following topics, as appropriate for the target audience:

i. Federal, state, and local water quality laws and regulations applicable to construction and grading[135] activities.
ii. The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization and impacts from construction material such as sediment).
iii. Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities.
iv. The Copermittee's inspection, plan review, and enforcement policies and procedures to verify consistent application.
v. Current advancements in BMP technologies.
vi. SUSMP Requirements including treatment options, LID BMPs, source control, and applicable tracking mechanisms.

[135] Attachment C of the permit defines grading as "the cutting and/or filling of the land surface to a desired slope or elevation."

(c) Municipal Industrial/Commercial Activities - Each Copermittee shall train staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year. Training shall cover inspection and enforcement procedures, BMP implementation, and reviewing monitoring data.

(d) Municipal Other Activities – Each Copermittee shall implement an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed.

(2) New Development and Construction Education

As early in the planning and development process as possible and all through the permitting and construction process, each Copermittee shall implement a program to educate project applicants, developers, contractors, property owners, community planning groups, and other responsible parties. The education program shall provide an understanding of the topics listed in Sections D.5.b.(1)(a) and D.5.b.(1)(b) above, as appropriate for the audience being educated. The education program shall also educate project applicants, developers, contractors, property owners, and other responsible parties on the importance of educating all construction workers in the field about stormwater issues and BMPs through formal or informal training.

(3) Residential, General Public, and School Children Education

Each Copermittee shall collaboratively conduct or participate in development and implementation of a plan to educate residential, general public, and school children target communities. The plan shall evaluate use of mass media, mailers, door hangers, booths at public events, classroom education, field trips, hands-on experiences, or other educational methods.

The State Board, in its October 2008 comments, states that the education requirement in part D.5. does not amount to a new program or higher level of service because the 2007 permit "includes education topics from the 2001 permit with minor wording and formatting changes. Additionally, the requirements were adopted to implement the same federal MEP standard as established in the CWA and in the 2001 Permit."

In their February 2009 comments, the claimants state that the 2001 permit did not require:

- Implementation of an education program so that the copermittee's planning and development review staff (and Planning Boards and Elected Officials, if applicable) understand certain specified laws and regulations related to water quality. (D.5.b.(1)(a).)
- Implementation of an education program that includes annual training prior to the rainy season so that the copermittee's construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of certain specified topics. (D.5.b.(1)(b).)
- Training of staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year relating to certain specified topics (D.5.b.(1)(c).)

- Implementation of an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed. (D.5.b.(1)(d).)
- Implementation of a program to educate project applicants, developers, contractors, property owners, community planning groups, and other responsible parties relating to certain specified topics. (D.5.b.(2).)

This analysis of whether the permit is a new program or higher level of service is in the order presented in the permit. The Commission finds that nearly all of the educational topics in part D.5.a. are the same as those in the 2001 permit (part F.4). Both the 2001 and 2007 permits require the claimants to "educate" each specified target community on the following topics (Table 3 in the 2007 permit):

> **Laws, Regulations, Permits, & Requirements:** Federal, state, and local water quality laws and regulations; Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction); Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities; Regional Board's General NPDES Permit for Ground Water Dewatering; Regional Board's 401 Water Quality Certification Program; Statewide General NPDES Utility Vault Permit; Requirements of local municipal permits and ordinances (e.g., storm water and grading ordinances and permits).
>
> **Best Management Practices:** Pollution prevention and safe alternatives; Good housekeeping (e.g., sweeping impervious surfaces instead of hosing); Proper waste disposal (e.g., garbage, pet/animal waste, green waste, household hazardous materials, appliances, tires, furniture, vehicles, boat/recreational vehicle waste, catch basin/ MS4 cleanout waste); Non-storm water disposal alternatives (e.g., all wash waters); Methods to minimized the impact of land development and construction; Methods to reduce the impact of residential and charity car-washing; Preventive Maintenance; Equipment/vehicle maintenance and repair; Spill response, containment, and recovery; Recycling; BMP maintenance.
>
> **General Urban Runoff Concepts:** Impacts of urban runoff on receiving waters; Distinction between MS4s and sanitary sewers; Short-and long-term water , quality impacts associated with urbanization (e.g., land-use decisions, development, construction); How to conduct a storm water inspection.
>
> **Other Topics:** Public reporting mechanisms; Water quality awareness for Emergency/ First Responders; Illicit Discharge Detection and Elimination observations and follow-up during daily work activities; Potable water discharges to the MS4; Dechlorination techniques; Hydrostatic testing; Integrated pest management; Benefits of native vegetation; Water conservation; Alternative materials and designs to maintain peak runoff values; Traffic reduction, alternative fuel use.

Because the requirement to educate the target communities on these topics was in the 2001 permit, as well as the 2007 permit, the Commission finds that doing so, as required by part D.5.a(1), table 3, is not a new program or higher level of service.

Under the 2007 permit, the copermittees are required to "educate each target community" on the following educational topics that were not in the 2001 permit: (1) Erosion prevention, (2) Non storm water discharge prohibitions, and (3) BMP types: facility or activity specific, LID [low-impact development], source control, and treatment control. Thus, the Commission finds that the part D.5.a.(1) is a new program or higher level of service to educate each target community on only the following topics: (1) Erosion prevention, (2) Non storm water discharge prohibitions, and (3) BMP types: facility or activity specific, LID, source control, and treatment control.

Part D.5.a.(2) states: "(2) Copermittee educational programs shall emphasize underserved target audiences, high-risk behaviors, and 'allowable' behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources." This provision was not in the 2001 permit, so the Commission finds that part D.5.a.(2) is a new program or higher level of service.

In part D.5.b.(1)(a) (Municipal Development Planning) the permit requires implementing an education program for "municipal planning and development review staffs (and Planning Board and Elected Officials, if applicable)" on specified topics. The 2001 permit required implementing an educational program for "Municipal Departments and Personnel" that would include planning and development review staffs, but not planning boards and elected officials. So the Commission finds that part D.5.b.(1)(a)(i) and (ii) is a new program or higher level of service for planning boards and elected officials.

Certain topics in part D.5.b.(1)(a) are a new program or higher level of service for both planning and development review staffs as well as planning boards and elected officials. Under both part F.4.a. of the 2001 permit, and D.5.b.(1)(a) of the 2007 permit, the copermittees are required to implement an educational program on the following topics:

> i. Federal, state, and local water quality laws and regulations applicable to Development Projects; [The 2001 permit, in F.4.a. (p. 35) says: "Federal, state and local water quality regulations that affect development projects."]
>
> ii. The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization); [The 2001 permit, in F.4.a (p. 35) calls this "Waters Quality Impacts associated with land development."]

Thus the Commission finds that implementing an educational program on these topics is not a new program or higher level of service for municipal departments, but is for planning boards and elected officials.

The following topics were not listed in the 2001 permit, so the Commission finds that part D.5.b.(1)(a) is a new program or higher level of service to implement these in an educational program for all target communities:

> (iii) How to integrate LID BMP requirements into the local regulatory program(s) and requirements;
>
> (iv) Methods of minimizing impacts to receiving water quality resulting from development, including: [1] Storm water management plan development and review; [2] Methods to control downstream erosion impacts; [3] Identification of pollutants of concern; [4] LID BMP techniques; [5] Source control BMPs; and

[6] Selection of the most effective treatment control BMPs for the pollutants of concern.

Part D.5.b.(1)(b) (Municipal Construction Activities) of the permit requires implementing an educational program for municipal "construction, building, code enforcement, and grading review staffs." Again, this is not a new program or higher level of service for those topics in which the 2001 permit also required an education program for "Municipal Departments and Personnel," such as:

> i. Federal, state, and local water quality laws and regulations applicable to construction and grading activities. [The 2001 permit, in F.4.a. (p. 35) says: "Federal, state and local water quality regulations that affect development projects."]
>
> ii. The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization and impacts from construction material such as sediment. [The 2001 permit, in F.4.a (p. 35) calls this "Water Quality Impacts associated with land development."]

The timing of the educational program specified in D.5.b.(1)(b) requires it to be implemented "prior to the rainy season." There is no evidence in the record, however, that this timing requirement is a new program or higher level of service compared with the 2001 permit. Thus the Commission finds that part D.5.b.(1)(b)(i) and (ii) are not a new program or higher level of service.

Municipal construction activity education topics were added to the 2007 permit, however, that were not in the 2001 permit, in paragraphs (iii) to (vi) as follows:

> (b) Municipal Construction Activities – Each Copermittee shall implement an education program that includes annual training prior to the rainy season so that its construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of the following topics, as appropriate for the target audience: [¶]...[¶] iii. Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities.
> iv. The Copermittee's inspection, plan review, and enforcement policies and procedures to verify consistent application.
> v. Current advancements in BMP technologies.
> vi. SUSMP Requirements including treatment options, LID BMPs, source control, and applicable tracking mechanisms.

Thus, the Commission finds that part D.5.b.(1)(b)(iii) - (vi) of the 2007 permit is a new program or higher level of service.

Part D.5.b.(1)(c) of the 2007 permit (Municipal Industrial/Commercial Activities) requires the following:

> (c) Each Copermittee shall train staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at

least once a year. Training shall cover inspection and enforcement procedures, BMP implementation, and reviewing monitoring data.

The 2001 permit included (in F.4.b.) the topic "How to conduct a stormwater inspection" but did not specify that the training was to be annual, and did not require the training to cover inspection and enforcement procedures, BMP Implementation, or reviewing monitoring data. Thus, the Commission finds that part D.5.(b)(1)(c) is a new program or higher level of service.

Part D.5.b.(1)(d) of the 2007 permit requires the following:

> (d) Municipal Other Activities – Each Copermittee shall implement an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed.

Regarding part D.5.b.(1)(d), the 2007 Fact Sheet/Technical Report states:

> A new requirement has also been added for education of activity specific BMPs for municipal personnel and contractors performing activities that generate pollutants. Education is required at all levels of municipal staff and contractors. Education is especially important for the staff in the field performing activities which might result in discharges of pollutants if proper BMPs are not used.

Because part D.5.b.(1)(d) was not in the 2001 permit, and because the Regional Board called it a "new requirement" the Commission finds that part D.5.(b)(1)(d) of the 2007 permit is a new program or higher level of service.

Part D.5.(b)(2) of the 2007 permit requires an education program for "project applicants, developers, contractors, property owners, community planning groups, and other responsible parties." Parts F.4.a and F4.b. of the 2001 permit required a similar education program for "construction site owners and developers." The Fact Sheet/Technical Report for the 2007 permit states:

> Different levels of training will be needed for planning groups, owners, developers, contractors, and construction workers, but everyone should get a general education of stormwater requirements. Education of all construction workers can prevent unintentional discharges, such as discharges by workers who are not aware that they are not allowed to wash things down the storm drains. Training for BMP installation workers is imperative because the BMPs will not fail if not properly installed and maintained. Training for field level workers can be formal or informal tail-gate format.

Thus, the Commission finds that part D.5.(b)(2) of the 2007 permit is a new program or higher level of service for project applicants, contractors, or community planning groups who are not developers or construction site owners.

The final part of the education programs in the 2007 permit is D.5.(b)(3) regarding "Residential, General Public, and School Children."

> Each Copermittee shall collaboratively conduct or participate in development and implementation of a plan to educate residential, general public, and school children target communities. The plan shall evaluate use of mass media, mailers,

door hangers, booths at public events, classroom education, field trips, hands-on experiences, or other educational methods.

The 2001 permit (part F.4.c.) stated the following:

> In addition to the topics listed in F.4.a. above, the Residential, General Public, and School Children communities shall be educated on the following topics where applicable:
>
> - Public reporting information resources
> - Residential and charity car-washing
> - Community activities (e.g., "Adopt a Storm Drain, Watershed, or Highway" Programs, citizen monitoring, creek/beach cleanups, environmental protection organization activities, etc..

The 2001 permit did not require claimants to "collaboratively conduct or participate in development ... of a plan to educate residential, general public, and school children target communities." The 2001 permit also did not require the plan to "evaluate use of mass media, mailers, door hangers, booths at public events, classroom education, field trips, hands-on experiences, or other educational methods." Thus, the Commission finds that part D.5.(b)(3) of the 2007 permit is a new program or higher level of service.

In sum, as to part D.5 of the 2007 permit that requires implementing educational programs, the Commission finds that the following subparts are new programs or higher levels of service:

- D.5.a.(1): Each copermittee shall educate each target community, as specified, on the following topics: erosion prevention, nonstorm waters discharge prohibitions, and BMP types: facility or activity specific, LID, source control, and treatment control.
- D.5.a.(2): Copermittee educational programs shall emphasize underserved target audiences, high-risk behaviors, and "allowable" behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources.
- D.5.b.(1)(a): Implement an education program so that planning boards and elected officials, if applicable, have an understanding of: (i) Federal, state, and local water quality laws and regulations applicable to Development Projects; (ii) The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land developments and urbanization).
- D.5.b.(1)(a): Implement an education program so that planning and development review staffs as well as planning boards and elected officials have an understanding of: (iii) How to integrate LID BMP requirements into the local regulatory program(s) and requirements; (iv) Methods of minimizing impacts to receiving water quality resulting from development, including: [1] Storm water management plan development and review; [2] Methods to control downstream erosion impacts; [3] Identification of pollutants of concern; [4] LID BMP techniques; [5] Source control BMPs; and [6] Selection of the most effective treatment control BMPs for the pollutants of concern."
- D.5.b.(1)(b)(iii) - (vi): Implement an education program that includes annual training prior to the rainy season for its construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an

understanding of the topics in parts D.5.b.(1)(b)(iii), (iv), (v), and (vi) of the permit, as follows:

> iii. Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities.
>
> iv. The Copermittee's inspection, plan review, and enforcement policies and procedures to verify consistent application.
>
> v. Current advancements in BMP technologies.
>
> vi. SUSMP Requirements including treatment options, LID BMPs, source control, and applicable tracking mechanisms.

- D.5.(b)(1)(c) and (d) as follows:

  > Each Copermittee shall train staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year. Training shall cover inspection and enforcement procedures, BMP implementation, and reviewing monitoring data.

- Municipal Other Activities – Each Copermittee shall implement an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed.
- D.5.(b)(2), As early in the planning and development process as possible and all through the permitting and construction process, to implement a program to educate project applicants, contractors, property owners, community planning groups, and other responsible parties. The education program shall provide an understanding of the topics listed in Sections D.5.b.(1)(a) [Municipal Development Planning] and D.5.b.(1)(b) [Municipal construction Activities] above, as appropriate for the audience being educated. The education program shall also educate project applicants, contractors, property owners, and other responsible parties on the importance of educating all construction workers in the field about stormwater issues and BMPs through formal or informal training.
- D.5.(b)(3), Each Copermittee shall collaboratively conduct or participate in development and implementation of a plan to educate residential, general public, and school children target communities. The plan shall evaluate use of mass media, mailers, door hangers, booths at public events, classroom education, field trips, hands-on experiences, or other educational methods.

II. Watershed Urban Runoff Management Program (Part E)

Part E of the permit is the Watershed Urban Runoff Management Program (WURMP). The permit (Table 4) divides the copermittees into nine watershed management areas (WMAs) by "major receiving water bodies." The 2001 permit also had a WURMP component (in part J).

A. Watershed Urban Runoff Management Program copermittee collaboration (parts E.2.f & E.2.g): These provisions require the copermittees to do the activities on pages 28-29 above, including the following:

- Collaborating with other copermittees within their watershed management areas (WMAs) to develop and implement an updated Watershed Urban Runoff Management Program for each watershed that prevents urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards which at a minimum includes:
    - Identifying and implementing watershed activities that address the high priority water quality problems in the watershed management areas that include both watershed water quality activities[136] and watershed education activities.[137]
    - Creating a watershed activities list that includes certain specified information to be submitted with each updated Watershed Urban Runoff Management Plan (WURMP) and updated annually thereafter.
    - Implementing identified watershed activities within established schedules.
    - Collaborating to develop and implement the Watershed Urban Runoff Management Program, including frequent regularly scheduled meetings.[138]

In its October 2008 comments, the State Board asserts that the Watershed Urban Runoff Management Program activities are necessary to meet the minimum federal MEP standard. The State Board quotes the following federal regulations: "The Director may … issue distinct permits for appropriate categories of discharges … including, but not limited to … all discharges within a system that discharge to the same watershed…" (40 C.F.R. 122.26(a)(3)(ii).) The State Board also quotes more specific federal regulations:

> Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed, or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas [watersheds] which contribute storm water to the system. (40 C.F.R. § 122.26 (a)(3)(v).)
>
> The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)(1)(v) of this section on a system-wide basis, a

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[136] Watershed Water Quality Activities are activities other than education that address the high priority water quality problems in the WMA. A Watershed Water Quality Activity implemented on a jurisdictional basis must be organized and implemented to target a watershed's high priority water quality problems or must exceed the baseline jurisdictional requirements of section D of the permit (Part E.2.f).

[137] Watershed Education Activities are outreach and training activities that address high priority water quality problems in the WMA (Part E.2.f).

[138] In their February 2009 comments, the claimants also list the following activities: (1) Annual review of WURMPs to identify needed modifications and improvements (part E.2.i); (2) Develop and periodically update watershed maps (part E.2.b); (3) Develop and implement a program for encouraging collaborative watershed-based land-use planning (part E.2.d); (4) Develop and implement a collective watershed strategy (part E.2.e). These parts of the permit, however, were not pled in the test claim so the Commission makes no findings on them.

> jurisdiction-wide basis, watershed basis, or other appropriate basis;" (40 C.F.R. § 122.26 (a)(5).)
>
> Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. (40 C.F.R. § 122.26 (d)(2)(iv).)

The State Board argues that the regional board "determined that the inclusion of the requirement to formalize the Watershed Water Qualities Activities List was appropriate to further the goal of the WURMPS in achieving compliance with federal law." Based on some reports it received, the Regional Board determined that "many of the watershed water quality activities had no clear connection to the high priority water quality problems in the area of implementation." The Board determined it was therefore necessary and appropriate to require development of an implementation strategy to maximize WURMP effectiveness.

Claimants, in their February 2009 comments, point out that while cooperative agreements may be required by 40 C.F.R. § 122.26(d)(2)(i)(D), "each copermittee is only responsible for their own systems." Claimants quote another federal regulation: "Copermittees need only comply with permit conditions relating to discharges from the municipal separate storm sewers for which they operate." (40 C.F.R. § 122.26(a)(3)(vi).) Claimants argue that the 2007 permit:

> [R]equires the copermittees to engage in specific programmatic activities that are duplicative of the activities that were not required under the 2001 Permit and that are already required of them on a jurisdictional basis within the boundaries of the same watershed. These new requirements include no less than two watershed water quality activities and two watershed education activities per year.

Claimants also state that the permit "mandates that watershed quality activities implemented on a jurisdictional basis must exceed the baseline jurisdictional requirements under Section D of the Order." (part E.2.f.(1)(a).) According to what the claimants call these "dual baseline standards, jurisdictional and watershed, the copermittees are required to perform more and duplicative work."

The Commission finds that the permit requirements in sections E.2.f and E.2.g. are not federal mandates. As with the other requirements in the permit, the federal regulations authorize but do not require the specificity regarding whether collaboration occurs on a jurisdictional, watershed or other basis. These requirements "exceed the mandate in that federal law or regulation."[139] As in *Long Beach Unified School Dist. v. State of California*,[140] the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen[141] to impose these requirements.

Based on the mandatory language in the permit, the Commission finds that the following in part E are a state mandate on the copermittees:

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[139] Government Code section 17556, subdivision (c).

[140] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[141] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

2. Each Copermittee shall collaborate with other Copermittees within its WMA(s) as in Table 4 [of the permit] to develop and implement an updated Watershed Urban Runoff Management Program for each watershed. Each updated Watershed Urban Runoff Management Program shall meet the requirements of section E of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. At a minimum, each Watershed Urban Runoff Management Program shall include the elements described below:
[¶]...[¶]

f. Watershed Activities[142]

(1) The Watershed Copermittees shall identify and implement Watershed Activities that address the high priority water quality problems in the WMA. Watershed Activities shall include both Watershed Water Quality Activities and Watershed Education Activities. These activities may be implemented individually or collectively, and may be implemented at the regional, watershed, or jurisdictional level.

(a) Watershed Water Quality Activities are activities other than education that address the high priority water quality problems in the WMA. A Watershed Water Quality Activity implemented on a jurisdictional basis must be organized and implemented to target a watershed's high priority water quality problems or must exceed the baseline jurisdictional requirements of section D of this Order.

(b) Watershed Education Activities are outreach and training activities that address high priority water quality problems in the WMA.

(2) A Watershed Activities List shall be submitted with each updated Watershed Urban Runoff Management Plan (WURMP) and updated annually thereafter. The Watershed Activities List shall include both Watershed Water Quality Activities and Watershed Education Activities, along with a description of how each activity was selected, and how all of the activities on the list will collectively abate sources and reduce pollutant discharges causing the identified high priority water quality problems in the WMA.

(3) Each activity on the Watershed Activities List shall include the following information:

(a) A description of the activity;
(b) A time schedule for implementation of the activity, including key milestones;
(c) An identification of the specific responsibilities of Watershed Copermittees in completing the activity;
(d) A description of how the activity will address the identified high priority water quality problem(s) of the watershed;

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[142] In their rebuttal comments submitted in February 2009, claimants mention part E.(3) of the permit that requires a detailed description of each activity on the Watershed Activities List. Part E.(3), however, was not in the test claim so staff makes no findings on it.

(e) A description of how the activity is consistent with the collective watershed strategy;
(f) A description of the expected benefits of implementing the activity; and
(g) A description of how implementation effectiveness will be measured.

(4) Each Watershed Copermittee shall implement identified Watershed Activities pursuant to established schedules. For each Permit year, no less than two Watershed Water Quality Activities and two Watershed Education Activities shall be in an active implementation phase. A Watershed Water Quality Activity is in an active implementation phase when significant pollutant load reductions, source abatement, or other quantifiable benefits to discharge or receiving water quality can reasonably be established in relation to the watershed's high priority water quality problem(s). Watershed Water Quality Activities that are capital projects are in active implementation for the first year of implementation only. A Watershed Education Activity is in an active implementation phase when changes in attitudes, knowledge, awareness, or behavior can reasonably be established in target audiences.

g. Copermittee Collaboration

Watershed Copermittees shall collaborate to develop and implement the Watershed Urban Runoff Management Programs. Watershed Copermittee collaboration shall include frequent regularly scheduled meetings.

As to the issue of new program or higher level of service, the State Board, in its October 2008 comments, states:

> Although Section E.2.f. requires development and implementation of a list of Watershed Water Qualities Activities for potential implementation that was not specifically required in the 2001 Permit, the Copermittees were previously required to identify priority water quality issues and identify recommended activities to address the priority water quality problems (See 2001 Permit, section J.1 and J.2.d.)

The State Board asserts that Copermittees were already required to collaborate with other Copermittees, and that "Section E.2.g. merely adds effectiveness strategies to the collaboration requirements." ... Other requirements challenged by the Claimants exist in the 2001 Permit, but with minor wording changes (e.g., the requirement to update watershed maps, which exists in both permits).

Claimants, in their February 2009 comments, assert that parts E.2.f. and E.2.g do impose a new program or higher level of service. According to the claimants:

> Under the 2001 Permit the watershed requirements were essentially limited to mapping, assessment and identification of short and long term issues. Collaboration included mapping (J.2.a.), assessment of receiving waters (J.2.b); identification and prioritization of water quality problems (J.2.c); implementation of time schedules (J.2.d) and identification of copermittee responsibilities for each recommended activity including a time schedule.
>
> [¶]...[¶]

> The 2007 Permit imposes standards far beyond those listed in ... the 2001 Permit .... The 2007 Permit now requires the copermittees to engage in specific programmatic activities that are duplicative of the activities that were not required under the 2001 Permit and that are already required of them on a jurisdictional basis within the boundaries of the same watershed. These new requirements include no less than two watershed water quality activities and two watershed education activities per year. The two-activity watershed requirement is a condition of all copermittees regardless of whether the activity is within their jurisdictional authority or not.
>
> In addition, while the 2007 Permit states that activities can be implemented at a regional, watershed or jurisdictional level, it mandates that watershed quality activities implemented on a jurisdictional basis must exceed the baseline jurisdictional requirements under Section D of the Order. By reason of the dual baseline standards, jurisdictional and watershed, the copermittees are required to perform more and duplicative work.

The Commission finds that E.2.f. and E.2.g of the permit are a new program or higher level of service.

As to watershed education in part E.2.f, the 2001 permit (in part J.2.g.) stated that the WURMP shall contain "A watershed based education program." The 2007 permit states that the WURMP shall include "watershed education activities" defined as "outreach and training activities that address high priority water quality problems in the WMA [Watershed Management Area(s)]." Moreover, in part E.f.(4), the 2007 permit states: "A Watershed Education Activity is in an active implementation phase when changes in attitudes, knowledge, awareness, or behavior can reasonably be established in target audiences." Because of this increased requirement for implementation of watershed education, the Commission finds that watershed education activities, as defined in part E.2.f, is a new program or higher level of service.

Additionally, the Commission finds that the rest of part E.2.f. is a new program or higher level of service because it includes elements not in the 2001 permit, such as:

- A definition of watershed water quality activities (part E.2.f.(1)(a)).
- Submission of a watershed activities list, with specified contents (part E.2.f.(2)).
- A detailed description of each activity on the watershed activities list, with seven specific components (part E.2.f.(3)).
- Implementation of watershed activities pursuant to established schedules, including definitions of when activities are in an active implementation phase (part E.2.f.(4)).

As to part E.2.g., although the 2001 (in parts J.1. & J.2.) and 2007 permits both require copermittee collaboration in developing and implementing the Watershed Urban Runoff Management Plan, copermittee collaboration is a new program or higher level of service because the WURMP is greatly expanded over the 2001 permit in part E.2.f as discussed above. This means that new collaboration is required to develop and implement the watershed activities in part E.2.f.

The 2007 permit (in part E.2.g) also states that "Watershed Copermittee collaboration shall include frequent regularly scheduled meetings." This requirement for meetings was not in the 2001 permit. The Fact Sheet/Technical Report states:

> The requirement for regularly scheduled meetings has been added based on Regional Board findings that watershed groups which hold regularly scheduled meetings (such as for San Diego Bay) typically produced better programs and work products than watershed groups that went for extended periods of time without scheduled meetings.[143]

Therefore, the Commission finds that part E.2.g. of the 2007 permit is a new program or higher level of service.

Regarding watershed water quality activities in part E.2.f, the Fact Sheet/Technical Report the Regional Board stated:

> This requirement developed over time while working with the Copermittees on their WURMP implementation under Order No. 2001-01. In October 2004 letters, the Regional Board recommended the Copermittees develop a list of Watershed Water Quality Activities for potential implementation. Following receipt of the Regional Board letters, the Copermittees created the Watershed Water Quality Activity lists. Although the Copermittees' lists needed improvement, the Regional Board found the lists to be useful planning tools that can be evaluated to identify effective and efficient Watershed Water Quality Activities. Because the lists are useful and have become a part of the WURMP implementation process, a requirement for their development has been written into the Order.

Thus, the Commission finds that part E.2.f. of the permit is a new program or higher level of service, in that it requires the following not required in the 2001 permit:

- Identification and implementation of watershed activities that address the high priority water quality problems in the WMA (Watershed Management Area), as specified (part E.2.f.(1)).
- Submission of a watershed activities list with each updated WURMP and updated annually thereafter, as specified (part E.2.f.(2)-(3)).
- Implementation of watershed activities pursuant to established schedules: no less than two watershed water quality activities and two watershed education activities in active implementation phase, as defined, per permit year (part E.2.f.(4)).

III. Regional Urban Runoff Management Program (Part F)

Part F of the permit describes the Regional Urban Runoff Management Program (RURMP). It was included because "some aspects of urban runoff management can be effectively addressed at a regional level. … However, significant flexibility has been provided to the Copermittees for new regional requirements."[144]

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[143] For an inexplicable reason, the Fact Sheet/Technical Report lists this collaboration activity under Section E.2.m of the permit rather than E.2.g.. The permit at issue has no section E.2.m.

[144] San Diego Regional Water Quality Control Board, "Fact Sheet/Technical Report for Order No. R9-2007-0001."

A. Copermittee collaboration – Regional Residential Education Program Development and Implementation (part F.1): Part F.1 requires the copermittees to develop and implement a Regional Residential Education Program, with specified contents (see p. 12 above). In the test claim the claimants discuss hiring a consultant to develop the educational program that "will generally educate residents on: 1) the difference between stormwater conveyance systems and sanitary sewer systems; 2) the connection of storm drains to local waterways; and 3) common residential sources of urban run-off." Claimants allege activities to comply with section F.1 of the permit that include, but are not limited to: "development of materials/branding, a regional website, regional outreach events, regional advertising and mass media, partnership development, and the development of marketing and research tools, including regional surveys to be conducted in FY 2008-09 and again in FY 2011-12."

In comments submitted in October 2008, the State Board asserts that the permit condition in section F.1. is necessary to meet the minimum federal MEP standard and that the requirement is supported by the Clean Water Act statutes and regulations. The State Board cites the following federal regulations:

> (v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system.[145] [¶]...[¶]
>
> (5) The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)(1)(v) of this section on a system-wide basis, jurisdiction-wide basis, watershed basis or other appropriate basis, or may issue permits for individual discharges.[146] [¶]...[¶]
>
> (2) *Part 2.* Part 2 of the application shall consist of:
>
> (i) *Adequate legal authority.* A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to: [¶]...[¶]
>
> (D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;[147]
>
> (iv) Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. ...[148]

In response, the claimants' February 2009 comments state that the Regional Residential Education Program is not necessary to meet the minimum federal MEP standard. The regional nature of the education program, according to the claimants, is duplicative because it imposes the

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[145] 40 Code of Federal Regulations section 122.26 (a)(3(v).

[146] 40 Code of Federal Regulations section 122.26 (a)(5).

[147] 40 Code of Federal Regulations section 122.26 (d)(2)(i)(D).

[148] 40 Code of Federal Regulations section 122.26 (d)(iv).

education requirements at the regional and jurisdictional levels concurrently, and it exceeds federal law.

The Commission finds that the requirements in part F.1 of the permit do not constitute a federal mandate. There is no federal requirement to provide a regional educational program, so the education program, "exceed[s] the mandate in that federal law or regulation."[149] As in *Long Beach Unified School Dist. v. State of California*, the permit "requires specific actions ... [that are] required acts."[150] In adopting part F.1, the state has freely chosen[151] to impose these requirements. Thus, the Commission finds that part F.1. of the permit does not constitute a federal mandate.

Based on the mandatory language on the face of the permit, the Commission finds that the permit constitutes a state mandate on the claimants to do all the following in part F.1 of the permit:

> The Regional Urban Runoff Management Program shall, at a minimum:
>
> 1. Develop and implement a Regional Residential Education Program. The program shall include:
>
> a. Pollutant specific education which focuses educational efforts on bacteria, nutrients, sediment, pesticides, and trash. If a different pollutant is determined to be more critical for the education program, the pollutant can be substituted for one of these pollutants.
> b. Education efforts focused on the specific residential sources of the pollutants listed in section F.1.a (p. 50.)

As to whether this is a new program or higher level of service, the State Board, in its October 2008 comments, states that it is not because the claimants were already implementing a residential education program at a regional level before the permit was adopted.

In claimants' February 2009 rebuttal comments, they assert that it is irrelevant whether or not the copermittees voluntarily met or exceeded the now mandatory requirements imposed by the 2007 permit because Government Code section 17565 states: "If a local agency ... at its option, has been incurring costs which are subsequently mandated by the state, the state shall reimburse the local agency ... for those costs incurred after the operative date of the mandate."

The Commission finds that part F.1 of the permit is a new program or higher level of service. The 2001 permit required an educational component as part of the Jurisdictional Urban Runoff Management Program (part F.4) that contained a residential component, but not a Regional Residential Education Program, so the activities in this program are new. Also, the Commission agrees that whether or not claimants were engaged in an educational program is not relevant due to Government Code section 17565. The Regional Board, in requiring the regional educational program, leaves the local agencies with no choice but to comply.

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[149] Government Code section 17556, subdivision (c).

[150] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155, 173.

[151] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

B. Copermittee collaboration (parts F.2 & F.3): Parts F.2 and F.3 (quoted on p. 11 above) require the copermittees to collaborate to develop, implement, and update as necessary a Regional Urban Runoff Management Program, to include developing the standardized fiscal analysis method required in permit part G (part F.2) and facilitating the assessment of the effectiveness of jurisdictional, watershed, and regional programs (part F.3).

In comments submitted in October 2008, the State Board asserts that the permit conditions in sections F.2 and F.3 are necessary to meet the minimum MEP standard, quoting the following federal regulation regarding municipal stormwater permits:

> (2) *Part 2.* Part 2 of the application shall consist of:
>
> (i) *Adequate legal authority.* A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to: [¶]...[¶]
>
> (D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;[152]

The State Board also quotes section 122.26 (a)(3)(v) of the federal regulations as follows:

> (v) Permits for all or a portion of all discharges from large[153] or medium[154] municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different

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[152] 40 Code of Federal Regulations section 122.26 (d)(2)(i)(D).

[153] "(4) Large municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) Located in an incorporated place with a population of 250,000 or more as determined by the 1990 Decennial Census by the Bureau of the Census (Appendix F of this part); or (ii) Located in the counties listed in appendix H, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or (iii) Owned or operated by a municipality other than those described in paragraph (b)(4)(i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(4)(i) or (ii) of this section. ..." [40 CFR § 122.26 (b)(4).]

[154] "(7) Medium municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) Located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the 1990 Decennial Census by the Bureau of the Census (Appendix G of this part); or (ii) Located in the counties listed in appendix I, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or (iii) Owned or operated by a municipality other than those described in paragraph (b)(7)(i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(7)(i) or (ii) of this section. ..." [40 CFR § 122.26 (b)(7).]

management programs for different drainage areas which contribute storm water to the system.

The State Board also asserts:

> To the extent the Clean Water Act and federal regulations do not identify all of the specificity required in Sections F.2, F.3 ..., the San Diego Water Board properly exercised its discretion under federal law to include specificity so that the federal MEP standard can be achieved. The San Diego Water Board exercised this duty under federal law and therefore the provisions of the 2007 Permit were adopted as federal requirements.

In the claimants' rebuttal comments submitted in February 2009, they state that "all of the authorities cited by the State merely acknowledge the State's authority to go beyond the federal regulations."

The Commission finds that the requirements in parts F.2 and F.3. of the permit do not constitute a federal mandate. There is no federal requirement to collaborate on, develop, or implement a Regional Urban Runoff Management Program (RURMP). The Commission finds that these RURMP activities "exceed the mandate in that federal law or regulation."[155] As in *Long Beach Unified School Dist. v. State of California*,[156] the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen[157] to impose these requirements. Thus, the Commission finds that parts F.2 and F.3 of the permit do not constitute federal mandates.

Based on the mandatory language on the face of the permit, the Commission finds that parts F.2 and F.3 of the permit constitutes a state mandate on the claimants to do all the following:

> Collaborate with the other Copermittees to develop, implement, and update as necessary a Regional Urban Runoff Management Program that meets the requirements of section F of the permit, reduces the discharge of pollutants from the MS4 to the MEP, and prevents urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. The Regional Urban Runoff Management Program shall, at a minimum: [¶]...[¶]
>
> (2) Develop the standardized fiscal analysis method required in section G of the permit, and,
>
> (3) Facilitate the assessment of the effectiveness of jurisdictional, watershed, and regional programs.

As to whether these activities are a new program or higher level of service, the claimants state in the test claim:

> "[W]hile the 2001 Permit required the copermittees to collaborate to address common issues and promote consistency among JURMPs and WURMPs and to

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[155] Government Code section 17556, subdivision (c).

[156] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[157] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

establish a management structure for this purpose, it lacked the detail, specificity and level of effort now mandated by the 2007 Permit."

In their February 2009 rebuttal comments, claimants assert that the 2001 and 2007 permits contain major substantive differences in their requirements for fiscal analyses of their jurisdictional programs.

The State Board, in its October 2008 comments, states that the 2001 permit required that "the Copermittees enter into a formal agreement to provide, at a minimum, a management structure for designating joint responsibilities, decision making, watershed management, information management of data and reports" and other collaborative arrangements to comply with the permit.

According to the State Board, parts F.2 and F.3 are not a new program or higher level of service because the copermittees "were already conducting multiple efforts on a regional level under the 2001 permit. The inclusion of the RURMP is designed to organize these efforts into one framework to improve Copermittee and Regional Board tracking of regional efforts." The State Board also asserts that the requirements were intended to reduce redundant reporting and improve efficiency and streamline regional program implementation. The State Board describes the 2007 permit as merely elaborating on and refining the 2001 requirements.

The permit itself states: "This Order contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in urban runoff to the MEP and achieve water quality standards." [Emphasis added.] The permit also describes the Regional Urban Runoff Management Plan as new.

While the 2001 permit contained requirements for a fiscal analysis (part F.8) and an assessment of effectiveness (part F.7), it did so only as components of a Jurisdictional Urban Runoff Management Program. The Regional Urban Runoff Management Program, required in part F.2 of the 2007 permit, is new. The fiscal analysis in part G is incorporated by reference into part F.2, and the effectiveness assessment is incorporated into part F.3. Thus, the Commission finds that the requirements in parts F.2 and F.3 are a new program or higher level of service.

IV. Program Effectiveness Assessment (Part I)

Part I of the permit is called "Program Effectiveness Assessment" and includes subparts for Jurisdictional (I.1), Watershed (I.2) and Regional (I.3) assessment, in addition to a Long Term Effectiveness Assessment (I.5). Of these, claimants pled subparts I.1, I.2 and I.5.

A. Jurisdictional and Watershed Program effectiveness assessment (parts I.1 & I.2): As more specifically stated on pages 22-24 above, the permit requires the copermittees to do the following:

- Annually assess the effectiveness of the Jurisdictional Urban Runoff Management Program (JURMP) that includes specifically assessing the effectiveness of specified components of the JURMP and the effectiveness of the JURMP as a whole.
- Identify measureable targeted outcomes, assessment measures, and assessment methods for each jurisdictional activity/BMP implemented, each major JURMP component, and the JURMP as a whole.

- Development and implement a plan and schedule to address the identified modifications and improvements.
- Annually report on the effectiveness assessment as implemented under each of the specified requirements.
- As a watershed group of copermittees, annually assess the effectiveness of the Watershed Urban Runoff Management Program (WURMP) implementation, including each water quality activity and watershed education activity, and the program as a whole.
- Determine source load reductions resulting from WURMP implementation and utilize water quality monitoring results and data to determine whether implementation is resulting in changes to water quality.
- As with the JURMP, annually review WURMP jurisdictional activities or BMPs to identify modifications and improvements needed to maximize the program's effectiveness, develop and implement a plan and schedule to address the identified modifications and improvements to the programs, and annually report on the program's effectiveness assessment as implemented under each of the requirements.

Regarding parts I.1.a. and I.2.a. of the permit, the Fact Sheet/Technical Report states: "The section requires both specific activities and broader programs to be assessed since the effectiveness of jurisdictional [or watershed] efforts may be evident only when considered at different scales."[158]

The State Board, in its comments submitted in October 2008, cites section 402(p)(3(B)(ii)-(iii) of the Clean Water Act, as well as 40 C.F.R. sections 122.26(d)(2)(i)(B)-(C), (E) and (F) and subdivision (d)(2)(iv) of the same section to show the "broad federal authorities relied upon by the San Diego Water Board to support Section I ... [that] ... support inclusion of the JURMP and WURMP effectiveness assessments under federal law." The State Board also quotes section 122.26(d)(2)(v) that the copermittees must include in part 2 of their application for a permit:

> *Assessment of controls.* Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water.

The State Board also says that "under 40 C.F.R. section 122.42(c), applicants must provide annual reports on the progress of their storm water management programs. The federal law behind the JURMP and WURMP effectiveness assessment requirements were discussed at great length in the 2001 Permit Fact Sheet."[159] The State Board quotes a lengthy portion of the 2001

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[158] Fact Sheet/Technical Report for Order No. R9-2007-0001, Parts I.1.a. and I.2.a.. Two identical paragraphs describe the JURMP on page 319 and the WURMP on page 320.

[159] 40 C.F.R. section 122.42(c) states:

> *Municipal separate storm sewer systems.* The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under §122.26(a)(1)(v) of this part must

Fact Sheet, which states that the U.S. EPA requires applicants to submit estimated reductions in pollutant loads expected to result from implemented controls and describe known impacts of storm water controls on groundwater. The 2001 Fact Sheet also includes "Throughout the permit term, the municipality must submit refinements to its assessment or additional direct measurements of program effectiveness in its annual report." It also lists a number of U.S. EPA suggestions, recommendations, and encouraged actions.

The State Board also quotes at length from the 2007 Permit Fact Sheet/Technical Report regarding why the effectiveness assessments are required under the permit, including the need for them and the benefits of including them. According to the State Board, the federal authorities support including the effectiveness assessments, and the Regional Board appropriately exercised discretion under federal law to include them, finding them necessary to implement the MEP standard. Thus, the State Board asserts that sections I.1 and I.2 do not exceed federal law.

The claimants, in their February 2009 comments, state that neither the broad nor the specific legal authority cited in the permit Fact Sheet "contains the above-referenced mandates required under the 2007 Permit." Claimants characterize the federal regulations as only requiring "program descriptions, estimated reductions, known impacts, and an annual report on progress. Federal law does not mandate the specific activities mandated by the 2007 Permit." Claimants also argue that the permit requirements are not necessary to meet the federal MEP standard, and point out that the 2001 Permit Fact Sheet cited by the State Board describes actions recommended or encouraged by the U.S. EPA, but not required. As claimant says: "they simply authorize applicants to go beyond minimum federal requirements." Claimants also quote the State Board's comment on "the need for and benefits of assessment requirements," noting that needs and benefits "constitute an insufficient basis for the imposition of a mandated requirement without subvention."

Although the federal regulations require assessment of controls and annual reports, they do not require the detailed assessment in the 2007 permit. The regulations do not require, for example, assessments of the effectiveness of each significant jurisdictional activity/BMP or watershed

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submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

(1) The status of implementing the components of the storm water management program that are established as permit conditions;
(2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with §122.26(d)(2)(iii) of this part; and
(3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under §122.26(d)(2)(iv) and (d)(2)(v) of this part;
(4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;
(5) Annual expenditures and budget for year following each annual report;
(6) A summary describing the number and nature of enforcement actions, inspections, and public education programs;
(7) Identification of water quality improvements or degradation.

quality activity, or of the implementation of each major component of the JURMP or WURMP, or identification of modifications and improvements to maximize the JURMP or WURMP effectiveness. These requirements, "exceed the mandate in that federal law or regulation."[160] As in *Long Beach Unified School Dist. v. State of California,*[161] the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen[162] to impose these requirements. Thus, the Commission finds that parts I.1 and I.2 of the permit are not federal mandates.

Based on the mandatory language on the face of the permit, the Commission finds that parts I.1 and I.2 of the permit are a state mandate on the copermittees to do all of the following:

> 1. Jurisdictional
>
> a. As part of its Jurisdictional Urban Runoff Management Program, each Copermittee shall annually assess the effectiveness of its Jurisdictional Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:
>
> (1) Specifically assess the effectiveness of each of the following:
>
> (a) Each significant jurisdictional activity/BMP or type of jurisdictional activity/BMP implemented;
> (b) Implementation of each major component of the Jurisdictional Urban Runoff Management Program (Development Planning, Construction, Municipal, Industrial/Commercial, Residential, Illicit Discharge[163] Detection and Elimination, and Education); and
> (c) Implementation of the Jurisdictional Urban Runoff Management Program as a whole.
>
> (2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.1.a.(1) above.
>
> (3) Utilize outcome levels 1-6[164] to assess the effectiveness of each of the items listed in section I.1.a.(1) above, where applicable and feasible.
>
> (4) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.1.a.(1) above, where applicable and feasible.
>
> (5) Utilize Implementation Assessment,[165] Water Quality Assessment,[166] and Integrated Assessment,[167] where applicable and feasible.

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[160] Government Code section 17556, subdivision (c).

[161] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[162] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

[163] Illicit discharge, as defined in Attachment C of the permit, is "any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from firefighting activities [40 C.F.R. 122.26 (b)(2)]."

[164] See footnote 50, page 21.

b. Based on the results of the effectiveness assessment, each Copermittee shall annually review its jurisdictional activities or BMPs to identify modifications and improvements needed to maximize Jurisdictional Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Jurisdictional activities/BMPs that are ineffective or less effective than other comparable jurisdictional activities/BMPs shall be replaced or improved upon by implementation of more effective jurisdictional activities/BMPs. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, jurisdictional activities or BMPs applicable to the water quality problems shall be modified and improved to correct the water quality problems.

c. As part of its Jurisdictional Urban Runoff Management Program Annual Reports, each Copermittee shall report on its Jurisdictional Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of sections I.1.a and I.1.b above.

2. Watershed

a. As part of its Watershed Urban Runoff Management Program, each watershed group of Copermittees (as identified in Table 4)[168] shall annually assess the effectiveness of its Watershed Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:

(1) Specifically assess the effectiveness of each of the following:

(a) Each Watershed Water Quality Activity implemented;
(b) Each Watershed Education Activity implemented; and
(c) Implementation of the Watershed Urban Runoff Management Program as a whole.

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[165] Implementation Assessment is defined in Attachment C of the permit as an "Assessment conducted to determine the effectiveness of copermittee programs and activities in achieving measureable targeted outcomes, and in determining whether priority sources of water quality problems are being effectively addressed."

[166] Water Quality Assessment is defined in Attachment C of the permit as an "Assessment conducted to evaluate the condition of non-storm water discharges, and the water bodies which receive these discharges."

[167] Integrated Assessment is defined in Attachment C of the permit as an "Assessment to be conducted to evaluate whether program implementation is properly targeted to and resulting in the protection and improvement of water quality."

[168] Table 4 of the permit divides the copermittees into nine watershed management areas. For example, the San Luis Rey River watershed management area lists the city of Oceanside, Vista and the County of San Diego as the responsible watershed copermittees. Table 4 also lists where the hydrologic units are and major receiving water bodies.

(2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.2.a.(1) above.

(3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in sections I.2.a.(1)(a) and I.2.a.(1)(b) above, where applicable and feasible.

(4) Utilize outcome levels 1-4 to assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, where applicable and feasible.

(5) Utilize outcome levels 5 and 6 to qualitatively assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, focusing on the high priority water quality problem(s) of the watershed. These assessments shall attempt to exhibit the impact of Watershed Urban Runoff Management Program implementation on the high priority water quality problem(s) within the watershed.

(6) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.2.a.(1) above, where applicable and feasible.

(7) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.

b. Based on the results of the effectiveness assessment, the watershed Copermittees shall annually review their Watershed Water Quality Activities, Watershed Education Activities, and other aspects of the Watershed Urban Runoff Management Program to identify modifications and improvements needed to maximize Watershed Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order.[169] The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Watershed Water Quality Activities/Watershed Education Activities that are ineffective or less effective than other comparable Watershed Water Quality Activities/Watershed Education Activities shall be replaced or improved upon by implementation of more effective Watershed Water Quality Activities/Watershed Education Activities. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, Watershed Water Quality Activities and Watershed Education Activities applicable to the water quality problems shall be modified and improved to correct the water quality problems.

c. As part of its Watershed Urban Runoff Management Program Annual Reports, each watershed group of Copermittees (as identified in Table 4) shall report on its Watershed Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of section I.2.a and I.2.b above.

[169] Section A is "Prohibitions and Receiving Water Limitations."

The State Board, in its October 2008 comments, states that the program effectiveness assessment is not a new program or higher level of service because the 2001 permit included a JURMP (in part F.7) and WURMP (in part J) effectiveness assessment requirements.

The claimants, in their February 2009 comments, state as follows:

> The 2001 Permit only required the copermittees to develop a long term strategy for assessing the effectiveness of their individual JURMP using specific and indirect measurements to track the long term progress of their individual JURMPs towards achieving water quality. [part F.7.a. of the 2001 permit.] The 2001 Permit also only mandated that the long term strategy developed by the copermittees include an assessment of the effectiveness of their JURMP in an annual report using the direct and indirect assessment measurements and methods developed in the long-term strategy. [part F.7. of the 2001 permit.]

Part F.7 of the 2001 permit required developing the following on the topic of "Assessment of Jurisdictional URMP Effectiveness Component."

> a. As part of its individual Jurisdictional URMP, each Copermittee shall develop a long-term strategy for assessing the effectiveness of its individual Jurisdictional URMP. The long-term assessment strategy shall identify specific direct and indirect measurements that each Copermittee will use to track the long-term progress of its individual Jurisdictional URMP towards achieving improvements in receiving water quality. Methods used for assessing effectiveness shall include the following or their equivalent: surveys, pollutant loading estimations, and receiving water quality monitoring. The long-term strategy shall also discuss the role of monitoring data in substantiating or refining the assessment.
>
> b. As part of its individual Jurisdictional URMP Annual Report, each Copermittee shall include an assessment of the effectiveness of its Jurisdictional URMP using the direct and indirect assessment measurements and methods developed in its long-term assessment strategy.

The 2007 permit requires more detail in its assessments than the 2001 permit. The 2007 permit requires annual assessments and using outcome levels, among other things, to assess the effectiveness of (a) each significant jurisdictional activity/BMP, (b) implementation of each major component of the JURMP, and (c) implementation of the JURMP as a whole. The 2001 permit did not require assessments at these three levels. And for example, outcome level 4 in the 2007 permit is required for measuring load reductions.[170] This is a higher level of service than "pollutant loading estimations" to be used as an effectiveness strategy in the 2001 permit.[171] Therefore, the Commission finds that section I.1 of the permit (Jurisdictional URMP effectiveness assessment) is a new program or higher level of service.

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[170] There are six Effectiveness Assessments incorporated into part I.1.a.(3) of the permit and are defined in Attachment C. One of them is "Effectiveness Assessment Level 4 – Load Reductions – Level 4 outcomes measure load reductions which quantify changes in the amounts of pollutants associated with specific sources before and after a BMP or other control measure is employed."

[171] See Fact Sheet/Technical Report for Order No. R9-2007-0001.

The assessment provisions of the Watershed Urban Runoff Management Program are in part J.2 of the 2001 permit, which requires each copermittee to develop and implement a Watershed URMP that contains, among other things:

> b. An assessment of the water quality of all receiving waters in the watershed based upon (1) existing water quality data; and (2) annual watershed water quality monitoring that satisfies the watershed monitoring requirements of Attachment B.
>
> [¶]...[¶]
>
> i. Long-term strategy for assessing the effectiveness of the Watershed URMP. The long-term assessment strategy shall identify specific direct and indirect measurements that will track the long-term progress of the Watershed URMP towards achieving improvements in receiving water quality. Methods used for assessing effectiveness shall include the following or their equivalent: surveys, pollutant loading estimations, and receiving water quality monitoring. The long-term strategy shall also discuss the role of monitoring data in substantiating or refining the assessment.

As with the JURMP, the 2001 permit required a "long-term strategy for assessing the effectiveness of the Watershed URMP" whereas the 2007 permit requires the annual assessment of more specific criteria: (a) each Watershed Water Quality Activity implemented; (b) Each Watershed Education Activity implemented; and (c) Implementation of the Watershed Urban Runoff Management program as a whole. And the 2007 permit requires assessing these activities using the same six effectiveness outcome levels as for the JURMP (defined in Attachment C), that were not in the 2001 permit.[172]

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[172] Effectiveness assessment outcome levels are defined in Attachment C of the permit as follows: Effectiveness assessment outcome level 1 – Compliance with Activity-based Permit Requirements – Level 1 outcomes are those directly related to the implementation of specific activities prescribed by this Order or established pursuant to it. Effectiveness assessment outcome level 2 – Changes in Attitudes, Knowledge, and Awareness – Level 2 outcomes are measured as increases in knowledge and awareness among target audiences such as residents, business, and municipal employees. Effectiveness assessment outcome level 3 – Behavioral Changes and BMP Implementation – Level 3 outcomes measure the effectiveness of activities in affecting behavioral change and BMP implementation. Effectiveness assessment outcome level 4 – Load Reductions – Level 4 outcomes measure load reductions which quantify changes in the amounts of pollutants associated with specific sources before and after a BMP or other control measure is employed. Effectiveness assessment outcome level 5 – Changes in Urban Runoff and Discharge Quality – Level 5 outcomes are measured as changes in one or more specific constituents or stressors in discharges into or from MS4s. Effectiveness assessment outcome level 6 – Changes in Receiving Water Quality – Level 6 outcomes measure changes to receiving water quality resulting from discharges into and from MS4s, and may be expressed through a variety of means such as compliance with water quality objectives or other regulatory benchmarks, protection of biological integrity [i.e., ecosystem health], or beneficial use attainment.

Therefore, the Commission finds that section I.2. of the permit (the Watershed URMP effectiveness assessment) is a new program or higher level of service.

B. Long Term Effectiveness Assessment (part I.5): As stated on pages 19-20 above, part I.5 requires the copermittees to collaborate to develop a Long Term Effectiveness Assessment (LTEA) that evaluates the copermittee programs on a jurisdictional, watershed, and regional level, and that emphasizes watershed assessment. The LTEA must build on the results of the August 2005 Baseline LTEA, and must be submitted to the Regional Board no later than 210 days before the permit expires. The LTEA must address the Regional objectives listed in part I.3 of the permit, as well as assess the effectiveness of the Receiving Waters Monitoring Program, and address outcome levels 1-6 as specified in attachment C of the permit.

In its October 2008 comments on the test claim, the State Board says that the LTEA requirement was imposed "so that the San Diego Water Board could properly evaluate the Copermittees' storm water program during the reapplication process." The State Board asserts that the LTEA provision is a federal mandate, citing 40 C.F.R. section 122.26, subdivisions (d)(2)(iv) and (v), in which (v) states that a permit application must include:

> *Assessment of controls.* Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water.

According to the State Board, "Even if the requirements to develop an LTEA are not specifically required by the federal regulations, the general discussion of the federal MEP standard is applicable here and supports the San Diego Water Board's determination that the region-wide LTEAs are necessary to meet the federal MEP standard."

In their February 2009 rebuttal comments, the claimants state:

> The program effectiveness component of the 2007 Permit mandates Jurisdictional (I.1), Watershed (I.2), Regional (I.3), Total Maximum Daily Loads ("TMDL") and BMP Implementation (I.4) and Long-term Effectiveness Assessment (I.5) requirements. This Section mandates multiple layers of program assessment, review and reporting. Such duplicative and collaborative efforts were not required under the 2001 Permit and are not required by federal law.

Claimants assert that there is no federal authority that states that the regional, jurisdictional and watershed program effectiveness training requirements are required to meet the minimum federal MEP standards. Claimants also state that permits in other jurisdictions do not have LTEA requirements. According to the claimants, "while portions of the federal regulations cited by the State permit region-wide or watershed-wide cooperation, there is no mandatory requirement for multiple layers of program effectiveness assessment."

Although the federal regulations require assessment of controls, they do not require the detailed assessment in the 2007 permit. They do not require, for example, collaboration with other copermittees, addressing specified objectives or outcome levels, or addressing jurisdictional, watershed, and regional programs. These requirements "exceed the mandate in that federal law

or regulation."[173] As in *Long Beach Unified School Dist. v. State of California*,[174] the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen[175] to impose these requirements. Thus, the Commission finds that part I.5 of the permit is not a federal mandate.

Because of the mandatory language on the face of the permit, the Commission finds that part I.5 of the permit is a state mandate for the claimants to do all of the following:

5. Long-term Effectiveness Assessment

a. Each Copermittee shall collaborate with the other Copermittees to develop a Longterm Effectiveness Assessment (LTEA), which shall build on the results of the Copermittees' August 2005 Baseline LTEA. The LTEA shall be submitted by the Principal Permittee to the Regional Board no later than 210 days in advance of the expiration of this Order.

b. The LTEA shall be designed to address each of the objectives listed in section I.3.a.(6)[176] of this Order, and to serve as a basis for the Copermittees' Report of Waste Discharge for the next permit cycle.

c. The LTEA shall address outcome levels 1-6, and shall specifically include an evaluation of program implementation to changes in water quality (outcome levels 5 and 6).

d. The LTEA shall assess the effectiveness of the Receiving Waters Monitoring Program in meeting its objectives and its ability to answer the five core management questions. This shall include assessment of the frequency of monitoring conducted through the use of power analysis and other pertinent statistical methods. The power analysis shall identify the frequency and intensity of sampling needed to identify a 10% reduction in the concentration of

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[173] Government Code section 17556, subdivision (c).

[174] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[175] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

[176] Part I.3.a.(6) of the permit states: At a minimum, the annual effectiveness assessment shall: (6) Include evaluation of whether the Copermittees' jurisdictional, watershed, and regional effectiveness assessments are meeting the following objectives: (a) Assessment of watershed health and identification of water quality issues and concerns. (b) Evaluation of the degree to which existing source management priorities are properly targeted to, and effective in addressing, water quality issues and concerns. (c) Evaluation of the need to address additional pollutant sources not already included in Copermittee programs. (d) Assessment of progress in implementing Copermittee programs and activities. (e) Assessment of the effectiveness of Copermittee activities in addressing priority constituents and sources. (f) Assessment of changes in discharge and receiving water quality. (g) Assessment of the relationship of program implementation to changes in pollutant loading, discharge quality, and receiving water quality. (h) Identification of changes necessary to improve Copermittee programs, activities, and effectiveness assessment methods and strategies.

constituents causing the high priority water quality problems within each watershed over the next permit term with 80% confidence.

e. The LTEA shall address the jurisdictional, watershed, and regional programs, with an emphasis on watershed assessment.

The next issue is whether the LTEA (part I.5) is a new program or higher level of service. The State Board, in its October 2008 comments, state as follows:

> The LTEA does not impose a new program or higher level of service. Rather, it requires the Copermittees to conduct a long term effectiveness assessment prior to submitting an application for reissuance of the Order in the next permit term and is necessary to support proposed changes to the Copermittees' programs."

The claimants, in their February 2009 comments, argue that the LTEA requirement in part I.5 does impose a new program or higher level of service. According to the claimants:

> Section F.7 of the 2001 Permit only required individual copermittees to develop long term effectiveness assessments for their Jurisdictional Urban Runoff Management Plan ("JURMP"). ... The 2001 Permit did not require the copermittees to collaborate to develop an overarching LTEA for regional, jurisdictional and watershed programs, and did not require the submission of a LTEA by a date certain in advance of the Permit expiration.

The Commission finds that the LTEA is a new program or higher level of service. The 2001 permit required JURMP assessment (in part F.7) and WURMP (in part J.2) as quoted above in the discussion on parts I.1 and I.2., but not an LTEA. The Fact Sheet/Technical Report for the 2007 permit states:

> Section I.5 (Long-Term Effectiveness Assessment) requires the Copermittees to conduct a Long-Term Effectiveness Assessment prior to their submittal of an application for reissuance of the Order. The Long-Term Effectiveness Assessment is necessary to provide support for the Copermittees' proposed changes to their programs in their ROWD. It can also serve as the basis for changes to the Order's requirements.

The Commission finds that the LTEA (part I.5) is a new program or higher level of service for three reasons. First, the scope of the assessment in the 2001 permit addresses only the JURMP and WURMP rather than "jurisdictional, watershed, and regional programs, with an emphasis on watershed assessment" as in the 2007 permit (see the analysis of I.1 and I.2 above). Second, the 2001 permit did not require collaborating with all other copermittees on assessment. Third, the 2001 permit contains much less detail on what to include in the assessment, such as, for example, the eight regional objectives listed in I.3.a.(6), incorporated by reference in part I.5. Also, the LTEA must assess the "effectiveness of the Receiving Waters Monitoring Program ... [and] shall include assessment of the frequency of monitoring conducted through the use of power analysis and other pertinent statistical methods." These methods were not required under the 2001 permit.

V. All Copermittee Collaboration (Part L)

Part L, labeled "All Permittee Collaboration," requires the copermittees to collaborate to address common issues and plan and coordinate activities, including developing a Memorandum of

Understanding (MOU), as specified. The Copermittees entered into an MOU effective in January 2008, which is attached to the test claim. The Copermittees allege activities involved with working body support and working body participation.

In comments submitted in October 2008, the State Board asserts that the permit condition in part L is necessary to meet the minimum MEP standard, quoting the following federal regulation regarding municipal stormwater permits:

> (2) *Part 2.* Part 2 of the application shall consist of:
>
> (i) *Adequate legal authority.* A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to: [¶]...[¶]
>
> (D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;[177]

The Commission finds that there is no federal mandate to develop a management structure (memorandum of understanding, or MOU) as required in part L of the 2007 permit. The federal regulation most on point requires an applicant (claimant) to demonstrate adequate legal authority "which authorizes or enables the applicant at a minimum to: [¶]...[¶] (D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;"[178] All the federal regulations address is authority to establish an interagency agreement or memorandum of understanding, but do not require it to be implemented or specify its contents beyond "controlling ... the contribution of pollutants from one portion of the municipal system to another portion of the municipal system."

By contrast, part L of the permit requires the copermittees to collaborate, promote consistency among JURMP and WURMP and plan and coordinate activities required under the permit. It also requires joint execution and submission to the Regional Board an MOU with a minimum of seven specified requirements.

Thus, this permit activity "exceed[s] the mandate in that federal law or regulation."[179] As in *Long Beach Unified School Dist. v. State of California,*[180] the permit requires specific actions, i.e., required acts that go beyond the requirements of federal law. In adopting these permit provisions, the state has freely chosen[181] to impose these requirements. Thus, the Commission finds that part L of the permit does not impose a federal mandate.

Based on the mandatory language in the permit, the Commission finds that part L of the permit is a state mandate on the claimants to do the following:

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[177] 40 Code of Federal Regulations section 122.26 (d)(2)(i)(D).

[178] 40 Code of Federal Regulations section 122.26 (d)(2)(i)(D).

[179] Government Code section 17556, subdivision (c).

[180] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[181] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

1. Collaborate with all other Copermittees regulated under this Order to address common issues, promote consistency among Jurisdictional Urban Runoff Management Programs and Watershed Urban Runoff Management Programs, and to plan and coordinate activities required under this Order.

(a) Jointly execute and submit to the Regional Board no later than 180 days after adoption of the permit, a Memorandum of Understanding, Joint Powers Authority, or other instrument of formal agreement that at a minimum:

(1) Identifies and defines the responsibilities of the Principal Permittee[182] and Lead Watershed Permittees;[183]

(2) Identifies Copermittees and defines their individual and joint responsibilities, including watershed responsibilities;

(3) Establishes a management structure to promote consistency and develop and implement regional activities;

(4) Establishes standards for conducting meetings, decisions-making, and cost-sharing;

(5) Provides guidelines for committee and workgroup structure and responsibilities;

(6) Lays out a process for addressing Copermittee non-compliance with the formal agreement;

(7) Includes any and all other collaborative arrangements for compliance with this order.

The State Board, in its October 2008 comments, asserts that the management structure framework in part L of the 2007 permit is not a new program or higher level of service because:

> The 2001 permit required significant collaboration to address common issues and promote consistency across management programs [and] development of a management structure through execution of a formal agreement, meeting minimum specifications. It also required standardized reporting, including fiscal analysis.

The State Board also argues there is "minimal substantive difference" between the 2001 and 2007 permits in their requirements to establish "a formal cooperative arrangement and to implement regional urban runoff management activities. The 2007 Permit merely elaborates on and refines the 2001 requirements."

In its February 2009 rebuttal comments, the claimants assert that the 2001 and 2007 permits contain major substantive differences in their requirements for fiscal analyses of their jurisdictional programs.

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[182] The Principal Permittee is the County of San Diego.

[183] According to the permit: "Watershed Copermittees shall identify the Lead Watershed Permittee for their WMA [Watershed Management Area]."

Part L.1 of the 2007 permit, the first paragraph in L requiring collaboration, is identical to part N of the 2001 permit. The Commission finds, however, that the collaboration is a new program or higher level of service because it now applies to all the activities that are found to be a new program or higher level of service in the analysis above (i.e, not in the 2001 permit) including the Regional Urban Runoff Management Program.

Part L.1.a, regarding the MOU or formal agreement, is similar but not identical to part N of the 2001 permit. Both permits require adoption of a "Memorandum of Understanding [MOU], Joint Powers Authority, or other instrument of formal agreement." The 2001 permit, in part N.1.a, required the MOU to provide a management structure with the following contents: "designation of joint responsibilities, decision making, watershed activities, information management of data and reports, including the requirements under this Order; and any and all other collaborative arrangements for compliance with this Order."

By contrast, the 2007 permit, requires the MOU to be submitted to the Regional Board within 180 days after adoption of the permit and requires that the MOU, at a minimum:

(1) Identifies and defines the responsibilities of the principal Permittee and Lead Watershed Permittees;

(2) Identifies Copermittees and defines their individual and joint responsibilities;

(3) Establishes a management structure to promote consistency and develop and implement regional activities;

(4) Establishes standards for conducting meetings, decision-making, and cost-sharing;

(5) Provides guidelines for committee and workgroup structure and responsibilities;

(6) Lays out a process for addressing Copermittee non-compliance with the formal agreement; and

(7) Includes any and all other collaborative arrangements for compliance with this order.

The contents of the MOU specified in the 2001 permit, although stated with less specificity, are the same as those in the 2007 permit for numbers (1)-(2) and (7) above. Both permits require the MOU to contain "designation of joint responsibilities" and "collaborative arrangements for compliance with this order." Thus, the Commission finds that jointly executing and submitting those parts of the MOU to the Regional Board is not a new program or higher level of service.

The Commission finds that part L.1.a of the permit is a new program or higher level of service for all copermittees to do the following:

- Collaborate with all other Copermittees to address common issues, promote consistency among Jurisdictional Urban Runoff Management Programs and Watershed Urban Runoff Management Programs, and to plan and coordinate activities required under the permit.
- Jointly execute and submit to the Regional Board, no later than 180 days after adoption of the permit, a Memorandum of Understanding, Joint Powers Authority, or other instrument of formal agreement which at a minimum: (3) Establishes a management structure to promote consistency and develop and implement regional activities; (4) Establishes standards for conducting meetings, decision-making, and cost-sharing; (5) Provides guidelines for

committee and workgroup structure and responsibilities; and (6) Lays out a process for addressing copermittee non-compliance with the formal agreement.

Summary of Issue 1: The Commission finds that the following parts of the 2007 permit are a state-mandated, new program or higher level of service.

I. Jurisdictional Urban Runoff Management Program and Reporting (Parts D & J)

- Collaborate with other copermittees to develop and implement a hydromodification management plan, as specified (D.1.g.), for private priority development projects. Reimbursement is not required for this activity for municipal priority development projects.
- Develop and submit an updated Model SUSMP that defines minimum Low-impact Development and other BMPs as specified (D.1.d.(7)-(8)), for private priority development projects. Reimbursement is not required for this activity for municipal priority development projects.
- Street sweeping (D.3.a.(5)) and reporting on street sweeping (J.3.a(3)x-xv);
- Conveyance system cleaning (D.3.a.(3)(b)(iii)) and reporting on conveyance system cleaning (J.3.a.(3)(c)(iv)-(viii));
- Educational component (D.5).
    - Educate each specified target community on the following topics: (1) Erosion prevention, (2) Non storm water discharge prohibitions, and (3) BMP types: facility or activity specific, LID, source control, and treatment control (D.5.a.(1));
    - Educational programs shall emphasize underserved target audiences, high-risk behaviors, and 'allowable' behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources (D.5.a.(2));
    - Implement an education program that includes annual training only for planning boards and elected officials, if applicable, to have an understanding of the topics in (i) and (ii) (D.5.b.(1)(a)(i) & (ii));
    - Implement an education program so that its planning and development review staffs (and Planning Boards and Election Officials, if applicable) have an understanding of the topics in (iii) and (iv) as specified (D.5.b.(1)(a)(iii) & (iv));
    - Implement an education program that includes annual training prior to the rainy season so that [the Copermittee's] construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of the following topics, as appropriate for the target audience: the topics in (iii) to (vi), as specified (D.5.b.(1)(b)(iii) & (iv));
        - Municipal Industrial/Commercial Activities (D.5.b.(1)(c));
        - Municipal Other Activities (D.5.b.(1)(d));
        - New Development and Construction Education (D.5.(b)(2));
        - Residential, General Public, and School Children Education (D.5.(b)(3)).

II. Watershed Urban Runoff Management Program (Parts E.2.f & E.2.g.)

- Identify and implement the Watershed activities as specified (E.2.f.).
- Collaborate to develop and implement the Watershed Urban Runoff Management Programs. Watershed Copermittee collaboration shall include frequent regularly scheduled meetings. (E.2.g.)

III. Regional Urban Runoff Management Program (Parts F.1, F.2 & F.3)

- Include developing and implementing a Regional Residential Education Program development and implementation in the RURMP, as specified (F.1.).
- Include developing the standardized fiscal analysis method required in permit part G in the RURMP (F.2.).
- Facilitate the assessment of the effectiveness of jurisdictional, watershed, and regional programs in the RURMP (F.3.).

IV. Program Effectiveness Assessment (Parts I.1, I.2 & I.5)

- Annually assess the effectiveness of each copermittee's JURMP, as specified (I.1.).
- Annually assess the effectiveness of each watershed group's WURMP (I.2.).
- Collaborate with the other copermittees to develop a Long-term Effectiveness Assessment, as specified, and submit it to the Regional Board as specified (I.5.).

V. All Permittee Collaboration (Part L)

- Collaborate with all other copermittees to address common issues, promote consistency among the JURMP and WURMP, and to plan and coordinate activities required under the permit.
- Jointly execute and submit to the Regional Board, no later than 180 days after adoption of the permit, a Memorandum of Understanding, Joint Powers Authority, or other instrument of formal agreement as specified (L.1.a. (3)-(5)).

Any further reference to the test claim activities is limited to these parts of the permit found to be a new program or higher level of service.

Issue 2: Do the test claim activities impose costs mandated by the state within the meaning of Government Code sections 17514 and 17556?

The final issue is whether the permit provisions impose costs mandated by the state,[184] and whether any statutory exceptions listed in Government Code section 17556 apply to the test claim. Government Code section 17514 defines "cost mandated by the state" as follows:

> [A]ny increased costs which a local agency or school district is required to incur after July 1, 1980, as a result of any statute enacted on or after January 1, 1975, or any executive order implementing any statute enacted on or after January 1, 1975, which mandates a new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution.

[184] *Lucia Mar, supra*, 44 Cal.3d 830, 835; Government Code section 17514.

Government Code section 17564 requires reimbursement claims to exceed $1000 to be eligible for reimbursement. In the test claim, the County of San Diego itemized the costs of complying with the permit conditions as follows:

Activity	Cost FY 2007-08
Regional Urban Runoff Management Program -Copermittee collaboration (F.2, F.3, L)	$260,031.09
Copermittee collaboration, Regional Residential Education, Program Development and Implementation (F.1)	$131,250.00
Jurisdictional Urban Runoff Management Program (JURMP) -hydromodification (D.1.g)	$630,000.00
JURMP Standard Urban Storm Water Mitigation Plans -low impact development (D.1.d)	$52,200.00
Long Term Effectiveness Assessment (I.5)	$210,000.00
Street Sweeping (D.3.a.(5) Equipment, Staffing, Contract	$3,477,190.00
Conveyance System Cleaning (D.3.a.(3)) and Reporting (J.2.a.(3)(c) iv – vii.	$3,456,087.00
Program Effectiveness Assessment (I.1 & I.2)	$392,363.00
Educational Surveys and Tests (D.5)	$62,617.00
Watershed Urban Runoff Management Program -Copermittee collaboration (E.2.f., E.2.g)	$1,632,893.00
Total	$10,304,631.09

Claimants submitted documentation in February 2010 that show the 2008-2009 cost for the permit activities is $18,014,213. These figures, along with those in the test-claim narrative and declarations submitted by the San Diego County and 18 cities,[185] illustrate that the costs to comply with the permit activities exceed $1,000. The Commission, however, cannot find "costs mandated by the state" within the meaning of Government Code section 17514 if any exceptions in Government Code section 17556 apply, which is discussed below.

A. Claimants did not request the test claim activities within the meaning of Government Code section 17556, subdivision (a).

The first issue is whether the claimants requested or proposed the activities in the permit. The Department of Finance and the State Board both assert that claimants did so in their Report of

[185] The County and city declarations are attached to the test claim.

Waste Discharge. As discussed above, the claimants were required to submit a ROWD and Stormwater Quality Management Plan before the permit was issued.[186]

Government Code section 17556, subdivision (a), provides that the Commission shall not find costs mandated by the state if:

> (a) The claim is submitted by a local agency ... that requested legislative authority for that local agency ... to implement the program specified in the statute, and that statute imposes costs upon that local agency or school district requesting the legislative authority. A resolution from the governing body or a letter from a delegated representative of the governing body of a local agency ... that requests authorization for that local agency ... to implement a given program shall constitute a request within the meaning of this subdivision.

Based on the language of the statute, section 17556, subdivision (a), does not apply because the permit is not a statute, the claimants did not request "legislative authority" to implement the permit, and the record lacks any resolutions adopted by the claimants. Therefore, the Commission finds that the claimants did not request the activities in the permit within the meaning of Government Code section 17556, subdivision (a).

B. Claimants have fee authority under Government Code section 17556, subdivision (d), for the test claim activities that do not require voter approval under Proposition 218

Government Code section 17556, subdivision (d), states:

> The commission shall not find costs mandated by the state, as defined in Section 17514, in any claim submitted by a local agency ... if, after a hearing, the commission finds any one of the following: [¶]...[¶] (d) The local agency ... has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.

The California Supreme Court upheld the constitutionality of Government Code section 17556, subdivision (d), in *County of Fresno v. State of California.*[187] The court, in holding that the term "costs" in article XIII B, section 6, excludes expenses recoverable from sources other than taxes, stated:

> Section 6 was included in article XIII B in recognition that article XIII A of the Constitution severely restricted the taxing powers of local governments. (See *County of Los Angeles, supra,* 43 Cal.3d at p. 61.) The provision was intended to preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that were ill equipped to handle the task. (*Ibid.*; see *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 836, fn. 6 [244 Cal.Rptr. 677, 750 P.2d 318].) Specifically, it was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues. Thus, although its language broadly

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[186] Water Code section 13376; 40 Code of Federal Regulations, section 122.21 (a). The Federal regulation applies to U.S. EPA-issued permits, but is incorporated into section 123.25 (the state-program provision) by reference. Also see the 2007 permit, page 2, part A.

[187] *County of Fresno v. State of California, supra,* 53 Cal.3d 482.

> declares that the "state shall provide a subvention of funds to reimburse ... local government for the costs [of a state-mandated new] program or higher level of service," read in its textual and historical context section 6 of article XIII B requires subvention only when the costs in question can be recovered *solely from tax revenues.*
>
> In view of the foregoing analysis, the question of the facial constitutionality of section 17556(d) under article XIII B, section 6, can be readily resolved. As noted, the statute provides that "The commission shall not find costs mandated by the state ... if, after a hearing, the commission finds that" the local government "has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service." Considered within its context, the section effectively construes the term "costs" in the constitutional provision as excluding expenses that are recoverable from sources other than taxes. Such a construction is altogether sound. As the discussion makes clear, the Constitution requires reimbursement only for those expenses that are recoverable solely from taxes. It follows that section 17556(d) is facially constitutional under article XIII B, section 6.[188]

In another case about subdivision (d) of section 17556, *Connell v. Superior Court,*[189] the dispute was whether local agencies had sufficient fee authority for a mandate involving increased purity of reclaimed wastewater used for certain types of irrigation. The court cited statutory fee authority for the reclaimed wastewater, and noted that the water districts did not dispute their fee authority. Rather, the water districts argued that they lacked "sufficient" fee authority in that it was not economically feasible to levy fees sufficient to pay the mandated costs. In finding the fee authority issue is a question of law, the court stated that Government Code section 17556, subdivision (d), is clear and unambiguous, in that its plain language precludes reimbursement where the local agency has the authority, i.e., the right or the power, to levy fees sufficient to cover the costs of the state-mandated program." The court rejected the districts' argument that "authority" as used in the statute should be construed as a "practical ability in light of surrounding economic circumstances" because that construction cannot be reconciled with the plain language of section 17556, and would create a vague standard not capable of reasonable adjudication. The court also said that nothing in the fee authority statute (Wat. Code, § 35470) limited the authority of the districts to levy fees "sufficient" to cover their costs. Thus, the court concluded that the plain language of section 17556 made the fee authority issue solely a question of law, and that the water districts could not be reimbursed due to that fee authority.[190]

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[188] *County of Fresno v. State of California, supra,* 53 Cal.3d 482, 487. Emphasis in original.

[189] *Connell v. Superior Court* (1997) 59 Cal.App.4th 382.

[190] *Connell v. Superior Court, supra,* 59 Cal.App.4th 382, 398-402.

1. **Claimants' have regulatory fee authority (within the meaning of Gov. Code, § 17556, subd. (d)) under the police power sufficient to pay for the mandated activities that do not require voter approval under Proposition 218: the hydromodification plan and low-impact development.**

In its October 2008 comments, the State Board asserted that the claimants have fee authority to pay for the permit activities. Although the Board recognizes "limitations on assessing fees and surcharges under California law ... [concerning] the percentage of voters who must approve the assessment" the Board points to examples of local agencies (Cities of Los Angeles, San Clemente, and Palo Alto) that have successfully adopted an assessment. The State Board also argues that the cities' trash collection responsibilities may also include street sweeping and conveyance system cleaning for which the city could charge fees, and that developer fees could be charged for hydromodification and low impact development.

Claimants, in comments submitted in February 2009, state that they cannot unilaterally impose a fee to recover the cost to comply with the 2007 permit on water or sewer bills sent to residents because of *Howard Jarvis Taxpayer Assoc. v. City of Salinas,*[191] in which the court invalidated a stormwater management utility fee imposed by the city on all owners of developed parcels in the city. The court held that article XIII D (Proposition 218) of the California Constitution "required the city to subject the proposed storm drainage fee to a vote of the property owners or the voting residents of the affected area."[192] As to the argument that claimants can put the fee to a vote in their jurisdictions, claimants state as follows:

> Articles XIII C and XIII D, which were added to the Constitution by Proposition 218, regulate the imposition of general and special taxes as well as the imposition of special assessments and property related fees. In each of these cases the question of whether to impose a tax, special assessment or a property related fee must be submitted to and approved by the voters. And, in the case of a special tax, and in certain instances the imposition of a fee or charge, the tax or fee must be approved by a two-thirds vote of the resident voters. The State fails to cite any authority that requires the copermittees to first submit the question of whether to impose a tax or fee to the voters and have them reject the proposition. Such a requirement would render all mandate claims moot, without first submitting the question of whether to impose a tax or assessment to a vote of the electorate.

The issue of local fee authority for municipal stormwater permit activities in this permit cannot be answered without discussing regulatory fee authority under the police power and the limitations on that authority via the voter-approval requirement in article XIII D of the California Constitution (Proposition 218).

Case law has recognized three general categories of local agency fees or assessments: (1) special assessments, based on the value of benefits conferred on property; (2) development fees, exacted in return for permits or other government privileges; and (3) regulatory fees, imposed under the police power.[193] The regulatory and development fees are discussed below in the context of

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[191] *Howard Jarvis Taxpayers Assoc. v. City of Salinas* (2002) 98 Cal.App.4th 1351, 1358-1359.

[192] *Id.* at page 1358-1359.

[193] *Sinclair Paint v. State Board of Equalization* (1997) 15 Cal.4th 866, 874.

XIII D (Proposition 218) that would allow the claimants to impose fees for the activities in the test claim related to development.

Regulatory fee authority under the police power: The law on local government fee authority begins with article XI, section 7, of the California Constitution, which states: "A county or city may make and enforce within its limits all local, police, sanitary, and other ordinances and regulations not in conflict with general laws." Article XI, section 7, includes the authority to impose fees, and courts have held that "the power to impose valid regulatory fees does not depend on legislatively authorized taxing power but exists pursuant to the direct grant of police power under article XI, section 7, of the California Constitution."[194]

Water pollution prevention is also a valid exercise of government police power.[195]

In *Sinclair Paint v. State Board of Equalization,*[196] the California Supreme Court upheld a fee on manufacturers of paint that funded a child lead-poisoning program that provided evaluation, screening, and medically necessary follow-up services for children who were deemed potential victims of lead poisoning. The program was entirely supported by fees assessed on manufacturers or other persons contributing to environmental lead contamination. In upholding the fee, the court ruled that it was a regulatory fee imposed under the police power and not a special tax requiring a two-thirds vote under article XIII A, section 4, of the California Constitution. The court stated:

> From the viewpoint of general police power authority, we see no reason why statutes or ordinances calling on polluters or producers of contaminating products to help in mitigation or cleanup efforts should be deemed less "regulatory" in nature than the initial permit or licensing programs that allowed them to operate.
>
> Viewed as a mitigating effects measure, [the fee] is comparable in character to several police power measures imposing fees to defray the actual or anticipated adverse effects of various business operations.[197] [Emphasis added.]

Regulatory fees also help to prevent or mitigate pollution, as the Court said: "imposition of 'mitigating effects' fees in a substantial amount ... also 'regulates' future conduct by deterring further manufacture, distribution, or sale of dangerous products, and by stimulating research and development efforts to produce safer or alternative products."[198] The court also recognized that regulatory fees do not depend on government-conferred benefits or privileges.[199]

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[194] *Mills v. County of Trinity* (1980) 108 Cal.App.3d 656, 662, in which a taxpayer challenged a county ordinance that imposed new and increased fees for county services in processing subdivision, zoning, and other land-use applications that had been adopted without a two-thirds affirmative vote of the county electors.

[195] *Freeman v. Contra Costa County Water Dist.* (1971) 18 Cal.App.3d 404, 408.

[196] *Sinclair Paint v. State Board of Equalization* (1997) 15 Cal.4th 866.

[197] *Sinclair Paint v. State Board of Equalization, supra,* 15 Cal.4th 866, 877.

[198] *Sinclair Paint v. State Board of Equalization, supra,* 15 Cal.4th 866, 875-877.

[199] *Id.* at page 875.

Although the holding in *Sinclair Paint* applied to a state-wide fee, the court's language (treating "ordinances" the same as "statutes") recognizes that local agencies also have police power to impose regulatory fees, and it relied on local government police power cases in its analysis.[200]

Other cases have defined a regulatory fee as an imposition that funds a regulatory program[201] or that distributes the collective cost of a regulation"[202] and is "enacted for purposes broader than the privilege to use a service or to obtain a permit. ...the regulatory program is for the protection of the health and safety of the public."[203] Courts will uphold regulatory fees if they do not exceed the reasonable cost of providing services necessary to the activity on which the fee is based and are not levied for an unrelated revenue purpose.

In upholding regulatory fees for environmental review by the California Department of Fish and Game, the court of appeal summarized the following rules on regulatory fees:

> A regulatory fee may be imposed under the police power when the fee constitutes an amount necessary to carry out the purposes and provisions of the regulation. [Citations omitted.] Such costs ... include all those incident to the issuance of the license or permit, investigation, inspection, administration, maintenance of a system of supervision and enforcement. [Citations omitted.] Regulatory fees are valid despite the absence of any perceived "benefit" accruing to the fee payers. [Citations omitted.] Legislators "need only apply sound judgment and consider 'probabilities according to the best honest viewpoint of informed officials' in determining the amount of the regulatory fee.[204] [Emphasis added.]

In *Tahoe Keys Property Owner's Assoc. v. State Water Resources Control Board*,[205] the court refused to issue a preliminary injunction against collecting a pollution mitigation fee of $4000 for each lot developed in the Tahoe Keys subdivision of Lake Tahoe. The fees were to be used for mitigation projects designed to achieve a net reduction in nutrients generated by the Tahoe Keys development. The court said: "on the face of the regulation, there appears to be a sufficient

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[200] *Sinclair Paint v. State Board of Equalization, supra,* 15 Cal.4th 866, 873. The Court stated: "Because of the close, 'interlocking' relationship between the various sections of article XIII A (Citation omitted) we believe these "special tax" cases [under article XIII A, § 3, state taxes] may be helpful, though not conclusive, in deciding the case before us. The reasons why particular fees are, or are not, "special taxes" under article XIII A, section 4, [local government taxes] may apply equally to section 3 cases."

[201] *California Assn. of Prof. Scientists v. Dept. of Fish and Game* (2000) 79 Cal.App.4th 935, 950.

[202] *Id.* at 952.

[203] *Ibid.*

[204] *California Assn. of Prof. Scientists v. Dept. of Fish and Game, supra,* 79 Cal.App.4th 935, 945.

[205] *Tahoe Keys Property Owner's Assn. v. State Water Resources Control Board* (1993) 23 Cal.App.4th 1459.

nexus between the effect of the regulation and the objectives it was supposed to advance to support the regulatory scheme [mitigation of pollution in Lake Tahoe]."[206]

A variety of local agency regulatory fees have been upheld for various programs, including: processing subdivision, zoning, and other land-use applications,[207] art in public places,[208] remedying substandard housing,[209] recycling,[210] administrative hearings under a rent-control ordinance,[211] signage,[212] air pollution mitigation,[213] and replacing converted residential hotel units.[214] Fees on developers for environmental mitigation under the California Environmental Quality Act have also been upheld.[215]

Given the variety of examples where regulatory fees have been upheld, and the broad range of costs to which they may be applied (including those for 'administration'), the claimants have fee authority under the police power to impose fees for the permit activities that are a state-mandated new program or higher level of service. But a determination as to whether the claimants' fee authority is sufficient, within the meaning of Government Code section 17556, subdivision (d), to pay for the mandated activities and deny the test claim, cannot be made without analysis of the limitations on the fee authority imposed by Proposition 218.

Regulatory fee authority is limited by voter approval under Proposition 218: With some exceptions, local government fees or assessments that are incident to property ownership are subject to voter approval under article XIII D of the California Constitution, as added by Proposition 218 in 1996. Article XIII D defines a fee as "any levy other than an ad valorem tax, a special tax, or an assessment, imposed by an agency on a parcel or a person as an incident of property ownership, including a user fee or charge for a property-related service." It defines an assessment as "any levy or charge upon real property by an agency for a special benefit conferred upon the real property [and] includes, but is not limited to, "special assessment,' 'benefit assessment,' 'maintenance assessment,' and 'special assessment tax.'"

Among other procedures, new or increased property-related fees require a majority-vote of the affected property owners, or two-thirds registered voter approval, or weighted ballot approval by the affected property owners (art. XIII D, § 6, subd. (c)). Assessments must also be approved by owners of the affected parcels (art. XIII D, § 4, subd.(d)). Expressly exempt from voter

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[206] *Id.* at page 1480.

[207] *Mills v. County of Trinity, supra,* 108 Cal.App.3d 656, 662.

[208] *Ehrlich v. City of Culver City* (1996) 12 Cal.4th 854, 886.

[209] *Apartment Assoc. of Los Angeles County v. City of Los Angeles* (2001) 24 Cal.4th 830.

[210] *City of Dublin v. County of Alameda* (1993) 14 Cal.App.4th 264.

[211] *Pennell v. City of San Jose* (1986) 42 Cal.3d 365.

[212] *United Business Communications v. City of San Diego* (1979) 91 Cal.App.3d 156.

[213] *California Building Industry Ass'n v. San Joaquin Valley Air Pollution Control Dist.* (2009) 178 Cal.App.4th 120.

[214] *Terminal Plaza Corp. v. City and County of San Francisco* (1986) 177 Cal.App.3d 892.

[215] *Environmental Council of Sacramento v. City of Sacramento* (2006) 142 Cal.App.4th 1018.

approval, however, are property-related fees for sewer, water, or refuse collection services (art. XIII D, § 6, subd. (c)).

In 2002, an appellate court in *Howard Jarvis Taxpayers Association v. City of Salinas, supra,* 98 Cal.App.4th 1351, found that a city's charges on developed parcels to fund stormwater management were property-related fees, and were not covered by Proposition 218's exemption for "sewer" or "water" services. This means that an election would be required to charge stormwater fees if they are imposed "as an incident of property ownership."

The issue of whether a local agency has sufficient fee authority for the mandated activities under Government Code section 17556, subdivision (d), in light of the voter approval requirement for fees under article XIII D (Proposition 218) is one of first impression for the Commission.

The Commission finds that a local agency does not have sufficient fee authority within the meaning of Government Code section 17556 if the fee or assessment is contingent on the outcome of an election by voters or property owners. The plain language of subdivision (d) of this section prohibits the Commission from finding that the permit imposes "costs mandated by the state" if "The local agency ... has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service." [Emphasis added.] Under Proposition 218, the local agency has no authority to impose the fee without the consent of the voters or property owners.

Additionally, it is possible that the local agency's voters or property owners may never adopt the proposed fee or assessment, but the local agency would still be required to comply with the state mandate. Denying reimbursement under these circumstances would violate the purpose of article XIII B, section 6, which is to "to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose."[216]

In its January 2010 comments on the draft staff analysis, the State Board disagrees that "the requirement to subject new or increased fees to these voting or protest requirements strips the claimants of 'fee authority' within the meaning of Government Code section 17556, subdivision (d)." The State Board cites *Connell v. Superior Court,*[217] in which the water districts argued that they lacked "sufficient" fee authority because it was not economically feasible for them to levy fees that were sufficient to pay the mandated costs. The *Connell* court determined that "the plain language of the statute [Gov. Code, § 17556, subd. (d)] precludes reimbursement where the local agency has the authority, i.e., the right or the power, to levy fees sufficient to cover the costs of the state-mandated program."[218] The State Board equates the Proposition 218 voting requirement with the economic impracticability faced by the water districts in *Connell.*

The claimants disagree, citing a lack of authority that requires them to first submit the question of whether to impose a tax or fee to the voters and have them reject the proposition. According

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[216] *County of San Diego, supra,* 15 Cal.4th 68, 81.

[217] *Connell v. Superior Court, supra,* 59 Cal.App.4th 382.

[218] *Id.* at page 401.

to the claimants, such a requirement would render all mandate claims moot, without first submitting the question of whether to impose a tax or assessment to a vote of the electorate.

The Commission disagrees with the State Board. The Proposition 218 election requirement is not like the economic hurdle to fees in *Connell*. Absent compliance with the Proposition 218 election and other procedures, there is no legal authority to impose or raise fees within the meaning of Government Code section 17556, subdivision (d). The voting requirement of Proposition 218 does not impose a mere practical or economic hurdle, as in *Connell*, but a legal and constitutional one. Without voter or property owner approval, the local agency lacks the "authority, i.e., the right or power, to levy fees sufficient to cover the costs of the state-mandated program."[219]

In fact, the fee at issue in the *Connell* case (Wat. Code, § 35470) was amended by the Legislature in 2007 to conform to Proposition 218. Specifically, the Water Code statute now requires compliance with "the "notice, protest, and hearing procedures in Section 53753 of the Government Code."[220] This Government Code statute implements Proposition 218.

For these reasons, the Commission finds that local agencies do not have fee authority that is sufficient within the meaning of Government Code section 17556, subdivision (d) to deny the test claim for those activities that would condition the fee or assessment on voter or property-owner approval under Proposition 218 (article XIII D). The Commission finds that Proposition 218 applies to all the activities in this test claim (except for the hydromodification and LID activities that are related to priority development projects discussed below) so that they impose "costs mandated by the state" (within the meaning of Gov. Code, § 17556, subd. (d)). To the extent that property-owner or voter-approved fees or assessments are imposed to pay for any of the permit activities found above to be a state-mandated new program or higher level of service, the fee or assessment would be identified as offsetting revenue in the parameters and guidelines to offset the claimant's costs in performing those activities.

Fees imposed for two of the test-claim activities, however, i.e., for the hydromodification management plan and low-impact development, would not be subject to voter approval under Proposition 218, as discussed below.

Fees as a condition of property development are not subject to Proposition 218: Proposition 218 does not apply to development fees, including those imposed on activities in part D of the permit. Article XIII D expressly states that it shall not be construed to "affect existing laws relating to the imposition of fees or charges as a condition of property development."[221]

Moreover, the California Supreme Court has ruled that fees imposed "as an incident to property ownership" are subject to Proposition 218, but fees that result from the owner's voluntary

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[219] *Connell v. Superior Court, supra,* 59 Cal.App.4th 382, 401.

[220] Water Code section 35470, as amended by Statutes 2007, chapter 27. Section 53753 of the Government Code requires compliance with "the procedures and approval process set forth in Section 4 of Article XIII D of the California Constitution" for assessments.

[221] California Constitution, article XIII D, section 1, subdivision (b).

decision to seek a government benefit are not.[222] Thus, fees imposed as a result of the owner's voluntary decision to undertake a development project are not subject to Proposition 218, because they are not merely incident to property ownership.[223]

The final issue, therefore, is whether claimants may impose fees that are sufficient within the meaning of Government Code section 17556, subdivision (d), to pay for the activities in the permit related to development: the hydromodification management plan (part D.1.g), and low-impact development (part D.1.d.(7)&(8)). The Commission finds claimants have fee authority that is sufficient within the meaning of Government Code section 17556, subdivision (d), and that these activities do not impose costs mandated by the state and are not reimbursable.

Hydromodification management plan: Part D.1 of the permit describes the development planning component of the JURMP. Part D.1.g. requires each copermittee to collaborate with other copermittees to develop and implement and report on developing a hydromodification management plan (HMP) to manage increases in runoff discharge rates and durations from all priority development projects, as specified. As discussed above, the HMP is a state-mandated new program or higher level of service for only private priority development projects. The purpose of the HMP is:

> [T]o manage increases in runoff discharge rates and durations from all Priority Development Projects, where such rates and durations are likely to cause increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

According to the permit, priority development projects are:

> a) all new Development Projects that fall under the project categories or locations listed in section D.1.d.(2), and b) those redevelopment projects that create, add or replace at least 5,000 square feet of impervious surfaces on an already developed site that falls under the project categories or locations listed in section D.1.d.(2).

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[222] In *Richmond v. Shasta Community Services Dist.* (2004) 32 Cal.4th 409, the court held that water service fees were subject to Proposition 218, but that water connection fees were not. In *Apartment Assoc. of Los Angeles County v. City of Los Angeles, supra,* 24 Cal.4th 830, 839-840, the court held that apartment inspection fees were not subject to Proposition 218 because they were not imposed on property owners as such, but in their capacity as landlords.

[223] A recent report by the Office of the Legislative Analyst concurs with this conclusion: "Local governments finance stormwater clean–up services from revenues raised from a variety of fees and, less frequently, through taxes. Property owner fees for stormwater services typically require approval by two–thirds of the voters, or a majority of property owners. Developer fees and fees imposed on businesses that contribute to urban runoff, in contrast, are not restricted by Proposition 218 and may be approved by a vote of the governing body. Taxes for stormwater services require approval by two–thirds of the electorate." Office of the Legislative Analyst. *California's Water: An LAO Primer* (October 22, 2008) page 56. [Emphasis added.] See: <http://www.lao.ca.gov/2008/rsrc/water_primer/ water_primer_102208.pdf> as of October 22, 2008.

The priority development project categories listed in part D.1.d.(2) are:

(a) Housing subdivisions of 10 or more dwelling units. This category includes single-family homes, multi-family homes, condominiums, and apartments.

(b) Commercial developments greater than one acre. [as specified]

(c) Developments of heavy industry greater than one acre. This category includes, but is not limited to, manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).

(d) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

(e) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except ... hydromodification requirement D.1.g.

(f) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.

(g) Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.

(h) Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.

(i) Street, roads, highways, and freeways. This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.

(j) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

The Commission finds that claimants have authority to impose fees for complying with the HMP activities in permit part D.1.g. for priority development projects, and their authority is sufficient within the meaning of Government Code section 17556, subdivision (d), in that the fee would not be subject to Proposition 218 voter approval. These activities involve collaborating with other copermittees to develop and implement a hydromodification management plan, and reporting on it. Because regulatory fees, pursuant to article XI, section 7 of the California Constitution, could be imposed on these priority development projects to pay for the costs of HMP, the Commission finds that permit part D.1.g. does not impose costs mandated by the state.

Low impact development: Low impact development is defined in Attachment C of the permit as a "storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions." The purpose of LID is to "collectively minimize directly connected impervious areas and promote infiltration at Priority Development Projects." LID best management practices include draining a portion of impervious areas into pervious areas prior to discharge into the storm drain, and constructing portions of priority development projects with permeable surfaces.

Part D.1.d.(7) requires updating the Standard Urban Storm Water Mitigation Plans (SUSMP) to include low impact development requirements, as specified, including BMP requirements that meet or exceed the requirements of sections D.1.d.(4)[224] and D.1.d.(5).[225] Both D.1.d.(4) and D.1.d.(5) are the LID requirement implemented at priority development projects.

Part D.1.d.(8) requires permittees to develop and submit an updated model SUSMP that defines minimum low impact development and other BMP requirements to incorporate into the permittees local SUSMPs for application to priority development projects.

The Commission finds that claimants have authority to impose fees for complying with the LID activities in parts D.1.d.(7) and D.1.d.(8) of the permit, and their authority is sufficient within the meaning of Government Code section 17556, subdivision (d), in that they are not subject to Proposition 218 voter approval. Because regulatory fees, pursuant to article XI, section 7 of the California Constitution, could be imposed on the priority development projects to pay for the costs associated with LID, the Commission finds that permit parts D.1.d.(7) and D.1.d.(8) do not impose costs mandated by the state.

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[224] Part D.1.d.(4) of the permit includes LID BMP requirements: "Each Copermittee shall require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas and promote infiltration at Priority Development Projects:" The Permit lists various LID site design BMPs that must be implemented at all Priority Development Projects, and other LID BMPs that must be implemented at all Priority Development Projects "where applicable and feasible."

[225] Part D.1.d.(5), regarding "Source control BMP Requirements" requires permittees to require each Priority Development Project to implement source control BMPs that must "Minimize storm water pollutants of concern in urban runoff" and include five other specific criteria.

2. Claimants also have fee authority regulated by the Mitigation Fee Act that is sufficient (within the meaning of Gov. Code, § 17556, subd. (d)) to pay for the hydromodification and low-impact development permit activities.

Development fees are also an exercise of the local police power under article XI, section 7 of the California Constitution.[226] A fee is considered a development fee if it is exacted in return for building permits or other governmental privileges so long as the amount of the fee bears a reasonable relation to the development's probable costs to the community and benefits to the developer.[227] Development fees are not restricted by Proposition 218 as discussed above.

Fees on developers as conditions of permit approval are governed by the Mitigation Fee Act (Gov. Code, §§ 66000-66025) which defines a "fee" as:

> [A] monetary exaction other than a tax or special assessment, whether established for a broad class of projects by legislation of general applicability or imposed on a specific project on an ad hoc basis, that is charged by a local agency to the applicant in connection with approval of a development project for the purpose of defraying all or a portion of the cost of public facilities related to the development project, but does not include ... fees for processing applications for governmental regulatory actions or approvals ...."[228] [Emphasis added.]

Public facilities are defined in the Act as "public improvements, public services, and community amenities."[229]

When a local agency imposes or increases a fee as a condition of development approval, it must do all of the following: (1) Identify the purpose of the fee; (2) Identify the use to which the fee is to be put. If the use is financing public facilities, the facilities shall be identified. (3) Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed; and, (4) Determine how there is a reasonable relationship between the need for the public facility and the type of development project upon which the fee is imposed. (Gov. Code, § 66001, subd. (a),)

The city or county must also determine whether there is a reasonable relationship between the specific amount of the fee and the costs of building, expanding, or upgrading public facilities. These determinations, known as nexus studies, are in writing and must be updated whenever new fees are imposed or existing fees are increased.[230] A fee imposed "as a condition of approval of

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[226] *California Building Industry Assoc. v. Governing Board* (1988) 206 Cal.App.3d 212, 234.

[227] *Sinclair Paint, supra,* 15 Cal.4th at page 875.

[228] Government Code section 66000, subdivision (b).

[229] Government Code section 66000, subdivision (d).

[230] Government Code section 66001, subdivision (b). The Act also requires cities to segregate fee revenues from other municipal funds and to refund them if they are not spent within five years. Any person may request an audit to determine whether any fee or charge levied by the city or county exceeds the amount reasonably necessary to cover the cost of the service provided (Gov. Code, §66006, subd. (d)). Under Government Code section 66014, fees charged for zoning changes, use permits, building permits, and similar processing fees are subject to the same nexus requirements as development fees. Lastly, under California Government Code

a proposed development or development project" is limited to the estimated reasonable cost of providing the service or facility.[231] This is in contrast to regulatory fees, which do not depend on government-conferred benefits or privileges.[232]

The Mitigation Fee Act defines a "development project" as "any project undertaken for the purpose of development ... includ[ing] a project involving the issuance of a permit for construction or reconstruction, but not a permit to operate." (Gov. Code, § 66000, subd. (a).)

A fee does not become a development fee simply because it is made in connection with a development project. Approval of the development must be conditioned on the payment of the fee. The Mitigation Fee Act is limited to situations where the fee or exaction is imposed as a condition of approval of a development project.[233]

Because local agencies may make development of priority development projects conditional on the payment of a fee, the Commission finds that the claimants have fee authority, governed by the Mitigation Fee Act, that is sufficient within the meaning of Government Code section 17556, subdivision (d), to pay for the hydromodification management plan and low-impact development activities. As discussed below, HMP and LID are "public facilities," which the Mitigation Fee Act defines as "public improvements, public services, and community amenities."[234]

The County of San Diego, in its January 2010 comments on the draft staff analysis, disagrees that it can impose a fee for the hydromodification plan (HMP) activities in the permit, stating that development and implementation of the HMP does not constitute a "public facility."

The Commission disagrees. The purpose of the permit is to prevent or abate pollution in waterways and beaches in San Diego County. More specifically, the purpose of the HMP is:

> [T]o manage increases in runoff discharge rates and durations from all Priority Development Projects, where such increased rates and durations are likely to cause increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

All these stated purposes of the HMP provide public services or improvements, or community amenities within the meaning of the Act.[235] Moreover, the California Supreme Court stated that the Act "concerns itself with development fees; that is, fees imposed on development projects in

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section 66020, agencies collecting fees must provide project applicants with a statement of the amounts and purposes of all fees at the time of fee imposition or project approval.

[231] Government Code section 66005, subdivision (a).

[232] *Sinclair Paint, supra,* 15 Cal.4th at page 875.

[233] *California Building Industry Ass'n v. San Joaquin Valley Air Pollution Control Dist.* (2009) 178 Cal.App.4th, 130, 131.

[234] Government Code section 66000, subdivision (d).

[235] Government Code section 66000, subdivision (d).

order to finance public improvements or programs that bear a 'reasonable relationship' to the development at issue."[236] The HMP is such a program.

Similarly, the purposes of LID are to "collectively minimize directly connected impervious areas and promote infiltration at Priority Development Projects" and to reduce stormwater runoff from priority development projects. These activities are public services or improvements that fall within the Act's definition of public facility.

The County also argues that under the Mitigation Fee Act, the local agency must determine that there is "a reasonable relationship between the fee's use and the type of development project on which the fee is imposed." The County argues that there is no reasonable relationship between the costs incurred by claimants to develop and implement the HMP and a particular development project on which the fee might be imposed.

Again, the Commission disagrees. Every time a developer proposes a project that falls within one of the "priority development project" categories listed above, and the developer has "not yet begun grading or construction activities at the time any updated SUSMP or hydromodification requirement commences," the local agency may impose a fee subject to the Mitigation Fee Act. The fee would be for the costs of developing and implementing the HMP to "manage increases in runoff discharge rates and durations from all Priority Development Projects [that] cause ... impacts to beneficial uses and stream habitat due to increased erosive force." The local agency may also impose a fee on priority development projects to comply with LID, the purpose of which is to "collectively minimize directly connected impervious areas and promote infiltration at Priority Development Projects" and to reduce stormwater runoff.

Finally, the County argues that assessing fees on a private developer who submits a project for approval to recover the costs of reviewing and approving a particular project is "specifically excluded from the definition of 'fee' under the Act." The definition of fee in the Act states that it "does not include ... fees for processing applications for governmental regulatory actions or approvals ...." (Gov. Code, § 66000, subd. (b).)

The Commission disagrees that an HMP fee would be for "processing applications for governmental regulatory actions or approvals." Rather, it would be for permit approval of priority development projects, and used to implement the HMP and LID requirements. In *Barratt American Inc. v. City of Rancho Cucamonga* (2005) 37 Cal.4th 685, 698, the California Supreme Court distinguished between regulatory fees that implement state and local building safety standards under the Health and Safety Code and developer fees subject to the Mitigation Fee Act by stating: "These regulatory fees fund a program that supervises how, not whether, a developer may build." Thus, the Commission finds that the developer fees may be imposed for permit approval for priority development projects if the permit is conditional on payment of the fee, and the fee is used for HMP and LID compliance.

In sum, the Commission finds that the claimants have fee authority governed by the Mitigation Fee Act that is sufficient (within the meaning of Gov. Code, § 17556, subd. (d), to pay for the following parts of the permit that are related to development: the hydromodification management plan (part D.1.g) and updating the Standard Urban Storm Water Mitigation Plans to include Low Impact Development requirements (part D.1.d.(7)&(8)).

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[236] *Utility Cost Management v. Indian Wells Valley Water Dist.* (2001) 26 Cal.4th 1185, 1191.

3. Claimants' fee authority under Public Resources Code section 40059, or via benefit assessments, is not sufficient to pay for street sweeping, and Government Code section 17556, subdivision (d), does not apply to reporting on street sweeping.

Street sweeping is one test claim activity that is typically funded by local agency fees or assessments. Fees and assessments are both governed by Proposition 218.

The permit (in part D.3.a.5) requires a program to sweep "improved (possessing a curb and gutter) municipal roads, streets, highways, and paring facilities" at intervals depending on whether they are identified as consistently generating the highest volumes, moderate volumes, or low volumes of trash and/or debris. Reporting on street sweeping, such as curb-miles swept and tons of material collected, is also required (part J.3.a.(3)(c)x-xv).

Some local agencies collect fees for street sweeping for their refuse fund, such as the City of Pasadena.[237] Other local agencies, e.g., the County of Fresno[238] and the City of La Quinta,[239] collect an assessment for street sweeping as a street maintenance activity. Both approaches are discussed below in light of the procedural requirements under Proposition 218.

Fees for street sweeping as refuse collection/solid waste handling: Article XI, section 7 of the California Constitution states: "A county or city may make and enforce within its limits all local, police, sanitary or other ordinances and regulations not in conflict with general laws." Local agency fees for refuse collection are authorized by Public Resources Code section 40059, which states:

> (a) Notwithstanding any other provision of law, each county, city, district, or other local governmental agency may determine all of the following:
>
> (1) Aspects of solid waste handling which are of local concern, including, but not limited to, frequency of collection, means of collection and transportation, level of services, charges and fees, and nature, location, and extent of providing solid waste handling services. [Emphasis added.]

"Solid waste" is defined in Public Resources Code section 40191 as:

> [A]ll putrescible and nonputrescible solid, semisolid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, dewatered, treated, or chemically fixed sewage sludge

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[237] City of Pasadena, Agenda Report, Resolution Nos. 8942 and 8943, April 27, 2009, "Public Hearing: Amendment to the General Fee Schedule to Increase the Residential Refuse Collection Fees and Solid Waste Franchise Fees." One of the findings in the resolution is: "Whereas, street sweeping is a refuse collection service involving solely the collection, removal and disposal of solid waste from public rights of way, and is, therefore, properly allocated to the Refuse Fund."

[238] County of Fresno, Resolution Nos. 8942 and 8943, adopted January 15, 2008.

[239] City of La Quinta, Resolution No. 2009-035, adopted May 5, 2009.

which is not hazardous waste, manure, vegetable or animal solid and semisolid wastes and other discarded solid and semisolid wastes.[240]

"Solid waste handling" is defined in Public Resources Code section 40195 as "the collection, transportation, storage, transfer, or processing of solid wastes." Given the nature of material swept from city streets, street sweeping falls under the rubric of 'solid waste handling.'

Under Proposition 218, "refuse collection" is expressly exempted from the voter-approval requirement (article XIII D, § 6, subd. (c).). Although "refuse collection" has no definition in article XIII D, the plain meaning of refuse[241] collection is the same as solid waste handling, as the dictionary definition of "refuse" and the statutory definition of "solid waste" both refer to rubbish and trash as synonyms. Refuse is collected via solid waste handling.

To impose or increase refuse collection fees, the local agency must provide mailed written notice to each parcel owner on which the fee will be imposed, and conduct a public hearing not less than 45 days after mailing the notice. If written protests against the proposed fee are presented by a majority of the parcel owners, the local agency may not impose or increase the fee (article XIII D, § 6, subd. (a)(2)). In addition, revenues are: (1) not to exceed the funds required to provide the service, (2) shall not be used for any other purpose than to provide the property-related service, and the amount of the fee on a parcel shall not exceed the proportional cost of the service attributable to the parcel. And the service must be actually used by or immediately available to the property owner (article XIII D, § 6, subd. (b)).

Government Code, section 17556, subdivision (d), does not apply to street sweeping because the fee is contingent on the outcome of a written protest by a majority of the parcel owners. The plain language of subdivision (d) of this section prohibits the Commission from finding that the permit imposes "costs mandated by the state" if "The local agency ... has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service." [Emphasis added.] Under Proposition 218, the local agency has no authority to impose the fee if it is protested by a majority of parcel owners.

Additionally, it is possible that a majority of land owners in the local agency may never allow the proposed fee, but the local agency would still be required to comply with the state mandate. This would violate the purpose of article XIII B, section 6, which is to "to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose."[242]

Thus, the Commission finds that fee authority under Public Resources Code section 40059 is not sufficient to pay for the mandated program or increased level of service in permit parts D.3.a.5 (street sweeping). Therefore, the Commission finds that street sweeping imposes costs mandated by the state and is reimbursable.

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[240] This definition also excludes hazardous waste, radioactive waste and medical waste, as defined.

[241] "Refuse" is defined as " Items or material discarded or rejected as useless or worthless; trash or rubbish." <http://dictionary.reference.com/browse/refuse> as of November 23, 2009.

[242] *County of San Diego, supra,* 15 Cal.4th 68, 81.

Any proposed fees that are not blocked by a majority of parcel owners for street sweeping must be identified as offsetting revenue in the parameters and guidelines.

Fees for street sweeping reports: Proposition 218 does not contain an express exemption on voter approval for reporting on street sweeping, only for "refuse collection." Moreover, Proposition 218 (art. XIII D, § 6, subd. (b)(4)) states: "No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question." The permit does not require the street sweeping reports be available to property owners, only that the reports be submitted to the Regional Board. For these reasons, the Commission finds that Government Code section 17556, subdivision (d), does not apply to reporting on street sweeping, so that part J.3.a.(3)(c)x-xv of the permit imposes costs mandated by the state and is reimbursable.

Assessments for street operation and maintenance: As mentioned above, some local agencies collect an assessment for street sweeping, e.g., the County of Fresno[243] and the City of La Quinta.[244] Assessments are defined as "any levy or charge upon real property by an agency for a special benefit conferred upon the real property. 'Assessment' includes, but is not limited to, 'special assessment,' 'benefit assessment,' 'maintenance assessment' and 'special assessment tax.'" (article XIII D, § 2, subd. (b).) The terms "maintenance and operation" of "streets" and "drainage systems," although used in article XIII D, are not defined in it. The plain meaning of maintenance of streets and drainage systems, however, would include street sweeping because "maintenance" means "the work of keeping something in proper condition; upkeep."[245] Clean streets are used not only for transportation, but for conveying storm water to storm drains.

The Supreme Court defined special assessments as follows:

> A special assessment is a "'compulsory charge placed by the state upon real property within a pre-determined district, made under express legislative authority for defraying in whole or in part the expense of a permanent public improvement therein....' " [Citation.]' [Citation.] In this regard, a special assessment is 'levied against real property particularly and directly benefited by a local improvement in order to pay the cost of that improvement.' [Citation.] 'The rationale of special assessment[s] is that the assessed property has received a special benefit over and above that received by the general public. The general public should not be required to pay for special benefits for the few, and the few specially benefited should not be subsidized by the general public.[246]

The Supreme Court summarized the constitutional procedures for creating an assessment district.

> Under Proposition 218's procedures, local agencies must give the record owners of all assessed parcels written notice of the proposed assessment, a voting ballot, and a statement disclosing that a majority protest will prevent the assessment's

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[243] County of Fresno, Resolution Nos. 8942 and 8943, adopted January 15, 2008.

[244] City of La Quinta, Resolution No. 2009-035, adopted May 5, 2009.

[245] <http://dictionary.reference.com/browse/maintenance> as of December 7, 2009.

[246] *Silicon Valley Taxpayers Ass'n. v. Santa Clara Open Space Authority* (2008) 44 Cal.4th 431, 442.

> passage. (Art. XIII D, § 4, subds. (c), (d).) The proposed assessment must be "supported by a detailed engineer's report." (Art. XIII D, § 4, subd. (b).) At a noticed public hearing, the agencies must consider all protests, and they "shall not impose an assessment if there is a majority protest." (Art. XIII D, § 4, subd. (e).) Voting must be weighted "according to the proportional financial obligation of the affected property." (*Ibid.*)[247]

Proposition 218 dictated that as of July 1, 1997, existing assessments were to comply with its procedural requirements, but an exception was created for "any assessment imposed exclusively to finance the capital costs or maintenance and operation expenses for sidewalks, streets, sewers, water, flood control, drainage systems or vector control." (art. XIII D, § 5, subd. (a), emphasis added.) This means that the procedural requirements of Proposition 218 apply only to increases in assessments for street sweeping that were imposed after Proposition 218 was enacted.[248]

Absent any evidence in the record that assessments imposed before July 1, 1997 for street sweeping are sufficient to pay for the street sweeping specified in part D.3.a. of the permit, the Commission cannot find that assessments imposed before that date would pay for the costs mandated by the state for street sweeping within the meaning of Government Code section 17556, subdivision (d).

Should a local agency determine that its existing assessments are not sufficient to pay for the mandated street sweeping, it can raise assessments by following the article XIII D (Proposition 218) procedures detailed above. Those procedures, however, include an election and a protest, both of which were found above to extinguish local fee authority sufficient to pay for the mandate and to block the application of Government Code section 17556, subdivision (d).

Thus, to the extent that the claimants impose or increase assessments to pay for the street sweeping, they would be identified as offsetting revenue in the parameters and guidelines.

4. Claimants' fee or assessment authority under Health and Safety Code section 5471 is not sufficient to pay for conveyance-system cleaning, and Government Code section 17556, subdivision (d), does not apply to reporting on conveyance-system cleaning

Conveyance-system cleaning for operation and maintenance of the MS4 and MS4 facilities (catch basins, storm drain inlets, open channels, etc.) is required in the permit (part D.3.a.(3)). Specifically, claimants are required to clean in a timely manner "Any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of design capacity.... Any MS4 facility that is designed to be self cleaning shall be cleaned of any accumulated trash and debris immediately. Open channels shall be cleaned of observed anthropogenic litter in a timely manner." Claimants are also required to report on the number of catch basins and inlets inspected and cleaned (J.3.a.(3)(c)iv-viii).

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[247] *Silicon Valley Taxpayers Ass'n v. Santa Clara Open Space Authority, supra,* 44 Cal.4th 431, 438.

[248] See also *Howard Jarvis Taxpayers Ass'n. v. City of Riverside* (1999) 73 Cal.App.4th, 679, holding that a preexisting streetlighting assessment is 'exempt under Proposition 218.'

Local agencies have fee authority under Health and Safety Code section 5471 to charge fees for storm drainage maintenance and operation as follows:

> [A]ny entity[249] shall have power, by an ordinance approved by a two-thirds vote of the members of the legislative body thereof, to prescribe, revise and collect, fees, tolls, rates, rentals, or other charges for services and facilities furnished by it, either within or without its territorial limits, in connection with its water, sanitation, storm drainage, or sewerage system. ... Revenues derived under the provisions in this section, shall be used only for the acquisition, construction, reconstruction, maintenance, and operation of water systems and sanitation, storm drainage, or sewerage facilities .... [Emphasis added.]

This plain meaning of this statutory fee for storm drain operation and maintenance would include conveyance-system cleaning as required in the permit (part D.3.a.(3)(iii)), which the permit specifies as cleaning "catch basins or storm drain inlets." This cleaning is within the operation and maintenance of the storm drains.

The statutory fee, adopted in 1953, is now subject to the procedural requirements of Proposition 218. As it states in subdivision (d) of Health and Safety Code section 5471:

> If the procedures set forth in this section as it read at the time a standby charge was established were followed, the entity may, by ordinance adopted by a two-thirds vote of the members of the legislative body thereof, continue the charge pursuant to this section in successive years at the same rate. If new, increased, or extended assessments are proposed, the entity shall comply with the notice, protest, and hearing procedures in Section 53753 of the Government Code [the codification of the Proposition 218 procedural requirements].

Proposition 218 does not exempt from voting requirements fees for storm drain maintenance like it does for "water, sewer, and refuse collection" in section 6 (c) of article XIII D. In fact, in *Howard Jarvis Taxpayers Ass'n. v. City of Salinas* (2002) 98 Cal.App.4th 1351, the court invalidated a local storm drain fee and held that the exemption from an election for sewer fees does not include storm drainage fees. As to new or increased assessments imposed for storm drainage operation and maintenance, they would be subject to the same election requirement of Proposition 218 (art. XIII D, § 4, subd. (e)) as for other assessments.

Therefore, the Commission finds that local agencies do not have sufficient authority under section 5471 of the Health and Safety Code to impose fees or assessments (under Gov. Code § 17556, subd. (d)) for conveyance system cleaning as required by part D.3.a.(3)(iii) of the permit or reporting as required by part J.3.a.(3)(c)iv-viii of the permit.

Fees or assessments for conveyance-system reports: The Commission also finds that local agencies do not have fee or assessment authority for reporting on conveyance-system (in part J.3.a.(3)(c)iv-viii) on the number of catch basins and inlets inspected and cleaned. Fees or

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[249] Entity is defined to include "counties, cities and counties, cities, sanitary districts, county sanitation districts, sewer maintenance districts, and other public corporations and districts authorized to acquire, construct, maintain and operate sanitary sewers and sewerage systems." Health and Safety Code section 5470, subdivision (e).

assessments imposed for this reporting would be subject to a vote of parcel owners. Moreover, Proposition 218 (art. XIII D, § 6, subd. (b)(4)) states: "No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question." The permit does not require the reports on conveyance- system cleaning be available to property owners, only that the reports be submitted to the Regional Board. For these reasons, the Commission finds that Government Code section 17556, subdivision (d), does not apply to reporting on conveyance-system cleaning, and that part J.3.a.(3)(c)iv-viii of the permit imposes costs mandated by the state within the meaning of Government Code section 17556, subdivision (d), and is reimbursable.

Any revenue from existing assessments, or assessments obtained after voter approval, for conveyance system cleaning would be included in the parameters and guidelines as offsets to reimbursement.

C. Claimants have potential fee authority and offsetting revenue if they comply with the requirements of Senate Bill 310 (Stats. 2009, ch. 577)

Effective January 2010, Senate Bill 310 (Stats. 2009, ch. 577) was enacted to add Water Code provisions authorizing local agencies to adopt watershed improvement plans.

SB 310 is intended to establish multiple watershed-based pilot programs.[250] The bill creates the California Watershed Improvement Act of 2009 (commencing with Wat. Code, § 16000). Pursuant to Water Code section 16101, each county, city, or special district that is a copermittee under a NPDES permit ***may*** develop either individually or jointly a watershed improvement plan. The process for developing a watershed improvement plan is to be conducted consistent with all applicable open meeting laws. Each county, city, or special district, or combination thereof, is to notify the appropriate Regional Board of its intention to develop a watershed improvement plan.

The watershed improvement plan is voluntary – it is not necessarily the same watershed activities required by the permit in the test claim.

SB 310 includes the following local agency fee authority:

> 16103. (a) In addition to making use of other financing mechanisms that are available to local agencies to fund watershed improvement plans and plan measures and facilities, a county, city, special district, or combination thereof may impose fees on activities that generate or contribute to runoff, stormwater, or surface runoff pollution, to pay the costs of the preparation of a watershed improvement plan, and the implementation of a watershed improvement plan if all of the following requirements are met:
>
> (1) The Regional Board has approved the watershed improvement plan.
>
> (2) The entity or entities that develop the watershed improvement plan make a finding, supported by substantial evidence, that the fee is reasonably related to the cost of mitigating the actual or anticipated past, present, or future adverse effects of the activities of the feepayer. "Activities," for the purposes of this paragraph,

[250] Senate Rules Committee, Office of Senate Floor Analyses, Analysis of Senate Bill 310 (2009-2010 Reg. Sess.) as amended August 31, 2009, page 4.

means the operations and existing structures and improvements subject to regulation under an NPDES permit for municipal separate storm sewer systems.

(3) The fee is not imposed solely as an incident of property ownership.

(b) A county, city, special district, or combination thereof may plan, design, implement, construct, operate, and maintain controls and facilities to improve water quality, including controls and facilities related to the infiltration, retention and reuse, diversion, interception, filtration, or collection of surface runoff, including urban runoff, stormwater, and other forms of runoff, the treatment of pollutants in runoff or other waters subject to water quality regulatory requirements, the return of diverted and treated waters to receiving water bodies, the enhance-ment of beneficial uses of waters of the state, or the beneficial use or reuse of diverted waters.

(c) The fees authorized under subdivision (a) may be imposed as user-based or regulatory fees consistent with this chapter.

However, Water Code section 16102, subdivision (d), states: "A regional board may, if it deems appropriate, utilize provisions of the approved watershed improvement plan (approved under this new act) to promote compliance with one of more of the regional board's regulatory plans or programs." Subdivision (e) states "Unless a regional board incorporates the provisions of the watershed improvement plan into waste discharge requirements issued to a permittee, the implementation of a watershed improvement plan by a permittee shall not be deemed to be in compliance with those waste discharge requirements."

Therefore, the Commission finds that Water Code section 16103 may only provide offsetting revenue for this test claim to the extent that a local agency voluntarily complies with Water Code section 16101, the Regional Board approves the plan and incorporates it into the test claim permit to satisfy the requirements of the permit.

D. The holding in *San Diego Unified School Dist. v. Commission on State Mandates* does not apply to the test claim activities.

The State Board's January 2010 comments on the draft staff analysis cite *San Diego Unified v. Commission on States Mandates,*[251] arguing that the permit in this test claim, like the pupil expulsion hearings, are intended to implement a federal law, and has costs that are, in context, de minimis. In *San Diego Unified School District,* the California Supreme Court held costs for hearing procedures and notice are not reimbursable for pupil expulsions that are discretionary under state law. The court found that these hearing procedures are incidental to federal due process requirements and the costs are de minimis, and thus not reimbursable.

The Commission disagrees. The permit in this case does not meet the criteria in the *San Diego Unified School District* case. Unlike the discretionary expulsions in *San Diego Unified School District,* the permit imposes state-mandated activities. And although the permit is intended to implement the federal Clean Water Act, there is no evidence or indication that its costs are de minimis. Claimants submitted declarations of costs totaling over $10 million for fiscal year

[251] *San Diego Unified School Dist., supra,* 33 Cal.4th 859.

2007-2008 alone.[252] Claimants further submitted documentation of 2008-2009 costs of over $18 million. The State Board offers no evidence or argument to refute these cost declarations, so the Commission finds that permit activities (except for LID and HMP discussed above) impose costs mandated by the state that are not de minimis.

Summary: To recap fee authority under issue 2, the Commission finds that, due to the fee authority under the police power generally, and as governed by the Mitigation Fee Act, there are no "costs mandated by the state" within the meaning of Government Code sections 17514 and 17556 for the following parts of the permit that have a reasonable relationship to property development:

- Hydromodification Management Plan (part D.1.g);
- Updating the Standard Urban Storm Water Mitigation Plans to include Low Impact Development requirements (parts D.1.d.(7) & D.1.d.(8));

The Commission also finds that the claimants' fee or assessment authority is not sufficient within the meaning of Government Code section 17556, subdivision (d), and that there are costs mandated by the state within the meaning of Government Code section 17514 for all the activities in the permit, including:

- The fee authority in Public Resources Code section 40059 for the permit activities in parts D.3.a.5 (street sweeping) and J.3.a.(3)(c)x-xv (reporting on street sweeping);
- The fee authority in Health and Safety Code section 5471, for the permit activities in part D.3.a.(3)(iii) (conveyance system cleaning) or part J.3.a.(3)(c)iv-viii (reporting on conveyance system cleaning) of the permit.

Further, the Commission finds the following would be identified as offsetting revenue in the parameters and guidelines for this test claim:

- Any fees or assessments approved by the voters or property owners for any activities in the permit, including those authorized by Public Resources Code section 40059 for street sweeping or reporting on street sweeping, and those authorize by Health and Safety Code section 5471, for conveyance-system cleaning, or reporting on conveyance-system cleaning;
- Any proposed fees that are not subject to a written protest by a majority of parcel owners and that are imposed for street sweeping.
- Effective January 1, 2010, fees imposed pursuant to Water Code section 16103 only to the extent that a local agency voluntarily complies with Water Code section 16101 by developing a watershed improvement plan pursuant to Statutes 2009, chapter 577, and the Regional Board approves the plan and incorporates it into the test claim permit to satisfy the requirements of the permit.

[252] The County and city declarations are attached to the test claim.

CONCLUSION

For the reasons discussed above, the Commission finds that parts of 2007 permit issued by the California Regional Quality Control Board, San Diego Region (Order No. R9-2007-001, NPDES No. CAS0108758), are a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution for the claimants to perform the following activities.

The term of the permit is from January 24, 2007 – January 23, 2012.[253] The permit terms and conditions are automatically continued, however, pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits are complied with.[254]

I. Jurisdictional Urban Runoff Management Program and Reporting (parts D & J)

Street sweeping (part D.3.a.(5)): Sweeping of Municipal Areas

> Each Copermittee shall implement a program to sweep improved (possessing a curb and gutter) municipal roads, streets, highways, and parking facilities. The program shall include the following measures:
>
> (a) Roads, streets, highways, and parking facilities identified as consistently generating the highest volumes of trash and/or debris shall be swept at least two times per month.
>
> (b) Roads, streets, highways, and parking facilities identified as consistently generating moderate volumes of trash and/or debris shall be swept at least monthly.
>
> (c) Roads, streets, highways, and parking facilities identified as generating low volumes of trash and/or debris shall be swept as necessary, but no less than once per year.

Street sweeping reporting (J.3.a.(3)(c)x-xv): Report annually on the following:

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[253] According to attachment B of the permit: "*Effective Date.* This Order shall become effective on the date of its adoption provided the USEPA has no objection...." "(q) *Expiration.* This Order expires five years after adoption."

[254] According to attachment B of the permit: "(r) *Continuation of Expired Order* [23 CCR 2235.4]. After this Order expires, the terms and conditions of this Order are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with."

x. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating the highest volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
xi. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating moderate volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
xii. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating low volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
xiii. Identification of the total distance of curb-miles swept.
xiv. Identification of the number of municipal parking lots, the number of municipal parking lots swept, and the frequency of sweeping.
xv. Amount of material (tons) collected from street and parking lot sweeping.

Conveyance system cleaning (D.3.a.(3)):

(a) Implement a schedule of inspection and maintenance activities to verify proper operation of all municipal structural treatment controls designed to reduce pollutant discharges to or from its MS4s and related drainage structures.

(b) Implement a schedule of maintenance activities for the MS4 and MS4 facilities (catch basins, storm drain inlets, open channels, etc). The maintenance activities shall, at a minimum, include: [¶]...[¶]

iii. Any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of design capacity shall be cleaned in a timely manner. Any MS4 facility that is designed to be self cleaning shall be cleaned of any accumulated trash and debris immediately. Open channels shall be cleaned of observed anthropogenic litter in a timely manner.

Conveyance system cleaning reporting (J.3.a.(3)(c)(iv)-(viii)): Update and revise the copermittees' JURMPs to contain:

iv. Identification of the total number of catch basins and inlets, the number of catch basins and inlets inspected, the number of catch basins and inlets found with accumulated waste exceeding cleaning criteria, and the number of catch basins and inlets cleaned.

v. Identification of the total distance (miles) of the MS4, the distance of the MS4 inspected, the distance of the MS4 found with accumulated waste exceeding cleaning criteria, and the distance of the MS4 cleaned.

vi. Identification of the total distance (miles) of open channels, the distance of the open channels inspected, the distance of the open channels found with anthropogenic litter, and the distance of open channels cleaned.

vii. Amount of waste and litter (tons) removed from catch basins, inlets, the MS4, and open channels, by category.

viii. Identification of any MS4 facility found to require inspection less than annually following two years of inspection, including justification for the finding.

Educational component (part D.5): To implement an education program using all media as appropriate to (1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum, the education program shall meet the requirements of this section and address the following target communities:

- Municipal Departments and Personnel
- Construction Site Owners and Developers
- Industrial Owners and Operators
- Commercial Owners and Operators
- Residential Community, General Public, and School Children

a.(1) Each Copermittee shall educate each target community on the following topics where appropriate: (i) Erosion prevention, (ii) Non storm water discharge prohibitions, and (iii) BMP types: facility or activity specific, LID,-source control, and treatment control.

a.(2) Copermittee educational programs shall emphasize underserved target audiences, high-risk behaviors, and "allowable" behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources.

b. SPECIFIC REQUIREMENTS

(1) Municipal Departments and Personnel Education

(a) Municipal Development Planning – Each Copermittee shall implement an education program so that its Planning Boards and Elected Officials, if applicable, have an understanding of:

i. Federal, state, and local water quality laws and regulations applicable to Development Projects;
ii. The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization);
iii. How to integrate LID BMP requirements into the local regulatory program(s) and requirements; and
iv. Methods of minimizing impacts to receiving water quality resulting from development, including:

[1] Storm water management plan development and review;
[2] Methods to control downstream erosion impacts;
[3] Identification of pollutants of concern;
[4] LID BMP techniques;
[5] Source control BMPs; and
[6] Selection of the most effective treatment control BMPs for the pollutants of concern.

(b) Municipal Construction Activities – Each Copermittee shall implement an education program that includes annual training prior to the rainy season so that its construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of the following topics, as appropriate for the target audience:

iii. Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities.
iv. The Copermittee's inspection, plan review, and enforcement policies and procedures to verify consistent application.
v. Current advancements in BMP technologies.
vi. SUSMP Requirements including treatment options, LID BMPs, source control, and applicable tracking mechanisms.

(c) Municipal Industrial/Commercial Activities - Each Copermittee shall train staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year [except for staff who solely inspect new development]. Training shall cover inspection and enforcement procedures, BMP implementation, and reviewing monitoring data.

(d) Municipal Other Activities – Each Copermittee shall implement an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed.

(2) New Development and Construction Education

As early in the planning and development process as possible and all through the permitting and construction process, each Copermittee shall implement a program to educate project applicants, developers, contractors, property owners, community planning groups, and other responsible parties. The education program shall provide an understanding of the topics listed in Sections D.5.b.(1)(a) and D.5.b.(1)(b) above, as appropriate for the audience being educated. The education program shall also educate project applicants, developers, contractors, property owners, and other responsible parties on the importance of educating all construction workers in the field about stormwater issues and BMPs through formal or informal training.

(3) Residential, General Public, and School Children Education

Each Copermittee shall collaboratively conduct or participate in development and implementation of a plan to educate residential, general public, and school children target communities. The plan shall evaluate use of mass media, mailers, door hangers, booths at public events, classroom education, field trips, hands-on experiences, or other educational methods.

II. Watershed Urban Runoff Management Program (parts E.2.f & E.2.g.)

Each Copermittee shall collaborate with other Copermittees within its WMA(s) [Watershed Management Area] as in Table 4 [of the permit] to develop and

implement an updated Watershed Urban Runoff Management Program for each watershed. Each updated Watershed Urban Runoff Management Program shall meet the requirements of section E of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. At a minimum, each Watershed Urban Runoff Management Program shall include the elements described below: [¶]...[¶]

[Paragraphs (a) through (e) were not part of the test claim.]

f. Watershed Activities

(1) The Watershed Copermittees shall identify and implement Watershed Activities that address the high priority water quality problems in the WMA. Watershed Activities shall include both Watershed Water Quality Activities and Watershed Education Activities. These activities may be implemented individually or collectively, and may be implemented at the regional, watershed, or jurisdictional level.

(a) Watershed Water Quality Activities are activities other than education that address the high priority water quality problems in the WMA. A Watershed Water Quality Activity implemented on a jurisdictional basis must be organized and implemented to target a watershed's high priority water quality problems or must exceed the baseline jurisdictional requirements of section D of this Order.

(b) Watershed Education Activities are outreach and training activities that address high priority water quality problems in the WMA.

(2) A Watershed Activities List shall be submitted with each updated Watershed Urban Runoff Management Plan (WURMP) and updated annually thereafter. The Watershed Activities List shall include both Watershed Water Quality Activities and Watershed Education Activities, along with a description of how each activity was selected, and how all of the activities on the list will collectively abate sources and reduce pollutant discharges causing the identified high priority water quality problems in the WMA.

(3) Each activity on the Watershed Activities List shall include the following information:

(a) A description of the activity;

(b) A time schedule for implementation of the activity, including key milestones;

(c) An identification of the specific responsibilities of Watershed Copermittees in completing the activity;

(d) A description of how the activity will address the identified high priority water quality problem(s) of the watershed;

(e) A description of how the activity is consistent with the collective watershed strategy;

(f) A description of the expected benefits of implementing the activity; and

(g) A description of how implementation effectiveness will be measured.

(4) Each Watershed Copermittee shall implement identified Watershed Activities pursuant to established schedules. For each Permit year, no less than two Watershed Water Quality Activities and two Watershed Education Activities shall be in an active implementation phase. A Watershed Water Quality Activity is in an active implementation phase when significant pollutant load reductions, source abatement, or other quantifiable benefits to discharge or receiving water quality can reasonably be established in relation to the watershed's high priority water quality problem(s). Watershed Water Quality Activities that are capital projects are in active implementation for the first year of implementation only. A Watershed Education Activity is in an active implementation phase when changes in attitudes, knowledge, awareness, or behavior can reasonably be established in target audiences.

g. Watershed Copermittees shall collaborate to develop and implement the Watershed Urban Runoff Management Programs. Watershed Copermittee collaboration shall include frequent regularly scheduled meetings.

III. Regional Urban Runoff Management Program (parts F.1, F.2 & F.3)

The Regional Urban Runoff Management Program shall, at a minimum:

Each copermittee shall collaborate with the other Copermittees to develop, implement, and update as necessary a Regional Urban Runoff Management Program that meets the requirements of section F of the permit, reduces the discharge of pollutants from the MS4 to the MEP, and prevents urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. The Regional Urban Runoff Management Program shall, at a minimum: [¶]...[¶]

1. Develop and implement a Regional Residential Education Program. The program shall include:

a. Pollutant specific education which focuses educational efforts on bacteria, nutrients, sediment, pesticides, and trash. If a different pollutant is determined to be more critical for the education program, the pollutant can be substituted for one of these pollutants.

b. Education efforts focused on the specific residential sources of the pollutants listed in section F.1.a.

2. Develop the standardized fiscal analysis method required in section G of the permit, and,

3. Facilitate the assessment of the effectiveness of jurisdictional, watershed, and regional programs.

IV. Program Effectiveness Assessment (parts I.1 & I.2)

1. Jurisdictional

a. As part of its Jurisdictional Urban Runoff Management Program, each Copermittee shall annually assess the effectiveness of its Jurisdictional Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:

(1) Specifically assess the effectiveness of each of the following:

(a) Each significant jurisdictional activity/BMP or type of jurisdictional activity/BMP implemented;

(b) Implementation of each major component of the Jurisdictional Urban Runoff Management Program (Development Planning, Construction, Municipal, Industrial/Commercial, Residential, Illicit Discharge[255] Detection and Elimination, and Education); and

(c) Implementation of the Jurisdictional Urban Runoff Management Program as a whole.

(2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.1.a.(1) above.

(3) Utilize outcome levels 1-6[256] to assess the effectiveness of each of the items listed in section I.1.a.(1) above, where applicable and feasible.

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[255] Illicit discharge, as defined in Attachment C of the permit, is "any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from firefighting activities [40 C.F.R. 122.26 (b)(2)]."

[256] Effectiveness assessment outcome levels are defined in Attachment C of the permit as follows: Effectiveness assessment outcome level 1 – Compliance with Activity-based Permit Requirements – Level 1 outcomes are those directly related to the implementation of specific activities prescribed by this Order or established pursuant to it. Effectiveness assessment outcome level 2 – Changes in Attitudes, Knowledge, and Awareness – Level 2 outcomes are measured as increases in knowledge and awareness among target audiences such as residents, business, and municipal employees. Effectiveness assessment outcome level 3 – Behavioral Changes and BMP Implementation – Level 3 outcomes measure the effectiveness of activities in affecting behavioral change and BMP implementation. Effectiveness assessment outcome level 4 – Load Reductions – Level 4 outcomes measure load reductions which quantify changes in the amounts of pollutants associated with specific sources before and after a BMP or other control measure is employed. Effectiveness assessment outcome level 5 – Changes in Urban Runoff and Discharge Quality – Level 5 outcomes are measured as changes in one or more specific constituents or stressors in discharges into or from MS4s. Effectiveness assessment outcome level 6 – Changes in Receiving Water Quality – Level 6 outcomes measure changes to receiving water quality resulting from discharges into and from MS4s, and may be expressed through a variety of means such as compliance with water quality objectives or other regulatory benchmarks, protection of biological integrity [i.e., ecosystem health], or beneficial use attainment.

(4) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.1.a.(1) above, where applicable and feasible.

(5) Utilize Implementation Assessment,[257] Water Quality Assessment,[258] and Integrated Assessment,[259] where applicable and feasible.

b. Based on the results of the effectiveness assessment, each Copermittee shall annually review its jurisdictional activities or BMPs to identify modifications and improvements needed to maximize Jurisdictional Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Jurisdictional activities/BMPs that are ineffective or less effective than other comparable jurisdictional activities/BMPs shall be replaced or improved upon by implementation of more effective jurisdictional activities/BMPs. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, jurisdictional activities or BMPs applicable to the water quality problems shall be modified and improved to correct the water quality problems.

c. As part of its Jurisdictional Urban Runoff Management Program Annual Reports, each Copermittee shall report on its Jurisdictional Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of sections I.1.a and I.1.b above.

2. Watershed

a. As part of its Watershed Urban Runoff Management Program, each watershed group of Copermittees (as identified in Table 4)[260] shall annually assess the effectiveness of its Watershed Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:

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[257] Implementation Assessment is defined in Attachment C of the permit as an "Assessment conducted to determine the effectiveness of copermittee programs and activities in achieving measureable targeted outcomes, and in determining whether priority sources of water quality problems are being effectively addressed."

[258] Water Quality Assessment is defined in Attachment C of the permit as an "Assessment conducted to evaluate the condition of non-storm water discharges, and the water bodies which receive these discharges."

[259] Integrated Assessment is defined in Attachment C of the permit as an "Assessment to be conducted to evaluate whether program implementation is properly targeted to and resulting in the protection and improvement of water quality."

[260] Table 4 of the permit divides the copermittees into nine watershed management areas. For example, the San Luis Rey River watershed management area lists the city of Oceanside, Vista and the County of San Diego as the responsible watershed copermittees. Table 4 also lists where the hydrologic units are and major receiving water bodies.

(1) Specifically assess the effectiveness of each of the following:

(a) Each Watershed Water Quality Activity implemented;

(b) Each Watershed Education Activity implemented; and

(c) Implementation of the Watershed Urban Runoff Management Program as a whole.

2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.2.a.(1) above.

3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in sections I.2.a.(1)(a) and I.2.a.(1)(b) above, where applicable and feasible.

4) Utilize outcome levels 1-4 to assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, where applicable and feasible.

5) Utilize outcome levels 5 and 6 to qualitatively assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, focusing on the high priority water quality problem(s) of the watershed. These assessments shall attempt to exhibit the impact of Watershed Urban

Runoff Management Program implementation on the high priority water quality problem(s) within the watershed.

6) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.2.a.(1) above, where applicable and feasible.

7) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.

b. Based on the results of the effectiveness assessment, the watershed Copermittees shall annually review their Watershed Water Quality Activities, Watershed Education Activities, and other aspects of the Watershed Urban Runoff Management Program to identify modifications and improvements needed to maximize Watershed Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order.[261] The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Watershed Water Quality Activities/Watershed Education Activities that are ineffective or less effective than other comparable Watershed Water Quality Activities/Watershed Education Activities shall be replaced or improved upon by implementation of more effective Watershed Water Quality Activities/Watershed Education Activities. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, Watershed Water Quality Activities and Watershed Education Activities applicable to the water quality problems shall be modified and improved to correct the water quality problems.

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[261] Section A is "Prohibitions and Receiving Water Limitations."

c. As part of its Watershed Urban Runoff Management Program Annual Reports, each watershed group of Copermittees (as identified in Table 4) shall report on its Watershed Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of section I.2.a and I.2.b above.

Long Term Effectiveness Assessment (I.5):

a. Collaborate with the other Copermittees to develop a Longterm Effectiveness Assessment (LTEA), which shall build on the results of the Copermittees' August 2005 Baseline LTEA. The LTEA shall be submitted by the Principal Permittee to the Regional Board no later than 210 days in advance of the expiration of this Order.

b. The LTEA shall be designed to address each of the objectives listed in section I.3.a.(6)[262] of this Order, and to serve as a basis for the Copermittees' Report of Waste Discharge for the next permit cycle.

c. The LTEA shall address outcome levels 1-6, and shall specifically include an evaluation of program implementation to changes in water quality (outcome levels 5 and 6).

d. The LTEA shall assess the effectiveness of the Receiving Waters Monitoring Program in meeting its objectives and its ability to answer the five core management questions. This shall include assessment of the frequency of monitoring conducted through the use of power analysis and other pertinent statistical methods. The power analysis shall identify the frequency and intensity of sampling needed to identify a 10% reduction in the concentration of constituents causing the high priority water quality problems within each watershed over the next permit term with 80% confidence.

e. The LTEA shall address the jurisdictional, watershed, and regional programs, with an emphasis on watershed assessment.

1. Collaborate with all other Copermittees regulated under the permit to address common issues, promote consistency among Jurisdictional Urban Runoff

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[262] Part I.3.a.(6) of the permit states: At a minimum, the annual effectiveness assessment shall: (6) Include evaluation of whether the Copermittees' jurisdictional, watershed, and regional effectiveness assessments are meeting the following objectives: (a) Assessment of watershed health and identification of water quality issues and concerns. (b) Evaluation of the degree to which existing source management priorities are properly targeted to, and effective in addressing, water quality issues and concerns. (c) Evaluation of the need to address additional pollutant sources not already included in Copermittee programs. (d) Assessment of progress in implementing Copermittee programs and activities. (e) Assessment of the effectiveness of Copermittee activities in addressing priority constituents and sources. (f) Assessment of changes in discharge and receiving water quality. (g) Assessment of the relationship of program implementation to changes in pollutant loading, discharge quality, and receiving water quality. (h) Identification of changes necessary to improve Copermittee programs, activities, and effectiveness assessment methods and strategies.

Management Programs and Watershed Urban Runoff Management Programs, and to plan and coordinate activities required under this Order.

V. All Copermittee Collaboration (part L)

(a) Collaborate with all other Copermittees to address common issues, promote consistency among Jurisdictional Urban Runoff Management Programs and Watershed Urban Runoff Management Programs, and to plan and coordinate activities required under the permit.

Jointly execute and submit to the Regional Board no later than 180 days after adoption of the permit, a Memorandum of Understanding, Joint Powers Authority, or other instrument of formal agreement that at a minimum: [¶]...[¶]

3. Establishes a management structure to promote consistency and develop and implement regional activities;
4. Establishes standards for conducting meetings, decisions-making, and cost-sharing.
5. Provides guidelines for committee and workgroup structure and responsibilities;
6. Lays out a process for addressing Copermittee non-compliance with the formal agreement.

The Commission finds that due to the fee authority under the police power (Cal. Const. art. XI, § 7) and as governed by the Mitigation Fee Act, there are no "costs mandated by the state" within the meaning of Government Code sections 17514 and 17556 for the following parts of the permit that have a reasonable relationship to property development:

- Hydromodification Management Plan (part D.1.g);
- Updating the Standard Urban Storm Water Mitigation Plans to include Low Impact Development requirements (parts D.1.d.(7) & D.1.d.(8));

The Commission also finds that the claimants' fee or assessment authority is not sufficient within the meaning of Government Code section 17556, subdivision (d), and that there are costs mandated by the state within the meaning of Government Code section 17514 for all the activities in the permit, including:

- The fee authority in Public Resources Code section 40059 for the permit activities in parts D.3.a.5 (street sweeping) and J.3.a.(3)(c)x-xv (reporting on street sweeping);
- The fee authority in Health and Safety Code section 5471, for the permit activities in part D.3.a.(3)(iii) (conveyance system cleaning) or part J.3.a.(3)(c)iv-viii (reporting on conveyance system cleaning) of the permit.

Further, the Commission finds the following would be identified as offsetting revenue in the parameters and guidelines for this test claim:

- Any fees or assessments approved by the voters or property owners for any activities in the permit, including those authorized by Public Resources Code section 40059 for street sweeping or reporting on street sweeping, and those authorize by Health and Safety Code

section 5471, for conveyance-system cleaning, or reporting on conveyance-system cleaning;

- Any proposed fees that are not subject to a written protest by a majority of parcel owners and that are imposed for street sweeping.
- Fees imposed pursuant to Water Code section 16103 only to the extent that a local agency voluntarily complies with Water Code section 16101, the Regional Board approves the plan and incorporates it into the test claim permit to satisfy the requirements of the permit.

BEFORE THE

COMMISSION ON STATE MANDATES

STATE OF CALIFORNIA

IN RE TEST CLAIM ON:

Los Angeles Regional Quality Control Board
Order No. 01-182
Permit CAS004001
Parts 4C2a., 4C2b, 4E & 4F5c3

Filed September 2, 2003, (03-TC-04)
September 26, 2003 (03-TC-19)
by the County of Los Angeles, Claimant

Filed September 30, 2003 (03-TC-20 & 03-TC-21) by the Cities of Artesia, Beverly Hills, Carson, Norwalk, Rancho Palos Verdes, Westlake Village, Azusa, Commerce, Vernon, Bellflower, Covina, Downey, Monterey Park, Signal Hill, Claimants

Case Nos.: 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21

Municipal Stormwater and Urban Runoff Discharges

STATEMENT OF DECISION PURSUANT TO GOVERNMENT CODE SECTION 17500 ET SEQ.; TITLE 2, CALIFORNIA CODE OF REGULATIONS, DIVISION 2, CHAPTER 2.5, ARTICLE 7.

(Adopted July 31, 2009)

STATEMENT OF DECISION

The Commission on State Mandates ("Commission") heard and decided this test claim during a regularly scheduled hearing on July 31, 2009. Leonard Kaye and Judith Fries appeared on behalf of the County of Los Angeles. Howard Gest appeared on behalf of the cities. Michael Lauffer appeared on behalf of the State Water Resources Control Board and the Regional Water Quality Control Board. Carla Castaneda and Susan Geanacou appeared on behalf of the Department of Finance. Geoffrey Brosseau appeared on behalf of the Bay Area Stormwater Management Agencies Association.

The law applicable to the Commission's determination of a reimbursable state-mandated program is article XIII B, section 6 of the California Constitution, Government Code section 17500 et seq., and related case law.

The Commission adopted the staff analysis to partially approve the test claim at the hearing by a vote of 4-2.

Summary of Findings

The consolidated test claim, filed by the County of Los Angeles and several cities, allege various activities related to placement and maintenance of trash receptacles at transit stops and inspections of various facilities to reduce stormwater pollution in compliance with a permit issued by the Los Angeles Regional Water Quality Control Board.

The Commission finds that the following activity in part 4F5c3 of the permit is a reimbursable state mandate on local agencies subject to the permit that are not subject to a trash total

maximum daily load:[1] "Place trash receptacles at all transit stops within its jurisdiction that have shelters no later than August 1, 2002, and at all transit stops within its jurisdiction no later than February 3, 2003. All trash receptacles shall be maintained as necessary."

The Commission also finds that the remainder of the permit (parts 4C2a, 4C2b & 4E) does not impose costs mandated by the state within the meaning of article XIII B, section 6 of the California Constitution because the claimants have fee authority (under Cal. Const. article XI, § 7) within the meaning of Government Code section 17556, subdivision (d), sufficient to pay for the activities in those parts of the permit.

BACKGROUND

The claimants allege various activities related to placement and maintenance of trash receptacles at transit stops and inspections of restaurants, automotive service facilities, retail gasoline outlets, automotive dealerships, phase I industrial facilities (as defined) and construction sites to reduce stormwater pollution in compliance with a permit issued by the Los Angeles Regional Water Quality Control Board (LA Regional Board), a state agency.

History of the test claims

The test claims were filed in September 2003,[2] by the County of Los Angeles and several cities within it (the permit covers the Los Angeles County Flood Control District and 84 cities in Los Angeles County, all except Long Beach). The Commission originally refused jurisdiction over the permits based on Government Code section 17516's definition of "executive order" that excludes permits issued by the State Water Resources Control Board (State Water Board) or Regional Water Quality Control Boards (regional boards). After litigation, the Second District Court of Appeal held that the exclusion of permits and orders of the State and Regional Water Boards from the definition of "executive order" is unconstitutional. The court issued a writ commanding the Commission to set aside the decision "affirming your Executive Director's rejection of Test Claim Nos. 03-TC-04, 03-TC-19, 03-TC-20 and 03-TC-21" and to fully consider those claims.[3]

The County of Los Angeles and the cities re-filed their claims in October and November 2007. The claims were consolidated by the Executive Director in December 2008. Thus, the

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[1] A Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards.

[2] Originally, test claims 03-TC-04 (*Transit Trash Receptacles*) and 03-TC-19 (*Inspection of Industrial/Commercial Facilities)* were filed by the County of Los Angeles on September 5, 2003. Test claim 03-TC-21 (*Stormwater Pollution Requirements*) was filed by the Cities of Baldwin Park, Bellflower, Cerritos, Covina, Downey, Monterey Park, Pico Rivera, Signal Hill, South Pasadena, and West Covina on September 30, 2003. Test claim 03-TC-20 (*Waste Discharge Requirements*) was filed by Cities of Artesia, Beverly Hills, Carson, La Mirada, Monrovia, Norwalk, Rancho Palos Verdes, San Marino, and Westlake Village on September 30, 2003.

[3] *County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4th 898.

reimbursement period is as though the claims were filed in September 2003, i.e., beginning July 1, 2002.[4]

Before discussing the specifics of the permit, an overview of municipal stormwater pollution puts the permit in context.

Municipal stormwater

One of the main objectives of the permit is "to assure that stormwater discharges from the MS4 [Municipal Separate Storm Sewer Systems][5] shall neither cause nor contribute to the exceedance of water quality standards and objectives nor create conditions of nuisance in the receiving waters, and that the discharge of non-stormwater to the MS4 has been effectively prohibited." (Permit, p. 13.)

Stormwater runoff flows untreated from urban streets directly into streams, lakes and the ocean. To illustrate the effect of stormwater[6] on water pollution, the Ninth Circuit Court of Appeal has stated the following:

> Storm water runoff is one of the most significant sources of water pollution in the nation, at times "comparable to, if not greater than, contamination from industrial and sewage sources." [Citation omitted.] Storm sewer waters carry suspended metals, sediments, algae-promoting nutrients (nitrogen and phosphorus), floatable trash, used motor oil, raw sewage, pesticides, and other toxic contaminants into streams, rivers, lakes, and estuaries across the United States. [Citation omitted.] In 1985, three-quarters of the States cited urban storm water runoff as a major cause of waterbody impairment, and forty percent reported construction site runoff as a major cause of impairment. Urban runoff has been named as the foremost cause of impairment of surveyed ocean waters. Among the sources of storm water contamination are urban development, industrial facilities, construction sites, and illicit discharges and connections to storm sewer systems.[7]

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[4] Government Code section 17557, subdivision (e).

[5] Municipal separate storm sewer means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2. (40 C.F.R. § 122.26 (b)(8).)

[6] Storm water means "storm water runoff, snow melt runoff, and surface runoff and drainage." (40 C.F.R. § 122.26 (b)(13).)

[7] *Environmental Defense Center, Inc. v. U.S. E.P.A.* (2003) 344 F.3d 832, 840-841.

Because of the stormwater pollution problems described by the Ninth Circuit above, California and the federal government regulate stormwater runoff as described below.

California law

The California Supreme Court summarized the state statutory scheme and regulatory agencies applicable to this test claim as follows:

> In California, the controlling law is the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), which was enacted in 1969. (Wat. Code, § 13000 et seq., added by Stats.1969, ch. 482, § 18, p. 1051.) Its goal is "to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." (§ 13000.) The task of accomplishing this belongs to the State Water Resources Control Board (State Board) and the nine Regional Water Quality Control Boards; together the State Board and the regional boards comprise "the principal state agencies with primary responsibility for the coordination and control of water quality." (§ 13001.) As relevant here, one of those regional boards oversees the Los Angeles region (the Los Angeles Regional Board).
>
> Whereas the State Board establishes statewide policy for water quality control (§ 13140), the regional boards "formulate and adopt water quality control plans for all areas within [a] region" (§ 13240).[8]

Much of what the regional board does, especially as pertaining to permits like the one in this claim, is based in federal law as described below.

Federal law

The Federal Clean Water Act (CWA) was amended in 1972 to implement a permitting system for all discharges of pollutants[9] from point sources[10] to waters of the United States, since

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[8] *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 619.

[9] According to the federal regulations, "Discharge of a pollutant" means: (a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or (b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger." (40 C.F.R. § 122.2.)

[10] A point source is "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. § 1362(14).

discharges of pollutants are illegal except under a permit.[11] The permits, issued under the national pollutant discharge elimination system, are called NPDES permits. Under the CWA, each state is free to enforce its own water quality laws so long as its effluent limitations[12] are not "less stringent" than those set out in the CWA (33 USCA 1370). The California Supreme Court described NPDES permits as follows:

> Part of the federal Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), "[t]he primary means" for enforcing effluent limitations and standards under the Clean Water Act. (*Arkansas v. Oklahoma, supra,* 503 U.S. at p. 101, 112 S.Ct. 1046.) The NPDES sets out the conditions under which the federal EPA or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. (33 U.S.C. § 1342(a) & (b).) In California, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law. (§ 13374.)[13]

In the Porter-Cologne Water Quality Control Act (Wat. Code, §§ 13370 et seq.), the Legislature found that the state should implement the federal law in order to avoid direct regulation by the federal government. The Legislature requires the permit program to be consistent with federal law, and charges the State and Regional Water Boards with implementing the federal program (Wat. Code, §§ 13372 & 13370). The State Water Resources Control Board (State Board) incorporates the regulations from the U.S. EPA for implementing the federal permit program, so both the Clean Water Act and U.S. EPA regulations apply to California's permit program (Cal.Code Regs., tit. 23, § 2235.2).

When a regional board adopts an NPDES permit, it must adopt as stringent a permit as U.S. EPA would have (federal Clean Water Act, § 402 (b)). As the California Supreme Court stated:

> The federal Clean Water Act reserves to the states significant aspects of water quality policy (33 U.S.C. § 1251(b)), and it specifically grants the states authority to "enforce any effluent limitation" that is not " *less stringent* " than the federal standard (*id.* § 1370, italics added). It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority, and thus it does not prohibit a state-when imposing effluent limitations that are *more stringent*

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[11] 40 Code of Federal Regulations, section 122.21 (a). The section applies to U.S. EPA-issued permits, but is incorporated into section 123.25 (the state program provision) by reference.

[12] *Effluent limitation* means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean. (40 C.F.R. § 122.2.)

[13] *City of Burbank v. State Water Resources Control Bd., supra,* 35 Cal.4th 613, 621. Actually, State and regional board permits allowing discharges into state waters are called "waste discharge requirements" (Wat. Code, § 13263).

than required by federal law-from taking into account the economic effects of doing so.[14]

Actions that dischargers must implement as prescribed in permits are commonly called "best management practices" or BMPs.[15]

Stormwater was not regulated by U.S. EPA in 1973 because of the difficulty of doing so. This exemption from regulation was overturned in *Natural Resources Defense Council v. Costle* (1977) 568 F.2d 1369, which ordered U.S. EPA to require NPDES permits for stormwater runoff. By 1987, U.S. EPA still had not adopted regulations to implement a permitting system for stormwater runoff. The Ninth Circuit Court of Appeals explained the next step as follows:

> In 1987, to better regulate pollution conveyed by stormwater runoff, Congress enacted Clean Water Act § 402(p), 33 U.S.C. § 1342(p), "Municipal and Industrial Stormwater Discharges." Sections 402(p)(2) and 402(p)(3) mandate NPDES permits for stormwater discharges "associated with industrial activity," discharges from large and medium-sized municipal storm sewer systems, and certain other discharges. Section 402(p)(4) sets out a timetable for promulgation of the first of a two-phase overall program of stormwater regulation.[16]

NPDES permits are required for "A discharge from a municipal separate storm sewer system serving a population of 250,000 or more."[17] The federal Clean Water Act specifies the following criteria for municipal storm sewer system permits:

> (i) may be issued on a system- or jurisdiction-wide basis;
>
> (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
>
> (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.[18]

In 1990, U.S. EPA adopted regulations to implement Clean Water Act section 402(p), defining which entities need to apply for permits and the information to include in the permit application.

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[14] *City of Burbank v. State Water Resources Control Bd., supra,* 35 Cal.4th 613, 627-628.

[15] Best management practices, or BMPs, means "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage." (40 CFR § 122.2.)

[16] *Environmental Defense Center, Inc. v. U.S. E.P.A., supra,* 344 F.3d 832, 841-842.

[17] 33 USCA 1342 (p)(2)(C).

[18] 33 USCA 1342 (p)(3)(B).

The permit application must propose management programs that the permitting authority will consider in adopting the permit. The management programs must include the following:

> [A] comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate.[19]

General state-wide permits

In addition to the regional stormwater permit at issue in this claim, the State Board has issued two general statewide permits,[20] as described in the permit as follows:

> To facilitate compliance with federal regulations, the State Board has issued two statewide general NPDES permits for stormwater discharges: one for stormwater from industrial sites [NPDES No. CAS000001, General Industrial Activity Storm Water Permit (GIASP)] and the other for stormwater from construction sites [NPDES No. CAS000002, General Construction Activity Storm Water Permit (GCASP)]. ... Facilities discharging stormwater associated with industrial activities and construction projects with a disturbed area of five acres or more are required to obtain individual NPDES permits for stormwater discharges, or to be covered by a statewide general permit by completing and filing a Notice of Intent (NOI) with the State Board. The U.S. EPA guidance anticipates coordination of the state-administered programs for industrial and construction activities with the local agency program to reduce pollutants in stormwater discharges to the MS4. The Regional Board is the enforcement authority in the Los Angeles Region for the two statewide general permits regulating discharges from industrial facilities and construction sites, and all NPDES stormwater and non-stormwater permits issued by the Regional Board. These industrial and construction sites and discharges are also regulated under local laws and regulations. (Permit, p. 11.)

The State Board has statutory fee authority to conduct inspections to enforce the general state-wide permits.[21] The statewide permits are discussed in further detail in the analysis.

The Los Angeles Regional Board permit (Order No. 01-182, Permit CAS004001)

To obtain the permit, the County of Los Angeles, on behalf of all permittees, submitted on January 31, 2001 a Report of Waste Discharge, which constitutes a permit application, and a Stormwater Quality Management Program, which constituted the permittees' proposal for best management practices that would be required in the permit.[22]

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[19] 40 Code of Federal Regulations section 122.26 (d)(2)(iv).

[20] A general permit means "an NPDES 'permit' issued under [40 CFR] §122.28 authorizing a category of discharges under the CWA within a geographical area." (40 CFR § 122.2.)

[21] Water Code section 13260, subdivision (d)(2)(B)(i) - (iii).

[22] State Water Resources Control Board, comments submitted April 18, 2008, page 8 and attachment 36.

The permit states that its objective is: "to protect the beneficial uses of receiving waters in Los Angeles County."[23] The permit was upheld by the Second District Court of Appeal in 2006, which described it as follows:

> The 72-page permit is divided into 6 parts. There is an overview and findings followed by a statement of discharge prohibitions; a listing of receiving water limitations; the Storm Water Quality Management Program; an explanation of special provisions; a set of definitions; and a list of what are characterized as standard provisions. The county, the flood control district, and the 84 cities are designated in the permit as the permittees.[24]

After finding that "the county, the flood control district, and the 84 cities discharge and contribute to the release of pollutants from "municipal separate storm sewer systems" (storm drain systems)" and that the discharges were the subject of regional board permits in 1990 and 1996, the regional board found that the storm drain systems in the county discharged a host of specified pollutants into local waters. The permit summed up by stating: "Various reports prepared by the regional board, the Los Angeles County Grand Jury, and academic institutions indicated pollutants are threatening to or actually impairing the beneficial uses of water bodies in the Los Angeles region."[25]

The permit also specifies prohibited and allowable discharges, receiving water limitations, the implementation of the Storm Water Quality Management Program "requiring the use of best management practices to reduce pollutant discharge into the storm drain systems to the maximum extent possible."[26] As the court described the permit:

> In the prohibited discharges portion of the permit, the county and the cities were required to "effectively prohibit non-stormwater discharges" into their storm sewer systems. This prohibition contains the following exceptions: where the discharge is covered by a National Pollutant Discharge Elimination permit for non-stormwater emission; natural springs and rising ground water; flows from riparian habitats or wetlands; stream diversions pursuant to a permit issued by the

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[23] Permit page 13. The permit also says: "This permit is intended to develop, achieve, and implement a timely comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the Maximum Extent Practicable (MEP) from the permitted areas in the County of Los Angeles to the waters of the US subject to the Permittees' jurisdiction."

[24] *County of Los Angeles v. California State Water Resources Control Board* (2006) 143 Cal.App.4th 985, 990.

[25] *County of Los Angeles v. California State Water Resources Control Board , supra,* 143 Cal.App.4th 985, 990

[26] *County of Los Angeles v. California State Water Resources Control Board,, supra,* 143 Cal.App.4th 985, 994.

regional board; "uncontaminated ground water infiltrations" ... and waters from emergency fire-fighting flows.[27]

There is also a list of permissible discharges that are incidental to urban activity, as specified (e.g., landscape irrigation runoff, etc.). In the part on receiving water limitations, the permit prohibits discharges from storm sewer systems that "cause or contribute" to violations of "Water Quality Standards" objectives in receiving waters as specified in state and federal water quality plans. Storm or non-stormwater discharges from storm sewer systems which constitute a nuisance are also prohibited.[28]

To comply with the receiving water limitations, the permittees must implement control measures in accordance with the permit.[29]

The permittees are also to implement the Storm Water Quality Management Program (SQMP) that meets the standards of 40 Code of Federal Regulations, part 122.26(d)(2) (2000) and reduces the pollutants in stormwaters to the maximum extent possible with the use of best management practices. And the permittees must revise the SQMP to comply with specified total maximum daily load (TMDL) allocations.[30] If a permittee modified the countywide SQMP, it must implement a local management program. Each permittee is required by November 1, 2002, to adopt a stormwater and urban runoff ordinance. By December 2, 2002, each permittee must certify that it had the legal authority to comply with the permit through adoption of ordinances or municipal code modifications.[31]

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[27] *County of Los Angeles v. California State Water Resources Control Board, supra,* 143 Cal.App.4th 985, 991-992.

[28] "'Nuisance' means anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; (3) occurs during, or as a result of, the treatment or disposal of wastes." *Id.* at 992.

[29] If the Storm Water Quality Management Program did not assure compliance with the receiving water requirements, the permittee must immediately notify the regional board; submit a Receiving Water Limitations Compliance Report that describes the best management practices currently being used and proposed changes to them; submit an implementation schedule as part of the Receiving Water Limitations Compliance Report; and, after approval by the regional board, promptly implement the new best management practices. If the permittee makes these changes, even if there were further receiving water discharges beyond those addressed in the Water Limitations Compliance Report, additional changes to the best management practices need not be made unless directed to do so by the regional board. *Id.* at 993.

[30] A Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards. See <http://www.epa.gov/OWOW/tmdl> as of October 3, 2008.

[31] *County of Los Angeles v. California State Water Resources Control Board, supra,* 143 Cal.App.4th 985.

The permit gives the County of Los Angeles additional responsibilities as principal permittee, such as coordination of the SQMP and convening watershed management committees. In addition, the permit contains a development construction program under which permittees are to implement programs to control runoff from construction sites, with additional requirements imposed on sites one acre or larger, and more on those five acres or larger. Permittees are to eliminate all illicit connections and discharges to the storm drain system, and must document, track and report all cases.

In this claim, however, claimants only allege activities in parts 4C2a, 4C2b, 4E and 4F5c3 of the permit. These parts concern placement and maintenance of trash receptacles at transit stops, and inspections of restaurants, automotive service facilities, retail gasoline outlets, automotive dealerships, phase I industrial facilities (as defined) and construction sites, as quoted below.

Co-Claimants' Position

Co-claimants assert that parts 4C2a, 4C2b, 4E and 4F5c3 of the LA Regional Board's permit constitute a reimbursable state-mandate within the meaning of article XIII B, section 6, and Government Code section 17514.

Transit Trash Receptacles: Los Angeles County ("County") filed test claims 03-TC-04 and 03-TC-19. In 03-TC-04, *Transit Trash Receptacles*, filed by the County, and 03-TC-20, *Waste Discharge Requirements,* filed by the cities, the claimants allege the following activities as stated in the permit part 4F5c3 (Part 4, Special Provisions, F. Public Agency Activities Program, 5. Storm Drain Operation and Management):

> c. Permittees not subject to a trash TMDL[32] shall: [¶]...[¶]
>
> (3) Place trash receptacles at all transit stops within its jurisdiction that have shelters no later than August 1, 2002, and at all transit stops within its jurisdiction no later than February 3, 2003. All trash receptacles shall be maintained as necessary.

Claimant County asserts that this permit condition requires the following:

1. Identifying all transit stops within its jurisdiction except for the Los Angeles River and Ballona Creek Watershed Management areas.
2. Selecting proper trash receptacle design and evaluating proper placement of trash receptacles.
3. Designing receptacle pad improvement, if needed.
4. Constructing and installing trash receptacle units.
5. Collecting trash and maintaining receptacles.

Inspection of Industrial and Commercial Facilities: In claim 03-TC-19, *Inspection of Industrial/ Commercial Facilities*, filed by the County, and 03-TC-20, *Waste Discharge Requirements,* filed by the cities, claimants allege the following activities as stated in the permit parts 4C2a and 4C2b (Part 4, Special Provisions, C. Industrial/Commercial Facilities Control Program):

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[32] A Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards. See <http://www.epa.gov/OWOW/tmdl> as of October 3, 2008.

2. Inspect Critical Sources – Each Permittee shall inspect all facilities in the categories and at a level and frequency as specified in the following subsections:

a) Commercial Facilities

(1) Restaurants

Frequency of Inspections: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of Inspections-: Each Permittee, in cooperation with its appropriate department (such as health or public works), shall inspect all restaurants within its jurisdiction to confirm that stormwater BMPs are being effectively implemented in compliance with State law, County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP [Storm Water Quality Management Program]. At each restaurant, inspectors shall verify that the restaurant operator:

- has received educational materials on stormwater pollution prevention practices;
- does not pour oil and grease or oil and grease residue onto a parking lot, street or adjacent catch basin;
- keeps the trash bin area clean and trash bin lids closed, and does not fill trash bins with washout water or any other liquid;
- does not allow illicit discharges, such as discharge of washwater from floormats, floors, porches, parking lots, alleys, sidewalks and street areas (in the immediate vicinity of the establishment), filters or garbage/trash containers;
- removes food waste, rubbish or other materials from parking lot areas in a sanitary manner that does not create a nuisance or discharge to the storm drain.

(2) Automotive Service Facilities

Frequency of Inspections: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of Inspections: Each permittee shall inspect all automotive service facilities within its jurisdiction to confirm that stormwater BMPs are effectively implemented in compliance with County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP. At each automotive service facility, inspectors shall verify that each operator:

- maintains the facility area so that it is clean and dry without evidence of excessive staining;
- implements housekeeping BMPs to prevent spills and leaks;
- properly discharges wastewaters to a sanitary sewer and/or contains wastewaters for transfer to a legal point of disposal;

- is aware of the prohibition on discharge of non-stormwater to the storm drain;
- properly manages raw and waste materials including proper disposal of hazardous waste;
- protects outdoor work and storage areas to prevent contact of pollutants with rainfall and runoff;
- labels, inspects, and routinely cleans storm drain inlets that are located on the facility's property; and
- trains employees to implement stormwater pollution prevention practices.

(3) Retail Gasoline Outlets and Automotive Dealerships

Frequency of Inspection: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each RGO [Retail Gasoline Outlet] and automotive dealership within its jurisdiction, in compliance with the SQMP, Regional Board Resolution 98-08, and the Stormwater Quality Task Force Best Management Practice Guide for RGOs. At each RGO and automotive dealership, inspectors shall verify that each operator:

- routinely sweeps fuel-dispensing areas for removal of litter and debris, and keeps rags and absorbents ready for use in case of leaks and spills;
- is aware that washdown of facility area to the storm drain is prohibited;
- is aware of design flaws (such as grading that doesn't prevent run-on, or inadequate roof covers and berms), and that equivalent BMPs are implemented;
- inspects and cleans storm drain inlets and catch basins within each facility's boundaries no later than October 1st of each year;
- posts signs close to fuel dispensers, which warn vehicle owners/operators against "topping off" of vehicle fuel tanks and installation of automatic shutoff fuel dispensing nozzles;
- routinely checks outdoor waste receptacle and air/water supply areas, cleans leaks and drips, and ensures that only watertight waste receptacles are used and that lids are closed; and
- trains employees to properly manage hazardous materials and wastes as well as to implement other stormwater pollution prevention practices.

b) Phase I Facilities[33]

Permittees need not inspect facilities that have been inspected by the Regional Board within the past 24 months. For the remaining Phase I facilities that the Regional Board has not inspected, each Permittee shall conduct compliance inspections as specified below.

Frequency of Inspection

Facilities in Tier 1 Categories:[34] Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Facilities in Tier 2 Categories:[35] Twice during the 5-year term of the permit, provided that the first inspection occurs no later than August 1, 2004, Permittees need not perform additional inspections at those facilities determined to have no risk of exposure of industrial activity[36] to stormwater. For those facilities that do

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[33] On page 62 of the permit, U.S. EPA Phase I Facilities are defined as "facilities in specified industrial categories that are required to obtain an NPDES permit for storm water discharges, as required by 40 CFR 122.26(c). These categories include: (i) facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR N); (ii) manufacturing facilities; (iii) oil and gas/mining facilities; (iv) hazardous waste treatment, storage, or disposal facilities; (v) landfills, land application sites, and open dumps; (vi) recycling facilities; (vii) steam electric power generating facilities; (viii) transportation facilities; (ix) sewage or wastewater treatment works; (x) light manufacturing facilities.

[34] Attachment B of the Permit (pp. B-1 to B-2) lists the Tier 1 categories as follows (with Phase I facilities listed in italics): "*Municipal landfills ...; Hazardous Waste Treatment, Disposal and Recovery Facilities; Facilities Subject to SARA Title III ...;* Restaurants; *Wholesale trade (scrap, auto dismantling)...;* Automotive service facilities; *Fabricated metal products ...; Motor freight ...; Chemical/allied products ...;* Automotive Dealers/Gas Stations ...; *Primary Metals.*"

[35] Attachment B of the Permit (pp. B-1 to B-2) lists the Tier 2 categories as follows (with Phase I facilities listed in italics): "*Electric/Gas/Sanitary...; Air Transportation ...; Rubbers/Miscellaneous Plastics ...; Local/Suburban Transit ...; Railroad Transportation ...; Oil & Gas Extraction ...; Lumber/Wood Products...; Machinery Manufacturing ...; Transportation Equipment ...; Stone, Clay, Glass, Concrete ...; Leather/Leather Products...; Miscellaneous Manufacturing ...; Food and kindred Products...; Mining of Nonmetallic Minerals ...; Printing and Publishing ...; Electric/Electronics ...; Paper and Allied Products ...; Furniture and Fixtures ...;* Laundries ...; *Instruments...; Textile Mills Products ...; Apparel ...*"

[36] "Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. ... The following categories of facilities are considered to be engaging in "industrial activity" for purposes of paragraph (b)(14): [¶]...[¶] (x) Construction activity including clearing, grading and excavation,

have exposure of industrial activities to stormwater, a Permittee may reduce that frequency of additional compliance inspections to once every 5 years, provided that the Permittee inspects at least 20% of the facilities in Tier 2 each year.

Level of Inspection: Each Permittee shall confirm that each operator:

- has a current Waste Discharge Identification (WDID) number for facilities discharging stormwater associated with industrial activity, and that a Storm Water Pollution Prevention Plan is available on-site, and
- is effectively implementing BMPs in compliance with County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP.

Inspection of Construction Sites: In claims 03-TC-20 and 03-TC-21, *Waste Discharge Requirements*, the cities allege the activities in permit parts 4C2a, 4C2b, and 4F5c3, as listed in the test claims cited above, in addition to the following activities as stated in part 4E of the permit (Part 4, Special Provisions, E. Development Construction Program):

- For construction sites one acre or greater, each Permittee shall comply with all conditions in section E1 above and shall: ...

  (b) Inspect all construction sites for stormwater quality requirements during routine inspections a minimum of once during the wet seasons. The Local SWPPP [Storm Water Pollution Prevention Plan] shall be reviewed for compliance with local codes, ordinances, and permits. For inspected sites that have not adequately implemented their Local SWPPP, a follow-up inspection to ensure compliance will take place within 2 weeks. If compliance has not been attained, the Permittee will take additional actions to achieve compliance (as specified in municipal codes). If compliance has not been achieved, and the site is also covered under a statewide general construction stormwater permit, each Permittee shall enforce their local ordinance requirements, and if non-compliance continues the Regional Board shall be notified for further joint enforcement actions.

  Part 4E3 of the Order provides, in relevant part, as follows:

  3. For sites five acres and greater, each Permittee shall comply with all conditions in Sections E1 and E2 and shall:

  a) require, prior to issuing a grading permit for all projects requiring coverage under the state general permit,[37] proof of a Waste Discharger Identification (WDID) number for filing a Notice of Intent (NOI) for coverage under the GCASP [General Construction

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except operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more;" [40 CFR §122.26 (b)(14), Emphasis added.]

[37] A general permit means "an NPDES 'permit' issued under [40 CFR] §122.28 authorizing a category of discharges under the CWA [Clean Water Act] within a geographical area." (40 CFR § 122.2.) California has issued one general permit for construction activity and one for industrial activity.

Activity Storm Water Permit][38] and a certification that a SWPPP has been prepared by the project developer. A Local SWPPP may substitute for the State SWPPP if the Local SWPPP is at least as inclusive in controls and BMPs as the State SWPPP.

b) Require proof of an NOI and a copy of the SWPPP at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going.
c) Use an effective system to track grading permits issued by each Permittee. To satisfy this requirement, the use of a database or GIS system is encouraged, but not required.

Both county and city claimants allege more than $1000 in costs in each test claim to comply with the permit activities.

In comments submitted June 4, 2009 on the draft staff analysis, the County of Los Angeles asserts that local agencies do not have fee authority to collect trash from trash receptacles that must be placed at transit stops, and that voter approval under Proposition 218 would be required to do so. The County also argues that voter approval under Proposition 218 would be required for stormwater inspection costs, and cites as evidence the City of Santa Clarita's stormwater pollution prevention fee, as well as legislative proposals now in the legislature that would, if enacted, provide fee authority.

In comments submitted June 8, 2009 on the draft staff analysis, the cities disagree with the conclusion that they have fee authority to recoup the costs of the transit-stop trash receptacles, and disagree that they have fee authority to inspect facilities covered by the state-issued general stormwater permits, as discussed in more detail below.

State Agency Positions

Department of Finance: Finance, in comments filed March 27, 2008 on all four test claims, alleges that the permit does not impose a reimbursable mandate within the meaning of section 6 of article XIII B of the California Constitution because "The permit conditions imposed on the local agencies are required by federal laws" so they are not reimbursable pursuant to Government Code section 17556, subdivision (c). Finance asserts that "requirements of the permit are federally required to comply with the NPDES [National Pollutant Discharge Elimination System] program ... [and] is enforceable under the federal CWA [Clean Water Act]."

Finance also argues that the claimants had discretion over the activities and conditions to include in the permit application. The permittees submitted a Storm Water Quality Management Program prevention report with their applications, in which they had the option to use "best management practices" to identify alternative practices to reduce water pollution. Since the local agencies prescribed the activities to be included in the permit, the requirements are a downstream result of the local agencies' decision to include the particular activities in the permit. Finance cites the *Kern* case,[39] which held that if participation in the underlying program is voluntary, the resulting new consequential requirements are not reimbursable mandates.

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[38] See page 11, paragraph 22 of the permit for a description of the statewide permits.

[39] *Department of Finance v. Commission on State Mandates (Kern High School Dist.)* (2003) 30 Cal.4th 727

Finally, Finance states that some local agencies are using fees for funding the claimed permit activities, so should the Commission find that the permit constitutes a reimbursable mandate, the fees should be considered as offsetting revenues.

Finance submitted comments on the draft staff analysis on June 19, 2009, agreeing that the local agencies have fee authority sufficient to pay for the mandated activities. Finance disagrees, however, with the portion of the analysis that finds that the activities are not federal mandates.

State Water Resources Control Board: The State Board filed comments on the four test claims on April 18, 2008, noting that the federal CWA mandates that municipalities apply for and receive permits regulating discharges of pollutants from their municipal separate storm sewer system (MS4) to waters of the United States. "Pursuant to federal regulations, the Permit contains numerous requirements for the cities and County to take actions to reduce the flow of pollutants into the rivers and the Bay, known as Best Management practices (BMPs)."

The State Board asserts that the permit is mandated on the local governments by federal law, and applies to many dischargers of stormwater, both public and private, so it is not unique to local governments. The federal mandate requires that the permit be issued to the local governments, and the specific requirements challenged are consistent with the minimum requirements of federal law. According to the State Board, even if the permit were interpreted as going beyond federal law, any additional state requirements are de minimis. And the costs are not subject to reimbursement because the programs were proposed by the cities and County themselves, and because they have the ability to fund these requirements through charges and fees and are not required to raise taxes.

In comments filed with the State Board on April 10, 2008 (attached to the State Board comments on the test claim), the United States Environmental Protection Agency (U.S. EPA) asserts that the permit conditions reduce pollutants to the "maximum extent practicable." The transit trash receptacle and inspection programs, according to U.S. EPA, are founded in section 402 (p) of the Clean Water Act, and are well within the scope of the federal regulations (40 CFR § 122.26 (d)(2)(iv)(A)(3)).

In its comments on the draft staff analysis submitted June 5, 2009, the State Board agrees with the conclusion and staff recommendation to deny the test claim, but disagrees with parts of the analysis. The State Board asserts that federal law: (1) requires local agencies to obtain NPDES permits from California Water Boards, and (2) mandates the permit, which is less stringent than permits for private industry. The State Board also states that the permit does not exceed the minimum federal mandate, as found by a court of appeal. Finally, the State Board argues that the federal stormwater law is one of general application, and therefore does not impose a state mandate.

Interested Party Positions

Bay Area Stormwater Management Agencies Association: In comments on the draft staff analysis received June 3, 2009 (although the letter is dated April 29, 2009) the Bay Area Stormwater Management Agencies Association (BASMAA) states that this matter is of statewide importance with broad implications, and fundamentally a matter of public finance. BASMAA also urges keeping the voters' objectives paramount. BASMAA agrees that the permit requirements are a new program or higher level of service and that the requirements go beyond the federal Clean Water Act's mandates. As for the portion of the draft staff analysis that

discusses local agency fee authority, BASMAA calls it "myopic" saying it "falls short in its consideration of all potentially relevant issues and appellate court precedents that need to be presented to the Commission to serve the interest of the public." (Comments p. 3.) BASMAA contends that many permit requirements relate to local communities and their residents rather than specific business activities, and require public services that are essentially incident to real property ownership, and/or may only be financed via fees that remain subject to the Proposition 218 voting requirement or increased property taxes. BASMAA also states that many permit activities would fall on joint power authorities or special districts that have no fee authority, or for which exemptions from Proposition 218 would not be applicable. BASMAA requests that the analysis be revised to revisit the conclusions regarding "funded vs. unfunded" requirements, and to recognize and distinguish the many types of stormwater activities for which regulatory fees would not apply.

League of California Cities and California State Association of Counties (CSAC): In joint comments on the draft staff analysis received June 4, 2009, the League of Cities and CSAC agree with the draft staff analysis that the permit is a mandate, but question whether the *Connell* and *County of Fresno* decisions are still valid as applied to Government Code section 17556, subdivision (d), which prohibit the Commission from finding costs mandated by the state if the local agency has fee authority. This is because of the voters' approval of Proposition 218 in 1996. The League and CSAC urge the Commission not to find that fee authority exists for local agencies (1) to the extent there may be doubt about whether a local agency has it, and (2) to the extent that there is no person upon which the local agency can impose the fee.

COMMISSION FINDINGS

The courts have found that article XIII B, section 6 of the California Constitution[40] recognizes the state constitutional restrictions on the powers of local government to tax and spend.[41] "Its purpose is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose."[42] A test claim statute or executive order may impose a reimbursable state-mandated program if it orders or commands a local agency or school district to engage in an activity or

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[40] Article XIII B, section 6, subdivision (a), provides:

> (a) Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service, except that the Legislature may, but need not, provide a subvention of funds for the following mandates: (1) Legislative mandates requested by the local agency affected. (2) Legislation defining a new crime or changing an existing definition of a crime. (3) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975.

[41] *Kern High School Dist., supra,* 30 Cal.4th 727, 735.

[42] *County of San Diego v. State of California (County of San Diego)*(1997) 15 Cal.4th 68, 81.

task.[43] In addition, the required activity or task must be new, constituting a "new program," or it must create a "higher level of service" over the previously required level of service.[44]

The courts have defined a "program" subject to article XIII B, section 6, of the California Constitution, as one that carries out the governmental function of providing public services, or a law that imposes unique requirements on local agencies or school districts to implement a state policy, but does not apply generally to all residents and entities in the state.[45] To determine if the program is new or imposes a higher level of service, the test claim legislation must be compared with the legal requirements in effect immediately before the enactment of the test claim legislation.[46] A "higher level of service" occurs when the new "requirements were intended to provide an enhanced service to the public."[47]

Finally, the newly required activity or increased level of service must impose costs mandated by the state.[48]

The Commission is vested with exclusive authority to adjudicate disputes over the existence of state-mandated programs within the meaning of article XIII B, section 6.[49] In making its decisions, the Commission must strictly construe article XIII B, section 6, and not apply it as an "equitable remedy to cure the perceived unfairness resulting from political decisions on funding priorities."[50]

The permit provisions in the consolidated test claim are discussed separately to determine whether they are reimbursable state-mandates.

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[43] *Long Beach Unified School Dist. v. State of California* (1990) 225 Cal.App.3d 155, 174.

[44] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 878 (*San Diego Unified School Dist.)*; *Lucia Mar Unified School District v. Honig* (1988) 44 Cal.3d 830, 835-836 (*Lucia Mar*).

[45] *San Diego Unified School Dist., supra,* 33 Cal.4th 859, 874, (reaffirming the test set out in *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56; *Lucia Mar, supra,* 44 Cal.3d 830, 835.)

[46] *San Diego Unified School Dist., supra,* 33 Cal.4th 859, 878; *Lucia Mar, supra*, 44 Cal.3d 830, 835.

[47] *San Diego Unified School Dist., supra,* 33 Cal.4th 859, 878.

[48] *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487; *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1265, 1284 (*County of Sonoma*); Government Code sections 17514 and 17556.

[49] *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 331-334; Government Code sections 17551, 17552.

[50] *County of Sonoma, supra,* 84 Cal.App.4th 1265, 1280, citing *City of San Jose v. State of California* (1996) 45 Cal.App.4th 1802, 1817.

Issue 1: Are the permit provisions (Parts 4C2a, 4C2b, 4E, and 4F5c3) subject to article XIII B, section 6, of the California Constitution?

The issues discussed here are whether the permit provisions are an executive order within the meaning of Government Code section 17516, whether they are discretionary, and whether they constitute a federal mandate.

A. Are the permit provisions (Parts 4C2a, 4C2b, 4E, and 4F5c3) an executive order within the meaning of Government Code section 17516?

The Commission has jurisdiction over test claims involving statutes and executive orders as defined by Government Code section 17516, which defines an "executive order" for purposes of state mandates, as "any order, plan, requirement, rule, or regulation issued by any of the following:

(a) The Governor.
(b) Any officer or official serving at the pleasure of the Governor.
(c) Any agency, department, board, or commission of state government."[51]

The LA Regional Water Board is a state agency.[52] The permit it issued is both a plan for reducing water pollution, and contains requirements for local agencies toward that end. Therefore, the Commission finds that the permit is an executive order within the meaning of article XIII B, section 6 and Government Code section 17516.

B. Are the permit provisions (Parts 4C2a, 4C2b, 4E, and 4F5c3) the result of claimants' discretion?

The permit provisions require placing and maintaining trash receptacles at transit stops and inspecting specified facilities and construction sites.

The Department of Finance, in comments submitted March 27, 2008, asserts that the claimants had discretion over what activities and conditions to include in the permit application, so that any resulting costs are downstream of the claimant's decision to include those provisions in the permit. Thus, Finance argues that the costs are not mandated by the state.

Similarly, the State Board, in its April 18, 2008 comments, cites the Stormwater Quality Management Program (SQMP) submitted by the county that constituted the claimants' proposal for the BMPs required under the permit. The State Water Board refers to (on p. 28 of the SQMP) the county's proposal to "collect trash along open channels and encourage voluntary trash collection in natural stream channels." The State Water Board further states that the SQMP (pp. 22-23) contains the municipalities' proposal for (1) site visits to industrial and commercial facilities, including automotive service businesses and restaurants to verify evidence of BMP

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[51] Section 17516 also states: ""Executive order" does not include any order, plan, requirement, rule, or regulation issued by the State Water Resources Control Board or by any regional water quality control board pursuant to Division 7 (commencing with Section 13000) of the Water Code." The Second District Court of Appeal has held that this statutory language is unconstitutional. *County of Los Angeles v. Commission on State Mandates, supra,* 150 Cal.App.4th 898, 904.

[52] Water Code section 13200 et seq.

implementation, and (2) maintaining a database of automotive and food service facilities including whether they have NPDES stormwater permit coverage.

Claimant County of Los Angeles, in its June 23, 2008 rebuttal comments (pp.3-4), stated whether or not most jurisdictions place transit receptacles at transit stops is not relevant to the existence of a state mandate because Government Code section 17565 provides that if a local agency has been incurring costs for activities that are subsequently mandated by the state, the activities are still subject to reimbursement. The County also states that the permit application only proposed an industrial/commercial *educational* site visit program, not an inspection program. The claimants allege that the inspection program was previously the state's duty, but that the permit shifted it to the local agencies.

Claimant cities in their June 28, 2008 comments also construe the SQMP proposal as involving only educational site visits, which they characterize as very different from compliance inspections. And cities assert that "nowhere in the Report of Waste Discharge do the applicants propose compliance inspections of facilities that hold general industrial and general construction stormwater permits for compliance with those permits." According to the cities, the city and county objected orally and in writing to the inspection permit provision.

In determining whether the permit provisions at issue are a downstream activity resulting from the discretionary decision by the local agencies, the following rule stated by the Supreme Court in the *Kern High School Dist.* case applies:

> [A]ctivities undertaken at the option or discretion of a local government entity ... do not trigger a state mandate and hence do not require reimbursement of funds—even if the local entity is obliged to incur costs as a result of its discretionary decision to participate in a particular program or practice.[53]

The Commission finds that the permit activities at issue were not undertaken at the option or discretion of the claimants. The claimants were required by state and federal law to submit the NPDES permit application in the form of a Report of Waste Discharge and SQMP. Submitting them was not discretionary. According to the record,[54] the county on behalf of all claimants, submitted on January 31, 2001 a Report of Waste Discharge (ROWD), which constitutes a permit application, and a SQMP, which constitutes the claimants' proposal for best management practices that would be required in the permit.

The duty to apply for an NPDES permit is not within the claimants' discretion. According to the federal regulation:

> a) *Duty to apply.* (1) Any person[55] who discharges or proposes to discharge pollutants ... and who does not have an effective permit ... must submit a

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[53] *Kern High School Dist., supra,* 30 Cal.4th 727, 742.

[54] State Water Resources Control Board, comments submitted April 18, 2008, page 8 & attachment 36.

[55] *Person* means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof (40 CFR § 122.2).

complete application to the Director in accordance with this section and part 124 of this chapter.[56]

Moreover, the ROWD (tantamount to an NPDES permit application) is required by California law, as follows: "Any person discharging pollutants or proposing to discharge pollutants to the navigable water of the United States within the jurisdiction of this state ... shall file a report of the discharge in compliance with the procedures set forth in Section 13260 ..."[57] Thus, submitting the ROWD is not discretionary.

Federal regulations also anticipate the filing of an application for a stormwater permit, which contains the information in the SQMP. The regulation states in part:

> (d) *Application requirements for large and medium municipal separate storm sewer discharges.* The operator of a discharge from a large or medium municipal separate storm sewer or a municipal separate storm sewer that is designated by the Director under paragraph (a)(1)(v) of this section, may submit a jurisdiction-wide or system-wide permit application. Where more than one public entity owns or operates a municipal separate storm sewer within a geographic area (including adjacent or interconnected municipal separate storm sewer systems), such operators may be a coapplicant to the same application.[58]

According to the permit, section 122.26, subdivision (d), of the federal regulations contains the essential components of the SQMP (p. 32), which is an enforceable element of the permit (p. 45). Section 122.26, subdivision (d)(2)(iv)(C), in the federal regulations is interpreted in the permit to "require that MS4 permittees implement a program to monitor and control pollutants in discharges to the municipal system from industrial and commercial facilities that contribute a substantial pollutant load to the MS4." (p. 35.) In short, the claimants were required by law to submit the ROWD and SQMP, with specified contents.

Because the claimants do not voluntarily participate in the NPDES program, the Commission finds that the *Kern High School Dist.* case does not apply to the permit, the contents of which were not the result of the claimants' discretion.

C. Are the permit provisions (Parts 4C2a, 4C2b, 4E, and 4F5c3) a federal mandate within the meaning of article XIII B, sections 6 and 9, subdivision (b)?

The next issue is whether the parts of the permit at issue are federally mandated, as asserted by the State Board and the Department of Finance (whose comments are detailed below). If so, the parts of the permit would not constitute a state mandate.

In *County of Los Angeles v. Commission on State Mandates,* the court stated as follows regarding this permit: "We are not convinced that the obligations imposed by a permit issued by a Regional Water Board necessarily constitute federal mandates under all circumstances."[59] But after

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[56] 40 Code of Federal Regulations, section 122.21 (a). The section applies to U.S. EPA-issued permits, but is incorporated into section 123.25 (the state program provision) by reference.

[57] Water Code section 13376.

[58] 40 Code of Federal Regulations, section 122.26 (d).

[59] *County of Los Angeles v. Commission on State Mandates, supra,* 150 Cal.App.4th 898, 914.

summarizing the arguments on both sides, the court declined to decide the issue, stating: "Resolution of the federal or state nature of these [permit] obligations therefore is premature and, thus, not properly before this court."[60] The court agreed with the Commission (calling it an "inescapable conclusion") that the federal versus state issues in the test claims must be addressed in the first instance by the Commission.[61]

The California Supreme Court has stated that "article XIII B, section 6, and the implementing statutes ... by their terms, provide for reimbursement only of *state*- mandated costs, not *federally* mandated costs."[62]

When analyzing federal law in the context of a test claim under article XII B, section 6, the court in *Hayes v. Commission on State Mandates* held that "[w]hen the federal government imposes costs on local agencies those costs are not mandated by the state and thus would not require a state subvention. Instead, such costs are exempt from local agencies' taxing and spending limitations" under article XIII B.[63] When federal law imposes a mandate on the state, however, and the state "freely [chooses] to impose the costs upon the local agency as a means of implementing a federal program, then the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government."[64]

Similarly, Government Code section 17556, subdivision (c), states that the Commission shall not find "costs mandated by the state" if "[t]he statute or executive order imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation."

In *Long Beach Unified School Dist. v. State of California*,[65] the court considered whether a state executive order involving school desegregation constituted a state mandate. The court held that the executive order required school districts to provide a higher level of service than required by federal constitutional or case law because the state requirements went beyond federal requirements.[66] The *Long Beach* court stated that unlike the federal law at issue, "the executive

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[60] *Id.* at page 918.

[61] *Id.* at page 917. The court cited *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal. 3d 830, 837, in support.

[62] *San Diego Unified School Dist. v. Commission on State Mandates, supra,* 33 Cal.4th 859, 879-880, emphasis in original.

[63] *Hayes v. Commission on State Mandates* (1992) 11 Cal. App. 4th 1564, 1593, citing *City of Sacramento v. State of California, supra,* 50 Cal.3d 51, 76; see also, Government Code sections 17513 and 17556, subdivision (c).

[64] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1594.

[65] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[66] *Id.* at page 173.

Order and guidelines require specific actions ... [that were] required acts. These requirements constitute a higher level of service."[67]

In analyzing the permit under the federal Clean Water Act, we keep the following in mind. First, each state is free to enforce its own water quality laws so long as its effluent limitations are not "less stringent" than those set out in the Clean Water Act.[68] Second, the California Supreme Court has acknowledged that an NPDES permit may contain terms that are federally mandated and terms that exceed federal law.[69] The federal Clean Water Act also allows for more stringent measures, as follows:[70]

> Permits for discharges from municipal storm sewers [¶]...[¶] (iii) shall require controls to reduce the discharges of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the ... State determines appropriate for the control of such pollutants. (33 U.S.C.A. 1342 (p)(3)(B)(iii).)

As discussed further below, the Commission finds that the permit activities are not federally mandated because federal law does not require the permittees to install and maintain trash receptacles at transit stops, or require inspections of restaurants, automotive service facilities, retail gasoline outlets or automotive dealerships. As to inspecting phase I facilities or construction sites, the federal regulatory scheme authorizes states to perform the inspections under a general statewide permit, making it possible to avoid imposing a mandate on the local agencies to do so.

In its June 2009 comments on the draft staff analysis, the State Board disagrees that specific mandates in the permit exceed the federal requirements, the State Board argues:

> This approach fails to recognize that NPDES storm water permits, whether issued by U.S. EPA or California's Water Boards, are designed to translate the general federal mandate into specific programs and enforceable requirements. Whether issued by U.S. EPA or the California's Water Boards, the federal NPDES permit will identify specific requirements for municipalities to reduce pollutants in their storm water to the maximum extent practicable. The federally required pollutant reduction is a federal mandate. ... The fact that state agencies have responsibility for specifying the federal permit requirements for municipalities does not convert the federal mandate into a state mandate.[71]

The Commission disagrees. Based on the *Long Beach Unified School Dist.* case discussed above and applied in the analysis below, the specific requirements in the permit may constitute a state mandate even though they are imposed in order to comply with the federal Clean Water Act.

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[67] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155, 173.

[68] 33 U.S.C. § 1370.

[69] *City of Burbank v. State Water Resources Control Board, supra,* 35 Cal.4th 613, 618, 628.

[70] 33 USCA section 1370.

[71] State Board comments submitted June 2009, page 6.

Finance, in its June 2009 comments on the draft staff analysis, distinguishes this permit from the issue in the *Long Beach Unified School Dist.* case. According to Finance, in *Long Beach,* the courts had suggested certain steps and approaches that might help alleviate racial discrimination, although the state's executive order and guidelines required specific actions. But in this claim, federal law requires NPDES permits to include specific requirements.

The Commission agrees that NPDES permits are required to include specific measures. But as discussed in more detail below, those measures are not the same as the specific requirements at issue in this permit (in Parts 4C2a, 4C2b, 4E, and 4F5c3).

The State Board's June 2009 comments also discuss *County of Los Angeles v. State Water Resources Control Board,*[72] which involved the same permit as in this test claim. The State Board asserts that this case holds, in an unpublished part, that "the permit did not exceed the federal minimum requirements for the MS4 program."[73] (Comments, p. 5.) The State Board asserts that the Commission is bound by this decision.

The Commission reads the *County of Los Angeles* case differently than the State Board. The plaintiffs (permittees and others) in that case challenged the permit on a variety of issues, including that the regional board did not have jurisdiction to issue it, and that it violated the California Environmental Quality Act. The court did not, however, discuss the permit conditions at issue in this test claim. In the portion cited by the State Board, the court was addressing the consideration of the permit's economic effects. One of the plaintiffs' challenges to the permit was that the regional board was required to consider the economic effects in issuing the permit. By alleging the regional board had not done so, the plaintiffs argued that the permit imposed conditions more stringent than required by the federal Clean Water Act. The court held that the plaintiff's contentions were waived for failure to set forth all the documents received by the regional board, and that the regional board had considered the costs and benefits of implementation of the permit. In other parts of the opinion, however, the court acknowledged the regional board's authority to impose permit restrictions beyond the "maximum extent feasible"[74]

The *County of Los Angeles* case is silent on the permit provisions at issue in this claim[75] (Parts 4C2a, 4C2b, 4E, and 4F5c3) except when it said: "we need no [sic] address the parties'

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[72] *County of Los Angeles v. State Water Resources Control Board, supra,* 143 Cal.App.4th 985.

[73] The court's opinion, including the unpublished parts, are in attachment 26 of the State Board's comments submitted April 18, 2008.

[74] See page 18 of attachment 26 of the State Board's comments submitted April 18, 2008.

[75] In *County of Los Angeles,* the plaintiffs also challenged the following parts of the permit: (1) part 2.1 that deals with receiving water restrictions and that prohibits all water discharges that violate water quality standards or objectives regardless of whether the best management practices are reasonable; (2) part 3.C, which requires the permittees to revise their storm water quality management programs in order to implement the total maximum daily loads for impaired water bodies, and (3) parts 3.G and 4., which authorize the regional board to require strict requirements with numeric limits on pollutants which are incorporated into the total maximum daily load restrictions. The court held that these contentions were waived for failure to set forth all the

remaining contentions concerning trash receptacles."[76] The court also said inspections under the permit were not unlawful. Nonetheless, the case is not binding on the Commission in deciding the issues in this claim.

California in the NPDES program: By way of background, under the federal statutory scheme, a stormwater permit may be administered by the Administrator of U.S. EPA or by a state-designated agency, but states are not required to have an NPDES program. Subdivision (b) of section 1324 of the federal Clean Water Act, the section that describes the NPDES program (and which, in subdivision (p), describes the requirements for the municipal stormwater system permits) states in part:

> At any time after the promulgation of the guidelines required by subsection (i)(2) of section 1314 of this title, the Governor of each State desiring to administer its own permit program for discharges into navigable waters within its jurisdiction may submit to the Administrator [of U.S. EPA] a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. [Emphasis added.]

And the federal stormwater statute states that the permits:

> [S]hall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. (33 USCA § 1342 (p)(3)(B)(iii). [Emphasis added].)

The federal statutory scheme indicates that California is neither required to have an NPDES program nor to issue stormwater permits. According to section 1342 (p) quoted above, the Administrator of U.S. EPA would do so if California had no program. The California Legislature, when adopting the NPDES program[77] to comply with the Federal Water Pollution Control Act of 1972 stated the following findings and declaration in Water Code section 13370:

(a) The Federal Water Pollution Control Act [citation omitted] as amended, provides for permit systems to regulate the discharge of pollutants ... to the navigable waters of the United States and to regulate the use and disposal of sewage sludge.

(b) The Federal Water Pollution Control Act, as amended, provides that permits may be issued by states which are authorized to implement the provisions of that act.

(c) It is in the interest of the people of the state, in order to avoid direct regulation by the federal government, of persons already subject to regulation under state law pursuant to this division, to enact this chapter in order to authorize the state to implement the

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applicable evidence, and that the regional board has authority to impose restrictions beyond the maximum extent feasible.

[76] See page 22, attachment 26 of the State Board's comments submitted April 18, 2008.

[77] Water Code section 13374 states: "The term 'waste discharge requirements' as referred to in this division is the equivalent of the term 'permits' as used in the Federal water Pollution Control Act, as amended."

provisions of the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto, and federal regulations and guidelines issued pursuant thereto, provided, that the state board shall request federal funding under the Federal Water Pollution Act for the purpose of carrying out its responsibilities under this program.

Based on this Water Code section 13370, in which California voluntarily adopts the permitting program, and on the federal statutes quoted above that authorize but do not expressly require states to have this program, the state has freely chosen[78] to effect the stormwater permit program.

Any further discussion in this analysis of federal "requirements" should be construed in the context of California's choice to participate in the federal regulatory NPDES program.

In its June 2009 comments on the draft staff analysis, the State Board argues as follows:

> [T]he ... analysis treats the state's decision to *administer* the NPDES permit program in 1972 as the 'choice' referred to in *Hayes*. ...The state's 'choice' to administer the program in lieu of the federal government does not alter the federal requirement on municipalities to reduce pollutants in these discharges to the maximum extent practicable.[79]

Finance, in its June 2009 comments, also disagrees with this part of the draft staff analysis, asserting that the duty to apply for a NPDES permit is required by federal law on public and private dischargers, which in this case are local agencies.

Even though California opted into the NPDES program, further analysis is needed to determine whether the federal regulations impose a mandate on the local agencies. To the extent that state requirements go beyond the federal requirements, there would be a state mandate.[80] Thus, the permit provisions (Parts 4C2a, 4C2b, 4E, and 4F5c3) are discussed below in context of the following federal law governing stormwater permits: Clean Water Act section 402(p) (33 USCA 1342 (p)(3)(B)) and Code of Federal Regulations, title 40, section 122.26.

Placing and maintaining trash receptacles at transit stops (part 4F5c3): This part of the permit states:

> c. Permittees not subject to a trash TMDL[81] shall: [¶]...[¶]
> (3) Place trash receptacles at all transit stops within its jurisdiction that have shelters no later than August 1, 2002, and at all transit stops within its jurisdiction no later than February 3, 2003. All trash receptacles shall be maintained as necessary.

The comments of the State Water Board and U.S. EPA assert that the permit conditions merely implement a federal mandate under the federal Clean Water Act and its regulations. The U.S.

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[78] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

[79] State Board comments submitted June 2009, page 4.

[80] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155, 173. Government Code section 17556, subdivision (b).

[81] A Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards.

EPA submitted a letter to the State Water Board regarding the permit conditions in April 2008, which the State Water Board attached to its comments. Regarding the trash receptacles, the letter states:

> [M]aintaining trash receptacles at all public transit stops is well within the scope of these [Federal] regulations. Among the minimum controls required to reduce pollutants from runoff from commercial and residential areas are practices for "operating and maintaining public streets, roads, and highways ... [40 CFR] § 122.26(d)(2)(iv)(A)(3).[82]

U.S. EPA also cites EPA's national menu of BMPs for stormwater management programs, "which recommends a number of BMPs to reduce trash discharges." Among the recommendations is 'improved infrastructure' for trash management when necessary, which includes the placement of trash receptacles at appropriate locations based on expected need."[83]

The State Water Board, in comments filed April 18, 2008, states that part 4F of the permit (regarding trash receptacles) concerns "the municipalities' own activities, as opposed to its regulation of discharges into its system by others." The State Water Board cites the same section 122.26 regulation as U.S. EPA, and states that the requirements "reflect the federal requirement to reduce pollutants from the MS4 to the maximum extent practicable. It is federal law that animates the requirement and federal law that mandates specificity in describing the BMPs." The State Water Board alleges that two appellate courts[84] have determined that the permit provisions constitute the "maximum extent practicable" standard, which is the minimum requirement under federal law.

The Department of Finance also asserts that the permit requirements are a federal mandate.

The County of Los Angeles, in comments filed June 23, 2008, states that "Nothing in the federal Clean Water Act requires the County to install trash receptacles at transit stops. Nothing in the federal regulations or the Clean Water Act itself imposes this obligation." The county states that the U.S.EPA's citation to BMPs for stormwater management programs "may be permitted under federal law ... and even encouraged as 'reasonable expectations.' But such requirements are not mandated on the County by federal law." The County admits the existence of "an abundance of federal guidance and encouragement to have the County install and maintain trash receptacles at all public transit stops. But these are merely federal suggestions, not mandates."

The city claimants, in comments filed June 25, 2008, also argue that the requirement for transit trash receptacles is not a federal mandate, stating that nothing in the Clean Water Act or the federal regulations requires cities to install trash receptacles at transit stops. City claimants also submit a survey of other municipal stormwater permits, finding that none of those issued by U.S. EPA required installation of trash receptacles at transit stops.

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[82] Letter from Alexis Strauss, Director, Water Division, U.S. EPA, to Tam M. Doduc, Chair, and Dorothy Rice, Executive Director, State Water Resources Control Board, April 10, 2008, page 3.

[83] *Id.* at page 3.

[84] The State Water Board cites: *City of Rancho Cucamonga v. Regional Water Quality Control Board- Santa Ana Region* (2006) 135 Cal.App.4th 1377; *County of Los Angeles v. California State Water Resources Control Board* (2006) 148 Cal.App.4th 985.

The federal law applicable to this issue is section 402 of the Clean Water Act, which states:

> Permits for discharges from municipal storm sewers--
>
> (i) may be issued on a system- or jurisdiction-wide basis;
>
> (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
>
> (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator[85] or the State determines appropriate for the control of such pollutants. (33 USCA § 1342 (p)(3)(B).)

The applicable federal regulations state as follows:

> (d) Application requirements for large and medium municipal separate storm sewer discharges. The operator[86] of a discharge[87] from a large or medium municipal separate storm sewer or a municipal separate storm sewer that is designated by the Director under paragraph (a)(1)(v) of this section, may submit a jurisdiction-wide or system-wide permit application. ... Permit applications for discharges from large and medium municipal storm sewers or municipal storm sewers designated under paragraph (a)(1)(v) of this section shall include; [¶]...[¶]
>
> (2) Part 2 of the application shall consist of: [¶]...[¶]
>
> (iv) Proposed management program. A proposed management program covers the duration of the permit. It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design

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[85] Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative. (40 CFR § 122.2.)

[86] "*Owner or operator* means the owner or operator of any "facility or activity" subject to regulation under the NPDES program." (40 CFR § 122.2.)

[87] "*Discharge* when used without qualification means the "discharge of a pollutant. *Discharge of a pollutant* means: (a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or (b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger." (40 CFR § 122.2.)

and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable. Proposed management programs shall describe priorities for implementing controls. Such programs shall be based on:

(A) A description of structural and source control measures[88] to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls. At a minimum, the description shall include: [¶]...[¶]

(3) A description of practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities. (40 CFR § 122.26(d)(2)(iv)(A)(3).) [Emphasis added.]

The Commission finds that the plain language of the federal statute (33 USCA § 1342 (p)(3)(B)) and regulation (40 CFR § 122.26 (d)(2)(iv)(A)(3)) does not require the permitees to install and maintain trash receptacles at transit stops.

Specifically, the state freely chose[89] to impose the transit trash receptacle requirement on the permittees because neither the federal statute nor the regulations require it. Nor do they require the permittees to implement "practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems"[90] although the regulation requires a description of practices for doing so. Because installing and maintaining trash receptacles at transit stops is not expressly required of cities or counties or municipal separate storm sewer dischargers in the federal statutes or regulations, these are activities that "mandate costs that exceed the mandate in the federal law or regulation."[91]

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[88] Minimum control measures are defined in 40 CFR § 122.34 to include: 1) Public education and outreach on storm water impacts; (2) Public involvement/participation; (3) Illicit discharge detection and elimination. (4) Construction site storm water runoff control; (5) Post-construction storm water management in new development and redevelopment.; (6) Pollution prevention/good housekeeping for municipal operations.

[89] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

[90] 40 CFR § 122.26(d)(2)(iv)(A)(3).

[91] Government Code section 17556, subdivision (c).

In *Long Beach Unified School Dist. v. State of California*,[92] the court considered whether a state executive order involving school desegregation constituted a state mandate. The court held that the executive order required school districts to provide a higher level of service than required by federal constitutional or case law because the state requirements went beyond federal requirements.[93] The *Long Beach Unified School District* court stated:

> Where courts have suggested that certain steps and approaches may be helpful [in meeting constitutional and case law requirements] the executive Order and guidelines require *specific actions.* ...[T]he point is that these steps are no longer merely being suggested as options which the local school district may wish to consider but are required acts. These requirements constitute a higher level of service.[94] [Emphasis added.]

The reasoning of *Long Beach Unified School Dist.* is applicable to this claim. Although "operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems..."[95] is a federal requirement on municipalities, the permit requirement to place trash receptacles at all transit stops and maintain them is an activity, like in *Long Beach Unified School Dist.,* that is a *specified action* going beyond federal law.[96]

Neither of the cases cited by the State Water Board demonstrate that placing trash receptacles at transit stops is required by federal law. In *City of Rancho Cucamonga v. Regional Water Quality Control Board –Santa Ana Region*[97] the court upheld a stormwater permit similar to the one at issue in this claim. The City of Rancho Cucamonga challenged the permit on a variety of grounds, including that it exceeded the federal requirements for stormwater dischargers to "reduce the discharge of pollutants to the maximum extent practicable"[98] and that it was overly prescriptive. The court concluded that the permit did not exceed the maximum extent practicable standard and upheld the permit in all respects. There is no indication in that case, however, that the permit at issue required trash receptacles at transit stops. Similarly, in a suit regarding the same permit at issue in this case, the *Los Angeles County*[99] court dismissed various challenges to the permit, but made no mention of the permit's transit trash receptacle provision.

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[92] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[93] *Id.* at page 173.

[94] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155, 173.

[95] 40 Code of Federal Regulations, section 122.26 (d)(2)(iv)(A)(3).

[96] *Ibid.*

[97] *City of Rancho Cucamonga v. Regional Water Quality Control Board- Santa Ana Region, supra,* 135 Cal.App.4th 1377.

[98] 33 USCA section 1342 (p)(3(B)(iii).

[99] *County of Los Angeles v. California State Water Resources Control Board, supra,* 143 Cal.App.4th 985.

Therefore, the Commission finds that placing and maintaining trash receptacles at all transit stops within the jurisdiction of each permittee, as specified, is not a federal mandate within the meaning of article XIII B, sections 6 and 9, subdivision (b).

Part 4F5c3 of the permit states as follows:

> c. Permittees not subject to a trash TMDL shall: (3) Place trash receptacles at all transit stops within its jurisdiction that have shelters no later than August 1, 2002, and at all transit stops within its jurisdiction no later than February 3, 2003. All trash receptacles shall be maintained as necessary.

Based on the mandatory language (i.e., "shall") in part 4F5c3 of the permit, the Commission finds it is a state mandate for the claimants that are not subject to a trash TMDL to place trash receptacles at all transit stops within its jurisdiction that have shelters no later than August 1, 2002, and at all transit stops within its jurisdiction no later than February 3, 2003, and to maintain all trash receptacles as necessary.

Inspecting commercial facilities (part 4C2a): Section 4C2a of the permit requires inspections of restaurants, automotive service facilities, retail gasoline outlets and automotive dealerships as follows:

> 2. Inspect Critical Sources – Each Permittee shall inspect all facilities in the categories and at a level and frequency as specified in the following subsections:
>
> (a) Commercial Facilities
>
> (1) Restaurants
>
> Frequency of Inspections: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.
>
> Level of Inspections: Each Permittee, in cooperation with its appropriate department (such as health or public works), shall inspect all restaurants within its jurisdiction to confirm that stormwater BMPs are being effectively implemented in compliance with Statw law, County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP. At each restaurant, inspectors shall verify that the restaurant operator:
>
> - has received educational materials on stormwater pollution prevention practices;
> - does not pour oil and grease or oil and grease residue onto a parking lot, street or adjacent catch basin;
> - keeps the trash bin area clean and trash bin lids closed, and does not fill trash bins with washout water or any other liquid;
> - does not allow illicit discharges, such as discharge of washwater from floormats, floors, porches, parking lots, alleys, sidewalks and street areas (in the immediate vicinity of the establishment), filters or garbage/trash containers;

- removes food waste, rubbish or other materials from parking lot areas in a sanitary manner that does not create a nuisance or discharge to the storm drain.

(2) Automotive Service Facilities

Frequency of Inspections: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of Inspections: Each permittee shall inspect all automotive service facilities within its jurisdiction to confirm that stormwater BMPs are effectively implemented in compliance with County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP. At each automotive service facility, inspectors shall verify that each operator:

- maintains the facility area so that it is clean and dry without evidence of excessive staining;
- implements housekeeping BMPs to prevent spills and leaks;
- properly discharges wastewaters to a sanitary sewer and/or contains wastewaters for transfer to a legal point of disposal;
- is aware of the prohibition on discharge of non-stormwater to the storm drain;
- properly manages raw and waste materials including proper disposal of hazardous waste;
- protects outdoor work and storage areas to prevent contact of pollutants with rainfall and runoff;
- labels, inspects, and routinely cleans storm drain inlets that are located on the facility's property; and
- trains employees to implement stormwater pollution prevention practices.

(3) Retail Gasoline Outlets and Automotive Dealerships

Frequency of Inspection: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each RGO and automotive dealership within its jurisdiction, in compliance with the SQMP, Regional Board Resolution 98-08, and the Stormwater Quality Task Force Best Management Practice Guide for RGOs. At each RGO and automotive dealership, inspectors shall verify that each operator:

- routinely sweeps fuel-dispensing areas for removal of litter and debris, and keeps rags and absorbents ready for use in case of leaks and spills;
- is aware that washdown of facility area to the storm drain is prohibited;
- is aware of design flaws (such as grading that doesn't prevent run-on, or inadequate roof covers and berms), and that equivalent BMPs are implemented;

- inspects and cleans storm drain inlets and catch basins within each facility's boundaries no later than October 1st of each year;
- posts signs close to fuel dispensers, which warn vehicle owners/operators against "topping off" of vehicle fuel tanks and installation of automatic shutoff fuel dispensing nozzles;
- routinely checks outdoor waste receptacle and air/water supply areas, cleans leaks and drips, and ensures that only watertight waste receptacles are used and that lids are closed; and
- trains employees to properly manage hazardous materials and wastes as well as to implement other stormwater pollution prevention practices. [¶]...[¶]

Level of Inspection: Each Permittee shall confirm that each operator:

- has a current Waste Discharge Identification (WDID) number for facilities discharging stormwater associated with industrial activity, and that a Storm Water Pollution Prevention Plan is available on-site, and
- is effectively implementing BMPs in compliance with County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP.

The state asserts that these inspection requirements in permit part 4C2a are a federal mandate.

In comments filed April 18, 2008, the State Water Board quotes from the MS4 Program Evaluation Guide issued by U.S. EPA, asserting that it requires inspections of businesses. The State Water Board also states:

> The federal regulations also specifically require local stormwater agencies, as part of their responsibilities under NPDES permits, to conduct inspections. [citing 40 CFR § 122.26(d)(2)(iv)(C).] Throughout the federal law, there are numerous requirements for entities that discharge pollutants to waters of the United States to monitor and inspect their facilities and their effluent. [citing Clean Water Act §402(b)(2)(B); 40 CFR § 122.44(i)).] The claimants are the dischargers of pollutants into surface waters; as part of their permit allowing these dischargers they must conduct inspections.

Similarly, the April 10, 2008 letter from U.S. EPA to the State Water Board and attached to the Board's comments submitted April 18, 2008, states:

> A program for commercial and industrial facility inspection and enforcement that includes restaurants and automobile facilities, would appear to be both practicable and effective. Such an inspection program ensures that stormwater discharges from such facilities are reducing their contribution of pollutants and that there are no non-stormwater discharges or illicit connections. Thus these programs are founded in both 402 (p)(3)(B)(ii) and (iii) and are well within the scope of 40 CFR § 122.26(d)(2)(iv)(A) and (B).

The County of Los Angeles, in its June 23, 2008 rebuttal comments, asserts that federal law requires prohibiting non-stormwater discharges into the storm sewers, and reducing the discharge of pollutants in stormwater to the maximum extent practicable (33 USC 1342(p)) but not inspecting restaurants, automotive service facilities, retail gas outlets, or automotive dealerships.

Only municipal landfills, hazardous waste treatment, disposal and recovery facilities and related facilities are required to be inspected (40 CFR § 122.26(d)(2)(iv)(C)).

In comments received June 25, 2008, the city claimants argue that the LA Regional Board freely chose to impose the permit requirements on the permittees, and make the following arguments: (1) The inspection obligations were not contained in two prior permits issued to the cities and the County—thus, the requirements are not federal mandates; (2) No federal statute or regulation requires the cities or the County to inspect restaurants, automotive service facilities, retail gas outlets, automotive dealerships or facilities that hold general industrial permits; (3) Stormwater NPDES permits issued by the U.S. EPA do not contain the requirement to inspect restaurants, auto service facilities, retail gas outlets and automotive dealerships, or require the extensive inspection of facilities that hold general industrial stormwater permits as contained in the Order [i.e. permit]; (4) The Administrator of U.S. EPA, as well as the head of the water division for U.S. EPA Region IX, have specifically stated that a municipality has an obligation under a stormwater permit only to assure compliance with local ordinances; the state retains responsibility to inspect for compliance with state law, including state-issued permits.

The city claimants dispute the State Board's contention that the court in *City of Rancho Cucamonga v. Regional Water Quality Control Board* (2006) 135 Cal.App.4th 1377 held that federal law required inspections like those at issue in the permit. The cities quote part of the *City of Rancho Cucamonga* case with the following emphasis:

> Rancho Cucamonga and the other permittees are responsible for inspecting construction and industrial sites and commercial facilities within their jurisdiction for compliance with and enforcement of local municipal ordinances and permits. *But the Regional Board continues to be responsible under the 2002 NPDES permit for inspections under the general permits.* The Regional Board may conduct its own inspections but permittees must still enforce their own laws at these sites. (40 C.F.R. § 122.26, subd. (d)(2) (2005).)

In discussing the federal mandate issue, the applicable federal law is section 402 of the Clean Water Act, which states that municipal storm sewer system permits:

> (i) may be issued on a system- or jurisdiction-wide basis; (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. (33 USCA § 1342 (p)(3)(B).)

The applicable federal regulations (40 CFR § 122.26 (d)(2)(iv)(B)&(C)) state as follows:

> (d) Application requirements for large and medium municipal separate storm sewer discharges. The operator of a discharge from a large or medium municipal separate storm sewer or a municipal separate storm sewer that is designated by the Director under paragraph (a)(1)(v) of this section, may submit a jurisdiction-wide or system-wide permit application. Where more than one public entity owns or operates a municipal separate storm sewer within a geographic area (including adjacent or interconnected municipal separate storm sewer systems), such

operators may be a coapplicant to the same application. Permit applications for discharges from large and medium municipal storm sewers or municipal storm sewers designated under paragraph (a)(1)(v) of this section shall include; [¶]...[¶]

(2) Part 2 of the application shall consist of: [¶]...[¶]

(iv) Proposed management program. A proposed management program covers the duration of the permit. It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable. Proposed management programs shall describe priorities for implementing controls. Such programs shall be based on: [¶]...[¶]

(B) A description of a program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer. The proposed program shall include:

(1) A description of a program, <u>including inspections</u>, to implement and enforce an ordinance, orders or similar means <u>to prevent illicit discharges to the municipal separate storm sewer system</u>; this program description shall address all types of illicit discharges, however the following category of non-stormwater discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States [¶]...[¶]

(C) A description of a program to monitor and control pollutants in stormwater discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system. The program shall:

(1) Identify priorities and procedures <u>for inspections</u> and establishing and implementing control measures for such discharges. (40 C.F.R. § 122.26, subd. (d)(2)(iv)(B)(1) & (C)(1).) [Emphasis added.]

There is a requirement in subdivision (d)(2)(iv)(B)(1) for implementing and enforcing "an ordinance, orders, or similar means to prevent illicit discharges to the municipal separate storm system." There is no express requirement in federal law, however, to inspect restaurants, automotive service facilities, retail gasoline outlets, or automotive dealerships. Nor does the

portion of the MS4 Program Evaluation Guide quoted by the State Water Board contain mandatory language to conduct inspections for these facilities.

In its April 2008 comments, the State Water Board argues that this reading of the regulations is not reasonable, and that U.S. EPA acknowledged that the initial selection by MS4s was only a starting point. In its comments (p.15), the State Water Board also states:

> Because the federal mandate requires Water Boards to choose specific BMPs [Best Management Practices] that are included in MS4 permits as requirements, the 'discretion' exercised in selecting those BMPs is necessarily a part of the federal mandate. It is not comparable to the discretion that the courts in *Hayes* or *San Diego* spoke of, where the state truly had a 'free choice.' The Los Angeles Water Board was mandated by federal law to select BMPs that would result in compliance with the federal MEP [Maximum Extent Practicable] standard. ... Therefore, it is clear that the mere exercise of discretion in selecting BMPs does not create a reimbursable mandate.

The State Water Board would have the Commission read requirements into the federal law that are not there. The Commission, however, cannot read a requirement into a statute or regulation that is not on its face or its legislative history.[100]

Based on the plain language of the federal regulations that are silent on the types of facilities at issue in the permit, the Commission finds that performing inspections at restaurants, automotive service facilities, retail gasoline outlets, or automotive dealerships, as specified in the permit, is not a federal mandate.

Moreover, the requirement to inspect the facilities listed in the permit is an activity, as in the *Long Beach Unified School Dist.* case discussed above, [101] that is a specified action going beyond the federal requirement for inspections "to prevent illicit discharges to the municipal separate storm sewer system." (40 C.F.R. § 122.26, subd. (d)(2)(iv)(B)(1).) As such, the inspections are not federally mandated.

The permit states in part: "Each Permittee shall inspect all facilities in the categories and at a level and frequency as specified ..." Based on the mandatory language in part 4C2a of the permit, the Commission finds that this part is a state mandate on the claimants to perform the inspections at restaurants, automotive service facilities, retail gasoline outlets, and automotive dealerships at the frequency and levels specified in the permit.

Inspecting phase I industrial facilities (part 4C2b): Part 4C2b of the permit regarding phase I industrial facilities requires the following:

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[100] *Gillett-Harris-Duranceau & Associates, Inc. v. Kemple* (1978) 83 Cal.App.3d 214, 219-220. "Rules governing the interpretation of statutes also apply to interpretation of regulations." *Diablo Valley College Faculty Senate v. Contra Costa Community College Dist.* (2007) 148 Cal.App.4th 1023, 1037.

[101] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

b) Phase I Facilities[102]

Permittees need not inspect facilities that have been inspected by the Regional Board within the past 24 months. For the remaining Phase I facilities that the Regional Board has not inspected, each Permittee shall conduct compliance inspections as specified below.

Frequency of Inspection

Facilities in Tier 1 Categories:[103] Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Facilities in Tier 2 Categories:[104] Twice during the 5-year term of the permit, provided that the first inspection occurs no later than August 1, 2004, Permittees need not perform additional inspections at those facilities determined to have no risk of exposure of industrial activity to stormwater. For those facilities that do have exposure of industrial activities to stormwater, a Permittee may reduce that frequency of additional compliance inspections to once every 5 years, provided that the Permittee inspects at least 20% of the facilities in Tier 2 each year.

Level of Inspection: Each Permittee shall confirm that each operator:

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[102] On page 62 of the permit, U.S. EPA Phase I Facilities are defined as "facilities in specified industrial categories that are required to obtain an NPDES permit for storm water discharges, as required by 40 CFR 122.26(c). These categories include: (i) facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR N); (ii) manufacturing facilities; (iii) oil and gas/mining facilities; (iv) hazardous waste treatment, storage, or disposal facilities; (v) landfills, land application sites, and open dumps; (vi) recycling facilities; (vii) steam electric power generating facilities; (viii) transportation facilities; (ix) sewage or wastewater treatment works; (x) light manufacturing facilities.

[103] Attachment B of the permit (pp. B-1 to B-2) lists the Tier 1 categories as follows (with Phase I facilities listed in italics): "*Municipal landfills ...; Hazardous Waste Treatment, Disposal and Recovery Facilities; Facilities Subject to SARA Title III ...;* Restaurants; *Wholesale trade (scrap, auto dismantling)...;* Automotive service facilities; *Fabricated metal products ...; Motor freight ...; Chemical/allied products ...;* Automotive Dealers/Gas Stations ...; *Primary Metals.*"

[104] Attachment B of the permit (pp. B-1 to B-2) lists the Tier 2 categories as follows (with Phase I facilities listed in italics): "*Electric/Gas/Sanitary...; Air Transportation ...; Rubbers/Miscellaneous Plastics ...; Local/Suburban Transit ...; Railroad Transportation ...; Oil & Gas Extraction ...; Lumber/Wood Products...; Machinery Manufacturing ...; Transportation Equipment ...; Stone, Clay, Glass, Concrete ...; Leather/Leather Products...; Miscellaneous Manufacturing ...; Food and kindred Products...; Mining of Nonmetallic Minerals ...; Printing and Publishing ...; Electric/Electronics ...; Paper and Allied Products ...; Furniture and Fixtures ...;* Laundries ...; *Instruments...; Textile Mills Products ...; Apparel ...*"

- has a current Waste Discharge Identification (WDID) number for facilities discharging stormwater associated with industrial activity, and that a Storm Water Pollution Prevention Plan is available on-site, and is effectively implementing BMPs in compliance with County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP.

The issue is whether these inspection requirements for phase I industrial facilities is a federal mandate. The governing federal regulation is 40 CFR section 122.26 (d)(2)(iv)(B)&(C), which is cited above. Specifically on point is subpart (C), which states that the proposed management program must include the following:

> (C) A description of a program to monitor and control pollutants in stormwater discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system. The program shall:
>
> (1) Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges; (40 C.F.R. § 122.26, subd. (d)(2)(iv)(B)(1) & (C)(1).) [Emphasis added.]

The phase I facilities in the permit are defined to include.

> (i) facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR N); (ii) manufacturing facilities; (iii) oil and gas/mining facilities; (iv) hazardous waste treatment, storage, or disposal facilities; (v) landfills, land application sites, and open dumps; (vi) recycling facilities; (vii) steam electric power generating facilities; (viii) transportation facilities; (ix) sewage or wastewater treatment works; (x) light manufacturing facilities. (Permit, p. 62)

And the Tier 1 facilities in the permit include municipal landfills, hazardous waste treatment, disposal and recovery facilities and facilities subject to SARA Title III (see permit attachment B, pp. B-1 to B-2). Thus, there is a federal requirement to inspect these phase I and tier 1 facilities in the permit. The issue is whether this requirement constitutes a federal mandate on local agencies. The Commission finds that it does not.

It is the state that mandates the phase I inspection and related activities in that the state freely chooses to impose the inspection and enforcement requirements on the local agency permittees.[105] This is because the federal regulatory scheme provides an alternative means of regulating and inspecting these industrial facilities under the state-enforced, statewide permit, as follows:

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[105] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

(c) Application requirements for stormwater discharges associated with industrial activity[106] and stormwater discharges associated with small construction activity -

(1) Individual application. Dischargers of stormwater associated with industrial activity and with small construction activity are required to apply for an individual permit or seek coverage under a promulgated stormwater general permit. Facilities that are required to obtain an individual permit, or any discharge of stormwater which the Director is evaluating for designation (see 124.52(c) of this chapter) under paragraph (a)(1)(v) of this section and is not a municipal storm sewer, shall submit an NPDES application in accordance with the requirements of § 122.21 as modified and supplemented by the provisions of this paragraph. [Emphasis added.]

The state has issued a statewide general activity industrial permit (GIASP) that is enforced through the regional boards.[107] This, along with the statewide construction permit, is described in the permit itself:

> To facilitate compliance with federal regulations, the State Board has issued two statewide general NPDES permits for stormwater discharges: one for stormwater from industrial sites [NPDES No. CAS000001, General Industrial Activity Storm Water Permit (GIASP)] and the other for stormwater from construction sites [NPDES No. CAS000002, General Construction Activity Storm Water Permit (GCASP)]. The GCASP was reissued on August 19, 1999. The GIASP was reissued on April 17, 1997. Facilities discharging stormwater associated with industrial activities and construction projects with a disturbed area of five acres or more are required to obtain individual NPDES permits for stormwater discharges, or to be covered by a statewide general permit by completing and filing a Notice of Intent (NOI) with the State Board. The USEPA guidance anticipates coordination of the state-administered programs for industrial and construction activities with the local agency program to reduce pollutants in stormwater discharges to the MS4. The Regional Board is the enforcement authority in the Los Angeles Region for the two statewide general permits regulating discharges from industrial facilities and construction sites, and all NPDES stormwater and

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[106] According to 40 CFR § 122.26, (b)(14): "Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. ... The following categories of facilities are considered to be engaging in "industrial activity" for purposes of paragraph (b)(14): [¶]...[¶](x) Construction activity including clearing, grading and excavation, except operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more."

[107] For example, page 2 of the Fact Sheet for the General Construction Activity Storm Water Permit states: "This General Permit shall be implemented and enforced by the nine California Regional Water Quality Control Boards (RWQCBs)."

> non-stormwater permits issued by the Regional Board. These industrial and construction sites and discharges are also regulated under local laws and regulations.[108]

There is nothing in the federal statutes or regulations that would prevent the state (rather than local agencies) from performing the inspections of industrial facilities (specified in part 4C2b of the permit) under the state-enforced general permit. Nor does federal law require the owner or operator of the discharge to perform these activities in part 4C2b of the permit. In fact, the State Board collects fees for the regional boards for performing inspections under the GIASP (see Wat. Code, § 13260, subd. (d)(2)(B)(ii)).

In its April 18, 2008 comments, the State Water Board asserts:

> Because the federal mandate requires Water Boards to choose specific BMPs [Best Management Practices] that are included in MS4 permits as requirements, the 'discretion' exercised in selecting those BMPs is necessarily a part of the federal mandate. It is not comparable to the discretion that the courts in *Hayes* or *San Diego* spoke of, where the state truly had a 'free choice.' The Los Angeles Water Board was mandated by federal law to select BMPs that would result in compliance with the federal MEP [Maximum Extent Practicable] standard. ... Therefore, it is clear that the mere exercise of discretion in selecting BMPs does not create a reimbursable mandate.[109]

The Commission disagrees. Inasmuch as the federal regulation (40 CFR § 122.26 (c)) authorizes coverage under a statewide general permit for the inspections of industrial activities, and the federal regulation (40 CFR § 122.26 (d)(2)(iv)(D)) does not expressly require those inspections to be performed by the county or cities (or the "owner or operator of the discharge") the Commission finds that the state has freely chosen[110] to impose these activities on the permittees. Therefore, the Commission finds that there is no federal mandate on the claimants to perform inspections of phase I facilities as specified in part 4C2b of the permit.

As to whether the permit is a state mandate, part 4C2b contains the following mandatory language:

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[108] Permit, page 11, paragraph 22.

[109] State Water Board comments, submitted April 18, 2008, page 15.

[110] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

b) Phase I Facilities[111]

Permittees need not inspect facilities that have been inspected by the Regional Board within the past 24 months. For the remaining Phase I facilities that the Regional Board has not inspected, each Permittee shall conduct compliance inspections as specified below. [Emphasis added.]

Frequency of Inspection

Facilities in Tier 1 Categories:[112] Twice during the 5-year term of the Order, provided that the first inspection occurs no later than August 1, 2004, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Facilities in Tier 2 Categories:[113] Twice during the 5-year term of the permit, provided that the first inspection occurs no later than August 1, 2004, Permittees need not perform additional inspections at those facilities determined to have no risk of exposure of industrial activity[114] to stormwater. For those facilities that do

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[111] On page 62 of the permit, U.S. EPA Phase I Facilities are defined as "facilities in specified industrial categories that are required to obtain an NPDES permit for storm water discharges, as required by 40 CFR 122.26(c). These categories include: (i) facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR N); (ii) manufacturing facilities; (iii) oil and gas/mining facilities; (iv) hazardous waste treatment, storage, or disposal facilities; (v) landfills, land application sites, and open dumps; (vi) recycling facilities; (vii) steam electric power generating facilities; (viii) transportation facilities; (ix) sewage or wastewater treatment works; (x) light manufacturing facilities.

[112] Attachment B of the permit (pp. B-1 to B-2) lists the Tier 1 categories as follows (with Phase I facilities listed in italics): "*Municipal landfills ...; Hazardous Waste Treatment, Disposal and Recovery Facilities; Facilities Subject to SARA Title III ...;* Restaurants; *Wholesale trade (scrap, auto dismantling)...;* Automotive service facilities; *Fabricated metal products ...; Motor freight ...; Chemical/allied products ...;* Automotive Dealers/Gas Stations ...; *Primary Metals.*"

[113] Attachment B of the permit (pp. B-1 to B-2) lists the Tier 2 categories as follows (with Phase I facilities listed in italics): "*Electric/Gas/Sanitary...; Air Transportation ...; Rubbers/Miscellaneous Plastics ...; Local/Suburban Transit ...; Railroad Transportation ...; Oil & Gas Extraction ...; Lumber/Wood Products...; Machinery Manufacturing ...; Transportation Equipment ...; Stone, Clay, Glass, Concrete ...; Leather/Leather Products...; Miscellaneous Manufacturing ...; Food and kindred Products...; Mining of Nonmetallic Minerals ...; Printing and Publishing ...; Electric/Electronics ...; Paper and Allied Products ...; Furniture and Fixtures ...;* Laundries ...; *Instruments...; Textile Mills Products ...; Apparel ...*"

[114] "Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. ... The following categories of facilities are considered to be engaging in "industrial activity" for purposes of paragraph (b)(14): [¶]...[¶] (x) Construction activity including clearing, grading and excavation,

have exposure of industrial activities to stormwater, a Permittee may reduce that frequency of additional compliance inspections to once every 5 years, provided that the Permittee inspects at least 20% of the facilities in Tier 2 each year.

Level of Inspection: Each Permittee shall confirm that each operator:

- has a current Waste Discharge Identification (WDID) number for facilities discharging stormwater associated with industrial activity, and that a Storm Water Pollution Prevention Plan is available on-site, and is effectively implementing BMPs in compliance with County and municipal ordinances, Regional Board Resolution 98-08, and the SQMP.

Based on this mandatory language to perform the inspections of phase I facilities as specified, the Commission finds that part 4C2b of the permit is a state-mandate.

Inspecting construction sites (part 4E): Part 4E of the permit contains the following requirements:

- Implement a program to control runoff from construction activity at all construction sites within each permittees jurisdiction, and ensure the specified minimum requirements are effectively implemented at all construction sites. (Permit, 4E1.)

  For construction sites one acre or greater, each permittee shall:

- Require the preparation and submittal of a Local SWPPP [Storm Water Pollution Prevention Plan], with specified contents, for approval prior to issuing a grading permit for construction projects. (Permit, 4E2a.)
- Inspect all construction sites for stormwater quality requirements during routine inspections a minimum of once during the wet seasons. (Permit, 4E2b.)
- Review the Local SWPPP for compliance with local codes, ordinances, and permits. (Permit, 4E2b.)
- For inspected sites that have not adequately implemented their Local SWPPP, conduct a follow-up inspection to ensure compliance will take place within 2 weeks.
  - If compliance has not been attained, take additional actions to achieve compliance (as specified in municipal codes).
  - If compliance has not been achieved, and the site is also covered under a statewide general construction stormwater permit, enforce the local ordinance requirements, and
  - If non-compliance continues the Regional Board shall be notified for further joint enforcement actions. (Permit, 4E2b.)

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except operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more." [40 CFR §122.26 (b)(14), Emphasis added.]

- Require by March 10, 2003, before issuing a grading permit for all projects less than five acres requiring coverage under a statewide general construction stormwater permit, proof of a Waste Discharger Identification Number for filing a Notice of Intent for permit coverage and a certification that a SWPPP has been prepared by the project developer. A Local SWPPP may substitute for the State SWPPP if the Local SWPPP is at least as inclusive in controls and BMPs [Best Management Practices] as the State SWPPP (Permit, 4E2c.)
- For sites five acres and greater:
    - Require, prior to issuing a grading permit for all projects requiring coverage under the state general permit, proof of a Waste Discharger Identification (WDID) number for filing a Notice of Intent (NOI) for coverage under the GCASP [General Construction Activity Storm Water Permit] and a certification that a SWPPP has been prepared by the project developer. A Local SWPPP may substitute for the State SWPPP if the Local SWPPP is at least as inclusive in controls and BMPs as the State SWPPP.
    - Require proof of an Notice of Intent (NOI) and a copy of the SWPPP at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going.
    - Use an effective system to track grading permits issued by each permittee. (Permit, 4E3.)
- For projects subject to the GCASP [General Construction Activity Storm Water Permit], permittees shall refer non-filers (i.e., those projects which cannot demonstrate that they have a WDID number) to the Regional Board, within 15 days of making a determination. In making such referrals, permittees shall include, at a minimum, the following documentation: Project location; Developer; Estimated project size; and Records of communication with the developer regarding filing requirements. (Permit, 4E4b.)
- Train employees in targeted positions (whose jobs or activities are engaged in construction activities including construction inspection staff) regarding the requirements of the stormwater management program no later than August 1, 2002, and annually thereafter. For permittees with a population of 250,000 or more (2000 US Census), initial training shall be completed no later than February 3, 2003. Each permittee shall maintain a list of trained employees. (Permit, 4E5.)

The applicable federal regulation (40 CFR § 122.26 (d)(2)(iv)(D)) on the issue of whether the inspection of construction sites is a federal mandate is as follows:

> (d) Application requirements for large[115] and medium[116] municipal separate storm sewer discharges. The operator[117] of a discharge from a large or medium

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[115] "(4) Large municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) Located in an incorporated place with a population of 250,000 or more as

municipal separate storm sewer or a municipal separate storm sewer that is designated by the Director under paragraph (a)(1)(v) of this section, may submit a jurisdiction-wide or system-wide permit application. ... Permit applications for discharges from large and medium municipal storm sewers or municipal storm sewers designated under paragraph (a)(1)(v) of this section shall include; [¶]...[¶]

(2) Part 2 of the application shall consist of: [¶]...[¶]

(iv) Proposed management program. A proposed management program covers the duration of the permit. It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable. Proposed management programs shall describe priorities for implementing controls. Such programs shall be based on: [¶]...[¶]

(D) A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in stormwater runoff

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determined by the 1990 Decennial Census by the Bureau of the Census (Appendix F of this part); or (ii) Located in the counties listed in appendix H, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or (iii) Owned or operated by a municipality other than those described in paragraph (b)(4)(i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(4)(i) or (ii) of this section. ..." (40 CFR § 122.26 (b)(4).)

[116] "(7) Medium municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) Located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the 1990 Decennial Census by the Bureau of the Census (Appendix G of this part); or (ii) Located in the counties listed in appendix I, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or (iii) Owned or operated by a municipality other than those described in paragraph (b)(7)(i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(7)(i) or (ii) of this section. ..." (40 CFR § 122.26 (b)(7).)

[117] "*Owner or operator* means the owner or operator of any 'facility or activity' subject to regulation under the NPDES program." (40 CFR § 122.2.)

> from construction sites to the municipal storm sewer system, which shall include: [¶]...[¶]
>
> (3) A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality; and ... [Emphasis added.]

The language of the federal regulation indicates a duty to inspect construction sites and enforce control measures as specified in part 4E of the permit. The *Rancho Cucamonga* case cited by the State Board also states that federal law requires NPDES permittees to inspect construction sites.[118]

The issue, however, is whether the federal requirements to inspect construction sites and enforce control measures amounts to a federal mandate on the local agencies. The Commission finds that it does not. First, the federal regulations quoted above do not specify the frequency or other specifics of the inspection program as the permit does. These are activities, as in the *Long Beach Unified School Dist.* case discussed above,[119] that are specified actions going beyond the federal requirement for inspections "to prevent illicit discharges to the municipal separate storm sewer system." (40 C.F.R. § 122.26, subd. (d)(2)(iv)(B)(1).) As such, it is not a federal mandate for the local agency permittees to inspect construction sites.

Moreover, it is the state that mandates the inspections of construction sites and related activities in that the state freely chooses to impose the inspection and enforcement requirements on the local agency permittees.[120] The federal regulations do not require: (1) a municipality to have a separate permit for construction activity or enforcement; or (2) that the inspections and related activities in part 4E of the permit be conducted by the owner or operator of the discharge. Rather, these activities may be conducted by the state under a state-wide, state-enforced, general permit, as stated in the federal stormwater regulation (40 CFR § 122.26 (c)), which states in part:

> (c) Application requirements for stormwater discharges associated with industrial activity [includes construction activity of five or more acres] and stormwater discharges associated with small construction activity[121] [construction activity from one to less than five acres]--

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[118] *City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region, supra,* 135 Cal.App.4th 1377, 1390.

[119] *Long Beach Unified School Dist. v. State of California, supra,* 225 Cal.App.3d 155.

[120] *Hayes v. Commission on State Mandates, supra,* 11 Cal. App. 4th 1564, 1593-1594.

[121] According to 40 CFR § 122.26, (b)(15): "Storm water discharge associated with small construction activity means the discharge of storm water from: (i) Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. The

(1) Individual application. Dischargers of stormwater associated with industrial activity and with small construction activity are required to apply for an individual permit or seek coverage under a promulgated stormwater general permit. [Emphasis added.]

The state has issued a statewide general construction permit, as described on page 11 of the permit as quoted above, which is enforced through the regional boards.[122] In fact, the State Board collects fees for the regional board for performing inspections under the GCASP (see Wat. Code, § 13260, subd. (d)(2)(B)(ii)).

There is nothing in the federal statutes or regulations that would prevent the state (rather than local agencies) from performing the inspection of construction sites and related activities (in part 4E of the permit) under the state-enforced general permit. Nor does federal law require the owner or operator of the discharge to perform these activities in part 4E of the permit. Therefore, the Commission finds that the requirement for local-agency permittees to inspect construction sites in section 4E of the permit is not a federal mandate.

The Commission finds that, based on the permit's mandatory language, the following activities in part 4E are state mandates on the permittees within the meaning of article XIII B, section 6:

- Implement a program to control runoff from construction activity at all construction sites within each permittee's jurisdiction, and ensure the specified minimum requirements are effectively implemented at all construction sites. (Permit, 4E1.)

  For construction sites one acre or greater:

- Require the preparation of a Local SWPPP [Storm Water Pollution Prevention Plan], with specified contents, for approval prior to issuing a grading permit for construction projects. (Permit, 4E2a.)
- Inspect all construction sites for stormwater quality requirements during routine inspections a minimum of once during the wet seasons. (Permit, 4E2b.)
- Review the Local SWPPP for compliance with local codes, ordinances, and permits. (Permit, 4E2b.)
- For inspected sites that have not adequately implemented their Local SWPPP, conduct a follow-up inspection to ensure compliance will take place within 2 weeks.
  - If compliance has not been attained, take additional actions to achieve compliance (as specified in municipal codes).

Director may waive the otherwise applicable requirements in a general permit for a storm water discharge from construction activities that disturb less than five acres where: ..."

[122] For example, page 2 of the Fact Sheet for the General Construction Activity Storm Water Permit states: "This General Permit shall be implemented and enforced by the nine California Regional Water Quality Control Boards (RWQCBs)."

- If compliance has not been achieved, and the site is also covered under a statewide general construction stormwater permit, enforce the local ordinance requirements, and
- If non-compliance continues, notify the Regional Board for further joint enforcement actions. (Permit, 4E2b.)

- Require by March 10, 2003, before issuing a grading permit for all projects less than five acres requiring coverage under a statewide general construction stormwater permit, proof of a Waste Discharger Identification Number for filing a Notice of Intent for permit coverage and a certification that a SWPPP has been prepared by the project developer. A Local SWPPP may substitute for the State SWPPP if the Local SWPPP is at least as inclusive in controls and BMPs [Best Management Practices] as the State SWPPP. (Permit, 4E2c.)
- For sites five acres and greater:
  - Require, prior to issuing a grading permit for all projects requiring coverage under the state general permit, proof of a Waste Discharger Identification (WDID) number for filing a Notice of Intent (NOI) for coverage under the GCASP [General Construction Activity Storm Water Permit] and a certification that a SWPPP has been prepared by the project developer. A Local SWPPP may substitute for the State SWPPP if the Local SWPPP is at least as inclusive in controls and BMPs as the State SWPPP.
  - Require proof of an Notice of Intent (NOI) and a copy of the SWPPP at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going.
  - Use an effective system to track grading permits issued by each permittee. (Permit, 4E3.)
- For projects subject to the GCASP [General Construction Activity Storm Water Permit], permittees shall refer non-filers (i.e., those projects which cannot demonstrate that they have a WDID number) to the Regional Board, within 15 days of making a determination. In making such referrals, permittees shall include, at a minimum, the following documentation: Project location; Developer; Estimated project size; and Records of communication with the developer regarding filing requirements. (Permit, 4E4b.)
- Train employees in targeted positions (whose jobs or activities are engaged in construction activities including construction inspection staff) regarding the requirements of the stormwater management program no later than August 1, 2002, and annually thereafter. For permittees with a population of 250,000 or more (2000 US Census), initial training shall be completed no later than February 3, 2003. Each permittee shall maintain a list of trained employees. (Permit, 4E5.)

One of the requirements in part 4E3c of the permit is to: "Use an effective system to track grading permits issued by each permittee. To satisfy this requirement, the use of a database or

GIS system is encouraged, but not required." The Commission finds that, based on the plain language of this provision, using an effective system to track grading permits is a state mandate, although use of a database or GIS system is not.

Overall, the Commission finds that the permit provisions (parts 4C2a, 4C2b, 4E & 4F5c3) are subject to article XIII B, section 6, of the California Constitution.

Issue 2: Do the transit trash receptacle and inspection permit provisions (Parts 4C2a, 4C2b, 4E, and 4F5c3) impose a new program or higher level of service?

The next issue is whether the permit provisions at issue, i.e., found above to be state-mandated, are a program, and whether they are a new program or higher level of service.

First, courts have defined a "program" for purposes of article XIII B, section 6, of the California Constitution, as one that carries out the governmental function of providing public services, or a law that imposes unique requirements on local agencies or school districts to implement a state policy, but does not apply generally to all residents and entities in the state.[123]

The State Water Board, in its April 2008 comments, argues that the NPDES program is not a program because "the NPDES permit program, and the stormwater requirements specifically, are not peculiar to local government. Industrial and construction facilities must also obtain NPDES stormwater permits."

In comments submitted June 25, 2008, the cities call the State Board's argument inapposite, and cite the *Carmel Valley Fire Protection District* case[124] regarding whether the permit constitutes a "program." According to claimant, "[t]he test is not whether the general program applies to both governmental and non-governmental entities. The test is whether the specific executive orders at issue apply to both government and non-governmental entities."

The Commission finds that the permit activities constitute a program within the meaning of article XIII B, section 6. The permit activities are limited to local governmental entities. The permit defines the "permittees" as the County of Los Angeles and 84 incorporated cities within the Los Angeles County Flood Control District (Permit, p. 1 & attachment A). The permit lists no private entities as "permittees." Moreover, the permit provides a service to the public by preventing or abating pollution in waterways and beaches in Los Angeles County. (Or as stated on page 13 of the permit: "The objective of this Order is to protect the beneficial uses of receiving waters in Los Angeles County.") Therefore, the Commission finds that the permit is a program within the meaning of article XIII B, section 6.

In its comments on the draft staff analysis submitted June 5, 2009, the State Board disagrees with this conclusion because NPDES permits may also apply to private entities.

The State Board made this same argument in *County of Los Angeles v. Commission on State Mandates*, which the court addressed by stating: "[T]he applicability of permits to public and private dischargers does not inform us about whether a particular permit or an obligation

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[123] *San Diego Unified School Dist., supra,* 33 Cal.4th 859, 874, (reaffirming the test set out in *County of Los Angeles v. State of California, supra,* 43 Cal.3d 46, 56; *Lucia Mar, supra,* 44 Cal.3d 830, 835.)

[124] *Carmel Valley Fire Protection District v. State of California* (1987) 190 Cal.App.3d 521, 537.

thereunder imposed on local governments constitutes a state mandate necessitating subvention under article XIII B, section 6."[125]

In other words, the issue is not whether NPDES permits generally constitute a "program" within the meaning of article XIII B, section 6. The only issue before the Commission is whether the permit in this test claim (Los Angeles Regional Quality Control Board Order No. 01-182, Permit CAS004001) constitutes a program because this permit is the only one over which the Commission has jurisdiction. Because they apply exclusively to local agencies, the Commission finds that the activities (parts 4C2a, 4C2b, 4E & 4F5c3) in this permit (Los Angeles Regional Quality Control Board Order No. 01-182, Permit CAS004001) constitute a program within the meaning of article XIII B, section 6.

The next step to determine whether the permit is a new program or higher level of service, the permit is compared to the legal requirements in effect immediately before its adoption.[126]

The Commission finds that local agencies were not required by state or federal law to place and maintain trash receptacles at transit stops before the permit was adopted. Whether or not most cities or counties do so, as argued by the State Water Board in its April 2008 comments, is not relevant to finding a state-mandated new program or higher level of service because even if they do, Government Code section 17565 states: "If a local agency ... at its option, has been incurring costs which are subsequently mandated by the state, the state shall reimburse the local agency ... for those costs incurred after the operative date of the mandate."

Because the transit trash receptacle requirement is newly mandated by the permit, and based on the plain language of part 4F5c3 of the permit, the Commission finds that it is a new program or higher level of service to place trash receptacles at transit stops and maintain them as specified in the permit.

For the same reason, the Commission finds that the inspections and enforcement activities at industrial and commercial facilities, including restaurants, automotive service facilities, retail gasoline outlets, automotive dealerships, and phase I facilities (in parts 4C2a & 4C2b of the permit) as well as inspection and enforcement at construction sites (in part 4E of the permit) are a new program or higher level of service. These were not required activities of the permittees prior to the permit's adoption.

In sum, the Commission finds that all the permit provisions at issue in this test claim impose a new program or higher level of service within the meaning of article XIII B, section 6 of the California Constitution.

Issue 3: Do the transit trash receptacle and inspection permit provisions (Parts 4C2a, 4C2b, 4E & 4F5c3) impose costs mandated by the state within the meaning of Government Code sections 17514 and 17556?

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[125] *County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4th 898, 919.

[126] *San Diego Unified School Dist., supra,* 33 Cal.4th 859, 878; *Lucia Mar, supra,* 44 Cal.3d 830, 835.

The final issue is whether the permit provisions impose costs mandated by the state,[127] and whether any statutory exceptions listed in Government Code section 17556 apply to the test claims. Government Code section 17514 defines "cost mandated by the state" as follows:

> [A]ny increased costs which a local agency or school district is required to incur after July 1, 1980, as a result of any statute enacted on or after January 1, 1975, or any executive order implementing any statute enacted on or after January 1, 1975, which mandates a new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution.

Government Code section 17564 requires reimbursement claims to exceed $1000 to be eligible for reimbursement.

In test claims 03-TC-20 and 03-TC-21, the cities' claimant representative declares (p. 24) that the cities will incur costs estimated to exceed $1000 to implement the permit conditions.

In test claim 03-TC-04, the County of Los Angeles states (p. 18) that the costs in providing the services claimed "far exceed the minimum reimbursement amount of $1000 per annum." In the attached declaration for *Transit Trash Receptacles*, the County declares (pp. 22-23) the following itemization of costs from December 13, 2001 to October 31, 2002:

> (1) Identify all transit stops in the jurisdiction: $19,989.17;
>
> (2) Select proper trash receptacle design, evaluate proper placement, specification and drawing preparation: $38,461.87;
>
> (3) Preliminary engineering works (construction contract preparation, specification reviewing process, bid advertising and awarding): $19,662.02;
>
> (4) Construct and install trash receptacle units: $230,755.58, construction management $34,628.31;
>
> (5) Trash collection and receptacle maintenance in FY 2002-03, $3,513.94, maintenance contractor costs for maintaining and collecting trash in FY 2002-03, $93,982.50;
>
> (6) Projected costs for on-going maintenance in FY 2003-04, $375,570.00.

Similarly, attached to claim 03-TC-19 (pp. 20-21) are declarations that itemize the County of Los Angeles' costs for *Inspection of Industrial/Commercial Facilities* program, from December 13, 2001 to September 15, 2003, as follows:

> (1) inspect 1744 restaurants: $234,931.83;
>
> (2) inspect 1110 automotive service facilities: $149,526.36;
>
> (3) inspect 249 retail gasoline outlets and automotive dealerships: $33,542.45;
>
> (4) Identify and inspect all Phase I (387 Tier 1 and 543 Tier 2) facilities within the jurisdiction: $125,155.31;
>
> (5) Total $543,155.95.

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[127] *Lucia Mar, supra*, 44 Cal.3d 830, 835; Government Code section 17514.

These declarations illustrate that the costs associated with the permit activities exceed $1,000. The Commission, however, cannot find "costs mandated by the state" within the meaning of Government Code section 17514 if any exceptions in Government Code section 17556 apply, which is discussed below.

A. Did the claimants request the activities in the permit within the meaning of Government Code section 17556, subdivision (a)?

The first issue is whether the claimants requested the activities in the permit. The Department of Finance and the State Water Board both asserted that they did. As discussed above, the claimants were required to submit a Report of Waste Discharge and Stormwater Quality Management Plan before the permit was issued.

Government Code section 17556, subdivision (a), provides that the Commission shall not find costs mandated by the state if:

> (a) The claim is submitted by a local agency ... that requested legislative authority for that local agency ... to implement the program specified in the statute, and that statute imposes costs upon that local agency or school district requesting the legislative authority. A resolution from the governing body or a letter from a delegated representative of the governing body of a local agency ... that requests authorization for that local agency ... to implement a given program shall constitute a request within the meaning of this subdivision.

Based on the language of the statute, section 17556, subdivision (a), does not apply because the permit is not a statute, the claimants did not request "legislative authority" to implement the permit, and the record lacks any resolutions adopted by the claimants. Therefore, the Commission finds that the claimants did not request the activities in the permit within the meaning of Government Code section 17556, subdivision (a).

B. Do the claimants have fee authority for the permit activities within the meaning of Government Code section 17556, subdivision (d)?

Government Code section 17556, subdivision (d), states:

> The commission shall not find costs mandated by the state, as defined in Section 17514, in any claim submitted by a local agency ... if, after a hearing, the commission finds any one of the following: [¶]...[¶] (d) The local agency ... has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.

The constitutionality of Government Code section 17556, subdivision (d), was upheld by the California Supreme Court in *County of Fresno v. State of California*,[128] in which the court held that the term "costs" in article XIII B, section 6, excludes expenses recoverable from sources other than taxes. The court stated:

> Section 6 was included in article XIII B in recognition that article XIII A of the Constitution severely restricted the taxing powers of local governments. (See *County of Los Angeles, supra,* 43 Cal.3d at p. 61.) The provision was intended to

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[128] *County of Fresno v. State of California , supra,* 53 Cal.3d 482.

> preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that were ill equipped to handle the task. (*Ibid.*; see *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 836, fn. 6 [244 Cal.Rptr. 677, 750 P.2d 318].) Specifically, it was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues. Thus, although its language broadly declares that the "state shall provide a subvention of funds to reimburse ... local government for the costs [of a state-mandated new] program or higher level of service," read in its textual and historical context section 6 of article XIII B requires subvention only when the costs in question can be recovered *solely from tax revenues.*
>
> In view of the foregoing analysis, the question of the facial constitutionality of section 17556(d) under article XIII B, section 6, can be readily resolved. As noted, the statute provides that "The commission shall not find costs mandated by the state ... if, after a hearing, the commission finds that" the local government "has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service." Considered within its context, the section effectively construes the term "costs" in the constitutional provision as excluding expenses that are recoverable from sources other than taxes. Such a construction is altogether sound. As the discussion makes clear, the Constitution requires reimbursement only for those expenses that are recoverable solely from taxes. It follows that section 17556(d) is facially constitutional under article XIII B, section 6.[129]

In *Connell v. Superior Court,*[130] the dispute was whether local agencies had sufficient fee authority for a mandate involving increased purity of reclaimed wastewater used for certain types of irrigation. The court cited statutory fee authority for the reclaimed wastewater, and noted that the water districts did not dispute their fee authority. Rather, the water districts argued that they lacked "sufficient" fee authority in that it was not economically feasible to levy fees sufficient to pay the mandated costs. In finding the fee authority issue is a question of law, the court stated that Government Code section 17556, subdivision (d), is clear and unambiguous, in that its plain language precludes reimbursement where the local agency has the authority, i.e., the right or the power, to levy fees sufficient to cover the costs of the state-mandated program." The court rejected the districts' argument that "authority" as used in the statute should be construed as a "practical ability in light of surrounding economic circumstances" because that construction cannot be reconciled with the plain language of section 17556, and would create a vague standard not capable of reasonable adjudication. The court also said that nothing in the fee authority statute (Wat. Code, § 35470) limited the authority of the Districts to levy fees "sufficient" to cover their costs. Thus, the court concluded that the plain language of section

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[129] *County of Fresno v. State of California, supra,* 53 Cal.3d 482, 487.

[130] *Connell v. Superior Court* (1997) 59 Cal.App.4th 382.

17556 made the fee authority issue solely a question of law, and that the water districts could not be reimbursed due to that fee authority.[131]

In its April 18, 2008 comments (p. 19), the State Board asserted that the claimants have fee authority to pay for the trash receptacle and inspection programs in the permit. Likewise, the Department of Finance, in its March 2008 comments, states that "some local agencies have set fees to be used toward funding the claimed permit activities" that should be considered offsetting revenues.

Los Angeles County, in its comments submitted in June 2008, states (p. 2) that it is "without sufficient fee authority to recover its costs." The County points out that the state or regional board has fee authority in Water Code section 13260, subdivision (d)(2)(B)(iii) for inspections of industrial and commercial facilities, but those fees are not shared with the County or the cities.[132] The County also states that the inspections are to determine compliance with the general industrial permit that is enforced by the regional boards.[133]

In their comments received June 25, 2008, the city claimants assert that they do not have fee authority. The cities first note that, for facilities that hold state-issued general industrial or general construction stormwater permits, the state already imposes an annual fee and therefore has occupied the field (Wat. Code, § 13260, subd. (d)(2)(B)(iii)). The cities also relate the difficulty of imposing a fee for inspecting restaurants, automotive service facilities, retail gasoline outlets and automotive dealerships because, although the cities could enact a general businesses license on all businesses, "the cities could not charge other businesses for the cost of inspecting this subgroup without again running the risk of charging fees on the other businesses for services not related to regulation of them." The cities also dispute the State Water Board's assertion that transit users could be charged a fee for the transit trash receptacles because the County and cities do not operate the transit system.

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[131] *Connell v. Superior Court, supra,* 59 Cal.App.4th 382, 398-402.

[132] Water Code section 13260, subdivision (d)(2)(B)(i) - (iii) states:

> (i) Notwithstanding subparagraph (A), the fees collected pursuant to this section from stormwater dischargers that are subject to a general industrial or construction stormwater permit under the national pollutant discharge elimination system (NPDES) shall be separately accounted for in the Waste Discharge Permit Fund. (ii) Not less than 50 percent of the money in the Waste Discharge Permit Fund that is separately accounted for pursuant to clause (i) is available, upon appropriation by the Legislature, for expenditure by the regional board with jurisdiction over the permitted industry or construction site that generated the fee to carry out stormwater programs in the region. (iii) Each regional board that receives money pursuant to clause (ii) shall spend not less than 50 percent of that money solely on stormwater inspection and regulatory compliance issues associated with industrial and construction stormwater programs.

[133] Page 3 of the General Industrial Permit states in part: "Following adoption of this General Permit, the Regional Water Boards shall enforce its provisions."

In comments on the draft staff analysis submitted in June 2009, the League of California Cities and California State Association of Counties (CSAC) question whether the decisions in *Connell* (1997), and *County of Fresno* (1991), can any longer be cited as good authority for the constitutionality of Government Code section 17556, subdivision (d), given the voter-approval requirement of Proposition 218 (discussed below) added to the state Constitution in 1996. Proposition 218 requires, among other things, that new or increased property-related fees be approved by a majority of the affected property owners, or two-thirds registered voter approval, or weighted ballot approval by the affected property owners, except for property-related fees for sewer, water, or refuse collection services (Cal. Const., art. XIII D, § 6, subd. (c)).

The League and CSAC also urge the Commission, to the extent there may be legal doubt whether a local agency has the authority to impose a fee, to not find that the fee authority exception to reimbursement in Government Code section 17556, subdivision (d), applies.

The Commission disagrees with the League and CSAC. The Commission cannot ignore the precedents of *Connell* or *County of Fresno*, or find that they conflict with article XIII D of the California Constitution (Proposition 218), until the issue is decided by a court of law. With regards to Government Code section 17556, subdivision (d), article III, section 3.5 of the California Constitution forbids the Commission or any state agency from declaring a statute unenforceable or refusing to enforce it on the basis of its unconstitutionality unless an appellate court declares that it is unconstitutional. Since no appellate court has so declared, the Commission is bound to uphold and analyze the application of Government Code section 17556, subdivision (d), to this test claim.

The issue of local fee authority for the municipal stormwater permit activities, however, is one of first impression for the Commission. Although there are no authorities directly on point, some legal principles emerge that guide the analysis, as discussed below.

1. Local fee authority to inspect commercial and industrial and construction sites (parts 4C2a, 4C2b & 4E)

Fee authority to inspect under the police power: The law on local government fee authority begins with article XI, section 7, of the California Constitution, which states: "A county or city may make and enforce within its limits all local, police, sanitary, and other ordinances and regulations not in conflict with general laws."

The Third District Court of Appeal has stated that article XI, section 7, includes the authority to impose fees. In *Mills v. Trinity County*,[134] a taxpayer challenged a county ordinance that imposed new and increased fees for county services in processing subdivision, zoning, and other land-use applications that had been adopted without the two-thirds affirmative vote of the county electors. In upholding the fees, the court stated:

> [S]o long as the local enactments are not in conflict with general laws, the power to impose valid regulatory fees does not depend on legislatively authorized taxing power but exists pursuant to the direct grant of police power under article XI, section 7, of the California Constitution.[135]

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[134] *Mills v. County of Trinity* (1980) 108 Cal.App.3d 656.

[135] *Mills v. County of Trinity, supra,* 108 Cal.App.3d 656, 662.

In addition to the *Mills* case, courts have held that water pollution prevention is a valid exercise of government police power.[136] And municipal inspections in furtherance of sanitary regulations have been upheld as "an exercise of that branch of the police power which pertains to the public health."[137]

In *Sinclair Paint v. State Board of Equalization,* [138] the California Supreme Court upheld a fee imposed on manufacturers of paint that funded a child lead-poisoning program, ruling it was a regulatory fee and not a special tax requiring a two-thirds vote under article XIII A, section 4, of the California Constitution (Proposition 13). The court recognized that determining under Proposition 13 whether impositions were fees or taxes is a question of law. In holding that the fee on paint manufacturers was "regulatory" and not a special tax, the court stated:

> From the viewpoint of general police power authority, we see no reason why statutes or ordinances calling on polluters or producers of contaminating products to help in mitigation or cleanup efforts should be deemed less "regulatory" in nature than the initial permit or licensing programs that allowed them to operate.
>
> Viewed as a mitigating effects measure, [the fee] is comparable in character to several police power measures imposing fees to defray the actual or anticipated adverse effects of various business operations.[139] [Emphasis added.]

The *Sinclair Paint* court also recognized that regulatory fees help to prevent pollution when it stated: "imposition of 'mitigating effects' fees in a substantial amount ... also 'regulates' future conduct by deterring further manufacture, distribution, or sale of dangerous products, and by stimulating research and development efforts to produce safer or alternative products."[140]

Although the court's holding in *Sinclair Paint* applied to a state-wide fee, the language it used (putting "ordinances" in the same category as "statutes") recognizes that local agencies also have the police power to impose regulatory fees. Moreover, the court relied on local government police power cases in its analysis.[141]

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[136] *Freeman v. Contra Costa County Water Dist.* (1971) 18 Cal.App.3d 404, 408.

[137] *Sullivan v. City of Los Angeles Dept. of Bldg. & Safety* (1953) 116 Cal.App.2d 807, 811.

[138] *Sinclair Paint v. State Board of Equalization* (1997) 15 Cal.4th 866.

[139] *Sinclair Paint v. State Board of Equalization, supra,* 15 Cal.4th 866, 877.

[140] *Sinclair Paint v. State Board of Equalization, supra,* 15 Cal.4th 866, 877.

[141] *Sinclair Paint v. State Board of Equalization, supra,* 15 Cal.4th 866, 873. The Court stated: "Because of the close, 'interlocking' relationship between the various sections of article XIII A (Citation omitted) we believe these "special tax" cases [under article XIII A, § 3, state taxes] may be helpful, though not conclusive, in deciding the case before us. The reasons why particular fees are, or are not, "special taxes" under article XIII A, section 4, [local government taxes] may apply equally to section 3 cases."

A regulatory fee is an imposition that funds a regulatory program[142] and is "enacted for purposes broader than the privilege to use a service or to obtain a permit. ...the regulatory program is for the protection of the health and safety of the public."[143] Courts will uphold regulatory fees if they comply with the following principles:

> Fees charged for the associated costs of regulatory activities are not special taxes under an article XIII A section 4 analysis if the "fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and [they] are not levied for unrelated revenue purposes." [Citations omitted] "A regulatory fee may be imposed under the police power when the fee constitutes an amount necessary to carry out the purposes and provisions of the regulation." [Citations omitted] "Such costs ... include all those incident to the issuance of the license or permit, investigation, inspection, administration, maintenance of a system of supervision and enforcement." [Citations omitted] Regulatory fees are valid despite the absence of any perceived "benefit" accruing to the fee payers. [Citations omitted] Legislators "need only apply sound judgment and consider 'probabilities according to the best honest viewpoint of informed officials' in determining the amount of the regulatory fee."[144] [Emphasis added.]

Local fees for inspections of commercial and industrial facilities, and construction sites, would be preventative and could be imposed to comply with the criteria the courts have used to uphold regulatory fees, articulated above. And the regulatory fees fall within the local police power to prevent, clean up, or mitigate pollution.

Therefore, pursuant to article XI, section 7, the Commission finds that the claimants have fee authority within the meaning of Government Code section 17556, subdivision (d), sufficient to carry out the mandated activities in parts 4C2a, 4C2b and 4E of the permit. Therefore, the Commission finds that there are no "costs mandated by the state" within the meaning of Government Code section 17514 and 17556 to perform the activities in those parts of the permit (commercial, phase I, and construction site inspections and related activities).

In fact, in June 2005, claimant Covina adopted stormwater inspection fees on restaurants, retail gasoline outlets, automotive service facilities, etc., as part of its business license fee, expressly for the purpose of complying with the permit at issue in this test claim.[145]

Statutory fee authority to operate and maintain storm drains: Health and Safety Code section 5471 expressly authorizes cities and counties to charge fees for storm drainage maintenance and operation services:

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[142] *California Assn. of Prof. Scientists v. Dept. of Fish and Game* (2000) 79 Cal.App.4th 935, 950.

[143] *Ibid.*

[144] *California Assn. of Prof. Scientists v. Dept. of Fish and Game, supra,* 79 Cal.App.4th 935, 945.

[145] City of Covina, Resolution No. 05-6455.

> [A]any entity[146] shall have power, by an ordinance approved by a two-thirds vote of the members of the legislative body thereof, to prescribe, revise and collect, fees, tolls, rates, rentals, or other charges for services and facilities furnished by it, either within or without its territorial limits, in connection with its water, sanitation, storm drainage, or sewerage system. ... Revenues derived under the provisions in this section, shall be used only for the acquisition, construction, reconstruction, maintenance, and operation of water systems and sanitation, storm drainage, or sewerage facilities ....

The statute makes no mention of "inspecting" commercial or industrial facilities or construction sites. Rather, the fee revenues are used for "maintenance and operation" of storm drainage facilities. Thus, for the types of businesses regulated by the permit (restaurants, automotive service facilities, retail gasoline outlets, automotive dealerships, phase I facilities, as defined, and construction sites) the Commission cannot find that pursuant to Health and Safety Code section 5471, the claimants have fee authority "sufficient" to pay for the mandated inspection program within the meaning of Government Code section 17556. The statute's "operation and maintenance" of storm drainage facilities does not encompass the state-mandated inspections of the facilities or construction sites specified in the permit.

2. Local fee authority under the police power and the Public Resources Code to place and maintain trash receptacles at transit stops (Permit, 4F5c3)

As discussed above, part 4F5c3 of the permit requires the County and cities to place and maintain trash receptacles at transit stops in their jurisdictions. Public Resources Code section 40059, subdivision (a), suggests that the County and cities have fee authority to perform this activity as follows:

> (a) Notwithstanding any other provision of law, each county, city, district, or other local governmental agency may determine all of the following: (1) Aspects of solid waste handling which are of local concern, including, but not limited to, frequency of collection, means of collection and transportation, level of services, charges and fees, and nature, location, and extent of providing solid waste handling services.

The statute gives local governments the authority over the "nature, location and extent of providing solid waste handling services" and is broad enough to encompass "placing and maintaining" receptacles at transit stops. The statute also provides local governments with broad authority over the "level of services, charges and fees."

The draft staff analysis determined that the claimants had fee authority under Public Resources Code section 40059 and the police power (Cal. Const. art. XI, § 7) to install and maintain trash receptacles at transit stops and recommended that the Commission deny the test claim with respect to part 4F5c3 of the permit.

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[146] Entity is defined to include "counties, cities and counties, cities, sanitary districts, county sanitation districts, sewer maintenance districts, and other public corporations and districts authorized to acquire, construct, maintain and operate sanitary sewers and sewerage systems." Health and Safety Code section 5470, subdivision (e).

The city claimants, in June 2009 comments on the draft staff analysis, argue that section 40059, subdivision (a), does not apply here because it was adopted as a "savings provision" in legislation establishing the Integrated Waste Management Board (IWMB) in order to ensure that local trash collection agreements would not be affected by the IWMB legislation. The cities also cite *Waste Resources Technologies v. Department of Public Health* (1994) 23 Cal.app.4th 299, which held that the statute reflected the Legislature's intent to allow for local regulation of waste collection. According to the cities, the statute "was not intended as an *imprimatur* for local agencies to assess fees on their residents or on businesses to pay for the costs of trash generated by transit users when that requirement was established not as a matter of local choice but rather state mandate." (Comments, p. 7.)

The cities also argue that a valid fee must have a causal connection or nexus between the person or entity paying the fee, and the benefit or burden being addressed. Claimants assert that there is no group on which the claimants can assess a fee that has a relationship with the trash receptacles because the burden is created by the transit riders but benefits the public at large. City claimants also argue that they cannot assess fees on transit agencies or increase transit fares to recoup the cost of installing and maintaining trash receptacles because they have no authority to do so. As an example, the claimants cite the Metropolitan Transit Authority's (the largest public transit operator in Los Angeles County) authority to set fares (Pub. Util. Code, § 30638) that rests exclusively with the MTA's board.

As to the police power, City claimants argue that they cannot use it to assess fees on property owners or businesses for the cost of transit trash receptacles because doing so would collect more than the actual cost of the collection and thereby create a special tax that would require a two-thirds vote (Cal. Const. art. XIII A, § 4). And according to the claimants, they do not have statutory fee authority to assess property owners for the cost of installing and maintaining trash receptacles. Finally, claimants assert that a fee on property owners for transit stop trash receptacles, even if it were not a special tax, would require a vote under Proposition 218 (Cal. Const., art. XIII D).

The County of Los Angeles, in its June 2009 comments on the draft staff analysis, argues that local agencies do not have fee authority over bus operators, and for support cites *Biber Electric Co. v. City of San Carlos* (1960) 181 Cal.App.2d 342, which held that a local fee would conflict with a general state Vehicle Code provision. The County also asserts that no fee could be imposed on bus riders because the pollution prevention would benefit all county residents, not only those riding buses, and that such a fee would require a vote under Proposition 218 because the fee's purpose would be excluding trash from storm drains rather than routine collection.

The League of California Cities and CSAC, in their June 2009 comments on the draft staff analysis, criticize the conclusion that fee authority exists for transit trash receptacles because the analysis does not discuss upon whom the fee would be imposed. They also dispute the application of the *Connell* case because the issue is not whether the fee is economically feasible, but whether it is legally feasible. The League and CSAC point out that local agencies have no authority to impose the fee on transit agencies or their ridership, and that Proposition 218 imposes procedural and substantive requirements on adjacent business owners and residences, so that the local agency could not impose the fee or assessment on them without their consent. Thus, the League and CSAC argue that the local agencies do not have fee authority pursuant to

Government Code section 17556, subdivision (d): "sufficient to pay for the mandated program or increased level of service."

After considering these arguments, the Commission agrees that Government Code section 17556, subdivision (d), does not apply to the placement and maintenance of transit trash receptacles as specified in the permit because the claimants do not have the authority to impose fees.

Michael Lauffer was asked at the Commission hearing on July 31, 2009, why the transit trash requirement in the permit was not imposed on transit agencies. Mr. Lauffer testified that transit agencies were not named historically on the permits, and that the Board, at the time it established the requirements, thought it was appropriate to place them on municipalities. He also testified that nothing would prevent the municipalities under the permit from working with Metropolitan Transit Authority (MTA) to cooperatively implement the transit trash requirement, or to have the MTA carry out the primary obligation for meeting it. He added that the transit stops were public facilities, the language used in the federal regulations, which is why the permit included the requirement to place the trash receptacles there.[147]

Because the trash receptacles are required to be placed at transit stops that would typically be on city property (sidewalks)[148] or transit district property (for bus or metro or subway stations), there are no entities on which the claimants would have authority to impose the fees. The plain language of Public Resources Code section 40059 provides no fee authority over transit districts or transit riders, and the Metropolitan Transit Authority's fee statutes grant fee authority exclusively to its board (Pub. Util. Code, §§ 30638 & 130051.12).

Additionally, the claimants do not have fee authority under the police power because they do not provide the "services necessary to the activity for which the fee is charged."[149]

Thus, the Commission finds that part 4F5c3 of the permit imposes costs mandated by the state within the meaning of Government Code section 17514 and 17556.

The remainder of this analysis addresses the arguments raised by the claimants that their local fee authority for inspections would be preempted by a statute granting the state fee authority, and that a local fee would be a special tax. The application of Proposition 218 on the fee authority for inspection is also discussed.

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[147] Commission on State Mandates, Public Hearing, Reporter's Transcript of Proceedings, July 31, 2009, pages 52-53.

[148] "The general rule views the sidewalk as part of the street; it … holds the city liable for pedestrian injuries caused by the dangerous condition of the sidewalk." *Low v. City of Sacramento* (1970) 7 Cal.App.3d 826, 832.

[149] *California Assn. of Prof. Scientists v. Dept of Fish and Game, supra,* 79 Cal.App.4th, 935, 945.

3. Local fee authority to inspect industrial or construction sites (parts 4C2a, 4C2b & 4E) performed under the statewide general permits would not be preempted by state fee authority in Water Code section 13260, subdivision (b)(2)(B)

In their comments submitted in June 2008 (p. 14), the city claimants argue that the permittees cannot impose fees for inspections of industrial or commercial or construction sites as follows:

> [W]ith respect to facilities that hold state-issued general industrial or general construction stormwater permits, the state had occupied the field. ...[T]he state already imposes an annual fee on general industrial and general construction stormwater permittees. That fee is explicitly designated, in part, to cover inspections of these facilities and regulatory compliance. Water Code § 13260(d)(2)(B).
>
> This state fee thus preempts any fee that the Cities or County could charge for inspection of these facilities.

The cities also assert that in 2001, the regional board initiated negotiation of a contract with the County whereby the regional board would pay the County to perform inspections of facilities that held general industrial stormwater permits (the 'Phase I facilities') on the regional board's behalf. Immediately after the permit was issued, the regional board terminated those negotiations.

In comments submitted in June 2009 on the draft staff analysis, city claimants clarify that their comments "are not directed towards the claimants' ability to assess fees for inspections of the other commercial establishments, i.e., restaurants and automotive service facilities, retail gasoline outlets and automobile dealerships, or Phase I facilities or construction sites that are not required to hold a state-issued general industrial or general construction stormwater permit."

According to the city claimants, fees for inspecting the phase I industrial facilities and construction sites under the statewide permits (the GIASP and GCASP) would be preempted by state fee authority in Water Code section 13260, under which the State Board collects fees for inspecting those sites. The city claimants state the fact that the specific destination of the funds from the fees in Water Code section 13260, subdivision (d)(2)(iii) is spelled out is evidence of intent that the Legislature fully occupied the field for inspections of GIASP and GCASP permit holders.

Because the fee authority to inspect commercial facilities (identified in the permit as restaurants, automotive service facilities, retail gasoline outlets and automotive dealerships) is not contested by the city claimants, the discussion below is limited to industrial and construction site inspections performed under the statewide permits concurrently with the permit at issue in this claim.

The California Supreme Court has outlined the following rules as to when a statute preempts a local ordinance by fully occupying the field:

> A local ordinance *enters a field fully occupied* by state law in either of two situations-when the Legislature "expressly manifest[s]" its intent to occupy the legal area or when the Legislature "impliedly" occupies the field. (*Sherwin-Williams, supra,* 4 Cal.4th at p. 898, 16 Cal.Rptr.2d 215, 844 P.2d 534; see also 8 Witkin, Summary of Cal. Law (10th ed. 2005) Constitutional Law, § 986, p.

551["[W]here the Legislature has manifested an intention, expressly or by implication, wholly to occupy the field ... municipal power [to regulate in that area] is lost."].)

When the Legislature has not expressly stated its intent to occupy an area of law, we look to whether it has *impliedly* done so. This occurs in three situations: when " '(1) the subject matter has been so fully and completely covered by general law as to clearly indicate that it has become exclusively a matter of state concern; (2) the subject matter has been partially covered by general law couched in such terms as to indicate clearly that a paramount state concern will not tolerate further or additional local action; or (3) the subject matter has been partially covered by general law, and the subject is of such a nature that the adverse effect of a local ordinance on the transient citizens of the state outweighs the possible benefit to the' locality." (*Sherwin-Williams, supra,* 4 Cal.4th at p. 898, 16 Cal.Rptr.2d 215, 844 P.2d 534.)[150]

The state statute at issue, the stormwater fee statute, in subdivision (d) of section 13260 of the Water Code, reads in pertinent part:

(d)(1)(A) Each person who is subject to subdivision (a) [who discharges waste that affects the quality of waters of the state] or (c) shall submit an annual fee according to a fee schedule established by the state board.

(B) The total amount of annual fees collected pursuant to this section shall equal that amount necessary to recover costs incurred in connection with the issuance, administration, reviewing, monitoring, and enforcement of waste discharge requirements and waivers of waste discharge requirements.

(C) Recoverable costs include, but are not limited to, costs incurred in reviewing waste discharge reports, prescribing terms of waste discharge requirements and monitoring requirements, enforcing and evaluating compliance with waste discharge requirements and waiver requirements, conducting surface water and groundwater monitoring and modeling, analyzing laboratory samples, and reviewing documents prepared for the purpose of regulating the discharge of waste, and administrative costs incurred in connection with carrying out those actions. [¶]...[¶]

(2) Subject to subparagraph (B), any fees collected pursuant to this section shall be deposited in the Waste Discharge Permit Fund which is hereby created. The money in the fund is available for expenditure by the state board, upon appropriation by the Legislature, for the purposes of carrying out this division.

(B) (i) Notwithstanding subparagraph (A), the fees collected pursuant to this section from stormwater dischargers that are subject to a general industrial or construction stormwater permit under the national pollutant discharge elimination system (NPDES) shall be separately accounted for in the Waste Discharge Permit Fund.

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[150] *O'Connell v. City of Stockton* (2007) 41 Cal.4th 1061, 1068. Emphasis in original.

> (ii) Not less than 50 percent of the money in the Waste Discharge Permit Fund that is separately accounted for pursuant to clause (i) is available, upon appropriation by the Legislature, for expenditure by the regional board with jurisdiction over the permitted industry or construction site that generated the fee to carry out stormwater programs in that region. (iii) Each regional board that receives money pursuant to clause (ii) shall spend not less than 50 percent of that money solely on stormwater inspection and regulatory compliance issues associated with industrial and construction stormwater programs. (Wat. Code, § 13260, subds. (d)(1) & (d)(2).) [Emphasis added.]

The State Water Board has adopted regulations to implement the stormwater fee that include fee schedules based on the threat to water quality and a complexity rating.[151] At the hearing on July 31, 2009, Michael Lauffer of the State Water Board testified that the fee is established annually by the State Board, based on the legislative appropriation for the boards to carry out their responsibilities. Mr. Lauffer testified that the annual fee for industrial facilities under this Water Code statute is $833, and the fee for construction facilities is variable, starting at $238, plus $24 per acre, with a cap of $2,600. [152]

The issue is whether Water Code section 13260, subdivision (d)(1) and (d)(2), preempts local fee authority. In resolving this, we look for express or implied preemption or intent to occupy the field.[153]

First, there is no express intent on the face of the Water Code statute to preempt any local fee ordinance because the statute is silent on local fees. As to implied intent to occupy the field of law, the Supreme Court has stated that it may be found if:

> (1) the subject matter has been so fully and completely covered by general law as to clearly indicate that it has become exclusively a matter of state concern; (2) the subject matter has been partially covered by general law couched in such terms as to indicate clearly that a paramount state concern will not tolerate further or additional local action; or (3) the subject matter has been partially covered by general law, and the subject is of such a nature that the adverse effect of a local ordinance on the transient citizens of the state outweighs the possible benefit to the locality.[154]

The city claimants, in their comments on the draft staff analysis submitted in June 2009, argue as follows with regard to Water Code section 13260:

> Here, the Legislature adopted a statute that specifically established a mechanism for fees to be assessed on GIASP and GCASP holders, for those funds to be

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[151] Fees for NPDES permits for municipal separate stormwater sewer systems are in subdivision (b) of section 2200 of title 23 of the California Code of Regulations.

[152] Commission on State Mandates, Public Hearing, Reporter's Transcript of Proceedings, July 31, 2009, page 111.

[153] *O'Connell v. City of Stockton, supra,* 41 Cal.4th 1061, 1068.

[154] *O'Connell v. City of Stockton, supra,* 41 Cal.4th 1061, 1068.

> segregated and sent to the regional boards, and for a specified amount of those funds ("not less than 50 percent of the money") to be used by the regional boards "solely" on stormwater inspection and regulatory compliance issues associated with industrial and construction stormwater programs. Water Code section 13260(d)(2)(iii). Such a specific determination as to the destination of the funds for the purposes of inspection and compliance evidences the intent of the Legislature that the issue of funding for GIASP and GCASP inspections be "fully occupied."

The Commission disagrees. Specific determination of funds is not a factor the courts use to determine whether a state statute fully occupies the field. Applying the Supreme Court's factors from the *O'Connell v. City of Stockton* case, the subject matter of stormwater fees has not been "so fully and completely covered by general law as to clearly indicate that it has become exclusively a matter of state concern."[155] The Water Code's single fee statute for state permit holders does not rise to that level. Second, the Commission cannot find that "the subject matter has been partially covered by general law couched in such terms as to indicate clearly that a paramount state concern will not tolerate further or additional local action."[156] No clear indication of a paramount state concern can be found on the face of the Water Code fee statute. And the third instance does not apply because the subject is not "of such a nature that the adverse effect of a local ordinance on the transient citizens of the state outweighs the possible benefit to the locality."

The legislative history of the Water Code provision does not indicate any intent to occupy the field. The legislative history of the amendment to require 50 percent of the fees to be used for stormwater inspection and regulatory compliance issues indicated as follows:

> ...California's 1994 Water Quality Inventory Report states that storm waters and urban run-off are the leading sources of pollution in California estuaries and ocean waters. Proponents argue that non-compliance is rampant, with approximately 10,000 industries in the Los Angeles area alone who are required but have failed to obtain storm water permits. Further, proponents point out that the Los Angeles Regional Water Quality Control Board has only two staff to contact, educate, and control each site and question whether adequate revenues are returned to the regional boards for this program.[157]

The Legislature acknowledged that the state inspections at the time the statute was enacted were inadequate to prevent the pollution that the statewide permits were intended to prevent.

And the regional board, via the permit, acknowledges the role of both local regulation and state regulation under the general permits. Page 11 of the permit states:

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[155] *O'Connell v. City of Stockton, supra,* 41 Cal.4th 1061, 1068.

[156] *Ibid.*

[157] Senate Rules Committee, Office of Senate Floor Analyses, third reading analysis of Assem. Bill No. 1186 (1997-1998 Reg. Sess.) as amended August 6, 1997.

> The U.S. EPA guidance anticipates coordination of the state-administered programs for industrial and construction activities with the local agency program to reduce pollutants in stormwater discharges to the MS4. The Regional Board is the enforcement authority in the Los Angeles Region for the two statewide general permits regulating discharges from industrial facilities and construction sites, and all NPDES stormwater and non-stormwater permits issued by the Regional Board. These industrial and construction sites and discharges are also regulated under local laws and regulations.

As to inspection of construction sites, section 4E of the permit states:

> If compliance has not been achieved, and the site is also covered under a statewide general construction stormwater permit, each Permittee shall enforce their local ordinance requirements, and if non-compliance continues the Regional Board shall be notified for further joint enforcement actions.

Moreover, the Water Code statute provides broader fee authority than a local inspection fee. The statute requires the regional board to "spend not less than 50 percent of that money solely on stormwater inspection and regulatory compliance issues associated with industrial and construction stormwater programs." (Wat. Code, § 13260, subd. (d)(2)(iii). Emphasis added.) Because the fees for GIASP and GCASP permit holders may also be spent on "regulatory compliance issues" in addition to the inspections, the Commission cannot find that a local fee ordinance would duplicate or be "coextensive" with state fee authority, and therefore cannot find that the state fee statute occupies the field. A local fee would merely partially overlap with the state fee.

As for the phase I facilities[158] subject to inspection, the inspections do not occupy the field because the permit specifies that these need not be inspected if the regional board has inspected them within the past 24 months.

According to the State Board's April 2008 comments, the overlapping fees were envisioned by U.S./EPA.

> In addition to the requirements for permits issued to municipalities, the Water Boards are also mandated to issue permits to entities that discharge stormwater "associated with industrial activity." (fn. CWA § 402(p)(2)(B)). As part of its responsibilities for its in lieu program, the State Boards must administer and enforce all of its permits. (fn. CWA § 402(p).) The State Water Board has issued

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[158] On page 62 of the permit, U.S. EPA Phase I Facilities are defined as "facilities in specified industrial categories that are required to obtain an NPDES permit for storm water discharges, as required by 40 CFR 122.26(c). These categories include: (i) facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR N); (ii) manufacturing facilities; (iii) oil and gas/mining facilities; (iv) hazardous waste treatment, storage, or disposal facilities; (v) landfills, land application sites, and open dumps; (vi) recycling facilities; (vii) steam electric power generating facilities; (viii) transportation facilities; (ix) sewage or wastewater treatment works; (x) light manufacturing facilities.

> permits for industrial and construction discharges of stormwater, and the Los Angeles Water Board administers those permits within its jurisdiction. Therefore, the Los Angeles Water Board does conduct inspections at businesses in Los Angeles County to ensure compliance with the state permits. In addition, the MS4 Permit requires the permittees also to conduct inspections. This approach, which may result in two different entities inspecting the same businesses to review stormwater practices, was specifically envisioned and required by U.S. EPA in adopting its stormwater regulations.

U.S./EPA, in its "MS4 Program Evaluation Guidance" document, acknowledged regulation at both the local and state levels as follows:[159]

> In addition to regulation of construction site stormwater at the local level, EPA regulations also require construction sites disturbing greater than one acre to obtain an NPDES permit. This permit can be issued by the state permitting authority or EPA, depending on whether the state has been delegated the NPDES authority. This dual regulation of construction sites at both the local and state or federal level can be confusing to permittees and construction operators.[160]

In fact, as to inspection duties and costs under two permit systems, one court has stated regarding a permit similar to the one in this claim:

> Rancho Cucamonga and the other permittees are responsible for inspection construction and industrial sites and commercial facilities within their jurisdiction for compliance with the enforcement of local municipal ordinance and permits. But the Regional Board continues to be responsible under the 2002 NPDES permit for inspections under the general permits.[161]

The reasoning of the *City of Rancho Cucamonga* case is instructive because a local regulatory fee could be used for local-government inspections, and the state fee is for state or regional inspections under the general statewide permits.

The state permit program and local inspection program under the regional board's permit can be viewed as two programs with similar, overlapping goals. Viewed in this way, the fees for two sets of inspections for construction sites (or for phase I facilities not inspected by the regional board within the past two years) would not necessarily exceed the costs of both sets of inspections.

In short, a local regulatory fee ordinance that provided for inspections of the industrial facilities and construction sites specified in the permit (parts 4C2a, 4C2b & 4E) would not be preempted

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[159] State Water Resources Control Board, comments submitted April 18, 2008, attachment 33.

[160] *Ibid.*

[161] *City of Rancho Cucamonga v. Regional Water Quality Control Board, supra,* 135 Cal.App.4th 1377. The test claim record is silent as to the number of facilities within the permit area that are subject to the General Industrial Activity Storm Water Permit, or how many construction sites within the permit area are subject to the General Construction Activity Storm Water Permit.

by the state fee authority in Water Code section 13260 or in title 23 of the California Code of Regulations.

4. Local fee authority to inspect industrial or construction sites covered under the state permits would not be a "special tax" under article XIII A, section 4, of the California Constitution

In their June 2008 rebuttal comments, the city claimants assert that they do not have sufficient fee authority under Government Code section 17556, subdivision (d). They focus on facilities that hold state-issued general industrial or construction stormwater permits and pay the state-imposed fees pursuant to Water Code section 13260, arguing that an additional local fee for inspecting these facilities would be considered a special tax. According to the city claimants:

> In order for a fee to be considered a "fee" as opposed to a "special tax," the fee cannot exceed the reasonable cost of providing the services necessary for which the fee is charged. See *Mills v. County of Trinity* (1980) 108 Cal.App.3d 656, 659-660. Any fee assessed by the Cities or the County for inspection of these facilities would be a double assessment, and thus run afoul of this rule.

The city claimants, in their June 2009 comments on the draft staff analysis, again assert that forcing claimants to recover their costs for inspecting the state-permitted GIASP and GCASP facilities and sites, the regional board is creating a special tax on holders of those state permits.

Special taxes are governed by article XIII A, section 4, of the California Constitution:

> Cities, Counties and special districts, by a two-thirds vote of the qualified electors of such district, may impose special taxes on such district, except ad valorem taxes on real property or a transaction tax or sales tax on the sale of real property within such City, County or special district.

Government Code section 50076 states that a fee is not a special tax under article XIII A, section 4, if the fees are: (1) "charged in connection with regulatory activities which fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged," and (2) "are not levied for unrelated revenue purposes." The California Supreme Court has reaffirmed this rule.[162]

The Commission finds that a local regulatory stormwater fee, if appropriately calculated and charged, would not be a special tax within the meaning of article XIII A, section 4. There is no evidence in the record that a local regulatory fee charged for the stormwater inspections would exceed the reasonable cost of providing the inspections and related services or would otherwise violate the criteria in section 50076.

As the court stated in the *Connell v. Superior Court* case discussed above:

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[162] *Sinclair Paint v. State Board of Equalization, supra,* 15 Cal.4th at p. 876: "[T]he term "special taxes" in article XIII A, section 4, does not embrace fees charged in connection with regulatory activities which fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and which are not levied for unrelated revenue purposes."

> The [Water] Districts argue any fees levied by the districts "cannot exceed the cost to the local agency to provide such service," because such excessive fees would constitute a special tax. However, the districts fail to explain how this is an issue. No one is suggesting the districts levy fees that exceed their costs.[163]

Similarly, in this claim no one is suggesting that the local agencies levy regulatory fees that exceed their costs. Therefore, the Commission finds that a local regulatory fee for stormwater would not be a "special tax" under article XIII A, section 4, of the California Constitution for the activities at issue in the permit.

5. The local fee to inspect industrial and construction sites would not be subject to voter approval under article XIII D (Proposition 218) of the California Constitution

Some local government fees are subject to voter approval under article XIII D of the California Constitution, as added by Proposition 218 (1996). Article XIII D defines a property-related fee or charge as any levy other than an ad valorem tax, a special tax, or an assessment, imposed by an agency on a parcel or a person as an incident of property ownership, including a user fee or charge for a property-related service. Among other things, new or increased property-related fees require a majority-vote of the affected property owners, or two-thirds registered voter approval, or weighted ballot approval by the affected property owners (article XIII D, § 6, subd. (c)). Exempt from voter approval, however, are property-related fees for sewer, water, or refuse collection services (*Ibid*).

In 2002, an appellate court decision in *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351, found that a city's charges on developed parcels to fund stormwater management were property-related fees, and were not covered by Proposition 218's exemption for "sewer" or "water" services. This means that an election would be required to impose storm water fees if they are imposed "as an incident of property ownership."

The Commission finds that local fees for inspections of phase I facilities, restaurants, retail gasoline outlets, automotive dealerships, etc., would not be subject to the vote requirement of Proposition 218. In a case involving inspections of apartments in the City of Los Angeles in which a fee was charged to landlords, the California Supreme Court ruled that the regulatory fee for inspecting apartments was not a "levy ... upon a parcel or upon a person as an incident of property ownership, including a user fee or charge for a property-related service" [164] within the meaning of Proposition 218. The court interpreted the phrase "incident of property ownership" as follows:

> The foregoing language means that a levy may not be imposed on a property owner as such-i.e., in its capacity as property owner-unless it meets constitutional prerequisites. In this case, however, the fee is imposed on landlords not in their capacity as landowners, but in their capacity as business owners. The exaction at issue here is more in the nature of a fee for a business license than a charge

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[163] *Connell v. Superior Court, supra,* 59 Cal.App.4th 382, 402.

[164] That is the definition of "fee" or "charge" in article XIII D, section 2, subdivision (e).

against property. It is imposed only on those landowners who choose to engage in the residential rental business, and only while they are operating the business.[165]

[¶]...[¶] In other words, taxes, assessments, fees, and charges are subject to the constitutional strictures when they burden landowners *as landowners.* The [City of Los Angeles'] ordinance does not do so: it imposes a fee on its subjects by virtue of their ownership of a business-i.e., because they are landlords.[166]

Following the reasoning of the *Apartment Assoc.* case, the inspection fees on restaurants, retail gasoline outlets, automotive dealerships, phase I facilities, etc., like the fee in *Apartment Assoc.*, would not be imposed on landowners as landowners, nor as an incident of property ownership, but by virtue of business ownership. Thus, the inspection fee would fall outside the voter requirement of Proposition 218.

As to the fees for inspecting construction sites, the Commission finds that they too would not be subject to Proposition 218's voter requirement. Article XIII D of the California Constitution states that it shall not be construed to "affect existing laws relating to the imposition of fees or charges as a condition of property development."[167]

Moreover, the California Supreme Court, in determining whether water connection fees are within the purview of Proposition 218, reasoned that "water service" fees were within the meaning of "property-related services" but "water connection" fees were not.

> Rather, we conclude that a water service fee is a fee or charge under article XIII D if, but only if, it is imposed "upon a person as an incident of property ownership." (Art. XIII D, § 2, subd. (e).) A fee for ongoing water service through an existing connection is imposed "as an incident of property ownership" because it requires nothing other than normal ownership and use of property. But a fee for making a new connection to the system is not imposed "as an incident of property ownership" because it results from the owner's voluntary decision to apply for the connection.[168]

The Supreme Court's reasoning applies to local stormwater fees for inspecting construction sites. That is, the fee would not be an incident of property ownership because it results from the owner's voluntary decision to build on or develop the property. Therefore, the Commission finds that local inspection fees for stormwater compliance at construction sites would not be within the purview of the election requirement of Proposition 218. A recent report by the Office of the Legislative Analyst concurs with this conclusion.[169]

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[165] *Apartment Assoc. of Los Angeles County v. City of Los Angeles* (2001) 24 Cal.4th 830, 839-840.

[166] *Id.* at 842 [Emphasis in original.]

[167] Article XIII D, section 1, subdivision (b).

[168] *Richmond v. Shasta Community Services Dist.* (2004) 32 Cal.4th 409, 427.

[169] "Local governments finance stormwater clean–up services from revenues raised from a variety of fees and, less frequently, through taxes. Property owner fees for stormwater services typically require approval by two–thirds of the voters, or a majority of property owners.

In its June 2009 comments, the County disagrees that stormwater pollution fees would not be subject to the voter requirement in Proposition 218, or that fee authority exists. In support, the County points to unadopted legislation pending in the current or in past legislative sessions that would provide fee authority or expressly exempt stormwater fees from the Proposition 218 voting requirement. For example SCA 18 (2009) would add "stormwater and urban runoff management" fees to those expressly exempted from the vote requirement in article XIII D, putting them in the same category as trash and sewer fees. SB 2058 (2002) would have required the regional water boards to share their fees with counties and cities. And SB 210 (2009) would provide cities and counties with stormwater regulatory or user-based fee authority.

The Commission finds that the unadopted legislative proposals cited by the County are unconvincing to show a lack of regulatory fee authority for business inspections as discussed above. First, courts have said that "As evidence of legislative intent, unadopted proposals have been held to have little value."[170] Second, if they were enacted, the legislative proposals would grant broader fee authority than is found in this analysis. For example, SCA 18, by adding a stormwater exception from the vote requirement in Proposition 218, would authorize *user* fees on residential property for stormwater and urban runoff programs, whereas this analysis addresses the much narrower issue of *regulatory* fees on businesses for inspections. Likewise, SB 2058 would have required the State Board's permit fees to be shared with "counties and cities" for the broad purpose of carrying out stormwater programs rather than for the narrower purpose of inspecting businesses. And SB 210 would likewise provide fee authority that is broader than regulatory fees; as the May 28, 2009 version expressly states in proposed section 16103, subdivision (c), of the Water Code: "The fees authorized under subdivision (a) may be imposed as user-based or regulatory fees consistent with this chapter." In short, the legislative proposals cited by the County do not indicate that fee authority does not exist. Rather, the proposals would, if enacted, provide broader fee authority than now exists.

In comments received June 3, 2009, the Bay Area Stormwater Management Agencies Association (BASMAA) contends that many permit requirements relate to local communities and their residents rather than specific business activities, and require public services that are essentially incident to real property ownership, and/or may only be financed via fees that remain subject to the voting requirements of Proposition 218 or increased property taxes. BASMAA also states that many permit activities would fall on joint power authorities or special districts that have no fee authority, or for which exemptions from Proposition 218 would not be applicable. BASMAA requests that the analysis be revised to revisit the conclusions regarding "funded vs. unfunded" requirements, and to recognize and distinguish the many types of stormwater activities for which regulatory fees would not apply.

Developer fees and fees imposed on businesses that contribute to urban runoff, in contrast, are not restricted by Proposition 218 and may be approved by a vote of the governing body. Taxes for stormwater services require approval by two–thirds of the electorate." Office of the Legislative Analyst. *California's Water: An LAO Primer* (October 22, 2008) page 56.

[170] *County of Sacramento v. State Water Resources Control Board* (2007) 153 Cal.App.4th 1579, 1590.

The Commission disagrees. BASMAA raises issues that are outside the scope of the portions of the Los Angeles stormwater permit (parts 4C2a, 4C2b, 4E & 4Fc3) that were pled by the test claimants. Because the Commission's jurisdiction is limited by those parts of the permit pled in the test claim, it cannot opine on other issues outside the pleadings, even if it would raise issues closely related to other NPDES permits (or even other parts of this NPDES permit).

In sum, the Commission finds that the inspections and related activities at issue in the Los Angeles stormwater permit are not subject to voter approval in article XIII D of the California Constitution (Proposition 218), so a regulatory fee ordinance for stormwater inspections would not be subject to voter approval.

Given the existence of local regulatory fee authority under the police power (Cal. Const, art. XI, § 7), and lacking any evidence or information to the contrary, the Commission finds that the claimants' authority to adopt a regulatory fee is sufficient (pursuant to Gov. Code, § 17556, subd. (d)) to pay for the inspections of restaurants, automotive service facilities, retail gasoline outlets, automotive dealerships, phase I facilities, as defined, and construction sites, and related activities specified in the permit. Therefore, for the inspections and related activities at issue, the Commission finds that there are no "costs mandated by the state" within the meaning of Government Code sections 17514 and 17556.

CONCLUSION

For the reasons discussed above, the Commission finds that the following activity in part 4F5c3 of the permit is a reimbursable state mandate within the meaning of Government Code sections 17514 and 17556: For local agencies subject to the permit that are not subject to a trash TMDL[171] to: "Place trash receptacles at all transit stops within its jurisdiction that have shelters no later than August 1, 2002, and at all transit stops within its jurisdiction no later than February 3, 2003. All trash receptacles shall be maintained as necessary."

The Commission also finds that the remainder of the permit (parts 4C2a, 4C2b & 4E) does not impose costs mandated by the state within the meaning of article XIII B, section 6 of the California Constitution because the claimants have fee authority (under Cal. Const. article XI, § 7) within the meaning of Government Code section 17556, subdivision (d), sufficient to pay for the activities in those parts of the permit.

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[171] A Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards.

Abbreviations

BMP - Best management practice

CWA – Clean Water Act

GCASP - General Construction Activity Storm Water Permit

GIASP - General Industrial Activity Storm Water Permit

MS4 - Municipal Separate Storm Sewer Systems

NOI - Notice of Intent for coverage under the GCASP

NPDES - national pollutant discharge elimination system

RGO - Retail Gasoline Outlet

ROWD – Report of Waste Discharge

SQMP - Storm Water Quality Management Program

SWPPP - Storm Water Pollution Prevention Plan

TMDL - Total Maximum Daily Load

U.S. EPA – United States Environmental Protection Agency

WDID - Waste Discharger Identification

STATE WATER RESOURCES CONTROL BOARD (STATE WATER BOARD)
WATER QUALITY ORDER NO. 97-03-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000001 (GENERAL PERMIT)

WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES
EXCLUDING CONSTRUCTION ACTIVITIES

The State Water Board finds that:

1. Federal regulations for storm water discharges were issued by the U.S. Environmental Protection Agency (U.S. EPA) on November 16, 1990 (40 Code of Federal Regulations [CFR] Parts 122, 123, and 124). The regulations require operators of specific categories of facilities where discharges of storm water associated with industrial activity (storm water) occur to obtain an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm discharges.

2. This General Permit shall regulate storm water discharges and authorized non-storm water discharges from specific categories of industrial facilities identified in Attachment 1, storm water discharges and authorized non-storm water discharges from facilities as designated by the Regional Water Quality Control Boards (Regional Water Boards), and storm water discharges and authorized non-storm water discharges from other facilities seeking General Permit coverage. This General Permit may also regulate storm water discharges and authorized non-storm water discharges from facilities as required by U.S. EPA regulations. This General Permit shall regulate storm water discharges and authorized non-storm water discharges previously regulated by San Francisco Bay Regional Water Board Order, No.92-11 (as amended by Order No. 92-116). This General Permit excludes storm water discharges and non-storm water discharges that are regulated by other individual or general NPDES permits, storm water discharges and non-storm water discharges from construction activities, and storm water discharges and non-storm water discharges excluded by the Regional Water Boards for coverage by this General Permit. Attachment 2 contains the addresses and telephone numbers of each Regional Water Board office.

3. To obtain coverage for storm water discharges and authorized non-storm water discharges pursuant to this General Permit, operators of facilities (facility operators) must submit a Notice of Intent (NOI), in accordance with the Attachment 3

10. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116) shall:

    a. Complete the 1996-97 activities required by those general permits. These include, but are not limited to, conducting any remaining visual observations, sample collection, annual site inspection, annual report submittal, and (for group monitoring leaders) Group Evaluation Reports; and

    b. Comply with the requirements of this General Permit no later than August 1, 1997.

11. If the Regional Water Board determines that a discharge may be causing or contributing to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan, the Regional Water Board may order the facility operator to comply with the requirements described in Receiving Water Limitation C.3. The facility operator shall comply with the requirements within the time schedule established by the Regional Water Board.

12. If the facility operator determines that its storm water discharges or authorized non-storm water discharges are causing or contributing to an exceedance of any applicable water quality standards, the facility operator shall comply with the requirements described in Receiving Water Limitation C.3.

13. State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) and San Francisco Bay Regional Water Board Order No. 91-011 (as amended by Order No. 92-116) are hereby rescinded.

F. REGIONAL WATER BOARD AUTHORITIES

1. Following adoption of this General Permit, Regional Water Boards shall:

    a. Implement the provisions of this General Permit, including, but not limited to, reviewing SWPPPs, reviewing annual reports, conducting compliance inspections, and taking enforcement actions.

    b. Issue other NPDES general permits or individual NPDES storm water permits as they deem appropriate to individual facility operators, facility operators of specific categories of industrial activities, or facility operators in a watershed or geographic area. Upon issuance of such NPDES permits by a Regional Water Board, the affected facility operator shall no longer

be regulated by this General Permit. Any new NPDES permit issued by the Regional Water Board may contain different requirements than the requirements of this General Permit.

2. Regional Water Boards may provide guidance to facility operators on the SWPPP and the Monitoring Program and reporting implementation.

3. Regional Water Boards may require facility operators to conduct additional SWPPP and Monitoring Program and reporting activities necessary to achieve compliance with this General Permit.

4. Regional Water Boards may approve requests from facility operators whose facilities include co-located industrial activities that are not contiguous within the facilities (e.g., some military bases) to comply with this General Permit under a single NOI. Storm water discharges and authorized non-storm water discharges from the co-located industrial activities and from other sources within the facility that may generate significant quantities of pollutants are authorized provided the SWPPP and Monitoring Program addresses each co-located industrial activity and other sources that may generate significant quantities of pollutants.

CERTIFICATION

The undersigned, Administrative Assistant to the State Water Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 17, 1997.

AYE: John P. Caffrey
John W. Brown
James M. Stubchaer
Marc Del Piero
Mary Jane Forster

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché

SECTION B. MONITORING PROGRAM AND REPORTING REQUIREMENTS

1. *Implementation Schedule*

Each facility operator shall develop a written monitoring program for each facility covered by this General Permit in accordance with the following schedule:

a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement a monitoring program no later than October 1, 1992. Facility operators beginning operations after October 1, 1992 shall develop and implement a monitoring program when the industrial activities begin.

b. Facility operators that submitted a Notice Of Intent (NOI) pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing monitoring program and implement any necessary revisions to their monitoring program in a timely manner, but in no case later than August 1, 1997. These facility operators may use the monitoring results conducted in accordance with those expired general permits to satisfy the pollutant/parameter reduction requirements in Section B.5.c., Sampling and Analysis Exemptions and Reduction certifications in Section B.12., and Group Monitoring Sampling credits in B.15.k. For facilities beginning industrial activities after the adoption of this General Permit, the monitoring program shall be developed and implemented when the facility begins the industrial activities.

2. *Objectives*

The objectives of the monitoring program are to:

a. Ensure that storm water discharges are in compliance with the Discharge Prohibitions, Effluent Limitations, and Receiving Water Limitations specified in this General Permit.

b. Ensure practices at the facility to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges are evaluated and revised to meet changing conditions.

c. Aid in the implementation and revision of the SWPPP required by Section A of this General Permit.

d. Measure the effectiveness of best management practices (BMPs) to prevent or reduce pollutants in storm water

discharges and authorized non-storm water discharges. Much of the information necessary to develop the monitoring program, such as discharge locations, drainage areas, pollutant sources, etc., should be found in the Storm Water Pollution Prevention Plan (SWPPP). The facility's monitoring program shall be a written, site-specific document that shall be revised whenever appropriate and be readily available for review by employees or Regional Water Board inspectors.

3. *Non-storm Water Discharge Visual Observations*

a. Facility operators shall visually observe all drainage areas within their facilities for the presence of unauthorized non-storm water discharges;

b. Facility operators shall visually observe the facility's authorized non-storm water discharges and their sources;

c. The visual observations required above shall occur quarterly, during daylight hours, on days with no storm water discharges, and during scheduled facility operating hours[1]. Quarterly visual observations shall be conducted in each of the following periods: January-March, April-June, July-September, and October-December. Facility operators shall conduct quarterly visual observations within 6-18 weeks of each other.

d. Visual observations shall document the presence of any discolorations, stains, odors, floating materials, etc., as well as the source of any discharge. Records shall be maintained of the visual observation dates, locations observed, observations, and response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Section A of this General Permit.

4. *Storm Water Discharge Visual Observations*

a. With the exception of those facilities described in Section B.4.d. below, facility operators shall visually

[1] "Scheduled facility operating hours" are the time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

observe storm water discharges from one storm event per month during the wet season (October 1-May 30). These visual observations shall occur during the first hour of discharge and at all discharge locations. Visual observations of stored or contained storm water shall occur at the time of release.

b. Visual observations are only required of storm water discharges that occur during daylight hours that are preceded by at least three (3) working days[2] without storm water discharges and that occur during scheduled facility operating hours.

c. Visual observations shall document the presence of any floating and suspended material, oil and grease, discolorations, turbidity, odor, and source of any pollutants. Records shall be maintained of observation dates, locations observed, observations, and response taken to reduce or prevent pollutants in storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Section A of this General Permit.

d. Feedlots (subject to Federal effluent limitations guidelines in 40 Code of Federal Regulations [CFR] Part 412) that are in compliance with Sections 2560 to 2565, Article 6, Chapter 15, Title 23, California Code of Regulations, and facility operators with storm water containment facilities shall conduct monthly inspections of their containment areas to detect leaks and ensure maintenance of adequate freeboard. Records shall be maintained of the inspection dates, observations, and any response taken to eliminate leaks and to maintain adequate freeboard.

5. *Sampling and Analysis*

a. Facility operators shall collect storm water samples during the first hour of discharge from (1) the first storm event of the wet season, and (2) at least one other storm event in the wet season. All storm water discharge locations shall be sampled. Sampling of stored or contained storm water shall occur at the time the stored or contained storm water is released. Facility operators that do not collect samples from the first storm event of the wet season are still required to collect samples from two other storm events of the wet season and shall explain in the Annual Report why the first storm event was not sampled.

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[2] Three (3) working days may be separated by non-working days such as weekends and holidays provided that no storm water discharges occur during the three (3) working days and the non-working days.

b. Sample collection is only required of storm water discharges that occur during scheduled facility operating hours and that are preceded by at least (3) three working days without storm water discharge.

c. The samples shall be analyzed for:

i. Total suspended solids (TSS) pH, specific conductance, and total organic carbon (TOC). Oil and grease (O&G) may be substituted for TOC; and

ii. Toxic chemicals and other pollutants that are likely to be present in storm water discharges in significant quantities. If these pollutants are not detected in significant quantities after two consecutive sampling events, the facility operator may eliminate the pollutant from future sample analysis until the pollutant is likely to be present again; and

iii. Other analytical parameters as listed in Table D (located at the end of this Section). These parameters are dependent on the facility's standard industrial classification (SIC) code. Facility operators are not required to analyze a parameter listed in Table D when the parameter is not already required to be analyzed pursuant to Section B.5.c.i. and ii. or B.6 of this General Permit, and either of the two following conditions are met: (1) the parameter has not been detected in significant quantities from the last two consecutive sampling events, or (2) the parameter is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation of the facilities industrial activities, potential pollutant sources, and SWPPP. Facility operators that do not analyze for the applicable Table D parameters shall certify in the Annual Report that the above conditions have been satisfied.

iv. Other parameters as required by the Regional Water Board.

6. *Facilities Subject to Federal Storm Water Effluent Limitation Guidelines*

Facility operators with facilities subject to Federal storm water effluent limitation guidelines, in addition to the requirements in Section B.5. above, must complete the following:

a. Collect and analyze two samples for any pollutant specified in the appropriate category of 40 CFR Subchapter N. The sampling and analysis exemptions and reductions described in Section B.12. of this General Permit do not apply to these pollutants.

b. Estimate or calculate the volume of storm water discharges from each drainage area;

c. Estimate or calculate the mass of each regulated pollutant as defined in the appropriate category of 40 CFR Subchapter N; and

d. Identify the individual(s) performing the estimates or calculations in accordance with Subsections b. and c. above.

7. *Sample Storm Water Discharge Locations*

a. Facility operators shall visually observe and collect samples of storm water discharges from all drainage areas that represent the quality and quantity of the facility's storm water discharges from the storm event.

b. If the facility's storm water discharges are commingled with run-on from surrounding areas, the facility operator should identify other visual observation and sample collection locations that have not been commingled by run-on and that represent the quality and quantity of the facility's storm water discharges from the storm event.

c. If visual observation and sample collection locations are difficult to observe or sample (e.g., sheet flow, submerged outfalls), facility operators shall identify and collect samples from other locations that represent the quality and quantity of the facility's storm water discharges from the storm event.

d. Facility operators that determine that the industrial activities and BMPs within two or more drainage areas are substantially identical may either (i) collect samples from a reduced number of substantially identical

drainage areas, or (ii) collect samples from each substantially identical drainage area and analyze a combined sample from each substantially identical drainage area. Facility operators must document such a determination in the annual report.

8. *Visual Observation and Sample Collection Exceptions*

Facility operators are required to be prepared to collect samples and conduct visual observations at the beginning of the wet season (October 1) and throughout the wet season

until the minimum requirements of Sections B.4. and B.5. are completed with the following exceptions:

a. A facility operator is not required to collect a sample and conduct visual observations in accordance with Section B.4 and Section B.5 due to dangerous weather conditions, such as flooding, electrical storm, etc., when storm water discharges begin after scheduled facility operating hours or when storm water discharges are not preceded by three working days without discharge. Visual observations are only required during daylight hours. Facility operators that do not collect the required samples or visual observations during a wet season due to these exceptions shall include an explanation in the Annual Report why the sampling or visual observations could not be conducted.

b. A facility operator may conduct visual observations and sample collection more than one hour after discharge begins if the facility operator determines that the objectives of this Section will be better satisfied. The facility operator shall include an explanation in the Annual Report why the visual observations and sample collection should be conducted after the first hour of discharge.

9. *Alternative Monitoring Procedures*

Facility operators may propose an alternative monitoring program that meets Section B.2 monitoring program objectives for approval by the Regional Water Board. Facility operators shall continue to comply with the monitoring requirements of this Section and may not implement an alternative monitoring plan until the alternative monitoring plan is approved by the Regional Water Board. Alternative monitoring plans are subject to modification by the Regional Water Boards.

10. *Monitoring Methods*

a. Facility operators shall explain how the facility's monitoring program will satisfy the monitoring program objectives of Section B.2. This shall include:

i. Rationale and description of the visual observation methods, location, and frequency.

ii. Rationale and description of the sampling methods, location, and frequency; and

iii. Identification of the analytical methods and corresponding method detection limits used to detect pollutants in storm water discharges. This shall include justification that the method detection limits are adequate to satisfy the objectives of the monitoring program.

b. All sampling and sample preservation shall be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a facility operator's own field instruments for measuring pH and Electro Conductivity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. All metals shall be reported as total metals. With the exception of analysis conducted by facility operators, all laboratory analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. Facility operators may conduct their own sample analyses if the facility operator has sufficient capability (qualified employees, laboratory equipment, etc.) to adequately perform the test procedures.

DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On December 15, 2017, I served the:

- **Claimants' Rebuttal Comments filed December 14, 2017**

  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03
  County of Riverside, Riverside County Flood Control and Water Conservation District, Cities of Murrieta, Temecula, and Wildomar, Co-Claimants

by making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on December 15, 2017 at Sacramento, California.

Jill L. Magee
Commission on State Mandates
980 Ninth Street, Suite 300
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COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 11/30/17

Claim Number: 11-TC-03

Matter: California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

Claimants: City of Murrieta
City of Temecula
City of Wildomar
County of Riverside
Riverside County Flood Control and Water Conservation District

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

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March 13, 2023

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Mr. Kris Cook
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And Parties, Interested Parties, and Interested Persons (See Mailing List)

Re: Draft Proposed Decision, Schedule for Comments, and Notice of Hearing
California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03
California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2., C., D., F.1.d.1., 2., 4., 7., F.1.f., F.1.h., F.1.i., F.2.d.3., F.2.e.6.e., F.3.a.10., F.3.b.4.a.ii., F.3.d.1.-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6., Adopted November 10, 2010
County of Riverside, Riverside County Flood Control and Water Conservation District, and Cities of Murrieta, Temecula, and Wildomar, Claimants

Dear Mr. Burhenn and Mr. Cook

The Draft Proposed Decision for the above-captioned matter is enclosed for your review and comment.

Written Comments

Written comments may be filed on the Draft Proposed Decision no later than **5:00 pm on April 3, 2023**. Please note that all representations of fact submitted to the Commission must be signed under penalty of perjury by persons who are authorized and competent to do so and must be based upon the declarant's personal knowledge, information, or belief. (Cal. Code Regs., tit. 2, § 1187.5.) Hearsay evidence may be used for the purpose of supplementing or explaining other evidence but shall not be sufficient in itself to support a finding unless it would be admissible over an objection in civil actions. (Cal. Code Regs., tit. 2, § 1187.5.) The Commission's ultimate findings of fact must be supported by substantial evidence in the record.[1]

You are advised that comments filed with the Commission are required to be electronically filed (e-filed) in an unlocked legible and searchable PDF file, using the Commission's Dropbox. (Cal. Code Regs., tit. 2, § 1181.3(c)(1).) Refer to http://www.csm.ca.gov/dropbox_procedures.php on the Commission's website for electronic filing instructions. If e-filing would cause the filer undue hardship or significant prejudice, filing may occur by first class mail, overnight delivery or personal service only upon approval of a written request to the executive director. (Cal. Code Regs., tit. 2, § 1181.3(c)(2).)

[1] Government Code section 17559(b), which provides that a claimant or the state may commence a proceeding in accordance with the provisions of section 1094.5 of the Code of Civil Procedure to set aside a decision of the Commission on the ground that the Commission's decision is not supported by substantial evidence in the record.

If you would like to request an extension of time to file comments, please refer to section 1187.9(a) of the Commission's regulations.

Hearing

This matter is set for hearing on **Friday, May 26, 2023**, at 10:00 a.m. via Zoom. The Proposed Decision will be issued on or about May 12, 2023.

Please notify Commission staff not later than the Wednesday prior to the hearing that you or a witness you are bringing plan to testify and please specify the names and email addresses of the people who will be speaking for inclusion on the witness list and so that detailed instructions regarding how to participate as a witness in this meeting on Zoom can be provided to them. When calling or emailing, please identify the item you want to testify on and the entity you represent. The Commission Chairperson reserves the right to impose time limits on presentations as may be necessary to complete the agenda.

If you would like to request postponement of the hearing, please refer to section 1187.9(b) of the Commission's regulations.

Sincerely,

Heather Halsey
Executive Director

ITEM ___

TEST CLAIM

DRAFT PROPOSED DECISION

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2., C., D., F.1.d.1., 2., 4., 7., F.1.f., F.1.h., F.1.i., F.2.d.3., F.2.e.6.e., F.3.a.10., F.3.b.4.a.ii., F.3.d.1.-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6.

Adopted November 10, 2010

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

11-TC-03

County of Riverside, Riverside County Flood Control and Water Conservation District, and Cities of Murrieta, Temecula, and Wildomar, Claimants

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EXECUTIVE SUMMARY

Overview

This Test Claim alleges reimbursable costs mandated by the state for the County of Riverside, the Riverside County Flood Control and Water Conservation District, and the cities of Murrieta, Temecula, and Wildomar (claimants), to comply with conditions of National Pollutant Discharge Elimination System Program (NPDES) permit, Order No. R9-2010-0016 (test claim permit) issued by the California Regional Water Quality Control Board, San Diego Region (Regional Board). This Test Claim pleads the following sections of the test claim permit:

A. The requirement to address three categories of urban irrigation runoff that formerly were considered exempt non-stormwater discharges, contained in Section B.2.;[1]

B. The requirement to monitor for, report and address exceedances of non-stormwater action levels, contained in Sections C. and F.4.d., F.4.e., and Attachment E., Section II.C.;[2]

[1] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 35-36 (Test Claim narrative).

[2] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 39-42 (Test Claim narrative).

C. The requirement to monitor for, report and address exceedances of stormwater action levels, contained in Section D.;[3]

D. Requirements relating to the Priority Development Projects, local impact development (LID) and hydromodification, contained in Section F.1.d.1., 2., 4., 7., and F.1.h.;[4]

E. Requirements to track the construction and operation of post-construction best management practices ("BMPs"), contained in Section F.1.f.;[5]

F. Requirements relating to the control of pollutants from construction sites, contained in Section F.2.d.3. and F.2.e.6.e.;[6]

G. Requirements relating to the development and implementation of BMPs for unpaved roads, contained in Sections F.1.i. and F.3.a.10.;[7]

H. Requirements relating the inspection of monitoring of commercial/industrial sources, contained in Section F.3.b.4.a.ii.;[8]

I. Requirements relating to the retrofitting of existing development, contained in Section F.3.d.1.-5.[9];

J. Requirements relating to the development and implementation of the Watershed Water Quality Workplan, contained in Section G.1.-5.;[10]

K. Requirements relating to the JRMP Annual Report, contained in Section K.3.a.-c.;[11]

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[3] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 44-45 (Test Claim narrative).

[4] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 46-52 (Test Claim narrative).

[5] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 57-58 (Test Claim narrative).

[6] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 59-60 (Test Claim narrative).

[7] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 61-62 (Test Claim narrative).

[8] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 63-64 (Test Claim narrative).

[9] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 65-66 (Test Claim narrative).

[10] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 68-70 (Test Claim narrative).

[11] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 72-73 (Test Claim narrative).

L. Requirements to perform special studies, contained in the Monitoring and Reporting Program, Attachment E., Section II.E.2.-5.;[12] and

M. Requirements to ensure that stormwater runoff not cause or contribute to a violation of water quality standards and "prevent" illicit discharges into the MS4, Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6 addressing development, construction, municipal facilities, industrial/commercial facilities, residential areas, retrofitting and education.[13]

Staff recommends that the Commission deny the Test Claim with respect to the Riverside County Flood Control and Water Conservation District, and partially approve the Test Claim for the County and cities as specified below.

Procedural History

On November 10, 2011, the claimants filed the joint Test Claim.[14] Between January 13, 2012 and January 17, 2013, the State Water Resources Control Board (State Board) and the San Diego Regional Water Quality Control Board (Regional Board) (collectively the Water Boards) requested five extensions of time to file comments on the Test Claim.

The claimants requested the Test Claim be put on inactive status on March 20, 2013. On August 29, 2016, the California Supreme Court issued its decision in *Department of Finance v. Commission on State Mandates* addressing the state mandate issue for a stormwater permit issued by the Los Angeles Regional Water Quality Control Board (Case No. S214855).[15] On March 8, 2017, Commission staff issued the Notice of Incomplete Joint Test Claim Filing. After one extension of time to file, the claimants filed their response to the Notice of Incomplete Joint Test Claim Filing on April 28, 2017.

On May 8, 2017, Commission staff issued Notice of Complete Joint Test Claim Filing, Removal From Inactive Status, Schedule for Comments, Renaming of Matter, Request for Administrative Record, and Notice of Tentative Hearing Date. Between May 22, 2017 and August 16, 2017, the Water Boards requested three extensions of time to file comments on the Test Claim. The Department of Finance (Finance) filed comments on the Test Claim on September 20, 2017.[16] The Water Boards filed comments on the Test Claim and the Administrative Record on September 22, 2017.[17] The claimants requested extensions of time to file rebuttal comments on

[12] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 75-77 (Test Claim narrative).

[13] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 81-83 (Test Claim narrative).

[14] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017.

[15] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749.

[16] Exhibit B, Finance's Comments on the Test Claim, filed September 20, 2017.

[17] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017.

October 3, 2017 and November 20, 2017. The claimants filed rebuttal comments on December 14, 2017.[18] On March 13, 2023, Commission staff issued the Draft Proposed Decision.[19]

Commission Responsibilities

Under article XIII B, section 6 of the California Constitution, local agencies and school districts are entitled to reimbursement for the costs of state-mandated new programs or higher levels of service. In order for local government to be eligible for reimbursement, one or more similarly situated local agencies or school districts must file a test claim with the Commission. "Test claim" means the first claim filed with the Commission alleging that a particular statue or executive order imposes costs mandated by the state. Test claims function similarly to class actions and all members of the class have the opportunity to participate in the test claim process and all are bound by the final decision of the Commission for purposes of that test claim.

The Commission is the quasi-judicial body vested with exclusive authority to adjudicate disputes over the existence of state-mandated programs within the meaning of article XIII B, section 6 of the California Constitution and not apply it as an "equitable remedy to cure the perceived unfairness resulting from political decisions on funding priorities."[20]

Claims

The following chart provides a brief summary of the claims and issues raised and staff's recommendation.

Issue	Description	Staff Recommendation
Is the Test Claim Timely Filed?	At the time the Test Claim was filed, Government Code section 17551 provided that local government test claims shall be filed "not later than 12 months following the effective date of a statute or executive order or within 12 months of incurring increased costs as a result of a statute or executive order, whichever is later."[21] The effective date of the test claim permit is November 10, 2010.[22] The	*Timely Filed* – This Test Claim was filed on November 10, 2011, which is 12 months following the effective date of the test claim permit. Therefore it was timely filed. Because the Test Claim was filed on November 10, 2011, the potential period of reimbursement under Government Code section 17557 begins on July 1, 2010. However, since the test claim

[18] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017.

[19] Exhibit E, Draft Proposed Decision, issued March 13, 2023.

[20] *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264, 1281, citing *City of San Jose v. State of California* (1996) 45 Cal.App.4th 1802, 1817.

[21] Government Code section 17551(c) (Stats. 2007, ch. 329).

[22] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 269 (test claim permit).

Issue	Description	Staff Recommendation
	Test Claim was filed on November 10, 2011, which is exactly 12 months following the effective date. Government Code section 17557(e) requires a test claim to be "submitted on or before June 30 following a fiscal year in order to establish eligibility for reimbursement for that fiscal year."	permit has a later effective date, the period of reimbursement for this Test Claim begins on the permit's effective date, November 10, 2010.
Does Section B.2. impose a reimbursable state mandated program?	Section B.2. of the test claim permit removes landscape irrigation, irrigation water, and lawn watering from the exempt, non-prohibited discharge list requiring the claimants to effectively prohibit them from entering the MS4 by implementing a program to detect and remove these illicit discharges.	*Deny* – Section B.2. of the test claim permit does not mandate a new program or higher level of service. This provision is required by federal law when the discharge is identified as a source of pollution[23] and was required under the prior permit.[24] Thus, the provision is not new. Both the claimants and the Regional Board identified landscape irrigation, irrigation water, and lawn watering as a source of non-stormwater pollution[25] leaving the Regional Board with no discretion, but to remove the exemption and require the claimants to effectively prohibit these non-stormwater discharges from entering the MS4 in compliance with federal law.

[23] Code of Federal Regulations, title 40, section 122.26(d)(2)(IV)(B)(1).

[24] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section B.2.); see also, Exhibit X (33), National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges; Final Rule, 55 Federal Register 47990 (November 16, 1990), page 48, which states: "However, the Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharges where appropriate."

[25] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 473-476 (Fact Sheet/Technical Report).

Issue	Description	Staff Recommendation
		Moreover, this provision does not change or increase the level or quality of service to the public; it simply makes the claimants comply with existing federal law to prohibit non-stormwater discharges.[26]
Do Sections C. and F.4.d. and e., and Section II.C. of Attachment E of the test claim permit impose a reimbursable state mandated program?	Sections C. and F.4.d. and e., and Section II.C. of Attachment E of the test claim permit establish dry weather non-stormwater action levels (NALs) for 18 pollutants that, if shown to be in excess of the NAL during monitoring, the claimant is required to investigate, identify, and remove the source of the illicit, non-stormwater discharge.	*Deny* – Sections C. and F.4.d. and e., and Section II.C. of Attachment E of the test claim permit do not mandate a new program or higher level of service. These sections simply identify action levels for each pollutant consistent with existing water quality standards that, if detected in dry weather monitoring and field screening to be in excess of the action level, triggers the investigation, identification of the discharge, removal, and reporting activities required by existing federal law.[27] The claimants do not violate the permit by exceeding the action level, as implied by the claimants; rather a violation occurs only if a permittee fails to timely implement the required actions following an exceedance of an action level.[28] In this sense, the action levels established in the test claim permit function the same as the prior permit, which required the claimants to identify criteria to determine if significant sources of

[26] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 877.

[27] Code of Federal Regulations, title 40, sections 122.26(d)(2)(iv)(B), 122.41, 122.48, and Part 27 (reporting).

[28] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 203 (Directive C.3.).

Issue	Description	Staff Recommendation
		pollutants were present in dry weather non-stormwater discharges consistent with water quality objectives.[29] Under both permits, the action levels or criteria are intended to determine the presence of an illicit discharge, which then triggers the federal requirements to investigate, identify, and remove the illicit discharge, and report the findings to the Regional Board.
Does Section D. impose a reimbursable state mandated program?	Section D. of the test claim permit establishes Stormwater Action Levels (SALs) for seven pollutants that, if shown to be in excess of the SAL during monitoring, the claimant is required to implement stormwater controls and reduce the discharge to the maximum extent practicable (MEP) to meet water quality standards, and annually evaluate and report that information to the Regional Board.	*Deny* – Section D. of the test claim permit does not mandate a new program or higher level of service. The SALs imposed by the test claim permit are simply numbers that reflect the existing water quality standards applicable to the waterbodies in the Basin Plan, the California Toxics Rule (CTR), and the US EPA Water Quality Criteria for the pollutants at issue, and if there is an exceedance of a SAL detected with monitoring, then the claimants have to address those exceedances by implementing or modifying BMPs to the MEP as required by federal law.[30] Thus, the Regional Board has imposed an iterative, BMP-based compliance regime, using the SALs as a target, or trigger, but leaving substantial flexibility to the permittees to determine how to comply with long-standing

[29] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.4.).

[30] United States Code, title 33, section 1342(a)(2) (Public Law 100-4); Code of Federal Regulations, title 40, sections 122.22, 122.44(d),(i)(1), 122.48.

Issue	Description	Staff Recommendation
		federal requirements to monitor, implement BMPs, and report exceedances to the Regional Board. The SALs themselves do not impose any new mandated activities. Moreover, the requirements to monitor and implement BMPs to ensure that stormwater discharges meet water quality standards for these constituents are not new, but have long been required and thus, these activities do not constitute a new program or higher level of service.[31]
Do Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5., of the test claim permit impose a reimbursable state-mandated program?	Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5., of the test claim permit requires, in the continuing effort to reduce the discharges of stormwater pollution from the MS4 to the MEP and to prevent those discharges from causing or contributing to a violation of water quality standards, an updated Standard Stormwater Mitigation Plan (SSMP) for review of priority development projects proposed by residential, commercial, industrial, mixed-use, and public project proponents and the implementation of LID site design BMPs at new development and redevelopment projects; the development of a hydromodification plan to manage increases in runoff discharge rates and durations from priority development projects; and the development and implementation of	*Deny* – Some activities required by sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. do not constitute a state-mandated new program or higher level of service, and those that do, do not result in costs mandated by the state. All LID, hydromodification, and retrofitting costs required by Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. of the test claim permit and incurred and triggered by a project proponent of a *municipal* priority development project are not mandated by the state and do not impose a new program or higher level of service because such costs are incurred at the discretion of the local agency, are not unique to government, and

[31] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.26(d)(2)(iv); Code of Federal Regulations, title 40, section 122.44(i)(1); Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.2.).

Issue	Description	Staff Recommendation
	a retrofitting program to reduce the impacts from hydromodification and promote LID BMPs.	do not provide a governmental service to the public.[32] The remaining new activities required by sections F.1.d., F.1.h., and F.3.d. that relate to the claimants' regulatory activities for the LID, hydromodification, and retrofit provisions of other development are mandated by the state and impose a new program or higher level of service. However, there are no costs mandated by the state. The claimants have regulatory fee authority sufficient as a matter of law to pay for the new state-mandated activities.[33]
Does Section F.1.f. impose a reimbursable state-mandated program?	Section F.1.f. of the test claim permit requires each copermittee, as part of their Jurisdictional Runoff Management Program (JRMP), to develop and maintain a watershed-based database.[34] The database shall track and inventory all approved structural post-construction BMPs and BMP maintenance for existing municipal, industrial, commercial, and	*Deny* – Section F.1.f. does not impose costs mandated by the state. Except as applicable to a claimant's own municipal development (which is not mandated by the state)[36], Section F.1.f., of the test claim permit imposes some new requirements

[32] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

[33] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 590.

[34] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 21, 57-58 (Test Claim narrative).

[36] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

Issue	Description	Staff Recommendation
	residential projects within its jurisdiction since July 2005; conduct inspections of the projects as specified; and verify that approved post-construction BMPs are operating effectively and have been adequately maintained as specified in the permit.[35]	that mandate a new program or higher levels of service. However, there are no costs mandated by the state. The claimants have regulatory fee authority sufficient as a matter of law to pay for the new state-mandated activities.[37]
Do Sections F.2.d.3. and F.2.e.6.e. of the test claim permit impose a reimbursable state-mandated program?	Sections F.2.d.3. and F.2.e.6.e. of the test claim permit require the claimants to require the implementation of Active/Passive Sediment Treatment (AST)[38] at construction sites that are determined by the copermittee to be an exceptional threat to water quality, and to review site monitoring data, if the site monitors its runoff, as part of construction site inspections.[39]	*Deny* – Sections F.2.d.3. and F.2.e.6.e. either do not mandate a new program or higher level of service, or do not impose costs mandated by the state. Section F.2.e.6.e., which requires that inspections of construction sites must include a review of facility monitoring data results if the site monitors its runoff, is not new, and does not impose a new program or higher level of service. Section F.2.d.3. imposes a state-mandated new program or higher level of service only when the claimant is acting in its regulatory capacity to require implementation of AST for construction sites other than its

[35] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 221-222 (test claim permit, Section F.1.f.).

[37] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 590.

[38] Active/Passive Sediment Treatment is defined as "[u]sing mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge. Exhibit A, Test Claim filed November 10, 2011 and Revised April 28, 2017, page 283 (test claim permit, Attachment C).

[39] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 59-60. The claimants have not alleged any other activities in section F.2.d., and, thus, only Sections F.2.d.3. and F.2.e.6.e. of the test claim permit are analyzed in this Decision.

Issue	Description	Staff Recommendation
		own that are determined to be an exceptional threat to water quality. However, there are no costs mandated by the state for the requirement imposed by section F.2.d.3. The claimants have regulatory fee authority sufficient as a matter of law to pay for the new state-mandated activities.[40]
Do Sections F.1.i. and F.3.a.10. impose a reimbursable state mandated program?	Sections F.1.i. and F.3.a.10. of the test claim permit require erosion and sediment control BMPs after construction of new unpaved roads and during maintenance activities on unpaved roads.	*Deny* – Sections F.1.i. and F.3.a.10. of the test claim permit do not mandate a new program or higher level of service. Federal law requires permittees to reduce the discharge of pollutants to the MEP[41] and to submit a proposed management program including operating and maintaining public streets, roads, and highways to reduce the impact on receiving waters.[42] The prior permit required the prevention or reduction of pollutants in runoff to the MEP during all phases of construction[43] and from all existing development including roads.[44] Thus, these requirements are not new and, if anything, they simply clarify the existing legal requirement to assess a site's

[40] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 590.

[41] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[42] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A)(3).

[43] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 585 (Order R9-2004-0001, Section G.5.a.8.).

[44] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 587 (Order R9-2004-0001, Section H.1.b.).

Issue	Description	Staff Recommendation
		compliance with local ordinances and water quality standards.[45]
Does Section F.3.b.4.a.ii. impose a reimbursable state mandated program?	Section F.3.b.4.a.ii. of the test claim permit requires that the inspection of industrial and commercial sites include a review of site monitoring data if the site monitors its runoff.	*Deny* – Section F.3.b.4.a.ii. does not mandate a new program or higher level of service. Federal regulations require that large and medium MS4 dischargers demonstrate adequate legal authority, through ordinance, permit, or other means, to prohibit illicit discharges;[46] control pollutants to the MS4 from stormwater discharges associated with industrial activity; carry out inspections, surveillance, and monitoring to ensure compliance with the permit conditions;[47] reduce pollutants from runoff from commercial areas; and perform inspections to implement and enforce ordinances.[48] The prior permit required the permittees to have adequate legal authority to control pollutant discharges into and from the MS4 through ordinance, statute, permit, contract, or other similar means;[49] and inspections of all industrial and commercial facilities that could contribute a significant pollutant load to the MS4.[50]

[45] *Western Security Bank v. Superior Court* (1997) 15 Cal.4th 232, 243.

[46] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(B).

[47] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(A), (F).

[48] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A), (B).

[49] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 575-576 (Order R9-2004-0001, Section D.1.).

[50] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-590 (Order R9-2004-0001, Section H.2.a., b.).

Issue	Description	Staff Recommendation
		Although the prior permit did not expressly state that reviewing facility monitoring data results, if the site monitors its runoff, was required as part of the inspection, it did expressly require that the inspections of industrial and commercial facilities include "but not be limited to" an assessment of the site's compliance with local ordinances and permits related to stormwater runoff, including the implementation and maintenance of designated minimum BMPs, and visual observations for non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff.[51] The prior permit also required the permittee to carry out all inspections and monitoring, and to enforce local stormwater ordinances on industrial and commercial facilities "as necessary to maintain compliance with this Order," including the permit's receiving water limitations and prohibitions banning any discharge of pollutant and non-stormwater discharges into the MS4 that would cause or contribute to the violation of water quality standards.[52] Thus, these requirements are not new.

[51] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-591 (Order R9-2004-0001, Section H.2.a., b., d.).

[52] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 574-575, 592 (Order R9-2004-0001, Prohibitions and Receiving Water Limitations; Industrial/Commercial Inspections, Section H.2.e.).

Issue	Description	Staff Recommendation
Does Section G.1.-5. impose a reimbursable state-mandated program?	Section G.1.-5. of the test claim permit requires the copermittees in a watershed management area to develop a workplan to assess and prioritize the water quality problems within the watershed's receiving waters, identify sources of the highest priority water quality problems, develop a watershed-wide BMP implementation strategy to abate the highest priority water quality problems, and a monitoring strategy to evaluate BMP effectiveness and changing water quality prioritization in the watershed management area[53]	*Partially approve* - Sections G.1.d., G.3., G.4., and G.5. of the test claim permit impose new requirements that mandate a new program or higher level of service. These requirements impose costs mandated by the state for the County and cities only, from November 10, 2010 through December 31, 2017. Beginning January 1, 2018, however, there are no costs mandated by the state because the County and cities have fee authority sufficient as a matter of law within the meaning of Government Code section 17556(d).[54] There are no costs mandated by the state for the Riverside County Flood and Water Conservation District because there is no evidence in the record that the District was forced to spend its "proceeds of taxes," but instead used assessment revenue and contract funds from the County and cities.[55]

[53] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 255-257 (test claim permit, Sections G.1.-G.5.).

[54] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 579-581 (review denied March 1, 2023); Government Code sections 57350 and 57351 (SB 231, eff. January 1, 2018, which overturned *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351); *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 195.

[55] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 102-103 (Declaration of Stuart McKibbin, Chief of the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District, dated April 27, 2017) and pages 104-105, paragraph 5 (Declaration of David Garcia, Project Manager within the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District dated April 27, 2017); Exhibit X (37), Santa Margarita River Region, Report of Waste Discharge (ROWD), January 15, 2009, pages 1, 16; Exhibit X (36), Riverside County Flood Control and

Issue	Description	Staff Recommendation
Do Sections K.3.a.-c. impose a reimbursable state-mandated program?	Section K.3.a.-c. of the test claim permit requires that each claimant prepare an individual JRMP annual report that covers implementation of its jurisdictional activities during the past annual reporting period, and specifies the contents of the annual report, which claimants contend includes a new reporting requirements that constitute a reimbursable state-mandated program.[56]	*Partially approve* - Sections K.3.a. and b. do not impose any new activities. Sections K.3.c.1., 2., 3., and 4. impose new requirements to include new information in the annual report, an annual reporting checklist, and new information identified in Table 5, and except for reporting on the claimant's own municipal projects (which is not mandated by the state)[57], the new requirements are mandated by the state and impose a new program or higher level of service. However, there are no costs mandated by the state for the requirements imposed by Sections K.3.c.1., 2., 3., and 4. that require the annual reporting of information relating to development that the claimants regulate. The claimants have regulatory fee authority sufficient as a matter of law to pay for these new state-mandated activities.[58]

Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 13; Exhibit X (24), Excerpt from Riverside County Flood Control and Water Conservation District's Annual Budget, Fiscal Year 2011-2012, pages 5, 6; Exhibit X (25), Excerpt from Riverside County Flood Control and Water Conservation District's Comprehensive Annual Financial Report for Year Ending June 30, 2015, pages 7, 9, 18.

[56] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262-267 (test claim permit, section K.3.).

[57] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

[58] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 590.

Issue	Description	Staff Recommendation
		There are costs mandated by the state for the remaining new state-mandated reporting requirements in Sections K.3.c.1., 2., 3., and 4. for the County and cities only, from November 10, 2010 through December 31, 2017. Beginning January 1, 2018, however, there are no costs mandated by the state because the County and cities have fee authority sufficient as a matter of law within the meaning of Government Code section 17556(d).[59] There are no costs mandated by the state for the Riverside County Flood and Water Conservation District because there is no evidence in the record that the District was forced to spend its "proceeds of taxes," but instead used assessment revenue and contract funds from the County and cities.[60]

[59] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 579-581 (review denied March 1, 2023); Government Code sections 57350 and 57351 (SB 231, eff. January 1, 2018, which overturned *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351); *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 195.

[60] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 102-103 (Declaration of Stuart McKibbin, Chief of the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District, dated April 27, 2017) and pages 104-105, paragraph 5 (Declaration of David Garcia, Project Manager within the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District dated April 27, 2017); Exhibit X (37), Santa Margarita River Region, Report of Waste Discharge (ROWD), January 15, 2009, pages 1, 16; Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 13; Exhibit X (24), Excerpt from Riverside County Flood Control and Water Conservation District's Annual Budget, Fiscal Year 2011-2012, pages 5, 6; Exhibit X (25), Excerpt from Riverside County Flood Control and Water Conservation District's Comprehensive Annual Financial Report for Year Ending June 30, 2015, pages 7, 9, 18.

Issue	Description	Staff Recommendation
Does Section II.E.2.-5. of Attachment E impose a reimbursable state-mandated program?	Section II.E.2.-5. of Attachment E, which is part of the Monitoring and Reporting Program (MRP), requires the claimants to perform the following special studies: Sediment Toxicity Study; Trash and Litter Investigation; Agricultural, Federal and Tribal Input Study; and MS4 Receiving Water and Maintenance Study.[61]	*Partially approve* - Conducting the four special studies in accordance with Attachment E, Sections II.E.2.-5. mandates a new program or higher level of service within the meaning of article XIII B, section 6 of the California Constitution. There are costs mandated by the state for the new state-mandated activities for the County and cities only, from November 10, 2010 through December 31, 2017. Beginning January 1, 2018, however, there are no costs mandated by the state because the County and cities have fee is authority sufficient as a matter of law within the meaning of Government Code section 17556(d).[62] There are no costs mandated by the state for the Riverside County Flood and Water Conservation District because there is no evidence in the record that the District was forced to spend its "proceeds of taxes," but instead used assessment revenue and

[61] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 75-81, 297-324 (Test Claim narrative; Attachment E.) The claimants did not plead the other special studies addressed in Attachment E, sections II.E.7. and 8. and, thus, this Decision does not address those studies.

[62] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 579-581 (review denied March 1, 2023); Government Code sections 57350 and 57351 (SB 231, eff. January 1, 2018, which overturned *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351); *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 195.

Issue	Description	Staff Recommendation
		contract funds from the County and cities.[63]
Do Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the test claim permit impose a reimbursable state-mandated program?	Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. address development, construction, municipal facilities, industrial/commercial facilities, residential areas, retrofitting and education, and contain language that provides that each updated JRMP and the components of the program "must . . . effectively prohibit non-storm water discharges, and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards."[64] The claimants contend that the language imposes new requirements to develop and implement the components in Section F. "in a manner that guarantees that those programs will	*Deny* – The language in Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. is not new and does not mandate a new program or higher level of service. Federal law has long required the claimants "to implement and enforce an ordinance, orders or similar means *to prevent illicit discharges to the municipal separate storm sewer system*"[67] and to "effectively *prohibit non-stormwater discharges into the storm sewers*."[68] Both of these limitations address discharges coming *into* the MS4. The claimants assert that the verb "prevent" is more stringent that "prohibit." However, this is not

[63] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 102-103 (Declaration of Stuart McKibbin, Chief of the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District, dated April 27, 2017) and pages 104-105, paragraph 5 (Declaration of David Garcia, Project Manager within the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District dated April 27, 2017); Exhibit X (37), Santa Margarita River Region, Report of Waste Discharge (ROWD), January 15, 2009, pages 1, 16; Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 13; Exhibit X (24), Excerpt from Riverside County Flood Control and Water Conservation District's Annual Budget, Fiscal Year 2011-2012, pages 5, 6; Exhibit X (25), Excerpt from Riverside County Flood Control and Water Conservation District's Comprehensive Annual Financial Report for Year Ending June 30, 2015, pages 7, 9, 18.

[64] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 208 (test claim permit, Section F.).

[67] United States Code, title 33, section 1342(p)(3)(B)(ii), emphasis added.

[68] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1) (71 FR 33639, June 12, 2006), emphasis added.

Issue	Description	Staff Recommendation
	prevent the discharge of pollutants at a level that could cause or contribute to a violation of any water quality standard as well as to prevent illicit discharges to the MS4," and that such requirements go beyond the MEP standard of federal law and constitute a new or higher level of service.[65] The claimants further allege that the requirements now subject them to sanctions, including civil penalties and injunctive relief, for the failure to achieve water quality standards.[66]	the case. Black's Law Dictionary defines prohibit as: "To prevent, preclude, or severely hinder."[69] Merriam-Webster Dictionary defines prohibit as, "to prevent from doing something."[70] Thus, prevention is part of, and not more stringent than, prohibition. Moreover, the requirement to prohibit non-storm water discharges *through and from* their MS4 systems, implement a program to prevent illicit discharges, and monitor to identify illicit discharges and exempted discharges that are a source of pollution, has been in the claimants' permits for the last 20 years.[71] Federal law requires that NPDES permits include conditions to achieve water quality standards and objectives.[72] And receiving water limitations and discharge prohibitions prohibiting discharges into and from MS4s in a manner causing a condition of pollution, causing

[65] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 83 (Test Claim narrative).

[66] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 81 (Test Claim narrative).

[69] Exhibit X (1), Black's Law Dictionary (11th ed. 2019), prohibit.

[70] Exhibit X (32), Merriam-Webster Dictionary, prohibit, https://www.merriam-webster.com/dictionary/prohibit?utm_campaign=sd&utm_medium=serp&utm_source=jsonld (accessed on April 4, 2022).

[71] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 413 (Fact Sheet/Technical Report).

[72] United States Code, title 33, section 1311(b)(1)(C); United States Code, title 33, section 1342(o)(3) (Public Law 100-4); Code of Federal Regulations, title 40, sections 122.41(d), 122.44(d)(1).

Issue	Description	Staff Recommendation
		exceedances of water quality objectives, or causing a violation of water quality standards, have been in all permits since 1999 when the State Water Resources Control Board issued precedential order 99-05.[73]

Staff Analysis

A. The Test Claim Was Timely Filed With a Period of Reimbursement Beginning November 10, 2010.

The Test Claim was filed on November 10, 2011. The effective date of the test claim permit is November 10, 2010.[74] At the time of filing, the Government Code provided that "test claims shall be filed not later than 12 months following the effective date of a statute or executive order…."[75] As the Test Claim was filed within 12 months following the effective date of the test claim permit, the Test Claim was timely filed.

Government Code section 17557(e) requires a test claim to be "submitted on or before June 30 following a fiscal year in order to establish eligibility for reimbursement for that fiscal year." Because the Test Claim was filed on November 10, 2011, the potential period of reimbursement under Government Code section 17557 begins on July 1, 2010. However, since the test claim permit has a later effective date, the period of reimbursement for this Test Claim begins on the permit's effective date, November 10, 2010.

B. Some of the Sections Pled by the Claimants Impose a State-Mandated New Program or Higher Level of Service.

Section B.2., of the test claim permit removes landscape irrigation, irrigation water, and lawn watering from the exempt, non-prohibited list of non-stormwater discharges requiring the claimants to effectively prohibit them from entering the MS4 by implementing a program to detect and remove these illicit discharges. This provision is required by federal law when the discharge is identified as a source of pollution[76] and was required under the prior permit.[77] Thus,

[73] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572-573, (Order R9-2004-0001, Section A.1.-3.); Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, State Water Board Order WQ 2015-0075, pages 221-222.

[74] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 269 (test claim permit).

[75] Government Code section 17551(c) (Stats. 2007, ch. 329).

[76] Code of Federal Regulations, title 40, section 122.26(d)(2)(IV)(B)(1).

[77] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section B.2.); see also, Exhibit X (33), National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges; Final Rule, 55 Federal

the provision is not new. Both the claimants and the Regional Board identified landscape irrigation, irrigation water, and lawn watering as a source of non-stormwater pollution[78] leaving the Regional Board with no discretion, but to remove the exemption and require the claimants to effectively prohibit these non-stormwater discharges from entering the MS4 in compliance with federal law. Reimbursement under article XIII B, section 6 of the California Constitution is not required if the statute or executive order imposes a requirement that is expressly mandated by federal law.[79] Moreover, this provision it is not new but simply makes the claimants comply with longstanding federal law which prohibits non-stormwater discharges.[80]

Sections C., and F.4.d., and e., and Section II.C. of Attachment E., of the test claim permit require dry weather monitoring and field screening for 18 pollutants specified in the permit, and if a pollutant is shown to exceed the non-stormwater action level (NAL), which is based on existing water quality standards, then the claimants are required to investigate, identify and remove the source of the illicit, non-stormwater discharge. Staff finds that these sections of the permit do not mandate a new program or higher level of service. Instead, the test claim permit simply identifies action levels for each pollutant consistent with existing water quality standards that, if detected in dry weather monitoring and field screening to be in excess of the action level, triggers the investigation, identification of the discharge, removal, and reporting activities required by existing federal law.[81] The claimants do not violate the permit by exceeding the action level, as implied by the claimants; rather a violation occurs only if a permittee fails to timely implement the required actions following an exceedance of an action level.[82] In this sense, the action levels established in the test claim permit function the same as the prior permit, which required the claimants to identify criteria to determine if significant sources of pollutants were present in dry weather non-stormwater discharges consistent with water quality objectives.[83] Under both permits, the action levels or criteria are intended to determine the

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Register 47990 (November 16, 1990), page 48, which states: "However, the Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharges where appropriate."

[78] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 473-476 (Fact Sheet/Technical Report).

[79] *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 71; *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1592; *County of Los Angeles v. Commission on State Mandates* (1995) 32 Cal.App.4th 805, 816; *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 879-880; *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 763; Government Code section 17556(c).

[80] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 877.

[81] Code of Federal Regulations, title 40, sections 122.26(d)(2)(iv)(B), 122.41, 122.48, and Part 27 (reporting).

[82] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 203 (Directive C.3.).

[83] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.4.).

presence of an illicit discharge, which then triggers the federal requirements to investigate, identify, and remove the illicit discharge, and report the findings to the Regional Board.

Section D. of the test claim permit establishes Stormwater Action Levels (SALs) for seven pollutants that, if shown to be in excess of the SAL during monitoring, the claimant is required to implement stormwater controls and reduce the discharge to the maximum extent practicable (MEP) to meet water quality standards, and annually evaluate and report that information to the Regional Board. Staff finds that Section D. of the test claim permit does not mandate a new program or higher level of service. The SALs imposed by the test claim permit are simply numbers that reflect the existing water quality standards applicable to the waterbodies in the Basin Plan, the California Toxics Rule (CTR), and the US EPA Water Quality Criteria for the pollutants at issue, and if there is an exceedance of a SAL detected with monitoring, then the claimants have to address those exceedances by implementing or modifying BMPs to the MEP as required by existing federal law.[84] Thus, the Regional Board has imposed an iterative, BMP-based compliance regime, using the SALs as a target, or trigger, but leaving substantial flexibility to the permittees to determine how to comply with long-standing federal requirements to monitor, implement BMPs, and report exceedances to the Regional Board. The SALs themselves do not impose any new mandated activities. Moreover, monitoring and implementing BMPs to ensure that stormwater discharges meet water quality standards for these constituents are not new, but have long been required and thus, these activities do not constitute a new program or higher level of service.[85]

Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5., of the test claim permit requires, in the continuing effort to reduce the discharges of stormwater pollution from the MS4 to the MEP and to prevent those discharges from causing or contributing to a violation of water quality standards, an updated Standard Stormwater Mitigation Plan (SSMP) for review of priority development projects proposed by residential, commercial, industrial, mixed-use, and public project proponents and the implementation of LID site design BMPs at new development and redevelopment projects; the development of a hydromodification plan to manage increases in runoff discharge rates and durations from priority development projects; and the development and implementation of a retrofitting program to reduce the impacts from hydromodification and promote LID BMPs. Staff finds that:

- All LID, hydromodification, and retrofitting costs required by Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. of the test claim permit and incurred and triggered by a project proponent of a *municipal* priority development project are not mandated by the state and do not impose a new program or higher level of service because such costs are incurred at

[84] United States Code, title 33, section 1342(a)(2) (Public Law 100-4); Code of Federal Regulations, title 40, sections 122.22, 122.44(d),(i)(1), 122.48.

[85] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.26(d)(2)(iv); Code of Federal Regulations, title 40, section 122.44(i)(1); Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.2.).

the discretion of the local agency, are not unique to government, and do not provide a governmental service to the public.[86]

- The remaining new LID, hydromodification, and retrofitting administrative, planning, and regulatory activities required by Sections F.1.d.1., 2., 4., 7., and h., and F.3.d.1.-5. are mandated by the state and impose a new program or higher level of service.

Section F.1.f. of the test claim permit requires each copermittee, as part of their Jurisdictional Runoff Management Program (JRMP), to develop and maintain a watershed-based database.[87] The database shall track and inventory all approved structural post-construction BMPs and BMP maintenance for existing municipal, industrial, commercial, and residential projects within its jurisdiction since July 2005; conduct inspections of the projects as specified; and verify that approved post-construction BMPs are operating effectively and have been adequately maintained as specified in the permit.[88] Staff finds that, *except* as applicable to a claimant's own municipal development (which is not mandated by the state),[89] the following activities are newly required by Section F.1.f., of the test claim permit and constitute state-mandated new programs or higher levels of service:

- Develop and maintain a watershed-based database to track and inventory all projects, within its jurisdiction, that have a final approved SSMP with structural post-construction BMPs implemented since July 2005. The database must include information on BMP type; location; watershed; date of construction; the party responsible for maintenance, maintenance verifications, and corrective actions; and whether the site was referred to the local vector control agency.[90]
- Verify that the required structural post-construction BMPs on inventoried *residential* projects have been implemented, are maintained, and are operating effectively every five

[86] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

[87] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 21, 57-58 (Test Claim narrative).

[88] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 221-222 (test claim permit, Section F.1.f.).

[89] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

[90] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 221 (test claim permit, Section F.1.f.1.).

years. Verification can be made through inspections, self-certifications, surveys, or other equally effective approaches.[91]

- Annually inspect the required structural post-construction BMPs at high priority *residential* projects.[92]
- For all inventoried projects, verifications performed through a means other than direct copermittee inspection, adequate documentation must be submitted to the copermittee to provide assurance that the required maintenance has been completed.[93]
- Inspections of the required structural post-construction BMPs at all inventoried projects must note observations of vector conditions and, where conditions are contributing to mosquito production, the copermittee is required to notify the local vector control agency.[94]

All other activities required by Section F.1.f. are not new and, thus, do not impose a new program or higher level of service.

Sections F.2.d.3. and F.2.e.6.e. of the test claim permit require the claimants to require the implementation of Active/Passive Sediment Treatment (AST)[95] at construction sites that are determined by the copermittee to be an exceptional threat to water quality, and to review site monitoring data, if the site monitors its runoff, as part of construction site inspections.[96] Staff finds that Section F.2.d.3. imposes a state-mandated new program or higher level of service only when the claimant is acting in its regulatory capacity and is performing the following activity for construction sites other than its own:

[91] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.i.).

[92] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.ii.).

[93] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.v.).

[94] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.vii.).

[95] Active/Passive Sediment Treatment is defined as "[u]sing mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge. Exhibit A, Test Claim filed November 10, 2011 and Revised April 28, 2017, page 283 (test claim permit, Attachment C).

[96] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 59-60. The claimants have not alleged any other activities in section F.2.d., and, thus, only Sections F.2.d.3. and F.2.e.6.e. of the test claim permit are analyzed in this Decision.

- Require implementation of AST for sediment at construction sites other than its own (or portions thereof) that are determined to be an exceptional threat to water quality.[97]

However, with respect to a local agency's own *municipal* construction sites, the requirement to implement AST is not mandated by the state, but is triggered by a local discretionary decision to construct new municipal projects.[98] Moreover, implementing AST at a local agency's own municipal construction site does not impose a new program or higher level of service because such costs are not unique to government and do not provide a governmental service to the public. Staff also finds that Section F.2.e.6.e. of the test claim permit, which requires that inspections of construction sites must include a review of facility monitoring data results if the site monitors its runoff, is not new, and does not impose a new program or higher level of service.

Sections F.1.i., and F.3.a.10. of the test claim permit require erosion and sediment control BMPs after construction of new unpaved roads and during maintenance activities on unpaved roads. Federal law requires permittees to reduce the discharge of pollutants to the MEP[99] and to submit a proposed management program including operating and maintaining public streets, roads, and highways to reduce the impact on receiving waters.[100] The prior permit required the prevention or reduction of pollutants in runoff to the MEP during all phases of construction[101] and from all existing development including roads.[102] Thus, these requirements are not new and, if anything, they simply clarify the existing legal requirement to assess a site's compliance with local ordinances and water quality standards.[103] Accordingly, the Staff that Sections F.1.i., and F.3.a.10. are not new requirements imposed or shifted by the state, and do not constitute a new program or higher level of service.

Section F.3.b.4.a.ii. of the test claim permit requires that the inspection of industrial and commercial sites include a review of site monitoring data if the site monitors its runoff. Staff finds that the requirement imposed by Section F.3.b.4.a.ii. clarifies the existing legal requirement to assess a site's compliance with local ordinances and water quality standards, but is not a new requirement and does not impose a new program or higher level of service. Federal regulations require that large and medium MS4 dischargers demonstrate adequate legal authority, through

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[97] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 231 (test claim permit, Section F.2.d.3.).

[98] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

[99] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[100] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A)(3).

[101] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 585 (Order R9-2004-0001, Section G.5.a.(8)).

[102] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 587 (Order R9-2004-0001, Section H.1.b.).

[103] *Western Security Bank v. Superior Court* (1997) 15 Cal.4th 232, 243.

ordinance, permit, or other means, to prohibit illicit discharges;[104] control pollutants to the MS4 from stormwater discharges associated with industrial activity; carry out inspections, surveillance, and monitoring to ensure compliance with the permit conditions;[105] reduce pollutants from runoff from commercial areas; and perform inspections to implement and enforce ordinances.[106] The prior permit required the permittees to have adequate legal authority to control pollutant discharges into and from the MS4 through ordinance, statute, permit, contract, or other similar means;[107] and inspections of all industrial and commercial facilities that could contribute a significant pollutant load to the MS4.[108] Although the prior permit did not expressly state that reviewing facility monitoring data results, if the site monitors its runoff, was required as part of the inspection, it did expressly require that the inspections of industrial and commercial facilities include "but not be limited to" an assessment of the site's compliance with local ordinances and permits related to stormwater runoff, including the implementation and maintenance of designated minimum BMPs, and visual observations for non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff.[109] The prior permit also required the permittee to carry out all inspections and monitoring, and to enforce local stormwater ordinances on industrial and commercial facilities "as necessary to maintain compliance with this Order," including the permit's receiving water limitations and prohibitions banning any discharge of pollutant and non-stormwater discharges into the MS4 that would cause or contribute to the violation of water quality standards.[110] Thus, these requirements are not new and, if anything, the requirement to review monitoring data results, if the site monitors its runoff, simply clarifies the existing legal requirement to assess a site's compliance with local ordinances and water quality standards. Moreover, there has been no shift of costs from the State to the claimants. The claimants enforce their local permits, plans, and ordinances, and the Water Boards enforce the General Industrial Permit.[111] In addition, the test claim permit states that if the Regional Board has conducted an inspection of an industrial

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[104] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(B).

[105] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(A), (F).

[106] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A), (B).

[107] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 575-576 (Order R9-2004-0001, Section D.1.).

[108] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-590 (Order R9-2004-0001, Section H.2.a., b.).

[109] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-591 (Order R9-2004-0001, Section H.2.a., b., d.).

[110] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 574-575, 592 (Order R9-2004-0001, Prohibitions and Receiving Water Limitations; Industrial/Commercial Inspections, Section H.2.e.).

[111] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 441 (Fact Sheet/Technical Report, Finding D.3.a.).

site during a particular year, the requirement for the responsible claimant to inspect this facility during the same year is deemed satisfied.[112]

Section G.1.-5. of the test claim permit requires the copermittees in a watershed management area to develop a workplan to assess and prioritize the water quality problems within the watershed's receiving waters, identify sources of the highest priority water quality problems, develop a watershed-wide BMP implementation strategy to abate the highest priority water quality problems, and a monitoring strategy to evaluate BMP effectiveness and changing water quality prioritization in the watershed management area.[113] A watershed workplan is not new. Under the prior permit, the claimants were required to collaborate with other watershed permittees to develop and implement a watershed stormwater management plan (watershed SWMP).[114] However, staff finds that Sections G.1.d., G.3., G.4., and G.5. of the test claim permit mandate a new program or higher level of service for the following new activities:

- The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs.[115]
- The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4.[116]
- The watershed workplan must include the identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan.[117]
- The annual watershed review meetings shall be open to the public and adequately noticed.[118]

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[112] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 244 (test claim permit, Section F.3.b.4.(e)).

[113] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 255-257 (test claim permit, Sections G.1.-G.5.).

[114] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Sections K.1., 2.).

[115] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 255 (test claim permit, Section G.1.d.).

[116] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.3.).

[117] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.4.).

[118] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

- Each permittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan.[119]

Section K.3.a.-c. of the test claim permit requires that each claimant prepare an individual JRMP annual report that covers implementation of its jurisdictional activities during the past annual reporting period, and specifies the contents of the annual report, which claimants contend includes new reporting requirements that constitute a reimbursable state-mandated program.[120] Staff finds that sections K.3.a. and b. do not impose any new activities. Sections K.3.c.1., 2., 3., and 4. impose new requirements to include new information in the annual report, specifically, an annual reporting checklist and new information identified in Table 5. Except for reporting on the claimant's own municipal projects (which is not mandated by the state),[121] staff finds the new requirements are mandated by the state and impose a new program or higher level of service.

Section II.E.2.-5. of Attachment E, which is part of the Monitoring and Reporting Program (MRP), requires the claimants to perform the following special studies: Sediment Toxicity Study; Trash and Litter Investigation; Agricultural, Federal and Tribal Input Study; and MS4 Receiving Water and Maintenance Study.[122] Staff finds that that Attachment E, Sections II.E.2.-5. mandate a new program or higher level of service within the meaning of article XIII B, section 6 of the California Constitution.

Finally, the claimants plead language in Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the test claim permit, which addresses development, construction, municipal facilities, industrial/commercial facilities, residential areas, retrofitting and education, that provides that each updated JRMP and the components of the program "must . . . effectively prohibit non-storm water discharges, and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards."[123] The claimants contend that the language imposes new requirements to develop and implement the components in Section F. "in a manner that guarantees that those programs will prevent the discharge of pollutants at a level that could cause or contribute to a violation of any water quality standard as well as to prevent illicit discharges to the MS4," and that such requirements go beyond the MEP standard of federal law and constitute

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[119] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[120] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262-267 (test claim permit, section K.3.).

[121] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

[122] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 75-81, 297-324 (Test Claim narrative; Attachment E.) The claimants did not plead the other special studies addressed in Attachment E, sections II.E.7. and 8. and, thus, this Decision does not address those studies.

[123] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 208 (test claim permit, Section F.).

a new and/or higher level of service.[124] The claimants further allege that the requirements now subject them to sanctions, including civil penalties and injunctive relief, for the failure to achieve water quality standards.[125] Staff finds that the language at issue in Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the test claim permit does not impose any new requirements and, therefore, does not mandate a new program or higher level of service. Federal law has long required the claimants "to implement and enforce an ordinance, orders or similar means *to prevent illicit discharges to the municipal separate storm sewer system*"[126] and to "effectively *prohibit non-stormwater discharges into the storm sewers*."[127] Both of these limitations address discharges coming *into* the MS4. The claimants assert that the verb "prevent" is more stringent that "prohibit." However, this is not the case. Black's Law Dictionary defines prohibit as: "To prevent, preclude, or severely hinder."[128] Merriam-Webster Dictionary defines prohibit as, "to prevent from doing something."[129] Thus, prevention is part of, and not more stringent than, prohibition. Moreover, the requirement to prohibit non-storm water discharges *through and from* their MS4 systems, implement a program to prevent illicit discharges, and monitor to identify illicit discharges and exempted discharges that are a source of pollution, has been in the claimants' permits for the last 20 years.[130] Federal law requires that NPDES permits include conditions to achieve water quality standards and objectives.[131] And receiving water limitations and discharge prohibitions into and from MS4s in a manner causing a condition of pollution, causing exceedances of water quality objectives, or causing a violation of water quality standards, have been in all permits since 1999 when the State Board issued precedential order

[124] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 83 (Test Claim narrative).

[125] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 81 (Test Claim narrative).

[126] United States Code, title 33, section 1342(p)(3)(B)(ii), emphasis added.

[127] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1) (71 FR 33639, June 12, 2006), emphasis added.

[128] Exhibit X (1), Black's Law Dictionary (11th ed. 2019), prohibit.

[129] Exhibit X (32), Merriam-Webster Dictionary, prohibit, https://www.merriam-webster.com/dictionary/prohibit?utm_campaign=sd&utm_medium=serp&utm_source=jsonld (accessed on April 4, 2022).

[130] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 413 (Fact Sheet/Technical Report).

[131] United States Code, title 33, section 1311(b)(1)(C); United States Code, title 33, section 1342(o)(3) (Public Law 100-4); Code of Federal Regulations, title 40, sections 122.41(d), 122.44(d)(1).

99-05.[132] Thus, the requirement to prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards is not new.

C. Pursuant to Government Code Section 17556(d), There Are No Costs Mandated by the State When the Claimants Have Regulatory Authority to Impose Fees (e.g., for LID, Hydromodification, Retrofitting, BMP Maintenance Tracking, Active/Passive Sediment Treatment, and Annual Reporting Requirements Addressing Development). Although the Remaining New State-Mandated Activities Result in Costs Mandated by the State for the County and Cities From November 10, 2010, to December 31, 2017, There Are No Costs Mandated by the State for Riverside County Flood and Water Conservation District Because There Is No Evidence in the Record that the District Was Forced to Spend Their Local "Proceeds of Taxes."

In order to be reimbursable, the mandated activities in these sections must result in increased costs mandated by the state, forcing local government to incur "increased actual expenditures of limited tax proceeds that are counted against the local government's spending limit."[133] In addition, a finding of costs mandated by the state means that none of the exceptions in Government Code section 17556 apply to deny the claim. Government Code section 17556(d) states that the Commission shall not find costs mandated by the state when:

> The local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service. This subdivision applies regardless of whether the authority to levy charges, fees, or assessments was enacted or adopted prior to or after the date on which the statute or executive order was enacted or issued.

Staff finds that:

a. The new state-mandated activities do not result in costs mandated by the state for the Riverside County Flood and Water Conservation District because there is no evidence in the record that the District was forced to spend its "proceeds of taxes," but instead used assessment revenue and contract funds from the County and cities.[134]

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[132] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572-573, (Order R9-2004-0001, Section A.1.-3.); Exhibit C, Water Boards' Comments on the Test Claim filed September 22, 2017, State Board Order WQ 2015-0075, pages 221-222.

[133] California Constitution, article XIII B, section 6; Government Code sections 17514, 17561(a); *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264, 1283; *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176, 1185, emphasis added.

[134] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 102-103 (Declaration of Stuart McKibbin, Chief of the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District, dated April 27, 2017) and pages 104-105, paragraph 5 (Declaration of David Garcia, Project Manager within the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District dated April 27, 2017); Exhibit X (37), Santa Margarita River Region, Report of Waste Discharge (ROWD), January 15, 2009, pages 1, 16; Exhibit X (36), Riverside County Flood Control and

b. The County and cities have regulatory fee authority sufficient as a matter of law to fund the new state-mandated activities required related to LID (Section F.1.d.1., 2., 4., 7.), Hydromodification (Section F.1.h.), Retrofitting (Section F.3.d.1-5.), BMP Maintenance Tracking (Section F.1.f.), Active/Passive Sediment Treatment (Section F.2.d.3.), Annual JRMP Reporting Checklist on Construction, New Development, Post Construction Development, Municipal (other than their own)/Commercial/Industrial (Section K.3.c.3.), and the Annual JRMP Reporting Requirements listed in Table 5 on New Development, Construction, Municipal (other than their own), Commercial/Industrial, Residential, and Retrofitting Existing Development (Section K.3.c.4.), pursuant to Government Code section 17556(d) and, thus, there are no costs mandated by the state for these activities.

c. The County and cities have constitutional and statutory authority to charge property-related fees for the new state-mandated requirements related to the Watershed Workplan (Sections G.1.-5.); the Annual JRMP Reporting requirements to include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items (Section K.3.c.1.), and provide in the annual report an updated timeframe for attainment of a desired outcome level when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe (Section K.3.c.2.); the Annual JRMP Reporting Checklist on Illicit Discharges and Connections and MS4 Maintenance (Section K.3.c.3.); the Annual JRMP Reporting Requirements listed in Table 5 on Illicit Discharge Detection and Elimination and Updated Workplans (Section K.3.c.4.); and Special Studies (Section II.E.2.-5. of Attachment E.). Based on *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351, and consistent with the prior Decision of the Commission in *Discharge of Stormwater Runoff- Order No. R9-2007-0001*, 07-TC-09, which was recently upheld by the Third District Court of Appeal in *Department of Finance v. Commission on State Mandates*,[135] these fees are subject to the voter approval requirement in article XIII D, section 6(c) from November 10, 2010, the beginning date of the potential period of reimbursement, to December 31, 2017, and, thus, the fee authority is not sufficient as a matter of law during this time period to fund the costs of the mandated activities. Under these limited circumstances, Government Code section 17556(d) does not apply, and there are costs mandated by the state. Any fee revenues received must be identified as offsetting revenue. In addition, reimbursement for this mandate from any source, including but not limited to, service fees collected, federal funds, other state funds, and other funds that are not the claimant's proceeds of taxes shall be identified and deducted from this claim.

Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 13; Exhibit X (24), Excerpt from Riverside County Flood Control and Water Conservation District's Annual Budget, Fiscal Year 2011-2012, pages 5, 6; Exhibit X (25), Excerpt from Riverside County Flood Control and Water Conservation District's Comprehensive Annual Financial Report for Year Ending June 30, 2015, pages 7, 9, 18.

[135] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 579-581 (review denied March 1, 2023).

Based on *Paradise Irrigation District* case and the Legislature's enactment of Government Code sections 57350 and 57351 (which overturned *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351), there are no costs mandated by the state on or after January 1, 2018, to comply with these activities, because claimants have constitutional and statutory authority to charge property-related fees for these costs subject only to the voter protest provisions of article XIII D, which is sufficient as a matter of law to cover the costs of the mandated activities within the meaning of Government Code section 17556(d).

Conclusion

Accordingly, staff recommends that the Commission deny this Test Claim with respect to the Riverside County Flood and Water Conservation District.

Staff further recommends that the Commission partially approve this Test Claim for the county and city copermittees, and find that the following activities impose a reimbursable state-mandated program from November 10, 2010, the beginning date of the potential period of reimbursement, to December 31, 2017:

A. Watershed Workplan

1. The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs. (Section G.1.d.)
2. The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4. (Section G.3.)
3. The watershed workplan must include the identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan. (Section G.4.)
4. The annual watershed review meetings shall be open to the public and adequately noticed. (Section G.5.)
5. Each permittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan. (Section G.5.)

B. Annual JRMP Report

1. Include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items. (Section K.3.c.1.)
2. Provide in the annual report an updated timeframe for attainment of a desired outcome level in the annual report when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe, but the review of the existing activities and BMPs are adequate, or that the projected timeframe should be extended. (Section K.3.c.2.)

3. Providing the following information in the Reporting Checklist: Illicit Discharges and Connections (Number of IC/ID Eliminations and Violations), and MS4 Maintenance (Total Miles of MS4 Inspected). (Section K.3.c.3.)
4. Providing the following information the Annual JRMP Reporting Requirements listed in Table 5: Illicit Discharge Detection and Elimination (A description of instances when field screening and analytical data exceeded action levels, including those instances for which no investigation was conducted), and Updated Workplans including priorities, strategy, implementation schedule, and effectiveness evaluation. (Section K.3.c.4.)

C. Special Studies

1. Conduct the four Special Studies required by Section II.E.2.-5. of Attachment E.

All other activities and sections of the test claim permit pled by the claimants and costs claimed are recommended for denial.

Staff Recommendation

Staff recommends that the Commission adopt the Proposed Decision to partially approve the Test Claim and authorize staff to make any technical, non-substantive changes to the Proposed Decision following the hearing.

BEFORE THE

COMMISSION ON STATE MANDATES

STATE OF CALIFORNIA

IN RE TEST CLAIM California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2., C., D., F.1.d.1., 2., 4., 7., F.1.f., F.1.h., F.1.i., F.2.d.3., F.2.e.6.e., F.3.a.10., F.3.b.4.a.ii., F.3.d.1.-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6., Adopted November 10, 2010 Filed on November 10, 2011 and Revised April 28, 2017 County of Riverside, Riverside County Flood Control and Water Conservation District, Cities of Murrieta, Temecula, and Wildomar, Claimants	Case No.: 11-TC-03 *California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016* DECISION PURSUANT TO GOVERNMENT CODE SECTION 17500 ET SEQ.; CALIFORNIA CODE OF REGULATIONS, TITLE 2, DIVISION 2, CHAPTER 2.5, ARTICLE 7. (*Adopted May 26, 2023*)

DECISION

The Commission on State Mandates (Commission) heard and decided this Test Claim during a regularly scheduled hearing on May 26, 2023. [Witness list will be included in the adopted Decision.]

The law applicable to the Commission's determination of a reimbursable state-mandated program is article XIII B, section 6 of the California Constitution, Government Code sections 17500 et seq., and related case law.

The Commission [adopted/modified] the Proposed Decision to [approve/partially approve/deny] the Test Claim by a vote of [vote will be included in the adopted Decision], as follows:

Member	**Vote**
Lee Adams, County Supervisor	
Gayle Miller, Representative of the Director of the Department of Finance, Chairperson	
Scott Morgan, Representative of the Director of the Office of Planning and Research	
Renee Nash, School District Board Member	
Sarah Olsen, Public Member	
Lynn Paquin, Representative of the State Controller, Vice Chairperson	
Spencer Walker, Representative of the State Treasurer	

Summary of the Findings

This Test Claim, which was timely filed, alleges reimbursable costs mandated by the state for the County of Riverside, Riverside County Flood Control and Water Conservation District (District), Cities of Murrieta, Temecula, and Wildomar (claimants), to comply with conditions of the National Pollutant Discharge Elimination System Program (NPDES) permit, Order No. R9-2010-0016 (test claim permit) issued by the California Regional Water Quality Control Board, San Diego Region (Regional Board). The claimants have properly pled the following sections of the test claim permit pursuant to Government Code section 17553, alleging these sections impose a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution: B.2., C., D., F.1.d.1., 2., 4., 7., F.1.f., F.1.h., F.1.i., F.2.d.3., F.2.e.6.e., F.3.a.10., F.3.b.4.a.ii., F.3.d.1.-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6.

The Commission finds that some of the sections of the test claim permit pled by the claimants impose a state-mandated new program or higher level of service, and others do not.

Section B.2., of the test claim permit removes landscape irrigation, irrigation water, and lawn watering from the exempt, non-prohibited list of non-stormwater discharges requiring the claimants to effectively prohibit them from entering the MS4 by implementing a program to detect and remove these illicit discharges. This provision is required by federal law when the discharge is identified as a source of pollution[136] and was required under the prior permit. [137] Thus, the provision is not new. Both the claimants and the Regional Board identified landscape irrigation, irrigation water, and lawn watering as a source of non-stormwater pollution[138] leaving the Regional Board with no discretion, but to remove the exemption and require the claimants to effectively prohibit these non-stormwater discharges from entering the MS4 in compliance with federal law. Reimbursement under article XIII B, section 6 of the California Constitution is not required if the statute or executive order imposes a requirement that is expressly mandated by

[136] Code of Federal Regulations, title 40, section 122.26(d)(2)(IV)(B)(1).

[137] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section B.2.); see also, Exhibit X (33), National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges; Final Rule, 55 Federal Register 47990 (November 16, 1990), page 48, which states: "However, the Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharges where appropriate."

[138] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 473-476 (Fact Sheet/Technical Report).

federal law.[139] Moreover, this provision it is not new but simply makes the claimants comply with longstanding federal law which prohibits non-stormwater discharges.[140]

Sections C., and F.4.d., and e., and Section II.C. of Attachment E., of the test claim permit require dry weather monitoring and field screening for 18 pollutants specified in the permit, and if a pollutant is shown to exceed the non-stormwater action level (NAL), which is based on existing water quality standards, then the claimants are required to investigate, identify and remove the source of the illicit, non-stormwater discharge. The Commission finds that these sections of the permit do not mandate a new program or higher level of service. Instead, the test claim permit simply identifies action levels for each pollutant consistent with existing water quality standards that, if detected in dry weather monitoring and field screening to be in excess of the action level, triggers the investigation, identification of the discharge, removal, and reporting activities required by existing federal law.[141] The claimants do not violate the permit by exceeding the action level, as implied by the claimants; rather a violation occurs only if a permittee fails to timely implement the required actions following an exceedance of an action level.[142] In this sense, the action levels established in the test claim permit function the same as the prior permit, which required the claimants to identify criteria to determine if significant sources of pollutants were present in dry weather non-stormwater discharges consistent with water quality objectives.[143] Under both permits, the action levels or criteria are intended to determine the presence of an illicit discharge, which then triggers the federal requirements to investigate, identify, and remove the illicit discharge, and report the findings to the Regional Board.

Section D. of the test claim permit establishes Stormwater Action Levels (SALs) for seven pollutants that, if shown to be in excess of the SAL during monitoring, the claimant is required to implement stormwater controls and reduce the discharge to the maximum extent practicable (MEP) to meet water quality standards, and annually evaluate and report that information to the Regional Board. The Commission finds that section D. of the test claim permit does not mandate a new program or higher level of service. The SALs imposed by the test claim permit are simply numbers that reflect the existing water quality standards applicable to the waterbodies in the Basin Plan, the California Toxics Rule (CTR), and the US EPA Water Quality Criteria for the

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[139] *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 71; *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1592; *County of Los Angeles v. Commission on State Mandates* (1995) 32 Cal.App.4th 805, 816; *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 879-880; *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 763; Government Code section 17556(c).

[140] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 877.

[141] Code of Federal Regulations, title 40, sections 122.26(d)(2)(iv)(B), 122.41, 122.48, and Part 27 (reporting).

[142] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 203 (Directive C.3.).

[143] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.4.).

pollutants at issue, and if there is an exceedance of a SAL detected with monitoring, then the claimants have to address those exceedances by implementing or modifying BMPs to the MEP as required by existing federal law.[144] Thus, the Regional Board has imposed an iterative, BMP-based compliance regime, using the SALs as a target, or trigger, but leaving substantial flexibility to the permittees to determine how to comply with long-standing federal requirements to monitor, implement BMPs, and report exceedances to the Regional Board. The SALs themselves do not impose any new mandated activities. Moreover, monitoring and implementing BMPs to ensure that stormwater discharges meet water quality standards for these constituents are not new, but have long been required and thus, these activities do not constitute a new program or higher level of service.[145]

Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5., of the test claim permit requires, in the continuing effort to reduce the discharges of stormwater pollution from the MS4 to the MEP and to prevent those discharges from causing or contributing to a violation of water quality standards, an updated Standard Stormwater Mitigation Plan (SSMP) for review of priority development projects proposed by residential, commercial, industrial, mixed-use, and public project proponents and the implementation of LID site design BMPs at new development and redevelopment projects; the development of a hydromodification plan to manage increases in runoff discharge rates and durations from priority development projects; and the development and implementation of a retrofitting program to reduce the impacts from hydromodification and promote LID BMPs. The Commission finds that:

- All LID, hydromodification, and retrofitting costs required by Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. of the test claim permit and incurred and triggered by a project proponent of a *municipal* priority development project are not mandated by the state and do not impose a new program or higher level of service because such costs are incurred at the discretion of the local agency, are not unique to government, and do not provide a governmental service to the public.[146]
- The remaining new LID, hydromodification, and retrofitting administrative, planning, and regulatory activities required by Sections F.1.d.1., 2., 4., 7., and h., and F.3.d.1.5. are mandated by the state and impose a new program or higher level of service.

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[144] United States Code, title 33, section 1342(a)(2) (Public Law 100-4); Code of Federal Regulations, title 40, sections 122.22, 122.44(d),(i)(1), 122.48.

[145] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.26(d)(2)(iv); Code of Federal Regulations, title 40, section 122.44(i)(1); Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.2.).

[146] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

Section F.1.f. of the test claim permit requires each copermittee, as part of their Jurisdictional Runoff Management Program (JRMP), to develop and maintain a watershed-based database.[147] The database shall track and inventory all approved structural post-construction BMPs and BMP maintenance for existing municipal, industrial, commercial, and residential projects within its jurisdiction since July 2005; conduct inspections of the projects as specified; and verify that approved post-construction BMPs are operating effectively and have been adequately maintained as specified in the permit.[148] The Commission finds that, *except* as applicable to a claimant's own municipal development (which is not mandated by the state)[149], the following activities are newly required by Section F.1.f., of the test claim permit and constitute state-mandated new programs or higher levels of service:

- Develop and maintain a watershed-based database to track and inventory all projects, within its jurisdiction, that have a final approved SSMP with structural post-construction BMPs implemented since July 2005. The database must include information on BMP type; location; watershed; date of construction; the party responsible for maintenance, maintenance verifications, and corrective actions; and whether the site was referred to the local vector control agency.[150]
- Verify that the required structural post-construction BMPs on inventoried *residential* projects have been implemented, are maintained, and are operating effectively every five years. Verification can be made through inspections, self-certifications, surveys, or other equally effective approaches.[151]
- Annually inspect the required structural post-construction BMPs at high priority *residential* projects.[152]

[147] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 21, 57-58 (Test Claim narrative).

[148] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 221-222 (test claim permit, Section F.1.f.).

[149] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

[150] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 221 (test claim permit, Section F.1.f.1.).

[151] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.i.).

[152] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.ii.).

- For all inventoried projects, verifications performed through a means other than direct copermittee inspection, adequate documentation must be submitted to the copermittee to provide assurance that the required maintenance has been completed.[153]
- Inspections of the required structural post-construction BMPs at all inventoried projects must note observations of vector conditions and, where conditions are contributing to mosquito production, the copermittee is required to notify the local vector control agency.[154]

All other activities required by Section F.1.f. are not new and, thus, do not impose a new program or higher level of service.

Sections F.2.d.3. and F.2.e.6.e. of the test claim permit require the claimants to require the implementation of Active/Passive Sediment Treatment (AST)[155] at construction sites that are determined by the copermittee to be an exceptional threat to water quality, and to review site monitoring data, if the site monitors its runoff, as part of construction site inspections.[156] The Commission finds that Section F.2.d.3. imposes a state-mandated new program or higher level of service only when the claimant is acting in its regulatory capacity and is performing the following activity for construction sites other than its own:

- Require implementation of AST for sediment at construction sites other than its own (or portions thereof) that are determined to be an exceptional threat to water quality.[157]

However, with respect to a local agency's own *municipal* construction sites, the requirement to implement AST is not mandated by the state, but is triggered by a local discretionary decision to construct new municipal projects.[158] Moreover, implementing AST at a local agency's own municipal construction site does not impose a new program or higher level of service because such costs are not unique to government and do not provide a governmental service to the public.

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[153] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.v.).

[154] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.vii.).

[155] Active/Passive Sediment Treatment is defined as "[u]sing mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge. Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 283 (test claim permit, Attachment C).

[156] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 59-60. The claimants have not alleged any other activities in section F.2.d., and, thus, only Sections F.2.d.3. and F.2.e.6.e. of the test claim permit are analyzed in this Decision.

[157] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 231 (test claim permit, Section F.2.d.3.).

[158] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

The Commission also finds that Section F.2.e.6.e. of the test claim permit, which requires that inspections of construction sites must include a review of facility monitoring data results if the site monitors its runoff, is not new, and does not impose a new program or higher level of service.

Sections F.1.i., and F.3.a.10. of the test claim permit require erosion and sediment control BMPs after construction of new unpaved roads and during maintenance activities on unpaved roads. Federal law requires permittees to reduce the discharge of pollutants to the MEP[159] and to submit a proposed management program including operating and maintaining public streets, roads, and highways to reduce the impact on receiving waters.[160] The prior permit required the prevention or reduction of pollutants in runoff to the MEP during all phases of construction[161] and from all existing development including roads.[162] Thus, these requirements are not new and, if anything, they simply clarify the existing legal requirement to assess a site's compliance with local ordinances and water quality standards.[163] Accordingly, the Commission finds that Sections F.1.i., and F.3.a.10. are not new requirements imposed or shifted by the state, and do not constitute a new program or higher level of service.

Section F.3.b.4.a.ii. of the test claim permit requires that the inspection of industrial and commercial sites include a review of site monitoring data if the site monitors its runoff. The Commission finds that the requirement imposed by Section F.3.b.4.a.ii. clarifies the existing legal requirement to assess a site's compliance with local ordinances and water quality standards, but is not a new requirement and does not impose a new program or higher level of service. Federal regulations require that large and medium MS4 dischargers demonstrate adequate legal authority, through ordinance, permit, or other means, to prohibit illicit discharges;[164] control pollutants to the MS4 from stormwater discharges associated with industrial activity; carry out inspections, surveillance, and monitoring to ensure compliance with the permit conditions;[165] reduce pollutants from runoff from commercial areas; and perform inspections to implement and enforce ordinances.[166] The prior permit required the permittees to have adequate legal authority to control pollutant discharges into and from the MS4 through ordinance, statute, permit, contract, or other similar means;[167] and inspections of all industrial and commercial facilities that

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[159] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[160] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A)(3).

[161] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 585 (Order R9-2004-0001, Section G.5.a.(8)).

[162] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 587 (Order R9-2004-0001, Section H.1.b.).

[163] *Western Security Bank v. Superior Court* (1997) 15 Cal.4th 232, 243.

[164] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(B).

[165] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(A), (F).

[166] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A), (B).

[167] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 575-576 (Order R9-2004-0001, Section D.1.).

could contribute a significant pollutant load to the MS4.[168] Although the prior permit did not expressly state that reviewing facility monitoring data results, if the site monitors its runoff, was required as part of the inspection, it did expressly require that the inspections of industrial and commercial facilities include "but not be limited to" an assessment of the site's compliance with local ordinances and permits related to stormwater runoff, including the implementation and maintenance of designated minimum BMPs, and visual observations for non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff.[169] The prior permit also required the permittee to carry out all inspections and monitoring, and to enforce local stormwater ordinances on industrial and commercial facilities "as necessary to maintain compliance with this Order," including the permit's receiving water limitations and prohibitions banning any discharge of pollutant and non-stormwater discharges into the MS4 that would cause or contribute to the violation of water quality standards.[170] Thus, these requirements are not new and, if anything, the requirement to review monitoring data results, if the site monitors its runoff, simply clarifies the existing legal requirement to assess a site's compliance with local ordinances and water quality standards. Moreover, there has been no shift of costs from the State to the claimants. The claimants enforce their local permits, plans, and ordinances, and the Water Boards enforce the General Industrial Permit.[171] In addition, the test claim permit states that if the Regional Board has conducted an inspection of an industrial site during a particular year, the requirement for the responsible claimant to inspect this facility during the same year is deemed satisfied.[172]

Section G.1.-5. of the test claim permit requires the copermittees in a watershed management area to develop a workplan to assess and prioritize the water quality problems within the watershed's receiving waters, identify sources of the highest priority water quality problems, develop a watershed-wide BMP implementation strategy to abate the highest priority water quality problems, and a monitoring strategy to evaluate BMP effectiveness and changing water quality prioritization in the watershed management area.[173] The requirement for a watershed workplan is not new. Under the prior permit, the claimants were required to collaborate with other watershed permittees to develop and implement a watershed stormwater management plan

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[168] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-590 (Order R9-2004-0001, Section H.2.a.b.).

[169] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-591 (Order R9-2004-0001, Section H.2.a., b., d.).

[170] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 574-575, 592 (Order R9-2004-0001, Prohibitions and Receiving Water Limitations; Industrial/Commercial Inspections, Section H.2.e.).

[171] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 441 (Fact Sheet/Technical Report, Finding D.3.a.).

[172] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 244 (test claim permit, Section F.3.b.4.(e)).

[173] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 255-257 (test claim permit, Sections G.1.-G.5.).

(watershed SWMP).[174] However, Sections G.1.d, G.3., G.4., and G.5. of the test claim permit mandate a new program or higher level of service for the following new activities:

- The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs.[175]
- The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4.[176]
- The watershed workplan must include the identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan.[177]
- The annual watershed review meetings shall be open to the public and adequately noticed.[178]
- Each permittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan.[179]

Section K.3.a.-c. of the test claim permit requires that each claimant prepare an individual JRMP annual report that covers implementation of its jurisdictional activities during the past annual reporting period, and specifies the contents of the annual report, which claimants contend includes a new reporting requirements that constitute a reimbursable state-mandated program.[180] The Commission finds that sections K.3.a. and b. do not impose any new activities. Sections K.3.c.1., 2., 3., and 4. impose some new requirements to include new information in the annual report, an annual reporting checklist, and new information identified in Table 5, and except for reporting on the claimant's own municipal projects (which is not mandated by the state)[181], the

[174] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Sections K.1., 2.).

[175] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 255 (test claim permit, Section G.1.d.).

[176] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.3.).

[177] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.4.).

[178] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[179] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[180] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262-267 (test claim permit, section K.3.).

[181] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v.*

new requirements are mandated by the state and impose a new program or higher level of service.

Section II.E.2.-5. of Attachment E, which is part of the Monitoring and Reporting Program (MRP), requires the claimants to perform the following special studies: Sediment Toxicity Study; Trash and Litter Investigation; Agricultural, Federal and Tribal Input Study; and MS4 Receiving Water and Maintenance Study.[182] The Commission finds that that Attachment E, Sections II.E.2.-5. mandate a new program or higher level of service within the meaning of article XIII B, section 6 of the California Constitution.

Finally, the claimants plead particular language that appears in Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the test claim permit, which address development, construction, municipal facilities, industrial/commercial facilities, residential areas, retrofitting and education, and contain language that provides that each updated JRMP and the components of the program "must . . . effectively prohibit non-storm water discharges, and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards."[183] The claimants contend that the language imposes new requirements to develop and implement the components in Section F. "in a manner that guarantees that those programs will prevent the discharge of pollutants at a level that could cause or contribute to a violation of any water quality standard as well as to prevent illicit discharges to the MS4," and that such requirements go beyond the MEP standard of federal law and constitute a new or higher level of service.[184] The claimants further allege that the requirements now subject them to sanctions, including civil penalties and injunctive relief, for the failure to achieve water quality standards.[185] The Commission finds that the language at issue in Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the test claim permit does not impose any new requirements and, therefore, does not mandate a new program or higher level of service. Federal law has long required the claimants "to implement and enforce an ordinance, orders or similar means *to prevent illicit discharges to the municipal separate storm sewer system*"[186] and to "effectively *prohibit non-stormwater*

Commission on State Mandates (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*); *Coast Community College Dist. v. Commission on State Mandates* (2022) (2022) 13 Cal.5th 800, 815-817.

[182] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 75-81, 297-324 (Test Claim narrative; Attachment E.) The claimants did not plead the other special studies addressed in Attachment E, sections II.E.7. and 8. and, thus, this Decision does not address those studies.

[183] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 208 (test claim permit, Section F.).

[184] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 83 (Test Claim narrative).

[185] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 81 (Test Claim narrative).

[186] United States Code, title 33, section 1342(p)(3)(B)(ii), emphasis added.

discharges into the storm sewers."[187] Both of these limitations address discharges coming *into* the MS4. The claimants assert that the verb "prevent" is more stringent that "prohibit." However, this is not the case. Black's Law Dictionary defines prohibit as: "To prevent, preclude, or severely hinder."[188] Merriam-Webster Dictionary defines prohibit as, "to prevent from doing something."[189] Thus, prevention is part of, and not more stringent than, prohibition. Moreover, the requirement to prohibit non-storm water discharges *through and from* their MS4 systems, implement a program to prevent illicit discharges, and monitor to identify illicit discharges and exempted discharges that are a source of pollution, has been in the claimants' permits for the last 20 years.[190] Federal law requires that NPDES permits include conditions to achieve water quality standards and objectives.[191] And receiving water limitations and prohibition of discharges into and from MS4s in a manner causing a condition of pollution, causing exceedances of water quality objectives, or causing a violation of water quality standards, have been in all permits since 1999 when the State Board issued precedential order 99-05.[192] Thus, the requirement to prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards is not new.

In order to be reimbursable, the new mandated activities must result in increased costs mandated by the state, forcing local government to incur "increased actual expenditures of limited tax proceeds that are counted against the local government's spending limit."[193] In addition, a finding of costs mandated by the state means that none of the exceptions in Government Code section 17556 apply to deny the claim. Government Code section 17556(d) states that the Commission shall not find costs mandated by the state when "[t]he local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service."

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[187] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1) (71 FR 33639, June 12, 2006), emphasis added.

[188] Exhibit X (1), Black's Law Dictionary (11th ed. 2019), prohibit.

[189] Exhibit X (32), Merriam-Webster Dictionary, prohibit, https://www.merriam-webster.com/dictionary/prohibit?utm_campaign=sd&utm_medium=serp&utm_source=jsonld (accessed on April 4, 2022).

[190] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 413 (Fact Sheet/Technical Report).

[191] United States Code, title 33, section 1311(b)(1)(C); United States Code, title 33, section 1342(o)(3) (Public Law 100-4); Code of Federal Regulations, title 40, sections 122.41(d), 122.44(d)(1).

[192] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572-573, (Order R9-2004-0001, Section A.1.-3.); Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, State Water Board Order WQ 2015-0075, pages 221-222.

[193] California Constitution, article XIII B, section 6; Government Code sections 17514, 17561(a); *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264, 1283; *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176, 1185, emphasis added.

The Commission finds that:

a. The new state-mandated activities do not result in costs mandated by the state for Riverside County Flood and Water Conservation District because there is no evidence in the record that the District was forced to spend its "proceeds of taxes," but instead used assessment revenue and contract funds from the County and cities.[194]

b. The County and cities have regulatory fee authority sufficient as a matter of law to fund the new state-mandated activities required related to LID (Section F.1.d.1., 2., 4., 7.), Hydromodification (Section F.1.h.), Retrofitting (Section F.3.d.1-5.), BMP Maintenance Tracking (Section F.1.f.), Active/Passive Sediment Treatment (Section F.2.d.3.), Annual JRMP Reporting Checklist on Construction, New Development, Post Construction Development, Municipal (other than their own)/Commercial/Industrial (Section K.3.c.3.), and the Annual JRMP Reporting Requirements listed in Table 5 on New Development, Construction, Municipal (other than their own), Commercial/Industrial, Residential, and Retrofitting Existing Development (Section K.3.c.4.), pursuant to Government Code section 17556(d) and, thus, there are no costs mandated by the state for these activities.

c. The County and cities have constitutional and statutory authority to charge property-related fees for the new state-mandated requirements related to the Watershed Workplan (Sections G.1.-5.); the Annual JRMP Reporting requirements to include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items (Section K.3.c.1.), and provide in the annual report an updated timeframe for attainment of a desired outcome level when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe (Section K.3.c.2.); the Annual JRMP Reporting Checklist on Illicit Discharges and Connections and MS4 Maintenance (Section K.3.c.3.); the Annual JRMP Reporting Requirements listed in Table 5 on Illicit Discharge Detection and Elimination and Updated Workplans (Section K.3.c.4.); and Special Studies (Section II.E.2.-5. of Attachment E.). Based on *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351, and consistent with the prior Decision of the Commission in *Discharge of Stormwater Runoff- Order No. R9-2007-0001*, 07-TC-09, which was recently upheld by the Third District Court of Appeal in *Department of*

[194] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 102-103 (Declaration of Stuart McKibbin, Chief of the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District, dated April 27, 2017) and pages 104-105, paragraph 5 (Declaration of David Garcia, Project Manager within the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District dated April 27, 2017); Exhibit X (37), Santa Margarita River Region, Report of Waste Discharge (ROWD), January 15, 2009, pages 1, 16; Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 13; Exhibit X (24), Excerpt from Riverside County Flood Control and Water Conservation District's Annual Budget, Fiscal Year 2011-2012, pages 5, 6; Exhibit X (25), Excerpt from Riverside County Flood Control and Water Conservation District's Comprehensive Annual Financial Report for Year Ending June 30, 2015, pages 7, 9, 18.

Finance v. Commission on State Mandates,[195] these fees are subject to the voter approval requirement in article XIII D, section 6(c) from November 10, 2010, the beginning date of the potential period of reimbursement, to December 31, 2017, and, thus, the fee authority is not sufficient as a matter of law during this time period to fund the costs of the mandated activities. Under these limited circumstances, Government Code section 17556(d) does not apply, and there are costs mandated by the state. Any fee revenues received must be identified as offsetting revenue. In addition, reimbursement for this mandate from any source, including but not limited to, service fees collected, federal funds, other state funds, and other funds that are not the claimant's proceeds of taxes shall be identified and deducted from this claim.

Based on *Paradise Irrigation District* case and the Legislature's enactment of Government Code sections 57350 and 57351 (which overturned *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351), there are no costs mandated by the state on or after January 1, 2018, to comply with these activities, because claimants have constitutional and statutory authority to charge property-related fees for these costs subject only to the voter protest provisions of article XIII D, which is sufficient as a matter of law to cover the costs of the mandated activities within the meaning of Government Code section 17556(d).

Accordingly, the Commission denies this Test Claim with respect to the Riverside County Flood and Water Conservation District.

The Commission partially approves this Test Claim for the County of city copermitees only, and finds that the following activities impose a reimbursable state-mandated program from November 10, 2010, the beginning date of the potential period of reimbursement, to December 31, 2017:

A. Watershed Workplan

1. The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs. (Section G.1.d.)
2. The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4. (Section G.3.)
3. The watershed workplan must include the identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan. (Section G.4.)
4. The annual watershed review meetings shall be open to the public and adequately noticed. (Section G.5.)

[195] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 579-581 (review denied March 1, 2023).

5. Each permittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan. (Section G.5.)

B. Annual JRMP Report

1. Include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items. (Section K.3.c.1.)
2. Provide in the annual report an updated timeframe for attainment of a desired outcome level in the annual report when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe, but the review of the existing activities and BMPs are adequate, or that the projected timeframe should be extended. (Section K.3.c.2.)
3. Providing the following information in the Reporting Checklist: Illicit Discharges and Connections (Number of IC/ID Eliminations and Violations), and MS4 Maintenance (Total Miles of MS4 Inspected). (Section K.3.c.3.)
4. Providing the following information the Annual JRMP Reporting Requirements listed in Table 5: Illicit Discharge Detection and Elimination (A description of instances when field screening and analytical data exceeded action levels, including those instances for which no investigation was conducted), and Updated Workplans including priorities, strategy, implementation schedule, and effectiveness evaluation. (Section K.3.c.4.)

C. Special Studies

1. Conduct the four Special Studies required by Section II.E.2.-5. of Attachment E.

All other activities and sections of the test claim permit pled by the claimants and costs claimed are denied.

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COMMISSION FINDINGS

I. Chronology

11/10/2010	The California Regional Water Quality Control Board, San Diego Region (Regional Board) issued the test claim permit, Order No. R9-2010-0016.
11/10/2011	The claimants filed the joint Test Claim.[196]
12/02/2011	The claimants filed supplemental declarations to the Test Claim.
01/13/2012-01/17/2013	The Water Boards requested five extensions of time to file comments, which were granted for good cause.
03/20/2013	The claimants requested the Test Claim be put on inactive status due to pending litigation, which was approved on March 22, 2013.
03/08/2017	Commission staff issued Notice of Incomplete Joint Test Claim Filing.
03/16/2017	The claimants requested an extension to respond to the Notice of Incomplete Joint Test Claim Filing, which was approved for good cause.
04/28/2017	The claimants filed their response to the Notice of Incomplete Joint Test Claim Filing.

[196] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017.

05/08/2017	Commission staff issued Notice of Complete Joint Test Claim Filing, Removal From Inactive Status, Schedule for Comments, Renaming of Matter, Request for Administrative Record, and Notice of Tentative Hearing Date.
05/22/2017-08/16/2017	The Water Boards requested three extensions of time to file comments on the Test Claim, which were approved for good cause.
09/20/2017	The Department of Finance (Finance) filed comments on the Test Claim.[197]
09/22/2017	The Water Boards filed comments on the Test Claim and filed the Administrative Record on Order R9-2010-0016.[198]
10/03/2017-11/20/2017	The claimants requested two extensions of time to file rebuttal comments, which were approved for good cause.
12/14/2017	The claimants filed rebuttal comments.[199]
03/13/2023	Commission staff issued the Draft Proposed Decision.[200]

II. Background

A. History of the Federal Regulation of Municipal Stormwater

The law commonly known today as the Clean Water Act (CWA) is the result of major amendments to the Federal Water Pollution Control Act enacted in 1977. The history that follows details the evolution of the federal law and implementing regulations which are applicable to the case at hand. The bottom line is that CWA's stated goal is to *eliminate* the discharge of pollutants into the nation's waters by 1985.[201] "*This goal is to be achieved through the enforcement of the strict timetables and technology-based effluent limitations established by the Act.*"[202] The CWA utilizes a permit program that was established in 1972, the National Pollutant Discharge Elimination System (NPDES), as the primary means of enforcing the Act's effluent limitations. As will be made apparent by the following history, the goal of eliminating the discharge of pollutants into the nation's waters was still far from being achieved as of 2010, when the test claim permit was issued, and the enforcement, rather than being strict, has taken an iterative approach, at least with respect to municipal stormwater dischargers.

Regulation of water pollution in the United States finds its beginnings in the Rivers and Harbors Appropriation Act of 1899, which made it unlawful to throw or discharge "any refuse matter of any kind or description…into any navigable water of the United States, or into any tributary of

[197] Exhibit B, Finance's Comments on the Test Claim, filed September 20, 2017.

[198] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017.

[199] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017.

[200] Exhibit E, Draft Proposed Decision, issued March 13, 2023.

[201] United States Code, title 33, section 1251(a)(1).

[202] *Natural Res. Def. Council v. Costle* (D.C.Cir. 1977) 568 F.2d 1369, 1371, emphasis added.

any navigable water."[203] This prohibition survives in the current United States Code today, qualified by more recent provisions of law that authorize the issuance of discharge permits with specified restrictions to ensure that such discharges will not degrade water quality or cause or contribute to the violation of any water quality standards set for the water body by the United States Environmental Protection Agency (US EPA) or by states on behalf of US EPA.[204]

In 1948, the federal Water Pollution Control Act "adopted principles of State-Federal cooperative program development, limited federal enforcement authority, and limited federal financial assistance."[205] Pursuant to further amendments to the Act made in 1965, "States were directed to develop water quality standards establishing water quality goals for interstate waters." However, the purely water quality-based approach "lacked enforceable Federal mandates and standards, and a strong impetus to implement plans for water quality improvement. The result was an incomplete program that in Congress' view needed strengthening."[206]

Up until 1972, many states had "water quality standards" that attempted to limit pollutant concentrations in their lakes, rivers, streams, wetlands, and coastal waters. Yet the lack of efficient and effective monitoring and assessment tools and the sheer difficulty in identifying pollutant sources resulted in a cumbersome, slow, ineffective system that was unable to reverse growing pollution levels in the nation's waters. In 1972, after earlier state and federal laws failed to sufficiently improve water quality, and rivers that were literally on fire provoked public outcry, the Congress passed the Federal Water Pollution Control Act Amendments, restructuring the authority for water pollution control to regulate individual point source dischargers and generally prohibit the discharge of any pollutant to navigable waters from a point source unless the discharge was authorized by a NPDES permit. The 1972 amendments also consolidated authority in the Administrator of US EPA.

In 1973, US EPA adopted regulations to implement the Act which provided exclusions for several types of discharges including "uncontrolled discharges composed entirely of storm runoff when these discharges are uncontaminated by any industrial or commercial activity" and have not been identified "as a significant contributor of pollution."[207] This particular exclusion applied only to municipal separate storm sewer systems (MS4s). As a result, as point source pollutant loads were addressed effectively by hundreds of new treatment plants, the problem with polluted runoff (i.e., both nonpoint source pollution and stormwater discharges) became more evident.

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[203] United States Code, title 33, section 401 (Mar. 3, 1899, c. 425, § 13, 30 Stat. 1152).

[204] See United States Code, title 33, sections 1311-1342 (CWA 301(a) and 402); Code of Federal Regulations, title 40, section 131.12.

[205] Exhibit X (10), EPA, Advanced Notice of Proposed Rule Making, (Federal Register / Vol. 63, No. 129 / July 7, 1998 / Proposed Rules), https://www.gpo.gov/fdsys/pkg/FR-1998-07-07/pdf/98-17513.pdf (accessed on September 12, 2022), page 4.

[206] Exhibit X (10), EPA, Advanced Notice of Proposed Rule Making, (Federal Register / Vol. 63, No. 129 / July 7, 1998 / Proposed Rules), https://www.gpo.gov/fdsys/pkg/FR-1998-07-07/pdf/98-17513.pdf (accessed on September 12, 2022), page 4.

[207] Code of Federal Regulations, title 40, sections 124.5 and 124.11 (30 FR 18003, July 5, 1973).

However, in 1977 the Court in *Natural Resources Defense Council v. Costle* held that the US EPA had no authority to exempt point source discharges, including stormwater discharges from MS4s, from the requirements of the Act and that to do so contravened the Legislature's intent.[208] The Act prohibits "the discharge of any pollutant by any person" without an NPDES permit.[209] The term "discharge of a pollutant" means "any addition of any pollutant to navigable waters from *any* point source."[210] A "point source" is any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.[211] Thus, when an MS4 discharges stormwater contaminated with pollutants from a pipe, ditch, channel, gutter or other conveyance, it is a point source discharger subject to the requirements of the CWA to obtain and comply with an NPDES permit or else be found in violation of the CWA.

Stormwater runoff "…is generated from rain and snowmelt events that flow over land or impervious surfaces, such as paved streets, parking lots, and building rooftops, and does not soak into the ground."[212] Polluted stormwater runoff is commonly transported through MS4s, and then often discharged, untreated, into local water bodies.[213] As the Ninth Circuit Court of Appeal has stated:

> Storm water runoff is one of the most significant sources of water pollution in the nation, at times "comparable to, if not greater than, contamination from industrial and sewage sources." [Citation omitted.] Storm sewer waters carry suspended metals, sediments, algae-promoting nutrients (nitrogen and phosphorus), floatable trash, used motor oil, raw sewage, pesticides, and other toxic contaminants into streams, rivers, lakes, and estuaries across the United States. [Citation omitted.] In 1985, three-quarters of the States cited urban storm water runoff as a major cause of waterbody impairment, and forty percent reported construction site runoff as a major cause of impairment. Urban runoff has been named as the foremost cause of impairment of surveyed ocean waters. Among the sources of storm water

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[208] *Natural Res. Def. Council v. Costle* (D.C.Cir. 1977) 568 F.2d 1369, 1379 (holding unlawful EPA's exemption of stormwater discharges from NPDES permitting requirements).

[209] United States Code, title 33, section 1311(a).

[210] United States Code, title 33, section 1362(12)(A), emphasis added.

[211] United States Code, title 33, section 1362(14).

[212] See United States Code, title 33, section 122.26(b)(13) and Exhibit X (15), EPA, National Pollutant Discharge Elimination System (NPDES) Stormwater Program, Problems with Stormwater Pollution, https://www.epa.gov/npdes/npdes-stormwater-program (accessed on September 13, 2022).

[213] Exhibit X (19), EPA, NPDES Stormwater Program, Stormwater Discharges from Municipal Sources, https://www.epa.gov/npdes/stormwater-discharges-municipal-sources (accessed on September 13, 2022).

contamination are urban development, industrial facilities, construction sites, and illicit discharges and connections to storm sewer systems.[214]

Major amendments to the Federal Water Pollution Control Act were enacted in the federal Clean Water Act of 1977, and the federal act is now commonly referred to as the Clean Water Act (CWA). CWA's stated goal is to eliminate the discharge of pollutants into the nation's waters by 1985.[215] "This goal is to be achieved through the enforcement of the strict timetables and technology-based effluent limitations established by the Act."[216]

MS4s are thus established point sources subject to the CWA's NPDES permitting requirements.[217]

In 1987, to better regulate pollution conveyed by stormwater runoff, Congress enacted CWA section 402(p), codified at United States Code, title 33, section 1342(p), "Municipal and Industrial Stormwater Discharges." Sections 1342(p)(2) and (3) require NPDES permits for stormwater discharges "associated with industrial activity," discharges from large and medium-sized municipal storm sewer systems, and certain other discharges. Section 402(p)(4) sets out a timetable for promulgation of the first of a two-phase overall program of stormwater regulation with the first permits to issue by not later than 1991 or 1993, depending on the size of the population served by the MS4.[218]

Generally, NPDES permits issued under the CWA must "contain limits on what you can discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health."[219] A NPDES permit specifies "an acceptable level of a pollutant or pollutant parameter in a discharge." [220]

With regard to MS4s specifically, the 1987 amendments require control technologies that reduce pollutant discharges to the maximum extent practicable (MEP), including best management

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[214] *Environmental Defense Center, Inc. v. EPA* (9th Cir. 2003) 344 F.3d 832, 840-841 (citing *Natural Res. Def. Council v. U.S. EPA* (9th Cir. 1992) 966 F.2d 1292, 1295, and Regulation for Revision of the Water Pollution Control Program Addressing Storm Water (64 Fed.Reg. 68722, 68724, 68727 (December 8, 1999) codified at Code of Federal Regulations, title 40, parts 9, 122, 123, 124)).

[215] United States Code, title 33, section 1251(a)(1).

[216] *Natural Res. Def. Council v. Costle* (D.C.Cir. 1977) 568 F.2d 1369, 1371.

[217] *Natural Res. Def. Council v. Costle* (D.C.Cir. 1977) 568 F.2d 1369, 1379 (holding unlawful EPA's exemption of stormwater discharges from NPDES permitting requirements); *Natural Res. Def. Council v. U.S. EPA* (9th Cir. 1992) 966 F.2d 1292, 1295-1298.

[218] United States Code, title 33, section 1342(p)(2)-(4); *Natural Res. Def. Council v. U.S. EPA* (9th Cir. 1992) 966 F.2d 1292, 1296.

[219] Exhibit X (18), EPA, NPDES Permit Basics, https://www.epa.gov/npdes/npdes-permit-basics (accessed on September 13, 2022).

[220] Exhibit X (18), EPA, NPDES Permit Basics, https://www.epa.gov/npdes/npdes-permit-basics (accessed on September 13, 2022).

practices (BMPs), control techniques and system design and engineering methods, and such other provisions as the Administrator[221] deems appropriate for the control of such pollutants.[222] A statutory anti-backsliding requirement was also added to preserve present pollution control levels achieved by dischargers by prohibiting the adoption of less stringent effluent limitations[223] than those already contained in their discharge permits, except in certain narrowly defined circumstances.[224]

The United States Supreme Court has observed the cooperative nature of water quality regulation under the CWA as follows:

> The Clean Water Act anticipates a partnership between the States and the Federal Government, animated by a shared objective: "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a).) Toward this end, the Act provides for two sets of water quality measures. "Effluent limitations" are promulgated by the EPA and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources. (See §§ 1311, 1314.) "[W]ater quality standards" are, in general, promulgated by the States and establish the desired condition of a waterway. (See § 1313.) These standards supplement effluent limitations "so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels." (*EPA v. California ex rel. State Water Resources Control Bd.,* 426 U.S. 200, 205, n. 12, 96 S.Ct. 2022, 2025, n. 12, 48 L.Ed.2d 578 (1976).)[225]

The CWA thus employs two primary mechanisms for controlling water pollution: identification and standard-setting for bodies of water (i.e. 303(d) listings of impaired water bodies and the setting of water quality standards), and identification and regulation of dischargers (i.e. the inclusion of effluent limitations consistent with water quality standards in NPDES permits).

In 1990, pursuant to CWA section 1342, US EPA issued the "Phase I Rule" regulating large and medium MS4s. The Phase I Rule and later amendments thereto, in addition to generally applicable provisions of the CWA and its implementing regulations and other state and federal

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[221] Defined in United States Code, title 33, section 1251(d) (section 101(d) of the CWA) as the Administrator of the U. S. Environmental Protection Agency.

[222] United States Code, title 33, section 1342(p)(3). This is in contrast to the "best available technology" standard that applies to the treatment of industrial discharges (see United States Code, title 33, section 1311(b)(2)(A)).

[223] The Senate and Conference Reports from the 99th Congress state that these additions were intended to "clarify the Clean Water Act's prohibition of backsliding on effluent limitations." See H.R. Conf. Rep. No. 99-1004 (1986), emphasis added; see also S. Rep. No. 99-50, 45 (1985).

[224] United States Code, title 33, section 1342(o); see Joint Explanatory Statement of the Committee of Conference, H.R. Conf. Rep. No. 99-1004, 153 (1986).

[225] *Arkansas v. Oklahoma* (1992) 503 U.S. 91, 101-102.

environmental laws, apply to the permit at issue in this Test Claim.

B. Key Definitions

1. Water Quality Standards

A "water quality standard" defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria that protect the designated uses.[226] The term "water quality standard applicable to such waters" and "applicable water quality standards" refer to those water quality standards established under section 303 of the CWA, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements which may be adopted by the federal or state government and may be found in a variety of places including but not limited to Code of Federal Regulations, title 40, sections 131.36, 131.38, and California state adopted water quality control plans and basin plans.[227] A TMDL is a regulatory term in the CWA, describing a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards. Federal law requires the states to adopt an anti-degradation policy which at minimum protects existing uses and requires that existing high quality waters be maintained to the maximum extent possible unless certain findings are made.[228]

The water quality criteria can be expressed in narrative form, which are broad statements of desirable water quality goals, or in a numeric form, which identifies specific pollutant concentrations.[229] When water quality criteria are met, water quality will generally protect the designated use.[230] Federal regulations state the purpose of a water quality standard as follows:

> A water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria that protect the designated uses. States adopt water quality standards to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (the Act). "Serve the purposes of the Act" (as defined in sections 101(a)(2) and 303(c) of the Act) means that water quality standards should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value of public water supplies, propagation of fish, shellfish, and wildlife, recreation in and on the water, and agricultural, industrial, and other purposes including navigation.[231]

With respect to standard-setting for bodies of water, section 1313(a) of the United States Code provides that existing water quality standards may remain in effect unless the standards are not

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[226] Code of Federal Regulations, title 40, part 131.2.

[227] Code of Federal Regulations, title 40, part 130.7(b)(3).

[228] Code of Federal Regulations, title 40, part 131.12.

[229] *City of Arcadia v. State Water Resources Control Board* (2006) 135 Cal.App.4th 1392, 1403.

[230] Code of Federal Regulations, title 40, section 131.3(b).

[231] Code of Federal Regulations, title 40, section 131.2.

consistent with the CWA, and that the Administrator "shall promptly prepare and publish" water quality standards for any waters for which a state fails to submit water quality standards, or for which the standards are not consistent with the CWA.[232] In addition, states are required to hold public hearings from time to time but "at least once each three year period" for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards:

> Whenever the State revises or adopts a new standard, such revised or new standard shall be submitted to the [US EPA] Administrator. Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.[233]

In general, if a body of water is identified as impaired under section 303(d) of the CWA, it is necessarily exceeding one or more of the relevant water quality standards.[234]

2. Total Maximum Daily Loads (TMDLs).

Section 303(d) of the CWA, codified at United States Code, title 33, section 1313(d), requires that each state "identify those waters within its boundaries for which the effluent limitations…are not stringent enough to implement any water quality standard applicable to such waters." The identification of waters not meeting water quality standards is called an "impairment" finding, and the priority ranking is known as the "303(d) list."[235] The state is required by the Act to "establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters."[236]

After the waters are ranked, federal law requires that "TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical WQS [water quality standards] with seasonal variations and a margin of safety which takes into account any lack of

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[232] United States Code, title 33, section 1313(a). Note that section 1313 was last amended by 114 Stat. 870, effective Oct. 10, 2000.

[233] United States Code, title 33, section 1313(c)(2)(A), effective October 10, 2000.

[234] See United States Code, title 33, section 1313(d)(1)(A) (codifying CWA § 303(d) and stating: "Each State shall identify [as impaired] those waters within its boundaries for which the effluent limitations … are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.").

[235] Code of Federal Regulations, title 40, part 130.7(d)(1); see also *San Francisco Baykeeper, Inc. v. Browner* (N.D. Cal 2001) 147 F.Supp.2d 991, 995.

[236] United States Code, title 33, section 1313(d)(1)(A).

knowledge concerning the relationship between effluent limitations and water quality. Determinations of TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters."[237] A TMDL is defined as the sum of the amount of a pollutant allocated to *all point sources* (*i.e.*, the sum of all waste load allocations, or WLAs), plus the amount of a pollutant allocated for nonpoint sources and natural background. A TMDL is essentially a plan setting forth the amount of a pollutant allowable that will attain the water quality standard necessary for beneficial uses.[238]

303(d) lists and TMDLs are required to be submitted to the Administrator "not later than one hundred and eighty days after the date of publication of the first identification of pollutants under section 1314(a)(2)(D) [of the CWA]" and thereafter "from time to time," and the Administrator "shall either approve or disapprove such identification and load not later than thirty days after the date of submission."[239] A complete failure by a state to submit a TMDL for a pollutant received by waters designated as "water quality limited segments" pursuant to the CWA, will be construed as a constructive submission of no TMDL, triggering a nondiscretionary duty of the federal EPA to establish a TMDL for the state.[240] If the Administrator disapproves the 303(d) list or a TMDL, the Administrator "shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement [water quality standards]."[241] Finally, the identification of waters and setting of standards and TMDLs is required as a part of a state's "continuing planning process approved [by the Administrator] which is consistent with this chapter."[242]

If a TMDL has been established for a body of water identified as impaired under section 303(d), an NPDES permit must contain limitations that "must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any [s]tate water quality standard, including [s]tate narrative criteria for water quality."[243] And, for new sources or discharges, the limitations must ensure that the source or discharge will not cause or contribute to the violation of water quality standards and will not violate the TMDL.[244]

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[237] Code of Federal Regulations, title 40, part 130.7(c)(1).

[238] Code of Federal Regulations, title 40, part 130.2.

[239] United States Code, title 33, section 1313(d)(2); see also *San Francisco Baykeeper, Inc. v. Browner* (N.D. Cal. 2001) 147 F.Supp.2d 991, 995.

[240] United States Code, title 33, section 1313(d)(1)(A), (C), (d)(2); see also *San Francisco Baykeeper, Inc. v. Browner* (9th Circuit, 2002) 297 F.3d 877.

[241] United States Code, title 33, section 1313(d)(2).

[242] United States Code, title 33, section 1313(d-e).

[243] Code of Federal Regulations, title 40, section 122.44(d)(1)(i), emphasis added.

[244] Code of Federal Regulations, title 40, section 122.4(i). See also Code of Federal Regulations, title 40, section 130.2(i); *Friends of Pinto Creek v. EPA* (9th Cir. 2007) 504 F.3d 1007, 1011 ("A

3. Municipal Separate Storm Sewer System (MS4)

A "Municipal Separate Storm Sewer System" (or MS4) refers to a collection of structures designed to gather stormwater and discharge it into local streams and rivers. A storm sewer contains untreated water, so the water that enters a storm drain and then into a storm sewer enters rivers, creeks, or the ocean at the other end is the same water that entered the system.

4. Best Management Practices (BMPs)

The acronym "BMP" is short for Best Management Practice. In the context of water quality, BMPs are methods, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and non-point source discharges including stormwater. BMPs include but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during, and after pollution-producing activities.

C. Specific Federal Legal Provisions Relating to Stormwater Pollution Prevention

1. Federal Anti-degradation Policy

When a TMDL has not been established, however, a permit may be issued provided that the new source does not degrade water quality in violation of the applicable anti-degradation policy. Any increase in loading of a pollutant to a waterbody that is impaired because of that pollutant would degrade water quality in violation of the applicable anti-degradation policy. Federal law, Code of Federal Regulations, title 40, section 131.12(a)(1), requires the state to adopt and implement an anti-degradation policy that will "maintain the level of water quality necessary to protect existing (in stream water) uses."

NPDES permits must include conditions to achieve water quality standards and objectives and generally may not allow dischargers to backslide.[245]

2. Requirement to Effectively Prohibit Non-Stormwater Discharges

CWA section 402(p)(3)(B)(ii) requires that permits for MS4s "shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers."

TMDL specifies the maximum amount of a particular pollutant that can be discharged or loaded into the waters from all combined sources, so as to comply with the water quality standards.").

[245] United States Code, title 33, section 1311(b)(1)(C), which states, "in order to carry out the objective of this chapter there shall be achieved . . . any more stringent limitation, including those necessary to meet water quality standards"; section 1342(o)(3), which states, "In no event may such a permit to discharge into waters be renewed, reissued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 1313 of this title applicable to such waters"; and Code of Federal Regulations, title 40, section 122.44(d)(1), which states that NPDES permits must include "any requirements in addition to or more stringent than promulgated effluent limitations guidelines . . . necessary to . . . [a]chieve water quality standards established under section 303 of the CWA."

3. Standard Setting for Dischargers of Pollutants: NPDES Permits

Section 1342 of the CWA provides for the NPDES program, the final piece of the regulatory framework under which discharges of pollutants are regulated and permitted, and applies whether or not a TMDL has been established. Section 1342 states that "the Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 1311(a) of this title."[246] Section 1342 further provides that states may submit a plan to administer the NPDES permit program, and that upon review of the state's submitted program "[t]he Administrator shall authorize a State, which he determines has the capability of administering a permit program which will carry out the objective of this chapter to issue permits for discharges into the navigable waters within the jurisdiction of such State."[247]

Whether issued by the Administrator or by a state permitting program, all NPDES permits must ensure compliance with the requirements of sections 1311, 1312, 1316, 1317, and 1343 of the Act; must be for fixed terms not exceeding five years; can be terminated or modified for cause, including violation of any condition of the permit; and must control the disposal of pollutants into wells.[248] In addition, NPDES permits are generally prohibited, with some exceptions, from containing effluent limitations that are "less stringent than the comparable effluent limitations in the previous permit."[249] An NPDES permit for a point source discharging into an impaired water body must be consistent with the WLAs made in a TMDL, if a TMDL is approved and is applicable to the water body.[250]

4. The Federal Toxics Rules (40 CFR 131.36 and 131.38)

In 1987, Congress amended CWA section 303(c)(2) by adding subparagraph (B) which requires that a state, whenever reviewing, revising, or adopting new water quality standards, must adopt numeric criteria for all toxic pollutants listed pursuant to section 307(a)(1) for which criteria have been published under section 304(a). Section 303(c)(4) of the CWA authorizes the U.S. EPA Administrator to promulgate standards where necessary to meet the requirements of the Act. The federal criteria below are legally applicable in the State of California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA.

5. National Toxics Rule (NTR)

For the 14 states that did not timely adopt numeric criteria as required, U.S. EPA promulgated the National Toxics Rule (NTR) on December 22, 1992 (57 FR 60848). About 40 criteria in the NTR apply in California.

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[246] United States Code, title 33, section 1342(a)(1).

[247] United States Code, title 33, section 1342(a)(5); (b).

[248] United States Code, title 33, section 1342(b)(1).

[249] United States Code, title 33, section 1342(o).

[250] Code of Federal Regulations, title 40, section 122.44(d).

6. The California Toxics Rule (CTR)

The "California Toxics Rule" is also a federal regulation, notwithstanding its somewhat confusing name. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California to supplement the previously adopted NTR criteria that applied in the State. U.S. EPA amended the CTR on February 13, 2001. U.S. EPA promulgated this rule to fill a gap in California water quality standards that was created in 1994 when a state court overturned the state's water quality control plans which contained water quality criteria for priority toxic pollutants, leaving the state without numeric water quality criteria for many priority toxic pollutants as required by the CWA.

California had not adopted numeric water quality criteria for toxic pollutants as required by CWA section 303(c)(2)(B), which was added to the CWA by Congress in 1987 and was the only state in the nation for which CWA section 303(c)(2)(B) had remained substantially unimplemented after the US EPA's promulgation of the NTR in December of 1992.[251] The Administrator determined that this rule was a necessary and important component for the implementation of CWA section 303(c)(2)(B) in California.

In adopting the CTR, U.S. EPA states:

> EPA is promulgating this rule based on the Administrator's determination that numeric criteria are necessary in the State of California to protect human health and the environment. The Clean Water Act requires States to adopt numeric water quality criteria for priority toxic pollutants for which EPA has issued criteria guidance, the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses.

And:

> Numeric criteria for toxic pollutants allow the State and EPA to evaluate the adequacy of existing and potential control measures to protect aquatic ecosystems and human health. Numeric criteria also provide a more precise basis for deriving water quality-based effluent limitations (WQBELs) in National Pollutant Discharge Elimination System (NPDES) permits and wasteload allocations for total maximum daily loads (TMDLs) to control toxic pollutant discharges. Congress recognized these issues when it enacted section 303(c)(2)(B) to the CWA.

D. The California Water Pollution Control Program

1. Porter-Cologne

California's water pollution control laws were substantially overhauled in 1969 with the Porter-Cologne Water Quality Control Act (Porter-Cologne).[252] Beginning with section 13000, Porter-Cologne provides:

[251] Federal Register, Volume 64, Number 97, page 7.

[252] Water Code section 13020 (Stats. 1969, ch. 482).

> The Legislature finds and declares that the people of the state have a primary interest in the conservation, control, and utilization of the water resources of the state, and that the quality of all the waters of the state shall be protected for use and enjoyment by all the people of the state.
>
> The Legislature further finds and declares that activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.
>
> The Legislature further finds and declares that the health, safety, and welfare of the people of the state requires that there be a statewide program for the control of the quality of all the waters of the state…and that the statewide program for water quality control can be most effectively administered regionally, within a framework of statewide coordination and policy.[253]

The state water pollution control program was again modified, beginning in 1972, so that the code would substantially comply with the federal CWA, and "on May 14, 1973, California became the first state to be approved by the EPA to administer the NPDES permit program."[254]

Section 13160 provides that the State Water Resources Control Board (State Board) "is designated as the state water pollution control agency for all purposes stated in the Federal Water Pollution Control Act…[and is] authorized to exercise any powers delegated to the state by the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) and acts amendatory thereto."[255] Section 13001 describes the state and regional boards as being "the principal state agencies with primary responsibility for the coordination and control of water quality."

To achieve the objectives of conserving and protecting the water resources of the state, and in exercise of the powers delegated, Porter-Cologne, like the CWA, employs a combination of water quality standards and point source pollution controls.[256]

Under Porter Cologne, the nine regional boards' primary regulatory tools are the water quality control plans, also known as basin plans.[257] These plans fulfill the planning function for the water boards, are regulations adopted under the Administrative Procedure Act with a specialized process,[258] and provide the underlying basis for most of the regional board's actions (e.g., NPDES permit conditions, cleanup levels). Basin plans consist of three elements:

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[253] Water Code section 13000 (Stats. 1969, ch. 482).

[254] *County Sanitation Dist. No. 2 of Los Angeles County v. County of Kern* (2005) 127 Cal.App.4th 1544, 1565-1566; see also Water Code section 13370 *et seq*.

[255] Water Code section 13160 (Stats. 1969, ch. 482; Stats. 1971, ch. 1288; Stats. 1976, ch. 596).

[256] Water Code section 13142 (Stats. 1969, ch. 482; Stats. 1971, ch. 1288; Stats. 1979, ch. 947; Stats. 1995, ch. 28).

[257] Water Code sections 13240-13247.

[258] Water Code sections 11352-11354.

- Determination of beneficial uses;
- Water quality objectives to reasonably protect beneficial uses; and
- An implementation program to achieve water quality objectives.[259]

Porter Cologne sections 13240-13247 address the development and implementation of regional water quality control plans (i.e., basin plans), including "water quality objectives," defined in section 13050 as "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area."[260] Section 13241 provides that each regional board "shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance." The section directs the regional boards to consider, when developing water quality objectives:

(a) Past, present, and probable future beneficial uses of water.

(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

(c) Water quality conditions that could reasonably by achieved through the coordinated control of all factors which affect water quality in the area.

(d) Economic considerations.

(e) The need for developing housing within the region.

(f) The need to develop and use recycled water.[261]

Beneficial uses, in turn, are defined in section 13050 as including, but not limited to, "domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves."[262] In addition, section 13243 permits a regional board to define "certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted."[263]

Sections 13260-13274 address the development of "waste discharge requirements," which section 13374 states "is the equivalent of the term 'permits' as used in the Federal Water

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[259] Water Code section 13050(j); see also section 13241.

[260] Water Code section 13050 (Stats. 1969, ch. 482; Stats. 1969, ch. 800; Stats. 1970, ch. 202; Stats. 1980, ch. 877; Stats. 1989, ch. 642; Stats. 1991, ch. 187 (AB 673); Stats. 1992, ch. 211 (AB 3012); Stats. 1995, ch. 28 (AB 1247); Stats. 1995, ch. 847 (SB 206); Stats. 1996, ch. 1023 (SB 1497)).

[261] Water Code section 13241 (Stats. 1969, ch. 482; Stats. 1979, ch. 947; Stats. 1991, ch. 187 (AB 673)).

[262] Water Code section 13050 (Stats. 1969, ch. 482; Stats. 1969, ch. 800; Stats. 1970, ch. 202; Stats. 1980, ch. 877; Stats. 1989, ch. 642; Stats. 1991, ch. 187 (AB 673); Stats. 1992, ch. 211 (AB 3012); Stats. 1995, ch. 28 (AB 1247); Stats. 1995, ch. 847 (SB 206); Stats. 1996, ch. 1023 (SB 1497)).

[263] Water Code section 13243 (Stats. 1969, ch. 482).

Pollution Control Act, as amended."[264] Section 13263 permits the regional boards, after a public hearing, to prescribe waste discharge requirements "as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge, except discharges into a community sewer system." Section 13263 also provides that the regional boards "need not authorize the utilization of the full waste assimilation capacities of the receiving waters," and that the board may prescribe requirements although no discharge report has been filed, and may review and revise requirements on its own motion. The section further provides that "[a]ll discharges of waste into waters of the state are privileges, not rights."[265] Section 13377 permits a regional board to issue waste discharge requirements "which apply and ensure compliance with all applicable provisions of the [Federal Water Pollution Control Act]."[266] In effect, sections 13263 and 13377 permit the issuance of waste discharge requirements concurrently with an NPDES permit if a discharge is to waters of both California and the United States.

The California Supreme Court explained the interplay between state and federal law in *Department of Finance v. Commission on State Mandates* as follows:

> California was the first state authorized to issue its own pollutant discharge permits. (Citations omitted.) Shortly after the CWA's enactment, the Legislature amended the Porter–Cologne Act, adding chapter 5.5 (Wat. Code, § 13370 et seq.) to authorize state issuance of permits (Wat. Code, § 13370, subd. (c)). The Legislature explained the amendment was "in the interest of the people of the state, in order to avoid direct regulation by the federal government of persons already subject to regulation under state law pursuant to [the Porter–Cologne Act]." (*Ibid*.) The Legislature provided that Chapter 5.5 be "construed to ensure consistency" with the CWA. (Wat. Code, § 13372, subd. (a).) It directed that state and regional boards issue waste discharge requirements "ensur[ing] compliance with all applicable provisions of the [CWA] ... *together with any more stringent effluent standards or limitations* necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." (Wat. Code, § 13377, italics added.) To align the state and federal permitting systems, the legislation provided that the term " 'waste discharge requirements' " under the Act was equivalent to the term " 'permits' " under the CWA. (Wat. Code, § 13374.) Accordingly, California's permitting system now regulates discharges under both state and federal law. (Citations omitted.)
>
> In 1987, Congress amended the CWA to clarify that a permit is required for any discharge from a municipal storm sewer system serving a population of 100,000 or more. (33 U.S.C. § 1342(p)(2)(C), (D).) Under those amendments, a permit may be issued either on a system- or jurisdiction-wide basis, must effectively prohibit nonstorm water discharges into the storm sewers, and must "require controls to reduce the discharge of pollutants *to the maximum extent practicable*."

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[264] Water code section 13374 (Stats. 1972, ch. 1256).

[265] Water Code section 13263(a), (b), (g) (Stats. 1969, ch. 482; Stats. 1992, ch. 211 (AB 3012); Stats. 1995, ch. 28 (AB 1247); Stats. 1995, ch. 421 (SB 572)).

[266] Water Code section 13377 (Stats. 1972, ch. 1256; Stats. 1978, ch. 746).

(33 U.S.C. § 1342(p)(3)(B), italics added.) The phrase "maximum extent practicable" is not further defined. How that phrase is applied, and by whom, are important aspects of this case.

EPA regulations specify the information to be included in a permit application. (See 40 C.F.R. § 122.26(d)(1)(i)-(vi), (d)(2)(i)-(viii).) Among other things, an applicant must set out a proposed management program that includes management practices; control techniques; and system, design, and engineering methods to reduce the discharge of pollutants to the maximum extent practicable. (40 C.F.R. § 122.26(d)(2)(iv).) The permit-issuing agency has discretion to determine which practices, whether or not proposed by the applicant, will be imposed as conditions. (*Ibid*.)[267]

2. California's Anti-degradation Policy (State Water Resources Control Board Resolution No. 68-16 adopted October 24, 1968)

In 1968, the State Board adopted Resolution 68-16, formally entitled "Statement of Policy With Respect to Maintaining High Quality of Waters In California," to prevent the degradation of surface waters where background water quality is higher than the established level necessary to protect beneficial uses. That executive order states the following:

WHEREAS the California Legislature has declared that it is the policy of the State that the granting of permits and licenses for unappropriated water and the disposal of wastes into the waters of the State shall be so regulated as to achieve highest water quality consistent with maximum benefit to the people of the State and shall be controlled so as to promote the peace, health, safety and welfare of the people of the State; and

WHEREAS water quality control policies have been and are being adopted for waters of the State; and

WHEREAS the quality of some waters of the State is higher than that established by the adopted policies and it is the intent and purpose of this Board that such higher quality shall be maintained to the maximum extent possible consistent with the declaration of the Legislature;

NOW, THEREFORE, BE IT RESOLVED:

Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which

[267] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 757.

> will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.
>
> In implementing this policy, the Secretary of the Interior will be kept advised and will be provided with such information as he will need to discharge his responsibilities under the Federal Water Pollution Control Act.

State Board Resolution 68-16, Statement of Policy With Respect to Maintaining High Quality of Waters in California, is the policy that the State asserts incorporates the federal antidegradation policy. The Water Quality Control Plans in turn (i.e., Basin Plans) require conformity with State Board Resolution 68-16. Therefore, any provisions in a permit that are inconsistent with the State's anti-degradation policy are also inconsistent with the Basin Plan.

3. Administrative Procedures Update, Antidegradation Policy Implementation for NPDES Permitting, 90-004

The May 1990 Administrative Procedures Update, entitled Antidegradation Policy Implementation for NPDES Permitting, APU 90-004, provides guidance for the State's regional boards in implementing the State Board's Resolution No. 68-16, Statement of Policy With Respect to Maintaining High Quality of Waters in California, and the Federal Antidegradation Policy, as set forth in Code of Federal Regulations, title 40, part 131.12. It states that "If baseline water quality is equal to or less than the quality as defined by the water quality objective, water quality shall be maintained or improved to a level that achieves the objectives."[268]

4. Statewide Plans: The Ocean Plan, the California Inland Surface Waters Plan (ISWP), and, the Enclosed Bays and Estuaries Plan (EBEP)

California has adopted an Ocean Plan, applicable to interstate waters, and two other state-wide plans which establish water quality criteria or objectives for all fresh waters, bays and estuaries in the State.

a. California Ocean Plan

Section 303(c)(3)(A) of the CWA provides that "[a]ny State which prior to October 18, 1972, has not adopted pursuant to its own laws water quality standards applicable to intrastate waters shall, not later than one hundred and eighty days after October 18, 1972, adopt and submit such standards to the [U.S. EPA] Administrator." Section 303(c)(3)(C) further provides that "[i]f the [U.S. EPA] Administrator determines that any such standards are not consistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972, he shall, not later than the ninetieth day after the date of submission of such standards, notify the State and specify the changes to meet such requirements. If such changes are not adopted by the State within ninety days after the date of notification, the Administrator shall promulgate such standards pursuant to subsection (b) of this section." Thus, beginning October 18, 1972, states

[268] Exhibit X (40), State Water Resources Control Board, Administrative Procedures Update, 90-004, page 4.

were required to adopt water quality laws applicable to intrastate waters or else allow the U.S. EPA to adopt such standards for them.

California's first adopted its Ocean Plan in July 6, 1972, and as applicable to this test claim, has amended it in 1978, 1983, 1988, 1990, 1997, 2001, 2005, and 2009.[269] The Ocean Plan was also amended five times after the adoption of the test claim permit.

b. The California Inland Surface Waters Plan (ISWP) and the Enclosed Bays and Estuaries Plan (EBEP)

On April 11, 1991, the State Board adopted two statewide water quality control plans, the California Inland Surface Waters Plan (ISWP) and the Enclosed Bays and Estuaries Plan (EBEP). These statewide plans contained narrative and numeric water quality criteria for toxic pollutants, in part to satisfy CWA section 303(c)(2)(B). The water quality criteria contained in these statewide plans, together with the designated uses in each of the Basin Plans, created a set of water quality standards for waters within the State of California.

Specifically, the two plans established water quality criteria or objectives for all fresh waters, bays and estuaries in the State.

Section 303(c)(2)(B) of the federal CWA requires that states adopt numeric criteria for priority pollutants for which EPA has issued criteria guidance, as part of the states' water quality standards. As discussed above, U.S. EPA promulgated these criteria in the CTR in 2000 because the State court overturned two of California's water quality control plans (the ISWP and the EBEP) in 1994 and the State failed to promulgate new plans, so the State was left without enforceable standards. The federal toxics criteria apply to the State of California for inland surface waters, enclosed bays, and estuaries for "all purposes and programs under the CWA" and are commonly known as "the California Toxics Rule" (CTR).[270] There are 126 chemicals on the federal CTR[271] and the State Implementation Policy (SIP) for Implementation of the Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries adds another 6 isomers of

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[269] California first adopted its Ocean Plan on July 6, 1972, and has amended it in 1978 (Order 78-002, adopted 1/19/1978), 1983 (Order 83-087, adopted 11/17/1983), 1988 (Order 88-111, adopted 9/22/1988), 1990 (Order 90-027, amendment regarding new water quality objectives in Table B, adopted 3/22/1990), 1997 (Order 97-026, amendment regarding revisions to the list of critical life stage protocols used in testing the toxicity of waste discharges, adopted 3/20/1997), 2001 (Order 2000-108, amendment regarding Table A, chemical water quality objectives, provisions of compliance, special protection for water quality and designated uses, and administrative changes, adopted 11/16/2000), 2005 (Order 2005-0013, amendment regarding Water Contact Bacterial Standards, adopted 1/20/2005; Order 2005-0035, amendments regarding (1) Reasonable Potential, Determining When California Ocean Plan Water Quality-Based Effluent Limitations are Required, and (2) Minor Changes to the Areas of Special Biological Significance, and Exception Provisions, 4/21/2005) and 2009 (Order 2009-0072, amendments regarding total recoverable metals, compliance schedules, toxicity definitions, and the list of exceptions, adopted 9/15/2009).

[270] Code of Federal Regulations, title 40, Part 131, May 18, 2000.

[271] See Code of Federal Regulations, title 40, Part 131, May 18, 2000.

chlorinated dioxins and 10 isomers of chlorinated furans for optional use in California (however, these are required to be used in the California Ocean Plan).

The EBEP was later adopted with respect to sediment quality objectives for toxic pollutants by the State Board on September 16, 2008 (Resolution No. 2008-0070), effective on January 5, 2009, and has been amended twice after the adoption of the test claim permit on April 6, 2011 (Resolution No. 2011-0017), effective on June 8, 2011 and June 5, 2018 (Resolution No. 2018-0028), effective March 11, 2019.

Likewise, the following adopted amendments, all of which were adopted after the test claim permit at issue in this case, were incorporated into the ISWP:

- Part 1: Trash Provisions, adopted on April 7, 2015 (Resolution No. 2015-0019), effective on December 2, 2015
- Part 2: Tribal Subsistence Beneficial Uses and Mercury Provisions, adopted on May 2, 2017 (Resolution No. 2017-0027), effective on June 28, 2017
- Part 3: Bacteria Provisions and Variance Policy, adopted on August 7, 2018 (Resolution No. 2018-0038), effective on February 4, 2019
- State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (for waters of the United States only), adopted April 2, 2019 (Resolution No. 2019-0015), effective May 28, 2020.

5. Basin Plans (also known as Water Quality Control Plans)

The Basin Plan is a regional board's master water quality control planning document for a particular water basin. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also must include any TMDL programs of implementation to achieve water quality objectives.[272] Basin Plans must be adopted by the regional board and approved by the State Board, the California Office of Administrative Law (OAL), and U.S. EPA, in the case of action on surface waters standards.[273]

E. The History of the Test Claim Permit

The claimants are the owners of an interconnected MS4 which lies within the Santa Margarita Hydrologic Unit, one of the eleven hydrologic units of the San Diego Region.[274] The Upper Santa Margarita Watershed is approximately 548 square miles and includes the County of Riverside, the Cities of Murrieta, Temecula, and Wildomar, as well as portions of the Cleveland and San Bernardino National Forests, and the Cahuilla, Ramona, Pauma, and Pechanga Indian Reservations.[275] The claimants' MS4 discharges its runoff into lakes, drinking water reservoirs,

[272] Water Code section 13241.

[273] Water Code section 13245; United States Code, title 33, section 1313(c)(1).

[274] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 184-185 (test claim permit, Finding C.7.).

[275] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, section V.C., page 8.

rivers, streams, creeks, bays, estuaries, coastal lagoons, and, ultimately, the Pacific Ocean.[276] "Over 40 percent of the water used in the watershed is locally produced. In addition, surface and ground water from the Upper Santa Margarita Watershed flow to Fallbrook in San Diego County and the U.S. Marine Corps Base Camp Pendleton where it is used as part of the municipal and domestic water supply."[277]

The test claim permit, Order No. R9-2010-0016,[278] is the fourth iteration of the NPDES permit for the claimants' MS4 (fourth term permit). In 1990, the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the City of Temecula (copermittees)[279] obtained a first-term permit. Following its incorporation in 1992, the City of Murrieta was added as a copermittee to that permit. In 1998, the Regional Board adopted the second-term permit. The US EPA objected to the 1998 permit due to the receiving water limitations language, which the US EPA determined did not comply with the federal CWA and its implementing regulations. US EPA reissued the second-term permit and the Regional Board issued an addendum to incorporate US EPA's permit.[280]

In 2004, the Regional Board adopted the third-term permit, Order No. R9-2004-0001 (prior permit).[281] At the time that the prior permit was adopted, the Upper Santa Margarita Watershed had significant pollutant issues: Murrieta Creek and a portion of the Santa Margarita River were CWA section 303(d) listed for phosphorus and the Santa Margarita Lagoon was listed for eutrophication. Pollutants of concern included sedimentation, iron, manganese, and total dissolved solids. Other existing or potential sources of the following pollutants that may cause, or contribute to an excursion above a State water quality standard were identified: nitrogen, diazinon and other pesticides, herbicides, heavy metals and other toxics, oil and grease, total suspended solids, nutrients, pathogens, and trash.[282]

The prior permit represented a shift in the Regional Board's approach to permitting, using for the first time detailed, specific requirements to achieve the minimum level of implementation. The prior permit, however, did not address all of the water quality challenges faced by the

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[276] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 184-185 (test claim permit, Finding C.7.).

[277] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 395 (Fact Sheet/Technical Report, Discussion of Finding C.5.), footnote omitted.

[278] R9-2010-0016 is both an "order" of the Regional Board and an NPDES "permit." This analysis will refer to it as the "test claim permit."

[279] The claimants are interchangeably referred to as permittees, as used in the prior permit and copermittees, as used in the test claim permit.

[280] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, section V.A., page 8.

[281] R9-2004-0001 is both an "order" of the Regional Board and an NPDES "permit." This analysis will refer to it as the "prior permit."

[282] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, section VI.B., Table 1, pages 16-18.

copermittees.[283] Discharges from the MS4 continued to be the leading cause of water quality impairment with increases in toxicity and the number of CWA section 303(d) listed water bodies continued to increase.[284]

On November 10, 2010, the Regional Board adopted the test claim permit.[285] The City of Wildomar was added as a copermittee for the first time because it was just incorporated in 2008 and was covered under the unincorporated part of the county in the prior permits.[286] The test claim permit increases the emphasis on watershed-focused discharge management. As explained by the Fact Sheet: "There are several reasons for this shift in emphasis. An emphasis on watersheds is necessary to shift the focus of the Copermittees from program development and implementation to water quality results. After over 20 years of Copermittee program implementation, it is critical that the Copermittees link their efforts with positive impacts on water quality."[287]

This Test Claim pleads the following provisions of the test claim permit:

A. The requirement to address three categories of urban irrigation runoff that formerly were considered exempt non-stormwater discharges, contained in Section B.2.;[288]

B. The requirement to monitor for, report and address exceedances of non-stormwater action levels, contained in Sections C. and F.4.d., F.4.e., and Attachment E., Section II.C.;[289]

C. The requirement to monitor for, report and address exceedances of stormwater action levels, contained in Section D.;[290]

[283] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 374 (Fact Sheet/Technical Report).

[284] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 374 (Fact Sheet/Technical Report).

[285] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 182 (test claim permit).

[286] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 388 (Fact Sheet/Technical Report, Finding B.1.).

[287] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 375 (Fact Sheet/Technical Report, section V.).

[288] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 35-36 (Test Claim narrative).

[289] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 39-42 (Test Claim narrative).

[290] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 44-45 (Test Claim narrative).

D. Requirements relating to the Priority Development Projects, local impact development and hydromodification, contained in Section F.1.d.1., 2., 4., 7., and F.1.h.;[291]

E. Requirements to track the construction and operation of post-construction best management practices ("BMPs"), contained in Section F.1.f.;[292]

F. Requirements relating to the control of pollutants from construction sites, contained in Section F.2.d.3. and F.2.e.6.e.;[293]

G. Requirements relating to the development and implementation of BMPs for unpaved roads, contained in Sections F.1.i. and F.3.a.10.;[294]

H. Requirements relating the inspection of monitoring of commercial/industrial sources, contained in Section F.3.b.4.a.ii.;[295]

I. Requirements relating to the retrofitting of existing development, contained in Section F.3.d.1.-5.[296];

J. Requirements relating to the development and implementation of the Watershed Water Quality Workplan, contained in Section G.1.-5.;[297]

K. Requirements relating to the JRMP Annual Report, contained in Section K.3.a.-c.;[298]

L. Requirements to perform special studies, contained in the Monitoring and Reporting Program, Attachment E. Section II.E.2.-5.;[299] and

M. Requirements that programs relating to development, construction, municipal facilities, industrial/commercial facilities, residential areas, retrofitting and education ensure that

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[291] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 46-52 (Test Claim narrative).

[292] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 57-58 (Test Claim narrative).

[293] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 59-60 (Test Claim narrative).

[294] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 61-62 (Test Claim narrative.

[295] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 63-64 (Test Claim narrative).

[296] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 65-66 (Test Claim narrative).

[297] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 68-70 (Test Claim narrative).

[298] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 72-73 (Test Claim narrative).

[299] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 75-77 (Test Claim narrative).

stormwater runoff not cause or contribute to a violation of a water quality standard and "prevent" illicit discharges into the MS4, contained in Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6.[300]

III. Positions of the Parties and Interested Parties

A. County of Riverside, Riverside County Flood Control and Water Conservation District, and the Cities of Murrieta, Temecula, and Wildomar, Claimants

As will be covered within the analysis of the specific sections pled below, the claimants contend that the test claim permit includes numerous new requirements that exceed what is required under federal law.[301] The claimants note that the Commission has twice found the imposition of reimbursable state-mandated programs in MS4 permits issued by the Los Angeles and the San Diego regional boards.[302]

The claimants contend that under definitive guidance provided by the court in *Department of Finance* regarding how to determine what constitutes a federal versus state mandate, the test claim permit's requirements are state, not federal, mandates.[303] The claimants also contend that the decision in *Department of Finance* has three relevant holdings. First, the claimants assert that the decision sets forth the test to determine if a permit requirement is a federal or state mandate, that is, if the state has discretion to impose the requirement and does so by virtue of a true choice, then the requirement is state-mandated.[304] Second, the claimants assert that the decision addresses whether the Commission must defer to the Water Boards as to what constitutes a federal mandate. The claimants further assert that the court concludes that the Commission must make that determination by applying California's constitutional, statutory, and common law to the issue of reimbursement. The claimants concede that the Commission must defer to the Water Boards' expertise if the regional board found that the permit conditions were the only means to implement the MEP standard, however, the regulatory language must be

[300] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 81-83 (Test Claim narrative).

[301] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 21 (Test Claim narrative).

[302] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 23 (Test Claim narrative) citing *In re Test Claim on: Los Angeles Regional Quality Control Board Order No. 01-192*, Test Claim Nos.: 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21; *In re Test Claim on: San Diego Regional Water Quality Control Board Order No. R9-2007-0001*, Test Claim No. 07-TC-09.

[303] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 30-35 (Test Claim narrative), citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 765.

[304] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, page 35, citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 765.

examined to establish the scope and detail required by the federal law.[305] Third, the claimants assert that the court concludes that the state bears the burden to establish an exception under Government Code section 17556.[306] The claimants contend that the test claim permit does not contain the necessary findings to establish that the requirements are only federal mandates and the Water Boards cite general regulatory authority to support their specific requirements.[307]

The claimants further contend that the test claim permit is not based on the federal MEP standard, but rather on the water quality standards established in the state's Basin Plan requiring compliance under state, not federal, authority.[308]

The claimants further assert that the requirements in the test claim permit are new programs and higher levels of service.[309] The claimants contend that the test claim permit imposed requirements uniquely on local government, and are not based on the claimants' voluntary act.[310]

The claimants then assert that Water Boards have not demonstrated that the requirements are the only method to meet the MEP standard or are required by federal law, contending that the Water Boards' findings regarding federal law are not entitled to deference and the Water Boards have too narrow of a reading of the application of *Department of Finance* to the test claim permit.[311] Specifically, the claimants argue that the test claim permit, itself, states it is based on both federal and state law.[312] Claimants state that Finding E.6., which addresses whether the test claim permit is a state mandate, is not entitled to deference under *Department of Finance* as the Commission has exclusive jurisdiction to make that determination.[313] The claimants state that the court in *Department of Finance* considered the Water Boards' argument, that the test claim permit requirements are derived from federal law and that the US EPA would have included the same requirements, and rejected it.[314]

The claimants argue that the test claim permit imposes costs mandated by the state and the claimants lack fee authority to cover the costs of complying with the test claim permit, so Government Code section 17556(d) does not apply. The claimants allege that the costs are not recoverable through fees due to the application of Proposition 26, which amended article XIII C

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[305] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages 11-12, citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 768-769, 771.

[306] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages 11-12, citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 769.

[307] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages 11-12.

[308] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages 12-14.

[309] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages 14-16.

[310] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages 22-23.

[311] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages 17-22.

[312] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages 17-18.

[313] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages 19-20.

[314] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages 21-22.

of the California Constitution to define most fees as taxes unless the fee falls within certain exceptions. The claimants argue that they can only charge fees in the amount necessary to recover program costs and the payor can only be charged for the portion of costs attributable to the burdens on or direct benefits to that payor. If the charge does not fall within that definition of a fee, the charge is a tax and must be approved by the voters. The claimants conclude that charges for a specific purpose, such as the costs to comply with the test claim permit, would be a special tax and require the approval of two-thirds of the voters.[315]

B. Department of Finance

Finance defers to the Water Boards on the issues of whether the test claim permit imposes a new program or higher level of service and the impact of the decision in *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749.[316] Regarding the issue of fee authority, Finance states that the claimants have fee authority "undiminished by Propositions 2018 or 26."[317] Finance contends that Proposition 26 specifically excludes assessments and property-related fees imposed under Proposition 218.[318] Finance further contends that the claimants can impose property-related fees under their police powers. Finance relies on the holding in *Clovis Unified School Dist. v. Chiang* (2010) 188 Cal.App.4th 794, that to the extent that a local government has authority to charge for program costs, those charges cannot be recovered as a state-mandated cost. Finance argues that holding applies to this Test Claim: "Local governments can choose to not submit a fee to the voters and voters can indeed reject a proposed fee, but not with the effect of turning permit costs into state reimbursable mandates."[319] Finance concludes that the claimants have sufficient authority to charge fees regardless of political feasibility. Finance also contends that Government Code section 17556(d) applies in that there can be no finding of a reimbursable state-mandated program when the claimants have the authority to impose fees sufficient to pay for the permit activities.[320] However, if the Commission should find a reimbursable state-mandated program, Finance points to the offsetting revenue identified by the claimants and notes the Commission should identify those revenues as well.[321]

C. The Water Boards

As will be covered in more detail in the analysis below, the Water Boards contend that, when adopting the test claim permit, "the San Diego Water Board found that provisions and requirements were necessary to meet the maximum extent practicable standard (MEP) and are

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[315] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 27-28 (Test Claim narrative, pages 7-8).

[316] Exhibit B, Finance's Comments on the Test Claim, filed September 20, 2017, page 1.

[317] Exhibit B, Finance's Comments on the Test Claim, filed September 20, 2017, page 1.

[318] Exhibit B, Finance's Comments on the Test Claim, filed September 20, 2017, page 1, citing California Constitution, article XIIIC, section 1(e)(7).

[319] Exhibit B, Finance's Comments on the Test Claim, filed September 20, 2017, page 1.

[320] Exhibit B, Finance's Comments on the Test Claim, filed September 20, 2017, pages 1-2.

[321] Exhibit B, Finance's Comments on the Test Claim, filed September 20, 2017, page 2.

based exclusively on federal law."[322] The Water Boards contend that the claimants are not entitled to subvention for complying with the test claim permit because they have not shown that the requirements are new programs or higher level of services, are unique to local agencies, or that exceptions to the subvention requirement do not apply.[323]

The Water Boards further contend that the decision in *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749 (*Department of Finance*), when applied to the test claim permit, will yield a finding that there is no state mandate due to the following differences between the facts of the case and the facts of this Test Claim. Specifically, the Water Boards assert, this test claim raises the following issues which were not addressed in *Department of Finance*:

1. Here, the Regional Board specifically found the permit requirements at issue in this test claim are federal mandates, unlike the regional board in the *Department of Finance case*;

2. The parties in *Department of Finance* did not dispute that the requirements were new and were not included in the prior permit, which is not true here since the Water Boards contend that the requirements of test claim permit *were* contained in prior permits and are not new;

3. There was no evaluation in *Department of Finance* of whether the requirements were required under a TMDL or other federal law, such as the requirement to effectively prohibit non-stormwater discharges into their MS4s;

4. None of the requirements evaluated by the court in *Department of Finance* were included in any US EPA issued permits, which is not the case here;

5. The issue of whether the local government had the authority to levy fees or assessments pursuant to Government Code section 17556(d) was not determined by the court in *Department of Finance*;

6. The Supreme Court in *Department of Finance* did not consider that the requirements are generally applicable and not unique to government;

7. The Supreme Court in *Department of Finance* did not evaluate the permittees' voluntary participation in the NPDES program.[324]

With regard to the test claim permit, the Water Boards contend that the requirements were in prior permits and are not new. Any changes to those requirements are not a higher level of service because the changes are mere refinements of existing requirements and are consistent with the US EPA's guidance that the iterative process making each permit more refined and detailed than the last. Also, mere direction from the San Diego Water Board to reallocate resources is not sufficient to show a shifting of costs from the state to the local government.[325]

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[322] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 2.

[323] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 2.

[324] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 3-4.

[325] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 10-12, 15-16.

The Water Boards contend that the Regional Board's findings regarding federal law are entitled to deference. In contrast to the Regional Board in *Department of Finance*, the Regional Board here, when issuing the test claim permit, specifically found "[I]t is entirely the federal authority that forms the legal basis to establish the permit provisions."[326] And "this Order implements the federally mandated requirements under the CWA" including "federal requirements to effectively prohibit non-stormwater discharges, to reduce the discharge of pollutants in storm water to the MEP."[327] The Water Boards reason that if they were not authorized to issue permits, the US EPA would have issued a similar permit. "Therefore, in issuing the permit provisions necessary to comply with federal law, the San Diego Water Board exercised its duty under federal law."[328] Relying on *Rancho Cucamonga v. Regional Water Quality Control Bd., Santa Ana Region* (2006) 135 Cal.App.4th 1377, the Water Boards argue that in exercising its duty, the San Diego Water Board required compliance with federal mandates and, in exercising its discretion as required by federal law, the Regional Board imposed requirements necessary to implement federal law. This supports a conclusion that the requirements in the test claim permit are federal mandates. The holding in *Department of Finance* does not conflict with this conclusion as the permit at issue in that case had its roots in both state and federal law, whereas the test claim permit is rooted only in federal law. The Water Boards conclude that the Regional Board's findings that the requirements were necessary to implement the MEP standard are entitled to deference under *Department of Finance.*[329]

The Water Boards also contend that the requirements in the test claim permit are not unique to government as the US EPA requires control of municipal and non-municipal stormwater discharges. Numerous provisions of the permit are laws of general applicability. While the requirements in the test claim permit apply only to the public entity copermittees, the substantive actions required are not unique to that class of permittee and other permits impose similar requirements on non-local agencies.[330]

Finally, the Water Boards contend that the claimants have voluntarily undertaken to participate in the MS4 program as there is no requirement for them to do so and the claimants have not demonstrated that they cannot cover any costs by imposing fees as has been done by the cities of Alameda, San Clemente, San Jose, and Santa Cruz.[331]

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[326] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 13, citing 2010 Permit Fact Sheet, page F-34.

[327] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 13-14.

[328] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 12.

[329] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 13-15.

[330] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 16-17.

[331] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 18-19.

IV. Discussion

Article XIII B, section 6 of the California Constitution provides in relevant part the following:

> Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such programs or increased level of service…

The purpose of article XIII B, section 6 is to "preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose."[332] Thus, the subvention requirement of section 6 is "directed to state-mandated increases in the services provided by [local government] …"[333]

Reimbursement under article XIII B, section 6 is required when the following elements are met:

1. A state statute or executive order requires or "mandates" local agencies or school districts to perform an activity.[334]
2. The mandated activity constitutes a "program" that either:
   a. Carries out the governmental function of providing a service to the public; or
   b. Imposes unique requirements on local agencies or school districts and does not apply generally to all residents and entities in the state.[335]
3. The mandated activity is new when compared with the legal requirements in effect immediately before the enactment of the test claim statute or executive order and it increases the level of service provided to the public.[336]
4. The mandated activity results in the local agency or school district incurring increased costs, within the meaning of section 17514. Increased costs, however, are not reimbursable if an exception identified in Government Code section 17556 applies to the activity.[337]

The Commission is vested with the exclusive authority to adjudicate disputes over the existence of state-mandated programs within the meaning of article XIII B, section 6 of the California

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[332] *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81.

[333] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56.

[334] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 874.

[335] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 874-875 (reaffirming the test set out in *County of Los Angeles* (1987) 43 Cal.3d 46, 56).

[336] *San Diego Unified School Dist.* (2004) 33 Cal.4th 859, 874-875, 878; *Lucia Mar Unified School District v. Honig* (1988) 44 Cal.3d 830, 835.

[337] *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487; *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1265, 1284; Government Code sections 17514 and 17556.

Constitution.[338] The determination whether a statute or executive order imposes a reimbursable state-mandated program is a question of law.[339] In making its decisions, the Commission must strictly construe article XIII B, section 6 of the California Constitution, and not apply it as an "equitable remedy to cure the perceived unfairness resulting from political decisions on funding priorities."[340]

A. The Test Claim Was Timely Filed Pursuant to Government Code Section 17551(c) Because the Test Claim Was Filed Within Twelve Months of the Effective Date of the Test Claim Permit, with a Period of Reimbursement Beginning November 10, 2010.

The Test Claim was filed on November 10, 2011. The effective date of the test claim permit is November 10, 2010.[341] At the time of filing, the Government Code section 17551 provided that "test claims shall be filed not later than 12 months following the effective date of a statute or executive order…."[342] As the Test Claim was filed within 12 months following the effective date of the test claim permit, the Test Claim was timely filed.

Government Code section 17557(e) requires a test claim to be "submitted on or before June 30 following a fiscal year in order to establish eligibility for reimbursement for that fiscal year." Because the Test Claim was filed on November 10, 2011, the potential period of reimbursement under Government Code section 17557 begins on July 1, 2010. However, since the test claim permit has a later effective date, the potential period of reimbursement for this Test Claim begins on the permit's effective date, November 10, 2010.

[338] *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 335.

[339] *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 109.

[340] *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1265, 1280, citing *City of San Jose v. State of California* (1996) 45 Cal.App.4th 1802, 1817.

[341] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 269 (test claim permit).

[342] Government Code section 17551(c) (Stats. 2007, ch. 329).

B. Some of the Sections Pled by the Claimants Impose a State-Mandated New Program or Higher Level of Service.

1. The Requirements of Section B.2. of the Test Claim Permit, Addressing Formerly Exempted Non-Stormwater Discharges That Have Been Identified as a Source of Pollutants, Do Not Mandate a New Program or Higher Level of Service Because Existing Federal Law Requires the Claimants to Prohibit Non-Stormwater Discharges.

The claimants have pled Section B.2. of the test claim permit,[343] which removes landscape irrigation, irrigation water, and lawn watering from the exempt, non-prohibited discharge list.[344] Thus, the claimants are now required to effectively prohibit landscape irrigation, irrigation water, and lawn watering from entering the MS4 by implementing a program to detect and remove these illicit discharges, just like other prohibited non-stormwater discharges.

The Commission finds that Section B.2. does not mandate a new program or higher level of service.

a. Background

i Federal law requires that if an exempt discharge is identified as a pollutant, the permittee is required to effectively prohibit the illicit discharge from entering the municipal separate storm sewer system.

Federal law distinguishes between stormwater discharges and non-stormwater discharges. Stormwater is defined as "storm water runoff, snow melt runoff, and surface runoff and drainage; events related to precipitation."[345] A discharge to a MS4 that "is *not* composed entirely of stormwater" is considered an illicit non-stormwater, or dry weather discharge.[346]

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[343] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 35-36 (Test Claim narrative).

[344] Section B.2. of the test claim permit exempts the following non-stormwater discharges: diverted stream flows, rising ground water, uncontaminated ground water infiltration (as defined at Code of Federal Regulations, title 40, section 35.2005(20)) to MS4s, uncontaminated pumped ground water, foundation drains, springs, water from crawl space pumps, footing drains, air conditioning condensation, flows from riparian habitats and wetlands, water line flushing, discharges from potable water sources not subject to NPDES Permit No. CAG679001 other than water main breaks, individual residential car washing, and dechlorinated swimming pool discharges. Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 200-201 (test claim permit, Section B.2.).

[345] Code of Federal Regulations, title 40, section 122.26(b)(13).

[346] Code of Federal Regulations, title 40, section 122.26(b)(2) defines "Illicit discharge" as "any discharge to a municipal separate storm sewer that is *not* composed entirely of storm water except discharges pursuant to a NPDES permit (*other than the NPDES permit for discharges from the municipal separate storm sewer*) and discharges resulting from firefighting activities." Emphasis added.

Federal law requires that, in order to achieve water quality standards and objectives, permits for discharges from MS4s "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers," unless those discharges are conditionally exempted from this prohibition.[347] Those discharge categories that are not prohibited from entering into the MS4 continue to be exempt unless the discharge is identified by a municipality as a source of pollutants to waters of the United States. If a discharge is identified as a pollutant, the municipality is required by federal law to effectively prohibit the illicit discharge from entering the MS4 by implementing a program to detect and remove the discharge.[348]

ii. The prior permit conditionally exempted landscape irrigation, irrigation water, and lawn watering from the list of non-stormwater discharges that permittees were prohibited from discharging.

Section B.2. of the prior permit provided a list of exempt non-stormwater discharges that included landscape irrigation, irrigation water, and lawn watering, which were not prohibited from being discharged into the MS4.[349] Section B.2. further stated that the listed categories of non-stormwater discharges are not prohibited "unless a Permittee or the SDRWQCB identifies the discharge category as a source of pollutants to waters of the U.S."[350] The prior permit also required each permittee to "examine its Illicit Discharge Monitoring results collected in accordance with Requirement J.3 of this Order and Section II.B of the MRP [Monitoring and Reporting Program] to identify water quality problems which may be the result of any non-prohibited discharge category(ies) listed above in Requirement B.2. Follow-up investigations shall be conducted as necessary to identify and control any non-prohibited discharge category(ies) listed above."[351] In addition, permittees were required to "investigate and inspect any portion of the MS4 that, based on visual observations, monitoring results or other appropriate information, indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water (including non-prohibited discharge(s) identified in Section B. of this Order)."[352] If a non-prohibited discharge category was identified by a permittee as a source of pollutant to the waters of the United States during the term of the permit, the permittee was required by the prior permit to prohibit the discharge or to implement Best Management

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[347] United States Code, title 33, section 1342(p)(3)(B)(ii) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1).

[348] United States Code, title 33, section 1342(p)(3)(B)(ii) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.26(d)(2)(IV)(B)(1).

[349] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572-573 (Order R9-2004-0001, Section B.2.).

[350] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section B.2.).

[351] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section B.4.).

[352] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.4.).

Practices (BMPs) to reduce the discharge of the pollutant to the MEP and submit a report to the Regional Board.[353]

b. Section B.2. of the test claim permit removes landscape irrigation, irrigation water, and lawn watering from the exemption, but does not mandate a new program or higher level of service.

Section B.2. of the test claim permit removes landscape irrigation, irrigation water, and lawn watering from the exempt, non-prohibited discharge list.[354] Thus, the claimants are now required to effectively prohibit landscape irrigation, irrigation water, and lawn watering from entering the MS4 by implementing a program to detect and remove these illicit discharges, just like other prohibited non-stormwater discharges.

The Fact Sheet for the test claim permit explains that removal of landscape irrigation, irrigation water, and lawn watering discharges from the exemption was based on the claimants' and the Regional Board's identification of these discharges as sources of pollutants to the waters of the United States:

> Discharges from landscape irrigation have been identified by the San Diego Water Board and the Copermittees as a source of pollutants and conveyance of pollutants to waters of the United States in the following:
>
> - In educational materials developed by The Cities and County of Riverside "Only Rain in the Storm Drain" Pollution Prevention Program, the Landscape and Garden brochure states: "Soil, yard wastes, *over-watering* [] and garden chemicals become part of the urban runoff mix that winds it [sic] way through streets, gutters and storm drains before entering lakes, rivers, streams, etc."
> - In an educational survey developed by The Cities and County of Riverside "Only Rain in the Storm Drain" Pollution Prevention Program distributed at Public Outreach events, the answer to the question about where lawn irrigation water goes states: *"Water that leaves your lawn from irrigation ... can pick up motor oil and grease from vehicles,* excess *fertilizer from your lawn, bacteria from pet waste, and* excess *pesticides from your yard. These*

[353] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section B.2.).

[354] Section B.2. of the test claim permit exempts the following non-stormwater discharges: diverted stream flows, rising ground water, uncontaminated ground water infiltration (as defined at Code of Federal Regulations, title 40, section 35.2005(20)) to MS4s, uncontaminated pumped ground water, foundation drains, springs, water from crawl space pumps, footing drains, air conditioning condensation, flows from riparian habitats and wetlands, water line flushing, discharges from potable water sources not subject to NPDES Permit No. CAG679001 other than water main breaks, individual residential car washing, and dechlorinated swimming pool discharges. Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 200-201 (test claim permit, Section B.2.).

pollutants can be carried down streets and storm drains directly to our streams, *lakes and rivers without treatment!"*

- In 2006, the State Water Board allocated Grant funding to the Smarttimer/Edgescape Evaluation Program (SEEP). The project targets irrigation runoff by retrofitting existing development and documenting the conservation and runoff improvements. The Grant Application states that "Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators". Furthermore, the grant application states that "Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the Basin Plan and Bacteria TMDL over the long term". This is reinforced in the project descriptions and objectives: "Elevated dry-weather storm drain flows, composed primarily ... of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California's urbanized coastline. Storm drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and warm, unseasonal contaminated freshwater plumes in the nearshore marine environment". The basis of this grant project is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, they indicate that the alteration of natural flows is impacting the Beneficial Uses of waters of the State. The results of this study can be applied broadly to any area where over-irrigation takes place, including Riverside County. Preliminary results from the study indicate that that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants.
- In the Watershed Action Plan Annual Report(s) for the 2006-2007 reporting period, submitted by the County of Orange, Orange County Flood Control District and Copermittees within the San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds, the Orange County Copermittees, within their Watershed Action Strategy Table for Fecal Indicator Bacteria state that *"Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the [. . .] watershed. Dry weather flow* is *the transport medium for bacteria and other 303(d) constituents of concern".* Additionally, they state that *"conditions in the MS4 contribute to high* seasonal *bacteria propagation in-pipe during warm weather. Landscape irrigation* is a *major contributor to dry weather flow, both* as *surface runoff due to over-irrigation and overspray onto pavements; and* as *subsurface seepage that finds its way into the MS4."*

- In the Carlsbad Watershed Urban Runoff Management Program (WURMP) Fiscal Year 2008 Annual Report, submitted by the Carlsbad Watershed Copermittees (Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, and the County of San Diego), the Carlsbad Watershed Copermittees state *"The Carlsbad Watershed Management Area (WMA) collective watershed strategy identifies bacteria, sediment, and nutrients* as *high priority water quality pollutants in the Agua Hedionda (904.3 - bacteria and sediment), Buena Vista (904.2 - bacteria), and San Marcos Creek (904.5 - nutrients) Hydrologic Areas. Bacteria, sediment, and nutrients have been identified* as *potential discharges from over-irrigation."*
- In Appendix D of the San Diego Bay WURMP 2007-2008 Annual Report, submitted by the San Diego Bay Watershed Copermittees (Cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego, the County of San Diego, the Port of San Diego, and the San Diego County Airport Authority), the San Diego Bay Watershed Copermittees identified *over-irrigation of lawns* from business and/or residential land uses as a likely pollutant source for bacteria, pesticides, and sediment.
- On September 28, 2006 Governor Arnold Schwarzenegger approved Assembly Bill 1881, The Water Conservation in Landscaping Act (AB 1881, Laird) [Civil Code section 65591 et seq. (Stats. 2006, ch. 559)]. The act requires cities, counties, and charter cities and charter counties, to adopt landscape water conservation ordinances by January 1, 2010. Additionally, the law required the Department of Water Resources (DWR) to prepare a Model Water Efficient Landscape Ordinance for use by local agencies. The Water Efficient Landscape Ordinance was approved by the Office of Administrative Law on September 10, 2009. All local agencies were required to adopt a water efficient landscape ordinance by January 1, 2010. Local agencies could adopt the Water Efficient Landscape Ordinance developed by DWR, or an ordinance considered at least as effective as the Model Ordinance. The Water Efficient Landscape Ordinance includes a requirement that local agencies prohibit runoff from irrigation (§ 493.2): *"Local agencies shall prevent water waste resulting from inefficient landscape irrigation by* prohibiting runoff from leaving the target landscape *[emphasis added] due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated* areas, *walks, roadways, parking lots, or structures. Penalties for violation of these prohibitions shall be established locally."*
- On October 08, 2009, the State of California Department of Water Resources issued a letter to all cities and counties within the State of California giving reminder of required adoption of the Water Efficient Landscape Ordinance. The letter states that: *"Other benefits include reduced irrigation runoff,* reduced pollution of waterways *[emphasis added], drought resistance, and less green waste."*

- On December 18, 2009, the San Diego Water Board adopted Order. No. R9-2009-0002, the fourth-term Orange County permit, which found that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. Landscape irrigation, irrigation water, and lawn watering were categories removed from the list of non-storm water discharges not prohibited to be discharged into the MS4.
- The San Diego Water Board has responded to complaints about and observed runoff from over-irrigation entering the MS4s in the Riverside County portion of the San Diego Region.[355]

The claimants contend that federal law does not support the prohibition of landscape irrigation, irrigation water, and lawn watering, noting that federal regulations require the claimants to address — not prohibit — non-stormwater discharges or flows when the discharges are identified by the municipality — not the Regional Board — as sources of pollutants.[356] The claimants further contend that they did not identify landscape irrigation, irrigation water, and lawn watering as sources of pollution, but only prepared the educational outreach materials to educate and prevent these discharges from becoming problematic:

> While the 2010 Permit Fact Sheet states that educational outreach materials utilized by the Copermittees identified these categories of runoff as a source and conveyance of pollutants to the MS4 (Fact Sheet, pp. 108-09), those materials were prepared as a preventative measure, to educate the public and prevent these discharges from becoming problematic, and did not represent a determination by Claimants that those discharges were a demonstrated problem within the watershed. In comments to the RWQCB during the development of the 2010 Permit, Claimants in fact stated that none of the municipalities had identified irrigation runoff as a source of pollutants requiring prohibition. [Footnote 6: The Fact Sheet also cites other support for the elimination of the exemption for irrigation water runoff, but this "evidence" relates to findings for other municipalities, or generally for the state, and not for the Copermittees. *See* Fact Sheet, pp. 109-10.] (*See* District Comment Letter dated September 7, 2010 and Attachment 6 (included in Section 7)). Thus, in adding this provision, the RWQCB relied on no actual determination of impairment within the jurisdiction of the Claimants.[357]

The claimants also contend that there is a distinction between identifying a particular discharger and identifying an entire category of discharges pointing to the preamble to the federal regulations, which "makes clear that the permittees' illicit discharge program need not prevent

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[355] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 473-476 (Fact Sheet/Technical Report), emphasis in original.

[356] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 36 (Test Claim narrative), citing Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1).

[357] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 37 (Test Claim narrative).

discharges of the 'exempt' categories into the MS4 'unless such discharges are specifically identified on a case-by-case basis as needing to be addressed.'"[358] Thus, the claimants agree that "individual discharges within exempt categories must be addressed when the particular discharge is a source of pollutants to waters of the U.S.," but assert that "federal regulations do not allow for removing entire categories of exempt non-storm water discharges."[359] Moreover, the prohibition of all irrigation runoff is impracticable and "may not be significant enough to ever be discharged from the MS4 into receiving waters or contain pollutants in violation of any water quality standard."[360] Finally, the claimants conclude that the requirements are not a federal mandate.[361]

The Water Boards contend that the claimants identified landscape irrigation, irrigation water, and lawn watering as significant dry weather, non-stormwater contributors of pollutants to MS4s during the permit development process as stated in the test claim permit. "Where, as here, a municipality has identified previously exempt categories of non-storm water discharges as sources of pollutants, the categories represent illicit discharges and must be prohibited in compliance with the CWA."[362] Moreover, the permit record "reflects statewide recognition of the pollution caused by overirrigation" and "that pollution in irrigation waters is ubiquitous and would be extremely difficult to isolate and address on a site-by-site basis."[363] Requiring the claimants "to address only individual sites, rather than the categories of irrigation waters, as they suggest, would not satisfy the federal requirements."[364]

The Water Boards further contend that the requirements in the test claim permit are not new as the prior permit include prohibitions on non-stormwater discharges in the MS4 unless authorized by a separate permit or authorized as a category of exempted non-stormwater discharges. The prior permit also addressed removing the exemptions when categories are identified as sources of pollutants.[365]

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[358] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 37 (Test Claim narrative), citing 55 Federal Register 47995 (November 16, 1990).

[359] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 37 (Test Claim narrative).

[360] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 38 (Test Claim narrative).

[361] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 38 (Test Claim narrative), citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal. 5th 749.

[362] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 20 citing to United States Code, title 33, section 1342(p)(3)(B)(ii), requiring permits for municipal stormwater discharges "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers."

[363] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 20.

[364] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 20.

[365] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 20.

> When the municipality has provided information showing that a category of discharge is a source of pollutants, federal law requires it to address the category in a manner similar to other recognized illicit discharges under the federal nonstorm water provisions in place for decades. Implementation of this decades-old standard does not amount to imposition of a new program or any higher level of service than was previously in place.[366]

The Water Boards conclude that the Commission should give significant weight to the conclusion of the Regional Board in its decision to prohibit landscape irrigation, irrigation water, and lawn watering.[367]

The Commission finds that Section B.2. of the test claim permit does not mandate a new program or higher level of service.

The CWA requires that permits adopted by the Water Boards for discharges from municipal storm sewers "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers."[368] Federal regulations expressly state that the program to detect and remove illicit discharges into the MS4 shall address "all types of illicit discharges," including the following "categories" of non-stormwater discharges "where such discharges are identified by the municipality as sources of pollutants to waters of the United States: . . ., "landscape irrigation," . . ., "irrigation water," . . . [and] "lawn watering."[369] The preamble to the Federal regulations refers to "components of discharges" that are not prohibited from entering the MS4 unless "such discharges are specifically identified on a case-by-case basis as needing to be addressed":

> … in general, municipalities will not be held responsible for prohibiting some specific components of discharges or flows listed below through their municipal separate storm sewer system, even though their such components may be considered non-storm water discharges, unless such discharges are specifically identified on a case-by-case basis as needing to be addressed.[370]

The preamble also refers to the "classes" of non-stormwater discharges that are not prohibited in all cases:

> Several commenters suggested that either the definition of "storm water" should include some additional classes of nonprecipitation sources, or that municipalities should not be held responsible for "effectively prohibiting" some classes of nonstorm water discharges into their municipal storm sewers. The various types of discharges addressed by these comments include . . . landscape irrigation, . . .

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[366] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 20.

[367] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 20.

[368] United States Code, title 33, section 1342(p)(3)(B)(ii) (Public Law 100-4).

[369] Code of Federal Regulations, title 40, section 122.26(d)(2)(IV)(B)(1).

[370] Exhibit X (33), National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges; Final Rule, 55 Federal Register 47990 (November 16, 1990), page 6.

> irrigation waters, . . . lawn watering . . . . Most of these comments were made with regard to the concern that these were commonly occurring discharges which did not pose significant environmental problems.
>
> EPA disagrees that the above described flows will not pose, in every case, significant environmental problems. At the same time, it is unlikely Congress intended to require municipalities to effectively prohibit . . . seemingly innocent flows that are characteristic of human existence in urban environments and which discharge to municipal separate storm sewers. It should be noted that the legislative history is essentially silent on this point. Accordingly, EPA is clarifying that section 402(p)(3)(B) of the CWA (which requires permits for municipal separate storm sewers to "effectively" prohibit non-storm water discharges) does not require permits for municipalities to prohibit certain discharges or flows of nonstorm water to waters of the United States through municipal separate storm sewers in all cases.[371]

Accordingly, federal law does not support the claimants' assertion that each individual discharge be treated on a case-by-case basis; it's the type of discharge that is treated on a case-by-case basis. Thus, when approving a jurisdiction-wide NPDES permit, the Regional Board is required by federal law to address and effectively prohibit a previously exempted category of a non-stormwater discharge when the discharge is identified as a source of pollution.

Moreover, the prior permit required that if either a claimant or the Regional Board identifies a discharge category as a source of pollutants to the waters of the United States, then the discharge category represents an illicit discharge and must be prohibited in compliance with the CWA and, thus, that provision is not new.[372]

In this case, the record shows that the claimants identified to their residents that landscape irrigation, irrigation water, and lawn watering can be a source of non-stormwater pollution in their education materials and survey as part of the "Only Rain in the Storm Drain" Pollution Prevention Program.[373] In addition, the Regional Board found ample evidence in the surrounding areas of the state, and through complaints in Riverside County, that landscape irrigation, irrigation water, and lawn watering discharges into the MS4 were sources and conveyances of pollutants to waters of the United States. The State Board, in its grant funding

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[371] Exhibit X (33), National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges; Final Rule, 55 Federal Register 47990 (November 16, 1990), page 48.

[372] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section B.2.); see also, Exhibit X (33), National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges; Final Rule, 55 Federal Register 47990 (November 16, 1990), page 48, which states: "However, the Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharges where appropriate."

[373] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 473-474 (Fact Sheet/Technical Report).

materials for the SEEP program, stated that irrigation runoff contributes flow and pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators, and that the reduction or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the Basin Plan and Bacteria TMDLs over the long term.[374] Moreover, state law previously required local government to adopt a Water Efficient Landscape Ordinance to prohibit irrigation runoff from leaving the target landscape, and required local agencies to either adopt the following model ordinance or its equivalent:[375]

> (a) Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures. Penalties for violation of these prohibitions shall be established locally.
>
> (b) Restrictions regarding overspray and runoff may be modified if:
>
> (1) the landscape area is adjacent to permeable surfacing and no runoff occurs; or
>
> (2) the adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping.[376]

Federal law requires the Regional Board to establish conditions to ensure compliance with all applicable requirements of the CWA and regulations, including the prohibition of illicit non-stormwater discharges.[377] Accordingly, since landscape irrigation, irrigation water, and lawn watering were identified as sources and conveyances of pollutants, the Regional Board had no discretion, but was required by federal law to remove the exemption and require the claimants to effectively prohibit these non-stormwater discharges from entering the MS4. Reimbursement under article XIII B, section 6 of the California Constitution is not required if the statute or executive order imposes a requirement that is expressly mandated by federal law.[378]

Moreover, the requirement to prohibit landscape irrigation, irrigation water, and lawn watering does not constitute a new program or higher level of service. The Supreme Court has clarified

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[374] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 473-476 (Fact Sheet/Technical Report).

[375] Civil Code section 65594 (Stats. 2006, ch. 559).

[376] California Code of Regulations, title 23, section 493.2 (Register 2009, Number 37).

[377] United States Code, title 33, section 1342(a)(2) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.43(a).

[378] *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 71; *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1592; *County of Los Angeles v. Commission on State Mandates* (1995) 32 Cal.App.4th 805, 816; *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 879-880; *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 763; Government Code section 17556(c).

that "simply because a state law or order may *increase the costs* borne by local government *in providing services*, this does not necessarily establish that the law or order constitutes an *increased or higher level* of the resulting 'service to the public' under article XIII B, section 6, and Government Code section 17514."[379] Rather, the new program or higher level of service must "increase the actual level or quality of governmental services provided," or be unique to local government.[380] In this case, federal law has long required that all dischargers, including private industrial dischargers and local governments, effectively prohibit "all types" of non-stormwater discharges identified as sources of pollutants to waters of the United States.[381] The requirements associated with effectively prohibiting landscape irrigation, irrigation water, and lawn watering, which are known sources of non-stormwater pollutants, do not change or increase that level or quality of service to the public; they simply make the claimants comply with existing federal law to prohibit non-stormwater discharges.

Accordingly, the Commission finds that Section B.2. of the test claim permit does not mandate a new program or higher level of service.

2. Sections C., F.4.d. and e., and Section II.C. of Attachment E of the Test Claim Permit, Which Address Dry Weather Non-Stormwater Action Levels (NALs), Do Not Mandate a New Program or Higher Level of Service Because the Requirements Are Not New, But Simply Implement Federal Law.

The claimants have pled Sections C. (Non-Stormwater Dry Weather Action Levels) and F.4.d. and e. (Illicit Discharge Detection and Elimination) and Section II.C., of Attachment E of the test claim permit,[382] which address dry weather non-stormwater action levels (NALs) for fecal coliform, enterococci, turbidity, pH, dissolved oxygen, total nitrogen, total phosphorus, methyl blue active substances (MBAS), iron, manganese; and the priority pollutants: cadmium, copper, chromium III, chromium IV (hexavalent), lead, nickel, silver, and zinc.[383] The claimant states more specifically that:

> Sections C and portions of F.4 of the 2010 Permit (as well as the provisions of Section II.C of the Permit's Monitoring and Reporting Program ("MRP"), Attachment E) required Claimants to comply with new requirements relating to "Non-Stormwater Dry Weather Action Levels" or "NALs." These requirements

[379] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 876-877, emphasis in original.

[380] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 877.

[381] United States Code, title 33, section 1342(p)(3)(B)(ii) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1). In addition, MS4 dischargers must demonstrate adequate legal authority, through ordinance, permit, or other means, to prohibit illicit discharges from others to the MS4. Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(B).

[382] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 39-42 (Test Claim narrative).

[383] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 204-205 (test claim permit, Section C.5.)

included programmatic investigation, monitoring and reporting requirements, as well as action items stemming from a NAL exceedance.[384]

These sections generally require monitoring and field screening for pollutants as specified in the permit, and if a pollutant is shown to be in excess of the NAL, then the claimant is required to investigate and identify and remove the source of the illicit, non-stormwater discharge.

As explained below, the Commission finds that that sections C and F.4.d. and e. do not mandate a new program or higher level of service. Instead, the test claim permit simply identifies action levels for each pollutant consistent with existing water quality standards that, if detected in dry weather monitoring and field screening to be in excess of the action level, triggers the investigation, identification of the discharge, removal, and reporting activities required by existing federal law. The claimants do not violate the permit by exceeding the action level, as implied by the claimants; rather a violation occurs only if a permittee fails to timely implement the required actions following an exceedance of an action level.[385] In this sense, the action levels established in the test claim permit function the same as the prior permit, which required the claimants to identify criteria to determine if significant sources of pollutants were present in dry weather non-stormwater discharges consistent with water quality objectives.[386] Under both permits, the action levels or criteria are intended to determine the presence of an illicit discharge, which then triggers the federal requirements to investigate, identify, and remove the illicit discharge, and report the findings to the Regional Board.

a. Background

i. Federal law requires permittees to effectively prohibit non-stormwater discharges into the storm sewers by implementing a program to detect and remove illicit discharges.

In order to achieve water quality standards, federal law requires that permits for discharges from MS4s "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers," unless those discharges are conditionally exempted from this prohibition.[387] According to a fact sheet issued by EPA, illicit non-stormwater discharges may contribute to high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies:

> Illicit discharges enter the MS4 system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into

[384] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 39.

[385] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 203 (Directive C.3.).

[386] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.4.).

[387] United States Code, title 33, section 1342(p)(3)(B)(ii) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1).

> the drain). The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.[388]

Examples of illicit non-stormwater discharges include sanitary wastewater, effluent from septic tanks, car wash wastewater, improper oil disposal, radiator flushing disposal, laundry wastewaters, spills from roadway accidents, and improper disposal of automobile and household toxics.[389]

To "effectively prohibit" non-stormwater discharges requires the implementation of a program to detect and remove illicit discharges, which under federal law shall contain the following:

- A description of a program, including inspections, to implement and enforce an ordinance to prevent illicit non-stormwater discharges to the MS4.[390]
- A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations to be evaluated.[391]
- A description of procedures to investigate portions of the MS4 that, based on field screening or other information, indicate a reasonable potential for containing illicit discharges or other sources of non-storm water pollution.[392]
- A description of procedures to prevent, contain, and respond to spills that may discharge into the MS4;
- A description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from MS4s;
- A description of educational activities, public information activities, and other activities to facilitate the proper management and disposal of oil and toxic materials; and

[388] Exhibit X (20), EPA, Stormwater Phase II Final Rule, Illicit Discharge Detection and Elimination Minimum Control Measure, Fact Sheet 2.5 (EPA 833-F-00-007), January 2000, revised December 2005.

[389] Exhibit X (20), EPA, Stormwater Phase II Final Rule, Illicit Discharge Detection and Elimination Minimum Control Measure, Fact Sheet 2.5 (EPA 833-F-00-007), January 2000, revised December 2005.

[390] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1).

[391] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(2).

[392] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(3).

- A description of controls to limit infiltration of seepage from municipal sanitary sewers to MS4s where necessary.[393]

Federal law also requires that NPDES permits include specific requirements for the proper collection, management, and electronic reporting of data about the NPDES program to ensure that there is timely, complete, accurate, and nationally-consistent set of data about the NPDES program.[394] All NPDES permits must also specify requirements for recording and reporting monitoring results.[395]

> *ii. The prior permit required the permittees to develop a dry weather monitoring program to include numeric criteria for pollutants to determine when an exceedance occurred. Investigation, inspection, follow-up and reporting requirements were required if an exceedance of the numeric criteria was detected and the permittee had to immediately eliminate all detected illicit discharges, discharge sources, and connections.*

The prior permit contained the following receiving water limitations and discharge prohibitions:

- Discharges into and from MS4s causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the State are prohibited.
- Discharges from MS4s that cause or contribute to exceedances of water quality objectives for surface water or groundwater are prohibited.
- Discharges from MS4s that cause or contribute the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect the beneficial uses of receiving waters) are prohibited.
- Discharges are also subject to the prohibitions in the Basin Plan, which includes but is not limited to, illicit discharges that are not composed entirely of stormwater, which are prohibited.[396]

Section B.1.-3. of the prior permit required each permittee to "effectively prohibit all types of non-stormwater discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit" or the discharge falls within a non-prohibited category of discharges.[397]

Section J. required each permittee to develop and implement an illicit discharge detection and elimination program to actively seek and eliminate illicit discharges and connections to the MS4, including the requirement to develop a dry weather monitoring program and numeric criteria for

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[393] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B).

[394] Code of Federal Regulations, title 40, sections 122.44 and 122.48, and part 127.

[395] Code of Federal Regulations, title 40, section 122.48.

[396] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572, 573, 598-599 (Order R9-2004-0001, Sections A., C.1., and Attachment A.).

[397] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572-573 (Order R9-2004-0001, Sections B.1.-B.3.).

pollutants that will trigger follow-up investigations to identify and remove the source causing the exceedance. The program must include the following, at minimum:

- Implement a program to actively seek and eliminate illicit discharges and connections into its MS4. The program shall address all types of illicit discharges and connections excluding those non-storm water discharges that are exempt.[398]
- Develop or obtain an up-to-date labeled map of its entire MS4 and the corresponding drainage areas, the accuracy of which shall be confirmed and updated at least annually.[399]
- Implement the illicit discharge monitoring program in accordance with section II.B. of the MRP to detect illicit discharges and connections.[400]
- Investigate and inspect any portion of its MS4 that, based on visual observations, monitoring results or other appropriate information, indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water.[401]
- Develop numeric criteria to determine when follow-up actions will be necessary and include the criteria and follow-up procedures in each permittees' Individual Storm Water Management Plan (SWMP).[402]
- Eliminate all illicit discharges, illicit discharge sources, and illicit connections as soon as possible after detection. Illicit discharges that are a serious threat to public health or the environment must be eliminated immediately.[403]
- Implement and enforce ordinances, orders, or other legal authority to prevent and eliminate illicit discharges and connections to its MS4.[404]

[398] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 593 (Order R9-2004-0001, Section J.1.).

[399] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.2.).

[400] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.3.).

[401] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.4.).

[402] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.4.).

[403] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.5.).

[404] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.6.).

- Take appropriate actions to prevent, respond to, contain and cleanup sewage spills into the MS4 and to prevent the contamination of surface water, ground water and soil to the MEP.[405]
- Promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s including the development and operation of a public hotline capable of receiving reports in both English and Spanish, 24 hours per day/seven days per week.[406]
- Respond to and resolve each reported incident and summarize all reported incidents and resolution in the annual report.[407]
- Facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes including educational activities, public information activities, and establishment of collection sites.[408]

The requirements of the illicit discharge monitoring program are in Section II.B., of the MRP and require each permittee to develop and implement a program that meets or exceeds the listed requirements within 365 days of the adoption of prior permit. The program had to be designed to emphasize frequent, geographically widespread inspections, monitoring, and follow-up investigations to detect illicit discharges and connections. The program was required to be included in the each permittee's individual SWMP.[409] The program requirements under the prior permit were as follows:

- Use the MS4 map and select illicit discharge monitoring stations at accessible points (i.e., outfalls, manholes or open channels), located downstream of potential sources of illicit discharges (i.e., commercial, industrial, and residential areas), and in a quantity sufficient to represent the MS4 and detect illicit discharges that may occur throughout the system.[410]

[405] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 594-595 (Order R9-2004-0001, Section J.7.).

[406] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section J.8.).

[407] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section J.8.).

[408] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section J.9.).

[409] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B., page 9.

[410] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.1.a., page 9.

- Inspect each station at least twice between May 1st and September 30th of each year, *and more frequently if necessary to comply with Section J. of the prior permit* [the Illicit Discharge Detection and Elimination Program].[411]
- Inspect all other dry weather flows that are observed or reported in addition to the station inspections.[412]
- Record the following information at each inspected site: time since last rain, quantity of last rain, site descriptions, flow estimation, and visual observations.[413]
- If flow or ponded water is observed at a station and there has been at least 72 hours of dry weather, a field screening analysis using suitable methods to estimate the following constituents shall be conducted: specific conductance or calculate total dissolved solids,[414] turbidity, pH, temperature, and dissolved oxygen.[415]
- If field screening analysis or visual observations at a site indicate a potential illicit discharge, a sample shall be collected and analyzed for: total hardness, oil and grease, ammonia nitrogen, total phosphorus, copper (total and dissolved), surfactants (MBAS), diazinon, chlorpyrifos, lead (dissolved), nitrate nitrogen, E.coli, total coliform, and fecal coliform.[416]
- Develop numeric criteria for field screening and analytical monitoring results that will trigger follow-up investigations to identify the source causing the exceedance of the criteria.[417]

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[411] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.1.a., page 9, emphasis added.

[412] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.1.b., page 9.

[413] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.2.a., page 9.

[414] Total suspended solids (TSS) are particles that are larger than 2 microns found in the water column, whereas turbidity is an optical determination of water clarity. Exhibit X (29), Fondriest Environmental, Inc., "Turbidity, Total Suspended Solids and Water Clarity." Fundamentals of Environmental Measurements, June 13, 2014, pages 2-3, https://www.fondriest.com/environmental-measurements/parameters/water-quality/turbidity-total-suspended-solids-water-clarity/ (accessed on April 5, 2022).

[415] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.2.b., page 9.

[416] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.2.c., pages 9-10.

[417] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.3., page 10.

- Implement the follow-up investigation procedures in the event of an exceedance of the criteria.[418]

In addition to the illicit discharge monitoring program, the MRP under the prior permit included receiving waters monitoring, which along with wet weather monitoring, required the permittees to "analyze a minimum of two dry weather samples from each triad station per monitoring year," which could be done using grab samples.[419] The dry weather samples had to be analyzed for the following constituents:

> Trace metals: total cadmium, total chromium, total copper, total nickel, total lead, total zinc;
>
> Nutrients: ammonia, total Kjeldahl nitrogen, nitrate, total phosphorus;
>
> Bacteria: total coliform, fecal coliform, E. coli;
>
> Pesticides: diazinon, chlorpyrifos, other organophosphate pesticides;
>
> Conventionals: temperature, pH, hardness, specific conductance, dissolved oxygen, MBAS;
>
> Polycyclic aromatic hydrocarbons;
>
> Volatiles; and
>
> Total suspended solids.[420]

The permittees were required to use the data results from the receiving water monitoring to evaluate the extent and cause of the pollutants in receiving waters. Specifically, the permittees were required to use Toxicity Identification Evaluations (TIEs) to determine the causes and Toxicity Reduction Evaluations (TREs) to identify sources.

In addition, the receiving water monitoring program included tributary monitoring where the permittees were required to:

- Collect a grab sample from two dry weather events during each monitoring year at the following four tributary stations: (1) Warm Springs Creek, near the confluence with Murrieta Creek; (2) Santa Gertudis Creek, near the confluence with Murrieta Creek; (3) Long Canyon Creek near the confluence with Murrieta Creek; and (4) Redhawk Channel, near the confluence with Temecula Creek.[421]

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[418] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.3., page 10.

[419] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A., page 3.

[420] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Table 1, pages 3-4.

[421] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A.5.a., page 7.

- If flow is insufficient to collect a sample, this shall be documented in the subsequent annual report.[422]
- Tributary samples shall be analyzed for constituents of concern. Constituents of concern shall be determined based on exceedances of water quality objectives at respective triad and dry weather monitoring stations, as well as land uses in the area.[423]

The MRP also required that the priority toxic pollutants identified in the CTR be monitored under all monitoring programs and analyzed.[424]

b. The requirements imposed by Sections C. and F.4.d. and e., and Section II.C. of Attachment E of the test claim permit do not mandate a new program or higher level of service.

i. Sections C. and F.4.d. and e., and Section II.C. of Attachment E of the test claim permit establish NALs for specified pollutants and when an exceedance of a NAL is detected during monitoring, the permit requires investigation, inspection, follow-up and reporting and requires the claimant to immediately eliminate all detected illicit discharges, discharge sources, and connections.

The test claim permit contains the same receiving water limitations and discharge prohibitions as the prior permit, including the requirement to effectively prohibit non-stormwater discharges into the MS4 unless authorized by another permit or not prohibited and the prohibition of discharges from the MS4 that cause or contribute to a violation of water quality standards.[425]

While the prior permit directed the copermittees to develop numeric criteria for pollutants to determine when an exceedance of a pollutant occurred requiring follow-up actions and elimination of the illicit discharge, the test claim permit establishes numeric action levels "to help provide an assessment of the effectiveness of the prohibition of non-storm water discharges" specifically for fecal coliform, enterococci, turbidity, pH, dissolved oxygen, total nitrogen, total phosphorus, methyl blue active substances (MBAS), iron, manganese in inland surface waters, and for priority pollutants (cadmium, copper, chromium III, chromium IV (hexavalent), lead, nickel, silver, and zinc), and requires the permittees to monitor for these action levels.[426] The action levels are based on existing narrative or numeric water quality objectives and criteria defined in the Basin Plan, the Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and the State Policy for Implementation of Toxics Standards

[422] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A.5.b., page 8.

[423] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A.5.c., page 8.

[424] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.C.i., page 11.

[425] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 199-200, 270-271 (test claim permit, Sections A. and B., and Attachment A.).

[426] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 204-205 (test claim permit, Section C.5.).

for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP).[427] Specifically, action levels for fecal coliform, enterococci, turbidity, pH, dissolved oxygen, total nitrogen, total phosphorus, MBAS, iron, and manganese in inland surface waters were established as follows:

> For discharges to inland surface waters, action levels are based on the USEPA water quality criteria for the protection of aquatic species, the USEPA water quality criteria for the protection of human health, water quality criteria and objectives in the applicable State plans, effluent concentration available using best available technology, and 40 CFR 131.38. Since the assumed initial dilution factor for the discharge is zero and a mixing zone is not allowed, a non-storm water discharge from the MS4 could not cause an excursion from numeric receiving water quality objectives if the discharge is in compliance with the action levels contained in the Order.[428]

And action levels for the priority pollutants were established as follows:

> Priority pollutants analyzed included Cadmium, Copper, Chromium, Lead, Nickel, Silver and Zinc. These priority pollutants are likely to be present in non-storm water MS4 discharges (see Finding C.3) though dissolved metal effluent monitoring was not conducted under the previous Order. The most stringent applicable water quality criteria have been identified for these seven metals and, excluding Chromium (VI), and all are dependent on receiving water hardness. The conversion factors for Cadmium and Lead are also water hardness dependent (40 CFR [section] 131.38(b)(2)). These levels are established as the action levels for these constituents.
>
> While effluent monitoring is not available from the previous Order, the monitoring that was done for metal concentrations in receiving waters often lacked a measurement of receiving water hardness. Due to the multiple point source discharges of non-storm water from the MS4, a discharge may enter a receiving water whose hardness will vary temporally. In addition, hardness may vary spatially within and among receiving waters.
>
> However, other information is available to determine the appropriateness of an action level. Existing monitoring concentrations absent of receiving water data, no dilution credit or mixing zone allowance, current 303(d) listings of receiving waters for other pollutants, receiving water monitoring data, and the classification of waters as critical habitat for endangered and species of concern, provide evidence that NALs are appropriate for these priority pollutants at this time in

[427] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 480 (Fact Sheet/Technical Report).

[428] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 481 (Fact Sheet/Technical Report).

> order to ensure that the Copermittees comply with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s.[429]

NALs were established because the Regional Board found that dry weather monitoring in receiving waters that was conducted under the prior permit identified the presence of bacteria, pH, dissolved oxygen, nitrate, turbidity, MBAS, and metals, all in concentrations that exceed water quality criteria.[430] The Regional Board also found that the exceedances relating to non-stormwater discharges now require it to establish TMDLs for the pollutants to eliminate the impairment in the waters and until that is done, early control actions are warranted and required:

> . . . there is a reasonable potential that municipal storm water and non-storm water discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria (including Fecal Coliform and E. Coli), Copper, Manganese, Iron, Chlorpyrifos, Diazinon, Sulfates, Phosphorous, Nitrogen, Total Dissolved Solids (TDS), and Toxicity. In accordance with CWA section 303(d), the San Diego Water Board is required to establish TMDLs for these pollutants to these waters to eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Copermittees are warranted and required pursuant to this Order.[431]

The activities required by the test claim permit are cross-referenced in Sections C., F.4.d. and e., and Section II.C. of Attachment E., and are listed below with citations to each activity.

1. Each copermittee, beginning no later than July 1, 2012, must implement the NAL monitoring as described in Attachment E of this Order.[432]

   Attachment E is the Monitoring and Reporting Program for the test claim permit, and Section II.C. of Attachment E requires each copermittee to collaborate with the other copermittees to develop, conduct, and report on a year-round watershed based dry weather non-storm water MS4 discharge monitoring program. The monitoring program

[429] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 481-482 (Fact Sheet/Technical Report, Directive C).

[430] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 481 (Fact Sheet/Technical Report, Discussion of Directive C).

[431] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 463 (Fact Sheet/Technical Report, Discussion of Finding E.9.).

[432] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 202, 250 (test claim permit, Sections C.1., F.4.d.). Section C.1. states that "Each copermittee, beginning no later than July 1, 2012, must implement the NAL monitoring as described in Attachment E of this Order." Section F.4.d. requires that each copermittee to conduct dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect illicit discharges and connections in accordance with Attachment E.

must also be designed to assess the contribution of dry weather flows to Clean Water Act section 303(d) listed impairments.[433]

In the interim period until the dry weather non-storm water effluent analytical monitoring program is implemented, each copermittee is required to continue to implement dry weather field screening and analytical monitoring as it was most recently implemented pursuant to the prior permit.[434]

2. The monitoring program must include the following components:

   a. MS4 Outfall monitoring. Sampling stations must be located at major outfalls to allow monitoring of effluent at the end of pipe prior to discharge into the receiving waters and other outfall sampling points (or any other point of access such as manholes) identified by the copermittees as potential high risk sources of polluted effluent. The copermittees must develop their monitoring plans to sample a representative percentage of major outfalls and identified stations within each hydrologic subarea.[435]

   b. Clearly identify each dry weather effluent analytical monitoring station on the MS4 map as either a separate geographic information system (GIS) layer or a map overlay.[436]

   c. Develop or update written procedures and implement effluent analytical monitoring including field observations, monitoring, and analyses to be conducted. These procedures must be consistent with 40 CFR part 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants. At a minimum, the procedures must meet the following criteria:

      - Sampling Frequency. Sample a representative percentage of major outfalls and identified stations within each hydrologic subarea. All monitoring conducted must be preceded by a minimum of 72 hours of dry weather.
      - If a ponded MS4 discharge is observed at a monitoring station, record the observation and collect at least one grab sample. Estimate the discharge flow by measuring the width of water surface, approximate depth of water, and approximate flow velocity.

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[433] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 309 (test claim permit, Attachment E, Section II.C.)

[434] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 309 (test claim permit, Attachment E, Section II.C.3.)

[435] "A representative percentage determination must consider hydrologic conditions, total drainage area of the site, population density of the site, traffic density, age of the structures or buildings in the area, and land use types (commercial, residential and industrial)." Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 309-310 (test claim permit, Section C.4.; Attachment E., Sections II.C.1.a.(1) and II.C.1.b.(1), footnote 12).

[436] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 309 (test claim permit, Attachment E, Section II.C.2.a.(2)).

- Effluent samples must undergo analytical laboratory analysis for (a) all constituents described in Table 1. Analytical Testing for Mass Loading and Stream Assessment of this Order,[437] (b) constituents with assigned NALs, and (c) Total Residual Chlorine.
- If the station is dry (i.e. no flowing or ponded MS4 discharge is observed), make and record all applicable observations on the MS4 outfall and receiving waters, including any evidence of past non-stormwater flows and the presence of trash.[438]

3. Investigate Source of Exceedance:
   a. Develop or update response criteria for dry weather non-stormwater effluent analytical monitoring results that include the NALS as described in Section C., an evaluation of LC_{50} levels for toxicity to appropriate test organisms,[439] and a consideration of 303(d) listed waterbodies and environmentally sensitive areas, to determine when follow-up investigations will be performed in response to monitoring.[440]
   b. In response to an exceedance of a NAL, the copermittees having jurisdiction must investigate and seek to identify the source of the exceedance in a timely manner, as follows:
      - Obvious illicit discharges (i.e. color, odor, or significant exceedances of action levels) must be investigated immediately.
      - Field screen data. Within two business days of receiving dry weather field screening results that exceed action levels, the copermittee(s) having jurisdiction

[437] Table 1 Analytical Testing for Mass Loading (II.A.1.) and Stream Assessment (II.A.2.): Conventionals, Nutrients, Hydrocarbons: Total Dissolved Solids, Total Suspended Solids, Turbidity, Total Hardness, pH, Specific Conductance, Temperature, Dissolved Oxygen, Total Phosphorus, Dissolved Phosphorus, Nitrite, Nitrate, Total Kjeldahl Nitrogen, Ammonia, Biological Oxygen Demand, 5-day, Chemical Oxygen Demand, Total Organic Carbon, Dissolved Organic Carbon, Methylene Blue Active Substances, Oil and Grease, Sulfate. Pesticides: Diazinon, Chlorpyrifos, Malathion, Carbamates, Pyrethroids. Metals (Total and Dissolved): Arsenic, Cadmium, Total Chromium, Hexavalent Chromium, Copper, Lead, Iron, Manganese, Nickel, Selenium, Zinc, Mercury, Silver, Thallium. Bacteriological (mass loading): E. coli, Fecal Coliform, Enterococcus. (Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 301 (test claim permit, Attachment E, Table 1).

[438] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 250, 310 (test claim permit, Section F.4.d.; Attachment E, Section II.C.1.b.).

[439] Median lethal concentration, or LC50, is the average concentration of a chemical capable of killing one-half of a population of test animals exposed to the chemical under test conditions. Exhibit X (30), Medical Dictionary, LC50, https://medical-dictionary.thefreedictionary.com/LC50 (accessed on April 6, 2022).

[440] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 251, 311 (test claim permit, Section F.4.e.1.; Attachment E, Section II.C.2.a.).

must either initiate an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation must be included in the annual report.

- Analytical data. Within five business days of receiving analytical laboratory results that exceed action levels, the copermittee(s) having jurisdiction must either initiate an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation must be included in the annual report.[441]

c. Depending on the source of the exceedance, the following action must be taken:[442]

- If the source is natural in origin and in conveyance into the MS4, then the copermittee must report its findings and documentation of its source investigation in its annual report.[443]
- If the source is an illicit discharge or connection, then the copermittee must eliminate the discharge to its MS4 and report the findings, including any enforcement actions taken, and documentation of the source investigation in its annual report. If the copermittee is unable to eliminate the source of discharge prior to the annual report submittal, then the copermittee must submit, as part of its annual report, its plan and timeframe to eliminate the source.[444]
- If the source is an exempted category of non-stormwater discharge, then the copermittee must determine if this is an isolated circumstance or if the category of discharges must be addressed through the prevention or prohibition. The copermittee must submit its findings including a description of the steps taken to address the discharge and the category of discharge in its annual report. The steps taken must include relevant updates to or new ordinances, orders, or other legal means of addressing the category of discharge and the anticipated schedule for doing so. The copermittee must submit a summary of its findings with the Report of Waste Discharge.[445]

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[441] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 251, 311 (test claim permit, Section F.4.e.2.; Attachment E, Section II.C.2.b.).

[442] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 202, 311 (test claim permit, Section C.2.; Attachment E, Section II.C.2.b.).

[443] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 202 (test claim permit, Section C.2.a.).

[444] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 202 (test claim permit, Section C.2.b.).

[445] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 202 (test claim permit, Section C.2.c.).

- If the source is a non-storm water discharge in violation or potential violation of an existing separate NPDES permit, then the copermittee must report, within three business days, the findings including all pertinent information regarding the discharger and discharge characteristics to the Regional Board.[446]
- If the source is unidentifiable after taking and documenting reasonable steps to do so, then the copermittee must perform additional focused sampling. If the results of the additional sampling indicate a recurring exceedance of NALs with an unidentified source, then the copermittee must update its programs (including, where applicable, updates to the watershed workplan, retrofitting considerations, and program effectiveness work plans) within a year to address the common contributing sources and include the updates in its annual report.[447]

d Respond to notifications: Each copermittee must respond to and resolve each reported incident (e.g., public hotline, staff notification, etc.) made to the copermittee in a timely manner. Criteria may be developed to assess the validity of, and prioritize the response to, each report.[448]

e. Report, during any annual reporting period in which one or more exceedances of NALs have been documented, a description of whether and how the observed exceedances did or did not result in a discharge from the MS4 that caused, or threatened to cause or contribute to a condition of pollution, contamination, or nuisance in the receiving waters.[449]

The test claim permit further explains that an exceedance of a NAL does not alone constitute a violation of the permit, but could indicate non-compliance with the requirement to effectively prohibit non-stormwater discharges. A failure to timely undertake required source investigation and elimination actions following an exceedance of a NAL, however, is a violation of the permit.

> An exceedance of an NAL does not alone constitute a violation of the provisions of this Order. An exceedance of an NAL may indicate a lack of compliance with the requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions set forth in Sections A and B of this Order. Failure to timely implement required actions specified in this Order following an exceedance of an NAL constitutes a violation of this Order. Neither the absence of exceedances of NALs nor compliance with required actions following observed exceedances, excuses any non-compliance

[446] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 202-203 (test claim permit, Section C.2.d.).

[447] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 203 (test claim permit, Section C.2.e.).

[448] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 251 (test claim permit, Section F.4.e.3.).

[449] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 203 (test claim permit, Section C.3.).

with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s or any non-compliance with the prohibitions in Sections A and B of this Order.[450]

ii. The requirements imposed by Sections C. and F.4.d. and e., and Section II.C. of Attachment E of the test claim permit do not mandate a new program or higher level of service.

The claimants contend that Sections C., F.4.d. and e., and Section II.C. of Attachment E. impose reimbursable state-mandated activities and that federal law does not require the imposition of numeric action levels for pollutants for MS4 NPDES permit holders.

> The language of the CWA, as well as the relevant authority discussing federal requirements for an MS4 NPDES Permit under the Act, confirm that no numeric limits, whether or not styled as "action levels," are *required* to be included within an MS4 permit. (*See, e.g., Defenders of Wildlife, supra*, 191 F.3d at 1163 and 1165 ["Industrial discharges must comply strictly with State water-quality standards," while "Congress chose not to include a similar provision for municipal storm-sewer discharges;" "the *statute unambiguously demonstrates* that Congress did not require municipal storm-sewer dischargers to strictly comply with 33 U.S.C. § 1311(b)(1)(C)."]; *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 874 ("*BIA*") ("With respect to municipal stormwater discharges, Congress clarified that the EPA has the authority to fashion NPDES Permit requirements to meet water quality standards without specific numeric effluent limits and to instead impose 'controls to reduce the discharge of pollutants to the maximum extent practicable.'"); *Divers' Environmental Conservation Organization v. State Water Resources Control Board* (2006) 145 Cal.App.4th 246, 256 ("In regulating stormwater permits the EPA has repeatedly expressed a preference for doing so by the way of BMPs, rather than by way of imposing either technology-based or water quality based numerical limitations."); State Board Order No. 2000-11, p. 3 ("In prior orders this Board has explained the need for the municipal stormwater programs *and the emphasis on BMPs in lieu of numeric effluent limitations*.")(emphasis supplied); State Board Order No. 2006-12, p. 17 ["Federal regulations do not require numeric effluent limitations for discharges of stormwater."]; and State Board Order No. 91-03, pgs. 30-31 ("*We . . . conclude that numeric effluent limitations are not legally required*. Further we have determined that the program of prohibitions, source control measures and 'best management practices' set forth in the Permit constitutes effluent limitations as required by law.'") (emphasis supplied).[451]

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[450] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 203 (Directive C.3.).

[451] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 42 (Test Claim narrative).

The claimants further contend that NALs are similar to strict numeric effluent limits in that they impose new mandated requirements on the claimants to address exceedances of NALs. Upon an exceedance, the claimants are required to implement various measures to comply with NALs, regardless of the feasibility of complying. Failure to address NAL exceedances is a violation of the test claim permit. "In light of these facts, the NAL mandates went beyond what is required to be imposed in an MS4 permit, and was therefore not a federal mandate. Having only general authority in the CWA regulations, the RWQCB made a 'true choice' in deciding to impose these specific mandates."[452] Finally, the claimants contend that there were no NAL-related requirements in the prior permit.[453]

The Water Boards contend that the imposition of NALs do not constitute a reimbursable state-mandated program, but are necessary to meet the federal requirement that each permittee effectively prohibit all types of unauthorized non-storm water discharges into its MS4. This requirement has been in place for decades. The NALs provisions are designed to help achieve compliance with the federal standard — not to impose a new program or a higher level of service. The level of service is the same as has been required and expected of copermittees in prior permits. Like the test claim permit, the prior permit contained specific non-stormwater or dry-weather monitoring and follow-up requirements, for example:[454]

> Directive B.1., ["Each permittee shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit or authorized in accordance with Requirements B.2. and B.3 below."], Directive B.4, "Each Permittee shall examine its Illicit Discharge Monitoring results ... to identify water quality problems which may be the result of any non-prohibited discharge category(ies) listed above in Requirement B.2. Follow-up investigations shall be conducted as necessary to identify and control ... [,]" and Directive J.4., "Each Permittee shall develop numeric criteria in accordance with section I1.B.3 of the MRP to determine when follow-up actions will be necessary."[455]

The Water Boards further contend that the action levels are based on applicable water quality objectives from the Basin Plan and other water quality control plans. The determination to include action levels resulted from evaluation of available information leading to the conclusion

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[452] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 43 (Test Claim narrative), citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal. 5th 749, 765; *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1593.

[453] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 43 (Test Claim narrative).

[454] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 22-23.

[455] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 23, footnote 114.

that claimants' reliance on existing BMPs for almost 20 years had yet to result in compliance with applicable water quality standards.[456]

The Commission finds that the requirements imposed by Sections C. and F.4.d. and e., and Section II.C. of Attachment E. of the test claim permit do not mandate a new program or higher level of service.

First, the claimants mistakenly rely on provisions of the CWA that require NPDES permits authorizing *stormwater* discharges from MS4s, to reduce the discharge of pollutants to the maximum extent practicable (MEP) under 33 U.S. Code section 1342(p)(3)(B)(iii), to argue that the requirements in Sections C. and F.4.(d) and (e) of the test claim permit are mandated by the state. Federal law includes a separate, more stringent requirement for *non-stormwater* discharges into the MS4. As indicated in the background for this section, 33 U.S. Code section 1342(p)(3)(B)(ii) requires that permits for discharges from MS4s "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers."[457] The distinction between the requirements for stormwater and non-stormwater discharges is explained in Finding 14 of the test claim permit as follows:

> Non-storm water (dry weather) discharge from the MS4 is not considered storm water (wet weather) discharge and therefore is not subject to regulation under the Maximum Extent Practicable(MEP) standard from CWA 402(p)(3)(B)(iii), which is explicitly for "Municipal . . . *Stormwater Discharges* (emphasis added)" from the MS4. Rather, non-storm water discharges, per CWA 402(p)(3)(B)(ii), are to be effectively prohibited.[458]

US EPA adopted regulations to implement the effective prohibition of non-stormwater discharges into the MS4 on November 16, 1990, by requiring operators of MS4s to submit, as part of their application for a NPDES permit, a description of their existing management program to control pollutants from the MS4 and the existing program to identify illicit connections to the MS4.[459] The application must also include the results of a field screening analysis for illicit connections and illegal dumping.[460] The federal regulations require that field screening points or major outfalls shall be randomly located throughout the storm sewer system and selected by placing a grid over a drainage system map that identifies those cells of the grid that contain a segment of the storm sewer system or major outfall. The field screening analysis shall include a narrative description of visual observations made during dry weather periods. If any flow is observed, grab samples must be collected and analyzed for color, odor, turbidity, the presence of an oil sheen or surface scum, and any other relevant observations regarding the potential presence of non-stormwater discharges or illegal dumping. In addition, a narrative

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[456] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 21-22.

[457] United States Code, title 33, section 1342(p)(3)(B)(ii) (Public Law 100-4).

[458] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 187 (test claim permit, Finding 14.).

[459] Code of Federal Regulations, title 40, section 122.26(d)(1)(v).

[460] Code of Federal Regulations, title 40, section 122.26(d)(1)(iv)(D).

description of the results of a field analysis using suitable methods to estimate pH, total chlorine, total copper, total phenol, and detergents (surfactants) shall be provided, along with a flow rate.[461]

Federal regulations also require a proposed management program to detect and remove illicit discharges.[462] The program must include a description of procedures for ongoing field screening activities, including areas or locations to be evaluated;[463] and procedures to investigate portions of the MS4 that, based on field screening or other information, indicate a reasonable potential for containing illicit discharges or other sources of non-storm water pollution.[464] Federal regulations also contain reporting requirements.[465] When adopting these regulations, the US EPA stated the following:

> Today's rule defines the term "illicit discharge" to describe any discharge through a municipal separate storm sewer that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not authorized under the CWA. Section 402(p)(3)(B) of the CWA requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer. As discussed in more detail below, today's rule begins to implement the "effective prohibition" by requiring municipal operators of municipal separate storm sewer systems serving a population of 100,000 or more to submit a description of a program to detect and control certain non-storm water discharges to their municipal system. Ultimately, such non-storm water discharges through a municipal separate storm sewer must be either removed from the system or become subject to an NPDES permit . . . .[466]

If a municipality does not implement a program to detect and remove illicit discharges, or fails to obtain an NPDES permit to specifically allow for the discharge, then the municipality violates the CWA and such noncompliance constitutes "grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application" under federal law.[467]

Accordingly, federal law has long required the claimants to effectively prohibit non-stormwater discharges by implementing a program to detect and remove illicit discharges, which includes field screening and monitoring; preparing a map overlay of the monitoring stations and field screening points; procedures to investigate portions of the MS4 that, based on field screening or

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[461] Code of Federal Regulations, title 40, section 122.26(d)(1)(iv)(D).

[462] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B).

[463] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(2).

[464] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(3).

[465] Code of Federal Regulations, title 40, section 122.48.

[466] Exhibit X (33), NPDES Permit Application Regulations for Storm Water Discharges; Final Rule, 55 Federal Register 47990 (November 16, 1990), page 6.

[467] Code of Federal Regulations, title 40, sections 122.26(d)(2)(iv)(B), and 122.41(a).

other information, indicate a reasonable potential for containing illicit discharges or other sources of non-stormwater pollution; removal of the discharge; and reporting the results. These activities are not new.

In addition, the claimants mistakenly contend that the NALs "are similar to strict numeric effluent limits in that they impose new mandated requirements on the Copermittees to meet such numeric limits."[468] The test claim permit simply identifies action levels for each pollutant that, if detected in monitoring and field screening to be in excess of the action level, triggers the investigation, identification of the discharge, removal, and reporting activities required by federal law. The claimants do not violate the permit by exceeding the NAL, as implied by the claimant; a violation occurs only if the claimant fails to timely implement the required actions following an exceedance of an action level.[469] [470] In this sense, NALs established in the test claim permit function the same as the prior permit, which required the claimant to identify numeric criteria to determine if significant sources of pollutants were present in dry weather non-stormwater discharges.[471] Under both permits, the action levels or criteria are intended to determine the presence of an illicit discharge, which then triggers the federal requirements to investigate, identify, and remove the illicit discharge, and report the findings to the Regional Board.

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[468] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 43 (Test Claim narrative).

[469] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 203 (test claim permit, Section C.3.).

[470] This is in contrast to the industrial dischargers, which are subject to strict liability standards for exceeding effluent limits. Industrial dischargers are required to meet applicable effluent limitations with the "best practicable control technology currently available," and are required to achieve "any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance…or any other Federal law or regulations, or required to implement any applicable water quality standard established pursuant to this chapter." United States Code, title 33, section 1311(b)(1)(C); *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1166. The US EPA's Multi-Sector General Permit for Stormwater Discharges, applicable to industrial activity, states simply, "Your discharge must be controlled as necessary to meet applicable water quality standards." Any exceedance of an applicable water quality standard by an industrial discharger requires corrective action, reporting, and potential monetary penalties for failing to strictly comply with the effluent limit. Exhibit X (14), EPA, Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity, May 27, 2009, pages 21-24, 183, ("The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act…").

[471] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 594 (Order R9-2004-0001, Section J.4.).

As indicated above, the CWA requires that NPDES permits for MS4s "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers."[472] Federal law also requires that if a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criteria, the Regional Board must develop permit limits as necessary to meet water quality standards.[473] In this case, the Regional Board found, based on the dry weather monitoring in receiving waters conducted under the prior permit, that concentrations of bacteria, pH, dissolved oxygen, nitrate, turbidity, MBAS, and metals exceed water quality criteria, and that the exceedances relating to non-stormwater discharges require it to now establish TMDLs.[474] Thus, the Regional Board established the action levels that trigger the federally-required activities instead of continuing to allow the claimants to identify the criteria for the presence of an illicit discharge. The NALs were established by the Regional Board "at levels appropriate to protect water quality standards [, which] is expected to lead to the identification of significant sources of pollutants in dry weather non-storm water discharges."[475] The action levels are based on previously adopted numeric or narrative water quality objectives and criteria for pollutants in the receiving waters as identified in the Ocean Plan; the Basin Plan; the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP); and the California Toxics Rule.[476] The action levels determine the presence of an illicit discharge detected with monitoring and field screening, which then triggers the existing federal requirements to investigate, identify, and remove the illicit discharge, and report the findings to the Regional Board.

The test claim permit, however, does contain more specificity to effectively prohibit non-stormwater discharges and to protect the region's water quality standards, when compared to the prior permit. For example, the test claim permit includes deadlines to investigate the potential illicit discharge when screening results exceed action levels and to report to the Regional Board.[477] Although the requirements to investigate and report were contained in the prior permit and are not new, the prior permit did not specify deadlines. A deadline may affect the timing, but it does not require that any new activities be performed.

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[472] United States Code, title 33, section 1342(p)(3)(B)(ii) (Public Law 100-4).

[473] Code of Federal Regulations, title 40, section 122.44(d)(1).

[474] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 463, 482 (Fact Sheet/Technical Report).

[475] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 197 (test claim permit, Finding E.10.).

[476] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 197-198 (test claim permit, Finding E.10.).

[477] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 202-203, 251, 311 (test claim permit, Sections C.2.d., F.4.e.2., and Attachment E, Section II.C.2.b.).

The test claim permit also specifies that claimants must "conduct, and report on a year-round watershed based Dry Weather Non-stormwater MS4 Discharge Monitoring Program."[478] The prior permit required that "dry weather analytical and field screening monitoring shall be conducted at each identified station at least twice between May 1st and September 30th of each year, *or as more frequently as the Permittee determines is necessary to comply with the order*."[479] The Findings in the test claim permit indicate that the permittees had not previously complied with applicable water quality standards and did not effectively prohibit non-stormwater discharges under the prior permit. Finding 9 states the following:

> The Copermittees' water quality monitoring data submitted to date documents persistent violations of Basin Plan water quality objectives for various runoff-related pollutants (indicator bacteria, dissolved solids, turbidity, metals, pesticides, etc.) at various watershed monitoring stations. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that runoff discharges are causing or contributing to water quality impairments, and are the leading cause of such impairments in Riverside County.[480]

And Finding 14 states that "dry weather non-storm water discharges have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds and are to be effectively prohibited under the CWA."[481]

The claimants were therefore required by the prior permit to conduct dry weather monitoring and field screening more often than twice per year, and as necessary to comply with the receiving water limitations and discharge prohibitions. Thus, a year-round monitoring program is not a new requirement.

In addition, the test claim permit requires sampling of a representative percentage of major outfalls within each hydrologic area to allow monitoring of effluent at the end of pipe prior to discharge into the receiving waters, and other outfall sampling points (or any other point of access such as manholes) identified by the claimants as potential high risk sources of polluted effluent.[482] This requirement is not new. The prior permit did not specifically require monitoring at major outfalls, but allowed the claimants to select monitoring stations at accessible

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[478] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 309 (test claim permit, Attachment E, Section II.C.).

[479] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.1.a., page 9, emphasis added.

[480] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 186 (test claim permit, Finding 9.).

[481] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 187 (test claim permit, Finding 14.).

[482] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 203, 309 (test claim permit, Section C.4; Attachment E, Section II.C.1.a.1.).

points (i.e., outfalls, manholes or open channels) located downstream of potential sources of illicit discharges (i.e., commercial, industrial, and residential areas), and in a quantity sufficient to represent the MS4 and detect illicit discharges that may occur throughout the system.[483] However, the Clean Water Act has always required an NPDES permittee to monitor its discharges into the waters of the United States in a manner sufficient to determine whether it is in compliance with the permit, including the receiving water limitations and discharge prohibitions.[484] An NPDES permit is unlawful if a permittee is not required to effectively monitor its permit compliance.[485] Thus, the specificity of the sampling locations in the test claim permit does not constitute a new state-mandated activity.

Finally, the test claim permit specifies additional pollutants to be sampled in non-stormwater monitoring based on prior monitoring and the presence in 303(d) listed waterbodies. Under the prior permit, the claimants had to analyze specific conductance or calculate total dissolved solids, turbidity, pH, temperature, and dissolved oxygen in non-stormwater.[486] The test claim permit requires effluent samples of non-stormwater to undergo analytical laboratory analysis for (a) all constituents described in Table 1. Analytical Testing for Mass Loading and Stream Assessment of this Order;[487] (b) constituents with assigned NALs; and (c) Total Residual Chlorine.[488] The Fact Sheet explains that the requirement to test the additional pollutants (including indicator bacteria, nutrients (nitrate and phosphorous), Methylene Blue Active Substances (MBAS), pesticides and metals) was based on the fact that these pollutants exceed

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[483] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.1.a., page 9.

[484] United States Code, title 33, section 1342(a)(2); Code of Federal Regulations, title 40, sections 122.43(a), 122.44(i)(1).

[485] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(F); see also *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1209.

[486] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.B.2.b., page 9.

[487] Table 1 Analytical Testing for Mass Loading (II.A.1) and Stream Assessment (II.A.2): Conventionals, Nutrients, Hydrocarbons: Total Dissolved Solids, Total Suspended Solids, Turbidity, Total Hardness, pH, Specific Conductance, Temperature, Dissolved Oxygen, Total Phosphorus, Dissolved Phosphorus, Nitrite, Nitrate, Total Kjeldahl Nitrogen, Ammonia, Biological Oxygen Demand, 5-day, Chemical Oxygen Demand, Total Organic Carbon, Dissolved Organic Carbon, Methylene Blue Active Substances, Oil and Grease, Sulfate. Pesticides: Diazinon, Chlorpyrifos, Malathion, Carbamates, Pyrethroids. Metals (Total and Dissolved): Arsenic, Cadmium, Total Chromium, Hexavalent Chromium, Copper, Lead, Iron, Manganese, Nickel, Selenium, Zinc, Mercury, Silver, Thallium. Bacteriological (mass loading): E. coli, Fecal Coliform, Enterococcus. (Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 301 (test claim permit, Attachment E, Table 1, page 5.).)

[488] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 250, 310 (test claim permit, Section F.4.d.; Attachment E, Section II.C.1.b.).

water quality limits in receiving waters that are 303(d) listed as impaired, or they were previously identified as present through receiving water monitoring:

> The Order requires an increase in the number and type of pollutants sampled in nonstorm water from major outfalls. To date, Copermittees have not sampled major outfalls, only receiving waters, and sampling was limited to total dissolved solids, dissolved oxygen, pH, turbidity and specific conductance. Additional sampling was generally, though not always, conducted by Copermittees if initial sampling exceeded a Copermittee threshold. With the exception of dissolved oxygen, the current thresholds do not represent water quality objectives, as sampling may not trigger a threshold, but may still be exceeding a water quality objective. This Order requires non-storm water discharges to be sampled for additional pollutants including indicator bacteria, nutrients (nitrate and phosphorous), Methylene Blue Active Substances (MBAS), pesticides and metals. These pollutants are expected to be present in nonstorm water discharges, are pollutants for which receiving waters are 303(d) listed as impaired or have been identified as present through receiving water monitoring.[489]

These requirements, however, are not new. As stated above, federal law has always required an NPDES permittee to monitor its discharges into the waters of the United States in a manner sufficient to determine whether it is in compliance with the permit, including the receiving water limitations and discharge prohibitions.[490] An NPDES permit is unlawful if a permittee is not required to effectively monitor its permit compliance.[491] Furthermore, federal law mandates that permits for discharges from MS4s "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers," unless those discharges are conditionally exempted from this prohibition.[492] To "effectively prohibit" non-stormwater discharges requires the implementation of a program to detect and remove illicit discharges, which under federal law shall contain inspections, on-going field screening, a description of procedures to investigate portions of the MS4 that, based on field screening or other information, indicate a reasonable potential for containing illicit discharges or other sources of non-stormwater pollution.[493] And the prior permit, in Section J., required each permittee to develop and implement an illicit

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[489] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 478 (Fact Sheet/Technical Report).

[490] United States Code, title 33, section 1342(a)(2); Code of Federal Regulations, title 40, sections 122.43(a), 122.44(i)(1).

[491] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(F); see also *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1209.

[492] United States Code, title 33, section 1342(p)(3)(B)(ii) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1).

[493] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B).

discharge detection and elimination program to actively seek and eliminate "all types of illicit discharges and connections excluding those non-storm water discharges that are exempt."[494]

Indicator bacteria, nutrients (nitrate and phosphorous), Methylene Blue Active Substances (MBAS), pesticides and metals were previously identified and exceeded water quality standards in 303(d) listed water bodies. Thus, the claimants were required by federal law and the prior permit to monitor for these pollutants, investigate the source of the pollutants, remove any illicit discharges or connections causing the water quality impairment, and report the results and the test claim permit requirements to perform these activities are not new.

Moreover, the requirements do not constitute a new program or higher level of service. The Supreme Court has clarified that "simply because a state law or order may *increase the costs* borne by local government *in providing services*, this does not necessarily establish that the law or order constitutes an *increased or higher level* of the resulting 'service to the public' under article XIII B, section 6, and Government Code section 17514."[495] Rather, the new program or higher level of service must "increase the actual level or quality of governmental services provided."[496] In this case, federal law has long required that all dischargers, including private industrial dischargers and local governments effectively prohibit "all types" of non-stormwater discharges identified as sources of pollutants to waters of the United States.[497] The requirements imposed by the test claim permit do not change or increase the level or quality of service to the public; they simply make the claimants comply with existing federal law imposed on all dischargers to comply with water quality standards.[498]

Accordingly, the Commission finds that the requirements of Sections C. and F.4.d. and e., and Section II.C. of Attachment E. of the test claim permit are not new, are required by federal law, and do not mandate a new program or higher level of service.

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[494] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 593 (Order R9-2004-0001, Section J.1.).

[495] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 876-877. (Emphasis in original.)

[496] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 877.

[497] United States Code, title 33, section 1342(p)(3)(B)(ii) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1). In addition, MS4 dischargers must demonstrate adequate legal authority, through ordinance, permit, or other means, to prohibit illicit discharges to the MS4, Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(B).

[498] Code of Federal Regulations, title 40, sections 122.41(a) and 122.44(d)(1).

3. Section D. of the Test Claim Permit, Which Addresses Stormwater Action Levels (SALs), Does Not Mandate a New Program or Higher Level of Service Because the Activities to Monitor Discharges of Stormwater, Determine if the Discharges Are Meeting Existing Water Quality Standards Identified in the SALs and If Not, Implement or Modify BMPs to Meet Water Quality Standards and Report that Information to the Regional Board Were Required by the Prior Permit and Are Mandated by Existing Federal Law..

The claimants pled Section D., of the test claim permit,[499] which establishes numeric stormwater action levels (SALs) that are incorporated into the wet weather monitoring for seven designated pollutants (turbidity,[500] nitrate and nitrite,[501] phosphorus and the following metals: cadmium, copper, lead, and zinc). The action levels are based on US EPA Rain Zone 6 Phase I MS4 monitoring data for pollutants in stormwater, and reflect the water quality standards in the Basin Plan, the federal California Toxics Rule (CTR), and the US EPA Water Quality Criteria.[502] Section D., requires the copermittees to implement a stormwater pollution control program, including monitoring MS4 outfalls and implementing necessary stormwater controls if there is an

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[499] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 44-45 (Test Claim narrative).

[500] "Turbidity is a measure of the clarity of a water body and is related to erosion and sedimentation which impacts streams and lakes." Exhibit X (21), EPA, Turbidity, https://nepis.epa.gov/Exe/tiff2png.cgi/P10070Q2.PNG?-r+75+-g+7+D%3A%5CZYFILES%5CINDEX%20DATA%5C06THRU10%5CTIFF%5C00000726%5CP10070Q2.TIF (accessed on April 7, 2022).

[501] "Most nitrogenous materials in natural waters tend to be converted to nitrate, so all sources of combined nitrogen, particularly organic nitrogen and ammonia, should be considered as potential nitrate sources. Primary sources of organic nitrates include human sewage and livestock manure, especially from feedlots. The primary inorganic nitrates which may contaminate drinking water are potassium nitrate and ammonium nitrate both of which are widely used as fertilizers. . . . Nitrate in drinking water can be responsible for a temporary blood disorder in infants called methemoglobinemia (blue baby syndrome). In infants less than six months old, a condition exists in their digestive systems which allows for the chemical reduction of nitrate to nitrite. The nitrite absorbs through the stomach and reacts with hemoglobin to form methemoglobin, which does not have the oxygen carrying capacity of hemoglobin. Thus, the oxygen deficiency in the infant's blood results in the "blue baby" syndrome. When the nitrate-contaminating source is removed, the effects are reversible. Since ingestion of water containing high nitrate concentrations can be fatal to infants and livestock, the U.S. EPA has established a level of 10 mg/L total nitrate (measured as nitrogen) as the Maximum Contaminant Level Goal (MCLG) and Maximum Contaminant Level (MCL) in drinking water." Exhibit X (44), Water Quality Association, Nitrate/Nitrite Fact Sheet, 2014, pages 2-3, https://www.wqa.org/Portals/0/Technical/Technical%20Fact%20Sheets/2014_NitrateNitrite.pdf (accessed on April 7, 2022).

[502] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 431 (Fact Sheet/Technical Report, Finding D.1.h.).

exceedance of a SAL, to reduce the discharge of these pollutants in stormwater to the MEP so as not to exceed the SALs.[503] "[I]t is the goal of the SALs, through the iterative and MEP process, to have MS4 storm water discharges meet all applicable water quality standards."[504]

As described below, the Commission finds that Section D. of the test claim permit does not mandate a new program or higher level of service. The SALs imposed by the test claim permit are simply numbers that reflect the existing water quality standards applicable to the waterbodies in the Basin Plan, the California Toxics Rule (CTR), and the US EPA Water Quality Criteria for the pollutants at issue, and if there is an exceedance of a SAL detected with monitoring, then the claimants have to address those exceedances by implementing or modifying BMPs to the MEP as required by existing federal law. Thus, the Regional Board has imposed an iterative, BMP-based compliance regime, using the SALs as a target, or trigger, but leaving substantial flexibility to the permittees to determine how to comply with long-standing federal requirements to monitor, implement BMPs, and report exceedances to the Regional Board. The SALs themselves do not impose any new mandated activities. Moreover, monitoring and implementing BMPs to ensure that stormwater discharges meet water quality standards for these constituents are not new, but have long been required and thus, these activities do not constitute a new program or higher level of service.

a. Background

i. Federal law requires permittees to effectively monitor and implement BMPs to achieve water quality standards, and established water quality criteria for the pollutants at issue in section D.

Federal law requires that permits for discharges from municipal storm sewers "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[505] Federal regulations define "best management practices" as:

> . . . schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.[506]

Applications for an NPDES permit from medium and large MS4 dischargers are required to identify the following information, including monitoring and BMPs proposals, to reduce pollutants to the MEP:

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[503] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 205-206 (test claim permit, Section D.).

[504] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 490 (Fact Sheet/Technical Report).

[505] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[506] Code of Federal Regulations, title 40, section 122.2.

- The location of known municipal storm sewer system outfalls discharging to waters of the United States.[507]
- A list of water bodies that receive discharges from the MS4, including downstream segments, lakes, and estuaries, where pollutants from the system discharges may accumulate and cause water degradation, and a description of water quality impacts.[508]
- Existing quantitative data describing the volume and quality of discharges from the MS4, including a description of the outfalls sampled, sampling procedures and analytical methods used.[509]
- A description of the existing management programs to control pollutants from the municipal separate storm sewer system. The description shall provide information on existing structural and source controls, including operation and maintenance measures for structural controls that are currently being implemented.[510]
- The quality and quantity of discharges covered in the permit application, including:
    - Quantitative data from representative outfalls or field screening points that include samples of effluent analyzed for the pollutants listed in Table II and Table III of appendix D of 40 C.F.R. part 122 (which include, as relevant here, cadmium, copper, lead, and zinc); and for total suspended solids, total dissolved solids, Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD), oil and grease, fecal coliform, fecal streptococcus, pH, total Kjeldahl nitrogen, dissolved phosphorus, total ammonia plus organic nitrogen, total phosphorus, and nitrate/nitrite.
    - Estimates of the annual pollutant load and the event mean concentration of the cumulative discharges to waters of the United States from all identified municipal outfalls for BOD, COD, total suspended solids, dissolved solids, total nitrogen, total ammonia plus organic nitrogen, total phosphorus, dissolved phosphorus, cadmium, copper, lead, and zinc. The estimates shall be accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modeling, data analysis, and calculation methods.
    - A proposed monitoring program for representative data collection that describes the location of outfalls or field screening points to be sampled, why the location is representative, the frequency of sampling, parameters to be sampled, and a description of the sampling equipment.[511]
- A proposed management program that covers the duration of the permit. The management program "shall include a comprehensive planning process which involves

[507] Code of Federal Regulations, title 40, section 122.26(d)(1)(iii)(B).

[508] Code of Federal Regulations, title 40, section 122.26(d)(1)(iv)(C).

[509] Code of Federal Regulations, title 40, section 122.26(d)(1)(iv)(B).

[510] Code of Federal Regulations, title 40, section 122.26(d)(1)(v).

[511] Code of Federal Regulations, title 40, section 122.26(d)(2)(iii)(A)-(D).

public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate." The proposed programs will be considered when developing permit conditions to reduce pollutants in discharges to the MEP.[512]

Federal law then requires the Regional Board to establish conditions, as required on a case-by-case basis, to provide for and ensure compliance with all applicable requirements of the CWA and its implementing regulations.[513]

In addition, when the Regional Board determines that an MS4 discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criteria, the Regional Board is required by federal law to develop NPDES permit effluent limits as necessary to meet water quality standards.[514]

Water quality standards and criteria protect the beneficial uses of any given waterbody and are developed by the states, and included in the Regional Board's Basin Plans.[515] States are required to adopt water quality standards and criteria based on sound scientific rationale that identifies sufficient parameters or constituents to protect the designated use, and numerical values related to any constituents should be based on the US EPA's guidance documents or other defensible methods.[516] US EPA publishes water quality criteria in receiving waters to reflect the latest scientific knowledge on the kind and extent of all identifiable effects on health and welfare, which may be expected from the presence of pollutants in any body of water.[517] And the US EPA's water quality criteria for human health and aquatic life include recommended numeric criteria for the pollutants identified in Section D., of the test claim permit.[518] In addition, on May 18, 2000, the US EPA also established numeric water quality criteria for priority toxic pollutants and other provisions for water quality standards to be applied to waters in the state of California, which is known as the California Toxics Rule (CTR)[519] As the courts have

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[512] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv).

[513] Code of Federal Regulations, title 40, section 122.43(a).

[514] Code of Federal Regulations, title 40, section 122.44(d)(1).

[515] United States Code, title 33, section 1313(a), (c)(1); Code of Federal Regulations, title 40, sections 131.6, 131.10-131.12; Water Code sections 13240, 13241.

[516] Code of Federal Regulations, title 40, section 131.11.

[517] United States Code, title 33, section 1314(a).

[518] Exhibit X (16), EPA, National Recommended Water Quality Criteria - Aquatic Life Criteria Table, https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table (accessed on April 7, 2022); Exhibit X (17), EPA, National Recommended Water Quality Criteria – Human Health Criteria Table, https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table (accessed on April 7, 2022); United States Code, title 33, section 1312.

[519] Code of Federal Regulations, title 40, section 131.38 (65 Federal Register 31682, 31711, May 18, 2000).

explained, the CTR is a water quality standard that applies to "'all waters' for 'all purposes and programs under the Clean Water Act'" [520] as follows:

> The EPA's Summary of the Final CTR Rule provides that "[t]hese Federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the Clean Water Act." [Citation omitted] "All waters (including lakes, estuaries and marine waters) . . . are subject to the criteria promulgated today. Such criteria will need to be attained at the end of the discharge pipe, unless the State authorizes a mixing zone."[521]

All of the metals identified in Section D. of the test claim permit are priority toxic pollutants identified in the CTR.[522]

The CWA requires an NPDES permittee to monitor its discharges into the waters of the United States in a manner sufficient to determine whether it is in compliance with the permit.[523] An NPDES permit is unlawful if a permittee is not required to effectively monitor its permit compliance.[524] Federal regulations further require that samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity and shall be retained for at least five years. Monitoring must be conducted according to approved test procedures, unless another method is required as specified.[525]

Monitoring results must be reported, including any instances of noncompliance.[526] In addition, the permittee is required by federal regulations to report any noncompliance that may endanger health or the environment verbally within 24 hours, followed by a written report within five days. The report shall state whether the noncompliance has been corrected and the steps taken or planned to reduce or eliminate the noncompliance.[527]

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[520] *Santa Monica Baykeeper v. Kramer Metals, Inc.* (2009) 619 F.Supp.2d 914, 927.

[521] *Santa Monica Baykeeper v. Kramer Metals, Inc.* (2009) 619 F.Supp.2d 914, 926, citing 65 Federal Register, pages 31682, 31701.

[522] Code of Federal Regulations, title 40, section 131.38 (65 Federal Register 31717, May 18, 2000).

[523] United States Code, title 33, section 1342(a)(2) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.44(i)(1).

[524] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(F); see also *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1209.

[525] Code of Federal Regulations, title 40, section 122.41(j).

[526] Code of Federal Regulations, title 40, sections 122.41(l)(4), (7); 122.22, 122.48; Code of Federal Regulations, title 40, Part 127.

[527] Code of Federal Regulations, title 40, section 122.41(l)(6).

ii. The prior permit required receiving water monitoring and implementation of best management practices (BMPs) to achieve water quality standards, and if an exceedance occurred, the permittee was required to notify the Regional Board and modify best management practices (BMPs) to meet water quality standards.

The prior permit required the permittees to monitor receiving waters through core monitoring, regional monitoring, and special studies.[528] Core monitoring included mass loading, water column toxicity testing, bioassessment, follow-up analysis and action, and tributary monitoring.[529] Core monitoring required the use of stations where three types of monitoring occur: chemical, toxicity, and bioassessment. At these stations, called triad stations, the copermittees take both wet season — October 1 through April 30[530] — and dry season water samples for analysis.[531] The stations were located at Lower Temecula Creek, Lower Murrieta Creek at the United States Geological Survey Weir, and a representative reference station at a place of the copermittee's choosing which must be evaluated annually for suitability.[532] The first wet weather sample required analysis for the full US EPA priority pollutant list that includes 232 pollutants and water properties, including nitrate and nitrate, phosphorus, and the metals at issue here.[533] Thereafter, the required analysis was limited to 25 pollutants and water properties, including the metals at issue here.[534] When there was a lack of sampling data, the permittees were required to submit an explanation with the annual report.[535] Toxicity testing was performed on crustaceans and algae and bioassessment samples were compared with biological

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[528] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A., page 2.

[529] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A.I.1.-5., pages 2-7.

[530] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 616 (Order R9-2004-0001, Attachment C.).

[531] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A., page 2.

[532] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A.I.1.a., page 2.

[533] The list is codified at Code of Federal Regulations, title 40, section 122, Appendix D.

[534] Trace metals: total cadmium, total chromium, total copper, total nickel, total lead, total zinc; Nutrients: ammonia, total Kjeldahl nitrogen, nitrate, total phosphorus; Bacteria: total coliform, fecal coliform, E. coli; Pesticides: diazinon, chlorpyrifos, other OP [organophosphate] pesticides; Conventionals: Temperature, pH, hardness, specific conductance, dissolved oxygen, MBAS [methyl blue active substances]; PAHs [polycyclic aromatic hydrocarbons]; Volatiles (dry weather only); and total suspended solids. Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Table 1, page 4.

[535] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A.I.1., pages 2-4.

metrics.[536] The results of all three tests were evaluated using Toxicity Identification Evaluations (TIEs) to determine the cause of toxicity, and Toxicity Reduction Evaluations (TREs) to identify sources, and the permittees were required to implement management actions to reduce the pollutants.[537] The permittees were also required to sample and test four specific tributaries for constituents of concern, which were determined from exceedances of water quality objectives from the testing of the triad samples and land use.[538] Finally, the permittees were required to report on monitoring stations, sampling, testing, and analyses in the monitoring program annual report.[539]

The prior permit also required the permittees to meet receiving water limitations that prohibited the discharge of pollutants from the MS4 that cause or contribute to a violation of water quality standards as follows:

1. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses of receiving waters) are prohibited.

2. Each permittee shall comply with Requirement C.l, Prohibition A.2, and Prohibition A.4 as it applies to Prohibition No. 5 in Attachment A of this Order through timely implementation of control measures and other actions to reduce pollutants in urban runoff discharges in accordance with the SWMP and other requirements of this Order including any modifications.[540]

Prohibition A.2., referred to above, prohibited discharges from MS4s that cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater.[541] Prohibition A.4. stated that "[i]n addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in Attachment A to this Order."[542] Prohibition 5 in Attachment A to the prior permit states that the "discharge of waste to inland surface waters,

[536] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.I.2. and 3., pages 4-5.

[537] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.I.4., pages 5-7.

[538] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A.I.5., pages 7-8.

[539] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.B., pages 15-17.

[540] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.2.).

[541] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section A.2.).

[542] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section A.4.).

except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited."[543]

If an exceedance of a pollutant was detected, the permittee was required by Section C.2., of the receiving water limitations to notify the Regional Board and revise its stormwater management program SWMP and monitoring plan to implement additional BMPs as follows:

> 2. … The SWMP shall be designed to achieve compliance with Requirement C. l, Prohibition A.2, and Prohibition A.4 as it applies to Prohibition 5 in **Attachment A** of this Order. If exceedance(s) of water quality standards persist notwithstanding implementation of the SWMP and other requirements of this Order, the permittee shall assure compliance with Requirement C. l, Prohibition A.2, and Prohibition A.4 as it applies to Prohibition 5 in **Attachment A** of this Order by complying with the following procedure:
>
> a) Upon a determination by either a permittee or the SDRWQCB that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the permittee shall promptly notify and thereafter submit a report to the SDRWQCB that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the SWMP annual report unless the SDRWQCB directs an earlier submittal. The report shall include an implementation schedule. The SDRWQCB may require modifications to the report;
>
> b) Submit any modifications to the report required by the SDRWQCB within 30 days of notification;
>
> c) Within 30 days following SDRWQCB approval of the report described above, the permittee shall revise its SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required;
>
> d) Implement the revised SWMP and monitoring program in accordance with the approved schedule.[544]

In addition, the principal permittee was required to submit an annual report on the receiving waters monitoring that included a description of the monitoring results and answers to the following questions:

- Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?

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[543] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 598 (Order R9-2004-0001, Attachment A, Section A.5.).

[544] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.2.), emphasis in original.

- What is the extent and magnitude of the current or potential receiving water problems?
- What is the relative urban runoff contribution to the receiving water problem(s)?
- What are the sources of urban runoff that contribute to receiving water problem(s)?
- Are conditions in receiving waters getting better or worse?[545]

The fourth-year monitoring report also had to include the following information:

- A discussion of any long-term trends that can be detected from existing data (from all previous permit terms).
- Recommendations for future monitoring based on the results of previous efforts and the progress towards answering the management questions listed in Section II.A. of this MRP (bulleted above) and achieving the goals listed in Section I. of this MRP.[546]
- Recommended modifications to individual or watershed SWMPs to address identified source of pollutants in urban runoff.[547]

Finally, the prior permit stated that "nothing in this Order shall be construed to relieve the permittee from civil or criminal penalties for noncompliance."[548]

[545] 2004 MRP, Section III.B., page 16 (which refers to the questions in Section II.A., on page 2.)

[546] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, page 2. Section 1 of the 2004 MRP identifies the following goals:

1. Assess compliance with Order No. R9-2004-001;
2. Measure and improve the effectiveness of the SWMPs;
3. Assess the chemical, physical, and biological impacts of receiving waters resulting from urban runoff;
4. Characterize urban runoff discharges;
5. Identify sources of specific pollutants;
6. Prioritize drainage and sub-drainage areas that need management actions;
7. Detect and eliminate illicit discharges and illicit connections to the MS4; and
8. Assess the overall health of receiving waters.

[547] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, page 16.

[548] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 606 (Order R9-2004-0001, Attachment B, Standard Provisions).

b. Section D. of the test claim permit (SALs), does not mandate a new program or higher level of service.

i. Section D. of the test claim permit establishes stormwater action levels (SALs) for turbidity, nitrate and nitrite, phosphorus, cadmium, copper, lead, and zinc, and requires the claimants to monitor and implement best management practices (BMPs), and when an exceedance of a stormwater action level (SAL) occurs, the copermittees are required to notify the Regional Board and modify the best management practices (BMPs).

The test claim permit, at Finding C.9., explains that the copermittees' monitoring data showed persistent violations of water quality objectives and that runoff discharges are a leading cause of water quality impairments in Riverside County:

> The Copermittees' water quality monitoring data submitted to date documents persistent violations of Basin Plan water quality objectives for various runoff-related pollutants (indicator bacteria, dissolved solids, turbidity, metals, pesticides, etc.) at various watershed monitoring stations. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Riverside County.[549]

The Fact Sheet further explains that water quality in receiving waters downstream of the MS4 discharges failed to meet CTR standards and Basin Plan objectives:

> The Copermittees have produced data that demonstrates water quality objectives are frequently not met during dry and wet weather. The 2009 Report of Waste Discharge and the 2008-2009 Annual Reports document that receiving water monitoring stations often fail to meet water quality objectives established in the Basin Plan.
>
> Water quality in receiving waters downstream of MS4 discharges fail to meet California Toxics Rule standards [footnote omitted] and Basin Plan objectives. Data submitted in the MS4 Annual Reports indicate that at various times chemical, bacteria, pesticide, and metal concentrations may exceed water quality objectives in receiving waters in both wet and dry weather conditions.
>
> There are no other significant NPDES permitted discharges to the creeks. For instance, there are no live-stream discharges of treated waste water in the Riverside County area of the Santa Margarita watershed. The few NPDES permits in the watershed are mainly for recycled water which only discharges occasionally during the rainy season. Because the water quality monitoring indicates exceedances of water quality standards and MS4 discharges are the

[549] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 374 (test claim permit, Finding C.9.).

> main source of pollutants in the watersheds, it can be inferred that the MS4 discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Riverside County.[550]

Thus, Section D. of the test claim permit establishes numeric SALs for turbidity, nitrate and nitrite, phosphorus, cadmium, copper, lead, and zinc that are incorporated into the monitoring requirements for wet weather. The Fact Sheet explains that:

> SALs were developed based upon receiving water monitoring results and CWA section 303(d) impaired waters listings. Nitrogen, Copper and Phosphorous are all pollutants for which receiving waters are 303(d) listed as impaired and for which sufficient data was available to develop SALs. Additionally, receiving water monitoring, including from storm events monitored by the Copermittees, has demonstrated excursions and/or potential excursions, often absent receiving water hardness, above water quality criteria for turbidity (NTU), Cadmium, Lead, and Zinc. SALs were not developed for some pollutants for which receiving waters are 303(d) listed as impaired due to a lack of representative data available. These pollutants are required to be monitored but are not subject to a SAL under the Order.[551]

SALs were developed by using the national US EPA Rain Zone 6 Phase I MS4 stormwater monitoring data which includes MS4 effluent data from Orange, San Diego, Los Angeles, Ventura and San Bernardino counties, were set as the 90th percentile of the dataset for each constituent, and reflect the water quality standards in the Basin Plan, the federal California Toxics Rule (CTR), and the US EPA Water Quality Criteria.[552] "[I]t is the goal of the SALs, through the iterative and MEP process, to have MS4 storm water discharges meet all applicable water quality standards,"[553] and that any exceedance of a SAL indicates BMPs being implemented are insufficient to protect the beneficial uses of waters:

> Since the first permit (adopted 20 years ago), Copermittees have utilized nonnumerical limitations (BMPs) to control and abate the discharge of any pollutants in storm water discharges to the MEP. Copermittees have been accorded 20 years to research, develop, and deploy BMPs that are capable of reducing storm water discharges from the MS4 to levels represented in SALs. Storm Water Action Levels are set at such a level that any exceedance of a SAL will clearly indicate BMPs being implemented are insufficient to protect the Beneficial Uses of waters of the State. Copermittee shall utilize the exceedance

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[550] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 401 (Fact Sheet/Technical Report, Discussion of Finding C.9.).

[551] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 491 (Fact Sheet/Technical Report).

[552] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 376, 431-434, 484 (Fact Sheet/Technical Report).

[553] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 490 (Fact Sheet/Technical Report).

> information as a high priority consideration when adjusting and executing annual work plans, as required by this Permit. Failure to appropriately consider and react to SAL exceedances in an iterative manner creates a presumption that the Copermittee(s) have not complied to the MEP.[554]

Accordingly, Section D. of the test claim permit requires the copermittees to "implement the Wet Weather MS4 Discharge Monitoring as described in Attachment E of this Order, and beginning three years after the Order adoption date, the Copermittees must annually evaluate their data compared to the Stormwater Action Levels (SALs)."[555] The following requirements are imposed by Section D., and the Wet Weather MS4 Discharge Monitoring program in Attachment E:

1. Each copermittee is required collaborate with the other copermittees to develop, conduct, and report on a year-round, watershed-based, wet weather MS4 discharge monitoring program. The monitoring program design, implementation, analysis, assessment, and reporting must be conducted on a watershed basis for each of the hydrologic subareas.[556]
2. The principal copermittee is required to submit to the Regional Board for review and approval, a detailed draft of the wet weather MS4 discharge monitoring program to be implemented. The description must identify and provide the rationale for all constituents monitored, locations of monitoring, frequency of monitoring, and analyses to be conducted with the data generated.[557]
3. The monitoring program is required to include MS4 outfall monitoring and source identification monitoring as follows:
    a) MS4 outfall monitoring. The monitoring program is required to be designed to sample a representative percentage of the major outfalls within each hydrologic subarea and must begin no later than the 2012-2013 monitoring year; is required to characterize pollutant discharges from MS4 outfalls in each watershed during wet weather; must include the rationale and criteria for selection of outfalls to be

[554] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 433 (Fact Sheet/Technical Report, Discussion of Finding D.1.h.).

[555] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 205 (test claim permit, Section D.).

[556] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 205, 307 (test claim permit, Section D.1.; Attachment E., Section II.B.).

[557] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 309 (test claim permit, Attachment E., Section II.B.3.).

monitored; must, at a minimum, include collection of samples for pollutants listed in Table 4;[558] and must comply with the SALs.[559]

- Samples must be collected during the first 24 hours of the stormwater discharge or for the entire storm water discharge if it is less than 24 hours. Grab samples may be utilized only for pH, indicator bacteria, dissolved oxygen, temperature and hardness. All other constituents must be sampled using 24-hour composite samples or for the entire stormwater discharge if the storm event is less than 24 hours.[560]
- Sampling to compare MS4 outfall discharges with total metal SALs is required to include a measurement of receiving water hardness at each outfall. If a total metal concentration exceeds a SAL in Section D., that concentration must be compared to the California Toxic Rule criteria and the EPA one-hour maximum concentration for the detected level of receiving water hardness associated with that sample. If it is determined that the sample's total metal concentration for that specific pollutant exceeds the SAL but does not exceed the applicable one-hour criteria for the measured level of hardness, then the SAL shall be considered not exceeded for that measurement.[561] (Attachment E., Section II.B.1.b.)[562]

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[558] Table 4 of Attachment E lists the following pollutants, including those with SALs: Conventionals, Nutrients, Hydrocarbons: Total Dissolved Solids, Total Suspended Solids, Turbidity, Total Hardness, pH, Specific Conductance, Temperature, Dissolved Oxygen, Total Phosphorus, Dissolved Phosphorus, Nitrite, Nitrate, Total Kjeldahl Nitrogen, Ammonia, 5-day Biological Oxygen Demand, Chemical Oxygen Demand, Total Organic Carbon, Dissolved Organic Carbon, Methylene Blue Active Substances, Oil and Grease, Sulfate: Pesticides: Diazinon, Chlorpyrifos, Malathion, Carbamates, Pyrethroids; Metals (Total and Dissolved): Arsenic, Cadmium, Total Chromium, Hexavalent Chromium, Copper, Lead, Iron, Manganese, Nickel, Selenium, Zinc, Mercury, Silver, Thallium; Bacteriological (mass loading): E.coli, Fecal Coliform, Enterococcus. Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 308 (test claim permit, Attachment E, Section II.B.) The Fact Sheet explains that "the Copermittees are required to monitor for those pollutants in 40 CFR 122.26(d)(2)(iii)(B); for 303(d) listed pollutants for the Santa Margarita Hydrologic Unit; and for pollutants with Storm Water Action Levels." Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 559 (Fact Sheet/Technical Report).

[559] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 206, 307 (test claim permit, Section D.2.; Attachment E., Section II.B.1.).

[560] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 307, (test claim permit, Attachment E., Section II.B.1.a.).

[561] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 307-308, (test claim permit, Attachment E., Section II.B.1.b.).

[562] The Fact Sheet explains that "when an exceedance of a SAL concentration is detected for a metal, the Copermittee must determine if that exceedance is above the existing applicable water

- SAL samples must be 24 hour time-weighted composites.[563]

b) Source identification monitoring. The monitoring program shall identify sources of pollutants causing the priority water quality problems within each hydrologic subarea. The monitoring program is required to include focused monitoring which moves upstream into each watershed as necessary to identify sources. This monitoring program must be implemented within each hydrologic subarea and must begin no later than the 2012-2013 monitoring year.[564]

4. Responding to an exceedance of a SAL. At each monitoring station, a running average of twenty percent or greater of exceedances of any discharge of stormwater from the MS4 to waters of the U.S. that exceed the SALs for turbidity, nitrate and nitrite, phosphorus, cadmium, copper, lead, and zinc requires the copermittee having jurisdiction to affirmatively augment and implement all necessary stormwater controls and measures to reduce the discharge of the associated class of pollutants to the MEP. The copermittees must utilize the exceedance information when adjusting and executing annual work plans. The copermittees must take the magnitude, frequency, and number of constituents exceeding the SAL, in addition to receiving water quality data and other information, into consideration when prioritizing and reacting to SAL exceedances in an iterative manner. Failure to appropriately consider and react to SAL exceedances in an iterative manner creates a presumption that the copermittees have not reduced pollutants in storm water discharges to the MEP.[565]
5. Beginning three years after the Order adoption date, the Copermittees are required to annually evaluate their data compared to the SALs.[566]
6. At a minimum, outfalls that exceed SALs must be monitored in the subsequent year.[567]

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quality limitation based upon the hardness of the receiving water. The water quality limitations Copermittees must use to assess total metal SAL exceedances are the California Toxic Rule (CTR) and USEPA National Recommended Water Quality Criteria for Freshwater Aquatic Life 1 hour maximum concentrations." Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 490 (Fact Sheet/Technical Report).

[563] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 206 (test claim permit, Section D.2.).

[564] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 308, (test claim permit, Attachment E., Section II.B.2.).

[565] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 205 (test claim permit, Section D.1.).

[566] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 205 (test claim permit, Section D.1.).

[567] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 206 (test claim permit, Section D.2.).

7. To be relieved of the requirements to take action as described in D.1., above, the copermittee must demonstrate that the likely and expected cause of the SAL exceedance is not anthropogenic in nature (generated from human activity).[568]

Thus, Section D. requires the copermittees to monitor the discharge of stormwater from MS4 outfalls in addition to the receiving water monitoring (which is still required by the test claim permit).[569] As stated in the Fact Sheet, the copermittees were not required to monitor MS4 outfalls under the prior permit:

> Currently the Copermittees do not monitor the discharge of storm water from the MS4 outfalls. As a result, a substantial amount of information regarding the quality of MS4 effluent is unknown, and in-stream stations monitored under R9-2004-001 have not accurately characterized MS4 effluent data during the permit term. [Fn. omitted.] The collection of wet-weather MS4 effluent data will enable the Copermittees to assess the effectiveness of existing storm water BMP measures, estimate cumulative annual pollutant loads from MS4 storm water discharges, and estimate seasonal pollutant loads from individual major outfalls. This data can be used to more effectively target storm water management program efforts. The MRP also requires compliance with Section D. of the Order for Storm Water Action Levels.
>
> The monitoring of outfalls is expected to be used to identify storm drains that are discharging pollutants in concentrations that may pose a threat to receiving waters. Source investigations are expected to be conducted as a response to the data. The Copermittees are required to monitor for those pollutants in 40 CFR 122.26(d)(2)(iii)(B); for 303(d) listed pollutants for the Santa Margarita Hydrologic Unit; and for pollutants with Storm Water Action Levels.[570]

The Fact Sheet also explains that "[t]he MRP provides the Copermittees great flexibility in assigning stations and sampling frequency for wet-weather monitoring" in that "Copermittees are to propose the number and frequency of monitoring stations, thus proposing the overall cost of their program."[571] The Regional Board will review the proposed program "to ensure that it will comply with Federal regulations and section D of the Order for Storm Water Action Levels."[572]

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[568] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 206 (test claim permit, Section D.4.).

[569] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 90, 121 (test claim permit, Section N., Monitoring and Reporting Program).

[570] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 559 (Fact Sheet/Technical Report).

[571] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 559 (Fact Sheet/Technical Report).

[572] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 559 (Fact Sheet/Technical Report).

ii. Section D. does not mandate a new program or higher level of service since the activities to monitor discharges of stormwater, determine if the discharges are meeting existing water quality standards identified in the SALs and if not, implement or modify best management practices (BMPs) to meet water quality standards and report that information to the Regional Board were required by the prior permit and are mandated by federal law.

The claimants contend that Section D. imposes a reimbursable state-mandated program. The claimants argue that the prior permit did not include any SAL-related requirements. Further, they contend that there is no federal requirement that municipal NPDES permits include monitoring, reporting or compliance obligations that are triggered by an exceedance of a SAL, as follows:

> Contrary to any requirement to include a SAL-related mandate within an MS4 permit, the plain language of the CWA, as well as controlling case authority interpreting the Act, make clear that no form of SALs or any related mandates are required to be included within a municipal NPDES Permit by federal law. *See Defenders of Wildlife, supra*, 191 F.3d 1159, 1163 **("Industrial discharges must strictly comply with State water-quality standards," while "Congress chose not to include a similar provision for municipal storm-sewer discharges.")** (emphasis supplied); *Divers' Environmental, supra*, 145 Cal.App.4th at 256 ("In regulating stormwater permits the EPA has repeatedly expressed a preference for doing so by the way of BMPs, rather than by way of imposing either technology-based or water quality-based numerical limitations."); *BIA, supra*, 124 Cal.App.4th at 874 ("With respect to municipal stormwater discharges, Congress clarified that the EPA has the authority to fashion NPDES Permit requirements to meet water quality standards ***without specific numeric effluent limits*** and to instead impose 'controls to reduce the discharge of pollutants to the maximum extent practicable.'") (emphasis supplied); State Board Order No. 2006-12, p. 17 (**"Federal regulations do not require numeric effluent limitations for discharges of stormwater.")** (emphasis supplied); and State Board Order No. 91-03, pgs. 30-31 ("***We . . . conclude that numeric effluent limitations are not legally required***. Further we have determined that the program of prohibitions, source control measures and 'best management practices' set forth in the Permit constitutes effluent limitations as required by law.'") (emphasis supplied).[573]

The claimants further contend that, "while not "traditional 'strict' numeric effluent limits," the SALs, like the NALs, are a new program imposed on the claimants "tied to achieving compliance with specific numeric limits." If the claimants exceed the SALs, they "were subject to additional and costly requirements, regardless of the feasibility or practicability of complying with the SALs."[574] The claimants therefore contend that "the SAL mandates went beyond what

[573] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017 page 45 (Test Claim narrative), emphasis in original.

[574] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017 page 45 (Test Claim narrative).

is required to be imposed in an MS4 permit, and the RWQCB had a 'true choice' in deciding to impose the SAL mandates."[575]

The Water Boards disagree and contend that Section D., does not impose a state-mandated new program or higher level of service as follows:

> As in prior permits, Copermittees are required to comply with water quality standards and to control pollutants in storm water discharges to the MEP. They remain required "through timely implementation of control measures and other actions to reduce pollutants in storm water discharges." [Footnote omitted.] Contrary to Claimants' assertions, SALs, like NALs, do not exceed the requirements of federal law, but instead are required in this case to encourage the Copermittees to take appropriate measures to control of pollutants in storm water to the maximum extent practicable standard.[576]

The Commission finds that Section D. of the test claim permit does not mandate a new program or higher level of service.

First, the requirements to monitor stormwater discharges, determine if the discharges are meeting water quality standards and if not, implement or modify BMPs and annually evaluate and report that information to the Regional Board are not new. The CWA requires an NPDES permittee to monitor discharges into the waters of the United States in a manner sufficient to determine whether it is meeting water quality standards.[577] Federal regulations require that samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.[578] Conditions to achieve water quality standards and objectives include BMPs, or "controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[579] Further, federal law requires that monitoring results must be reported, including any instances of noncompliance.[580] A permittee is also required by federal regulations to report any noncompliance that may endanger health or the environment verbally within 24 hours,

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[575] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 45 (Test Claim narrative), citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal. 5th 749, 765.

[576] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 25.

[577] United States Code, title 33, section 1342(a)(2) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.44(i)(1).

[578] Code of Federal Regulations, title 40, section 122.41(j).

[579] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[580] Code of Federal Regulations, title 40, sections 122.41(l)(4), (7), 122.22; 122.48; Code of Federal Regulations, title 40, Part 127.

followed by a written report within five days. The report shall state whether the noncompliance has been corrected and the steps taken or planned to reduce or eliminate the noncompliance.[581]

In addition, under the prior permit, discharges from MS4s that cause or contribute to the violation of water quality standards were expressly prohibited.[582] The prior permit also prohibited discharges from MS4s that cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater.[583] The monitoring program required by the prior permit required the claimants to assess compliance with the permit and determine whether the discharges were meeting water quality standards.[584] If a claimant determined that the MS4 discharges were causing or contributing to an exceedance of an applicable water quality objective, the claimant was required under the prior permit to promptly notify and submit a report to the Regional Board that describes the BMPs that are currently implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards.[585] In addition, the claimants were required to annually evaluate their monitoring and report the findings to the Regional Board.[586]

The SALs were established because the claimants were not meeting water quality standards despite having monitored and implemented BMPs for the last twenty years. Their reports indicated "that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Riverside County."[587] The SALs imposed by the test claim permit are simply numbers that reflect the existing water quality standards in the Basin Plan, the federal California Toxics Rule (CTR), and the US EPA Water Quality Criteria for turbidity, nitrate and nitrite, phosphorus, cadmium, copper, lead, and zinc, and if there is an exceedance of a SAL detected with monitoring, then the claimants have to address those exceedances by implementing or modifying BMPs.[588] As indicated above, federal law requires the Regional Board to develop NPDES permit effluent limits as necessary to meet water quality standards when it determines that an MS4 discharge causes, has the reasonable potential to

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[581] Code of Federal Regulations, title 40, section 122.41(l)(6).

[582] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.1.).

[583] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 573, 581-582 (Order R9-2004-0001, Sections C.1., F.2.b.8.).

[584] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.2.).

[585] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.2.).

[586] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, page 16.

[587] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 401 (Fact Sheet/Technical Report, Finding C.9.).

[588] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 376 (Fact Sheet/Technical Report, Finding D.1.h.).

cause, or contributes to an excursion of a numeric or narrative water quality criteria.[589] But the SALs themselves do not impose any new mandated activities. As indicated above, both federal law and the prior permit required the claimants to monitor discharges of stormwater, determine if the discharges were meeting water quality standards and if not, implement or modify BMPs and evaluate and report that information to the Regional Board. These activities have long been required by law and are not new.

Section D. of the test claim permit does require that the claimants monitor and "sample a representative percentage of the major outfalls within each hydrologic subarea" during wet weather, with the number of monitoring stations and frequency of sampling at the discretion of the claimants, and then implement or modify BMPs when an exceedance occurs at those monitoring stations and report that information to the Regional Board.[590] As indicated above, the prior permit only required stormwater monitoring at the receiving waters and did not also require monitoring outfalls.[591] But the claimants were not meeting water quality standards and "[t]he monitoring of outfalls is expected to be used to identify storm drains that are discharging pollutants in concentrations that may pose a threat to receiving waters."[592] Monitoring a representative sample of major outfalls, however, is not a new state-mandated activity. The requirement in Section D. to conduct wet weather monitoring of MS4 outfalls simply implements existing federal law, which requires permittees to monitor its discharges into the waters of the United States in a manner sufficient to determine whether it is in compliance with the permit, including the receiving water limitations and discharge prohibitions, and if water quality standards are not met, permittees are required implement or modify BMPs to meet water quality standards and report that information to the Regional Board.[593] An NPDES permit is unlawful if a permittee is not required to effectively monitor its permit compliance.[594]

Moreover, the requirement to monitor MS4 outfalls and implement BMPs to ensure that water quality standards are met does not constitute a new program or higher level of service. The Supreme Court has clarified that "simply because a state law or order may *increase the costs* borne by local government *in providing services*, this does not necessarily establish that the law or order constitutes an *increased or higher level* of the resulting 'service to the public' under

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[589] Code of Federal Regulations, title 40, section 122.44(d)(1).

[590] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 205-206 (test claim permit, Section D.).

[591] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 573-574 (Order R9-2004-0001, Section C.).

[592] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 559 (Fact Sheet/Technical Report).

[593] United States Code, title 33, section 1342(a)(2); Code of Federal Regulations, title 40, sections 122.43(a), 122.44(i)(1).

[594] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(F); see also *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1209.

article XIII B, section 6, and Government Code section 17514."[595] Rather, the new program or higher level of service must "increase the actual level or quality of governmental services provided," or be imposed on local government uniquely.[596]

In this case, federal law has long required that NPDES permits include conditions to achieve water quality standards and objectives, including monitoring requirements to ensure that water quality standards are met.[597] As stated above, the SALs were developed to reflect the water quality standards in the Basin Plan, the federal California Toxics Rule (CTR), and the US EPA Water Quality Criteria.[598] "[I]t is the goal of the SALs, through the iterative and MEP process, to have MS4 storm water discharges meet all applicable water quality standards,"[599] and that any exceedance of a SAL indicates BMPs being implemented are insufficient to protect the beneficial uses of waters.[600]

The requirement imposed by the test claim permit to monitor MS4 outfalls and implement BMPs if an exceedance occurs at those monitoring stations simply makes the claimants comply with existing federal law imposed on *all* dischargers to comply with water quality standards.[601]

Moreover, the prior permit expressly prohibited discharges from MS4s that cause or contribute to the violation of water quality standards.[602] The prior permit also prohibited discharges from MS4s that cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater.[603] The prior permit further stated that "nothing in this Order shall be construed to relieve the permittee from civil or criminal penalties for noncompliance."[604] As

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[595] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 876-877, emphasis in original.

[596] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 877; *Carmel Valley Fire Protection District v. State of California* (2001) 25 Cal.4th 287.

[597] United States Code, title 33, section 1342(a)(2) (Public Law 100-4); Code of Federal Regulations, title 40, section 122.44(d)(1) and (i)(1).

[598] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 376, 431-434, 484 (Fact Sheet/Technical Report).

[599] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 490 (Fact Sheet/Technical Report).

[600] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 433 (Fact Sheet/Technical Report).

[601] Code of Federal Regulations, title 40, section 122.44(d)(1).

[602] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.1.).

[603] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 573, 581-582 (Order R9-2004-0001, Sections C.1., F.2.b.8.).

[604] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 606 (Order R9-2004-0001, Attachment B., Standard Provisions).

indicated in the findings, the claimants were not meeting water quality standards.[605] Based on these facts, the plain language of the prior permit, and the cases described below, the claimants could have been held liable for violating the CWA under the prior permit.

In *Building Industry Association of San Diego County v. State Water Resources Control Board*,[606] the Building Industry Association (BIA) challenged a 2001 NPDES stormwater permit issued by Regional Board that expressly prohibited the discharge of pollutants that "cause or contribute to exceedances of receiving water quality objectives," and that "cause or contribute to the violation of water quality standards."[607] The permit contained an enforcement provision that required a municipality to report any violations or exceedances of an applicable water quality standard and describe a process for improvement and prevention of further violations.[608] The permit also contained a provision that "Nothing in this section shall prevent the Regional Water Board from enforcing any provision of this Order while the municipality prepares and implements the above report."[609] BIA, concerned that the permit provisions were too stringent, impossible to satisfy, and would result in all affected municipalities being in immediate violation of the permit and subject to substantial civil penalties because they were not then complying with applicable water quality standards, contended that under federal law, the "maximum extent practicable" standard is the exclusive measure that may be applied to municipal storm sewer discharges. BIA asserted that the Regional Board may not require a municipality to comply with a state water quality standard if the required controls exceed a maximum extent practicable standard.[610] The court, however, rejected BIA's interpretation, and held that the permit provisions requiring compliance with water quality standards are proper under federal law.[611]

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[605] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 374, 401 (Fact Sheet/Technical Report, Finding C.9. and Discussion of Finding C.9.).

[606] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866.

[607] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 872, 876-877.

[608] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 877.

[609] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 877.

[610] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 872, 880, 890.

[611] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 880; see also, *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1166-1167, which also held that the US EPA or the state administrator has the authority to determine that ensuring strict compliance with state water quality standards is necessary to control pollutants.

Similarly, in *Natural Resources Defense Council, Inc. v. County of Los Angeles*,[612] the permit prohibited discharges from the MS4 that cause or contribute to the violation of water quality standards and objectives contained in the Basin Plan, the California Toxics Rule, the National Toxics Rule, and other state or federal approved surface water quality plans. The permit further provided that the permittees comply with the discharge prohibitions with monitoring and timely implementation of control measures and other actions to reduce pollutants in their discharges.[613] Between 2002 and 2008, annual monitoring reports were published, and identified 140 separate exceedances of the water quality standards for aluminum, copper, cyanide, zinc, and fecal coliform bacteria in the Los Angeles and San Gabriel Rivers.[614] NRDC filed a lawsuit alleging that the permittees violated the CWA and its causes of actions were based on the following assertions: that the permit incorporated the water quality limits for each receiving water body; that the monitoring stations had recorded pollutant loads in the receiving water bodies that exceed those permitted under the relevant standards; that an exceedance constitutes non-compliance with the permit and, thereby, the CWA; and that the permittees were liable for these exceedances under the CWA.[615] The permittees argued they could not be held liable for violating the permit and, thus, the CWA, based solely on monitoring data because the monitoring was not designed or intended to measure compliance of any permittee, which the court disagreed with based on the plain language of the permit; and the monitoring data cannot parse out precisely whose discharge contributed to any given exceedance because the monitoring stations manage samples downstream and not at the discharge points.[616] The court disagreed with the permittees, finding that:

> . . . . the data collected at the Monitoring Stations is intended to determine whether the Permittees are in compliance with the Permit. If the District's monitoring data shows that the level of pollutants in federally protected water bodies exceeds those allowed under the Permit, then, as a matter of permit construction, the monitoring data conclusively demonstrates that the County Defendants are not "in compliance" with the Permit conditions. Thus, the County Defendants are liable for Permit violations.[617]

The court also found that "the Clean Water Act requires every NPDES permittee to monitor its discharges into the navigable waters of the United States in a manner sufficient to determine

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[612] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194.

[613] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199.

[614] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1200.

[615] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1201.

[616] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1204-1205.

[617] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1206-1207.

whether it is in compliance with the relevant NPDES permit."[618] The court stated that Congress recognized that MS4s often cover many square miles and comprise numerous, geographically scattered sources of pollution including streets, catch basins, gutters, man-made channels, and storm drains, and that for large urban areas, MS4 permitting could not be accomplished on a source-by-source basis. Thus, Congress delegated to the US EPA and the state administrators discretion to issue permits on a jurisdiction-wide basis, instead of requiring separate permits for individual discharge points. Nothing in the MS4 permitting scheme of federal law, however, relieves permittees of the obligation to monitor their compliance with the permit and the CWA.[619] "Because the results of County Defendants' pollution monitoring conclusively demonstrate that pollution levels in the Los Angeles and San Gabriel Rivers are in excess of those allowed under the Permit, the County Defendants are *liable* for Permit violations as a matter of law."[620] The court remanded the case to the lower courts to determine the appropriate remedy for the county's violations.[621]

Therefore, Section D. does not increase the level or quality of service to the public; it simply helps the claimants comply with existing law imposed on all dischargers to meet water quality standards.

Finally, with the adoption of the test claim permit, the claimants will not be held strictly liable if a pollutant exceeds a SAL. Section D. expressly states that claimants simply have to "affirmatively augment and implement all necessary storm water controls and measures to reduce the discharge of the associated class of pollutant(s) to the MEP standard."[622] As the test claim permit states, "[f]ailure to appropriately consider and react to SAL exceedances in an iterative manner creates a presumption that the Copermittee(s) have not complied with the MEP standard."[623] The Fact Sheet also makes clear that:

> SALs are not numeric effluent limitations, which is reflected in language which clarifies an excursion above a SAL does not create a presumption that MEP is not being met. Instead, a SAL exceedance is to be used by the Copermittee as an indication that the MS4 storm water discharge point is a definitive "bad actor,"

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[618] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1207, citing to United States Code, title 33, section 1342(a)(2); Code of Federal Regulations, title 40, section 122.44(i)(1); Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(F).

[619] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1209.

[620] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1210, emphasis in original.

[621] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1210.

[622] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017 page 205 (test claim permit, Section D.1.).

[623] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017 page 205 (test claim permit, Section D.1.).

and the result from the monitoring needs to be considered as part of the iterative process for reducing pollutants in storm water to the MEP.[624]

Thus, claimants' argument that the numeric SALs are similar to numeric effluent limits in that they are new programs imposed on the copermittees that are tied to achieving compliance with specific numeric limits is not supported by the plain language of the test claim permit.

Accordingly, Section D. of the test claim permit does not mandate a new program or higher level of service.

4. Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. of the Test Claim Permit, Addressing Low Impact Development (LID), Hydromodification Plans, Best Management Practices (BMPs) for Priority Development Projects, and a Retrofitting Program to Reduce Impacts from Hydromodification and Promote Low Impact Development Best Management Practices (LID BMPs), Impose Some State-Mandated New Programs or Higher Levels of Service When Local Agencies Regulate Land Use and Development.

On pages 21 and 22 of the Test Claim, the claimants state they are pleading "Requirements relating to the Priority Development Projects, local impact development (LID) and hydromodification, contained in Section F.1." and the "Requirements relating to the retrofitting of existing development, contained in Section F.3.d."[625] On pages 46-52 of the Test Claim, the claimants discuss only Section F.1.d.1., 2., 4., and 7. relating to LID, and no other provisions of Section F.1.d, and cite Section F.1.h, which addresses the hydromodification requirements.[626] On pages 65-66 of the Test Claim, the claimants discuss Section F.3.d.1.-5., and do not discuss the remaining provisions of Section F.3.d.[627]

Government Code section 17553(b)(1) requires test claims to identify the specific sections of the executive order alleged to contain a mandate *and* a detailed description of the new activities mandated by the state. Thus, this Decision will address the specific sections properly pled; namely Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5., of the test claim permit as they relate to the activities relating to the retrofitting of existing development, contained in Section F.3.d, LID in Section F.1.d.1., 2., 4., and 7. and hydromodification in Section F.1.h. These sections are part of the Standard Stormwater Mitigation Plan (SSMP) that requires, in the continuing effort to reduce the discharges of stormwater pollution from the MS4 to the MEP and to prevent those discharges from causing or contributing to a violation of water quality standards, an updated plan for review of priority development projects proposed by residential, commercial, industrial, mixed-use, and public project proponents and the implementation of LID site design BMPs at new development and redevelopment projects; the development of a hydromodification plan to manage increases in runoff discharge rates and durations from priority development projects; and

[624] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017 pages 266, 432 (test claim permit; Fact Sheet/Technical Report, Discussion of Finding D.1.h.).

[625] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017 pages 21-22.

[626] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017 pages 46-52.

[627] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017 pages 65-66.

the development and implementation of a retrofitting program to reduce the impacts from hydromodification and promote LID BMPs.

The claimants seek reimbursement when regulating priority development projects *and* implementing LID and hydromodification requirements for their own municipal priority development projects and identify the following LID and hydromodification "mandated" activities for municipal projects:[628]

- Applying Standard Stormwater Mitigation Plan ("SSMP") requirements to an increased range of municipal projects implemented by the Claimants, which meet the requirements of to [sic] F.1.d.(1) and F.1.d.(2).
- Requiring implementation of LID practices and development and implementation of an LID Waiver program, as described in F.1.d.(4) and F.1.d.(7), on municipal PDPs implemented by the Claimants. This will require creating a formalized review process for all PDPs, developing protocols for assessing each PDP for various required types of LID, training staff on the new protocols, assessing potential on- or off-site collection and reuse of storm water, amending local ordinances to remove barriers to LID implementation, maintaining or restoring natural storage reservoirs and drainage corridors, draining a portion of impervious areas into pervious areas, and constructing low-traffic areas with permeable surfaces. Projects that are subject to these requirements include municipal yards, recreation centers, civic centers, and road improvements, and any other municipal projects meeting the permit-specified thresholds or geographical criteria.
- Requiring development of an HMP [hydromodification plan], and implementation of those HMP requirements on municipal PDPs implemented by the Claimants pursuant to Part F.1.h. To comply with part F.1.h, the Copermittees must invest significant resources to hold public hearings, hold collaborative meetings, perform studies and develop an HMP, train staff and the public, and adopt the local SSMP. In addition, as noted above, Claimants are prohibited from using non-natural materials in reinforcing stream channels, a prohibition which is not practicable. Continued compliance with these sections will also require Copermittees to add requirements to municipal projects and will significantly increase the costs of design and construction.[629]

The claimants also allege that the following activities related to the retrofitting program addressed in Section F.3.d.1.-5. of the test claim permit are newly mandated as follows:

- Section F.3.d. imposed at least five new requirements on Claimants, requirements which were not required by federal law and represented state mandates for which Claimants are entitled to reimbursement. The costs of developing and implementing the retrofitting program for existing development for which

[628] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 56 (Test Claim narrative).

[629] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 56 (Test Claim narrative).

Permittees should be reimbursed arise from the extensive list of requirements in the 2010 Permit. These requirements include:

- Identifying potential retrofitting candidates by researching and locating developments that contribute to a TMDL or ESA, that are channelized or hardened, that are tributary to receiving waters which are an ASBS, SWQPA, or are significantly eroded;
- Evaluating the feasibility, cost effectiveness, pollutant removal effectiveness, tributary area, maintenance requirements, landowner cooperation, neighborhood acceptance, aesthetic qualities, efficacy at addressing concern, and potential for improvement in public health and safety for each potential retrofitting candidate and then ranking each candidate accordingly;
- Prioritizing retrofit projects in the following year's municipal work plan and designing retrofit projects according to the SSMP requirements and hydromodification where feasible;
- Cooperating with and encouraging private landowners to undertake site-specific retrofit projects; and
- Tracking and inspecting retrofit BMPs.[630]

As described below, the Commission finds that:

- All LID, hydromodification, and retrofitting costs required by Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. of the test claim permit and incurred and triggered by a project proponent of a *municipal* priority development project are not mandated by the state and do not impose a new program or higher level of service because such costs are incurred at the discretion of the local agency, are not unique to government, and do not provide a governmental service to the public.
- The remaining new LID, hydromodification, and retrofitting administrative, planning, and regulatory activities required by Sections F.1.d.1., 2., 4., 7., and h., and F.3.d.1.-5. are mandated by the state and impose a new program or higher level of service.

a. Background

i. Federal law requires an NPDES applicant to propose structural and source control measures to reduce pollutants from runoff from all construction sites and all new development and redevelopment of commercial, residential, and industrial areas to the maximum extent practicable (MEP), and the US EPA encourages green infrastructure as an integral part of stormwater management.

Under federal law, NPDES permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and

[630] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 67 (Test Claim narrative).

system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[631] Federal regulations define "best management practices" as:

> . . . schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.[632]

Federal regulations require that the application for an NPDES permit for large and medium MS4 dischargers to describe a proposed management program that covers the duration of the permit to be considered by the Regional Board when developing permit conditions to reduce pollutants in discharges to the MEP. As relevant here, the proposed management programs shall include the following information:

- A description of structural and source control measures to reduce pollutants from runoff from *commercial and residential areas* that are discharged from the MS4 and that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls. At a minimum, the description shall include, as relevant here:
    - A description of planning procedures including a comprehensive master plan to develop, implement, and enforce controls to reduce the discharge of pollutants from MS4s that receive discharges from areas of *new development and significant redevelopment*. The plan shall address controls to reduce pollutants in discharges from MS4s after construction is completed.
    - A description of practices for operating and maintaining *public streets, roads, and highways*, and procedures for reducing the impact on receiving waters of discharges from MS4s.
- A description of a program to monitor and control pollutants in stormwater discharges to municipal systems from *industrial facilities* that the municipal permit applicant determines is contributing a substantial pollutant loading to the MS4. The description shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.
- A description of a program to *implement and maintain structural and non-structural BMPs* to reduce pollutants in stormwater runoff *from construction sites* to the MS4. The description shall include procedures for site planning, which incorporates consideration of potential water quality impacts; requirements for nonstructural and structural BMPs; procedures for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of

[631] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[632] Code of Federal Regulations, title 40, section 122.2.

> soils and receiving water quality; and appropriate educational and training measures for construction site owners.[633]

The application shall also include estimated reductions in loadings of pollutants from discharges of runoff from MS4s expected as a result of the water quality management programs and the identification of known impacts of stormwater controls on ground water.[634]

In 2006, the US EPA requested the National Research Council of the National Academy of Sciences (NRC) to conduct a review of the existing stormwater regulatory program.[635] NRC issued its report in 2008, and found that "the rapid conversion of land to urban and suburban areas has profoundly altered how water flows during and following storm events, putting higher volumes of water and more pollutants into the nation's rivers, lakes, and estuaries. These changes have degraded water quality and habitat in virtually every urban stream system."[636] The NRC report recommended "a number of actions, including conserving natural areas, reducing hard surface cover (e.g., roads and parking lots — impervious surface areas), and retrofitting urban areas with features that hold and treat stormwater."[637] The report also recommended that the US EPA adopt a watershed-based permitting system encompassing all discharges that could affect waterways in a particular drainage basin. Under this watershed approach, responsibility to implement watershed-based permits and control all types of municipal, industrial, and construction stormwater discharges would reside with MS4 permittees. The report criticized the US EPA's current approach, "which leaves much discretion to regulated entities to set their own standards through stormwater management plans and to self-monitor."[638]

After the NRC report was issued in 2008, the US EPA, in 2009, initiated information-gathering and public dialogue activities for possible regulatory changes that would respond to the NRC report and embrace the report's recommendations. As part of this project, the US EPA was considering establishing specific requirements and standards to control stormwater discharges from new development and redevelopment that promote sustainable practices that mimic natural processes to infiltrate and recharge, evapotranspire, and harvest and reuse precipitation as follows:

> For example, there could be a national requirement for on-site stormwater controls such that post development hydrology mimics predevelopment hydrology on a site-specific basis. EPA could establish a suite of specific options of standards for meeting such a requirement, for example, on-site retention of a

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[633] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv), emphasis added.

[634] Code of Federal Regulations, title 40, section 122.26(d)(2)(v).

[635] Exhibit X (6), Congressional Research Service, "Stormwater Permits: Status of EPA's Regulatory Program," (November 28, 2016), page 12; Exhibit X (22), Excerpt from 74 Federal Register 68617 (December 28, 2009), page 6.

[636] Exhibit X (22), Excerpt from 74 Federal Register 68617 (December 28, 2009), page 6.

[637] Exhibit X (22), Excerpt from 74 Federal Register 68617 (December 28, 2009), page 6.

[638] Exhibit X (6), Congressional Research Service, "Stormwater Permits: Status of EPA's Regulatory Program," (November 28, 2016), page 12.

specific size storm event in an area, limits on the amount of effective impervious surfaces (defines as impervious surfaces with direct hydraulic connection to the downstream drainage (or stream) system, also referred to as directly connected impervious area), use of site-specific calculations to determine predevelopment hydrology, and/or use of regional specific standards to reflect local circumstances.[639]

US EPA was also seeking input to require MS4s to address stormwater discharges in areas of existing development through retrofitting of the sewer system, drainage area, or individual structures with improved stormwater control measures.[640]

In March 2014, however, the US EPA announced that it would defer action on the rule and, instead, would provide incentives and technical assistance to address stormwater runoff. "In particular, the agency said that it will leverage existing requirements to strengthen municipal stormwater permits and will continue to promote green infrastructure as an integral part of stormwater management."[641]

ii. The prior permit required each copermittee to submit a storm water management plan (SWMP) to reduce pollutants in urban runoff to the maximum extent practicable (MEP), which included source control and treatment control best management practices (BMPs) for all priority development projects, and implementation of pollution prevention methods for construction and industrial sites.

The prior permit recognized that with urban development, natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots. While natural vegetated soil can both absorb rainwater and remove pollutants providing an effective natural purification process, pavement and concrete cannot.[642] The prior permit also recognized that urban runoff contains waste and pollutants that can threaten human health and toxic pollutants can impact the overall quality of aquatic systems and beneficial uses of receiving waters.[643] As a result, the runoff leaving the developed urban area is significantly greater in volume, velocity, and pollutant load than the pre-development runoff in the same area.[644]

The prior permit also recognized that pollutants can be effectively reduced in urban runoff by the application of pollution prevention, source control, and treatment control BMPs. Source control

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[639] Exhibit X (22), Excerpt from 74 Federal Register 68617 (December 28, 2009), pages 7-8.

[640] Exhibit X (22), Excerpt from 74 Federal Register 68617 (December 28, 2009), page 8.

[641] Exhibit X (6), Congressional Research Service, "Stormwater Permits: Status of EPA's Regulatory Program," (November 28, 2016), page 14.

[642] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 568 (Order R9-2004-0001, Finding 12).

[643] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 567 (Order R9-2004-0001, Findings 6 and 7).

[644] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 568 (Order R9-2004-0001, Finding 12).

BMPs (both structural and non-structural) minimize the contact between the pollutants and flows (for example, re-routing pollutant sources). Treatment control (or structural) BMPs remove pollutants from urban runoff.[645]

Thus, Section F., of the prior permit required each permittee, as a component of their SWMP, to address land use planning by minimizing the short and long-term impacts on receiving water quality from *new development and redevelopment*. In order to reduce pollutants in urban runoff from new development and redevelopment to the MEP, each permittee was required to include in its General Plan water quality and watershed protection principles and policies to direct land use decisions and require implementation of consistent water quality protection measures of their choosing for development projects. Examples of water quality and watershed protection principles and policies to be considered for inclusion in the General Plan included the following: (1) minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment, where feasible, to slow runoff and maximize its on-site infiltration; (2) implement pollution prevention methods supplemented by pollutant source controls and treatment; (3) preserve, create, or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones; (4) limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges; (5) prior to making land use decisions, utilize methods to estimate increases in pollutant loads and flows resulting from projected future development and require appropriate BMPs to mitigate the projected increases in pollutant loads and flows; (6) avoid development of areas that are susceptible to erosion and sediment loss or develop guidance that identifies these areas and protects them from erosion and sediment loss; (7) reduce pollutants associated with vehicles and increasing traffic resulting from development; and (8) post-development runoff from a site shall not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives and which have not been reduced to the MEP.[646]

Before the issuance of a local building permit, the prior permit required the permittees to require each proposed project proponent to implement BMPs to ensure that pollutants and runoff from the development will be reduced to the MEP. The project proponent was required to ensure that receiving water quality objectives were not violated throughout the life of the project. All development was required to be in compliance with stormwater ordinances and the following requirements, which were required to be included in local permits:

- Require project proponent to implement pollution prevention and source control BMPs.
- Require project proponent to implement site design/landscape characteristics that maximize infiltration, provide retention, slow runoff, and minimize impervious land coverage for all development projects.

[645] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 568 (Order R9-2004-0001, Finding 15).

[646] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 575-576 (Order R9-2004-0001, Section F.1.).

- Require project proponent to implement buffer zones for natural water bodies. Where buffer zones are not feasible, require project proponent to implement other buffers such as trees, lighting restrictions, access restrictions, etc.
- Require industrial applicants to provide evidence of coverage under the General Industrial Permit.
- Require project proponent to ensure its grading or other construction activities meet the requirements of the Standard Urban Storm Water Mitigation Plan (SUSMP), which is described below.
- Require project proponent to provide proof of a mechanism which will ensure ongoing long-term maintenance of all structural post-construction BMPs.[647]

In addition, the prior permit required the permittees to develop, adopt, and implement a SUSMP to reduce pollutants and to maintain or reduce downstream erosion and stream habitat from all *priority development projects*, which included all new development and redevelopment projects[648] that create, add, or replace at least 5,000 square feet of impervious surfaces on an already existing developed site. The permittees were required to ensure that the following priority development projects meet SUSMP requirements:[649]

- Home subdivisions of 10 or more housing units.
- Commercial developments greater than 100,000 square feet defined as any development on private land that is not for heavy industrial or residential uses and includes hospitals, laboratories, and other medical facilities; educational institutions; recreational facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; commercial airfields; and other light industrial facilities.
- Automotive repair shops.
- Restaurants, where the land area for development is greater than 5,000 square feet. If the land development is less than 5,000 square feet, the restaurant shall meet all SUSMP requirements, except for structural treatment BMP, numeric sizing criteria, and peak flow requirements.

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[647] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 576-577 (Order R9-2004-0001, Section F.2.).

[648] Redevelopment includes, but is not limited to, the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 577 (Order R9-2004-0001, Section F.2.b.).

[649] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 577 (Order R9-2004-0001, Section F.2.b.).

- All hillside development greater than 5,000 square feet defined as any development which creates 5,000 square feet of impervious surface that is located in an area with known erosive soil conditions and where the development will grade on any natural slope that is 25 percent or greater.
- Environmentally sensitive areas (ESAs).[650] All development and redevelopment located within or directly adjacent to (within 200 feet of an environmentally sensitive area) or discharging directly (outflow from a drainage conveyance system that is composed entirely of flows from the development or redevelopment site) to an environmentally sensitive area (where discharges from the development or redevelopment will enter receiving waters within the environmentally sensitive area), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to ten percent or more of its naturally occurring condition.
- Parking lots 5,000 square feet or more.
- Street, roads, highways, and freeways. This includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles
- Retail Gasoline Outlets that are 5,000 square feet or more or have a projected average daily traffic of 100 or more vehicles per day.[651]

The SUSMP was also required to include a list of recommended source control and treatment control BMPs and had to require that all priority development projects implement a combination of on-site source control and on-site/shared treatment control BMPs selected from the recommended BMP list. The BMPs shall, at a minimum:

- Control the post-development peak stormwater runoff discharge rates and velocities to maintain or reduce pre-development downstream erosion and to protect stream habitat.
- Conserve natural areas where feasible.

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[650] Environmentally Sensitive Areas are defined as areas "in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would easily be disturbed or degraded by human activities and developments." ESAs subject to urban runoff requirements include but are not limited to all CWA section 303(d) impaired water bodies, areas designated as Areas of Special Biological Significance by the State Resources Water Control Board Basin Plan; water bodies designated with the RARE beneficial use by the State Resources Water Control Board Basin Plan; areas within the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP) plan area that contain rare or especially valuable plant or animal life or their habitat; and any other equivalent environmentally sensitive areas which the copermittees have identified. Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 610 (Order R9-2004-0001, Attachment C), quoting Public Resources Code section 30107.5.

[651] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 577 (Order R9-2004-0001, Section F.2.b.).

- Minimize stormwater pollutants of concern in urban runoff from the priority development projects through implementation of source control BMPs. Identification of pollutants of concern should include, at a minimum, all pollutants for which water bodies receiving the development's runoff are listed as impaired under CWA section 303(d), all pollutants associated with the land use type of the development, and all pollutants commonly associated with urban runoff.
- Be effective at removing or treating the pollutants of concern associated with the project.
- Minimize directly connected impervious areas where feasible.
- Protect slopes and channels from eroding.
- Include storm drain stenciling and signage.
- Include properly designed outdoor material storage areas.
- Include properly designed trash storage areas.
- Include proof of a mechanism, to be provided by the project proponent or copermittee, which will ensure ongoing long-term structural BMP maintenance.
- Include additional water quality provisions applicable to individual priority development project categories.
- Be correctly designed so as to remove pollutants to the MEP.
- Be implemented close to pollutant sources, when feasible, and prior to discharging into receiving waters.
- Ensure that post-development runoff does not contain pollutant loads which cause or contribute to an exceedance of water quality objectives and which have not been reduced to the MEP.[652]

The prior permit required that the SUSMP require priority development projects to implement treatment control BMPs, which had to be located to infiltrate, filter, or treat the required runoff volume or flow prior to its discharge to any receiving water. Treatment control BMPs could be shared by multiple priority development projects as long as construction of any shared treatment control BMPs is completed prior to the use of any development project from which the treatment control BMP will receive runoff, and prior to discharge to a receiving water. In addition, all treatment control BMPs for a single priority development project had to be collectively sized to comply with the following specified numeric criteria for volume or flow:

- Volume-based BMPs shall be designed to infiltrate, filter, or treat the volume of runoff produced from a 24-hour 85th percentile storm event, as specified.
- Flow based BMPs shall be designed to infiltrate, filter, or treat either the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour; or the maximum flow rate of runoff produced by the 85th percentile hourly rainfall

[652] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 577-578 (Order R9-2004-0001, Section F.2.b.1.).

intensity; or the maximum flow rate of runoff that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor to two.

- Alternatively, the copermittees could develop an equivalent method for calculating the numeric sizing criteria for volume or flow.[653]

The prior permit also required that the SUSMP, require the permittees to develop a procedure for pollutants of concern to be identified for each priority development project. The procedure had to address receiving water quality (including pollutants for which receiving waters are listed as impaired under section 303(d)); pollutants associated with land use type of the development project; pollutants expected to be present on site; changes in stormwater discharge flow rates, velocities, durations, and volumes resulting from the development project; and sensitivity of receiving waters to changes in stormwater discharges flow rates, velocities, durations, and volumes.[654]

In addition, under the prior permit, the permittees were required to develop a process by which the SUSMP requirements would be implemented and at what point of the planning process development projects would be required to meet all SUSMP requirements. The process had to "also include identification of the roles and responsibilities of various municipal departments in implementing the SUSMP requirements, as well as any other measures necessary for the implementation of SUSMP requirements."[655]

The prior permit further required that the SUSMP contain a waiver provision that allows a permittee to waive the requirement of implementing all treatment control BMPs for a project if infeasibility can be established. A waiver of infeasibility shall only be granted when all available treatment control BMPs have been considered and rejected as infeasible. In addition, the prior permit gave the permittees authority to require project proponents that received waivers to transfer the cost savings, as determined by the permittee, to a stormwater mitigation fund to be used on projects to improve urban runoff quality within the watershed of the waived project.[656]

To protect groundwater quality, the prior permit required permittees to apply restrictions to the use of treatment control BMPs that are designed to function primarily as infiltration devices (such as infiltration trenches and infiltration basins) to ensure that their use shall not cause or contribute to an exceedance of groundwater quality objectives. The use of treatment control BMPs designed to function primarily as infiltration devices shall meet the following conditions:

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[653] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 578-580 (Order R9-2004-0001, Section F.2.b.2.-4.).

[654] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 581 (Order R9-2004-0001, Section F.2.b.5.).

[655] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 581 (Order R9-2004-0001, Section F.2.b.6.).

[656] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 581 (Order R9-2004-0001, Section F.2.b.7.).

- Urban runoff shall undergo pretreatment such as sedimentation or filtration prior to infiltration.
- All dry weather flows shall be diverted from infiltration devices.
- Pollution prevention and source control BMPs shall be implemented to protect groundwater quality at sites where infiltration treatment control BMPs are to be used.
- Infiltration treatment control BMPs shall be adequately maintained so that they remove pollutants to the MEP.
- The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark shall be at least 10 feet unless the groundwater basins do not support beneficial uses.
- The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) for proper infiltration durations and treatment of urban runoff.
- Infiltration treatment control BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated by each permittee.
- Infiltration treatment control BMPs shall be located a minimum of 100 feet horizontally from any water supply wells.

As part of the SUSMPs, the permittees were granted the authority to develop alternative restrictions on the use of treatment control BMPs that are designed to function primarily as infiltration devices.[657]

In addition, the prior permit required the permittees to develop and propose numeric criteria to control urban runoff discharge velocities, volumes, durations, and peak rates to ensure that discharges from priority development projects maintain or reduce pre-development downstream erosion and protect stream habitat.[658] The permittees were required to revise their current environmental review processes as necessary to include requirements for evaluation of water quality effects and identification of appropriate mitigation measures for all development projects.[659] The permittees were also required to implement education programs to include an annual training for planning and development review staffs, planning boards, and elected

[657] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 581-582 (Order R9-2004-0001, Section F.2.b.8.).

[658] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 582-583 (Order R9-2004-0001, Section F.2.b.9.).

[659] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 583 (Order R9-2004-0001, Section F.3.).

officials, as well as training for project applicants, developers, contractors, property owners, and community planning groups.[660]

Section G. of the prior permit contained SWMP provisions relating to construction sites and inspection of those sites. Each permittee was required to implement pollution prevention methods and to require construction site owners, developers, contractors, and other responsible parties to use the prevention methods. Each permittee had to also review and update its grading ordinances to require implementation of BMPs that addressed erosion prevention, slope stabilization, phased grading, revegetation, preservation of natural hydrologic features, preservation of riparian buffers and corridors, maintenance of all source control and treatment control BMPs, and retention and proper management of sediment and other construction pollutants on site. BMP implementation was year round, but requirements could vary during the wet and dry seasons. Each permittee was required to implement, or require implementation of, additional controls for construction sites tributary to CWA section 303(d) water bodies impaired for sediment as well as additional controls for construction sites within or adjacent to or discharging directly to receiving waters within ESAs. The permittees were required to conduct construction site inspections, as specified, for compliance with its local ordinances, permits, and the test claim permit. Based upon site inspection findings, follow-up actions were required including sanctions to ensure compliance with the prior permit, ordinances, and the building permit. Each permittee was also required to implement an education program that included annual training for its construction, building, and grading review staff and inspectors and a program for project applicants, contractors, developers, property owners, and other responsible parties.[661]

Finally, Section H. of the prior permit required each permittee to develop and implement programs to prevent or reduce pollutants in runoff to the MEP from all existing developments within its jurisdiction (municipal, industrial and commercial, and residential developments). Generally, each permittee had to require the use of pollution prevention methods; designate BMPs for implementation; identify pollution sources through developing and updating an inventory of existing development sites; conduct inspections of municipal and industrial and commercial sites and enforce its ordinances to ensure compliance with the prior permit and local ordinances. For industrial and commercial sites, each permittee was required to prioritize the inventory by threat to water quality standards and schedule inspections accordingly; use enforcement actions, including sanctions, to ensure compliance; and provide training to permittee staff and development site owners, operators and employers. In addition, each permittee was required to implement a schedule of maintenance for its MS4 BMPs.[662]

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[660] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 583-584 (Order R9-2004-0001, Section F.4.).

[661] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 584-587 (Order R9-2004-0001, Section G.).

[662] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 587-593 (Order R9-2004-0001, Section H.).

b. Except for costs incurred by a project proponent of a municipal project (which are not eligible for reimbursement), Sections F.1.d.1., 2., 4., 7., F.1.h., and F.3.d.1.-5. of the test claim permit mandate a new program or higher level of service.

i. New LID, hydromodification plan, and retrofitting requirements imposed by sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5.

The test claim permit explains that while the copermittees have generally been implementing the jurisdictional urban runoff programs required by the prior permit, MS4 discharges continue to cause or contribute to violations of water quality standards as evidenced by the copermittees' monitoring results.[663]

The Fact Sheet further explains that when the prior permit was adopted, studies showed that the level of imperviousness in an area strongly correlated with the quality of nearby receiving waters and stream degradation occurred at levels of imperviousness as low as 10 to 20 percent resulting in a decline in the biological integrity and physical habitat conditions necessary to support natural biological diversity. More recently, however, a study and report by the Southern California Coastal Water Research Program on the effects of imperviousness in southern California streams found that local ephemeral and intermittent streams are even more sensitive to such effects than streams in other parts of the country, with a threshold of response at a two or three percent change of impervious cover. Urban stream flows have greater peaks and volumes, and shorter retention times, than natural stream flows. This results in stream degradation and less time for sediment and other pollutants to settle before being carried out to the ocean, which then accelerates the erosion of the beds and banks within downstream receiving waters. The sediment and pollutants can be a significant cause of water quality degradation.[664] Thus, the test claim permit "contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in storm water runoff to the MEP and achieve water quality standards."[665]

The claimants pled Sections F.1.d.1., 2., 4., 7., and h., and F.3.d.1.-5. of the test claim permit.[666] These sections require an updated plan for review of priority development projects and implementation of Low-Impact Development (LID) site design BMPs at new development and redevelopment projects in Section F.1.d.1., 2., 4., 7.;[667] the development of a hydromodification plan to manage increases in runoff discharge rates and durations from priority development

[663] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 188 (test claim permit, Section D., Finding 1.b.).

[664] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 403-404 (Fact Sheet/Technical Report).

[665] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 188 (test claim permit, Section D., Finding 1.c.).

[666] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 46-52, 65-66 (Test Claim narrative).

[667] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 212-221 (test claim permit, Section F.1.d.).

projects in Section F.1.h.;[668] and the development and implementation of a retrofitting program to reduce the impacts from hydromodification and promote LID BMPs in Section F.3.d.1.-5.[669]

The goal of the LID and hydromodification management requirements is to restore and preserve the natural hydrologic cycles typically impacted by urbanization and development by requiring appropriate site design and source control BMPs in the approval of development and redevelopment projects: "…[i]ncreased storm water runoff; decreased groundwater recharge; and flow constriction….can often be avoided or minimized by implementing LID and hydromodification BMPs."[670]

"Low Impact Development (LID)" is defined in the test claim permit as "A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions."[671]

"Hydromodification" is defined as "[t]he change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes."[672] The test claim permit finds that hydromodification measures for discharges to hardened channels is necessary to restore the channels and the beneficial uses of local receiving waters to their natural state, as follows:

> The increased volume, velocity, frequency and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads in storm water runoff and the volume of storm water runoff. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by natural vegetated soil. Hydromodification measures for discharges to hardened channels to their natural state, thereby restoring the

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[668] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 223-228 (test claim permit, Section F.1.h.).

[669] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 247-249 (test claim permit, Section F.3.d.1.-5.).

[670] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 403 (Fact Sheet/Technical Report).

[671] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 287 (test claim permit, Attachment C.).

[672] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 287 (test claim permit, Attachment C.).

chemical, physical, and biological integrity and Beneficial Uses of local receiving waters.[673]

The new requirements are addressed below.

a) Section F.1.d.1., 2., 4., 7., of the test claim permit imposes new requirements to update the Model Standard Stormwater Mitigation Plans (SSMPs) for review of priority development projects and implementation of LID BMPs.

Priority development projects (Section F.1.d.1. and 2.)

Priority development project categories are defined in Section F.1.d.1. of the test claim permit as follows:

> (a) All new development projects that fall under the project categories or locations listed in section F.1.d.(2), and
>
> (b) Those redevelopment projects that create, add, or replace at least 5,000 square feet of impervious surfaces on an already developed site and the existing development and/or the redevelopment project falls under the project categories or locations listed in section F.1.d.(2). Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to SSMP requirements, the numeric sizing criteria discussed in section F.1.d.(6) applies only to the addition or replacement, and not to the entire development. Where redevelopment results in an increase of more than fifty percent of the impervious surfaces of a previously existing development, the numeric sizing criteria applies to the entire development.
>
> (c) One acre threshold: In addition to the priority development project categories identified in section F.1.d.(2), priority development projects must also include all other post-construction pollutant-generating new development projects that result in the disturbance of one acre or more of land by July 1, 2012.[674]

"Pollutant generating Development Projects" are defined as "those projects that generate pollutants at levels greater than natural background levels."[675]

Section F.1.d.2. defines the priority development project categories as follows:

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[673] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 187 (test claim permit, Finding 12).

[674] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 212-213 (test claim permit, Section F.1.d.1.).

[675] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 213, footnote 11 (test claim permit).

Where a new development project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SSMP requirements.

(a) New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site) including commercial, industrial, residential, mixed-use, and public projects. This category includes development projects on public or private land which fall under the planning and building authority of the Copermittees.

(b) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

(c) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet must meet all SSMP requirements *except for* structural treatment BMP and numeric sizing criteria requirement F.1.d.(6) and hydromodification requirement F.1.h.

(d) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.

(e) Environmentally Sensitive Areas (ESAs). All development located within, or directly adjacent to, or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10 percent or more of its naturally occurring condition. “Directly adjacent” means situated within 200 feet of the ESA. “Discharging directly to” means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.

(f) Impervious parking lots 5,000 square feet or more and potentially exposed to runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.

(g) Street, roads, highways, and freeways. This category includes any paved impervious surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles. To the extent that the Copermittees develop revised standard roadway design and post-construction BMP guidance that comply with the provisions of section F.1. of the Order, then public works projects that implement the revised standard roadway sections do not have to develop a project specific SSMP. The standard roadway design and

post-construction BMP guidance must be submitted with the Copermittee's updated SSMP.

(h) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.[676]

The categories of priority development projects are generally the same as the prior permit (new development projects and redevelopment projects, as identified, and automotive repair shops, restaurants, hillside developments greater than 5,000 square feet, environmentally sensitive areas, parking lots, and streets, roads, highways, and freeways). The test claim permit, however expands the new development category. For example, the prior permit defined a priority development project to include all new development projects, and listed housing subdivisions of ten or more dwelling units of single family homes, multi-family homes, condominiums, and apartments (i.e., residential) and commercial projects greater than 100,000 square feet.[677] Section F.1.d.2. of the test claim permit now defines "new development projects" as those "that create 10,000 square feet or more of impervious surfaces, including commercial, industrial, residential, mixed-use, and public projects," which is smaller and likely to include more projects as priority development projects.[678] Thus, multi-use developments, residential, commercial developments (that create between 10,000 square feet and 99,999 square feet, rather than 100,000 square feet under the prior permit), mixed use projects, public projects (except for public streets, roads, highways, and freeways, and those considered hillside developments or municipal projects built in environmentally sensitive areas), and industrial projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site), are new categories of new priority development projects. Finding D.2.e. of the test claim permit confirms that industrial projects are a new category of new priority development projects.

Industrial sites are significant sources of pollutants in runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID site design, source control, and treatment control BMPs are needed at industrial sites in order to meet the MEP standard. These BMPs are necessary where the industrial site is larger than 10,000 square feet. The 10,000 square feet threshold is appropriate, since it is consistent with requirements in other Phase I NPDES storm water regulations throughout California.[679]

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[676] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 213-214 (test claim permit, Section F.1.d.2.), emphasis added.

[677] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 577-578 (Order R9-2004-0001, Section F.2.b.1.).

[678] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 213 (test claim permit, Section F.1.d.2.a.).

[679] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 190-191 (test claim permit, Finding D.2.e.).

The Fact Sheet further states the following:

> Industrial sites can be a significant source of pollutants in storm water runoff. In an extensive review of storm water literature, the Los Angeles Water Board found widespread support for the finding that "industrial and commercial activities can also be considered hot spots as sources of pollutants." It also found that "industrial and commercial areas were likely to be the most significant pollutant source areas" of heavy metals. Likewise, storm water runoff from heavy industry in the Santa Clara Valley has been found to be extremely toxic. These findings are corroborated by USEPA, which states in the preamble to the 1990 Phase I NPDES storm water regulations that "Because storm water from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls for storm water discharges associated with industrial activity through their system in their storm water management program." Since heavy industrial sites can be a significant source of pollutants in runoff in a manner similar to other SSMP project categories such as commercial development or automotive repair shops, it is appropriate to include heavy industrial sites as a SSMP category in the Order.[680]

Section F.1.d.1.c. of the test claim permit also added as a priority development project all other post-construction pollutant-generating new development projects that result in the disturbance of one acre or more of land.[681] The Fact Sheet explains that the one acre pollutant-generating development projects were added to be consistent with Phase II NPDES regulations for small municipalities and the State Water Board's Construction General Permit to ensure all development projects subject to the post-construction BMP requirements of the Construction General Permit will implement SSMP post-construction BMP requirements.[682]

The test claim permit, in Section F.1.d.2., also states that where a new development project feature, such as a parking lot, falls into a priority development project category, the entire project footprint is subject to the stormwater mitigation plan requirements.[683] The Fact Sheet explains that this criterion is new and was not included in the prior permit as follows:

> One of the most significant changes is that where a Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SSMP requirements. This criterion was not included in Order No. R9-2004-0001. It is included, however, in the Model San Diego SSMP that was approved by the Regional Board in 2002. It is included in

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[680] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 438-439 (Fact Sheet/Technical Report), footnotes omitted.

[681] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 213 (test claim permit, Section F.1.d.1.c.).

[682] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 494 (Fact Sheet/Technical Report).

[683] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 213-214 (test claim permit, Section F.1.d.2.).

> this Order because existing development inspections by Riverside County municipalities show that facilities included in the Priority Development Project Categories routinely pose threats to water quality. This permit requirement will improve water quality and program efficiency by preventing future problems associated with partly treated storm water runoff from redevelopment sites. This approach to improving storm water runoff from existing developments is practicable because municipalities have a better ability to regulate new developments than existing developments.[684]

As described below, the copermittees have to ensure that these priority development projects comply with the activities in Sections F.1.d. and F.1.h.

LID BMP Requirements for Priority Development Projects (Section F.1.d.4.)

Section F.1.d.4. of the test claim permit states that each copermittee "must require each priority development project to implement LID BMPs which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss."[685] To ensure compliance with the LID BMPs, each copermittee must require LID BMPs or make a finding of infeasibility in accordance with the LID waiver program; incorporate formalized consideration, such as thorough checklists, ordinances, or other means of LID BMPs into the plan review process for priority development projects; and, within two years after adoption of the permit, review its local codes, policies, and ordinances and identify barriers to the implementation of LID BMPs, and take appropriate actions to remove the barriers.[686]

The Fact Sheet explains that the LID BMP plan review process "is expected to include an assessment of LID BMP techniques to infiltrate, filter, store, evaporate, and/or retain runoff close to the source of the runoff. The review process is also expected to include an assessment of the potential collection of storm water for on site and off site reuse opportunities."[687]

Section F.1.d.4.b. identifies the following LID BMPs that are required to be implemented at all priority development projects where technically feasible:

- Maintain or restore natural storage reservoirs and drainage corridors.
- Projects with landscaped or other pervious areas must properly design and construct the pervious areas to effectively receive and infiltrate, retain and/or treat runoff from impervious areas, prior to discharge to the MS4. Soil compaction for these areas must be

[684] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 495 (Fact Sheet/Technical Report).

[685] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.).

[686] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.a.).

[687] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 496 (Fact Sheet/Technical Report).

minimized. The amount of the impervious areas that are to drain to pervious areas must be based upon the total size, soil conditions, slope, and other pertinent factors.

- Projects with low traffic areas and appropriate soil conditions must be constructed with permeable surfaces.[688]

The LID BMPs shall be "sized and designed to ensure onsite retention without runoff, of the volume of runoff produced from a 24-hour 85th percentile storm event" calculated using pertinent local rain data or extrapolated from isopluvial maps, unless technically infeasible, and shall be "designed for an appropriate surface loading rate to prevent erosion, scour and channeling within the BMP."[689] In addition, the LID BMPs shall be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies.[690]

Under the prior permit, the copermittees were required to review and ensure that all priority development projects met SUSMP requirements to reduce pollutants to the MEP and to maintain or reduce downstream erosion and protect stream habitat. The requirements included that all priority development projects implement a combination of on-site source control and on-site/shared treatment control BMPs.[691] As relevant here, the BMPs under the prior permit, at a minimum, had to control the post-development urban runoff discharge velocities, volumes, durations, and peak rates to maintain or reduce pre-development downstream erosion, and to protect stream habitat; conserve natural areas where feasible; minimize directly connected impervious areas where feasible; protect slopes and channels from eroding; be correctly designed to remove pollutants to the MEP; and be implemented close to pollutant sources and prior to discharge into receiving waters supporting beneficial uses.[692] In addition, the prior permit required that each copermittee protect groundwater quality by applying restrictions to the use of structural treatment BMPs that are designed to primarily function as infiltration devices (such as infiltration trenches and basins).[693] Therefore, LID site design BMPs and protection of groundwater quality have always been required and had to be reviewed by the copermittee for existing categories of priority development projects. But under the prior permit, the project

[688] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.b.).

[689] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 216 (test claim permit, Section F.1.d.4.c.), footnote omitted.

[690] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 216 (test claim permit, Section F.1.d.4.e.).

[691] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 577 (Order R9-2004-0001, Section F.2.b.).

[692] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 578-579 (Order R9-2004-0001, Section F.2.b.2.).

[693] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 581 (Order R9-2004-0001, Section F.2.b.8.).

proponent could select the BMPs from a list of recommended BMPs contained in a copermittee's local SUSMP.[694]

The test claim permit now directs the copermittees to:

> ". . . . require new development projects to employ certain classes of LID site design BMPs. The required LID site design BMPs take advantage of features that are incorporated into the Priority Development Project, such as landscaping or walkways. It also requires that projects seek to maintain natural water drainage features rather than instinctively convey water in buried pipes and engineered ditches that eliminate natural water quality treatment functions."[695]

For example, and as stated in Section F.1.d.4.b.ii. of the permit, "projects with landscaped or other pervious areas must, where feasible, properly design and construct the pervious areas to effectively receive and infiltrate, retain and/or treat runoff from impervious areas, prior to discharge to the MS4."[696] Thus, the test claim permit establishes and requires specific site design BMP criteria to be used by the priority development projects.

The Fact Sheet also explains that the test claim permit now requires that LID BMPs be sized and designed to ensure onsite retention without runoff of the volume of runoff produced from a 24-hour 85th percentile storm event.[697] Under the prior permit, these sizing requirements applied only to structural treatment BMPs.[698] The change is consistent with other municipal stormwater NPDES permits adopted by the Los Angeles and Santa Ana Regional Boards, and the permit recently adopted by the San Diego Water Board for Orange County.[699]

Finally, the requirement in Section F.1.d.4.a. to review local codes, policies, and ordinances and identify barriers to the implementation of LID BMPs, and take appropriate actions to remove the barriers within two years of the adoption of the permit is a new requirement when compared to the prior permit.

Therefore, Section F.1.d.4. imposes the following new requirements on all new development and redevelopment priority development projects identified in Sections F.1.d.1. and 2.:

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[694] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 578 (Order R9-2004-0001, Section F.2.b.2.).

[695] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 496 (Fact Sheet/Technical Report).

[696] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.b.ii.).

[697] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 496 (Fact Sheet/Technical Report).

[698] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 579-580, 496 (Order No. R9-2004-0001, Section F.1.b.3.b.).

[699] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 496 (Fact Sheet/Technical Report).

- Require each priority development project to implement LID BMPs as described in Sections F.1.d.4.b., c., and e., which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss.
- Take the following measures to ensure that LID BMPs are implemented at priority development projects:

  (i) Each copermittee must require LID BMPs or make a finding of technical infeasibility for each priority development project in accordance with the LID waiver program in Section F.1.d.7.;

  (ii) Each copermittee must incorporate formalized consideration, such as thorough checklists, ordinances, and/or other means, of LID BMPs into the plan review process for priority development projects; and

  (iii) On or before July 1, 2012, each copermittee must review its local codes, policies, and ordinances and identify barriers therein to implementation of LID BMPs. Following the identification of these barriers to LID implementation, where feasible, the copermittee must take, by the end of the permit cycle, appropriate actions to remove such barriers. The copermittees must include this review with the updated JRMP.[700]

LID Waiver Program Requirements (Section F.1.d.7.)

Pursuant to Section F.1.d.7. of the test claim permit, the copermittees are required to develop (collectively or individually) a LID waiver program to incorporate into the SSMP, which would allow a priority development project to substitute implementation of all or some of the required LID BMPs with implementation of treatment control BMPs and a mitigation project. The LID BMP waiver program must meet the following requirements:

- Prior to implementation, the LID waiver program must clearly exhibit that it will not allow priority development projects to result in a net impact (after consideration of any mitigation) from pollutant loadings over and above the impact caused by projects meeting the onsite LID retention requirements.
- For each participating priority development project, a feasibility analysis must be included demonstrating that it is technically infeasible to implement LID BMPs. The copermittees are required to develop criteria for the technical feasibility of implementing LID BMPs. Each priority development project must demonstrate that LID BMPs were implemented as much as feasible given the site's unique conditions. Technical infeasibility may result from the following conditions: locations cannot meet the infiltration and groundwater protection requirements; insufficient demand for stormwater reuse; smart growth and infill or redevelopment locations where the density or nature of the project would create significant difficulty for compliance with the LID BMP

[700] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.).

requirements; or other site, geologic, soil, or implementation constraints identified in the updated SSMP document.

- Each participating priority development project must mitigate for the pollutant loads expected to be discharged due to not implementing the LID BMPs in Section F.1.d.4.[701]

A copermittee may choose to implement additional mitigation programs (e.g., pollutant credit system, mitigation fund) as part of the waiver program provided that the mitigation program clearly exhibits that it will not allow priority development projects to result in a net impact from pollutant loadings over and above the impact caused by projects meeting LID requirements.[702] However, additional mitigation programs are within the copermittee's discretion and are not required by the test claim permit.

The requirement to develop a LID BMP waiver program pursuant to Section F.1.d.7.c. is new for all priority development projects. Under the prior permit, a copermittee was authorized to waive a project from implementing *treatment control* BMPs, but was not required to develop a LID BMP waiver program.[703] The Fact Sheet explains the new requirement as follows:

> . . . the Regional Board has added to the Order a requirement for the Copermittees to develop such a [LID BMP waiver] program. The LID BMP waiver program would provide the opportunity for development projects to avoid partial or full LID BMP implementation in exchange for implementation of treatment control BMPs and mitigation. The program would maintain equal water quality benefits as properly implemented LID BMPs when partial LID BMPs are coupled with some form of mitigation.
>
> LID BMPs are not limited to infiltration BMPs, and may also include storage, evaporation, evapotranspiration, filtration, and/or on site reuse BMPs. Thus, the San Diego Water Board expects that every site will be able to implement some form of LID BMPs to some extent.[704]

b) Section F.1.h. imposes new requirements to develop and implement hydromodification plans and controls for priority development projects to ensure that estimated post-project runoff discharge rates and durations do not exceed pre-development discharge rates and durations.

Section F.1.h. of the test claim permit requires each copermittee to collaborate with other copermittees to develop and implement a Hydromodification Management Plan (HMP) to manage increases in runoff discharge rates and durations from all priority development projects.

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[701] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 218-219 (test claim permit, Section F.1.d.7.).

[702] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 218-219 (test claim permit, Section F.1.d.7.).

[703] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 581 (Order R9-2004-0001, Section F.2.b.7.).

[704] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 500 (Fact Sheet/Technical Report).

This requirement does not apply to small restaurants, however. Pursuant to Section F.1.d.2. of the test claim permit, "Restaurants where land development is less than 5,000 square feet must meet all SSMP requirements except for . . . hydromodification requirement F.1.h." The HMP shall be incorporated into the SSMP and implemented by each copermittee so that estimated post-project runoff discharge rates and durations do not exceed pre-development discharge rates and durations.

Section F.1.h.1. states that the HMP is required to:

- Identify a method for assessing susceptibility and geomorphic stability of channel segments which receive runoff discharges from priority development projects. A performance standard shall be established that ensures that the geomorphic stability within the channel not be comprised as a result of receiving runoff discharges from priority development projects.
- Utilize continuous simulation of the entire rainfall record (or other method acceptable to the Regional Board) to identify a range of runoff flows for which priority development projects post-project runoff flow rates and durations shall not exceed pre-development (naturally occurring) runoff flow rates and durations by more than ten percent, and which will result in increased potential for erosion or other significant adverse impacts to beneficial uses.
- Identify a method to assess and compensate for the loss of sediment supply to streams due to development. The copermittees must create a performance and/or design standard to ensure that the loss of sediment supply does not cause or contribute to increased erosion within channel segments downstream from priority development project discharge points.
- Require priority development projects to implement control measures so that post-development runoff flow rates and duration (1) do not exceed pre-project runoff flow and duration rates by more than ten percent; (2) do not result in channel conditions that do not meet channel standards for segments downstream of priority development project discharge points; and (3) compensate for the loss of sediment supply due to development.
- Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from priority development projects.
- Include other performance criteria (numeric or otherwise) for priority development projects that are necessary to prevent runoff from the projects from increasing or contributing unnatural rates of erosion of channel beds and banks, silt pollutants generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.
- Include a review of pertinent literature.
- Identify areas within the Santa Margarita Hydrologic Unit for potential opportunities to restore or rehabilitate stream channels where historic hydromodification of receiving waters that are tributary to documented low or very low Index of Biotic Integrity (IBI) scores.

- Include a protocol to evaluate potential hydrograph changes impacts to downstream watercourses from priority development projects.
- Include a description of how the copermittees will incorporate the HMP requirements into their local approval process.
- Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations, and address potential hydromodification impacts.
- Include technical information supporting any standards and criteria proposed.
- Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.
- Include a description of pre and post project monitoring and program evaluations, including physical and biological conditions of receiving water channels, to be conducted to assess the effectiveness of implementation of the HMP.
- Include mechanisms for assessing and addressing cumulative impacts within a watershed on channel morphology.[705]

Section F.1.h.2. states that the HMP must also include management measures to be used on priority development projects to mitigate hydromodification impacts, protect and restore downstream beneficial uses, and to prevent adverse physical changes to downstream channels. The measures must be prioritized based on consideration of: site design control measures, on-site management measures, regional controls located upstream of receiving waters, and in-stream management and control measures. The management measures must include stream restoration as an option. In-stream controls cannot include the use of nonnaturally occurring hardscape materials to reinforce stream channels. Where stream channels are adjacent to or are to be modified by the priority development project, management measures must include buffer zones and setbacks.[706]

Sections F.1.h.3. and 4. authorize the copermittee to establish a hydromodification waiver program for redevelopment priority development projects and provide the copermittees discretion to not impose the HMP requirements for certain projects.[707] These sections do not impose any requirements on the claimants.

Section F.1.h.5. requires the copermittees to submit a draft HMP that has been reviewed by the public to the Regional Board within three years of adoption of the permit. Within 180 days of receiving the Regional Board's comments on the draft HMP, the copermittees shall submit a

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[705] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 223-225 (test claim permit, Section F.1.h.1.).

[706] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 226 (test claim permit, Section F.1.h.2.).

[707] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 226-227 (test claim permit, Section F.1.h.3., 4.)

final HMP that addresses the comments. Within 90 days of receiving a finding of adequacy from the Regional Board, each copermittee shall incorporate and implement the HMP for all priority development projects. Prior to the adequacy finding by the Regional Board, the copermittees must encourage early implementation of those measures likely to be included in the HMP.[708]

Section F.1.h.6. requires each copermittee, from the time of adoption of the Order until the adequacy finding of the HMP by the Regional Board, to ensure that all priority development projects are implementing the interim hydromodification criteria (the requirements in the 2006 Riverside County WQMP, updated in 2009), unless the following four conditions are met: the runoff discharges directly to a concrete lined channel or storm drain, the discharge complies with copermittee's requirements for connections and discharges to the MS4, the discharge will not cause increased upstream or downstream erosion or adversely impact downstream habitat, and the discharge is authorized by the copermittee. Other exceptions are that the project disturbs less than one acre or the runoff flow rate, volume, velocity, and duration for the post-development condition do not exceed the pre-development (naturally occurring) condition for the 2-year, 24-hour and 10-year, 24-hour rainfall events.[709]

The requirement in Section F.1.h.6. for each copermittee, from the time of adoption of the test claim permit until the adequacy finding of the HMP by the Regional Board, to ensure that all priority development projects are implementing the interim hydromodification criteria is not new for priority development projects as defined under the prior permit (new commercial developments greater 100,000 square feet, automotive repair shops, restaurants, hillside developments greater than 5,000 square feet, environmentally sensitive areas, parking lots, and streets, roads, highways, and freeways). Under the prior permit, the claimants had to require that all priority development projects implement BMPs that control post-development stormwater runoff discharge velocities, volumes, durations, and peak rates to maintain or reduce pre-development downstream erosion and to protect stream habitat and ensure that post-development runoff does not contain pollutant loads that cause or contribute to an exceedance of water quality objectives.[710] The Fact Sheet further explains that

> Section F.1.h (6) describes interim hydromodification criteria that must be implemented by the Copermittees until the final HMP is found to be adequate by the San Diego Water Board Executive Officer. The Copermittees currently have hydromodification requirements in the SSMP (section 4.4 of the Riverside County WQMP). Until the final HMP is required to be implemented, the Copermittees must continue implementing their existing hydromodification requirements.[711]

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[708] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 227 (test claim permit, Section F.1.h.5.).

[709] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 227-228 (test claim permit, Section F.1.h.6.).

[710] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 578-579 (Order R9-2004-0001, Sections F.2.b.2.a. and n.).

[711] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 508 (Fact Sheet/Technical Report).

However, the requirement to ensure implementation of the interim hydromodification criteria until the adoption of the HMP is new for the following newly added priority development projects under the test claim permit:

- Multi-use developments, residential developments, commercial developments (that create between 10,000 square feet and 99,999 square feet, mixed use projects, public projects (except for public streets, roads, highways, and freeways, and those considered hillside developments or municipal projects built in environmentally sensitive areas), and industrial projects, which create 10,000 square feet or more of impervious surfaces (collectively over the entire project site).[712]
- All other post-construction pollutant-generating new development projects that result in the disturbance of one acre or more of land.[713]
- Where a new development project feature, such as a parking lot, falls into a priority development project category, the entire project footprint is subject to these stormwater mitigation plan requirements.[714]

In addition, the requirements to develop a draft HMP, make the draft available for public review and comment, submit the draft to the Regional Board, prepare a final HMP, and encourage early implementation of those measures likely to be included in the HMP are new.[715]

Moreover, the test claim permit provides greater specificity and detail with respect to the requirement to implement the requirements of the HMP for all priority development projects. As explained in the Fact Sheet,

> Hydromodification expands and clarifies current requirements for control of MS4 discharges to limit hydromodification effects caused by changes in runoff resulting from development and urbanization. The requirements are based on findings and recommendations of the Riverside County Storm Water Program, the Stormwater Monitoring Coalition (SMC), and the Storm Water Panel on Numeric Effluent Limits (Numeric Effluent Panel). Added specificity is needed due to the current lack of a clear standard for controlling hydromodification resulting from development. More specific requirements are also warranted because hydromodification is increasingly recognized as a major factor affecting water quality and beneficial uses.
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[712] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 213 (test claim permit, Section F.1.d.2.a.).

[713] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 213 (test claim permit, Section F.1.d.1.c.).

[714] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 213-214 (test claim permit, Section F.1.d.2.).

[715] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 223, 227 (test claim permit, Sections F.1.h., F.1.h.5.)

> The Copermittees recognize the need to improve management of hydromodification. The ROWD proposes to revise the SSMP to incorporate additional information from ongoing hydromodification studies conducted by the SMC.[716]

Accordingly, the requirement in Section F.1.h.5. to develop and implement the HMP in accordance with Sections F.1.h.1. and 2. is new for all priority development projects, except that pursuant to Section F.1.d.2., restaurants where land development is less than 5,000 square feet are not required to meet the hydromodification requirements. The requirement in Section F.1.h.6. to ensure that priority development projects are implementing the interim hydromodification criteria until the adoption of the HMP is new only for the new priority development projects listed above.

c) Section F.3.d.1.-5. imposes new requirements to develop a retrofitting program for existing development, encourage owners to retrofit existing developments, and track completed retrofit BMPs.

The claimants pled Section F.3.d.1.-5. of the test claim permit, which requires each copermittee to develop and implement a retrofitting program for existing development. The goals of the program are to reduce impacts from hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of stormwater pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of water quality standards. The retrofitting program may be coordinated with flood control projects and infrastructure improvement programs.

The retrofitting program is required to meet the following provisions:

- Identify and inventory existing developments (municipal, industrial, commercial, and residential) as candidates for retrofitting. Potential candidates for retrofitting include development that contributes to pollutants of concern to a TMDL or environmentally sensitive area; receiving waters that are channelized or otherwise hardened; development tributary to receiving waters that are channelized or otherwise hardened; development tributary to receiving waters that are significantly eroded; and developments tributary to Areas of Special Biological Significance or State Water Quality Protected Areas.[717]
- Evaluate and rank the inventoried existing developments to prioritize retrofitting based on the following criteria: feasibility, cost effectiveness, pollutant removal effectiveness, tributary area potentially treated, maintenance requirements, landowner cooperation, neighborhood acceptance, aesthetic qualities, efficacy at addressing concern, and potential improvements on public health and safety.[718]

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[716] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 504-506 (Fact Sheet/Technical Report), footnotes omitted.

[717] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 247-248 (test claim permit, Section F.3.d.1.).

[718] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 248 (test claim permit, Section F.3.d.2.).

- Consider the results of the evaluation in prioritizing work plans for the following year. Highly feasible projects expected to benefit water quality should be given a high priority to implement source control and treatment control BMPs. The retrofit projects should be designed in accordance with the SSMP requirements within Sections F.1.d.3.-8. and the hydromodification requirements in Section F.1.h., where feasible.[719]
- To encourage retrofitting projects, the copermittees must cooperate with private landowners and must consider the following practices in cooperating and encouraging private landowners to retrofit their existing development: demonstration retrofit projects, retrofits on public land and easements, education and outreach, subsidies for retrofit projects, requiring retrofit as mitigation or ordinance compliance, public and private partnerships, and fees for existing discharges to the MS4 and reduction of fees for retrofit implementation.[720]
- The completed retrofit BMPs shall be tracked and inspected. Public properties shall be inspected in accordance with Section F.1.f. and private properties, as needed.[721]

Based on the plain language of Section F.3.d.1.-4., claimants are required to develop a retrofitting program by identifying and creating an inventory of existing developments for retrofit, evaluating and ranking those projects for retrofit, and encouraging retrofit projects to be designed in accordance with SSMP LID and hydromodification requirements in Sections F.1.d.3.-9. and F.1.h.[722] These requirements are new as the prior permit included no activities regarding retrofitting. In addition, the Fact Sheet confirms that Section F.3.d. was added to the permit to impose specific requirements for the retrofit program and when appropriately applied, retrofitting existing development meets the MEP.[723] The Fact Sheet further states the following:

> Existing BMPs are not sufficient, as evidenced by 303(d) listings and exceedances of Water Quality Objectives from the Copermittees monitoring reports. More advanced BMPs, including the retrofitting of existing development with LID, are part of the iterative process. Previous permits limited the requirement of treatment control BMPs to new development and redevelopment. Based on the current rate of redevelopment compared to existing BMPs, the use of LID only on new and redevelopment will not adequately address current water quality problems, including downstream hydromodification. Retrofitting existing development is

[719] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 248 (test claim permit, Section F.3.d.3.).

[720] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 248 (test claim permit, Section F.3.d.4.).

[721] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 249 (test claim permit, Section F.3.d.5.).

[722] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 247-248 (test claim permit, Section F.3.d.1.-4.).

[723] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 523 (Fact Sheet/Technical Report).

> practicable for a municipality through a systematic evaluation, prioritization and implementation plan focused on impaired water bodies, pollutants of concern, areas of downstream hydromodification, feasibility and effective communication and cooperation with private property owners.[724]

However, the permit does *not* require the claimant to require an existing development to be retrofitted for LID and hydromodification. Nor does the permit require the copermittees to retrofit existing public properties. Thus, all retrofitted BMP inspection and tracking activities that flow from the discretionary decision of a copermittee to retrofit existing public developments are likewise not required by the test claim permit.[725]

Moreover, even if a property owner of an existing development decides to retrofit and seeks a permit to do so, then the copermittee is required by Section F.1.c., prior to approval and issuance of the permit, to prescribe the necessary requirements so that the project's discharges of stormwater pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of water quality standards, and will comply with all requirements of the test claim permit and ordinances adopted by the copermittee, including those in compliance with Sections F.1.d.3.-9. and F.1.h.[726] The claimants, however, did not plead Section F.1.c. of the test claim permit and, thus, the activities and the process to approve permits for retrofit projects are not eligible for reimbursement.

Section F.3.d.(5), however, does require that once a property owner of an existing development decides to retrofit, the completed retrofit BMPs shall be tracked and inspected in accordance with Section F.1.f. of the test claim permit and that requirement is new.[727]

d) Summary of new LID, Hydromodification Plan, Treatment Control, LID Waiver, and Retrofitting requirements imposed by sections F.1.d.1., 2., 4., 7., F.1.h., and F.3.d.1.-5. of the test claim permit.

Sections F.1.d.1., 2., 4., 7., F.1.h., and F.3.d.1.-5. of the test claim permit impose the following new requirements:

1. Administrative and Planning Activities

[724] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 523 (Fact Sheet/Technical Report).

[725] *Department of Finance v. Commission on State Mandates (Kern High School Dist.)* (2003) 30 Cal.4th 727; *City of Merced v. State* (1984) 153 Cal.App.3d 777; *Coast Community College Dist. v. Commission on State Mandates* (2022) 13 Cal.5th 800, 815-817.

[726] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 209-210 (test claim permit, Section F.1.c.).

[727] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 249 (test claim permit, Section F.3.d.5.).

a. Incorporate formalized consideration, such as thorough checklists, ordinances, and/or other means, of LID BMPs into the plan review process for priority development projects.[728]

b. Within two years after adoption of the permit, review local codes, policies, and ordinances and identify barriers to the implementation of LID BMPs, and take appropriate actions to remove the barriers.[729]

c. Develop a LID BMP waiver program to incorporate into the SSMP.[730]

d. Collaborate with other copermittees to develop a Hydromodification Management Plan (HMP) in accordance with Section F.1.h.1. and 2. of the test claim permit to manage increases in runoff discharge rates and durations from all priority development projects. Submit a draft HMP that has been available to public review and comment, to the Regional Board within three years of adoption of the permit. Within 180 days of receiving the Regional Board's comments on the draft HMP, submit a final HMP to the Regional Board that addresses the comments. Within 90 days of receiving a finding of adequacy from the Regional Water Board, incorporate the HMP into the SSMPs so that estimated post-project runoff discharge rates and durations do not exceed pre-development discharge rates and durations.[731]

e. Develop a retrofitting program for existing developments (municipal, industrial, commercial, and residential) by identifying and creating an inventory of existing developments for retrofit, evaluating and ranking those projects for retrofit, prioritizing work plans, and encouraging retrofit projects to be designed in accordance with SSMP LID and hydromodification requirements.[732] (Section F.3.d.1.-4.)

2. Ensure Priority Development Projects Comply With LID, Treatment Control, LID Waiver and Hydromodification Requirements

Each of the sections below require the claimants, in their regulatory capacity, to ensure that proponents of new development or significant redevelopment priority development projects, as specified, perform the following activities.[733] In addition, since priority

[728] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.a.ii.).

[729] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.a.iii.).

[730] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 218 (test claim permit, Section F.1.d.7.c.).

[731] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 223, 227 (test claim permit, Section F.1.h. and F.1.h.5.).

[732] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 247-248 (test claim permit, Section F.3.d.1.-4.).

[733] Section F.1.c. of the test claim permit states the following: "For all proposed Development Projects, each Copermittee, during the planning process, and prior to project approval and

development projects are defined in Section F.1.d.2. to include "public" projects, the claimant is seeking reimbursement to implement these activities when any new municipal development or significant redevelopment projects is proposed by a copermittee.

- Require each priority development project listed in Section F.1.d.1. and 2. to implement LID BMPs as described in Section F.1.d.4.b., c., and e., which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss, or make a finding of technical infeasibility for each priority development project in accordance with the LID waiver program in Section F.1.d.7.[734]
- Require all priority development projects, except for smaller restaurants where land development is less than 5,000 square feet, to implement the approved Hydromodification Plan (HMP).[735]

3. Retrofit Existing Development

   a. Develop a retrofitting program by identifying and creating an inventory of existing developments for retrofit, evaluating and ranking those projects for retrofit, and encouraging retrofit projects to be designed in accordance with SSMP LID and hydromodification requirements in Sections F.1.d.3.-9. and F.1.h.[736] (Section F.3.d.1.-4.)

   b. Once a property owner of an existing development decides to retrofit, the completed retrofit BMPs shall be tracked and inspected in accordance with section F.1.f. of the test claim permit.[737] (Section F.3.d.5.) Reimbursement is *not* required to track and inspect retrofitted BMPs of an existing *public or municipal* development.

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issuance of local permits, must prescribe the necessary requirements so that Development Project discharges of storm water pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of water quality standards, and will comply with the Copermittee's ordinances, permits, plans, and requirements, and with this Order. Exhibit A, Test Claim filed November 10, 2011 and Revised April 28, 2017, pages 209-210 (test claim permit, Section F.1.c.).

[734] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.).

[735] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 213, 223 (test claim permit, Sections F.1.d.2.c., F.1.h.).

[736] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 247-248 (test claim permit, Section F.3.d.1.-4.).

[737] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 249 (test claim permit, Section F.3.d.5.).

ii. All costs incurred to implement the LID, hydromodification, and retrofitting requirements of sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. of the test claim permit which are triggered by a project proponent of a municipal priority development project are not mandated by the state and do not impose a new program or higher level of service because such costs are incurred at the discretion of the local agency, are not unique to government, and do not provide a governmental service to the public.

As indicated above, priority development projects are defined to include "public" projects.[738] The claimants contend that the above activities are eligible for reimbursement under article XIII B, section 6 of the California Constitution when they propose new public or "municipal development or redevelopment projects" and incur costs related to LID and hydromodification for recreational facilities, parking lots, streets, roads, highways, and other projects large enough to exceed specified thresholds. The claimants seek reimbursement for municipal projects as follows:

- Applying Standard Stormwater Mitigation Plan (SSMP) requirements to an increased range of municipal projects implemented by the claimants, which meet the requirements of Sections F.1.d.1. and F.1.d.2.
- Requiring implementation of LID practices and development and implementation of an LID Waiver program, as described in Sections F.1.d.4. and F.1.d.7., on municipal priority development projects implemented by the claimants. This will require creating a formalized review process for all priority development projects, developing protocols for assessing each priority development project for various required types of LID, training staff on the new protocols, assessing potential on- or off-site collection and reuse of stormwater, amending local ordinances to remove barriers to LID implementation, maintaining or restoring natural storage reservoirs and drainage corridors, draining a portion of impervious areas into pervious areas, and constructing low-traffic areas with permeable surfaces. Projects that are subject to these requirements include municipal yards, recreation centers, civic centers, and road improvements, and any other municipal projects meeting the permit-specified thresholds or geographical criteria.
- Requiring development of an HMP, and implementation of those HMP requirements on municipal priority development projects implemented by the claimants pursuant to Section F.1.h. To comply with Section F.1.h., the claimants must invest significant resources to hold public hearings, hold collaborative meetings, perform studies and develop an HMP, train staff and the public, and adopt the local SSMP. In addition, as noted above, the claimants are prohibited from using non-natural materials in reinforcing stream channels, a prohibition which is not practicable. Continued compliance with these

[738] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 212-214 (test claim permit, Section F.1.d.1. and 2.).

sections will also require the claimants to add requirements to municipal projects and will significantly increase the costs of design and construction.[739]

The claimants assert that development and upkeep of these municipal land uses is not optional, but is an integral part of the claimants' function as municipal entities. The claimants further assert that the failure to make necessary repairs, upgrades, and extensions can expose them to liability.[740]

In addition, Sections F.3.d.1.-5. require the permittees to identify and inventory all existing development, including municipal development, evaluate and rank them, and as mentioned earlier, inspect and track any retrofitted BMPs on municipal development. The Commission finds that the costs incurred by a local agency as a project proponent of a new municipal development or redevelopment project under the test claim permit are not mandated by the state but are the result of a local discretionary decision, and therefore are not eligible for reimbursement.

a) Costs incurred by a municipality for LID, hydromodification, and retrofitting activities required by sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. of the test claim permit , as a project proponent of a municipal priority development project, are not mandated by the state.

To determine whether a requirement is mandated by the state, the requirement must be legally compelled by state law; that is, the law creates a mandatory legal obligation to comply with the requirements.[741] In the absence of legal compulsion, the courts have acknowledged the possibility that a state mandate can be found if local government can show that it faces "certain and severe penalties, such as double taxation or other draconian consequences," leaving local government no choice but to comply with the conditions established by the state.[742]

All costs incurred by a municipality as a project proponent under the LID and hydromodification sections of the test claim permit can be analogized to *City of Merced v. State* (1984) 153 Cal.App.3d 777 and *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727. In *City of Merced*, the statute at issue required a local government, when exercising

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[739] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 56 (Test Claim narrative).

[740] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 53-55 (Test Claim narrative), citing to *Department of Finance v. Commission on State Mandates (Kern High School Dist.)* (2003) 30 Cal.4th 727; *City of Merced v. State* (1984) 153 Cal.App.3d 777; and *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859.

[741] *Coast Community College Dist. v. Commission on State Mandates* (2022) 13 Cal.5th 800, 815 [". . . legal compulsion is present when the local entity has a mandatory, legally enforceable duty to obey. This standard is similar to the showing necessary to obtain a traditional writ of mandate, which requires the petitioning party to establish the respondent has "a clear, present, and usually ministerial duty to act. ... Mandate will not issue if the duty is ... mixed with discretionary power."].

[742] *Coast Community College Dist. v. Commission on State Mandates* (2022) 13 Cal.5th 800, 815-817.

the power of eminent domain, to compensate a business owner for the loss of business goodwill as part of compensating for the property subject to the taking.[743] The court found that nothing *required* the local entity to exercise the power of eminent domain, and thus any costs experienced as a result of the requirement to compensate for business goodwill was the result of an initial discretionary act.[744]

In *Kern High School Dist.*, the statute at issue required certain local school committees to comply with notice and agenda requirements in conducting their public meetings.[745] There, the court held that the underlying school site councils and advisory committees were part of several separate voluntary grant funded programs, and therefore any notice and agenda costs were an incidental impact of participating or continuing to participate in those programs.[746] The court acknowledged that the district was already participating in the underlying programs, and "as a practical matter, they feel they must participate in the programs, accept program funds, and…incur expenses necessary to comply with the procedural conditions imposed on program participants."[747] However, the court held that "[c]ontrary to the situation that we described in *City of Sacramento* [*v. State* (1990)] 50 Cal.3d 51, a claimant that elects to discontinue participation in one of the programs here at issue does not face 'certain and severe…penalties' such as 'double…taxation' or other 'draconian' consequences, but simply must adjust to the withdrawal of grant money along with the lifting of program obligations."[748]

The claimants specifically dispute the application of *City of Merced* and *Kern High School Dist.*, stating the test claim permit is not a voluntary program.[749] Furthermore, the claimants argue that since issuing the *Kern High School Dist*. decision, the California Supreme Court has rejected the application of *City of Merced* in circumstances beyond those strictly present in *Kern High School*

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[743] *City of Merced v. State* (1984) 153 Cal.App.3d 777, 782.

[744] *City of Merced v. State* (1984) 153 Cal.App.3d 777, 783.

[745] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 732.

[746] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 744-745.

[747] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 753.

[748] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 754 citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74 (The "certain and severe…penalties" and "double…taxation" referred to the situation in *City of Sacramento* in which the state was compelled, by the potential loss of *both* federal tax credits *and* subsidies provided to businesses statewide, to impose mandatory unemployment insurance coverage on public agencies consistent with a change in federal law.).

[749] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 53-54 (Test Claim narrative).

Dist.[750] The claimants cite *San Diego Unified School Dist. v. Commission* (2004) 33 Cal.4th 859, 887-888, in which the court stated "there is reason to question an extension of the holding of *City of Merced* so as to preclude reimbursement…whenever an entity makes an initial discretionary decision that in turn triggers mandated costs."[751]

The claimants misinterpret *San Diego Unified*, and place too much emphasis on dicta. In *San Diego Unified,* the court discussed the example of *Carmel Valley Fire Protection Dist. v. State* (1987) 190 Cal.App.3d 521, in which an executive order requiring that county firefighters be provided with protective clothing and safety equipment was held to impose a reimbursable state mandate for the costs of the clothing and equipment.[752] The *San Diego Unified* court reasoned that under a strict application of the rule of *City of Merced* "such costs would not be reimbursable for the simple reason that the local agency's decision to employ firefighters involves an exercise of discretion concerning, for example, how many firefighters are needed to be employed, etc."[753] In a footnote, the court acknowledged the argument made by amici and discussed by the court of appeal, below, that based on a school district's legal obligation to maintain a safe educational environment for both students and staff, it is inevitable that at least *some* expulsion proceedings will occur, and thus the hearing procedures should not be said to be entirely the result of voluntary or discretionary activity.[754] However, the court did not decide *San Diego Unified* on that ground, finding instead that hearing costs incurred relating to so-called discretionary expulsion proceedings under the Education Code were adopted to implement a federal due process mandate, and were, in context, de minimis, and were therefore nonreimbursable.[755] Therefore, the language cited by the claimants is merely dicta and the case does not reach a *conclusion* with respect to the prospective application of the *City of Merced* and *Kern High School Dist.* rules.

The Third District Court of Appeal addressed the bounds of the *Kern High School Dist.* rule in greater detail in *POBRA*, holding that following *City of Merced*, *Kern High School Dist.*, and *San Diego Unified*, there may be activities that involve the exercise of discretion but are nevertheless

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[750] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 54-55 (Test Claim narrative).

[751] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 54-55, (Test Claim narrative) citing *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 887-888.

[752] *Carmel Valley Fire Protection Dist. v. State of California* (1987) 190 Cal.App.3d 521.

[753] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 887-888.

[754] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 887, footnote 22.

[755] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 888 ("As we shall explain, we conclude, regarding the reimbursement claim that we face presently, that all hearing procedures set forth in Education Code section 48918 properly should be considered to have been adopted to implement a federal due process mandate, and hence that all such hearing costs are nonreimbursable under article XIII B, section 6…")

inevitable in the administration of a mandatory program. The issue, then, for the court in *POBRA*, was whether the alleged mandated costs spring from a local entity's "essential and basic function."[756] In *POBRA*, the alleged mandate pertained to due process protections required to be extended to all peace officers in the state, and the question was whether those costs constituted a reimbursable state mandate with respect to school districts, which were authorized, but not required, to employ peace officers. The court held that school districts "do not have provision of police protection as an essential and basic function," and therefore the decision to employ peace officers entitled to the protections of POBRA was a discretionary act that led the district to incur the costs alleged.[757] The court concluded that "[i]t is not essential unless there is a showing that, as a practical matter, exercising the authority to higher peace officers is the only reasonable means to carry out their core mandatory functions."[758]

Therefore, based on *Kern*, *POBRA*, and *Coast Community College Dist.* where statutory or regulatory requirements result from an apparently or facially *discretionary* decision, and are therefore not *legally* compelled, they may be *practically* compelled if the failure to act would subject the claimant to "certain and severe…penalties" such as "double…taxation" or other "draconian" consequences, which may occur if the discretionary act is "the only reasonable means to carry out [the claimant's] core mandatory functions.[759] Substantial evidence in the record is required to make a finding of practical compulsion.[760]

Here, the claimants assert, without support, that certain municipal projects, including roads and streets "are not optional."[761] Rather, "[t]hey are integral to the Permittee's function as municipal entities [*sic*], and the failure to make necessary repairs, upgrades, and extensions can expose the Permittees to liability."[762] This amounts to asserting *both* that the projects are "the only

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[756] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[757] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[758] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[759] *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727, 754 [citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74]; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[760] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368-1369 (*POBRA*); Government Code section 17559; California Code of Regulations, title 2, section 1187.5.

[761] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 54 (Test Claim narrative).

[762] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 54-55 (Test Claim narrative).

reasonable means to carry out their core mandatory functions"[763] *and* that potential tort liability constitutes "certain and severe…penalties" or other "draconian" consequences.[764]

The claimants' position is not supported by the law or any evidence in the record. First, the requirements detailed in the test claim permit do not apply to regular maintenance activities, based on the plain language of the order. Section F.1.d.1.b. defines significant redevelopment projects triggering the planning requirements as those that include the *addition or replacement* of 5,000 square feet or more of impervious surface on a developed site.[765] In addition, there is nothing in state statute or case law that imposes a legal obligation on local agencies to construct, expand, or improve municipal projects, including roads.[766]

Moreover, there is no evidence in the record that local agencies are practically compelled, as the only reasonable means necessary to carry out core mandatory functions, to develop or redevelop priority municipal projects.[767] Nor is there evidence in the record that a failure to develop or redevelop priority municipal projects would subject the claimant to "certain and severe…penalties" such as "double…taxation" or other "draconian" consequences.[768]

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[763] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[764] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 754 citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74.

[765] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 212 (test claim permit, Section F.1.d.1.b.).

[766] For example, see Government Code section 23004 (counties may purchase, receive by gift or bequest, and hold land within its limits, or elsewhere when permitted by law; and manage, sell, lease, or otherwise dispose of its property as the interests of its inhabitants require); Government Code sections 37350-37353 (cities may purchase, lease, receive, hold, and enjoy real and personal property, and control and dispose of it for the common benefit; may erect and maintain buildings for municipal purposes; and may acquire property for parking motor vehicles, and for opening and laying out any street; Government Code section 37111 ("When the legislative body deems it necessary that land purchased for park or other purposes be used for construction of public buildings or creation of a civic center, it may adopt an ordinance by a four-fifths vote declaring the necessity and providing for such use"); Streets and Highways Code section 1800 ("The legislative body of any city may do any and all things necessary to lay out, acquire, and construct any section or portion of any street or highway within its jurisdiction as a freeway, and to make any existing street or highway a freeway."); and Streets and Highways Code section 1801 ("The legislative body of any city may close any street or highway within its jurisdiction at or near the point of its intersection with any freeway, or may make provision for carrying such street or highway over, under, or to a connection with the freeway, and may do any and all necessary work on such street or highway.").

[767] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[768] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.)* (2003) 30 Cal.4th 727, 754 citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74.

Therefore, the Commission finds that the new requirements of the test claim permit, in Sections F.1.d.1., 2., 4., 7., and h., and F.3.d.1.-5., listed above, as applied to municipal project proponents are not mandated by the state.

> *b) The LID, hydromodification, and retrofitting requirements of sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. of the test claim permit, when triggered by a project proponent of a municipal priority development project, do not impose a new program or higher level of service because the requirements are not unique to government and do not provide a governmental service to the public.*

Moreover, these activities do not impose a new program or higher level of service. Article XIII B, section 6 requires reimbursement whenever the Legislature or any state agency mandates a new program or higher level of service that results in costs mandated by the state. "New program or higher level of service" is defined as "programs that carry out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state."[769] Here, the new LID and hydromodification requirements imposed on new development and significant redevelopment applies to both public and private project proponents, is not unique to government, and does not provide a governmental service to the public.

The California Supreme Court explained in *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, explained that "the intent underlying section 6 was to require reimbursement to local agencies for the costs involved in carrying out functions *peculiar to government*, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities."[770] The law at issue in the *County of Los Angeles* case addressed increased workers' compensation benefits for government employees, and the court concluded that:

> …section 6 has no application to, and the state need not provide subvention for, the costs incurred by local agencies in providing to their employees the same increase in worker's compensation benefits that employees of private individuals or organizations receive. Workers' compensation is *not* a program administered by local agencies to *provide service to the public*.[771]

The court also concluded that the statute did not impose unique requirements on local government:

> Although local agencies must provide benefits to their employees either through insurance or direct payment, they are indistinguishable in this respect from private employers. In no sense can employers, public or private, be considered to be administrators of a program of workers' compensation or to be providing services incidental to administration of the program. Workers' compensation is

[769] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56.

[770] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56-57, emphasis added.

[771] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58, emphasis added.

> administered by the state through the Division of Industrial Accidents and the Workers' Compensation Appeals Board. [Citation omitted.] Therefore, although the state requires that employers provide workers' compensation for nonexempt categories of employees, increases in the cost of providing this employee benefit are not subject to reimbursement as state-mandated programs or higher levels of service within the meaning of section 6.[772]

In *City of Sacramento*, the court considered whether a state law extending mandatory unemployment insurance coverage to include local government employees imposed a reimbursable state mandate.[773] The court followed *County of Los Angeles*, holding that "[b]y requiring local governments to provide unemployment compensation protection to their own employees, the state has not compelled provision of new or increased 'service to the public' at the local level…[nor] imposed a state policy 'uniquely' on local governments."[774] Rather, the court observed that most employers were already required to provide unemployment protection to their employers, and "[e]xtension of this requirement to local governments, together with the state government and nonprofit corporations, merely makes the local agencies 'indistinguishable in this respect from private employers.'"[775]

A few other examples are instructive. In *Carmel Valley*, the claimants sought reimbursement from the state for protective clothing and equipment required by regulation, and the state argued that private sector firefighters were also subject to the regulations, and thus the regulations were not unique to government.[776] The court rejected that argument, finding that "police and fire protection are two of the most essential and basic functions of local government."[777] And since there was no evidence on that point in the trial court, the court held "we have no difficulty in concluding as a matter of judicial notice that the overwhelming number of fire fighters discharge a classic governmental function."[778] Thus, the court found that the regulations requiring local agencies to provide protective clothing and equipment to firefighters carried out the governmental function of providing services to the public. The court also found that the requirements were uniquely imposed on government because:

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[772] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56, 58.

[773] *City of Sacramento v. State of California* (1990) 50 Cal.3d 51.

[774] *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 67.

[775] *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 67. See also, *City of Richmond v. Commission on State Mandates* (1998) 64 Cal.App.4th 1190 (Finding that statute eliminating local government exemption from liability for worker's compensation death benefits for public safety employees "simply puts local government employers on the same footing as all other nonexempt employers").

[776] *Carmel Valley Fire Protection District v. State of California* (1987) 190 Cal.App.3d 521.

[777] *Carmel Valley Fire Protection District v. State of California* (1987) 190 Cal.App.3d 521, 537, quoting *Verreos v. City and County of San Francisco* (1976) 63 Cal.App.3d 86, 107.

[778] *Carmel Valley Fire Protection District v. State of California* (1987) 190 Cal.App.3d 521, 537.

> The executive orders manifest a state policy to provide updated equipment to all fire fighters. Indeed, compliance with the executive orders is compulsory. The requirements imposed on local governments are also unique because fire fighting is overwhelmingly engaged in by local agencies. Finally, the orders do not generally apply to all residents and entities in the State but only to those involved in fire fighting.[779]

Later, in *County of Los Angeles*, counties sought reimbursement for elevator fire and earthquake safety regulations that applied to all elevators, not just those that were publicly-owned.[780] The court found that the regulations were plainly not unique to government.[781] The court also found that the regulations did not carry out the *governmental* function of providing a service to the public, despite declarations by the county that without those elevators, "no peculiarly governmental functions and no purposes mandated on County by State law could be performed in those County buildings . . . ."[782] The court held that the regulations did not constitute an increased or higher level of service, because "[t]he regulations at issue do not mandate elevator service; they simply establish safety measures."[783] The court continued:

> In determining whether these regulations are a program, the critical question is whether the mandated program carries out the governmental function of providing services to the public, not whether the elevators can be used to obtain these services. Providing elevators equipped with fire and earthquake safety features simply is not "a governmental function of providing services to the public." This case is therefore unlike *Lucia Mar, supra*, 44 Cal.3d 830, in which the court found the education of handicapped children to be a governmental function (44 Cal.3d at p. 835) and *Carmel Valley, supra*, where the court reached a similar conclusion regarding fire protection services. (190 Cal.App.3d at p. 537.)[784]

Here, the claimants have alleged the LID and hydromodification requirements are mandated by the state *as applied to their own municipal projects.*[785] However, the LID and hydromodification prevention requirements applicable to all priority development projects are not uniquely imposed on government. Many of the categories of "priority development projects" in the test claim

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[779] *Carmel Valley Fire Protection District v. State of California* (1987) 190 Cal.App.3d 521, 538.

[780] *County of Los Angeles v. Department of Industrial Relations* (1989) 214 Cal.App.3d 1538.

[781] *County of Los Angeles v. Department of Industrial Relations* (1989) 214 Cal.App.3d 1538, 1545.

[782] *County of Los Angeles v. Department of Industrial Relations* (1989) 214 Cal.App.3d 1538, 1545.

[783] *County of Los Angeles v. Department of Industrial Relations* (1989) 214 Cal.App.3d 1538, 1546.

[784] *County of Los Angeles v. Department of Industrial Relations* (1989) 214 Cal.App.3d 1538, 1546, footnote 5.

[785] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 56 (Test Claim narrative,).

permit, especially automotive repair shops, restaurants, and gas stations, contemplate a private person or entity as the project proponent, rather than a municipal entity. The LID and hydromodification prevention requirements are triggered based on the size and impact of a development project, not whether its proponent is a private or government entity.[786] In this respect, the requirements of the test claim permit are not unique to government, but apply only *incidentally* to the copermittees when they are the proponent of a project that meets the criteria of a priority development project. This is no different from the situation addressed in the *County of Los Angeles* and *City of Sacramento* cases; in each of those cases the alleged mandate applied to the local government as an employer, and applied in substantially the same manner as to all other employers, and for that reason the law at issue was not considered a "program" uniquely imposed on local government within the meaning of article XIII B.[787] An even closer analogy is seen in *County of Los Angeles v. Department of Industrial Relations*, in which the regulations complained of applied to publicly- and privately-owned elevators alike, and the court found that this did not constitute a unique requirement imposed on local government.[788] The LID and hydromodification requirements apply to both municipal and private development projects. A public library is no different under the test claim permit than a restaurant or gas station, as long as the development meets the size criteria.

Accordingly, the Commission finds that the new requirements of the test claim permit, in Sections F.1.d.1., 2., 4., 7., and h., and F.3.d.1.-5. listed above, as applied to local agency municipal priority development or significant redevelopment projects are *not* mandated by the state and do not impose a new program or higher level of service.

iii. The remaining new administrative, planning, and regulatory activities required by sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. are mandated by the state, and impose a new program or higher level of service.

The remaining activities are regulatory in nature and apply uniquely to the claimants as local agencies. The Water Boards contend, however, that the priority development project and hydromodification requirements are based exclusively on federal law, are necessary to meet MEP and water quality problems, and are consistent with US EPA guidance. The Water Boards assert that "U.S. EPA's views on what federal law requires is entitled to considerable deference."[789] The Water Boards further contend that the challenged provisions do not impose a new program or higher level of service.[790]

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[786] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 212-214 (test claim permit, Sections F.1.d.1. and 2.).

[787] *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 67, citing *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 58.

[788] *County of Los Angeles v. Dept. of Industrial Relations* (1989) 214 Cal.App.3d 1538.

[789] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 26-29.

[790] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 29-30.

The Commission finds that the regulatory activities required by Sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. are mandated by the state and impose a new program or higher level of service.

a) The regulatory activities required by sections F.1.d.1., 2., 4., 7., and h. and F.3.d.1.-5. are mandated by the state.

Federal law requires that NPDES permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[791]

In the 2016 decision in *Department of Finance v. Commission on State Mandates*, the California Supreme Court reviewed that federal law and identified the following test to determine whether certain conditions imposed by an NPDES stormwater permit issued by the Los Angeles Regional Board were mandated by the state or the federal government:

> If federal law compels the state to impose, or itself imposes, a requirement, that requirement is a federal mandate. On the other hand, if federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a "true choice," the requirement is not federally mandated.[792]

The court also held that if the state, in opposition, contends its requirements are federal mandates, the state has the burden to establish the requirements are in fact mandated by federal law.[793]

Applying that test to the permit issued by the Los Angeles Regional Water Board in the *Department of Finance* case, the court found that the Water Board was not required by federal law to impose any specific permit conditions, including the requirements to install and maintain trash, and inspect commercial, industrial, and construction sites. The court explained that the CWA broadly directs the Water Board to issue permits with conditions designed to reduce pollutant discharges to the MEP, and the federal regulations give broad discretion to the Water Boards to determine which specific controls are necessary to meet the MEP standard.[794] The court also found that the Commission did not have to defer to the Regional Board's conclusion that the challenged requirements were federally mandated since the determination is largely a question of law. However, "[h]ad the Regional Board found, when imposing the disputed permit conditions, that those conditions were the *only means* by which the maximum extent practicable

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[791] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[792] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 765. This case addressed a challenge by the State to the Commission's decision in *Municipal Storm Water and Urban Runoff Discharges*, 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21, adopted July 31, 2009.

[793] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 769.

[794] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 767-768, citing to Code of Federal Regulations, title 40, section 122.26(d)(2)(iv).

standard could be implemented, deference to the board's expertise in reaching that finding would be appropriate."[795]

In 2017, the Third District Court of Appeal applied the Supreme Court's test to an NPDES permit issued by the San Diego Regional Board, which contained LID and hydromodification plan requirements similar to the test claim permit at issue in this case.[796] The court held that there is no dispute that CWA and its regulations grant the San Diego Regional Board discretion to meet the MEP standard. "The CWA requires NPDES permits for MS4's to 'require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions *as the Administrator or the State determines appropriate* for the control of such pollutants."[797] The US EPA regulations also describe the discretion the State will exercise to meet the MEP standard. The regulations require a permit application by an MS4 to propose a management program, as specified, which "*will be considered by the Director when developing permit conditions* to reduce pollutants in discharges to the maximum extent practicable."[798]

Despite this language, the state argued in that case that the Regional Board "really did not exercise discretion" in imposing the challenged requirements since the Regional Board made a finding that its requirements were "necessary" to reduce pollutant discharges to the MEP. The state also contended that it did not make a true choice because the requirements were based on proposals in the application, which were modified by the Regional Board to achieve the federal standard.[799]

The court disagreed with the state's arguments. The court held that the state misconstrued the Supreme Court's decision in the 2016 case, where the Supreme Court made it clear that "except where a regional board finds the conditions are the *only means* by which the 'maximum extent practicable' standard can be met, the State exercises a true choice by determining what controls are necessary to meet the standard."[800] "That the San Diego Regional Board found the permit

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[795] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 769-770, emphasis added.

[796] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, which challenged the Commission's Decision in *Discharge of Stormwater Runoff- Order No. R9-2007-0001*, 07-TC-09, adopted March 26, 2010, San Diego Regional Board Order No. R9-0007-0001.

[797] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 681, citing to United States Code, title 33, section 1342(p)(3)(B)(iii), emphasis in original.

[798] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 681, citing to Code of Federal Regulations, title 40, section 122.26(d)(2)(iv), emphasis in original.

[799] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 681-682.

[800] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682 citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 768, emphasis added.

requirements were 'necessary' to meet the standard establishes only that the San Diego Regional Board exercised its discretion."[801]

With respect to the hydromodification plan requirements in the permit, the state claimed the requirement arises from US EPA regulations (40 C.F.R. 122.26(d)(2)(iv)(A)(2)) requiring the permit applicant to include in its application a description of planning procedures to develop and enforce controls to reduce the discharge of pollutants from MS4s that receive discharges from areas of new development and significant redevelopment. The court held, however, that the federal regulation does not require a hydromodification plan, nor does it restrict the Regional Board from exercising its discretion to require a specific type of plan to address the impacts of new development. The hydromodification plan requirements were held to be mandated by the state.[802]

The LID provisions in that case required the permittees to implement specified LID BMPs at most new development and redevelopment projects, and required the permittees to develop a model SUSMP to establish LID BMPs that meet or exceed the requirements. The state, relying on the same federal regulation cited in the paragraph above, argued that the requirements were necessary to achieve federal law. The court held that "nothing in the application regulation required the San Diego Regional Board to impose these specific requirements. As a result, they are state mandates subject to [article XIII B] section 6."[803]

The same analysis and findings apply to the planning and verification activities relating to the LID, hydromodification, and retrofit provisions required by the test claim permit. Like the 2017 case, the test claim permit here also states that it "contains new or modified requirements that are *necessary* to improve Copermittees' efforts to reduce the discharge of pollutants in storm water runoff to the MEP and achieve water quality standards."[804] The Water Boards rely on this language and also cite to comments made by a representative from the US EPA that he could not "really overemphasize the importance of incorporating these L.I.D. provisions in the permit" to contend that the requirements are mandated by federal law.[805]

Although, as stated in the background, the US EPA was considering the adoption of LID and hydromodification regulations, those regulations were never adopted. As a result, the federal government continues to encourage such provisions, but does not require these activities. As determined by the Third District Court of Appeal, the Regional Board exercised the discretion provided by federal law to impose these conditions. Moreover, there is no evidence in the record that these conditions were the "only means by which the MEP standard could be met."

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[801] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682.

[802] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 684.

[803] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 685.

[804] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 188 (test claim permit, Finding D.1.b.).

[805] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 28, quoting testimony from John Kemmerer at the November 18, 2009 Regional Board Hearing.

Accordingly, the remaining new activities related to the claimants' regulatory activities for the LID, hydromodification, and retrofit provisions for non-municipal projects are mandated by the state.

b) The new mandated activities constitute a new program or higher level of service.

Article XIII B, section 6 requires reimbursement whenever the Legislature or any state agency mandates a new program or higher level of service that results in costs mandated by the state. "New program or higher level of service" is defined as "programs that carry out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state."[806] Only one of these alternatives is required to establish a new program or higher level of service.[807]

Here, the new mandated activities cited above are expressly directed toward the local agency claimants under their regulatory authority, and thus are unique to local government. The requirements ensure that priority development projects incorporate LID and hydromodification prevention principles in the planning process at an early stage, and are intended to promote water quality and reduce the discharge of pollutants from new development and significant redevelopment activities.[808] "The challenged requirements are not bans or limits on pollution levels, they are mandates to perform specific actions" designed to reduce pollution entering stormwater drainage systems and receiving waters.[809] Thus, the new mandated activities also provide a governmental service to the public.

Accordingly, the following new activities related to the claimants' requirement to plan and regulate development *other than their own municipal developments* for the LID, hydromodification, and retrofit provisions required by Sections F.1.d.1., 2., 4., 7., and h., and F.3.d.1.-5. of the test claim permit mandate a new program or higher level of service:

1. Administrative and Planning Activities

    a. Incorporate formalized consideration, such as thorough checklists, ordinances, and/or other means, of LID BMPs into the plan review process for priority development projects.[810]

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[806] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56.

[807] *Carmel Valley Fire Protection Dist. v. State of California* (1987) 190 Cal.App.3d 521, 537; *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 557.

[808] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 212-216 (test claim permit, Section F.1.d.).

[809] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 560.

[810] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.a.ii.).

b. Within two years after adoption of the permit, review local codes, policies, and ordinances and identify barriers to the implementation of LID BMPs, and take appropriate actions to remove the barriers.[811]

c. Develop a LID BMP waiver program to incorporate into the SSMP.[812]

d. Collaborate with other copermittees to develop a Hydromodification Management Plan (HMP) in accordance with Sections F.1.h.1. and 2. of the test claim permit to manage increases in runoff discharge rates and durations from all priority development projects. Submit a draft HMP that has been available to public review and comment, to the Regional Board within three years of adoption of the permit. Within 180 days of receiving the Regional Board's comments on the draft HMP, submit a final HMP to the Regional Board that addresses the comments. Within 90 days of receiving a finding of adequacy from the Regional Water Board, incorporate the HMP into the SSMPs so that estimated post-project runoff discharge rates and durations do not exceed pre-development discharge rates and durations.[813]

e. Develop a retrofitting program for existing developments (municipal, industrial, commercial, and residential) by identifying and creating an inventory of existing developments for retrofit, evaluating and ranking those projects for retrofit, prioritizing work plans, and encouraging retrofit projects to be designed in accordance with SSMP LID and hydromodification requirements.[814])

2. Ensure Priority Development Projects (*Except for a Claimant's Own Municipal Priority Development Projects*) Comply With LID, Treatment Control, LID Waiver and Hydromodification Requirements, and Track and Inspect BMPS for Retrofitted Projects[815]

a. Require each priority development project listed in Section F.1.d.1. and 2., *except a claimant's own municipal projects*, to implement LID BMPs as described in Section

[811] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.a.iii.).

[812] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 219 (test claim permit, Section F.1.d.7.c.).

[813] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 223, 227 (test claim permit, Sections F.1.h., F.1.h.5.)

[814] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 247-248 (test claim permit, Sections F.3.d.1.-4.)

[815] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 209-210 (test claim permit), Section F.1.c. requires the following: "For all proposed Development Projects, each Copermittee, during the planning process, and prior to project approval and issuance of local permits, must prescribe the necessary requirements so that Development Project discharges of storm water pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of water quality standards, and will comply with the Copermittee's ordinances, permits, plans, and requirements, and with this Order.".

F.1.d.4.b., c., and e., which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss, or make a finding of technical infeasibility for each priority development project in accordance with the LID waiver program in section F.1.d.7.[816]

b. Require all priority development projects, *except for a claimant's own municipal projects and smaller restaurants where land development is less than 5,000 square feet*, to implement the approved Hydromodification Plan (HMP)[817]

c. Once a property owner of an existing development decides to retrofit, the completed retrofit BMPs shall be tracked and inspected in accordance with Section F.1.f. of the test claim permit. *This does not include the activity to track and inspect retrofitted BMPs of a claimant's own existing municipal development*.[818]

3. Retrofit Existing Development

a. Develop a retrofitting program by identifying and creating an inventory of existing developments for retrofit, evaluating and ranking those projects for retrofit, and encouraging retrofit projects to be designed in accordance with SSMP LID and hydromodification requirements in Sections F.1.d.3.-9. and F.1.h.[819] This activity does *not* include *a claimant's own public or municipal* project.

b. Once a property owner of an existing development decides to retrofit, the completed retrofit BMPs shall be tracked and inspected in accordance with Section F.1.f. of the test claim permit.[820] This does not include tracking and inspecting retrofitted BMPs *of a claimant's own existing public or municipal development*.

5. Except as Applicable to a Claimant's Own Municipal Development, Section F.1.f, Addressing BMP Maintenance Tracking, Imposes Some State-Mandated New Programs or Higher Levels of Service.

The claimants pled Section F.1.f. of the test claim permit, which requires each copermittee, as part of their Jurisdictional Runoff Management Program (JRMP) to develop and maintain a

[816] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 215-216 (test claim permit, Section F.1.d.4.).

[817] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 227 (test claim permit, Section F.1.h.5.c.)

[818] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 249 (test claim permit, Sections F.3.d.5.)

[819] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 247-248 (test claim permit, Sections F.3.d.1.-4.)

[820] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 249 (test claim permit, Sections F.3.d.5.)

watershed-based database.[821] The database shall track and inventory all approved structural post-construction BMPs and BMP maintenance for existing municipal, industrial, commercial, and residential projects within its jurisdiction since July 2005; conduct inspections of the projects as specified; and verify that approved post-construction BMPs are operating effectively and have been adequately maintained as specified in the permit.[822]

The Commission finds that, *except* as applicable to a claimant's own municipal development (which is not mandated by the state), the following activities are newly required by Section F.1.f., of the test claim permit and constitute state-mandated new programs or higher levels of service:

- Develop and maintain a watershed-based database to track and inventory all projects, within its jurisdiction, that have a final approved SSMP with structural post-construction BMPs implemented since July 2005. The database must include information on BMP type; location; watershed; date of construction; the party responsible for maintenance, maintenance verifications, and corrective actions; and whether the site was referred to the local vector control agency.[823]
- Verify that the required structural post-construction BMPs on inventoried *residential* projects have been implemented, are maintained, and are operating effectively every five years. Verification can be made through inspections, self-certifications, surveys, or other equally effective approaches.[824]
- Annually inspect the required structural post-construction BMPs at high priority *residential* projects.[825]
- For all inventoried projects, verifications performed through a means other than direct copermittee inspection, adequate documentation must be submitted to the copermittee to provide assurance that the required maintenance has been completed.[826]
- Inspections of the required structural post-construction BMPs at all inventoried projects must note observations of vector conditions and, where conditions are contributing to

[821] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 21, 57-58 (Test Claim narrative).

[822] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 221-222 (test claim permit, Section F.1.f.).

[823] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 221 (test claim permit, Section F.1.f.1.).

[824] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.i.).

[825] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.ii.).

[826] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.v.).

mosquito production, the copermittee is required to notify the local vector control agency.[827]

All other activities required by Section F.1.f. are not new and, thus, do not impose a new program or higher level of service.

a. Background

i. Federal law requires an NPDES applicant to propose a management program that includes a maintenance schedule to reduce pollutants in discharges from the MS4 to the maximum extent practicable (MEP), after construction projects are completed.

Under federal law, NPDES permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[828]

Federal regulations require applicants for an NPDES permit for large and medium MS4 discharges to describe a proposed management program that covers the duration of the permit to be considered by the Regional Board when developing permit conditions to reduce pollutants in discharges to the MEP. The management program is required to include a maintenance schedule for structural controls to reduce pollutants in discharges from the MS4.[829] The management program is also required to include a comprehensive master plan to develop, implement, and enforce controls to reduce the discharge of pollutants from the MS4s that receive discharges from areas of new development and significant redevelopment. Additionally, the plan shall "address controls to reduce pollutants in discharges from municipal separate storm sewers *after construction is completed*."[830] The plan shall also include inspections to implement and enforce ordinances, orders, or similar means to prevent illicit discharges to the MS4.[831] Federal regulations further state that NPDES permits must include "any requirements in addition to or more stringent than promulgated effluent limitations guidelines . . . necessary to . . . [a]chieve water quality standards established under section 303 of the CWA."[832]

[827] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.vii.).

[828] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[829] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A)(1).

[830] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A)(2), emphasis added.

[831] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1).

[832] Code of Federal Regulations, title 40, section 122.44(d)(1).

ii. The prior permit required each permittee to develop and implement programs for existing development, including post-construction BMPs, to prevent or reduce pollutants in runoff to the MEP, and to maintain and enforce adequate legal authority (through ordinances, permits, and inspections) to control pollutant discharges into and from the MS4.

Section H. of the prior permit required the permittees, as part of their JRMP, to develop and implement programs to prevent or reduce pollutants in runoff to the MEP from existing development, specifically, municipal facilities and activities, industrial and commercial facilities, and residential activities. To comply, the prior permit required the permittees to do the following activities:

For municipal facilities and activities:

- Require the use of pollution prevention methods.[833]
- Develop, and annually update, an inventory of facilities and activities that generate pollutants.[834]
- Implement or require implementation of BMPs to reduce pollutants in runoff to the MEP.[835] For municipal facilities and activities tributary to 303(d) impaired water bodies that generate pollutants for which the water body is impaired, implement or require implementation of additional BMPs to target that pollutant was required.[836]
- Implement a schedule of maintenance activities for structural source and treatment control BMPs designed to reduce pollutant discharges to or from its MS4s and related drainage structures.[837]
- Implement BMPs to reduce the contribution of pollutants to the MEP associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers to the MS4.[838]

[833] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 587 (Order R9-2004-0001, Section H.1.a.).

[834] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 587-588 (Order R9-2004-0001, Section H.1.b.).

[835] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 588 (Order R9-2004-0001, Section H.1.c.1.).

[836] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 588 (Order R9-2004-0001, Section H.1.c.2.).

[837] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 588 (Order R9-2004-0001, Section H.1.d.).

[838] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 588-589 (Order R9-2004-0001, Section H.1.e.).

- Conduct inspections annually and implement all follow-up actions necessary to comply with the Order.[839]
- Enforce the stormwater ordinance as necessary to maintain compliance with the Order.[840]

For industrial and commercial facilities:

- Require the use of pollution prevention methods.[841]
- Develop, and regularly update, an inventory of facilities that could contribute to a significant pollutant load to the MS4.[842]
- Designate a set of minimum BMP requirements to reduce the discharge of pollutants in runoff to the MEP and require the implementation of the designated minimum BMPs at each inventoried facility.[843]
- Prioritize each inventoried facility by threat to water quality and inspect: high priority facilities annually, medium priority facilities biannually, low priority facilities once during the 5-year term of the permit, and mobile operations as needed.[844]
- Enforce the stormwater ordinance, including sanctions, as necessary to maintain compliance with the Order.[845]
- Report, in the annual report, a list of industrial facilities that may require coverage under the General Industrial Permit but no notice of intent was filed.[846]

[839] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 589 (Order R9-2004-0001, Section H.1.f.).

[840] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 589 (Order R9-2004-0001, Section H.1.g.).

[841] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 589 (Order R9-2004-0001, Section H.2.a.).

[842] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-590 (Order R9-2004-0001, Section H.2.b.).

[843] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 590 (Order R9-2004-0001, Section H.2.c.).

[844] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 590-592 (Order R9-2004-0001, Section H.2.d.).

[845] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592 (Order R9-2004-0001, Section H.2.e.).

[846] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592 (Order R9-2004-0001, Section H.2.f.).

- Train staff responsible for conducting inspections of industrial/commercial facilities at least once a year.[847]

For existing residential developments:

- Encourage the use of pollution prevention methods.[848]
- Identify high priority residential activities that may contribute a significant pollutant load to the MS4 including those high threat activities specified in the permit (i.e. automobile repair, washing, and parking; home and garden activities and product use like fertilizer; disposal of hazardous waste, pet waste, and green waste).[849]
- Designate a set of minimum BMPs for high priority residential activities and require the implementation of the designated minimum BMPs.[850]
- Enforce the stormwater ordinance for all residential activities necessary to maintain compliance with the Order.[851]

Finding 30 of the prior permit recognized that certain BMPs for urban runoff management may create a habitat for vectors if not properly designed or maintained, stating that:

> If not properly designed or maintained, certain BMPs implemented or required by municipalities for urban runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). However, proper BMP design to avoid standing water can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities and local vector control agencies and the State Department of Health Services during the development and implementation of the SWMP.[852]

Section D. of the prior permit required each copermittee to establish, maintain, and enforce adequate legal authority (through ordinances and permits) to control pollutant discharges into and from the MS4. Legal authority had to:

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[847] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592 (Order R9-2004-0001, Section H.2.g.).

[848] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592 (Order R9-2004-0001, Section H.3.a.).

[849] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592 (Order R9-2004-0001, Section H.3.b.).

[850] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592-593 (Order R9-2004-0001, Section H.3.c.).

[851] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 593 (Order R9-2004-0001, Section H.3.d.).

[852] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 571 (Order R9-2004-0001, Finding 30).

- Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to the MS4 and from the industrial and construction sites.
- Prohibit all illicit discharges, including those from sewage; wash water from automotive service facilities; discharges from cleaning, repair, or maintenance of equipment, machinery, motor vehicles, cement-related equipment, and port-a-potty servicing; wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning; wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, etc; runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials; pool or fountain water containing chlorine, biocides, or other chemicals; sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and food-related wastes.
- Prohibit and eliminate all illicit connections.
- Control the discharge of spills, dumping, and disposal of materials other than stormwater.
- Require compliance with conditions in the ordinances, permits, contracts, and orders.
- Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s to the MEP.
- Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances, permits, and the Order, including the prohibition on illicit discharges to the MS4. This means the copermittee must have the authority to enter, sample, inspect, review and copy records, and require regular reports from industrial facilities and construction sites that discharge into MS4.
- Utilize enforcement mechanisms to require compliance.
- Control the contribution of pollutants from one portion to another portion of the shared MS4 through interagency agreements among the copermittees.[853]

b. Section F.1.f. of the test claim permit imposes new requirements that are mandated by the state and constitute a new program or higher level of service.

i. Section F.1.f. of the test claim permit adds new requirements, including the requirement to develop and maintain a watershed-based database to track and inventory all projects, to ensure that structural post-construction BMPs are operating effectively and have been adequately maintained.

Findings D.1.b. and c. of the test claim permit indicate that the copermittees have generally been implementing their JRMPs since the prior permit, but the runoff discharges continue to cause or contribute to violations of water quality standards as evidenced by the copermittees' monitoring

[853] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 574-575 (Order R9-2004-0001, Section D.1.).

results. According to the Fact Sheet, Section F. was included in the test claim permit to ensure the continued effectiveness of the post-construction BMP requirements.[854]

Accordingly, Section F.1.f.1. of the test claim permit requires, as part of the JRMP, that each copermittee perform the following:

- Develop and maintain a watershed-based database to track and inventory all projects, within its jurisdiction, that have a final approved SSMP with structural post-construction BMPs implemented since July 2005. LID BMPs implemented on a lot by lot basis at a single family residential home, such as rain barrels, are not required to be tracked or inventoried. The database must include information on BMP type; location; watershed; date of construction; the party responsible for maintenance, maintenance verifications, and corrective actions; and whether the site was referred to the local vector control agency.[855]

The requirement in Section F.1.f.1. is new. Under the prior permit, claimants had to develop an inventory of municipal facilities and activities that generate pollutants, and develop and inventory or database of industrial and commercial facilities that could contribute a significant pollutant load to the MS4.[856] The inventory for industrial and commercial facilities had to include the facility name, address, a description of the principal products or services provided, and SIC code for industrial facilities.[857] However, the claimants were not required to develop and maintain a watershed-based database to track and inventory the approved structural post-construction BMPs and verification of BMP maintenance for existing developments. Thus, the requirement in Section F.1.f.1. is new.

Section F.1.f.2. of the test claim permit requires each copermittee to verify that approved post-construction BMPs are operating effectively and have been adequately maintained by implementing the following measures:

- Designate high priority SSMP projects through consideration of BMP size, recommended maintenance frequency, likelihood of operational and maintenance issues, location, receiving water quality, compliance record, land use, and other relevant factors. At a minimum, high priority projects include those projects that generate pollutants (prior to treatment) within the tributary area of and within the same hydrologic subarea as a 303(d) listed water body impaired for that pollutant and those projects generating pollutants

[854] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 503-504 (Fact Sheet/Technical Report).

[855] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 221 (test claim permit, Section F.1.f.1.).

[856] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 587-589 (Order R9-2004-0001, Section H.1.).

[857] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 590 (Order R9-2004-0001, Section H.2.b.4.).

within the tributary area for and within the same hydrologic subarea as an observed action level exceedance of that pollutant.[858]

- Beginning on July 1, 2012, verify implementation, operation, and maintenance of structural post-construction BMPs on inventoried SSMP projects by inspection, self-certification, survey, or other equally effective approaches, by complying with the following requirements:

    1. The implementation, operation, and maintenance of all approved and inventoried final project public and private SSMPs must be verified every five years.[859]
    2. All projects with BMPs that are high priority shall be inspected annually before each rainy season.[860]
    3. All copermittee's projects with BMPs must be inspected annually.[861]
    4. For verifications performed by means other than copermittee inspection, adequate documentation that the required maintenance has been completed must be submitted to the copermittee.[862]
    5. Appropriate follow-up measures, including re-inspections, enforcement, and maintenance, must be conducted to ensure the treatment BMPs continue to reduce stormwater pollutants as originally designed.[863]
    6. Inspections must note observations of vector conditions and, where conditions are contributing to mosquito production, the copermittee is required to notify the local vector control agency.[864]

[858] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 221-222 (test claim permit, Section F.1.f.2.a.).

[859] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.i.).

[860] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.ii.).

[861] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.iii.).

[862] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.v.).

[863] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.vi.).

[864] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 222 (test claim permit, Section F.1.f.2.b.vii.).

Section F.1.f.2.b.iv. does not impose any requirements on the claimants, but states that "At the discretion of the Copermittee, its inspections may be coordinated with the facility inspections implemented pursuant to section F.3. of this Order."[865]

Some of the requirements of Section F.1.f.2. are new, and some are not.

The requirement in F.1.f.2.a. to designate high priority SSMP projects, which at a minimum include those projects that generate pollutants (prior to treatment) within the tributary area of and within the same hydrologic subarea as a 303(d) listed water body impaired for that pollutant and those projects generating pollutants within the tributary area for and within the same hydrologic subarea as an observed action level exceedance of that pollutant, is *not* new. The prior permit, in sections H.2.b. and d., required the claimants to develop an inventory or database of all industrial and commercial facilities within its jurisdiction and establish priorities for inspections and oversight of those facilities based on threat to water quality.[866] Thus, the requirement to designate high priority industrial and commercial projects is not new and does not impose a new program or higher level of service. The prior permit, in section H.3., also required the claimants to identify high priority residential activities that may contribute a significant pollutant load to the MS4, designate BMPs for those activities, and additional controls for high priority residential activities within or directly adjacent to or discharging directly to 303(d) impaired receiving waters.[867] Thus, the requirement to designate high priority residential activities is also not new and does not impose a new program or higher level of service. And the requirement to designate high priority municipal projects is not new and does not impose a new program or higher level of service. The prior permit, in section H.1., required the claimants to inventory all municipal facilities and activities that generate pollutants, and for those municipal facilities and activities tributary to 303(d) impaired water bodies that generate pollutants for which the water body is impaired, the implementation of additional BMPs to target that pollutant was required.[868]

The Commission further finds that the requirement in Section F.1.f.2.b. of the test claim permit to inspect and verify implementation, operation, and maintenance of structural post-construction BMPs on inventoried SSMP projects as specified is *partially new*. The requirement imposed by Section F.1.f.2.b.vii. of the test claim permit, that inspections for all inventoried projects must note observations of vector conditions and, where conditions are contributing to mosquito production, the copermittee is required to notify the local vector control agency, is new. The prior permit recognized that certain BMPs for urban runoff management may create a habitat for vectors if not properly designed or maintained, creating potential nuisance and public health issues. The prior permit further recognized that "[n]uisances and public health impacts resulting

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[865] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.iv.).

[866] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-591 (Order R9-2004-0001, Section H.2.).

[867] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 587-589 (Order R9-2004-0001, Section H.3.).

[868] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 587-589 (Order R9-2004-0001, Section H.1.).

from vector breeding can be prevented with close collaboration and cooperative effort between municipalities and local vector control agencies and the State Department of Health Services during the development and implementation of the SWMP."[869] These findings are also contained in Finding D.2.f.[870] and a similar finding appears in Section F.1.d.6.[871] which states "treatment control BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies."[872] However, the prior permit did not impose any specific requirements with respect to vector control, and the inspections required by the prior permit of existing development were focused on water quality and not public health.

The requirement imposed by Section F.1.f.2.b.v. of the test claim permit, that "[f]or verifications performed by means other than copermittee inspection, adequate documentation that the required maintenance has been completed must be submitted to the copermittee," is new for all existing development. The prior permit did not require the submittal of BMP maintenance documentation.

In addition, the requirements in Section F.1.f.2.b.i. and ii., to verify every five years the implementation, operation, and maintenance of structural post-construction BMPs on inventoried *residential* projects, and to annually inspect the required structural post-construction BMPs at high priority *residential* projects is new. Under the prior permit, the claimants had to encourage the use of pollution prevention methods,[873] designate a set of minimum BMPs for high priority residential activities and require the implementation of the designated minimum BMPs,[874] and enforce the stormwater ordinance for all residential activities necessary to maintain compliance with the Order.[875] However, there was no requirement to inspect residential projects or verify the operation and maintenance of structural post-construction BMPs every five years.

The remaining requirements imposed by Section F.1.f.2.b. with respect to municipal, industrial, and commercial facilities are *not new* and do not impose a new program or higher level of service. Section H.1.f. of the prior permit required the claimants to conduct annual inspections

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[869] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 571 (Order R9-2004-0001, Finding 30).

[870] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 119 (test claim permit, Finding D.2.f.).

[871] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 218 (test claim permit, Section F.1.d.6.f.).

[872] See Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 439, 500 (Fact Sheet/Technical Report).

[873] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592 (Order R9-2004-0001, Section H.3.a.).

[874] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 592-593 (Order R9-2004-0001, Section H.3.c.).

[875] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 593 (Order R9-2004-0001, Section H.3.d.).

of all municipal facilities and activities.[876] Section H.2.d. required claimants to inspect industrial and commercial facilities according to priority: high priority annually, medium priority biannually, low priority once during the 5-year term of the permit, and mobile operations as needed.[877] The inspection of municipal, industrial, and commercial facilities had to include the assessment of BMP implementation and effectiveness and, thus, any structural post-construction BMPs would have been verified at the time of inspection.[878] The prior permit also required the claimants to enforce the stormwater ordinance in order to achieve water quality standards for municipal, industrial, and commercial facilities necessary to maintain compliance with the prior permit (including the requirements to use BMPs to prevent or reduce the discharge of pollutants to the MEP; use pollution prevention methods; and carry out all inspections and monitoring of industrial and commercial facilities necessary to determine compliance and noncompliance with local ordinances and permits).[879] The prior permit also required the claimants to implement all follow-up actions necessary to comply with the Order.[880]

Thus, with respect to all municipal facilities and activities and high priority industrial and commercial facilities, the requirements of the test claim permit to annually inspect; verify effective operation and maintenance of the post construction BMPs, as well as compliance with all ordinances, permits, and the Order; and conduct follow-up measures to ensure that BMPs continue to reduce stormwater pollutants, are not new and do not impose a new program or higher level of service.

With respect to all medium or low threat industrial and commercial facilities, the requirements of the test claim permit to inspect every five years; verify effective operation and maintenance of the structural post-construction BMPs, as well as compliance with all ordinances, permits, and the Order; and follow-up measures to ensure that post-construction BMPs continue to reduce stormwater pollutants, are not new and do not impose a new program or higher level of service. In fact, for medium industrial and commercial facilities, fewer inspections are required: every five years rather than every two years.

With regard to mobile facilities, which were inspected as needed under the prior permit,[881] the test claim permit imposes the following time requirements: "The inspection, verification, and

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[876] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 589 (Order R9-2004-0001, Section H.1.f.).

[877] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 590-592 (Order R9-2004-0001, Section H.2.d.).

[878] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 589, 591 (Order R9-2004-0001, Sections H.1.f., H.2.d.2. and 3.).

[879] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 587-593 (Order R9-2004-0001, Sections H.1.a., H.1.c., H.1.f., H.1.g., H.2.a., H.2.c.-e., H.3.a., H.3.c., H.3.d.).

[880] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589, 592, (Order R9-2004-0001, Sections H.1.f., H.2.d.6.).

[881] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 591 (Order R9-2004-0001, Section H.2.d.2.d.).

follow-up activities for all approved and inventoried final project public and private SSMP are required every five years." The time requirements, however, do not impose any new activities on the claimants or increase the actual level or quality of governmental services required; they simply ensure that BMPs continue to be maintained and stormwater pollutants are reduced to the MEP as required under existing law. Thus, the requirement to inspect, verify, and conduct follow-up activities for mobile facilities is not new and does not impose a new program or higher level of service.

Thus, Section F.1.f. imposes the following new requirements:

- Develop and maintain a watershed-based database to track and inventory all projects, within its jurisdiction, that have a final approved SSMP with structural post-construction BMPs implemented since July 2005. The database must include information on BMP type; location; watershed; date of construction; the party responsible for maintenance, maintenance verifications, and corrective actions; and whether the site was referred to the local vector control agency.[882]
- Verify that the required structural post-construction BMPs on inventoried *residential* projects have been implemented, are maintained, and are operating effectively every five years. Verification can be made through inspections, self-certifications, surveys, or other equally effective approaches.[883]
- Annually inspect the required structural post-construction BMPs at high priority *residential* projects.[884]
- For all inventoried projects, verifications performed through a means other than direct copermittee inspection, adequate documentation must be submitted to the copermittee to provide assurance that the required maintenance has been completed.[885]
- Inspections of the required structural post-construction BMPs at all inventoried projects must note observations of vector conditions and, where conditions are contributing to mosquito production, the copermittee is required to notify the local vector control agency.[886]

[882] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 221 (test claim permit, Section F.1.f.1.).

[883] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.i.).

[884] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.ii.).

[885] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.v.).

[886] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.vii.).

ii. Except as applicable to a claimant's own municipal development, the new requirements imposed by section F.1.f. mandate a new program or higher level of service.

The claimants contend that the activities required by Section F.1.f. of the test claim permit are mandated by the state and not required by federal law, "Nothing in the CWA, its regulations, or case law requires local agencies to develop, fund, and implement a retroactive BMP maintenance tracking database and inspection program."[887] The claimants contend that the Water Boards exercised their "true choice" in requiring these activities and are thus mandated by the state.[888]

The Water Boards contend that the requirements in Section F.1.f. are not mandated by the state since the requirements implement and are necessary to meet federal law. "The BMP maintenance tracking requirement is integral to the successful implementation of runoff management programs that must be continually assessed, modified and improved upon, in order to achieve the evolving federal MEP standard."[889] The Water Boards further contend that tracking inspections of BMPs is consistent with US EPA guidance, which states the following:

> Creating an inventory of post-construction structural stormwater control measures, including tracking of specific information, will first enable Permittees to know what control measures they are responsible for. Without this information, the permittee will not be protecting water quality to their full potential since inspections, maintenance, and follow-up changes cannot be performed. Tracking information such as latitude/longitude, maintenance and inspection requirements and follow-up will allow the permittee to be able to better allocate their resources for those activities that are immediately necessary. . . ."[890]

The Water Boards further rely on the following recommendation by the US EPA:

> Permit writers should clearly specify requirements for inspections. Inspecting and properly maintaining structural stormwater controls to ensure they are working as designed is just as important as installing them in the first place. By having specific requirements, Permittees will be reminded that they must allocate resources to ensure control measures are properly maintained and functioning.[891]

The Water Boards also contend that the requirements do not impose a new program or higher level of service since the claimants' 2009 Report of Waste Discharge (ROWD) already included

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[887] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 58 (Test Claim narrative).

[888] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 58 (Test Claim narrative) citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749.

[889] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 30.

[890] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 31; see also, Exhibit X (12), EPA, MS4 Permit Improvement Guide (April 14, 2010), page 66.

[891] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 30-32; see also, Exhibit X (12), EPA, MS4 Permit Improvement Guide (April 14, 2010), page 68.

an approach for inspecting and/or verifying maintenance of treatment control BMPs implemented for priority development projects to ensure effectiveness, among other things.[892]

The Commission finds that some of the new activities required by section F.1.f. apply to all development, and as those activities apply to a claimant's own *municipal* development, they are not mandated by the state. However, the remaining new activities constitute a state-mandated new program or higher level of service.

The following activities required by section F.1.f. apply to all development, including municipal development:

- Develop and maintain a watershed-based database to track and inventory all projects, within its jurisdiction, that have a final approved SSMP with structural post-construction BMPs implemented since July 2005. The database must include information on BMP type; location; watershed; date of construction; the party responsible for maintenance, maintenance verifications, and corrective actions; and whether the site was referred to the local vector control agency.[893]
- For all inventoried projects, verifications performed through a means other than direct copermittee inspection, adequate documentation must be submitted to the copermittee to provide assurance that the required maintenance has been completed.[894]
- Inspections of the required structural post-construction BMPs at all inventoried projects must note observations of vector conditions and, where conditions are contributing to mosquito production, the copermittee is required to notify the local vector control agency.[895]

When determining whether a test claim statute or order compels compliance and, thus, creates a state-mandated program for purposes of reimbursement under article XIII B, section 6, the courts have identified two distinct theories: legal compulsion and practical compulsion.[896] Activities undertaken at the option or discretion of local government, without legal or practical compulsion, do not trigger a state-mandated program within the meaning or article XIII B, section 6.[897] The California Supreme Court has described legal compulsion as follows:

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[892] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 32.

[893] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 221 (test claim permit, Section F.1.f.1.).

[894] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.v.).

[895] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.vii.).

[896] *Coast Community College Dist. v. Commission on State Mandates* (2022) 13 Cal.5th 800, 815-817.

[897] *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 73-76; *Department of Finance v. Commission on State Mandates* (*Kern*) (2003) 30 Cal.4th 727; *Department of Finance v. Commission on State Mandates* (POBRA) (2009) 170 Cal.App.4th 1355, 1365-1366.

> Legal compulsion occurs when a statute or executive action uses mandatory language that require[s] or command[s] a local entity to participate in a program or service… Stated differently, legal compulsion is present when the local entity has a mandatory, legally enforceable duty to obey. This standard is similar to the showing necessary to obtain a traditional writ of mandate, which requires the petitioning party to establish the respondent has a clear, present, and usually ministerial duty to act. ... Mandate will not issue if the duty is ... mixed with discretionary power.
>
> Thus, as a general matter, a local entity's voluntary or discretionary decision to undertake an activity cannot be said to be legally compelled, even if that decision results in certain mandatory actions.[898]

In the absence of legal compulsion, the courts have acknowledged the possibility that a state mandate can be found if local government can show that it faces "certain and severe penalties, such as double taxation or other draconian consequences," leaving local government no choice but to comply with the conditions established by the state.[899] Substantial evidence in the record is required to make a finding of practical compulsion.[900]

Nothing in state statute or case law imposes a legal obligation on local agencies to construct, expand, or improve municipal projects.[901] Nor is there evidence in the record that the claimants

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[898] *Coast Community College Dist. v. Commission on State Mandates* (2022) 13 Cal.5th 800, 815 (internal quotation marks and citations omitted).

[899] *Coast Community College Dist. v. Commission on State Mandates* (2022) 13 Cal.5th 800, 815-817.

[900] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368-1369 (*POBRA*); Government Code section 17559; California Code of Regulations, title 2, section 1187.5.

[901] For example, see Government Code section 23004 (counties *may* purchase, receive by gift or bequest, and hold land within its limits, or elsewhere when permitted by law; and manage, sell, lease, or otherwise dispose of its property as the interests of its inhabitants require); Government Code sections 37350-37353 (cities *may* purchase, lease, receive, hold, and enjoy real and personal property, and control and dispose of it for the common benefit; may erect and maintain buildings for municipal purposes; and may acquire property for parking motor vehicles, and for opening and laying out any street; Government Code section 37111 ("When the legislative body deems it necessary that land purchased for park or other purposes be used for construction of public buildings or creation of a civic center, it *may* adopt an ordinance by a four-fifths vote declaring the necessity and providing for such use"); Streets and Highways Code, sections 1800 ["The legislative body of any city *may* do any and all things necessary to lay out, acquire, and construct any section or portion of any street or highway within its jurisdiction as a freeway, and to make any existing street or highway a freeway."]; 1801 ["The legislative body of any city *may* close any street or highway within its jurisdiction at or near the point of its intersection with any freeway, or *ma*y make provision for carrying such street or highway over, under, or to a

would suffer certain and severe penalties such as "double…taxation" or other "draconian" consequences" if they fail to comply with the permit's annual reporting requirements for municipal projects.[902]

Accordingly, the new activities as they apply to municipal developments are not mandated by the state.

However, *except as applicable to a claimant's own municipal development*, the remaining requirements mandate a new program or higher level of service:

- Develop and maintain a watershed-based database to track and inventory all projects, within its jurisdiction, that have a final approved SSMP with structural post-construction BMPs implemented since July 2005. The database must include information on BMP type; location; watershed; date of construction; the party responsible for maintenance, maintenance verifications, and corrective actions; and whether the site was referred to the local vector control agency.[903]
- Verify that the required structural post-construction BMPs on inventoried *residential* projects have been implemented, are maintained, and are operating effectively every five years. Verification can be made through inspections, self-certifications, surveys, or other equally effective approaches.[904]
- Annually inspect the required structural post-construction BMPs at high priority *residential* projects.[905]
- For all inventoried projects, verifications performed through a means other than direct copermittee inspection, adequate documentation must be submitted to the copermittee to provide assurance that the required maintenance has been completed.[906]
- Inspections of the required structural post-construction BMPs at all inventoried projects must note observations of vector conditions and, where conditions are contributing to

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connection with the freeway, and *may* do any and all necessary work on such street or highway."].

[902] *Coast Community College Dist. v. Commission on State Mandates* (2022) 13 Cal.5th 800, 815-817.

[903] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 221 (test claim permit, Section F.1.f.1.).

[904] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.i.).

[905] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.ii.).

[906] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.v.).

> mosquito production, the copermittee is required to notify the local vector control agency.[907]

In *Department of Finance v. Commission on State Mandates*, the California Supreme Court identified the following test to determine whether certain conditions imposed by an NPDES stormwater permit issued by the Los Angeles Regional Water Board were mandated by the state or the federal government:

> If federal law compels the state to impose, or itself imposes, a requirement, that requirement is a federal mandate. On the other hand, if federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a "true choice," the requirement is not federally mandated.[908]

The courts have also explained that "except where a regional board finds the conditions are the *only means* by which the [federal] 'maximum extent practicable' standard can be met, the state exercises a true choice by determining what controls are necessary to meet the standard."[909] "That the San Diego Regional Board found the permit requirements were 'necessary' to meet the standard establishes only that the San Diego Regional Board exercised its discretion."[910]

In this case, the Water Boards argue that the requirements in Section F.1.f. are necessary to meet the MEP standard under federal law and that the US EPA recommended the copermittees create an inventory of post-construction structural stormwater control measures and specific inspection requirements to meet the MEP requirements. Federal law requires that NPDES permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[911] Federal law also requires the claimants to propose a management program that includes a comprehensive master plan to develop, implement, and enforce controls to reduce the discharge of pollutants from the MS4s that receive discharges from areas of new development and significant redevelopment. The plan is required to "address controls to reduce pollutants in discharges from municipal separate storm sewers *after construction is completed*."[912] And the program is required to include inspections to prevent illicit discharges from entering the MS4.[913] Federal law, however, gives the Water Boards

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[907] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.vii.).

[908] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 765.

[909] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682, citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 768, emphasis added.

[910] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682.

[911] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[912] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A)(2), emphasis added.

[913] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1).

discretion to determine what controls and inspections are necessary to meet the MEP standard, and does not require any specific activities. Moreover, there is no evidence in the record that the new required activities are the only means by which the federal MEP standard can be met.

Accordingly, the Commission finds that *except as applicable to a claimant's own municipal development* the new activities required by Section F.1.f. are mandated by the state.

Moreover, these activities constitute a new program or higher level of service. "New program or higher level of service" is defined as "programs that carry out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state."[914]

The new requirements cited above are expressly directed toward the local agency permittees under their regulatory authority and, thus, are unique to government, and, except as applicable to their own municipal development, detail their responsibilities to:

- Develop and maintain a watershed-based database to track and inventory all projects, within its jurisdiction, that have a final approved SSMP with structural post-construction BMPs implemented since July 2005. The database must include information on BMP type; location; watershed; date of construction; the party responsible for maintenance, maintenance verifications, and corrective actions; and whether the site was referred to the local vector control agency.[915]
- Verify that the required structural post-construction BMPs on inventoried *residential* projects have been implemented, are maintained, and are operating effectively every five years. Verification can be made through inspections, self-certifications, surveys, or other equally effective approaches.[916]
- Annually inspect the required structural post-construction BMPs at high priority *residential* projects.[917]
- For all inventoried projects, verifications performed through a means other than direct copermittee inspection, adequate documentation must be submitted to the copermittee to provide assurance that the required maintenance has been completed.[918]
- Inspections of the required structural post-construction BMPs at all inventoried projects must note observations of vector conditions and, where conditions are contributing to

[914] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56.

[915] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 221 (test claim permit, Section F.1.f.1.).

[916] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.i.).

[917] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.ii.).

[918] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.v.).

mosquito production, the copermittee is required to notify the local vector control agency.[919]

"The challenged requirements are not bans or limits on pollution levels, they are mandates to perform specific actions" designed to reduce the discharge of pollutants in stormwater runoff to the MEP, and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.[920] Therefore, the new requirements also carry out the governmental function of providing services to the public.

Accordingly, the new state-mandated activities required by Sections F.1.f. of the test claim permit impose a new program or higher level of service.

6. Section F.2.d.3. Imposes a State-Mandated New Program or Higher Level of Service to Require Implementation of Active/Passive Sediment Treatment at Construction Sites (Other Than the Claimants' Own Municipal Construction Site), But the Requirements in Section F.2.e.(6)(e) Are Not New and Do Not Impose a New Program or Higher Level of Service.

The claimants pled the requirements in Sections F.2.d.3. and F.2.e.6.e. of the test claim permit, which require the copermittees to require the implementation of Active/Passive Sediment Treatment (AST)[921] at construction sites that are determined by the copermittee to be an exceptional threat to water quality, and to review site monitoring data, if the site monitors its runoff, as part of construction site inspections.[922]

The Commission finds that Section F.2.d.3. imposes a state-mandated new program or higher level of service only when the claimant is acting in its regulatory capacity and is performing the following activity for construction sites other than its own:

- Require implementation of AST for sediment at construction sites other than its own (or portions thereof) that are determined to be an exceptional threat to water quality.[923]

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[919] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.vii.).

[920] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 560; Exhibit A, Test Claim filed November 10, 2011 and Revised April 28, 2017, pages 188, 212, 503 (test claim permit; Fact Sheet/Technical Report).

[921] Active/Passive Sediment Treatment is defined as "[u]sing mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge. Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 283 (test claim permit, Attachment C).

[922] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 59-60. The claimants have not alleged any other activities in section F.2.d., and, thus, only Sections F.2.d.3. and F.2.e.6.e. of the test claim permit are analyzed in this Decision.

[923] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 231 (test claim permit, Section F.2.d.3.).

However, with respect to a local agency's own *municipal* construction sites, the requirement to implement AST is not mandated by the state, but is triggered by a local discretionary decision to construct new municipal projects. Moreover, implementing AST at a local agency's own municipal construction site does not impose a new program or higher level of service because such costs are not unique to government and do not provide a governmental service to the public.

Finally, the Commission finds that Section F.2.e.6.e. of the test claim permit, which requires that inspections of construction sites must include a review of facility monitoring data results if the site monitors its runoff, is not new, and does not impose a new program or higher level of service.

a. Background

i. Federal law requires an NPDES applicant to propose structural and source control measures to reduce pollutants from runoff from all construction sites to the maximum extent practicable (MEP).

Under federal law, NPDES permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[924]

Federal regulations require that the application for an NPDES permit for large and medium MS4 dischargers must describe a proposed management program that covers the duration of the permit to be considered by the Regional Board when developing permit conditions to reduce pollutants in discharges to the MEP. The proposed management program shall include a comprehensive planning process which involves public participation and where necessary, intergovernmental coordination, to reduce the discharge of pollutants to the MEP using management practices, control techniques and system, design and engineering methods, and other appropriate conditions.[925] Further, the application must demonstrate adequate legal authority, through ordinance, permit, or other means, to control pollutants to the MS4 from stormwater discharges associated with industrial activity and to carry out all inspection, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with permit conditions.[926] Stormwater discharges associated with industrial activity are defined to include construction activity.[927] The legal authority shall also prohibit illicit discharges to the MS4.[928]

As relevant here, the proposed management program shall include a description of a program to implement and maintain structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites to the MS4, including:

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[924] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[925] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv).

[926] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(A), (F).

[927] Code of Federal Regulations, title 40, section 122.26(b)(14)(x).

[928] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(B).

- Procedures for site planning, which incorporates consideration of potential water quality impacts.
- Requirements for nonstructural and structural BMPs.
- Procedures for identifying priorities for inspecting sites and enforcing control measures, which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.
- Appropriate educational and training measures for construction site owners.[929]

ii. The prior permit required each permittee to implement a program, which included inspections, to reduce pollutants in construction site runoff to the MEP.

The prior permit identifies the following general prohibitions and receiving water limitations with which the permittees are required to comply:

- Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in the waters of the state are prohibited.
- Discharges from MS4s that cause or contribute to exceedances of water quality objectives for surface water and ground water are prohibited.
- Discharges from MS4s containing pollutants which have not been reduced to the MEP are prohibited.
- Discharges from MS4s that are subject to all Basin Plan prohibitions (cited in Attachment A to the order) are prohibited.
- All types of non-stormwater discharges into the MS4, unless authorized by an NPDES permit, are prohibited.
- Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses of receiving waters) are prohibited.[930]

The prior permit also requires the permittees to have adequate legal authority to control pollutant discharges into and from the MS4 through ordinance, statute, permit, contract, or other similar means. The legal authority, at a minimum, must authorize the permittee to do the following:

- Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies to both industrial and construction sites that have coverage under the General Industrial Permit and the General Construction Permit, as well as to those sites that do not.

[929] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(D).

[930] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572-573, 597 (Order R9-2004-0001, Sections A., B.1., C.1.).

- Prohibit all illicit discharges and connections to the MS4.
- Control the discharge of spills, dumping or disposal of materials other than stormwater to its MS4.
- Require compliance with the copermittee's ordinances, permits, contracts, or orders by holding dischargers accountable for the contributions to pollutants and flows.
- Require the use of BMPs to reduce or prevent the discharge of pollutants into the MS4 to the MEP.
- Carry out all inspections and monitoring necessary to determine compliance and noncompliance with local ordinances and orders, and the prior permit.[931]

To comply with the prohibitions and receiving water limitations, the prior permit required each permittee to implement a program to reduce pollutants in runoff to the MEP during all construction phases. The permittees were required to include the following in their programs:

- Implement and require implementation of pollution prevention methods.[932]
- Review and update grading ordinances as necessary for compliance with stormwater ordinances and the prior permit.[933]
- Develop and implement a process to ensure that BMPs to reduce the discharge of pollutants to the MEP are applicable to construction and grading permits and plans prior to their approval.[934]
- Develop and annually update an inventory of all construction sites within its jurisdiction.[935]
- Designate a set of minimum BMPs and implement or require their implementation to ensure erosion prevention, slope stabilization, phased grading, revegetation, preservation of natural hydraulic features and riparian buffers and corridors, maintenance of all source and treatment control BMPs, and retention and proper management of sediment and other construction-related pollutants.[936]

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[931] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 574-575 (Order R9-2004-0001).

[932] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 584 (Order R9-2004-0001, Section G.1.).

[933] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 584 (Order R9-2004-0001, Section G.2.).

[934] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 584-585 (Order R9-2004-0001, Section G.3.).

[935] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 585 (Order R9-2004-0001, Section G.4.).

[936] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 585 (Order R9-2004-0001, Section G.5.).

- Enforce its ordinances (grading, stormwater, etc.) and permits (building, grading, etc.) at all construction sites as necessary to maintain compliance with the prior permit.[937]

In addition, the permittees were required to conduct inspections of construction sites for compliance with their local ordinances (grading, stormwater, etc.), permits (construction, grading, etc.), and the prior permit.[938] During the wet season, the frequencies of the inspections depended on the size of the site and the threat to water quality.[939] The following sites had to be inspected every two weeks during the wet season:

- All sites 5 acres or more, and tributary to a CWA section 303(d) water body impaired for sediment or within or directly adjacent to or discharging directly to a receiving water within ESA.
- Other sites determined by the permittees or the SDRWQCB as a significant threat to water quality. In evaluating threat to water quality, the following factors shall be considered: (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-stormwater discharges; and (7) any other relevant factors.[940]

During the dry season, the permittees were required to inspect all construction sites as needed.[941]

Finally, based upon site inspection findings, each permittee was required to implement all follow-up actions necessary to comply with the prior permit.[942] In this respect, the prior permit required additional controls for construction sites tributary to 303(d) waterbodies impaired for sediment as necessary to comply with this Order. "Each Permittee shall implement, or require implementation of, additional controls for construction sites within or adjacent to or discharging directly to receiving waters within ESAs as necessary to comply with this Order."[943]

The Findings of the prior permit explain the rationale for these requirements as follows:

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[937] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 586 (Order R9-2004-0001, Section G.7.).

[938] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 586 (Order R9-2004-0001, Section G.6.).

[939] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 586 (Order R9-2004-0001, Sections G.6.b.-d.).

[940] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 586 (Order R9-2004-0001, Sections G.6.b.).

[941] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 586 (Order R9-2004-0001, Section G.6.e.).

[942] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 586 (Order R9-2004-0001, Section G.6.f.).

[943] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 585 (Order R9-2004-0001, Sections G.5.d.).

> As operators of the MS4s, the Permittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or exceedances of water quality objectives.[944]

The Findings also state the following:

> In accordance with federal NPDES regulations and to ensure the most effective oversight of . . . construction site discharges, discharges of runoff from . . . construction sites are subject to dual (state and local) storm water regulation. Under this dual system, the SDRWQCB is responsible for enforcing the General Construction Activities Storm Water Permit . . . , and each municipal Permittee is responsible for enforcing its local permits, plans, and ordinances, which may require the implementation of additional BMPs than required under the statewide general permits.[945]

b. Section F.2.d.3. of the test claim permit imposes a state-mandated new program or higher level of service.

i. Section F.2.d.3. of the test claim permit adds a new requirement for the implementation of active/passive sediment treatment at construction sites determined to be an exceptional threat to water quality.

The requirement to have a construction program is set forth in the test claim permit in Section F.2., and, like the prior permit, the program must include an ordinance update, an updated inventory of construction sites, a process to review BMPs before issuing a permit, BMP designation and implementation, inspections, and enforcement.[946] The goals of the program are to prevent illicit discharges into the MS4, implement structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites to the MEP, reduce construction site discharges of stormwater pollutants to the MEP, and prevent construction site discharges from causing or contributing to a violation of water quality standards.[947] As stated in Finding 1.f.: "Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and

[944] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 569 (Order R9-2004-0001, Finding 20).

[945] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 570 (Order R9-2004-0001, Finding 21).

[946] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 229-234 (test claim permit, Section F.2.).

[947] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 229 (test claim permit, Section F.2.).

impairment of receiving waters."[948] The importance of focusing on construction sites is further explained in the Fact Sheet:

> Management of storm water runoff during the construction phase is also essential. USEPA explains in the preamble to the Phase II regulations that storm water discharges generated during construction activities can cause an array of physical, chemical, and biological water quality impacts. Specifically, the biological, chemical and physical integrity of the waters may become severely compromised due to runoff from construction sites. Fine sediment from construction sites can adversely affect aquatic ecosystems by reducing light penetration, impeding sight-feeding, smothering benthic organisms, abrading gills and other sensitive structures, reducing habitat by clogging interstitial spaces within the streambed, and reducing intergravel dissolved oxygen by reducing the permeability of the bed material. Water quality impairment also results, in part, because a number of pollutants are preferentially absorbed onto mineral or organic particles found in fine sediment. The interconnected process of erosion (detachment of the soil particles), sediment transport, and delivery is the primary pathway for introducing key pollutants, such as nutrients, metals, and organic compounds into aquatic systems.[949]

Accordingly, Section F.2.d.3. of the test claim permit requires each copermittee to require implementation of Active/Passive Sediment Treatment (AST) at construction sites, or portions of sites, that the copermittee determines to be an exceptional threat to water quality.[950] AST requires the use of "mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge."[951]

The copermittees must consider the following in making their determination of whether a site is an exceptional threat to water quality: soil erosion potential or soil type, the site's slopes, project size and type, sensitivity of receiving water bodies, proximity to receiving water bodies, non-stormwater discharges, ineffectiveness of other BMPs, proximity and sensitivity of aquatic threatened and endangered species of concern, known effects of AST chemicals, and any other relevant factors.[952] As the Fact Sheet explains:

> For sites that are identified as exceptional threat to water quality, active/passive sediment treatment (AST) is required to be implemented *in addition* to the

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[948] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 189 (test claim permit, Finding 1.f.).

[949] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 430 (Fact Sheet/Technical Report) citing 64 Federal Register 68728.

[950] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 231 (test claim permit, Section F.2.d.3.).

[951] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 283 (test claim permit, Attachment C).

[952] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 230-231 (test claim permit, Section F.2.d.3.a.-j.).

> minimum set and/or enhanced sediment control BMPs. AST is required at construction sites that are identified by the Copermittee as an exceptional threat to water quality due to high turbidity or suspended sediment levels in the site's effluent even when other sediment control BMPs have been implemented. In cases where the Copermittee's designated minimum set of BMPs and/or enhanced BMPs are not able or expected to be able to reduce turbidity or suspended sediment levels to a level that will be protective of water quality, AST is *necessary* and is considered MEP for the discharges from these sites.[953]

Although the prior permit required additional controls necessary to comply with water quality standards for construction sites tributary to 303(d) waterbodies impaired for sediment and those within or adjacent to or discharging directly to receiving waters within ESAs,[954] it did not specifically require the implementation of AST at those sites and instead left the decision about which additional controls to use to the local agency permittees. The Water Boards acknowledge that this requirement was not in the prior permit.[955]

Therefore, Section F.2.d.3. imposes the following new requirement:

- Require implementation of AST for sediment at construction sites (or portions thereof) that are determined to be an exceptional threat to water quality.[956]

> *ii. The activity to require implementation of active/passive sediment treatment (AST) at a copermittee's own municipal construction site is not mandated by the state, but is triggered by a local discretionary decision to construct new municipal projects, and does not impose a new program or higher level of service because such costs are not unique to government and do not provide a governmental service to the public.*

As set forth above, the implementation of AST for any construction site where the copermittee has determined that the site is an exceptional threat to water quality is required by the test claim permit. The claimants contend that this activity is eligible for reimbursement under article XIII B, section 6 of the California Constitution. However, any costs related to implementation of AST that are incurred by a local agency permittee as a project proponent of new municipal

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[953] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 512 (Fact Sheet/Technical), emphasis added.

[954] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 585 (Order R9-2004-0001, Section G.5.d.).

[955] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 34 ("*Although the specific challenged provisions were not contained in the prior permit*, it contained numerous requirements directing Claimants to control pollutants in discharges of runoff associated with industrial and construction activity and to require construction sites to comply with construction and grading ordinances and permits." Emphasis added.).

[956] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 231 (test claim permit, Section F.2.d.3.).

projects are not mandated by the state, are the result of a local discretionary decision, and are, therefore, not eligible for reimbursement.

In *City of Merced*, the statute at issue required a local government, when exercising the power of eminent domain, to compensate a business owner for the loss of business goodwill, as part of the compensation paid for the property subject to the taking.[957] The court found that no state law *required* the local entity to exercise the power of eminent domain, and thus any costs experienced as a result of the requirement to compensate for business goodwill was the result of an initial discretionary act.[958]

In *Kern High School Dist.*, the statute at issue required certain local school committees to comply with notice and agenda requirements in conducting their public meetings.[959] There, the court held that the underlying school site councils and advisory committees were part of several separate voluntary grant funded programs, and therefore any notice and agenda costs were an incidental impact of participating or continuing to participate in those programs and were not legally compelled by state law.[960] The court left open the possibility that a state mandate could be based on practical compulsion if the failure to comply resulted in "'certain and severe…penalties' such as 'double…taxation' or other 'draconian' consequences."[961] The court acknowledged that the district was already participating in the underlying programs, and "as a practical matter, they feel they must participate in the programs, accept program funds, and…incur expenses necessary to comply with the procedural conditions imposed on program participants."[962] However, the court held that "[c]ontrary to the situation that we described in *City of Sacramento* [*v. State* (1990)] 50 Cal.3d 51, a claimant that elects to discontinue participation in one of the programs here at issue does not face 'certain and severe…penalties' such as 'double…taxation' or other 'draconian' consequences, but simply must adjust to the withdrawal of grant money along with the lifting of program obligations."[963]

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[957] *City of Merced v. State* (1984) 153 Cal.App.3d 777, 782.

[958] *City of Merced v. State* (1984) 153 Cal.App.3d 777, 783.

[959] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 732.

[960] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 744-745.

[961] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 754, citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74 (The "certain and severe…penalties" and "double…taxation" referred to the situation in *City of Sacramento* in which the state was compelled, by the potential loss of *both* federal tax credits *and* subsidies provided to businesses statewide, to impose mandatory unemployment insurance coverage on public agencies consistent with a change in federal law.).

[962] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 753.

[963] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 754 citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74.

More recently, the Third District Court of Appeal addressed the bounds of the *Kern High School Dist.* rule in greater detail in *Department of Finance v. Commission* (2009) 170 Cal.App.4th 1355 (*POBRA*), holding that following *City of Merced*, *Kern High School Dist.*, and *San Diego Unified School Dist. v. Commission on State Mandates* (dealing with discretionary expulsions),[964] there may be activities that involve the exercise of discretion but are nevertheless inevitable in the administration of a mandatory program and, thus, any downstream activities required by state law could be determined mandated by the state. The issue, then, for the court in *POBRA*, was whether the alleged mandated costs spring from a local entity's "essential and basic function."[965] In *POBRA*, the alleged mandate pertained to due process protections required to be extended to all peace officers in the state, and the question was whether those costs constituted a reimbursable state mandate with respect to school districts, which were authorized, but not required, to employ peace officers. The court held that school districts "do not have provision of police protection as an essential and basic function," and therefore the decision to employ peace officers entitled to the protections of POBRA was a discretionary act that led the district to incur the costs alleged.[966] The court concluded that "[i]t is not essential unless there is a showing that, as a practical matter, exercising the authority to higher peace officers is the only reasonable means to carry out their core mandatory functions."[967]

Here the statutes do not legally compel local agencies to construct new municipal sites.[968] They have the discretion to do so.[969] Thus, the state has not legally compelled them to implement

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[964] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 884-886.

[965] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[966] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[967] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[968] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 754; *Coast Community College Dist. v. Commission on State Mandates* (2022) 13 Cal.5th 800, 815-817; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[969] For example, see Government Code section 23004 (counties may purchase, receive by gift or bequest, and hold land within its limits, or elsewhere when permitted by law; and manage, sell, lease, or otherwise dispose of its property as the interests of its inhabitants require); Government Code sections 37350-37353 (cities may purchase, lease, receive, hold, and enjoy real property, and control and dispose of it for the comment benefit; may erect and maintain buildings for municipal purposes; and may acquire property for parking motor vehicles, and for opening and laying out any street; Government Code section 37111 ("When the legislative body deems it necessary that land purchased for park or other purposes be used for construction of public buildings or creation of a civic center, it may adopt an ordinance by a four-fifths vote declaring the necessity and providing for such use").

AST for sediment at their own municipal construction sites that are determined to be an exceptional threat to water quality.

Further, there is no evidence in the record that a failure to construct new municipal sites would subject the claimant to "certain and severe…penalties" such as "double…taxation" or other "draconian" consequences.[970] Substantial evidence in the record is required to make a finding of practical compulsion.[971]

Therefore, the Commission finds that Section F.2.d.3. of the test claim permit, as applied to the local agency permittee's own municipal construction sites, are not mandated by the state.

Moreover, the activity to implement AST at the agency's own municipal construction sites determined to be an exceptional threat to water quality does not impose a new program or higher level of service. Article XIII B, section 6 requires reimbursement whenever the Legislature or any state agency mandates a new program or higher level of service that results in costs mandated by the state. "New program or higher level of service" is defined as "programs that carry out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state."[972] Here, the AST requirement is imposed on *all* construction sites that are an exceptional threat to water quality. As the Fact Sheet explains: "AST is required at construction sites that are identified by the Copermittee as an exceptional threat to water quality due to high turbidity or suspended sediment levels in the site's effluent even when other sediment control BMPs have been implemented."[973] Thus, AST implementation applies without regard to whether the construction project is public or private. Further, implementing AST at all sites that are determined to be an exceptional threat to water quality is not unique to government and does not provide a *governmental* service to the public.

Accordingly, the Commission finds that Section F.2.d.3., as applied to a local agency permittee's own municipal construction sites, does not impose a state-mandated new program or higher level of service.

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[970] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 754, citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74; *Coast Community College Dist. v. Commission on State Mandates* (2022) 13 Cal.5th 800, 815-817; *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[971] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368-1369 (*POBRA*); Government Code section 17559; California Code of Regulations, title 2, section 1187.5.

[972] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56.

[973] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 512 (Fact Sheet/Technical Report).

iii. The requirement imposed on claimants by section F.2.d.3. to require the implementation of active/passive sediment treatment (AST) at construction sites (or portions thereof) that are determined to be an exceptional threat to water quality, which is performed by the claimants in their capacity to regulate construction sites other than their own, is mandated by the state and imposes a new program or higher level of service.

The requirement imposed on the claimants by Section F.2.d.3. to require the implementation of AST at construction sites (or portions thereof) that are determined to be an exceptional threat to water quality, is also imposed on the claimants in their regulatory capacity. In this respect, the required activity mandates a new program or higher level of service.

Federal law requires that NPDES permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[974]

In *Department of Finance v. Commission on State Mandates*, the California Supreme Court identified the following test to determine whether certain conditions imposed by an NPDES stormwater permit issued by the Los Angeles Regional Water Board were mandated by the state and or the federal government:

> If federal law compels the state to impose, or itself imposes, a requirement, that requirement is a federal mandate. On the other hand, if federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a "true choice," the requirement is not federally mandated.[975]

The courts have also explained that "except where a regional board finds the conditions are the *only means* by which the [federal] 'maximum extent practicable' standard can be met, the State exercises a true choice by determining what controls are necessary to meet the standard."[976] "That the San Diego Regional Board found the permit requirements were 'necessary' to meet the standard establishes only that the San Diego Regional Board exercised its discretion."[977]

In this case, the Water Boards argue that the requirement in Section F.2.d.3. is necessary to meet the federal MEP standard. This is supported by the Fact Sheet, which states that, "AST is

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[974] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[975] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 765. This case addressed a challenge by the State to the Commission's Decision in *Municipal Stormwater and Urban Runoff Discharges*, 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21, adopted July 31, 2009.

[976] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682, citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 768, emphasis added.

[977] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682.

necessary and is considered MEP for the discharges from [construction] sites."[978] Federal law, however, gives the Water Boards discretion to determine what controls are necessary to meet the MEP standard, and does not require any specific activities.[979] Moreover, there is no evidence in the record that the new required activities are the only means by which the federal MEP standard can be met.

Accordingly, the new requirement imposed on the claimants by Section F.2.d.3. to require, in their regulatory capacity, the implementation of AST for sediment at construction sites other than their own (or portions thereof) that are determined to be an exceptional threat to water quality, is mandated by the state.

The Commission also finds that the activity constitutes a new program or higher level of service. "New program or higher level of service" is defined as "programs that carry out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state."[980] Only one of these alternatives is required to establish a new program or higher level of service.[981]

Here, the new mandated activity is expressly directed toward the local agency permittees under their regulatory authority, and thus is unique to local government. The mandate to require that AST is implemented at construction sites that are determined to be an exceptional threat to water quality is intended to promote water quality and reduce the discharge of pollutants from construction activity.[982] "The challenged requirements are not bans or limits on pollution levels, they are mandates to perform specific actions" designed to reduce pollution entering stormwater drainage systems and receiving waters.[983] Thus, the new mandated activity also provides a governmental service to the public.

Accordingly, Section F.2.d.3. mandates a new program or higher level of service when performed by the claimants in their regulatory capacity:

- Require implementation of AST for sediment at construction sites other than their own (or portions thereof), that are determined to be an exceptional threat to water quality.[984]

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[978] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 512 (Fact Sheet/Technical Report), emphasis added.

[979] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 767-769.

[980] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56.

[981] *Carmel Valley Fire Protection Dist. v. State of California* (1987) 190 Cal.App.3d 521, 537; *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 557.

[982] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 230-231, 233 (test claim permit, Section F.2.d.3.).

[983] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 560.

[984] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 231 (test claim permit, Section F.2.d.3.).

c. Section F.2.e.6.e. of the test claim permit, which requires that inspections of construction sites must include a review of facility monitoring data results if the site monitors its runoff, does not impose a new program or higher level of service.

i. Section F.2.e.6.e. of the test claim permit provides that inspections of construction sites must include a review of facility monitoring data results, if the site monitors its runoff.

Section F.2.e. of the test claim permit, like the prior permit, requires each copermittee to conduct construction site inspections for compliance with its ordinances (grading, stormwater, etc.), permits (construction, grading, etc.), and this Order.[985] Section F.2.e.6.e. adds the following language to these provisions: "[i]nspections must include . . . a review of the site monitoring data results, if the site monitors its runoff."[986] According to the Water Boards, this means that the claimants are now also required to review the monitoring results if a construction site it is inspecting has monitored its runoff.[987]

The claimants seek reimbursement only for the costs to review the monitoring data results if the construction site monitors its runoff, and the associated costs to train inspectors, and not for the full inspection.[988]

> Claimants were required, when they inspected construction sites, to review any collected monitoring data. This required Claimants to ensure that their inspection staff were trained at the same level as state inspectors, such as those from the RWQCB. It should be noted that Claimants cannot collect fees to cover the increased costs to train on and review this data, as the State already collects fees for such a service as part of the General Construction Permit.
>
> To address these requirements, the District, through the cost-sharing mechanism in the Implementation Agreement, conducted training of Claimant staff and updated the JRMP template.[989]

As described below, the requirement to review the monitoring results if a construction site it is inspecting has monitored its runoff is not new and, therefore, does not impose a new program or

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[985] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 232 (test claim permit, Section F.2.e.).

[986] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 233 (test claim permit, Section F.2.e.6.e.).

[987] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 32.

[988] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 63-65 (Test Claim narrative).

[989] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 61, 96 (Test Claim narrative; Declaration of Stuart McKibbin, Chief of the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District, dated April 27, 2017).

higher level of service. In addition, Section F.2.e.6.e. does not require the claimants to provide training to their employees.

> *ii. Section F.2.e.6.e. of the test claim permit clarifies the duties under existing law, but does not impose a new requirement on the claimants to review the monitoring results if a construction site it is inspecting has monitored its runoff and, thus, section F.2.e.6.e. does not impose a new program or higher level of service. In addition, section F.2.e.6.e. does not require the claimants to provide training to their employees.*

Section F.2.e.6. lists the items that need review on inspection of construction sites. Section F.2.e.6.e. states that "[i]nspections must include . . . a review of the site monitoring data results, if the site monitors its runoff."[990]

The claimants argue that the requirement to review monitoring data results of construction sites is a new state-mandated activity that has been shifted by the state to local governments.[991] The claimants rely on the Supreme Court's decision in *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749. That case addressed the Commission's Decision in *Municipal Stormwater and Urban Runoff Discharges*, 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21, where the Commission found that the NPDES permit issued by the Los Angeles Regional Water Control Board imposed *new* state-mandated requirements on the local agency permittees to inspect restaurants, automotive service facilities, retail gasoline outlets, and automotive dealerships.[992] The Supreme Court agreed, finding that the Regional Board had primary responsibility for inspecting industrial and commercial facilities under state and federal law and shifted that responsibility to the permittees as follows:

> Neither the CWA's "maximum extent practicable" provision nor the EPA regulations on which the State relies expressly required the Operators to inspect these particular facilities or construction sites. The CWA makes no mention of inspections. (33 U.S.C. § 1342(p)(3)(B)(iii).) The regulations required the Operators to include in their permit application a description of priorities and procedures for inspecting certain industrial facilities and construction sites, but suggested that the Operators would have discretion in selecting which facilities to inspect. (See C.F.R. § 122.26(d)(2)(iv)(C)(1).) The regulations do not mention commercial facility inspections at all.

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[990] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 233 (test claim permit, Section F.2.e.6.e.).

[991] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 60 (Test Claim narrative).

[992] The Commission ultimately denied reimbursement for the inspection activities because the claimants had adequate fee authority to pay for such costs pursuant to Government Code section 17556(d) and, therefore, there were no costs mandated by the state. The Second District Court of Appeal, in *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 562-565, upheld the Commission's Decision.

Further, as the Operators explained, state law made the *Regional Board* responsible for regulating discharges of waste within its jurisdiction. (Wat. Code, §§ 13260, 13263.) This regulatory authority included the power to "inspect the facilities of any person to ascertain whether ... waste discharge requirements are being complied with." (Wat. Code, § 13267, subd. (c).) Thus, state law imposed an overarching mandate that the Regional Board inspect the facilities and sites.

In addition, federal law and practice required the Regional Board to inspect all industrial facilities and construction sites. Under the CWA, the State Board, as an issuer of NPDES permits, was required to issue permits for storm water discharges "associated with industrial activity." (33 U.S.C. § 1342(p)(3)(A).) The term "industrial activity" includes "construction activity." (40 C.F.R. § 122.26(b)(14)(x).) The Operators submitted evidence that the State Board had satisfied its obligation by issuing a general industrial activity stormwater permit and a general construction activity stormwater permit. Those statewide permits imposed controls designed to reduce pollutant discharges from industrial facilities and construction sites. Under the CWA, those facilities and sites could operate under the statewide permits rather than obtaining site-specific pollutant discharge permits.

The Operators showed that, in those statewide permits, the State Board had placed responsibility for inspecting facilities and sites on the *Regional Board*. The Operators submitted letters from the EPA indicating the State and regional boards were responsible for enforcing the terms of the statewide permits. The Operators also noted the State Board was authorized to charge a fee to facilities and sites that subscribed to the statewide permits (Wat. Code, § 13260, subd. (d)), and that a portion of that fee was earmarked to pay the Regional Board for "inspection and regulatory compliance issues." (Wat. Code, § 13260, subd. (d)(2)(B)(iii).) Finally, there was evidence the Regional Board offered to pay the County to inspect industrial facilities. There would have been little reason to make that offer if federal law required the County to inspect those facilities.

This record demonstrates that the Regional Board had primary responsibility for inspecting these facilities and sites. It shifted that responsibility to the Operators by imposing these Permit conditions. The reasoning of *Hayes, supra,* 11 Cal.App.4th 1564, 15 Cal.Rptr.2d 547, provides guidance. There, the EHA required the state to provide certain services to special education students, but gave the state discretion in implementing the federal law. (*Hayes*, at p. 1594, 15 Cal.Rptr.2d 547.) The state exercised its "true discretion" by selecting the specific requirements it imposed on local governments. As a result, the *Hayes* court held the costs incurred by the local governments were state-mandated costs. (*Ibid*.) Here, state and federal law required the Regional Board to conduct inspections. The Regional Board exercised its discretion under the CWA, and shifted that obligation to the Operators. That the Regional Board did so while exercising its permitting authority under the CWA does not change the nature of the Regional

Board's action under section 6. Under the reasoning of *Hayes*, the inspection requirements were not federal mandates.[993]

Unlike the facts in the *Department of Finance* case, however, inspection of construction sites in this case, including all activities necessary to assess compliance with ordinances and water quality standards, is *not* new, but was imposed by the prior permit.

Reimbursement under article XIII B, section 6 requires that all elements be met, including that any increased costs result from a new program or higher level of service mandated by the state on the local agency.[994] To determine whether a test claim statute imposes a new program or higher level of service, the required activities imposed by the state must be *new.*[995] Alternatively, a new program or higher level of service can occur if the state transfers to local agencies complete or partial financial responsibility for a required program for which the state previously had complete or partial financial responsibility.[996] To determine if a mandated activity or shift in costs from the state is new, the courts have used the ordinary meaning of the word "new" and have found that if local government was not required to perform the activity or incur the cost shifted from the state at the time the test claim statute or regulation became effective (which, in effect, requires a comparison of the law immediately before the effective date of the test claim statute or regulation), the mandated activity or shifted cost is new.

For example, in *Lucia Mar Unified School Dist.*, the 1981 test claim statute required local school districts to pay the cost of educating pupils in state schools for the severely handicapped — costs that the state had previously paid in full until the 1981 statute became effective.[997] The court held that the requirement imposed on local school districts to fund the cost of educating these pupils was new "*since at the time [the test claim statute] became effective* they were not required to contribute to the education of students from their districts at such schools."[998] The same analysis was applied in *County of San Diego*, where the court found that the state took full responsibility to fund the medical care of medically indigent adults in 1979, which lasted until the 1982 test claim statute shifted the costs back to counties.[999] In *City of San Jose*, the court addressed the 1990 test claim statute, which authorized counties to charge cities for the costs of booking into county jails persons who had been arrested by employees of the cities.[1000] The court denied the city's claim for reimbursement, finding that the costs were not shifted by the state since "*at the time [the 1990 test claim statute] was enacted*, and indeed long before that

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[993] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 770-771.

[994] *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835.

[995] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 874-875 (reaffirming the test set out in *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56).

[996] California Constitution, article XIII B, section 6(c).

[997] *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 832.

[998] *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835, emphasis added.

[999] *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 91.

[1000] *City of San Jose v. State* (1996) 45 Cal.App.4th 1802.

statute, the financial and administrative responsibility associated with the operation of county jails and detention of prisoners was borne entirely by the county."[1001] In *San Diego Unified School District*, the court determined that the required activities imposed by 1993 test claim statutes, which addressed the suspension and expulsion of K-12 students from school, were "new in comparison with the preexisting scheme in view of the circumstances that they did not exist prior to the enactment of [the 1993 test claim statutes]."[1002] And in *Department of Finance. v. Commission on State Mandates* (2021) 59 Cal.App.5th 546 (on remand from the California Supreme Court), the court found that installing and maintaining trash receptacles at transit stops and performing inspections of industrial and commercial facilities were *new duties* that local governments were required to perform, when compared to prior law.[1003] The purpose of article XIII B, section 6 is to prevent the state from forcing extra programs on local government each year in a manner that negates their careful budgeting of increased expenditures that are counted against the local government's annual spending limit.[1004]

In this case, although the prior permit did not expressly state that reviewing construction site monitoring data results if the site monitors its runoff was required as part of the inspection, it did expressly require the claimants to conduct inspections for compliance with local stormwater ordinances on construction sites and to enforce its ordinances "as necessary to maintain compliance with this Order," including the permit's receiving water limitations and prohibitions banning any discharge of pollutant and non-stormwater discharges into the MS4 that would cause or contribute to the violation of water quality standards.[1005]

If anything, the requirement to review monitoring data results if the site monitors its runoff simply clarifies the existing legal requirement to assess a site's compliance with local ordinances and water quality standards. The courts have recognized that changes in statutory or regulatory language can be intended to clarify the law, rather than change it.

[1001] *City of San Jose v. State* (1996) 45 Cal.App.4th 1802, 1812, emphasis added.

[1002] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 878; see also page 869, footnotes 6 and 7, and page 870, footnote 9 (where the court describes in detail the state of the law immediately before the enactment of the 1993 test claim statutes).

[1003] *Department of Finance. v. Commission State Mandates* (2021) 59 Cal.App.5th 546, 558. As indicated earlier, however, the court also found there were no costs mandated by the state because the permittees had fee authority sufficient to pay for the costs of the inspections pursuant to Government Code section 17556(d). *Department of Finance. v. Commission State Mandates* (2021) 59 Cal.App.5th 546, 562-565.

[1004] California Constitution, articles XIII B, sections 1, 8(a) and (b); *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56; *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835; *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1595; *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264, 1283.

[1005] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 574-575, 584 (Order R9-2004-0001, Prohibitions and Receiving Water Limitations; Industrial/Commercial Inspections, Section G.).

> We assume the Legislature amends a statute for a purpose, but that purpose need not necessarily be to change the law. [Citation.] Our consideration of the surrounding circumstances can indicate that the Legislature made ... changes in statutory language in an effort only to clarify a statute's true meaning.[1006]

In addition, there has been no shift of costs from the state to the local agencies. As indicated in the test claim permit, the State Water Board has issued a statewide General Construction Permit (State Water Board Order 2009-0009-DWQ, NPDES No. CAS000002), which is intended to cover any construction or demolition activity and regulates stormwater runoff from construction sites and prohibits non-stormwater discharges.[1007] To be authorized to discharge stormwater under the General Permit, the legally responsible person is required to file a notice of intent, storm water pollution prevention plan, and other documents with the State Water Board.[1008] The statewide General Construction Permit does *not*, however, "preempt or supersede the authority of local storm water management agencies to prohibit, restrict, or control storm water discharges to municipal separate storm sewer systems or other watercourses within their jurisdictions."[1009] Thus, as indicated in the Fact Sheet for the test claim permit, discharges of runoff from construction sites are subject to stormwater regulation under both state and local systems to ensure the most effective oversight. The copermittees enforce their local permits, plans, and ordinances, and the State Water Boards enforce the General Construction Permit.[1010]

Thus, reviewing monitoring data results if the site monitors its runoff is not a new requirement imposed or shifted by the state, and does not constitute a new program or higher level of service.

Moreover, Section F.2.e.6.e. does not require the claimants to train their employees to review monitoring data results if the site monitors runoff.

Accordingly, Section F.2.e.6.e. does not mandate a new program or higher level of service.

[1006] *Western Security Bank v. Superior Court* (1997) 15 Cal.4th 232, 243.

[1007] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 191 (test claim permit, Finding D.3.); Exhibit X (41), State Water Resources Control Board, Construction General Permit, Order 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ, pages 3, 9, 14, https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf (accessed on January 10, 2022).

[1008] Exhibit X (41), State Water Resources Control Board, Construction General Permit, Order 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ, page 14, https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf (accessed on January 10, 2022).

[1009] Exhibit X (41), State Water Resources Control Board, Construction General Permit, Order 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ, page 56, https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf (accessed on January 10, 2022).

[1010] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 441 (Fact Sheet/Technical Report, Finding D.3.a.).

7. Sections F.1.i. and F.3.a.10. of the Test Claim Permit, Addressing Erosion and Sediment Control Best Management Practices (BMPs) After Construction and During Maintenance of Unpaved Roads, Do Not Mandate a New Program or Higher Level of Service Because the Activities Are Not New and Any Downstream Costs Incurred for Municipal Unpaved Roads Are at the Discretion of the Local Agency.

The claimants have pled Sections F.1.i. and F.3.a.10. of the test claim permit.[1011] These sections are part of the Jurisdictional Runoff Management Program (JRMP) that requires the development and implementation of erosion and sediment control BMPs after construction of new unpaved roads and during maintenance activities on unpaved roads.

As described below, the Commission finds that Sections F.1.i. and F.3.a.10. of the test claim permit are not mandated by the state and do not impose a new program or higher level of service because the activities are not new and any costs incurred for municipal unpaved roads are at the discretion of the local agency.

a. Background

i. Federal law requires permittees to implement control measures to reduce pollutants from operating and maintaining public streets, roads, and highways.

Under federal law, NPDES permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[1012] A permittee's proposed management program shall include a description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas, including "practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems."[1013]

ii. The prior permit required each permittee to develop and implement programs to prevent or reduce pollutants in runoff to the maximum extent practicable (MEP) during all phases of construction and from all existing development including municipal roads.

Section A. of the 2004 prior permit contained the following general prohibitions:

- Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state are prohibited.

[1011] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 21, 61-62 (Test Claim narrative).

[1012] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[1013] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A)(3) (71 FR 33639, June 12, 2006).

- Discharges from MS4s containing pollutants which have not been reduced to the MEP are prohibited.[1014]

Section F. of the prior permit addressed development planning and required that "[e]ach Permittee's General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) shall include water quality and watershed protection principles and policies to direct land-use decisions and require implementation of consistent water quality protection measures for development projects," including the following:

- Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways; and bridges.
- Establish development guidance that protects areas from erosion and sediment loss.
- Post-development runoff from a site shall not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives and which have not been reduced to the MEP.[1015]

Section G. of the prior permit required each permittee to implement a program to reduce pollutants in runoff to the MEP during all construction phases, including the requirement to designate and implement BMPs for the retention and proper management of sediment and other construction pollutants on site.[1016]

Section H. of the prior permit also contained provisions on existing development including municipal facilities and activities.[1017] Municipal facilities and activities "included, but were not limited to," roads, streets, highways, and parking facilities and drainage facilities.[1018] The term "road" was not defined beyond the fact that roads are municipal facilities. Under existing law, the permittees are only responsible for maintaining roads that are accepted into either the county road system or the city street system.[1019] A road is accepted into the system only through an action by the governing body or its designee.[1020] Thus, the term "roads" included whatever

[1014] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section A.1., 3.).

[1015] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 576 (Order R9-2004-0001, Section F.1.).

[1016] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 585 (Order R9-2004-0001, Section G.5.a.8.).

[1017] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 587 (Order R9-2004-0001, Section H.).

[1018] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 587 (Order R9-2004-0001, Section H.1.b.).

[1019] Streets and Highways Code sections 941(b) and 1806(a); *Kern County v. Edgemont Development Corp.* (1963) 222 Cal.App.2d 874, 878.

[1020] Streets and Highways Code sections 941(b) and 1806(a).

paved or unpaved roads had been accepted into the permittees' road system. As relevant here, the municipal program required the following:

- Develop and update annually an inventory of all of the permittee's municipal facilities and activities that generate pollutants, including not limited to, roads, streets, and highways.[1021]
- Implement or require the implementation of BMPs to reduce pollutants in urban runoff to the MEP from all the permittee's municipal facilities and activities.[1022]
- Implement, or require implementation of, additional controls for municipal facilities and activities tributary to section 303(d) impaired water bodies or within or directly adjacent to or discharging directly to receiving waters within ESAs.[1023]
- Implement a schedule of maintenance activities for structural source and treatment control BMPs designed to reduce pollutant discharges to or from its MS4s and related drainage structures.[1024]
- Inspect all municipal facilities and activities annually and implement all follow-up actions necessary to comply with the prior permit.[1025]

The Findings of the prior permit explain the rationale for these requirements as follows:

> Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d) impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particular sensitive environment. Therefore, additional control to reduce pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.[1026]

[1021] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 587 (Order R9-2004-0001, Section H.1.b.).

[1022] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 588 (Order R9-2004-0001, Section H.1.c.1.).

[1023] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 588 (Order R9-2004-0001, Section H.1.c.2.).

[1024] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 588 (Order R9-2004-0001, Section H.1.d.1.).

[1025] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 589 (Order R9-2004-0001, Section H.1.f.).

[1026] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 568 (Order R9-2004-0001, Finding 8).

As explained in the 2004 Fact Sheet, the Report of Waste Discharge (ROWD) filed on May 30, 2003, set forth the permittees' municipal facilities strategy pursuant to the permit issued in 1998 listing the municipal facilities and activities that have the potential to contribute pollutants to stormwater runoff. While roads were not included as a facility of concern, the permittees asserted that they could not control pollutants from brake pad and tire wear and internal combustion engines.[1027] The Regional Board disagreed with this assertion quoting the US EPA's Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems (Guidance Manual):

> proposed management programs must include a description of practices for operation and maintenance of public streets, roads, and highways, and procedures for reducing the impact of runoff from these areas on receiving waters. [...] Pollutants from traffic can be minimized by using nonstructural controls (e.g., traffic reduction and improved traffic management), structural controls (e.g., traditional and innovative BMPs), and changing maintenance activities.[1028]

The Guidance Manual also states that road maintenance activities can contribute pollutants due to erosion because of the removal of vegetation from the shoulders and roadside ditches.[1029]

b. Sections F.1.i. and F.3.a.10. of the test claim permit do not mandate a new program or higher level of service.

i. Sections F.1.i. and F.3.a.10. of the test claim permit include specific requirements for the development and implementation of erosion and sediment control best management practices (BMPs) after construction of new unpaved roads and during maintenance activities by copermittees on unpaved roads.

The test claim permit specifically addresses unpaved roads and includes specific requirements for erosion and sediment controls to reduce and minimize the impacts of sediment discharged during storm events to the MS4s and receiving waters.[1030] Unpaved roads are defined as "a long, narrow stretch without pavement used for traveling by motor passenger vehicle between two or

[1027] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, page 58.

[1028] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, page 58, quoting Exhibit X (11), EPA, Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems, November 1992, pages 77-78, https://www3.epa.gov/npdes/pubs/owm0246.pdf (accessed on January 25, 2022).

[1029] Exhibit X (11), EPA, Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems, November 1992, page 78, https://www3.epa.gov/npdes/pubs/owm0246.pdf (accessed on January 25, 2022).

[1030] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 424 (Fact Sheet/Technical Report, Discussion of Finding D.1.c.).

more points. Unpaved roads are generally constructed of dirt, gravel, aggregate or macadam and may be improved or unimproved."[1031]

The Fact Sheet explains the need to focus on unpaved roads as source of sediment and its impacts on water quality:

> During the previous permit period, the San Diego Water Board identified, through investigations and complaints, sediment discharges from unpaved roads as a significant source of water quality problems in the Riverside County portion of the San Diego Region. Enforcement and inspection activities conducted by the San Diego Water Board during the previous permit term have found a lack of source control for many unpaved roads within the jurisdiction of the Copermittees. Unpaved roads are a source of sediment that can be discharged in runoff to receiving waters, especially during storm events. Erosion of unpaved roadways occurs when soil particles are loosened and carried away from the roadway base, ditch, or road bank by water, wind, traffic, or other transport means. Exposed soils, high runoff velocities and volumes, sandy or silty soil types, and poor compaction increase the potential for erosion.
>
> Road construction, culvert installation, and other maintenance activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff and thereby erosion and the release of sediment. Poorly designed roads can act as preferential drainage pathways that carry runoff and sediment into natural streams, impacting water quality. In addition, other public works activities along unpaved roads have the potential to significantly affect sediment discharge and transport within streams and other waterways, which can degrade the beneficial uses of those waterways.[1032]

Accordingly, Section F.1.i., which is part of the development planning component of the JRMP, requires the following activities for unpaved road development:

- Develop, where they do not already exist, and implement or require implementation of erosion and sediment control BMPs after construction of new unpaved roads. At a minimum, the BMPs must include the following, or alternative BMPs that are equally effective:

  (1) Practices to minimize road related erosion and sediment transport.

  (2) Grading of unpaved roads to slope outward where consistent with road engineering safety standards.

  (3) Installation of water bars as appropriate.

[1031] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 293 (test claim permit, Attachment C).

[1032] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 423-424 (Fact Sheet/Technical Report, Discussion of Finding D.1.c.).

(4) Unpaved roads and culvert[1033] designs that do not impact creek functions and where applicable, that maintain migratory fish passage.[1034]

The Fact Sheet explains that guidance documents by several government agencies[1035] that include design, construction specifications, and source control BMPs that can be implemented by private and public entities are available to the copermittees.[1036]

Section F.3.a.10 of the test claim permit addresses the maintenance work on "copermittee-maintained unpaved roads," which are those unpaved roads that the copermittees maintain in their road system.[1037] Maintenance of copermittee-maintained unpaved roads requires implementation of BMPs for erosion and sediment control during and after maintenance activities, particularly in or adjacent to stream channels or wetlands. This requirement is necessary to ensure the discharge of sediment during maintenance activities is minimized.[1038] Accordingly, Section F.3.a.10. requires the following:

- Develop, where they do not already exist, and implement or require implementation of BMPs for erosion and sediment control measures during their maintenance activities on copermittee-maintained unpaved roads, particularly in or adjacent to receiving waters.[1039]
- Develop and implement or require implementation of appropriate BMPs to minimize impacts on streams and wetlands during their unpaved road maintenance activities.[1040]

[1033] A culvert is "a transverse drain" or, more specifically, "a drain or pipe that allows water to flow under a road." Exhibit X (31), Merriam-Webster Dictionary, culvert, https://www.merriam-webster.com/dictionary/culvert (accessed on February 10, 2022).

[1034] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 228 (test claim permit, Section F.1.i.).

[1035] The agencies include US EPA, the US Forest Service, and the University of California.

[1036] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 424 (Fact Sheet/Technical Report).

[1037] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 841, 843-844 (Riverside County's Comments on Tentative Order R9-2010-0016, Attachment 5: Proposed Unpaved Road Requirements of the Draft 2010 Santa Margarita Region MS4 Permit, Section F.3.c.5. (privately owned unpaved road maintenance was deleted and not included in the final version of the test claim permit)).

[1038] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 518 (Fact Sheet/Technical Report).

[1039] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 239 (test claim permit, Section F.3.a.10.a.).

[1040] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 239 (test claim permit, Section F.3.a.10.b.).

- Maintain as necessary their unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport.[1041]
- Slope outward the re-grading of unpaved roads during maintenance where consistent with road engineering safety standards or alternative equally effective BMPs must be implemented to minimize erosion and sedimentation from unpaved roads.[1042]
- Examine, through unpaved road maintenance, the feasibility of replacing existing culverts or design of new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology.[1043]

The claimants contend that the unpaved roads requirements in the test claim permit are newly required and go beyond the federal regulations, which require the claimants to address discharges from the MS4, and instead require the claimants address all discharges from any unpaved roads.[1044] The claimants conclude that the requirements are not a federal mandate but the "true choice" of the Water Boards to impose such requirements.[1045]

The Water Boards contend that the requirements addressing unpaved roads are not new requirements and do not impose a new program or higher level of service. The prior permit required implementation of BMPs to reduce pollutants in runoff to the MEP during the construction and maintenance of unpaved roads, although the prior permit did not explicitly specify unpaved roads by name.[1046]

ii. A copermittee's construction of new municipal unpaved roads and maintenance work on copermittee-maintained unpaved roads are not mandated by the state because such costs are incurred at the discretion of the local agency.

The claimants contend that the activities to comply with Sections F.1.i. and F.3.a.10. of the test claim permit are eligible for reimbursement under article XIII B, section 6 of the California Constitution. However, when the claimants engage in construction of new unpaved roads or maintenance of copermittee-maintained unpaved roads, the costs incurred by a local agency are

[1041] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 239 (test claim permit, Section F.3.a.10.c.).

[1042] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 239 (test claim permit, Section F.3.a.10.d.).

[1043] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 239 (test claim permit, Section F.3.a.10.e.).

[1044] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 62 (Test Claim narrative).

[1045] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 62-63 (Test Claim narrative), citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal. 5th 749, 765.

[1046] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 35-37.

not mandated by the state, but are the result of a local discretionary decision, which are, therefore, not eligible for reimbursement.

The courts have found that when statutory or regulatory requirements result from an apparently or facially *discretionary* decision, and are therefore not *legally* compelled by the state, they may be *practically* compelled if the discretionary act is "the only reasonable means to carry out [the claimant's] core mandatory functions,"[1047] or if the failure to act would subject the claimant to "certain and severe…penalties" such as "double…taxation" or other "draconian" consequences.[1048] Substantial evidence in the record is required to make a finding of practical compulsion.[1049]

Here, the construction and maintenance of roads accepted into the municipal system is entirely voluntary. The claimants have provided no evidence to support that they have a legal or practical compulsion to construct or maintain unpaved roads. Moreover, as explained above, even if there were some type of compulsion to construct or repair roads, the claimants are only responsible for roads that are accepted into either their road system which can only be accomplished by the voluntary action of the governing body.[1050]

Therefore, the Commission finds that the requirements in Sections F.1.i. and F.3.a.10. of the test claim permit, as applied to local agency municipal construction of new unpaved roads and maintenance of copermittee-maintained unpaved roads are not mandated by the state.

iii. Sections F.1.i. and F.3.a.10. of the test claim permit clarify the duties under the prior permit, but do not impose new requirements on the claimants and, thus, sections F.1.i. and F.3.a.10. do not constitute a new program or higher level of service.

Reimbursement under article XIII B, section 6 requires that all elements be met, including that any increased costs result from a new program or higher level of service mandated by the state on the local agency.[1051] To determine whether a test claim statute imposes a new program or higher level of service, the required activities imposed by the state must be *new.*[1052] Alternatively, a new program or higher level of service can occur if the state transfers to local agencies complete or partial financial responsibility for a required program for which the state

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[1047] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[1048] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 754 citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74.

[1049] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368-1369 (*POBRA*); Government Code section 17559; California Code of Regulations, title 2, section 1187.5.

[1050] Streets and Highways Code sections 941(b) and 1806(a).

[1051] *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835.

[1052] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 874-875 (reaffirming the test set out in *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56).

previously had complete or partial financial responsibility.[1053] To determine if a mandated activity or shift in costs from the state is new, the courts have used the ordinary meaning of the word "new" and have found that if local government was not required to perform the activity or incur the cost shifted from the state at the time the test claim statute or regulation became effective (which, in effect, requires a comparison of the law immediately before the effective date of the test claim statute or regulation), the mandated activity or shifted cost is new.[1054]

Section F.1.i. of the test claim permit requires implementation of erosion and sediment control BMPs after construction of new unpaved roads. Although Section F.1.i. identifies BMPs for unpaved roads, the section also permits the copermittees to implement equally effective alternative BMPs of their choosing; "At a minimum, the BMPs must include the following, *or alternative BMPs that are equally effective*. . . ."[1055] Thus the requirement under Section F.1.i., like the requirement under the prior permit, is to implement effective BMPs after construction. The prior permit specifically required the claimants to amend their General Plans to require that post-development runoff from a site shall not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives and which have not been reduced to the MEP.[1056] The prior permit also required the claimants to implement a program to reduce pollutants in runoff to the MEP during all construction phases, including the requirement to designate and implement BMPs for the retention and proper management of sediment and other construction pollutants on site.[1057] In addition, the prior permit required the claimants to implement or require the implementation of BMPs to reduce pollutants in urban runoff to the MEP from all municipal facilities and activities, which was defined to include roads, and to implement or require implementation of additional BMPs for roads tributary to section 303(d) impaired water bodies.[1058] Thus, Section F.1.i. of the test claim permit does not impose any new requirements.

[1053] California Constitution, article XIII B, section 6(c).

[1054] *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835; *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 91; *City of San Jose v. State* (1996) 45 Cal.App.4th 1802, 1812; *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 878; see also page 869, footnotes 6 and 7, and page 870, footnote 9 (where the court describes in detail the state of the law immediately before the enactment of the 1993 test claim statutes); and *Department of Finance. v. Commission State Mandates* (2021) 59 Cal.App.5th 546, 558.

[1055] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 228 (test claim permit, Section F.1.i.), emphasis added.

[1056] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 576 (Order R9-2004-0001, Section F.1.).

[1057] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 585 (Order R9-2004-0001, Section G.5.a.8.).

[1058] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 588 (Order R9-2004-0001, Section H.1.c.1.).

Similarly, the requirements in section F.3.a.10. of the test claim permit, which specifically addresses maintenance work on copermittee-maintained unpaved roads, does not impose any new activities; the section simply requires the claimants to continue to maintain and use BMPs that the claimants develop for erosion and sediment when maintaining unpaved roads to ensure that those pollutants are reduced to the MEP particularly around receiving waters, and that water quality standards for the receiving waters are met. Section F.3.a.10. requires claimants to: (a) develop, *where they do not already exist*, and implement or require implementation of BMPs for erosion and sediment control measures during their maintenance activities on copermittee-maintained unpaved roads, particularly in or adjacent to receiving waters; (b) develop and implement or require implementation of appropriate BMPs to minimize impacts on streams and wetlands during their unpaved road maintenance activities; (c) maintain as necessary their unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport; (d) slope outward re-grading of unpaved roads during maintenance where consistent with road engineering safety standards or alternative equally effective BMPs must be implemented to minimize erosion and sedimentation from unpaved roads; (e) examine, through unpaved road maintenance, the feasibility of replacing existing culverts or design of new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology.[1059]

Although the prior permit did not expressly identify the BMPs necessary to address runoff when maintaining municipal unpaved roads, it did require the claimants to inventory and implement BMPs to reduce pollutants in urban runoff to the MEP from all their municipal facilities and activities.[1060] Municipal facilities "included, but were not limited to," roads, streets, highways, and parking facilities.[1061] The prior permit also required the claimants to implement additional controls for municipal facilities and activities tributary to section 303(d) impaired water bodies or within or directly adjacent to or discharging directly to receiving waters within ESAs.[1062] Finally, the prior permit required the claimants to inspect all municipal facilities and activities annually and implement all follow-up actions necessary to comply with the prior permit, which including the order that discharges into and from the MS4 in a manner causing or threatening to cause a condition of pollution in the waters of the state are prohibited.[1063] Thus, under the prior permit, the claimants were required to implement BMPs to reduce pollutants in runoff to the MEP from unpaved roads, and to inspect unpaved roads and implement all follow-up actions

[1059] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 239 (test claim permit, Section F.3.a.10.).

[1060] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 588 (Order R9-2004-0001, Section H.1.c.1.).

[1061] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 587 (Order R9-2004-0001, Section H.1.b.).

[1062] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 588 (Order R9-2004-0001, Section H.1.c.2.).

[1063] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572, 589 (Order R9-2004-0001, Sections A., H.1.f.).

necessary to comply with the permit to ensure that water quality standards are met.[1064] If anything, the requirements in the test claim permit regarding unpaved roads simply clarify the existing legal requirement to assess a site's compliance with local ordinances and water quality standards. The courts have recognized that changes in statutory or regulatory language can be intended to clarify the law, rather than change it.[1065]

Accordingly, the Commission finds that the development and implementation of erosion and sediment control BMPs after construction of new unpaved roads and during maintenance activities on unpaved roads pursuant to Sections F.1.i. and F.3.a.10. are not a new requirements imposed or shifted by the state, and do not constitute a new program or higher level of service.

8. Section F.3.b.4.a.ii. of the Test Claim Permit, Which Addresses Industrial and Commercial Site Inspections, Does Not Require the Claimants to Perform Any New Activities and, Thus, Does Not Impose a New Program or Higher Level of Service.

The claimants pled Section F.3.b.4.a.ii. of the test claim permit, which is part of the Existing Development Component of the Jurisdictional Runoff Management Program (JRMP). The claimants specifically allege that Section F.3.b.4.a.ii. of the test claim permit imposes new state-mandated requirements to inspect industrial and commercial sites, including a review of site monitoring data if the site monitors its runoff.[1066]

As described below, the Commission finds that the requirement imposed by Section F.3.b.4.a.ii., to review as part of industrial and commercial site inspections industrial or commercial site monitoring data, if the site monitors its runoff, clarifies the existing legal requirement to assess a site's compliance with local ordinances and water quality standards, but is not a new requirement and does not impose a new program or higher level of service.

a. Background

i. Federal law requires an NPDES applicant to adopt ordinances to control pollutants to the MS4 from stormwater discharges associated with industrial activities and to prevent illicit non-stormwater discharges, and to monitor and inspect these sites to ensure compliance with the permit and water quality standards.

NPDES permits must include conditions to achieve water quality standards and objectives.[1067] As relevant to this section, federal regulations require that the application for an NPDES permit for large and medium MS4 dischargers must demonstrate adequate legal authority, through ordinance, permit, or other means, to control pollutants *to* the MS4 from stormwater discharges

[1064] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 587-588 (Order R9-2004-0001, Sections H.1.b., c.).

[1065] *Western Security Bank v. Superior Court* (1997) 15 Cal.4th 232, 243.

[1066] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 63-64. No other provision in section F.3.b. was discussed in the Test Claim and, thus, the analysis in this Decision is limited to the activity required by section F.3.b.4.a.ii.

[1067] Code of Federal Regulations, title 40, section 122.44(d)(1).

associated with *industrial activity* and to carry out *inspections*, surveillance, and monitoring to ensure compliance with the permit conditions.[1068] The legal authority shall also prohibit illicit discharges to the MS4.[1069]

In addition, the proposed management program shall include structural and source control measures to reduce pollutants from runoff from *commercial* areas, and inspections to implement and enforce ordinances that prevent illicit discharges to the MS4.[1070] The program is also required to monitor and control pollutants from runoff from industrial facilities that the permit applicant determines are contributing substantial pollutant loading to the MS4 and in such cases, the program shall "identify priorities and procedures for inspections and establishing and implementing control measures for such discharges" and a monitoring program.[1071]

> *ii. The prior permit required each permittee to inspect and assess industrial and commercial facilities to ensure compliance with local ordinances, effective best management practice (BMP) implementation, and for potential illicit discharges and connections, and to implement all follow-up actions necessary to comply with the receiving water limitations and prohibitions identified in the prior permit.*

The prior permit identifies the following general prohibitions and receiving water limitations for which the permittees are required to comply:

- Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in Water Code section 13050), in the waters of the state are prohibited.
- Discharges from MS4s that cause or contribute to exceedances of water quality objectives for surface water and ground water are prohibited.
- Discharges from MS4s containing pollutants which have not been reduced to the MEP are prohibited.
- Discharges from MS4s that are subject to all Basin Plan prohibitions (cited in Attachment A to the order) are prohibited.
- All types of non-stormwater discharges into the MS4, unless authorized by an NPDES permit, are prohibited.
- Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses of receiving waters) are prohibited.[1072]

[1068] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(A), (F).

[1069] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(B).

[1070] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(A), (B).

[1071] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(C).

[1072] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572-573 (Order R9-2004-0001, Sections A., B.1., C.1.).

The prior permit also requires the permittees to have adequate legal authority to control pollutant discharges into and from the MS4 through ordinance, statute, permit, contract, or other similar means. The legal authority, at a minimum, must authorize the permittee to do the following:

- Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies to both industrial and construction sites that have coverage under the General Industrial Permit and the General Construction Permit, as well as to those sites that do not.
- Prohibit all illicit discharges and connections to the MS4.
- Control the discharge of spills, dumping or disposal of materials other than stormwater to its MS4.
- Require compliance with the permittee's ordinances, permits, contracts, or orders by holding dischargers accountable for the contributions to pollutants and flows.
- Require the use of BMPs to reduce or prevent the discharge of pollutants into the MS4 to the MEP.
- Carry out all inspections and monitoring necessary to determine compliance and noncompliance with local ordinances and orders, and the prior permit.[1073]

In order to comply with the above requirements, the prior permit included an industrial/commercial facilities program that, among other things, required inspections of all industrial and commercial facilities under the permittee's jurisdiction that could contribute a significant pollutant load to the MS4. At a minimum, the following commercial and industrial facilities were required to be inspected:

1. Commercial facilities:
    - Automobile repair, maintenance, fueling, or cleaning
    - Airplane repair, maintenance, fueling, or cleaning
    - Boat repair, maintenance, fueling, or cleaning
    - Equipment repair, maintenance, fueling, or cleaning
    - Automobile and other vehicle body repair or painting
    - Mobile automobile or other vehicle washing (base of operations)
    - Automobile (or other vehicle) parking lots and storage facilities
    - Retail or wholesale fueling
    - Pest control services (base of operations)
    - Eating or drinking establishments

[1073] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 575-576 (Order R9-2004-0001, Section D.1.).

- Mobile carpet, drape or furniture cleaning (base of operations)
- Cement mixing or cutting (base of operations)
- Masonry (base of operations)
- Painting and coating (base of operations)
- Landscaping (base of operations)
- Nurseries and greenhouses
- Golf courses, parks and other recreational areas/facilities
- Cemeteries
- Pool and fountain cleaning (base of operations)
- Port-a-potty servicing (base of operations)

2. Industrial Sites/Sources:
    - Industrial Facilities, as defined at 40 Code of Federal Regulations section 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
    - Operating and closed landfills;
    - Facilities subject to Superfund Amendments and Reauthorization Act (SARA) Title III, also known as the Emergency Planning and Community Right-to-Know Act (EPCRA); and
    - Hazardous waste treatment, disposal, storage and recovery facilities.
3. All other facilities tributary to a CWA section 303(d) impaired water body, where a facility generates pollutants for which the water body segment is impaired.
4. All other facilities that the permittee determines may contribute a significant pollutant load to the MS4.[1074]

Each permittee was required to designate a set of minimum BMP requirements for the commercial and industrial facilities in its jurisdiction to reduce the discharge of pollutants in runoff to the MEP.[1075] In addition, based on the threat to water quality, the permittees were required to establish priorities for inspections of industrial and commercial facilities and to inspect the facilities according to the permit's schedule with high priority facilities being inspected annually, and low priority facilities inspected once during the five-year term of the

[1074] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-590 (Order R9-2004-0001, Section H.2.a., b.).

[1075] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 590 (Order R9-2004-0001, Section H.2.c.).

permit.[1076] In addition to ensuring implementation of minimum BMPs, inspections "shall include, but not be limited to" the following:

- Assessment of compliance with local ordinances and permits related to stormwater runoff, including the implementation and maintenance of designated minimum BMPs.
- Assessment of BMP effectiveness.
- Visual observations for non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff.
- Education and outreach on stormwater pollution prevention.[1077]

Inspections of industrial facilities also required the permittees to check for coverage under the General Industrial Permit.[1078] If the Regional Board conducted an inspection of an industrial facility during a particular year, however, the requirement for the responsible permittee to inspect the site during that same year was deemed satisfied.[1079]

Based upon facility inspection findings, each permittee was required to implement all follow-up actions necessary to comply with the prior permit, and enforce local ordinances as necessary to comply with the prior permit.[1080]

The Findings of the prior permit explain the rationale for these requirements as follows:

> As operators of the MS4s, the Permittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or exceedances of water quality objectives.[1081]

The Findings also state the following:

> In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial . . . site discharges, discharges of runoff from industrial . . .

[1076] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 590-591 (Order R9-2004-0001, Section H.2.d.1., 2.).

[1077] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 591 (Order R9-2004-0001, Sections H.2.d.3., 4.).

[1078] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 591 (Order R9-2004-0001, Section H.2.d.3.).

[1079] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592 (Order R9-2004-0001, Section H.2.d.5.).

[1080] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592 (Order R9-2004-0001, Sections H.2.d.6., e.).

[1081] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 569 (Order R9-2004-0001, Finding 20).

sites are subject to dual (state and local) storm water regulation. Under this dual system, the SDRWQCB is responsible for enforcing the . . . General Industrial Activities Storm Water Permit, . . . , and each municipal Permittee is responsible for enforcing its local permits, plans, and ordinances, which may require the implementation of additional BMPs than required under the statewide general permits.[1082]

b. Section F.3.b.4.a.ii. of the test claim permit does not impose a new program or higher level of service.

i. Section F.3.b.4.a.ii. of the test claim permit requires that inspections of industrial and commercial sites include a review of facility monitoring data results, if the site monitors its runoff.

The claimants pled Section F.3.b.4.a.ii. of the test claim permit, which requires as part of the industrial and commercial site inspection program, that such "[i]nspections must include . . . a review of facility monitoring data results, if the site monitors its runoff."[1083] The Fact Sheet explains that "monitoring data can provide the inspector pertinent information that can be used during the visual inspection of the facility (e.g., BMPs implemented, maintenance records for BMPs, pollutants in storm water runoff). The Copermittees' inspectors have the discretion to determine the depth and detail of the review and use of the information in conducting the inspection."[1084]

The test claim permit refers to the same types of commercial and industrial facilities listed in the prior permit that require inspection. However, the test claim permit adds botanical and zoological gardens and exhibits, marinas, building material retailers and storage, animal boarding facilities and kennels, mobile pet services, power washing services, and plumbing services, to the list of sites requiring inspection and a review of their monitoring data results. The Fact Sheet explains that "[t]hese commercial or industrial sites and sources have been identified by the Copermittees and/or the San Diego Water Board as facilities that may contribute a significant pollutant load to the MS4."[1085] In addition, the mobile businesses and service industries, where the business travels to the customer to perform the service rather than the customer traveling to the business to receive the service (i.e. mobile pet services, power washing services, and

[1082] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 570 (Order R9-2004-0001, Finding 21).

[1083] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 243 (test claim permit, Section F.3.b.4.a.ii.).

[1084] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 521 (Fact Sheet/Technical Report).

[1085] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 519 (Fact Sheet/Technical Report).

plumbing services) "produce waste streams that could potentially impact water quality if appropriate BMPs are not implemented."[1086]

The test claim permit also clarifies that "eating or drinking establishments" includes retail establishments with food markets, and that all other commercial or industrial sites within or directly adjacent to or discharging directly to receiving waters within environmentally sensitive areas or that generate pollutants tributary to and within the same hydrologic subarea as an observed exceedance of an action level require inspection and review of the monitoring data results if the site monitors its runoff.[1087]

Like the prior permit, the inspections, "at a minimum" must be inspected each year if the site is determined to pose a high threat to water quality, or at least once during a five year period.[1088] In addition, like the prior permit, if the Regional Board has conducted an inspection of an industrial site during a particular year, the requirement for the responsible permittee to inspect this facility during the same year is deemed satisfied.[1089]

The claimants do not seek reimbursement for the total cost of inspecting the newly identified facilities, but only for the costs to review the monitoring data results if the industrial or commercial site monitors its runoff, and the associated costs to train inspectors.[1090]

ii. Section F.3.b.4.a.ii. of the test claim permit clarifies the duties under existing law, but does not impose a new requirement on the claimants and, thus, section F.3.b.4.a.ii. does not constitute a new program or higher level of service.

The claimants argue that the requirement to review monitoring data results of industrial and commercial facilities is a new state-mandated activity that has been shifted by the state to local governments.[1091] The claimants rely on the Supreme Court's decision in *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749. That case addressed the Commission's decision in *Municipal Stormwater and Urban Runoff Discharges*, 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21, where the Commission found that the NPDES permit issued by the Los Angeles Regional Water Control Board imposed *new* state-mandated requirements on the local agency permittees to inspect restaurants, automotive service facilities, retail gasoline outlets, and

[1086] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 520 (Fact Sheet/Technical Report).

[1087] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 239-241 (test claim permit, Section F.3.b.1.).

[1088] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 243 (test claim permit, Section F.3.b.4.b.).

[1089] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 244 (test claim permit, Section F.3.b.4.e.).

[1090] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 63-65 (Test Claim narrative).

[1091] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 64 (Test Claim narrative).

automotive dealerships.[1092] The Supreme Court agreed, finding that the Regional Board had primary responsibility for inspecting industrial and commercial facilities under state and federal law and shifted that responsibility to the permittees.[1093]

However, unlike the facts in the *Department of Finance* case, inspection of the industrial and commercial facilities in this case, including all activities necessary to assess compliance with ordinances and water quality standards, is *not* new, but was imposed by the prior permit.

Reimbursement under article XIII B, section 6 requires that all elements be met, including that any increased costs result from a new program or higher level of service mandated by the state on the local agency.[1094] To determine whether a test claim statute imposes a new program or higher level of service, the required activities imposed by the state must be *new.*[1095] Alternatively, a new program or higher level of service can occur if the state transfers to local agencies complete or partial financial responsibility for a required program for which the state previously had complete or partial financial responsibility.[1096] To determine if a mandated activity or shift in costs from the state is new, the courts have used the ordinary meaning of the word "new" and have found that if local government was not required to perform the activity or incur the cost shifted from the state at the time the test claim statute or regulation became effective (which, in effect, requires a comparison of the law immediately before the effective date of the test claim statute or regulation), the mandated activity or shifted cost is new.[1097]

Although the prior permit did not expressly state that reviewing facility monitoring data results if the site monitors its runoff was required as part of the inspection, it did expressly require the claimants to inspect all industrial and commercial sites, including all other facilities not expressly identified that are tributary to a section 303(d) impaired water body, where a facility generates pollutants for which the water body segment is impaired, and all other facilities that the permittee

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[1092] The Commission ultimately denied reimbursement for the inspection activities because the claimants had adequate fee authority to pay for such costs pursuant to Government Code section 17556(d) and, therefore, there were no costs mandated by the state. The Second District Court of Appeal, in *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 562-565, upheld the Commission's Decision.

[1093] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 770-771.

[1094] *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835.

[1095] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 874-875 (reaffirming the test set out in *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56).

[1096] California Constitution, article XIII B, section 6(c).

[1097] *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835; *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 91; *City of San Jose v. State* (1996) 45 Cal.App.4th 1802, 1812; *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 878; see also page 869, footnotes 6 and 7, and page 870, footnote 9 (where the court describes in detail the state of the law immediately before the enactment of the 1993 test claim statutes); and *Department of Finance. v. Commission State Mandates* (2021) 59 Cal.App.5th 546, 558.

determines may contribute a significant pollutant load to the MS4.[1098] "All other facilities" would include botanical and zoological gardens and exhibits, marinas, building material retailers and storage, animal boarding facilities and kennels, mobile pet services, power washing services, and plumbing services, which were identified as contributing a significant pollutant load to the MS4,"[1099] and "produce waste streams that could potentially impact water quality if appropriate BMPs are not implemented."[1100] Moreover, the inspections under the prior permit had to *include "but not be limited to"* an assessment of the site's compliance with local ordinances and permits related to stormwater runoff, including the implementation and maintenance of designated minimum BMPs, and visual observations for non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff.[1101] The prior permit also required the permittee to carry out all inspections and monitoring, and to enforce local stormwater ordinances on industrial and commercial facilities "as necessary to maintain compliance with this Order," including the permit's receiving water limitations and prohibitions banning any discharge of pollutant and non-stormwater discharges into the MS4 that would cause or contribute to the violation of water quality standards.[1102]

It is a general rule of statutory construction that "use of the language 'including, but not limited to' in the statutory definition is a phrase of enlargement rather than limitation."[1103] In this respect, the claimants' inspections required by the prior permit were not limited to visual observations of the site, but had to include whatever was necessary to ensure that discharges into the MS4 were complying with the claimants' local ordinances enforcing the prohibitions and receiving water limitations of the permit, and ensuring water quality standards were met. Otherwise follow-up action was necessary to ensure that the facility met water quality standards.[1104]

If anything, the requirement to review monitoring data results if the site monitors its runoff simply clarifies the existing legal requirement to assess a site's compliance with local ordinances

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[1098] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-590 (Order R9-2004-0001, Section H.2.a., b.).

[1099] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 519 (Fact Sheet/Technical Report).

[1100] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 520 (Fact Sheet/Technical Report).

[1101] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-591 (Order R9-2004-0001, Sections H.2.a., b., d.).

[1102] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 574-575, 592 (Order R9-2004-0001, Prohibitions and Receiving Water Limitations; Industrial/Commercial Inspections, Section H.2.e.).

[1103] *People v. Arias* (2008) 45 Cal.4th 169, 176.

[1104] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592 (Order R9-2004-0001, Section H.2.d.6. and e.).

and water quality standards. The courts have recognized that changes in statutory or regulatory language can be intended to clarify the law, rather than change it.

> We assume the Legislature amends a statute for a purpose, but that purpose need not necessarily be to change the law. [Citation.] Our consideration of the surrounding circumstances can indicate that the Legislature made ... changes in statutory language in an effort only to clarify a statute's true meaning.[1105]

Moreover, there has been no shift of costs from the state to the claimants. As indicated in both the prior permit and the test claim permit, the claimants are required to also inspect industrial facilities that are subject to the State's General Industrial Permit.[1106] The State Water Board has issued a statewide General Industrial Permit (State Water Board Order 97-03 DWQ, NPDES No. CAS000001), which is intended to cover all new or existing stormwater discharges and authorized non-stormwater discharges from industrial facilities required by federal regulations to obtain a permit.[1107] To be authorized to discharge stormwater under the General Permit, industrial facilities are required to file a Notice of Intent with the State Water Board.[1108] The statewide General Industrial Permit does *not*, however, "preempt or supersede the authority of local agencies to prohibit, restrict, or control storm water discharges and non-storm water discharges to storm drain systems or other water-courses within their jurisdictions as allowed by State and Federal law."[1109] Thus, as indicated in the Fact Sheet for the test claim permit, discharges of runoff from industrial sites are subject to stormwater regulation under both state and local systems to ensure the most effective oversight. The claimants enforce their local permits, plans, and ordinances, and the Water Boards enforce the General Industrial Permit.[1110] In addition, the permit states that if the Regional Board has conducted an inspection of an

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[1105] *Western Security Bank v. Superior Court* (1997) 15 Cal.4th 232, 243.

[1106] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 589-590 (Order R9-2004-0001, Section H.2.a., b.); pages 243-244, (test claim permit, Section F.3.b.4.).

[1107] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 191 (test claim permit, Finding D.3.); Exhibit X (42), State Water Resources Control Board, General Industrial Permit, Order 97-03-DWQ, page 4, https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/induspmt.pdf (accessed on January 26, 2022).

[1108] Exhibit X (42), State Water Resources Control Board, General Industrial Permit, Order 97-03-DWQ, pages 1, 4, 36-39, https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/induspmt.pdf (accessed on January 26, 2022).

[1109] Exhibit X (42), State Water Resources Control Board, General Industrial Permit, Order 97-03-DWQ, page 17, https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/induspmt.pdf (accessed on January 26, 2022).

[1110] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 441 (Fact Sheet/Technical Report, Finding D.3.a.).

industrial site during a particular year, the requirement for the responsible claimant to inspect this facility during the same year is deemed satisfied.[1111]

Accordingly, the Commission finds that reviewing monitoring data results if the site monitors its runoff is not a new requirement imposed or shifted by the state, and does not constitute a new program or higher level of service.

9. Sections G.1.-5. of the Test Claim Permit, Addressing the Watershed Workplan, Impose Some State-Mandated New Programs or Higher Level of Service.

The claimants pled Section G.1.-5. of the test claim permit regarding the development and implementation of the Watershed Water Quality Workplan to identify, prioritize, address, and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed.[1112] The claimants specifically allege that Sections G.1.-5. of the test claim permit impose a reimbursable state-mandated program.[1113]

These sections comprise the majority of the Watershed Water Quality Workplan (watershed workplan), a collaborative effort that requires copermittees in a watershed management area to develop a workplan to assess and prioritize the water quality problems within the watershed's receiving waters, identify sources of the highest priority water quality problems, develop a watershed-wide BMP implementation strategy to abate the highest priority water quality problems, and a monitoring strategy to evaluate BMP effectiveness and changing water quality prioritization in the watershed management area.[1114] A watershed workplan is not new. Under the prior permit, the claimants were required to collaborate with other watershed permittees to develop and implement a watershed stormwater management plan (watershed SWMP).[1115]

As described below, the Commission finds that Sections G.1.d, G.3., G.4., and G.5. of the test claim permit mandate a new program or higher level of service for the following activities:

- The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs.[1116]

[1111] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 244 (test claim permit, Section F.3.b.4.e.).

[1112] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 68-70 (Test Claim narrative).

[1113] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 68-72 (Test Claim narrative), 255-257 (test claim permit, Sections G.1.-G.5.). The claimants did not plead Section G.6., regarding the pyrethroid pollutant reduction program and, thus, this Decision does not address Section G.6.

[1114] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 255-257 (test claim permit, Sections G.1.-G.5.).

[1115] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Sections K.1., 2.).

[1116] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 255 (test claim permit, Section G.1.d.).

- The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4.[1117]
- The watershed workplan must include the identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan.[1118]
- The annual watershed review meetings shall be open to the public and adequately noticed.[1119]
- Each permittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan.[1120]

All other activities required by Sections G.1. through G.5. are not new and, thus, do not impose a new program or higher level of service.

a. Background

i. Federal law requires permittees to propose a management program to reduce pollutants in discharges to the maximum extent practicable (MEP), which must involve public participation, and may impose controls on a systemwide basis, a watershed basis, or a jurisdiction basis necessary to meet water quality standards.

Under federal law, NPDES permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[1121]

Federal regulations require that the application for an NPDES permit for large and medium MS4 dischargers must describe a proposed management program that covers the duration of the permit to be considered by the Regional Board when developing permit conditions to reduce pollutants in discharges to the MEP. The proposed management program shall include a comprehensive planning process which involves public participation and where necessary, intergovernmental coordination, to reduce the discharge of pollutants to the MEP using management practices, control techniques and system, design and engineering methods, and

[1117] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.3.).

[1118] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.4.).

[1119] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1120] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1121] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

other appropriate conditions. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls.[1122]

ii. The prior permit required the permittees to mitigate highest priority water quality issues; develop and implement a watershed Storm Water Management Plan; participate in watershed management efforts; and meet annually to review the watershed Storm Water Management Plan.

Section E. of the prior permit required a watershed Storm Water Management Plan (SWMP) for the Upper Santa Margarita Watershed.[1123] The watershed SWMP had to consist of a written account of all area-wide and watershed-based programs and activities conducted by the permittees including the programs and items required in sections K.l.-K.4. of the prior permit.[1124]

Sections K.l.-K.4. of the prior permit required each permittee to do the following:

1. Collaborate with the other permittees to identify, address, and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed.[1125]
2. Collaborate with the other permittees to develop and implement a watershed SWMP.[1126]
3. Participate in watershed management efforts to address stormwater quality issues within the entire watershed, including efforts conducted by other entities in the watershed, such as San Diego County, U.S. Marine Corps Base Camp Pendleton, Native American tribes, and other state, federal, and local agencies.[1127]
4. Meet with all permittees, at least once a year, to review and assess available water quality data, from the MRP and other reliable sources, to assess program effectiveness, and to review and update the watershed SWMP.[1128]

The watershed SWMP described in Section K.2. of the prior permit had to contain the following:

- An accurate map of the Upper Santa Margarita Watershed that identifies all receiving waters, all CWA section 303(d) impaired receiving waters, existing and planned land

[1122] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv).

[1123] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 575 (Order R9-2004-0001, Section E.).

[1124] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 575 (Order R9-2004-0001, Section E.).

[1125] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.1.).

[1126] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.).

[1127] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Section K.3.).

[1128] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Section K.4.).

uses, MS4s, major highways, jurisdictional boundaries, industrial and commercial facilities, municipal sites, and residential areas.[1129]

- A description of any interagency agreement, or other efforts, with non-permittee owners of the MS4, such as Caltrans, Native American tribes, and school districts, to control the contribution of pollutants from one portion of the shared MS4 to another portion.[1130]
- An assessment of the water quality of all receiving waters based upon existing water quality data and results from the receiving waters and illicit discharge monitoring programs in the MRP.[1131]
- An identification and prioritization of major water quality problems caused or contributed to by MS4 discharges and the likely sources of the problems.[1132]
- A time schedule for implementation of short and long-term recommended activities needed to address the highest priority water quality problem(s).[1133]
- A watershed-based education program focusing on water quality issues specific to the Santa Margarita watershed.[1134]
- A mechanism to facilitate collaborative watershed-based land use planning with neighboring local governments.[1135]
- A description of any other urban runoff management programs or activities being conducted to address water quality issues.[1136]

[1129] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.a.).

[1130] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.b.).

[1131] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.c.).

[1132] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.d.).

[1133] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 595-596 (Order R9-2004-0001, Section K.2.e.).

[1134] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Section K.2.f.).

[1135] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Section K.2.g.).

[1136] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Section K.2.h.).

- A description of the permittees' responsibilities for implementing the watershed SWMP.[1137]
- The expenditures and funding sources for the area-wide and watershed-based activities and programs.[1138]
- Standardized reporting formats developed by the permittees.[1139]
- Short-term strategy (completed during the life of the 2004 permit) for assessing the effectiveness of the activities and programs implemented as part of the watershed SWMP. The short-term strategy shall also discuss the role of monitoring data collected by the permittees in substantiating or refining the assessment. [1140]
- Long-term strategy (completed beyond the life of the 2004 permit) for assessing the effectiveness of the watershed SWMP in achieving improvements in receiving water quality impacted by urban runoff discharges. Methods used for assessing effectiveness shall include the following or their equivalent: surveys, pollutant loading estimations, receiving water quality monitoring, and achievement of measurable goals. The long-term strategy shall also discuss the role of monitoring data in substantiating or refining the assessment.[1141]

In addition, the 2004 MRP required the permittees to participate and coordinate with federal, state, and local agencies and other dischargers in the Santa Margarita Watershed in development and implementation of a regional watershed monitoring program.[1142]

The 2004 Fact Sheet explains the watershed SWMP as follows:

> The requirements in Section K of the Order are necessary for the Permittees to identify and mitigate sources of pollutants in urban runoff from the entire watershed that impact common downstream receiving waters. This is the key to addressing the impacts from areas and activities within the Permittees' jurisdiction on downstream receiving waters and their beneficial uses (i.e. Camp Pendleton's drinking water supply) as well as addressing pollutant sources in the watershed which are outside the Permittees' jurisdiction. **Finding No. 20** emphasizes the

[1137] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Section K.2.i.).

[1138] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Section K.2.j.).

[1139] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Section K.2.k.).

[1140] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Section K.2.l.).

[1141] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Section K.2.m.).

[1142] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section A.II., page 8.

need for watershed-based activities and collaboration among dischargers in a common watershed. It states, "As operators of the MS4s, the Permittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or exceedances of receiving water quality objectives." Permittees could be held responsible for discharges of pollutants from sources outside of their jurisdiction if they cause or contribute to exceedances of water quality objectives, therefore, it is necessary for Permittees to make efforts to address all sources of pollutants in the watershed.[1143]

b. Sections G.1.d., G.3., G.4., and G.5. of the test claim permit mandate a new program of higher level of service by requiring the claimants to perform additional watershed activities.

i. Sections G.1.-.5. of the test claim permit impose some new requirements on the claimants.

The approach under the prior permit, however, did not result in improvements to water quality. The Fact Sheet to the test claim permit states the following:

> **Section G** requires Copermittees to continue implementation of their watershed runoff management program (WRMP), however the implementation approach has changed. Order No. R9-2004-001 required a Watershed SWMP that included a collaborative strategy to abate the sources and reduce the discharges causing high priority water quality problems. This strategy was to guide each watershed Copermittee's selection and implementation of Watershed Activities, so that the activities selected and implemented would remove that pollutant contribution responsible for the identified high priority water quality problem. Outcomes of these requirements were not able to demonstrate improvements to water quality.
>
> Revised language in Order No. R9-2010-0016 attempts to focus each watershed Copermittee's efforts and resources on addressing the highest water quality problems in the watershed by focusing attention on the health of the receiving water body and the most efficient use of the watershed Copermittee's time and resources. Order No. R9-2010-0016 requires the watershed Copermittees to develop and follow a workplan approach towards assessing receiving water body conditions, prioritizing the highest priority water quality problems, implementing effective BMPs, and measuring water quality improvement in the receiving water.[1144]

Thus, Sections G.1.-5. of the test claim permit impose a few new requirements on the claimants.

[1143] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, page 70, emphasis in original.

[1144] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 531-532 (Fact Sheet/Technical Report).

Sections G.1.-5. of the test claim permit, like the prior permit, require a watershed SWMP, now renamed a watershed water quality workplan (watershed workplan).[1145] Section G. requires that each copermittee to "collaborate with other copermittees to develop and implement a watershed water quality workplan (watershed workplan) to identify, prioritize, address, and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed."[1146]

The watershed workplan must include, at a minimum, the following components identified in Section G.1.:

- Characterize the receiving water quality in the watershed including an assessment and analysis of regularly collected water quality data, reports, monitoring, and analysis generated by the Receiving Waters Monitoring and Reporting Program, as well as applicable information available from other public and private organizations.[1147]
- An updated watershed map.[1148]
- Identify and prioritize water quality problem(s) in the watershed's receiving waters in terms of constituents by location giving consideration to TMDLs; CWA section 303(d) listed receiving waters; waters with persistent violations of water quality standards, toxicity, or other impacts to beneficial uses, and other pertinent conditions.[1149]
- Identify the likely sources, pollutant discharges and/or other factors causing the highest water quality problem(s) within the watershed. Determining the sources must include, but not be limited to: information from the construction, industrial/commercial, municipal, and residential source identification programs within the Jurisdictional Runoff Management Program (JRMP); water quality monitoring data collected as part of the Receiving Water Monitoring and Reporting Program; and additional focused water quality monitoring to identify specific sources within the watershed.[1150]
- Develop a watershed BMP implementation strategy to attain receiving water quality objectives in the identified highest priority water quality problem(s) and locations, which must include a schedule for implementation of the BMPs to abate specific

[1145] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 424 (Fact Sheet/Technical Report, Finding D.1.d.).

[1146] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 439 (test claim permit, Section G.).

[1147] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 439 (test claim permit, Section G.1.a.).

[1148] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 439 (test claim permit, Section G.1.a.).

[1149] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 439 (test claim permit, Section G.1.b.).

[1150] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 439 (test claim permit, Section G.1.c.).

receiving water quality problems, a list of criteria to be used to evaluate BMP effectiveness, and a map of any implemented and/or proposed BMPs.[1151]

- Develop a strategy to monitor improvements in receiving water quality directly resulting from implementation of the BMPs described in the watershed workplan including reviewing the necessary data to report on the measured pollutant reduction that results from proper BMP implementation. The monitoring must, at a minimum, be conducted in the receiving water to demonstrate reduction in pollutant concentrations and progression towards attainment of receiving water quality objectives.[1152]
- Establish a schedule for development and implementation of the watershed strategy outlined in the workplan. The schedule must, at a minimum, include forecasted dates of planned actions to address the watershed workplan components listed above[1153] and dates for watershed review meetings through the remaining portion of this permit cycle.[1154]

Section G.2. requires that the watershed workplan be implemented within 90 days of submittal unless otherwise directed by the Regional Board.[1155]

Most of these requirements are *not* new. For example, Sections G. and G.1.a. require the claimants to collaborate with other copermittees to develop and implement a watershed workplan to identify, prioritize, address, and mitigate the highest priority water quality issues/pollutants in the watershed. The workplan must characterize the receiving water quality in the watershed including an assessment and analysis of regularly collected water quality data, reports, monitoring, and analysis generated by the receiving waters monitoring and reporting program, as well as applicable information available from other public and private organizations, and must include an updated map. The prior permit, in Sections K.1. and K.2., required the same activities. The claimants were required to collaborate with the other copermittees to identify, address, and mitigate the highest priority water quality issues/pollutants in the in the Upper Santa

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[1151] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 439 (test claim permit, Section G.1.d.).

[1152] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 439-440 (test claim permit, Section G.1.e.).

[1153] The language in Section G.1.f. states, "The schedule must, at a minimum, include forecasted dates of planned actions to address Provisions E.2(a) through E.2(e) and dates for watershed review meetings through the remaining portion of this Permit cycle." The phrase "Provisions E.2(a) through E.2(e)" must be an error as section E. includes only subdivisions a. through c. and addresses local ordinances and section G.2. has no subdivisions. Thus, the only reading that makes sense and must have been the intended language is "Provisions G.1.a. through G.1.e.", which includes all the watershed workplan components listed before Section G.1.f.

[1154] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 440 (test claim permit, Section G.1.f.).

[1155] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 440 (test claim permit, Section G.2.).

Margarita Watershed and implement a watershed workplan.[1156] Section K.2.c. required the workplan to include an assessment of the water quality of all receiving waters based upon "existing water quality data" and "results from the Receiving Waters and Illicit Discharge Monitoring Programs described in the MRP."[1157] The claimants contend that the requirement in Section G.1.a. "to not only review monitoring data collected under the permit, but also data from 'applicable information available from other public and private organizations'" is a new, different, and more demanding requirement.[1158] However, the phrase "existing water quality data" does not have any limiting language and thus, includes relevant data from any source, including public or private organizations. The addition of "public and private organizations" provides additional detail to the requirement, but it does not make it new nor a higher level of service. In addition, the prior permit in Section K.2.a. required the workplan to contain "an *accurate* map of the Upper Santa Margarita Watershed that identifies all receiving waters, all CWA section 303(d) impaired receiving waters, existing and planned land uses, MS4s, major highways, jurisdictional boundaries, industrial and commercial facilities, municipal sites, and residential areas.[1159] The test claim permit simply requires an "updated" watershed map, but since a map must be *updated* to be *accurate,* the requirement in Section G.1.a. for the map has not changed. Therefore, the requirements in Sections G. and G.1.a. are not new and do not impose a new program or higher level of service.

The claimants also contend that the requirement in Section G.1.b. to "identify and prioritize water quality problem(s) in terms of constituents by locations, in the watershed's receiving waters" is a new, different, and more demanding requirement.[1160] The prior permit required "[a]n identification and prioritization of major water quality problems in the watershed caused or contributed to by MS4 discharges . . ."[1161] As set forth above, the 2004 Fact Sheet explained that the requirements "are necessary for the Permittees to *identify and mitigate* sources of pollutants in urban runoff from the entire watershed that impact common downstream *receiving waters*."[1162] The 2010 Fact Sheet emphasizes the importance of a watershed workplan that implements "a collective watershed strategy to assess and prioritize the water quality problems, and *identify,*

[1156] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Sections K.1., and K.2.).

[1157] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.d.).

[1158] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 70 (Test Claim narrative).

[1159] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.a.).

[1160] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 70 (Test Claim narrative).

[1161] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.d.).

[1162] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, page 70, emphasis in original.

address, and mitigate the highest priority water quality issues/pollutants within the Upper Santa Margarita watershed's *receiving waters*."[1163] Thus, the requirement to identify and prioritize water quality problems has not changed and nor has its purpose changed. The change in the requirement is the addition of the phrase "in terms of constituents by locations" which is how the claimants are to identify the water quality problems. However, this requirement is not new and does not impose a new program or higher level of service. The prior permit MRP required the claimants to implement the MRP to achieve certain objectives including:

> 3. Assess the chemical, physical, and biological impacts of receiving waters resulting from urban runoff;
>
> 4. Characterize urban runoff discharges;
>
> 5. Identify sources of specific pollutants . . .[1164]

Specifically, receiving waters monitoring under the prior permit required the claimants "to address on-going, site-specific needs" through water sampling at stations for pollutants and toxicity with follow-up analyses using Toxicity Identification Evaluations (TIEs) to determine the cause of toxicity and Toxicity Reduction Evaluations (TREs) to identify sources and implement management actions.[1165] The claimants were also required to implement tributary monitoring through station sampling to help identify sources of pollutants.[1166] Each of these samplings would yield a quantified water quality problem in terms of constituent by location.

The objectives stated in the prior permit's MRP were echoed in the test claim permit's MRP.[1167] In addition, the MRP requires the claimants to design receiving waters monitoring to meet the stated goals.[1168] The test claim permit's MRP, like the prior MRP, requires water sampling at stations for pollutants and toxicity and also requires stream assessment monitoring. Both require follow-up analyses using TIEs to determine the cause of toxicity and TREs to identify the sources.[1169] Again, these analyses will yield quantified results by constituent and location. Thus, the requirement in Section G.1.b. to identify and prioritize water quality problem(s) in terms of constituents by locations is *not* a new requirement or a higher level of service.

The claimants further contend that the requirement in Section G.1.c. that the workplan "identify likely sources, pollutant discharges and/or other factors causing the highest water quality

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[1163] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 532 (Fact Sheet/Technical Report, Section G.1), emphasis added.

[1164] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, page 2.

[1165] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, pages 2-7.

[1166] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, pages 7-8.

[1167] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 298 (test claim permit, Attachment E.).

[1168] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 299 (test claim permit, Attachment E.).

[1169] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 299- 305 (test claim permit, Attachment E.).

problem(s) within the watershed" where identification efforts must include "additional focused water quality monitoring to identify specific sources within the watershed" is also a new, different, and more demanding requirement.[1170] However, the prior permit required "[a]n identification and prioritization of major water quality problems in the watershed caused or contributed to by MS4 discharges and the likely source(s) of the problem(s)."[1171] Thus, the requirement to identify likely sources of the water quality problems has not changed. While the prior permit provided no additional language on the steps to be taken to fulfill the requirement, the test claim permit adds that the efforts must include "additional focused water quality monitoring to identify specific sources within the watershed." The prior permit, however, prohibited discharges from MS4s that cause or contribute to the violation of water quality standards.[1172] As part of Receiving Water Limitations, the claimants were required to assure compliance with the prohibition by providing notice and a report regarding BMPs to the Regional Board upon a determination by either the claimants or the Regional Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard.[1173] Such a determination would require sufficiently focused water quality monitoring to identify the specific source of the exceedance. The test claim permit includes the same prohibition and the same procedure upon the determination of an exceedance.[1174] The requirement to perform additional focused water quality monitoring to identify specific sources within the watershed is part of a pre-existing duty of the claimants to comply with the prohibition against discharges from MS4s that cause or contribute to the violation of water quality standards and is not a new requirement or a higher level of service. Thus, the requirement in Section G.1.c. is *not* new and does not impose a new program or higher level of service.

The test claim permit in Sections G.1.d., G.1.e., and G.1.f. also require the claimants to develop a watershed BMP implementation strategy as part of the workplan to attain receiving water quality objectives and to include a schedule for implementation of the BMPs and a list of criteria to be used to evaluate BMP effectiveness;[1175] develop a strategy to monitor improvements in receiving

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[1170] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 70 (Test Claim narrative).

[1171] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.d.).

[1172] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.1.); see also, Basin Plan Prohibitions ("The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited."), page 598 (Order R9-2004-0001, Attachment A., Section 5.).

[1173] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.2.a.)

[1174] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 199-200 (test claim permit, Section A.3.).

[1175] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 439 (test claim permit, Section G.1.d.).

water quality directly resulting from implementation of the BMPs including reviewing the necessary data to report on the measured pollutant reduction;[1176] and establish a schedule for development and implementation of the watershed strategy outlined in the workplan.[1177] These requirements are *not* new and do not impose a new program or higher level of service. The prior permit, in Sections K.2.l. and m., required the claimants to include and implement short and long-term strategies to assess the effectiveness of activities, programs, and the Watershed SWMP in improving receiving water quality, including the use of monitoring data collected by the permittees in substantiating or refining the assessment.[1178] And the prior permit's MRP required the claimants to participate and coordinate with federal, state, and local agencies and other dischargers in the Santa Margarita Watershed in development and implementation of a regional watershed monitoring program.[1179] While the test claim permit clarified that the implementation strategies include the development of BMPs, that requirement is not new. The claimants have long been required "to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."[1180] Federal regulations define "best management practices" as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.[1181] And that is exactly what the prior permit required; implementation of strategies to assess the effectiveness of activities and programs. Section K.2.e. of the prior permit also required the claimants to have a time schedule for implementation of short and long-term recommended activities needed to address the highest priority water quality problem(s).[1182] Thus, these requirements in Sections G.1.d., G.1.e., and G.1.f. are *not* new and do not impose a new program or higher level of service.

However, the following requirement imposed in Section G.1.d., was not required by the prior permit and is new:

[1176] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 439-440 (test claim permit, Section G.1.e.).

[1177] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 440 (test claim permit, Section G.1.f.).

[1178] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 596 (Order R9-2004-0001, Sections K.2.l. and m.).

[1179] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section A.II., page 8.

[1180] United States Code, title 33, section 1342(p)(3)(B)(iii) (Public Law 100-4).

[1181] Code of Federal Regulations, title 40, section 122.2.

[1182] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 595-596 (Order R9-2004-0001, Section K.2.e.).

- The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs.[1183]

Section G.2. requires that the watershed workplan be implemented within 90 days of submittal unless otherwise directed by the Regional Board.[1184] The prior permit did not include deadline to start implementation, however, the claimants were still required to implement a watershed SWMP.[1185] Imposing a deadline on the claimants does not result in any newly required activities.

Section G.3. requires the watershed copermittees to hold frequent regularly scheduled meetings; pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4; and, as appropriate, participate in watershed management efforts to address water quality issues within the entire Santa Margarita Watershed (such as the County of San Diego and U.S. Marine Corps Camp Pendleton).[1186]

Even though the prior permit did not expressly state that the watershed permittees are required to hold frequent regularly scheduled meetings, this activity is *not* new. The requirement to meet frequently encourages the claimants to continue to collaborate on watershed issues. However, under the prior permit, in Sections K.1. and K.2., the claimants were required to collaborate with other permittees to identify, address, and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed, and to develop and implement a Watershed SWMP for the Upper Santa Margarita Watershed. The SWMP had to include "a mechanism to facilitate collaborative "watershed-based" (i.e. natural resource-based) land use planning with neighboring local governments in the watershed" pursuant to Section K.2.g.[1187] Thus, the collaboration requirements under the prior permit mean that the claimants had to meet frequently on these issues.

The requirement in Section G.3. to pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4 is new. The prior permit, in Section K.2.b. required that the SWMP include "A description of any interagency agreement, or other efforts, with non-Permittee owners of the MS4 (such as Caltrans, Native American Tribes, and

[1183] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 255 (test claim permit, Section G.1.d).

[1184] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 440 (test claim permit, Section G.2.).

[1185] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.).

[1186] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 440 (test claim permit, Section G.3.).

[1187] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Sections K.1., K.2.).

school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4."[1188] However, it did not require the claimants to pursue such agreements. Thus, Section G.3. imposes the following new requirement:

- The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4.[1189]

The last requirement in Section G.3., to participate in watershed management efforts to address water quality issues within the entire Santa Margarita Watershed (such as the County of San Diego and U.S. Marine Corps Camp Pendleton) is *not* new and does not impose a new program or higher level of service. Section K.3. of the prior permit, required the claimants to "participate in watershed management efforts to address storm water quality issues within the entire Santa Margarita Watershed, including efforts conducted by other entities in the watershed, such as San Diego County, U.S. Marine Corps Base Camp Pendleton, Native American tribes, and other state, federal, and local agencies."

Section G.4. requires the watershed copermittees to implement a watershed-specific public participation mechanism within each watershed, which must include a minimum 30-day public review of and opportunity to comment on the watershed workplan prior to submittal to the Regional Board. The workplan must include a description of the public participation mechanisms to be used and identification of the persons or entities anticipated to be involved during the development and implementation of the watershed workplan.[1190] The Water Boards' comments suggest the public participation requirements in section G.4. are new as follows:

> To the extent the requirement to allow public participation prior to submittal of a draft Watershed workplan is new to the 2010 Permit, for purposes of responding to Claimant's challenge, it is important to note that the 2010 Permit does not *mandate* that Copermittees actually consider or respond to comments on the draft Watershed Workplan, [fn. omitted.] nor does it mandate holding a public meeting at that stage. By its term, it simply mandates that Copermittees make a draft available for public review and comment. To the extent allowing public comment on the draft Watershed Workplan is determined to be a new requirement, any costs associated with making a draft available for public comment, with no additional associated mandated requirements to respond to any public comments or modify the draft, would be *de minimis*.[1191]

[1188] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section K.2.b.).

[1189] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.3.).

[1190] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 440 (test claim permit, Section G.4.).

[1191] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 48.

However, Section E.3. of prior permit (which addresses both the individual and watershed SWMP) required that "[e]ach Permittee shall incorporate a mechanism for public participation during the development and implementation of its SWMP," and thus the public participation requirement for the watershed workplan is *not* new.[1192] Public participation was not defined in the prior permit, but as stated in the background, federal regulations require proposed management programs to "include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable . . . ."[1193], and the US EPA's MS4 Program Evaluation Guidance describes the public participation activities as requiring, at a minimum, notice and an opportunity to comment.[1194]

The requirement in Section G.4., that the workplan must include the identification the persons or entities anticipated to be involved during the development and implementation of the watershed workplan, however, was not required by prior law and is new. Thus, Section G.4. of the test claim permit imposes the following new requirement:

- The Watershed Workplan must include the identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan.[1195]

Section G.5. requires the claimants to review and update the watershed workplan annually to identify needed changes to the prioritized water quality problems identified in the plan and present all updates to the watershed workplan during an annual watershed review meeting. The watershed review meeting must be open to the public and adequately noticed.[1196] Section K.4. of the prior permit required the claimants to annually "meet to review and assess available water quality data (from the MRP and other reliable sources), assess program effectiveness, and to review and update the Watershed SWMP." Thus, the annual meeting is not new, and the costs to review and update the plan are likewise not new. However, the requirement in Section G.5. that the "annual watershed review meeting must be open to the public and adequately noticed" is new and is not required by the prior permit. The Water Boards suggest that the claimants were already subject to open meeting act requirements and thus, the test claim permit requirements of providing notice and opening the annual meeting to the public are not new.[1197] The Ralph M. Brown Act, which applies to cities, counties and other local governmental bodies, is not applicable to the watershed copermittees as they are not the body of a local agency created by the

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[1192] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 575 (Order R9-2004-0001, Section E.3.).

[1193] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv).

[1194] Exhibit X (13), EPA, MS4 Program Evaluation Guidance, January 2007, page 38.

[1195] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.4.).

[1196] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 441 (test claim permit, Section G.5.).

[1197] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 47.

governing body of a local agency or any other statutorily-created local body.[1198] The Bagley-Keene Open Meeting Act, which applies to state bodies, is also not applicable to the watershed copermittees. The Regional Board is subject to the Bagley-Keene Open Meeting Act but the watershed copermittees are not delegated the authority of the Regional Board, are not advisory to the Regional Board, and no member of the Regional Board is a watershed copermittee.[1199] Therefore, there is no pre-existing duty for the watershed copermittees to comply with open meeting act requirements. Accordingly, Section G.5. imposes the following new requirement:

- The annual watershed review meetings shall be open to the public and adequately noticed.[1200]

Finally, Section G.5. requires each claimant to also review and modify their jurisdictional programs and JRMP annual reports, as necessary, so that they are consistent with the updated watershed workplan.[1201] This was not required by the prior permit. Therefore, Section G.5. imposes the following new requirement:

- Each copermittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan.[1202]

ii. The new requirements imposed by sections G.1.d., G.3., G.4., and G.5. are mandated by the state.

As indicated above, Section G. imposes the following new requirements:

- The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs.[1203]
- The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4.[1204]

[1198] Government Code section 54952.

[1199] Government Code section 11121.

[1200] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1201] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1202] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1203] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 255 (test claim permit, Section G.1.d).

[1204] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.3.).

- The watershed workplan must include the identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan.[1205]
- The annual watershed review meetings shall be open to the public and adequately noticed.[1206]
- Each copermittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan.[1207]

The Commission finds that that these activities are mandated by the state.

The California Supreme Court, in *Department of Finance v. Commission on State Mandates*, identified the following test to determine whether certain conditions imposed by an NPDES stormwater permit issued by the Los Angeles Regional Water Board were mandated by the state or the federal government:

> If federal law compels the state to impose, or itself imposes, a requirement, that requirement is a federal mandate. On the other hand, if federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a "true choice," the requirement is not federally mandated.[1208]

The court recognized that the "federal CWA broadly directed the board to issue permits with conditions designed to reduce pollutant discharges to the maximum extent practicable. But the US EPA's regulations gave the board discretion to determine which specific controls were necessary to meet that standard. (40 C.F.R. § 122.26(d)(2)(iv).)"[1209] "[E]xcept where a regional board finds the conditions are the *only means* by which the [federal] 'maximum extent practicable' standard can be met, the State exercises a true choice by determining what controls are necessary to meet the standard."[1210] "That the San Diego Regional Board found the permit requirements were 'necessary' to meet the standard establishes only that the San Diego Regional Board exercised its discretion."[1211]

[1205] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.4.).

[1206] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1207] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1208] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 765.

[1209] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 767-768.

[1210] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682, citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 768, emphasis added.

[1211] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682.

Here, the federal regulations require the proposed management program to include "a comprehensive planning process which involves public participation and where necessary, intergovernmental coordination, to reduce the discharge of pollutants to the MEP using management practices, control techniques and system, design and engineering methods, and other appropriate conditions."[1212] But the decision on whether to require controls on a jurisdictional or watershed basis, and to determine which controls to require, is left to the discretion of the Regional Board. Federal law simply provides that "[p]roposed management programs *may* impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls, but does not require watershed planning.[1213] In 2017, the Third District Court of Appeal agreed with this conclusion, finding that permit requirements to develop and implement regional watershed management programs was mandated by the state as follows:

> The regulation relied upon by the State [40 C.F.R. § 122.26(d)(2)(iv), which states that "Proposed programs *may* impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls."] does not mandate any of these watershed and regional management requirements. It clearly leaves to the San Diego Regional Board the discretion to require controls on a systemwide, watershed, or jurisdictional basis. The State exercised that discretion in imposing the controls it imposed. They thus are state mandates subject to section 6.[1214]

The new activities are not required by federal law and there is no evidence in the record that these activities are the *only means* by which the federal MEP standard can be met. The Regional Board, therefore, exercised true discretion when requiring the claimants to perform the new activities bulleted above. Thus, the new activities required by Sections G.1.d., G.3., G.4., and G.5. are mandated by the state.

iii. The new activities mandated by sections G.1.d., G.3., G.4., and G.5. of the test claim permit constitute a new program or higher level of service.

The Commission also finds that the new state-mandated activities constitute a new program or higher level of service within the meaning of article XIII B, section 6. A new program or higher level of service is defined as one that carries out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state.[1215] Only one of these alternatives is required to establish a new program or higher level of service.[1216]

Here, the new requirements mandated by Sections G.1.d., G.3., G.4., and G.5. are expressly directed toward the local agency copermittees and are therefore uniquely imposed on local

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[1212] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv).

[1213] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv).

[1214] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 687.

[1215] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56.

[1216] *Carmel Valley Fire Protection Dist. v. State of California* (1987) 190 Cal.App.3d 521, 537; *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 557.

government. In addition, the new requirements provide a governmental service to the public by protecting the beneficial uses of receiving waters, and ensuring notice and public participation when assessing the water quality problems.

Accordingly, the new requirements in Sections G.1.d., G.3., G.4., and G.5. of the test claim permit mandate a new program or higher level of service within the meaning of article XIII B, section 6 of the California Constitution.

10. Section K.3.a.-c. of the Test Claim Permit Imposes Some New Annual Reporting Requirements That Are Mandated by the State and Impose a New Program or Higher Level of Service.

The claimants pled Section K.3.a.-c.of the test claim permit requiring that certain information be included in the annual Jurisdictional Runoff Management Program (JRMP) report.[1217] Section K.3.a.-c. of the test claim permit requires that each claimant prepare an individual JRMP annual report that covers implementation of its jurisdictional activities during the past annual reporting period, and specifies the contents of the annual report, which claimants contend includes a new reporting requirements that constitute a reimbursable state-mandated program.[1218]

The Commission finds that sections K.3.a. and b. do not impose any new activities. Sections K.3.c.1., 2., 3., and 4. impose some new requirements, and except for reporting on the claimant's own municipal projects (which is not mandated by the state), the new requirements are mandated by the state and impose a new program or higher level of service.

a. Background

i. Federal law requires that permittees submit an annual report to the Regional Board covering program status and proposed changes, data, budget, enforcement actions, inspections, public education programs and water quality improvements or degradation.

Federal law requires that an annual report be filed by the permittees by the anniversary date of the issuance of the permit and include the following information:

- The status of implementing the components of the stormwater management program that are established as permit conditions.
- Proposed changes to the stormwater management programs that are established as permit conditions. Such proposed changes shall be consistent with Code of Federal Regulations, title 40, 122.26(d)(2)(iii) [which requires a permittee to provide information, as specified, characterizing the quality and quantity of discharges covered in the permit application].
- Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit.

[1217] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 72-75.

[1218] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262-267 (test claim permit, section K.3.).

- A summary of data, including monitoring data, that is accumulated throughout the reporting year.
- Annual expenditures and budget for the year following each annual report.
- A summary describing the number and nature of enforcement actions, inspections, and public education programs.
- Identification of water quality improvements or degradation.[1219]

Federal law also requires the retention of monitoring records, copies of required reports, and records of all data used to complete the permit application for a period of at least three years.[1220]

ii. The prior permit required the submission of an annual report to the Regional Board containing descriptions of the activities and data for each of the components of the permit.

To assess compliance with the prior permit, measure the effectiveness of the stormwater plans, and to assess the overall health of the receiving waters, the prior permit's MRP required each permittee to submit an individual SWMP Annual Report documenting the permit activities performed by the permittee during the prior year with a signed certified statement under penalty of perjury.[1221] The report would be combined with the other permittees' SWMP reports and the watershed SWMP before being submitted to the Regional Board. Each individual report was required to contain, at a minimum, data addressing the following components:

- A comprehensive description of all activities conducted by the permittee to meet the permit requirements, described more fully below.[1222]
- An assessment of program effectiveness, requiring that "each Permittee shall include an assessment of the effectiveness of its Individual SWMP using the measurable goals and direct and indirect assessment measurements developed in the SWMP in accordance with Attachment D of Order No. R9-2004-001."[1223]
- An annual fiscal analysis that evaluates the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities of the permittee's individual SWMP. The analysis had to include a report of the previous reporting period's budget and source of funds, and a budget and identification of source of funds for the upcoming budget year, broken down by program components (program management, construction inspections, development plan review and SUSMP

[1219] Code of Federal Regulations, title 40, section 122.42(c).

[1220] Code of Federal Regulations, title 40, section 122.41(j)(2).

[1221] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Sections I., III.C., pages 2, 17.

[1222] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1., page 12.

[1223] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.b., page 14.

implementation, industrial and commercial inspections, illicit discharge and connection response and elimination, municipal activities, education, monitoring, and other).

- Non-Storm Water Discharges. Permittees shall report on any discharge category listed in Requirement B.2 of Order No. R9-2004-001 that was identified as a source of pollutants during the reporting period. For each identified category, the permittee had to report whether it elected to prohibit the discharge or to require BMPs to reduce pollutants in the discharge to the MEP. If the discharge is not prohibited, the BMPs that will be implemented, or required to be implemented, had to be described in each permittee's annual report.
- Receiving Water Limitations. The report required pursuant to Requirement C.2.a. of the prior permit, if applicable.
- A summary of all urban runoff related data not included in the annual monitoring report (e.g., special investigations).
- Proposed revisions to the Individual SWMP, including areas in need of improvement based on the assessment of effectiveness of each program component.[1224]

The prior permit then identifies specific reporting requirements for the first bullet above, the "comprehensive description of all activities conducted by the Permittee to meet all requirements of Order No. R9-2004-001," which included, "but [was] not limited to, the following information" (which includes for each component an assessment of the program's effectiveness based on the measurable goals and direct and indirect assessment measurements developed in the SWMP in accordance with Attachment D.):[1225]

- Development Planning (Section F.): (i) Description of any amendments to the General Plan or the development project approval process; (ii) Number of grading permits issued; (iii) Number of developments conditioned to meet SUSMP requirements; (iv) Attach one example of a development project that was conditioned to meet SUSMP requirements and a description of the required BMPs; (v) Description of any updates to the environmental review process; (vi) Description and number of training efforts conducted during the reporting period (for staff, developers, contractors, etc.), including the number of staff trained; and (vii) An assessment of program effectiveness based on the measurable goals established in the copermittee's SWMP.[1226]
- Construction (Section G.): (i) Number of inspections conducted; (ii) Number and type of enforcement actions related to construction sites; (iii) Description of modifications made to the construction and grading approval process; (iv) Description and number of training efforts conducted during the reporting period (for staff inspectors, contractors, and

[1224] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1., pages 12-14.

[1225] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a., page 12.

[1226] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.1., page 12.

construction site operators); and (v) An assessment of program effectiveness based on the measurable goals established in the permittee's SWMP.[1227]

- Municipal (Section H.1.): (i) Number of municipal inspections conducted; (ii) Number and types of enforcement actions taken; (iii) Number of catch basins and inlets that were inspected and the number that were cleaned; (iv) Assessment of the amount and type of debris removed from catch basins, streets, and open channels, including an identification of problem areas that generate the most pollutants; (v) Assessment of effectiveness of BMPs that have been implemented for municipal facilities and activities; (vi) Description and number of training efforts conducted over the last year (for municipal facility operators and inspectors); and (vii) An assessment of program effectiveness based on the measurable goals established in the permittee's SWMP.[1228]
- Industrial/Commercial (Section H.2.): (i) Number of inspections conducted; (ii) Number and type of enforcement actions taken; and (iii) An assessment of overall program effectiveness based on the measurable goals established in the permittee's SWMP.[1229]
- Residential (Section H.3.): (i) A description of residential areas that were focused on during the past year; (ii) Number and types of enforcement actions taken; and (iii) Assessment of overall program effectiveness based on the measurable goals established in the permittee's SWMP.[1230]
- Education (Section I.): (i) Description of education efforts conducted by the permittee (not collectively with other permittees) during the previous year; (ii) Assessment of overall program effectiveness based on the measurable goals established in the permittee's SWMP.[1231]
- Illicit Discharge Detection and Elimination (Section J.): (i) Number of illicit discharges, connections and spills reported and/or identified during the reporting period; (ii) Number of illicit discharges or connections investigated during the reporting period and the outcome of the investigations; (iii) Number and types of enforcement actions taken for illicit discharges or connections during the reporting period; (iv) Number of times the permittee's hotline was called during the reporting period, as compared to previous reporting periods; (v) Number and location of dry weather monitoring sites that were monitored during the reporting period; (vi) Summary of Illicit Discharge Monitoring

[1227] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.2., page 12.

[1228] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.3., pages 12-13.

[1229] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.4., page 13.

[1230] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.5., page 13.

[1231] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.6., page 13.

Program results, including: 1) All inspection, field screening, and analytical monitoring results; 2) All follow-up and elimination activities; and 3) Any proposed changes to station locations and/or sampling frequencies; and (vii) An assessment of overall program effectiveness based on the measurable goals established in the permittee's SWMP.[1232]

- Public Participation: a description of efforts to include the public in urban runoff management programs during the reporting period.[1233]

b. Sections K.3.a. and b. do not impose any new requirements, but section K.3.c.1., 2., 3., and 4. of the test claim permit mandate a new program or higher level of service.

The findings in the test claim permit indicate that the "[a]nnual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs."[1234] The Fact Sheet for Section K. cites to the federal regulation requiring annual reports, Code of Federal Regulations, title 40, section 122.42(c), and Water Code section 13267 (which provides that "the Regional Board may require that any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires") as the legal authority for this section.[1235] The Fact Sheet further explains that the reporting requirements include less activity-based reporting and instead focuses on results and responses to effectiveness assessments using the data collected under the prior permit as a baseline to determine whether the programs are successful.[1236]

The claimants have pled only the reporting requirements in Section K.3.a.-c., which addresses the individual annual report, now called the JRMP Annual Report. As indicated above, the copermittees are required to review and modify their JRMP and JRMP annual reports after the annual watershed review meeting to ensure their individual plans are consistent with the updated watershed workplan.[1237] Thus, given the potential for modifications of the JRMP annual report based on the updates to the watershed workplan, Section K. begins by stating that "the

[1232] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.7., page 13.

[1233] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.8., page 14.

[1234] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 189 (test claim permit, Finding D.1.g.).

[1235] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 539 (Fact Sheet/Technical Report).

[1236] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 540-541 (Fact Sheet/Technical Report).

[1237] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 257, 267 (test claim permit, Sections G.5., Section L.).

Copermittees *may propose* alternate reporting criteria and schedules, as part of their updated JRMP, for the Executive Officer's acceptance."[1238]

Each part of Section K.3.a.-c. is addressed below.

i. Section K.3.a. and b.

Section K.3.a. and b. of the test claim permit require each copermittee to generate and submit an individual JRMP annual report, by October 31 of each year, which covers activities during the prior reporting period. Section K.3.a. further requires each copermittee to retain records of all monitoring information and copies of reports for at least three years in accordance with the Standard Provisions in Attachment B.[1239] These requirements are not new. The requirement in Section K.3.b. to submit the annual report by October 31 does not impose any new activities on the claimants. Annual reports were required by the prior permit to be submitted by October 31 and are required by existing federal law.[1240] In addition, although a retention period was not included in the prior permit, federal law requires the retention of monitoring records, copies of required reports, and records of all data used to complete the permit application for a period of at least three years.[1241] Thus, the retention of records required by Section K.3.b. of the test claim permit is not new, but is required by existing federal law.

ii. Section K.3.c.1.

Section K.3.c. provides that each annual report "must contain, at a minimum, the following information, as applicable to the Copermittee:

> (1) Information required to be reported annually in Section H (Fiscal Analysis) of this Order;
>
> (2) Information required to be reported annually in Section J (Program Effectiveness) of this Order;
>
> (3) The completed Reporting Checklist found in Attachment D; and

[1238] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 260 (test claim permit, Section K.). The test claim permit states, "The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to CWC §13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC §13223 or this Order explicitly states otherwise." Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 199, footnote 4 (test claim permit, Section A.).

[1239] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 275 (test claim permit, Section K.3.a.-b.; Attachment B, Section 4).

[1240] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.C., pages 12, 17; Code of Federal Regulations, title 40, section 122.42(c).

[1241] Code of Federal Regulations, title 40, section 122.41(j)(2).

(4) Information for each program component as described in the following Table 5."[1242]

The first provision in Section K.3.c.1 states that each JRMP annual report contain information required to be reported annually in Section H. (Fiscal Analysis),[1243] which requires an annual fiscal analysis of the capital and operation and maintenance expenditures necessary to accomplish the requirements of the test claim permit and estimated expenditures for the current reporting period, the preceding period, and the next period. The analysis must include a description of the source of funds that are proposed to meet the necessary expenditures and a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items.[1244] The copermittees are required to submit their annual fiscal analysis containing this information with the annual JRMP report.[1245]

The claimants did not plead Section H. and, thus, this Decision does not address whether preparing the annual fiscal analysis is eligible for reimbursement under article XIII B, section 6. The claimants pled only the reporting requirement in Section K.3.c.1.

Federal law requires reporting on annual expenditures and the budget for the year following each annual report, and any necessary revisions to the fiscal analysis.[1246] In addition, the prior permit required the claimants to analyze capital, operational, and maintenance expenditures and describe the source of funding for the next year in their annual report.[1247] Thus, these requirements in Section K.3.c.1. are not new and do not mandate a new program or higher level of service.

However, the requirement to provide a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items was not expressly required by prior law. Thus Section K.3.c.1. imposes the following new requirement:

- Include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items.[1248]

[1242] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.).

[1243] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.1.).

[1244] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section H.2.).

[1245] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 258 (test claim permit, Section H.3.).

[1246] Code of Federal Regulations, title 40, section 122.42(c).

[1247] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.c., page 14.

[1248] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.1.).

iii. Section K.3.c.2.

Section K.3.c.2. requires that each JRMP annual report contain information required to be reported annually in Section J. (Program Effectiveness).[1249] Generally, Section J. requires an annual assessment of the implementation of JRMP components (Development Planning, Construction, Municipal, Industrial/Commercial, Residential, Education, and Illicit Discharge Detection and Elimination Programs) to ensure that they "(1) reduce the discharge of storm water pollutants from its MS4 to the MEP; (2) prohibit non-stormwater discharges; and (3) prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards."[1250]

The assessment shall be based on the assessment measures or methods for each of the six outcome levels described by the California Stormwater Quality Association (CASQA), and a determination of whether the desired outcome has been met.[1251] Where the assessments indicate that the outcome level has not been achieved within the projected timeframe, each copermittee is required to review its activities and BMPs to identify any needed modifications and improvements and develop and implement a work plan and schedule to address any program modifications and improvements.[1252]

[1249] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.2.).

[1250] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 258 (test claim permit, Section J.1.).

[1251] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 258-259 (test claim permit, Section J.1.). The six effective assessment outcome levels are: Level 1 Compliance with Activity-based Permit Requirements: Level 1 outcomes are those directly related to the implementation of specific activities prescribed by the test claim permit or established pursuant to it. Level 2 Changes in Attitudes, Knowledge, and Awareness: Level 2 outcomes are measured as increases in knowledge and awareness among target audiences such as residents, businesses, and municipal employees. Level 3 Behavioral Change and BMP Implementation: Level 3 outcomes measure the effectiveness of activities in affecting behavioral change and BMP implementation. Level 4 Load Reductions: Level 4 outcomes measure load reductions which quantify changes in the amounts of pollutants associated with specific sources before and after a BMP or other control measure is employed. Level 5 Changes in Runoff and Discharge Quality: Level 5 outcomes measures changes in one or more specific constituents or stressors in discharges into or from MS4s. Level 6 Changes in Receiving Water Quality: Level 6 outcomes measure changes to receiving water quality resulting from discharges into and from MS4s, and may be expressed through a variety of means such as compliance with water quality objectives or other regulatory benchmarks, protection of biological integrity, or beneficial use attainment. Exhibit A, Test Claim filed November 10, 2011 and Revised April 28, 2017, page 285 (test claim permit, Attachment C).

[1252] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 259 (test claim permit, Section J.2.b.). The work plan must include, at a minimum, the following: (1) The problems and priorities identified during the assessment; (2) A list of priority pollutants and known or suspected sources; (3) A brief description of the strategy employed to reduce,

The claimants did not plead Section J. and, thus, this Decision does not address whether conducting the assessments and developing and implementing work plans are eligible for reimbursement under article XIII B, section 6. However, Section K.3.c.2. (which was pled) incorporates the reporting requirements in Section J., which requires that the following information be included in the annual report:

- Provide the following information in the summary of its effectiveness assessments in the annual report:
  a. The results of each of the effectiveness assessments performed pursuant to Section J.1.b, including the demonstrated CASQA effectiveness level(s).
  b. Responses to effectiveness assessments: A description of any program modifications planned in accordance with Section J.2., including the work plan and identified schedule for implementation. The description must include the basis for determining that each modified activity and/or BMP represents an improvement expected to result in improved water quality.
  c. A description of any steps to be implemented to improve the copermittee's ability to assess program effectiveness.[1253]
- Provide an updated timeframe for attainment of a desired outcome level in the annual report when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe, but the review of the existing activities and BMPs are adequate, or that the projected timeframe should be extended.[1254]
- Provide the updated work plan and schedule to address any program modifications and improvements in response to the findings of its assessment.[1255]

Federal law requires that the annual report identify the status of implementing the components of the stormwater program, any proposed changes to the stormwater management programs, and any necessary revisions to the assessment of controls.[1256] The prior permit required the annual

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eliminate, or mitigate the negative impacts; (4) A description and schedule for new and/or modified BMPs with dates for significant milestones; (5) A description of how the selected activities will address an identified high priority problem, including a description of the expected effectiveness and benefits of the new or modified BMPs; (6) A description of implementation effectiveness metrics; (7) A description of how efficacy results will be used to modify priorities and implementation; and (8) A review of past activities implemented, progress in meeting water quality standards, and planned program adjustments.

[1253] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 260 (test claim permit, Section J.3.).

[1254] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 259 (test claim permit, Section J.2.a.).

[1255] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 259 (test claim permit, Section J.2.b.).

[1256] Code of Federal Regulations, title 40, section 122.42(c).

report to include an assessment of the effectiveness of its Individual SWMP (which included an assessment of the Development Planning, Construction, Municipal, Industrial/Commercial, Residential, Education, and Illicit Discharge Detection and Elimination Programs), using measurable goals and direct and indirect assessment measurements developed in the SWMP, and proposed revisions to the Individual SWMP including areas in need of improvement based on the assessment of effectiveness of each program component.[1257] Therefore, the requirements in the first bullet — to provide the results of the effectiveness assessments, responses to those assessments, proposed program modifications expected to result in improved water quality, and a description of steps to improve the ability to assess program effectiveness — are not new, but fall within these existing requirements.

In addition, the last bullet — to provide an updated work plan and schedule to address any program modifications and improvements in response to the findings of the assessment — is not new. The prior permit required that the annual report include proposed revisions to the Individual SWMP including areas in need of improvement based on the assessment of effectiveness of each program component.[1258] The prior permit also required that the individual SWMPs be designed to achieve compliance with the receiving water limitations and prohibitions to ensure that water quality standards are met, and that the claimant's individual SWMPs be timely implemented using control measures and other actions to reduce pollutants in urban runoff discharges. If an exceedance of water quality standards persisted notwithstanding implementation of the SWMP, the claimants had to assure compliance with the receiving water limitations and prohibitions by reporting to the Regional Board the BMPs that were currently being implemented and additional BMPs that will be implemented (if approved by the Regional Board) to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. This report was expressly allowed to be incorporated into the SWMP annual report, and had to include an implementation schedule.[1259]

However, the second bullet above was not expressly stated in prior law. The second bullet requires the claimant to provide in the annual report an updated timeframe to attain a desired outcome level when the desired outcome has not yet been achieved, but the claimant believes that the existing controls and BMPs are adequate and need more time. Federal law does require the permittee to report on the status of the program, but does not expressly require the reporting of an updated timeframe to attain a desired outcome level when the permittee believes that BMP modifications are not necessary. Thus, the following activity is new:

- Provide in the annual report an updated timeframe for attainment of a desired outcome level in the annual report when an assessment indicates that the desired outcome level has

[1257] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.b., page 14.

[1258] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.b., page 14.

[1259] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.).

not been achieved at the end of the projected timeframe, but the review of the existing activities and BMPs are adequate, or that the projected timeframe should be extended.[1260]

iv. Section K.3.c.3.

Section K.3.c.3. requires that each JRMP annual report contain the reporting checklist in Attachment D,[1261] which must be no longer than two pages, be current as of the first day of the rainy season, include a signed certification statement, and provide the following information:

- Order Requirements: were all requirements of this order met?
- Construction: number of active sites, number of inactive sites, number of sites inspected, number of inspections, number of violations, number of construction enforcement actions taken.
- New Development: number of development plan reviews, number of grading permits issued, number of projects exempted from interim/final hydromodification requirements.
- Post Construction Development: number of priority development projects, number of SUSMP required post-construction BMP inspections, number of SUSMP required post-construction BMP violations, number of SUSMP required post-construction BMP enforcement actions taken.
- Illicit Discharges and Connections: number of inspections, number of detections by staff, number of detections from the public, number of eliminations, number of violations, number of enforcement actions taken.
- MS4 Maintenance: number of inspections conducted, amount of waste removed, total miles of MS4 inspected.
- Municipal/Commercial/Industrial: number of facilities, number of inspections conducted, number of facilities inspected, number of violations, number of enforcement actions taken.[1262]

The prior permit did not include a checklist. However, some of the information in the checklist was required to be reported under the prior permit. In addition, federal law requires that the annual report include some of the information described below. Thus, gathering and reporting the following information required by Section K.3.c.3. is *not* new and does not constitute a new program or higher level of service:

- Order Requirements: were all requirements of this order met? Federal law requires a permittee to file reports to ensure compliance with the permit and water quality

[1260] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.2.).

[1261] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.3.).

[1262] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 296 (test claim permit, Attachment D.).

standards.[1263] Federal law also requires the report to include the status of implementing the components of the storm water management program that are established as permit conditions; a summary of data, including monitoring data, that is accumulated throughout the reporting year; and identification of water quality improvements or degradation.[1264] In addition, the prior permit required that the annual report contain a "comprehensive description of all activities conducted by the copermittee to meet all requirements" of the permit.[1265] Thus, reporting on whether the permittee met the requirements of the order is not new.

- Construction: The number of inspections and number of construction enforcement actions taken are required by federal law.[1266] In addition, these reporting requirements are in the prior permit which required reporting on "(i) Number of inspections conducted; (ii) Number and type of enforcement actions related to construction sites."[1267]
- New Development: The number of grading permits issued is a reporting requirement in the prior permit which required reporting on "(ii) Number of grading permits issued."[1268]
- Illicit Discharges and Connections: The number of IC/ID detections by staff, number of IC/ID detections from the public, and number of IC/ID enforcement actions taken are reporting requirements in the prior permit which required reporting on "(i) Number of illicit discharges, connections and spills reported and/or identified during the reporting period; . . . (iii) Number and types of enforcement actions taken for illicit discharges or connections during the reporting period."[1269] The requirement to report the number of IC/ID inspections and number enforcement actions are also required by federal law.[1270]
- MS4 Maintenance: The number of inspections conducted is required to be reported by federal law.[1271] The amount of waste removed was required under the prior permit which

[1263] United States Code, title 33, section 1342(a)(2) (Public Law 100-4).

[1264] Code of Federal Regulations, title 40, section 122.42(c).

[1265] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1., page 12.

[1266] Code of Federal Regulations, title 40, section 122.42(c).

[1267] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.2., page 12.

[1268] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.1., page 12.

[1269] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.7., page 13.

[1270] Code of Federal Regulations, title 40, section 122.42(c).

[1271] Code of Federal Regulations, title 40, section 122.42(c).

included "an assessment of the amount and type of debris removed from catch basins, streets, and open channels."[1272]

- Municipal/Commercial/Industrial: The number of inspections conducted and number of enforcement actions taken are required by federal law.[1273] In addition, these reporting requirements are in the prior permit which required reporting on "(i) Number of inspections conducted; (ii) Number and type of enforcement actions taken."[1274]

The following reporting requirements in Section K.3.c.3. require the reporting of numbers on the checklist, including but not limited to the number of sites, inspections, violations, and enforcement actions, which are not expressly required by federal law or the prior permit. Therefore, gathering and reporting the following specific numbers on the checklist required by Section K.3.c.3. *is new*:

- Construction:

  Number of Active Sites

  Number of Inactive Sites

  Number of Sites Inspected

  Number of Violations

- New Development:

  Number of Development Plan Reviews

  Number of Projects Exempted from Interim/Final Hydromodification Requirements

- Post Construction Development:

  Number of Priority Development Projects

  Number of SUSMP Required Post-Construction BMP Inspections

  Number of SUSMP Required Post-Construction BMP Violations

  Number of SUSMP Required Post-Construction BMP Enforcement Actions Taken

- Illicit Discharges and Connections:

  Number of IC/ID Eliminations

  Number of IC/ID Violations

- MS4 Maintenance:

  Total Miles of MS4 Inspected

[1272] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.3., page 13.

[1273] Code of Federal Regulations, title 40, section 122.42(c).

[1274] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.3. and 4., pages 12-13.

- Municipal/Commercial/Industrial:

  Number of Facilities

  Number of Violations[1275]

v. Section K.3.c.4.

Section K.3.c.4. requires the following information identified in Table 5 to be included in the annual report:[1276]

a. New Development:

- All updated relevant sections of the general plan and environmental review process and a description of any planned updates within the next annual reporting period, if applicable;
- All revisions to the SSMP, including where applicable: (a) identification and summary of where the SSMP fails to meet the requirements of this Order; (b) updated procedures for identifying pollutants of concern for each priority development project; (c) updated treatment BMP ranking matrix; (d) updated site design and treatment control BMP design standards;
- Number of priority development projects reviewed and approved during the reporting period. Brief description of BMPs required at approved priority development projects. Verification that site design, source control, and treatment BMPs were required on all applicable priority development projects;
- Name and location of all priority development projects that were granted a waiver from implementing LID BMPs pursuant to Section F.1.d.4. during the reporting period;
- Updated watershed-based BMP maintenance tracking database of approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction, including updates to the list of high-priority priority development projects; and verification that the requirements of this Order were met during the reporting period;
- Name and brief description of all approved priority development projects required to implement hydrologic control measures in compliance with Section F.1.h., including a brief description of the management measures planned to protect downstream beneficial uses and prevent adverse physical changes to downstream stream channels;

[1275] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 296 (test claim permit, Section K.3.c.3., Attachment D).

[1276] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.4.).

- Number and description of all enforcement activities applicable to the new development and redevelopment component and a summary of the effectiveness of those activities.[1277]

b. Construction:

- All updated relevant ordinances and description of planned ordinance updates within the next annual reporting period, if applicable;
- A description of any changes to procedures used for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality;
- Any changes to the designated minimum and enhanced BMPs;
- Summary of the inspection program, including the following information: (a) total number and date of inspections conducted at each facility; (b) number, date, and types of enforcement actions by facility; (c) brief description of each high-level enforcement actions at construction sites including the effectiveness of the enforcement. Supporting paper (or electronic) files must be maintained and made available upon the Regional Board's request. Supporting files must include a record of inspection dates, the results of each inspection, photographs (if any), and a summary of any enforcement actions taken.[1278]

c. Municipal:

- Updated source inventory;
- All changes to the designated municipal BMPs;
- Descriptions of any changes to procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies;
- Summary and assessment of BMP retrofits implemented at flood control structures, including: (a) list of projects retrofitted; (b) list and description of structures evaluated for retrofitting; (c) list of structures still needing to be evaluated and the schedule for evaluation;
- Summary of the municipal structural treatment control operations and maintenance activities, including: (a) number of inspections and types of facilities; (b) summary of findings;

[1277] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 263-264 (test claim permit, Table 5.).

[1278] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 264 (test claim permit, Table 5.).

- Summary of the MS4 and MS4 facilities operations and maintenance activities, including: (a) number and types of facilities maintained; (b) amount of material removed; (c) list of facilities planned for bi-annual inspections and the justification;
- Summary of the municipal areas/programs inspection activities, including: (a) number and date of inspections conducted at each facility; (b) the BMP violations identified during the inspection by facility; (c) number, date and types of enforcement actions by facility; (d) summary of inspection findings and follow-up activities for each facility;
- Description of activities implemented to address sewage infiltration into the MS4;
- Description of BMPs and their implementation for unpaved roads construction and maintenance.[1279]

d. Commercial/Industrial:

- Updated inventory of commercial/industrial sources;
- Summary of the inspection program, including the following information: (a) number and date of inspections conducted at each facility or mobile business; (b) the BMP violations identified during the inspection by facility; (c) number, date, and types of enforcement actions by facility or mobile business; (d) brief description of each high-level enforcement actions at commercial/industrial sites including the effectiveness of the enforcement and follow-up activities for each facility;
- All changes to designated minimum and enhanced BMPs;
- A list of industrial sites, including each name, address, and Standard Industrial Classification (SIC) code, that the copermittee suspects may require coverage under the General Industrial Permit, but has not submitted a Notice of Intent (NOI).[1280]

e. Residential:

- All updated minimum BMPs required for residential areas and activities;
- Quantification and summary of applicable runoff and storm water enforcement actions within residential areas and activities;
- Description of efforts to manage runoff and storm water pollution in common interest areas and mobile home parks.[1281]

[1279] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 264-265 (test claim permit, Table 5.).

[1280] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 265 (test claim permit, Table 5.).

[1281] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 266 (test claim permit, Table 5.).

f. Retrofitting Existing Development:

- Updated inventory and prioritization of existing development identified as candidates for retrofitting;
- Description of efforts to retrofit existing developments during the reporting year;
- Description of efforts taken to encourage private landowners to retrofit existing development;
- A list of all retrofit projects that have been implemented, including site location, a description of the retrofit project, pollutants expected to be treated, and the tributary acreage of runoff that will be treated;
- Any proposed retrofit or regional mitigation projects and time lines for future implementation;
- Any proposed changes to the copermittee's overall retrofitting program.[1282]

g. Illicit Discharge Detection and Elimination:

- Any changes to the legal authority to implement illicit discharge detection and elimination activities;
- Any changes to the established investigation procedures;
- Any changes to public reporting mechanisms, including phone numbers and web pages;
- Summaries of illicit discharges (including spills and water quality data events) and how each significant case was resolved;
- A description of instances when field screening and analytical data exceeded action levels, including those instances for which no investigation was conducted;
- A description of follow-up and enforcement actions taken in response to investigations of illicit discharges and a description of the outcome of the investigation/enforcement actions.[1283]

h. Workplans:

- Updated workplans including priorities, strategy, implementation schedule, and effectiveness evaluation.[1284] The test claim permit discusses the following

[1282] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 266 (test claim permit, Table 5.).

[1283] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 266 (test claim permit, Table 5.).

[1284] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 266 (test claim permit, Table 5.).

workplans: the watershed water quality workplan (watershed workplan),[1285] special studies workplans,[1286] and monitoring program workplan.[1287]

Both federal law and the prior permit required the copermittees to report on much of the information found in Table 5. Thus, reporting the following information in Table 5, and as required by Section K.3.c.4., is *not* new and does not impose a new program or higher level of service:

a. New Development:

- All updated relevant sections of the general plan and the environmental review process. The prior permit required the permittees to include a description of any amendments to the general plan and a description of any updates to the environmental review process in the annual report.[1288]
- Number of priority development projects reviewed and approved during the reporting period. The prior permit required the copermittees to report on the number of developments conditioned to meet SUSMP requirements.[1289] The SUSMP was a plan to reduce pollutants and to maintain or reduce downstream erosion and stream habitat from all priority development projects.[1290]
- Number and description of all enforcement activities applicable to the new development and redevelopment component. Federal law requires the reporting of a summary describing the number and nature of enforcement actions.[1291]
- A summary of the effectiveness of all enforcement activities applicable to the new development and redevelopment component. The prior permit required each copermittee to review and "ensure" that all priority development projects meet

[1285] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 255-257 (test claim permit, Section G.).

[1286] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 314-318 (test claim permit, Monitoring and Reporting Program, Section E.).

[1287] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 321 (test claim permit, Monitoring and Reporting Program, Section E.).

[1288] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.1., page 12.

[1289] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.1., page 12.

[1290] Redevelopment includes, but is not limited to, the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 577 (Order R9-2004-0001, Section F.2.b.).

[1291] Code of Federal Regulations, title 40, section 122.42(c).

SUSMP requirements[1292] and provide in the annual report, an assessment of entire program's effectiveness based on the measurable goals established in the copermittee's SWMP.[1293]

- All revisions to the SSMP, including where applicable: (a) Identification and summary of where the SSMP fails to meet the requirements of this Order. The prior permit required the annual report to include proposed revisions to the Individual SWMP, including areas in need of improvement based on the assessment of effectiveness of each program component.[1294]

b. Construction:

- All updated relevant ordinances. One of the permit requirements under federal law is to show that the copermittee has adequate legal authority to control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by stormwater discharges associated with industrial activity and "industrial activity" is defined to include construction activities.[1295] Federal law then requires reporting proposed changes to the stormwater management programs that are established as permit conditions.[1296]
- Summary of the inspection program, including the following information: Total number of inspections conducted at each facility; number and types of enforcement actions by facility; brief description of each high-level enforcement actions at construction sites. The prior permit required the number of inspections and number and type of enforcement actions.[1297] The prior permit also required that the SWMP contain a description of enforcement mechanisms and steps that will be used.[1298] And the annual report had to include an assessment of program effectiveness based on the measurable goals established in the copermittee's

[1292] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 577, (Order R9-2004-0001, Section F.2.b.).

[1293] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.1., page 12.

[1294] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.2., page 12.

[1295] Code of Federal Regulations, title 40, section 122.26(b)(12) and section 122.26(d)(2)(i)(A).

[1296] Code of Federal Regulations, title 40, section 122.42(c).

[1297] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.2., page 12.

[1298] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 618 (Order R9-2004-0001, Attachment D, Section 3.j.).

SWMP.[1299] In addition, federal law requires the reporting of a summary describing the number and nature of enforcement actions and inspections.[1300]

- Supporting paper (or electronic) files must be maintained by the copermittees and made available upon San Diego Water Board's request. Federal law requires the retention of monitoring records, copies of required reports, and records of all data used to complete the permit application for a period of at least three years.[1301]

c. Municipal:

- Include the number of inspections in the summary of the municipal structural treatment control operations and maintenance activities. The prior permit required that the annual report include the number of municipal inspections conducted.[1302] In addition, federal law requires the reporting of a summary describing the number and nature of inspections.[1303]
- Include in the summary of the MS4 and MS4 facilities operations and maintenance activities, the (b) amount of material removed. The prior permit also required the permittees to report an assessment of the amount and type of debris removed from catch basins, streets, and open channels.[1304]
- Summary of the municipal areas/programs inspection activities, including: number of inspections conducted at each facility; number and types of enforcement actions by facility; summary of inspection findings and follow-up actions for each facility. The prior permit required the number of municipal inspections conducted.[1305] In addition, federal law requires the reporting of a summary describing the number and nature of enforcement actions and inspections.[1306]

[1299] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.2., page 12.

[1300] Code of Federal Regulations, title 40, section 122.42(c).

[1301] Code of Federal Regulations, title 40, section 122.41(j)(2).

[1302] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.3., pages 12-13.

[1303] Code of Federal Regulations, title 40, section 122.42(c).

[1304] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.3., pages 12-13.

[1305] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.3., pages 12-13.

[1306] Code of Federal Regulations, title 40, section 122.42(c).

d. Commercial/Industrial:

- Summary of the inspection program, including the following information: Number of inspections conducted at each facility or mobile business;[1307] number and types of enforcement actions by facility or mobile business; brief description of each high-level enforcement action at commercial/industrial sites. The prior permit required the copermittees to report on the number of inspections conducted, and the number and type of enforcement actions taken.[1308] In addition, federal law requires the reporting of a summary describing the number and nature of enforcement actions and inspections.[1309]
- A list of industrial sites, including each name, address, and the Standard Industrial Classification (SIC) code, that the copermittee suspects may require coverage under the General Industrial Permit, but has not submitted a Notice of Intent (NOI) to be covered by the General Industrial Permit. The prior permit required that as part of each annual report, each copermittee shall report a list of industrial facilities, including the name, address, and SIC code, that may require coverage under the General Industrial Permit for which a NOI has not been filed.[1310]

e. Residential:

- Quantification and summary of applicable runoff and storm water enforcement actions within residential areas and activities. Federal law requires the reporting of a summary describing the number and nature of enforcement actions.[1311]

f. Retrofitting Existing Development:

- Any proposed changes to the copermittee's overall retrofitting program. Federal law requires reporting proposed changes to the stormwater management programs that are established as permit conditions.[1312]

g. Illicit Discharge Detection and Elimination:

- Any changes to the established investigation procedures. Under federal law, the illicit discharge detection and elimination program is required to contain a description of procedures to investigate portions of the MS4 that, based on field screening or other information, indicate a reasonable potential for containing

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[1307] Section IV.B.7.b.ii., of this Decision finds that inspection of mobile businesses is not new.

[1308] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.4., page 13.

[1309] Code of Federal Regulations, title 40, section 122.42(c).

[1310] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 592 (Order R9-2004-0001, Section H.2.f.).

[1311] Code of Federal Regulations, title 40, section 122.42(c).

[1312] Code of Federal Regulations, title 40, section 122.42(c).

illicit discharges or other sources of non-storm water pollution.[1313] Federal law then requires reporting proposed changes to the stormwater management programs that are established as permit conditions.[1314]

- Any changes to public reporting mechanisms, including phone numbers and web pages. Under federal law, the illicit discharge detection and elimination program is required to contain a description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from MS4s.[1315] Federal law then requires reporting proposed changes to the stormwater management programs that are established as permit conditions.[1316]
- Any changes to the legal authority to implement illicit discharge detection and elimination activities. One of the permit requirements under federal law is to show that the permittee has adequate legal authority to prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer.[1317] In addition, the illicit discharge detection and elimination program is required to contain a description of a program to implement and enforce an ordinance to prevent illicit non-stormwater discharges to the MS4.[1318] Federal law then requires reporting proposed changes to the stormwater management programs that are established as permit conditions.[1319]
- A description of enforcement actions taken in response to investigations of illicit discharges. Federal law requires the reporting of a summary describing the number and nature of enforcement actions.[1320] The prior permit also required the reporting of the number and types of enforcement actions taken for illicit discharges or connections during the reporting period.[1321]
- Summaries of illicit discharges (including spills and water quality data events) and how each significant case was resolved. The prior permit required a summary of illicit discharge monitoring program results, including: 1) all inspection, field screening, and analytical monitoring results; 2) all follow-up and elimination

[1313] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B).

[1314] Code of Federal Regulations, title 40, section 122.42(c).

[1315] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B).

[1316] Code of Federal Regulations, title 40, section 122.42(c).

[1317] Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(B).

[1318] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1).

[1319] Code of Federal Regulations, title 40, section 122.42(c).

[1320] Code of Federal Regulations, title 40, section 122.42(c).

[1321] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.7., page 13.

activities; and 3) any proposed changes to station locations and/or sampling frequencies.[1322]

- A description of follow-up actions taken in response to investigations of illicit discharges. The prior permit required that the summary of illicit discharge monitoring program results include "All follow-up and elimination activities."[1323]
- A description of the outcome of the investigation/enforcement actions. The prior permit provided, "All reported incidents, and how each was resolved, shall be summarized in each Permittee's Individual Annual Report."[1324]

The following information contained in Table 5, and required to be reported by Section K.3.c.4., are not specifically required by federal law and are not expressly required by the prior permit. Therefore, reporting the following specific information required by Section K.3.c.4. *is new*:

a. New Development:

- All revisions to the SSMP, including where applicable: (b) updated procedures for identifying pollutants of concern for each priority development project; (c) updated treatment BMP ranking matrix; (d) updated site design and treatment control BMP design standards.[1325]
- Brief description of BMPs required at approved priority development projects. Verification that site design, source control, and treatment BMPs were required on all applicable priority development projects.[1326]

  The prior permit required the copermittees to attach one example of a development project that was conditioned to meet SUSMP requirements and a description of the required BMPs for that example,[1327] but did not require the copermittees to describe the BMPs required at all approved priority development projects or provide verification that BMPs were required. In addition, the prior permit required project proponents to provide the copermittee proof of a mechanism which will ensure

[1322] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.7., page 13.

[1323] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.7., page 13.

[1324] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 595 (Order R9-2004-0001, Section J.8.).

[1325] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 2.).

[1326] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 3.).

[1327] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.1., page 12.

ongoing long-term maintenance of all structural post-construction BMPs,[1328] but there was no requirement for the copermittee to provide that verification in the annual report to the Regional Board.

- Name and location of all priority development projects that were granted a waiver from implementing LID BMPs pursuant to Section F.1.d.4. during the reporting period.[1329]
- Updated watershed-based BMP maintenance tracking database of approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction, including updates to the list of high-priority priority development projects; and verification that the requirements of the test claim permit were met during the reporting period.[1330]
- Name and brief description of all approved priority development projects required to implement hydrologic control measures in compliance with Section F.1.h., including a brief description of the management measures planned to protect downstream beneficial uses and prevent adverse physical changes to downstream stream channels.[1331]

b. Construction:

- A description of planned ordinance updates within the next annual reporting period, if applicable.[1332]
- A description of any changes to procedures used for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.[1333]
- Any changes to the designated minimum and enhanced BMPs.[1334]

[1328] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 577 (Order R9-2004-0001, Section F.2.a.6.).

[1329] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 4.).

[1330] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 5.).

[1331] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. New Development 6.).

[1332] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 1.).

[1333] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 2.).

[1334] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 3.).

- Include the following information in the summary of the inspection program: (a) date of inspections conducted at each facility; (b) date of enforcement actions by facility; (c) brief description of the effectiveness of each high-level enforcement action at construction sites.[1335]
- Supporting files must include a record of inspection dates, the results of each inspection, photographs (if any), and a summary of any enforcement actions taken.[1336]

c. Municipal:

- Updated source inventory.[1337]
- All changes to the designated municipal BMPs.[1338]
- Descriptions of any changes to procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies.[1339]
- Summary and assessment of BMP retrofits implemented at flood control structures, including: (a) list of projects retrofitted; (b) list and description of structures evaluated for retrofitting; (c) list of structures still needing to be evaluated and the schedule for evaluation.[1340]
- Include in the summary of the MS4 and MS4 facilities operations and maintenance activities, the (a) number and types of facilities maintained.[1341]

  The prior permit required the copermittees to inventory all municipal facilities and activities, including a description of the facilities and activities, and to report the

[1335] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 4.).

[1336] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 4.).

[1337] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 1.).

[1338] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 2.).

[1339] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 3.).

[1340] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 4.).

[1341] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 5.a.).

number of municipal inspections conducted.[1342] But the claimants were not required to report the number of facilities maintained.

- Include (a) types of facilities and (b) summary of the inspection findings in the summary of the municipal structural treatment control operations and maintenance activities.[1343]
- Include a list of facilities planned for bi-annual inspections and the justification in the summary of the MS4 and MS4 facilities operations and maintenance activities.[1344]
- Include in the summary of the municipal areas/programs inspection activities: (a) date of inspections conducted at each facility; (b) The BMP violations identified during the inspection by facility; (c) date of enforcement actions by facility.[1345]
- Description of activities implemented to address sewage infiltration into the MS4.[1346]
- Description of BMPs and their implementation for unpaved roads construction and maintenance.[1347]

d. Commercial/Industrial:

- Updated inventory of commercial/industrial sources of discharges.[1348]
- Include the following information in the summary of the inspection program: (a) date of inspections conducted at each facility or mobile business; (b) the BMP violations identified during the inspection by facility; (c) date of enforcement actions by facility or mobile business; (d) brief description of the effectiveness each high-level

[1342] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 587 (Order R9-2004-0001, Section H.1.b., page 22); Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section III.A.1.a.(3).

[1343] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 5.).

[1344] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 6.c.).

[1345] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 7.a.-c.).

[1346] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 8.).

[1347] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 9.).

[1348] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Commercial/Industrial 1.).

enforcement actions at commercial/industrial sites including the follow-up activities for each facility.[1349]

- All changes to designated minimum and enhanced BMPs.[1350]

e. Residential:

- All updated minimum BMPs required for residential areas and activities.[1351]
- Description of efforts to manage runoff and storm water pollution in common interest areas and mobile home parks.[1352]

f. Retrofitting Existing Development:

- Updated inventory and prioritization of existing development identified as candidates for retrofitting.[1353]
- Description of efforts to retrofit existing developments during the reporting year.[1354]
- Description of efforts taken to encourage private landowners to retrofit existing development.[1355]
- A list of all retrofit projects that have been implemented, including site location, a description of the retrofit project, pollutants expected to be treated, and the tributary acreage of runoff that will be treated.[1356]

[1349] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Commercial/Industrial 2.).

[1350] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Commercial/Industrial 3.).

[1351] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Residential 1.).

[1352] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Residential 3.).

[1353] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 1.).

[1354] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 2.).

[1355] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 3.).

[1356] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 4.).

- Any proposed retrofit or regional mitigation projects and time lines for future implementation.[1357]

g. Illicit Discharge Detection and Elimination:

- A description of instances when field screening and analytical data exceeded action levels, including those instances for which no investigation was conducted.[1358]

h. Workplans:

- Updated workplans including priorities, strategy, implementation schedule, and effectiveness evaluation.[1359]

c. Except for the reporting on claimants' own municipal projects required by section K.3.c.3., 4., the new requirements imposed by section K.3.c.1.-4. are mandated by the state.

i. The arguments raised by the parties

The claimants contend that these requirements are mandated by the state and impose a new program or higher level of service. The claimants state that federal regulations require an annual report, which includes a "summary of data, including monitoring data" and a summary describing the number and nature of enforcement actions, inspections and public educations programs. The test claim permit requires far more.[1360] The claimants conclude that the additional requirements imposed are the true choice of the Regional Board and, thus, are mandated by the state and impose new program or higher level of service.[1361]

The Water Boards contend that the information challenged by the claimants are not mandated by the state and do not impose a new program or higher level of service. Rather, the Water Boards contend that the reporting is required under federal law (Code of Federal Regulations, title 40, section 122.42(c)) and is necessary to demonstrate whether the storm water management programs are implementing the most effective controls to reduce the discharge of pollutants to the MEP standard.[1362]

[1357] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 5.).

[1358] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Illicit Discharge Detection and Elimination 5.).

[1359] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Workplans).

[1360] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 73 (Test Claim narrative).

[1361] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 74 (Test Claim narrative), citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 479, 765, 768.

[1362] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 50.

> Unlike in the LA Permit case considered in *Department of Finance* [*v. Commission on State Mandates* (2016) 1 Cal.5th 479, 765], the San Diego Water Board found that the provisions in the 2010 Permit are exclusively based on federal law and found that the underlying substantive provisions to be reported upon were necessary to meet the MEP standard. Consistently, the 2010 Permit found that "[a]nnual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs." [Footnote omitted.] The San Diego Water Board's findings are entitled to deference under *Department of Finance*.[1363]

The Water Boards further contend that the prior permit included annual reporting and the contents of the report was specified in great detail as part of the MRP. The test claim permit reduces the amount of activity-based reporting. Thus, the Water Boards argue that the "extensive level of detailed reporting requirements already in place prior to adoption of the 2010 Permit support the conclusion that no new program or higher level of service was imposed."[1364] Further, the Water Boards state that, for many of the provisions underlying the reporting requirements, the claimants have fee authority. Also, some of the reporting is on municipal projects that are undertaken voluntarily by the claimants and do not result in reimbursable costs. Finally, the inclusion of information generated from programmatic data should only result in de minimis costs.[1365]

For the reasons below, the Commission finds that, *except* for the reporting on claimants' own municipal projects, the new requirements imposed by Section K.3.c.1.-4. are mandated by the state.

ii. Except for the reporting on claimants' own municipal projects, the new requirements imposed by Section K.3.c.1.-4. are mandated by the state.

Both parties rely on the 2016 Supreme Court decision in *Department of Finance v. Commission on State Mandates* to support or distinguish their positions. As stated earlier in this Decision, the California Supreme Court in the 2016 *Department of Finance* case reviewed prior court decisions on the federal mandate issue and identified the following test to determine whether certain conditions imposed by an NPDES stormwater permit issued by the Los Angeles Regional Water Board were mandated by the state or the federal government:

> If federal law compels the state to impose, or itself imposes, a requirement, that requirement is a federal mandate. On the other hand, if federal law gives the state discretion whether to impose a particular implementing requirement, and the state

[1363] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 50, quoting Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 431 (Fact Sheet/Technical Report, Finding D.1.g.), citing Code of Federal Regulations, title 40, section 122.42(c).

[1364] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 51.

[1365] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 54.

> exercises its discretion to impose the requirement by virtue of a "true choice," the requirement is not federally mandated.[1366]

The court recognized that the "federal CWA broadly directed the board to issue permits with conditions designed to reduce pollutant discharges to the maximum extent practicable. But the US EPA's regulations gave the board discretion to determine which specific controls were necessary to meet the MEP standard. (40 C.F.R. § 122.26(d)(2)(iv).)"[1367] "Except where a regional board finds the conditions are the *only means* by which the [federal] 'maximum extent practicable' standard can be met, the State exercises a true choice by determining what controls are necessary to meet the standard."[1368]

The Supreme Court in *Department of Finance* also addressed the inspection requirements of that permit, finding that federal regulations "required the Operators to include in their permit application a description of priorities and procedures for inspecting certain industrial facilities and construction sites, but suggested that the Operators would have discretion in selecting which facilities to inspect" and agreed with the State that "some kind of operator inspections would be required."[1369] The court found that even though the federal regulations "contemplated some form of inspections, however, does not mean that federal law required the scope and detail of inspections required by the Permit conditions. As explained, the evidence before the Commission showed the opposite to be true."[1370]

The Supreme Court relied heavily on *Hayes v. Commission on State Mandates* in its determination of the whether a requirement is a state or federal mandate, and in its analysis of the inspection requirements.[1371] *Hayes* addressed state statutes that implemented the federal Education of the Handicapped Act, which required the state to provide certain services to special education students, and the court agreed that the Act imposed a federal mandate on the state.[1372] However, the court's "conclusion that the Education of the Handicapped Act is a federal mandate with respect to the state marks the starting point rather than the end of the consideration which will be required to resolve the Santa Barbara and Riverside test claims."[1373] The state's response to the federal mandate still needs to be viewed to determine if the state exercised "true discretion" in requiring local government to act.

[1366] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 765.

[1367] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 767-768.

[1368] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682, citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 768, emphasis added.

[1369] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 770, 771.

[1370] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 771.

[1371] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 771, citing *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564.

[1372] *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1592.

[1373] *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1592.

> When the federal government imposes costs on local agencies those costs are not mandated by the state and thus would not require a state subvention. Instead, such costs are exempt from local agencies' taxing and spending limitations. This should be true even though the state has adopted an implementing statute or regulation pursuant to the federal mandate so long as the state had no "true choice" in the manner of implementation of the federal mandate. [Citation omitted.]
>
> This reasoning would not hold true where the manner of implementation of the federal program was left to the true discretion of the state. A central purpose of the principle of state subvention is to prevent the state from shifting the cost of government from itself to local agencies. [Citation omitted.] Nothing in the statutory or constitutional subvention provisions would suggest that the state is free to shift state costs to local agencies without subvention merely because those costs were imposed upon the state by the federal government. In our view the determination whether certain costs were imposed upon a local agency by a federal mandate must focus upon the local agency which is ultimately forced to bear the costs and how those costs came to be imposed upon that agency. If the state freely chose to impose the costs upon the local agency as a means of implementing a federal program then the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government.[1374]

The court remanded the matter back to the Commission, finding as follows:

> In short, even though the state had no real choice in deciding whether to comply with the federal act, the act did not necessarily require the state to impose all of the costs of implementation upon local school districts. To the extent the state implemented the act by freely choosing to impose new programs or higher levels of service upon local school districts, the costs of such programs or higher levels of service are state mandated and subject to subvention.[1375]

Here, like the program in *Hayes* and the inspection requirement in *Department of Finance*, there is a federal mandate to submit an annual report with the information required to be included in that report, and this Decision denies those reporting activities required by Section K.3. that are already expressly required by federal law.[1376] However, the test claim permit in Sections K.3.c.1.-4. goes beyond the federal mandate and impose many new reporting requirements and define the detailed scope of data the Regional Board requests that cannot be identified as incidental or "de minimis" in context, and thus, the new requirements are not part and parcel of a federal mandate.[1377] The findings in the test claim permit indicate that the "[a]nnual reporting

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[1374] *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1593-1594.

[1375] *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1594.

[1376] Code of Federal Regulations, title 40, section 122.42(c).

[1377] Referring to the Supreme Court's holding in *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 890, which adopted the reasoning in *County of Los*

requirements included in this Order are necessary to meet federal requirements *and* to evaluate the effectiveness and compliance of the Copermittees' programs,"[1378] and the Fact Sheet clarifies that the reporting requirements are based on federal law *and* Water Code section 13267 (which provides that "the Regional Board *may* require that any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires").[1379]

Federal law does not specifically require the information described above and there is no evidence in the record that providing the new required information is the only means by which program effectiveness and compliance can be evaluated. Thus, the new reporting requirements are mandated by the state.

Moreover, the introductory language to Section K. states "the Copermittees *may propose* alternate reporting criteria and schedules, as part of their updated JRMP, for the Executive Officer's acceptance," which if approved, could conceivably reduce the scope of the reporting requirements.[1380] However, there is no evidence that any proposals were filed or approved or that the reporting requirements in Section K. have been amended or reduced. Thus, the claimants are required to comply with the new reporting activities that are mandated by the test claim permit.

Finally, the Water Boards argue that some of the reporting is on municipal projects that are undertaken voluntarily by the claimants and do not result in reimbursable costs.[1381] For example, Section K.3.c.4. requires the claimants to report on their own municipal projects, including unpaved roads construction and maintenance, and identify a description and implementation of BMPs and inspection activities on those municipal projects. As previously explained in this Decision, state law does not mandate the claimants to develop or redevelop municipal projects or facilities, or to build or maintain unpaved roads. That decision is left to the discretion of the

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*Angeles v. Commission on State Mandate*s (1995) 32 Cal.App.4th 805, 815-818 (*County of Los Angeles II*).

[1378] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 189 (test claim permit, Finding D.1.g.).

[1379] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 439 (Fact Sheet/Technical Report).

[1380] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 260 (test claim permit, Section K.). The test claim permit states, "The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to CWC §13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC §13223 or this Order explicitly states otherwise." Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 199, footnote 4 (test claim permit, Section A.).

[1381] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 54.

local agency.[1382] The courts have made clear that costs incurred as a downstream result of a local discretionary decision is not legally compelled by state law.[1383]

Moreover, there is no evidence that local agencies are practically compelled, as the only reasonable means necessary to carry out core mandatory functions, to develop or redevelop priority municipal projects.[1384] Nor is there evidence that a failure to develop or redevelop priority municipal projects would subject the claimant to "certain and severe…penalties" such as "double…taxation" or other "draconian" consequences.[1385]

Accordingly, *except* for the reporting on claimants' own municipal projects, the new requirements imposed by Section K.3.c.1.-4. are mandated by the state.

iii. The new annual reporting requirements mandated by section K.3.c.1.-4. constitute a new program or higher level of service.

Article XIII B, section 6 requires reimbursement whenever the Legislature or any state agency mandates a new program or higher level of service that results in costs mandated by the state. To determine whether a program is new or provides a higher level of service in an existing program, the requirements in the test claim statute or executive order are compared with the legal

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[1382] For example, see Government Code section 23004 (counties may purchase, receive by gift or bequest, and hold land within its limits, or elsewhere when permitted by law; and manage, sell, lease, or otherwise dispose of its property as the interests of its inhabitants require); Government Code sections 37350-37353 (cities may purchase, lease, receive, hold, and enjoy real property, and control and dispose of it for the common benefit; may erect and maintain buildings for municipal purposes; and may acquire property for parking motor vehicles, and for opening and laying out any street; Government Code section 37111 ("When the legislative body deems it necessary that land purchased for park or other purposes be used for construction of public buildings or creation of a civic center, it may adopt an ordinance by a four-fifths vote declaring the necessity and providing for such use"); Streets and Highways Code section 1800 ("The legislative body of any city may do any and all things necessary to lay out, acquire, and construct any section or portion of any street or highway within its jurisdiction as a freeway, and to make any existing street or highway a freeway."); and Streets and Highways Code section 1801 ("The legislative body of any city may close any street or highway within its jurisdiction at or near the point of its intersection with any freeway, or may make provision for carrying such street or highway over, under, or to a connection with the freeway, and may do any and all necessary work on such street or highway.").

[1383] *City of Merced v. State* (1984) 153 Cal.App.3d 777, 782-783; *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.*) (2003) 30 Cal.4th 727, 744-745.

[1384] *Department of Finance v. Commission on State Mandates* (2009) 170 Cal.App.4th 1355, 1368 (*POBRA*).

[1385] *Department of Finance v. Commission on State Mandates* (*Kern High School Dist.)* (2003) 30 Cal.4th 727, 754 citing *City of Sacramento v. State* (1990) 50 Cal.3d 51, 74.

requirements in effect before the test claim statute or executive order.[1386] If the requirements are new, the analysis continues to determine if the requirements constitute a "program" within the meaning of article XIII B, section 6, which is defined as one that carries out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state.[1387] Only one of these alternatives is required to establish a new program or higher level of service.[1388]

Here, the new requirements mandated by Section K.3.c.1.-4. are expressly directed toward the local agency permittees in their regulatory capacity and, thus, are unique to government, and detail their responsibilities to provide additional information in the JRMP annual report to the Regional Board to ensure compliance with the JRMP components of the test claim permit and water quality standards. "The challenged requirements are not bans or limits on pollution levels, they are mandates to perform specific actions" designed to reduce pollution entering stormwater drainage systems and receiving waters.[1389]

Accordingly, *except* for the reporting on claimants' own municipal projects required by Section K.3.c.3., 4., the new requirements imposed by Section K.3.c.1.-4. of the test claim permit mandate a new program or higher level of service for the following activities:

1. Include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items.[1390]
2. Provide in the annual report an updated timeframe for attainment of a desired outcome level in the annual report when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe, but the review of the existing activities and BMPs are adequate, or that the projected timeframe should be extended.[1391]
3. *Except for reporting on the claimants' own municipal projects (which is not eligible for reimbursement)*, providing the following information in the Checklist pursuant to Section K.3.c.3.:

    a. Construction:

[1386] *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 75, 98; *Lucia Mar Unified School District v. Honig* (1988) 44 Cal.3d 830, 835; *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 557.

[1387] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56.

[1388] *Carmel Valley Fire Protection Dist. v. State of California* (1987) 190 Cal.App.3d 521, 537; *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 557.

[1389] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 560.

[1390] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.1.).

[1391] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.2.).

1) Number of Active Sites
2) Number of Inactive Sites
3) Number of Sites Inspected
4) Number of Violations

b. New Development:
1) Number of Development Plan Reviews
2) Number of Projects Exempted from Interim/Final Hydromodification Requirements

c. Post Construction Development:
1) Number of Priority Development Projects
2) Number of SUSMP Required Post-Construction BMP Inspections
3) Number of SUSMP Required Post-Construction BMP Violations
4) Number of SUSMP Required Post-Construction BMP Enforcement Actions Taken

d. Illicit Discharges and Connections:
1) Number of IC/ID Eliminations
2) Number of IC/ID Violations

e. MS4 Maintenance:
1) Total Miles of MS4 Inspected

f. Municipal/Commercial/Industrial:
1) Number of Facilities
2) Number of Violations[1392]

4. *Except for reporting on the claimants' own municipal projects (which is not eligible for reimbursement)*, report the following information contained in Table 5 and required to be reported by Section K.3.c.4.:

a. New Development:
1) All revisions to the SSMP, including where applicable: (b) updated procedures for identifying pollutants of concern for each priority development project; (c) updated treatment BMP ranking matrix; (d) updated site design and treatment control BMP design standards.[1393]

[1392] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 296 (test claim permit, Section K.3.c.3., Attachment D.).

[1393] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 2.).

2) Brief description of BMPs required at approved priority development projects. Verification that site design, source control, and treatment BMPs were required on all applicable priority development projects.[1394]

3) Name and location of all priority development projects that were granted a waiver from implementing LID BMPs pursuant to Section F.1.d.4 during the reporting period.[1395]

4) Updated watershed-based BMP maintenance tracking database of approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction, including updates to the list of high-priority priority development projects; and verification that the requirements of this Order were met during the reporting period.[1396]

5) Name and brief description of all approved priority development projects required to implement hydrologic control measures in compliance with Section F.1.h., including a brief description of the management measures planned to protect downstream beneficial uses and prevent adverse physical changes to downstream stream channels.[1397]

b. Construction:

1) A description of planned ordinance updates within the next annual reporting period, if applicable.[1398]

2) A description of any changes to procedures used for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.[1399]

3) Any changes to the designated minimum and enhanced BMPs.[1400]

[1394] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 3.).

[1395] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 4.).

[1396] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 5.).

[1397] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. New Development 6.).

[1398] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 1.).

[1399] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 2.).

[1400] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 3.).

4) Include the following information in the summary of the inspection program: (a) date of inspections conducted at each facility; (b) date of enforcement actions by facility; (c) brief description of the effectiveness of each high-level enforcement action at construction sites.[1401]

5) Supporting files must include a record of inspection dates, the results of each inspection, photographs (if any), and a summary of any enforcement actions taken.[1402]

c. Municipal:

1) Updated source inventory.[1403]

2) All changes to the designated municipal BMPs.[1404]

3) Descriptions of any changes to procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies.[1405]

4) Summary and assessment of BMP retrofits implemented at flood control structures, including: (a) List of projects retrofitted; (b) List and description of structures evaluated for retrofitting; (c) List of structures still needing to be evaluated and the schedule for evaluation.[1406]

5) Include in the summary of the MS4 and MS4 facilities operations and maintenance activities, the (a) Number and types of facilities maintained.[1407]

6) Include (a) types of facilities and (b) summary of the inspection findings in the summary of the municipal structural treatment control operations and maintenance activities.[1408]

[1401] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 4.).

[1402] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 4.).

[1403] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 1.).

[1404] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 2.).

[1405] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 3.).

[1406] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 4.).

[1407] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 5.a.).

[1408] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 5.).

7) Include a list of facilities planned for bi-annual inspections and the justification in the summary of the MS4 and MS4 facilities operations and maintenance activities.[1409]

8) Include in the summary of the municipal areas/programs inspection activities: (a) date of inspections conducted at each facility; (b) The BMP violations identified during the inspection by facility; (c) date of enforcement actions by facility.[1410]

9) Description of activities implemented to address sewage infiltration into the MS4.[1411]

10) Description of BMPs and their implementation for unpaved roads construction and maintenance.[1412]

d. Commercial/Industrial:

1) Updated inventory of commercial/industrial sources of discharges.[1413]

2) Include the following information in the summary of the inspection program: (a) date of inspections conducted at each facility or mobile business; (b) The BMP violations identified during the inspection by facility; (c) date of enforcement actions by facility or mobile business; (d) brief description of the effectiveness each high-level enforcement actions at commercial/industrial sites including the follow-up activities for each facility.[1414]

3) All changes to designated minimum and enhanced BMPs.[1415]

e. Residential:

1) All updated minimum BMPs required for residential areas and activities.[1416]

[1409] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 6.c.).

[1410] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 7.a.-c.).

[1411] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 8.).

[1412] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 9.).

[1413] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Commercial/Industrial 1.).

[1414] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Commercial/Industrial 2.).

[1415] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Commercial/Industrial 3.).

[1416] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Residential 1.).

2) Description of efforts to manage runoff and storm water pollution in common interest areas and mobile home parks.[1417]

f. Retrofitting Existing Development:

1) Updated inventory and prioritization of existing development identified as candidates for retrofitting.[1418]

2) Description of efforts to retrofit existing developments during the reporting year.[1419]

3) Description of efforts taken to encourage private landowners to retrofit existing development.[1420]

4) A list of all retrofit projects that have been implemented, including site location, a description of the retrofit project, pollutants expected to be treated, and the tributary acreage of runoff that will be treated.[1421]

5) Any proposed retrofit or regional mitigation projects and time lines for future implementation.[1422]

g. Illicit Discharge Detection and Elimination:

1) A description of instances when field screening and analytical data exceeded action levels, including those instances for which no investigation was conducted.[1423]

[1417] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Residential 3.).

[1418] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 1.).

[1419] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 2.).

[1420] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 3.).

[1421] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 4.).

[1422] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 5.).

[1423] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Illicit Discharge Detection and Elimination 5.).

h. Workplans:

1) Updated workplans including priorities, strategy, implementation schedule, and effectiveness evaluation.[1424]

11. Attachment E of the Test Claim Permit, Which Addresses Special Studies in Section II.E.2.-5., Mandates a New Program or Higher Level of Service.

The claimants pled Section II.E.2.-5., of Attachment E, which is the Monitoring and Reporting Program (MRP), and contend Section II.E.2.-5. requires the claimants to perform the following special studies: Sediment Toxicity Study; Trash and Litter Investigation; Agricultural, Federal and Tribal Input Study; and MS4 Receiving Water and Maintenance Study.[1425]

The Commission finds that that Attachment E, Sections II.E.2.-5. mandate a new program or higher level of service within the meaning of article XIII B, section 6 of the California Constitution.

a. Background

i. Federal law requires permittees to provide any information the Director requests for determining compliance or whether modifications to the permit are required.

Federal law requires municipalities to apply for a NPDES permit to discharge any pollutant from an MS4.[1426] NPDES permits must include conditions to achieve water quality standards and objectives.[1427] One such condition is the duty to provide information: "The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit."[1428]

ii. The prior permit required the permittees to perform one special study on numeric criteria to control runoff from new developments.

The permittees have been monitoring water quality under a NPDES permit since 1993. The monitoring data indicated several persistent exceedances of water quality objectives for urban runoff-related pollutants. At the time that the prior permit was adopted, the water quality concerns in the Santa Margarita watershed included the Murrieta Creek and the upper Santa

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[1424] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Workplans).

[1425] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 22, 75-81, 297-324 (Test Claim narrative; Attachment E.) The claimants did not plead the other special studies addressed in Attachment E, sections II.E.7. and 8. and, thus, this Decision does not address those studies.

[1426] Code of Federal Regulations, title 40, section 122.26(a)(3)(2010); *Arkansas v. Oklahoma* (1992) 503 U.S. 91, 101-102.

[1427] Code of Federal Regulations, title 40, section 122.44(d)(1).

[1428] Code of Federal Regulations, title 40, section 122.42(h).

Margarita River, which were CWA section 303(d) listed for phosphorus and the estuary listed for eutrophication. Other constituents of concern were sedimentation/siltation, iron, manganese and total dissolved solids (TDS). The County of Riverside's water quality concerns were sediment from construction-related erosion and pollution due to urban storm water runoff. Further down the watershed, the County of San Diego's concerns were eutrophication, nitrogen, phosphorus, diazinon, TDS, other toxic substances, and trash.[1429] However, due to inadequate monitoring and reporting, it was not possible to conduct a detailed analysis to establish the sources of the pollutants.[1430]

Thus, the prior permit required the permittees to conduct special studies as directed by the executive officer, in addition to their monitoring requirements. The prior permit explained that "[s]pecial studies are intended to address specific research or management issues that are not addressed by the routine core monitoring program."[1431]

> This monitoring is useful to address unique issues, oftentimes triggered by routine monitoring to help understand results or identify efficient management measures. Special studies are short-term studies with a predefined beginning, middle and end.[1432]

The prior permit included one special study, which required them to develop and implement a study to determine numeric criteria for controlling the volume, velocity, duration, and peak discharge rate of runoff from new developments to minimize erosion of natural stream channels and impacts to instream habitat. As part of the study, the permittees were required to propose numeric criteria and a time-schedule for implementation of the criteria on priority development projects within 365 days of the identification of the criteria and no later than the fourth year annual report or the application for permit renewal. The permittees had the option of using criteria developed in other areas of Southern California if they could demonstrate that such criteria are applicable to and protective of the conditions in the Upper Santa Margarita Watershed. The permittees were required to report the status of the study, implementation, and progress towards the development of numeric criteria in the annual report.[1433]

b. Sections II.E.2-5, of Attachment E to the Test Claim Permit, Which Requires the Claimants to Conduct Four New Special Studies, Mandates a New Program or Higher Level of Service.

The claimants have pled Sections II.E.2.-5., of the Attachment E (the MRP), which requires the copermittees to conduct four special studies. The Fact Sheet explains the basis of the special studies requirements.

[1429] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, Table 1, page 16.

[1430] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, pages 17-18.

[1431] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A.III., page 8.

[1432] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, pages 72-73.

[1433] Exhibit X (35), Order R9-2004-0001, Monitoring and Reporting Program, Section II.A.III., page 8.

Under the prior permit, the copermittees expanded their stormwater programs and were largely in compliance with its requirements.[1434] However, prior to the adoption of the test claim permit, challenges remained:

> Today, storm and nonstorm water discharges from the MS4 continue to be the leading cause of water quality impairment in the San Diego Region. Since 1998, the number of impaired water bodies in the Riverside County portion of the San Diego Region on the CWA section 303(d) List of Water Quality Impaired Segments (303(d) List) has increased with each new list (i.e. new impaired water bodies listed on the 2002, 2006, and 2008 303(d) Lists). The Copermittees' monitoring data exhibits persistent exceedances of water quality objectives in the Santa Margarita watershed. The Santa Margarita watershed also has conditions that are frequently toxic to aquatic life. Bioassessment data from the watersheds further reflects these conditions, finding that macroinvertebrate communities in creeks have widespread Poor to Very Poor Index of Biotic Integrity (IBI) ratings.[1435]

The section 303(d) list included Murrieta Creek listed for phosphorus, nitrogen, iron, and manganese and Upper Santa Margarita River listed for phosphorus. The sources for these constituents had still not been identified. In addition, Temecula Creek was listed for phosphorus, nitrogen, and TDS with no sources identified.[1436] The monitoring annual report for 2006-2007 reported the following constituents of concern: chlorpyrifos, dissolved copper, and dissolved lead which exceeded CTR objectives and fecal coliform, color, iron, manganese, MBAS, nitrogen, pH, phosphorous, total dissolved solids and turbidity which exceeded Basin Plan objectives.[1437]

In addition, trash remains a persistent pollutant which, after leaving the MS4, can accumulate posing a serious threat to the beneficial uses of the receiving waters.[1438] The Basin Plan includes water quality objectives that prohibit both floating materials and suspended and settleable materials. The copermittees documented high volumes of trash coming from the MS4 and in receiving waters. The Regional Board found that high density urban areas are responsible for up to 60 percent of trash entering MS4s. Moreover, trash on or near roadways is not only constantly

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[1434] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 374 (Fact Sheet/Technical Report).

[1435] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 374, 186 (Fact Sheet/Technical Report), footnotes omitted; see also (test claim permit, Finding C.9.).

[1436] Exhibit X (37), Santa Margarita River Region, Report of Waste Discharge (ROWD), January 15, 2009, Table 5, page 32.

[1437] Exhibit X (23), Excerpt from the Regional Board's Administrative Record, Volume 1, for Order No. R9-2010-0016, filed September 22, 2017, pages 67, 68, 85, and 86 (Santa Margarita Region Monitoring Annual Report Fiscal Year 2006-2007).

[1438] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 400 (Fact Sheet/Technical Report, Finding C.8.).

present, it is mainly comprised of floatable materials which places receiving waters at risk during storm events.[1439]

i. Section II.E.2.-5., of Attachment E of the test claim permit, imposes new requirements to conduct four special studies to monitor the sediment toxicity of streams; trash and litter as pollutants in receiving waters; the water quality of agricultural, federal, and tribal runoff; and the impact of vegetation removal activities on the water quality of receiving waters.

Thus, Section II.E.2.-5., of Attachment E of the test claim permit, requires the copermittees to conduct four[1440] new special studies in addition to the monitoring requirements.[1441]

Sediment Toxicity Study

For this study, the copermittees must develop and submit to the Regional Board by April 1, 2012, a workplan to investigate the toxicity of sediment in streams and its potential impact on benthic macroinvertebrate Index of Biotic Integrity (IBI) scores. The study must be implemented in conjunction with the stream assessment monitoring in Attachment E. The study must include the following elements:

- At least four stream assessment locations must be sampled, including one reference site and one mass loading site. The selection of sites must be done with consideration of subjectivity of receiving waters to discharges from residential and agricultural land uses.
- At a minimum, sampling must occur once per year at each site for at least two years.
- At a minimum, sediment toxicity analysis must include the measurement of metals, pyrethroids, and organochlorine pesticides. The analysis must include estimates of bioavailability based upon sediment grain size, organic carbon, and receiving water temperature at the sampling site. Acute and chronic toxicity testing must be done using *Hyalella azteca*.
- Results and a discussion must be included in the monitoring annual report including an assessment of the relationship between observed IBI scores and all variables measured.[1442]

[1439] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 400 (Fact Sheet/Technical Report, Discussion of Finding C.8.).

[1440] The test claim permit included a fifth special study but the Intermittent and Ephemeral Stream Perennial Conversion Study was not pled in the Test Claim. The claimants allege that they negotiated with the Regional Board to replace the fifth special study and part of the fourth study with a study on the impacts of LID implementation on downstream flows to Camp Pendleton and potential impacts on beneficial uses. Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 80 (Test Claim narrative).

[1441] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 314-318 (test claim permit, Attachment E, Section II.E.).

[1442] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 314 (test claim permit, Attachment E, Section II.E.2.).

As the Fact Sheet explains:

> This study has been added to the Monitoring and Reporting requirements to assess the quality of stream sediments and possible contamination due to runoff from the MS4. Toxicity tests focusing on aqueous toxicity may not account for the full toxicity of receiving waters if constituents, such as heavy metals or pesticides, are bound to sediments. Southern California studies have shown that stream sediments can exhibit significant levels of toxic metals and pesticides, including pyrethroids. Additionally, the Copermittees have identified the presence of aqueous toxicity at both mass loading stations due to pyrethroid pesticides, but their presence in sediments is unknown.[1443]

Trash and Litter Investigation

For this study, the copermittees must develop and submit to the Regional Board by September 1, 2012, a workplan to assess trash (including litter[1444]) as a pollutant within receiving waters on a watershed based scale. The copermittees must select a lead copermittee. The study must include the following elements:

- The lead copermittee must identify suitable sampling locations within the Santa Margarita HU [Hydrologic Unit].
- Trash at each location must be monitored a minimum of twice during the wet season following a qualified monitoring storm event[1445] and twice during the dry season.
- The lead copermittee must use the "Final Monitoring Workplan for the Assessment of Trash in San Diego County Watersheds" and "A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region" to develop a monitoring protocol.
- Results and discussion must be included in the monitoring annual report and must, at a minimum, include source identification, an evaluation of BMPs for trash reduction and prevention, and a description of any BMPs implemented in response to study results.[1446]

As the Fact Sheet explains:

[1443] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 561 (Fact Sheet/Technical Report), footnotes omitted.

[1444] Government Code section 68055.1(g) defines litter as "all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing."

[1445] A qualified monitoring storm event is defined as a minimum of 0.1 inches of precipitation preceded by 72 hours of dry weather.

[1446] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 315 (test claim permit, Attachment E, Section II.E.3.).

> The objective of the study is to evaluate the quantity, type, and source(s) of trash and litter in receiving waters (see Finding E.12 and Discussion regarding regional efforts). Although trash can impair beneficial uses, the amount and type of trash discharged into receiving waters from the Copermittee(s) MS4 is unknown. Thus, the Copermittees have largely been unable to assess the effectiveness of their BMPs that target trash as a pollutant.[1447]

Agricultural, Federal and Tribal Input Study

For this study, the copermittees must develop and submit to the Regional Board by September 1, 2012, a workplan to investigate the water quality of agricultural, federal, and tribal runoff that is discharged into their MS4. The study must include the following elements:

- The copermittees must identify a representative number of sampling stations within their MS4 that receive discharges of agricultural, federal, and tribal runoff that has not co-mingled with any other source. At least one station from each category must be identified.
- One storm event must be monitored at each sampling location each year for at least two years.
- At a minimum, analysis must include those constituents listed in Table 1[1448] of the MRP. Grab samples may be utilized, though composite samples are preferred. The copermittees must also measure or estimate flow rates and volumes of discharges into the MS4.
- Results and discussion from the study must be included in the monitoring annual report.[1449]

As the Fact Sheet explains:

> The objective of the study is to determine the type, quantity and estimated loading of pollutants in these discharges. In the ROWD, the Copermittees specifically state their concern regarding the quality of storm water which is discharged into their MS4 from such areas, and state that these discharges may affect overall

[1447] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 561 (Fact Sheet/Technical Report).

[1448] Analytical testing on: Conventionals, Nutrients, Hydrocarbons: Total Dissolved Solids, Total Suspended Solids, Turbidity, Total Hardness, pH, Specific Conductance, Temperature, Dissolved Oxygen, Total Phosphorus, Dissolved Phosphorus, Nitrite, Nitrate, Total Kjeldahl Nitrogen, Ammonia, 5-day Biological Oxygen Demand, Chemical Oxygen Demand, Total Organic Carbon, Dissolved Organic Carbon, Methylene Blue Active Substances, Oil and Grease, Sulfate: Pesticides: Diazinon, Chlorpyrifos, Malathion, Carbamates, Pyrethroids; Metals (Total and Dissolved): Arsenic, Cadmium, Total Chromium, Hexavalent Chromium, Copper, Lead, Iron, Manganese, Nickel, Selenium, Zinc, Mercury, Silver, Thallium; Bacteriological (mass loading): E.coli, Fecal Coliform, Enterococcus.

[1449] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 315-316 (test claim permit, Attachment E, Section II.E.4.).

> water quality, primarily in the Murrieta and Temecula Creek watersheds. However, no data, information, or analyses were presented or identified on the level of pollutants in such flows into their MS4.[1450]

MS4 and Receiving Water Maintenance Study

For this study, the copermittees must develop and submit to the Regional Board by April 1, 2012, a workplan to investigate receiving waters that are considered part of the MS4 and that are subject to continual vegetative clearance activities, for example, mowing. The copermittees must assess the effects of the vegetation removal activities and water quality, including, but not limited to, modification of biogeochemical functions, in-stream temperatures, receiving water bed and bank erosion potential, and sediment transport. The study must include the following elements:

- The copermittees must identify suitable sampling locations, including at least one reference that is not subject to maintenance activities.
- At a minimum, the copermittees must monitor pre- and post-maintenance activities for indicator bacteria, turbidity, temperature, dissolved oxygen and nutrients (nitrite, nitrate, total Kjeldahl nitrogen, ammonia and total phosphorous). The copermittees must also measure or estimate flow rates and volumes.
- Results and discussion from the study must be included in the annual monitoring report including the relevance of findings to CWA section 303(d) listed impaired waters.[1451]

As the Fact Sheet explains:

> The objective of the study is to determine if there are short-term or long-term in-stream water quality impacts from maintenance activities and to assess if the activities exacerbate the impairment of receiving waters 303(d) listed as impaired wholly or partially from MS4 discharges. Receiving waters within the Copermittees jurisdiction have been routinely cleared of vegetation by the Copermittees as part of their MS4 maintenance programs without mitigation efforts. The in-stream modification of vegetation may result in changes in water quality and Beneficial Uses from changes in nutrient cycling, the storage of organic matter, infiltration, flow attenuation, temperature and erosion potential. The relative contribution, if any, of maintenance activities to CWA 303(d) water quality impairments in [sic] unknown. The program is also expected to work in conjunction with other permit requirements of the Order. For example, the Copermittees may choose to utilize study results when implementing the HMP, LID, and retrofitting programs.[1452]

[1450] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 561-562 (Fact Sheet/Technical Report), footnotes omitted.

[1451] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 316 (test claim permit, Attachment E, Section II.E.5.).

[1452] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 562 (Fact Sheet/Technical Report), footnotes omitted.

While the inclusion of a special study in a permit is not new, the four special studies included in the test claim permit cover completely different subject matters and are required in addition to the monitoring requirements. The Water Boards admit that the test claim permit "contains new or modified requirements . . ."[1453] and that the focus of these studies is directed at different and higher priority water quality issues.[1454]

Therefore, the Commission finds that the activities described above are new requirements imposed on the claimants.

ii. The new activities in sections II.E.2.-5. of Attachment E of the test claim permit are mandated by the state because the Regional Board exercised discretion when requiring these activities and there is no evidence that the new required activities are the only means by which the federal MEP standard can be met.

The claimants contend that although federal law requires NPDES permittees to conduct a monitoring program and operators of a large or medium MS4 systems to submit an annual report, there is no authority in federal law for the RWQCB to require the special studies set forth in the test claim permit. The claimants conclude that the studies represent the intent of the Regional Board to shift its investigatory responsibility to the claimants and this shifting of state law-based responsibility creates a state mandate.[1455]

The Water Boards contend that the special studies do not mandate new programs or higher levels of service:

> Instead, the Special Studies requirements were targeted at areas of copermittee program deficiencies and were designed to help ensure Copermittees achieve the required federal standard of controlling pollutants in storm water discharges to the MEP or the separate federal requirement of effectively prohibiting non-storm water discharges into the MS4. They primarily are intended to require the Copermittees to collect monitoring data as part of the federally required monitoring program that can be used either to demonstrate that their jurisdictional runoff management programs are meeting the federal standards or that will inform changes needed to improve their programs so that the standards are met. Although they have different substantive focuses than the 2004 Permit special studies, the[y] do not amount to establishment of new programs or mandates to perform higher levels of service.[1456]

[1453] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 56-57, citing Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 422 (Fact Sheet/Technical Report, Finding D.1.c.).

[1454] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 60.

[1455] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 77-78 (Test Claim narrative), citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal. 5th 749, 771.

[1456] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 54.

The Water Boards assert that the special studies are necessary for the claimants to reach the MEP standard. The special studies "represent 'prescribed conditions ... on data and information collection' (see 122.26(d)(2))."[1457] Federal law requires the claimants to conduct a comprehensive monitoring program and to report on the identification of water quality improvements or degradation.[1458] The Water Boards assert that the overarching federal basis for the monitoring program, which includes the special studies, is to "assess the condition of receiving waters, monitor pollutants in storm and non-storm water effluent from the MS4, and conduct Special Studies to address conditions of concern."[1459]

The Water Boards further contend that the Regional Board found that the test claim permit "contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in storm water runoff to the MEP and achieve water quality standards. . . . Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other San Diego Water Board compliance assessment activities."[1460] The Regional Board also found, "Each of the components of the MRP is necessary to meet the objectives listed above" which are: assessing compliance with the permit; measuring and improving runoff management programs; assessing the chemical, physical, and biological impacts from MS4 discharges; characterizing storm water discharges; identifying sources of pollutants; prioritizing drainage and sub-drainage areas; detecting and eliminating illicit discharges and illicit connections to the MS4; assessing receiving waters; and providing information to implement BMP improvements.[1461]

The Commission finds that the requirement to conduct the four new special studies is mandated by the state.

In the 2016 decision in *Department of Finance v. Commission on State Mandates*, the California Supreme Court analyzed an NPDES stormwater permit issued by the Los Angeles Regional Water Board to determine whether the conditions (placing trash receptacles at transit stops and inspecting construction and industrial sites) were mandated by the state or by federal law.[1462] The court explained the issue as follows.

> As noted, reimbursement is not required if the statute or executive order imposes "a requirement that is mandated by a federal law or regulation," unless the state

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[1457] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 55.

[1458] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 55.

[1459] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 56, citing test claim permit, Attachment E, Section II.E.

[1460] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 56-57 citing Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 422 (Fact Sheet/Technical Report, Finding D.1.c.).

[1461] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 56-57, citing Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 551 (Fact Sheet/Technical Report).

[1462] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749.

> mandate imposes costs that exceed the federal mandate. (Gov. Code, § 17556, subd. (c).) The question here is how to apply that exception when federal law requires a local agency to obtain a permit, authorizes the state to issue the permit, and provides the state discretion in determining which conditions are necessary to achieve a general standard established by federal law, and when state law allows the imposition of conditions that exceed the federal standard. Previous decisions of this court and the Courts of Appeal provide guidance.[1463]

After reviewing the prior court decisions in *City of Sacramento v. State of California*, *Hayes v. Commission on State Mandates*, and *County of Los Angeles v. Commission on State Mandates*,[1464] the court identified the following test to determine whether the conditions imposed by the stormwater permit were mandated by the state or the federal government:

> If federal law compels the state to impose, or itself imposes, a requirement, that requirement is a federal mandate. On the other hand, if federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a "true choice," the requirement is not federally mandated.[1465]

The court found that the trash receptacle and inspection requirements at issue in the case were mandated by the state and not by federal law because these requirements were not expressly required by federal law; federal regulations (in 40 C.F.R. § 122.26(d)(2)(iv)) give the Regional Board discretion to determine which specific controls are necessary to meet the MEP standard; and even though the US EPA regulations contemplated some form of inspections "does not mean that federal law required the scope and detail of inspections required by the Permit conditions."[1466] The court also disagreed that the Commission should have deferred to the Regional Board's conclusion that the challenged requirements were federally mandated. That determination is largely a question of law. Had the Regional Board found, when imposing the disputed permit conditions, that those conditions were the *only means* by which the maximum extent practicable standard could be implemented, deference to the board's expertise in reaching that finding would be appropriate."[1467]

The Third District Court of Appeal has also explained that "except where a regional board finds the conditions are the *only means* by which the [federal] 'maximum extent practicable' standard can be met, the State exercises a true choice by determining what controls are necessary to meet

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[1463] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 763.

[1464] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 763-765, citing *City of Sacramento v. State of California* (1990) 50 Cal.3d 51; *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564; *County of Los Angeles v. Commission on State Mandates* (1995) 32 Cal.App.4th 805.

[1465] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 765.

[1466] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 767-772.

[1467] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 768.

the standard."[1468] "That the San Diego Regional Board found the permit requirements were 'necessary' to meet the standard establishes only that the San Diego Regional Board exercised its discretion."[1469]

In this case, federal law requires the claimants to have a monitoring program.[1470] The MRP requirements in the test claim permit include a detailed monitoring program for stormwater and non-stormwater discharges with action levels for certain pollutants, as well as the new special studies described above.[1471] Thus, the special studies are required to be conducted in addition to the monitoring. The Water Boards argue that the requirements to conduct the special studies are necessary to meet the federal requirement to reduce the discharge of pollutants in stormwater runoff to the MEP and achieve water quality standards.[1472] Federal law, however, gives the Water Boards discretion to determine what controls are necessary to meet the MEP standard, and does not require any specific activities, and does not require dischargers to conduct special studies. Moreover, there is no evidence in the record that the new required activities are the *only* means by which the federal MEP standard can be met.

Accordingly, the Commission finds that the new activities required by Sections II.E.2.-5. to conduct the four special studies are mandated by the state.

iii. Sections II.E.2.-5., of Attachment E of the test claim permit impose a new program or higher level of service because the requirements are uniquely imposed on local government and provide a governmental service to the public.

Article XIII B, section 6 requires reimbursement whenever the Legislature or any state agency mandates a new program or higher level of service that results in costs mandated by the state. If the requirements are new, the analysis continues to determine if the requirements constitute a "program" within the meaning of article XIII B, section 6, which is defined as one that carries out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all

[1468] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682, citing *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 768, emphasis added.

[1469] *Department of Finance v. Commission on State Mandates* (2017) 18 Cal.App.5th 661, 682.

[1470] Code of Federal Regulations, title 40, section 122.26(d)(2)(iii)(D).

[1471] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 298-311 (test claim permit, Attachment E.).

[1472] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 56-57.

residents and entities in the state.[1473] Only one of these alternatives is required to establish a new program or higher level of service.[1474]

Recently, the Second District Court of Appeal found that the trash receptacle and inspection requirements imposed in the NPDES stormwater permit issued by the Los Angeles Regional Water Quality Control Board carried out the governmental function of providing a service to the public by reducing pollution entering stormwater drainage systems and receiving waters and imposed unique requirements on local government and, thus, constituted a new program or higher level of service.[1475]

Similarly here, the new requirements to conduct four special studies are expressly directed toward the local agency copermittees and are therefore uniquely imposed on local government. In addition, the new requirements provide a governmental service to the public by studying specific water quality issues and gathering data on unknown pollutant issues that may be impairing water quality standards.[1476]

Accordingly, the requirements in Sections II.E.2.-5. of Attachment E of the test claim permit mandate a new program or higher level of service within the meaning of article XIII B, section 6 of the California Constitution:

12. Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the Test Claim Permit, Which Address Prevention of Discharges, Does Not Impose Any New Requirements and Therefore, Does Not Mandate a New Program or Higher Level of Service.

The claimants pled particular language that appears under several components of Section F. of the test claim permit addressing development, construction, municipal facilities, industrial/commercial facilities, residential areas, retrofitting and education, in Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6, which requires the permittees to ensure that non-storm water

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[1473] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56.

[1474] *Carmel Valley Fire Protection Dist. v. State of California* (1987) 190 Cal.App.3d 521, 537; *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 557.

[1475] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 556-561.

[1476] The Sediment Toxicity Study assesses "the quality of stream sediments and possible contamination due to runoff from the MS4" because heavy metals and pesticides are not likely to be found by the test claim permit's water monitoring requirements. Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 561, 562 (Fact Sheet/Technical Report), The Trash and Litter Investigation assesses "the quantity, type, and source(s) of trash and litter in receiving waters" because there is no data on trash and litter which can impair the beneficial uses of receiving waters; The Agricultural, Federal and Tribal Input Study assesses "the type, quantity and estimated loading of pollutants in these discharges" because there is no data on the impact these non-copermittee discharges on the MS4; and the MS4 and Receiving Water Maintenance Study determines "if there are short-term or long-term in-stream water quality impacts from maintenance activities and to assess if the activities exacerbate the impairment of receiving waters 303(d) listed as impaired wholly or partially from MS4 discharges."

discharges are effectively prohibited, and that they "prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards."[1477]

The claimants contend that this language imposes new requirements to develop and implement the components in Section F. "in a manner that guarantees that those programs will prevent the discharge of pollutants at a level that could cause or contribute to a violation of any water quality standard as well as to prevent illicit discharges to the MS4," and that such requirements go beyond the MEP standard of federal law and constitute a new program or higher level of service.[1478] The claimants further allege that the requirements now subject them to sanctions, including civil penalties and injunctive relief, for the failure to achieve water quality standards.[1479]

The Commission finds that the requirements at issue in Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the test claim permit are not new and do not mandate a new program or higher level of service.

a. Background

i. Federal law requires that permits include conditions to achieve water quality standards and objectives and that permittees effectively prohibit non-stormwater discharges into the MS4.

Under federal law, NPDES permits must include conditions to achieve water quality standards and objectives.[1480] The CWA states, "In no event may such a permit to discharge into waters be renewed, reissued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 1313 of this title applicable to such waters"[1481] Federal regulations state that NPDES permits must include "any requirements in addition to or more stringent than promulgated effluent limitations guidelines . . . necessary to . . . [a]chieve water quality standards established under section 303 of the CWA."[1482] Federal law also requires that if a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criteria, the Regional Board must develop permit limits as necessary to meet water quality standards.[1483] In addition, permittees are required to take all reasonable steps to

[1477] For example, see Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 208 (test claim permit, Section F.).

[1478] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 83 (Test Claim narrative).

[1479] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 81 (Test Claim narrative).

[1480] Code of Federal Regulations, title 40, section 122.44(d)(1).

[1481] United States Code, title 33, section 1342(o)(3) (Public Law 100-4).

[1482] Code of Federal Regulations, title 40, section 122.44(d)(1).

[1483] Code of Federal Regulations, title 40, section 122.44(d)(1).

minimize or prevent any discharge or disposal in violation of a permit, which has a reasonable likelihood of adversely affecting human health or the environment.[1484]

Federal law also requires that permits adopted by the Regional Board for discharges from MS4s "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers."[1485] To "effectively prohibit" non-stormwater discharges requires the implementation of a program to detect and remove illicit discharges, which under federal law shall contain the following:

- A description of a program, including inspections, to implement and enforce an ordinance to prevent illicit non-stormwater discharges to the MS4;[1486]
- A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations to be evaluated;[1487]
- A description of procedures to investigate portions of the MS4 that, based on field screening or other information, indicate a reasonable potential for containing illicit discharges or other sources of non-stormwater pollution.[1488]
- A description of procedures to prevent, contain, and respond to spills that may discharge into the MS4;
- A description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from MS4s;
- A description of educational activities, public information activities, and other activities to facilitate the proper management and disposal of oil and toxic materials; and
- A description of controls to limit infiltration of seepage from municipal sanitary sewers to MS4s where necessary.[1489]

Federal law also requires that a permittee have legal authority established by statute, ordinance, or a series of contracts that enables the permittee to perform the following activities to ensure compliance with water quality standards:

- Control the contribution of pollutants to the MS4 by stormwater discharges associated with industrial activity and the quality of stormwater discharged from sites of industrial activity.
- Prohibit illicit discharges to the MS4.

[1484] Code of Federal Regulations, title 40, section 122.41(d).

[1485] United States Code, title 33, section 1342(p)(3)(B)(ii) (Public Law 100-4).

[1486] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1).

[1487] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(2).

[1488] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(3).

[1489] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B).

- Control the discharge to the MS4 of spills, dumping, or disposal of materials other than stormwater.
- Control through interagency agreements the contribution of pollutants from one portion of the MS4 to another portion of the MS4.
- Require compliance with conditions in ordinances, permits, contracts or orders.
- Carry out all inspections, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions, including the prohibition on illicit discharges to the MS4.[1490]

Finally, if a permittee fails to comply with these federal requirements, or otherwise violates the conditions in an NPDES permit, it may be subject to state and federal enforcement actions and private citizen lawsuits for injunctive relief and civil penalties.[1491] Federal regulations further state that "Any permit noncompliance constitutes a violation of the CWA and is grounds for enforcement action."[1492]

ii. The prior permit required the permittees to comply with prohibitions and receiving water limitations; and to establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from their MS4s.

The prior permit required the permittees to comply with the following prohibitions and receiving water limitations:

- Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in California Water Code section 13050), in waters of the state are prohibited.
- Discharges from MS4s that cause or contribute to exceedances of water quality objectives for surface water or groundwater are prohibited.
- Discharges from MS4s containing pollutants which have not been reduced to the MEP are prohibited.
- Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses of receiving waters) are prohibited.[1493]

[1490] Code of Federal Regulations, title 40, section 122.26(d)(2).

[1491] United States Code, title 33, sections 1319, 1342(b)(7), 1365(a). See also, Water Code sections 13385 and 13387 (potential criminal penalties).

[1492] Code of Federal Regulations, title 40, section 122.41.

[1493] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572-573, (Order R9-2004-0001, Section A.1.-3.).

Discharges from MS4s are also subject to the Basin Plan prohibitions listed in Attachment A to the prior permit.[1494]

The prior permit also required the permittees to effectively prohibit all types of non-stormwater discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit or the discharge category is not prohibited under this permit.[1495]

In addition, upon a finding by a permittee or the Regional Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the prior permit required the permittee to provide notice and a report to the Regional Board on the current BMPs and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The permittee was also required to revise its Storm Water Management Plan (SWMP) and monitoring program to incorporate the approved modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.[1496]

The prior permit further required the permittees to "establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means."[1497] Specifically, the permittee's legal authority must include the ability to control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4, prohibit all identified illicit discharges not otherwise allowed; prohibit and eliminate illicit connections to the MS4; control discharges of materials other than stormwater to the MS4; require compliance with the permit, contracts, and the permittee's ordinances; require the use of BMPS; carry out inspections, surveillance, and monitoring; use enforcement mechanisms; and control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements.[1498]

The prior permit requires the permittees to reduce pollutants in urban runoff to the maximum extent practicable and to comply with the permit and all relevant ordinances as part of the SWMP generally and under the following components: development planning, Standard Urban Storm Water Mitigation Plans (SUSMPs) regarding priority development projects, construction, municipal, commercial/industrial, residential, and education.[1499]

[1494] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section A.1.-3.; Attachment A, Basin Plan Prohibitions).

[1495] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 572 (Order R9-2004-0001, Section B.1.).

[1496] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 573 (Order R9-2004-0001, Section C.2.).

[1497] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 574 (Order R9-2004-0001, Section D.1.).

[1498] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 574-575 (Order R9-2004-0001, Section D.1.).

[1499] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 575, 577-593 (Order R9-2004-0001, Section E.1.).

The Fact Sheet to the prior permit explains that the iterative process (reducing pollutants to the MEP using BMPs) does not shield a permittee from the independent requirement to comply with water quality objectives as follows:

> . . . while implementation of the iterative BMP process is a means to achieve compliance with water quality objectives, it does not shield the discharger from enforcement actions for continued non-compliance with water quality objectives. Consistent with EPA guidance (EPA, 1998a and 1998b) regardless of whether or not an iterative process is being implemented, discharges that cause or contribute to an exceedance of water quality objectives are in violation of Order R9-2004-001.[1500]

iii. Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the test claim permit require copermittees to prevent non-stormwater discharges and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

The test claim permit, like the prior permit, includes the same prohibitions and receiving water limitations with which the copermittees are required to comply.[1501]

The test claim permit, also like the prior permit, requires the copermittees to effectively prohibit all types of non-stormwater discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit or the discharge category is not prohibited under this permit.[1502]

Section A.3., like the prior permit, provides that, upon a finding by a copermittee or the Regional Board that that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the copermittee must provide notice and a report to the Regional Board on the current BMPs and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards and an implementation schedule. The copermittee is also required to revise its Jurisdictional Runoff Management Program (JRMP) and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.[1503] As explained by the Fact Sheet:

> The Copermittees must reduce the discharge of storm water pollutants to the MEP and ensure that their MS4 discharges do not cause or contribute to violations of water quality standards. If the Copermittees have reduced storm water pollutant discharges to the MEP, but their discharges are still causing or contributing to violations of water quality standards, the Order provides a clear and detailed

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[1500] Exhibit X (34), Order R9-2004-0001, Fact Sheet/Technical Report, page 34.

[1501] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 199, 200 (test claim permit, Sections A.1.-3.).

[1502] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 200 (test claim permit, Section B.1.).

[1503] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 199-200 (test claim permit, Section A.3.a.).

process for the Copermittees to follow. This process is often referred to as the "iterative process" and can be found at section A.3. The language of section A.3 is prescribed by the State Water Board and is included in MS4 permits statewide. Section A.3 essentially requires additional BMPs to be implemented until MS4 storm water discharges no longer cause or contribute to a violation of water quality standards.[1504]

The test claim permit, like the prior permit, requires the copermittees to "establish, maintain, and enforce adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means."[1505]

The claimants, however, focus on Section F. of test claim permit, which addresses the Jurisdictional Runoff Management Program (JRMP). As expressly stated in Section F., each updated JRMP "must . . . reduce the discharge of storm water pollutants from the MS4 to the MEP, *effectively prohibit non-storm water discharges, and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards*" for the following components of the program: development planning, Standard Stormwater Mitigation Plans (SSMP) regarding priority development projects, construction, municipal, commercial/industrial, residential, retrofitting, and education.[1506] The claimants contend that the requirement to effectively prohibit non-storm water discharges, and to prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards is new and results in a reimbursable state-mandated program.[1507] These requirements are stated as follows, with the italicized text alleged by the claimant to create new reimbursable state mandates:

- Each updated JRMP must meet the requirements of Section F. of this Order, reduce the discharge of stormwater pollutants from the MS4 to the MEP, *effectively prohibit non-stormwater discharges, and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards*.[1508]
- Each copermittee must implement a program which meets the requirements of this section and (1) reduces Development Project discharges of storm water pollutants from the MS4 to the MEP; *(2) prevents Development Project discharges from the MS4 from causing or contributing to a violation of water quality standards; (3) prevents illicit discharges into the MS4* and (4) manages increases in runoff discharge rates and

[1504] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 471 (Fact Sheet/Technical Report).

[1505] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 206-207 (test claim permit, Section E.1.).

[1506] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 208 (test claim permit, Section F.), emphasis added.

[1507] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 83 (Test Claim narrative).

[1508] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 208 (test claim permit, Section F.).

durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.[1509]

- The SSMP must meet the requirements of Section F.1.d. of this Order to (1) reduce Priority Development Project discharges of storm water pollutants from the MS4 to the MEP, and *(2) prevent Priority Development Project runoff discharges from the MS4 from causing or contributing to a violation of water quality standards*.[1510]
- Each copermittee must implement a construction program which meets the requirements of this section, *prevents illicit discharges into the MS4*, implements and maintains structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites to the MS4, reduces construction site discharges of stormwater pollutants from the MS4 to the MEP, *and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards*.[1511]
- Each copermittee must implement a municipal program for the copermittee's areas and activities that meets the requirements of this section, *prevents illicit discharges into the MS4*, reduces municipal discharges of stormwater pollutants from the MS4 to the MEP, *and prevents municipal discharges from the MS4 from causing or contributing to a violation of water quality standards*.[1512]
- Each copermittee must implement a commercial/industrial program that meets the requirements of this section, *prevents illicit discharges into the MS4*, reduces commercial/industrial discharges of stormwater pollutants from the MS4 to the MEP, *and prevents commercial/industrial discharges from the MS4 from causing or contributing to a violation of water quality standards*.[1513]
- Each copermittee must implement a residential program that meets the requirements of this section, *prevents illicit discharges into the MS4*, reduces residential discharges of stormwater pollutants from the MS4 to the MEP, *and prevents residential discharges from the MS4 from causing or contributing to a violation of water quality standards*.[1514]

[1509] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 208 (test claim permit, Section F.1.).

[1510] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 212 (test claim permit, Section F.1.d.).

[1511] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 229 (test claim permit, Section F.2.).

[1512] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 234 (test claim permit, Section F.3.a.).

[1513] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 239 (test claim permit, Section F.3.b.).

[1514] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 245 (test claim permit, Section F.3.c.).

- Each copermittee must develop and implement a retrofitting program that meets the requirements of this section. The goals of the existing development retrofitting program are to address the impacts of existing development through retrofit projects that reduce impacts from hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of stormwater pollutants from the MS4 to the MEP, and *prevent discharges from the MS4 from causing or contributing to a violation of water quality standards*.[1515]
- Each copermittee must implement education programs to (1) measurably increase the knowledge regarding MS4s, impacts of runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutants in stormwater discharges and *eliminate prohibited non-stormwater discharges to MS4s and the environment*.[1516]

b. Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the Test Claim Permit Are Not New and, Thus, Do Not Mandate a New Program or Higher Level of Service.

i. The arguments raised by the parties

The claimants contend that the italicized language above requires them to develop and implement the components in Section F. "in a manner that guarantees that those programs will prevent the discharge of pollutants at a level that could cause or contribute to a violation of any water quality standard as well as to prevent illicit discharges to the MS4. Such requirements went beyond federal law and regulation, including the MEP standard, and constituted a new and/or higher level of service."[1517] The claimants allege that the requirements now subject them to sanctions, including civil penalties and injunctive relief, for the programs' failure to achieve water quality standards.[1518]

The claimants agree that federal law requires the claimants to ensure that they "effectively prohibit non-stormwater discharges into the storm sewers" and to ensure that discharges of pollutants from MS4s are reduced to the "maximum extent practicable" noting that these are two separate requirements: the prohibition of non-stormwater discharges *into* the MS4 and the reduction of pollutants discharged *from* the MS4 to the MEP.[1519] However, the claimants contend that the test claim permit requirements exceed federal law in two ways:

[1515] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 247 (test claim permit, Section F.3.d.).

[1516] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 252 (test claim permit, Section F.6.).

[1517] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 83 (Test Claim narrative).

[1518] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 81 (Test Claim narrative).

[1519] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 83 (Test Claim narrative, citing United States Code, title 33, section 1342(p)(3)(B)(ii)-(iii)).

> First, by requiring the "prevention" of non-stormwater discharges into the MS4, the Copermittees were required to go beyond merely "effectively prohibiting" such discharges. Second, with respect to ensuring the non-violation of water quality standards without regard to the MEP standard, the RWQCB was requiring a compliance standard not required of municipalities under federal law.[1520]

The claimants also contend that the federal regulations do not require the absolute achievement of water quality standards to comply with a permit, citing federal regulations requiring reduction of the discharge of pollutants from MS4s. The claimants conclude that the "regulatory focus is on reducing pollutants from MS4 discharges, not on ensuring that such discharges do not cause or contribute to a violation of water quality standards."[1521]

In addition, the claimants contend that the Regional Board was not authorized to include such language in the test claim permit stating that the Regional Board relied on Code of Federal Regulations, title 40, section 122.44(d)(1)(i), which requires permits to include limitations which "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."[1522] The claimants argue that that regulation is inapplicable to MS4 permits relying on the United States Court of Appeals for the Ninth Circuit case *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159:

> Under the holding in *Defenders of Wildlife, supra,* this regulation does not apply to MS4 permits, which operate under the MEP standard and not the requirement for strict compliance with water quality standards. Moreover, 40 CFR § 122.44 provides that the "following requirements" (including § 122.44(d)(1)(i)) apply only "when applicable." Under *Defenders of Wildlife,* the requirements of 40 CFR § 122.44(d)(1)(i) are, as a matter of law, not applicable to an MS4 permit such as the 2010 Permit, and do not provide authority to the RWQCB. *See also* 40 CFR § 122.44(k)(2), which authorizes the use of BMPs to "control or abate the discharge of pollutants when . . . authorized under section 402(p) [the provision relating to MS4 permits] of the CWA for the control of storm water discharges."
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> *See also Tualatin River Keepers, et al. v. Oregon Department of Environmental Quality* (2010) 235 Ore. App. 132*,* where the court considered whether wasteload allocations from adopted TMDLs were required to be enforced as strict numeric effluent limits within a municipal NPDES permit. Petitioners argued that the Oregon Department of Environmental Quality had erred by issuing a permit that did not "specify wasteload allocations in the form of numeric effluent limits." *Id*.

[1520] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 83 (Test Claim narrative), citing *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1165.

[1521] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 83-85 (Test Claim narrative).

[1522] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 85-86 (Test Claim narrative).

> at 137. The Oregon court disagreed, finding that under the CWA, best management practices were considered to be a "type of effluent limitation," and that such best management practices were authorized to be used pursuant to the CWA, section 33 U.S.C. § 1342(p) as a means of controlling "storm water discharges." *Id*. at 141-42, citing 33 U.S.C. § 1342(p) and 40 CFR § 122.44(k)(2)-(3). This case demonstrates further that requirements for NPDES permits to meet water quality standards must, in the case of MS4 permits, be addressed through BMPs, not absolute adherence to such standards.[1523]

Moreover, the claimants contend that the requirements are not practicable, as the power to actually reduce the discharge of pollutants in runoff to the level required by the test claim permit is, with the exception of municipal facilities, in the hands of and subject to the actions or inactions of third parties (developers, commercial/industrial site operators or residential homeowners). The claimants acknowledge that they can implement programs to enforce requirements upon those third parties within their jurisdiction, but the claimants cannot guarantee the third parties' compliance as the variability of stormwater and urban runoff discharges makes it nearly impossible to assure compliance with all water quality standards at all times.[1524]

Finally, the claimants contend that nothing in the prior permit required the claimants to ensure that discharges from construction, municipal, industrial, commercial or residential sources would not cause or contribute to a violation of water quality standards nor did the prior permit require the educational component to so assure.[1525]

The Water Boards contend that these provisions do not impose a reimbursable state-mandated program under article XIII B, section 6 of the California Constitution. The Water Boards contend that Sections A.1., A.2., and A.3. in the Prohibitions and Receiving Water Limitations Provisions of the test claim permit implement the same language that the State Water Board directed in a 1999 precedential order[1526] that regional water boards are required to use in all MS4 permits.[1527]

> The precedential "receiving water limitations language" generally requires that municipal storm water discharges shall not cause or contribute to exceedances of water quality objectives in the receiving waters. The language was initially developed by U.S. EPA after it objected to receiving water limitations in two

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[1523] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 85-86 (Test Claim narrative).

[1524] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 86 (Test Claim narrative), citing Tab 5, Uhley Declaration Regarding Additional Factual Issues, Paragraphs 11-12.

[1525] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 86-87 (Test Claim narrative).

[1526] Exhibit X (43), State Water Resources Control Board, Order WQ 99-05, https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/1999/wq1999_05.pdf (accessed on March 25, 2022).

[1527] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 61.

> regional water board permits (including the 1998 MS4 Permit issued to Riverside County Copermittees) that effectively provided a safe harbor from enforcement during iterative process implementation. Since 1999, the State Water Board consistently has expected receiving water limitations in MS4 permits to be complied with through the iterative process of employing successively improved BMPs.[1528]

This receiving water limitations language has been included in all permits issued to the claimants since 1999.[1529]

The Water Boards further contend that other test claimants[1530] have made parallel arguments relying on the United States Court of Appeals for the Ninth Circuit decision in *National Resources Defense Council (NRDC)* v. *County of* Los *Angeles* (2013) 725 F.3d 1194 "for the (incorrect) proposition that the 2013 opinion created a strict liability scheme where none existed previously. Orange County Claimants in that matter therefore asserted that the receiving water limitations language in the San Diego Regional Permit exceeds federal law by newly requiring 'strict liability.'"[1531] The State Water Board explained the impacts of the *NRDC* case in a 2015 Water Quality order addressing the most recent Los Angeles MS4 Permit as follows:

> The lack of a safe harbor in the iterative process of the 2001 Los Angeles Order was again acknowledged in 2011 and 2013, this time by the Ninth Circuit Court of Appeal. In these instances, the Ninth Circuit was considering a citizen suit brought by the Natural Resources Defense Council against the City of Los Angeles and the Los Angeles County Flood Control District for alleged violations of the receiving water limitations of that order. The Ninth Circuit held that, as the receiving water limitations of the 2001 Los Angeles MS4 Order (and accordingly, the precedential language in State Water Board Order WQ 99-05) was drafted, engagement in the iterative process does not excuse liability for violations of water quality standards.[fn] The California Court of Appeal has come to the same conclusion in interpreting similar receiving water limitations provisions in MS4 Orders issued by the San Diego Regional Water Quality Control Board in 2001 and the Santa Ana Regional Water Quality Control Board in 2002[fn].[1532]

[1528] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 61.

[1529] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 62.

[1530] *San Diego Region Order No. R9-2015-0100 and Order No. R9-2015-0001, Test Claim 15-TC-02.*

[1531] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 62.

[1532] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 62, quoting State Water Board Order WQ 2015-0075, page 223, citing *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2011) 673 F.3d. 880, rev'd on other grounds sub nom. *Los Angeles County Flood Control Dist. v. Natural Resources Defense Council* (2013) 133 S.Ct. 710, mod. by *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2013) 725 F.3d 1194, cert. den. *Los Angeles County Flood Control Dist. v. Natural Resources Defense Council* (2014) 134 S.Ct. 2135; *Building Industry Assn. of San Diego County* (2004) 124

The decisions of state and federal courts on this issue reflect the Water Boards' long-standing view that the iterative process does not provide a safe harbor to MS4 dischargers. "'When a discharger is shown to be causing or contributing to an exceedance of water quality standards, that discharger is in violation of the permit's receiving water limitations and potentially subject to enforcement by the water boards or through a citizen suit, regardless of whether or not the discharger is actively engaged in the iterative process.'"[1533] The court's conclusion in *NRDC* that receiving water limitations provisions are independent from the provisions establishing the iterative process for purposes of enforcement is not new and is consistent with the Water Boards' historical interpretation.[1534] Also, the receiving water limitations provisions are not a higher level of service as the test claim permit carries forward the language from the prior permit.[1535]

Regarding the requirement to eliminate or prevent unauthorized non-stormwater discharges, the Water Boards contend that this language implements and is required by federal law.

> Under Clean Water Act section 402(p)(3)(B)(ii), permitting agencies must ensure that permits for MS4 discharges include requirements necessary to "effectively prohibit non-stormwater discharges into the storm sewers." While "non-storm water" is not defined in the CWA or federal regulations, the federal regulations define "illicit discharge" as "any discharge to a municipal separate storm sewer that is not composed entirely of storm water and that is not covered by an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer and discharges resulting from firefighting activities)." This definition is the most closely applicable definition of "non-storm water" contained in federal law.[1536]

The implementing federal regulations also address the prevention or elimination of illicit discharges. Specifically, Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B) requires that the proposed management program "shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer." Also, Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1) requires "a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system."[1537]

Cal.App.4th 866; *City of Rancho Cucamonga v. Regional Water Quality Control Bd.* (2006) 135 Cal.App.4th 1377.

[1533] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 62-63, quoting State Water Board Order WQ 2015-0075, page 222, footnote 44.

[1534] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 63.

[1535] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 64-65.

[1536] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 65 quoting Code of Federal Regulations, title 40, section 122.26(b)(2).

[1537] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 66.

While the Water Boards are not aware of any judicial opinions interpreting "effectively," in general, the requirement to "effectively prohibit" non-stormwater discharges has been interpreted to require either the prohibition of unauthorized non-stormwater flows to the MS4 through detection and removal of illicit discharges or ensuring that operators of non-stormwater systems obtain NPDES permits for those discharges.[1538]

The Water Boards also contend that the requirement to prohibit non-stormwater discharges is neither new nor a higher level of service as similar language was included in the prior two permits. The 1998 permit, as modified in 2000, stated that, with certain listed exceptions, "permittees shall prohibit non-storm water discharges into the MS4." The prior permit, issued in 2004, stated that the claimants "shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit; or authorized in accordance with [permit provisions]." The prior permit also required the development and implementation of an illicit discharge detection and elimination program "containing measures to actively seek and eliminate illicit discharges and connections" and that claimants "shall eliminate all illicit discharges, illicit discharge sources, and illicit connections as soon as possible after detection;" and "shall implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4."[1539]

ii. Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the test claim permit are not new and do not mandate a new program or higher level of service.

As indicated above, the claimants' contend that the requirements in Section F. of the test claim permit exceed the requirements under federal law in two ways as follows:

> First, by requiring the "prevention" of non-stormwater discharges into the MS4, the Copermittees were required to go beyond merely "effectively prohibiting" such discharges. Second, with respect to ensuring the non-violation of water quality standards without regard to the MEP standard, the RWQCB was requiring a compliance standard not required of municipalities under federal law.[1540]

The Commission disagrees and finds that the provisions in Section F. of the test claim permit that require the claimant's JRMP programs to effectively prohibit non-storm water discharges and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards are *not* new and, thus, do not mandate a new program or higher level of service.

Federal law has long required the claimants "to implement and enforce an ordinance, orders or similar means *to prevent illicit discharges to the municipal separate storm sewer system*"[1541] and

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[1538] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, page 66.

[1539] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 66-67 citing Order R9-2004-0001, Sections J., J.5., and J.6.

[1540] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 83 (Test Claim narrative) citing *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1165.

[1541] United States Code, title 33, section 1342(p)(3)(B)(ii), emphasis added.

to "effectively *prohibit non-stormwater discharges into the storm sewers*."[1542] Both of these limitations address discharges coming *into* the MS4. The claimants assert that the verb "prevent" is more stringent that "prohibit." However, this is not the case. Black's Law Dictionary defines prohibit as: "To prevent, preclude, or severely hinder."[1543] Merriam-Webster Dictionary defines prohibit as, "to prevent from doing something."[1544] Thus, prevention is part of, and not more stringent than, prohibition.

To "effectively prohibit" non-stormwater discharges requires the implementation of a program to detect and remove illicit discharges, which under the CWA shall contain the following:

- A description of a program, including inspections, to implement and enforce an ordinance to prevent illicit non-stormwater discharges to the MS4;[1545]
- A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations to be evaluated;[1546]
- A description of procedures to investigate portions of the MS4 that, based on field screening or other information, indicate a reasonable potential for containing illicit discharges or other sources of non-stormwater pollution.[1547]
- A description of procedures to prevent, contain, and respond to spills that may discharge into the MS4;
- A description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from MS4s;
- A description of educational activities, public information activities, and other activities to facilitate the proper management and disposal of oil and toxic materials; and
- A description of controls to limit infiltration of seepage from municipal sanitary sewers to MS4s where necessary.[1548]

As explained by the Fact Sheet, these non-stormwater requirements have been in the claimants' permits for the last 20 years:

[1542] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1) (71 FR 33639, June 12, 2006), emphasis added.

[1543] Exhibit X (1), Black's Law Dictionary (11th ed. 2019), prohibit.

[1544] Exhibit X (32), Merriam-Webster Dictionary, prohibit, https://www.merriam-webster.com/dictionary/prohibit?utm_campaign=sd&utm_medium=serp&utm_source=jsonld (accessed on April 4, 2022).

[1545] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(1).

[1546] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(2).

[1547] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B)(3).

[1548] Code of Federal Regulations, title 40, section 122.26(d)(2)(iv)(B).

> For the last 20 years, Riverside County NPDES permits for discharges of storm water have regulated non-storm water discharges from the MS4. These permits required Copermittees (dischargers) to prohibit non-storm water discharges into (thus through and from) their MS4 systems, implement a program to prevent illicit discharges, and monitor to identify illicit discharges and exempted discharges that are a source of pollution. These measures are considered Best Management Practices (BMPs), are required to be included in NPDES permits issued under section 402(p) of the CWA, and are considered by USEPA to be an interim approach to permitting non-storm water discharges from the MS4 in accordance with section 402 of the CWA and CFR 122.44(k).[1549]

Moreover, the requirement to prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards is not new. As explained in the background, federal law requires that NPDES permits include conditions to achieve water quality standards and objectives.[1550] And the following receiving water limitations and discharge prohibitions were in the prior permit, and have been in all permits since 1999 when the State Water Resources Control Board issued precedential order 99-05:

- Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in California Water Code section 13050), in waters of the state are prohibited.
- Discharges from MS4s that cause or contribute to exceedances of water quality objectives for surface water or groundwater are prohibited.
- Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses of receiving waters) are prohibited.[1551]

The State Water Board explained its ruling in a subsequent order as follows:

> We have directed, in precedential orders, that MS4 permits require discharges to be controlled so as not to cause or contribute to exceedances of water quality standards in receiving waters, [fn. omitted] but have prescribed an iterative process whereby an exceedance of a water quality standard triggers a process of BMP improvements. That iterative process involves reporting of the violation, submission of a report describing proposed improvements to BMPs expected to better meet water quality standards, and implementation of these new BMPs. [FN. omitted.] The current language of the existing receiving waters limitations

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[1549] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 413 (Fact Sheet/Technical Report).

[1550] United States Code, title 33, section 1311(b)(1)(C); United States Code, title 33, section 1342(o)(3) (Public Law 100-4); Code of Federal Regulations, title 40, sections 122.41(d), 122.44(d)(1).

[1551] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 572-573, (Order R9-2004-0001, Section A.1.-3.).

> provisions was actually developed by USEPA when it vetoed two regional water board MS4 permits that utilized a prior version of the State Water Board's receiving water limitations provisions. [FN. omitted.] In State Water Board Order WQ 99-05, we directed that all regional boards use USEPA's receiving water limitations provisions.
>
> There has been significant confusion within the regulated MS4 community regarding the relationship between the receiving water limitations and the iterative process, in part because the water boards have commonly directed dischargers to achieve compliance with water quality standards by improving control measures through the iterative process. But the iterative process, as established in our precedential orders and as generally written into MS4 permits adopted by the water boards, does not provide a "safe harbor" to MS4 dischargers. When a discharger is shown to be causing or contributing to an exceedance of water quality standards, that discharger is in violation of the permit's receiving water limitations and potentially subject to enforcement by the water boards or through a citizen suit, regardless of whether or not the discharger is actively engaged in the iterative process. [FN. omitted.][1552]

The prior permit further explained that "as operators of the MS4, the Permittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control."[1553]

Furthermore, the position that the receiving water limitations are independent from the provisions that establish the iterative process has been judicially upheld. In *Building Industry Association of San Diego County v. State Water Resources Control Board*,[1554] the Building Industry Association (BIA) challenged a 2001 NPDES stormwater permit issued by the San Diego Regional Water Quality Control Board that expressly prohibited the discharge of pollutants that "cause or contribute to exceedances of receiving water quality objectives," and that "cause or contribute to the violation of water quality standards."[1555] The permit also contained an enforcement provision that required a municipality to report any violations or exceedances of an applicable water quality standard, and describe a process for improvement and prevention of further violations.[1556] The permit in BIA then stated, "Nothing in this section shall

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[1552]Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, State Water Board Order WQ 2015-0075, pages 221-222.

[1553] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 569 (Order R9-2004-0001, Finding 20).

[1554] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866.

[1555] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 872, 876-877.

[1556] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 877.

prevent the Regional Water Board from enforcing any provision of this Order while the municipality prepares and implements the above report."[1557] BIA, concerned that the permit provisions were too stringent, impossible to satisfy, and would result in all affected municipalities being in immediate violation of the permit and subject to substantial civil penalties because they were not then complying with applicable water quality standards — contended that under federal law, the "maximum extent practicable" standard is the exclusive measure that may be applied to municipal storm sewer discharges. BIA asserted that the Regional Board may not require a municipality to comply with a state water quality standard if the required controls exceed a maximum extent practicable standard.[1558] The court, however, rejected BIA's interpretation, and held that the permit provisions requiring compliance with water quality standards are proper under federal law.[1559]

In *Natural Resources Defense Council, Inc. v. County of Los Angeles*,[1560] the permit prohibited discharges from the MS4 that cause or contribute to the violation of water quality standards and objectives contained in the Basin Plan, the California Toxics Rule, the National Toxics Rule, and other state or federal approved surface water quality plans. The permit further provided that the permittees comply with the discharge prohibitions with monitoring and timely implementation of control measures and other actions to reduce pollutants in their discharges.[1561] Between 2002 and 2008, annual monitoring reports were published, and identified 140 separate exceedances of the water quality standards for aluminum, copper, cyanide, zinc, and fecal coliform bacteria in the Los Angeles and San Gabriel Rivers.[1562] NRDC filed a lawsuit alleging that the permittees violated the CWA, and its causes of actions were based on the following assertions: that the permit incorporated the water quality limits for each receiving water body; that the monitoring stations had recorded pollutant loads in the receiving water bodies that exceed those permitted under the relevant standards; that an exceedance constitutes non-compliance with the permit and, thereby, the CWA; and that the permittees were liable for these exceedances under the CWA.[1563]

[1557] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 877.

[1558] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 872, 880, 890.

[1559] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 880; see also, *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1166-1167, which also held that the US EPA or the state administrator has the authority to determine that ensuring strict compliance with state water quality standards is necessary to control pollutants.

[1560] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194.

[1561] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199.

[1562] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1200.

[1563] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1201.

The permittees argued they could not be held liable for violating the permit and, thus, the CWA, based solely on monitoring data because the monitoring was not designed or intended to measure compliance of any permittee, which the court disagreed with based on the plain language of the permit; and the monitoring data cannot parse out precisely whose discharge contributed to any given exceedance because the monitoring stations manage samples downstream and not at the discharge points.[1564] The court disagreed with the permittees, finding that:

> . . . . the data collected at the Monitoring Stations is intended to determine whether the Permittees are in compliance with the Permit. If the District's monitoring data shows that the level of pollutants in federally protected water bodies exceeds those allowed under the Permit, then, as a matter of permit construction, the monitoring data conclusively demonstrates that the County Defendants are not "in compliance" with the Permit conditions. Thus, the County Defendants are liable for Permit violations.[1565]

The court also found that "the Clean Water Act requires every NPDES permittee to monitor its discharges into the navigable waters of the United States in a manner sufficient to determine whether it is in compliance with the relevant NPDES permit."[1566] The court stated that Congress recognized that MS4s often cover many square miles and comprise numerous, geographically scattered sources of pollution including streets, catch basins, gutters, man-made channels, and storm drains, and that for large urban areas, MS4 permitting could not be accomplished on a source-by-source basis. Thus, Congress delegated to the US EPA and the state administrators discretion to issue permits on a jurisdiction-wide basis, instead of requiring separate permits for individual discharge points. Nothing in the MS4 permitting scheme of federal law, however, relieves permittees of the obligation to monitor their compliance with the permit and the CWA.[1567] "Because the results of County Defendants' pollution monitoring conclusively demonstrate that pollution levels in the Los Angeles and San Gabriel Rivers are in excess of those allowed under the Permit, the County Defendants are *liable* for Permit violations as a

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[1564] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1204-1205.

[1565] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1206-1207.

[1566] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1207, citing United States Code, title 33, section 1342(a)(2); Code of Federal Regulations, title 40, section 122.44(i)(1); and Code of Federal Regulations, title 40, section 122.26(d)(2)(i)(F).

[1567] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1209.

matter of law."[1568] The court remanded the case to the lower courts to determine the appropriate remedy for the county's violations.[1569]

And in *City of Rancho Cucamonga v. Regional Water Quality Control Bd.,* the court noted the following:

> As it did repeatedly below, Rancho Cucamonga maintains the 2002 permit violates section 402(k) of the Clean Water Act (33 U.S.C. § 1342(k)), because the permit does not include "safe harbor" language, providing that, if a permittee is in full compliance with the terms and conditions of its permit, it cannot be found in violation of the Clean Water Act. (U.S. Public Interest v. Atlantic Salmon (1st Cir. 2003) 339 F.3d 23, 26; EPA v. State Water Resources Control Board (1976) 426 U.S. 200, 205 [48 L.Ed.2d 578, 96 S.Ct. 2022].) The trial court found there was no statutory right to a "safe harbor" provision to be included as the term of the permit. We agree.[1570]

Accordingly, Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6. of the test claim permit do not mandate a new program or higher level of service to ensure that stormwater runoff not cause or contribute to a violation of a water quality standard and "prevent" illicit discharges into the MS4.

C. <u>Pursuant to Government Code Section 17556(d), There Are No Costs Mandated by the State When the Claimants Have Regulatory Authority to Impose Fees (i.e. for LID, Hydromodification, Retrofitting, BMP Maintenance Tracking, Active/Passive Sediment Treatment, and Annual Reporting Requirements Addressing Development). Although the Remaining New State-Mandated Activities Result in Costs Mandated by the State for the County and Cities From November 10, 2010, to December 31, 2017, There are No Costs Mandated by the State for Riverside County Flood and Water Conservation District Because There Is No Evidence in the Record that the District Was Forced to Spend Their Local "Proceeds of Taxes."</u>

As indicated above, the following activities constitute mandated new programs or higher levels of service:

[1568] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1210, emphasis in original.

[1569] *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2013) 725 F.3d 1194, 1199, 1210.

[1570] *City of Rancho Cucamonga v. Regional Water Quality Control Bd.* (2006) 135 Cal.App.4th 1377, 1388.

A. <u>LID, Hydromodification, Retrofitting</u>

1. Administrative and planning activities

   a. Incorporate formalized consideration, such as thorough checklists, ordinances, and/or other means, of LID BMPs into the plan review process for priority development projects.[1571]

   b. Within two years after adoption of the permit, review local codes, policies, and ordinances and identify barriers to the implementation of LID BMPs, and take appropriate actions to remove the barriers.[1572]

   c. Develop a LID BMP waiver program to incorporate into the SSMP.[1573]

   d. Collaborate with other copermittees to develop a Hydromodification Management Plan (HMP) in accordance with sections F.1.h.1. and 2. of the test claim permit to manage increases in runoff discharge rates and durations from all priority development projects. Submit a draft HMP that has been available to public review and comment, to the Regional Board within three years of adoption of the permit. Within 180 days of receiving the Regional Board's comments on the draft HMP, submit a final HMP to the Regional Board that addresses the comments. Within 90 days of receiving a finding of adequacy from the Regional Water Board, incorporate the HMP into the SSMPs so that estimated post-project runoff discharge rates and durations do not exceed pre-development discharge rates and durations.[1574]

   e. *Except as applicable to a claimant's own municipal development (which isnot mandated by the state and does not impose a new program or higher level of service)*, develop a retrofitting program for existing developments (municipal, industrial, commercial, and residential) by identifying and creating an inventory of existing developments for retrofit, evaluating and ranking those projects for retrofit, prioritizing work plans, and encouraging retrofit projects to be designed in accordance with SSMP LID and hydromodification requirements.[1575]

[1571] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.a.ii.).

[1572] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.a.iii.).

[1573] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 218 (test claim permit, Section F.1.d.7.c.).

[1574] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 223, 227 (test claim permit, Section F.1.h. and F.1.h.5.).

[1575] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 247-248 (test claim permit, Section F.3.d.1.-4.).

2. Ensure priority development projects (*except for a claimant's own municipal priority development projects, which are not mandated by the state and do not impose a new program or higher level of service*) comply with LID, LID waiver and hydromodification requirements, and track and inspect BMPS for retrofitted projects.[1576]

    a. Require each priority development project listed in Sections F.1.d.1. and 2., *except a claimant's own municipal projects*, to implement LID BMPs as described in Sections F.1.d.4.b., c., and e., which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss, or make a finding of technical infeasibility for each priority development project in accordance with the LID waiver program in Section F.1.d.7.[1577]

    b. Require all priority development projects, *except for a claimant's own municipal projects and smaller restaurants where land development is less than 5,000 square feet*, to implement the approved Hydromodification Plan (HMP).[1578]

    c. *Except for a claimant's own municipal development,* track and inspect any completed retrofitted BMPs in accordance with Section F.1.f. of the test claim permit. *This does not include tracking and inspecting retrofitted BMPs of a claimant's own existing municipal development*.[1579]

B. <u>BMP Maintenance Tracking</u>

Except as applicable to a claimant's own municipal development (which is not mandated by the state and does not impose a new program or higher level of service), the following activities constitute state-mandated new programs or higher levels of service:

1. Develop and maintain a watershed-based database to track and inventory all projects, within its jurisdiction, that have a final approved SSMP with structural post-construction BMPs implemented since July 2005. The database must include information on BMP type; location; watershed; date of construction; the party responsible for maintenance,

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[1576] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 209-210 (test claim permit). Section F.1.c. requires the following: "For all proposed Development Projects, each Copermittee, during the planning process, and prior to project approval and issuance of local permits, must prescribe the necessary requirements so that Development Project discharges of storm water pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of water quality standards, and will comply with the Copermittee's ordinances, permits, plans, and requirements, and with this Order."

[1577] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 215 (test claim permit, Section F.1.d.4.).

[1578] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 213, 223 (test claim permit, Sections F.1.d.2.c., F.1.h.).

[1579] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 249 (test claim permit, Section F.3.d.5.).

maintenance verifications, and corrective actions; and whether the site was referred to the local vector control agency.[1580]

2. Verify that the required structural post-construction BMPs on inventoried *residential* projects have been implemented, are maintained, and are operating effectively every five years. Verification can be made through inspections, self-certifications, surveys, or other equally effective approaches.[1581]

3. Annually inspect the required structural post-construction BMPs at high priority *residential* projects.[1582]

4. For all inventoried projects, verifications performed through a means other than direct copermittee inspection, adequate documentation must be submitted to the copermittee to provide assurance that the required maintenance has been completed.[1583]

5. Inspections of the required structural post-construction BMPs at all inventoried projects must note observations of vector conditions and, where conditions are contributing to mosquito production, the copermittee is required to notify the local vector control agency.[1584]

C. Active/Passive Sediment Treatment

1. *Except for the claimants' own municipal construction sites (which is not mandated by the state and does not impose a new program or higher level of service)*, require implementation of AST for sediment at construction sites (or portions thereof) that are determined to be an exceptional threat to water quality.[1585]

D. Watershed Workplan

1. The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs.[1586]

[1580] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 221 (test claim permit, Section F.1.f.1.).

[1581] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.i.).

[1582] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.ii.).

[1583] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.v.).

[1584] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 222 (test claim permit, Section F.1.f.2.b.vii.).

[1585] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 231 (test claim permit, Section F.2.d.3.).

[1586] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 255 (test claim permit, Section G.1.d.).

2. The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4.[1587]
3. The watershed workplan must include the identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan.[1588]
4. The annual watershed review meetings shall be open to the public and adequately noticed.[1589]
5. Each permittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan.[1590]

E. <u>Annual JRMP Report</u>

1. Include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items.[1591]
2. Provide in the annual report an updated timeframe for attainment of a desired outcome level in the annual report when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe, but the review of the existing activities and BMPs are adequate, or that the projected timeframe should be extended.[1592]
3. *Except for reporting on the claimants' own municipal projects (which is not eligible for reimbursement)*, providing the following information in the Checklist pursuant to Section K.3.c.3.:
    a. Construction:
        1) Number of Active Sites
        2) Number of Inactive Sites
        3) Number of Sites Inspected

[1587] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.3.).

[1588] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.4.).

[1589] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1590] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1591] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.1.).

[1592] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.2.).

4) Number of Violations

b. New Development:

1) Number of Development Plan Reviews

2) Number of Projects Exempted from Interim/Final Hydromodification Requirements

c. Post Construction Development:

1) Number of Priority Development Projects

2) Number of SUSMP Required Post-Construction BMP Inspections

3) Number of SUSMP Required Post-Construction BMP Violations

4) Number of SUSMP Required Post-Construction BMP Enforcement Actions Taken

d. Illicit Discharges and Connections:

1) Number of IC/ID Eliminations

2) Number of IC/ID Violations

e. MS4 Maintenance:

1) Total Miles of MS4 Inspected

f. Municipal/Commercial/Industrial:

1) Number of Facilities

2) Number of Violations[1593]

4. *Except for reporting on the claimants' own municipal projects (which is not eligible for reimbursement)*, report the following information contained in Table 5 and required to be reported by Section K.3.c.4.:

a. New Development:

1) All revisions to the SSMP, including where applicable: (b) updated procedures for identifying pollutants of concern for each priority development project; (c) updated treatment BMP ranking matrix; (d) updated site design and treatment control BMP design standards.[1594]

[1593] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 296 (test claim permit, Section K.3.c.3., Attachment D.).

[1594] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 2.).

2) Brief description of BMPs required at approved priority development projects. Verification that site design, source control, and treatment BMPs were required on all applicable priority development projects.[1595]

3) Name and location of all priority development projects that were granted a waiver from implementing LID BMPs pursuant to Section F.1.d.4. during the reporting period.[1596]

4) Updated watershed-based BMP maintenance tracking database of approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction, including updates to the list of high-priority priority development projects; and verification that the requirements of this Order were met during the reporting period.[1597]

5) Name and brief description of all approved priority development projects required to implement hydrologic control measures in compliance with Section F.1.h. including a brief description of the management measures planned to protect downstream beneficial uses and prevent adverse physical changes to downstream stream channels.[1598]

b. Construction:

1) A description of planned ordinance updates within the next annual reporting period, if applicable.[1599]

2) A description of any changes to procedures used for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.[1600]

3) Any changes to the designated minimum and enhanced BMPs.[1601]

[1595] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 3.).

[1596] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 4.).

[1597] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 263 (test claim permit, Section K.3.c.4., Table 5. New Development 5.).

[1598] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. New Development 6.).

[1599] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 1.).

[1600] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 2.).

[1601] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 3.).

4) Include the following information in the summary of the inspection program: (a) date of inspections conducted at each facility; (b) date of enforcement actions by facility; (c) brief description of the effectiveness of each high-level enforcement action at construction sites.[1602]

5) Supporting files must include a record of inspection dates, the results of each inspection, photographs (if any), and a summary of any enforcement actions taken.[1603]

c. Municipal (other than a claimant's own development):

1) Updated source inventory.[1604]

2) All changes to the designated municipal BMPs.[1605]

3) Descriptions of any changes to procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies.[1606]

4) Summary and assessment of BMP retrofits implemented at flood control structures, including: (a) List of projects retrofitted; (b) List and description of structures evaluated for retrofitting; (c) List of structures still needing to be evaluated and the schedule for evaluation.[1607]

5) Include in the summary of the MS4 and MS4 facilities operations and maintenance activities, the (a) Number and types of facilities maintained.[1608]

6) Include (a) types of facilities and (b) summary of the inspection findings in the summary of the municipal structural treatment control operations and maintenance activities.[1609]

[1602] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 4.).

[1603] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Construction 4.).

[1604] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 1.).

[1605] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 2.).

[1606] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 3.).

[1607] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 264 (test claim permit, Section K.3.c.4., Table 5. Municipal 4.).

[1608] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 5.a.).

[1609] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 5.).

7) Include a list of facilities planned for bi-annual inspections and the justification in the summary of the MS4 and MS4 facilities operations and maintenance activities.[1610]

8) Include in the summary of the municipal areas/programs inspection activities: (a) date of inspections conducted at each facility; (b) The BMP violations identified during the inspection by facility; (c) date of enforcement actions by facility.[1611]

9) Description of activities implemented to address sewage infiltration into the MS4.[1612]

10) Description of BMPs and their implementation for unpaved roads construction and maintenance.[1613]

d. Commercial/Industrial:

1) Updated inventory of commercial/industrial sources of discharges.[1614]

2) Include the following information in the summary of the inspection program: (a) date of inspections conducted at each facility or mobile business; (b) The BMP violations identified during the inspection by facility; (c) date of enforcement actions by facility or mobile business; (d) brief description of the effectiveness each high-level enforcement actions at commercial/industrial sites including the follow-up activities for each facility.[1615]

3) All changes to designated minimum and enhanced BMPs.[1616]

e. Residential:

1) All updated minimum BMPs required for residential areas and activities.[1617]

[1610] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 6.c.).

[1611] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 7.a.-c.).

[1612] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 8.).

[1613] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Municipal 9.).

[1614] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Commercial/Industrial 1.).

[1615] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Commercial/Industrial 2.).

[1616] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 265 (test claim permit, Section K.3.c.4., Table 5. Commercial/Industrial 3.).

[1617] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Residential 1.).

2) Description of efforts to manage runoff and storm water pollution in common interest areas and mobile home parks.[1618]

f. Retrofitting Existing Development:

1) Updated inventory and prioritization of existing development identified as candidates for retrofitting.[1619]

2) Description of efforts to retrofit existing developments during the reporting year.[1620]

3) Description of efforts taken to encourage private landowners to retrofit existing development.[1621]

4) A list of all retrofit projects that have been implemented, including site location, a description of the retrofit project, pollutants expected to be treated, and the tributary acreage of runoff that will be treated.[1622]

5) Any proposed retrofit or regional mitigation projects and time lines for future implementation.[1623]

g. Illicit Discharge Detection and Elimination:

1) A description of instances when field screening and analytical data exceeded action levels, including those instances for which no investigation was conducted.[1624]

[1618] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Residential 3.).

[1619] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 1.).

[1620] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 2.).

[1621] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 3.).

[1622] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 4.).

[1623] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Retrofitting Existing Development 5.).

[1624] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Illicit Discharge Detection and Elimination 5.).

h. Workplans:

1) Updated workplans including priorities, strategy, implementation schedule, and effectiveness evaluation.[1625]

F. Special Studies

1. Sediment Toxicity Study

a. Develop and submit to the Regional Board by April 1, 2012, a workplan to investigate the toxicity of sediment in streams and its potential impact on benthic macroinvertebrate IBI scores. The study must be implemented in conjunction with the stream assessment monitoring in Attachment E. The study must include the following elements:

1) At least four stream assessment locations must be sampled, including one reference site and one mass loading site. The selection of sites must be done with consideration of subjectivity of receiving waters to discharges from residential and agricultural land uses.

2) At a minimum, sampling must occur once per year at each site for at least two years.

3) At a minimum, sediment toxicity analysis must include the measurement of metals, pyrethroids, and organochlorine pesticides. The analysis must include estimates of bioavailability based upon sediment grain size, organic carbon, and receiving water temperature at the sampling site. Acute and chronic toxicity testing must be done using *Hyalella azteca*.

b. Include the results and a discussion in the monitoring annual report including an assessment of the relationship between observed IBI scores and all variables measured.[1626]

2. Trash and Litter Investigation

a. Develop and submit to the Regional Board by September 1, 2012, a workplan to assess trash (including litter) as a pollutant within receiving waters on a watershed based scale. The copermittees must select a lead copermittee. The study must include the following elements:

1) The lead copermittee must identify suitable sampling locations within the Santa Margarita HU.

[1625] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4., Table 5. Workplans).

[1626] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 314 (test claim permit, Attachment E, Section II.E.2.).

2) Trash at each location must be monitored a minimum of twice during the wet season following a qualified monitoring storm event[1627] and twice during the dry season.

3) The lead copermittee must use the "Final Monitoring Workplan for the Assessment of Trash in San Diego County Watersheds" and "A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region" to develop a monitoring protocol.

b. Include the results and a discussion in the monitoring annual report and must, at a minimum, include source identification, an evaluation of BMPs for trash reduction and prevention, and a description of any BMPs implemented in response to study results.[1628]

3. Agricultural, Federal and Tribal Input Study

a. Develop and submit to the Regional Board by September 1, 2012, a workplan to investigate the water quality of agricultural, federal, and tribal runoff that is discharged into their MS4. The study must include the following elements:

1) The copermittees must identify a representative number of sampling stations within their MS4 that receive discharges of agricultural, federal, and tribal runoff that has not co-mingled with any other source. At least one station from each category must be identified.

2) One storm event must be monitored at each sampling location each year for at least two years.

3) At a minimum, analysis must include those constituents listed in Table 1 of the MRP. Grab samples may be utilized, though composite samples are preferred. The copermittees must also measure or estimate flow rates and volumes of discharges into the MS4.

b. Include the results and a discussion from the study in the monitoring annual report.[1629]

4. MS4 and Receiving Water Maintenance Study

a. Develop and submit to the Regional Board by April 1, 2012, a workplan to investigate receiving waters that are considered part of the MS4 and that are subject to continual vegetative clearance activities, for example, mowing. The copermittees must assess the effects of the vegetation removal activities and water quality, including, but not limited to, modification of biogeochemical functions, in-stream

[1627] A qualified monitoring storm event is defined as a minimum of 0.1 inches of precipitation preceded by 72 hours of dry weather.

[1628] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 315 (test claim permit, Attachment E, Section II.E.3.).

[1629] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 315-316 (test claim permit, Attachment E, Section II.E.4.).

temperatures, receiving water bed and bank erosion potential, and sediment transport. The study must include the following elements:

1) The copermittees must identify suitable sampling locations, including at least one reference that is not subject to maintenance activities.

2) At a minimum, the copermittees must monitor pre- and post-maintenance activities for indicator bacteria, turbidity, temperature, dissolved oxygen and nutrients (nitrite, nitrate, total Kjeldahl nitrogen, ammonia and total phosphorous). The copermittees must also measure or estimate flow rates and volumes.

b. Include the results and a discussion from the study in the annual monitoring report including the relevance of findings to CWA section 303(d) listed impaired waters.[1630]

The last issue is whether these activities result in increased costs mandated by the state. Government Code section 17514 defines "costs mandated by the state" as any increased costs that a local agency or school district incurs as a result of any statute or executive order that mandates a new program or higher level of service. Government Code section 17564(a) further requires that no claim shall be made nor shall any payment be made unless the claim exceeds $1,000. Increased costs mandated by the state requires a showing of "increased actual expenditures of limited tax proceeds that are counted against the local government's spending limit."[1631]

In addition, a finding of costs mandated by the state means that none of the exceptions in Government Code section 17556 apply to deny the claim. As relevant here, Government Code section 17556(d) states that the Commission shall not find costs mandated by the state when:

> The local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service. This subdivision applies regardless of whether the authority to levy charges, fees, or assessments was enacted or adopted prior to or after the date on which the statute or executive order was enacted or issued.

The claimants contend that the activities result in increased costs mandated by the state within the meaning of article XIII B, section 6 and Government Code section 17514. They estimate that, for all requirements set forth in the test claim permit, increased costs of $1,446,317.50 were expended in FY 2010-11 and $2,438,936.90 in FY 2011-12, and an as yet undetermined share of $18,696.29 in FY 2010-11 and $271,720.61 in FY 2011-12. In addition, for the special studies requirement, the statewide estimate of increased costs was $103,789.60 in FY 2012-13.[1632]

Although the claimants agree that some claimants have access to a Riverside County stormwater fund, to fuel tax and community services revenue, to lighting and maintenance revenues and

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[1630] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 316 (test claim permit, Attachment E, Section II.E.5.).

[1631] *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264, 1283; *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176, 1185.

[1632] Exhibit A, Test Claim ,filed November 10, 2011 and revised April 28, 2017, page 87 (Test Claim narrative).

development and business registration fees and the District has access to a Benefit Assessment for stormwater costs, these funding sources do not cover the entire cost of compliance with the provisions set forth in this Test Claim. Additionally, the claimants contend they are subject to the limitations of Proposition 26, which limits their ability to recover costs through fees. Therefore, the claimants conclude that Government Code section 17556(d) does not apply to deny this test claim.[1633]

The Water Boards allege that the test claim permit does not result in increased costs mandated by the state since the claimants have fee authority sufficient as a matter of law to cover the costs of the program and, thus, Government Code section 17556(d) applies to deny this Test Claim. They argue that municipalities can and do assess stormwater fees to fund their programs, and point to case law that holds that practical considerations to assessing fees are not relevant to the inquiry of whether the claimants have fee authority sufficient as a matter of law to fund the costs of the program.[1634]

As explained below, the Commission finds that the new state-mandated activities result in costs mandated by the state for most of the copermittees for some of the activities based on the following findings:

a. The new state-mandated activities do not result in costs mandated by the state for Riverside County Flood and Water Conservation District because there is no evidence in the record that the District was forced to spend its "proceeds of taxes," but instead used assessment revenue and contract funds from the County and cities.

b. The County and cities have regulatory fee authority sufficient as a matter of law to fund the new state-mandated activities required related to LID (Section F.1.d.1., 2., 4., 7.), Hydromodification (Section F.1.h.), Retrofitting (Section F.3.d.1-5.), BMP Maintenance Tracking (Section F.1.f.), Active/Passive Sediment Treatment (Section F.2.d.3.), Annual JRMP Reporting Checklist on Construction, New Development, Post Construction Development, Municipal (other than their own)/Commercial/Industrial (Section K.3.c.3.), and the Annual JRMP Reporting Requirements listed in Table 5 on New Development, Construction, Municipal (other than their own), Commercial/Industrial, Residential, and Retrofitting Existing Development (Section K.3.c.4.), pursuant to Government Code section 17556(d) and, thus, there are no costs mandated by the state for these activities.

c. The County and cities have constitutional and statutory authority to charge property-related fees for the new state-mandated requirements related to the Watershed Workplan (Sections G.1.-5.); the Annual JRMP Reporting requirements to include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items (Section K.3.c.1.), and provide in the annual report an updated timeframe for attainment of a desired outcome level when an

[1633] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 88 (Test Claim narrative).

[1634] Exhibit C, Water Boards' Comments on the Test Claim, filed September 22, 2017, pages 18-19, citing *Connell v. Superior Court* (1997) 50 Cal.App.4th 382, 398 and *Clovis Unified School Dist. v. Chiang* (2010) 188 Cal.App.4th 794, 812.

assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe (Section K.3.c.2.); the Annual JRMP Reporting Checklist on Illicit Discharges and Connections and MS4 Maintenance (Section K.3.c.3.); the Annual JRMP Reporting Requirements listed in Table 5 on Illicit Discharge Detection and Elimination and Updated Workplans (Section K.3.c.4.); and Special Studies (Section II.E.2.-5. of Attachment E.). Based on *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351, and consistent with the prior Decision of the Commission in *Discharge of Stormwater Runoff- Order No. R9-2007-0001*, 07-TC-09, which was recently upheld by the Third District Court of Appeal in *Department of Finance v. Commission on State Mandates*,[1635] these fees are subject to the voter approval requirement in article XIII D, section 6(c) from November 10, 2010, the beginning date of the potential period of reimbursement, to December 31, 2017, and, thus, the fee authority is not sufficient as a matter of law during this time period to fund the costs of the mandated activities. Under these limited circumstances, Government Code section 17556(d) does not apply, and there are costs mandated by the state. Any fee revenues received must be identified as offsetting revenue. In addition, reimbursement for this mandate from any source, including but not limited to, service fees collected, federal funds, other state funds, and other funds that are not the claimant's proceeds of taxes shall be identified and deducted from this claim.

Based on *Paradise Irrigation District* case and the Legislature's enactment of Government Code sections 57350 and 57351 (which overturned *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351), there are no costs mandated by the state on or after January 1, 2018, to comply with these activities, because claimants have constitutional and statutory authority to charge property-related fees for these costs subject only to the voter protest provisions of article XIII D, which is sufficient as a matter of law to cover the costs of the mandated activities within the meaning of Government Code section 17556(d).

1. The New State-Mandated Activities Do Not Result in Costs Mandated by the State for the Riverside County Flood and Water Conservation District Because There Is No Evidence in the Record That the District Was Forced to Spend Their Local "Proceeds Of Taxes."

Although the record shows the County and cities used proceeds of taxes to comply with the test claim permit and incurred $1,000 in costs,[1636] there is no evidence in the record that the District was forced to spend its local "proceeds of taxes." The reimbursement requirement in article XIII B, section 6 was included because of the tax and spend limitations in articles XIII A and XIII B, and is triggered only when the state forces the expenditure of local proceeds of taxes; section 6 was not intended to reach beyond taxation or to protect nontax sources.

[1635] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 579-581 (review denied March 1, 2023).

[1636] See, for example, Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 106-170 (Declarations from employees of the County of Riverside, and Cities of Murrieta, Temecula, and Wildomar), and the analysis in the next section.

In 1978, the voters adopted Proposition 13, which added article XIII A to the California Constitution. Article XIII A reduced the authority of local government to impose property taxes by providing that "the maximum amount of any ad valorem tax on real property shall not exceed one percent (1%) of the full cash value of such property," and that the one percent tax was to be collected by counties and "apportioned according to law to the districts within the counties…"[1637] In addition to limiting the property tax, section 4 also restricts a local government's ability to impose special taxes by requiring a two-thirds approval by voters.[1638]

Article XIII B was adopted by the voters as Proposition 4, less than 18 months after the addition of article XIII A to the state Constitution, and was billed as "the next logical step to Proposition 13."[1639] While article XIII A is aimed at controlling ad valorem property taxes and the imposition of new special taxes, "the thrust of article XIII B is toward placing certain limitations on the growth of appropriations at both the state and local government level; in particular, article XIII B places limits on the authorization to expend the 'proceeds of taxes.'"[1640] "Proceeds of taxes," in turn, includes "all tax revenues," as well as proceeds from "regulatory licenses, user charges, and user fees to the extent those proceeds *exceed* the costs reasonably borne by that entity in providing the regulation, product, or service," and proceeds from the investment of tax revenues.[1641] And, with respect to local governments, the section reiterates that "proceeds of taxes" includes state subventions other than mandate reimbursement, and, with respect to the State's spending limit, excludes such state subventions.[1642]

Article XIII B does *not* restrict the growth in appropriations financed from nontax sources, such as "user fees based on reasonable costs," and assessments.[1643] And appropriations subject to limitation do not include "[a]ppropriations for debt service."[1644]

Proposition 4 also added article XIII B, section 6, which was specifically "designed to protect the tax revenues of local governments from state mandates that would require the expenditure of

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[1637] California Constitution, article XIII A, section 1 (effective June 7, 1978).

[1638] California Constitution, article XIII A, section 4 (effective June 7, 1978).

[1639] *County of Placer v. Corin* (1980) 113 Cal.App.3d 443, 446.

[1640] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 762; *County of Placer v. Corin* (1980) 113 Cal.App.3d 443, 446.

[1641] California Constitution, article XIII B, section 8(c) (added, Nov. 7, 1979; amended by Proposition 111, June 5, 1990), emphasis added.

[1642] California Constitution, article XIII B, section 8(c) (added, Nov. 7, 1979; amended by Proposition 111, June 5, 1990).

[1643] *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487; see also, *County of Placer v. Corin* (1980) 113 Cal.App.3d 443, 451 (finding that revenues from a local special assessment for the construction of public improvements are not "proceeds of taxes" subject to the appropriations limit.).

[1644] California Constitution, article XIII B, section 9 (added, Nov. 7, 1979; amended by Proposition 111, June 5, 1990).

such revenues."[1645] The California Supreme Court, in *County of Fresno v. State of California*,[1646] explained:

> Section 6 was included in article XIII B in recognition that article XIII A of the Constitution severely restricted the taxing powers of local governments. (See *County of Los Angeles I, supra,* 43 Cal.3d at p. 61.) The provision was intended to preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that were ill equipped to handle the task. (*Ibid.*; see *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 836, fn. 6.) Specifically, it was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues. Thus, although its language broadly declares that the "state shall provide a subvention of funds to reimburse ... local government for the costs [of a state-mandated new] program or higher level of service," read in its textual and historical context section 6 of article XIII B requires subvention only when the costs in question can be recovered *solely from tax revenues*.[1647]

Most recently, the California Supreme Court concluded that articles XIII A and XIII B work "in tandem," for the purpose of precluding "the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities *because of the taxing and spending limitations that articles XIII A and XIII B impose*."[1648] Accordingly, reimbursement under article XIII B, section 6 is only required when a mandated new program or higher level of service forces local government to incur "increased actual expenditures of limited tax proceeds that are counted against the local government's spending limit."[1649]

Based on the record and documents publicly available,[1650] there is no evidence that the District used its proceeds of taxes to pay for the new state-mandated activities. The District has instead used assessment revenue to pay for NPDES permit costs and funds received from the County and City claimants pursuant to an Implementation Agreement and, thus, the District has not incurred

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[1645] *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487.

[1646] *County of Fresno v. State of California* (1991) 53 Cal.3d 482.

[1647] *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487, emphasis in original.

[1648] *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 763, emphasis added.

[1649] *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264, 1283; *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176, 1185, emphasis added.

[1650] California Code of Regulations, title 2, section 1187.5(c) ("Official notice may be taken in the manner and of the information described in Government Code Section 11515.").

"increased actual expenditures of limited tax proceeds that are counted against [the District's] spending limit."[1651]

The District was established by the Legislature in 1945 to provide for the control of the flood and storm waters of the district and to conserve the waters for beneficial and useful purposes.[1652] The District has the power to acquire and purchase property, to incur indebtedness, to cause taxes and assessments to be levied and collected for the purpose of paying any obligation of the district and to carry out any of the purposes of the act, and to make contracts and employ labor and "to do all acts necessary for the full exercise of all powers vested in the district."[1653] The Board of Supervisors for the County of Riverside is the District's governing body.[1654]

The District was designated as the principal permittee for the region's NPDES permits, including the test claim permit,[1655] and has the primary responsibility under the test claim permit to:

1. Serve as liaison between the Copermittees and the San Diego Water Board on general permit issues, and when necessary and appropriate, represent the Copermittees before the San Diego Water Board.
2. Coordinate permit activities among the Copermittees and facilitate collaboration on the development and implementation of programs required under this Order.
3. Coordinate the submittal of the documents and reports required by Section K of the test claim permit and Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016 in Attachment E of the test claim permit.[1656]

The District's 2012 JRMP states that the enabling act does not provide the District with land use or police powers. Therefore, the District cannot regulate development of private, industrial, or

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[1651] *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264, 1283; *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176, 1185, emphasis added.

[1652] Water Code sections 48-1 (Statutes 1945, chapter 1122), 48-9 (Statutes 1945, chapter 1122, last amended by Statutes 1987, chapter 669).

[1653] Water Code section 48-9; see also Water Codes section 48-14 (Taxes and Assessments, which authorizes the County Board of Supervisors to levy taxes or assessments on all taxable property for the District).

[1654] Water Code section 48-10.

[1655] Exhibit X (37), Santa Margarita River Region, Report of Waste Discharge (ROWD), January 15, 2009, page 36; Exhibit X (38), Santa Margarita River Region, Report of Waste Discharge (ROWD), May 10, 2015, page 5; Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 119.

[1656] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 268 (test claim permit, Section M).

commercial facilities, and does not perform inspections.[1657] The District alleges, however, that it hired consultants, and developed and provided training with respect to the regulatory activities required under the LID, hydromodification, retrofitting, and active/passive sediment treatment sections of the permit, and updated the JRMP/Annual Report template to incorporate the new requirements "using funds contributed from each copermittee, including the District, through the Implementation Agreement."[1658] For all other new mandated activities relating to the Watershed Workplan, Annual Report, and Special Studies, the District used "funds contributed from each copermittee, including the District, through the Implementation Agreement."[1659] The District's Declaration further states that in 1991, it established the Santa Margarita Watershed Benefit Assessment to fund its MS4 compliance activities, and that the Benefit Assessment paid for "aspects of the District's compliance with the [test claim] Permit."[1660] There is no mention in the District's Declarations that the District used any of its own tax revenues to pay for costs incurred under the test claim permit.[1661]

The Implementation Agreement identified by the District is described in the District's 2012 JRMP, the first report publicly available after the adoption of the test claim permit, as a cooperative agreement with the County of Riverside and the Cities of Murrieta, Temecula, and Wildomar to contribute funds to implement the following shared costs required by the test claim permit:

a. Joint development of compliance documents required by the test claim permit.

b. Funding of the additional responsibilities of the District as Principal Copermittee (described in Section M of the test claim permit).

c. Regional public education activities.

[1657] Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 13, footnote 1.

[1658] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 94-101 (Declaration of Stuart McKibbin, Chief of the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District, dated April 27, 2017).

[1659] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 99-101 (Declaration of Stuart McKibbin, Chief of the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District, dated April 27, 2017).

[1660] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 102-103 (Declaration of Stuart McKibbin, Chief of the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District, dated April 27, 2017).

[1661] See also, Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 104-105, paragraph 5 (Declaration of David Garcia, Project Manager within the Watershed Protection Division of the Riverside County Flood Control and Water Conservation District dated April 27, 2017, which states, "The District was designated the Principal Permittee under the Permit, and in that role, coordinated joint responses to the Permit requirements set forth in the Test Claim, which responses were paid for as shared costs by the Claimants under the Implementation Agreement entered into by and between the Permittees.")

d. Regional training programs for copermittee staff.

e. Water quality monitoring as described in the test claim permit, Attachment E, Sections II.A through II.F, exclusive of source identification efforts that may be required of the District.

f. Joint support for other Regional Programs.[1662]

Individual costs for each copermittee are also incurred for activities, such as implementing BMPs for their own municipal facilities, removing illicit connections and illegal discharges in their jurisdictions, gathering information for the annual JRMP, and for inspections and regulating development.[1663]

The Implementation Agreement for the shared costs is included in the District's 2012 JRMP and states in relevant part the following:

- The District established the Santa Margarita Benefit Assessment Area pursuant to District Ordinance 14 in May 1991 to offset the program and administrative costs associated with the NPDES Program, and the District is willing to use those assessment funds to support the District's role as principal permittee and the regional costs of the test claim permit to the extent that the Benefit Assessment funds are available and can be used.[1664]
- The delegation of responsibilities of the District, as the principal permittee, and the County and cities are defined in the Agreement.[1665]
- The shared costs will be determined by estimating the costs each December for the upcoming fiscal year; estimating the District's internal costs for developing, implementing, and administering the NPDES program; estimating the revenues generated from the Benefit Assessment; determining actual costs of the NPDES program in the prior fiscal year; and determining credits or debits due to the County or Cities based on the difference of actual contributions from the previous fiscal year with the actual contributions for that fiscal year.
    - The District's contribution for the shared costs is calculated as follows:

[1662] Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, pages 11-12.

[1663] Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 13, footnote 1; Exhibit X (26), Excerpt from Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP) for Fiscal Year 2014-2015, page 8.

[1664] Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, pages 120-126 (Implementation Agreement).

[1665] Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 120 (Implementation Agreement).

District Contribution = Assessment Revenues – internal costs – 20 percent Assessment Revenue (which is kept as a reserve for the NPDES program pursuant to Ordinance 14). If the calculation yields a negative result, then the District shall have no contribution for the upcoming fiscal year, except for internal costs it has incurred.

- The County and cities' contribution for the shared costs is calculated as follows:

  Combined Contribution (which shall not exceed $2,200,000) = Estimated Costs – District Contribution. The pro rata share of County and City costs is based on equally weighted average of population and Benefit Assessment Units within the region, and then adjusted with credits or debits.[1666]

The Santa Margarita Benefit Assessment, discussed above, was established in 1991 pursuant to Ordinance 14 adopted by the District to offset the administrative and program costs associated with the NPDES stormwater program.[1667] The ordinance states in relevant part the following:

> The Board of Supervisors of the District finds that the Benefit Assessment to be annually levied shall be based on the proportional stormwater runoff generated by each lot or parcel within the Benefit Assessment Area. Revenues derived from the Benefit Assessment shall be applied exclusively to pay the District's administrative and program costs associated with the NPDES Permit required for the Benefit Assessment Area and are to be apportioned to the Benefit Assessment Area in which they are collected.[1668]

The assessment appears as a separate item on the county's property tax bill and is collected at the same time and in the same manner as property taxes.[1669] The Benefit Assessment has not increased since 1991.[1670]

[1666] Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, pages 127-129 (Implementation Agreement).

[1667] Exhibit X (9), Engineer's Report to the Board of Supervisors of the Riverside County Flood Control and Water Conservation District on the NPDES Program for the Santa Margarita Benefit Assessment Area, July 2013, pages 4, 24-37 (Ordinance No. 14).

[1668] Exhibit X (9), Engineer's Report to the Board of Supervisors of the Riverside County Flood Control and Water Conservation District on the NPDES Program for the Santa Margarita Benefit Assessment Area, July 2013, page 25 (Ordinance No. 14).

[1669] Exhibit X (9), Engineer's Report to the Board of Supervisors of the Riverside County Flood Control and Water Conservation District on the NPDES Program for the Santa Margarita Benefit Assessment Area, July 2013, page 34 (Ordinance No. 14).

[1670] Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 16, Table 3-3 "NPDES Program - Benefit Assessment Ordinance, Last Updated June 4, 1991"; Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 102 (Declaration of Stuart McKibbin, Chief of the Watershed Protection Division of the Riverside County Flood Control and Water

The Report of Waste Discharge (ROWD) dated January 15, 2009, which serves as the application for renewal of the next NPDES permit (the test claim permit), indicates that the District's shared and individual costs to comply with the prior permit were fully paid using Benefit Assessment revenues.[1671]

The JRMP dated June 30, 2012, similarly states that the Benefit Assessment revenues are available and will be used for the following costs under the test claim permit: program management and reporting, annual fee for permit, implementation agreement shared costs, retrofit program, and public education and outreach.[1672]

The JRMP/Annual Report dated October 31, 2015, states that the District will use funds received from the Benefit Assessment and Implementation Agreements to fund these costs under the test claim permit in fiscal year 2015-2016.[1673]

Finally, the District's Annual Budget for fiscal year 2011-2012 and its Comprehensive Annual Financial Report for year ending June 30, 2015, identifies the *NPDES Santa Margarita* fund, which is the special revenue fund used to account for revenues and expenditures related to the National Pollutant Discharge Elimination System (NPDES) in the Santa Margarita assessment area. This fund is funded by the benefit assessment and "intergovernmental" (i.e. from the Implementation Agreement), and is not funded by any property tax revenues.[1674]

Thus, these documents show that the District used funds from the Benefit Assessment and the Implementation Agreement to pay for costs incurred to comply with the test claim permit. These

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Conservation District, dated April 27, 2017, "There was no increase in the fees generated by the Benefit Assessment over the course of the Permit.").

[1671] Exhibit X (37), Santa Margarita River Region, Report of Waste Discharge (ROWD), January 15, 2009, pages 1, 16 ("Currently, the Benefit Assessment revenues fund the District's share of the area-wide MS4 Permit program activities and the District's individual compliance activities as a Permittee. Under the Benefit Assessment each parcel is taxed based on the impervious area of each parcel at a set rate established by District Ordinance 14. This rate has not been increased since 1991 due to Proposition 218.").

[1672] Exhibit X (36), Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP), June 30, 2012, page 13. The other costs identified in the 2012 JRMP include those outside the scope of the new state-mandated activities (elimination of illicit connections and illegal discharges, municipal facilities and activities); costs for development planning, which are paid using development fees; and regulatory activities to inspect private, industrial, and commercial facilities, for which the District has no mandated responsibilities.

[1673] Exhibit X (26), Excerpt from Riverside County Flood Control and Water Conservation District's Jurisdictional Runoff Management Program (JRMP) for Fiscal Year 2014-2015, pages 8-9.

[1674] Exhibit X (24), Excerpt from Riverside County Flood Control and Water Conservation District's Annual Budget, Fiscal Year 2011-2012, pages 5, 6; Exhibit X (25), Excerpt from Riverside County Flood Control and Water Conservation District's Comprehensive Annual Financial Report for Year Ending June 30, 2015, pages 7, 9, 18.

funds, however, are not the District's proceeds of taxes and are not counted against the District's appropriations limit.

Assessments are levied for improvements that benefit particular parcels of land, do not raise the general revenues of the District, and are not counted against the District's appropriations limit.[1675] Moreover, the expenditure of assessment revenue is expressly *not* a "cost mandated by the state" under the Government Code.[1676]

In addition, the funds received from the other copermittees under the Implementation Agreement are *not* the District's proceeds of taxes. Although the Implementation Agreement funds may be the proceeds of taxes of the County and cities, the funds are received by the District pursuant to the contract. The Implementation Agreement funds are not levied by or for the District, and are not counted against the District's appropriations limit.[1677] Therefore, reimbursement is not required for the District's expenditure of the Implementation Agreement funds.[1678]

Accordingly, there is no evidence in the record that the District has been forced to spend its local "proceeds of taxes" for the new mandated activities and, thus, the District has not incurred costs mandated by the state. Reimbursement is therefore denied for the Riverside County Flood Control and Water Conservation District.

2. The New State Mandated Activities Result in Costs Mandated by the State Except For Those Activities for Which the County and Cities Have Fee Authority Sufficient to Fund the Cost of the Program.

a. <u>There is substantial evidence in the record of costs mandated by the state for the county and cities.</u>

The County and cities filed declarations showing they have incurred shared costs and individual direct costs exceeding the $1,000 threshold to comply with the test claim permit.[1679] The Test Claim narrative further states that although some claimants have access to a Riverside County stormwater fund,[1680] to fuel tax and community services revenue, to lighting and maintenance

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[1675] *County of Placer v. Corin* (1980) 113 Cal.App.3d 444, 447-453.

[1676] Government Code section 17556(d), which provides that the Commission shall not find costs mandated by the state when the local agency "has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service."

[1677] California Constitution, article XIII B, section 8; *Bell Community Redevelopment Agency v. Woosley* (1985) 169 Cal.App.3d 24, 32.

[1678] *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264, 1283; *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176, 1185.

[1679] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 106-170 (Declarations from employees of the County of Riverside, and Cities of Murrieta, Temecula, and Wildomar).

[1680] The Declarations described herein refer to the County Service Area 152 fund as the stormwater fund. According to the Santa Margarita Watershed JRMP and Annual Report for Fiscal Year 2013-2014, the County of Riverside's Economic Development Agency took control of this service area in 2002. "CSAs are an alternative method of providing governmental

revenues and/or development/business registration fees for stormwater costs, these funding sources do not cover the entire cost of the program and the claimants have been forced to use their General Fund revenues.[1681] This statement is consistent with the declarations filed by the County and cities. The County declares that it used gas tax revenues and General Fund revenues, both of which are the County's proceeds of taxes,[1682] to pay for the costs incurred under the test claim permit:

> I am informed and believe that there are no dedicated state, federal or regional funds that are or will be available to pay for any of the new and/or upgraded programs and activities set forth in this Declaration. I am informed and believe that certain of the programs set forth above are funded in part by the proceeds of fuel taxes collected in the County and by community services association revenue. I am further informed and believe that such proceeds are not sufficient to fund all programs set forth in this declaration. I am not aware of any other fee or tax that the County would have the discretion to impose under California law to recover any portion of the cost of these program and activities. I further am informed and believe that the only other available source to pay for these new programs and activities is the County's general fund.[1683]

The City of Murrieta also declares that it had to use General Fund revenues to pay for the costs incurred under the test claim permit as follows:

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services by the County within unincorporated areas to provide extended services such as sheriff protection, fire protection, local park maintenance services, water and sewer services, ambulance services, streetlight energy services, landscape services and street sweeping. CSA 152 is designated as the mechanism to *provide limited street-sweeping maintenance for MS4 within the service area*." Exhibit X (39), Santa Margarita Watershed JRMP and Annual Report for Fiscal Year 2013-2014, page 5, emphasis added. The Test Claim does not plead any sections of the permit addressing street sweeping and, thus, it is not clear if the claimants used these funds for the new mandated program here.

[1681] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 88 (Test Claim narrative).

[1682] "Gas Tax" revenues, though collected by the state and allocated to the counties by statute, fall within the definition of "proceeds of taxes," since they are a state subvention other than a subvention under section 6. (Streets and Highways Code, section 2101 et seq.; California Constitution, article XIII B, section 8 ["With respect to any local government, 'proceeds of taxes' shall include subventions received from the State, other than pursuant to Section 6…"].)

[1683] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 118, paragraph 6 (Declaration of Steven Horn, Principal Management Analyst and NPDES Stormwater Program Administrator for the County of Riverside, dated April 24, 2017.)

Although the County's Budget for fiscal year 2011-2012 identifies "CSA 152 NPDES" and "NPDES Santa Margarita Assmt" in its reporting of the special districts' budgets, it does not show other sources funds for the County's NPDES program. Exhibit X (7), County of Riverside, Adopted Budget, Fiscal Year 2011-2012, pages 224-225, et seq.

> I am informed and believe that there are no dedicated state or federal funds that are or will be available to pay for any of the new and/or upgraded programs and activities set forth in this Declaration. The City has access to funding obtained through County Service Area 152, which funds, in part, the obligations of the City under the Permit. The City also can collect some inspection fees during the new development process, but not for existing development. I am informed and believe that neither of these funding sources is sufficient to cover the cost of the programs and activities set forth in this Declaration. I am not aware of any other fee or tax that the City would have the discretion to impose under California law to recover any portion of the cost of these program and activities. I further am informed and believe that the only other available source to pay for these new programs and activities is the County's general fund.[1684]

Similar declarations were filed by the cities of Temecula and Wildomar, acknowledging the use of County Service Area funds, Lighting and Landscape Maintenance Funds, and development fees, but also the use of General Fund revenues to pay for the activities identified in the declarations.[1685]

The JRMP reports filed by the County of Riverside and the cities support these declarations and show that the County and cities used general funds to comply with the test claim permit.[1686]

There is no evidence in the record to rebut these documents.

Accordingly, there is substantial evidence in the record that the County and cities used proceeds of taxes to comply with the test claim permit. The analysis must continue, however, to determine whether the exceptions in Government Code section 17556 apply.

[1684] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 130-131, paragraph 6 (Declaration of Bob Moehling, City Engineer for the City of Murrieta, dated April 27, 2017).

[1685] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 144, paragraph 6; page 157, paragraph 6; and page 170, paragraph 6 (Declaration of Patrick A. Thomas, Director of Public Works/City Engineer for the City of Temecula, dated April 25, 2017; Declaration of Daniel A. York, City Manager, Public Works Director and City Engineer for the City of Wildomar, dated April 26, 2017; Declaration of Tim D'Zmura, City Engineer and Director of Public Works for the City of Wildomar, dated November 30, 2011.)

[1686] Exhibit X (8), County of Riverside Jurisdictional Runoff Management Program (JRMP), June 30, 2014, pages 14-15; Exhibit X (2), City of Murrieta Jurisdictional Runoff Management Program (JRMP), June 27, 2012, pages 13-14; Exhibit X (4), City of Temecula Jurisdictional Runoff Management Program (JRMP), June 30, 2012, pages 12-13; Exhibit X (5), City of Wildomar Jurisdictional Runoff Management Program (JRMP), October 31, 2014, pages 34-35.

b. There are no costs mandated by the state pursuant to Government Code section 17556(d) for mandated activities for which there is authority to charge regulatory fees pursuant to article XIII C or property-related fees that are subject only to the voter protest provisions of article XIII D, section 6 of the California Constitution. However, when voter approval is required to impose fees, then Government Code section 17556(d) does not apply.

Government Code section 17556(d) provides that the Commission "shall not find costs mandated by the state, as defined in Section 17514" if the Commission finds that "the local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service."

The claimants argue that "it is clear that the costs associated with developing and implementing many programs called for in the 2010 [test claim] Permit are not recoverable through fees."[1687] The claimants conclude,

> A fee or charge that does not fall within the seven exceptions listed in Article XIII C, section 1(e) is automatically deemed a tax, which must be approved by the voters. Any fee that does not fall within one of the exceptions listed in Article XIII C, section 1(e) and that is imposed for a specific purpose, such as funding all or part of a program designed to comply with a municipality's obligation under an MS4 Permit, would constitute a "special tax." Article XIII A, section 4 and Article XIII C, section 2(d) would thus require it to be approved by 2/3 of the voters of the portion of the jurisdiction subject to the fee.[1688]

However, there is no question that local agencies have the authority to charge fees for stormwater programs. Cities and counties have authority under the California Constitution to make and enforce ordinances and resolutions to protect and ensure the general welfare within their jurisdiction, which is commonly referred to as the "police power."[1689] That authority includes the power to impose fees or charges that are directed toward a particular activity or industrial or commercial sector, known as "regulatory fees;" fees or charges based on services or benefits received from government, known as "user fees;" fees or charges imposed as a condition of development of real property, known as "development fees;" and fees or charges (or assessments) levied on all property owners within the jurisdiction, which after Proposition 218 are commonly described as "property-related fees or assessments." In addition, a number of provisions of the Government Code provide express authority to impose or increase regulatory

[1687] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 27 (Test Claim narrative).

[1688] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 28 (Test Claim narrative).

[1689] California Constitution, article XI, section 7. See also, *Marblehead Land Co. v. City of Los Angeles* (1931) 47 F.2d 528, 532.

fees,[1690] fees for development of real property,[1691] and property-based assessments, fees and charges.[1692] Each of these fees or charges is subject to differing limitations pursuant to Propositions 218 and 26.[1693]

"Regulatory," "development," and "user" fees or charges are not subject to voter approval or majority protest. Broadly, these categories of fees are those that are targeted toward certain activities or sectors of industrial or commercial activity, or certain benefits received from the government or burdens created by the activity or the entity, rather than imposed on all property owners as an incident of property ownership.[1694] Such fees may be adopted as an ordinance or resolution in the context of the legislative body's normal business,[1695] subject only to the limitations of article XIII C, section 1(e), which, largely turn on establishing the relationship between the revenues raised and the uses to which they are put, and the amount charged and the benefits received or burdens created by the payor.[1696]

As explained below, the courts have held that there are no costs mandated by the state pursuant to Government Code section 17556(d) when local government has the authority to charge regulatory fees pursuant to article XIII C or property-related fees that are subject only to the voter protest provisions of article XIII D, section 6 of the California Constitution.

[1690] See, for example, Government Code section 37101 ("The legislative body may license, for revenue and regulation, and fix the license tax upon, every kind of lawful business transacted in the city.").

[1691] Government Code section 66001 provides for development fees under the Mitigation Fee Act requiring local entity to identify the purpose of the fee and the uses to which revenues will be put, to determine a reasonable relationship between the fee's use and the type of project or projects on which the fee is imposed.

[1692] See, for example, Health and Safety Code section 5471 (fees for storm drainage maintenance and operation); Government Code sections 38902 (providing for sewer standby charges); 53750 et seq. (Proposition 218 Omnibus Implementation Act, describing procedures for adoption of assessments, fees and charges); 53751 (as amended in 2017, providing that fees for sewer services includes storm sewers).

[1693] California Constitution, articles XIII C and XIII D.

[1694] See *Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842.

[1695] See, for example, *City and County of San Francisco v. Boss* (1948) 83 Cal.App.2d 445, 450 ("If revenue is the primary purpose and regulation is merely incidental the imposition is a tax; while if regulation is the primary purpose the mere fact that incidentally a revenue is also obtained does not make the imposition a tax.").

[1696] California Constitution, article XIII C, section 1(e).

i. Case law establishes that the exception to the subvention requirement found in Government Code section 17556(d) is a legal inquiry, not a practical one.

The California Supreme Court upheld the constitutionality of Government Code section 17556(d) in *County of Fresno.*[1697] The court, in holding that the term "costs" in article XIII B, section 6, excludes expenses recoverable from sources other than taxes, stated:

> Section 6 was included in article XIII B in recognition that article XIII A of the Constitution severely restricted the taxing powers of local governments. (See *County of Los Angeles I, supra,* 43 Cal.3d at p. 61.) The provision was intended to preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that were ill equipped to handle the task. (*Ibid.*; see *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 836, fn. 6 [244 Cal.Rptr. 677, 750 P.2d 318].) Specifically, it was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues. Thus, although its language broadly declares that the "state shall provide a subvention of funds to reimburse ... local government for the costs [of a state-mandated new] program or higher level of service," read in its textual and historical context section 6 of article XIII B requires subvention only when the costs in question can be recovered *solely from tax revenues.*[1698]

Following the logic of *County of Fresno*, the Third District Court of Appeal in *Connell v. Superior Court* held that the Santa Margarita Water District, and other similarly situated districts, had statutory authority to raise rates on water, notwithstanding argument and evidence that the amount by which the district would be forced to raise its rates would render the water unmarketable.[1699] The district acknowledged the existence of fee authority, but argued it was not "sufficient," within the meaning of section 17556(d).[1700] The court held that "[t]he Districts in effect ask us to construe 'authority,' as used in the statute, as a practical ability in light of surrounding economic circumstances. However, this construction cannot be reconciled with the plain language of [section 17556(d)] and would create a vague standard not capable of reasonable adjudication."[1701] The court concluded: "Thus, the economic evidence presented by SMWD to the Board was irrelevant and injected improper factual questions into the inquiry."[1702]

More recently, the Third District Court of Appeal endorsed and followed *Connell* in *Paradise Irrigation District*: "[w]e also reject the Water and Irrigation Districts' claim that, as a matter of practical reality, the majority protest procedure allows water customers to defeat the Districts'

[1697] *County of Fresno v. State of California* (1990) 53 Cal.3d. 482.

[1698] *County of Fresno v. State of California* (1990) 53 Cal.3d. 482, 487.

[1699] *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 402.

[1700] *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 398.

[1701] *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 401.

[1702] *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 401.

authority to levy fees."[1703] Instead, the court held, "[w]e adhere to our holding in *Connell* that the inquiry into fee authority constitutes an issue of law rather than a question of fact."[1704] Further, the 2021 decision of the Second District Court of Appeal in *Department of Finance v. Commission on State Mandates* found that "[e]ven if we assume that drafting or enforcing a law that imposes fees to pay for inspections would be difficult, the issue is whether the local governments have the authority to impose such a fee, not how easy it would be to do so."[1705]

Accordingly, the rule from these cases is that where the claimant has "authority, i.e., the right or power, to levy fees sufficient to cover the costs" of a state mandated program, reimbursement is not required, notwithstanding other factors that may make the exercise of that authority impractical or undesirable.[1706]

ii. Article XIII C of the California constitution exempts from the definition of "tax" a number of fees, including regulatory fees, so long as such fees meet a threshold of reasonableness and proportionality, and does not render local government's authority to impose fees insufficient as a matter of law within the meaning of Government Code section 17556(d).

Article XI, section 7 of the California Constitution provides: "A county or city may make and enforce within its limits all local, police, sanitary, and other ordinances and regulations not in conflict with general laws."[1707] Interpreting this provision, and its predecessor, the courts have held that a local legislative body with police power "has a wide discretion" and its laws or ordinances "are invested with a strong presumption of validity."[1708] The courts have held that "the power to impose valid regulatory fees does not depend on legislatively authorized taxing power but exists pursuant to the direct grant of police power under article XI, section 7, of the California Constitution."[1709] Accordingly, ordinances or laws regulating legitimate businesses or other activities within a city or county, as well as regulating the development and use of real

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[1703] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 195.

[1704] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 195.

[1705] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 564, citing *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 401.

[1706] *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487; *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 401-402.

[1707] California Constitution, article XI, section 7.

[1708] *Marblehead Land Co. v. City of Los Angeles* (1931) 47 F.2d 528, 532.

[1709] *Mills v. County of Trinity* (1980) 108 Cal.App.3d 656, 662 (in which a taxpayer challenged a county ordinance that imposed new and increased fees for county services in processing subdivision, zoning, and other land-use applications that had been adopted without a two-thirds affirmative vote of the county electors.).

property, have generally been upheld.[1710] In addition, "[t]he services for which a regulatory fee may be charged include those that are "'incident to the issuance of [a] license or permit, investigation, inspection, administration, maintenance of a system of supervision and enforcement.'"[1711] The courts also hold that water pollution prevention is a valid exercise of government police power.[1712]

Moreover, as noted above, a number of provisions of the Government Code provide express authority to impose or increase regulatory fees,[1713] and fees for development of real property,[1714] and property-based assessments, fees and charges.[1715]

Thus, there is no dispute that the claimants have authority, both statutory and constitutional (recognized in case law), to impose fees, including regulatory and development fees.[1716] The issue in dispute is only whether Propositions 218 and 26 impose procedural and substantive

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[1710] See *Ex parte Junqua* (1909) 10 Cal.App. 602 (police power "embraces the right to regulate any class of business, the operation of which, unless regulated, may, in the judgment of the appropriate local authority, interfere with the rights of others…."); *Sullivan v. City of Los Angeles Dept. of Building & Safety* (1953) 116 Cal.App.2d 807 (recognizing broad power to regulate not only nuisances but things or activities that may become nuisances or injurious to public health); *California Building Industry Assn. v. City of San Jose* (2015) 61 Cal.4th 435 (recognizing broad authority of municipality to regulate land use).

[1711] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 562, quoting *California Assn. of Prof. Scientists v. Department of Fish & Game* (2000) 79 Cal.App.4th 935, 945.

[1712] *Freeman v. Contra Costa County Water Dist.* (1971) 18 Cal.App.3d 404, 408.

[1713] See, for example, Government Code section 37101 ("The legislative body may license, for revenue and regulation, and fix the license tax upon, every kind of lawful business transacted in the city.").

[1714] Government Code section 66001 provides for development fees under the Mitigation Fee Act requiring local entity to identify the purpose of the fee and the uses to which revenues will be put, to determine a reasonable relationship between the fee's use and the type of project or projects on which the fee is imposed.

[1715] See, for example, Government Code sections 38902 (providing for sewer standby charges); 53750 et seq. (Proposition 218 Omnibus Implementation Act, describing procedures for adoption of assessments, fees and charges); 53751 (as amended in 2017, providing that fees for sewer services includes storm sewers).

[1716] See also, *Ayers v. City Council of City of Los Angeles* (1949) 34 Cal.2d 31 (Upholding conditions imposed by the City on subdivision development, in the absence of any clear restriction or limitation on the City's police power); *Associated Home Builders etc. Inc. v. City of Walnut Creek* (1971) 4 Cal.3d 633 (Upholding state statute and local ordinance requiring dedication or in-lieu fees for parks and recreation as a condition of subdividing for residential building).

restrictions that so weaken that authority as to render it insufficient within the meaning of Government Code section 17556(d).

As discussed above, Proposition 13 of 1978 added article XIII A to the California Constitution, with the intent to limit local governments' power to impose or increase *taxes*.[1717] Proposition 13 generally limited the rate of any ad valorem tax on real property to one percent; limited increases in the assessed value of real property to two percent annually absent a change in ownership; and required that any changes in state taxes enacted to increase revenues and special taxes imposed by local government must be approved by a two-thirds vote of the electors.[1718] Proposition 13, however, did not define "special taxes," and a series of judicial decisions tried to define the difference between fees and taxes, and in so doing, diminished Proposition 13's import by allowing local governments to generate revenue without a two-thirds vote.[1719]

In 1996, Proposition 218 added article XIII C to ensure and reiterate voter approval requirements for general and special taxes, because it was not clear whether Proposition 62, which enacted statutory provisions to ensure that all new local taxes be approved by a vote of the local electorate, bound charter jurisdictions.[1720] As added by Proposition 218, article XIII C defined all taxes as general or special, and provided that special districts have no power to impose general taxes; and for any other local government, general taxes require approval by a majority of local voters, and special taxes require a two-thirds majority voter approval.[1721]

Interpreting the newly-reiterated limitation on local taxes, the California Supreme Court in *Sinclair Paint* held that a statute permitting the Department of Health Services to levy fees on manufacturers and other persons contributing to environmental lead contamination, in order to support a program of evaluation and screening of children, imposed bona fide *regulatory fees*, and not, as alleged by plaintiffs, a special tax that would require voter approval under articles XIII A and XIII C.[1722] The Court noted with approval *San Diego Gas & Electric*, in which the air district was permitted to recover costs of its operations, which are not reasonably identifiable with specific industrial polluters, against all monitored polluters according to an emissions-based formula, and those fees were not held to constitute a special tax.[1723] The Court cited with approval the court of appeal's finding that "[a] reasonable way to achieve Proposition 13's goal of tax relief is to shift the costs of controlling stationary sources of pollution from the tax-paying

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[1717] See, e.g., *County of Fresno v. State of California* (1991) 53 Cal.3d 482.

[1718] *Schmeer v. County of Los Angeles* (2013) 213 Cal.App.4th 1310, 1317.

[1719] *Schmeer v. County of Los Angeles* (2013) 213 Cal.App.4th 1310, 1317-1319.

[1720] *Jacks v. City of Santa Barbara* (2017) 3 Cal.5th 248, 258-259.

[1721] See Exhibit X (27), Excerpts from Voter Information Guide, November 1996 General Election (Proposition 218, November 5, 1996).

[1722] *Sinclair Paint Co. v. State Board of Equalization* (1997) 15 Cal.4th 866, 870; 877.

[1723] *San Diego Gas & Electric Co. v. San Diego County Air Pollution Control Dist.* (1988) 203 Cal.App.3d 1132, 1148.

public to the pollution-causing industries themselves…"[1724] The Court thus held: "In our view, the shifting of costs of providing evaluation, screening, and medically necessary follow-up services for potential child victims of lead poisoning from the public to those persons deemed responsible for that poisoning is likewise a reasonable police power decision."[1725]

In 2010, the voters approved Proposition 26, partly in response to *Sinclair Paint*.[1726] Proposition 26 sought to broaden the definition of "tax," and accordingly narrow the courts' construction of permissible non-tax fees. However, Proposition 26 largely *codifies* the analysis of *Sinclair Paint*, in its articulation of the various types of fees and charges that are *not* deemed "taxes."[1727] Thus, while Proposition 13 led a series of increasing restrictions on the imposition of new taxes, after *Sinclair Paint* and Propositions 218 and 26, local governments have the power, subject to varying limitations, to impose or increase (1) general taxes (with voter approval);[1728] (2) special taxes (with *two-thirds* voter approval);[1729] and (3) levies, charges, or exactions that are not "taxes," pursuant to the exceptions stated in article XIII C, section 1(e), which include:

> (1) A charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege.
>
> (2) A charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product.
>
> (3) A charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof.
>
> (4) A charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property.
>
> (5) A fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law.

[1724] *Sinclair Paint Co. v. State Board of Equalization* (1997) 15 Cal.4th 866, 879 quoting *San Diego Gas & Electric Co. v. San Diego County Air Pollution Control Dist.* (1988) 203 Cal.App.3d 1132, 1148.

[1725] *Sinclair Paint Co. v. State Board of Equalization* (1997) 15 Cal.4th 866, 879.

[1726] See Exhibit X (28), Excerpts from Voter Information Guide, November 2010 General Election (Proposition 26, Nov. 2, 2010), page 3.

[1727] *City of San Buenaventura v. United Water Conservation Dist.* (2017) 3 Cal.5th 1191, 1210, footnote 7 citing *Jacks v. City of Santa Barbara* (2017) 3 Cal.5th 248, 262 and footnote 5.

[1728] California Constitution, article XIII C, section 2.

[1729] California Constitution, article XIII C, section 2.

(6) A charge imposed as a condition of property development.

(7) Assessments and property-related fees imposed in accordance with the provisions of Article XIII D.

The local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity.[1730]

The plain language of article XIII C, section 1(e) thus describes certain categories of fees or exactions that are not taxes, including fees or charges for a benefit conferred or privilege granted,[1731] and fees or charges for a government service or product provided to the payor and not others.[1732] Both of these could be described as "user" fees, or otherwise described as fees for a government service or benefit. In addition, section 1(e) provides for regulatory fees (including those for inspections),[1733] development fees,[1734] and assessments or property-related fees or charges adopted in accordance with article XIII D.[1735] In each case, the local government bears the burden to establish that the fee or charge is not a tax, including that "the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity."[1736]

However, while the limitations of article XIII C, section 1(e) may be newly expressed in the Constitution (i.e., added in 2010 by Proposition 26), the concepts that regulatory fees must be reasonably related to a legitimate public purpose, and in some way proportional to the activity being regulated, are not at all new. The California Supreme Court described the history of such fees in *United Water Conservation Dist.*, saying, "the language of Proposition 26 is drawn in large part from pre-Proposition 26 case law distinguishing between taxes subject to the requirements of article XIII A, on the one hand, and regulatory and other fees, on the other."[1737] The Court also noted: "*Sinclair Paint*, from which the relevant article XIII C requirements are derived, made clear that the aggregate cost inquiry and the allocation inquiry are two separate

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[1730] California Constitution, article XIII C, section 1(e).

[1731] California Constitution, article XIII C, section 1(e)(1).

[1732] California Constitution, article XIII C, section 1(e)(2).

[1733] California Constitution, article XIII C, section 1(e)(3).

[1734] California Constitution, article XIII C, section 1(e)(6).

[1735] California Constitution, article XIII C, section 1(e)(7).

[1736] California Constitution, article XIII C, section 1(e).

[1737] *City of San Buenaventura v. United Water Conservation Dist.* (2017) 3 Cal.5th 1191, 1210, footnote 7 citing *Jacks v. City of Santa Barbara* (2017) 3 Cal.5th 248, 262, and footnote 5.

steps in the analysis."[1738] Accordingly, the Court upheld the court of appeal's finding that the conservation charges did not exceed the reasonable cost of the regulatory activity in the aggregate,[1739] but presumed "each requirement to have independent effect,"[1740] and remanded the matter for consideration of the latter issue.

Similarly, in *San Diego County Water Authority*, the First District Court of Appeal upheld non-property-related rates charged for conveying water from the Colorado River based on a two-part test.[1741] The rates were held to satisfy both the express requirements of article XIII C, section 1(e)(2): "a specific service (use of the conveyance system) directly to the payor (a member agency) that is not provided to those not charged and which does not exceed the reasonable costs…of providing the service"; and the more general test of *Sinclair Paint*: "[the volumetric rates] bear a fair and reasonable relationship to the benefits it receives from its use of the conveyance system."[1742]

Notably, developer fees have been interpreted somewhat more loosely with respect to this proportionality test. The plain language of article XIII C, section 1(e)(6) conspicuously omits any language relating to the reasonable costs or burdens of development, although the general caveat at the end of section 1(e) presumably still applies: "that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity."[1743] However, the court in *616 Croft Ave., LLC* suggests that as long as a development fee is "reasonably related to the broad general welfare purposes for which the ordinance was enacted,"[1744] the courts will not inquire into the reasonableness of the fee as applied to a particular payor:

> [A]lthough the fee must be reasonable, the inquiry is not about the reasonableness of the individual calculation of fees related to Croft's development's impact on affordable housing. The inquiry is whether the fee schedule *itself* is reasonably related to the overall availability of affordable housing in West Hollywood.[1745]

[1738] *City of San Buenaventura v. United Water Conservation Dist.* (2017) 3 Cal.5th 1191, 1210.

[1739] *City of San Buenaventura v. United Water Conservation Dist.* (2017) 3 Cal.5th 1191, 1212.

[1740] *City of San Buenaventura v. United Water Conservation Dist.* (2017) 3 Cal.5th 1191, 1214 citing *Dix v. Superior Court* (1991) 53 Cal.3d 442, 459.

[1741] *San Diego County Water Authority v. Metropolitan Water Dist. of Southern California* (2017) 12 Cal.App.5th 1124, 1153.

[1742] *San Diego County Water Authority v. Metropolitan Water Dist. of Southern California* (2017) 12 Cal.App.5th 1124, 1153.

[1743] California Constitution, article XIII C, section 1(e).

[1744] *616 Croft Ave., LLC v. City of West Hollywood* (2016) 3 Cal.App.5th 621, 631.

[1745] *616 Croft Ave., LLC v. City of West Hollywood* (2016) 3 Cal.App.5th 621, 631-632.

The court relied in part on article XIII D, section 1, which states that "[n]othing in this article or Article XIII C shall be construed to…[a]ffect exiting laws relating to the imposition of fees as a condition of property development."[1746]

Accordingly, there is no reason to believe that article XIII C imposes any greater limitation on local governments' authority under their police power to impose reasonable regulatory fees and other fees than existed under prior law. Article XIII C makes clear that the burden is on the local government to establish that the levy is not a tax, that the fee is reasonably related to the costs to government in the aggregate, and that the fee charged to the payors is reasonably related to the benefits received or burdens created by such payors as a part of the rate setting process.[1747] It is not the burden of the state to make this showing on behalf of local government.

Here, the claimants argue the impossibility of imposing or increasing fees,[1748] even as *Sinclair Paint* and *616 Croft Ave.* show that the reasonableness and proportionality tests to which courts have subjected other proposed fees do not present such a hurdle as to effectively divest them of the authority to impose fees. In addition, there is ample evidence that the claimants do in fact impose development fees, regulatory fees, and other fees that they have successfully established as fees, rather than taxes, even after the adoption of Propositions 218 and 26. For example, the cities include fees for inspections and the city of Wildomar also includes fees for business registrations as funding sources to comply with the test claim permit's requirements.[1749] The County's adopted budget for fiscal year 2011-2012 includes revenue generated from building permits of $1,643,939.[1750]

Based on the foregoing, the Commission finds that article XIII C of the California Constitution does not render local government's authority to impose fees insufficient as a matter of law within the meaning of Government Code section 17556.

[1746] *616 Croft Ave., LLC v. City of West Hollywood* (2016) 3 Cal.App.5th 621, 631 ("Because the City has shown the fees are not special taxes under *Terminal Plaza* [*Corp. v. City and County of San Francisco* (1986) 177 Cal.App.3d 892], articles XIII C and XIII D of the California Constitution do not require the City to demonstrate the reasonableness of Croft's individual fee.").

[1747] California Constitution, article XIII C, section 1(e).

[1748] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, page 64.

[1749] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 157 (Declaration of Daniel A. York, Assistant City Manager, Public Works Director, and City Engineer for the City of Wildomar).

[1750] Exhibit X (7), County of Riverside, Adopted Budget, Fiscal Year 2011-2012, page 75.

iii. The County and Cities have authority to charge regulatory fees sufficient to pay for the new state-mandated requirements related to LID (Section F.1.d.1., 2., 4., 7.), Hydromodification (Section F.1.h.), Retrofitting (Section F.3.d.1-5.), BMP Maintenance Tracking (Section F.1.f.), Active/Passive Sediment Treatment (Section F.2.d.3.), Annual JRMP Reporting Checklist on Construction, New Development, Post Construction Development, Municipal (other than their own)/Commercial/Industrial (Section K.3.c.3.), and the Annual JRMP Reporting Requirements listed in Table 5 on New Development, Construction, Municipal (other than their own), Commercial/Industrial, Residential, and Retrofitting Existing Development (Section K.3.c.4.), which are sufficient as a matter of law to cover the costs of the mandated activities within the meaning of Government Code section 17556(d) and, thus, there are no costs mandated by the state for these activities.

Consistent with the above analysis of article XIII C, section 1(e)(3), the 2021 *Department of Finance* decision of the Second District Court of Appeal addressed NPDES permit requirements issued by the Los Angeles Regional Board to periodically inspect commercial and industrial facilities to ensure compliance with various environmental regulatory requirements.[1751] The court found that the local agencies subject to that permit had the authority under their police powers to charge regulatory fees for the inspection activities:

> We agree with the Commission that, based upon the local governments' constitutional police power and their ability to impose a regulatory fee that (1) does not exceed the reasonable cost of the inspections, (2) is not levied for unrelated revenue purposes, and (3) is fairly allocated among the fee payers, the local governments have such authority.[1752]

Even though the imposition of the fee may be difficult, the court held that local governments have the authority to impose the fee and, thus, reimbursement under article XIII B, section 6 was not required:

> The local governments also argue that a fee that must be no more than necessary to cover the reasonable costs of the inspections "would be difficult to accomplish." They refer to problems that would arise from a general business license fee on all businesses, including those not subject to inspection, and to charging fees for inspections in years in which no inspection would take place. Even if we assume that drafting or enforcing a law that imposes fees to pay for inspections would be difficult, the issue is whether the local governments have the authority to impose such a fee, not how easy it would be to do so. (*Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 401, 69 Cal.Rptr.2d 231.) As

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[1751] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 552.

[1752] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 562-563, citing *California Building Industry Assn. v. State Water Resources Control Bd.* (2018) 4 Cal.5th 1032, 1046, which cited *Sinclair Paint Co. v. State Bd. of Equalization* (1997) 15 Cal.4th 866, 881.

> explained above, the police powers provision of the constitution and the judicial authorities we have cited provide that authority.[1753]

In addition, the courts have explained that the scope of a regulatory fee is somewhat flexible, is valid as long as it relates to the overall purpose of the regulatory governmental action.[1754] The Third District Court of Appeal in *California Assn. of Prof. Scientists v. Department of Fish & Game (Professional Scientists)* has identified the following general rules:

> General principles have emerged. Fees charged for the associated costs of regulatory activities are not special taxes under an article XIII A, section 4 analysis if the " ' "fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and [they] are not levied for unrelated revenue purposes." ' " (Citation omitted.) "A regulatory fee may be imposed under the police power when the fee constitutes an amount necessary to carry out the purposes and provisions of the regulation." (Citation omitted.) "Such costs ... include all those incident to the issuance of the license or permit, investigation, inspection, administration, maintenance of a system of supervision and enforcement." (Citation omitted.) Regulatory fees are valid despite the absence of any perceived "benefit" accruing to the fee payers. (Citation omitted.) Legislators "need only apply sound judgment and consider 'probabilities according to the best honest viewpoint of informed officials' in determining the amount of the regulatory fee." (Citation omitted).[1755]

As indicated by the court in *Professional Scientists,* regulatory fees can include all those costs "incident to the issuance of the license or permit, investigation, inspection, administration, maintenance of a system of supervision and enforcement."[1756] In *United Business Commission v. City of San Diego*, the court explained that regulatory fees include "all the incidental consequences that may be likely to subject the public to cost in consequence of the business licensed" and that the following incidental costs are properly included in a regulatory fee: "inspection of hazards, travel time, office supplies, telephone expenses, overhead, and clerk's time"[1757] And Third District Court of Appeal recently held in *Department of Finance v. Commission on State Mandates* that regulatory fees properly included the costs of creating LID and hydromodification plans, which were "incident to the development permit which permittees

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[1753] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 564-565.

[1754] *California Farm Bureau Federation v. State Water Resources Control Board* (2011) 51 Cal.4th 421, 438, citing *California Assn. of Prof. Scientists v. Department of Fish & Game* (2000) 79 Cal.App.4th 935, 945.

[1755] *California Assn. of Prof. Scientists v. Department of Fish & Game* (2000) 79 Cal.App.4th 935, 945.

[1756] *California Assn. of Prof. Scientists v. Department of Fish & Game* (2000) 79 Cal.App.4th 935, 945.

[1757] *United Business Commission v. City of San Diego* (1979) 91 Cal.App.3d 156, 166, footnote 2.

will issue to priority development projects and the administration of permittees' pollution abatement program."[1758]

The Mitigation Fee Act, Government Code section 66000 et seq., also authorizes local agencies to impose development fees if certain requirements are met. As defined by the Act, a development fee is:

> . . . a monetary exaction other than a tax or special assessment, whether established for a broad class of projects by legislation of general applicability or imposed on a specific project on an ad hoc basis, that is charged by a local agency to the applicant in connection with approval of a development project for the purpose of defraying all or a portion of the cost of public facilities related to the development project, but does not include . . . fees for processing applications for governmental regulatory actions or approvals[.][1759]

"[A] fee does not become a 'development fee' simply because it is made in connection with a development project. Rather, approval of the development project must be conditioned on payment of the fee."[1760] A development fee under the Act is one that is imposed to "defray[] all or a portion of the cost of public facilities related to the development project."[1761] "'Public facilities' [broadly] includes public improvements, public services, and community amenities," and, thus, is not limited to capital outlay costs.[1762] The local agency shall determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed.[1763] Pollution prevention or abatement provides a public service,[1764] which falls within the Act's definition of a public facility.

For these reasons, the Third District Courts of Appeal upheld the application of Government Code section 17556(d) for LID and Hydromodification planning activities at issue in another stormwater permit issued by the Regional Board, finding that the permittees had fee authority sufficient as a matter of law to cover all costs incurred under those sections of the permit, despite arguments from local government that the fee would not cover writing the LID and Hydromodification Plan standards and that the fee would be imposed on future development and, thus, could not be proportionate to the service provided.[1765]

[1758] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 590 (review denied March 1, 2023).

[1759] Government Code section 66000(b).

[1760] *California Building Industry Assn. v. San Joaquin Valley Air Pollution Control Dist.* (2009) 178 Cal.App.4th 120, 130.

[1761] Government Code section 66000(b).

[1762] Government Code section 66000(d).

[1763] Government Code section 66001.

[1764] *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 560.

[1765] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 590.

Therefore, the Commission finds that the County and cities have fee authority within the meaning of Government Code section 17556(d) sufficient as a matter of law to cover the cost of the new state-mandated activities related to LID (Section F.1.d.1., 2., 4., 7.), Hydromodification (Section F.1.h.), Retrofitting (Section F.3.d.1-5.), BMP Maintenance Tracking (Section F.1.f.), Active/Passive Sediment Treatment (Section F.2.d.3.), Annual JRMP Reporting Checklist on Construction, New Development, Post Construction Development, Municipal (other than their own)/Commercial/Industrial (Section K.3.c.3.), and the Annual JRMP Reporting Requirements listed in Table 5 on New Development, Construction, Municipal (other than their own), Commercial/Industrial, Residential, and Retrofitting Existing Development (Section K.3.c.4.).

Accordingly, there are no costs mandated by the state for these activities and reimbursement is denied.

iv. The County and cities do not have authority to impose stormwater property-related fees for the new mandated activities related to the Watershed Workplan (Sections G.1.-5.); the Annual JRMP Reporting requirements to include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items (Section K.3.c.1.), and provide in the annual report an updated timeframe for attainment of a desired outcome level when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe (Section K.3.c.2.); the Annual JRMP Reporting Checklist on Illicit Discharges and Connections and MS4 Maintenance (Section K.3.c.3.); the Annual JRMP Reporting Requirements listed in Table 5 on Illicit Discharge Detection and Elimination and Updated Workplans (Section K.3.c.4.); and Special Studies (Section II.E.2.-5. of Attachment E.), and therefore there are costs mandated by the state for these activities until the fee authority is no longer subject to the voter approval requirements of article XIII D, section 6(c) after December 31, 2017. However, beginning January 1, 2018, there are no costs mandated by the state because these fees are subject only to the voter protest provisions of Article XIII D, section 6(a) and Government Code section 17556(d) applies.

The remaining new mandated activities are as follows:

Watershed Workplan (G.1.-5.)

1. The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs.[1766]
2. The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native

[1766] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 255 (test claim permit, Section G.1.d.).

American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4.[1767]

3. The watershed workplan must include the identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan.[1768]
4. The annual watershed review meetings shall be open to the public and adequately noticed.[1769]
5. Each permittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan.[1770]

Annual JRMP Report (Sections K.3.c.1.-4)

1. Include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items.[1771]
2. Provide in the annual report an updated timeframe for attainment of a desired outcome level in the annual report when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe, but the review of the existing activities and BMPs are adequate, or that the projected timeframe should be extended.[1772]
3. Providing the following information in the Reporting Checklist: Illicit Discharges and Connections (Number of IC/ID Eliminations and Violations), and MS4 Maintenance (Total Miles of MS4 Inspected).[1773]
4. Providing the following information the Annual JRMP Reporting Requirements listed in Table 5: Illicit Discharge Detection and Elimination (A description of instances when field screening and analytical data exceeded action levels, including those instances for

[1767] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.3.).

[1768] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 256 (test claim permit, Section G.4.).

[1769] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1770] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 257 (test claim permit, Section G.5.).

[1771] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.1.).

[1772] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, page 262 (test claim permit, Section K.3.c.2.).

[1773] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 296 (test claim permit, Section K.3.c.3.).

which no investigation was conducted)[1774], and Updated Workplans including priorities, strategy, implementation schedule, and effectiveness evaluation.[1775]

Special Studies (Attachment E, Section II.E.2.-5.) – conducting the four special studies.

The claimants have constitutional police power (Cal. Const., art. XI, § 7) and statutory authority to impose property-related fees for these remaining new state mandated activities.[1776] An example of such a property-related stormwater fee that covers the costs of complying "with applicable local, state, and federal stormwater regulations," which would include the activities here, is the property-related fee adopted in 2014 by the City of San Clemente (which is not a permittee under the test claim permit), and was in effect from February 7, 2014 through June 30, 2020.[1777]

The claimants contend, however, that any fees developed by the claimants to fund compliance with the test claim permit would be a property-related fee that would require a majority vote of the property owners subject to the fee and, thus, claimants do not have sufficient fee authority within the meaning of Government Code section 17556(d).[1778]

The claimants' assertion, implicates article XIII D and the limitations imposed on assessments and property-related fees and charges.

As described below, the County and cities have authority to impose stormwater property-related fees for the remaining new mandated activities identified above, subject to article XIII D, which until January 1, 2018, required voter approval before fees could be charged. Government Code section 17556(d) does not apply to deny a claim when voter approval of the fee is required from November 10, 2010, the beginning date of the potential period of reimbursement, to December 31, 2017. However, beginning January 1, 2018, there are no costs mandated by the state because these fees are subject only to the voter protest provisions of Article XIII D, section 6(a) and Government Code section 17556(d) applies.

Article XIII D, as added by Proposition 218 "imposes certain substantive and procedural restrictions on taxes, assessments, fees, and charges 'assessed by any agency upon any parcel of

[1774] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4.).

[1775] Exhibit A, Test Claim, filed November 10, 2011 and revised April 28, 2017, pages 262, 266 (test claim permit, Section K.3.c.4.).

[1776] See, e.g., Health and Safety Code section 5471 (fees for storm drainage maintenance and operation); Government Code sections 38902 (providing for sewer standby charges); 53750 et seq. (Proposition 218 Omnibus Implementation Act, describing procedures for adoption of assessments, fees and charges); 53751 (as amended in 2017, providing that fees for sewer services includes storm sewers).

[1777] Exhibit X (3), City of San Clemente Municipal Code, title 13, chapter 13.34, sections 13.34.010-13.34.030.

[1778] Exhibit D, Claimants' Rebuttal Comments, filed December 14, 2017, pages pdf 66-67.

property or upon any person as an incident of property ownership.'"[1779] Specifically, assessments and property-related fees are subject to notice and hearing requirements, and must meet a threshold of proportionality with respect to the amount of the exaction and the purposes to which it is put. Section 4, addressing assessments, provides:

> An agency which proposes to levy an assessment shall identify all parcels which will have a special benefit conferred upon them and upon which an assessment will be imposed. The proportionate special benefit derived by each identified parcel shall be determined in relationship to the entirety of the capital cost of a public improvement, the maintenance and operation expenses of a public improvement, or the cost of the property related service being provided. No assessment shall be imposed on any parcel which exceeds the reasonable cost of the proportional special benefit conferred on that parcel. Only special benefits are assessable, and an agency shall separate the general benefits from the special benefits conferred on a parcel. Parcels within a district that are owned or used by any agency, the State of California or the United States shall not be exempt from assessment unless the agency can demonstrate by clear and convincing evidence that those publicly owned parcels in fact receive no special benefit.[1780]

Once the amount of the proposed assessment is identified, notice must be mailed to the record owner of each parcel, stating the amount chargeable to the entire district, to the parcel itself, the reason for the assessment and the basis of the calculation, and the date, time and location of the public hearing on the proposed assessment. The notice must be in the form of a ballot, and at the public hearing the agency "shall consider all protests…and tabulate the ballots." If the majority of the returned ballots oppose the assessment, the agency "shall not impose" the assessment.[1781]

Similarly, section 6 provides for a proportionality requirement with respect to property-related fees and charges:

> A fee or charge shall not be extended, imposed, or increased by any agency unless it meets all of the following requirements:
>
> (1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
>
> (2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
>
> (3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
>
> (4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question. Fees

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[1779] *City of San Buenaventura v. United Water Conservation Dist.* (2017) 3 Cal.5th 1191, 1200 citing California Constitution, article XIII D, section 3).

[1780] California Constitution, article XIII D, section 4(a).

[1781] California Constitution, article XIII D, section 4(c)-(e).

> or charges based on potential or future use of a service are not permitted. Standby charges, whether characterized as charges or assessments, shall be classified as assessments and shall not be imposed without compliance with Section 4.
>
> (5) No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library services, where the service is available to the public at large in substantially the same manner as it is to property owners. Reliance by an agency on any parcel map, including, but not limited to, an assessor's parcel map, may be considered a significant factor in determining whether a fee or charge is imposed as an incident of property ownership for purposes of this article. In any legal action contesting the validity of a fee or charge, the burden shall be on the agency to demonstrate compliance with this article.[1782]

And, section 6 provides for notice and a public hearing similarly to section 4; but, unlike section 4, section 6 does not expressly require the notice to inform parcel owners of their right to protest the proposed fee, nor is the notice required to be in the form of a ballot to be returned.[1783]

Finally, section 6(c) also provides that voter approval is required for property-related fees and charges *other than* for water, sewer, and refuse collection services.[1784] The court in *Howard Jarvis Taxpayers' Assn. v. City of Salinas* (2002) 98 Cal.App.4th 1351 held that "sewer," for purposes of the voter approval exemption does not include storm sewers or storm drainage fees.[1785] That holding has since been the subject of legislative correction, in the form of Government Code sections 53750 and 53751, which were amended in 2017 to expressly overrule *Howard Jarvis Taxpayers' Assn. v. City of Salinas*.[1786] The Commission presumes the validity of Government Code sections 53750 and 53751, as amended, and, as the Third District Court of Appeal recently held, that the amendments, absent a clear and unequivocal statement to the contrary, operate *prospectively* beginning January 1, 2018.[1787] Accordingly, prior to January 1, 2018, storm sewer or storm drainage fees imposed would be subject to the voter approval requirements of article XIII D, section 6(c), but after January 1, 2018, storm sewer or storm drainage fees imposed on property owners are subject only to the majority protest requirement of article XIII D, section 6(a), and the reasonableness and proportionality requirements of section 6(b).

Many of the limitations stated in Proposition 218 are not new, as most special assessment acts under prior law required notice and a public hearing, and many such acts also provided for

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[1782] California Constitution, article XIII D, section 6(b).

[1783] Compare California Constitution, article XIII D, section 6(a)(1)-(2) with article XIII D, section 4(a).

[1784] California Constitution, article XIII D, section 6(c).

[1785] *Howard Jarvis Taxpayers' Assn. v. City of Salinas* (2002) 98 Cal.App.4th 1351, 1358-1359.

[1786] Government Code sections 53750, 53751 (amended by Statutes 2017, chapter 536 (SB 231)).

[1787] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 573-577 (review denied March 1, 2023).

majority protest of affected parcel owners to defeat a proposed assessment.[1788] Despite the existence of such limitations before Proposition 218, the court in *County of Placer v. Corin* held that assessments were sufficiently distinct from taxes as to be outside the scope of articles XIII A and XIII B.[1789]

After Proposition 218 came *Apartment Assn. of Los Angeles County, Richmond*, and *Bighorn-Desert View*.[1790] In each of these cases, the California Supreme Court narrowly construed the procedural and substantive limitations of article XIII D. In *Apartment Assn.*, the Court rejected a challenge under article XIII D, section 6 to the city's ordinance imposing fees on residential rental properties, finding that the fees were not "imposed by an agency upon a parcel or upon a person as *an incident of property ownership*…"[1791] The Court held that Proposition 218 imposes restrictions on taxes, assessments, fees, and charges only "when they burden landowners as *landowners*."[1792] The residential rental fee ordinance at issue "imposes a fee on its subjects by virtue of their ownership of a business — i.e., because they are landlords," and, thus, the fee was not subject to the requirements of article XIII D.[1793]

In *Richmond*, the District imposed a "capacity charge" on applicants for *new* water service connections, and thus could not prospectively identify the parcels to which the charge would apply; that is, it could not have complied with the procedural requirements of notice and hearing under article XIII D, section 4. The Court held that the impossibility of compliance with section 4 was one reason to find that the capacity charge was not an assessment, within the meaning of article XIII D.[1794] The Court also found that the charge was to be imposed on applicants for new service, rather than users receiving service through existing connections, and that that distinction is consistent with the overall intent of Proposition 218, to promote taxpayer consent.[1795] Accordingly, the Court concluded: "Because these fees are imposed only on the self-selected group of water service applicants, and not on real property that the District has identified or is able to identify, and because neither fee can ever become a charge on the property itself, we

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[1788] *County of Placer v. Corin* (1980) 113 Cal.App.3d 443, 454, footnote 9.

[1789] *County of Placer v. Corin* (1980) 113 Cal.App.3d 443, 454, footnote 9.

[1790] *Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830; *Richmond v. Shasta Community Services Dist.* (2004) 32 Cal.4th 409; *Bighorn-Desert View Water Agency v. Verjill* (2006) 39 Cal.4th 205.

[1791] California Constitution, article XIII D, sections 2(e) and 3, emphasis added; *Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 841-842.

[1792] *Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842, emphasis in original.

[1793] *Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842.

[1794] *Richmond v. Shasta Community Services Dist.* (2004) 32 Cal.4th 409, 419.

[1795] *Richmond v. Shasta Community Services Dist.* (2004) 32 Cal.4th 409, 420.

conclude that neither fee is subject to the restrictions that article XIII D imposes on property assessments and property-related fees."[1796]

In *Bighorn-Desert View*, the Court rejected a local initiative designed to impose a voter approval requirement on all future rate increases for water service,[1797] finding that article XIII D, section 6's express *exemption* from voter approval for sewer, water, and refuse collection "would appear to embody the electorate's intent as to when voter-approval should be required, or not required."[1798] The Court concluded:

> [U]nder section 3 of California Constitution article XIII C, local voters by initiative may reduce a public agency's water rate and other delivery charges, but…[article XIII C, section 3] does not authorize an initiative to impose a requirement of voter preapproval for future rate increases or new charges for water delivery. In other words, by exercising the initiative power voters may decrease a public water agency's fees and charges for water service, but the agency's governing board may then raise other fees or impose new fees without prior approval. Although this power-sharing arrangement has the potential for conflict, we must presume that both sides will act reasonably and in good faith, and that the political process will eventually lead to compromises that are mutually acceptable and both financially and legally sound. (See *DeVita v. County of Napa, supra,* 9 Cal.4th at pp. 792–793, 38 Cal.Rptr.2d 699, 889 P.2d 1019 ["We should not presume ... that the electorate will fail to do the legally proper thing."].) We presume local voters will give appropriate consideration and deference to a governing board's judgments about the rate structure needed to ensure a public water agency's fiscal solvency, and we assume the board, whose members are elected (see Stats. 1969, ch. 1175, § 5, p. 2274, 72B West's Ann. Wat.-Appen., *supra,* ch. 112, p. 190), will give appropriate consideration and deference to the voters' expressed wishes for affordable water service. The notice and hearing requirements of subdivision (a) of section 6 of California Constitution article XIII D will facilitate communications between a public water agency's board and its customers, and the substantive restrictions on property-related charges in subdivision (b) of the same section should allay customers' concerns that the agency's water delivery charges are excessive.[1799]

In 2019, the Third District Court of Appeal issued its decision in *Paradise Irrigation District*, which directly addresses (in the context of water services) the claimants' assertion that cities and counties are without authority to impose new fees in light of the voter protest provisions of

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[1796] *Richmond v. Shasta Community Services Dist.* (2004) 32 Cal.4th 409, 430.

[1797] *Bighorn-Desert View Water Agency v. Verjill* (2006) 39 Cal.4th 205, 219.

[1798] *Bighorn-Desert View Water Agency v. Verjill* (2006) 39 Cal.4th 205, 218-219.

[1799] *Bighorn-Desert View Water Agency v. Verjill* (2006) 39 Cal.4th 205, 220-221.

Proposition 218, and that mandate reimbursement is therefore warranted.[1800] In *Paradise Irrigation District*, the Third District Court of Appeal observed:

> This case takes up where *Connell* left off, namely with the question of whether the passage of Proposition 218 undermined water and irrigation districts' authority to levy fees so that they are entitled to subvention for state-mandated regulations requiring water infrastructure upgrades. The Water and Irrigation Districts do not argue this court wrongly decided *Connell, supra,* 59 Cal.App.4th 382, 69 Cal.Rptr.2d, but only that the rule of decision was superseded by Proposition 218. Consequently, we proceed to examine the effect of Proposition 218 on the continuing applicability of *Connell.*[1801]

Ultimately the court preserved and followed the rule of *Connell*, finding, based in large part on a discussion of *Bighorn-Desert View*, that "Proposition 218 implemented a power-sharing arrangement that does not constitute a revocation of the Water and Irrigation Districts' fee authority."[1802] The court held, "[c]onsistent with the California Supreme Court's reasoning in *Bighorn*, we presume local voters will give appropriate consideration and deference to state mandated requirements relating to water conservation measures required by statute."[1803] In addition, the court held "[w]e also reject the Water and Irrigation Districts' claim that, as a matter of practical reality, the majority protest procedure allows water customers to defeat the Districts' authority to levy fees."[1804] However, the court said, "[w]e adhere to our holding in *Connell* that the inquiry into fee authority constitutes an issue of law rather than a question of fact."[1805] The court found that water service fees, being expressly exempt from the voter approval provisions of article XIII D, section 6(c), therefore do not require voter preapproval, as would new taxes.[1806] In addition, the court followed and relied upon *Bighorn-Desert View*'s analysis of a power-sharing relationship between local agencies and their constituents, including the presumption that "local voters will give appropriate consideration and deference to a governing board's judgments about the rate structure needed to ensure a public water agency's fiscal solvency…" and that the notice and hearing requirements of article XIII D, section 6(a)

[1800] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 189.

[1801] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 189.

[1802] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 194-195.

[1803] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 194.

[1804] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 195.

[1805] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 195.

[1806] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 192.

"will facilitate communications between a public water agency's board and its customers, and the substantive restrictions on property-related charges in subdivision (b) of the same section should allay customers' concerns that the agency's water delivery charges are excessive."[1807] Accordingly, the court found that that power-sharing arrangement "does not undermine the fee authority that the districts have," and the majority protest procedure of article XIII D, section 6(a) "does not divest the Water and Irrigation Districts of their authority to levy fees."[1808] The court noted that statutory protest procedures already existed, and "the possibility of a protest under article XIII D, section 6 does not eviscerate the Water and Irrigation Districts' ability to raise fees to comply with the Water Conservation Act."[1809] Thus, the court found that Government Code section 17556(d) still applies to deny a claim when the fee authority is subject to voter protest under article XIII D, section 6(a).

However, the court *Paradise Irrigation District* did not analyze whether Government Code section 17556(d) applies when voter approval is required in the years before Government Code sections 53750 and 53751 were enacted to make property-related stormwater fees fall within article XIII D's exception to the voter approval requirement. The court noted that,

> In this case, none of the parties argue the costs for upgrading water service that may be required by the Conservation Act are subject to voter approval. Such an argument would be untenable because SB 231 added Government Code section 53751, subdivision (h), to declare that "Proposition 218 exempts sewer and water services from the voter-approval requirement." (Stats. 2017, ch. 536, § 2.)[1810]

Thus, based on the *Paradise Irrigation District* decision and the Legislature's enactment of Government Code sections 57350 and 57351, any costs incurred on or after January 1, 2018, to comply with the following new requirements are denied: new activities related to the Watershed Workplan (Sections G.1.-5.); the Annual JRMP Reporting requirements to include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items (Section K.3.c.1.), and provide in the annual report an updated timeframe for attainment of a desired outcome level when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe (Section K.3.c.2.); the Annual JRMP Reporting Checklist on Illicit Discharges and Connections and MS4 Maintenance (Section K.3.c.3.); the Annual JRMP Reporting Requirements listed in Table 5 on Illicit Discharge Detection and Elimination and Updated Workplans (Section K.3.c.4.); and Special Studies (Section II.E.2.-5. of Attachment E.). The claimants have authority to charge property-related fees for these costs subject only to a voter protest under article XIII D on or

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[1807] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 192-193.

[1808] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 194.

[1809] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 194.

[1810] *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 197.

after January 1, 2018, which is sufficient as a matter of law to cover the costs of the mandated activities within the meaning of Government Code section 17556(d).

However, there remains an issue as to whether Government Code section 17556(d) applies when voter approval is required by article XIII D for any costs incurred for these activities, from November 10, 2010, the beginning date of the potential period of reimbursement, to December 31, 2017 — before Government Code 57350 and 57351 were enacted. The Third District Court of Appeal recently addressed the issue in *Department of Finance v. Commission on State Mandates* and upheld the Commission's findings in *Discharge of Stormwater Runoff*, 07-TC-09, which addressed an NPDES stormwater permit issued by the San Diego Regional Water Quality Control Board.[1811] Although the State filed a petition for review of that decision, the Supreme Court denied review on March 1, 2023.[1812] Thus, the decision of the Third District Court of Appeal is final, and binding on the Commission.

In *Discharge of Stormwater Runoff- Order No. R9-2007-0001*, 07-TC-09, the Commission found that the permit imposed new state-mandated activities relating to the public education program, activities and collaboration required to develop watershed and regional urban runoff management programs, and activities required to comply with the permit's program effectiveness assessment.[1813] The Commission also found that the claimants had the fee authority under their constitutional police powers and several statutory provisions, but that authority was subject to the voter approval requirement of article XIII D, section 6. The Commission found that local agencies do not have sufficient fee authority within the meaning of Government Code section 17556(d) when voter approval of the fee is constitutionally required. The Commission based the finding on several cases, including *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351, 1352, 1358-1359, which as stated above, held that a city's charges on developed parcels to fund stormwater management were property-related fees, and were not covered by Proposition 218's voter-approval exemption for "sewer" or "water" services. The Commission also distinguished *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, finding that the voting requirement in Proposition 218 does not impose a mere practical or economic hurdle, as in *Connell*, but a legal and constitutional one. The Commission concluded that without voter approval, the local agency lacks the authority, i.e., the right or power, to levy fees sufficient to cover the costs of the state-mandated program, and approved reimbursement for those activities subject to potential offsetting revenues.[1814]

[1811] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 579-580 (review denied March 1, 2023).

[1812] *Department of Finance v. Commission on State Mandates*, Case No. S277832, petition for review denied March 1, 2023.

[1813] Commission on State Mandates, Statement of Decision, *Discharge of Stormwater Runoff – Order No. R9-2007-0001*, 07-TC-09, adopted March 26, 2010, pages 122-132, https://csm.ca.gov/decisions/doc14.pdf (accessed on September 7, 2022).

[1814] Commission on State Mandates, Statement of Decision, *Discharge of Stormwater Runoff – Order No. R9-2007-0001*, 07-TC-09, adopted March 26, 2010, pages 102-107, https://csm.ca.gov/decisions/doc14.pdf (accessed on September 7, 2022).

The Third District Court of Appeal agreed, finding as follows:

> Here, a fee for stormwater drainage services is *not* valid unless and until the voters approve it. For property-related fees, article XIII D limits permittees' police power to proposing the fee. Like article XIII C's limitation on local governments' taxing authority, article XIII D provides that "[e]xcept for fees or charges for sewer, water, and refuse collection services, no property related fee or charge shall be imposed or increased unless and until that fee or charge is submitted and approved by a majority vote of the property owners of the property subject to the fee or charge or, at the option of the agency, by a two-thirds vote of the electorate residing in the affected area." (Cal. Const., art. XIII D, § 6, subd. (c).) The State's argument ignores the actual limitation article XIII D imposes on permittees' police power. Permittees expressly have no authority to levy a property-related fee unless and until the voters approve it. There is no power sharing arrangement.
>
> This limitation is crucial to our analysis. The voter approval requirement is a primary reason Section 6 exists and requires subvention. As stated earlier, the purpose of Section 6 "is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose." (*County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81, 61 Cal.Rptr.2d 134, 931 P.2d 312.) And what are those limitations? Voter approval requirements, to name some.
>
> Articles XIII A and XIII B "work in tandem, together restricting California governments' power both to levy and to spend for public purposes." (*City of Sacramento, supra*, 50 Cal.3d at p. 59, fn. 1, 266 Cal.Rptr. 139, 785 P.2d 522.) Article XIII A prevents local governments from levying special taxes without approval by two-thirds of the voters. (Cal. Const., art. XIII A, § 4.) It also prevents local governments from levying an ad valorem tax on real and personal property. (Cal. Const., art. XIII A, § 1.) Article XIII B, adopted as the "next logical step" to article XIII A, limits the growth of appropriations made from the proceeds of taxes. (Cal. Const., art. XIII B, §§ 1, 2, 8; *City Council v. South* (1983) 146 Cal.App.3d 320, 333-334, 194 Cal.Rptr. 110.) And, as stated above, article XIII C extends the voter approval requirement to local government general taxes. (Cal. Const., art. XIII C, § 2, subd. (b).)
>
> Subvention is required under Section 6 because these limits on local governments' taxing and spending authority, especially the voter approval requirements, deprive local governments of the authority to enact taxes to pay for new state mandates. They do not create a power-sharing arrangement with voters. They limit local government's authority to proposing a tax only, a level of authority that does not guarantee resources to pay for a new mandate. Section 6 provides them with those resources.
>
> Article XIII D's voter approval requirement for property-related fees operates to the same effect. Unlike the owner protest procedure at issue in

> *Irrigation Dist.*, the voter approval requirement does not create a power sharing arrangement. It limits a local government's authority to proposing a fee only; again, a level of authority that does not guarantee resources to pay for a state mandate. Section 6 thus requires subvention because of Article XIII D's voter approval requirement. Contrary to the State's argument, *Paradise Irrigation Dist*. does not compel a different result.[1815]

Thus, consistent with this decision, and the prior decision of the Commission in *Discharge of Stormwater Runoff- Order No. R9-2007-0001*, 07-TC-09, the Commission finds that the County and cities have the authority to impose property-related fees requiring voter approval from November 10, 2010, the beginning date of the potential period of reimbursement, to December 31, 2017, for the new state-mandated activities required by the following sections of the test claim permit: the Watershed Workplan (Sections G.1.-5.); the Annual JRMP Reporting requirements to include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items (Section K.3.c.1.), and provide in the annual report an updated timeframe for attainment of a desired outcome level when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe (Section K.3.c.2.); the Annual JRMP Reporting Checklist on Illicit Discharges and Connections and MS4 Maintenance (Section K.3.c.3.); the Annual JRMP Reporting Requirements listed in Table 5 on Illicit Discharge Detection and Elimination and Updated Workplans (Section K.3.c.4.); and Special Studies (Section II.E.2.-5. of Attachment E.). Since voter approval is required during this time period, Government Code section 17556(d) does not apply and there are costs mandated by the state for these activities. Any fee revenues received must be identified as offsetting revenue. In addition, reimbursement for this mandate from any source, including but not limited to, service fees collected, federal funds, other state funds, and other funds that are not the claimant's proceeds of taxes shall be identified and deducted from this claim.

Any costs incurred for these activities beginning January 1, 2018, are denied.

V. Conclusion

Based on the foregoing analysis, the Commission partially approves this Test Claim only for the County of Riverside and the city copermittees, and finds that the following activities impose a reimbursable state-mandated program from November 10, 2010, the beginning date of the potential period of reimbursement, to December 31, 2017:

A. Watershed Workplan

1. The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs. (Section G.1.d.)
2. The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4. (Section G.3.)

[1815] *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 579-581 (review denied March 1, 2023).

3. The watershed workplan must include the identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan. (Section G.4.)
4. The annual watershed review meetings shall be open to the public and adequately noticed. (Section G.5.)
5. Each permittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan. (Section G.5.)

B. Annual JRMP Report

1. Include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items. (Section K.3.c.1.)
2. Provide in the annual report an updated timeframe for attainment of a desired outcome level in the annual report when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe, but the review of the existing activities and BMPs are adequate, or that the projected timeframe should be extended. (Section K.3.c.2.)
3. Providing the following information in the Reporting Checklist: Illicit Discharges and Connections (Number of IC/ID Eliminations and Violations), and MS4 Maintenance (Total Miles of MS4 Inspected). (Section K.3.c.3.)
4. Providing the following information the Annual JRMP Reporting Requirements listed in Table 5: Illicit Discharge Detection and Elimination (A description of instances when field screening and analytical data exceeded action levels, including those instances for which no investigation was conducted), and Updated Workplans including priorities, strategy, implementation schedule, and effectiveness evaluation. (Section K.3.c.4.)

D. Special Studies

1. Sediment Toxicity Study
    a. Develop and submit to the Regional Board by April 1, 2012, a workplan to investigate the toxicity of sediment in streams and its potential impact on benthic macroinvertebrate IBI scores. The study must be implemented in conjunction with the stream assessment monitoring in Attachment E. The study must include the following elements:
        1) At least four stream assessment locations must be sampled, including one reference site and one mass loading site. The selection of sites must be done with consideration of subjectivity of receiving waters to discharges from residential and agricultural land uses.
        2) At a minimum, sampling must occur once per year at each site for at least two years.
        3) At a minimum, sediment toxicity analysis must include the measurement of metals, pyrethroids, and organochlorine pesticides. The analysis must include estimates of bioavailability based upon sediment grain size, organic carbon, and

receiving water temperature at the sampling site. Acute and chronic toxicity testing must be done using *Hyalella azteca*.

b. Include the results and a discussion in the monitoring annual report including an assessment of the relationship between observed IBI scores and all variables measured. (Attachment E., Section II.E.2.)

2. Trash and Litter Investigation

a. Develop and submit to the Regional Board by September 1, 2012, a workplan to assess trash (including litter) as a pollutant within receiving waters on a watershed based scale. The copermittees must select a lead copermittee. The study must include the following elements:

1) The lead copermittee must identify suitable sampling locations within the Santa Margarita HU.

2) Trash at each location must be monitored a minimum of twice during the wet season following a qualified monitoring storm event[1816] and twice during the dry season.

3) The lead copermittee must use the "Final Monitoring Workplan for the Assessment of Trash in San Diego County Watersheds" and "A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region" to develop a monitoring protocol.

b. Include the results and a discussion in the monitoring annual report and must, at a minimum, include source identification, an evaluation of BMPs for trash reduction and prevention, and a description of any BMPs implemented in response to study results. (Attachment E., Section II.E.3.)

3. Agricultural, Federal and Tribal Input Study

a. Develop and submit to the Regional Board by September 1, 2012, a workplan to investigate the water quality of agricultural, federal, and tribal runoff that is discharged into their MS4. The study must include the following elements:

1) The copermittees must identify a representative number of sampling stations within their MS4 that receive discharges of agricultural, federal, and tribal runoff that has not co-mingled with any other source. At least one station from each category must be identified.

2) One storm event must be monitored at each sampling location each year for at least two years.

3) At a minimum, analysis must include those constituents listed in Table 1 of the MRP. Grab samples may be utilized, though composite samples are preferred.

[1816] A qualified monitoring storm event is defined as a minimum of 0.1 inches of precipitation preceded by 72 hours of dry weather.

The copermittees must also measure or estimate flow rates and volumes of discharges into the MS4.

b. Include the results and a discussion from the study in the monitoring annual report. (Attachment E., Section II.E.4.)

4. MS4 and Receiving Water Maintenance Study

a. Develop and submit to the Regional Board by April 1, 2012, a workplan to investigate receiving waters that are considered part of the MS4 and that are subject to continual vegetative clearance activities, for example, mowing. The copermittees must assess the effects of the vegetation removal activities and water quality, including, but not limited to, modification of biogeochemical functions, in-stream temperatures, receiving water bed and bank erosion potential, and sediment transport. The study must include the following elements:

1) The copermittees must identify suitable sampling locations, including at least one reference that is not subject to maintenance activities.

2) At a minimum, the copermittees must monitor pre- and post-maintenance activities for indicator bacteria, turbidity, temperature, dissolved oxygen and nutrients (nitrite, nitrate, total Kjeldahl nitrogen, ammonia and total phosphorous). The copermittees must also measure or estimate flow rates and volumes.

b. Include the results and a discussion from the study in the annual monitoring report including the relevance of findings to CWA section 303(d) listed impaired waters. (Attachment E., Section II.E.5.)

Any fee revenues received must be identified as offsetting revenue. In addition, reimbursement for this mandate from any source, including but not limited to, service fees collected, federal funds, other state funds, and other funds that are not the claimant's proceeds of taxes shall be identified and deducted from this claim.

This Test Claim is denied for the Riverside County Flood Control and Water Conservation District because there is no evidence that the District incurred costs mandated by the state from its proceeds of taxes.

All other activities and sections of the test claim permit and costs pled by the claimants are denied.

DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On March 13, 2023, I served the:

- **Draft Proposed Decision, Schedule for Comments, and Notice of Hearing issued March 13, 2023**

  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03
  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2., C., D., F.1.d.1., 2., 4., 7., F.1.f., F.1.h., F.1.i., F.2.d.3., F.2.e.6.e., F.3.a.10., F.3.b.4.a.ii., F.3.d.1.-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6., Adopted November 10, 2010
  County of Riverside, Riverside County Flood Control and Water Conservation District, and Cities of Murrieta, Temecula, and Wildomar, Claimants

by making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on March 13, 2023 at Sacramento, California.

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COMMISSION ON STATE MANDATES

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Last Updated: 2/15/23

Claim Number: 11-TC-03

Matter: California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

Claimants: City of Murrieta
City of Temecula
City of Wildomar
County of Riverside
Riverside County Flood Control and Water Conservation District

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

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YANA GARCIA
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State Water Resources Control Board

RECEIVED
May 19, 2023
Commission on
State Mandates

May 19, 2023

VIA DROP BOX

Heather Halsey
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COMMENTS OF THE STATE WATER RESOURCES CONTROL BOARD AND CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION Draft Proposed Decision, Schedule for Comments, and Notice of Hearing
California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2., C., D., F.1.d.1., 2., 4., 7., F.1.f., F.1.h., F.1.i.,F.2.d.3., F.2.e.6.e., F.3.a.10., F.3.b.4.a.ii., F.3.d.1.-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6., Adopted November 10, 2010
County of Riverside, Riverside County Flood Control and Water Conservation District, and Cities of Murrieta, Temecula, and Wildomar, Claimants

Dear Ms. Halsey:

By letter dated March 13, 2023, the Commission on State Mandates (Commission) issued a Draft Proposed Decision, Schedule for Comments, and Notice of Hearing in the above test claim matter. The letter established an April 3, 2023, deadline for filing written comments on the Draft Proposed Decision. The Commission granted requests for extension of time and established that written comments on the Draft Proposed Decision are due on May 19, 2023. This matter is scheduled for public hearing at the Commission's July 28, 2023, meeting.

The State Water Resources Control Board (State Water Board) and California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) (collectively, Water Boards) have reviewed the Draft Proposed Decision dated March 13, 2023, for the above-referenced Test Claim. The Water Boards appreciate the careful and thoughtful work of the Commission staff and concur with the conclusions to deny the Test Claim as to most of the challenged provisions in the San Diego Water Board's Order No. R9-2010-0016 (test claim permit).

As a preliminary matter, the Water Boards note that after claimants filed their initial test claim on November 10, 2011, the Commission staff issued a Notice of Incomplete Joint Test Claim Filing on March 18, 2017, identifying, among other items, that the original test claim was "missing a detailed description of increased costs and a statewide estimate of costs as required by Government Code section 17553." (Notice of Incomplete Joint Test Claim Filing, p. 1.) On April 28, 2017, claimants submitted a response, including a revised Narrative Statement and declarations of claimant representatives. On May 8, 2017, the Commission staff issued a Notice of Complete Joint Test Claim Filing, Removal from Inactive Status, Scheduling of Comments, Renaming of Matter, Request for Administrative Record and Notice of Hearing Date. As claimants have already had one opportunity to submit updated cost information in this matter, the Water Boards request an opportunity to review and respond to additional new cost information, if any, claimants submit with their written comments on the Draft Proposed Decision.

The Water Boards respectfully submit the following comments on limited aspects of the Draft Proposed Decision.

I. Comments on Test Claim Permit Provisions

A. Watershed Workplan

Section G.1-5. of the test claim permit address development and implementation of a Watershed Water Quality Workplan. This section of the test claim permit "requires copermittees in a watershed management area to develop a workplan to assess and prioritize the water quality problems within the watershed's receiving waters, identify sources of the highest priority water quality problems, develop a watershed-wide BMP implementation strategy to abate the highest priority water quality problems, and a monitoring strategy to evaluate BMP effectiveness and changing water quality prioritization in the watershed management area." (Draft Proposed Decision, p. 243.)

The Draft Proposed Decision recognizes that the prior permit imposed a requirement that claimants collaborate with other watershed permittees to develop and implement a watershed stormwater management plan and imposed numerous related requirements. The Draft Proposed Decision recommends the Commission partially approve the Test Claim for this Section, finding that most requirements in Section G.1.-5. are not new programs, but the five requirements in Sections G.1.d., G.3, G.4. and G.5, below, are new as compared to the prior permit and mandate a new program or higher level of service:

1. The watershed BMP implementation strategy shall include a map of any implemented and proposed BMPs. (Section G.1.d.)

2. The copermittees shall pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-copermittee owners of

the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4. (Section G.3.)

3. The watershed workplan must include the identification of the persons or entities anticipated to be involved during the development of the Watershed Workplan. (Section G.4.)

4. The annual watershed review meetings shall be open to the public and adequately noticed. (Section G.5.)

5. Each permittee shall review and modify jurisdictional programs and JRMP annual reports, as necessary, so they are consistent with the updated watershed workplan. (Section G.5.)[1]

The Water Boards request the Commission instead find that none of these five requirements in Section G.1.-5. impose a new program or higher level of service. As discussed in the Water Boards' written comments on the Test Claim, in adopting the test claim permit, the San Diego Water Board intended the entirety of Section G.1.-5. as facets of the prior permit's requirements to continue implementation of the watershed water quality program initiated under the prior permit. To the extent the Commission finds any of the above five requirements to be new programs or require higher levels of service, the Commission should find that any costs to implement these requirements are de minimis.

B. Annual JRMP Report

Section K.3.a.-c. of the test claim permit requires annual reporting relating to development and implementation of permittee individual jurisdictional runoff management programs (JRMP.) These provisions require each permittee to prepare an individual JRMP annual report covering implementation of its jurisdictional activities during the past annual reporting period, and specifies the contents of the annual report, which claimants contend includes a new reporting requirement that constitute a reimbursable state-mandated program. The Water Boards concur with the Draft Proposed Decision's finding that Sections K.3.a. and b. do not impose any new activities on claimants and also agree that the state has not mandated any of these requirements as to claimants' own municipal projects.

The Draft Proposed Decision finds that the following test claim permit provisions are new programs or higher levels of service:

1. Include in the annual fiscal analysis a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items. (Section K.3.c.1.)

[1] Draft Proposed Decision, pp. 46-47.

2. Provide in the annual report an updated timeframe for attainment of a desired outcome level in the annual report when an assessment indicates that the desired outcome level has not been achieved at the end of the projected timeframe, but the review of the existing activities and BMPs are adequate, or that the projected timeframe should be extended. (Section K.3.c.2.)

3. Providing the following information in the Reporting Checklist: Illicit Discharges and Connections (Number of IC/ID Elimination and Violations), and MS4 Maintenance (Total Miles of MS4 Inspected). (Section K.3.c.3.)

4. Providing the following information the Annual JRMP Reporting Requirements listed on Table 5: Illicit Discharge Detection and Elimination (A description of instances when field screening and analytical data exceeded action levels, including those instances for which no investigation was conducted), and Updated Workplans including priorities, strategy, implementation schedule, and effectiveness evaluation. (Section K.3.c.4.)[2]

The Water Boards request that the Commission find that none of the requirements in Sections K.3.c.1., 2., 3., and 4.[3] listed above impose a new program or higher level of service. As discussed in the Water Boards' written comments on the Test Claim, the prior permit also required preparation of updated JRMPs and reduced the amount of program activity-based reporting as compared to the prior permit. And as reflected in the written comments, the prior permit required extensive and comparably detailed reporting provisions. As the test claim permit largely continued the prior permit's JRMP requirements, these provisions should not be considered new programs or higher levels of service as compared to the prior permit. To the extent the Commission finds that the provisions in Sections K.3.c.1., 2., 3., and 4. impose new programs or higher levels of service, any costs associated with implementation of those provisions are de minimis.

II. Claimants Have Fee Authority for Any Mandated Costs

The Draft Proposed Decision contains extensive discussion of local agency constitutional and statutory authorities to raise fees, including discussion of what has been found to constitute sufficient fee authority as a legal matter within the meaning of Government Code section 17556, subdivision (d).[4] The Water Boards agree with the Draft Proposed Decision's conclusion that claimants have sufficient fee authority as a legal matter based on the reasoning in *Paradise Irrigation District* ((2019) 33 Cal.App.5th 174) and the Legislature's enactment of Government Code sections 57350 and 57351 for costs incurred beginning January 1, 2018. Importantly, however, San Diego Water Board Order No. R9-2015-0100, which superseded the test claim permit as to claimants, became effective January 7, 2016.[5] Accordingly, the Draft Proposed

[2] Draft Proposed Decision, p. 47.
[3] The test claim permit provisions Commission staff would find are new programs or higher levels of service are reproduced in the Draft Proposed Decision at pages 268-290.
[4] See Draft Proposed Decision, pp. 345-379.
[5] See, San Diego Water Board Website, R9-2015-0100.pdf (ca.gov), p. 7.

Decision should be revised to recognize that the scope of the Test Claim period of reimbursement for any mandated costs ends January 6, 2016.

As explained below, the Water Boards *disagree* with the Draft Proposed Decision's conclusion that claimants lack fee authority for costs incurred *prior* to 2018 due to Proposition 218's voter approval provisions.[6] The Water Boards contend that claimants had sufficient fee authority as a legal matter under Government Code section 17556(d) for the entire test claim period and are entitled to no reimbursement. California courts have consistently held that fee authority is purely a question of legal authorization. (*Connell v. Superior Court* (1997) 59, Cal.App.4th 382, 401 [holding that the focus under Government Code section 17556 is whether a local agency has "authority, i.e., the right or power, to levy fees sufficient to cover the costs:]; *Clovis Unified School Dist. v. Chiang* (2010) 188 Cal.App.4th 794, 812.) "[F]actual considerations of practicality" do not defeat a local agency's fee authority. (*Paradise Irrigation Dist. v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 195.) The Draft Proposed Decision correctly finds that claimants have authority under their police powers to impose fees in connection with challenged permit provisions. Even where Proposition 218 super-imposes a voter approval provision on fees to pay for specific state mandates, the Commission should find claimants' authority nonetheless exists and expenditures for mandates are not reimbursable.

In *Paradise Irrigation, supra,* the court of appeal considered whether the majority protest procedure added by Proposition 218 deprived local agencies of authority to impose fees for water service. (33 Cal.App.5th at p. 182.) California Constitution, Article XIII D, section 6(a), requires a local agency to identify parcels subject to a new fee, calculate the fee amount, and provide notice to affected property owners. (Art. XIII D, § 6, subd. (a)(1).) If a majority of the property owners submit written protests against the fee, the fee may not be imposed. (*Id.,* subd. (a)(2).)

The *Paradise Irrigation* court held that the "majority protest procedures are properly construed as a power-sharing arrangement between the districts and their customers, rather than a deprivation of fee authority." (33 Cal.App.5th at p. 182.) It explained that, when considering how voter powers affect the ability of local governments to impose fees, courts "presume local voters will give appropriate consideration and deference to state mandated requirements . . . ." (*Id.,* at p. 194, citing *Bighorn-Desert View Water Agency v. Verjil* (2006) 39 Cal.4th 205, 220.) "Although this power-sharing arrangement has the potential for conflict, we must presume that both sides will act reasonably and in good faith." (*Id.,* at p. 192.) Further, the fact that, "as a matter of practical reality, the majority protest procedure allows water customers to defeat the District's authority to levy fees" was not dispositive; "the inquiry into fee authority constitutes an issue of law rather than a question of fact." (*Id.,* at p. 195, citing *Connell, supra,* 59 Cal.App.4th at p. 401.)

The *Paradise Irrigation* court did not consider whether a local agency has fee authority as a legal matter where fees or assessments are subject to voter approval requirements. However, the court's reasoning applies with equal force where

[6] Draft Proposed Decision, pp. 377-379.

Proposition 218 requires pre-approval by a majority vote of the affected property owners (or, alternatively, by a two-thirds vote of the electorate). That the governing body of a municipality (e.g., County Board of Supervisors or City Council) and the affected property owners who elected that body share power to impose fees does not mean claimants are deprived of fee authority under Government Code section 17556. And the fact that property owners in claimants' local jurisdictions could theoretically withhold approval—just as a majority of the governing body could theoretically withhold approval to impose a fee—does not undermine claimants' police power; that power exists regardless of what the property owners, or the governing body, might decide about any given fee.

Under Proposition 218, local property owners share the power to impose certain fees with their governing bodies. This more direct governance process does not deprive a local agency of any fee authority, the local agency simply shares that authority with affected property owners or voters. Such property owners or voters are considered part of the legislating body, a body that has legal fee authority required by Government Code section 17556. Whether a fee is subject to voter approval (which may be withheld) or majority protest (which can defeat a fee), there is the same potential practical result that the local agency will be unable to collect the desired fee. Since the same potential outcome can result from either power-sharing mechanism, there is no compelling reason to find fee authority exists in one mechanism but not the other. While voter approval provisions, like voter protest provisions, may complicate the exercise of fee authority, they do not negate it.

Therefore, while the Water Boards agree with the Draft Proposed Decision's reasoning and finding that Claimant Riverside County Flood Control and Water Conservation District is not entitled to any cost reimbursement, the Water Boards also urge the Commission to find that claimants have necessary fee authority for any state mandated costs incurred during the permit term, and are not entitled to any reimbursement.

III. Conclusion

For the above reasons, the Water Boards request the Commission adopt the Draft Proposed Decision with the limited changes requested by the Water Boards.

I declare under penalty of perjury that the foregoing is true and correct to the best of my personal knowledge, information, or belief.

Sincerely,

Catherine George Hagan

Catherine George Hagan
Attorney IV

DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On May 19, 2023, I served the:

- **Water Boards' Comments on the Draft Proposed Decision filed May 19, 2023**

  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03
  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2., C., D., F.1.d.1., 2., 4., 7., F.1.f., F.1.h., F.1.i., F.2.d.3., F.2.e.6.e., F.3.a.10., F.3.b.4.a.ii., F.3.d.1.-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6.,
  Adopted November 10, 2010
  County of Riverside, Riverside County Flood Control and Water Conservation District, and Cities of Murrieta, Temecula, and Wildomar, Claimants

by making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on May 19, 2023 at Sacramento, California.

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COMMISSION ON STATE MANDATES

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Last Updated: 5/17/23

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Claimants: City of Murrieta
City of Temecula
City of Wildomar
County of Riverside
Riverside County Flood Control and Water Conservation District

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

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May 19, 2023

Via Drop Box

Ms. Heather Halsey
Executive Director
Commission on State Mandates
980 9th Street, Suite 300
Sacramento, CA 95814

Re: Claimants' Comments on Draft Proposed Decision on *California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, etc.* Test Claim 11-TC-03

Dear Ms. Halsey:

Attached please find the comments of Claimants County of Riverside, the Riverside County Flood Control and Water Conservation District, and the Cities of Murrieta, Temecula and Wildomar on the Draft Proposed Decision issued by Commission staff on the above-referenced Joint Test Claim.

Please let me know if you have any questions. Thank you.

I declare under penalty of perjury that the foregoing, signed on May 19, 2023, is true and correct to the best of my personal knowledge, information, or belief.

David W. Burhenn
Claimant Representative
Address, phone and e-mail set forth above

CLAIMANTS' COMMENTS ON DRAFT PROPOSED DECISION

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2, C., D., F.1.d.1., 2., 4.,7., F.1.f., F.1.h., F.1.i., F.2.d.3., F.2.e.6.e., F.2,b.4.a.ii., F.3.d.1-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1. F.1.d., F.2., F.3.A.-d., and F.6. **, 11-TC-03, adopted May 22, 2009**

Claimants County of Riverside, Riverside County Flood Control and Water Conservation District ("District"), and Cities of Murrieta, Temecula and Wildomar ("Claimants") herewith submit their comments on the Draft Proposed Decision ("DPD") issued by staff of the Commission on State Mandates ("Commission") on March 13, 2023 regarding the above-referenced test claim ("Test Claim").

While Claimants agree with the DPD that Claimants are entitled to a subvention of funds for various mandates in Order No. R9-2010-0016 (the "Test Claim Permit") adopted by the California Regional Water Quality Control Board, San Diego Region ("Water Board"), Claimants disagree with other conclusions in the DPD, as set forth in these comments.

Each section of the Test Claim Permit at issue is discussed in the order presented in the DPD.[1] Claimants respectfully submit that the arguments and evidence already submitted in support of the Test Claim and the additional arguments set forth in these comments establish that a subvention of funds is required for elements of the Test Claim Permit at issue in the Test Claim. Claimants also incorporate herein their comments made in the Section 5 Narrative Statement and Rebuttal Comments on the Test Claim.

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[1] These comments address the conclusions set forth in the DPD (pages 34-382) and to avoid repetition, do not separately address those in the Executive Summary. DPD at 1-33. To the extent required, the arguments and evidence set forth in the Comments are similarly directed to the conclusions in the Executive Summary.

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II. COMMENTS ON "BACKGROUND" SECTION OF DPD: THE 2009 PERMIT CAN AND DOES IMPOSE MANDATES THAT GO BEYOND THE "MEP" STANDARD OF COMPLIANCE

While the "Background" section of the DPD (at 51-72) notes that operators of municipal separate storm sewer systems ("MS4s") covered by a National Pollutant Discharge Elimination System ("NPDES") permit are required to reduce pollutant discharges "to the maximum extent practicable" (DPD at 54), there is no further discussion as to how the Clean Water Act ("CWA") leaves substantial discretion to the states in adopting permit requirements which go beyond CWA requirements.

This feature was noted in *Defenders of Wildlife v. Browner,* 191 F.3d 1159 (9th Cir. 1999), which addressed whether MS4 operators were subject to the same standard of strict compliance with water quality standards mandated for industrial dischargers in 33 U.S.C. § 1311. The Ninth Circuit found that they were not, holding that in adopting 33 U.S.C. §

1342(p)(3)(B) (the subsection relating to municipal discharges), Congress "*replaces* the requirements of § 1311 with the requirement that municipal storm-sewer dischargers 'reduce the discharge of pollutants to the maximum extent practicable . . . .'"[2]

Of relevance to these comments, *Defenders* held that the Environmental Protection Agency ("EPA") Administrator or a state (like California) authorized to carry out the NPDES program pursuant to 33 U.S.C. § 1342(a)(5) has the *discretion* to impose "such other provisions" as the Administrator or the state determines appropriate for the control of such pollutants. As the court held, "[t]hat provision gives the EPA discretion to determine what pollution controls are appropriate."[3]

Thus, California can tailor its MS4 permits to require strict compliance with water quality standards and adopt other MS4 permit requirements that go beyond the MEP standard. The California Supreme Court recognized the dual nature of NPDES permitting in *City of Burbank v. State Water Resources Control Board* (2005) 35 Cal.4th 613, where it held that more stringent permit requirements issued under the authority of California's Porter-Cologne Water Quality Act[4] contained in an NPDES permit were required to be evaluated under state requirements in Water Code §§ 13240 and 13241.[5]

Whether state mandated requirements in MS4 NPDES permits were subject to state constitutional requirements, and in particular article XIII B, section 6 of the California Constitution, was decided in *Department of Finance v. Comm. on State Mandates* (2016) 1 Cal. 5th 749 ("*LA County Permit Appeal I*"). That case held that certain provisions in the 2001 Los Angeles County MS4 permit constituted state mandates eligible for subvention. In so ruling, the Supreme Court expressly rejected an argument raised by the Department of Finance and the water boards that because a provision was in a stormwater NPDES permit, it was "ipso facto, required by federal law."[6]

III. COMMENTS ON DISCUSSION SECTION OF DPD

A. Timely Filing of Test Claim

Claimants concur with the DPD's conclusion that the Test Claim was timely filed.

B. Requirements in Section B.2 Relating to Removal of Formerly Exempt Categories of Non-Stormwater Discharges

By removing certain categories of irrigation-related discharges (landscape irrigation, irrigation water and lawn watering) from an exemption to the prohibition on discharges of non-stormwaters in the previous MS4 permit issued to Claimants by the Water Board, Order No. R9-2004-0001 (the "2004 Permit"), Section B.2 of the Test Claim Permit created a state mandate.

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[2] 191 F.3d at 1165 (emphasis in original). Thus, the statement in the Background section at 60 that Section 1311 standards apply to all NPDES permits is incorrect.

[3] 191 F.3d at 1166.

[4] Water Code § 13000 *et seq.*

[5] *City of Burbank,* 35 Cal. 4th at 618.

[6] 1 Cal. 5th at 768.

Claimants demonstrated in the Test Claim that, among other things, (1) the 2004 Permit included an exemption for such discharges; (2) federal law provides that unless "such discharges are identified *by the municipality* as sources of pollutants to waters of the United States"[7] it was within the permittees' discretion to allow such discharges to be exempted from prohibition; and (3) no such identification had been made here. Claimants introduced evidence of additional activities required by the removal of the exemption for irrigation-related discharges, including changes to permittees' Coordinated Monitoring Program ("CMP") and revisions to the Jurisdictional Runoff Management Plan ("JRMP"), as well as additional monitoring efforts. *See generally* Section 5 Narrative Statement at 15-19 and Claimants' Rebuttal Comments at 16-18.

The DPD, however, concludes that the elimination of the exemption for the irrigation-related discharges was required under 40 CFR § 122.26(d)(2)(iv)(B)(1) and thus was not a state mandate. DPD at 86-88. The DPD (at 81-82) concludes that Claimants identified the discharges as sources of pollutants to waters of the United States. In fact, that "identification" was language in educational outreach materials intended to prevent such discharges *before* they posed a threat, materials that were not specific to the Santa Margarita watershed. *See* discussion in Section 5 Narrative Statement at 17-18 and Claimants' Rebuttal at 16-18. Claimants thus did not specifically identify irrigation-related discharges in the Santa Margarita watershed as a source of pollutants to waters of the United States. And, the other findings cited by the DPD at 82-84 represent the conclusions either of municipalities in other counties (and watersheds), state agencies, or a MS4 permit issued to another county, none of which represents any determination by the municipalities in question, the Test Claim Permit permittees.[8]

Because the Water Board could impose additional permit requirements beyond those authorized by federal law (*Defenders of Wildlife, supra*), the Board had the discretion to remove the exemption for the irrigation-related discharges. This removal, however, was a state mandate, not a requirement of federal law.

The DPD also concludes that the removal of the exemption was "not a new program or higher level of service" because federal law "has long required that all dischargers, including private industrial dischargers and local governments, effectively prohibit 'all types' of non-stormwater discharges identified as sources of pollutants to waters of the United States." DPD at 88-89.[9] The DPD concludes that requirements associated with addressing irrigation-related

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[7] 40 CFR § 122.26(d)(2)(iv)(B)(1) (emphasis supplied).

[8] The DPD cites (at 82) the Smarttimer/Edgescape Evaluation Program (SEEP) as rationale for the removal of the exemption. This program, however, did not involve Riverside County municipalities but rather Orange County municipalities, the Metropolitan Water District of Southern California, the Department of Agriculture and south Orange County water districts. *See* Supplemental Fact Sheet, Tentative Order R9-2009-0002, San Diego Water Board, at 12-13. This Tentative Order can be found at https://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/docs/oc_permit/updates_4_15_09/R9-2009-0002%20Supplemental%20Fact%20Sheet.pdf. Claimants request that the Commission take administrative notice of this document pursuant to Evidence Code § 452(c) as an "official act of the ... executive .... departments of ... any state of the United States"; Govt. Code § 11515; and Cal. Code Regs., tit. 2, § 1187.5(c).

[9] The DPD also concludes that the removal of the exemption was not a "new" requirement because the 2004 Permit gave both the permittees and the Water Board the discretion to remove the exemption. DPD at 87. But this provision did not remove the exemption; the Test Claim Permit did. The requirements of

discharges "do not change or increase [the] level or quality of service to the public; they simply make the claimants comply with existing federal law to prohibit non-stormwater discharges." DPD at 89.

Claimants disagree. First, "federal requirements" exempted irrigation-related discharges from the "effectively prohibit" non-stormwater discharge requirement *unless* they were identified by the *municipalities* as a source of pollutants to waters of the United States.[10] The 2004 Permit did *not* require Claimants to address these discharges unless, *in the discretion of permittee or the Water Board,* they should be. Test Claim Permit Section B.2 removed that discretion, requiring Claimants to now address such discharges -- a "new" requirement. A "program is 'new' if the local government had not previously been required to institute it." *County of Los Angeles v. Comm. on State Mandates* (2003) 110 Cal.App.4th 1176, 1189; *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835 ("*Lucia Mar*").

Second, general federal regulatory language does not impose a federal mandate if the regulation leaves the manner of implementation to the discretion of the permittee. *See LA County Permit Appeal I.*[11] Here, the language of the federal regulation left the discretion as to whether to include irrigation-related discharges to the permittees.

In addition, "the application of Section 6 . . . does not turn on whether the underlying obligations to abate pollution remain the same. It applies if any executive order, which each permit is, requires permittees to provide a new program or a higher level of existing services." *Dept. of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 559 ("*LA County Permit Appeal II*"). The additional obligations imposed on Claimants by removal of the exemption, such as required changes to the CMP and JRMP and additional monitoring, represented a "higher level of service" to the public, contrary to the conclusion in the DPD. What constitutes a "higher level of service" are "'state mandated increases in the services provided by local agencies in existing programs.'"[12]

The removal of the exemption for irrigation-related discharges in Section B.2 of the Test Claim Permit constitutes a state mandate for which a subvention of funds is required.

C. Requirements in Sections C., F.4.d. and e. and Section II.C. of Attachment E Relating to Non-Stormwater Action Levels

The above-cited Test Claim Permit requirements mandated Claimants to undertake an entirely new program relating to Non-Stormwater Action Levels ("NALs"). As described in the DPD (at 99-103), permittees were required to do the following tasks, among others:

- Monitor at specified locations, including major outfalls, and such other sampling points as identified by the permittees and map those locations on their MS4 map;

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the Test Claim Permit and the 2004 Permit were different and under *Lucia Mar, supra,* the removal of the exemption in the test Claim permit was a new requirement.

[10] 40 CFR § 122.26(d)(2)(iv)(B)(1).

[11] 1 Cal. 5th at 770.

[12] *LA County Permit Appeal II,* 59 Cal.App.5th at 556 (*quoting County of Los Angeles v. State of California* (1987) 43 Cal. 3d 46, 56).

- Develop and/or update written procedures for effluent analytical monitoring, including the requirement to sample a representative percentage of major outfalls and identified stations within each hydrologic subarea;
- Analyze samples for over 40 constituents, including conventional pollutants, nutrients, hydrocarbons, pesticides, metals and bacteriological pollutants;
- Collaborate to develop and implement a monitoring program to identify sources of pollutants in non-stormwater discharges;
- If the NAL exceedance was the result of an illicit discharge, and permittees determined that the discharges were part of a category of illicit discharges, report their investigation in their Annual Report to the Water Board, along with the steps taken to address the discharges;
- If permittees could not identify the source of the exceedance, perform additional focused monitoring;
- If permittees identified the source of the exceedance as natural, report those findings and documentation of their source investigation in their Annual Report;
- If permittees identified the source of the exceedance as a non-storm water discharge in violation or potential violation of an existing separate NPDES permit, report to the Water Board within three business days, including all pertinent information regarding the discharge and the discharge characteristics.

The DPD concludes that these provisions, which were not in the 2004 Permit, nonetheless do not constitute a "new program" or "higher level of service." DPD at 104-113.

1. The NAL Provisions are Not Federally Mandated

The DPD first concludes that federal law has long required MS4 permittees to effectively prohibit non-stormwater discharges into the MS4 and that the MS4 permit application regulations in 40 CFR § 122.26(d)(2)(B) required permittees to submit a management program "to detect and remove illegal discharges, which includes field screening and monitoring, preparing a map overlay of the monitoring stations and field screening points, procedures to investigate portions of the MS4 that, based on field screening or other information, indicate a reasonable potential for containing illegal discharges or other sources of non-stormwater pollution; removal of the discharge; and reporting the results. These activities are not new." DPD at 107-108.

The DPD does not conclude that federal law mandated the NAL provisions. It cannot because even if a permit provision reflected a requirement of federal law, if "federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a "true choice," the requirement is not federally mandated." *LA County Permit Appeal I,* 1 Cal. 5th at 765. *See also Dept. of Finance v. Comm. on State Mandates* (2017) 18 Cal.App.5th 661, 683 ("*San Diego Permit Appeal I")* (to constitute "a federal mandate for purposes of section 6 . . . the federal law or regulation must 'expressly' or 'explicitly' require the condition contained in the permit.").

Here, the federal requirements cited in the DPD were general in nature and did not specify how permittees were to comply with them. The Water Board, using its independent power to act under California law, had true discretion in how it chose to implement those requirements in the context of an MS4 permit like the Test Claim Permit, and exercised that discretion in imposing the new requirements relating to NALs.

While stopping short of concluding that federal law compelled the NAL requirements, the DPD appears to "bootstrap" the federal illegal discharge requirements to support its conclusion that the NAL requirements are not "new" since these underlying federal requirements had been in place long before the Test Claim Permit.

Claimants disagree. In a recent case, *Dept. of Finance v. Comm. on State Mandates* (2022) 85 Cal.App.5th 535 ("*San Diego Permit Appeal II*"), the Third District Court of Appeal rejected a similar argument made by the state in an appeal of a test claim concerning the 2007 San Diego County MS4 Permit. That case is discussed next below.

2. The NAL Requirements Were "New" and Represented a "Higher Level of Service"

In *San Diego Permit Appeal II*, the state argued, *inter alia,* that various MS4 permit requirements were not "new" because permittees had an underlying obligation, dating from the adoption of the CWA's provisions addressing MS4 discharges, and permittees' first MS4 permit, to "prohibit nonstormwater discharges into their MS4s . . . ."[13]

The Court of Appeal rejected that argument:

> The application of [article XIIIB] Section 6 . . . does not turn on whether the underlying obligations to abate pollution remains the same. It applies if any executive order, which each permit is, requires permittees to provide a new program or a high level of existing services."[14]

The court held that in determining "whether a program imposed by the permit is new, we compare the legal requirements imposed by the new permit with those in effect before the new permit became effective."[15] The court found that this "is so even though the [new] conditions *were designed to satisfy the same standard of performance.*"[16]

Here, the underlying obligations set forth in the CWA and in the cited MS4 permit application regulations have long existed and governed previous MS4 permits. The existence of any longstanding "underlying obligations," however, does not mean that the specific NALs requirements in the Test Claim Permit are not "new." To determine that, the inquiry must focus on whether the NAL requirements in the Test Claim Permit were required in the 2004 Permit. *See San Diego Unified School Dist. v. Comm. on State Mandates* (2004) 33 Cal. 4th 859, 878 (*San Diego Unified"); Lucia Mar, supra.*[17] That comparison shows that the NALs requirements in the Test Claim Permit were not present in the 2004 Permit.

Section II.C.1.a.(1) of the Test Claim Permit Monitoring and Reporting Program (Attachment E to the Test Claim Permit) ("Test Claim Permit MRP") required that permittees "must" sample "at major outfalls" and "[o]ther outfall sampling points . . . identified by the Copermittees as potential high risk sources of polluted effluent or as identified under Section C.4

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[13] 85 Cal.App.5th at 559.

[14] *Id.*

[15] *Id.*

[16] *Id.* (emphasis supplied).

[17] 44 Cal. 3d at 835.

of the Order." The Test Claim Permit also required permittees to develop monitoring plans "to sample a representative percentage of major outfalls and identified stations within each hydrologic subarea. At a minimum, outfalls that exceed any NALs once during any year must be monitored in the subsequent year."[18]

By comparison, the Monitoring and Reporting Program under the 2004 Permit, No. R9-2004-001 ("2004 Permit MRP") gave permittees the discretion to select "Illicit Discharge Monitoring stations" within their jurisdiction. The 2004 Permit MRP required that permittees "inspect" Illicit Discharge Monitoring stations twice per year. Only if there was the presence of ponded or flowing water was a "field screening" required, and then, only if the field screening indicated a potential illicit discharge, would a sample be required to be collected for analysis. 2004 Permit MRP at 9.

The Test Claim Permit afforded Claimants no such discretion; all sampling stations were required to be monitored and sampled for multiple additional analytes not required under the previous 2004 Permit. In the Test Claim Permit Fact Sheet, the Water Board itself acknowledged that this was an increase in services required of permittees: "The Order requires *an increase* in the number and type of pollutants sampled in non-storm water from major outfalls. . . . This Order requires non-storm water discharges to be sampled for *additional* pollutants . . . ."[19]

The DPD concludes that the outfall monitoring requirement, though not required in the 2004 Permit, was not "new" because federal NPDES regulations required that dischargers must effectively monitor for permit compliance. DPD at 111. However, those regulations did not specify where dischargers must monitor – the Test Claim Permit did, and the outfall monitoring represented a significant increase in the monitoring obligations imposed on permittees. Under *LA County Permit Appeal I, supra,* the general federal NPDES monitoring provisions did not represent a federal mandate. Similarly, those requirements did not mean that the increased sample analysis requirements in the Test Claim Permit were not "new," as the DPD concludes (at 112).

The Test Claim Permit also imposed increased programmatic requirements related to dry weather flows. The 2004 Permit allowed permittees the discretion to establish "numeric criteria" for field screening and analytical monitoring result "that will trigger follow-up investigations to identify the source causing the exceedance of the criteria" and to describe the numeric criteria and follow-up procedures in their Storm Water Management Plans.[20] By contrast, the Test Claim Permit specified a detailed reporting and analytical matrix for permittees. For example, if the permittees believed the source of a NAL exceedance was natural in origin, they were required to "report its findings and documentation of its source investigation" to the Water Board in their Annual Report.[21] There was no similar requirement in the 2004 Permit.

If water quality data or conditions indicated a potential illegal discharge or connection, the Test Claim Permit required permittees to address them "immediately" (for "obvious illicit discharges") and to initiate an investigation within two business days (of receiving dry weather

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[18] Test Claim Permit, Section C.4.

[19] Test Claim Permit Fact Sheet at 113 (emphasis supplied).

[20] 2004 Permit MRP at II.B.3; 2004 Permit at J.4.

[21] Test Claim Permit, Section C.2.a.

field screening results that exceeded NALs) or within five business days (of receiving analytical laboratory results that exceeded NALS) to identify the source or to document the rationale for why the discharge "does not pose a threat to water quality and does not need further investigation." Such documentation was to be included in the Annual Report.[22] The 2004 Permit required none of these specific investigation and documentation obligations.

Under the Test Claim Permit, if a permittee was unable to identify the source of a NAL exceedance "after taking and documenting reasonable steps to do so," it was required to perform "additional focused sampling."[23] If the results of that sampling indicated a recurring exceedance of NALs from an unidentified source, the permittee was required to "update its programs within a year to address the common contributing sources that may be causing such an exceedance."[24] The permittee's Annual Report was required to include such updates, including where applicable, updates to watershed workplans, retrofitting considerations and program effectiveness work plans.[25] None of these requirements was in the 2004 Permit.

Permittees were also required during any annual reporting period in which one or more NAL exceedances were documented to include "a description of whether and how the observed exceedances did or did not result in a discharge from the MS4 that caused, or threatened to cause or contribute to a condition of pollution, contamination, or nuisance in the receiving waters."[26] This requirement was not in the 2004 Permit.

Thus, based on governing case law, the NALs requirements in the Test Claim permit were in fact "new." And, they represented a "higher level" of service required of Claimants in that they required additional monitoring and analysis, more thorough investigations of exceedances and to address illegal discharges in a more detailed, systemized and prompt manner when compared with the requirements of the 2004 Permit. These additional steps required by the Test Claim Permit represent a "higher level" of service under the test set forth in *LA County Permit Appeal II, supra,* and not, as the DPD concludes (at 113), merely increases in costs to provide the same services.

Claimants are entitled to a subvention of funds with respect to the NALs requirements set forth in the Test Claim.

D. Requirements in Section D Relating to Storm Water Action Levels

Section D of the Test Claim Permit established a new requirement for permittees to take into account Water Board-established Storm Water Action Levels ("SALs") in their monitoring and reporting efforts under the permit.

The requirements of Section D (and referenced companion requirements in Section II.B. of the Test Claim Permit MRP) are set forth in the DPD at 125-128. Briefly summarized, they required permittees to develop a year-round watershed-based wet weather MS4 discharge monitoring program; present an associated draft plan with the rationale, locations, frequency and

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[22] Test Claim Permit, Section F.4.e.(2).

[23] Test Claim Permit, Section C.2.e.

[24] *Id.*

[25] *Id.*

[26] Test Claim Permit Section C.3.

analyses identified to conduct monitoring at a "representative percentage" of the major outfalls within each hydrologic subarea; conduct source identification monitoring to identify sources of pollutants causing the priority water quality problems within each hydrologic subarea; take SAL exceedances into consideration when adjusting and executing annual work plans; sample for a broad suite of constituents (set forth in MRP Table 4); and, if permittees believed a SAL exceedance was caused by natural sources, demonstrate that the "likely and expected" cause of the exceedance was not "anthropogenic in nature."[27]

None of these requirements was contained in the 2004 Permit, which neither referenced SALs nor required monitoring at MS4 outfalls and which required more limited analysis of sampled stormwater.[28] Nevertheless, the DPD concludes that the requirements of Section D of the Test Claim Permit did not mandate a new program or higher level of service.

As with its analysis of the NALs requirements, the DPD focuses not on the specific requirements of the Test Claim Permit, which under applicable caselaw is the appropriate starting place to determine whether a program is "new," *San Diego Unified, supra; Lucia Mar, supra,* but rather on general, underlying legal requirements that applied to the Test Claim Permit and previous MS4 permits.

The DPD cites federal requirements that NPDES permittees monitor their discharges to determine whether they are meeting water quality standards, as well as other requirements relating to permittee monitoring and reporting arising either from the CWA, its implementing regulations, or the 2004 Permit. DPD at 130-131. The DPD also cites as authority 2004 Permit language requiring permittee discharges to not cause or contribute to the exceedance of water quality standards or receiving water objectives, for permittees to assess compliance with the permit and to suggest additional BMPs if compliance was not being attained, and for permittees to annually evaluate their monitoring and report the findings to the Water Board. DPD at 131.

Thus, the DPD concludes that since federal law or prior permits set forth general underlying requirements regarding stormwater discharges (*e.g.,* requirements to monitor discharges, report exceedances, meet water quality standards, adjust BMPs, etc.), the specific SALs requirements in the Test Claim Permit were not new but "simply makes the claimants comply with existing federal law imposed on *all* dischargers to comply with water quality standards."[29] The DPD concludes further that instead of increasing the level or quality of service to the public, Section D "simply helps the claimants comply with existing law imposed on all discharges to meet water quality standards."[30]

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[27] *See generally* Test Claim Permit Section D and Section II.B of Test Claim Permit MRP.

[28] As the DPD acknowledges, wet and dry weather monitoring under the 2004 Permit involved only three "Triad" stations which, because they were not at MS4 outfalls, did not constitute a "representative percentage" of the major outfalls within each hydrologic subarea, the requirement in Test Claim Permit Section D. DPD at 119-120. Also, a comparison of the constituents required to be analyzed shows that the requirements in Test Claim Permit MRP Table 4 were more extensive than those in 2004 Permit MRP Table 1.

[29] DPD at 133. Significantly, as with the DPD's analysis of the NAL requirements in the Test Claim Permit, the DPD does not conclude that the SALs were mandated by federal law. Given governing case law, this is correct.

[30] DPD at 136.

Claimants disagree. As *San Diego Permit Appeal II* and other cases have held, when an executive order contains a requirement not found in a previous order, that additional requirement represents a "new" program. *San Diego Permit Appeal II* held that in order to determine "whether a program imposed by the permit is new, we compare the legal requirements imposed by the new permit with those in effect before the new permit became effective."[31] The court found that this "is so even though the [new] conditions *were designed to satisfy the same standard of performance*."[32] Thus, the arguments presented in the DPD (at 132) that the upgraded monitoring requirements in the Test Claim Permit were not "new" because such monitoring was required to monitor permit compliance, an existing standard, conflicts with the holding in *San Diego Permit Appeal II.* Again, the question that must be addressed is, does the requirement in the executive order at issue appear in previous permits? If not, it is "new."

The DPD cites various "standards of performance" contained in federal law/regulations or prior permits to support its conclusion that the SAL requirements are not "new."[33] These citations, however, do not rebut the fact that the above-mentioned specific requirements of Section D are "new" requirements which implement those standards of performance. Under the test laid down in *San Diego Permit Appeal II*, "the application of [article XIII B] Section 6 does not turn on whether the underlying obligation to abate pollution remains the same. It applies if any executive order . . . requires permittees to provide a new program or higher level of service."[34]

The DPD also asserts that Section D of the Test Claim Permit "does not increase the level or quality of service to the public; it simply helps the claimants comply with existing law imposed on all dischargers to meet water quality standards." DPD at 136. This assertion (which, under *Defenders of Wildlife, supra,* is incorrect) nevertheless errs in setting forth the analysis that the Commission is required to make. It can be argued that *any* provision in an MS4 permit is intended to "help" permittees to comply with the CWA, but that does not mean that those provisions, when they impose greater obligations on those permittees, are not state mandates. California appellate courts have decided otherwise. *See LA County Permit Appeal I, San Diego Permit Appeal I, and San Diego Permit Appeal II, supra.*

Implementation of Section D required Claimants to undertake a new program and provide a higher level of service. The DPD itself acknowledges that permittees "were not required to monitor MS4 outfalls under the prior permit."[35] Nor were permittees required under the 2004 Permit to develop a year-round watershed-based wet weather MS4 discharge monitoring program; to present a draft plan with the rationale, locations, frequency and analyses identified; to conduct monitoring at a "representative percentage" of the major outfalls within each hydrologic subarea; to conduct source identification monitoring to identify sources of pollutants causing the priority water quality problems within each hydrologic subarea; to respond to SAL exceedances by taking them into consideration when adjusting and executing annual work plans; to sample for a broader suite of constituents obtained from monitoring; and, if a SAL exceedance

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[31] 85 Cal.App.5th at 559.

[32] *Id.* (emphasis supplied).

[33] DPD at 133.

[34] 85 Cal.App.5th at 559.

[35] DPD at 128.

was believed to be from natural causes, to demonstrate that the "likely and expected" cause of the exceedance was not "anthropogenic in nature."

These requirements were new to the Test Claim Permit and thus represent "new" programs which trigger article XIII B, section 6 and as to which a subvention of funds is required. These requirements similarly represent the provision of a "higher level of service" to the public through the enhanced monitoring and required responses to exceedances of water quality standards in stormwater.

E. Requirements in Sections F.1.d., F.1.h. and F.3.d. Relating to Low Impact Development, Hydromodification Plans, Best Management Practices for Priority Development Projects and Retrofitting of Existing Development

The DPD concludes that the requirements in Sections F.1.d., F.1.h., and F.3.d. of the Test Claim Permit generally impose state-mandated new programs or higher levels of service, but that Sections F.1.d.1., 2., 4. 7., F.1.h., and F.3.d.1.-5, as they apply to Claimants' own municipal projects, do not. The DPD concludes that such costs were incurred at the discretion of the local agency, are not unique to government, and do not provide a governmental service to the public. DPD at 170-179. Claimants' comments focus on those conclusions.

1. The Low Impact Development (LID), Hydromodification Plan (HMP) and BMPs for Priority Development Projects (PDPs) Impose Mandates on Claimants; Claimants Do Not Have True Discretion as to the Sizing of Municipal Projects that Constitute PDPs

The DPD concludes that, like private developers, local governments construct PDPs at their discretion; thus, the imposition of LID and HMP requirements on such projects is not a state mandate. DPD at 171. Whether these requirements apply depends on the size of the project (specific categories of PDPs, such as automotive repair shops, restaurants and retail gasoline outlets, relate to private PDPs only and were not included in the Test Claim.).[36] Claimants submit, however, that when local governments undertake a PDP, it is because they must build that project in the public interest. Local governments do not have the same ability as a private developer to adjust the size of the project so as to avoid the LID and HMP requirements, since the size of the project must reflect civic requirements and needs.

The DPD cites *City of Merced v. State* (1984) 153 Cal.App.3d 777 and *Dept. of Finance v. Commission on State Mandates* (2003) 30 Cal. 4th 727 *("KHSD")* in support of its position. *City of Merced* involved the question of whether a local government, when it exercised the power of eminent domain, must include the loss of business goodwill as part of the compensation for the taking.[37] The court held that it did, given that the city was not required to exercise its eminent domain powers and by choosing to do so, was liable for resulting costs.[38]

KHSD concerned whether a local school district's being required to comply with notice and agenda requirements in conducting certain public committee meetings was a state mandate. The Court held that since the committees in question were part of separate grant-funded

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[36] *See* Section 5 Narrative Statement at 27.

[37] 153 Cal.App.3d at 782.

[38] *Id.* at 783.

programs in which the district chose to participate and that such costs were incidental to such programs, the notice and agenda requirements were not a state mandate.

As explained more fully in Claimants' Narrative Statement,[39] *KHSD* is inapposite because in that case, the district chose to accept the grants to fund those meetings. Similarly, *City of Mercer* is inapposite because the city chose to exercise its power of eminent domain. Claimants here did not "choose" to build public projects in the same sense. They must either build such projects to fulfill their civic obligations or they or their constituents could face "certain and severe penalties or consequences" for not providing necessary public services. *San Diego Permit Appeal II, supra.*[40] Thus, the projects are "practically compelled."

The *San Diego Permit Appeal II* court discussed this issue in response to an argument by the state that permittees "chose" to obtain an NPDES permit to discharge stormwater. The court rejected that argument:

> In urbanized cities and counties such as permittees, deciding not to provide a stormwater drainage system is no alternative at all. It is "so far beyond the realm of practical reality that it left permittees "without discretion" not to obtain a permit. Permittees were thus compelled as a practical matter to obtain an NPDES permit and fulfill the permit's conditions.[41]

In *Dept. of Finance v. Comm. on State Mandates* (2009) 170 Cal.App.4th 1358 ("*POBRA*"), the court provided further guidance in setting forth whether a state requirement was "practically compelled," holding that the question was whether the action "is the only reasonable means to carry out [the local agency's] core mandatory functions."[42]

Here, in similarly urbanized areas of Riverside County, the construction of essential infrastructure is the only reasonable means by which core mandatory governmental functions can be carried out and were "compelled as a practical matter" to construct that infrastructure.

2. The LID and HMP Requirements Provide a Service to the Public

The DPD also concludes that the LID and HMP requirements did not impose a new program or higher level of service because the requirements "are not unique to government and do not provide a governmental service to the public." DPD at 176-179. It is not in dispute that those requirements apply to both private and public PDPs. However, the DPD errs in its conclusion that they do not provide a benefit to the public.

The three cases cited in the DPD pre-date the recent decision of the Second District Court of Appeal in *LA County Permit Appeal II, supra.* In that case, the court was presented with the question of whether, *inter alia,* a requirement to place trash receptacles at transit stops represented a "program" compensable under article XIII B, section 6. The court first noted that there were two separate tests to determine the existence of a "program," those of providing

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[39] Section 5 Narrative Statement at 33-35.

[40] 85 Cal.App.5th at 558.

[41] *Ibid.* (citations omitted).

[42] 170 Cal.App.4th at 1368.

services to the public and those which impose unique requirements on local governments, noting that the "two parts are alternatives; either will trigger the subvention obligation unless an exception applies."[43]

With regard to the trash receptacle requirement, the court held that receptacle placement met the requirement of providing services to the public, noting that even if the placement itself did not result in a higher level of stormwater drainage and flood control, "trash collection is itself a governmental function that provides a service to the public by producing cleaner transit stops, sidewalks, streets, and, ultimately, stormwater drainage systems and receiving waters."[44]

Here, the LID and HMP requirements, which were developed by the permittees in an exercise of their governmental function as operators of a stormwater drainage system, provided benefits to the public through the reduction of runoff carrying potential pollutants and the reduction of high flows that caused erosion. Under the test set forth in *LA County Permit Appeal II,* the LID and HMP requirements constitute a "program."

3. The Retrofitting Requirements in the Test Claim Permit Are Neither Discretionary Nor Apply to Non-Governmental Actors; They are Unique to Claimants

The DPD similarly concludes that the retrofitting requirements in Test Claim Permit Section F.3.d. were either not mandated by the state or were not unique to government and thus do not provide a governmental service to the public. DPD at 171-179.[45] Claimants disagree.

First, Claimants were required to identify and inventory existing municipal, industrial, commercial, and residential areas as candidates for retrofitting using criteria identified by the Water Board; to evaluate and rank those existing developments to prioritize retrofitting based on Water Board required criteria; and, to consider the results of the evaluation in prioritizing work plans for the following year.[46] None of these tasks was "discretionary." The evaluation required was of *existing* projects, not future projects which may be developed. Thus, the argument that the tasks required in Section F.3.d. is not "mandatory" is incorrect.

Second, the inventorying, evaluation and work plan development required in this section were obligations unique to local government – no private parties were required to undertake this work. And, given that the express purpose of the work was to improve the quality of stormwater discharges from existing development, there was a benefit to the public, as the Water Board itself found: "Retrofitting existing development with storm water treatment controls, including LID, is necessary to address storm water discharges from existing development that may cause or

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[43] 59 Cal.App.5th at 557.

[44] *Id.* at 558-59.

[45] The DPD combines into the same discussion LID/HMP requirements, which in the Test Claim were addressed only as they applied to municipal projects, and retrofitting requirements, which the Test Claim addressed as it applied to all projects. *See* Section 5 Narrative Statement at 45-48. Thus, the argument that the Test Claim intended to address only F.3.d. retrofitting requirements to municipal projects is incorrect.

[46] *See* DPD at 165-66.

contribute to a condition of pollution or a violation of water quality standards."[47] *See LA County Permit Appeal II, supra.*

Additionally, Section F.3.d. required evaluation of *existing* municipal projects, so the work to evaluate, prioritize and report on municipal projects is not the same as the requirements in Section F.1. of the Test Claim Permit, which set forth LID and HMP requirements for *future* development. The retrofitting requirements constituted a new program and/or a higher level of service.

F. Requirements in Section F.1.f. Relating to BMP Maintenance Tracking

Test Claim Permit Section F.1.f. contained requirements relating to the tracking of BMP maintenance. The DPD concludes that some of these requirements were "new" while others were not.

The DPD also concludes that requirements in Section F.1.f applicable to municipal projects were not mandated by the state, and thus are not eligible for a subvention of funds, stating: "Nothing in state statute or case law imposes a legal obligation on local agencies to construct, expand, or improve municipal projects. Nor is there evidence in the record that the claimants would suffer certain and severe penalties such as 'double . . . taxation' or other 'draconian' consequences if they fail to comply with the permit's annual reporting requirements for municipal projects." DPD at 200-201.

Claimants disagree. There *was* a legal obligation imposed here on Claimants – it was the obligation to create a BMP maintenance tracking database for completed development projects, whether they be industrial/commercial, residential *or* municipal. It was the *creation of the database and the other Section F.1.f. requirements* that constituted the legal compulsion on Claimants, not the allegedly discretionary decision to construct a municipal project in the first place. Claimants were legally compelled to perform the requirements in Section F.1.f., and the reference in the DPD (at 201) to "certain and severe penalties," one test for requirements that may be "practically compelled," is irrelevant.

The question of how far "downstream" the applicability of a determination that a requirement was discretionary, not mandated, should extend was raised by the Supreme Court in *San Diego Unified, supra.* There, the Court expressed concern regarding the scope of *City of Merced:*

> [W]e agree with the District and amici curiae that *there is reason to question an extension of the holding of City of Merced so as to preclude reimbursement under article XIII B, section 6 of the state Constitution and Government Code section 17514 whenever an entity makes an initial discretionary decision that in turn triggers mandated costs.* Indeed, it would appear that under a strict application of the language in *City of Merced*, public entities would be denied reimbursement for state-mandated costs in apparent contravention of the intent underlying article XIII B, section 6 of the state Constitution and Government Code section 17514 and contrary to past decisions in which it has been established that reimbursement was in fact proper. For example, as explained above, in *Carmel Valley, supra*, 190 Cal.App.3d 521, an executive order requiring that county

[47] Test Claim Permit Finding 3.3.

> firefighters be provided with protective clothing and safety equipment was found to create a reimbursable state mandate for the added costs of such clothing and equipment. (Id., at pp. 537–538.) The court in *Carmel Valley* apparently did not contemplate that reimbursement would be foreclosed in that setting merely because a local agency possessed discretion concerning how many firefighters it would employ—and hence, in that sense, could control or perhaps even avoid the extra costs to which it would be subjected. Yet, under a strict application of the rule gleaned from *City of Merced, supra,* 153 Cal.App.3d 777, such costs would not be reimbursable for the simple reason that the local agency's decision to employ firefighters involves an exercise of discretion concerning, for example, how many firefighters are needed to be employed, etc. We find it doubtful that the voters who enacted article XIII B, section 6, or the Legislature that adopted Government Code section 17514, intended that result, and hence we are reluctant to endorse, in this case, an application of the rule of *City of Merced* that might lead to such a result.

33 Cal. 4th at 887-88 (emphasis supplied).

Here, the BMP tracking database requirements were unconnected to the original decision to build a municipal project that required those BMPs. The projects were built and the BMPs were installed. Section F.1.f. made the tracking of those BMPs mandatory, not discretionary. Having exercised their alleged discretion to build the project, Claimants had *no* discretion as to whether to include their completed municipal projects in the database and otherwise follow the requirements of Section F.1.f. Extension of the *City of Merced* rule to such requirements is not appropriate.

G. Requirements in Section F.2.d.3. and F.2.e.(6) Relating to Implementation of Active/Passive Sediment Treatment and Review of Monitoring Data at Construction Sites

Section F.2.d.3. of the Test Claim Permit required the installation of Active/Passive Sediment Treatment systems ("AST") at construction sites where the permittees determined that the site posed an exceptional threat to water quality due to high turbidity or suspended sediment levels in the site's effluent. The DPD concluded that this requirement imposed a state-mandated new program or higher level of service (DPD at 209-211), but not for permittee construction sites. DPD at 211-214.

The rationale cited in the DPD is the same as for other construction-related requirements in the Test Claim Permit: the State did not mandate Claimants to build projects that would require the installation of AST systems. In response, Claimants refer to and incorporate their arguments at Section III.E.1, *supra,* which addresses these contentions.

The DPD also concludes that the requirement in Test Claim Permit Section F.2.e.(6) for permittees to review monitoring results at the construction sites where the site monitored its runoff did not impose a new program or higher level of service. DPD at 218-222. The 2004 Permit required that construction sites be inspected, and the DPD concludes that "although the prior permit did not expressly state that reviewing construction site monitoring data results if the site monitors its runoff was required as [art of the inspection], it did expressly require the claimants to conduct inspections for compliance with local stormwater ordinances on construction site and to enforce its ordinances" as necessary to maintain compliance with the

2004 Permit.[48] The DPD further concludes that "the requirement to review monitoring results if the site monitors its runoff simply *clarifies* the existing legal requirement to assess a site's compliance with local ordinances and water quality standards." DPD at 221 (emphasis supplied).

The DPD acknowledges that the 2004 Permit did not require permittees to review water quality monitoring data. The addition of this requirement was a "new" program as well as a higher level of service required of permittees; the argument that this was a mere "clarification" of the predecessor permit's requirements creates an exception that would swallow the rule. Calling any change to requirements of a prior order a "clarification" writes out of the law the requirement that the provisions of the test claim order must be compared with those in the preceding order. *Lucia Mar, supra.* And, the tasks required by the two permits were different – an "inspection" can be conducted entirely visually; the review of monitoring data requires an analysis of the results and comparison to the standards applicable to the receiving water, a task potentially requiring office work. Claimants in fact introduced evidence that additional costs were expended for training of permittee staff. *See* Declarations in Support of Test Claim, Section 5(f).

Finally, the DPD concludes that there was no shift of costs from the state to the local agencies, contending that "[t]he Copermittees enforce their local permits, plans, and ordinances, and the State Water Boards enforce the General Construction Permit." DPD at 222.

The General Construction Permit ("GCP") requires certain construction site operators to monitor stormwater discharges from their sites and to maintain records of the monitoring.[49] The Test Claim Permit made no distinction between monitoring required under local ordinances (if any) and the GCP. The Test Claim Permit thus required permittees to review GCP-mandated records, which is a function reserved to the State Water Board and the regional water boards, which collect an inspection fee from such permittees pursuant to Water Code § 13260(d)((2)(B)(iii).

Requiring permittees to review monitoring data collected as an enforceable requirement in the CGP and charging a fee for such review duplicated the fees assessed by the state for the same service, thus exceeding the reasonable cost of providing services for which the fee is charged and not bear a fair or reasonable relationship to the pertinent burdens or benefits. Similarly, the local fee for investigating GCP monitoring data would duplicate state law, rendering it invalid under the doctrine of preemption. *See O'Connell v. City of Stockton* (2007) 41 Cal. 4th 1061, 1067.[50]

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[48] DPD at 221, citing 2004 Permit Section G.

[49] *See* State Water Board Order 2009-0009-DWQ, as amended, Section J.

[50] This matter differs from that at issue in *LA County Permit Appeal II,* where the court held that there was no evidence that local governments would replace or supplant inspections by the regional water board. 59 Cal.App.5th at 563. Here, there is such evidence in the requirement to review monitoring data.

H. Requirements in Sections F.1.i. and F.3.a.10 Regarding Construction and Maintenance Requirements for Unpaved Roads

The Test Claim Permit required Claimants to incorporate BMPs to be applied in the construction and maintenance of unpaved roads. The DPD concludes that the decision to construct and maintain unpaved roads is discretionary and thus not mandated by the state and that the unpaved road requirements are not "new." Claimants disagree.

1. The Construction and Maintenance of Unpaved Roads is an Essential Function of Local Government; Claimants were "Practically Compelled" to Maintain Such Roads

The DPD asserts that Claimants "have provided no evidence to support that they have a legal or practical compulsion to construct or maintain unpaved roads." DPD at 230. In reply, Claimants first note that the construction and maintenance of roads, including unpaved roads, is an essential function of local government. For that reason, the decision to build or accept unpaved roads is, like those of other municipal facilities discussed in Sections III.E., III.F., and III.G., *supra,* is different from the discretionary acts described in *City of Merced* and *KHSD.* Claimants hereby reincorporate the arguments presented therein.

Moreover, the maintenance of unpaved municipal roads is "practically compelled" under the test set forth in *San Diego Permit Appeal II.* There, the court found that in some cases, a municipality and its constituents could face "certain and severe penalties or consequences" if the municipality did not undertake certain civic tasks. Here, the failure to maintain unpaved roads would not only put Claimants' residents served by those roads in jeopardy of not being able to leave their homes for work, recreation or emergencies, but also would place any person driving on such unmaintained roads in jeopardy for potential harm to themselves or to others.

Further, as held in *POBRA, supra,* a municipality may be practically compelled to follow statutory or regulatory requirements in carrying out a facially discretionary project if the project was "the only reasonable means to carry out [the claimant's] core mandatory functions."[51] The maintenance of unpaved roads dedicated to municipal use is certainly a core mandatory function of municipal government and maintenance of those roads is the only reasonable means by which such critical infrastructure can continue to be used. Local governments have no option; either the roads are maintained (and unpaved roads in particular, due to their soft surfaces, are susceptible of deterioration) or they become unusable, resulting in a failure of that core function of local government.

As importantly, local governments, such as Claimants here, face legal liability for the consequences of not maintaining unpaved roads. "The County owes a duty to maintain safe roads for all foreseeable uses . . . ." *Williams v. County of Sonoma* (2020) 55 Cal.App.5th 125, 132 (failure to maintain road caused injury to bicyclist). *Williams* cited Govt. Code § 835, which provides in relevant part that "a public entity is liable for injury caused by a dangerous condition of its property." While a plaintiff must establish certain prerequisites to establish liability, the failure to maintain an unpaved road known to require such maintenance would establish either "a negligent or wrongful act or omission of an employee of the public entity within the scope of his

[51] 170 Cal.App.4th at 1368.

employment" which created the dangerous condition (Govt. Code § 835(a)) or the public entity had "actual or constructive notice of the dangerous condition under Section 835.2 a sufficient time prior to the injury to have taken measures to protect against the dangerous condition" (Govt. Code § 835(b)).[52]

The Government Code defines "protect against" to mean in part "repairing, remedying or correcting a dangerous condition." Govt Code § 830(b). Thus, the failure to effect repairs of a dangerous unpaved road can readily establish a failure "to have taken measures to protect against the dangerous condition."

Local governments have been found liable under this statute and a predecessor statute for liability stemming from unsafe road surfaces. *See Williams, supra; Alvarez v. County of Los Angeles* (1955) 132 Cal.App.2d 525, where the court upheld the liability of the county due to negligent maintenance of an unpaved road which caused injuries to a driver and his passenger.

Thus, the failure to maintain unpaved roads accepted by a municipality does, under governing statutes and case law, lead to "certain and severe penalties or consequences" and thus is "practically compelled."

2. The Test Claim Permit Requirements Regarding Unpaved Road Construction and Maintenance Were "New" and Required a Higher Level of Public Service

The unpaved road construction and maintenance requirements in the Test Claim Permit are, moreover, "new." The DPD concludes (at 230-233) that several requirements in the 2004 Permit to implement BMPs for the construction of municipal "facilities and activities" (which were defined to include "roads") and to impose BMPs meant to achieve the MEP standard meant that the requirement for Claimants to include unpaved road BMPs was not new. Citing language in Section F.1.i. that permittees could, instead of implementing BMPs following the permit requirements, implement "alternative BMPs that are equally effective," the DPD concludes that this simply meant that permittees were "to implement effective BMPs after construction," similar to the generic requirements in the 2004 Permit. DPD at 231.

These conclusions disregard the fact that in the 2004 Permit, which must be compared against the Test Claim Permit to determine whether the latter's requirements are "new," *Lucia Mar, supra,* there were no BMP requirements explicitly applicable to roads, much less unpaved roads. Even though the Test Claim Permit allowed permittees to implement "alternative BMPs," those BMPs still had to be shown to be "equally effective" with the specific new requirements in the Test Claim Permit, i.e., that there be practices to minimize road related erosion and sediment transport; sloping the grading of unpaved roads outward; installation of water bars; and, adopting

[52] Govt. Code § 835.2 provides that a public entity has actual notice of a dangerous condition within the meaning of subdivision (b) of Section 835 if it had actual knowledge of the existence of the condition and knew or should have known of its dangerous character. The statute provides further that a public entity has constructive notice of a dangerous condition within the meaning of subdivision (b) of Section 835 if the plaintiff establishes that the condition had existed for such a period of time and was of such an obvious nature that the public entity, in the exercise of due care, should have discovered the condition and its dangerous character.

road and culvert designs that did not impact creek functions or migratory fish passages.[53] *None* of those criteria was contained in the 2004 Permit.

The DPD also cites (at 231-232) requirements in the 2004 Permit for permittees to implement BMPs to reduce pollutants in urban runoff to the MEP from municipal facilities and activities and to require additional BMPs for "facilities and/or activities" (not "roads," as stated in the DPD at 231) that were tributary to waterbodies listed as impaired under CWA Section 303(d). Again, these generic and limited requirements do not support the DPD's contention that the requirements of Section F.1.i. were not "new." The requirement to reduce pollutants in urban runoff to the MEP was a subset of the underlying requirement in the 2004 Permit prohibiting discharges from MS4s "which have not been reduced to the MEP."[54] As discussed in Section III.C.2 above, the presence of such underlying obligations in previous permits does not mean that more specific requirements in a subsequent permit are not "new." And, under the 2004 Permit, permittees were free to design and implement their own BMPs to meet that general standard; under the Test Claim Permit, the BMP types were dictated.

The same issues are posed by the DPD's conclusion that the requirements of Section F.3.a.10. of the Test Claim Permit were not new. The reference to the need for additional control measures for facilities tributary to Section 303(d) impaired waterbodies contained in 2004 Permit Section H.1.c.(2) was far more limited than requirements in the Test Claim Permit, which applied to unpaved roads wherever they may be located, including those "particularly in or adjacent to receiving waters." Section F.3.a.10. The Water Board applied the unpaved road BMP requirements to *all* unpaved roads, not only those which could discharge pollutants into Section 303(d) impaired waters. This section also required permittees to develop specific BMPs to address the maintenance of existing unpaved roads, none of which was required in the 2004 Permit.

Thus, the requirements in the Test Claim Permit were more comprehensive and different than those in the 2004 Permit cited in the DPD, e.g., those applicable only to "facilities" tributary to 303(d) listed waterbodies and adjacent to or discharging to receiving waters with Environmentally Sensitive Areas. Moreover, those 2004 Permit provisions required permittees only to implement unspecified "additional controls" to address such discharges, not the specific BMPs required in the Test Claim Permit. Thus, with respect to both Sections F.1.i. and F.3.a.10., the Test Claim Permit required a "higher level of service" to the public through the governmental activity of public road construction and maintenance.

The DPD concludes its analysis by stating that "the requirements in the test claim permit regarding unpaved roads simply clarify the existing legal requirements to assess a site's compliance with local ordinances and water quality standards." DPD at 233. This conclusion, however, is not supported by the Water Board's own stated rationale for those provisions. Finding D.1.c. of the Test Claim Permit recites, in relevant part:

> This Order contains *new or modified* requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in storm water runoff to the MEP and to achieve water quality standards. . . . Other requirements, such as for unpaved

[53] Test Claim Permit, Section F.1.i.

[54] *See* 2004 Permit, Section A.3.

roads, are a result of San Diego Water Board's identification of water quality problems through investigations and complaints *during the previous permit period.*"

(Emphasis supplied).

In addition to the reference to "new or modified" requirements, this finding states that the unpaved roads requirements came about as a result of investigations and complaints *"during the previous permit period,"* demonstrating that the specific focus on unpaved road requirements was new to the Test Claim Permit, and not a continuation of existing requirements from the 2004 Permit.

The Test Claim Permit Fact Sheet similarly stated that Section F.1.i. "specifically requires" permittees to implement or require implementation of BMPs for erosion and sediment control after construction of new unpaved roads.[55] In discussing Section F.3.a.10., the Fact Sheet stated that "[t]his requirement is necessary to ensure the Copermittees minimize the discharge of sediment from their unpaved roads used for their maintenance activities."[56]

The record reflects that the Water Board paid particular and new attention to perceived sediment issues from unpaved roads and in response, mandated new and higher levels of service of permittees in the Test Claim Permit.

I. Requirements in Section F.3.b.4.a.ii. Regarding Industrial and Commercial Inspections

Similar to Section F.2.e.(6) of the Test Claim Permit relating to construction sites (discussed in Section III.G. above), Section F.3.b.4.a.ii. required that permittee inspections of commercial and industrial facilities had to include a "[r]eview of facility monitoring data if the site monitors its runoff."

The DPD concludes that this requirement was not "new," claiming that requirements in the 2004 Permit imposed essentially the same standard, and that "the requirement to review monitoring data results if the site monitors its runoff simply clarifies the existing legal requirement to assess a site's compliance with local ordinances." DPD at 241. The DPD cites in support inspection requirements in the 2004 Permit that required permittees to assess industrial and commercial facilities' compliance with local ordinances and permits related to stormwater runoff. DPD at 241.

However, the 2004 Permit's only monitoring requirement for such inspections was that permittees were to conduct "visual observations for non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff." DPD at 241.[57] Nowhere in the 2004 Permit was there any express requirement that, during inspections of industrial and commercial facilities, permittees were required to review facility monitoring results, as the DPD acknowledges. DPD at 240.

The DPD bridges this gap by arguing that introductory language in the 2004 Permit's inspection requirements, stating that inspections of industrial and commercial facilities "shall

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[55] Test Claim Permit Fact Sheet at 144.

[56] *Id.* at 153.

[57] Citing 2004 Permit Sections H.2.a., H.2.b. and H.2.d.

include, *but not be limited to*" were not limited to visual observations of the site "but had to include whatever was necessary to ensure that discharges into the MS4 were complying with the claimants' local ordinances enforcing the prohibitions and receiving water limitations of the permit . . . ." DPD at 241.

The DPD's conclusion that the new requirement to review monitoring results simply "clarified" existing legal requirements to assess a site's compliance with local ordinances and water quality standards ignores unfunded mandates jurisprudence, cited above, which requires a comparison of the language of the executive order at issue and its predecessor. *E.g., San Diego Permit Appeal II; Lucia Mar, supra.*

A new program or higher level of service is created when an executive order, such as the Test Claim Permit, *requires* certain actions that previously had only been suggested or encouraged. *Long Beach Unified School Dist. v. State of California ("Long Beach Unified").*[58] Here, the Test Claim Permit required permittees to perform an additional new task not formerly specified.

The DPD apparently concludes that the "but not limited to" language represented an unstated, inherent mandate for permittees to review monitoring results. But to be a "mandate," a requirement must be express. *Long Beach Unified, supra.* The 2004 Permit contained no mandate to review monitoring results; the Test Claim Permit does. Under the 2004 Permit, permittees might, but were not specifically required to, inspect monitoring records. Under the Test Claim Permit, they were mandated to do so.

The DPD also concludes that there "has been no shift of costs from the state to the claimants" because the stormwater discharges from industrial sites "are subject to stormwater regulation under both state and local systems . . . [t]he claimants enforce their local permits, plans, and ordinances, and the Water Boards enforce the General Industrial Permit." DPD at 242.

Industrial and commercial facilities covered by the Industrial General Permit ("IGP")[59] are required to monitor discharges and to maintain records of such monitoring in facility records.[60] The Test Claim Permit made no distinction between monitoring conducted under the auspices of local ordinances (if any) and the IGP. The Test Claim Permit required permittees to review those IGP-required records, which is a function reserved to the State Water Board and the regional water boards, which collect an inspection fee from such permittees pursuant to Water Code § 13260(d)((2)(B)(iii).

Requiring permittees to review monitoring data collected as an enforceable requirement in the IGP and charging a fee for such review duplicated the fees assessed by the state for the same service, thus exceeding the reasonable cost of providing services for which the fee is charged and not bear a fair or reasonable relationship to the pertinent burdens or benefits. Similarly, the local fee for investigating ICP monitoring data would duplicate state law,

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[58] (1990) 225 Cal.App.3d 155, 173.

[59] State Water Resources Control Board, General Industrial Permit, Order 97-03-DWQ ("1997 IGP"); State Water Resources Control Board, General Industrial Permit, Order 2014-0057-DWQ (effective July 1, 2015) ("2014 IGP"). These versions of the IGP were in effect during the term of the Test Claim Permit.

[60] 1997 IGP at Section B; 2014 IGP at Sections XI; XII.

rendering it invalid under the doctrine of preemption. *See O'Connell v. City of Stockton* (2007) 41 Cal. 4th 1061, 1067.[61]

J. Requirements in Sections G.1.-5. Addressing the Watershed Workplan

The DPD concludes that some requirements in Sections G.1.-5. of the Test Claim Permit relating to watershed workplan requirements are "new" while others reflect requirements in the prior 2004 Permit. These comments focus on the latter conclusion.

Before addressing these watershed workplan requirements, it is useful to review what the Water Board intended in adopting them. The Test Claim Permit Fact Sheet (quoted in the DPD at 248) acknowledged that the Water Board was adopting a new approach. The 2004 Permit required "selection and implementation of watershed activities," but the Water Board found that program to be unsatisfactory. Fact Sheet at 166. The Water Board thus revised those watershed provisions in the Test Claim Permit, requiring permittees to develop a workplan that would now assess receiving waterbody conditions, prioritize the highest water quality problems, implement effective BMPs and measure water quality improvement. In so doing, the Water Board explicitly acknowledged that the "implementation approach has changed." Fact Sheet at 166.

If the Water Board did not intend Claimants to initiate new programs or a higher level of service in Section G, the Board would have continued the requirements in the 2004 Permit. It did not do so. Instead, the Water Board found that the 2004 Permit requirements "were not able to demonstrate improvements to water quality." Fact Sheet at 166. The Water Board therefore revised and supplemented the requirements in the 2004 Permit in Section G of the Test Claim Permit. The Water Board's dissatisfaction with the prior permit's stormwater management program and its revision and supplementation of that program in the Test Claim Permit is evidence that the Board intended a change from the prior permit, *i.e.,* that it intended to require in the permit a new program or higher level of service.

1. Requirements in Section G.1

Test Claim Permit Section G.1. required permittees to develop the components of a Watershed Workplan to characterize the receiving water quality in the watershed, including using specified data sources (Section G.1.a.), to identify and prioritize water quality problems "in terms of constituents by location" in receiving waters (Section G.1.b.), to identify likely sources causing the highest priority water quality problems within the watershed, including additional focused monitoring (Section G.1.c.), to develop a BMP implementation strategy including a schedule for implementation of the BMPs to abate specific receiving water quality problems and a list of criteria to evaluate BMP effectiveness (Section G.1.d.), to develop a monitoring strategy to monitor improvements in water quality from BMPs (Section G.1.e.) and to establish a schedule for development and implementation of the Watershed Workplan strategy (Section G.1.f.).[62] The DPD concludes that "[m]ost of these requirements are *not* new." *Id.* at 250, emphasis in original. Claimants disagree.

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[61] This matter differs from that at issue in *LA County Permit Appeal II,* where the court held that there was no evidence that local governments would replace or supplant inspections by the regional water board. 59 Cal.App.5th at 563. Here, there is such evidence in the requirement to review monitoring data.

[62] *See* DPD at 249-250.

First, the DPD contends that Section G.1.a.'s requirement to consider "applicable information available from other public and private organizations" in characterizing receiving water quality is not "new," citing Section K.2(c) of the 2004 Permit, which required an assessment of receiving water quality based upon "existing water quality data." A comparison of the two permits refutes this conclusion. The phrase "existing water quality data" is undefined and does not require permittees to resort to "information" obtained from other public and private sources. The DPD concludes that this phrase "does not have any limiting language and thus, includes relevant data from any source" and further that the addition of "public and private organizations" in the Test Claim Permit merely "provides additional detail" to the requirement and did not create a new requirement. DPD at 251. But the 2004 Permit did not require permittees to review "all" existing water quality data nor did the permit provide any guidance as to the source of such data.

Second, Section G.1.b. required permittees to identify *by constituent and location* major water quality problems in the receiving waters. 2004 Permit Section K.2.d. only required permittees to include in their Stormwater Management Plans "[a]n identification and prioritization of major water quality problems in the watershed caused or contributed to by MS4 discharges and the likely source(s) of the problem(s)." The DPD concludes that this did not mean that Section G.1.b. constituted a new requirement, quoting from the 2004 Permit Fact Sheet the statement that the Water Board's intent was identify and mitigate sources of pollutants in urban runoff. DPD at 251. While a Fact Sheet can provide useful information on the Water Board's intent in including a permit provision, it is the operative language in permit directives which governs the conduct of the permittees and constitutes the mandates. No language in the 2004 Permit required permittees to identify by constituent and location problems in the receiving waters. The Test Claim Permit's language thus was new and required an increase in services.[63]

Third, Section G.1.c., which specified particular sources of information that had to be reviewed to identify factors causing the highest water quality problems within the watershed, including performing "additional focused water quality monitoring to identify specific sources within the watershed," reflected new requirements compared to 2004 Section K.2.d. (quoted above) and required that permittees provide a higher level of service. The DPD concludes that because receiving waters limitations provisions in the 2004 Permit (and the Test Claim Permit) prohibited discharges that caused or contributed to the violation of water quality standards, and that permittees were required "to assure compliance with the prohibition by providing notice and a report regarding BMPs," such provisions would in turn "require sufficiently focused water quality monitoring to identify the specific source of the exceedance." DPD at 253.

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[63] The DPD also cites receiving waters monitoring requirements under the 2004 Permit requiring permittees to monitor at stations for pollutants and toxicity using Toxicity Identification Evaluations and Toxicity Reduction Evaluations, and to implement tributary monitoring. DPD at 252. Taken together, concludes the DPD, this "would yield a quantified water quality problem in terms of constituent by location." *Ibid.* This is not correct. "Toxicity" in the 2004 Permit is defined to mean in part, "Adverse responses of organisms to chemicals or physical agents from mortality to physiological responses such as impaired reproduction or growth anomalies." 2004 Permit, Attachment C, "Definitions," at C-6. Pollutants causing toxicity are only a subset of all constituents, which Section G.1.b. required Claimants to assess in order to identify the highest water quality problems within the watershed, e.g., "TMDLs, receiving waters listed on the CWA section 303(d) list, waters with persistent violations of water quality standards, toxicity, or other impacts to benefici9al uses, and other pertinent conditions."

This conclusion relies on an inference that there would have to be "sufficiently focused" monitoring required by the 2004 Permit to make the explicit monitoring requirements in the Test Claim Permit not "new." Inferences are not mandates. The Test Claim Permit required focused monitoring without reference to any other provision in the permit. The 2004 Permit did not. Under governing mandates law, that means that the requirements of Section G.1.c. are "new." *E.g., San Diego Permit Appeal II, supra.* Moreover, under *San Diego Permit Appeal II*, reliance on underlying obligations that have appeared in multiple permits, such as the receiving water limitations provision cited in the DPD, does not mean that additional mandates intended to implement that underlying provision are not "new" and thus do not trigger article XIII B, section 6.

Fourth, concerning requirements in Sections G.1.d., G.1.e. and G.1.f., the DPD similarly references language in the CWA and federal regulations to argue that those provisions – which required development of a watershed BMP implementation strategy as part of the workplan to attain receiving water quality objectives; a schedule for BMP implementation and identification of criteria used to evaluate BMP effectiveness; development of a strategy to monitor improvements in water quality from implementation of the BMPs, including reviewing data to report on the measured pollutant reduction; and establishment of a schedule for development and implementation of the watershed strategy outlined in the workplan – also were not "new."[64]

None of these requirements is contained in the 2004 Permit. The DPD cites 2004 Permit Sections K.2.l and K.2.m., which generally required permittees to adopt short and long-term strategies for assessing the activities and programs implement as part of the watershed SWMP. But these provisions required none of the specific steps required in Test Claim Permit Sections G.1.d., G.1.e. and G.1.f.

The DPD acknowledges that the Test Claim Permit "clarified that the implementation strategies include the development of BMPs," but finds that this requirement was not "new" because claimants "have long been required" to reduce discharges to the MEP through BMPs. DPD at 254. The DPD again cites the "underlying requirements" applicable to MS4 permits in the CWA as the basis for its conclusion that requirements in the Test Claim Permit that *not* contained in the 2004 Permit, were not "new." As previously discussed, *San Diego Permit Appeal II*[65] held that the presence of continuing underlying obligations in successive MS4 permits does not mean that new ways of implementing those obligations was not a "new" requirement triggering article XIII B, section 6. The 2004 Permit and the Test Claim Permit both were authorized by the requirements of the CWA and implementing regulations; the fact that the latter contained specific additional requirements to implement those statutory requirements means that those additional requirements are "new" and not merely "clarifications."[66]

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[64] *See* DPD at 253-254.

[65] 85 Cal.App.5th at 559.

[66] In addition, Section G.3. of the Test Claim Permit set forth requirements relating to collaboration with other permittees in development and implementation of the Workplan. While the DPD finds that the requirement in Section G.3. to pursue interagency agreements to be new (DPD at 256) the requirement for "frequent regularly scheduled meetings" is not. DPD at 255. The DPD concludes that collaboration requirements under the 2004 Permit would "mean that the claimants had to meet frequently on these issues." Again, this is an implied requirement, not the express requirement set forth in the Test Claim Permit.

2. Requirements in Section G.4

The DPD concludes that requirement in Section G.4 for permittees to implement a "watershed-specific public participation mechanism within each watershed," a minimum 30-day public review of and opportunity to comment on the Watershed Workplan and a description in the workplan of the public participation mechanisms to be used were not new, with the exception of a requirement relating to the identification of persons and entities anticipated to be involved during the development and implementation of the Watershed Workplan. DPD at 256-257.

While the Water Boards appeared to concede that these requirements were "new" in their comments on the Test Claim (DPD at 256), the DPD disagrees, citing Section E.3 of the 2004 Permit, which provided: "Each permittee shall incorporate a mechanism for public participation during the development and implementation of its SWMP." The more specific requirements of Test Claim Permit Section G.4, however, which require a "watershed-specific public participation," a 30-day public review and comment period and a description in the workplan of the public participation mechanisms to be used are not mirrored in the simple 2004 Permit requirement for permittees to incorporate public participation during development and implementation of the SWMP. This citation does not support a finding that the requirements in Section G.4 are not "new" or provide a higher level of service.

The DPD also cites federal regulations requiring public participation in the comprehensive planning process to reduce discharges to the MEP. DPD at 257. Neither these regulations nor the non-mandatory EPA MS4 Program Evaluation Guidance specify how public participation is to be incorporated into the Watershed Workplan. Under governing caselaw, they do not represent a federal mandate on Claimants. *LA County Permit Appeal I,* 1 Cal. 5th at 756; *San Diego Permit Appeal I,* 18 Cal. App. 5th at 683 (general federal regulatory language does not impose a federal mandate where regulation leaves the manner of implementation to the permittee). Citation of the regulations and Guidance is inapposite.

K. Requirements in Sections K.3.a.-c. Regarding Permittee Annual Reporting

Sections K.3.a.-c. of the Test Claim Permit specify the contents of the Annual Report each permittee was required to submit to the Water Board. A number of those requirements represented new mandates and/or higher levels of service to be performed by Claimants, as discussed below.[67]

1. Section K.3.c.(2)

This section requires that the Annual Report include matters required to be reported pursuant to Section J of the Test Claim Permit, which covers program effectiveness assessments. The DPD concludes that with the exception of one requirement,[68] these requirements were not "new." DPD at 270.

While the 2004 Permit MRP required that permittees include in their annual reports "[p]roposed revisions to the Individual SWMP, including areas in need of improvement based on

[67] Claimants concur with the DPD's conclusions with respect to Sections K.3.a. and K.3.b.

[68] Relating to the requirement to include in the Annual Report an updated timeframe of a desired outcome level. See DPD at 270-271.

the assessment of effectiveness of each program component,"[69] the Test Claim Permit requirements went further, requiring that in responding to a finding in the program assessment that a desired outcome had not been achieved, a workplan was to be prepared, one that was required to contain eight specified elements, none of which was contained in the prior permit or MRP.[70]

This analysis applies to other sections of the 2004 Permit cited to support the conclusion that the Test Claim Permit requirements were not new. 2004 Permit Section C.2.a. merely required that upon a determination by a permittee that MS4 discharges were causing or contributing to an exceedance of a water quality standard, a report was to be submitted to the Water Board describing "additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards." This requirement is in no sense a cognate to the more detailed requirements of Section K.3.c.(2) (preparation of a description of the response to the effectiveness assessment required pursuant to Section J.2) and thus does not refute the conclusion that the former is a new program or higher level of service. *San Diego Unified, supra.* This requirement was also new and one that requiring a higher level of service by Claimants.

2. Section K.3.c.(4)

This section of the Test Claim Permit required that Claimants' Annual Report include information on various program components set forth in Table 5. The DPD (at 274-299) concludes that a number of requirements in the Section were new, but that some were not. In addition, the DPD concludes that the inclusion of information in the Annual Report regarding municipal projects was not eligible for a subvention of funds, because such projects were "discretionary." DPD at 292-293. The following are Claimants' comments on those conclusions.

a. Conclusions Regarding Table 5 Elements

The Test Claim asserted that a number of the requirements in Section K.3.c.(4) went beyond the requirements in the 2004 Permit, including the requirement in the Construction section of Table 5 to provide a "brief description of each high-level enforcement actions at construction sites including the effectiveness of enforcement." (A similar requirement was contained in the Commercial/Industrial section of Table 5). These additional requirement goes beyond the summary requirements in federal regulation and the requirements in the 2004 Permit and is thus a new program and higher level of service. Similarly, the Table 5 requirement under New Development to summarize the effectiveness of enforcement activities went beyond the 2004 Permit's requirement to assess "program effectiveness."

Claimants also take issue with the DPD's conclusion regarding Annual Report elements relating to municipal projects. The DPD concludes that requirements in Section K.3.c.(4) requiring permittees to "report on their own municipal projects, including unpaved road construction and maintenance, and identify a description and implementation of BMPs and inspection activities on those municipal projects" were discretionary, and thus not subject to a requirement for a subvention of funds. DPD at 292-293.

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[69] 2004 Permit MRP, III.A.1.g.

[70] Test Claim Permit, Section J.2.b.

The DPD, citing *City of Merced* and *KHSD,* concludes that the "courts have made clear that costs incurred as a downstream result of a local discretionary decision is not legally compelled by state law." DPD at 293. Neither case, however, should be read so broadly. In both cases, the ancillary costs found to be within the ambit of the same discretionary, non-mandated act by local government. Thus, in *City of Merced,* the cost (loss of business goodwill) was simply another element of compensation associated with the same governmental act, exercise of the power of eminent domain on property. Similar, in *KHSD,* the cost (of public notice and agenda) was directly related to the discretionary act of holding a public meeting associated as part of a grant program the district had voluntarily entered into.

In those cases, the "downstream" costs were part and parcel of the package of costs incurred in the discretionary activity. That is not true of Section K.3.c.(4). Here, Claimants were mandated to include in their Annual Report a description of programs relating to various categories of projects, including municipal projects. That reporting had nothing to do with the imposition of conditions on the construction or operation of those municipal projects, but merely *the reporting to the Water Board of information concerning such projects.* This was no different than the requirement for Claimants to include information in their Annual Reports about private development projects. The mandate for Claimants here was to *report*, not to *apply conditions* required by the Test Claim Permit on municipal projects. The projects were already built. Whether or not the decision to build them was discretionary on the part of the municipality, the Test Claim Permit's obligation on permittees to report on them was not.[71]

L. Requirements in Section II.E.2.-5. of Attachment E Regarding Special Studies

The DPD concludes, correctly, that four "special studies" required by Section II.E.2.-5. of the Test Claim Permit MRP mandates a new program or higher level of service for Claimants. DPD at 300-311. There is no discussion in the DPD, however, regarding a fifth special study ordered to be conducted.

As set forth in Claimants' Rebuttal Comments, the Water Board ordered Claimants, in lieu of completing a study into intermittent and ephemeral stream conversion into perennial streams as well as performance of monitoring in an MS4 and receiving waters management study, to perform a study on the impacts of LID protections on downstream flows to Camp Pendleton and potential impacts on downstream beneficial uses ("LID Impacts Study"). *See* Rebuttal Comments at 52-53 and Exhibits A and B to Declaration of Claudio M. Padres, P.E., attached thereto.

While the LID Study was not required by the Test Claim Permit, it was required by the Water Board, acting under the powers granted by the Test Claim Permit; in fact in a letter from Water Board Assistant Executive Officer James G. Smith (Exhibit B to Padres Declaration), Mr.

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[71] Claimants again note that they disagree with the conclusions in the DPD concerning whether the response of Claimants to Test Claim Permit requirements concerning municipal projects are "discretionary." *See* discussions in Sections III.E, III.F, III.G, and III.H, above. Additionally, Claimants reference their argument that certain municipal projects, such as the maintenance of unpaved roads, in fact were "practically compelled" and a core function of municipal government. *See* discussion in Section III.F above; *San Diego Permit Appeal II, supra.*[71]

Smith stated that he would not recommend that the Water Board enforce the requirements in Section II.E.5 and II.E.6 of the Test Claim Permit MRP for Claimants to complete the other two special studies if they conducted the LID Study.

Claimants request that the Commission also award a subvention of funds for the LID Impacts Study.

M. Requirements in Sections F., F.1., F.1.d, F.2., F.3.a.-d., and F.6. of the Test Claim Permit Regarding Prevention of Discharges

Finally, the Test Claim raised the inclusion of new language in Test Claim Permit Sections F., F.1., F.1.d., F.2., F.2.a.-d. and F.6 which required that permittees be "effectively prohibiting" non-stormwater discharges from the MS4, "prevent" illegal discharges into the MS4" and "prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. *See* Section 5 Narrative Statement at 61-63 and the DPD at 317-319 for the specific language at issue.

The DPD concludes that these provisions were not "new," that to "prevent" non-stormwater discharges was no more stringent than to "effectively prohibit" such discharges into the MS4 and that the "effectively prohibit" requirement had been in previous MS4 permits issued to Claimants. DPD at 324-325. The DPD also concludes that discharge prohibition and receiving water limitations language in the 2004 Permit which prohibited, *inter alia,* creation of a nuisance, discharges from MS4s that caused or contributed to exceedances of water quality objectives for surface water or groundwater and discharges from MS4s that caused or contributed to the violation of water quality standards, meant that the specific language in the above-cited provisions was not "new."

However, the Water Board in these Test Claim Permit Section F programmatic requirements was establishing a new program or higher level of service by including these additional specific requirements. For example, the industrial/commercial program in the 2004 Permit required the implementation of BMPs "to reduce the discharge of pollutants in runoff *to the MEP*."[72] The 2004 Permit BMP program programs for residential areas and municipal facilities also were required to reduce pollutants "*to the MEP*."[73] The construction program in the 2004 Permit required the permittees to implement a program "to address construction sites to reduce pollutants in runoff *to the MEP* during all construction phases."[74] (The 2004 Permit contained no provision requiring retrofitting of existing development.) By contrast, the counterpart provisions in the Test Claim Permit required a higher level of pollution control, e.g., requiring that discharges from the MS4 not cause or contribute to violations of water quality standards.[75]

With respect to the CWA requirement that MS4 permittees "effectively prohibit" the discharge of non-stormwater into the MS4, 33 U.S.C. § 1342(p)(3)(B)(ii), the regulatory language refers to programs that are to be implemented over time, not the immediate "prevents illicit discharges into the MS4" language found in the cited Section F provisions. For example,

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[72] 2004 Permit, Section H.2.c. (emphasis added).

[73] 2004 Permit, Sections H.1.c.(1); H.3.c. (emphasis added).

[74] 2004 Permit, Section G (emphasis added).

[75] *See* Test Claim Permit, Sections F.1 and F.1.d; F.2; F.3.a.; F.3.b.; F.3.c.; F.3.d.; F.6.

regulations regarding the proposed stormwater management program require the description of a program "including a *schedule*, to detect and remove . . . illicit discharges." 40 CFR § 122.26(d)(2)(iv)(B) (emphasis supplied). In the preamble to the final stormwater regulations, the requirement is that *"[u]ltimately*, such non-storm water discharges through a municipal storm sewer must either be removed from the system . . . ." (55 Fed. Reg. 47990, 47995 (November 16, 1990) (emphasis supplied)).

The counterpart provisions in the 2004 Permit also did not contain language requiring the prevention or elimination of such non-stormwater discharges. *See* 2004 Permit, Section F (Development Planning); Section G (Construction); Section H (Existing Development, including H.1 (municipal facilities), H.2 (industrial/commercial facilities) and H.3 (residential)); or Section I (Education). It is those specific counterparts that the Commission must evaluate in determining whether the Section F requirements of the 2010 Permit were a new program or higher level of service than that required under the previous 2004 Permit. *San Diego Unified, supra; Lucia Mar, supra.*

IV. COMMENTS ON FUNDING SOURCES

The DPD concludes that with regard to certain activities it identified as new state-required mandates in the Test Claim Permit, Claimants are not entitled to a subvention of funds under article XIII B, section 6 of the California Constitution. These conclusions are:

1. There is no substantial evidence in the record that the District was required to use "proceeds of taxes" to pay for the requirements at issue in the Test Claim;

2. Claimants had the authority to charge "regulatory fees" sufficient to pay for certain mandates; and

3. Beginning on January 1, 2018, the adoption of new California legislation cut off the ability of Claimants to seek a subvention of funds after that date for mandates fundable through property-related fees, by re-defining the term "sewer" in a statute interpreting terms in the state Constitution to include storm drains, and thereby expanding the categories of projects for which a fee may be imposed without a majority vote of approval.

Each of these conclusions is addressed below.

A. Flood Control District Assessments

Without agreeing to the correctness of the DPD's conclusions regarding the use of benefit assessment funds and "proceeds of taxes," to the extent that the District identifies further evidence relevant to this section of the DPD, it will consider presenting such evidence at the hearing on the Test Claim.

B. Authority to Impose Regulatory Fees

The DPD concludes (at 365-368) that Claimants have fee authority within the meaning of Govt. Code § 17556(d) to obtain funding for certain Test Claim Permit provisions identified in the DPD as constituting new state mandates. Claimants respond to those allegations next below.

1. Non-Applicability of Regulatory Fee Authority to Public Facilities and Activities

Claimants obviously cannot charge fees for their own projects, making it impossible to recover costs through development or other regulatory fees. The DPD concludes that public development projects are "discretionary" and thus not mandated by the state. In response, Claimants have demonstrated in Section III above that such projects are not "discretionary" as being legally or practically compelled. In addition, ancillary requirements associated with public projects, such as reporting, inventorying and others, are mandatory for permittees. *See* discussions at Sections III.E, III.F., III.G. and III.H, above.

Claimants submit that the requirements of the following Test Claim Provisions, as they apply to their public facilities or projects,[76] are eligible for reimbursement:

- Sections F.1.d.1., 2., 4., 7., h., F.3.d.1.-5.
- Section F.1.f.
- Sections F.2.d.3. and F.2.e.(6)(e)
- Sections F.1.i. and F.3.a.10.
- Sections G.1.-5.
- Sections K.3.a.-c.

2. Claimants Lack Regulatory Fee Authority For Numerous Test Claim Permit Provisions

The DPD concludes that with respect to a number of Test Claim Permit provisions, Claimants had regulatory fee authority to charge third parties for the costs of such provisions. However, an examination of the provisions in question rebuts that conclusion.

Article XI, section 7 of the California Constitution provides that a municipality "may make and enforce within its limits all local, police, sanitary, and other ordinances and regulations not in conflict with general laws." Courts have traditionally interpreted this power to authorize "valid regulatory fees."[77] This fee-setting power is, however, limited by California caselaw as well as amendments to the Constitution adopted through the initiative process in Propositions 218 and 26. *LA County Permit Appeal II, supra,* outlines these limitations:

> A regulatory fee is valid "if (1) the amount of the fee does not exceed the reasonable costs of providing the services for which it is charged, (2) the fee is not levied for unrelated revenue purposes, and (3) the amount of the fee bears a reasonable relationship to the burdens created by the fee payers' activities or operations" or the benefits the fee payers receive from the regulatory activity. (*California Building Industry Assn. v. State Water Resources Control Bd.* (2018) 4 Cal.5th 1032, 1046, citing *Sinclair Paint Co. v. State Bd. of Equalization* (1997) 15 Cal.4th 866, 881).[78]

Additional restrictions are contained in Proposition 26 (incorporated into the California Constitution as article XIII C) which provides that any levy, charge or exaction of any kind imposed by a local government is a "tax," except the following:

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[76] As discussed in Section IV.B.2. next below, Claimants also lack regulatory fee authority to assess fees from private developments or projects for certain of these provisions because they involved reporting or other obligations unrelated to the construction or development of the projects.

[77] *Mills v. County of Trinity* (1980) 108 Cal.App.3d 656, 662.

[78] 59 Cal.App.5th at 562.

> (1) A charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege.
>
> (2) A charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product.
>
> (3) A charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof.
>
> (4) A charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property.
>
> (5) A fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law.
>
> (6) A charge imposed as a condition of property development.
>
> (7) Assessments and property-related fees imposed in accordance with the provisions of Article XIII D.

Cal. Const. article XIII C, section 1.

While these constitutional provisions and case law authorizes some regulatory costs, such as those for inspections, to be recovered as fees, that authority is limited by the requirements of the Constitution. It is within that framework that Claimants respond to the conclusions in the DPD concerning their ability to assess regulatory fees on the Test Claim Permit provisions identified in the DPD at 365.

a. Retrofitting Provisions in Section F.3.d.

The DPD concludes, without discussion, that Claimants can assess regulatory fees to pay costs relating to the retrofitting of existing development. But in such a situation, there is no property owner or developer upon which fees can be assessed to pay such costs as identifying and inventorying existing areas of development (Section F.3.d.1.); costs to "evaluate and rank" the inventoried areas to prioritize retrofitting (Section F.3.d.2.); or, costs to consider the results of the evaluation in prioritizing Claimant work plans for the following year.

All of these requirements are unrelated to potential future private development, for which development fees can be obtained, but rather to how Claimants must evaluate *existing* developments.[79] And, as the Test Claim Permit expressly provided, the work required of Claimants was not intended to benefit or burden any particular parcel but to improve water quality generally by addressing "the impacts of existing development through retrofit projects that reduce impacts from hydromodification, promote LID, support riparian and aquatic habitat

[79] In this way, the factual situation can be distinguished from that present in *San Diego Permit Appeal II,* where the question related to how the costs of preparing LID and HMP documentation was to be allocated amongst future development projects. 85 Cal.App.5th at 586-95.

restoration, reduce the discharge of storm water pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of water quality standards." Test Claim Permit, Section F.3.d.

Fees for requirements which "redound to the benefit of all" are not recoverable as regulatory fees. *Newhall County Water Dist. v. Castaic Lake Water Agency* (2016) 243 Cal.App.4th 1430, 1451. *Newhall County* held that a charge imposed by a water agency for creating "groundwater management plans" as part of the agency's groundwater management program could not be imposed as a fee. The court reasoned that the charge was "not [for] specific services the Agency provides directly to the [payors], and not to other [non-payors] in the Basin. On the contrary, groundwater management services redound to the benefit of all groundwater extractors in the Basin – not just the [payors]."[80] *See also LA County Permit Appeal II, supra,* holding that placing trash receptacles at transit stops benefitted the "public at large"[81] and that associated costs could not be passed on to any particular person or group.[82]

b. BMP Maintenance Tracking in Section F.1.f.1

Section F.1.f.1 of the Test Claim Permit required permittees to maintain a database of all projects with a structural post-construction BMP implemented since 2005. The creation of the database provided permittees with a way to track such BMPs, and did not itself provide a benefit to the owners/operators of those BMPs. Moreover, the requirement to include BMPs implemented starting in 2005, five years before the effective date of the Test Claim Permit, meant that permittees would have been unable to recover costs of entering those pre-Permit BMPs on the database through the development process, if that were even possible.

c. Annual JRMP Reporting Checklist in Section K.3.c.3.

The DPD concludes that Claimants' cost for the JRMP annual report checklist requirements relating to Construction, New Development, Post Construction Development, Municipal (other than their own)/Commercial/Industrial could be recovered as regulatory fees. Section K.3.c.3. of the Test Claim Permit mandated a reporting requirement intended to inform the Water Board of the status of permittees' program. The checklist served as a statistical tool but provided no benefits to any of the projects which were among the statistics reported. The purpose of the checklist, and the other annual reporting requirements in Test Claim Permit Section K.3.c., was not to administer or facilitate any inspection or other interaction with [property-related] but rather to "maintain records demonstrating that Permit activity requirements have been met, which allows the San Diego Water Board to confirm compliance as needed . . . ." Test Claim Permit Fact Sheet at 175.

d. Annual JRMP Program Component Table 5 in Section K.3.c.4.

A similar analysis to that above applies to the requirement to provide the information specified in Test Claim Permit Table 5 in the JRMP annual report. The DPD concludes that such

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[80] *Ibid.*

[81] 59 Cal.App.5th at 569.

[82] *See also* Calif. Const. article XIII D, section 6(b)(5), which prohibits fees "for general governmental services . . . where the service is available to the public at large in substantially the same manner as it is to property owners."

costs, as they apply to New Development, Construction, Municipal (other than own), Commercial/Industrial, Residential and Retrofitting Existing Development, could be covered through regulatory fees. DPD at 343. While the informational requirements of Table 5 are more comprehensive than those in the checklist required by Section K.3.c.3., their purpose is no different. It is not to administer or facilitate the interaction between the Claimants and property owners/operators or projects within their jurisdictions, a task which potentially could be funded through regulatory fees, but rather to "maintain records." As such, the costs associated with such activities are not recoverable as regulatory fees.

3. Other Test Claim Permit Requirements As to Which Claimants Lack Regulatory Fee Authority

In Section III of these comments, Claimants have identified additional Test Claim Permit requirements which represented unfunded state mandates. These are:

- Section B.2., removing categories of irrigation-related discharges from the list of exempt non-stormwater discharges.
- Sections C., F.4.d. and e., and Section II.C. of the MRP, relating to NALs.
- Section D, relating to SALs.
- Section F.2.e.(6)(e), referring to the preempted costs of reviewing monitoring data required by the State GCP.
- Section F.3.b .4.a.ii.m referring to the preempted costs of reviewing monitoring data required by the State IGP.

None of the costs of the first three of these requirements could be recovered as regulatory fees, as the provisions constitute property-related fees subject to the majority vote requirement in Calif. Const. article XIII D, section 6(c). Because of that voter approval requirement, the Commission has in past MS4 permit test claims determined that Claimants did not have the authority to charge or assess such fees as a matter of law. This same determination was made in the DPD. DPD at 356. With respect to the last two requirements, please see the final paragraph of Sections III.G and III.I, above.[83]

C. SB 231, Which Claims to "Correct" a Court's Interpretation of article XIII D, section 6 of the California Constitution, Misinterprets Proposition 218 and the Historical Record and Should Not Be Relied Upon by the Commission

Howard Jarvis Taxpayers Assn. v. City of Salinas (2002) 98 Cal.App.4th 1351 *("City of Salinas")* determined that the exclusion from the majority taxpayer vote requirement for property-related fees for "sewer services" in article XIII D, section 6(c) of the California Constitution, did not cover storm sewers or storm drainage fees.[84]

In 2017, fifteen years after *City of Salinas,* the Legislature enacted SB 231, which amended Govt. Code § 53750 to define the term "sewer" (which is contained in Calif. Const. article XIII D, section 6(c)):

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[83] In addition, to the extent the "Section F" Test Claim Permit requirements discussed in Section III.M above cannot be funded by regulatory fees, they would represent unfunded mandates.

[84] 98 Cal.App.4th at 1358-359.

> "Sewer" includes systems, all real estate, fixtures, and personal property owned, controlled, operated, or managed in connection with or to facilitate sewage collection, treatment, or disposition for sanitary or drainage purposes, including lateral and connecting sewers, interceptors, trunk and outfall lines, sanitary sewage treatment or disposal plants or works, drains, conduits, outlets for surface or storm waters, and any and all other works, property, or structures necessary or convenient for the collection or disposal of sewage, industrial waste, or surface or storm waters. "Sewer system" shall not include a sewer system that merely collects sewage on the property of a single owner.

Govt. Code § 53750(k).

SB 231 also added Govt. Code § 53751, which sets forth findings as to the legislative intent in amending § 53750 to encompass storm sewers and drainage in the definition of "sewer." Section 53751 states that the Legislature intended to overrule *City of Salinas* because that court failed, among other things, to recognize that the term "sewer" had a "broad reach" "encompassing the provision of clean water and then addressing the conveyance and treatment of dirty water, whether that water is rendered unclean by coming into contact with sewage or by flowing over the built-out human environment and becoming urban runoff." Govt. Code § 53751(h).

The Legislature also included a finding that "[n]either the words 'sanitary' nor 'sewerage' are used in Proposition 218, and the common meaning of the term 'sewer services' is not 'sanitary sewerage.' In fact, the phrase 'sanitary sewerage' is uncommon." Govt. Code § 53751(g). SB 231 further cites a series of pre-Proposition 218 statutes and cases which, the legislation asserts, "reject the notion that the term 'sewer' applies only to sanitary sewers and sanitary sewerage." Govt. Code § 53751(i). The DPD concludes that the adoption of SB 231, combined with the decision of the court in *Paradise Irrigation Dist. v. Commission on State Mandates*[85] renders any costs incurred by Claimants after January 1, 2018 (the effective date of SB 231) not eligible for reimbursement. DPD at 379.[86]

1. SB 231 Does Not Apply Retroactively

While not expressly so finding, the DPD implicitly concludes that the amendments to Govt. Code §§ 53750 and 53751 operate *prospectively* from January 1, 2018 and do not have retroactive effect. The Third District Court of Appeal so held in *San Diego Permit Appeal II.*[87]

2. The Plain Language and Structure of Proposition 218 Do Not Support SB 231's Definition of "Sewer" in Govt. Code § 53750

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[85] (2019) 33 Cal.App.5th 205.

[86] The applicability of *Paradise Irrigation Dist.* to the Test Claim depends on whether SB 231 is valid. If it is not, as Claimants assert, a local government cannot assess a fee without it being subject to a majority vote.

[87] 85 Cal.App.5th at 577.

When it comes to the validity of any statute purporting to interpret the California Constitution, it is undisputed that the final word is left to the courts.[88] For this reason, the ultimate validity of SB 231 is not before the Commission. It would be error, however, for the Commission to cite SB 231 to deny Claimants a subvention of funds for costs expended after January 1, 2018. This is so because in seeking to overrule *City of Salinas,* SB 231 attempts to reinterpret the Constitution in contradiction of the intent of the voters when they adopted Proposition 218. Because the Constitution cannot be modified by a legislative enactment,[89] SB 231 is unconstitutional on its face, and should not be relied upon by the Commission.

SB 231 attempted to re-define the meaning of a Constitutional provision, article XIII D, section 6, through an amendment to the Proposition 218 Omnibus Implementation Act, Govt. Code § 53750 *et seq.* ("Implementation Act"). The Legislature made no attempt to define "sewer" when it adopted the original Act in 1997, nor in subsequent amendments prior to SB 231, which was adopted 21 years after passage of Proposition 218. Notably, the Legislature waited 15 years after the allegedly erroneous holding in *City of Salinas* to enact a "correction."

In Govt. Code § 53751(f), the Legislature found that *City of Salinas* "failed to follow long-standing principles of statutory construction by disregarding the plain meaning of the term "sewer." In so finding, the Legislature itself ignored these principles. In construing voter initiatives, courts are charged with determining the intent of the voters. *Professional Engineers in California Government v. Kempton* ((2007) 40 Cal. 4th 1016, 1037. To ascertain that intent, courts turn first to the initiative's language, giving words their ordinary meaning as understood by "the average voter." *People v. Adelmann* (2018) 4 Cal. 5th 1071, 1080. The initiative must also be construed in the context of the statute as a whole and the scheme of the initiative. *People v. Rizo* (2000) 22 Cal. 4th 681, 685. In addition, if there is ambiguity in the initiative language, ballot summaries and arguments may be considered as well as reference to the contemporaneous construction of the Legislature. *Professional Engineers, supra;*[90] *Los Angeles County Transportation Comm. v. Richmond* (1982) 31 Cal.3d 197, 203.

In construing a statute or initiative, every word must be given meaning. *City of San Jose v. Superior Court* (2017) 2 Cal. 5th 608, 617. If the Legislature (or the voters) use different words in the same sentence, it must be assumed that their intent was that the words have different meanings. *K.C. v. Superior Court* (2018) 24 Cal.App.5th 1001, 1011 n.4.

In the case of Proposition 218, the word "sewer" is used both in article XIII D, section 5 and in article XIII D, section 6. Section 5 exempts from the majority protest requirement in article XIII D, section 4 "[a]ny assessment imposed exclusively to finance the capital costs or maintenance and operation expenses for sidewalks, streets, *sewers*, water, flood control,

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[88] *Cf. City of San Buenaventura v. United Water Conservation Dist.* (2017 Cal. 5th 1191, 1209 n.6 ("the ultimate constitutional interpretation must rest, of course, with the judiciary."); *see also County of Los Angeles v. Comm'n on State Mandates, supra,* 150 Cal.App.4th at 921 (overruling statute that purported to shield MS4 permits from article XIII B section 6 and holding that a "statute cannot trump the constitution.")

[89] *County of Los Angeles, supra,* 150 Cal.App.4th at 921.

[90] 40 Cal. 4th at 1037.

drainage systems or vector control." Calif. Const. article XIII D, section 5(a) (emphasis added). There, the term "sewer" is set forth separately from "drainage systems," which the Legislature defined as "any system of public improvements that is intended to provide for erosion, control, for landslide abatement, or for *other types of water drainage."* Govt. Code § 53750(d) (emphasis added). Since both "sewer" and "drainage systems" (which refer to systems which drain stormwater, including storm sewers) are contained in the same sentence, it must be presumed that the voters intended that "sewer" mean something other than "public improvements . . . intended to provide for . . . other types of water drainage."

Moreover, the word "sewer," but not the term "drainage systems" appears in article XIII D, section 6. A longstanding principle of statutory construction is that when language is included in one portion of a statute, "its omission from a different portion addressing a similar subject suggests that the omission was purposeful." *E.g., In re Ethan C* (2012) 54 Cal. 4th 610, 638. In *Richmond v. Shasta Community Services Dist.,* the Supreme Court used this tool to analyze article XIII D to determine if a capacity charge and a fire suppression charge imposed by a water district were "property related":

> Several provisions of article XIII D tend to confirm the Legislative Analyst's conclusion that charges for utility services such as electricity and water should be understood as charges imposed "as an incident of property ownership." For example, subdivision (b) of section 3 provides that 'fees for the provision of electrical or gas service shall not be deemed charges or fees imposed as an incident of property ownership' under article XIII D. Under the rule of construction that the expression of some things in a statute implies the exclusion of other things not expressed (*In re Bryce C.* (1995) 12 Cal.4th 226, 231), the expression that electrical and gas service charges are not within the category of property-related fees implies that similar charges for other utility services, such as water and sewer, are property-related fees subject to the restrictions of article XIII D."[91]

A similar analysis of Article XIII D supports the conclusion that the voters' intent was that "sewers" referred to sanitary sewers, not storm drainage systems. As noted above, the municipal infrastructure listed in article XIII D, section 5 includes both "sewers" and "drainage systems." By contrast, article XIII D, section 6(c) refers only to "sewer" in exempting from the majority vote requirement "sewer, water and refuse collection services." Given that another section of the proposition specifically called out "drainage systems" as different from "sewers," the absence of the former term requires that it be presumed that the voters understood "sewer" or "sewer services" in section 6(c) to be limited to sanitary sewers. This was the holding of the Third District Court of Appeal in *San Diego Permit Appeal II.*[92]

The proponents of Proposition 218 also expressed an intent that it "be construed liberally to curb the rise in "excessive" taxes, assessments, and fees exacted by local governments

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[91] (2004) 32 Cal. 4th 409, 427.

[92] 85 Cal.App.5th at 568.

without taxpayer consent."[93] Any interpretation of the breadth of the meaning of the exception for "sewer services" must therefore take that intent into account and interpret exceptions to limits on the taxing or fee power narrowly.[94]

Thus, the unambiguous, plain meaning of article XIII D, section 6(c) is that the term "sewer" or "sewer services" pertains only to sanitary sewers and not to MS4s. In attempting to expand the facilities and services covered by this term, SB 231 is an invalid modification of Proposition 218 that seeks to override voter intent. SB 231 does not provide authority to bar Claimants from seeking a subvention of funds for costs incurred after January 1, 2018.

While resort to interpretive aids is not required when the meaning of a statutory term is clear, SB 231 justifies its amendment of Govt. Code § 53750 by asserting that "[n]umerous sources predating Proposition 218 reject the notion that the term "sewer" applies only to sanitary sewers and sanitary sewerage." Govt. Code § 53751(i). These include:

(a) Pub. Util. Code § 230.5: This statute is referenced[95] as the source for the "definition of 'sewer' or 'sewer service' that should be used in the Implementation Act. It defines "sewer system" to include both sanitary and storm sewers and appurtenant systems. However, this is an isolated statutory example and is found in a section of the Public Utilities Code dealing with privately owned sewer and water systems regulated by the Public Utilities Commission,[96] and not a "system of public improvements that is intended to provide . . . for other types of water drainage." Govt. Code § 53750(d). Such small systems may well serve both as a sanitary and storm system, but they are not typical of the MS4 systems being regulated by the Test Claim Permit or of the public projects that Proposition 218 was written to address. Moreover, the fact that the statute goes to the effort to define "sewer system" to include both sanitary and storm sewers shows that, without such an explicit definition, the tendency would be to consider only sanitary sewers to fall under the definition of "sewer."

(b) Govt. Code § 23010.3. This statute[97] relates to the authorization for counties to spend money for the construction of certain conveyances, and defines those conveyances as "any sanitary sewer, storm sewer, or drainage improvements . . ." This does not further the arguments made in SB 213, since the statutory language calls out "sanitary sewer," "storm sewer" and "drainage improvements" as separate items, and also contradicts the statement in Govt. Code § 53751(g) that the phrase "sanitary sewerage" is uncommon. The similar phrase "sanitary sewer" is commonly found, as noted below.

(c) The Street Improvement Act of 1913: Govt. Code § 53751(i)(3) references only to the name of this statute, Streets & Highways Code §§ 10000-10706, but cites no section supporting SB 231's interpretation of Proposition 218. Moreover, within this Act, Streets &

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[93] *City of Salinas,* 98 Cal. App. 4th at 1357-58.

[94] *Ibid.*

[95] Govt. Code § 53751(i)(1)

[96] *See* Pub. Util. Code § 230.6, defining "sewer system corporation" to include "every corporation or person owning, controlling, operating, or managing any sewer system for compensation within this state."

[97] Cited in Govt. Code § 53751(i)(2).

Highways Code § 10100.7, which allows a municipality to establish an assessment district to pay for the purchase of already constructed utilities, separately defines "water systems" and "sewer systems," with the latter clearly limited to sanitary sewers: "sewer system facilities, including sewers, pipes, conduits, manholes, treatment and disposal plants, connecting sewers and appurtenances for providing sanitary sewer service, or capacity in these facilities . . . ." *Ibid.*

(d) *Los Angeles County Flood Cont. Dist. v. Southern Cal. Edison Co.* (1958) 51 Cal. 2d 331 is cited[98] for the proposition that the California Supreme Court "stated that 'no distinction has been made between sanitary sewers and storm drains or sewers.'" This case involved whether defendant Edison's had to pay to relocate its gas lines to allow construction of District storm drains. In stating that there was no distinction (as to the payment obligation) between sanitary sewers and storm drains or sewers, the Court was not commenting on whether a "sewer" *qua* "sewer" necessarily filled both sanitary and storm functions. And, again, the Court distinguished between "sanitary sewers" and "storm drains or sewers" in the language of the opinion.

(e) *County of Riverside v. Whitlock* (1972) 22 Cal.App.3d 863, *Ramseier v. Oakley Sanitary Dist.* (1961) 197 Cal.App.2d 722, and *Torson v. Fleming* (1928) 91 Cal. App. 168. These cases are cited in Govt. Code § 53751(i)(5) as examples of "[m]any other cases where the term 'sewer' has been used interchangeably to refer to both sanitary and storm sewers." However, the holdings in these cases are more limited. *County of Riverside* refers to "sewer" only in a footnote, which quotes from an Interim Assembly Committee Report discussing public improvements including "streets, storm and sanitary sewers, sidewalks, curbs, etc." (language which does not distinguish between storm and sanitary sewers).[99] However, in another footnote which quoted from Street & Highways Code § 2932 regarding assessments for public improvements, the phrase "sewerage or drainage facilities" is employed, again reflecting a distinction between these functions and assigning the function of sanitary services to "sewerage."[100]

Ramseier involved a dispute over a contract to expand the district's "storm and sanitary sewer system."[101] This was the only reference to "sewers" in the case, and that reference distinguishes between "storm" and "sanitary" sewers. The rationale for citation to *Torson* is unclear, though the case involved a requested extension of a sanitary sewer, and the statutes cited in the case referred, separately, to both "sanitary" and "storm" sewers.[102] While these cases present only limited examples of how the term "storm sewer" or "sanitary sewer" were employed, it is clear that in all, a distinction is drawn between sanitary sewers and storm sewers.

3. There is Significant Evidence that the Legislature and the Courts Considered "Sewers" to be Different from "Storm Drains" Prior to the Adoption of Proposition 218

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[98] Cited in Govt. Code § 53751(i)(4)

[99] 22 Cal.App.3d at 874 n.9.

[100] 22 Cal.App.3d at 869 n.8.

[101] 197 Cal.App.2d at 723.

[102] 91 Cal. App. at 172.

There are numerous examples in pre-Proposition 218 California statutes and caselaw of the term "sewer" being used to denote sanitary sewers and not storm sewers. For example, Education Code § 81310, in referring to the power of a community college board to convey an easement to a utility, refers to "water, *sewer*, gas, or *storm drain* pipes or ditches, electric or telephone lines, and access roads." (emphasis added). There is no ambiguity in this statute – the "sewer" being referred cannot be a storm sewer, as "storm drain" pipes are specifically referenced.[103]

Another example is Govt. Code § 66452.6, relating to the timing of extensions for subdivision tentative map act approval, and defining "public improvements" to include "traffic controls, streets, roads, highways, freeways, bridges, overcrossings, street interchanges, *flood control or storm drain facilities*, *sewer facilities*, water facilities, and lighting facilities."[104] Again, there is no ambiguity; the Legislature separately defined "flood control or storm drain facilities" from "sewer facilities," with the latter taken on the same meaning ascribed to it in *City of Salinas.*

Similarly, Health & Safety Code § 6520.1 provides that a sanitary district can prohibit a private property owner from connecting "any house, habitation, or structure requiring *sewerage or drainage* disposal service to any privately owned *sewer* or *storm drain* in the district." Again, the Legislature used "sewer" here as a sanitation utility separate and apart from drainage. This practice of defining "sewer" as a sanitary utility distinct from "storm drain" has continued after the adoption of Proposition 218. In Water Code § 8007, effective May 21, 2009, the Legislature made the extension of certain utilities into disadvantaged unincorporated areas subject to the prevailing wage law, and defined those utilities as the city's "water, *sewer, or storm drain* system." (emphasis added).

Cases, too have used the term "sewer" to mean a sanitary sewer handling sewage as opposed to storm drains. For example, in *E.L. White, Inc. v. Huntington Beach* (1978) 21 Cal.3d 497, the Supreme Court used the terms "storm drain" and "sewer" separately in discussing the liability of the city and a contractor for a fatal industrial accident. Also, in *Shea v. Los Angeles* (1935) 6 Cal.App.2d 534, 535-36, the court referred to the "sanitary sewer" and "sewers" in addition to a "storm drain." In *Boynton v. City of Lockport Mun. Sewer Dist.* (1972) 28 Cal.App.3d 91, 93-96, the court discussed whether "sewer rates" were properly assessed by the city, and in that case, the court consistently used the term "sewer" to refer to sanitary sewers handling sewage.

These examples demonstrate that there was no "plain meaning" of "sewer" as a term that encompassed both sanitary and storm sewers. In fact, as the Third District Court of Appeal recently held in *San Diego Permit Appeal II*, the term was understood by the voters to mean solely sanitary sewers.

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[103] *K.C., supra,* 24 Cal.App.5th at 1011 n.4 (when Legislature uses different words in the same sentence, it is assumed that it intended the words to have different meanings).

[104] Govt. Code § 66452.6(a)(3) (emphasis added).

Thus, there is significant evidence, in the language of the ballot measure itself, in the interpretation courts are required to give to the measure, and in the prevailing legislative and judicial usage of the term "sewer," to find that the voters on Proposition 218 intended the result found by the court in *City of Salinas.* As such, SB 231 is an unconstitutional attempt by the Legislature to rewrite history and should not be relied upon by the Commission to refuse a subvention of funds for the costs of unfunded state mandates in the Test Claim Permit incurred after January 1, 2018.

V. CONCLUSION

In summary, Claimants respectfully request that the Commission consider the arguments set forth in these Comments in their consideration of the Decision to be rendered on the Test Claim. Claimants appreciate this opportunity to provide their comments on the DPD.

I declare under penalty of perjury that the foregoing, signed on May 19, 2023, is true and correct to the best of my personal knowledge, information, or belief.

BURHENN & GEST LLP
HOWARD GEST
DAVID W. BURHENN

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DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On May 22, 2023, I served the:

- **Finance's Late Comments on the Draft Proposed Decision filed May 22, 2023**
- **Claimants' Comments on the Draft Proposed Decision filed May 19, 2023**

  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03
  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2., C., D., F.1.d.1., 2., 4., 7., F.1.f., F.1.h., F.1.i., F.2.d.3., F.2.e.6.e., F.3.a.10., F.3.b.4.a.ii., F.3.d.1.-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6.,
  Adopted November 10, 2010
  County of Riverside, Riverside County Flood Control and Water Conservation District, and Cities of Murrieta, Temecula, and Wildomar, Claimants

by making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on May 22, 2023 at Sacramento, California.

Jill L. Magee
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COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 5/17/23

Claim Number: 11-TC-03

Matter: California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

Claimants: City of Murrieta
City of Temecula
City of Wildomar
County of Riverside
Riverside County Flood Control and Water Conservation District

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

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May 19, 2023

RECEIVED
May 22, 2023
Commission on State Mandates

LATE FILING

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Response to Draft Proposed Decision for Test Claim 11-TC-03, California Regional Water Quality Control Board, San Diego Region, Order No. R0-2010-0016

Dear Director Halsey:

The Department of Finance (Finance) has reviewed the draft proposed decision for the San Diego Regional Water Quality Control Board (Regional Water Board), Test Claim 11-TC-03. Finance defers to the California State Water Resources Control Board (State Board) and to the Regional Water Board as to (i) the duration of any reimbursement period; and (ii) those portions of the Test Claim Permit (as defined below) where the draft proposed decision finds potential for reimbursable costs.

Finance agrees with the draft proposed decision's conclusions that the conditions set forth in certain sections of Order No. R9-2010-0016 issued by the Regional Water Board (Test Claim Permit) do not impose a new program or higher level of service within the meaning of article XIIIB, section 6 of the California Constitution. Specifically, Finance notes that the draft proposed decision is correct with respect to its denial of reimbursable costs associated with Section B.2.; Section C.; Sections F.4.d. and e. and Section II.C. of Attachment E; Section D; Sections F.1.d., 2., 4., 7., Sections h. and F.3.d1.-5; Section F.1.f.; Sections F.2.d.3.; Section $.2.e.6.e.;Sections F.1.i. and F.3.a.10.; and Section F.3.b.4.a.ii of the Test Claim Permit.

Finance continues to assert that claimants do have sufficient fee authority that is undiminished by Propositions 218 and 26. Finance relies on the holding in Clovis Unified School Dist. v. Chiang (2010) 188 Cal.App.4th, 794 that, to the extent that local government has authority to charge for program costs, those charges cannot be recovered as a state-mandated cost. Thus, Finance argues that the decision by local government not to take the additional necessary steps (such as submitting a proposed fee to voters) to exercise fee authority does not negate that fee authority but instead evidences an exercise of discretion by local government. This is supported by Paradise Irrigation District v. Commission on State Mandates (2019) 33 Cal.App.5th 174, 244 which found that the majority protest procedure (which Finance contends is one of the additional steps to the exercise of fee authority as described above) does not negate a claimant's fee authority. Further, Finance maintains that Government Code section

17556(d) applies in that there can be no finding of a reimbursable stated-mandated program when the claimants have the authority to impose fees sufficient to pay for the requirements of the Test Claim Permit.

Should the Commission find reimbursable costs in connection with the Test Claim Permit, Finance points to offsetting funds that are not "proceeds of taxes" within the meaning of article XIII B, section 8(c) of the California Constitution and notes that the Commission should take all steps necessary to identify those funds and deduct them from any reimbursable costs. As noted in Department of Finance vs. Commission on State Mandates (2022) 85 Cal.App.5th 535, 560, citing County of Fresno v. State of California et al. 280 Cal.Rptr., 92 at p. 487, article XIII B, section 6 of the California Constitution requires subvention only when the costs in question can be recovered solely from tax revenues.

If you have any questions regarding this letter, please contact Chris Hill, Principal Program Budget Analyst at (916) 445-3274.

Sincerely,

Teresa Calvert

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Program Budget Manager

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DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On May 22, 2023, I served the:

- **Finance's Late Comments on the Draft Proposed Decision filed May 22, 2023**
- **Claimants' Comments on the Draft Proposed Decision filed May 19, 2023**

  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03
  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2., C., D., F.1.d.1., 2., 4., 7., F.1.f., F.1.h., F.1.i., F.2.d.3., F.2.e.6.e., F.3.a.10., F.3.b.4.a.ii., F.3.d.1.-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6.,
  Adopted November 10, 2010
  County of Riverside, Riverside County Flood Control and Water Conservation District, and Cities of Murrieta, Temecula, and Wildomar, Claimants

by making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on May 22, 2023 at Sacramento, California.

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COMMISSION ON STATE MANDATES

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Last Updated: 5/17/23

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Matter: California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

Claimants: City of Murrieta
City of Temecula
City of Wildomar
County of Riverside
Riverside County Flood Control and Water Conservation District

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

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August 23, 2023

Via Drop Box

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Re: Notice of Errata Regarding Claimants' Comments on Draft Proposed Decision on *California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, etc.* Test Claim 11-TC-03

Dear Ms. Halsey:

I am writing as Claimant Representative to advise of errata in the Comments of Claimants County of Riverside, the Riverside County Flood Control and Water Conservation District, and the Cities of Murrieta, Temecula and Wildomar on the Draft Proposed Decision issued by Commission staff on the above-referenced Joint Test Claim.

As indicated in the attached redline pages, in the third full paragraph on page 5 of the Comments, the citation should be to *Dept. of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 559. In footnote 12 at the bottom of the page, the full case name is added since it is the first time that the case is cited. On page 7, in the second paragraph, the partial case name is used since the case was previously cited.

Please let me know if you have any questions or if Commission staff require anything additional. Thank you.

I declare under penalty of perjury that the foregoing, signed on August 23, 2023, is true and correct to the best of my personal knowledge, information, or belief.

David W. Burhenn
Claimant Representative
Address, phone and e-mail set forth above

discharges "do not change or increase [the] level or quality of service to the public; they simply make the claimants comply with existing federal law to prohibit non-stormwater discharges." DPD at 89.

Claimants disagree. First, "federal requirements" exempted irrigation-related discharges from the "effectively prohibit" non-stormwater discharge requirement *unless* they were identified by the *municipalities* as a source of pollutants to waters of the United States.[10] The 2004 Permit did *not* require Claimants to address these discharges unless, *in the discretion of permittee or the Water Board*, they should be. Test Claim Permit Section B.2 removed that discretion, requiring Claimants to now address such discharges -- a "new" requirement. A "program is 'new' if the local government had not previously been required to institute it." *County of Los Angeles v. Comm. on State Mandates* (2003) 110 Cal.App.4th 1176, 1189; *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835 ("*Lucia Mar*").

Second, general federal regulatory language does not impose a federal mandate if the regulation leaves the manner of implementation to the discretion of the permittee. *See LA County Permit Appeal I.*[11] Here, the language of the federal regulation left the discretion as to whether to include irrigation-related discharges to the permittees.

In addition, "the application of Section 6 . . . does not turn on whether the underlying obligations to abate pollution remain the same. It applies if any executive order, which each permit is, requires permittees to provide a new program or a higher level of existing services." *Dept. of Finance v. Commission on State Mandates* (2022~~1~~) 85~~59~~ Cal.App.5th 53~~546~~, 559 ("*San Diego~~LA County~~ Permit Appeal II*"). The additional obligations imposed on Claimants by removal of the exemption, such as required changes to the CMP and JRMP and additional monitoring, represented a "higher level of service" to the public, contrary to the conclusion in the DPD. What constitutes a "higher level of service" are "'state mandated increases in the services provided by local agencies in existing programs.'"[12]

The removal of the exemption for irrigation-related discharges in Section B.2 of the Test Claim Permit constitutes a state mandate for which a subvention of funds is required.

C. Requirements in Sections C., F.4.d. and e. and Section II.C. of Attachment E Relating to Non-Stormwater Action Levels

The above-cited Test Claim Permit requirements mandated Claimants to undertake an entirely new program relating to Non-Stormwater Action Levels ("NALs"). As described in the DPD (at 99-103), permittees were required to do the following tasks, among others:

- Monitor at specified locations, including major outfalls, and such other sampling points as identified by the permittees and map those locations on their MS4 map;

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the Test Claim Permit and the 2004 Permit were different and under *Lucia Mar, supra,* the removal of the exemption in the test Claim permit was a new requirement.

[10] 40 CFR § 122.26(d)(2)(iv)(B)(1).

[11] 1 Cal. 5th at 770.

[12] *Dept of Finance v. Commission on State Mandates ~~LA County Permit Appeal II,~~* (2021) 59 Cal.App.5th 546,~~at~~ 556 (*"LA County Permit Appeal II"*) (*quoting County of Los Angeles v. State of California* (1987) 43 Cal. 3d 46, 56).

While stopping short of concluding that federal law compelled the NAL requirements, the DPD appears to "bootstrap" the federal illegal discharge requirements to support its conclusion that the NAL requirements are not "new" since these underlying federal requirements had been in place long before the Test Claim Permit.

Claimants disagree. In a recent case, *Dept. of Finance v. Comm. on State Mandates* (2022) 85 Cal.App.5th 535 ("*San Diego Permit Appeal II*"), the Third District Court of Appeal rejected a similar argument made by the state in an appeal of a test claim concerning the 2007 San Diego County MS4 Permit. That case is discussed next below.

2. The NAL Requirements Were "New" and Represented a "Higher Level of Service"

In *San Diego Permit Appeal II*, the state argued, *inter alia,* that various MS4 permit requirements were not "new" because permittees had an underlying obligation, dating from the adoption of the CWA's provisions addressing MS4 discharges, and permittees' first MS4 permit, to "prohibit nonstormwater discharges into their MS4s . . . ."[13]

The Court of Appeal rejected that argument:

> The application of [article XIIIB] Section 6 . . . does not turn on whether the underlying obligations to abate pollution remains the same. It applies if any executive order, which each permit is, requires permittees to provide a new program or a high level of existing services."[14]

The court held that in determining "whether a program imposed by the permit is new, we compare the legal requirements imposed by the new permit with those in effect before the new permit became effective."[15] The court found that this "is so even though the [new] conditions *were designed to satisfy the same standard of performance.*"[16]

Here, the underlying obligations set forth in the CWA and in the cited MS4 permit application regulations have long existed and governed previous MS4 permits. The existence of any longstanding "underlying obligations," however, does not mean that the specific NALs requirements in the Test Claim Permit are not "new." To determine that, the inquiry must focus on whether the NAL requirements in the Test Claim Permit were required in the 2004 Permit. *See San Diego Unified School Dist. v. Comm. on State Mandates* (2004) 33 Cal. 4th 859, 878 (*San Diego Unified"); Lucia Mar, supra.*[17] That comparison shows that the NALs requirements in the Test Claim Permit were not present in the 2004 Permit.

Section II.C.1.a.(1) of the Test Claim Permit Monitoring and Reporting Program (Attachment E to the Test Claim Permit) ("Test Claim Permit MRP") required that permittees "must" sample "at major outfalls" and "[o]ther outfall sampling points . . . identified by the Copermittees as potential high risk sources of polluted effluent or as identified under Section C.4

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[13] 85 Cal.App.5th at 559.

[14] *Id.*

[15] *Id.*

[16] *Id.* (emphasis supplied).

[17] 44 Cal. 3d at 835.

DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On August 24, 2023, I served the:

- **Current Mailing List dated August 14, 2023**
- **Claimants' Late Comments on the Draft Proposed Decision filed August 23, 2023**

  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, 11-TC-03
  California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016, Sections B.2., C., D., F.1.d.1., 2., 4., 7., F.1.f., F.1.h., F.1.i., F.2.d.3., F.2.e.6.e., F.3.a.10., F.3.b.4.a.ii., F.3.d.1.-5., F.4.d., F.4.e., G.1.-5., K.3.a.-c., Attachment E., Sections II.C. and II.E.2.-5., and Sections F., F.1., F.1.d., F.2., F.3.a.-d., and F.6., Adopted November 10, 2010
  County of Riverside, Riverside County Flood Control and Water Conservation District, and Cities of Murrieta, Temecula, and Wildomar, Claimants

by making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on August 24, 2023 at Sacramento, California.

David Chavez

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Last Updated: 8/14/23

Claim Number: 11-TC-03

Matter: California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

Claimants: City of Murrieta
City of Temecula
City of Wildomar
County of Riverside
Riverside County Flood Control and Water Conservation District

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

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Black's Law Dictionary (11th ed. 2019), prohibit

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Preface | Guide | Legal Maxims | Bibliography

prohibit *vb.* (15c) **1.** To forbid by law. **2.** To prevent, preclude, or severely hinder.

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CITY OF MURRIETA
JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
SANTA MARGARITA REGION

ORDER NO. R9-2010-0016

JUNE 27, 2012

CERTIFICATION

I certify under penalty of law that this document and all attachments including the Watershed Workplan and Water Quality Management Plan, prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____ Date: 6/26/2012

Patrick A. Thomas, PE
Director of Public Works

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Acronyms and Abbreviations

ABOP	Anti-freeze, Batteries, Oil, and Latex Paint
ASB	Area of Special Biological Significance
AST	Active/Passive Sediment Treatment
BMP	Best Management Practice
Cal-EMA	California Emergency Management Agency
Cal-EPA	California Environmental Protection Agency
CAP	Compliance Assistance Program
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CESQG	Conditionally Exempt Small Quantity Generator
CIA	Common Interest Area
CIEP	Compliance Inspection and Enforcement Program
CMP	Consolidated Monitoring Program
Copermittees	District, County, and Cities of Murrieta, Temecula and Wildomar
Construction General Permit	NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
DEH	County Department of Environmental Health
District	Riverside County Flood Control and Water Conservation District
ESA	Environmentally Sensitive Area
FPPP	Facility Pollution Prevention Plan
HHW	Household Hazardous Waste
HMP	Hydromodification Management Plan
HOA	Homeowners Association
IC/ID	Illicit Connection/Illegal Discharge
IDDE	Illicit Discharge Detection and Elimination
Industrial General Permit	NPDES General Permit for Stormwater Discharges Associated with Industrial Activities
IPM	Integrated Pest Management
JRMP	Jurisdictional Runoff Management Plan
LID	Low Impact Development
MEP	Maximum Extent Practicable
MHP	Mobile Home Park
MSHCP	Multi Species Habitat Conservation Plan
MS4	Municipal Separate Storm Sewer System
NAL	Non-Stormwater Dry Weather Action Levels
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
O&M	Operation & Maintenance
SAL	Stormwater Action Level
San Diego Regional Board	San Diego Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SIC	Standard Industrial Classification
SMARTS	Stormwater Multiple Application and Report Tracking System
SMR	Santa Margarita Region

State Board	State Water Resources Control Board
SWPPP	Stormwater Pollution Prevention Plan
SWQPA	State Water Quality Protected Area
TMDL	Total Maximum Daily Load
WDID	Waste Discharge Identification
WQMP	Water Quality Management Plan for the Santa Margarita Region of Riverside County
WQMP Projects	Priority Development Projects with a final approved Project-Specific WQMP
WLA	Waste Load Allocation
2010 SMR MS4 Permit	Order No. R9-2010-0016

EXECUTIVE SUMMARY

This Jurisdictional Runoff Management Program (JRMP) describes the specific Runoff management programs and activities implemented to comply with the requirements of the Municipal Separate Storm Sewer System (MS4) Permit, Order No. R9-2010-0016, issued to the Riverside County Copermittees in the Santa Margarita Region (SMR) by the San Diego Regional Water Quality Control Board (San Diego Regional Board) on November 10, 2010 (2010 SMR MS4 Permit). This JRMP is the principal document that comprehensively translates the MS4 Permit requirements into actions that the City of Murrieta is implementing to comply with the 2010 SMR MS4 Permit. This JRMP will be reviewed at least annually to incorporate new and revised compliance programs specified in the 2010 SMR MS4 Permit.

This JRMP is based on a SMR-wide template developed jointly by the Copermittees to promote consistency in the compliance programs implemented in the SMR. The JRMP has been customized to describe the City of Murrieta 's compliance procedures and requirements. The terms and acronyms used in this JRMP are defined in the glossary (Appendix A) and defined terms are capitalized.

2.0 Introduction To The City of Murrieta JRMP

2.1 Program Overview

The Clean Water Act of 1987 (CWA) established requirements for discharges of Urban Runoff from MS4s under the National Pollution Discharge Elimination System (NPDES) program. The 2010 SMR MS4 Permit regulates discharges of Runoff from MS4 facilities in the SMR. The Copermittees covered under the MS4 Permit are the County of Riverside, Riverside County Flood Control and Water Conservation District (District) and the cities within the SMR, including the City of Murrieta. Each Copermittee is responsible for compliance with the 2010 SMR MS4 Permit.

This JRMP is a programmatic document developed by the City to describe its specific internal management of the Runoff management program as well as ordinances, plans, policies and procedures necessary to manage Runoff and comply with the 2010 SMR MS4 Permit. This JRMP comprehensively translates the 2010 SMR MS4 Permit requirements into programs and Implementation Plans for the City of Murrieta.

2.2 Description of City of Murrieta MS4 Facilities

The major MS4 facilities owned and operated by the City of Murrieta and regulated under the 2010 SMR MS4 Permit consist of underground storm drains, open channels, retention basins, detention basins, and catch basins. Each year, the City of Murrieta updates a map of the City of Murrieta MS4 facilities with modifications and additions to its major MS4 facilities in the JRMP Annual Report.

Within the jurisdictional boundaries of the City of Murrieta, additional MS4 facilities and discharges may be present that are not owned by the City of Murrieta. These may include MS4 facilities owned/operated by the District, and other non MS4 Copermittee entities, including federal, state, tribal and private entities and discharges otherwise permitted by the San Diego Regional Board or the State Water Resources Control Board (State Board).

Table 2-1 lists the Receiving Waters that may receive discharges from the City of Murrieta's MS4 facilities, and the associated 303(d) listings. It should be noted that the City of Murrieta is not alone responsible for potential or actual water quality problems or 303(d) listings within any of the identified Receiving Waters; however the programs identified within this JRMP are designed to reduce the discharge of Stormwater Pollutants from the MS4 to the MEP, effectively prohibit Non-Stormwater discharges, and prevent Runoff discharges from the City of Murrieta's MS4 from causing or contributing to a violation of Water Quality Standards.

Table 2-1: 303(d) Listed Receiving Waters within and downstream of the City of Murrieta's Jurisdiction

Receiving Water	303(d) Listings
Murrieta Creek	Chlorpyrifos, Copper, Iron, Manganese, Nitrogen, Phosphorus, Toxicity
Warm Springs Creek	Chlorpyrifos, Esherichia Coli, Fecal Coliform, Iron, Manganese, Nitrogen, Phosphorus

3.0 PROGRAM MANAGEMENT

3.1 Departmental Responsibilities

There are multiple City of Murrieta departments with responsibility to implement elements of this JRMP and to meet the requirements of the 2010 MS4 Permit. An organizational chart depicting the departments involved in implementing the NPDES program is provided in Appendix B. Additionally, key personnel (position title) with implementation responsibilities, and a matrix showing each JRMP element, the departments with implementation responsibilities, the specific responsibilities of each department/organizational unit, and the key personnel by position title are also provided in Appendix B.

3.2 Cooperative Activities

3.2.1 Implementation Agreement

The City of Murrieta participates in a cooperative Implementation Agreement with the following Copermittees within the SMR.

- County of Riverside
- Riverside County Flood Control and Water Conservation District
- City of Temecula
- City of Wildomar

Through this agreement, the City of Murrieta and the other listed Copermittees contribute funds to implement various aspects of the 2010 SMR MS4 Permit requirements on a region-wide basis. This approach allows for more consistent compliance with many elements of the 2010 SMR MS4 Permit, implementation of programs, increases cost effectiveness, and provides consistent messages for the public. The regional programs that the City of Murrieta jointly funds and implements regionally through this Implementation Agreement include:

- Joint development of compliance documents required by the 2010 SMR MS4 Permit among the Copermittees
- Funding of the additional responsibilities of the District as Principal Copermittee (Described in Section M of the 2010 SMR MS4 Permit)
- Regional public education activities
- Regional training programs for Copermittee staff
- Water quality monitoring as described in the 2010 SMR MS4 Permit Attachment E, Sections II.A through II.F, exclusive of source identification efforts that may be required of the City of

Murrieta based on an exceedances of an Action Level at a City of Murrieta owned Major MS4 Outfall.

- Joint support for other Regional Programs, including
    - The Compliance Assistance Program (CAP) including Food Service and Hazardous Materials facility inspections
    - Household Hazardous Waste and Antifreeze, Batteries, Oil and Latex Paint (ABOP) collection programs
    - Participation in the California Stormwater Quality Association (CASQA)

Major modifications to the interagency agreements and changes in the cooperative activities are described in Annual Reporting to the Regional Board

3.3 Fiscal Analysis {H.}

City of Murrieta makes capital expenditures and incurs operation and maintenance (O&M) costs to implement this JRMP and to meet the requirements of the 2010 MS4 Permit. Each year the capital expenditures and O&M costs incurred during the reporting period and the budgeted capital expenditures and O&M costs planned for the next fiscal year are provided in the Annual Report. Table 3-1 below describes the sources of funding that the City of Murrieta has available to fund these programs.

Table 3-1. Fiscal Resources

Program Element	Funding Source(s)
Program Management and Reporting	General Fund / CSA 152
Annual Fee for MS4 NPDES Permit	General Fund / CSA 152
Implementation Agreement Shared Cost	General Fund / CSA 152
Elimination of Illicit Connections & Illegal Discharges	General Fund / CSA 152
Municipal Facilities and Activities	General Fund / CSA 152
Development Planning	General Fund / CSA 152
Private Development Construction (Inspections)	General Fund / CSA 152
Industrial and Commercial Sources (Inspections)	General Fund / CSA 152
Retrofit Program	General Fund / CSA 152
Public Education & Outreach	General Fund / CSA 152
Other	General Fund / CSA 152

Table 3-2 below describes limitations on how the City of Murrieta can use the various sources of funding.

Table 3-2. Restrictions on Use of Funding Sources

Source of Funds	Restrictions on Use (if applicable)

Source of Funds	Restrictions on Use (if applicable)
County Service Area 152	Limited and cannot be increased
General Fund	Limited and subject to economy

3.4 Legal Authority {E.}

A certification of the City of Murrieta's adequate legal Authority to comply with 40 CFR 122.26(d)(2)(I)(A-F) and the 2010 MS4 Permit is provided in Appendix B. Table 3-3 lists the ordinances that grant the Authority to implement the requirements of the 2010 MS4 Permit and this JRMP. The Runoff Management and Discharge Controls addressed by these ordinances provide the Authority to:

- Control the contribution of Pollutants in discharges of Runoff associated with industrial and construction activity to its MS4 facilities and control the quality of Runoff from Industrial and Construction Sites. This requirement applies both to Industrial and Construction Sites which have coverage under the statewide Industrial or Construction General Stormwater Permits, as well as to those sites which do not. Grading ordinances must be updated and enforced as necessary to comply with this Order;
- Prohibit all identified Illicit Discharges not otherwise allowed pursuant to Section B.2 of the 2010 SMR MS4 Permit;
- Prohibit and eliminate Illicit Connections to the MS4;
- Control the discharge of spills, dumping, or disposal of materials other than Stormwater into the MS4;
- Require compliance with conditions in City of Murrieta's ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 facilities accountable for their contributions of Pollutants and flows);
- Utilize enforcement mechanisms to require compliance with City of Murrieta Stormwater Ordinances, permits, contracts, or orders;
- Control the contribution of Pollutants from one portion of the MS4 to another through interagency agreements with other Copermittees;
- Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with the Stormwater Ordinance and permits and with the 2010 SMR MS4 Permit, including the prohibition on Illicit Discharges to the MS4. The City of Murrieta has authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from Industrial Facilities discharging into its MS4 facilities, including Construction Sites;
- Require the use of BMPs to prevent or reduce the discharge of Pollutants into the MS4 from Stormwater to the MEP;
- Require documentation on the effectiveness of BMPs implemented to reduce the discharge of Stormwater Pollutants to the MS4 to the MEP; and
- Implement and enforce its ordinances within CIA/HOA areas and mobile home parks.

Table 3-3 lists the City of Murrieta's ordinances that provide this legal authority. These ordinances (1) can be viewed at http://www.amlegal.com/library/ca/murrieta.shtml

Table 3-3. Ordinances Providing Legal Authority

Ordinance No.	Ordinance Short Title	Provision(s) of Ordinance and Description of Authorities Granted	Availability of Ordinance (Online URL or front counter)	Date of last update/status (Pending, draft, or adopted)
Chapter 8.36	Stormwater and Urban Runoff Management and Discharge Controls	Prohibit discharge of any pollutant per the NPDES Clean Water Act Section 402, 33 U.S.C. Section 1342 and prohibits discharges of non-stormwater discharges to the MS4	Online and front counter	1st Reading Approved, 2nd Reading is Pending
Chapter 1.26	Administrative Citations	Alternative method of enforcement for minor violations of the municipal code and applicable state codes.	Online and front counter	Adopted
Chapter 1.32	General Penalties	Administer monetary fines for non-compliance with the municipal code	Online and front counter	Adopted
Chapter 8.20	Summary of Abatement of Nuisances	A procedure for the abatement of nuisances in the interest of the public health, safety, and welfare	Online and front counter	Adopted

3.5 Enforcement/Compliance Strategy

As described within this JRMP, the City of Murrieta implements a variety of programs and has established ordinances that are designed to meet the goals of the 2010 SMR MS4 Permit, however the City of Murrieta must necessarily rely on the actions or inactions of independent third parties such as residents and businesses for the protection of water quality. Accordingly, consistent with the 2010 SMR MS4 Permit and pursuant to the legal authorities described in Section 3.4, compliance with the City of Murrieta's ordinances is mandated through implementation of various enforcement mechanisms.

This section describes a program wide Enforcement / Compliance Strategy that serves as guidance to the various City of Murrieta departments in prioritizing and conducting enforcement activities that are consistent with the 2010 MS4 Permit and appropriate to the severity of the violation. Due to the unique nature of mobile businesses, specific enforcement procedures for Mobile Businesses are described in Section 3.5.3.

3.5.1 Prioritize Violations

The City of Murrieta's ordinances cover a wide range of prohibited activities with varying magnitudes of potential impact on the Beneficial Uses of Receiving Waters. For example, discharges of either Hazardous Materials (e.g., solvents and pesticides) or Non-Hazardous Materials (e.g., food Wastes, trash, and debris) into the MS4 are violations of Stormwater Ordinance subject to enforcement. Similarly, an accidental spill into a catch basin inlet and an intentional discharge from an Illicit Connection are both violations. Prioritizing violations is important in focusing the City of Murrieta's finite resources on those violations that may have the greatest potential impact on the quality of Receiving Waters.

Prioritizing violations is based on many factors, including the experience and professional judgment of the City of Murrieta's staff. The factors that are commonly considered in prioritizing violations of the City of Murrieta's Stormwater and Urban Runoff Management and Discharge Controls ordinance and Grading, Erosion and Sediment Control ordinance are presented in Table 3-4.

Table 3-4. Prioritization Factors for Violations

Prioritization Factor	Description
Characteristics of the Potential Pollutant	Based on chemical characteristics and potential to impact Beneficial Uses of Receiving Waters. The more Toxic, hazardous, or detrimental to the Beneficial Uses of the Receiving Waters a Pollutant, is the higher priority the discharge.
Sensitivity of the Affected Receiving Waters	The sensitivity of the affected Receiving Waters should be considered directly proportional to the priority of the violation because, for example, a more sensitive Receiving Water may suffer severe adverse effects from the discharge of a particular Pollutant whereas a less sensitive Receiving Water may suffer no adverse effects from the same Pollutant discharge. It is also important to consider that a Receiving Water may be highly sensitive to one potential Pollutant discharge while, at the same time, completely insensitive to another potential Pollutant. Examples of Receiving Waters that may be particularly sensitive include those with municipal supply or wildlife habitat designated Beneficial Uses.
Proximity of Receiving Waters	The closer a Receiving Water is to the discharge, the less chance there is for dispersion, dilution, or degradation of the potential Pollutant. Therefore, the closer the discharge is to Receiving Waters, the higher priority of the violation.
Magnitude of Discharge (volume and mass)	A larger Illegal Discharge should be of a higher priority than a smaller Illegal Discharge because as the magnitude of the Pollutant discharge increases, the extent of impact of the discharge on the environment increases as well.
Responsiveness of the Discharger in taking corrective actions	A discharger who is responsive and implements a good faith effort to correct a violation is more likely to minimize adverse impacts to surface water quality than a discharger who takes no action to correct a violation. Therefore, the priority of a violation should decrease as the responsiveness of the discharger increases.
Intent of the Discharger	Is the violation accidental or the result of an accident or a deliberate attempt to circumvent regulations?
Frequency of the Violation	Violations of local Stormwater Ordinances and erosion control ordinances that are continuous or reoccurring should be of a higher priority than isolated occurrences of violations. The more frequent a violation, the more likely it is that the discharge will impact surface water quality.
Previous History of Non-Compliance of the Responsible Party	A poor history of non-compliance of a discharger should result in a higher prioritization of subsequent violations as compared to a discharger with a good history of compliance because a history of non-compliance is evidence of a discharger's lack of concern for complying with local Stormwater and erosion control ordinances.

Table 3-5 provides general guidance for categorizing the relative severity of violations based upon the factors and/or circumstances associated with a violation.

Table 3-5. Relative Severity of Violations

Factors Affecting the Severity of Violations	Severity Priority Level		
	High	Medium	Low
Pollutant characteristics	Hazardous Materials (e.g., pesticides and solvents)	Metals, nutrients, sediment, other non-Hazardous Materials	Trash and debris
Sensitivity of Receiving Waters	Drinking water source, wildlife refuge, Illegal Discharges containing Pollutants identified as Impairing the Receiving Water.	Recreational reservoir, riparian habitat	Dry, ephemeral stream
Proximity of Receiving Waters	Adjacent	Several hundred feet away	Several hundred yards away
Discharge magnitude	1000's gallons	100's gallons	10's gallons
Responsiveness of discharger	No action to contain or mitigate discharge	Reactive to control discharge when requested (i.e., cooperative)	Implements spill control plan at own initiative or shows good faith effort to respond
Intent of violation	Intentional	Discharge due to lack of controls or negligence	Implemented and maintained controls that failed (i.e., accident)
Frequency of violation	Continuous	Intermittent	Isolated incident
Previous history of discharger	Enforcement and cleanup historically resisted and more than one previous violation	Enforcement and cleanup performed when threatened and one or less previous violations	Enforcement and cleanup performed when requested and no previous violations

Because violations may not clearly fall into any single priority level described in Table 3-5, the priority assigned by City of Murrieta staff to particular violations may involve a subjective weighting of various factors.

3.5.2 Select Appropriate Enforcement Actions

The City of Murrieta will emphasize and encourage voluntary compliance with its ordinances to the MEP. The enforcement/compliance response should be based on the severity of the violation in consideration of the factors in Table 3-5. The types of enforcement/compliance responses available, depending on the circumstances, and in typical order of increasing severity, are:

- Education and information,
- Verbal warning,
- Written warning,
- Notice of violation or noncompliance,
- Stop work order or cease and desist order,
- Civil citation or injunction,
- Monetary fine

- Bonding
- Administrative fine, and
- Referral to the Environmental Crimes Strike Force for criminal prosecution (infraction or misdemeanor).

3.5.2.1 Administrative Remedies

Education and Information, and Verbal and Written Warnings. Education and information should be provided to dischargers as an element of each enforcement action. Verbal and written warnings may also be provided depending on the circumstances of the condition that is causing or threatening to cause a violation of the City of Murrieta's ordinances. However, unless the condition is an initial violation of the Stormwater Ordinance and consists of a low priority and severity violation, additional enforcement action may be appropriate.

Notice of Noncompliance. The Notice of Noncompliance constitutes a basic request that the property owner or facility operator rectify the condition causing or threatening to cause noncompliance with the City of Murrieta's ordinances. The Notice of Noncompliance is generally issued when one or more of the following circumstances exist:

- The violation or threat is not significant and has been short in duration,
- The responsible party is cooperative and has indicated a willingness to remedy the conditions,
- The violation or threat is an isolated incident, and
- The violation or threat does not affect and will not harm human health or the environment.
- An actual condition of noncompliance exists, but the condition cannot be remedied within a relatively short period of time.
- The owner of the property or facility operator has indicated willingness to come into compliance by meeting milestones established in a reasonable schedule.
- The violation does not pose an immediate threat to human health or the environment.

Stop Work Order or Cease and Desist Order. The Stop Work Order or Cease and Desist Order are appropriate when the immediate action of the owner of property or operator of a facility is necessary to stop an existing discharge, which is occurring in violation of an ordinance. The Cease and Desist Order may also be appropriately issued as a first step in ordering the removal of nuisance conditions, which threaten to cause an unauthorized discharge of Pollutants if exposed to rain or surface water Runoff. The Cease and Desist Order is generally issued when one or more of the following circumstances exist:

- The violation or threat is immediate in nature and may require an emergency spill response or immediate nuisance abatement if left unattended.
- The violation or threat exhibits a potential situation that may harm human health or the environment.
- Contacts with the property owner or facility operator indicate that further Authority of the Copermittee may need to be demonstrated before remedial action is forthcoming.
- Prior Notices of Noncompliance have not obtained a favorable response.

Prior to issuance of any Cease and Desist Order or commencement of other civil or criminal enforcement action against any person, the City of Murrieta should deliver to the person a written Notice of Noncompliance, which states the act or acts constituting the violation and directs that the violation be corrected. The Notice of Noncompliance should provide the person with a reasonable time period to correct the violation before further proceedings are brought against the person. However, a Notice of Noncompliance should not be the first enforcement method used if egregious or unusual circumstances indicate that a stronger enforcement method is appropriate.

3.5.2.2 Criminal Enforcement

Misdemeanors. Criminal enforcement is appropriate when evidence of noncompliance indicates that the violator of the Ordinance has acted willfully with intent to cause, allow continuing or concealing a discharge in violation of the Ordinance.

Infractions. At the discretion of the City of Murrieta's attorneys, misdemeanor acts may be treated as infractions. Factors that the attorney may use in determining whether the misdemeanor is more appropriately treated as an infraction may include the:

- Duration of the violation or threatened violation.
- Compliance history of the person, business or entity.
- Effort made to comply with an established compliance schedule.
- Existence of prior enforcement actions.
- Actual harm to human health or the environment from the violation.

Issuance of Citation. Where criminal enforcement is indicated, the inspector will issue a citation including the:

- Name and address of the violator,
- Provisions of the ordinance violated,
- Time and place of required appearance before a magistrate.

The offending party must sign the citation thereby promising to appear. If the cited party refuses to sign the citation, the inspector may cause the arrest of the discharger, or may refer the matter to the municipal attorney for issuance of a warrant for arrest. Inspectors should be aware that cited parties have the right to demand the immediate review by a magistrate, and such a request must be granted. Inspectors should respond to such a request by referring the request to the City of Murrieta's Police Department.

Referral to Environmental Crimes Strike Force

The Riverside County Environmental Crimes Strike Force is a committee designed to pursue enforcement of serious environmental crimes. Referral of a case to the Environmental Crimes Strike Force would occur after repeated attempts at obtaining compliance have failed. The contact for the Environmental Crimes Task Force is Daniel Workman, Senior Investigator, Riverside County District Attorney Office (951.955.0755 dworkman@rivcodda.org). If Mr. Workman is not available, an Environmental Crimes Investigator can be contacted at 951.955.5430.

3.5.2.3 Appropriate Enforcement/Compliance Responses

Table 3-6 provides an example of appropriate enforcement responses that correspond to the severity of a violation as determined from Table 3-5. Recognizing the unique characteristics of mobile businesses, enforcement actions against such businesses will typically follow the procedure described in Section 3.5.3 below.

Table 3-6. Enforcement Responses for Violations Where Overlapping Authority Exists

Incident Severity Priority Level	Appropriate Enforcement Responses[1]	Lead Enforcement Agency	
		Copermittee	Regional Board Support
High	Referral to Environmental Crimes Strike Force	X	X
	Citation	X	X
	Infraction	X	X
	Misdemeanor	X	X
Medium	Infraction	X	X
	Misdemeanor	X	X
	Stop work order or cease and desist order	X	
	Notice of non-compliance	X	
Low	Notice of non-compliance	X	
	Written warning	X	
	Verbal warning	X	
	Education and information	X	

[1] Education and information should be incorporated into all enforcement responses.

The City of Murrieta takes the lead in initiating enforcement actions related to violations of its Stormwater Ordinance within its jurisdiction, however the Regional Board may be asked to provide support in enforcement actions related to incidents that are or escalate to a high-priority status. State law limits the Authority of the City of Murrieta to assess significant fines and penalties. However, the Regional Board has substantial abilities to assess fines and penalties under state and federal law that can be used to augment local enforcement where superior regulatory Authority and the ability to assess fines and penalties would be beneficial. Additionally, the Regional Board will be responsible for performing all enforcement actions related to compliance with the Statewide General Permits.

3.5.3 Enforcement Strategy for Violations Originating from Mobile Businesses {F.3.b.(3)(ii)}

Predominantly, violations by Mobile Businesses are reported by the public or by City of Murrieta field personnel. Appropriate field personnel are also trained to identify potential Non-Stormwater Discharges and other discharge of Pollutants from Mobile Businesses during the course of their normal duties. Violations originating from Mobile Businesses may be received by the City of Murrieta in the form of complaint calls from the public. For example, the District currently operates, on behalf of the City of Murrieta, a centralized 24-hour hotline (800-506-2556) that may be used by the public to, among other things, report violations into public streets, the MS4 and other water bodies. These calls can be received in English or Spanish and are routed to the appropriate Copermittee departments or contacts. The City of

Murrieta also implements Wet and Dry Weather monitoring programs that may indicate the presence of Non-Stormwater Discharges and other discharges of Pollutants to the MS4.

When put on notice by staff or a third party of a potential violation of City of Murrieta ordinances originating from a Mobile Business that is not already being responded to by another responsible agency (e.g., other Copermittee), the City of Murrieta investigates and take the following actions, as applicable:

- If the reported incident is outside of the City of Murrieta's jurisdiction, referral to the appropriate agency and/or the Regional Board will be made;
- Identify the name and contact information for the Mobile Business;
- The City of Murrieta responds to reported violations originating from a Mobile Business within its jurisdiction within two (2) business days of determining the name and contact information for the Mobile Business;
- Inspections performed in response to a report are documented using the standard complaint reporting forms; and
- When appropriate, samples of Non-Stormwater Discharges originating from Mobile Businesses that enter the MS4 may be collected.

As described in Section 8.5, investigations of Mobile Businesses are performed by the City of Murrieta in response to reports of potential violations originating from Mobile Businesses received from the public, staff and/or other agencies. The City of Murrieta has adopted ordinances prohibiting such discharges and established programs to enforce them.

Where violations that originate from Mobile Businesses are discovered, the City of Murrieta will take appropriate enforcement action. Recognizing the unique characteristics of Mobile Businesses, the typical escalating enforcement protocol includes the following; however steps may be adjusted as appropriate to the nature of the violation:

Initial Violation

1) City of Murrieta staff provides educational materials to the Mobile Business operator informing them of the minimum Source Control and Pollution Prevention BMPs they must implement (refer to Section 8.5.1). This includes a review of applicable BMP fact sheets, and letting the operator know the proper procedures for disposal of Pollutants and Non-Stormwater discharges originating from Mobile Businesses.

2) If applicable, the City of Murrieta will require the Mobile Business owner to obtain a local business license.

3) The City of Murrieta may give notice that the Mobile Business operator shall cease any activity which causes Non-Stormwater Discharge to the MS4 until they implement the minimum BMPs (see below for list of recommended BMPs).

4) If discharge is observed at time of inspection, City of Murrieta staff shall require the Mobile Business operator to immediately contain the discharge and perform any necessary remediation or cleanup from the MS4.

Repeat Violations

For repeat violations by the same operator, the City of Murrieta follows the remainder of the Enforcement Compliance strategy in Section 3.5 which may include, as appropriate, issuing written warnings, Notices of Violation, citations, or referrals to the Regional Board.

3.5.4 Coordination of Enforcement/Compliance Activities

Coordination with other Copermittees and government agencies including the Regional Board is essential for successful implementation of an enforcement/compliance program. The entire MS4 is not controlled by a single federal, tribal, state, local or private entity, nor does any single entity have Authority to take enforcement action for violations occurring outside of its jurisdiction. Further, other governmental agencies may have additional enforcement authorities that are appropriate to the situation. The City of Murrieta coordinates its enforcement activities, as practicable, with the appropriate Copermittees and government and agencies and tribes in accordance with the following guidelines:

3.5.4.1 Identify Lead Agency

- Enforcement will be coordinated when multiple agencies have jurisdiction and an agency has not been able to obtain compliance by the discharger.
- Unless otherwise agreed to in writing, the lead enforcement agency role will be assigned on the basis of the origin of the discharge.
- The Regional Board may be asked to be the lead enforcement agency for higher priority Illegal Discharges in areas of overlapping Authority, such as for discharges to Receiving Waters, and will be the lead enforcement agency for all enforcement actions related to compliance with the State Industrial or Construction General Stormwater Permits.
- Investigation and other relevant information will be shared between the participating agencies in a timely fashion.

3.5.4.2 Lead Enforcement Agency Responsibilities.

The lead enforcement agency will assume the following responsibilities:

- Coordinating activities and assigning responsibilities (e.g., investigations, site visits, etc.) among participating agencies;
- Maintaining communication and information exchange among participating agencies;
- Ensuring that follow-up actions are implemented; and
- Documentation and reporting as required.

3.5.4.3 Coordination with the Regional Board

Under the Porter-Cologne Water Quality Act, the State has provided the Regional Boards with overriding Authority to manage water quality and administer compliance with state and federal water quality law.

This Authority includes the ability to impose more significant fines and other sanctions than the Copermittees. With this Authority, the Regional Board may be more effective in obtaining the cooperation and compliance from those who violate Stormwater regulations. The Regional Board is notified by the City of Murrieta when findings of potential non-compliance with the State's Industrial and Construction General Stormwater Permits have been identified or when the City of Murrieta has been unable to obtain the compliance of a party responsible for violating its Stormwater Ordinance or erosion control ordinance. The list of contact names maintained by the District identifies the appropriate Regional Board staff to contact to initiate coordination of enforcement activities or to notify the Regional Board of potential findings of non-compliance. Where appropriate, notifications of potential non-compliance should be forwarded to the designated Regional Board contact person by the stormwater compliance coordinator.

3.5.4.4 Coordination with Other Agencies

In addition to the Regional Board, the City of Murrieta may also find it useful or necessary to coordinate or report findings of potential non-compliance to other government agencies with jurisdiction over water quality issues including the California Department of Fish and Game and the United States Fish and Wildlife Service. The list of contact names maintained by the District identifies the appropriate staff at these agencies to contact to initiate coordination of enforcement activities or to notify of potential findings of non-compliance. In addition, the City of Murrieta may cooperate with other Copermittees in the Santa Margarita Region in developing and implementing programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education.

3.5.5 Recordkeeping

Enforcement actions taken, and tools such as citations or tickets utilized, and the discharger's return to compliance are tracked in the databases described in the JRMP. Information to be retained by the City of Murrieta regarding their enforcement program includes:

- Documentation of staff training;
- Inspection notes or reports;
- Warning letters, violation notices, etc.;
- Documentation of follow-up actions;
- Contact reports from meetings or conversations with violators, other Copermittees, or other agencies; and
- Copies of notifications of potential non-compliance.

3.6 Receiving Water Limitations {A.3.}

The 2010 SMR MS4 Permit states that discharges from City of Murrieta MS4 that have been found to cause or contribute to the violation of water quality standards (designated beneficial uses, water quality objectives developed to protect beneficial uses, and the State policy with respect to maintaining high quality waters) are prohibited. The City of Murrieta complies with this prohibition through timely

implementation of control measures and other actions as described in this JRMP to reduce pollutants in stormwater discharges in accordance with the 2010 MS4 Permit.

If it is determined that discharges from City of Murrieta MS4 are causing or contributing to exceedances of Water Quality Standards that persist, notwithstanding implementation of the control measures specified in the JRMP, the City of Murrieta will implement the following procedure:

Notification

If the City of Murrieta determines that discharges from its MS4 are causing or contributing to an exceedance within a receiving water of an applicable Receiving Water Quality Standard, within thirty (30) working days, the City of Murrieta's NPDES Coordinator will provide oral or e-mail notification to the Executive Officer, identifying the pertinent information and data supporting the determination, and commit to submitting a full report in accordance with the reporting procedures below.

If the City of Murrieta's NPDES Coordinator is notified by the Executive Officer of a determination by the Regional Board that discharges from the City of Murrieta's MS4 are causing or contributing to an exceedance within a receiving water of an applicable Receiving Water Quality Standard, within ten (10) working days the City of Murrieta's NPDES Coordinator will via e-mail acknowledge such notification, and formally request any pertinent supporting information and data not included in the original notification. Following receipt and validation of all information supporting such a determination, the City of Murrieta will commit to providing a full report in accordance with the reporting procedures below.

Reporting

If the exceedance documented pursuant to the notification above is solely due to discharges to the MS4 from activities or areas outside the City of Murrieta's jurisdiction or control, within ten (10) working days of becoming aware of the situation, the City of Murrieta will provide documentation of these discharges to the Executive Officer. Subsequently, the City of Murrieta will document the situation within the Annual Report.

Otherwise, following the notifications above the City of Murrieta will, within the annual report covering the date of the notification (unless the Executive Officer directs an earlier submittal), provide a report with:

1) A description of the BMPs that are currently being implemented through the JRMP and any additional BMPs that will be implemented to prevent or reduce those Pollutants that are causing or contributing to the exceedance of the applicable Receiving Water Quality Standards. The report may be incorporated in the Annual Report unless the San Diego Regional Board directs an earlier submittal; and

2) An implementation schedule for any new/revised BMPs. If the Executive Officer directs any modifications to the report, within thirty (30) days, the City of Murrieta will submit a revised report.

Update Compliance Programs

Within thirty (30) days following approval by the Executive Officer of the report described above, the City of Murrieta will revise the applicable sections of this JRMP and the monitoring program, to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required. The City of Murrieta will implement the revised JRMP and monitoring program in accordance with the approved schedule for implementation of any new/revised BMPs

3.7 Program Reporting, Evaluation, and Revision {K.3}

The City of Murrieta implements the following Annual Reporting, program evaluation, and program revision requirements described in the 2010 SMR MS4 Permit.

3.7.1 Annual Reporting {K.3.a.}

Each year the City of Murrieta prepares a JRMP Annual Report summarizing the implementation of the jurisdictional activities described in the JRMP during the reporting period for submittal to the Regional Board. Each Annual Report must verify and document compliance with the 2010 SMR MS4 Permit. The City of Murrieta retains records in accordance with the Standard Provisions in Attachment B of the 2010 SMR MS4 Permit, available for review, that document compliance with each requirement of the Permit. The City of Murrieta submits the Annual Report including documentation of implementation of the compliance programs utilizing standardized reporting forms. The reporting forms will be amended as needed to facilitate changes in compliance programs or more accurate reporting of compliance programs.

3.7.2 Program Effectiveness Assessment and Reporting {J.}

The City of Murrieta regularly assesses its compliance programs described in the JRMP to identify improvements that will promote the reduction of Pollutants in Runoff to the MEP while also supporting the responsible management and allocation of the public resources available for implementation.

The strategy for assessing the effectiveness of the JRMP is described in Appendix B.

3.7.3 JRMP Revisions {F.}

As part of the Annual Reporting process, the City of Murrieta will review the JRMP to identify the need, if any, for revisions. The City of Murrieta may propose revisions to the JRMP under the following conditions:

- Where needed improvements are identified based on staff experience in implementing the JRMP;
- Upon completion of newly developed program elements;
- In response to Effectiveness Assessments as described in section 3.7.2;
- In response to persistent Action Level exceedances.
- In response to the BMP strategy identified in the Watershed Workplan (see section 3.8)
- As directed by the Executive Officer to reflect regional and watershed-specific requirements and/or Waste Load Allocations (WLAs) developed and approved pursuant to the Total Maximum Daily Load (TMDL) process for Impaired Waterbodies.

- As directed by the Executive Officer where the JRMP must be revised in order to address exceedances of Receiving Water Limitations that have been determined to be contributed to or caused by Runoff.

3.8 Watershed Workplan {G}

The City of Murrieta participates in the development and updating of a Watershed Water Quality Workplan (Watershed Workplan) that is designed to identify, prioritize, address and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed.

This plan is available at: http://rcflood.org/NPDES/SantaMargaritaWS.aspx

4.0 Illicit Discharge Detection and Elimination (IDDE){F.4.}

The City of Murrieta implements the following program to actively detect and eliminate Illicit Discharges and disposal into the MS4, in accordance with Provision F.4. of the 2010 SMR MS4 Permit.

4.1 Overview

4.1.1 Prohibited Discharges

The City of Murrieta, through its legal Authority (Section 3.4), enforcement mechanisms (Section 3.5), and various other programs summarized in Section 4.2 below, effectively prohibits all types of Non-Stormwater discharges into its MS4 facilities unless such discharge is authorized by a separate NPDES permit or specifically allowed under the 2010 SMR MS4 Permit (summarized in Section 4.1.2 below).

4.1.2 Conditionally Allowed Non-Stormwater Discharges {B.2.}

The City of Murrieta is not required to prohibit the discharges categories identified below.

- Diverted stream flows;
- Rising ground waters;
- Uncontaminated groundwater infiltration (as defined in 40 CFR 35.2005 (20)) to MS4s
- Uncontaminated pumped groundwater[1];
- Foundation drains[2];
- Springs;
- Water from crawl space pumps[3];
- Footing drains[4];
- Air conditioning condensation;
- Flows from riparian habitats and wetlands;
- Water line flushing[5& 6]

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[1] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[2] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[3] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[4] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[5] This exemption does not include fire suppression sprinkler system maintenance and testing discharges. Those discharges may e regulated under Section B.3 of the 2010 SMR MS4 Permit

[6] Requires enrollment under Order R9-2002-0020.

- Discharges from potable water sources not subject to NPDES No. CAG679001, other than water main breaks;
- Individual residential car washing;
- Dechlorinated swimming pool discharges;[7] and
- Emergency fire fighting flows (i.e. flows necessary for the protection of life or property).[8]

4.2 IC/ID Prevention {F.4.}

The programs described in Sections 5 through 9 of this JRMP are designed to prevent IC/IDs from occurring. Additionally, Section 11 of this JRMP describes the public education efforts implemented to ensure that the public is informed of these requirements. Below are some highlights of specific elements of the City of Murrieta's programs that help prevent IC/IDs.

4.2.1 Legal Authority {F.4.a.(1)}

As described in Section 3.4, the City of Murrieta maintains a Stormwater and Urban Runoff Management and Discharge Controls ordinance prohibiting IC/IDs.

4.2.2 Connections to City of Murrieta MS4 Facilities

The City of Murrieta's Public Works Department requires all proposed or detected third party connections to its MS4 facilities to obtain an Encroachment Permit. Through this permit process, the City of Murrieta ensures that the connection is not designed to drain Illegal Discharges into the MS4.

4.2.3 Inspections {F.4.a.(2)}

The inspection programs implemented by the City of Murrieta described in Sections 5 through 9 of this JRMP provide an opportunity to identify Illicit Connections and for inspectors to work with the property owner to remedy problems that may potentially result in an Illegal Discharge. If routine inspections or Dry Weather monitoring indicate Illicit Connections or Illegal Discharges, they will be investigated and eliminated or permitted[9] as described in Sections 4.3 and 4.4.

4.2.4 Maintain MS4 Map {F.4.b.}

An updated map of MS4 facilities owned by the City of Murrieta is maintained and provided to the Regional Board in the Annual JRMP report. The map includes all segments of the MS4 owned, operated, and maintained by the Copermittee, as well as all known locations of inlets that discharge and/or collect Runoff into the MS4 facilities, all known locations of connections with other MS4s (e.g., Caltrans), and all known locations of all the outfalls that discharge Runoff to Receiving Waters from the City of Murrieta's MS4 facilities. The accuracy of the MS4 map has been confirmed during dry weather field screening and analytical monitoring and will be updated at least annually. The MS4 map including any GIS layers will be submitted annually with the updated JRMP. This map is useful in identifying and narrowing down potential source areas in response to an observed IC/ID or Action Level exceedance.

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[7] Excluding saline swimming pool discharges.

[8] Specifically excluding non-emergency fire fighting flows, i.e. flows from controlled or practice blazes and maintenance activities, and building fire suppression system maintenance discharges, i.e. sprinkler line flushing.

4.2.5 Outfall Monitoring {F.4.d.}

The City of Murrieta conducts dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 facilities within its jurisdiction to detect IC/IDs as described in Section 13.

4.2.6 Waste Collection Programs

4.2.6.1 Household Hazardous Waste (HHW) Collection and Anti-freeze, Batteries, Oil, and Latex Paint (ABOP) Collection Programs

Through the Implementation Agreement (see Section 3.2) the City of Murrieta participates in the HHW and ABOP collection programs in conjunction with the Riverside County Waste Management Department. Mobile HHW collection events are held at sites in the SMR and are scheduled periodically on weekends from 9:00 a.m. until 2:00 p.m.. Through the Implementation Agreement, the District, on behalf of the City of Murrieta, also supports one permanent ABOP collection site in the SMR, which is located at:

Murrieta Maintenance Yard / Riverside County Transportation Department
25315 Jefferson Avenue, Murrieta, 92562

The site is open Saturdays from 9:00 a.m. until 2:00 p.m. with the exception of holiday weekends. Mobile and permanent site locations may vary over time. Details, site locations, maps and schedules of operation for both the HHW and ABOP collection events are available on the DEH web site at http://www.rivcowm.org/opencms/hhw/pdf/HHWEventFlyerPDFs/91709-MASTERHHWSchedule.pdf or by calling 1-888-722-4234 or 951-358-5055.

Along with materials collected at HHW and ABOP sites, cathode ray tubes can be taken to County landfills for recycling. Used motor oil for recycling may be taken to drop off at certified collection centers throughout Riverside County in addition to the ABOP sites.

4.2.6.2 Conditionally Exempt Small Quantity Generator (CESQG)

The CESQG Program is a Hazardous Waste pick-up disposal service for eligible businesses/non-profit organizations in Riverside County. This program provides an affordable way to legally dispose of limited quantities of Hazardous Waste.

Businesses that generate 27 gallons or 220 pounds of Hazardous Waste or 2.2 pounds of extremely Hazardous Waste per month can participate in the CESQG program. Businesses are required to use a licensed hauler to manifest and transport their Hazardous Waste. The most common participants in the CESQG program are painters, print shops, auto shops, builders, churches, schools, non-profit groups and property managers. An appointment for pickup of Hazardous Waste or further information on the CESQG program can be obtained by calling 1-800-952-5566.

4.3 IC/ID Detection {F.4}

In the mid-1990s, the Riverside County Copermittees conducted reconnaissance surveys to identify IC/IDs to the MS4s. The reconnaissance surveys were limited to underground storm drains of 36-inch diameter or larger and open channels and utilized videotaping. Each undocumented connection to the MS4 was traced to its origin. Although 200 undocumented connections to the underground MS4 facilities

were found County-wide, none of the connections were determined to be Illicit Connections with regard to the MS4 NPDES program. As underground facilities are difficult to access and the Copermittees inspect the construction of new underground MS4 facilities to verify that no Illicit Connections are being made, it has been determined that additional inspections of the underground MS4 facilities are not warranted. However, the City of Murrieta conducts inspections of open channel MS4 facilities to identify Illicit Connections as an element of routine facility maintenance. Illicit Connections identified during these surveys are documented and removed where necessary in order to comply with the 2010 MS4 Permit.

Although the overall programs described in this JRMP are designed to help prevent IC/IDs into the MS4, the following summarizes the specific methods implemented by the City of Murrieta to detect and eliminate potential IC/IDs

4.3.1 MS4 Facility Inspections {F.4.e}

During the regular maintenance as described in Section 5.3herein, MS4 facilities are inspected to identify potential Illicit Connections, and evidence of any Illegal Discharges. This is the most direct method to detect IC/IDs. Appropriate field personnel are trained to identify potential IC/IDs during the course of their normal duties. The City of Murrieta staff is familiar with the existing MS4 and the drainage patterns within its jurisdiction and can take steps to identify the source of what appears to be an IC/ID.

4.3.2 Public IC/ID Reports / Hotline {F.4.c}

Predominantly, Illegal Discharges are reported by the public or by City of Murrieta field personnel. Third-party notifications are a direct source of IC/ID information. The public is encouraged to call the Police Department/Code Enforcement to report observed spills or Illegal Discharges.

Additionally, as described in Section 11, the Riverside County Copermittees maintain a Public Education and Outreach program that includes education regarding IC/IDs. Procedures to educate the public about Illegal Discharges and Pollution Prevention where problems are found are included in this program. The District operates, on behalf of the Copermittees, a centralized 24-hour hotline (1-800-506-2556) that may be used by the public to, among other things, report Illegal Discharges from urban areas into public streets, the MS4 and other water bodies. These calls can be received in English or Spanish and are routed to the appropriate City of Murrieta departments or contacts.

Upon receiving notification from staff or a third-party, the City of Murrieta staff follows the procedures identified in Section 4.4 below.

4.3.3 IC/ID: Construction Site Inspections {F.1.e.(6)(d)}

As described in Section 7 herein, the City of Murrieta implements programs to track and verify that Construction Sites are complying with their ordinances. As part of that program, the City of Murrieta supplements the Illicit Discharge Detection and Elimination (IDDE) program by assuring that appropriate BMPs are being implemented to prevent Illegal Discharges, and that no Illicit Connections occur during the installation phase of new MS4 facilities. Illegal Connections are prohibited by the City of Murrieta and are initially verified during the plan check process. The City of Murrieta verifies conformance with

the approved plans and conducts inspections at Construction Sites. A Stop Work Order is issued if an IC/ID is observed during an inspection, and where applicable City of Murrieta staff will follow the relevant procedures described below. The Stop Work Order will cease after the IC/ID has been removed or eliminated.

4.3.4 IC/ID: Industrial/Commercial Facility Inspections {F.3.b.(4)(vi)}

As described in Section 8, the City of Murrieta implements programs to track and verify that Industrial and Commercial Facilities are complying with the Stormwater Ordinance. At the time of writing the Compliance Assisted Program (CAP) assists the Copermittees IC/ID elimination efforts through the Stormwater Compliance Surveys completed by Department of Environmental Health and Hazardous Materials Management. These surveys list non-compliance issues that require additional attention, including IC/IDs, and the surveys are forwarded to the District. The District forwards the surveys to the City of Murrieta NPDES Coordinator for follow-up visits, if necessary. If IC/IDs are encountered however, the CAP inspector directly contacts the City of Murrieta, who will investigate as described below. However, the City is exploring opting out of the CAP program so the City can cover the 2010 MS4 Permit requirements in the same inspection.

4.3.5 Monitoring Activities {Attachment E, II.C.}

The City of Murrieta, in cooperation with the District, implements a Non-Stormwater Dry Weather Action Level (NAL) monitoring program at the Major Outfalls from its MS4 facilities. This monitoring program is intended, in part, to help identify MS4 Outfalls and sub-drainage areas within the City of Murrieta's jurisdiction that may have Illegal Discharges. The monitoring program is described in the CMP http://rcflood.org/NPDES/Monitoring.aspx. Where an Action Level exceedance is detected at a Major Outfall, the City of Murrieta, Public Works Department conducts source identification efforts as described in Section 4.4.2

4.3.6 Non-Jurisdictional IC/IDs

Where Non-Jurisdictional IC/IDs are identified within the City of Murrieta's jurisdiction, the responsible party is notified of the Regional Board requirements and the Executive Officer is notified of the Non-Jurisdictional IC/ID. The City of Murrieta also implements Wet and Dry Weather monitoring programs that may indicate the presence of IC/IDs as described in Section 13.

4.4 IC/ID Response and Reporting {F.4.}

The 2010 SMR MS4 Permit and the Clean Water Act requires the Copermittees to prohibit, consistent with the MEP standard, Illegal Discharges (including the discharge of spills, leaks, or dumping of any materials other than Stormwater and authorized Non-Stormwater) into the MS4.

The City of Murrieta implements the following procedures to investigate and inspect portions of its MS4 that, based on the results of field screening, analytical monitoring, or other appropriate information, indicate a reasonable potential of containing IC/IDs or other sources of Pollutants in Non-Stormwater.

After receiving a notification of a water pollution problem on the area-wide hotline, Code Enforcement Officer of the Code Enforcement Department investigates and notifies the appropriate NPDES Coordinator of the Public Works Department of the City of Murrieta if there is a problem.

4.4.1 Initial Response Timeframe and Requirements

Based on the information reported, the Code Enforcement will assess if the IC/ID is an Emergency Situation that poses an immediate threat to human health or the environment. Any sewage spill over 1,000 gallons or that could impact water contact recreation, any spill that could impact wildlife, any Hazardous Material spill where residents are evacuated, any spill of reportable quantities of Hazardous Waste (as defined by 40 CFR 117 and 40 CFR 302), or any other spill reportable to the California Emergency Management Agency (Cal-EMA, formerly known as the Office of Emergency Services or OES) is classified as a threat to human health or the environment..

a. If the discharge is a threat to human health or the environment:
    i. Such discharges must be reported immediately by phone to the Cal-EMA at 1-800-852-7550 and should also be reported to the Executive Officer of the Regional Board by telephone: 858-467-2952. If these reports to these agencies have already been submitted by other parties, this reporting need not be repeated by the City of Murrieta.
    ii. Investigation (if the source is not immediately known) and elimination activities (as described below) must occur immediately within 24 hours of being put on notice by staff or a third-party.

b. If there are obvious Illicit Discharges (i.e. color, odor, or significant exceedances of Action Levels (>10x the Action level) investigation as described below must occur within one business day.

c. If Field Screening Data collected as part of the NAL Monitoring program (as described in Section 4.0 of Volume III of the CMP and Section 13.2 of the JRMP) exceeds Action Levels, the City of Murrieta will either:
    i. Initiate an investigation (as described below) to identify the source of the discharge within two (2) business days of receiving the data, or
    ii. Document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation will be included in the JRMP Annual Report.

d. If Analytical Laboratory Results collected as part of the NAL Monitoring program (as described in Section 4.0 of Volume III of the CMP and Section 13.2 of the JRMP) exceeds Action Levels at a City of Murrieta outfall, the City of Murrieta will either:
    i. Initiate an investigation (as described below) to identify the source of the discharge within five (5) business days of receiving the data, or
    ii. Document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation will be included in the City of Murrieta's JRMP Annual Report.

e. Other reported potential Illicit Discharges that do not meet the criteria identified above will be responded to in a timely manner. Responses to such reports may be prioritized.

4.4.2 Investigation {F.4.e.}

The City of Murrieta takes action to eliminate all detected IC/IDs. The Department and/or Position Title conducts investigations based on the data or reports as described above. The following investigative steps will be taken by the City of Murrieta:

1. If there is no active discharge, standing water, or other evidence of recent discharges (stains) at the reported location, Outfall or NAL exceedance location, reconnaissance is complete at that location and observations are documented in the City of Murrieta's complaint database. If necessary the location may be marked for future additional follow-up.

2. If there are multiple active discharges at the reported location or outfall, staff will:
    a. Observe the flows for any odd odors or discoloration
    b. Take photographs of the discharge and the point of entry to MS4 (if known)
    c. Attempt to trace the flow/flows to its origin

3. If there is an active discharge or evidence of recent Dry Weather flow at the reported location or Outfall, staff will:
    a. Take photographs of the discharge and the point of entry to MS4 (if known)
    b. Attempt to trace the flow/flows to its origin
    c. Collect the following field parameters – pH, temperature, and specific conductivity.
    d. If the field parameters exceed follow-up criteria identified in the CMP, or if there is other visible evidence of an Illegal Discharge (e.g., stains), a continued investigation will be necessary, see Step 4.

4. Where the initial investigation identified in Step 3 indicated a potential Illegal Discharge, the City of Murrieta will perform a source investigation as follows:
    a. If active discharge with flow
        - Trace the source of the discharge as far upstream as possible.
        - Additional field measurements and/or lab analyses may be performed and documented (as outlined above) where there is no other evidence of the IC/ID source.
    b. If no active discharge but evidence of a recent IC/ID is present at time of investigation, trace the source of the discharge as far upstream as possible.

4.4.3 Elimination {F.4.f}

1. If the source is not identified
    a. Attempt to narrow down potential source areas, and make note in the investigation file.
    b. Where appropriate, public education material in area of IC/ID or complaint may be provided.
    c. Location is marked for future follow-up where appropriate. Follow-up visit(s) will confirm if the IC/ID has recurred and an attempt will be made to locate source. If the IC/ID has not recurred or has been eliminated it is noted and complaint/investigation is closed.
    d. If the investigation was initiated in response to an Action Level exceedance:
        i. Additional NAL sampling will occur at the Outfall in subsequent years.

ii. If the results of the additional sampling indicate recurring exceedances of the same NAL(s) with an unidentified source, then the City of Murrieta will provide an evaluation in the JRMP Annual Report of needed changes to the programs described in this JRMP to address the common contributing sources that may be causing such an exceedance. Applicable updates will be made to the Watershed Water Quality Workplan (G. of the 2010 SMR MS4 Permit), Retrofitting Existing Development (F.3.d. of the 2010 SMR MS4 Permit) and Program Effectiveness Assessment and Reporting (J. 2010 SMR MS4 Permit) work plans.

2. If the source is identified, and if:
   a. The source is natural (non-anthropogenically influenced) in origin and in conveyance into the MS4 then the City of Murrieta need not prohibit the discharge;
      i. The City of Murrieta will report its findings and documentation of its source investigation to the Regional Board in the JRMP Annual Report covering the period in which the findings were made.
   b. If the source of the exceedance is an exempted category of Non-Stormwater discharge as described in Section 4.1.2, then the City of Murrieta, Public Works Department will determine if this is an isolated circumstance or if the problem is recurrent to the point that the category of discharges must be addressed through the prohibition of that category of discharge as an Illicit Discharge.
      i. The City of Murrieta will submit its findings including a description of the steps taken to address the discharge and the category of discharge, to the Regional Board for review in the applicable JRMP Annual Report covering the period in which the findings were made. Such description will include relevant updates to existing ordinances or new ordinances, orders, or other legal means of addressing the category of discharge, and the anticipated schedule for doing so. The City of Murrieta must also submit a summary of its findings with the Report of Waste Discharge.
   c. The source is in the jurisdiction of another Copermittee, the appropriate Copermittee is notified, and further action is performed by that Copermittee.
   d. The source is a discharge separately permitted by the Regional Board and/or the State Board that is in violation or potential violation of that permit, then:
      i. If applicable, a copy of the regulatory permit City of Murrieta Department authorizing the discharge will be obtained.
      ii. The Copermittee must report, within three business days, the findings to the San Diego Water Board including all pertinent information regarding the discharger and discharge characteristics.
      iii. The findings of the investigation will be noted in the file and the case will be closed.
      iv. If a permitted discharge is perceived to be a threat to human health or the environment will be reported to the Regional Board/Cal-EPA.
   e. The source is an Illegal Discharge within the jurisdiction of the City of Murrieta:
      i. The source is provided with educational material about IC/IDs, and an attempt is made to have the source resolve the situation immediately.

ii. Where appropriate, Code Enforcement staff will implement enforcement procedures consistent with Section 3.5 of this JRMP.
iii. Follow-up as appropriate to ensure that the IC/ID is eliminated.
iv. Report the findings, including any enforcement action(s) taken, and documentation of the source investigation to the San Diego Water Board in the Annual Report.
v. If the City of Murrieta is unable to eliminate the source of discharge prior to the Annual Report submittal, then the Copermittee must submit, as part of its JRMP Annual Report, its plan and timeframe to eliminate the source of the exceedance.
vi. Those dischargers seeking to continue such a discharge must obtain coverage under a separate NPDES permit prior to continuing any such discharge.

f. The source is part of a HazMat incident, it is reported to the Incident Commander upon arrival. Coordination with the HazMat team takes place and samples are only collected with approval of the Incident Commander as samples may be done in conjunction with future legal action. Under no circumstances is a site entered or field measurements collected if conditions are unsafe.

4.4.4 Clean-up

The City of Murrieta ensures that any Illegal Discharge is cleaned up where necessary and that no further environmental degradation occurs and the responsible party restore the area back to its original state to the MEP.

4.4.5 Sanitary Wastes {F.4.h}

The City of Murrieta implements programs to manage discharges of sewage into its MS4 facilities from various sources including Sanitary Sewer Overflows and private laterals, failing septic systems, and portable toilets.

4.4.5.1 Sanitary Sewer Overflows and Private Laterals

The City of Murrieta cooperates and coordinates with the local sanitation districts as described in Appendix C to swiftly respond to and contain sewage spills that may discharge into its MS4 facilities.

As part of those efforts, the City of Murrieta allows local sanitation districts immediate 24-hour access to its MS4 facilities to address and contain sewage spills. The City of Murrieta also works cooperatively with the local sanitation districts to determine and control the impact of infiltration from leaking sanitary sewer systems on Runoff quality.

4.4.5.2 Failing Septic Systems

The City of Murrieta, in conjunction with the County Department of Environmental Health (DEH), implements preventative and management measures for septic systems within their jurisdiction, as applicable, including:

- Inventory: The City of Murrieta and / or Building Department maintains an inventory of septic systems within its jurisdiction, with updates of new septic systems approved since 2008 available from the DEH;

- Ordinance: The City of Murrieta follows the Riverside County ordinance that regulates discharges from failing septic systems.
- Enforcement: Enforcement against failing septic systems is performed by Riverside County Department of Environment Health. And as necessary, in accordance with the enforcement procedures referenced in Section 3.5 of this JRMP.

4.4.5.3 Portable Sanitary Services (Portable Toilets)

Further, the Copermittees have added the base of operations for portable toilet suppliers to their Industrial/Commercial Facility inspection lists and prioritized them according to their threat to water quality. The City of Murrieta implements management measures for portable toilet use within their jurisdiction, including:

- Ordinance: The City of Murrieta follows the Riverside County ordinance that regulates portable toilets (Ordinance Number;
- Enforcement: Enforcement against ordinance violations by improper use or deployment of Portable Toilets is performed by Code Enforcement as necessary, in accordance with the enforcement procedures referenced in Section 3.5 of this JRMP; and

5.0 MUNICIPAL AREAS AND ACTIVITIES {F.3.A}

The City of Murrieta implements the following Municipal program to meet the requirements of provision F.3.a of the 2010 SMR MS4 Permit, prevent Illicit Discharges into the MS4, reduce municipal discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent municipal discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

5.1 Planning City of Murrieta Facilities {F.1}

The City of Murrieta implements the applicable processes and procedures described in Section 6 of this JRMP in the planning and design of City of Murrieta projects. This includes, where applicable, the development of a Project-Specific WQMP. Depending on the type of project, the following procedures are implemented by the City of Murrieta to ensure that the planning and design of its public agency Priority Development Projects comply with the requirements of the 2010 SMR MS4 Permit:

All City of Murrieta projects will complete a "WQMP Applicability Checklist" (Found in the SMR WQMP) to determine if a WQMP is required.

5.1.1 Public Works Priority Development Projects {F.1.d}

- If the project meets the definition of Priority Development Project as discussed in Section 6.6.3, a Project-Specific WQMP will be prepared consistent with the requirements of the SMR WQMP;
- The Preliminary Project-Specific WQMP, whether developed in-house or by a contractor, will be forwarded to the Public Works Department for a thorough review of all items required in the SMR WQMP. The reviewer will use the City of Murrieta "WQMP Review checklist" to determine if the Project-Specific WQMP is complete. The Public Works Department will approve the final Project-Specific WQMP.
- Prior to initiating grading or construction activities, the City of Murrieta, Public Works Department will ensure that the construction plans for its Priority Development Projects incorporate the BMPs described in the approved final Project-Specific WQMP. Appendix B includes the Position/Title of the reviewers under the respective departments responsible for implementing these reviews and approvals.
- The O&M Plan described in the Project-Specific WQMP will be integrated into the FPPP (see Section 5.3.4.1).

5.1.2 Public Works Transportation Projects {F.1.i}

The Public Works Department will required a Project-Specific WQMP as described in Section 5.1.1 above for City of Murrieta Transportation Projects that qualify as a Priority Development Project, or design the project to comply with the Transportation Project Guidance is included as Exhibit D to the SMR WQMP.

5.1.3 Public Works Unpaved Roads {F.1.i.}

Public Works projects that construct Unpaved Roads must follow the BMP guidance described in Section 6.6.7 of this JRMP.

5.1.4 Design of Flood Control Projects {F.3.a.(4)(a)}

During the design of flood control projects, the City of Murrieta Public Works Department assesses the potential impacts of the project on Receiving Water quality. As they are not Development Projects intended for human use or occupation, typically no additional Runoff or Pollutants will be expected to be discharged into Receiving Waters as a result of the construction of flood control projects.

5.1.5 Other Public Works Projects

Other Public Works Projects will comply with Section 6.6.6.

5.2 City of Murrieta Construction Activities {F.2.}

The City of Murrieta implements the applicable requirements of Section 7 of this JRMP in the construction of City of Murrieta projects. This includes, where applicable, compliance with the latest version of the Construction General Permit. As described in Section 5.1 above, the City of Murrieta prepares a WQMP for all applicable Public Works Priority Development Projects, which also meets the post-construction requirements in the Construction General Stormwater Permit.

City of Murrieta construction projects one acre or larger or which are part of a construction project one acre or larger must comply with the Construction General Stormwater Permit. Prior to commencement of construction activities, the City of Murrieta Public Works department files Permit Registration Documents by using the State Board's Storm Water Multiple Application and Report Tracking System (SMARTS) and submitting a Notice of Intent (NOI) fee. Upon completion of the construction project, the City of Murrieta files a Notice of Termination (NOT) and other project close-out documentation via the State Board SMARTS. The SMARTS can be accessed at:

https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

During construction closeout the City of Murrieta will assure satisfactory completion of the requirements in a project-specific WQMP by:

- Verifying that Structural Stormwater BMPs have been constructed and installed in conformance with approved plans and specifications;
- Assuming responsibility for the long-term funding and implementation, operation, maintenance, repair, and/or replacement of BMPs;
- Confirming that procedures are in place to implement all Non-Structural BMPs;
- Verifying that public agency Industrial Facilities that are subject to California's General Permit for Stormwater Discharges Associated with Industrial Activities as defined by Standard Industrial Classification (SIC) code obtain coverage and provide a copy of the NOI submitted to the State Board and/or a copy of the notification of the issuance of a Waste Discharge Identification (WDID) Number.

Where applicable, the operation and maintenance procedures for the Treatment Control BMPs included in the project-specific WQMP will be incorporated into a municipal Facility Pollution Prevention Plan (FPPP), as described in Section 5.3.4.1. For City of Murrieta projects, upon completion of construction when contract close-out occurs the responsibility for implementation, operation, and maintenance of

BMPs will transfer from the contractor to the appropriate department and become part of the City of Murrieta's program for operation and maintenance of City of Murrieta's facilities, described in Section 5.3 below.

5.3 Operation and Maintenance of City of Murrieta Areas and Activities {F.3.a.}

The City of Murrieta implements the following measures to ensure that their Municipal Areas and Activities meet the requirements of Section F.3a. of the 2010 SMR MS4 Permit, reduce City of Murrieta discharges of Stormwater Pollutants from its MS4 facilities to the MEP, and prevents discharges from its MS4 facilities from causing or contributing to a violation of Water Quality Standards. This section describes the program implemented by the City of Murrieta for the operation, maintenance and inspection of their Municipal Areas and Activities.

5.3.1 Source Identification / Inventory {F.3.a.(1)}

The City of Murrieta maintains an inventory of its Municipal Areas and Activities that have the potential to generate Pollutants. This inventory is maintained by the Public Works Department and a copy is included with each JRMP Annual Report to the Regional Board. Linear facilities, such as roads, streets and highways, do not need to be individually inventoried. The City of Murrieta's MS4 Facilities are shown on an MS4 map which is updated and provided in each Annual Report.

This inventory includes the name, address (if applicable), and a description of the area/activity; which Pollutants are potentially generated by the area/activity; whether the area/activity is adjacent to an Environmentally Sensitive Area (ESA); and identification of whether the area/activity is tributary to and within the same hydrologic subarea as a CWA Section 303(d) water body segment and generates Pollutants for which the water body segment is Impaired.

5.3.2 Typical Minimum BMPs {F.3.a.(2)(b)

Based on the areas and activities inventoried and the Pollutants of Concern identified, a list of potential minimum Source Control / Pollution Prevention BMPs was developed and appropriate minimum BMPs applicable to specific facilities or activities are identified per 5.3.3. and 5.3.4. below. The BMPs listed are both effective and widely accepted. The City of Murrieta staff consults other sources of BMP information and considers implementation of additional methods and measures as appropriate. Appropriate BMPs for each Municipal Area are incorporated into the FPPPs, as applicable. In addition, minimum BMPs for the City of Murrieta's mobile activities are also incorporated into the FPPPs for the Municipal Facilities that serve as the base of operation for these activities.

5.3.3 BMPs for City of Murrieta Activities

The Municipal Activities conducted by the City of Murrieta include:

- Fertilizer application;
- Pesticide and/or herbicide application;
- Graffiti removal;

- Power washing;
- Landscape maintenance;
- Swimming pool maintenance;
- Operation of corporation yards (vehicle and equipment maintenance, storage, etc.);
- Pavement sawing;
- Road, sidewalk, and parking lot maintenance;
- Painting;
- Vehicle and equipment fueling;
- Vehicle and equipment cleaning;
- Vehicle and equipment repair;
- Outdoor loading/unloading of materials;
- Outdoor liquid container storage;
- Outdoor storage of raw materials;
- Waste handling and disposal;
- Building and grounds maintenance;
- Grading;
- Construction;

Where the above listed activities take place at an inventoried Municipal Facility, the FPPP applicable to that facility will described the specific BMPs deployed. Also, mobile activities based out of the Municipal Facility and the BMPs that are used in performing those mobile activities are also described in the FPPP.

5.3.3.1 Special Event BMPs {F.3.a.(2)(c)}

The City of Murrieta also designates BMPs for special events that the City of Murrieta holds that are expected to generate significant trash and litter. Controls considered, as applicable to each event, include:

- Temporary screens on catch basins and storm drain inlets;
- Temporary fencing to prevent windblown trash from entering adjacent water bodies and MS4 channels;
- Proper management of trash and litter;
- Catch basin cleaning following the special event and prior to an anticipated rain event;
- Street sweeping of roads, streets, highways and parking facilities following the special event; and
- Other equivalent controls.

5.3.3.2 Fire BMPs {B.3.a.}

In coordination with the Riverside County Fire Agencies, the Riverside County Permittees developed a list of appropriate BMPs to be implemented to reduce Pollutants from fire training activities, fire hydrant testing or flushing and BMPs feasible for emergency fire fighting flows. These BMPs and the strategy for providing training and updating the list of BMPs are described in Appendix C.

5.3.4 BMPs for City of Murrieta Areas

5.3.4.1 Facility Pollution Prevention Plans (FPPP) {F.3.a.(2)}

An FPPP is maintained for that covers each Municipal Facility. Each FPPP is designed to identify the minimum Pollution Prevention Methods and BMPs applicable to each Facility and the mobile activities based out of each Facility. The FPPP is typically maintained onsite at each individual facility, however, for facilities (e.g., parks, trails) that do not maintain onsite staff, maintenance equipment or materials, a copy of the FPPP for the applicable category of Municipal Activity is maintained at the centralized maintenance facility (e.g., corporate yard) corresponding to the operations category or where the maintenance contracts are administered (i.e., City of Murrieta main office). The inventory of Municipal Facilities identifies the location of the FPPP for each facility, and staff responsible for implementation and update of the FPPP. Each FPPP also includes a Facility Inspection Form that is used to record inspection findings.

For any City of Murrieta facilities that are tributary to and within the same hydrologic unit as a 303(d) listed waterbody and/or within, adjacent to, or discharging directly to an ESA, the FPPP includes any enhanced measures deemed necessary to mitigate Pollutants shown to be generated by the site, for which the water body segment is Impaired. As TMDLs are developed and/or action level exceedances are detected, the BMPs implemented at these facilities may be revisited to ensure that all appropriate enhanced measures deemed necessary by the Copermittee are implemented.

For other City of Murrieta owned areas that do not have an FPPP (such as vacant land), appropriate BMPs including those identified in the remaining Subsections of 5.3.4. are implemented on an as-needed basis as problems are identified.

5.3.4.2 BMP Implementation for Management of Pesticides, Herbicides, and Fertilizers {F.3.a.(3)}

The City of Murrieta implements BMPs to reduce the contribution of Stormwater Pollutants to the MEP associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from its municipal areas and activities to MS4 facilities and Receiving Waters. Such BMPs are described in the FPPP applicable to the facility and generally include:

(a) Educational activities, permits, certifications and other measures for municipal applicators and distributors;

(b) Integrated Pest Management (IPM.) measures that rely on non-chemical solutions where possible;

(c) The use of native vegetation where consistent with the facility's intended use and landscaping plan;

(d) Schedules for irrigation and chemical application such that they are not applied in advance of anticipated rain events or during rain events ; and

(e) The collection and proper disposal of unused pesticides, herbicides, and fertilizers.

5.3.4.3 BMP Implementation for Flood Control Structures {F.3.a.(4)}

(a) The City of Murrieta implements procedures to assure that new flood management projects assess the impacts on the water quality of Receiving Waters. See Section 5.1.4.

(b) The City of Murrieta includes water quality protection measures, where feasible, when retrofitting existing flood control structural devices.

(c) The City of Murrieta evaluates its existing flood control structures as part of ongoing routine maintenance. For any structures that are found to be causing or contributing to a condition of Pollution, the City of Murrieta implements measures to reduce or eliminate the structure's effect on Pollution, and evaluates the feasibility of retrofitting the structural flood control device. The inventory and evaluation is completed by and submitted to the Regional Board in each JRMP Annual Report.

5.3.4.4 BMP Implementation for Sweeping of Municipal Areas {F.3.a.(5)}

Where municipal area sweeping is implemented as a BMP for City of Murrieta owned and maintained roads, streets, highways, and parking facilities, the City of Murrieta designs and implements the program based on the following criteria:

(a) Roads, streets, highways, and parking facilities identified as consistently generating the highest volumes of trash and/or debris must be swept at least two times per month.

(b) Roads, streets, highways, and parking facilities identified as consistently generating moderate volumes of trash and/or debris are swept at least monthly.

(c) Roads, streets, highways, and parking facilities identified as generating low volumes of trash and/or debris must be swept as necessary, but no less than annually.

5.3.4.5 Copermittee Maintained Unpaved Roads Maintenance {F.3.a.(10)}

(a) The City of Murrieta implements or requires implementation of BMPs for Erosion and sediment control measures, and to minimize potential impacts on streams and wetlands during their maintenance activities on City of Murrieta maintained unpaved roads, particularly in or adjacent to Receiving Waters. Such BMPs may include, as applicable to the maintenance activity:

- minimize soil disturbance
- Minimize maintenance during the rainy season
- Compact lose sediment

- Hauls lose sediment away if it cannot be compacted
- Minimize concentration of flows
- Temporary diversion of run-on flow

(b) The City of Murrieta maintains as necessary its unpaved roads adjacent to streams and riparian habitat to reduce Erosion and sediment transport.

(c) Re-grading of unpaved roads during maintenance is sloped outward where consistent with road engineering safety standards or alternative equally effective BMPs are implemented to minimize Erosion and Sedimentation from unpaved roads; and

(d) Through maintenance of unpaved roads, the City of Murrieta examines the feasibility of replacing existing culverts or design of new culverts or bridge crossings to reduce Erosion and maintain natural stream geomorphology.

5.3.5 Operation and Maintenance of MS4 Facilities and Treatment Controls {F.3.a.(6)}

The City of Murrieta's open channels, catch basins, storm drain inlets, and retention/detention basins are inspected, cleaned, and maintained as described below. Wastes and materials removed are disposed of per applicable laws and appropriate BMPs are deployed as necessary to minimize impacts to the Receiving Waters to the MEP. During the annual inspection and maintenance of MS4 facilities, the City of Murrieta inspects for visual evidence of Illegal Discharges, litter and/or debris accumulation, and other maintenance issues.

(a) Treatment Controls: The City of Murrieta Public Works Maintenance department implements a schedule of inspection and maintenance activities to verify proper operation of all its municipal Structural Treatment Controls BMPs designed to reduce Stormwater Pollutant discharges to or from its MS4 facilities.

For Structural Treatment Control BMPs integrated into a City of Murrieta owned Municipal Facility, the BMPs are integrated and identified within the applicable FPPP (see Section 5.3.4.1), and are inspected as described in Section 5.4 below:

(b) MS4 Facilities: The City of Murrieta implements a schedule of maintenance activities for its MS4 facilities (including but not limited to catch basins, storm drain inlets, detention basins, etc). The maintenance activities include:

i. Inspection and removal of accumulated Waste at least annually between May 1st and September 30th of each year for all MS4 facilities;

ii. Additional facility cleaning as necessary between October 1st and April 30th of each year;

iii. Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year;

iv. Open channels and basins are cleaned of observed anthropogenic litter in a timely manner;

v. Maintenance activities within open channels must not adversely impact Beneficial Uses;

vi. Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed;

vii. Proper disposal of Waste removed pursuant to applicable laws; and

viii. Measures to eliminate Waste discharges during MS4 maintenance and cleaning activities.

(c) Low Priority MS4 Facilities: Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year. MS4 facilities that have met these criteria and will be inspected every other year are identified below

- 'None identified at this time

5.3.5.1 Flood Control Structure Evaluations {F.3.a.(4)(c)}

The City of Murrieta's Public Works Department evaluates its existing flood control structures as part of the ongoing routine maintenance described above, to identify structures that are causing or contributing to a condition of Pollution. For any such structures, where feasible the City implements measures to reduce or eliminate the structure's effect on Pollution, and evaluates the feasibility of retrofitting the structural flood control device. The inventory and evaluation findings are submitted to the San Diego Regional Board in each JRMP Annual Report.

5.3.5.2 Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance {F.3.a.(7)}

The City of Murrieta does not own nor operate a municipal sanitary sewer system, however the City of Murrieta does cooperate with Eastern Municipal, Rancho California, Western Municipal, and Elsinore Valley water districts for responding to and addressing any observed infiltration into the City of Murrieta 's MS4 facilities. In addition, the City of Murrieta implements the following controls to limit infiltration of seepage from sanitary sewers to MS4 facilities where necessary:

i. Adequate plan checking for Construction and Development Projects;

ii. Incident response training for its employees that may identify sanitary sewer spills;

iii. Code enforcement inspections;

iv. MS4 maintenance and inspections;

v. Interagency coordination with sewer agencies; and

vi. Proper education of its staff and contractors conducting field operations on the MS4.

5.4 Inspection of Copermittee Areas and Activities {F.3.A.(8)}

The City of Murrieta inspects the following high priority Copermittee Areas and Activities annually:

i. Roads, streets, highways, and parking facilities

ii. Flood management projects and flood control devices not otherwise inspected per Section F.3.a.(6)(b) of the 2010 SMR MS4 Permit

iii. Areas and activities tributary to and within the same hydrologic subarea as a CWA Section 303(d) Impaired water body segment, where an area or activity generates Pollutants for which the water body segment is Impaired

iv. Areas and activities within or adjacent to or discharging directly to Receiving Waters within ESAs

v. Municipal Facilities:

[a] Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles;
[b] City Hall;
[c] Library;
[d] Senior Center;
[e] Police Station;
[f] Fire Stations; and
[g] Household hazardous waste collection facility

vi. Parks and recreation facilities

vii. Special event venues following special events (festivals, sporting events, etc.)

viii. Power washing activities

ix. All City of Murrieta WQMP projects with Structural post-construction BMPs, including verification that the Structural post-construction BMPs on those projects have been appropriately maintained consistent with the WQMP and/or the FPPP. {F.1.f.(2)(b)(iii)}

x. Other municipal areas and activities that the City of Murrieta determines may contribute a significant Pollutant load to the MS4

(a) Inspections of the City of Murrieta's MS4 facilities are performed concurrently with the maintenance schedule described in Section 5.3.5 above.

(b) Other Municipal Areas and Activities are inspected as needed and in response to water quality data, valid public complaints, and findings from City of Murrieta or contract staff.

(c) Based upon site inspection findings, the City of Murrieta implements all follow-up actions necessary to comply with this Order.

5.5 Enforcement of Municipal Areas and Activities {F.3.a.(9)}

The City of Murrieta enforces its Stormwater Ordinance(s) for all its Municipal Areas and Activities as necessary to maintain compliance with the 2010 SMR MS4 Permit.

6.0 DEVELOPMENT PLANNING {F.1.}

The City of Murrieta implements the following programs related to the planning and permitting of Development Projects[11] within the City's jurisdiction. This program is designed to:

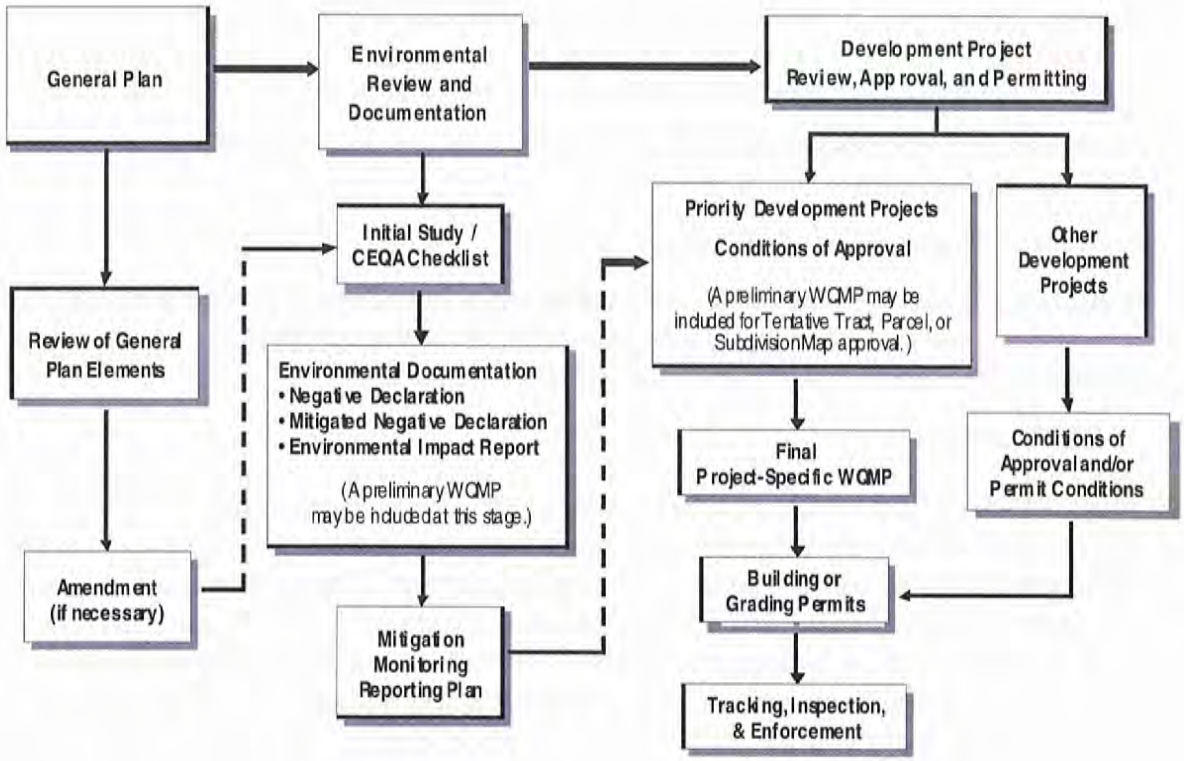
- Reduce Development Project discharges of Stormwater Pollutants to the MS4 to the MEP;
- Prevent Development Project discharges to the MS4 from causing or contributing to a violation of Water Quality Standards;
- Prevent Illicit Discharges into the MS4; and
- Manage increases in Runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt Pollutant generation, or other impacts to Beneficial Uses and stream habitat due to increased erosive force.

6.1 INTRODUCTION

This program element links the City of Murrieta General Plan, the environmental review process, and the development approval and permitting processes to the later phases of detailed design, construction and operation. A General Plan specifies policies that guide development. The environmental review process examines potential impacts from proposed development with respect to the General Plan policies and many environmental issues, including water quality, and includes consideration of mitigation measures to reduce any identified significant impacts. The development approval and permitting processes carries forth project-specific requirements in the form of conditions of approval, design specifications, tracking, inspection, and enforcement actions. Figure 6-1 is a generalized flow diagram that depicts the relationship of the General Plan, environmental review process and development planning and permit process, as well as the project design, construction, and operation phases.

[11] Construction, rehabilitation, redevelopment, or reconstruction of any public or private residential project, industrial, commercial, or any other projects.

Figure 6-1. Relationship between General Plan, Environmental Review Process and Development Approval & Permitting Process



6.2 GENERAL PLAN {F.1.a.}

The City of Murrieta has reviewed its General Plan to ensure that it includes water quality and watershed protection principles and policies as appropriate to allow the City of Murrieta to direct land-use decisions and to require implementation of consistent water quality protection measures for all Development, Redevelopment, and Retrofit projects.

The General Plan allows the City of Murrieta to implement the Water Quality & Watershed Protection Principles & Policies described below. The specific requirements for Development, Redevelopment and Retrofit projects are implemented through the programs described in Sections 6.3 through 6.9.

- Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of Development and Redevelopment and, where feasible, slow Runoff and maximize on-site infiltration of Runoff.

- Implement Pollution Prevention methods supplemented by Pollutant Source Control and Treatment Control BMPs. Use small collection strategies located at, or as close as

possible to, the source (i.e., the point where water initially meets the ground) to minimize the transport of Runoff and Pollutants offsite and into an MS4.

- Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones; and encourage land acquisition of such areas.

- Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.

- Prior to making land use decisions, utilize methods available to estimate increases in Pollutant loads and flows resulting from projected future development; require incorporation of BMPs to mitigate the projected increases in Pollutant loads and flows.

- Avoid development of areas that are particularly susceptible to Erosion and sediment loss; or establish development guidance that identifies these areas and protects them from Erosion and sediment loss.

- Reduce Pollutants associated with vehicles and increasing traffic resulting from development.

- Post-development Runoff from a site must not contain Pollutant loads that cause or contribute to an exceedance of Receiving Water Quality Objectives and which have not been reduced to the MEP.

Some of the preceding concepts are addressed as part of the WQMP process or through the conditioning of a project in the development review process, rather than as explicit elements of the General Plan.

Further, the City of Murrieta has incorporated the Multi Species Habitat Conservation Plan (MSHCP) into their General Plan. As of June 2012, approximately 136 square miles, or 25% of the Santa Margarita Region, has been successfully conserved as part of the Copermittees implementation of the MSHCP, including significant lands adjacent to or encompassing Receiving Waters, and addresses many of the water quality and watershed protection concepts identified in the 2010 SMR MS4 Permit. Additionally, through the continued implementation of the MSHCP, much of the remaining non-urbanized area will ultimately be conserved, totaling approximately 43% of the Santa Margarita Region. The MSHCP also finds that the Copermittees' General Plans, zoning ordinances, and policies include measures capable of implementing the following planning concepts, which are consistent with the 2010 SMR MS4 Permit considerations such as:

- Measures to ensure that the quality and quantity of Runoff discharged to MSHCP conservation areas is not altered in any adverse way when compared to existing drainage conditions;
- Measures to avoid discharge of untreated surface Runoff from developed and paved areas into MSHCP conservation areas; and
- Measures to require MS4s to be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within MSHCP conservation areas.

6.3 ENVIRONMENTAL REVIEW PROCESS {F.1.b.}

The City of Murrieta prescribes the necessary requirements so that proposed Development Project discharges of Stormwater Pollutants from its MS4 facilities will be reduced to the MEP, and will comply with City ordinances, permits, plans, and requirements, and with the 2010 SMR MS4 Permit.

In addition, the City of Murrieta has reviewed its CEQA processes to ensure that Runoff management is properly considered and addressed. When acting as CEQA Lead Agency for a proposed Development Project at the earliest possible time in the process, the City of Murrieta identifies the resources under the jurisdiction of the Regional Board which may be affected by the project, including the potential need for a CWA §401 water quality certification, NPDES permit, or Waste Discharge Requirements. The City of Murrieta coordinates project review with Regional Board staff pursuant to the requirements of CEQA. Upon request by Regional Board staff, this coordination may include the timely provision of the proposed project applicant's identity and contact information for facilitation of consultation meetings.

6.3.1 Project Application Form

A Project Application Form is used by the City of Murrieta requiring the applicant to describe or include the following information in the project application:

- WQMP Applicability Checklist;
- Submittal of preliminary Project-Specific WQMP, if applicable; and
- Where a Project-Specific WQMP is not applicable, descriptions of how the proposed project will incorporate the measures described in Section 6.6.6. {F.1.c.}

The City of Murrieta Project Application Form is included in Appendix D, "Application for Land Use and Development"

6.3.2 LID Barriers Review {F.1.d.(4)(a)}

The City of MurrietaPublic Works Department has reviewed its local codes, policies and ordinances and identified the potential barriers to the implementation of LID BMPs in Table 6-1. This table also identifies the steps required to remove those barriers, where feasible, by the end of the 2010 SMR MS4 Permit term (i.e., by November 10, 2015):

Table 6-1 Potential barriers to LID BMPs

Reference	LID BMP	Potential Barriers identified	Steps required to remove barriers
F.1.c.(2)(a)	Conserve natural areas, including existing trees, other native vegetation, and soils	None – projects must comply with the 2010 MS4 Permit	None

Reference	LID BMP	Potential Barriers identified	Steps required to remove barriers
F.1.c.(2)(b)	Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised	None – projects must comply with the 2010 MS4 Permit	None
F.1.c.(2)(c)	Minimize the impervious footprint of the project	None – projects must comply with the 2010 MS4 Permit	None
F.1.c.(2)(d)	Minimize soil compaction to landscaped areas	None – projects must comply with the 2010 MS4 Permit	None
F.1.c.(2)(e)	Minimize disturbances to natural drainages	None – projects must comply with the 2010 MS4 Permit	None
F.1.c.(2)(f)	Disconnect impervious surfaces through distributed pervious areas	None – projects must comply with the 2010 MS4 Permit	None
F.1.d.(4)(b)(i)	Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and Ephemeral and Intermittent streams)	None – projects must comply with the 2010 MS4 Permit	None
F.1.d.(4)(b)(ii)	Construct pervious areas to effectively receive and infiltrate, retain and/or treat Runoff from impervious areas, and to minimize soil compaction in these areas	None – projects must comply with the 2010 MS4 Permit	None

Reference	LID BMP	Potential Barriers identified	Steps required to remove barriers
F.1.d.(4)(b)(iii)	Construct low-traffic areas with permeable surfaces, where appropriate soil conditions exist	None – projects must comply with the 2010 MS4 Permit	None
F.1.d.(4)(c)(i)	Structural Infiltration BMPs	None – projects must comply with the 2010 MS4 Permit	None
F.1.d.(4)(c)(i)	Structural Harvest and Use BMPs	None – projects must comply with the 2010 MS4 Permit	None
F.1.d.(4)(c)(ii)	Structural Bioretention BMPs	None – projects must comply with the 2010 MS4 Permit	None
F.1.d.(4)(c)(ii)	Other structural LID BMPs (such as vegetated extended detention basins)	None – projects must comply with the 2010 MS4 Permit	None

The City of Murrieta will update the above table as necessary through the implementation of their development planning activities, whether through identification of additional barriers, or as any identified barriers are removed. Any changes to the above table will be conducted and reported in the City of Murrieta's JRMP Annual Report.

6.4 WATER QUALITY MANAGEMENT PLAN {F.1.d}

The City of Murrieta, in collaboration with the other SMR Copermittees, has developed a WQMP for the Santa Margarita Region of Riverside County, which describes the process for application of required LID Principles (Site Design), Source Control BMPs, LID BMPs, and Treatment Control BMPs, on Priority Development Projects to ensure that the land use approval and permitting process will:

- Reduce Priority Development Project discharges of Stormwater Pollutants from the MS4 to the MEP, and
- Prevent Priority Development Project Runoff discharges to the MS4 from causing or contributing to a violation of Water Quality Standards.

The SMR WQMP and a Project-Specific WQMP are provided on the following website at: http://www.murrieta.org/cityhall/pwe/water.asp

6.5 Hydromodification Management Plan {F.1.h.}

An updated Hydromodification Management Plan (HMP) is being developed by the Copermittees to manage increases in Runoff discharge rates and duration from Priority Development Projects. The objectives of the HMP are:

- Estimated proposed project Runoff discharge rates and durations do not exceed the pre-project discharge rates and durations.
- For proposed projects on an already developed site, the estimated proposed project Runoff discharge rates and durations do not exceed the pre-project discharge rates and durations, where the pre-project discharge rates and durations are that of the pre-development, naturally occurring condition.

Upon completion of the HMP in 2013, the HMP will be incorporated into the SMR WQMP. Until that HMP is developed and approved by the Regional Board, the interim Hydromodification requirements described in the SMR WQMP are in effect.

6.6 Development Project Review, Approval, and Permitting {F.1.D.}

6.6.1 Process Overview

The City of Murrieta, during the planning process, and prior to project approval and issuance of local permits, prescribes the necessary requirements so that Development Project discharges of Stormwater Pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of Water Quality Standards, and will comply with City ordinances, permits, plans, and requirements, and with the 2010 SMR MS4 Permit.

All Development Projects that are submitted to the City of Murrieta for discretionary approval or permitting are required to fill out a Project Application Form. Based on the results of that checklist, each project is categorized as either a "Priority Development Project" or as an "Other Development Project." The requirements for Other Development Projects are described in Section 6.6.6.

The City Planning Department coordinates the land use case processing, which includes compliance with CEQA procedures, general plan conformity, ordinance consistency, and public health and safety requirements. The City Planning Department works closely with many other departments to ensure proper review of these issues. Together, these departments review proposed Development Projects for applicability and compliance with WQMP requirements.

6.6.2 Identification of Development Projects Requiring a Project-Specific WQMP {F1.d(1) & (2)}

The Project Application Form includes a WQMP Applicability Checklist as discussed in Section 6.3.1.

In reviewing project applications, the City reviews the WQMP Applicability Checklist and the other information provided in the project application to verify the applicant's determination as a *Priority Development Project* or an *Other Development Project*. If the applicant incorrectly certified that the proposed project did not require a Project-Specific WQMP, the City will notify the project applicant and

effectively place a hold on the project application until a preliminary Project-Specific WQMP is submitted.

If a Project-Specific WQMP is required, the City will require that a preliminary Project-Specific WQMP be included with the project application packet. The Planning Department will then forward copies of the project application, including the Project-Specific WQMP, to Public Works Department for review and as applicable issuance of conditions of approval.

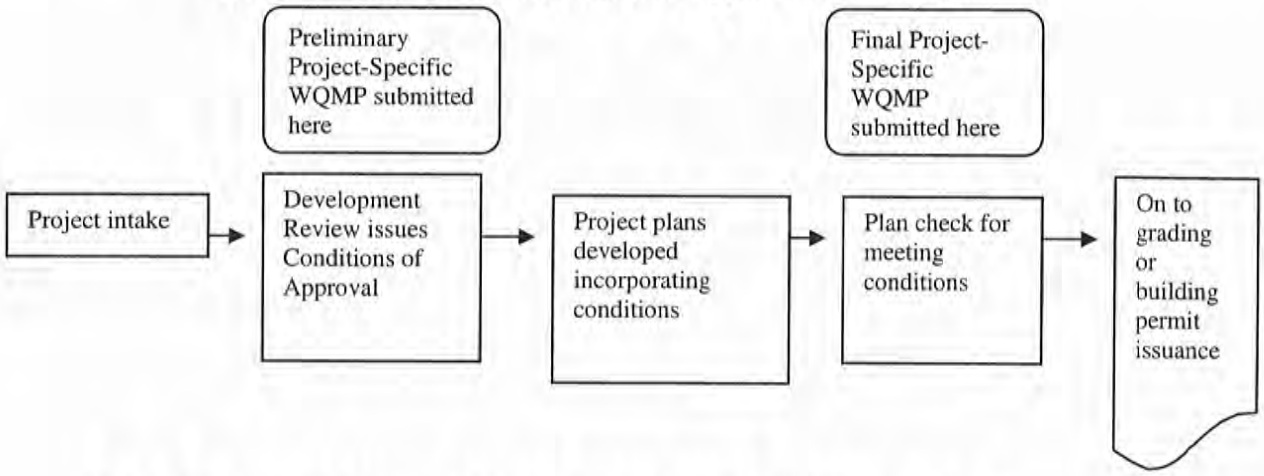
6.6.3 Conditions of Approval {F.1.c}

The development review process applies standard conditions of approval to ensure that the requirements of the 2010 SMR MS4 Permit are met. City of Murrieta Department has developed standardized Engineering conditions of approval that may be used and are provided in Appendix D.

6.6.4 Review of Preliminary Project-Specific WQMPs

The Planning and Public Works Departments requires preliminary Project-Specific WQMPs to be submitted with the project application for all Priority Development Projects. The level of detail in the preliminary Project-Specific WQMP must be consistent with the level of detail for the overall project design at the time project approval is sought. Prior to issuance of grading or building permits, the project applicant must submit the final Project-Specific WQMP for review and approval. The Public Works Department uses a Checklist for Project Specific WQMP to facilitate thorough and consistent reviews of preliminary and final project-specific WQMPs. The Checklist for Project Specific WQMP is an exhibit to the SMR WQMP. Figure 6-2 shows a typical review and approval process.

Figure 6-2. Flowchart of Project Review, Approval & Permitting Process



6.6.5 Review and Approval of Final Project-Specific WQMPs {F.1.d.(9)(a)}

Based on the Conditions of Approval and prior to approval of a final Project-Specific WQMP, the Public Works Department will ensure that:

- The final Project-Specific WQMP is prepared and is consistent with the requirements of the SMR WQMP;

- LID BMPs have been incorporated into the site to the extent feasible; or if the project proponent has acceptably demonstrated that LID BMPs are technically infeasible for the project, the Public Works Department will document within the project file a finding of technical infeasibility;
- The entity or entities responsible for BMP implementation and maintenance have been identified; and
- The mechanism for BMP funding is identified.

The Public Works Department will ensure all requirements have been addressed prior to approval of a final Project-Specific WQMP.

6.6.6 Requirements for Other Development Projects [F.1.c]

The City requires other Development Projects to incorporate LID Principles (Site Design) and Source Control BMPs, where applicable and feasible, into project plans through conditions of approval or building/grading permit conditions. LID BMPs and Treatment Control BMPs may be required on a case-by-case basis for Other Development Projects that directly discharge Runoff to Receiving Waters listed as Impaired on California's CWA Section 303(d) List of Water Quality Limited Segments.

Discharges from other approved Development Projects are subject to the following management measures:

(1) Source control BMPs that reduce Stormwater Pollutants of Concern in Runoff; prevent Illicit Discharges into the MS4; prevent irrigation runoff; storm drain system stenciling or signage; properly design outdoor material storage areas; properly design outdoor work areas; and properly design trash storage areas.

(2) The following LID BMPs listed below must be implemented at all Development Projects where applicable and feasible.

(a) Conserve natural areas, including existing trees, other vegetation, and soils;
(b) Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised;
(c) Minimize the impervious footprint of the project;
(d) Minimize soil compaction of landscaped areas;
(e) Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.); and
(f) Disconnect impervious surfaces through distributed pervious areas.

(3) Buffer zones for natural water bodies, where technically feasible. Where buffer zones are technically infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc.

(4) Other measures necessary so that grading or other construction activities meet the provisions specified in Section 7.0 of this JRMP.

(5) Submittal of documentation of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.

(6) Infiltration and Groundwater Protection

To protect groundwater quality, restrictions are applied to the use of Treatment Control BMPs that are designed to primarily function as large, centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions are designed so that the use of such infiltration Treatment Control BMPs does not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each Treatment Control BMP designed to primarily function as a centralized infiltration device is required to meet the restrictions below, unless the Development Project demonstrates that a restriction is not necessary to protect groundwater quality.

1. Infiltration BMPs must not be used for areas of industrial or light industrial activity, and other high threat to water quality land uses and activities as designated by each Copermittee unless first treated or filtered to remove Pollutants prior to infiltration.
2. The seasonal high groundwater mark must be at least 10 feet below the invert of the Infiltration BMP.
3. Infiltration BMPs must be located a minimum of 100 feet horizontally from any water supply wells.
4. No part of a Infiltration BMP should be within a 2:1 (horizontal:vertical) influence line extending from any septic leach line.
5. Infiltration BMPs must not be located in soils that, according to a licensed Geotechnical Engineer, do not have adequate physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) for the protection of groundwater.

(7) Where feasible, landscaping with native or low water species shall be preferred in areas that drain to the MS4 or to Waters of the U.S.

(8) Rain water harvesting and water reuse, where feasible, must be encouraged as part of the site design and construction to reduce Pollutants in Stormwater discharges to the MEP.

Additionally, where an Other Development Project proposes a new Unpaved Road, the applicant must incorporate the following, or alternative BMPs that are equally effective:

- Identify practices that will minimize road related Erosion and sediment transport;
- Grade Unpaved Roads to slope outward where consistent with road engineering safety standards;
- Incorporate installation of water bars as appropriate; and
- Provide Unpaved Road and culvert designs that do not impact creek functions.

6.6.7 Unpaved Roads Development {F.1.i}

The City of Murrieta implements or requires the implementation of erosion and sediment control BMPs after construction of new Unpaved Roads. Such BMPs are required for Priority Development Projects in the SMR WQMP and for Other Development Projects as discussed in Section 6.6.6 above.

6.6.8 Plan Check: Issuance of Grading or Building Permits

6.6.8.1 Plan Check for Priority Development Projects

The Planning and Public Works Departments review the relevant CEQA documentation (including the Mitigation Monitoring and Reporting Program, if applicable), the conditions of approval, and the final

approved Project-Specific WQMP as part of the plan check process. Once a Priority Development Project reaches the plan check phase, the project applicant should have an approved final Project-Specific WQMP in conformance with the SMR WQMP.

Construction plans submitted by the project applicant for plan check are reviewed to verify that they properly incorporate all Site Design, Structural LID and/or Treatment Control BMPs identified in the approved final Project-specific WQMP. The designs of Structural Source Control BMPs, LID BMPs, and Treatment Control BMPs are reviewed to verify inclusion of control measures necessary to effectively minimize the creation of Nuisance or Pollution associated with vectors, such as mosquitoes, rodents, flies, etc. The design review during plan check also verifies that Structural BMPs provide adequate access for ongoing maintenance of the BMP after construction. The construction plans are also reviewed for consistency with the BMP design criteria and guidance provided in the SMR WQMP.

6.6.8.2 Plan Check for Other Development Projects

For Other Development Projects, the Public Works Department reviews the construction plans submitted for a grading or building permit to ensure that the plans incorporate all applicable and appropriate Site Design, Source Control and LID BMPs as described in Section 6.6.6.

6.6.8.3 Standard Notes for Plans

Prior to the issuance of a grading or building permit, the City of Murrieta Department requires standard notes to be added to the plan set to address Pollution Prevention during the construction phase of a project. Standardized notes are discussed below:

1. In Case of Emergency, Call: (provide name, work and home phone numbers)
2. Equipment and workers for emergency work shall be made available at all times during the rainy season. Necessary materials shall be available on site and stockpiled at convenient locations to facilitate rapid construction of temporary devices when rain is imminent.
3. Devices shall not be moved or modified without the approval of the engineering department.
4. All removable protective devices shown shall be in place at the end of each working day when the 5-day rain probability forecast exceeds 40%.
5. After a rainstorm, all silt and debris shall be removed from check berms and desilting basins, and the basins pumped dry.
6. Graded areas around the tract perimeter must drain away from the face of slope at the conclusion of each working day.
7. The contractor shall be responsible and shall take necessary precautions to prevent public trespass onto areas where impounded water creates a hazardous condition.
8. Gravel bag layout shall be installed as shown per plan or as directed by the City inspector.

6.7 FIELD VERIFICATION OF BMPS & PERMIT CLOSEOUT{F.1.E.}

6.7.1 Release of Conditions of Approval

The end of the construction phase is typically accompanied by the close out of permits and issuance of certificates of use and/or occupancy. The Engineering Department uses this juncture to assure satisfactory completion of all requirements in a Project-Specific WQMP and/or the conditions of approval by verifying that the following items, as applicable, have been completed - prior to granting occupancy:

- All Site Design, LID, structural Source Control, and Treatment Control BMPs have been constructed and installed in conformance with approved plans and specifications and functional in accordance with the approved Project-Specific WQMP (if applicable); and that they include control measures to effectively minimize the creation of Nuisance or Pollution associated with vectors, such as mosquitoes, rodents, flies, etc.;
- A mechanism or agreement acceptable to the Public Works Department has been executed for the long-term funding, implementation, operation, maintenance, repair, and where necessary, the replacement of BMPs;
- The owner/operator is prepared to implement all Non-Structural BMPs, and to implement, operate, and maintain all Site Design, LID, structural Source Control, and Treatment Control BMPs;
- An adequate number of copies of the Project-Specific WQMP, if applicable, are available onsite; and
- An Industrial Facility subject to the Industrial General Permit as defined by Standard Industrial Classification (SIC) code has obtained coverage by providing a copy of the NOI with associated WDID number or other proof of filing submitted via the SMARTS to the State Board. Where such an Industrial Facility is identified but coverage cannot be verified, theCity of Murrieta notifies the San Diego Regional Board and the owner/operator that the facility may be required to obtain coverage under the Industrial General Permit.

6.7.2 Maintenance Responsibility

The responsibility for implementation, operation, and maintenance of BMPs may be with a private entity or by the City under various arrangements and with various funding sources. The responsibility to provide for the long-term implementation, operation, and maintenance of BMPs associated with Priority Development Projects or Other Development Projects may:

- Remain with a private entity (property owner, home owners association, etc.) for private improvements; or
- Be transferred to a public entity (e.g., a city, county, special district, etc.) through dedication of the property provide a funding source has been created; or

If a property owner or a private entity retains or assumes responsibility for implementation, operation, and maintenance of BMPs, the Permittees require an agreement that can take the form of:

- A Restrictive Covenant recorded with the County Recorder;

- A Homeowners Association or Property Owners Association Covenants, Codes, and Restrictions that are actively enforced and funded ;
- The formation of, or annexation to, a maintenance district or assessment district; or
- Other instrument sufficient to guarantee long-term implementation, operation, maintenance, and funding of BMPs.

6.8 Structural Post-Construction BMP Database and Maintenance Verification {F.1.F}

The Public Works Department implements a program to verify the maintenance and effectiveness of post construction Structural BMPs constructed pursuant to an approved final Project-Specific WQMP.

6.8.1 Inventory of WQMP Projects {F.1.f.(1)}

The City of Murrieta maintains a watershed-based database to track and inventory all Priority Development Projects constructed within City jurisdiction that have a final approved Project-Specific WQMP (WQMP Projects) and the post-construction Structural BMPs implemented therein since July 2005. This database does not track nor inventory LID BMPs implemented on a lot by lot basis at single family residential houses – such as rain barrels.

This database includes the following information:

- WQMP Project Name
- Map number
- Priority for Maintenance Verifications (see Section 6.8.2)
- Watershed where project is located
- Types of BMPs and location(s)
- Date of construction or date of initial verification/certification
- Party responsible for maintenance
- Dates of maintenance verifications
- Findings of maintenance verifications
- Corrective actions identified during maintenance verification, including whether the site was referred to the local vector control agency or department.

6.8.2 Designation of High Priority Projects for Maintenance Verification {F.1.f.(2)(a)}

The City of Murrieta designates each WQMP project as either High or Standard Priority based on the following considerations:

- BMP size,
- Recommended maintenance frequency,

- Likelihood of operational and maintenance issues,
- Location,
- Receiving Water quality,
- Compliance record,
- Land use, and
- Other pertinent factors

At a minimum, High Priority projects include those projects that have been identified by the Copermittee as a facility that:

- Generates Pollutants (prior to treatment) within the tributary area of and within the same hydrologic subarea as a 303(d) listed waterbody Impaired for that Pollutant; or
- Generates Pollutants within the tributary area for and within the same hydrologic subarea as an observed Action Level exceedance of that Pollutant.

6.8.3 Maintenance Verification of Structural Post-Construction BMPs {F.1.f.(2)(b)}

The City of Murrieta verifies that the required post-construction Structural BMPs on the inventoried WQMP Projects have been implemented, are maintained, and are operating effectively through inspections, self-certifications, surveys, or other equally effective approaches with the following conditions:

6.8.3.1 WQMP Structural BMP Inspection Schedule

Table 6-2 WQMP Structural BMP Inspection Schedule

WQMP Project Priority	Verification frequency
Standard	Once every 5 years
High	Annually

In addition to the above table, all City of Murrieta owned projects with post-construction Structural BMPs must be inspected annually as described in Section 5.4.

6.8.3.2 Verification Methods

The City of Murrieta conducts direct inspections of WQMP Projects to comply with the BMP verification requirements. The Public Works Department first reviews the approved final Project-Specific WQMP, and verifies that all post-construction Structural BMPs identified in the WQMP are implemented and have been appropriately maintained in accordance with the O&M Plan identified in the Project-Specific WQMP. A standardized inspection / verification form may be utilized and is provided in Appendix E.

And/or

The Public Works Department has established a program for third party verifications and/or self certifications that WQMP projects can utilize. Adequate documentation must be submitted to the Public Works Department to provide assurance that the required maintenance has been completed. These third party verifications / self certifications are required to complete the standardized inspection / verification form provided in Appendix E.

6.8.4 Post Construction BMP Recordation {F.1.d.(9)(b)}

The City of Murrieta has established a mechanism to ensure that appropriate easements and ownerships are properly recorded in public records and the information is conveyed to all appropriate parties when there is a change in project or site ownership.

6.9 Enforcement for Development {F.1.g}

The legal Authority and enforcement policies and procedures of City of Murrieta are described in Section 3 of this JRMP. The City of Murrieta conducts appropriate follow-up measures to ensure the Treatment Control BMPs continue to reduce Stormwater Pollutants as originally designed. These measures include re-inspections, and where necessary enforcement (as described in Section 3.5).

7.0 PRIVATE DEVELOPMENT CONSTRUCTION ACTIVITY {F.2.}

The City of Murrieta implements the following program that is designed to meet the requirements of provision F.2. of the 2010 SMR MS4 Permit, require implementation and maintenance of Structural and Non-Structural BMPs to reduce Pollutants in Stormwater Runoff from Construction Sites to the MS4, reduce Construction Site discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent Construction Site discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

7.1 Source Identification / Inventory {F.2.b}

The City of Murrieta's maintains an updated watershed-based inventory database of Construction Sites within its jurisdiction. This inventory is provided in each Annual Report. Construction Sites are any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation. Construction Sites are included in the inventory regardless of whether the Construction Site is subject to the Construction General Stormwater Permit or other individual construction Stormwater NPDES permits. This database is updated with new projects added when the project is issued a building or grading permit or when the pre-construction meeting has occurred. Projects may be removed from the database when construction is completed and the project's building or grading permit is closed. The City of Murrieta Construction Site database includes the following project information:

- Facility/Project name,
- Facility/Project address,
- Tract number(s) or Assessor Parcel Number (APN),
- Watershed / Sub watershed,
- Project priority,
- Date of inspections performed at each site,
- Site size,
- WDID #,
- Grading Permit #,
- Developer's information,
- Site contact information, and
- Enforcement actions taken.

7.2 Construction Site Planning and Project Approval Process {F.2.c}

The City of Murrieta incorporates consideration of potential water quality impacts prior to approval and issuance of construction and grading permits.

Prior to issuance of Building / Grading Permits, the City of Murrieta:

- Requires implementation of the applicable designated BMPs (Section 7.3) and other measures that are selected so that Illicit Discharges into the MS4 are prevented, Stormwater Pollutants discharged from the Construction Site will be reduced to the MEP, and construction activity discharges from the MS4 are prevented from causing or contributing to a violation of Water Quality Standards.

- Ensures that the project proponent's Runoff management plan (or equivalent Construction Site BMP plan) is required to comply, and reviewed by the Public Works Department to verify compliance with the local grading ordinance, other applicable local ordinances, and the 2010 SMR MS4 Permit. This construction site BMP plan does not need to be reviewed to ensure that it complies with the Construction General Permit,.

- Verifies that project proponents subject to the Construction General Permit have existing coverage. Where coverage under the Construction General Permit appears to apply, the City of Murrieta verifies coverage on the State Board's web page at:

  http://www.swrcb.ca.gov/water_issues/programs/stormwater/databases.shtml#const_db

  For such projects, the Regional and/or the State Board are responsible for conducting inspections and verifying compliance with the Construction General Permit. The City of Murrieta's review of the project's Runoff management plan, as well as the City of Murrieta's inspections conducted as described in Section 7.4 below, are to ensure compliance with the City of Murrieta's ordinances and the 2010 MS4 Permit.

- Categorizes the project as a high, medium, or low threat to water quality for the purposes of inspection, as described in Section 7.4.

7.3 Construction Site BMPs {F.2.d}

The City of Murrieta has designated a minimum set of BMPs and other measures to be implemented at all Construction Sites, as applicable to the site and the activities thereon. The City of Murrieta requires implementation of the designated minimum BMPs and any additional measures necessary to comply with the 2010 SMR MS4 Permit at each Construction Site within its jurisdiction year round. BMP implementation requirements, however, can vary based on Rainy and Dry Seasons. Dry Season BMP implementation must plan for and address unseasonal rain events that may occur during the Dry Season (May 1 through September 30).

7.3.1 Minimum Erosion and Sediment Control Practices {F.2.d(1)(b)}

- Erosion prevention. Erosion prevention is to be used as the most important measure for keeping sediment on site during construction;
- Sediment controls. Sediment controls are to be used as a supplement to erosion prevention for keeping sediment on-site during construction;
- Slope stabilization must be used on all active slopes during rain events regardless of the season and on all inactive slopes during the Rainy Season and during rain events in the Dry Season;
- Permanent revegetation or landscaping as early as feasible; and
- Erosion and sediment controls must be required during the construction of Unpaved Roads.

7.3.2 Minimum Management Measures {F.2.D(1)(a)}

BMP Name	Stormwater BMP Handbook Portal: Construction	Caltrans Construction Site BMP Manual	MS4 Permit Requirement Reference F.2.d.(1):
Stabilize Exposed Soils (one or more or the methods below will be used as needed)			
Chemical Stabilization (Soil Binders)	EC-5	SS-5	(a): (iv), (vii) (viii) (b): (i)
Polyacrylamide	SE-11		(a): (iv), (vii) (viii) b): (i)
Mulching			
Hydraulic Mulch	EC-3	SS-3	(a): (iv), (vii) (viii) b): (i)
Straw Mulch	EC-6	SS-6	(a): (iv), (vii) b): (i),
Wood Mulching	EC-8	SS-8	(a): (iv), (vii) b): (i)
Permanent Seeding			(a): (iv), (vii) b): (i) (iv)
Sodding			(a): (iv), (vii), (viii) b): (i) (iv)
Soil Roughening			
Temporary Seeding/Hydroseeding	EC-4	SS-4	(a): (iv), (vii) (viii) b): (i)
Protect Steep Slopes			
Earth Dikes/Drainage Swales/Lined Ditches	EC-9	SS-9	b): (i), (iii)
Fiber Roll	SE-5	SC-5	b): (i) (iii)
Geotextiles	EC-7	SS-7	b): (i) (iii)
Gradient Terraces			b): (i) (iii)
Soil Retention			b): (i) (iii)
Straw Bale Barrier	SE-9	SC-9	b): (i) (iii)
Temporary Slope Drain	EC-11	SS-11	b): (i) (iii)
Protect Waterways			
Check Dams	SE-4	SC-4	
Outlet Protection/Velocity Dissipation Devices	EC-10	SS-10	(a): (xii) b): (i)
Stream bank Stabilization	EC-12	SS-12	(a): (xii)
Temporary Stream Crossings	NS-4	NS-4	b): (i)
Vegetated Buffer			

Phase Construction			
Construction Sequencing (Scheduling)	EC-1	SS-1	(a): (ii), (iii), (iv), (v), (vi), vii b): (i)
Dust Control (Wind Erosion Control)	WE-1	WE-1	(a): (iv), (viii)
Preserve Site Condition			
Entrance/Outlet Tire Wash	TC-3	TC-3	(a): (ix),
Preservation of Existing Vegetation	EC-2	SS-2	(iii) (iv), (xii) b): (i)
Stabilized Construction Entrance/Exit	TC-1	TC-1	(a): (ix)
Stabilized Construction Roadway	TC-2	TC-2	(a): (ix) b): (i) (iv)
Scheduling			(a): (ii) (iii), (iv), (v), (vi), vii b): (i)
Waste Management			
Waste Handling and Disposal	SC-34		(a): (i), (xi.), (x), (xi)
Pollution Prevention			
Spill prevention, Control and Cleanup	SC-11		(a): (i.), (x)

The City of Murrieta requires project proponents to submit a SWPPP/Erosion Control Plan that identifies each of the BMPs used during the construction phase and their deployment at the Construction Site. The SWPPP:

- Establishes limitations of grading to a maximum disturbed area as determined by City of Murrieta before either temporary or permanent erosion controls are implemented to prevent Stormwater Pollution.

  This maximum area is established by the City on a case-by-case basis depending on the specifics of each project, and documented in the grading permit documents.

Since BMP technology is constantly changing, the City of Murrieta may consider other BMPs of equivalent or better performance on a case-by-case basis.

7.3.3 Enhanced BMPs {F.2.d.(2)}

The City of Murrieta requires implementation of enhanced measures to address the threat to water quality posed by all Construction Sites tributary to CWA Section 303(d) water body segments Impaired for sediment or turbidity. Currently there are no CWA Section 303(d) water body segments Impaired for sediment or turbidity that the City MS4 facilities discharge into. Where necessary, the City of Murrieta also requires implementation of enhanced measures for Construction Sites within, or adjacent to, or discharging directly to Receiving Waters within an ESA (as defined in Attachment C of the 2010 SMR MS4 Permit).

7.3.4 Active/Passive Sediment Treatment (AST) {F.2.d.(3)}:

The City of Murrieta requires implementation of AST for sediment at Construction Sites (or portions thereof) that the City determines to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors are to be considered by the City of Murrieta:

(a) Soil erosion potential or soil type;

(b) The site's slopes;

(c) Project size and type;

(d) Sensitivity of Receiving Water bodies;

(e) Proximity to Receiving Water bodies;

(f) Non-Stormwater discharges;

(g) Ineffectiveness of other BMPs;

(h) Proximity and sensitivity of aquatic threatened and endangered species of concern;

(i) Known effects of AST chemicals; and

(j) Any other relevant factors.

As defined in the MS4 Permit, AST is a treatment mechanism that uses mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge. Such measures are highly expensive and are expected only to

be required in cases where there is an exceptional threat and/or demonstrable impacts to receiving water quality and all other available BMPs have been ineffective for the site.

7.4 Construction Site Inspection {F.2.E}

The City of Murrieta conducts Construction Site inspections for compliance with its ordinances (grading, stormwater, etc.), permits (construction, grading, etc.), and the 2010 SMR MS4 Permit. When conducting inspections of Construction Sites the City of Murrieta utilizes the inspection form provided in Appendix E. Priorities for inspecting Construction Sites must consider the nature and size of the construction activity, topography, and the characteristics of soils and Receiving Water quality. City of Murrieta inspectors inspect the inventoried Construction Sites according to the schedule below.

7.4.1 Rainy Season[12] Inspection Frequency

Table 7-1: Construction Site Inspection Frequency

Priority	Supporting Criteria [a]	Rainy Season Inspection Frequency
High	• Sites that disturb an area greater than 30 acres with rough grading or with active, unstabilized slopes occurring during the Rainy Season • Sites disturbing an area greater than one (1) acre within the same hydrologic subarea and tributary to Receiving Waters with CWA Section 303(d) listed waters for sediment or turbidity Impairments or within, directly adjacent to, or discharging directly to a Receiving Water within an ESA. • Other sites determined by the City of Murrieta as a significant threat to water quality, considering the following factors: o Soil erosion potential (e.g. Hillside sites) o Project size and type o Sensitivity of and proximity to Receiving Waters (particularly ESAs since no Receiving Waters are 303(d) listed for sediment or turbidity) o History or presence of Illegal Non-Stormwater Discharges o Known past record of non-compliance by the operators of the Construction Site o Any other relevant factors.	Every Two Weeks
Medium	Project Size Sites disturbing an area of one acre or more.	Monthly
Low	Project Size Sites disturbing less than 1 acre.	As needed

[12] The Rainy Season – (aka Wet Season) is the period of time from October 1 forward to April 30 when the Santa Margarita Region experiences the most rainfall.

7.4.2 Dry Season Inspection Frequency

The City of Murrieta inspects all Construction Sites as needed during the Dry Season. Sites meeting the criteria in Section F.2.e.(1) of the 2010 SMR MS4 Permit are inspected at least once in August or September each year.

7.4.3 Re-inspections

Based upon site inspection findings, the City of Murrieta implements all follow-up actions (i.e., re-inspection, enforcement) necessary to comply with the 2010 SMR MS4 Permit. Re-inspection frequencies are determined by the City of Murrieta based upon the severity of deficiencies, the nature of the construction activity, and the characteristics of soils and Receiving Water quality.

7.4.4 Conducting Inspections

At a minimum, the following items are addressed by City of Murrieta staff during Construction Site inspections:

- Check for coverage under the Construction General Permit NOI and/or WDID No. during initial inspections;
- Assessment of compliance with City of Murrieta ordinances and permits related to Runoff, including the implementation and maintenance of designated minimum BMPs;
- Assessment of BMP effectiveness;
- Visual observations for Non-Stormwater discharges, potential Illicit Connections, and potential discharge of Pollutants in Stormwater Runoff;
- Review of site monitoring data results, if the site monitors its Runoff;
- Education and outreach on Stormwater Pollution prevention, as needed; and
- Creation of a written or electronic inspection report.

The City of Murrieta tracks the number of inspections for each inventoried Construction Site within its jurisdiction throughout the reporting period to verify that each site is inspected at the minimum frequencies required. The Construction Site inspection form is included in Appendix E.

7.5 Enforcement {F.2.f }

The City of Murrieta has developed and implements an escalating enforcement process (Section 3.5) that is designed to achieve prompt corrective actions at Construction Sites for non-compliance with the City of Murrieta's permits, requirements and Ordinances.

The City of Murrieta responds to construction complaints received from third-parties and to ensure the San Diego Regional Board that corrective actions have been implemented, if warranted.

7.6 Reporting of Non-Compliant Construction Sites {F.2.g}

The City of Murrieta will notify the San Diego Regional Board when the City of Murrieta issues high level enforcement (as defined in Section 3.5) to a Construction Site that poses a significant threat to water quality in its jurisdiction as a result of violations of its Stormwater Ordinances.

In addition, the City of Murrieta annually notifies the San Diego Regional Board, prior to the commencement of the Rainy Season (October 1st), of all Construction Sites with alleged violations that pose a significant threat to water quality. Information may be provided as part of the JRMP Annual Report if submitted prior to the Rainy Season. Information provided must include, but not be limited to, the following:

(a) WDID number if enrolled under the Construction General Permit

(b) Site location, including address

(c) Current violations or suspected violations

8.0 INDUSTRIAL AND COMMERCIAL SOURCES {F.1.B.}

The City of Murrieta implements the following Industrial and Commercial Program which has been designed to help prevent Illicit Discharges into the MS4, reduce industrial and commercial discharges of Stormwater Pollutants into and from the MS4 to the MEP, and prevent Industrial and Commercial Facility discharges to the MS4 from causing or contributing to a violation of Water Quality Standards in Receiving Waters. The City of Murrieta will continue to review the effectiveness of the Industrial and Commercial Facility inspection program annually and make additional program modifications as necessary.

8.1 Industrial/Commercial Source Identification & Inventory {F.1.b.(1)(a)}

The City of Murrieta developed and maintains an updated inventory/database of Industrial and Commercial Facilities within its jurisdiction that could contribute a significant Pollutant load to the MS4, as identified by the 2010 SMR MS4 Permit. Facilities are included in this inventory regardless of whether the facility is subject to the Industrial General Permit, or other individual NPDES permits issued by the State Board or the San Diego Regional Board. This inventory/database is maintained by the Public Works Department and an electronic copy is included as an attachment to each Annual Report.

The Public Works Department regularly updates the inventory/database using information obtained during facility inspections or from any of the following sources: conditional use permits, plot plans, building permits, business licenses, occupancy permits, Hazardous Materials permits, and Hazardous Waste generator permits are approved for the development of a new Industrial Facility. Additional facilities are identified through the CAP and as compliance surveys and inspections are completed and Industrial Facilities are identified.

8.1.1 Facility Categories

The Industrial and Commercial Facilities inventory/database includes the following categories of potential sources:

Industrial Sites/Sources

- Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
- Operating and closed landfills;
- Facilities subject to SARA Title III; and
- Hazardous Waste treatment, disposal, storage and recovery facilities.

Commercial Sites/Sources

- Automobile repair, maintenance, fueling, or cleaning;
- Airplane repair, maintenance, fueling, or cleaning;
- Boat repair, maintenance, fueling, or cleaning;

- Equipment repair, maintenance, fueling, or cleaning;
- Automobile and other vehicle body repair or painting;
- Mobile automobile or other vehicle washing;
- Automobile (or other vehicle) parking lots and storage facilities;
- Retail or wholesale fueling;
- Pest control services;
- Eating or drinking establishments, including such retail establishments with food markets;
- Mobile carpet, drape or furniture cleaning;
- Cement mixing or cutting;
- Masonry;
- Painting and coating;
- Botanical or zoological gardens and exhibits;
- Landscaping;
- Nurseries and greenhouses;
- Golf courses, parks and other recreational areas/facilities;
- Cemeteries;
- Pool and fountain cleaning;
- Marinas;
- Portable sanitary services;
- Building material retailers and storage;
- Animal boarding facilities and kennels;
- Mobile pet services;
- Power washing services;
- Plumbing services; and
- Other sites and sources as identified by the Copermittee as having a history of un-authorized discharges to the MS4.

ESAs and 303(d) Listed Waterbodies

All other Industrial or Commercial Sites / sources tributary to and within the same hydrologic subarea as a CWA Section 303(d) Impaired water body segment, where the City of Murrieta has determined that the site/source generates Pollutants for which the water body segment is Impaired. All other Commercial or Industrial Sites/sources within or directly adjacent to or discharging directly to Receiving Waters within ESAs (as defined in Attachment C of the 2010 SMR MS4 Permit) or that the City of Murrieta has

determined generate Pollutants tributary to and within the same hydrologic subarea as an observed exceedance of an Action Level of those Pollutants.

All other Industrial or Commercial Sites/sources that the City of Murrieta determines may contribute a significant Pollutant load to the MS4.

8.1.2 Inventory Information

The information for each facility in the Industrial and Commercial Facility Database includes the following information:

- Name of facility;
- Address;
  - Mailing address (if different)
- Pollutants potentially generated by the facility;
- Identification of whether the facility is tributary to a CWA §303(d) water body segment and generates Pollutants for which the water body segment is Impaired;
- A narrative description including SIC codes which best reflects the principal products or services provided by the facility.
- Location reference (such as, geographic coordinates, cross streets, etc.)
- Facility Category (per Section 8.1.1)
- Hydrologic Unit Code
- Facility contact
- Facility contact phone number
- WDID number associated with the Industrial General Permit (if any)
- Other NPDES permit or Waste Discharge Requirements
- Site size

8.1.3 Facilities that pose a high threat to water quality

The City of Murrieta identifies those facilities that pose a high threat to Receiving Water quality.

All inventoried sites are inspected at least once during a five year period. In evaluating threat to water quality, the 2010 SMR MS4 Permit identifies the following factors that are to be considered:

(i) Type of activity (SIC code);

(ii) Materials used at the facility;

(iii) Wastes generated;

(iv) Pollutant discharge potential, including whether the facility generates a Pollutant that exceeds an Action Level;

(v) Non-Stormwater discharges;

(vi) Size of facility;

(vii) Proximity to Receiving Water bodies;

(viii) Sensitivity of Receiving Water bodies;

(ix) Whether the facility is subject to the General Industrial Permit or an individual NPDES permit;

(x) Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability;

(xi) Facility design; total area of the site, portion of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and Runoff;

(xiii) The facility's compliance history; and

(xiv) Any other relevant factors.

Primarily, the designation of Industrial and Commercial Facilities that are a high threat to Receiving Water quality will be assessed using the monitoring described in the CMP, through the Watershed Water Quality Workplan assessments. As described in the Santa Margarita Watershed Water Quality Workplan, where an MS4 Outfall Action Level exceedance is detected in a Receiving Water with chronic exceedances of Basin Plan Objectives for the same Pollutant, the City of Murrieta will evaluate appropriate response actions to address that Action Level exceedance. Where the appropriate response action is identified as enhanced or focused industrial or commercial inspections, all facilities in the inventory that are tributary to that outfall and are known to generate Pollutants associated with the Action Level exceedance (per the inventoried information about the facility) will be designated as high priority facilities. Further prioritization among inventoried industrial and commercial facilities may be performed by the City of Murrieta using the remaining factors identified above.

8.2 General BMP Implementation

8.2.1 Pollution Prevention BMPs {F.1.b.(2)(a)}

The City of Murrieta has designated the following set of minimum Pollution Prevention BMPs for the Industrial and Commercial Facilities within its jurisdiction to reduce the discharge of Pollutants to the MEP:

- Good Housekeeping
- Proper Materials Handling and Storage
- Proper Waste Handling

- Preventive Maintenance
- Spill Prevention and Response Procedures (where applicable)
- Facility Personnel Training

Through the process of conducting inspections of Industrial and Commercial Facilities, the inspectors make the facilities aware of these minimum BMPs and additional BMPs (when appropriate) and of the City of Murrieta's applicable ordinance(s).

8.2.2 Minimum BMPs {F.1.b.(2)(b)}

The City of Murrieta has also designated the following minimum set of BMPs for all applicable inventoried Industrial and Commercial Sites/sources within its jurisdiction that are specific to facility types and Pollutant-generating activities. During the inspection of inventoried Industrial and Commercial facilities, the following minimum BMPs are verified as applicable to the facility. Where applicable, CASQA BMP Fact sheets are noted:

Item #	Minimum BMP	CASQA BMP Fact Sheet
1	Hazardous Waste/Materials storage areas are clean, no signs of leakage, and protected from rainfall and Runoff;	SC-34
2	Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and no signs of leakage from the trash bins	SC-34
3	Aboveground tanks have been properly maintained including no signs of leakage, and secondary containment in good condition	SC-11, SC-31, SC-33
4	Onsite storm drain inlets are protected from inappropriate Non-Stormwater discharges	SC-44
5	Oil/water separators are connected to sanitary sewer	NA
6	Wash water from wash pads (steam cleaning or high pressure cleaning) is directed to the sanitary sewer and does not discharge to the MS4	SC-10
7	Mop bucket wash water is discharged to sanitary sewer via clarifier	SC-10
8	Parking lot areas are free of trash, debris, and fluids other than water	SC-43
9	Facility has coverage under the Industrial General Permit, if appropriate	NA
Item #	**Minimum BMP**	**CASQA BMP Fact Sheet**
10	Oil and grease Wastes are not discharged onto a parking lot, street or adjacent catch basin	SC-10
11	Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and the bins have not been washed out into the MS4	SC-43
12	Floor mats, filters and garbage containers are not washed in adjacent parking lots, alleys, sidewalks, or streets and no wash water is discharged to MS4s	SC-10

Item #	Minimum BMP	CASQA BMP Fact Sheet
13	Parking lot areas are cleaned by sweeping, not by hosing down, and the facility operator uses dry methods for spill cleanup	SC-43

The City of Murrieta will continue to regularly review and update these designated BMPs for adequacy and subsequently submit any updates in the JRMP Annual Report.

8.2.3 Enhanced BMPs for ESAs and 303(d) Impairments {F.1.b.(2)(c)}

The City of Murrieta designates enhanced measures as necessary for inventoried Industrial and Commercial Sites/sources that:

- Are tributary to and within the same hydrologic subarea as CWA Section 303(d) Impaired water body segments (where the City of Murrieta has determined that the site/source generates Pollutants for which the water body segment is Impaired).
- Are within or directly adjacent to or discharging directly to Receiving Waters within ESAs.

8.2.4 BMP Implementation {F.1.b.(2)(d)}

The City of Murrieta requires the implementation of the designated minimum and enhanced BMPs and any additional measures necessary based on inspections, incident responses, and water quality data to comply with the 2010 SMR MS4 Permit at each Industrial and Commercial Site/source within its jurisdiction. To ensure that the designated BMPs are implemented by the facility owner/operator, the City of Murrieta implements the following programmatic BMPs:

- Maintain and update Inventory of facilities (Section 8.1)
- Designates appropriate BMPs to be implemented by each facility (Section 8.2)
- Conducts inspections (Section 8.4)
- Enforces City ordinances (Section 3.5)

8.3 Mobile Businesses Program {F.1.b.(3)}

The City of Murrieta has developed and is implementing a program to reduce the discharge of Stormwater Pollutants from Mobile Businesses to the MEP and to prohibit Non-Stormwater discharges pursuant to Section B of the 2010 SMR MS4 Permit. The City of Murrieta maintains as part of its commercial source inventory a listing of Mobile Businesses known to operate within its jurisdiction that conduct services listed above in Section 8.1.

8.3.1 Minimum BMPs for Mobile Businesses {F.1.b.(3)(i)}

Based on the activities associated with the Mobile Businesses identified in the City of Murrieta's jurisdiction, the following list of potential Source Control BMPs was developed for each of the categories of Mobile Businesses:

Power Washing Activities

- Direct discharge to landscape areas, prevent discharge from leaving site, contain wash water and dispose into sanitary sewer or landscape area

Mobile carpet, drape or furniture cleaning

- Direct discharge to landscape areas, prevent discharge from leaving site, discharge wash water to sanitary sewer, use of environmentally safe products

Mobile equipment repair, maintenance, fueling or cleaning

- contain runoff and vacuum all liquids and debris

Pest control services

- Do not apply pesticide within 24-hours of forecasted rain above 50% chance, try to minimize use, and use products according to their instructions

Cement mixing or cutting

- contain runoff and vacuum all liquids and debris

Masonry

- contain pollutants onsite, cover materials, wash out in landscape areas

Mobile painting and coating

- contain pollutants onsite, cover materials, wash out in landscape areas

Landscaping

- contain fertilizers onsite, cover materials, blow debris back onto landscape areas and not into street

Pool and Fountain Cleaning

- discharge to sanitary sewer or landscape areas, remove chlorine and other pollutants before discharge into MS4

Portable Sanitary Services

- contain runoff and vacuum all liquids and debris

Mobile Pet Services

- disposal of hair and other solids in proper waste containers, dispose of waste water into sanitary sewer

Power Washing Services

- Direct discharge to landscape areas, prevent discharge from leaving site, contain wash water and vacuum all liquids and debris

Plumbing Services

- proper disposal of waste, good house keeping

8.3.2 Notification and Response {F.1.b.(3)(iii)}

Each Copermittee notifies all Mobile Businesses based within, or discovered operating within their jurisdiction concerning the minimum Source Control and Pollution Prevention BMPs that they must implement when conducting their activities. The City of Murrieta identifies Mobile Businesses based within, or operating within their jurisdictions by the following methods:

When put on notice by staff or a third-party of a potential violation originating from a Mobile Business that is not already being responded to by another responsible agency (e.g., other Copermittee), the City of Murrieta investigates and take the actions as described in Section 3.5.3.

8.3.3 Database {F.1.b.(3)(a)}

The Copermittees maintain a list of known Mobile Businesses and their bases of operation in the Industrial/Commercial Facility Database described in Section 8.1. The database will assist in identifying the information necessary for the Copermittees to take enforcement action.

8.4 Industrial and Commercial Facility Inspections {F.3.b.}

The City of Murrieta conducts Industrial and Commercial site inspections for compliance with its ordinances, permits, and the 2010 MS4 Permit.

8.4.1 Inspection Frequencies {F.1.B.(4)(B)

At a minimum all sites determined by the City of Murrieta to pose a high threat to water quality (Section 8.1.3) are inspected annually. All other inventoried sites are inspected at least once during a five year period.

8.4.2 Inspection Procedures {F.3.b.(4)}

When conducting facility/business inspections, at a minimum, the following are addressed:

- Review of BMP implementation plans not including Project-Specific WQMPs required pursuant to Section F.1.d of the 2010 SMR MS4 Permit, if the site uses or is required to use such a plan;
- Review of facility monitoring data, if the site monitors its Runoff;
- Check for coverage under the General Industrial Permit NOI and/or WDID, if applicable;
- Assessment of compliance with City of Murrieta ordinances and City of Murrieta issued permits related to Runoff;

- Assessment of the implementation, maintenance and effectiveness of the designated minimum and/or enhanced BMPs;
- Visual observations for Non-Stormwater discharges, potential Illicit Connections, and potential discharge of Pollutants in Stormwater Runoff; and
- Education and training on Stormwater Pollution prevention, as conditions warrant.

8.4.3 Inspection Program Approach

The City of Murrieta ensures that all inventoried facilities are inspected pursuant to the frequencies and procedures identified in Sections 8.4.1 and 8.4.2, respectively. These requirements are met through a combination of approaches as described below.

8.4.3.1 Compliance Assistance Program (CAP)

The City will conduct the business inspections program similar to the County's Department of Environmental Health implements the CAP for oversight and inspection of Industrial and Commercial Facilities. This is the baseline inspection program for the SMR.

The CAP involves a detailed Stormwater compliance survey for facilities that must secure a Hazardous Materials permit for storing, handling or generating such materials and for retail food facilities. Many types of Industrial and Commercial Facilities are inspected by the County's Department of Environmental Health Hazardous Materials Management staff including those that conduct automobile mechanical repair, maintenance, fueling, or cleaning operations, automobile or other vehicle body repair or painting operations, and painting or coating operations.

Blank copies of the forms used by the County's Department of Environmental Health when conducting these stormwater compliance surveys are included in Appendix F. Completed survey forms are forwarded to the District and the appropriate Copermittee. The respective jurisdiction's representative identifies those surveys that indicate non-compliance to initiate a follow-up inspection.

The CAP includes educational outreach to the inspected facilities and completion of a detailed Stormwater compliance survey. In conducting a facility inspection, if it appears that the facility may be required to have coverage under the Industrial General Permit and the facility operator indicated that a NOI or SWPPP is not onsite, the inspector provides the facility operator with an informational sheet on the requirements of the Industrial General Permit and makes a note on the compliance survey that the NOI or SWPPP was not available onsite. The City of Murrieta also verifies the SIC codes of each Industrial facility to ensure that the Industrial General Permit is obtained where necessary.

8.4.3.2 Third Party Certifications {F.1.d(4)(c)}

The City of Murrieta may in the future propose to develop and implement a third party certification program subject to San Diego Regional Board Executive Officer acceptance. This program would verify Industrial and Commercial Site/source compliance with the City of Murrieta's ordinances, permits, and this Order. To the extent that third party certifications are conducted to fulfill the requirements of Section F.3.b.(4) of the 2010 SMR MS4 Permit, the City of Murrieta will retain responsibility for compliance with the 2010 SMR MS4 Permit and will be responsible for conducting and documenting quality assurance and quality control of the third-party certifications.

If the City of Murrieta proposes a third party certification program it will include the following:

(i) A description of the procedures and measures for quality assurance and quality control;

(ii) A listing of sites/sources that may and may not participate in the program;

(iii) The representative percentage of certifications that would qualify to satisfy the inspection requirements in Section F.3.b(4)(c) of the 2010 SMR MS4 Permit;

(iv) Photo documentation of potential stormwater violations identified during the third party inspection;

(v) Reporting to the City of Murrieta of identified significant potential violations, including imminent or observed Illegal Discharges, within 24 hours of the third party inspection;

(vi) Reporting to the City of Murrieta of all findings within one week of the inspection being conducted; and

(vii) City of Murrieta follow-up and/or enforcement actions for identified potential Stormwater violations within two business days of the potential violation report receipt.

Based upon site inspection findings, the City of Murrieta will implement all follow-up actions and enforcement necessary to comply with the 2010 SMR MS4 Permit.

8.4.4 Regional Board Inspections {F.1.d.(4)(c)}

To the extent that the San Diego Regional Board has conducted an inspection of an Industrial Site during a particular year, the requirement for the responsible Copermittee to inspect this facility during the same year is deemed satisfied.

8.4.5 Tracking Inspections

The City of Murrieta tracks the number of inspections for the inventoried Industrial and Commercial Sites/sources throughout the reporting period to verify that the sites/sources are inspected at the minimum frequencies listed in the 2010 SMR MS4 Permit.

8.4.6 Enforcement of Industrial and Commercial Sites/Sources

The City of Murrieta enforces its Stormwater Ordinance for all Industrial and Commercial Sites/sources as necessary to maintain compliance with the 2010 SMR MS4 Permit. The Enforcement/Compliance Strategy is described in Section 3.5 of this JRMP.

8.4.7 Reporting of Non-Compliant Sites {F.1.d(6)}

The City of Murrieta provides annual notification to the San Diego Regional Board, prior to the commencement of the Wet Season, of any unresolved high level enforcement action (as defined in the City of Murrietas' JRMP) that poses a significant threat to water quality in its jurisdiction as a result of violations of the Stormwater Ordinance.

9.0 RESIDENTIAL SOURCES {F.c}

The City of Murrieta implements the following residential program, which has been designed to meet the requirements of Section F.3.c. of the 2010 SMR MS4 Permit, help prevent Illicit Discharges into the MS4, reduce residential discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent residential discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

9.1 Program Approach

The City of Murrieta actively encourages the use of Pollution Prevention methods by residents, particularly for those high priority residential areas and activities described above. The following describes the programs implemented by the City of Murrieta:

- Training City Personnel who have regular contact with residential areas (e.g., park maintenance personnel, street sweepers, code enforcement officers, etc.) to serve as informal inspectors performing field reviews. The training programs are further described in Section 12.
- Participation in County-wide Public Education Efforts including (as further described in Section 11.
    - Maintenance of brochures on various topics pertinent to the high priority residential activities described in Section 11.
    - Maintenance of a public education website
    - Issuance of quarterly e-newsletters
    - Outreach at Community events
    - Outreach at Home Improvement stores
    - Elementary School assembly presentations
    - Maintenance of a "1-800" hotline for reporting of complaints or illegal discharges

9.2 High Priority Residential Areas and Activities {F.3.c.(1)}

The 2010 SMR MS4 Permit identifies the following residential activities as posing a high threat to water quality:

- Automobile repair, maintenance, washing and parking.
- Home and garden care activities and product use (pesticides and fertilizers);
- Disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, cleaning products);
- Any residential areas tributary to and within the same hydrologic subarea as a CWA Section 303(d) Impaired water body, where the residence generates Pollutants for which the water body is Impaired; and

- Any residential areas within or directly adjacent to or discharging directly to Receiving Waters within an ESA.

9.3 Designated BMPs {F.3.c.(2)(b)}

The City of Murrieta has designated a set of minimum BMPs for high-threat-to-water-quality residential areas and activities within their jurisdiction to reduce the discharge of Pollutants to the MEP. The minimum BMPs, all of which are Pollution Prevention BMPs, are:

Table 9-1: Designated Residential BMPs

	Area or Activity	Designated BMPs	Reference Material
A	Residential: Automobile repair, maintenance, washing and parking	• Collect and properly dispose of automotive fluids and other waste • Clean up spills using dry cleanup methods where possible • Store Hazardous Materials away from rain and Runoff • Avoid hosing down parking areas • Prevent all leaks and/or spills from entering the street or MS4	**Brochures (See Section 11):** • Automotive Maintenance and Car Care Brochure • Outdoor Cleaning **CASQA BMP Fact Sheets:** • SC-20 • SC-21 • SC-22 • SC-43
B	Home and garden care activities and product use (pesticides, herbicides and fertilizers)	• Prevent irrigation runoff • Store and apply pesticides, fertilizers and other chemicals in accordance with their labeling • Avoid applying pesticides, herbicides and fertilizers before forecasted rain	**Brochures (See Section 11):** • Landscape and Garden • 10 Ways to Save Water Outdoors **CASQA BMP Fact Sheets:** • SC-73 • SD-10 • SD-12

C	Disposal of trash, pet waste, green waste, and Household Hazardous Waste (e.g., paints, cleaning products)	• Properly dispose of pet waste • Collect green waste and never blow such waste into the street, gutter or MS4 • Never dispose of Waste in a street, gutter or MS4 • Take Household Hazardous Waste to a designated collection center	• **Brochures (See Section 11):** • After the Storm • What's the Scoop • Tips for Horse Care • Landscape and Garden • Pools, Spas and Fountains **HHW and ABOP Collection Events** http://www.rivcowm.org/opencms/hhw/index.html **Videos:** • Animal Care • Household Hazardous Waste • Managing your Lawn and Garden • Outdoor Activities

The residential activities described in Table 9-1 above are assumed to occur with equal likelihood in all residential areas within the City of Murrieta's jurisdiction. The implementation of the residential program and the minimum BMPs designated above is therefore designed to address these activities on a City wide basis. This includes addressing Pollutants from Residential areas that may be tributary to and potentially impacting a CWA Section 303(d) Impaired water body, and for addressing residential discharges into ESAs.

The above list of residential areas and activities and associated BMPs may be updated by the City of Murrieta in response to the Santa Margarita Watershed Water Quality Workplan assessments.

The City of Murrieta requires implementation of the minimum BMPs and any additional measures necessary to comply with the Prohibitions and Receiving Water Limitations and restrictions on Non-Stormwater discharges as specified in the 2010 SMR MS4 Permit.

9.4 Hazardous Waste BMPs {F.3.c.(2)(c)}

The City of Murrieta participates in regional activities to facilitate the proper collection and management of used oil, Toxic and Hazardous materials, and other household Wastes. This includes assisting in the distribution of information regarding the dates and locations of temporary and permanent HHW and ABOP collection events and facilities, financial support of HHW and ABOP collection facilities and events, and curbside or special collection sites managed by the Copermittees or private entities, such as solid waste haulers.

9.5 Common Interest Areas, Home Owner Associations and Mobile Home Parks {F.3.c.(4)}

The City of Murrieta requires implementation of effective management measures in CIAs, HOAs and mobile home parks (MHPs) to ensure that Runoff within and from these areas meets the objectives of the

2010 SMR MS4 Permit. The designated BMPs for residential CIAs, HOAs, and MHPs are as described in Section 9.3. Additional BMPs may be required based on a review of pertinent factors, including:

- Maintenance duties and procedures typically used by CIA/HOA maintenance associations within its jurisdiction;
- Whether streets and storm drains are publicly or privately owned within the CIA/HOA or MHP;
- Whether the CIA/HOA or MHP has been identified as a high priority residential area based on an evaluation of the site potential to generate Pollutants contributing to a 303(d) listed waterbody or an observed Action Level exceedance; and
- Other activities conducted or authorized by the HOA that may pose a significant risk to inland Receiving Waters.

Additional BMPs that may be applicable to CIAs, HOAs, and/or MHPs (in addition to those referenced in Section 9.3) are:

Table 9-2: Additional BMPs for CIAs, HOAs, and MHPs

	Area or Activity	Designated BMPs	Reference Material
A	Outdoor Cleaning Activities	• Clean up spills using dry cleanup methods where possible • Avoid hosing down parking areas • Prevent all wash water, leaks and/or spills from entering the street or MS4	**Brochures (See Section 11):** • Outdoor Cleaning **CASQA BMP Fact Sheets:** • SC-43
B	Community Pools / Fountains	• Properly maintain community pools and/or fountains to avoid Illegal Discharges • Properly store all chemicals and equipment used in maintaining the pools/fountains	• **Brochures (See Section 11):** • Pools, Spas and Fountains **CASQA BMP Fact Sheets:** • SC-72
C	Community streets, roads and parking lots	• Sweep streets/roads as necessary to prevent accumulated trash or debris from entering the MS4 • Schedule repairs for Dry Weather, and protect nearby storm drain inlets for repairs that must occur during the Wet Season	**CASQA BMP Fact Sheets:** • SC-43 • SC-70

D	Community-owned MS4	• Regularly inspect and remove litter and/or other debris from inlets- before the Wet Season • If there is evidence of Illegal Discharges or dumping, attempt to find and eliminate the source. Refer to the local code enforcement agency if necessary. • Post no-dumping signs in areas where trash or other illegal dumping accumulates	**CASQA BMP Fact Sheets:** • SC-10 • SC-74

9.6 Enforcement {F.3.c.(3)}

If during an inspection in response to a complaint, a Code Enforcement inspector observes that a residence or a CIA/HOA/MHP is non-compliant with the City of Murrieta Stormwater Ordinance, (including the prohibition of non-exempt Non-Stormwater discharges), City of Murrieta or Code Enforcement department begins enforcement procedures. Procedures for enforcement of the Stormwater Ordinance is described in Section 3.5 and the process for elimination of IC/IDs is described in Section 4.

10.0 RETROFITTING EXISTING DEVELOPMENT{F.3.D.}

The goals of the Existing Development Retrofitting program are to address the impacts of existing development through retrofit projects that reduce impacts from Hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of Water Quality Standards. Where feasible, at the discretion of the City of Murrieta, the Existing Development Retrofitting Program may be coordinated with flood control projects and other infrastructure improvement programs.

To facilitate consistent implementation of the Existing Retrofit Program in the Santa Margarita Region, the Copermittees prepared the Santa Margarita Region Retrofit Program Study, which is available at http://rcflood.org/NPDES/SantaMargaritaWS.aspx. The components of this Retrofit Program Study represent an adaptive approach to meeting the Retrofit requirements of the MS4 Permit.

The Retrofit Program itself consists of a multi-step process to identify and ultimately prioritize the actions and efforts that are best suited to addressing specific water quality issues in the Santa Margarita Region. The steps in this Retrofit Program enable the Copermittees first to identify water quality, watershed, infrastructure, or other issues or Conditions of Concern; second to develop context for the issues; and finally to use a series of tools, called the "Retrofit Program Framework," to identify the best strategy or strategies to address them, up to and including Retrofit projects. The tools can be applied and re-combined as the Copermittees' programs evolve and develop, to identify Retrofit project needs, priorities, and opportunities, and to select and design appropriate Structural or Non-Structural BMPs that may provide the most cost-effective reduction measures for Pollutants or Conditions of Concern.

10.1 Identification of Conditions of Concern

The potential issues which may trigger a Retrofit evaluation are listed in Table 10-1 below, and correspond to the "Problem or Condition (NAL/SAL Exceedance)" column headings in the BMP Menu, (Appendix B of the Retrofit Program Study).

Table 10-1: Observations Potentially Triggering a Retrofit Program Framework Analysis

Irrigation Runoff	
Hydrologic modification/channel instability	
Illicit Connection/Discharge	
Action Level Exceedances or TMDLs related to:	
Metals	Pesticides
Organics	Nutrients
Oil & grease	Bacteria
Sediment	

10.2 Source Assessment & Identification

When the City of Murrieta identifies a problem identified in Table 10-1, Step 2 of the Retrofit Program Framework identifies that the City of Murrieta conduct source identification in an attempt to determine the source and/or areas of development that may potentially be retrofit. To aid in the source identification, the Retrofit Program Study provides land use maps as well as information about Pollutants associated with those land uses, and factors that can be used to help guide a Copermittee to narrow down potential sources.

The procedures for source identification are described in Section 4.4.2 of this JRMP.

One possible outcome of the source assessment could be identification of a single point source. Under this scenario, the City of Murrieta would implement JRMP enforcement programs to eliminate the source of the issue. The other possible outcome is that there is not an identifiable point source of the issue. In this instance, Step 3 of the Retrofit Program Framework is to assess the current JRMP program implementation relative to the Pollutant or condition of concern, its likely source, the land use and management setting, and the Copermittees responsibilities and initiatives that may or should be able to address the issue. The purpose of this step is to assess whether the problem or condition may be mitigated through more effective or aggressive implementation of its existing authorities and programs in the JRMP, or if supplemental actions – such as Retrofit projects (Non-Structural and/or Structural) – may be required. The results of this evaluation may reveal that the existing JRMP program implementation could be enhanced to address the issue; in that case any deficiencies or needed improvements in City of Murrieta programs would be addressed and reported in the JRMP Annual Report.

If the JRMP programs are being adequately implemented the City of Murrieta can use Steps 4 and 5 of the Retrofit Program Framework, to evaluate structural and non-structural Retrofit BMPs. An early step in the evaluation would be to asses if Non-Structural Retrofit BMPs would be an appropriate solution. In instances where a Non Structural Retrofit BMP is not a feasible option to address the identified problem and where the Watershed Workplan has identified the problem as a Priority 1 issue, City of Murrieta can use the BMP menu to evaluate Structural BMPs.

10.3 Identification of Candidate Areas for Retrofitting *(F.3.d.1.)*

Existing areas of development (i.e., municipal, industrial, commercial, residential) within the City of Murrieta have been identified and inventoried as candidates for Retrofitting in the Santa Margarita Region Retrofit Program Study. Potential Retrofitting candidates include but are not limited to:

1. Areas of development that generate Pollutants of Concern to a TMDL or an ESA;
2. Receiving Waters that are channelized or otherwise hardened;
3. Areas of development tributary to Receiving Waters that are channelized or otherwise hardened;
4. Areas of development tributary to Receiving Waters that are significantly eroded; and

5. Areas of development tributary to an Area of Special Biological Significance (ASBS) or SWQPA.

The potential retrofitting candidate areas are identified in Figure 20 of the Santa Margarita Region Retrofit Program Study. When a specific problem has been identified per the Retrofit Program Framework, this initial inventory will be tailored to identify and prioritize focused areas of development as necessary during the source identification process described in Section 10.4.

10.4 Prioritization of Candidate Areas for Retrofitting *{F.3.d.2.}*

The inventoried areas of existing development that are tributary to the identified Condition of Concern will be evaluated and ranked as part of Step 4 and/or Step 5 of the Retrofit Program Framework, as necessary, to prioritize Retrofit projects. Criteria for evaluation include, but are not limited to:

1. Feasibility;
2. Cost effectiveness;
3. Pollutant removal effectiveness, including reducing Pollutants exceeding Action Levels;
4. Tributary area potentially treated;
5. Maintenance requirements;
6. Landowner cooperation;
7. Neighborhood acceptance;
8. Aesthetic qualities;
9. Efficacy at addressing concern; and
10. Potential improvements on public health and safety.

A prioritized inventory of existing areas of development identified as candidates for retrofitting will be developed and provided in the JRMP Annual Report, as applicable in response to steps 4 and 5 of the Retrofit Program Framework.

10.5 Incorporation into Watershed Workplan *{F.3.d.3.}*

The City of Murrieta will consider the results of the Retrofit Program Framework, when applicable, in prioritizing Watershed Work Plans for the following year in accordance with Section G.1 of the 2010 SMR MS4 Permit and in assessing the JRMP program effectiveness in accordance with Section J of the Permit.

Evaluation of Retrofit BMP options will consider program jurisdiction (e.g., regulated construction sites vs. agricultural operations with waivers), evaluation of whether Non-Structural Retrofit BMP approaches are sufficient to address the problem, and, if necessary, evaluation of sites and BMPs for structural

Retrofit projects. As noted above, the methodology in the Retrofit Program Framework prioritizes the use of Non-Structural BMPs, which can be implemented far more quickly and often at a much lower cost.

Structural BMPs are assessed where the identified issue is identified as a priority 1 issue in the Watershed Workplan, and the Non-Structural BMPs are insufficient to address the problem. Highly feasible projects expected to benefit water quality will be given a high priority to implement Source Control and Treatment Control BMPs. Where Structural BMPs are proposed and where feasible, the Retrofit projects may be designed in accordance with the WQMP requirements within Sections F.1.d.(3) through F.1.d.(8) and the Hydromodification requirements in Section F.1.h. of the 2010 SMR MS4 Permit.

10.6 Encouraging Private Retrofitting Projects *{F.3.d.4.}*

The City of Murrieta will cooperate with private landowners to encourage site specific Retrofitting projects, where identified as necessary to address a pollutant or condition of concern pursuant to steps 4 and 5 of the Retrofit Program Framework, or where deemed appropriate by the City of Murrieta as part of enforcement measures where a source is found. The following practices will be considered in cooperating and encouraging private landowners to Retrofit their existing development, which are included in the BMP Menu, (Appendix B of the Retrofit Program Study):

1. Demonstration Retrofit projects; Retrofits on public land and easements that treat Runoff from private developments;
2. Education and outreach;
3. Subsidies for Retrofit projects;
4. Requiring Retrofit projects as enforcement, mitigation or ordinance compliance;
5. Public and private partnerships; and
6. Fees for existing discharges to the MS4 and reduction of fees for Retrofit implementation.

10.7 Tracking Retrofit BMPs *{F.3.d.(5)}*

The known completed Retrofit BMPs will be maintained in the watershed-based database established to track and inventory post-construction Structural BMPs in accordance with Section F.1.f. of the 2010 SMR MS4 Permit. Retrofit BMPs on publicly owned properties will be inspected to verify that they are operating effectively and have been adequately maintained per Section F.1.f of the 2010 SMR MS4 Permit. Privately owned Retrofit BMPs will be inspected as needed.

10.8 Regional Mitigation Projects *{F.3.d.(6)}*

Where constraints on Retrofitting preclude effective BMP deployment on existing developments at locations critical to protect Receiving Waters pursuant to Step 5 of the Retrofit Program Framework, a regional mitigation project may be proposed to improve water quality. Such regional projects may include but are not limited to:

1. Regional water quality treatment BMPs;

2. Urban creek or wetlands restoration and preservation;
3. Daylighting and restoring underground creeks;
4. Localized rainfall storage and reuse to the extent such projects are fully protective of downstream water rights;
5. Hydromodification projects; and
6. Removal of invasive plant species.

11.0 PUBLIC EDUCATION COMPONENT{F.6.}

Developing programs to increase public awareness and to involve the public can be an effective method for controlling Pollution associated with Runoff. Emphasizing the relevant impact of Runoff to target audiences increases the likelihood that the messages will be noticed and that the audience will support and participate in program implementation. The Riverside County Permittees have developed a County-wide Public Education and Outreach Program that is implemented by the District.

To leverage Copermittee resources, the Public Education and Outreach Program may partner with other entities including Riverside County's Waste Management Department, Western Riverside Council of Governments, and other County-wide Stormwater public education programs in Southern California, the Riverside-Corona Resource Conservation District, and others to promote conservation, Pollution Prevention and environmental awareness. The public education program may also expand outreach opportunities by collaborating with entities such as Riverside County's Agricultural Commissioner and University California Cooperative Extension to promote proper use of pesticides and herbicides to specific target groups such as pesticide applicators and home gardeners.

The Public Education and Outreach Program maintains an Internet website that provides information to residents and businesses about Stormwater management and offers Stormwater Pollution Prevention activities. The website also provides a materials order form for educational materials, and has a tracking mechanism for the number of queries. The website address is http://rcflood.org/stormwater/.

11.1 Target Audiences

The City of Murrieta ensures that appropriate education and outreach is available to the following target audiences:

- Copermittee departments and personnel
- New Development / Redevelopment Project Applicants, Developers, Contractors, property owners, and other responsible parties
- Construction Site owners and operators
- Commercial Facility owners and operators
- Industrial Facility owners and operators
- Residential community and general public

11.2 Education of Public Audiences

11.2.1 General Education

The City of Murrieta, through the Implementation Agreement described in Section 3.2.1, coordinates with the other Copermittees to develop and implement County-wide educational activities through the regional 'Only Rain Down the Storm Drain' program implemented by the District. Where necessary those regional

activities are supplemented by the City of Murrieta with additional localized educational / outreach activities.

In general, these education programs educate each target audience on the following topics, as appropriate and applicable to the target audience's potential Stormwater and Non-Stormwater discharges to the MS4:

(a) Applicable water quality laws, regulations, permits, and requirements;

(b) BMPs;

(c) General Runoff concepts;

(d) Existing water quality, including local water quality conditions, Impaired waterbodies and ESAs; and

(e) Other topics, as determined by the Copermittee(s), such as public reporting mechanisms, water conservation, LID techniques, and public health and vector issues associated with Runoff.

In addition, the City of Murrieta implements educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.

11.2.2 Target Audience Topics

The City of Murrieta ensures that their education program provides the following information

New Development / Redevelopment and Construction Sites {F.6.b.(2)}

As early in the planning and development process as possible and all through the permitting and construction process, the City of Murrieta notifies parties responsible for the construction project about the importance of educating all construction workers in the field about Stormwater issues and BMPs, in addition to the general topics under Section F.6.a.(1) of the 2010 SMR MS4 Permit.

Commercial and Industrial Sites / Sources {F.6.b.(3)}

At least once during the five-year period of this Order, the City of Murrieta will notify the owner/operator of each of its inventoried commercial and industrial site/source of the BMP requirements applicable to the site/source.

Residential and General Public {F.6.b.(4)}

The City of Murrieta, through the implementation agreement, collaborates with the other Copermittees to fund the development and implementation of the regional 'Only Rain Down the Storm Drain' public education program. One of the goals of this program is to educate residential and general public target communities on potential Pollutant generating activities (e.g., car washing, mobile operations, yard maintenance) and Pollutant generating products (e.g., pesticides, fertilizers, household chemicals). The target audiences of the residential and general public education programs include underserved target

audiences (e.g., disadvantaged communities), residents and managers of CIA/HOA areas, and owners and residents of MHPs.

11.2.1 Methods

The Table 11-1 describes the public education and outreach methods that target public audiences:

Table 11-1: Public Education Education/Outreach Methods

Target Audience	JRMP Program Areas Addressed	Education / Outreach Methods
New Development / Redevelopment Project Applicants, Developers, Contractors, Property Owners, and other Responsible Parties	• F.1 • F.6.a • F.6.b.(2)	**Training** • Regional SMR WQMP Launch Training (upon approval of revised SMR WQMP) • Regional HMP Launch Training (upon approval of HMP) **Guidance Documents** • SMR WQMP and HMP Guidance • Regional LID BMP Design Handbook (http://rcflood.org/npdes/lidbmp.aspx) • CASQA Low Impact Development Manual for Southern California (https://www.casqa.org/LID/tabid/240/Default.aspx) • CASQA Stormwater BMP Handbooks (http://www.cabmphandbooks.com/) **Applications / Forms** • Project Application form • WQMP Applicability Checklist • **Electronic Outreach** • Regional Quarterly E-newsletters • Website **Other** • Regional Quarterly E-newsletters

Target Audience	JRMP Program Areas Addressed	Education / Outreach Methods
Construction Site Owners and Operators	• F.2. • F.6.a. • F.6.b.(2)	**Applications / Forms** • Grading Permit Application form • Construction Checklist (a sample is provided in WQMP Chapter 5) • Other **Print Material** • After the Storm • General Construction site supervision • Outdoor Cleaning Activities • Construction Poster • others **Electronic Outreach** • Regional Quarterly E-newsletters • Website • Other **Other** • Other
Commercial / Industrial Owners and Operators	• F.3.b. • F.6.a. • F.6.b.(3)	**Applications / Forms** • Business Registration form • Other **Direct Outreach** • Business Partnerships with garden centers / nurseries, paint stores, hardware stores, home improvement stores, and pet facilities, including training for store staff on specific stormwater / BMP issues • Other **Print Material** • After the Storm • Did you know your facility may need a stormwater permit? • Automotive Maintenance and Car Care • Outdoor Cleaning Activities • Food Service Industry • Industrial / Commercial Facilities • Landscape and Garden • Pools, Spas and Fountains • Others **Electronic Outreach** • Regional Quarterly E-newsletters • E-blasts to mobile service providers • Website • Other **Other** • Other

Target Audience	JRMP Program Areas Addressed	Education / Outreach Methods
Residential Community and General Public	• F.3.c. • F.6.a. • F.6.b.(4)	**Direct Outreach** • Attendance at region-wide community events • Attendance at local community events • Elementary School Presentations • Outreach at Home Improvement Stores • Other **Print Material** • After the Storm • 10 Ways to Save Water Outdoors • Landscape and Garden • Living on the Edge • Stream Stabilization Fact Sheet • Tips for Horse Care • Septic Tank Systems • Automotive Maintenance and Car Care • Outdoor Cleaning Activities • Pools, Spas and Fountains • What's the Scoop? • Tear sheets on various BMP topics placed in stores as part of Commercial / Industrial outreach • others **Electronic Outreach** • Regional Quarterly E-newsletters • Website • Other **Other** Other

12.0 CITY OF MURRIETA STAFF TRAINING {F.6.}

The City of Murrieta's education program ensures that City of Murrieta staff and contractors (and Planning Boards and Elected Officials, if applicable) responsible for implementing the requirements of the 2010 SMR MS4 Permit have an understanding of the following topics as applicable to their responsibilities.

(i) Applicable water quality laws and regulations;

(ii) The potential effects and impacts that Copermittee departments and personnel activities related to their job duties can have on water quality);

(iii) Plan review policies and procedures to verify consistent application;

(iv) Methods of minimizing impacts to receiving water quality resulting from development, construction, and other potential Pollutant generating activities;

(v) Proper implementation of erosion and sediment control, Source Control, Treatment Control, and other BMPs to minimize the impacts to Receiving Water quality resulting from development, construction, and other potential Pollutant generating activities;

(vi) Applicable recordkeeping and tracking mechanisms; and

(vii) Inspection and enforcement procedures, BMP implementation, and review of monitoring data

12.1 Methods

The following table describes the educational activities conducted that target City of Murrieta staff:

Table 12-1: City of Murrieta **Staff Education/Outreach Methods**

Target Audience	JRMP Program Area Addressed	Education / Outreach Methods
Management	All	• Staff Meetings • Regional City Manager coordination meetings • other
NPDES Coordinator	All	• SMR Technical Advisory Committee (TAC) Meetings • SMR Copermittee staff meetings • Regional NPDES training (all applicable modules) • others

Target Audience	JRMP Program Area Addressed	Education / Outreach Methods
Development Planning Staff	• F.1. • F.6.a. • F.6.b.(1)	• Regional WQMP Training • HMP Training (to be developed upon approval of HMP) • Copermittee staff training • others
Construction Site Approval, Inspection and Enforcement	• F.2. • F.4. • F.6.a. • F.6.b.(1)	• Regional Construction Inspection Training • Copermittee staff training • others
Municipal Maintenance	• F.3.a. • F.4. • F.6.a. • F.6.b.(1)	• Regional Municipal Maintenance Training • Pesticide applicator certification • Copermittee staff training • others
Code Enforcement	• F.3.b. • F.4. • F.6.a. • F.6.b.(1)	• Regional Commercial / Industrial Inspection Training • Copermittee staff training • others

12.2 Frequency {F.6.b.(1)(b)(2)}

The City of Murrieta trains its staff responsible for oversight and conducting storm water compliance inspections and enforcement of construction activities (e.g. construction, building, code enforcement, grading review staffs, inspectors, and other responsible construction staff) annually prior to the rainy season.

The City of Murrieta trains its staff responsible for conducting stormwater compliance inspections and enforcement of Industrial and Commercial Facilities at least once a year.

13.0 MONITORING PROGRAM {N.}

13.1 Overview

The District, through the Implementation Agreement (Section 3.2.1), implements the Santa Margarita Monitoring Plan on behalf of the City of Murrieta. The Monitoring Plan, available at: http://rcflood.org/NPDES/Monitoring.aspx, addresses the City of Murrieta's responsibilities in the Receiving Waters, MS4 Discharge and Reporting Program No. R9-2010-0016 (MRP, Attachment E to the 2010 SMR MS4 Permit).

Additionally, the City of Murrieta conducts source identification monitoring as required per Section II.B.2. and II.C.2. of the MRP, in response to an exceedance of an Action Level.

The Major MS4 Outfalls will be tested in accordance to the 2010 SMR MS4 Permit. A list will be created and tracked as part of the monitoring program.

13.2 Non-Stormwater Dry Weather Action Levels {C.}

The District will notify the City of Murrieta of exceedances of Analytical results (either laboratory or field screening) that exceed the NALs presented in Table 3 of the 2010 SMR MS4 Permit. In response to such an exceedance, the City of Murrieta will investigate and seek to identify the source of the exceedance in a timely manner following the procedures described in Section 4.4.2 and 4.4.3. However, if the City of Murrieta identifies a number of NAL exceedances that prevents it from adequately conducting source investigations at all sites in a timely manner, then the City of Murrieta will submit a prioritization plan and timeline that identifies the timeframe and planned actions to investigate and report its findings on all of the exceedances to the Regional Board.

The 2010 MS4 Permit notes that neither the absence of exceedances of NALs nor compliance with required actions following observed exceedances, excuses any non-compliance with the requirement to effectively prohibit all types of unauthorized Non-Stormwater discharges into the MS4 or any non-compliance with the prohibitions in the MS4 Permit.

During any Annual Reporting period in which one or more exceedances of NALs have been documented the City of Murrieta will report a description of whether and how the observed exceedances did or did not result in a discharge from the MS4 that caused, or threatened to cause or contribute to a condition of Pollution, Contamination, or Nuisance in the Receiving Waters.

13.3 Stormwater Action Levels {D.}

The District implements the Wet Weather MS4 Discharge Monitoring program and annually evaluates the data compared to the Stormwater Action Levels (SALs) identified in Table 4 of the 2010 SMR MS4 Permit. At each monitoring station, a running average of 20% or greater of exceedances of any discharge of stormwater from the MS4 to Waters of the U.S. that exceed the SALs for each of the Pollutants listed in Table 4 (below) in Receiving Waters receiving discharges from the City of Murrieta's MS4 facilities requires the City of Murrieta to affirmatively augment and implement all necessary stormwater controls and measures described in this JRMP to reduce the discharge of the associated class of Pollutants(s) to the

MEP. The City of Murrieta will utilize the exceedance information when adjusting and executing its annual work plans. The magnitude, frequency, and number of constituents exceeding the SAL(s), in addition to Receiving Water quality data and other information, will be considered when prioritizing and reacting to SAL exceedances in an iterative manner.

Glossary

Name	Definition
2010 SMR MS4 Permit	Order R9-2010-0016, an NPDES MS4 Permit issued by the San Diego Regional Board.
Action Level	See Non-Stormwater Action Levels and Stormwater Action Levels
Beneficial Use	The uses of water necessary for the survival or well being of man, plants and wildlife. These uses of water serve to promote the tangible and intangible economic, social and environmental goals. "Beneficial Uses" of the waters of the State that may be protected include, but are not limited to, domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing Beneficial Uses are uses that were attained in the surface or groundwater on or after November 28, 1975; and potential Beneficial Uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under Federal law. [California Water Code Section 13050(f)].
Best Management Practice (BMP)	Any procedure or device designed to minimize the quantity of Pollutants that enter the MS4 or to control stormwater flow. See Chapter Two.
Bioretention BMP	A type of LID Retention BMP that is designed to capture the Design Capture Volume and absorb that volume entirely into a biologically active soil media. Water retained in this soil media is then evapotranspired by plants in the BMP, or slowly allowed to infiltrate into the underlying soils. This BMP inherently maximizes both Infiltration and Evapotranspiration of Runoff based on the actual limitations of the soil and environment.
Biotreatment BMP	A type of **LID BMP** that can be used in certain circumstances when LID Retention BMPs are not feasible. These BMPs provide similar functions and benefits as LID Bioretention BMPs, such as inclusion of natural biological processes and maximizing opportunities for Infiltration and Evapotranspiration, however, they are not designed to retain the Design Capture Volume in an engineered soil media. Examples of Biotreatment BMPs include extended detention basins, bioswales and constructed wetlands.
California Stormwater Quality Association (CASQA)	Publisher of the California Stormwater Best Management Practices Handbooks, available at www.cabmphandbooks.com
Cease and Desist Order	See Stop Work Order
CEQA	California Environmental Quality Act
Citation	An official summons to appear (as before a court)
Condition of Concern	Conditions that may affect the designated Beneficial Uses of a Receiving Water

Glossary

Name	Definition
Condition(s) of Approval (COA)	Requirements a Copermittee may adopt for a project in connection with a discretionary action (e.g., approval of a subdivision map or issuance of a use permit). COAs may specify features required to be incorporated into the final plans for the project and may also specify uses, activities, and operational measures that must be observed over the life of the project.
Construction Site	Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to clearing, grading, disturbances to ground such as stockpiling, and excavation.
Copermittee	District, County and Cities of Murrieta, Temecula and Wildomar. The terms *'local Copermittee'* and *'your Copermittee'* refers to the Copermittee that has jurisdiction over the proposed **Priority Development Project**.
CWA	The Federal Clean Water Act
Design Capture Volume (VBMP)	The volume of runoff from the **Design Storm**. This is design sizing standard for LID BMPs, as well as for conventional Treatment Control BMPs whose design is based on treating a particular volume of runoff.
Design Flow Rate (QBMP)	The flow rate resulting from an hourly rainfall intensity of 0.2 inch per hour. The Design Flow Rate will depend on the types of post-development surfaces on the site. Flow-based BMP designs can only be used when implementing conventional Treatment Control BMPs.
Design Storm	The 85th percentile 24-hour storm depth, based on local historical rainfall records. See Exhibit A of the SMR WQMP.
Development Project	Any project that proposes construction, rehabilitation, redevelopment, or reconstruction of any public or private residential, industrial or commercial facility, or any other projects designed for post-construction human activity or occupation.
Directly Connected	Any impervious surface which drains into a catch basin, area drain, or other conveyance structure (such as a street) without first directing the flow across pervious areas (e.g., lawns).
Discretionary Approval	A project which requires the exercise of judgment or deliberation by the public agency or body when they decide to approve or disapprove a particular activity. Discretionary approvals are distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances or regulations. **Check with the Copermittee to determine if a particular action is considered Discretionary.**
Drainage Management Area (DMA)	Individual, discrete drainage areas that typically follow grade breaks and roof ridge lines

Glossary

Name	Definition
Drawdown Time	The time required for a detention or retention BMP to drain and return to the dry-weather condition. For detention BMPs, Drawdown Time is a function of basin volume and outlet orifice size. For infiltration BMPs, Drawdown Time is a function of basin volume and infiltration rate. For Harvest and use BMPs, Drawdown Time is a function of the cistern volume and the demand for use of captured stormwater.
Dry Season	May 1st through September 30th
Dry Weather	Weather is considered dry if the preceding 72 hours has been without precipitation.
DU	Dwelling Unit
EIATIA	Effective Impervious Area To Irrigated Area that would be required to achieve the minimum 40% long-term retention of runoff when harvesting stormwater runoff for outdoor irrigation. See Section 2 of the SMR WQMP.
EIR	Environmental Impact Report
Emergency Situation	IC/IDs that pose an immediate threat to human health or the environment. Any sewage spill over 1,000 gallons or that could impact water recreation, any spill that could impact wildlife, any Hazardous Material spill where residents are evacuated, any spill of reportable quantities of Hazardous Waste (as defined by 40 CFR 117 and 40 CFR 302), or any other spill reportable to the California Emergency Management Agency (Cal-EMA, formerly known as the Office of Emergency Services or OES) is classified as a threat to human health or the environment.
Ephemeral	Water bodies, or segments thereof, that contain water only for a short period following precipitation events.
Erosion	When land is diminished or worn away due to wind, water or glacial ice. Often the eroded debris (silt or sediment) becomes a Pollutant via Stormwater Runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building and timber harvesting.
ESA	Environmentally Sensitive Area. At minimum, as defined in the 2010 MS4 Permit, all Receiving Waters are considered ESAs.
Evapotranspiration	The process of transferring moisture from the earth to the atmosphere by evaporation of water and transpiration from plants.
Facility Pollution Prevention Plan (FPPP)	A plan that the Copermittee maintains that describes the BMPs that are implemented at their municipal facilities to reduce stormwater pollution to the MEP and prohibit illegal discharges.
Final Project-Specific WQMP	A fully completed version of the Water Quality Management Plan that must be submitted and approved prior to recordation of the final map, parcel map or issuance of building permit. See also Preliminary Project-Specific WQMP.

Glossary

Name	Definition
General Plan	Document that specifies policies that guide development.
Harvest and Use BMPs	Stormwater BMPs that capture stormwater runoff in a vault or cistern, and stores that water for later use, such as for irrigation.
Hazardous Materials	Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by the USEPA in 40 CFR 116 to be reported if a designated quantity of the material is spilled into the Waters of the U.S. or emitted into the environment.
Hazardous Waste	As defined by 40 CFR 117 and 40 CFR 302
Head	In hydraulics, energy represented as a difference in elevation. In slow-flowing open systems, such as most stormwater BMPs, this is the difference in water surface elevation, e.g., between an inlet and outlet.
Hydrograph	Runoff flow rate graphed as a function of time.
Hydrologic Soil Group (HSG)	Classification of soils by the NRCS into A, B, C and D groups according to infiltration characteristics.
Hydromodification	The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport.
Hydromodification Management Plan (HMP)	A Plan that, once developed by the Copermittees, will specify requirements that must be implemented so that projects will not cause Hydromodification.
Illegal Discharge	Defined in 40 CFR 122.26(b)(2) as any discharge to the MS4 that is not composed entirely of stormwater, except discharges pursuant to an NPDES permit, discharges that are identified in Section 4.1.2 of the JRMP, and other discharges authorized by the Executive Officer of the Regional Board.
Illicit Connection	Any unauthorized connection to the MS4 that conveys an Illicit Discharge
Impairment	Describes a condition where a waterbody is presumed by the Regional Board to not be supporting its Beneficial Uses, based on exceedances of certain water quality objectives..
Impervious Area	
Impervious surface	Any surface in the landscape that cannot effectively absorb or infiltrate urban runoff; for example, conventionally paved: sidewalks, rooftops, roads and parking areas.
Implementation Agreement	An agreement among the Copermittees that establishes the responsibilities of each Copermittee and a procedure for funding the shared costs.

Glossary

Name	Definition
Industrial Facility	Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including: those subject to the General Industrial Permit or other individual NPDES permit; Operating and closed landfills; Facilities subject to SARA Title III; and Hazardous waste treatment, disposal, storage and recovery facilities.
Infiltration BMPs	A type of LID Retention BMP where the primary treatment mechanism is through seepage of runoff into a site's underlying soil.
Infiltration Rate	Rate at which water can be added to a soil without creating runoff (in/hr).
Infraction	Violation
Integrated Pest Management (IPM)	A decision-making process for managing pests that combines biological, cultural, mechanical, physical and chemical tools, and other management practices to control pests in a safe, cost effective and environmentally sound manner that contributes to the protection of public health
Intermittent	Waterbodies, or segments thereof, that contain water for extended periods during the year, but not at all times.
JRMP	Jurisdictional Runoff Management Plan
JRMP Annual Report	Report summarizing a Copermittee's compliance information to be submitted annually to the Regional Board on or before each October 31st of each year, beginning on October 31, 2013. The reporting period for these JRMP Annual Reports must be the previous fiscal year.
LID BMPs	LID BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the Pollution of Waters of the United states through Stormwater management and land development strategies that emphasize conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. LID BMPs include retention practices that do not allow Runoff, suchas infiltration, rain water harvesting and reuse, and evapotranspiration. LID BMPs also include flow-through practices such as biofiltration that may have some discharge of Stormwater following Pollutant reduction.
LID Principles	LID Principles are Site Design concepts that help prevent or minimize the causes (or drivers) of project impacts, and help mimic the pre-development hydrology. Implementing LID Principles will help minimize the need for specific Stormwater BMPs on a project.

Glossary

Name	Definition
LID Retention BMP	A type of Stormwater BMP that is designed to store the Design Capture Volume, and avoid any discharge to downstream systems in storms up to the Design Storm. For the purposes of this WQMP, LID Retention BMPs include Infiltration BMPs, Harvest and Use BMPs, Pervious Pavement BMPs and Bioretention BMPs. See also Other LID BMPs
Low Impact Development (LID)	A stormwater management and land development strategy that emphasizes conservation and the use of onsite natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.
Major Outfall	Outfalls owned by a Copermittee with a pipe diameter of 36 inches or greater or drainage areas draining 50 acres or more. See also **Outfall.**
Maximum Extent Practicable (MEP)	Standard, established by the 1987 amendments to the Clean Water Act, for the reduction of Pollutant discharges from MS4s.
Misdemeanor	A crime less serious than a felony.
Mobile Business	Businesses that conduct services listed in section 8.1.1 but do not operate out of a fixed location.
Municipal Facility	A facility owned by a Copermittee
Municipal Separate Storm Sewer System (MS4)	A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains) as defined in 40 CFR 122.26(b)(8).
National Pollutant Discharge Elimination System (NPDES)	As part of the 1972 Clean Water Act, Congress established the NPDES permitting system to regulate the discharge of Pollutants from municipal sanitary sewers and industries. The NPDES was expanded in 1987 to incorporate permits for discharges from MS4s as well (aka MS4 Permits).
Non-Hazardous Materials	For example, food wastes, trash and debris
Non-Jurisdictional IC/ID	An IC/ID originating from a property over which the Copermittee has no applicable jurisdictional authority such as a special district (e.g., school, water, wastewater), federal, state, or tribal property.
Non-Stormwater	All discharges to and from an MS4 that do not originate from precipitation events (i.e., all discharges from an MS4 other than Stormwater). Non-Stormwater includes Illicit Discharges, non-prohibited discharges, and NPDES permitted discharges.

Glossary

Name	Definition
Non-Stormwater Action Levels	This Order includes action levels for pollutants in non-stormwater, dry weather discharges from the MS4. The non-stormwater action levels are designed to ensure that the Order's requirement to effectively prohibit all types of unauthorized discharges of non-stormwater into the MS4 is being complied with. Non-stormwater action levels in the Order are based upon numeric or narrative water quality objectives and criteria as defined in the Basin Plan, the State Water Board's Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (State Implementation Policy or SIP). An exceedance of an action level requires specified responsive action by the Copermittees. This Order describes what actions the Copermittees must take when an exceedance of an action level is observed. Exceedances of non-stormwater action levels do not alone constitute a violation of this Order but could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-stormwater discharges into the MS4 or other prohibitions established in this Order. Failure to undertake required source investigation and elimination action following an
Non-Structural BMPs	See LID Principles
Notice of Noncompliance	The Notice of Noncompliance constitutes a basic request that the property owner or facility operator rectify the condition causing or threatening to cause noncompliance
NRCS	Natural Resources Conservation Service
O&M	Operation and Maintenance. All BMPs implemented as part of a WQMP must continue to be operational and must be maintained throughout the life of the project.
Operational Source Control BMPs	Source Control programs or activities implemented by a site operator to prevent pollution. Examples include regular sweeping of parking lots and other 'housekeeping' efforts.
Other Development Projects	All Discretionary Development Projects that are not categorized as Priority Development Projects.
Other LID BMPs	Stormwater BMPs that incorporate features that provide for natural biological processes while maximizing opportunities for Infiltration and Evapotranspiration. These are distinguished from **LID Retention BMPs**, with the latter being BMPs that, in addition to the above features, are also designed to retain stormwater runoff.
Outfall	Means a Point Source as defined by 40 CFR 122.2.a, the point where a municipal separate storm sewer discharges to Waters of the U.S. and does not include open conveyances connecting two municipal separate storm sewers, pipes, tunnels or other conveyances which connect segments of the same stream or other Waters of the U.S. and are used to convey waters of the U.S. [40 CFR 122.26(b)(9)].
Permanent Source Control BMP	A type of source control BMP that is a structural part of the site, such as roofs and berms over and around trash and recycling areas.

Glossary

Name	Definition
Permeable or Pervious or Porous Pavements	Pavements for roadways, sidewalks, or plazas that are designed to infiltrate runoff *through* the pavement. Types of Permeable Pavements include pervious concrete, pervious asphalt, porous pavers and granular materials.
Pollutant	Any agent that may cause or contribute to the degradation of water quality such that a condition of Pollution or Contamination is created or aggravated.
Pollutant of Concern	Pollutants for which water bodies are listed as impaired under CWA Section 303(d), pollutants associated with the land use type of a development, and/or pollutants commonly associated with runoff.
Pollution Prevention BMP	Practices that reduce or eliminate the generation of Pollutants.
Pre-Development	Conditions that would exist naturally.
Preliminary Project-Specific WQMP	A preliminary project-specific WQMP is commonly required to be submitted with an application for entitlements and development approvals and must be approved by the Copermittee before any approvals or entitlements will be granted.
Priority Development Project	Development Projects that meet the categories and criteria identified in Table 1-1 (see 2010 SMR MS4 Permit, item F.1.d.).
Priority Pollutant of Concern	Pollutants that are associated with a proposed project and are listed as impaired under CWA Section 303(d).
Project-Specific WQMP	A plan specifying and documenting permanent LID Principles and Stormwater BMPs to control post-construction Pollutants and stormwater runoff for the life of the project, and to maintain Stormwater BMPs for the life of the project. Copermittees may require a preliminary Project-Specific WQMP submittal, to be followed by a final Project-Specific WQMP.
Proprietary Stormwater BMPs	Products designed and marketed by private businesses for treatment of stormwater.
Rainy Season	October 1st through April 30th
Rational Method	A method of calculating runoff flows based on rainfall intensity, tributary area, and a coefficient representing the proportion of rainfall that runs off. In the Rational Method Q=C*I*A as further described in Section 2 of the WQMP.
Receiving Water	Any water body that is identified in the San Diego Basin Plan. The San Diego Basin Plan is available from the San Diego Regional Board's website at www.waterboards.ca.gov/sandiego.

Glossary

Name	Definition
Redevelopment	A Development Project that involves the creation, addition and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.
Regional Water Quality Control Board (or Regional Board)	Regional Boards are responsible for implementing Pollution control provisions of the CWA and California Water Code within their jurisdiction. There are nine Regional Boards in California. The Regional Boards issued the 2010 MS4 Permit to the Copermittees on November 10, 2010.
Retrofit	Programs and projects to address the impacts of existing development through reducing the impacts from hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.
Runoff	All flows in a stormwater conveyance system that consists of the following components: (1) stormwater (wet weather flows) and (2) non-stormwater including dry weather flows.
Runoff Management Plan	A site-specific plan identifying BMPs to manage the quality and quantity of runoff from a project site.
Santa Margarita Region (SMR)	The portion of Riverside County covered by Order R9-2010-0016, an NPDES MS4 Permit issued by the Santa Diego Regional Board.
Sedimentation	The action or process of forming or depositing sediment.
Self-treating area	Natural or landscaped area (as described in Section 3.3 of the WQMP) that drains offsite without comingling with developed portions of the site.
Site Design	See **LID Principles**.
Source Control BMP	A facility or procedure to prevent Pollutants from coming into contact with rainfall and/or runoff.
Stop Work Order or Cease and Desist Order	As used in the JRMP, an order from a Copermittee to stop a particular activity.
Stormwater	Per 40 CFR 122.26(b)(13), means stormwater runoff, snowmelt runoff, and surface runoff and drainage. Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.

Glossary

Name	Definition
Stormwater Action Level	SALs were computed as the 90th percentile of the data set, utilizing the statistical based population approach, one of three approaches recommended by the State Water Board's Storm Water Panel in its report 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006)". SALs are identified in Section D of the 2010 SMR MS4 Permit. Copermittees must implement a timely, comprehensive, cost-effective stormwater pollution control program to reduce the discharge of pollutants in stormwater from the permitted areas so as not to exceed the SALs. Exceedance of SALs may indicate inadequacy of programmatic measures and BMPs required in this Order.
Stormwater Ordinance	The ordinance or set of ordinances that are consistent with the Legal Authorities described in section 3.4 of this JRMP.
Stormwater Pollutant	A Pollutant associated with Stormwater.
Stormwater Pollution Prevention Plan (SWPPP)	A plan providing for temporary measures to control sediment and other Pollutants *during* construction. In contrast with the WQMP which is a plan to reduce pollutant in runoff during the post-construction use and life of the project.
Structural Stormwater BMPs	Structural Post-Construction BMPs that are designed to address stormwater runoff impacts from the completed site, and throughout the use and life of the project.. Stormwater BMPs consist of LID Principles, LID BMPs, Conventional Treatment BMPs, Hydromodification BMPs, and Permanent Source Control BMPs.
Total Maximum Daily Load (TMDL)	A TMDL is the maximum amount of a Pollutant that can be discharged into a waterbody from all sources (point and non-point) and still maintain Water Quality Standards. Under CWA Section 303(d), TMDLs must be developed for all waterbodies that do not meet Water Quality Standards after application of technology-based controls.
Toxicity	Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.
Treatment Control BMP	Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological or chemical process.
TUTIA	Toilet Users To Impervious Area ratio, that would be required to achieve the minimum 40% long-term retention of runoff when harvesting stormwater runoff for toilet use. See Chapter 2 of the WQMP.
Unpaved Road	A long, narrow stretch without pavement used for traveling by motor passenger vehicles between two or more points. Unpaved roads are generally constructed of dirt, gravel, aggregate or macadam and may be improved or unimproved.

Glossary

Name	Definition
Waste	As defined in CWC Section 13050(d), "waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal."
Waste Discharge Requirements	As defined in Section 13374 of the California Water Code, the term "Waste Discharge Requirements" is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board usually reserves reference to the term "permit" to Waste Discharge Requirements for discharges to surface Waters of the U.S.
Water Quality Management Plan (WQMP, or SMR WQMP)	Referred to as a Standard Stormwater Mitigation Plan (SSMP) in the 2010 SMR MS4 Permit. This is a plan to reduce the discharge of pollutants to the MEP from the post-construction use and life of a project.
Water Quality Objectives	Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water. [California Water Code Section 13050 (h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans. Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a receiving water and still generally ensure that the beneficial uses of the receiving water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne's definition of pollution. A condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are
Water Quality Standards	The beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.) of water and the Water Quality Objectives necessary to protect those uses.

Glossary

Name	Definition
Waters of the U.S.	As defined in the 40 CFR 122.2, the Waters of the U.S. are defined as: "(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this
Wet Season	October 1st to April 30th
Wet Weather	Weather is considered wet if precipitation measuring over 0.10 inches has been received during the preceding 72 hours.

APPENDIX B

Permittee Departmental Responsibilities

There are multiple departments with responsibility to implement elements of the JRMP and to meet the requirements of the 2010 MS4 Permit. An organizational chart depicting the departments and key personnel (positions title) with implementation responsibilities is shown below. Additionally, Table 3-1 is a matrix showing each JRMP element, the departments with implementation responsibilities, the specific responsibilities of each department/organizational unit, and the key personnel by position title.

City of Murrieta Organizational Chart

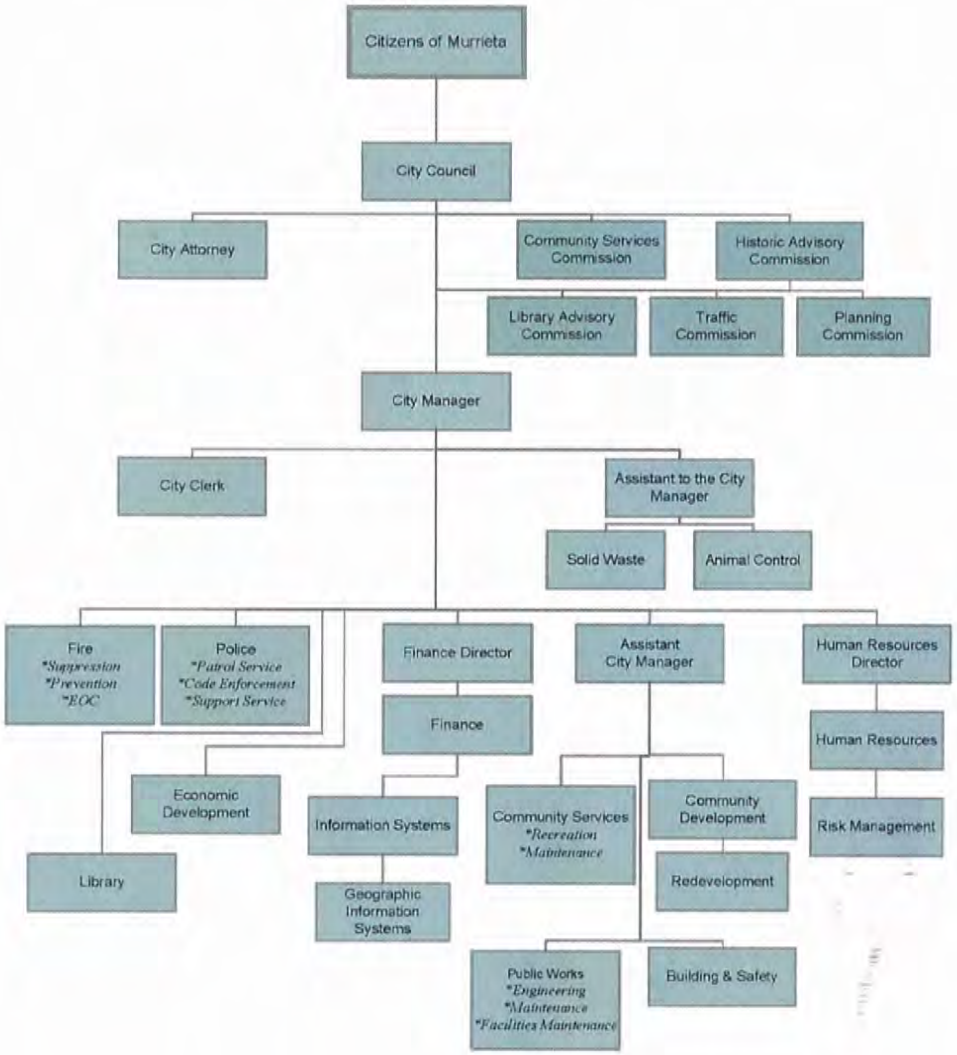


Table B-1. JRMP Departmental Responsibilities

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff Title
3.0 Program Management	3.1 – Departmental Responsibilities – Maintain matrix	Public Works Department	NPDES Coordinator
	3.2 – Cooperative Activities	City Manager	NPDES Coordinator
	3.3 – Fiscal Analysis {H}	City Manager	NPDES Coordinator
	3.4 – Legal Authority{E.}	City Attorney	NPDES Coordinator
	3.5 – Enforcement/Compliance Strategy	(see individual program sections)	(see individual program sections)
	3.6 – Receiving Water Limitations{A.}	Public Works Department	NPDES Coordinator
	3.7 – Program Reporting, Evaluation and Revision {J., K., L}	Public Works Department	NPDES Coordinator
4.0 Elimination of Illicit Connections and Illegal Discharges {F.4}	4. 1.1 Prohibited Discharges {A.1., 2}	Public Works Department	NPDES Coordinator
	4.2.1 Legal Authority {E.}	City Attorney	City Attorney
	4.2.2 Connections to MS4 Facilities	Maintain Inventory & Map - Public Works Department	Encroachment Permit Coordinator
	4.2.3 Inspections	(see individual program sections)	(see individual program sections)
	4.2.4 Maintain MS4 Facility Map{F.4.b.}	Public Works Department	NPDES Coordinator
	4.2.5 Public Reporting of IC/IDs	RCFC for regional 1-800 hotline Department for locally reported IC/IDs	N/A Code Enforcement

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff Title
	4.2.6 Dry Weather Field Screening	Public Works Department	NPDES Coordinator
	4.2.7 Waste Collection Programs	RCFC administers contract with Riverside County Waste Management	N/A
	4.3.1 MS4 Facility Inspections {F.4.e}	As described for Section 5	As described for section 5
	4.3.2 Public IC/ID Reports {F.4.c}	Public Works Department	NPDES Coordinator
	4.3.3 IC/ID Construction Site Inspections {F.1.e.(6)(d); F.2.e}	Building Department & Public Works Department See Section 7.4	Construction Inspector
	4.3.4 IC/ID Industrial / Commercial Facilities Inspections {F.3.b.(4)(vi)}	DEH/HAZMAT & Public Works Department See Section 8.4 herein	NPDES Coordinator
	4.3.5 IC/ID Monitoring Activities {Attachment E. II.C}	Public Works Department	NPDES Coordinator
	4.3.6 Non-Jurisdictional IC/IDs	Public Works Department	NPDES Coordinator (for notifications)
	4.4 IC/ID Response and Reporting {F.4}	Initial Investigation – Public Works Department	NPDES Coordinator
		Source Investigation – Public Works Department	NPDES Coordinator
		Elimination – Code Enforcement	Code Enforcement Staff
	4.4.5 Sanitary Wastes F.4.h}	Portable Toilets – Building & Public Works Department	Construction Inspector
		Failing Septic Systems – Building & Public Works Department	Construction Inspector
5.0 Permittee Facilities and Activities {F.3.a}	5.1 Planning Facilities {F.1}	Planning Projects – Planning & Public Works Departments	Planning Supervisor, NPDES Coordinator
	5.1.1 - Public Works Priority	Review WQMP Applicability Checklist -	NPDES Coordinator

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff Title
	Development Projects {F.1.d}	Public Works Department	
	5.1.2 – Public Works Transportation Projects F.1.d.(2)(g)}	Public Works Department	Project Manager
	5.1.3 Public Works Unpaved Roads {F.1.i}	Public Works Department	PW Maintenance Manager
	5.1.4 Design of Flood Control Projects {F.3.a.(4)(a)	Public Works Department	Project Manager
	5.1.5 Other public works projects {	Public Works Department	Project Manager
	5.2 – Permittee Construction Activities {F.2.}	Submit PRDs - Public Works Department	Project Manager
		Prepare Construction SWPPP – Public Works Department	Project Manager
		Notify Executive Officer of Non Compliance – Public Works Department	Project Manager
		Conduct monitoring – Public Works Department	Project Manager
		Submit NOT – Public Works Department	Project Manager
	5.3 – Operation & Maintenance of Permittee Areas & Activities {F.3.a.}	Public Works Department, Community Service District, Fire Department, Police Department	PW Maintenance Manager, Parks Maintenance Manager, Fire Chief, Police Chief
	5.3.1 Source Identification/ Inventory {F.3.a.(1)}	Public Works Department	NPDES Coordinator
	5.3.2 Typical Minimum BMPs {F.3.a.(2)(b)}	Public Works Department	NPDES Coordinator
	5.3.3.1 Special Event BMPs {F.e.a(2)(c)}	Public Works Department	NPDES Coordinator
	5.3.3.2 Fire BMPs {B.3.a.}	Non-emergency BMPs - Fire Department	Fire Chief
		NOI for De Minimus Permit – Fire Department	Fire Chief
	5.3.3 BMPs for City Activities {F.3.a.(a)(2)(b)}	Public Works Department, Community Service District, Fire Department, Police	PW Maintenance Manager, Parks Maintenance Manager, Fire Chief,

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff Title
		Department	Police Chief
	5.3.5 Maintenance of MS4 facilities and treatment control BMPs {F.3.a.(6)}	Public Works Department	PW Maintenance Manager
	5.4 Annual Inspection {F.3.A.(8)}	Public Works Department	NPDES Coordinator
	5.5 Enforcement of Municipal Areas and Activities {F.3.a.(9)}	Public Works Department	NPDES Coordinator
6.0 Development Planning {F.1}			
	6.2 General Plan {F.1.a}	Planning Department	Planning Director
	6.3.2 LID Barriers Review {{F.1.d.(4)(a)}	Public Works Department	NPDES Coordinator
	6.6.2 Approval Process Criteria and Requirements for All Development Projectsl {F.1.c.}	Planning Department	Planning Supervisor
	6.6.3 Identify Priority Development Projects {F.1.d.(1) & (2)}	Planning Department	Planning Supervisor
	6.6.4 Conditions of Approval	Public Works Department	NPDES Coordinator
	6.6.5 Review Preliminary Project-Specific WQMPs{F.1.d.(9)(a)}	Public Works Department	NPDES Coordinator
	6.6.6 Review and Approval of Final Project-Specific WQMPs {F.1.d.(9)(a)}	Public Works Department	NPDES Coordinator
	6.6.7 Requirements for Other Development Projects	Public Works Department	NPDES Coordinator
	6.6.8 Unpaved Roads Development	Public Works Department	NPDES Coordinator
	6.6.9 Plan Check: Issuance of Grading or Building Permits	Planning Department	Planning Director
	6.7 Field Verify BMPs & Permit Closeout {F.1.e.}	Public Works Department	Construction Inspector

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff Title
	6.7.2 BMP Maintenance Tracking {F.1.f.}	Public Works Department	Maintenance Supervisor
	6.8 Structural Post-Construction BMP Database and Maintenance Verification {F.1.f}	Public Works Department	Maintenance Supervisor NPDES Coordinator
	6.8.4 Change of Ownership Recordation {F.1.d.(9)(b)}	Public Works Department	NPDES Coordinator
	6.9 Enforcement for Development {F.1.g}	Public Works & Code Enforcement Departments	NPDES Coordinator & Code Enforcement Officer
7.0 Private Development Construction {F.2.}			
	7.1 Source Identification/Inventory {F.2.b}	Public Work Department	NPDES Coordinator
	7.2 Construction Site Planning and Project Approval Process {F.2.c.}	Public Work Department	NPDES Coordinator
	7.3 Construction Site BMP Implementation {F.2.d.}	Public Work Department	NPDES Coordinator
	7.4 Construction Site Inspection {F.2.e.}	Public Work Department	NPDES Coordinator
	7.5 Construction Enforcement {F.2.f.}	Public Work Department	NPDES Coordinator
	7.6 Reporting of Non-Compliant Sites {F.2.g.}	Public Work Department	NPDES Coordinator
8.0 Industrial and Commercial Sources {F.3.b.}			
	8.1 Industrial/Commercial Database {F.3.b.(1)}	Public Works Department	NPDES Coordinator

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff Title
	8.2 General BMP Implementation {F.3.b.(2)}	Public Work Department	NPDES Coordinator
	8.3 Mobile Business Program {F.1.b.(3)}	Public Works Department	NPDES Coordinator
	8.4 Industrial/Commercial Inspections {F.3.b.}	DEH/HAZMAT & Public Works Department	NPDES Coordinator
	8.4.6 Industrial/Commercial Enforcement {F.1.d.(5)}	Public Works Department	NPDES Coordinator
	8.4.7 Reporting of Non-Compliant Sites {F.1.d.(6)}	Public Works Department	NPDES Coordinator
9.0 Residential Sources {F.1.c.}			
	9.3 Designated BMPs {F.3.c.(2)(b)}	Public Works Department	NPDES Coordinator
	9.4 Household Waste Management {F.3.c.(2)(c)}	Public Works Department	NPDES Coordinator
	9.5 Common Interest Areas/ Homeowner Association Areas / and Mobile Home Parks {F.3.c.(4)}	Public Works Department	NPDES Coordinator
	9.6 Residential Enforcement {F.3.c.(3)}	Public Works Department	NPDES Coordinator
10.0 Retrofitting Existing Development {F.3.d.}			
	10.1 Identification of Conditions of Concern {{F.3.d.(1)}	Public Works Department	NPDES Coordinator
	10.2 Source Assessment & Identification {F.3.d.(2)}	Public Works Department	NPDES Coordinator
	10.3 Identification of Candidate Areas for Retrofitting {F.3.d.(2)}	Public Works Department	NPDES Coordinator

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff Title
	10.4 Prioritization of Candidate Areas for Retrofitting {F.3.d.(2)}	Public Works Department	NPDES Coordinator
	10.5 Prioritizing Retrofitting Work Plans 10.3 {F.3.d.(3)}	Public Works Department	NPDES Coordinator
	10.6 Private Retrofitting Projects {F.3.d.(4)}	Public Works Department	NPDES Coordinator
	10.7 Tracking Retrofit BMPs {F.3.d.(5)}	Public Works Department	NPDES Coordinator
	10.8 Regional Mitigation Projects {F.3.d.7)}	Public Works Department	NPDES Coordinator
11.0 Education {F.6.}			
	11.1 Target Audiences	Public Works Department	NPDES Coordinator
	11.2 Residential and General Public F.6.b.(4)}	Public Works Department	NPDES Coordinator
12.0 Copermittee Staff Training	Copermittee Staff	RCFC&WCD	NPDES Coordinator
13.0 Monitoring Program {N}			
	13.2 NALs {C}	Public Works Department	NPDES Coordinator
	13.3 SALs {D}	Public Works Department	NPDES Coordinator

California Regional Water Quality Control Board

San Diego Region

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Supporting Document No. 6
Item No. 5
October 13, 2010

September 28, 2010

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City Manager
City of Wildomar
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Donald Allison, P.E.
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City of Menifee
29714 Haun Road
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Dear Messrs. Thomas, Oviedo and Allison:

SUBJECT: DESIGNATIONS OF SAN DIEGO WATER BOARD AND SANTA ANA WATER BOARD FOR PURPOSES OF REGULATION OF MUNICIPAL SEPARATE STORM SEWER SYSTEMS - CITIES OF MENIFEE, MURRIETA AND WILDOMAR, RIVERSIDE COUNTY

This letter constitutes the California Regional Water Quality Control Board, San Diego Region's (San Diego Water Board, San Diego Regional Board, or Region 9) written agreement pursuant to Water Code section 13228, subdivision (a) to designate the Santa Ana Regional Water Quality Control Board (Santa Ana Water Board or Region 8) as the regulator of the City of Menifee within Region 9's geographic jurisdiction for municipal separate storm sewer system (MS4) permit purposes[1], and further constitutes the San Diego Water Board's written agreement to accept designation from the Santa Ana Water Board to regulate the Cities of Murrieta and Wildomar, including those portions of each city that fall within Region 8's geographic jurisdiction, for MS4 permit purposes.[2] As discussed below, this agreement is subject to several important limitations recognized by the Cities.

[1] The San Diego Water Board intends to consider the adoption of a new MS4 permit (Tentative Order No. R9-2010-0016) that would regulate the relevant portions of Murrieta and Wildomar on October 13, 2010.

[2] Until the new San Diego Water Board MS4 permit is adopted, including regulation of the Cities of Murrieta and Wildomar for MS4 purposes regardless of geographic boundaries, portions of Murrieta and Wildomar remain regulated in part by Order No. R8-2010-0033. Murrieta and Wildomar would become regulated by the San Diego Water Board, with certain limitations described below, when the San Diego Water Board adopts tentative Order No. R9-2010-0016, scheduled for consideration on October 13, 2010.

Background

The Cities each lay partially within both the San Diego and Santa Ana Water Boards' geographic jurisdictional boundaries. Portions of the Cities are currently regulated by the Santa Ana Water Board under Order No. R8-2010-0033 for MS4 discharges. Because the Cities of Wildomar and Menifee were incorporated after 2004, the San Diego Water Board's existing MS4 permit, Order No. R9-2004-001, regulates portions of Murrieta, but does not regulate Wildomar or Menifee. On July 20, 21 and 22, 2010, Murrieta, Wildomar and Menifee, respectively, submitted letters addressed jointly to the Executive Officers of the San Diego Water Board and the Santa Ana Water Board requesting that they each be regulated by one MS4 permit, pursuant to Water Code section 13228. (The Cities' letters, which include maps provided by the Cities depicting their respective geographic locations, are attached to this letter as Exhibits 1-3.) Murrieta and Wildomar requested that the Santa Ana Water Board designate the San Diego Water Board as the regulator for all portions of their respective cities, including those portions within Region 8's geographic boundary, for their MS4-related discharges. Likewise, the City of Menifee requested that the San Diego Water Board designate the Santa Ana Water Board as the regulator for all portions of Menifee, including those portions of the city that fall within Region 9's jurisdictional boundary, for matters pertaining to MS4 discharges. As the basis for their requests, the Cities cite the desire to reduce the complexities associated with being regulated by two separate MS4 permits and a desire to increase effectiveness and efficiencies in using city resources to benefit water quality. As described below, each city recognizes appropriate and important limitations to this agreement.

Limitations on San Diego Water Board Designation Agreement

As explained in their respective letters, each city recognizes the following common limitations to this agreement: (1) the requested designation applies only to MS4 permitting so that each city is subject to a single MS4 permit; (2) the Cities of Murrieta and Wildomar recognize that other waste discharge requirements (WDRs) or orders issued and/or enforced by the San Diego Water Board remain wholly under the San Diego Water Board's jurisdiction; likewise, the City of Menifee recognizes that WDRs and/or other orders issued or enforced by the Santa Ana Water Board remain wholly under the Santa Ana Water Board's jurisdiction; and (3) each Water Board retains the authority to enforce provisions of the MS4 permit issued to each city[3] but compliance

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The Santa Ana Water Board may amend its order to remove Murrieta and Wildomar after the San Diego Water Board's adoption of Tentative Order No. R9-2010-0016, but this designation becomes effective upon the San Diego water Board's action.

[3] Primary enforcement responsibility lies with the permitting Water Board.

will be determined based upon the MS4 permit in which a particular city is regulated as a co-permittee (see Wat. Code § 13228, subd. (b)).

The Cities also expressly acknowledged the following reciprocal limitation concerning Total Maximum Daily Loads (TMDLs). Murrieta and Wildomar understand and agree that "[a]ny TMDLs and associated MS4 permit requirements issued by the Santa Ana Regional Board, which include [Murrieta and Wildomar] as responsible part[ies], will be incorporated into the MS4 permit issued by the San Diego Regional Board by reference, including reference to any associated provisions, findings or elements of the fact sheet." (City of Murrieta, Letter to Kurt Berchtold and David Gibson, July 20, 2010, p. 2; City of Wildomar, Letter to Kurt Berchtold and David Gibson, July 21, 2010, p. 2.) Similarly, the City of Menifee understands that "[a]ny TMDLs and associated MS4 permit requirements issued by the San Diego Regional Board, which include the City of Menifee as a responsible party, will be incorporated into the MS4 permit issued by the Santa Ana Regional Board by reference, including reference to any associated provisions, findings or elements of the fact sheet." (City of Menifee, Letter to Kurt Berchtold and David Gibson, July 22, 2010, p. 2.)

The Cities further recognize they will be subject to different processes for submitting Permit Registration Documents (PRDs) for municipal construction projects subject to the State Water Resources Control Board's (State Water Board's) Construction General Storm Water Permit. Under the Santa Ana Water Board's MS4 permit, Order No. R8-2010-0033, PRDs for municipal construction projects are submitted to the State Water Board through the Stormwater Multi-Application Reporting and Tracking System (SMARTS) without the filing fee. The City of Menifee will follow the process set forth by the Santa Ana Water Board under Order No. R8-2010-0033 for construction PRDs for all municipal construction projects within the City of Menifee. In contrast, the San Diego Water Board's existing (R9-2004-0001) and proposed (R9-2010-0016) MS4 permits include no similar process. Therefore, the Cities of Murrieta and Wildomar will submit PRDs[4] in accordance with the manner prescribed in State Water Board's Construction General Storm Water Permit, including appropriate fees.

Similarly, Region 8 MS4 requirements do not require separate coverage under the General Industrial Storm Water Permit (97-03-DWQ) for municipal yards. As such, the City of Menifee need not get coverage under the State Water Board's General Industrial Storm Water Permit for its corporate yards. Murrieta and Wildomar shall get coverage under the General Industrial Storm Water Permit for all their corporate yards.

Complaints received for discharges flowing from municipal, construction, industrial, and commercial sites to MS4s within the Cities of Murrieta and Wildomar will be forwarded to the San Diego Water Board for review. Complaints regarding discharges from

[4] In the form of a Notice of Intent (NOI).

municipal, construction, industrial, and commercial sites to MS4s within the City of Menifee will be referred to the Santa Ana Water Board for review.

Each Water Board remains responsible for overseeing construction and industrial sites under the statewide General Permits for Construction and Industrial Activities (State Water Board Orders No. 2009-0009 DWQ and No. 97-03 DWQ, respectively) based on the Water Board's geographic jurisdictional boundary. The Santa Ana Water Board shall notify the San Diego Water Board of any non-compliance found during routine inspections of sites within the Santa Ana Water Board boundary that discharge into the MS4s for the Cities of Murrieta and Wildomar. The San Diego Water Board shall notify the Santa Ana Water Board of any non-compliance found during routine inspections of sites within the San Diego Water Board boundary that discharge into the City of Menifee's MS4.

For de minimus types of discharges listed in the Region 8 MS4 Permit, the City of Menifee does not have to get separate coverage under Region 8's General De Minimus Permit (R8-2009-0003). De minimus types of discharges to Region 8's jurisdiction from the Cities of Wildomar and Murrieta shall be regulated under Region 8's General De Minimus Permit, R8-2009-0003.

Finally, the City of Murrieta notes that its annual report under the San Diego MS4 permit will include the 375 acres currently within the Santa Ana watershed. While not noted by the Cities of Wildomar and Menifee, the San Diego Water Board expects that the annual report filed by each city would be a single report covering the entire geographic area of the city, regardless of geographic jurisdiction, using the format prescribed in its respective permit and submitted to the appropriate regulating board.

For the reasons outlined above, the San Diego Water Board agrees to the Cities' regulatory designation requests and notes that tentative Order No. R9-2010-0016 will be revised to reflect this agreement. This agreement shall become effective with the adoption of tentative Order No. R9-2010-0016. The San Diego Water Board does not anticipate the need, but reserves the right, to modify or terminate this agreement in the future, upon sufficient notice, and for good cause.

Respectfully,

DAVID W. GIBSON
Executive Officer

Enclosure

cc: Kurt Berchtold, Executive Officer, Santa Ana Water Board

California Regional Water Quality Control Board
Santa Ana Region

Linda S. Adams
Secretary for
Environmental Protection

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Arnold Schwarzenegger
Governor

September 28, 2010

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Menifee, CA 92586

Dear Messrs. Thomas, Oviedo and Allison:

DESIGNATIONS OF SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD AND SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD FOR PURPOSES OF REGULATION OF MUNICIPAL SEPARATE STORM SEWER SYSTEMS - CITIES OF MENIFEE, MURRIETA AND WILDOMAR, RIVERSIDE COUNTY

This letter constitutes the Santa Ana Regional Water Quality Control Board's (Santa Ana Water Board's or Region 8's) written agreement pursuant to Water Code section 13228, subdivision (a), to designate the San Diego Regional Water Quality Control Board (San Diego Water Board or Region 9) as the regulator of the Cities of Murrieta and Wildomar, including those portions of each city that fall within Region 8's geographic jurisdiction, for municipal separate storm sewer system (MS4) permit purposes[1], and further constitutes the Santa Ana Water Board's written agreement to accept designation from the San Diego Water Board to regulate the City of Menifee within Region 9's geographic jurisdiction for MS4 permit purposes under Order No. R8-2010-0033.[2]

[1] At the time this letter was signed, the San Diego Water Board intended to consider the adoption of a new MS4 permit (Tentative Order No. R9-2010-0016) that would regulate the relevant portions of Murrieta and Wildomar.

[2] Until the new San Diego Water Board MS4 permit is adopted, including regulation of the Cities of Murrieta and Wildomar for MS4 purposes regardless of geographic boundaries, portions of Murrieta and Wildomar remain regulated in part by Order No. R8-2010-0033. Murrieta and Wildomar would become regulated by the San Diego Water Board, with certain limitations described below, when the San Diego Water Board adopts tentative Order No. R9-2010-0016, scheduled for consideration on October 13, 2010.

As discussed below, this agreement is subject to several important limitations recognized by the Cities of Menifee, Wildomar, and Murrieta (collectively, the Cities).

Background

The Cities each lay partially within both the San Diego and Santa Ana Water Boards' geographic jurisdictional boundaries. Portions of the Cities are currently regulated by the Santa Ana Water Board under Order No. R8-2010-0033 for MS4 discharges. Because the Cities of Wildomar and Menifee were incorporated after 2004, the San Diego Water Board's existing MS4 permit, Order No. R9-2004-0001, only regulates portions of Murrieta. On July 20, 21 and 22, 2010, Murrieta, Wildomar and Menifee, respectively, submitted letters addressed jointly to the Executive Officers of the San Diego Water Board and the Santa Ana Water Board requesting that they each be regulated by one MS4 permit, pursuant to Water Code section 13228. (The Cities' letters, which include maps provided by the Cities depicting their respective geographic locations, are attached to this letter as Exhibits 1-3.) Murrieta and Wildomar requested that the Santa Ana Water Board designate the San Diego Water Board as the regulator for all portions of their respective cities, including those portions within Region 8's geographic boundary, for their MS4-related discharges. Likewise, the City of Menifee requested that the San Diego Water Board designate the Santa Ana Water Board as the regulator for all portions of Menifee, including those portions of the city that fall within Region 9's jurisdictional boundary, for matters pertaining to MS4 discharges. As the basis for their requests, the Cities cite the desire to reduce the complexities associated with being regulated by two separate MS4 permits and a desire to increase effectiveness and efficiencies in using city resources to benefit water quality. As described below, each city recognizes appropriate and important limitations to this agreement.

Limitations on the Santa Ana Water Board Designation Agreement

As explained in their respective letters, each city recognizes the following common limitations to this agreement: (1) the requested designation applies only to MS4 permitting so that each city is subject to a single MS4 permit; (2) the Cities of Murrieta and Wildomar recognize that other waste discharge requirements (WDRs) or orders issued and/or enforced by the San Diego Water Board remain wholly under the San Diego Water Board's jurisdiction; likewise, the City of Menifee recognizes that WDRs and/or other orders issued or enforced by the Santa Ana Water Board remain wholly under the Santa Ana Water Board's jurisdiction; and (3) each Water Board retains the authority to enforce provisions of the MS4 permit issued to each city but compliance will

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The Santa Ana Water Board intends to amend Order No. R8-2010-033 to remove Murrieta and Wildomar after the San Diego Water Board's adoption of Tentative Order No. R9-2010-0016. This designation becomes effective upon the San Diego Water Board's action.

be determined based upon the MS4 permit in which a particular city is a named as a co-permittee (see Wat. Code § 13228, subd. (b)).

The Cities also expressly acknowledged the following reciprocal limitation concerning Total Maximum Daily Loads (TMDLs). Murrieta and Wildomar understand and agree that "[a]ny TMDLs and associated MS4 permit requirements issued by the Santa Ana Regional Board, which include [Murrieta and Wildomar] as responsible part[ies], will be incorporated into the MS4 permit issued by the San Diego Regional Board by reference, including reference to any associated provisions, findings or elements of the fact sheet." (City of Murrieta, Letter to Kurt Berchtold and David Gibson, July 20, 2010, p. 2; City of Wildomar, Letter to Kurt Berchtold and David Gibson, July 21, 2010, p. 2.) Similarly, the City of Menifee understands that "[a]ny TMDLs and associated MS4 permit requirements issued by the San Diego Regional Board, which include the City of Menifee as a responsible party, will be incorporated into the MS4 permit issued by the Santa Ana Regional Board by reference, including reference to any associated provisions, findings or elements of the fact sheet." (City of Menifee, Letter to Kurt Berchtold and David Gibson, July 22, 2010, p. 2.)

The Cities further recognize they will be subject to different processes for submitting Permit Registration Documents (PRDs) for municipal construction projects subject to the State Water Resources Control Board's (State Water Board's) Construction General Storm Water Permit. Under the Santa Ana Water Board's MS4 permit, Order No. R8-2010-0033, PRDs for municipal construction projects are submitted to the State Water Board through the Stormwater Multi-Application Reporting and Tracking System (SMARTS) without the filing fee. The City of Menifee will follow the process set forth by the Santa Ana Water Board under Order No. R8-2010-0033 for construction PRDs for all municipal construction projects within the City of Menifee. In contrast, the San Diego Water Board's existing (R9-2004-0001) and proposed (R9-2010-0016) MS4 permits include no similar process. Therefore, the Cities of Murrieta and Wildomar will submit PRDs[3] in accordance with the manner prescribed in State Water Board's Construction General Storm Water Permit, including appropriate fees.

Similarly, Region 8 MS4 requirements do not require separate coverage under the General Industrial Storm Water Permit (97-03-DWQ) for corporate yards. As such, the City of Menifee need not obtain coverage under the State Water Board's General Industrial Storm Water Permit for its corporate yards. Murrieta and Wildomar shall get coverage under the General Industrial Storm Water Permit for <u>all</u> their corporate yards.

Complaints received for discharges flowing from municipal, construction, industrial, and commercial sites to MS4s within the Cities of Murrieta and Wildomar will be forwarded to the San Diego Water Board for review. Complaints regarding discharges from municipal, construction, industrial, and commercial sites to MS4s within the City of

[3] The PRDs include a Notice of Intent (NOI).

Menifee will be referred to the Santa Ana Water Board for review. Each Water Board remains responsible for overseeing construction and industrial sites under the statewide General Permits for Construction and Industrial Activities (State Water Board Orders No. 2009-0009 DWQ and No. 97-03 DWQ, respectively) based on the Water Board's geographic jurisdictional boundary. The Santa Ana Water Board shall notify the San Diego Water Board of any non-compliance found during routine inspections of sites within the Santa Ana Water Board boundary that discharge into the MS4s for the Cities of Murrieta and Wildomar. The San Diego Water Board shall notify the Santa Ana Water Board of any non-compliance found during routine inspections of sites within the San Diego Water Board boundary that discharge into the City of Menifee's MS4.

For de minimus types of discharges listed in the Region 8 MS4 Permit, the City of Menifee does not have to obtain separate coverage under Region 8's General De Minimus Permit (R8-2009-0003). De minimus types of discharges to Region 8's jurisdiction from the Cities of Wildomar and Murrieta shall be regulated under Region 8's General De Minimus Permit, R8-2009-0003.

Finally, the City of Murrieta notes that its annual report under the San Diego MS4 permit will include the 375 acres currently within the Santa Ana watershed. While not noted by the Cities of Wildomar and Menifee, the Santa Ana Water Board expects that the annual report filed by each city would be a single report covering the entire geographic area of the city, regardless of geographic jurisdiction, using the format prescribed in its respective permit and submitted to the appropriate regulating board.

For the reasons outlined above, the Santa Ana Water Board agrees to the Cities' regulatory designation requests and notes that Order No. R8-2010-0033 will be revised to reflect this agreement. This agreement shall become effective with the adoption of tentative Order No. R9-2010-0016.

The Santa Ana Water Board does not anticipate the need, but reserves the right, to modify or terminate this agreement in the future, upon sufficient notice, and for good cause.

Respectfully,

Kurt V. Berchtold
Executive Officer

Enclosure

cc: David Gibson, Executive Officer, San Diego Regional Water Quality Control Board
Jason Uhley, Riverside County Flood Control and Water Conservation District

AGREEMENT

National Pollutant Discharge Elimination System
Stormwater Discharge Permit
Implementation Agreement
San Diego Region

(Santa Margarita Drainage Area)

This Implementation Agreement ("Agreement"), entered into by the RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT (the "DISTRICT"), the COUNTY OF RIVERSIDE (the "COUNTY"), and the CITIES OF MURRIETA, TEMECULA and WILDOMAR (the "CITIES"), collectively referred to as "COPERMITTEES" and sometimes also referred to as "Parties", individually each as "Party", establishes the responsibilities of each Party concerning the implementation of and compliance with the National Pollutant Discharge Elimination System ("NPDES") Municipal Separate Storm Sewer System ("MS4") Discharge Permit issued by the California Regional Water Quality Control Board – San Diego Region (CRWQCB-SDR) pursuant to Order No. R9-2010-0016 (the "NPDES Permit").

RECITALS

WHEREAS, Congress in 1987 added Section 402(p) to the Federal Clean Water Act ("CWA") (33 U.S.C.§1342(p)); and

WHEREAS, Section 402(p) of the CWA requires certain municipalities to obtain NPDES Permits in order to discharge stormwater from MS4s to waters of the United States; and

WHEREAS, Section 402(p) of the CWA requires operators of certain industrial facilities to obtain NPDES permits for stormwater discharges associated with designated industrial activities, including construction activities; and

WHEREAS, Section 402(p) further requires the United States Environmental Protection Agency ("EPA") to promulgate regulations for NPDES permit applications; and

WHEREAS, EPA adopted such regulations in November 1990; and

WHEREAS, EPA delegated authority to the California State Water Resources Control Board ("SWRCB") to administer the NPDES permit process within the boundaries of the State of California; and

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WHEREAS, SWRCB has in turn delegated its NPDES permitting authority to the California Regional Water Quality Control Boards to administer the NPDES permit process within the boundaries of their respective regions; and

WHEREAS, the jurisdiction of the CRWQCB-SDR includes that portion of Riverside County known as the Santa Margarita Region; and

WHEREAS, DISTRICT was created to provide for, among other things, the control of flood and stormwaters within the County of Riverside and is empowered to investigate, examine, measure, analyze, study and inspect matters pertaining to flood and stormwaters; and

WHEREAS, on January 15, 2009, DISTRICT, COUNTY and CITIES submitted a Report of Waste Discharge as an application to renew NPDES Permit No. CAS0108766; and

WHEREAS, the application for renewal of the NPDES Permit was submitted in accordance with the provisions of the previous NPDES permit (Order No. R9-2004-001) which expired on July 14, 2009; and

WHEREAS, on November 10, 2010, the CRWQCB-SDR adopted Order No. R9-2010-0016 to serve as Waste Discharge Requirements in accordance with Section 13263(a) of the California Water Code and as an NPDES permit pursuant to Section 402(p) of the CWA; and

WHEREAS, the NPDES Permit meets or exceeds the requirements of Section 402(p)(3)(B) of the CWA; and

WHEREAS, the NPDES Permit designates the DISTRICT, COUNTY and CITIES as COPERMITTEES; and

WHEREAS, the NPDES Permit requires designation of a "Principal Copermittee", and DISTRICT, COUNTY and CITIES have agreed that DISTRICT will serve as Principal Copermittee for the term of the NPDES Permit; and

WHEREAS, the Parties believe that cooperation between COPERMITTEES in the administration and implementation of the NPDES Permit is in the best interest of COPERMITTEES; and

WHEREAS, the NPDES Permit provides that the COPERMITTEES collaborate

in the development and implementation of various requirements of the NPDES Permit; and

WHEREAS, DISTRICT is willing to utilize its staff to coordinate the activities of COPERMITTEES to facilitate compliance with the NPDES Permit and CWA requirements; and

WHEREAS, DISTRICT established the Santa Margarita Watershed Benefit Assessment Area (the "BENEFIT ASSESSMENT") pursuant to District Ordinance 14 on May 14, 1991 to offset the DISTRICT'S program and administrative costs associated with the development, implementation and management of the Federally-mandated NPDES Program and DISTRICT is willing to use BENEFIT ASSESSMENT funds to support the DISTRICT's role as Principal Permittee and to support regional program costs to the extent that BENEFIT ASSESSMENT funds are available and can be used for regional programs; and

WHEREAS, COPERMITTEES are to perform and/or execute certain activities prescribed in the NPDES Permit that will benefit all COPERMITTEES.

NOW, THEREFORE, the Parties do mutually agree as follows:

1. Incorporation of the NPDES Permit. The NPDES Permit is hereby incorporated by reference in its entirety and made a part of this Agreement as Exhibit "A".

2. Delegation of Responsibilities. The responsibilities of each of the COPERMITTEES under the NPDES Permit are reiterated below in subsections 2.a. and 2.b. Additional delegated responsibilities of the Parties under this Agreement to implement and/or comply with the NPDES Permit are set forth below in subsections 2.c. through 2.h.:

a. DISTRICT shall:

(1) Comply with Section M (Principal Copermittee Responsibilities), including coordinating the development of updates and reports on programs required under the NPDES Permit that are jointly required of each COPERMITTEE, including the Watershed Water Quality Workplan ("Watershed Workplan"), Standard Storm Water Mitigation Plan ("SSMP"), Hydromodification Management Plan ("HMP"), a model Jurisdictional Runoff

Management Plan ("JRMP"), the Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016, and any other reports prepared by the DISTRICT on behalf of the COPERMITTEES as required by Sections K.1 and K.2 of the NPDES Permit. DISTRICT will provide COUNTY and CITIES an opportunity to participate in the development and review of, and comment on, such programs, plans and reports prior to submittal to the CRWQCB-SDR.

(2) Comply with Sections A through P (Prohibitions and Receiving Water Limitations, Non-Stormwater Discharges, Non-Stormwater Dry Weather Action Levels, Stormwater Action Levels, Legal Authority, JRMP, Watershed Workplan, Fiscal Analysis, Total Maximum Daily Loads ("TMDLs"), Program Effectiveness Assessment & Reporting, Reporting, Modifications of Programs, Receiving Waters and MS4 Discharge Monitoring and Reporting Program, Standard Provisions, Reporting Requirements and Notifications, as well as Additional Provisions, respectively), as they pertain to pollutant discharges from DISTRICT owned and operated MS4 which are generated directly from or by DISTRICT facilities and operations, at no cost to COUNTY and CITIES.

b. COUNTY and CITIES, at no cost to DISTRICT, shall, for land area within their individual jurisdictions:

(1) Comply with Sections A through P (Prohibitions and Receiving Water Limitations, Non-Stormwater Discharges,

Non-Stormwater Dry Weather Action Levels, Stormwater Action Levels, Legal Authority, JRMP, Watershed Workplan, Fiscal Analysis, TMDLs, Program Effectiveness Assessment and Reporting, Reporting, Modifications of Programs, Receiving Waters and MS4 Discharge Monitoring and Reporting Program, Standard Provisions, Reporting Requirements and Notifications, as well as Additional Provisions, respectively), as they pertain to pollutant discharges from COUNTY/CITY owned and operated MS4, which are generated by jurisdictional land uses, facilities, and operations of the respective COUNTY and CITIES.

(2) Demonstrate compliance with NPDES Permit requirements through timely implementation of the JRMPs; any COPERMITTEE-specific elements of the Watershed Workplan and Monitoring and Reporting Program; and any approved modifications, revisions or amendments thereto.

(3) Provide to DISTRICT (on DISTRICT-provided forms) information needed to satisfy the reporting requirements as described in Sections G, N, and Provision III of Attachment E, or to respond to information requests from the CRWQCB-SDR. COUNTY and CITIES shall specifically:

(a) Submit data necessary to prepare updates to the Watershed Workplan to the DISTRICT no later than August 31st of each year.

(b) Submit any monitoring and sampling data individually collected pursuant to the MS4 Permit, to the DISTRICT at least quarterly as necessary for

DISTRICT to track and prepare reports under the Monitoring and Reporting Program. All applicable monitoring and sampling data individually collected within each fiscal year must be received by DISTRICT no later than August 15th of each year, for inclusion in the monitoring annual report that will be prepared and submitted by the District, pursuant to Section 2.e. herein.

(c) Provide one completed bound hard copy, and two electronic copies (PDF preferred) on CD or DVD, of the completed JRMP annual report to the DISTRICT no later than October 15th of each year.

(d) Provide information on existing MS4 facilities, "major outfalls" (as defined in the NPDES Permit) and/or other data as it pertains to facilities of COUNTY or CITIES when requested by DISTRICT.

c. Public Education Program. On behalf of COPERMITTEES, DISTRICT shall conduct public education activities on a regional basis that focus on reducing pollution of urban runoff within the Santa Margarita Region, including, as appropriate, developing and disseminating broadcast, online and/or print outreach and advertising, developing brochures, and attending public events. DISTRICT shall also develop and implement mechanisms to determine the effectiveness of the regional public education program. The COUNTY and CITIES shall be individually responsible for developing and implementing any supplemental public education programs that may be necessary to target

individual communities or stakeholders within their respective jurisdictions, pursuant to Section F.6. of the NPDES Permit.

d. COPERMITTEE Training Program. On behalf of COPERMITTEES, and as requested by the COPERMITTEES, DISTRICT shall develop and conduct regional training sessions for COPERMITTEE personnel, covering the aspects of the programs developed by DISTRICT pursuant to Section 2.a.(1) of this AGREEMENT that are regionally uniform among COPERMITTEES. The COUNTY and CITIES shall be individually responsible for developing and implementing and reporting upon any supplemental training that may be necessary to ensure that their personnel are trained adequately regarding local policies and procedures for implementing the requirements of the NPDES Permit, pursuant to section F.6. of the NPDES Permit.

e. Monitoring Program. On behalf of the COPERMITTEES, DISTRICT shall perform sampling of surface water and urban runoff in accordance with the provisions of the NPDES Permit Monitoring and Reporting Program ("MRP"), Attachment E Provisions II.A and II.D-II.F, and prepare and submit Monitoring Reports in accordance with Provision III of Attachment E. The location of the sampling sites shall be determined by COPERMITTEES, subject to approval by CRWQCB-SDR. For Provision II.B. and II.C of the MRP, DISTRICT will coordinate with COPERMITTEES in developing a plan for identifying the list of outfalls to be sampled each year in accordance with the NPDES Permit, and COPERMITTEES shall be individually responsible for conducting outfall sampling, source identifications, and enforcement as necessary for their outfalls. The COPERMITTEES

may, subject to Section 3 herein, request the DISTRICT to conduct the initial outfall sampling required in Provisions II.B. and II.C. on behalf of the COPERMITTEES, however, all source identifications (including any follow-up sampling) and enforcement that may be required will remain the individual responsibility of the respective COPERMITTEES. The DISTRICT shall also enter into a contract with a local lab to provide analysis of water quality samples collected under the MRP. The contract shall be used strictly for water quality samples collected to comply with Provision II of the MRP. DISTRICT shall prepare and submit Monitoring Reports, as required by Provision III of Attachment E, based on data collected by the DISTRICT on behalf of the COPERMITTEES, and data provided to the DISTRICT by the COPERMITTEES in accordance with Section 2.b.(3)(b) of this Agreement.

f. Consultant Services. In the event DISTRICT requires the services of a consultant(s) to assist in performing duties conducted on behalf of the COPERMITTEES pursuant to Section 2 of this Agreement, the cost of said consultant(s) services shall be shared by COPERMITTEES in accordance with the cost sharing provisions set forth in Section 3 of this Agreement. COUNTY and CITIES shall be notified in writing of DISTRICTS request for proposals from one or more consultants, selection of a consultant, consultant's fee, contract timetable and payment schedule, and be allowed the opportunity to participate in decisions related to consultant's services. All consultant agreements are contingent upon the consulting firm's ability to meet DISTRICT standards and requirements, and where applicable approval by the DISTRICT's

Board of Supervisors.

g. Support for Regional Programs. The COPERMITTEES shall jointly provide funding for certain regional efforts that benefit the Santa Margarita Region, including but not limited to: County Environmental Health's Compliance Assistance Program; the County Fire Department's Hazardous Materials Team; County Environmental Health's Household Hazardous Waste and Antifreeze, Batteries, Oil and Paint collection program; the DISTRICT'S membership with the California Stormwater Quality Association on behalf of COPERMITTEES; the DISTRICT'S administration of Principal Permittee duties, and other NPDES support activities as described in this Agreement, or as needed and agreed to by the COPERMITTEES. Where these programs are implemented countywide in support of other NPDES permit regions, the DISTRICT shall estimate the portion of the total cost of these regional programs that benefits the Santa Margarita Region.

h. Regulation and Enforcement. COUNTY and CITIES shall be responsible for the regulation and enforcement of local ordinances and regulations within their respective jurisdictions to ensure compliance with the NPDES Permit, and to prevent pollutants originating from within their respective jurisdictions from being discharged into the jurisdiction of another Party in a manner which could cause that Party to violate the NPDES Permit. This includes the exercise of police powers and land use controls and the enforcement of ordinances that COUNTY or CITIES presently have adopted or may adopt in the future.

3. Shared Costs. Costs for services to be performed in accordance with Sections 2.c., 2.d., 2.e. and 2.f. of this Agreement shall be shared by the Parties in accordance with the procedure specified below. In December of each year of this Agreement the DISTRICT shall:

a. Estimate the costs of services specified in Sections 2.c., 2.d., 2.e. of this Agreement and 2.f. for the upcoming fiscal year ("ESTIMATED COSTS");

b. Estimate the DISTRICT'S internal costs for developing, implementing and administering the NPDES program in the Santa Margarita Region as specified in 2.a. ("INTERNAL COSTS");

c. Estimate the revenues expected from the BENEFIT ASSESSMENT program ("ASSESSMENT REVENUES");

d. Determine actual costs for NPDES programs administered in the previous fiscal year; and

e. Determine Credits or Debits ("CREDITS" or "DEBITS") due COUNTY and CITIES based on the difference of the actual contributions from the previous fiscal year with the actual contributions provided by the COUNTY and CITIES for that fiscal year.

By February 1st of each year of this Agreement, the DISTRICT, CITIES and COUNTY, through a NPDES representative assigned by the General Manager-Chief Engineer, City Managers, and County Executive Office, respectively, shall approve, by majority vote, ESTIMATED COSTS for the upcoming fiscal year.

3.1 DISTRICT Contribution

The DISTRICT contribution ("DISTRICT CONTRIBUTION") to programs specified in Sections 2.c., 2.d., 2.e., and 2.f. for the upcoming fiscal year shall be determined using the following formula:

DISTRICT CONTRIBUTION = ASSESSMENT REVENUES -

INTERNAL COSTS - 20% ASSESSMENT REVENUE. [1]

If the calculation yields a negative result, the DISTRICT shall have no contribution for the upcoming fiscal year other than the INTERNAL COSTS it has incurred.

3.2 COUNTY and CITIES Contribution

The total shared COUNTY and CITIES contribution (the "COMBINED CONTRIBUTION") shall be determined using the following formula:

COMBINED CONTRIBUTION = ESTIMATED COSTS - DISTRICT CONTRIBUTION.

The COUNTY'S and individual CITIES' respective pro rata share of the COMBINED CONTRIBUTION ("INDIVIDUAL CONTRIBUTION") shall be determined on the basis of an equally weighted average of population and Benefit Assessment Units within the Santa Margarita Region of Riverside County. More specifically, such percentage contribution shall be calculated as the equally weighted average of:

(a) The population of COUNTY or individual CITIES within the Santa Margarita Region, divided by the total population of the COUNTY and CITIES in the Santa Margarita Region and;

(b) The calculated number of Benefit Assessment Units ("BAU") for COUNTY or individual CITIES, divided by the total BAU for COUNTY and individual CITIES.

The INDIVIDUAL CONTRIBUTION shall be further adjusted by any CREDITS or DEBITS due from the previous fiscal year.

The population of CITIES shall be determined by the latest California State Department of Finance population figures issued in May of each year. COUNTY population shall be based on the most current Tax Rate Area ("TRA") information best fitting the Santa Margarita Region.

The BAU count of COUNTY and CITIES shall be estimated by comparing the most current TRA information best fitting the Santa Margarita Region with the Assessment

[1] District retains 20% of assessment revenue as a reserve for District's administrative and program costs associated with the NPDES Permit pursuant to RCFC&WCD Ordinance No. 14.

Rolls from the current fiscal year's BENEFIT ASSESSMENT Engineer's Report.

COUNTY and CITIES may generate credits toward payments due by providing labor or services in lieu of cash payments. DISTRICT shall determine value of labor or services based on ESTIMATED COSTS for the fiscal year.

DISTRICT shall invoice COUNTY and CITIES for INDIVIDUAL CONTRIBUTION at the beginning of each fiscal year and said invoice shall be due and payable by COUNTY and CITIES within 60 days of receipt of invoice from DISTRICT. The COMBINED CONTRIBUTION for COUNTY and CITIES shall not exceed $2,200,000 (two million, two hundred thousand dollars) annually under this Agreement.

4. Term of the Agreement. The term of this Agreement shall commence on the date of execution by the duly authorized representative of at least three of the five COPERMITTEES. The term of this Agreement shall extend for up to eighteen (18) months beyond the period of time in which the term of the NPDES Permit remains in valid force and effect, unless terminated prior to that date by agreement by all the Parties or withdrawal of all of the Parties in accordance with the terms of this Agreement.

5. Additional Parties. Any City which incorporates after the date of issuance of the NPDES Permit and/or after the commencement of this Agreement ("Prospective City") may file a written request with DISTRICT asking to be added as a Party. Upon receipt of such a request, DISTRICT shall solicit the approval or denial of the Parties. If a majority of the Parties, each having one, co-equal vote, approves the addition of the Prospective City, this Agreement shall be amended to reflect the addition, and the Prospective City shall thereafter become a Party under this Agreement. Upon execution of the Amended Agreement, the Prospective City shall be responsible for the shared costs discussed in Section 3 of this Agreement for the then-current budget year and any subsequent budget year.

6. Withdrawal from the Agreement. Any Party shall be eligible to withdraw from this Agreement after first giving 60 days written notice to the DISTRICT and the CRWQCB-SDR. The withdrawing Party shall agree in such notice to apply with the CRWQCB-SDR for a separate NPDES permit and to comply with all of the requirements established by

CRWQCB-SDR. In addition, withdrawal shall constitute forfeiture of all of the withdrawing Party's already-paid share of the costs allocated pursuant to Section 3. The withdrawing Party shall be responsible for any lawfully assessed penalties as a consequence of its withdrawal. In addition, the withdrawing Party shall remain liable as an Indemnitor Party after the effective date of its withdrawal as described in Section 7 below. The cost allocations to the remaining Parties shall be recalculated in the following budget year.

7. Mutual Indemnification. Each Party (hereafter "Indemnitor Party") shall indemnify, defend and hold harmless any other Party, together with that Party's employees, officers, managers, governing board members, counsel, representatives and agents (collectively "Indemnitee Parties"), from and against any and all damages, liabilities, losses, demands, lawsuits, orders, actions, causes of action, penalties, judgments, claims, costs and expenses (including reasonable attorneys' fees, including through all appeals) arising from or related to any violation of the NPDES Permit or this Agreement (collectively "Losses") to the extent caused by (i) by the acts or omissions of the Indemnitor Party and its employees, agents and representatives, (ii) discharges from the Indemnitor Party's jurisdictional area or facilities, and/or (iii) discharges from any MS4 owned or operated by the Indemnitor Party. The obligations of the Indemnitor Party set forth in this Section 7 are non-exclusive and are in addition to, and do not replace or modify, any other rights of action, whether at law or in equity, that any Party may have against another Party. Nothing in this Agreement shall limit the ability of any Party to seek any relief, legal or equitable, against any non-Party. The obligations set forth in this Section 7 shall survive the termination of this Agreement as to all such acts, omissions or discharges as described in subparts (i) through (iii) hereinabove that occurred, or are alleged to have occurred, while a Party during the term of the Agreement up until such time that it is terminated.

8. Amendments to the Agreement. Except as provided in Section 5, this Agreement may only be amended by consent of all Parties. No amendment to this Agreement shall be effective unless it is in writing and signed by the duly authorized representatives of all Parties.

9. Authorized Signatories. The General Manager-Chief Engineer of DISTRICT, the Chief Executive Officer of COUNTY and the City Managers of CITIES (or their designees) shall be authorized to execute all documents and take all other procedural steps necessary to file for and obtain an NPDES permit(s) or amendments thereto.

10. Notices. All notices shall be deemed duly given when delivered by hand; or three (3) days after deposit in the U.S. Mail, postage prepaid. Notice to the Parties shall be sent to the publically advertised mailing address for the Party.

11. Governing Law and Severability. This Agreement shall be governed and construed in accordance with the laws of the State of California. If any provision or provisions of this Agreement shall be determined to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired hereby.

12. Consent to Waiver and Breach. No term or provision hereof shall be deemed waived and no breach excused, unless the waiver or breach is consented to in writing, and signed by the Party or Parties affected. Consent by any Party to a waiver or breach by other Party shall not constitute consent to any different or subsequent waiver or breach.

13. Entire Agreement. This Agreement and the exhibits attached hereto constitute the entire agreement between the Parties with respect to the subject matter therein; all prior agreements, representations, statements, negotiations and undertakings are superseded hereby.

14. Execution in Counterparts. This Agreement may be executed and delivered in any number of counterparts or copies (counterparts) by the Parties. As each Party has signed and delivered at least one counterpart to the other Parties, each counterpart shall be deemed an original and, taken together, shall constitute one and the same Agreement, which shall be binding and effective as to the Parties.

15. Non-Waiver of Objections. The entry into, and the performance of this Agreement by the Parties shall not constitute, nor be construed as, any waiver of the COPERMITTEES' objection to any provisions of the NPDES Permit including, without

limitation, any provisions identified in the Petition for Review filed by the COPERMITTEES with the SWRCB, or that provisions of the NPDES Permit constitute an unfunded State mandate without subvention of State funds.

/ / /

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the dates set forth below.

RECOMMENDED FOR APPROVAL:

By_____
WARREN D. WILLIAMS
General Manager-Chief Engineer

Dated:_____

APPROVED AS TO FORM:

By_____
PAMELA J. WALLS
County Counsel

Dated:_____

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By _____
MARION ASHLEY, Chairman
Riverside County Flood Control and Water Conservation District Board of Supervisors

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

RECOMMENDED FOR APPROVAL:

Dated:_____

COUNTY OF RIVERSIDE

By _____
BOB BUSTER, Chairman
Riverside County Board of Supervisors

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

WHEN DOCUMENT IS FULLY EXECUTED RETURN
CLERK'S COPY
to Riverside County Clerk of the Board, Stop 1010
Post Office Box 1147, Riverside, Ca 92502-1147
Thank you.

JU:AMM:cw
11/03/11

DEC 06 2011 3.4

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the dates set forth below.

RECOMMENDED FOR APPROVAL:

By _____
WARREN D. WILLIAMS
General Manager-Chief Engineer

Dated: 11/22/11

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By _____
MARION ASHLEY, Chairman
Riverside County Flood Control and Water Conservation District Board of Supervisors

APPROVED AS TO FORM:

PAMELA J. WALLS
County Counsel

By _____
KARIN WATTS-BAZAN
Principal Deputy County Counsel

Dated: November 21, 2011

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

RECOMMENDED FOR APPROVAL:

By _____
LARRY PARRISH
Interim County Executive Officer

Dated: _____

COUNTY OF RIVERSIDE

By _____
BOB BUSTER, Chairman
Riverside County Board of Supervisors

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

JU:AMM:cw
11/03/11

DEC 06 2011 11.1

APPROVED AS TO FORM:

By _____
City Attorney

CITY OF MURRIETA

By _____
Mayor

ATTEST:

By _____
City Clerk

Dated: January 17, 2012

APPROVED AS TO FORM:

By _____
Peter M. Thorson, City Attorney

CITY OF TEMECULA

By _____
Chuck Washington, Mayor

ATTEST:

By _____
Susan W. Jones, MMC, City Clerk

Dated: 1/10/12

APPROVED AS TO FORM:

By _____
City Attorney
ASSISTANT

CITY OF WILDOMAR

By _____
Mayor

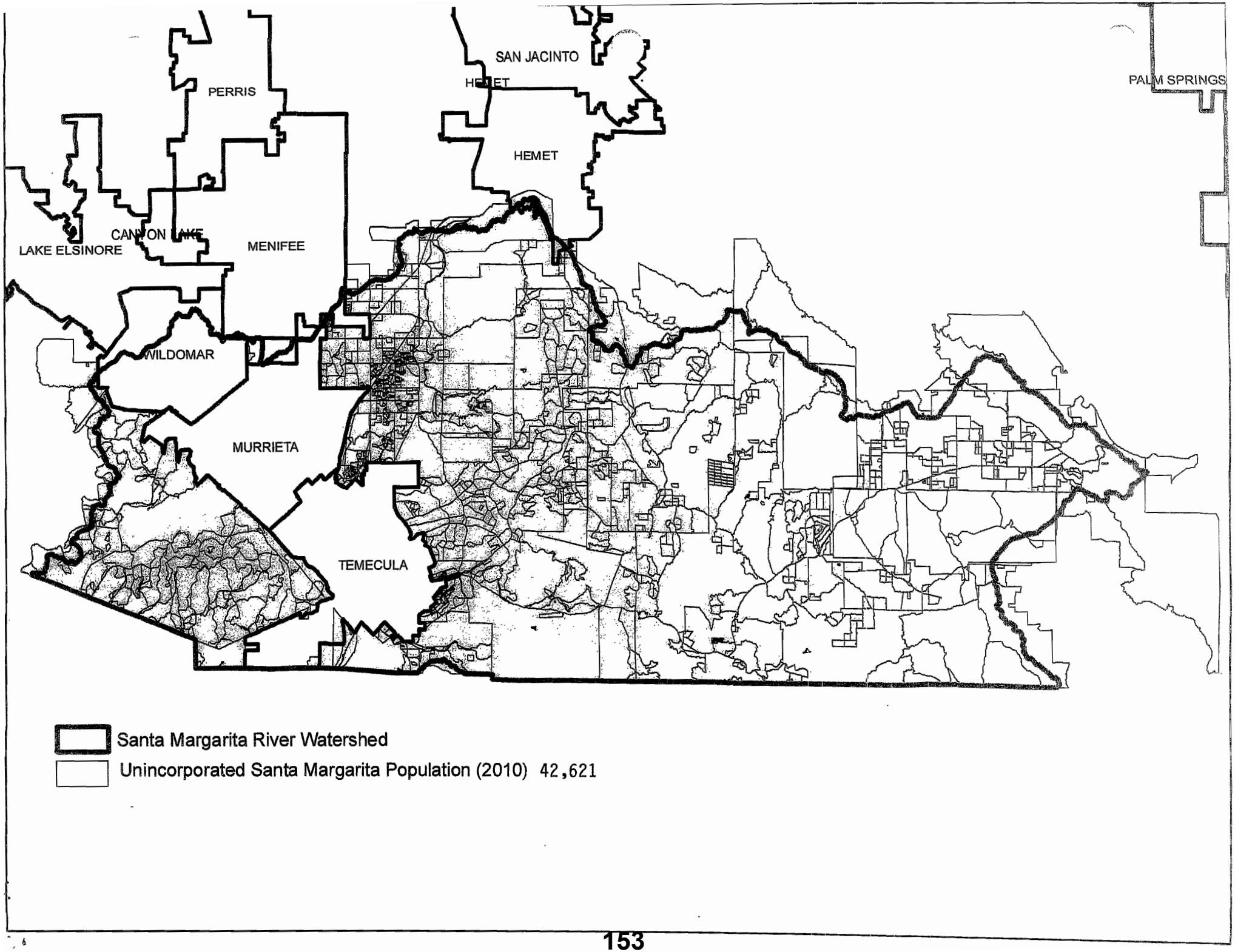
ATTEST:

By _____
City Clerk

Dated: 01-19-12

2011-2012 NPDES Cooperative Agreement Cost Sharing Estimates
Approximate Numbers for Budgeting Consideration

Municipality	Population	SMR
Riverside County	42,621	$288,052
Murrieta	101,487	$527,612
Temecula	105,029	$581,716
Wildomar	31,907	$146,637
Total	281,044	$1,544,017


SAN JACINTO
HEMET
PERRIS
HEMET
PALM SPRINGS
CANYON LAKE
LAKE ELSINORE
MENIFEE
WILDOMAR
MURRIETA
TEMECULA
Santa Margarita River Watershed
Unincorporated Santa Margarita Population (2010) 42,621

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

County of Riverside
Name of Local Agency or School District

Larry Parrish
Claimant Contact

Interim Chief Executive Officer
Title

4080 Lemon Street, Suite 400
Street Address

Riverside, CA 95201
City, State, Zip

951-955-1110
Telephone Number

951-955-1105
Fax Number

ceo@rceo.org
E-Mail Address

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

David W. Burhenn
Claimant Representative Name

Attorney
Title

Burhenn & Gest LLP
Organization

624 S. Grand Avenue, Suite 2200
Street Address

Los Angeles, CA 90017
City, State, Zip

213-629-8788
Telephone Number

213-688-7716
Fax Number

dburhenn@burhenngest.com
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016 (adopted November 10, 2010)

☑ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

(Revised 1/2008)

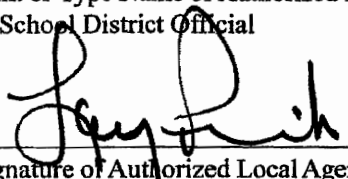
8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Larry Parrish
Print or Type Name of Authorized Local Agency or School District Official

Interim Chief Executive Officer
Print or Type Title



Signature of Authorized Local Agency or School District Official

November 7, 2011
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

ORDINANCE NO. _____ - 12

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MURRIETA, CALIFORNIA, AMENDING CHAPTER 8.36 OF THE MURRIETA MUNICIPAL CODE TO ENACT CHANGES TO THE CITY'S REGULATIONS OF DISCHARGES TO ITS STORM DRAIN SYSTEM MANDATED BY ORDER R9-2010-0016 OF THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION

WHEREAS, the federal Clean Water Act ("CWA") was amended in 1987 to address stormwater runoff from municipal and industrial dischargers. One requirement of the amendment was that many municipalities throughout the United States were obligated to obtain National Pollutant Discharge Elimination System ("NPDES") permits for discharges of stormwater runoff; and

WHEREAS, In response to the CWA, the San Diego Regional Board (Regional Board) issued a municipal stormwater first term permit, Order No. 90-46, in July 1990 that applied to the City's municipal separate storm sewer system ("MS4") discharges; and

WHEREAS, the City previously adopted ordinances, codified at chapter 8.36 of the City's Municipal Code, to enact requirements for the enforcement of three previous NPDES permits issued by the Regional Board that were applicable to the City; and

WHERES, on November 10, 2010, the Regional Board adopted the fourth term permit, Order R9-2010-0016 regulating discharges from the MS4's draining the County of Riverside, the Cities of Murrieta, Temecula, Wildomar, and the Riverside County Flood Control and Water Conservation District within the San Diego Region ("NPDES Permit"); and

WHEREAS, the NPDES Permit mandates that the City update its laws to ensure to implement and enforce each of the NPDES permit requirements; and

WHEREAS, substantial changes to the current regulations codified at chapter 8.36 are required to reflect all of the requirements of the NPDES Permit,

NOW, THEREFORE, the City Council of Murrieta, California does amend chapter 8.36 of its Municipal Code and does ordain as follows:

SECTION 1. AMENDMENTS TO CHAPTER 8.36.

Current chapter 8.36 of the Murrieta Municipal Code is hereby deleted in its entirety and hereby amended to read as follows:

Article 1. General Provisions

8.36.100 Title.

This chapter shall be known as the "City of Murrieta Stormwater and Runoff Management and Discharge Controls Ordinance" and may be so cited.

8.36.110 Purpose and intent.

The Purpose of this chapter is to implement the Federal Water Pollution Control Act (the "Clean Water Act" or "CWA"), 33 U.S.C. Sections 1251—1387, and the California Water Code by prohibiting the discharge of any pollutant to navigable waters of the United States from a point source unless the discharge is authorized by a permit issued pursuant to the National Pollutant Discharge Elimination System ("NPDES") required by CWA Section 402, 33 U.S.C. Section 1342, and prohibits non-stormwater discharges into the municipal separate storm sewer system ("MS4").

8.36.120 Administration.

The chapter shall be administered for the City of Murrieta by the city engineer or his or her designee.

8.36.130 Definitions.

A. The terms as used in this chapter or in any resolution or standard adopted by the city council pursuant to this chapter, shall have the following meanings:

"Authorized inspector" shall mean the city engineer and all persons designated by him or her and under his or her instruction and supervision, who are assigned to investigate compliance with, detect violations of, and/or take actions pursuant to this chapter.

"Best Management Practices" or "BMPs" shall mean, as defined in 40 C.F.R. 122.2, schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include site design, source control, treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

"City engineer" shall mean the director of public works/city engineer of the City of Murrieta or his or her designee.

"Co-NPDES permittee" shall mean the County of Riverside, the Riverside County Flood Control and Water Conservation District and the City of Temecula, City of Wildomar and City of Murrieta which are responsible for compliance with the terms of the NPDES permit.

"CWA" shall mean the Clean Water Act.

"Discharge" shall mean any release, spill, leak, flow, escape, leaching (including subsurface migration or deposition to groundwater), dumping or disposal of any liquid, semi-solid or solid substance.

"Discharge exception" shall mean those activities not restricted or prohibited by this chapter or exempted in the NPDES permit or a subsequent NPDES permit.

"Discharger" shall mean any person, any property owner, or any occupant of any unit, building, premises or lot within the city, who either discharges or causes to discharge any of the substances listed under "discharge," above, either directly or indirectly into the city's storm drain system.

"Existing Development and Operations," shall mean existing fixed or mobile industrial and commercial business facilities and non-commercial facilities that are not residential in nature (such as not-for-profit entities,) facilities in the City operated by other governmental entities, common interest areas, homeowners' associations, and property management organizations.

"Illicit connection" shall mean any physical connection to the storm drain system that conveys an illicit discharge.

"Illegal discharge" shall mean any discharge to the storm drain system that is not composed entirely of stormwater runoff except discharges made pursuant to a NPDES permit and discharges resulting from fire fighting activities (40 C.F.R. 122.26(b)(2)).

"Invoice for costs" shall mean the actual costs and expenses of the city, including but not limited to administrative overhead, salaries and other expenses recoverable under California law, incurred during any inspection conducted pursuant to this chapter or where a notice of noncompliance, administrative compliance order or other enforcement option under this chapter is utilized to ensure compliance with this chapter or the NPDES permit.

"JRMP" or "jurisdictional runoff management plan" shall mean a written description of the specific jurisdictional runoff management measures and programs that the city will implement to comply with the NPDES permit and to ensure that stormwater pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

"Maximum extent practicable" ("MEP") shall mean the technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) for stormwater that operators of MS4s must meet as contained within the most-current NPDES permit. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment

control BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than best available technology economically achievable. A definition for MEP is not provided either in the statute or in the regulations. Instead the definition of MEP is dynamic and will be defined by the following process over time: municipalities propose their definition of MEP by way of their runoff management programs. Their total collective and individual activities conducted pursuant to the runoff management programs becomes their proposal for MEP as it applies both to their overall effort, as well as to specific activities (e.g., MEP for street sweeping, or MEP for MS4 maintenance). In the absence of a proposal acceptable to the Regional Board, the Regional Board defines MEP.

"Modifications to existing development" shall mean the creation or addition of impervious surfaces or the making of improvements to an existing structure on an already developed site; replacement of impervious surfaces that are not part of a routine maintenance activity; and land-disturbing activities related to structural or impervious surfaces. Modifications to existing development does not include trenching and resurfacing associated with utility work; resurfacing existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair. This definition is consistent with the term "redevelopment" as referenced in the NPDES permit.

"New development" shall mean all public and private residential (whether single-family, multi-unit or planned unit development), industrial, commercial, retail, and other non-residential construction projects, or grading for future construction, for which a land use approval, grading permit, building permit or nonresidential plumbing permit is required.

"Non-Stormwater" shall mean all discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than Stormwater). Non-Stormwater includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

"NPDES" or "National Pollution Discharge Elimination System" shall mean the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing NPDES permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

"NPDES permit" shall mean any NPDES permit setting waste discharge requirements for discharges from the MS4s draining the County of Riverside, the incorporated cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the San Diego Region and which also includes the City of Murrieta.

"Owner or operator" shall mean the owner or operator of any facility or activity subject to regulation under the NPDES permit.

"Permittee" shall mean any person, property owner, contractor, or authorized agent to whom a NPDES permit is issued pursuant to this chapter.

"Person" shall mean an individual, association, partnership, corporation, municipality, state or federal agency, or any agent or employee thereof (40 C.F.R. 122.2).

"Pollutant" shall mean anything that causes the deterioration of water quality such that it impairs subsequent and/or competing uses of the water. Pollutants may include but are not limited to paints, oil and other automotive fluids, soil, rubbish, trash, garbage, debris, refuse, waste, fecal coliform, fecal streptococcus, enterococcus, heavy metals, hazardous waste, chemicals, fresh concrete, yard waste from commercial landscaping operations, animal waste, materials that result from the process of constructing a building or structure, nauseous or offensive matter of any kind.

"Prohibited discharge" shall mean any discharge which contains any pollutant, from public or private property to: (i) the storm drain system; (ii) any upstream flow, which is tributary to the storm drain system; (iii) any groundwater, river, stream, creek, wash or dry weather arroyo, wetlands area, or marsh; or (iv) which is otherwise prohibited by the NPDES permit. The term "prohibited discharge" shall not include discharges allowable under the discharge exception.

"Receiving waters" shall mean the waters of the United States. This applies to natural drainage channels, active or not, including all tributaries leading to streams, creeks, rivers, and other water bodies.

"Regional board" or "SDRWQCB" shall mean the San Diego Regional Water Quality Control Board which has jurisdiction over the city.

"Runoff" shall mean all flows in a stormwater conveyance system, including the city's storm drain system, that consists of the following components: (1) stormwater (wet weather flows) and (2) non-stormwater including dry weather flows.

"Site" shall mean the real property on which activities subject to this chapter may occur.

"State Board" or "SWRCB" shall mean the State Water Resources Control Board.

"State general NPDES permit" shall mean either the State General Industrial Stormwater NPDES permit or the State General Construction NPDES permit, as the same may be amended from time to time, and the terms and requirements of either or both NPDES permits. In the event the Environmental Protection Agency (EPA) revokes the in-lieu NPDES permitting authority of the state board, then the term state general

NPDES permit shall also refer to any EPA-administered stormwater control program for industrial activities, construction activities, or any other type of activity that is subsequently regulated through a state general NPDES permit.

"Storm drain system" or "MS4" (municipal separate storm sewer system) shall mean any facility within the city limits by which stormwater may be conveyed to waters of the United States. "Storm drain system" includes but is not limited to any roads with drainage systems, streets, gutters, catch basins, natural and artificial channels, ditches, aqueducts, storm drains, inlets, conduit, lined diversion structures, streams, creeks, or other drainage structures within the city limits, which is a part of or tributary to the county-wide stormwater runoff system and owned, operated, maintained or controlled by the City, the County of Riverside, the Riverside County Water Conservation and Flood Control District or any co-NPDES permittee, and used for the purpose of collecting, storing, transporting, or disposing of stormwater.

"Stormwater" shall mean stormwater runoff, snowmelt runoff and surface runoff and drainage. Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.

"WQMP" means a water quality management plan and is also known as the standard stormwater mitigation plan ("SSMP"); it shall be prepared by a professional civil engineer licensed in the State of California

B. To the extent any defined term in this chapter conflicts with the meaning of the same term in the NPDES permit, the definition provided by the NPDES permit shall govern.

C. This chapter is to be construed and interpreted to be consistent with the NPDES permit. The NPDES permit shall be used to further construe any term or requirement contained in this chapter.

8.36.140 Jurisdictional runoff management program.

The city engineer shall adopt a specific jurisdictional runoff management program ("JRMP") to comply with the NPDES permit and ensure that stormwater pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards. The city engineer shall have the authority to change, update or revise the JRMP as necessary in order to implement the provisions of this chapter and the NPDES permit and all revisions thereto arising from time to time.

8.36.150 Regulatory consistency.

This chapter shall be construed to assure consistency with the requirements of the Clean Water Act and any amendments thereof, and all applicable implementing regulations, and any existing or future NPDES permit and any amendments or revisions thereto or re-issuance thereof. If there is any conflict between the NPDES permit and

this chapter or between the NPDES permit and any city policy adopted pursuant to the chapter, the NPDES permit shall apply.

8.36.160 Compliance disclaimer.

Full compliance by any person or entity with the provisions of this chapter shall not preclude the need to comply with other local, state or federal statutory or regulatory requirements, which may be required for the control of the discharge of pollutants into Runoff and/or the protection of stormwater and non-stormwater runoff quality.

8.36.170 City cooperation.

The city intends to cooperate with other agencies with jurisdiction over regulated discharges to its MS4 to ensure that the regulatory purposes underlying the NPDES permit promulgated pursuant to the Clean Water Act (33 U.S.C. 1251 et. seq.) are met.

8.36.180 Contracting for services.

The city may, to the extent authorized by law, elect to contract for the services of any public agency or private enterprise to carry out the planning approvals, inspections, permits and enforcement authorized by this chapter.

Article 2. Prohibited Discharges and Illicit Connections

8.36.200 Prohibited discharges.

All discharges to the city's MS4 prohibited pursuant to the NPDES permit are prohibited.

8.36.210 Prohibited illicit connections.

Any connection to the city's MS4 deemed to be an "illicit connection" pursuant to the NPDES permit is prohibited. The prohibition against illicit connections shall apply regardless of whether the connection was established prior to the date on which this chapter was enacted.

Article 3. Control of Discharges and Runoff

8.36.300 New development projects and modifications to existing development.

A. General Requirements. New development or modifications to existing development shall be designed to control discharges and pollutants in runoff pursuant to the requirements of the NPDES permit. The city engineer shall approve the WQMP and BMPs that may be implemented to achieve compliance with the NPDES permit and shall approve the manner of implementation.

B. Construction Discharge and Runoff Compliance. All individual grading and building project permits shall conform to the State General Construction NPDES permit requirements and implement measures, including adherence to their stormwater pollution prevention plan, to ensure that all pollutants from the site will be either eliminated or reduced to the maximum extent practicable, and will not cause or contribute to an exceedance of water quality objectives as described in the San Diego Regional Water Quality Control Board Basin Plan. All grading and building activities will be in compliance with the Grading, Erosion and Sediment Control Ordinance at chapter 15.52 of this Code; the Grading Manual; other applicable ordinances; federal, state, and local permits; and other applicable requirements.

8.36.310 Permit requirements for all construction and for industrial/ commercial activities.

A. State-issued Permits. Each person associated with any individual NPDES permit (whether or not the NPDES permit) or State general construction NPDES permit shall comply with all the requirements of such permits. Each person identified in these permits shall comply with and undertake all activities required by such permits. The city engineer may require any person to which such a permit has been issued to provide proof of compliance, in a form acceptable to the city engineer or his or her designated representative, prior to the issuance of any grading, building or occupancy permit, or any other type of permit or license issued by the city.

B. City-issued Permits. An application for any of the following permits or approvals shall demonstrate how the requirements of this chapter will be met, and the permit or approval shall not be issued unless the city engineer determines that the application complies with the requirements of this chapter:

1. Commercial development plan
2. Residential development plan
3. Industrial development plan
4. Grading plan
5. Building permit
6. Improvement plan
7. Conditional use permit
8. Temporary use permit
9. Tentative map modifications
10. Map modifications

C. Permit Suspensions or Revocations. The city engineer may suspend or revoke any permit issued by the city when it is determined that:

1. The permittee has violated any term, condition, or requirement of the permit or any applicable provision of this chapter;

2. The circumstances have changed so that it is no longer appropriate to accept the discharge;

3. The permittee fails to comply with any schedule for compliance issued pursuant to this chapter; or

4. Any regulatory agency, including the EPA, the State Board or a regional water quality control board having jurisdiction over the discharge, notifies the city that the discharge should be terminated.

D. Permit Modifications. The city engineer may modify any permit when it is determined that:

1. Federal or state law requirements have changed in a manner that necessitates a change in the permit;

2. The permittee's discharge or the circumstances under which the discharge occurs have changed; or

3. A change to the permit is necessary to ensure compliance with the objectives of this chapter or to protect the quality of receiving waters.

E. Compliance with the terms, conditions and requirements of a permit issued by the city shall not relieve the permittee from compliance with all federal, state and local laws, regulations, the NPDES permit and local permit requirements, applicable to the activity for which the permit is issued.

8.36.320 Water quality management plan.

A. All new development or modifications to existing development projects that meet the specified categories listed in the NPDES permit shall prepare a preliminary WQMP. The permittee shall submit the preliminary WQMP during the planning application submittal process and a final WQMP during final engineering.

B. The city engineer or his or her designated representative shall review all required WQMPs and impose terms, conditions and requirements on the projects in accordance with this chapter prior to the city's issuance of permits (grading and building), discretionary land use approvals or recordation of maps. The city engineer shall approve all final WQMPs and evidence of this approval shall be submitted prior to the issuance of permits, discretionary land use approvals or recordation of maps.

C. The city engineer shall require that the WQMP, or components within the WQMP, be recorded with the county recorder's office. The signature of the property owner, or successor in interest, shall be sufficient for the recording of the plan or any revised plan. A signature on behalf of the city shall not be required for recordation.

D. New development projects or a modification to existing development which do not require a WQMP, will be required to implement minimum BMPs designated by the city according to conditions and requirements established by the city engineer which must be consistent with the NPDES permit.

E. A WQMP shall be required if the city engineer determines one is required by the NPDES permit.

F. Contents of a WQMP shall comply with the Riverside County WQMP Guidance and Template for the Santa Margarita Region. The BMPs identified in the WQMP shall include site design, source controls and treatment controls consistent with the NPDES permit.

G. The costs and expenses of the city incurred in the review, approval, or revision of any water quality management plan are assessed to the property owner or responsible party and are due and payable to the city. The city engineer or his or her designee may elect to require a deposit of estimated costs and expenses, and the actual costs and expenses shall be deducted from the deposit, and the balance, if any, refunded to the property owner or responsible party.

8.36.330 Expiration of, adherence to and continuation of WQMPs.

A. Expiration of final WQMPs.

1. Approved plans for a WQMP shall expire 12 months following the date of approval unless project construction has begun and may be returned to the applicant or may be destroyed by the city engineer without additional notice to the applicant.

2. The city engineer may extend the time for action by the applicant upon an approved plan for a WQMP for a period not exceeding twelve months upon written request by the applicant showing that circumstances beyond the reasonable control of the applicant have prevented action from being taken.

3. If a final WQMP issued pursuant to this chapter has expired without first being extended by the city engineer, in order to renew the WQMP, the applicant shall resubmit the plans and pay the most current plan review fee.

B. Adherence to WQMP Requirements. All new development and modifications to existing development projects shall adhere to the terms, conditions and requirements of the approved final WQMP.

C. Continuation of Terms, Conditions and Requirements for New Development and Modifications to Existing Development Projects. All terms, conditions and requirements which the city planning and public works departments have initially imposed pursuant to this chapter shall remain in effect upon the transfer of the property. Any owner of the property, or any successors, or assigns, shall be in violation of this chapter if they fail to implement and/or adhere to the terms, conditions and requirements imposed on the property pursuant to this chapter.

8.36.340 Jurisdictional runoff management plan.

All new development and modifications to existing development projects shall be undertaken and implemented in a manner that is consistent with the JRMP and NPDES permit. Any conditions and requirements established by the city's planning and public works departments which are related to the reduction or elimination of pollutants in runoff from the project site, shall be fulfilled by the permitted person.

Article 4. Existing Development and Litter Control

8.36.400 Existing development and operations.

A. General Requirements. In a manner consistent with the NPDES permit, existing development and operations (whether fixed or mobile) shall prevent pollutants from entering runoff and shall control runoff so as to prevent any deterioration of water quality that would impair subsequent or competing uses of the water.

B. Existing Development and Operations. Each person in charge of day-to-day operations of an existing development and operations facility in the city shall implement minimum BMPs as necessary to comply with the NPDES permit. For those existing development and operations that are tributary to impaired water bodies and/or are directly adjacent to or discharging directly to receiving waters, BMPs shall include additional controls as required by the NPDES permit.

C. Common Interest Areas, Homeowners' Associations, Property Management Organizations and Mobil Home Parks. Each person who owns, operates, or is in charge of day-to-day activities of common interest areas on private property in the city shall ensure that runoff from within common interest areas, including private roads, drainage facilities, and other components of the stormwater conveyance system, meets the objectives of the NPDES permit and this chapter.

8.36.410 Litter control.

A. No person shall dump, dispose, or stockpile any waste material, including but not limited to common household rubbish or garbage of any kind (whether generated or accumulated at a residence, business or other location), upon any public or private property, whether occupied, open or vacant, including but not limited to, any street, sidewalk, alley, right-of-way, open area or point of entry to the storm drain system, except in trash containers with closed lids, or at a lawfully established waste disposal facility.

B. Any person who owns or occupies a property on which a prohibited disposal of waste materials occurs shall ensure that all such waste materials are properly collected and disposed of within a reasonable period of time.

C. Any person who either owns or occupies property and who fails to comply with the requirements of this chapter may be charged with creating a nuisance upon the property.

Article 5. Inspections and Enforcement

8.36.500 Inspections.

A. Right to Inspect. Prior to commencing any regular monitoring inspection as herein below authorized, the authorized inspector shall obtain either the consent of the owner or occupant of the private property or shall obtain an administrative inspection warrant or criminal search warrant.

B. Entry to Inspect. The authorized inspector may enter private property to investigate the source of any discharge to any public street, inlet, gutter, storm drain, or the storm drain system located within the jurisdiction of the city.

C. Exigent Conditions. If the city engineer has reasonable cause to believe that non-storwater runoff is actively discharging from the property onto any public street, inlet, gutter, or any other storm drain system, the city engineer shall have the right to immediately enter and inspect said property, regardless of whether said property is occupied or unoccupied, and regardless of whether formal permission to inspect said property has been obtained in order to protect the public health, safety and welfare from imminent harm.

D. Compliance Assessments. The authorized inspector may inspect private property for the purpose of verifying compliance with this chapter, including but not limited to (1) identifying products produced, processes conducted, chemicals used, and materials stored on or contained within the property; (2) identifying point(s) of discharge of all wastewater, process water systems, pollutants and prohibited runoff; (3) investigating the natural slope at the location, including drainage patterns and manmade conveyance systems; (4) establishing the location of all points of discharge from the private property, whether by surface runoff or through a storm drain system; (5) locating any illicit connection or the source of prohibited discharge; (6) evaluating compliance with any BMP or WQMP; (7) evaluating compliance with any permit issued pursuant to this chapter; and (8) investigating the condition of any legal nonconforming connection.

E. New BMPs. When a BMP is installed on private property as part of a project that requires a city permit or business license, in order to comply with this chapter, the property owner, occupant or operator shall provide the city access for inspection of BMPs to ensure that the BMP is working properly. This includes the right to enter the property without prior notice, as needed, when the city has a reasonable basis to believe that the BMP is not working properly, to enter for any follow-up

inspections, or to enter when necessary for abatement of a nuisance or correction of a violation of this chapter.

F. Portable Equipment. For purposes of verifying compliance with this chapter, the authorized inspector may inspect any vehicle, truck, trailer, tank truck or other mobile equipment.

G. Records Review. The authorized inspector may inspect all records of the owner or occupant of private property relating to chemicals or processes presently or previously occurring on site, including material and/or chemical inventories, facilities maps, or schematics and diagrams, material safety data sheets, hazardous waste manifests, business plans, pollution prevention plans, state general permits, stormwater pollution prevention plans, monitoring program plans, and any other record(s) relating to illicit connections, prohibited discharges, a legal nonconforming connection, operations or maintenance records related to compliance with a final WQMP or any other source of contribution or potential contribution of pollutants to the storm drain system.

H. Sample and Test. The authorized inspector may inspect, sample, and test any area runoff, soils area (including groundwater testing), process discharge, materials within any waste storage area (including any container contents), and/or treatment system discharge for the purpose of determining the potential for contribution of pollutants to the storm drain system. The authorized inspector may investigate the integrity of all storm drain and sanitary sewer systems, any legal nonconforming connection, or other pipelines on the property using appropriate tests, including but not limited to smoke and dye tests or video surveys. The authorized inspector may take photographs or video tape, make measurements or drawings, and create any other record reasonably necessary to document conditions on the property.

I. Monitoring. The authorized inspector may erect and maintain monitoring devices for the purpose of measuring any discharge or potential source of discharge to the storm drain system.

J. Test Results. Upon submission of a written request by the owner or occupant of the property subject to inspection, the city engineer shall provide copies of all monitoring and test results conducted at the owner or occupant's property.

K. Cost Recovery. When any city inspection, monitoring, laboratory testing or other action undertaken to enforce the provisions of this chapter or the NPDES permit or to comply with the requirements of the same, the city engineer shall collect a fee from the inspected or monitored person in an amount not greater than the costs to the city of the inspection and monitoring in an amount to be established by the city council for the recovery of such costs generally.

8.36.510 Violation.

It shall be unlawful for any person to conduct any work or business, or cause the same to be done, contrary to or in violation of any of the provisions of this chapter, the NPDES permit, state or federal laws.

8.36.520 Liability.

A. Liability for any prohibited discharge or runoff or illicit connection prohibited by this chapter or the NPDES permit shall be the responsibility of the person(s) causing or responsible for the discharge, and such persons shall defend, indemnify and hold harmless the city in any administrative or judicial enforcement action relating to such discharge.

B. A civil or administrative violation of this chapter shall occur, regardless of a person's negligence or their intent to construct, maintain, operate or utilize an illicit connection or to cause, allow or facilitate any prohibited discharge into the city's MS4.

8.36.530 City-issued permits, enforcement.

A. Construction and Occupancy Permits.

1. The issuance of a grading or building permit, performance of permit inspections, or issuance of a certificate of occupancy may be withheld, revoked or suspended on property on which a violation of the provisions of this chapter exist, including work not performed in accordance with the approved plans, until such violation(s) has been corrected to the satisfaction of the city engineer.

2. Any permit applicant or holder may appeal a determination of the city engineer made pursuant to this subsection pursuant to procedures for appeal established elsewhere in this Code applicable to the specific permit(s) at issue. A permittee may request a temporary variance to continue to discharge pending issuance of a final decision through the appeal process.

B. Business Licenses. Violations of this chapter may be grounds for the suspension or revocation of a city business license in accordance with chapter 5.04 of this Code.

8.36.540 Violation a nuisance.

Any condition in violation of the prohibitions of this chapter, including but not limited to the maintenance or use of any illicit connection or the occurrence of any prohibited discharge, shall constitute a threat to the public health, safety, and welfare, and is declared and deemed a nuisance pursuant to Government Code section 38771.

8.36.550 Enforcement of violations.

A. Violations. Violations of the provisions of this chapter shall be prosecuted pursuant to any or all of the following provisions of this code:

1. Chapter 1.26, administrative citations. The city's authorized inspector shall be deemed an enforcement officer as that term is defined at Code section 1.26.020 for the purpose of enforcing any provision of this chapter or the

NPDES permit and he or she may also utilize any of the administrative citation procedures set forth at chapter 1.26;

2. Chapter 1.32, general penalties;

3. Chapter 1.32, specifically, as a misdemeanor and any violation of this chapter or the NPDES permit shall constitute a misdemeanor; or

4. Chapter 8.20, for the summary abatement of nuisances.

B. Notwithstanding any notice provisions contained at chapters 1.26, 1.32 or 8.20, where the owner or occupant of any private property cannot be located after the reasonable efforts of the authorized inspector, any notice required to enforce any provision of this chapter shall be deemed delivered after posting on the property for a period of ten business days.

C. Emergency Abatement.

1. In the event that the city manager, city engineer or a designee of either determines that any violation of the provisions of this chapter or the NPDES permit constitutes an imminent danger to public safety or the environment, the city manager, or his or her designee, may enter the property from which the violation emanates and abate the condition as public nuisance, and restore any affected property prior to notice to or consent from the owner or occupant thereof and without judicial warrant by following the applicable procedures set forth at chapter 8.20 of this Code.

2. An imminent danger created by a violation of this chapter or the NPDES permit may be subject to an immediate order by the city engineer or his or her designee to immediately cease such conduct. The city attorney is authorized to immediately seek a court order to enforce an order of the city engineer issued pursuant to this sub-section, according to the procedures provided at chapter 1.32 of this code. The city shall be entitled to recover the costs incurred enforcing the city engineer's order including any reasonable and necessary legal fees.

3. An imminent danger includes, but is not limited to, exigent circumstances created by the dispersal of pollutants, where the same presents a significant and immediate threat to the public safety or the environment.

4. Notwithstanding the authority of the city to conduct an emergency abatement action or order immediate cessation of a violation of this chapter or NPDES permit, an administrative hearing and right to appeal pursuant to chapter 1.26 of this code will be available after an emergency abatement or order to immediately cease violation has occurred.

D. Recovery of Costs.

1. Administrative enforcement costs. The authorized inspector may deliver to the owner or occupant of any private property or any responsible party, or any

other person who becomes subject to a notice of noncompliance with this chapter or administrative order, an invoice for costs. An invoice for costs is delivered and is appealable in accordance with the notice provisions established by chapter 1.26 for notice of an administrative citation. An invoice for costs is immediately due and payable to the city for the actual costs incurred by the city in issuing and enforcing any notice or order.

2. Abatement costs. In addition to any right provided by chapter 8.20, in order to recover the costs incurred by the city to abate a violation of this chapter or the NPDES permit, the city is entitled to recover the city's abatement costs, including its reasonably-incurred attorneys fees, from the owner or occupant of any private property or any responsible party, or any other person who becomes subject to a city abatement. The city may recover such costs through any means authorized for cost recovery contained in this code, including chapter 1.32.

E. Nonexclusive Remedies. Each and every remedy available for the enforcement of this chapter shall be nonexclusive, and it is within the discretion of the authorized inspector or enforcing attorney to seek cumulative remedies, except that multiple monetary fines or penalties are not available for any single violation of this chapter. The remedies available to the city pursuant to the provisions of this chapter shall not limit the right of the city to seek any other remedy that may be available by law.

F. Procedures and Right of Appeal. The procedures and right to appeal any action to enforce this chapter or the NPDES permit shall be governed by the specific chapter of this code pursuant to which the city undertakes its enforcement action.

8.36.560 Administrative compliance order.

A. Administrative Compliance Order. In addition to anything provided at chapter 1.26, the authorized inspector may issue an administrative compliance order which may be issued to any of the following:

1. Any owner or occupant of any private property requiring abatement of conditions on the property that cause or may cause a prohibited discharge or an illicit connection in violation of this chapter or the NPDES permit;

2. The owner of private property or a responsible party subject to the requirements of any WQMP to ensure implementation of and adherence to the terms, conditions and requirements of the plan; or

3. Any person responsible for an illicit connection or prohibited discharge pursuant to this chapter or the NPDES permit.

B. Contents. The administrative compliance order may include any terms and requirements necessary to remedy any violation of this chapter or the NPDES permit, including but not limited to,

1. Specific steps and time schedules for compliance as reasonably necessary to prevent threatened or future unauthorized discharges, including but not limited to the threat of a prohibited discharge from any pond, pit, well, surface impoundment, holding, or storage area;

2. Specific steps and time schedules for compliance as reasonably necessary to discontinue any illicit connection;

3. Specific requirements for containment, cleanup, removal, storage, installation of overhead covering, or proper disposal of any pollutant having the potential to contact stormwater runoff;

4. Any other terms or requirements reasonably calculated to achieve full compliance with the terms, conditions, and requirements of any WQMP; and

5. Any other terms or requirements reasonably calculated to prevent continued or threatened violations of this chapter, including, but not limited to, requirements for compliance with best management practices guidance documents promulgated by any federal, state, or regional agency.

C. Applicable Procedures. Notice, enforcement and appeal of an administrative compliance order pursuant to this chapter shall occur pursuant to the procedures established at chapter 1.26 of this Code for administrative citations, generally.

SECTION 2. SEVERABILITY.

If any provision of this Ordinance or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications, and to this end the provisions of this Ordinance are declared to be severable.

SECTION 3. EFFECTIVE DATE.

This Ordinance shall take effect and be enforced thirty (30) days following its adoption.

SECTION 4. NOTICE OF ADOPTION.

The City Clerk shall certify to the adoption of this Ordinance and shall publish a summary of this Ordinance and post a certified copy of the full Ordinance in the office of the City Clerk at least five (5) days prior to the adoption of the proposed Ordinance; and within fifteen (15) days after adoption of the Ordinance, the City Clerk shall publish a summary of the Ordinance with the names of the council members voting for and against the Ordinance.

ADOPTED by the City Council and signed by the Mayor and attested by the City Clerk this __ day of July, 2012.

PASSED, APPROVED AND ADOPTED this ___ day of July, 2012.

_____
Douglas R. McAllister, Mayor

ATTEST:

_____
A. Kay Vinson, City Clerk

APPROVED AS TO FORM:

_____
Leslie E. Devaney, City Attorney

I, A. Kay Vinson, City Clerk of the City of Murrieta, California, hereby certify under penalty of perjury that the foregoing Ordinance was duly and regularly introduced at a meeting of the City Council on the __ day of June, 2012, and that thereafter the said Ordinance was duly and regularly adopted at a regular meeting of the City Council on the __th day of July, 2012, by the following vote, to-wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____

City Clerk

David W. Gibson, Executive Officer
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123·4340

Re: Legal Authority of the City of Murrieta to Implement and Enforce the Requirements of 40 CFR 122.26(d)(2)(i)(A-F) and RWQCB Order R9-2010-0016

Dear Mr. Gibson:

The City of Murrieta (the "City"), by and through its City Attorney, hereby submits the following certification, pursuant to Section E.2 of Order No. R9-2010-0016,[NPDES Permit No. CASO108766], issued by the California Regional Water Quality Control Board, San Diego Region ("RWQCB") on November 10, 2010 and entitled "Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the San Diego Region." (the "Permit").

The City is one of the co-permittees under the Permit. Section E.2 of the Permit requires the City to provide the RWQCB with a statement by its legal counsel, certifying that the City has adequate legal authority to implement and enforce each of the current requirements set forth in 40 CFR 122.26(d)(2)(i)(A-F) and the Permit. The purpose of this letter is to comply with Section E.2 of the Permit. It is our opinion that the City has the necessary legal authority to implement, comply with and enforce the requirements of the Permit and 40 CFR 122.26(d)(20(i)(A-F) to the extent permitted by State and Federal law and subject to the limitations on municipal action under the California and United States Constitutions.

1. Citation of Runoff Related Ordinances

Presently, the City has in force Chapter 8.36 of its municipal code, entitled "City of Murrieta Stormwater and Urban Runoff Management and Discharge Controls Ordinance" regulating runoff in the City. At the date this letter is written, the chapter applies and enforces the standards of the previous NPDES permit.

On June 19, 2012, the City Council approved the first reading of a replacement for chapter 8.36 entitled, "City of Murrieta Stormwater and Runoff Management and Discharge Controls Ordinance" ("new chapter 8.36") which implements the requirements necessary to enforce the current Permit. Upon second reading, which will take place as soon as legally allowed pursuant to California law, it is anticipated that new chapter 8.36

will be adopted by the City Council. This letter describes the City's ordinances related to the Permit that will be in place when new chapter 8.36 is legally in force.

Additional provisions regarding runoff contained within the City's ordinances are found at: (1) Chapter 15.52, Grading, Erosion and Sediment Control; (2) chapter 15.54, Encroachment Permits Generally; and (3) chapter 16.108, Improvements, section 070, Erosion Control and Grading. These provisions are currently in force and do not require updating to mandate compliance with the current Permit.

2. Local administrative and legal enforcement procedures

The local administrative and legal procedures available to the City to mandate compliance with the City's runoff related ordinances in new chapter 8.36 are located at article 5, Inspections and Enforcement and also reference and incorporate enforcement provisions with the City's Municipal Code located at chapter 1.26, administrative citation; chapter 1.32, general penalties; and chapter 8.20, for summary abatement of nuisances. Enforcement actions may be completed either administratively or they may be commenced and completed in the judicial system as the City deems most appropriate for the control of runoff consistent with the Permit.

3. Runoff ordinance adoption procedure

City staff in coordination with the office of City Attorney draft and propose ordinances to the City related to runoff. They are the presented to the City Council for consideration and adoption pursuant to the requirements of California law. After proper public notice and any required public participation, Counsel considers proposed runoff ordinances, makes any changes it deems appropriate, and then approves a first reading of an ordinance. California law requires a second reading of all ordinances before they can be adopted by the Council, a process which occurs for runoff ordinances.

Once adopted, the City's ordinances become effective pursuant to California law. Facial challenges to the City's ordinances, as specified by California law, must be taken pursuant to writ in a court of law. Challenges to the City's runoff ordinances as applied in a particular circumstance must be addressed in the first instance administratively pursuant to the City's Municipal Code with an ultimate challenge available to a court of law should the challenging party property exhaust administrative remedies.

To the best of our ability, on behalf of the City of Murrieta, the above information has intended to address all of the requirements of section E.2 of the Permit. If you require additional information, please contact our offices.

Appendix B-5

Performance Evaluation Assessment

Compliance with Section J.1

Section J.1 of the 2010 SMR MS4 Permit requires each Copermittee to annually assess and report upon the effectiveness of the JRMP and Watershed Workplan implementation to (1) reduce the discharge of Storm Water Pollutants from its MS4 facilities to the MEP; (2) prohibit Non-Stormwater discharges; and (3) prevent runoff discharges from the MS4 from causing or contributing to a violation of Water Quality Standards. With submittal of the Report of Waste Discharge, the Copermittees will determine whether their program implementation is resulting in the protection and/or improvement of water quality through an integrated assessment.

Overview

The purpose of the overall program assessment is to ensure that the Copermittee's programs continue to be effective at managing the effects of Runoff on Receiving Water quality as required under section J.1 of the 2010 SMR MS4 Permit. To achieve this objective, the Copermittees have developed an overall program effectiveness assessment strategy. The overall program effectiveness assessment is an iterative process as depicted in Figure 1.

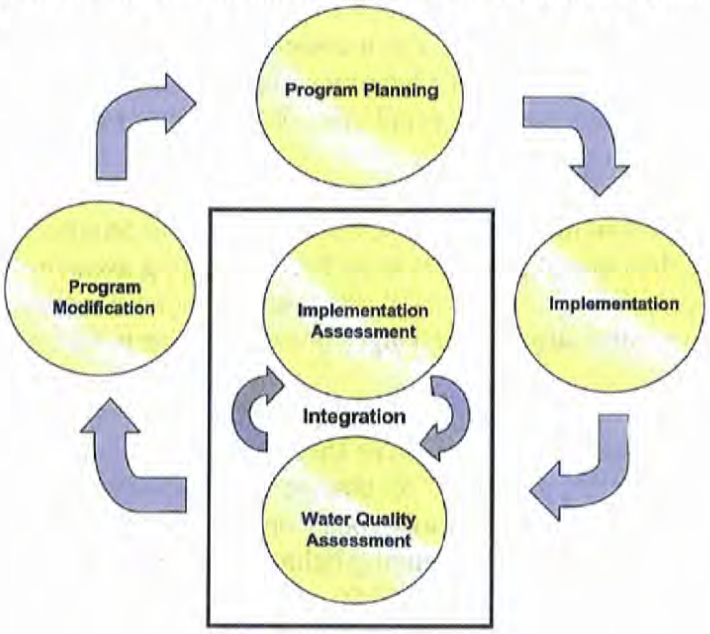


Figure 1

Measurable metrics that will be collected annually. These metrics generally involve: Confirmation of activities, Tabulation of data, Surveys of the public, results from Inspections or site visits, Quantification, and information from the Monitoring program.

CASQA Outcome Levels for each metric; to indicate how each metric can demonstrate the effectiveness of the Permittee's programs (as described below). Data collected through program implementation will be used to assess Level 1 – 4/5 outcomes. The results from the monitoring program will be used to identify water quality trends to evaluate Level 5 & 6 Outcomes

Assessment Intervals at which the Copermittees will evaluate the measurable metrics to determine the applicable CASQA Outcome Levels.

Timeframes in which the Copermittees expect to be able to achieve the desired CASQA Outcome Level. If a desired outcome is not attained within the specified timeframe, the Copermittee(s) will re-assess the BMP to identify any improvements that may be needed to improve their ability to detect and attain the outcome.

CASQA Outcome Levels

CASQA has established six effectiveness assessment levels which are described below. Generally lower level outcomes must be achieved before the higher level outcomes can be expected.

Level 1 – Documenting activities. Level 1 Outcomes provide the program managers with direct feedback on whether the control measures are being developed and implemented as planned and on schedule. Level 1 Outcomes are assumed to be beneficial to water quality and reflect program implementation and are not indicators of the impact of implementation on the environment.

Level 2 – Raising awareness. Level 2 Outcomes provide program managers with feedback on how effective the control measures have been in raising awareness and changing attitudes of target audiences. Level 2 Outcomes are assumed to be beneficial to the environment as increased awareness and attitudinal changes provide the basis for behavioral change.

Level 3 – Changing behavior. By building on Level 2, Level 3 Outcomes provide program managers with feedback on how effective the program elements and control measures have been in motivating target audiences to change their behaviors and implement appropriate BMPs. At Level 3, control measures focus on providing information and incentives for target audiences to take action by changing behavior and implementing recommended BMPs. Both quantitative (i.e., statistically valid) and qualitative methods are used to measure behavior changes. Methods used to measure behavior changes include those used for Level 2 Outcomes as well as direct observation via site visits. Level 3 Outcomes may take the form of a percent and/or change in the percentage of the target audience demonstrating that a behavior change has occurred such as an increase in number of BMPs implemented and maintained at construction sites.

Level 4 – Reducing loads from sources. Level 4 Outcomes provide program managers with feedback regarding reductions in the amounts of pollutants associated with specific sources

resulting from the implementation or enhancement of a BMP. If a large enough portion of the target audience is moved to take action (Level 3), loads into the MS4 are prevented. At Level 4, programs collect data to allow estimation of loads from Pollutant sources that are prevented from being either generated or discharged into the MS4.

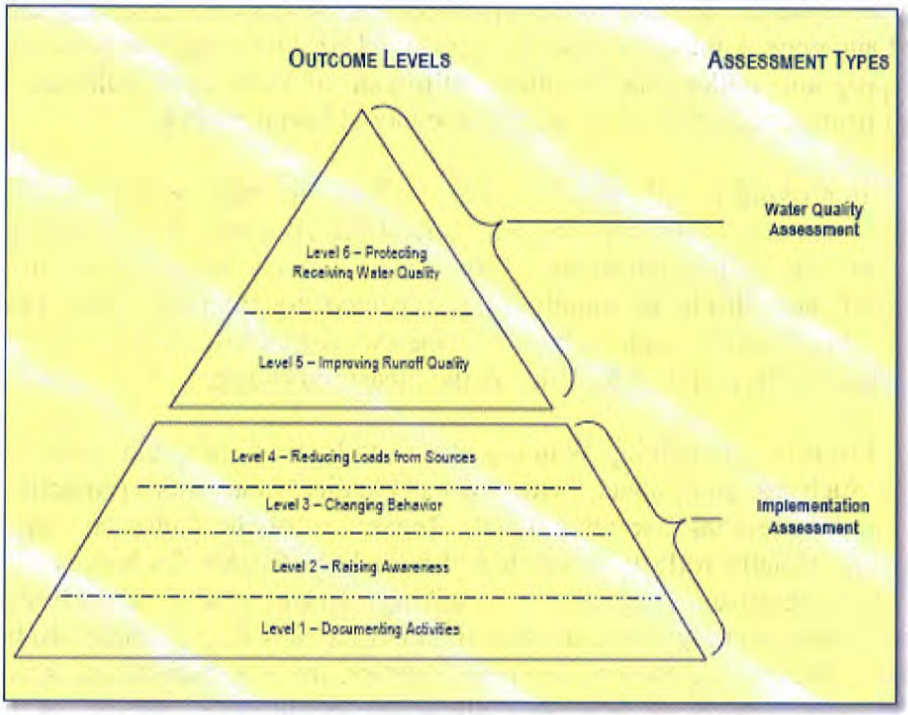
Level 5 – Improving runoff quality. Level 5 Outcomes may be measured as reductions in one or more specific Pollutants, and may reflect effectiveness at a variety of scales ranging from site-specific to programmatic. Over time, as loads are prevented from entering the MS4, runoff and discharge quality are expected to improve. At Level 5, baseline measurements of runoff quality should be measured to allow comparison. Multi-year data sets are needed to have any confidence in the measured change.

Level 6 – Protecting Receiving Water quality. At Level 6, program managers will focus on Outcomes such as compliance with Water Quality Standards, protection of biological integrity, and Beneficial Use attainment. Regardless of the Outcomes targeted, Receiving Water quality usually reflects more than the quality of MS4 discharges. Other influences may have a significant impact on Receiving Water quality, including sanitary sewer overflows, rising groundwater, agricultural and other Non-Point Source discharges. Changes in Receiving Waters and the environment resulting from stormwater programs may only be seen over long periods of time that allow the cumulative impacts of multiple control measures and program elements to result in measurable change in water quality.

Categories of Assessments

The program elements addressed in the overall program effectiveness assessment can generally be broken down into two categories, implementation assessments, and water quality assessments, as shown in the figure below:

Appendix B-5



Assessment Strategy

JRMP Implementation Assessments

The Copermittees have identified implementation assessment metrics for each compliance program area which can potentially demonstrate multiple outcome levels, as summarized below:

JRMP Program	Table #	Potential Outcome Levels					
		1	2	3	4	5	6
IC/ID	1	X		X	X	X	
Permittee Facilities	2	X	X	X	X		
Development Planning	3	X		X		X	
Construction	4	X		X			
Industrial / Commercial	5	X		X			
Residential	6			X	X		
Retrofit	7	X			X	X	
Public Education	8	X	X	X	X		

The specific metrics and associated CASQA Effectiveness Metrics are shown in Tables 1-8 of the Performance Evaluation Assessment.

Water Quality Assessments

In addition to the implementation assessments identified above, data from the Monitoring program will be used to perform Water Quality Assessments, as summarized below:

Monitoring Program Element	Potential Outcome Levels					
	1	2	3	4	5	6
Outfalls – Dry Weather				X	X	
Outfalls – Wet Weather				X	X	
Outfalls – High Priority Inland Aquatic Habitat				X	X	
Receiving Waters - Stream Assessment Monitoring				X	X	X
Receiving Waters – MLS Dry Weather				X	X	X
Receiving Waters – MLS Dry Weather				X	X	X

The specific metrics and associated CASQA Effectiveness Metrics for the Monitoring Program Element are shown in Table 9 of the Performance Evaluation Assessment. The revised Santa Margarita Monitoring Program (Volume III of the CMP) describes the monitoring program that will collect the necessary data.

The specific metrics and associated CASQA Effectiveness Metrics for the Watershed Workplan Program Element are shown in Table 10 of the Performance Evaluation Assessment. The Watershed Workplan is discussed in section 3.8 of the JRMP.

Reporting of Effectiveness Assessments

The continued implementation of the BMPs required in the 2010 SMR MS4 Permit are anticipated to result in incremental, but overall improvement in the metrics that may or may not be discernible within the term of the 2010 SMR MS4 Permit, however this assessment program is intended to be an iterative process that can transcend MS4 Permit terms, to ensure that improvements are made consistent with the MEP standard.

Beginning with the FY 2012-2013 Annual Reports, a summary of the Implementation Assessments will be provided within each JRMP Annual Report, and a summary of the Water Quality Assessments will be provided within each Monitoring Annual Report.

These effectiveness summaries will include:

a. The data collected for each of the measurable metrics identified in tables 1-10.

b. A determination of the applicable CASQA outcome level(s) for each metric, upon completion or the applicable assessment interval.

c. Responses to effectiveness assessments: Where the assessments indicate that the desired outcome level has not been achieved at the end of the projected timeframe, the Copermittee(s) will review its(their) applicable activities and BMPs to identify any modifications and improvements needed to maximize effectiveness, as necessary to comply with the 2010 SMR MS4 Permit. If the Copermittee(s) determines that the existing activities/BMPs are adequate, or that the projected timeframe should be

extended, justification and an updated timeframe for attainment of the outcome level will be provided in the Annual Report.

d. A work plan and schedule to address any program modifications and improvements in response to the findings of the assessments will be developed and implemented. The work plan and schedule will be provided and updated with the applicable Annual Report. The work plans will include, at a minimum, the following:

1) The problems and priorities identified during the assessment;
2) A list of Priority Pollutants and known or suspected sources;
3) A brief description of the strategy employed to reduce, eliminate or mitigate the negative impacts;
4) A description and schedule for new and/or modified BMPs. The schedule will include dates for significant milestones;
5) A description of how the selected activities will address an identified high priority problem. This will include a description of the expected effectiveness and benefits of the new and/or modified BMPs;
6) A description of implementation effectiveness metrics;
7) A description of how efficacy results will be used to modify priorities and implementation; and
8) A review of past activities implemented, progress in meeting Water Quality Standards, and planned program adjustments.

Table 10: Watershed Workplan

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Annual Public Review Meeting conducted	1	Annual	Annual
Updated Characterization of Receiving Water Quality	1	Annual	Annual
Updated prioritization of water quality problems	1	Annual	Annual
Descriptions of likely sources updated	1	Annual	Annual
Updated BMP Implementation Strategy	1	Annual	Annual
BMPs implemented according to schedule	1	Annual	Annual
Number of Collaborative Meetings Attended	1	Annual	Annual
Numeric Nutrient Endpoints Study	6	ROWD	5+ Years
Brake Pad Legistlation	3	ROWD	5+ years
Pyrethroid Toxicity Reduction Evaluation plan implemented	3	ROWD	5+ Years

BEST MANAGEMENT PRACTICES Plan for FIRE FIGHTING ACTIVITIES

Initially Prepared in Consultation with the Following Fire Fighting Agencies:

City of Corona Fire Department
City of Hemet Fire Department
City of Norco Fire Department
City of Riverside Fire Department
County of Riverside Fire Department/CDF
Idyllwild Fire Protection District
Murrieta Fire Protection District

Revised in compliance with
Order No. R9-2010-0016 (NPDES No. CAS0108766)
Covering the Santa Margarita Region

June 2012

INTENT

The purpose of this plan is to identify Best Management Practices (BMPs) used by fire fighting agencies for Runoff management in the Santa Margarita Region of Riverside County. Section B.3 of the 2010 SMR MS Permit adopted by the San Diego Regional Water Quality Control Board (Regional Board) requires each Copermittee to develop and implement a program to address Pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified as significant sources of Pollutants to Waters of the U.S.

The Riverside County MS4 Permittees in cooperation with the Riverside County Fire Agencies have developed fire department activity procedures to provide guidance to Fire Prevention and Firefighting personnel for management of Runoff. Guidance is provided in the form of recommended BMPs that are incorporated as part of the individual Jurisdictional Runoff Management Plans (JRMP), and as applicable into Facility Pollution Prevention Plans.

When followed, implementation of the BMPs will minimize discharges of Runoff to the municipal separate storm sewer system (MS4) associated with non-emergency fire fighting activities.

PROHIBITIONS

Building fire suppression system maintenance discharges (e.g., sprinkler line flushing) and vehicle washing contain Waste. Therefore, the Copermittees are required to prohibit such discharges as Illegal Discharges through ordinance, order, or similar means.

PROCEDURE

Fire Prevention Activities

1. Fire Sprinkler Acceptance and Testing BMPs

   - As noted above, discharges associated with fire suppression systems are prohibited. Such discharges must not be allowed to reach any MS4, Receiving Water, or other conveyance such as a street with curb and gutter.
   - Flows from fire sprinkler acceptance and testing must be contained onsite and/or direct the water flows to landscaped or green areas whenever possible and safe to do so without causing damage or erosion.
   - When practicable, divert sprinkler system flushing flows to the sanitary sewer, with the permission of the local sewer agency.
   - Conduct fire sprinkler testing on non-rainy days.

2. Fire Hydrant Testing BMPs

   - Obtain coverage under Order R9-2002-0020 (link) and implement any compliance requirements specified therein. The following are general guidelines that may need to be complied with:
     - Conduct on non-rainy days.
     - Conduct flows for the shortest duration possible.
     - Use a water diffuser as necessary.
     - Remove debris from the affected curb and gutter before initiating flushing.
     - Direct water flows to landscaped or green areas whenever possible and safe to do so without causin damage or erosion.

Non-emergency Firefighting Activities

1. Discharges Associated With Fire Training Activities

Training activities, which simulate emergency responses, must be performed in a manner that reduces or prevents discharges to the MS4 to the maximum extent practicable. In addition, when the elimination of discharges into the MS4 is unavoidable (i.e. equipment failures), measures will be implemented to minimize impacts to water quality:

- Live and simulated fire training should be conducted, where feasible, in facilities where Runoff controls protecting the MS4 have been engineered and built into the facility.
- When conducting Maximum Capability Training (MCT) exercises, potable water sources may be used when Runoff cannot be contained.
- Direct water flows to landscaped or green belt areas whenever possible.
- Survey the area prior to the training exercise to ensure that debris will not enter the MS4 as a result of the flows generated during the drill.
- When practicable, divert flows to the sanitary sewer with the permission of the local sewer agency.
- Use fog streams or straight streams for short durations when practicable.
- Use lower gallon per minute (GPM) nozzle settings.
- Prevent discharge of foam or other additives to the MS4. If training activities involve the use of foam, block off all potentially affected storm drain inlets with plastic sheeting and sandbags or temporary berms.

2. Discharges Associated With Post-Emergency Fire Fighting Activities

The post-emergency rehabilitation and maintenance of response equipment must be performed in a manner that avoids unnecessary discharges to the MS4.

3. Discharges Associated with Activities Conducted at Fire Facilities

Specific BMPs to be implemented at Copermittee owned Fire Facilities are identified in the Facility Pollution Prevention Plan (FPPP) as described in the JRMP. The following are general BMPs that can be considered for incorporation into the FPPP as determined appropriate and applicable by the Copermittee.

A. Vehicles and Equipment Washing and Cleaning

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 from vehicle and equipment washing and cleaning:

- Use methods of cleaning vehicles that employ the minimal use of water, such as wet chamois or non-water rinses, when applicable.
- Limit the use of all cleaning agents and when feasible only use water.
- Remove debris from any area or facility used for washing and/or cleaning vehicles.
- Prevent Runoff from vehicle and equipment washing and cleaning from entering the MS4 by employing one of the following BMPs.

  a. Direct water flows to landscaped or green areas or contain the water onsite and allow it to evaporate and infiltrate whenever safe to do so without causing damage or erosion.
  b. Use designated wash areas (preferably covered and bermed) to contain and/or divert the wash

water to the sanitary sewer either through the use of "wet-vac" or through a plumbed sanitary sewer connection.

c. Use self-contained water recycling systems.
d. Use off-site commercial washing and steam cleaning facilities.

- Prohibit all steam cleaning discharges from entering the MS4. Direct all steam cleaning discharges to the sanitary sewer.

B. Vehicle Fueling

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 when fueling fire fighting apparatus:

- Protect the fueling area from Stormwater by installing a canopy.
- Pave fueling area surfaces with Portland cement concrete (or other equivalent smooth impervious surface).
- Keep perimeter drains clear of debris at all times.
- Where a perimeter drain is not installed, install a berm or grade area to prevent run-on of Stormwater and spilled liquids.
- Use a dead-end sump to collect spills or install an oil-water separator.
- Utilize vapor recovery nozzles to help control drips as well as air pollution. Discourage "topping-off" of fuel tanks.
- Maintain a spill control kit at the site. Use absorbent materials on small spills and general cleaning rather than hosing down an area. Remove the absorbent materials promptly and dispose as hazardous waste.
- Keep site Facility Pollution Prevention Plan (FPPP) current.

C. Vehicles and Equipment Maintenance and Repair

The following BMPs must be implemented in order to prevent or reduce the discharge of Pollutants to the MS4 from vehicle and equipment maintenance and repair:

- Conduct vehicle and equipment maintenance in areas where precautions have been taken to prevent the entry of spills into the MS4.
- Use dry cleaning methods in maintenance and repair areas when practical.

D. Hose Washing and Cleaning

- Design future facilities used for washing and/or cleaning fire hoses to prevent wash water or other debris from entering the MS4.
- Direct water flows to landscaped or green areas or contain the water onsite and allowing it to percolate through plant material, the landscape, or to evaporate completely, whenever safe to do so without causing damage or erosion.
- Use designated wash areas (preferably covered and bermed) to contain and/or divert the wash water to the sanitary sewer either through the use of a "wet-vac" or through a plumbed sanitary sewer connection.
- Prevent wash water containing detergents, degreasers, or other contaminants from entering the MS4.
- When cleaning the wash area prevent discharge from entering the MS4. Utilize wet mop cleanin methods in small areas, when feasible.
- Use methods of cleaning fire hoses that employ the minimal use of water, such as high-pressure spray

washers, when applicable.

E. Facility Maintenance

he following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 during facility maintenance:

- Use dry cleaning methods, such as sweeping, to clean impervious areas such as apparatus floors, driveways, patios, and walkways. Place sweepings and debris in receptacles for solid waste disposal.
- Maintain landscaped areas as required, limiting the introduction of leaves and landscape waste into the MS4.
- Monitor and maintain irrigation systems to prevent Runoff.
- Maintain and repair structures in order to prevent the release of water, soils, or waste to the MS4.

F. Solid Waste and Hazardous Materials Storage Areas

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 from solid waste and in hazardous materials storage areas:

- Provide a canopy or roof for solid waste and hazardous materials storage areas.
- Provide secondary containment (i.e. a metal or plastic pan with a raised edge) for hazardous materials storage areas.
- Ensure waste containers and dumpsters are properly secured and sealed. Provide lids for all trash and solid waste receptacles. Keep lids closed to prevent contact with rainfall and to ensure containment of waste within the storage area.

Emergency Fire Fighting Activities

An "emergency" exists from alarm notification until, in the opinion of the incident commander, the emergency has concluded. Discharges occurring during emergency fire fighting activities (i.e. flows necessary for the protection of life and property) do not require BMPs and are not prohibited under the 2010 SMR MS4 Permit.

IMPLEMENTATION STRATEGY

Education, Training, and Outreach

1. Stormwater NPDES Training

Copermittee Fire department personnel should receive annual education and training to increase staff awareness and understanding of Stormwater Pollution issues, BMPs, and their compliance obligations.

2. Best Management Practices (BMPs) Update

The Copermittees in the Santa Margarita Region will continue to work cooperatively with fire departments to identify, update, and provide guidance on the implementation BMPs, as appropriate, to reduce contaminants in discharges related to fire department agency activities to the maximum extent practicable.

GLOSSARY

With exception of the following, terms used in this document are defined in the JRMP Glossary,:

Maximum Capability Training (MCT)
The MCT involves training exercises in which high water flows are generated to ensure operational readiness. Examples may include: Probation preparation and testing, and organized exercises that prepare or test the abilities of long term employees. Water flows into the storm drain are permissible when using potable water sources (hydrants or water tanks) and debris from the effected curb and gutter have been previously removed.

Unified Sanitary Sewer Spill Response Procedure

Submitted to the
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

(SDRWQCB ORDER NO. R9-2010-0016)

N P D E S

June 30, 2012

BY THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISRICT, COUNTY OF RIVERSIDE, AND CITIES OF RIVERSIDE COUNTY (SAN DIEGO REGION)

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Unified Sanitary Sewer Spill Response Procedure

1.0 Background

On November 10, 2010, the California Regional Water Quality Control Board – San Diego Region (Regional Board) issued an area-wide Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (2010 MS4 Permit) to the Riverside County Flood Control and Water Conservation District (District), the County of Riverside (County), and the incorporated cities of Riverside County within the San Diego Region (collectively, Copermittees).

The 2010 MS4 Permit requires the Copermittees to control the discharge of Pollutants into and from the MS4s to Waters of the United States, including from Sewage Spills. The Copermittees however do not own nor operate any portion of the sanitary sewer system nor associated treatment facilities. Sewering agencies that own or operate sanitary sewer collection systems greater than one mile in length are regulated under State Water Resources Control Board Water Quality Order No. 2006-0003 and the accompanying amendment to its monitoring and reporting program (WQ 2008-0002-EXEC). This order, known as the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Sanitary Sewer Order) serves, among other purposes, to prevent and minimize Potential Pollutants from sanitary sewer overflows (SSOs) originating from these sewer collection systems from entering surface waters. Copermittees that own or operate applicable sanitary sewer collection systems are required to obtain coverage under the Sanitary Sewer Order.

The Regional Board has found that effluent from SSOs that may enter the MS4 can ultimately have a negative impact on Beneficial Uses of Receiving Waters. The Copermittees have developed this Sanitary Sewer Spill Response Procedure to prevent, respond to, contain and clean up sewage from SSOs that have or could impact the MS4.

2.0 Purpose

The local Sewering agenciesare required to provide notification, documentation, spill response and reporting of SSOs from their sanitary sewer collection systems pursuant to established federal and state regulations (including the Sanitary Sewer Order), and individual NPDES permits. This Sanitary Sewer Spill Response Procedure provides a mechanism to ensure effective coordination between those sewering agencies and the Copermittees in the event that an SSO threatens to impact, or impacts, the MS4. This procedure will:

- Enhance communication between the Copermittees, sewering agencies and the Regional Board;
- Clarify and streamline interagency SSO response procedures; and
- Provide additional protection of Receiving Waters.

3.0 SSO Response Procedure

Upon determination by a sewering agency or Copermittee, persons in charge, contractor or field crew that an SSO has occurred that may impact the MS4, the following notification, reporting, response, and sampling procedures will be implemented.

3.1 Notifications

3.1.1 Notification Requirements Applicable to Sewering Agencies:

In compliance with the Sanitary Sewer Order, the following notification requirements are applicable to sanitary sewer collection systems and other facilities owned or operated by sewering agencies:

- For any discharges of sewage that result in a discharge to a drainage channel or surface water, the sewering agency will as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the OES, the County Department of Environmental Health, and the Regional Board.
- As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the sewering agency will submit to the Regional Board a certification that the OES and the County Department of Environmental Health have been notified of the discharge.

The sewering agency with jurisdiction for the spill will provide notification immediately (within 24 hours of becoming aware of the circumstances) for all discharges that endanger human health or the environment as follows:

- By phone to the OES at 800-582-7550 and to the Regional Board at 858-467-2952
- At a minimum:
  - Any sewage spill greater than 1,000 gallons
  - Any sewage spill that could impact water contact recreation
  - Any discharge of sewage into or on any Waters of the State (reportable to OES[1])

In addition, the sewering agency will notify the Highway Patrol of SSOs affecting a State Highway in accordance with OES guidance[2].

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1 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 4. http://www.oes.ca.gov/

2 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

Other spill incidents, including any unauthorized discharges that are not reportable to the OES, are reported to the Regional Board's Executive Officer as part of the Annual Report as described in Section 3.3.

3.1.2 Notification Requirements Applicable to Copermittees Not Owning or Operating a Sanitary Sewer Collection System

Should a Copermittee discover an SSO or determine that sewage is entering the MS4, the Copermittee shall immediately notify the appropriate sewering agency.

1. Where the sewering agency determines that the SSO originates from its sewer collection system or facilities, the sewering agency will follow the notification procedures described in Section 3.1.1 and established reporting procedures. No further notification or reporting is required by the Copermittee.
2. Where the sewering agency determines that the SSO originates from a private lateral or private property, the sewering agency will contact the property owner for clean up responsibility and will contact the Copermittee with jurisdiction of the spill. For more information on private property SSOs, see Section 6.0. The Copermittee with jurisdiction for the spill will provide notification immediately (within 24 hours of becoming aware of the circumstances) for all discharges that endanger human health or the environment as follows:
   - By phone to the OES at 800-582-7550 and to the Regional Board at 858-467-2952
   - At a minimum:
     - Any sewage spill greater than 1,000 gallons
     - Any sewage spill that could impact water contact recreation
     - Any discharge of sewage into or on any Waters of the State (reportable to OES[3])
   - In addition, the Copermittee with jurisdiction for the spill will notify the Highway Patrol of SSOs affecting a State Highway in accordance with OES guidance[4].

Should a Copermittee discover discharges of sewage in an area not served by a sewering agency, the Copermittee with jurisdiction for the spill will follow the procedures in sections 3.5 and 4.4.5 of the JRMP as applicable.

Other spill incidents, including any unauthorized discharges that are not reportable to the OES, are reported to the Regional Board's Executive Officer as part of the Annual Report as described in Section 3.3.

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3 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

"California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

3.1.3 Agency Contact Information

To identify sewering agency with jurisdiction in the spill area, **see Attachment A**. A list of the current contact phone numbers for various agencies is provided below:

CONTACT:	PHONE NUMBER:
County Department of Environmental Health / Environmental Resources Management	951-955-8980
Governor's Office of Emergency Services (OES)	800-852-7550
Copermittee Staff (whose MS4 may be affected by spill)	**See Attachment B**
Regional Water Quality Control Board: San Diego Region	858-467-2952
Riverside County Flood Control and Water Conservation District	951-955-1200
Sewering agency with jurisdiction in spill area	**See Attachment A**
California Highway Patrol (if highway affected by spill)	**911**

3.2 Minimum Information for Notification

Copermittee staff providing notice should make reasonable attempts to reach sewering agency contacts during and after normal working hours. In cases where sewering agency contacts are not available, messages shall be left. The following minimum information should be conveyed by Copermittee staff as appropriate:

- Identity of caller
- Location, date and time of SSO, status of the SSO (actual or threatened release)
- Quantity of sewage released (estimate of flow or volume)
- Need for public safety or traffic control measures
- Cause of the SSO, if known
- Description of immediate measures taken to contain/mitigate SSO
- Estimate of additional containment and/or clean-up options
- Determination if sewage was discharged to MS4 or areas otherwise impacting the MS4 **(Refer to Attachment A)**
- Determination if SSO reached a state highway

A copy of a sample SSO reporting form is included in **Attachment C**.

3.3 Reporting Requirements

Each Sewering agency is responsible for filing all SSO reports as required under federal and state law for discharges from their sanitary sewer systems, including any applicable NPDES or other permits. Sewering agencies are required to report any discharges to the Department of Environmental Health immediately, per the requirements of Health and Safety Codes Section 5411.5.

Copermittees shall additionally follow specific reporting requirements as described in Section 4 of the JRMP.

The Person in Charge at the responsible sewering agency must CC: the final SSO Report provided to the Regional Board to the affected Copermittees via hard copy or electronic means.

3.4 Response Requirements

Responsible sewering agencies will lead response to SSOs and will assume Person in Charge responsibilities in most cases. Person in Charge of spill response:

- Will take all immediate measures necessary to contain release or potential release of sewage and prevent/minimize impacts to water quality and the MS4.

  May cut locks, open manholes, or otherwise enter MS4 as necessary to contain and clean up SSOs.

- Will contact the maintenance/public works department of the appropriate Copermittee as necessary, and as soon as possible, to notify them of actions within their MS4. Contact numbers are included in **Attachment B**. If necessary, Copermittee staff will support spill response by providing MS4 maps or other support if available.

- Will coordinate with Copermittee staff as necessary to ensure that the clean up adequately remedies impacts of the sewage released to the MS4. It should be noted that the Regional Board prefers that MS4 facilities not be sanitized with disinfectant where not immediately impacting public health (i.e. no chlorine shall be used when discharge is within 1,500 feet of a waterway).

- Will coordinate with local fire, police, and traffic departments as necessary to ensure the safety of the response effort, and to manage traffic and local residents.

4.0 Training Requirements

Sewering Agencies and Copermittee staff will ensure that training for this procedure is incorporated into appropriate training programs related to SSO response.

5.0 Detection Involving Infiltration into MS4

In the event that Copermittees encounter evidence of potential sewage infiltration into the MS4 due to water quality monitoring or field observation, the Copermittees will notify the relevant sewering agency (**see Attachment A**) to coordinate a response.

6.0 Private Property SSOs

Sewering agencies and their contractors will respond to all SSOs within their service area. If a private property is the source of an SSO, agencies and their contractors shall assist in the control and containment to ensure that the sewage does not enter the MS4. If the SSO was a result of a private lateral, the private property owner will be informed of the blockage, and will be responsible to remove the blockage. If the SSO was a result of the sewer trunk line blockage, the response crew will correct the problem.

Glossary

Note: With the exception of the following, most terms used in this document are defined in the Glossary to the JRMP.

Sanitary Sewer Overflow (SSO) - A sanitary sewer overflow is any overflow, spill, release, discharge or diversion of wastewater from a sanitary sewer system. SSOs include:

(i) Overflows or releases of wastewater that reach Waters of the U.S.;
(ii) Overflows or releases of wastewater that do not reach Waters of the U.S.; and
(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions in a sanitary sewer, other than a building lateral. Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned is an SSO when sewage is discharged off private property into streets, stormdrains, or Waters of the U.S.

Sanitary Sewer System - Any system of pipes, pump stations, sewer lines, or other conveyances upstream of a wastewater treatment plant headworks used to collect and convey sewage to a treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, highlines, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not SSOs.

Sewage - The waste and wastewater produced by residential and commercial establishments and discharged into sewers.

Waters of the State – Any water, surface or underground, including saline waters within the boundaries of the State.

Attachment A

Sewering Agency Contact Roster

Unified Sanitary Sewer Spill Response Procedure

Attachment A (Sewering Agency Contact Roster)

stern Municipal Water District
egrated Operations Center or
Mr. Mark Chamberlin
Post Office Box 8300
Perris, CA 92572
951.928.3777 ext. 6265 (During & After Work Hours)
Fax: 951.928.6177
chamberm@emwd.org

Rancho California Water District
42135 Winchester Road
Temecula, CA 92590
951.296.6953, Fax: 951.296.6868
951.296.6900 (emergency)

Elsinore Valley Municipal Water District
Ms. Susan Halpin
Post Office Box 3000
Lake Elsinore, CA 925310-3000
951.674.3146 ext. 8203, After hours: 951.258.9299
Fax: 951.245.5946
shalpin@evmwd.net

Attachment B

MS4 Copermittee Contact Roster

Unified Sanitary Sewer Spill Response Procedure

Attachment B (MS4 Copermittee Contact Roster)

City of Menifee
Mr. Don Allison
29683 New Hub Drive, Suite C
Menifee, CA 92586
951.672.6777
dallison@cityofmenifee.us

City of Murrieta
Mr. Bill Woolsey
1 Town Center
24601 Jefferson Avenue
951.461.6073, Fax: 951.698.4509
wwoolsey@murrieta.org

Rancho California Water District
42135 Winchester Road
Temecula, CA 92590
951.296.6953, Fax: 951.296.6868
951.296.6900 (emergency)

Riverside County Environmental Health
Mr. John Watkins
4080 Lemon Street, 9th Floor
Riverside, CA 92501
951.955.3915, Fax: 951.781.9653
Jwatkins@co.riverside.ca.us

Riverside County Executive Office
Mr. Mike Shetler
4080 Lemon Street, 5th Floor
Riverside, CA 92501
951.955.1110, Fax: 951.955.1105
mshetler@rceo.org

Riverside County Flood Control District
Ms. Arlene Chun
1995 Market Street
Riverside, CA 92501
951.955.1330, Fax: 951.788.9965
abchun@rcflood.org

Mark Biloki, Maintenance Superintendent
mbiloki@rcflood.org
951.955.1310, Cell: 951.288.5254, Home: 909.877.2716

Zully Smith, Operations & Maint. Division Manager
zsmith@rcflood.org
951.955.1280, Cell: 951.318.1445

City of Temecula
Mr. Aldo Licitra
43200 Business Park Drive, Temecula, CA 92589-9033
951.308.6387, Field: 951.541.7850, Fax: 951.694.6475
Aldo.licitra@cityoftemecula.org

After Hours: Rodney Tidwell,
Public Works Maint. Supervisor
951.302.4102, Field: 951.303.5497
Rodney.tidwell@cityoftemecula.org

City of Wildomar
Mr. Tim D'Zmura
23873 Clinton Keith Road, Suite 201
Wildomar, CA 92595
951.677.7751, Fax: 951.698.1463
tdzmura@cityofwildomar.org

Attachment C

Sample SSO Reporting Form

SANITARY SEWER OVERFLOW REPORT FORM

This report is: ☐ Preliminary ☐ Final ☐ Revised Final

Sanitary Sewer Overflow Sequential Tracking Number: _____

Reported to: _____
(Enter Fax #, Voicemail #, or Name of Regional Board Staff)

Date Reported: ____/____/_____ (MM/DD/YY)

SANITARY SEWER OVERFLOW REPORT FORM

Sanitary Sewer Overflow Correction - - Description of all Preventative and Corrective Measures Taken or Planned:

_____

Was there measurable precipitation during 72-hour period prior to the overflow?

☐ Yes ☐ No

Initial and Secondary Receiving Waters:

Did the sanitary sewer overflow enter a storm drain?

☐ Yes ☐ No

Did the sanitary sewer overflow reach surface waters other than a storm drain?

☐ Yes ☐ No

Name or description of secondary receiving waters. (If none, state such)

_____

If the sanitary sewer overflow did not reach surface waters, describe the final destination of sewage.

_____

Notification:

Was the local health services agency notified?

☐ Yes ☐ No

If the overflow was over 1,000 gallons, was the Office of Emergency Services (OES) notified?

☐ Yes ☐ No ☐ Not applicable

Affected Area Posting:

Were signs posted to warn of contamination?

☐ Yes ☐ No

Location of Posting (if Posted): _____

How many days were the warning signs posted?: _____

Remarks:

_____

CITY OF MURRIETA
Community Development Department
1 Town Square
24601 Jefferson Avenue
Murrieta, CA 92562

Application for Land Use and Development

Check one as appropriate:
☐ DEVELOPMENT PLAN ☐ CONDITIONAL USE PERMIT ☐ REVISED PERMIT

For Community Development Office Use Only

Case Number: _____ **Date Submitted:** _____ **Received by:** _____

PROJECT INFORMATION

PROJECT TITLE AND DESCRIPTION

_____
_____
_____

Project Name/Name of Center: _____

Related cases filed in conjunction with this request (Is this part of a larger project?): _____
_____

PROPERTY INFORMATION

Assessor's Parcel Number(s): _____

Approximate Gross Acreage/Net Acreage: _____ Current Zoning & GP Designation: _____

Property Address/Location: _____

RDA Project: Yes ☐ No ☐

APPLICANT/PROJECT MANAGER/OWNER INFORMATION

PLEASE INDICATE WHICH OF FOLLOWING WILL FUNCTION AS THE CONTACT PERSON FOR THIS PROCESS (SELECT ONLY **ONE**): Applicant/Developer ☐ Project Manager ☐ Property Owner ☐ Prospective Owner ☐

APPLICANT/DEVELOPER

Contact Name: _____ E-Mail: _____

Company Name: _____ E-Mail: _____

Mailing Address: _____
Street

_____
City State ZIP

Daytime Phone No: (___) _____ Fax No.: (___) _____

PROJECT MANAGER (Representative for Developer)

Contact Name: _____ E-Mail: _____

Company Name: _____ E-Mail: _____

Mailing Address: _____
Street

_____
City State ZIP

Daytime Phone No: ( ) _____ Fax No: ( ) _____

PROPERTY OWNER

Name: _____ E-Mail: _____

Mailing Address: _____
Street

_____
City State ZIP

Daytime Phone No: ( ) _____ Fax No: ( ) _____

If the property is owned by more than one person, attach a separate page that references the application case number and lists the names, mailing addresses, and phone numbers of all persons having an interest in the real property or properties involved in this application.

PROSPECTIVE PROPERTY OWNER (If applicable)

Name: _____ E-Mail: _____

Mailing Address: _____
Street

_____
City State ZIP

Daytime Phone No: ( ) _____ Fax No: ( ) _____

ACKNOWLEDGMENT OF DEPOSIT BASED PROCESSING OF APPLICATIONS

The signature below acknowledges that the City operates on the basis of full cost recovery for the processing of Planning projects. Deposits made at the time of application may not be sufficient for the processing of the application and additional deposits may be required to cover the cost of reviewing the project. If at any time deposits are insufficient to cover the processing of the application, processing will be stopped until sufficient additional funds are deposited with the City. Lack of sufficient funds on deposit will suspend any required processing time frames.

All signatures must be originals ("wet-signed"). Photocopies of signatures are **not** acceptable.

_____ _____
PRINTED NAME OF APPLICANT SIGNATURE OF APPLICANT

OWNER CERTIFICATION

I CERTIFY UNDER THE PENALTY OF THE LAWS OF THE STATE OF CALIFORNIA THAT I AM THE PROPERTY OWNER OF THE PROPERTY THAT IS THE SUBJECT MATTER OF THIS APPLICATION AND I AM AUTHORIZING AND DO HEREBY CONSENT TO THE FILING OF THIS APPLICATION AND ACKNOWLEDGE THAT THE FINAL APPROVAL BY THE CITY OF MURRIETA, IF ANY, MAY RESULT IN RESTRICTIONS, LIMITATIONS AND CONSTRUCTION OBLIGATIONS BEING IMPOSED ON THIS REAL PROPERTY.

All signatures must be originals ("wet-signed"). Photocopies of signatures are **not** acceptable.

PRINTED NAME OF OWNER	SIGNATURE OF OWNER
PRINTED NAME OF OWNER	SIGNATURE OF OWNER

Written authorization from the legal property owner is required. An authorized agent for the owner must attach a notarized letter of authorization from the legal property owner.

If the property is owned by more than one person, attach a separate page that references the application case number and lists the names, mailing addresses, and phone numbers of all persons having an interest in the real property or properties involved in this application.

☐ See attached sheet(s) for other property owner's signatures.

FILING INSTRUCTIONS FOR LAND USE APPLICATION

The following instructions are intended to provide the necessary information and procedures to facilitate the processing of a Land Use application. Your cooperation with these instructions will insure that your application can be processed in the most expeditious manner possible.

THE LAND USE AND DEVELOPMENT FILING PACKAGE MUST CONSIST OF THE FOLLOWING:

PLEASE NOTE: If you are applying for a use which is completely interior, requiring no revisions to the exterior grounds, building architecture, parking or landscaping, you may not need to provide Grading, Landscaping, or Exterior Elevation plans. Please contact the Planning Department to verify submittal requirements.

INITIAL SUBMITTAL:

1. One complete and signed application form.

2. One complete and signed Depositor Application (if a depositor ID has not been previously established). To download this form, go to http://www.murrieta.org/uploads/forms/finance/Depositor%20Application.pdf.

3. The appropriate deposit fee for the application type or types.
   To view the Fee Schedule, go to
   http://www.murrieta.org/uploads/forms/planning/08-09%20fees.pdf

   This is a deposit based application and is billed on a time worked basis. Additional funds may/will be requested to cover costs of public hearings, staff reports, etc.

4. Complete the "Environmental Setting" section of this application.

5. Other information including technical studies/reports such as biological surveys and delineations studies and/or a cultural resource assessment will be required as determined by the completed "Environmental Setting" section of this application.

6. One 8 ½" x 11" photocopy of a U.S. Geological Survey Quadrangle Map at a 2400 to 1 scale delineating the site's boundaries (Note: each photocopy must not have been enlarged or reduced, have a North arrow, scale, quadrangle name, and Section/Township/Range location of the site.) The site must be clearly identified on the map.

   For easy access to U.S.G.S. maps, go to:
   http://www.usgs.gov/ or http://www.terraserver.com/?tid=151.

7. $60.00 processing fee payable to "UC Regents" for cultural resources review.

8. Two (2) copies of the Preliminary Title Report (must be prepared within the last 6 months).

9. One copy of the current legal description for each property involved as recorded in the Office of the County Recorder. A copy of a grant deed of each property involved will suffice.

10. If any of the properties involved do not abut a public street, a copy of appropriate documentation of legal access (e.g. recorded easement) for said property shall be provided.

11. Ten (10) full size (24"x 36") copies of the following exhibits. The exhibit must include the information described in the "Land Use and Development Matrix" section of this application.
    a. Site plan.
    b. Conceptual grading plan.
    c. Conceptual landscape plan.

    All exhibits must be folded no larger than 8 ½" x 11".

12. Four (4) full-size (24"x 36") copies and six (6) reduced (11"x 17") of building floor plans and elevations (if any buildings or structures exist and are to remain, or are proposed.) The exhibits shall also include the information described the "Land Use and Development Matrix" section of this application. All exhibits

must be folded no larger than 8 ½" x 11."

13. One (1) copy of reduced (11" x 17") of the following exhibits.
    a. Site plan
    b. Conceptual grading plan
    c. Conceptual landscaping plan

    All exhibits must be folded no larger than 8 ½"x 11"

14. One (1) copy of 24" x 36" and one copy of reduced (11"x 17") colored elevations.

15. One (1) 8 ½"x 11" color and material board including samples of all proposed colors and materials.

16. Complete the "Water Quality Management Plan (WQMP) Information" section of this application.

17. If determined by the completed WQMP Checklist for either the Santa Ana River or Santa Margarita River region to be required, two (2) completed copies of the Project Specific Preliminary WQMP and the "Summary of Project-Specific Water Quality Management Plan Requirements" section of this application.

18. Complete the "Hazardous Waste Disclosure Statement" section of this application.

19. For applications pertaining to a particular use (Conditional Use Permit), provide a detailed description of the operational characteristics of the business including, but not limited to, hours of operation, activities performed onsite, estimated customer base and employees.

20. Other information that may include biological surveys, delineations study, cultural resource assessment or other items.

21. Three (3) copies of a traffic assessment report signed by a registered Traffic Engineer report shall be submitted to the City. The report shall follow the criteria outlined by the City's Engineering Department.

22. One (1) recent (less than one-year old) aerial photograph of the entire Project Site with the boundary of the site delineated.

23. A minimum of three (3) ground-level panoramic photographs (color prints) clearly showing the whole project site. Include a location map identifying the position from which the photo was taken and the approximate area of coverage of each photograph.

PRIOR TO SCHEDULING A PUBLIC HEARING:

1. Project Plans - Twelve (12) copies of:
    a. Site plan (full size 24" x 36")
    b. Conceptual grading plan (full size 24" x 36")
    c. Conceptual landscape plans (full size 24" x 36")
    d. Building plans (floor plans, roof plans, elevations, appropriate detail and/or sections) (2 copies full size 24" x 36" and 10 copies reduced 11" x 17")
    e. Colored elevations (10 full size 24" x 36" and 2 reduced 11" x 17")

    The exhibits shall also include the information described in the Land Use and Development Matrix. All exhibits must be folded no larger than 8 ½" x 11."

2. 1 set of ALL plans reduced to 8 1/2" x 11" size.

3. Digital images of the aerial photograph, Site Plan, Building Elevations & Building Floor Plans, the U.S.G.S. Map, and the panoramic photographs of the site in a format acceptable to the Planning Department (e.g. TIFF, GIF, JPEG, PDF).

4. In order to facilitate mailing of public hearing notices to affected properties a complete noticing package is required. The required radius is 500 feet from the exterior boundaries of the property for which the application is filed. The Director may require additional noticing if determined necessary or desirable or to comply with the "expanded notice" requirements of the Development Code. **Please Note**: Property owner noticing requirements may vary based on the location of the proposed project site.
    a. An assessor's Parcel Map(s) illustrating the required radius as measured from the exterior boundaries of the subject site, Include all parcels within the radius and all those that touch the radius line. Preferred scale of the map is 1-200 feet, 300 feet, or 400 feet.

b. If more than one (1) Assessor's Parcel Map is required to show all of the affected parcels then an index map must be included. The index map must show the entire area affected on ONE SHEET. The required radius boundary line must be drawn on the map and be clearly visible (Preferably in red line). Index map(s) from the Riverside County Tax Assessor's Office may be used for this purpose.

c. Two (2) sets of gummed or adhesive labels with the name, address and assessor's parcel number for every parcel within the required radius. These labels must be based on the latest equalized tax roll from the Riverside County Tax Assessor's Office.

d. Include mailing labels for the property owner, applicant, and representative.

e. A Signed certification letter from the person(s) preparing the list certifying that the information contained therein is accurate and is from the latest Riverside County Tax Assessor's Rolls. A sample "Public Noticing Certified Property Owner's List Affidavit" is included at the back of this application.
Information to prepare the above may be obtained from the Riverside County Tax Assessor's Office. Also, local Title Companies offer this service.

5. Additional deposit, if necessary. There shall be no outstanding fee balance prior to scheduling a hearing.

LAND USE AND DEVELOPMENT MATRIX

The following table lists the minimum information required on the site plan, grading plan, and landscape plan exhibits. IF ANY REQUIRED INFORMATION IS NOT APPLICABLE TO A SPECIFIC PROJECT, A SIGNED LETTER SHALL BE PROVIDED EXPLAINING WHY THE INFORMATION IS NOT NECESSARY. All exhibits must be clearly drawn and legible.

Note: Additional information may be required during review of the proposed land use application, including information not specifically required by this checklist.

CUP	DP	RP	**CUP** = Conditional Use Permit **DP** = Development Plan **RP** = Revised Permit
ALL PLANS: (SITE, CONCEPTUAL GRADING, CONCEPTUAL LANDSCAPE, FLOOR)			
X	X	X	1. Name, Address, and telephone number of applicant.
X	X	X	2. Name, address, and telephone number of land owner.
X	X	X	3. Name, address, and telephone number of exhibit preparer.
X	X	X	4. Assessor's Parcel Numbers and, if available, address of the property.
X	X	X	5. Scale (number of feet per inch) of 1" = 20' or 1" = 40'. Use Engineer's Scale for all maps/exhibits. Architect's scale is only acceptable for floor plans, elevations, and landscape plans. A smaller scale may be used for purposes of providing a cover sheet showing the entire project boundaries on one sheet.
X	X	X	6. North Arrow
X	X	X	7. Date Exhibit Prepared.
X	X	X	8. Title of Exhibit (i.e. "Development Plan", "Revised Permit", "Landscaping Plan", "Conceptual Landscape plan for Dev. Plan", etc.)
X	X	X	9. A detailed project description, including proposed and existing buildings, structures and uses.
X	X	X	10. Complete legal description of property.
X	X	X	11. Overall dimensions and total net and gross acreage of property.
X	X	X	12. Vicinity map, showing site relationship to major highways and cities, and two access roads. (Proposed and existing paved roads will be indicated by heavy lines or noted as paved).
X	X	X	13. Exhibit revision block.
X	X	X	14. Numbered mobile home or recreational vehicle spaces, dwelling units, or lots, and the total number of each type of space, unit, or lot.
X	X	X	15. Location of adjoining property and lot lines.
X	X	X	16. Existing and proposed zoning and land use of property.
X	X	X	17. Existing use and zoning of property immediately surrounding subject property.
X	X	X	18. If project is within a Specific Plan, indicate the Specific Plan Planning Area number and the land use designation of subject property and all surrounding property.
X	X	X	19. If project is within a Community Services District landscape and lighting area, identify the district.
X	X	X	20. Label and describe any land or right-of-way to be dedicated to public or other uses.
X	X	X	21. Location, dimensions, setbacks, and nature of proposed and existing, fences, gates, walls, free standing signs, driveways, turnout and/or turnarounds and curbs, drainage structures, and above and below ground structures including septic subsurface sewage disposal system.
X	X	X	22. Location, dimensions, arrangement, and numbering of parking spaces for existing and/or proposed parking, loading and unloading facilities, identifying ADA parking spaces.
X	X	X	23. Location , dimensions, and cross section of existing and proposed ingress and egress, and methods of vehicular circulation.
X	X	X	24. Location and dimensions of existing dwellings, buildings or other structures, labeled as existing and indicating whether they are to remain or be removed.
X	X	X	25. Location, dimensions, and height of proposed dwellings, buildings, or other structures, labeled as proposed.
X	X	X	26. Setback dimensions of proposed structures and paved areas.
X	X	X	27. Location of trash enclosures with wall height and type of construction including ADA accessible

CUP	DP	RP	CUP = Conditional Use Permit DP = Development Plan RP = Revised Permit
			compatibility and trellis detail.
X	X	X	28. Path of travel for ADA from public right-of-way, building to building and trash enclosure.
SITE PLAN:			
X	X	X	1. Names, addresses and phone numbers of utility purveyors and school district(s) including providers of water, sewer, gas, electricity, telephone, and cable television.
X	X	X	2. Names, locations, right-of-way widths, and improvements of adjacent existing and proposed streets and the approximate grades of proposed and existing streets and approximate street centerline radii of curbs. If private streets are proposed, they shall be noted on the tentative map.
X	X	X	3. Typical street improvement cross-section and City standard #.
X	X	X	4. Table indicating area and density calculations with percentage breakdowns, including total area involved, total building area divided by uses, (if applicable), total parking or paved area, total landscaped area, total recreation, and/or open space area. Identify proposed parking spaces.
X	X	X	5. Labeled common areas, open space, and recreational areas, with location, dimensions, acreage, any known proposed uses, and name of proposed owner(s) or entity (ies) who will maintain these areas.
X	X	X	6. Labeled landscaped areas with dimensions and spacing of proposed planters.
X	X	X	7. Square footage calculations per floor and total for each building shown, and per dwelling unit, as applicable.
X	X	X	8. Shaded path of travel for Fire/Emergency access.
CONCEPTUAL GRADING:			
X	X	X	1. Names of utility purveyors and school district(s) including providers of water, sewer, gas, electricity, telephone, and cable television.
X	X	X	2. Location, widths, and improvements of existing and proposed public utility, easements, transmission lines, power and telephone poles, and underground utilities on or abutting the property.
X	X	X	3. Names, locations, right-of-way widths, and improvements of adjacent existing and proposed streets and the approximate grades of proposed and existing streets and approximate street centerline radii of curbs. If private streets are proposed, they shall be notes on the tentative map.
X	X	X	4. List and accurately show all easements of record (by map or instrument number).
X	X	X	5. Streets, alleys, and right-of-ways providing legal access to the property.
X	X	X	6. Typical street improvement cross-section.
X	X	X	7. Existing topography of the property, with the source(s) of the contour lines identified. The contour lines shall extend 300 feet beyond the exterior boundaries of the subject property when adjacent property is unimproved or vacant. When adjacent property is improved or not vacant, contour lines shall extend beyond the exterior boundaries of the subject property a distance sufficient to determine compatibility with adjacent property. Maximum contour interval should be five feet. Flood Control District and Transportation department base maps are acceptable sources of information. Topography from U.S.G.S. maps may be used only when more detailed information is not available. Additional topography may be required if deemed necessary.
X	X	X	8. Preliminary grading including all cut/fill, slopes to scale with setbacks from structures and property lines, the elevations of all individual building pads, the elevations at the perimeter of the subject property, conceptual drainage facilities (including the location of terraces, terrace drains, down drains, brow ditches, V-ditches, and lot to lot drainage facilities), existing topography, and the relationship to adjoining land an development, and any existing grading.
X	X	X	9. Spot Elevations (proposed finished elevations) sufficient to demonstrate that streets, driveways, parking lots, and drainage grades meet minimum requirements. Spot elevations may be necessary at street intersections, end, and cul-de-sacs; beginning and end of all driveways, parking lot outer limits, entrance and end points, and at all grade breaks.
X	X	X	10. When subsurface septic sewage disposal is intended, include and identify the primary sewage disposal system and its 100% expansion area. Identify any proposed cuts and/or fills in the areas of the sewage disposal systems, the elevation of the individual building pads such that there will be gravity feed to the sewage disposal system, and statement signed and with seal, as to the appropriateness of the grading plan with regard to the soils percolation engineer's report. Said statement may be attached to the grading plan or placed upon a blue line copy of the grading plan.
X	X	X	11. Note whether or not land is subject to liquefaction or other geologic hazard, or is within a Special Studies Zone.

C U P	D P	R P	CUP = Conditional Use Permit DP = Development Plan RP = Revised Permit
X	X	X	12. Note whether or not land is subject to overflow, inundation, or flood hazard.
X	X	X	13. FEMA mapped floodplains and floodways including zone designation.
X	X	X	14. Drainage Plan. The Conceptual Grading plan shall include a conceptual drainage plan showing how all on-site and off-site storm water will be conveyed through the property. The exhibit shall clearly label points of concentration where flows enter or exit the site and indicate the amount of runoff (cubic feet per second – CFS) and the tributary drainage area (acres) at these points. The drainage plan shall acknowledge offsite construction required to collect flows and to discharge them to an adequate outlet. The exhibit shall also clearly label all watercourses, channels, culverts, brow ditches, or other flood control facilities passing through the site and indicate whether they are proposed or existing. Additionally, all facilities shall be labeled with name, owner, maintenance entity, capacity, grades, and dimensions. All easements or right of way shall be shown and their widths indicated. Where calculated flow rates or hydraulic capacities are supplied or where flood control facilities are proposed, the exhibit shall be signed and sealed by a registered civil engineer. In cases where it is not feasible to show the required detail on the exhibit or where offsite improvements or analysis are required, the applicant may submit two (2) copies of a drainage report as a supplement to the exhibit.
X	X	X	15. Centerline curve radii and typical sections of all open channels.
X	X	X	16. Setback dimensions of existing structures and paved areas.
X	X	X	17. Location and amount of flammable/combustible liquids and waste oil both above and below ground.
X	X	X	18. Constrained areas including but not limited to, the following resources and hazards; Slopes in excess of 25%, biologically sensitive areas, archeologically sensitive areas, flood hazard areas, ridgelines, hilltops, and geologically hazardous areas. Within constrained areas, proposed pad locations and driveways must be shown.
X	X	X	19. To show compliance with the Water Quality Management Plan, water quality features or a note describing the site's water quality features shall be shown.
CONCEPTUAL LANDSCAPING:			
X	X	X	1. It is highly recommended that plans be prepared by a licensed landscape architect in the state of California.
X	X	X	2. Location, widths, and improvements of existing and proposed public utility, easements, transmission lines, power and telephone poles, and underground utilities on or abutting the property.
X	X	X	3. List and accurately show all easements of record (by map or instrument number).
X	X	X	4. Table indicating area and density calculations with percentage breakdowns, including total area involved, total building area divided by uses, (if applicable), total parking or paved area, total landscaped area, total recreation, and/or open space area. Identify proposed parking spaces.
X	X	X	5. Labeled common areas, open space, and recreational areas, with location, dimensions, acreage, any known proposed uses, and name of proposed owner(s) or entity (ies) who will maintain these areas. Show/Identify Murrieta Community Services Department (MCSD) areas of landscaping.
X	X	X	6. Labeled landscaped areas with dimensions and spacing of proposed planters. Ensure that all planting areas contain 5 feet of planted area, excluding curbs and adjacent concrete step-out where applicable next to parking stalls.
X	X	X	7. Irrigation and landscaping plans, including size, plant species, spacing proposed, planters and irrigation systems. Incorporate drip irrigation, smart irrigation controller, and plant materials with low-water requirements (hydro-zoned).
X	X	X	8. Identify the square footage of landscape: a. Overall b. Within the right-of-way c. Within bumper overhang
X	X	X	9. Label existing trees to be preserved and/or removed under 16.42 Tree Preservation. Provide detailed information regarding site constraints and protection for all trees to be preserved in place or moved.
X	X	X	10. Indicate that the landscape plans shall comply with all applicable codes of the Murrieta Municipal code – Titles 16.27 and 16.28 and other codes required (16.42).
X	X	X	11. To show compliance with the Water Quality Management Plan, water quality features or a note describing the site's water quality features shall be shown.
ELEVATIONS/FLOOR PLANS:			

C U P	D P	R P	CUP = Conditional Use Permit DP = Development Plan RP = Revised Permit
X	X	X	Dimensioned elevations, including details of proposed materials for elevations, type of construction and occupancy classification per the current Uniform Building Code and floor plans for each building. (Attach to site plan). Architectural elevations shall include scaled drawings of all sides of all buildings with dimensions indicating proposed and existing heights and any proposed or existing wall signs, HVAC equipment, solar equipment or other equipment mounted on exterior walls or roof. Roof plans must include the height of the parapet, roof height, highest roof deck height and lowest parapet height. Also indicate the height of the tallest equipment. Conceptual sign locations, colors & materials should be identified. No landscaping, figures, or other presentation decorations shall be illustrated on the building elevations.

Additional copies of this application may be obtained from the Planning Department's Web Page at http://www.murrieta.org/dev/planning/index.asp.

ENVIRONMENTAL SETTING

Approximate Gross Acreage/Net Acreage: _____

General location (nearby or cross streets): North of _____, South of _____, East of _____, West of _____.

Precisely describe the existing use and condition of the site: _____

Existing zoning of adjacent parcels: _____

Precisely describe existing uses adjacent to the site: _____

MSHCP Number (if applicable): _____
Two (2) copies of an MSHCP consistency analyses and appropriate focused surveys are required if the site is in an MSHCP cell.

Describe the plant cover found on the site, including the number and type of all trees: _____

NOTE: EXPLAIN ANY "YES" RESPONSES IN AN ATTACHMENT.

Is the site on filled land, slopes in excess of 10% or located in a canyon? If yes, a geological and/or soils investigation is to accompany this application. Yes ☐ No ☐

Has the site been surveyed for historical, paleontological, or archaeological resources? If yes, a copy of the survey is to accompany this application. Yes ☐ No ☐

Does the site contain any unique natural, ecological or scenic resources? Yes ☐ No ☐

Do any drainage swales or channels border or cross the site? Yes ☐ No ☐

Has a traffic study been prepared? If yes, a copy of the study is to accompany this application. Yes ☐ No ☐

Is the site in a flood plain? Yes ☐ No ☐
If "Yes", a copy of a drainage plan is to accompany this application.

Have any special studies or reports, such as a traffic study, biological report, archaeological report, geological or geotechnical reports, been prepared for the subject property? Yes ☐ No ☐
If yes, indicate the type of report(s) and provide a copy: _____

RESIDENTIAL PROJECTS:

Number and type of dwelling units proposed: _____

Density of the proposed project (# of units per net acreage): _____

Type and size of households expected: _____

Will any multi-story units be located adjacent to a highway or freeway? _____
If yes, a noise study is to accompany this application.

COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL PROJECTS:

Indicate specific type of use proposed: _____

List the gross square footage by each type of use: _____

List the gross square footage and number of floors for each building: _____

Estimate employment by shift: _____

Identify any planned outdoor activities: _____

What percentage of the project site will be covered by:
Paving _____ % Building _____ % Landscaping _____ %

ALL PROJECTS

The maximum height of structures _____

Describe the amount and type of off-street parking proposed _____

Describe how drainage will be accommodated _____

Identify any off-site construction (public or private) required to support this project _____

Preliminary grading plans estimate _____ cubic yards of cut and _____ yards of fill.

Will the proposal result in cut or fill slopes steeper than 2:1 or higher than 10 feet?
Yes ☐ No ☐

Does the project need to import or export dirt? Yes ☐ No ☐

Import _____ Export_____ Neither _____

What is the anticipated source/destination of the import/export?

What is the anticipated route of travel for transport of the soil material?

How many anticipated truckloads? _____ Truck loads.

What is the square footage of usable pad area? (area excluding all slopes) _____sq. ft.

Give time estimated dates for the following:

A. Rough Grading _____
B. Final Grading _____
C. Start Construction _____
D. Complete Construction _____
E. Describe any Project Phasing _____

List all other permits or public agency approvals required of this project _____

NOTE: EXPLAIN ANY "YES" RESPONSES IN ATTACHMENTS:

DURING CONSTRUCTION, WILL THE PROJECT:

A. Emit dust, ash, smoke, fumes or odors? Yes ☐ No ☐

B. Alter existing drainage patterns? Yes ☐ No ☐

C. Create a substantial demand for energy or water? Yes ☐ No ☐

D. Discharge water of poor quality? Yes ☐ No ☐

E. Increase noise levels on site or for adjoining areas? Yes ☐ No ☐

F. Generate abnormally large amounts of solid waste or litter? Yes ☐ No ☐

G. Use, produce, store, or dispose of potentially hazardous materials such as toxic or radioactive substances, flammables or explosives? Yes ☐ No ☐

H. Require unusually high demands for services such as police, fire, sewer, schools, water, public, recreation, etc.? Yes ☐ No ☐

I. Displace any residential occupants? Yes ☐ No ☐

Is water service available at the project site?: Yes ☐ No ☐

If "No", how far must the water line(s) be extended to provide service?
(No. of feet/miles) _____

Is sewer service available at the project site?: Yes ☐ No ☐

If "No", how far must the sewer line(s) be extended to provide service?
(No. of feet/miles) _____

Is a reclaimed water service available at this site? Yes ☐ No ☐

If "No", how far must reclaimed water line(s) be extended to provide service (# of feet) _____

WATER QUALITY MANAGEMENT PLAN (WQMP) INFORMATION

To comply with the WQMP, a developer may be required to submit a "Project Specific" WQMP. This report is intended to, a) identify potential post-project pollutants and hydrologic impacts associated with the development; b) identify proposed mitigation measures (Best Management Practices – BMPs.) for identified impacts including site design, source control and treatment control post-development BMPs; and c) identify sustain able funding and maintenance mechanisms for the aforementioned BMPs. A template for this report is included as an appendix to the WQMP. Projects requiring Project Specific WQMPs will also need to include a PRELIMINARY Project Specific WQMP along with the application package. The format of the PRELIMINARY report would mimic the format/template of the final report but would be at a much lesser level of detail. For example, points a, b & c above would be covered, rough calculations supporting sizing would be included, and footprint/locations for the BMPs would be identified on the tentative exhibit. Detailed drawings will not be required.

Murrieta

CHECKLIST FOR IDENTIFYING PROJECTS REQUIRING A PROJECT-SPECIFIC WQMP WITHIN THE SANTA MARGARITA REGION

Applicant Name: _____ **Phone # :** _____

Project Location: _____

Case # : _____ **Tract # :** _____ - _____ **APN :** _____

	Does the proposed project incorporate any of the following items?	YES	NO
1	**Modification to Existing Development (Significant Redevelopment) -** this category includes the addition, creation or replacement of 5,000 sq. ft. or more of impervious surface on an already developed site. This category includes: (a) The expansion of a building footprint or addition or replacement of a structure; (b) Replacement of impervious surface that is not part of routine maintenance activities; and **Note:** Where modification to existing development results in an increase of less than 50% of the impervious surface of a previously existing development, and the existing development was not subject to WQMP requirements, WQMP requirements shall apply only to the addition, and not to the entire development. Otherwise the entire development must be treated.		
2	**New Development** - that creates 10,000 sf or more of impervious surfaces (collectively over the entire site) including commercial, residential, and public projects, on public and private lands.		
3	**Automotive Repair Shops** - as a facility that is categorized in any one of the SIC codes: 5013, 5014, 5541, 7532-7534, or 7536-7539		
4	**One Acre Threshold** - post-construction pollutant-generating new Development Projects that result in the disturbance of one acre or more of land by July 1, 2012.		
5	**Restaurants** - this category includes all eating and drinking establishments where the land area for development is greater than 5,000 sq. ft. **Note:** Restaurants with land area less than 5,000 sq. ft. shall meet modified WQMP requirements that except for structural treatment BMP and peak flow criteria.		
6	**Hillside development** - this category includes any developments that create more than 5,000 sq. ft. of impervious surface located in an area with known erosive soil conditions, and where the project will require grading on natural slopes of 25% or greater.		
7	**Environmentally sensitive areas (ESAs)** - this category includes all development located within or directly adjacent to or discharging directly to an ESA which either creates 2,500 sq. ft. of impervious surface or increases 10% or more of its naturally occurring condition. **Note:** "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.		
8	**Parking lots** - this category includes projects that create 5,000 sq. ft. of impervious surface for temporary parking or storage of motor vehicles. This category includes parking lots associated with any of the developments listed above.		
9	**Streets, roads, highways & freeways** - this category includes projects that create 5,000 sq. ft. or more of impervious surface for transportation of motor vehicles.		
10	**Retail gasoline outlets (RGOs) -** this category applies if either the RGO is 5,000 sq. ft or more or with a projected average daily traffic (ADT) of 100 or more vehicles per day.		

A project-specific WQMP is required if the answer to any of the above questions is "YES."

WQMP Template can be found at http://www.murrieta.org/Public Works/Water Quality

HAZARDOUS WASTE SITE DISCLOSURE STATEMENT

Government Code Section 65962.5 requires the applicant for any development project to consult specified state-prepared lists of hazardous waste sites and submit a signed statement to the local agency indicating whether the project is located on or near an identified site. Under the statute, no application shall be accepted as complete without the signed statement.

To search the hazardous waste list go to www.geotracker.swrcb.ca.gov.

I (we) certify that I (we) have investigated our project with respect to its location on or near an identified hazardous waste site and that my (our) answers are true and correct to the best of my (our) knowledge. My (our) investigation has shown that:

☐ The project is not located on or near an identified hazardous waste site.

☐ The project is located on or near an identified hazardous waste site.
Please list the location of the hazardous waste site(s) on an attached sheet.

Owner/Representative (1) _____ Date _____

Owner/Representative (2) _____ Date _____

CERTIFIED PROPERTY OWNER'S LIST AFFIDAVIT

STATE OF CALIFORNIA
COUNTY OF RIVERSIDE
CITY OF MURRIETA

I,_____, HEREBY CERTIFY THAT THE ATTACHED LIST CONTAINS THE NAMES AND ADDRESSS OF ALL PERSONS TO WHOM ALL PROPERTY IS ASSESSED AS THEY APPEAR ON ALL THE LATEST AVAILBABLE ASSESSMENT ROLL OF THE COUNTY OF RIVERSIDE WITHIN THE AREA DESCRIBED AND FOR A DISTANCE OF 500 FEET FROM THE EXTERIOR BOUNDARIES.

I/WE CERTIFY (OR DECLARE UNDER PENALTY OF PERFJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA) THAT THE FOREGOING IS TRUE AND CORRECT.

DATE:_____ SIGNED:_____

CITY OF MURRIETA
MEMORANDUM

TO: , Project Planner

FROM: Civil Engineer Associate

DATE: Current Date

SUBJECT: **<BOILER PLATE> Engineering Conditions of Approval**

DEPARTMENT OF PUBLIC WORKS

The Department of Public Works recommends the following Conditions of Approval for this project. Unless stated otherwise, all conditions shall be completed by the Subdivider at no cost to the City.

General Requirements

1. It is understood that the Tentative Map / Development Plan correctly shows all existing and proposed easements, traveled ways, grading, drainage courses, and that the omission may require the map or plans associated with this application to be resubmitted for further consideration.

2. A grading permit for either rough or precise grading shall be obtained from the Department of Public Works prior to commencement of any construction outside of the City-maintained road right-of-way.

3. An encroachment permit shall be obtained from the Department of Public Works prior to commencement of any construction within an existing City right-of-way or easement.

4. Subdivider shall coordinate with adjacent property owners affected by grading, street, utility and drainage improvements necessary for the onsite, frontage, and offsite improvements. Subdivider shall be solely responsible for acquisition of any necessary easements and agreements prior to grading permit or improvement approval whichever comes first. If necessary, the agreements shall address maintenance, erosion control, and be notarized in a format acceptable to the City Engineer.

5. All improvement plans, grading plans, landscape and irrigation plans shall be coordinated for consistency with adjacent projects and existing improvements contiguous to the site and shall be submitted on standard 24" x 36" City-formatted mylars.

6. All designs shall conform to the City of Murrieta Municipal Code, Development Code, Standard Drawings, and Circulation Element.

7. Prior to approval of any grading plan, improvement plan, or final map; submit clearances from all applicable agencies, and pay all outstanding plan check and processing fees.

PRIOR TO ISSUANCE OF ANY GRADING PERMIT, UNLESS OTHER TIMING IS INDICATED, THE SUBDIVIDER SHALL COMPLETE THE FOLLOWING OR HAVE PLANS SUBMITTED AND APPROVED, IMPROVEMENT AGREEMENTS EXECUTED AND SECURITIES POSTED:

8. Pay to City all County of Riverside Development Impact Fees applicable at time of grading permit issuance or as otherwise approved by ordinance. In the event these fees have been previously paid, the Subdivider shall provide proof of payment. Said fees are included , but not limited to the following:

- Riverside County Area Drainage Fee
- Kangaroo Rat Fee
- MSHCP Fee

9. Obtain written clearance, as deemed necessary by the Public Works Department, from the following agencies:
   a. San Diego Regional Water Quality Control Board
   b. Department of Fish & Game
   c. U. S. Army Corps of Engineers
   d. Planning Department
   e. Engineering Department
   f. Community Services Department
   g. Sewer and Water District(s)
   h. The Gas Company
   i. Southern California Edison Company
   j. Phone and CATV

10. A Grading Plan shall be prepared by a registered Civil Engineer in accordance with City standards and approved by the Department of Public Works prior to commencement of any grading. The plan shall incorporate adequate erosion control measures to protect the site and adjoining properties from damage due to erosion.

11. Prior to commencing of any clearing, grading in excess of 50 cubic yards, or paving in excess of 3,000 square feet, the Subdivider shall obtain a grading permit and approval prior to issuance of a building permit.

12. A comprehensive Geologic and Geotechnical Report shall be prepared by a registered Civil or Soils Engineer and submitted to the Engineering Department with the initial grading plan check. The report shall address in situ soils conditions, identify any geotechnical hazards for the site, provide recommendations for the construction of engineered structures, preliminary pavement sections, slope stability, identify and located faults, and confirm the buildings have sufficient setback from the fault but not be limited to just these items. All recommended measures identified in the report shall be incorporated into the project design. The report may be subject to a third-party review at the discretion of the City Engineer if located in a Geologic Special Study Zone.

13. A haul permit is required prior to hauling dirt or construction debris onto or off the site. Submit a proposed haul route plan and comply with all conditions and requirements the City Engineer may impose to the hauling operation.

14. Process a Conditional Letter of Map Revision (CLOMR) prior to rough grading plan approval, if a portion of this site resides in a FEMA special flood hazard area. The rough grading plan shall clearly demonstrate that any building finished floor elevations shall be 1' minimum above the 100-year Base Flood Elevation. Provide FEMA Elevation Certificate(s) for all lots within one hundred feet of the 100-year flood plain after grading has been completed. The floodway and floodplain boundary lines shall be shown on the Precise Grading Plan.

15. If blasting of rock is required, the Subdivider shall pull a blasting permit with the Riverside County Sheriff's Department for approval and notify the City of Murrieta Police and Fire Departments prior to blasting.

NOI, SWPPP, WQMP

16. Prior to issuance of a grading permit or other construction activities, the Subdivider shall provide the following to City staff:

    a. A copy of the Notice of Intent (NOI) and waste Discharge Identification (WDID) number from the State Water Resources Control Board.

    b. An adequate Storm Water Pollution Plan (SWPPP) shall be available to State and City Inspectors at the job site prior to commencing construction. The Subdivider shall be responsible for implementation, monitoring, operation and maintenance of the SWPPP until all improvements have been accepted by the City or construction is complete, whichever is later. A Notice of Termination (NOT) can then be filed with the State Water Resources Control Board. Grading during the wet season should identify additional BMP's for rain events that may occur as necessary for compliance with the Santa Margarita Region MS4 Permit.

    c. A Final project-specific Water Quality Management Plan (WQMP) shall be submitted to the City for approval with the grading plan check application and approved by the Engineering Department prior to issuance of a grading permit. It shall incorporate, but not be limited to, the following: site design BMP's, applicable source control BMP's, treatment control BMP's, long term operation and maintenance requirements, inspection and maintenance checklist; record a restrictive covenant to ensure operation, maintenance, funding, and transfer of requirements. The post-construction best management practices (BMPs) outlined in the approved Final project-specific WQMP shall be incorporated in the improvement plans.

17. A copy of the Final project-specific WQMP shall be kept onsite at all times. The Subdivider shall make the occupants, tenants, staff, employees, and contractors aware of this document and educate them on the contents.

18. The Subdivider, assigns, or heirs shall allow the City to enter the premises to conduct periodic inspections to ensure that the WQMP is being implemented, maintained, and to review the inspection and maintenance records.

19. The Subdivider shall record a restrictive covenant or create some other acceptable mechanism, subject to the approval of the City Engineer, to ensure the ongoing operation, maintenance, and funding of the Final project-specific WQMP.

20. All grading activities shall minimize dust through compliance with AQMD Rule 403 which requires watering during earth moving operations.

21. All open or undeveloped land shall be maintained to prevent wind and or water erosion of such land. All disturbed undeveloped land shall either be planted with interim landscaping or stabilized with such other erosion control measures.

22. Post security and enter into an agreement guaranteeing the grading and erosion control improvements in conformance with applicable City Standards and subject to approval by the

Department of Public Works.

23. Ensure that the Drainage Study and WQMP measures address the proposed commingled flows from the adjacent property, unless procedures are incorporated to otherwise convey and properly dispose of the flows without commingling.

DRAINAGE

24. Provide a hydrologic and hydraulic study prepared by a registered Civil Engineer which identifies storm water runoff quantities from the site and upstream of the site. The study shall show all existing or proposed offsite public or private drainage facilities intended to discharge this runoff. The study shall include a capacity analysis verifying the adequacy of the facilities. Runoff from the development or partial phase of development of the property shall not exceed the existing natural discharge quantities with respect to the following criteria:

    A. Detention shall not be required for developments of less than one acre if the development uses volume based water quality measures.

    B. For projects less than 10 acres, including those less than one acre NOT using volume based water quality measures shall analyze and mitigate the difference in developed and undeveloped runoff for a 10-year storm. A simplified hydrograph method shall be used that simulates the hydrograph with a triangle. The Rational method flow rate shall be the top value of the triangle and the base width shall be two times the time of concentration (Tc). The difference in area between the developed condition triangle and the existing condition triangle represents the required storage volume. Both triangles shall use time of concentration from the developed condition. Based upon the storage volume head, the outlet structure shall have an outlet flow no larger than the existing flow rate.

    C. Projects that are 10 acres or greater shall analyze for the 1,3,6 and 24-hour duration for the 2,5 and 10-year frequency storms.

    The design of detention basins shall provide for the detention of nuisance flow. Development shall detain the year and duration incremental storm runoff developed and or increased by means of on-site detention. Detention techniques shall include, but not be limited to: Parking lot detention or on-site detention basin or other methods approved by the City Engineer. Evidence of a maintenance mechanism shall be provided for the basins. If project discharges/connects to an off-site detention basin, provide permission to drain/connect correspondence from the owner of basin or system. Off-site detention basins require a Declaration of Dedication. All detention measures shall have positive drainage with a minimum 48hr draw-down time and be empty within 72 hours. Standing water is not permitted.

25. Hydromodification – the project shall conform to the current requirements of the San Diego MS4 permit Order No. R9-2010-0016.

26. Subdivider shall prepare a Storm Drain Improvement Plan shall be prepared by a registered Civil Engineer in accordance with City standards and approved by the Department of Public Works.

27. Street storm flows shall not exceed top of curb for the 10-year storm event and must be contained within the street right-of-way for the 100-year storm event.

28. Alteration to the existing drainage pattern, concentration or diverting flows is not allowed unless letters of permission from the downstream property owners are obtained and adequate drainage improvements are constructed. This includes but is not limited to improving existing facilities, securing drainage easements, notarized letter of permission or agreement, and a maintenance mechanism put in place for any private drainage facilities. A manhole shall be constructed at right of way line where private storm drain facilities connect to the public storm drain facilities.

29. Accept and properly dispose of all offsite drainage flowing onto or through the site.

30. If possible, all drainage shall be conveyed onto public property. Drainage flowing cross lot is not permitted.

31. Record a statement on the final map that each parcel accepts drainage flows from the adjoining parcels as shown on the approved tentative map.

32. If alterations to the flood plain are proposed, the Subdivider shall obtain a CLOMR from FEMA acknowledging that the proposed alterations to the flood plain meet FEMA criteria. A LOMR is required prior to occupancy.

33. If required, environmental maintenance permit(s) in favor of the City shall be obtained by the Subdivider prior to City acceptance of soft bottom drainage facilities.

STREET IMPROVEMENTS

34. Subdivider shall design and guarantee construction of the following public improvements to the current City of Murrieta Circulation Element and corresponding City standards unless otherwise noted:

    A. Design, dedicate rights of way and improve existing Jefferson Avenue to half 110 foot right of way per modified Arterial Highway City Std. 101 and Circulation Element with raised landscape median and a 14 foot right turn pocket onto Sycamore Street. Access to the project driveway and Sycamore Street shall be limited to right in and right out. Improvements including but not limited to: paving, curb and gutter; sidewalk adjacent to ROW; street lights; drainage facilities; signing and striping; utilities (including sewer and water); raised landscaped median with all improvements subject to the approval of the City Engineer.

    B. Design, dedicate rights of way and improve existing Village Parkway to the full half width (22 feet centerline to curb on a 33 foot wide ROW) per Collector Street City Std. 105. Improvements including but not limited to: paving, curb and gutter; sidewalk adjacent to ROW; street lights; drainage facilities; signing and striping; utilities (including but not limited to water and sewer); with all improvements subject to the approval of the City Engineer.

    C. Design, dedicate rights of way and improve Sycamore Street to the full half width + 12 foot (8 foot graded shoulder and 34 feet edge of pavement to curb on a 33 foot wide ROW) per Collector City Std. 105. Improvements including but not limited to: full width paving, curb and gutter; sidewalk adjacent to ROW; street lights; drainage

facilities; signing and striping with left turn lane; utilities (including but not limited to water and sewer); with all improvements subject to the approval of the City Engineer.

35. Subdivider shall prepare a Street Improvement Plan shall be prepared by a registered Civil Engineer in accordance with City standards. The centerline profile shall extend a minimum of 300 feet beyond the project boundaries showing grade and alignment.

36. Subdivider shall prepare a Signing and Striping plan, shall be designed by a registered Civil or Traffic Engineer and be included with the street improvement plans for the project.

37. All street improvement design shall provide adequate right-of-way and transitions to existing improvements.

38. Subdivider shall prepare a construction area Traffic Control Plan, if required by the Traffic Engineer, shall be prepared by a registered Civil or Traffic Engineer in accordance with City standards and approved by the Department of Public Works for work. The Traffic Control Plan shall address street closures, detour or other disruption to traffic circulation as required by the Department of Public Works.

39. Extend full width improvements on Village Parkway offsite to join existing street improvements at Station 27+38.50.

40. Corner property line cut off for vehicular sight distance and installation of pedestrian and traffic control facilities shall be provided at all street intersections and entrances in accordance with City Standards No. 206 and 214.

41. Private Roads shall be designed to meet City standards except when allowed by the City engineer. The private access easement providing the main vehicular access to each created parcel shall be dedicated on the parcel map as a separate lettered lot.

42. Bring any existing access ramps adjacent to and fronting the project to current ADA requirements. However, when work is required in an intersection that involves or impacts existing access ramps, those ramps in that intersection shall be retrofitted to comply with current A.D.A. requirements

SEWER AND WATER

43. Verify capacity of proposed sewer and water systems and provide approval by the governing Sewer and Water District that the proposed sewer and water system is compliant with the District's master plan.

44. Subdivider shall design and guarantee the construction of all sewer and water improvements necessary to serve this project. Private sewer forcemains are not allowed in the public right of way unless otherwise approved by the City Engineer.

FINAL MAP

45. Subdivider shall submit a final map prepared in accordance to the City of Murrieta

Development Code and Subdivision Map Act. The final map shall be prepared by a licensed land surveyor or registered civil engineer.

46. Prior to approval of the final map, unless other timing is indicated, the Subdivider shall complete all improvement plans, submit and obtain approval, post securities and execute agreements.

47. Easements, when required for roadway slopes, landscape easements, drainage facilities, utilities, etc., both onsite and offsite shall be shown on the final map. All offers of dedication and conveyances shall be submitted for review and recorded as directed by the Department of Public Works. On-site drainage facilities located outside of road right-of-way shall be contained within private drainage easements as determined to be necessary. A note shall be added to the final map stating, "*Drainage easements shall be kept free of buildings and obstructions.*" The Subdivider shall incur all costs associated with the formation of a suitable maintenance district for all associated slope and drainage easements, including landscaping and access.

48. All easements and/or right-of-way dedications shall be offered for dedication to the public or other appropriate agency and shall continue in force until the City accepts or abandons such offers. All dedications shall be free from all encumbrances as approved by the Department of Public Works.

49. Relinquish and waive abutter's right of access to and from (insert street names) excepting those areas as shown on the approved tentative map.

50. An easement for a joint use driveway shall be provided prior to approval of the final map or issuance of building permit, whichever occurs first. The easement shall provide access to lot/parcel #'s and be noted on the final map.

51. Record a 28' wide minimum (unless otherwise approved by the Fire Department) easement on the final map that provides emergency vehicles and reciprocal access with the purpose of looping all the parcels to the access points on Clinton Keith Road and Private Driveway.

52. CC&R's, if required, shall be submitted with the Final Map for first plan check review.

53. Any proposed vacations or abandonments of existing public right of way or easements shall be shown on the final map.

54. If the subdivider chooses to defer the improvements, subdivider shall prepare a cost estimate and execute a Deferred Improvement Agreement. The cost estimate shall include the all costs, plan preparation, plan check fees, permit fees, bonding and construction costs, etc.

55. Street Names – a minimum of three street names shall be submitted for each street shown on an exhibit of the project. The street names should be listed in the order of preference for each street and shall be submitted to the Community Development Director. Is this more of a Planning condition? I have also seen Cities have you submit a list, they approve the list and the Subdivider can apply them to any streets. I prefer this method better because fewer names are required.

56. All existing street and property monuments within or abutting this project site shall be preserved. If monuments are damaged or destroyed, the Subdivider shall retain a qualified

licensed land surveyor or civil engineer to reset those monuments per City Standards and file the necessary information with the County Recorder's office as required by California Business and Professions Code Section 8771. If damaged, existing monuments that are no longer relevant as a result of the parcel merger / lot line adjustment do not have to be replaced. Existing monuments that are damaged and no longer relevant do not have to be replaced.

57. Submittal of the final map for first plan check review must include two copies of the CC&R's. The City Attorney shall approve the CC&R's prior to approval of the final map by the City Council. The CC&R's shall include language to notify the property owners and occupants of the requirements to implement the approved project-specific WQMP.

58. Provide one hard copy and electronic copy of the final map. The electronic copy shall be in an AutoCAD format to the satisfaction of the City's GIS Department.

UTILITIES

59. Subdivider shall install all existing and proposed utility systems including gas, electric (under 33kv), telephone, water, sewer, and cable TV shall be installed underground, with easements provided as required, and designed and constructed in accordance with City Codes and the utility provider.

60. Subdivider shall install all dry and wet utilities prior to the placement of final cap or lift of asphalt pavement to avoid new street improvements from being marred by saw cuts, pot holes, equipment, etc.

PRIOR TO ISSUANCE OF BUILDING PERMITS

61. All easements, agreements of improvements, offsite construction, and dedication for required rights-of-way shall be approved by the Engineering Department.

62. A Letter or Map Revision (LOMR) is required if, a Conditional Letter of Map Revision (CLOMR) was issued. A Letter of Map revision (LOMR) from FEMA shall be submitted to the City along with FEMA Elevation Certificates for all lots within one hundred feet of the 100-year flood plan.

63. The building pad shall be certified by a registered Civil Engineer for location and elevation, and the Soils Engineer shall issue a Final Soils Report addressing compaction and site conditions.

64. Subdivider shall pay to the City the applicable Development Impact Fees as required by and in accordance with City Ordinance 196-98.

65. Subdivider shall pay to the City the Western Riverside County Transportation Uniform Mitigation Fee (TUMF) based on the applicable rates at time of permit.

PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY

66. Secure coverage under the General Construction Permit, Regional Water Quality Control

Board (for Industrial facilities)

67. Final grading of the subject property shall be completed in accordance with the California Building Code, the approved grading plan, the conditions of the grading permit, City Grading Manual and accepted grading construction practices. The final grading shall be in substantial conformance with the approved Development Plan.

68. All improvements, required by the Public Works Department, shall be constructed and completed per the approved plans and City standards to the satisfaction of the City Engineer.

69. All sewer and water improvements shall be constructed and completed in accordance with the Sewer and Water District standards.

70. Final Map shall be recorded.

71. All existing and proposed utility lines have been installed underground with easements provided. Relocate overhead electrical utility lines that are 33kv or higher.

72. Demonstrate that all treatment control BMP's described in the Final project-specific WQMP have been constructed and installed in conformance with the approved plans and specifications and the Subdivider is prepared to implement all non-structural BMP's described in the approved Final project-specific WQMP.

73. Subdivider shall prepare and provide an as-built project specific WQMP (approved final WQMP updated to include any changes made during construction) and demonstrate that an adequate number of copies are available for the future owners / occupants.

74. Subdivider shall provide a copy of these free brochures in the new homeowner booklet: "Guidelines for Maintaining Your Swimming Pool, Jacuzzi, and Garden Fountain; Outdoor Cleaning Activities and Professional Mobile Service Providers; and What's the Scoop".
    a. Cleaning Activities and Professional Mobile Service Providers; and What's the Scoop". Include a copy of the link to the City's website "Trash & Recycling" page that includes information that can help improve the quality of storm water runoff by providing basic information to the new homeowner. www.murrieta.org/services/waste/wastemgmtdata.asp
    b. Inform the homeowners that Waste Management will pick up bulk items twice per year as part of the trash service the homeowners pay for.
    c. Inform the homeowners that household hazardous waste products such as used motor oil, paint batteries, fertilizers, pesticides, etc can be dropped off at the County of Riverside facility located at 25315 Jefferson Avenue, Murrieta, Ca 92562. Hours are only from 9am to 2pm on Saturdays and closed on holiday weekends. Provide this contact phone number of (951) 486-3200 & link: http://www.rivcowm.org/HHW_Schedule.htm#_Regional_Permanent_HHW

75. Provide one set of Mylars and electronic copy of "As-Built" drawings of the grading, improvement plans, hydrology map and final map (if applicable). The electronic copy shall be in an AutoCAD format to the satisfaction of the City's GIS Department. File format is AutoCAD DWG or DXF – version 2007 or less. Coordinate system is NAD 1983 State plane California Zone V1 FIPS 0406 Feet.

76. Obtain written clearance, as deemed necessary by the Public Works Department, from the following agencies:
    a. Planning Department
    b. Engineering Department (a LOMR if, a CLOMR was required and provide Elevation Certificates)
    c. Building Department
    d. Fire Department
    e. Community Services Department
    f. Sewer and Water District(s)
    g. Utility Companies

Murrieta

NPDES Construction Activity Compliance Inspection Notice

Public Works Department / NPDES
26442 Beckman Court
Murrieta, CA 92562
(951) 304-2489

Page #: ____

Tract # / Parcel Map #:	Project Name:	Weather:	Date:
Permit Number:	Developer:	Inspected By:	Date Last Inspected:
Copy of SWPPP onsite: [ ] Yes [ ] No	Copy of NOI onsite: [ ] Yes [ ] No	WDID #:	Routine Inspection: [ ] Yes [ ] No

Project Location:

NOTICE: In conformance with the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit for the Santa Margarita and Santa Ana Watersheds, the City of Murrieta is mandated to perform NPDES construction site inspections to determine if the site is in compliance with Storm Water Ordinances, regulations, and codes.

	Item Inspected	Yes	No	
1	Stabilized construction entrance & tracking controls in place at all exits.	[ ]	[ ]	
2	Source Control BMPs in place and maintained.	[ ]	[ ]	
3	Perimeter control BMPs are in place and maintained.	[ ]	[ ]	
4	Evidence of tracking beyond project perimeter.	[ ]	[ ]	
5	Interior and affected exterior streets are clean and free of pollutants.	[ ]	[ ]	
6	BMPs at catch basin's and discharge points are in place and maintained.	[ ]	[ ]	
7	Sediment discharge in area requiring protection.	[ ]	[ ]	
8	Evidence of non-stormwater discharges.	[ ]	[ ]	
9	Construction materials stored in designated areas.	[ ]	[ ]	
10	Liquid materials stored properly.	[ ]	[ ]	
11	Concrete wash-outs in place and maintained.	[ ]	[ ]	
12	Construction debris stored properly.	[ ]	[ ]	
13	BMPs in place for equipment maintenance activities.	[ ]	[ ]	
14	Litter / covered trash enclosures / housekeeping maintained.	[ ]	[ ]	

NOTICE: The Porter-Cologne Water Quality Control Act of the State of California states in part that persons violating water quality objectives can be held civilly and criminally liable and the Federal Clean Water Act states in part that persons violating the Act may be held civilly and criminally liable.

COMMENTS:

Site Contact:	Received By:	Phone:	Time:

ACTION TAKEN:

Verbal / Written Notification [ ] Second Written Warning [ ] Stop Work Notice [ ]

Withhold Certificate of Occupancy (C of O) [ ] Code Enforcement Citation [ ] Notify SDRWQCB [ ]

White - Inspector Canary - Site Contact

Rev. 02 (08/05)

HAZARDOUS WASTE/ HAZARDOUS MATERIALS FACILITY STORM WATER COMPLIANCE SURVEY FORM

FACILITY DBA	TELEPHONE	DATE
ADDRESS	CITY, ZIP	
MAILING ADDRESS (if different from site address)	MAILING CITY, ZIP	
CONTACT	FACILITY#	SIC CODE

Compliance Areas	YES	NO	N/A
***OUTSIDE AREAS (Free of staining & debris; provides good housekeeping; maintained in a manner to prevent runoff.)**		**Requires follow up**	
1. CHEMICAL STORAGE * The outside storage area is kept secure to minimize the possibility of a release. Chemicals / materials are protected from precipitation / stormwater runoff and the containers show no signs of leaking.			
2. DUMPSTER * Lid closed. No liquids are leaking from dumpster; surrounding area is free of trash.			
3. ABOVEGROUND TANKS * No ground staining, no spillage observed and no discharge to storm drain. Tanks are maintained to minimize the possibility of a release (secondary containment).			
4. ONSITE STORM DRAIN* Protected from accidental discharge other than stormwater.			
5. POWER WASH OR STEAM CLEAN* (discharge to sewer) Drains to oil/water separator connected to a sanitary sewer and not a septic system or storm drain. Steam cleaning not discharged to parking lot, storm drain or soil.			
6. PARKING LOT / DRIVEWAY* Free of excess trash, chemical staining or liquids other than water.			
7. OTHER* Non-storm water discharge (i.e. non-hazardous process discharge).			
8. MOP WATER TO SANITARY SEWER VIA CLARIFIER. Mop water is not dumped to the soil, parking lot, gutter, street, or other areas susceptible to storm water runoff and discharge to the storm drain.			
9. STORM WATER EDUCATIONAL BROCHURES GIVEN TO FACILITY OR POSTERS DISPLAYED FOR EMPLOYEES. If no, what informational material should be sent to the facility?			
10. IF A SWPPP IS REQUIRED, WAS IT AVAILABLE FOR REVIEW? See storm water handout for industrial facilities.			
11. NOTICE OF INTENT. Has the site obtained necessary permit coverage under the General Industrial Permit, if appropriate?			

OVERALL EVALUATION/ COMMENTS:

RECEIVED BY:	HAZ MAT SPEC:	BADGE #

Agency referred to as indicated on the back of this page.

If additional information is required, contact the Only Rain Down the Storm Drain Program of the Cities and County of Riverside at (800) 506-2555.

Local Agency Contacts

For questions about the program in a specific city, contact the local agency.

City of Banning
Public Works Department
Banning, CA 92220
Ph: (909) 922-3130

City of Beaumont
Beaumont, CA 92223
Ph: (909) 769-8520

City of Calimesa
Department of Public Works
Calimesa, CA 92320
Ph: (909) 795-9801

City of Canyon Lake
Canyon Lake, CA 92587
Ph: (909) 244-2955

City of Cathedral City
Cathedral City, CA 92234
Ph: (760) 770-0390

City of Coachella
Department of Public Works
Coachella, CA 92236
Ph: (760) 398-5744

Coachella Valley Water District
Coachella, CA 92236
Ph: (760) 398-2651

City of Corona
Corona, CA 91720
Ph: (951) 736-2266

City of Desert Hot Springs
Public Works Department
Ph: (760) 329-6411, Ex 232

City of Eastvale
Eastvale, CA 91752
Ph: (951) 361-0900

City of Hemet
Hemet, CA 92545
Ph: (909) 765-3712

City of Indian Wells
Indian Wells, CA 92210
Ph: (760) 346-2489

City of Indio
Indio, CA 92201
Ph: (760) 342-6530

City of Jurupa Valley
Jurupa Valley, CA 92509
Ph: (951) 332-6464

City of La Quinta
La Quinta, CA 92253
Ph: (760) 777-7051

City of Lake Elsinore
Lake Elsinore, CA 92530
Ph: (909) 674-3124

City of Menifee
Menifee, CA 92586
Ph: (951) 672-6777

City of Moreno Valley
Moreno Valley, CA 92552
Ph: (909) 413-3120

City of Murrieta
Murrieta, CA 92562
Ph: (951) 304-2489

City of Norco
Engineering Department
Norco CA 92860-0428
Ph: (909) 270-5618

City of Palm Desert
Palm Desert, CA 92260
Ph: (760) 346-0611 (Main)
Ph: (760) 776-6450 (Public Works)

City of Palm Springs
Public Works
Ph: (760) 323-8253

City of Perris
Perris, CA 92570
Ph: (951) 956-2120

City of Rancho Mirage
Rancho Mirage, CA 92270
Ph: (760) 770-3224

City of Riverside
Public Works
Ph: (951) 826-5341

City of San Jacinto
San Jacinto, CA 92583
Ph: (951) 654-4041

City of Temecula
Temecula, CA 92590
Ph: (909) 694-6411

City of Wildomar
Wildomar, CA 92595
Ph: (951) 677-7751

For questions about the program in the unincorporated area of Riverside County, contact the following:

Riverside County Flood Control
& Water Conservation District
Ph: (951) 955-1200

FOOD FACILITY STORMWATER COMPLIANCE SURVEY

FACILITY DBA	FACILITY #	DATE	
ADDRESS	ACTIVITY	SERVICE CODE: 410	
COMPLIANCE AREAS	YES	NO	N/A
GREASE BARRELS/ INTERCEPTORS			
1. Grease pumped/removed from grease interceptor on a regular basis.			
2. Grease interceptor located outside facility, maintained properly.			
3. Evidence of spillage to ground surface at grease interceptor?			
EQUIPMENT CLEANING			
4. The following items are cleaned in such a manner that all wash water is discharged to the sanitary sewer or is collected for proper disposal:			
a. Grease filters			
b. Floor mats			
c. Floors (mop water and rinse water)			
d. Grills			
OUTSIDE AREAS			
4. The following areas are cleaned in such a manner that all wash water is discharged to the sanitary sewer or is collected for proper disposal:			
a. Sidewalk or outdoor seating			
b. Drive thru and parking lot			
DUMPSTERS AND RECYCLING CONTAINERS			
5. Food/liquid waste bagged and sealed before disposal.			
6. Dumpsters and recycling containers are covered.			
7. Spilled materials around containers are picked up regularly.			
8. Wash water is discharged to the sanitary sewer or is collected for proper disposal.			
EMPLOYEE EDUCATION/ AWARENESS			
9. Brochures or posters displayed.			
10. BMPs observed.			
OVERALL RATING	GOOD	AVERAGE	NEEDS IMPROVEMENT
COMMENTS:			
Received by:	Env. Health Specialist:		Badge #

If additional information is required, contact the Only Rain Down the Storm Drain Program of the Cities and County of Riverside at (800) 506-2555.

Local Agency Contacts

For questions about the program in a specific city, contact the local agency.

City of Banning
Public Works Department
Banning, CA 92220
Ph: (909) 922-3130

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Beaumont, CA 92223
Ph: (909) 769-8520

City of Calimesa
Department of Public Works
Calimesa, CA 92320
Ph: (909) 795-9801

City of Canyon Lake
Canyon Lake, CA 92587
Ph: (909) 244-2955

City of Cathedral City
Environmental Conservation
Cathedral City, CA 92234
Ph: (760) 770-0390

City of Coachella
Department of Public Works
Coachella, CA 92236
Ph: (760) 398-5744

Coachella Valley Water District
Coachella, CA 92236
Ph: (760) 398-2651

City of Corona
Corona, CA 91720
Ph: (951) 736-2266

City of Desert Hot Springs
Public Works Department
Ph: (760) 329-6411

City of Eastvale
Eastvale, CA 91752
Ph: (951) 361-0900

City of Hemet
Hemet, CA 92545
Ph: (909) 765-3712

City of Indian Wells
Indian Wells, CA 92210
Ph: (760) 346-2489

City of Indio
Indio, CA 92201
Ph: (760) 342-6530

City of Jurupa Valley
Jurupa Valley, CA 92509
Ph: (951) 332-6464

City of La Quinta
La Quinta, CA 92253
Ph: (760) 777-7051

City of Lake Elsinore
Lake Elsinore, CA 92530
Ph: (909) 674-3124

City of Menifee
Menifee, CA 92586
Ph: (951) 672-6777

City of Moreno Valley
Moreno Valley, CA 92552
Ph: (909) 413-3120

City of Murrieta
Murrieta, CA 92562
Ph: (951) 304-2489

City of Norco
Engineering Department
Norco CA 92860-0428
Ph: (909) 270-5618

City of Palm Desert
Palm Desert, CA 92260
Ph: (760) 346-0611 (Main)
Ph: (760) 776-6450 (Public Works)

City of Palm Springs
Palm Springs, CA 92263
Ph: (760) 323-8253

City of Perris
Perris, CA 92570
Ph: (951) 956-2120

City of Rancho Mirage
Rancho Mirage, CA 92270
Ph: (760) 770-3224

City of Riverside
Public Works
Ph: (951) 826-5341

City of San Jacinto
San Jacinto, CA 92583
Ph: (951) 654-4041

City of Temecula
Temecula, CA 92590
Ph: (951) 694-6411

City of Wildomar
Wildomar, CA 92595
Ph: (951) 677-7751

For questions about the program in the unincorporated area of Riverside County, contact the following:

Riverside County Flood Control
& Water Conservation District
Ph: (951) 955-1200

13.34.010 - Purpose.

The purpose of the clean ocean fee program is to provide for: (1) improving the quality of storm and surface water; (2) the planning, permitting, design, construction, operation, maintenance, regulation, inspection, improvement and replacement of the City's storm drainage facilities and management and administration thereof; and (3) complying with applicable local, State, and Federal storm water regulations. In order to properly fund such services and facilities, the City Council has determined that it is necessary to impose on developed property and undeveloped, graded property a clean ocean fee (the "fee"). The City Council finds that the fee, as established below, is reasonably related to the costs of providing the services and facilities for which the fee is charged.

(Ord. 1454 § 1 (part), 2007)

13.34.020 - Definitions.

For purposes of this chapter, the following terms shall have the ascribed meanings:

"Assessee" shall mean the person obligated to pay the fee.

"City" shall mean the City of San Clemente.

"Developed parcel" shall mean any lot or parcel of land which has been altered from its natural state by the construction, creation, or addition of impervious area, except public streets and highways and appurtenant improvements thereto, such as curbs and sidewalks.

"Engineer" shall mean the Utilities Director of the City of San Clemente or his or her designee.

"Equivalent drainage residential unit (DRU)" shall mean the basic unit for the computation of the fee, and is based upon the average amount of impervious area of a single-family residential parcel.

"Impervious area" shall mean any part of any parcel that has been modified by the action of any person in a manner which reduces the land's natural ability to absorb and hold storm and surface water. This includes the grading of the property and/or creation of any hard surface area which either prevents or retards the entry of water into the soil mantle, and/or the hardening of an existing surface which causes water to flow at an increased rate. By way of example, common impervious areas include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel, roads, or any cleared, graded, paved, graveled or compacted surface or paved earthen materials, or areas covered with surfaces which similarly impede the natural infiltration of surface water into the soil mantle.

"Multi-family residential property" shall mean all residentially zoned, developed parcels containing two (2) or more dwelling units. This includes apartments, condominiums, timeshares, hotels and motels.

"Nonresidential property" shall mean all developed parcels zoned or used for commercial, industrial, retail, governmental or institutional uses.

"Parcel" shall mean the smallest separately segregated lot, unit or plot of land having an identified owner, boundaries and surface area which is documented for property tax purposes and given an Assessors' parcel number by the Orange County Assessor.

"Single-family residential property" shall include all developed parcels with one (1) single-family detached housing unit.

"Storm and surface water" shall mean water occurring on the surface of the land from precipitation, and surface or subterranean water from any source, regardless of whether such water is falling or flowing onto land in question.

"Storm and surface water control facilities" shall mean all manmade structures or natural watercourse facility improvements, developments, properties or interest therein, which are or have been made, constructed or acquired for the collection and conveyance of storm and surface water runoff to improve the quality of controlling or protecting life or property from any storm, flood or surplus waters.

"Storm drainage facilities" shall mean the storm and surface water drainage systems comprised of storm and surface water control facilities and any other natural features which store, control, treat and/or convey storm and surface water. Storm drainage facilities shall include all natural and manmade elements used to convey storm water from the first point of impact with the surface of the earth to a suitable receiving body of water or location internal or external to the boundaries of the City. Storm drainage facilities include all pipes, appurtenant features, culverts, streets, curbs, gutters, pumping stations, channels, streams, ditches, wetlands, detention/retention basins, ponds and other storm and surface water conveyance and treatment facilities, whether public or private.

"Undeveloped, graded parcel" shall mean parcels which have been altered, in whole or in part, through a process of clearing, grading or earth moving and compaction so as to alter the perviousness of the parcel, thereby increasing storm and surface water runoff.

"Undeveloped parcel" shall mean any parcel which has not been altered from its natural state either by grading, or the construction, creation or addition of impervious area, or has been restored to its natural state of perviousness through planting or landscaping, as determined by the Engineer.

(Ord. 1454 § 1 (part), 2007; Ord. No. 1648 , § 7, 12-5-2017)

13.34.030 - Fee—Imposition.

There is imposed on each and every developed parcel and each and every undeveloped, graded parcel within the City and the owner and occupiers thereof, jointly and severally, the City of San Clemente clean ocean fee (the "fee"). The fee is found to be reasonably related to the cost of providing storm drainage

facility services for the parcels assessed the fee. The fee is reasonable and is necessary to pay for: (1) improving the quality of storm and surface water; (2) the planning, permitting, design, construction, operation, maintenance, regulation, inspection, improvement and replacement of the City's storm drainage facilities; and (3) complying with applicable local, State, and Federal stormwater regulations. The fee will take effect on February 7, 2014 and will expire on June 30, 2020.

(Ord. 1454 § 1 (part), 2007)

(Ord. No. 1577, § 2, 1-7-2014)

13.34.040 - Fee—Calculation.

The fee shall be based upon the applicable parcel's contribution of storm and surface water runoff into the City's storm drainage facilities, as expressed in drainage residential units ("DRU") or portions thereof. The fee ("DRU Value") is established at five dollars and ten cents ($5.10) per DRU per month for parcels on private streets and six dollars and twenty-three cents ($6.23) per DRU per month for parcels on public streets. The City's Street Assessment District database shall be used to determine whether a street is classified as a private or public street. The following schedule is hereby established for parcels in the City:

Parcel Type		Monthly fee (DRU Value ×___)	Monthly fee (dollar amount)
Single-Family Residential	Private street	1 DRU	$5.10
	Public street	1 DRU	$6.23
Multi-Family Residential	Private street	0.8 DRU per residential unit	$4.08 per residential unit
	Public street	0.8 DRU per residential unit	$4.98 per residential unit
Non-Residential	Private street	10 DRU per acre or fraction thereof	$51.00 per acre or fraction thereof
	Public street	10 DRU per acre or fraction thereof	$62.30 per acre or fraction thereof

Undeveloped, Graded	Private street	0.5 DRU plus 0.1 DRU per acre or fraction thereof over 2 acres	$2.55 plus $0.51 per acre or fraction thereof over 2 acres
	Public street	0.5 DRU plus 0.1 DRU per acre or fraction thereof over 2 acres	$3.12 plus $0.62 per acre or fraction thereof over 2 acres

(Ord. 1454 § 1 (part), 2007)

(Ord. No. 1577, § 3, 1-7-2014)

13.34.050 - Fee—Payment.

The fee shall be billed for all assessable parcels within the City as either a separate charge on the City's utility bill or as a separate bill for those parcels within the City which do not currently receive City utility service. The amount billed shall become a personal obligation of the person listed as the utility customer or, for parcels not currently receiving City utility service, a personal obligation of the record owner of the parcel as shown on the latest Assessor's tax roll. The fee shall be due and payable on the date the bill is prepared, and shall be considered delinquent if payment is not received within thirty (30) days of the date the payment is due and payable. The City shall impose a ten (10) percent nonpayment penalty on all delinquent accounts. An additional one and one-half (1 ½) percent penalty shall be imposed for each additional thirty (30) day period the amount remains unpaid. If the bill is not paid within sixty (60) days of the date the payment is deemed delinquent, the amount owing shall constitute a lien against the parcel receiving the service, and the City shall include a statement on the bill notifying the assessee of the lien as provided for in Health and Safety Code Section 5473.11. The lien shall remain in effect for three (3) years unless extended, and shall be released upon payment of the delinquent amount plus all penalties associated therewith. The City may, in addition to or instead of the methods of fee collection described above, contract with other public or private utilities for collection in conjunction with their utility bills or the County of Orange Tax Assessor for collection on the tax rolls.

(Ord. 1454 § 1 (part), 2007)

13.34.060 - Appeal.

Any assessee affected by any decision, action or determination made by the Engineer interpreting or implementing the provisions of this chapter or any permit issued herein, may file an appeal of the decision with the Engineer within ten (10) days of the issuance of the decision, setting forth in detail the facts supporting the assessee's appeal. Such facts may include, but not be limited to, evidence that the parcel maintains its own storm drainage facility and does not contribute storm and surface water to the City's storm drainage facilities. The appeal shall be heard by the Utilities Director or his or her designee within thirty (30) days of receipt of the appeal request. The Utilities Director shall render a decision on the appeal within fifteen (15) days of concluding the appeal hearing.

(Ord. 1454 § 1 (part), 2007; Ord. No. 1648 , § 7, 12-5-2017)

13.34.070 - Use of fees.

The revenue generated from the fee shall, upon receipt, be placed in the clean ocean fee account. The revenue generated from the fee shall be used for the purposes specified in this chapter, and all costs related thereto.

(Ord. 1454 § 1 (part), 2007)

CITY OF TEMECULA
JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
SANTA MARGARITA REGION

ORDER NO. R9-2010-0016

JUNE 30, 2012

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ACRONYMS AND ABBREVIATIONS

ABOP	Anti-freeze, Batteries, Oil, and Latex Paint
ASB	Area of Special Biological Significance
AST	Active/Passive Sediment Treatment
BMP	Best Management Practice
Cal-EMA	California Emergency Management Agency
Cal-EPA	California Environmental Protection Agency
CAP	Compliance Assistance Program
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CESQG	Conditionally Exempt Small Quantity Generator
CIA	Common Interest Area
CIEP	Compliance Inspection and Enforcement Program
CMP	Consolidated Monitoring Program
Copermittees	District, County, and Cities of Murrieta, Temecula and Wildomar

Construction General Permit	NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
DEH	County Department of Environmental Health
District	Riverside County Flood Control and Water Conservation District
ESA	Environmentally Sensitive Area
FPPP	Facility Pollution Prevention Plan
HHW	Household Hazardous Waste
HMP	Hydromodification Management Plan
HOA	Homeowners Association
IC/ID	Illicit Connection/Illegal Discharge
IDDE	Illicit Discharge Detection and Elimination
Industrial General Permit	NPDES General Permit for Stormwater Discharges Associated with Industrial Activities
IPM	Integrated Pest Management
JRMP	Jurisdictional Runoff Management Plan
LID	Low Impact Development
MEP	Maximum Extent Practicable
MHP	Mobile Home Park
MSHCP	Multi Species Habitat Conservation Plan
MS4	Municipal Separate Storm Sewer System
NAL	Non-Stormwater Dry Weather Action Levels
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
O&M	Operation & Maintenance
SAL	Stormwater Action Level
San Diego Regional Board	San Diego Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SIC	Standard Industrial Classification
SMARTS	Stormwater Multiple Application and Report Tracking System
SMR	Santa Margarita Region
State Board	State Water Resources Control Board
SWPPP	Stormwater Pollution Prevention Plan
SWQPA	State Water Quality Protected Area
TMDL	Total Maximum Daily Load
WDID	Waste Discharge Identification
WQMP	Water Quality Management Plan for the Santa Margarita Region of Riverside County
WQMP Projects	Priority Development Projects with a final approved Project-Specific WQMP
WLA	Waste Load Allocation
2010 SMR MS4 Permit	Order No. R9-2010-0016

EXECUTIVE SUMMARY

This Jurisdictional Runoff Management Program (JRMP) plan describes the City if Temecula's specific runoff management (water quality) programs and activities implemented to comply with the requirements of the Municipal Separate Storm Sewer System (MS4) Permit, Order No. R9-2010-0016, issued to the Riverside County Copermittees in the Santa Margarita Region (SMR) by the San Diego Regional Water Quality Control Board (San Diego Regional Board) on November 10, 2010 (2010 SMR MS4 Permit). This JRMP is the principal document that comprehensively translates the MS4 Permit requirements into actions that the City of Temecula is implementing to comply with the 2010 SMR MS4 Permit. This JRMP will be reviewed at least annually to incorporate new and revised compliance programs specified in the 2010 SMR MS4 Permit.

This JRMP is based on a SMR-wide template developed jointly by the Copermittees to promote consistency in the compliance programs implemented in the SMR. The JRMP has been customized to describe the City of Temecula 's compliance procedures and requirements. The terms and acronyms used in this JRMP are defined in the glossary (Appendix A) and defined terms are capitalized.

2.0 INTRODUCTION TO THE CITY OF TEMECULA JRMP

2.1 Program Overview

The Clean Water Act of 1987 (CWA) established requirements for discharges of Urban Runoff from MS4s under the National Pollution Discharge Elimination System (NPDES) program. The 2010 SMR MS4 Permit regulates discharges of runoff from MS4 facilities in the SMR. The Copermittees covered under the MS4 Permit are the County of Riverside, Riverside County Flood Control and Water Conservation District (District) and the cities within the SMR, including the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla (City). Each Copermittee is responsible for compliance with the 2010 SMR MS4 Permit.

This JRMP is a programmatic document developed by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla to describe its specific internal management of its water quality program as well as ordinances, plans, policies and procedures necessary to manage runoff and comply with the 2010 SMR MS4 Permit. This JRMP comprehensively translates the 2010 SMR MS4 Permit requirements into programs and Implementation Plans for the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla.

2.2 Description of City of Temecula MS4 Facilities

The major MS4 facilities owned and operated by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla and regulated under the 2010 SMR MS4 Permit consist of underground storm drains, improved open channels, and detention basins. Each year, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla updates a map of its MS4 facilities with modifications and additions to its major MS4 facilities in the JRMP Annual Report.

Within the jurisdictional boundaries of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, additional MS4 facilities and discharges may be present that are not owned by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla. These may include MS4 facilities owned/operated by the District, and other non MS4 Copermittee entities, including federal, state, tribal and private entities and discharges otherwise permitted by the San Diego Regional Board or the State Water Resources Control Board (State Board).

Table 2-1 lists the Receiving Waters that may receive discharges from the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's MS4 facilities, and the associated 303(d) listings. It should be noted that the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla is not alone responsible for potential or actual water quality problems or 303(d) listings within any of the identified Receiving Waters; however the programs identified within this JRMP are designed to reduce the discharge of Stormwater Pollutants from the MS4 to the MEP, effectively prohibit Non-Stormwater discharges, and prevent Runoff discharges from the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's MS4 from causing or contributing to a violation of Water Quality Standards.

Table 2-1: 303(d) Listed Receiving Waters within and downstream of the City of Temecula's Jurisdiction

Receiving Water	303(d) Listings
Empire	Not Listed
Long Canyon	Chlorpyrifos, Fecal Coliform, Iron, Manganese
Murrieta	Chlorpyrifos, Copper, Iron, Manganese, Nitrogen, Phosphorus, Toxicity
Pechanga	Not Listed
Redhawk	Chlorpyrifos, Copper, Diazinon, Escherichia coli (E. coli), Fecal Coliform, Iron, Manganese, Nitrogen, Phosphorus, Total Dissolved Solids
Santa Gertrudis	Chlorpyrifos, Copper, Escherichia coli (E. coli), Fecal Coliform, Iron, Manganese, Phosphorus
Temecula	Chlorpyrifos, Copper, Phosphorus, Total Dissolved Solids, Toxicity

3.0 PROGRAM MANAGEMENT

3.1 Departmental Responsibilities

There are multiple 11B58BCity 3B73B21Bof Tem163Becu50B80Bla departments that share responsibility to implement elements of this JRMP and to meet the requirements of the 2010 MS4 Permit. An organizational chart depicting the departments involved in implementing the NPDES program is provided in Appendix B. Additionally, key personnel (position titles) with implementation responsibilities, and a matrix showing each JRMP element, the departments with implementation responsibilities, the specific responsibilities of each department/organizational unit, and the key personnel by position title are also provided in Appendix B.

3.2 Cooperative Activities

3.2.1 Implementation Agreement

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla participates in a cooperative Implementation Agreement with the following Copermittees within the SMR.

- County of Riverside
- Riverside County Flood Control and Water Conservation District
- City of Murrieta
- City of Wildomar

Through this agreement, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla and the other listed Copermittees contribute funds to implement various aspects of the 2010 SMR MS4 Permit requirements on a region-wide basis. This approach allows for more consistent compliance with many elements of the 2010 SMR MS4 Permit, implementation of programs, increases cost effectiveness, and provides consistent messages for the public. The regional programs that the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla jointly funds and implements regionally through this Implementation Agreement include:

- Joint development of compliance documents required by the 2010 SMR MS4 Permit among the Copermittees
- Funding of the additional responsibilities of the District as Principal Copermittee (Described in Section M of the 2010 SMR MS4 Permit)
- Regional public education activities
- Regional training programs for Copermittee staff

- Water quality monitoring as described in the 2010 SMR MS4 Permit Attachment E, Sections II.A through II.F, exclusive of source identification efforts that may be required of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla based on any exceedances of an Action Level at a 11B58BCity 3B73B21Bof Tem163Becu50B80Bla owned Major MS4 Outfall.

- Joint support for other Regional Programs, including

    - The Compliance Assistance Program (CAP) including Food Services and Hazardous Materials facilities inspections

    - Household Hazardous Waste and Antifreeze, Batteries, Oil and Latex Paint (ABOP) collection programs

    - Participation in the California Stormwater Quality Association (CASQA)

Major modifications to the interagency agreements and changes in the cooperative activities are described in Annual Reporting to the Regional Board

3.3 Fiscal Analysis {H.}

11B58BCity 3B73B21Bof Tem163Becu50B80Bla makes capital expenditures and incurs operation and maintenance (O&M) costs to implement this JRMP and to meet the requirements of the 2010 MS4 Permit. Each year the capital expenditures and O&M costs incurred during the reporting period and the budgeted capital expenditures and O&M costs planned for the next fiscal year are provided in the Annual Report. Table 3-1 below describes the sources of funding that the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has available to fund these programs.

Table 3-1. Fiscal Resources

Program Element	Funding Source(s)
Program Management and Reporting	City's General fund
Annual Fee for MS4 NPDES Permit	City's General fund
Implementation Agreement Shared Cost	City's General fund
Elimination of Illicit Connections & Illegal Discharges	City's General Fund
Municipal Facilities and Activities	City's General Fund
Development Planning	Fees
Private Development Construction (Inspections)	Fees
Industrial and Commercial Sources (Inspections)	City's General Fund
Retrofit Program	City's General Fund
Public Education & Outreach	City's General fund
Other	City's General fund

Table 3-2 below describes limitations on how the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla can use the various sources of funding.

Table 3-2. Restrictions on Use of Funding Sources

Source of Funds	Restrictions on Use (if applicable)
County Service Area 152	City is not a participant
General Fund	Fund is distributed to all departments based on departmental needs
Fees	User Fee analysis based on industry standards

3.4 Legal Authority {E.}

A certification of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's adequate legal Authority to comply with 40 CFR 122.26(d)(2)(I)(A-F) and the 2010 MS4 Permit is provided in Appendix B. Table 3-3 lists the ordinances that grant the Authority to implement the requirements of the 2010 MS4 Permit and this JRMP. Water quality management and discharge controls addressed by these ordinances provide the authority to:

- Control the contribution of Pollutants in discharges of Runoff associated with industrial and construction activity to its MS4 facilities and control the quality of Runoff from Industrial and Construction Sites. This requirement applies both to Industrial and Construction Sites which have coverage under the statewide Industrial or Construction General Stormwater Permits, as well as to those sites which do not. Grading ordinances must be updated and enforced as necessary to comply with this Order;
- Prohibit all identified Illicit Discharges not otherwise allowed pursuant to Section B.2 of the 2010 SMR MS4 Permit;
- Prohibit and eliminate Illicit Connections to the MS4;
- Control the discharge of spills, dumping, or disposal of materials other than Stormwater into the MS4;
- Require compliance with conditions in 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 facilities accountable for their contributions of Pollutants and flows);
- Utilize enforcement mechanisms to require compliance with 11B58BCity 3B73B21Bof Tem163Becu50B80Bla water quality Ordinances, permits, contracts, or orders;
- Control the contribution of Pollutants from one portion of the MS4 to another through interagency agreements with other Copermittees;
- Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with the water quality ordinances and permits and with the 2010 SMR MS4 Permit, including the prohibition on Illicit Discharges to the MS4. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has authority to enter, monitor, inspect, take measurements, review and copy

records, and require regular reports from Industrial Facilities discharging into its MS4 facilities, including Construction Sites;

- Require the use of BMPs to prevent or reduce the discharge of Pollutants into the MS4 from Stormwater to the MEP;
- Require documentation on the effectiveness of BMPs implemented to reduce the discharge of Stormwater Pollutants to the MS4 to the MEP; and
- Implement and enforce its ordinances within CIA/HOA areas and mobile home parks.

Table 3-3 lists the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's ordinances that provide this legal authority. These ordinances (1) can be viewed at

http://www.qcode.us/codes/temecula/

or

http://www.cityoftemecula.org/Temecula/Government/CityClerk/MunicipalCode.htm.

Table 3-3. Ordinances Providing Legal Authority

Ordinance No.	Ordinance Short Title	Provision(s) of Ordinance and Description of Authorities Granted	Availability of Ordinance (Online URL or front counter)
8.12.020 H, J, P, R	Nuisances	Disposal of pet waste, green waste, Hazardous Waste, Automobile repair and maintenance	http://www.qcode.us/codes/temecula/
8.20	Waste Management	Disposal of Non-hazardous Waste, Disposal of Solid Waste, Unlawful Dumping, Spill Clean-up	http://www.qcode.us/codes/temecula/
8.28	Stormwater and Urban Runoff Management and Discharge Controls	Prohibitions. Non-Stormwater Discharges . Development Planning. Existing Development. Illicit Discharge Detection.	http://www.qcode.us/codes/temecula/
10.16.040	Vehicles and Traffic	Automobile Parking	http://www.qcode.us/codes/temecula/
10.16.050	Vehicles and Traffic	Automobile Washing	http://www.qcode.us/codes/temecula/
12.04.080	Streets, Sidewalks, and Public Places	Disposal of Pet Waste	http://www.qcode.us/codes/temecula/
12.04.160	Streets, Sidewalks, and Public Places	Prohibiting pollutants to waters	http://www.qcode.us/codes/temecula/
12.04.180	Streets, Sidewalks, and Public Places	Waste Liquids and Refuse	http://www.qcode.us/codes/temecula/
17.32.060	Water Efficient Landscape Design	Landscape Design Requirement	http://www.qcode.us/codes/temecula/
18.15	Grading, Erosion and Sediment Control.	Erosion, and sediment controls	http://www.qcode.us/codes/temecula/

3.5 Enforcement/Compliance Strategy

As described within this JRMP, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements a variety of programs and has established ordinances that are designed to meet the goals of the 2010 SMR MS4 Permit, however the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla must necessarily rely on the actions or inactions of independent third parties such as residents and businesses for the protection of water quality. Accordingly, consistent with the 2010 SMR MS4 Permit and pursuant to the legal authorities described in Section 3.4, compliance with the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's ordinances is mandated through implementation of various enforcement mechanisms.

This section describes a program wide Enforcement / Compliance Strategy that serves as guidance to the various 11B58BCity 3B73B21Bof Tem163Becu50B80Bla departments in prioritizing and conducting enforcement activities that are consistent with the 2010 MS4 Permit and appropriate to the severity of the violation. Due to the unique nature of mobile businesses, specific enforcement procedures for Mobile Businesses are described in Section 3.5.3.

3.5.1 Prioritize Violations

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's ordinances cover a wide range of prohibited activities with varying magnitudes of potential impacts on the Beneficial Uses of Receiving Waters. For example, discharges of either Hazardous Materials (e.g., solvents and pesticides) or Non-Hazardous Materials (e.g., food Wastes, trash, and debris) into the MS4 are violations of the City's Ordinance and are subject to enforcement. Similarly, an accidental spill into a catch basin inlet and an intentional discharge from an Illicit Connection are both violations. Prioritizing violations is important in focusing the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's finite resources on those violations that may have the greatest potential impact on the quality of Receiving Waters.

Prioritizing violations is based on many factors, including the experience and professional judgment of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's staff. The factors that are commonly considered in prioritizing violations of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's water quality ordinances are presented in Table 3-4.

Table 3-4. Prioritization Factors for Violations

Prioritization Factor	Description
Characteristics of the Potential Pollutant	Based on chemical characteristics and potential to impact Beneficial Uses of Receiving Waters. The more Toxic, hazardous, or detrimental to the Beneficial Uses of the Receiving Waters a Pollutant, is the higher priority the discharge.
Sensitivity of the Affected Receiving Waters	The sensitivity of the affected Receiving Waters should be considered directly proportional to the priority of the violation because, for example, a more sensitive Receiving Water may suffer severe adverse effects from the discharge of a particular Pollutant whereas a less sensitive Receiving Water may suffer no adverse effects from the same Pollutant discharge. It is also important to consider that a Receiving Water may be highly sensitive to one potential Pollutant discharge while, at the same time, completely insensitive to another potential Pollutant. Examples of Receiving Waters that may be particularly sensitive include those with municipal supply or wildlife habitat designated Beneficial Uses.
Proximity of Receiving Waters	The closer a Receiving Water is to the discharge, the less chance there is for dispersion, dilution, or degradation of the potential Pollutant. Therefore, the closer the discharge is to Receiving Waters, the higher priority of the violation.
Magnitude of Discharge (volume and mass)	A larger Illegal Discharge should be of a higher priority than a smaller Illegal Discharge because as the magnitude of the Pollutant discharge increases, the extent of impact of the discharge on the environment increases as well.
Responsiveness of the Discharger in taking corrective actions	A discharger who is responsive and implements a good faith effort to correct a violation is more likely to minimize adverse impacts to surface water quality than a discharger who takes no action to correct a violation. Therefore, the priority of a violation should decrease as the responsiveness of the discharger increases.
Intent of the Discharger	Is the violation accidental or the result of an accident or a deliberate attempt to circumvent regulations?
Frequency of the Violation	Violations of local water quality ordinances and that are continuous or reoccurring should be of a higher priority than isolated occurrences of violations. The more frequent a violation, the more likely it is that the discharge will impact surface water quality.
Previous History of Non-Compliance of the Responsible Party	A poor history of non-compliance of a discharger should result in a higher prioritization of subsequent violations as compared to a discharger with a good history of compliance because a history of non-compliance is evidence of a discharger's lack of concern for complying with local Stormwater and erosion control ordinances.

Table 3-5 provides general guidance for categorizing the relative severity of violations based upon the factors and/or circumstances associated with a violation.

Table 3-5. Relative Severity of Violations

Factors Affecting the Severity of Violations	Severity Priority Level		
	High	Medium	Low
Pollutant characteristics	Hazardous Materials (e.g., pesticides and solvents)	Metals, nutrients, sediment, other non-Hazardous Materials	Trash and debris
Sensitivity of Receiving Waters	Drinking water source, wildlife refuge, Illegal Discharges containing Pollutants identified as Impairing the Receiving Water.	Recreational reservoir, riparian habitat	Dry, ephemeral stream
Proximity of Receiving Waters	Adjacent	Several hundred feet away	Several hundred yards away
Discharge magnitude	1000's gallons	100's gallons	10's gallons
Responsiveness of discharger	No action to contain or mitigate discharge	Reactive to control discharge when requested (i.e., cooperative)	Implements spill control plan at own initiative or shows good faith effort to respond
Intent of violation	Intentional	Discharge due to lack of controls or negligence	Implemented and maintained controls that failed (i.e., accident)
Frequency of violation	Continuous	Intermittent	Isolated incident
Previous history of discharger	Enforcement and cleanup historically resisted and more than one previous violation	Enforcement and cleanup performed when threatened and one or less previous violations	Enforcement and cleanup performed when requested and no previous violations

Because violations may not clearly fall into any single priority level described in Table 3-5, the priority assigned by 11B58BCity 3B73B21Bof Tem163Becu50B80Bla staff to particular violations may involve a subjective weighting of various factors.

3.5.2 Select Appropriate Enforcement Actions

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will emphasize and encourage voluntary compliance with its ordinances to the MEP. The enforcement/compliance response should be based on the severity of the violation in consideration of the factors in Table 3-5. The types of enforcement/compliance responses available, depending on the circumstances, and in typical order of increasing severity, are:

- Education and information,
- Verbal warning,
- Written warning,
- Notice of violation or noncompliance,
- Stop work order or cease and desist order,
- Civil citation or injunction,

- Bonding
- Administrative fine, and
- Referral to the Environmental Crimes Strike Force for criminal prosecution (infraction or misdemeanor).

3.5.2.1 Administrative Remedies

Education and Information, and Verbal and Written Warnings. Education and information should be provided to dischargers as an element of each enforcement action. Verbal and written warnings may also be provided depending on the circumstances of the condition that is causing or threatening to cause a violation of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's ordinances. However, unless the condition is an initial violation of the water quality ordinances and consists of a low priority and severity violation, additional enforcement action may be appropriate.

Notice of Noncompliance. The Notice of Noncompliance constitutes a basic request that the property owner or facility operator rectify the condition causing or threatening to cause noncompliance with the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's ordinances. The Notice of Noncompliance is generally issued when one or more of the following circumstances exist:

- The violation or threat is not significant and has been short in duration,
- The responsible party is cooperative and has indicated a willingness to remedy the conditions,
- The violation or threat is an isolated incident, and
- The violation or threat does not affect and will not harm human health or the environment.
- An actual condition of noncompliance exists, but the condition cannot be remedied within a relatively short period of time.
- The owner of the property or facility operator has indicated willingness to come into compliance by meeting milestones established in a reasonable schedule.
- The violation does not pose an immediate threat to human health or the environment.

Stop Work Order or Cease and Desist Order. The Stop Work Order or Cease and Desist Order are appropriate when the immediate action of the owner of property or operator of a facility is necessary to stop an existing discharge, which is occurring in violation of an ordinance. The Cease and Desist Order may also be appropriately issued as a first step in ordering the removal of nuisance conditions, which threaten to cause an unauthorized discharge of Pollutants if exposed to rain or surface water Runoff. The Cease and Desist Order is generally issued when one or more of the following circumstances exist:

- The violation or threat is immediate in nature and may require an emergency spill response or immediate nuisance abatement if left unattended.
- The violation or threat exhibits a potential situation that may harm human health or the environment.
- Contacts with the property owner or facility operator indicate that further Authority of the Copermittee may need to be demonstrated before remedial action is forthcoming.

- Prior Notices of Noncompliance have not obtained a favorable response.

Prior to issuance of any Cease and Desist Order or commencement of other civil or criminal enforcement action against any person, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla should deliver to the person a written Notice of Noncompliance, which states the act or acts constituting the violation and directs that the violation be corrected. The Notice of Noncompliance should provide the person with a reasonable time period to correct the violation before further proceedings are brought against the person. However, a Notice of Noncompliance should not be the first enforcement method used if egregious or unusual circumstances indicate that a stronger enforcement method is appropriate.

3.5.2.2 Criminal Enforcement

Misdemeanors. Criminal enforcement is appropriate when evidence of noncompliance indicates that the violator of the Ordinance has acted willfully with intent to cause, allow continuing or concealing a discharge in violation of the Ordinance.

Infractions. At the discretion of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's attorneys, misdemeanor acts may be treated as infractions. Factors that the attorney may use in determining whether the misdemeanor is more appropriately treated as an infraction may include the:

- Duration of the violation or threatened violation.
- Compliance history of the person, business or entity.
- Effort made to comply with an established compliance schedule.
- Existence of prior enforcement actions.
- Actual harm to human health or the environment from the violation.

Issuance of Citation. Where criminal enforcement is indicated, the inspector will issue a citation including the:

- Name and address of the violator,
- Provisions of the ordinance violated,
- Time and place of required appearance before a magistrate.

The offending party must sign the citation thereby promising to appear. If the cited party refuses to sign the citation, the inspector may cause the arrest of the discharger, or may refer the matter to the municipal attorney for issuance of a warrant for arrest. Inspectors should be aware that cited parties have the right to demand the immediate review by a magistrate, and such a request must be granted. Inspectors should respond to such a request by referring the request to the City of Temecula's Police Department.

Referral to Environmental Crimes Strike Force. The Riverside County Environmental Crimes Strike Force is a committee designed to pursue enforcement of serious environmental crimes. Referral of a case to the Environmental Crimes Strike Force would occur after repeated attempts at obtaining compliance have failed. The contact for the Environmental Crimes Task Force is Daniel Workman, Senior Investigator, Riverside County District Attorney Office (951.955.0755 dworkman@rivcodda.org). If Mr. Workman is not available, an Environmental Crimes Investigator can be contacted at 951.955.5430.

3.5.2.3 Appropriate Enforcement/Compliance Responses

Table 3-6 provides an example of appropriate enforcement responses that correspond to the severity of a violation as determined from Table 3-5. Recognizing the unique characteristics of mobile businesses, enforcement actions against such businesses will typically follow the procedure described in Section 3.5.3 below.

Table 3-6. Enforcement Responses for Violations Where Overlapping Authority Exists

Incident Severity Priority Level	Appropriate Enforcement Responses[1]	Lead Enforcement Agency	
		Copermittee	Regional Board Support
High	Referral to Environmental Crimes Strike Force	X	X
	Citation	X	X
	Infraction	X	X
	Misdemeanor	X	X
Medium	Infraction	X	X
	Misdemeanor	X	X
	Stop work order or cease and desist order	X	
	Notice of non-compliance	X	
Low	Notice of non-compliance	X	
	Written warning	X	
	Verbal warning	X	
	Education and information	X	

[1] Education and information should be incorporated into all enforcement responses.

The 11B58BCity 3B21Bof Tem163Becu50B80Bla takes the lead in initiating enforcement actions related to violations of its water quality ordinances within its jurisdiction, however the Regional Board may be asked to provide support in enforcement actions related to incidents that are or escalate to a high-priority status. State law limits the Authority of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla to assess significant fines and penalties. However, the Regional Board has substantial abilities to assess fines and penalties under state and federal law that can be used to augment local enforcement where superior regulatory Authority and the ability to assess fines and penalties would be beneficial. Additionally, the Regional Board will be responsible for performing all enforcement actions related to compliance with the Statewide General Permits.

3.5.3 Enforcement Strategy for Violations Originating from Mobile Businesses {F.3.b.(3)(ii)}

Predominantly, violations by Mobile Businesses are reported by the public or by 11B58BCity 3B73B21Bof Tem163Becu50B80Bla field personnel. Appropriate field personnel are also trained to identify potential Non-Stormwater Discharges and other discharge of Pollutants from Mobile Businesses during the course of their normal duties. Violations originating from Mobile Businesses may be received by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla in the form of complaint calls from the public. For example, the District currently operates, on behalf of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, a centralized 24-hour hotline (800-506-2556) that may be used by the public to, among other things, report violations into public streets, the MS4 and other waterbodies. These calls can be received in English or Spanish and are routed to the appropriate Copermittee departments or contacts. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla also implements Wet and Dry Weather monitoring programs that may indicate the presence of Non-Stormwater Discharges and other discharges of Pollutants to the MS4.

When put on notice by staff or a third party of a potential violation of 11B58BCity 3B73B21Bof Tem163Becu50B80Bla ordinances originating from a Mobile Business that is not already being responded to by another responsible agency (e.g., other Copermittee), the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla investigates and takes the following actions, as applicable:

- If the reported incident is outside of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's jurisdiction, referral to the appropriate agency and/or the Regional Board will be made;
- Identify the name and contact information for the Mobile Business;
- The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla responds to reported violations originating from a Mobile Business within its jurisdiction within two (2) business days of determining the name and contact information for the Mobile Business;
- Inspections performed in response to a report are documented using the standard complaint reporting forms; and
- When appropriate, samples of Non-Stormwater Discharges originating from Mobile Businesses that enter the MS4 may be collected.

As described in Section 8.5, investigations of Mobile Businesses are performed by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla in response to reports of potential violations originating from Mobile Businesses received from the public, staff and/or other agencies. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has adopted ordinances prohibiting such discharges and established programs to enforce them.

Where violations that originate from Mobile Businesses are discovered, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will take appropriate enforcement action. Recognizing the unique characteristics of Mobile Businesses, the typical escalating enforcement protocol includes the following; however steps may be adjusted as appropriate to the nature of the violation:

Initial Violation

1) 11B58BCity 3B73B21Bof Tem163Becu50B80Bla staff provides educational materials to the Mobile Business operator informing them of the minimum Source Control and Pollution Prevention BMPs they must implement (refer to Section 8.5.1). This includes a review of applicable BMP fact sheets, and letting the operator know the proper procedures for disposal of Pollutants and Non-Stormwater discharges originating from Mobile Businesses.

2) If applicable, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will require the Mobile Business owner to obtain a local business license.

3) The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla may give notice that the Mobile Business operator shall cease any activity which causes Non-Stormwater Discharge to the MS4 until they implement the minimum BMPs (see below for list of recommended BMPs).

4) If discharge is observed at time of inspection, 11B58BCity 3B73B21Bof Tem163Becu50B80Bla staff shall require the Mobile Business operator to immediately contain the discharge and perform any necessary remediation or cleanup from the MS4.

Repeat Violations

For repeat violations by the same operator, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla follows the remainder of the Enforcement Compliance strategy in Section 3.5 which may include, as appropriate, issuing written warnings, Notices of Violation, citations, or referrals to the Regional Board.

3.5.4 Coordination of Enforcement/Compliance Activities

Coordination with other Copermittees and government agencies including the Regional Board is essential for successful implementation of an enforcement/compliance program. The entire MS4 is not controlled by a single federal, tribal, state, local or private entity, nor does any single entity have Authority to take enforcement action for violations occurring outside of its jurisdiction. Further, other governmental agencies may have additional enforcement authorities that are appropriate to the situation. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla coordinates its enforcement activities, as practicable, with the appropriate Copermittees and government and agencies and tribes in accordance with the following guidelines:

3.5.4.1 Identify Lead Agency

- Enforcement will be coordinated when multiple agencies have jurisdiction and an agency has not been able to obtain compliance by the discharger.
- Unless otherwise agreed to in writing, the lead enforcement agency role will be assigned on the basis of the origin of the discharge.
- The Regional Board may be asked to be the lead enforcement agency for higher priority Illegal Discharges in areas of overlapping Authority, such as for discharges to Receiving Waters, and will be the lead enforcement agency for all enforcement actions related to compliance with the State Industrial or Construction General Stormwater Permits.
- Investigation and other relevant information will be shared between the participating agencies in a timely fashion.

3.5.4.2 Lead Enforcement Agency Responsibilities.

The lead enforcement agency will assume the following responsibilities:

- Coordinating activities and assigning responsibilities (e.g., investigations, site visits, etc.) among participating agencies;
- Maintaining communication and information exchange among participating agencies;
- Ensuring that follow-up actions are implemented; and
- Documentation and reporting as required.

3.5.4.3 Coordination with the Regional Board

Under the Porter-Cologne Water Quality Act, the State has provided the Regional Boards with overriding Authority to manage water quality and administer compliance with state and federal water quality law. This Authority includes the ability to impose more significant fines and other sanctions than the Copermittees. With this Authority, the Regional Board may be more effective in obtaining the cooperation and compliance from those who violate Stormwater regulations. The Regional Board is notified by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla when findings of potential non-compliance with the State's Industrial and Construction General Stormwater Permits have been identified or when the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has been unable to obtain the compliance of a party responsible for violating its water quality ordinances. The list of contact names maintained by the District identifies the appropriate Regional Board staff to contact to initiate coordination of enforcement activities or to notify the Regional Board of potential findings of non-compliance. Where appropriate, notifications of potential non-compliance should be forwarded to the designated Regional Board contact person by the stormwater compliance coordinator.

3.5.4.4 Coordination with Other Agencies

In addition to the Regional Board, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla may also find it useful or necessary to coordinate or report findings of potential non-compliance to other government agencies with jurisdiction over water quality issues including the California Department of Fish and Game, the United States Fish and Wildlife Service, and the Army Corp of Engineers. The list of contact names maintained by the District identifies the appropriate staff at these agencies to contact to initiate coordination of enforcement activities or to notify of potential findings of non-compliance. In addition, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla may cooperate with other Copermittees in the Santa Margarita Region in developing and implementing programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education.

3.5.5 Recordkeeping

Enforcement actions taken, and tools such as citations or tickets utilized, and the discharger's return to compliance are tracked in the databases described in the JRMP. Information to be retained by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla regarding their enforcement program includes:

- Documentation of staff training;
- Inspection notes or reports;

- Warning letters, violation notices, etc.;
- Documentation of follow-up actions;
- Contact reports from meetings or conversations with violators, other Copermittees, or other agencies; and
- Copies of notifications of potential non-compliance.

3.6 Receiving Water Limitations {A.3.}

The 2010 SMR MS4 Permit states that discharges from the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla MS4s that have been found to cause or contribute to the violation of water quality standards (designated beneficial uses, water quality objectives developed to protect beneficial uses, and the State policy with respect to maintaining high quality waters) are prohibited. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla complies with this prohibition through timely implementation of control measures and other actions as described in this JRMP to reduce pollutants in stormwater discharges in accordance with the 2010 MS4 Permit.

If it is determined that discharges from the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla MS4s are causing or contributing to exceedances of Water Quality Standards that persist, notwithstanding implementation of the control measures specified in the JRMP, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will implement the following procedure:

Notification

If the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla determines that discharges from its MS4 are causing or contributing to an exceedance within a receiving water of an applicable Receiving Water Quality Standard, the City of Temecula's NPDES representative will provide oral or e-mail notification to the Regional Board's Executive Officer within thirty (30) working days, identifying the pertinent information and data supporting the determination, and commit to submitting a full report in accordance with the reporting procedures below.

If the City of Temecula's NPDES representative is notified by the Executive Officer of a determination by the Regional Board that discharges from the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's MS4 are causing or contributing to an exceedance within a receiving water of an applicable Receiving Water Quality Standard, within ten (10) working days, the City of Temecula's NPDES representative will via e-mail acknowledge such notification, and formally request any pertinent supporting information and data not included in the original notification. Following receipt and validation of all information supporting such a determination, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will commit to providing a full report in accordance with the reporting procedures below.

Reporting

If the exceedance documented pursuant to the notification above is solely due to discharges to the MS4 from activities or areas outside the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's jurisdiction or control, within ten (10) working days of becoming aware of the situation, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will provide documentation of these discharges to the Executive Officer.

Subsequently, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will document the situation within the Annual Report.

Otherwise, following the notifications above, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will, within the annual report covering the date of the notification (unless the Executive Officer directs an earlier submittal), provide a report with:

1) A description of the BMPs that are currently being implemented through the JRMP and any additional BMPs that will be implemented to prevent or reduce those Pollutants that are causing or contributing to the exceedance of the applicable Receiving Water Quality Standards. The report may be incorporated in the Annual Report unless the San Diego Regional Board directs an earlier submittal; and

2) An implementation schedule for any new/revised BMPs. If the Executive Officer directs any modifications to the report, within thirty (30) days, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will submit a revised report.

Update Compliance Programs

Within thirty (30) days following approval by the Executive Officer of the report described above, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will revise the applicable sections of this JRMP and the monitoring program, to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will implement the revised JRMP and monitoring program in accordance with the approved schedule for implementation of any new/revised BMPs

3.7 Program Reporting, Evaluation, and Revision {K.3}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following Annual Reporting, program evaluation, and program revision requirements described in the 2010 SMR MS4 Permit.

3.7.1 Annual Reporting {K.3.a.}

Each year the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla prepares a JRMP Annual Report summarizing the implementation of the jurisdictional activities described in the JRMP during the reporting period for submittal to the Regional Board. Each Annual Report must verify and document compliance with the 2010 SMR MS4 Permit. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla retains records in accordance with the Standard Provisions in Attachment B of the 2010 SMR MS4 Permit, available for review, that document compliance with each requirement of the Permit. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla submits the Annual Report including documentation of implementation of the compliance programs utilizing standardized reporting forms. The reporting forms will be amended as needed to facilitate changes in compliance programs or more accurate reporting of compliance programs.

3.7.2 Program Effectiveness Assessment and Reporting {J.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla regularly assesses its compliance programs described in the JRMP to identify improvements that will promote the reduction of Pollutants in Runoff

to the MEP while also supporting the responsible management and allocation of the public resources available for implementation.

The strategy for assessing the effectiveness of the JRMP is described in Appendix B.

3.7.3 JRMP Revisions {F.}

As part of the Annual Reporting process, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will review the JRMP to identify the need, if any, for revisions. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla may propose revisions to the JRMP under the following conditions:

- Where needed improvements are identified based on staff experience in implementing the JRMP;
- Upon completion of newly developed program elements;
- In response to Effectiveness Assessments as described in section 3.7.2;
- In response to persistent Action Level exceedances.
- In response to the BMP strategy identified in the Watershed Workplan (see section 3.8)
- As directed by the Executive Officer to reflect regional and watershed-specific requirements and/or Waste Load Allocations (WLAs) developed and approved pursuant to the Total Maximum Daily Load (TMDL) process for Impaired Waterbodies.
- As directed by the Executive Officer where the JRMP must be revised in order to address exceedances of Receiving Water Limitations that have been determined to be contributed to or caused by Runoff.

3.8 Watershed Workplan {G}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla participates in the development and updating of a Watershed Water Quality Workplan (Watershed Workplan) that is designed to identify, prioritize, address and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed.

This plan is available at: http://rcflood.org/NPDES/SantaMargaritaWS.aspx

4.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE){F.4.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following program to actively detect and eliminate Illicit Discharges and disposal into the MS4, in accordance with Provision F.4. of the 2010 SMR MS4 Permit.

4.1 Overview

4.1.1 Prohibited Discharges

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, through its legal Authority (Section 3.4), enforcement mechanisms (Section 3.5), and various other programs summarized in Section 4.2 below, effectively prohibits all types of Non-Stormwater discharges into its MS4 facilities unless such discharge is authorized by a separate NPDES permit or specifically allowed under the 2010 SMR MS4 Permit (summarized in Section 4.1.2 below).

4.1.2 Conditionally Allowed Non-Stormwater Discharges {B.2.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla is not required to prohibit the discharges categories identified below.

- Diverted stream flows;
- Rising ground waters;
- Uncontaminated groundwater infiltration (as defined in 40 CFR 35.2005 (20)) to MS4s
- Uncontaminated pumped groundwater[1];
- Foundation drains[2];
- Springs;
- Water from crawl space pumps[3];
- Footing drains[4];
- Air conditioning condensation;
- Flows from riparian habitats and wetlands;
- Water line flushing[5& 6]

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[1] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[2] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[3] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[4] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

- Discharges from potable water sources not subject to NPDES No. CAG679001, other than water main breaks;
- Individual residential car washing;
- Dechlorinated swimming pool discharges;[7] and
- Emergency fire fighting flows (i.e. flows necessary for the protection of life or property).[8]

4.2 IC/ID Prevention {F.4.}

The programs described in Sections 5 through 9 of this JRMP are designed to prevent IC/IDs from occurring. Additionally, Section 11 of this JRMP describes the public education efforts implemented to ensure that the public is informed of these requirements. Below are some highlights of specific elements of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's programs that help prevent IC/IDs.

4.2.1 Legal Authority {F.4.a.(1)}

As described in Section 3.4, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla maintains water quality ordinances prohibiting IC/IDs.

4.2.2 Connections to City of Temecula MS4 Facilities

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requires all proposed or detected third party connections to its MS4 facilities to obtain a Grading and/or Encroachment permit. Through this permitting process, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla ensures that the connection is not designed to drain Illegal Discharges into the MS4.

4.2.3 Inspections {F.4.a.(2)}

The inspection programs implemented by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla described in Sections 5 through 9 of this JRMP provide an opportunity to identify Illicit Connections and for inspectors to work with the property owner to remedy problems that may potentially result in an Illegal Discharge. If routine inspections or Dry Weather monitoring indicate Illicit Connections or Illegal Discharges, they will be investigated and eliminated or permitted[9] as described in Sections 4.3 and 4.4.

4.2.4 Maintain MS4 Map {F.4.b.}

An updated map of MS4 facilities owned by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla is maintained and provided to the Regional Board in the Watershed Annual JRMP report. The map includes all segments of the MS4 owned, operated, and maintained by the Copermittee, as well as all known

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[5] This exemption does not include fire suppression sprinkler system maintenance and testing discharges. Those discharges may be regulated under Section B.3 of the 2010 SMR MS4 Permit

[6] Requires enrollment under Order R9-2002-0020.

[7] Excluding saline swimming pool discharges.

[8] Specifically excluding non-emergency fire fighting flows, i.e. flows from controlled or practice blazes and maintenance activities, and building fire suppression system maintenance discharges, i.e. sprinkler line flushing.

locations of inlets that discharge and/or collect Runoff into the MS4 facilities, all known locations of connections with other MS4s (e.g., Caltrans), and all known locations of all the outfalls that discharge Runoff to Receiving Waters from the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's MS4 facilities. The accuracy of the MS4 map has been confirmed during dry weather field screening and analytical monitoring and will be updated at least annually. The MS4 map including any GIS layers will be submitted annually with the updated JRMP. This map is useful in identifying and narrowing down potential source areas in response to an observed IC/ID or Action Level exceedance

4.2.5 Outfall Monitoring {F.4.d.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla conducts dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 facilities within its jurisdiction to detect IC/IDs as described in Section 13.

4.2.6 Waste Collection Programs

4.2.6.1 Household Hazardous Waste (HHW) Collection and Anti-freeze, Batteries, Oil, and Latex Paint (ABOP) Collection Programs

Through the Implementation Agreement (see Section 3.2) the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla participates in the HHW and ABOP collection programs in conjunction with the Riverside County Waste Management Department. Mobile HHW collection events are held at sites in the SMR and are scheduled periodically on weekends from 9:00 a.m. until 2:00 p.m.. Through the Implementation Agreement, the District, on behalf of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, also supports one permanent ABOP collection site in the SMR, which is located at:

Murrieta Maintenance Yard / Riverside County Transportation Department
25315 Jefferson Avenue, Murrieta, 92562

The site is open Saturdays from 9:00 a.m. until 2:00 p.m. with the exception of holiday weekends. Mobile and permanent site locations may vary over time. Details, site locations, maps and schedules of operation for both the HHW and ABOP collection events are available on the DEH web site at http://www.rivcowm.org/opencms/hhw/pdf/HHWEventFlyerPDFs/91709-MASTERHHWSchedule.pdf or by calling 1-888-722-4234 or 951-358-5055.

Along with materials collected at HHW and ABOP sites, cathode ray tubes can be taken to County landfills for recycling. Used motor oil for recycling may be taken to drop off at certified collection centers throughout Riverside County in addition to the ABOP sites.

4.2.6.2 Conditionally Exempt Small Quantity Generator (CESQG)

The CESQG Program is a Hazardous Waste pick-up disposal service for eligible businesses/non-profit organizations in Riverside County. This program provides an affordable way to legally dispose of limited quantities of Hazardous Waste.

Businesses that generate 27 gallons or 220 pounds of Hazardous Waste or 2.2 pounds of extremely Hazardous Waste per month can participate in the CESQG program. Businesses are required to use a licensed hauler to manifest and transport their Hazardous Waste. The most common participants in the CESQG program are painters, print shops, auto shops, builders, churches, schools, non-profit groups and property managers. An appointment for pickup of Hazardous Waste or further information on the CESQG program can be obtained by calling 1-800-952-5566.

4.3 IC/ID Detection {F.4}

In the mid-1990s, the Riverside County Copermittees conducted reconnaissance surveys to identify IC/IDs to the MS4s. The reconnaissance surveys were limited to underground storm drains of 36-inch diameter or larger and open channels and utilized videotaping. Each undocumented connection to the MS4 was traced to its origin. Although 200 undocumented connections to the underground MS4 facilities were found County-wide, none of the connections were determined to be Illicit Connections with regard to the MS4 NPDES program. As underground facilities are difficult to access and the Copermittees inspect the construction of new underground MS4 facilities to verify that no Illicit Connections are being made, it has been determined that additional inspections of the underground MS4 facilities are not warranted. However, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla conducts inspections of its MS4 facilities to identify Illicit Connections as an element of routine facility maintenance. Illicit Connections identified during these surveys are documented and removed where necessary in order to comply with the 2010 MS4 Permit.

Although the overall programs described in this JRMP are designed to help prevent IC/IDs into the MS4, the following summarizes the specific methods implemented by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla to detect and eliminate potential IC/IDs

4.3.1 MS4 Facility Inspections {F.4.e}

During the regular maintenance as described in Section 5.3herein, MS4 facilities are inspected to identify potential Illicit Connections, and evidence of any Illegal Discharges. This is the most direct method to detect IC/IDs. Appropriate field personnel are trained to identify potential IC/IDs during the course of their normal duties. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla staff is familiar with the existing MS4 and the drainage patterns within its jurisdiction and can take steps to identify the source of what appears to be an IC/ID.

4.3.2 Public IC/ID Reports / Hotline {F.4.c}

Predominantly, Illegal Discharges are reported by the public or by 11B58BCity 3B73B21Bof Tem163Becu50B80Bla field personnel. Third-party notifications are a direct source of IC/ID information. The public is encouraged to call the Police Department/Code Enforcement to report observed spills or Illegal Discharges.

Additionally, as described in Section 11, the Riverside County Copermittees maintain a Public Education and Outreach program that includes education regarding IC/IDs. Procedures to educate the public about Illegal Discharges and Pollution Prevention where problems are found are included in this program. The District operates, on behalf of the Copermittees, a centralized 24-hour hotline (1-800-506-2556) that may be used by the public to, among other things, report Illegal Discharges from urban areas into public

streets, the MS4 and other waterbodies. These calls can be received in English or Spanish and are routed to the appropriate 11B58BCity 3B73B21Bof Tem163Becu50B80Bla departments or contacts.

Upon receiving notification from staff or a third-party, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla staff follows the procedures identified in Section 4.4 below.

4.3.3 IC/ID: Construction Site Inspections {F.1.e.(6)(d)}

As described in Section 7 herein, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements programs to track and verify that Construction Sites are complying with their ordinances. As part of that program, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla supplements the Illicit Discharge Detection and Elimination (IDDE) program by assuring that appropriate BMPs are being implemented to prevent Illegal Discharges, and that no Illicit Connections occur during the installation phase of new MS4 facilities. Illegal Connections are prohibited by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla and are initially verified during the plan check process. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla verifies conformance with the approved plans and conducts inspections at Construction Sites. Enforcement actions will be immediately enacted if an IC/ID is observed during an inspection, and where applicable 11B58BCity 3B73B21Bof Tem163Becu50B80Bla staff will follow the relevant procedures described below. Enforcement action will cease after the IC/ID has been removed or eliminated.

4.3.4 IC/ID: Industrial/Commercial Facility Inspections {F.3.b.(4)(vi)}

As described in Section 8, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements programs to track and verify that Industrial and Commercial facilities are complying with the water quality ordinances. The County's CAP assists the Copermittee's IC/ID elimination efforts through the Stormwater Compliance Surveys completed by Department of Environmental Health (Food Services) and Hazardous Materials Management (Haz Mat). These surveys list non-compliance issues that require additional attention, including IC/IDs, and the surveys are forwarded to the District. The District forwards the surveys to the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla NPDES Coordinator for follow-up visits, if necessary. If IC/IDs are encountered however, the CAP inspector directly contacts the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, who will investigate as described below.

4.3.5 Monitoring Activities {Attachment E, II.C.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, in cooperation with the District, implements a Non-Stormwater Dry Weather Action Level (NAL) monitoring program at the Major Outfalls from its MS4 facilities. This monitoring program is intended, in part, to help identify MS4 Outfalls and sub-drainage areas within the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's jurisdiction that may have Illegal Discharges. The monitoring program is described in the CMP http://rcflood.org/NPDES/Monitoring.aspx. Where an Action Level exceedance is detected at a Major Outfall, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla conducts source identification efforts as described in Section 4.4.2

4.3.6 Non-Jurisdictional IC/IDs

Where Non-Jurisdictional IC/IDs are identified within the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's jurisdiction, the responsible party is notified of the Regional Board requirements

and the Executive Officer is notified of the Non-Jurisdictional IC/ID. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla also implements Wet and Dry Weather monitoring programs that may indicate the presence of IC/IDs as described in Section 13.

4.4 IC/ID Response and Reporting {F.4.}

The 2010 SMR MS4 Permit and the Clean Water Act requires the Copermittees to prohibit, consistent with the MEP standard, Illegal Discharges (including the discharge of spills, leaks, or dumping of any materials other than Stormwater and authorized Non-Stormwater) into the MS4.

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following procedures to investigate and inspect portions of its MS4 that, based on the results of field screening, analytical monitoring, or other appropriate information, indicate a reasonable potential of containing IC/IDs or other sources of Pollutants in Non-Stormwater:

After the City of Temecula receives a notification of a water pollution problem from the area-wide hotline, the City's NPDES representative investigates the problem as follows:

4.4.1 Initial Response Timeframe and Requirements

Based on the information reported, the City's NPDES representative will assess if the IC/ID is an Emergency Situation that poses an immediate threat to human health or the environment. Any sewage spill over 1,000 gallons or that could impact water contact recreation, any spill that could impact wildlife, any Hazardous Material spill where residents are evacuated, any spill of reportable quantities of Hazardous Waste (as defined by 40 CFR 117 and 40 CFR 302), or any other spill reportable to the California Emergency Management Agency (Cal-EMA, formerly known as the Office of Emergency Services or OES) is classified as a threat to human health or the environment..

a. If the discharge is a threat to human health or the environment:

    i. Such discharges must be reported immediately by phone to the Cal-EMA at 1-800-852-7550 and should also be reported to the Executive Officer of the Regional Board by telephone: 858-467-2952. If these reports to these agencies have already been submitted by other parties, this reporting need not be repeated by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla.

    ii. Investigation (if the source is not immediately known) and elimination activities (as described below) must occur immediately within 24 hours of being put on notice by staff or a third-party.

b. If there are obvious Illicit Discharges (i.e. color, odor, or significant exceedances of Action Levels >10x the Action Level), investigation as described below must occur within one business day.

c. If Field Screening Data collected as part of the NAL Monitoring program (as described in Section 4.0 of Volume III of the CMP and Section 13.2 of the JRMP) exceeds Action Levels, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will either:

   i. Initiate an investigation (as described below) to identify the source of the discharge within two (2) business days of receiving the data, or

   ii. Document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation will be included in the JRMP Annual Report.

d. If Analytical Laboratory Results collected as part of the NAL Monitoring program (as described in Section 4.0 of Volume III of the CMP and Section 13.2 of the JRMP) exceeds Action Levels at a 11B58BCity 3B73B21Bof Tem163Becu50B80Bla outfall, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will either:

   i. Initiate an investigation (as described below) to identify the source of the discharge within five (5) business days of receiving the data, or

   ii. Document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation will be included in the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's JRMP Annual Report.

e. Other reported potential Illicit Discharges that do not meet the criteria identified above will be responded to in a timely manner. Responses to such reports may be prioritized.

4.4.2 Investigation {F.4.e.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla takes action to eliminate all detected IC/IDs and conducts investigations based on the data or reports as described above. The following investigative steps will be taken by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla:

1. If there is no active discharge, standing water, or other evidence of recent discharges (stains) at the reported location, Outfall or NAL exceedance location, reconnaissance is complete at that location and observations are documented on the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's inspection forms and/or the City's Service Order Request (SOR) database. If necessary the location may be marked for future additional follow-up.

2. If there are multiple active discharges at the reported location or outfall, staff will:
   a. Observe the flows for any odd odors or discoloration
   b. If necessary, gather information such as photographs of the discharge and at the point of entry to MS4 (if known)
   c. Attempt to trace the flow/flows to its origin

3. If there is an active discharge or evidence of recent Dry Weather flow at the reported location or Outfall, staff will:
    a. Take photographs of the discharge and the point of entry to MS4 (if known)
    b. Attempt to trace the flow/flows to its origin
    c. Collect the following field parameters – pH, temperature, and specific conductivity.
    d. If the field parameters exceed follow-up criteria identified in the CMP, or if there is other visible evidence of an Illegal Discharge (e.g., stains), a continued investigation will be necessary, see Step 4.

4. Where the initial investigation identified in Step 3 indicated a potential Illegal Discharge, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will perform a source investigation as follows:
    a. If active discharge with flow
        - Trace the source of the discharge as far upstream as possible.
        - Additional field measurements and/or lab analyses may be performed and documented (as outlined above) where there is no other evidence of the IC/ID source.
    b. If no active discharge but evidence of a recent IC/ID is present at time of investigation, trace the source of the discharge as far upstream as possible.

4.4.3 Elimination {F.4.f}

1. If the source is not identified
    a. Attempt to narrow down potential source areas, and make note in the investigation file.
    b. Where appropriate, public education material in area of IC/ID or complaint may be provided.
    c. Location is marked for future follow-up where appropriate. Follow-up visit(s) will confirm if the IC/ID has recurred and an attempt will be made to locate source. If the IC/ID has not recurred or has been eliminated it is noted and complaint/investigation is closed.
    d. If the investigation was initiated in response to an Action Level exceedance:
        i. Additional NAL sampling will occur at the Outfall in subsequent years.
        ii. If the results of the additional sampling indicate recurring exceedances of the same NAL(s) with an unidentified source, then the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will provide an evaluation in the JRMP Annual Report of needed changes to the programs described in this JRMP to address the common contributing sources that may be causing such an exceedance. Applicable updates will be made to the Watershed Water Quality Workplan (G. of the 2010 SMR MS4 Permit), Retrofitting Existing Development (F.3.d. of the 2010 SMR MS4 Permit) and Program Effectiveness Assessment and Reporting (J. 2010 SMR MS4 Permit) work plans.

2. If the source is identified, and if:
    a. The source is natural (non-anthropogenically influenced) in origin and in conveyance into the MS4 then the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla need not prohibit the discharge;

i. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will report its findings and documentation of its source investigation to the Regional Board in the JRMP Annual Report covering the period in which the findings were made.

b. If the source of the exceedance is an exempted category of Non-Stormwater discharge as described in Section 4.1.2, then the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will determine if this is an isolated circumstance or if the problem is recurrent to the point that the category of discharges must be addressed through the prohibition of that category of discharge as an Illicit Discharge.

   i. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will submit its findings including a description of the steps taken to address the discharge and the category of discharge, to the Regional Board for review in the applicable JRMP Annual Report covering the period in which the findings were made. Such description will include relevant updates to existing ordinances or new ordinances, orders, or other legal means of addressing the category of discharge, and the anticipated schedule for doing so. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla must also submit a summary of its findings with the Report of Waste Discharge.

c. The source is in the jurisdiction of another Copermittee, the appropriate Copermittee is notified, and further action is performed by that Copermittee.

d. The source is a discharge separately permitted by the Regional Board and/or the State Board that is in violation or in potential violation of that permit, then
   i. If applicable, a copy of the regulatory permit will be obtained.
   ii. The Copermittee must report, within three business days, the findings to the San Diego Regional Board including all pertinent information regarding the discharger and discharge characteristics.
   iii. The findings of the investigation will be noted and the case will be closed.
   iv. If a permitted discharge is perceived to be a threat to human health or the environment, it will be reported to the Regional Board/Cal-EPA.

e. The source is an Illegal Discharge within the jurisdiction of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla:
   i. The source is provided with educational material about IC/IDs, and an attempt is made to have the source resolve the situation immediately.
   ii. Where appropriate, City staff will implement enforcement procedures consistent with Section 3.5 of this JRMP.
   iii. Follow-up as appropriate to ensure that the IC/ID is eliminated.
   iv. Report the findings, including any enforcement action(s) taken, and documentation of the source investigation to the San Diego Regional Board in the Annual Report.

v. If the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla is unable to eliminate the source of discharge prior to the Annual Report submittal, then the Copermittee must submit, as part of its JRMP Annual Report, its plan and timeframe to eliminate the source of the exceedance.

vi. Those dischargers seeking to continue such a discharge must obtain coverage under a separate NPDES permit prior to continuing any such discharge.

f. The source is part of a HazMat incident, it is reported to the Incident Commander upon arrival. Coordination with the HazMat team takes place and samples are only collected with approval of the Incident Commander as samples may be done in conjunction with future legal action. Under no circumstances is a site entered or field measurements collected if conditions are unsafe.

4.4.4 Clean-up

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla ensures that any Illegal Discharge is cleaned up where necessary and that no further environmental degradation occurs and the responsible party(ies) restore the area as close to its original state to the MEP.

4.4.5 Sanitary Wastes {F.4.h}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements programs to manage discharges of sewage into its MS4 facilities from various sources including Sanitary Sewer Overflows and private laterals, failing septic systems, and portable toilets.

4.4.5.1 Sanitary Sewer Overflows and Private Laterals

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla cooperates and coordinates with the local sanitation districts as described in Appendix C to swiftly respond to and contain sewage spills that may discharge into its MS4 facilities.

As part of those efforts, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla allows local sanitation districts immediate 24-hour access to its MS4 facilities to address and contain sewage spills originating from their sewage lines. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla does not own or operate sewer facilities but works cooperatively with the local sanitation districts to determine and control the impact of infiltration from leaking sanitary sewer systems on runoff quality.

4.4.5.2 Failing Septic Systems

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla does not permit nor regulate septic systems. Septic systems are permitted through the County Department of Environmental Health (DEH). DEH implements preventative and management measures for septic systems within the City of Temecula.

- Ordinance: The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla follows the Riverside County's ordinance that regulates discharges from failing septic systems
- Enforcement: Enforcement against failing septic systems is performed by Riverside County as necessary, in accordance with the enforcement procedures referenced in Section 3.5 of this JRMP.

4.4.5.3 Portable Sanitary Services (Portable Toilets)

Further, the Copermittees have added the Base-of-Operations for portable toilet suppliers to their Industrial/Commercial Facility inspection lists and prioritized them according to their threat to water quality. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements management measures for portable toilet use within their jurisdiction, including:

- Ordinance: The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla regulates discharges from portable toilets through its water quality ordinances;
- Enforcement: Enforcement against ordinance violations by improper use or deployment of Portable Toilets is performed as necessary, in accordance with the enforcement procedures referenced in Section 3.5 of this JRMP.

5.0 MUNICIPAL AREAS AND ACTIVITIES {F.3.A}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following Municipal program to meet the requirements of provision F.3.a of the 2010 SMR MS4 Permit, prevent Illicit Discharges into the MS4, reduce municipal discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent municipal discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

5.1 Planning 11B58BCity 3B73B21Bof Tem163Becu50B80Bla Facilities {F.1}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the applicable processes and procedures described in Section 6 of this JRMP in the planning and design of 11B58BCity 3B73B21Bof Tem163Becu50B80Bla projects. This includes, where applicable, the development of a Project-Specific WQMP. Depending on the type of project, the following procedures are implemented by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla to ensure that the planning and design of its public agency Priority Development Projects comply with the requirements of the 2010 SMR MS4 Permit:

All 11B58BCity 3B73B21Bof Tem163Becu50B80Bla projects will complete a "WQMP Initial Applicability Checklist" (Found in the SMR WQMP) to determine if a WQMP is required.

5.1.1 Public Works Priority Development Projects {F.1.d}

- If the project meets the definition of Priority Development Project as discussed in Section 6.6.3, the City or it's contractor will prepare a Project-Specific WQMP, consistent with the requirements of the SMR WQMP;
- The Conceptual Project-Specific WQMP, whether developed in-house or by a contractor, will be thoroughly reviewed for all items required in the SMR WQMP. The reviewer will use the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla "WQMP Review checklist" to determine if the Project-Specific WQMP is complete and will approve the final Project-Specific WQMP.
- Prior to initiating grading or construction activities, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will ensure that the construction plans for its Priority Development Projects incorporate the BMPs described in the approved final Project-Specific WQMP. Appendix B includes the Position/Title of the reviewers under the respective departments responsible for implementing these reviews and approvals.
- The O&M Plan described in the Project-Specific WQMP may also be integrated into a municipal Facility Pollution Prevention Plan (FPPP), if applicable.

5.1.2 Public Works Transportation Projects {F.1.i}

The City of Temecula will either prepare a Project-Specific WQMP as described in Section 5.1.1 above for its Transportation Projects that qualify as a Priority Development Project, or design the project to comply with the Transportation Project Guidance included as Exhibit D to the SMR WQMP.

5.1.3 Public Works Unpaved Roads {F.1.i.}

Public Works projects that construct Unpaved Roads must follow the BMP guidance described in Section 6.6.7 of this JRMP.

5.1.4 Design of Flood Control Projects {F.3.a.(4)(a)}

During the design of flood control projects, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla assesses the potential impacts of the project on Receiving Water quality. As they are not Development Projects intended for human use or occupation, typically no additional Runoff or Pollutants will be expected to be discharged into Receiving Waters as a result of the construction of flood control projects.

5.1.5 Other Public Works Projects

Other Public Works Projects will comply with Section 6.6.6.

5.2 11B58BCity 3B73B21Bof Tem163Becu50B80Bla Construction Activities {F.2.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the applicable requirements of Section 7 of this JRMP in the construction of its projects. This includes, where applicable, compliance with the latest version of the Construction General Permit. As described in Section 5.1 above, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla prepares a WQMP for all applicable Public Works Priority Development Projects, which also meets the post-construction requirements in the Construction General Stormwater Permit.

11B58BCity 3B73B21Bof Tem163Becu50B80Bla construction projects that are one acre or larger, or which are part of a construction project of one acre or larger, must comply with the Construction General Stormwater Permit. Prior to commencement of construction activities, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla files Permit Registration Documents by using the State Board's Storm Water Multiple Application and Report Tracking System (SMARTS) and submitting a Notice of Intent (NOI) fee. Upon completion of the construction project, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla files a Notice of Termination (NOT) and other project close-out documentation via the State Board SMARTS. The SMARTS can be accessed at:

https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

During construction closeout the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will assure satisfactory completion of the requirements in a project-specific WQMP by:

- Verifying that Structural Stormwater BMPs have been constructed and installed in conformance with approved plans and specifications;
- Assuming responsibility for the long-term funding and implementation, operation, maintenance, repair, and/or replacement of BMPs;
- Confirming that procedures are in place to implement all Non-Structural BMPs;

- Verifying that public agency Industrial Facilities that are subject to California's General Permit for Stormwater Discharges Associated with Industrial Activities as defined by Standard Industrial Classification (SIC) code obtain coverage and provide a copy of the NOI submitted to the State Board and/or a copy of the notification of the issuance of a Waste Discharge Identification (WDID) Number.

Where applicable, the operation and maintenance procedures for the Treatment Control BMPs included in the project-specific WQMP may be incorporated into a municipal FPPP, if applicable. For 11B58BCity 3B73B21Bof Tem163Becu50B80Bla projects, upon completion of construction when contract close-out occurs the responsibility for implementation, operation, and maintenance of BMPs will transfer from the contractor to the appropriate department and become part of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's program for operation and maintenance of its facilities, described in Section 5.3 below.

5.3 Operation and Maintenance of City of Temecula Areas and Activities {F.3.a.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following measures to ensure that their Municipal Areas and Activities meet the requirements of Section F.3a. of the 2010 SMR MS4 Permit, reduce discharges of Stormwater Pollutants from its MS4 facilities to the MEP, and prevents discharges from its MS4 facilities from causing or contributing to a violation of Water Quality Standards. This section describes the program implemented by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla for the operation, maintenance and inspection of their Municipal Areas and Activities.

5.3.1 Source Identification / Inventory {F.3.a.(1)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla maintains an inventory of its Municipal Areas and Activities that have the potential to generate pollutants. This inventory is maintained by the City's NPDES Program of the Public Works Department and a copy is included with each JRMP Annual Report to the Regional Board. Linear facilities, such as roads, streets and highways, do not need to be individually inventoried. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's MS4 Facilities are shown on an MS4 map which is updated and provided in each Annual Report.

This inventory includes the name, address (if applicable), and a description of the area/activity; which pollutants are potentially generated by the area/activity; whether the area/activity is adjacent to an Environmentally Sensitive Area (ESA); and identification of whether the area/activity is tributary to and within the same hydrologic subarea as a CWA Section 303(d) water body segment and generates Pollutants for which the water body segment is Impaired.

5.3.2 Typical Minimum BMPs {F.3.a.(2)(b)

Based on the areas and activities inventoried, such as those listed in 5.3.3, and any Pollutants of Concern identified, a list of potential minimum source control pollution prevention BMPs was generated for each facility or activity category. BMPs for each category are incorporated into category-specific source-control BMP booklets (FPPPs). These source control BMPs were taken directly from the California Stormwater Quality Association (CASQA) BMP Handbook for Municipal Facilities. In addition,

minimum BMPs for mobile activities that serve as the base of operation for these activities are also included.

5.3.3 BMPs for 11B58BCity 3B73B21Bof Tem163Becu50B80Bla Activities

Examples of Municipal Activities conducted by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla include:

- Graffiti removal;
- Herbicide application;
- Power washing;
- Landscape maintenance;
- Swimming pool maintenance;
- Operation of corporate yard (vehicle, equipment, material storage);
- Road, sidewalk, and parking lot maintenance;
- Painting;
- Fertilizer application;
- Vehicle and non-motorized equipment cleaning;
- Outdoor loading/unloading of materials;
- Non-hazardous waste handling and disposal;
- Building and grounds maintenance;
- Grading;
- Construction.

Where the above listed activities take place at an inventoried Municipal Facility, the category-specific source-control BMP booklet (FPPP) applicable to that facility category will describe the specific BMPs deployed. BMPs that are used when performing the routine activities identified above are provided below {F.3.a.(2)} Also, mobile activities based out of the Municipal Facility and the BMPs that are used in performing those mobile activities are also included in the FPPP.

5.3.3.1 Special Event BMPs {F.3.a.(2)(c)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla also designates BMPs for special events that are expected to generate significant trash and litter. Controls considered, and as applicable to each event, include:

- Temporary screens on catch basins and storm drain inlets;
- Temporary fencing to prevent windblown trash from entering adjacent water bodies and MS4 channels;

- Proper management of trash and litter;
- Catch basin cleaning following the special event and prior to an anticipated rain event;
- Street sweeping of roads, streets, highways and parking facilities following the special event; and
- Other equivalent controls.

5.3.3.2 Fire BMPs {B.3.a.}

In coordination with the Riverside County Fire Agencies, the Riverside County Permittees developed a list of appropriate BMPs to be implemented to reduce Pollutants from fire training activities, fire hydrant testing or flushing and BMPs feasible for emergency fire fighting flows. These BMPs and the strategy for providing training and updating the list of BMPs are described in Appendix C.

5.3.4 BMPs for 11B58BCity 3B73B21Bof Tem163Becu50B80Bla Areas

5.3.4.1 Facility Pollution Prevention Plans (FPPP) {F.3.a.(2)}

An FPPP is maintained for each municipal facility category. Each FPPP is designed to identify the minimum Pollution Prevention Methods and BMPs applicable to each facility category and the mobile activities based out of each facility. FPPPs are typically maintained at each individual facility, however, for facilities (e.g., parks, trails) that do not maintain onsite staff, maintenance equipment or materials, a the FPPP will be maintained at the centralized maintenance facility (e.g., corporate yard) corresponding to the category or where the maintenance contracts are administered (i.e., 11B58BCity 3B73B21Bof Tem163Becu50B80Bla main office). The FPPP also identifies staff responsible for implementation and updating the FPPP. Each FPPP may also include a Facility Inspection Form that is used to record inspection findings, if applicable.

For any facilities that are tributary to and within the same hydrologic unit as a 303(d) listed waterbody and/or within, adjacent to, or discharging directly to an ESA, the FPPP includes any enhanced measures deemed necessary to mitigate pollutants shown to be generated by the site, for which the water body segment is impaired. As TMDLs are developed and/or action level exceedances are detected, the BMPs implemented at these facilities may be revisited to ensure that all appropriate enhanced measures deemed necessary by the Copermittee are implemented.

For other areas that do not have an FPPP (such as vacant land), appropriate BMPs including those identified in the remaining subsections of 5.3.4. are implemented on an as-needed basis as problems are identified.

5.3.4.2 BMP Implementation for Management of Herbicides and Fertilizers {F.3.a.(3)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements BMPs to reduce the contribution of stormwater pollutants to the MEP associated with the application, storage, and disposal of herbicides and fertilizers from its municipal areas and activities to MS4 facilities and Receiving Waters. Such BMPs generally include:

(a) Educational activities, permits, certifications and other measures for municipal applicators and distributors;

b) Integrated Pest Management (IPM) measures that rely on non-chemical solutions where possible;

(c) The use of native vegetation where consistent with the facility's intended use and landscaping plan;

(d) Schedules for irrigation and chemical application such that they are not applied in advance of anticipated rain events or during rain events ; and

(e) The collection and proper disposal of unused herbicides and fertilizers.

5.3.4.3 BMP Implementation for Flood Control Structures {F.3.a.(4)}

(a) The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements procedures to assure that new flood management projects assess the impacts on the water quality of Receiving Waters. See Section 5.1.4.

(b) The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla includes water quality protection measures, where feasible, when retrofitting existing flood control structural devices.

(c) The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla evaluates its existing flood control structures as part of ongoing routine maintenance. For any structures that are found to be causing or contributing to a condition of Pollution, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements measures to reduce or eliminate the structure's effect on pollution, and evaluates the feasibility of retrofitting the structural flood control device. The inventory and evaluation is completed by and submitted to the Regional Board in each JRMP Annual Report.

5.3.4.4 BMP Implementation for Sweeping of Municipal Areas {F.3.a.(5)}

Where municipal area sweeping is implemented as a BMP for 11B58BCity 3B73B21Bof Tem163Becu50B80Bla owned and maintained roads, streets, highways, and parking facilities, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla designs and implements the program based on the following criteria:

(a) Roads, streets, highways, and parking facilities identified as consistently generating the highest volumes of trash and/or debris must be swept at least two times per month.

(b) Roads, streets, highways, and parking facilities identified as consistently generating moderate volumes of trash and/or debris must be swept at least monthly.

(c) Roads, streets, highways, and parking facilities identified as generating low volumes of trash and/or debris must be swept as necessary, but no less than annually.

5.3.4.5 Copermittee Maintained Unpaved Roads Maintenance {F.3.a.(10)}

(a) Although the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla does not own any unpaved roads, the City requires implementation of BMPs on privately-owned unpaved roads for erosion and sediment control measures to minimize potential impacts to streams, riparian habitat, and wetlands, particularly in or adjacent to Receiving Waters. Such BMPs may include, as applicable to the maintenance activity:

- Identify practices that will minimize road related erosion and sediment transport;
- Grade Unpaved Roads to slope outward where consistent with road engineering safety standards;
- Incorporate installation of water bars as appropriate; and
- Provide Unpaved Road and culvert designs that do not impact creek functions.

(b) The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla may examine the feasibility of replacing existing culverts or designing new culverts or other types of crossings to reduce erosion and maintain natural stream geomorphology.

5.3.5 Operation and Maintenance of MS4 Facilities and Treatment Controls {F.3.a.(6)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's improved open channels, catch basins, storm drain inlets, and detention basins are inspected, cleaned, and maintained as described below. Wastes and materials removed are disposed of per applicable laws and appropriate BMPs are deployed as necessary to minimize impacts to the Receiving Waters to the MEP. During annual inspections and maintenance of MS4 facilities, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla inspects for visual evidence of illegal discharges, litter and/or debris accumulation, and other maintenance issues.

(a) Treatment Controls: The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements an annual schedule of inspection and maintenance activities to verify proper operation of all of its municipal Structural Treatment Control BMPs designed to reduce stormwater pollutant discharges to or from its MS4 facilities. The BMPs are listed on an electronic database and inspected as described in Section 5.4 below.

(b) MS4 Facilities: The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements an annual schedule of inspection and maintenance activities for its MS4 facilities (including but not limited to catch basins, storm drain inlets, detention basins, etc). The maintenance activities include:

i. Inspection and removal of accumulated Waste at least annually between May 1st and September 30th of each year for all MS4 facilities;

ii. Additional facility cleaning as necessary between October 1st and April 30th of each year;

iii. Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year;

iv. Improved open channels and detention basins are cleaned of observed anthropogenic litter in a timely manner;

v. Maintenance activities within improved open channels must not adversely impact Beneficial Uses;

vi. Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed;

vii. Proper disposal of waste removed pursuant to applicable laws; and

viii. Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

(c) Low Priority MS4 Facilities: Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year.

5.3.5.1 Flood Control Structure Evaluations {F.3.a.(4)(c)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's evaluates its existing flood control structures as part of the ongoing routine maintenance described above, to identify structures that are causing or contributing to a condition of pollution. For any such structures, where feasible the City implements measures to reduce or eliminate the structure's effect on pollution, and evaluates the feasibility of retrofitting the structural flood control device. The inventory and evaluation findings are submitted to the San Diego Regional Board in each JRMP Annual Report.

5.3.5.2 Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance {F.3.a.(7)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla does not own nor operate a municipal sanitary sewer system. However, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla does cooperate with Rancho California Water District, Eastern Municipal Water District, and Western Municipal Water District for responding to and addressing any observed infiltration into the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla 's MS4 facilities. In addition, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following controls to limit infiltration of seepage from sanitary sewers to MS4 facilities where necessary:

i. Adequate plan checking for construction of development projects;

ii. Incident response training for employees to identify sanitary sewer spills;

iii. Code enforcement inspections;

iv. MS4 maintenance and inspections;

v. Interagency coordination with sewer agencies; and

vi. Proper education of staff and contractors conducting field operations on the MS4.

5.4 Inspection of Copermittee Areas and Activities {F.3.A.(8)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla inspects the following high priority Copermittee Areas and Activities annually:

i. Roads, streets, highways, and parking facilities

ii. Flood management projects and flood control devices not otherwise inspected per Section F.3.a.(6)(b) of the 2010 SMR MS4 Permit

iii. Areas and activities tributary to and within the same hydrologic subarea as a CWA Section 303(d) Impaired water body segment, where an area or activity generates Pollutants for which the water body segment is Impaired

iv. Areas and activities within or adjacent to or discharging directly to Receiving Waters within ESAs

v. Municipal Facilities:

[a] City Hall;
[b] Corporate yard;
[c] Library;
[d] Senior Center;
[e] Fire Stations;
[f] Swimming Pools;
[g] Public parking lots.

vi. Parks and recreation facilities

vii. Special event venues (festivals, concerts, open-air markets, etc.)

viii. Power washing activities

ix. All 11B58BCity 3B73B21Bof Tem163Becu50B80Bla WQMP projects with Structural post-construction BMPs, including verification that the Structural post-construction BMPs on those projects have been appropriately maintained consistent with the WQMP. {F.1.f.(2)(b)(iii)}

x. Other municipal areas and activities that the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla determines may contribute a significant pollutant load to the MS4

(a) Inspections of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's MS4 facilities are performed concurrently with the maintenance schedule described in Section 5.3.5 above.

(b) Other Municipal Areas and Activities are inspected as needed and in response to water quality data, valid public complaints, and findings from 11B58BCity 3B73B21Bof Tem163Becu50B80Bla or contract staff.

(c) Based upon site inspection findings, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements all follow-up actions necessary to comply with this Order.

5.5 Enforcement of Municipal Areas and Activities {F.3.a.(9)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla enforces its water quality ordinances for all its Municipal Areas and Activities as necessary to maintain compliance with the 2010 SMR MS4 Permit.

6.0 DEVELOPMENT PLANNING {F.1.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following programs related to the planning and permitting of Development Projects[10] within the City's jurisdiction. This program is designed to:

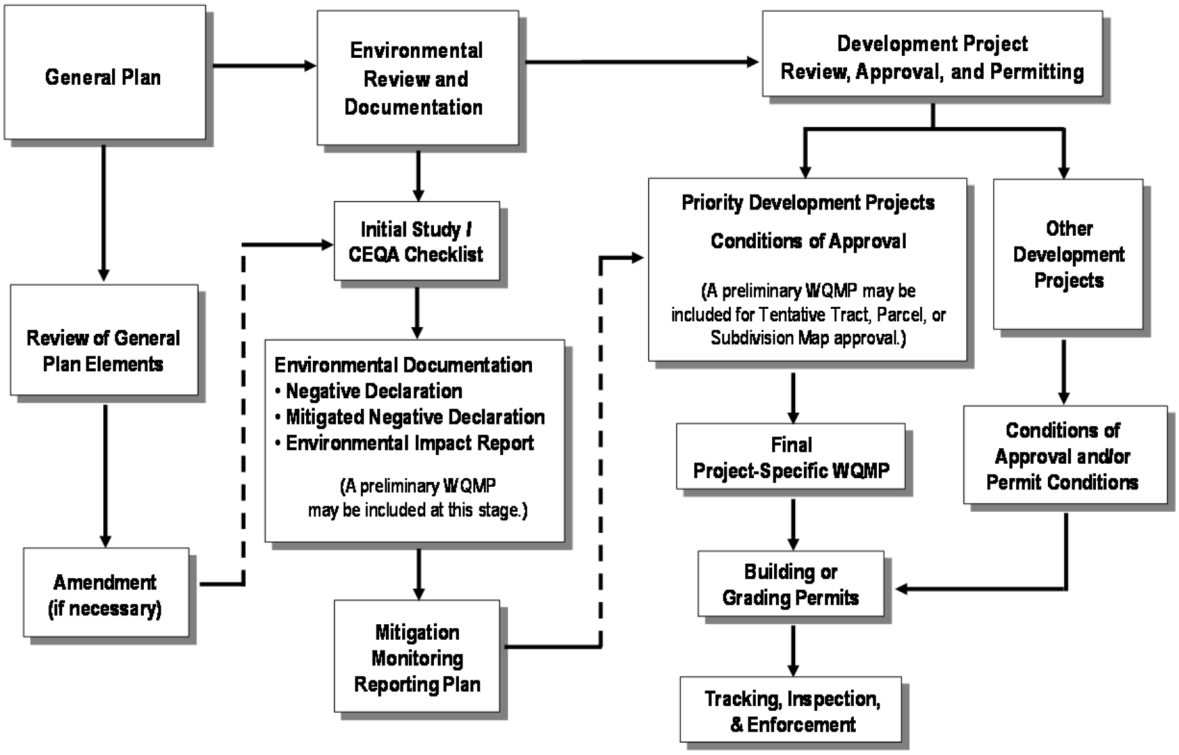
- Reduce Development Project discharges of stormwater pollutants from the MS4 to the MEP;
- Prevent Development Project discharges from the MS4 from causing or contributing to a violation of Water Quality Standards;
- Prevent Illicit Discharges into the MS4; and
- Manage increases in runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to Beneficial Uses and stream habitat due to increased erosive force.

6.1 Introduction

This program element links the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's General Plan, the environmental review process, and the development approval and permitting processes to the later phases of detailed design, construction, and operation. A General Plan specifies policies that guide development. The environmental review process examines potential impacts from proposed development with respect to the General Plan policies and many environmental issues, including water quality, and includes consideration of mitigation measures to reduce any identified significant impacts. The development approval and permitting processes carries forth project-specific requirements in the form of conditions of approval, design specifications, tracking, inspection, and enforcement actions. Figure 6-1 is a generalized flow diagram that depicts the relationship of the General Plan, environmental review process and development planning and permit process, as well as the project design, construction, and operation phases.

[10] Construction, rehabilitation, redevelopment, or reconstruction of any public or private residential project, industrial, commercial, or any other projects.

Figure 6-1. Relationship between General Plan, Environmental Review Process and Development Approval & Permitting Process



6.2 General Plan {F.1.a.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has reviewed its General Plan to ensure that it includes water quality and watershed protection principles and policies as appropriate to allow the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla to direct land-use decisions and to require implementation of consistent water quality protection measures for all Development, Redevelopment, and Retrofit projects.

The General Plan allows the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla to implement the Water Quality & Watershed Protection Principles & Policies described below. These concepts are addressed as part of the WQMP process during the development review process, rather than as explicit elements of the General Plan.

- Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of Development and Redevelopment and, where feasible, slow runoff and maximize on-site infiltration of runoff.

- Implement Pollution Prevention methods supplemented by Pollutant Source Control and Treatment Control BMPs. Use small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground) to minimize the transport of Runoff and Pollutants offsite and into an MS4.

- Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones; and encourage land acquisition of such areas.

- Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.

- Prior to making land use decisions, utilize methods available to estimate increases in pollutant loads and flows resulting from projected future development; require incorporation of BMPs to mitigate the projected increases in pollutant loads and flows.

- Avoid development of areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss.

- Reduce pollutants associated with vehicles and increasing traffic resulting from development.

- Post-development runoff from a site must not contain pollutant loads that cause or contribute to an exceedance of Receiving Water Quality Objectives and which have not been reduced to the MEP.

Further, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has incorporated the Multi Species Habitat Conservation Plan (MSHCP) into their General Plan. As of June 2012, approximately 136 square miles, or 25% of the Santa Margarita Region, has been successfully conserved as part of the Copermittee's implementation of the MSHCP, including significant lands adjacent to or encompassing Receiving Waters, and addresses many of the water quality and watershed protection concepts identified in the 2010 SMR MS4 Permit. Additionally, through the continued implementation of the MSHCP, much of the remaining non-urbanized area will ultimately be conserved, totaling approximately 43% of the Santa Margarita Region. The MSHCP also finds that the Copermittees' General Plans, zoning ordinances, and policies include measures capable of implementing the following planning concepts, which are consistent with the 2010 SMR MS4 Permit considerations such as:

- Measures to ensure that the quality and quantity of runoff discharged to MSHCP conservation areas is not altered in any adverse way when compared to existing drainage conditions;
- Measures to avoid discharge of untreated surface runoff from developed and paved areas into MSHCP conservation areas; and
- Measures to require MS4s to be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within MSHCP conservation areas.

6.3 Environmental Review Process {F.1.b.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla prescribes the necessary requirements so that proposed Development Project discharges of stormwater pollutants from its MS4 facilities will be reduced to the MEP, and will comply with the City's ordinances, permits, plans, and requirements, and with the 2010 SMR MS4 Permit.

In addition, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has reviewed its CEQA processes to ensure that water quality is properly considered and addressed. When acting as CEQA Lead Agency for a proposed Development Project at the earliest possible time in the process, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla identifies the resources under the jurisdiction of the Regional Board which may be affected by the project, including the potential need for a CWA §401 water quality certification, NPDES permit, or Waste Discharge Requirements. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla coordinates project review with Regional Board staff pursuant to the requirements of CEQA. Upon request by Regional Board staff, this coordination may include the timely provision of the proposed project applicant's identity and contact information for facilitation of consultation meetings.

6.3.1 Project Application Form

A Project Application Form is used by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requiring the applicant to describe or include the following information in the project application:

- WQMP Initial Applicability Checklist;
- Submittal of a conceptual Project-Specific WQMP, if applicable; and
- Where a Project-Specific WQMP is not applicable, the proposed project must show how it will incorporate measures described in Section 6.6.6. {F.1.c.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's Project Application Form is included in Appendix D.

6.3.2 LID Barriers Review {F.1.d.(4)(a)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has reviewed its local codes, policies and ordinances and identified the potential barriers to the implementation of LID BMPs in Table 6-1. This table also identifies the steps required to remove those barriers, where feasible, by the end of the 2010 SMR MS4 Permit term (i.e., by November 10, 2015):

Table 6-1 Potential Barriers to LID BMPs

Reference	LID BMP	Potential Barriers identified	Steps required to remove barriers
F.1.c.(2)(a)	Conserve natural areas, including existing trees, other native vegetation, and soils	Lot size, usable space, subsurface soil conditions, hydrologic conditions, utility easements, topography	None
F.1.c.(2)(b)	Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised	None – projects must comply with the 2010 MS4 Permit	None
F.1.c.(2)(c)	Minimize the impervious footprint of the project	Lot size, usable space, subsurface soil conditions, hydrologic conditions, utility easements, topography	None
F.1.c.(2)(d)	Minimize soil compaction to landscaped areas	None – projects must comply with the 2010 MS4 Permit	None
F.1.c.(2)(e)	Minimize disturbances to natural drainages	Lot size, usable space, subsurface soil conditions, hydrologic conditions, utility easements, topography	None
F.1.c.(2)(f)	Disconnect impervious surfaces through distributed pervious areas	Lot size, usable space, subsurface soil conditions, hydrologic conditions, utility easements, topography	None
F.1.d.(4)(b)(i)	Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and Ephemeral and Intermittent streams)	Lot size, usable space, subsurface soil conditions, hydrologic conditions, utility easements, topography	None

Reference	LID BMP	Potential Barriers identified	Steps required to remove barriers
F.1.d.(4)(b)(ii)	Construct pervious areas to effectively receive and infiltrate, retain and/or treat Runoff from impervious areas, and to minimize soil compaction in these areas	None – projects must comply with the 2010 MS4 Permit	None
F.1.d.(4)(b)(iii)	Construct low-traffic areas with permeable surfaces, where appropriate soil conditions exist	None – projects must comply with the 2010 MS4 Permit	None
F.1.d.(4)(c)(i)	Structural Infiltration BMPs	Lot size, usable space, subsurface soil conditions, hydrologic conditions, utility easements, topography	None
F.1.d.(4)(c)(i)	Structural Harvest and Use BMPs	Lot size, usable space, subsurface soil conditions, hydrologic conditions, utility easements, topography	None
F.1.d.(4)(c)(ii)	Structural Bioretention BMPs	Lot size, usable space, subsurface soil conditions, hydrologic conditions, utility easements, topography	None
F.1.d.(4)(c)(ii)	Other structural LID BMPs (such as vegetated extended detention basins)	Lot size, usable space, subsurface soil conditions, hydrologic conditions, utility easements, topography	None

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will update the above table as necessary through the implementation of the development planning activities, whether through identification of additional barriers, or as any identified barriers are removed. Any changes to the above table will be conducted and reported in the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's JRMP Annual Report.

6.4 Water Quality Management Plan {F.1.d}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, in collaboration with the other SMR Copermittees, has developed a WQMP for the Santa Margarita Region of Riverside County, which describes the process for application of required LID Principles (Site Design), Source Control BMPs, LID BMPs, and Treatment Control BMPs, on Priority Development Projects to ensure that the land use approval and permitting process will:

- Reduce Priority Development Project discharges of stormwater pollutants from the MS4 to the MEP, and
- Prevent Priority Development Project Runoff discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

The SMR WQMP Guidelines and a Project-Specific WQMP template are provided on the City's website at: http://www.cityoftemecula.org/Temecula/Government/PublicWorks/WQMPandNPDES/WQMP.htm

6.5 Hydromodification Management Plan {F.1.h.}

An updated Hydromodification Management Plan (HMP) is being developed by the Copermittees to manage increases in runoff discharge rates and duration from Priority Development Projects. The objectives of the HMP are:

- Ensure that the estimated proposed project runoff discharge rates and durations do not exceed the pre-project discharge rates and durations.
- For proposed projects on an already developed site, ensure that the estimated proposed project runoff discharge rates and durations do not exceed the pre-project discharge rates and durations, where the pre-project discharge rates and durations are that of the pre-development, naturally occurring condition.

Upon completion of the HMP in 2013, the HMP will be incorporated into the SMR WQMP. Until the HMP is developed and approved by the Regional Board, the interim Hydromodification requirements described in the SMR WQMP guidelines are in effect.

6.6 Development Project Review, Approval, and Permitting {F.1.d.}

6.6.1 Process Overview

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, during the planning process, and prior to project approval and issuance of local permits, prescribes the necessary requirements so that Development Project discharges of stormwater pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of Water Quality Standards, and will comply with the City's ordinances, permits, plans, and requirements, and with the 2010 SMR MS4 Permit.

All Development Projects that are submitted to the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla for discretionary approval or permitting are required to fill out a WQMP Initial Applicability Checklist. Based on the results of that checklist, each project is categorized as either a "Priority Development Project" or as an "Other Development Project." Since July 2005 the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has required a project applicant to prepare a project-specific WQMP for all Priority Development Projects. The requirements for Other Development Projects are described in Section 6.6.6.

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's Planning Department coordinates the land use case processing, which includes compliance with CEQA procedures, general plan conformity, ordinance consistency, and public health and safety requirements. The Planning Department works closely with

many other departments, such as Public Works, Building and Safety, Fire, etc. to ensure proper review of these issues during the Development Review process. Together, these departments assist in ensuring that Development Projects comply with WQMP requirements.

6.6.2 Identification of Development Projects Requiring a Project-Specific WQMP {F1.d(1) & (2)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's Project Application Form includes a WQMP Initial Applicability Checklist as discussed in Section 6.3.1.

In reviewing project applications, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's Public Works Department reviews the WQMP Initial Applicability Checklist and other information provided in the project application to verify the applicant's determination as a *Priority Development Project* or an *Other Development Project*. If the applicant incorrectly certifies that the proposed project did not require a Project-Specific WQMP, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will notify the project applicant and effectively place a hold on the project application until a conceptual Project-Specific WQMP is submitted.

If a Project-Specific WQMP is required, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla Planning Department will verify that a conceptual Project-Specific WQMP is included with the project application packet. The Planning Department will then forward the Project-Specific WQMP, to the Public Works Department for review and, as applicable, issuance of conditions of approval.

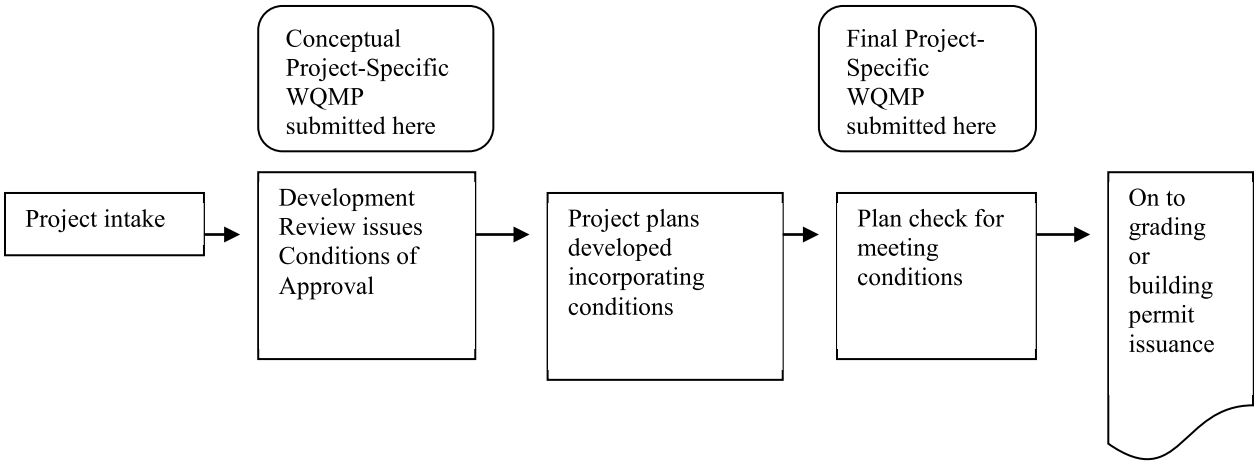
6.6.3 Conditions of Approval {F.1.c}

The City's Development Review Committee (DRC) applies standard conditions of approval to ensure that the requirements of the 2010 SMR MS4 Permit are met. Public Works' Standard Conditions of Approval addressing WQMP requirements are provided in Appendix D.

6.6.4 Review of Conceptual Project-Specific WQMPs

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requires conceptual Project-Specific WQMPs to be submitted with the project application for all Priority Development Projects. The level of detail in the conceptual Project-Specific WQMP must be consistent with the level of detail for the overall project design at the time project approval is sought. Prior to issuance of grading or building permits, the project applicant must submit the Final Project-Specific WQMP for review and approval. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's uses checklists to facilitate thorough and consistent reviews of conceptual and final project-specific WQMPs. An example checklist is an exhibit to the SMR WQMP. Figure 6-2 shows a typical review and approval process.

Figure 6-2. Flowchart of Project Review, Approval & Permitting Process



6.6.5 Review and Approval of Final Project-Specific WQMPs {F.1.d.(9)(a)}

Based on the Conditions of Approval and prior to approval of a Final Project-Specific WQMP, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's Public Works Department will ensure that:

- The Final Project-Specific WQMP is prepared and is consistent with the requirements of the SMR WQMP;
- LID BMPs have been incorporated into the site to the extent feasible; or if the project proponent has acceptably demonstrated that LID BMPs are technically infeasible for the project, the Public Works Department will document within the project file a finding of technical infeasibility;
- The entity or entities responsible for BMP implementation and maintenance have been identified; and
- The mechanism for BMP funding is identified.

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will ensure all requirements have been addressed prior to approval of a Final Project-Specific WQMP.

6.6.6 Approval Process Criteria and Requirements for Other Development Projects [F.1.c]

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requires Other Development Projects to incorporate LID Principles (Site Design) and Source Control BMPs, where applicable and feasible, into project plans through conditions of approval or building/grading permit conditions. LID BMPs and Treatment Control BMPs may be required on a case-by-case basis for Other Development Projects that directly discharge Runoff to Receiving Waters listed as Impaired on California's CWA Section 303(d) List of Water Quality Limited Segments.

Discharges from other approved Development Projects are subject to the following management measures:

(1) Source control BMPs that reduce Stormwater Pollutants of Concern in Runoff; prevent Illicit Discharges into the MS4; prevent irrigation runoff; storm drain system stenciling or signage; properly design outdoor material storage areas; properly design outdoor work areas; and properly design trash storage areas.

(2) The following LID BMPs listed below must be implemented at all Development Projects where applicable and feasible.

(a) Conserve natural areas, including existing trees, other vegetation, and soils;
(b) Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised;
(c) Minimize the impervious footprint of the project;
(d) Minimize soil compaction of landscaped areas;
(e) Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.); and
(f) Disconnect impervious surfaces through distributed pervious areas.

(3) Buffer zones for natural water bodies, where technically feasible. Where buffer zones are technically infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc.

(4) Other measures necessary so that grading or other construction activities meet the provisions specified in Section 7.0 of this JRMP.

(5) Submittal of documentation of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.

(6) Infiltration and Groundwater Protection

To protect groundwater quality, restrictions are applied to the use of Treatment Control BMPs that are designed to primarily function as large, centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions are designed so that the use of such infiltration Treatment Control BMPs does not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each Treatment Control BMP designed to primarily function as a centralized infiltration device is required to meet the restrictions below, unless the Development Project demonstrates that a restriction is not necessary to protect groundwater quality.

(a) Infiltration BMPs must not be used for areas of industrial or light industrial activity, and other high threat to water quality land uses and activities as designated by each Copermittee unless first treated or filtered to remove Pollutants prior to infiltration.
(b) The seasonal high groundwater mark must be at least 10 feet below the invert of the Infiltration BMP.
(c) Infiltration BMPs must be located a minimum of 100 feet horizontally from any water supply wells.
(d) No part of an Infiltration BMP should be within a 2:1 (horizontal:vertical) influence line extending from any septic leach line.
(e) Infiltration BMPs must not be located in soils that, according to a licensed Geotechnical Engineer, do not have adequate physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) for the protection of groundwater.

(7) Where feasible, landscaping with native or low water species shall be preferred in areas that drain to the MS4 or to Waters of the U.S.

(8) Rain water harvesting and water reuse, where feasible, must be encouraged as part of the site design and construction to reduce Pollutants in Stormwater discharges to the MEP.

Additionally, where an Other Development Project proposes a new Unpaved Road, the applicant must incorporate the following, or alternative, BMPs that are equally effective:

- Identify practices that will minimize road related erosion and sediment transport;
- Grade Unpaved Roads to slope outward where consistent with road engineering safety standards;
- Incorporate installation of water bars as appropriate; and
- Provide Unpaved Road and culvert designs that do not impact creek functions.

6.6.7 Unpaved Roads Development {F.1.i}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla does not own unpaved roads. However, implementation of erosion and sediment control BMPs after construction of new private unpaved roads is required. Such BMPs are required for Priority Development Projects in the SMR WQMP, and for Other Development Projects as discussed in Section 6.6.6 above.

6.6.8 Plan Check: Issuance of Grading or Building Permits

6.6.8.1 Plan Check for Priority Development Projects

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla reviews the relevant CEQA documentation (including the Mitigation Monitoring and Reporting Program, if applicable), the conditions of approval, and the approved Final Project-Specific WQMP as part of the plan check process.

Construction plans submitted by the project applicant for plan check are reviewed to verify that they also properly incorporate all Site Design, Structural LID and/or Treatment Control BMPs identified in the final version of the Project-specific WQMP. The designs of Structural Source Control BMPs, LID BMPs, and Treatment Control BMPs are reviewed to verify inclusion of control measures necessary to effectively minimize the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, flies, etc. The design review during plan check also verifies that Structural BMPs provide adequate access for ongoing maintenance of the BMP after construction.

6.6.8.2 Plan Check for Other Development Projects

For Other Development Projects, the Public Works Department reviews the construction plans submitted for a grading or building permit to ensure that the plans incorporate all applicable and appropriate Site Design, Source Control and LID BMPs as described in Section 6.6.6.

6.6.8.3 Standard Notes for Plans

Prior to the issuance of a grading or building permit, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's Public Works Department requires standard erosion and sediment control notes to be added to the plan set to address Pollution Prevention during the construction phase of a project. Standard Erosion and Sediment Control notes are included in Appendix E.

6.7 Field Verification of BMPs & Permit Closeout{F.1.e.}

6.7.1 Release of Conditions of Approval

The end of the construction phase is typically accompanied by the close out of permits and issuance of certificates of use and/or occupancy. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla uses this juncture to assure satisfactory completion of all requirements in a Project-Specific WQMP and/or the conditions of approval by verifying that the following items, as applicable, have been completed - prior to granting occupancy:

- All Site Design, LID, structural Source Control, and Treatment Control BMPs have been constructed and installed in conformance with approved plans and specifications and functional in accordance with the approved Project-Specific WQMP (if applicable); and that they include control measures to effectively minimize the creation of Nuisance or Pollution associated with vectors, such as mosquitoes, rodents, flies, etc.;
- A mechanism or agreement acceptable to the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has been executed for the long-term funding, implementation, operation, maintenance, repair, and where necessary, the replacement of BMPs;
- The owner/operator is prepared to implement all Non-Structural BMPs, and to implement, operate, and maintain all Site Design, LID, structural Source Control, and Treatment Control BMPs;
- An adequate number of copies of the Project-Specific WQMP, if applicable, are available onsite; and
- An Industrial Facility subject to the Industrial General Permit as defined by Standard Industrial Classification (SIC) code has obtained coverage by providing a copy of the NOI with associated WDID number or other proof of filing submitted via the SMARTS to the State Board. Where such an Industrial Facility is identified but coverage cannot be verified, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla notifies the San Diego Regional Board and the owner/operator that the facility may be required to obtain coverage under the Industrial General Permit.

6.7.2 Maintenance Responsibility

The responsibility to provide for the long-term implementation, operation, and maintenance of BMPs associated with Priority Development Projects or Other Development Projects may:

- Remain with a private entity (property owner, home owners association, etc.); or
- Be transferred to a public entity (e.g., a city, county, special district, etc.) through dedication of the property; or
- Be transferred to a public entity, or another private party through a contract.

Following satisfactory inspection, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla may accept Structural BMPs within public right-of-ways, and may accept Structural BMPs on land dedicated to public ownership. Upon acceptance of the BMPs, responsibility for operation and maintenance of Structural BMPs will transfer from the developer or contractor to the appropriate entity, including the funding mechanism identified in the approved final Project-Specific WQMP for Priority Development

Projects or the conditions of approval or building/grading permit conditions for Other Development Projects.

If a property owner or a private entity retains or assumes responsibility for implementation, operation, and maintenance of BMPs, the City requires an agreement that can take the form of:

- A Covenant and Agreement recorded with the County Recorder;
- A Homeowners Association or Property Owners Association Covenants, Codes, and Restrictions;
- The formation of, or annexation to, a maintenance district or assessment district; or
- Other instrument sufficient to guarantee long-term implementation, operation, and maintenance of BMPs.

6.8 Structural Post-Construction BMP Database and Maintenance Verification {F.1.f}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements a program to verify the maintenance and effectiveness of post construction Structural BMPs constructed pursuant to an approved Final Project-Specific WQMP.

6.8.1 Inventory of WQMP Projects {F.1.f.(1)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla maintains a watershed-based database to track and inventory all Priority Development Projects constructed within the City's jurisdiction that have an approved Final Project-Specific WQMP and have had post-construction Structural BMPs implemented since July 2005. This database does not track nor inventory LID BMPs implemented on a lot by lot basis at single family residential houses – such as rain barrels.

This database includes the following information:

- Project Name
- Priority for Maintenance Verifications (see Section 6.8.2)
- Type of project (residential, commercial, industrial, multi-use)
- Location of the project
- Watershed where project is located
- Types of BMPs and location(s)
- Date of construction or date of initial verification/certification
- Party responsible for maintenance
- Dates of maintenance verifications
- Findings of maintenance verifications

- Corrective actions identified during maintenance verification, including whether the site was referred to the local vector control agency or department.

6.8.2 Designation of High Priority Projects for Maintenance Verification {F.1.f.(2)(a)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla designates each WQMP project as either High or Standard Priority based on the following considerations:

- BMP size,
- Recommended maintenance frequency,
- Likelihood of operational and maintenance issues,
- Location,
- Receiving Water quality,
- Compliance record,
- Land use, and
- Other pertinent factors

At a minimum, High Priority projects include those projects that have been identified by the Copermittee as a facility that:

- Generates Pollutants (prior to treatment) within the tributary area of and within the same hydrologic subarea as a 303(d) listed waterbody Impaired for that Pollutant; or
- Generates Pollutants within the tributary area for and within the same hydrologic subarea as an observed Action Level exceedance of that Pollutant.

6.8.3 Maintenance Verification of Structural Post-Construction BMPs {F.1.f.(2)(b)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla verifies that the required post-construction Structural BMPs on the inventoried WQMP Projects have been implemented, are maintained, and are operating effectively through inspections, self-certifications, surveys, or other equally effective approaches with the following conditions:

6.8.3.1 WQMP Structural BMP Inspection Schedule

Table 6-2 WQMP Structural BMP Inspection Schedule

WQMP Project Priority	Verification frequency
Standard	Once every 5 years
High	Annually

In addition to the above table, all 11B58BCity 3B73B21Bof Tem163Becu50B80Bla-owned projects with post-construction Structural BMPs must be inspected annually as described in Section 5.4.

6.8.3.2 Verification Methods

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla Public Works Department conducts direct inspections of WQMP Projects to comply with the BMP verification requirements. The Public Works Department first reviews the approved Final Project-Specific WQMP, and verifies that all post-construction Structural BMPs identified in the WQMP are implemented and have been appropriately maintained in accordance with the O&M Plan identified in the Project-Specific WQMP. A standardized inspection / verification form is used to document the inspection.

6.8.4 Post Construction BMP Recordation {F.1.d.(9)(b)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's Public Works Department established a mechanism through a single-party Operation and Maintenance Agreement (O&M Agreement) to ensure that appropriate easements and ownerships are properly recorded in public records and the information is conveyed to all appropriate parties when there is a change in project or site ownership.

6.9 Enforcement for Development {F.1.g}

The legal Authority and enforcement policies and procedures of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla are described in Section 3 of this JRMP. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla conducts appropriate follow-up measures to ensure that the Treatment Control BMPs continue to reduce stormwater pollutants as originally designed. These measures include re-inspections, and, where necessary, enforcement (as described in Section 3.5).

7.0 PRIVATE DEVELOPMENT CONSTRUCTION ACTIVITY {F.2.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following program that is designed to meet the requirements of provision F.2. of the 2010 SMR MS4 Permit, require implementation and maintenance of Structural and Non-Structural BMPs to reduce pollutants in stormwater runoff from construction sites to the MS4, reduce construction site discharges of stormwater pollutants from the MS4 to the MEP, and prevent construction site discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

7.1 Source Identification / Inventory {F.2.b}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's Public Works Department maintains an updated watershed-based inventory database of construction sites within its jurisdiction. This inventory is provided in each Annual Report. Construction sites are any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation. Construction sites are included in the inventory regardless of whether the construction site is subject to the Construction General Stormwater Permit or other individual construction stormwater NPDES permits. This database is updated when new projects are issued a grading permit. Projects may be removed from the database when construction is completed and the project's grading permit is closed. The database includes the following project information:

- Project Identification (i.e. name, tract number, assessor parcel #, grading permit #, etc),
- Project location,
- Watershed / Subwatershed
- Project type,
- Project priority,
- Date of inspections performed at each site,
- WDID # (if applicable),
- Enforcement actions taken.

7.2 Construction Site Planning and Project Approval Process {F.2.c}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla incorporates consideration of potential water quality impacts prior to approval and issuance of construction and grading permits.

Prior to issuance of Grading Permits, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla:

- Requires implementation of the applicable designated BMPs (Section 7.3) and other measures that are selected so that Illicit Discharges into the MS4 are prevented, stormwater pollutants

discharged from the Construction Site will be reduced to the MEP, and construction activity discharges from the MS4 are prevented from causing or contributing to a violation of Water Quality Standards.

- Ensures that the project proponent's Erosion and Sediment Control Plan (ESC Plan) is required to comply, and reviewed by the Public Works Department to verify compliance with the local grading ordinance, other applicable local ordinances, and the 2010 SMR MS4 Permit,

- Verifies that the project proponent is subject to the Construction General Permit and has existing coverage. Where coverage under the Construction General Permit appears to apply, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla verifies coverage on the State Board's web page at:

  http://www.swrcb.ca.gov/water_issues/programs/stormwater/databases.shtml#const_db

  For such projects, the Regional and/or the State Board are responsible for conducting inspections and verifying compliance with the Construction General Permit. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's review of the project's ESC Plan, as well as the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's inspections conducted as described in Section 7.4 below, are to ensure compliance with the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's ordinances and the 2010 MS4 Permit.

- Categorizes the project according to risk level for the purposes of inspection, as described in Section 7.4.

7.3 Construction Site BMPs {F.2.d}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has designated a minimum set of BMPs and other measures to be implemented at all Construction Sites, as applicable to the site and to the activities thereon. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requires implementation of the designated minimum BMPs and any additional measures necessary to comply with the 2010 SMR MS4 Permit at each Construction Site within its jurisdiction year round. Appendix E includes Temecula's annual letter to project owners, developers, project managers, field superintendents, and contractors that lists many of these minimum BMPs. BMP implementation requirements, however, can vary based on Rainy and Dry Seasons. Dry Season BMP implementation must plan for and address unseasonal rain events that may occur during the Dry Season (May 1 through September 30).

7.3.1 Minimum Erosion and Sediment Control Practices {F.2.d(1)(b)}

- Erosion prevention. Erosion prevention is to be used as the most important measure for keeping sediment on site during construction;

- Sediment controls. Sediment controls are to be used as a supplement to erosion prevention for keeping sediment on-site during construction;

- Slope stabilization must be used on all active slopes during rain events regardless of the season and on all inactive slopes during the Rainy Season and during rain events in the Dry Season;

- Permanent revegetation or landscaping as early as feasible; and

- Erosion and sediment controls must be required during the construction of Unpaved Roads.

7.3.2 Minimum Management Measures {F.2.D(1)(a)}

BMP Name	Stormwater BMP Handbook Portal: Construction	Caltrans Construction Site BMP Manual	MS4 Permit Requirement Reference F.2.d.(1):
Stabilize Exposed Soils (one or more or the methods below will be used as needed)			
Chemical Stabilization (Soil Binders)	EC-5	SS-5	(a): (iv), (vii) (viii) (b): (i)
Polyacrylamide	SE-11		(a): (iv), (vii) (viii) b): (i)
Mulching			
Hydraulic Mulch	EC-3	SS-3	(a): (iv), (vii) (viii) b): (i)
Straw Mulch	EC-6	SS-6	(a): (iv), (vii) b): (i),
Wood Mulching	EC-8	SS-8	(a): (iv), (vii) b): (i)
Permanent Seeding			(a): (iv), (vii) b): (i) (iv)
Sodding			(a): (iv), (vii), (viii) b): (i) (iv)
Soil Roughening			
Temporary Seeding/Hydroseeding	EC-4	SS-4	(a): (iv), (vii) (viii) b): (i)
Protect Steep Slopes			
Earth Dikes/Drainage Swales/Lined Ditches	EC-9	SS-9	b): (i), (iii)
Fiber Roll	SE-5	SC-5	b): (i) (iii)
Geotextiles	EC-7	SS-7	b): (i) (iii)
Gradient Terraces			b): (i) (iii)
Soil Retention			b): (i) (iii)
Straw Bale Barrier	SE-9	SC-9	b): (i) (iii)
Temporary Slope Drain	EC-11	SS-11	b): (i) (iii)
Protect Waterways			
Check Dams	SE-4	SC-4	
Outlet Protection/Velocity Dissipation Devices	EC-10	SS-10	(a): (xii) b): (i)
Streambank Stabilization	EC-12	SS-12	(a): (xii)
Temporary Stream Crossings	NS-4	NS-4	b): (i)
Vegetated Buffer			

Phase Construction			
Construction Sequencing (Scheduling)	EC-1	SS-1	(a): (ii), (iii), (iv), (v), (vi), vii b): (i)
Dust Control (Wind Erosion Control)	WE-1	WE-1	(a): (iv), (viii)
Preserve Site Condition			
Entrance/Outlet Tire Wash	TC-3	TC-3	(a): (ix),
Preservation of Existing Vegetation	EC-2	SS-2	(iii) (iv), (xii) b): (i)
Stabilized Construction Entrance/Exit	TC-1	TC-1	(a): (ix)
Stabilized Construction Roadway	TC-2	TC-2	(a): (ix) b): (i) (iv)
Scheduling			(a): (ii) (iii), (iv), (v), (vi), vii b): (i)
Waste Management			
Waste Handling and Disposal	SC-34		(a): (i), (xi.), (x), (xi)
Pollution Prevention			
Spill prevention, Control and Cleanup	SC-11		(a): (i.), (x)

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requires project proponents to submit for review an Erosion and Sediment Control Plan appropriate to project type/size that identifies each of the BMPs used during the construction phase and their deployment at the Construction Site. This plan:

- Establishes limitations of grading to a maximum disturbed area as determined by 11B58BCity 3B73B21Bof Tem163Becu50B80Bla before either temporary or permanent erosion controls are implemented to prevent stormwater pollution.

  This maximum area is established by the City on a case-by-case basis depending on the specifics of each project, and documented in the grading permit documents.

  The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has the option of allowing a temporary increase in the size of disturbed soil areas beyond the maximum if the individual site is in compliance with the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's ordinances and the site has adequate control practices implemented to prevent stormwater pollution;

- Requires preservation of natural hydrologic features where feasible;

- Preservation of riparian buffers and corridors where feasible;

- Evaluation and maintenance of all BMPs, until removed; and

- Retention, reduction, and proper management of all Stormwater Pollutant discharges on site to the MEP standard.

Since BMP technology is constantly changing, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla may consider other BMPs of equivalent or better performance on a case-by-case basis.

7.3.3 Enhanced BMPs {F.2.d.(2)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requires implementation of enhanced measures to address the threat to water quality posed by all Construction Sites tributary to CWA Section 303(d) water body segments Impaired for sediment or turbidity. Currently there are no CWA Section 303(d) water body segments Impaired for sediment or turbidity that the City's MS4 facilities discharge into. Where necessary, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla also requires implementation of enhanced measures for Construction Sites within, or adjacent to, or discharging directly to Receiving Waters within an ESA (as defined in Attachment C of the 2010 SMR MS4 Permit).

7.3.4 Active/Passive Sediment Treatment (AST) {F.2.d.(3)}:

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requires implementation of ASTs for sediment at Construction Sites (or portions thereof) that the City determines to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors are to be considered by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla:

(a) Soil erosion potential or soil type;

(b) The site's slopes;

(c) Project size and type;

(d) Sensitivity of Receiving Water bodies;

(e) Proximity to Receiving Water bodies;

(f) Non-Stormwater discharges;

(g) Ineffectiveness of other BMPs;

(h) Proximity and sensitivity of aquatic threatened and endangered species of concern;

(i) Known effects of AST chemicals; and

(j) Any other relevant factors.

As defined in the MS4 Permit, AST is a treatment mechanism that uses mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge. Such measures are highly expensive and are expected only to be required in cases where there is an exceptional threat and/or demonstrable impacts to receiving water quality and all other available BMPs have been ineffective for the site.

7.4 Construction Site Inspection {F.2.E}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla conducts Construction Site inspections for compliance with its ordinances (grading, stormwater, etc.), permits (construction, grading, etc.), and the 2010 SMR MS4 Permit. When conducting inspections of Construction Sites the 11B58BCity

3B73B21Bof Tem163Becu50B80Bla utilizes the inspection form provided in Appendix E. Priorities for inspecting Construction Sites must consider the nature and size of the construction activity, topography, and the characteristics of soils and Receiving Water quality. 11B58BCity 3B73B21Bof Tem163Becu50B80Bla construction inspectors inspect the inventoried Construction Sites according to the schedule below.

7.4.1 Rainy Season[11] Inspection Frequency

Table 7-1: Construction Site Inspection Frequency

Priority	Supporting Criteria [(a)]	Rainy Season Inspection Frequency
High	• Sites that disturb an area greater than 30 acres with rough grading or with active, unstabilized slopes occurring during the Rainy Season • Sites disturbing an area greater than one (1) acre within the same hydrologic subarea and tributary to Receiving Waters with CWA Section 303(d) listed waters for sediment or turbidity Impairments or within, directly adjacent to, or discharging directly to a Receiving Water within an ESA. • Other sites determined by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla as a significant threat to water quality, considering the following factors: o Soil erosion potential (e.g. Hillside sites) o Project size and type o Sensitivity of and proximity to Receiving Waters (particularly ESAs since no Receiving Waters are 303(d) listed for sediment or turbidity) o History or presence of Illegal Non-Stormwater Discharges o Known past record of non-compliance by the operators of the Construction Site o Any other relevant factors.	Every Two Weeks
Medium	Project Size Sites disturbing an area of one acre or more.	Monthly
Low	Project Size Sites disturbing less than 1 acre.	As needed

7.4.2 Dry Season Inspection Frequency

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla inspects all Construction Sites as needed during the Dry Season. Sites meeting the criteria in Section F.2.e.(1) of the 2010 SMR MS4 Permit are inspected at least once in August or September each year.

[11] The Rainy Season – (aka Wet Season) is the period of time from October 1 forward to April 30 when the Santa Margarita Region experiences the most rainfall.

7.4.3 Re-inspections

Based upon site inspection findings, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements all follow-up actions (i.e., re-inspection, enforcement) necessary to comply with the 2010 SMR MS4 Permit. Re-inspection frequencies are determined by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla based upon the severity of deficiencies, the nature of the construction activity, and the characteristics of soils and Receiving Water quality.

7.4.4 Conducting Inspections

At a minimum, the following items are addressed by 11B58BCity 3B73B21Bof Tem163Becu50B80Bla staff during Construction Site inspections:

- Check for coverage under the Construction General Permit NOI and/or WDID No. during initial inspections;
- Assessment of compliance with 11B58BCity 3B73B21Bof Tem163Becu50B80Bla ordinances and permits related to Runoff, including the implementation and maintenance of designated minimum BMPs;
- Assessment of BMP effectiveness;
- Visual observations for Non-Stormwater discharges, potential Illicit Connections, and potential discharge of Pollutants in Stormwater Runoff;
- Review of site monitoring data results, if the site monitors its Runoff;
- Education and outreach on Stormwater Pollution prevention, as needed; and
- Creation of a written or electronic inspection report.

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's Public Works inspectors track the number of inspections for each inventoried Construction Site within its jurisdiction throughout the reporting period to verify that each site is inspected at the minimum frequencies required. The Construction Site inspection form is included in Appendix E.

7.5 Enforcement {F.2.f }

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has developed and implements an escalating enforcement process (Section 3.5) that is designed to achieve prompt corrective actions at Construction Sites for non-compliance with the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's permits, requirements and Ordinances.

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla responds to construction complaints received from third-parties and to ensure the San Diego Regional Board that corrective actions have been implemented, if warranted.

7.6 Reporting of Non-Compliant Construction Sites {F.2.g}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will notify the San Diego Regional Board when the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla issues high level enforcement (as defined in Section 3.5) to a Construction Site that poses a significant threat to water quality in its jurisdiction as a result of violations of its water quality ordinances.

In addition, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla annually notifies the San Diego Regional Board, prior to the commencement of the Rainy Season (October 1st), of all Construction Sites with alleged violations that pose a significant threat to water quality. Information may be provided as part of the JRMP Annual Report if submitted prior to the Rainy Season. Information provided must include, but not be limited to, the following:

(a) WDID number if enrolled under the Construction General Permit

(b) Site location, including address

(c) Current violations or suspected violations

8.0 INDUSTRIAL AND COMMERCIAL SOURCES {F.1.B.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following Industrial and Commercial Program which has been designed to help prevent Illicit Discharges into the MS4, reduce industrial and commercial discharges of stormwater pollutants into and from the MS4 to the MEP, and prevent Industrial and Commercial Facility discharges to the MS4 from causing or contributing to a violation of Water Quality Standards in Receiving Waters. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will continue to review the effectiveness of the Industrial and Commercial Facility inspection program annually and make additional program modifications as necessary.

8.1 Industrial/Commercial Source Identification & Inventory {F.1.b.(1)(a)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla developed and maintains an updated inventory/database of Industrial and Commercial Facilities within its jurisdiction that could contribute a significant pollutant load to the MS4, as identified by the 2010 SMR MS4 Permit. Facilities are included in this inventory regardless of whether the facility is subject to the Industrial General Permit, or other individual NPDES permits issued by the State Board or the San Diego Regional Board. An electronic copy of this inventory is maintained by the Public Works Department.

The Public Works Department regularly updates the inventory/database using information obtained during facility inspections or from any of the following sources: conditional use permits, plot plans, building permits, business licenses, occupancy permits, etc.

8.1.1 Facility Categories

As listed in the 2010 SMR MS4 Permit, the Industrial and Commercial Facilities inventory/database must include the following categories of potential sources:

Industrial Sites/Sources

- Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
- Operating and closed landfills;
- Facilities subject to SARA Title III; and
- Hazardous Waste treatment, disposal, storage and recovery facilities.

Commercial Sites/Sources

- Automobile repair, maintenance, fueling, or cleaning;
- Airplane repair, maintenance, fueling, or cleaning;
- Boat repair, maintenance, fueling, or cleaning;
- Equipment repair, maintenance, fueling, or cleaning;
- Automobile and other vehicle body repair or painting;

- Mobile automobile or other vehicle washing;
- Automobile (or other vehicle) parking lots and storage facilities;
- Retail or wholesale fueling;
- Pest control services;
- Eating or drinking establishments, including such retail establishments with food markets;
- Mobile carpet, drape or furniture cleaning;
- Cement mixing or cutting;
- Masonry;
- Painting and coating;
- Botanical or zoological gardens and exhibits;
- Landscaping;
- Nurseries and greenhouses;
- Golf courses, parks and other recreational areas/facilities;
- Cemeteries;
- Pool and fountain cleaning;
- Marinas;
- Portable sanitary services;
- Building material retailers and storage;
- Animal boarding facilities and kennels;
- Mobile pet services;
- Power washing services;
- Plumbing services; and
- Other sites and sources as identified by the Copermittee as having a history of un-authorized discharges to the MS4.

ESAs and 303(d) Listed Waterbodies

All other Industrial or Commercial sites/sources tributary to and within the same hydrologic subarea as a CWA Section 303(d) Impaired water body segment, where the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has determined that the site/source generates Pollutants for which the water body segment is Impaired. All other Commercial or Industrial Sites/sources within or directly adjacent to or discharging directly to Receiving Waters within ESAs (as defined in Attachment C of the 2010 SMR MS4 Permit) or that the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has determined generate Pollutants tributary to and within the same hydrologic subarea as an observed exceedance of an Action Level of those Pollutants.

All other Industrial or Commercial Sites/sources that the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla determines may contribute a significant Pollutant load to the MS4.

8.1.2 Inventory Information

The information for each facility in the Industrial and Commercial Facility Database includes the following information:

- Name of facility;
- Street Address;
- Pollutants potentially generated by the facility;
- Identification of whether the facility is tributary to a CWA §303(d) water body segment and generates Pollutants for which the water body segment is Impaired;
- A narrative description including SIC codes which best reflects the principal products or services provided by the facility.
- Facility Category (per Section 8.1.1)
- Facility contact
- Facility contact phone number
- WDID number associated with the Industrial General Permit (if any)
- Other NPDES permit or Waste Discharge Requirements

This database will assist in identifying information necessary for the copermittees to take enforcement actions, if required.

8.1.3 Facilities that pose a high threat to water quality

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla identifies those facilities that pose a high threat to Receiving Water quality.

All inventoried sites are inspected at least once during a five year period. In evaluating threat to water quality, the 2010 SMR MS4 Permit identifies the following factors that are to be considered:

(i) Type of activity (SIC code);

(ii) Materials used at the facility;

(iii) Wastes generated;

(iv) Pollutant discharge potential, including whether the facility generates a Pollutant that exceeds an Action Level;

(v) Non-Stormwater discharges;

(vi) Size of facility;

(vii) Proximity to Receiving Water bodies;

(viii) Sensitivity of Receiving Water bodies;

(ix) Whether the facility is subject to the General Industrial Permit or an individual NPDES permit;

(x) Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability;

(xi) Facility design; total area of the site, portion of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and Runoff;

(xiii) The facility's compliance history; and

(xiv) Any other relevant factors.

Primarily, the designation of Industrial and Commercial Facilities that are a high threat to Receiving Water quality will be assessed using the monitoring described in the CMP, through the Watershed Water Quality Workplan assessments. As described in the Santa Margarita Watershed Water Quality Workplan, where an MS4 Outfall Action Level exceedance is detected in a Receiving Water with chronic exceedances of Basin Plan Objectives for the same Pollutant, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will evaluate appropriate response actions to address that Action Level exceedance. Where the appropriate response action is identified as enhanced or focused industrial or commercial inspections, all facilities in the inventory that are tributary to that outfall and are known to generate Pollutants associated with the Action Level exceedance (per the inventoried information about the facility) will be designated as high priority facilities. Further prioritization among inventoried industrial and commercial facilities may be performed by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla using the remaining factors identified above.

8.2 General BMP Implementation

8.2.1 Pollution Prevention BMPs {F.1.b.(2)(a)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has designated the following set of minimum Pollution Prevention BMPs for the Industrial and Commercial Facilities within its jurisdiction to reduce the discharge of pollutants to the MEP:

- Good Housekeeping
- Proper Materials Handling and Storage
- Proper Waste Handling
- Preventive Maintenance
- Spill Prevention and Response Procedures (where applicable)
- Facility Personnel Training

Through the process of conducting inspections of Industrial and Commercial Facilities, the inspectors make the facilities aware of these minimum BMPs and additional BMPs (when appropriate) and of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's applicable ordinance(s).

8.2.2 Minimum BMPs {F.1.b.(2)(b)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has also designated the following minimum set of BMPs for all applicable inventoried Industrial and Commercial sites/sources within its jurisdiction that are specific to facility types and pollutant-generating activities. During the inspection of inventoried Industrial and Commercial facilities, the following minimum BMPs are verified as applicable to the facility. Where applicable, CASQA BMP Fact sheets are noted:

Item #	Minimum BMP	CASQA BMP Fact Sheet
1	Hazardous Waste/Materials storage areas are clean, no signs of leakage, and protected from rainfall and Runoff;	SC-34
2	Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and no signs of leakage from the trash bins	SC-34
3	Aboveground tanks have been properly maintained including no signs of leakage, and secondary containment in good condition	SC-11, SC-31, SC-33
4	Onsite storm drain inlets are protected from inappropriate Non-Stormwater discharges	SC-44
5	Oil/water separators are connected to sanitary sewer	NA
6	Wash water from wash pads (steam cleaning or high pressure cleaning) is directed to the sanitary sewer and does not discharge to the MS4	SC-10
7	Mop bucket wash water is discharged to sanitary sewer via clarifier	SC-10
8	Parking lot areas are free of trash, debris, and fluids other than water	SC-43
9	Facility has coverage under the Industrial General Permit, if appropriate	NA

Item #	Minimum BMP	CASQA BMP Fact Sheet
10	Oil and grease Wastes are not discharged onto a parking lot, street or adjacent catch basin	SC-10
11	Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and the bins have not been washed out into the MS4	SC-43
12	Floor mats, filters and garbage containers are not washed in adjacent parking lots, alleys, sidewalks, or streets and no wash water is discharged to MS4s	SC-10
13	Parking lot areas are cleaned by sweeping, not by hosing down, and the facility operator uses dry methods for spill cleanup	SC-43

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will continue to regularly review and update these designated BMPs for adequacy and subsequently submit any updates in the JRMP Annual Report.

8.2.3 Enhanced BMPs for ESAs and 303(d) Impairments {F.1.b.(2)(c)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla designates enhanced measures as necessary for inventoried Industrial and Commercial sites/sources that:

- Are tributary to and within the same hydrologic subarea as CWA Section 303(d) Impaired water body segments (where the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has determined that the site/source generates pollutants for which the water body segment is impaired).
- Are within or directly adjacent to or discharging directly to Receiving Waters within ESAs.

8.2.4 BMP Implementation {F.1.b.(2)(d)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requires the implementation of the designated minimum and enhanced BMPs and any additional measures necessary based on inspections, incident responses, and water quality data to comply with the 2010 SMR MS4 Permit at each Industrial and Commercial Site/source within its jurisdiction. To ensure that the designated BMPs are implemented by the facility owner/operator, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following programmatic BMPs:

- Maintain and update Inventory of facilities (Section 8.1)
- Designates appropriate BMPs to be implemented by each facility (Section 8.2)
- Conducts inspections (Section 8.4)
- Enforces City ordinances (Section 3.5)

8.3 Mobile Businesses Program {F.1.b.(3)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has developed and is implementing a program to reduce the discharge of Stormwater Pollutants from Mobile Businesses to the MEP and to prohibit Non-Stormwater discharges pursuant to Section B of the 2010 SMR MS4 Permit. The 11B58BCity

3B73B21Bof Tem163Becu50B80Bla maintains as part of its commercial source inventory a listing of Mobile Businesses known to operate within its jurisdiction that conduct services listed above in Section 8.1.

8.3.1 Minimum BMPs for Mobile Businesses {F.1.b.(3)(i)}

Based on the activities associated with the Mobile Businesses identified in the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's jurisdiction, the following list of potential Source Control BMPs was developed for each of the categories of Mobile Businesses:

Power Washing Activities

- Direct discharge to landscape areas, prevent discharge from leaving site, contain wash water and dispose into sanitary sewer or landscape area

Mobile carpet, drape or furniture cleaning

- Direct discharge to landscape areas, prevent discharge from leaving site, discharge wash water to sanitary sewer, use of environmentally safe products

Mobile equipment repair, maintenance, fueling or cleaning

- contain runoff and vacuum all liquids and debris

Pest control services

- Do not apply pesticide within 24-hours of forecasted rain above 50% chance, try to minimize use, and use products according to their instructions

Cement mixing or cutting

- contain runoff and vacuum all liquids and debris

Masonry

- contain pollutants onsite, cover materials, wash out in landscape areas

Mobile painting and coating

- contain pollutants onsite, cover materials, wash out in landscape areas

Landscaping

- contain fertilizers onsite, cover materials, blow debris back onto landscape areas and not into street

Pool and Fountain Cleaning

- discharge to sanitary sewer or landscape areas, remove chlorine and other pollutants before discharge into MS4

Portable Sanitary Services

- contain runoff and vacuum all liquids and debris

Mobile Pet Services

- disposal of hair and other solids in proper waste containers, dispose of waste water into sanitary sewer

Power Washing Services

- Direct discharge to landscape areas, prevent discharge from leaving site, contain wash water and vacuum all liquids and debris

Plumbing Services

- proper disposal of waste, good house keeping

8.3.2 Notification and Response {F.1.b.(3)(iii)}

Each Copermittee notifies all Mobile Businesses based within, or discovered operating within their jurisdiction concerning the minimum Source Control and Pollution Prevention BMPs that they must implement when conducting their activities. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla identifies Mobile Businesses based within, or operating within their jurisdictions based on the City's business license list, word of mouth by other mobile operators, and direct contact when the City comes across an active mobile operator.

When put on notice by staff or a third-party of a potential violation originating from a Mobile Business that is not already being responded to by another responsible agency (e.g., other Copermittee), the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla investigates and take the actions as described in Section 3.5.3.

8.3.3 Database {F.1.b.(3)(a)}

The copermittees include Mobile Businesses and their bases of operation in the Industrial/Commercial Facility Database described in Section 8.1. This database will assist in identifying information necessary for the copermittees to take enforcement action, if required.

8.4 Industrial and Commercial Facility Inspections {F.3.b.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla conducts Industrial and Commercial site inspections for compliance with its ordinances, permits, and the 2010 MS4 Permit.

8.4.1 Inspection Frequencies {F.1.B.(4)(B)

At a minimum, all sites determined by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla to pose a high threat to water quality (Section 8.1.3) are inspected annually. All other inventoried sites are inspected at least once during a five year period.

8.4.2 Inspection Procedures {F.3.b.(4)}

When conducting facility/business inspections, at a minimum, the following are addressed:

- Review of BMP implementation plans not including Project-Specific WQMPs required pursuant to Section F.1.d of the 2010 SMR MS4 Permit, if the site uses or is required to use such a plan;
- Review of facility monitoring data, if the site monitors its runoff;
- Check for coverage under the General Industrial Permit NOI and/or WDID, if applicable;
- Assessment of compliance with 11B58BCity 3B73B21Bof Tem163Becu50B80Bla ordinances and 11B58BCity 3B73B21Bof Tem163Becu50B80Bla issued permits related to runoff;
- Assessment of the implementation, maintenance and effectiveness of the designated minimum and/or enhanced BMPs;
- Visual observations for Non-Stormwater discharges, potential Illicit Connections, and potential discharge of pollutants in stormwater runoff; and
- Education and training on stormwater pollution prevention, as conditions warrant.

8.4.3 Inspection Program Approach

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla ensures that all inventoried facilities are inspected pursuant to the frequencies and procedures identified in Sections 8.4.1 and 8.4.2, respectively. These requirements are met through a combination of approaches as described below.

8.4.3.1 Compliance Assistance Program

The County's Department of Environmental Health implements the CAP for oversight and inspection of Industrial and Commercial Facilities within the County's jurisdiction. Until recently, this program served as the baseline inspection program for the City of Temecula.

The CAP involves a detailed stormwater compliance survey for facilities that must secure a Hazardous Materials permit for storing, handling or generating such materials and for retail food facilities. Many types of Industrial and Commercial Facilities are inspected by the County's Department of Environmental Health Hazardous Materials Management staff including those that conduct automobile mechanical repair, maintenance, fueling, or cleaning operations, automobile or other vehicle body repair or painting operations, and painting or coating operations.

Blank copies of the forms used by the County's Department of Environmental Health when conducting these stormwater compliance surveys are included in Appendix F. Completed survey forms are forwarded to the District and the appropriate Copermittee. The respective jurisdiction's representative identifies those surveys that indicate non-compliance to initiate a follow-up inspection.

The CAP includes educational outreach to the inspected facilities and completion of a detailed stormwater compliance survey. In conducting a facility inspection, if it appears that the facility may be required to have coverage under the Industrial General Permit and the facility operator indicated that a NOI or SWPPP is not onsite, the inspector provides the facility operator with an informational sheet on the requirements of the Industrial General Permit and makes a note on the compliance survey that the NOI or SWPPP was not available onsite. The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla also verifies the SIC codes of each Industrial facility to ensure that the Industrial General Permit is obtained where necessary.

8.4.3.2 Third Party Certifications {F.1.d(4)(c)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla may in the future propose to develop and implement a third party certification program subject to San Diego Regional Board Executive Officer acceptance. This program would verify Industrial and Commercial Site/source compliance with the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's ordinances, permits, and this Order. To the extent that third party certifications are conducted to fulfill the requirements of Section F.3.b.(4) of the 2010 SMR MS4 Permit, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will retain responsibility for compliance with the 2010 SMR MS4 Permit and will be responsible for conducting and documenting quality assurance and quality control of the third-party certifications.

If the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla proposes a third party certification program it will include the following:

(i) A description of the procedures and measures for quality assurance and quality control;

(ii) A listing of sites/sources that may and may not participate in the program;

(iii) The representative percentage of certifications that would qualify to satisfy the inspection requirements in Section F.3.b(4)(c) of the 2010 SMR MS4 Permit;

(iv) Photo documentation of potential stormwater violations identified during the third party inspection;

(v) Reporting to the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla of identified significant potential violations, including imminent or observed Illegal Discharges, within 24 hours of the third party inspection;

(vi) Reporting to the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla of all findings within one week of the inspection being conducted; and

(vii) 11B58BCity 3B73B21Bof Tem163Becu50B80Bla follow-up and/or enforcement actions for identified potential Stormwater violations within two business days of the potential violation report receipt.

Based upon site inspection findings, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will implement all follow-up actions and enforcement necessary to comply with the 2010 SMR MS4 Permit.

8.4.4 Regional Board Inspections {F.1.d.(4)(c)}

To the extent that the San Diego Regional Board has conducted an inspection of an Industrial Site during a particular year, the requirement for the responsible Copermittee to inspect this facility during the same year is deemed satisfied.

8.4.5 Tracking Inspections

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla tracks the number of inspections for the inventoried Industrial and Commercial Sites/sources throughout the reporting period to verify that the sites/sources are inspected at the minimum frequencies listed in the 2010 SMR MS4 Permit.

8.4.6 Enforcement of Industrial and Commercial Sites/Sources

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla enforces its water quality ordinance for all Industrial and Commercial Sites/sources as necessary to maintain compliance with the 2010 SMR MS4 Permit. The Enforcement/Compliance Strategy is described in Section 3.5 of this JRMP.

8.4.7 Reporting of Non-Compliant Sites {F.1.d(6)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla provides annual notification to the San Diego Regional Board, prior to the commencement of the Wet Season, of any unresolved high level enforcement action (as defined in the 11B58BCity 3B73B21Bof Tem163Becu50B80BlaCity's' JRMP) that poses a significant threat to water quality in its jurisdiction as a result of violations of the water quality ordinances.

9.0 RESIDENTIAL SOURCES {F.c}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements the following residential program, which has been designed to meet the requirements of Section F.3.c. of the 2010 SMR MS4 Permit, help prevent Illicit Discharges into the MS4, reduce residential discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent residential discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

9.1 Program Approach

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla actively encourages the use of pollution prevention methods by residents, particularly for those high priority residential areas and activities described above. The following describes the programs implemented by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla:Training City Personnel who have regular contact with residential areas (e.g., park maintenance personnel, street sweepers, code enforcement officers, etc.) to serve as informal inspectors performing field reviews. The training programs are further described in Section 12.

- Participation in County-wide Public Education Efforts including (as further described in Section 11.
  - Maintenance of brochures on various topics pertinent to the high priority residential activities described in Section 11.
  - Maintenance of a public education website
  - Issuance of quarterly e-newsletters
  - Outreach at Community events
  - Outreach at Home Improvement stores
  - Elementary School assembly presentations
  - Maintenance of a "1-800" hotline for reporting of complaints or illegal discharges

9.2 High Priority Residential Areas and Activities {F.3.c.(1)}

The 2010 SMR MS4 Permit identifies the following residential activities as posing a high threat to water quality:

- Automobile repair, maintenance, washing and parking.
- Home and garden care activities and product use (pesticides and fertilizers);
- Disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, cleaning products);
- Any residential areas tributary to and within the same hydrologic subarea as a CWA Section 303(d) Impaired water body, where the residence generates Pollutants for which the water body is Impaired; and
- Any residential areas within or directly adjacent to or discharging directly to Receiving Waters within an ESA.

9.3 Designated BMPs {F.3.c.(2)(b)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla has designated a set of minimum BMPs for high-threat-to-water-quality residential areas and activities within their jurisdiction to reduce the discharge of Pollutants to the MEP. The minimum BMPs, all of which are Pollution Prevention BMPs, are:

Table 9-1: Designated Residential BMPs

Area or Activity		Designated BMPs	Reference Material
A	Residential: Automobile repair, maintenance, washing and parking	• Collect and properly dispose of automotive fluids and other waste • Clean up spills using dry cleanup methods where possible • Store Hazardous Materials away from rain and Runoff • Avoid hosing down parking areas • Prevent all leaks and/or spills from entering the street or MS4	**Brochures (See Section 11):** • Automotive Maintenance and Car Care Brochure • Outdoor Cleaning **CASQA BMP Fact Sheets:** • SC-20 • SC-21 • SC-22 • SC-43
B	Home and garden care activities and product use (pesticides, herbicides and fertilizers)	• Prevent irrigation runoff • Store and apply pesticides, fertilizers and other chemicals in accordance with their labeling • Avoid applying pesticides, herbicides and fertilizers before forecasted rain	**Brochures (See Section 11):** • Landscape and Garden • 10 Ways to Save Water Outdoors **CASQA BMP Fact Sheets:** • SC-73 • SD-10 • SD-12

C	Disposal of trash, pet waste, green waste, and Household Hazardous Waste (e.g., paints, cleaning products)	• Properly dispose of pet waste • Collect green waste and never blow such waste into the street, gutter or MS4 • Never dispose of Waste in a street, gutter or MS4 • Take Household Hazardous Waste to a designated collection center	• **Brochures (See Section 11):** • After the Storm • What's the Scoop • Tips for Horse Care • Landscape and Garden • Pools, Spas and Fountains **HHW and ABOP Collection Events** http://www.rivcowm.org/opencms/hhw/index.html **Videos:** • Animal Care • Household Hazardous Waste • Managing your Lawn and Garden • Outdoor Activities

The residential activities described in Table 9-1 above are assumed to occur with equal likelihood in all residential areas within the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's jurisdiction. The implementation of the residential program and the minimum BMPs designated above is therefore designed to address these activities on a City-wide basis. This includes addressing pollutants from residential areas that may be tributary to and potentially impacting a CWA Section 303(d) Impaired water body, and for addressing residential discharges into ESAs.

The above list of residential areas and activities and associated BMPs may be updated by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla in response to the Santa Margarita Watershed Water Quality Workplan assessments.

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requires implementation of the minimum BMPs and any additional measures necessary to comply with the Prohibitions and Receiving Water Limitations and restrictions on Non-Stormwater discharges as specified in the 2010 SMR MS4 Permit.

9.4 Hazardous Waste BMPs {F.3.c.(2)(c)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla participates in regional activities to facilitate the proper collection and management of used oil, Toxic and Hazardous materials, and other household Wastes. This includes assisting in the distribution of information regarding the dates and locations of temporary and permanent HHW and ABOP collection events and facilities, financial support of HHW and ABOP collection facilities and events, and curbside or special collection sites managed by the Copermittees or private entities, such as solid waste haulers.

9.5 Common Interest Areas, Home Owner Associations and Mobile Home Parks {F.3.c.(4)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla requires implementation of effective management measures in CIAs, HOAs and mobile home parks (MHPs) to ensure that runoff within and from these areas meets the objectives of the 2010 SMR MS4 Permit. The designated BMPs for residential CIAs, HOAs, and MHPs are as described in Section 9.3. Additional BMPs may be required based on a review of pertinent factors, including:

- Maintenance duties and procedures typically used by CIA/HOA maintenance associations within its jurisdiction;
- Whether streets and storm drains are publicly or privately owned within the CIA/HOA or MHP;
- Whether the CIA/HOA or MHP has been identified as a high priority residential area based on an evaluation of the site potential to generate Pollutants contributing to a 303(d) listed waterbody or an observed Action Level exceedance; and
- Other activities conducted or authorized by the HOA that may pose a significant risk to inland Receiving Waters.

Additional BMPs that may be applicable to CIAs, HOAs, and/or MHPs (in addition to those referenced in Section 9.3) are:

Table 9-2: Additional BMPs for CIAs, HOAs, and MHPs

	Area or Activity	Designated BMPs	Reference Material
A	Outdoor Cleaning Activities	• Clean up spills using dry cleanup methods where possible • Avoid hosing down parking areas • Prevent all wash water, leaks and/or spills from entering the street or MS4	**Brochures (See Section 11):** • Outdoor Cleaning **CASQA BMP Fact Sheets:** • SC-43
B	Community Pools / Fountains	• Properly maintain community pools and/or fountains to avoid Illegal Discharges • Properly store all chemicals and equipment used in maintaining the pools/fountains	• **Brochures (See Section 11):** • Pools, Spas and Fountains **CASQA BMP Fact Sheets:** • SC-72
C	Community streets, roads and parking lots	• Sweep streets/roads as necessary to prevent accumulated trash or debris from entering the MS4 • Schedule repairs for Dry Weather, and protect nearby storm drain inlets for repairs that must occur during the Wet Season	**CASQA BMP Fact Sheets:** • SC-43 • SC-70

D	Community-owned MS4	• Regularly inspect and remove litter and/or other debris from inlets- before the Wet Season • If there is evidence of Illegal Discharges or dumping, attempt to find and eliminate the source. Refer to the local code enforcement agency if necessary. • Post no-dumping signs in areas where trash or other illegal dumping accumulates	**CASQA BMP Fact Sheets:** • SC-10 • SC-74

9.6 Enforcement {F.3.c.(3)}

If during an inspection in response to a complaint, the City observes that a residence or a CIA/HOA/MHP is non-compliant with the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's water quality ordinances, (including the prohibition of non-exempt Non-Stormwater discharges), the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla begins enforcement procedures. Procedures for enforcement of the water quality ordinances is described in Section 3.5 and the process for elimination of IC/IDs is described in Section 4.

10.0 RETROFITTING EXISTING DEVELOPMENT{F.3.D.}

The goals of the Existing Development Retrofitting Program are to address the impacts of existing development through retrofit projects that reduce impacts from Hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of stormwater pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of Water Quality Standards. Where feasible, at the discretion of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, the Existing Development Retrofitting Program may be coordinated with flood control projects and other infrastructure improvement programs.

To facilitate consistent implementation of the Existing Retrofit Program in the Santa Margarita Region, the Copermittees prepared the Santa Margarita Region Retrofit Program Study, which is available at http://rcflood.org/NPDES/SantaMargaritaWS.aspx. The components of this Retrofit Program Study represent an adaptive approach to meeting the Retrofit requirements of the MS4 Permit.

The Retrofit Program itself consists of a multi-step process to identify and ultimately prioritize the actions and efforts that are best suited to addressing specific water quality issues in the Santa Margarita Region. The steps in this Retrofit Program enable the Copermittees first to identify water quality, watershed, infrastructure, or other issues or Conditions of Concern; second to develop context for the issues; and finally to use a series of tools, called the "Retrofit Program Framework," to identify the best strategy or strategies to address them, up to and including Retrofit projects. The tools can be applied and re-combined as the Copermittees' programs evolve and develop, to identify Retrofit project needs, priorities, and opportunities, and to select and design appropriate Structural or Non-Structural BMPs that may provide the most cost-effective reduction measures for Pollutants or Conditions of Concern.

10.1 Identification of Conditions of Concern

The potential issues which may trigger a Retrofit evaluation are listed in Table 10-1 below, and correspond to the "Problem or Condition (NAL/SAL Exceedance)" column headings in the BMP Menu, (Appendix B of the Retrofit Program Study).

Table 10-1: Observations Potentially Triggering a Retrofit Program Framework Analysis

Irrigation Runoff	
Hydrologic modification/channel instability	
Illicit Connection/Discharge	
Action Level Exceedances or TMDLs related to:	
Metals	Pesticides
Organics	Nutrients
Oil & grease	Bacteria
Sediment	

10.2 Source Assessment & Identification

When the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla identifies a problem identified in Table 10-1, Step 2 of the Retrofit Program Framework identifies that the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla conduct source identification in an attempt to determine the source and/or areas of development that may potentially be retrofitted. To aid in the source identification, the Retrofit Program Study provides land use maps as well as information about pollutants associated with those land uses, and factors that can be used to help guide a Copermittee to narrow down potential sources.

The procedures for source identification are described in Section 4.4.2 of this JRMP.

One possible outcome of the source assessment could be identification of a single point source. Under this scenario, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla would implement JRMP enforcement programs to eliminate the source of the issue. The other possible outcome is that there is not an identifiable point source of the issue. In this instance, Step 3 of the Retrofit Program Framework is to assess the current JRMP program implementation relative to the Pollutant or condition of concern, its likely source, the land use and management setting, and the Copermittee's responsibilities and initiatives that may or should be able to address the issue. The purpose of this step is to assess whether the problem or condition may be mitigated through more effective or aggressive implementation of its existing authorities and programs in the JRMP, or if supplemental actions – such as Retrofit projects (Non-Structural and/or Structural) – may be required. The results of this evaluation may reveal that the existing JRMP program implementation could be enhanced to address the issue; in that case any deficiencies or needed improvements in 11B58BCity 3B73B21Bof Tem163Becu50B80Bla programs would be addressed and reported in the JRMP Annual Report.

If the JRMP programs are being adequately implemented the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla can use Steps 4 and 5 of the Retrofit Program Framework, to evaluate structural and non-structural Retrofit BMPs. An early step in the evaluation would be to asses if Non-Structural Retrofit BMPs would be an appropriate solution. In instances where a Non Structural Retrofit BMP is not a feasible option to address the identified problem and where the Watershed Workplan has identified the problem as a Priority 1 issue, 11B58BCity 3B73B21Bof Tem163Becu50B80Bla can use the BMP menu to evaluate Structural BMPs.

10.3 Identification of Candidate Areas for Retrofitting *{F.3.d.1.}*

Existing areas of development (i.e., municipal, industrial, commercial, residential) within the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla have been identified and inventoried as candidates for Retrofitting in the Santa Margarita Region Retrofit Program Study. Potential Retrofitting candidates include but are not limited to:

1. Areas of development that generate Pollutants of Concern to a TMDL or an ESA;

2. Receiving Waters that are channelized or otherwise hardened;

3. Areas of development tributary to Receiving Waters that are channelized or otherwise hardened;

4. Areas of development tributary to Receiving Waters that are significantly eroded; and

5. Areas of development tributary to an Area of Special Biological Significance (ASBS) or SWQPA.

The potential retrofitting candidate areas are identified in Figure 20 of the Santa Margarita Region Retrofit Program Study. When a specific problem has been identified per the Retrofit Program Framework, this initial inventory will be tailored to identify and prioritize focused areas of development as necessary during the source identification process described in Section 10.4.

10.4 Prioritization of Candidate Areas for Retrofitting *{F.3.d.2.}*

The inventoried areas of existing development that are tributary to the identified Condition of Concern will be evaluated and ranked as part of Step 4 and/or Step 5 of the Retrofit Program Framework, as necessary, to prioritize Retrofit projects. Criteria for evaluation include, but are not limited to:

1. Feasibility;

2. Cost effectiveness;

3. Pollutant removal effectiveness, including reducing Pollutants exceeding Action Levels;

4. Tributary area potentially treated;

5. Maintenance requirements;

6. Landowner cooperation;

7. Neighborhood acceptance;

8. Aesthetic qualities;

9. Efficacy at addressing concern; and

10. Potential improvements on public health and safety.

A prioritized inventory of existing areas of development identified as candidates for retrofitting will be developed and provided in the JRMP Annual Report, as applicable in response to steps 4 and 5 of the Retrofit Program Framework.

10.5 Incorporation into Watershed Workplan *{F.3.d.3.}*

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will consider the results of the Retrofit Program Framework, when applicable, in prioritizing Watershed Work Plans for the following year in accordance with Section G.1 of the 2010 SMR MS4 Permit and in assessing the JRMP program effectiveness in accordance with Section J of the Permit.

Evaluation of Retrofit BMP options will consider program jurisdiction (e.g., regulated construction sites vs. agricultural operations with waivers), evaluation of whether Non-Structural Retrofit BMP approaches are sufficient to address the problem, and, if necessary, evaluation of sites and BMPs for structural Retrofit projects. As noted above, the methodology in the Retrofit Program Framework prioritizes the use of Non-Structural BMPs, which can be implemented far more quickly and often at a much lower cost.

Structural BMPs are assessed where the identified issue is identified as a priority 1 issue in the Watershed Workplan, and the Non-Structural BMPs are insufficient to address the problem. Highly feasible projects expected to benefit water quality will be given a high priority to implement Source Control and Treatment Control BMPs. Where Structural BMPs are proposed and where feasible, the Retrofit projects may be designed in accordance with the WQMP requirements within Sections F.1.d.(3) through F.1.d.(8) and the Hydromodification requirements in Section F.1.h. of the 2010 SMR MS4 Permit.

10.6 Encouraging Private Retrofitting Projects *{F.3.d.4.}*

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will cooperate with private landowners to encourage site specific Retrofitting projects, where identified as necessary to address a pollutant or condition of concern pursuant to steps 4 and 5 of the Retrofit Program Framework, or where deemed appropriate by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla as part of enforcement measures where a source is found. The following practices will be considered in cooperating and encouraging private landowners to retrofit their existing development, which are included in the BMP Menu, (Appendix B of the Retrofit Program Study). Such practices may include but are not limited to:

1. Education and outreach;
2. Requiring Retrofit projects as enforcement, mitigation or ordinance compliance when a source of discharge is found;
3. Fees for existing discharges to the MS4 and reduction of these fees for Retrofit implementation;
4. Subsidies for Retrofit projects;
5. Public and private partnerships; and
6. Demonstration Retrofit projects on public land and easements.

10.7 Tracking Retrofit BMPs *{F.3.d.(5)}*

The known completed Retrofit BMPs will be maintained in the watershed-based database established to track and inventory post-construction Structural BMPs in accordance with Section F.1.f. of the 2010 SMR MS4 Permit. Retrofit BMPs on publicly owned properties will be inspected to verify that they are operating effectively and have been adequately maintained per Section F.1.f of the 2010 SMR MS4 Permit. Privately owned Retrofit BMPs will be inspected as needed.

10.8 Regional Mitigation Projects *{F.3.d.(6)}*

Where constraints on Retrofitting preclude effective BMP deployment on existing developments at locations critical to protect Receiving Waters pursuant to Step 5 of the Retrofit Program Framework, a

regional mitigation project may be proposed to improve water quality. Such regional projects may include but are not limited to:

1. Regional water quality treatment BMPs;
2. Urban creek or wetlands restoration and preservation;
3. Daylighting and restoring underground creeks;
4. Localized rainfall storage and reuse to the extent such projects are fully protective of downstream water rights;
5. Hydromodification projects; and
6. Removal of invasive plant species.

11.0 PUBLIC EDUCATION COMPONENT{F.6.}

Developing programs to increase public awareness and to involve the public can be an effective method for controlling pollution associated with runoff. Emphasizing the relevant impact of runoff to target audiences increases the likelihood that the messages will be noticed and that the audience will support and participate in program implementation. The Riverside County Permittees have developed a County-wide Public Education and Outreach Program that is implemented by the District.

To leverage Copermittee resources, the Public Education and Outreach Program may partner with other entities including Riverside County's Waste Management Department, Western Riverside Council of Governments, other County-wide stormwater public education programs in Southern California, the Riverside-Corona Resource Conservation District, and others to promote conservation, pollution prevention and environmental awareness. The public education program may also expand outreach opportunities by collaborating with entities such as Riverside County's Agricultural Commissioner and University California Cooperative Extension to promote proper use of pesticides and herbicides to specific target groups such as pesticide applicators and home gardeners.

The Public Education and Outreach Program maintains an Internet website that provides information to residents and businesses about stormwater management and offers stormwater pollution prevention activities. The website also provides a materials order form for educational materials, and has a tracking mechanism for the number of queries. The website address is http://rcflood.org/stormwater/.

11.1 Target Audiences

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla ensures that appropriate education and outreach is available to the following target audiences:

- Copermittee departments and personnel
- New Development / Redevelopment Project Applicants, Developers, Contractors, property owners, and other responsible parties
- Construction Site owners and operators
- Commercial Facility owners and operators
- Industrial Facility owners and operators
- Residential community and general public

11.2 Education of Public Audiences

11.2.1 General Education

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, through the Implementation Agreement described in Section 3.2.1, coordinates with the other Copermittees to develop and implement County-wide educational activities through the regional 'Only Rain Down the Storm Drain' program implemented

by the District. Where necessary those regional activities are supplemented by the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla with additional localized educational / outreach activities.

In general, these education programs educate each target audience on the following topics, as appropriate and applicable to the target audience's potential Stormwater and Non-Stormwater discharges to the MS4:

(a) Applicable water quality laws, regulations, permits, and requirements;

(b) BMPs;

(c) General runoff concepts;

(d) Existing water quality, including local water quality conditions, Impaired waterbodies and ESAs; and

(e) Other topics, as determined by the Copermittee(s), such as public reporting mechanisms, water conservation, LID techniques, and public health and vector issues associated with Runoff.

In addition, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla implements educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.

11.2.2 Target Audience Topics

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla ensures that their education program provides the following information:

New Development / Redevelopment and Construction Sites {F.6.b.(2)}

As early in the planning and development process as possible, and all through the permitting and construction process, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla notifies parties responsible for the construction project about the importance of educating all construction workers in the field about stormwater issues and BMPs, in addition to the general topics under Section F.6.a.(1) of the 2010 SMR MS4 Permit.

Commercial and Industrial Sites / Sources {F.6.b.(3)}

Through the inspection program, the owner/operator of each inventoried commercial and industrial site/source will be notified of the BMP requirements applicable to the site/source at least once during the five-year period of this Order.

Residential and General Public {F.6.b.(4)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla, through the Implementation Agreement, collaborates with the other Copermittees to fund the development and implementation of the regional 'Only Rain Down the Storm Drain' public education program. One of the goals of this program is to educate residential and general public target communities on potential Pollutant generating activities (e.g.,

car washing, mobile operations, yard maintenance) and pollutant generating products (e.g., herbicides, fertilizers, household chemicals). The target audiences of the residential and general public education programs includes underserved target audiences (e.g., disadvantaged communities), residents and managers of CIA/HOA areas, and owners and residents of MHPs.

11.2.1 Methods

The Table 11-1 describes the public education and outreach methods that target public audiences:

Table 11-1: Public Education Education/Outreach Methods

Target Audience	JRMP Program Areas Addressed	Education / Outreach Methods
New Development / Redevelopment Project Applicants, Developers, Contractors, Property Owners, and other Responsible Parties	• F.1 • F.6.a • F.6.b.(2)	**Training** • Regional SMR WQMP Training (upon approval of revised SMR WQMP) • Regional HMP Training (upon approval of HMP) **Guidance Documents** • SMR WQMP and HMP Guidance • Regional LID BMP Design Handbook (http://rcflood.org/npdes/lidbmp.aspx) • CASQA Low Impact Development Manual for Southern California (https://www.casqa.org/LID/tabid/240/Default.aspx) • CASQA Stormwater BMP Handbooks (http://www.cabmphandbooks.com/) **Applications / Forms** • Project Application form • WQMP Initial Applicability Checklist **Electronic Outreach** • Regional Quarterly E-newsletters • Website **Other** • Regional Quarterly E-newsletters

Target Audience	JRMP Program Areas Addressed	Education / Outreach Methods
Construction Site Owners and Operators	• F.2. • F.6.a. • F.6.b.(2)	**Applications / Forms** • Grading Permit Application form • Construction Checklist (a sample is provided in WQMP Chapter 5) **Printed Material** • After the Storm • General Construction site supervision • Outdoor Cleaning Activities • Construction Poster **Electronic Outreach** • Regional Quarterly E-newsletters • Website
Commercial / Industrial Owners and Operators	• F.3.b. • F.6.a. • F.6.b.(3)	**Applications / Forms** • Business Registration form **Direct Outreach** • Business Partnerships with garden centers / nurseries, paint stores, hardware stores, home improvement stores, and pet facilities, including training for store staff on specific stormwater / BMP issues **Printed Material** • After the Storm • Did you know your facility may need a stormwater permit? • Automotive Maintenance and Car Care • Outdoor Cleaning Activities • Food Service Industry • Industrial / Commercial Facilities • Landscape and Garden • Pools, Spas and Fountains **Electronic Outreach** • Regional Quarterly E-newsletters • E-blasts to mobile service providers • Website

Target Audience	JRMP Program Areas Addressed	Education / Outreach Methods
Residential Community and General Public	• F.3.c. • F.6.a. • F.6.b.(4)	**Direct Outreach** • Attendance at region-wide community events • Attendance at local community events • Elementary School Presentations • Outreach at Home Improvement Stores **Printed Material** • After the Storm • 10 Ways to Save Water Outdoors • Landscape and Garden • Living on the Edge • Stream Stabilization Fact Sheet • Tips for Horse Care • Septic Tank Systems • Automotive Maintenance and Car Care • Outdoor Cleaning Activities • Pools, Spas and Fountains • What's the Scoop? • Tearsheets on various BMP topics placed in stores as part of Commercial / Industrial outreach **Electronic Outreach** • Regional Quarterly E-newsletters • Website

12.0 11B58BCITY 3B73B21BOF TEM163BECU50B80BLA STAFF TRAINING{F.6.}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's education program ensures that 11B58BCity 3B73B21Bof Tem163Becu50B80Bla staff and contractors (and Planning Boards and Elected Officials, if applicable) responsible for implementing the requirements of the 2010 SMR MS4 Permit have an understanding of the following topics as applicable to their responsibilities.

(i) Applicable water quality laws and regulations;

(ii) The potential effects and impacts that Copermittee departments and personnel activities related to their job duties can have on water quality);

(iii) Plan review policies and procedures to verify consistent application;

(iv) Methods of minimizing impacts to receiving water quality resulting from development, construction, and other potential Pollutant generating activities;

(v) Proper implementation of erosion and sediment control, Source Control, Treatment Control, and other BMPs to minimize the impacts to Receiving Water quality resulting from development, construction, and other potential Pollutant generating activities;

(vi) Applicable recordkeeping and tracking mechanisms; and

(vii) Inspection and enforcement procedures, BMP implementation, and review of monitoring data

12.1 Methods

The following table describes the educational activities conducted that target 11B58BCity 3B73B21Bof Tem163Becu50B80Bla staff:

Table 12-1: City of Temecula **Staff Education/Outreach Methods**

Target Audience	JRMP Program Area Addressed	Education / Outreach Methods
Management	All	• Staff Meetings
NPDES Program Staff	All	• SMR Technical Advisory Committee (TAC) Meetings • Regional NPDES training (all applicable modules)

Target Audience	JRMP Program Area Addressed	Education / Outreach Methods
Development Planning Staff	• F.1. • F.6.a. • F.6.b.(1)	• Regional WQMP Training • Regional HMP Training (to be developed upon approval of HMP) • Copermittee staff training
Construction Site Approval, Inspection and Enforcement	• F.2. • F.4. • F.6.a. • F.6.b.(1)	• Regional Construction Inspection Training • Copermittee staff training
Municipal Maintenance	• F.3.a. • F.4. • F.6.a. • F.6.b.(1)	• Regional Municipal Maintenance Training • Copermittee staff training
Code Enforcement	• F.3.b. • F.4. • F.6.a. • F.6.b.(1)	• Regional Commercial / Industrial Inspection Training • Copermittee staff training

12.2 Frequency {F.6.b.(1)(b)(2)}

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla trains staff responsible for oversight and conducting storm water compliance inspections and enforcement of construction activities (e.g. construction, building, code enforcement, grading review staff, inspectors, and other responsible construction staff) annually.

The 11B58BCity 3B73B21Bof Tem163Becu50B80Bla also provides annual training to staff responsible for conducting stormwater compliance inspections and enforcement of Industrial and Commercial Facilities.

13.0 MONITORING PROGRAM {N.}

13.1 Overview

The District, through the Implementation Agreement (Section 3.2.1), implements the Santa Margarita Monitoring Plan on behalf of the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla. The Monitoring Plan, available at: http://rcflood.org/NPDES/Monitoring.aspx, addresses the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's responsibilities in the Receiving Waters, MS4 Discharge and Reporting Program No. R9-2010-0016 (MRP, Attachment E to the 2010 SMR MS4 Permit). Additionally, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla conducts source identification monitoring as required per Section II.B.2. and II.C.2. of the MRP, in response to an exceedance of an Action Level. The Major MS4 Outfalls will be tested in accordance with the 2010 SMR MS4 Permit. A list will be created and tracked as part of the monitoring program.

13.2 Non-Stormwater Dry Weather Action Levels {C.}

The District will notify the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla of exceedances of Analytical results (either laboratory or field screening) that exceed the NALs presented in Table 3 of the 2010 SMR MS4 Permit. In response to such an exceedance, the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will investigate and seek to identify the source of the exceedance in a timely manner following the procedures described in Section 4.4.2 and 4.4.3. However, if the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla identifies a number of NAL exceedances that prevents it from adequately conducting source investigations at all sites in a timely manner, then the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will submit a prioritization plan and timeline that identifies the timeframe and planned actions to investigate and report its findings on all of the exceedances to the Regional Board.

The 2010 MS4 Permit notes that neither the absence of exceedances of NALs nor compliance with required actions following observed exceedances, excuses any non-compliance with the requirement to effectively prohibit all types of unauthorized Non-Stormwater discharges into the MS4 or any non-compliance with the prohibitions in the MS4 Permit. During any Annual Reporting period in which one or more exceedances of NALs have been documented the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla will report a description of whether and how the observed exceedances did or did not result in a discharge from the MS4 that caused, or threatened to cause or contribute to a condition of Pollution, Contamination, or Nuisance in the Receiving Waters.

13.3 Stormwater Action Levels {D.}

The District implements the Wet Weather MS4 Discharge Monitoring program and annually evaluates the data compared to the Stormwater Action Levels (SALs) identified in Table 4 of the 2010 SMR MS4 Permit. At each monitoring station, a running average of 20% or greater of exceedances of any discharge of stormwater from the MS4 to Waters of the U.S. that exceed the SALs for each of the Pollutants listed in Table 4 (below) in Receiving Waters receiving discharges from the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla's MS4 facilities requires the 11B58BCity 3B73B21Bof Tem163Becu50B80Bla to affirmatively augment and implement all necessary stormwater controls and measures described in this JRMP to reduce the discharge of the associated class of Pollutants(s) to the MEP. The 11B58BCity

3B73B21Bof Tem163Becu50B80Bla will utilize the exceedance information when adjusting and executing its annual work plans. The magnitude, frequency, and number of constituents exceeding the SAL(s), in addition to Receiving Water quality data and other information, will be considered when prioritizing and reacting to SAL exceedances in an iterative manner.

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INDUSTRIAL AND COMMERCIAL SOURCE INSPECTION FORM

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RETROFIT PROGRAM STUDY

Glossary

Name	Definition
2010 SMR MS4 Permit	Order R9-2010-0016, an NPDES MS4 Permit issued by the San Diego Regional Board.
Action Level	See Non-Stormwater Action Levels and Stormwater Action Levels
Beneficial Use	The uses of water necessary for the survival or well being of man, plants and wildlife. These uses of water serve to promote the tangible and intangible economic, social and environmental goals. "Beneficial Uses" of the waters of the State that may be protected include, but are not limited to, domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing Beneficial Uses are uses that were attained in the surface or groundwater on or after November 28, 1975; and potential Beneficial Uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under Federal law. [California Water Code Section 13050(f)].
Best Management Practice (BMP)	Any procedure or device designed to minimize the quantity of Pollutants that enter the MS4 or to control stormwater flow. See Chapter Two.
Bioretention BMP	A type of LID Retention BMP that is designed to capture the Design Capture Volume and absorb that volume entirely into a biologically active soil media. Water retained in this soil media is then evapotranspired by plants in the BMP, or slowly allowed to infiltrate into the underlying soils. This BMP inherently maximizes both Infiltration and Evapotranspiration of Runoff based on the actual limitations of the soil and environment.
Biotreatment BMP	A type of **LID BMP** that can be used in certain circumstances when LID Retention BMPs are not feasible. These BMPs provide similar functions and benefits as LID Bioretention BMPs, such as inclusion of natural biological processes and maximizing opportunities for Infiltration and Evapotranspiration, however, they are not designed to retain the Design Capture Volume in an engineered soil media. Examples of Biotreatment BMPs include extended detention basins, bioswales and constructed wetlands.
California Stormwater Quality Association (CASQA)	Publisher of the California Stormwater Best Management Practices Handbooks, available at www.cabmphandbooks.com
Cease and Desist Order	See Stop Work Order
CEQA	California Environmental Quality Act
Citation	An official summons to appear (as before a court)
Condition of Concern	Conditions that may affect the designated Beneficial Uses of a Receiving Water

Glossary

Name	Definition
Condition(s) of Approval (COA)	Requirements a Copermittee may adopt for a project in connection with a discretionary action (e.g., approval of a subdivision map or issuance of a use permit). COAs may specify features required to be incorporated into the final plans for the project and may also specify uses, activities, and operational measures that must be observed over the life of the project.
Construction Site	Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to clearing, grading, disturbances to ground such as stockpiling, and excavation.
Copermittee	District, County and Cities of Murrieta, Temecula and Wildomar. The terms *'local Copermittee'* and *'your Copermittee'* refers to the Copermittee that has jurisdiction over the proposed **Priority Development Project**.
CWA	The Federal Clean Water Act
Design Capture Volume (VBMP)	The volume of runoff from the **Design Storm**. This is design sizing standard for LID BMPs, as well as for conventional Treatment Control BMPs whose design is based on treating a particular volume of runoff.
Design Flow Rate (QBMP)	The flow rate resulting from an hourly rainfall intensity of 0.2 inch per hour. The Design Flow Rate will depend on the types of post-development surfaces on the site. Flow-based BMP designs can only be used when implementing conventional Treatment Control BMPs.
Design Storm	The 85th percentile 24-hour storm depth, based on local historical rainfall records. See Exhibit A of the SMR WQMP.
Development Project	Any project that proposes construction, rehabilitation, redevelopment, or reconstruction of any public or private residential, industrial or commercial facility, or any other projects designed for post-construction human activity or occupation.
Directly Connected	Any impervious surface which drains into a catch basin, area drain, or other conveyance structure (such as a street) without first directing the flow across pervious areas (e.g., lawns).
Discretionary Approval	A project which requires the exercise of judgment or deliberation by the public agency or body when they decide to approve or disapprove a particular activity. Discretionary approvals are distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances or regulations. **Check with the Copermittee to determine if a particular action is considered Discretionary.**
Drainage Management Area (DMA)	Individual, discrete drainage areas that typically follow grade breaks and roof ridge lines

Glossary

Name	Definition
Drawdown Time	The time required for a detention or retention BMP to drain and return to the dry-weather condition. For detention BMPs, Drawdown Time is a function of basin volume and outlet orifice size. For infiltration BMPs, Drawdown Time is a function of basin volume and infiltration rate. For Harvest and use BMPs, Drawdown Time is a function of the cistern volume and the demand for use of captured stormwater.
Dry Season	May 1st through September 30th
Dry Weather	Weather is considered dry if the preceding 72 hours has been without precipitation.
DU	Dwelling Unit
EIATIA	Effective Impervious Area To Irrigated Area that would be required to achieve the minimum 40% long-term retention of runoff when harvesting stormwater runoff for outdoor irrigation. See Section 2 of the SMR WQMP.
EIR	Environmental Impact Report
Emergency Situation	IC/IDs that pose an immediate threat to human health or the environment. Any sewage spill over 1,000 gallons or that could impact water recreation, any spill that could impact wildlife, any Hazardous Material spill where residents are evacuated, any spill of reportable quantities of Hazardous Waste (as defined by 40 CFR 117 and 40 CFR 302), or any other spill reportable to the California Emergency Management Agency (Cal-EMA, formerly known as the Office of Emergency Services or OES) is classified as a threat to human health or the environment.
Ephemeral	Water bodies, or segments thereof, that contain water only for a short period following precipitation events.
Erosion	When land is diminished or worn away due to wind, water or glacial ice. Often the eroded debris (silt or sediment) becomes a Pollutant via Stormwater Runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building and timber harvesting.
ESA	Environmentally Sensitive Area. At minimum, as defined in the 2010 MS4 Permit, all Receiving Waters are considered ESAs.
Evapotranspiration	The process of transferring moisture from the earth to the atmosphere by evaporation of water and transpiration from plants.
Facility Pollution Prevention Plan (FPPP)	A plan that the Copermittee maintains that describes the BMPs that are implemented at their municipal facilities to reduce stormwater pollution to the MEP and prohibit illegal discharges.
Final Project-Specific WQMP	A fully completed version of the Water Quality Management Plan that must be submitted and approved prior to recordation of the final map, parcel map or issuance of building permit. See also Preliminary Project-Specific WQMP.

Glossary

Name	Definition
General Plan	Document that specifies policies that guide development.
Harvest and Use BMPs	Stormwater BMPs that capture stormwater runoff in a vault or cistern, and stores that water for later use, such as for irrigation.
Hazardous Materials	Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by the USEPA in 40 CFR 116 to be reported if a designated quantity of the material is spilled into the Waters of the U.S. or emitted into the environment.
Hazardous Waste	As defined by 40 CFR 117 and 40 CFR 302
Head	In hydraulics, energy represented as a difference in elevation. In slow-flowing open systems, such as most stormwater BMPs, this is the difference in water surface elevation, e.g., between an inlet and outlet.
Hydrograph	Runoff flow rate graphed as a function of time.
Hydrologic Soil Group (HSG)	Classification of soils by the NRCS into A, B, C and D groups according to infiltration characteristics.
Hydromodification	The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport.
Hydromodification Management Plan (HMP)	A Plan that, once developed by the Copermittees, will specify requirements that must be implemented so that projects will not cause Hydromodification.
Illegal Discharge	Defined in 40 CFR 122.26(b)(2) as any discharge to the MS4 that is not composed entirely of stormwater, except discharges pursuant to an NPDES permit, discharges that are identified in Section 4.1.2 of the JRMP, and other discharges authorized by the Executive Officer of the Regional Board.
Illicit Connection	Any unauthorized connection to the MS4 that conveys an Illicit Discharge
Impairment	Describes a condition where a waterbody is presumed by the Regional Board to not be supporting its Beneficial Uses, based on exceedances of certain water quality objectives..
Impervious Area	
Impervious surface	Any surface in the landscape that cannot effectively absorb or infiltrate urban runoff; for example, conventionally paved: sidewalks, rooftops, roads and parking areas.
Implementation Agreement	An agreement among the Copermittees that establishes the responsibilities of each Copermittee and a procedure for funding the shared costs.

Glossary

Name	Definition
Industrial Facility	Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including: those subject to the General Industrial Permit or other individual NPDES permit; Operating and closed landfills; Facilities subject to SARA Title III; and Hazardous waste treatment, disposal, storage and recovery facilities.
Infiltration BMPs	A type of LID Retention BMP where the primary treatment mechanism is through seepage of runoff into a site's underlying soil.
Infiltration Rate	Rate at which water can be added to a soil without creating runoff (in/hr).
Infraction	Violation
Integrated Pest Management (IPM)	A decision-making process for managing pests that combines biological, cultural, mechanical, physical and chemical tools, and other management practices to control pests in a safe, cost effective and environmentally sound manner that contributes to the protection of public health
Intermittent	Waterbodies, or segments thereof, that contain water for extended periods during the year, but not at all times.
JRMP	Jurisdictional Runoff Management Plan
JRMP Annual Report	Report summarizing a Copermittee's compliance information to be submitted annually to the Regional Board on or before each October 31st of each year, beginning on October 31, 2013. The reporting period for these JRMP Annual Reports must be the previous fiscal year.
LID BMPs	LID BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the Pollution of Waters of the United states through Stormwater management and land development strategies that emphasize conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. LID BMPs include retention practices that do not allow Runoff, suchas infiltration, rain water harvesting and reuse, and evapotranspiration. LID BMPs also include flow-through practices such as biofiltration that may have some discharge of Stormwater following Pollutant reduction.
LID Principles	LID Principles are Site Design concepts that help prevent or minimize the causes (or drivers) of project impacts, and help mimic the pre-development hydrology. Implementing LID Principles will help minimize the need for specific Stormwater BMPs on a project.

Glossary

Name	Definition
LID Retention BMP	A type of Stormwater BMP that is designed to store the Design Capture Volume, and avoid any discharge to downstream systems in storms up to the Design Storm. For the purposes of this WQMP, LID Retention BMPs include Infiltration BMPs, Harvest and Use BMPs, Pervious Pavement BMPs and Bioretention BMPs. See also Other LID BMPs
Low Impact Development (LID)	A stormwater management and land development strategy that emphasizes conservation and the use of onsite natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.
Major Outfall	Outfalls owned by a Copermittee with a pipe diameter of 36 inches or greater or drainage areas draining 50 acres or more. See also **Outfall.**
Maximum Extent Practicable (MEP)	Standard, established by the 1987 amendments to the Clean Water Act, for the reduction of Pollutant discharges from MS4s.
Misdemeanor	A crime less serious than a felony.
Mobile Business	Businesses that conduct services listed in section 8.1.1 but do not operate out of a fixed location.
Municipal Facility	A facility owned by a Copermittee
Municipal Separate Storm Sewer System (MS4)	A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains) as defined in 40 CFR 122.26(b)(8).
National Pollutant Discharge Elimination System (NPDES)	As part of the 1972 Clean Water Act, Congress established the NPDES permitting system to regulate the discharge of Pollutants from municipal sanitary sewers and industries. The NPDES was expanded in 1987 to incorporate permits for discharges from MS4s as well (aka MS4 Permits).
Non-Hazardous Materials	For example, food wastes, trash and debris
Non-Jurisdictional IC/ID	An IC/ID originating from a property over which the Copermittee has no applicable jurisdictional authority such as a special district (e.g., school, water, wastewater), federal, state, or tribal property.
Non-Stormwater	All discharges to and from an MS4 that do not originate from precipitation events (i.e., all discharges from an MS4 other than Stormwater). Non-Stormwater includes Illicit Discharges, non-prohibited discharges, and NPDES permitted discharges.

Glossary

Name	Definition
Non-Stormwater Action Levels	This Order includes action levels for pollutants in non-stormwater, dry weather discharges from the MS4. The non-stormwater action levels are designed to ensure that the Order's requirement to effectively prohibit all types of unauthorized discharges of non-stormwater into the MS4 is being complied with. Non-stormwater action levels in the Order are based upon numeric or narrative water quality objectives and criteria as defined in the Basin Plan, the State Water Board's Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (State Implementation Policy or SIP). An exceedance of an action level requires specified responsive action by the Copermittees. This Order describes what actions the Copermittees must take when an exceedance of an action level is observed. Exceedances of non-stormwater action levels do not alone constitute a violation of this Order but could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-stormwater discharges into the MS4 or other prohibitions established in this Order. Failure to undertake required source investigation and elimination action following an exceedance of a non-stormwater action level (NAL or action level) is a violation of this Order. The San Diego Water Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-stormwater discharges because there may be some discharges in which pollutants do not exceed established action levels. However, establishing NALs at levels appropriate to protect water quality standards is expected to lead to the identification of significant sources of pollutants in dry weather non-stormwater discharges.
Non-Structural BMPs	See LID Principles
Notice of Noncompliance	The Notice of Noncompliance constitutes a basic request that the property owner or facility operator rectify the condition causing or threatening to cause noncompliance
NRCS	Natural Resources Conservation Service
O&M	Operation and Maintenance. All BMPs implemented as part of a WQMP must continue to be operational and must be maintained throughout the life of the project.
Operational Source Control BMPs	Source Control programs or activities implemented by a site operator to prevent pollution. Examples include regular sweeping of parking lots and other 'housekeeping' efforts.
Other Development Projects	All Discretionary Development Projects that are not categorized as Priority Development Projects.

Glossary

Name	Definition
Other LID BMPs	Stormwater BMPs that incorporate features that provide for natural biological processes while maximizing opportunities for Infiltration and Evapotranspiration. These are distinguished from **LID Retention BMPs**, with the latter being BMPs that, in addition to the above features, are also designed to retain stormwater runoff.
Outfall	Means a Point Source as defined by 40 CFR 122.2.a, the point where a municipal separate storm sewer discharges to Waters of the U.S. and does not include open conveyances connecting two municipal separate storm sewers, pipes, tunnels or other conveyances which connect segments of the same stream or other Waters of the U.S. and are used to convey waters of the U.S. [40 CFR 122.26(b)(9)].
Permanent Source Control BMP	A type of source control BMP that is a structural part of the site, such as roofs and berms over and around trash and recycling areas.
Permeable or Pervious or Porous Pavements	Pavements for roadways, sidewalks, or plazas that are designed to infiltrate runoff *through* the pavement. Types of Permeable Pavements include pervious concrete, pervious asphalt, porous pavers and granular materials.
Pollutant	Any agent that may cause or contribute to the degradation of water quality such that a condition of Pollution or Contamination is created or aggravated.
Pollutant of Concern	Pollutants for which water bodies are listed as impaired under CWA Section 303(d), pollutants associated with the land use type of a development, and/or pollutants commonly associated with runoff.
Pollution Prevention BMP	Practices that reduce or eliminate the generation of Pollutants.
Pre-Development	Conditions that would exist naturally.
Preliminary Project-Specific WQMP	A preliminary project-specific WQMP is commonly required to be submitted with an application for entitlements and development approvals and must be approved by the Copermittee before any approvals or entitlements will be granted.
Priority Development Project	Development Projects that meet the categories and criteria identified in Table 1-1 (see 2010 SMR MS4 Permit, item F.1.d.).
Priority Pollutant of Concern	Pollutants that are associated with a proposed project and are listed as impaired under CWA Section 303(d).
Project-Specific WQMP	A plan specifying and documenting permanent LID Principles and Stormwater BMPs to control post-construction Pollutants and stormwater runoff for the life of the project, and to maintain Stormwater BMPs for the life of the project. Copermittees may require a preliminary Project-Specific WQMP submittal, to be followed by a final Project-Specific WQMP.
Proprietary Stormwater BMPs	Products designed and marketed by private businesses for treatment of stormwater.
Rainy Season	October 1st through April 30th

Glossary

Name	Definition
Rational Method	A method of calculating runoff flows based on rainfall intensity, tributary area, and a coefficient representing the proportion of rainfall that runs off. In the Rational Method Q=C*I*A as further described in Section 2 of the WQMP.
Receiving Water	Any water body that is identified in the San Diego Basin Plan. The San Diego Basin Plan is available from the San Diego Regional Board's website at www.waterboards.ca.gov/sandiego.
Redevelopment	A Development Project that involves the creation, addition and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.
Regional Water Quality Control Board (or Regional Board)	Regional Boards are responsible for implementing Pollution control provisions of the CWA and California Water Code within their jurisdiction. There are nine Regional Boards in California. The Regional Boards issued the 2010 MS4 Permit to the Copermittees on November 10, 2010.
Retrofit	Programs and projects to address the impacts of existing development through reducing the impacts from hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.
Runoff	All flows in a stormwater conveyance system that consists of the following components: (1) stormwater (wet weather flows) and (2) non-stormwater including dry weather flows.
Runoff Management Plan	A site-specific plan identifying BMPs to manage the quality and quantity of runoff from a project site.
Santa Margarita Region (SMR)	The portion of Riverside County covered by Order R9-2010-0016, an NPDES MS4 Permit issued by the Santa Diego Regional Board.
Sedimentation	The action or process of forming or depositing sediment.
Self-treating area	Natural or landscaped area (as described in Section 3.3 of the WQMP) that drains offsite without comingling with developed portions of the site.
Site Design	See **LID Principles**.

Glossary

Name	Definition
Source Control BMP	A facility or procedure to prevent Pollutants from coming into contact with rainfall and/or runoff.
Stop Work Order or Cease and Desist Order	As used in the JRMP, an order from a Copermittee to stop a particular activity.
Stormwater	Per 40 CFR 122.26(b)(13), means stormwater runoff, snowmelt runoff, and surface runoff and drainage. Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.
Stormwater Action Level	SALs were computed as the 90th percentile of the data set, utilizing the statistical based population approach, one of three approaches recommended by the State Water Board's Storm Water Panel in its report 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006)". SALs are identified in Section D of the 2010 SMR MS4 Permit. Copermittees must implement a timely, comprehensive, cost-effective stormwater pollution control program to reduce the discharge of pollutants in stormwater from the permitted areas so as not to exceed the SALs. Exceedance of SALs may indicate inadequacy of programmatic measures and BMPs required in this Order.
Stormwater Ordinance	The ordinance or set of ordinances that are consistent with the Legal Authorities described in section 3.4 of this JRMP.
Stormwater Pollutant	A Pollutant associated with Stormwater.
Stormwater Pollution Prevention Plan (SWPPP)	A plan providing for temporary measures to control sediment and other Pollutants *during* construction. In contrast with the WQMP which is a plan to reduce pollutant in runoff during the post-construction use and life of the project.
Structural Stormwater BMPs	Structural Post-Construction BMPs that are designed to address stormwater runoff impacts from the completed site, and throughout the use and life of the project.. Stormwater BMPs consist of LID Principles, LID BMPs, Conventional Treatment BMPs, Hydromodification BMPs, and Permanent Source Control BMPs.
Total Maximum Daily Load (TMDL)	A TMDL is the maximum amount of a Pollutant that can be discharged into a waterbody from all sources (point and non-point) and still maintain Water Quality Standards. Under CWA Section 303(d), TMDLs must be developed for all waterbodies that do not meet Water Quality Standards after application of technology-based controls.
Toxicity	Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.
Treatment Control BMP	Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological or chemical process.

Glossary

Name	Definition
TUTIA	Toilet Users To Impervious Area ratio, that would be required to achieve the minimum 40% long-term retention of runoff when harvesting stormwater runoff for toilet use. See Chapter 2 of the WQMP.
Unpaved Road	A long, narrow stretch without pavement used for traveling by motor passenger vehicles between two or more points. Unpaved roads are generally constructed of dirt, gravel, aggregate or macadam and may be improved or unimproved.
Waste	As defined in CWC Section 13050(d), "waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal."
Waste Discharge Requirements	As defined in Section 13374 of the California Water Code, the term "Waste Discharge Requirements" is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board usually reserves reference to the term "permit" to Waste Discharge Requirements for discharges to surface Waters of the U.S.
Water Quality Management Plan (WQMP, or SMR WQMP)	Referred to as a Standard Stormwater Mitigation Plan (SSMP) in the 2010 SMR MS4 Permit. This is a plan to reduce the discharge of pollutants to the MEP from the post-construction use and life of a project.

Glossary

Name	Definition
Water Quality Objectives	Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water. [California Water Code Section 13050 (h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans. Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a receiving water and still generally ensure that the beneficial uses of the receiving water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne's definition of pollution. A condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are the reasons why all waste discharge requirements implementing the Federal NPDES regulations require compliance with water quality objectives. (Water quality objectives are also called water quality criteria in the CWA.)
Water Quality Standards	The beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.) of water and the Water Quality Objectives necessary to protect those uses.

Glossary

Name	Definition
Waters of the U.S.	As defined in the 40 CFR 122.2, the Waters of the U.S. are defined as: "(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water
Wet Season	October 1st to April 30th
Wet Weather	Weather is considered wet if precipitation measuring over 0.10 inches has been received during the preceding 72 hours.

Table B-1. JRMP Departmental Responsibilities

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
3.0 Program Management	3.1 – Departmental Responsibilities – Maintain matrix	Public Works Department	NPDES Engineer
	3.2 – Cooperative Activities	Public Works Department	NPDES Engineer
	3.3 – Fiscal Analysis {H}	Public Works Department	NPDES Engineer
	3.4 – Legal Authority{E.}	Public Works Department	NPDES Engineer
	3.5 – Enforcement/Compliance Strategy	Public Works Department	NPDES Engineer
	3.6 – Receiving Water Limitations{A.}	Public Works Department	NPDES Engineer
	3.7 – Program Reporting, Evaluation and Revision {J., K., L}	Public Works Department	NPDES Engineer
4.0 Elimination of Illicit Connections and Illegal Discharges {F.4}	4. 1.1 Prohibited Discharges {A.1., 2}	Public Works Department	NPDES Engineer
	4.2.1 Legal Authority {E.}	Public Works Department	NPDES Engineer
	4.2.2 Connections to MS4 Facilities	Maintain Inventory & Map - Public Works Department	NPDES Engineer
	4.2.3 Inspections	Public Works Department	1) Inspectors 2) NPDES Engineer
	4.2.4 Maintain MS4 Facility Map{F.4.b.}	Public Works Department	1) Senior Land Development Engineer 2) NPDES Engineer
	4.2.5 Public Reporting of IC/IDs	1) RCFC (1-800 Hotline) 2) Public Works Department	1) RCFC NPDES Department 2) NPDES Engineer 3) Maintenance Superintendent

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
	4.2.6 Dry Weather Field Screening	Public Works Department	NPDES Engineer
	4.2.7 Waste Collection Programs	1) RCFC (regional collection programs) 2) Temecula Community Services Dept (city-wide collection programs)	1) RCFC NPDES Department 2) Temecula Community Services Department Director
	4.3.1 MS4 Facility Inspections {F.4.e}	Public Works Department	1) Maintenance Superintendent 2) Inspectors 3) NPDES Engineer
	4.3.2 Public IC/ID Reports {F.4.c}	Public Works Department	1) Maintenance Superintendent 2) Inspectors 3) NPDES Engineer
	4.3.3 IC/ID Construction Site Inspections {F.1.e.(6)(d); F.2.e}	1) Public Works Department 2) Building and Safety Department	1) Inspectors 2) Building and Safety Inspectors
	4.3.4 IC/ID Industrial / Commercial Facilities Inspections {F.3.b.(4)(vi)}	Public Works Department	1) Inspectors 2) NPDES Engineer
	4.3.5 IC/ID Monitoring Activities {Attachment E. II.C}	Public Works Department	NPDES Engineer
	4.3.6 Non-Jurisdictional IC/IDs	Public Works Department	NPDES Engineer (for notifications)
	4.4 IC/ID Response and Reporting {F.4}	Public Works Department (Initial Investigation)	1) Inspectors 2) NPDES Engineer 3) Maintenance Superintendent
		Public Works Department (Source Investigation)	1) Inspectors 2) NPDES Engineer 3) Maintenance Superintendent
		Public Works Department (Elimination)	1) Inspectors 2) NPDES Engineer 3) Maintenance Superintendent
	4.4.5 Sanitary Wastes F.4.h}	Portable Toilets – Code Enforcement	Code Enforcement Staff
		Failing Septic Systems – Code Enforcement	Code Enforcement Staff

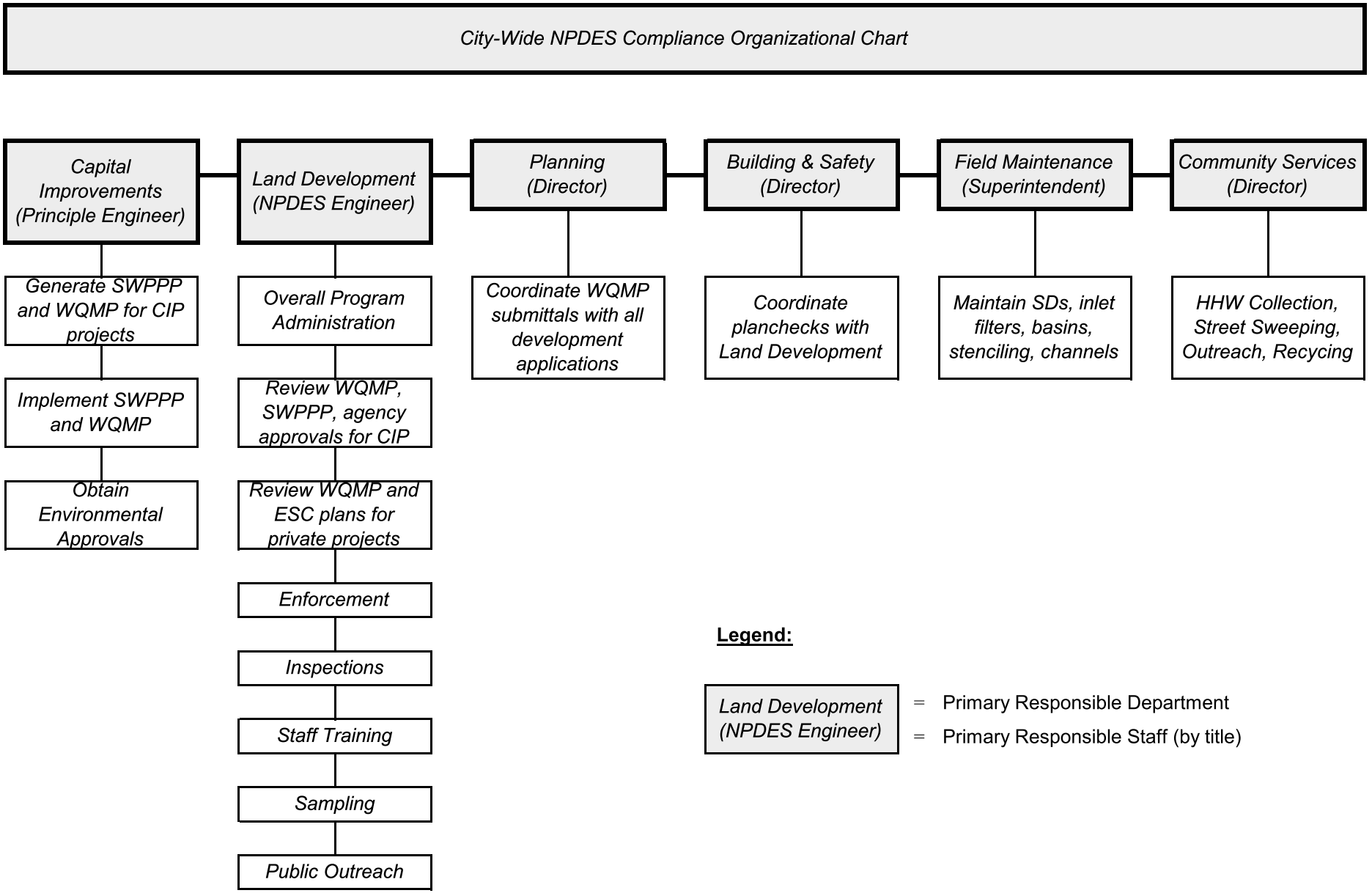
Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
5.0 Permittee Facilities and Activities {F.3.a}	5.1 Planning Facilities {F.1}	Planning Department Public Works Department	Director of Planning Director of Public Works
	5.1.1 - Public Works Priority Development Projects {F.1.d}	Public Works Department (Review WQMP Applicability Checklist)	Principle Engineer - CIP
	5.1.2 – Public Works Transportation Projects F.1.d.(2)(g)}	Public Works Department	Principle Engineer - CIP
	5.1.3 Public Works Unpaved Roads {F.1.i}	Public Works Department	Principle Engineer - CIP
	5.1.4 Design of Flood Control Projects {F.3.a.(4)(a)	Public Works Department	Principle Engineer - CIP
	5.1.5 Other public works projects {	Public Works Department	Principle Engineer – CIP
	5.2 – Permittee Construction Activities {F.2.}	Submit PRDs - Public Works Department	Principle Engineer – CIP
		Prepare Construction SWPPP – Public Works Department	Principle Engineer – CIP
		Notify Executive Officer of Non Compliance – Public Works Department	Principle Engineer – CIP
		Conduct monitoring – Public Works Department	Principle Engineer – CIP
		Submit NOT – Public Works Department	Principle Engineer – CIP
	5.3 – Operation & Maintenance of Permittee Areas & Activities {F.3.a.}	Public Works Department	1) Maintenance Superintendent 2) Inspectors 3) NPDES Engineer
	5.3.1 Source Identification/ Inventory {F.3.a.(1)}	Public Works Department	NPDES Engineer
	5.3.2 Typical Minimum BMPs {F.3.a.(2)(b)}	Public Works Department	NPDES Engineer
	5.3.3.1 Special Event BMPs {F.e.a(2)(c)}	Public Works Department	1) Permit Engineer 2) NPDES Engineer
	5.3.3.2 Fire BMPs {B.3.a.}	Non-emergency BMPs - Fire Department	Fire Marshal

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
		NOI for De Minimus Permit – Fire Department	N/A
	5.3.3 BMPs for Activities {F.3.a.(a)(2)(b)}	Public Works Department	1) Maintenance Superintendent 2) Inspectors 3) NPDES Engineer
	5.3.5 Maintenance of MS4 facilities and treatment control BMPs {F.3.a.(6)}	Public Works Department	1) Maintenance Superintendent 2) Inspectors 3) NPDES Engineer
	5.4 Annual Inspection {F.3.A.(8)}	Public Works Department	1) Maintenance Superintendent 2) Inspectors 3) NPDES Engineer
	5.5 Enforcement of Municipal Areas and Activities {F.3.a.(9)}	Public Works Department	1) Inspectors 2) NPDES Engineer
6.0 Development Planning {F.1}	6.2 General Plan {F.1.a}	Planning Department	Director of Planning
	6.3.2 LID Barriers Review {{F.1.d.(4)(a)}	Public Works Department	NPDES Engineer
	6.6.2 Approval Process Criteria and Requirements for All Development Projectsl {F.1.c.}	Planning Department	Director of Planning
	6.6.3 Identify Priority Development Projects {F.1.d.(1) & (2)}	Public Works Department	NPDES Engineer
	6.6.4 Conditions of Approval (NPDES COAs)	Public Works Department	NPDES Engineer
	6.6.5 Review Preliminary Project-Specific WQMPs{F.1.d.(9)(a)}	Public Works Department	NPDES Engineer
	6.6.6 Review and Approval of Final Project-Specific WQMPs {F.1.d.(9)(a)}	Public Works Department	NPDES Engineer
	6.6.7 Requirements for Other Development Projects	Planning Department	Director of Planning

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
	6.6.8 Unpaved Roads Development	Public Works Department	NPDES Engineer
	6.6.9 Plan Check: Issuance of Grading or Building Permits	Public Works Department	Senior Land Development Engineer
	6.7 Field Verify BMPs & Permit Closeout {F.1.e.}	Public Works Department	1) Inspectors 2) NPDES Engineer
	6.7.2 BMP Maintenance Tracking {F.1.f.}	Public Works Department	1) Inspectors 2) NPDES Engineer
	6.8 Structural Post-Construction BMP Database and Maintenance Verification {F.1.f}	Public Works Department	1) Inspectors 2) NPDES Engineer
	6.8.4 Change of Ownership Recordation {F.1.d.(9)(b)}	Public Works Department	NPDES Engineer
	6.9 Enforcement for Development {F.1.g}	Public Works Department	1) Inspectors 2) NPDES Engineer
7.0 Private Development Construction {F.2.}	7.1 Source Identification/Inventory {F.2.b}	Public Work Department	1) Inspectors 2) NPDES Engineer
	7.2 Construction Site Planning and Project Approval Process {F.2.c.}	Public Work Department	1) Inspectors 2) NPDES Engineer
	7.3 Construction Site BMP Implementation {F.2.d.}	Public Work Department	1) Inspectors 2) NPDES Engineer
	7.4 Construction Site Inspection {F.2.e.}	Public Work Department	1) Inspectors 2) NPDES Engineer
	7.5 Construction Enforcement {F.2.f.}	Public Work Department	1) Inspectors 2) NPDES Engineer
	7.6 Reporting of Non-Compliant Sites {F.2.g.}	Public Work Department	1) Inspectors 2) NPDES Engineer
8.0 Industrial and Commercial Sources {F.3.b.}	8.1 Industrial/Commercial Database {F.3.b.(1)}	Public Works Department	1) Inspectors 2) NPDES Engineer
	8.2 General BMP Implementation {F.3.b.(2)}	Public Works Department	1) Inspectors 2) NPDES Engineer

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
	8.3 Mobile Business Program {F.1.b.(3)}	Public Works Department	1) Inspectors 2) NPDES Engineer
	8.4 Industrial/Commercial Inspections {F.3.b.}	Public Works Department	1) Inspectors 2) NPDES Engineer
	8.4.6 Industrial/Commercial Enforcement {F.1.d.(5)}	Public Works Department	1) Inspectors 2) NPDES Engineer
	8.4.7 Reporting of Non-Compliant Sites {F.1.d.(6)}	Public Works Department	1) Inspectors 2) NPDES Engineer
9.0 Residential Sources {F.1.c.}	9.3 Designated BMPs {F.3.c.(2)(b)}	Public Works Department	1) Inspectors 2) NPDES Engineer
	9.4 Household Waste Management {F.3.c.(2)(c)}	Public Works Department	1) Inspectors 2) NPDES Engineer
	9.5 Common Interest Areas/ Homeowner Association Areas / and Mobile Home Parks {F.3.c.(4)}	Public Works Department	1) Inspectors 2) NPDES Engineer
	9.6 Residential Enforcement {F.3.c.(3)}	Public Works Department	1) Inspectors 2) NPDES Engineer
10.0 Retrofitting Existing Development {F.3.d.}	10.1 Identification of Conditions of Concern {{F.3.d.(1)}	Public Works Department	NPDES Engineer
	10.2 Source Assessment & Identification {F.3.d.(2)}	Public Works Department	NPDES Engineer
	10.3 Identification of Candidate Areas for Retrofitting {F.3.d.(2)}	Public Works Department	NPDES Engineer
	10.4 Prioritization of Candidate Areas for Retrofitting {F.3.d.(2)}	Public Works Department	NPDES Engineer
	10.5 Prioritizing Retrofitting Work Plans 10.3 {F.3.d.(3)}	Public Works Department	NPDES Engineer
	10.6 Private Retrofitting Projects {F.3.d.(4)}	Public Works Department	NPDES Engineer

Program Element	JRMP Section {Permit reference}	Primary Responsible Department	Responsible Staff (Name or Title as appropriate)
	10.7 Tracking Retrofit BMPs {F.3.d.(5)}	Public Works Department	NPDES Engineer
	10.8 Regional Mitigation Projects {F.3.d.7)}	Public Works Department	NPDES Engineer
11.0 Education {F.6.}	11.1 Target Audiences	1) RCFC (regional) 2) Public Works Department	1) RCFC NPDES Department 2) NPDES Engineer
	11.2 Residential and General Public F.6.b.(4)}	Public Works Department	NPDES Engineer
12.0 Copermittee Staff Training	Copermittee Staff	RCFC&WCD	NPDES Engineer
13.0 Monitoring Program {N}	13.2 NALs {C}	Public Works Department	NPDES Engineer
	13.3 SALs {D}	Public Works Department	NPDES Engineer


City-Wide NPDES Compliance Organizational Chart
Capital Improvements (Principle Engineer)
Land Development (NPDES Engineer)
Planning (Director)
Building & Safety (Director)
Field Maintenance (Superintendent)
Community Services (Director)
Generate SWPPP and WQMP for CIP projects
Implement SWPPP and WQMP
Obtain Environmental Approvals
Overall Program Administration
Review WQMP, SWPPP, agency approvals for CIP
Review WQMP and ESC plans for private projects
Enforcement
Inspections
Staff Training
Sampling
Public Outreach
Coordinate WQMP submittals with all development applications
Coordinate planchecks with Land Development
Maintain SDs, inlet filters, basins, stenciling, channels
HHW Collection, Street Sweeping, Outreach, Recycing
Legend:
Land Development (NPDES Engineer)
= Primary Responsible Department
= Primary Responsible Staff (by title)

AGREEMENT

National Pollutant Discharge Elimination System
Stormwater Discharge Permit
Implementation Agreement
San Diego Region

(Santa Margarita Drainage Area)

This Implementation Agreement ("Agreement"), entered into by the RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT (the "DISTRICT"), the COUNTY OF RIVERSIDE (the "COUNTY"), and the CITIES OF MURRIETA, TEMECULA and WILDOMAR (the "CITIES"), collectively referred to as "COPERMITTEES" and sometimes also referred to as "Parties", individually each as "Party", establishes the responsibilities of each Party concerning the implementation of and compliance with the National Pollutant Discharge Elimination System ("NPDES") Municipal Separate Storm Sewer System ("MS4") Discharge Permit issued by the California Regional Water Quality Control Board – San Diego Region (CRWQCB-SDR) pursuant to Order No. R9-2010-0016 (the "NPDES Permit").

RECITALS

WHEREAS, Congress in 1987 added Section 402(p) to the Federal Clean Water Act ("CWA") (33 U.S.C.§1342(p)); and

WHEREAS, Section 402(p) of the CWA requires certain municipalities to obtain NPDES Permits in order to discharge stormwater from MS4s to waters of the United States; and

WHEREAS, Section 402(p) of the CWA requires operators of certain industrial facilities to obtain NPDES permits for stormwater discharges associated with designated industrial activities, including construction activities; and

WHEREAS, Section 402(p) further requires the United States Environmental Protection Agency ("EPA") to promulgate regulations for NPDES permit applications; and

WHEREAS, EPA adopted such regulations in November 1990; and

WHEREAS, EPA delegated authority to the California State Water Resources Control Board ("SWRCB") to administer the NPDES permit process within the boundaries of the State of California; and

WHEREAS, SWRCB has in turn delegated its NPDES permitting authority to the California Regional Water Quality Control Boards to administer the NPDES permit process within the boundaries of their respective regions; and

WHEREAS, the jurisdiction of the CRWQCB-SDR includes that portion of Riverside County known as the Santa Margarita Region; and

WHEREAS, DISTRICT was created to provide for, among other things, the control of flood and stormwaters within the County of Riverside and is empowered to investigate, examine, measure, analyze, study and inspect matters pertaining to flood and stormwaters; and

WHEREAS, on January 15, 2009, DISTRICT, COUNTY and CITIES submitted a Report of Waste Discharge as an application to renew NPDES Permit No. CAS0108766; and

WHEREAS, the application for renewal of the NPDES Permit was submitted in accordance with the provisions of the previous NPDES permit (Order No. R9-2004-001) which expired on July 14, 2009; and

WHEREAS, on November 10, 2010, the CRWQCB-SDR adopted Order No. R9-2010-0016 to serve as Waste Discharge Requirements in accordance with Section 13263(a) of the California Water Code and as an NPDES permit pursuant to Section 402(p) of the CWA; and

WHEREAS, the NPDES Permit meets or exceeds the requirements of Section 402(p)(3)(B) of the CWA; and

WHEREAS, the NPDES Permit designates the DISTRICT, COUNTY and CITIES as COPERMITTEES; and

WHEREAS, the NPDES Permit requires designation of a "Principal Copermittee", and DISTRICT, COUNTY and CITIES have agreed that DISTRICT will serve as Principal Copermittee for the term of the NPDES Permit; and

WHEREAS, the Parties believe that cooperation between COPERMITTEES in the administration and implementation of the NPDES Permit is in the best interest of COPERMITTEES; and

WHEREAS, the NPDES Permit provides that the COPERMITTEES collaborate

in the development and implementation of various requirements of the NPDES Permit; and

WHEREAS, DISTRICT is willing to utilize its staff to coordinate the activities of COPERMITTEES to facilitate compliance with the NPDES Permit and CWA requirements; and

WHEREAS, DISTRICT established the Santa Margarita Watershed Benefit Assessment Area (the "BENEFIT ASSESSMENT") pursuant to District Ordinance 14 on May 14, 1991 to offset the DISTRICT'S program and administrative costs associated with the development, implementation and management of the Federally-mandated NPDES Program and DISTRICT is willing to use BENEFIT ASSESSMENT funds to support the DISTRICT's role as Principal Permittee and to support regional program costs to the extent that BENEFIT ASSESSMENT funds are available and can be used for regional programs; and

WHEREAS, COPERMITTEES are to perform and/or execute certain activities prescribed in the NPDES Permit that will benefit all COPERMITTEES.

NOW, THEREFORE, the Parties do mutually agree as follows:

1. Incorporation of the NPDES Permit. The NPDES Permit is hereby incorporated by reference in its entirety and made a part of this Agreement as Exhibit "A".

2. Delegation of Responsibilities. The responsibilities of each of the COPERMITTEES under the NPDES Permit are reiterated below in subsections 2.a. and 2.b. Additional delegated responsibilities of the Parties under this Agreement to implement and/or comply with the NPDES Permit are set forth below in subsections 2.c. through 2.h.:

a. DISTRICT shall:

(1) Comply with Section M (Principal Copermittee Responsibilities), including coordinating the development of updates and reports on programs required under the NPDES Permit that are jointly required of each COPERMITTEE, including the Watershed Water Quality Workplan ("Watershed Workplan"), Standard Storm Water Mitigation Plan ("SSMP"), Hydromodification Management Plan ("HMP"), a model Jurisdictional Runoff

Management Plan ("JRMP"), the Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016, and any other reports prepared by the DISTRICT on behalf of the COPERMITTEES as required by Sections K.1 and K.2 of the NPDES Permit. DISTRICT will provide COUNTY and CITIES an opportunity to participate in the development and review of, and comment on, such programs, plans and reports prior to submittal to the CRWQCB-SDR.

(2) Comply with Sections A through P (Prohibitions and Receiving Water Limitations, Non-Stormwater Discharges, Non-Stormwater Dry Weather Action Levels, Stormwater Action Levels, Legal Authority, JRMP, Watershed Workplan, Fiscal Analysis, Total Maximum Daily Loads ("TMDLs"), Program Effectiveness Assessment and Reporting, Reporting, Modifications of Programs, Receiving Waters and MS4 Discharge Monitoring and Reporting Program, Standard Provisions, Reporting Requirements and Notifications, as well as Additional Provisions, respectively), as they pertain to pollutant discharges from DISTRICT owned and operated MS4 which are generated directly from or by DISTRICT facilities and operations, at no cost to COUNTY and CITIES.

b. COUNTY and CITIES, at no cost to DISTRICT, shall, for land area within their individual jurisdictions:

(1) Comply with Sections A through P (Prohibitions and Receiving Water Limitations, Non-Stormwater Discharges,

Non-Stormwater Dry Weather Action Levels, Stormwater Action Levels, Legal Authority, JRMP, Watershed Workplan, Fiscal Analysis, TMDLs, Program Effectiveness Assessment and Reporting, Reporting, Modifications of Programs, Receiving Waters and MS4 Discharge Monitoring and Reporting Program, Standard Provisions, Reporting Requirements and Notifications, as well as Additional Provisions, respectively), as they pertain to pollutant discharges from COUNTY/CITY owned and operated MS4, which are generated by jurisdictional land uses, facilities, and operations of the respective COUNTY and CITIES.

(2) Demonstrate compliance with NPDES Permit requirements through timely implementation of the JRMPs; any COPERMITTEE-specific elements of the Watershed Workplan and Monitoring and Reporting Program; and any approved modifications, revisions or amendments thereto.

(3) Provide to DISTRICT (on DISTRICT-provided forms) information needed to satisfy the reporting requirements as described in Sections G, N, and Provision III of Attachment E, or to respond to information requests from the CRWQCB-SDR. COUNTY and CITIES shall specifically:

(a) Submit data necessary to prepare updates to the Watershed Workplan to the DISTRICT no later than August 31st of each year.

(b) Submit any monitoring and sampling data individually collected pursuant to the MS4 Permit, to the DISTRICT at least quarterly as necessary for

DISTRICT to track and prepare reports under the Monitoring and Reporting Program. All applicable monitoring and sampling data individually collected within each fiscal year must be received by DISTRICT no later than August 15th of each year, for inclusion in the monitoring annual report that will be prepared and submitted by the District, pursuant to Section 2.e. herein.

(c) Provide one completed bound hard copy, and two electronic copies (PDF preferred) on CD or DVD, of the completed JRMP annual report to the DISTRICT no later than October 15th of each year.

(d) Provide information on existing MS4 facilities, "major outfalls" (as defined in the NPDES Permit) and/or other data as it pertains to facilities of the COUNTY or CITIES when requested by DISTRICT.

c. Public Education Program. On behalf of COPERMITTEES, DISTRICT shall conduct public education activities on a regional basis that focus on reducing pollution of urban runoff within the Santa Margarita Region, including, as appropriate, developing and disseminating broadcast, online and/or print outreach and advertising, developing brochures, and attending public events. DISTRICT shall also develop and implement mechanisms to determine the effectiveness of the regional public education program. The COUNTY and CITIES shall be individually responsible for developing and implementing any supplemental public education programs that may be necessary to target

individual communities or stakeholders within their respective jurisdictions, pursuant to Section F.6. of the NPDES Permit.

d. COPERMITTEE Training Program. On behalf of COPERMITTEES, and as requested by the COPERMITTEES, DISTRICT shall develop and conduct regional training sessions for COPERMITTEE personnel, covering the aspects of the programs developed by DISTRICT pursuant to Section 2.a.(1) of this AGREEMENT that are regionally uniform among COPERMITTEES. The COUNTY and CITIES shall be individually responsible for developing and implementing and reporting upon any supplemental training that may be necessary to ensure that their personnel are trained adequately regarding local policies and procedures for implementing the requirements of the NPDES Permit, pursuant to section F.6. of the NPDES Permit.

e. Monitoring Program. On behalf of the COPERMITTEES, DISTRICT shall perform sampling of surface water and urban runoff in accordance with the provisions of the NPDES Permit Monitoring and Reporting Program ("MRP"), Attachment E Provisions II.A and II.D-II.F, and prepare and submit Monitoring Reports in accordance with Provision III of Attachment E. The location of the sampling sites shall be determined by COPERMITTEES, subject to approval by CRWQCB-SDR. For Provision II.B. and II.C of the MRP, DISTRICT will coordinate with COPERMITTEES in developing a plan for identifying the list of outfalls to be sampled each year in accordance with the NPDES Permit, and COPERMITTEES shall be individually responsible for conducting outfall sampling, source identifications, and enforcement as necessary for their outfalls. The COPERMITTEES

may, subject to Section 3 herein, request the DISTRICT to conduct the initial outfall sampling required in Provisions II.B. and II.C. on behalf of the COPERMITTEES, however, all source identifications (including any follow-up sampling) and enforcement that may be required will remain the individual responsibility of the respective COPERMITTEES. The DISTRICT shall also enter into a contract with a local lab to provide analysis of water quality samples collected under the MRP. The contract shall be used strictly for water quality samples collected to comply with Provision II of the MRP. DISTRICT shall prepare and submit Monitoring Reports, as required by Provision III of Attachment E, based on data collected by the DISTRICT on behalf of the COPERMITTEES, and data provided to the DISTRICT by the COPERMITTEES in accordance with Section 2.b.(3)(b) of this Agreement.

f. Consultant Services. In the event DISTRICT requires the services of a consultant(s) to assist in performing duties conducted on behalf of the COPERMITTEES pursuant to Section 2 of this Agreement, the cost of said consultant(s) services shall be shared by COPERMITTEES in accordance with the cost sharing provisions set forth in Section 3 of this Agreement. COUNTY and CITIES shall be notified in writing of DISTRICTS request for proposals from one or more consultants, selection of a consultant, consultant's fee, contract timetable and payment schedule, and be allowed the opportunity to participate in decisions related to consultant's services. All consultant agreements are contingent upon the consulting firm's ability to meet DISTRICT standards and requirements, and where applicable approval by the DISTRICT'S

Board of Supervisors.

g. Support for Regional Programs. The COPERMITTEES shall jointly provide funding for certain regional efforts that benefit the Santa Margarita Region, including but not limited to: County Environmental Health's Compliance Assistance Program; the County Fire Department's Hazardous Materials Team; County Environmental Health's Household Hazardous Waste and Antifreeze, Batteries, Oil and Paint collection program; the DISTRICT'S membership with the California Stormwater Quality Association on behalf of COPERMITTEES; the DISTRICT'S administration of Principal Permittee duties, and other NPDES support activities as described in this Agreement, or as needed and agreed to by the COPERMITTEES. Where these programs are implemented countywide in support of other NPDES permit regions, the DISTRICT shall estimate the portion of the total cost of these regional programs that benefits the Santa Margarita Region.

h. Regulation and Enforcement. COUNTY and CITIES shall be responsible for the regulation and enforcement of local ordinances and regulations within their respective jurisdictions to ensure compliance with the NPDES Permit, and to prevent pollutants originating from within their respective jurisdictions from being discharged into the jurisdiction of another Party in a manner which could cause that Party to violate the NPDES Permit. This includes the exercise of police powers and land use controls and the enforcement of ordinances that COUNTY or CITIES presently have adopted or may adopt in the future.

3. Shared Costs. Costs for services to be performed in accordance with Sections 2.c., 2.d., 2.e. and 2.f. of this Agreement shall be shared by the Parties in accordance with the procedure specified below. In December of each year of this Agreement the DISTRICT shall:

a. Estimate the costs of services specified in Sections 2.c., 2.d., 2.e. of this Agreement and 2.f. for the upcoming fiscal year ("ESTIMATED COSTS");

b. Estimate the DISTRICT'S internal costs for developing, implementing and administering the NPDES program in the Santa Margarita Region as specified in 2.a. ("INTERNAL COSTS");

c. Estimate the revenues expected from the BENEFIT ASSESSMENT program ("ASSESSMENT REVENUES");

d. Determine actual costs for NPDES programs administered in the previous fiscal year; and

e. Determine Credits or Debits ("CREDITS" or "DEBITS") due to COUNTY and CITIES based on the difference of the actual contributions from the previous fiscal year with the actual contributions provided by the COUNTY and CITIES for that fiscal year.

By February 1st of each year of this Agreement, the DISTRICT, CITIES and COUNTY, through a NPDES representative assigned by the General Manager-Chief Engineer, City Managers, and County Executive Office, respectively, shall approve, by majority vote, ESTIMATED COSTS for the upcoming fiscal year.

3.1 DISTRICT Contribution

The DISTRICT contribution ("DISTRICT CONTRIBUTION") to programs specified in Sections 2.c., 2.d., 2.e., and 2.f. for the upcoming fiscal year shall be determined using the following formula:

DISTRICT CONTRIBUTION = ASSESSMENT REVENUES -

INTERNAL COSTS - 20% ASSESSMENT REVENUE. [1]

If the calculation yields a negative result, the DISTRICT shall have no contribution for the upcoming fiscal year other than the INTERNAL COSTS it has incurred.

3.2 COUNTY and CITIES Contribution

The total shared COUNTY and CITIES contribution (the "COMBINED CONTRIBUTION") shall be determined using the following formula:

COMBINED CONTRIBUTION = ESTIMATED COSTS - DISTRICT CONTRIBUTION.

The COUNTY'S and individual CITIES' respective pro rata share of the COMBINED CONTRIBUTION ("INDIVIDUAL CONTRIBUTION") shall be determined on the basis of an equally weighted average of population and Benefit Assessment Units within the Santa Margarita Region of Riverside County. More specifically, such percentage contribution shall be calculated as the equally weighted average of:

(a) The population of COUNTY or individual CITIES within the Santa Margarita Region, divided by the total population of the COUNTY and CITIES in the Santa Margarita Region and;

(b) The calculated number of Benefit Assessment Units ("BAU") for COUNTY or individual CITIES, divided by the total BAU for COUNTY and individual CITIES.

The INDIVIDUAL CONTRIBUTION shall be further adjusted by any CREDITS or DEBITS due from the previous fiscal year.

The population of CITIES shall be determined by the latest California State Department of Finance population figures issued in May of each year. COUNTY population shall be based on the most current Tax Rate Area ("TRA") information best fitting the Santa Margarita Region.

The BAU count of COUNTY and CITIES shall be estimated by comparing the most current TRA information best fitting the Santa Margarita Region with the Assessment

[1] District retains 20% of assessment revenue as a reserve for District's administrative and program costs associated with the NPDES Permit pursuant to RCFC&WCD Ordinance No. 14.

Rolls from the current fiscal year's BENEFIT ASSESSMENT Engineer's Report.

COUNTY and CITIES may generate credits toward payments due by providing labor or services in lieu of cash payments. DISTRICT shall determine value of labor or services based on ESTIMATED COSTS for the fiscal year.

DISTRICT shall invoice COUNTY and CITIES for INDIVIDUAL CONTRIBUTION at the beginning of each fiscal year and said invoice shall be due and payable by COUNTY and CITIES within 60 days of receipt of invoice from DISTRICT. The COMBINED CONTRIBUTION for COUNTY and CITIES shall not exceed $2,200,000 (two million, two hundred thousand dollars) annually under this Agreement.

4. Term of the Agreement. The term of this Agreement shall commence on the date of execution by the duly authorized representative of at least three of the five COPERMITTEES. The term of this Agreement shall extend for up to eighteen (18) months beyond the period of time in which the term of the NPDES Permit remains in valid force and effect, unless terminated prior to that date by agreement by all the Parties or withdrawal of all of the Parties in accordance with the terms of this Agreement.

5. Additional Parties. Any City which incorporates after the date of issuance of the NPDES Permit and/or after the commencement of this Agreement ("Prospective City") may file a written request with DISTRICT asking to be added as a Party. Upon receipt of such a request, DISTRICT shall solicit the approval or denial of the Parties. If a majority of the Parties, each having one, co-equal vote, approves the addition of the Prospective City, this Agreement shall be amended to reflect the addition, and the Prospective City shall thereafter become a Party under this Agreement. Upon execution of the Amended Agreement, the Prospective City shall be responsible for the shared costs discussed in Section 3 of this Agreement for the then-current budget year and any subsequent budget year.

6. Withdrawal from the Agreement. Any Party shall be eligible to withdraw from this Agreement after first giving 60 days written notice to the DISTRICT and the CRWQCB-SDR. The withdrawing Party shall agree in such notice to apply with the CRWQCB-SDR for a separate NPDES permit and to comply with all of the requirements established by

CRWQCB-SDR. In addition, withdrawal shall constitute forfeiture of all of the withdrawing Party's already-paid share of the costs allocated pursuant to Section 3. The withdrawing Party shall be responsible for any lawfully assessed penalties as a consequence of its withdrawal. In addition, the withdrawing Party shall remain liable as an Indemnitor Party after the effective date of its withdrawal as described in Section 7 below. The cost allocations to the remaining Parties shall be recalculated in the following budget year.

7. Mutual Indemnification. Each Party (hereafter "Indemnitor Party") shall indemnify, defend and hold harmless any other Party, together with that Party's employees, officers, managers, governing board members, counsel, representatives and agents (collectively "Indemnitee Parties"), from and against any and all damages, liabilities, losses, demands, lawsuits, orders, actions, causes of action, penalties, judgments, claims, costs and expenses (including reasonable attorneys' fees, including through all appeals) arising from or related to any violation of the NPDES Permit or this Agreement (collectively "Losses") to the extent caused by (i) by the acts or omissions of the Indemnitor Party and its employees, agents and representatives, (ii) discharges from the Indemnitor Party's jurisdictional area or facilities, and/or (iii) discharges from any MS4 owned or operated by the Indemnitor Party. The obligations of the Indemnitor Party set forth in this Section 7 are non-exclusive and are in addition to, and do not replace or modify, any other rights of action, whether at law or in equity, that any Party may have against another Party. Nothing in this Agreement shall limit the ability of any Party to seek any relief, legal or equitable, against any non-Party. The obligations set forth in this Section 7 shall survive the termination of this Agreement as to all such acts, omissions or discharges as described in subparts (i) through (iii) hereinabove that occurred, or are alleged to have occurred, while a Party during the term of the Agreement up until such time that it is terminated.

8. Amendments to the Agreement. Except as provided in Section 5, this Agreement may only be amended by consent of all Parties. No amendment to this Agreement shall be effective unless it is in writing and signed by the duly authorized representatives of all Parties.

9. Authorized Signatories. The General Manager-Chief Engineer of DISTRICT, the Chief Executive Officer of COUNTY and the City Managers of CITIES (or their designees) shall be authorized to execute all documents and take all other procedural steps necessary to file for and obtain an NPDES permit(s) or amendments thereto.

10. Notices. All notices shall be deemed duly given when delivered by hand; or three (3) days after deposit in the U.S. Mail, postage prepaid. Notice to the Parties shall be sent to the publically advertised mailing address for the Party.

11. Governing Law and Severability. This Agreement shall be governed and construed in accordance with the laws of the State of California. If any provision or provisions of this Agreement shall be determined to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired hereby.

12. Consent to Waiver and Breach. No term or provision hereof shall be deemed waived and no breach excused, unless the waiver or breach is consented to in writing, and signed by the Party or Parties affected. Consent by any Party to a waiver or breach by any other Party shall not constitute consent to any different or subsequent waiver or breach.

13. Entire Agreement. This Agreement and the exhibits attached hereto constitute the entire agreement between the Parties with respect to the subject matter therein; all prior agreements, representations, statements, negotiations and undertakings are superseded hereby.

14. Execution in Counterparts. This Agreement may be executed and delivered in any number of counterparts or copies (counterparts) by the Parties. As each Party has signed and delivered at least one counterpart to the other Parties, each counterpart shall be deemed an original and, taken together, shall constitute one and the same Agreement, which shall be binding and effective as to the Parties.

15. Non-Waiver of Objections. The entry into, and the performance of this Agreement by the Parties shall not constitute, nor be construed as, any waiver of the COPERMITTEES' objection to any provisions of the NPDES Permit including, without

limitation, any provisions identified in the Petition for Review filed by the COPERMITTEES with the SWRCB, or that provisions of the NPDES Permit constitute an unfunded State mandate without subvention of State funds.

/ / /

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the dates set forth below.

RECOMMENDED FOR APPROVAL:

By _____
WARREN D. WILLIAMS
General Manager-Chief Engineer

Dated: 11/22/11

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By _____
MARION ASHLEY, Chairman
Riverside County Flood Control and Water Conservation District Board of Supervisors

APPROVED AS TO FORM:

PAMELA J. WALLS
County Counsel

By _____
KARIN WATTS-BAZAN
Principal Deputy County Counsel

Dated: November 21, 2011

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

RECOMMENDED FOR APPROVAL:

By _____
LARRY PARRISH
Interim County Executive Officer

Dated: _____

COUNTY OF RIVERSIDE

By _____
BOB BUSTER, Chairman
Riverside County Board of Supervisors

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

JU:AMM:cw
11/03/11

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the dates set forth below.

RECOMMENDED FOR APPROVAL:

By_____
WARREN D. WILLIAMS
General Manager-Chief Engineer

Dated:_____

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By _____
MARION ASHLEY, Chairman
Riverside County Flood Control and Water Conservation District Board of Supervisors

APPROVED AS TO FORM:

By _____
PAMELA J. WALLS
County Counsel

Dated:_____

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

RECOMMENDED FOR APPROVAL:

Dated:_____

COUNTY OF RIVERSIDE

By _____
BOB BUSTER, Chairman
Riverside County Board of Supervisors

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

WHEN DOCUMENT IS FULLY EXECUTED RETURN
CLERK'S COPY
to Riverside County Clerk of the Board, Stop 1010
Post Office Box 1147, Riverside, Ca 92502-1147
Thank you.

JU:AMM:cw
11/03/11

APPROVED AS TO FORM:

By _____
Peter M. Thorson, City Attorney

CITY OF TEMECULA

By _____
Chuck Washington, Mayor

ATTEST:

By _____
Susan W. Jones, MMC, City Clerk

Dated: 1/10/12

APPROVED AS TO FORM:

By _____
City Attorney

CITY OF MURRIETA

By _____
Mayor

ATTEST:

By _____
City Clerk

Dated: January 17, 2012

APPROVED AS TO FORM:

By _____
City Attorney
Assistant

CITY OF WILDOMAR

By _____
Mayor

ATTEST:

By _____
City Clerk

Dated: 01-19-12

Program Element	Permit Task	SubTask	Completion	Budget FY11/12	Budget (Projected) FY12/13
Fourth-term Permit Development	Permit Application (ROWD)		Jan-09	$0	$0
	Permit Negotiation		Nov-10	$0	$0
		Permit Adoption	Nov-10		
	Legal Support	General Legal Support Services	Ongoing	$30,100	$30,100
		Permit Appeal	Dec-10	$0	$0
		Mandates Claim	Nov-11	$50,000	$0
	General Support		Ongoing	$70,000	$70,000
	JRMP		Dec-11	$75,250	$0
	Monitoring Plan	Revised Monitoring Plan	Jun-12	$250,000	$0
		Special Studies Round 1	Apr-12		
		Special Studies Round 2	Sep-12		
	Retrofit Study		Jun-12	$250,000	$50,000
	SSMP	SSMP Development	Jun-12	$99,750	$0
		Hydromod Susceptability Mapping	Jun-13		$66,667
		HMP	Jun-13		$233,333
		Road Standards	Jun-12	$24,750	$0
	Watershed Workplan		Jun-12	$98,550	$20,000
	Subtotal			**$948,400**	**$470,100**
District Staff / Admin	General Support			**$627,950**	**$627,950**
Public Education and Outreach	School/Business/Permittee Training			**$109,380**	**$153,333**
Water Quality Monitoring	Data Collection and Analysis			**$286,540**	**$1,212,676**
Regional Cooperative Programs	Pollutant Control Partnerships			**$144,340**	**$154,340**
Total Budget				**$2,116,610**	**$2,618,399**

Agency Contributions

	FY11/12	FY12/13
Prior Year Credits Earned	$56,336	TBD
RCFC&WCD	$472,475	TBD
County	$331,834	TBD
Murrieta	$527,612	TBD
Temecula	**$581,716**	**$788,835**
Wildomar	$146,637	TBD
Total	**$2,116,610**	**TBD**

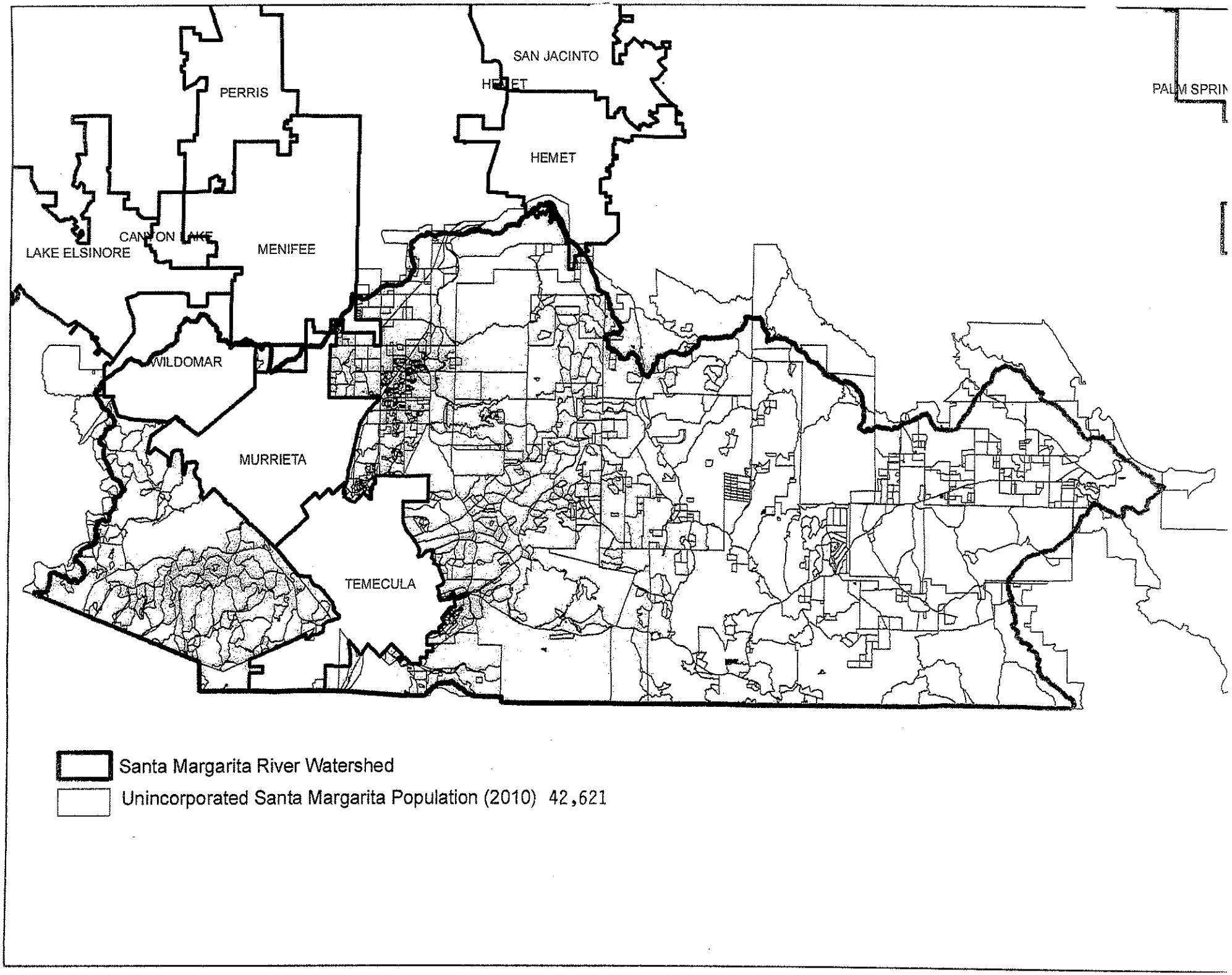
TBD - To Be Determined

Cost Sharing Factors

AGENCY	POP	BAUs	Weighted %
County	61,446	27,885	**21.04%**
Murrieta	101,487	42,290	**33.29%**
Temecula	105,029	49,741	**36.76%**
Wildomar	31,907	9,300	**8.92%**
Totals:	299,869	129,216	**100.00%**

Cost Sharing Formula

Step 1	Total Administrative Costs		$627,950	$627,950
	80% Benefit Assessment Revenue		-$472,475	-$472,475
	Regional Administrative Share		$155,475	$155,475
Step 2	Regional Administrative Share		$155,475	$155,475
	Regional Program Share		$1,488,660	$1,990,449
	Total Regional Share		$1,644,135	$2,145,924
Step 3 (Temecula)	Gross Share	(36.76%)	$604,379	$788,835
	Estimated Prior Year Credits		-$22,663	$0
	Net Share		**$581,716**	**$788,835**


SAN JACINTO
PERRIS
HEMET
HEMET
LAKE ELSINORE
MENIFEE
WILDOMAR
MURRIETA
TEMECULA
Santa Margarita River Watershed
Unincorporated Santa Margarita Population (2010) 42,621

ORDINANCE NO. 04-04

AN ORDINANCE OF THE CITY OF TEMECULA, CALIFORNIA, ADDING TITLE 18 TO THE TEMECULA MUNICIPAL CODE PERTAINING TO GRADING, EROSION AND SEDIMENT CONTROL, AND AUTHORIZING THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER TO PREPARE A GRADING MANUAL SETTING FORTH THE ADMINISTRATIVE PROCEDURES AND TECHNICAL REQUIREMENTS NECESSARY TO IMPLEMENT THIS ORDINANCE

The City Council of the City of Temecula, does ordain as follows:

Section 1: Growth and development have created permanent changes to the City's landscape and its natural resources. Open space and naturally vegetated areas have been permanently altered through clearing and grading activities associated with construction and land development. Loss of ground cover, coupled with grading, excavation, and compaction of the land contributes to decreased groundwater infiltration, increased storm water flow, erosion and increased sediment runoff into streams and other water bodies. Controlling erosion and sedimentation represents a vital component of protecting the water quality of our watercourses, water bodies and wetlands.

Section 2: Grading and land clearing activities also impact the City's aesthetic value and community character. Establishing minimum standards and requirements relating to land grading, clearing, excavations and fills, and procedures by which these standards and requirements may be enforced, will help to ensure soil is not stripped and removed from lands in the City, leaving them unsightly and susceptible to erosion, subsidence, faulty drainage and sediment deposition.

Section 3: It is desirable to adopt regulations for grading private property that will help to ensure that future grading, clearing and development of land within the City occurs in the manner most compatible with surrounding areas, and is paramount to protecting life, limb and property, and promoting and enhancing the general public welfare and a superior community environment.

Section 4: The Temecula Municipal Code is hereby amended by adding Title 18, consisting of Articles 1 through 11, and the various Chapters and Sections within each Article, to read as follows:

Section 5: The provisions of Title 18, Articles 1 through 11, shall apply to all grading permits issued on or after the effective date of this Ordinance.

Section 6: The City Council authorizes and directs the Director of Public Works/City Engineer to prepare and utilize a manual of standards setting forth the administrative procedures and technical requirements necessary to implement the provisions of this Ordinance. Such rules, procedures, and requirements shall be entitled "Administrative and Technical Procedures Manual for Grading, Erosion, and Sediment Control" in substantially the form set forth in Exhibit A.

Section 7: If any provision of this Ordinance or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or application, and to this end, the provisions of this Ordinance are declared to be severable.

Section 8: The potential grading and land clearing activities regulated by this Ordinance represent components of the adopted General Plan that has already received the appropriate review when the General Plan was approved. Based on this fact, the City Council hereby finds that the adoption of this Ordinance is exempt from further review pursuant to CEQA Guideline Sections 15162(a) and 15061(b)(3) of the CEQA Guidelines. Section 15162 states that when an EIR has been certified for a project, no additional environmental review is required unless there is substantial evidence that the project has changed. The Final EIR for the City General Plan was certified on November 9, 1993.

Section 9: The City Clerk shall certify the Ordinance and cause it to be published as required by law. This Ordinance shall take effect on the 30th day after adoption pursuant to state law.

PASSED, APPROVED AND ADOPTED, by the City Council of the City of Temecula on the 11th day of May, 2004.

Michael S. Naggar, Mayor

ATTEST:

Susan W. Jones, CMC
City Clerk

[SEAL]

STATE OF CALIFORNIA)
COUNTY OF RIVERSIDE) ss
CITY OF TEMECULA)

I, Susan W. Jones, CMC, City Clerk of the City of Temecula, do certify that the foregoing Ordinance No. 04-04 was duly introduced and placed upon its first reading at a regular meeting of the City Council on the 20th day of April, 2004, and that thereafter, said Ordinance was duly adopted and passed at a regular meeting of the City Council on the 11th day of May, 2004 by the following vote:

AYES:	5	COUNCILMEMBERS: Comerchero, Roberts, Stone, Washington, Naggar
NOES:	0	COUNCILMEMBERS: None
ABSENT:	0	COUNCILMEMBERS: None
ABSTAIN:	0	COUNCILMEMBERS: None

Susan W. Jones, CMC
City Clerk

ORDINANCE NO. 08-09

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF TEMECULA AMENDING PORTIONS OF TITLE 18 OF THE TEMECULA MUNICIPAL CODE FOR GRADING, EROSION, AND SEDIMENT CONTROL TO PROVIDE CONSISTENCY WITH THE ADOPTION OF THE 2007 EDITION OF THE CALIFORNIA BUILDING CODE INCLUDING APPENDIX 'J' AND TO MAKE OTHER MINOR CLARIFICATIONS AND CORRECTIONS

THE CITY COUNCIL OF THE CITY OF TEMECULA, DOES HEREBY ORDAIN AS FOLLOWS:

[CHANGES INCORPORATED INTO ORDINANCE]

Section 75. Environmental Finding. The proposed amendments to Title 18 of the Temecula Municipal Code are determined to be minor clarifications or typographical corrections of the Code. Based on this fact, the City Council hereby finds that the adoption of this Title is exempt from further review pursuant to CEQA Guideline Section 15061(b)(3) of the CEQA Guidelines, because it can be seen with certainty that there is no possibility that the proposed Title may have a significant effect on the environment.

Section 76: If any provision of this Title or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or application, and to this end, the provisions of this Title are declared to be severable.

Section 77: The City Clerk shall certify the Title and cause it to be published as required by law. This Title shall take effect on the 30th day after adoption pursuant to state law.

PASSED, APPROVED, AND ADOPTED by the City Council of the City of Temecula this 26th day of August, 2008.

Michael S. Naggar, Mayor

ATTEST:

Susan W. Jones, MMC
City Clerk

[SEAL]

STATE OF CALIFORNIA)
COUNTY OF RIVERSIDE) ss
CITY OF TEMECULA)

I, Susan W. Jones, MMC, City Clerk of the City of Temecula, do hereby certify that the foregoing Ordinance No. 08-09 was duly introduced and placed upon its first reading at a meeting of the City Council of the City of Temecula on the 12th day of August, 2008, and that thereafter, said Ordinance was duly adopted by the City Council of the City of Temecula at a meeting thereof held on the 26th day of August, 2008, by the following vote:

AYES:	4	COUNCIL MEMBERS:	Comerchero, Edwards, Roberts, Naggar
NOES:	0	COUNCIL MEMBERS:	None
ABSENT:	1	COUNCIL MEMBERS:	Washington
ABSTAIN:	0	COUNCIL MEMBERS:	None

Susan W. Jones, MMC
City Clerk

CITY OF TEMECULA

GRADING, EROSION AND SEDIMENT CONTROL ORDINANCE

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TITLE 18
CITY OF TEMECULA
GRADING, EROSION AND SEDIMENT CONTROL ORDINANCE

Chapter 18.01
ARTICLE 1. GENERAL PROVISIONS

Sections:

18.01.020	**Title**
18.01.040	**Grading Manual**
18.01.060	**Purpose**
18.01.080	**Scope**

18.01.020 Title

The Ordinance codified in these chapters shall be known as the "City of Temecula Grading, Erosion, and Sediment Control Ordinance" and will be referred to herein as "this Ordinance."

18.01.040 Grading Manual

The City Engineer shall formulate a manual setting forth the administrative procedures and technical requirements necessary to implement the provisions of this Ordinance. Such rules, procedures, and requirements shall be entitled "The City of Temecula Administrative and Technical Procedures Manual for Grading, Erosion and Sediment Control" ("Grading Manual"). The City Engineer shall have the authority to change, update or revise the Grading Manual as necessary in order to implement the provisions of this Ordinance and all revisions thereto arising from time to time.

In the event of any conflict between the Grading Manual and this Ordinance, the more restrictive provisions shall govern. The provisions of the Grading Manual shall, to the extent they are made conditions of a permit by the City Engineer, be binding upon the permittee and those claiming under said permittee.

18.01.060 Purpose

This Ordinance is enacted for the purpose of regulating grading activity on property within the city limits of the City to safeguard life, limb, health, property and public welfare; to avoid discharges of pollutants such as sediment, hazardous materials, wastes and debris from entering public or private storm water conveyance facilities and surface waters; and to ensure that the intended use of a graded site within the city limits is consistent with the City's General Plan, any specific plans adopted thereto and all applicable City ordinances and zoning regulations.

18.01.080 Scope

This Ordinance sets forth rules and regulations, which reflect the minimum acceptable methods or actions to control land disturbances, landfill, soil storage, pollution and erosion and sedimentation resulting from construction, grading, excavation and land clearing activities. This Ordinance establishes procedures for issuance, administration and enforcement of permits for such activities. Any such grading activities within the city limits of the City shall conform to the provisions of this Ordinance and the Grading Manual and other applicable provisions of the Temecula Municipal Code and the California Building Code, as adopted and amended by the City, together with all other conditions of approval.

In the event that a particular topic is not covered in either this Ordinance or the Grading Manual, the applicable provisions of the Temecula Municipal Code or the California Building Code, as adopted and amended by the City, shall govern. If a conflict arises between the Temecula Municipal Code or the California Building Code, the more restrictive provision shall govern, unless otherwise approved by the City Engineer.

Chapter 18.03

ARTICLE 2. PERMITS

Sections:

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18.03.040 Permit Exemptions

18.03.020 Permits Required

No person shall conduct any grading, stockpiling, excavating, paving, earth moving, filling, clearing, disking, brushing or grubbing on natural or existing grade or perform work that is preparatory to grading, without first having obtained a permit in accordance with this Ordinance, except as specified in Section 18.03.040, of this Ordinance and without having obtained coverage under the State Water Resources Control Board (SWRCB) National Pollution Discharge Elimination System (NPDES) permit for construction activity (if applicable).

18.03.040 Permit Exemptions

Grading permits are not required for:

A. An excavation below the existing finished grade for re-compaction within the building zone (within five feet (5') of footings) or for basements and footings for a building, mobile home, retaining wall, septic system, well or structure authorized by a building permit. This shall not exempt any fill made with the material from such excavation or exempt any excavation having an unsupported height greater than two feet (2') after the completion of such structure. Regardless of exemption, the Public Works Department shall be notified of activity.

B. Cemetery graves;

C. Refuse disposal sites controlled by other statutorily authorized regulations or agencies;

D. Earthwork or construction controlled by the federal, state, county or city governments, or by a local agency as defined by Government Code Section 53090 through 53095 (special districts). This exemption, however, shall apply only when the grading activity takes place on the property, or dedicated rights-of-way or easements of the above agencies;

E. Excavation and backfill for installation of underground utilities by public utilities or companies operating under the authority of a franchise or public right-of-way permit;

F. Mining, quarrying, excavating, processing stockpiling of rock, sand, gravel, aggregate or clay for commercial purposes where established and provided for by a conditional use permit, provided such operations do not affect the lateral support of any adjacent or adjoining properties, or alter the direction of, or contribute to, sedimentation to natural watercourses.

G. Exploratory excavations under the direction of civil engineers, geotechnical engineers, engineering geologists, and/or archaeologists or paleontologists, or pursuant to a well permit, provided all excavations are properly backfilled or otherwise restored. All such elevations and trenches are subject to the applicable sections of Title 8 of the State Orders, Division of Industrial Safety and the following:

1. When such work involves removal of any native vegetation, it shall be accompanied by an administrative clearing permit in accordance with Section 18.09.120 (C), "Administrative Clearing Permit" of this Ordinance. Any access roadways or pads constructed for this work shall only be constructed as approved in the administrative clearing permit and shall be restored as required in the permit.

H. An excavation not intended to support structures or mobile homes and which (a) is less than two feet (2') in vertical depth or (b) does not create a cut slope greater than three feet (3') in vertical height and steeper than two horizontal to one vertical (2:1). This exemption shall not apply when finish grading is proposed, subsequent to a permit authorizing rough grading in accordance with Section 18.09.120(A), "Types of Grading Permits" of this Ordinance.

I. A fill less than one foot (1') in vertical depth, placed on natural terrain with a slope flatter than five horizontal to one vertical (5:1), or less than three feet (3') in depth, not intended to support structures or mobile homes, which does not exceed fifty (50) cubic yards on any site and does not obstruct a drainage course. This exemption shall not apply when finish grading is proposed, subsequent to a permit authorizing rough grading in accordance with Section 18.09.120(A), "Types of Grading Permits" of this Ordinance.

J. The construction or maintenance of roads or facilities for the generation, storage or transmissions of water including floodwaters or electrical energy by public agencies or their agents. Work may be subject to Water Quality Management Plan (WQMP) requirements. A WQMP project includes the construction or reconstruction of 5,000 square feet of impervious surface in a parking lot, street, road or highway.

K. The maintenance of private roads by private individuals or their agents, but not the construction or widening of such roads.

L. Clearing and brushing when directed by the Fire Chief to mitigate a potential fire hazard in accordance with Title 8, Chapter 8.16, "Hazardous Vegetation," of the Temecula Municipal Code with the concurrence of the Director of Planning that such clearing and brushing will not cause significant damage to any habitat of any rare, endangered or protected species of wildlife or endanger any archaeological or historical resources, open space areas with biological significance, or transition areas between land to be cleared for fire fuel mitigation and permanent open space.

M. Clearing and brushing, expressly for the following purposes:

1. Routine landscaping and maintenance of already landscaped areas and the removal of dead or diseased trees or shrubs.
2. Clearing which conforms to the location, extent and purpose authorized explicitly by a construction permit pursuant to a discretionary land use permit or a discretionary development permit. An Administrative Clearing Permit, in accordance with Section 18.09.120(C) of this Ordinance, shall be required for any purpose that is not specifically addressed by the construction permit.

N. Repaving, resurfacing and maintenance of existing private roads and parking lots and the preparation necessary for that work, provided no grading beyond the limits of other exemptions is performed.

O. Minor maintenance and alterations to natural drainage areas that do not:

1. Obstruct or redirect drainage from adjacent properties, nor
2. Divert the outflow of drainage from the existing or natural discharge point of the property, nor
3. Concentrate or accelerate the flow of drainage as it leaves the property, nor
4. Create ponding, siltation or erosion in or of the streambed, nor
5. Disturb wetlands

Note: The above listed exemptions do not apply to clearing, grubbing, brushing, disking or grading when:

1. Work will occur in, or physically impact, designated or dedicated open space or environmentally sensitive areas designated in the General Plan, or the finally adopted plan of any public agency or governmental office with jurisdiction over the site, or shown on any approved Specific Plan; or
2. Work will occur in any waterway or wetland, stream, river, channel, pond, lake, marsh, bog, lagoon, vernal pool or riparian habitat, except as provided in exemption "P", below; or
3. Work will occur in any floodway or floodplain as shown on the Federal Emergency Management Agency (FEMA) Flood Plain Maps, or on City revised maps except as provided in subsection "P", below.

Chapter 18.06

ARTICLE 3. GRADING APPLICATION REQUIREMENTS

Sections:

18.06.020	**Grading Application**
18.06.040	**Plans and Specifications**
18.06.060	**Geotechnical (Soils) Reports**
18.06.080	**Seismicity Reports**
18.06.100	**Dust Control and Prevention Plan**
18.06.120	**Haul Route Plan**
18.06.140	**Erosion and Sediment Control Plan**
18.06.160	**Expiration and Renewal of Grading Application Submittals**

18.06.020 Grading Application

To obtain a grading permit, the applicant shall first file an application in writing on a form furnished by the City Engineer for that purpose.

18.06.040 Plans and Specifications

A. Each application for a grading permit shall be accompanied by plans and specifications, soils engineering and geotechnical reports, hydrology/hydraulic reports, erosion and sediment control plans, proof of coverage under the State General Permit for construction activities and all other information required by the City Engineer as in the Grading Manual, and payment of the appropriate fees. In addition, a conceptual Water Quality Management Plan (WQMP) must be accepted by the City Engineer prior to issuance of final conditions of approval. A final WQMP must be accepted by the City Engineer prior to issuance of a grading permit.

B. Plans and specifications for grading projects requiring permits as defined in Section 18.03.020, "Permits Required" of this Ordinance shall be prepared and signed by the engineer of record. This requirement may be extended to any project when, in the opinion of the City Engineer, drainage or geologic factors may warrant a need for civil engineering design and control.

C. Grading plans and specifications shall be prepared in accordance with the Grading Manual.

18.06.060 Geotechnical (Soils) Reports

A. **Surface and Subsurface Conditions.** The City Engineer shall require a geotechnical report to correlate surface and subsurface conditions with the proposed grading plan. The results of the investigation shall be presented in a report in conformance with the requirements of this Ordinance and the Grading Manual.

B. **Supplemental Reports/Data.** The City Engineer shall require such supplemental reports and data, as he deems necessary, upon his review of the site and the reports and other data submitted. Such required data may include tests for soil fertility and agricultural suitability to be performed at the conclusion of rough grading by a recognized agronomic soil-testing laboratory, with written analysis and recommendation, to be utilized during any required re-vegetation.

C. **Waiver of Geotechnical Report Requirements.** For a specific project, the City Engineer may determine that the geological and geotechnical conditions at the site are such that public safety is adequately protected and no mitigation is required. This finding shall be based on a report presenting evaluations of site in the immediate vicinity having similar geologic and geotechnical characteristics. The report shall be prepared by a certified engineering geologist or registered civil engineer, having competence in the field of seismic hazard evaluation and mitigation. The City Engineer shall provide a written commentary that addresses the report conclusions as justification for waiving the requirement of a geotechnical report for the project. All such waivers shall be recorded with the county recorder and a separate copy, together with the report and commentary, shall be filed with the State Geologist within 30 days of the waiver, in accordance with Public Resources Code Section 2697(a).

18.06.080 Seismicity Reports - Alquist-Priolo Earthquake Fault Zoning Act

A seismicity report shall be required as a condition for issuance of a grading permit for all grading applications associated with subdivisions (tracts); all grading projects that propose development with occupancy category II, III, IV structures as shown in table 1604A.5 of the California Building Code; and all real estate development that lies within an earthquake fault zone. Said reports shall comply with the requirements of the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code, Section 2621, et seq.) and as specified in the Grading Manual.

18.06.100 Dust Control and Prevention Plan

Dust control and prevention procedures shall be employed while construction activity occurs to minimize wind borne particles. At minimum, all grading operations, land clearing, loading, stockpiling, landscaping, vehicular track-out and haul routes shall comply with South Coast Air Quality Management District (SCAQMD) Rule 403 (Fugitive Dust Emissions) and the Grading Manual.

18.06.120 Haul Route Plan

Where soil or construction materials are moved on public roadways from or to the site of a grading operation, a haul route plan shall be approved by the City Engineer in accordance with the Grading Manual. Deviation from the designated haul route shall constitute a violation of the conditions of the permit issued under this Ordinance. Vehicular track-out shall be controlled, as directed by the City Engineer, to prevent sediment deposition outside of the project site boundaries.

18.06.140 Erosion and Sediment Control Plan

All grading plans, regardless of the date of submittal, shall include an erosion and sediment control plan designed to limit erosion and sediment discharges of all disturbed portions of the property and to minimize the transport of soil onto adjacent properties or into storm water conveyance systems in accordance with the provisions of Chapter 18.15 of this Ordinance and the Grading Manual.

18.06.160 Expiration and Renewal of Grading Application Submittals

A. Applications for which no permit is issued within 180 days (6 months) following the date of application shall expire, and plans submitted for checking may thereafter be returned to the applicant or may be destroyed by the City Engineer without additional notice to the applicant.

B. The City Engineer may extend the time for action by the applicant for a period not exceeding 180 days (6 months) upon written request by the applicant showing that circumstances beyond the reasonable control of the applicant have prevented action from being taken.

C. In order to renew action for an application after expiration, the applicant shall resubmit grading submittal package and pay the most current plan check fee.

D. Plan check fees shall be forfeited for all expired permits.

Chapter 18.09

ARTICLE 4. GRADING PERMIT REQUIREMENTS

Sections:

18.09.020	**Permit Issuance – Terms and Conditions**
18.09.040	**Responsibility of Permittee**
18.09.060	**Contractor Qualifications**
18.09.080	**Right of Entry**
18.09.100	**Tentative Subdivision or Conditional Use Permit Required**
18.09.120	**Types of Permits**
18.09.140	**Protection of Adjoining Property**
18.09.160	**Protection of Utilities**
18.09.180	**Maintenance of Protective Devices**
18.09.200	**Time of Operations**
18.09.220	**Debris on Public Streets**
18.09.240	**Disposal of Materials**
18.09.260	**Expiration and Renewal of Issued Permits**
18.09.280	**Denial of Permit**

18.09.020 Permit Issuance – Terms and Conditions

A. Upon receipt and approval of the required application, fees, plans, reports, and other requirements of this Ordinance, the City Engineer may issue a permit, subject to any terms and conditions deemed necessary to ensure conformance with the provisions of this Ordinance and the Grading Manual.

B. The City Engineer shall have the discretion to impose or modify conditions as necessary to prevent a possible nuisance or hazard, or to eliminate a nuisance or hazard, to persons or to public or private property in accordance with Section 18.27.060, "Hazardous Conditions" of this Ordinance.

C. The issuance of a permit shall constitute an authorization to do only that work which is described or illustrated on the application for the permit, or on the plans and specifications attached to the permit and approved by the City Engineer. A separate permit shall be required for each (noncontiguous) grading project.

18.09.040 Responsibility of Permittee

It shall be the responsibility of the permittee to be knowledgeable of the conditions and/or restrictions placed on the permit as outlined in the applicable sections of this Ordinance, the Grading Manual, and as contained on the approved grading plans and geotechnical reports. The permittee shall also be responsible for maintaining a copy of the permit and approved plans at the work site, and implementing the applicable requirements of the City's Standard Grading Notes, as identified in the Grading Manual.

18.09.060 Contractor Qualifications

All persons performing work pursuant to this Ordinance shall have all valid licenses and insurance required by the State of California and by the City of Temecula.

18.09.080 Right of Entry

As a prerequisite for issuance of any grading permit, the owner, contractor or authorized agent of the site to be graded acknowledges and grants permission to the City for right of entry into the site for inspection, emergency work or correction of grading not performed in compliance with the terms and conditions of the permit. The owner, contractor or authorized agent shall agree to indemnify the City for any claims or damages, which may result from the City's entry onto the property including any corrective or emergency action taken pursuant to such right of entry.

18.09.100 Tentative Subdivision or Conditional Use Permit Required

Under either of the following circumstances, a permit shall not be issued unless and until a tentative map or a conditional use permit has been approved by the City:

A. If the purpose of the proposed grading or clearing is to prepare the land for a subdivision or for some use for which a conditional use permit is required; or

B. Notwithstanding the purpose of the proposed grading or clearing as stated in the application, if the City Engineer finds that the purpose of the proposed grading or clearing is to prepare the land for subdivision or for some use for which a conditional use permit is required.

18.09.120 Types of Permits

A. **Mass, Rough or Precise Grading.** The City Engineer may issue a mass, rough or precise grading permit for grading work upon completion of an application in accordance with the Grading Manual. The issuance of building permits shall be determined as follows:

1. Building permits may be issued for a site graded under a precise grading permit or plan upon completion and approval of the rough grade inspection as specified in the Grading Manual.
2. Building permits shall not be issued for a site graded under a rough grading permit unless a precise grading permit or plan has been issued.

B. **Stockpiling.** Upon approval by the Planning Commission, a stockpile permit may be issued for the stockpile of soil materials on a lot or parcel provided that the soil materials shall be removed from the site or compacted and graded thereon under a subsequently issued mass, rough or precise grading permit within six (6) months of issuance of a stockpile permit, unless modified by the Planning Commission, in accordance with the Grading Manual.

C. **Administrative Clearing.** No person shall commence any clearing and grubbing operation without first obtaining a grading or administrative clearing permit in accordance with the Grading Manual.

D. **Borrow Sites.** A grading and/or administrative clearing permit shall not be issued when, in the opinion of the City Engineer, a significant amount of borrow or waste material is to be removed from a grading site for commercial purposes unless a Conditional Use Permit in accordance with Chapter 17.04, "Permits" of the Temecula Municipal Code has been issued for the operation of a borrow pit on the grading site.

E. **Paving.** No person shall construct concrete or bituminous pavement surfacing on natural or existing grade in excess of five-thousand (5,000) square feet for any commercial, industrial, multi-residential or other parking lot, without a valid grading permit for such paving (this excludes Single Family Residence). Maintenance and repaving of existing paved sections shall be exempt from this requirement.

F. **Watercourse Alteration.** No person shall alter an existing watercourse, channel, or revetment by excavating, or placing fill, rock protection or structural improvements therein without an applicable state agency approval and a grading permit unless (i) the requirement for a grading permit is waived by the City Engineer, or (ii) the grading is performed as interim protection in an emergency to prevent flooding, or (iii) a separate improvement plan for such alteration is approved by applicable state agencies and the City Engineer.

G. **Rock Blasting.** No rock blasting shall be permitted until a pre-blast survey of the surrounding property is conducted to the satisfaction of the City Engineer. During rock blasting, seismic recordings shall be taken for all blasts at locations and levels approved by the City Engineer. All blasting shall conform to the requirements of the City Engineer, as specified in the Grading Manual.

18.09.140 Protection of Adjoining Property

Each adjacent owner is entitled to the lateral and subjacent support that his land receives from the adjoining land, subject to the right of the property owner of the adjoining land to make proper and usual excavations on the same for purposes of construction or improvement, as follows:

A. Any person causing an excavation to be made to a depth of ten feet (10') or more below the grade and within ten feet (10') of the property line(s) shall protect the excavation so that the soil of adjoining property will not cave in or settle. The person making or causing the excavation to be made shall provide written notification to the adjoining property owner(s) no less than ten (10) days before such excavation is to be made, stating the depth for which such excavation is to be made and when the excavation will begin.

B. If at any time it appears that the excavation is of greater depth than are the walls or foundation of an adjoining building or other structure, and the distance from the edge of the excavation to an adjoining building or other structure is less than the depth of the excavation, the person causing the excavation shall notify the owner of the adjoining building or other structure no less than ten (10) days before such excavation is to be made to protect the same from any damage, or to brace or extend the foundations of the noted building or other structure from possible damage from the excavation.

C. Excavations shall meet all State and Federal regulations including, but not limited to, any trench greater than five feet (5') deep, obtaining CAL OSHA permits.

D. No grading shall be approved which, in the opinion of the City Engineer, physically prevents the use of existing legal access to any parcel.

18.09.160 Protection of Utilities

A. During grading operations, the permittee shall be responsible for the prevention of damage to public utilities or services and for confining grading activities to the area permitted on the approved plans. This responsibility applies within the limits of grading or clearing and along any routes of travel of equipment.

B. Before starting any excavation work, the permittee shall be responsible to contact Underground Service Alert of Southern California and coordinate the proposed excavation with all interested utility companies, districts and agencies.

18.09.180 Maintenance of Protective Devices

The owner or agent in control of such property on which a grading activity has occurred pursuant to a permit granted under the provisions of this division, shall maintain in good condition and repair all structures, planting and other protective devices as per the approved plans or required by the permit. Any facilities dedicated for public use and accepted by a public agency are exempt.

18.09.200 Time of Operations

A. Time of any grading, clearing and equipment operations pursuant to this Ordinance shall be consistent with City Ordinance No. 94-25. Grading operations within one-quarter (1/4) mile of an occupied residence shall not be conducted between the hours of 6:30 p.m. and 6:30 a.m., Monday through Friday; or between the hours of 6:30 p.m. and 7:00 a.m. on Saturdays. Further, no such activity shall be undertaken on Sunday or any nationally recognized holiday. The City Engineer may extend the hours permitted for grading or equipment operations if the City Engineer determines that such operations are not detrimental to the health, safety or welfare of the inhabitants of nearby structures. Permitted hours of operation may be shortened by the City Engineer's findings of a previously unforeseen effect on the health, safety or welfare of the surrounding community.

B. Public Works projects of any Federal, State or local entity or emergency work by public utilities are exempt from the provisions of this Ordinance. Residents working on their property are exempt from the prohibition of construction activities on Sundays and holidays but shall comply with the hourly restrictions set forth for Saturday when working on Sundays and holidays.

18.09.220 Debris on Public and Private Streets

This Ordinance forbids the throwing, leaving, maintaining, keeping, placing, dumping, depositing or spilling soil materials on public and private streets or any portion of the public right-of-way. The permittee shall be responsible

for the complete removal and cleanup of such materials from the street or any portion of the public right-of-way. If the permittee fails to immediately remove said spillage or deposit from the street and/or public right-of-way, and it is necessary for the City to cause such removal to be made, the cost of such removal work shall be the responsibility of the permittee. The City may use the grading deposit in accordance with Section 18.24.120, "Grading and Erosion Control Securities" of this Ordinance for this purpose without notice to the owner. An additional cash deposit may be required prior to resumption of grading activities to insure the cleanup of public streets.

18.09.240 Disposal of Materials

The disposal of all waste and recycling materials removed as part of any grading project shall be in compliance with the City's Solid Waste Franchise Agreement, as specified within the provisions of the Temecula Municipal Code, Title 8, Chapter 8.20, "Waste Management," and the Grading Manual.

18.09.260 Expiration and Renewal of Issued Permits

A. A grading permit shall be valid for a period of six (6) months from the date of issuance.

B. The time limitation for all grading permits is also subject to the following provisions:

1. **Change of ownership.** A permit issued in accordance with these requirements shall terminate upon a change of ownership if the work for which said grading permit was issued has not been completed. In such instances, a new permit shall be required for the completion of the work.
    a. If the time limitations of paragraph (A) of this section are not applicable, and no changes have been made to the plans and specifications last submitted to the City Engineer, no charge shall be made for the issuance of a new permit.
    b. If changes have been made to the plans and specifications last submitted to the City Engineer, fees based on the valuation of the additional or new work, such as additional earthwork and necessary plan checking, shall be charged to the permit applicant.
    c. New securities and/or deposits shall be submitted by the new owner in accordance with Section 18.24.100, "Grading, Erosion and Sediment Control Securities" of this Ordinance.
2. **Permit Extensions.** The City Engineer may extend the time limit on permits by one (1) or more successive periods of up to 180 days (6 months) upon written request by the applicant showing to the satisfaction of the City Engineer that circumstances beyond the control of the applicant have prevented, delayed or extended the time required to complete the grading operations.
3. **Weather-related delays.** The City Engineer may require that grading operations and project designs be modified if delays occur which incur weather-related problems not considered at the time the permit was originally issued.

C. As a condition of the extension of any time period, the City Engineer may require the payment of additional permit, plan checking, inspection, and/or soils review fees required to cover the administration of the extensions and/or increased costs to the City and to bring the project into conformance with any fee schedule in effect at the time of extension.

18.09.280 Denial of Permit

A. **Hazardous Conditions.** A permit shall not be issued in any case where the City Engineer determines that the work as proposed by the applicant will:

1. Expose any property to landslide or geologic hazard;
2. Adversely interfere with existing drainage courses or patterns;
3. Cause erosion and/or flooding, which could result in the depositing of mud, silt or debris on any other property or public or private street;
4. Create any hazard to person or property; or
5. Damage or endanger any environmentally sensitive species and habitats, rocks and/or archaeological artifacts.

B. **General Conditions.** A permit shall not be issued if any of the following apply:
   1. If the submittal is incomplete;
   2. If the plan as submitted does not comply with the provisions of this Ordinance;
   3. If the required security is not posted;
   4. If the application contains false information.

C. **Other.** The City Engineer shall deny the issuance of a permit if any of the following apply:
   1. If prohibited by a duly elected moratorium, court order, injunction, or other legal order;
   2. If the applicant or owner has failed to comply with the provisions of this Ordinance; or
   3. If the work proposed is not consistent with the City's General Plan, or any element thereof, or any specific plan, conditional use permit, land use ordinance or regulation, zoning ordinance or regulation or permit, or approved subdivision map.

Chapter 18.12

ARTICLE 5. GRADING DESIGN STANDARDS

Sections:

18.12.020	**Cuts**
18.12.040	**Fills**
18.12.060	**Setbacks**
18.12.080	**Terraces and Terrace Drains**
18.12.100	**Subsurface Drainage**
18.12.120	**Pad Grading**
18.12.140	**Asphalt Concrete Pavement**
18.12.160	**Disabled Access**

18.12.020 Cuts

Unless otherwise recommended by the geotechnical engineer or the engineering geology reports, or both, and approved by the City Engineer, cuts slopes shall be no steeper than two horizontal to one vertical (2:1). All cuts and excavations shall conform to the provisions of this Ordinance and the Grading Manual.

Exception: In the absence of an approved geotechnical engineering report, these provisions may be waived by the City Engineer for minor cuts not intended to support structures.

A. A cut surface may be at a slope of 1.5 horizontal to 1 vertical (67%) provided that all the following are met:
   1. It is not intended to support structures or sur-charges;
   2. It is adequately protected against erosion;
   3. It is no more than eight feet (8') in height;
   4. It is approved by the City Engineer;

B. A cut surface in bedrock shall be permitted to be at a slope of one horizontal and one vertical (100%).

18.12.040 Fills

Unless otherwise recommended by the geotechnical engineer or the engineering geology reports, or both, and approved by the City Engineer, fills shall be in accordance with the Grading Manual.

Exception: In the absence of an approved geotechnical engineering report, these provisions may be waived by the City Engineer for minor fills not intended to support structures.

18.12.060 Setbacks

All setbacks and other restrictions specified in the Grading Manual, pursuant to the recommendation of a civil or geotechnical engineer, and approved by the City Engineer, are to prevent damage to adjacent properties from erosion or to provide access for slope and drainage structure maintenance. Retaining walls may be used to reduce the required setbacks when approved by the City Engineer.

18.12.080 Terraces and Terrace Drains

Drainage facilities and terraces shall be in accordance with the Grading Manual unless otherwise approved by the City Engineer.

18.12.100 Subsurface Drainage

A. Cut and fill slopes shall be provided with subsurface drainage as necessary for stability and as recommended by the geotechnical engineer and/or engineering geologist.

B. All canyons and buttress fills shall be provided with sub drains approved by the City Engineer.

18.12.120 Pad Grading

Storm water runoff from lots or adjacent properties shall not be carried over cut or fill slopes steeper than five horizontal to one vertical (5:1). Such runoff shall be in accordance with the Grading Manual.

18.12.140 Asphalt Concrete Pavement

Asphalt concrete pavement for surfacing of parking lots, private streets, driveways or other similar uses shall be in accordance with the Grading Manual unless otherwise approved by the City Engineer.

18.12.160 Disabled Access

All site development and precise grading shall be designed to provide access to all entrances and exterior ground-floor exits and to normal paths of travel in accordance with California Disabled Access Regulations (California Code of Regulations, Title 24, Part 2).

Chapter 18.15

ARTICLE 6. EROSION AND SEDIMENT CONTROL

Sections:

18.15.020	Construction Runoff Compliance
18.15.040	Erosion and Sediment Control Plans Required
18.15.060	Erosion and Sediment Control Systems
18.15.080	Temporary Site Vegetation
18.15.100	Erosion and Sediment Control Maintenance
18.15.120	Erosion and Sediment Control – Agricultural
18.15.140	Additional NPDES Requirements

18.15.020 Construction Runoff Compliance

A. All individual construction and grading projects shall implement measures to ensure that pollutants are not discharged from the site, will be reduced to the Maximum Extent Practicable (MEP) and will not cause or contribute to an exceedance of water quality objectives in the local natural watercourses. All construction and grading activities will be in compliance with applicable ordinances, permits and other federal, state and local requirements.

B. The permittee shall adhere to the following requirements:

1. Develop and implement an erosion and sediment control plan to manage storm water and non-storm water discharges from the site at all times in accordance with the Grading Manual. Projects disturbing, exposing or stockpiling one (1) acre or more of soil are also required to have coverage under the State General Construction Permit and generate a Storm Water Pollution Prevention Plan (SWPPP) per the State General Construction Permit;
2. Conduct phased grading operations and minimize grading activities during the rainy season. Coincide grading with dry weather periods to the extent feasible. Implement additional "Best Management Practices" (BMP's) for all rain events;
3. Install a combination of erosion and sediment control measures to effectively prevent erosion and retain sediment on-site throughout the duration of all construction activities.
4. Minimize exposure time of disturbed soil areas;
5. Temporarily stabilize and re-seed disturbed soil areas as rapidly as possible;
6. Permanently re-vegetate or landscape as early as feasible;
7. Stabilize all slopes;
8. The permittee shall abide by all of the provisions set forth in the State Water Resource Control Board (SWRCB) NPDES General Permit for construction activity. The City must be provided with a Waste Discharge Identification (WDID) number issued by the SWRCB prior to an issuance of a grading permit.
9. Implement the applicable requirements of the City's Standard Erosion and Sediment Control Notes, as identified in the Grading Manual.

Note: The above requirements are applicable to all construction sites regardless of whether the construction site is subject to the State General Construction Permit or other individual National Pollutant Discharge Elimination System (NPDES) permit.

18.15.040 Erosion and Sediment Control Plans Required

A. No grading activity will be allowed on any single grading site under permit unless the City Engineer has approved an erosion and sediment control plan.

B. All grading plans, regardless of the date of submittal, shall include an erosion and sediment control plan designed to limit erosion of all disturbed portions of the property and to minimize the transport of soil onto downgrade perimeters, private and public storm water conveyance systems, environmentally sensitive areas and adjacent properties in accordance with the provisions of this Chapter and the Grading Manual.

C. All erosion and sediment control BMP's outlined on the erosion and sediment control plan will be shown on the SWPPP, if applicable, and implemented prior to October 1st of each year.

18.15.060 Erosion and Sediment Control Systems

A. The permittee shall be responsible for the control of erosion and sediment discharge on and from all disturbed areas of grading until issuance of certificate of occupancy at which time the BMP's of the WQMP shall be in place.

B. No grading work shall be allowed on any site when the City Engineer determines that erosion, mudflow or sediment discharge may adversely affect downstream properties, drainage courses, storm drains, streets, easements, or public or private facilities or improvements unless an approved erosion and sediment control system has been implemented on the site. If the City determines that it is necessary for the City to cause erosion and sediment control measures to be installed or cleanup to be done, the permittee shall pay all of the City's direct and indirect costs including extra inspection, supervision and reasonable overhead charges in accordance with Section 18.24.100, "Cost Recovery Fees" of this Ordinance.

C. All protective devices shown on the erosion and sediment control plan and in the SWPPP, if applicable, shall be in place within seven (7) days prior to any forecasted rain. If the permittee does not install or

maintain erosion and sediment controls, the City Engineer may order City crews to do the work or may issue contracts for such work and charge the cost of this work along with reasonable overhead charges to the cash deposits or other instruments implemented for this work without further notification to the owner. No additional work on the project except erosion and sediment control work shall be performed until the full amount drawn from the cash deposit, in accordance with Section 18.24.120, "Grading, Erosion and Sediment Control Securities" of this Ordinance is restored by the permittee.

D. "Best Management Practices" (BMP's) shall be implemented on a continual basis during construction activities. The following minimum criteria shall be met:

1. An effective combination of erosion and sediment controls shall be implemented within seven (7) working days of clearing or inactivity in construction.
2. Soil stockpiles must be stabilized with a combination of erosion and sediment controls and have a daily maintenance frequency or as directed by the City Engineer.
3. Waterway and watercourse protection shall include, but not be limited to, stabilization of the channel before, during and after in-channel work.
4. Additional erosion and sediment control materials shall be stockpiled at various locations throughout the site for immediate implementation within seven (7) days of a forecasted rain. The developer/contractor shall make available equipment and workers for emergency work to protect the site.

E. Cut and fill slopes shall be protected to control against erosion and sediment discharge.

F. Permittee shall implement BMP's year round. Additional site specific BMP's shall also be implemented, as necessary, to comply with this Ordinance which may be more stringent than those required under the General Construction Permit.

G. Permittee shall implement additional controls for construction sites tributary to Clean Water Act (CWA) section 303(d) water bodies impaired for sediment. Each Permittee shall implement additional controls for construction sites within, adjacent, or discharging directly to receiving waters within environmentally sensitive areas.

H. Permittee shall conduct construction site inspection for compliance with this Ordinance and all applicable permits.

18.15.080 Temporary Site Vegetation

Temporary site vegetation shall be required, as determined by the City Engineer, on any disturbed soil areas of the site for prolonged periods of grading inactivity or expiration of a grading permit in accordance with Section 18.09.260, "Expiration and Renewal of Issued Permits" of this Ordinance. Temporary vegetation shall not negate any City requirement or condition of approval to install permanent landscaping.

18.15.100 Erosion and Sediment Control Maintenance

A. Prior to and after each rainstorm, all on-site and off-site flow-lines, storm water conveyance systems, check dams, chevrons, silt fences and desilting basins shall be free of sediment, construction materials, waste, miscellaneous debris and deteriorated erosion and sediment controls at all times.

B. Prior to and after each rainstorm, the erosion and sediment control system shall be evaluated and revised and repaired as necessary.

C. The permittee shall be responsible for and shall take necessary precautions to prevent public trespass onto areas where impounded water, due to erosion and sediment control devices, creates a hazardous condition. Signage indicating "ponded water – do not enter" shall be posted.

D. The permittee shall be responsible for continual maintenance of the devices during all construction activities.

E. In the event the City Engineer must cause emergency work to be done, he or she may revoke the grading permit. The permit shall not be renewed until an approved erosion and sediment control system has been installed and the owner has paid any applicable fees.

F. If any grading or clearing subject to Section 18.03.020 "Permits Required" of this Ordinance has commenced on private property without a valid grading permit, the property owner will be required to stop work, prepare and implement an erosion and sediment control plan which has been approved by the City and obtain a valid grading permit.

18.15.120 Erosion and Sediment Control – Agricultural

A. **Resource Conservation Plans.** For all lands used for agricultural purposes within the City of Temecula, the property owner shall cause to be prepared a resource conservation plan, utilizing the best management practices for the prevention of erosion and sedimentation. The resource conservation plan shall be prepared by the USDA Soil Conservation Services or a registered agricultural engineer consultant.

B. **Implementation of Resource Conservation Plans.** The resource conservation plans to be prepared for best management practices implementation is to be prioritized based upon the soil conservation service "soil erosion hazard map" with those areas of high erosion hazard receiving top priority. Resource conservation plans for agricultural areas shall be submitted for review and filing by the City after acceptance by the Regional Water Quality Control Board

C. **Annual Report.** The property owner of agricultural land shall be responsible for the preparation and submittal to the City Engineer an annual report setting forth their progress in the preparation of resource conservation plans and best management practices implementation. Progress reports may be required more frequently if deemed necessary by the City Engineer.

18.15.140 Additional NPDES Requirements

A. **General Requirements.** All grading activities subject to the regulations of this Ordinance shall be designed and conducted to minimize runoff of all pollutants onto public or private properties and into waters of the United States as required by this section and City Municipal Code, Title 8, Chapter 8.28, Storm Water/Urban Runoff Management and Discharge Control.

B. **Responsibility.** It shall be the permittee's responsibility to obtain coverage under the SWRCB General Construction Permit, submit a Notice of Intent (NOI) and appropriate fee to the SWRCB, complete all site-specific Storm Water Pollution Prevention Plans (SWPPP), monitoring and reporting program plans, reports, certifications, and other information required by the permit and or requested by the Regional Water Quality Control Board (RWQCB), United States Environmental Protection Agency (USEPA), or the City Engineer. The permittee shall update all plans as construction activities are modified from their original schedule and/or progress as originally planned. The permittee shall also maintain all erosion and sediment control measures at the site throughout the duration of the project as required by the permit. All of the information noted above shall be maintained on-site during construction and shall be presented upon demand by the SWRCB and/or City of Temecula inspectors. NPDES requirements will remain in effect until Notice of Termination (NOT) requirements are fulfilled.

Chapter 18.18

ARTICLE 7. GRADING INSPECTION

Sections:

18.18.020	**Inspections Required**
18.18.040	**Grading Requirements**
18.18.060	**Transfer of Responsibility**
18.18.080	**Notification of Noncompliance**
18.18.100	**Special Inspections**
18.18.120	**Stopping and Correction of Work**

18.18.020 Inspections Required

All grading operations for which a permit is issued pursuant to the provisions of this Ordinance shall be subject to inspection by the City Engineer or his or her representative.

18.18.040 Grading Requirements

A. **Civil Engineer.** It shall be the responsibility of the civil engineer who prepared the grading plans to incorporate the applicable recommendations from the geotechnical engineering and geology reports and to incorporate any City Engineer approved alternatives into the grading plan.

1. The civil engineer shall be responsible for establishing line and grade for the grading and drainage improvements and shall act as the coordinating agent in the event the need arises for liaison between the other professionals, the contractor and the City Engineer.
2. The civil engineer shall be responsible for the preparation of plan revisions to be approved by the City Engineer prior to implementing the change in the field.
3. Prior to issuance of building permits for any given lot or lots, the civil engineer shall be responsible for submitting a pad certification letter stating line and grade as evidence that the grading activity has been completed within standard tolerances in accordance with the approved plans and that all embankments and cut slopes and pad sizes are as shown on the approved plans.

B. **Geotechnical Engineer.** The geotechnical engineer's area of responsibility shall include, but not be limited to, performing the preliminary geotechnical engineering investigation and report, determining the suitability of soils during grading, providing compaction inspection and testing, and preparing the final geotechnical engineering report.

C. **Engineering Geologist.** The engineering geologist's area of responsibility shall include, but not limited to, professional inspection and approval of the stability of cut slopes with respect to geological matters, and the need for sub-drains or other groundwater drainage devices. He shall report his findings to the geotechnical engineer for engineering analysis.

D. **Landscape Architect.** The landscape architect shall incorporate applicable recommendations from the geotechnical engineering reports into the landscape and irrigation plans. The landscape architect shall also prepare plan revisions to be approved by the City Engineer prior to implementing the change in the field.

1. All ground cover shall provide one-hundred percent (100%) coverage within nine (9) months of planting, or additional landscaping shall be required in order to meet this standard.

18.18.060 Transfer of Responsibility

If the civil engineer of record, the geotechnical engineer, the engineering geologist, or the grading contractor of record is changed during the course of the work, the project shall be stopped until:

A. The permittee submits a letter of notification verifying the change of the responsible professional; and

B. The new responsible professional submits in writing that he has reviewed all prior reports and/or plans (specified by date and title) and work performed by the responsible professional party, and that he concurs with the findings, conclusions and recommendations, and is satisfied with the work performed. He or she must state that they assume all responsibility within his or her purview as of a specified date. All exceptions shall be justified to the satisfaction of the City Engineer.

Exception: Where clearly indicated that the firm, not the individual engineer and/or geologist, is the contracting party, the designated engineer or geologist may be reassigned and another engineer and/or geologist within the firm may assume responsibility.

18.18.080 Notification of Noncompliance

If, in the course of fulfilling their responsibility under this division, the engineer of record, the geotechnical engineer, the engineering geologist, or the testing agency finds that the work is not being performed in accordance with approved plans, specifications, or this Ordinance, the discrepancies shall be reported immediately in writing to the grading contractor, the permittee and the City Engineer. Recommendations for corrective measures shall be submitted for approval to the City Engineer.

18.18.100 Special Inspections

The City Engineer may establish special inspection requirements in accordance with Chapter 17, Section 1704, "Special Inspections", of the California Building Code, amended, for special cases involving grading or paving related operations. Special cases may apply to work where, in the opinion of the City Engineer, it is necessary to supplement the resources or expertise available for inspection.

18.18.120 Stopping and Correction of Work

A. The provisions of Appendix Chapter 1, Administration, Section 114, "Stop Orders", of the California Building Code shall apply to all grading work. Whenever the City Engineer or his or her representative determines that any work does not comply with the terms and conditions of the permit, or that that the work is being done improperly or in a hazardous manner, he or she may order the work stopped by notice in writing served on any persons engaged in doing or causing such work to be done, and any such persons shall stop conducting such work until authorized by the City Engineer to proceed with the work.

B. Whenever any work on which inspections are required is covered or concealed by additional work without first having been inspected, the City Engineer may require that such work be exposed for examination. Such work may be subject to additional inspection fees in accordance with Section 18.24.040(D), "Grading Permit and Inspection Fee" of this Ordinance.

C. If the city inspector finds the soil or other conditions not as stated in the approved plans and geotechnical reports or in additional information which was required for issuance of the grading permit, he may issue a stop work order until a revised grading plan has been approved by the City Engineer.

D. If, during the course of any clearing, grubbing or grading operations, discovery is made of items of archaeological or paleontological interest, the permittee shall immediately cease operation in the area of discovery and notify the city inspector. Discoveries that may be encountered include, but are not limited to, dwelling sites, stone implements or other artifacts, animal bones, and fossils. The permittee shall obtain the services of a qualified archeologist or paleontologist to investigate the site and assess the significance of the find. Under no circumstances shall anyone remove or disturb any artifacts or remains. Work shall be resumed in the area of discovery at the direction of the City Engineer.

E. Work may resume and the stop order shall be rescinded upon the City Engineer's determination that conditions have changed, corrections have been made, or the causes or actions which required a stop order have been remedied or alleviated to his or her satisfaction.

Chapter 18.21

ARTICLE 8. COMPLETION OF WORK

Sections:

18.21.020 Final Reports
18.21.040 Notification of Completion

18.21.020 Final Reports

Upon final completion of the rough grading work, the City Engineer may require the written approvals, reports, plans and supplements specified in the Grading Manual.

18.21.040 Notification of Completion

The permittee or his agent shall notify the City Engineer when the grading operation is ready for final inspection. Final approval shall not be given until all work, including installation of all drainage facilities and their protective devices, and all erosion and sediment control measures, including landscaping and its irrigation system, have been completed in accordance with the approved grading plan, and the required reports have been submitted. Where landscape planting for erosion and sediment control has been installed, final clearance (i.e. release of security deposits) shall not be granted until the planting has been established. The establishment of such erosion and sediment control plantings shall be certified by a licensed Landscape Architect and approved by the City Engineer.

Chapter 18.24

ARTICLE 9. GRADING FEES AND SECURITIES

Sections:

18.24.020 Grading, Erosion and Sediment Control Plan Checking Fee
18.24.040 Grading Permit and Inspection Fee
18.24.060 Review of Geotechnical Reports Fee
18.24.080 Refunds
18.24.100 Cost Recovery Fees
18.24.120 Grading, Erosion and Sediment Control Securities

18.24.020 Grading, Erosion and Sediment Control Plan Checking Fee

Before accepting an application and a set of plans and specifications for review, the City Engineer shall collect all plan-checking fees. Separate permits and fees shall apply to retaining walls or major drainage structures. All applicants submitting plans as required by this Ordinance shall pay all plan check fees and/or deposits as required by this Ordinance and by City Council resolution establishing applicable fees and deposits.

18.24.040 Grading Permit and Inspection Fee

A. All applicants requesting a mass, rough, precise, stockpile or administrative clearing permit as required by this Ordinance shall pay all fees and/or deposits as required by this Ordinance and by City Council resolution establishing applicable fees and deposits.

B. The fee for a grading permit authorizing additional work under a valid permit shall be the difference between the fee paid for the original permit and the fee shown for the entire project as indicated in the City's fee schedule.

C. A separate permit shall be required for each separate (noncontiguous) site. One permit may cover both an excavation and a fill on the same site.

D. Failure to pay fees and obtain a permit before commencing work shall be deemed a violation of this Ordinance, except where it can be proven to the satisfaction of the City Engineer that an emergency existed

that made it impractical to first obtain the permit. A violation shall result in an assessment of double permit fees for work done prior to permit issuance. Payment of a double fee shall not relieve any person from fully complying with the requirements of this Ordinance.

18.24.060 Review of Geotechnical Reports Fee

Before accepting a geotechnical (soils) report for review, the City Engineer shall collect a report review fee. A separate fee will be charged for each individual report submitted for review. The amount shall be as set forth by City Council resolution.

18.24.080 Refunds

After submittal and commencement of processing by the City, no fee collected pursuant to this division, shall be refunded in whole or in part, except as provided as follows:

A. Inspection fees may be refunded, less any City expenses incurred, including a reasonable overhead charge, at any time prior to the start of the work authorized by the permit, upon the applicant's written request, provided the grading application has expired or has been withdrawn.

B. No refund shall be made if the applicant or permittee has any outstanding debts owed to the City, or if corrective work remains to be done on the grading work itself.

C. No refund shall be made pursuant to this section if a request for refund is submitted to the City more than one (1) year from the date of payment of the fee as to which a refund is claimed.

18.24.100 Cost Recovery Fees

If the City Engineer performs emergency work relating to grading and erosion and sediment control on private property, he shall charge the property owner all direct and indirect costs that are necessary to complete the work to his satisfaction. Any costs assessed against the property owner under this section may be appealed to the City Council in accordance with Section 18.27.100, "Appeals" of this Ordinance.

18.24.120 Grading, Erosion and Sediment Control Securities

A. **Security required.** A grading permit shall not be issued unless the permittee first posts a security with the City comprised of a cash deposit, letter of credit, or a combination cash deposit and a corporate surety bond issued by a surety authorized to do business in the State of California, as specified in the Grading Manual. The security amount is required to assure that the work, if not completed in accordance with the approved plans and specifications, will be corrected to eliminate any deficiency or hazard created by the work or its lack of maintenance, as follows:

1. A cash deposit, in accordance with the Grading Manual, may be required by the City Engineer to ensure the elimination of hazardous conditions, the emergency maintenance of erosion and sediment control systems and to ensure the removal of stockpiles.
2. On developments where progressive individual grading projects or several concurrent projects are being constructed by one owner, a continuing (blanket) bond or other approved security that covers all such projects may be accepted in an amount determined by the City Engineer.

B. **Failure to Complete the Work.** In the event of failure to complete the work and failure to comply with all of the conditions and terms of the permit, the City Engineer may order work required by the permit to be completed or put in a safe condition to his satisfaction. The surety executing such bond, deposit, instrument of credit, or letter of credit shall continue to be firmly bound under a continuing obligation for the payment of all necessary costs and expenses that may be incurred or expended in causing any and all such required work to be done.

C. **Default in Performance Conditions.** Whenever the City Engineer finds or determines that a default has occurred in the performance of any requirement of a condition of a permit issued under the provisions of this Ordinance, written notice thereof shall be given to the principal and to the surety named on the bond. Such notice shall specify the work to be done, the estimated cost thereof and the period of time deemed by

the City Engineer to be reasonably necessary for the completion of such work. After receipt of such notice, the surety shall, within the time specified, cause or require the work to be performed, or failing therein, shall pay the estimated cost of doing the work as set forth in the notice. The surety shall pay the City for actual costs in accordance with Section 18.24.100, "Cost Recovery Fees" of this Ordinance.

Chapter 18.27

ARTICLE 10. ORGANIZATION AND ENFORCEMENT

Sections:

18.27.020	**Powers and Duties of the City Engineer**
18.27.040	**Violations and Penalties**
18.27.060	**Hazardous Conditions**
18.27.080	**Public Nuisance**
18.27.100	**Appeals**

18.27.020 Powers and Duties of the City Engineer

The provisions of Appendix Chapter 1, Administration, Section 104, Duties and Powers of Building Official, of the California Building Code shall apply to the City Engineer and his or her representative for all grading construction and earthwork to be done as required by any conditions of a permit issued pursuant to this Ordinance.

18.27.040 Violations and Penalties

A. It shall be unlawful for any person, firm or corporation to do grading work in the City of Temecula, or cause the same to be done, contrary to or in violation of any of the provisions of this Ordinance or State or Federal Law.

B. The issuance of a building permit, performance of building permit inspections, or issuance of a certificate of occupancy may be withheld on property on which a violation of the provisions of this Ordinance exist, including work not performed in accordance with the approved plans, until such violation(s) has been corrected to the satisfaction of the City Engineer.

C. Any person, firm, or corporation violating any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor. Each such person, firm or corporation shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violations of any provisions of this Ordinance are permitted, continued or committed by such person, firm or corporation and shall be punishable as provided for in Chapter 1.20, "General Penalty" of the Temecula Municipal Code.

18.27.060 Hazardous Conditions

A. Hazardous conditions exist when the state of any natural ground, natural slopes, excavation, fill or drainage devices are situated on private property in such a manner that they are a hazard to life or limb, or a danger to public safety, or endangers the safety, usability, or stability of adjacent property, structures or public facilities.

B. The City Engineer or their designee (including City Code Enforcement) may examine, or cause to be examined, every condition reported as hazardous as set forth in subsection (A) of this section.

C. Upon confirmation of a hazardous condition, the City Engineer or their designee (including City Code Enforcement) shall provide written notification to the permittee, owner or agent in control of property with confirmed hazardous condition, requiring mitigation of said hazardous condition and stipulation of an acceptable time frame for compliance.

D. The permittee, owner or agent in control of the property shall comply with any demand for corrective work or repairs as required. In the event that corrective action is not completed within the period specified in writing, the City may exercise any available recourse for correction of said hazardous condition in accordance with Title 8, Chapter 8.12, of the Municipal Code.

18.27.080 Public Nuisance

For purposes of this Ordinance, the following shall constitute a public nuisance:

A. Any grading or other work conducted without a permit where it is required by this Ordinance.

B. Any grading or other work done in violation of any of the conditions imposed thereon by a permit issued pursuant to this Ordinance.

C. Any grading or other work, which fails to be done as required by any conditions of a permit, issued pursuant to this Ordinance.

D. The existence of a hazardous condition as defined in Section 18.27.060, of this Ordinance upon the determination by the City Engineer that such condition exists.

18.27.100 Appeals

A. The applicant, permittee, or any person(s) not satisfied with the decision by the City Engineer in regards to issuance of a grading permit or the performance of the permitted work, may file a written appeal to the City Clerk for a hearing before the City Council.

B. Any such appeal must be made within three (3) calendar days following the decision.

C. The City Council will set a hearing to consider the appeal at the earliest possible regularly scheduled City Council meeting.

D. The City Council, after receiving and considering all testimony and pertinent documents, may:
   1. Uphold the City Engineer's decision; or
   2. Approve the appeal; or
   3. Modify the City Engineer's decision, consistent with the requirements of this Ordinance.

Chapter 18.33

ARTICLE 11. DEFINITIONS OF TERMS

Whenever, in this Ordinance and the Grading Manual, or in any resolution or standard adopted by City Council pursuant to this Ordinance, the following terms are used, they shall have the meaning ascribed to them in this section, unless it is apparent that some other meaning is intended:

"**Administrative Clearing Permit**" means a permit that authorizes the clearing, brushing, or grubbing of a portion of land beyond that scope exempted from the permit process by this Ordinance.

"**As-Graded**" means the site configuration upon completion of grading. This includes all horizontal and vertical dimensions and relationships and all physical features installed, reconstructed, eliminated, or altered by the grading operations as shown on the record drawings prepared by the engineer of work.

"**Accessibility**" is the combination of various elements in a building, facility, site or area, or portion thereof which allows access, circulation and the full use of the building and facilities by persons with disabilities in conformance with the Chapter 11B of the California Building Code.

"**Accessible Route of Travel**" means the continuous unobstructed path connecting all accessible elements and spaces in an accessible building or facility that can be negotiated by a person with a severe disability using a wheelchair and that is also safe for and usable by persons with other disabilities, and that also is consistent with the definition of "Path of Travel" in this section. Interior accessible routes may include parking access aisles, curb ramps, crosswalks at vehicular ways, walks, sidewalks, ramps and lifts. An accessible route does not include stairs, steps or escalators.

"**Accessibility**" means the combination of various elements in a building or area, which allows access, circulation, and the full use of the building and facilities by handicapped persons.

"**Applicant**" means any person, corporation, partnership association of any type, public agency or any other legal entity who submits an application for a grading permit pursuant to this Ordinance.

"**Approval**" means that the proposed work or completed work conforms to the requirements of this Ordinance, in the opinion of the City Engineer.

"**ASTM Standards**" means the American Society for Testing Materials, which develops standardized test methods, specifications, practices, guides, classifications and terminology in such subject areas as metals, paints, construction, consumer products and many others.

"**Base**" means a layer of specified material of planned thickness placed immediately below the pavement or surfacing.

"**Bedrock**" means in-place solid rock.

"**Bench**" means a relatively level step excavated into soil materials on which fill is to be placed.

"**BMP's**" means the management practices, operating procedures, and devices implemented to prevent or reduce the discharge of pollutants directly or indirectly to public or private storm water conveyance systems.

"**Borrow**" means soil material acquired from an off-site location for use in grading on a site.

"**Buttress Fill**" means an engineered fill designed to stabilize an adverse geologic condition (landslide, adverse bedding, etc.).

"**Certify" or "Certification**" means a signed written statement that the specific inspections and/or tests required to be performed on real property have been performed and that the works comply with the applicable requirements of this Chapter, the plans, and the permit.

"**City Engineer**" means the City Engineer of the City of Temecula or his or her duly delegated representative.

"**Civil Engineer**" means a professional engineer registered in the State of California to practice in the field of civil engineering.

"**Clearing, Brushing and Grubbing**" means the removal or disturbance of vegetation (grass, brush, trees, and similar plant types), weed abatement, manmade structures, environmentally sensitive species and habitats, rocks, archaeological artifacts and sites, or other environmentally sensitive features by any means for purposes of development or compliance with laws, rules or regulations. For purposes of this chapter, references to "clearing" means clearing, brushing and grubbing individually and separately.

"**Compaction**" means the densification of a fill by mechanical or other acceptable means.

"**Construction Site**" means any project requiring a local grading or building permit, including projects requiring coverage under the General Construction Permit.

"**Contour Grading**" means grading that creates or results in land surfaces that reflect the pre-graded natural terrain or that simulates natural terrain (i.e. rounded, non-planer surfaces and rounded, non-angular intersections between surfaces).

"**Crib Wall**" means a crib type wall as described in the most recent publication of "Standard Plans", Department of Transportation, State of California.

"**Cross-Lot Drainage**" means any drainage course created through grading or excavation that crosses on to another lot either within or outside the subdivision or construction site.

"**Curb Ramp**" means a sloping pedestrian way, intended for pedestrian traffic, which provides access between a walk or sidewalk to a surface located above or below an adjacent curb face.

"**Cut**" see definition for "Excavation."

"**Dry Season**" means May 1st thru September 30th of each year.

"**Engineer of Record**" means the professional engineer holding a current registration in the State of California who supervised the design and signed the grading plan accepted by the City Engineer.

"**Erosion**" means the wearing away of the ground surface as a result of the movement of wind, water or ice.

"**Erosion Control**" means anything that keeps soil in place.

"**Erosion and Sediment Control Plan**" is a plan prepared under the direction of and signed by a civil engineer competent in the preparation of such plans and knowledgeable about current erosion and sediment control methods. Said plan shall be submitted to the City and shall provide for protection of exposed soils and desiltation of runoff at frequent intervals prior to discharging from a site or to a storm water conveyance system (natural watercourses, streets, flow-lines, inlets, outlets, etc.).

"**Erosion and Sediment Control System**" means combination of erosion and sediment controls (including effective planting and the maintenance thereof) to protect the project site, adjacent private property, watercourses, public facilities, graded improvements, existing natural features, archaeological artifacts, and to relieve waters of suspended sediments or debris prior to discharge from the site.

"**Excavation**" or "Cut" means an act by which soil, sand, gravel, or rock is cut into, dug, quarried, uncovered, removed, or relocated, and shall include the conditions resulting there from.

"**Expansive Soils**" is any soil with an expansion index greater than twenty (20), as determined by the Expansive Index Tests of the California Building Code.

"**Fault**" means a fracture in the earth's crust along which movement has occurred. A fault, as defined by the California Division of Mines and Geology, is considered active if the movement has occurred within the last eleven thousand years (Holocene geologic time).

"**Fill**" means a deposit of soil, sand, gravel, rock, or other material placed by artificial means.

"**Flow-line**" means v-ditches, brow-ditches, terrace drains, ribbon gutters, curb gutters, etc.

"**Fugitive Dust**" means the particulate matter entrained in the ambient air as a result of man-made fugitive dust sources as determined by South Coast Air Quality Management District Rule 403.

"**General Construction Permit**" means the permit issued by the SWRCB to regulate discharges from construction activity.

"**Geohydrology**" means all groundwater information, water-well usage rate requirement, seepage elevations, pollution evaluations, projected usage rate considerations, evaluations of impact on existing and future users, and long term projections appropriate to site development.

"**Geologic Hazard**" means any geologic feature capable of producing structural damage or physical injury. Geologic hazards include:

A. Landslides and potential slope instabilities resulting from bedding faults, weak clay stone beds, and over steepened slopes.

B. Deposits potentially subject to liquefaction, seismically induced settlement, severe ground shaking, surface rupture, debris flows, or rock falls resulting from fault activity.

C. Deposits subject to seepage conditions or high-ground water table.

"**Geotechnical Engineering Report**" means a geotechnical report prepared under the responsible supervision of a geotechnical engineer and approved by the City Engineer or his representative, which includes:

A. Preliminary information concerning engineering properties of soil and rock on a site prior to grading, present, historical, and future groundwater levels, analysis for both gross and surficial slope stability, fill settlement, liquefaction potential, alluvium deposits, describing locations of these materials and providing recommendations for preparation of the site for its intended use.

B. A grading report which includes information on site preparation, compaction of fills placed, providing recommendations for structural design and approving the site for its intended use.

"**Grade**" means the vertical elevation of the ground surface.

A. **"Existing grade"** means the grade prior to grading.

B. **"Finish grade"** means the final grade of the site, which conforms precisely to the City-approved plans, approved construction changes or record drawings.

C. **"Natural grade (or natural ground)"** means the ground surface unaltered by artificial means.

D. **"Rough grade"** means the stage at which the work is in to precise conformance with the approved plan and when all excavations for drainage structures and retaining walls are complete.

"**Grading,**" means any process of excavation or filling or combination thereof.

"**Greenbook Standards,**" means the most recent publication of the Standard Specifications for Public Works Construction, which provides specifications that, have general applicability to public works projects.

"**Hillside Site,**" means a site where the existing grade is 20 percent (%) or greater and which may be adversely affected by drainage and/or stability conditions within or from outside the site, or which may cause an adverse affect on adjacent property.

"**Key**" means a compacted fill placed in a trench excavated in earth material beneath the toe of a slope.

"**Keyway**" means an excavated trench into competent earth material beneath the toe of the proposed fill slope.

"**Landslide**" means a perceptible down slope movement of rock, soil, or artificial fill ranging in speed from moderately slow (slump) to very rapid (avalanche).

"**Maximum Extent Practicable (MEP)**" means the standard established by Congress in the Clean Waters Act that operators of MS4 permits must meet. To achieve the MEP standard, Best Management Practices must be implemented that are technically feasible (i.e. are likely to be effective) in combination with treatment methods serving as a backup.

"**Mined Lands**" includes the surface, subsurface, and groundwaters of an area in which surface mining operations will be, are being, or have been conducted. This includes private ways and roads appurtenant to any such area, land excavations, mining waste, and areas in which structures, facilities, equipment, machines, tools, or other related materials or property are located.

"**Municipal Separate Storm Sewer System/MS4 (Permit)**" means the certification/regulation requirements that the City must meet to allow storm water discharges into the Waters of the State.

"**Natural Terrain**" means the lay of the land prior to any grading or other artificial landform modification.

"**National Pollutant Discharge Elimination System (NPDES)**" means the permitting and program requirements established by the Federal Clean Water Act and administered by the Environmental Protection Agency to regulate the discharge of pollutants to waters of the United States.

"**Owner**" means a person who owns a site upon which is located grading, clearing, mining, quarrying, and/or commercial extraction operations that are being conducted or may be conducted.

"**Path of Travel**" means a passage that may consist of walks and sidewalks, curb ramps and pedestrian ramps, lobbies and corridors, elevators, other improved areas, or a necessary combination thereof, that provides free and unobstructed access to and egress from a particular area or location for pedestrians and/or wheelchair users. A "path of travel" includes a continuous, unobstructed way of pedestrian passage by means of exited, and which connects a particular area with an exterior approach (including sidewalks, streets and parking areas), an entrance to the facility and other parts of the facility. In existing buildings, when alterations, structural repairs or additions are made, the term "path of travel" also includes the sanitary facilities, telephones, drinking fountains and signs serving the altered area.

"**Permit**" means the authorization issued pursuant to this Ordinance, together with the application for the same, the conditions upon which it was issued, and any plans, specifications, reports, and approved modifications thereto.

"**Permittee**" means any person, property owner, contractor or authorized agent to whom a permit is issued pursuant to this Ordinance.

"**Person**" means any individual, firm, association, corporation, organization, or partnership or any city, county, district, the State or any department or agency thereof. (14 Cal. Code of Regulations, Sec. 3501)

"**Pollutant**" means any agent that may cause or contribute to the degradation of water quality. The term may include, but is not limited to, dredged spoil, rock, sand, silt, solid and liquid waste, oil, fuels, construction related materials, debris and other contaminates.

"**Precise Conformance**", for purposes of this Ordinance, means:

A. Pad elevations within plus or minus four-tenths (0.4) of a foot (1') of planned elevation or approved construction change:

B. Street subgrade within plus or minus four hundredths (0.04) of a foot (1') of planned elevation or approved construction change;

C. Slope grades within plus or minus 1/2 foot (0.5') of planned elevation or approved construction change;

D. Rock slopes (rip-rap armoring) and horizontal locations within two feet (2') of planned elevation and location or approved construction change;

E. Drainage gradient to within two-tenths (0.2) of one percent (1%) of planned slope or approved construction change;

F. Structures within the tolerances specified in the latest adopted version of the "Standard Specifications for Public Works Construction" (Green Book).

"**Precise Grading Permit**" means a permit that is issued on the basis of approved plans that show the precise locations of structures, finished elevations, drainage details and all on-site improvements on a given property.

"**Priority Development Projects**" means new development and redevelopment projects, as indicated in the City's MS4 permit requirements.

"**Private Roads**" are roads that have been dedicated to the public, but not accepted for public use or that have been retained as "Private" for private use by the owners or may simply be a road created by private use or easement.

"**Quarrying**"' means the process of removing or extracting stone, rock, or similar materials from an open excavation for financial gain.

"**Rainy Season**" means October 1st thru April 30th of the next calendar year.

"**Record Drawings**" means plans prepared by the engineer of work subsequent to the completion of all work on the approved plans and approved changes thereon depicting the as-graded condition.

"**Regional Water Quality Control Board" (RWQCB)** means the State's Regional Regulatory Agency responsible for protecting waters of the State.

"**Retaining Wall**" means a wall designed to resist the lateral displacement of soil or other materials.

"**Rough Grading Permit**" means a permit that is issued on the basis of approved plans that show finished elevations, interim building pad elevations and drainage.

"**Sediment Control**" means anything that captures soil particles after being displaced.

"**Site**" means the real property on which activities subject to this Ordinance may occur.

"**Slope**" means an inclined ground surface of fill, excavation or natural terrain, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

"**Slope Revegetation**" means the planting of graded slopes with native and/or naturalizing plant species, which, after an initial establishment period, usually requiring irrigation, will survive with normal precipitation.

"Slope Stability" shall be defined as follows:

A. **"Gross stability"** means the factor of safety against failure of slope material located below a surface approximately three to four feet deep, measured from and perpendicular to the slope face.

B. **"Surficial stability"** means the factor of safety against failure of the outer three to four feet of slope material measured from and perpendicular to the slope face.

"Soil" means any rock, natural soil, or fill, and/or any combination thereof.

"South Coast Air Quality Management District" (SCAQMD) means the regulatory authority for all or portions of Los Angeles, Orange, San Bernardino and Riverside Counties that oversees air pollution emissions from stationary sources, including fugitive dust sources generated by construction activity.

"State Water Resources Control Board" (SWRCB) means the regulatory authority that develops statewide water protection policies, establishes water quality standards, and guides the nine Regional Water Quality Control Boards throughout the state.

"Stockpile" means a temporary uncompacted fill or embankment placed by artificial means, which is designated or intended to be moved, or relocated at a later date.

"Stop Work Order" means an order issued by a City official who requires that specific activity or all activity on a work site be stopped.

"Storm Water" means surface runoff and drainage associated with storm events.

"Storm Water Conveyance System" means any natural watercourses, curbs, gutters, streets, flow-lines, inlets, outlets, etc., either public or private, leading to waters of the State.

"Storm Water Pollution Prevention Plan" (SWPPP) means a document which meets the requirements set in the State's NPDES General permits for Construction and Industrial activities. The SWPPP must describe the BMP's to be implemented to meet the requirements of the General Permits and this Ordinance.

"Sub-base" means a layer of specified material of planned thickness between a base and the subgrade.

"Sub-grade" means the soil prepared to support structures, or that portion of the roadbed on which pavement, surfacing, base or sub-base, or layer of other material is placed.

"Terrace" means a relatively level step constructed in the face of a graded slope surface for drainage and maintenance purposes.

"Topsoil" means soil which is within the uppermost horizon of a soil profile, and which contains organic matter, nutrients, and microorganisms necessary for plant growth.

"Ultimate Right-of-Way" means the right-of-way shown as ultimate on an adopted precise plan of highway alignment, or a street right-of-way shown within the boundary of a recorded tract map, or a recorded parcel map. The latest adopted or recorded document in the above cases shall take precedence. If none of these exist, the Ultimate Right-of-Way shall be considered to be the right-of-way required by the highway classification as shown on the Master Plan of Arterial Highways. In all other instances, the Ultimate Right-of-Way shall be considered to be the existing right-of-way.

"Water Quality Management Plan (WQMP)" means a plan submitted in connection with an application for a City permit or other City approval, identifying the measures that will be used to mitigate the impacts of urban runoff from development projects.

"Watercourse" means a permanent or intermittent stream or other body of water, either natural or improved, which gathers or carries surface water.

"Watershed" means the geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also know as a drainage area, catchment, or river basin.

"Waters of the State" means any water, surface or underground, under the jurisdiction of the State.

Section 5: The provisions of Title 18, Articles 1 through 11, shall apply to all grading permits issued on or after the effective date of this Title.

Section 6: The City Council authorizes and directs the City Engineer to prepare and utilize a manual of standards setting forth the administrative procedures and technical requirements necessary to implement the provisions of this Ordinance. Such rules, procedures, and requirements shall be entitled "Administrative and Technical Procedures Manual for Grading, Erosion, and Sediment Control" in substantially the form set forth in Exhibit A.

Section 7: If any provision of this Ordinance or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or application, and to this end, the provisions of this Ordinance are declared to be severable.

Section 8: The potential grading and land clearing activities regulated by this Ordinance represent components of the adopted General Plan that has already received the appropriate review when the General Plan was approved. Based on this fact, the City Council hereby finds that the adoption of this Ordinance is exempt from further review pursuant to CEQA Guideline Sections 15162(a) and 15061(b)(3) of the CEQA Guidelines. Section 15162 states that when an EIR has been certified for a project, no additional environmental review is required unless there is substantial evidence that the project has changed. The Final EIR for the City General Plan was certified on November 9, 1993.

Section 9: The City Clerk shall certify the Ordinance and cause it to be published as required by law. This Ordinance shall take effect on the 30th day after adoption pursuant to state law.

PASSED, APPROVED AND ADOPTED, by the City Council of the City of Temecula on the 20th day of April 2004.

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June 28, 2012

VIA U.S. MAIL AND E-MAIL

David W. Gibson
Executive Officer
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Re: Legal Authority of the City of Temecula to Implement and Enforce the Requirements of 40 CFR 122.26(d)(2)(i)(A-F) and RWQCB Order R9-2010-0016

Dear Mr. Gibson:

The City of Temecula (the "City"), by and through its City Attorney, hereby submits the following certification, pursuant to Section E.2 of Order No. R9-2010-0016, [NPDES Permit No. CAS0108766], issued by the California Regional Water Quality Control Board, San Diego Region ("RWQCB") on November 10, 2010 and entitled "Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District Within the San Diego Region " (the "Permit").

The City is one of the co-permittees under the Permit. Section E.2 of the Permit requires the City to provide the RWQCB with a statement by its legal counsel, certifying that the City has taken necessary steps to obtain and maintain full legal authority to implement and enforce each of the current requirements set forth in 40 CFR 122.26(d)(2)(i)(A-F) and the Permit. The purpose of this letter is to describe the City's compliance with Section E.2 of the Permit. As discussed in further detail herein, it is our opinion that the City has the necessary legal authority to implement the Permit and to control and prohibit discharges of pollutants into the Municipal Separate Storm Sewer System ("MS4"). This Statement is being submitted on behalf of the City to comply with the requirements of Section E.2 of the Permit. However, this Statement is not, nor should it be construed as, a waiver of any rights that the City may have relating to the Permit.

1. Legal Authority Statement

In our opinion, the City has adequate legal authority to comply with the legal requirements imposed upon the City under the Permit, consistent with the requirements set forth in the U.S. Environmental Protection Agency's regulations promulgated under the Clean Water Act, and, specifically, 40 CFR 122.26(d)(2)(i)(A-F), and to the extent permitted by State and Federal law and subject to the limitations on municipal action under the California and United States Constitutions, except as noted herein:

The Co-Permittees, including the City, have agreed that the Riverside County Flood Control and Water Conservation District ("District") is to serve as the Principal Permittee under this Permit. This statement assumes the District also has adequate legal authority to comply with the requirements imposed on it as the Principal Permittee by the Permit, and that the Principal Permittee will exercise its legal authority as appropriate to comply with the Permit.

2. Status of Implementation

The City has adequate legal authority, as envisioned by the Clean Water Act and applicable regulations, to implement the requirements of the Permit by the mandated dates to the extent permitted by California and Federal law and subject to the limitations on municipal action under the constitutions of California and the United States.

3. Ordinances

The City has adopted ordinances related to the regulation of urban runoff to control and prohibit discharges of pollutants into the MS4 and to comply with the requirements of the Permit applicable to the City, as well as, to the extent applicable, 40 C.F.R. § 122.26 (D)(2)(i)(A)-(F). The City's Water Quality Ordinance (Chapter 8.28 of Municipal Code) is the principal City ordinance addressing the control of urban runoff.

A. Enforceability

The City, as a general law city, has broad general police powers under the Constitution of the State of California to enact legislation for health and public welfare of the community to the extent not preempted by Federal or State law. In addition, the City adopted ordinances for the purpose of ensuring that it has adequate

legal authority to implement and enforce its storm water control program. The City has the authority under the Constitution and statutes of the State of California to enact and enforce these ordinances, and these ordinances were duly enacted. These ordinances contain specific enforcement provisions under the generally applicable enforcement provisions of the Temecula Municipal Code.

B. Implementation

Some of the City's ordinances are implemented through permit programs and others are implemented as regulatory programs. Under each ordinance, one or more City departments or department directors are authorized and directed in each ordinance to take the actions contemplated by the ordinance (*e.g.*, to consider evidence and make findings, to issue or deny permits, to impose conditions on projects, to inspect, to take enforcement action, etc.).

The City's Water Quality Ordinance (Chapter 8.28 of Municipal Code) is the principal City ordinance addressing the control of urban runoff. This ordinance is regulatory, and applies to specified new and existing residential and business communities and associated facilities and activities, as well as new development and redevelopment, and all other specified new and existing facilities and activities that threaten to discharge pollutants within the boundaries of the City and within its regulatory jurisdiction, whether or not a City permit or approval is required. The City's Water Quality Ordinance also contains discharge prohibitions and requirements for the implementation of best management practices ("BMPs") and other requirements necessary to implement the Permit.

Other City departments require compliance with the City's Water Quality Ordinance as a condition for issuance of relevant City permits. City departments may also impose specific conditions of approval consistent with the City's Water Quality Ordinance. All City environmental ordinances are also implemented, in part, through the application of the CEQA process to proposed projects.

Although City ordinances are not subject to appeals, they are subject to a public notice and comment process prior to enactment. Enacted City ordinances can be challenged by, among other things, the timely filing of a writ of mandate in Superior Court. The referendum and initiative process can also be used to change or repeal enacted ordinances. The imposition of administrative penalties and fines under these ordinances (where applicable) can be appealed to the courts. Trial court decisions to impose civil penalties or to grant injunctive or other relief can also be appealed.

4. Administrative and Legal Procedures

In addition to the above authority, the City has in place various legal and administrative procedures to assist in enforcing the various urban runoff related Ordinances, including the following:

A. Administrative Remedies

- General Penalties (Chapter 1.20 of the Temecula Municipal Code; Temecula Municipal Code Sections 8.28.310, 8.28.320 and 8.28.410)
- Administrative Penalties and Citations (Chapter 1.21 of the Temecula Municipal Code)

B. Nuisance Remedies

- Public nuisance under State law
- City Nuisance abatement procedures (Chapter 8.12 of the Temecula Municipal Code)

C. Criminal Remedies

- Misdemeanor citations/prosecution (explicitly authorized for grading violations in Temecula Municipal Code Section 18.27.040 and stormwater violations in Temecula Municipal Code Section 1.20.010)

D. Equitable Remedies

- Injunctive relief under State law and the Temecula Municipal Code
- Declaratory relief under State law

E. Other Civil Remedies

- Federal law claims (*e.g.*, Clean Water Act and Resource Conservation and Recovery Act Citizen Suits)

- Remedies under the California Government Code

Please contact me if you have any questions regarding the foregoing or if you need any additional information regarding the City's legal authority to enforce the Permit.

Very truly yours,

for

Peter M. Thorson
City Attorney

cc: Greg Butler, City of Temecula
Aldo Licitra, City of Temecula
Candice K. Lee, Esq.

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Table 7: Retrofit Program Section 10.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interv** *(how frequently the annually collecte assessed for meeting potential CAS Levels)*
Number of times the Retrofit Program has identified a potential solution to a specific identified problem	1	Annual
Number of non-structural 'retrofit' BMPs that have been implemented	4	ROWD
Number of structural 'retrofit' BMPs that have been implemented	5	ROWD

* *As described in the Retrofit Program, Retrofit BMPs (Non-structural and/or Structural) may not be required to address all identified problems. Accordingly no timeframe has been established*

Outcome Timeframe *(time at which program will be reassessed if desired outcome has not been achieved)*
Annual
N/A*
N/A*

potential outcomes.

Appendix B-5

Performance Evaluation Assessment

Compliance with Section J.1

Section J.1 of the 2010 SMR MS4 Permit requires each Copermittee to annually assess and report upon the effectiveness of the JRMP and Watershed Workplan implementation to (1) reduce the discharge of Storm Water Pollutants from its MS4 facilities to the MEP; (2) prohibit Non-Stormwater discharges; and (3) prevent runoff discharges from the MS4 from causing or contributing to a violation of Water Quality Standards. With submittal of the Report of Waste Discharge, the Copermittees will determine whether their program implementation is resulting in the protection and/or improvement of water quality through an integrated assessment.

Overview

The purpose of the overall program assessment is to ensure that the Copermittee's programs continue to be effective at managing the effects of Runoff on Receiving Water quality as required under section J.1 of the 2010 SMR MS4 Permit. To achieve this objective, the Copermittees have developed an overall program effectiveness assessment strategy. The overall program effectiveness assessment is an iterative process as depicted in Figure 1.

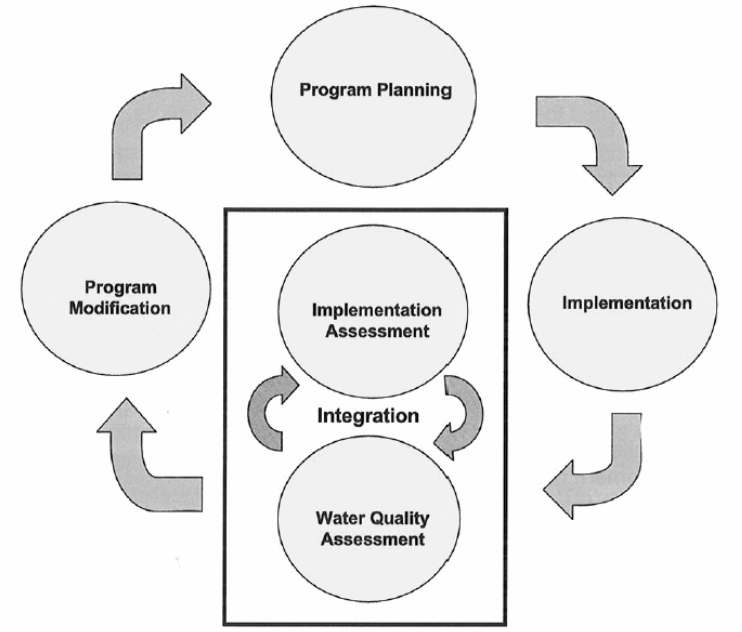


Figure 1

Measurable metrics that will be collected annually. These metrics generally involve: Confirmation of activities, Tabulation of data, Surveys of the public, results from Inspections or site visits, Quantification, and information from the Monitoring program.

CASQA Outcome Levels for each metric; to indicate how each metric can demonstrate the effectiveness of the Permittee's programs (as described below). Data collected through program implementation will be used to assess Level 1 – 4/5 outcomes. The results from the monitoring program will be used to identify water quality trends to evaluate Level 5 & 6 Outcomes

Assessment Intervals at which the Copermittees will evaluate the measurable metrics to determine the applicable CASQA Outcome Levels.

Timeframes in which the Copermittees expect to be able to achieve the desired CASQA Outcome Level. If a desired outcome is not attained within the specified timeframe, the Copermittee(s) will re-assess the BMP to identify any improvements that may be needed to improve their ability to detect and attain the outcome.

CASQA Outcome Levels

CASQA has established six effectiveness assessment levels which are described below. Generally lower level outcomes must be achieved before the higher level outcomes can be expected.

Level 1 – Documenting activities. Level 1 Outcomes provide the program managers with direct feedback on whether the control measures are being developed and implemented as planned and on schedule. Level 1 Outcomes are assumed to be beneficial to water quality and reflect program implementation and are not indicators of the impact of implementation on the environment.

Level 2 – Raising awareness. Level 2 Outcomes provide program managers with feedback on how effective the control measures have been in raising awareness and changing attitudes of target audiences. Level 2 Outcomes are assumed to be beneficial to the environment as increased awareness and attitudinal changes provide the basis for behavioral change.

Level 3 – Changing behavior. By building on Level 2, Level 3 Outcomes provide program managers with feedback on how effective the program elements and control measures have been in motivating target audiences to change their behaviors and implement appropriate BMPs. At Level 3, control measures focus on providing information and incentives for target audiences to take action by changing behavior and implementing recommended BMPs. Both quantitative (i.e., statistically valid) and qualitative methods are used to measure behavior changes. Methods used to measure behavior changes include those used for Level 2 Outcomes as well as direct observation via site visits. Level 3 Outcomes may take the form of a percent and/or change in the percentage of the target audience demonstrating that a behavior change has occurred such as an increase in number of BMPs implemented and maintained at construction sites.

Level 4 – Reducing loads from sources. Level 4 Outcomes provide program managers with feedback regarding reductions in the amounts of pollutants associated with specific sources

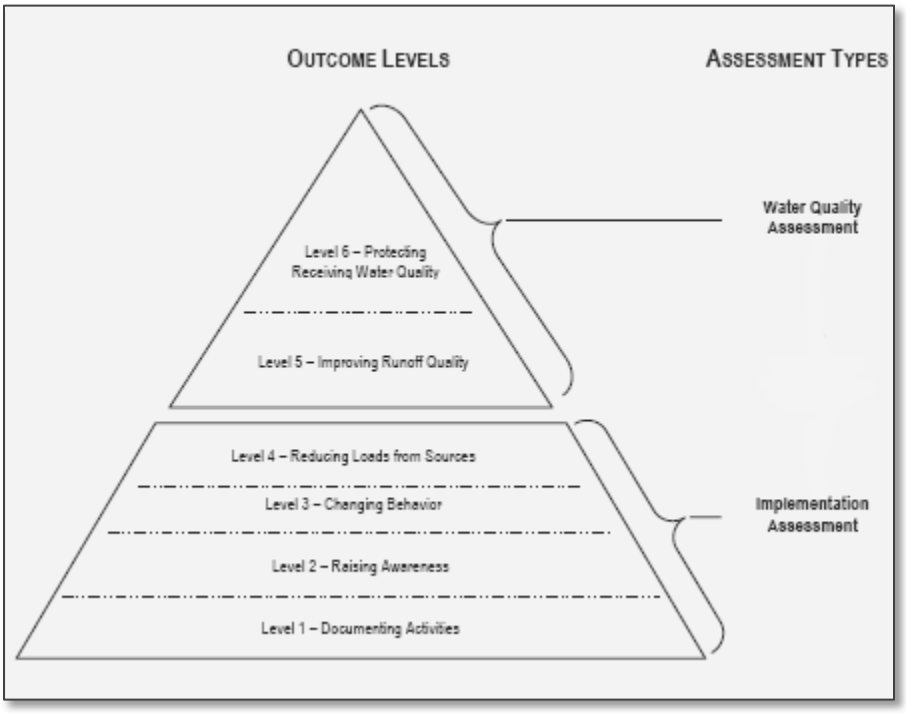
resulting from the implementation or enhancement of a BMP. If a large enough portion of the target audience is moved to take action (Level 3), loads into the MS4 are prevented. At Level 4, programs collect data to allow estimation of loads from Pollutant sources that are prevented from being either generated or discharged into the MS4.

Level 5 – Improving runoff quality. Level 5 Outcomes may be measured as reductions in one or more specific Pollutants, and may reflect effectiveness at a variety of scales ranging from site-specific to programmatic. Over time, as loads are prevented from entering the MS4, runoff and discharge quality are expected to improve. At Level 5, baseline measurements of runoff quality should be measured to allow comparison. Multi-year data sets are needed to have any confidence in the measured change.

Level 6 – Protecting Receiving Water quality. At Level 6, program managers will focus on Outcomes such as compliance with Water Quality Standards, protection of biological integrity, and Beneficial Use attainment. Regardless of the Outcomes targeted, Receiving Water quality usually reflects more than the quality of MS4 discharges. Other influences may have a significant impact on Receiving Water quality, including sanitary sewer overflows, rising groundwater, agricultural and other Non-Point Source discharges. Changes in Receiving Waters and the environment resulting from stormwater programs may only be seen over long periods of time that allow the cumulative impacts of multiple control measures and program elements to result in measurable change in water quality.

Categories of Assessments

The program elements addressed in the overall program effectiveness assessment can generally be broken down into two categories, implementation assessments, and water quality assessments, as shown in the figure below:



Assessment Strategy

JRMP Implementation Assessments

The Copermittees have identified implementation assessment metrics for each compliance program area which can potentially demonstrate multiple outcome levels, as summarized below:

JRMP Program	Table #	Potential Outcome Levels					
		1	2	3	4	5	6
IC/ID	1	X		X	X	X	
Permittee Facilities	2	X	X	X	X		
Development Planning	3	X		X		X	
Construction	4	X		X			
Industrial / Commercial	5	X		X			
Residential	6			X	X		
Retrofit	7	X			X	X	
Public Education	8	X	X	X	X		

The specific metrics and associated CASQA Effectiveness Metrics are shown in Tables 1-8 of the Performance Evaluation Assessment.

Water Quality Assessments

In addition to the implementation assessments identified above, data from the Monitoring program will be used to perform Water Quality Assessments, as summarized below:

Monitoring Program Element	Potential Outcome Levels					
	1	2	3	4	5	6
Outfalls – Dry Weather				X	X	
Outfalls – Wet Weather				X	X	
Outfalls – High Priority Inland Aquatic Habitat				X	X	
Receiving Waters - Stream Assessment Monitoring				X	X	X
Receiving Waters – MLS Dry Weather				X	X	X
Receiving Waters – MLS Dry Weather				X	X	X

The specific metrics and associated CASQA Effectiveness Metrics for the Monitoring Program Element are shown in Table 9 of the Performance Evaluation Assessment. The revised Santa Margarita Monitoring Program (Volume III of the CMP) describes the monitoring program that will collect the necessary data.

The specific metrics and associated CASQA Effectiveness Metrics for the Watershed Workplan Program Element are shown in Table 10 of the Performance Evaluation Assessment. The Watershed Workplan is discussed in section 3.8 of the JRMP.

Reporting of Effectiveness Assessments

The continued implementation of the BMPs required in the 2010 SMR MS4 Permit are anticipated to result in incremental, but overall improvement in the metrics that may or may not be discernible within the term of the 2010 SMR MS4 Permit, however this assessment program is intended to be an iterative process that can transcend MS4 Permit terms, to ensure that improvements are made consistent with the MEP standard.

Beginning with the FY 2012-2013 Annual Reports, a summary of the Implementation Assessments will be provided within each JRMP Annual Report, and a summary of the Water Quality Assessments will be provided within each Monitoring Annual Report.

These effectiveness summaries will include:

a. The data collected for each of the measurable metrics identified in tables 1-10.

b. A determination of the applicable CASQA outcome level(s) for each metric, upon completion or the applicable assessment interval.

c. Responses to effectiveness assessments: Where the assessments indicate that the desired outcome level has not been achieved at the end of the projected timeframe, the Copermittee(s) will review its(their) applicable activities and BMPs to identify any modifications and improvements needed to maximize effectiveness, as necessary to comply with the 2010 SMR MS4 Permit. If the Copermittee(s) determines that the existing activities/BMPs are adequate, or that the projected timeframe should be

extended, justification and an updated timeframe for attainment of the outcome level will be provided in the Annual Report.

d. A work plan and schedule to address any program modifications and improvements in response to the findings of the assessments will be developed and implemented. The work plan and schedule will be provided and updated with the applicable Annual Report. The work plans will include, at a minimum, the following:

1) The problems and priorities identified during the assessment;
2) A list of Priority Pollutants and known or suspected sources;
3) A brief description of the strategy employed to reduce, eliminate or mitigate the negative impacts;
4) A description and schedule for new and/or modified BMPs. The schedule will include dates for significant milestones;
5) A description of how the selected activities will address an identified high priority problem. This will include a description of the expected effectiveness and benefits of the new and/or modified BMPs;
6) A description of implementation effectiveness metrics;
7) A description of how efficacy results will be used to modify priorities and implementation; and
8) A review of past activities implemented, progress in meeting Water Quality Standards, and planned program adjustments.

BEST MANAGEMENT PRACTICES Plan for FIRE FIGHTING ACTIVITIES

Initially Prepared in Consultation with the Following Fire Fighting Agencies:

City of Corona Fire Department
City of Hemet Fire Department
City of Norco Fire Department
City of Riverside Fire Department
County of Riverside Fire Department/CDF
Idyllwild Fire Protection District
Murrieta Fire Protection District

Revised in compliance with
Order No. R9-2010-0016 (NPDES No. CAS0108766)
Covering the Santa Margarita Region

June 2012

INTENT

The purpose of this plan is to identify Best Management Practices (BMPs) used by fire fighting agencies for Runoff management in the Santa Margarita Region of Riverside County. Section B.3 of the 2010 SMR MS4 Permit adopted by the San Diego Regional Water Quality Control Board (Regional Board) requires each Copermittee to develop and implement a program to address Pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified as significant sources of Pollutants to Waters of the U.S.

The Riverside County MS4 Permittees in cooperation with the Riverside County Fire Agencies have developed fire department activity procedures to provide guidance to Fire Prevention and Firefighting personnel for management of Runoff. Guidance is provided in the form of recommended BMPs that are incorporated as part of the individual Jurisdictional Runoff Management Plans (JRMP), and as applicable into Facility Pollution Prevention Plans.

When followed, implementation of the BMPs will minimize discharges of Runoff to the municipal separate storm sewer system (MS4) associated with non-emergency fire fighting activities.

PROHIBITIONS

Building fire suppression system maintenance discharges (e.g., sprinkler line flushing) and vehicle washing contain Waste. Therefore, the Copermittees are required to prohibit such discharges as Illegal Discharges through ordinance, order, or similar means.

PROCEDURE

Fire Prevention Activities

1. Fire Sprinkler Acceptance and Testing BMPs

   - As noted above, discharges associated with fire suppression systems are prohibited. Such discharges must not be allowed to reach any MS4, Receiving Water, or other conveyance such as a street with curb and gutter.
   - Flows from fire sprinkler acceptance and testing must be contained onsite and/or direct the water flows to landscaped or green areas whenever possible and safe to do so without causing damage or erosion.
   - When practicable, divert sprinkler system flushing flows to the sanitary sewer, with the permission of the local sewer agency.
   - Conduct fire sprinkler testing on non-rainy days.

2. Fire Hydrant Testing BMPs

   - Obtain coverage under Order R9-2002-0020 (link) and implement any compliance requirements specified therein. The following are general guidelines that may need to be complied with:
     - Conduct on non-rainy days.
     - Conduct flows for the shortest duration possible.
     - Use a water diffuser as necessary.
     - Remove debris from the affected curb and gutter before initiating flushing.
     - Direct water flows to landscaped or green areas whenever possible and safe to do so without causing damage or erosion.

Non-emergency Firefighting Activities

1. Discharges Associated With Fire Training Activities

Training activities, which simulate emergency responses, must be performed in a manner that reduces or prevents discharges to the MS4 to the maximum extent practicable. In addition, when the elimination of discharges into the MS4 is unavoidable (i.e. equipment failures), measures will be implemented to minimize impacts to water quality:

- Live and simulated fire training should be conducted, where feasible, in facilities where Runoff controls protecting the MS4 have been engineered and built into the facility.
- When conducting Maximum Capability Training (MCT) exercises, potable water sources may be used when Runoff cannot be contained.
- Direct water flows to landscaped or green belt areas whenever possible.
- Survey the area prior to the training exercise to ensure that debris will not enter the MS4 as a result of the flows generated during the drill.
- When practicable, divert flows to the sanitary sewer with the permission of the local sewer agency.
- Use fog streams or straight streams for short durations when practicable.
- Use lower gallon per minute (GPM) nozzle settings.
- Prevent discharge of foam or other additives to the MS4. If training activities involve the use of foam, block off all potentially affected storm drain inlets with plastic sheeting and sandbags or temporary berms.

2. Discharges Associated With Post-Emergency Fire Fighting Activities

The post-emergency rehabilitation and maintenance of response equipment must be performed in a manner that avoids unnecessary discharges to the MS4.

3. Discharges Associated with Activities Conducted at Fire Facilities

Specific BMPs to be implemented at Copermittee owned Fire Facilities are identified in the Facility Pollution Prevention Plan (FPPP) as described in the JRMP. The following are general BMPs that can be considered for incorporation into the FPPP as determined appropriate and applicable by the Copermittee.

A. Vehicles and Equipment Washing and Cleaning

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 from vehicle and equipment washing and cleaning:

- Use methods of cleaning vehicles that employ the minimal use of water, such as wet chamois or non-water rinses, when applicable.
- Limit the use of all cleaning agents and when feasible only use water.
- Remove debris from any area or facility used for washing and/or cleaning vehicles.
- Prevent Runoff from vehicle and equipment washing and cleaning from entering the MS4 by employing one of the following BMPs.

  a. Direct water flows to landscaped or green areas or contain the water onsite and allow it to evaporate and infiltrate whenever safe to do so without causing damage or erosion.
  b. Use designated wash areas (preferably covered and bermed) to contain and/or divert the wash

water to the sanitary sewer either through the use of "wet-vac" or through a plumbed sanitary sewer connection.

c. Use self-contained water recycling systems.
d. Use off-site commercial washing and steam cleaning facilities.

- Prohibit all steam cleaning discharges from entering the MS4. Direct all steam cleaning discharges to the sanitary sewer.

B. Vehicle Fueling

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 when fueling fire fighting apparatus:

- Protect the fueling area from Stormwater by installing a canopy.
- Pave fueling area surfaces with Portland cement concrete (or other equivalent smooth impervious surface).
- Keep perimeter drains clear of debris at all times.
- Where a perimeter drain is not installed, install a berm or grade area to prevent run-on of Stormwater and spilled liquids.
- Use a dead-end sump to collect spills or install an oil-water separator.
- Utilize vapor recovery nozzles to help control drips as well as air pollution. Discourage "topping-off" of fuel tanks.
- Maintain a spill control kit at the site. Use absorbent materials on small spills and general cleaning rather than hosing down an area. Remove the absorbent materials promptly and dispose as hazardous waste.
- Keep site Facility Pollution Prevention Plan (FPPP) current.

C. Vehicles and Equipment Maintenance and Repair

The following BMPs must be implemented in order to prevent or reduce the discharge of Pollutants to the MS4 from vehicle and equipment maintenance and repair:

- Conduct vehicle and equipment maintenance in areas where precautions have been taken to prevent the entry of spills into the MS4.
- Use dry cleaning methods in maintenance and repair areas when practical.

D. Hose Washing and Cleaning

- Design future facilities used for washing and/or cleaning fire hoses to prevent wash water or other debris from entering the MS4.
- Direct water flows to landscaped or green areas or contain the water onsite and allowing it to percolate through plant material, the landscape, or to evaporate completely, whenever safe to do so without causing damage or erosion.
- Use designated wash areas (preferably covered and bermed) to contain and/or divert the wash water to the sanitary sewer either through the use of a "wet-vac" or through a plumbed sanitary sewer connection.
- Prevent wash water containing detergents, degreasers, or other contaminants from entering the MS4.
- When cleaning the wash area prevent discharge from entering the MS4. Utilize wet mop cleaning methods in small areas, when feasible.
- Use methods of cleaning fire hoses that employ the minimal use of water, such as high-pressure spray

washers, when applicable.

E. Facility Maintenance

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 during facility maintenance:

- Use dry cleaning methods, such as sweeping, to clean impervious areas such as apparatus floors, driveways, patios, and walkways. Place sweepings and debris in receptacles for solid waste disposal.
- Maintain landscaped areas as required, limiting the introduction of leaves and landscape waste into the MS4.
- Monitor and maintain irrigation systems to prevent Runoff.
- Maintain and repair structures in order to prevent the release of water, soils, or waste to the MS4.

F. Solid Waste and Hazardous Materials Storage Areas

The following BMPs should be considered in order to prevent or reduce the discharge of Pollutants to the MS4 from solid waste and in hazardous materials storage areas:

- Provide a canopy or roof for solid waste and hazardous materials storage areas.
- Provide secondary containment (i.e. a metal or plastic pan with a raised edge) for hazardous materials storage areas.
- Ensure waste containers and dumpsters are properly secured and sealed. Provide lids for all trash and solid waste receptacles. Keep lids closed to prevent contact with rainfall and to ensure containment of waste within the storage area.

Emergency Fire Fighting Activities

An "emergency" exists from alarm notification until, in the opinion of the incident commander, the emergency has concluded. Discharges occurring during emergency fire fighting activities (i.e. flows necessary for the protection of life and property) do not require BMPs and are not prohibited under the 2010 SMR MS4 Permit.

IMPLEMENTATION STRATEGY

Education, Training, and Outreach

1. Stormwater NPDES Training

Copermittee Fire department personnel should receive annual education and training to increase staff awareness and understanding of Stormwater Pollution issues, BMPs, and their compliance obligations.

2. Best Management Practices (BMPs) Update

The Copermittees in the Santa Margarita Region will continue to work cooperatively with fire departments to identify, update, and provide guidance on the implementation BMPs, as appropriate, to reduce contaminants in discharges related to fire department agency activities to the maximum extent practicable.

GLOSSARY

With exception of the following, terms used in this document are defined in the JRMP Glossary,:

Maximum Capability Training (MCT)
The MCT involves training exercises in which high water flows are generated to ensure operational readiness. Examples may include: Probation preparation and testing, and organized exercises that prepare or test the abilities of long term employees. Water flows into the storm drain are permissible when using potable water sources (hydrants or water tanks) and debris from the effected curb and gutter have been previously removed.

Unified Sanitary Sewer Spill Response Procedure

Submitted to the
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

(SDRWQCB ORDER NO. R9-2010-0016)

June 30, 2012

BY THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISRICT, COUNTY OF RIVERSIDE, AND CITIES OF RIVERSIDE COUNTY (SAN DIEGO REGION)

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Unified Sanitary Sewer Spill Response Procedure

1.0 Background

On November 10, 2010, the California Regional Water Quality Control Board – San Diego Region (Regional Board) issued an area-wide Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (2010 MS4 Permit) to the Riverside County Flood Control and Water Conservation District (District), the County of Riverside (County), and the incorporated cities of Riverside County within the San Diego Region (collectively, Copermittees).

The 2010 MS4 Permit requires the Copermittees to control the discharge of Pollutants into and from the MS4s to Waters of the United States, including from Sewage Spills. The Copermittees however do not own nor operate any portion of the sanitary sewer system nor associated treatment facilities. Sewering agencies that own or operate sanitary sewer collection systems greater than one mile in length are regulated under State Water Resources Control Board Water Quality Order No. 2006-0003 and the accompanying amendment to its monitoring and reporting program (WQ 2008-0002-EXEC). This order, known as the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Sanitary Sewer Order) serves, among other purposes, to prevent and minimize Potential Pollutants from sanitary sewer overflows (SSOs) originating from these sewer collection systems from entering surface waters. Copermittees that own or operate applicable sanitary sewer collection systems are required to obtain coverage under the Sanitary Sewer Order.

The Regional Board has found that effluent from SSOs that may enter the MS4 can ultimately have a negative impact on Beneficial Uses of Receiving Waters. The Copermittees have developed this Sanitary Sewer Spill Response Procedure to prevent, respond to, contain and clean up sewage from SSOs that have or could impact the MS4.

2.0 Purpose

The local Sewering agenciesare required to provide notification, documentation, spill response and reporting of SSOs from their sanitary sewer collection systems pursuant to established federal and state regulations (including the Sanitary Sewer Order), and individual NPDES permits. This Sanitary Sewer Spill Response Procedure provides a mechanism to ensure effective coordination between those sewering agencies and the Copermittees in the event that an SSO threatens to impact, or impacts, the MS4. This procedure will:

- Enhance communication between the Copermittees, sewering agencies and the Regional Board;
- Clarify and streamline interagency SSO response procedures; and
- Provide additional protection of Receiving Waters.

3.0 SSO Response Procedure

Upon determination by a sewering agency or Copermittee, persons in charge, contractor or field crew that an SSO has occurred that may impact the MS4, the following notification, reporting, response, and sampling procedures will be implemented.

3.1 Notifications

3.1.1 Notification Requirements Applicable to Sewering Agencies:

In compliance with the Sanitary Sewer Order, the following notification requirements are applicable to sanitary sewer collection systems and other facilities owned or operated by sewering agencies:

- For any discharges of sewage that result in a discharge to a drainage channel or surface water, the sewering agency will as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the OES, the County Department of Environmental Health, and the Regional Board.
- As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the sewering agency will submit to the Regional Board a certification that the OES and the County Department of Environmental Health have been notified of the discharge.

The sewering agency with jurisdiction for the spill will provide notification immediately (within 24 hours of becoming aware of the circumstances) for all discharges that endanger human health or the environment as follows:

- By phone to the OES at 800-582-7550 and to the Regional Board at 858-467-2952
- At a minimum:
  - Any sewage spill greater than 1,000 gallons
  - Any sewage spill that could impact water contact recreation
  - Any discharge of sewage into or on any Waters of the State (reportable to OES[1])

In addition, the sewering agency will notify the Highway Patrol of SSOs affecting a State Highway in accordance with OES guidance[2].

1 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 4. http://www.oes.ca.gov/

2 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

Other spill incidents, including any unauthorized discharges that are not reportable to the OES, are reported to the Regional Board's Executive Officer as part of the Annual Report as described in Section 3.3.

3.1.2 Notification Requirements Applicable to Copermittees Not Owning or Operating a Sanitary Sewer Collection System

Should a Copermittee discover an SSO or determine that sewage is entering the MS4, the Copermittee shall immediately notify the appropriate sewering agency.

1. Where the sewering agency determines that the SSO originates from its sewer collection system or facilities, the sewering agency will follow the notification procedures described in Section 3.1.1 and established reporting procedures. No further notification or reporting is required by the Copermittee.
2. Where the sewering agency determines that the SSO originates from a private lateral or private property, the sewering agency will contact the property owner for clean up responsibility and will contact the Copermittee with jurisdiction of the spill. For more information on private property SSOs, see Section 6.0. The Copermittee with jurisdiction for the spill will provide notification immediately (within 24 hours of becoming aware of the circumstances) for all discharges that endanger human health or the environment as follows:
    - By phone to the OES at 800-582-7550 and to the Regional Board at 858-467-2952
    - At a minimum:
        - Any sewage spill greater than 1,000 gallons
        - Any sewage spill that could impact water contact recreation
        - Any discharge of sewage into or on any Waters of the State (reportable to OES[3])
    - In addition, the Copermittee with jurisdiction for the spill will notify the Highway Patrol of SSOs affecting a State Highway in accordance with OES guidance[4].

Should a Copermittee discover discharges of sewage in an area not served by a sewering agency, the Copermittee with jurisdiction for the spill will follow the procedures in sections 3.5 and 4.4.5 of the JRMP as applicable.

Other spill incidents, including any unauthorized discharges that are not reportable to the OES, are reported to the Regional Board's Executive Officer as part of the Annual Report as described in Section 3.3.

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3 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

4 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

3.1.3 Agency Contact Information

To identify sewering agency with jurisdiction in the spill area, **see Attachment A**. A list of the current contact phone numbers for various agencies is provided below:

CONTACT:	**PHONE NUMBER:**
County Department of Environmental Health / Environmental Resources Management	951-955-8980
Governor's Office of Emergency Services (OES)	800-852-7550
Copermittee Staff (whose MS4 may be affected by spill)	**See Attachment B**
Regional Water Quality Control Board: San Diego Region	858-467-2952
Riverside County Flood Control and Water Conservation District	951-955-1200
Sewering agency with jurisdiction in spill area	**See Attachment A**
California Highway Patrol (if highway affected by spill)	**911**

3.2 Minimum Information for Notification

Copermittee staff providing notice should make reasonable attempts to reach sewering agency contacts during and after normal working hours. In cases where sewering agency contacts are not available, messages shall be left. The following minimum information should be conveyed by Copermittee staff as appropriate:

- Identity of caller
- Location, date and time of SSO, status of the SSO (actual or threatened release)
- Quantity of sewage released (estimate of flow or volume)
- Need for public safety or traffic control measures
- Cause of the SSO, if known
- Description of immediate measures taken to contain/mitigate SSO
- Estimate of additional containment and/or clean-up options
- Determination if sewage was discharged to MS4 or areas otherwise impacting the MS4 **(Refer to Attachment A)**
- Determination if SSO reached a state highway

A copy of a sample SSO reporting form is included in **Attachment C**.

3.3 Reporting Requirements

Each Sewering agency is responsible for filing all SSO reports as required under federal and state law for discharges from their sanitary sewer systems, including any applicable NPDES or other permits. Sewering agencies are required to report any discharges to the Department of Environmental Health immediately, per the requirements of Health and Safety Codes Section 5411.5.

Copermittees shall additionally follow specific reporting requirements as described in Section 4 of the JRMP.

The Person in Charge at the responsible sewering agency must CC: the final SSO Report provided to the Regional Board to the affected Copermittees via hard copy or electronic means.

3.4 Response Requirements

Responsible sewering agencies will lead response to SSOs and will assume Person in Charge responsibilities in most cases. Person in Charge of spill response:

- Will take all immediate measures necessary to contain release or potential release of sewage and prevent/minimize impacts to water quality and the MS4.

- May cut locks, open manholes, or otherwise enter MS4 as necessary to contain and clean up SSOs.

- Will contact the maintenance/public works department of the appropriate Copermittee as necessary, and as soon as possible, to notify them of actions within their MS4. Contact numbers are included in **Attachment B**. If necessary, Copermittee staff will support spill response by providing MS4 maps or other support if available.

- Will coordinate with Copermittee staff as necessary to ensure that the clean up adequately remedies impacts of the sewage released to the MS4. It should be noted that the Regional Board prefers that MS4 facilities not be sanitized with disinfectant where not immediately impacting public health (i.e. no chlorine shall be used when discharge is within 1,500 feet of a waterway).

- Will coordinate with local fire, police, and traffic departments as necessary to ensure the safety of the response effort, and to manage traffic and local residents.

4.0 Training Requirements

Sewering Agencies and Copermittee staff will ensure that training for this procedure is incorporated into appropriate training programs related to SSO response.

5.0 Detection Involving Infiltration into MS4

In the event that Copermittees encounter evidence of potential sewage infiltration into the MS4 due to water quality monitoring or field observation, the Copermittees will notify the relevant sewering agency (**see Attachment A**) to coordinate a response.

6.0 Private Property SSOs

Sewering agencies and their contractors will respond to all SSOs within their service area. If a private property is the source of an SSO, agencies and their contractors shall assist in the control and containment to ensure that the sewage does not enter the MS4. If the SSO was a result of a private lateral, the private property owner will be informed of the blockage, and will be responsible to remove the blockage. If the SSO was a result of the sewer trunk line blockage, the response crew will correct the problem.

Glossary

Note: With the exception of the following, most terms used in this document are defined in the Glossary to the JRMP.

Sanitary Sewer Overflow (SSO) - A sanitary sewer overflow is any overflow, spill, release, discharge or diversion of wastewater from a sanitary sewer system. SSOs include:

(i) Overflows or releases of wastewater that reach Waters of the U.S.;
(ii) Overflows or releases of wastewater that do not reach Waters of the U.S.; and
(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions in a sanitary sewer, other than a building lateral. Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned is an SSO when sewage is discharged off private property into streets, stormdrains, or Waters of the U.S.

Sanitary Sewer System - Any system of pipes, pump stations, sewer lines, or other conveyances upstream of a wastewater treatment plant headworks used to collect and convey sewage to a treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, highlines, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not SSOs.

Sewage - The waste and wastewater produced by residential and commercial establishments and discharged into sewers.

Waters of the State – Any water, surface or underground, including saline waters within the boundaries of the State.

Attachment A

Sewering Agency Contact Roster

Unified Sanitary Sewer Spill Response Procedure

Attachment A (Sewering Agency Contact Roster)

Eastern Municipal Water District
Integrated Operations Center or
Mr. Mark Chamberlin
Post Office Box 8300
Perris, CA 92572
951.928.3777 ext. 6265 (During & After Work Hours)
Fax: 951.928.6177
chamberm@emwd.org

Elsinore Valley Municipal Water District
Ms. Susan Halpin
Post Office Box 3000
Lake Elsinore, CA 925310-3000
951.674.3146 ext. 8203, After hours: 951.258.9299
Fax: 951.245.5946
shalpin@evmwd.net

Rancho California Water District
42135 Winchester Road
Temecula, CA 92590
951.296.6953, Fax: 951.296.6868
951.296.6900 (emergency)

Attachment B

MS4 Copermittee Contact Roster

Unified Sanitary Sewer Spill Response Procedure

Attachment B (MS4 Copermittee Contact Roster)

Rancho California Water District
42135 Winchester Road
Temecula, CA 92590
951.296.6953, Fax: 951.296.6868
951.296.6900 (emergency)

Riverside County Executive Office
Mr. Mike Shetler
4080 Lemon Street, 5th Floor
Riverside, CA 92501
951.955.1110, Fax: 951.955.1105
mshetler@rceo.org

Riverside County Environmental Health
Mr. John Watkins
4080 Lemon Street, 9th Floor
Riverside, CA 92501
951.955.3915, Fax: 951.781.9653
Jwatkins@co.riverside.ca.us

Riverside County Flood Control District
Ms. Arlene Chun
1995 Market Street
Riverside, CA 92501
951.955.1330, Fax: 951.788.9965
abchun@rcflood.org

Mark Biloki, Maintenance Superintendent
mbiloki@rcflood.org
951.955.1310, Cell: 951.288.5254, Home: 909.877.2716

Zully Smith, Operations & Maint. Division Manager
zsmith@rcflood.org
951.955.1280, Cell: 951.318.1445

City of Temecula
Mr. Aldo Licitra
41000 Main Street, Temecula, CA 92590
951.308.6387, Field: 951.541.7850, Fax: 951.694.6475
Aldo.licitra@cityoftemecula.org

After Hours: Rodney Tidwell,
Public Works Maint. Superintendent
951.302.4102, Field: 951.303.5497
Rodney.tidwell@cityoftemecula.org

City of Wildomar
Mr. Tim D'Zmura
23873 Clinton Keith Road, Suite 201
Wildomar, CA 92595
951.677.7751, Fax: 951.698.1463
tdzmura@cityofwildomar.org

City of Murrieta
Mr. Bill Woolsey
1 Town Center
24601 Jefferson Avenue
951.461.6073, Fax: 951.698.4509
wwoolsey@murrieta.org

Attachment C

Sample SSO Reporting Form

SANITARY SEWER OVERFLOW REPORT FORM

This report is: ☐ Preliminary ☐ Final ☐ Revised Final

Sanitary Sewer Overflow Sequential Tracking Number: _____

Reported to: _____
(Enter Fax #, Voicemail #, or Name of Regional Board Staff)

Date Reported: ____/____/_____ (MM/DD/YY)

SANITARY SEWER OVERFLOW REPORT FORM

Sanitary Sewer Overflow Correction - - Description of all Preventative and Corrective Measures Taken or Planned:

_____

Was there measurable precipitation during 72-hour period prior to the overflow?

☐ Yes ☐ No

Initial and Secondary Receiving Waters:

Did the sanitary sewer overflow enter a storm drain?

☐ Yes ☐ No

Did the sanitary sewer overflow reach surface waters other than a storm drain?

☐ Yes ☐ No

Name or description of secondary receiving waters. (If none, state such)

_____

If the sanitary sewer overflow did not reach surface waters, describe the final destination of sewage.

_____

Notification:

Was the local health services agency notified?

☐ Yes ☐ No

If the overflow was over 1,000 gallons, was the Office of Emergency Services (OES) notified?

☐ Yes ☐ No ☐ Not applicable

Affected Area Posting:

Were signs posted to warn of contamination?

☐ Yes ☐ No

Location of Posting (if Posted): _____

How many days were the warning signs posted?: _____

Remarks:

_____

INITIAL STUDY

City of Temecula P.O. Box 9033, Temecula, CA 92589-9033 Environmental Checklist	
Project Title	
Lead Agency Name and Address	City of Temecula P.O. Box 9033, Temecula, CA 92589-9033
Contact Person and Phone Number	(951)
Project Location	
Project Sponsor's Name and Address	
General Plan Designation	
Zoning	
Description of Project	(Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary)
Surrounding Land Uses and Setting	(Briefly describe the project's surroundings)
Other public agencies whose approval is required	(E.g. permits, financing approval, or participation agreement)

Environmental Factors Potentially Affected			
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.			
	Aesthetics		Mineral Resources
	Agriculture and Forestry Resources		Noise
	Air Quality		Population and Housing
	Biological Resources		Public Services
	Greenhouse Gas Emissions		Recreation
	Cultural Resources		Transportation and Traffic
	Geology and Soils		Utilities and Service Systems
	Hazards and Hazardous Materials		Mandatory Findings of Significance
	Hydrology and Water Quality		None
	Land Use and Planning		

Determination
(To be completed by the lead agency)

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date _____

Printed Name _____ For _____

1. AESTHETICS. Would the project:

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Have a substantial adverse effect on a scenic vista?				
b	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				
c	Substantially degrade the existing visual character or quality of the site and its surroundings?				
d	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				

Comments:

1.a.
1.b.
1.c.
1.d.

2. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				
b	Conflict with existing zoning for agricultural use, or a Williamson Act contract?				
c	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)?				
d	Result in the loss of forest land or conversion of forest land to non-forest use				
e	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				

Comments:

2.a.
2.b.
2.c.
2.d.
2.e.

3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Conflict with or obstruct implementation of the applicable air quality plan?				
b	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				
c	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				
d	Expose sensitive receptors to substantial pollutant concentrations?				
e	Create objectionable odors affecting a substantial number of people?				

Comments:

3.a.
3.b.
3.c.
3.d.
3.e.

4. BIOLOGICAL RESOURCES. Would the project?					
Issues and Supporting Information Sources		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				
b	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				
c	Have a substantial adverse effect of federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				
d	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
e	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				
f	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				

Comments:

4.a.
4.b.
4.c.
4.d.
4.e.
4.f.

5. CULTURAL RESOURCES. Would the project:

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				
b	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?				
c	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				
d	Disturb any human remains, including those interred outside of formal cemeteries?				

Comments:

5.a.
5.b.
5.c.
5.d.

6. GEOLOGY AND SOILS. Would the project:

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i.	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				
ii	Strong seismic ground shaking?				
iii	Seismic-related ground failure, including liquefaction?				
iv	Landslides?				
b	Result in substantial soil erosion or the loss of topsoil?				
c	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				
d	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				
e	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				

Comments:

6.a.
6.b.
6.c.
6.d.
6.e.
.

7. GREENHOUSE GAS EMISSIONS. Would the project:						
	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				
b	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				

Comments:

7.a.
7.b.

8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Create a significant hazard to the public or the environment through the routine transportation, use, or disposal of hazardous materials?				
b	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				
c	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				
d	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				
e	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				
f	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				
g	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				
h	Expose people or structures to a significant risk or loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				

Comments:

8.a.
8.b.
8.c
8.d.
8.e.
8.f.
8.g.
8.h.

9. HYDROLOGY AND WATER QUALITY. Would the project:

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality?				
b	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				
c	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				
d	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				
e	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?				
f	Require the preparation of a project-specific WQMP?				
g	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				
h	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				
i	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				
j	Inundation by seiche, tsunami, or mudflow?				

Comments:

9.a.
9.b.
9.c.
9.d.
9.e.
9.f.
9.g.
9.h.
9.i.
9.j.

10. LAND USE AND PLANNING. Would the project:					
Issues and Supporting Information Sources		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Physically divide an established community?				
b	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				
c	Conflict with any applicable habitat conservation plan or natural community conservation plan?				

Comments:

10.a.
10.b.
10.c.

11. MINERAL RESOURCES. Would the project:

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				
b	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				

Comments:

11.a.
11.b.

12. NOISE. Would the project result in:					
Issues and Supporting Information Sources		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				
b	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				
c	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				
d	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				
e	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				
f	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				

Comments:

12.a.
12.b.
12.c.
12.d.
12.e.
12.f.

13. POPULATION AND HOUSING. Would the project:						
	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
b	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				
c	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				

Comments:

13.a.
13.b.
13.c.

14. PUBLIC SERVICES.

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	Fire protection?				
	Police protection?				
	Schools?				
	Parks?				
	Other public facilities?				

Comments:

14.a.

15. RECREATION.

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				
b	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				

Comments:

15.a.
15.b.

16. TRANSPORTATION/TRAFFIC. Would the project:

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?				
b	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				
c	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				
d	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				
e	Result in inadequate emergency access?				
f	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				

Comments:

16.a.
16.b.
16.c.
16.d.
16.e.
16.f.

17. UTILITIES AND SERVICE SYSTEMS. Would the project:						
Issues and Supporting Information Sources		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				
b	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				
c	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				
d	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				
e	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				
f	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				
g	Comply with federal, state, and local statutes and regulations related to solid waste?				

Comments:

17.a.
17.b.
17.c.
17.d.
17.e.
17.f.
17.g.

18. MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:						
	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				
b	Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				
c	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				

Comments:

18.a.
18.b.
18.c.

19.	**EARLIER ANALYSES. Earlier analyses may be used where, pursuant to the tiering program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case a discussion should identify the following on attached sheets.**
a	Earlier analyses used. Identify earlier analyses and state where they are available for review.
b	Impacts adequately addressed. Identify which affects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
c	Mitigation measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

SOURCES

1. City of Temecula General Plan
2. City of Temecula General Plan Final Environmental Impact Report
3. South Coast Air Quality Management District CEQA Air Quality Handbook

City of Temecula

41000 Main Street
P.O. Box 9033
Temecula, California 92589-9033
PHONE: (951) 694-6400
FAX: (951) 694-6477

DEVELOPMENT PLAN

Introduction

This handout summarizes Temecula's Development Plan requirements. Projects that require a Development Plan review and application requirements are specified in section 17.05 of the Development Code.

What is the purpose and intent of a Development Plan application?

The purpose of a Development Plan Application is to ensure all new construction or remodeling of industrial, commercial, and/or multiple-family residential development is consistent with the General Plan, design standards and performance standards of the Development Code.

When is a Development Plan required?

A Development Plan is required:

For all residential development (excluding individual single-family homes), and all commercial and industrial developments.

When several permits or multiple applications are required for the same project, a combined hearing and review process may be permitted, however separate applications shall be filed for each action requested.

How do I apply for a Development Plan?

Call the Community Development Department, (951) 694-6400, to schedule an application submittal appointment. City staff will meet with you within one to two working days to review your application materials for completeness. The application will be deemed complete at the counter if all submittal materials and fees have been provided.

Who approves Development Plan applications?

The following type of project is decided at the administrative level:

- Administrative Development Plans

The following type of project is decided at the Planning Director level:

- Projects less than 10,000 square feet of gross floor area.

The following types of projects are decided at the Planning Commission level:

- Projects greater than 10,000 square feet of gross floor area.
- Projects that may have special community impacts or other unique circumstances.

What are the criteria for approval?

According to the City's Development Code, in order to approve a Development Plan application, the following findings must be made:

- The proposed use is in conformance with the General Plan for Temecula and with all applicable requirements of State law and other Ordinances of the City.
- The overall development of the land is designed for the protection of the public health, safety, and general welfare.

Development Plan applications may be approved with "Conditions of Approval" which are deemed necessary to protect the public health, safety, and general welfare and assure compliance with the Development Code standards and provisions.

How many times can a Development Plan be extended?

The Development Code permits up to 3 one-year time extensions for Development Plans.

How do I apply for a Development Plan?

Call the Community Development Department, (951) 694-6400, to schedule an application submittal appointment. City staff will meet with you within 1to 2 working days to review your application materials for completeness. The application will be deemed complete at the counter if all submittal materials and fees have been provided.

City of Temecula

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FAX: (951) 694-6477
www.cityoftemecula.org

Date Stamp

PROJECT CLASSIFICATION
PA#_____
DEV#_____
PRJ#_____
LDC#_____

DEVELOPMENT PLAN APPLICATION

PROJECT INFORMATION
(INCOMPLETE APPLICATIONS CANNOT BE ACCEPTED)

Application Type (Check One):

☐ **Commercial Development** ☐ **Industrial Development** ☐ **Residential Development**

Type of Review Requested:

- ❑ Development Plan Over 10,000 square feet
- ❑ Development Plan Under 10,000 square feet
- ❑ Multi-Family Residential Development Plan

Project Title:_____

Project Description/Use:_____

_____

Assessor's Parcel No(s):_____

Legal Description (Tract, lot no.):_____

Street Address(es):_____

General Location:_____

ADDITIONAL PROJECT INFORMATION

Total Building Square Footage:_____

Zoning:_____ General Plan:_____

Gross Acreage:_____

Related Cases:_____

Is Parcel(s) in an MSHCP "Criteria Cell": YES _____ NO_____ (Go to www.rcip.org to find out)

APPLICANT/REPRESENTATIVE/OWNER INFORMATION

APPLICANT/REPRESENTATIVE_____**CONTACT**_____
LAST FIRST MI.

PHONE NO. _____FAX NO. _____

ADDRESS_____
STREET CITY STATE ZIP

E-MAIL _____

☐ **I certify that all filing requirements have been satisfied for my application. I further understand that an incomplete application cannot be accepted for processing.**

Applicant's Signature _____ **Date:** _____

PROPERTY OWNER _____
LAST FIRST MI.

PHONE NO. _____ FAX NO. _____

ADDRESS_____
STREET CITY STATE ZIP

E-MAIL _____

Owner Certification

☐ **I certify under the penalty of the laws of the State of California that I am the property owner of the property that is the subject matter of this application and I am authorizing to and hereby do consent to the filing of this application and acknowledge that the final approval by the City of Temecula, if any, may result in restrictions, limitations and construction obligations being imposed on this real property.**

Owner/Authorized Agent Signature: _____ **Date:** _____

Print Name: _____

Written authorization from the legal property owner is required. An authorized agent for the owner must attach a notarized letter of authorization from the legal property owner.

DEVELOPMENT PLAN
APPLICATION SUBMITTAL REQUIREMENTS

Initial Submittal Requirements	COM	IND	RES
Completed and Signed Application and Filing Fee	1	1	1
Site Plan (Described in Section A)	20	20	20
Floor Plan/Roof Plan/ (Described in Section B)	20	20	20
Proposed Structure Elevations (Described in Section C)	20	20	20
Conceptual Landscape Plan (Described in Section D)	20	20	20
Conceptual Grading Plan (Described in Section E)	20	20	20
Conceptual Colored Landscape Plan	3	3	3
Proposed Structure Color Elevations (Described in C1)	1	1	1
Proposed Color 3-D Perspective Rendering (only for proposed buildings in the Old Town Specific Plan three or more stories in height). This 3-D rendering is intended to show building height, mass and relative position to its surroundings and neighboring buildings in Old Town. (Described in Section C2)	1	-	1
8 1/2" X 11" Color Photos (Described in Section F)	1	1	1
Material Sample Board (Described in Section G)	1	1	1
Photometric Plan (Described in Section H)	1	1	1
Materials for Architectural Review (Described in Section I)	1	1	1
Statement of Operations (Described in Section J)	20	20	20
MSHCP Information (Described in Section K)	1	1	1
A $60 check made payable to "University of California Regents" and USGS 7.5' series quadrangle map (Consult with the Planning Department) (Described in Section L)	1	1	1
Project-Specific Water Quality Management Plan based on the Initial Applicability Checklist and Conceptual Acceptance Requirements (Described in Section M). Consult with Public Works to assist in determining if this item is required.	1	1	1
Hazardous Waste Site Information Form (Described in Section N)	1	1	1
Developer Disclosure Statement (attached)	1	1	1

Initial Submittal Requirements	COM	IND	RES
Preliminary title report with all referenced supporting documents	2	2	2
Letter of Justification (Described I Section Q)	20	20	20
Traffic Study/Analysis (Consult with Public Works)	1	1	1
Drainage Study/Analysis (Consult with Public Works)	1	1	1
Preliminary Soils and Geotechnical Report (Consult with Public Works to determine if this item is required)	2	2	2
Chemical Classification / Quantification Packet (See Fire Department for package)	1	1	1

Submittal Requirements Prior to Hearing	COM	IND	RES
Public Hearing Information (Described in Section O)	1	1	1
Spiral Bound Color 11"x17" reduction of all exhibits	8	8	8
8 ½"x11" reduction of all exhibits	1	1	1
8 ½"x11" reduction of all previously approved exhibits	1	1	1
Mounted final color building elevations (3'x4')	1	1	1
Full size set of final site plan, elevations, floor plans, grading plan and landscape plan folded to 8½"x11"	4	4	4
Final Color 3-D perspective rendering (only for proposed buildings located within the Old Town Specific Plan that are three or more stories in height). This 3-D rendering is intended to show building height, mass and relative position to its surroundings and neighboring buildings in Old Town. (Described in Section C2). *This is a proposed final version for presentation to the Planning Commission.*	1	1	1
Developer Disclosure Statement – updated (if Planning Commission/City Council approval required)	1	1	1
CD of all project plans in JPEG or PDF format. Electronic file sizes should be limited to 5MB for black and white sheets and 10MB for color sheets	1	1	1

2. PLAN PREPARATION AND GUIDELINES

All plans shall be drawn on uniform sheets no less than 24" X 36" (or as approved by the Community Development Department). **Each complete set consisting of the site plan, floor plan/roof plan, proposed structure elevations, conceptual landscape plan, photometric plan, and conceptual grading plan should be stapled together and folded into 1/8 sections with a folded size not to exceed 8 1/2" X 11".** All plans shall be clear, legible and accurately scaled. The site plan, landscape plan and grading plan should all be at the **same** scale and shall be consistent with each other.

On large scale drawings, 1"=20', or larger, it will generally be desirable to include the conceptual grading of the site on the site plan in lieu of a separate drawing (see Section B). For larger, more complicated sites drawn at a smaller scale (i.e., 1"=40'), a separate conceptual grading plan should be submitted.

SECTION A. SITE PLAN CONTENT

Scale: Engineering scale not to exceed 1"=40'.

The following information shall be included on the plan:

- ❑ Name, address, and phone and fax number of applicant, owner, architect and/or engineer.
- ❑ Graphic scale (with bar scale) and north arrow
- ❑ Vicinity map
- ❑ Date Site Plan prepared
- ❑ Data table formatted in the following order:

○ Assessors Parcel Number		
○ Street Address (if available)		
○ Legal description of the property. (i.e. Tract/Parcel Map and Lot(s)/parcel(s)		
○ Zoning designation		
○ General Plan designation		
○ Existing land use/proposed land use		
○ Total Gross Area:	square feet	acres
○ Total Net Area:	square feet	acres
○ Total Building Area:	square feet	FAR
○ Lot coverage:	Square Feet	Percentage
○ Building area	s.f.	%
○ Parking area	s.f.	%
○ Landscaping area	s.f.	%
○ Parking:	Spaces Required	Spaces Provided
○ Ratio/square foot of use(s)	spaces	spaces
○ Number of disabled spaces	spaces	spaces
○ Total Parking	spaces	spaces
○ Floor Area Ratio		
○ Occupancy classification (per Uniform Building Code)		
○ Type of construction (per Uniform Building Code)		
○ Indicate if building has fire sprinklers and/or alarm		
○ Number of stories		
○ Height of building (as measured from the pre-existing grade, finished grade or floor protection elevation, which ever is lowest to highest point on roof)		

- ❑ Existing property lines in bold and label all dimensions (metes and bounds)
- ❑ Location and dimensions of all existing and proposed easements (with record reference)
- ❑ Proposed lot lines and dimensions, if applicable
- ❑ Delineate and label the minimum setbacks from all property lines
- ❑ Location and dimension of all existing and proposed structures, including building setbacks
- ❑ Location and dimension of all landscaping and pedestrian walkways (shaded)
- ❑ Location and typical dimension of drive aisles, loading zones and parking stalls
- ❑ Location of existing and proposed onsite fuel tanks

- ❑ Location and dimension of all trash enclosure(s)
- ❑ Location of monument sign(s) (existing and proposed)
- ❑ All proposed public improvements, including cross sections
- ❑ Location of existing or proposed fire hydrants within 500 feet of project site
- ❑ Location of existing or proposed Fire Department connections (within 50 feet of a public hydrant and 40 feet away from the building
- ❑ Location of existing or proposed Post Indicator Valve
- ❑ Label interior and exterior turning radius dimensions at entries and drive aisles for emergency vehicle access (minimum interior – 37 feet; exterior – 56 feet; wheel cuts – 50 feet)
- ❑ Location and dimension of all walls and fences
- ❑ Location of all structures, driveways, parking areas, trees and adjoining property lines within 50 feet of the perimeter of the subject property
- ❑ Zoning and existing land use of adjacent parcels
- ❑ Phasing of the project (if proposed)
- ❑ Americans with Disabilities Act (ADA) path of travel (horizontal path of travel only)
- ❑ Location, type and height of all existing and proposed street, parking and pedestrian lights (Indicate any to be relocated)

SECTION B. FLOOR PLAN/ROOF PLAN CONTENTS

Scale: The scale used on the floor and roof plans shall be no less than 1/4" per foot. Large projects shall be no less than 1/8" per foot with 1/4" per foot details). The floor and roof plans shall illustrate <u>all</u> proposed (and existing, if applicable) buildings and structures. The following information shall be included on the floor plans:

- ❑ Proposed use for each room (if available)
- ❑ Proposed square footage for each room
- ❑ Restrooms
- ❑ Exits
- ❑ Doors
- ❑ Hallways
- ❑ Corridors
- ❑ Elevators
- ❑ Patio
- ❑ Fire sprinkler riser room (with direct exterior access)
- ❑ Fire alarm control panel
- ❑ Location of Knox Box
- ❑ Location of Fire Department connection (if wall mounted)

The following information shall be included on the roof plan:

- ❑ All roof pitches and direction of fall
- ❑ Location and detail of all mechanical equipment
- ❑ Spot elevations or other cross-sections necessary to verify that all mechanical equipment is fully screened

SECTION C. BUILDING ELEVATION(S) CONTENT

Scale: No less than 1/4" (large projects no less than 1/8" with 1/4" details).

Illustrative building elevations showing <u>all</u> sides of proposed (and existing, if applicable) buildings and accessory structures (trash enclosures, walls, carports, etc.). Include cross-section(s) of building(s) with proposed grades.

The following information shall be included on the elevation plans:

- ❑ Name, address and phone number, of the applicant, architect and/or engineer
- ❑ Location of building address and wall mounted signs for all sides of the building(s)
- ❑ Shading, as applicable, to give the elevations some graphic dimension

- ❑ Location of walls and fences
- ❑ Roof top mechanical equipment screens
- ❑ A schedule for colors and materials (which corresponds to the color and material board) and specific location of their use
- ❑ Height of buildings with dimensions

SECTION C1. BUILDING COLOR ELEVATION(S) CONTENT

Scale: No less than 1/4" (large projects no less than 1/8" with 1/4" details).

Illustrative building elevations showing all sides of proposed (and existing, if applicable) buildings and accessory structures (trash enclosures, walls, carports, etc.). Include cross-section(s) of building(s) with proposed grades. Colors used on the color elevations shall match those used on the material sample board (See Section F) to the greatest extent possible in order to give the most accurate representation. Colored elevations are to be void of landscaping to clearly demonstrate the aesthetic impact the building(s) will create. In addition to colored elevations, colored renderings may be submitted with landscaping, however, the landscaping must conform with the planting materials indicated on the landscape plan.

SECTION C2. COLOR 3-D PERSPECTIVE RENDERING CONTENT

This submittal requirement is only for proposed buildings three or more stories in height and located within the Old Town Specific Plan. The 3-D color perspective rendering may be submitted as an electronic version in JPEG or PDF format or as a virtual tour (in a format capable of being incorporated into Microsoft PowerPoint and compatible with existing software of the Planning Department). The intent is to illustrate the impact that the proposed building will have on its surroundings and neighboring buildings in Old Town. The proposed building image shall be superimposed into its site area in Old Town and provide a 360-degree 3-D illustration of the proposed building and its existing surroundings within a radius of 300 feet. Four views will be required from north, south, east and west perspective to illustrate the impact the proposed building will have as it relates to its location in Old Town.

SECTION D. LANDSCAPE PLAN CONTENT

Scale: *Engineering scale not to exceed 1"=40'*.

The following information shall be included on the plan:

- ❑ Name, address, and phone number of applicant, architect, engineer and/or landscape architect
- ❑ Scale and north arrow.
- ❑ Location of all proposed buildings, paved surfaces, walls/fences and sidewalks
- ❑ Roof outlines including eave overhang
- ❑ Location, size and identification of all existing and proposed plant material, trees, shrubs and groundcover. Note on plans whether existing landscape is to be removed.
- ❑ A planting legend that identifies plant varieties (botanical and common names), sizes, quantities, and spacing
- ❑ Location and elevation of mounding, if proposed
- ❑ Graphically indicate all slopes, which equal or exceed 3:1
- ❑ Graphically indicate all vehicle sight lines
- ❑ Generally describe type of irrigation system to be implemented

SECTION E. CONCEPTUAL GRADING PLAN CONTENT

Scale: Engineering scale not to exceed 1"=40'.

On large scale drawings, 1"=20', or larger it will generally be desirable to include the conceptual grading of the site on the site plan in lieu of a separate drawing. For larger, more complicated sites drawn at a smaller scale (i.e., 1"=40'), a separate conceptual grading plan should be submitted. A Registered Civil Engineer shall prepare grading plans

The following information shall be included on the plan:

- ❑ Title Block
  - ○ Name, address, and phone and fax number, of applicant, owner and engineer
- ❑ Legend, north arrow, bar and graphic scale, vicinity map
- ❑ Data Table
  - ○ Assessor's Parcel Number(s)
  - ○ Project Name
  - ○ Legal description (i.e. Tract/Parcel Map and lot(s)/parcel (s))
  - ○ Approximate earthwork quantities (CY)
  - ○ Date and Source of Topography (should be current)
- ❑ Metes and bounds (i.e. bearing and distance)
- ❑ Location and dimensions of all existing and proposed easements
- ❑ Existing topography, proposed grades, and natural features to 50 feet from the perimeter of the subject property at minimum two-foot contour intervals
- ❑ All slopes greater than 2:1 must be clearly labeled
- ❑ Limits of FEMA floodplains and floodways (if applicable)
- ❑ Delineation of special hazard zones (i.e., earthquake faults and liquefaction zones)
- ❑ Proposed grading; structures, curbs, retaining and/or sound walls (top and footing elevations), gutters, pavement, walks, swales, mounding, slopes, open space, trails, etc.) per the appropriate City standard
- ❑ Pad and finished floor elevations
- ❑ Location and dimension of all proposed public improvements, including cross sections
- ❑ Locations of existing public and proposed utilities (including sewer and water)
- ❑ Cross-sections at all property lines
- ❑ Driveway, street slopes and surfaces in plan view and cross section
- ❑ Drainage and flood control facilities, including size and type
- ❑ Americans with Disabilities Act (ADA) path of travel

SECTION F. 8 1/2" X 11" COLOR PHOTOS

8½"x11" color photos from interior of site looking north, south, east, and west with direction attached to each photo. Additionally, photos of the project site from off-site in all directions.

SECTION G. MATERIAL SAMPLE BOARD

Size: No larger than 8 ½"x11". An 8½"x11" photo shall also be provided for the file. The material sample board is intended to provide a fair representation of the major exterior materials to be used on the project together with colors and stains. Therefore, no photographs of the materials will be accepted on the material sample boards. The color and material board shall be used in conjunction with the schedule on the elevations in order to determine the specific location and use of colors and materials. The board should be of rigid material (cardboard or foam board, not wood) and shall show the following:

- ❑ Sample of all roofing materials
- ❑ Sample of all siding materials
- ❑ Sample of window glazing materials
- ❑ Sample of all window frames
- ❑ Sample of all canvas awning materials
- ❑ Samples of all paint colors to be used on the buildings applied to the surface of actual

exterior building material samples
- ❑ Manufacturers name and identification numbers of paint colors that correspond to the proposed materials
- ❑ Exterior light fixture details
- ❑ Sample of decorative paving treatments – color, finish, pattern

SECTION H. PHOTOMETRIC PLAN

Include a plan that demonstrates a minimum of one footcandle of illumination throughout the entire onsite parking area.

SECTION I. MATERIALS FOR ARCHITECTURAL REVIEW

The City of Temecula contracts with an Architect to provide an unbiased third party review of all new projects. Provide an electronic version of the following information in JPEG or PDF format omitting all leader lines and callouts:

- ❑ Color photos from interior of site looking north, south, east, and west with direction identified for each photo
- ❑ Site plans
- ❑ Building elevations
- ❑ Floor plans
- ❑ Landscape plans

SECTION J. STATEMENT OF OPERATIONS

Provide a written statement outlining your request for a Development Plan. Your response must give a detailed description of the proposed use and shall include, but is not be limited to:

- ❑ Hours and days of operation
- ❑ Number of employees
- ❑ Number of required parking
- ❑ Average daily peak trips generated
- ❑ Type of equipment or processes used
- ❑ Description of hazardous materials (existing and new)
- ❑ Other descriptions that effectively describe the proposed use

SECTION K. MSHCP INFORMATION

The Riverside County Multi-Species Habitat Conservation Plan has identified areas in the City as "Criteria Cells" that require mitigation for habitat conservation. To find out if your project is within a Criteria Cell area, please go to the MSHCP website at www.rcip.org. From this home page, click on Conservation Summary Report Generator. You will be redirected to a page where you can input the parcel number. If there is more than one parcel number, you must input them one at a time and print out each report individually. A report for each parcel must be attached to the application at time of submittal.

SECTION L. UNIVERSITY OF CALIFORNIA REGENTS

Provide a check made payable to University of California Regents for cultural resource review along with a copy of a USGS Quad map not reduced or enlarge (7.5' Series) showing location of project site. Check for shall be made payable to University of California Regents in the amount of $60 required by University of California.

SECTION M. WQMP INITIAL APPLICABILITY AND CONCEPTUAL ACCEPTANCE CHECKLISTS

Step One: Fill out the Initial Applicability Checklist. If "yes" can be answered to any of the criteria outlined in the Initial Applicability checklist, a Water Quality Management Plan (WQMP) is required for the project and will have to be submitted with the application materials at the time of submittal. Go to Step Two below. [NOTE: If "no" is answered to **all** of the criteria outlined in the Initial Applicability checklist, then a Water Quality Management Plan is not needed for the initial submittal].

Step Two: A WQMP, including the completed Initial Applicability Checklist must be submitted if "yes" was answered in any of the criteria outlined in the Initial Applicability checklist. In addition, the Conceptual Checklist and Supplemental Slipsheets must be completed and submitted with the application materials along with the WQMP. The WQMP template, checklists and slipssheets are available online at:
http://www.cityoftemecula.org/Temecula/Government/PublicWorks/WQMPandNPDES/WQMP.htm

WATER QUALITY MANAGEMENT PLAN (WQMP)

INITIAL APPLICABILITY CHECKLIST

Applicant Name:_____

Planning Application Number:_____

Project Name:_____

	Does the proposed project incorporate any of the following categories? (All questions must be answered)	Yes	No
1	**Modifications to Existing Developments** – This category includes projects that create, add, or replace 5,000 sq. ft. or more of impervious surface on an already developed site. This category includes: (a) Expansion of a building footprint, or addition or replacement of a structure; (b) Increase in the gross floor area, or major exterior construction or remodeling; (c) Replacement of impervious surfaces that are not part of routine maintenance activities; (d) Land disturbing activities related to a structure or impervious surface. **Note:** If modifications create less than 50% of the impervious surface of a previously existing development, and the existing development was not originally subject to WQMP requirements, a WQMP shall be required only to the addition, and not to the entire development.		
2	**Residential Development** - This category includes subdivisions of single-family homes, multi-family homes, condominiums, and apartments consisting of 10 or more dwelling units.		
3	**Non-Residential Development** - This category includes projects where the land area for development is greater than 100,000 sq. ft.		
4	**Automotive Maintenance and Repair Shops** - This category includes facilities engaged in general maintenance and mechanical repairs, body and upholstery repair, painting, transmission and exhaust repair, tire servicing; and glass repair.		
5a	**Restaurants** - This category includes all eating and drinking establishments where the land for development is greater than 5,000 sq. ft.		
5b	**Restaurants** where the land area for development is less than 5,000 sq. ft. are only required to follow the site design and source control requirements of the WQMP.		
6	**Hillside Development** – This category includes any developments that create more than 5,000 sq. ft. of impervious surface, are located in an area with known erosive soil conditions, and where the project will require grading natural slopes of 25% (4:1) or steeper.		
7	**Environmentally Sensitive Areas (ESAs)** – This category includes all development located within or directly adjacent to or discharging directly to an ESA which either creates 2,500 sq. ft. of impervious surface or increases the area of imperviousness by 10% or more of its naturally occurring condition. **Note:** "Directly adjacent" means within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or modification, and not commingled with flows from adjacent lands.		
8	**Parking Lots** – This category includes projects that create 5,000 sq. ft. or more of impervious surface for temporary parking or storage of motor vehicles. This category includes parking areas associated with any of the developments outlined above. Routine maintenance, including removal and replacement, is exempt.		
9	**Streets, Roads, Highways & Freeways** – This category includes projects that create 5,000 sq. ft. or more of impervious surface for transportation of motor vehicles. Routine maintenance, including removal and replacement, is exempt.		
10	**Retail Gasoline Outlets** – This category applies if either of the following criteria is met: (a) 5,000 sq. ft. or more of impervious surface, or (b) a projected 'Average Daily Traffic' count of 100 or more vehicles per day.		

If you answered "YES" to any of the questions above, a project-specific Water Quality Management Plan must be prepared and submitted (see next page).

Conceptual-Level Water Quality Management Plan (WQMP)

A conceptual WQMP shall be submitted as part of the initial application submittal package. Applicants shall confer with the City's engineering staff to ensure adherence with the latest version of the Project-Specific WQMP Template. At a minimum, the following sections of the WQMP template shall be satisfied at this submittal stage. Each section shall adhere to all of the items outlined in the Conceptual Acceptance checklist.

WQMP Section	Title of Section
I	Project Description
III	Pollutants of Concern
IV	Hydrologic Conditions of Concern (Preliminary Surface Hydrology)
V.1	Site Design BMPs
V.3	Treatment Control BMPs
VI	Operation and Maintenance Responsibility for Treatment Controls
Appendix B	WQMP Site Plan
Appendix C	Supporting Detail related to Hydrologic Conditions of Concern (Preliminary Surface Hydrology)
Appendix E	Soil and Percolation Reports that specifically address soil infiltration properties
Appendix F	Treatment Control BMP Sizing Calculations and Design Details

Visit the City's website for detailed information on WQMP requirements:
http://www.cityoftemecula.org/Temecula/Government/PublicWorks/WQMPandNPDES/WQMP.htm

SECTION N. HAZARDOUS WASTE SITE INFORMATION FORM

Government Code Section 65962.5, which became effective July 1, 1987, requires the applicant for any development project to consult specified State-prepared lists of hazardous waste sites and submit a signed statement to the local agency indicating whether the project is located on or near an identified site. Under the statute, no application shall be accepted without this signed statement.

PART A

TO DETERMINE IF YOUR PROJECT IS WITHIN THE ONE-MILE RADIUS OF A HAZARDOUS WASTE SITE refer to the following list of State identified Hazardous Waste Sites. Identify the listed site by placing a check in the box provided and sign and date this form.

Is the project within a one-mile radius of an identified hazardous waste site? Yes No

REGIONAL WATER QUALITY CONTROL BOARD HAZARDOUS WASTE SITES

- ❑ Rancho California Water District, 28061 Diaz Road, Temecula, CA 92590
- ❑ Borg Warner Mechanical Seal, 27941 Front Street, Temecula, CA 92590
- ❑ Chevron Service Station, 28900 Rancho California Road, Temecula, CA 92590
- ❑ Plant Equipment, Inc., 28075 Diaz Road, Temecula, CA 92590
- ❑ Mobil, 28111 Front Street, Temecula, CA 92590
- ❑ Penfold Properties, 28545 Front Street, Temecula, CA 92590
- ❑ C.L. Pharris Ready Mix Plant, 29065 Front Street, Temecula, CA 92590
- ❑ Temecula Fuel Center, 44987 Front Street, Temecula CA 92590
- ❑ Arco, 27641 Ynez Road, Temecula, CA 92590

PART B

TO DETERMINE IF YOUR PROJECT IS WITHIN A ONE-MILE RADIUS OF A PUBLIC WELL SITE, which could potentially be affected by a hazardous waste generator, refer to the following list of State identified Public Well Sites. Identify the listed site by placing a check in the box provided and sign and date this form on the last page.

Is the project within a one-mile radius of an identified public well? Yes No

DHS3 PUBLIC WELL SITES SERVING MORE THAN 200 CONNECTIONS

- ❑ Rancho Cal WD (#102), SW 1/4, SE 1/4, Sec. 2, T8S, R3W
- ❑ Rancho Cal WD (#114, 113), SE 1/4, NE 1/4, Sec. 25, T7S, R2W

I (we) certify that I (we) have investigated and completed this hazardous waste site form, and that my (our) answers are true and correct to the best of my (our) knowledge.

Owner/Representative_____Date_____

SECTION O. PUBLIC HEARING REQUIREMENTS

The following information may be obtained by requesting a "Radius Package" from a title insurance company.

The following items will be required prior to scheduling the application for public hearing:

1. **TWO** identical packages to be inserted in separate 9 1/2" x 12 1/2" manila envelopes. These envelopes shall indicate the case number and the word "labels," and shall contain the following:

   a. One typed set of gummed labels **(30 labels per sheet)** indicating all the property owners' names and the mailing addresses that are within a 600-foot radius of the exterior of the proposed tract boundaries (this list shall be ascertained from the last equalized assessment roll). The Planning Application Number shall be located on all label sheets.

      ***A minimum of the 30 nearest individual property owners (persons owning multiple properties shall only be counted once) shall be provided. Applicant is responsible for crossing out all duplicate labels.**

   b. A photocopy of the aforementioned labels

   c. One label for the representative/engineer

   d. One label for the owner

2. Four typed sets of gummed labels of the owner, engineer, and representative with their mailing addresses. Do not include duplicate sets where representative and owner, etc., are the same. These should be inserted in a letter-sized envelope and stapled to the outside of one of the large manila envelopes mentioned in item 1 above.

3. Certification by the Title Company, engineer, or surveyor that the above list is complete and accurate. The Tax Assessor's Office will not prepare or certify the property owner list (see certification form attached).

4. On a copy of your assessors parcel map show all the parcels within the noticing radius. On the map, print the names of all property owners within the noticing radius as they are listed on the gummed labels.

PROPERTY OWNERS CERTIFICATION

I, _____, certify that on _____
(Print Name) (Month-day-year)

the attached property owners list was prepared by

_____Pursuant to application

requirements furnished by the City of Temecula Planning Department. Said list is a complete and true compilation of owner of the subject property and all other property owners within **600 feet (or the 30 nearest individual property owners, whichever creates the greatest number of public notices (persons owning multiple properties shall only be counted once)** of the property involved in the application and is based upon the latest equalized assessment rolls.

I further certify that the information filed is true and correct to the best of my knowledge. I understand that incorrect or erroneous information may result in processing delays or be grounds for rejection or denial of the application.

NAME:_____

TITLE/REGISTRATION:_____

ADDRESS:_____

PHONE:_____ (Daytime phone no.)

SIGNATURE:_____

DATE: _____ CASE NO.: _____

CITY OF TEMECULA
DEVELOPMENT APPLICATION
DEVELOPER DISCLOSURE STATEMENT

This portion of the Application must be fully completed and signed by the Applicant. If not fully completed and signed, the Application will be deemed incomplete. Additionally, this portion of the Application must be fully completed and signed by the Applicant and filed with the Planning Department again not less than five nor more than ten days prior to the hearing before the Planning Commission and not less than five nor more than ten days prior to the hearing before the City Council, if any.

1. Address of subject property:_____
   Cross street:_____

2. Date this Disclosure Statement is completed:_____

3. Name of Applicant: _____

   A. If Applicant is a limited liability company ("LLC"), please state:
      1) Full name of LLC
      2) Address of LLC
      3) State of registration
      4) Name and address of managing member(s)
      5) Name and address of agent for service of process

   B. If Applicant is a partnership, please state:
      1) Full name of partnership
      2) Address of partnership
      3) State of registration
      4) Name and address of general partners
      5) Name and address of agent for service of process

   C. If Applicant is a corporation, please state:
      1) Full name of corporation
      2) Address of corporation
      3) State of incorporation
      4) Name and address of officers of corporation
      5) Name and address of shareholder with fifty percent (50%) or more of the shares of the corporation, if any
      6) If no shareholder has fifty percent (50%) or more of the corporation's share, name and address of controlling shareholder
      7) Name and address of agent for service of process

4. Name of each Owner of the subject property: _____

_____

A. If Owner is a limited liability company ("LLC"), please state:
   1) Full name of LLC

   2) Address of LLC

   3) State of registration

   4) Name and address of managing member(s)

   5) Name and address of agent for service of process

B. If Owner is a partnership, please state:
   1) Full name of partnership

   2) Address of partnership

   3) State of registration

   4) Name and address of general partners

   5) Name and address of agent for service of process

C. If Owner is a corporation, please state:
   1) Full name of corporation

   2) Address of corporation

   3) State of incorporation

   4) Name and address of officers of corporation

   5) Name and address of shareholder with fifty percent (50%) or more of the shares of the corporation, if any

   6) If no shareholder has fifty percent (50%) or more of the corporation's share, name and address of controlling shareholder

   7) Name and address of agent for service of process

5. If the subject property is in escrow to be conveyed to another party or is the subject of a purchase and sale agreement, state the name of each person in escrow to purchase the subject property or a party to the purchase and sale agreement ("Party in Escrow"): _____

_____

A. If the Party in Escrow is a limited liability company ("LLC"), please state:
   1) Full name of LLC
   2) Address of LLC
   3) State of registration
   4) Name and address of managing member(s)
   5) Name and address of agent for service of process

B. If Party in Escrow is a partnership, please state:
   1) Full name of partnership
   2) Address of partnership
   3) State of registration
   4) Name and address of general partners
   5) Name and address of agent for service of process

C. If Party in Escrow is a corporation, please state:
   1) Full name of corporation
   2) Address of corporation
   3) State of incorporation
   4) Name and address of officers of corporation
   5) Name and address of shareholder with fifty percent (50%) or more of the shares of the corporation, if any
   6) If no shareholder has fifty percent (50%) or more of the corporation's share, name and address of controlling shareholder
   7) Name and address of agent for service of process

6. For any deeds of trust or other liens on the property (other than real property tax liens) please state the following:

   A. Name of beneficiary of the deed of trust or lien

   B. Date of the deed of trust or lien.

I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on the date and location set forth below

_____
Name:
Title:
Date of signing:
Location of Signing: (__) Temecula or (__) Other
_____

Date
PA
Public Works Development Plan

General Requirements

PW-1. Unless otherwise noted, all conditions shall be completed by the developer at no cost to any Government Agency. It is understood that the developer correctly shows on the site plan all existing and proposed property lines, easements, traveled ways, improvement constraints and drainage courses, and their omission may require the project to be resubmitted for further review and revision.

PW-2. A Grading Permit for precise grading, including all on-site flat work and improvements, shall be obtained from the Department of Public Works prior to commencement of any construction outside of the City-maintained street right-of-way.

PW-3. An Encroachment Permit shall be obtained from the Department of Public Works prior to commencement of any construction within an existing or proposed City right-of-way.

PW-4. An Encroachment Permit shall be obtained from the California Department of Transportation prior to commencement of any construction within an existing or proposed State right-of-way.

PW-5. All improvement plans shall be coordinated for consistency with adjacent projects and existing improvements contiguous to the site and shall be submitted on standard 24” x 36” City of Temecula mylars.

PW-6. The project shall include construction-phase pollution prevention controls into the design of the project to prevent non-permitted runoff from discharging off site or entering any storm drain system or receiving water during all field-related activities.

PW-7. A Water Quality Management Plan (WQMP) must be conceptually accepted by the City prior to the initial grading plan check. The WQMP will be prepared by a registered civil engineer and include Low Impact Development (LID) Best Management Practices (BMPs), source controls, and treatment devices.

PW-8. All onsite drainage and water quality facilities shall be privately maintained.

Prior to Issuance of Grading Permit(s)

PW-9. The Water Quality Management Plan (WQMP) must receive final acceptance by the City prior to issuance of any grading permit.

PW-10. A copy of the grading and improvement plans, along with supporting hydrologic and hydraulic calculations shall be submitted to the Riverside County Flood Control and Water Conservation District for approval.

PW-11. A permit from Riverside County Flood Control and Water Conservation District is required for work within their right-of-way.

PW-12. A grading plan shall be prepared by a registered civil engineer in accordance with City of Temecula standards, and shall be reviewed and approved by the Department of Public Works prior to the commencement of grading. The grading plan shall include all necessary erosion control measures needed to adequately protect the site (public and private) and adjoining properties from damage due to erosion.

PW-13. The developer shall post security and enter into an agreement guaranteeing the grading and erosion control improvements in conformance with applicable City Standards and subject to approval by the Department of Public Works in accordance with Grading Ordinance Section 18.24.120.

PW-14. A Soils Report shall be prepared by a registered soil or civil engineer and submitted to the Department of Public Works with the initial grading plan check. The report shall address all soil conditions of the site, and provide recommendations for the construction of engineered structures and pavement sections.

PW-15. A Geological Report shall be prepared by a qualified engineer or geologist and submitted to the Department of Public Works with the initial grading plan check. The report shall address special study zones and the geological conditions of the site, and shall provide recommendations to mitigate the impact of ground shaking and liquefaction.

PW-16. The developer shall have a Drainage Study prepared by a registered civil engineer in accordance with City Standards identifying storm water runoff expected from this site and upstream of this site. The study shall identify all existing or proposed public or private drainage facilities intended to discharge this runoff. The study shall also analyze and identify impacts to downstream properties and provide specific recommendations to protect the properties and mitigate any impacts. Any upgrading or upsizing of downstream facilities, including acquisition of drainage or access easements necessary to make required improvements, shall be provided by the developer.

PW-17. Construction-phase pollution prevention controls shall be consistent with the City's Grading, Erosion and Sediment Control Ordinance and associated technical manual, and the City's standard notes for Erosion and Sediment Control.

PW-18. The project shall demonstrate coverage under the State NPDES General Permit for Construction Activities by providing a copy of the Waste Discharge Identification number (WDID) issued by the State Water Resources Control Board (SWRCB), the project's Risk Level (RL) determination number, and name and contact information of the Qualified SWPPP Developer (QSD). A Stormwater Pollution Prevention Plan (SWPPP) shall be available at the site throughout the duration of construction activities.

PW-19. As deemed necessary by the Department of Public Works, the developer shall receive written clearance from the San Diego Regional Water Quality Board, Riverside County Flood Control and Water Conservation District, Planning Department, or other affected agencies.

PW-20. The developer shall comply with all constraints which may be shown upon an Environmental Constraint Sheet (ECS) recorded with any underlying maps related to the subject property.

PW-21. Permanent landscape and irrigation plans shall be submitted to the Planning Department and the Department of Public Works for review and approval.

PW-22. The applicant shall comply with the provisions of Chapter 8.24 of the Temecula Municipal Code (Habitat Conservation) by paying the appropriate fee set forth in that ordinance or by providing documented evidence that the fees have already been paid.

PW-23. The developer shall obtain letters of approval for any off site work performed on adjoining properties. The letters shall be in format as directed by the Department of Public Works.

PW-24. The developer shall post security and enter into an agreement guaranteeing the grading and erosion control improvements in conformance with applicable City Standards and subject to approval by the Department of Public Works in accordance with Grading Ordinance Section 18.24.120.

PW-25. The site is in an area identified on the Flood Insurance Rate Map. This project shall comply with Chapter 15.12 of the Temecula Municipal Code which may include obtaining a Letter of Map Revision from FEMA. A Flood Plain Development Permit shall be submitted to the Department of Public Works for review and approval.

PW-26. A drainage channel and/or flood protection wall will be required to protect the structures by diverting sheet runoff to streets, or to a storm drain.

Prior to Issuance of Building Permit(s)

PW-27. Final Map shall be approved and recorded.

PW-28. Improvement plans shall conform to applicable City of Temecula Standards subject to approval by the Department of Public Works. The following design criteria shall be observed:

a. Flowline grades shall be 0.5% minimum over P.C.C. and 1.00% minimum over A.C. paving.

b. Driveways shall conform to the applicable City of Temecula Standard Number 207.

c. Streetlights shall be installed along the public streets adjoining the site in accordance with City of Temecula Standard Number 800.

d. Concrete sidewalks and ramps shall be constructed along public street frontages in accordance with City of Temecula Standard Number. 400.

e. Improvement plans shall extend 300 feet beyond the project boundaries.

f. Minimum centerline radii shall be in accordance with City of Temecula Standard Number 113.

g. All curves shall include a 100-foot minimum tangent section.

h. All street and driveway center line intersections shall be at 90 degrees.

i. Public street improvement plans shall include plans and profiles showing existing topography, utilities, proposed centerline, top of curb and flowline grades.

j. Landscaping shall be limited in the corner cut-off area of all intersections and adjacent to driveways to provide for minimum sight distance and visibility.

k. All concentrated drainage directed towards the public street shall be conveyed through under sidewalk drains.

PW-29. The developer shall construct all public improvements outlined in these conditions to City of Temecula General Plan standards unless otherwise noted. Plans shall be reviewed and approved by the Department of Public Works.

PW-30. Improve (Urban Arterial (8–10 lanes divided) Highway Standard No. 100B–134'/150' R/W) to include dedication of half-width street right-of-way, installation of half-width street improvements, paving, curb and gutter, sidewalk, streetlights, drainage facilities, signing and striping, utilities (including but not limited to water and sewer), and raised landscaped median.

PW-31. Improve (Urban Arterial (6 lanes divided) Highway Standard No. 100A–134' R/W) to include dedication of half-width street right-of-way, installation of half-width street improvements, paving, curb and gutter, sidewalk, streetlights, drainage facilities, signing and striping, utilities (including but not limited to water and sewer), and raised landscaped median.

PW-32. Improve (Principal Arterial (6 lanes divided) Highway Standard No. 100–110' R/W) to include dedication of half-width street right-of-way, installation of half-width street improvements, paving, curb and gutter, sidewalk, streetlights, drainage facilities, signing and striping, utilities (including but not limited to water and sewer), and raised landscaped median.

PW-33. Improve (Major Arterial (4 lanes divided) Highway Standard No. 101–100' R/W) to include dedication of half-width street right-of-way, installation of half-width street improvements, paving, curb and gutter, sidewalk, streetlights, drainage facilities, signing and striping, utilities (including but not limited to water and sewer), and raised landscaped median.

PW-34. Improve (Secondary Arterial (4 lanes undivided) Highway Standard No. 102–88' R/W) to include dedication of half-width street right-of-way, installation of half-width street improvements, paving, curb and gutter, sidewalk, streetlights, drainage facilities, signing and striping and utilities (including but not limited to water and sewer).

PW-35. Improve (Industrial Collector (2 lanes divided) Highway Standard No. 102B–78' R/W) to include dedication of half-width street right-of-way plus six feet, installation of half-width street improvements plus six feet, paving, curb and gutter, sidewalk, streetlights, drainage facilities, signing and striping and utilities (including but not limited to water and sewer).

PW-36. Improve (Residential Collector (2 lanes undivided) Road Standard No. 103A–66' R/W) to include dedication of half-width street right-of-way plus twelve feet, installation of half-width street improvements plus twelve feet, paving, curb and gutter, sidewalk, streetlights, drainage facilities, signing and striping, and utilities (including but not limited to water and sewer).

PW-37. Improve (General Local Street Standard No. 104–60' R/W) to include dedication of half-width street right-of-way plus twelve feet, installation of half-width street improvements plus twelve feet, paving, curb and gutter, sidewalk, streetlights, drainage facilities, signing, striping and utilities (including but not limited to water and sewer).

PW-38. The developer shall design and construct or provide an in lieu of construction fee for half width raised landscape median on (Urban Arterial Highway Standards–134' R/W), (Principal Arterial Highway Standards–110' R/W), (Major Arterial Highway Standards–100' R/W) from to (along property frontage). Plans shall be reviewed and approved by the Department of Public Works.

PW-39. Install a traffic signal at the intersection of and to include signal interconnect with the signal(s) at the intersection(s) of and .

PW-40. A School Zone signing and striping plan per Caltrans' standards, shall be designed by a registered engineer for the school site within this project and included with the street improvement plans for the project. Designs shall also include a warrant analysis for a flashing yellow beacon and if warrants are met, shall be installed by the developer.

PW-41. All street improvement designs shall provide adequate right-of-way and pavement transitions per Caltrans' standards for transition to existing street sections.

PW-42. The developer shall construct all public improvements in conformance with applicable City Standards and subject to approval by the Department of Public Works including street improvements, which may include, but not limited to, pavement, curb and gutter, median, sidewalk, drive approaches; streetlights, signing, striping, traffic signal systems, other traffic control devices as appropriate; sewer and domestic water systems; under grounding of proposed utility distribution lines; and storm drain facilities.

PW-43. The developer shall vacate and dedicate the abutters rights of access along pursuant to the new location of the driveway.

PW-44. A construction area Traffic Control Plan shall be designed by a registered civil or traffic engineer and reviewed by the Department of Public Works for any street closure and detour or other disruption to traffic circulation as required by the Department of Public Works.

PW-45. A Signing and Striping Plan shall be designed by a registered civil engineer approved by the Department of Public Works for .

PW-46. Bus bays will be designed at all existing and proposed bus stops as directed by Riverside Transit Agency and approved by the Department of Public Works.

PW-47. All access rights, easements for sidewalks for public uses shall be submitted and reviewed by the Department of Public Works and City Attorney and approved by City Council for dedication of the City where sidewalks meander through private property.

PW-48. The building pad shall be certified to have been substantially constructed in accordance with the approved Precise Grading Plan by a registered civil engineer, and the soil engineer shall issue a Final Soil Report addressing compaction and site conditions.

PW-49. This developer must enter into an agreement with the City for a "Trip Reduction Plan" in accordance with Ordinance Number 93-01.

PW-50. The developer shall obtain an easement for ingress and egress over the adjacent property.

PW-51. The developer shall pay to the City the Public Facilities Development Impact Fee as required by, and in accordance with, Chapter 15.06 of the Temecula Municipal Code and all Resolutions implementing Chapter 15.06.

PW-52. The developer shall record a written offer to participate in, and waive all rights to object to the formation of an Assessment District, a Community Facilities District, or a Bridge and Major Thoroughfare Fee District for the construction of the proposed Western Bypass Corridor in accordance with the General Plan. The form of the offer shall be subject to the approval of the City Engineer and City Attorney.

PW-53. The developer shall pay to the City the Western Riverside County Transportation Uniform Mitigation Fee (TUMF) Program as required by, and in accordance with, Chapter 15.08 of the Temecula Municipal Code and all Resolutions implementing Chapter 15.08.

Prior to Issuance of Certificate of Occupancy

PW-54. The project shall submit a completed WQMP Operation and Maintenance (O&M) Agreement that must include the owner's notarized signature, proof of recordation with the County Recorder's Office, and all maintenance procedures for each of the structural treatment control Best Management Practices (BMPs) outlined in the WQMP.

PW-55. The project shall demonstrate that the structural treatment control BMPs outlined in the Water Quality Management Plan (WQMP) have been constructed and installed in conformance with approved plans and are ready for immediate implementation.

PW-56. As deemed necessary by the Department of Public Works the developer shall receive written clearance from Rancho California Water District, Eastern Municipal Water District, or other affected agencies.

PW-57. Corner property line cut off shall be required per City of Temecula Standard No. 603A.

PW-58. All public improvements, including traffic signals, shall be constructed and completed per the approved plans and City standards to the satisfaction of the Department of Public Works.

PW-59. The existing improvements shall be reviewed. Any appurtenance damaged or broken shall be repaired or removed and replaced to the satisfaction of the Department of Public Works.

PW-60. All necessary certifications and clearances from engineers, utility companies and public agencies shall be submitted as required by the Department of Public Works.

NPDES Construction Inspection Notice

Public Works Department / NPDES
41000 Main Street, Temecula, CA
951-694-6411

Project Name:	WDID#:	Weather:	Date:
LD/PW number:	Developer:	Inspected by:	Date last inspected

Project Location:

NOTICE: In conformance with the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit for the Santa Margarita River Watershed, the Cities and County are mandated to perform NPDES construction site inspections to determine if the site is in compliance with local, State, and Federal stormwater and urban runoff ordinances and regulations.

Check the box adjacent to items for which deficiencies were observed.

1	Tracking controls (all access points).	[ ]
2	Tracking of sediment (interior, access points, and perimeter).	[ ]
3	Streets swept (interior, access points, and exterior).	[ ]
4	Perimeter controls (in place, functioning, maintained).	[ ]
5	Sediment controls (all interior streets and maintained).	[ ]
6	BMP's at CB's & Discharge points: In Place / Functioning / Maintained.	[ ]
7	Sediment and/or other pollutants at inlets or discharge points.	[ ]
8	All other sediment controls: In Place / Functioning / Maintained.	[ ]
9	Sediment discharge beyond project limits or in area requiring protection.	[ ]
10	Erosion present.	[ ]
11	All slopes received erosion controls.	[ ]
12	All pads received erosion controls.	[ ]
13	Non-stormwater discharges: Observed / Evident.	[ ]
14	Construction materials: In Designated Areas / Stored Properly.	[ ]
15	Liquid materials stored properly.	[ ]
16	PCC waste storage area in place and maintained.	[ ]
17	Waste materials: In Designated Areas / Stored Properly.	[ ]
18	BMP's in place for equipment maintenance / functioning / maintained.	[ ]
19	Litter / housekeeping / maintained.	[ ]
20		[ ]

NOTICE: The State of California Porter-Cologne Water Quality Control Act and the Federal Clean Water Act state that persons who violate these acts and any of the State and Federal water quality objectives can be held criminally liable.

Additional Comments:

Site Contact:	Received by:	Phone:	Time:

Action taken:

Verbal [ ] Written warning [ ] Administrative citation [ ] Stop Work Notice [ ]

May 2012

NPDES Inspection Frequency Sheet

Const

Risk Level 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	**27**	28	29	**30**	**31**	Inspector LD No.
Shell Building																																**Rudy**
Rancho Ca / Lyndee Ln																																10-020
Med Bldg																																**Matt**
42210 Lyndee Ln																																11-045GF
Lennar																																**Matt**
Rec Ctr @ Sunny Meadows	Complete																															10-047GF
UHS Medical Center																																**Rudy**
31700 Temecula Parkway																																
Grading																																10-006 GF
St Imp																																10-062CC
TS Margarita																																10-065CC
TS Temecula Pkwy																																10-064CC
TC																																10-066CC
Newland																																**Matt**
Meadow Parkway	Complete																															01-192CC
Campanula median	Complete																															11-033CC
Temecula Ln - D R Horton																																06-173
Loma Linda / Temecula Ln																																**Matt**
Harveston																																**Matt**
Richmond Am - Barrington																																10-011
Richmond Am - Emery I																																10-040
Richmond Am - Emery II	Inactive																															10-052
Richmond Am Stratford																																**Matt**
Primrose Ave																																11-063
Wolf Creek-2																																**Matt**
Woodside - Sycamore	Complete																															06-073
Portola Terrace Apts																																**Rudy**
Pujol St																																**11-086**

May 2012

NPDES Inspection Frequency Sheet

Const

Risk Level 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	**27**	28	29	**30**	**31**	Inspector LD No.
Anthony Res. -SFR	Inactive																															**Rudy**
Santiago Rd																																06-201
Sipkoi BMX Track																																**Rudy**
33239 Susan Grace Ct																																10-025
Macur Res																																**Rudy**
29725 Monte Verde																																10-022
Rancho Comm Church																																**Rudy**
Sports Field																																11-018
Arco Car Wash																																Matt
Winchester Rd																																11-031
Time Warner																																Matt
La Serena																																11-009
Panhandle																																
Unicom - 1A	Inactive																															05-139
Davidson - 2	Inactive																															04-222
HRA - 3	Inactive																															
HRA -4A	Inactive																															
Downey Bank - 4B	Inactive																															
Pan																																
Unicom	Inactive																															02-138
6 Ac Park	Inactive																															03-327
Truax Bldg																																

May 2012

NPDES Inspection Frequency Sheet

Const

Risk Level 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	**27**	28	29	**30**	**31**	Inspector LD No.
Inactive NPDES Compliant Projects																																
w/ 70% minimum Growth Established																																
SFR Gronlund																																
29699 Avenida Del Sol	Inactive																															06-170
SFR - Dohrman																																**Matt**
30277 Via Brisa	Inactive																															05-081
SFR - Chacon																																**Rudy**
40390 Calle Fiesta	Inactive																															07-057
Pace Res	Inactive																															**Rudy**
30580 Del Rey Rd																																10-003
Deportola Professional Ctr	Inactive																															**Matt**
Deportola / Margarita																																07-109
Erik Halter	Inactive																															**Rudy**
Santiago / Ormsby																																07-005
Bieri Property	Inactive																															**Rudy**
Ynez / Date																																07-105
Garrett Property	Inactive																															**Rudy**
Winchester / Dendy																																07-008
MJW Property Ridgeview	Inactive																															**Rudy**
Ave. Alvardo																																05-006
Temecula Village Apts - MJW	Inactive																															**Rudy**
Rancho Calif. Rd. e/o Moraga Rd.																																02-213
Artisan / Garrett Group	Inactive																															**Rudy**
Deerhollow & Peachtree																																06-199
Summer House - Wermers	Inactive																															**Rudy**
Margarita & Dartolo																																06-203
Com. Ctr Crisell Property	Inactive																															**Matt**
29710 Via Las Colinas																																07-094
Warehouse at Creekside	Inactive																															**Rudy**
42081 3rd St																																08-063

May 2012

NPDES Inspection Frequency Sheet

Const

Risk Level 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	**27**	28	29	**30**	**31**	Inspector LD No.
City of Temecula Projects																																
NW RDA Property / Old Ed Ctr	Inactive																															**Jay**
Dendy Parkway																																05-126
Madison Ave Property	Inactive																															**Avlin**
Madison Ave Property																																
Ped Bridge																																
San Gertrudis Creek	Complete																															PW05-11
Roripaugh Ranch																																
Butterfield Rd																																PW09-02
Library Street Imp																																
Pauba																																PW08-07
Storm Drain Imp.																																
Calle Fiesta																																PW10-07

PUBLC WORKS DEPARTMENT
LAND DEVELOPMENT DIVISION

EROSION & SEDIMENT CONTROL NOTES

1. These notes are comprehensive and should be applied according to site-specific conditions. **Year-round** pollution prevention measures, also known as Best Management Practices (BMP's), must be installed prior to any field activities. Additional erosion prevention and sediment controls must be installed and maintained prior to and throughout each rainy season. The developer/contractor is responsible for erosion and sediment controls throughout the duration of the project for all clearing, disking, grading, excavating and stockpiling activities, and on all exposed slopes and inactive pads throughout the entire site. The developer/contractor is also responsible for any discharges from subcontractors.

2. All runoff shall be filtered prior to discharging from a site or to any type of private or public storm water conveyance system (natural watercourses, streets, gutters, concrete-lined v-ditches, storm drains, flow-lines, inlets, outlets, etc.). All non-permitted discharges are prohibited from entering any storm water conveyance system year-round.

3. If the project will disturb, expose or stockpile one (1) acre or more of soil, the site must be covered under the State General Construction Permit. A Waste Discharge Identification (WDID) Number and risk level determination shall be provided to the City prior to issuance of a grading permit, and a Storm Water Pollution Prevention Plan (SWPPP) shall be implemented throughout the duration of the project. The SWPPP shall be readily available to City and State inspectors and updated to reflect current site conditions during construction. The construction permit can be downloaded at www.waterboards.ca.gov/water_issues/programs/stormwater construction. BMP handbooks can be downloaded at www.cabmphandbooks.com.

4. Additional erosion and sediment control materials shall be stockpiled at various locations throughout the site for immediate implementation within seven (7) days prior to any forecasted rain. The developer/contractor shall make available equipment and workers for emergency work to protect the site.

5. Perimeter protection must be installed prior to any clearing activities. Clearing shall be limited to areas that will be immediately graded or disturbed. A combination of erosion and sediment controls shall be implemented in areas that have been cleared. All disturbed areas of an inactive site, as described in of the Grading Manual, shall also be protected.

6. All erosion and sediment controls shall be inspected, restored, repaired or modified year-round throughout the site to protect perimeters, adjacent properties, environmentally sensitive areas, and all private and public storm water conveyance systems. If any erosion or sediment controls fail during any rain event, more effective ones will be required in their place.

7. Erosion controls shall include, but are not limited to, applying and establishing vegetative cover, wood mulch, stapled or pinned blankets (straw, coconut or other), plastic sheeting (minimum 10-mil), polypropylene mats, spray-on controls to all disturbed areas, or other measures approved by the City Engineer. Jute netting shall not be used as a stand-alone erosion control. For slopes greater than 4:1, provide fiber rolls and either a bonded fiber matrix product applied to a rate of 3500 lb/acre or a stabilized fiber matrix product applied to a rate of 10 gal/acre. The City may approve different application rates for slopes less than 4:1.

8. Sediment controls shall include, but are not limited to, desilting basins, graded berms, fiber rolls, silt fences, gravel bag chevrons (filled with minimum ¾" gravel), check dams, drainage inlet protection, etc. Fiber rolls shall be installed in 15 foot (15') increments measured along on the face of the slope. Silt fence shall be installed along interior streets and combined with gravel-bag or silt fence chevrons inside the sidewalk right-of-way or back of curbs.

9. All onsite and offsite flow lines (v-ditches, brow-ditches, terrace drains, ribbon gutters, curb gutters, etc.), storm water conveyance systems, check dams, chevrons, silt fences and desilting basins shall be free of sediment, construction materials, waste, miscellaneous debris, and deteriorated erosion and sediment controls **year-round**.

10. Construction waste and miscellaneous debris shall be placed in water-tight bins. Wire mesh receptacles will not be allowed. Wash-out stations shall be provided for concrete, paints, stucco, and other liquid waste and shall be lined with plastic and located away from streets, sidewalks, right-of-ways, flow-lines, etc. Prior to any forecasted rain, bins and wash-outs shall be covered with a lid or plastic tarp.
11. Construction access points shall be stabilized with a combination of rock and shaker plates year-round to prevent track-out. Interior access points (all proposed driveways, material storage and staging area entrances/exits, etc.) shall also be protected with rock to prevent track-out onto interior streets. Routine street sweeping shall be performed on all paved streets where tracking is observed. Vacuum sweepers shall be used when street sweeping becomes ineffective. Controlled street washing will only be allowed prior to the application of asphalt seal coats, and only when all pertinent drainage inlets are protected.
12. Desilting basins shall be designed according to the guidance provided in CASQA's construction BMP handbook.
13. Storm water runoff shall not be directed over any slopes without permanent down drains installed. Erosion and sediment controls are required on all exposed slopes until sufficient permanent landscaping has been established. 100% slope protection must be in place prior to the issuance of a certificate of occupancy.
14. Material storage and staging areas shall be established. Fuel tanks, portable toilets, liquids, gels and powders shall be stored away from all private / public storm water conveyance systems, sidewalks, right-of-ways and flow-lines and shall have secondary containment. Inactive stockpiles of soil shall be covered at all times. Active stockpiles shall be covered prior to a forecasted rain.
15. All portable mixers shall have plastic liners underneath with gravel-bags placed on the down-hill side of the liners to contain discharges.
16. Impounded water shall be secured from the public. Signage indicating "Ponded Water-Do Not Enter" shall be posted.
17. No obstructions, other than BMP's, shall be allowed within any storm water conveyance system, unless alternative drainage facilities have been approved by the City Engineer.

City of Temecula

Department of Public Works
41000 Main Street ▪ Temecula, CA 92590
Mailing Address: P.O. Box 9033 ▪ Temecula, CA 92589-9033
Phone (951) 694-6411 ▪ Fax (951) 694-6475 ▪ www.cityoftemecula.org

August 22, 2011

To: Project Developers, Property Owners, Project Managers, Field Superintendents, and Contractors.

RE: Requirements for Construction Projects.

The City of Temecula is requiring **year-round pollution prevention measures,** also known as Best Management Practices (BMPs), at every active and inactive construction site throughout the City. You are responsible for preventing pollutants at your site from reaching any type of storm water conveyance system (gutters, streets, flow lines, inlets, ditches, storm drains, natural drainage courses, creeks) or neighboring properties at all times. This is especially important between **October 1st and April 30th**, when you are required to **upgrade your Wet-Weather BMPs (erosion control measures)**.

Compliance with the **State's Construction General Permit (CGP)** is also required if your project disturbs, exposes, clears, grades, or stockpiles one acre or more of soil. Proof of a Waste Discharge Identification (WDID) Number and Risk Level Determination must be provided to the City. A Storm Water Pollution Prevention Plan (SWPPP) must be onsite at all times, updated frequently, and readily available to City and State inspectors.

At a minimum, the following requirements must be implemented:

- The City shall be notified if your project becomes inactive, or if portions within your project become inactive, or if construction activities cease for seven (7) consecutive calendar days. Inactivity will require: 1) the submittal of a BMP implementation plan to the City demonstrating current conditions and proposed compliance during the period of inactivity, and 2) establishment of 100% vegetative coverage as the primary erosion control on all inactive areas of the project.
- All storm water conveyance systems, check dams, chevrons, silt fences, temporary desilting basins, etc. shall be free of sediment, construction materials, waste, miscellaneous debris, and deteriorated BMPs;
- Waste and debris shall be placed in water-tight trash bins, and covered with a solid lid or plastic tarp prior to any forecasted rain;

- Additional BMPs shall be stockpiled throughout your site for immediate implementation prior to any forecasted rain;
- Wash-out stations shall be provided for concrete, paints, stucco, etc. These stations shall be water-tight and located away from streets, sidewalks, flow lines, and drainage inlets;
- Portable toilets shall have secondary containment and be placed away from streets, sidewalks, flowlines, and drainage inlets;
- Construction access locations shall implement a combination of rock and shaker plates. Interior access points (driveways, staging areas, etc.) shall also be protected with rock;
- All completed slopes and inactive pads shall have a combination of erosion and sediment control BMPs;
- All portable mixers shall have plastic liners underneath with gravel bags placed on the down-hill side of the liners to contain discharges;
- Street sweeping shall be performed on all paved areas, at all construction exits, during hauling operations, and on all haul route streets on a regular basis. Vacuum sweepers shall be used when street sweeping becomes ineffective;
- Water shall be filtered and drained from basins within 72-hours of collection;
- ESC plans and Standard ESC Notes must be adhered to at all times;
- The project developer is responsible for discharges from all contractors, landscapers, and other personnel working at the site.

City inspectors will begin conducting Wet-Weather inspections by **October 1st** at each site. Failure to implement wet-weather BMPs in addition to year-round BMPs will result in citations, Stop Work notices, suspension of business licenses, withholding of occupancies, and case referrals to the San Diego Regional Water Quality Control Board. If existing BMPs are inadequate, more effective BMPs will be required.

Please call me at (951) 308-6387 if you have any questions regarding this information.

Sincerely,

Aldo Licitra

Aldo Licitra
NPDES/Water Quality Program

Water Quality Program
Business Inspection Checklist
41000 Main Street, Temecula, CA.
(951) 308-6395
www.cityoftemecula.org

Name of Inspector:			
Type of Inspection:	**[ ]** Routine (annual)	**[ ]** Follow-up	**[ ]** Second Follow-up
Date:			
Time:			
Received By:			

A. CONTACT INFORMATION

Facility Name _____ **Category:** [ ] Industrial [ ] Commercial

Street Address _____ **Contact Number:** _____

Contact Person _____ **Mailing Address (if different):** _____

B. FACILITY / SITE INFORMATION:

Description of Site Activities: _____

SIC / NAIC Code (circle one): _____ **Revised SIC/NAIC Code:** _____

Priority Classification: **[ ]** High

Revised Priority Classification: **[ ]** Below 'High' threshold

Does facility have a current business license? **[ ]** Yes **[ ]** No **#** _____ **Exp.** _____

Is facility subject to a State General Industrial Permit? [ ] Yes [ ] No **WDID #:** _____

List the surface flow paths from facility to Murrieta Creek _____

C. BEST MANAGEMENT PRACTICES (BMP) ASSESSMENT:

		N/A	Yes	No	Comments
C.1	**General Areas**				
a.	Is the site free of evidence of unauthorized releases?				
b.	Is the site free of evidence of illicit connections?				
c.	Are onsite inlets and flowlines free of dirt, litter, stains, other material?				
d.	Are onsite inlets and flowlines protected from unauthorized releases?				
e.	Is washwater from all cleaning activities disposed properly? Where to?				
f.	Are biodegradable soaps used? Specify activity.				
g.	Is roof water drained to parking lot / landscaping?				
C.2	**Landscaped Areas**				
a.	Are adequate erosion prevention measures employed? (vegetation or physical stabilization)				
b.	Are irrigation systems programmed to minimize over-watering and runoff?				
c.	Are inlets or flowlines free of landscape waste (tree or shrub trimmings, grass clippings, etc)?				
d.	Is landscape material (fertilizers, pesticides, etc) stored onsite and/or protected by runoff?				
C.3	**Materials and Wastes Areas**				
a.	Are all materials and activities protected from exposure to stormwater?				
b.	Are adequate trash containers provided? (covered, no leaks) Are these areas free of litter and stains?				
c.	Are adequate recycling containers provided? (covered, no leaks) Are these areas free of litter and stains?				
d.	Is service provided to prevent trash and recycling containers from overflowing?				

FOOD FACILITY STORMWATER COMPLIANCE SURVEY

FACILITY DBA	FACILITY #	DATE	
ADDRESS	ACTIVITY	SERVICE CODE: 410	
COMPLIANCE AREAS	YES	NO	N/A
GREASE BARRELS/ INTERCEPTORS			
1. Grease pumped/removed from grease interceptor on a regular basis.			
2. Grease interceptor located outside facility, maintained properly.			
3. Evidence of spillage to ground surface at grease interceptor?			
EQUIPMENT CLEANING			
4. The following items are cleaned in such a manner that all wash water is discharged to the sanitary sewer or is collected for proper disposal:			
a. Grease filters			
b. Floor mats			
c. Floors (mop water and rinse water)			
d. Grills			
OUTSIDE AREAS			
4. The following areas are cleaned in such a manner that all wash water is discharged to the sanitary sewer or is collected for proper disposal:			
a. Sidewalk or outdoor seating			
b. Drive thru and parking lot			
DUMPSTERS AND RECYCLING CONTAINERS			
5. Food/liquid waste bagged and sealed before disposal.			
6. Dumpsters and recycling containers are covered.			
7. Spilled materials around containers are picked up regularly.			
8. Wash water is discharged to the sanitary sewer or is collected for proper disposal.			
EMPLOYEE EDUCATION/ AWARENESS			
9. Brochures or posters displayed.			
10. BMPs observed.			
OVERALL RATING	GOOD	AVERAGE	NEEDS IMPROVEMENT

COMMENTS:		
Received by:	Env. Health Specialist:	Badge #

If additional information is required, contact the Only Rain Down the Storm Drain Program of the Cities and County of Riverside at (800) 506-2555.

Local Agency Contacts

For questions about the program in a specific city, contact the local agency.

City of Banning
Public Works Department
Banning, CA 92220
Ph: (909) 922-3130

City of Beaumont
Beaumont, CA 92223
Ph: (909) 769-8520

City of Calimesa
Department of Public Works
Calimesa, CA 92320
Ph: (909) 795-9801

City of Canyon Lake
Canyon Lake, CA 92587
Ph: (909) 244-2955

City of Cathedral City
Environmental Conservation
Cathedral City, CA 92234
Ph: (760) 770-0390

City of Coachella
Department of Public Works
Coachella, CA 92236
Ph: (760) 398-5744

Coachella Valley Water District
Coachella, CA 92236
Ph: (760) 398-2651

City of Corona
Corona, CA 91720
Ph: (951) 736-2266

City of Desert Hot Springs
Public Works Department
Ph: (760) 329-6411

City of Eastvale
Eastvale, CA 91752
Ph: (951) 361-0900

City of Hemet
Hemet, CA 92545
Ph: (909) 765-3712

City of Indian Wells
Indian Wells, CA 92210
Ph: (760) 346-2489

City of Indio
Indio, CA 92201
Ph: (760) 342-6530

City of Jurupa Valley
Jurupa Valley, CA 92509
Ph: (951) 332-6464

City of La Quinta
La Quinta, CA 92253
Ph: (760) 777-7051

City of Lake Elsinore
Lake Elsinore, CA 92530
Ph: (909) 674-3124

City of Menifee
Menifee, CA 92586
Ph: (951) 672-6777

City of Moreno Valley
Moreno Valley, CA 92552
Ph: (909) 413-3120

City of Murrieta
Murrieta, CA 92562
Ph: (951) 304-2489

City of Norco
Engineering Department
Norco CA 92860-0428
Ph: (909) 270-5618

City of Palm Desert
Palm Desert, CA 92260
Ph: (760) 346-0611 (Main)
Ph: (760) 776-6450 (Public Works)

City of Palm Springs
Palm Springs, CA 92263
Ph: (760) 323-8253

City of Perris
Perris, CA 92570
Ph: (951) 956-2120

City of Rancho Mirage
Rancho Mirage, CA 92270
Ph: (760) 770-3224

City of Riverside
Public Works
Ph: (951) 826-5341

City of San Jacinto
San Jacinto, CA 92583
Ph: (951) 654-4041

City of Temecula
Temecula, CA 92590
Ph: (951) 694-6411

City of Wildomar
Wildomar, CA 92595
Ph: (951) 677-7751

For questions about the program in the unincorporated area of Riverside County, contact the following:

Riverside County Flood Control
& Water Conservation District
Ph: (951) 955-1200

HAZARDOUS WASTE/ HAZARDOUS MATERIALS FACILITY STORM WATER COMPLIANCE SURVEY FORM

FACILITY DBA	TELEPHONE	DATE
ADDRESS	CITY, ZIP	
MAILING ADDRESS (if different from site address)	MAILING CITY, ZIP	
CONTACT	FACILITY#	SIC CODE

Compliance Areas	YES	NO	N/A
***OUTSIDE AREAS (Free of staining & debris; provides good housekeeping; maintained in a manner to prevent runoff.)**		**Requires follow up**	
1. CHEMICAL STORAGE * The outside storage area is kept secure to minimize the possibility of a release. Chemicals / materials are protected from precipitation / stormwater runoff and the containers show no signs of leaking.			
2. DUMPSTER * Lid closed. No liquids are leaking from dumpster; surrounding area is free of trash.			
3. ABOVEGROUND TANKS * No ground staining, no spillage observed and no discharge to storm drain. Tanks are maintained to minimize the possibility of a release (secondary containment).			
4. ONSITE STORM DRAIN* Protected from accidental discharge other than stormwater.			
5. POWER WASH OR STEAM CLEAN* (discharge to sewer) Drains to oil/water separator connected to a sanitary sewer and not a septic system or storm drain. Steam cleaning not discharged to parking lot, storm drain or soil.			
6. PARKING LOT / DRIVEWAY* Free of excess trash, chemical staining or liquids other than water.			
7. OTHER* Non-storm water discharge (i.e. non-hazardous process discharge).			
8. MOP WATER TO SANITARY SEWER VIA CLARIFIER. Mop water is not dumped to the soil, parking lot, gutter, street, or other areas susceptible to storm water runoff and discharge to the storm drain.			
9. STORM WATER EDUCATIONAL BROCHURES GIVEN TO FACILITY OR POSTERS DISPLAYED FOR EMPLOYEES. If no, what informational material should be sent to the facility?			
10. IF A SWPPP IS REQUIRED, WAS IT AVAILABLE FOR REVIEW? See storm water handout for industrial facilities.			
11. NOTICE OF INTENT. Has the site obtained necessary permit coverage under the General Industrial Permit, if appropriate?			

OVERALL EVALUATION/ COMMENTS:

RECEIVED BY:	HAZ MAT SPEC:	BADGE #
Agency referred to as indicated on the back of this page.		

If additional information is required, contact the Only Rain Down the Storm Drain Program of the Cities and County of Riverside at (800) 506-2555.

Local Agency Contacts

For questions about the program in a specific city, contact the local agency.

City of Banning
Public Works Department
Banning, CA 92220
Ph: (909) 922-3130

City of Beaumont
Beaumont, CA 92223
Ph: (909) 769-8520

City of Calimesa
Department of Public Works
Calimesa, CA 92320
Ph: (909) 795-9801

City of Canyon Lake
Canyon Lake, CA 92587
Ph: (909) 244-2955

City of Cathedral City
Cathedral City, CA 92234
Ph: (760) 770-0390

City of Coachella
Department of Public Works
Coachella, CA 92236
Ph: (760) 398-5744

Coachella Valley Water District
Coachella, CA 92236
Ph: (760) 398-2651

City of Corona
Corona, CA 91720
Ph: (951) 736-2266

City of Desert Hot Springs
Public Works Department
Ph: (760) 329-6411, Ex 232

City of Eastvale
Eastvale, CA 91752
Ph: (951) 361-0900

City of Hemet
Hemet, CA 92545
Ph: (909) 765-3712

City of Indian Wells
Indian Wells, CA 92210
Ph: (760) 346-2489

City of Indio
Indio, CA 92201
Ph: (760) 342-6530

City of Jurupa Valley
Jurupa Valley, CA 92509
Ph: (951) 332-6464

City of La Quinta
La Quinta, CA 92253
Ph: (760) 777-7051

City of Lake Elsinore
Lake Elsinore, CA 92530
Ph: (909) 674-3124

City of Menifee
Menifee, CA 92586
Ph: (951) 672-6777

City of Moreno Valley
Moreno Valley, CA 92552
Ph: (909) 413-3120

City of Murrieta
Murrieta, CA 92562
Ph: (951) 304-2489

City of Norco
Engineering Department
Norco CA 92860-0428
Ph: (909) 270-5618

City of Palm Desert
Palm Desert, CA 92260
Ph: (760) 346-0611 (Main)
Ph: (760) 776-6450 (Public Works)

City of Palm Springs
Public Works
Ph: (760) 323-8253

City of Perris
Perris, CA 92570
Ph: (951) 956-2120

City of Rancho Mirage
Rancho Mirage, CA 92270
Ph: (760) 770-3224

City of Riverside
Public Works
Ph: (951) 826-5341

City of San Jacinto
San Jacinto, CA 92583
Ph: (951) 654-4041

City of Temecula
Temecula, CA 92590
Ph: (909) 694-6411

City of Wildomar
Wildomar, CA 92595
Ph: (951) 677-7751

For questions about the program in the unincorporated area of Riverside County, contact the following:

Riverside County Flood Control
& Water Conservation District
Ph: (951) 955-1200

SANTA MARGARITA WATERSHED NPDES MUNICIPAL STORMWATER PERMIT

(NPDES No. CAS0108766)

JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP) ANNUAL REPORT

FOR

CITY OF WILDOMAR
FISCAL YEAR 2013 – 2014

October 31, 2014

Certification
I. Executive Summary
II. Introduction
1. Development Planning
2. Construction
3. Municipal
4. Industrial/Commercial
5. Residential
6. Retrofitting Existing Development
7. Illicit Discharge Detection and Elimination
8. Workplans
9. Non-Stormwater Discharges
10. Receiving Water Limitations
11. Fiscal Analysis
12. Assessment and Response Reporting
13. Conclusions
14. Recommendations

Attachment A Annual Report Checklist
Attachment B Post-Construction BMP Database
Attachment C City Ordinance/Municipal Code Updates
Attachment D Construction Site Inventory
Attachment E Commercial and Industrial Facilities
Attachment F Educational Brochures
Attachment G Retrofit Program Framework Diagram

ORDER NO. R9-2010-0016

Submitted to

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____

Dan York
Director of Public Works

[Note: per Attachment B: Standard Provisions, Reporting Requirements and Notifications, provision 5.(b)(2) of the 2010 SMR MS4 Permit: [Applications [40CFR 122.22(a)(3)] All permit applications shall be signed by either a principal executive officer or ranking elected official.]

I. EXECUTIVE SUMMARY

This Annual Report describes the storm water management program for the City of Wildomar (City) Fiscal Year 2013/2014, July 1, 2013 through June 30, 2014. This Annual Report is intended to document the programs the City has implemented to comply with the requirements of the municipal separate storm sewer system permit (MS4 Permit) issued to the Santa Margarita Watershed Permittees by the San Diego Regional Water Quality Control board on July 14, 2004. The City did not incorporate until July 1, 2008, so it was not a permittee at the time the MS4 Permit was issued.

The City has a population of 32,176 people (as of 2010)[1] and encompasses approximately 23.7 square miles, with 31% draining to the Santa Ana River Watershed, and 69% draining to the Santa Margarita River Watershed. In 2010, the City requested that the San Diego Regional Water Quality Control Board be named as the regulator for all portions of the city including those portions in the Santa Ana River Watershed. This request was approved by the Regional Water Quality Control Board in a letter dated September 28, 2010.

During the reporting period, the City reviewed and approved for entitlement two priority development projects requiring project specific Water Quality Management Plans (WQMP). The City also reviewed and approved three priority development projects for construction and/or grading activities and accepted their WQMPs. The entitlement projects reviewed and approved include a 10-lot single family residential development (TTM 36519/PA 12-0392) and a 7-parcel commercial/retail development (TPM 30522/PA 10-0301). The projects reviewed and approved for construction include an 84-lot single family residential development (TTM 32535/Project 13-0058), a 102-lot single family residential development (TTM 25122/Project 13-0030), and a single parcel commercial/retail development (PP 10-0222/Project 13-0109). Two of the three projects approved for construction were issued grading permits and commenced grading activities during the reporting period. Other projects were also under review for entitlement approval or construction approval but did not receive approval during the reporting period. The City also conducted inspections for thirteen (13) construction project sites, ten (10) of which were active.

The City swept a total of 2,575.44 [2] curb miles of streets and cleaned 278 catch basins, preventing 489 cubic feet of debris (catch basins: including soil, vegetation, and litter) plus 135.05 tons (street sweeping) from reaching the MS4 outfalls. The City inspected construction sites during the reporting period according to the schedule set forth in the City's MS4 permit and issued several written warnings to developers. No high level enforcement actions were taken by the City. The State Water Resources and Quality Control Board (SWRQCB) performed several inspections within the City's jurisdiction during the reporting period and issued Notices of Violations to developers within the City. The City performed one (1) Industrial and Commercial inspection during the reporting period. The County performed three (3) Industrial and Commercial inspections within the City's jurisdiction during the reporting period. The City also responded to five (5) IC/ID incidents and followed-up accordingly.

The City participated in two (2) community events at which public information booths were present for stormwater pollution prevention education. The City's three (3) parks re-opened during the reporting period, after being closed for several years. The City has assessed the parks' post-construction BMPs and has budgeted to repair the BMPs to ensure that they are functional and effective.

I. EXECUTIVE SUMMARY

As the City continues to see development and growth, staff is continuing to assess and update the stormwater management program to improve the City's monitoring and program implementation.

[1] http://quickfacts.census.gov/qfd/states/06/0685446.html

[2] Sweeping only includes County Service Area (CSA) sweeping and street sweeping by CR&R Environmental Services. Value does not include street sweeping performed by franchise agreement with Waste Management.

II. INTRODUCTION

The City of Wildomar (City) is located primarily within the Santa Margarita River Watershed (SMR), with portions of the City located within and draining into the Santa Ana River Watershed (SAR). The City incorporated in July 2008 and in 2010, the City requested that the San Diego Regional Water Quality Control Board be named as the regulator for all portions of the city including those portions in the Santa Ana River Watershed. This request was approved by the Regional Water Quality Control Board in a letter dated September 28, 2010. The City's storm water management (NPDES) program is administered by the Public Works and Engineering Department. The Public Works and Engineering Department manages and administers the NPDES program as specified in the City's Jurisdictional Runoff Management Plan (JRMP) and in compliance with the MS4 Permit. The program implementation is addressed through items such as development planning, construction inspections, municipal facility management, industrial and commercial inspections, residential outreach and response, illicit discharge detection and elimination, and SMR Workplan participation. The remainder of this report provides details regarding the City's implementation of the NPDES program during the reporting period (FY 2013-2014).

1. DEVELOPMENT PLANNING
(SECTION F.1. of ORDER NO. R9-2010-0016)

New Development

1) General Plan/Environmental Review K.3.c.(4)1

a) Description of any amendments/updates to the General Plan as required by Section F.1.a. of the 2010 SMR MS4 Permit:
There were no updates to the City's General Plan during the reporting period. The City is currently working on its General Plan update. Adoption of the update is expected to occur during the first quarter of 2015. The General Plan includes policies which encourage water conservation, runoff reduction (by reduction of impervious areas), drought-resistant landscaping, educational outreach, minimization of pollutant discharges, incorporation of natural drainage systems in developments, and on-site or near-site stormwater retention. The updates also include provisions for establishing and maintaining regulations regarding water preservation.

b) Description of any amendments/updates to the environmental review process as required by Section F.1.b. of the 2010 SMR MS4 Permit.
The development environmental review process is managed by the State. City staff and consultant staff review projects accordingly. The City routinely requires EIRs to be prepared for development projects.

c) Description of any planned updates to the General Plan or the environmental review process within the next Annual Reporting period as required by Sections F.1.a.&b of the 2010 SMR MS4 Permit.
The City is currently working on its General Plan update. Adoption of the update is expected to occur during the first quarter of 2015. The General Plan includes policies which encourage water conservation, runoff reduction (by reduction of impervious areas), drought-resistant landscaping, educational outreach, minimizing pollutant discharges, incorporation of natural drainage systems in developments, and on-site or near-site stormwater retention. The updates include provisions for establishing and maintaining regulations regarding water preservation.

The City also anticipates developing its own local CEQA guidelines in the coming year.

2) SSMP status as required under Section F.1.d. of the 2010 SMR MS4 Permit K.3.c.(4)2.

The Santa Margarita Copermittees submitted a SSMP (Water Quality Management Plan (WQMP) to the Regional Water Quality Control Board (RWQCB) in June 2012. A letter of "Conditional Finding of Adequacy" from the RWQCB was received on September 16, 2013. The Copermittees resubmitted the SSMP and received Conditional Approval on May 12, 2014. The new SSMP became effective on July 11, 2014.

Description of all revisions to the SSMP, including where applicable:

a) Identification and summary of where the SSMP fails to meet the requirements of the 2010 SMR MS4 Permit as required under Section F.1.d. of the 2010 SMR MS4 Permit:
The 2014 Model SSMP/WQMP complies with the 2010 SMR MS4 Permit and received

Conditional Approval from the RWQCB on May 12, 2014. The SSMP became effective on July 11, 2014.

b) Updated procedures for identifying Pollutants of Concern for each Priority Development Project as required under Section F.1.d.(3) of the 2010 SMR MS4 Permit:

The new (2014) SMR WQMP (SSMP), approved by the RWQCB on April 8, 2014, sets forth the following procedures for developers to identify Pollutants for Concern for Priority Development Projects (PDP):

1. Identify Receiving Waters – Use the most recent version of the Water Quality Control Plan for the in the San Diego Region Basin to determine the PDPs proximate Receiving Waters. This information can be accessed from the following site:
    a. http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/
2. Identify Impairments in those Receiving Waters by Reviewing:
the 303(d) listings for all downstream Receiving Waters:
    a. http://waterboards.ca.gov/santaana/water_issues/programs/tmdl/303d.shtml
and any Pollutants being addressed by an adopted TMDL:
    b. http://waterboards.ca.gov/santaana/water_issues/programs/tmdl/
3. Identify Pollutants associated with your site/project - This includes legacy Pollutants that may be present on the project site, as well as Pollutants that are listed for the category of development on [the table] below. That table may be updated by the Copermittees periodically based on updated studies and information. Updates will be reported in the JRMP Annual Report to the San Diego Regional Board submitted by the Copermittee with Jurisdiction over the project site, and reflected in an update to this WQMP.

1. DEVELOPMENT PLANNING
(SECTION F.1. of ORDER NO. R9-2010-0016), CONT

Priority Development Project Categories and/or Project Features (check those that apply)	General Pollutant Categories							
	Bacterial Indicators	**Metals**	**Nutrients**	**Pesticides**	**Toxic Organic Compounds**	**Sediments**	**Trash & Debris**	**Oil & Grease**
Detached Residential Development	P	N	P	P	N	P	P	P
Attached Residential Development	P	N	P	P	N	P	P	P[(2)]
Commercial/Industrial Development	P[(3)]	P	P[(1)]	P[(1)]	P[(5)]	P[(1)]	P	P
Automotive Repair Shops	N	P	N	N	P[(4, 5)]	N	P	P
Restaurants (>5,000 ft^2)	P	N	N	N	N	N	P	P
Hillside Development (>5,000 ft^2)	P	N	P	P	N	P	P	P
Parking Lots (>5,000 ft^2)	P[(6)]	P	P[(1)]	P[(1)]	P[(4)]	P[(1)]	P	P
Retail Gasoline Outlets	N	P	N	N	P	N	P	P

P = Potential

N = Not Potential

(1) A potential Pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected

(2) A potential Pollutant if the project includes uncovered parking areas; otherwise not expected

(3) A potential Pollutant is land use involving animal waste

(4) Specifically petroleum hydrocarbons

(5) Specifically solvents

(6) Bacterial indicators are routinely detected in pavement runoff

c) Updated Treatment Control BMP ranking matrix as required by Section F.1.d.(6)(b)(i) of the 2010 SMR MS4 Permit:
The new Model WQMP (SSMP) approved by the RWQCB includes a BMP Selection Matrix that prioritizes LID BMPs in this order: Harvest and Use, Infiltration, Permeable Pavement, Bioretention, and Biotreatment.

d) Updated site design and Treatment Control BMP design standards as required by Sections F.1.d.(4)(c)(i) and F.1.d.(6)(b)(ii) of the 2010 SMR MS4 Permit.
The new Model WQMP (SSMP) approved by the RWQCB includes updated BMP design standards.

3) Priority Development Projects K.3.c.(4)3

a) The City of Wildomar reviewed and approved five (5) Priority Development Projects during the reporting period. The projects include:
   i. Entitlement Approval:

a. 10-lot Single Family Residential Subdivision (TTM 36519/PA 12-0392)
b. 7-parcel Commercial/Retail Development (TPM 30552/PA 10-0301)

ii. Grading/WQMP Approval/Acceptance:
a. Commercial-Retail Center (PP 10-0222/Project 13-0109)
- *Grading and Improvement Plan Approval, WQMP Acceptance*

b. 84-lot Single Family Residential Subdivision (TTM 32535/PA 13-0078)
- *Grading and Improvement Plan Approval, WQMP Acceptance*

c. 102-lot Single Family Residential Subdivision (TTM 25122/PA 13-0120)
- *Grading Plan Approval, WQMP Acceptance*

b) The following LID and Source Control BMPs were required as applicable approved Priority Development Projects as required by the 2010 SMR MS4 Permit:

Reference	LID BMP Requirements
F.1c.(2)(a)	**Conserve natural areas, including existing trees, other native vegetation, and soils.**
F.1c.(2)(b)	**Construct streets, sidewalks, or parking lots aisles to the minimum widths necessary, provided that public safety is not compromised.**
F.1c.(2)(c)	**Minimize the impervious footprint of the project**
F.1c.(2)(d)	**Minimize soil compaction to landscaped areas**
F.1c.(2)(e)	**Minimize disturbances to natural drainages**
F.1c.(2)(f)	**Disconnect impervious surfaces through distributed pervious areas**
F.1c.(2)(b)(i)	**Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and ephemeral and intermittent streams)**
F.1c.(2)(b)(ii)	**Construct pervious areas to effectively receive and infiltrate, retain and/or treat Runoff from Pervious areas, and to minimize soil compaction in these areas**
F.1c.(2)(b)(iii)	**Construct low-traffic areas with permeable surfaces, where appropriate soil conditions exist**
F.1c.(2)(c)(i)	**Structural Infiltration BMPs**
F.1c.(2)(c)(i)	**Structural Harvest and Use BMPs**
F.1c.(2)(c)(ii)	**Structural Bioretention BMPs**

	Source Control BMP Requirements
F.1.d.(5)(a)	**Prevent illicit discharges into the MS4**
F.1.d.(5)(b)	**Minimize storm water pollutants of concern in runoff**
F.1.d.(5)(c)	**Eliminate irrigation runoff**
F.1.d.(5)(d)	**Include storm drain system stenciling or signage**
F.1.d.(5)(e)	**Include properly designed outdoor material storage areas**
F.1.d.(5)(f)	**Include properly designed outdoor work areas**
F.1.d.(5)(g)	**Include properly designed trash storage areas**
F.1.d.(5)(h)	**Include water quality protection requirements applicable to individual priority project categories**

c) The following process was implemented to verify that Site Design, Source Control, and Treatment Control BMPs were required on all applicable Priority Development Projects as required under Section F.1.d.(9) of the 2010 SMR MS4 Permit:

All project applications submitted to the Planning Department are routed to the Engineering Department for review and comment prior to project conditioning and/or approval. The application packet includes a WQMP Applicability Checklist to inform the applicant of whether or not a WQMP (SSMP) will be required. The Engineering Department is responsible for reviewing the applications, confirming if the project is a Priority Development Project and a WQMP is required, and reviewing WQMPs for compliance with the MS4 Permit during entitlement review and grading and improvement plan review. During this year, the 2014 Model WQMP was not approved until April and was not enforced until July 2014. Consequently, projects during the reporting period were reviewed for compliance with the 2004 MS4 Permit.

4) Following are the names and locations of all Priority Development Projects that were granted a waiver from implementing LID BMPs pursuant to Section F.1.d.(4) of the 2010 SMR MS4 Permit K.3.c.(4)4:

None

5) Treatment Control BMPs K.3.c.(4)5

a) A current copy of the City of Wildomar's BMP maintenance tracking database of approved Treatment Control BMPs and Treatment Control BMP maintenance required under F.1.f.(1) of the 2010 SMR MS4 Permit is attached (Attachment B). This database includes an identification of all high-priority Priority Development Projects that have a final approved Project-Specific WQMP and their structural post-construction BMPs implemented since July 2005.

Please note, this database is being updated and may not include all approved and constructed post-construction BMPs.

b) The City of Wildomar verifies that the following structural post-construction BMPs on the inventoried WQMP projects have been implemented, are maintained, and are operating effectively through inspections, self-certifications, surveys, or other equally effective approaches as required under the 2010 SMR MS4 Permit:

Reference	LID BMP Requirements
F.1c.(2)(a)	**The implementation, operation, and maintenance of all (100 percent) approved and inventoried final public and private Project-Specific WQMPs are verified every five years**
F.1c.(2)(b)	**All (100 percent) projects with BMPs that are high priority are issued self-**

	certification letters annually[a][b].
F.1c.(2)(c)	**All (100 percent) of the Priority Development Projects with BMPs are issued self-certification letters annually[a][b].**
F.1c.(2)(d)	**As appropriate, the City of Wildomar coordinates its inspections with the facility inspections implemented pursuant to Section F.3 of the 2010 SMR MS4 Permit**
F.1c.(2)(e)	**For verifications performed through a means other than direct inspection by the City of Wildomar, adequate documentation is required to provide assurance that the required maintenance has been completed**
F.1c.(2)(f)	**Appropriate follow-up measures (including re-inspections, enforcement, maintenance. Etc.) are conducted to ensure the Treatment Control BMPs continue to reduce Storm Water Pollutants as originally designed**
F.1c.(2)(b)(i)	**Inspections note observations of vector conditions, such as mosquitoes. Where conditions are identified as contributing to mosquito production, the City of Wildomar notifies its local vector control agency.**

[a] The City issued self-certification letters for owners/responsible parties of facilities with post-construction BMPs. Four (4) of seven (7) total owners responded. Only one (1) owner addressed the development's post-construction BMPs. This owner performed maintenance on the BMPs appropriately to correct violations.
[b] The City implements self-certifications as a method to ensure that post-construction BMPs are maintained. City inspections for post-construction BMP facilities will be scheduled under the City's Stormwater Facilities BMP Maintenance Agreement, an agreement which is part of Project WQMPs, or as the City receives business registrations for those business, facilities, or entities who are legally responsible for post-construction BMPs.

6) The following Priority Development Projects have been required to implement hydrologic control measures to protect downstream Beneficial Uses and prevent adverse physical changes to downstream channels in compliance with Section F.1.h of the 2010 SMR MS4 Permit K.3.c.(4)6:

Name	Location	Planned Management Measures
TTM 36519/PA 12-0392 **Lesle Tract Map** **10-lot Single Family Residential Subdivision**	34915 Orange St. Wildomar, CA Sedco Tract 1, Lot 48	Infiltration Trenches to mitigate excess post-development runoff volumes. *Note: Final WQMP currently in plan review.*
TPM 30522/PA 10-0301 Bundy at Orange Commercial Site	SEC Bundy Canyon Road at Orange Street	Sand Filter Basin

1. DEVELOPMENT PLANNING
(SECTION F.1. of ORDER NO. R9-2010-0016), CONT

TTM 32535/Project 13-0058 **North Ranch** **81-lot Single Family Residential Subdivision**	North of the intersection of Clinton Keith Rd. and Stable Lanes Rd.	Infiltration Basin Detention Basin Catch Basin Inlet Filter *Note: BMPs are not specifically for HCOC* *Note: Under construction*
TTM 25122/Project 13-0030 **Rancho Fortunado I** **102-lot Single Family Residential Subdivision**	SWC of the intersection of Palomar St. and McVicar Sr.	Three (3) detention basins Filterra units Catch Basin Inlet Filters *Note: BMPs are not specifically for HCOC* *Note: Under construction*
PP 10-0222/Project 13-0109 **Plaza de Bundy Canyon** **Commercial/Retail Development**	21940 Bundy Canyon Rd. Wildomar, CA 92595	Underground Infiltration Basin Two (2) Bio-Swales *Note: BMPs are not specifically for HCOC* *Note: Under construction*

7) The following table provides a description of all activities related to the enforcement of the Stormwater Ordinance in New Development and Redevelopment Projects in the City of Wildomar's jurisdiction as required under Section F.1.g. of the 2010 SMR MS4 Permit during the reporting period and a summary of the effectiveness of the enforcement activities K.3.c.(4)7:

Violation	Project Name & Address	Enforcement Action	Effectiveness
BMPs Not Maintained	**Anne Sullivan Nursery School** 21776 Palomar St. Wildomar, CA 92595	Education and Warning	Result: Good Maintenance was performed on BMPs

2. CONSTRUCTION
SECTION F.2. of ORDER NO. R9-2010-0016)

1) **Ordinances K.3.c.(4)1**

   a) **Describe updated relevant ordinances as required under Section F.2.a. of the 2010 SMR MS4 Permit**

   The City did not update any ordinances related to construction BMPs during the reporting period. The City adopted the 2013 California Building Code (CBC) which includes provisions regarding slope protection. The 2013 CBC can be located online at http://www.bsc.ca.gov/codes.aspx. The 2013 CBC is adopted by reference as set forth in Chapter 15.12.010 of the City's Municipal Code (Attachment C) (http://qcode.us/codes/wildomar/view.php?topic=15-15_12-15_12_010&frames=on).

   b) **Describe planned ordinance updates within the next Annual Reporting period, if applicable**

   The City is in the process of updating its stormwater ordinances to ensure compliance with the 2010 SMR MS4 Permit. The updated ordinances are anticipated to be adopted by City Council during FY 2014-2015.

2) **Describe any changes to procedures used for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality as required by Section F.2.e of the 2010 SMR MS4 Permit K.3.c.(4)2.**

The City inspects construction sites based on the 2010 SMR MS4 Permit's schedule:

1. Rainy Season (October – May):
   a. Sites 30 acres or larger – every two weeks
   b. Sites less than 30 acres but larger than 1 acre – every month
   c. Sites less than 1 acre – as needed
2. Dry Season:
   a. All sites – as needed

3) **Describe any changes to the designated minimum and enhanced BMPs as described in Section F.2.d.(1) of the 2010 SMR MS4 Permit K.3.c.(4)3:**

There were no changes to the minimum and enhanced BMPs during this reporting period.

4) **Summarize the finding of the Construction Inspection Program specified in Section F.2.e. of the 2010 MS4 Permit K.3.c.(4)4:**

   a) **Total number and date of inspection conducted at each Construction Site**

   93 - Construction Inspections

   b) **Number, date, and types of enforcement actions by Construction Site**

   Due to the large number of inspections performed, the inspection dates are not included

herein. Inspection dates and details are included in Attachment D.

Rainy Season Inspections:

29 inspections – In compliance/No enforcement necessary
55 inspections – Written warnings

Dry Season Inspections:

5 inspections – In compliance/No enforcement necessary
4 inspections – Written warnings

c) Brief description of each high-level enforcement action at Construction Sites including the effectiveness of the enforcement:

No inspections performed by the City of Wildomar required high-level enforcement actions during the reporting period. The RWQCB performed five (5) construction site inspections during the rainy season and issued five (5) Notices of Violation (NOVs).

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

1) Following is the current inventory of all City of Wildomar facilities and activities that have the potential to generate Pollutants as required under F.3.a.(1) of the 2010 SMR MS4 Permit [K.3.c.(4)1]

Type	Name
Park	Marna O'Brien Park
	Regency Heritage Park
	Windsong Park
Other	Wildomar Cemetery

The City's three parks were closed for the majority of the reporting period. They reopened in April 2014.

2) Following is the current list of minimum BMPs for the City of Wildomar facilities included in the inventory addressed in item 1) above K.3.c.(4)2

BMP Code	Description	Used
SC-10	Non-Stormwater Discharges	☒ Yes ☐ No
SC-11	Spill Prevention, Control and Clean-up	☒ Yes ☐ No
SC-20	Vehicle and Equipment Fueling	☒ Yes ☐ No
SC-21	Vehicle and Equipment Cleaning	☒ Yes ☐ No
SC-22	Vehicle and Equipment Repair	☒ Yes ☐ No
SC-30	Outdoor Loading/Unloading of Materials	☒ Yes ☐ No
SC-31	Outdoor Liquid Container Storage	☐ Yes ☒ No
SC-32	Outdoor Equipment Maintenance	☐ Yes ☒ No
SC-33	Outdoor Storage of Raw Materials	☒ Yes ☐ No
SC-34	Waste Handling and Disposal	☒ Yes ☐ No
SC-35	Safe Alternative Products	☐ Yes ☒ No
SC-40	Contaminated or Erodible Areas	☐ Yes ☒ No
SC-41	Building and Grounds Maintenance	☒ Yes ☐ No
SC-42	Building Repair and Construction	☒ Yes ☐ No
SC-43	Parking/Storage Area Maintenance	☒ Yes ☐ No
SC-44	Drainage System Maintenance	☒ Yes ☐ No
SC-60	Housekeeping Practices	☒ Yes ☐ No
SC-61	Safe Alternative Products	☒ Yes ☐ No
SC-70	Road and Street Maintenance	☒ Yes ☐ No

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

SC-73	Landscape Maintenance	☒ Yes ☐ No
SC-74	Drainage System Maintenance	☒ Yes ☐ No
SC-75	Waste Handling and Disposal	☒ Yes ☐ No
SC-76	Water and Sewer Utility Maintenance	☐ Yes ☒ No

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

3) Describe any changes to procedures to assure that flood management projects assess the impacts on the water quality of Receiving Waters as required under Section F.3.a.(4) of the 2010 SMR MS4 Permit [K.3.c.(4)3]

The City issued a Request for Proposal for the design and construction of Wildomar Channel Lateral C-1 (RFP issued near the end of the reporting period). The City and the Riverside County Flood Control and Water Conservation District entered into a cooperative agreement for the design and construction of this Master Drainage Plan facility. In addition to evaluating and planning for appropriate post construction BMPs, the project's consultant engineering firm has been tasked with completing the CEQA evaluation, a Determination of Biologically Equivalent or Superior Preservation Analysis (DBESP) for Impacts to MSHCP riparian/riverine areas.

4) Following is a summary and assessment of BMP retrofit projects implemented at flood control structures as specified in Section F.3.a.(4)(c) and F.3.d of the 2010 SMR MS4 Permit [K.3.c.(4)4]:

a) **Listing of flood control facilities retrofitted:**

None*

b) **Listing and description of flood control structures evaluated for retrofitting:**

None*

c) **Listing of flood control structures still needing to be evaluated and the schedule for evaluation:**

None*

* The City does not own or operate its own flood control facilities. All flood control facilities within the City's jurisdiction are owned and operated by the Riverside County Flood Control and Water Conservation District.

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

5) Following is a summary of the municipal structural Treatment Control BMP operations and maintenance activities as specified in F.3.a.(6) of the 2010 SMR MS4 Permit [K.3.c.(4)5]:

Type of Structural Treatment Control BMP	Number of Inspections	Findings
Catch Basin Filters	Inspections Conducted Quarterly	N/A
Park WQMPs	See below*	N/A

*The City's three parks re-opened in April 2014. Some of the parks' post-construction BMPs required maintenance and re-installation due to the lack of maintenance while the parks were closed. City staff has observed the BMPs as they are being maintained but have not performed formal inspections of the BMPs. Moving forward, the City will work towards implementing the WQMP maintenance as specified in the Project Specific WQMP for each park.

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

6) Summary of the MS4 facilities operations and maintenance activities, including amount material removed from, including justification for less than annual inspection as required under Section F.3.a.(6)(b) of the 2010 SMR MS4 Permit [K.3.c.(4)(6)]:

MS4 Facility Type	Number of Facilities Maintained	Amount of Material Removed (tons)	Facilities Planned for Bi-Annual Inspections and Justification
Catch Basins **Total**	**278**	**Sediment** **275.80 cf** **Vegetation** **169.19 cf** **Litter** **39.61 cf** **Total** **489 cf***	
Debris Basins **Total**	None	**0.0 tons (wet weight)**	
Open Channels **Total**	None	**0.0 tons (wet weight)**	
Other MS4 Facilities	**2,575.44 curb miles swept***	**135.05 tons****	
Facility Total		**489 cf plus 135.05 tons**	

*City's maintenance contractor does not record data in tons.

**Sweeping only includes County Service Area (CSA) sweeping and street sweeping by CR&R Environmental Services. Value does not include street sweeping performed by franchise agreement with Waste Management.

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

7) The following table contains a Summary of municipal areas/programs inspection activities as specified by Section F.3.a.(8)(a&b) of the 2010 SMR MS4 Permit [K.3.c.(4)6] including:

a) **Number and date of inspections conducted at each facility [K.3.c.(4)7.(a)].**

b) **BMP violations identified during each facility inspection [K.3.c.(4)7.(b)].**

c) **The number, date and types of enforcement actions received at each facility [K.3.c.(4)7.(c)]**

d) **Summary of inspection findings and follow-up activities for each inspected facility [K3.c.(4)7.(d)]**

Facility	Inspections		BMP Violation	Enforcement			Summary of Inspection	
	#	Date		#	Date	Type	Findings	Follow-up
Total								

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

8) The following activities implemented to address sewage infiltration into the MS4 as specified in F.3.a.(7) of the 2010 SM4 MS4 Permit [K.3.c.(4)8]

Description of Sewage Infiltration Controls	Used
Adequate plan checking for construction and new development	☒ Yes ☐ No
Incident response training for municipal employees that identify sanitary sewer spills	☒ Yes ☐ No
Code enforcement inspections	☒ Yes ☐ No
MS4 maintenance and inspections	☒ Yes ☐ No
Interagency coordination with sewer agencies	☒ Yes ☐ No
Education of staff and contractors conducting field operations on the MS4 or its municipal sanitary sewer (if applicable)	☒ Yes ☐ No

9) Describe BMPs and their implementation for unpaved roads construction and maintenance as specified in F.3.a.(10) of the 2010 SMR MS4 [K.3.c.(4)8]:
The City does not allow the construction of new unpaved roads.

Description of Unpaved Road Construction and Maintenance BMPs	Used
Lost Road – crushed base with recycled asphalt application BMPs were implemented during the material application.	☒ Yes ☐ No
Lost Road – Magnesium Chloride ($MgCl_2$) application **BMPs: Magnesium Chloride application reduces weathering of roadway surface and potential roadway material runoff**. • **Application also inhibits dust formation and serves as the primary motive for implementing this road construction.** • City a**pplication**s of $MgCl_2$ are **scheduled** to ensure that timing is appropriate with respect to current and forecasted weather conditions	☒ Yes ☐ No

4. INDUSTRIAL / COMMERICIAL
(SECTION F.3.b. of ORDER NO. R9-2010-0016)

1) **Attachment E contains the updated inventory of Industrial and Commercial Facilities as required under Section F.3.b.(1) of the 2010 SMR Permit [K.3.c.(4)1&2]. This inventory includes the following information by facility or mobile business:**

   a) **Number and date of inspections conducted at each facility or mobile business.**

   b) **BMP violations identified during the inspection.**

   c) **Number, date, and type of enforcement actions.**

   d) **Brief description of each high-level enforcement action at Industrial/Commercial sites including the effectiveness of the enforcement and follow-up activities.**

2) **All changes to the designated minimum and enhanced BMPs required under Section F.3.b.(2)b&c of the 2010 SMR MS4 Permit [K.3.c.(4)3]**

Minimum BMP	CASQA BMP Fact Sheet	Used
Hazardous Waste/Materials storage areas are clean, no signs of leakage, and protected from rainfall and Runoff;	SC-34	☒ Yes ☐ No
Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and no signs of leakage from the trash bins	SC-34	☒ Yes ☐ No
Aboveground tanks have been properly maintained including no signs of leakage, and secondary containment in good condition	SC-11, SC-31, SC-33	☒ Yes ☐ No
Onsite storm drain inlets are protect from inappropriate non-storm water discharges	SC-44	☒ Yes ☐ No
Oil/water separators are connected to sanitary sewer	NA	☒ Yes ☐ No
Wash water from wash pads (steam cleaning or high pressure cleaning) is directed to the sanitary sewer and does not discharge to the MS4	SC-10	☒ Yes ☐ No
Mop bucket wash water is discharged to sanitary sewer via clarifier	SC-10	☒ Yes ☐ No
Parking lot areas are free of trash, debris, and fluids other than water	SC-43	☒ Yes ☐ No
Facility has coverage under the Industrial General Permit, if appropriate	NA	☒ Yes ☐ No
Minimum BMP	CASQA	☒ Yes ☐ No
Oil and grease Wastes are not discharged onto a parking lot, street or adjacent catch basin	SC-10	☒ Yes ☐ No
Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and the bins have not been washed out into the MS4	SC-43	☒ Yes ☐ No
Floor mats, filters and garbage containers are not washed in adjacent parking lots, alleys, sidewalks, or streets and that no wash water is discharged to MS4S	SC-10	☒ Yes ☐ No

4. INDUSTRIAL / COMMERICIAL
(SECTION F.3.b of ORDER NO. R9-2010-0016), CONT.

Parking lot areas are cleaned by sweeping, not by hosing down, and that facility operator uses dry methods for spill cleanup	SC-43	☒ Yes ☐ No

3) Provide a list of Industrial Facilities, including each name, address, and SIC code in the City of Wildomar's jurisdiction, that may require coverage under the General Industrial Permit, but has not submitted an NOI [K.3.c.(4)4]

There are no industrial facilities in the City of Wildomar that may require coverage under the General Industrial Permit, but have not submitted an NOI.

Facility Name	Facility Address	SIC Code
Lake Elsinore Unified School District Transportation Facility	21641 Bundy Canyon Rd. Wildomar, CA 92595	4151

5. RESIDENTIAL
(SECTION F.3.c. of ORDER NO. R9-2010-0016)

1) Provide an updated list of minimum BMPs required for residential areas and activities as required by Section F.3.c.(2)(b) of the 2010 SMR MS4 Permit [K.3.c.(4)1]

Area of Activity		Designated BMPs	Reference Material
A	Automobile repair, maintenance, washing and parking	• Collect and properly dispose of automotive fluids and other waste • Clean up spills using dry cleanup methods where possible • Store Hazardous Materials away from rain and runoff • Avoid hosing down parking areas. • Prevent all wash water, leaks and/or spills from entering the street or MS4	**Brochures (see Attachment F):** • Automotive Maintenance and Car Care Brochure • Outdoor Cleaning **CASQA BMP Fact Sheets:** • SC-20, • SC-21, • SC-22, • SC-43
B	Home and garden care activities and product use (pesticides, herbicides and fertilizers)	• Prevent irrigation runoff • Store and apply pesticides, fertilizers and other chemicals in accordance with their labeling • Avoid applying pesticides, herbicides and fertilizers before forecasted rain	**Brochures (see Attachment F):** • Landscape and Garden • 10 Ways to Save Water Outdoors **CASQA BMP Fact Sheets:** • SC-73, • SD-10, • SD-12
C	Disposal of trash, pet waste, green waste, and Household Hazardous Waste (e.g., paints, cleaning products)	• Properly dispose of pet waste • Collect green waste and never blow such waste into the street, gutter or MS4 • Never dispose of waste in a street, gutter or MS4 • Take Household Hazardous Waste to a designated collection center	**Brochures (see Attachment F):** • After the Storm • What's the Scoop • Tips for Horse Care • Landscape and Garden • Pools, Spas and Fountains **HHW and ABOP Collection Events** http://www.rivcowm.org/opencms/hhw/schedule.html **Videos:** • Animal Care • Household Hazardous Waste • Managing your Lawn and Garden • Outdoor Activities http://rcflood.org/stormwater/ (Videos found in the Media Library)

5. RESIDENTIAL
(SECTION F.3.c of ORDER NO. R9-2010-0016) CONT.

2) Provide a summary of the number and type of applicable runoff and stormwater enforcement actions taken within residential areas and activities as required under Section F.3.c.(3) of the 2010 SMR MS4 Permit [K.3.c.(4)2]:

Number by Area or Activity			Enforcement and Compliance Responses
A	B	C	
1*	1**		Education and information
1*			Verbal Warning
1*	1**		Written Warning
			Notice of Non-Compliance
			Administrative Compliance Order
			Misdemeanor
			Infraction
			Citation
			Referral to SDRWQCB
			Total

* Same activity – Yamas Drive: unpermitted car wash within City right-of-way

** Same activity – Sundrops Lane: unpermitted stockpiling on private drainage easement with potential discharge to City right-of-way

3) Describe the City of Wildomar's efforts to manage runoff and Stormwater Pollution in common interest areas and mobile home parks as required under Section F.3.c.(4) of the 2010 SMR MS4 Permit [K.3.c.(4)2]:

Mobile home parks and common interest areas are managed and enforced in the same manner as other residential areas. New mobile home developments and new developments with common interest areas are conditioned to provide water quality BMPs in accordance with the 2010 SMR MS4 Permit and Model SSMP/WQMP.

6. RETROFITTING EXISTING DEVELOPMENT (SECTION F.3.d. of ORDER NO. R9-2010-0016)

1) **Provide an updated inventory and prioritization of existing developments identified as candidates for retrofitting as required under Section F.3.d.(2) of the 2010 SMR MS4 Permit [K.3.d.(4)1]:**

   The 2010 SMR MS4 Permit Copermittees prepared a Santa Margarita Region Retrofit Program Study in May 2012. This Study establishes the framework for the Copermittees to identify conditions of concern and retrofit strategies to address those concerns. The Retrofit Program Framework Diagram is included in Attachment G.

2) **Describe the City of Wildomar's efforts to retrofit existing developments during the reporting period as required under Section F.3.d.(2) of the 2010 SMR MS4 Permit [K.3.d.(4)2]:**

   The first step in the Compermittee's Retrofit Program Framework is to identify specific issues to be addressed by retrofit. Issues are identified when illicit discharges are detected or action levels are exceeded. No illicit discharges were reported and no action levels were exceeded this year, so the City did not proceed beyond the first step in the Retrofit Program Framework Diagram.

3) **Describe the City of Wildomar efforts taken to encourage private landowners to retrofit existing development as required under Section F.3.d.(4) of the 2010 SMR MS4 Permit [K.3.d.(4)3]:**

   Project applicants who submit plans for entitlement are requested to indicate any plans for low impact development on the plans which they submit. The applicant is referred to the Riverside County Flood Control's Low Impact Development webpage. A handout describing low impact development is also provided to the applicant. These projects typically include accessory structures and second units.

4) **Provide a list of all retrofit projects that have been implemented including site location, a description of the retrofit project pollutants expected to be treated, and the tributary acreage of runoff that will be treated as required under Section F.3.d.(5) of the 2010 SMR MS4 Permit [K.3.d.(4)4]:**

   No retrofit projects occurred within the City during the last reporting year.

5) **Describe any proposed retrofit or regional mitigation projects and timelines for future implementation [K.3.d.(4)5]:**

   There are no retrofit or regional mitigation projects currently proposed within the City of Wildomar.

6) **Describe any proposed changes to the City of Wildomar's overall retrofitting program [K.3.d.(4)6]:**

   The City will continue to implement the retrofit program as outlined in the Retrofit Program Study. This study established a framework for the Copermittees to follow to identify and implement retrofit projects. The study identified three City owned sites with soils suitable for a retrofit BMP. One is an existing park, one is a future school site, and one is a future park site.

7. ILLICIT DISCHARGE DETECTION AND ELIMINATION (SECTION F.4 of ORDER NO. R9-2010-0016) CONT.

1) Describe any changes to the legal authority to implement Illicit Discharge Detection and Elimination (IDDE) activities as required under Section F.4.a.(1) of the 2010 SMR MS4 Permit [K.3.d.(4)1]:

There were no changes to the City's legal authority to implement IDDE activities during the reporting period.

2) Describe any changes to the established IDDE investigation procedures as specified under Section F.4.e. of the 2010 SMR MS4 permit [K.3.d.(4)2]:

There were no changes to the established IDDE investigation procedures during the reporting period.

3) Describe any changes to public reporting mechanisms, including phone numbers and web pages as required under Section F.4.c of the 2010 SMR MS4 Permit [K.3.d.(4)3]

There were no formal changes to the public reporting mechanisms during the reporting period. The City updated its phone systems to include a dedicated Public Works/Engineering line (951-677-7751, Line 5). This line is made available via a call-tree presented to callers when they call the City's main phone number. The City also has a new dedicated Public Works/Engineering email address (wildomarpw@cityofwildomar.org).

4) Summarize Illicit Discharges (including spills and water quality data events) and how each significant case was resolved [K.3.d.(4)4]:

Illicit Discharge Incident	How Resolved
1. December 4, 2013 • **TR 31736-1: Construction - Developer's subcontractor drained sewer ball-testing water into off-site storm drain which drains into watercourse**	Discharge drained into rip-rap at the headwall of the outfall. Subcontractor pumped drained and ponded water from discharge location into project's onsite infiltration basin. Silt fence was present around the discharge location/rip-rap and headwall. Developer repaired damaged silt fence following the incident.
2. **January 2014** • **TR 31736-1: Construction – Discharge of slurry into flow line while developer's utility subcontractor completed vault work at the corner of George Ave. and Clinton Keith Rd.**	Developer had protected downstream catch basin. Subcontractor removed the material prior to reaching the MS4.

7. ILLICIT DISCHARGE DETECTION AND ELIMINATION (SECTION F.4 of ORDER NO. R9-2010-0016) CONT.

3. **January 10, 2014** • **32818 Willow Bay Rd. – Illegal Connection**	The City received notice from Riverside County Flood Control and Water Conservation District that an illegal connection from the Willow Bay Rd. home was made into the Flood Control Channel behind the home. The City sent the homeowner a letter informing them of the violation and performed a site visit. The homeowner followed-up by closing the illegal connection.
4. February 12, 2014 • Yamas Dr. - Unpermitted Car Wash in City Right-of-Way discharging into Catch Basin	City staff responded to complaints about car wash. Car wash activities were required to cease. Business owners were directed to obtain a City business registration and relocate to an appropriate location outside City right-of-way and to implement BMPs. Educational materials were also provided to the business owners.
5. **June 6, 2014** • **21465 Palomar St. - Sanitary Sewer Overflow from Business Park Septic System into City Right-of-Way**	Elsinore Valley Municipal Water District responded first to the incident. The City took over in following-up with the incident. Business owner responded the same day by having a pump truck come out. Another clean up crew came to address the discharge in the parking lot and right-of-way. Environmental Health was contacted as they are the permitting agency for septic systems. After obtaining permits, the system was dug up and replaced. No further discharges have occurred.

5) Describe any instances when field screening and analytical data exceeded Action Levels, including those instances for which no investigation was conducted [K.3.d.(4)5]:

There were no instances in which field screening and analytical data exceeded Action Levels.

6) Describe the follow-up and enforcement actions taken in response to investigations of Illicit Discharges and a description of the outcome of the investigation/enforcement actions as required under Section F.4.e,f, & g. [K.3.d.(4)6]:

Discharge incidents below correspond to the same incident number in the table above, in Section 7.4 of this report. Please find in the table above the full descriptions for the incidents and follow-up/enforcement actions listed below.

Illicit Discharge Incident	Follow-up and Enforcement Action	Outcome
1. **TR 31736-1 (1)**	See response above under Section 7.4.	All future sewer-ball testing discharges were discharged into the onsite infiltration basin.
2. **TR 31736-1 (2)**	See response above under Section 7.4.	Subcontractor collected

7. ILLICIT DISCHARGE DETECTION AND ELIMINATION (SECTION F.4 of ORDER NO. R9-2010-0016) CONT.

		material prior to reaching MS4.
3. **32818 Willow Bay Rd.**	See response above under Section 7.4.	Homeowner closed connection.
4. **Yamas Dr.**	See response above under Section 7.4.	Business activities ceased, owners provided with educational materials.
5. **21465 Palomar St.**	See response above under Section 7.4.	No further discharges have occurred.

The City also investigated and responded to notices of incidents/conditions which were not illicit discharges but which could potentially result in or become an illicit discharge should the conditions not be properly addressed. These incidents/conditions are usually addressed by a site visit and/or letter issued to the appropriate party informing them of the concerns and potential violations.

8. WORKPLANS

1) Provide a summary of workplans including priorities, strategy, implementation schedule and effectiveness evaluations.

The Upper Santa Margarita Watershed Water Quality Workplan (Watershed Workplan) has been developed in compliance with Directive G of the San Diego Regional Water Quality Control Board's Order No. R9-2010-0016. The purpose of the Watershed Workplan is to:

1) Characterize the Receiving Water quality in the Upper Santa Margarita River Watershed's Receiving Waters
2) Identify and prioritize water quality problem(s) in terms of constituents by location in the Upper Santa Margarita River Watershed's Receiving Waters.
3) Identify the likely sources of the highest priority water quality problem(s) within the Upper Santa Margarita River Watershed.
4) Develop a watershed Best Management Practice (BMP) implementation strategy to attain Receiving Water Quality Objectives for the highest priority water quality problem(s).
5) Develop a strategy to monitor improvements in Receiving Water quality directly resulting from implementation of the BMP implementation strategy described in this Watershed Workplan.
6) Establish a schedule for development and implementation of the BMP and monitoring strategies outlined in this Watershed Workplan.

The Watershed Workplan is reviewed annually and updated to identify needed changes to prioritize water quality problem(s) listed in the Workplan.

Throughout Fiscal Year 2013-2014, the SMR Copermittees have been assessing the Watershed Workplan programs based upon the criteria set forth by CASQA. Section 12 of this JRMP Annual Report discusses the effectiveness of the implementation of the Watershed Workplan and the CASQA outcome levels achieved. The District and the Copermittees continue to implement the schedule as seen in Figure 1 of the Watershed Workplan that outlines implementation of various storm water programs.

9. NON-STORMWATER DISCHARGES

1) **Identify any non-stormwater discharge category listed in Requirement B.2 of Order No. R9-2010-0016 that was identified as a source of Pollutants to Waters of the U.S. during the reporting period. For each identified category, the Copermittee must report whether it elected to prohibit the discharge or to require BMPs to reduce Pollutants in the discharge to the MEP. If the discharge is not prohibited, the BMPs that will be implemented, or required to be implemented, are described below:**

Non-Stormwater Discharge Categories (per Requirement B.2)	Source of Pollutant	Prohibited	Required BMPs
Diverted stream flows	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Rising ground waters	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Uncontaminated pumped ground water	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Foundation drains	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Springs	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Water from crawl space pumps	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Footing drains	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Air conditioning condensation	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Flows from riparian habitats and wetlands	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Water line flushing	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Individual residential car washing	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Dechlorinated swimming pool discharges	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No

2) **Provide a description of any updates to ordinances, orders, or similar means to prohibit non-storm water discharge categories identified under Section B.2 of the 2010 SMR MS4 Permit.**

There were no updates to the City's stormwater ordinance during the reporting period. The City is currently in the process of updating its stormwater ordinance.

3) **Identify any control measures to be required and implemented for non-stormwater discharge categories identified as needing controls by the San Diego Water Board.**

None of the non-stormwater discharge categories listed was identified as needing controls within the City by the San Diego Water Board.

9. NON-STORMWATER DISCHARGES CONT.

4) Provide a description of a program to address Pollutants from non-emergency firefighting flows identified by the City of Wildomar to be significant sources of Pollutants:

The City has not identified non-emergency firefighting flows as a significant source of Pollutants.

10. RECEIVING WATER LIMITATIONS

This section includes the report required pursuant to Requirement A.3.a.(1) of Order No. R9-2010-0016, if applicable.

Requirement A.3.a.(1) states:

"Upon a determination by either a Copermittee or the San Diego Regional Board that storm water MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee must notify the San Diego Regional Board within 30 days and thereafter submit a report to the San Diego Regional Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any Pollutants that are causing or contributing to the exceedance of Water Quality Standards. The report may be incorporated in the Annual Report unless the San Diego Regional Board directs an earlier submittal. The report must include an implementation schedule. The San Diego Regional Board may require modifications to the report;"

There were no discharges within the City determined to be causing or contributing to an exceedance of an applicable water quality standard during the reporting period.

The City relies on RCFCWCD to conduct any permit required water quality monitoring.

11. FISCAL ANALYSIS CONT.

1) The following table provides estimated expenditures for the current reporting period, the preceding reporting period, and the next reporting period. This table identifies the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities described in the City of Wildomar's JRMP as required under Section H.2 of the 2010 SMR MS4 Permit.

Program Element	Fiscal Year 2014-2015		Fiscal Year 2013-2014		Fiscal Year 2012-2013	
	Capital Expenditures	O&M/Admin Expenditures	Capital Expenditures	O&M/Admin Expenditures	Capital Expenditures	O&M/Admin Expenditures
Program Management		$25,000		$20,000		$20,000
Annual Fee for MS4 NPDES Permit		$15,000		$15,000		$9,500
Implementation Agreement Shared Cost		$190,700		$52,000		$227,000
Construction Inspections		(2)		(2)		(2)
Development Planning		(2)		(2)		(2)
Industrial and Commercial Inspections		$35,000		$35,000		$35,000
Illicit Connections & Illegal Discharges Program		(3)		(3)		(3)
Municipal Facilities and Activities						$48,000
Public Education & Outreach		(1)		(1)		(1)

Monitoring Program		(1)		(1)		(1)
Retrofit Program		(1)		(1)		(1)
Other						
Total	$	$265,700	$	$122,000	$	$339,500

Notes:
(1) These items are included in the "Implementation Agreement Shared Cost."
(2) These items are included in the cost billed to the project developer and are not tracked separately.
(3) IC/ID program activities are not tracked separately.

2) A description of the source(s) of funds that are proposed to meet the necessary expenditures for the subsequent year.

Source of Funds	Capital Expenditures	Percent of Total Program Funding	Restrictions on Use (if applicable)
General Fund		81%	
LLMD 89-1-C/CSA 152		19%	Maximum parcel assessment established at annexation into district. Must be used for fossil filter replacement and street sweeping within specified neighborhoods.

11. FISCAL ANALYSIS CONT.

3) Provide a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line item.

The Program Management cost will increase by 25% ($5,000) from the current reporting period to the next fiscal year (FY 2014-2015). This reflects the anticipated time to be spent in implementing the NPDES program. Activities covered under the program management cost include, but are not limited to, items such as staff response to IC/ID incidents, business registration review for NDPES compliance, coordinating the inspection program, collating the data for the JRMP annual report, and general program management.

The Implementation Agreement Shared Cost item has increased by approximately 267% ($138,700) from the current reporting period to the next fiscal year (FY 2014-2015). This reflects the City's share of the additional cost spent by the Copermittees to prepare studies and reports to comply with the 2010 SMR MS4 Permit.

12. ASSESSMENT AND RESPONSE REPORTING

1) **The following is the City of Wildomar summary of its effectiveness assessments as required under Section J.3 of the 2010 SMR MS4 Permit.**

12.1.a.1 Illicit Discharge Detection and Elimination Effectiveness Assessment

Table 12-1: Illicit Discharge Detection and Elimination Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Number of IC/ID reports received (F.4.e.(3))	1	Level 1
Percentage/Number of Dry Weather Source ID Efforts that were completed and Findings	0	Level 5
Estimated volume of anthropogenic trash removed from City of Wildomar MS4 facilities (tons) (F.3.a.(6)(b)(vi))	489 cf* plus 135 tons**	Level 4

*City's maintenance contractor does not record data in tons.

** Sweeping only includes removal by County Service Area (CSA) sweeping and street sweeping by CR&R Environmental Services. Value does not include street sweeping performed by franchise agreement with Waste Management.

12.1.a.2 Municipal Areas and Activities Effectiveness Assessment

Table 12-2: Municipal Areas and Activities Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Percent/Number of City of Wildomar facilities with appropriate BMPs identified (F.3.a.(2)(b))	33[a]	Level 2
Number of City of Wildomar facility and MS4 operators and maintenance staff that attended Municipal training (F.6.b.(1))	0	Level 1
Estimated tons of Waste removed by City of Wildomar street sweeping, (F.3.a.(5))	135.05[b]	Level 4
Estimated tons of Waste removed from City of Wildomar Open Channels (F.3.a.(6)(b))	0[c]	Level 4
Estimated tons of Waste removed from City of Wildomar storm drain inlets (F.3.a.(6)(b))	489 cf[d]	Level 4

[a] Includes: 30 catch basin filter inserts, 3 parks with post-construction BMPs
[b] Sweeping only includes County Service Area (CSA) sweeping and street sweeping by CR&R Environmental Services. Value does not include street sweeping performed by franchise agreement with Waste Management.
[c] Open channel flood control facilities within the City are maintained by Riverside County Flood Control District
[d] The City's maintenance contractor does not record removal in tons

12.1.a.3 Development Planning Effectiveness Assessment

Table 12-3: Development Planning Program Effectiveness

Measureable Metric Collected	Data	CASQA Outcome Level
Number of acres of Redevelopment projects that incorporated LID-based BMPs that are built and completed (F.1.f.(1))	0*	Level 5
Number of applicable planning staff that attended WQMP training (F.6.b.(1))	0	Level 1

*No redevelopment projects were approved or constructed this year.

12.1.a.4 Private Development Construction Activity Effectiveness Assessment

Table 12-4: Private Development Construction Activity Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Construction Site inventory updated (F.2.b.)	Yes	Level 1
Number of construction inspection staff that attended Construction training (F.6.b.(b))	2	Level 1

12.1.a.5 Industrial and Commercial Effectiveness Assessment

Table 12-5: Industrial and Commercial Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Industrial and Commercial Facilities inventory updated (F.3.b.(1)(a))	Yes	Level 1
Number of applicable Industrial and Commercial Facility inspection staff that attended Industrial-Commercial training (F.6.b.(1)(c))	1	Level 1

12.1.a.6 Residential Effectiveness Assessment

Table 12-6: Residential Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Gallons of used oil collected at collection events (F.3.c.(2)(c))	36,869 lbs* 4,855 gal**	Level 4
Total pounds collected at HHW/ABOP events (F.3.c.(2)(c))	182,687 lbs*	Level 4

*SMR data, not Copermittee specific

**Assumed density of 7.59 lb/gal for Automobile Oil (http://www.engineeringtoolbox.com/liquids-densities-d_743.html)

12. ASSESSMENT AND RESPONSE REPORTING

12.1.a.7 Retrofit Program Effectiveness Assessment

Table 12-7: Retrofit Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Number of times the Retrofit Program has identified a potential solution to a specific identified problem	0*	Level 1

*No specific problems were identified.

12.1.a.8 Public Education Effectiveness Assessment

Table 12-8: Public Education Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Number of outreach events to schools	6*	Level 1
Number of Public Events where outreach was conducted	16*	Level 1
Pounds of trash removed through watershed cleanup events	182,687 lbs	Level 4
Number of home improvement stores provided outreach / customer education information for pesticide use	5/3*	Level 1
Number of E-Newsletters signups	60	Level 2
% of E-Newsletters clicked	26%**	Level 2

*SMR data, not Copermittee specific; **SMR Quarterly Average

12.1.a.9 Watershed Workplan Effectiveness Assessment

Table 12-9: Watershed Workplan Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Annual Public Review Meeting conducted	1	Level 1
Updated Characterization of Receiving Water Quality	(See Below)	Level 1
Updated prioritization of water quality problems	(Refer to SMR Annual Monitoring Report, Table 41)	Level 1
Descriptions of likely sources updated	(Refer to SMR Monitoring Annual Report, Section 5.3)	Level 1

12. ASSESSMENT AND RESPONSE REPORTING

Updated BMP Implementation Strategy	(See Below)	Level 1
BMPs implemented according to schedule	(See Below)	Level 1
Number of Collaborative Meetings Attended	5	Level 1

Updated Characterization of Receiving Water Quality:

The Copermittees submitted an Annual SMR Monitoring Report for the reporting period to the Regional Water Quality Control Board on October 1, 2014. This monitoring report indicates that "overall, water quality conditions in the SMR receiving waters appear to be getting better, based on the number of Clean Water Act (CWA) Section 303(d)-listed constituents in the Upper Santa Margarita River Watershed with statistically significant downward trends."

Updated BMP Implementation Strategy:

The City of Wildomar did not implement any new BMPs during this reporting period. The City of Wildomar is implementing the current BMP Implementation Strategy per Section 4 of the Upper Santa Margarita River Watershed Workplan.

BMPs Implemented According to Schedule:

The City of Wildomar did not implement any new BMPs during this reporting period.

a) Response to effectiveness assessments:

The City of Wildomar does not plan any program modifications for the next year. The SMR Copermittees expect that future monitoring and the associated data will foster a better understanding of Pollutants and their impacts to Receiving Waters. Results from monitoring activities/studies will continue to guide the Copermittees in assessing and managing their programs to protect Receiving Waters in the SMR to the maximum extent practicable.

b) A description of any steps to be implemented to improve the City of Wildomar's ability to assess program effectiveness.

The City of Wildomar and Copermittess do not plan any modifications to program monitoring at this time. Future monitoring and studies will provide additional information to guide the Copermittees in assessing and managing their programs to protect Receiving Waters in the SMR to the maximum extent practicable.

10. RECEIVING WATER LIMITATIONS

This is the second year that the City has been subject to Order No. R9-2010-0016. The City reviewed and approved two (2) Priority Development Projects for entitlement and reviewed and approved three (3) Priority Development Projects for construction. The construction approvals included rough grading approvals and WQMP acceptances. Of the three construction projects, only two were issued grading permits and began construction activities during the reporting period. The entitlement projects reviewed and approved include a 10-lot single family residential development (TTM 36519/PA 12-0392) and a 7-parcel commercial/retail development (TPM 30522/PA 10-0301). The projects reviewed and approved for construction include an 84-lot single family residential development (TTM 32535/Project 13-0058 – grading permit for 31.17 disturbed acres), a 102-lot single family residential development (TTM 25122/Project 13-0030 – grading permit for 41.7 acres), and a single parcel commercial/retail development (PP 10-0222/Project 13-0109).

The City swept 2,575.44[1] curb miles of streets and cleaned 278 catch basins this fiscal year, thereby preventing approximately 489 cubic feet (catch basins) and 135.05 tons (street sweeping) of debris from reaching the MS4 outfalls.

The City inspected construction sites during the reporting period according to the schedule set forth in the City's MS4 permit and issued several written warnings to developers. No high level enforcement actions were taken by the City. Out of a total of ninety-three (93) inspections, the City issued a total of fifty-nine (59) written warning to developers of construction sites. The Public Works department began reviewing business registrations this reporting period to request storm water compliance deposits from business owners of specific business requiring inspections to allow City staff to perform Commercial/Industrial Inspections, as specified in the City's JRMP. The City performed one (1) Industrial and Commercial inspection during the reporting period. The County performed three (3) Industrial and Commercial inspections within the City's jurisdiction during the reporting period. The City issued self-certification letters for owners/responsible parties of facilities with post-construction BMPs. The City also responded to five (5) illicit discharges during the reporting period.

The City participated in two (2) community events at which public information booths were present for stormwater pollution prevention education. The City also re-opened its three (3) parks during the reporting period, all of which had been closed for several years. The City has assessed the parks' post-construction BMPs and has budgeted to repair the BMPs to ensure that they are functional and effective.

The City's JRMP, in cooperation with the other Copermittees, complies with the 2010 SMR MS4 Permit. Based on the information collected to date, the City's program is effectively protecting the Receiving Waters and no changes are proposed at this time. Future monitoring and studies will provide additional information to guide the City in assessing and managing its programs.

[1] Sweeping only includes County Service Area (CSA) sweeping and street sweeping by CR&R Environmental Services. Value does not include street sweeping performed by franchise agreement with Waste Management.

13. RECOMMENDATIONS

14. RECOMMENDATIONS

The City of Wildomar does not plan any modifications to its water quality program and assessment at this time. The City incorporated the Public Works Department in the business registration review process during the reporting period to ensure that businesses requiring NPDES Compliance Inspections are tracked and provide a deposit for inspections. As the Public Works Department continues to monitor business registrations to ensure compliance with the NPDES program, the City intends to further develop the industrial/commercial tracking database and perform more industrial/commercial inspections to ensure that pollutants reaching the MS4 are continually reduced to the maximum extent practicable. Future monitoring and studies will provide additional information which the City will utilize in determining if modifications to its program will improve program effectiveness.

ATTACHMENT A: ANNUAL REPORT CHECKLIST CONT.

Annual Report Summary Checklist	
Order Requirements	
Were All Requirements of Order No. R9-2010-0016 met?	☒ Yes ☐ No
Construction	
Number of Active Sites	10
Number of Inactive Sites	3
Number of Sites Inspected	13
Number of Violations	59[a]
Number of Construction Enforcement Actions Taken	59[a]
New Development	
Number of Development Plan Reviews	5[b]
Number of Grading Permits Issued	2
Number of Projects Exempted from Interim/Final Hydromodification Requirements	3[c]
Post Construction Development	
Number of Priority Development Projects	7
Number of SUSMP Required Post-Construction BMP Inspections	4[d]
Number of SUSMP Required Post-Construction BMP Violations	1[d]
Number of SUSMP Required Post-Construction BMP Enforcement Actions Taken	0
Illicit Discharges and Connections	
Number of IC/IC Inspections	5
Number of IC/ID Detections by Staff	3[e]
Number of IC/ID Detections from the Public	2
Number of IC/ID Eliminations	5
Number of IC/ID Violations	5
Number of IC/ID Enforcement Actions Taken	5
MS4 Maintenance	
Number of Inspections Conducted	N/A
Amount of Waste Removed	489 cf[f] plus 135.05 tons[g]

ATTACHMENT A: ANNUAL REPORT CHECKLIST CONT.

Total Miles of MS4 Inspected	2,575.44 curb miles[g]
Municipal/Commercial/Industrial	
Number of Facilities	4[h]
Number of Inspections Conducted	0[i]
Number of Facilities Inspected	0[i]
Number of Violations	0[i]
Number of Enforcement Actions Taken	0[i]

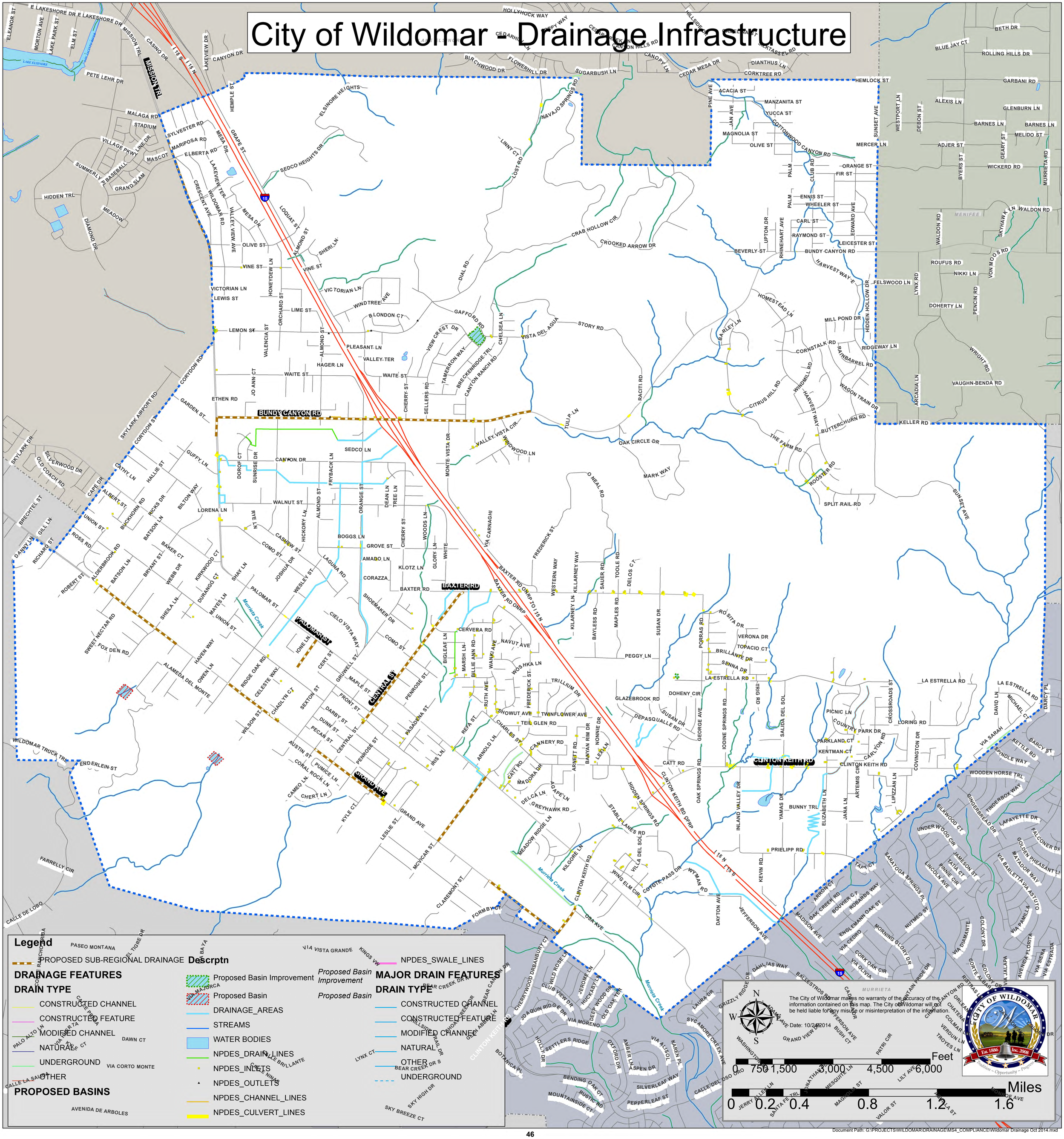
[a] Violations and enforcement actions are only those noted and issued by the City (does not include State inspection and enforcement activities)
[b] Five (5) completed reviews: two (2) entitlement, three (3) grading/improvement plan
[c] Three (3) projects met an exempting condition as set-forth in the 2006 WQMP's section regarding Hydrologic Conditions of Concern
[d] The City sent letters requesting self-verification of post-construction BMPs. Four owners responded. Only one owner addressed the development's post-construction BMPs. This owner performed maintenance on the BMPs appropriately to correct violations.
[e] Staff was notified by the Riverside County Flood Control and Water Conservation District regarding one IC.
[f] The City's maintenance contractor does not record data in tons.
[g] Waste removed in tons only includes waste removed by County Service Area (CSA) sweeping and CR&R Environmental Services Street Sweeping. Value does not include street sweeping performed by franchise agreement with Waste Management.
[h] Sweeping only includes County Service Area (CSA) sweeping and street sweeping by CR&R Environmental Services. Value does not include street sweeping performed by franchise agreement with Waste Management.
[i] The City's three parks were closed for the majority of the reporting period and opened in April 2014. No formal inspections were conducted at the City's cemetery.

I certify under penalty of law that this Annual Report Summary Checklist was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____ _____

Dan York
Director of Public Works

City of Wildomar - Drainage Infrastructure



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Stormwater Permits: Status of EPA's Regulatory Program

name redacted
Specialist in Resources and Environmental Policy

November 28, 2016

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CRS REPORT
Prepared for Members and
Committees of Congress

Summary

The Environmental Protection Agency (EPA) and states implement a federally mandated program for controlling stormwater discharges from industrial facilities and municipalities. Large cities and most industry sources are subject to rules issued in 1990 (Phase I rules), and EPA issued permit rules to cover smaller cities and other industrial sources and construction sites in 1999 (Phase II rules). Because of the large number of affected sources and deadline changes that led to confusion, numerous questions have arisen about this program. Impacts and costs of the program's requirements, especially on cities, are a continuing concern.

The 109th Congress enacted omnibus energy legislation (P.L. 109-58, the Energy Policy Act of 2005) that included a provision giving the oil and gas industry regulatory relief from some stormwater control requirements. In 2008, a federal court vacated an EPA rule implementing this provision. EPA intends to issue a revised rule that repeals the one that was vacated by the court and codifies the statutory exemption in P.L. 109-58, but the agency does not have a specific schedule for doing so. In the 111th Congress, the House passed a bill that included a provision that would repeal the exemption in P.L. 109-58, but the Senate took no action. Similar legislation has been introduced in the 114th Congress (H.R. 1460).

Congress often looks to federal agencies to lead or test new policy approaches, a fact reflected in legislation enacted in the 110th Congress. Section 438 of the Energy Independence and Security Act (P.L. 110-140, EISA) requires federal agencies to implement strict stormwater runoff requirements for development or redevelopment projects involving a federal facility in order to reduce stormwater runoff and associated pollutant loadings. EPA has issued technical guidance for federal agencies to use in meeting these requirements.

In 2009 the National Research Council issued a report calling for major changes to strengthen EPA's stormwater regulatory program, which it criticized as being inconsistent nationally and failing to adequately control all sources of stormwater discharge that contribute to waterbody impairment. In response, EPA began efforts to expand regulations and strengthen the current program with a revised rule. Agency officials said that the new rule would focus on stormwater discharges from newly developed and redeveloped, or post-construction, sites, such as subdivisions, roadways, industrial facilities, and commercial buildings or shopping centers. The rule was originally due to be proposed in 2011, but EPA missed that and several subsequent deadlines, due to analytic problems associated with developing the rule. In 2014, the agency announced that it would defer action on a national rule and instead will provide incentives, technical assistance, and other approaches for cities to address stormwater runoff themselves.

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Background

Stormwater discharge systems are the pipes and sewer lines that carry rainwater or snow melt, but not domestic sanitary wastes, away from urban areas and commercial and industrial facilities. For many years the focus of the nation's water quality programs was on controlling pollutants associated with industrial *process* wastewaters and municipal sewage discharges. More diffuse and episodic discharges (such as rainfall runoff from farm lands and urban runoff) and discharges believed to be relatively uncontaminated received less attention from policymakers and regulators.

However, as the traditional sources of water pollution have become better controlled through laws and regulations, attention has increasingly focused on remaining problems that continue to prevent attainment of state and tribal water quality standards. Stormwater is one such source of pollution. For some time, it was generally believed that stormwater was largely clean, or uncontaminated. However, studies have demonstrated that this type of discharge—from rainfall and snow melt—carries with it large amounts of organic and toxic pollutants that can harm water quality, including oil and grease, heavy metals, pesticides, soil, and sediment.

In urban areas, widespread residential and commercial development results in the removal of vegetation cover and building of impervious structures such as roads and parking lots. These activities may change natural drainage patterns in an area, causing higher runoff flows during wet weather events. Urbanization and the human alteration of landscapes and land uses that is associated with it have resulted in the degradation of conditions in downstream waterbodies. States report that stormwater discharges, including urban runoff, industrial activity, construction, and mining, are a significant source of surface water quality problems today. But control of stormwater discharges and other sources of wet weather pollution, including overflows from combined and separate sewer systems, is complicated because discharges generally are intermittent and are less amenable to "end of pipe" solutions than conventional industrial and municipal water pollution.

Recognition of the water quality problems of stormwater runoff led Congress in 1987, when it last comprehensively amended the Clean Water Act (CWA), to direct EPA to implement a specific permit program for stormwater discharges from industrial sources and municipalities (P.L. 100-4). Even before the 1987 amendments, the issue of how to regulate stormwater discharges had a lengthy history of regulatory proposals, delays, legal challenges, and court decisions. Still, EPA had been unable to devise a comprehensive and flexible administrative process for regulating stormwater discharges before requirements were legislated in 1987. In that legislation, Congress established a phased and tiered approach to permitting of stormwater discharges that fundamentally redesigned the CWA's approach to stormwater discharges. Congress recognized that EPA's difficulties in addressing sources of stormwater stemmed in part from the large number of sources potentially subject to regulation, so the 1987 legislation adopted a procedure that would enable the major contributors of stormwater pollutants to be addressed first, and remaining stormwater discharges in later phases.

EPA initially issued regulations to implement Congress's legislative mandate in 1990, utilizing a series of phased requirements.[1] Phase I applied to large dischargers: those associated with industrial activities, municipal separate storm sewer systems serving 100,000 people or more, and construction projects disturbing more than 5 acres. Smaller sources were slated for possible

[1] U.S. Environmental Protection Agency, "National Pollutant Discharge Elimination System Application Regulations for Storm Water Discharges," 55 *Federal Register* 47990-48091, November 16, 1990.

regulation under Phase II of the program (discussed below) and included cities and towns with separate storm sewer systems serving fewer than 100,000 people, commercial operations, and smaller construction projects. Stormwater requirements are one element of the comprehensive permit program, the National Pollutant Discharge Elimination System (NPDES), authorized in Section 402 of the act. Under the act, it is illegal to discharge pollutants from point sources (e.g., industrial plant pipes, sewage treatment plants, or storm sewers) into the nation's waters without an NPDES permit—permits are the fundamental compliance and enforcement mechanism of the law. EPA manages the NPDES stormwater program in four states (Idaho, Massachusetts, New Hampshire, and New Mexico), plus the District of Columbia and most U.S. territories, and has delegated that authority to the remaining 46 states and the Virgin Islands.

An estimated 123,000 industrial facilities (twice the number of industrial sources subject to the base NPDES program) and 220 municipalities and counties were covered by the 1990 permit rules for Phase I of the program. The initial procedures and deadlines were complex and were made more confusing by subsequent deadline extensions.[2]

The 1987 CWA amendments directed delegated states (or EPA) to issue stormwater permits not later than four years after enactment of that legislation. This would have required permits to be issued by February 4, 1991, but this did not occur, in part because EPA's 1990 rule was issued 21 months after the statutory deadline. Regulated sources must comply with stormwater permits within three years of their issuance.

Permits require dischargers, at a minimum, to implement pollution prevention plans, although remediation or additional treatment of runoff may also be required. Permits issued to municipalities require cities to develop, implement, and enforce a stormwater management program that addresses key areas such as public education, eliminating illicit connections to storm sewers, good housekeeping of municipal operations, and control of erosion and sedimentation from construction sites.

Prior to implementation of the stormwater regulatory program, the universe of NPDES permittees nationwide was less than 70,000 industrial and municipal facilities. The addition of stormwater permittees greatly expanded this regulatory program. EPA estimates that the total number of stormwater permittees at any one time exceeds half a million—thus, NPDES stormwater permittees outnumber wastewater permittees more than five-fold.

Industrial Facilities

Industries that manufacture, process, or store raw materials and which collect and convey stormwater associated with those activities were required to apply for an NPDES permit under the Phase I program. Several industries were specifically identified in EPA's 1990 regulation: mining operations; lumber and wood products; paper and allied products; printing, chemical products, paints, varnishes, and lacquers; stone, clay, glass, and concrete; metals; petroleum bulk terminals; hazardous waste treatment facilities; salvage operations; and powerplants.

Industrial facilities had several options to comply with these permit requirements. Chiefly, they could obtain either individual or group permits. Applications for *individual* facility permits were due to be submitted by October 1, 1992. For *group* permits (covering multiple facilities with

[2] Moreover, the 1990 regulations themselves were challenged by an environmental group, the Natural Resources Defense Council. In 1992, a federal appeals court ruled that EPA had failed to meet certain deadlines specified in the 1987 legislation and had been improper in exempting from regulation light industry and construction sites that affect less than 5 acres of land. *Natural Resources Defense Council v. EPA*, 966 F.2d 1292 (9th Cir. 1992).

similar stormwater discharges), a two-step process applied: submitting a list of facilities to be covered by September 30, 1991, and submitting more detailed information, such as sampling data on 10% of facilities in the group and a description of a stormwater management program, by October 1, 1992.[3]

EPA also provided a third option for industrial facilities, through a *general* permit procedure. A general permit is one that covers discharges from more than one facility, thus making the large number of stormwater permittees more manageable. Sources are only required to submit a Notice of Intent to be covered by a general permit, rather than the detailed application for an individual permit. EPA expected that general stormwater permits will make for a less costly and burdensome permitting process through less extensive testing and control requirements, as well as minimal monitoring and reporting. For most sources, general permits require preparation of a pollution prevention plan, and compliance with the plan six months later. EPA issued general permits for stormwater discharges associated with industrial and construction activities that disturb 5 acres or more, which apply in the four states where EPA is the permitting authority for the stormwater program. Using the EPA general permit as a model, most other states that have been delegated permitting responsibility use similar general permits to reduce the administrative burden of the industrial stormwater permit program.

Congress addressed the deadlines for stormwater permitting of industrial facilities twice. Congress first extended aspects of the deadlines for group applications by industrial facilities (P.L. 102-27, Dire Emergency Supplemental Appropriations Act of 1991), and in the 1991 Surface Transportation Act (P.L. 102-240), Congress clarified the deadlines applicable to industrial activities that are municipally owned or operated (such as airports or powerplants).

Municipalities

Phase I

Much of the controversy about stormwater requirements has focused on impacts on cities, not industrial sources. Municipalities with separate storm sewer systems (called MS4s) were subject to EPA's regulations under staggered deadlines based on the size of population served. In the 1990 Phase I regulations that apply to industrial activities, EPA also regulated discharges from medium-size and large cities (covering those with populations greater than 100,000 persons). The Phase I regulations are primarily application requirements that identify components that must be addressed in permit applications. The rules require large and medium MS4s to develop a stormwater management program, track and oversee industries facilities that are regulated under the stormwater program, conduct monitoring, and submit periodic reports. The regulations specified deadlines for these cities to provide regulators with information on legal authority over stormwater discharges and to provide detailed information on source identification and monitoring data. EPA identified 173 cities and parts of 47 urban counties as covered by Phase I.

[3] The same deadlines also applied to industrial activities owned or operated by municipalities with a population of 250,000 or more. For industrial activities owned or operated by municipalities with populations of more than 100,000 but less than 250,000, the respective deadlines were May 18, 1992, and May 17, 1993. Certain government-owned or -operated activities (airports, powerplants, and uncontrolled sanitary landfills) also were subject to the May 1992 and May 1993 deadlines, even if the unit of government has a population of less than 100,000.

Phase II

The 1987 CWA amendments exempted smaller cities (with populations of less than 100,000) from any stormwater permit requirements until October 1, 1992, and directed EPA to develop a suitable approach to address them under Phase II of the stormwater regulatory program. Because of problems in formulating a permitting strategy, EPA did not issue regulations by the 1992 deadline, nor did it meet the deadline in a one-year extension that Congress provided in P.L. 102-580. In 1995, EPA convened an advisory committee of stakeholders to assist in developing rules by March 1, 1999, a deadline set in a judicial consent order in *Natural Resources Defense Council v. EPA* (Civ. No. 95-0634 PFL [DDC, Apr. 6, 1995]) that required EPA to clarify the scope of coverage and control mechanisms for the Phase II program. Based in part on extensive discussions with the stakeholder advisory committee and with another court-approved extension, EPA issued a final Phase II rule in 1999.[4] EPA estimated that the rule would make approximately 3,000 more river miles safe for boating annually and protect up to 500,000 people a year from illness due to swimming in contaminated waters.

The 1999 Phase II rule extended Phase I by requiring permits of two additional classes of dischargers on a nationwide basis: (1) operators of MS4s serving populations of less than 100,000 persons in urbanized areas as defined by the Bureau of the Census, and (2) operators of construction activities that disturb greater than 1 and less than 5 acres of land (larger construction sites are covered by the Phase I rules). Separate storm sewer systems such as those serving military bases, universities, large hospital or prison complexes, and highways are also included in the definition of small MS4. EPA estimated that 5,040 small cities are covered by Phase II, along with about 110,200 construction starts per year.[5]

Waivers from coverage are available both for small cities (those with fewer than 10,000 persons) and construction activities if the discharges are not causing water quality impairment. At the same time, additional small municipal systems and construction sites may be brought into the stormwater program on a case-by-case basis, if permitting authorities determine that they are significant contributors to water pollution. Under the 1999 rule, covered facilities were required to apply for NPDES permit coverage by March 2003 (most under a general rather than an individual permit) and implement stormwater management programs that include six minimum management controls that effectively reduce or prevent pollutant discharges into receiving waters, such as pollution prevention and eliminating illicit discharge connections for municipal operations. The rule also provided that municipally operated industrial activities not previously regulated were required to apply for permit coverage under the same schedule as other facilities covered by Phase II.

In the final Phase II rule, EPA attempted to balance statutory requirements for a nationally applicable program with sufficient administrative flexibility to focus on significant water quality impairments. For example, EPA encouraged permitting authorities to use general rather than individual permits for the majority of covered dischargers. The agency's decision to not include

[4] U.S. Environmental Protection Agency, "National Pollutant Discharge Elimination System—Regulations for Revision of the Water Pollution Control Program for Storm Water Discharges," 64 *Federal Register* 68721-68851, December 8, 1999.

[5] Although precise numbers are not available, EPA now estimates that the number of regulated MS4s is about 7,000 (including 1,000 under Phase I and 6,000 under Phase II). The number of industrial permittees is estimated to be around 100,000. The construction site portion of the program each year covers about 200,000 permittees under Phase I (5 acres or greater) and another 200,000 under Phase II (1 to 5 acres). See National Research Council of the National Academy of Sciences, Water Science and Technology Board, *Urban Stormwater Management in the United States*, The National Academies Press, Washington, DC, 2009, p. 36.

construction sites smaller than 1 acre was based on the belief that regulating the smallest of such sites would overwhelm the resources of permitting authorities and might not yield corresponding water quality benefits. Further, EPA modified the previous Phase I rule to exclude industrial facilities that have "no exposure" of their activities (such as raw materials) to stormwater, thus reducing coverage by an estimated 76,000 facilities that have no industrial stormwater discharges. These efforts to provide flexibility notwithstanding, many regulated entities continued to criticize the scope of the stormwater program, saying that EPA had greatly underestimated the cost of the Phase II rules (projected to be $297 million annually for small cities and $505 million annually for construction activities).

Cities of all sizes have complained about the costs and difficulties of complying with EPA's regulations, especially because there is no specific CWA grant or other type of assistance program to help pay for developing and implementing local stormwater programs. Many contend that cities already are burdened with numerous environmental compliance requirements and lack adequate resources to address stormwater controls in addition to drinking water, solid waste, wastewater treatment, and sludge disposal problems. Where cities need to construct or install technology to control stormwater discharges, the principal source of financial assistance is the CWA's state revolving fund (SRF) loan program that is administered by states. However, because SRF assistance is not restricted to meeting just stormwater project needs, competition for available funds for all types of eligible projects is intense.[6]

Many municipal and industrial dischargers covered by the Phase I and Phase II programs have reached the end of their initial permit terms (NPDES permits are issued for five-year terms). For permit renewals, the agency is implementing a streamlined reapplication process that will not require the extensive information collection that characterized the first round of permitting.

Implementation of permits (i.e., translating permits into specific steps to manage stormwater runoff) is now the challenge for permitting authorities and permittees. According to a 2001 Government Accountability Office (GAO) report, local governments are primarily using best management practices (BMPs, sometimes called stormwater control measures, or SCMs) to prevent or slow stormwater from quickly reaching nearby waterbodies and degrading water quality, rather than requiring that stormwater be transported to treatment facilities.[7] BMPs include nonstructural measures to minimize contaminants getting into stormwater (e.g., street sweeping) and structural practices such as detention ponds to separate contaminants from stormwater. GAO criticized EPA for not establishing systematic efforts or measurable goals to evaluate the effectiveness of the program in reducing stormwater pollution or to determine its costs, which local governments have portrayed as high. In the 1999 rules, EPA set a goal of beginning to evaluate implementation of Phase II of the program in 2012.

In a 2007 report, GAO examined implementation of the stormwater regulatory program by municipalities.[8] GAO found that implementation of both Phases I and II had been slow: nearly 11% of communities were not permitted as of 2006; and even in communities with permits, delays occurred due to litigation or other disputes. Thus, GAO reported that because many communities were still in the early stages of implementation at the time of the report, it was too

[6] For additional information, see CRS Report 98-323, *Wastewater Treatment: Overview and Background*, by (name re dacted) .

[7] U.S Government Accountability Office, *Water Quality, Better Data and Evaluation of Urban Runoff Programs Needed to Assess Effectiveness*, GAO-01-679, June 2001.

[8] U.S. Government Accountability Office, *Clean Water, Further Implementation and Better Cost Data Needed to Determine Impact of EPA's Storm Water Program on Communities*, GAO-07-479, May 2007.

early to determine the overall program burden. While EPA's regulations provide flexibility, which could limit program burden, increased burden could result if communities are required by states or EPA to expand stormwater management activities or meet more stringent specific permit conditions in the future. GAO found that EPA is not collecting complete and consistent cost and other data, which hampers assessment of program burden.

The 1999 Phase II rules were challenged by environmental groups. The litigation resulted in a 2003 federal court ruling (Environmental Defense Center v. EPA, 344 F.3d 832 (9th Cir. 2003)). The Phase II rules allowed permitting authorities to issue general permits for MS4 stormwater discharges and required regulated MS4s to submit a Notice of Intent (NOI) to be covered by the general permit. The court found that the Phase II rules failed to require review of NOIs and failed to make NOIs available to the public or subject to public hearings and directed EPA to revise the rules to correct these procedural shortcomings. Following the court's ruling, EPA issued guidance but did not propose revised rules. In 2014, the environmental groups sued EPA for failing to follow the court's nearly 12-year-old ruling. Under a settlement agreement with the environmental plaintiffs, EPA agreed to issue final revised rules by November 17, 2016.

The agency issued revised MS4 rules on November 17.[9] The new rule allows states to choose between two options for increasing scrutiny of the MS4s' compliance plants. It allows states and other authorities crafting general permits for small MS4s to either outline in the permit terms all compliance methods that are open to permittees, or set up a "two-step" process in which facilities that apply for coverage must add their compliance plans as enforceable permit terms, including a notice-and-comment process for each plan. According to EPA, the two-step general permit allows the permitting authority to establish some requirements in the general permit and others applicable to individual MS4s through a second proposal and public comment process. Most states reportedly were pleased that the final rule provides permitting authorities with flexibility, although a few states said that allowing states to choose the regulatory approach would be more time-intensive and expensive than the system under the previous MS4 rules. Environmentalists' responses to the new rule were mixed, with some supporting EPA's actions and saying that the revised rule would lead to tighter controls on MS4 permits, but others contending that the rule's flexibility would make oversight by the public more difficult.

Congressional Interest

Prior to issuance of the final Phase II rule in 1999, Congress included language in EPA's FY2000 appropriation bill (P.L. 106-74) directing the agency not to issue the final rule before submitting a detailed impact analysis to Congress. To meet a court-ordered deadline for the regulation, EPA released the report concurrently with the Phase II rule.[10] In the 106th Congress, legislation was introduced to exempt construction sites of less than 5 acres and certain above-ground drainage ditches from stormwater permitting requirements. At a 1999 Senate hearing, EPA witnesses opposed the bill, saying that above-ground drainage ditches and small construction sites are significant sources of water pollution and thus should be subject to stormwater management requirements. No further action occurred.

[9] A prepublication version of the *Federal Register* Notice for the rule is available at https://www.epa.gov/npdes/npdes-stormwater-final-ms4-general-permit-remand-rule.

[10] U.S. Environmental Protection Agency, Office of Water, *Report to Congress on the Phase II Storm Water Regulations*, EPA 833-R-99-001, September 1999, http://www.epa.gov/npdes/pubs/ReptoCong_PhII_SWR.pdf.

In response to concerns about program impacts and costs, the 107th Congress enacted legislation allowing states to use Section 319 grant funds, which are used for projects to manage nonpoint sources of water pollution, for projects or activities related to developing and implementing a Phase II stormwater program (§301 of P.L. 107-303). This authority only applied to Section 319 funds in FY2003. Legislation to extend this authority beyond FY2003 was introduced in the 108th Congress, but was not enacted.

Oil and Gas Facilities

As the March 2003 Phase II deadline approached (affecting small municipalities and construction sites), EPA proposed a two-year extension of the rule for small oil and gas exploration and production facility construction sites to allow the agency to assess the rule's economic impact on that industry. EPA had initially assumed that most oil and gas facilities would be smaller than one acre in size and thus excluded from Phase II rules, but newer data indicated that up to 30,000 new sites per year would be of sizes subject to the rule. In March 2005 EPA extended the exemption until June 2006 for further study and said it would issue a specific rule for small oil and gas construction sites by that date. The postponement did not affect other industries, construction sites, or small cities covered by the 1999 rule. Under the 1987 amendments to the CWA, the *operations* of facilities involved in oil and gas exploration and production generally were exempted from compliance with stormwater runoff regulations (so long as the runoff is uncontaminated by pollutants), but the *construction* of associated facilities was not.

Omnibus energy legislation enacted in the 109th Congress (P.L. 109-58, the Energy Policy Act of 2005) included a provision addressing this issue. Section 323 amends the CWA to specifically include construction activities at *all* oil and gas development and production sites, regardless of size (including sites larger than 5 acres, previously covered by Phase I), in the law's general statutory exemption for oil and gas facilities from stormwater rules. Its intention was to exempt from the CWA all uncontaminated stormwater discharges that occur while setting up drilling operations.

Oil and gas officials, who supported the provision, said that the existing EPA stormwater rules create time-consuming permitting requirements, even though the short construction period for drilling sites carries little potential for stormwater runoff pollution. Opponents argued that the provision did not belong in the omnibus energy legislation and that there is no evidence that construction at oil and gas sites causes less pollution than other construction activities, which are regulated under EPA's stormwater program.

EPA promulgated a rule to implement Section 323 in 2006.[11] The rule was criticized by some interest groups and Members of Congress who argued that EPA had exceeded its authority by broadly defining the scope of contamination that is exempted by the rule beyond the statutory language to also include stormwater discharges contaminated solely with sediment. In May 2008, a federal court held that the rule is arbitrary and capricious, and it vacated the rule.[12] EPA petitioned the court to rehear the case, but the request was denied—thus, the exemption is no longer in effect. At the time, EPA said that it intends to issue a revised rule that would remove the 2006 rule from the Code of Federal Regulations consistent with the court vacatur and codify the

[11] U.S. Environmental Protection Agency, "Amendments to the National Pollutant Discharges Elimination System (NPDES) Regulations for Storm Water Discharges Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations, or Transmission Facilities," 71 *Federal Register* 33628-33640, June 12, 2006.

[12] Natural Resources Defense Council v. U.S. Environmental Protection Agency, 526 F.3d 591 (9th Cir. 2008).

statutory exemption in P.L. 109-58, but the agency has not proposed any revisions or announced a specific schedule for doing.

Legislation to repeal Section 323 was introduced in the 109th Congress, but no further action occurred. In the 111th Congress, legislation to repeal the exemption passed the House (the provision was Section 728 of H.R. 3534, the Consolidated Land, Energy, and Aquatic Resources Act), but it was not enacted. In the 114th Congress, a bill has been introduced to repeal the oil and gas exemption enacted in P.L. 109-58. This bill, H.R. 1460, also would direct the Secretary of the Interior to conduct a study of stormwater runoff from oil and gas operations that may result in contamination. Similar legislation was introduced in the 113th Congress.

Stormwater Management at Federal Facilities

Congress often looks to federal agencies to lead or test new policy approaches, a fact reflected in legislation passed in 2007. Section 438 of P.L. 110-140, the Energy Independence and Security Act (EISA), requires federal agencies to implement strict stormwater runoff requirements for development or redevelopment projects involving a federal facility in order to reduce stormwater runoff and associated pollutant loadings to water resources. The legislation requires agencies to use site planning, construction, and other strategies to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property.

To assist agencies in meeting these requirements, EPA issued technical guidance.[13] The guidance provides two options for meeting the performance objective of preserving or restoring the hydrology of a site: retaining the 95th percentile rainfall event (i.e., managing rainfall on-site for storm events whose precipitation total is less than or equal to 95% of all storm events over a given period of record), or site-specific hydrologic analysis (i.e., using site-specific analysis to determine predevelopment runoff conditions). According to the guidance, using a performance-based approach rather than prescriptive requirements is intended to give site designers maximum flexibility in selecting appropriate control practices. Issuance of the guidance also fulfilled an element of an October 2009 executive order that formally assigned to EPA the responsibility to issue the Section 438 guidance, in coordination with other agencies, and to do so by December 5, 2009.[14]

In December 2010 Congress passed legislation requiring federal agencies to pay local fees for treating and managing stormwater runoff. The legislation amends CWA Section 313, which requires federal agencies to comply with all federal, state, and local water pollution control requirements as nongovernmental entities, including the payment of reasonable service charges. The issue emerged earlier in 2010 when several federal agencies announced that they would not pay stormwater fees assessed by the District of Columbia, claiming that the fees amounted to a tax that the agencies were not required to pay, because the waiver of sovereign immunity in Section 313 applies to fees and charges, but not a tax. The legislation was intended to clarify uncertainty over whether federal agencies must pay local stormwater fees. President Obama signed the legislation in January 2011 (P.L. 111-378).

[13] U.S. Environmental Protection Agency, Office of Water, Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects Under Section 438 of the Energy Independence and Security Act, EPA 841-B-09-001, December 2009, http://www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf.

[14] Executive Order 13514, "Federal Leadership in Environmental Energy and Economic Performance," 71 *Federal Register* 52117-52127, October 8, 2009.

A continuing aspect of the issue of interest in a few locations is the scope of P.L. 111-378 and whether it requires the government to pay local stormwater fees retroactively. After the Bonneville Power Administration objected to paying retroactive stormwater fees imposed by two Washington localities following passage of the federal facility amendment, the matter ended up in federal court. The government took the position in the litigation that the legislative change amounted to a redefinition of "service charges," instead of a clarification of Congress's original intent, and would only apply prospectively. In 2012, a federal district court rejected the government's position and held that the CWA amendment was merely a clarification of the statute and thus is entitled to retroactive effect.[15] The federal government did not appeal this ruling. A similar case in Georgia was dismissed following a settlement agreement between the parties, but the settlement did not resolve lingering questions whether stormwater charges are fees for "reasonable services provided" or taxes, an issue of concern more broadly than just regarding government facilities.

EPA's Stormwater Rulemaking

In 2006 EPA requested the National Research Council of the National Academy of Sciences (NRC) to conduct a review of the existing stormwater regulatory program. The resulting report, issued in 2009, called for major changes to EPA's stormwater control program that would focus on the flow volume of stormwater runoff instead of just its pollutant load. The committee observed that—

> stormwater discharges would ideally be regulated through direct controls on land use, strict limits on both the quantity and quality of stormwater runoff into surface waters, and rigorous monitoring of adjacent waterbodies to ensure that they are not degraded by stormwater discharge.... Presently, however, the regulation of stormwater is hampered by its association with a statute that focuses primarily on specific pollutants and ignores the volume of discharges.[16]

The NRC report recommended that EPA adopt a watershed-based permitting system encompassing all discharges—stormwater and wastewater—that could affect waterways in a particular drainage basin, rather than individual permits that do not account for cumulative conditions from multiple sources in the same watershed. Under the proposed watershed permitting strategy, responsibility to implement watershed-based permits and control all types of municipal, industrial, and construction stormwater discharges would reside with MS4 permittees. The report criticized EPA's current approach, which leaves much discretion to regulated entities to set their own standards through stormwater management plans and to self-monitor. As a result, enforcement is difficult and variable, and information to assess the water quality benefits of the regulatory program is limited. The report also noted that adequate resources, including new levels of public funds, will likely be required to operate a more comprehensive and effective stormwater permitting program.

Subsequently, EPA initiated information-gathering and public dialogue activities as a prelude to possible regulatory changes that would respond to the NRC's criticism of inconsistency in stormwater requirements nationally and embrace the report's recommendation to adequately control all sources of stormwater discharge that contribute to waterbody impairment. EPA proposed to collect data from MS4s, states, and industry entities involved in developing or redeveloping sites on the scope of the current regulatory program and management practices, as

[15] United States v. Renton, W.D. Wash., No. C11-1156JLR, May 25, 2012.

[16] *Supra* note 5, p. 3.

well as information on control, pollution prevention technologies, and BMPs applied to stormwater discharges from newly developed and redeveloped sites.[17]

In response to the NRC report, EPA began work to develop a rule to revise the existing stormwater regulatory program. The rule also followed a 2010 settlement agreement between EPA and environmental litigants, which called for EPA to revise existing rules "to expand the universe of regulated stormwater discharges and to control, at a minimum, stormwater discharges from newly developed and redeveloped sites."[18] In the settlement, EPA committed to consider supplemental provisions as part of the national rule that would apply only to the Chesapeake Bay watershed, a region where municipal stormwater discharges are a significant cause of water quality impairment and are one of the only sources of pollutants with increasing loads to the Bay and its tributaries.

In early 2010 EPA held a series of listening sessions across the country as part of a process seeking public comments on potential considerations for regulatory changes.[19] The agency also sent survey questionnaires to property owners and developers, municipal sewer system authorities, state regulators, and EPA regional offices to obtain their input. Some industry groups reportedly criticized possible expansion of the current program, saying that EPA's authority to regulate stormwater does not extend to regulation of post-construction discharges. Some states also said that EPA lacks the technical knowledge to regulate stormwater across the nation, while states with comprehensive regulations, such as Florida and Maryland, demonstrate that regulation is best done at the state and local level, because of locational differences in stormwater discharges. EPA officials noted that a number of states have developed their own stormwater management programs, particularly in the Northeast, where lawsuits have pushed regulators, and also in some high-precipitation states in the Northwest. A number of commenters urged EPA to ensure that performance standards designed to reduce storm runoff be flexible so that communities can create requirements appropriate to their stormwater needs. Cost is a key issue raised by some states and municipalities concerned about the possibility of mandatory retrofit requirements that would impose a significant economic burden on cities.[20] Some state and local government representatives—while they concerned about details of a rule—believed that a national rule would provide needed uniformity and consistency in stormwater programs across the nation.

During efforts to develop a national rule, EPA explored regulatory options that would strengthen the regulatory program by establishing specific post-construction requirements for stormwater discharges from new development and redevelopment, which currently are not regulated. While MS4s are required to address stormwater discharges from new development and redevelopment in their management plans, existing rules do not include specific management practices or standards to be implemented. Other options that EPA considered included expanding the area defined as MS4s to include rapidly developing areas, devising a single set of consistent regulations for all MS4s, and requiring MS4s to address stormwater discharges in areas of existing development through retrofit practices. EPA officials said that the rule would focus on

[17] U.S. Environmental Protection Agency, "Agency Information Collection Activities; Proposed Collection; Comment Request; Stormwater Management Including Discharges from Newly Developed and Redeveloped Sites; EPA ICR No. 2366.01, OMB Control No. 2040-NEW," 74 *Federal Register* 56191-56193, October 30, 2009.

[18] Fowler v. EPA, D.D.C. No. 1:09-cv-5, May 11, 2010, pp. 18-19.

[19] U.S. Environmental Protection Agency, "Stakeholder Input; Stormwater Management Including Discharges from New Development and Redevelopment," 74 *Federal Register* 68617-68622, December 28, 2009.

[20] Examples of urban retrofits include breaking up concrete and installing stones, thereby replacing an impermeable surface with a permeable one that will absorb runoff; and adding vegetation and trees to parking lots.

stormwater discharges from developed, or post-construction, sites, such as subdivisions, roadways, industrial facilities, and commercial buildings or shopping centers, and to seek to ensure that even after development projects are completed, runoff levels from sites are equivalent to pre-construction hydrology. The proposal, referred to as the "post-construction rule," likely would set a first-time stormwater retention performance standard to limit runoff that would otherwise enter an MS4 system. By retaining a portion of rainfall on-site, the discharge of pollutants for that volume is prevented from entering the sewer system. Requirements in the post-construction rule, once finalized, would be incorporated into MS4 permits as permits come up for renewal.

The stormwater rulemaking drew some interest from Members of Congress. In 2013, Republican members of the Senate Environment and Public Works Committee urged EPA to suspend work on the rulemaking until the agency could seek meaningful input from small businesses and provide a report to Congress on the necessity for new stormwater regulations.[21]

Under the 2010 settlement with environmentalists, EPA was initially due to propose a national rule by September 2011 and complete the rule in 2014. Subsequently, the deadlines were renegotiated several times. Under the last deadline, EPA was to propose regulations by June 17, 2013, but EPA missed that deadline, and on June 18, the environmental plaintiffs notified the agency that it was in breach of the legal settlement. At that point, EPA and the plaintiffs had reached a legal impasse; EPA reportedly continued to work on the rule, while the environmental groups considered further legal action. Finalizing a rule with national application was said to be complicated by a number of analytic issues, particularly how to calculate costs and benefits of the proposal and how to incorporate flexibility, such as possibly including lengthy implementation plans for retrofit projects and allowing states with equivalent stormwater programs to regulate in lieu of EPA.

In mid-March 2014, EPA announced that it would defer action on the post-construction stormwater rule and instead will provide incentives, technical assistance, and other approaches for cities to address stormwater runoff themselves. In particular, the agency said that it will leverage existing requirements to strengthen municipal stormwater permits and will continue to promote green infrastructure as an integral part of stormwater management.[22]

Although EPA discontinued development of a national stormwater rule, the agency continues to pursue some of the ideas that the rule had been expected to incorporate, such as emphasizing on-site retention of stormwater at construction sites or requiring green infrastructure, when individual MS4 permits come up for renewal. These concepts are reflected, for example, in the MS4 permit for Washington DC, issued by EPA in 2013, and EPA's 2014 proposed MS4 general permit for Massachusetts; both were crafted by EPA, which is the NPDES permitting authority in DC and Massachusetts. In the majority of states, permitting authority has been delegated to states (see page 2). In those cases, environmental groups are reportedly pursuing a permit-by-permit approach of encouraging states to strengthen the terms of new and reissued MS4 permits.

[21] Letter from Senator David Vitter et al., Ranking Member, Senate Committee on Environment and Public Works, to Nancy K. Stoner, Acting Assistant Administrator, U.S. EPA, May 20, 2013, on file with author.

[22] For additional information, see CRS Report R43131, *Green Infrastructure and Issues in Managing Urban Stormwater*, by (name redacted) .

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COUNTY OF RIVERSIDE

STATE OF CALIFORNIA

FY 2011-12
ADOPTED BUDGET

Board of Supervisors

Bob Buster
Supervisor, First District

John Tavaglione
Supervisor, Second District

Jeff Stone
Supervisor, Third District

John J. Benoit
Supervisor, Fourth District

Marion Ashley
Supervisor, Fifth District

Prepared by
Bill Luna
County Executive Officer

County of Riverside

FY 2011-12
ADOPTED BUDGET

Presented by
Bill Luna
County Executive Officer

on September 13, 2011

to the
COUNTY BOARD OF SUPERVISORS

First District ..... Supervisor Bob Buster, Chair
Second District ..... Supervisor John Tavaglione
Third District ..... Supervisor Jeff Stone
Fourth District ..... Supervisor John J. Benoit
Fifth District ..... Supervisor Marion Ashley

Paul Angulo, CPA, MA
County Auditor-Controller

RIVERSIDE COUNTY
BOARD OF SUPERVISORS

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1ST DISTRICT
CHAIR

JOHN TAVAGLIONE
2ND DISTRICT

JEFF STONE
3RD DISTRICT

JOHN J. BENOIT
4TH DISTRICT

MARION ASHLEY
5TH DISTRICT

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Bill Luna
County Executive Officer

Jay E. Orr
Assistant County Executive Officer

Executive Office, County of Riverside

September 13, 2011

Honorable Board of Supervisors
County of Riverside
Robert T. Andersen Administrative Center
4080 Lemon Street, 5th Floor
Riverside, CA 92501-3651

SUBJECT: FY 11/12 Final Adopted Budget

Board Members:

On June 13, 2011, the Board approved the FY 11/12 recommended budget, part of a multiyear plan to return the county to structural balance. The Board then directed additions and corrections for FY 11/12 based on testimony during budget hearings. The final budget is now balanced, using reductions that total more than $31 million. The budget also incorporates more than $28 million in reserves and one-time sources exceeding $51 million, an amount higher than we had planned.

While this budget year has been challenging, we cannot rest. We already anticipate the budget for FY 12/13 will carry comparable fiscal challenges and fewer options. Revenue will likely slip further, difficult budget decisions again will be unavoidable and reserves offer only a dwindling lifeline.

Amid concerns about relying on speculative revenue and one-time funds for ongoing expenses, we cannot achieve structural balance in two years as originally planned. We must extend our fiscal recovery plan. We face a distressing FY 12/13 budget gap of over $80 million and our first hurdle is substituting for the $51 million in one-time money proposed in the current-year budget. We cannot rely every year on unpredictable one-time sources to fund ongoing services, but we are relying on them this year. Reserves for economic uncertainty upon budget adoption will be down to $125 million, backstopping a budget that could siphon a significant portion of those reserves if we do not act decisively.

Delaying final budget recommendations until September has reaped some benefit. We have a clearer picture of where the fund balance ended in FY 10/11 and can present budget options based on available year-end data rather than projections. The recommended budget was based on a beginning fund balance of $20 million; the total is closer to $45 million due to departmental savings of about $14 million, contingency

savings of about $19 million and discretionary revenue that was about $12 million higher than budgeted. The final budget recommendations in this document use $17.9 million of that additional fund balance to support $51 million in addbacks the Board endorsed and directed during budget formulation.

While discretionary revenue was $12 million higher than expected, Prop. 172 revenue growth was not as robust and increased by $4.3 million rather than $11 million originally projected. More importantly, many solutions proposed for avoiding public-safety reductions relied on Prop. 172 funds. The final budget recommendations in this document substitute $11.3 million in fund balance for Prop. 172 revenue. A table summarizing the revised Prop. 172 revenue allocations and additional use of general-fund balance is included as Attachment F. This backfill, while unsustainable, appears necessary to ameliorate immediate public-safety reductions.

Looking to the economy, data provided in the last few weeks from our economists at California State University, Fullerton, confirm negative assessed-valuation projections over the next two years. With state revenue receipts 10 percent ($583 million) below projections in July, the reports all suggest we should anticipate further declines in county revenue.

While the budget reflects the impact of state budget cuts and includes adjustments for anticipated realignment involving state corrections reform, the source of ongoing funding for these changes still is unclear. Additionally, the state has not released firm plans for other realignment elements, including public social services. Whether the state will fully fund realignment costs is unconfirmed, so we must limit our expenses to available funding. Departments should track all mandated costs. As in recent years, deferred state payments could jeopardize our ability to maintain core discretionary programs. Per Board direction, the Executive Office recommends suspending any programs for which state funding is withheld, and discontinuing programs for which state funding has been withdrawn.

Also, as in recent years, department heads are expected to manage spending to prevent additional demand on the general fund. Any general-fund budget request should be presented with the quarterly budget report, when it can be evaluated in the context of the latest economic data, departmental needs and any updates related to new resources.

Several potentially significant policy items already have been identified and will be presented for Board action in the first-quarter report. Contingency funds will have to be used if other revenue does not materialize. The Registrar of Voters anticipates costs for additional space needed to make election operations more efficient. State budget reductions also suspended reimbursement for costs related to vote-by-mail ballots. The Assessor wishes to add 10 essential positions not currently filled because of budget

reductions. Potential funding has been identified that would reduce the need for NCC in covering the costs for these positions.

Use of one time money has had to expand to support other policy decisions. For example, service increases have been ordered in the Detention Health and Mental Health medical system; reductions in fire stations and municipal staffing were not taken, so structural deficits in Fire remain; District Attorney reductions did not cover additional cuts to balance from the prior administration; and the Sheriff's proposals to close budget gaps may be uncertain.

What is certain is the significant and persistent gap between spending and the revenue available to support it. To reconcile, our choices are basic: reduce costs (particularly in payroll), shift costs, find new reoccurring revenue or depend on one time-revenue.

Next year, additional cuts in net county cost (NCC) should be expected. To be effective, cuts must apply to all NCC-funded departments. The principal impact of those cuts affects the public-safety group, which presently consumes more than 60 percent of NCC. Although NCC cuts should be targeted toward layoffs, the resulting staff cuts might not be tolerable for the Board because of the effect on the public safety group. Alternatively, if cuts were targeted only to non public safety, it is questionable whether the yield could bridge the budget gap.

An immediate hiring freeze in all departments would reduce payroll costs but also would disproportionately affect public-safety departments. I am mindful the Board rejected a proposed hiring freeze earlier this year.

Negotiated labor savings with employee bargaining units will reduce the depth of budget cuts. Proposals to shift pension costs are in negotiation and the Board could consider other compensation.

Turning to revenue-based options, we could direct staff to build budgets that anticipate significant one-time revenue. That option poses even greater risk if adequate revenue does not materialize, such as Prop. 172 funding. It limits Board flexibility and would require drastic cost-cutting to compensate in the event revenue falls below projections.

Other revenue-based alternatives could include drawing cash reserves from restricted funds and borrowing against assets. These options leverage cash assets or loans against facilities to pay for operations. They are not solutions and only increase future costs, delaying the return to a structurally balanced budget.

If we face further cuts to services, the prospect of reduced payroll and potentially reduced compensation, then departments must plan for another round of budget cuts and staffing turbulence in the next fiscal year. If so, we should also finalize plans for those cuts during the current fiscal year to ensure full savings in FY 12/13. Therefore, I will provide an early action plan for FY 12/13 for adoption with the first-quarter report on

November 1, 2011. However, I look forward to Board deliberation today on its preferred courses of action to guide that plan.

IT IS THEREFORE RECOMMENDED that the Board of Supervisors:

1) Approve Resolution No. 2011-243 (Attachment A) adopting the FY 11/12 budget including all elements approved in the recommended budget as well as final budget changes in authorized positions on Schedule 20 (Attachment C), amending the existing Ordinance 440;
2) Approve Resolution No. 2011-244 (Attachment B) confirming the occurrence of a public (Beilenson) hearing;
3) Approve the recommendations for budget changes (Attachment D);
4) Approve the updated summary budget schedules 21-23 (Attachment E);
5) Receive and file the Prop. 172 distribution report (Attachment F);
6) Receive and file the economic update from Cal State Fullerton (Attachment G);
7) Ratify the CEO proposal for targeting future NCC cuts to reduce payroll.

Respectfully submitted,

Bill Luna
County Executive Officer

FINAL CHANGES TO FY 11/12 RECOMMENDED BUDGET

GENERAL OVERVIEW

FY 10/11 ended with the County of Riverside still waiting for economic recovery, a rational state budget, and fiscal certainty. The data does not yet conclude that our local economy has hit bottom. Sales taxes were up modestly in FY 10/11 and the foreclosure rate continues to fall, though the number of foreclosures is still very high. These improvements must be considered in light of unemployment that persists near a historic high and property values that fell slightly again this year. At the state level, real reform seems to be under way. While this is necessary, most of the financial details of the reform's centerpiece (realignment) still are uncertain. As we struggled to balance our own budget while preserving essential services, general-fund departments adjusted to a third year of cuts while preparing for what they had hoped would be a final cut in FY 11/12. Unfortunately, it now appears additional cuts will be necessary in FY 12/13.

The Board has held to its two-fold goal of balancing the budget while preserving reserves. Unfortunately, our local economy has been more adversary than ally in this effort. Soft revenue, particularly property taxes, has left us short of budget balance. As of June's recommended budget, we are $28 million short of balance and reserves are at the lower end of manageable levels.

Closing the gap can be accomplished only with additional cuts to general-fund departments. Savings could come through labor negotiations or by again decreasing net county cost (NCC) support for departments. The actions in this document do not close the remaining budget gap.

Additional appropriations of $25 million for Board directed add-backs are recommended for critical services. An additional budget adjustment of $1.4 million for the Public Defender is on the same agenda for Board approval. The additions are funded with about $9 million of new ongoing revenue and about $16 million in one-time revenue from beginning balance and other sources. Unless we identify new, ongoing revenue to replace one-time funds, the structural deficit will continue grow.

FY 11/12 REVENUE UPDATE

Dr. Adrian R. Fleissig and Dr. Mira Farka (CSUF) have provided an update to the economic forecast report that went to the Board during the FY 11/12 budget process. The full report is included with this document as Attachment G. This forecast will be one of the tools used by the Executive Office as it begins early planning for the FY 12/13 budget.

One central theme of the report is that our local economic recovery will be slow and protracted. Continued weakness in jobs, unemployment, and real estate prices are expected, specifically:

- Job growth should resume at a slow and uneven pace, unable to offset job losses from the recession.
- Unemployment will remain in double-digits during 2012 and 2013.

- Weakness in the housing market will persist due to high foreclosures and distressed properties.
- Commercial real estate sector is not expected to recover noticeably over the next twelve months.

Our recurring discretionary revenues – property tax, supplemental property tax, sales tax, Teeter funds, document transfer revenue, interest, and a few others – came in very nearly on target. The revenue with the largest reduction, Teeter, was balanced by a dramatic recovery in supplemental property taxes. Four unbudgeted items that totaled about $13 million represent the net extra supplemental revenue that contributed to the new year's beginning balance. These three revenues included a state payment for SB 90 claims, unclaimed money, the release of old reserves, and proceeds from selling county property to the courts.

Solid sales tax revenue in the first half of the year was followed by generally disappointing numbers in the second half. Early encouraging projections were not realized. The FY 10/11 drop in sales tax revenue, due to city incorporations, was not as steep as expected, though the decline will continue in FY 11/12. Particularly disappointing were the final numbers for Prop. 172. Early projections called for $11 million in growth but the actual increase was little over $4 million.

Guarded optimism continues to be the reasonable course. Property taxes, Teeter and interest revenue are projected to fall slightly in the new year. Sales tax (not including new city incorporations), Prop. 172 and document transfer revenues are forecast to be up modestly. As a whole, discretionary revenue will probably end FY 11/12 slightly below what was generated in FY 10/11. Revenue growth will not provide this year's final step to a balanced budget. Further, there are no indications that strong revenue growth can be expected for the following fiscal year.

BEGINNING FUND BALANCE

Each year's beginning fund balance is generated from leftover contingency, department savings, and extra discretionary revenue. The final, audited amount will be calculated with the Comprehensive Annual Financial Report (CAFR) in December; however, the Executive Office and Auditor-Controller were able to accurately estimate the beginning balance at $45 million. The recommended budget assumed $20 million in beginning balance, so there is $25 million additional beginning balance to build into the final/adopted budget. This was generated by departments staying within their budgets.

BOARD OF SUPERVISOR FUND BALANCE AND RESERVE POLICY

To make fund balance information presented in governmental financial statements more useful, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 54 (GASB 54), *Fund Balance Reporting and Government Fund Type Definitions*. GASB 54 shifted the focus of fund balance reporting from the availability of fund resources for budgeting to the extent to which the government is bound to honor spending constraints

on those fund resources. As mandated by GASB 54, Board Policy A-30 – *Government Fund and Reserve Balance* – will be brought before the Board for review and approval on today's agenda. The final budget recommendations will result in fund balance levels that are consistent with the new policy.

STATE BUDGET IMPACT – REALIGNMENT

Realignment of the state's health, social, and safety programs to counties will cause little disruption if adequate funding accompanies our added responsibilities. County departments such as Probation, Mental Health, and Department of Public Social Services (DPSS) are prepared to adjust as needed. What remains to be seen is whether lawmakers provide appropriate supporting revenue.

Initial statewide changes are supported by the $5.1 billion provided in FY 11/12, with that amount projected to increase to $6.4 billion in FY 14/15. Financing comes from a dedicated portion of state sales tax revenue and vehicle license fees. However, the funding provisions are not guaranteed. They will be operative only if ballot measures prior to November 17, 2012 authorize continued dedicated state revenues to realignment. Further, realignment is being implemented thus far without constitutional safeguards that county governments sought.

The impact of the new state budget on individual departments is felt most strongly in public safety, mental health, the hospital, and DPSS.

PUBLIC SAFETY

Probation will not close its Twin Pines or Van Horn youth facilities. The Youth Accountability Teams will also continue operating. The Citizens Options for Public Safety (COPS) and Juvenile Justice Crime Prevention Act programs were also included in the state budget. Previously, these efforts were funded with a share of the temporary increase in VLF and sales tax, which sunset on June 30, 2011 and were not extended. The state included these programs under realignment funding. Realignment implementation has been delayed until October 1, 2011 and is funded for nine months.

Counties will provide treatment, supervision, and incarceration of the non-violent, non-serious, non-high risk sexual offenders. Funds also are designated for start-up, planning, and technical assistance. To address the impact of this realignment:

- A community corrections partnership (CCP) established to develop local strategies. Membership is mandated and the partnership is chaired by the chief probation officer.
- An allocation of approximately $21 million will be shared by the Probation Department, Sheriff's Department and other CCP partners such as the Department of Mental Health and police departments. Probation is the designated fiscal administrator for the management of funds received.

- An additional one-time allocation of approximately $1.5 million will be provided for initial implementation costs as well as $200,000 for CCP planning.
- A separate allocation of $755,421 will be shared by the District Attorney and Public Defender. The allocation for the courts will be established at a later date.

MENTAL HEALTH

The realignment of mental health programs is funded with a one-time redirection of Mental Health Services Act (MHSA) dollars. If state revenue is less that estimated and triggers are implemented in January 2012, the department may be affected. Impacts are unknown at this time but the department will continue to monitor and update as appropriate.

RIVERSIDE COUNTY REGIONAL MEDICAL CENTER (RCRMC)

RCRMC anticipates a new revenue reduction of approximately $4 million due to the implementation of a fee on intergovernmental transfers for the operation of Medi-Cal managed care plans and the transfer of federal funds to cover state expenses for uncompensated care. The state retained hospital-fee revenue of approximately $2.4 million. RCRMC will implement cost-saving measures and continue to monitor expenses.

DEPARTMENT OF PUBLIC SOCIAL SERVICES (DPSS)

State funding for CalWORKs, In-Home Support Services (IHSS) administration, foster care, and adoptions assistance is expected to decrease by $7 million. In addition, the department estimates that $1.4 million in additional NCC support may be needed to offset the loss of child support collection revenue retained by the state. The department will adjust programs and reduce costs to mitigate the impacts and will report on actual needs in the first quarter.

DPSS anticipates increased federal and state revenue of $1.6 million for CalFresh administration due to projected caseload growth. There is no impact to the general fund.

If revenue falls short of state projections and triggers are implemented, DPSS estimates that $9.2 million in funding for IHSS anti-fraud efforts and IHSS service hours will be at risk. Reductions to child care funding are unknown at this time, but could be significant.

ITEMS RAISED DURING BUDGET HEARINGS

The Board approved the recommended budget for FY 11/12 on June 13, 2011. Included within the recommended budget were almost $24.4 million in addbacks for Probation ($2 million), Fire ($2.4 million), and DPSS ($20 million). During budget hearings, several departments presented additional information for Board consideration with final budget recommendations. Based on Board direction during hearings, the Executive Office has updated the recommended budget and presents the following changes for adoption.

ONE-TIME MONEY IN FY 11/12 BUDGET
In millions of dollars

Department	Use of Fund Balance	Prop. 172 Surplus Use	Other Revenue Source	Total Additions
Probation	-	-	1.98	1.98
Fire	0.6	0.5	2.4	3.5
DPSS	-	-	20.0	20
District Attorney	2.2	1.6	-	3.8
Sheriff	7.7	5.8	-	13.5
Juvenile Hall	0.5	0.6	-	1.1
Assessor	-	-	0.75	0.75
Public Defender	1.4	-	-	1.4
Detention Health	3.7	-	-	3.7
MH - Detention	1.8	-	-	1.8
Total	**17.9**	**8.5**	**25.1**	**51.5**

It should be noted that the request from the Public Defender for $1.4 in additional funding was presented following the official close of budget hearings. The request will be presented as a separate item on the same agenda for Board approval.

The following narrative provides an overview of the items raised during budget hearings. The associated budget adjustments have been detailed on Attachment D.

ASSESSOR-CLERK-RECORDER

The Assessor-Clerk-Recorder reported that cuts to its operations would likely delay the completion of the 2012 assessment roll and assessment appeals. The department has requested funding for 10 appraisers at an annual cost of $75,000 each. The funding is needed to maintain operations at a level that will allow assessment related processes to be completed without delay. The Executive Office recommends that the Board approve the department's request. Total projected shortfall to be funded is $750,000.

Since the close of budget hearings, the department has identified revenue related to a newly established penalty for failing to report a change of ownership or change in control of a legal entity. This revenue could reduce the need for additional general fund use. An accurate estimate of that revenue will not be available until January 2012. The Board will receive an update during the midyear budget report.

DETENTION HEALTH SERVICES (DHS)

DHS provides medical services to those in Sheriff's correctional facilities and Probation's juvenile detention facilities. Funding was directed to restore staffing. Total projected shortfall to be funded is $4.8 million, $1.1 million of which will be funded through Probation.

The balance of the shortfall ($3.7 million) will be supported with general fund balance from FY 10/11 and will restore the department to FY 09/10 service levels.

DISTRICT ATTORNEY

During budget hearings, the District Attorney presented a budget plan to meet the department's budget target. The plan reflected reductions in personnel costs and additional revenue sources. The total projected shortfall to be funded was $5.1 million. About $1.6 million of the shortfall will be funded with new Prop. 172 revenue and $2.2 with FY 10/11 general fund balance. An anticipated $1.3 million in savings from the imposition of labor contract terms on the Riverside Sheriff's Association (RSA) will allow the department to meet its final budget target.

FIRE

The Fire Chief presented a budget plan that identified revenue sources and cost savings to meeting the department's budget target without closing fire stations or reducing municipal staffing levels. Fire reports that the total projected shortfall to be funded is $7.5 million. Although revenue enhancement related to American Medical Response services was originally estimated to be $1.3 million, realistically there will be no additional revenue. About $500,000 of the shortfall will be funded with new Prop. 172 revenue and $600,000 with FY 10/11 general fund balance. An additional $1.6 million in savings from the pass-through of CalPERS rate reductions will assist the department with meeting its target. All in, the Fire Department has a continuing structural deficit of $4.8 Million. The bulk of the shortfall will be covered by the department through various cost containment measures and increased revenue, which would not result in the elimination of services.

MENTAL HEALTH - DETENTION

The department provides mental health services to individuals incarcerated in Sheriff's correctional facilities and Probation's juvenile detention facilities. To restore staffing at the Southwest Detention Center and augment current staffing at the Robert Presley Detention Center for 24/7 coverage, the department requested additional funding. Total projected shortfall to be funded is $1.3 million. This shortfall will be offset with the use of general fund balance from FY 10/11 and will restore the department to FY 09/10 service levels.

PROBATION

Budget reductions to detention health services have significantly impacted Probation's juvenile hall operations. To meet state and federal requirements for juvenile facilities at the lowest cost, funding is required to restore staffing for juvenile detention health services to minimum levels. Total projected shortfall to be funded is $1.1 million. About $600,000 of the shortfall will be funded with new Prop. 172 revenue and $500,000 with FY 10/11 general fund balance. The funds will be used to reimburse Detention Health Services for services provided at juvenile facilities.

REGISTRAR OF VOTERS

The Registrar of Voters recommended several improvements for the 2012 presidential

election cycle, including a temporary increase in operating space. The cost for temporary space is unknown at this time but will require additional funding. No additional adjustments have been made to the budget.

SHERIFF

On March 29, 2011, the Sheriff outlined the impact of budget reductions on the department's operations. In order to fully fund operations the Sheriff reported the department would need about $287 million in NCC funding. This would reestablish FY 09/10 levels, add for the cost of living adjustments, Prop. 172 revenue losses, internal service cost increases, expanded operations at the Larry Smith Correctional Facility, and merit/pension cost increases. Based on this information and a NCC target of $226 million, the Executive Office estimated the department had a funding shortfall of $62 million. This did not include $20 million related to detention health services, which could be funded within the RCRMC, Mental Health, or Probation budgets.

During budget hearings, the Sheriff presented a plan for meeting budget targets without layoffs. The alternate plan included service reductions, alternate revenue sources, and savings related to personnel costs. Total projected shortfall to be funded (as presented during the budget workshop) was $62 million. About $5.8 million of the shortfall will be funded with new Prop. 172 revenue and $7.7 million with FY 10/11 general fund balance. The department also intends to fund $3 million of its shortfall with the use of its subfunds. The balance of the shortfall ($40 million) will be funded with various savings and a contract for services with the newly incorporated city of Jurupa Valley.

The CEO observed that Jurupa Valley contract revenue was speculative. It should be noted that the Sheriff has stated there is some risk that alternate revenue identified for meeting the budget target will not materialize. The department has agreed to make the appropriate adjustments to operations to mitigate shortfalls in revenue. The following table illustrates the status of estimated savings and revenue as proposed by the Sheriff:

STATUS OF SHERIFF'S ESTIMATED SAVINGS/REVENUE
In millions

	Amount	Status
Imposition Savings (RSA)	$12.2	Ongoing
Personnel Savings (attrition/no expansion)	$7.8	Ongoing
Service reductions (patrol – unincorporated)	$5.1	Ongoing
Service reductions (SAFE Team)	$0.9	Ongoing
Service reductions (Aviation)	$1.0	Ongoing
Jurupa Valley Contract Service Revenue	$13.0	No active FY 11/12 contract negotiations
Total	**$40.0**	

The Sheriff anticipates a continuing structural deficit of $5.5 million with all savings and additional funding taken into account. The department requests a portion of its FY 10/11

budget surplus be used to cover the deficit for FY 11/12. The CEO has already recommended this budget surplus be used to backfill the shortfall caused by the lower than expected growth in Prop. 172 revenue.

OTHER CORRECTIONS TO THE RECOMMENDED BUDGET

As required by law, several proposed revisions were submitted to the Clerk of the Board and made part of the public record prior to the close of budget hearing. These revisions included budget adjustments related to the:

- Forms 11 requesting FY 11/12 budget adjustments approved by the Board after the recommended budget document went to print.
- Corrected position and asset reports (Schedules 20-23 to the recommended budget).

The Executive Office has incorporated these changes, as well as corrections to minor misprints and errors that did not require a budget adjustment, into the final budget recommendations for adoption by the Board.

RESOLUTION NO. 2011-243

RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY RIVERSIDE ADOPTING THE FISCAL YEAR 2011/12 BUDGET

BE IT RESOLVED AND ORDERED by the Board of Supervisors of the County of Riverside, State of California, in regular session assembled on September 13, 2011, that pursuant to Sections 29080 through 29092 of the Government Code, the budget of the County of Riverside, including all districts, agencies, and authorities governed by this Board, is hereby adopted for Fiscal Year 2011/12, in accordance with the financing requirement of the recommended budget, less such deletions and reductions plus such additions and increases as have been made by order of this Board during and after the final budget hearing commenced on June 13, 2011, and prior to the adoption of this resolution, said adoption being by reference to the financing requirements of the recommended budget on file with the Clerk of this Board and the minutes of this Board as to changes therein, and that said final budget consists of:

(a) Appropriations by objects of expenditures within each budget unit;

(b) Other financing uses by budget unit;

(c) Intrafund transfers by budget unit;

(d) Transfers-out by fund;

(e) Appropriations for contingencies by fund;

(f) Cancellations and provisions for reserves and designations by fund and purpose;

(g) The means of financing the budget requirements;

(h) The gross appropriations limit and the total annual appropriations subject to limitation; and

(i) Amendment of Ordinance No.440 regarding authorized positions by budget unit.

BE IT FURTHER RESOLVED that within the object of Salaries and Employee Benefits, the object of Services and Supplies, the object of Other Charges, and the subobject of Fixed Assets for Equipment, for each budget unit, the listing of items are only for convenience, and shall not restrict expenditure, within the limits of the total appropriation for the specified object or subobject, by the official responsible for that budget unit except as otherwise provided by procedures and adopted by the Board of Supervisors.

FORM APPROVED COUNTY COUNSEL
BY: PAMELA J. WALLS DATE 9/6/11

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RESOLUTION NO. 2011-244

RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF RIVERSIDE CONFIRMING THE OCCURRENCE OF A PUBLIC (BEILENSON) HEARING

WHEREAS, the Board of Supervisors, scheduled a public hearing, also known as a Beilenson Hearing on May 16, 2011, to consider proposed reduction of medical services at certain Riverside County Department of Public Health Family Care Centers and California Children Services as required by Health & Safety Code section 1442.5, subd. (a):

WHEREAS, public notice of the May 16, 2011 hearing was given as required by Health & Safety Code section 1442.5, subd. (a);

WHEREAS, the public hearing occurred at the time and place set forth in the public notice during which the Board of Supervisors received public comment and information on the proposed reduction of medical services; now therefore,

BE IT RESOLVED by the Board of Supervisors of the County of Riverside, State of California, in regular session assembled on September 13, 2011, that prior to its decision on the proposed reduction of medical services at certain Riverside County Department of Public Health Care Centers and California Children Services, the Board of Supervisors held a public hearings as required by Health and Safety Code section 1442.5, subd. (a).

FORM APPROVED COUNTY COUNSEL

BY _____ 9/6/11

PAMELA J. WALLS DATE

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Bill Luna
County Executive Officer

Jay E. Orr
Assistant County Executive Officer

Executive Office, County of Riverside

May 30, 2011

Honorable Board of Supervisors
County of Riverside
Robert T. Andersen Administrative Center
4080 Lemon Street, 5th Floor
Riverside, CA 92501-3651

SUBJECT: FY 11/12 Recommended Budget

Board Members:

Attached is my FY 11/12 recommended budget for your consideration and approval. Approval of this budget provides needed spending authority beginning July 1, 2011. My staff will construct the final budget after budget hearings scheduled on June 13, 2011. The final budget, scheduled for adoption September 13, 2011, will build upon the recommended budget that is before you today, with adjustments at your direction.

Determined to eliminate the growing structural deficit, Board members set a two-year goal to balance the budget; this budget approaches that goal. Because it remains your highest priority, public safety was cut less than other functions, but all general-fund departments sustained painful reductions.

The structural deficit that soared to $130 million will be about 5 percent ($28 million) of general-fund discretionary revenue when we start the new fiscal year. There was no way to get to this point easily - services have been reduced and the workforce funded by the general fund is down 9 percent since September 2008. The Board's fiscal discipline has allowed us to avoid what might otherwise have been a disastrous year. We have met our fiduciary duty but core services are being reduced.

With passage of this budget, the reserve for economic uncertainty will fall to about $120 million, or 21 percent of general-fund discretionary revenue. Much lower and we lose flexibility and become vulnerable to even a small solution aimed our way when the state addresses its budget crisis. For context, rating agencies would likely prefer a number over 30 percent.

Last year, Moody's rating service put us on negative outlook, warning that without significant reform we would be downgraded. This year, we have avoided a downgrade but all rating agencies judge that Riverside County will have to improve to remain in the group of AA-rated California counties. While we benefit by our Board's resolve and our underlying economic drivers, our deficit, our shrinking reserves, and the state's budget woes still present significant challenges.

County-retained economists from Beacon Economics and Cal State Fullerton agree our local economy is out of recession and slowly improving. Economic news is better than a year ago but still mixed. Riverside County faces persistently high unemployment and assessed values show no sign of substantial increases in the near term. Although we still have challenges we hope the worst has passed.

This recommended budget includes difficult choices, carefully crafted with information gathered as we moved from budget workshops in November through department-head testimony in April about the effects of budget cuts.

- Public-safety departments are cut 3 percent to 5 percent of net county cost (NCC).
- Other departments generally are cut an average of 19 percent of NCC with a few exceptions.
- Staff reductions will continue.

Most labor unions and management have sustained temporary 10 percent wage reductions. Spread out over a year or two, payroll savings have helped the county preserve vital services and jobs. The last two unions to address sacrifice are public-safety employee unions.

The county also is preparing for expected increases in retirement benefit costs. Both CalPERS and our own actuary agree that increases over the next few years will be sizable. Year-over-year increases of $20 million are possible and the costs of current retirement benefits are unsustainable in the longer term. Realizing this the Board has directed that all ongoing labor negotiations include a discussion of two major potential shifts: 1) that employees pay more of their own retirement costs; and 2) that all new employees have a retirement benefit package lower than the existing benefit.

Built on conservative principles, this budget recognizes challenges in the economy. The state budget is sure to hurt the county but we cannot accurately predict the full effect until the state budget is approved. Should the approved budget ultimately be similar to the governor's May Revise budget, our departments' existing budgets should be able to accommodate the additional state cuts. Our final budget is scheduled for adoption on September 13, 2011 to allow for any benefit from year-end fund balance and state impacts. Should the adopted state budget create greater impacts on our finances, adjustments will be recommended at that time or in the quarterly reports. We also have directed departments to prepare plans in the event a realigned revenue stream is not established.

During budget impact workshops at the end of March two issues were raised. As we go to print new information has been presented:

- The Sheriff previously indicated his budget would be short by $60 million and would trigger substantial layoffs of both sworn and non-sworn employees. Serious reductions in patrol and corrections would result. The Sheriff has since reviewed his budget options and now recommends additional revenue. Cost savings would be added to reduce the overall shortfall to $16.5 million.
- Concern was expressed over reductions in funding for jail inmate health and mental health care. The department managers for RCRMC and Mental Health, along with the Sheriff, have reviewed the need for improved service levels. They recommend that a return to the FY 09/10 budget level of $20.9 million would provide an appropriate enhancement to meet inmate and youth offender needs in accordance with the intent of legal requirements. This would require an appropriation of $6.6 million beyond what is included in the recommended budget.

The following are my recommended motions to initiate the final steps of the two-year budget plan. My budget summary on the following pages details the differences between this year's and next year's budget.

IT IS THEREFORE RECOMMENDED that the Board of Supervisors:

1) Approve the FY 11/12 recommended budget effective July 1, 2011, including: appropriations and estimated revenue, reserves and designations, Resolution No. 440-8862 modifying position levels (included in the budget report as Schedule 20), and fixed assets and vehicle requests;
2) Tentatively schedule adoption of the final budget for Tuesday, September 13, 2011;
3) Direct the Executive Officer to make the personnel changes, including necessary layoffs, which are incorporated in this budget document; and
4) Open budget hearings.

Respectfully submitted,

BILL LUNA
County Executive Officer

05.25.11finalbudgetletter

FISCAL PROCEDURES APPROVED
PAUL ANGULO, CPA, AUDITOR-CONTROLLER
BY Tanya S. Harris
TANYA S. HARRIS, CPA

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RESOLUTION NO. 440-8862

BE IT RESOLVED BY THE Board of Supervisors of the County of Riverside, State of California, in regular session assembled on June 13, 2011 that pursuant to Section 5.A of Ordinance No. 440, the County Executive Officer is authorized, with an operative date of July 01, 2011, to make changes to the existing Departmental Section of Ordinance No. 440 as listed in Schedule 20 to the FY 11/12 recommended budget, a copy of which is attached hereto and by this reference made a part hereof.

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GENERAL OVERVIEW AND STATE BUDGET

While most economists agree that the recession has officially ended, the most optimistic economic forecasts project slow growth, if any, over the near future. Reminiscent of this last fiscal year, the county's budget plans for FY 11/12 anticipate little help from the economy or the state. Reports of stabilizing job and housing markets produce guarded optimism at best. Locally, the unemployment rate as well as housing foreclosures have been trending downward. This trend fuels the hope that the worst is in the past.

In March, the Governor proposed the FY 11/12 state budget that addressed the $26.6 billion budget deficit with spending cuts, tax extensions, and other solutions. Spending cuts and the first phase of the Governor's realignment plan were approved by the state legislature. The effect of these items has been reflected in the impacted departments' budgets. Further progress was hindered when the Governor was unable to obtain the support for the other provisions, including the extension the current sales tax and vehicle licensing fees for five years, within his budget plan.

The May revisions to the budget have been released and represent the Governor's best effort to close the budget deficit and address the state's ongoing fiscal problems. Although the revisions reflect positive revenue data for the beginning of 2011, the state continues to report an $11 billion budget shortfall. The May revise also reflects the Governor's preference for a balanced approach to meeting budget challenges although the impact of an all cuts approach was provided. The impact would include further reductions in CalWORKs, eliminating domestic and related services for IHSS recipients, capping Medi-Cal coverage, and making deeper reductions to developmental services. The Governor also notes that if the dedicated funding stream for realignment is not passed, many of these programs would be eliminated. The county's strategy is to keep current budget tactics unchanged and to direct departments to develop a state budget impact mitigation plan that can be executed as early as July 2011.

COUNTY DISCRETIONARY REVENUE

A $10.1 million decline in discretionary revenue is projected for FY 11/12. This decline includes a loss of $2.0 million in franchise fees, $1.7 million in sales taxes, $0.9 million in interest income, and $1.7 million in other miscellaneous revenue sources. See the table 4 on page 10 for more detail.

Most of Riverside's discretionary revenue is directly related to property values. Property taxes account for 46 percent of the revenue, 33 percent is from state property tax pass-throughs, and 6 percent is from delinquent property tax penalties. The property tax figure is based on the Assessor's preliminary Proposition 8 analysis of property valuation and it is expected the actual amount will not deviate significantly. The Auditor-Controller provides the property tax related estimates while the Treasurer-Tax Collector provides the estimates for interest income.

Three independent sales tax forecasts predict a moderate increase to sales tax revenue in the near term. This growth in sales tax revenue is not enough to compensate for tax

revenue that will be transferred (estimated to be approximately $7 million) to the new cities of Eastvale and Jurupa Valley. The county's safety sales tax revenue seems to have stabilized at $110.5 million in FY 09/10. It is expected to be between $117 and $121 million in FY 10/11. In FY 11/12, it is projected to be between $118 and $121 million. Additional revenue beyond $110.5 million is placed into a separate fund for public safety needs as directed by the Board.

The county's long-term outlook for discretionary revenue is gradually improving. What remains a matter of active debate is if the county will begin to see a recovery in FY 12/13. The optimistic camp (Beacon Economics) calls for a modest gain in property values, while the more pessimistic camp (Cal State Fullerton economists) forecasts continued falling property values. By all accounts, the growth associated with a significant portion of the county's discretionary revenue will be modest at best. The county is currently projecting a smaller revenue loss ($10 million) than last year's more than $33 million loss. While encouraging, the county will not grow its way out of its current economic difficulties any time soon.

STRUCTURAL DEFICIT

In FY 07/08, the first clear signs of economic deterioration became unmistakable. By the end of the next fiscal year, a sizeable disparity had developed between ongoing revenues and ongoing operating expenses. This disparity, or structural deficit, was projected to exceed $130 million in FY 10/11 if the Board did not exercise steadfast fiscal restraint. It has been the Board's preference to temper the impact of revenue declines with the use of general fund reserves and a multi-year reduction in general fund support. Distributing reductions over several years has allowed department managers to implement gradual changes to business processes while minimizing the severity of service cut impacts during any fiscal year.

With the approval of the FY 10/11 budget, the Board strongly affirmed its commitment to balancing the budget in two years while preserving reserves that were fast approaching critical levels. The Board is still on target to eliminate the structural deficit during FY 11/12. Toward that end, this budget contains about $55 million in cuts and reductions as well as the use of about $28 million from the reserve for economic uncertainty. This final year of cuts will put seemingly insurmountable pressure on county managers and staff to preserve essential services. Unfortunately, some services will be slowed or eliminated while some portion of the workforce will be lost to attrition and layoffs.

ACTIONS TAKEN TO OVERCOME BUDGET CHALLENGES

This budget is conservative and recognizes difficult economic conditions. Steps taken over the last few years to address some of the challenges include:

- Negotiation of increased employee participation in retirement costs
- Negotiation of second retirement tier for new employees

- Department-led control of general fund employment levels
- Implementation of Board-approved furloughs
- Implementation of countywide cost control efforts
- Reduction of the workforce through early retirement
- Reduction of the county's vehicle fleet
- Delay or cancellation of capital projects
- Revision or introduction of Board policies that improved business processes and cash management
- Organization of a long-term initiative to increase efficiency through information technology
- Organization of committees to evaluate pension policies and recommend reform as necessary

BUDGET WORKSHOPS, TESTIMONY, AND BEILENSEN HEARINGS

As in the previous year, the Board asked for early budget impact workshops. These budget workshops began in late March and included testimony from department heads. This input and the additional time to consider options allowed the Board to assign measured, targeted cuts to general fund departments.

On May 16, the Board heard testimony from two independent economists hired by the Executive Office. The economist from Beacon Economics forecast that the county's assessed valuation will remain relatively flat for FY 11/12, experience moderate growth in FY 12/13, and pick up in earnest during FY 13/14 and beyond. Beacon Economics prognosis was encouraging although it reported significant risks remain. The next economists from Cal State Fullerton communicated a more pessimistic view of the county's recovery. They predicted assessed valuation would remain relatively flat for the next two fiscal years with modest growth thereafter. They reported many risks to the forecasted recovery.

A Beilensen hearing was held for the Community Health Agency's Children's Services Unit following the economists report. Prior to making a decision to eliminate or reduce the level of medical services offered to the public, the Board is required to hold public hearings. The Board heard testimony from the department head and various members of the public. Comments from the Board indicated a desire to restore cuts so that service levels would remain unchanged.

Based on comments during the workshops and hearings, it is clear that public safety remains a high priority. However, the Board also recognizes the severity of cuts to other departments over the last few years and acknowledges that public safety cuts are necessary to preserve other core services important to the public. On average, public safety departments net county cost targets will be cut by four percent for FY 11/12.

Other departments will be cut an average of 19 percent. Layoffs are expected and displaced employees will be offered similar positions in other divisions, when possible.

FY 11/12 BUDGET HIGHLIGHTS

- Budget Impact workshops and department testimony allowed the Board to carefully consider general fund departments' challenges. The Board reaffirmed its goal of structural balance during FY 11/12.
- Community improvement funds will be reduced to $2.4 million for FY 11/12.
- General fund contingency is about 3.4 percent of discretionary revenue ($20 million), while the Board-approved benchmark is 4.0 percent of discretionary revenue ($23.3 million.) If Board commitments require additional appropriations, contingency funds may be used.
- Together the reserves for economic uncertainty and disaster relief total about 23 percent of discretionary revenue ($135.7 million). The Board-approved target minimum for these reserves is 15 percent of discretionary revenue ($87.3 million.)
- No ongoing general funds are appropriated in the recommended budget for new capital projects.
- The state's fiscal situation remains uncertain. Known cuts are included in this budget. Additionally, departments have prepared contingency plans for likely potential cuts. The county will address the state's revised budget proposal in its final budget, assuming the state has adopted a budget by that time. Board direction to minimize the use of the reserve for economic uncertainty offers a cushion to adjust to the effects of the state's budget plan.
- Layoffs will be necessary. Departments will work to minimize the effect on employees by offering new positions in other divisions, if possible. The first-quarter report will include an update.
- The general fund carryover at year-end, excluding reserves, was budgeted at $20 million. Historically, the carryover has been well over $40 million. Additional beginning fund balance may be available when the final budget is presented to the Board for adoption. This assumption envisions that some contingency funds will not be needed and can be carried forward.

COUNTYWIDE BUDGET SUMMATION

COUNTYWIDE SPENDING AND REVENUE

The FY 11/12 recommended budget establishes about $4.8 billion in appropriations for Riverside County. Countywide revenue is expected to remain stable at about $4.4 billion. The $386 million difference between appropriations and revenue is backed with fund balance, reserves, and designations. These sources represent revenue collected in earlier fiscal years.

The county's budget is divided into three fund groups: governmental, proprietary, and special district. Governmental funds account for basic services such as public protection, social services, and general administration. Proprietary funds reflect activities financed primarily by revenue generated from the activities themselves, such as the county hospital. Special districts are separate local governmental agencies created to perform governmental or proprietary functions within limited boundaries. When local taxes are inadequate or competing demands for existing tax dollars make it difficult for the county to provide all of the services county constituents' desire, they form special districts to pay for new or higher levels of existing services. The following table provides a fiscal year comparison of the county budget by fund group.

Table 1

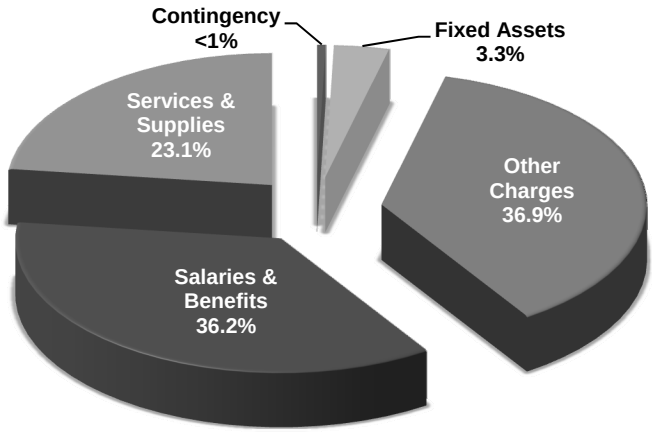
Fiscal Year Comparison of the County Budget
(In Millions)

Estimated Appropriations	FY10/11 Adopted Budget	FY11/12 Recommended Budget	Change ($)	Change (%)
Governmental funds	3,231.4	3,138.9	(92.5)	(2.9%)
Proprietary funds	926.8	956.7	29.9	3.2%
Special district funds	581.5	688.3	106.8	18.4%
All County Funds	**$4,739.7**	**$4,783.9**	**$44.2**	**<1%**
Estimated Revenue				
Governmental funds	3,050.0	2,951.0	(99.0)	(3.2%)
Proprietary funds	849.2	848.4	0.8	(<1%)
Special district funds	496.7	598.3	101.6	20.5%
All County Funds	**$4,395.9**	**$4,397.7**	**$1.8**	**<1%**

The county anticipates spending 36 percent of its resources on salaries and benefits. Another 60 percent is spent on supplies and other charges, such as payments on debt and intra-county transactions. About three percent of the county's appropriations are budgeted for the acquisition of capital assets. Chart 1 illustrates countywide spending by category.

Chart 1

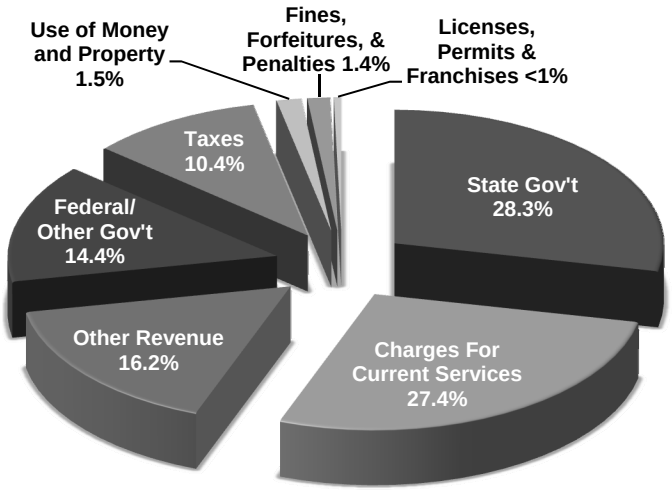
Countywide Appropriations
(by Category)



The county's largest source of revenue is derived from the state government. The smallest sources of revenue are from licenses, permits, and franchises; use of money and property; and fines, penalties, and forfeitures. Together, these sources represent less than four percent of the county's total revenue. The following chart reflects countywide revenue by its source.

Chart 2

Countywide Revenue
(by Source)



The governmental fund group accounts for most of the county's finances and includes:

- General fund - the county's basic operating fund which is used to report all operating activity not accounted for in other specialized funds.

- Special revenue funds - used to report the operating activity associated with specific revenue sources that are restricted to a particular purpose
- Capital project funds – used to report the operating activity associated with the construction, rehabilitation, and acquisition of capital assets.
- Debt service funds – used to report activity associated with the repayment of debt.

The proprietary fund group includes internal service and enterprise funds. Internal service funds are used to account for operating activity between county departments that are supported by cost recovery. Enterprise fund are used to account for county functions that are primarily supported with user charges to external parties. The following table compares the FY 10/11 adopted budget to the FY 11/12 recommended budget and summarizes spending by fund group.

Table 2

Fiscal Year Comparison of County Appropriations
(In Millions)

	FY10/11 Adopted Budget	FY11/12 Recommended Budget	Change ($)	Change (%)
Governmental Funds				
General fund	2,441.3	2,452.2	10.9	<1%
Special revenue funds	453.2	408.5	(44.7)	(9.9%)
Capital project funds	290.3	236.1	(54.2)	(18.7%)
Debt service funds	46.6	42.1	(4.5)	(9.7%)
Total governmental funds	*$3,231.4*	*$3,138.9*	*($92.5)*	*(2.9%)*
Proprietary Funds				
Internal service funds	369.1	350.4	(18.7)	(5.1%)
Enterprise funds	557.7	606.3	48.6	2.7%
Total proprietary funds	*$ 926.8*	*$ 956.7*	*$29.9*	*3.2%*
Special District Budgets				
Community redevelopment	248.1	366.0	117.9	47.5%
IHSS Public Authority	2.7	2.6	(0.1)	(3.7%)
Parks and Open Space District	43.0	22.3	(20.7)	(48.1%)
County service areas	21.5	24.6	3.1	14.4%
Flood Control District	140.0	163.2	23.2	17.0%
Waste Management District	5.0	4.4	(0.6)	(1.2%)
Capital finance	72.1	79.6	7.5	10.4%
Cemetery District	0.5	0.9	0.4	80%
Children and Families Comm.	48.6	24.7	(23.9)	(49.2%)
Total special districts	*$ 581.5*	*$ 688.3*	*106.8*	*19.6%*
Total gross appropriations	***$ 4,739.7***	***$ 4,783.9***	***$44.2***	***<1%***

Financing sources include all new revenue, any released reserves, and fund balance carried over from the previous year. Financing uses include all new appropriations and increases to reserves. By law, budgeted financing sources must equal financing uses. The table below summarizes the FY 11/12 recommended spending plan by financing sources and uses. In total, $386 million in reserves and fund balance will be needed to support planned spending.

Table 3

Summary of Sources and Uses by Fund Type
(In Millions)

Total Financing Sources	Fund Balance and Reserve Cancellations	Financing Sources	Total Available Financing
General fund	74.8	2,377.4	2,452.2
Special revenue funds	24.1	384.5	408.6
Capital project funds	89.0	147.1	236.1
Debt service funds	0.0	42.1	42.1
Internal service funds	36.8	313.6	350.4
Enterprise funds	71.4	534.8	606.2
Special district funds	90.0	598.3	688.3
	$ 386.1	**$4,397.8**	**$4,783.9**

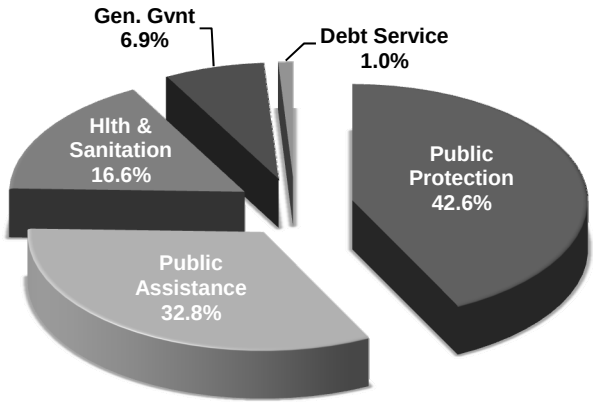
Total Financing Uses	Provisions for Reserves	Operating Expenditures	Total Available Requirements
General fund	2.8	2,449.3	2,452.1
Special revenue funds	0.2	408.3	408.5
Capital project funds	0.5	235.6	236.1
Debt service funds	0.0	42.1	42.1
Internal service funds	0.0	350.5	350.5
Enterprise funds	0.0	606.3	606.3
Special district funds	0.5	687.8	688.3
	$ 4.0	**$4,779.9**	**$4,783.9**

GENERAL FUND APPROPRIATIONS

The FY 11/12 general fund budget includes $2.5 billion in spending authority. The chart on the next page shows general fund appropriations by function. Public protection accounts for the largest portion of general fund appropriations totaling slightly more than $1 billion. About $803 million is appropriated for public assistance and another $406 million is appropriated in support of health and sanitation services. General government services account for just over $169 million.

Chart 3

General Fund Appropriations
(by Function*)



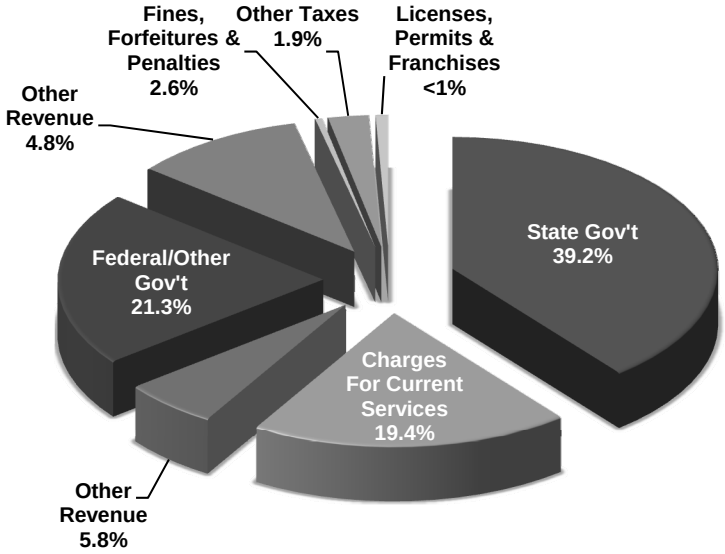
* *Functions not shown are public ways and facilities as well as education, recreation, and culture which account for less than one percent ($2.9 million) of general fund appropriations.*

GENERAL FUND REVENUE

About $2.4 billion in revenue is expected to support general fund operations using the county general fund. The next chart reflects all sources of anticipated general fund revenue, the largest portion of which will be received from the state ($937 million). Revenue received from federal and other government entities totals $507 million. The county expects to receive $463 million from charges for services.

Chart 4

General Fund Revenue
(by Source)



GENERAL FUND DISCRETIONARY REVENUE

The greater part (76 percent) of general fund revenue is restricted and can only be used for the purpose it was collected. It is at the Board's discretion to determine how the unrestricted portion (24 percent) will be spent on core services. For FY 11/12, general fund discretionary revenue is estimated to be about $582 million, a two percent decrease ($10.1 million) from last year's budget projection. Although certain discretionary general fund revenues show signs of growth, other revenue estimates continue to weaken. The primary cause of the overall decrease was related to eroding Teeter Overflow revenue. Growth within sales tax collections would have offset this decrease except it is anticipated there will be a revenue loss associated with the newly incorporated cities. Revenue neutrality agreements with these cities will help offset these losses beginning in FY 14/15.

The following table reflects the allocation of discretionary revenue by source. A discussion of key revenue sources follows.

Table 4

Year to Year Comparison of General Fund Discretionary Revenue
(In Millions)

	FY10/11 Final Budget	FY11/12 Recommended Budget	Change ($)	Change (%)	Percent of Revenue
Property Taxes	263.8	266.4	2.6	1%	45.8%
Motor Vehicle In-Lieu	188.8	189.0	0.2	0.1%	32.5%
Teeter Overflow	46.0	35.5	(10.5)	(22.8%)	6.1%
Fines & Penalties	25.7	27.0	1.3	5.1%	4.6%
Sales Tax*	23.0	21.3	(1.7)	(7.4%)	3.7%
Tobacco Tax	10.0	10.0	-	-	1.7%
Property Transfer Tax	9.3	10.5	1.2	12.9%	1.8%
Franchise Fees	7.0	5.0	(2.0)	(28.6%)	<1%
Interest Earnings	6.3	6.6	(0.9)	(14.3%)	1.1%
Misc. Federal & State	5.9	6.1	0.2	3.4%	1.0%
Other Miscellaneous	6.3	4.6	(1.7)	(27.0%)	<1%
Total	**$ 592.1**	**$ 582.0**	**($ 10.1)**	**(1.7%)**	

* Does not include Public Safety Sales Tax

Property Taxes

Property tax revenue is estimated at $266.4 million for FY 11/12. This revenue represents 46 percent of the county's discretionary revenue and includes $85.1 million in redevelopment tax increment pass-through funds. As property values in the county decline, this revenue falls.

Motor Vehicle In-lieu Fees

Motor vehicle in-lieu revenue is estimated at $189 million and represents about 33 percent of the county's discretionary revenue. The state converted this revenue source

to property tax revenue several years ago. This revenue is now tied to county assessed property values, just like property tax revenue.

Teeter Overflow

In 1993, the county adopted the Teeter Plan, which provides an alternate procedure to distribute property taxes. The Teeter Plan is financed, and debt service paid, as delinquent properties are redeemed. State law requires that a tax-loss reserve fund be established with a balance equal to one percent of the Teeter roll. Any delinquent collections exceeding the one percent may be transferred to the general fund. This excess is called the Teeter overflow.

Despite the frailty of the local housing and employment markets, there is a downward trend in property tax delinquency rates. Timely payment of property taxes by financial institutions that have taken ownership of distressed properties may be the primary cause. This trend, reinforced with a slow economic recovery, will continue to erode this revenue in future years. The recommended FY 11/12 budget projects this overflow to be about $35.5 million.

Court Fines and Penalties

Fines and penalties are estimated at $27 million. Comprising almost five percent of the county's revenue, fines and penalties are mostly dedicated to funding the county's obligation to the trial courts and are subject to state maintenance-of-effort requirements. The county continues to shift fines and fees resulting from trial-court reform to the state.

Sales Taxes

Sales and use taxes are estimated at $21.3 million and represent about four percent of the county's discretionary revenue. This amount reflects anticipated losses of revenue associated with the incorporation of the cities of Eastvale and Jurupa Valley.

Tobacco Taxes

In 1998, when the Master Tobacco Litigation Settlement was finalized, tobacco companies agreed to pay compensation for causing tobacco-related problems across the nation. Riverside County along with other cities and counties entered into an agreement with the state regarding how California's share of the settlement was to be allocated. In 2007, the county sold bonds backed by the future stream of tobacco-tax settlement income for one lump-sum amount, reducing what it would have otherwise received to $10 million per year. These funds are passed on to the county hospital.

GENERAL FUND RESERVES AND DESIGNATIONS

The recommended budget incorporates the use of about $55 million in general fund reserves to fund one-time and ongoing expenditures in support of general fund operations. In this budget, $34 million in discretionary reserves (including $7 million from the property tax system designation for the CREST project, as approved by the Board in October 2010), $20 million in unreserved fund balance, and $19.7 million in restricted reserves are being drawn upon to support recommended spending. Additionally, $2.4 million will be set aside for community improvements. The table

below depicts proposed changes to general fund reserves and expected year-end balances.

Table 5

Estimated General Fund Reserves and Designations
(In Millions)

Name	FY10/11 Expected Ending Balance	FY11/12 Recommended Changes	FY 11/12 Reserves and Designations
Economic Uncertainty	148.6	(27.8)	120.8
Disaster Relief	15.0	0.0	15.0
Property Tax System Replacement	17.0	(7.0)	10.0
Community Improvement	0.0	2.4	2.4
Total Discretionary	*$ 180.6*	*(32.4)*	*$ 148.2*
Restricted Reserves and Designations	**66.1**	(19.6)	53.7
Total Reserves and Designations	**$246.7**	**($52.0)**	**$202.9**

GENERAL FUND DISCRETIONARY ALLOCATIONS - NET COUNTY COST

In accordance with Board policy, general fund support authorized by the Board in the previous year's final budget plus ongoing commitments approved by the Board during the year form the basis for the general fund's net county cost (NCC) allocated in the subsequent year's recommended budget. NCC represents the allocation of discretionary revenue and reserves in support of various county services. In an effort to move toward structural balance, net county costs were reduced disproportionately between departments, but overall by eight percent. For FY 11/12, NCC allocations are expected to exceed discretionary revenue by about $28 million. The table on the next page compares ongoing net county cost for FY 10/11 and FY 11/12.

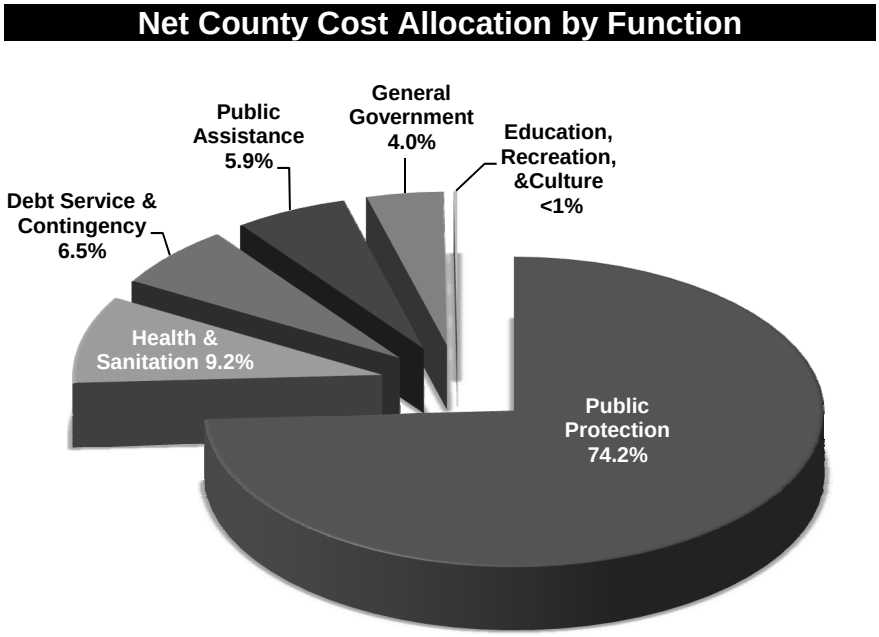
Table 6

Changes in Ongoing Net County Costs
(In Millions)

	FY10/11 Budget	FY11/12 Recommended Budget	Change ($)	Change (%)
Public Protection	497.5	467.5	(30.0)	(6.0%)
General Government	34.0	25.4	(8.6)	(25.3%)
Health & Sanitation	67.4	57.8	(9.6)	(14.2%)
Public Assistance	45.9	37.2	(8.1)	(19.0%)
Education, Recreation, &Culture	1.5	1.2	(0.3)	(20.0%)
Debt Service and Contingency	39.5	41.2	1.7	4.3%
Total Net County Cost	**$ 685.8**	**$ 630.3**	**($55.5)**	**(8.1)%**

The largest share of discretionary resources (74 percent) is allocated to public protection ($467.5 million). The Sheriff's Department will receive $225.6 million. The District Attorney's Office will receive about $58.7 million. The Fire Department, which also receives structural fire-tax revenue, will receive about $40.6 million in general fund support. As required by state law, the county plans on spending almost $35.1 million for individuals that have been charged with a crime and need legal representation but cannot afford to hire a privately retained attorney. Those funds are allocated to the Public Defender's Office, the Alternate Public Defender, confidential court orders, and indigent defense. The Probation Department will receive about $29.4 million. The public ways and facilities function will not have a general fund allocation. Education, recreation, and culture make up less than one percent of general fund net county cost allocations ($1.2 million). The chart on the next page illustrates ongoing general fund allocations by function.

Chart 5



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RIVERSIDE COUNTY OFFICE OF AUDITOR-CONTROLLER
GANN LIMIT CALCULATION
FY 2011-12

COUNTY ITEM	**FY 2011-12**
Base Year as adjusted for growth	2,050,230,730
Growth Factors:	
Cost of Living:	
1. Per. Cap.Pers. Inc. %	2.51
2. Loc. Ass'd. Val. Non-Res. Constr. %	-0.08%
Population:	
1. Total County Pop. Change %	1.81%
2. Contiguous County Pop. Change % *	1.07%
3. Incorporated Areas Change %	1.77%
Factor Options:	
1. Per. Cap. Inc.& Tot. Cnty. Pop. Change	1.0437
2. Per. Cap. Inc.& Cont. Cnty. Pop. Change	1.0361
3. Per. Cap. Inc.& Incorp. Area Change	1.0432
4. Loc. Val. Non-Res.& Tot. Cnty. Pop. Change	1.0173
5. Loc. Val. Non-Res.& Cont. Cnty. Pop. Change	1.0099
6. Loc. Val. Non-Res.& Incorp. Area Change	1.0169
Optimum Factor**	1.0437
Gross Appropriation Limit	2,139,732,138
Adjust - Transfer of Responsibilty	0.00
GANN LIMIT ADJ. FOR TRANSFER OF RESPONSIBILITIES	2,139,732,138
APPROPRIATIONS OF TAXES SUBJECT TO LIMITATION	
Total Appropriations:	
County Operating Funds	3,138,425,486
County Service Areas	24,569,412
	3,162,994,898
Less: Non-Proceeds of Taxes	
Statutory Exclusions	2,248,960,534
Qualified Capital Outlay	(1,328,962)
CSA Operating funds	14,387,622
Appropriation Subject to Limit	900,975,704
APPROPRIATION OVER (UNDER) LIMIT	(1,238,756,434)
LIMIT OVERRIDE ELECTION	N/A

Note * - Calculation based on average of Riverside County and five contiguous counties percent change in total county population.

**** The optimum factors are used for the Appropriation Limit calculation.**

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RIVERSIDE COUNTY COURT HOUSE

State Controller Schedules
County Budget Act
January 2010

County of Riverside
All Funds Summary
Fiscal Year 2012

Actual ☑
Estimated ❑

Schedule 1

Fund Name	Total Financing Sources				Total Financing Uses		
	Fund Balance Unreserved/ Undesignated June 30, 2011	Decreases to Reserves/ Designations	Additional Financing Sources	Total Financing Sources	Financing Uses	Increases to Reserves/ Designations	Total Financing Uses
1	2	3	4	5	6	7	8
General Fund	$ 33,738,217	$ 56,381,291	$ 2,387,600,448	$ 2,477,719,956	$ 2,475,319,956	$ 2,400,000	$ 2,477,719,956
Special Revenue Fund	$ 23,395,122	$ 659,600	$ 384,452,244	$ 408,506,966	$ 408,295,967	$ 210,999	$ 408,506,966
Capital Project Fund	$ -	$ 88,964,319	$ 147,110,431	$ 236,074,750	$ 235,612,386	$ 462,364	$ 236,074,750
Debt Service Fund	$ -	$ -	$ 42,112,031	$ 42,112,031	$ 42,112,031	$ -	$ 42,112,031
Total Governmental Funds	**$ 57,133,339**	**$ 146,005,210**	**$ 2,961,275,154**	**$ 3,164,413,703**	**$ 3,161,340,340**	**$ 3,073,363**	**$ 3,164,413,703**
Other Funds							
Internal Service Funds	$ -	$ 36,843,359	$ 318,741,538	$ 355,584,897	$ 355,584,897	$ -	$ 355,584,897
Enterprise Funds	-	71,439,470	534,817,279	606,256,749	606,256,749	-	606,256,749
Special District and Other Agencies	8,305,119	81,674,844	599,981,697	689,961,660	689,471,313	490,347	689,961,660
Total Other Funds	**$ 8,305,119**	**$ 189,957,673**	**$ 1,453,540,514**	**$ 1,651,803,306**	**$ 1,651,312,959**	**$ 490,347**	**$ 1,651,803,306**
Total All Funds	**$ 65,438,458**	**$ 335,962,883**	**$ 4,414,815,668**	**$ 4,816,217,009**	**$ 4,812,653,299**	**$ 3,563,710**	**$ 4,816,217,009**

Arithmetic Results				COL 2 + 3 + 4			COL 6+7
Government Fund Totals Transferred From	SCH 2, COL 2	SCH 2, COL 3	SCH 2, COL 4	SCH 2 COL 5 COL 5 = COL 8	SCH 2, COL 6	SCH 2, COL 7	SCH 2, COL 8 COL 5 = COL 8
Internal Service Fund From			SCH 10, COL 5		SCH 10, COL 5		
Enterprise Fund From	SCH 11, COL 5				SCH 11, COL 5		
Special Districts Fund From	SCH 12, COL 2	SCH 12, COL 3	SCH 12, COL 4	SCH 12, COL 5 COL 5 = COL 8	SCH 12, COL 6	SCH 12, COL 7	SCH 12, COL 8 COL 5 = COL 8

State Controller Schedules
County Budget Act
January 2010

County of Riverside
Governmental Funds Summary
Fiscal Year 2011-12

Actual ☑
Estimated ❑

Schedule 2

Fund Name	Total Financing Sources				Total Financing Uses		
	Fund Balance Unreserved/ Undesignated June 30, 2011	Decreases to Reserves/ Designations	Additional Financing Sources	Total Financing Sources	Financing Uses	Increases to Reserves/ Designations	Total Financing Uses
1	2	3	4	5	6	7	8
General Fund							
10000 General Fund	$ 33,738,217	$ 56,381,291	$ 2,387,600,448	$ 2,477,719,956	$ 2,475,319,956	$ 2,400,000	$ 2,477,719,956
Total General Fund	**$ 33,738,217**	**$ 56,381,291**	**$ 2,387,600,448**	**$ 2,477,719,956**	**$ 2,475,319,956**	**$ 2,400,000**	**$ 2,477,719,956**
Special Revenue Fund							
22300 AB2766 Sher Bill	$ 555,000	$ -	$ 670,000	$ 1,225,000	$ 1,225,000	$ -	$ 1,225,000
22050 AD CFD Adm	$ -	$ -	$ 790,000	$ 790,000	$ 790,000	$ -	$ 790,000
22650 Airport Land Use Commission	$ -	$ -	$ 335,991	$ 335,991	$ 335,991	$ -	$ 335,991
22100 Aviation	$ 279,049	$ -	$ 2,460,958	$ 2,740,007	$ 2,740,007	$ -	$ 2,740,007
21750 Bio-terrorism Preparedness	$ -	$ -	$ 2,631,029	$ 2,631,029	$ 2,631,029	$ -	$ 2,631,029
20250 Building Permits	$ 711,527	$ -	$ 5,020,626	$ 5,732,153	$ 5,732,153	$ -	$ 5,732,153
21270 Cal Home Program	$ -	$ -	$ 750,000	$ 750,000	$ 750,000	$ -	$ 750,000
22250 Cal Id	$ -	$ -	$ 5,466,105	$ 5,466,105	$ 5,466,105	$ -	$ 5,466,105
21770 CHA:CDC PHER H1N1 Allocation	$ -	$ -	$ 98,684	$ 98,684	$ 98,684	$ -	$ 98,684
21760 CHA:Hosp Prep Prog Allocation	$ -	$ -	$ 708,633	$ 708,633	$ 708,633	$ -	$ 708,633
21780 CHA:Hosp Prep Prog H1N1 Alloc	$ -	$ -	$ -	$ -	$ -	$ -	$ -
22700 CHA:Prop 10	$ -	$ -	$ 1,813,279	$ 1,813,279	$ 1,813,279	$ -	$ 1,813,279
21000 Co Structural Fire Protection	$ -	$ -	$ 48,257,081	$ 48,257,081	$ 48,257,081	$ -	$ 48,257,081
21050 Community Action Agency	$ -	$ -	$ 8,608,267	$ 8,608,267	$ 8,608,267	$ -	$ 8,608,267
21200 County Free Library	$ 14,075,148	$ -	$ 17,616,942	$ 31,692,090	$ 31,692,090	$ -	$ 31,692,090
21100 EDA-Administration	$ -	$ -	$ 22,277,180	$ 22,277,180	$ 22,277,180	$ -	$ 22,277,180
23000 Franchise Area 8 Assmt For Wmi	$ -	$ -	$ 800,000	$ 800,000	$ 800,000	$ -	$ 800,000
21250 Home Program Fund	$ -	$ -	$ 4,317,667	$ 4,317,667	$ 4,317,667	$ -	$ 4,317,667
21300 Homeless Housing Relief Fund	$ 1,087,919	$ -	$ 9,874,257	$ 10,962,176	$ 10,962,176	$ -	$ 10,962,176
21350 Hud Community Services Grant	$ -	$ -	$ 13,250,766	$ 13,250,766	$ 13,250,766	$ -	$ 13,250,766
20300 Landscape Maintenance District	$ -	$ 257,383	$ 2,145,988	$ 2,403,371	$ 2,403,371	$ -	$ 2,403,371
22200 National Date Festival	$ 64,309	$ -	$ 3,546,722	$ 3,611,031	$ 3,611,031	$ -	$ 3,611,031
21370 Neighborhood Stabilization NSP	$ -	$ -	$ 36,667,963	$ 36,667,963	$ 36,667,963	$ -	$ 36,667,963
21450 Office On Aging	$ -	$ -	$ 11,322,291	$ 11,322,291	$ 11,322,291	$ -	$ 11,322,291
22000 Rideshare	$ -	$ -	$ 1,447,574	$ 1,447,574	$ 1,447,574	$ -	$ 1,447,574
22350 Special Aviation	$ -	$ -	$ 2,156,350	$ 2,156,350	$ 2,156,350	$ -	$ 2,156,350

State Controller Schedules
County Budget Act
January 2010

County of Riverside
Governmental Funds Summary
Fiscal Year 2011-12

Actual ☑
Estimated ❑

Schedule 2

Fund Name	Total Financing Sources				Total Financing Uses		
	Fund Balance Unreserved/ Undesignated June 30, 2011	Decreases to Reserves/ Designations	Additional Financing Sources	Total Financing Sources	Financing Uses	Increases to Reserves/ Designations	Total Financing Uses
1	2	3	4	5	6	7	8
22400 Supervisorial Road Dist #4	$ -	$ 385,269	$ 629,763	$ 1,015,032	$ 1,015,032	$ -	$ 1,015,032
20260 Survey	$ -	$ -	$ 4,814,810	$ 4,814,810	$ 4,814,810	$ -	$ 4,814,810
20200 Tran-Lnd Mgmt Agency Adm	$ 51,276	$ -	$ 11,929,012	$ 11,980,288	$ 11,980,288	$ -	$ 11,980,288
20000 Transportation	$ 6,570,894	$ -	$ 135,257,410	$ 141,828,304	$ 141,828,304	$ -	$ 141,828,304
22500 US Grazing Fees	$ -	$ 16,948	$ 107	$ 17,055	$ 17,055	$ -	$ 17,055
22450 WC- Multi-Species Habitat Con	$ -	$ -	$ 4,280,967	$ 4,280,967	$ 4,264,967	$ 16,000	$ 4,280,967
21550 Workforce Development	$ -	$ -	$ 24,505,822	$ 24,505,822	$ 24,310,823	$ 194,999	$ 24,505,822
Total Special Revenue Fund	**$ 23,395,122**	**$ 659,600**	**$ 384,452,244**	**$ 408,506,966**	**$ 408,295,967**	**$ 210,999**	**$ 408,506,966**
Capital Project Fund							
30000 Accumulative Capital Outlay	$ -	$ -	$ 1,037,750	$ 1,037,750	$ 1,037,750	$ -	$ 1,037,750
30100 Capital Const-Land & Bldg Acq	$ -	$ -	$ 86,417,047	$ 86,417,047	$ 86,417,047	$ -	$ 86,417,047
30700 Capital Improvement Program	$ -	$ 25,090,000	$ 960,000	$ 26,050,000	$ 26,050,000	$ -	$ 26,050,000
30120 County Tobacco Securitization	$ -	$ 35,073,100	$ 4,037,000	$ 39,110,100	$ 39,110,100	$ -	$ 39,110,100
33600 CREST	$ -	$ -	$ 11,068,486	$ 11,068,486	$ 11,068,486	$ -	$ 11,068,486
31650 Dev Agrmt DIF Cons. Area Plan	$ -	$ -	$ 1,924,154	$ 1,924,154	$ 1,924,025	$ 129	$ 1,924,154
31680 Developer Agreements	$ -	$ 188,617	$ 11,383	$ 200,000	$ 200,000	$ -	$ 200,000
30500 Developers Impact Fee Ops	$ -	$ 7,248,000	$ 6,812,000	$ 14,060,000	$ 14,060,000	$ -	$ 14,060,000
32710 EDA Mitigation Projects	$ -	$ -	$ 85,000	$ 85,000	$ 85,000	$ -	$ 85,000
30300 Fire Capital Project Fund	$ -	$ 1,109,870	$ -	$ 1,109,870	$ 1,109,870	$ -	$ 1,109,870
31600 Menifee Rd-Bridge Benefit Dist	$ -	$ 197,357	$ 52,643	$ 250,000	$ 250,000	$ -	$ 250,000
31640 Mira Loma R & B Bene District	$ -	$ -	$ 1,114,754	$ 1,114,754	$ 652,710	$ 462,044	$ 1,114,754
33500 PSEC 800 Mhz Radio Project	$ -	$ 88,949	$ 5,565,275	$ 5,654,224	$ 5,654,224	$ -	$ 5,654,224
31693 RBBD-Scott Road	$ -	$ 139,361	$ 90,639	$ 230,000	$ 230,000	$ -	$ 230,000
31540 RDA Capital Improvements	$ -	$ 12,005,985	$ 24,567,075	$ 36,573,060	$ 36,573,060	$ -	$ 36,573,060
31690 Signal Mitigation Dev Imp Fees	$ -	$ -	$ 3,158,191	$ 3,158,191	$ 3,158,000	$ 191	$ 3,158,191
31610 So West Area RB Dist	$ -	$ 7,253,192	$ 201,922	$ 7,455,114	$ 7,455,114	$ -	$ 7,455,114
31630 Traffic Signal Mitigation	$ -	$ 569,888	$ 7,112	$ 577,000	$ 577,000	$ -	$ 577,000
32750 Woodcrest Library Project	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Project Fund	**$ -**	**$ 88,964,319**	**$ 147,110,431**	**$ 236,074,750**	**$ 235,612,386**	**$ 462,364**	**$ 236,074,750**
Debt Service Fund							

State Controller Schedules
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January 2010

County of Riverside
Governmental Funds Summary
Fiscal Year 2011-12

Schedule 2

Actual ☑
Estimated ❑

Fund Name	Total Financing Sources				Total Financing Uses		
	Fund Balance Unreserved/ Undesignated June 30, 2011	Decreases to Reserves/ Designations	Additional Financing Sources	Total Financing Sources	Financing Uses	Increases to Reserves/ Designations	Total Financing Uses
1	2	3	4	5	6	7	8
35000 Pension Obligation Bonds	$ -	$ -	$ 36,176,199	$ 36,176,199	$ 36,176,199	$ -	$ 36,176,199
37050 Teeter Debt Service Fund	$ -	$ -	$ 5,935,832	$ 5,935,832	$ 5,935,832	$ -	$ 5,935,832
Total Debt Service Fund	**$ -**	**$ -**	**$ 42,112,031**	**$ 42,112,031**	**$ 42,112,031**	**$ -**	**$ 42,112,031**
Total Governmental Funds	**$ 57,133,339**	**$ 146,005,210**	**$ 2,961,275,154**	**$ 3,164,413,703**	**$ 3,161,340,340**	**$ 3,073,363**	**$ 3,164,413,703**

Appropriations Limit	**$ 2,139,732,138**
Appropriations Subject to Limit	**$ 900,975,704**

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Arithmetic Results				COL 2 + 3 + 4 COL 5 = COL 8			COL 6+7 COL 5 = COL 8
Totals Transferred From	SCH 3, COL 6	SCH 4, COL 4	SCH 5, COL 5		SCH 7, COL 5	SCH 4, COL 6	SCH 7, COL 5
Totals Transferred To	SCH 1, COL 2	SCH 1, COL 3	SCH 1, COL 4	SCH 1, COL 5	SCH 1, COL 6	SCH 1, COL 7	SCH 1, COL 8

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County of Riverside
Fund Balance - Governmental Funds
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Schedule 3

Actuals ☑
Estimated ❑

Fund Name	Total Fund Balance June 30, 2010	Less: Fund Balance-Reserved/Designated			Fund Balance Unreserved /Undesignated June 30, 2010
		Encumbrances	General & Other Reserves	Designations	
1	2	3	4	5	6
General Fund					
10000 General Fund	$ 335,777,036	$ 3,462,110	$ 7,875,853	$ 290,700,856	$ 33,738,217
Total General Fund	**$ 335,777,036**	**$ 3,462,110**	**$ 7,875,853**	**$ 290,700,856**	**$ 33,738,217**
Special Revenue Fund					
20000 Transportation	$ 81,185,982	$ 602,956	$ 69,743,665	$ 4,268,467	$ 6,570,894
20200 Tran-Lnd Mgmt Agency Adm	$ 20,199,245	$ 112,285	$ 19,893,157	$ 142,527	$ 51,276
20250 Building Permits	$ 1,033,279	$ -	$ 321,752	$ -	$ 711,527
20260 Survey	$ 1,555,893	$ -	$ 1,555,893	$ -	$ -
20300 Landscape Maintenance District	$ 3,742,163	$ -	$ 3,742,163	$ -	$ -
21000 Co Structural Fire Protection	$ 4,426,982	$ -	$ 4,426,982	$ -	$ -
21050 Community Action Agency	$ 1,079,032	$ -	$ 1,079,032	$ -	$ -
21100 EDA-Administration	$ 9,641,209	$ -	$ 2,357,007	$ 7,284,202	$ -
21200 County Free Library	$ 21,070,866	$ -	$ 6,995,718	$ -	$ 14,075,148
21250 Home Program Fund	$ 124,380	$ -	$ 124,380	$ -	$ -
21270 Cal Home Program	$ 24,002	$ -	$ 24,002	$ -	$ -
21300 Homeless Housing Relief Fund	$ 1,433,745	$ -	$ 345,826	$ -	$ 1,087,919
21350 Hud Community Services Grant	$ 227,853	$ -	$ 227,853	$ -	$ -
21370 Neighborhood Stabilization NSP	$ 2,343,518	$ -	$ 2,343,518	$ -	$ -
21450 Office On Aging	$ 662,689	$ -	$ 662,689	$ -	$ -
21550 Workforce Development	$ 2,088,927	$ -	$ 2,088,927	$ -	$ -
21750 Bio-terrorism Preparedness	$ 3,422,899	$ -	$ 3,422,899	$ -	$ -
21760 CHA:Hosp Prep Prog Allocation	$ -	$ -	$ -	$ -	$ -
21770 CHA:CDC PHER H1N1 Allocation	$ -	$ -	$ -	$ -	$ -
21780 CHA:Hosp Prep Prog H1N1 Alloc	$ 47,110	$ -	$ 47,110	$ -	$ -
22000 Rideshare	$ 58,581	$ -	$ 58,581	$ -	$ -
22050 AD CFD Adm	$ 1,403,567	$ 55,742	$ 1,347,825	$ -	$ -
22100 Aviation	$ 1,015,277	$ -	$ 736,228	$ -	$ 279,049
22200 National Date Festival	$ 154,910	$ -	$ 90,601	$ -	$ 64,309
22250 Cal Id	$ 7,898,988	$ -	$ 7,898,988	$ -	$ -
22300 AB2766 Sher Bill	$ 980,375	$ -	$ 425,375	$ -	$ 555,000
22350 Special Aviation	$ 1,195,195	$ -	$ 1,195,195	$ -	$ -
22400 Supervisorial Road Dist #4	$ 1,939,408	$ -	$ 1,939,408	$ -	$ -
22450 WC- Multi-Species Habitat Con	$ 3,675,113	$ -	$ 3,675,113	$ -	$ -
22500 US Grazing Fees	$ 17,297	$ -	$ 17,297	$ -	$ -
22650 Airport Land Use Commission	$ 472,695	$ -	$ 472,695	$ -	$ -
22700 CHA:Prop 10	$ 555,401	$ -	$ 555,401	$ -	$ -
23000 Franchise Area 8 Assmt For Wmi	$ 5,784	$ -	$ 5,784	$ -	$ -
Total Special Revenue Fund	**$ 173,682,365**	**$ 770,983**	**$ 137,821,064**	**$ 11,695,196**	**$ 23,395,122**

Arithmetic Results					COL 2 - 3 - 4 - 5
Totals Transferred From			COL 4 + 5 = Sch 4, Col 2	COL 4 + 5 = Sch 4, Col 2	
Totals Transferred To					SCH 2, COL 2

State Controller Schedules
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County of Riverside
Fund Balance - Governmental Funds
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Schedule 3

Actuals ☑
Estimated ❑

Fund Name	Total Fund Balance June 30, 2010	Less: Fund Balance-Reserved/Designated			Fund Balance Unreserved /Undesignated June 30, 2010
		Encumbrances	General & Other Reserves	Designations	
1	2	3	4	5	6
Capital Project Fund					
30000 Accumulative Capital Outlay	$ 1,505,286	$ -	$ 1,505,286	$ -	$ -
30100 Capital Const-Land & Bldg Acq	$ -	$ -	$ -	$ -	$ -
30120 County Tobacco Securitization	$ 55,303,910	$ -	$ 55,303,910	$ -	$ -
30300 Fire Capital Project Fund	$ 1,109,870	$ -	$ 1,109,870	$ -	$ -
30500 Developers Impact Fee Ops	$ 118,220,949	$ -	$ 118,220,949	$ -	$ -
30700 Capital Improvement Program	$ 40,521,237	$ -	$ 40,521,237	$ -	$ -
31540 RDA Capital Improvements	$ 27,715,925	$ -	$ 21,264,753	$ 6,451,172	$ -
31600 Menifee Rd-Bridge Benefit Dist	$ 8,452,653	$ -	$ 8,452,653	$ -	$ -
31610 So West Area RB Dist	$ 10,512,819	$ -	$ 10,512,819	$ -	$ -
31630 Traffic Signal Mitigation	$ 763,153	$ -	$ 763,153	$ -	$ -
31640 Mira Loma R & B Bene District	$ 18,806,022	$ -	$ 18,806,022	$ -	$ -
31650 Dev Agrmt DIF Cons. Area Plan	$ 19,901	$ -	$ 19,901	$ -	$ -
31680 Developer Agreements	$ 1,735,395	$ -	$ 1,735,395	$ -	$ -
31690 Signal Mitigation Dev Imp Fees	$ 29,922	$ -	$ 29,922	$ -	$ -
31693 RBBD-Scott Road	$ 1,479,566	$ -	$ 1,479,566	$ -	$ -
32710 EDA Mitigation Projects	$ 134,431	$ -	$ 134,431	$ -	$ -
32750 Woodcrest Library Project	$ 1	$ -	$ 1	$ -	$ -
33500 PSEC 800 Mhz Radio Project	$ 1,011,869	$ -	$ 1,011,869	$ -	$ -
33600 CREST	$ 3,419,051	$ -	$ 3,419,051	$ -	$ -
Total Capital Project Fund	$ **290,741,960**	$ **-**	$ **284,290,788**	$ **6,451,172**	$ **-**
Debt Service Fund					
35000 Pension Obligation Bonds	$ 11,087,752	$ -	$ 11,087,752	$ -	$ -
37050 Teeter Debt Service Fund	$ 10,626,883	$ -	$ 10,626,883	$ -	$ -
Total Debt Service Fund	$ **21,714,635**	$ **-**	$ **21,714,635**	$ **-**	$ **-**
Total Governmental Funds	$ **821,915,996**	$ **4,233,093**	$ **451,702,340**	$ **308,847,224**	$ **57,133,339**

Arithmetic Results					COL 2 - 3 - 4 - 5
Totals Transferred From			COL 4 + 5 = Sch 4, Col 2	COL 4 + 5 = Sch 4, Col 2	
Totals Transferred To					SCH 2, COL 2

State Controller Schedules County Budget Act January 2010	County of Riverside Reserves/Designations - By Governmental Funds Fiscal Year 2011-12					Schedule 4
Description	Reserves/ Designations June 30, 2010	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
General Fund						
11008 RESTRICTED-AB 709 Court Svcs A	$ 1,951,434	$ 1,000,751	$ 1,000,751	$ -	$ -	$ 950,683
11009 RESTRICTED-AB 818 Prop Tax Adm	1,960,066	809,220	809,220	-	-	1,150,846
11012 RESTRICTED-Auditor-Undistr Rec	-	-	-	-	-	-
11013 RESTRICTED-Auto Theft Interdic	869,558	869,558	869,558	-	-	-
11016 RESTRICTED-Citation Sign-Off	98,485	-	-	-	-	98,485
11017 RESTRICTED-Consumer Protection	3,628,846	3,628,846	3,628,846	-	-	-
11018 RESTRICTED-State Adj DA Asset	688,925	22,500	22,500	-	-	666,425
11019 RESTRICTED-DA-Vehicle Theft Al	-	-	-	-	-	-
11021 RESTRICTED-Realignment-Social	-	-	-	-	-	-
11022 RESTRICTED-Drug Prevention-Edu	1,343,998	-	-	-	-	1,343,998
11024 RESTRICTED-Prop 36 Sa & Crime	55,354	-	-	-	-	55,354
11026 RESTRICTED-Federal Equity Shar	1,686,190	1,321,000	1,321,000	-	-	365,190
11028 RESTRICTED-DA Federal Asset Fo	1,005,749	22,500	22,500	-	-	983,249
11029 RESTRICTED-Fsd Tax Intercept R	-	-	-	-	-	-
11030 RESTRICTED-Health Realignment	-	-	-	-	-	-
11032 RESTRICTED-Mental Health Reali	-	-	-	-	-	-
11033 RESTRICTED-Multispecies Projec	-	-	-	-	-	-
11034 RESTRICTED-Night Court Assess	-	-	-	-	-	-
11036 RESTRICTED-Prop 99 Gen- CHIP	7,997	-	-	-	-	7,997
11037 RESTRICTED-Prop 99 Gen- CHIP	4,086	-	-	-	-	4,086
11038 RESTRICTED-Emergency Medical S	6,558,248	-	-	-	-	6,558,248
11039 RESTRICTED-Public Safety Augme	-	-	-	-	-	-
11040 RESTRICTED-Recorder Vital-Hlth	443,889	249,212	249,212	-	-	194,677
11041 RESTRICTED-Real Estate Fraud P	2,070	-	-	-	-	2,070
11042 RESTRICTED-Asset Forfeitur-Adu	233,403	179,000	179,000	-	-	54,403
11046 RESTRICTED-Vital-Health Stat T	783,026	-	-	-	-	783,026
11048 RESTRICTED-AB 2086 Alcohol Con	1,030,073	-	-	-	-	1,030,073

State Controller Schedules
County Budget Act
January 2010

County of Riverside
Reserves/Designations - By Governmental Funds
Fiscal Year 2011-12

Schedule 4

Description	Reserves/ Designations June 30, 2010	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
11050 RESTRICTED-AB 189-Crim Justice	$ -	$ -	$ -	$ -	$ -	$ -
11053 RESTRICTED-CIWIMB Local Enforc	49.709	-	-	-	-	49,709
11054 RESTRICTED-Court House Temp Co	116.639	116,639	116,639	-	-	-
11055 RESTRICTED-Domestic Violence P	1.069.109	800,000	800,000	-	-	269,109
11056 RESTRICTED-DPSS Miscellaneous	-	-	-	-	-	-
11059 RESTRICTED-Hazardous Waste Gen	-	-	-	-	-	-
11060 RESTRICTED-Tax Losses Reserve	-	-	-	-	-	-
11062 RESTRICTED-Countywide DIF Prog	402,520	402,520	402,520	-	-	-
11064 RESTRICTED-TB Prev & Control A	175.306	-	-	-	-	175,306
11065 RESTRICTED-Reg Mobile Homes	-	-	-	-	-	-
11067 RESTRICTED-Sheriff Writ Assess	2,381,329	1,000,000	-	-	-	2,381,329
11069 RESTRICTED-Radio Replacement F	-	-	-	-	-	-
11072 RESTRICTED-Youth Protection/In	711,546	-	-	-	-	711,546
11076 RESTRICTED-Modernization	17,700,515	8,376,746	8,376,746	-	-	9,323,769
11077 RESTRICTED-Conversion	4.044.152	293,019	293,019	-	-	3,751,133
11078 RESTRICTED-Bldg Assmt-Civil	268	-	-	-	-	268
11079 RESTRICTED-Fee Building Fund-F	13.823	-	-	-	-	13,823
11081 RESTRICTED-J Edward Eberle Mem	42,512	-	-	-	-	42,512
11082 RESTRICTED-Dean Stout Memorial	204	-	-	-	-	204
11084 RESTRICTED-Local Lead Tobacco	-	-	-	-	-	-
11085 RESTRICTED-Booking Fees Recove	5.130.688	3,234,464	3,234,464	-	-	1,896,224
11086 RESTRICTED-Family Support Reim	-	-	-	-	-	-
11087 RESTRICTED-Automated County Wa	678,041	-	-	-	-	678,041
11088 RESTRICTED-Public Safety Inter	3.582	-	-	-	-	3,582
11089 RESTRICTED-Local Enforce Agenc	-	-	-	-	-	-
11091 RESTRICTED-Prop 10-High Risk I	-	-	-	-	-	-
11092 RESTRICTED-Prop 10 - Preschool	-	-	-	-	-	-
11093 RESTRICTED-Prop 10 - Children'	-	-	-	-	-	-

State Controller Schedules
County Budget Act
January 2010

County of Riverside
Reserves/Designations - By Governmental Funds
Fiscal Year 2011-12

Schedule 4

Description	Reserves/ Designations June 30, 2010	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
11094 RESTRICTED-Prop 10 - VIP Tots	$ -	$ -	$ -	$ -	$ -	$ -
11097 RESTRICTED-State Domestic Prep	1.740	-	-	-	-	1,740
11098 RESTRICTED-Air Quality Program	95,754	-	-	-	-	95,754
11099 RESTRICTED-Wind Implement Moni	265,008	-	-	-	-	265,008
11100 RESTRICTED-Wind Energy Convers	-	-	-	-	-	-
11101 RESTRICTED-Planning Special Pr	139,332	-	-	-	-	139,332
11102 RESTRICTED-CHA Animal Control	99,412	-	-	-	-	99,412
11103 RESTRICTED-STSA Escrow	3,380,763	-	-	-	-	3,380,763
11104 RESTRICTED-Capital Improvement	-	-	-	-	-	-
11105 RESTRICTED-Fugitive Apprehensi	-	-	-	-	-	-
11108 RESTRICTED-Leased Court Facili	-	-	-	-	-	-
11109 RESTRICTED-Community Health Do	-	-	-	-	-	-
11110 RESTRICTED-Robert Howie Monume	-	-	-	-	-	-
11114 RESTRICTED-Temescal Valley - S	-	-	-	-	-	-
11115 RESTRICTED-Mental Health Servi	-	-	-	-	-	-
11116 RESTRICTED-Mosquito Control-VB	-	-	-	-	-	-
11117 RESTRICTED-JAG-2005 DJ-BX-0176	-	-	-	-	-	-
11118 RESTRICTED-DOI-Auto Insurance	-	-	-	-	-	-
11120 RESTRICTED-JAG-2006 DJ-BX-0076	-	-	-	-	-	-
11121 RESTRICTED-OPEB Designated Fun	-	-	-	-	-	-
11123 RESTRICTED-Indian Gaming Spc D	-	-	-	-	-	-
11126 RESTRICTED-Youthful Offender B	-	-	-	-	-	-
11127 RESTRICTED-JAG-2007 DJ-BX-0456	-	-	-	-	-	-
11128 RESTRICTED-Soc.Security Trunca	-	-	-	-	-	-
11129 RESTRICTED-Electronic Recordin	332,367	332,367	332,367	-	-	-
11130 RESTRICTED-Idyllwild Library E	-	-	-	-	-	-
11131 RESTRICTED-Parimutuel In-Lieu	-	-	-	-	-	-
11132 RESTRICTED-JAG 2008 DJ-BX-0161	-	-	-	-	-	-

State Controller Schedules
County Budget Act
January 2010

County of Riverside

Reserves/Designations - By Governmental Funds

Fiscal Year 2011-12

Schedule 4

Description	Reserves/ Designations June 30, 2010	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
11135 RESTRICTED-AB158 Pechanga	$ -	$ -	$ -	$ -	$ -	$ -
11136 RESTRICTED-AB158 Morongo	-	-	-	-	-	-
11137 RESTRICTED-AB158 Cabazon	-	-	-	-	-	-
11138 RESTRICTED-AB158 Augustine	-	-	-	-	-	-
11139 RESTRICTED-AB158 Aqua Caliente	-	-	-	-	-	-
11140 RESTRICTED-AB158 Twenty-Nine P	-	-	-	-	-	-
11142 RESTRICTED-Illegal dumping Pro	-	-	-	-	-	-
11143 RESTRICTED-AB158 Casino Morong	-	-	-	-	-	-
11144 RESTRICTED-AB158 Pechanga Reso	-	-	-	-	-	-
11145 RESTRICTED-AB158 Soboba Casino	-	-	-	-	-	-
11146 RESTRICTED-AB158 Spotlight 29	-	-	-	-	-	-
11147 RESTRICTED-AB158 Augustine Cas	-	-	-	-	-	-
11148 RESTRICTED-JAG ARRA FY09	-	-	-	-	-	-
11149 RESTRICTED-Dispute Resolution	-	-	-	-	-	-
11150 RESTRICTED-JAG 2009 DJ BX 0214	-	-	-	-	-	-
19002 DESIGNATED-economic uncertain.	152,508,171	27,762,820	27,762,820	-	-	124,745,351
19004 DESIGNATED-SB90 deferral	1,380,033	-	-	-	-	1,380,033
19005 DESIGNATED-community improve.	-	-	-	2,400,000	2,400,000	2,400,000
19007 DESIGNATED-property tax system	18,599,158	6,960,129	6,960,129	-	-	11,639,029
19012 RESERVED-Inventory	1,565,357	-	-	-	-	1,565,357
19013 RESERVED-Imprest Cash	371,750	-	-	-	-	371,750
19014 RESERVED-General	15,193,532	-	-	-	-	15,193,532
19015 RESERVED-Restricted Programs	35,321,039	-	-	-	-	35,321,039
19016 RESERVED-Probation Asset Forf.	4,185	-	-	-	-	4,185
19017 RESERVED-EH Hazardous Material	2,260,633	-	-	-	-	2,260,633
19018 RESERVED-Family Planning	-	-	-	-	-	-
19019 RESERVED-Mangini Settlement	141,147	-	-	-	-	141,147
19020 RESERVED-Hlth Statham AIDS	-	-	-	-	-	-

State Controller Schedules
County Budget Act
January 2010

County of Riverside
Reserves/Designations - By Governmental Funds
Fiscal Year 2011-12

Schedule 4

Description	Reserves/ Designations June 30, 2010	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
19021 RESERVED-Prop 36 SACPA	$ -	$ -	$ -	$ -	$ -	$ -
19022 RESERVED-State Domestic Prep E	-	-	-	-	-	-
19024 DESIGNATED-Disaster Relief	15.000.000	-	-	-	-	15,000,000
19026 RESERVED-prepaid items	277.292	-	-	-	-	277,292
19027 DESIGNATED-mobile home reg	230.806	-	-	-	-	230,806
19028 DESIGNATED-plan special projct	-	-	-	-	-	-
19029 DESIGNATED-bud savng retention	-	-	-	-	-	-
Total General Fund	$ **302,038,819**	$ **57,381,291**	$ **56,381,291**	$ **2,400,000**	$ **2,400,000**	$ **248,057,528**
Special Revenue Fund						
20000 Transportation	$ 74.615.088	$ -	$ -	$ -	$ -	$ 74,615,088
20200 Tran-Lnd Mgmt Agency Adm	20.147.969	-	-	-	-	20,147,969
20250 Building Permits	321.752	-	-	-	-	321,752
20260 Survey	1.555.893	-	-	-	-	1,555,893
20300 Landscape Maintenance District	37,421,163	257,383	257,383	-	-	37,163,780
21000 Co Structural Fire Protection	4.426.982	-	-	-	-	4,426,982
21050 Community Action Agency	1,079,032	-	-	-	-	1,079,032
21100 EDA-Administration	9.641.209	-	-	-	-	9,641,209
21200 County Free Library	6,995,718	-	-	-	-	6,995,718
21250 Home Program Fund	124.380	-	-	-	-	124,380
21270 Cal Home Program	24,002	-	-	-	-	24,002
21300 Homeless Housing Relief Fund	345.826	-	-	-	-	345,826
21350 Hud Community Services Grant	227,853	-	-	-	-	227,853
21370 Neighborhood Stabilization NSP	2.343.518	-	-	-	-	2,343,518
21450 Office On Aging	662,689	-	-	-	-	662,689
21550 Workforce Development	2.088.927	-	-	194,999	194,999	2,283,926
21750 Bio-terrorism Preparedness	3.422.899	-	-	-	-	3,422,899
21760 CHA:Hosp Prep Prog Allocation	-	-	-	-	-	-

State Controller Schedules
County Budget Act
January 2010

County of Riverside
Reserves/Designations - By Governmental Funds
Fiscal Year 2011-12

Schedule 4

Description	Reserves/ Designations June 30, 2010	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
21770 CHA:CDC PHER H1N1 Allocation	$ -	$ -	$ -	$ -	$ -	$ -
21780 CHA:Hosp Prep Prog H1N1 Alloc	47.110	-	-	-	-	47,110
22000 Rideshare	58.581	-	-	-	-	58,581
22050 AD CFD Adm	1.403.567	-	-	-	-	1,403,567
22100 Aviation	736.228	-	-	-	-	736,228
22200 National Date Festival	90.601	-	-	-	-	90,601
22250 Cal Id	7.898.988	-	-	-	-	7,898,988
22300 AB2766 Sher Bill	425,375	-	-	-	-	425,375
22350 Special Aviation	1.195.195	-	-	-	-	1,195,195
22400 Supervisorial Road Dist #4	1,939,408	385,269	385,269	-	-	1,554,139
22450 WC- Multi-Species Habitat Con	3.675.113	-	-	16,000	16,000	3,691,113
22500 US Grazing Fees	17,297	16,948	16,948	-	-	349
22650 Airport Land Use Commission	472.695	-	-	-	-	472,695
22700 CHA:Prop 10	555,401	-	-	-	-	555,401
23000 Franchise Area 8 Assmt For Wmi	5.784	-	-	-	-	5,784
Total Special Revenue Fund	$ **183,966,243**	$ **659,600**	$ **659,600**	$ **210,999**	$ **210,999**	$ **183,517,642**
Capital Project Fund						
30000 Accumulative Capital Outlay	$ 1,505,286	$ -	$ -	$ -	$ -	$ 1,505,286
30100 Capital Const-Land & Bldg Acq	-	-	-	-	-	-
30120 County Tobacco Securitization	55,303,910	35,073,100	35,073,100	-	-	20,230,810
30300 Fire Capital Project Fund	1.109.870	1,109,870	1,109,870	-	-	-
30500 Developers Impact Fee Ops	118,220,949	7,248,000	7,248,000	-	-	110,972,949
30700 Capital Improvement Program	40.521.237	25,090,000	25,090,000	-	-	15,431,237
31540 RDA Capital Improvements	27,715,925	12,005,985	12,005,985	-	-	15,709,940
31600 Menifee Rd-Bridge Benefit Dist	8.452.653	197,357	197,357	-	-	8,255,296
31610 So West Area RB Dist	10.512.819	7,253,192	7,253,192	-	-	3,259,627
31630 Traffic Signal Mitigation	763.153	569,888	569,888	-	-	193,265

State Controller Schedules
County Budget Act
January 2010

County of Riverside
Reserves/Designations - By Governmental Funds
Fiscal Year 2011-12

Schedule 4

Description	Reserves/ Designations June 30, 2010	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
31640 Mira Loma R & B Bene District	$ 18,806,022	$ -	$ -	$ 462,044	$ 462,044	$ 19,268,066
31650 Dev Agrmt DIF Cons. Area Plan	19,901	-	-	129	129	20,030
31680 Developer Agreements	1,735,395	188,617	188,617	-	-	1,546,778
31690 Signal Mitigation Dev Imp Fees	29,922	-	-	191	191	30,113
31693 RBBD-Scott Road	1,479,566	139,361	139,361	-	-	1,340,205
32710 EDA Mitigation Projects	134,431	-	-	-	-	134,431
32750 Woodcrest Library Project	1	-	-	-	-	1
33500 PSEC 800 Mhz Radio Project	1,011,869	88,949	88,949	-	-	922,920
33600 CREST	3,419,051	-	-	-	-	3,419,051
Total Capital Project Fund	$ **290,741,960**	$ **88,964,319**	$ **88,964,319**	$ **462,364**	$ **462,364**	$ **202,240,005**
Debt Service Fund						
35000 Pension Obligation Bonds	$ 11,087,752	$ -	$ -	$ -	$ -	$ 11,087,752
37050 Teeter Debt Service Fund	10,626,883	-	-	-	-	10,626,883
Total Debt Service Fund	$ **21,714,635**	$ **-**	$ **-**	$ **-**	$ **-**	$ **21,714,635**
Total Governmental Funds	$ **798,461,657**	$ **147,005,210**	$ **146,005,210**	$ **3,073,363**	$ **3,073,363**	$ **655,529,810**

Arithmetic Results						COL 2 - 4 + 6
Total Transferred **From**					SCH 7, COL 5	
Total Transferred **To**	SCH 3, COL'S 4 & 5		SCH 2, COL 3		SCH 2. COL 7	

State Controller Schedules	County of Riverside	Schedule 5
County Budget Act January 2010	Summary of Additional Financing Sources by Source and Fund Governmental Funds **Fiscal Year 2011-12**	

Description	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Summarization by Source					
Taxes	$ 296,488,610	$ 294,362,860	$ 306,677,559	$ 286,026,713	$ 286,026,713
Licenses, Permits & Franchises	19,195,969	20,294,237	21,510,516	19,510,516	19,510,516
Fines, Forfeitures & Penalties	113,205,568	94,815,956	98,199,648	95,465,223	92,541,377
Rev Fr Use Of Money&Property	31,869,130	25,273,389	24,542,434	24,492,434	24,492,434
Intergovernmental Revenues	1,487,299,971	1,519,372,090	1,582,546,303	1,586,034,641	1,589,708,487
Charges For Current Services	662,425,605	612,552,790	688,056,450	687,646,244	688,646,244
Other In-Lieu And Other Govt	12,326,753	18,886,417	12,174,383	12,174,383	12,174,383
Special And Extraordinary Item	59,660	-	-	-	-
Other Revenue	323,257,752	223,707,291	191,792,780	239,675,000	248,175,000
Total Summarization by Source	**$ 2,946,129,018**	**$ 2,809,265,030**	**$ 2,925,500,073**	**$ 2,951,025,154**	**$ 2,961,275,154**

State Controller Schedules	County of Riverside	Schedule 5
County Budget Act January 2010	Summary of Additional Financing Sources by Source and Fund Governmental Funds **Fiscal Year 2011-12**	

Description	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Summarization by Fund					
10000 General Fund	$ 2,327,914,053	$ 2,265,029,071	$ 2,359,301,496	$ 2,377,350,448	$ 2,387,600,448
20000 Transportation	117,510,847	161,573,433	135,257,410	135,257,410	135,257,410
20200 Tran-Lnd Mgmt Agency Adm	12,799,652	11,575,228	11,929,012	11,929,012	11,929,012
20250 Building Permits	6,388,131	5,848,380	5,020,626	5,020,626	5,020,626
20260 Survey	5,372,181	4,636,902	4,814,810	4,814,810	4,814,810
20300 Landscape Maintenance District	2,210,465	2,154,011	2,145,988	2,145,988	2,145,988
21000 Co Structural Fire Protection	49,518,189	50,786,893	48,257,081	48,257,081	48,257,081
21050 Community Action Agency	11,185,587	12,053,503	8,608,267	8,608,267	8,608,267
21100 EDA-Administration	22,593,359	19,483,654	22,277,180	22,277,180	22,277,180
21200 County Free Library	18,412,983	22,778,009	17,616,942	17,616,942	17,616,942
21250 Home Program Fund	1,369,972	4,007,538	4,317,667	4,317,667	4,317,667
21270 Cal Home Program	147	1,500,755	750,000	750,000	750,000
21300 Homeless Housing Relief Fund	8,210,550	9,391,714	9,874,257	9,874,257	9,874,257
21350 Hud Community Services Grant	13,510,032	13,468,589	13,250,766	13,250,766	13,250,766
21370 Neighborhood Stabilization NSP	32,352,116	24,774,125	36,667,963	36,667,963	36,667,963
21450 Office On Aging	12,348,480	11,877,233	11,322,291	11,322,291	11,322,291
21550 Workforce Development	35,987,439	36,248,805	24,505,822	24,505,822	24,505,822
21750 Bio-terrorism Preparedness	2,563,266	2,447,870	2,631,029	2,631,029	2,631,029
21760 CHA:Hosp Prep Prog Allocation	-	602,850	708,633	708,633	708,633
21770 CHA:CDC PHER H1N1 Allocation	1,790,578	1,241,857	98,684	98,684	98,684
21780 CHA:Hosp Prep Prog H1N1 Alloc	42,509	5,542	-	-	-
22000 Rideshare	1,297,623	1,238,288	1,447,574	1,447,574	1,447,574
22050 AD CFD Adm	1,072,247	847,565	790,000	790,000	790,000
22100 Aviation	-	2,700,896	2,460,958	2,460,958	2,460,958
22200 National Date Festival	4,352,675	4,228,014	3,546,722	3,546,722	3,546,722
22250 Cal Id	4,268,824	4,184,872	5,466,105	5,466,105	5,466,105
22300 AB2766 Sher Bill	531,061	616,323	670,000	670,000	670,000
22350 Special Aviation	-	3,888,564	2,156,350	2,156,350	2,156,350
22400 Supervisorial Road Dist #4	658,167	650,723	629,763	629,763	629,763
22450 WC- Multi-Species Habitat Con	3,551,074	4,019,724	3,764,967	4,280,967	4,280,967
22500 US Grazing Fees	241	107	107	107	107
22650 Airport Land Use Commission	419,063	353,350	335,991	335,991	335,991
22700 CHA:Prop 10	1,578,734	1,858,620	1,813,279	1,813,279	1,813,279
23000 Franchise Area 8 Assmt For Wmi	764,615	777,308	800,000	800,000	800,000
30000 Accumulative Capital Outlay	651,208	1,036,602	1,037,750	1,037,750	1,037,750
30100 Capital Const-Land & Bldg Acq	91,143,068	45,169,195	86,417,047	86,417,047	86,417,047
30120 County Tobacco Securitization	36,466,697	3,650,854	4,037,000	4,037,000	4,037,000
30300 Fire Capital Project Fund	15,787	7,207	-	-	-
30500 Developers Impact Fee Ops	5,464,591	3,316,829	6,812,000	6,812,000	6,812,000
30700 Capital Improvement Program	2,007,117	866,128	960,000	960,000	960,000
31540 RDA Capital Improvements	60,456,131	19,052,494	24,567,075	24,567,075	24,567,075
31600 Menifee Rd-Bridge Benefit Dist	100,624	55,458	52,643	52,643	52,643

State Controller Schedules | **County of Riverside** | **Schedule 5**

County Budget Act
January 2010

Summary of Additional Financing Sources by Source and Fund
Governmental Funds
Fiscal Year 2011-12

Description	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
31610 So West Area RB Dist	$ 255,990	$ 218,962	$ 201,922	$ 201,922	$ 201,922
31630 Traffic Signal Mitigation	19,732	6,921	7,112	7,112	7,112
31640 Mira Loma R & B Bene District	1,830,380	1,036,936	1,114,754	1,114,754	1,114,754
31650 Dev Agrmt DIF Cons. Area Plan	874,908	1,931,240	1,924,154	1,924,154	1,924,154
31680 Developer Agreements	21,683	11,307	11,383	11,383	11,383
31690 Signal Mitigation Dev Imp Fees	2,695,135	1,630,450	3,158,191	3,158,191	3,158,191
31693 RBBD-Scott Road	43,333	87,766	90,639	90,639	90,639
32710 EDA Mitigation Projects	84,169	61,392	85,000	85,000	85,000
32750 Woodcrest Library Project	33,978	-	-	-	-
33500 PSEC 800 Mhz Radio Project	914,493	5,954,124	5,565,275	5,565,275	5,565,275
33600 CREST	4,109,768	3,062,720	4,108,357	11,068,486	11,068,486
35000 Pension Obligation Bonds	33,860,282	32,955,866	36,176,199	36,176,199	36,176,199
37050 Teeter Debt Service Fund	4,505,084	2,302,263	5,935,832	5,935,832	5,935,832
Total Summarization by Fund	$ **2,946,129,018**	$ **2,809,265,030**	$ **2,925,500,073**	$ **2,951,025,154**	$ **2,961,275,154**

Total Transferred From	sch 6. col 4	sch 6. col 5		sch 6. col 6	sch 6. col 7
Total Transferred To					sch 2. col 4
Summarization Totals Must Equal					Total by Source = Total by Fund

State Controller Schedules	County of Riverside	Schedule 6
County Budget Act	Detail of Additional Financing Sources by Fund and Account	
January 2010	Governmental Funds	
	Fiscal Year 2011-12	

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
10000 General Fund						
General Fund						
	Taxes					
		Prop Tax Current Secured	$ 179,360,958	$ 170,180,000	$ 171,100,000	$ 171,100,000
		Prop Tax Current Unsecured	9,333,901	8,176,582	8,586,000	8,586,000
		Prop Tax Prior Secured	16,287	35,472	-	-
		Prop Tax Prior Unsecured	480,831	606,345	700,000	700,000
		Prop Tax Current Supplemental	(3,402,651)	25,316	210,000	210,000
		Prop Tax Prior Supplemental	5,647,799	2,698,690	655,800	655,800
		Sales & Use Taxes	25,761,880	28,393,095	21,349,154	21,349,154
		Documentary Transfer Tax	10,677,818	9,958,654	10,500,000	10,500,000
		Transient Occupancy	1,414,745	1,403,983	1,457,188	1,457,188
		Non Commn Aircraft	411,496	305,096	300,000	300,000
		Other Taxes	-	-	-	-
		Racehorse Tax	11,260	23,866	20,000	20,000
		Del Mobile Home Fees	(83,368)	-	-	-
		Total Taxes	**$ 229,630,956**	**$ 221,807,099**	**$ 214,878,142**	**$ 214,878,142**
	Licenses, Permits & Franchises					
		County Animal Licenses	$ 561,854	$ 700,813	$ 1,100,000	$ 1,100,000
		Kennel Permits	19,840	19,195	21,527	21,527
		Business Licenses	469,530	456,010	516,000	516,000
		Lic-Fortune Telling 5.24.030	100	111	240	240
		Lic-Massage 5.32.020/5.32.040	49,950	35,960	31,896	31,896
		Mitigation Fee	(395,516)	-	80,000	80,000
		Food Facility Const Plan Check	519,272	561,160	650,000	650,000
		Cert For Sewage Disposal	296,494	265,779	250,000	250,000
		Swim Pool Const Plan Check	627,056	572,004	600,000	600,000
		Franchises	5,212,231	5,368,976	5,000,000	5,000,000
		Haz Mtl-Emerg Resp Plan Prmt	2,843,074	3,145,261	3,000,000	3,000,000
		Hazardous Waste Generator Prmt	1,784,903	1,857,737	2,000,000	2,000,000
		License-Bingo Ord 5.04.010	1,900	1,450	1,500	1,500
		License-CATV	3,121,829	3,497,957	3,360,000	3,360,000
		License-Dance Ord 5.20.010	1,425	1,900	-	-
		Lic -Marriage Domestic Viol	241,638	256,473	198,000	198,000
		Permit-Explosive Handling	7,412	9,984	7,375	7,375
		Permit-Gun (PC 12050)	30,418	36,650	30,000	30,000
		Records Clearance Letters	11,121	11,634	11,578	11,578
		UST New Const-Upgrade Permit	87,208	93,305	100,000	100,000
		UST Operating Permit	866,073	847,190	800,000	800,000
		UST Remov-Aban-Temp-Close Prmt	16,962	20,764	20,000	20,000
		Medical Waste	142,744	166,140	137,000	137,000
		Air Quality	3,536	16,458	-	-

State Controller Schedules	County of Riverside	Schedule 6
County Budget Act	Detail of Additional Financing Sources by Fund and Account	
January 2010	Governmental Funds	
	Fiscal Year 2011-12	

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Wind Implementation Monitoring	$ -	$ 6,900	$ -	$ -
		Abandoned Propty Registration	202,483	236,795	215,230	215,230
		Total Licenses, Permits & Franchises	$ **16,723,537**	$ **18,186,606**	$ **18,130,346**	$ **18,130,346**
	Fines, Forfeitures & Penalties					
		Teeter Overflow	$ 52,600,000	$ -	$ 35,500,000	$ -
		Vehicle Code Fines	34	1	-	-
		Fee-POC Transaction	301,809	315,289	272,212	272,212
		Fine-Traffic Motor Vehicle MC	1,763,911	1,787,219	1,833,000	1,833,000
		Health-Safety Fees	10,120	9,508	22,230	22,230
		DUI Misdemeanor Reckless	240,644	239,411	783,320	783,320
		Fine-Ch90-78 Forensic Test	445,344	470,818	615,000	615,000
		Other Court Fines	8,184,488	8,496,260	7,533,964	7,533,964
		Code Enforcement	1,141,437	1,032,116	1,838,145	1,838,145
		Superior Court	181,504	168,656	132,000	132,000
		Administration Costs	4,147	6,605	-	-
		Fine-Traffic School	1,620,602	1,561,489	1,798,250	1,798,250
		AB233 Realignment	19,016,788	18,490,799	19,917,480	19,917,480
		Other Court Fines Non Dept	1,141	1,105	-	-
		Criminal-Co. 25%	160,496	96,605	252,700	252,700
		Other Fines	2,546,538	3,495,138	630,889	630,889
		Alcohol Education Prevention	341,301	327,974	885,154	885,154
		Failure to Appear(Auto Wrnt)	15,954	13,283	-	-
		Asset Forfeiture	940,502	2,020,401	45,000	-
		Civil Penalties	13,087	9,780	10,000	10,000
		Other Forfeitures & Penalties	11,239,107	6,116,522	7,531,429	3,902,583
		Work Release Programs	3,268,224	3,067,106	2,986,300	2,986,300
		Admin Enforcement Order	52,583	66,350	50,000	50,000
		CIO Penalty R&T 482	286,963	177,770	230,000	980,000
		Penalties & Int On Del Taxes	1,889,530	2,551,167	2,938,845	2,938,845
		Penalties & Int - Del Tax	3,076,780	455,031	5,935,832	5,935,832
		Costs On Delinquent Taxes	3,336,424	3,029,479	2,914,991	2,914,991
		Teeter Overflow	-	40,000,000	-	35,500,000
		Total Fines, Forfeitures & Penalties	$ **112,679,458**	$ **94,005,882**	$ **94,656,741**	$ **91,732,895**
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 12,946,494	$ 8,457,177	$ 5,446,630	$ 5,446,630
		Interest-Other	29,126	32,030	-	-
		Interest- AB 1018 (PC 7642)	6,000	-	-	-
		Interest-Departmental	84,244	55,935	15,472	15,472
		Rents	215,518	258,420	252,295	252,295
		Admissions	6,037	8,240	6,343	6,343
		Building Use	1,034,097	1,145,689	1,134,236	1,134,236

Detail of Additional Financing Sources by Fund and Account
Governmental Funds
Fiscal Year 2011-12

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Exhibits	$ 170,424	$ 165,510	$ 161,250	$ 161,250
		Entry Fees	-	522	522	522
		Industrial & Commercial Space	710	2,960	1,445	1,445
		Land Lease	222,132	(6,393)	-	-
		Lease Ambulance	13,250	9,750	10,990	10,990
		Lease To Non-County Agency	540,833	407,506	538,184	538,184
		Misc Event Charges	97,641	112,859	132,500	132,500
		Concessions	1,598	860	937	937
		Parking	620,809	403,468	582,753	582,753
		Range Fees	80,201	90,800	80,000	80,000
		Rental Of Buildings	500,672	476,250	982,673	982,673
		Vending Machines	37,143	3,543	2,740	2,740
		Monthly Parking Fees-County	89,887	100,996	82,139	82,139
		Monthly Parking-Non-County	285,378	468,258	492,180	492,180
		Parking Validations - County	6,040	3,000	4,369	4,369
		Parking Validations Non-County	13,506	16,956	10,498	10,498
		Parking Returned Check Fee	67	-	-	-
		Total Rev Fr Use Of Money&Property	$ **17,001,807**	$ **12,214,336**	$ **9,938,156**	$ **9,938,156**
	Intergovernmental Revenues					
		CA-Motor Vehicle In-Lieu Tax	$ 197,932,854	$ 189,210,416	$ 189,000,000	$ 189,000,000
		CA-Realignment from VLF	48,559,842	45,942,536	50,000,000	50,000,000
		CA-Public Asst Administration	118,162,348	119,503,840	126,488,245	126,488,245
		CA-Support Enf Incentive	9,754,714	10,761,168	11,111,978	11,111,978
		CA-Public Asst Program	124,139,448	135,459,003	181,495,332	181,495,332
		CA-Realignment-DPSS	62,812,010	71,159,570	65,828,326	65,828,326
		CA-Realignment-Mental Health	20,515,648	22,365,241	21,898,167	21,898,167
		CA-Mental Health Services	3,088,118	4,073,341	4,383,386	4,383,386
		CA-Rollover	16,196	(13,309)	3	3
		CA-State MH Subs Funding	9,379,951	5,975,593	13,423,436	13,423,436
		CA-Managed Care	48,124	1,912,613	10,374,613	10,374,613
		CA-Prop 36 SA&Crime Prevention	1,029,413	499,960	1	1
		CA-Mental Health Svcs Act	31,328,564	54,430,995	69,567,597	69,567,597
		CA-Medi-cal	6,634,743	6,095,484	6,889,144	6,889,144
		Ca-Chdp	859,050	1,181,004	1,075,539	1,075,539
		CA-Family Planning	1,404,738	2,778,637	5,264,332	5,264,332
		CA-Medically Indigent	1,782,497	1,672,172	1,403,885	1,403,885
		CA-Medi-Cal Match	1,563,703	1,525,571	1,881,343	1,881,343
		CA-Realignment-Health	12,742,089	13,340,539	11,737,043	11,737,043
		CA-Other Aid to Health	520,136	404,230	589,306	589,306
		CA-Grant Revenue	9,885,612	7,699,815	9,374,854	9,374,854
		CA-Ag Commn-Salary Reimb	979,539	961,255	958,020	958,020
		CA-Ag Commn-Sale Econ Poisons	561,698	555,613	570,000	570,000

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Detail of Additional Financing Sources by Fund and Account

Governmental Funds

Fiscal Year 2011-12

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		CA-Unclmd Gas Tax Agricultural	$ 587,703	$ 401,064	$ 410,000	$ 410,000
		CA-Juvenile Probation & Camps	4,918,082	3,396,120	5,252,006	5,252,006
		Local Detention Facility	2,990,912	3,946,507	3,488,687	3,488,687
		CA-Parolee Detention Holds	836,392	1,190,495	812,645	812,645
		CA-Disaster	61,858	8,478	-	-
		CA-Homeowners Tax Relief	2,763,155	2,768,770	2,800,000	2,800,000
		CA-Suppl Homeowners Tax Relief	45,547	60,308	78,000	78,000
		CA-Elect Reimb Sec State	5,065	1,863,927	5,000	5,000
		CA-Mandate Reimbrsment Process	63,044	367,813	2,552,720	2,552,720
		CA- Other State Mandated Costs	-	-	1,697,305	1,697,305
		CA-Mandate Reimbursement	5,646,751	3,644,809	72,265	72,265
		CA-Post Reimbursement	656,010	680,505	351,103	351,103
		CA-Tobacco Tax Prop.10	2,117,202	2,148,781	2,855,748	2,855,748
		CA-Tobacco Tax Prop.99	336,497	252,012	282,000	282,000
		CA-Growth Pub Safety Sales Tax	42,295,790	(512,633)	-	-
		CA-License Plate Fund	-	-	22,000	22,000
		CA-Veteran Svc Officer Reimb	331,842	266,845	149,000	149,000
		CA-Public Safety Sales Tax	67,862,888	110,585,796	106,911,951	110,585,797
		CA-From Other St Govt Agencies	1,344,301	864,495	560,648	560,648
		Off Highway Vehicle Park & Rec	247,784	68,576	-	-
		CA-Vehicle Theft SB 2139	1,461,019	2,043,041	1,123,230	1,123,230
		CA-Urban Auto Fraud Grant	359,186	386,846	147,784	147,784
		CA-Spousal Abuse Pros	171,049	257,497	222,861	222,861
		CA-Misc State Reimbursements	39,841	6,706	-	-
		CA-Victims Claim Process	701,398	820,067	750,258	750,258
		CA-Workers Comp Ins Fraud	1,058,939	1,265,313	1,130,000	1,130,000
		CA-Penal Code 1305	-	37,568	10,000	10,000
		CA-Special Emphasis Grant	77,832	150,156	125,000	125,000
		CA-DA Auto Ins Fraud	394,834	500,718	448,374	448,374
		CA-Extradition Of Prisoners	135,818	118,852	83,100	83,100
		CA-Citizens Option Ps	6,830,703	6,011,426	5,677,466	5,677,466
		CA-County Government	166,489	109,599	156,000	156,000
		CA-Vehicle Abatement	667,015	630,494	548,216	548,216
		CA-Victim-Witness	753,290	1,093,948	866,176	866,176
		CA-Career Criminal Program	364,323	152,715	-	-
		CA- Other Operating Grants	5,671,789	6,336,022	5,532,106	5,532,106
		CA-STC Reimbursement	957,729	1,172,320	1,110,212	1,110,212
		CA-Trans Of Prisoners PC4750	1,193,917	788,738	818,256	818,256
		CA-Indian Gaming Grants	1,373,162	26,953	1,100,000	1,100,000
		CA-PC4750 CDC:Criminal/Writs	763,279	623,524	977,009	977,009
		CA-Child Abuse Vertical Prosec	225,535	100,084	-	-
		CA-LifeAnnuity Consmer Protect	45,994	8,965	10,000	10,000
		CA-Criminal RestitutionCompact	201,900	198,946	198,333	198,333

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Detail of Additional Financing Sources by Fund and Account

Governmental Funds

Fiscal Year 2011-12

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Fed-Public Assistance Admin	$ 218,976,974	$ 199,681,354	$ 223,043,787	$ 223,043,787
		Fed-Publ Assistance Programs	145,137,481	157,207,757	148,221,569	148,221,569
		Fed-Family Support Reimb	19,581,945	21,768,355	22,351,237	22,351,237
		Fed-Support Enforce Incentive	1,975,242	1,810,092	2,039,640	2,039,640
		Fed-Title IV-E Funding	5,323,568	4,023,600	8,321,574	8,321,574
		Fed-National School Lunch	757,278	685,923	687,050	687,050
		Fed-SB 910 MAA MAC	1,639,426	654,630	1,012,081	1,012,081
		Fed- Health Grants	15,130,735	20,166,494	22,105,949	22,105,949
		Fed-Aid For Disaster	-	14,926	1	1
		Federal In Lieu Taxes	3,126,249	3,165,975	3,100,000	3,100,000
		Fed-BJA Block Grant	98,987	-	157,781	157,781
		Fed-Destruction-Marijuana	24,288	40,053	750	750
		Fed-Misc Reimbursement	324,343	348,337	88,177	88,177
		Fed-Medi-Cal-FFP	43,906,716	37,186,227	41,217,176	41,217,176
		Fed-DAS Regular-103M/C-F	-	1	1	1
		Fed-Block Grants	13,838,114	15,922,135	14,289,566	14,289,566
		Fed- Other Operating Grants	5,581,243	6,803,337	7,086,224	7,086,224
		Fed- Ineligible SSI Incentive	153,600	169,800	163,200	163,200
		Fed-US DOJ SCAAP	895,690	806,265	800,000	800,000
		Fed-Federal Revenue	795,319	311,908	200,001	200,001
		Fed-Life Support-CY	-	40,000	40,000	40,000
		Fed-Life Support-PY	-	20,000	20,000	20,000
		Fed-Other Government Agencies	30,798	60,838	10,000	10,000
		Fed-Medicare	302,691	458,936	321,306	321,306
		Fed-Anti Drug Abuse Program	1,178,126	884,242	682,993	682,993
		Fed-Southwest Border Init	18,450	453,797	500,000	500,000
		Fed-Mandate Reimbursement	2,496,451	1,617,442	2,939,261	2,939,261
		Fed ARRA - Prime Recipient	4,769,855	4,609,167	5,083,270	5,083,270
		Fed - ARRA Subrecipient	18,541,369	11,236,687	2,203,342	2,203,342
		Total Intergovernmental Revenues	$ **1,325,031,837**	$ **1,342,486,731**	$ **1,439,335,945**	$ **1,443,009,791**
	Charges For Current Services					
		Seizure Fees	$ 238,271	$ 434,244	$ 340,916	$ 340,916
		Correction Of Fixed Charges	131,437	72,080	44,200	44,200
		Prop Tax Colln Fees R&T 95.2	11,346,831	9,808,083	10,054,788	10,054,788
		R & T 2188 Timeshare Asmnt Fee	2,222,081	2,155,842	2,102,375	2,102,375
		Hist Aircraft Exempt R&T 220.5	805	630	500	500
		Redemption Fees	515,486	607,982	570,413	570,413
		Supplemental 5% Charge R&T75.6	2,800,686	2,295,689	2,277,818	2,277,818
		Tax Coll Adv Costs-Tax Sales	376,888	375,339	140,892	140,892
		Treasurer-Tax Collector Fees	2,945,992	3,060,444	2,898,420	2,898,420
		Special Assessments	291,540	1,375,263	260,865	260,865
		Undivided Intrst R&T Code 4151	267	885	200	200

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Sep Valuations R&T Code 2821	$ 3,540	$ 494	$ 2,000	$ 2,000
		Prop Characteristics R&T 408.3	6,742	3,423	5,000	5,000
		Map Copies	29,989	13,561	20,000	20,000
		AB1389 Charges	55,423	-	-	-
		Auditor-Accounting Fees	72,671	72,900	131,555	131,555
		Auditor - Garnishment Fee	31,818	36,735	34,500	34,500
		Payroll Services-County	476,119	657,418	636,000	636,000
		Replacement Radios	1,647,935	1,664,302	1,700,000	1,700,000
		Communications Services	1,025,269	1,015,010	1,114,849	1,114,849
		Candidates Filing Fees	88,199	722	50,000	50,000
		School Election Service	1,250,479	1,830,954	587,000	587,000
		Special Dist Election Service	584,009	1,839,832	391,000	391,000
		City Election Services	571,730	1,445,740	224,000	224,000
		Dispatch Services	67,480	977,527	136,120	136,120
		DA-Check Diversion Program	64,427	47,100	100,000	100,000
		Flood Control District	97,007	139,611	100,000	100,000
		Housing Authority	12,514	12,068	10,000	10,000
		Legal Services	93,829	102,344	87,000	87,000
		Liability Insurance	105,855	80,434	150,000	150,000
		LPS Conservatorship	250,574	313,970	146,304	146,304
		Public Defender Service	139,388	284,160	245,000	245,000
		School Districts	5,776	34,362	6,000	6,000
		Prison Legal Riemb (PC4750)	33,429	48,290	25,000	25,000
		Investigation Fees	8,585	15,463	-	-
		Restaurant Consultation Fees	77,575	63,424	80,000	80,000
		NPDES-Planning-Engineering	98,940	185,771	115,000	115,000
		Planning Services	128,873	135,206	101,812	101,812
		Deposit Based Fee Draws	4,645,057	3,936,783	3,800,324	3,800,324
		Charges for Admin Services	13,540	4,241	13,000	13,000
		Misc Reimb-Agricultural Svcs	795,484	893,448	799,000	799,000
		Sealer of Weights & Measures	1,663,258	1,720,677	1,660,000	1,660,000
		USDA Phyto Fees	10,662	4,630	1	1
		Civil Process Fees	1,384,716	1,309,094	1,484,126	1,484,126
		Small Claims Fee	-	-	300	300
		Court Fees & Costs	1,358,312	735,606	-	-
		Collection Charges	1,195,007	1,757,867	1,672,925	1,672,925
		Probate Fees	503,737	439,468	295,807	295,807
		Superior Court Fees	1,911	2,835	265,660	265,660
		Reimb From Trial Court Funding	15,490,171	16,484,810	17,163,717	17,163,717
		Estate Fees	7,207	8,718	3,620	3,620
		Pa Stat Commn Xtraord PC7660	558,788	497,133	350,000	350,000
		Proc For Estates No Known Heir	100,420	88,336	70,000	70,000
		Storage-Cost Reimbursement	13,176	23,062	26,000	26,000

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Adoption-Auction Fees	$ 199,634	$ 145,082	$ 131,219	$ 131,219
		City Billings-Animal Shelt Svc	3,098,888	2,285,846	1,985,580	1,985,580
		City Billings-Field Services	2,209,441	1,943,785	1,778,884	1,778,884
		City Licenses-Service Charge	44,545	29,591	84,510	84,510
		Impounds Boards Disposal	238,397	227,921	245,304	245,304
		Spay&Neuter Clinic Fees	382,889	461,206	1,060,670	1,060,670
		Law Enforcement Services	146,758	151,095	151,516	151,516
		ABC Letters	970	1,423	1,358	1,358
		Contract City Law Enforcement	144,195,661	145,318,391	151,617,808	151,617,808
		Crime Analysis Fees	1,368	1,244	1,250	1,250
		Fingerprinting	163,121	130,434	127,682	127,682
		RCRMC Security Law Enforcement	2,365,536	2,745,234	2,709,421	2,709,421
		School Services Law Enforcemnt	4,089,385	3,293,624	3,340,994	3,340,994
		Search And Rescue	11,405	43,603	500	500
		Sheriff Extra Duty (GC53069.8)	1,663,864	1,661,167	1,522,029	1,522,029
		Vehicle Impound Fee VC22850.5	108,883	115,511	109,898	109,898
		Aircraft Costs-Reimb	-	140	-	-
		Fee-Repo (GC26751)	13,594	13,405	14,309	14,309
		Booking Fees	-	(21,859)	-	-
		Citation Sign - Off	18,447	28,542	-	-
		Trial Crt Funding-Unallowable	1,071,108	1,149,237	1,155,447	1,155,447
		Recording Fees	6,566,154	8,228,769	8,700,007	8,700,007
		Copies of Official Records	322,461	324,671	251,250	251,250
		Vitals Recorder Fees	1,138,858	1,136,724	1,105,000	1,105,000
		Conversion Program	602,739	579,743	600,000	600,000
		Recorder Vitals	136,742	153,602	133,000	133,000
		Recorder Modernization	2,226,173	2,217,210	2,309,000	2,309,000
		No. Chg/Ownership R&T 480.3	254,840	170,920	256,000	256,000
		Soc. Security Truncation	604,767	582,126	600,000	600,000
		Electronic Recording Fee	604,767	582,126	600,000	600,000
		Health Services	333,650	35,760	56,492	56,492
		Ambulance Inspection	438,269	221,750	140,000	140,000
		Capitated Medi-Cal	1,361,349	2,024,386	1,895,723	1,895,723
		Detention Facilities	1,438	1,274	10,629	10,629
		Emerg Med Personnel Cert	63,825	56,919	110,000	110,000
		EMS Protocol Manual Fees	350	10	-	-
		EMS Testing Fees	(18)	-	-	-
		Environmental Health Contracts	219,661	253,002	195,000	195,000
		Fees-Other Health	111,542	269,746	103,000	103,000
		WIC-Baby Slings	3,575	4,170	5,000	5,000
		Food Facility	5,485,316	5,735,166	5,800,000	5,800,000
		Food Handlers Education	840,967	920,403	905,894	905,894
		Industrial Hygiene Fees	8,284	34,810	50,000	50,000

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Lab Fees	$ -	$ 40	$ -	$ -
		Lab Fees-Private Pay	457,371	662,893	550,000	550,000
		Lea -Tipping Fee	752,340	764,140	910,000	910,000
		Mandatory Aids Education	13,924	9,862	15,000	15,000
		Mobilehome Park	178,801	171,725	230,000	230,000
		Organized Camp	22,486	18,938	15,000	15,000
		Poultry Ranch	15,688	13,964	17,000	17,000
		Refuse Collection Permits	2,592,239	2,418,782	2,058,891	2,058,891
		Reimb For Health Svc-Physicals	155,300	190,106	169,403	169,403
		Septic Tank Pumper	61,847	57,748	60,000	60,000
		Swimming Pool Permits	2,482,108	2,504,981	2,500,000	2,500,000
		Uncmpsd Emerg Med Svcs SB-12	7,678,556	6,769,041	7,250,000	7,250,000
		Unpackaged Food Carts Inspec	9,020	6,902	10,000	10,000
		Water Systems	212,023	253,185	185,000	185,000
		Water Wells	146,504	150,463	125,000	125,000
		Private Solid Waste Facilities	108,983	76,589	105,000	105,000
		Other 3rd Parties	150,403	54,345	522,785	522,785
		Other 3rd Parties-Non PT	463,672	473,821	501,086	501,086
		Health fees	131,439	213,516	-	-
		CHDP Patients	19,840	7,968	34,658	34,658
		IHSS Insurance Premiums	1,160,483	1,150,381	1,069,905	1,069,905
		Mental Health Services	-	-	1	1
		Inst Mentally Disabled	1,515,514	1,850,364	1,406,749	1,406,749
		Insurance Fees	298,293	321,429	286,769	286,769
		Patient Fees	267,140	197,338	197,215	197,215
		Other MH Charges For Services	2,494,290	2,229,739	4,056,061	4,056,061
		CCS Therapy Repay	6,560	4,266	-	-
		California children's services	8,780	10,874	-	-
		Adoption Fees	-	150	-	-
		Medi Care Patients	358,736	165,474	981,562	981,562
		Medi-Cal Patients	4,974,784	7,821,636	13,859,375	13,859,375
		Mia	(5,095)	(6,468)	2,441,622	2,441,622
		Private Patients	653,767	724,302	390,784	390,784
		Rebates & Refunds	782,959	1,422,002	1,077,405	1,077,405
		Medical Records Abstract Sales	304	418	-	-
		Seminar & Tuition Fees	22,608	59,089	21,500	21,500
		Consulting Fees	405,969	361,455	360,913	360,913
		Professional Education	(954)	(747)	-	-
		Edward Dean Museum	44,862	34,443	50,000	50,000
		Personnel Services	4,630,358	5,436,293	4,159,590	4,159,590
		Training	39,015	44,147	-	-
		Real Estate Fraud Prosecution	947,659	925,633	1,042,000	1,042,000
		Accident Reports	154,041	136,265	148,842	148,842

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Schedule 6

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Collections Program	$ 445,448	$ 524,933	$ 539,082	$ 539,082
		Containment And Cleanup	85,094	652,361	138,000	138,000
		Custodial	3,611,093	305,384	-	-
		Developer Mitigation	443,584	30,422	1,000	1,000
		Development Fees	36,803	43,581	40,000	40,000
		Leasing Services	7,890,952	228,061	-	-
		Maintenance	2,085,096	292	-	-
		Preliminary Notice	2,170	1,674	2,000	2,000
		Reimb-Hazardous Waste Cleanup	66,531	48,289	60,000	60,000
		Reimb Cost-Rejected Checks	6,831	4,465	4,800	4,800
		Reimb For Coroner Photos	120	833	-	-
		Reimb For Coroners Services	65,307	36,328	64,469	64,469
		Reimb For Prob Svc	1,638,741	1,813,097	1,388,524	1,388,524
		Reimb Ind Burial Cremation	59,443	73,735	59,000	59,000
		Reimb Moneymax Admin	4,878,383	4,252,224	4,558,957	4,558,957
		Reimb Of Cost-Admin Overhead	117,243	73,883	50,000	50,000
		Reimb Of Special Purchase	61,109	44,387	51,000	51,000
		Reimb-Rej Check Damages	134,302	111,312	94,421	94,421
		Reimbursement For Services	3,861,734	7,742,417	9,936,394	9,936,394
		Reimbursement Of Salaries	536,150	1,365,659	985,335	985,335
		Right Of Way Services	633,317	-	-	-
		Special Fire Services	456,124	459,769	375,000	375,000
		Support Services	3,607,454	5,081,842	3,671,182	3,671,182
		Treas Fees- Improv Bond Serv	1,786	324	-	-
		Utilities	1,706,603	2,391,163	2,247,004	2,247,004
		Vet Svs Ofc Rmb Med-Cos Avoid	-	-	123,000	123,000
		Weed Abatement	57,274	84,222	1,200,000	1,200,000
		Research Reimb	2,804	4,501	2,000	2,000
		Clerk Fees	1,655,984	1,496,925	1,500,000	1,500,000
		Fish & Game-Cc Portion	63,296	63,614	60,000	60,000
		Unclaimed Property	50,169	20,260	26,692	26,692
		Subpoena Fees	31,762	22,637	20,504	20,504
		Interfnd -CDBG	618,400	1,195,114	-	-
		Interfnd-Reimb Of Cs Admin Ovh	379,813	667,778	644,874	644,874
		Interfnd -Co Support Svcs	2,467,689	2,841,571	2,947,266	2,947,266
		Interfnd -Custodial	1,045,160	-	-	-
		Interfnd -Extra Duty	126,068	119,909	127,476	127,476
		Interfnd -Fire Services	51,559,948	47,651,211	45,024,082	45,024,082
		Interfnd -Law Enforcement	119,024	-	-	-
		Interfnd -Leases	4,719,039	70,000	70,001	70,001
		Interfnd -Legal Services	768,948	912,135	661,326	661,326
		Interfnd -Maintenance	1,100,151	-	-	-
		Interfnd-Development Fees	-	-	300	300

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Interfnd -Miscellaneous	$ 1,685,286	$ 1,471,836	$ 1,407,094	$ 2,407,094
		Interfnd -Office Expense	1,563	-	-	-
		Interfnd -Personnel Svcs	1,005,088	998,993	800,000	800,000
		Interfnd -Plan Check	4,280	-	-	-
		Interfnd -RDA	-	1,984,391	3,455,689	3,455,689
		Interfnd -Reimb For Service	3,015,785	9,811,756	10,719,816	10,719,816
		Interfnd -Right Of Way	1,955,168	-	-	-
		Interfnd -Salary Reimbursmt	6,053,155	4,378,246	4,224,151	4,224,151
		Interfnd -Training	42,608	42,460	2,440	2,440
		Interfnd -Utilities	439,309	741,117	1,754,910	1,754,910
		Interfund - Project Costs	625,329	778,467	879,914	879,914
		Interfund-Admin Services	139,025	264,039	100,000	100,000
		Interfund-Acctg Auditing Fees	1,615,350	161,307	151,000	151,000
		Interfund- Rideshare	34,971	38,370	15,661	15,661
		Interfund-Parking	428,940	702,965	766,634	766,634
		Interfund-Parking Validations	3,900	3,100	2,622	2,622
		Fire Inspection Haz Reduction	55,886	25,383	35,000	35,000
		Fire Protection Planning	889,683	870,139	650,000	650,000
		Fire Suppression Recovery Cost	456,546	1,327,082	214,204	214,204
		Fire Protection	-	-	55,069,512	55,069,512
		Fire Protection-Elsinore	2,154,755	2,239,341	857,756	857,756
		Fire Protection-Calimesa	874,875	915,929	268,959	268,959
		Fire Protection-Canyon Lake	972,842	1,313,935	283,098	283,098
		Fire Protection-Blythe	60,901	80,124	57,000	57,000
		Fire Protection-San Jacinto	2,628,086	2,700,940	728,751	728,751
		Fire Protection Indio-Indio	9,595,250	9,790,102	1,610,105	1,610,105
		Fire Protection-Perris	2,492,869	2,603,643	823,182	823,182
		Fire Protection-Menifee	6,345,767	6,376,721	1,593,520	1,593,520
		Fire Protection-Rubidoux	2,060,698	1,509,074	344,036	344,036
		Fire Protection-Temecula	3,219,518	3,360,586	1,644,867	1,644,867
		Fire Protection-Wildomar	2,061,197	1,373,908	397,159	397,159
		Fire Protection-DHS	1,012,659	1,064,860	465,623	465,623
		Fire Protection-Moreno Valley	12,833,251	12,848,118	2,479,308	2,479,308
		Fire Protection-Beaumont	1,635,585	1,752,721	488,082	488,082
		Fire Protection-Coachella	2,514,768	2,031,489	518,263	518,263
		Fire Protection-Banning	2,257,112	2,137,669	535,672	535,672
		Fire Protection-29 Palms	80,000	60,000	-	-
		Fire Protection-Rancho Mirage	3,609,756	3,800,613	811,654	811,654
		Fire Protection-Indian Wells	-	37,772	-	-
		Fire Protection-Palm Desert	3,574,932	3,781,699	1,803,105	1,803,105
		Total Charges For Current Services	$ **447,035,765**	$ **443,894,618**	$ **461,799,973**	$ **462,799,973**
	Other In-Lieu And Other Govt					

State Controller Schedules	County of Riverside	Schedule 6
County Budget Act	Detail of Additional Financing Sources by Fund and Account	
January 2010	Governmental Funds	
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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Oth Gov-EVTDA/Cabazon Funding	$ 177	$ (14)	$ -	$ -
		Oth Gov-City Governments	32,714	107,186	94,543	94,543
		In Lieu-Tax from So Cal Fair	49,449	38,354	-	-
		Total Other In-Lieu And Other Govt	$ **82,340**	$ **145,526**	$ **94,543**	$ **94,543**
	Other Revenue					
		Sale Of Asmt Roll	$ 112,739	$ 52,353	$ 60,000	$ 60,000
		Sale Of Miscellaneous Matls	84,513	86,426	82,200	82,200
		Sale Of Meals	37,383	41,537	41,340	41,340
		Other Taxable Sales	363	623	578	578
		Sale Of Books	1,137	295	-	-
		Sale Of Surplus Property	1,252	1,403	-	-
		Contractual Revenue	89,229,845	82,001,076	85,100,000	85,100,000
		Earthquake Renovation	9,375	-	-	-
		Cash Over-Short	90,940	88,924	76,640	76,640
		El Sobrante Land Fill	1,757,312	2,222,219	2,000,000	2,000,000
		Rebates & Refunds	3,780,212	6,557,402	3,853,819	3,853,819
		Unclaimed Money	260,486	3,561,415	116,840	116,840
		Restitution	-	73	-	-
		Judgments	1,872	1,080	-	-
		CA Wellness Foundation Grant	39	-	-	-
		Contributions & Donations	441,295	246,082	274,781	274,781
		Clearing	(635)	177,473	1	1
		Budget Reimbursement	1,191,532	1,436,231	673,848	673,848
		Employee Reimbursement	53	323	100	100
		Insurance Claims	403,614	458,223	-	-
		Insurance Proceeds	138,086	-	-	-
		Postage	103,230	51,029	40,000	40,000
		Other Misc Revenue	2,387,634	2,395,843	2,225,288	2,225,288
		Witness Jury Fees-Employees	9,649	6,997	4,135	4,135
		Program Revenue	5,559,730	2,839,147	4,488,150	4,488,150
		Undistributed Revenue	-	311	5	5
		Contrib Fr Non-County Agencies	510,473	20,641	2,500	2,500
		Redevelopment Pass Thru	382,293	-	-	-
		Administrative Charges	2,255	107,419	959	959
		Salary Reimbursement	242,107	(17,877)	90,623	90,623
		Uncollectible Receivables	(253)	(5,803)	-	-
		Parking Revenue	17,793	20,035	34,000	34,000
		Sale of Scrap and Waste	323	-	-	-
		Tobacco Tax Settlement	-	10,000,000	10,000,000	10,000,000
		Sale Of Real Estate	-	2,735,832	-	-
		Operating Transfer-In	7,334,508	4,979,240	24,776,000	33,276,000
		Contrib Fr Other County Funds	62,554,838	7,996,541	1,451,045	1,451,045

Detail of Additional Financing Sources by Fund and Account
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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Premium On Bonds Issued	$ 3,082,360	$ 4,225,760	$ 3,123,750	$ 3,123,750
		Total Other Revenue	$ **179,728,353**	$ **132,288,273**	$ **138,516,602**	$ **147,016,602**
	Total General Fund					
Total 10000 General Fund			$ **2,327,914,053**	$ **2,265,029,071**	$ **2,377,350,448**	$ **2,387,600,448**
20000 Transportation						
	Special Revenue Fund					
	Taxes					
		Prop. 42-Traffic Cong Relief	$ 10,526,797	$ 17,095,632	$ 16,175,971	$ 16,175,971
		Local Transportation Act	225,777	673,900	984,000	984,000
		Meas A-Local St & Rds	6,592,023	6,559,687	5,800,000	5,800,000
		Total Taxes	$ **17,344,597**	$ **24,329,219**	$ **22,959,971**	$ **22,959,971**
	Licenses, Permits & Franchises					
		Permit-Road Privileges	$ 61,245	$ 68,025	$ 52,695	$ 52,695
		Parade Fees	2,655	2,450	2,531	2,531
		Total Licenses, Permits & Franchises	$ **63,900**	$ **70,475**	$ **55,226**	$ **55,226**
	Fines, Forfeitures & Penalties					
		Other Forfeitures & Penalties	$ 875	$ 270	$ 875	$ 875
		Total Fines, Forfeitures & Penalties	$ **875**	$ **270**	$ **875**	$ **875**
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 1,004,384	$ 939,911	$ 800,899	$ 800,899
		Total Rev Fr Use Of Money&Property	$ **1,004,384**	$ **939,911**	$ **800,899**	$ **800,899**
	Intergovernmental Revenues					
		CA-Hwy Users/Gas Tax Sec 2104A	$ 20,004	$ 20,004	$ 27,053,466	$ 27,053,466
		CA-Hwy Users/Gas Tax Sec 2104B	63,347	70,679	-	-
		CA-Hwy Users/Gas Tax Sec 2104C	5,925	5,925	-	-
		CAHwy Users/Gas Tx Sec 2104DEF	17,059,274	16,533,009	-	-
		CA-Hwy Users/Gas Tax Sec 2105	8,424,902	8,187,082	-	-
		CA-Hwy Users/Gas Tax Sec 2106	1,840,214	1,523,205	-	-
		CA-Indian Gaming Grants	-	162	5,000	5,000
		CA-Roads Matching and Exchange	410,476	-	410,476	410,476
		CA-Prop 1B Highway Safety	-	22,402,853	-	-
		Fed-Aid For Disaster	588,238	(14,926)	300,000	300,000
		Fed-Forest Reserve	98,744	96,864	49,179	49,179
		Fed-Misc Reimbursement	16,317,514	18,124,619	16,900,000	16,900,000
		Fed - ARRA Subrecipient	2,326,024	6,514,852	7,518,000	7,518,000
		Total Intergovernmental Revenues	$ **47,154,662**	$ **73,464,328**	$ **52,236,121**	$ **52,236,121**
	Charges For Current Services					
		Sale Of Plans-Specifications	$ 31,775	$ 18,990	$ 31,775	$ 31,775

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Deposit Based Fee Draws	$ 4,302,635	$ 3,509,519	$ 2,465,267	$ 2,465,267
		Subdivision Inspection Fees	46,347	40,000	36,716	36,716
		Traffic Sub	1,323	-	-	-
		Encroachment Permit Fees	535,217	368,497	535,217	535,217
		CTP Fees	151,989	88,365	103,972	103,972
		Road Const Expense Reimb	5,803,325	9,084,250	4,000,000	4,000,000
		Road Maint Expense Reimb	86,026	71,001	65,340	65,340
		Road Signal Maint Exp Reimb	654,932	617,094	403,214	403,214
		Disposal Fees	11,714	11,121	10,504	10,504
		Fuel Sales	67,766	88,327	95,705	95,705
		Developer Mitigation	121,258	94,935	-	-
		Development Fees	142	118	110	110
		Fleet Daily Rentals	7,718	5,593	7,758	7,758
		Reimbursement For Services	4,352,110	12,478,909	12,362,807	12,362,807
		Right Of Way Services	585,870	-	-	-
		Tumf Revenue-Developer Fees	6,861,565	2,443,317	3,980,000	3,980,000
		Subpoena Fees	315	150	315	315
		Interfnd -CDBG	-	42,518	-	-
		Interfnd -CSA Intracounty	129,185	160,110	340,931	340,931
		Interfnd -Maintenance	19,620	10,370	10,819	10,819
		Interfnd -Miscellaneous	65,015	27,620	10,440	10,440
		Interfnd -RDA	6,339,253	7,850,707	8,178,195	8,178,195
		Interfnd -Reimb For Service	1,088,628	145,101	1,088,628	1,088,628
		Interfnd -Road District 4	39,105	37,501	275,000	275,000
		Interfnd -Salary Reimbursmt	455,826	283,628	404,651	404,651
		Interfnd -Equipment Usage	135,194	19,584	148,800	148,800
		Interfund - Project Costs	7,165,584	7,735,674	12,472,840	12,472,840
		Interfund - Fuel Sales	127,896	142,402	162,924	162,924
		Interfund- Rideshare	-	4,713	4,752	4,752
		Total Charges For Current Services	$ **39,187,333**	$ **45,380,114**	$ **47,196,680**	$ **47,196,680**
	Other In-Lieu And Other Govt					
		CVAG	$ 9,222,716	$ 8,243,777	$ 8,900,000	$ 8,900,000
		Special District Income	218,056	4,435,406	261,800	261,800
		Total Other In-Lieu And Other Govt	$ **9,440,772**	$ **12,679,183**	$ **9,161,800**	$ **9,161,800**
	Other Revenue					
		Sale Of Miscellaneous Matls	$ 1,978	$ 9,707	$ 1,978	$ 1,978
		Sale Of Surplus Property	15,532	27,887	15,480	15,480
		Rebates & Refunds	19,535	19,358	19,501	19,501
		Contributions & Donations	1,253,762	3,262,217	1,800,000	1,800,000
		Insurance Claims	44,053	350	12,812	12,812
		Postage	10	-	20	20

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Other Misc Revenue	$ 89,700	$ 31,847	$ 89,800	$ 89,800
		Witness Jury Fees-Employees	300	142	200	200
		Sale Of Automotive Equipment	289,759	349,738	161,767	161,767
		Operating Transfer-In	43,062	-	-	-
		Contrib Fr Other County Funds	1,556,633	1,008,687	744,280	744,280
		Total Other Revenue	$ **3,314,324**	$ **4,709,933**	$ **2,845,838**	$ **2,845,838**
	Total Special Revenue Fund					
Total 20000 Transportation			$ **117,510,847**	$ **161,573,433**	$ **135,257,410**	$ **135,257,410**
20200 Tran-Lnd Mgmt Agency Adm						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 108,040	$ 65,858	$ 58,000	$ 58,000
		Total Rev Fr Use Of Money&Property	$ **108,040**	$ **65,858**	$ **58,000**	$ **58,000**
	Charges For Current Services					
		Deposit Based Fee Draws	$ 660,695	$ 766,913	$ 632,000	$ 632,000
		LMS Fees	362,258	338,372	367,609	367,609
		GIS Fees	539,684	544,410	470,000	470,000
		Charges for Admin Services	-	325,075	-	-
		Development Fees	2,636	2,834	3,800	3,800
		Reimb Cost-Rejected Checks	360	410	100	100
		Reimb Of Special Purchase	-	-	788,603	788,603
		Reimb-Rej Check Damages	(4,655)	4,655	100	100
		Reimbursement For Services	329,662	201,454	104,000	104,000
		Subpoena Fees	150	-	-	-
		Interfnd-Reimb Of Cs Admin Ovh	9,046,472	7,125,052	6,996,665	6,996,665
		Interfnd -Miscellaneous	(18,690)	30	3,250	3,250
		Interfnd -Reimb For Service	620,724	471,957	785,250	785,250
		Interfnd -Salary Reimbursmt	-	94,138	120,000	120,000
		Total Charges For Current Services	$ **11,539,296**	$ **9,875,300**	$ **10,271,377**	$ **10,271,377**
	Other Revenue					
		Sale Of Miscellaneous Matls	$ 34,492	$ 141,469	$ 135,100	$ 135,100
		Cash Over-Short	(102)	40	100	100
		Rebates & Refunds	-	27,163	-	-
		Clearing	(681,972)	(195)	-	-
		Budget Reimbursement	-	(2,228)	-	-
		Other Misc Revenue	3,677	23,331	250	250
		Witness Jury Fees-Employees	300	-	-	-
		Contrib Fr Non-County Agencies	539,584	195,998	85,700	85,700
		Salary Reimbursement	-	272,819	518,525	518,525
		Uncollectible Receivables	(26,925)	(4,276)	-	-

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Contrib Fr Other County Funds	$ 1,283,262	$ 979,949	$ 859,960	$ 859,960
		Total Other Revenue	$ **1,152,316**	$ **1,634,070**	$ **1,599,635**	$ **1,599,635**
	Total Special Revenue Fund					
Total 20200 Tran-Lnd Mgmt Agency Adm			$ **12,799,652**	$ **11,575,228**	$ **11,929,012**	$ **11,929,012**
20250 Building Permits						
	Special Revenue Fund					
	Licenses, Permits & Franchises					
		Business Licenses	$ 476,647	$ 360,940	$ 290,000	$ 290,000
		Graffiti Sales License	90	54	100	100
		Permit-Building	1,905,217	1,643,939	1,002,944	1,002,944
		Total Licenses, Permits & Franchises	$ **2,381,954**	$ **2,004,933**	$ **1,293,044**	$ **1,293,044**
	Intergovernmental Revenues					
		CA-From Other St Govt Agencies	$ -	$ 1,283	$ -	$ -
		Total Intergovernmental Revenues	$ **-**	$ **1,283**	$ **-**	$ **-**
	Charges For Current Services					
		Deposit Based Fee Draws	$ 3,722,305	$ 3,539,524	$ 3,500,000	$ 3,500,000
		Charges for Admin Services	3,582	2,858	4,000	4,000
		Micrographic Fees	18,311	31,117	24,000	24,000
		Research Reimb	19,857	14,540	16,000	16,000
		Subpoena Fees	1,655	683	1,300	1,300
		Interfnd-Development Fees	417	1,510	500	500
		Interfnd -Reimb For Service	2,676	3,260	2,000	2,000
		Interfnd -Salary Reimbursmt	6,537	11,251	6,000	6,000
		Interfund- Rideshare	4,120	2,206	3,557	3,557
		Total Charges For Current Services	$ **3,779,460**	$ **3,606,949**	$ **3,557,357**	$ **3,557,357**
	Other Revenue					
		Sale Of Miscellaneous Matls	$ 4,417	$ 3,876	$ 3,500	$ 3,500
		Rebates & Refunds	-	9,039	-	-
		Contrib Fr Other County Funds	222,300	222,300	166,725	166,725
		Total Other Revenue	$ **226,717**	$ **235,215**	$ **170,225**	$ **170,225**
	Total Special Revenue Fund					
Total 20250 Building Permits			$ **6,388,131**	$ **5,848,380**	$ **5,020,626**	$ **5,020,626**
20260 Survey						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 11,019	$ 10,110	$ 7,406	$ 7,406
		Total Rev Fr Use Of Money&Property	$ **11,019**	$ **10,110**	$ **7,406**	$ **7,406**

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
	Charges For Current Services					
		Survey Monument Preserv	$ 93,283	$ 42,202	$ 74,264	$ 74,264
		Deposit Based Fee Draws	869,208	742,951	649,633	649,633
		Development Fees	8,679	6,598	8,556	8,556
		Reimbursement For Services	-	16,715	5,000	5,000
		Interfnd -Engineering	4,215,067	3,773,301	3,952,549	3,952,549
		Interfnd -Miscellaneous	-	-	-	-
		Interfnd -Reimb For Service	156,779	24,840	83,722	83,722
		Total Charges For Current Services	$ **5,343,016**	$ **4,606,607**	$ **4,773,724**	$ **4,773,724**
	Other Revenue					
		Sale Of Miscellaneous Matls	$ 16,390	$ 12,901	$ 11,580	$ 11,580
		Rebates & Refunds	-	4,256	-	-
		Other Misc Revenue	-	3,028	20,000	20,000
		Witness Jury Fees-Employees	30	-	100	100
		Contrib Fr Non-County Agencies	1,726	-	2,000	2,000
		Total Other Revenue	$ **18,146**	$ **20,185**	$ **33,680**	$ **33,680**
	Total Special Revenue Fund					
Total 20260 Survey			$ **5,372,181**	$ **4,636,902**	$ **4,814,810**	$ **4,814,810**
20300 Landscape Maintenance District						
	Special Revenue Fund					
	Taxes					
		Prop Tax Prior Secured	$ 31,361	$ -	$ -	$ -
		Total Taxes	$ **31,361**	$ **-**	$ **-**	$ **-**
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 37,743	$ 20,981	$ 19,591	$ 19,591
		Land Lease	22,552	23,327	23,736	23,736
		Total Rev Fr Use Of Money&Property	$ **60,295**	$ **44,308**	$ **43,327**	$ **43,327**
	Charges For Current Services					
		Special Assessments	$ 831,431	$ 837,154	$ 785,916	$ 785,916
		Interfnd -RDA	215,546	166,286	200,000	200,000
		Interfnd -Salary Reimbursmt	-	12,019	-	-
		Total Charges For Current Services	$ **1,046,977**	$ **1,015,459**	$ **985,916**	$ **985,916**
	Other In-Lieu And Other Govt					
		Special District Income	$ 1,071,832	$ 1,094,244	$ 1,116,745	$ 1,116,745
		Total Other In-Lieu And Other Govt	$ **1,071,832**	$ **1,094,244**	$ **1,116,745**	$ **1,116,745**
	Total Special Revenue Fund					
Total 20300 Landscape Maintenance District			$ **2,210,465**	$ **2,154,011**	$ **2,145,988**	$ **2,145,988**

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
21000 Co Structural Fire Protection						
	Special Revenue Fund					
		Taxes				
		Prop Tax Current Secured	$ 35,477,941	$ 34,299,743	$ 35,064,297	$ 35,064,297
		Prop Tax Current Unsecured	2,195,823	1,680,463	1,677,769	1,677,769
		Prop Tax Prior Unsecured	104,957	124,617	-	-
		Prop Tax Current Supplemental	-	102,372	-	-
		Prop Tax Prior Supplemental	647,309	271,823	223,554	223,554
		Total Taxes	$ **38,426,030**	$ **36,479,018**	$ **36,965,620**	$ **36,965,620**
		Intergovernmental Revenues				
		CA-Homeowners Tax Relief	$ 567,888	$ 572,434	$ 663,715	$ 663,715
		CA-Suppl Homeowners Tax Relief	4,588	6,132	-	-
		Total Intergovernmental Revenues	$ **572,476**	$ **578,566**	$ **663,715**	$ **663,715**
		Other Revenue				
		Contractual Revenue	$ 7,230,636	$ 10,054,137	$ 7,302,624	$ 7,302,624
		Redevelopment Pass Thru	3,289,047	3,675,172	3,325,122	3,325,122
		Total Other Revenue	$ **10,519,683**	$ **13,729,309**	$ **10,627,746**	$ **10,627,746**
	Total Special Revenue Fund					
Total 21000 Co Structural Fire Protection			$ **49,518,189**	$ **50,786,893**	$ **48,257,081**	$ **48,257,081**
21050 Community Action Agency						
	Special Revenue Fund					
		Fines, Forfeitures & Penalties				
		Superior Court	$ 130,000	$ 382,989	$ 382,989	$ 382,989
		Total Fines, Forfeitures & Penalties	$ **130,000**	$ **382,989**	$ **382,989**	$ **382,989**
		Rev Fr Use Of Money&Property				
		Interest-Invested Funds	$ -	$ 2,833	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **-**	$ **2,833**	$ **-**	$ **-**
		Intergovernmental Revenues				
		CA-Mandate Reimbursement	$ -	$ 174	$ -	$ -
		Fed-Misc Reimbursement	11,259	579,123	233,542	233,542
		Fed-Block Grants	1,887,884	2,467,677	2,162,183	2,162,183
		Fed- Other Operating Grants	4,357,589	3,921,140	2,306,413	2,306,413
		Fed-Other Government Agencies	30,000	-	-	-
		Fed - ARRA Subrecipient	4,333,289	4,083,479	3,002,352	3,002,352
		Total Intergovernmental Revenues	$ **10,620,021**	$ **11,051,593**	$ **7,704,490**	$ **7,704,490**
		Charges For Current Services				
		Interfnd -Miscellaneous	$ 1,250	$ 1,630	$ -	$ -
		Interfnd -Salary Reimbursmt	68,725	-	-	-

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Total Charges For Current Services	$ **69,975**	$ **1,630**	$ **-**	$ **-**
	Other Revenue					
		Rebates & Refunds	$ -	$ 28,950	$ -	$ -
		Other Misc Revenue	183,638	254,198	410,491	410,491
		Program Revenue	-	138,000	9,300	9,300
		Undistributed Revenue	2,403	58,647	-	-
		Operating Transfer-In	-	-	-	-
		Contrib Fr Other County Funds	179,550	134,663	100,997	100,997
		Total Other Revenue	$ **365,591**	$ **614,458**	$ **520,788**	$ **520,788**
	Total Special Revenue Fund					
Total 21050 Community Action Agency			$ **11,185,587**	$ **12,053,503**	$ **8,608,267**	$ **8,608,267**
21100 EDA-Administration						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 7,529	$ 3,598	$ 5,000	$ 5,000
		Temporary Use Lease	-	829	648,040	648,040
		Total Rev Fr Use Of Money&Property	$ **7,529**	$ **4,427**	$ **653,040**	$ **653,040**
	Intergovernmental Revenues					
		CA-Mandate Reimbursement	$ -	$ 658	$ -	$ -
		Fed- Other Operating Grants	401,688	45,500	475,277	475,277
		Fed ARRA - Prime Recipient	47,895	2,199,844	3,000,000	3,000,000
		Total Intergovernmental Revenues	$ **449,583**	$ **2,246,002**	$ **3,475,277**	$ **3,475,277**
	Charges For Current Services					
		Housing Authority	$ 366,245	$ 957,157	$ 1,086,253	$ 1,086,253
		Reimbursement Of Salaries	81,943	4,032	-	-
		Interfnd -Leases	63,282	50,488	100,000	100,000
		Interfnd -Miscellaneous	3,442,161	5,487,407	3,700,516	3,700,516
		Interfnd -Office Expense	3,458,833	2,651,724	3,837,060	3,837,060
		Interfnd -Salary Reimbursmt	10,645,197	6,026,791	7,159,238	7,159,238
		Total Charges For Current Services	$ **18,057,661**	$ **15,177,599**	$ **15,883,067**	$ **15,883,067**
	Other Revenue					
		Rebates & Refunds	$ -	$ 107,602	$ -	$ -
		Other Misc Revenue	1,988,754	1,633,665	1,852,023	1,852,023
		Contrib Fr Other County Funds	2,089,540	314,359	70,000	70,000
		Bond Proceeds	292	-	343,773	343,773
		Total Other Revenue	$ **4,078,586**	$ **2,055,626**	$ **2,265,796**	$ **2,265,796**
	Total Special Revenue Fund					

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
Total 21100 EDA-Administration			$ **22,593,359**	$ **19,483,654**	$ **22,277,180**	$ **22,277,180**
21200 County Free Library						
	Special Revenue Fund					
	Taxes					
		Prop Tax Current Secured	$ 9,702,921	$ 10,421,218	$ 9,938,214	$ 9,938,214
		Prop Tax Current Unsecured	539,551	508,721	518,301	518,301
		Prop Tax Prior Unsecured	-	37,725	-	-
		Prop Tax Current Supplemental	-	30,798	-	-
		Prop Tax Prior Supplemental	149,079	82,288	118,512	118,512
		Total Taxes	$ **10,391,551**	$ **11,080,750**	$ **10,575,027**	$ **10,575,027**
	Fines, Forfeitures & Penalties					
		Library Fines And Fees	$ 395,235	$ 426,815	$ 424,618	$ 424,618
		Total Fines, Forfeitures & Penalties	$ **395,235**	$ **426,815**	$ **424,618**	$ **424,618**
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 3,048	$ 8,509	$ 2,105	$ 2,105
		Rents	9,055	19,177	19,176	19,176
		Lease To Non-County Agency	32,130	279,832	124,679	124,679
		Total Rev Fr Use Of Money&Property	$ **44,233**	$ **307,518**	$ **145,960**	$ **145,960**
	Intergovernmental Revenues					
		CA-State Revenue	$ -	$ -	$ 454,336	$ 454,336
		CA-Construction	624,026	701,453	-	-
		CA-Homeowners Tax Relief	171,915	172,216	163,604	163,604
		CA-Suppl Homeowners Tax Relief	1,389	1,845	-	-
		CA-Penal Code 1305	-	-	-	-
		CA- Other Operating Grants	641,310	572,005	430,976	430,976
		Fed-Community Redevelopment Hm	-	-	-	-
		Total Intergovernmental Revenues	$ **1,438,640**	$ **1,447,519**	$ **1,048,916**	$ **1,048,916**
	Charges For Current Services					
		Environmental Health Contracts	$ 81,103	$ -	$ -	$ -
		Interfnd -Leases	159,475	159,475	171,474	171,474
		Total Charges For Current Services	$ **240,578**	$ **159,475**	$ **171,474**	$ **171,474**
	Other In-Lieu And Other Govt					
		Oth Gov-City Governments	$ -	$ 3,834,880	$ 571,295	$ 571,295
		Total Other In-Lieu And Other Govt	$ **-**	$ **3,834,880**	$ **571,295**	$ **571,295**
	Other Revenue					
		Contractual Revenue	$ 5,785,540	$ 5,445,640	$ 4,670,526	$ 4,670,526
		Cash Over-Short	-	804	-	-

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Rebates & Refunds	$ -	$ 4,143	$ 7,100	$ 7,100
		Contributions & Donations	-	68,775	2,026	2,026
		Insurance Proceeds	112,206	1,690	-	-
		Contrib Fr Other County Funds	5,000	-	-	-
		Total Other Revenue	$ **5,902,746**	$ **5,521,052**	$ **4,679,652**	$ **4,679,652**
	Total Special Revenue Fund					
Total 21200 County Free Library			$ **18,412,983**	$ **22,778,009**	$ **17,616,942**	$ **17,616,942**
21250 Home Program Fund						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 698	$ 1,027	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **698**	$ **1,027**	$ **-**	$ **-**
	Intergovernmental Revenues					
		Fed-Community Redevelopment Hm	$ 868,560	$ 3,414,282	$ 3,900,000	$ 3,900,000
		Fed-Block Grants	334,254	394,858	317,667	317,667
		Total Intergovernmental Revenues	$ **1,202,814**	$ **3,809,140**	$ **4,217,667**	$ **4,217,667**
	Other Revenue					
		Program Revenue	$ 166,460	$ 197,371	$ 100,000	$ 100,000
		Total Other Revenue	$ **166,460**	$ **197,371**	$ **100,000**	$ **100,000**
	Total Special Revenue Fund					
Total 21250 Home Program Fund			$ **1,369,972**	$ **4,007,538**	$ **4,317,667**	$ **4,317,667**
21270 Cal Home Program						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 147	$ 755	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **147**	$ **755**	$ **-**	$ **-**
	Intergovernmental Revenues					
		CA-State Revenue	$ -	$ 1,500,000	$ 750,000	$ 750,000
		Total Intergovernmental Revenues	$ **-**	$ **1,500,000**	$ **750,000**	$ **750,000**
	Total Special Revenue Fund					
Total 21270 Cal Home Program			$ **147**	$ **1,500,755**	$ **750,000**	$ **750,000**
21300 Homeless Housing Relief Fund						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 54,712	$ 20,386	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **54,712**	$ **20,386**	$ **-**	$ **-**

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
	Intergovernmental Revenues					
		CA-City Co Emergency Homeless	$ 110,780	$ 130,282	$ 70,428	$ 70,428
		Fed-Block Grants	144,920	225,700	319,841	319,841
		Fed- Other Operating Grants	4,050,544	6,370,603	7,321,816	7,321,816
		Total Intergovernmental Revenues	$ **4,306,244**	$ **6,726,585**	$ **7,712,085**	$ **7,712,085**
	Other Revenue					
		Program Revenue	$ 1,241	$ 18,419	$ 56,000	$ 56,000
		Contrib Fr Other County Funds	3,848,353	2,626,324	2,106,172	2,106,172
		Total Other Revenue	$ **3,849,594**	$ **2,644,743**	$ **2,162,172**	$ **2,162,172**
	Total Special Revenue Fund					
Total 21300 Homeless Housing Relief Fund			$ **8,210,550**	$ **9,391,714**	$ **9,874,257**	$ **9,874,257**
21350 Hud Community Services Grant						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 8,122	$ 166	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **8,122**	$ **166**	$ **-**	$ **-**
	Intergovernmental Revenues					
		Fed-Community Redevelopment Hm	$ 10,297,746	$ 8,254,576	$ 9,141,647	$ 9,141,647
		Fed-Block Grants	1,336,414	1,387,335	1,441,272	1,441,272
		Fed- Other Operating Grants	702,715	367,426	370,503	370,503
		Fed-Other Government Agencies	22,925	-	19,500	19,500
		Fed ARRA - Prime Recipient	1,005,314	3,393,434	2,217,844	2,217,844
		Total Intergovernmental Revenues	$ **13,365,114**	$ **13,402,771**	$ **13,190,766**	$ **13,190,766**
	Other Revenue					
		Program Revenue	$ 136,796	$ 65,652	$ 60,000	$ 60,000
		Total Other Revenue	$ **136,796**	$ **65,652**	$ **60,000**	$ **60,000**
	Total Special Revenue Fund					
Total 21350 Hud Community Services Grant			$ **13,510,032**	$ **13,468,589**	$ **13,250,766**	$ **13,250,766**
21370 Neighborhood Stabilization NSP						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 5,464	$ 16,270	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **5,464**	$ **16,270**	$ **-**	$ **-**
	Intergovernmental Revenues					
		CA-State Revenue	$ -	$ 1,707,467	$ -	$ -
		Fed-Community Redevelopment Hm	30,495,211	5,932,463	15,000,000	15,000,000
		Fed-Block Grants	1,114,344	842,124	1,667,963	1,667,963

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Total Intergovernmental Revenues	$ **31,609,555**	$ **8,482,054**	$ **16,667,963**	$ **16,667,963**
	Other Revenue					
		Program Revenue	$ 737,097	$ 16,275,801	$ 20,000,000	$ 20,000,000
		Total Other Revenue	$ **737,097**	$ **16,275,801**	$ **20,000,000**	$ **20,000,000**
	Total Special Revenue Fund					
Total 21370 Neighborhood Stabilization NSP			$ **32,352,116**	$ **24,774,125**	$ **36,667,963**	$ **36,667,963**
21450 Office On Aging						
	Special Revenue Fund					
	Taxes					
		Measure A-Transit	$ 37,971	$ 37,642	$ 41,185	$ 41,185
		Total Taxes	$ **37,971**	$ **37,642**	$ **41,185**	$ **41,185**
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ (14,343)	$ (13,607)	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **(14,343)**	$ **(13,607)**	$ **-**	$ **-**
	Intergovernmental Revenues					
		CA-Mental Health Services	$ 613,302	$ 794,045	$ 595,615	$ 595,615
		CA-Congregate Nutrition	180,224	162,688	162,905	162,905
		CA-Other Aid to Health	243,010	238,647	356,774	356,774
		CA-Mandate Reimbrsment Process	399,517	(11,340)	-	-
		CA-Mandate Reimbursement	-	213	-	-
		CA-Tobacco Tax Prop.10	491,953	568,106	426,248	426,248
		CA-Home Del Meals	218,253	159,847	158,635	158,635
		Fed-Misc Reimbursement	8,081,843	8,151,492	7,700,065	7,700,065
		Fed ARRA - Prime Recipient	356,013	-	-	-
		Total Intergovernmental Revenues	$ **10,584,115**	$ **10,063,698**	$ **9,400,242**	$ **9,400,242**
	Charges For Current Services					
		Interfnd -CDBG	$ 67,000	$ 193,285	$ 40,000	$ 40,000
		Interfund - Project Costs	-	-	-	-
		Total Charges For Current Services	$ **67,000**	$ **193,285**	$ **40,000**	$ **40,000**
	Other Revenue					
		Rebates & Refunds	$ 55,645	$ 17,200	$ -	$ -
		Contributions & Donations	18,822	6,739	4,800	4,800
		Other Misc Revenue	328,805	427,424	945,808	945,808
		Grants-Nongovtl Agencies	-	-	-	-
		Contrib Fr Other County Funds	1,270,465	1,144,852	890,256	890,256
		Total Other Revenue	$ **1,673,737**	$ **1,596,215**	$ **1,840,864**	$ **1,840,864**
	Total Special Revenue Fund					

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
Total 21450 Office On Aging			$ **12,348,480**	$ **11,877,233**	$ **11,322,291**	$ **11,322,291**
21550 Workforce Development						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 9,510	$ 7,417	$ -	$ -
		Rents	668,643	881,029	914,639	914,639
		Total Rev Fr Use Of Money&Property	$ **678,153**	$ **888,446**	$ **914,639**	$ **914,639**
	Intergovernmental Revenues					
		CA-From Other St Govt Agencies	$ 83,275	$ 47,346	$ -	$ -
		Fed-WIA	20,350,311	22,508,314	22,143,112	22,143,112
		Fed - ARRA Subrecipient	13,886,492	10,467,957	-	-
		Total Intergovernmental Revenues	$ **34,320,078**	$ **33,023,617**	$ **22,143,112**	$ **22,143,112**
	Charges For Current Services					
		Housing Authority	$ 105,589	$ 91,670	$ 115,968	$ 115,968
		Reimbursement For Services	2,736	-	-	-
		Interfnd -CDBG	38,225	50,000	25,000	25,000
		Interfnd -Leases	202,195	206,922	429,785	429,785
		Interfnd -Miscellaneous	322,185	1,198,498	33,791	33,791
		Interfnd -Office Expense	23,113	49,766	41,589	41,589
		Interfnd -Salary Reimbursmt	102,106	522,038	656,369	656,369
		Interfund- Rideshare	5,749	6,751	-	-
		Total Charges For Current Services	$ **801,898**	$ **2,125,645**	$ **1,302,502**	$ **1,302,502**
	Other Revenue					
		Other Misc Revenue	$ 179,882	$ 207,097	$ 145,569	$ 145,569
		Program Revenue	5,428	-	-	-
		Contrib Fr Other County Funds	2,000	4,000	-	-
		Total Other Revenue	$ **187,310**	$ **211,097**	$ **145,569**	$ **145,569**
	Total Special Revenue Fund					
Total 21550 Workforce Development			$ **35,987,439**	$ **36,248,805**	$ **24,505,822**	$ **24,505,822**
21750 Bio-terrorism Preparedness						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 20,324	$ 21,466	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **20,324**	$ **21,466**	$ **-**	$ **-**
	Intergovernmental Revenues					
		Fed- Other Operating Grants	$ 2,542,942	$ 2,416,083	$ 2,156,029	$ 2,156,029
		Total Intergovernmental Revenues	$ **2,542,942**	$ **2,416,083**	$ **2,156,029**	$ **2,156,029**

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
	Charges For Current Services					
		Interfnd-Reimb Of Cs Admin Ovh	$ -	$ 10,321	$ -	$ -
		Total Charges For Current Services	$ **-**	$ **10,321**	$ **-**	$ **-**
	Other Revenue					
		Other Misc Revenue	$ -	$ -	$ 475,000	$ 475,000
		Total Other Revenue	$ **-**	$ **-**	$ **475,000**	$ **475,000**
	Total Special Revenue Fund					
Total 21750 Bio-terrorism Preparedness			$ **2,563,266**	$ **2,447,870**	$ **2,631,029**	$ **2,631,029**
21760 CHA:Hosp Prep Prog Allocation						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ -	$ 644	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **-**	$ **644**	$ **-**	$ **-**
	Intergovernmental Revenues					
		Fed- Other Operating Grants	$ -	$ 602,206	$ 708,633	$ 708,633
		Total Intergovernmental Revenues	$ **-**	$ **602,206**	$ **708,633**	$ **708,633**
	Total Special Revenue Fund					
Total 21760 CHA:Hosp Prep Prog Allocation			$ **-**	$ **602,850**	$ **708,633**	$ **708,633**
21770 CHA:CDC PHER H1N1 Allocation						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 2,644	$ 6,941	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **2,644**	$ **6,941**	$ **-**	$ **-**
	Intergovernmental Revenues					
		Fed- Other Operating Grants	$ 1,787,934	$ 1,234,916	$ 98,684	$ 98,684
		Total Intergovernmental Revenues	$ **1,787,934**	$ **1,234,916**	$ **98,684**	$ **98,684**
	Total Special Revenue Fund					
Total 21770 CHA:CDC PHER H1N1 Allocation			$ **1,790,578**	$ **1,241,857**	$ **98,684**	$ **98,684**
21780 CHA:Hosp Prep Prog H1N1 Alloc						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 323	$ 410	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **323**	$ **410**	$ **-**	$ **-**
	Intergovernmental Revenues					
		Fed- Other Operating Grants	$ 42,186	$ 5,132	$ -	$ -

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Total Intergovernmental Revenues	$ **42,186**	$ **5,132**	$ **-**	$ **-**
	Total Special Revenue Fund					
Total 21780 CHA:Hosp Prep Prog H1N1 Alloc			$ **42,509**	$ **5,542**	$ **-**	$ **-**
22000 Rideshare						
	Special Revenue Fund					
	Licenses, Permits & Franchises					
		Air Quality	$ 26,578	$ 32,223	$ 31,900	$ 31,900
		Total Licenses, Permits & Franchises	$ **26,578**	$ **32,223**	$ **31,900**	$ **31,900**
	Rev Fr Use Of Money&Property					
		Parking	$ 475,922	$ 536,568	$ 550,000	$ 550,000
		Total Rev Fr Use Of Money&Property	$ **475,922**	$ **536,568**	$ **550,000**	$ **550,000**
	Charges For Current Services					
		Rideshare Revenue	$ 325,614	$ 313,708	$ 350,000	$ 350,000
		Interfnd -Air Qualty AB2766	469,458	355,789	515,674	515,674
		Total Charges For Current Services	$ **795,072**	$ **669,497**	$ **865,674**	$ **865,674**
	Other Revenue					
		Other Misc Revenue	$ 51	$ -	$ -	$ -
		Total Other Revenue	$ **51**	$ **-**	$ **-**	$ **-**
	Total Special Revenue Fund					
Total 22000 Rideshare			$ **1,297,623**	$ **1,238,288**	$ **1,447,574**	$ **1,447,574**
22050 AD CFD Adm						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 12,637	$ 8,523	$ 10,000	$ 10,000
		Total Rev Fr Use Of Money&Property	$ **12,637**	$ **8,523**	$ **10,000**	$ **10,000**
	Charges For Current Services					
		Reimbursement For Services	$ 1,059,279	$ 838,542	$ 705,000	$ 705,000
		Total Charges For Current Services	$ **1,059,279**	$ **838,542**	$ **705,000**	$ **705,000**
	Other Revenue					
		Other Misc Revenue	$ 331	$ 500	$ 75,000	$ 75,000
		Total Other Revenue	$ **331**	$ **500**	$ **75,000**	$ **75,000**
	Total Special Revenue Fund					
Total 22050 AD CFD Adm			$ **1,072,247**	$ **847,565**	$ **790,000**	$ **790,000**
22100 Aviation						
	Special Revenue Fund					

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ -	$ 7,115	$ 5,000	$ 5,000
		Temporary Use Lease	-	1,945,172	2,030,698	2,030,698
		Total Rev Fr Use Of Money&Property	$ -	$ **1,952,287**	$ **2,035,698**	$ **2,035,698**
	Intergovernmental Revenues					
		CA-Aviation	$ -	$ 100,000	$ 50,000	$ 50,000
		Total Intergovernmental Revenues	$ -	$ **100,000**	$ **50,000**	$ **50,000**
	Charges For Current Services					
		Landing Fees	$ -	$ 25,840	$ 5,000	$ 5,000
		Interfnd -Leases	-	33,548	34,310	34,310
		Interfnd -Miscellaneous	-	110,000	75,000	75,000
		Interfnd -Salary Reimbursmt	-	132,889	15,950	15,950
		Total Charges For Current Services	$ -	$ **302,277**	$ **130,260**	$ **130,260**
	Other Revenue					
		Sales-Gas & Oil Franchise Fees	$ -	$ 231,934	$ 180,000	$ 180,000
		Other Misc Revenue	-	86,398	40,000	40,000
		Contrib Fr Non-County Agencies	-	28,000	25,000	25,000
		Total Other Revenue	$ -	$ **346,332**	$ **245,000**	$ **245,000**
	Total Special Revenue Fund					
Total 22100 Aviation			$ -	$ **2,700,896**	$ **2,460,958**	$ **2,460,958**
22200 National Date Festival						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 10,940	$ 4,278	$ 5,000	$ 5,000
		Rents	9,955	4,214	15,000	15,000
		Admissions	1,043,925	1,011,275	1,000,000	1,000,000
		Carnival	741,605	739,302	740,000	740,000
		Entry Fees	22,003	22,683	22,000	22,000
		Fair Sponsorship	237,637	223,835	196,000	196,000
		Fair Time Utilities	8,170	8,925	8,700	8,700
		Industrial & Commercial Space	262,188	310,063	305,000	305,000
		Interim Alcohol Sales	46,142	18,212	40,000	40,000
		Fair Time Alcohol Sales	-	51,355	55,000	55,000
		Interim Food Sales	10,629	9,133	15,000	15,000
		Misc Event Charges	231,083	215,628	200,000	200,000
		Concessions	304,248	303,591	370,000	370,000
		Parking	291,960	223,166	207,000	207,000
		Rent- Fairground Facilities	134,325	215,213	207,000	207,000
		Rental Of Buildings	32,149	38,091	20,000	20,000

Detail of Additional Financing Sources by Fund and Account
Governmental Funds
Fiscal Year 2011-12

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Total Rev Fr Use Of Money&Property	$ **3,386,959**	$ **3,398,964**	$ **3,405,700**	$ **3,405,700**
	Intergovernmental Revenues					
		CA-Grant Revenue	$ 35,000	$ 116,000	$ -	$ -
		CA-Fairs	115,500	117,750	-	-
		Total Intergovernmental Revenues	$ **150,500**	$ **233,750**	$ **-**	$ **-**
	Charges For Current Services					
		Interfnd -Miscellaneous	$ 319,146	$ 443,294	$ -	$ -
		Interfnd -Salary Reimbursmt	114,017	114,017	116,022	116,022
		Total Charges For Current Services	$ **433,163**	$ **557,311**	$ **116,022**	$ **116,022**
	Special And Extraordinary Item					
		Special Items	$ 59,660	$ -	$ -	$ -
		Total Special And Extraordinary Item	$ **59,660**	$ **-**	$ **-**	$ **-**
	Other Revenue					
		Cash Over-Short	$ 583	$ 1,120	$ -	$ -
		Rebates & Refunds	19	152	-	-
		Other Misc Revenue	46,279	36,717	25,000	25,000
		Uncollectible Receivables	12	-	-	-
		Sale of Vehicles	500	-	-	-
		Operating Transfer-In	275,000	-	-	-
		Contrib Fr Other County Funds	-	-	-	-
		Total Other Revenue	$ **322,393**	$ **37,989**	$ **25,000**	$ **25,000**
	Total Special Revenue Fund					
Total 22200 National Date Festival			$ **4,352,675**	$ **4,228,014**	$ **3,546,722**	$ **3,546,722**
22250 Cal Id						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 28,614	$ 10,536	$ 30,000	$ 30,000
		Interest-Departmental	2,728	1,444	5,000	5,000
		Total Rev Fr Use Of Money&Property	$ **31,342**	$ **11,980**	$ **35,000**	$ **35,000**
	Intergovernmental Revenues					
		CA-Post Reimbursement	$ 232	$ -	$ 150	$ 150
		Total Intergovernmental Revenues	$ **232**	$ **-**	$ **150**	$ **150**
	Charges For Current Services					
		School Services Law Enforcemnt	$ -	$ 2,704	$ 2,704	$ 2,704
		Cal-Id Assessment	1,401,586	1,341,112	1,438,546	1,438,546
		Cal-Id	2,309,820	2,308,873	3,393,252	3,393,252
		Cal-DNA	131,223	125,301	195,000	195,000

Detail of Additional Financing Sources by Fund and Account
Governmental Funds
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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Total Charges For Current Services	$ **3,842,629**	$ **3,777,990**	$ **5,029,502**	$ **5,029,502**
	Other Revenue					
		Budget Reimbursement	$ 250	$ -	$ -	$ -
		Contrib Fr Other County Funds	394,371	394,902	401,453	401,453
		Total Other Revenue	$ **394,621**	$ **394,902**	$ **401,453**	$ **401,453**
	Total Special Revenue Fund					
Total 22250 Cal Id			$ **4,268,824**	$ **4,184,872**	$ **5,466,105**	$ **5,466,105**
22300 AB2766 Sher Bill						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 12,977	$ 5,925	$ 20,000	$ 20,000
		Total Rev Fr Use Of Money&Property	$ **12,977**	$ **5,925**	$ **20,000**	$ **20,000**
	Intergovernmental Revenues					
		CA-From Other St Govt Agencies	$ 518,084	$ 610,398	$ 650,000	$ 650,000
		Total Intergovernmental Revenues	$ **518,084**	$ **610,398**	$ **650,000**	$ **650,000**
	Total Special Revenue Fund					
Total 22300 AB2766 Sher Bill			$ **531,061**	$ **616,323**	$ **670,000**	$ **670,000**
22350 Special Aviation						
	Special Revenue Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ -	$ 11,795	$ 13,850	$ 13,850
		Total Rev Fr Use Of Money&Property	$ **-**	$ **11,795**	$ **13,850**	$ **13,850**
	Intergovernmental Revenues					
		CA-State Match	$ -	$ 51,293	$ 61,500	$ 61,500
		Fed-Airports Improvements	-	3,231,394	1,961,000	1,961,000
		Total Intergovernmental Revenues	$ **-**	$ **3,282,687**	$ **2,022,500**	$ **2,022,500**
	Charges For Current Services					
		Interfnd -Miscellaneous	$ -	$ 213,500	$ 120,000	$ 120,000
		Total Charges For Current Services	$ **-**	$ **213,500**	$ **120,000**	$ **120,000**
	Other Revenue					
		Insurance Proceeds	$ -	$ 380,582	$ -	$ -
		Operating Transfer-In	-	-	-	-
		Total Other Revenue	$ **-**	$ **380,582**	$ **-**	$ **-**
	Total Special Revenue Fund					
Total 22350 Special Aviation			$ **-**	$ **3,888,564**	$ **2,156,350**	$ **2,156,350**

State Controller Schedules	County of Riverside	Schedule 6
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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
22400 Supervisorial Road Dist #4						
	Special Revenue Fund					
		Taxes				
		Prop Tax Current Secured	$ 588,686	$ 593,924	$ 547,465	$ 547,465
		Prop Tax Current Unsecured	27,911	27,194	31,203	31,203
		Prop Tax Prior Unsecured	1,334	2,017	1,100	1,100
		Prop Tax Current Supplemental	-	1,598	12,000	12,000
		Prop Tax Prior Supplemental	8,213	4,399	15,000	15,000
		Total Taxes	$ **626,144**	$ **629,132**	$ **606,768**	$ **606,768**
		Rev Fr Use Of Money&Property				
		Interest-Invested Funds	$ 17,809	$ 11,053	$ 7,825	$ 7,825
		Total Rev Fr Use Of Money&Property	$ **17,809**	$ **11,053**	$ **7,825**	$ **7,825**
		Intergovernmental Revenues				
		CA-Homeowners Tax Relief	$ 9,190	$ 8,937	$ 8,960	$ 8,960
		CA-Suppl Homeowners Tax Relief	74	96	-	-
		Total Intergovernmental Revenues	$ **9,264**	$ **9,033**	$ **8,960**	$ **8,960**
		Other Revenue				
		Contractual Revenue	$ 4,950	$ 1,505	$ 6,210	$ 6,210
		Total Other Revenue	$ **4,950**	$ **1,505**	$ **6,210**	$ **6,210**
	Total Special Revenue Fund					
Total 22400 Supervisorial Road Dist #4			$ **658,167**	$ **650,723**	$ **629,763**	$ **629,763**
22450 WC- Multi-Species Habitat Con						
	Special Revenue Fund					
		Rev Fr Use Of Money&Property				
		Interest-Invested Funds	$ 46,459	$ 26,570	$ 16,000	$ 16,000
		Total Rev Fr Use Of Money&Property	$ **46,459**	$ **26,570**	$ **16,000**	$ **16,000**
		Charges For Current Services				
		Disposal Fees	$ 3,504,615	$ 3,993,154	$ 4,264,967	$ 4,264,967
		Total Charges For Current Services	$ **3,504,615**	$ **3,993,154**	$ **4,264,967**	$ **4,264,967**
	Total Special Revenue Fund					
Total 22450 WC- Multi-Species Habitat Con			$ **3,551,074**	$ **4,019,724**	$ **4,280,967**	$ **4,280,967**
22500 US Grazing Fees						
	Special Revenue Fund					
		Intergovernmental Revenues				
		Fed-Grazing Fees	$ 241	$ 107	$ 107	$ 107
		Total Intergovernmental Revenues	$ **241**	$ **107**	$ **107**	$ **107**
	Total Special Revenue Fund					

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
Total 22500 US Grazing Fees			$ 241	$ 107	$ 107	$ 107
22650 Airport Land Use Commission						
	Special Revenue Fund					
		Charges For Current Services				
		Plan Review Fees	$ 65,417	$ 68,912	$ 65,000	$ 65,000
		Deposit Based Fee Draws	1,593	7,167	8,000	8,000
		Interfnd-Development Fees	3,703	14,240	-	-
		Total Charges For Current Services	$ **70,713**	$ **90,319**	$ **73,000**	$ **73,000**
		Other Revenue				
		Other Misc Revenue	$ 13	$ 40	$ -	$ -
		Contrib Fr Other County Funds	348,337	262,991	262,991	262,991
		Total Other Revenue	$ **348,350**	$ **263,031**	$ **262,991**	$ **262,991**
	Total Special Revenue Fund					
Total 22650 Airport Land Use Commission			$ **419,063**	$ **353,350**	$ **335,991**	$ **335,991**
22700 CHA:Prop 10						
	Special Revenue Fund					
		Rev Fr Use Of Money&Property				
		Interest-Invested Funds	$ 18,097	$ 12,573	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **18,097**	$ **12,573**	$ **-**	$ **-**
		Intergovernmental Revenues				
		CA-Tobacco Tax Prop.10	$ 1,560,637	$ 1,846,047	$ 1,793,279	$ 1,793,279
		Total Intergovernmental Revenues	$ **1,560,637**	$ **1,846,047**	$ **1,793,279**	$ **1,793,279**
		Other Revenue				
		Other Misc Revenue	$ -	$ -	$ 20,000	$ 20,000
		Total Other Revenue	$ **-**	$ **-**	$ **20,000**	$ **20,000**
	Total Special Revenue Fund					
Total 22700 CHA:Prop 10			$ **1,578,734**	$ **1,858,620**	$ **1,813,279**	$ **1,813,279**
23000 Franchise Area 8 Assmt For Wmi						
	Special Revenue Fund					
		Rev Fr Use Of Money&Property				
		Interest-Invested Funds	$ 415	$ 253	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **415**	$ **253**	$ **-**	$ **-**
		Charges For Current Services				
		Land Use Fees-Cities	$ 764,200	$ 777,055	$ 800,000	$ 800,000
		Total Charges For Current Services	$ **764,200**	$ **777,055**	$ **800,000**	$ **800,000**
	Total Special Revenue Fund					

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
Total 23000 Franchise Area 8 Assmt For Wmi			$ **764,615**	$ **777,308**	$ **800,000**	$ **800,000**
30000 Accumulative Capital Outlay						
	Capital Project Fund					
		Other Revenue				
		Contrib Fr Other County Funds	$ 651,208	$ 1,036,602	$ 1,037,750	$ 1,037,750
		Total Other Revenue	$ **651,208**	$ **1,036,602**	$ **1,037,750**	$ **1,037,750**
	Total Capital Project Fund					
Total 30000 Accumulative Capital Outlay			$ **651,208**	$ **1,036,602**	$ **1,037,750**	$ **1,037,750**
30100 Capital Const-Land & Bldg Acq						
	Capital Project Fund					
		Rev Fr Use Of Money&Property				
		Interest-Invested Funds	$ (220,497)	$ (63,142)	$ 1	$ 1
		Total Rev Fr Use Of Money&Property	$ **(220,497)**	$ **(63,142)**	$ **1**	$ **1**
		Charges For Current Services				
		Rebates & Refunds	$ (186,240)	$ 26,610	$ -	$ -
		Reimbursement For Services	31,737,584	18,727,687	76,158,478	76,158,478
		Interfnd -Reimb For Service	54,181,632	20,393,792	9,576,362	9,576,362
		Interfnd -Salary Reimbursmt	69,000	-	-	-
		Interfund - Project Costs	44,204	159,036	4,010	4,010
		Total Charges For Current Services	$ **85,846,180**	$ **39,307,125**	$ **85,738,850**	$ **85,738,850**
		Other Revenue				
		Rebates & Refunds	$ -	$ 2,171	$ -	$ -
		Insurance Claims	-	111,901	-	-
		Other Misc Revenue	3,152	400,000	-	-
		Contrib Fr Non-County Agencies	2,552,396	-	-	-
		Administrative Charges	-	21	-	-
		Operating Transfer-In	-	3,793,183	-	-
		Contrib Fr Other County Funds	2,961,837	1,617,936	678,196	678,196
		Total Other Revenue	$ **5,517,385**	$ **5,925,212**	$ **678,196**	$ **678,196**
	Total Capital Project Fund					
Total 30100 Capital Const-Land & Bldg Acq			$ **91,143,068**	$ **45,169,195**	$ **86,417,047**	$ **86,417,047**
30120 County Tobacco Securitization						
	Capital Project Fund					
		Rev Fr Use Of Money&Property				
		Interest-Invested Funds	$ 3,853,563	$ 407,120	$ 3,000,000	$ 3,000,000
		Building Use	-	185,929	337,000	337,000
		Total Rev Fr Use Of Money&Property	$ **3,853,563**	$ **593,049**	$ **3,337,000**	$ **3,337,000**

State Controller Schedules	County of Riverside	Schedule 6
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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
	Other Revenue					
		Rebates & Refunds	$ -	$ 3,057,805	$ -	$ -
		Tobacco Tax Settlement	-	-	500,000	500,000
		Operating Transfer-In	32,600,000	-	-	-
		Bond Proceeds	13,134	-	200,000	200,000
		Total Other Revenue	$ **32,613,134**	$ **3,057,805**	$ **700,000**	$ **700,000**
	Total Capital Project Fund					
Total 30120 County Tobacco Securitization			$ **36,466,697**	$ **3,650,854**	$ **4,037,000**	$ **4,037,000**
30300 Fire Capital Project Fund						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 15,787	$ 7,207	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **15,787**	$ **7,207**	$ **-**	$ **-**
	Total Capital Project Fund					
Total 30300 Fire Capital Project Fund			$ **15,787**	$ **7,207**	$ **-**	$ **-**
30500 Developers Impact Fee Ops						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 1,629,570	$ 845,556	$ 1,640,000	$ 1,640,000
		Total Rev Fr Use Of Money&Property	$ **1,629,570**	$ **845,556**	$ **1,640,000**	$ **1,640,000**
	Charges For Current Services					
		Developer Mitigation	$ 3,830,775	$ 2,466,299	$ 5,160,000	$ 5,160,000
		Interfnd-Development Fees	4,246	4,974	12,000	12,000
		Total Charges For Current Services	$ **3,835,021**	$ **2,471,273**	$ **5,172,000**	$ **5,172,000**
	Total Capital Project Fund					
Total 30500 Developers Impact Fee Ops			$ **5,464,591**	$ **3,316,829**	$ **6,812,000**	$ **6,812,000**
30700 Capital Improvement Program						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 850,994	$ 332,420	$ 440,000	$ 440,000
		Total Rev Fr Use Of Money&Property	$ **850,994**	$ **332,420**	$ **440,000**	$ **440,000**
	Charges For Current Services					
		Interfnd -Miscellaneous	$ 61,821	$ 28,621	$ 100,000	$ 100,000
		Total Charges For Current Services	$ **61,821**	$ **28,621**	$ **100,000**	$ **100,000**
	Other Revenue					
		Rebates & Refunds	$ 41,272	$ -	$ -	$ -
		Redevelopment Pass Thru	-	-	-	-

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Contrib Fr Other County Funds	$ 1,053,030	$ 505,087	$ 420,000	$ 420,000
		Total Other Revenue	$ **1,094,302**	$ **505,087**	$ **420,000**	$ **420,000**
	Total Capital Project Fund					
Total 30700 Capital Improvement Program			$ **2,007,117**	$ **866,128**	$ **960,000**	$ **960,000**
31540 RDA Capital Improvements						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ -	$ 230,830	$ 159,660	$ 159,660
		Total Rev Fr Use Of Money&Property	$ **-**	$ **230,830**	$ **159,660**	$ **159,660**
	Other Revenue					
		Contractual Revenue	$ 55,550,557	$ 18,821,664	$ 24,407,415	$ 24,407,415
		Operating Transfer-In	4,905,574	-	-	-
		Total Other Revenue	$ **60,456,131**	$ **18,821,664**	$ **24,407,415**	$ **24,407,415**
	Total Capital Project Fund					
Total 31540 RDA Capital Improvements			$ **60,456,131**	$ **19,052,494**	$ **24,567,075**	$ **24,567,075**
31600 Menifee Rd-Bridge Benefit Dist						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 100,624	$ 55,458	$ 52,643	$ 52,643
		Total Rev Fr Use Of Money&Property	$ **100,624**	$ **55,458**	$ **52,643**	$ **52,643**
	Total Capital Project Fund					
Total 31600 Menifee Rd-Bridge Benefit Dist			$ **100,624**	$ **55,458**	$ **52,643**	$ **52,643**
31610 So West Area RB Dist						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 135,155	$ 71,558	$ 51,922	$ 51,922
		Total Rev Fr Use Of Money&Property	$ **135,155**	$ **71,558**	$ **51,922**	$ **51,922**
	Other In-Lieu And Other Govt					
		Special District Income	$ 120,835	$ 147,404	$ 150,000	$ 150,000
		Total Other In-Lieu And Other Govt	$ **120,835**	$ **147,404**	$ **150,000**	$ **150,000**
	Total Capital Project Fund					
Total 31610 So West Area RB Dist			$ **255,990**	$ **218,962**	$ **201,922**	$ **201,922**
31630 Traffic Signal Mitigation						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 19,732	$ 6,921	$ 7,112	$ 7,112

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Total Rev Fr Use Of Money&Property	$ **19,732**	$ **6,921**	$ **7,112**	$ **7,112**
	Total Capital Project Fund					
Total 31630 Traffic Signal Mitigation			$ **19,732**	$ **6,921**	$ **7,112**	$ **7,112**
31640 Mira Loma R & B Bene District						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 235,135	$ 125,907	$ 114,754	$ 114,754
		Total Rev Fr Use Of Money&Property	$ **235,135**	$ **125,907**	$ **114,754**	$ **114,754**
	Other In-Lieu And Other Govt					
		Special District Income	$ 1,595,245	$ 911,029	$ 1,000,000	$ 1,000,000
		Total Other In-Lieu And Other Govt	$ **1,595,245**	$ **911,029**	$ **1,000,000**	$ **1,000,000**
	Total Capital Project Fund					
Total 31640 Mira Loma R & B Bene District			$ **1,830,380**	$ **1,036,936**	$ **1,114,754**	$ **1,114,754**
31650 Dev Agrmt DIF Cons. Area Plan						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 554	$ 353	$ 129	$ 129
		Total Rev Fr Use Of Money&Property	$ **554**	$ **353**	$ **129**	$ **129**
	Other Revenue					
		Contrib Fr Other County Funds	$ 874,354	$ 1,930,887	$ 1,924,025	$ 1,924,025
		Total Other Revenue	$ **874,354**	$ **1,930,887**	$ **1,924,025**	$ **1,924,025**
	Total Capital Project Fund					
Total 31650 Dev Agrmt DIF Cons. Area Plan			$ **874,908**	$ **1,931,240**	$ **1,924,154**	$ **1,924,154**
31680 Developer Agreements						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 21,683	$ 11,307	$ 11,383	$ 11,383
		Total Rev Fr Use Of Money&Property	$ **21,683**	$ **11,307**	$ **11,383**	$ **11,383**
	Total Capital Project Fund					
Total 31680 Developer Agreements			$ **21,683**	$ **11,307**	$ **11,383**	$ **11,383**
31690 Signal Mitigation Dev Imp Fees						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 1,593	$ 678	$ 191	$ 191
		Total Rev Fr Use Of Money&Property	$ **1,593**	$ **678**	$ **191**	$ **191**
	Other Revenue					

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Contrib Fr Other County Funds	$ 2,693,542	$ 1,629,772	$ 3,158,000	$ 3,158,000
		Total Other Revenue	$ **2,693,542**	$ **1,629,772**	$ **3,158,000**	$ **3,158,000**
	Total Capital Project Fund					
Total 31690 Signal Mitigation Dev Imp Fees			$ **2,695,135**	$ **1,630,450**	$ **3,158,191**	$ **3,158,191**
31693 RBBD-Scott Road						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 27,604	$ 13,615	$ 10,639	$ 10,639
		Total Rev Fr Use Of Money&Property	$ **27,604**	$ **13,615**	$ **10,639**	$ **10,639**
	Other In-Lieu And Other Govt					
		Special District Income	$ 15,729	$ 74,151	$ 80,000	$ 80,000
		Total Other In-Lieu And Other Govt	$ **15,729**	$ **74,151**	$ **80,000**	$ **80,000**
	Total Capital Project Fund					
Total 31693 RBBD-Scott Road			$ **43,333**	$ **87,766**	$ **90,639**	$ **90,639**
32710 EDA Mitigation Projects						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Misc Event Charges	$ -	$ 23,180	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **-**	$ **23,180**	$ **-**	$ **-**
	Charges For Current Services					
		Interfnd -Miscellaneous	$ -	$ -	$ 80,000	$ 80,000
		Total Charges For Current Services	$ **-**	$ **-**	$ **80,000**	$ **80,000**
	Other Revenue					
		Other Misc Revenue	$ -	$ 7,612	$ -	$ -
		Contrib Fr Other County Funds	84,169	30,600	5,000	5,000
		Total Other Revenue	$ **84,169**	$ **38,212**	$ **5,000**	$ **5,000**
	Total Capital Project Fund					
Total 32710 EDA Mitigation Projects			$ **84,169**	$ **61,392**	$ **85,000**	$ **85,000**
32750 Woodcrest Library Project						
	Capital Project Fund					
	Rev Fr Use Of Money&Property					
		Interest-Invested Funds	$ 966	$ -	$ -	$ -
		Total Rev Fr Use Of Money&Property	$ **966**	$ **-**	$ **-**	$ **-**
	Charges For Current Services					
		Interfund - Rent CORAL	$ 33,012	$ -	$ -	$ -

Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Total Charges For Current Services	$ **33,012**	$ **-**	$ **-**	$ **-**
	Total Capital Project Fund					
Total 32750 Woodcrest Library Project			$ **33,978**	$ **-**	$ **-**	$ **-**
33500 PSEC 800 Mhz Radio Project						
	Capital Project Fund					
		Intergovernmental Revenues				
		Fed-Construction	$ 32,812	$ 747,844	$ -	$ -
		Total Intergovernmental Revenues	$ **32,812**	$ **747,844**	$ **-**	$ **-**
		Other Revenue				
		Rebates & Refunds	$ -	$ 23,306	$ -	$ -
		Contrib Fr Other County Funds	881,681	5,182,974	5,565,275	5,565,275
		Total Other Revenue	$ **881,681**	$ **5,206,280**	$ **5,565,275**	$ **5,565,275**
	Total Capital Project Fund					
Total 33500 PSEC 800 Mhz Radio Project			$ **914,493**	$ **5,954,124**	$ **5,565,275**	$ **5,565,275**
33600 CREST						
	Capital Project Fund					
		Rev Fr Use Of Money&Property				
		Interest-Invested Funds	$ 29,850	$ 20,624	$ 11,500	$ 11,500
		Total Rev Fr Use Of Money&Property	$ **29,850**	$ **20,624**	$ **11,500**	$ **11,500**
		Charges For Current Services				
		Prop Tax Colln Fees R&T 95.2	$ 1,893,004	$ 1,207,698	$ 2,292,700	$ 2,292,700
		Total Charges For Current Services	$ **1,893,004**	$ **1,207,698**	$ **2,292,700**	$ **2,292,700**
		Other Revenue				
		Rebates & Refunds	$ -	$ 6,747	$ -	$ -
		Budget Reimbursement	198	114	-	-
		Contrib Fr Other County Funds	2,186,716	1,827,537	8,764,286	8,764,286
		Total Other Revenue	$ **2,186,914**	$ **1,834,398**	$ **8,764,286**	$ **8,764,286**
	Total Capital Project Fund					
Total 33600 CREST			$ **4,109,768**	$ **3,062,720**	$ **11,068,486**	$ **11,068,486**
35000 Pension Obligation Bonds						
	Debt Service Fund					
		Rev Fr Use Of Money&Property				
		Interest-Invested Funds	$ 127,460	$ 88,813	$ -	$ -
		Interest-Other	614,885	595,627	-	-
		Total Rev Fr Use Of Money&Property	$ **742,345**	$ **684,440**	$ **-**	$ **-**
		Charges For Current Services				

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Fund Name	Financing Source Category	Financing Source Account	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3	4	5	6	7
		Interfund-Admin Services	$ 33,117,937	$ 32,271,426	$ 36,176,199	$ 36,176,199
		Total Charges For Current Services	$ **33,117,937**	$ **32,271,426**	$ **36,176,199**	$ **36,176,199**
	Total Debt Service Fund					
Total 35000 Pension Obligation Bonds			$ **33,860,282**	$ **32,955,866**	$ **36,176,199**	$ **36,176,199**
37050 Teeter Debt Service Fund						
	Debt Service Fund					
		Rev Fr Use Of Money&Property				
		Interest-Invested Funds	$ 1,428,304	$ 1,804,497	$ -	$ -
		Investment Income	-	235	-	-
		Total Rev Fr Use Of Money&Property	$ **1,428,304**	$ **1,804,732**	$ **-**	$ **-**
		Other Revenue				
		Rebates & Refunds	$ -	$ 42,500	$ -	$ -
		Operating Transfer-In	3,076,780	455,031	5,935,832	5,935,832
		Total Other Revenue	$ **3,076,780**	$ **497,531**	$ **5,935,832**	$ **5,935,832**
	Total Debt Service Fund					
Total 37050 Teeter Debt Service Fund			$ **4,505,084**	$ **2,302,263**	$ **5,935,832**	$ **5,935,832**
Total ALL FUNDS			$ **2,946,129,018**	$ **2,809,265,030**	$ **2,951,025,154**	$ **2,961,275,154**

Total All Funds Transferred To	sch 5, col 2	sch 5, col 3	sch 5, col 4	sch 5, col 5

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County Budget Act January 2010	Summary of Financing Uses by Function and Fund Governmental Funds **Fiscal Year 2011-12**	

Description	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Summarization by Function					
General Government	$ 648,817,937	$ 317,137,069	$ 434,446,225	$ 438,369,899	$ 439,119,899
Public Protection	1,085,852,895	1,109,265,406	1,098,783,494	1,103,100,847	1,122,800,847
Public Ways and Facilities	144,016,784	188,408,526	179,796,288	180,312,288	180,312,288
Health and Sanitation	347,787,913	359,883,891	411,768,453	412,446,810	417,985,027
Public Assistance	833,094,306	844,956,305	885,094,991	913,126,668	913,126,668
Education	21,394,379	21,765,566	24,574,741	24,574,741	24,574,741
Recreation and Cultural Services	-	388,858	385,177	385,177	385,177
Debt Service	43,005,628	39,453,026	44,566,720	43,035,693	43,035,693
Total Financing Uses by Function	$ **3,123,969,842**	$ **2,881,258,647**	$ **3,079,416,089**	$ **3,115,352,123**	$ **3,141,340,340**
Appropriations for Contingencies					
10000 General Fund	$ -	$ -	$ 19,975,099	$ 20,000,000	$ 20,000,000
Total Appropriations for Contingencies					
Subtotal Financing Uses	$ **3,123,969,842**	$ **2,881,258,647**	$ **3,099,391,188**	$ **3,135,352,123**	$ **3,161,340,340**
Provisions for Reserves and Designations					
10000 General Fund	$ 27,982,875	$ -	$ -	$ -	$ -
20000 Transportation	2,463,533	3,044,036	-	-	-
20250 Building Permits	35,214	198,558	-	-	-
20260 Survey	1,095,396	460,497	-	-	-
20300 Landscape Maintenance District	179,765	393,320	-	-	-
21000 Co Structural Fire Protection	-	3,408,364	-	-	-
21050 Community Action Agency	329,835	1,140,983	-	-	-
21100 EDA-Administration	979,427	1,657,256	-	-	-
21200 County Free Library	-	1,461,281	-	-	-
21250 Home Program Fund	4,961	105,187	-	-	-
21270 Cal Home Program	147	23,855	-	-	-
21300 Homeless Housing Relief Fund	11,167	-	-	-	-
21350 Hud Community Services Grant	-	368,691	-	-	-
21370 Neighborhood Stabilization NSP	272,852	2,069,548	-	-	-
21450 Office On Aging	56,348	-	-	-	-
21550 Workforce Development	-	2,655,134	194,999	194,999	194,999
21750 Bio-terrorism Preparedness	-	225,446	-	-	-
21770 CHA:CDC PHER H1N1 Allocation	98,192	-	-	-	-
21780 CHA:Hosp Prep Prog H1N1 Alloc	41,568	5,542	-	-	-
22000 Rideshare	101,451	-	-	-	-
22050 AD CFD Adm	364,946	185,532	-	-	-

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Description	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
22100 Aviation	$ -	$ 94,480	$ -	$ -	$ -
22250 Cal Id	400,621	529,969	-	-	-
22400 Supervisorial Road Dist #4	76,341	423,226	-	-	-
22450 WC- Multi-Species Habitat Con	81,373	-	16,000	16,000	16,000
22500 US Grazing Fees	241	107	-	-	-
22650 Airport Land Use Commission	72,423	43,629	-	-	-
22700 CHA:Prop 10	-	156,698	-	-	-
23000 Franchise Area 8 Assmt For Wmi	1,035	253	-	-	-
30000 Accumulative Capital Outlay	-	63,011	-	-	-
30100 Capital Const-Land & Bldg Acq	-	11,263,130	-	-	-
31540 RDA Capital Improvements	26,595,311	-	-	-	-
31600 Menifee Rd-Bridge Benefit Dist	75,463	-	-	-	-
31640 Mira Loma R & B Bene District	-	-	462,044	462,044	462,044
31650 Dev Agrmt DIF Cons. Area Plan	69,628	-	129	129	129
31680 Developer Agreements	-	11,307	-	-	-
31690 Signal Mitigation Dev Imp Fees	159,731	-	191	191	191
32710 EDA Mitigation Projects	83,169	-	-	-	-
33500 PSEC 800 Mhz Radio Project	-	936,917	-	-	-
33600 CREST	1,706,222	-	-	-	-
35000 Pension Obligation Bonds	-	118,511	-	-	-
37050 Teeter Debt Service Fund	1,278,717	-	-	-	-
Total Reserves and Designations	**$ 64,617,952**	**$ 31,044,468**	**$ 673,363**	**$ 673,363**	**$ 673,363**
Total Financing Uses	**$ 3,188,587,794**	**$ 2,912,303,115**	**$ 3,100,064,551**	**$ 3,136,025,486**	**$ 3,162,013,703**
Summarization by Fund					
10000 General Fund	$ 2,299,931,178	$ 2,308,433,422	$ 2,413,975,752	$ 2,449,331,739	$ 2,475,319,956
20000 Transportation	115,047,314	158,529,397	141,828,304	141,828,304	141,828,304
20200 Tran-Lnd Mgmt Agency Adm	13,621,714	12,253,145	11,980,288	11,980,288	11,980,288
20250 Building Permits	6,352,917	5,649,822	5,732,153	5,732,153	5,732,153
20260 Survey	4,276,785	4,176,405	4,814,810	4,814,810	4,814,810
20300 Landscape Maintenance District	2,030,700	1,760,691	2,403,371	2,403,371	2,403,371
21000 Co Structural Fire Protection	51,154,267	47,378,529	48,257,081	48,257,081	48,257,081
21050 Community Action Agency	10,855,752	10,912,520	8,608,267	8,608,267	8,608,267
21100 EDA-Administration	21,613,932	17,826,398	22,277,180	22,277,180	22,277,180
21200 County Free Library	23,418,875	21,316,728	31,692,090	31,692,090	31,692,090
21250 Home Program Fund	1,365,011	3,902,351	4,317,667	4,317,667	4,317,667
21270 Cal Home Program	-	1,476,900	750,000	750,000	750,000
21300 Homeless Housing Relief Fund	8,199,383	9,668,931	10,962,176	10,962,176	10,962,176
21350 Hud Community Services Grant	13,763,049	13,099,898	13,250,766	13,250,766	13,250,766
21370 Neighborhood Stabilization NSP	32,079,264	22,704,577	36,667,963	36,667,963	36,667,963
21450 Office On Aging	12,292,132	11,930,679	11,322,291	11,322,291	11,322,291
21550 Workforce Development	36,680,684	33,593,671	24,310,823	24,310,823	24,310,823

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Description	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
21750 Bio-terrorism Preparedness	$ 2,701,872	$ 2,222,424	$ 2,631,029	$ 2,631,029	$ 2,631,029
21760 CHA:Hosp Prep Prog Allocation	-	653,620	708,633	708,633	708,633
21770 CHA:CDC PHER H1N1 Allocation	1,692,386	1,813,400	98,684	98,684	98,684
21780 CHA:Hosp Prep Prog H1N1 Alloc	941	-	-	-	-
22000 Rideshare	1,196,172	1,333,871	1,447,574	1,447,574	1,447,574
22050 AD CFD Adm	707,301	662,033	790,000	790,000	790,000
22100 Aviation	-	2,606,416	2,740,007	2,740,007	2,740,007
22200 National Date Festival	4,619,101	4,267,407	3,611,031	3,611,031	3,611,031
22250 Cal Id	3,868,203	3,654,903	5,466,105	5,466,105	5,466,105
22300 AB2766 Sher Bill	799,200	693,143	1,225,000	1,225,000	1,225,000
22350 Special Aviation	-	4,409,635	2,156,350	2,156,350	2,156,350
22400 Supervisorial Road Dist #4	581,826	227,497	1,015,032	1,015,032	1,015,032
22450 WC- Multi-Species Habitat Con	3,469,701	4,037,154	3,748,967	4,264,967	4,264,967
22500 US Grazing Fees	-	-	17,055	17,055	17,055
22650 Airport Land Use Commission	346,640	309,721	335,991	335,991	335,991
22700 CHA:Prop 10	1,605,373	1,701,922	1,813,279	1,813,279	1,813,279
23000 Franchise Area 8 Assmt For Wmi	763,580	777,055	800,000	800,000	800,000
30000 Accumulative Capital Outlay	733,947	973,591	1,037,750	1,037,750	1,037,750
30100 Capital Const-Land & Bldg Acq	95,779,879	33,906,065	86,417,047	86,417,047	86,417,047
30120 County Tobacco Securitization	225,251,401	15,391,489	39,110,100	39,110,100	39,110,100
30300 Fire Capital Project Fund	286,075	232,451	1,109,870	1,109,870	1,109,870
30500 Developers Impact Fee Ops	12,355,947	16,759,159	14,060,000	14,060,000	14,060,000
30700 Capital Improvement Program	24,577,522	12,093,820	26,050,000	26,050,000	26,050,000
31540 RDA Capital Improvements	33,860,820	35,955,523	36,573,060	36,573,060	36,573,060
31600 Menifee Rd-Bridge Benefit Dist	25,161	126,423	250,000	250,000	250,000
31610 So West Area RB Dist	762,834	668,747	7,455,114	7,455,114	7,455,114
31630 Traffic Signal Mitigation	515,319	464,637	577,000	577,000	577,000
31640 Mira Loma R & B Bene District	2,425,255	1,757,319	652,710	652,710	652,710
31650 Dev Agrmt DIF Cons. Area Plan	805,280	1,999,961	1,924,025	1,924,025	1,924,025
31680 Developer Agreements	374,070	-	200,000	200,000	200,000
31690 Signal Mitigation Dev Imp Fees	2,535,404	1,787,910	3,158,000	3,158,000	3,158,000
31693 RBBD-Scott Road	380,410	721,920	230,000	230,000	230,000
32710 EDA Mitigation Projects	1,000	100,356	85,000	85,000	85,000
32750 Woodcrest Library Project	222,354	-	-	-	-
33500 PSEC 800 Mhz Radio Project	6,298,778	5,017,207	5,565,275	5,654,224	5,654,224
33600 CREST	2,403,546	3,981,548	11,068,487	11,068,486	11,068,486
35000 Pension Obligation Bonds	36,113,220	32,837,355	36,176,199	36,176,199	36,176,199
37050 Teeter Debt Service Fund	3,226,367	2,498,901	5,935,832	5,935,832	5,935,832
Total Financing Uses by Fund	**$ 3,123,969,842**	**$ 2,881,258,647**	**$ 3,099,391,188**	**$ 3,135,352,123**	**$ 3,161,340,340**

Total Financing Uses by Function Transferred From	sch 8, col 2	sch 8, col 3		sch 8, col 4	sch 8, col 5
Total Financing Uses Transferred To					sch 2, col 8
Subtotal Fin Uses Ties To					sch 2, col 6
Total Reserves and Designations Transferred To					sch 2, col 7 sch 4, col 6
Summarization Totals Must Equal					Total FIN Uses = Total FIN Uses

State Controller Schedules	County of Riverside	Schedule 8
County Budget Act	Detail of Financing Uses by Function, Activity and Budget Unit	
January 2010	Governmental Funds	
	Fiscal Year 2011-12	

Function, Activity and Budget Unit	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
General Government					
Communication					
PSEC 800MHZ RADIO PROJECT	$ 6,298,778	$ 5,017,207	$ 5,565,275	$ 5,654,224	$ 5,654,224
Total Communication	$ **6,298,778**	$ **5,017,207**	$ **5,565,275**	$ **5,654,224**	$ **5,654,224**
Counsel					
COUNTY COUNSEL	$ 5,030,283	$ 5,503,693	$ 4,778,878	$ 4,778,878	$ 4,778,878
Total Counsel	$ **5,030,283**	$ **5,503,693**	$ **4,778,878**	$ **4,778,878**	$ **4,778,878**
Debt Service - Principal					
TEETER DEBT SVC	$ 3,226,367	$ 2,498,901	$ 5,935,832	$ 5,935,832	$ 5,935,832
Total Debt Service - Principal	$ **3,226,367**	$ **2,498,901**	$ **5,935,832**	$ **5,935,832**	$ **5,935,832**
Elections					
REGISTRAR OF VOTERS	$ 10,485,872	$ 9,898,744	$ 9,254,574	$ 9,254,574	$ 9,254,574
Total Elections	$ **10,485,872**	$ **9,898,744**	$ **9,254,574**	$ **9,254,574**	$ **9,254,574**
Finance					
ACO: Payroll Services	$ 2,079,368	$ 549,935	$ 843,500	$ 843,500	$ 843,500
ASSESSOR: ASSESSOR	21,102,713	19,634,084	17,782,598	17,782,598	18,532,598
AUDITOR-CONTROLLER	6,705,615	6,821,529	7,303,165	7,303,165	7,303,165
COWCAP REIMBURSEMENT	(3,567,313)	(11,858,272)	(14,211,771)	(14,211,771)	(14,211,771)
INTEGRATED PROP-TAX MGMT SYS	2,403,546	3,981,548	11,068,487	11,068,486	11,068,486
INTERNAL AUDITS	1,499,573	1,213,495	977,947	977,947	977,947
PURCHASING	1,910,900	1,651,714	1,631,661	1,631,661	1,631,661
TREASURER-TAX COLLECTOR	13,166,871	13,417,373	14,483,224	14,483,225	14,483,225
Total Finance	$ **45,301,273**	$ **35,411,406**	$ **39,878,811**	$ **39,878,811**	$ **40,628,811**
Legislative and Administrative					
AB 2766 AIR QUALITY	$ 799,200	$ 693,143	$ 1,225,000	$ 1,225,000	$ 1,225,000
ASSESSMENT APPEALS BOARD	706,009	677,870	645,370	645,370	645,370
BOARD OF SUPERVISORS	10,361,809	10,708,711	9,302,204	7,406,172	7,406,172
CFD_AD ADMINISTRATION	707,301	662,033	790,000	790,000	790,000
EXECUTIVE OFFICE	4,710,969	4,222,957	4,798,992	4,798,992	4,798,992
LEGISLATIVE_ADMIN SERVICES	1,856,842	1,621,664	1,665,774	1,860,775	1,860,775
RDA CAPITAL IMPROVEMENTS	33,860,820	35,955,523	36,573,060	36,573,060	36,573,060
WOODCREST LIBRARY PROJECT	222,354	-	-	-	-
Total Legislative and Administrative	$ **53,225,304**	$ **54,541,901**	$ **55,000,400**	$ **53,299,369**	$ **53,299,369**
Other General					
CONTRIBUTION TO OTHER FUNDS	$ 70,762,992	$ 46,081,868	$ 49,886,070	$ 56,240,635	$ 56,240,635

Detail of Financing Uses by Function, Activity and Budget Unit
Governmental Funds
Fiscal Year 2011-12

Function, Activity and Budget Unit	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
COURT SUBFUND	$ 10,506,782	$ 10,129,721	$ 9,374,359	$ 9,374,359	$ 9,374,359
DEVELOPERS IMPACT FEE OPS	12,184,747	11,492,083	13,760,000	13,760,000	13,760,000
EO SUBFUND BUDGETS	3,237,081	923,578	8,099,652	8,099,652	8,099,652
MITIGATION PROJECT OPS	171,200	5,267,076	300,000	300,000	300,000
Survey	4,276,785	4,176,405	4,814,810	4,814,810	4,814,810
Total Other General	$ **101,139,587**	$ **78,070,731**	$ **86,234,891**	$ **92,589,456**	$ **92,589,456**
Personnel					
HR: HUMAN RESOURCES	$ 7,086,348	$ 7,748,025	$ 6,306,008	$ 6,306,008	$ 6,306,008
HR: RIDESHARE	1,196,172	1,333,871	1,447,574	1,447,574	1,447,574
Total Personnel	$ **8,282,520**	$ **9,081,896**	$ **7,753,582**	$ **7,753,582**	$ **7,753,582**
Plant Acquisition					
CAPITAL IMPROVEMENT PROGRAM	$ 24,577,522	$ 12,093,820	$ 26,050,000	$ 26,050,000	$ 26,050,000
CONST _ LAND ACQ - ACO	733,947	973,591	1,037,750	1,037,750	1,037,750
EDA: BLYTHE CONSTR _ LAND	-	-	1,000	1,000	1,000
EDA: FRENCH VAL CONSTR _ LAND	-	1,221,046	155,500	155,500	155,500
EDA: HEMET-RYAN CONSTR _ LAND	-	736,995	150,500	150,500	150,500
EDA: THERMAL CONSTR _ LAND	-	2,451,594	1,838,000	1,838,000	1,838,000
FIRE: CONST _ LAND ACQ	286,075	232,451	1,109,870	1,109,870	1,109,870
LIBRARY CONST _ LAND	1,532,228	-	5,846,000	5,846,000	5,846,000
Tobacco Securitization	225,251,401	15,391,489	39,110,100	39,110,100	39,110,100
Total Plant Acquisition	$ **252,381,173**	$ **33,100,986**	$ **75,298,720**	$ **75,298,720**	$ **75,298,720**
Promotion					
EDA: ADMIN SUBFUNDS	$ 2,901,151	$ 4,483,459	$ 6,966,371	$ 6,966,371	$ 6,966,371
EDA: ADMINISTRATION	18,712,781	13,342,939	15,310,809	15,310,809	15,310,809
EDA: DESERT EXPOCENTRE	4,619,101	4,267,407	3,611,031	3,611,031	3,611,031
EDA: MITIGATION FUND	1,000	100,356	85,000	85,000	85,000
Total Promotion	$ **26,234,033**	$ **22,194,161**	$ **25,973,211**	$ **25,973,211**	$ **25,973,211**
Property Management					
FACILITY MGMT: ADMINISTRATION	$ 298,930	$ 4,923,042	$ 5,606,179	$ 5,517,643	$ 5,517,643
FACILITY MGMT: DESIGN _ CONST.	3,965,350	10,657,471	11,189,412	10,949,458	10,949,458
FACILITY MGMT: ENERGY MGMT	9,699,762	12,328,097	15,559,413	15,069,094	15,069,094
FACILITY MGMT: HOUSEKEEPING	4,384,011	-	-	-	-
FACILITY MGMT: MAINTENANCE	4,809,780	-	-	-	-
FACILITY MGMT: PROJECT GROUP	1,844,911	-	-	-	-

Function, Activity and Budget Unit	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
FACILITY MGMT: REAL ESTATE	$ 16,430,124	$ 2,768	$ -	$ -	$ -
FACILITY MGMT:CAPITAL PROJECTS	95,779,879	33,906,065	86,417,047	86,417,047	86,417,047
Total Property Management	$ **137,212,747**	$ **61,817,443**	$ **118,772,051**	$ **117,953,242**	$ **117,953,242**
Total General Government	$ **648,817,937**	$ **317,137,069**	$ **434,446,225**	$ **438,369,899**	$ **439,119,899**
Public Protection					
Administration					
PROBATION: ADMIN _ SUPPORT	$ 7,285,819	$ 6,709,863	$ 7,814,807	$ 7,814,807	$ 7,814,807
Total Administration	$ **7,285,819**	$ **6,709,863**	$ **7,814,807**	$ **7,814,807**	$ **7,814,807**
Detention and Correction					
PROBATION	$ 34,212,236	$ 31,472,637	$ 34,863,994	$ 34,863,994	$ 34,863,994
PROBATION: JUVENILE HALL	39,220,591	36,397,975	36,278,716	38,182,450	39,282,450
SHERIFF: CORRECTIONS	146,346,922	159,896,369	148,512,389	148,512,389	158,055,172
Total Detention and Correction	$ **219,779,749**	$ **227,766,981**	$ **219,655,099**	$ **221,558,833**	$ **232,201,616**
Fire Protection					
FIRE PROTECTION: CONTRACTS	$ 66,145,038	$ 67,167,823	$ 73,419,347	$ 73,419,347	$ 73,419,347
FIRE PROTECTION: FOREST	99,413,619	97,809,446	93,653,394	96,053,394	97,153,394
FIRE: NON FOREST	51,154,267	47,378,529	48,257,081	48,257,081	48,257,081
Total Fire Protection	$ **216,712,924**	$ **212,355,798**	$ **215,329,822**	$ **217,729,822**	$ **218,829,822**
Judicial					
ALTERNATE PUBLIC DEFENDER	$ 24,965	$ 3,268,027	$ 3,438,502	$ 3,438,502	$ 3,438,502
CHILD SUPPORT SERVICES	35,774,967	36,089,250	36,795,882	36,795,882	36,795,882
CONFIDENTIAL COURT ORDERS	689,040	562,131	660,014	660,014	660,014
CONTRIBUTION TO TRIAL COURT	30,709,165	30,499,568	32,781,889	32,781,889	32,781,889
COURT FACILITIES	4,824,448	4,404,127	4,895,120	4,895,120	4,895,120
COURT TRANSCRIPTS	1,892,700	1,714,580	1,500,000	1,500,000	1,500,000
DISTRICT ATTORNEY: CRIMINAL	96,834,999	100,418,533	92,294,619	92,294,619	92,294,619
DISTRICT ATTORNEY: FORENSICS	393,920	467,033	615,000	615,000	615,000
INDIGENT DEFENSE	-	11,725,648	10,842,258	10,842,258	10,842,258
PUBLIC DEFENDER	35,153,243	33,585,497	31,909,186	31,909,186	31,909,186
Total Judicial	$ **206,297,447**	$ **222,734,394**	$ **215,732,470**	$ **215,732,470**	$ **215,732,470**
Other Protection					
ASSESSOR: CLERK-RECORDER	$ 16,011,900	$ 17,137,538	$ 24,844,344	$ 24,844,344	$ 24,844,344
CHA: ANIMAL CONTROL	19,380,782	15,750,427	16,007,869	16,007,469	16,007,469

Detail of Financing Uses by Function, Activity and Budget Unit
Governmental Funds
Fiscal Year 2011-12

Function, Activity and Budget Unit	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
CODE ENFORCEMENT	$ 18,012,660	$ 16,410,562	$ 14,012,590	$ 14,012,590	$ 15,012,590
MENTAL HEALTH: PUBLIC GUARDIAN	4,604,830	4,076,705	4,221,796	4,221,796	4,221,796
NATL POLLUTANT DSCHRG ELIM SYS	2,351,014	1,844,574	1,368,183	1,382,202	1,382,202
RANGE IMPROVEMENT	-	-	17,055	17,055	17,055
SHERIFF: CORONER	7,450,344	7,375,078	6,198,459	6,198,459	7,694,306
SHERIFF: PUBLIC ADMINISTRATOR	1,513,786	1,318,590	1,526,454	1,526,454	1,526,454
TLMA: Airport Land Use Comm	346,640	309,721	335,991	335,991	335,991
TLMA: CROSSING GUARD	280,738	292,329	353,075	353,075	353,075
TLMA: PLANNING	8,500,197	7,493,343	7,060,404	7,060,404	7,060,404
Total Other Protection	$ **78,452,891**	$ **72,008,867**	$ **75,946,220**	$ **75,959,839**	$ **78,455,686**
Police Protection					
SHERIFF: ADA GRANT	$ 962,289	$ 944,189	$ 682,993	$ 682,993	$ 682,993
SHERIFF: ADMINISTRATION	10,804,734	10,549,607	11,192,480	11,192,480	11,192,480
SHERIFF: AUTO THEFT	762,892	693,478	869,561	869,561	869,561
SHERIFF: CAC SECURITY	516,388	533,249	-	-	550,030
SHERIFF: CAL-DNA	623,179	175,487	760,941	760,941	760,941
SHERIFF: CAL-ID	3,103,953	3,208,431	4,379,025	4,379,025	4,379,025
SHERIFF: CAL-PHOTO	141,071	270,985	326,139	326,139	326,139
SHERIFF: COURT SERVICES	22,795,945	24,833,289	25,282,593	25,282,593	24,201,754
SHERIFF: PATROL	260,412,438	268,860,647	262,349,117	262,349,117	267,810,487
SHERIFF: SUPPORT	35,940,392	35,707,524	36,033,462	36,033,462	36,033,462
SHERIFF: TRAINING CENTER	10,137,439	11,317,068	11,389,669	11,389,669	11,920,478
Total Police Protection	$ **346,200,720**	$ **357,093,954**	$ **353,265,980**	$ **353,265,980**	$ **358,727,350**
Protection/Inspection					
AGRICULTURAL COMMISSIONER	$ 4,770,428	$ 4,945,727	$ 5,306,943	$ 5,306,943	$ 5,306,943
BUILDING AND SAFETY	6,352,917	5,649,822	5,732,153	5,732,153	5,732,153
Total Protection/Inspection	$ **11,123,345**	$ **10,595,549**	$ **11,039,096**	$ **11,039,096**	$ **11,039,096**
Total Public Protection	$ **1,085,852,895**	$ **1,109,265,406**	$ **1,098,783,494**	$ **1,103,100,847**	$ **1,122,800,847**
Public Ways and Facilities					
Capital Outlay					
CONST _ LAND-CHIRIACO	$ -	$ -	$ 500	$ 500	$ 500
CONST _ LAND-DESERT CENTER	-	-	10,850	10,850	10,850
TLMA: DA_DIF	805,280	1,999,961	1,924,025	1,924,025	1,924,025
TLMA: DEV AGREEMENTS	374,070	-	200,000	200,000	200,000
TLMA: RBBD - MENIFEE	25,161	126,423	250,000	250,000	250,000

Detail of Financing Uses by Function, Activity and Budget Unit
Governmental Funds
Fiscal Year 2011-12

Function, Activity and Budget Unit	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
TLMA: RBBD - MIRA LOMA	$ 2,425,255	$ 1,757,319	$ 652,710	$ 652,710	$ 652,710
TLMA: RBBD - SCOTT ROAD	380,410	721,920	230,000	230,000	230,000
TLMA: RBBD - SOUTHWEST	762,834	668,747	7,455,114	7,455,114	7,455,114
TLMA: SIGNAL DIF	2,535,404	1,787,910	3,158,000	3,158,000	3,158,000
TLMA: SIGNAL MITIGATION	515,319	464,637	577,000	577,000	577,000
TLMA: TRANSP CONST PROJECT	81,034,642	121,161,443	102,254,818	102,254,818	102,254,818
Total Capital Outlay	$ **88,858,375**	$ **128,688,360**	$ **116,713,017**	$ **116,713,017**	$ **116,713,017**
Parking Facilities					
FACILITY MGMT: PARKING	$ 1,722,534	$ 1,759,638	$ 1,975,195	$ 1,975,195	$ 1,975,195
Total Parking Facilities	$ **1,722,534**	$ **1,759,638**	$ **1,975,195**	$ **1,975,195**	$ **1,975,195**
Public Ways					
EDA: AIRPORT	$ -	$ 2,606,416	$ 2,740,007	$ 2,740,007	$ 2,740,007
ENVIRONMENTAL PROGRAMS	2,017,485	1,825,611	1,748,785	1,748,785	1,748,785
MULTI-SPEC HABITAT PLAN	3,469,701	4,037,154	3,748,967	4,264,967	4,264,967
TLMA: ADMINISTRATION	6,684,637	6,505,228	6,341,243	6,341,243	6,341,243
TLMA: CONSOLIDATED COUNTER	1,953,271	1,567,578	1,495,157	1,495,157	1,495,157
TLMA: GIS	2,966,321	2,354,728	2,395,103	2,395,103	2,395,103
TLMA: LANDSCAPE MAINT DIST	2,030,700	1,760,691	2,403,371	2,403,371	2,403,371
TLMA: SUP ROAD DIST NO 4	581,826	227,497	1,015,032	1,015,032	1,015,032
TLMA: TRANS EQUIP (GARAGE)	178,418	3,346,789	2,982,308	2,982,308	2,982,308
TLMA: TRANSPORTATION	33,553,516	33,728,836	36,238,103	36,238,103	36,238,103
Total Public Ways	$ **53,435,875**	$ **57,960,528**	$ **61,108,076**	$ **61,624,076**	$ **61,624,076**
Total Public Ways and Facilities	$ **144,016,784**	$ **188,408,526**	$ **179,796,288**	$ **180,312,288**	$ **180,312,288**
Health and Sanitation					
California Childrens' Services					
CHA: CA CHILDRENS SERVICES	$ 18,138,661	$ 16,701,173	$ 16,165,628	$ 16,843,985	$ 16,843,985
Total California Childrens' Services	$ **18,138,661**	$ **16,701,173**	$ **16,165,628**	$ **16,843,985**	$ **16,843,985**
Health					
CHA: ADMIN	$ 6,827,716	$ 5,122,694	$ 7,507,274	$ 7,507,274	$ 7,507,274
CHA: BIO-TERRORISM PREP	2,701,872	2,222,424	2,631,029	2,631,029	2,631,029
CHA: ENVIRONMENTAL HEALTH	22,966,877	22,849,564	24,119,952	24,119,952	24,119,952
CHA: PROPOSITION 10	1,605,373	1,701,922	1,813,279	1,813,279	1,813,279
CHA: PUBLIC HEALTH	56,484,643	62,154,706	74,323,167	74,323,167	74,323,167
CHA:CDC PHER H1N1 ALLOCATION	1,692,386	1,813,400	98,684	98,684	98,684
CHA:HOSP PREP PROG ALLOCATION	-	653,620	708,633	708,633	708,633

Detail of Financing Uses by Function, Activity and Budget Unit
Governmental Funds
Fiscal Year 2011-12

Function, Activity and Budget Unit	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
CHA:HOSP PREP PROG H1N1 ALLOC	$ 941	$ -	$ -	$ -	$ -
MENTAL HEALTH: ADMINISTRATION	6,310,456	9,930,659	14,573,449	14,573,449	14,573,449
MENTAL HEALTH: DETENTION PROG	5,593,962	5,081,373	5,051,714	5,051,714	6,892,511
MENTAL HEALTH: SUBSTANCE ABUSE	21,179,676	21,166,999	21,152,409	21,152,409	21,152,409
MENTAL HEALTH: TREATMENT PROG	115,812,825	127,187,291	157,663,557	157,663,557	157,663,557
RCRMC: DETENTION HEALTH	16,061,266	13,453,547	10,765,181	10,765,181	14,462,601
Total Health	$ **257,237,993**	$ **273,338,199**	$ **320,408,328**	$ **320,408,328**	$ **325,946,545**
Hospital Care					
CONT TO HEALTH_MENTAL HEALTH	$ 57,438,460	$ 54,821,154	$ 58,878,775	$ 58,878,775	$ 58,878,775
RCRMC: MED INDIGENT SERVICES	14,209,219	14,246,310	15,515,722	15,515,722	15,515,722
Total Hospital Care	$ **71,647,679**	$ **69,067,464**	$ **74,394,497**	$ **74,394,497**	$ **74,394,497**
Sanitation					
WASTE: AREA 8 ASSESSMENT	$ 763,580	$ 777,055	$ 800,000	$ 800,000	$ 800,000
Total Sanitation	$ **763,580**	$ **777,055**	$ **800,000**	$ **800,000**	$ **800,000**
Total Health and Sanitation	$ **347,787,913**	$ **359,883,891**	$ **411,768,453**	$ **412,446,810**	$ **417,985,027**
Public Assistance					
Administration					
DPSS: ADMINISTRATION	$ 349,149,991	$ 347,391,865	$ 377,069,698	$ 377,069,698	$ 377,069,698
Total Administration	$ **349,149,991**	$ **347,391,865**	$ **377,069,698**	$ **377,069,698**	$ **377,069,698**
Aid Programs					
DPSS: CATEGORICAL AID	$ 307,497,162	$ 330,786,947	$ 339,368,771	$ 353,669,585	$ 353,669,585
DPSS: HOMELESS HOUSING RELIEF	3,921,279	6,331,516	7,266,415	7,266,415	7,266,415
DPSS: MANDATED CLIENT SERVICES	57,807,123	56,233,189	55,898,561	68,768,734	68,768,734
DPSS: OTHER AID	2,172,535	1,999,573	1,223,395	2,084,085	2,084,085
Total Aid Programs	$ **371,398,099**	$ **395,351,225**	$ **403,757,142**	$ **431,788,819**	$ **431,788,819**
Care of Court Wards					
PROBATION: COURT PLACEMENT	$ 310,622	$ 287,932	$ 303,882	$ 303,882	$ 303,882
Total Care of Court Wards	$ **310,622**	$ **287,932**	$ **303,882**	$ **303,882**	$ **303,882**
Other Assistance					
DCA: ADMIN LOCAL INITIATIVE	$ 2,016,803	$ 2,097,196	$ 2,162,183	$ 2,162,183	$ 2,162,183
DCA: LOCAL INITIATIVE	6,175,934	6,713,932	5,877,798	5,877,798	5,877,798

State Controller Schedules	County of Riverside	Schedule 8
County Budget Act	Detail of Financing Uses by Function, Activity and Budget Unit	
January 2010	Governmental Funds	
	Fiscal Year 2011-12	

Function, Activity and Budget Unit	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
DCA: OTHER PROGRAMS	$ 2,663,015	$ 2,101,392	$ 568,286	$ 568,286	$ 568,286
DPSS: HOMELESS	4,278,104	3,337,415	3,695,761	3,695,761	3,695,761
EDA: COMMUNITY DEV - HUD	13,763,049	13,099,898	13,250,766	13,250,766	13,250,766
EDA: WORK FORCE DEVELOPMENT	36,680,684	33,593,671	24,310,823	24,310,823	24,310,823
HUD	1,365,011	3,902,351	4,317,667	4,317,667	4,317,667
Home Grant Program	-	1,476,900	750,000	750,000	750,000
NEIGHBORHOOD STABILIZATION NSP	32,079,264	22,704,577	36,667,963	36,667,963	36,667,963
OFFICE ON AGING TITLE III	12,292,132	11,930,679	11,322,291	11,322,291	11,322,291
Total Other Assistance	$ **111,313,996**	$ **100,958,011**	$ **102,923,538**	$ **102,923,538**	$ **102,923,538**
Veterans' Services					
VETERANS SERVICES	$ 921,598	$ 967,272	$ 1,040,731	$ 1,040,731	$ 1,040,731
Total Veterans' Services	$ **921,598**	$ **967,272**	$ **1,040,731**	$ **1,040,731**	$ **1,040,731**
Total Public Assistance	$ **833,094,306**	$ **844,956,305**	$ **885,094,991**	$ **913,126,668**	$ **913,126,668**
Education					
Library Services					
COUNTY FREE LIBRARY	$ -	$ 21,212,095	$ 23,987,538	$ 23,987,538	$ 23,987,538
COUNTY FREE LIBRARY	20,838,071	-	-	-	-
Total Library Services	$ **20,838,071**	$ **21,212,095**	$ **23,987,538**	$ **23,987,538**	$ **23,987,538**
Other Education					
COOPERATIVE EXTENSION	$ 556,308	$ 553,471	$ 587,203	$ 587,203	$ 587,203
Total Other Education	$ **556,308**	$ **553,471**	$ **587,203**	$ **587,203**	$ **587,203**
Total Education	$ **21,394,379**	$ **21,765,566**	$ **24,574,741**	$ **24,574,741**	$ **24,574,741**
Recreation and Cultural Services					
Cultural Services					
EDA: EDWARD DEAN MUSEUM	$ -	$ 388,858	$ 385,177	$ 385,177	$ 385,177
Total Cultural Services	$ **-**	$ **388,858**	$ **385,177**	$ **385,177**	$ **385,177**
Total Recreation and Cultural Services	$ **-**	$ **388,858**	$ **385,177**	$ **385,177**	$ **385,177**
Debt Service					
Interest on Long-Term Debt					
INTEREST ON TRANS	$ 5,843,832	$ 6,511,038	$ 6,531,969	$ 5,000,942	$ 5,000,942
Total Interest on Long-Term Debt	$ **5,843,832**	$ **6,511,038**	$ **6,531,969**	$ **5,000,942**	$ **5,000,942**

State Controller Schedules	County of Riverside	Schedule 8
County Budget Act January 2010	Detail of Financing Uses by Function, Activity and Budget Unit Governmental Funds **Fiscal Year 2011-12**	

Function, Activity and Budget Unit	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Retirement of Long-Term Debt					
LIBRARY LEASE-PURCHASE	$ 1,048,576	$ 104,633	$ 1,858,552	$ 1,858,552	$ 1,858,552
PENSION OBLIGATION BONDS	36,113,220	32,837,355	36,176,199	36,176,199	36,176,199
Total Retirement of Long-Term Debt	$ **37,161,796**	$ **32,941,988**	$ **38,034,751**	$ **38,034,751**	$ **38,034,751**
Total Debt Service	$ **43,005,628**	$ **39,453,026**	$ **44,566,720**	$ **43,035,693**	$ **43,035,693**
Contingency					
Other General					
APPROPRIATION FOR CONTINGENCY	$ -	$ -	$ 19,975,099	$ 20,000,000	$ 20,000,000
Total Other General	$ **-**	$ **-**	$ **19,975,099**	$ **20,000,000**	$ **20,000,000**
Total Contingency	$ **-**	$ **-**	$ **19,975,099**	$ **20,000,000**	$ **20,000,000**
Grand Total Financing Uses by Function	$ **3,123,969,842**	$ **2,881,258,647**	$ **3,099,391,188**	$ **3,135,352,123**	$ **3,161,340,340**

Total Financing Uses by Function Transferred To	sch 7, col 2	sch 7, col 3		sch 7, col 4	sch 7, col 5

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **BOARD OF SUPERVISORS**					
FUND: **10000**		Function: **GENERAL GOVERNMENT**			
DEPT: **1000100000**		Activity: **LEGISLATIVE AND ADMINISTRATIVE**			
Licenses, Permits & Franchises	$ 3,121,829	$ 3,497,957	$ 3,360,000	$ 3,360,000	$ 3,360,000
Rev Fr Use Of Money&Property	-	-	50,000	-	-
Charges For Current Services	846,071	654,665	982,000	982,000	982,000
Total Revenue	**$ 3,967,900**	**$ 4,152,622**	**$ 4,392,000**	**$ 4,342,000**	**$ 4,342,000**
Salaries and Benefits	$ 5,722,124	$ 6,326,720	$ 6,675,165	$ 6,322,247	$ 6,322,247
Services and Supplies	1,606,799	1,451,337	1,359,850	1,276,850	1,276,850
Other Charges	2,573,579	2,580,796	1,344,405	-	-
Fixed Assets	-	41,173	42,609	-	-
Operating Transfers Out	465,640	327,859	73,100	-	-
Intrafund Transfers	(6,333)	(19,174)	(192,925)	(192,925)	(192,925)
Total Expenditures/Appropriations	**$ 10,361,809**	**$ 10,708,711**	**$ 9,302,204**	**$ 7,406,172**	**$ 7,406,172**
Net Cost	**$ 6,393,909**	**$ 6,556,089**	**$ 4,910,204**	**$ 3,064,172**	**$ 3,064,172**
Budget Unit: **ASSESSMENT APPEALS BOARD**					
FUND: **10000**		Function: **GENERAL GOVERNMENT**			
DEPT: **1000200000**		Activity: **LEGISLATIVE AND ADMINISTRATIVE**			
Charges For Current Services	$ 279,361	$ 356,742	$ 327,000	$ 327,000	$ 327,000
Other Revenue	-	-	-	58,841	58,841
Total Revenue	**$ 279,361**	**$ 356,742**	**$ 327,000**	**$ 385,841**	**$ 385,841**
Salaries and Benefits	$ 359,471	$ 346,885	$ 323,896	$ 323,896	$ 323,896
Services and Supplies	346,538	330,985	321,574	321,574	321,574
Intrafund Transfers	-	-	(100)	(100)	(100)
Total Expenditures/Appropriations	**$ 706,009**	**$ 677,870**	**$ 645,370**	**$ 645,370**	**$ 645,370**
Net Cost	**$ 426,648**	**$ 321,128**	**$ 318,370**	**$ 259,529**	**$ 259,529**
Budget Unit: **EXECUTIVE OFFICE**					
FUND: **10000**		Function: **GENERAL GOVERNMENT**			
DEPT: **1100100000**		Activity: **LEGISLATIVE AND ADMINISTRATIVE**			

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Fines, Forfeitures & Penalties	$ -	$ 568,000	$ 568,000	$ 568,000	$ 568,000
Rev Fr Use Of Money&Property	-	392,051	482,000	482,000	482,000
Intergovernmental Revenues	52,500	-	-	-	-
Charges For Current Services	534,697	1,151,208	1,319,000	1,319,000	1,319,000
Other Revenue	103,732	79,140	500,000	500,000	500,000
Total Revenue	**$ 690,929**	**$ 2,190,399**	**$ 2,869,000**	**$ 2,869,000**	**$ 2,869,000**
Salaries and Benefits	$ 3,861,756	$ 3,523,535	$ 3,497,309	$ 3,497,309	$ 3,497,309
Services and Supplies	441,792	946,356	1,187,923	1,187,923	1,187,923
Other Charges	520,772	1,521	8,050	8,050	8,050
Fixed Assets	19,304	-	-	-	-
Operating Transfers Out	-	-	234,507	234,507	234,507
Intrafund Transfers	(132,655)	(248,455)	(128,797)	(128,797)	(128,797)
Total Expenditures/Appropriations	**$ 4,710,969**	**$ 4,222,957**	**$ 4,798,992**	**$ 4,798,992**	**$ 4,798,992**
Net Cost	**$ 4,020,040**	**$ 2,032,558**	**$ 1,929,992**	**$ 1,929,992**	**$ 1,929,992**
Budget Unit: **AB 2766 AIR QUALITY**					
FUND: **22300**	Function: **GENERAL GOVERNMENT**				
DEPT: **1100100000**	Activity: **LEGISLATIVE AND ADMINISTRATIVE**				
Rev Fr Use Of Money&Property	$ 12,977	$ 5,925	$ 20,000	$ 20,000	$ 20,000
Intergovernmental Revenues	518,084	610,398	650,000	650,000	650,000
Total Revenue	**$ 531,061**	**$ 616,323**	**$ 670,000**	**$ 670,000**	**$ 670,000**
Services and Supplies	$ 178,805	$ 199,660	$ 330,000	$ 330,000	$ 330,000
Other Charges	577,333	493,483	850,000	850,000	850,000
Operating Transfers Out	43,062	-	45,000	45,000	45,000
Total Expenditures/Appropriations	**$ 799,200**	**$ 693,143**	**$ 1,225,000**	**$ 1,225,000**	**$ 1,225,000**
Net Cost	**$ 268,139**	**$ 76,820**	**$ 555,000**	**$ 555,000**	**$ 555,000**
Budget Unit: **RDA CAPITAL IMPROVEMENTS**					
FUND: **31540**	Function: **GENERAL GOVERNMENT**				
DEPT: **1100100000**	Activity: **LEGISLATIVE AND ADMINISTRATIVE**				
Rev Fr Use Of Money&Property	$ -	$ 230,830	$ 159,660	$ 159,660	$ 159,660
Other Revenue	60,456,131	18,821,664	24,407,415	24,407,415	24,407,415
Total Revenue	**$ 60,456,131**	**$ 19,052,494**	**$ 24,567,075**	**$ 24,567,075**	**$ 24,567,075**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Services and Supplies	$ 5,985	$ 35,000	$ 35,000	$ 35,000	$ 35,000
Other Charges	600,000	5,163,155	5,000,000	5,000,000	5,000,000
Fixed Assets	-	1,853,350	-	-	-
Operating Transfers Out	33,254,835	28,904,018	31,538,060	31,538,060	31,538,060
Total Expenditures/Appropriations	**$ 33,860,820**	**$ 35,955,523**	**$ 36,573,060**	**$ 36,573,060**	**$ 36,573,060**
Net Cost	**$ (26,595,311)**	**$ 16,903,029**	**$ 12,005,985**	**$ 12,005,985**	**$ 12,005,985**
Budget Unit:			**WOODCREST LIBRARY PROJECT**		
FUND: **32750**			Function: **GENERAL GOVERNMENT**		
DEPT: **1100100000**			Activity: **LEGISLATIVE AND ADMINISTRATIVE**		
Rev Fr Use Of Money&Property	$ 966	$ -	$ -	$ -	$ -
Charges For Current Services	33,012	-	-	-	-
Total Revenue	**$ 33,978**	**$ -**	**$ -**	**$ -**	**$ -**
Services and Supplies	$ 681	$ -	$ -	$ -	$ -
Other Charges	221,673	-	-	-	-
Total Expenditures/Appropriations	**$ 222,354**	**$ -**	**$ -**	**$ -**	**$ -**
Net Cost	**$ 188,376**	**$ -**	**$ -**	**$ -**	**$ -**
Budget Unit:			**CONST _ LAND ACQ - ACO**		
FUND: **30000**			Function: **GENERAL GOVERNMENT**		
DEPT: **1100300000**			Activity: **PLANT ACQUISITION**		
Other Revenue	$ 651,208	$ 1,036,602	$ 1,037,750	$ 1,037,750	$ 1,037,750
Total Revenue	**$ 651,208**	**$ 1,036,602**	**$ 1,037,750**	**$ 1,037,750**	**$ 1,037,750**
Services and Supplies	$ -	$ 29	$ 50	$ 50	$ 50
Other Charges	733,947	973,562	1,037,700	1,037,700	1,037,700
Total Expenditures/Appropriations	**$ 733,947**	**$ 973,591**	**$ 1,037,750**	**$ 1,037,750**	**$ 1,037,750**
Net Cost	**$ 82,739**	**$ (63,011)**	**$ -**	**$ -**	**$ -**
Budget Unit:			**LIBRARY CONST _ LAND**		
FUND: **21200**			Function: **GENERAL GOVERNMENT**		
DEPT: **1100400000**			Activity: **PLANT ACQUISITION**		
Other In-Lieu And Other Govt	$ -	$ -	$ -	$ -	$ -
Total Revenue	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Fixed Assets	$ 1,532,228	$ -	$ 5,846,000	$ 5,846,000	$ 5,846,000
Total Expenditures/Appropriations	**$ 1,532,228**	**$ -**	**$ 5,846,000**	**$ 5,846,000**	**$ 5,846,000**
Net Cost	**$ 1,532,228**	**$ -**	**$ 5,846,000**	**$ 5,846,000**	**$ 5,846,000**
		Budget Unit:	**CONTRIBUTION TO OTHER FUNDS**		
FUND: **10000**		Function:	**GENERAL GOVERNMENT**		
DEPT: **1101000000**		Activity:	**OTHER GENERAL**		
Other Revenue	$ 59,723,000	$ 7,840,885	$ -	$ -	$ -
Total Revenue	**$ 59,723,000**	**$ 7,840,885**	**$ -**	**$ -**	**$ -**
Services and Supplies	$ 3,725,547	$ 2,387,759	$ 1,748,341	$ 1,748,341	$ 1,748,341
Other Charges	6,806,912	5,323,214	6,997,778	6,888,172	6,888,172
Operating Transfers Out	60,230,533	38,370,895	41,139,951	47,604,122	47,604,122
Total Expenditures/Appropriations	**$ 70,762,992**	**$ 46,081,868**	**$ 49,886,070**	**$ 56,240,635**	**$ 56,240,635**
Net Cost	**$ 11,039,992**	**$ 38,240,983**	**$ 49,886,070**	**$ 56,240,635**	**$ 56,240,635**
		Budget Unit:	**COURT SUBFUND**		
FUND: **10000**		Function:	**GENERAL GOVERNMENT**		
DEPT: **1101200000**		Activity:	**OTHER GENERAL**		
Fines, Forfeitures & Penalties	$ 10,489,234	$ 10,040,284	$ 9,255,220	$ 9,255,220	$ 9,255,220
Charges For Current Services	117,965	(8)	2,500	2,500	2,500
Other Revenue	487,269	-	-	-	-
Total Revenue	**$ 11,094,468**	**$ 10,040,276**	**$ 9,257,720**	**$ 9,257,720**	**$ 9,257,720**
Services and Supplies	$ 383,999	$ 31,979	$ 52,100	$ 52,100	$ 52,100
Other Charges	10,122,783	10,097,742	9,322,259	9,322,259	9,322,259
Total Expenditures/Appropriations	**$ 10,506,782**	**$ 10,129,721**	**$ 9,374,359**	**$ 9,374,359**	**$ 9,374,359**
Net Cost	**$ (587,686)**	**$ 89,445**	**$ 116,639**	**$ 116,639**	**$ 116,639**
		Budget Unit:	**LEGISLATIVE_ADMIN SERVICES**		
FUND: **10000**		Function:	**GENERAL GOVERNMENT**		
DEPT: **1102900000**		Activity:	**LEGISLATIVE AND ADMINISTRATIVE**		
Charges For Current Services	$ 33,704	$ 26,990	$ 50,000	$ 50,000	$ 50,000
Other Revenue	153,738	-	-	-	-
Total Revenue	**$ 187,442**	**$ 26,990**	**$ 50,000**	**$ 50,000**	**$ 50,000**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Services and Supplies	$ 1,856,842	$ 1,621,664	$ 1,665,774	$ 1,860,775	$ 1,860,775
Total Expenditures/Appropriations	**$ 1,856,842**	**$ 1,621,664**	**$ 1,665,774**	**$ 1,860,775**	**$ 1,860,775**
Net Cost	**$ 1,669,400**	**$ 1,594,674**	**$ 1,615,774**	**$ 1,810,775**	**$ 1,810,775**
FUND: **37050**		Budget Unit: **TEETER DEBT SVC**			
DEPT: **1103400000**		Function: **GENERAL GOVERNMENT**			
		Activity: **DEBT SERVICE - PRICIPAL**			
Rev Fr Use Of Money&Property	$ 1,428,304	$ 1,804,732	$ -	$ -	$ -
Other Revenue	3,076,780	497,531	5,935,832	5,935,832	5,935,832
Total Revenue	**$ 4,505,084**	**$ 2,302,263**	**$ 5,935,832**	**$ 5,935,832**	**$ 5,935,832**
Services and Supplies	$ 597,792	$ 686,182	$ 1,000,000	$ 1,000,000	$ 1,000,000
Other Charges	2,628,575	1,812,719	4,935,832	4,935,832	4,935,832
Total Expenditures/Appropriations	**$ 3,226,367**	**$ 2,498,901**	**$ 5,935,832**	**$ 5,935,832**	**$ 5,935,832**
Net Cost	**$ (1,278,717)**	**$ 196,638**	**$ -**	**$ -**	**$ -**
FUND: **30500**		Budget Unit: **MITIGATION PROJECT OPS**			
DEPT: **1103500000**		Function: **GENERAL GOVERNMENT**			
		Activity: **OTHER GENERAL**			
Rev Fr Use Of Money&Property	$ 78,823	$ 37,323	$ 140,000	$ 140,000	$ 140,000
Charges For Current Services	18,300	4,428	160,000	160,000	160,000
Total Revenue	**$ 97,123**	**$ 41,751**	**$ 300,000**	**$ 300,000**	**$ 300,000**
Services and Supplies	$ 171,200	$ 4,391,546	$ 260,100	$ 260,100	$ 260,100
Other Charges	-	410,098	20,000	20,000	20,000
Operating Transfers Out	-	465,432	19,900	19,900	19,900
Total Expenditures/Appropriations	**$ 171,200**	**$ 5,267,076**	**$ 300,000**	**$ 300,000**	**$ 300,000**
Net Cost	**$ 74,077**	**$ 5,225,325**	**$ -**	**$ -**	**$ -**
FUND: **30500**		Budget Unit: **DEVELOPERS IMPACT FEE OPS**			
DEPT: **1103700000**		Function: **GENERAL GOVERNMENT**			
		Activity: **OTHER GENERAL**			
Rev Fr Use Of Money&Property	$ 1,550,747	$ 808,233	$ 1,500,000	$ 1,500,000	$ 1,500,000
Charges For Current Services	3,816,721	2,466,845	5,012,000	5,012,000	5,012,000
Total Revenue	**$ 5,367,468**	**$ 3,275,078**	**$ 6,512,000**	**$ 6,512,000**	**$ 6,512,000**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Services and Supplies	$ 1,802,078	$ 534,684	$ 1,193,000	$ 1,193,000	$ 1,193,000
Other Charges	552,238	3,505,563	4,550,000	4,550,000	4,550,000
Operating Transfers Out	9,830,431	7,451,836	8,017,000	8,017,000	8,017,000
Total Expenditures/Appropriations	**$ 12,184,747**	**$ 11,492,083**	**$ 13,760,000**	**$ 13,760,000**	**$ 13,760,000**
Net Cost	**$ 6,817,279**	**$ 8,217,005**	**$ 7,248,000**	**$ 7,248,000**	**$ 7,248,000**

Budget Unit: **EO SUBFUND BUDGETS**
FUND: **10000** Function: **GENERAL GOVERNMENT**
DEPT: **1103800000** Activity: **OTHER GENERAL**

Fines, Forfeitures & Penalties	$ 3,076,780	$ 40,455,031	$ 5,935,832	$ 5,935,832	$ 41,435,832
Rev Fr Use Of Money&Property	-	-	5,000	5,000	5,000
Charges For Current Services	2,091,563	1,957,063	1,756,300	1,756,300	1,756,300
Other Revenue	118,853	526,974	-	-	-
Total Revenue	**$ 5,287,196**	**$ 42,939,068**	**$ 7,697,132**	**$ 7,697,132**	**$ 43,197,132**
Salaries and Benefits	$ 136,659	$ 149,036	$ 155,250	$ 155,250	$ 155,250
Services and Supplies	199,755	277,869	1,903,570	1,903,570	1,903,570
Other Charges	110,266	41,642	105,000	105,000	105,000
Operating Transfers Out	3,076,780	455,031	5,935,832	5,935,832	5,935,832
Intrafund Transfers	(286,379)	-	-	-	-
Total Expenditures/Appropriations	**$ 3,237,081**	**$ 923,578**	**$ 8,099,652**	**$ 8,099,652**	**$ 8,099,652**
Net Cost	**$ (2,050,115)**	**$ (42,015,490)**	**$ 402,520**	**$ 402,520**	**$ (35,097,480)**

Budget Unit: **CAPITAL IMPROVEMENT PROGRAM**
FUND: **30700** Function: **GENERAL GOVERNMENT**
DEPT: **1104200000** Activity: **PLANT ACQUISITION**

Rev Fr Use Of Money&Property	$ 850,994	$ 332,420	$ 440,000	$ 440,000	$ 440,000
Charges For Current Services	61,821	28,621	100,000	100,000	100,000
Other Revenue	1,094,302	505,087	420,000	420,000	420,000
Total Revenue	**$ 2,007,117**	**$ 866,128**	**$ 960,000**	**$ 960,000**	**$ 960,000**
Services and Supplies	$ 646,120	$ 329,896	$ 600,000	$ 600,000	$ 600,000
Other Charges	5,385,598	4,834,376	9,510,000	9,510,000	9,510,000
Operating Transfers Out	18,545,804	6,929,548	15,940,000	15,940,000	15,940,000
Total Expenditures/Appropriations	**$ 24,577,522**	**$ 12,093,820**	**$ 26,050,000**	**$ 26,050,000**	**$ 26,050,000**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Net Cost	**$ 22,570,405**	**$ 11,227,692**	**$ 25,090,000**	**$ 25,090,000**	**$ 25,090,000**
Budget Unit: **Tobacco Securitization**					
FUND: **30120**		Function: **GENERAL GOVERNMENT**			
DEPT: **1105100000**		Activity: **PLANT ACQUISITION**			
Rev Fr Use Of Money&Property	$ 3,853,563	$ 593,049	$ 3,337,000	$ 3,337,000	$ 3,337,000
Other Revenue	32,613,134	3,057,805	700,000	700,000	700,000
Total Revenue	**$ 36,466,697**	**$ 3,650,854**	**$ 4,037,000**	**$ 4,037,000**	**$ 4,037,000**
Services and Supplies	$ 2,307,925	$ 540,545	$ 1,010,100	$ 1,010,100	$ 1,010,100
Other Charges	54,139,613	12,818,169	18,100,000	18,100,000	18,100,000
Fixed Assets	121,303,863	-	-	-	-
Operating Transfers Out	47,500,000	2,032,775	20,000,000	20,000,000	20,000,000
Total Expenditures/Appropriations	**$ 225,251,401**	**$ 15,391,489**	**$ 39,110,100**	**$ 39,110,100**	**$ 39,110,100**
Net Cost	**$ 188,784,704**	**$ 11,740,635**	**$ 35,073,100**	**$ 35,073,100**	**$ 35,073,100**
Budget Unit: **HR: HUMAN RESOURCES**					
FUND: **10000**		Function: **GENERAL GOVERNMENT**			
DEPT: **1130100000**		Activity: **PERSONNEL**			
Charges For Current Services	$ 6,390,298	$ 7,192,727	$ 5,286,508	$ 5,286,508	$ 5,286,508
Other Revenue	1,089,819	1,239,633	1,019,500	1,019,500	1,019,500
Total Revenue	**$ 7,480,117**	**$ 8,432,360**	**$ 6,306,008**	**$ 6,306,008**	**$ 6,306,008**
Salaries and Benefits	$ 14,795,974	$ 15,421,602	$ 15,301,602	$ 15,301,602	$ 15,301,602
Services and Supplies	3,918,475	3,893,960	3,863,973	3,863,973	3,863,973
Other Charges	58,290	39,298	28,290	28,290	28,290
Fixed Assets	-	-	30,000	30,000	30,000
Operating Transfers Out	757,143	357,143	357,143	357,143	357,143
Intrafund Transfers	(12,443,534)	(11,963,978)	(13,275,000)	(13,275,000)	(13,275,000)
Total Expenditures/Appropriations	**$ 7,086,348**	**$ 7,748,025**	**$ 6,306,008**	**$ 6,306,008**	**$ 6,306,008**
Net Cost	**$ (393,769)**	**$ (684,335)**	**$ -**	**$ -**	**$ -**
Budget Unit: **HR: RIDESHARE**					
FUND: **22000**		Function: **GENERAL GOVERNMENT**			
DEPT: **1130300000**		Activity: **PERSONNEL**			

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Licenses, Permits & Franchises	$ 26,578	$ 32,223	$ 31,900	$ 31,900	$ 31,900
Rev Fr Use Of Money&Property	475,922	536,568	550,000	550,000	550,000
Charges For Current Services	795,072	669,497	865,674	865,674	865,674
Other Revenue	51	-	-	-	-
Total Revenue	**$ 1,297,623**	**$ 1,238,288**	**$ 1,447,574**	**$ 1,447,574**	**$ 1,447,574**
Salaries and Benefits	$ 208,679	$ 231,435	$ 229,113	$ 229,113	$ 229,113
Services and Supplies	327,266	348,987	452,294	452,294	452,294
Other Charges	660,227	753,449	766,167	766,167	766,167
Total Expenditures/Appropriations	**$ 1,196,172**	**$ 1,333,871**	**$ 1,447,574**	**$ 1,447,574**	**$ 1,447,574**
Net Cost	**$ (101,451)**	**$ 95,583**	**$ -**	**$ -**	**$ -**
FUND: **22050** DEPT: **1150100000**		Budget Unit: **CFD_AD ADMINISTRATION** Function: **GENERAL GOVERNMENT** Activity: **LEGISLATIVE AND ADMINISTRATIVE**			
Rev Fr Use Of Money&Property	$ 12,637	$ 8,523	$ 10,000	$ 10,000	$ 10,000
Charges For Current Services	1,059,279	838,542	705,000	705,000	705,000
Other Revenue	331	500	75,000	75,000	75,000
Total Revenue	**$ 1,072,247**	**$ 847,565**	**$ 790,000**	**$ 790,000**	**$ 790,000**
Salaries and Benefits	$ 552,791	$ 530,445	$ 491,500	$ 491,500	$ 491,500
Services and Supplies	76,014	56,655	142,500	142,500	142,500
Other Charges	78,496	74,933	156,000	156,000	156,000
Fixed Assets	-	-	-	-	-
Total Expenditures/Appropriations	**$ 707,301**	**$ 662,033**	**$ 790,000**	**$ 790,000**	**$ 790,000**
Net Cost	**$ (364,946)**	**$ (185,532)**	**$ -**	**$ -**	**$ -**
FUND: **10000** DEPT: **1200100000**		Budget Unit: **ASSESSOR: ASSESSOR** Function: **GENERAL GOVERNMENT** Activity: **FINANCE**			
Fines, Forfeitures & Penalties	$ 286,963	$ 177,770	$ 230,000	$ 230,000	$ 980,000
Charges For Current Services	13,311,442	11,514,734	11,576,434	11,576,434	11,576,434
Other Revenue	115,493	61,853	63,300	63,300	63,300
Total Revenue	**$ 13,713,898**	**$ 11,754,357**	**$ 11,869,734**	**$ 11,869,734**	**$ 12,619,734**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 16,656,100	$ 15,285,308	$ 13,746,406	$ 13,746,406	$ 14,496,406
Services and Supplies	4,377,447	4,301,155	3,925,032	3,925,032	3,925,032
Other Charges	-	18,939	48,260	48,260	48,260
Fixed Assets	70,347	29,500	62,900	62,900	62,900
Intrafund Transfers	(1,181)	(818)	-	-	-
Total Expenditures/Appropriations	**$ 21,102,713**	**$ 19,634,084**	**$ 17,782,598**	**$ 17,782,598**	**$ 18,532,598**
Net Cost	**$ 7,388,815**	**$ 7,879,727**	**$ 5,912,864**	**$ 5,912,864**	**$ 5,912,864**

Budget Unit: **INTEGRATED PROP-TAX MGMT SYS**
FUND: **33600** Function: **GENERAL GOVERNMENT**
DEPT: **1200400000** Activity: **FINANCE**

Rev Fr Use Of Money&Property	$ 29,850	$ 20,624	$ 11,500	$ 11,500	$ 11,500
Charges For Current Services	1,893,004	1,207,698	2,292,700	2,292,700	2,292,700
Other Revenue	2,186,914	1,834,398	1,804,157	8,764,286	8,764,286
Total Revenue	**$ 4,109,768**	**$ 3,062,720**	**$ 4,108,357**	**$ 11,068,486**	**$ 11,068,486**
Salaries and Benefits	$ 1,381,612	$ 1,717,699	$ 3,149,792	$ 3,149,792	$ 3,149,792
Services and Supplies	738,095	2,239,119	4,724,350	4,724,349	4,724,349
Other Charges	271,537	24,730	267,872	267,872	267,872
Fixed Assets	12,302	-	2,926,473	2,926,473	2,926,473
Total Expenditures/Appropriations	**$ 2,403,546**	**$ 3,981,548**	**$ 11,068,487**	**$ 11,068,486**	**$ 11,068,486**
Net Cost	**$ (1,706,222)**	**$ 918,828**	**$ 6,960,130**	**$ -**	**$ -**

Budget Unit: **AUDITOR-CONTROLLER**
FUND: **10000** Function: **GENERAL GOVERNMENT**
DEPT: **1300100000** Activity: **FINANCE**

Taxes	$ (83,368)	$ -	$ -	$ -	$ -
Fines, Forfeitures & Penalties	(61,401)	-	-	-	-
Intergovernmental Revenues	61,858	8,478	56,059	56,059	56,059
Charges For Current Services	2,628,010	3,342,066	2,958,340	2,958,340	2,958,340
Other Revenue	3,744	222,628	-	-	-
Total Revenue	**$ 2,548,843**	**$ 3,573,172**	**$ 3,014,399**	**$ 3,014,399**	**$ 3,014,399**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 5,868,344	$ 5,845,970	$ 6,296,706	$ 6,296,706	$ 6,296,706
Services and Supplies	2,050,920	1,922,721	1,820,854	1,820,854	1,820,854
Intrafund Transfers	(1,213,649)	(947,162)	(814,395)	(814,395)	(814,395)
Total Expenditures/Appropriations	**$ 6,705,615**	**$ 6,821,529**	**$ 7,303,165**	**$ 7,303,165**	**$ 7,303,165**
Net Cost	**$ 4,156,772**	**$ 3,248,357**	**$ 4,288,766**	**$ 4,288,766**	**$ 4,288,766**
Budget Unit:			**INTERNAL AUDITS**		
FUND: **10000**			Function: **GENERAL GOVERNMENT**		
DEPT: **1300200000**			Activity: **FINANCE**		
Salaries and Benefits	$ 1,139,601	$ 914,989	$ 676,885	$ 676,885	$ 676,885
Services and Supplies	378,367	312,526	319,262	319,262	319,262
Intrafund Transfers	(18,395)	(14,020)	(18,200)	(18,200)	(18,200)
Total Expenditures/Appropriations	**$ 1,499,573**	**$ 1,213,495**	**$ 977,947**	**$ 977,947**	**$ 977,947**
Net Cost	**$ 1,499,573**	**$ 1,213,495**	**$ 977,947**	**$ 977,947**	**$ 977,947**
Budget Unit:			**ACO: Payroll Services**		
FUND: **10000**			Function: **GENERAL GOVERNMENT**		
DEPT: **1300300000**			Activity: **FINANCE**		
Charges For Current Services	$ 2,146,468	$ 905,073	$ 843,500	$ 843,500	$ 843,500
Other Revenue	-	165	-	-	-
Total Revenue	**$ 2,146,468**	**$ 905,238**	**$ 843,500**	**$ 843,500**	**$ 843,500**
Salaries and Benefits	$ 1,355,335	$ 1,671,065	$ 1,910,276	$ 1,910,276	$ 1,910,276
Services and Supplies	724,033	576,748	566,224	566,224	566,224
Intrafund Transfers	-	(1,697,878)	(1,633,000)	(1,633,000)	(1,633,000)
Total Expenditures/Appropriations	**$ 2,079,368**	**$ 549,935**	**$ 843,500**	**$ 843,500**	**$ 843,500**
Net Cost	**$ (67,100)**	**$ (355,303)**	**$ -**	**$ -**	**$ -**
Budget Unit:			**COWCAP REIMBURSEMENT**		
FUND: **10000**			Function: **GENERAL GOVERNMENT**		
DEPT: **1302200000**			Activity: **FINANCE**		
Charges For Current Services	$ 6,073,834	$ 7,923,413	$ 6,618,448	$ 6,618,448	$ 6,618,448
Total Revenue	**$ 6,073,834**	**$ 7,923,413**	**$ 6,618,448**	**$ 6,618,448**	**$ 6,618,448**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Intrafund Transfers	$ (3,567,313)	$ (11,858,272)	$ (14,211,771)	$ (14,211,771)	$ (14,211,771)
Total Expenditures/Appropriations	**$ (3,567,313)**	**$ (11,858,272)**	**$ (14,211,771)**	**$ (14,211,771)**	**$ (14,211,771)**
Net Cost	**$ (9,641,147)**	**$ (19,781,685)**	**$ (20,830,219)**	**$ (20,830,219)**	**$ (20,830,219)**
		Budget Unit:	**TREASURER-TAX COLLECTOR**		
FUND: **10000**		Function:	**GENERAL GOVERNMENT**		
DEPT: **1400100000**		Activity:	**FINANCE**		
Fines, Forfeitures & Penalties	$ 3,397,825	$ 3,029,479	$ 2,914,991	$ 2,914,991	$ 2,914,991
Charges For Current Services	10,820,789	10,002,116	10,075,601	10,075,601	10,075,601
Other Revenue	347,382	200,067	300,005	300,005	300,005
Total Revenue	**$ 14,565,996**	**$ 13,231,662**	**$ 13,290,597**	**$ 13,290,597**	**$ 13,290,597**
Salaries and Benefits	$ 7,486,741	$ 7,717,341	$ 8,275,181	$ 8,275,181	$ 8,275,181
Services and Supplies	5,624,052	5,687,982	6,207,743	6,207,744	6,207,744
Other Charges	188	94	300	300	300
Fixed Assets	55,890	11,956	-	-	-
Total Expenditures/Appropriations	**$ 13,166,871**	**$ 13,417,373**	**$ 14,483,224**	**$ 14,483,225**	**$ 14,483,225**
Net Cost	**$ (1,399,125)**	**$ 185,711**	**$ 1,192,627**	**$ 1,192,628**	**$ 1,192,628**
		Budget Unit:	**COUNTY COUNSEL**		
FUND: **10000**		Function:	**GENERAL GOVERNMENT**		
DEPT: **1500100000**		Activity:	**COUNSEL**		
Intergovernmental Revenues	$ -	$ 37,568	$ 10,000	$ 10,000	$ 10,000
Charges For Current Services	1,540,069	1,935,298	1,449,826	1,449,826	1,449,826
Total Revenue	**$ 1,540,069**	**$ 1,972,866**	**$ 1,459,826**	**$ 1,459,826**	**$ 1,459,826**
Salaries and Benefits	$ 8,636,325	$ 9,143,036	$ 8,864,981	$ 8,864,981	$ 8,864,981
Services and Supplies	796,828	868,770	805,406	805,406	805,406
Fixed Assets	8,799	-	-	-	-
Intrafund Transfers	(4,411,669)	(4,508,113)	(4,891,509)	(4,891,509)	(4,891,509)
Total Expenditures/Appropriations	**$ 5,030,283**	**$ 5,503,693**	**$ 4,778,878**	**$ 4,778,878**	**$ 4,778,878**
Net Cost	**$ 3,490,214**	**$ 3,530,827**	**$ 3,319,052**	**$ 3,319,052**	**$ 3,319,052**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **REGISTRAR OF VOTERS**					
FUND: **10000**		Function: **GENERAL GOVERNMENT**			
DEPT: **1700100000**		Activity: **ELECTIONS**			
Intergovernmental Revenues	$ 18,335	$ 1,868,927	$ 1,850,801	$ 1,850,801	$ 1,850,801
Charges For Current Services	2,497,180	5,119,398	1,254,250	1,254,250	1,254,250
Other Revenue	140,186	81,877	75,000	75,000	75,000
Total Revenue	**$ 2,655,701**	**$ 7,070,202**	**$ 3,180,051**	**$ 3,180,051**	**$ 3,180,051**
Salaries and Benefits	$ 3,114,721	$ 3,670,165	$ 3,165,468	$ 3,870,962	$ 3,870,962
Services and Supplies	6,415,595	6,172,390	6,089,106	5,383,612	5,383,612
Other Charges	837,987	-	-	-	-
Fixed Assets	117,569	56,189	-	-	-
Total Expenditures/Appropriations	**$ 10,485,872**	**$ 9,898,744**	**$ 9,254,574**	**$ 9,254,574**	**$ 9,254,574**
Net Cost	**$ 7,830,171**	**$ 2,828,542**	**$ 6,074,523**	**$ 6,074,523**	**$ 6,074,523**
Budget Unit: **EDA: ADMINISTRATION**					
FUND: **21100**		Function: **GENERAL GOVERNMENT**			
DEPT: **1900100000**		Activity: **PROMOTION**			
Rev Fr Use Of Money&Property	$ 6	$ 251	$ -	$ -	$ -
Intergovernmental Revenues	-	5,858	-	-	-
Charges For Current Services	17,763,739	12,369,821	15,020,116	15,020,116	15,020,116
Other Revenue	348,833	1,232,447	290,693	290,693	290,693
Total Revenue	**$ 18,112,578**	**$ 13,608,377**	**$ 15,310,809**	**$ 15,310,809**	**$ 15,310,809**
Salaries and Benefits	$ 13,914,554	$ 9,742,361	$ 10,523,274	$ 10,523,274	$ 10,523,274
Services and Supplies	3,069,973	1,918,057	2,131,990	2,131,990	2,131,990
Other Charges	1,682,037	1,669,026	2,630,545	2,630,545	2,630,545
Fixed Assets	46,217	13,495	25,000	25,000	25,000
Total Expenditures/Appropriations	**$ 18,712,781**	**$ 13,342,939**	**$ 15,310,809**	**$ 15,310,809**	**$ 15,310,809**
Net Cost	**$ 600,203**	**$ (265,438)**	**$ -**	**$ -**	**$ -**
Budget Unit: **EDA: MITIGATION FUND**					
FUND: **32710**		Function: **GENERAL GOVERNMENT**			
DEPT: **1900100000**		Activity: **PROMOTION**			

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Rev Fr Use Of Money&Property	$ -	$ 23,180	$ -	$ -	$ -
Charges For Current Services	-	-	80,000	80,000	80,000
Other Revenue	84,169	38,212	5,000	5,000	5,000
Total Revenue	**$ 84,169**	**$ 61,392**	**$ 85,000**	**$ 85,000**	**$ 85,000**
Other Charges	$ 1,000	$ 100,356	$ 85,000	$ 85,000	$ 85,000
Total Expenditures/Appropriations	**$ 1,000**	**$ 100,356**	**$ 85,000**	**$ 85,000**	**$ 85,000**
Net Cost	**$ (83,169)**	**$ 38,964**	**$ -**	**$ -**	**$ -**

FUND: **21100**
DEPT: **1900500000**

Budget Unit: **EDA: ADMIN SUBFUNDS**
Function: **GENERAL GOVERNMENT**
Activity: **PROMOTION**

Rev Fr Use Of Money&Property	$ 7,523	$ 4,176	$ 653,040	$ 653,040	$ 653,040
Intergovernmental Revenues	449,583	2,240,144	3,475,277	3,475,277	3,475,277
Charges For Current Services	293,922	2,807,778	862,951	862,951	862,951
Other Revenue	3,729,753	823,179	1,975,103	1,975,103	1,975,103
Total Revenue	**$ 4,480,781**	**$ 5,875,277**	**$ 6,966,371**	**$ 6,966,371**	**$ 6,966,371**
Services and Supplies	$ 844,586	$ 873,670	$ 801,539	$ 801,539	$ 801,539
Other Charges	2,056,565	3,609,789	6,164,832	6,164,832	6,164,832
Total Expenditures/Appropriations	**$ 2,901,151**	**$ 4,483,459**	**$ 6,966,371**	**$ 6,966,371**	**$ 6,966,371**
Net Cost	**$ (1,579,630)**	**$ (1,391,818)**	**$ -**	**$ -**	**$ -**

FUND: **22350**
DEPT: **1910100000**

Budget Unit: **EDA: BLYTHE CONSTR _ LAND**
Function: **GENERAL GOVERNMENT**
Activity: **PLANT ACQUISITION**

Rev Fr Use Of Money&Property	$ -	$ 2,747	$ 500	$ 500	$ 500
Intergovernmental Revenues	-	-	500	500	500
Total Revenue	**$ -**	**$ 2,747**	**$ 1,000**	**$ 1,000**	**$ 1,000**
Services and Supplies	$ -	$ -	$ 200	$ 200	$ 200
Other Charges	-	-	100	100	100
Fixed Assets	-	-	700	700	700
Total Expenditures/Appropriations	**$ -**	**$ -**	**$ 1,000**	**$ 1,000**	**$ 1,000**
Net Cost	**$ -**	**$ (2,747)**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **EDA: THERMAL CONSTR _ LAND**					
FUND: **22350**		Function: **GENERAL GOVERNMENT**			
DEPT: **1910200000**		Activity: **PLANT ACQUISITION**			
Rev Fr Use Of Money&Property	$ -	$ 971	$ 1,500	$ 1,500	$ 1,500
Intergovernmental Revenues	-	1,347,832	1,721,500	1,721,500	1,721,500
Charges For Current Services	-	125,000	115,000	115,000	115,000
Other Revenue	-	380,582	-	-	-
Total Revenue	**$ -**	**$ 1,854,385**	**$ 1,838,000**	**$ 1,838,000**	**$ 1,838,000**
Services and Supplies	$ -	$ -	$ 115,000	$ 115,000	$ 115,000
Other Charges	-	61,645	10,000	10,000	10,000
Fixed Assets	-	2,389,949	1,713,000	1,713,000	1,713,000
Total Expenditures/Appropriations	**$ -**	**$ 2,451,594**	**$ 1,838,000**	**$ 1,838,000**	**$ 1,838,000**
Net Cost	**$ -**	**$ 597,209**	**$ -**	**$ -**	**$ -**
Budget Unit: **EDA: HEMET-RYAN CONSTR _ LAND**					
FUND: **22350**		Function: **GENERAL GOVERNMENT**			
DEPT: **1910300000**		Activity: **PLANT ACQUISITION**			
Rev Fr Use Of Money&Property	$ -	$ 113	$ 500	$ 500	$ 500
Intergovernmental Revenues	-	696,962	150,000	150,000	150,000
Charges For Current Services	-	21,000	-	-	-
Other Revenue	-	-	-	-	-
Total Revenue	**$ -**	**$ 718,075**	**$ 150,500**	**$ 150,500**	**$ 150,500**
Services and Supplies	$ -	$ -	$ 149,500	$ 149,500	$ 149,500
Other Charges	-	21,245	500	500	500
Fixed Assets	-	715,750	500	500	500
Total Expenditures/Appropriations	**$ -**	**$ 736,995**	**$ 150,500**	**$ 150,500**	**$ 150,500**
Net Cost	**$ -**	**$ 18,920**	**$ -**	**$ -**	**$ -**
Budget Unit: **EDA: FRENCH VAL CONSTR _ LAND**					
FUND: **22350**		Function: **GENERAL GOVERNMENT**			
DEPT: **1910600000**		Activity: **PLANT ACQUISITION**			

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Rev Fr Use Of Money&Property	$ -	$ -	$ 500	$ 500	$ 500
Intergovernmental Revenues	-	1,237,893	150,000	150,000	150,000
Charges For Current Services	-	67,500	5,000	5,000	5,000
Total Revenue	**$ -**	**$ 1,305,393**	**$ 155,500**	**$ 155,500**	**$ 155,500**
Services and Supplies	$ -	$ 8,455	$ 150,000	$ 150,000	$ 150,000
Other Charges	-	49,999	5,000	5,000	5,000
Fixed Assets	-	1,162,592	500	500	500
Total Expenditures/Appropriations	**$ -**	**$ 1,221,046**	**$ 155,500**	**$ 155,500**	**$ 155,500**
Net Cost	**$ -**	**$ (84,347)**	**$ -**	**$ -**	**$ -**

Budget Unit: **EDA: DESERT EXPOCENTRE**
FUND: **22200** Function: **GENERAL GOVERNMENT**
DEPT: **1920100000** Activity: **PROMOTION**

Rev Fr Use Of Money&Property	$ 3,386,959	$ 3,398,964	$ 3,405,700	$ 3,405,700	$ 3,405,700
Intergovernmental Revenues	150,500	233,750	-	-	-
Charges For Current Services	433,163	557,311	116,022	116,022	116,022
Special And Extraordinary Item	59,660	-	-	-	-
Other Revenue	322,393	37,989	25,000	25,000	25,000
Total Revenue	**$ 4,352,675**	**$ 4,228,014**	**$ 3,546,722**	**$ 3,546,722**	**$ 3,546,722**
Salaries and Benefits	$ 723,815	$ 808,960	$ 801,906	$ 801,906	$ 801,906
Services and Supplies	2,404,295	2,659,234	2,209,106	2,209,106	2,209,106
Other Charges	681,106	717,747	599,919	599,919	599,919
Fixed Assets	809,885	81,466	100	100	100
Total Expenditures/Appropriations	**$ 4,619,101**	**$ 4,267,407**	**$ 3,611,031**	**$ 3,611,031**	**$ 3,611,031**
Net Cost	**$ 266,426**	**$ 39,393**	**$ 64,309**	**$ 64,309**	**$ 64,309**

Budget Unit: **FIRE: CONST _ LAND ACQ**
FUND: **30300** Function: **GENERAL GOVERNMENT**
DEPT: **2700100000** Activity: **PLANT ACQUISITION**

Rev Fr Use Of Money&Property	$ 15,787	$ 7,207	$ -	$ -	$ -
Total Revenue	**$ 15,787**	**$ 7,207**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Services and Supplies	$ 68,807	$ 97,783	$ 327,870	$ 327,870	$ 327,870
Other Charges	212,601	134,668	370,000	370,000	370,000
Fixed Assets	4,667	-	412,000	412,000	412,000
Total Expenditures/Appropriations	**$ 286,075**	**$ 232,451**	**$ 1,109,870**	**$ 1,109,870**	**$ 1,109,870**
Net Cost	**$ 270,288**	**$ 225,244**	**$ 1,109,870**	**$ 1,109,870**	**$ 1,109,870**

FUND: **20260**
DEPT: **3130200000**

Budget Unit: **Survey**
Function: **GENERAL GOVERNMENT**
Activity: **OTHER GENERAL**

Rev Fr Use Of Money&Property	$ 11,019	$ 10,110	$ 7,406	$ 7,406	$ 7,406
Charges For Current Services	5,343,016	4,606,607	4,773,724	4,773,724	4,773,724
Other Revenue	18,146	20,185	33,680	33,680	33,680
Total Revenue	**$ 5,372,181**	**$ 4,636,902**	**$ 4,814,810**	**$ 4,814,810**	**$ 4,814,810**
Salaries and Benefits	$ 3,519,586	$ 3,452,370	$ 3,780,068	$ 3,780,068	$ 3,780,068
Services and Supplies	277,128	291,691	443,727	443,727	443,727
Other Charges	415,785	423,765	462,015	462,015	462,015
Fixed Assets	64,286	8,579	129,000	129,000	129,000
Intrafund Transfers	-	-	-	-	-
Total Expenditures/Appropriations	**$ 4,276,785**	**$ 4,176,405**	**$ 4,814,810**	**$ 4,814,810**	**$ 4,814,810**
Net Cost	**$ (1,095,396)**	**$ (460,497)**	**$ -**	**$ -**	**$ -**

FUND: **10000**
DEPT: **7200100000**

Budget Unit: **FACILITY MGMT: ADMINISTRATION**
Function: **GENERAL GOVERNMENT**
Activity: **PROPERTY MANAGEMENT**

Charges For Current Services	$ 290,603	$ 4,892,495	$ 5,606,179	$ 5,517,643	$ 5,517,643
Other Revenue	210	30,520	-	-	-
Total Revenue	**$ 290,813**	**$ 4,923,015**	**$ 5,606,179**	**$ 5,517,643**	**$ 5,517,643**
Salaries and Benefits	$ 4,866,229	$ 4,755,591	$ 4,969,916	$ 5,110,730	$ 5,110,730
Services and Supplies	1,241,960	1,121,952	1,761,048	1,825,423	1,825,423
Other Charges	436,259	756,320	815,253	610,066	610,066
Fixed Assets	15,746	-	22,000	22,000	22,000
Intrafund Transfers	(6,261,264)	(1,710,821)	(1,962,038)	(2,050,576)	(2,050,576)
Total Expenditures/Appropriations	**$ 298,930**	**$ 4,923,042**	**$ 5,606,179**	**$ 5,517,643**	**$ 5,517,643**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Net Cost	**$ 8,117**	**$ 27**	**$ -**	**$ -**	**$ -**
Budget Unit: **FACILITY MGMT: HOUSEKEEPING**					
FUND: **10000**		Function: **GENERAL GOVERNMENT**			
DEPT: **7200200000**		Activity: **PROPERTY MANAGEMENT**			
Charges For Current Services	$ 4,668,539	$ 305,384	$ -	$ -	$ -
Other Revenue	10,094	-	-	-	-
Total Revenue	**$ 4,678,633**	**$ 305,384**	**$ -**	**$ -**	**$ -**
Salaries and Benefits	$ 9,744,173	$ -	$ -	$ -	$ -
Services and Supplies	2,898,962	-	-	-	-
Other Charges	1,285	-	-	-	-
Fixed Assets	35,826	-	-	-	-
Intrafund Transfers	(8,296,235)	-	-	-	-
Total Expenditures/Appropriations	**$ 4,384,011**	**$ -**	**$ -**	**$ -**	**$ -**
Net Cost	**$ (294,622)**	**$ (305,384)**	**$ -**	**$ -**	**$ -**
Budget Unit: **FACILITY MGMT: MAINTENANCE**					
FUND: **10000**		Function: **GENERAL GOVERNMENT**			
DEPT: **7200300000**		Activity: **PROPERTY MANAGEMENT**			
Charges For Current Services	$ 3,471,436	$ 292	$ -	$ -	$ -
Other Revenue	10,418	-	-	-	-
Total Revenue	**$ 3,481,854**	**$ 292**	**$ -**	**$ -**	**$ -**
Salaries and Benefits	$ 11,331,436	$ -	$ -	$ -	$ -
Services and Supplies	7,716,482	-	-	-	-
Other Charges	46,318	-	-	-	-
Intrafund Transfers	(14,284,456)	-	-	-	-
Total Expenditures/Appropriations	**$ 4,809,780**	**$ -**	**$ -**	**$ -**	**$ -**
Net Cost	**$ 1,327,926**	**$ (292)**	**$ -**	**$ -**	**$ -**
Budget Unit: **FACILITY MGMT: REAL ESTATE**					
FUND: **10000**		Function: **GENERAL GOVERNMENT**			
DEPT: **7200400000**		Activity: **PROPERTY MANAGEMENT**			

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Rev Fr Use Of Money&Property	$ 260,510	$ (5,509)	$ -	$ -	$ -
Charges For Current Services	15,538,585	(39,737)	-	-	-
Other Revenue	66,455	-	-	-	-
Total Revenue	**$ 15,865,550**	**$ (45,246)**	**$ -**	**$ -**	**$ -**
Salaries and Benefits	$ 2,080,728	$ -	$ -	$ -	$ -
Services and Supplies	51,662,291	-	-	-	-
Other Charges	4,006,147	-	-	-	-
Intrafund Transfers	(41,319,042)	2,768	-	-	-
Total Expenditures/Appropriations	**$ 16,430,124**	**$ 2,768**	**$ -**	**$ -**	**$ -**
Net Cost	**$ 564,574**	**$ 48,014**	**$ -**	**$ -**	**$ -**

FUND: **10000** DEPT: **7200500000**

Budget Unit: **FACILITY MGMT: DESIGN _ CONST.**
Function: **GENERAL GOVERNMENT**
Activity: **PROPERTY MANAGEMENT**

Charges For Current Services	$ 3,497,411	$ 10,834,498	$ 11,188,453	$ 10,948,499	$ 10,948,499
Other Revenue	-	5,683	959	959	959
Total Revenue	**$ 3,497,411**	**$ 10,840,181**	**$ 11,189,412**	**$ 10,949,458**	**$ 10,949,458**
Salaries and Benefits	$ 2,748,999	$ 7,049,205	$ 7,496,333	$ 7,496,333	$ 7,496,333
Services and Supplies	1,461,118	3,168,150	3,776,768	3,776,768	3,776,768
Other Charges	399,930	1,788,376	866,320	865,450	865,450
Fixed Assets	-	6,325	1	1	1
Intrafund Transfers	(644,697)	(1,354,585)	(950,010)	(1,189,094)	(1,189,094)
Total Expenditures/Appropriations	**$ 3,965,350**	**$ 10,657,471**	**$ 11,189,412**	**$ 10,949,458**	**$ 10,949,458**
Net Cost	**$ 467,939**	**$ (182,710)**	**$ -**	**$ -**	**$ -**

FUND: **10000** DEPT: **7200600000**

Budget Unit: **FACILITY MGMT: ENERGY MGMT**
Function: **GENERAL GOVERNMENT**
Activity: **PROPERTY MANAGEMENT**

Charges For Current Services	$ 2,150,030	$ 5,235,682	$ 7,375,746	$ 7,375,746	$ 7,375,746
Total Revenue	**$ 2,150,030**	**$ 5,235,682**	**$ 7,375,746**	**$ 7,375,746**	**$ 7,375,746**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 80,854	$ 98,877	$ 163,483	$ 163,483	$ 163,483
Services and Supplies	17,731,745	19,865,204	24,417,051	23,926,732	23,926,732
Other Charges	1,822,135	1,830,154	1,829,116	1,829,116	1,829,116
Fixed Assets	36,277	1,526,693	3,980,258	3,980,258	3,980,258
Intrafund Transfers	(9,971,249)	(10,992,831)	(14,830,495)	(14,830,495)	(14,830,495)
Total Expenditures/Appropriations	**$ 9,699,762**	**$ 12,328,097**	**$ 15,559,413**	**$ 15,069,094**	**$ 15,069,094**
Net Cost	**$ 7,549,732**	**$ 7,092,415**	**$ 8,183,667**	**$ 7,693,348**	**$ 7,693,348**
		Budget Unit:	**FACILITY MGMT:CAPITAL PROJECTS**		
FUND: **30100**		Function:	**GENERAL GOVERNMENT**		
DEPT: **7200800000**		Activity:	**PROPERTY MANAGEMENT**		
Rev Fr Use Of Money&Property	$ (220,497)	$ (63,142)	$ 1	$ 1	$ 1
Charges For Current Services	85,846,180	39,307,125	85,738,850	85,738,850	85,738,850
Other Revenue	5,517,385	5,925,212	678,196	678,196	678,196
Total Revenue	**$ 91,143,068**	**$ 45,169,195**	**$ 86,417,047**	**$ 86,417,047**	**$ 86,417,047**
Services and Supplies	$ 41,049	$ 297,740	$ 127,892	$ 127,892	$ 127,892
Other Charges	4,294,683	2,935,535	4,301,993	4,301,993	4,301,993
Fixed Assets	91,444,147	30,672,790	81,987,162	81,987,162	81,987,162
Total Expenditures/Appropriations	**$ 95,779,879**	**$ 33,906,065**	**$ 86,417,047**	**$ 86,417,047**	**$ 86,417,047**
Net Cost	**$ 4,636,811**	**$ (11,263,130)**	**$ -**	**$ -**	**$ -**
		Budget Unit:	**FACILITY MGMT: PROJECT GROUP**		
FUND: **10000**		Function:	**GENERAL GOVERNMENT**		
DEPT: **7201100000**		Activity:	**PROPERTY MANAGEMENT**		
Charges For Current Services	$ 2,000,089	$ (90)	$ -	$ -	$ -
Other Revenue	75,763	-	-	-	-
Total Revenue	**$ 2,075,852**	**$ (90)**	**$ -**	**$ -**	**$ -**
Salaries and Benefits	$ 1,045,808	$ -	$ -	$ -	$ -
Services and Supplies	1,750,892	-	-	-	-
Other Charges	75,973	-	-	-	-
Intrafund Transfers	(1,027,762)	-	-	-	-
Total Expenditures/Appropriations	**$ 1,844,911**	**$ -**	**$ -**	**$ -**	**$ -**
Net Cost	**$ (230,941)**	**$ 90**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
FUND: **10000**		Budget Unit: **PURCHASING**			
DEPT: **7300100000**		Function: **GENERAL GOVERNMENT**			
		Activity: **FINANCE**			
Charges For Current Services	$ 546,198	$ 516,085	$ 780,092	$ 780,092	$ 780,092
Other Revenue	4,988	5,932	9,911	9,911	9,911
Total Revenue	**$ 551,186**	**$ 522,017**	**$ 790,003**	**$ 790,003**	**$ 790,003**
Salaries and Benefits	$ 2,093,560	$ 2,056,352	$ 2,072,375	$ 2,072,375	$ 2,072,375
Services and Supplies	341,723	345,689	332,217	332,217	332,217
Other Charges	697	1,564	1,000	1,000	1,000
Intrafund Transfers	(525,080)	(751,891)	(773,931)	(773,931)	(773,931)
Total Expenditures/Appropriations	**$ 1,910,900**	**$ 1,651,714**	**$ 1,631,661**	**$ 1,631,661**	**$ 1,631,661**
Net Cost	**$ 1,359,714**	**$ 1,129,697**	**$ 841,658**	**$ 841,658**	**$ 841,658**
FUND: **33500**		Budget Unit: **PSEC 800MHZ RADIO PROJECT**			
DEPT: **7400300000**		Function: **GENERAL GOVERNMENT**			
		Activity: **COMMUNICATION**			
Intergovernmental Revenues	$ 32,812	$ 747,844	$ -	$ -	$ -
Other Revenue	881,681	5,206,280	5,565,275	5,565,275	5,565,275
Total Revenue	**$ 914,493**	**$ 5,954,124**	**$ 5,565,275**	**$ 5,565,275**	**$ 5,565,275**
Salaries and Benefits	$ 2,488,788	$ 2,810,187	$ 2,647,703	$ 2,736,652	$ 2,736,652
Services and Supplies	2,260,432	1,357,877	2,509,027	2,509,027	2,509,027
Other Charges	1,057,158	405,896	179,945	179,945	179,945
Fixed Assets	492,400	443,247	228,600	228,600	228,600
Total Expenditures/Appropriations	**$ 6,298,778**	**$ 5,017,207**	**$ 5,565,275**	**$ 5,654,224**	**$ 5,654,224**
Net Cost	**$ 5,384,285**	**$ (936,917)**	**$ -**	**$ 88,949**	**$ 88,949**

FUNDED POSITIONS: See Attachment A

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State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **CONTRIBUTION TO TRIAL COURT**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **1100900000**		Activity: **JUDICIAL**			
Services and Supplies	$ 853	$ 778	$ 781,889	$ 781,889	$ 781,889
Other Charges	30,708,312	30,498,790	32,000,000	32,000,000	32,000,000
Total Expenditures/Appropriations	**$ 30,709,165**	**$ 30,499,568**	**$ 32,781,889**	**$ 32,781,889**	**$ 32,781,889**
Net Cost	**$ 30,709,165**	**$ 30,499,568**	**$ 32,781,889**	**$ 32,781,889**	**$ 32,781,889**
Budget Unit: **CONFIDENTIAL COURT ORDERS**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **1103300000**		Activity: **JUDICIAL**			
Services and Supplies	$ 689,040	$ 562,131	$ 660,014	$ 660,014	$ 660,014
Total Expenditures/Appropriations	**$ 689,040**	**$ 562,131**	**$ 660,014**	**$ 660,014**	**$ 660,014**
Net Cost	**$ 689,040**	**$ 562,131**	**$ 660,014**	**$ 660,014**	**$ 660,014**
Budget Unit: **COURT FACILITIES**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **1103900000**		Activity: **JUDICIAL**			
Other Revenue	$ 18,779	$ -	$ -	$ -	$ -
Total Revenue	**$ 18,779**	**$ -**	**$ -**	**$ -**	**$ -**
Services and Supplies	$ 1,197,533	$ 1,135,498	$ 1,490,625	$ 1,490,625	$ 1,490,625
Other Charges	3,626,915	3,268,629	3,404,495	3,404,495	3,404,495
Total Expenditures/Appropriations	**$ 4,824,448**	**$ 4,404,127**	**$ 4,895,120**	**$ 4,895,120**	**$ 4,895,120**
Net Cost	**$ 4,805,669**	**$ 4,404,127**	**$ 4,895,120**	**$ 4,895,120**	**$ 4,895,120**
Budget Unit: **COURT TRANSCRIPTS**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **1104300000**		Activity: **JUDICIAL**			
Services and Supplies	$ 1,892,700	$ 1,714,580	$ 1,500,000	$ 1,500,000	$ 1,500,000
Total Expenditures/Appropriations	**$ 1,892,700**	**$ 1,714,580**	**$ 1,500,000**	**$ 1,500,000**	**$ 1,500,000**
Net Cost	**$ 1,892,700**	**$ 1,714,580**	**$ 1,500,000**	**$ 1,500,000**	**$ 1,500,000**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **NATL POLLUTANT DSCHRG ELIM SYS**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **1105000000**		Activity: **OTHER PROTECTION**			
Salaries and Benefits	$ 281,135	$ 306,644	$ 304,874	$ 304,874	$ 304,874
Services and Supplies	545,045	539,130	546,584	560,603	560,603
Operating Transfers Out	1,524,834	998,800	516,725	516,725	516,725
Total Expenditures/Appropriations	**$ 2,351,014**	**$ 1,844,574**	**$ 1,368,183**	**$ 1,382,202**	**$ 1,382,202**
Net Cost	**$ 2,351,014**	**$ 1,844,574**	**$ 1,368,183**	**$ 1,382,202**	**$ 1,382,202**
Budget Unit: **INDIGENT DEFENSE**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **1109900000**		Activity: **JUDICIAL**			
Intergovernmental Revenues	$ -	$ 23,432	$ -	$ -	$ -
Charges For Current Services	-	144,780	120,000	120,000	120,000
Total Revenue	**$ -**	**$ 168,212**	**$ 120,000**	**$ 120,000**	**$ 120,000**
Services and Supplies	$ -	$ 11,725,648	$ 10,842,258	$ 10,842,258	$ 10,842,258
Total Expenditures/Appropriations	**$ -**	**$ 11,725,648**	**$ 10,842,258**	**$ 10,842,258**	**$ 10,842,258**
Net Cost	**$ -**	**$ 11,557,436**	**$ 10,722,258**	**$ 10,722,258**	**$ 10,722,258**
Budget Unit: **ASSESSOR: CLERK-RECORDER**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **1200200000**		Activity: **OTHER PROTECTION**			
Rev Fr Use Of Money&Property	$ 16,595	$ 15,455	$ 15,000	$ 15,000	$ 15,000
Charges For Current Services	13,694,537	15,025,831	15,578,000	15,578,000	15,578,000
Other Revenue	3,777	5,245	-	-	-
Total Revenue	**$ 13,714,909**	**$ 15,046,531**	**$ 15,593,000**	**$ 15,593,000**	**$ 15,593,000**
Salaries and Benefits	$ 10,553,632	$ 12,770,583	$ 14,749,080	$ 14,749,080	$ 14,749,080
Services and Supplies	5,505,054	4,477,826	4,784,127	4,784,127	4,784,127
Other Charges	10	-	4,866,085	4,866,085	4,866,085
Fixed Assets	72,759	51,598	535,052	535,052	535,052
Intrafund Transfers	(119,555)	(162,469)	(90,000)	(90,000)	(90,000)
Total Expenditures/Appropriations	**$ 16,011,900**	**$ 17,137,538**	**$ 24,844,344**	**$ 24,844,344**	**$ 24,844,344**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Net Cost	**$ 2,296,991**	**$ 2,091,007**	**$ 9,251,344**	**$ 9,251,344**	**$ 9,251,344**
Budget Unit: **DISTRICT ATTORNEY: CRIMINAL**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **2200100000**		Activity: **JUDICIAL**			
Fines, Forfeitures & Penalties	$ 7,083,115	$ 2,774,058	$ 3,673,846	$ 3,673,846	$ -
Intergovernmental Revenues	27,332,789	26,966,547	28,488,585	24,814,739	28,488,585
Charges For Current Services	1,264,730	1,436,548	1,286,170	1,286,170	1,286,170
Other In-Lieu And Other Govt	32,714	107,186	94,543	94,543	94,543
Other Revenue	578,366	789,861	63,020	63,020	1,663,020
Total Revenue	**$ 36,291,714**	**$ 32,074,200**	**$ 33,606,164**	**$ 29,932,318**	**$ 31,532,318**
Salaries and Benefits	$ 88,422,695	$ 93,882,558	$ 84,834,688	$ 84,834,688	$ 84,834,688
Services and Supplies	10,857,260	9,201,911	9,384,227	9,384,227	9,384,227
Other Charges	16,223	106,291	250	250	250
Intrafund Transfers	(2,461,179)	(2,772,227)	(1,924,546)	(1,924,546)	(1,924,546)
Total Expenditures/Appropriations	**$ 96,834,999**	**$ 100,418,533**	**$ 92,294,619**	**$ 92,294,619**	**$ 92,294,619**
Net Cost	**$ 60,543,285**	**$ 68,344,333**	**$ 58,688,455**	**$ 62,361,301**	**$ 60,762,301**
Budget Unit: **DISTRICT ATTORNEY: FORENSICS**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **2200200000**		Activity: **JUDICIAL**			
Fines, Forfeitures & Penalties	$ 445,344	$ 470,818	$ 615,000	$ 615,000	$ 615,000
Total Revenue	**$ 445,344**	**$ 470,818**	**$ 615,000**	**$ 615,000**	**$ 615,000**
Services and Supplies	$ 393,920	$ 467,033	$ 602,700	$ 602,700	$ 602,700
Intrafund Transfers	-	-	12,300	12,300	12,300
Total Expenditures/Appropriations	**$ 393,920**	**$ 467,033**	**$ 615,000**	**$ 615,000**	**$ 615,000**
Net Cost	**$ (51,424)**	**$ (3,785)**	**$ -**	**$ -**	**$ -**
Budget Unit: **CHILD SUPPORT SERVICES**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **2300100000**		Activity: **JUDICIAL**			

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Rev Fr Use Of Money&Property	$ 12,047	$ 7,174	$ 6,500	$ 6,500	$ 6,500
Intergovernmental Revenues	35,145,809	35,217,846	36,381,086	36,381,086	36,381,086
Charges For Current Services	2,671	3,587	2,500	2,500	2,500
Other Revenue	4,488	89,977	3,500	3,500	3,500
Total Revenue	**$ 35,165,015**	**$ 35,318,584**	**$ 36,393,586**	**$ 36,393,586**	**$ 36,393,586**
Salaries and Benefits	$ 27,179,828	$ 26,584,548	$ 28,182,408	$ 28,182,408	$ 28,182,408
Services and Supplies	8,585,111	9,479,717	8,488,474	8,488,474	8,488,474
Other Charges	34	-	100,000	100,000	100,000
Fixed Assets	9,994	24,985	25,000	25,000	25,000
Total Expenditures/Appropriations	**$ 35,774,967**	**$ 36,089,250**	**$ 36,795,882**	**$ 36,795,882**	**$ 36,795,882**
Net Cost	**$ 609,952**	**$ 770,666**	**$ 402,296**	**$ 402,296**	**$ 402,296**

Budget Unit: **PUBLIC DEFENDER**
FUND: **10000** Function: **PUBLIC PROTECTION**
DEPT: **2400100000** Activity: **JUDICIAL**

Intergovernmental Revenues	$ -	$ 69,127	$ 70,000	$ 70,000	$ 70,000
Charges For Current Services	216,954	237,706	182,760	182,760	182,760
Other Revenue	897	485	750	750	750
Total Revenue	**$ 217,851**	**$ 307,318**	**$ 253,510**	**$ 253,510**	**$ 253,510**
Salaries and Benefits	$ 31,123,734	$ 29,709,073	$ 28,078,791	$ 28,078,791	$ 28,078,791
Services and Supplies	4,056,637	3,759,580	3,830,562	3,830,562	3,830,562
Other Charges	-	136,509	-	-	-
Fixed Assets	-	-	64,000	64,000	64,000
Intrafund Transfers	(27,128)	(19,665)	(64,167)	(64,167)	(64,167)
Total Expenditures/Appropriations	**$ 35,153,243**	**$ 33,585,497**	**$ 31,909,186**	**$ 31,909,186**	**$ 31,909,186**
Net Cost	**$ 34,935,392**	**$ 33,278,179**	**$ 31,655,676**	**$ 31,655,676**	**$ 31,655,676**

Budget Unit: **ALTERNATE PUBLIC DEFENDER**
FUND: **10000** Function: **PUBLIC PROTECTION**
DEPT: **2401300000** Activity: **JUDICIAL**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ -	$ 2,286,000	$ 2,579,894	$ 2,579,894	$ 2,579,894
Services and Supplies	24,965	959,052	858,608	858,608	858,608
Fixed Assets	-	22,975	-	-	-
Total Expenditures/Appropriations	**$ 24,965**	**$ 3,268,027**	**$ 3,438,502**	**$ 3,438,502**	**$ 3,438,502**
Net Cost	**$ 24,965**	**$ 3,268,027**	**$ 3,438,502**	**$ 3,438,502**	**$ 3,438,502**
		Budget Unit:	**SHERIFF: ADMINISTRATION**		
FUND: **10000**		Function:	**PUBLIC PROTECTION**		
DEPT: **2500100000**		Activity:	**POLICE PROTECTION**		
Licenses, Permits & Franchises	$ 30,418	$ 36,650	$ 30,000	$ 30,000	$ 30,000
Intergovernmental Revenues	8,518	107,342	122,433	122,433	122,433
Charges For Current Services	1,349,424	1,409,594	1,456,521	1,456,521	1,456,521
Other Revenue	119	8,900	-	-	-
Total Revenue	**$ 1,388,479**	**$ 1,562,486**	**$ 1,608,954**	**$ 1,608,954**	**$ 1,608,954**
Salaries and Benefits	$ 9,092,756	$ 8,670,602	$ 9,756,778	$ 9,756,778	$ 9,756,778
Services and Supplies	1,445,053	1,707,269	1,150,335	1,150,335	1,150,335
Other Charges	278,540	191,485	307,678	307,678	307,678
Fixed Assets	12,636	5,302	-	-	-
Intrafund Transfers	(24,251)	(25,051)	(22,311)	(22,311)	(22,311)
Total Expenditures/Appropriations	**$ 10,804,734**	**$ 10,549,607**	**$ 11,192,480**	**$ 11,192,480**	**$ 11,192,480**
Net Cost	**$ 9,416,255**	**$ 8,987,121**	**$ 9,583,526**	**$ 9,583,526**	**$ 9,583,526**
		Budget Unit:	**SHERIFF: SUPPORT**		
FUND: **10000**		Function:	**PUBLIC PROTECTION**		
DEPT: **2500200000**		Activity:	**POLICE PROTECTION**		
Licenses, Permits & Franchises	$ 5,496	$ 5,356	$ 6,000	$ 6,000	$ 6,000
Fines, Forfeitures & Penalties	15,954	13,283	-	-	-
Rev Fr Use Of Money&Property	206	124	120	120	120
Intergovernmental Revenues	12,537,348	12,520,279	12,576,331	12,576,331	12,576,331
Charges For Current Services	14,448,303	12,982,761	13,589,939	13,589,939	13,589,939
Other Revenue	1,654	99,098	75,000	75,000	75,000
Total Revenue	**$ 27,008,961**	**$ 25,620,901**	**$ 26,247,390**	**$ 26,247,390**	**$ 26,247,390**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 29,731,289	$ 29,685,110	$ 29,686,371	$ 29,686,371	$ 29,686,371
Services and Supplies	7,049,214	6,879,983	7,199,319	7,199,319	7,199,319
Other Charges	176,780	11,217	190,096	190,096	190,096
Fixed Assets	192,903	75,745	-	-	-
Intrafund Transfers	(1,209,794)	(944,531)	(1,042,324)	(1,042,324)	(1,042,324)
Total Expenditures/Appropriations	**$ 35,940,392**	**$ 35,707,524**	**$ 36,033,462**	**$ 36,033,462**	**$ 36,033,462**
Net Cost	**$ 8,931,431**	**$ 10,086,623**	**$ 9,786,072**	**$ 9,786,072**	**$ 9,786,072**

Budget Unit: **SHERIFF: PATROL**
FUND: **10000** Function: **PUBLIC PROTECTION**
DEPT: **2500300000** Activity: **POLICE PROTECTION**

Licenses, Permits & Franchises	$ 66,412	$ 55,683	$ 46,589	$ 46,589	$ 46,589
Fines, Forfeitures & Penalties	825,889	1,535,364	1,019,724	19,724	19,724
Rev Fr Use Of Money&Property	23,727	11,201	-	-	-
Intergovernmental Revenues	38,557,186	38,464,639	35,959,301	35,959,301	35,959,301
Charges For Current Services	137,000,567	137,993,131	143,615,004	143,615,004	143,615,004
Other Revenue	180,346	1,182,288	1,725	1,725	2,321,725
Total Revenue	**$ 176,654,127**	**$ 179,242,306**	**$ 180,642,343**	**$ 179,642,343**	**$ 181,962,343**
Salaries and Benefits	$ 219,585,531	$ 225,321,884	$ 215,932,376	$ 215,432,376	$ 220,893,746
Services and Supplies	38,099,707	41,187,796	44,279,450	44,779,450	44,779,450
Other Charges	1,981,929	1,547,102	2,122,893	2,122,893	2,122,893
Fixed Assets	1,995,394	2,218,450	370,500	370,500	370,500
Intrafund Transfers	(1,250,123)	(1,414,585)	(356,102)	(356,102)	(356,102)
Total Expenditures/Appropriations	**$ 260,412,438**	**$ 268,860,647**	**$ 262,349,117**	**$ 262,349,117**	**$ 267,810,487**
Net Cost	**$ 83,758,311**	**$ 89,618,341**	**$ 81,706,774**	**$ 82,706,774**	**$ 85,848,144**

Budget Unit: **SHERIFF: CORRECTIONS**
FUND: **10000** Function: **PUBLIC PROTECTION**
DEPT: **2500400000** Activity: **DETENTION AND CORRECTION**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Fines, Forfeitures & Penalties	$ 4,924,018	$ 5,401,332	$ 4,500,761	$ 2,766,300	$ 2,766,300
Rev Fr Use Of Money&Property	218,557	204,556	164,391	164,391	164,391
Intergovernmental Revenues	31,113,267	32,502,513	31,446,911	31,446,911	31,446,911
Charges For Current Services	2,340,453	3,230,731	2,737,875	2,737,875	2,737,875
Other Revenue	585,116	534,133	2,124,468	2,124,468	5,604,468
Total Revenue	**$ 39,181,411**	**$ 41,873,265**	**$ 40,974,406**	**$ 39,239,945**	**$ 42,719,945**
Salaries and Benefits	$ 124,119,810	$ 135,259,874	$ 126,829,445	$ 126,829,445	$ 136,372,228
Services and Supplies	21,910,981	23,274,538	21,555,580	21,555,580	21,555,580
Other Charges	170,163	895,676	127,364	127,364	127,364
Fixed Assets	147,376	466,904	-	-	-
Intrafund Transfers	(1,408)	(623)	-	-	-
Total Expenditures/Appropriations	**$ 146,346,922**	**$ 159,896,369**	**$ 148,512,389**	**$ 148,512,389**	**$ 158,055,172**
Net Cost	**$ 107,165,511**	**$ 118,023,104**	**$ 107,537,983**	**$ 109,272,444**	**$ 115,335,227**

Budget Unit: **SHERIFF: COURT SERVICES**
FUND: **10000** Function: **PUBLIC PROTECTION**
DEPT: **2500500000** Activity: **POLICE PROTECTION**

Fines, Forfeitures & Penalties	$ 823,754	$ 787,324	$ 220,000	$ 220,000	$ 220,000
Rev Fr Use Of Money&Property	2,209	1,514	2,200	2,200	2,200
Intergovernmental Revenues	7,717	7,588	-	-	-
Charges For Current Services	18,031,598	18,777,496	19,738,493	19,738,493	19,738,493
Other Revenue	6,390	8,407	-	-	-
Total Revenue	**$ 18,871,668**	**$ 19,582,329**	**$ 19,960,693**	**$ 19,960,693**	**$ 19,960,693**
Salaries and Benefits	$ 19,814,772	$ 19,995,120	$ 21,617,898	$ 21,617,898	$ 20,537,059
Services and Supplies	2,999,093	3,687,170	3,648,337	3,648,337	3,648,337
Other Charges	26,143	3,460	68,365	68,365	68,365
Fixed Assets	-	1,194,265	-	-	-
Intrafund Transfers	(44,063)	(46,726)	(52,007)	(52,007)	(52,007)
Total Expenditures/Appropriations	**$ 22,795,945**	**$ 24,833,289**	**$ 25,282,593**	**$ 25,282,593**	**$ 24,201,754**
Net Cost	**$ 3,924,277**	**$ 5,250,960**	**$ 5,321,900**	**$ 5,321,900**	**$ 4,241,061**

Budget Unit: **SHERIFF: CAC SECURITY**
FUND: **10000** Function: **PUBLIC PROTECTION**
DEPT: **2500600000** Activity: **POLICE PROTECTION**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 374,935	$ 395,844	$ -	$ -	$ 407,486
Services and Supplies	141,453	137,405	-	-	145,544
Intrafund Transfers	-	-	-	-	(3,000)
Total Expenditures/Appropriations	**$ 516,388**	**$ 533,249**	**$ -**	**$ -**	**$ 550,030**
Net Cost	**$ 516,388**	**$ 533,249**	**$ -**	**$ -**	**$ 550,030**
		Budget Unit:	**SHERIFF: TRAINING CENTER**		
FUND: **10000**		Function:	**PUBLIC PROTECTION**		
DEPT: **2500700000**		Activity:	**POLICE PROTECTION**		
Rev Fr Use Of Money&Property	$ 774,072	$ 970,578	$ 848,696	$ 848,696	$ 848,696
Intergovernmental Revenues	850,132	588,084	562,627	562,627	562,627
Charges For Current Services	794,634	1,303,315	1,419,206	1,419,206	1,419,206
Other Revenue	337,812	447,824	354,500	354,500	354,500
Total Revenue	**$ 2,756,650**	**$ 3,309,801**	**$ 3,185,029**	**$ 3,185,029**	**$ 3,185,029**
Salaries and Benefits	$ 6,066,247	$ 6,669,770	$ 6,720,735	$ 6,720,735	$ 7,251,544
Services and Supplies	3,443,379	4,420,732	4,490,026	4,490,026	4,490,026
Other Charges	622,186	322,379	289,952	289,952	289,952
Fixed Assets	12,343	19,607	-	-	-
Intrafund Transfers	(6,716)	(115,420)	(111,044)	(111,044)	(111,044)
Total Expenditures/Appropriations	**$ 10,137,439**	**$ 11,317,068**	**$ 11,389,669**	**$ 11,389,669**	**$ 11,920,478**
Net Cost	**$ 7,380,789**	**$ 8,007,267**	**$ 8,204,640**	**$ 8,204,640**	**$ 8,735,449**
		Budget Unit:	**SHERIFF: AUTO THEFT**		
FUND: **10000**		Function:	**PUBLIC PROTECTION**		
DEPT: **2500800000**		Activity:	**POLICE PROTECTION**		
Intergovernmental Revenues	$ 830,197	$ 845,462	$ 869,561	$ -	$ -
Charges For Current Services	30	45	-	-	-
Total Revenue	**$ 830,227**	**$ 845,507**	**$ 869,561**	**$ -**	**$ -**
Salaries and Benefits	$ 30,355	$ 48,429	$ 49,461	$ 49,461	$ 49,461
Services and Supplies	732,537	665,678	832,418	832,418	832,418
Intrafund Transfers	-	(20,629)	(12,318)	(12,318)	(12,318)
Total Expenditures/Appropriations	**$ 762,892**	**$ 693,478**	**$ 869,561**	**$ 869,561**	**$ 869,561**
Net Cost	**$ (67,335)**	**$ (152,029)**	**$ -**	**$ 869,561**	**$ 869,561**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **SHERIFF: ADA GRANT**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **2500900000**		Activity: **POLICE PROTECTION**			
Fines, Forfeitures & Penalties	$ -	$ 40,011	$ -	$ -	$ -
Intergovernmental Revenues	1,179,085	886,615	682,993	682,993	682,993
Total Revenue	**$ 1,179,085**	**$ 926,626**	**$ 682,993**	**$ 682,993**	**$ 682,993**
Services and Supplies	$ 946,289	$ 944,189	$ 682,993	$ 682,993	$ 682,993
Fixed Assets	16,000	-	-	-	-
Total Expenditures/Appropriations	**$ 962,289**	**$ 944,189**	**$ 682,993**	**$ 682,993**	**$ 682,993**
Net Cost	**$ (216,796)**	**$ 17,563**	**$ -**	**$ -**	**$ -**
Budget Unit: **SHERIFF: CORONER**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **2501000000**		Activity: **OTHER PROTECTION**			
Rev Fr Use Of Money&Property	$ 34,386	$ 20,914	$ 32,040	$ 32,040	$ 32,040
Intergovernmental Revenues	2,978,757	2,986,815	3,023,813	3,023,813	3,023,813
Charges For Current Services	510,900	651,287	603,551	603,551	603,551
Other Revenue	20,002	23,166	38,360	38,360	38,360
Total Revenue	**$ 3,544,045**	**$ 3,682,182**	**$ 3,697,764**	**$ 3,697,764**	**$ 3,697,764**
Salaries and Benefits	$ 5,741,117	$ 5,741,559	$ 4,966,639	$ 4,966,639	$ 5,899,875
Services and Supplies	1,709,227	1,633,519	1,231,720	1,231,720	1,794,331
Other Charges	-	-	100	100	100
Total Expenditures/Appropriations	**$ 7,450,344**	**$ 7,375,078**	**$ 6,198,459**	**$ 6,198,459**	**$ 7,694,306**
Net Cost	**$ 3,906,299**	**$ 3,692,896**	**$ 2,500,695**	**$ 2,500,695**	**$ 3,996,542**
Budget Unit: **SHERIFF: PUBLIC ADMINISTRATOR**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **2501100000**		Activity: **OTHER PROTECTION**			
Rev Fr Use Of Money&Property	$ 6,000	$ -	$ -	$ -	$ -
Intergovernmental Revenues	630	-	-	-	-
Charges For Current Services	794,329	729,284	553,620	553,620	553,620
Other Revenue	-	2,796	-	-	-
Total Revenue	**$ 800,959**	**$ 732,080**	**$ 553,620**	**$ 553,620**	**$ 553,620**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 1,173,156	$ 930,174	$ 1,193,983	$ 1,193,983	$ 1,193,983
Services and Supplies	340,553	388,416	337,924	337,924	337,924
Other Charges	77	-	-	-	-
Intrafund Transfers	-	-	(5,453)	(5,453)	(5,453)
Total Expenditures/Appropriations	**$ 1,513,786**	**$ 1,318,590**	**$ 1,526,454**	**$ 1,526,454**	**$ 1,526,454**
Net Cost	**$ 712,827**	**$ 586,510**	**$ 972,834**	**$ 972,834**	**$ 972,834**
		Budget Unit:	**SHERIFF: CAL-ID**		
FUND: **22250**		Function:	**PUBLIC PROTECTION**		
DEPT: **2505100000**		Activity:	**POLICE PROTECTION**		
Rev Fr Use Of Money&Property	$ 28,614	$ 10,536	$ 30,000	$ 30,000	$ 30,000
Intergovernmental Revenues	232	-	150	150	150
Charges For Current Services	3,075,533	3,381,703	3,947,422	3,947,422	3,947,422
Other Revenue	394,621	394,902	401,453	401,453	401,453
Total Revenue	**$ 3,499,000**	**$ 3,787,141**	**$ 4,379,025**	**$ 4,379,025**	**$ 4,379,025**
Salaries and Benefits	$ 2,253,947	$ 2,389,853	$ 2,754,461	$ 2,754,461	$ 2,754,461
Services and Supplies	582,244	726,237	1,243,090	1,243,090	1,243,090
Other Charges	178,793	45,753	31,474	31,474	31,474
Fixed Assets	88,969	46,588	350,000	350,000	350,000
Total Expenditures/Appropriations	**$ 3,103,953**	**$ 3,208,431**	**$ 4,379,025**	**$ 4,379,025**	**$ 4,379,025**
Net Cost	**$ (395,047)**	**$ (578,710)**	**$ -**	**$ -**	**$ -**
		Budget Unit:	**SHERIFF: CAL-DNA**		
FUND: **22250**		Function:	**PUBLIC PROTECTION**		
DEPT: **2505200000**		Activity:	**POLICE PROTECTION**		
Rev Fr Use Of Money&Property	$ 2,728	$ 1,444	$ 5,000	$ 5,000	$ 5,000
Charges For Current Services	625,096	125,301	755,941	755,941	755,941
Total Revenue	**$ 627,824**	**$ 126,745**	**$ 760,941**	**$ 760,941**	**$ 760,941**
Services and Supplies	$ 619,225	$ 175,033	$ 760,941	$ 760,941	$ 760,941
Other Charges	3,954	454	-	-	-
Total Expenditures/Appropriations	**$ 623,179**	**$ 175,487**	**$ 760,941**	**$ 760,941**	**$ 760,941**
Net Cost	**$ (4,645)**	**$ 48,742**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **SHERIFF: CAL-PHOTO**					
FUND: **22250**			Function: **PUBLIC PROTECTION**		
DEPT: **2505300000**			Activity: **POLICE PROTECTION**		
Charges For Current Services	$ 142,000	$ 270,986	$ 326,139	$ 326,139	$ 326,139
Total Revenue	**$ 142,000**	**$ 270,986**	**$ 326,139**	**$ 326,139**	**$ 326,139**
Services and Supplies	$ 125,313	$ 89,696	$ 161,672	$ 161,672	$ 161,672
Other Charges	500	489	767	767	767
Fixed Assets	15,258	180,800	163,700	163,700	163,700
Total Expenditures/Appropriations	**$ 141,071**	**$ 270,985**	**$ 326,139**	**$ 326,139**	**$ 326,139**
Net Cost	**$ (929)**	**$ (1)**	**$ -**	**$ -**	**$ -**
Budget Unit: **PROBATION: JUVENILE HALL**					
FUND: **10000**			Function: **PUBLIC PROTECTION**		
DEPT: **2600100000**			Activity: **DETENTION AND CORRECTION**		
Intergovernmental Revenues	$ 18,986,443	$ 17,901,375	$ 21,563,385	$ 21,563,385	$ 21,563,385
Charges For Current Services	940,249	755,419	383,193	383,193	383,193
Other Revenue	2,871	1,995,213	-	1,976,000	2,576,000
Total Revenue	**$ 19,929,563**	**$ 20,652,007**	**$ 21,946,578**	**$ 23,922,578**	**$ 24,522,578**
Salaries and Benefits	$ 32,313,718	$ 29,619,789	$ 29,721,944	$ 31,697,944	$ 31,697,944
Services and Supplies	6,432,144	5,979,835	5,596,335	5,524,069	5,524,069
Other Charges	509,088	802,048	960,437	960,437	2,060,437
Fixed Assets	-	35,034	-	-	-
Intrafund Transfers	(34,359)	(38,731)	-	-	-
Total Expenditures/Appropriations	**$ 39,220,591**	**$ 36,397,975**	**$ 36,278,716**	**$ 38,182,450**	**$ 39,282,450**
Net Cost	**$ 19,291,028**	**$ 15,745,968**	**$ 14,332,138**	**$ 14,259,872**	**$ 14,759,872**
Budget Unit: **PROBATION**					
FUND: **10000**			Function: **PUBLIC PROTECTION**		
DEPT: **2600200000**			Activity: **DETENTION AND CORRECTION**		
Intergovernmental Revenues	$ 23,098,512	$ 21,250,850	$ 25,314,523	$ 25,314,523	$ 25,314,523
Charges For Current Services	1,567,599	1,384,947	1,549,541	1,549,541	1,549,541
Other Revenue	19,164	29,837	17,267	17,267	17,267
Total Revenue	**$ 24,685,275**	**$ 22,665,634**	**$ 26,881,331**	**$ 26,881,331**	**$ 26,881,331**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 27,993,472	$ 26,326,780	$ 29,144,409	$ 29,144,409	$ 29,144,409
Services and Supplies	4,397,276	4,374,496	4,474,165	4,474,165	4,474,165
Other Charges	2,118,574	1,795,884	1,898,412	1,898,412	1,898,412
Fixed Assets	111,535	-	-	-	-
Intrafund Transfers	(408,621)	(1,024,523)	(652,992)	(652,992)	(652,992)
Total Expenditures/Appropriations	**$ 34,212,236**	**$ 31,472,637**	**$ 34,863,994**	**$ 34,863,994**	**$ 34,863,994**
Net Cost	**$ 9,526,961**	**$ 8,807,003**	**$ 7,982,663**	**$ 7,982,663**	**$ 7,982,663**
		Budget Unit:	**PROBATION: ADMIN _ SUPPORT**		
FUND: **10000**		Function:	**PUBLIC PROTECTION**		
DEPT: **2600700000**		Activity:	**ADMINISTRATION**		
Intergovernmental Revenues	$ 449,009	$ 711,694	$ 693,380	$ 693,380	$ 693,380
Charges For Current Services	500,000	-	-	-	-
Other Revenue	285	831	-	-	-
Total Revenue	**$ 949,294**	**$ 712,525**	**$ 693,380**	**$ 693,380**	**$ 693,380**
Salaries and Benefits	$ 6,029,432	$ 5,843,472	$ 6,819,001	$ 6,819,001	$ 6,819,001
Services and Supplies	1,256,387	866,391	995,806	995,806	995,806
Total Expenditures/Appropriations	**$ 7,285,819**	**$ 6,709,863**	**$ 7,814,807**	**$ 7,814,807**	**$ 7,814,807**
Net Cost	**$ 6,336,525**	**$ 5,997,338**	**$ 7,121,427**	**$ 7,121,427**	**$ 7,121,427**
		Budget Unit:	**FIRE PROTECTION: FOREST**		
FUND: **10000**		Function:	**PUBLIC PROTECTION**		
DEPT: **2700200000**		Activity:	**FIRE PROTECTION**		
Rev Fr Use Of Money&Property	$ 314,940	$ 254,747	$ 344,490	$ 344,490	$ 344,490
Intergovernmental Revenues	6,351,227	6,924,649	7,647,544	7,647,544	7,647,544
Charges For Current Services	49,112,208	45,684,455	47,431,311	47,431,311	47,431,311
Other Revenue	915,585	714,558	500	2,400,500	2,900,500
Total Revenue	**$ 56,693,960**	**$ 53,578,409**	**$ 55,423,845**	**$ 57,823,845**	**$ 58,323,845**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 13,518,616	$ 14,789,102	$ 14,960,832	$ 14,960,832	$ 14,960,832
Services and Supplies	82,880,816	79,696,621	76,376,736	78,776,736	79,876,736
Other Charges	2,744,650	2,806,180	2,433,226	2,433,226	2,433,226
Fixed Assets	555,770	919,425	109,000	109,000	109,000
Intrafund Transfers	(286,233)	(401,882)	(226,400)	(226,400)	(226,400)
Total Expenditures/Appropriations	**$ 99,413,619**	**$ 97,809,446**	**$ 93,653,394**	**$ 96,053,394**	**$ 97,153,394**
Net Cost	**$ 42,719,659**	**$ 44,231,037**	**$ 38,229,549**	**$ 38,229,549**	**$ 38,829,549**
FUND: **21000** DEPT: **2700300000**		Budget Unit: **FIRE: NON FOREST** Function: **PUBLIC PROTECTION** Activity: **FIRE PROTECTION**			
Taxes	$ 38,426,030	$ 36,479,018	$ 36,965,620	$ 36,965,620	$ 36,965,620
Intergovernmental Revenues	572,476	578,566	663,715	663,715	663,715
Other Revenue	10,519,683	13,729,309	10,627,746	10,627,746	10,627,746
Total Revenue	**$ 49,518,189**	**$ 50,786,893**	**$ 48,257,081**	**$ 48,257,081**	**$ 48,257,081**
Other Charges	$ 51,154,267	$ 47,378,529	$ 48,257,081	$ 48,257,081	$ 48,257,081
Total Expenditures/Appropriations	**$ 51,154,267**	**$ 47,378,529**	**$ 48,257,081**	**$ 48,257,081**	**$ 48,257,081**
Net Cost	**$ 1,636,078**	**$ (3,408,364)**	**$ -**	**$ -**	**$ -**
FUND: **10000** DEPT: **2700400000**		Budget Unit: **FIRE PROTECTION: CONTRACTS** Function: **PUBLIC PROTECTION** Activity: **FIRE PROTECTION**			
Charges For Current Services	$ 65,816,719	$ 67,179,688	$ 73,419,347	$ 73,419,347	$ 73,419,347
Other Revenue	204,634	2,448	-	-	-
Total Revenue	**$ 66,021,353**	**$ 67,182,136**	**$ 73,419,347**	**$ 73,419,347**	**$ 73,419,347**
Salaries and Benefits	$ 1,817,589	$ 1,552,743	$ 2,060,798	$ 2,060,798	$ 2,060,798
Services and Supplies	64,310,861	65,604,197	70,138,546	70,138,546	70,138,546
Fixed Assets	16,588	10,883	1,220,003	1,220,003	1,220,003
Total Expenditures/Appropriations	**$ 66,145,038**	**$ 67,167,823**	**$ 73,419,347**	**$ 73,419,347**	**$ 73,419,347**
Net Cost	**$ 123,685**	**$ (14,313)**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **AGRICULTURAL COMMISSIONER**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **2800100000**		Activity: **PROTECTION_INSPECTION**			
Licenses, Permits & Franchises	$ 44,940	$ 33,612	$ 36,000	$ 36,000	$ 36,000
Fines, Forfeitures & Penalties	28,333	39,993	32,000	32,000	32,000
Intergovernmental Revenues	2,128,940	1,917,932	1,938,020	1,938,020	1,938,020
Charges For Current Services	2,472,116	2,623,043	2,461,001	2,461,001	2,461,001
Total Revenue	**$ 4,674,329**	**$ 4,614,580**	**$ 4,467,021**	**$ 4,467,021**	**$ 4,467,021**
Salaries and Benefits	$ 4,064,991	$ 4,109,369	$ 4,168,347	$ 4,168,347	$ 4,168,347
Services and Supplies	636,364	815,549	1,106,596	1,106,596	1,106,596
Other Charges	18,210	20,809	32,000	32,000	32,000
Fixed Assets	50,863	-	-	-	-
Total Expenditures/Appropriations	**$ 4,770,428**	**$ 4,945,727**	**$ 5,306,943**	**$ 5,306,943**	**$ 5,306,943**
Net Cost	**$ 96,099**	**$ 331,147**	**$ 839,922**	**$ 839,922**	**$ 839,922**
Budget Unit: **RANGE IMPROVEMENT**					
FUND: **22500**		Function: **PUBLIC PROTECTION**			
DEPT: **2800200000**		Activity: **OTHER PROTECTION**			
Intergovernmental Revenues	$ 241	$ 107	$ 107	$ 107	$ 107
Total Revenue	**$ 241**	**$ 107**	**$ 107**	**$ 107**	**$ 107**
Services and Supplies	$ -	$ -	$ 17,055	$ 17,055	$ 17,055
Total Expenditures/Appropriations	**$ -**	**$ -**	**$ 17,055**	**$ 17,055**	**$ 17,055**
Net Cost	**$ (241)**	**$ (107)**	**$ 16,948**	**$ 16,948**	**$ 16,948**
Budget Unit: **BUILDING AND SAFETY**					
FUND: **20250**		Function: **PUBLIC PROTECTION**			
DEPT: **3110100000**		Activity: **PROTECTION_INSPECTION**			
Licenses, Permits & Franchises	$ 2,381,954	$ 2,004,933	$ 1,293,044	$ 1,293,044	$ 1,293,044
Intergovernmental Revenues	-	1,283	-	-	-
Charges For Current Services	3,779,460	3,606,949	3,557,357	3,557,357	3,557,357
Other Revenue	226,717	235,215	170,225	170,225	170,225
Total Revenue	**$ 6,388,131**	**$ 5,848,380**	**$ 5,020,626**	**$ 5,020,626**	**$ 5,020,626**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 4,027,381	$ 3,735,287	$ 3,621,206	$ 3,621,206	$ 3,621,206
Services and Supplies	680,742	778,166	792,513	792,513	792,513
Other Charges	1,581,178	1,096,416	1,301,434	1,301,434	1,301,434
Fixed Assets	-	8,145	17,000	17,000	17,000
Operating Transfers Out	63,616	31,808	-	-	-
Total Expenditures/Appropriations	**$ 6,352,917**	**$ 5,649,822**	**$ 5,732,153**	**$ 5,732,153**	**$ 5,732,153**
Net Cost	**$ (35,214)**	**$ (198,558)**	**$ 711,527**	**$ 711,527**	**$ 711,527**
Budget Unit: **TLMA: PLANNING**					
FUND: **10000**		Function: **PUBLIC PROTECTION**			
DEPT: **3120100000**		Activity: **OTHER PROTECTION**			
Licenses, Permits & Franchises	$ 3,536	$ 23,358	$ -	$ -	$ -
Intergovernmental Revenues	-	-	-	-	-
Charges For Current Services	4,426,365	4,410,774	4,542,158	4,542,158	4,542,158
Other Revenue	2,377,878	448,886	507,500	507,500	507,500
Total Revenue	**$ 6,807,779**	**$ 4,883,018**	**$ 5,049,658**	**$ 5,049,658**	**$ 5,049,658**
Salaries and Benefits	$ 4,699,901	$ 4,082,081	$ 3,932,564	$ 3,932,564	$ 3,932,564
Services and Supplies	2,031,399	2,359,458	1,937,416	1,937,416	1,937,416
Other Charges	1,918,457	1,146,804	1,190,424	1,190,424	1,190,424
Operating Transfers Out	73,972	36,986	-	-	-
Intrafund Transfers	(223,532)	(131,986)	-	-	-
Total Expenditures/Appropriations	**$ 8,500,197**	**$ 7,493,343**	**$ 7,060,404**	**$ 7,060,404**	**$ 7,060,404**
Net Cost	**$ 1,692,418**	**$ 2,610,325**	**$ 2,010,746**	**$ 2,010,746**	**$ 2,010,746**
Budget Unit: **TLMA: CROSSING GUARD**					
FUND: **20000**		Function: **PUBLIC PROTECTION**			
DEPT: **3130300000**		Activity: **OTHER PROTECTION**			
Charges For Current Services	$ 285,774	$ 312,753	$ 353,075	$ 353,075	$ 353,075
Total Revenue	**$ 285,774**	**$ 312,753**	**$ 353,075**	**$ 353,075**	**$ 353,075**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 229,417	$ 260,472	$ 259,104	$ 259,104	$ 259,104
Services and Supplies	30,933	22,411	89,880	89,880	89,880
Other Charges	20,388	19,650	8,043	8,043	8,043
Intrafund Transfers	-	(10,204)	(3,952)	(3,952)	(3,952)
Total Expenditures/Appropriations	**$ 280,738**	**$ 292,329**	**$ 353,075**	**$ 353,075**	**$ 353,075**
Net Cost	**$ (5,036)**	**$ (20,424)**	**$ -**	**$ -**	**$ -**

Budget Unit: **TLMA: Airport Land Use Comm**
FUND: **22650** Function: **PUBLIC PROTECTION**
DEPT: **3130800000** Activity: **OTHER PROTECTION**

Charges For Current Services	$ 70,713	$ 90,319	$ 73,000	$ 73,000	$ 73,000
Other Revenue	348,350	263,031	262,991	262,991	262,991
Total Revenue	**$ 419,063**	**$ 353,350**	**$ 335,991**	**$ 335,991**	**$ 335,991**
Salaries and Benefits	$ 188,344	$ 182,532	$ 182,339	$ 182,339	$ 182,339
Services and Supplies	123,930	99,761	112,387	112,387	112,387
Other Charges	34,366	27,428	41,265	41,265	41,265
Total Expenditures/Appropriations	**$ 346,640**	**$ 309,721**	**$ 335,991**	**$ 335,991**	**$ 335,991**
Net Cost	**$ (72,423)**	**$ (43,629)**	**$ -**	**$ -**	**$ -**

Budget Unit: **CODE ENFORCEMENT**
FUND: **10000** Function: **PUBLIC PROTECTION**
DEPT: **3140100000** Activity: **OTHER PROTECTION**

Licenses, Permits & Franchises	$ 202,483	$ 236,795	$ 215,230	$ 215,230	$ 215,230
Fines, Forfeitures & Penalties	1,295,587	1,307,639	1,521,468	1,521,468	1,521,468
Intergovernmental Revenues	905,563	879,042	1,033,864	1,033,864	1,033,864
Charges For Current Services	828,012	1,197,116	1,165,859	1,165,859	2,165,859
Other Revenue	337,578	311,287	306,491	306,491	306,491
Total Revenue	**$ 3,569,223**	**$ 3,931,879**	**$ 4,242,912**	**$ 4,242,912**	**$ 5,242,912**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 11,824,603	$ 10,982,634	$ 10,789,021	$ 10,789,021	$ 10,789,021
Services and Supplies	4,171,840	4,489,059	3,457,036	3,457,036	3,457,036
Other Charges	2,070,974	980,176	(238,492)	(238,492)	761,508
Fixed Assets	-	-	5,965	5,965	5,965
Intrafund Transfers	(54,757)	(41,307)	(940)	(940)	(940)
Total Expenditures/Appropriations	**$ 18,012,660**	**$ 16,410,562**	**$ 14,012,590**	**$ 14,012,590**	**$ 15,012,590**
Net Cost	**$ 14,443,437**	**$ 12,478,683**	**$ 9,769,678**	**$ 9,769,678**	**$ 9,769,678**
Budget Unit: **MENTAL HEALTH: PUBLIC GUARDIAN**					
FUND: **10000**			Function: **PUBLIC PROTECTION**		
DEPT: **4100100000**			Activity: **OTHER PROTECTION**		
Intergovernmental Revenues	$ 2,999,591	$ 2,654,039	$ 3,018,919	$ 3,018,919	$ 3,018,919
Charges For Current Services	752,916	736,917	511,526	511,526	511,526
Other Revenue	-	-	3	3	3
Total Revenue	**$ 3,752,507**	**$ 3,390,956**	**$ 3,530,448**	**$ 3,530,448**	**$ 3,530,448**
Salaries and Benefits	$ 2,203,906	$ 2,249,502	$ 2,501,219	$ 2,501,219	$ 2,501,219
Services and Supplies	2,467,488	1,899,650	1,793,024	1,793,024	1,793,024
Fixed Assets	6,003	-	-	-	-
Intrafund Transfers	(72,567)	(72,447)	(72,447)	(72,447)	(72,447)
Total Expenditures/Appropriations	**$ 4,604,830**	**$ 4,076,705**	**$ 4,221,796**	**$ 4,221,796**	**$ 4,221,796**
Net Cost	**$ 852,323**	**$ 685,749**	**$ 691,348**	**$ 691,348**	**$ 691,348**
Budget Unit: **CHA: ANIMAL CONTROL**					
FUND: **10000**			Function: **PUBLIC PROTECTION**		
DEPT: **4200600000**			Activity: **OTHER PROTECTION**		
Licenses, Permits & Franchises	$ 581,694	$ 720,008	$ 1,121,527	$ 1,121,527	$ 1,121,527
Rev Fr Use Of Money&Property	-	-	-	-	-
Charges For Current Services	6,236,445	5,197,709	5,392,115	5,392,115	5,392,115
Other Revenue	7,577,620	627,460	443,250	443,250	443,250
Total Revenue	**$ 14,395,759**	**$ 6,545,177**	**$ 6,956,892**	**$ 6,956,892**	**$ 6,956,892**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 12,838,649	$ 10,755,354	$ 10,192,453	$ 10,192,453	$ 10,192,453
Services and Supplies	6,756,216	5,923,037	6,715,416	6,715,016	6,715,016
Other Charges	535,917	45,872	-	-	-
Fixed Assets	-	11,723	-	-	-
Operating Transfers Out	150,000	-	-	-	-
Intrafund Transfers	(900,000)	(985,559)	(900,000)	(900,000)	(900,000)
Total Expenditures/Appropriations	**$ 19,380,782**	**$ 15,750,427**	**$ 16,007,869**	**$ 16,007,469**	**$ 16,007,469**
Net Cost	**$ 4,985,023**	**$ 9,205,250**	**$ 9,050,977**	**$ 9,050,577**	**$ 9,050,577**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **MULTI-SPEC HABITAT PLAN**					
FUND: **22450**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **1103600000**		Activity: **PUBLIC WAYS**			
Rev Fr Use Of Money&Property	$ 46,459	$ 26,570	$ 16,000	$ 16,000	$ 16,000
Charges For Current Services	3,504,615	3,993,154	3,748,967	4,264,967	4,264,967
Total Revenue	**$ 3,551,074**	**$ 4,019,724**	**$ 3,764,967**	**$ 4,280,967**	**$ 4,280,967**
Services and Supplies	$ 2,242,718	$ 2,768,544	$ 2,426,352	$ 2,942,352	$ 2,942,352
Other Charges	966,983	1,008,610	1,062,615	1,062,615	1,062,615
Operating Transfers Out	260,000	260,000	260,000	260,000	260,000
Total Expenditures/Appropriations	**$ 3,469,701**	**$ 4,037,154**	**$ 3,748,967**	**$ 4,264,967**	**$ 4,264,967**
Net Cost	**$ (81,373)**	**$ 17,430**	**$ (16,000)**	**$ (16,000)**	**$ (16,000)**
Budget Unit: **CONST _ LAND-CHIRIACO**					
FUND: **22350**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **1910400000**		Activity: **CAPITAL OUTLAY**			
Rev Fr Use Of Money&Property	$ -	$ 707	$ 500	$ 500	$ 500
Intergovernmental Revenues	-	-	-	-	-
Total Revenue	**$ -**	**$ 707**	**$ 500**	**$ 500**	**$ 500**
Services and Supplies	$ -	$ -	$ 100	$ 100	$ 100
Other Charges	-	-	100	100	100
Fixed Assets	-	-	300	300	300
Total Expenditures/Appropriations	**$ -**	**$ -**	**$ 500**	**$ 500**	**$ 500**
Net Cost	**$ -**	**$ (707)**	**$ -**	**$ -**	**$ -**
Budget Unit: **CONST _ LAND-DESERT CENTER**					
FUND: **22350**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **1910500000**		Activity: **CAPITAL OUTLAY**			
Rev Fr Use Of Money&Property	$ -	$ 7,257	$ 10,350	$ 10,350	$ 10,350
Intergovernmental Revenues	-	-	500	500	500
Total Revenue	**$ -**	**$ 7,257**	**$ 10,850**	**$ 10,850**	**$ 10,850**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Services and Supplies	$ -	$ -	$ 250	$ 250	$ 250
Other Charges	-	-	250	250	250
Fixed Assets	-	-	10,350	10,350	10,350
Total Expenditures/Appropriations	**$ -**	**$ -**	**$ 10,850**	**$ 10,850**	**$ 10,850**
Net Cost	**$ -**	**$ (7,257)**	**$ -**	**$ -**	**$ -**

FUND: **22100**
DEPT: **1910700000**
Budget Unit: **EDA: AIRPORT**
Function: **PUBLIC WAYS AND FACILITIES**
Activity: **PUBLIC WAYS**

Rev Fr Use Of Money&Property	$ -	$ 1,952,287	$ 2,035,698	$ 2,035,698	$ 2,035,698
Intergovernmental Revenues	-	100,000	50,000	50,000	50,000
Charges For Current Services	-	302,277	130,260	130,260	130,260
Other Revenue	-	346,332	245,000	245,000	245,000
Total Revenue	**$ -**	**$ 2,700,896**	**$ 2,460,958**	**$ 2,460,958**	**$ 2,460,958**
Salaries and Benefits	$ -	$ 559,223	$ 621,457	$ 621,457	$ 621,457
Services and Supplies	-	1,087,910	1,040,593	1,040,593	1,040,593
Other Charges	-	959,283	994,632	994,632	994,632
Fixed Assets	-	-	83,325	83,325	83,325
Total Expenditures/Appropriations	**$ -**	**$ 2,606,416**	**$ 2,740,007**	**$ 2,740,007**	**$ 2,740,007**
Net Cost	**$ -**	**$ (94,480)**	**$ 279,049**	**$ 279,049**	**$ 279,049**

FUND: **20200**
DEPT: **3100100000**
Budget Unit: **TLMA: GIS**
Function: **PUBLIC WAYS AND FACILITIES**
Activity: **PUBLIC WAYS**

Rev Fr Use Of Money&Property	$ 103,678	$ 61,086	$ 55,500	$ 55,500	$ 55,500
Charges For Current Services	1,169,107	1,082,082	2,044,603	2,044,603	2,044,603
Other Revenue	164,027	291,771	295,000	295,000	295,000
Total Revenue	**$ 1,436,812**	**$ 1,434,939**	**$ 2,395,103**	**$ 2,395,103**	**$ 2,395,103**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 1,764,121	$ 1,427,157	$ 1,347,849	$ 1,347,849	$ 1,347,849
Services and Supplies	1,110,478	933,393	991,495	991,495	991,495
Other Charges	101,089	(3,916)	19,198	19,198	19,198
Fixed Assets	16,359	5,299	49,000	49,000	49,000
Intrafund Transfers	(25,726)	(7,205)	(12,439)	(12,439)	(12,439)
Total Expenditures/Appropriations	**$ 2,966,321**	**$ 2,354,728**	**$ 2,395,103**	**$ 2,395,103**	**$ 2,395,103**
Net Cost	**$ 1,529,509**	**$ 919,789**	**$ -**	**$ -**	**$ -**
Budget Unit: **TLMA: ADMINISTRATION**					
FUND: **20200**			Function: **PUBLIC WAYS AND FACILITIES**		
DEPT: **3100200000**			Activity: **PUBLIC WAYS**		
Rev Fr Use Of Money&Property	$ 4,362	$ 4,772	$ 2,500	$ 2,500	$ 2,500
Charges For Current Services	7,683,932	6,603,472	6,301,308	6,301,308	6,301,308
Other Revenue	(670,396)	47,753	950	950	950
Total Revenue	**$ 7,017,898**	**$ 6,655,997**	**$ 6,304,758**	**$ 6,304,758**	**$ 6,304,758**
Salaries and Benefits	$ 5,903,991	$ 5,589,897	$ 5,850,417	$ 5,850,417	$ 5,850,417
Services and Supplies	680,126	1,007,223	1,057,262	1,057,262	1,057,262
Other Charges	918,024	511,055	1,754	1,754	1,754
Fixed Assets	84,628	115,379	144,000	144,000	144,000
Intrafund Transfers	(902,132)	(718,326)	(712,190)	(712,190)	(712,190)
Total Expenditures/Appropriations	**$ 6,684,637**	**$ 6,505,228**	**$ 6,341,243**	**$ 6,341,243**	**$ 6,341,243**
Net Cost	**$ (333,261)**	**$ (150,769)**	**$ 36,485**	**$ 36,485**	**$ 36,485**
Budget Unit: **TLMA: CONSOLIDATED COUNTER**					
FUND: **20200**			Function: **PUBLIC WAYS AND FACILITIES**		
DEPT: **3100300000**			Activity: **PUBLIC WAYS**		
Charges For Current Services	$ 2,342,171	$ 1,664,100	$ 1,480,166	$ 1,480,166	$ 1,480,166
Other Revenue	(23,605)	(1,690)	200	200	200
Total Revenue	**$ 2,318,566**	**$ 1,662,410**	**$ 1,480,366**	**$ 1,480,366**	**$ 1,480,366**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 1,534,567	$ 1,124,269	$ 1,122,189	$ 1,122,189	$ 1,122,189
Services and Supplies	287,722	373,301	361,059	361,059	361,059
Other Charges	142,948	99,324	217,608	217,608	217,608
Operating Transfers Out	37,874	18,937	-	-	-
Intrafund Transfers	(49,840)	(48,253)	(205,699)	(205,699)	(205,699)
Total Expenditures/Appropriations	**$ 1,953,271**	**$ 1,567,578**	**$ 1,495,157**	**$ 1,495,157**	**$ 1,495,157**
Net Cost	**$ (365,295)**	**$ (94,832)**	**$ 14,791**	**$ 14,791**	**$ 14,791**
		Budget Unit:	**ENVIRONMENTAL PROGRAMS**		
FUND: **20200**		Function:	**PUBLIC WAYS AND FACILITIES**		
DEPT: **3100500000**		Activity:	**PUBLIC WAYS**		
Charges For Current Services	$ 344,086	$ 525,646	$ 445,300	$ 445,300	$ 445,300
Other Revenue	1,682,290	1,296,236	1,303,485	1,303,485	1,303,485
Total Revenue	**$ 2,026,376**	**$ 1,821,882**	**$ 1,748,785**	**$ 1,748,785**	**$ 1,748,785**
Salaries and Benefits	$ 1,430,648	$ 1,249,672	$ 1,368,222	$ 1,368,222	$ 1,368,222
Services and Supplies	247,346	128,020	67,000	67,000	67,000
Other Charges	339,491	447,919	313,563	313,563	313,563
Total Expenditures/Appropriations	**$ 2,017,485**	**$ 1,825,611**	**$ 1,748,785**	**$ 1,748,785**	**$ 1,748,785**
Net Cost	**$ (8,891)**	**$ 3,729**	**$ -**	**$ -**	**$ -**
		Budget Unit:	**TLMA: TRANSPORTATION**		
FUND: **20000**		Function:	**PUBLIC WAYS AND FACILITIES**		
DEPT: **3130100000**		Activity:	**PUBLIC WAYS**		
Licenses, Permits & Franchises	$ 63,900	$ 70,475	$ 55,226	$ 55,226	$ 55,226
Fines, Forfeitures & Penalties	875	270	875	875	875
Rev Fr Use Of Money&Property	262,252	405,686	252,059	252,059	252,059
Intergovernmental Revenues	27,351,280	25,273,479	27,402,645	27,402,645	27,402,645
Charges For Current Services	9,286,218	6,789,098	7,417,089	7,417,089	7,417,089
Other In-Lieu And Other Govt	218,056	141,306	261,800	261,800	261,800
Other Revenue	1,659,752	1,075,613	848,409	848,409	848,409
Total Revenue	**$ 38,842,333**	**$ 33,755,927**	**$ 36,238,103**	**$ 36,238,103**	**$ 36,238,103**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 28,147,873	$ 27,149,252	$ 29,087,183	$ 29,087,183	$ 29,087,183
Services and Supplies	14,981,306	14,988,626	17,130,684	17,130,684	17,130,684
Other Charges	6,022,553	5,892,732	5,329,590	5,329,590	5,329,590
Fixed Assets	46,666	160,071	2,152,890	2,152,890	2,152,890
Operating Transfers Out	53,556	26,778	-	-	-
Intrafund Transfers	(15,698,438)	(14,488,623)	(17,462,244)	(17,462,244)	(17,462,244)
Total Expenditures/Appropriations	**$ 33,553,516**	**$ 33,728,836**	**$ 36,238,103**	**$ 36,238,103**	**$ 36,238,103**
Net Cost	**$ (5,288,817)**	**$ (27,091)**	**$ -**	**$ -**	**$ -**
Budget Unit: **TLMA: LANDSCAPE MAINT DIST**					
FUND: **20300**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130100000**		Activity: **PUBLIC WAYS**			
Taxes	$ 31,361	$ -	$ -	$ -	$ -
Rev Fr Use Of Money&Property	60,295	44,308	43,327	43,327	43,327
Charges For Current Services	1,046,977	1,015,459	985,916	985,916	985,916
Other In-Lieu And Other Govt	1,071,832	1,094,244	1,116,745	1,116,745	1,116,745
Total Revenue	**$ 2,210,465**	**$ 2,154,011**	**$ 2,145,988**	**$ 2,145,988**	**$ 2,145,988**
Services and Supplies	$ 1,677,808	$ 1,494,473	$ 1,963,820	$ 1,963,820	$ 1,963,820
Other Charges	352,892	266,218	439,551	439,551	439,551
Total Expenditures/Appropriations	**$ 2,030,700**	**$ 1,760,691**	**$ 2,403,371**	**$ 2,403,371**	**$ 2,403,371**
Net Cost	**$ (179,765)**	**$ (393,320)**	**$ 257,383**	**$ 257,383**	**$ 257,383**
Budget Unit: **TLMA: SUP ROAD DIST NO 4**					
FUND: **22400**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130400000**		Activity: **PUBLIC WAYS**			
Taxes	$ 626,144	$ 629,132	$ 606,768	$ 606,768	$ 606,768
Rev Fr Use Of Money&Property	17,809	11,053	7,825	7,825	7,825
Intergovernmental Revenues	9,264	9,033	8,960	8,960	8,960
Other Revenue	4,950	1,505	6,210	6,210	6,210
Total Revenue	**658,167**	**650,723**	**629,763**	**629,763**	**629,763**
Services and Supplies	$ 248,226	$ 175,382	$ 323,750	$ 323,750	$ 323,750
Other Charges	333,600	52,115	691,282	691,282	691,282
Total Expenditures/Appropriations	**581,826**	**227,497**	**1,015,032**	**1,015,032**	**1,015,032**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Net Cost	**$ (76,341)**	**$ (423,226)**	**$ 385,269**	**$ 385,269**	**$ 385,269**
Budget Unit: **TLMA: TRANSP CONST PROJECT**					
FUND: **20000**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130500000**		Activity: **CAPITAL OUTLAY**			
Taxes	$ 17,344,597	$ 24,329,219	$ 22,959,971	$ 22,959,971	$ 22,959,971
Rev Fr Use Of Money&Property	676,432	500,376	519,906	519,906	519,906
Intergovernmental Revenues	19,803,382	48,190,849	24,833,476	24,833,476	24,833,476
Charges For Current Services	29,147,395	37,934,791	38,922,021	38,922,021	38,922,021
Other In-Lieu And Other Govt	9,222,716	12,537,877	8,900,000	8,900,000	8,900,000
Other Revenue	1,254,932	3,262,217	1,800,000	1,800,000	1,800,000
Total Revenue	**$ 77,449,454**	**$ 126,755,329**	**$ 97,935,374**	**$ 97,935,374**	**$ 97,935,374**
Salaries and Benefits	$ 9,105,090	$ 8,613,971	$ 10,229,805	$ 10,229,805	$ 10,229,805
Services and Supplies	77,477,081	128,595,336	108,293,940	108,293,940	108,293,940
Other Charges	12,430,060	13,158,395	16,686,549	16,686,549	16,686,549
Operating Transfers Out	-	-	-	-	-
Intrafund Transfers	(17,977,589)	(29,206,259)	(32,955,476)	(32,955,476)	(32,955,476)
Total Expenditures/Appropriations	**$ 81,034,642**	**$ 121,161,443**	**$ 102,254,818**	**$ 102,254,818**	**$ 102,254,818**
Net Cost	**$ 3,585,188**	**$ (5,593,886)**	**$ 4,319,444**	**$ 4,319,444**	**$ 4,319,444**
Budget Unit: **TLMA: RBBD - MENIFEE**					
FUND: **31600**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130500000**		Activity: **CAPITAL OUTLAY**			
Rev Fr Use Of Money&Property	$ 100,624	$ 55,458	$ 52,643	$ 52,643	$ 52,643
Total Revenue	**$ 100,624**	**$ 55,458**	**$ 52,643**	**$ 52,643**	**$ 52,643**
Services and Supplies	$ -	$ -	$ 150,000	$ 150,000	$ 150,000
Other Charges	25,161	126,423	100,000	100,000	100,000
Total Expenditures/Appropriations	**$ 25,161**	**$ 126,423**	**$ 250,000**	**$ 250,000**	**$ 250,000**
Net Cost	**$ (75,463)**	**$ 70,965**	**$ 197,357**	**$ 197,357**	**$ 197,357**
Budget Unit: **TLMA: RBBD - SOUTHWEST**					
FUND: **31610**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130500000**		Activity: **CAPITAL OUTLAY**			

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Rev Fr Use Of Money&Property	$ 135,155	$ 71,558	$ 51,922	$ 51,922	$ 51,922
Other In-Lieu And Other Govt	120,835	147,404	150,000	150,000	150,000
Total Revenue	**$ 255,990**	**$ 218,962**	**$ 201,922**	**$ 201,922**	**$ 201,922**
Services and Supplies	$ 156,870	$ -	$ 519,114	$ 519,114	$ 519,114
Other Charges	605,964	668,747	6,936,000	6,936,000	6,936,000
Total Expenditures/Appropriations	**$ 762,834**	**$ 668,747**	**$ 7,455,114**	**$ 7,455,114**	**$ 7,455,114**
Net Cost	**$ 506,844**	**$ 449,785**	**$ 7,253,192**	**$ 7,253,192**	**$ 7,253,192**
Budget Unit: **TLMA: SIGNAL MITIGATION**					
FUND: **31630**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130500000**		Activity: **CAPITAL OUTLAY**			
Rev Fr Use Of Money&Property	$ 19,732	$ 6,921	$ 7,112	$ 7,112	$ 7,112
Total Revenue	**$ 19,732**	**$ 6,921**	**$ 7,112**	**$ 7,112**	**$ 7,112**
Other Charges	$ 515,319	$ 464,637	$ 577,000	$ 577,000	$ 577,000
Total Expenditures/Appropriations	**$ 515,319**	**$ 464,637**	**$ 577,000**	**$ 577,000**	**$ 577,000**
Net Cost	**$ 495,587**	**$ 457,716**	**$ 569,888**	**$ 569,888**	**$ 569,888**
Budget Unit: **TLMA: RBBD - MIRA LOMA**					
FUND: **31640**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130500000**		Activity: **CAPITAL OUTLAY**			
Rev Fr Use Of Money&Property	$ 235,135	$ 125,907	$ 114,754	$ 114,754	$ 114,754
Other In-Lieu And Other Govt	1,595,245	911,029	1,000,000	1,000,000	1,000,000
Total Revenue	**$ 1,830,380**	**$ 1,036,936**	**$ 1,114,754**	**$ 1,114,754**	**$ 1,114,754**
Services and Supplies	$ 151,597	$ -	$ 496,710	$ 496,710	$ 496,710
Other Charges	2,273,658	1,757,319	156,000	156,000	156,000
Total Expenditures/Appropriations	**$ 2,425,255**	**$ 1,757,319**	**$ 652,710**	**$ 652,710**	**$ 652,710**
Net Cost	**$ 594,875**	**$ 720,383**	**$ (462,044)**	**$ (462,044)**	**$ (462,044)**
Budget Unit: **TLMA: DA_DIF**					
FUND: **31650**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130500000**		Activity: **CAPITAL OUTLAY**			

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Rev Fr Use Of Money&Property	$ 554	$ 353	$ 129	$ 129	$ 129
Other Revenue	874,354	1,930,887	1,924,025	1,924,025	1,924,025
Total Revenue	**$ 874,908**	**$ 1,931,240**	**$ 1,924,154**	**$ 1,924,154**	**$ 1,924,154**
Other Charges	$ 805,280	$ 1,999,961	$ 1,924,025	$ 1,924,025	$ 1,924,025
Total Expenditures/Appropriations	**$ 805,280**	**$ 1,999,961**	**$ 1,924,025**	**$ 1,924,025**	**$ 1,924,025**
Net Cost	**$ (69,628)**	**$ 68,721**	**$ (129)**	**$ (129)**	**$ (129)**
Budget Unit: **TLMA: DEV AGREEMENTS**					
FUND: **31680**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130500000**		Activity: **CAPITAL OUTLAY**			
Rev Fr Use Of Money&Property	$ 21,683	$ 11,307	$ 11,383	$ 11,383	$ 11,383
Total Revenue	**$ 21,683**	**$ 11,307**	**$ 11,383**	**$ 11,383**	**$ 11,383**
Other Charges	$ 374,070	$ -	$ 200,000	$ 200,000	$ 200,000
Total Expenditures/Appropriations	**$ 374,070**	**$ -**	**$ 200,000**	**$ 200,000**	**$ 200,000**
Net Cost	**$ 352,387**	**$ (11,307)**	**$ 188,617**	**$ 188,617**	**$ 188,617**
Budget Unit: **TLMA: SIGNAL DIF**					
FUND: **31690**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130500000**		Activity: **CAPITAL OUTLAY**			
Rev Fr Use Of Money&Property	$ 1,593	$ 678	$ 191	$ 191	$ 191
Other Revenue	2,693,542	1,629,772	3,158,000	3,158,000	3,158,000
Total Revenue	**$ 2,695,135**	**$ 1,630,450**	**$ 3,158,191**	**$ 3,158,191**	**$ 3,158,191**
Other Charges	$ 2,535,404	$ 1,787,910	$ 3,158,000	$ 3,158,000	$ 3,158,000
Total Expenditures/Appropriations	**$ 2,535,404**	**$ 1,787,910**	**$ 3,158,000**	**$ 3,158,000**	**$ 3,158,000**
Net Cost	**$ (159,731)**	**$ 157,460**	**$ (191)**	**$ (191)**	**$ (191)**
Budget Unit: **TLMA: RBBD - SCOTT ROAD**					
FUND: **31693**		Function: **PUBLIC WAYS AND FACILITIES**			
DEPT: **3130500000**		Activity: **CAPITAL OUTLAY**			
Rev Fr Use Of Money&Property	$ 27,604	$ 13,615	$ 10,639	$ 10,639	$ 10,639
Other In-Lieu And Other Govt	15,729	74,151	80,000	80,000	80,000
Total Revenue	**$ 43,333**	**$ 87,766**	**$ 90,639**	**$ 90,639**	**$ 90,639**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Services and Supplies	$ 133,226	$ 36,250	$ 50,000	$ 50,000	$ 50,000
Other Charges	247,184	685,670	180,000	180,000	180,000
Total Expenditures/Appropriations	**$ 380,410**	**$ 721,920**	**$ 230,000**	**$ 230,000**	**$ 230,000**
Net Cost	**$ 337,077**	**$ 634,154**	**$ 139,361**	**$ 139,361**	**$ 139,361**
		Budget Unit:	**TLMA: TRANS EQUIP (GARAGE)**		
FUND: **20000**		Function:	**PUBLIC WAYS AND FACILITIES**		
DEPT: **3130700000**		Activity:	**PUBLIC WAYS**		
Rev Fr Use Of Money&Property	$ 65,700	$ 33,849	$ 28,934	$ 28,934	$ 28,934
Charges For Current Services	467,946	343,472	504,495	504,495	504,495
Other Revenue	399,640	372,103	197,429	197,429	197,429
Total Revenue	**$ 933,286**	**$ 749,424**	**$ 730,858**	**$ 730,858**	**$ 730,858**
Salaries and Benefits	$ 1,942,237	$ 1,835,566	$ 1,910,852	$ 1,910,852	$ 1,910,852
Services and Supplies	3,938,576	3,907,291	4,213,513	4,213,513	4,213,513
Other Charges	1,818,568	1,534,729	1,398,104	1,398,104	1,398,104
Fixed Assets	679,939	2,791,259	2,703,500	2,703,500	2,703,500
Intrafund Transfers	(8,200,902)	(6,722,056)	(7,243,661)	(7,243,661)	(7,243,661)
Total Expenditures/Appropriations	**$ 178,418**	**$ 3,346,789**	**$ 2,982,308**	**$ 2,982,308**	**$ 2,982,308**
Net Cost	**$ (754,868)**	**$ 2,597,365**	**$ 2,251,450**	**$ 2,251,450**	**$ 2,251,450**
		Budget Unit:	**FACILITY MGMT: PARKING**		
FUND: **10000**		Function:	**PUBLIC WAYS AND FACILITIES**		
DEPT: **7200700000**		Activity:	**PARKING FACILITIES**		
Fines, Forfeitures & Penalties	$ 162,836	$ 133,240	$ -	$ -	$ -
Rev Fr Use Of Money&Property	1,015,887	992,678	1,171,939	1,171,939	1,171,939
Charges For Current Services	432,927	709,623	769,256	769,256	769,256
Other Revenue	17,993	20,150	34,000	34,000	34,000
Total Revenue	**$ 1,629,643**	**$ 1,855,691**	**$ 1,975,195**	**$ 1,975,195**	**$ 1,975,195**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 1,044,371	$ 1,002,081	$ 1,102,143	$ 1,102,143	$ 1,102,143
Services and Supplies	700,341	833,522	968,650	968,650	968,650
Other Charges	69,082	-	2,900	2,900	2,900
Fixed Assets	-	-	50	50	50
Intrafund Transfers	(91,260)	(75,965)	(98,548)	(98,548)	(98,548)
Total Expenditures/Appropriations	**$ 1,722,534**	**$ 1,759,638**	**$ 1,975,195**	**$ 1,975,195**	**$ 1,975,195**
Net Cost	**$ 92,891**	**$ (96,053)**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

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State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **CONT TO HEALTH_MENTAL HEALTH**					
FUND: **10000**		Function: **HEALTH AND SANITATION**			
DEPT: **1101400000**		Activity: **HOSPITAL CARE**			
Services and Supplies	$ 174	$ 174	$ 174	$ 174	$ 174
Other Charges	57,438,286	54,820,980	58,878,601	58,878,601	58,878,601
Total Expenditures/Appropriations	**$ 57,438,460**	**$ 54,821,154**	**$ 58,878,775**	**$ 58,878,775**	**$ 58,878,775**
Net Cost	**$ 57,438,460**	**$ 54,821,154**	**$ 58,878,775**	**$ 58,878,775**	**$ 58,878,775**
Budget Unit: **MENTAL HEALTH: TREATMENT PROG**					
FUND: **10000**		Function: **HEALTH AND SANITATION**			
DEPT: **4100200000**		Activity: **HEALTH**			
Rev Fr Use Of Money&Property	$ 1,024,930	$ 476,250	$ 1,023,856	$ 1,023,856	$ 1,023,856
Intergovernmental Revenues	101,859,837	115,049,113	147,350,435	147,350,435	147,350,435
Charges For Current Services	3,132,029	4,013,492	3,425,187	3,425,187	3,425,187
Other Revenue	150	7,165	3	3	3
Total Revenue	**$ 106,016,946**	**$ 119,546,020**	**$ 151,799,481**	**$ 151,799,481**	**$ 151,799,481**
Salaries and Benefits	$ 51,298,814	$ 55,854,541	$ 67,042,409	$ 67,042,409	$ 67,042,409
Services and Supplies	18,753,931	25,078,345	29,660,970	29,660,970	29,660,970
Other Charges	67,093,214	67,426,743	82,546,313	82,546,313	82,546,313
Fixed Assets	-	84,028	50,000	50,000	50,000
Intrafund Transfers	(21,333,134)	(21,256,366)	(21,636,135)	(21,636,135)	(21,636,135)
Total Expenditures/Appropriations	**$ 115,812,825**	**$ 127,187,291**	**$ 157,663,557**	**$ 157,663,557**	**$ 157,663,557**
Net Cost	**$ 9,795,879**	**$ 7,641,271**	**$ 5,864,076**	**$ 5,864,076**	**$ 5,864,076**
Budget Unit: **MENTAL HEALTH: DETENTION PROG**					
FUND: **10000**		Function: **HEALTH AND SANITATION**			
DEPT: **4100300000**		Activity: **HEALTH**			
Intergovernmental Revenues	$ 784,632	$ 745,028	$ 1,576,607	$ 1,576,639	$ 1,576,639
Charges For Current Services	(1,364)	404	1,719	1,719	1,719
Other Revenue	-	28	3	3	3
Total Revenue	**$ 783,268**	**$ 745,460**	**$ 1,578,329**	**$ 1,578,361**	**$ 1,578,361**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 4,098,727	$ 3,961,565	$ 3,537,347	$ 3,537,347	$ 5,335,061
Services and Supplies	1,526,112	1,150,685	1,545,579	1,545,579	1,588,662
Intrafund Transfers	(30,877)	(30,877)	(31,212)	(31,212)	(31,212)
Total Expenditures/Appropriations	**$ 5,593,962**	**$ 5,081,373**	**$ 5,051,714**	**$ 5,051,714**	**$ 6,892,511**
Net Cost	**$ 4,810,694**	**$ 4,335,913**	**$ 3,473,385**	**$ 3,473,353**	**$ 5,314,150**
FUND: **10000** DEPT: **4100400000**		Budget Unit: **MENTAL HEALTH: ADMINISTRATION** Function: **HEALTH AND SANITATION** Activity: **HEALTH**			
Intergovernmental Revenues	$ 6,248,210	$ 9,881,574	$ 14,500,174	$ 14,500,208	$ 14,500,208
Charges For Current Services	62,210	49,087	73,237	73,237	73,237
Other Revenue	32	-	4	4	4
Total Revenue	**$ 6,310,452**	**$ 9,930,661**	**$ 14,573,415**	**$ 14,573,449**	**$ 14,573,449**
Salaries and Benefits	$ 13,283,325	$ 14,510,273	$ 16,520,684	$ 16,520,684	$ 16,520,684
Services and Supplies	4,773,314	7,138,398	10,862,675	10,862,675	10,862,675
Other Charges	22,025	63,322	90,465	90,465	90,465
Fixed Assets	119,575	21,216	75,692	75,692	75,692
Intrafund Transfers	(11,887,783)	(11,802,550)	(12,976,067)	(12,976,067)	(12,976,067)
Total Expenditures/Appropriations	**$ 6,310,456**	**$ 9,930,659**	**$ 14,573,449**	**$ 14,573,449**	**$ 14,573,449**
Net Cost	**$ 4**	**$ (2)**	**$ 34**	**$ -**	**$ -**
FUND: **10000** DEPT: **4100500000**		Budget Unit: **MENTAL HEALTH: SUBSTANCE ABUSE** Function: **HEALTH AND SANITATION** Activity: **HEALTH**			
Fines, Forfeitures & Penalties	$ 1,690,148	$ 1,638,177	$ 2,925,172	$ 2,925,208	$ 2,925,208
Rev Fr Use Of Money&Property	465	(465)	2	2	2
Intergovernmental Revenues	17,486,085	17,734,950	16,006,897	16,006,897	16,006,897
Charges For Current Services	2,111,313	1,631,305	2,016,102	2,016,102	2,016,102
Other Revenue	51	16	4	4	4
Total Revenue	**$ 21,288,062**	**$ 21,003,983**	**$ 20,948,177**	**$ 20,948,213**	**$ 20,948,213**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 6,736,800	$ 7,204,258	$ 7,697,653	$ 7,697,653	$ 7,697,653
Services and Supplies	4,667,594	4,919,563	5,070,841	5,070,841	5,070,841
Other Charges	9,738,850	9,062,136	8,423,726	8,423,726	8,423,726
Fixed Assets	99,747	-	-	-	-
Intrafund Transfers	(63,315)	(18,958)	(39,811)	(39,811)	(39,811)
Total Expenditures/Appropriations	**$ 21,179,676**	**$ 21,166,999**	**$ 21,152,409**	**$ 21,152,409**	**$ 21,152,409**
Net Cost	**$ (108,386)**	**$ 163,016**	**$ 204,232**	**$ 204,196**	**$ 204,196**
Budget Unit: **CHA: PUBLIC HEALTH**					
FUND: **10000**		Function: **HEALTH AND SANITATION**			
DEPT: **4200100000**		Activity: **HEALTH**			
Licenses, Permits & Franchises	$ (1,050)	$ -	$ -	$ -	$ -
Rev Fr Use Of Money&Property	215,518	258,420	252,295	252,295	252,295
Intergovernmental Revenues	30,055,537	36,702,846	41,531,430	41,531,430	41,531,430
Charges For Current Services	11,253,310	13,236,227	21,635,298	21,635,298	21,635,298
Other Revenue	1,176,082	1,532,662	1,984,066	1,984,066	1,984,066
Total Revenue	**$ 42,699,397**	**$ 51,730,155**	**$ 65,403,089**	**$ 65,403,089**	**$ 65,403,089**
Salaries and Benefits	$ 45,974,589	$ 49,710,010	$ 54,760,961	$ 54,760,961	$ 54,760,961
Services and Supplies	28,874,686	30,711,218	36,590,861	36,590,861	36,590,861
Other Charges	1,973,093	2,019,888	2,117,030	2,117,030	2,117,030
Fixed Assets	253,186	142,188	304,875	304,875	304,875
Intrafund Transfers	(20,590,911)	(20,428,598)	(19,450,560)	(19,450,560)	(19,450,560)
Total Expenditures/Appropriations	**$ 56,484,643**	**$ 62,154,706**	**$ 74,323,167**	**$ 74,323,167**	**$ 74,323,167**
Net Cost	**$ 13,785,246**	**$ 10,424,551**	**$ 8,920,078**	**$ 8,920,078**	**$ 8,920,078**
Budget Unit: **CHA: BIO-TERRORISM PREP**					
FUND: **21750**		Function: **HEALTH AND SANITATION**			
DEPT: **4200100000**		Activity: **HEALTH**			
Rev Fr Use Of Money&Property	$ 20,324	$ 21,466	$ -	$ -	$ -
Intergovernmental Revenues	2,542,942	2,416,083	2,156,029	2,156,029	2,156,029
Charges For Current Services	-	10,321	-	-	-
Other Revenue	-	-	475,000	475,000	475,000
Total Revenue	**$ 2,563,266**	**$ 2,447,870**	**$ 2,631,029**	**$ 2,631,029**	**$ 2,631,029**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 1,141,324	$ 1,095,982	$ 1,426,484	$ 1,426,484	$ 1,426,484
Services and Supplies	1,248,401	750,487	856,189	856,189	856,189
Other Charges	312,147	362,307	348,356	348,356	348,356
Fixed Assets	-	13,648	-	-	-
Total Expenditures/Appropriations	**$ 2,701,872**	**$ 2,222,424**	**$ 2,631,029**	**$ 2,631,029**	**$ 2,631,029**
Net Cost	**$ 138,606**	**$ (225,446)**	**$ -**	**$ -**	**$ -**
Budget Unit: **CHA:HOSP PREP PROG ALLOCATION**					
FUND: **21760**		Function: **HEALTH AND SANITATION**			
DEPT: **4200100000**		Activity: **HEALTH**			
Rev Fr Use Of Money&Property	$ -	$ 644	$ -	$ -	$ -
Intergovernmental Revenues	-	602,206	708,633	708,633	708,633
Total Revenue	**$ -**	**$ 602,850**	**$ 708,633**	**$ 708,633**	**$ 708,633**
Salaries and Benefits	$ -	$ 261,425	$ 156,444	$ 156,444	$ 156,444
Services and Supplies	-	329,648	378,267	378,267	378,267
Other Charges	-	62,547	173,922	173,922	173,922
Fixed Assets	-	-	-	-	-
Total Expenditures/Appropriations	**$ -**	**$ 653,620**	**$ 708,633**	**$ 708,633**	**$ 708,633**
Net Cost	**$ -**	**$ 50,770**	**$ -**	**$ -**	**$ -**
Budget Unit: **CHA:CDC PHER H1N1 ALLOCATION**					
FUND: **21770**		Function: **HEALTH AND SANITATION**			
DEPT: **4200100000**		Activity: **HEALTH**			
Rev Fr Use Of Money&Property	$ 2,644	$ 6,941	$ -	$ -	$ -
Intergovernmental Revenues	1,787,934	1,234,916	98,684	98,684	98,684
Total Revenue	**$ 1,790,578**	**$ 1,241,857**	**$ 98,684**	**$ 98,684**	**$ 98,684**
Salaries and Benefits	$ 160,914	$ 192,554	$ 19,285	$ 19,285	$ 19,285
Services and Supplies	1,457,747	1,030,387	49,899	49,899	49,899
Other Charges	58,585	296,733	11,500	11,500	11,500
Fixed Assets	15,140	293,726	18,000	18,000	18,000
Total Expenditures/Appropriations	**$ 1,692,386**	**$ 1,813,400**	**$ 98,684**	**$ 98,684**	**$ 98,684**
Net Cost	**$ (98,192)**	**$ 571,543**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **CHA:HOSP PREP PROG H1N1 ALLOC**					
FUND: **21780**		Function: **HEALTH AND SANITATION**			
DEPT: **4200100000**		Activity: **HEALTH**			
Rev Fr Use Of Money&Property	$ 323	$ 410	$ -	$ -	$ -
Intergovernmental Revenues	42,186	5,132	-	-	-
Total Revenue	**$ 42,509**	**$ 5,542**	**$ -**	**$ -**	**$ -**
Services and Supplies	$ 941	$ -	$ -	$ -	$ -
Total Expenditures/Appropriations	**$ 941**	**$ -**	**$ -**	**$ -**	**$ -**
Net Cost	**$ (41,568)**	**$ (5,542)**	**$ -**	**$ -**	**$ -**
Budget Unit: **CHA: PROPOSITION 10**					
FUND: **22700**		Function: **HEALTH AND SANITATION**			
DEPT: **4200100000**		Activity: **HEALTH**			
Rev Fr Use Of Money&Property	$ 18,097	$ 12,573	$ -	$ -	$ -
Intergovernmental Revenues	1,560,637	1,846,047	1,793,279	1,793,279	1,793,279
Other Revenue	-	-	20,000	20,000	20,000
Total Revenue	**$ 1,578,734**	**$ 1,858,620**	**$ 1,813,279**	**$ 1,813,279**	**$ 1,813,279**
Salaries and Benefits	$ 1,277,612	$ 1,220,488	$ 1,314,304	$ 1,314,304	$ 1,314,304
Services and Supplies	309,070	266,503	377,894	377,894	377,894
Other Charges	12,460	214,931	121,081	121,081	121,081
Fixed Assets	6,231	-	-	-	-
Total Expenditures/Appropriations	**$ 1,605,373**	**$ 1,701,922**	**$ 1,813,279**	**$ 1,813,279**	**$ 1,813,279**
Net Cost	**$ 26,639**	**$ (156,698)**	**$ -**	**$ -**	**$ -**
Budget Unit: **CHA: CA CHILDRENS SERVICES**					
FUND: **10000**		Function: **HEALTH AND SANITATION**			
DEPT: **4200200000**		Activity: **CALIFORNIA CHILDRENS SERVICES**			
Intergovernmental Revenues	$ 11,652,854	$ 10,922,110	$ 10,521,411	$ 10,521,411	$ 10,521,411
Charges For Current Services	15,340	45,140	597,716	-	-
Other Revenue	(5)	35	-	-	-
Total Revenue	**$ 11,668,189**	**$ 10,967,285**	**$ 11,119,127**	**$ 10,521,411**	**$ 10,521,411**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 12,473,445	$ 12,061,782	$ 12,524,363	$ 12,524,363	$ 12,524,363
Services and Supplies	4,181,076	3,394,127	3,451,265	3,527,338	3,527,338
Other Charges	1,484,140	1,245,264	190,000	792,284	792,284
Total Expenditures/Appropriations	**$ 18,138,661**	**$ 16,701,173**	**$ 16,165,628**	**$ 16,843,985**	**$ 16,843,985**
Net Cost	**$ 6,470,472**	**$ 5,733,888**	**$ 5,046,501**	**$ 6,322,574**	**$ 6,322,574**
Budget Unit: **CHA: ADMIN**					
FUND: **10000**		Function: **HEALTH AND SANITATION**			
DEPT: **4200300000**		Activity: **HEALTH**			
Intergovernmental Revenues	$ 199,113	$ 253,932	$ 260,000	$ 260,000	$ 260,000
Charges For Current Services	6,764,731	7,624,941	7,247,174	7,247,174	7,247,174
Other Revenue	(11)	2,897	100	100	100
Total Revenue	**$ 6,963,833**	**$ 7,881,770**	**$ 7,507,274**	**$ 7,507,274**	**$ 7,507,274**
Salaries and Benefits	$ 12,470,919	$ 12,900,148	$ 14,501,438	$ 14,501,438	$ 14,501,438
Services and Supplies	12,010,967	6,112,183	9,620,504	9,620,504	9,620,504
Other Charges	256,314	92,515	378,352	378,352	378,352
Fixed Assets	171,494	236,631	281,000	281,000	281,000
Intrafund Transfers	(18,081,978)	(14,218,783)	(17,274,020)	(17,274,020)	(17,274,020)
Total Expenditures/Appropriations	**$ 6,827,716**	**$ 5,122,694**	**$ 7,507,274**	**$ 7,507,274**	**$ 7,507,274**
Net Cost	**$ (136,117)**	**$ (2,759,076)**	**$ -**	**$ -**	**$ -**
Budget Unit: **CHA: ENVIRONMENTAL HEALTH**					
FUND: **10000**		Function: **HEALTH AND SANITATION**			
DEPT: **4200400000**		Activity: **HEALTH**			
Licenses, Permits & Franchises	$ 7,609,426	$ 7,951,738	$ 8,037,000	$ 8,037,000	$ 8,037,000
Fines, Forfeitures & Penalties	644,997	605,636	1,312,435	1,312,435	1,312,435
Intergovernmental Revenues	559,753	522,001	629,305	629,305	629,305
Charges For Current Services	13,585,073	14,970,079	13,596,785	13,596,785	13,596,785
Other Revenue	10,906	8,302	200,000	200,000	200,000
Total Revenue	**$ 22,410,155**	**$ 24,057,756**	**$ 23,775,525**	**$ 23,775,525**	**$ 23,775,525**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 14,080,369	$ 15,230,670	$ 16,183,136	$ 16,183,136	$ 16,183,136
Services and Supplies	8,717,779	7,559,844	7,717,714	7,717,714	7,717,714
Other Charges	103,263	48,626	153,902	153,902	153,902
Fixed Assets	103,754	95,893	-	-	-
Operating Transfers Out	66,870	33,435	65,200	65,200	65,200
Intrafund Transfers	(105,158)	(118,904)	-	-	-
Total Expenditures/Appropriations	**$ 22,966,877**	**$ 22,849,564**	**$ 24,119,952**	**$ 24,119,952**	**$ 24,119,952**
Net Cost	**$ 556,722**	**$ (1,208,192)**	**$ 344,427**	**$ 344,427**	**$ 344,427**
		Budget Unit:	**RCRMC: MED INDIGENT SERVICES**		
FUND: **10000**		Function:	**HEALTH AND SANITATION**		
DEPT: **4300200000**		Activity:	**HOSPITAL CARE**		
Intergovernmental Revenues	$ 9,302,040	$ 9,549,019	$ 8,923,428	$ 8,923,428	$ 8,923,428
Charges For Current Services	762,972	1,207,463	3,427,758	3,427,758	3,427,758
Other Revenue	6,455	92,322	97,804	97,804	97,804
Total Revenue	**$ 10,071,467**	**$ 10,848,804**	**$ 12,448,990**	**$ 12,448,990**	**$ 12,448,990**
Salaries and Benefits	$ 1,977,382	$ 1,977,840	$ 2,364,754	$ 2,364,754	$ 2,364,754
Services and Supplies	722,110	688,251	615,964	615,964	615,964
Other Charges	36,902,587	34,266,579	36,756,482	36,756,482	36,756,482
Intrafund Transfers	(25,392,860)	(22,686,360)	(24,221,478)	(24,221,478)	(24,221,478)
Total Expenditures/Appropriations	**$ 14,209,219**	**$ 14,246,310**	**$ 15,515,722**	**$ 15,515,722**	**$ 15,515,722**
Net Cost	**$ 4,137,752**	**$ 3,397,506**	**$ 3,066,732**	**$ 3,066,732**	**$ 3,066,732**
		Budget Unit:	**RCRMC: DETENTION HEALTH**		
FUND: **10000**		Function:	**HEALTH AND SANITATION**		
DEPT: **4300300000**		Activity:	**HEALTH**		
Charges For Current Services	$ 304	$ 418	$ -	$ -	$ -
Total Revenue	**$ 304**	**$ 418**	**$ -**	**$ -**	**$ -**
Salaries and Benefits	$ 11,302,410	$ 8,420,346	$ 6,089,850	$ 6,089,850	$ 10,747,966
Services and Supplies	5,497,701	5,485,397	5,157,535	5,157,535	5,296,916
Intrafund Transfers	(738,845)	(452,196)	(482,204)	(482,204)	(1,582,281)
Total Expenditures/Appropriations	**$ 16,061,266**	**$ 13,453,547**	**$ 10,765,181**	**$ 10,765,181**	**$ 14,462,601**
Net Cost	**$ 16,060,962**	**$ 13,453,129**	**$ 10,765,181**	**$ 10,765,181**	**$ 14,462,601**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Budget Unit: **WASTE: AREA 8 ASSESSMENT**
FUND: **23000** Function: **HEALTH AND SANITATION**
DEPT: **4500300000** Activity: **SANITATION**

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Rev Fr Use Of Money&Property	$ 415	$ 253	$ -	$ -	$ -
Charges For Current Services	764,200	777,055	800,000	800,000	800,000
Total Revenue	**$ 764,615**	**$ 777,308**	**$ 800,000**	**$ 800,000**	**$ 800,000**
Services and Supplies	$ 763,580	$ 777,055	$ 800,000	$ 800,000	$ 800,000
Total Expenditures/Appropriations	**$ 763,580**	**$ 777,055**	**$ 800,000**	**$ 800,000**	**$ 800,000**
Net Cost	**$ (1,035)**	**$ (253)**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

COUNTY OF RIVERSIDE
CODE ENFORCEMENT
13575

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **DOMESTIC VIOLENCE PROGRAM**					
FUND: **10000**		Function: **PUBLIC ASSISTANCE**			
DEPT: **1101700000**		Activity: **AID PROGRAMS**			
Fines, Forfeitures & Penalties	$ 12,072	$ -	$ -	$ -	$ -
Total Revenue	**$ 12,072**	**$ -**	**$ -**	**$ -**	**$ -**
Net Cost	**$ 751,508**	**$ 777,055**	**$ 800,000**	**$ 800,000**	**$ 800,000**
Budget Unit: **EDA: COMMUNITY DEV - HUD**					
FUND: **21350**		Function: **PUBLIC ASSISTANCE**			
DEPT: **1900200000**		Activity: **OTHER ASSISTANCE**			
Rev Fr Use Of Money&Property	$ 8,122	$ 166	$ -	$ -	$ -
Intergovernmental Revenues	13,365,114	13,402,771	13,190,766	13,190,766	13,190,766
Other Revenue	136,796	65,652	60,000	60,000	60,000
Total Revenue	**$ 13,510,032**	**$ 13,468,589**	**$ 13,250,766**	**$ 13,250,766**	**$ 13,250,766**
Salaries and Benefits	$ -	$ 580,817	$ 739,758	$ 739,758	$ 739,758
Services and Supplies	8,998	51,833	78,020	78,020	78,020
Other Charges	13,754,051	12,467,248	12,432,988	12,432,988	12,432,988
Total Expenditures/Appropriations	**$ 13,763,049**	**$ 13,099,898**	**$ 13,250,766**	**$ 13,250,766**	**$ 13,250,766**
Net Cost	**$ 253,017**	**$ (368,691)**	**$ -**	**$ -**	**$ -**
Budget Unit: **NEIGHBORHOOD STABILIZATION NSP**					
FUND: **21370**		Function: **PUBLIC ASSISTANCE**			
DEPT: **1900200000**		Activity: **OTHER ASSISTANCE**			
Rev Fr Use Of Money&Property	$ 5,464	$ 16,270	$ -	$ -	$ -
Intergovernmental Revenues	31,609,555	8,482,054	16,667,963	16,667,963	16,667,963
Other Revenue	737,097	16,275,801	20,000,000	20,000,000	20,000,000
Total Revenue	**$ 32,352,116**	**$ 24,774,125**	**$ 36,667,963**	**$ 36,667,963**	**$ 36,667,963**
Services and Supplies	$ 268,880	$ 82,631	$ 119,443	$ 119,443	$ 119,443
Other Charges	31,810,384	22,621,946	36,548,520	36,548,520	36,548,520
Total Expenditures/Appropriations	**$ 32,079,264**	**$ 22,704,577**	**$ 36,667,963**	**$ 36,667,963**	**$ 36,667,963**
Net Cost	**$ (272,852)**	**$ (2,069,548)**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **EDA: WORK FORCE DEVELOPMENT**					
FUND: **21550**		Function: **PUBLIC ASSISTANCE**			
DEPT: **1900300000**		Activity: **OTHER ASSISTANCE**			
Rev Fr Use Of Money&Property	$ 678,153	$ 888,446	$ 914,639	$ 914,639	$ 914,639
Intergovernmental Revenues	34,320,078	33,023,617	22,143,112	22,143,112	22,143,112
Charges For Current Services	801,898	2,125,645	1,302,502	1,302,502	1,302,502
Other Revenue	187,310	211,097	145,569	145,569	145,569
Total Revenue	**$ 35,987,439**	**$ 36,248,805**	**$ 24,505,822**	**$ 24,505,822**	**$ 24,505,822**
Salaries and Benefits	$ 8,899,120	$ 10,617,324	$ 11,046,939	$ 11,046,939	$ 11,046,939
Services and Supplies	4,763,075	6,675,260	5,098,707	5,098,707	5,098,707
Other Charges	22,958,253	16,301,087	8,155,177	8,155,177	8,155,177
Fixed Assets	60,236	-	10,000	10,000	10,000
Total Expenditures/Appropriations	**$ 36,680,684**	**$ 33,593,671**	**$ 24,310,823**	**$ 24,310,823**	**$ 24,310,823**
Net Cost	**$ 693,245**	**$ (2,655,134)**	**$ (194,999)**	**$ (194,999)**	**$ (194,999)**
Budget Unit: **HUD**					
FUND: **21250**		Function: **PUBLIC ASSISTANCE**			
DEPT: **1900600000**		Activity: **OTHER ASSISTANCE**			
Rev Fr Use Of Money&Property	$ 698	$ 1,027	$ -	$ -	$ -
Intergovernmental Revenues	1,202,814	3,809,140	4,217,667	4,217,667	4,217,667
Other Revenue	166,460	197,371	100,000	100,000	100,000
Total Revenue	**$ 1,369,972**	**$ 4,007,538**	**$ 4,317,667**	**$ 4,317,667**	**$ 4,317,667**
Services and Supplies	$ 687	$ 11,817	$ 7,684	$ 7,684	$ 7,684
Other Charges	1,364,324	3,890,534	4,309,983	4,309,983	4,309,983
Total Expenditures/Appropriations	**$ 1,365,011**	**$ 3,902,351**	**$ 4,317,667**	**$ 4,317,667**	**$ 4,317,667**
Net Cost	**$ (4,961)**	**$ (105,187)**	**$ -**	**$ -**	**$ -**
Budget Unit: **Home Grant Program**					
FUND: **21270**		Function: **PUBLIC ASSISTANCE**			
DEPT: **1900600000**		Activity: **OTHER ASSISTANCE**			
Rev Fr Use Of Money&Property	$ 147	$ 755	$ -	$ -	$ -
Intergovernmental Revenues	-	1,500,000	750,000	750,000	750,000
Total Revenue	**$ 147**	**$ 1,500,755**	**$ 750,000**	**$ 750,000**	**$ 750,000**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Other Charges	$ -	$ 1,476,900	$ 750,000	$ 750,000	$ 750,000
Total Expenditures/Appropriations	**$ -**	**$ 1,476,900**	**$ 750,000**	**$ 750,000**	**$ 750,000**
Net Cost	**$ (147)**	**$ (23,855)**	**$ -**	**$ -**	**$ -**
		Budget Unit:	**PROBATION: COURT PLACEMENT**		
FUND: **10000**		Function:	**PUBLIC ASSISTANCE**		
DEPT: **2600400000**		Activity:	**CARE OF COURT WARDS**		
Charges For Current Services	$ 120,176	$ 25,812	$ -	$ -	$ -
Total Revenue	**$ 120,176**	**$ 25,812**	**$ -**	**$ -**	**$ -**
Services and Supplies	$ 321	$ 2,132	$ 4,081	$ 4,081	$ 4,081
Other Charges	334,317	285,800	299,801	299,801	299,801
Intrafund Transfers	(24,016)	-	-	-	-
Total Expenditures/Appropriations	**$ 310,622**	**$ 287,932**	**$ 303,882**	**$ 303,882**	**$ 303,882**
Net Cost	**$ 190,446**	**$ 262,120**	**$ 303,882**	**$ 303,882**	**$ 303,882**
		Budget Unit:	**DPSS: ADMINISTRATION**		
FUND: **10000**		Function:	**PUBLIC ASSISTANCE**		
DEPT: **5100100000**		Activity:	**ADMINISTRATION**		
Rev Fr Use Of Money&Property	$ 152	$ -	$ -	$ -	$ -
Intergovernmental Revenues	341,588,605	328,902,164	362,946,675	362,946,675	362,946,675
Charges For Current Services	1,645,075	1,448,642	1,227,215	1,227,215	1,227,215
Other In-Lieu And Other Govt	-	-	-	-	-
Other Revenue	329,446	67,719	90,623	90,623	90,623
Total Revenue	**$ 343,563,278**	**$ 330,418,525**	**$ 364,264,513**	**$ 364,264,513**	**$ 364,264,513**
Salaries and Benefits	$ 214,331,008	$ 225,211,581	$ 240,682,782	$ 240,682,782	$ 240,682,782
Services and Supplies	74,305,517	71,239,855	78,187,867	78,187,867	78,187,867
Other Charges	59,612,721	51,107,926	58,181,984	58,181,984	58,181,984
Fixed Assets	1,034,134	87,567	190,000	190,000	190,000
Intrafund Transfers	(133,389)	(255,064)	(172,935)	(172,935)	(172,935)
Total Expenditures/Appropriations	**$ 349,149,991**	**$ 347,391,865**	**$ 377,069,698**	**$ 377,069,698**	**$ 377,069,698**
Net Cost	**$ 5,586,713**	**$ 16,973,340**	**$ 12,805,185**	**$ 12,805,185**	**$ 12,805,185**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **DPSS: MANDATED CLIENT SERVICES**					
FUND: **10000**		Function: **PUBLIC ASSISTANCE**			
DEPT: **5100200000**		Activity: **AID PROGRAMS**			
Intergovernmental Revenues	$ 53,136,108	$ 50,443,749	$ 50,676,137	$ 50,676,139	$ 50,676,139
Charges For Current Services	1,160,483	1,150,381	1,069,905	1,069,905	1,069,905
Other Revenue	-	-	-	12,870,173	12,870,173
Total Revenue	**$ 54,296,591**	**$ 51,594,130**	**$ 51,746,042**	**$ 64,616,217**	**$ 64,616,217**
Other Charges	$ 57,807,123	$ 56,353,189	$ 56,018,561	$ 68,888,734	$ 68,888,734
Intrafund Transfers	-	(120,000)	(120,000)	(120,000)	(120,000)
Total Expenditures/Appropriations	**$ 57,807,123**	**$ 56,233,189**	**$ 55,898,561**	**$ 68,768,734**	**$ 68,768,734**
Net Cost	**$ 3,510,532**	**$ 4,639,059**	**$ 4,152,519**	**$ 4,152,517**	**$ 4,152,517**
Budget Unit: **DPSS: CATEGORICAL AID**					
FUND: **10000**		Function: **PUBLIC ASSISTANCE**			
DEPT: **5100300000**		Activity: **AID PROGRAMS**			
Intergovernmental Revenues	$ 288,116,067	$ 311,323,026	$ 322,353,707	$ 330,385,384	$ 330,385,384
Other Revenue	4,347,411	1,534,478	1,416,449	7,685,586	7,685,586
Total Revenue	**$ 292,463,478**	**$ 312,857,504**	**$ 323,770,156**	**$ 338,070,970**	**$ 338,070,970**
Other Charges	$ 307,497,162	$ 330,786,947	$ 339,368,771	$ 353,669,585	$ 353,669,585
Total Expenditures/Appropriations	**$ 307,497,162**	**$ 330,786,947**	**$ 339,368,771**	**$ 353,669,585**	**$ 353,669,585**
Net Cost	**$ 15,033,684**	**$ 17,929,443**	**$ 15,598,615**	**$ 15,598,615**	**$ 15,598,615**
Budget Unit: **DPSS: OTHER AID**					
FUND: **10000**		Function: **PUBLIC ASSISTANCE**			
DEPT: **5100400000**		Activity: **AID PROGRAMS**			
Licenses, Permits & Franchises	$ 241,638	$ 256,473	$ 198,000	$ 198,000	$ 198,000
Fines, Forfeitures & Penalties	169,432	168,656	132,000	132,000	132,000
Intergovernmental Revenues	43,343	56,717	40,000	40,000	40,000
Other Revenue	-	-	-	860,690	860,690
Total Revenue	**$ 454,413**	**$ 481,846**	**$ 370,000**	**$ 1,230,690**	**$ 1,230,690**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Services and Supplies	$ -	$ -	$ -	$ -	$ -
Other Charges	2,172,535	1,999,573	1,223,395	2,084,085	2,084,085
Total Expenditures/Appropriations	**$ 2,172,535**	**$ 1,999,573**	**$ 1,223,395**	**$ 2,084,085**	**$ 2,084,085**
Net Cost	**$ 1,718,122**	**$ 1,517,727**	**$ 853,395**	**$ 853,395**	**$ 853,395**
Budget Unit:			**DPSS: HOMELESS HOUSING RELIEF**		
FUND: **21300**			Function: **PUBLIC ASSISTANCE**		
DEPT: **5100500000**			Activity: **AID PROGRAMS**		
Intergovernmental Revenues	$ 3,921,279	$ 6,323,103	$ 7,266,415	$ 7,266,415	$ 7,266,415
Total Revenue	**$ 3,921,279**	**$ 6,323,103**	**$ 7,266,415**	**$ 7,266,415**	**$ 7,266,415**
Other Charges	$ 3,921,279	$ 6,331,516	$ 7,266,415	$ 7,266,415	$ 7,266,415
Total Expenditures/Appropriations	**$ 3,921,279**	**$ 6,331,516**	**$ 7,266,415**	**$ 7,266,415**	**$ 7,266,415**
Net Cost	**$ -**	**$ 8,413**	**$ -**	**$ -**	**$ -**
Budget Unit:			**DPSS: HOMELESS**		
FUND: **21300**			Function: **PUBLIC ASSISTANCE**		
DEPT: **5100600000**			Activity: **OTHER ASSISTANCE**		
Rev Fr Use Of Money&Property	$ 54,712	$ 20,386	$ -	$ -	$ -
Intergovernmental Revenues	384,965	403,482	445,670	445,670	445,670
Other Revenue	3,849,594	2,644,743	2,162,172	2,162,172	2,162,172
Total Revenue	**$ 4,289,271**	**$ 3,068,611**	**$ 2,607,842**	**$ 2,607,842**	**$ 2,607,842**
Services and Supplies	$ 74,080	$ 152,663	$ 142,244	$ 142,244	$ 142,244
Other Charges	4,204,024	3,184,752	3,553,517	3,553,517	3,553,517
Total Expenditures/Appropriations	**$ 4,278,104**	**$ 3,337,415**	**$ 3,695,761**	**$ 3,695,761**	**$ 3,695,761**
Net Cost	**$ (11,167)**	**$ 268,804**	**$ 1,087,919**	**$ 1,087,919**	**$ 1,087,919**
Budget Unit:			**DCA: ADMIN LOCAL INITIATIVE**		
FUND: **21050**			Function: **PUBLIC ASSISTANCE**		
DEPT: **5200100000**			Activity: **OTHER ASSISTANCE**		
Intergovernmental Revenues	$ 1,887,884	$ 2,467,851	$ 2,162,183	$ 2,162,183	$ 2,162,183
Charges For Current Services	68,725	130	-	-	-
Other Revenue	(1,535)	28,950	-	-	-
Total Revenue	**$ 1,955,074**	**$ 2,496,931**	**$ 2,162,183**	**$ 2,162,183**	**$ 2,162,183**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 1,402,177	$ 1,050,294	$ 770,153	$ 770,153	$ 770,153
Services and Supplies	477,657	458,647	410,755	410,755	410,755
Other Charges	124,559	578,322	981,275	981,275	981,275
Fixed Assets	12,410	9,933	-	-	-
Total Expenditures/Appropriations	**$ 2,016,803**	**$ 2,097,196**	**$ 2,162,183**	**$ 2,162,183**	**$ 2,162,183**
Net Cost	**$ 61,729**	**$ (399,735)**	**$ -**	**$ -**	**$ -**
		Budget Unit:	**DCA: LOCAL INITIATIVE**		
FUND: **21050**		Function:	**PUBLIC ASSISTANCE**		
DEPT: **5200200000**		Activity:	**OTHER ASSISTANCE**		
Rev Fr Use Of Money&Property	$ -	$ 2,833	$ -	$ -	$ -
Intergovernmental Revenues	6,644,834	6,760,279	5,477,307	5,477,307	5,477,307
Other Revenue	155,249	385,645	400,491	400,491	400,491
Total Revenue	**$ 6,800,083**	**$ 7,148,757**	**$ 5,877,798**	**$ 5,877,798**	**$ 5,877,798**
Salaries and Benefits	$ 853,923	$ 1,598,435	$ 1,728,237	$ 1,728,237	$ 1,728,237
Services and Supplies	896,908	692,207	693,165	693,165	693,165
Other Charges	4,319,409	4,423,290	3,456,396	3,456,396	3,456,396
Fixed Assets	105,694	-	-	-	-
Total Expenditures/Appropriations	**$ 6,175,934**	**$ 6,713,932**	**$ 5,877,798**	**$ 5,877,798**	**$ 5,877,798**
Net Cost	**$ (624,149)**	**$ (434,825)**	**$ -**	**$ -**	**$ -**
		Budget Unit:	**DCA: OTHER PROGRAMS**		
FUND: **21050**		Function:	**PUBLIC ASSISTANCE**		
DEPT: **5200300000**		Activity:	**OTHER ASSISTANCE**		
Fines, Forfeitures & Penalties	$ 130,000	$ 382,989	$ 382,989	$ 382,989	$ 382,989
Intergovernmental Revenues	2,087,303	1,823,463	65,000	65,000	65,000
Charges For Current Services	1,250	1,500	-	-	-
Other Revenue	211,877	199,863	120,297	120,297	120,297
Total Revenue	**$ 2,430,430**	**$ 2,407,815**	**$ 568,286**	**$ 568,286**	**$ 568,286**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Salaries and Benefits	$ 163,564	$ 298,011	$ 258,033	$ 258,033	$ 258,033
Services and Supplies	508,491	792,160	310,253	310,253	310,253
Other Charges	1,930,331	1,011,221	-	-	-
Fixed Assets	60,629	-	-	-	-
Total Expenditures/Appropriations	**$ 2,663,015**	**$ 2,101,392**	**$ 568,286**	**$ 568,286**	**$ 568,286**
Net Cost	**$ 232,585**	**$ (306,423)**	**$ -**	**$ -**	**$ -**

Budget Unit: **OFFICE ON AGING TITLE III**
FUND: **21450** Function: **PUBLIC ASSISTANCE**
DEPT: **5300100000** Activity: **OTHER ASSISTANCE**

Taxes	$ 37,971	$ 37,642	$ 41,185	$ 41,185	$ 41,185
Rev Fr Use Of Money&Property	(14,343)	(13,607)	-	-	-
Intergovernmental Revenues	10,584,115	10,063,698	9,400,242	9,400,242	9,400,242
Charges For Current Services	67,000	193,285	40,000	40,000	40,000
Other Revenue	1,673,737	1,596,215	1,840,864	1,840,864	1,840,864
Total Revenue	**$ 12,348,480**	**$ 11,877,233**	**$ 11,322,291**	**$ 11,322,291**	**$ 11,322,291**
Salaries and Benefits	$ 5,345,132	$ 5,516,964	$ 5,523,645	$ 5,523,645	$ 5,523,645
Services and Supplies	1,527,850	1,948,176	1,815,654	1,815,654	1,815,654
Other Charges	5,332,814	4,465,539	3,982,992	3,982,992	3,982,992
Fixed Assets	86,336	-	-	-	-
Total Expenditures/Appropriations	**$ 12,292,132**	**$ 11,930,679**	**$ 11,322,291**	**$ 11,322,291**	**$ 11,322,291**
Net Cost	**$ (56,348)**	**$ 53,446**	**$ -**	**$ -**	**$ -**

Budget Unit: **VETERANS SERVICES**
FUND: **10000** Function: **PUBLIC ASSISTANCE**
DEPT: **5400100000** Activity: **VETERANS SERVICES**

Intergovernmental Revenues	$ 331,842	$ 266,845	$ 171,000	$ 171,000	$ 171,000
Charges For Current Services	-	-	123,000	123,000	123,000
Total Revenue	**$ 331,842**	**$ 266,845**	**$ 294,000**	**$ 294,000**	**$ 294,000**
Salaries and Benefits	$ 745,364	$ 792,272	$ 835,895	$ 835,895	$ 835,895
Services and Supplies	135,332	168,405	198,836	198,836	198,836
Other Charges	40,902	6,595	6,000	6,000	6,000
Total Expenditures/Appropriations	**$ 921,598**	**$ 967,272**	**$ 1,040,731**	**$ 1,040,731**	**$ 1,040,731**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Net Cost	**$ 589,756**	**$ 700,427**	**$ 746,731**	**$ 746,731**	**$ 746,731**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **COUNTY FREE LIBRARY**					
FUND: **21200**		Function: **EDUCATION**			
DEPT: **1101500000**		Activity: **LIBRARY SERVICES**			
Taxes	$ 10,391,551	$ -	$ -	$ -	$ -
Fines, Forfeitures & Penalties	395,235	-	-	-	-
Rev Fr Use Of Money&Property	19,382	-	-	-	-
Intergovernmental Revenues	1,438,640	-	-	-	-
Charges For Current Services	81,103	-	-	-	-
Other Revenue	5,902,746	2,237,297	-	-	-
Total Revenue	**$ 18,228,657**	**$ 2,237,297**	**$ -**	**$ -**	**$ -**
Salaries and Benefits	$ 16,089	$ -	$ -	$ -	$ -
Services and Supplies	1,667,395	-	-	-	-
Other Charges	18,838,012	-	-	-	-
Fixed Assets	316,575	-	-	-	-
Total Expenditures/Appropriations	**$ 20,838,071**	**$ -**	**$ -**	**$ -**	**$ -**
Net Cost	**$ 2,609,414**	**$ (2,237,297)**	**$ -**	**$ -**	**$ -**
Budget Unit: **COUNTY FREE LIBRARY**					
FUND: **21200**		Function: **EDUCATION**			
DEPT: **1900700000**		Activity: **LIBRARY SERVICES**			
Taxes	$ -	$ 11,080,750	$ 10,575,027	$ 10,575,027	$ 10,575,027
Fines, Forfeitures & Penalties	-	426,815	424,618	424,618	424,618
Rev Fr Use Of Money&Property	-	307,518	145,960	145,960	145,960
Intergovernmental Revenues	-	1,447,519	1,048,916	1,048,916	1,048,916
Charges For Current Services	-	159,475	171,474	171,474	171,474
Other In-Lieu And Other Govt	-	3,834,880	571,295	571,295	571,295
Other Revenue	-	3,283,755	4,679,652	4,679,652	4,679,652
Total Revenue	**$ -**	**$ 20,540,712**	**$ 17,616,942**	**$ 17,616,942**	**$ 17,616,942**
Salaries and Benefits	$ -	$ 129,802	$ 166,724	$ 166,724	$ 166,724
Services and Supplies	-	4,555,444	4,384,601	4,384,601	4,384,601
Other Charges	-	15,911,228	18,536,213	18,536,213	18,536,213
Fixed Assets	-	615,621	900,000	900,000	900,000
Total Expenditures/Appropriations	**$ -**	**$ 21,212,095**	**$ 23,987,538**	**$ 23,987,538**	**$ 23,987,538**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Net Cost	**$ -**	**$ 671,383**	**$ 6,370,596**	**$ 6,370,596**	**$ 6,370,596**
FUND: **10000**		Budget Unit: **COOPERATIVE EXTENSION**			
DEPT: **6300100000**		Function: **EDUCATION**			
		Activity: **OTHER EDUCATION**			
Salaries and Benefits	$ 232,720	$ 266,181	$ 265,987	$ 265,987	$ 265,987
Services and Supplies	323,588	287,290	321,216	321,216	321,216
Total Expenditures/Appropriations	**$ 556,308**	**$ 553,471**	**$ 587,203**	**$ 587,203**	**$ 587,203**
Net Cost	**$ 556,308**	**$ 553,471**	**$ 587,203**	**$ 587,203**	**$ 587,203**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5

FUND: **10000**
DEPT: **1930100000**

Budget Unit: **EDA: EDWARD DEAN MUSEUM**
Function: **RECREATION&CULTURAL SERVICES**
Activity: **CULTURAL SERVICES**

Rev Fr Use Of Money&Property	$ 105,986	$ 125,441	$ 142,997	$ 142,997	$ 142,997
Charges For Current Services	54,862	120,905	60,000	60,000	60,000
Other Revenue	12,311	10,661	82,647	82,647	82,647
Total Revenue	**$ 173,159**	**$ 257,007**	**$ 285,644**	**$ 285,644**	**$ 285,644**
Salaries and Benefits	$ -	$ 101,274	$ 105,177	$ 105,177	$ 105,177
Services and Supplies	-	264,334	252,379	252,379	252,379
Other Charges	-	23,250	28,021	28,021	28,021
Fixed Assets	-	-	500	500	500
Operating Transfers Out	-	-	100	100	100
Intrafund Transfers	-	-	(1,000)	(1,000)	(1,000)
Total Expenditures/Appropriations	**$ -**	**$ 388,858**	**$ 385,177**	**$ 385,177**	**$ 385,177**
Net Cost	**$ (173,159)**	**$ 131,851**	**$ 99,533**	**$ 99,533**	**$ 99,533**

FUNDED POSITIONS: See Attachment A

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State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5

Budget Unit: **APPROPRIATION FOR CONTINGENCY**
FUND: **10000**
Function: **CONTINGENCY**
DEPT: **1109000000**
Activity: **OTHER GENERAL**

Approp for Contingencies	$ -	$ -	$ 19,975,099	$ 20,000,000	$ 20,000,000
Total Expenditures/Appropriations	**$ -**	**$ -**	**$ 19,975,099**	**$ 20,000,000**	**$ 20,000,000**
Net Cost	**$ -**	**$ -**	**$ 19,975,099**	**$ 20,000,000**	**$ 20,000,000**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Budget Unit: **INTEREST ON TRANS**					
FUND: **10000**		Function: **DEBT SERVICE**			
DEPT: **1102100000**		Activity: **INTEREST ON LONG-TERM DEBT**			
Other Revenue	$ 3,082,360	$ 4,225,760	$ -	$ 3,123,750	$ 3,123,750
Total Revenue	**$ 3,082,360**	**$ 4,225,760**	**$ -**	**$ 3,123,750**	**$ 3,123,750**
Services and Supplies	$ 23,050	$ 73,471	$ 195,025	$ 195,025	$ 195,025
Other Charges	5,820,782	6,437,567	6,336,944	4,805,917	4,805,917
Total Expenditures/Appropriations	**$ 5,843,832**	**$ 6,511,038**	**$ 6,531,969**	**$ 5,000,942**	**$ 5,000,942**
Net Cost	**$ 2,761,472**	**$ 2,285,278**	**$ 6,531,969**	**$ 1,877,192**	**$ 1,877,192**
Budget Unit: **LIBRARY LEASE-PURCHASE**					
FUND: **21200**		Function: **DEBT SERVICE**			
DEPT: **1102200000**		Activity: **RETIREMENT OF LONG-TERM DEBT**			
Rev Fr Use Of Money&Property	$ 24,851	$ -	$ -	$ -	$ -
Charges For Current Services	159,475	-	-	-	-
Total Revenue	**$ 184,326**	**$ -**	**$ -**	**$ -**	**$ -**
Services and Supplies	$ 328,383	$ -	$ 353,052	$ 353,052	$ 353,052
Other Charges	720,193	104,633	1,505,500	1,505,500	1,505,500
Total Expenditures/Appropriations	**$ 1,048,576**	**$ 104,633**	**$ 1,858,552**	**$ 1,858,552**	**$ 1,858,552**
Net Cost	**$ 864,250**	**$ 104,633**	**$ 1,858,552**	**$ 1,858,552**	**$ 1,858,552**
Budget Unit: **PENSION OBLIGATION BONDS**					
FUND: **35000**		Function: **DEBT SERVICE**			
DEPT: **1104000000**		Activity: **RETIREMENT OF LONG-TERM DEBT**			
Rev Fr Use Of Money&Property	$ 742,345	$ 684,440	$ -	$ -	$ -
Charges For Current Services	33,117,937	32,271,426	36,176,199	36,176,199	36,176,199
Total Revenue	**$ 33,860,282**	**$ 32,955,866**	**$ 36,176,199**	**$ 36,176,199**	**$ 36,176,199**
Salaries and Benefits	$ 14,434,034	$ 6,370,892	$ 9,000,000	$ 9,000,000	$ 9,000,000
Services and Supplies	422	439	500	500	500
Other Charges	21,678,764	26,269,024	27,175,699	27,175,699	27,175,699
Operating Transfers Out	-	197,000	-	-	-
Total Expenditures/Appropriations	**$ 36,113,220**	**$ 32,837,355**	**$ 36,176,199**	**$ 36,176,199**	**$ 36,176,199**

FUNDED POSITIONS: See Attachment A

State Controller Schedules	County of Riverside	Schedule 9
County Budget Act January 2010	Detail of Financing Sources and Financing Uses Governmental Funds **Fiscal Year 2011-12**	

Detail by Revenue Category and Expenditure Object	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Net Cost	**$ 2,252,938**	**$ (118,511)**	**$ -**	**$ -**	**$ -**

FUNDED POSITIONS: See Attachment A

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State Controller Schedules
County Budget Act
January 2010

County of Riverside
Operation of Internal Service Fund
Fiscal Year 2011-12

Schedule 10

FUND: **45100**
DEPT: **1200300000**

Name	**ASSESSOR: RECORD MGT AND ARCH**
Fund Title	**Records Mgt & Archives Program**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 2,633,244	$ 1,930,885	$ 1,853,885	$ 1,853,885	$ 1,853,885
Miscellaneous	-	2,739	-	-	-
Total Operating Revenues	**$ 2,633,244**	**$ 1,933,624**	**$ 1,853,885**	**$ 1,853,885**	**$ 1,853,885**
Operating Expenses					
Salaries And Benefits	$ 1,607,374	$ 1,073,581	$ 1,178,290	$ 1,178,290	$ 1,178,290
Services And Supplies	737,612	610,283	636,383	636,383	636,383
Other Charges	49,912	11,316	25,712	25,712	25,712
Total Operating Expenses	**$ 2,394,898**	**$ 1,695,180**	**$ 1,840,385**	**$ 1,840,385**	**$ 1,840,385**
Operating Income (Loss)	**$ 238,346**	**$ 238,444**	**$ 13,500**	**$ 13,500**	**$ 13,500**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 10,561	$ 6,941	$ 6,000	$ 6,000	$ 6,000
Total Non-Operating Revenues (Expenses)	**$ 10,561**	**$ 6,941**	**$ 6,000**	**$ 6,000**	**$ 6,000**
Income Before Capital Contributions and Transfers	**$ 248,907**	**$ 245,385**	**$ 19,500**	**$ 19,500**	**$ 19,500**
Change in Net Assets	**$ 248,907**	**$ 245,385**	**$ 19,500**	**$ 19,500**	**$ 19,500**
Net Assets - Beginning Balance	848,845	1,097,752		1,343,137	1,343,137
Net Assets - Ending Balance	$ 1,097,752	$ 1,343,137		$ 1,362,637	$ 1,362,637
Capital Assets	$ -	$ 53,073	$ 19,500	$ 19,500	$ 19,500

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

State Controller Schedules
County Budget Act
January 2010

County of Riverside
Operation of Internal Service Fund
Fiscal Year 2011-12

Schedule 10

FUND: **47200**
DEPT: **7200200000**

Name	**FM Custodial-Housekeeping**
Fund Title	**EDA-Custodial Services**
Service Activity	**PROPERTY MANAGEMENT**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ -	$ 13,217,085	$ 13,896,796	$ 13,896,796	$ 13,896,796
Miscellaneous	-	53	-	-	-
Total Operating Revenues	**$ -**	**$ 13,217,138**	**$ 13,896,796**	**$ 13,896,796**	**$ 13,896,796**
Operating Expenses					
Salaries And Benefits	$ -	$ 10,250,613	$ 10,217,153	$ 10,217,153	$ 10,217,153
Services And Supplies	-	3,590,918	3,672,767	3,672,767	3,672,767
Total Operating Expenses	**$ -**	**$ 13,841,531**	**$ 13,889,920**	**$ 13,889,920**	**$ 13,889,920**
Operating Income (Loss)	**$ -**	**$ (624,393)**	**$ 6,876**	**$ 6,876**	**$ 6,876**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ -	$ 5,665	$ 2,189	$ 2,189	$ 2,189
Total Non-Operating Revenues (Expenses)	**$ -**	**$ 5,665**	**$ 2,189**	**$ 2,189**	**$ 2,189**
Income Before Capital Contributions and Transfers	**$ -**	**$ (618,728)**	**$ 9,065**	**$ 9,065**	**$ 9,065**
Contributions-In/(Out)	$ -	$ 619,087	$ -	$ -	$ -
Change in Net Assets	**$ -**	**$ 359**	**$ 9,065**	**$ 9,065**	**$ 9,065**
Net Assets - Beginning Balance	-	-		359	359
Net Assets - Ending Balance	$ -	359		$ 9,424	$ 9,424
Capital Assets	$ -	$ -	$ -	$ -	$ -

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

State Controller Schedules
County Budget Act
January 2010

County of Riverside
Operation of Internal Service Fund
Fiscal Year 2011-12

Schedule 10

FUND: **47210**
DEPT: **7200300000**

Name	**FACILITY MGMT: MAINTENANCE**
Fund Title	**EDA-Maintenance Services**
Service Activity	**PROPERTY MANAGEMENT**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ -	$ 19,173,025	$ 20,432,155	$ 20,432,155	$ 20,432,155
Miscellaneous	-	6,812	5,858	5,858	5,858
Total Operating Revenues	**$ -**	**$ 19,179,837**	**$ 20,438,013**	**$ 20,438,013**	**$ 20,438,013**
Operating Expenses					
Salaries And Benefits	$ -	$ 13,534,794	$ 12,701,267	$ 12,701,267	$ 12,701,267
Services And Supplies	-	7,706,002	7,703,497	7,703,497	7,703,497
Other Charges	-	33,919	7,100	7,100	7,100
Total Operating Expenses	**$ -**	**$ 21,274,715**	**$ 20,411,864**	**$ 20,411,864**	**$ 20,411,864**
Operating Income (Loss)	**$ -**	**$ (2,094,878)**	**$ 26,149**	**$ 26,149**	**$ 26,149**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ -	$ 6,429	$ 2,876	$ 2,876	$ 2,876
Total Non-Operating Revenues (Expenses)	**$ -**	**$ 6,429**	**$ 2,876**	**$ 2,876**	**$ 2,876**
Income Before Capital Contributions and Transfers	**$ -**	**$ (2,088,449)**	**$ 29,025**	**$ 29,025**	**$ 29,025**
Contributions-In/(Out)	$ -	$ 1,240,082	$ -	$ -	$ -
Change in Net Assets	**$ -**	**$ (848,367)**	**$ 29,025**	**$ 29,025**	**$ 29,025**
Capital Assets	$ -	$ -	$ -	$ -	$ -

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FUND: **47220**
DEPT: **7200400000**

Name	**Real Estate**
Fund Title	**EDA-Real Estate**
Service Activity	**PROPERTY MANAGEMENT**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Rents And Concessions	$ -	$ 314,151	$ 6,990,930	$ 6,990,930	$ 6,990,930
Chgs For Curr Svcs-Other	-	56,824,472	53,244,833	52,664,344	52,664,344
Institutional Care And Svcs	-	1,340	-	-	-
Planning And Engineering Svcs	-	167,850	71,971	71,971	71,971
Miscellaneous	-	33,213	-	-	-
Other Sales	-	59	-	-	-
Total Operating Revenues	**$ -**	**$ 57,341,085**	**$ 60,307,734**	**$ 59,727,245**	**$ 59,727,245**
Operating Expenses					
Salaries And Benefits	$ -	$ 2,481,764	$ 3,225,997	$ 3,275,871	$ 3,275,871
Services And Supplies	-	52,205,094	53,924,808	53,367,913	53,367,913
Other Charges	-	2,441,314	3,153,377	3,081,508	3,081,508
Total Operating Expenses	**$ -**	**$ 57,128,172**	**$ 60,304,182**	**$ 59,725,292**	**$ 59,725,292**
Operating Income (Loss)	**$ -**	**$ 212,913**	**$ 3,552**	**$ 1,953**	**$ 1,953**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ -	$ 3,229	$ -	$ -	$ -
Total Non-Operating Revenues (Expenses)	**$ -**	**$ 3,229**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ -**	**$ 216,142**	**$ 3,552**	**$ 1,953**	**$ 1,953**
Operating Transfers-In/(Out)	$ -	$ 79,735	$ -	$ -	$ -
Contributions-In/(Out)	$ -	$ 50,598	$ -	$ -	$ -
Change in Net Assets	**$ -**	**$ 346,475**	**$ 3,552**	**$ 1,953**	**$ 1,953**
Net Assets - Beginning Balance	-	-		346,475	346,475
Net Assets - Ending Balance	$ -	$ 346,475		$ 348,428	$ 348,428
Capital Assets	$ -	$ -	$ -	$ -	$ -

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FUND: **45800**
DEPT: **1132000000**

Name	**HR: EXCLUSIVE PROVIDER OPTION**
Fund Title	**ISF-Exclusive Provider Optn**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 447,801	$ 465,382	$ 545,173	$ 545,173	$ 545,173
Health Fees	14,774,888	15,642,269	15,603,116	15,603,116	15,603,116
Miscellaneous	35,769,711	39,715,647	37,255,267	37,255,267	37,255,267
Total Operating Revenues	**$ 50,992,400**	**$ 55,823,298**	**$ 53,403,556**	**$ 53,403,556**	**$ 53,403,556**
Operating Expenses					
Salaries And Benefits	$ 3,498,319	$ 3,591,341	$ 3,704,137	$ 3,704,137	$ 3,704,137
Services And Supplies	8,152,179	7,586,595	7,074,166	7,074,166	7,074,166
Other Charges	41,352,788	41,891,771	42,299,757	42,299,757	42,299,757
Total Operating Expenses	**$ 53,003,286**	**$ 53,069,707**	**$ 53,078,060**	**$ 53,078,060**	**$ 53,078,060**
Operating Income (Loss)	**$ (2,010,886)**	**$ 2,753,591**	**$ 325,496**	**$ 325,496**	**$ 325,496**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 215,926	$ 127,168	$ 125,874	$ 125,874	$ 125,874
Total Non-Operating Revenues (Expenses)	**$ 215,926**	**$ 127,168**	**$ 125,874**	**$ 125,874**	**$ 125,874**
Income Before Capital Contributions and Transfers	**$ (1,794,960)**	**$ 2,880,759**	**$ 451,370**	**$ 451,370**	**$ 451,370**
Contributions-In/(Out)	$ 94,091	$ 55,314	$ 129,971	$ 129,971	$ 129,971
Change in Net Assets	**$ (1,700,869)**	**$ 2,936,073**	**$ 581,341**	**$ 581,341**	**$ 581,341**
Net Assets - Beginning Balance	11,784,684	10,083,815		13,019,888	13,019,888
Net Assets - Ending Balance	$ 10,083,815	$ 13,019,888		$ 13,601,229	$ 13,601,229
Capital Assets	$ -	$ -	$ -	$ -	$ -

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FUND: **45840**
DEPT: **1132400000**

Name	**HR: CONCORDIA PREFERRED**
Fund Title	**ISF-Concordia Preferred Dental**
Service Activity	**PERSONNEL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 20,233	$ 10,045	$ -	$ -	$ -
Miscellaneous	4,127,756	1,585,749	-	-	-
Total Operating Revenues	**$ 4,147,989**	**$ 1,595,794**	**$ -**	**$ -**	**$ -**
Operating Expenses					
Services And Supplies	$ 314,335	$ 237,042	$ -	$ -	$ -
Other Charges	3,482,471	2,042,602	-	-	-
Total Operating Expenses	**$ 3,796,806**	**$ 2,279,644**	**$ -**	**$ -**	**$ -**
Operating Income (Loss)	**$ 351,183**	**$ (683,850)**	**$ -**	**$ -**	**$ -**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 46,455	$ 25,871	$ -	$ -	$ -
Total Non-Operating Revenues (Expenses)	**$ 46,455**	**$ 25,871**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ 397,638**	**$ (657,979)**	**$ -**	**$ -**	**$ -**
Change in Net Assets	**$ 397,638**	**$ (657,979)**	**$ -**	**$ -**	**$ -**
Net Assets - Beginning Balance	3,895,389	4,293,027		3,635,048	3,635,048
Net Assets - Ending Balance	$ 4,293,027	$ 3,635,048	$	3,635,048	$ 3,635,048

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FUND: **45860**
DEPT: **1130600000**

Name	**Delta Dental**
Fund Title	**ISF-Delta Dental Self Ins**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ -	$ 9,319	$ 2,000	$ 2,000	$ 2,000
Miscellaneous	-	3,102,818	5,126,000	5,126,000	5,126,000
Total Operating Revenues	**$ -**	**$ 3,112,137**	**$ 5,128,000**	**$ 5,128,000**	**$ 5,128,000**
Operating Expenses					
Services And Supplies	$ -	$ 172,747	$ 314,340	$ 314,340	$ 314,340
Other Charges	-	2,214,092	4,813,660	4,813,660	4,813,660
Total Operating Expenses	**$ -**	**$ 2,386,839**	**$ 5,128,000**	**$ 5,128,000**	**$ 5,128,000**
Operating Income (Loss)	**$ -**	**$ 725,298**	**$ -**	**$ -**	**$ -**
Non-Operating Revenue (Expenses)					
Total Non-Operating Revenues (Expenses)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ -**	**$ 725,298**	**$ -**	**$ -**	**$ -**
Change in Net Assets	**$ -**	**$ 725,298**	**$ -**	**$ -**	**$ -**
Net Assets - Beginning Balance	-	-		725,298	725,298
Net Assets - Ending Balance	$ -	$ 725,298		$ 725,298	$ 725,298

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FUND: **45870**
DEPT: **1132800000**

Name	**HR: FREEDOM DENTAL PLAN**
Fund Title	**ISF-Freedom Dental Plan**
Service Activity	**PERSONNEL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 3,283	$ 754	$ -	$ -	$ -
Miscellaneous	488,794	186,019	-	-	-
Total Operating Revenues	**$ 492,077**	**$ 186,773**	**$ -**	**$ -**	**$ -**
Operating Expenses					
Services And Supplies	$ 25,271	$ 12,575	$ -	$ -	$ -
Other Charges	455,738	207,149	-	-	-
Total Operating Expenses	**$ 481,009**	**$ 219,724**	**$ -**	**$ -**	**$ -**
Operating Income (Loss)	**$ 11,068**	**$ (32,951)**	**$ -**	**$ -**	**$ -**
Non-Operating Revenue (Expenses)					
Total Non-Operating Revenues (Expenses)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ 11,068**	**$ (32,951)**	**$ -**	**$ -**	**$ -**
Change in Net Assets	**$ 11,068**	**$ (32,951)**	**$ -**	**$ -**	**$ -**
Net Assets - Beginning Balance	394,204	405,272		372,321	372,321
Net Assets - Ending Balance	$ 405,272	$ 372,321	$	372,321	$ 372,321

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FUND: **45900**
DEPT: **1132600000**

Name	**HR: LOCAL ADV PLUS DENTAL**
Fund Title	**ISF-Local Adv Plus Dental**
Service Activity	**PERSONNEL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 4,477	$ 5,326	$ 6,395	$ 6,395	$ 6,395
Miscellaneous	961,433	1,010,389	1,158,927	1,158,927	1,158,927
Total Operating Revenues	**$ 965,910**	**$ 1,015,715**	**$ 1,165,322**	**$ 1,165,322**	**$ 1,165,322**
Operating Expenses					
Services And Supplies	$ 74,743	$ 75,168	$ 82,533	$ 82,533	$ 82,533
Other Charges	772,580	777,128	1,088,789	1,088,789	1,088,789
Total Operating Expenses	**$ 847,323**	**$ 852,296**	**$ 1,171,322**	**$ 1,171,322**	**$ 1,171,322**
Operating Income (Loss)	**$ 118,587**	**$ 163,419**	**$ (6,000)**	**$ (6,000)**	**$ (6,000)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 14,690	$ 8,974	$ 6,000	$ 6,000	$ 6,000
Total Non-Operating Revenues (Expenses)	**$ 14,690**	**$ 8,974**	**$ 6,000**	**$ 6,000**	**$ 6,000**
Income Before Capital Contributions and Transfers	**$ 133,277**	**$ 172,393**	**$ -**	**$ -**	**$ -**
Change in Net Assets	**$ 133,277**	**$ 172,393**	**$ -**	**$ -**	**$ -**
Net Assets - Beginning Balance	1,182,817	1,316,094		1,488,487	1,488,487
Net Assets - Ending Balance	$ 1,316,094	$ 1,488,487		$ 1,488,487	$ 1,488,487

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FUND: **45920**
DEPT: **1132500000**

Name	**HR: LOCAL ADV BLYTHE DENTAL**
Fund Title	**ISF-Local Adv Blythe Dental**
Service Activity	**PERSONNEL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 329	$ 110	$ 100	$ 100	$ 100
Miscellaneous	27,143	25,421	27,159	27,159	27,159
Total Operating Revenues	**$ 27,472**	**$ 25,531**	**$ 27,259**	**$ 27,259**	**$ 27,259**
Operating Expenses					
Services And Supplies	$ 3,406	$ 2,989	$ 3,621	$ 3,621	$ 3,621
Other Charges	21,337	17,925	23,838	23,838	23,838
Total Operating Expenses	**$ 24,743**	**$ 20,914**	**$ 27,459**	**$ 27,459**	**$ 27,459**
Operating Income (Loss)	**$ 2,729**	**$ 4,617**	**$ (200)**	**$ (200)**	**$ (200)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 535	$ 328	$ 200	$ 200	$ 200
Total Non-Operating Revenues (Expenses)	**$ 535**	**$ 328**	**$ 200**	**$ 200**	**$ 200**
Income Before Capital Contributions and Transfers	**$ 3,264**	**$ 4,945**	**$ -**	**$ -**	**$ -**
Change in Net Assets	**$ 3,264**	**$ 4,945**	**$ -**	**$ -**	**$ -**
Net Assets - Beginning Balance	45,523	48,787		53,732	53,732
Net Assets - Ending Balance	$ 48,787	$ 53,732		$ 53,732	$ 53,732

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FUND: **45960**
DEPT: **1131000000**

Name	**HR: LIABILITY INSURANCE**
Fund Title	**ISF-Liability Insurance**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Rents And Concessions	$ 5,553	$ 5,710	$ 3,000	$ 3,000	$ 3,000
Chgs For Curr Svcs-Other	-	3,246,614	-	-	-
Miscellaneous	13,001,070	14,889,831	19,554,939	19,554,939	19,554,939
Total Operating Revenues	**$ 13,006,623**	**$ 18,142,155**	**$ 19,557,939**	**$ 19,557,939**	**$ 19,557,939**
Operating Expenses					
Salaries And Benefits	$ 3,165,770	$ 3,457,752	$ 3,396,490	$ 3,396,490	$ 3,396,490
Services And Supplies	6,809,166	6,547,577	7,304,869	7,304,869	7,304,869
Other Charges	9,813,008	10,410,895	9,952,925	9,952,925	9,952,925
Total Operating Expenses	**$ 19,787,944**	**$ 20,416,224**	**$ 20,654,284**	**$ 20,654,284**	**$ 20,654,284**
Operating Income (Loss)	**$ (6,781,321)**	**$ (2,274,069)**	**$ (1,096,345)**	**$ (1,096,345)**	**$ (1,096,345)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 426,224	$ 199,870	$ 150,000	$ 150,000	$ 150,000
Total Non-Operating Revenues (Expenses)	**$ 426,224**	**$ 199,870**	**$ 150,000**	**$ 150,000**	**$ 150,000**
Income Before Capital Contributions and Transfers	**$ (6,355,097)**	**$ (2,074,199)**	**$ (946,345)**	**$ (946,345)**	**$ (946,345)**
Operating Transfers-In/(Out)	$ (798,176)	$ (283,900)	$ (753,356)	$ (753,356)	$ (753,356)
Change in Net Assets	**$ (7,153,273)**	**$ (2,358,099)**	**$ (1,699,701)**	**$ (1,699,701)**	**$ (1,699,701)**
Net Assets - Beginning Balance	11,875,989	4,722,716		2,364,617	2,364,617
Net Assets - Ending Balance	$ 4,722,716	$ 2,364,617		$ 664,916	$ 664,916
Capital Assets	$ (178,824)	$ -	$ 100,000	$ 100,000	$ 100,000

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FUND: **46000**
DEPT: **1130900000**

Name	**HR: MALPRACTICE INSURANCE**
Fund Title	**ISF-Malpractice Insurance**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Miscellaneous	$ 2,047,000	$ 244,895	$ -	$ -	$ -
Total Operating Revenues	**$ 2,047,000**	**$ 244,895**	**$ -**	**$ -**	**$ -**
Operating Expenses					
Salaries And Benefits	$ 168,169	$ 187,937	$ 184,368	$ 184,368	$ 184,368
Services And Supplies	2,784,393	1,563,033	1,900,647	1,900,647	1,900,647
Other Charges	1,190,069	2,971,957	2,413,000	2,413,000	2,413,000
Total Operating Expenses	**$ 4,142,631**	**$ 4,722,927**	**$ 4,498,015**	**$ 4,498,015**	**$ 4,498,015**
Operating Income (Loss)	**$ (2,095,631)**	**$ (4,478,032)**	**$ (4,498,015)**	**$ (4,498,015)**	**$ (4,498,015)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 229,258	$ 103,224	$ 100,000	$ 100,000	$ 100,000
Total Non-Operating Revenues (Expenses)	**$ 229,258**	**$ 103,224**	**$ 100,000**	**$ 100,000**	**$ 100,000**
Income Before Capital Contributions and Transfers	**$ (1,866,373)**	**$ (4,374,808)**	**$ (4,398,015)**	**$ (4,398,015)**	**$ (4,398,015)**
Operating Transfers-In/(Out)	$ (25,000)	$ (25,000)	$ (62,779)	$ (62,779)	$ (62,779)
Change in Net Assets	**$ (1,891,373)**	**$ (4,399,808)**	**$ (4,460,794)**	**$ (4,460,794)**	**$ (4,460,794)**
Net Assets - Beginning Balance	13,139,099	11,247,726		6,847,918	6,847,918
Net Assets - Ending Balance	$ 11,247,726	$ 6,847,918		$ 2,387,124	$ 2,387,124

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FUND: **46020**
DEPT: **1130700000**

Name	**HR: PROPERTY INSURANCE**
Fund Title	**ISF-Property Insurance Fund**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Miscellaneous	$ 6,652,287	$ 5,553,820	$ 5,553,820	$ 5,553,820	$ 5,553,820
Total Operating Revenues	**$ 6,652,287**	**$ 5,553,820**	**$ 5,553,820**	**$ 5,553,820**	**$ 5,553,820**
Operating Expenses					
Salaries And Benefits	$ 114,645	$ 128,880	$ 123,939	$ 123,939	$ 123,939
Services And Supplies	7,387,660	5,526,049	5,708,449	5,708,449	5,708,449
Total Operating Expenses	**$ 7,502,305**	**$ 5,654,929**	**$ 5,832,388**	**$ 5,832,388**	**$ 5,832,388**
Operating Income (Loss)	**$ (850,018)**	**$ (101,109)**	**$ (278,568)**	**$ (278,568)**	**$ (278,568)**
Non-Operating Revenue (Expenses)					
Total Non-Operating Revenues (Expenses)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ (850,018)**	**$ (101,109)**	**$ (278,568)**	**$ (278,568)**	**$ (278,568)**
Change in Net Assets	**$ (850,018)**	**$ (101,109)**	**$ (278,568)**	**$ (278,568)**	**$ (278,568)**
Net Assets - Beginning Balance	2,270,927	1,420,909		1,319,800	1,319,800
Net Assets - Ending Balance	$ 1,420,909	$ 1,319,800		$ 1,041,232	$ 1,041,232

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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FUND: **46040**
DEPT: **1131300000**

Name	**HR: SAFETY LOSS CONTROL**
Fund Title	**ISF-Safety Loss Control**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 667,237	$ 618,429	$ 634,010	$ 634,010	$ 634,010
Total Operating Revenues	**$ 667,237**	**$ 618,429**	**$ 634,010**	**$ 634,010**	**$ 634,010**
Operating Expenses					
Salaries And Benefits	$ 1,676,939	$ 1,685,062	$ 1,888,398	$ 1,888,398	$ 1,888,398
Services And Supplies	254,264	270,039	289,258	289,258	289,258
Other Charges	8,423	4,488	40,845	40,845	40,845
Total Operating Expenses	**$ 1,939,626**	**$ 1,959,589**	**$ 2,218,501**	**$ 2,218,501**	**$ 2,218,501**
Operating Income (Loss)	**$ (1,272,389)**	**$ (1,341,160)**	**$ (1,584,491)**	**$ (1,584,491)**	**$ (1,584,491)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 21,810	$ 10,323	$ 15,000	$ 15,000	$ 15,000
Total Non-Operating Revenues (Expenses)	**$ 21,810**	**$ 10,323**	**$ 15,000**	**$ 15,000**	**$ 15,000**
Income Before Capital Contributions and Transfers	**$ (1,250,579)**	**$ (1,330,837)**	**$ (1,569,491)**	**$ (1,569,491)**	**$ (1,569,491)**
Contributions-In/(Out)	$ 1,621,352	$ 592,800	$ 1,569,491	$ 1,569,491	$ 1,569,491
Change in Net Assets	**$ 370,773**	**$ (738,037)**	**$ -**	**$ -**	**$ -**
Net Assets - Beginning Balance	1,139,199	1,509,972		771,935	771,935
Net Assets - Ending Balance	$ 1,509,972	$ 771,935		$ 771,935	$ 771,935

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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FUND: **46060**
DEPT: **1131200000**

Name	**HR: DISABILITY INSURANCE**
Fund Title	**ISF-Std Disability Ins**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Miscellaneous	$ 3,891,116	$ 4,065,465	$ 4,856,000	$ 4,856,000	$ 4,856,000
Total Operating Revenues	**$ 3,891,116**	**$ 4,065,465**	**$ 4,856,000**	**$ 4,856,000**	**$ 4,856,000**
Operating Expenses					
Salaries And Benefits	$ 72,812	$ 69,588	$ 80,895	$ 80,895	$ 80,895
Services And Supplies	165,912	308,703	307,660	307,660	307,660
Other Charges	3,995,208	4,260,588	4,400,200	4,400,200	4,400,200
Total Operating Expenses	**$ 4,233,932**	**$ 4,638,879**	**$ 4,788,755**	**$ 4,788,755**	**$ 4,788,755**
Operating Income (Loss)	**$ (342,816)**	**$ (573,414)**	**$ 67,245**	**$ 67,245**	**$ 67,245**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 12,731	$ 3,638	$ 3,200	$ 3,200	$ 3,200
Total Non-Operating Revenues (Expenses)	**$ 12,731**	**$ 3,638**	**$ 3,200**	**$ 3,200**	**$ 3,200**
Income Before Capital Contributions and Transfers	**$ (330,085)**	**$ (569,776)**	**$ 70,445**	**$ 70,445**	**$ 70,445**
Contributions-In/(Out)	$ -	$ 400,000	$ -	$ -	$ -
Change in Net Assets	**$ (330,085)**	**$ (169,776)**	**$ 70,445**	**$ 70,445**	**$ 70,445**
Net Assets - Beginning Balance	1,155,485	825,400		655,624	655,624
Net Assets - Ending Balance	$ 825,400	$ 655,624		$ 726,069	$ 726,069

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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FUND: **46080**
DEPT: **1131100000**

Name	**HR: UNEMPLOYMENT INSURANCE**
Fund Title	**ISF-Unemployment Insurance**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Miscellaneous	$ 5,907,667	$ 8,334,413	$ 6,409,438	$ 6,409,438	$ 6,409,438
Total Operating Revenues	**$ 5,907,667**	**$ 8,334,413**	**$ 6,409,438**	**$ 6,409,438**	**$ 6,409,438**
Operating Expenses					
Services And Supplies	$ 112,355	$ 181,660	$ 238,762	$ 238,762	$ 238,762
Other Charges	5,350,873	5,334,861	5,800,000	5,800,000	5,800,000
Total Operating Expenses	**$ 5,463,228**	**$ 5,516,521**	**$ 6,038,762**	**$ 6,038,762**	**$ 6,038,762**
Operating Income (Loss)	**$ 444,439**	**$ 2,817,892**	**$ 370,676**	**$ 370,676**	**$ 370,676**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 15,989	$ 23,424	$ 16,735	$ 16,735	$ 16,735
Total Non-Operating Revenues (Expenses)	**$ 15,989**	**$ 23,424**	**$ 16,735**	**$ 16,735**	**$ 16,735**
Income Before Capital Contributions and Transfers	**$ 460,428**	**$ 2,841,316**	**$ 387,411**	**$ 387,411**	**$ 387,411**
Change in Net Assets	**$ 460,428**	**$ 2,841,316**	**$ 387,411**	**$ 387,411**	**$ 387,411**
Net Assets - Beginning Balance	479,455	939,883		3,781,199	3,781,199
Net Assets - Ending Balance	$ 939,883	$ 3,781,199		$ 4,168,610	$ 4,168,610

Revenues Tie To					sch 1. col 4
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FUND: **46100**
DEPT: **1130800000**

Name	**HR: WORKERS COMPENSATION**
Fund Title	**ISF-Workers Comp Insurance**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 256,329	$ 211,788	$ 50,859	$ 50,859	$ 50,859
Institutional Care And Svcs	17,068,999	14,679,002	21,079,002	21,079,002	21,079,002
Miscellaneous	480,903	338,688	146,000	146,000	146,000
Total Operating Revenues	**$ 17,806,231**	**$ 15,229,478**	**$ 21,275,861**	**$ 21,275,861**	**$ 21,275,861**
Operating Expenses					
Salaries And Benefits	$ 4,976,256	$ 4,320,339	$ 4,464,207	$ 4,464,207	$ 4,464,207
Services And Supplies	2,629,467	2,646,158	3,021,027	3,021,027	3,021,027
Other Charges	13,811,944	14,527,290	23,785,997	23,785,997	23,785,997
Intrafund Transfers	32,179	-	919,566	919,566	919,566
Total Operating Expenses	**$ 21,449,846**	**$ 21,493,787**	**$ 32,190,797**	**$ 32,190,797**	**$ 32,190,797**
Operating Income (Loss)	**$ (3,643,615)**	**$ (6,264,309)**	**$ (10,914,936)**	**$ (10,914,936)**	**$ (10,914,936)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 1,199,490	$ 630,266	$ 725,000	$ 725,000	$ 725,000
Total Non-Operating Revenues (Expenses)	**$ 1,199,490**	**$ 630,266**	**$ 725,000**	**$ 725,000**	**$ 725,000**
Income Before Capital Contributions and Transfers	**$ (2,444,125)**	**$ (5,634,043)**	**$ (10,189,936)**	**$ (10,189,936)**	**$ (10,189,936)**
Operating Transfers-In/(Out)	$ (1,859,006)	$ (1,683,900)	$ (1,858,967)	$ (1,858,967)	$ (1,858,967)
Change in Net Assets	**$ (4,303,131)**	**$ (7,317,943)**	**$ (12,048,903)**	**$ (12,048,903)**	**$ (12,048,903)**
Capital Assets	$ (174,821)	$ -	$ 25,000	$ 25,000	$ 25,000

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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FUND: **46100**
DEPT: **1132200000**

Name	**HR: EMPLOYEE ASSISTANCE PROG**
Fund Title	**ISF-Workers Comp Insurance**
Service Activity	**PERSONNEL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 52,523	$ 80,818	$ 161,470	$ 161,470	$ 161,470
Total Operating Revenues	**$ 52,523**	**$ 80,818**	**$ 161,470**	**$ 161,470**	**$ 161,470**
Operating Expenses					
Salaries And Benefits	$ 595,461	$ 784,873	$ 928,097	$ 928,097	$ 928,097
Services And Supplies	205,616	251,134	152,939	156,939	156,939
Intrafund Transfers	-	-	(919,566)	(919,566)	(919,566)
Total Operating Expenses	**$ 801,077**	**$ 1,036,007**	**$ 161,470**	**$ 165,470**	**$ 165,470**
Operating Income (Loss)	**$ (748,554)**	**$ (955,189)**	**$ -**	**$ (4,000)**	**$ (4,000)**
Non-Operating Revenue (Expenses)					
Total Non-Operating Revenues (Expenses)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ (748,554)**	**$ (955,189)**	**$ -**	**$ (4,000)**	**$ (4,000)**
Change in Net Assets	**$ (748,554)**	**$ (955,189)**	**$ -**	**$ (4,000)**	**$ (4,000)**

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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FUND: **46120**
DEPT: **1132900000**

Name	**HR: OCCUPATNL HLTH _ WELFARE**
Fund Title	**ISF-Occupational Health & Well**
Service Activity	**PERSONNEL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 369,570	$ 483,727	$ 476,450	$ 476,450	$ 476,450
Health Fees	1,499,193	2,087,871	1,500,000	1,500,000	1,500,000
Miscellaneous	200,000	557,171	666,690	666,690	666,690
Total Operating Revenues	**$ 2,068,763**	**$ 3,128,769**	**$ 2,643,140**	**$ 2,643,140**	**$ 2,643,140**
Operating Expenses					
Salaries And Benefits	$ 1,911,990	$ 2,252,960	$ 2,419,682	$ 2,419,682	$ 2,419,682
Services And Supplies	959,234	1,268,638	1,611,331	1,611,331	1,611,331
Other Charges	4,964	-	8,000	8,000	8,000
Total Operating Expenses	**$ 2,876,188**	**$ 3,521,598**	**$ 4,039,013**	**$ 4,039,013**	**$ 4,039,013**
Operating Income (Loss)	**$ (807,425)**	**$ (392,829)**	**$ (1,395,873)**	**$ (1,395,873)**	**$ (1,395,873)**
Non-Operating Revenue (Expenses)					
Total Non-Operating Revenues (Expenses)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ (807,425)**	**$ (392,829)**	**$ (1,395,873)**	**$ (1,395,873)**	**$ (1,395,873)**
Contributions-In/(Out)	$ 1,060,830	$ 1,000,000	$ 1,395,873	$ 1,395,873	$ 1,395,873
Change in Net Assets	**$ 253,405**	**$ 607,171**	**$ -**	**$ -**	**$ -**
Net Assets - Beginning Balance	832,645	1,086,050		1,693,221	1,693,221
Net Assets - Ending Balance	$ 1,086,050	$ 1,693,221		$ 1,693,221	$ 1,693,221

Revenues Tie To					sch 1. col 4
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FUND: **47000**
DEPT: **1131800000**

Name	**HR: TEMP ASSISTANCE POOL**
Fund Title	**Temporary Assistance Pool**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 19,182,481	$ 13,499,344	$ 3,662,850	$ 3,662,850	$ 3,662,850
Law Enforcement Services	97,042	124,725	97,000	97,000	97,000
Miscellaneous	2,803	4,743	-	-	-
Total Operating Revenues	**$ 19,282,326**	**$ 13,628,812**	**$ 3,759,850**	**$ 3,759,850**	**$ 3,759,850**
Operating Expenses					
Salaries And Benefits	$ 14,814,553	$ 11,048,521	$ 2,655,595	$ 2,655,595	$ 2,655,595
Services And Supplies	2,248,864	2,664,773	2,223,255	2,223,255	2,223,255
Other Charges	2,218	2,218	2,000	2,000	2,000
Total Operating Expenses	**$ 17,065,635**	**$ 13,715,512**	**$ 4,880,850**	**$ 4,880,850**	**$ 4,880,850**
Operating Income (Loss)	**$ 2,216,691**	**$ (86,700)**	**$ (1,121,000)**	**$ (1,121,000)**	**$ (1,121,000)**
Non-Operating Revenue (Expenses)					
Total Non-Operating Revenues (Expenses)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ 2,216,691**	**$ (86,700)**	**$ (1,121,000)**	**$ (1,121,000)**	**$ (1,121,000)**
Operating Transfers-In/(Out)	$ (500,000)	$ (740,000)	$ (879,000)	$ (879,000)	$ (879,000)
Change in Net Assets	**$ 1,716,691**	**$ (826,700)**	**$ (2,000,000)**	**$ (2,000,000)**	**$ (2,000,000)**
Net Assets - Beginning Balance	3,200,286	4,916,977		4,090,277	4,090,277
Net Assets - Ending Balance	$ 4,916,977	$ 4,090,277		$ 2,090,277	$ 2,090,277

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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FUND: **45500**
DEPT: **7400100000**

Name	**IT: INFORMATION TECHNOLOGY**
Fund Title	**ISF-Information Technology**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Auditing And Accounting Fees	$ 890,310	$ 788,741	$ 1,041,019	$ 1,041,019	$ 1,041,019
Chgs For Curr Svcs-Other	2,760,121	2,319,208	1,784,357	1,784,357	1,784,357
Communication Services	30,428,354	28,227,740	28,796,324	28,796,324	28,796,324
Planning And Engineering Svcs	29,627	17,276	-	-	-
Miscellaneous	1,177	(6,161,420)	-	-	-
Other Sales	-	7,536	-	-	-
Total Operating Revenues	**$ 34,109,589**	**$ 25,199,081**	**$ 31,621,700**	**$ 31,621,700**	**$ 31,621,700**
Operating Expenses					
Salaries And Benefits	$ 20,298,999	$ 20,197,326	$ 21,505,616	$ 21,505,616	$ 21,505,616
Services And Supplies	8,454,383	10,081,260	11,890,379	11,890,379	11,890,379
Other Charges	3,667,765	3,024,898	2,825,032	2,825,032	2,825,032
Total Operating Expenses	**$ 32,421,147**	**$ 33,303,484**	**$ 36,221,027**	**$ 36,221,027**	**$ 36,221,027**
Operating Income (Loss)	**$ 1,688,442**	**$ (8,104,403)**	**$ (4,599,327)**	**$ (4,599,327)**	**$ (4,599,327)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 174,651	$ 100,677	$ -	$ -	$ -
Loss or Gain Sale Fixed Assets	(13,649)	(12,902)	-	-	-
Total Non-Operating Revenues (Expenses)	**$ 161,002**	**$ 87,775**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ 1,849,444**	**$ (8,016,628)**	**$ (4,599,327)**	**$ (4,599,327)**	**$ (4,599,327)**
Change in Net Assets	**$ 1,849,444**	**$ (8,016,628)**	**$ (4,599,327)**	**$ (4,599,327)**	**$ (4,599,327)**
Net Assets - Beginning Balance	18,138,365	19,987,809		11,971,181	11,971,181
Net Assets - Ending Balance	$ 19,987,809	$ 11,971,181		$ 7,371,854	$ 7,371,854
Capital Assets	$ -	$ -	$ -	$ -	$ -

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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FUND: **45510**
DEPT: **7400400000**

Name	**RCIT: PASS THRU**
Fund Title	**RCIT Pass Thru**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Total Operating Revenues	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Operating Expenses					
Services And Supplies	$ (5,000)	$ -	$ 17,000,000	$ 17,000,000	$ 17,000,000
Intrafund Transfers	-	-	(17,000,000)	(17,000,000)	(17,000,000)
Total Operating Expenses	**$ (5,000)**	**$ -**	**$ -**	**$ -**	**$ -**
Operating Income (Loss)	**$ 5,000**	**$ -**	**$ -**	**$ -**	**$ -**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 1,716	$ -	$ -	$ -	$ -
Total Non-Operating Revenues (Expenses)	**$ 1,716**	**$ -**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ 6,716**	**$ -**	**$ -**	**$ -**	**$ -**
Change in Net Assets	**$ 6,716**	**$ -**	**$ -**	**$ -**	**$ -**
Net Assets - Beginning Balance	(6,698)	18		18	18
Net Assets - Ending Balance	$ 18	$ 18	$	18	$ 18

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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FUND: **45420**
DEPT: **1109200000**

Name	**OASIS: FINANCIALS**
Fund Title	**OnlineAdmSvcsInfoSys(OASIS)**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 6,758,467	$ 5,987,073	$ 5,839,138	$ 5,839,138	$ 5,839,138
Miscellaneous	5,933	1,409	-	-	-
Total Operating Revenues	**$ 6,764,400**	**$ 5,988,482**	**$ 5,839,138**	**$ 5,839,138**	**$ 5,839,138**
Operating Expenses					
Salaries And Benefits	$ 4,711,721	$ 4,454,289	$ 4,786,568	$ 4,786,568	$ 4,786,568
Services And Supplies	1,977,062	1,753,010	2,070,591	2,070,591	2,070,591
Other Charges	396,757	775,444	1,197,557	1,197,557	1,197,557
Total Operating Expenses	**$ 7,085,540**	**$ 6,982,743**	**$ 8,054,716**	**$ 8,054,716**	**$ 8,054,716**
Operating Income (Loss)	**$ (321,140)**	**$ (994,261)**	**$ (2,215,578)**	**$ (2,215,578)**	**$ (2,215,578)**
Non-Operating Revenue (Expenses)					
Interest-Departmental	$ -	$ -	$ 8,000	$ 8,000	$ 8,000
Total Non-Operating Revenues (Expenses)	**$ -**	**$ -**	**$ 8,000**	**$ 8,000**	**$ 8,000**
Income Before Capital Contributions and Transfers	**$ (321,140)**	**$ (994,261)**	**$ (2,207,578)**	**$ (2,207,578)**	**$ (2,207,578)**
Change in Net Assets	**$ (321,140)**	**$ (994,261)**	**$ (2,207,578)**	**$ (2,207,578)**	**$ (2,207,578)**
Capital Assets	$ -	$ (128,670)	$ 151,333	$ 151,333	$ 151,333

Revenues Tie To					sch 1. col 4
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FUND: **45420**
DEPT: **1109300000**

Name	**OASIS: HRMS**
Fund Title	**OnlineAdmSvcsInfoSys(OASIS)**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ❑	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 4,577,864	$ 4,644,535	$ 4,625,468	$ 4,625,468	$ 4,625,468
Miscellaneous	5,897	535	-	-	-
Total Operating Revenues	**$ 4,583,761**	**$ 4,645,070**	**$ 4,625,468**	**$ 4,625,468**	**$ 4,625,468**
Operating Expenses					
Salaries And Benefits	$ 2,344,889	$ 2,450,933	$ 2,649,141	$ 2,649,141	$ 2,649,141
Services And Supplies	1,674,895	1,409,736	1,550,935	1,550,935	1,550,935
Other Charges	688,506	371,389	700,558	700,558	700,558
Total Operating Expenses	**$ 4,708,290**	**$ 4,232,058**	**$ 4,900,634**	**$ 4,900,634**	**$ 4,900,634**
Operating Income (Loss)	**$ (124,529)**	**$ 413,012**	**$ (275,166)**	**$ (275,166)**	**$ (275,166)**
Non-Operating Revenue (Expenses)					
Interest-Departmental	$ -	$ -	$ 8,000	$ 8,000	$ 8,000
Total Non-Operating Revenues (Expenses)	**$ -**	**$ -**	**$ 8,000**	**$ 8,000**	**$ 8,000**
Income Before Capital Contributions and Transfers	**$ (124,529)**	**$ 413,012**	**$ (267,166)**	**$ (267,166)**	**$ (267,166)**
Change in Net Assets	**$ (124,529)**	**$ 413,012**	**$ (267,166)**	**$ (267,166)**	**$ (267,166)**
Net Assets - Beginning Balance	2,479,923	2,355,394		2,768,406	2,768,406
Net Assets - Ending Balance	$ 2,355,394	$ 2,768,406		$ 2,501,240	$ 2,501,240
Capital Assets	$ -	$ 128,671	$ 85,666	$ 85,666	$ 85,666

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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Schedule 10

FUND: **45300**
DEPT: **7300500000**

Name	**PURCHASING: FLEET SERVICES**
Fund Title	**ISF-Automotive Maintenance**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 32,778,789	$ 31,951,227	$ 29,904,887	$ 29,904,887	$ 29,904,887
Miscellaneous	335,778	14,034	332,000	332,000	332,000
Other Sales	-	-	1,000	1,000	1,000
Total Operating Revenues	**$ 33,114,567**	**$ 31,965,261**	**$ 30,237,887**	**$ 30,237,887**	**$ 30,237,887**
Operating Expenses					
Salaries And Benefits	$ 3,983,572	$ 3,784,011	$ 3,927,616	$ 3,927,616	$ 3,927,616
Services And Supplies	12,254,357	15,038,793	15,764,037	15,764,037	15,764,037
Other Charges	13,411,844	11,105,403	19,093,268	19,093,268	19,093,268
Total Operating Expenses	**$ 29,649,773**	**$ 29,928,207**	**$ 38,784,921**	**$ 38,784,921**	**$ 38,784,921**
Operating Income (Loss)	**$ 3,464,794**	**$ 2,037,054**	**$ (8,547,034)**	**$ (8,547,034)**	**$ (8,547,034)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 74,165	$ 44,099	$ 51,000	$ 51,000	$ 51,000
Loss or Gain Sale Fixed Assets	(506,175)	(26,030)	-	-	-
Sale Of Automotive Equipment	398,845	(18,467)	320,000	320,000	320,000
Total Non-Operating Revenues (Expenses)	**$ (33,165)**	**$ (398)**	**$ 371,000**	**$ 371,000**	**$ 371,000**
Income Before Capital Contributions and Transfers	**$ 3,431,629**	**$ 2,036,656**	**$ (8,176,034)**	**$ (8,176,034)**	**$ (8,176,034)**
Change in Net Assets	**$ 3,431,629**	**$ 2,036,656**	**$ (8,176,034)**	**$ (8,176,034)**	**$ (8,176,034)**
Net Assets - Beginning Balance	17,829,370	21,260,999		23,297,655	23,297,655
Net Assets - Ending Balance	$ 21,260,999	$ 23,297,655		$ 15,121,621	$ 15,121,621
Capital Assets	$ -	$ -	$ 1,076,000	$ 1,076,000	$ 1,076,000

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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Schedule 10

FUND: **45600**
DEPT: **7300300000**

Name	**PURCHASING: PRINTING**
Fund Title	**ISF-Printing Services**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	$ 3,696,547	$ 3,521,387	$ 3,544,296	$ 3,544,296	$ 3,544,296
Miscellaneous	4,096	426	-	-	-
Total Operating Revenues	**$ 3,700,643**	**$ 3,521,813**	**$ 3,544,296**	**$ 3,544,296**	**$ 3,544,296**
Operating Expenses					
Salaries And Benefits	$ 1,481,470	$ 1,407,949	$ 1,452,309	$ 1,452,309	$ 1,452,309
Services And Supplies	1,603,006	1,696,558	1,999,274	1,999,274	1,999,274
Other Charges	272,594	272,998	379,973	379,973	379,973
Total Operating Expenses	**$ 3,357,070**	**$ 3,377,505**	**$ 3,831,556**	**$ 3,831,556**	**$ 3,831,556**
Operating Income (Loss)	**$ 343,573**	**$ 144,308**	**$ (287,260)**	**$ (287,260)**	**$ (287,260)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 10,790	$ 8,097	$ 4,500	$ 4,500	$ 4,500
Loss or Gain Sale Fixed Assets	-	39,329	-	-	-
Total Non-Operating Revenues (Expenses)	**$ 10,790**	**$ 47,426**	**$ 4,500**	**$ 4,500**	**$ 4,500**
Income Before Capital Contributions and Transfers	**$ 354,363**	**$ 191,734**	**$ (282,760)**	**$ (282,760)**	**$ (282,760)**
Change in Net Assets	**$ 354,363**	**$ 191,734**	**$ (282,760)**	**$ (282,760)**	**$ (282,760)**
Net Assets - Beginning Balance	1,393,974	1,748,337		1,940,071	1,940,071
Net Assets - Ending Balance	$ 1,748,337	$ 1,940,071		$ 1,657,311	$ 1,657,311
Capital Assets	$ -	$ -	$ 270,000	$ 270,000	$ 270,000

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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Schedule 10

FUND: **45620**
DEPT: **7300600000**

Name	**CENTRAL MAIL SERVICES-ISF**
Fund Title	**ISF-Central Mail Services**
Service Activity	**COMMUNICATION**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Chgs For Curr Svcs-Other	1,399,539	930,294	1,832,329	1,832,329	1,832,329
Miscellaneous	2,470,749	2,203,792	2,409,269	2,409,269	2,409,269
Total Operating Revenues	**$ 3,870,288**	**$ 3,134,086**	**$ 4,241,598**	**$ 4,241,598**	**$ 4,241,598**
Operating Expenses					
Salaries And Benefits	$ 520,028	$ 487,124	$ 524,431	$ 524,431	$ 524,431
Services And Supplies	3,366,750	2,782,353	3,712,983	3,712,983	3,712,983
Other Charges	14,932	28,294	18,556	18,556	18,556
Total Operating Expenses	**$ 3,901,710**	**$ 3,297,771**	**$ 4,255,970**	**$ 4,255,970**	**$ 4,255,970**
Operating Income (Loss)	**$ (31,422)**	**$ (163,685)**	**$ (14,372)**	**$ (14,372)**	**$ (14,372)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 14,007	$ 6,317	$ 4,500	$ 4,500	$ 4,500
Total Non-Operating Revenues (Expenses)	**$ 14,007**	**$ 6,317**	**$ 4,500**	**$ 4,500**	**$ 4,500**
Income Before Capital Contributions and Transfers	**$ (17,415)**	**$ (157,368)**	**$ (9,872)**	**$ (9,872)**	**$ (9,872)**
Change in Net Assets	**$ (17,415)**	**$ (157,368)**	**$ (9,872)**	**$ (9,872)**	**$ (9,872)**
Net Assets - Beginning Balance	1,554,251	1,536,836		1,379,468	1,379,468
Net Assets - Ending Balance	$ 1,536,836	$ 1,379,468		$ 1,369,596	$ 1,369,596
Capital Assets	$ -	$ -	$ 60,000	$ 60,000	$ 60,000

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

State Controller Schedules
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Schedule 10

FUND: **45700**
DEPT: **7300400000**

Name	**PURCHASING: SUPPLY SERVICES**
Fund Title	**ISF-Supply Services**
Service Activity	**OTHER GENERAL**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Rents And Concessions	$ -	$ -	$ 25,000	$ 25,000	$ 25,000
Chgs For Curr Svcs-Other	8,046,368	8,238,438	9,050,938	9,050,938	9,050,938
Miscellaneous	5,221,974	2,861,305	4,249,500	4,249,500	4,249,500
Other Sales	106,421	121,723	163,000	163,000	163,000
Total Operating Revenues	**$ 13,374,763**	**$ 11,221,466**	**$ 13,488,438**	**$ 13,488,438**	**$ 13,488,438**
Operating Expenses					
Salaries And Benefits	$ 831,557	$ 765,115	$ 823,102	$ 823,102	$ 823,102
Services And Supplies	12,664,490	10,743,529	12,702,570	12,702,570	12,702,570
Other Charges	33,626	28,154	27,533	27,533	27,533
Total Operating Expenses	**$ 13,529,673**	**$ 11,536,798**	**$ 13,553,205**	**$ 13,553,205**	**$ 13,553,205**
Operating Income (Loss)	**$ (154,910)**	**$ (315,332)**	**$ (64,767)**	**$ (64,767)**	**$ (64,767)**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 33,680	$ 15,016	$ 7,000	$ 7,000	$ 7,000
Total Non-Operating Revenues (Expenses)	**$ 33,680**	**$ 15,016**	**$ 7,000**	**$ 7,000**	**$ 7,000**
Income Before Capital Contributions and Transfers	**$ (121,230)**	**$ (300,316)**	**$ (57,767)**	**$ (57,767)**	**$ (57,767)**
Change in Net Assets	**$ (121,230)**	**$ (300,316)**	**$ (57,767)**	**$ (57,767)**	**$ (57,767)**
Net Assets - Beginning Balance	4,025,728	3,904,498		3,604,182	3,604,182
Net Assets - Ending Balance	$ 3,904,498	$ 3,604,182		$ 3,546,415	$ 3,546,415
Capital Assets	$ -	$ -	$ 62,130	$ 62,130	$ 62,130

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

SYCAMORE CREEK

State Controller Schedules
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County of Riverside
Operation of Enterprise Fund
Fiscal Year 2011-12

Schedule 11

FUND: **40050**
DEPT: **4300100000**

Name	**RCRMC: MEDICAL CENTER**
Fund Title	**RCRMC**
Service Activity	**HOSPITAL CARE**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Rents And Concessions	$ 682,940	$ 658,142	$ 761,573	$ 761,573	$ 761,573
State	123,100,111	199,509,633	253,965,803	253,965,803	253,965,803
Federal	309,397	455,829	279,494	279,494	279,494
California Children'S Services	27,457,965	23,785,313	4,802,347	4,802,347	4,802,347
Chgs For Curr Svcs-Other	245	190	223	223	223
Educational Services	18,516	16,687	14,304	14,304	14,304
Health Fees	1,883,577	412,125	554,244	554,244	554,244
Institutional Care And Svcs	1,362,658,569	1,413,567,818	190,801,674	190,801,674	190,801,674
Sanitation Services	(1,162,977,459)	(1,243,315,298)	-	-	-
Miscellaneous	2,810,010	3,936,808	2,091,870	2,091,870	2,091,870
Tobacco Tax Settlement	10,000,000	-	10,000,000	10,000,000	10,000,000
Total Operating Revenues	**$ 365,943,871**	**$ 399,027,247**	**$ 463,271,532**	**$ 463,271,532**	**$ 463,271,532**
Operating Expenses					
Salaries And Benefits	$ 211,839,082	$ 223,628,095	$ 245,592,267	$ 245,592,267	$ 245,592,267
Services And Supplies	151,105,096	152,771,021	163,856,779	163,856,779	163,856,779
Other Charges	22,955,547	23,032,957	27,110,445	27,110,445	27,110,445
Total Operating Expenses	**$ 385,899,725**	**$ 399,432,073**	**$ 436,559,491**	**$ 436,559,491**	**$ 436,559,491**
Operating Income (Loss)	**$ (19,955,854)**	**$ (404,826)**	**$ 26,712,041**	**$ 26,712,041**	**$ 26,712,041**
Non-Operating Revenue (Expenses)					
Interest-Invested Funds	$ 234,942	$ 191,078	$ 140,000	$ 140,000	$ 140,000
Loss or Gain Sale Fixed Assets	(9,475)	(262,776)	-	-	-
Total Non-Operating Revenues (Expenses)	**$ 225,467**	**$ (71,698)**	**$ 140,000**	**$ 140,000**	**$ 140,000**
Income Before Capital Contributions and Transfers	**$ (19,730,387)**	**$ (476,524)**	**$ 26,852,041**	**$ 26,852,041**	**$ 26,852,041**
Operating Transfers-In/(Out)	$ 4,730,339	$ 4,585,296	$ (71,434,971)	$ (71,434,971)	$ (71,434,971)
Contributions-In/(Out)	$ 7,017,231	$ 10,000,000	$ 5,000,000	$ 5,000,000	$ 5,000,000
Change in Net Assets	$ (7,982,817)	$ 14,108,772	$ (39,582,930)	$ (39,582,930)	$ (39,582,930)
Net Assets - Beginning Balance	86,193,764	78,210,947		92,319,719	92,319,719
Net Assets - Ending Balance	$ 78,210,947	$ 92,319,719		$ 52,736,789	$ 52,736,789
Capital Assets	$ (32,262)	$ (1)	$ 21,716,555	$ 21,716,555	$ 21,716,555

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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Schedule 11

FUND: **40200**
DEPT: **4500100000**

Name	**WASTE: DISPOSAL ENTERPRISE**
Fund Title	**Waste Management**
Service Activity	**SANITATION**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐		2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3			4	5
Operating Revenues						
Other Court Fines	$ 622,619	$ -	$	-	$ -	$ -
Rents And Concessions	247,659	255,952		255,000	255,000	255,000
State	396,687	212,175		300,000	300,000	300,000
Chgs For Curr Svcs-Other	125,974	48,758		115,000	115,000	115,000
Health Fees	999,851	1,010,828		600,000	600,000	600,000
Planning And Engineering Svcs	81,766	88,626		71,000	71,000	71,000
Sanitation Services	48,476,216	48,522,077		52,550,892	52,550,892	52,550,892
Miscellaneous	664,598	983,573		415,000	415,000	415,000
Other Sales	197,964	84,322		60,300	60,300	60,300
Total Operating Revenues	**$ 51,813,334**	**$ 51,206,311**	**$**	**54,367,192**	**$ 54,367,192**	**$ 54,367,192**
Operating Expenses						
Salaries And Benefits	$ -	$ 12,776,008	$	14,041,362	$ 15,312,427	$ 15,312,427
Services And Supplies	-	37,275,000		31,300,650	31,300,650	31,300,650
Other Charges	-	5,549,338		4,730,000	4,730,000	4,730,000
Intrafund Transfers	-	-		(4,730,000)	(4,730,000)	(4,730,000)
Total Operating Expenses	**$ -**	**$ 55,600,346**	**$**	**45,342,012**	**$ 46,613,077**	**$ 46,613,077**
Operating Income (Loss)	**$ 51,813,334**	**$ (4,394,035)**	**$**	**9,025,180**	**$ 7,754,115**	**$ 7,754,115**
Non-Operating Revenue (Expenses)						
Interest-Invested Funds	$ 1,575,275	$ 883,561	$	500,000	$ 500,000	$ 500,000
Interest-Other	30	-		-	-	-
Loss or Gain Sale Fixed Assets	315,342	(8,556)		-	-	-
Sale Of Equipment	347,400	129,004		100,000	100,000	100,000
Total Non-Operating Revenues (Expenses)	**$ 2,238,047**	**$ 1,004,009**	**$**	**600,000**	**$ 600,000**	**$ 600,000**
Income Before Capital Contributions and Transfers	**$ 54,051,381**	**$ (3,390,026)**	**$**	**9,625,180**	**$ 8,354,115**	**$ 8,354,115**
Change in Net Assets	$ 54,051,381	$ (3,390,026)	$	9,625,180	$ 8,354,115	$ 8,354,115
Net Assets - Beginning Balance	132,420,751	186,472,132			183,082,106	183,082,106
Net Assets - Ending Balance	$ 186,472,132	$ 183,082,106			$ 191,436,221	$ 191,436,221
Capital Assets	$ -	$ 1	$	18,494,100	$ 18,494,100	$ 18,494,100

Revenues Tie To					sch 1. col 4
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Schedule 11

FUND: **40600**
DEPT: **1900400000**

Name	**EDA: HOUSING AUTHORITY**
Fund Title	**Housing Authority (County)**
Service Activity	**AID PROGRAMS**

Operating Detail	2009-10 Actual	2010-11 Actual ☑ Estimated ☐	2011-12 Requested	2011-12 Recommended	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Operating Revenues					
Federal	$ 7,296,165	$ 8,767,134	$ 11,438,555	$ 11,438,555	$ 11,438,555
Total Operating Revenues	**$ 7,296,165**	**$ 8,767,134**	**$ 11,438,555**	**$ 11,438,555**	**$ 11,438,555**
Operating Expenses					
Salaries And Benefits	$ 6,999,042	$ 8,304,522	$ 10,071,041	$ 10,071,041	$ 10,071,041
Services And Supplies	339,229	299,919	1,367,514	1,367,514	1,367,514
Total Operating Expenses	**$ 7,338,271**	**$ 8,604,441**	**$ 11,438,555**	**$ 11,438,555**	**$ 11,438,555**
Operating Income (Loss)	**$ (42,106)**	**$ 162,693**	**$ -**	**$ -**	**$ -**
Non-Operating Revenue (Expenses)					
Total Non-Operating Revenues (Expenses)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Income Before Capital Contributions and Transfers	**$ (42,106)**	**$ 162,693**	**$ -**	**$ -**	**$ -**
Change in Net Assets	$ (42,106)	$ 162,693	$ -	$ -	$ -
Net Assets - Beginning Balance	20,389,750	20,347,644		20,510,337	20,510,337
Net Assets - Ending Balance	$ 20,347,644	$ 20,510,337		$ 20,510,337	$ 20,510,337

Revenues Tie To					sch 1. col 4
Expenses Tie To					sch 1. col 6

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FAMILY LAW
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State Controller Schedules
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County of Riverside
Special Districts and Other Agencies Summary
Fiscal Year 2011-12

Schedule 12

Actual ☑
Estimated ❑

District Name	Total Financing Sources				Total Financing Uses		
	Fund Balance Unreserved/ Undesignated June 30, 2011	Decreases to Reserves/ Designations	Additional Financing Sources	Total Financing Sources	Financing Uses	Increases to Reserves/ Designations	Total Financing Uses
1	2	3	4	5	6	7	8
Capital Finance & Admin							
35900 CORAL	$ -	$ -	$ 79,595,521	$ 79,595,521	$ 79,595,521	$ -	$ 79,595,521
Total Capital Finance & Admin	**$ -**	**$ -**	**$ 79,595,521**	**$ 79,595,521**	**$ 79,595,521**	**$ -**	**$ 79,595,521**
Community Redvelopment							
25000 RDA Housing Set Aside	$ -	$ -	$ 59,616,138	$ 59,616,138	$ 59,616,138	$ -	$ 59,616,138
32700 RDA Capital Projects	-	-	191,300,278	191,300,278	191,300,278	-	191,300,278
37100 RDA Debt Service	-	-	115,096,830	115,096,830	115,096,830	-	115,096,830
Total Community Redvelopment	**$ -**	**$ -**	**$ 366,013,246**	**$ 366,013,246**	**$ 366,013,246**	**$ -**	**$ 366,013,246**
County Service Areas							
23025 Co Service Area #001	$ -	$ -	$ 4,864	$ 4,864	$ 4,864	$ -	$ 4,864
23100 Co Service Area #013	-	-	4,517	4,517	4,517	-	4,517
23125 Co Service Area #015	-	-	9,468	9,468	9,468	-	9,468
23200 Co Service Area #021	-	-	11,861	11,861	11,861	-	11,861
23225 Co Service Area #022	-	-	20,943	20,943	20,943	-	20,943
23300 Co Service Area #027	-	-	34,410	34,410	34,410	-	34,410
23375 CSA #36 Idyllwild Ltg-P&R	-	-	442,063	442,063	442,063	-	442,063
23400 Co Service Area #038	-	-	153,994	153,994	153,994	-	153,994
23425 Co Service Area #041	-	-	820,241	820,241	820,241	-	820,241
23450 Co Service Area #041b	-	-	304	304	304	-	304
23475 Co Service Area #043	-	-	28,661	28,661	28,661	-	28,661
23500 Co Service Area #047	-	-	7,430	7,430	7,430	-	7,430
23525 Co Service Area #051	-	-	724,336	724,336	724,336	-	724,336
23575 Co Service Area #053	-	-	4,776	4,776	4,776	-	4,776
23600 Co Service Area #059	-	-	5,619	5,619	5,619	-	5,619
23625 Co Service Area #060	-	-	334,034	334,034	334,034	-	334,034
23675 Co Service Area #069	-	-	143,641	143,641	143,641	-	143,641
23700 Co Service Area #070	-	-	39,652	39,652	39,652	-	39,652
23725 Co Service Area #072	-	-	5,476	5,476	5,476	-	5,476

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District Name	Total Financing Sources				Total Financing Uses		
	Fund Balance Unreserved/ Undesignated June 30, 2011	Decreases to Reserves/ Designations	Additional Financing Sources	Total Financing Sources	Financing Uses	Increases to Reserves/ Designations	Total Financing Uses
1	2	3	4	5	6	7	8
23750 Co Service Area #073	$ -	$ -	$ 2,939	$ 2,939	$ 2,939	$ -	$ 2,939
23775 Co Service Area #080	-	-	53,354	53,354	53,354	-	53,354
23825 Co Service Area #084	-	-	99,458	99,458	99,458	-	99,458
23850 Co Service Area #085	-	-	224,566	224,566	224,566	-	224,566
23900 Co Service Area #087	-	-	38,837	38,837	38,837	-	38,837
23925 Co Service Area #089	-	-	28,512	28,512	28,512	-	28,512
23950 Co Service Area #091	-	-	147,934	147,934	147,934	-	147,934
24025 Co Service Area #094	-	-	3,511	3,511	3,511	-	3,511
24050 Co Service Area #097	-	-	72,039	72,039	72,039	-	72,039
24075 Co Service Area #103	-	-	368,177	368,177	368,177	-	368,177
24100 CSA #104 Sky Valley	-	-	163,528	163,528	163,528	-	163,528
24125 Co Service Area #105	-	-	221,020	221,020	221,020	-	221,020
24150 Co Service Area #108	-	-	83,453	83,453	83,453	-	83,453
24175 Co Service Area #113	-	-	10,050	10,050	10,050	-	10,050
24200 Co Service Area #115	-	-	41,978	41,978	41,978	-	41,978
24225 Co Service Area #117	-	-	26,838	26,838	26,838	-	26,838
24250 Co Service Area #121	-	-	434,125	434,125	434,125	-	434,125
24275 Co Service Area #124	-	-	3,784	3,784	3,784	-	3,784
24300 Co Service Area #125	-	-	15,234	15,234	15,234	-	15,234
24325 Co Service Area #126	-	-	247,286	247,286	247,286	-	247,286
24350 Co Service Area #128 East	-	-	263,385	263,385	263,385	-	263,385
24375 Co Service Area #128 West	-	-	42,861	42,861	42,861	-	42,861
24400 Co Service Area #132	-	-	184,794	184,794	184,794	-	184,794
24425 Co Service Area #134	-	-	1,262,854	1,262,854	1,262,854	-	1,262,854
24450 Co Service Area #135	-	-	19,471	19,471	19,471	-	19,471
24525 Co Service Area #142	-	-	12,149	12,149	12,149	-	12,149
24550 CSA #143a Warner Sprg Subzone1	-	-	1,819,892	1,819,892	1,819,892	-	1,819,892
24575 Co Service Area #145	-	-	4,591	4,591	4,591	-	4,591
24600 Co Service Area #149 Wine Cou	-	-	390,206	390,206	390,206	-	390,206
24625 Co Service Area #152 NPDES	-	-	6,371,676	6,371,676	6,371,676	-	6,371,676
24630 LMD 2006-1 Wildomar	-	-	-	-	-	-	-

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District Name	Total Financing Sources				Total Financing Uses		
	Fund Balance Unreserved/ Undesignated June 30, 2011	Decreases to Reserves/ Designations	Additional Financing Sources	Total Financing Sources	Financing Uses	Increases to Reserves/ Designations	Total Financing Uses
1	2	3	4	5	6	7	8
24800 Co Service Area #146	$ -	$ -	$ 9,034	$ 9,034	$ 9,034	$ -	$ 9,034
24825 CSA #149 Wine Country Beautif	-	-	69,850	69,850	69,850	-	69,850
24875 CSA #152 Sports Facility	-	-	477,085	477,085	477,085	-	477,085
31550 Co Service Area #143 Qmby	-	-	2,007,929	2,007,929	2,007,929	-	2,007,929
31555 CSA #145 Quimby	-	-	105,360	105,360	105,360	-	105,360
31560 CSA #152 Zone A	-	-	1,004,193	1,004,193	1,004,193	-	1,004,193
31570 CSA #152 Zone B	-	-	3,013,344	3,013,344	3,013,344	-	3,013,344
32720 CSA 126 Quimby	-	-	50,276	50,276	50,276	-	50,276
32730 CSA 146 Quimby	-	-	50,225	50,225	50,225	-	50,225
32740 CSA152 Cajalco Corridor Quimby	-	-	1,507,517	1,507,517	1,507,517	-	1,507,517
33200 Co Community Parks	-	-	215,373	215,373	215,373	-	215,373
40400 Co Service Area #122 Water	-	-	380,950	380,950	380,950	-	380,950
40420 Co Service Area #62 Sewer	-	-	11,782	11,782	11,782	-	11,782
40440 CSA #62 Water-Sewer	-	-	211,702	211,702	211,702	-	211,702
Total County Service Areas	**$ -**	**$ -**	**$ 24,569,412**	**$ 24,569,412**	**$ 24,569,412**	**$ -**	**$ 24,569,412**
Flood Control District							
15000 Special Accounting	$ 137,790	$ -	$ 815,000	$ 952,790	$ 952,790	$ -	$ 952,790
15100 Flood Administration	1,849,536	-	3,381,750	5,231,286	5,231,286	-	5,231,286
25110 Zone 1 Const-Maint-Misc	-	9,543,800	10,970,740	20,514,540	20,514,540	-	20,514,540
25120 Zone 2 Const-Maint-Misc	-	32,401,021	13,802,500	46,203,521	46,203,521	-	46,203,521
25130 Zone 3 Const-Maint-Misc	-	3,440,740	2,180,000	5,620,740	5,620,740	-	5,620,740
25140 Zone 4 Const-Maint-Misc	-	6,377,042	17,356,100	23,733,142	23,733,142	-	23,733,142
25150 Zone 5 Const-Maint-Misc	-	7,848,740	2,726,000	10,574,740	10,574,740	-	10,574,740
25160 Zone 6 Const-Maint-Misc	-	16,392,190	4,258,000	20,650,190	20,650,190	-	20,650,190
25170 Zone 7 Const-Maint-Misc	-	985,840	4,218,000	5,203,840	5,203,840	-	5,203,840
25180 NPDES White Water Assessment	-	46,027	717,223	763,250	763,250	-	763,250
25190 NPDES Santa Ana Assessment Are	-	972,762	2,785,000	3,757,762	3,757,762	-	3,757,762
25200 NPDES Santa Margarita Assmt	-	131,910	1,981,000	2,112,910	2,112,910	-	2,112,910
33000 FC-Capital Project Fund	-	-	4,636,000	4,636,000	4,635,000	1,000	4,636,000
40650 Photogrammetry Operation	43,970	-	333,000	376,970	376,970	-	376,970

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District Name	Total Financing Sources				Total Financing Uses		
	Fund Balance Unreserved/ Undesignated June 30, 2011	Decreases to Reserves/ Designations	Additional Financing Sources	Total Financing Sources	Financing Uses	Increases to Reserves/ Designations	Total Financing Uses
1	2	3	4	5	6	7	8
40660 Subdivision Operation	$ 1,199,960	$ -	$ 1,003,000	$ 2,202,960	$ 2,202,960	$ -	$ 2,202,960
40670 Encroachment Permits	199,940	-	172,000	371,940	371,940	-	371,940
48000 Hydrology Services	-	-	1,117,780	1,117,780	1,105,840	11,940	1,117,780
48020 Garage-Fleet Operations	1,697,270	-	3,223,500	4,920,770	4,920,770	-	4,920,770
48040 Project-Maintenance Operation	-	-	880,025	880,025	796,260	83,765	880,025
48060 Mapping Services	123,230	-	338,000	461,230	461,230	-	461,230
48080 Data Processing	980,860	-	1,920,000	2,900,860	2,900,860	-	2,900,860
Total Flood Control District	**$ 6,232,556**	**$ 78,140,072**	**$ 78,814,618**	**$ 163,187,246**	**$ 163,090,541**	**$ 96,705**	**$ 163,187,246**
IHSS Public Authority							
22800 IHSS Public Authority	$ 117,224	$ -	$ 2,409,199	$ 2,526,423	$ 2,526,423	$ -	$ 2,526,423
Total IHSS Public Authority	**$ 117,224**	**$ -**	**$ 2,409,199**	**$ 2,526,423**	**$ 2,526,423**	**$ -**	**$ 2,526,423**
Parks and Open Space District							
25400 Regional Park & Open Space Dis	$ 1,955,339	$ -	$ 8,706,638	$ 10,661,977	$ 10,661,977	$ -	$ 10,661,977
25420 Recreation	-	1,456,702	2,364,057	3,820,759	3,820,759	-	3,820,759
25500 County Fish & Game	-	5,450	2,050	7,500	7,500	-	7,500
25510 Park Resident Emp Utility	-	-	59,800	59,800	5,590	54,210	59,800
25520 Arundo Removal	-	-	834,053	834,053	665,029	169,024	834,053
25535 Natural Resource Education	-	88,465	18,000	106,465	106,465	-	106,465
25540 Multi-Species Reserve	-	-	779,574	779,574	716,714	62,860	779,574
25550 Santa Ana Mitigation Bank	-	120,402	18,000	138,402	138,402	-	138,402
25570 Jensen Ranch Trust	-	-	-	-	-	-	-
25590 MSHCP Reserve Management	-	72,893	692,206	765,099	765,099	-	765,099
33100 Park Acq & Development	-	174,543	-	174,543	174,543	-	174,543
33110 Prop 40 Capital Dev Parks	-	-	-	-	-	-	-
33120 Developer Impact Fees Parks	-	-	3,867,757	3,867,757	3,867,757	-	3,867,757
33150 Park Acquisition-ACO	-	-	1,110,391	1,110,391	1,109,591	800	1,110,391
33160 SAR Parkway Prado Dam Trail	-	-	13,000	13,000	-	13,000	13,000
33170 Prop 50 River Pkwys Grant SART	-	-	1,700,000	1,700,000	1,700,000	-	1,700,000
Total Parks and Open Space District	**$ 1,955,339**	**$ 1,918,455**	**$ 20,165,526**	**$ 24,039,320**	**$ 23,739,426**	**$ 299,894**	**$ 24,039,320**

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District Name	Total Financing Sources				Total Financing Uses		
	Fund Balance Unreserved/ Undesignated June 30, 2011	Decreases to Reserves/ Designations	Additional Financing Sources	Total Financing Sources	Financing Uses	Increases to Reserves/ Designations	Total Financing Uses
1	2	3	4	5	6	7	8
Perris Valley Cemetery Dist							
22900 Perris Cemetery District	$ -	$ -	$ 878,851	$ 878,851	$ 878,851	$ -	$ 878,851
39810 Perris Valley Cemetery Endowmt	-	-	21,472	21,472	21,472	-	21,472
Total Perris Valley Cemetery Dist	**$ -**	**$ -**	**$ 900,323**	**$ 900,323**	**$ 900,323**	**$ -**	**$ 900,323**
RC Children & Family Comm							
25800 RC Children & Famly Commission	$ -	$ 1,616,317	$ 23,113,852	$ 24,730,169	$ 24,730,169	$ -	$ 24,730,169
Total RC Children & Family Comm	**$ -**	**$ 1,616,317**	**$ 23,113,852**	**$ 24,730,169**	**$ 24,730,169**	**$ -**	**$ 24,730,169**
Waste Management District							
40250 WRMD Operating	$ -	$ -	$ 4,400,000	$ 4,400,000	$ 4,306,252	$ 93,748	$ 4,400,000
Total Waste Management District	**$ -**	**$ -**	**$ 4,400,000**	**$ 4,400,000**	**$ 4,306,252**	**$ 93,748**	**$ 4,400,000**
Total Special Districts and Other Agencies	**$ 8,305,119**	**$ 81,674,844**	**$ 599,981,697**	**$ 689,961,660**	**$ 689,471,313**	**$ 490,347**	**$ 689,961,660**

Arithmetic Results				COL 2 + 3 + 4 COL 5 = COL 8			COL 6+7 COL 5 = COL 8
Totals Transferred From	SCH 13, COL 6	SCH 14, COL 4	SCH 15, COL 5		SCH 15, COL 5	SCH 14, COL 6	SCH 15, COL 5
Totals Transferred To	SCH 1, COL 2	SCH 1, COL 3	SCH 1, COL 4	SCH 1, COL 5	SCH 1, COL 6	SCH 1, COL 7	SCH 1, COL 8

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District Name	Total Fund Balance June 30, 2011	Less: Fund Balance-Reserved/Designated			Fund Balance Unreserved/ Undesignated June 30, 2011
		Encumbrances	General & Other Reserves	Designations	
1	2	3	4	5	6
Capital Finance & Admin					
35900 CORAL	$ 586,148	$ -	$ 586,148	$ -	$ -
Total Capital Finance & Admin	**$ 586,148**	$ -	$ **586,148**	$ -	$ -
Community Redvelopment					
25000 RDA Housing Set Aside	$ 189,094,866	$ -	$ 189,094,866	$ -	$ -
32700 RDA Capital Projects	271,455,757	-	152,896,259	118,559,498	-
37100 RDA Debt Service	71,527,196	-	70,320,942	1,206,254	-
Total Community Redvelopment	**$ 532,077,819**	$ -	$ **412,312,067**	$ **119,765,752**	$ -
County Service Areas					
23025 Co Service Area #001	$ 52,715	$ -	$ 52,715	$ -	$ -
23100 Co Service Area #013	48,325	-	48,325	-	-
23125 Co Service Area #015	147,848	-	147,848	-	-
23200 Co Service Area #021	91,745	-	91,745	-	-
23225 Co Service Area #022	31,420	-	31,420	-	-
23300 Co Service Area #027	112,554	-	112,554	-	-
23375 CSA #36 Idyllwild Ltg-P&R	323,488	-	323,488	-	-
23400 Co Service Area #038	558,198	-	558,198	-	-
23425 Co Service Area #041	1,337,274	-	1,337,274	-	-
23450 Co Service Area #041b	80,738	-	80,738	-	-
23475 Co Service Area #043	36,610	-	36,610	-	-
23500 Co Service Area #047	76,806	-	76,806	-	-
23525 Co Service Area #051	86,399	-	86,399	-	-
23575 Co Service Area #053	14,933	-	14,933	-	-
23600 Co Service Area #059	45,982	-	45,982	-	-
23625 Co Service Area #060	591,714	-	591,714	-	-
23675 Co Service Area #069	176,776	-	176,776	-	-
23700 Co Service Area #070	393,530	-	393,530	-	-
23725 Co Service Area #072	45,644	-	45,644	-	-
23750 Co Service Area #073	28,629	-	28,629	-	-
23775 Co Service Area #080	71,932	-	71,932	-	-
23825 Co Service Area #084	452,047	-	452,047	-	-
23850 Co Service Area #085	126,200	-	126,200	-	-
23900 Co Service Area #087	93,239	-	93,239	-	-
23925 Co Service Area #089	9,209	-	9,209	-	-
23950 Co Service Area #091	617,179	-	617,179	-	-
24025 Co Service Area #094	4,892	-	4,892	-	-
24050 Co Service Area #097	11,390	-	11,390	-	-
24075 Co Service Area #103	97,117	-	97,117	-	-
24100 CSA #104 Sky Valley	639,726	-	639,726	-	-
24125 Co Service Area #105	366,301	-	366,301	-	-
24150 Co Service Area #108	526,717	-	526,717	-	-
24175 Co Service Area #113	79,273	-	79,273	-	-
24200 Co Service Area #115	247,450	-	247,450	-	-
24225 Co Service Area #117	86,342	-	86,342	-	-
24250 Co Service Area #121	453,031	-	453,031	-	-

State Controller Schedules County Budget Act January 2010	County of Riverside Fund Balance - Special Districts and Other Agencies Fiscal Year - 2011-12	Schedule 13 Actual ☑ Estimated ❑

District Name	Total Fund Balance June 30, 2011	Less: Fund Balance-Reserved/Designated			Fund Balance Unreserved/ Undesignated June 30, 2011
		Encumbrances	General & Other Reserves	Designations	
1	2	3	4	5	6
24275 Co Service Area #124	$ 272,236	$ -	$ 272,236	$ -	$ -
24300 Co Service Area #125	79,357	-	79,357	-	-
24325 Co Service Area #126	183,956	-	183,956	-	-
24350 Co Service Area #128 East	271,450	-	271,450	-	-
24375 Co Service Area #128 West	45,544	-	45,544	-	-
24400 Co Service Area #132	133,740	-	133,740	-	-
24425 Co Service Area #134	893,507	-	893,507	-	-
24450 Co Service Area #135	27,644	-	27,644	-	-
24525 Co Service Area #142	29,353	-	29,353	-	-
24550 CSA #143a Warner Sprg Subzone1	2,091,056	-	2,091,056	-	-
24575 Co Service Area #145	56,144	-	56,144	-	-
24600 Co Service Area #149 Wine Cou	447,298	-	447,298	-	-
24625 Co Service Area #152 NPDES	4,966,513	-	4,966,513	-	-
24630 LMD 2006-1 Wildomar	110	-	110	-	-
24800 Co Service Area #146	33,529	-	33,529	-	-
24825 CSA #149 Wine Country Beautif	63,580	-	63,580	-	-
24875 CSA #152 Sports Facility	1,342,874	-	1,342,874	-	-
31550 Co Service Area #143 Qmby	2,102,006	-	-	2,102,006	-
31555 CSA #145 Quimby	1,423,787	-	-	1,423,787	-
31560 CSA #152 Zone A	1,122,873	-	-	1,122,873	-
31570 CSA #152 Zone B	3,291,888	-	-	3,291,888	-
32720 CSA 126 Quimby	73,228	-	73,228	-	-
32730 CSA 146 Quimby	59,663	-	59,663	-	-
32740 CSA152 Cajalco Corridor Quimby	1,996,493	-	1,996,493	-	-
33200 Co Community Parks	620,224	-	620,224	-	-
40400 Co Service Area #122 Water	153,401	-	45,437	107,964	-
40420 Co Service Area #62 Sewer	36,769	-	-	36,769	-
40440 CSA #62 Water-Sewer	43,593	-	20,896	22,697	-
Total County Service Areas	**$ 30,025,189**	$ -	$ **21,917,205**	$ **8,107,984**	$ -
Flood Control District					
15000 Special Accounting	$ 855,524	$ -	$ 717,734	$ -	$ 137,790
15100 Flood Administration	1,849,536	-	-	-	1,849,536
25110 Zone 1 Const-Maint-Misc	22,990,761	-	-	22,990,761	-
25120 Zone 2 Const-Maint-Misc	63,827,257	-	-	63,827,257	-
25130 Zone 3 Const-Maint-Misc	12,866,336	-	-	12,866,336	-
25140 Zone 4 Const-Maint-Misc	67,611,193	-	-	67,611,193	-
25150 Zone 5 Const-Maint-Misc	12,919,999	-	-	12,919,999	-
25160 Zone 6 Const-Maint-Misc	25,757,812	-	-	25,757,812	-
25170 Zone 7 Const-Maint-Misc	34,948,921	-	-	34,948,921	-
25180 NPDES White Water Assessment	778,151	-	-	778,151	-
25190 NPDES Santa Ana Assessment Are	4,735,585	-	-	4,735,585	-

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District Name	Total Fund Balance June 30, 2011	Less: Fund Balance-Reserved/Designated			Fund Balance Unreserved/ Undesignated June 30, 2011
		Encumbrances	General & Other Reserves	Designations	
1	2	3	4	5	6
25200 NPDES Santa Margarita Assmt	$ 566,960	$ -	$ -	$ 566,960	$ -
33000 FC-Capital Project Fund	420,484	-	64,966	355,518	-
40650 Photogrammetry Operation	571,974	-	-	528,004	43,970
40660 Subdivision Operation	1,236,009	-	-	36,049	1,199,960
40670 Encroachment Permits	315,104	-	-	115,164	199,940
48000 Hydrology Services	56,648	-	56,648	-	-
48020 Garage-Fleet Operations	6,261,411	-	75,691	4,488,450	1,697,270
48040 Project-Maintenance Operation	1,080,382	-	244,903	835,479	-
48060 Mapping Services	607,308	-	-	484,078	123,230
48080 Data Processing	1,491,118	-	-	510,258	980,860
Total Flood Control District	**$ 261,748,473**	$ -	$ **1,159,942**	$ **254,355,975**	$ **6,232,556**
IHSS Public Authority					
22800 IHSS Public Authority	$ 1,718,170	$ -	$ 1,600,946	$ -	$ 117,224
Total IHSS Public Authority	**$ 1,718,170**	$ -	$ **1,600,946**	$ -	$ **117,224**
Parks and Open Space District					
25400 Regional Park & Open Space Dis	$ 4,414,712	$ -	$ 2,089,662	$ 369,711	$ 1,955,339
25420 Recreation	1,456,702	-	1,456,702	-	-
25500 County Fish & Game	14,869	-	2,240	12,629	-
25510 Park Resident Emp Utility	244,953	-	36,171	208,782	-
25520 Arundo Removal	2,821,694	-	420,302	2,401,392	-
25535 Natural Resource Education	320,770	-	-	320,770	-
25540 Multi-Species Reserve	214,241	-	91,300	122,941	-
25550 Santa Ana Mitigation Bank	4,086,513	-	-	4,086,513	-
25570 Jensen Ranch Trust	-	-	-	-	-
25590 MSHCP Reserve Management	925,880	-	925,880	-	-
33100 Park Acq & Development	1,398,368	-	1,398,368	-	-
33110 Prop 40 Capital Dev Parks	1,441,079	-	1,441,079	-	-
33120 Developer Impact Fees Parks	2,970,134	-	2,970,134	-	-
33150 Park Acquisition-ACO	227,726	-	227,726	-	-
33160 SAR Parkway Prado Dam Trail	2,909,044	-	2,909,044	-	-
Total Parks and Open Space District	**$ 23,446,685**	$ -	$ **13,968,608**	$ **7,522,738**	$ **1,955,339**
Perris Valley Cemetery Dist					
22900 Perris Cemetery District	$ 586,234	$ -	$ 586,234	$ -	$ -
39810 Perris Valley Cemetery Endowmt	463,826	-	463,826	-	-
Total Perris Valley Cemetery Dist	**$ 1,050,060**	$ -	$ **1,050,060**	$ -	$ **-**
RC Children & Family Comm					
25800 RC Children & Famly Commission	$ 14,525,886	$ -	$ 379,711	$ 14,146,175	$ -
Total RC Children & Family Comm	**$ 14,525,886**	$ -	$ **379,711**	$ **14,146,175**	$ **-**

State Controller Schedules
County Budget Act
January 2010

County of Riverside
Fund Balance - Special Districts and Other Agencies
Fiscal Year - 2011-12

Schedule 13

Actual ☑
Estimated ❑

District Name	Total Fund Balance June 30, 2011	Less: Fund Balance-Reserved/Designated			Fund Balance Unreserved/ Undesignated June 30, 2011
		Encumbrances	General & Other Reserves	Designations	
1	2	3	4	5	6
Waste Management District					
40250 WRMD Operating	$ 231,502	$ -	$ 231,502	$ -	$ -
Total Waste Management District	**$ 231,502**	$ **-**	$ **231,502**	$ **-**	$ **-**
Total Special Districts and Other Agencies	**$ 865,409,932**	$ **-**	$ **453,206,189**	$ **403,898,624**	$ **8,305,119**

Arithmetic Results					COL 2 - 3 - 4 - 5
Totals Transferred From			SCH 14, COL 2	SCH 14, COL 2	
Totals Transferred To					SCH 1, COL 2 SCH 12, COL 2

State Controller Schedules
County Budget Act
January 2010

County of Riverside

Special Districts and Other Agencies
Reserves/Designations

Fiscal Year 2011-12

Schedule 14

Actual ☑
Estimated ❑

District Name	Reserves/ Designations June 30, 2011	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
Capital Finance & Admin						
35900 CORAL	$ 586,148	$ -	$ -	$ -	$ -	$ 586,148
Total Capital Finance & Admin	$ **586,148**	$ **-**	$ **-**	$ **-**	$ **-**	$ **586,148**
Community Redvelopment						
25000 RDA Housing Set Aside	$ 189,094,866	$ -	$ -	$ -	$ -	$ 189,094,866
32700 RDA Capital Projects	$ 271,455,757	$ -	$ -	$ -	$ -	$ 271,455,757
37100 RDA Debt Service	$ 71,527,196	$ -	$ -	$ -	$ -	$ 71,527,196
Total Community Redvelopment	$ **532,077,819**	$ **-**	$ **-**	$ **-**	$ **-**	$ **532,077,819**
County Service Areas						
23025 Co Service Area #001	$ 52,715	$ -	$ -	$ -	$ -	$ 52,715
23100 Co Service Area #013	$ 48,325	$ -	$ -	$ -	$ -	$ 48,325
23125 Co Service Area #015	$ 147,848	$ -	$ -	$ -	$ -	$ 147,848
23200 Co Service Area #021	$ 91,745	$ -	$ -	$ -	$ -	$ 91,745
23225 Co Service Area #022	$ 31,420	$ -	$ -	$ -	$ -	$ 31,420
23300 Co Service Area #027	$ 112,554	$ -	$ -	$ -	$ -	$ 112,554
23375 CSA #36 Idyllwild Ltg-P&R	$ 323,488	$ -	$ -	$ -	$ -	$ 323,488
23400 Co Service Area #038	$ 558,198	$ -	$ -	$ -	$ -	$ 558,198
23425 Co Service Area #041	$ 1,337,274	$ -	$ -	$ -	$ -	$ 1,337,274
23450 Co Service Area #041b	$ 80,738	$ -	$ -	$ -	$ -	$ 80,738
23475 Co Service Area #043	$ 36,610	$ -	$ -	$ -	$ -	$ 36,610

State Controller Schedules
County Budget Act
January 2010

County of Riverside

Special Districts and Other Agencies
Reserves/Designations

Fiscal Year 2011-12

Schedule 14

Actual ☑
Estimated ❑

District Name	Reserves/ Designations June 30, 2011	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
23500 Co Service Area #047	$ 76,806	$ -	$ -	$ -	$ -	$ 76,806
23525 Co Service Area #051	$ 86,399	$ -	$ -	$ -	$ -	$ 86,399
23575 Co Service Area #053	$ 14,933	$ -	$ -	$ -	$ -	$ 14,933
23600 Co Service Area #059	$ 45,982	$ -	$ -	$ -	$ -	$ 45,982
23625 Co Service Area #060	$ 591,714	$ -	$ -	$ -	$ -	$ 591,714
23675 Co Service Area #069	$ 176,776	$ -	$ -	$ -	$ -	$ 176,776
23700 Co Service Area #070	$ 393,530	$ -	$ -	$ -	$ -	$ 393,530
23725 Co Service Area #072	$ 45,644	$ -	$ -	$ -	$ -	$ 45,644
23750 Co Service Area #073	$ 28,629	$ -	$ -	$ -	$ -	$ 28,629
23775 Co Service Area #080	$ 71,932	$ -	$ -	$ -	$ -	$ 71,932
23825 Co Service Area #084	$ 452,047	$ -	$ -	$ -	$ -	$ 452,047
23850 Co Service Area #085	$ 126,200	$ -	$ -	$ -	$ -	$ 126,200
23900 Co Service Area #087	$ 93,239	$ -	$ -	$ -	$ -	$ 93,239
23925 Co Service Area #089	$ 9,209	$ -	$ -	$ -	$ -	$ 9,209
23950 Co Service Area #091	$ 617,179	$ -	$ -	$ -	$ -	$ 617,179
24025 Co Service Area #094	$ 4,892	$ -	$ -	$ -	$ -	$ 4,892
24050 Co Service Area #097	$ 11,390	$ -	$ -	$ -	$ -	$ 11,390
24075 Co Service Area #103	$ 97,117	$ -	$ -	$ -	$ -	$ 97,117
24100 CSA #104 Sky Valley	$ 639,726	$ -	$ -	$ -	$ -	$ 639,726

State Controller Schedules
County Budget Act
January 2010

County of Riverside

Special Districts and Other Agencies
Reserves/Designations

Fiscal Year 2011-12

Schedule 14

Actual ☑
Estimated ❑

District Name	Reserves/ Designations June 30, 2011	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
24125 Co Service Area #105	$ 366,301	$ -	$ -	$ -	$ -	$ 366,301
24150 Co Service Area #108	$ 526,717	$ -	$ -	$ -	$ -	$ 526,717
24175 Co Service Area #113	$ 79,273	$ -	$ -	$ -	$ -	$ 79,273
24200 Co Service Area #115	$ 247,450	$ -	$ -	$ -	$ -	$ 247,450
24225 Co Service Area #117	$ 86,342	$ -	$ -	$ -	$ -	$ 86,342
24250 Co Service Area #121	$ 453,031	$ -	$ -	$ -	$ -	$ 453,031
24275 Co Service Area #124	$ 272,236	$ -	$ -	$ -	$ -	$ 272,236
24300 Co Service Area #125	$ 79,367	$ -	$ -	$ -	$ -	$ 79,367
24325 Co Service Area #126	$ 183,956	$ -	$ -	$ -	$ -	$ 183,956
24350 Co Service Area #128 East	$ 271,450	$ -	$ -	$ -	$ -	$ 271,450
24375 Co Service Area #128 West	$ 45,544	$ -	$ -	$ -	$ -	$ 45,544
24400 Co Service Area #132	$ 133,740	$ -	$ -	$ -	$ -	$ 133,740
24425 Co Service Area #134	$ 893,507	$ -	$ -	$ -	$ -	$ 893,507
24450 Co Service Area #135	$ 27,644	$ -	$ -	$ -	$ -	$ 27,644
24525 Co Service Area #142	$ 29,353	$ -	$ -	$ -	$ -	$ 29,353
24550 CSA #143a Warner Sprg Subzone1	$ 2,091,056	$ -	$ -	$ -	$ -	$ 2,091,056
24575 Co Service Area #145	$ 56,144	$ -	$ -	$ -	$ -	$ 56,144
24600 Co Service Area #149 Wine Cou	$ 447,298	$ -	$ -	$ -	$ -	$ 447,298
24625 Co Service Area #152 NPDES	$ 4,966,513	$ -	$ -	$ -	$ -	$ 4,966,513

State Controller Schedules
County Budget Act
January 2010

County of Riverside

Special Districts and Other Agencies
Reserves/Designations

Fiscal Year 2011-12

Schedule 14

Actual ☑
Estimated ❑

District Name	Reserves/ Designations June 30, 2011	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
24630 LMD 2006-1 Wildomar	$ 110	$ -	$ -	$ -	$ -	$ 110
24800 Co Service Area #146	$ 33,529	$ -	$ -	$ -	$ -	$ 33,529
24825 CSA #149 Wine Country Beautif	$ 63,580	$ -	$ -	$ -	$ -	$ 63,580
24875 CSA #152 Sports Facility	$ 1,342,874	$ -	$ -	$ -	$ -	$ 1,342,874
31550 Co Service Area #143 Qmby	$ 2,102,006	$ -	$ -	$ -	$ -	$ 2,102,006
31555 CSA #145 Quimby	$ 1,423,787	$ -	$ -	$ -	$ -	$ 1,423,787
31560 CSA #152 Zone A	$ 1,122,873	$ -	$ -	$ -	$ -	$ 1,122,873
31570 CSA #152 Zone B	$ 3,291,888	$ -	$ -	$ -	$ -	$ 3,291,888
32720 CSA 126 Quimby	$ 73,228	$ -	$ -	$ -	$ -	$ 73,228
32730 CSA 146 Quimby	$ 59,663	$ -	$ -	$ -	$ -	$ 59,663
32740 CSA152 Cajalco Corridor Quimby	$ 1,996,493	$ -	$ -	$ -	$ -	$ 1,996,493
33200 Co Community Parks	$ 620,224	$ -	$ -	$ -	$ -	$ 620,224
40400 Co Service Area #122 Water	$ 153,401	$ -	$ -	$ -	$ -	$ 153,401
40420 Co Service Area #62 Sewer	$ 36,769	$ -	$ -	$ -	$ -	$ 36,769
40440 CSA #62 Water-Sewer	$ 43,593	$ -	$ -	$ -	$ -	$ 43,593
Total County Service Areas	$ **30,025,199**	$ **-**	$ **-**	$ **-**	$ **-**	$ **30,025,199**
Flood Control District						
15000 Special Accounting	$ 717,734	$ -	$ -	$ -	$ -	$ 717,734
15100 Flood Administration	$ -	$ -	$ -	$ -	$ -	$ -

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County of Riverside

Special Districts and Other Agencies
Reserves/Designations

Fiscal Year 2011-12

Schedule 14

Actual ☑
Estimated ❑

District Name	Reserves/ Designations June 30, 2011	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
25110 Zone 1 Const-Maint-Misc	$ 22,990,761	$ 9,543,800	$ 9,543,800	$ -	$ -	$ 13,446,961
25120 Zone 2 Const-Maint-Misc	$ 63,827,257	$ 32,401,021	$ 32,401,021	$ -	$ -	$ 31,426,236
25130 Zone 3 Const-Maint-Misc	$ 12,866,336	$ 3,440,740	$ 3,440,740	$ -	$ -	$ 9,425,596
25140 Zone 4 Const-Maint-Misc	$ 67,611,193	$ 6,377,042	$ 6,377,042	$ -	$ -	$ 61,234,151
25150 Zone 5 Const-Maint-Misc	$ 12,919,999	$ 7,848,740	$ 7,848,740	$ -	$ -	$ 5,071,259
25160 Zone 6 Const-Maint-Misc	$ 25,757,812	$ 16,392,190	$ 16,392,190	$ -	$ -	$ 9,365,622
25170 Zone 7 Const-Maint-Misc	$ 34,948,921	$ 985,840	$ 985,840	$ -	$ -	$ 33,963,081
25180 NPDES White Water Assessment	$ 778,151	$ 46,027	$ 46,027	$ -	$ -	$ 732,124
25190 NPDES Santa Ana Assessment Are	$ 4,735,585	$ 972,762	$ 972,762	$ -	$ -	$ 3,762,823
25200 NPDES Santa Margarita Assmt	$ 566,960	$ 131,910	$ 131,910	$ -	$ -	$ 435,050
33000 FC-Capital Project Fund	$ 420,484	$ -	$ -	$ 1,000	$ 1,000	$ 421,484
40650 Photogrammetry Operation	$ 528,004	$ -	$ -	$ -	$ -	$ 528,004
40660 Subdivision Operation	$ 36,049	$ -	$ -	$ -	$ -	$ 36,049
40670 Encroachment Permits	$ 115,164	$ -	$ -	$ -	$ -	$ 115,164
48000 Hydrology Services	$ 56,648	$ -	$ -	$ 11,940	$ 11,940	$ 68,588
48020 Garage-Fleet Operations	$ 4,564,141	$ -	$ -	$ -	$ -	$ 4,564,141
48040 Project-Maintenance Operation	$ 1,080,382	$ -	$ -	$ 83,765	$ 83,765	$ 1,164,147
48060 Mapping Services	$ 484,078	$ -	$ -	$ -	$ -	$ 484,078
48080 Data Processing	$ 510,258	$ -	$ -	$ -	$ -	$ 510,258

State Controller Schedules
County Budget Act
January 2010

County of Riverside

Special Districts and Other Agencies
Reserves/Designations

Fiscal Year 2011-12

Schedule 14

Actual ☑
Estimated ❑

District Name	Reserves/ Designations June 30, 2011	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
Total Flood Control District	$ **255,515,917**	$ **78,140,072**	$ **78,140,072**	$ **96,705**	$ **96,705**	$ **177,472,550**
IHSS Public Authority						
22800 IHSS Public Authority	$ 1,600,946	$ -	$ -	$ -	$ -	$ 1,600,946
Total IHSS Public Authority	$ **1,600,946**	$ **-**	$ **-**	$ **-**	$ **-**	$ **1,600,946**
Parks and Open Space District						
25400 Regional Park & Open Space Dis	$ 2,459,373	$ -	$ -	$ -	$ -	$ 2,459,373
25420 Recreation	$ 1,456,702	$ 1,456,702	$ 1,456,702	$ -	$ -	$ -
25500 County Fish & Game	$ 14,869	$ 5,450	$ 5,450	$ -	$ -	$ 9,419
25510 Park Resident Emp Utility	$ 244,953	$ -	$ -	$ 54,210	$ 54,210	$ 299,163
25520 Arundo Removal	$ 2,821,694	$ -	$ -	$ 169,024	$ 169,024	$ 2,990,718
25535 Natural Resource Education	$ 320,770	$ 88,465	$ 88,465	$ -	$ -	$ 232,305
25540 Multi-Species Reserve	$ 214,241	$ -	$ -	$ 62,860	$ 62,860	$ 277,101
25550 Santa Ana Mitigation Bank	$ 4,086,513	$ 120,402	$ 120,402	$ -	$ -	$ 3,966,111
25590 MSHCP Reserve Management	$ 925,880	$ 72,893	$ 72,893	$ -	$ -	$ 852,987
33100 Park Acq & Development	$ 1,398,368	$ 174,543	$ 174,543	$ -	$ -	$ 1,223,825
33110 Prop 40 Capital Dev Parks	$ 1,441,079	$ -	$ -	$ -	$ -	$ 1,441,079
33120 Developer Impact Fees Parks	$ 2,970,134	$ -	$ -	$ -	$ -	$ 2,970,134
33150 Park Acquisition-ACO	$ 227,726	$ -	$ -	$ 800	$ 800	$ 228,526
33160 SAR Parkway Prado Dam Trail	$ 2,909,044	$ -	$ -	$ 13,000	$ 13,000	$ 2,922,044
Total Parks and Open Space District	$ **21,491,346**	$ **1,918,455**	$ **1,918,455**	$ **299,894**	$ **299,894**	$ **19,872,785**

State Controller Schedules
County Budget Act
January 2010

County of Riverside

Special Districts and Other Agencies
Reserves/Designations

Fiscal Year 2011-12

Schedule 14

Actual ☑
Estimated ❑

District Name	Reserves/ Designations June 30, 2011	Decreases or Cancellations		Increases or New		Total Reserves/ Designations for the Budget Year
		Recommended	Adopted by the Board of Supervisors	Recommended	Adopted by the Board of Supervisors	
1	2	3	4	5	6	7
Perris Valley Cemetery Dist						
22900 Perris Cemetery District	$ 586,234	$ -	$ -	$ -	$ -	$ 586,234
39810 Perris Valley Cemetery Endowmt	$ 463,826	$ -	$ -	$ -	$ -	$ 463,826
Total Perris Valley Cemetery Dist	$ **1,050,060**	$ **-**	$ **-**	$ **-**	$ **-**	$ **1,050,060**
RC Children & Family Comm						
25800 RC Children & Famly Commission	$ 14,525,886	$ 1,616,317	$ 1,616,317	$ -	$ -	$ 12,909,569
Total RC Children & Family Comm	$ **14,525,886**	$ **1,616,317**	$ **1,616,317**	$ **-**	$ **-**	$ **12,909,569**
Waste Management District						
40250 WRMD Operating	$ 231,502	$ -	$ -	$ 93,748	$ 93,748	$ 325,250
Total Waste Management District	$ **231,502**	$ **-**	$ **-**	$ **93,748**	$ **93,748**	$ **325,250**
Total Special Districts and Other Agencies	**$ 857,104,823**	**$ 81,674,844**	**$ 81,674,844**	**$ 490,347**	**$ 490,347**	**$ 775,920,326**

Arithmetic Results						COL 2 - 4 + 6
Total Transferred **From**						
Total Transferred **To**	SCH 13, COL'S 4 & 5		SCH 12. COL 3 SCH 1, COL 3		SCH 12. COL 7 SCH 1, COL 7	

State Controller Schedules County Budget Act January 2010	County of Riverside Special Districts and Other Agencies Financing Sources and Uses by Budget Unit by Object Fiscal Year 2011-12	Schedule 15

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
PERRIS VALLEY CEMETERY			Fund - **22900** Deptid - **980501**		
Charges For Current Services	$ 207,309	$ 203,537	$ 184,063	$ 184,063	$ 184,063
Intergovernmental Revenues	2,972	2,943	2,883	2,883	2,883
Other Revenue	6,343	6,830	470,076	470,076	470,076
Rev Fr Use Of Money&Property	10,748	5,551	3,218	3,218	3,218
Taxes	199,436	207,005	218,611	218,611	218,611
Total Revenue	$ **426,808**	$ **425,866**	$ **878,851**	$ **878,851**	$ **878,851**
Salaries And Benefits	$ 260,255	$ 222,354	$ 207,234	$ 207,234	$ 207,234
Services And Supplies	154,956	142,923	350,771	350,771	350,771
Other Charges	29,241	49,114	70,846	70,846	70,846
Fixed Assets	47,008	13,692	250,000	250,000	250,000
Total Expenditures/Appropriations	$ **491,460**	$ **428,083**	$ **878,851**	$ **878,851**	$ **878,851**
Net Cost	$ **64,652**	$ 2,217	$ **-**	$ **-**	$ **-**
PERRIS VALLEY CEMETERY ENDOW			Fund - **39810** Deptid - **980502**		
Charges For Current Services	$ 24,680	$ 22,600	$ 19,800	$ 19,800	$ 19,800
Rev Fr Use Of Money&Property	4,782	2,941	1,672	1,672	1,672
Total Revenue	$ **29,462**	$ **25,541**	$ **21,472**	$ **21,472**	$ **21,472**
Services And Supplies	$ -	$ -	$ 21,472	$ 21,472	$ 21,472
Total Expenditures/Appropriations	$ **-**	$ **-**	$ **21,472**	$ **21,472**	$ **21,472**
Net Cost	$ **(29,462)**	$ (25,541)	$ **-**	$ **-**	$ **-**

State Controller Schedules County Budget Act January 2010	County of Riverside Special Districts and Other Agencies Financing Sources and Uses by Budget Unit by Object Fiscal Year 2011-12	Schedule 15

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
EDA: COMMUNITY REDEV HOUSING				Fund - **25000** Deptid - **934001**	
Charges For Current Services	$ -	$ 4,100	$ 205,879	$ 205,879	$ 205,879
Other Revenue	59,861,292	25,060,842	40,975,808	40,975,808	40,975,808
Rev Fr Use Of Money&Property	477,680	435,390	419,581	419,581	419,581
Taxes	18,795,047	17,507,656	18,014,870	18,014,870	18,014,870
Total Revenue	$ **79,134,019**	$ **43,007,988**	$ **59,616,138**	$ **59,616,138**	$ **59,616,138**
Services And Supplies	$ 103,300	$ 135,231	$ 161,172	$ 161,172	$ 161,172
Other Charges	10,433,626	10,136,160	44,920,148	44,920,148	44,920,148
Operating Transfers Out	5,719,405	8,777,234	14,534,818	14,534,818	14,534,818
Total Expenditures/Appropriations	$ **16,256,331**	$ **19,048,625**	$ **59,616,138**	$ **59,616,138**	$ **59,616,138**
Net Cost	**$ (62,877,688)**	$ (23,959,363)	**$ -**	**$ -**	**$ -**
EDA: COMMUNITY REDEV CAPTIAL				Fund - **32700** Deptid - **934001**	
Charges For Current Services	$ 14,778,401	$ 6,863,872	$ 1,893,248	$ 1,893,248	$ 1,893,248
Intergovernmental Revenues	-	70,962	1,000	1,000	1,000
Other Revenue	40,239,972	126,690,718	188,057,853	188,057,853	188,057,853
Rev Fr Use Of Money&Property	2,555,345	2,440,164	1,348,177	1,348,177	1,348,177
Total Revenue	$ **57,573,718**	$ **136,065,716**	$ **191,300,278**	$ **191,300,278**	$ **191,300,278**
Services And Supplies	$ 332,981	$ 3,599,972	$ 3,552,823	$ 3,552,823	$ 3,552,823
Other Charges	103,280,151	118,229,497	182,609,123	182,609,123	182,609,123
Fixed Assets	-	-	-	-	-
Operating Transfers Out	4,509,178	3,762,384	5,138,332	5,138,332	5,138,332
Total Expenditures/Appropriations	$ **108,122,310**	$ **125,591,853**	$ **191,300,278**	$ **191,300,278**	$ **191,300,278**
Net Cost	**$ 50,548,592**	$ (10,473,863)	**$ -**	**$ -**	**$ -**
EDA: COMMUNITY REDEV DEBT				Fund - **37100** Deptid - **934001**	
Other Revenue	$ 22,838,860	$ 35,194,841	$ 42,637,534	$ 42,637,534	$ 42,637,534
Rev Fr Use Of Money&Property	748,320	242,202	400,108	400,108	400,108
Taxes	75,181,609	70,029,184	72,059,188	72,059,188	72,059,188
Total Revenue	$ **98,768,789**	$ **105,466,227**	$ **115,096,830**	$ **115,096,830**	$ **115,096,830**
Other Charges	$ 94,335,140	$ 79,772,847	$ 109,139,156	$ 109,139,156	$ 109,139,156
Operating Transfers Out	27,000,000	-	5,957,674	5,957,674	5,957,674
Total Expenditures/Appropriations	$ **121,335,140**	$ **79,772,847**	$ **115,096,830**	$ **115,096,830**	$ **115,096,830**

State Controller Schedules County Budget Act January 2010	County of Riverside Special Districts and Other Agencies Financing Sources and Uses by Budget Unit by Object Fiscal Year 2011-12	Schedule 15

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Net Cost	**$ 22,566,351**	**$** (25,693,380)	**$ -**	**$ -**	**$ -**

State Controller Schedules County Budget Act January 2010	County of Riverside Special Districts and Other Agencies Financing Sources and Uses by Budget Unit by Object Fiscal Year 2011-12	Schedule 15

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
CSA 1 CORONITA LIGHTING _			Fund - **23025** Deptid - **900101**		
Charges For Current Services	$ 1,041	$ 926	$ 1,081	$ 1,081	$ 1,081
Intergovernmental Revenues	51	53	52	52	52
Rev Fr Use Of Money&Property	563	330	209	209	209
Taxes	3,105	3,331	3,522	3,522	3,522
Total Revenue	$ **4,760**	$ **4,640**	$ **4,864**	$ **4,864**	$ **4,864**
Services And Supplies	$ 1,594	$ 1,602	$ 2,500	$ 2,500	$ 2,500
Other Charges	304	255	2,364	2,364	2,364
Total Expenditures/Appropriations	$ **1,898**	$ **1,857**	$ **4,864**	$ **4,864**	$ **4,864**
Net Cost	$ **(2,862)**	$ (2,783)	$ **-**	$ **-**	$ **-**
CSA 13 N PALM SPRINGS LIGH			Fund - **23100** Deptid - **901301**		
Charges For Current Services	$ 1,470	$ 1,336	$ 1,544	$ 1,544	$ 1,544
Intergovernmental Revenues	65	52	37	37	37
Rev Fr Use Of Money&Property	508	301	190	190	190
Taxes	3,946	3,393	2,746	2,746	2,746
Total Revenue	$ **5,989**	$ **5,082**	$ **4,517**	$ **4,517**	$ **4,517**
Services And Supplies	$ 2,406	$ 2,420	$ 2,900	$ 2,900	$ 2,900
Other Charges	382	267	1,617	1,617	1,617
Total Expenditures/Appropriations	$ **2,788**	$ **2,687**	$ **4,517**	$ **4,517**	$ **4,517**
Net Cost	$ **(3,201)**	$ (2,395)	$ **-**	$ **-**	$ **-**
CSA 15 N PALM SPRINGS OASI			Fund - **23125** Deptid - **901501**		
Intergovernmental Revenues	$ 209	$ 164	$ 119	$ 119	$ 119
Rev Fr Use Of Money&Property	1,631	940	538	538	538
Taxes	12,390	10,729	8,811	8,811	8,811
Total Revenue	$ **14,230**	$ **11,833**	$ **9,468**	$ **9,468**	$ **9,468**
Services And Supplies	$ 7,366	$ 6,973	$ 8,060	$ 8,060	$ 8,060
Other Charges	981	647	1,408	1,408	1,408
Total Expenditures/Appropriations	$ **8,347**	$ **7,620**	$ **9,468**	$ **9,468**	$ **9,468**
Net Cost	$ **(5,883)**	$ (4,213)	$ **-**	$ **-**	$ **-**

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1	2	3		4	5
CSA 21 CORONITA-YORBA HGHT			Fund - **23200** Deptid - **902101**		
Intergovernmental Revenues	$ 161	$ 167	$ 170	$ 170	$ 170
Rev Fr Use Of Money&Property	1,005	577	329	329	329
Taxes	9,573	10,475	11,362	11,362	11,362
Total Revenue	$ **10,739**	$ **11,219**	$ **11,861**	$ **11,861**	$ **11,861**
Services And Supplies	$ 7,320	$ 7,227	$ 9,200	$ 9,200	$ 9,200
Other Charges	707	614	2,661	2,661	2,661
Total Expenditures/Appropriations	$ **8,027**	$ **7,841**	$ **11,861**	$ **11,861**	$ **11,861**
Net Cost	$ **(2,712)**	$ (3,378)	$ **-**	$ **-**	$ **-**
CSA 22 ELSINORE AREA LIGHT			Fund - **23225** Deptid - **902201**		
Charges For Current Services	$ 16,701	$ 15,291	$ 15,470	$ 15,470	$ 15,470
Intergovernmental Revenues	23	24	25	25	25
Other Revenue	-	-	3,746	3,746	3,746
Rev Fr Use Of Money&Property	269	178	102	102	102
Taxes	1,428	1,558	1,600	1,600	1,600
Total Revenue	$ **18,421**	$ **17,051**	$ **20,943**	$ **20,943**	$ **20,943**
Services And Supplies	$ 17,220	$ 14,059	$ 18,911	$ 18,911	$ 18,911
Other Charges	1,356	973	2,032	2,032	2,032
Total Expenditures/Appropriations	$ **18,576**	$ **15,032**	$ **20,943**	$ **20,943**	$ **20,943**
Net Cost	$ **155**	$ (2,019)	$ **-**	$ **-**	$ **-**
CSA 27 CHERRY VALLEY LIGHT			Fund - **23300** Deptid - **902701**		
Charges For Current Services	$ 8,917	$ 8,764	$ 9,118	$ 9,118	$ 9,118
Intergovernmental Revenues	386	376	361	361	361
Other Revenue	-	-	-	-	-
Rev Fr Use Of Money&Property	1,161	685	387	387	387
Taxes	23,151	23,709	24,544	24,544	24,544
Total Revenue	$ **33,615**	$ **33,534**	$ **34,410**	$ **34,410**	$ **34,410**
Services And Supplies	$ 26,065	$ 26,257	$ 30,700	$ 30,700	$ 30,700
Other Charges	2,108	1,856	3,710	3,710	3,710
Total Expenditures/Appropriations	$ **28,173**	$ **28,113**	$ **34,410**	$ **34,410**	$ **34,410**

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1	2	3		4	5
Net Cost	**$ (5,442)**	$ (5,421)	**$ -**	**$ -**	**$ -**

CSA 36 IDYLLWILD LIGHTING

Fund - **23375**
Deptid - **903601**

Charges For Current Services	$ 124,658	$ 123,831	$ 126,036	$ 126,036	$ 126,036
Intergovernmental Revenues	1,083	1,036	973	973	973
Other Revenue	-	1,098	247,607	247,607	247,607
Rev Fr Use Of Money&Property	3,764	1,957	1,156	1,156	1,156
Taxes	65,527	65,963	66,291	66,291	66,291
Total Revenue	**$ 195,032**	**$ 193,885**	**$ 442,063**	**$ 442,063**	**$ 442,063**
Salaries And Benefits	$ -	$ -	$ 132,617	$ 132,617	$ 132,617
Services And Supplies	229,083	177,227	245,000	245,000	245,000
Other Charges	19,898	18,241	29,446	29,446	29,446
Fixed Assets	-	-	35,000	35,000	35,000
Total Expenditures/Appropriations	**$ 248,981**	**$ 195,468**	**$ 442,063**	**$ 442,063**	**$ 442,063**
Net Cost	**$ 53,949**	$ 1,583	**$ -**	**$ -**	**$ -**

CSA 38 PINE COVE FIRE PROT

Fund - **23400**
Deptid - **903801**

Charges For Current Services	$ 85,420	$ 89,473	$ 87,496	$ 87,496	$ 87,496
Intergovernmental Revenues	891	932	959	959	959
Other Revenue	30,000	-	-	-	-
Rev Fr Use Of Money&Property	5,702	3,631	1,934	1,934	1,934
Taxes	54,254	59,281	63,605	63,605	63,605
Total Revenue	**$ 176,267**	**$ 153,317**	**$ 153,994**	**$ 153,994**	**$ 153,994**
Services And Supplies	$ 450	$ 686	$ 14,720	$ 14,720	$ 14,720
Other Charges	112,246	109,906	129,274	129,274	129,274
Fixed Assets	-	-	10,000	10,000	10,000
Total Expenditures/Appropriations	**$ 112,696**	**$ 110,592**	**$ 153,994**	**$ 153,994**	**$ 153,994**
Net Cost	**$ (63,571)**	$ (42,725)	**$ -**	**$ -**	**$ -**

CSA 41A MEADOWBROOKS ROADS

Fund - **23425**
Deptid - **904101**

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1	2	3		4	5
CSA 41A MEADOWBROOKS ROADS			Fund - **23425** Deptid - **904101**		
Charges For Current Services	$ 26,843	$ -	$ -	$ -	$ -
Intergovernmental Revenues	1,662	1,451	1,221	1,221	1,221
Other Revenue	-	-	727,832	727,832	727,832
Rev Fr Use Of Money&Property	14,049	8,370	4,715	4,715	4,715
Taxes	100,307	93,173	86,473	86,473	86,473
Total Revenue	$ **142,861**	$ **102,994**	$ **820,241**	$ **820,241**	$ **820,241**
Services And Supplies	$ 5,352	$ 6,600	$ 10,000	$ 10,000	$ 10,000
Other Charges	70,999	11,024	810,241	810,241	810,241
Total Expenditures/Appropriations	$ **76,351**	$ **17,624**	$ **820,241**	$ **820,241**	$ **820,241**
Net Cost	$ **(66,510)**	$ (85,370)	$ **-**	$ **-**	$ **-**
CSA 41B MEADOWBROOKS ROADS			Fund - **23450** Deptid - **904101**		
Charges For Current Services	$ 3,664	$ -	$ -	$ -	$ -
Rev Fr Use Of Money&Property	916	526	304	304	304
Total Revenue	$ **4,580**	$ **526**	$ **304**	$ **304**	$ **304**
Services And Supplies	$ -	$ -	$ 200	$ 200	$ 200
Other Charges	463	42	104	104	104
Total Expenditures/Appropriations	$ **463**	$ **42**	$ **304**	$ **304**	$ **304**
Net Cost	$ **(4,117)**	$ (484)	$ **-**	$ **-**	$ **-**
CSA 43 HOMELAND LIGHTING			Fund - **23475** Deptid - **904301**		
Charges For Current Services	$ 6,102	$ 6,046	$ 6,311	$ 6,311	$ 6,311
Intergovernmental Revenues	356	341	320	320	320
Rev Fr Use Of Money&Property	119	164	77	77	77
Taxes	21,113	21,472	21,953	21,953	21,953
Total Revenue	$ **27,690**	$ **28,023**	$ **28,661**	$ **28,661**	$ **28,661**
Services And Supplies	$ 11,292	$ 13,563	$ 24,718	$ 24,718	$ 24,718
Other Charges	1,877	1,542	3,943	3,943	3,943
Total Expenditures/Appropriations	$ **13,169**	$ **15,105**	$ **28,661**	$ **28,661**	$ **28,661**
Net Cost	$ **(14,521)**	$ (12,918)	$ **-**	$ **-**	$ **-**

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1	2	3		4	5
CSA 47 W PALM SPRINGS VILL			Fund - **23500** Deptid - **904701**		
Intergovernmental Revenues	$ 151	$ 126	$ 98	$ 98	$ 98
Rev Fr Use Of Money&Property	771	473	266	266	266
Taxes	9,351	8,404	7,066	7,066	7,066
Total Revenue	$ **10,273**	$ **9,003**	$ **7,430**	$ **7,430**	$ **7,430**
Services And Supplies	$ 2,658	$ 2,669	$ 5,427	$ 5,427	$ 5,427
Other Charges	673	495	2,003	2,003	2,003
Total Expenditures/Appropriations	$ **3,331**	$ **3,164**	$ **7,430**	$ **7,430**	$ **7,430**
Net Cost	$ **(6,942)**	$ (5,839)	$ **-**	$ **-**	$ **-**
CSA 51 DESERT CENTRE_MULTI			Fund - **23525** Deptid - **905102**		
Charges For Current Services	$ 453,111	$ 444,036	$ 403,654	$ 403,654	$ 403,654
Intergovernmental Revenues	496	517	532	532	532
Other Revenue	3,085	200	277,680	277,680	277,680
Rev Fr Use Of Money&Property	5,969	2,426	799	799	799
Taxes	50,595	47,292	41,671	41,671	41,671
Total Revenue	$ **513,256**	$ **494,471**	$ **724,336**	$ **724,336**	$ **724,336**
Salaries And Benefits	$ 223,771	$ 269,790	$ 360,656	$ 360,656	$ 360,656
Services And Supplies	221,042	254,834	281,882	281,882	281,882
Other Charges	84,648	80,218	81,798	81,798	81,798
Total Expenditures/Appropriations	$ **529,461**	$ **604,842**	$ **724,336**	$ **724,336**	$ **724,336**
Net Cost	$ **16,205**	$ 110,371	$ **-**	$ **-**	$ **-**
CSA 53 INDIO AREA LIGHTING			Fund - **23575** Deptid - **905301**		
Charges For Current Services	$ 3,771	$ 4,128	$ 4,397	$ 4,397	$ 4,397
Intergovernmental Revenues	5	5	5	5	5
Rev Fr Use Of Money&Property	119	82	45	45	45
Taxes	294	311	329	329	329
Total Revenue	$ **4,189**	$ **4,526**	$ **4,776**	$ **4,776**	$ **4,776**
Services And Supplies	$ 1,727	$ 1,727	$ 2,500	$ 2,500	$ 2,500
Other Charges	309	228	2,276	2,276	2,276
Total Expenditures/Appropriations	$ **2,036**	$ **1,955**	$ **4,776**	$ **4,776**	$ **4,776**

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1	2	3		4	5
Net Cost	**$ (2,153)**	$ (2,571)	**$ -**	**$ -**	**$ -**
CSA 59 HEMET AREA LIGHTING			Fund - **23600** Deptid - **905901**		
Charges For Current Services	$ 1,440	$ 1,327	$ 1,471	$ 1,471	$ 1,471
Intergovernmental Revenues	57	59	59	59	59
Rev Fr Use Of Money&Property	486	286	162	162	162
Taxes	3,507	3,741	3,927	3,927	3,927
Total Revenue	**$ 5,490**	**$ 5,413**	**$ 5,619**	**$ 5,619**	**$ 5,619**
Services And Supplies	$ 2,674	$ 2,686	$ 3,600	$ 3,600	$ 3,600
Other Charges	349	286	2,019	2,019	2,019
Total Expenditures/Appropriations	**$ 3,023**	**$ 2,972**	**$ 5,619**	**$ 5,619**	**$ 5,619**
Net Cost	**$ (2,467)**	$ (2,441)	**$ -**	**$ -**	**$ -**
CSA 60 PINYON FIRE PROTECT			Fund - **23625** Deptid - **906001**		
Charges For Current Services	$ 58,354	$ 57,781	$ 59,475	$ 59,475	$ 59,475
Intergovernmental Revenues	99	91	82	82	82
Other Revenue	-	-	266,693	266,693	266,693
Rev Fr Use Of Money&Property	6,112	3,755	2,105	2,105	2,105
Taxes	6,021	5,880	5,679	5,679	5,679
Total Revenue	**$ 70,586**	**$ 67,507**	**$ 334,034**	**$ 334,034**	**$ 334,034**
Services And Supplies	$ 4,815	$ 33,015	$ 66,000	$ 66,000	$ 66,000
Other Charges	7,147	5,881	248,034	248,034	248,034
Fixed Assets	-	-	20,000	20,000	20,000
Total Expenditures/Appropriations	**$ 11,962**	**$ 38,896**	**$ 334,034**	**$ 334,034**	**$ 334,034**
Net Cost	**$ (58,624)**	$ (28,611)	**$ -**	**$ -**	**$ -**
CSA 69 HEMET AREA (EAST)LI			Fund - **23675** Deptid - **906901**		

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1	2	3		4	5
CSA 69 HEMET AREA (EAST)LI			Fund - **23675** Deptid - **906901**		
Charges For Current Services	$ 27,150	$ 28,054	$ 27,655	$ 27,655	$ 27,655
Intergovernmental Revenues	1,133	1,054	959	959	959
Other Revenue	-	1	47,067	47,067	47,067
Rev Fr Use Of Money&Property	2,451	1,192	716	716	716
Taxes	68,466	67,879	67,244	67,244	67,244
Total Revenue	$ **99,200**	$ **98,180**	$ **143,641**	$ **143,641**	$ **143,641**
Services And Supplies	$ 122,641	$ 124,466	$ 135,000	$ 135,000	$ 135,000
Other Charges	6,371	5,277	8,641	8,641	8,641
Total Expenditures/Appropriations	$ **129,012**	$ **129,743**	$ **143,641**	$ **143,641**	$ **143,641**
Net Cost	$ **29,812**	$ 31,563	$ **-**	$ **-**	$ **-**
CSA 70 PERRIS AREA LIGHTIN			Fund - **23700** Deptid - **907001**		
Intergovernmental Revenues	$ 649	$ 600	$ 547	$ 547	$ 547
Rev Fr Use Of Money&Property	4,378	2,513	1,438	1,438	1,438
Taxes	38,946	38,198	37,667	37,667	37,667
Total Revenue	$ **43,973**	$ **41,311**	$ **39,652**	$ **39,652**	$ **39,652**
Services And Supplies	$ 24,813	$ 28,877	$ 33,000	$ 33,000	$ 33,000
Other Charges	4,763	3,768	6,652	6,652	6,652
Total Expenditures/Appropriations	$ **29,576**	$ **32,645**	$ **39,652**	$ **39,652**	$ **39,652**
Net Cost	$ **(14,397)**	$ (8,666)	$ **-**	$ **-**	$ **-**
CSA 72 RUBIDOUX LIGHTING			Fund - **23725** Deptid - **907201**		
Charges For Current Services	$ 2,224	$ 1,900	$ -	$ -	$ -
Intergovernmental Revenues	49	52	53	53	53
Other Revenue	-	-	1,729	1,729	1,729
Rev Fr Use Of Money&Property	498	287	166	166	166
Taxes	3,101	3,379	3,528	3,528	3,528
Total Revenue	$ **5,872**	$ **5,618**	$ **5,476**	$ **5,476**	$ **5,476**
Services And Supplies	$ 3,668	$ 4,160	$ 5,000	$ 5,000	$ 5,000
Other Charges	485	272	476	476	476
Total Expenditures/Appropriations	$ **4,153**	$ **4,432**	$ **5,476**	$ **5,476**	$ **5,476**

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1	2	3		4	5
Net Cost	**$ (1,719)**	$ (1,186)	**$ -**	**$ -**	**$ -**
CSA 73 CRESTMORE HEIGHTS A			Fund - **23750** Deptid - **907301**		
Charges For Current Services	$ 549	$ 348	$ -	$ -	$ -
Intergovernmental Revenues	33	34	36	36	36
Other Revenue	-	-	427	427	427
Rev Fr Use Of Money&Property	321	182	105	105	105
Taxes	2,017	2,206	2,371	2,371	2,371
Total Revenue	**$ 2,920**	**$ 2,770**	**$ 2,939**	**$ 2,939**	**$ 2,939**
Services And Supplies	$ 2,036	$ 2,051	$ 2,587	$ 2,587	$ 2,587
Other Charges	211	145	352	352	352
Total Expenditures/Appropriations	**$ 2,247**	**$ 2,196**	**$ 2,939**	**$ 2,939**	**$ 2,939**
Net Cost	**$ (673)**	$ (574)	**$ -**	**$ -**	**$ -**
CSA 80 HOMELAND LIGHTING			Fund - **23775** Deptid - **908001**		
Charges For Current Services	$ 9,497	$ 7,021	$ -	$ -	$ -
Intergovernmental Revenues	547	537	521	521	521
Other Revenue	3,001	51	14,148	14,148	14,148
Rev Fr Use Of Money&Property	666	416	241	241	241
Taxes	40,630	41,862	38,444	38,444	38,444
Total Revenue	**$ 54,341**	**$ 49,887**	**$ 53,354**	**$ 53,354**	**$ 53,354**
Services And Supplies	$ 50,362	$ 45,126	$ 50,000	$ 50,000	$ 50,000
Other Charges	3,397	2,613	3,354	3,354	3,354
Total Expenditures/Appropriations	**$ 53,759**	**$ 47,739**	**$ 53,354**	**$ 53,354**	**$ 53,354**
Net Cost	**$ (582)**	$ (2,148)	**$ -**	**$ -**	**$ -**
CSA 84 SUN CITY LIGHTING			Fund - **23825** Deptid - **908401**		

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1	2	3		4	5
CSA 84 SUN CITY LIGHTING			Fund - **23825** Deptid - **908401**		
Charges For Current Services	$ 98,605	$ 96,139	$ 95,281	$ 95,281	$ 95,281
Intergovernmental Revenues	12	12	13	13	13
Other Revenue	-	-	-	-	-
Rev Fr Use Of Money&Property	3,824	2,597	1,447	1,447	1,447
Taxes	728	3,004	2,717	2,717	2,717
Total Revenue	$ **103,169**	$ **101,752**	$ **99,458**	$ **99,458**	$ **99,458**
Services And Supplies	$ 82,980	$ 30,628	$ 78,000	$ 78,000	$ 78,000
Other Charges	9,066	5,686	21,458	21,458	21,458
Total Expenditures/Appropriations	$ **92,046**	$ **36,314**	$ **99,458**	$ **99,458**	$ **99,458**
Net Cost	**$ (11,123)**	$ (65,438)	**$ -**	**$ -**	**$ -**
CSA 85 CABAZON LIGHTING PA			Fund - **23850** Deptid - **908501**		
Charges For Current Services	$ 64,867	$ 64,591	$ 66,360	$ 66,360	$ 66,360
Intergovernmental Revenues	378	366	347	347	347
Other Revenue	15,740	2,403	91,183	91,183	91,183
Rev Fr Use Of Money&Property	1,563	676	398	398	398
Taxes	85,465	77,173	66,278	66,278	66,278
Total Revenue	$ **168,013**	$ **145,209**	$ **224,566**	$ **224,566**	$ **224,566**
Salaries And Benefits	$ 49,115	$ 27,941	$ 26,437	$ 26,437	$ 26,437
Services And Supplies	126,795	111,826	172,200	172,200	172,200
Other Charges	25,985	18,947	25,929	25,929	25,929
Total Expenditures/Appropriations	$ **201,895**	$ **158,714**	$ **224,566**	$ **224,566**	$ **224,566**
Net Cost	**$ 33,882**	$ 13,505	**$ -**	**$ -**	**$ -**
CSA 87 WOODCREST LIGHTING			Fund - **23900** Deptid - **908701**		
Charges For Current Services	$ 24,176	$ 23,971	$ 24,440	$ 24,440	$ 24,440
Intergovernmental Revenues	132	135	138	138	138
Other Revenue	-	-	4,751	4,751	4,751
Rev Fr Use Of Money&Property	956	558	320	320	320
Taxes	7,948	8,572	9,188	9,188	9,188
Total Revenue	$ **33,212**	$ **33,236**	$ **38,837**	$ **38,837**	$ **38,837**

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1	2	3		4	5
CSA 87 WOODCREST LIGHTING			Fund - **23900** Deptid - **908701**		
Services And Supplies	$ 27,430	$ 27,622	$ 31,247	$ 31,247	$ 31,247
Other Charges	2,065	1,865	7,590	7,590	7,590
Total Expenditures/Appropriations	$ **29,495**	$ **29,487**	$ **38,837**	$ **38,837**	$ **38,837**
Net Cost	**$ (3,717)**	$ (3,749)	**$ -**	**$ -**	**$ -**
CSA 89 PERRIS AREA (LAKEVIEW)			Fund - **23925** Deptid - **908901**		
Charges For Current Services	$ 23,807	$ 23,103	$ 23,575	$ 23,575	$ 23,575
Intergovernmental Revenues	69	71	73	73	73
Rev Fr Use Of Money&Property	81	26	9	9	9
Taxes	4,176	4,564	4,855	4,855	4,855
Total Revenue	$ **28,133**	$ **27,764**	$ **28,512**	$ **28,512**	$ **28,512**
Services And Supplies	$ 25,454	$ 23,659	$ 26,453	$ 26,453	$ 26,453
Other Charges	1,731	1,516	2,059	2,059	2,059
Total Expenditures/Appropriations	$ **27,185**	$ **25,175**	$ **28,512**	$ **28,512**	$ **28,512**
Net Cost	**$ (948)**	$ (2,589)	**$ -**	**$ -**	**$ -**
CSA 91 VALLE VISTA			Fund - **23950** Deptid - **909101**		
Charges For Current Services	$ 133,146	$ 132,919	$ 134,587	$ 134,587	$ 134,587
Intergovernmental Revenues	166	167	165	165	165
Rev Fr Use Of Money&Property	6,253	3,729	2,122	2,122	2,122
Taxes	10,096	10,629	11,060	11,060	11,060
Total Revenue	$ **149,661**	$ **147,444**	$ **147,934**	$ **147,934**	$ **147,934**
Services And Supplies	$ 100,324	$ 100,894	$ 130,370	$ 130,370	$ 130,370
Other Charges	9,224	8,330	17,564	17,564	17,564
Total Expenditures/Appropriations	$ **109,548**	$ **109,224**	$ **147,934**	$ **147,934**	$ **147,934**
Net Cost	**$ (40,113)**	$ (38,220)	**$ -**	**$ -**	**$ -**
CSA 94 SE OF HEMET LIGHTING			Fund - **24025** Deptid - **909401**		

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1	2	3		4	5
CSA 94 SE OF HEMET LIGHTING			Fund - **24025** Deptid - **909401**		
Charges For Current Services	$ 273	$ 163	$ 296	$ 296	$ 296
Intergovernmental Revenues	31	29	29	29	29
Other Revenue	-	-	1,265	1,265	1,265
Rev Fr Use Of Money&Property	58	31	18	18	18
Taxes	1,851	1,863	1,903	1,903	1,903
Total Revenue	$ **2,213**	$ **2,086**	$ **3,511**	$ **3,511**	$ **3,511**
Services And Supplies	$ 2,274	$ 2,285	$ 3,276	$ 3,276	$ 3,276
Other Charges	142	115	235	235	235
Total Expenditures/Appropriations	$ **2,416**	$ **2,400**	$ **3,511**	$ **3,511**	$ **3,511**
Net Cost	$ **203**	$ 314	$ **-**	$ **-**	$ **-**
CSA 97 MECCA LIGHTING			Fund - **24050** Deptid - **909701**		
Charges For Current Services	$ 61,409	$ 60,698	$ 61,801	$ 61,801	$ 61,801
Intergovernmental Revenues	107	113	117	117	117
Other Revenue	182	39	-	-	-
Rev Fr Use Of Money&Property	264	79	64	64	64
Taxes	8,335	9,359	10,057	10,057	10,057
Total Revenue	$ **70,297**	$ **70,288**	$ **72,039**	$ **72,039**	$ **72,039**
Services And Supplies	$ 78,367	$ 73,000	$ 63,835	$ 63,835	$ 63,835
Other Charges	7,525	6,375	8,204	8,204	8,204
Total Expenditures/Appropriations	$ **85,892**	$ **79,375**	$ **72,039**	$ **72,039**	$ **72,039**
Net Cost	$ **15,595**	$ 9,087	$ **-**	$ **-**	$ **-**
CSA 103 LA SERENE LIGHTING			Fund - **24075** Deptid - **910301**		
Charges For Current Services	$ 347,894	$ 353,057	$ 358,143	$ 358,143	$ 358,143
Intergovernmental Revenues	39	41	42	42	42
Other Revenue	-	-	6,824	6,824	6,824
Rev Fr Use Of Money&Property	852	444	369	369	369
Taxes	2,440	2,654	2,799	2,799	2,799
Total Revenue	$ **351,225**	$ **356,196**	$ **368,177**	$ **368,177**	$ **368,177**

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1	2	3		4	5
CSA 103 LA SERENE LIGHTING			Fund - **24075** Deptid - **910301**		
Salaries And Benefits	$ 7	$ -	$ -	$ -	$ -
Services And Supplies	337,741	380,089	344,366	344,366	344,366
Other Charges	27,058	34,222	23,811	23,811	23,811
Total Expenditures/Appropriations	$ **364,806**	$ **414,311**	$ **368,177**	$ **368,177**	$ **368,177**
Net Cost	**$ 13,581**	$ 58,115	**$ -**	**$ -**	**$ -**
CSA 104 SANTA ANA			Fund - **24100** Deptid - **910401**		
Charges For Current Services	$ 86,045	$ 85,659	$ 86,645	$ 86,645	$ 86,645
Intergovernmental Revenues	868	765	651	651	651
Other Revenue	-	-	28,251	28,251	28,251
Rev Fr Use Of Money&Property	5,702	3,950	2,137	2,137	2,137
Taxes	52,159	48,712	45,844	45,844	45,844
Total Revenue	$ **144,774**	$ **139,086**	$ **163,528**	$ **163,528**	$ **163,528**
Services And Supplies	$ -	$ -	$ 25,000	$ 25,000	$ 25,000
Other Charges	22,381	77,838	138,528	138,528	138,528
Total Expenditures/Appropriations	$ **22,381**	$ **77,838**	$ **163,528**	$ **163,528**	$ **163,528**
Net Cost	**$ (122,393)**	$ (61,248)	**$ -**	**$ -**	**$ -**
CSA 105 HAPPY VALLEY ROAD MAIN			Fund - **24125** Deptid - **910501**		
Charges For Current Services	$ 48,948	$ 48,918	$ 49,125	$ 49,125	$ 49,125
Intergovernmental Revenues	449	411	371	371	371
Other Revenue	1,300	-	144,910	144,910	144,910
Rev Fr Use Of Money&Property	2,910	2,063	1,112	1,112	1,112
Taxes	26,703	25,800	25,502	25,502	25,502
Total Revenue	$ **80,310**	$ **77,192**	$ **221,020**	$ **221,020**	$ **221,020**
Services And Supplies	$ 5,271	$ 5,251	$ 108,408	$ 108,408	$ 108,408
Other Charges	8,109	6,894	112,612	112,612	112,612
Total Expenditures/Appropriations	$ **13,380**	$ **12,145**	$ **221,020**	$ **221,020**	$ **221,020**
Net Cost	**$ (66,930)**	$ (65,047)	**$ -**	**$ -**	**$ -**

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1	2	3		4	5
CSA 108 ROAD IMPROVEMENT MAIN			Fund - **24150** Deptid - **910801**		
Charges For Current Services	$ 13,443	$ 13,319	$ 13,515	$ 13,515	$ 13,515
Intergovernmental Revenues	278	279	276	276	276
Other Revenue	-	-	49,000	49,000	49,000
Rev Fr Use Of Money&Property	5,718	3,318	1,890	1,890	1,890
Taxes	16,440	17,266	18,772	18,772	18,772
Total Revenue	$ **35,879**	$ **34,182**	$ **83,453**	$ **83,453**	$ **83,453**
Services And Supplies	$ -	$ -	$ 4,000	$ 4,000	$ 4,000
Other Charges	15,916	8,828	79,453	79,453	79,453
Total Expenditures/Appropriations	$ **15,916**	$ **8,828**	$ **83,453**	$ **83,453**	$ **83,453**
Net Cost	$ **(19,963)**	$ (25,354)	$ **-**	$ **-**	$ **-**
CSA 113 WOODCREST LIGHTING			Fund - **24175** Deptid - **911301**		
Charges For Current Services	$ 8,477	$ 8,382	$ 8,552	$ 8,552	$ 8,552
Intergovernmental Revenues	22	21	20	20	20
Rev Fr Use Of Money&Property	744	472	263	263	263
Taxes	1,722	1,808	1,215	1,215	1,215
Total Revenue	$ **10,965**	$ **10,683**	$ **10,050**	$ **10,050**	$ **10,050**
Services And Supplies	$ 1,062	$ 1,067	$ 5,611	$ 5,611	$ 5,611
Other Charges	663	587	4,439	4,439	4,439
Total Expenditures/Appropriations	$ **1,725**	$ **1,654**	$ **10,050**	$ **10,050**	$ **10,050**
Net Cost	$ **(9,240)**	$ (9,029)	$ **-**	$ **-**	$ **-**
CSA 115 DESERT HOT SPRINGS			Fund - **24200** Deptid - **911501**		
Charges For Current Services	$ 40,997	$ 40,712	$ 41,110	$ 41,110	$ 41,110
Other Revenue	-	-	-	-	-
Rev Fr Use Of Money&Property	2,389	1,562	868	868	868
Total Revenue	$ **43,386**	$ **42,274**	$ **41,978**	$ **41,978**	$ **41,978**
Services And Supplies	$ 2,086	$ 8,002	$ 4,000	$ 4,000	$ 4,000
Other Charges	4,768	19,960	37,978	37,978	37,978
Total Expenditures/Appropriations	$ **6,854**	$ **27,962**	$ **41,978**	$ **41,978**	$ **41,978**

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1	2	3		4	5
Net Cost	**$ (36,532)**	$ (14,312)	**$ -**	**$ -**	**$ -**
CSA 117 MEAD VALLEY-AN SER			Fund - **24225** Deptid - **911701**		
Charges For Current Services	$ 26,038	$ 26,163	$ 26,555	$ 26,555	$ 26,555
Rev Fr Use Of Money&Property	814	500	283	283	283
Total Revenue	**$ 26,852**	**$ 26,663**	**$ 26,838**	**$ 26,838**	**$ 26,838**
Services And Supplies	$ 18,679	$ 18,798	$ 20,000	$ 20,000	$ 20,000
Other Charges	1,717	1,414	6,838	6,838	6,838
Total Expenditures/Appropriations	**$ 20,396**	**$ 20,212**	**$ 26,838**	**$ 26,838**	**$ 26,838**
Net Cost	**$ (6,456)**	$ (6,451)	**$ -**	**$ -**	**$ -**
CSA 121 BERNUDA DUNES LIGHTING			Fund - **24250** Deptid - **912101**		
Charges For Current Services	$ 95,028	$ 94,691	$ 97,602	$ 97,602	$ 97,602
Other Revenue	450	-	335,000	335,000	335,000
Rev Fr Use Of Money&Property	4,367	2,698	1,523	1,523	1,523
Total Revenue	**$ 99,845**	**$ 97,389**	**$ 434,125**	**$ 434,125**	**$ 434,125**
Services And Supplies	$ 49,456	$ 53,269	$ 79,988	$ 79,988	$ 79,988
Other Charges	6,070	5,437	319,137	319,137	319,137
Fixed Assets	-	-	35,000	35,000	35,000
Total Expenditures/Appropriations	**$ 55,526**	**$ 58,706**	**$ 434,125**	**$ 434,125**	**$ 434,125**
Net Cost	**$ (44,319)**	$ (38,683)	**$ -**	**$ -**	**$ -**
CSA 124 LAKE ELSINORE WARM SPR			Fund - **24275** Deptid - **912411**		
Charges For Current Services	$ 2,498	$ 2,669	$ 2,755	$ 2,755	$ 2,755
Rev Fr Use Of Money&Property	3,188	1,768	1,029	1,029	1,029
Total Revenue	**$ 5,686**	**$ 4,437**	**$ 3,784**	**$ 3,784**	**$ 3,784**
Services And Supplies	$ -	$ -	$ 1,500	$ 1,500	$ 1,500
Other Charges	605	318	2,284	2,284	2,284
Total Expenditures/Appropriations	**$ 605**	**$ 318**	**$ 3,784**	**$ 3,784**	**$ 3,784**

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1	2	3		4	5
Net Cost	**$ (5,081)**	$ (4,119)	**$ -**	**$ -**	**$ -**

CSA 125 THERMAL AREA LIGHTING

Fund - **24300**
Deptid - **912501**

Intergovernmental Revenues	$ 56	$ 59	$ 61	$ 61	$ 61
Other Revenue	646	91	179	179	179
Rev Fr Use Of Money&Property	877	503	292	292	292
Taxes	17,033	15,822	14,702	14,702	14,702
Total Revenue	**$ 18,612**	**$ 16,475**	**$ 15,234**	**$ 15,234**	**$ 15,234**
Services And Supplies	$ 13,962	$ 14,285	$ 13,920	$ 13,920	$ 13,920
Other Charges	1,132	964	1,314	1,314	1,314
Total Expenditures/Appropriations	**$ 15,094**	**$ 15,249**	**$ 15,234**	**$ 15,234**	**$ 15,234**
Net Cost	**$ (3,518)**	$ (1,226)	**$ -**	**$ -**	**$ -**

CSA 126 HIGHGROVE AREA LIGHT

Fund - **24325**
Deptid - **912601**

Charges For Current Services	$ 135,704	$ 134,741	$ 132,960	$ 132,960	$ 132,960
Intergovernmental Revenues	1,583	1,334	1,069	1,069	1,069
Other Revenue	931	447	11,830	11,830	11,830
Rev Fr Use Of Money&Property	(200)	666	281	281	281
Taxes	119,415	110,953	101,146	101,146	101,146
Total Revenue	**$ 257,433**	**$ 248,141**	**$ 247,286**	**$ 247,286**	**$ 247,286**
Salaries And Benefits	$ 21,737	$ 15,140	$ 42,386	$ 42,386	$ 42,386
Services And Supplies	101,833	115,234	149,352	149,352	149,352
Other Charges	124,980	34,921	55,548	55,548	55,548
Total Expenditures/Appropriations	**$ 248,550**	**$ 165,295**	**$ 247,286**	**$ 247,286**	**$ 247,286**
Net Cost	**$ (8,883)**	$ (82,846)	**$ -**	**$ -**	**$ -**

CSA 126 QUIMBY HIGHGROVE LGHTG

Fund - **32720**
Deptid - **912601**

Charges For Current Services	$ -	$ -	$ -	$ -	$ -
Other Revenue	-	-	50,000	50,000	50,000
Rev Fr Use Of Money&Property	857	477	276	276	276
Total Revenue	**$ 857**	**$ 477**	**$ 50,276**	**$ 50,276**	**$ 50,276**

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1	2	3		4	5
CSA 126 QUIMBY HIGHGROVE LGHTG			Fund - **32720** Deptid - **912601**		
Services And Supplies	$ -	$ -	$ 10,276	$ 10,276	$ 10,276
Fixed Assets	-	-	40,000	40,000	40,000
Total Expenditures/Appropriations	$ **-**	$ **-**	$ **50,276**	$ **50,276**	$ **50,276**
Net Cost	**$ (857)**	$ (477)	**$ -**	**$ -**	**$ -**
CSA 128 LAKE MATHEWS LIGHT			Fund - **24350** Deptid - **912801**		
Charges For Current Services	$ 32,649	$ 32,563	$ 32,925	$ 32,925	$ 32,925
Other Revenue	-	-	229,532	229,532	229,532
Rev Fr Use Of Money&Property	2,636	1,646	928	928	928
Total Revenue	$ **35,285**	$ **34,209**	$ **263,385**	$ **263,385**	$ **263,385**
Services And Supplies	$ -	$ -	$ 9,000	$ 9,000	$ 9,000
Other Charges	3,246	10,227	254,385	254,385	254,385
Total Expenditures/Appropriations	$ **3,246**	$ **10,227**	$ **263,385**	$ **263,385**	$ **263,385**
Net Cost	**$ (32,039)**	$ (23,982)	**$ -**	**$ -**	**$ -**
CSA 128 LAKE MATTHEWS ROAD			Fund - **24375** Deptid - **912801**		
Charges For Current Services	$ 7,862	$ 8,531	$ 8,475	$ 8,475	$ 8,475
Other Revenue	-	-	34,255	34,255	34,255
Rev Fr Use Of Money&Property	324	254	131	131	131
Total Revenue	$ **8,186**	$ **8,785**	$ **42,861**	$ **42,861**	$ **42,861**
Services And Supplies	$ -	$ -	$ 2,000	$ 2,000	$ 2,000
Other Charges	1,202	805	40,861	40,861	40,861
Total Expenditures/Appropriations	$ **1,202**	$ **805**	$ **42,861**	$ **42,861**	$ **42,861**
Net Cost	**$ (6,984)**	$ (7,980)	**$ -**	**$ -**	**$ -**
CSA 132 LAKE MATHEWS LIGHTING			Fund - **24400** Deptid - **913201**		

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1	2	3		4	5
CSA 132 LAKE MATHEWS LIGHTING			Fund - **24400** Deptid - **913201**		
Charges For Current Services	$ 143,814	$ 143,973	$ 146,051	$ 146,051	$ 146,051
Other Revenue	-	-	38,231	38,231	38,231
Rev Fr Use Of Money&Property	1,764	797	512	512	512
Total Revenue	$ **145,578**	$ **144,770**	$ **184,794**	$ **184,794**	$ **184,794**
Services And Supplies	$ 168,914	$ 164,223	$ 175,000	$ 175,000	$ 175,000
Other Charges	9,089	8,291	9,794	9,794	9,794
Total Expenditures/Appropriations	$ **178,003**	$ **172,514**	$ **184,794**	$ **184,794**	$ **184,794**
Net Cost	$ **32,425**	$ 27,744	$ **-**	$ **-**	$ **-**
CSA 134 TEMESCAL CANYON LIGHT			Fund - **24425** Deptid - **913401**		
Charges For Current Services	$ 1,012,456	$ 1,084,342	$ 1,093,905	$ 1,093,905	$ 1,093,905
Other Revenue	630	690	166,867	166,867	166,867
Rev Fr Use Of Money&Property	4,862	3,694	2,082	2,082	2,082
Total Revenue	$ **1,017,948**	$ **1,088,726**	$ **1,262,854**	$ **1,262,854**	$ **1,262,854**
Salaries And Benefits	$ 138,927	$ 137,410	$ 212,140	$ 212,140	$ 212,140
Services And Supplies	633,240	591,670	844,066	844,066	844,066
Other Charges	212,666	156,150	206,648	206,648	206,648
Total Expenditures/Appropriations	$ **984,833**	$ **885,230**	$ **1,262,854**	$ **1,262,854**	$ **1,262,854**
Net Cost	$ **(33,115)**	$ (203,496)	$ **-**	$ **-**	$ **-**
CSA 135 TEMESCAL CANYON LIGHT			Fund - **24450** Deptid - **913501**		
Charges For Current Services	$ 12,662	$ 12,511	$ 12,758	$ 12,758	$ 12,758
Other Revenue	-	-	6,602	6,602	6,602
Rev Fr Use Of Money&Property	381	180	111	111	111
Total Revenue	$ **13,043**	$ **12,691**	$ **19,471**	$ **19,471**	$ **19,471**
Services And Supplies	$ 16,898	$ 16,407	$ 18,500	$ 18,500	$ 18,500
Other Charges	803	727	971	971	971
Total Expenditures/Appropriations	$ **17,701**	$ **17,134**	$ **19,471**	$ **19,471**	$ **19,471**
Net Cost	$ **4,658**	$ 4,443	$ **-**	$ **-**	$ **-**

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CSA 142 WILDOMAR LIGHTING			Fund - **24525** Deptid - **914201**		
Charges For Current Services	$ 11,713	$ 11,723	$ 11,986	$ 11,986	$ 11,986
Other Revenue	-	-	85	85	85
Rev Fr Use Of Money&Property	205	144	78	78	78
Total Revenue	$ **11,918**	$ **11,867**	$ **12,149**	$ **12,149**	$ **12,149**
Services And Supplies	$ 9,555	$ 4,067	$ 11,000	$ 11,000	$ 11,000
Other Charges	888	674	1,149	1,149	1,149
Total Expenditures/Appropriations	$ **10,443**	$ **4,741**	$ **12,149**	$ **12,149**	$ **12,149**
Net Cost	$ **(1,475)**	$ (7,126)	$ **-**	$ **-**	$ **-**
CSA 143 RANCHO CALIF PARK			Fund - **24550** Deptid - **914301**		
Charges For Current Services	$ 1,719,325	$ 1,770,984	$ 1,755,604	$ 1,755,604	$ 1,755,604
Other Revenue	3,886	5,375	58,632	58,632	58,632
Rev Fr Use Of Money&Property	12,822	10,259	5,656	5,656	5,656
Total Revenue	$ **1,736,033**	$ **1,786,618**	$ **1,819,892**	$ **1,819,892**	$ **1,819,892**
Salaries And Benefits	$ 160,237	$ 111,402	$ 131,468	$ 131,468	$ 131,468
Services And Supplies	938,666	992,141	1,361,805	1,361,805	1,361,805
Other Charges	293,550	253,893	326,619	326,619	326,619
Total Expenditures/Appropriations	$ **1,392,453**	$ **1,357,436**	$ **1,819,892**	$ **1,819,892**	$ **1,819,892**
Net Cost	$ **(343,580)**	$ (429,182)	$ **-**	$ **-**	$ **-**
CSA 143 QUIMBY RANCHO CALIF			Fund - **31550** Deptid - **914301**		
Charges For Current Services	$ -	$ -	$ -	$ -	$ -
Other Revenue	-	-	2,000,000	2,000,000	2,000,000
Rev Fr Use Of Money&Property	24,963	13,709	7,929	7,929	7,929
Total Revenue	$ **24,963**	$ **13,709**	$ **2,007,929**	$ **2,007,929**	$ **2,007,929**
Services And Supplies	$ 40,208	$ 4,195	$ 1,000,000	$ 1,000,000	$ 1,000,000
Fixed Assets	-	-	1,007,929	1,007,929	1,007,929
Total Expenditures/Appropriations	$ **40,208**	$ **4,195**	$ **2,007,929**	$ **2,007,929**	$ **2,007,929**
Net Cost	$ **15,245**	$ (9,514)	$ **-**	$ **-**	$ **-**

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1	2	3		4	5
CSA 145 SUN CITY PARK _ REC			Fund - **24575** Deptid - **914501**		
Charges For Current Services	$ 2,109	$ 2,202	$ 2,356	$ 2,356	$ 2,356
Other Revenue	1,329	-	-	-	-
Rev Fr Use Of Money&Property	720	371	221	221	221
Taxes	534	2,310	2,014	2,014	2,014
Total Revenue	$ **4,692**	$ **4,883**	$ **4,591**	$ **4,591**	$ **4,591**
Services And Supplies	$ 33,898	$ 8,172	$ 3,316	$ 3,316	$ 3,316
Other Charges	23,608	466	1,275	1,275	1,275
Total Expenditures/Appropriations	$ **57,506**	$ **8,638**	$ **4,591**	$ **4,591**	$ **4,591**
Net Cost	$ **52,814**	$ 3,755	$ **-**	$ **-**	$ **-**
CSA 145 QUIMBY SUN CITY			Fund - **31555** Deptid - **914501**		
Charges For Current Services	$ -	$ -	$ -	$ -	$ -
Other Revenue	-	-	100,000	100,000	100,000
Rev Fr Use Of Money&Property	16,747	9,276	5,360	5,360	5,360
Total Revenue	$ **16,747**	$ **9,276**	$ **105,360**	$ **105,360**	$ **105,360**
Services And Supplies	$ 14,206	$ -	$ 55,000	$ 55,000	$ 55,000
Fixed Assets	-	-	50,360	50,360	50,360
Total Expenditures/Appropriations	$ **14,206**	$ **-**	$ **105,360**	$ **105,360**	$ **105,360**
Net Cost	$ **(2,541)**	$ (9,276)	$ **-**	$ **-**	$ **-**
CSA 146 LAKEVIEW PARK _ REC			Fund - **24800** Deptid - **914601**		
Charges For Current Services	$ 11,354	$ 8,807	$ 8,930	$ 8,930	$ 8,930
Rev Fr Use Of Money&Property	256	190	104	104	104
Total Revenue	$ **11,610**	$ **8,997**	$ **9,034**	$ **9,034**	$ **9,034**
Services And Supplies	$ (189)	$ 1,773	$ 6,879	$ 6,879	$ 6,879
Other Charges	1,032	1,323	2,155	2,155	2,155
Total Expenditures/Appropriations	$ **843**	$ **3,096**	$ **9,034**	$ **9,034**	$ **9,034**
Net Cost	$ **(10,767)**	$ (5,901)	$ **-**	$ **-**	$ **-**

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1	2	3		4	5
CSA 146 QUIMBY LAKEVIEW P _ R			Fund - **32730** Deptid - **914601**		
Charges For Current Services	$ 23,760	$ -	$ -	$ -	$ -
Other Revenue	-	-	50,000	50,000	50,000
Rev Fr Use Of Money&Property	641	389	225	225	225
Total Revenue	$ **24,401**	$ **389**	$ **50,225**	$ **50,225**	$ **50,225**
Services And Supplies	$ -	$ -	$ 10,225	$ 10,225	$ 10,225
Fixed Assets	-	-	40,000	40,000	40,000
Total Expenditures/Appropriations	$ **-**	$ **-**	$ **50,225**	$ **50,225**	$ **50,225**
Net Cost	$ **(24,401)**	$ (389)	$ **-**	$ **-**	$ **-**
CSA 149 WINE COUNTRY			Fund - **24600** Deptid - **914901**		
Charges For Current Services	$ 297,047	$ 298,652	$ 301,160	$ 301,160	$ 301,160
Other Revenue	-	-	88,150	88,150	88,150
Rev Fr Use Of Money&Property	979	1,895	896	896	896
Total Revenue	$ **298,026**	$ **300,547**	$ **390,206**	$ **390,206**	$ **390,206**
Services And Supplies	$ 411	$ 2,662	$ 10,000	$ 10,000	$ 10,000
Other Charges	86,866	106,145	380,206	380,206	380,206
Total Expenditures/Appropriations	$ **87,277**	$ **108,807**	$ **390,206**	$ **390,206**	$ **390,206**
Net Cost	$ **(210,749)**	$ (191,740)	$ **-**	$ **-**	$ **-**
CSA 149 WINE COUNTRY BEAUTIFIC			Fund - **24825** Deptid - **914901**		
Charges For Current Services	$ 62,432	$ 66,620	$ 69,773	$ 69,773	$ 69,773
Other Revenue	-	2,224	-	-	-
Rev Fr Use Of Money&Property	248	199	77	77	77
Total Revenue	$ **62,680**	$ **69,043**	$ **69,850**	$ **69,850**	$ **69,850**
Salaries And Benefits	$ 33,749	$ -	$ -	$ -	$ -
Services And Supplies	34,501	24,972	44,372	44,372	44,372
Other Charges	9,360	6,141	25,478	25,478	25,478
Total Expenditures/Appropriations	$ **77,610**	$ **31,113**	$ **69,850**	$ **69,850**	$ **69,850**
Net Cost	$ **14,930**	$ (37,930)	$ **-**	$ **-**	$ **-**

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1	2	3		4	5
CSA 152 NPDES			Fund - **24625** Deptid - **915201**		
Charges For Current Services	$ 1,570,828	$ 2,091,658	$ 1,567,502	$ 1,567,502	$ 1,567,502
Other Revenue	53,827	69,901	3,150,723	3,150,723	3,150,723
Rev Fr Use Of Money&Property	37,545	24,635	15,673	15,673	15,673
Total Revenue	$ **1,662,200**	$ **2,186,194**	$ **4,733,898**	$ **4,733,898**	$ **4,733,898**
Salaries And Benefits	$ 130,485	$ 499,368	$ 2,145,045	$ 2,145,045	$ 2,145,045
Services And Supplies	119,463	402,582	1,020,740	1,020,740	1,020,740
Other Charges	1,104,171	1,371,102	1,568,113	1,568,113	1,568,113
Total Expenditures/Appropriations	$ **1,354,119**	$ **2,273,052**	$ **4,733,898**	$ **4,733,898**	$ **4,733,898**
Net Cost	$ **(308,081)**	$ 86,858	$ **-**	$ **-**	$ **-**
LMD WILDOMAR			Fund - **24630** Deptid - **915201**		
Charges For Current Services	$ 14	$ (11,826)	$ -	$ -	$ -
Other Revenue	74	-	-	-	-
Rev Fr Use Of Money&Property	116	78	-	-	-
Total Revenue	$ **204**	$ **(11,748)**	$ **-**	$ **-**	$ **-**
Services And Supplies	$ 1,822	$ -	$ -	$ -	$ -
Other Charges	4,397	-	-	-	-
Total Expenditures/Appropriations	$ **6,219**	$ **-**	$ **-**	$ **-**	$ **-**
Net Cost	$ **6,015**	$ 11,748	$ **-**	$ **-**	$ **-**
CSA 152 SPORTS PARK			Fund - **24875** Deptid - **915201**		
Charges For Current Services	$ 415,846	$ 447,956	$ 449,607	$ 449,607	$ 449,607
Other Revenue	1,862	3,807	23,222	23,222	23,222
Rev Fr Use Of Money&Property	10,831	7,724	4,256	4,256	4,256
Total Revenue	$ **428,539**	$ **459,487**	$ **477,085**	$ **477,085**	$ **477,085**
Salaries And Benefits	$ 75,161	$ 80,165	$ 90,770	$ 90,770	$ 90,770
Services And Supplies	38,192	123,771	255,986	255,986	255,986
Other Charges	62,245	65,812	130,329	130,329	130,329
Total Expenditures/Appropriations	$ **175,598**	$ **269,748**	$ **477,085**	$ **477,085**	$ **477,085**

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1	2	3		4	5
Net Cost	**$ (252,941)**	$ (189,739)	**$ -**	**$ -**	**$ -**

CSA 152 ZONE A

Fund - **31560**
Deptid - **915201**

Charges For Current Services	$ 13,320	$ 8,724	$ -	$ -	$ -
Other Revenue	-	-	1,000,000	1,000,000	1,000,000
Rev Fr Use Of Money&Property	12,893	7,264	4,193	4,193	4,193
Total Revenue	**$ 26,213**	**$ 15,988**	**$ 1,004,193**	**$ 1,004,193**	**$ 1,004,193**
Services And Supplies	$ -	$ -	$ 75,000	$ 75,000	$ 75,000
Fixed Assets	-	-	929,193	929,193	929,193
Total Expenditures/Appropriations	**$ -**	**$ -**	**$ 1,004,193**	**$ 1,004,193**	**$ 1,004,193**
Net Cost	**$ (26,213)**	$ (15,988)	**$ -**	**$ -**	**$ -**

CSA 152 ZONE B

Fund - **31570**
Deptid - **915201**

Other Revenue	$ 1,370,008	$ -	$ 3,000,000	$ 3,000,000	$ 3,000,000
Rev Fr Use Of Money&Property	41,177	22,850	13,344	13,344	13,344
Total Revenue	**$ 1,411,185**	**$ 22,850**	**$ 3,013,344**	**$ 3,013,344**	**$ 3,013,344**
Services And Supplies	$ 125,665	$ 269,253	$ 488,344	$ 488,344	$ 488,344
Other Charges	2,848	2,408	2,500,000	2,500,000	2,500,000
Fixed Assets	-	-	25,000	25,000	25,000
Total Expenditures/Appropriations	**$ 128,513**	**$ 271,661**	**$ 3,013,344**	**$ 3,013,344**	**$ 3,013,344**
Net Cost	**$ (1,282,672)**	$ 248,811	**$ -**	**$ -**	**$ -**

CSA 152 CAJALCO CORRIDOR QUIMB

Fund - **32740**
Deptid - **915201**

Other Revenue	$ -	$ -	$ 1,500,000	$ 1,500,000	$ 1,500,000
Rev Fr Use Of Money&Property	23,403	13,008	7,517	7,517	7,517
Total Revenue	**$ 23,403**	**$ 13,008**	**$ 1,507,517**	**$ 1,507,517**	**$ 1,507,517**
Services And Supplies	$ 13,008	$ -	$ 50,000	$ 50,000	$ 50,000
Other Charges	-	-	1,000,000	1,000,000	1,000,000
Fixed Assets	-	-	457,517	457,517	457,517
Total Expenditures/Appropriations	**$ 13,008**	**$ -**	**$ 1,507,517**	**$ 1,507,517**	**$ 1,507,517**

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1	2	3		4	5
Net Cost	**$ (10,395)**	$ (13,008)	**$ -**	**$ -**	**$ -**

CSA 152 NPDES

Fund - **33200**
Deptid - **915201**

Charges For Current Services	$ -	$ 5,745	$ 11,490	$ 11,490	$ 11,490
Intergovernmental Revenues	2,768	2,693	2,584	2,584	2,584
Other Revenue	7,612	8,918	38,162	38,162	38,162
Rev Fr Use Of Money&Property	5,477	2,860	1,619	1,619	1,619
Taxes	183,586	175,468	161,518	161,518	161,518
Total Revenue	**$ 199,443**	**$ 195,684**	**$ 215,373**	**$ 215,373**	**$ 215,373**
Salaries And Benefits	$ 122,780	$ 44,903	$ 43,682	$ 43,682	$ 43,682
Services And Supplies	69,473	99,953	107,859	107,859	107,859
Other Charges	42,358	33,137	63,832	63,832	63,832
Fixed Assets	-	-	-	-	-
Total Expenditures/Appropriations	**$ 234,611**	**$ 177,993**	**$ 215,373**	**$ 215,373**	**$ 215,373**
Net Cost	**$ 35,168**	$ (17,691)	**$ -**	**$ -**	**$ -**

CSA ADMINISTRATION

Fund - **24625**
Deptid - **915202**

Charges For Current Services	$ 850,874	$ 1,802,481	$ 1,298,770	$ 1,298,770	$ 1,298,770
Other Revenue	-	-	339,008	339,008	339,008
Total Revenue	**$ 850,874**	**$ 1,802,481**	**$ 1,637,778**	**$ 1,637,778**	**$ 1,637,778**
Salaries And Benefits	$ -	$ 557,502	$ 804,108	$ 804,108	$ 804,108
Services And Supplies	-	113,228	142,551	142,551	142,551
Other Charges	-	656,457	691,119	691,119	691,119
Total Expenditures/Appropriations	**$ -**	**$ 1,327,187**	**$ 1,637,778**	**$ 1,637,778**	**$ 1,637,778**
Net Cost	**$ (850,874)**	$ (475,294)	**$ -**	**$ -**	**$ -**

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1	**2**	**3**		**4**	**5**
CORAL			Fund - **35900** Deptid - **925001**		
Charges For Current Services	$ 15,392,382	$ 15,857,294	$ 18,698,008	$ 22,305,434	$ 22,305,434
Other Revenue	23,640,006	27,351,726	39,894,813	36,287,387	36,287,387
Rev Fr Use Of Money&Property	13,115,405	13,121,538	21,002,700	21,002,700	21,002,700
Total Revenue	$ **52,147,793**	$ **56,330,558**	$ **79,595,521**	$ **79,595,521**	$ **79,595,521**
Services And Supplies	$ 1,741,188	$ 1,075,538	$ 1,201,000	$ 1,201,000	$ 1,201,000
Other Charges	50,362,605	55,189,135	78,310,260	78,310,260	78,310,260
Operating Transfers Out	-	-	84,261	84,261	84,261
Total Expenditures/Appropriations	$ **52,103,793**	$ **56,264,673**	$ **79,595,521**	$ **79,595,521**	$ **79,595,521**
Net Cost	**$ (44,000)**	$ (65,885)	**$ -**	**$ -**	**$ -**

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1	2	3		4	5
FLOOD: CAPITAL PROJECTS			Fund - **33000** Deptid - **947100**		
Charges For Current Services	$ -	$ -	$ -	$ -	$ -
Other Revenue	600,000	1,409,190	4,635,000	4,635,000	4,635,000
Rev Fr Use Of Money&Property	1,677	2,081	1,000	1,000	1,000
Total Revenue	$ **601,677**	$ **1,411,271**	$ **4,636,000**	$ **4,636,000**	$ **4,636,000**
Fixed Assets	$ 412,520	$ 1,346,305	$ 4,635,000	$ 4,635,000	$ 4,635,000
Total Expenditures/Appropriations	$ **412,520**	$ **1,346,305**	$ **4,635,000**	$ **4,635,000**	$ **4,635,000**
Net Cost	$ **(189,157)**	$ (64,966)	$ **(1,000)**	$ **(1,000)**	$ **(1,000)**
FLOOD: SPECIAL ACCOUNTING			Fund - **15000** Deptid - **947180**		
Charges For Current Services	$ 920,024	$ 707,260	$ 805,000	$ 805,000	$ 805,000
Rev Fr Use Of Money&Property	30,804	6,984	10,000	10,000	10,000
Total Revenue	$ **950,828**	$ **714,244**	$ **815,000**	$ **815,000**	$ **815,000**
Salaries And Benefits	$ 1,075,547	$ 885,335	$ 525,300	$ 525,300	$ 525,300
Services And Supplies	513,737	1,565,464	2,057,490	2,057,490	2,057,490
Intrafund Transfers	(742,439)	(1,442,217)	(1,630,000)	(1,630,000)	(1,630,000)
Total Expenditures/Appropriations	$ **846,845**	$ **1,008,582**	$ **952,790**	$ **952,790**	$ **952,790**
Net Cost	$ **(103,983)**	$ 294,338	$ **137,790**	$ **137,790**	$ **137,790**
FLOOD: DISTRICT ADMIN			Fund - **15100** Deptid - **947200**		
Charges For Current Services	$ 3,574,882	$ 86,060	$ 116,000	$ 116,000	$ 116,000
Intergovernmental Revenues	43,490	43,862	44,500	44,500	44,500
Other Revenue	215,095	244,849	251,250	251,250	251,250
Rev Fr Use Of Money&Property	37,297	32,527	26,000	26,000	26,000
Taxes	3,002,891	2,817,269	2,944,000	2,944,000	2,944,000
Total Revenue	$ **6,873,655**	$ **3,224,567**	$ **3,381,750**	$ **3,381,750**	$ **3,381,750**
Salaries And Benefits	$ 3,553,385	$ 4,315,307	$ 5,451,767	$ 5,451,767	$ 5,451,767
Services And Supplies	3,121,734	3,049,121	4,037,145	4,037,145	4,037,145
Fixed Assets	46,779	19,565	50,000	50,000	50,000
Intrafund Transfers	(898)	(3,214,710)	(4,307,626)	(4,307,626)	(4,307,626)
Total Expenditures/Appropriations	$ **6,721,000**	$ **4,169,283**	$ **5,231,286**	$ **5,231,286**	$ **5,231,286**

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1	2	3		4	5
Net Cost	**$ (152,655)**	$ 944,716	**$ 1,849,536**	**$ 1,849,536**	**$ 1,849,536**
FLOOD: HYDROLOGY			Fund - **48000** Deptid - **947240**		
Charges For Current Services	$ 769,897	$ 658,933	$ 1,116,840	$ 1,116,840	$ 1,116,840
Other Revenue	17,726	-	-	-	-
Rev Fr Use Of Money&Property	(41)	307	940	940	940
Total Revenue	**$ 787,582**	**$ 659,240**	**$ 1,117,780**	**$ 1,117,780**	**$ 1,117,780**
Salaries And Benefits	$ 324,459	$ 319,264	$ 373,200	$ 373,200	$ 373,200
Services And Supplies	413,182	351,464	614,140	614,140	614,140
Other Charges	2,462	5,908	28,500	28,500	28,500
Fixed Assets	-	-	90,000	90,000	90,000
Total Expenditures/Appropriations	**$ 740,103**	**$ 676,636**	**$ 1,105,840**	**$ 1,105,840**	**$ 1,105,840**
Net Cost	**$ (47,479)**	$ 17,396	**$ (11,940)**	**$ (11,940)**	**$ (11,940)**
FLOOD: GARAGE_FLEET OPS			Fund - **48020** Deptid - **947260**		
Charges For Current Services	$ 12,608	$ 41,167	$ 15,000	$ 15,000	$ 15,000
Other Revenue	363,517	136,963	190,500	190,500	190,500
Rev Fr Use Of Money&Property	3,222,094	3,162,556	3,018,000	3,018,000	3,018,000
Total Revenue	**$ 3,598,219**	**$ 3,340,686**	**$ 3,223,500**	**$ 3,223,500**	**$ 3,223,500**
Salaries And Benefits	$ 670,472	$ 635,937	$ 721,300	$ 721,300	$ 721,300
Services And Supplies	1,169,353	1,258,562	1,495,670	1,495,670	1,495,670
Other Charges	928,394	893,534	1,029,800	1,029,800	1,029,800
Fixed Assets	-	-	1,674,000	1,674,000	1,674,000
Total Expenditures/Appropriations	**$ 2,768,219**	**$ 2,788,033**	**$ 4,920,770**	**$ 4,920,770**	**$ 4,920,770**
Net Cost	**$ (830,000)**	$ (552,653)	**$ 1,697,270**	**$ 1,697,270**	**$ 1,697,270**
FLOOD: PROJECT MAINTENANCE OPS			Fund - **48040** Deptid - **947280**		
Charges For Current Services	$ 887,476	$ 857,545	$ 875,025	$ 875,025	$ 875,025
Rev Fr Use Of Money&Property	4,971	4,270	5,000	5,000	5,000
Total Revenue	**$ 892,447**	**$ 861,815**	**$ 880,025**	**$ 880,025**	**$ 880,025**

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Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
FLOOD: PROJECT MAINTENANCE OPS			Fund - **48040** Deptid - **947280**		
Salaries And Benefits	$ 13,883	$ 3,552	$ 28,500	$ 28,500	$ 28,500
Services And Supplies	644,296	633,636	767,760	767,760	767,760
Total Expenditures/Appropriations	$ **658,179**	$ **637,188**	$ **796,260**	$ **796,260**	$ **796,260**
Net Cost	$ **(234,268)**	$ (224,627)	$ **(83,765)**	$ **(83,765)**	$ **(83,765)**
FLOOD: MAPPING SERVICES			Fund - **48060** Deptid - **947300**		
Charges For Current Services	$ 27,907	$ 25,626	$ 33,000	$ 33,000	$ 33,000
Other Revenue	424,952	368,395	300,000	300,000	300,000
Rev Fr Use Of Money&Property	8,800	2,989	5,000	5,000	5,000
Total Revenue	$ **461,659**	$ **397,010**	$ **338,000**	$ **338,000**	$ **338,000**
Salaries And Benefits	$ 311,464	$ 170,722	$ 175,400	$ 175,400	$ 175,400
Services And Supplies	206,599	117,405	174,830	174,830	174,830
Other Charges	54,605	57,399	60,000	60,000	60,000
Fixed Assets	-	-	51,000	51,000	51,000
Operating Transfers Out	281,000	-	-	-	-
Total Expenditures/Appropriations	$ **853,668**	$ **345,526**	$ **461,230**	$ **461,230**	$ **461,230**
Net Cost	$ **392,009**	$ (51,484)	$ **123,230**	$ **123,230**	$ **123,230**
FLOOD: DATA PROCESSING			Fund - **48080** Deptid - **947320**		
Rev Fr Use Of Money&Property	$ 1,627,395	$ 1,648,478	$ 1,920,000	$ 1,920,000	$ 1,920,000
Total Revenue	$ **1,627,395**	$ **1,648,478**	$ **1,920,000**	$ **1,920,000**	$ **1,920,000**
Salaries And Benefits	$ 1,044,407	$ 1,116,056	$ 1,339,500	$ 1,339,500	$ 1,339,500
Services And Supplies	1,005,882	1,049,383	1,488,360	1,488,360	1,488,360
Other Charges	55,838	44,739	38,000	38,000	38,000
Fixed Assets	-	-	35,000	35,000	35,000
Total Expenditures/Appropriations	$ **2,106,127**	$ **2,210,178**	$ **2,900,860**	$ **2,900,860**	$ **2,900,860**
Net Cost	$ **478,732**	$ 561,700	$ **980,860**	$ **980,860**	$ **980,860**

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1	2	3		4	5
FLOOD: ZONE 1 OPERATIONS			Fund - **25110** Deptid - **947400**		
Charges For Current Services	$ 910,259	$ 4,707	$ 15,000	$ 15,000	$ 15,000
Intergovernmental Revenues	97,101	98,509	96,000	96,000	96,000
Other Revenue	1,667,541	1,497,795	4,081,740	4,081,740	4,081,740
Rev Fr Use Of Money&Property	415,303	221,941	204,000	204,000	204,000
Taxes	6,657,803	6,339,840	6,574,000	6,574,000	6,574,000
Total Revenue	$ **9,748,007**	$ **8,162,792**	$ **10,970,740**	$ **10,970,740**	$ **10,970,740**
Salaries And Benefits	$ 2,672,104	$ 3,224,866	$ 3,710,200	$ 3,710,200	$ 3,710,200
Services And Supplies	6,721,973	5,462,901	14,600,930	14,600,930	14,600,930
Other Charges	250,000	-	1,216,750	1,216,750	1,216,750
Fixed Assets	-	429,843	350,000	350,000	350,000
Operating Transfers Out	160,874	250,224	836,660	836,660	836,660
Intrafund Transfers	-	-	(200,000)	(200,000)	(200,000)
Total Expenditures/Appropriations	$ **9,804,951**	$ **9,367,834**	$ **20,514,540**	$ **20,514,540**	$ **20,514,540**
Net Cost	$ **56,944**	$ 1,205,042	$ **9,543,800**	$ **9,543,800**	$ **9,543,800**
FLOOD: ZONE 2 OPERATIONS			Fund - **25120** Deptid - **947420**		
Charges For Current Services	$ 183,758	$ 1,435	$ 1,000	$ 1,000	$ 1,000
Intergovernmental Revenues	159,472	166,236	167,000	167,000	167,000
Other Revenue	1,689,002	1,605,461	2,600,000	2,600,000	2,600,000
Rev Fr Use Of Money&Property	666,892	402,228	253,500	253,500	253,500
Taxes	10,919,601	10,570,576	10,781,000	10,781,000	10,781,000
Total Revenue	$ **13,618,725**	$ **12,745,936**	$ **13,802,500**	$ **13,802,500**	$ **13,802,500**
Salaries And Benefits	$ 2,448,489	$ 2,419,089	$ 3,835,510	$ 3,835,510	$ 3,835,510
Services And Supplies	5,291,699	3,861,156	33,410,581	33,410,581	33,410,581
Other Charges	1,349,000	-	4,466,750	4,466,750	4,466,750
Fixed Assets	-	-	3,440,000	3,440,000	3,440,000
Operating Transfers Out	268,942	397,248	1,300,680	1,300,680	1,300,680
Intrafund Transfers	-	-	(250,000)	(250,000)	(250,000)
Total Expenditures/Appropriations	$ **9,358,130**	$ **6,677,493**	$ **46,203,521**	$ **46,203,521**	$ **46,203,521**
Net Cost	$ **(4,260,595)**	$ (6,068,443)	$ **32,401,021**	$ **32,401,021**	$ **32,401,021**
FLOOD: ZONE 3 OPERATIONS			Fund - **25130** Deptid - **947440**		

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1	2	3		4	5
FLOOD: ZONE 3 OPERATIONS			Fund - **25130** Deptid - **947440**		
Charges For Current Services	$ -	$ 113,742	$ -	$ -	$ -
Intergovernmental Revenues	22,402	22,211	22,000	22,000	22,000
Other Revenue	637,020	604,728	700,000	700,000	700,000
Rev Fr Use Of Money&Property	129,118	79,307	51,000	51,000	51,000
Taxes	1,560,088	1,431,977	1,407,000	1,407,000	1,407,000
Total Revenue	$ **2,348,628**	$ **2,251,965**	$ **2,180,000**	$ **2,180,000**	$ **2,180,000**
Salaries And Benefits	$ 554,648	$ 732,944	$ 1,275,430	$ 1,275,430	$ 1,275,430
Services And Supplies	614,165	526,231	2,649,740	2,649,740	2,649,740
Other Charges	-	-	200,000	200,000	200,000
Fixed Assets	-	-	1,270,000	1,270,000	1,270,000
Operating Transfers Out	35,676	58,771	225,570	225,570	225,570
Total Expenditures/Appropriations	$ **1,204,489**	$ **1,317,946**	$ **5,620,740**	$ **5,620,740**	$ **5,620,740**
Net Cost	**$ (1,144,139)**	$ (934,019)	**$ 3,440,740**	**$ 3,440,740**	**$ 3,440,740**
FLOOD: ZONE 4 OPERATIONS			Fund - **25140** Deptid - **947460**		
Charges For Current Services	$ 1,885,652	$ 1,417,481	$ 276,000	$ 276,000	$ 276,000
Intergovernmental Revenues	165,820	163,399	162,000	162,000	162,000
Other Revenue	1,070,628	1,089,128	5,878,300	5,878,300	5,878,300
Rev Fr Use Of Money&Property	697,729	430,164	285,800	285,800	285,800
Taxes	11,618,921	10,580,537	10,754,000	10,754,000	10,754,000
Total Revenue	$ **15,438,750**	$ **13,680,709**	$ **17,356,100**	$ **17,356,100**	$ **17,356,100**
Salaries And Benefits	$ 2,892,225	$ 3,866,372	$ 4,981,876	$ 4,981,876	$ 4,981,876
Services And Supplies	6,236,371	5,312,485	15,624,706	15,624,706	15,624,706
Other Charges	184,561	-	1,250,000	1,250,000	1,250,000
Fixed Assets	2,435,972	662,959	2,005,000	2,005,000	2,005,000
Operating Transfers Out	290,580	733,421	1,300,510	1,300,510	1,300,510
Intrafund Transfers	(4,104,733)	(150)	(1,428,950)	(1,428,950)	(1,428,950)
Total Expenditures/Appropriations	$ **7,934,976**	$ **10,575,087**	$ **23,733,142**	$ **23,733,142**	$ **23,733,142**
Net Cost	**$ (7,503,774)**	$ (3,105,622)	**$ 6,377,042**	**$ 6,377,042**	**$ 6,377,042**
FLOOD: ZONE 5 OPERATIONS			Fund - **25150** Deptid - **947480**		

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1	2	3		4	5
FLOOD: ZONE 5 OPERATIONS			Fund - **25150** Deptid - **947480**		
Charges For Current Services	$ 30	$ 39	$ -	$ -	$ -
Intergovernmental Revenues	36,282	35,238	37,000	37,000	37,000
Other Revenue	503,568	198,995	100,000	100,000	100,000
Rev Fr Use Of Money&Property	156,480	84,244	60,000	60,000	60,000
Taxes	2,506,696	2,283,523	2,529,000	2,529,000	2,529,000
Total Revenue	$ **3,203,056**	$ **2,602,039**	$ **2,726,000**	$ **2,726,000**	$ **2,726,000**
Salaries And Benefits	$ 1,156,174	$ 833,464	$ 1,089,760	$ 1,089,760	$ 1,089,760
Services And Supplies	3,528,807	1,236,487	8,856,740	8,856,740	8,856,740
Other Charges	-	-	200,000	200,000	200,000
Fixed Assets	-	-	125,000	125,000	125,000
Operating Transfers Out	58,341	91,531	303,240	303,240	303,240
Total Expenditures/Appropriations	$ **4,743,322**	$ **2,161,482**	$ **10,574,740**	$ **10,574,740**	$ **10,574,740**
Net Cost	$ **1,540,266**	$ (440,557)	$ **7,848,740**	$ **7,848,740**	$ **7,848,740**
FLOOD: ZONE 6 OPERATIONS			Fund - **25160** Deptid - **947500**		
Charges For Current Services	$ 1,950	$ 285	$ -	$ -	$ -
Intergovernmental Revenues	51,326	50,683	52,000	52,000	52,000
Other Revenue	686,076	590,799	450,000	450,000	450,000
Rev Fr Use Of Money&Property	349,296	207,223	165,000	165,000	165,000
Taxes	3,558,854	3,308,496	3,591,000	3,591,000	3,591,000
Total Revenue	$ **4,647,502**	$ **4,157,486**	$ **4,258,000**	$ **4,258,000**	$ **4,258,000**
Salaries And Benefits	$ 1,327,930	$ 1,413,315	$ 2,625,990	$ 2,625,990	$ 2,625,990
Services And Supplies	2,542,907	2,473,324	11,886,450	11,886,450	11,886,450
Other Charges	-	-	200,000	200,000	200,000
Fixed Assets	554,270	533,345	5,500,000	5,500,000	5,500,000
Operating Transfers Out	86,357	133,163	437,750	437,750	437,750
Total Expenditures/Appropriations	$ **4,511,464**	$ **4,553,147**	$ **20,650,190**	$ **20,650,190**	$ **20,650,190**
Net Cost	$ **(136,038)**	$ 395,661	$ **16,392,190**	$ **16,392,190**	$ **16,392,190**
FLOOD: ZONE 7 OPERATIONS			Fund - **25170** Deptid - **947520**		

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1	2	3		4	5
FLOOD: ZONE 7 OPERATIONS			Fund - **25170** Deptid - **947520**		
Charges For Current Services	$ 30,371	$ 145,749	$ 12,000	$ 12,000	$ 12,000
Intergovernmental Revenues	218,925	130,979	55,000	55,000	55,000
Other Revenue	432,215	1,123,412	250,000	250,000	250,000
Rev Fr Use Of Money&Property	389,578	229,099	160,000	160,000	160,000
Taxes	3,708,964	3,482,100	3,741,000	3,741,000	3,741,000
Total Revenue	$ **4,780,053**	$ **5,111,339**	$ **4,218,000**	$ **4,218,000**	$ **4,218,000**
Salaries And Benefits	$ 1,022,593	$ 995,700	$ 1,414,510	$ 1,414,510	$ 1,414,510
Services And Supplies	1,680,585	2,538,253	4,265,160	4,265,160	4,265,160
Other Charges	-	-	200,000	200,000	200,000
Fixed Assets	385,280	132,983	-	-	-
Operating Transfers Out	90,231	936,073	427,590	427,590	427,590
Intrafund Transfers	(358,869)	(170,581)	(1,103,420)	(1,103,420)	(1,103,420)
Total Expenditures/Appropriations	$ **2,819,820**	$ **4,432,428**	$ **5,203,840**	$ **5,203,840**	$ **5,203,840**
Net Cost	$ **(1,960,233)**	$ (678,911)	$ **985,840**	$ **985,840**	$ **985,840**
FLOOD: NPDES WHITEWATER			Fund - **25180** Deptid - **947540**		
Charges For Current Services	$ 294,241	$ 290,103	$ 295,000	$ 295,000	$ 295,000
Other Revenue	395,618	424,461	416,423	416,423	416,423
Rev Fr Use Of Money&Property	4,330	3,872	5,800	5,800	5,800
Total Revenue	$ **694,189**	$ **718,436**	$ **717,223**	$ **717,223**	$ **717,223**
Salaries And Benefits	$ 175,929	$ 239,535	$ 373,850	$ 373,850	$ 373,850
Services And Supplies	305,292	282,411	389,400	389,400	389,400
Total Expenditures/Appropriations	$ **481,221**	$ **521,946**	$ **763,250**	$ **763,250**	$ **763,250**
Net Cost	$ **(212,968)**	$ (196,490)	$ **46,027**	$ **46,027**	$ **46,027**
FLOOD: NPDES SANTA ANA			Fund - **25190** Deptid - **947560**		
Charges For Current Services	$ 2,264,949	$ 2,223,459	$ 2,265,000	$ 2,265,000	$ 2,265,000
Other Revenue	100,000	493,976	500,000	500,000	500,000
Rev Fr Use Of Money&Property	47,218	27,873	20,000	20,000	20,000
Total Revenue	$ **2,412,167**	$ **2,745,308**	$ **2,785,000**	$ **2,785,000**	$ **2,785,000**
Salaries And Benefits	$ 613,624	$ 683,691	$ 690,270	$ 690,270	$ 690,270
Services And Supplies	1,775,667	1,628,079	3,067,492	3,067,492	3,067,492
Total Expenditures/Appropriations	$ **2,389,291**	$ **2,311,770**	$ **3,757,762**	$ **3,757,762**	$ **3,757,762**

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1	2	3		4	5
Net Cost	**$ (22,876)**	$ (433,538)	**$ 972,762**	**$ 972,762**	**$ 972,762**

FLOOD: NPDES SANTA MARGARITA

Fund - **25200**
Deptid - **947580**

Charges For Current Services	$ 470,472	$ 480,033	$ 476,000	$ 476,000	$ 476,000
Other Revenue	467,830	500,000	1,501,000	1,501,000	1,501,000
Rev Fr Use Of Money&Property	6,072	3,173	4,000	4,000	4,000
Total Revenue	**$ 944,374**	**$ 983,206**	**$ 1,981,000**	**$ 1,981,000**	**$ 1,981,000**
Salaries And Benefits	$ 251,819	$ 402,103	$ 515,080	$ 515,080	$ 515,080
Services And Supplies	536,868	682,795	1,597,830	1,597,830	1,597,830
Total Expenditures/Appropriations	**$ 788,687**	**$ 1,084,898**	**$ 2,112,910**	**$ 2,112,910**	**$ 2,112,910**
Net Cost	**$ (155,687)**	$ 101,692	**$ 131,910**	**$ 131,910**	**$ 131,910**

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1	2	3		4	5
PARKS: SANTA ANA RIVER MIT					
			Fund - **25550**		
			Deptid - **931101**		
Charges For Current Services	$ 26,287	$ 17,739	$ -	$ -	$ -
Rev Fr Use Of Money&Property	52,241	27,326	18,000	18,000	18,000
Total Revenue	$ **78,528**	$ **45,065**	$ **18,000**	$ **18,000**	$ **18,000**
Services And Supplies	$ 40,598	$ 133,295	$ 136,821	$ 136,821	$ 136,821
Other Charges	184,148	134,219	1,581	1,581	1,581
Total Expenditures/Appropriations	$ **224,746**	$ **267,514**	$ **138,402**	$ **138,402**	$ **138,402**
Net Cost	$ **146,218**	$ 222,449	$ **120,402**	$ **120,402**	$ **120,402**
PARKS: CONST _ ACQ					
			Fund - **33150**		
			Deptid - **931102**		
Intergovernmental Revenues	$ 52,294	$ -	$ 1,109,591	$ 1,109,591	$ 1,109,591
Rev Fr Use Of Money&Property	3,205	2,135	800	800	800
Total Revenue	$ **55,499**	$ **2,135**	$ **1,110,391**	$ **1,110,391**	$ **1,110,391**
Services And Supplies	$ 538	$ 11,400	$ 764,988	$ 764,988	$ 764,988
Other Charges	-	-	35,100	35,100	35,100
Fixed Assets	-	-	309,503	309,503	309,503
Total Expenditures/Appropriations	$ **538**	$ **11,400**	$ **1,109,591**	$ **1,109,591**	$ **1,109,591**
Net Cost	$ **(54,961)**	$ 9,265	$ **(800)**	$ **(800)**	$ **(800)**
PARKS: FISH _ GAME					
			Fund - **25500**		
			Deptid - **931103**		
Charges For Current Services	$ 3,324	$ 2,152	$ 2,000	$ 2,000	$ 2,000
Rev Fr Use Of Money&Property	191	88	50	50	50
Total Revenue	$ **3,515**	$ **2,240**	$ **2,050**	$ **2,050**	$ **2,050**
Services And Supplies	$ 1,987	$ -	$ 5,000	$ 5,000	$ 5,000
Other Charges	4,475	-	2,500	2,500	2,500
Total Expenditures/Appropriations	$ **6,462**	$ **-**	$ **7,500**	$ **7,500**	$ **7,500**
Net Cost	$ **2,947**	$ (2,240)	$ **5,450**	$ **5,450**	$ **5,450**
PARKS: REGIONAL PARKS DIST					
			Fund - **25400**		
			Deptid - **931104**		

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1	2	3		4	5
PARKS: REGIONAL PARKS DIST			Fund - **25400** Deptid - **931104**		
Charges For Current Services	$ 4,687,879	$ 4,891,363	$ 3,814,174	$ 3,814,174	$ 3,814,174
Intergovernmental Revenues	62,291	82,828	127,235	127,235	127,235
Other Revenue	834,162	734,265	515,229	515,229	515,229
Rev Fr Use Of Money&Property	757,869	888,547	523,000	523,000	523,000
Taxes	4,078,997	4,104,686	3,725,000	3,725,000	3,725,000
Total Revenue	$ **10,421,198**	$ **10,701,689**	$ **8,704,638**	$ **8,704,638**	$ **8,704,638**
Salaries And Benefits	$ 6,366,559	$ 7,736,858	$ 6,124,400	$ 6,124,400	$ 6,124,400
Services And Supplies	3,393,243	3,373,803	3,127,387	3,127,387	3,127,387
Other Charges	179,544	333,854	1,380,200	1,380,200	1,380,200
Fixed Assets	19,687	90,405	3,250	3,250	3,250
Operating Transfers Out	118,589	905,416	21,740	21,740	21,740
Total Expenditures/Appropriations	$ **10,077,622**	$ **12,440,336**	$ **10,656,977**	$ **10,656,977**	$ **10,656,977**
Net Cost	$ **(343,576)**	$ 1,738,647	$ **1,952,339**	$ **1,952,339**	$ **1,952,339**
PARKS: ACQ _ DEVELOP TRUST			Fund - **33100** Deptid - **931105**		
Other Revenue	$ 40,827	$ 266,359	$ -	$ -	$ -
Rev Fr Use Of Money&Property	22,757	7,510	-	-	-
Total Revenue	$ **63,584**	$ **273,869**	$ **-**	$ **-**	$ **-**
Services And Supplies	$ 185	$ 134,897	$ 130,093	$ 130,093	$ 130,093
Other Charges	21,409	51,608	44,450	44,450	44,450
Fixed Assets	55,718	575,245	-	-	-
Total Expenditures/Appropriations	$ **77,312**	$ **761,750**	$ **174,543**	$ **174,543**	$ **174,543**
Net Cost	$ **13,728**	$ 487,881	$ **174,543**	$ **174,543**	$ **174,543**
PARKS: ARRUNDO TRUST FUND			Fund - **25520** Deptid - **931107**		
Charges For Current Services	$ 279,252	$ 493,810	$ 245,000	$ 245,000	$ 245,000
Intergovernmental Revenues	-	46,940	50,000	50,000	50,000
Rev Fr Use Of Money&Property	11,496	7,727	4,500	4,500	4,500
Total Revenue	$ **290,748**	$ **548,477**	$ **299,500**	$ **299,500**	$ **299,500**

State Controller Schedules County Budget Act January 2010	County of Riverside Special Districts and Other Agencies Financing Sources and Uses by Budget Unit by Object Fiscal Year 2011-12	Schedule 15

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
PARKS: ARRUNDO TRUST FUND			Fund - **25520** Deptid - **931107**		
Salaries And Benefits	$ -	$ -	$ 59,149	$ 59,149	$ 59,149
Services And Supplies	107,340	107,519	175,429	175,429	175,429
Other Charges	184,302	130,530	100	100	100
Fixed Assets	-	-	2,000	2,000	2,000
Total Expenditures/Appropriations	$ **291,642**	$ **238,049**	$ **236,678**	$ **236,678**	$ **236,678**
Net Cost	**$ 894**	$ (310,428)	**$ (62,822)**	**$ (62,822)**	**$ (62,822)**
PARKS: RESIDENCE UTILITY TR			Fund - **25510** Deptid - **931108**		
Charges For Current Services	$ 10,776	$ 9,570	$ 9,000	$ 9,000	$ 9,000
Rev Fr Use Of Money&Property	51,404	43,817	50,800	50,800	50,800
Total Revenue	$ **62,180**	$ **53,387**	$ **59,800**	$ **59,800**	$ **59,800**
Services And Supplies	$ 18,849	$ 9,949	$ 5,590	$ 5,590	$ 5,590
Other Charges	2,810	7,266	-	-	-
Total Expenditures/Appropriations	$ **21,659**	$ **17,215**	$ **5,590**	$ **5,590**	$ **5,590**
Net Cost	**$ (40,521)**	$ (36,172)	**$ (54,210)**	**$ (54,210)**	**$ (54,210)**
HISTORICAL COMMISSION			Fund - **25400** Deptid - **931111**		
Charges For Current Services	$ 452	$ -	$ -	$ -	$ -
Other Revenue	2,264	2,205	2,000	2,000	2,000
Rev Fr Use Of Money&Property	-	-	-	-	-
Total Revenue	$ **2,716**	$ **2,205**	$ **2,000**	$ **2,000**	$ **2,000**
Services And Supplies	$ 1,846	$ 1,829	$ 5,000	$ 5,000	$ 5,000
Total Expenditures/Appropriations	$ **1,846**	$ **1,829**	$ **5,000**	$ **5,000**	$ **5,000**
Net Cost	**$ (870)**	$ (376)	**$ 3,000**	**$ 3,000**	**$ 3,000**
PARKS: JENSEN RANCH TRUST			Fund - **25570** Deptid - **931113**		

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Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
PARKS: JENSEN RANCH TRUST			Fund - **25570** Deptid - **931113**		
Other Revenue	$ -	$ -	$ -	$ -	$ -
Rev Fr Use Of Money&Property	-	-	-	-	-
Total Revenue	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Services And Supplies	$ -	$ -	$ -	$ -	$ -
Total Expenditures/Appropriations	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Net Cost	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
PARKS: MULTI-SPECIES RESERVE			Fund - **25540** Deptid - **931116**		
Charges For Current Services	$ 252,442	$ 362,990	$ 779,274	$ 779,274	$ 779,274
Rev Fr Use Of Money&Property	1,447	920	300	300	300
Total Revenue	**$ 253,889**	**$ 363,910**	**$ 779,574**	**$ 779,574**	**$ 779,574**
Salaries And Benefits	$ -	$ -	$ 249,467	$ 249,467	$ 249,467
Services And Supplies	29,798	32,653	69,914	69,914	69,914
Other Charges	217,207	239,959	7,333	7,333	7,333
Fixed Assets	29,888	-	390,000	390,000	390,000
Total Expenditures/Appropriations	**$ 276,893**	**$ 272,612**	**$ 716,714**	**$ 716,714**	**$ 716,714**
Net Cost	**$ 23,004**	**$** (91,298)	**$ (62,860)**	**$ (62,860)**	**$ (62,860)**
PARKS: SAPP PROP 13			Fund - **25520** Deptid - **931120**		
Charges For Current Services	$ 1,096	$ -	$ -	$ -	$ -
Intergovernmental Revenues	52,562	173,752	-	-	-
Total Revenue	**$ 53,658**	**$ 173,752**	**$ -**	**$ -**	**$ -**
Services And Supplies	$ 25,281	$ 80,149	$ -	$ -	$ -
Other Charges	27,903	62,357	-	-	-
Total Expenditures/Appropriations	**$ 53,184**	**$ 142,506**	**$ -**	**$ -**	**$ -**
Net Cost	**$ (474)**	**$** (31,246)	**$ -**	**$ -**	**$ -**
PARKS: PROP 40 CAPITAL DEV			Fund - **33110** Deptid - **931121**		

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Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
PARKS: PROP 40 CAPITAL DEV			Fund - **33110** Deptid - **931121**		
Charges For Current Services	$ -	$ 1,000,000	$ -	$ -	$ -
Intergovernmental Revenues	143,378	4,506,214	-	-	-
Rev Fr Use Of Money&Property	10,458	7,430	-	-	-
Total Revenue	$ **153,836**	$ **5,513,644**	$ **-**	$ **-**	$ **-**
Services And Supplies	$ 116,581	$ 163,703	$ -	$ -	$ -
Other Charges	19,158	211,274	-	-	-
Fixed Assets	-	3,849,286	-	-	-
Total Expenditures/Appropriations	$ **135,739**	$ **4,224,263**	$ **-**	$ **-**	$ **-**
Net Cost	$ **(18,097)**	$ (1,289,381)	$ **-**	$ **-**	$ **-**
PARKS: DIF - WEST CO PARKS			Fund - **33120** Deptid - **931122**		
Other Revenue	$ 4,389,175	$ 1,590,401	$ -	$ -	$ -
Rev Fr Use Of Money&Property	16,435	6,989	-	-	-
Total Revenue	$ **4,405,610**	$ **1,597,390**	$ **-**	$ **-**	$ **-**
Services And Supplies	$ 746,312	$ 95,557	$ -	$ -	$ -
Other Charges	147,277	78,093	-	-	-
Fixed Assets	5,248,228	610,164	-	-	-
Total Expenditures/Appropriations	$ **6,141,817**	$ **783,814**	$ **-**	$ **-**	$ **-**
Net Cost	$ **1,736,207**	$ (813,576)	$ **-**	$ **-**	$ **-**
PARKS: DIF - EAST CO PARKS			Fund - **33120** Deptid - **931123**		
Other Revenue	$ -	$ 1,041,962	$ -	$ -	$ -
Rev Fr Use Of Money&Property	5,193	2,374	-	-	-
Total Revenue	$ **5,193**	$ **1,044,336**	$ **-**	$ **-**	$ **-**
Services And Supplies	$ 30,356	$ 3,805	$ -	$ -	$ -
Other Charges	28,933	3,960	-	-	-
Fixed Assets	157,597	736,461	-	-	-
Total Expenditures/Appropriations	$ **216,886**	$ **744,226**	$ **-**	$ **-**	$ **-**
Net Cost	$ **211,693**	$ (300,110)	$ **-**	$ **-**	$ **-**

State Controller Schedules County Budget Act January 2010	County of Riverside Special Districts and Other Agencies Financing Sources and Uses by Budget Unit by Object Fiscal Year 2011-12	Schedule 15

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
PARKS: DIF - WEST CO TRAILS			Fund - **33120** Deptid - **931124**		
Intergovernmental Revenues	$ 355,555	$ (3,933)	$ -	$ -	$ -
Other Revenue	2,021,076	421,118	3,867,757	3,867,757	3,867,757
Rev Fr Use Of Money&Property	110,811	9,284	-	-	-
Total Revenue	$ **2,487,442**	$ **426,469**	$ **3,867,757**	$ **3,867,757**	$ **3,867,757**
Services And Supplies	$ 527,684	$ 236,524	$ 85,800	$ 85,800	$ 85,800
Other Charges	375,405	67,554	3,006,387	3,006,387	3,006,387
Fixed Assets	2,107,785	957,267	775,570	775,570	775,570
Total Expenditures/Appropriations	$ **3,010,874**	$ **1,261,345**	$ **3,867,757**	$ **3,867,757**	$ **3,867,757**
Net Cost	**$ 523,432**	$ 834,876	**$ -**	**$ -**	**$ -**
PARKS: DIF - EAST CO TRAILS			Fund - **33120** Deptid - **931125**		
Other Revenue	$ -	$ -	$ -	$ -	$ -
Rev Fr Use Of Money&Property	86	48	-	-	-
Total Revenue	$ **86**	$ **48**	$ **-**	$ **-**	$ **-**
Services And Supplies	$ -	$ -	$ -	$ -	$ -
Other Charges	210	-	-	-	-
Fixed Assets	-	-	-	-	-
Total Expenditures/Appropriations	$ **210**	$ **-**	$ **-**	$ **-**	$ **-**
Net Cost	**$ 124**	$ (48)	**$ -**	**$ -**	**$ -**
Prop 50 River Pkwys Grant SART			Fund - **33170** Deptid - **931126**		
Intergovernmental Revenues	$ -	$ -	$ 1,700,000	$ 1,700,000	$ 1,700,000
Rev Fr Use Of Money&Property	-	1,122	-	-	-
Total Revenue	$ **-**	$ **1,122**	$ **1,700,000**	$ **1,700,000**	$ **1,700,000**
Other Charges	$ -	$ -	$ 1,700,000	$ 1,700,000	$ 1,700,000
Total Expenditures/Appropriations	$ **-**	$ **-**	$ **1,700,000**	$ **1,700,000**	$ **1,700,000**
Net Cost	**$ -**	$ (1,122)	**$ -**	**$ -**	**$ -**

State Controller Schedules County Budget Act January 2010	County of Riverside Special Districts and Other Agencies Financing Sources and Uses by Budget Unit by Object Fiscal Year 2011-12	Schedule 15

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
NATURAL RESOURCES EDUCATION			Fund - **25535** Deptid - **931130**		
Other Revenue	$ -	$ 95,000	$ 18,000	$ 18,000	$ 18,000
Rev Fr Use Of Money&Property	4,363	2,088	-	-	-
Total Revenue	$ **4,363**	$ **97,088**	$ **18,000**	$ **18,000**	$ **18,000**
Services And Supplies	$ -	$ -	$ -	$ -	$ -
Other Charges	65,800	106,445	-	-	-
Operating Transfers Out	-	-	106,465	106,465	106,465
Total Expenditures/Appropriations	$ **65,800**	$ **106,445**	$ **106,465**	$ **106,465**	$ **106,465**
Net Cost	$ **61,437**	$ 9,357	$ **88,465**	$ **88,465**	$ **88,465**
PARKS: SAR PARKWAY TO PRADO TR			Fund - **33160** Deptid - **931140**		
Rev Fr Use Of Money&Property	$ 35,156	$ 20,347	$ 13,000	$ 13,000	$ 13,000
Total Revenue	$ **35,156**	$ **20,347**	$ **13,000**	$ **13,000**	$ **13,000**
Operating Transfers Out	$ -	$ 95,000	$ -	$ -	$ -
Total Expenditures/Appropriations	$ **-**	$ **95,000**	$ **-**	$ **-**	$ **-**
Net Cost	$ **(35,156)**	$ 74,653	$ **(13,000)**	$ **(13,000)**	$ **(13,000)**
PARKS: MSHCP RESERVE MGT			Fund - **25590** Deptid - **931150**		
Charges For Current Services	$ 710,893	$ 655,477	$ 689,706	$ 689,706	$ 689,706
Rev Fr Use Of Money&Property	6,541	4,767	2,500	2,500	2,500
Total Revenue	$ **717,434**	$ **660,244**	$ **692,206**	$ **692,206**	$ **692,206**
Salaries And Benefits	$ -	$ -	$ 334,867	$ 544,976	$ 544,976
Services And Supplies	99,499	66,303	107,804	202,961	202,961
Other Charges	532,270	294,525	17,162	17,162	17,162
Total Expenditures/Appropriations	$ **631,769**	$ **360,828**	$ **459,833**	$ **765,099**	$ **765,099**
Net Cost	$ **(85,665)**	$ (299,416)	$ **(232,373)**	$ **72,893**	$ **72,893**
OFF ROAD VEHICLE MANAGEMENT			Fund - **25520** Deptid - **931160**		

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Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
OFF ROAD VEHICLE MANAGEMENT			Fund - **25520** Deptid - **931160**		
Intergovernmental Revenues	$ 112,244	$ 106,139	$ 100,000	$ 100,000	$ 100,000
Other Revenue	-	-	49,643	49,643	49,643
Rev Fr Use Of Money&Property	6,236	3,384	2,000	2,000	2,000
Total Revenue	$ **118,480**	$ **109,523**	$ **151,643**	$ **151,643**	$ **151,643**
Services And Supplies	$ -	$ -	$ 20,000	$ 20,000	$ 20,000
Operating Transfers Out	149,842	120,610	144,373	144,373	144,373
Total Expenditures/Appropriations	$ **149,842**	$ **120,610**	$ **164,373**	$ **164,373**	$ **164,373**
Net Cost	$ **31,362**	$ 11,087	$ **12,730**	$ **12,730**	$ **12,730**
HABITAT _ OPEN SPACE MANAGEMNT			Fund - **25520** Deptid - **931170**		
Charges For Current Services	$ 2,896	$ 20	$ -	$ -	$ -
Other Revenue	409,842	380,610	380,610	380,610	380,610
Rev Fr Use Of Money&Property	5,340	3,588	2,300	2,300	2,300
Total Revenue	$ **418,078**	$ **384,218**	$ **382,910**	$ **382,910**	$ **382,910**
Salaries And Benefits	$ -	$ -	$ 241,628	$ 241,628	$ 241,628
Services And Supplies	49,731	40,885	20,850	20,850	20,850
Other Charges	279,297	218,501	1,500	1,500	1,500
Total Expenditures/Appropriations	$ **329,028**	$ **259,386**	$ **263,978**	$ **263,978**	$ **263,978**
Net Cost	$ **(89,050)**	$ (124,832)	$ **(118,932)**	$ **(118,932)**	$ **(118,932)**
RECREATION			Fund - **25420** Deptid - **931180**		
Charges For Current Services	$ 76,698	$ 581,121	$ 1,902,256	$ 1,902,256	$ 1,902,256
Other Revenue	100,000	684,526	21,470	21,470	21,470
Rev Fr Use Of Money&Property	1,021	1,959	440,331	440,331	440,331
Total Revenue	$ **177,719**	$ **1,267,606**	$ **2,364,057**	$ **2,364,057**	$ **2,364,057**
Salaries And Benefits	$ -	$ -	$ 2,621,397	$ 2,621,397	$ 2,621,397
Services And Supplies	74,221	523,381	1,076,642	1,076,642	1,076,642
Other Charges	212,053	651,491	16,220	16,220	16,220
Fixed Assets	-	82,257	106,500	106,500	106,500
Total Expenditures/Appropriations	$ **286,274**	$ **1,257,129**	$ **3,820,759**	$ **3,820,759**	$ **3,820,759**

State Controller Schedules County Budget Act January 2010	County of Riverside Special Districts and Other Agencies Financing Sources and Uses by Budget Unit by Object Fiscal Year 2011-12				Schedule 15
Detail by Revenue Category and Expenditure Object	**2009-10 Actuals**	**2010-11** **Actual** ☑ **Estimated** ❑	**2011-12 Requested Amount**	**2011-12 Recmnded Budget**	**2011-12 Adopted by the Board of Supervisors**
1	**2**	**3**		**4**	**5**
Net Cost	**$ 108,555**	**$ (10,477)**	**$ 1,456,702**	**$ 1,456,702**	**$ 1,456,702**

State Controller Schedules County Budget Act January 2010	County of Riverside Special Districts and Other Agencies Financing Sources and Uses by Budget Unit by Object Fiscal Year 2011-12	Schedule 15

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Amount	2011-12 Recmnded Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
CHILDREN AND FAMILIES COMM			Fund - **25800** Deptid - **938001**		
Intergovernmental Revenues	$ 26,175,030	$ 24,048,801	$ 22,587,587	$ 22,587,587	$ 22,587,587
Other Revenue	128,280	106,755	85,000	85,000	85,000
Rev Fr Use Of Money&Property	704,142	322,853	418,788	441,265	441,265
Total Revenue	$ **27,007,452**	$ **24,478,409**	$ **23,091,375**	$ **23,113,852**	$ **23,113,852**
Salaries And Benefits	$ 2,418,680	$ 2,597,579	$ 2,664,004	$ 2,468,106	$ 2,468,106
Services And Supplies	27,845,426	37,333,538	28,867,653	22,262,063	22,262,063
Total Expenditures/Appropriations	$ **30,264,106**	$ **39,931,117**	$ **31,531,657**	$ **24,730,169**	$ **24,730,169**
Net Cost	**$ 3,256,654**	$ 15,452,708	**$ 8,440,282**	**$ 1,616,317**	**$ 1,616,317**

State Controller Schedules County Budget Act January 2010	**County of Riverside** Special Districts and Other Agencies Financing Sources and Uses by Budget Unit by Object Fiscal Year 2011-12	Schedule 15

Detail by Revenue Category and Expenditure Object	**2009-10 Actuals**	**2010-11** **Actual** ☑ **Estimated** ❑	**2011-12 Requested Amount**	**2011-12 Recmnded Budget**	**2011-12 Adopted by the Board of Supervisors**
1	**2**	**3**		**4**	**5**
DPSS: IHSS PUBLIC AUTHORITY			Fund - **22800** Deptid - **985101**		
Charges For Current Services	$ 162,350	$ 162,350	$ 162,350	$ 162,350	$ 162,350
Intergovernmental Revenues	2,056,116	1,895,432	1,734,516	1,734,516	1,734,516
Other Revenue	-	683,111	512,333	512,333	512,333
Rev Fr Use Of Money&Property	7,965	4,031	-	-	-
Total Revenue	$ **2,226,431**	$ **2,744,924**	$ **2,409,199**	$ **2,409,199**	$ **2,409,199**
Salaries And Benefits	$ 1,677,218	$ 1,795,797	$ 1,831,958	$ 1,831,958	$ 1,831,958
Services And Supplies	210,698	330,313	406,630	406,630	406,630
Other Charges	518,354	259,086	287,835	287,835	287,835
Total Expenditures/Appropriations	$ **2,406,270**	$ **2,385,196**	$ **2,526,423**	$ **2,526,423**	$ **2,526,423**
Net Cost	**$ 179,839**	$ (359,728)	**$ 117,224**	**$ 117,224**	**$ 117,224**

State Controller Schedules County Budget Act January 2010	County of Riverside Financing Sources for Special District Enterprise Funds Fiscal Year 2011-12	Schedule 15E

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Budget	2011-12 Rcomended Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
CSA 62 RIPLEY DEBT SERVICE			Fund - **40420**		
			Deptid - **906202**		
Intergovernmental Revenues	$ 167	$ 109	$ 51	$ 51	$ 51
Other Revenue	-	-	10,408	10,408	10,408
Taxes	9,654	9,765	1,323	1,323	1,323
Total Revenue	**$ 9,821**	**$ 9,874**	**$ 11,782**	**$ 11,782**	**$ 11,782**
Other Charges	$ 11,566	$ 12,301	$ 11,782	$ 11,782	$ 11,782
Total Expenditures/Appropriations	**$ 11,566**	**$ 12,301**	**$ 11,782**	**$ 11,782**	**$ 11,782**
Net Cost	$ **1,745**	$ 2,427	$ -	$ -	$ -
Retained Earnings					
Beginning Balance	$ 40,940	$ 39,195	$ 41,622	$ 41,622	$ 41,622
Ending Balance	$ 39,195	$ 41,622	$ 41,622	$ 41,622	$ 41,622
CSA 62 RIPLEY DEPT SERVICE			Fund - **40440**		
			Deptid - **906203**		
Charges For Current Services	$ 174,824	$ 168,093	$ 151,259	$ 151,259	$ 151,259
Intergovernmental Revenues	54	57	59	59	59
Other Revenue	600	11,591	47,029	47,029	47,029
Rev Fr Use Of Money&Property	660	262	151	151	151
Taxes	13,112	14,194	13,204	13,204	13,204
Total Revenue	**$ 189,250**	**$ 194,197**	**$ 211,702**	**$ 211,702**	**$ 211,702**
Salaries And Benefits	$ 138,048	$ 67,568	$ 104,479	$ 104,479	$ 104,479
Services And Supplies	86,432	94,667	104,723	104,723	104,723
Other Charges	920	909	2,500	2,500	2,500
Total Expenditures/Appropriations	**$ 225,400**	**$ 163,144**	**$ 211,702**	**$ 211,702**	**$ 211,702**
Net Cost	$ **36,150**	$ (31,053)	$ -	$ -	$ -
Retained Earnings					
Beginning Balance	$ 48,689	$ 12,539	$ (18,514)	$ (18,514)	$ (18,514)
Ending Balance	$ 12,539	$ (18,514)	$ (18,514)	$ (18,514)	$ (18,514)
CSA 122 MESA VERDE LIGHTING			Fund - **40400**		
			Deptid - **912211**		
Charges For Current Services	$ 178,346	$ 188,583	$ 208,586	$ 208,586	$ 208,586
Other Revenue	209	-	171,568	171,568	171,568
Rev Fr Use Of Money&Property	2,838	1,313	796	796	796
Total Revenue	**$ 181,393**	**$ 189,896**	**$ 380,950**	**$ 380,950**	**$ 380,950**
Salaries And Benefits	$ 137,560	$ 134,449	$ 270,139	$ 270,139	$ 270,139
Services And Supplies	78,776	74,374	105,811	105,811	105,811
Other Charges	-	-	5,000	5,000	5,000
Total Expenditures/Appropriations	**$ 216,336**	**$ 208,823**	**$ 380,950**	**$ 380,950**	**$ 380,950**

State Controller Schedules County Budget Act January 2010	County of Riverside Financing Sources for Special District Enterprise Funds Fiscal Year 2011-12	Schedule 15E

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Budget	2011-12 Rcomended Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Net Cost	$ **34,943**	$ 18,927	$ -	$ -	$ -
Retained Earnings					
Beginning Balance	$ 207,268	$ 172,325	$ 191,252	$ 191,252	$ 191,252
Ending Balance	$ 172,325	$ 191,252	$ 191,252	$ 191,252	$ 191,252

State Controller Schedules County Budget Act January 2010	County of Riverside Financing Sources for Special District Enterprise Funds Fiscal Year 2011-12	Schedule 15E

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Budget	2011-12 Rcomended Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
FLOOD: PHOTOGRAMMETRY OPS			Fund - **40650** Deptid - **947120**		
Charges For Current Services	$ 27,899	$ 108,325	$ 99,000	$ 99,000	$ 99,000
Other Revenue	-	101,383	100,000	100,000	100,000
Rev Fr Use Of Money&Property	147,522	135,834	134,000	134,000	134,000
Total Revenue	**$ 175,421**	**$ 345,542**	**$ 333,000**	**$ 333,000**	**$ 333,000**
Salaries And Benefits	$ 11,219	$ 133,736	$ 165,000	$ 165,000	$ 165,000
Services And Supplies	58,808	137,272	179,970	179,970	179,970
Other Charges	23,104	12,642	17,000	17,000	17,000
Fixed Assets	-	-	15,000	15,000	15,000
Total Expenditures/Appropriations	**$ 93,131**	**$ 283,650**	**$ 376,970**	**$ 376,970**	**$ 376,970**
Net Cost	$ **(82,290)**	$ (61,892)	$ 43,970	$ **43,970**	$ **43,970**
Retained Earnings					
Beginning Balance	$ 422,813	$ 505,103	$ 443,211	$ 443,211	$ 443,211
Ending Balance	$ 505,103	$ 443,211	$ 487,181	$ 487,181	$ 487,181
FLOOD: SUBDIVISION OPS			Fund - **40660** Deptid - **947140**		
Charges For Current Services	$ 1,082,494	$ 991,672	$ 963,000	$ 963,000	$ 963,000
Rev Fr Use Of Money&Property	81,119	44,251	40,000	40,000	40,000
Total Revenue	**$ 1,163,613**	**$ 1,035,923**	**$ 1,003,000**	**$ 1,003,000**	**$ 1,003,000**
Salaries And Benefits	$ 554,063	$ 738,371	$ 1,244,700	$ 1,244,700	$ 1,244,700
Services And Supplies	1,235,813	1,833,994	1,458,260	1,458,260	1,458,260
Intrafund Transfers	(292,318)	(297,711)	(500,000)	(500,000)	(500,000)
Total Expenditures/Appropriations	**$ 1,497,558**	**$ 2,274,654**	**$ 2,202,960**	**$ 2,202,960**	**$ 2,202,960**
Net Cost	$ **333,945**	$ 1,238,731	$ 1,199,960	$ **1,199,960**	$ **1,199,960**
Retained Earnings					
Beginning Balance	$ 2,808,685	$ 2,474,740	$ 3,713,471	$ 3,713,471	$ 3,713,471
Ending Balance	$ 2,474,740	$ 3,713,471	$ 4,913,431	$ 4,913,431	$ 4,913,431
FLOOD: ENCROACHMENT PERMITS			Fund - **40670** Deptid - **947160**		
Charges For Current Services	$ 183,068	$ 180,569	$ 165,000	$ 165,000	$ 165,000
Rev Fr Use Of Money&Property	6,623	3,381	7,000	7,000	7,000
Total Revenue	**$ 189,691**	**$ 183,950**	**$ 172,000**	**$ 172,000**	**$ 172,000**
Salaries And Benefits	$ 93,617	$ 106,547	$ 295,200	$ 295,200	$ 295,200
Services And Supplies	110,003	84,700	116,740	116,740	116,740
Intrafund Transfers	(37,400)	(36,114)	(40,000)	(40,000)	(40,000)
Total Expenditures/Appropriations	**$ 166,220**	**$ 155,133**	**$ 371,940**	**$ 371,940**	**$ 371,940**

State Controller Schedules County Budget Act January 2010	County of Riverside Financing Sources for Special District Enterprise Funds Fiscal Year 2011-12	Schedule 15E

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑	2011-12 Requested Budget	2011-12 Rcomended Budget	2011-12 Adopted by the Board of Supervisors
1	2	3		4	5
Net Cost	$ **(23,471)**	$ (28,817)	$ 199,940	$ **199,940**	$ **199,940**
Retained Earnings					
Beginning Balance	$ 262,814	$ 286,285	$ 257,468	$ 257,468	$ 257,468
Ending Balance	$ 286,285	$ 257,468	$ 457,408	$ 457,408	$ 457,408

State Controller Schedules County Budget Act January 2010	County of Riverside Financing Sources for Special District Enterprise Funds Fiscal Year 2011-12	Schedule 15E

Detail by Revenue Category and Expenditure Object	2009-10 Actuals	2010-11 Actual ☑ Estimated ❑		2011-12 Requested Budget	2011-12 Rcomended Budget	2011-12 Adopted by the Board of Supervisors
1	2	3			4	5
WASTE: WRMD OPERATIONS			Fund - **40250** Deptid - **943001**			
Other Revenue	$ 4,428,078	$ 4,452,549	$	4,400,000	$ 4,400,000	$ 4,400,000
Rev Fr Use Of Money&Property	7,538	4,816		-	-	-
Total Revenue	**$ 4,435,616**	**$ 4,457,365**	**$**	**4,400,000**	**$ 4,400,000**	**$ 4,400,000**
Salaries And Benefits	$ 4,374,941	$ 4,245,487	$	4,296,752	$ 4,296,752	$ 4,296,752
Services And Supplies	-	7,138		9,500	9,500	9,500
Total Expenditures/Appropriations	**$ 4,374,941**	**$ 4,252,625**	**$**	**4,306,252**	**$ 4,306,252**	**$ 4,306,252**
Net Cost	$ **(60,675)**	$ (204,740)	$	(93,748)	$ **(93,748)**	$ **(93,748)**
Retained Earnings						
Beginning Balance	$ 453,076	$ 513,751	$	309,011	$ 309,011	$ 309,011
Ending Balance	$ 513,751	$ 309,011	$	215,263	$ 215,263	$ 215,263

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HONORING
RIVERSIDE
COUNTY
VETERANS
PAST, PRESENT
AND FUTURE

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit:	**1000100000 BOARD OF SUPERVISORS**						
Regular							
13496	BOARD ASSISTANT	7	0	0	0	0	7
13901	DEP CLERK OF THE BOARD	1	-1	0	0	0	0
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
13996	SUPV LEGISLATIVE ASSISTANT	34	-2	1	0	0	33
74110	ADMIN SVCS ANALYST II - C	1	0	0	0	0	1
74259	CLERK OF THE BOARD	1	0	0	0	0	1
74265	ASST CLERK OF THE BOARD	1	0	0	0	0	1
74515	BOARD OF SUPV CHIEF OF STAFF	5	0	0	0	0	5
74516	BOARD OF SUPERVISORS MEMBER	5	0	0	0	0	5
86149	IT NETWORK ADMIN II - C	1	0	0	0	0	1
86150	IT NETWORK ADMIN III - C	1	0	0	0	0	1
86180	IT USER SUPPORT TECH III - C	1	0	0	0	0	1
	Sum of Regular	59	-3	1	0	0	57
Temporary							
13865	OFFICE ASSISTANT II	1	0	0	0	0	1
13898	COUNTY TEMPORARY	2	3	-4	0	0	1
	Sum of Temporary	3	3	-4	0	0	2
	Total changes for 1000100000	62	0	-3	0	0	59
Budget Unit:	**1000200000 ASSESSMENT APPEALS BOARD**						
Regular							
13496	BOARD ASSISTANT	4	0	0	0	0	4
13497	SR BOARD ASSISTANT	0	1	0	0	0	1
13901	DEP CLERK OF THE BOARD	1	-1	0	0	0	0
	Sum of Regular	5	0	0	0	0	5
	Total changes for 1000200000	5	0	0	0	0	5
Budget Unit:	**1100100000 EXECUTIVE OFFICE**						
Regular							
13925	EXECUTIVE ASSISTANT I	2	1	-1	0	0	2
13933	CEO EXECUTIVE ASSISTANT	1	0	0	0	0	1
13964	ADMIN SECRETARY II	3	0	0	0	0	3

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
15927	ACCOUNTING TECHNICIAN II - C	1	0	0	0	0	1
74110	ADMIN SVCS ANALYST II - C	1	0	-1	0	0	0
74128	ASST COUNTY EXECUTIVE OFFICE	1	0	0	0	0	1
74130	COUNTY FINANCE DIRECTOR	1	0	0	0	0	1
74134	PRINCIPAL MGMT ANALYST	8	1	-3	0	0	6
74138	DEP COUNTY EXECUTIVE OFFICER	1	1	-1	0	0	1
74150	SR MANAGEMENT ANALYST	2	0	0	0	0	2
74261	COUNTY EXECUTIVE OFFICER	1	0	0	0	0	1
74295	PUBLIC INFORMATION SPEC - C	0	1	-1	0	0	0
74460	PUBLIC INFORMATION OFFICER	1	0	0	0	0	1
86150	IT NETWORK ADMIN III - C	1	0	0	0	0	1
	Sum of Regular	24	4	-7	0	0	21
	Total changes for 1100100000	24	4	-7	0	0	21

Budget Unit: **1105000000** **NAT'L POLLUTANT DICHARGE ELMN SYS**

Regular

74134	PRINCIPAL MGMT ANALYST	1	0	0	0	0	1
74150	SR MANAGEMENT ANALYST	1	0	0	0	0	1
	Sum of Regular	2	0	0	0	0	2
	Total changes for 1105000000	2	0	0	0	0	2

Budget Unit: **1109200000** **OASIS FINANCIALS**

Regular

13865	OFFICE ASSISTANT II	1	0	0	0	0	1
74191	ADMIN SVCS MGR I	1	0	0	0	0	1
77272	OASIS DIRECTOR	1	0	0	0	0	1
86111	BUSINESS PROCESS ANALYST II	10	4	-4	0	0	10
86117	IT BUSINESS SYS ANALYST III	12	0	-1	0	0	11
86118	OASIS BUSINESS PROCESS MGR	2	0	0	0	0	2
86119	IT SUPV BUSINESS SYS ANALYST	0	2	-1	0	0	1
86139	IT DATABASE ADMIN III	1	0	0	0	0	1
86140	IT SUPV DATABASE ADMIN	1	0	0	0	0	1
86141	IT OFFICER II	1	0	0	0	0	1
86143	IT OFFICER I	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
86155	IT NETWORK ADMIN III	1	0	0	0	0	1
86165	IT SYSTEMS ADMINISTRATOR III	3	0	0	0	0	3
	Sum of Regular	35	6	-6	0	0	35
	Total changes for 1109200000	35	6	-6	0	0	35

Budget Unit: **1109300000 OASIS HRMS**

Regular

74105	ADMIN SVCS ANALYST I	1	0	0	0	0	1
74114	ADMIN SVCS ASST	1	0	0	0	0	1
77270	INFO SECURITY ANALYST III	1	0	0	0	0	1
86111	BUSINESS PROCESS ANALYST II	4	0	0	0	0	4
86117	IT BUSINESS SYS ANALYST III	9	0	0	0	0	9
86119	IT SUPV BUSINESS SYS ANALYST	0	1	0	0	0	1
86139	IT DATABASE ADMIN III	2	0	0	0	0	2
86143	IT OFFICER I	1	0	0	0	0	1
	Sum of Regular	19	1	0	0	0	20
	Total changes for 1109300000	19	1	0	0	0	20

Budget Unit: **1130100000 HUMAN RESOURCES**

Regular

13133	SR HUMAN RESOURCES CLERK - C	12	4	2	0	0	18
13440	HUMAN RESOURCES CLERK - C	18	-1	0	0	0	17
13469	EMPLOYEE BENEFITS & REC SUPV	2	0	0	0	0	2
13612	HUMAN RESOURCES TECHNICIAN II	32	8	-2	0	0	38
13873	OFFICE ASSISTANT III - C	9	1	2	0	0	12
13920	SECRETARY II - C	3	-1	0	0	0	2
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
15918	ACCOUNTING ASSISTANT II - C	2	-2	0	0	0	0
15919	ACCOUNTING TECHNICIAN I - C	2	-1	0	0	0	1
15926	SR ACCOUNTING ASST - C	1	-1	0	0	0	0
15927	ACCOUNTING TECHNICIAN II - C	2	0	0	0	0	2
74242	ASST COUNTY EXEC OFFCR/HR/ED	1	0	0	0	0	1
74650	DIR OF EMPLOYEE RELATIONS	1	0	0	0	0	1
74674	HUMAN RESOURCES SERVICES MG	12	-4	0	0	0	8

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74768	PRINCIPAL HR ANALYST	5	3	1	0	0	9
74772	HUMAN RESOURCES ANALYST II	28	1	-1	0	0	28
74773	HUMAN RESOURCES DIV MGR I	0	1	0	0	0	1
74774	SR HUMAN RESOURCES ANALYST	28	0	4	0	0	32
74775	ASST HUMAN RESOURCES DIRECT	1	0	0	0	0	1
74776	HUMAN RESOURCES DIV MGR II	2	1	2	0	0	5
74780	DEP HUMAN RESOURCES DIRECTO	2	0	1	0	0	3
77414	PRINCIPAL ACCOUNTANT	0	1	0	0	0	1
77417	SUPV ACCOUNTANT - C	1	0	0	0	0	1
77423	SR ACCOUNTANT - C	1	-1	0	0	0	0
77499	FISCAL MANAGER	1	-1	0	0	0	0
86108	BUSINESS PROCESS ANALYST I - C	0	1	0	0	0	1
86158	IT SUPV NETWORK ADMIN - C	1	0	0	0	0	1
86170	IT SUPV USER SUPPORT TECH - C	1	0	0	0	0	1
86179	IT USER SUPPORT TECH II - C	1	0	0	0	0	1
86199	IT WEB DEVELOPER II - C	1	-1	0	0	0	0
	Sum of Regular	171	8	9	0	0	188
	Total changes for 1130100000	171	8	9	0	0	188

Budget Unit: **1130300000** **HR AIR QUALITY DIVISION**

Regular

13612	HUMAN RESOURCES TECHNICIAN II	1	0	0	0	0	1
13873	OFFICE ASSISTANT III - C	1	0	0	0	0	1
74473	EMPLOYEE TRANS COORDINATOR	1	0	0	0	0	1
	Sum of Regular	3	0	0	0	0	3
	Total changes for 1130300000	3	0	0	0	0	3

Budget Unit: **1130700000** **HR PROPERTY INSURANCE**

Regular

74774	SR HUMAN RESOURCES ANALYST	1	0	0	0	0	1
	Sum of Regular	1	0	0	0	0	1
	Total changes for 1130700000	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit:	**1130800000 HR WORKERS COMPENSATION**						
Regular							
13422	WORKERS COMP UR NURSE CASE	1	0	0	0	0	1
13424	WORKERS COMP U/R TECH	2	-1	0	0	0	1
13472	WORKERS COMP CLAIMS TECH	3	0	0	0	0	3
13522	CLAIMS ADJUSTER II	13	0	0	0	0	13
13523	SR CLAIMS ADJUSTER	3	0	0	0	0	3
13612	HUMAN RESOURCES TECHNICIAN II	1	-1	1	0	0	1
13860	SUPV OFFICE ASSISTANT I - C	1	0	0	0	0	1
13873	OFFICE ASSISTANT III - C	11	-1	0	0	0	10
73815	PHYSICIAN IV - C	1	-1	0	0	0	0
73923	NURSE MANAGER	1	0	0	0	0	1
74674	HUMAN RESOURCES SERVICES MG	0	0	2	0	0	2
74768	PRINCIPAL HR ANALYST	0	0	1	0	0	1
74772	HUMAN RESOURCES ANALYST II	3	0	0	0	0	3
74773	HUMAN RESOURCES DIV MGR I	3	0	-2	0	0	1
74774	SR HUMAN RESOURCES ANALYST	3	0	0	0	0	3
74780	DEP HUMAN RESOURCES DIRECTO	1	0	0	0	0	1
74783	CLAIMS PROGRAM SUPV	1	0	0	0	0	1
77423	SR ACCOUNTANT - C	1	0	0	0	0	1
86108	BUSINESS PROCESS ANALYST I - C	1	0	0	0	0	1
86149	IT NETWORK ADMIN II - C	1	0	0	0	0	1
86180	IT USER SUPPORT TECH III - C	1	0	0	0	0	1
86190	IT APPS DEVELOPER III - C	1	0	0	0	0	1
	Sum of Regular	53	-4	2	0	0	51
	Total changes for 1130800000	53	-4	2	0	0	51
Budget Unit:	**1130900000 HR MALPRACTICE INSURANCE**						
Regular							
13523	SR CLAIMS ADJUSTER	1	0	0	0	0	1
13873	OFFICE ASSISTANT III - C	1	0	0	0	0	1
	Sum of Regular	2	0	0	0	0	2
	Total changes for 1130900000	2	0	0	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit:	**1131000000 HR LIABILITY INSURANCE**						
Per Diem							
13886	TEMPORARY ASST - PD	0	0	1	0	0	1
	Sum of Per Diem	0	0	1	0	0	1
Regular							
13133	SR HUMAN RESOURCES CLERK - C	1	-1	0	0	0	0
13440	HUMAN RESOURCES CLERK - C	2	0	0	0	0	2
13450	SR LIABILITY CLAIMS TECH - C	1	0	0	0	0	1
13522	CLAIMS ADJUSTER II	4	0	0	0	0	4
13523	SR CLAIMS ADJUSTER	2	0	0	0	0	2
13612	HUMAN RESOURCES TECHNICIAN II	1	0	0	0	0	1
13873	OFFICE ASSISTANT III - C	5	-1	0	0	0	4
13920	SECRETARY II - C	1	0	0	0	0	1
15919	ACCOUNTING TECHNICIAN I - C	1	0	0	0	0	1
37558	SR POLYGRAPH EXAMINER	1	0	0	0	0	1
37560	POLYGRAPH EXAMINER	1	0	0	0	0	1
74246	DIR OF LEADERSHIP & ORG DEV	1	0	0	0	0	1
74669	MANAGING PSYCH-LE & ASSESSME	1	0	0	0	0	1
74674	HUMAN RESOURCES SERVICES MG	1	0	0	0	0	1
74768	PRINCIPAL HR ANALYST	1	0	-1	0	0	0
74772	HUMAN RESOURCES ANALYST II	1	0	0	0	0	1
74773	HUMAN RESOURCES DIV MGR I	1	0	0	0	0	1
74774	SR HUMAN RESOURCES ANALYST	1	0	0	0	0	1
74783	CLAIMS PROGRAM SUPV	1	0	0	0	0	1
79722	LAW ENFORCEMENT PSYCHOLOGI	1	0	0	0	0	1
86142	IT SUPV BUSINESS SYS ANALYST-C	1	0	0	0	0	1
86143	IT OFFICER I	1	0	0	0	0	1
86180	IT USER SUPPORT TECH III - C	1	0	0	0	0	1
86190	IT APPS DEVELOPER III - C	1	0	0	0	0	1
	Sum of Regular	33	-2	-1	0	0	30
	Total changes for 1131000000	33	-2	0	0	0	31

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit: **1131200000**	**HR STD DISABILITY INSURANCE**						
Regular							
13521	CLAIMS ADJUSTER I	1	0	0	0	0	1
	Sum of Regular	1	0	0	0	0	1
	Total changes for 1131200000	1	0	0	0	0	1
Budget Unit: **1131300000**	**HR SAFETY LOSS CONTROL**						
Regular							
13873	OFFICE ASSISTANT III - C	2	0	0	0	0	2
73576	SAFETY INDSTRL HYGIENIST III-C	1	0	0	0	0	1
73995	OCCUPATIONAL HLTH NRS CONSLT	1	0	0	0	0	1
74674	HUMAN RESOURCES SERVICES MG	1	0	0	0	0	1
74684	SAFETY COORDINATOR - C	11	-1	0	0	0	10
74686	SR SAFETY COORDINATOR	3	-1	0	0	0	2
74768	PRINCIPAL HR ANALYST	0	1	0	0	0	1
	Sum of Regular	19	-1	0	0	0	18
	Total changes for 1131300000	19	-1	0	0	0	18
Budget Unit: **1131800000**	**HR TAP - TEMP ASST POOL**						
Per Diem							
13413	PHARMACY TECHNICIAN II - PD	1	0	-1	0	0	0
13884	TEMPORARY ASST EXEMPT - PD	73	0	-30	0	0	43
13885	TAP REGISTRY NURSE - PD	3	0	-3	0	0	0
13886	TEMPORARY ASST - PD	400	0	-1	0	0	399
13897	TEMPORARY ASST - PD-ON CALL	400	0	-1	0	0	399
57746	LICENSED PSYCHIATRIC TECH - PD	1	0	-1	0	0	0
57754	LICENSED VOC NURSE II - PD	10	0	-9	0	0	1
57784	NURSING ASSISTANT - PD	70	0	-55	0	0	15
73612	PHARMACIST - PD	5	0	-3	0	0	2
73808	PHYSICIAN IV - PD	5	0	-4	0	0	1
73926	HOUSE SUPERVISOR - PD	4	0	-4	0	0	0
73958	REGISTERED NURSE III - PD	52	0	-37	0	0	15
74016	REGISTERED NURSE-PD III-AN-RS	37	0	-26	0	0	11
79801	MEDICAL SOCIAL WORKER II - PD	3	0	-2	0	0	1

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
98702	CLINICAL LAB SCIENTIST - PD	5	0	-5	0	0	0
98722	RADIOLOGIC TECHNOLOGIST - PD	4	0	-4	0	0	0
98732	RADIOLOGIC SPECIALIST - PD	2	0	-2	0	0	0
98742	ELECTROCARDIOGRAPH TECH - PD	1	0	-1	0	0	0
98759	RESP CARE PRACT II, REG - PD	22	0	-20	0	0	2
	Sum of Per Diem	1,098	0	-209	0	0	889
Regular							
13440	HUMAN RESOURCES CLERK - C	3	0	0	0	0	3
13612	HUMAN RESOURCES TECHNICIAN II	17	-2	1	0	0	16
13860	SUPV OFFICE ASSISTANT I - C	1	-1	0	0	0	0
13865	OFFICE ASSISTANT II	1	0	0	0	0	1
13873	OFFICE ASSISTANT III - C	7	-3	0	0	0	4
13888	TEMPORARY ASST FLOATER - LIUN	29	0	-1	0	0	28
13889	TEMPORARY ASST FLOATER - SEIU	15	0	-1	0	0	14
13890	TEMPORARY ASST FLOATER - MGT	4	0	-1	0	0	3
13891	TEMPORARY ASST FLOATER - CNF	23	0	-1	0	0	22
13892	TEMPORARY ASST FLOATER-SEIU-	6	0	-1	0	0	5
13893	TEMPORARY ASST FLOATER - WAS	2	0	-1	0	0	1
15918	ACCOUNTING ASSISTANT II - C	4	-1	0	0	0	3
15919	ACCOUNTING TECHNICIAN I - C	1	1	0	0	0	2
15927	ACCOUNTING TECHNICIAN II - C	0	0	1	0	0	1
57793	HEALTH SERVICES ASSISTANT	1	0	0	0	0	1
73458	HEALTH EDUCATION ASST II	1	-1	0	0	0	0
73958	REGISTERED NURSE III - PD	0	15	0	0	0	15
74674	HUMAN RESOURCES SERVICES MG	1	0	0	0	0	1
74768	PRINCIPAL HR ANALYST	2	-2	0	0	0	0
74772	HUMAN RESOURCES ANALYST II	1	0	0	0	0	1
74774	SR HUMAN RESOURCES ANALYST	3	3	0	0	0	6
74776	HUMAN RESOURCES DIV MGR II	0	1	0	0	0	1
86159	IT SUPV APPS DEVELOPER - C	1	0	0	0	0	1
86183	IT USER SUPPORT TECH II	1	0	0	0	0	1
	Sum of Regular	124	10	-4	0	0	130
Seasonal							
85079	PUBLIC SERVICES WORKER - PARK	0	0	1	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
	Sum of Seasonal	0	0	1	0	0	1
Temporary							
13866	OFFICE ASSISTANT III	1	0	-1	0	0	0
13871	TEMPORARY ASST	1,713	-100	-1,291	0	0	322
13883	TEMPORARY ASST EXEMPT	19	0	0	0	0	19
13894	TEMPORARY ASST -STUDENT INTE	62	0	-1	0	0	61
13895	TEMPORARY ASST - EXECUTIVE	20	0	-1	0	0	19
78642	COMMISSION/ADVISORY GRP MEM	0	100	-34	0	0	66
	Sum of Temporary	1,815	0	-1,328	0	0	487
	Total changes for 1131800000	3,037	10	-1,540	0	0	1,507

Budget Unit: **1132000000 HR EXCLUSIVE PROVIDER OPTION**

Regular							
13133	SR HUMAN RESOURCES CLERK - C	2	0	0	0	0	2
13421	SR PHARMACY TECHNICIAN - C	1	0	0	0	0	1
13440	HUMAN RESOURCES CLERK - C	2	0	0	0	0	2
13522	CLAIMS ADJUSTER II	4	0	0	0	0	4
13523	SR CLAIMS ADJUSTER	1	0	0	0	0	1
13612	HUMAN RESOURCES TECHNICIAN II	1	0	0	0	0	1
13873	OFFICE ASSISTANT III - C	2	1	0	0	0	3
57790	HEALTH SERVICES ASSISTANT - C	2	0	0	0	0	2
73609	MANAGING PHARMACIST - EX CARE	1	0	0	0	0	1
73620	PHARMACY TECHNICIAN II - C	1	0	0	0	0	1
73621	SUPV PHARMACY TECHNICIAN - C	1	0	0	0	0	1
73622	PHARMACIST - C	1	0	0	0	0	1
73880	EXCLUSIVE CARE MEDICAL DIR	1	0	0	0	0	1
73889	EXCLUSIVE CARE DIR OF MED SPE	1	0	0	0	0	1
73923	NURSE MANAGER	1	0	0	0	0	1
73993	REGISTERED NURSE IV - C	1	0	0	0	0	1
73994	REGISTERED NURSE V - C	3	0	0	0	0	3
74001	PATIENT SVCS COORDINATOR - C	2	0	0	0	0	2
74110	ADMIN SVCS ANALYST II - C	1	0	0	0	0	1
74672	EXCLUSIVE CARE PLAN MANAGER	1	0	0	0	0	1
74772	HUMAN RESOURCES ANALYST II	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74774	SR HUMAN RESOURCES ANALYST	3	0	0	0	0	3
78346	NUTRITIONIST - C	1	0	0	0	0	1
86108	BUSINESS PROCESS ANALYST I - C	1	0	0	0	0	1
	Sum of Regular	36	1	0	0	0	37
	Total changes for 1132000000	36	1	0	0	0	37

Budget Unit: **1132200000** **HR EMPLOYEE ASSISTANCE PROGRAM**

Regular

13860	SUPV OFFICE ASSISTANT I - C	0	1	0	0	0	1
13873	OFFICE ASSISTANT III - C	3	0	1	0	0	4
74671	EMPLOYEE PSYCHOLOGICAL SVC	1	0	0	0	0	1
79714	SR CLINICAL PSYCHOLOGIST - C	0	1	0	0	0	1
79760	CLINICAL THERAPIST II - C	3	0	1	0	0	4
	Sum of Regular	7	2	2	0	0	11
	Total changes for 1132200000	7	2	2	0	0	11

Budget Unit: **1132900000** **HR OCCUPATIONAL HEALTH & WELLNESS**

Regular

13133	SR HUMAN RESOURCES CLERK - C	0	1	1	0	0	2
13873	OFFICE ASSISTANT III - C	1	1	0	0	0	2
15929	ACCOUNTING ASSISTANT I - C	1	0	0	0	0	1
57750	LICENSED VOC NURSE II - C	2	0	0	0	0	2
57790	HEALTH SERVICES ASSISTANT - C	2	0	1	0	0	3
73439	OCC INJURY & ILLNESS SPEC	2	0	0	0	0	2
73459	HEALTH EDUCATION ASST II - C	0	1	0	0	0	1
73799	PHYSICIAN ASSISTANT II - C	1	0	0	0	0	1
73815	PHYSICIAN IV - C	1	0	0	0	0	1
73923	NURSE MANAGER	1	0	0	0	0	1
73989	REGISTERED NURSE III - C	0	0	1	0	0	1
73993	REGISTERED NURSE IV - C	2	0	0	0	0	2
73994	REGISTERED NURSE V - C	2	0	0	0	0	2
74002	OCCUPATIONAL HLTH NRS-SHERIF	2	0	0	0	0	2
74768	PRINCIPAL HR ANALYST	1	0	0	0	0	1
86108	BUSINESS PROCESS ANALYST I - C	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
98721	RADIOLOGIC TECHNOLOGIST II - C	1	0	0	0	0	1
	Sum of Regular	20	3	3	0	0	26
	Total changes for 1132900000	20	3	3	0	0	26

Budget Unit: **1150100000 CFD / ASSESSMENT DIST ADMIN**

Regular

13925	EXECUTIVE ASSISTANT I	1	-1	0	0	0	0
15918	ACCOUNTING ASSISTANT II - C	1	0	-1	0	0	0
15919	ACCOUNTING TECHNICIAN I - C	0	1	0	0	0	1
74110	ADMIN SVCS ANALYST II - C	0	1	0	0	0	1
74134	PRINCIPAL MGMT ANALYST	2	0	-1	0	0	1
74138	DEP COUNTY EXECUTIVE OFFICER	1	0	0	0	0	1
	Sum of Regular	5	1	-2	0	0	4
	Total changes for 1150100000	5	1	-2	0	0	4

Budget Unit: **1200100000 ASSESSOR**

Regular

13786	DATA ENTRY OPERATOR II	3	0	-3	0	0	0
13865	OFFICE ASSISTANT II	14	-1	-7	0	0	6
13867	SUPV OFFICE ASSISTANT I	2	0	-1	0	0	1
13924	SECRETARY II	0	1	-1	0	0	0
15307	ACR TECHNICIAN I	20	4	2	0	0	26
15308	ACR TECHNICIAN II	17	2	-7	0	7	19
15309	ACR TECHNICIAN III	3	0	-2	0	0	1
15310	SUPV ACR TECHNICIAN	2	1	-1	0	0	2
15912	ACCOUNTING ASSISTANT II	1	0	-1	0	0	0
15913	SR ACCOUNTING ASST	1	0	-1	0	0	0
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74319	APPRAISER TECHNICIAN	17	4	-3	0	0	18
74322	APPRAISER II	33	2	2	10	0	47
74323	SR APPRAISER	32	0	-2	0	0	30
74324	SUPV APPRAISER	14	0	0	0	0	14
74325	PRINCIPAL DEPUTY ACCR	4	0	-1	0	0	3
74326	CHF DEP ASSESSOR/CO CLK/REC	0	1	-1	0	0	0

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74327	SUPV DEP ACCR	0	1	-1	0	0	0
74376	ASST ASSESSOR-COUNTY CLK-RE	1	0	0	0	0	1
74520	ASSESSOR/COUNTY CLERK/RECOR	1	0	-1	0	0	0
77103	GIS SPECIALIST II	7	0	0	0	0	7
77104	GIS ANALYST	2	0	0	0	0	2
77105	GIS SUPERVISOR ANALYST	1	0	0	0	0	1
77106	GIS SENIOR ANALYST	1	1	-1	0	0	1
77442	AUDITOR/APPRAISER II	6	1	-1	0	0	6
77443	SR AUDITOR/APPRAISER	5	0	1	0	0	6
77444	SUPV AUDITOR-APPRAISER	2	1	-1	0	0	2
86103	IT APPS DEVELOPER III	3	0	-3	0	0	0
86115	IT BUSINESS SYS ANALYST II	0	1	-1	0	0	0
86117	IT BUSINESS SYS ANALYST III	1	0	0	0	0	1
86143	IT OFFICER I	1	0	0	0	0	1
86174	IT SYSTEMS OPERATOR II	1	0	0	0	0	1
86177	IT SUPV SYSTEMS OPERATOR	1	0	-1	0	0	0
86183	IT USER SUPPORT TECH II	1	0	-1	0	0	0
92243	SR GIS SPECIALIST	1	0	0	0	0	1
	Sum of Regular	199	19	-37	10	7	198
	Total changes for 1200100000	199	19	-37	10	7	198

Budget Unit: **1200200000** **COUNTY CLERK-RECORDER**

Regular

13518	ARCHIVES & RECORDS TECH	3	-1	0	0	0	2
13524	SUPV ARCHIVES & REC TECH I	2	0	0	0	0	2
13525	SUPV ARCHIVES & REC TECH II	1	0	0	0	0	1
13865	OFFICE ASSISTANT II	3	0	-1	0	1	3
13866	OFFICE ASSISTANT III	2	0	-1	0	0	1
13867	SUPV OFFICE ASSISTANT I	0	0	1	0	0	1
13923	SECRETARY I	1	0	0	0	0	1
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
15307	ACR TECHNICIAN I	31	4	-2	0	0	33
15308	ACR TECHNICIAN II	67	1	4	0	0	72

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
15309	ACR TECHNICIAN III	16	2	1	0	0	19
15310	SUPV ACR TECHNICIAN	13	-1	-2	0	0	10
15912	ACCOUNTING ASSISTANT II	3	0	1	0	0	4
15913	SR ACCOUNTING ASST	5	0	1	0	0	6
15915	ACCOUNTING TECHNICIAN I	2	0	1	0	0	3
15916	ACCOUNTING TECHNICIAN II	0	0	1	0	0	1
74012	RESEARCH & POLICY ANALYST	2	1	-1	0	0	2
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74114	ADMIN SVCS ASST	1	0	0	0	0	1
74127	SR ADMINISTRATIVE ANALYST	0	0	1	0	0	1
74199	ADMIN SVCS SUPV	2	0	0	0	0	2
74213	ADMIN SVCS OFFICER	1	-1	0	0	0	0
74325	PRINCIPAL DEPUTY ACCR	3	0	0	0	0	3
74326	CHF DEP ASSESSOR/CO CLK/REC	0	1	0	0	0	1
74327	SUPV DEP ACCR	3	0	0	0	0	3
74376	ASST ASSESSOR-COUNTY CLK-RE	2	0	0	0	0	2
74520	ASSESSOR/COUNTY CLERK/RECOR	0	0	1	0	0	1
74740	DEPT H.R. COORDINATOR	1	0	0	0	0	1
77412	ACCOUNTANT II	0	1	-1	0	0	0
77443	SR AUDITOR/APPRAISER	1	1	-1	0	0	1
77444	SUPV AUDITOR-APPRAISER	1	0	1	0	0	2
77445	PRINCIPAL AUDITOR/APPRAISER	1	0	0	0	0	1
77499	FISCAL MANAGER	0	1	0	0	0	1
86103	IT APPS DEVELOPER III	2	0	3	0	0	5
86105	IT SUPV APPS DEVELOPER	1	0	0	0	0	1
86111	BUSINESS PROCESS ANALYST II	0	1	0	0	0	1
86117	IT BUSINESS SYS ANALYST III	2	0	0	0	0	2
86139	IT DATABASE ADMIN III	1	0	1	0	0	2
86141	IT OFFICER II	0	0	1	0	0	1
86143	IT OFFICER I	2	0	0	0	0	2
86153	IT NETWORK ADMIN II	1	0	0	0	0	1
86155	IT NETWORK ADMIN III	3	0	-1	0	0	2
86165	IT SYSTEMS ADMINISTRATOR III	0	1	1	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
86177	IT SUPV SYSTEMS OPERATOR	0	0	1	0	0	1
86183	IT USER SUPPORT TECH II	2	0	1	0	0	3
86185	IT USER SUPPORT TECH III	0	1	-1	0	0	0
86187	IT SUPV USER SUPPORT TECH	1	0	-1	0	0	0
	Sum of Regular	185	12	9	0	1	207
Temporary							
13871	TEMPORARY ASST	0	0	8	0	0	8
	Sum of Temporary	0	0	8	0	0	8
	Total changes for 1200200000	185	12	17	0	1	215

Budget Unit: **1200300000** **AC RECORDER CENTER DIV.**

Regular							
13518	ARCHIVES & RECORDS TECH	5	1	-1	0	1	6
13519	SR ARCHIVES & RECORDS TECH	3	-1	0	0	0	2
13524	SUPV ARCHIVES & REC TECH I	4	0	-1	0	0	3
13525	SUPV ARCHIVES & REC TECH II	1	0	0	0	0	1
13526	ARCHIVIST/RECORDS ANALYST I	1	1	0	0	0	2
13527	ARCHIVIST/RECORDS ANALYST II	1	0	1	0	0	2
13528	ARCHIVIST/RECORDS MANAGER	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	1	0	-1	0	0	0
74326	CHF DEP ASSESSOR/CO CLK/REC	1	0	-1	0	0	0
77412	ACCOUNTANT II	0	0	1	0	0	1
	Sum of Regular	19	1	-2	0	1	19
Temporary							
13871	TEMPORARY ASST	0	0	3	0	0	3
74180	PROF STUDENT INTERN	2	0	-2	0	0	0
	Sum of Temporary	2	0	1	0	0	3
	Total changes for 1200300000	21	1	-1	0	1	22

Budget Unit: **1200400000** **INTEGRATED PROPERTY TAX MGMT SYSTEM**

Regular							
74114	ADMIN SVCS ASST	2	0	0	0	0	2
74323	SR APPRAISER	2	0	-2	0	0	0
74325	PRINCIPAL DEPUTY ACCR	0	0	1	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
77442	AUDITOR/APPRAISER II	0	0	0	0	1	1
86103	IT APPS DEVELOPER III	0	1	0	0	0	1
86110	BUSINESS PROCESS ANALYST I	4	-2	0	0	1	3
86111	BUSINESS PROCESS ANALYST II	6	-3	5	0	0	8
86115	IT BUSINESS SYS ANALYST II	1	-1	0	0	0	0
86117	IT BUSINESS SYS ANALYST III	1	1	0	0	0	2
86119	IT SUPV BUSINESS SYS ANALYST	1	0	0	0	0	1
86141	IT OFFICER II	0	0	1	0	0	1
86143	IT OFFICER I	1	-1	1	0	0	1
86146	PROPERTY TAX SYSTEM IT OFFICE	1	0	0	0	0	1
86165	IT SYSTEMS ADMINISTRATOR III	1	0	0	0	0	1
	Sum of Regular	20	-5	6	0	2	23
	Total changes for 1200400000	20	-5	6	0	2	23

Budget Unit: **1300100000** **AUDITOR - CONTROLLER**

Regular

13866	OFFICE ASSISTANT III	1	0	0	0	0	1
13917	STAFF WRITER	1	0	-1	0	0	0
13922	SECRETARY II - C	0	0	1	0	0	1
13925	EXECUTIVE ASSISTANT I	1	0	-1	0	0	0
13964	ADMIN SECRETARY II	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	4	1	0	0	0	5
15915	ACCOUNTING TECHNICIAN I	8	0	1	0	0	9
15916	ACCOUNTING TECHNICIAN II	4	-1	-1	0	0	2
15917	SUPV ACCOUNTING TECHNICIAN	1	1	0	0	0	2
74200	ADMIN SVCS SUPV - C	1	0	0	0	-1	0
74740	DEPT H.R. COORDINATOR	0	0	1	0	0	1
75212	COUNTY AUDITOR-CONTROLLER	1	0	0	0	0	1
77411	ACCOUNTANT I	1	-1	2	0	0	2
77412	ACCOUNTANT II	3	1	-2	0	0	2
77413	SR ACCOUNTANT	14	1	-1	0	0	14
77414	PRINCIPAL ACCOUNTANT	5	0	0	0	0	5
77415	CHF ACCOUNTANT	2	0	0	0	0	2
77416	SUPV ACCOUNTANT	8	0	0	0	0	8

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
77425	ASST COUNTY AUDITOR-CONTROL	1	0	-1	0	0	0
77426	DEP AUDITOR-CONTROLLER	0	0	2	0	0	2
86110	BUSINESS PROCESS ANALYST I	1	0	0	0	0	1
86111	BUSINESS PROCESS ANALYST II	4	0	0	0	0	4
86117	IT BUSINESS SYS ANALYST III	1	1	0	0	0	2
86119	IT SUPV BUSINESS SYS ANALYST	1	0	0	0	0	1
86143	IT OFFICER I	1	0	0	0	0	1
86153	IT NETWORK ADMIN II	1	0	0	0	0	1
	Sum of Regular	66	3	0	0	-1	68
	Total changes for 1300100000	66	3	0	0	-1	68

Budget Unit: **1300200000** **INTERNAL AUDITS**

Regular

77414	PRINCIPAL ACCOUNTANT	2	1	-1	0	-1	1
77415	CHF ACCOUNTANT	0	0	0	0	1	1
77421	SR INTERNAL AUDITOR	9	1	-4	0	-1	5
77426	DEP AUDITOR-CONTROLLER	0	1	-1	0	0	0
	Sum of Regular	11	3	-6	0	-1	7
	Total changes for 1300200000	11	3	-6	0	-1	7

Budget Unit: **1300300000** **ACO - COUNTY PAYROLL SERVICES**

Regular

15915	ACCOUNTING TECHNICIAN I	11	0	-1	0	0	10
15916	ACCOUNTING TECHNICIAN II	0	1	1	0	0	2
15917	SUPV ACCOUNTING TECHNICIAN	2	-1	0	0	0	1
77411	ACCOUNTANT I	0	1	-1	0	0	0
77412	ACCOUNTANT II	2	0	0	0	0	2
77413	SR ACCOUNTANT	3	-1	0	0	0	2
77414	PRINCIPAL ACCOUNTANT	1	0	0	0	0	1
77415	CHF ACCOUNTANT	0	1	0	0	0	1
77416	SUPV ACCOUNTANT	2	0	0	0	0	2
77426	DEP AUDITOR-CONTROLLER	1	-1	0	0	0	0
	Sum of Regular	22	0	-1	0	0	21
	Total changes for 1300300000	22	0	-1	0	0	21

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit:	**1400100000 TREASURER-TAX COLLECTOR**						
Regular							
13926	EXECUTIVE ASSISTANT II	1	-1	0	0	0	0
15322	TAX COLLECTION INVESTIGATOR I	1	-1	0	0	0	0
15323	TAX COLLECTION INVESTIGATOR II	2	0	0	0	0	2
15325	SR TAX COLLECTION INVESTIGATO	1	0	0	0	0	1
15911	ACCOUNTING ASSISTANT I	7	-1	0	0	0	6
15912	ACCOUNTING ASSISTANT II	28	-1	0	0	0	27
15913	SR ACCOUNTING ASST	18	0	0	0	0	18
15915	ACCOUNTING TECHNICIAN I	14	2	0	0	0	16
15916	ACCOUNTING TECHNICIAN II	2	0	0	0	0	2
15917	SUPV ACCOUNTING TECHNICIAN	10	-1	0	0	0	9
74106	ADMIN SVCS ANALYST II	2	0	0	0	0	2
74114	ADMIN SVCS ASST	2	-2	0	0	0	0
74191	ADMIN SVCS MGR I	1	0	0	0	0	1
74532	TREASURER & TAX COLLECTOR	1	0	0	0	0	1
77411	ACCOUNTANT I	2	0	0	0	0	2
77412	ACCOUNTANT II	1	0	0	0	0	1
77413	SR ACCOUNTANT	1	0	0	0	0	1
77414	PRINCIPAL ACCOUNTANT	1	0	0	0	0	1
77416	SUPV ACCOUNTANT	1	0	0	0	0	1
77434	DEP TREASURER/TAX COLLECTOR	4	0	0	0	0	4
77435	ASST TREASURER/TAX COLLECTO	1	0	0	0	0	1
77438	CHF DEP TREAS/TAX COLLECTOR	3	0	0	0	0	3
77439	CHF DEP TREAS/TAX COLLECTOR II	1	0	0	0	0	1
77486	ASST INVESTMENT MANAGER	1	0	0	0	0	1
77487	INVESTMENT MANAGER	1	0	0	0	0	1
86103	IT APPS DEVELOPER III	1	0	0	0	0	1
86110	BUSINESS PROCESS ANALYST I	0	1	0	0	0	1
86111	BUSINESS PROCESS ANALYST II	0	2	0	0	0	2
86117	IT BUSINESS SYS ANALYST III	1	-1	0	0	0	0
86119	IT SUPV BUSINESS SYS ANALYST	1	0	0	0	0	1
86141	IT OFFICER II	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
86153	IT NETWORK ADMIN II	1	0	0	0	0	1
86155	IT NETWORK ADMIN III	1	0	0	0	0	1
86183	IT USER SUPPORT TECH II	2	0	0	0	0	2
	Sum of Regular	115	-3	0	0	0	112
	Total changes for 1400100000	115	-3	0	0	0	112

Budget Unit: **1500100000** **COUNTY COUNSEL**

Regular

13925	EXECUTIVE ASSISTANT I	0	1	0	0	0	1
13934	COUNTY COUNSEL LEGAL SUPP AS	2	-1	0	0	0	1
13936	LEGAL SUPPORT ASST II - C	13	-4	0	0	0	9
13937	SR LEGAL SUPPORT ASST - C	2	0	0	0	0	2
15918	ACCOUNTING ASSISTANT II - C	1	0	0	0	0	1
15927	ACCOUNTING TECHNICIAN II - C	1	0	0	0	0	1
74104	COUNTY COUNSEL ADMIN ASST	2	-1	0	0	0	1
74191	ADMIN SVCS MGR I	1	0	0	0	0	1
74254	COUNTY COUNSEL	1	0	0	0	0	1
78505	PARALEGAL II - C	1	0	0	0	0	1
78507	PARALEGAL I - C	3	0	0	0	0	3
78514	DEP COUNTY COUNSEL IV	40	2	-4	0	0	38
78515	PRINCIPAL DEP COUNTY COUNSEL	3	0	0	0	0	3
78517	ASST COUNTY COUNSEL	1	0	0	0	0	1
	Sum of Regular	71	-3	-4	0	0	64
	Total changes for 1500100000	71	-3	-4	0	0	64

Budget Unit: **1700100000** **REGISTRAR OF VOTERS**

Regular

13001	ELECTIONS COORD - SERVICES	2	0	0	0	0	2
13002	ELECTIONS COORD ASST	1	2	0	0	0	3
13004	ELECTIONS TECH III - SERVICES	3	0	0	0	0	3
13005	ELECTIONS TECH II - SERVICES	9	0	0	0	0	9
13007	ELECTIONS ANALYST	1	0	0	0	0	1
13332	CHF DEP REGISTRAR OF VOTERS	2	0	0	0	0	2
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
15833	STOREKEEPER	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
62402	ELECTIONS TECH - OPERATIONS	2	0	0	0	0	2
62940	ELECTIONS TECH II - OPERATIONS	1	0	0	0	0	1
74191	ADMIN SVCS MGR I	1	-1	0	0	0	0
74199	ADMIN SVCS SUPV	1	1	0	0	0	2
74253	ELECTION PRECINCTS MANAGER	0	1	0	0	0	1
74833	REGISTRAR OF VOTERS	1	0	0	0	0	1
74834	ASST REGISTRAR OF VOTERS	1	0	0	0	0	1
77103	GIS SPECIALIST II	2	0	0	0	0	2
77104	GIS ANALYST	1	0	0	0	0	1
86117	IT BUSINESS SYS ANALYST III	0	1	0	0	0	1
86119	IT SUPV BUSINESS SYS ANALYST	1	0	0	0	0	1
86140	IT SUPV DATABASE ADMIN	1	0	0	0	0	1
86153	IT NETWORK ADMIN II	1	0	0	0	0	1
86174	IT SYSTEMS OPERATOR II	1	0	0	0	0	1
	Sum of Regular	35	4	0	0	0	39
Seasonal							
13005	ELECTIONS TECH II - SERVICES	5	0	0	0	1	6
62971	RECORDS & SUPPORT ASSISTANT	1	0	0	0	0	1
86182	USER TECHNICAL SUPPORT	1	0	0	0	0	1
86183	IT USER SUPPORT TECH II	0	0	1	0	-1	0
	Sum of Seasonal	7	0	1	0	0	8
	Total changes for 1700100000	42	4	1	0	0	47

Budget Unit: **1900100000** **EDA ADMINISTRATION**

Regular							
13131	SR HUMAN RESOURCES CLERK	1	0	0	0	0	1
13439	HUMAN RESOURCES CLERK	1	0	0	0	0	1
13491	REAL PROPERTY COORDINATOR	1	-1	0	0	0	0
13865	OFFICE ASSISTANT II	11	-3	-1	0	0	7
13866	OFFICE ASSISTANT III	9	2	0	0	0	11
13923	SECRETARY I	3	0	-1	0	0	2
13924	SECRETARY II	3	3	-1	0	0	5

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
13926	EXECUTIVE ASSISTANT II	2	-1	0	0	0	1
13928	CVEP EXECUTIVE ASSISTANT I	1	-1	0	0	0	0
15812	BUYER II	1	0	0	0	0	1
15826	SUPPORT SERVICES TECHNICIAN	3	-1	-1	0	0	1
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	2	2	0	0	0	4
15916	ACCOUNTING TECHNICIAN II	5	-1	1	0	0	5
62251	MAINTENANCE PAINTER	4	-4	0	0	0	0
62730	BLDG MAINTENANCE WORKER	3	-3	0	0	0	0
74094	CVEP ASST DIR/OUTRCH SPEC, PT	2	-2	0	0	0	0
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74114	ADMIN SVCS ASST	1	-1	0	0	0	0
74125	ADMIN ASSISTANT - CVEP	2	-1	-1	0	0	0
74154	MANAGING DIRECTOR OF EDA	1	0	0	0	0	1
74161	CVEP PRESIDENT & CEO	1	-1	0	0	0	0
74176	CVEP VICE PRESIDENT	1	-1	0	0	0	0
74183	DEVELOPMENT SPECIALIST I	14	-5	-2	0	0	7
74184	DEVELOPMENT SPECIALIST II	19	-6	0	0	0	13
74185	DEVELOPMENT SPECIALIST III	24	-11	-1	0	0	12
74186	SR DEVELOPMENT SPECIALIST	25	-14	0	0	0	11
74196	DEP DIR OF EDA	2	0	0	0	0	2
74199	ADMIN SVCS SUPV	1	0	0	0	0	1
74213	ADMIN SVCS OFFICER	1	-1	0	0	0	0
74221	PRINCIPAL DEVELOPMENT SPEC	6	-2	0	0	0	4
74231	ASST DIR OF EDA	5	0	-1	0	0	4
74242	ASST COUNTY EXEC OFFCR/HR/ED	1	0	0	0	0	1
74297	EDA DEVELOPMENT MANAGER	7	-6	0	0	0	1
74461	EDA MARKETING & INFO OFFICER	1	0	0	0	0	1
74917	REAL PROPERTY AGENT III	1	-1	0	0	0	0
74919	REAL PROPERTY AGENT I	1	-1	0	0	0	0
76608	FACILITIES PROJECT MGR III	1	-1	0	0	0	0
77411	ACCOUNTANT I	3	-1	0	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
77412	ACCOUNTANT II	3	-1	-1	0	0	1
77413	SR ACCOUNTANT	3	0	0	0	0	3
77414	PRINCIPAL ACCOUNTANT	4	-1	-1	0	0	2
77416	SUPV ACCOUNTANT	2	0	-1	0	0	1
77497	FISCAL ANALYST	3	-1	0	0	0	2
77499	FISCAL MANAGER	1	0	0	0	0	1
86101	IT APPS DEVELOPER II	0	1	-1	0	0	0
86138	IT DATABASE ADMIN II	1	0	-1	0	0	0
86143	IT OFFICER I	1	0	0	0	0	1
86155	IT NETWORK ADMIN III	1	0	-1	0	0	0
86165	IT SYSTEMS ADMINISTRATOR III	3	0	0	0	0	3
86183	IT USER SUPPORT TECH II	3	1	0	0	0	4
86185	IT USER SUPPORT TECH III	2	0	0	0	0	2
86187	IT SUPV USER SUPPORT TECH	1	-1	0	0	0	0
86195	IT WEB DEVELOPER II	2	0	0	0	0	2
86197	IT SUPV WEB DEVELOPER	1	0	0	0	0	1
	Sum of Regular	204	-65	-14	0	0	125
Temporary							
13815	PUBLIC SERVICE EMPLOYEE B	5	0	0	0	0	5
	Sum of Temporary	5	0	0	0	0	5
	Total changes for 1900100000	209	-65	-14	0	0	130

Budget Unit: **1900200000** **EDA HUD-CDBG/HOME GRANTS**

Regular							
13865	OFFICE ASSISTANT II	2	-1	0	0	0	1
13866	OFFICE ASSISTANT III	0	1	1	0	0	2
74183	DEVELOPMENT SPECIALIST I	1	-1	0	0	0	0
74184	DEVELOPMENT SPECIALIST II	3	0	0	0	0	3
74185	DEVELOPMENT SPECIALIST III	3	-1	0	0	0	2
74186	SR DEVELOPMENT SPECIALIST	2	0	1	0	0	3
74221	PRINCIPAL DEVELOPMENT SPEC	1	0	0	0	0	1
74297	EDA DEVELOPMENT MANAGER	1	0	0	0	0	1
	Sum of Regular	13	-2	2	0	0	13
	Total changes for 1900200000	13	-2	2	0	0	13

State Controller
County Budget Act
(2010)

COUNTY OF RIVERSIDE
STATE OF CALIFORNIA
SUMMARY OF AUTHORIZED POSITIONS
FOR FISCAL YEAR BEGINNING JULY 1, 2011

County Budget Form
Schedule 20

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit:	**1900300000 EDA WORKFORCE DEVELOPMENT**						
Regular							
13865	OFFICE ASSISTANT II	8	-2	0	0	0	6
13866	OFFICE ASSISTANT III	16	0	3	0	0	19
13923	SECRETARY I	2	0	3	0	0	5
13924	SECRETARY II	0	0	2	0	0	2
13929	EXECUTIVE SECRETARY	1	0	-1	0	0	0
15826	SUPPORT SERVICES TECHNICIAN	2	1	0	0	0	3
15913	SR ACCOUNTING ASST	2	0	0	0	0	2
15915	ACCOUNTING TECHNICIAN I	3	0	0	0	0	3
15916	ACCOUNTING TECHNICIAN II	1	0	0	0	0	1
74183	DEVELOPMENT SPECIALIST I	20	0	-7	0	0	13
74184	DEVELOPMENT SPECIALIST II	32	0	-3	0	0	29
74185	DEVELOPMENT SPECIALIST III	45	-1	-1	0	0	43
74186	SR DEVELOPMENT SPECIALIST	8	1	1	0	0	10
74196	DEP DIR OF EDA	1	0	0	0	0	1
74221	PRINCIPAL DEVELOPMENT SPEC	8	0	0	0	0	8
74231	ASST DIR OF EDA	1	0	0	0	0	1
77411	ACCOUNTANT I	3	0	-1	0	0	2
77412	ACCOUNTANT II	8	1	0	0	0	9
77413	SR ACCOUNTANT	3	0	0	0	0	3
77414	PRINCIPAL ACCOUNTANT	1	0	0	0	0	1
77416	SUPV ACCOUNTANT	3	0	0	0	0	3
77497	FISCAL ANALYST	1	-1	1	0	0	1
77499	FISCAL MANAGER	1	0	0	0	0	1
86138	IT DATABASE ADMIN II	1	0	0	0	0	1
86171	IT SYSTEMS OPERATOR I	1	0	1	0	0	2
86174	IT SYSTEMS OPERATOR II	2	0	0	0	0	2
	Sum of Regular	174	-1	-2	0	0	171
Temporary							
13814	PUBLIC SERVICE EMPLOYEE A	40	0	-25	0	0	15
13815	PUBLIC SERVICE EMPLOYEE B	5	-5	0	0	0	0
13871	TEMPORARY ASST	0	0	4	0	0	4

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Sum of Temporary		45	-5	-21	0	0	19
Total changes for 1900300000		219	-6	-23	0	0	190

Budget Unit: **1900400000** **EDA HOUSING AUTHORITY**

Regular

13491	REAL PROPERTY COORDINATOR	1	-1	0	0	0	0
13865	OFFICE ASSISTANT II	11	0	1	0	0	12
13866	OFFICE ASSISTANT III	2	-1	0	0	0	1
13923	SECRETARY I	1	0	0	0	0	1
15826	SUPPORT SERVICES TECHNICIAN	1	0	0	0	0	1
15911	ACCOUNTING ASSISTANT I	0	0	1	0	0	1
15913	SR ACCOUNTING ASST	2	0	0	0	0	2
15915	ACCOUNTING TECHNICIAN I	3	-1	2	0	0	4
15916	ACCOUNTING TECHNICIAN II	1	0	0	0	0	1
62730	BLDG MAINTENANCE WORKER	2	0	2	0	0	4
62771	BLDG MAINTENANCE SUPERVISOR	1	0	0	0	0	1
66532	HOUSING AUTHORITY MAINT WKR I	1	0	0	0	0	1
66533	HOUSING AUTHORITY MAINT WKR I	6	0	-1	0	0	5
66534	SR HOUSING AUTHORITY MAINT W	2	-1	-1	0	0	0
74183	DEVELOPMENT SPECIALIST I	1	1	0	0	0	2
74184	DEVELOPMENT SPECIALIST II	2	0	0	0	0	2
74185	DEVELOPMENT SPECIALIST III	1	3	0	0	0	4
74186	SR DEVELOPMENT SPECIALIST	7	1	0	0	0	8
74196	DEP DIR OF EDA	0	0	1	0	0	1
74199	ADMIN SVCS SUPV	1	0	0	0	0	1
74221	PRINCIPAL DEVELOPMENT SPEC	4	0	0	0	0	4
74231	ASST DIR OF EDA	1	0	0	0	0	1
74917	REAL PROPERTY AGENT III	1	-1	0	0	0	0
74918	REAL PROPERTY AGENT II	1	-1	0	0	0	0
74919	REAL PROPERTY AGENT I	1	-1	0	0	0	0
74921	SR REAL PROPERTY AGENT	2	-2	0	0	0	0
77411	ACCOUNTANT I	0	0	1	0	0	1
77413	SR ACCOUNTANT	2	0	0	0	0	2
77414	PRINCIPAL ACCOUNTANT	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
77416	SUPV ACCOUNTANT	0	0	1	0	0	1
77499	FISCAL MANAGER	1	0	0	0	0	1
86164	IT SYSTEMS ADMINISTRATOR II	1	0	-1	0	0	0
86165	IT SYSTEMS ADMINISTRATOR III	1	0	0	0	0	1
86174	IT SYSTEMS OPERATOR II	1	0	1	0	0	2
97460	HOUSING PROGRAM ASSISTANT I	12	0	1	0	0	13
97461	HOUSING PROGRAM ASSISTANT II	2	0	-2	0	0	0
97462	HOUSING SPECIALIST I	36	2	8	0	0	46
97463	HOUSING SPECIALIST II	16	0	2	0	0	18
97464	HOUSING SPECIALIST III	7	0	1	0	0	8
97465	PUBLIC HOUSING PROPERTY MGR	5	0	0	0	0	5
	Sum of Regular	141	-2	17	0	0	156
Seasonal							
97461	HOUSING PROGRAM ASSISTANT II	0	0	2	0	0	2
	Sum of Seasonal	0	0	2	0	0	2
	Total changes for 1900400000	141	-2	19	0	0	158

Budget Unit: **1900700000** **COUNTY FREE LIBRARY**

Regular							
13923	SECRETARY I	0	0	1	0	0	1
74137	LIBRARY SERVICES ADMINISTRATO	0	1	0	0	0	1
74298	DEP DIR - CULTURAL SERVICES	0	1	0	0	0	1
	Sum of Regular	0	2	1	0	0	3
	Total changes for 1900700000	0	2	1	0	0	3

Budget Unit: **1910700000** **COUNTY AIRPORTS**

Regular							
13866	OFFICE ASSISTANT III	1	0	0	0	0	1
62101	AIRPORT OPS & MAINT WORKER II	4	0	0	0	0	4
62105	AIRPORT OPS & MAINT SUPERVISO	1	0	0	0	0	1
74184	DEVELOPMENT SPECIALIST II	1	0	0	0	0	1
74185	DEVELOPMENT SPECIALIST III	1	0	0	0	0	1
74186	SR DEVELOPMENT SPECIALIST	2	-1	0	0	0	1
74221	PRINCIPAL DEVELOPMENT SPEC	0	0	1	0	0	1
74920	SUPV REAL PROPERTY AGENT	1	-1	0	0	0	0

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Sum of Regular		11	-2	1	0	0	10
Total changes for 1910700000		11	-2	1	0	0	10

Budget Unit: **1920100000** **FAIR AND NAT'L DATE FESTIVAL**

Regular							
13866	OFFICE ASSISTANT III	2	0	0	0	0	2
15911	ACCOUNTING ASSISTANT I	1	0	0	0	0	1
62107	FAIRGROUND OPS & MAINT WKR	2	0	0	0	0	2
62108	LEAD FAIRGRND OPS & MAINT WRK	1	0	0	0	0	1
74183	DEVELOPMENT SPECIALIST I	1	0	0	0	0	1
74184	DEVELOPMENT SPECIALIST II	0	1	-1	0	0	0
74185	DEVELOPMENT SPECIALIST III	1	0	0	0	0	1
74221	PRINCIPAL DEVELOPMENT SPEC	1	0	0	0	0	1
74281	SATELLITE FACILITIES COORD	1	0	0	0	0	1
	Sum of Regular	10	1	-1	0	0	10
Temporary							
13898	COUNTY TEMPORARY	9	0	2	0	0	11
	Sum of Temporary	9	0	2	0	0	11
	Total changes for 1920100000	19	1	1	0	0	21

Budget Unit: **1930100000** **EDWARD DEAN MUSEUM**

Regular							
13443	MUSEUM ASSISTANT	2	0	0	0	0	2
	Sum of Regular	2	0	0	0	0	2
Temporary							
13814	PUBLIC SERVICE EMPLOYEE A	1	0	0	0	0	1
	Sum of Temporary	1	0	0	0	0	1
	Total changes for 1930100000	3	0	0	0	0	3

Budget Unit: **2200100000** **DISTRICT ATTORNEY**

Regular							
13131	SR HUMAN RESOURCES CLERK	5	0	-1	0	0	4
13469	EMPLOYEE BENEFITS & REC SUPV	1	0	0	0	0	1
13866	OFFICE ASSISTANT III	11	0	-1	0	0	10
13917	STAFF WRITER	1	0	-1	0	0	0

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13918	D.A. PUBLIC SAFETY DISPATCHER	2	0	0	0	0	2
13919	D.A. SECRETARY	15	0	-2	0	0	13
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
13931	LEGAL SUPPORT ASST II	132	0	-17	17	0	132
13932	SR LEGAL SUPPORT ASST	23	-2	-2	2	0	21
13940	LAW OFFICE SUPERVISOR I	6	1	-1	1	0	7
13941	LAW OFFICE SUPERVISOR II	3	1	0	0	0	4
13997	D.A. LEGISLATIVE ADMINISTRATOR	1	0	-1	0	0	0
15811	BUYER I	1	0	0	0	0	1
15812	BUYER II	0	0	0	1	0	1
15831	STOCK CLERK	5	0	-1	0	0	4
15833	STOREKEEPER	1	0	0	0	0	1
15911	ACCOUNTING ASSISTANT I	2	0	0	0	0	2
15912	ACCOUNTING ASSISTANT II	4	0	-1	0	0	3
15913	SR ACCOUNTING ASST	2	0	0	0	0	2
15915	ACCOUNTING TECHNICIAN I	4	0	0	0	0	4
15916	ACCOUNTING TECHNICIAN II	3	0	0	0	0	3
37531	FORENSIC TECHNICIAN II	7	0	0	0	0	7
37532	SUPV FORENSIC TECHNICIAN	1	0	0	0	0	1
37571	INVESTIGATIVE TECH II	37	0	-2	0	0	35
37572	SR INVESTIGATIVE TECHNICIAN	5	0	0	0	0	5
37573	SUPV INVESTIGATIVE TECH	1	0	0	0	0	1
37664	SR D.A. INVESTIGATOR	46	2	-7	0	0	41
37666	SR D.A. INVESTIGATOR B	74	0	-7	7	0	74
37667	D.A. BUREAU COMMANDER	8	0	-2	1	0	7
37669	D.A. BUREAU COMMANDER (B)	5	0	-2	1	0	4
37670	ASST CHF D.A. INVESTIGATOR	3	0	0	0	0	3
37676	CHF D.A. INVESTIGATOR	1	0	0	0	0	1
37878	D.A. PROGRAM MANAGER	1	-1	0	0	0	0
74106	ADMIN SVCS ANALYST II	2	0	0	0	0	2
74121	ADMIN ANALYST	0	1	0	0	0	1
74127	SR ADMINISTRATIVE ANALYST	1	0	0	0	0	1
74199	ADMIN SVCS SUPV	3	-2	-1	0	0	0

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74234	SR PUBLIC INFO SPECIALIST	0	2	-1	1	0	2
74542	D.A.	1	0	0	0	0	1
74543	D.A. INFORMATION OFFICER	3	-3	0	0	0	0
74545	D.A. EXECUTIVE OFFICER	1	0	-1	0	0	0
74546	DEP DIR, D.A. ADMINISTRATION	1	0	0	0	0	1
74740	DEPT H.R. COORDINATOR	2	0	0	0	0	2
77412	ACCOUNTANT II	2	0	0	1	0	3
77413	SR ACCOUNTANT	2	0	-1	0	0	1
77414	PRINCIPAL ACCOUNTANT	1	0	0	0	0	1
77459	CRIME ANALYST	2	0	0	0	0	2
78506	PARALEGAL II	29	0	-3	3	0	29
78508	PARALEGAL I	8	0	-1	1	0	8
78528	CHF ASST DISTRICT ATTORNEY	1	0	-1	1	0	1
78533	DEP DISTRICT ATTORNEY III	62	-4	-3	3	0	58
78534	DEP DISTRICT ATTORNEY IV	176	-38	-3	2	0	137
78535	CHF DEP DISTRICT ATTORNEY	8	0	-3	3	0	8
78536	SUPV DEP DISTRICT ATTORNEY	21	2	-4	4	0	23
78538	DEP DISTRICT ATTORNEY IV-S	0	27	-8	8	0	27
78539	ASST DISTRICT ATTORNEY	4	0	-1	1	0	4
78543	DEP DISTRICT ATTORNEY IV-T	0	24	-4	4	0	24
79779	VICTIM SERVICES DIRECTOR	1	0	0	0	0	1
79783	SR VICTIM/WITNESS CLAIMS TECH	2	0	0	0	0	2
79784	SUPV VICTIM/WITNESS CLAIM TEC	1	0	0	0	0	1
79786	VICTIM/WITNESS CLAIMS TECH	6	0	0	0	0	6
79787	VICTIM SERVICES ADVOCATE I	18	0	-3	3	0	18
79788	VICTIM SERVICES ADVOCATE II	31	1	-2	2	0	32
79790	VICTIM SERVICES ASST DIRECTOR	3	0	-2	1	0	2
79792	VICTIM SERVICES SUPERVISOR	6	0	0	0	0	6
79881	TRAINING OFFICER	3	0	-1	1	0	3
86101	IT APPS DEVELOPER II	1	0	-1	1	0	1
86139	IT DATABASE ADMIN III	2	0	0	0	0	2
86141	IT OFFICER II	0	0	1	0	0	1
86155	IT NETWORK ADMIN III	3	0	0	0	0	3

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
86183	IT USER SUPPORT TECH II	1	0	0	0	0	1
86185	IT USER SUPPORT TECH III	4	0	0	0	0	4
86187	IT SUPV USER SUPPORT TECH	1	0	0	0	0	1
97325	AUDIO-VIDEO TECHNICIAN	2	0	0	0	0	2
97326	SR AUDIO-VIDEO TECHNICIAN	1	0	0	0	0	1
98554	IT FORENSICS EXAMINER II	3	0	-1	0	0	2
98555	IT FORENSICS EXAMINER III	1	0	-1	1	0	1
	Sum of Regular	832	11	-93	71	0	821
	Total changes for 2200100000	832	11	-93	71	0	821

Budget Unit: **2300100000** **CHILD SUPPORT SERVICES**

Regular

13131	SR HUMAN RESOURCES CLERK	1	0	0	0	0	1
13439	HUMAN RESOURCES CLERK	2	-1	0	0	0	1
13445	MAIL CLERK	2	0	0	0	0	2
13609	SUPV PROGRAM SPECIALIST	3	1	-1	0	0	3
13865	OFFICE ASSISTANT II	52	-2	0	0	0	50
13866	OFFICE ASSISTANT III	3	0	0	0	0	3
13867	SUPV OFFICE ASSISTANT I	1	0	0	0	0	1
13923	SECRETARY I	3	-1	1	0	0	3
13924	SECRETARY II	2	0	0	0	0	2
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
13930	LEGAL SUPPORT ASST I	4	0	0	0	0	4
13931	LEGAL SUPPORT ASST II	19	-1	1	0	0	19
13932	SR LEGAL SUPPORT ASST	2	0	0	0	0	2
13940	LAW OFFICE SUPERVISOR I	3	0	0	0	0	3
13941	LAW OFFICE SUPERVISOR II	1	0	0	0	0	1
15811	BUYER I	1	0	0	0	0	1
15833	STOREKEEPER	0	1	-1	0	0	0
15911	ACCOUNTING ASSISTANT I	7	-2	0	0	0	5
15912	ACCOUNTING ASSISTANT II	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	1	-1	0	0	0	0
15914	SUPV ACCOUNTING ASSISTANT	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
15916	ACCOUNTING TECHNICIAN II	1	-1	0	0	0	0
15917	SUPV ACCOUNTING TECHNICIAN	1	0	0	0	0	1
37489	DIR OF CHILD SUPPORT SERVICES	1	0	0	0	0	1
37490	CHF DEP CHILD SUPPORT ATTORN	1	0	0	0	0	1
37492	DEP CHILD SUPP ATTORNEY IV-S	2	0	0	0	0	2
37493	DEP CHILD SUPP ATTORNEY IV	5	0	0	0	0	5
37494	DEP CHILD SUPP ATTORNEY III	5	-1	0	0	0	4
37549	CHILD SUPPORT INTERVIEWER	56	-3	0	0	0	53
37551	CHILD SUPPORT SPECIALIST	123	1	0	0	0	124
37552	SR CHILD SUPPORT SPECIALIST	20	0	0	0	0	20
37554	CHILD SUPPORT SVCS REG MGR	3	1	-1	0	0	3
37556	CHILD SUPPORT SVCS SUPERVISO	13	0	0	0	0	13
37557	CHILD SUPPORT SVCS PROGRAM	1	0	0	0	0	1
37571	INVESTIGATIVE TECH II	2	0	0	0	0	2
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74113	ADMIN SVCS MGR II	1	0	0	0	0	1
74127	SR ADMINISTRATIVE ANALYST	1	0	0	0	0	1
74199	ADMIN SVCS SUPV	1	0	0	0	0	1
74740	DEPT H.R. COORDINATOR	1	0	0	0	0	1
77225	TECHNICAL SUPPORT MANAGER	1	0	0	0	0	1
78506	PARALEGAL II	2	0	0	0	0	2
78508	PARALEGAL I	1	-1	0	0	0	0
79819	PROGRAM SPECIALIST II	5	-1	0	0	0	4
79861	STAFF DEVELOPMENT OFFICER	1	0	0	0	0	1
86103	IT APPS DEVELOPER III	2	0	0	0	0	2
86117	IT BUSINESS SYS ANALYST III	2	0	0	0	0	2
86119	IT SUPV BUSINESS SYS ANALYST	1	0	0	0	0	1
86153	IT NETWORK ADMIN II	1	0	0	0	0	1
86164	IT SYSTEMS ADMINISTRATOR II	0	1	0	0	0	1
86183	IT USER SUPPORT TECH II	2	0	0	0	0	2
86185	IT USER SUPPORT TECH III	4	-1	1	0	0	4
	Sum of Regular	372	-11	0	0	0	361
Temporary							
74180	PROF STUDENT INTERN	3	0	0	0	0	3

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Sum of Temporary		3	0	0	0	0	3
Total changes for 2300100000		375	-11	0	0	0	364

Budget Unit: **2400100000** **PUBLIC DEFENDER**

Regular

13131	SR HUMAN RESOURCES CLERK	1	-1	0	0	0	0
13439	HUMAN RESOURCES CLERK	1	0	0	0	0	1
13865	OFFICE ASSISTANT II	3	0	0	0	0	3
13866	OFFICE ASSISTANT III	1	0	0	0	0	1
13923	SECRETARY I	2	0	0	0	0	2
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
13930	LEGAL SUPPORT ASST I	8	0	0	0	0	8
13931	LEGAL SUPPORT ASST II	26	-2	-4	0	1	21
13932	SR LEGAL SUPPORT ASST	7	0	0	0	0	7
13940	LAW OFFICE SUPERVISOR I	4	0	0	0	0	4
15833	STOREKEEPER	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
15916	ACCOUNTING TECHNICIAN II	1	0	0	0	0	1
37563	PUBLIC DEFENDER INVEST II	20	-2	0	0	0	18
37565	PUBLIC DEFENDER INVEST III	20	0	0	0	0	20
37567	SUPV PUBLIC DEFENDER INVEST	4	0	0	0	0	4
37569	CHF PUBLIC DEFENDER INVESTIGT	1	0	0	0	0	1
37571	INVESTIGATIVE TECH II	4	0	-4	0	2	2
62971	RECORDS & SUPPORT ASSISTANT	1	0	-1	0	1	1
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74113	ADMIN SVCS MGR II	1	0	0	0	0	1
74245	PUBLIC DEFENDER	1	0	0	0	0	1
74740	DEPT H.R. COORDINATOR	1	0	-1	0	0	0
78506	PARALEGAL II	14	-3	-11	0	0	0
78508	PARALEGAL I	16	0	-15	0	0	1
78553	DEP PUBLIC DEFENDER III	45	0	0	0	0	45
78554	DEP PUBLIC DEFENDER IV	86	-2	0	0	0	84
78555	SUPV DEP PUBLIC DEFENDER	14	0	-1	0	0	13
78556	DEP PUBLIC DEFENDER V	9	0	0	0	0	9

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
78557	ASST PUBLIC DEFENDER	4	0	0	0	0	4
79875	SOCIAL SERVICES WORKER III	1	0	0	0	0	1
79878	SOCIAL SERVICES WORKER V	1	0	0	0	0	1
86164	IT SYSTEMS ADMINISTRATOR II	1	0	-1	0	0	0
86165	IT SYSTEMS ADMINISTRATOR III	1	0	0	0	0	1
86167	IT SUPV SYSTEMS ADMINISTRATOR	1	0	0	0	0	1
86183	IT USER SUPPORT TECH II	4	0	-2	0	0	2
	Sum of Regular	308	-10	-40	0	4	262
	Total changes for 2400100000	308	-10	-40	0	4	262

Budget Unit: **2401300000** **ALTERNATE PUBLIC DEFENDER**

Regular

13865	OFFICE ASSISTANT II	1	0	0	0	0	1
13931	LEGAL SUPPORT ASST II	2	0	0	0	0	2
37563	PUBLIC DEFENDER INVEST II	5	-3	0	0	0	2
37565	PUBLIC DEFENDER INVEST III	1	3	0	0	0	4
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
78506	PARALEGAL II	3	0	0	0	0	3
78554	DEP PUBLIC DEFENDER IV	4	-1	0	0	0	3
78556	DEP PUBLIC DEFENDER V	2	1	0	0	0	3
78557	ASST PUBLIC DEFENDER	1	0	0	0	0	1
	Sum of Regular	20	0	0	0	0	20
	Total changes for 2401300000	20	0	0	0	0	20

Budget Unit: **2500100000** **SHERIFF ADMINISTRATION**

Regular

13865	OFFICE ASSISTANT II	0	1	0	0	0	1
13866	OFFICE ASSISTANT III	4	0	0	0	0	4
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
37576	SHERIFF CORPORAL	0	1	-1	2	0	2
37582	CHF DEP SHERIFF	7	1	-2	2	0	8
37602	DEP SHERIFF	4	1	-1	1	0	5
37605	ASST SHERIFF	3	1	-2	2	0	4

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
37608	SHERIFF INVESTIGATOR	12	-12	0	1	0	1
37611	SHERIFF'S SERGEANT	6	1	-1	1	0	7
37614	SHERIFF'S LIEUTENANT	3	0	0	0	0	3
37617	SHERIFF'S CAPTAIN	1	0	0	0	0	1
37624	CHF DEP DIR, SHERIFF'S ADMIN	1	0	0	0	0	1
37698	SHERIFF'S LEAD INV III B	0	13	-1	1	0	13
52218	CORRECTIONAL CHIEF DEPUTY	0	1	0	0	0	1
52262	SHERIFF SERVICE OFFICER II	2	0	-2	1	0	1
52264	COMMUNITY SERVICES OFFICER I	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74233	PUBLIC INFORMATION SPECIALIST	2	0	-2	0	0	0
74234	SR PUBLIC INFO SPECIALIST	1	0	-1	0	0	0
74541	UNDERSHERIFF	1	0	0	0	0	1
74544	SHERIFF/CORONER/PUBLIC ADMIN	1	0	0	0	0	1
74548	SHERIFF'S LEGISLATIVE ASST	1	0	0	0	0	1
79735	CHAPLAIN	1	0	0	0	0	1
79837	RESEARCH SPECIALIST I	0	1	-1	1	0	1
92701	GRAPHIC ARTS ILLUSTRATOR	1	0	-1	0	0	0
92752	MEDIA PRODUCTION SPECIALIST	1	0	-1	0	0	0
	Sum of Regular	56	9	-16	12	0	61
Temporary							
13865	OFFICE ASSISTANT II	0	1	-1	1	0	1
74180	PROF STUDENT INTERN	0	1	-1	1	0	1
	Sum of Temporary	0	2	-2	2	0	2
	Total changes for 2500100000	56	11	-18	14	0	63

Budget Unit: **2500200000** **SHERIFF SUPPORT**

Regular							
13131	SR HUMAN RESOURCES CLERK	2	1	-1	1	0	3
13469	EMPLOYEE BENEFITS & REC SUPV	1	0	0	0	0	1
13473	SHERIFF COMMUNICATIONS MANA	2	0	0	0	0	2
13475	SHERIFF RECORDS MANAGER	1	0	0	0	0	1
13476	SHERIFF RECORDS/WARRANTS SU	6	0	0	0	0	6
13511	MSAG COORDINATOR	2	0	0	0	0	2

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13518	ARCHIVES & RECORDS TECH	1	0	-1	1	0	1
13519	SR ARCHIVES & RECORDS TECH	1	0	0	0	0	1
13789	SR SHERIFF REC/WARRANTS ASST	4	0	0	0	0	4
13791	SHERIFF REC/WARRANTS ASST II	15	1	-2	2	0	16
13792	SHERIFF REC/WARRANTS ASST III	2	2	-2	2	0	4
13797	SHERIFF 911 COMM OFFICER II	127	20	-31	31	0	147
13798	SR SHERIFF 911 COMM OFFICER	19	0	-1	1	0	19
13802	TELEPHONE RPT UNIT OFFICER II	10	0	-1	1	0	10
13809	SHERIFF COMMUNICATIONS SUPV	19	0	-1	1	0	19
13865	OFFICE ASSISTANT II	6	1	-5	5	0	7
13866	OFFICE ASSISTANT III	13	0	-3	3	0	13
15912	ACCOUNTING ASSISTANT II	4	2	0	0	0	6
15913	SR ACCOUNTING ASST	12	3	-3	3	0	15
15915	ACCOUNTING TECHNICIAN I	7	1	-1	1	0	8
15916	ACCOUNTING TECHNICIAN II	6	3	-3	3	0	9
15917	SUPV ACCOUNTING TECHNICIAN	1	-1	0	0	0	0
37534	CRIMINAL INFORMATION TECH (D)	1	0	0	0	0	1
37570	INVESTIGATIVE TECH I	3	0	-1	1	0	3
37571	INVESTIGATIVE TECH II	1	1	0	0	0	2
37576	SHERIFF CORPORAL	4	-1	-2	2	0	3
37602	DEP SHERIFF	11	4	-10	10	0	15
37608	SHERIFF INVESTIGATOR	10	-10	0	0	0	0
37611	SHERIFF'S SERGEANT	7	0	-2	2	0	7
37614	SHERIFF'S LIEUTENANT	4	0	0	0	0	4
37617	SHERIFF'S CAPTAIN	1	0	0	0	0	1
37698	SHERIFF'S LEAD INV III B	0	16	-12	12	0	16
52211	CORRECTIONAL DEPUTY II	3	1	-4	4	0	4
52212	CORRECTIONAL CORPORAL	1	0	-1	1	0	1
52213	CORRECTIONAL SERGEANT	1	0	0	0	0	1
52262	SHERIFF SERVICE OFFICER II	6	2	-2	2	0	8
52264	COMMUNITY SERVICES OFFICER I	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	3	1	-1	1	0	4
74113	ADMIN SVCS MGR II	2	-1	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74191	ADMIN SVCS MGR I	0	1	-1	1	0	1
74199	ADMIN SVCS SUPV	2	0	0	0	0	2
74213	ADMIN SVCS OFFICER	1	0	0	0	0	1
74273	ADMIN SVCS MGR III	1	0	0	0	0	1
74287	DEP DIR, SHERIFF'S ADMIN	0	1	-1	1	0	1
74293	CONTRACTS & GRANTS ANALYST	1	0	0	0	0	1
74740	DEPT H.R. COORDINATOR	1	1	0	0	0	2
77412	ACCOUNTANT II	2	0	-1	1	0	2
77413	SR ACCOUNTANT	1	3	-1	1	0	4
77414	PRINCIPAL ACCOUNTANT	1	0	0	0	0	1
77416	SUPV ACCOUNTANT	1	2	-1	1	0	3
77418	SYSTEMS ACCOUNTANT I	0	1	0	0	0	1
86103	IT APPS DEVELOPER III	1	1	-1	1	0	2
86115	IT BUSINESS SYS ANALYST II	2	3	-1	1	0	5
86117	IT BUSINESS SYS ANALYST III	6	0	0	0	0	6
86119	IT SUPV BUSINESS SYS ANALYST	1	0	0	0	0	1
86139	IT DATABASE ADMIN III	1	0	-1	1	0	1
86143	IT OFFICER I	1	0	0	0	0	1
86144	IT OFFICER III	1	0	-1	1	0	1
86164	IT SYSTEMS ADMINISTRATOR II	6	2	-2	2	0	8
86165	IT SYSTEMS ADMINISTRATOR III	6	0	0	0	0	6
86167	IT SUPV SYSTEMS ADMINISTRATOR	2	0	0	0	0	2
86183	IT USER SUPPORT TECH II	3	1	-2	2	0	4
86185	IT USER SUPPORT TECH III	1	0	0	0	0	1
86195	IT WEB DEVELOPER II	1	0	0	0	0	1
	Sum of Regular	363	62	-103	103	0	425
Temporary							
13511	MSAG COORDINATOR	0	1	-1	1	0	1
13898	COUNTY TEMPORARY	1	21	-22	22	0	22
13899	COUNTY TEMPORARY - SR	0	2	-2	2	0	2
74118	STUDENT AIDE II	0	1	-1	1	0	1
74180	PROF STUDENT INTERN	0	1	-1	1	0	1
	Sum of Temporary	1	26	-27	27	0	27

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Total changes for 2500200000		364	88	-130	130	0	452

Budget Unit: **2500300000 SHERIFF PATROL**

Regular

13471	CRIME ANALYST SUPERVISOR	1	0	0	0	0	1
13797	SHERIFF 911 COMM OFFICER II	6	0	-1	1	0	6
13798	SR SHERIFF 911 COMM OFFICER	1	0	0	0	0	1
13809	SHERIFF COMMUNICATIONS SUPV	1	0	0	0	0	1
13865	OFFICE ASSISTANT II	68	7	-17	17	0	75
13866	OFFICE ASSISTANT III	30	1	-1	1	0	31
13867	SUPV OFFICE ASSISTANT I	2	0	0	0	0	2
13868	SUPV OFFICE ASSISTANT II	10	0	-1	1	0	10
15912	ACCOUNTING ASSISTANT II	10	0	0	0	0	10
15913	SR ACCOUNTING ASST	9	1	0	0	0	10
15915	ACCOUNTING TECHNICIAN I	11	2	0	1	0	14
15916	ACCOUNTING TECHNICIAN II	1	1	-1	0	0	1
15917	SUPV ACCOUNTING TECHNICIAN	0	1	8	-6	0	3
37528	DOCUMENTS EXAMINER	1	0	0	0	0	1
37531	FORENSIC TECHNICIAN II	20	13	-14	14	0	33
37532	SUPV FORENSIC TECHNICIAN	2	1	-1	1	0	3
37576	SHERIFF CORPORAL	90	5	-15	15	0	95
37602	DEP SHERIFF	991	31	-294	292	0	1020
37608	SHERIFF INVESTIGATOR	181	-181	0	0	0	0
37611	SHERIFF'S SERGEANT	177	14	-16	16	0	191
37614	SHERIFF'S LIEUTENANT	46	3	-6	6	0	49
37617	SHERIFF'S CAPTAIN	13	0	0	0	0	13
37698	SHERIFF'S LEAD INV III B	0	216	-47	47	0	216
52262	SHERIFF SERVICE OFFICER II	37	6	-10	10	0	43
52264	COMMUNITY SERVICES OFFICER I	17	0	0	0	0	17
52265	COMMUNITY SERVICES OFFICER II	120	1	-12	12	0	121
66301	AIRCRAFT MECHANIC	3	2	-3	3	0	5
66302	SR AIRCRAFT MECHANIC	1	0	0	0	0	1
74113	ADMIN SVCS MGR II	0	1	0	0	0	1
77416	SUPV ACCOUNTANT	0	1	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
77459	CRIME ANALYST	17	1	-1	1	0	18
77460	SR CRIME ANALYST	2	0	0	0	0	2
92741	FORENSIC PHOTO LAB TECHNICIA	1	0	-1	1	0	1
	Sum of Regular	1,869	127	-433	433	0	1,996
Temporary							
13865	OFFICE ASSISTANT II	0	1	0	0	0	1
13898	COUNTY TEMPORARY	0	1	-1	1	0	1
13899	COUNTY TEMPORARY - SR	2	5	-7	7	0	7
74180	PROF STUDENT INTERN	0	2	-2	2	0	2
	Sum of Temporary	2	9	-10	10	0	11
	Total changes for 2500300000	1,871	136	-443	443	0	2,007

Budget Unit: **2500400000** **SHERIFF CORRECTION**

	Regular						
13818	SHERIFF CORRECTIONS ASST I	61	13	-16	16	0	74
13819	SHERIFF CORRECTIONS ASST II	12	2	0	0	0	14
13822	SUPV SHERIFF CORRECTIONS ASS	4	1	0	0	0	5
13865	OFFICE ASSISTANT II	3	4	-5	5	0	7
13866	OFFICE ASSISTANT III	3	1	0	0	0	4
13867	SUPV OFFICE ASSISTANT I	1	0	0	0	0	1
13868	SUPV OFFICE ASSISTANT II	1	0	0	0	0	1
15831	STOCK CLERK	0	2	0	0	0	2
15833	STOREKEEPER	2	1	0	0	0	3
15912	ACCOUNTING ASSISTANT II	1	1	-1	1	0	2
15913	SR ACCOUNTING ASST	5	4	-2	2	0	9
15915	ACCOUNTING TECHNICIAN I	5	0	0	0	0	5
15916	ACCOUNTING TECHNICIAN II	1	1	0	0	0	2
15917	SUPV ACCOUNTING TECHNICIAN	1	0	0	0	0	1
37576	SHERIFF CORPORAL	4	5	-1	1	0	9
37602	DEP SHERIFF	326	10	-81	81	0	336
37608	SHERIFF INVESTIGATOR	3	-3	0	0	0	0
37611	SHERIFF'S SERGEANT	46	8	-4	4	0	54
37614	SHERIFF'S LIEUTENANT	13	3	0	0	0	16
37617	SHERIFF'S CAPTAIN	4	0	-1	1	0	4

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
37698	SHERIFF'S LEAD INV III B	0	5	-1	1	0	5
52211	CORRECTIONAL DEPUTY II	696	31	-233	233	0	727
52212	CORRECTIONAL CORPORAL	103	11	-32	32	0	114
52213	CORRECTIONAL SERGEANT	54	4	-14	14	0	58
52214	CORRECTIONAL LIEUTENANT	11	0	-2	2	0	11
52215	CORRECTIONAL CAPTAIN	1	0	0	0	0	1
52262	SHERIFF SERVICE OFFICER II	5	1	-1	1	0	6
54402	CORRECTIONAL BAKER	0	1	-1	1	0	1
54420	CORRECTIONAL COOK	23	14	-8	8	0	37
54422	CORRECTIONAL FOOD SVCS SUPV	9	6	-6	6	0	15
54453	CORRECTIONAL SR FOOD SVC WR	25	16	-6	6	0	41
54475	FOOD SVCS MGR-ADULT DETENTIO	2	0	0	0	0	2
54610	LAUNDRY WORKER - ADULT DET	4	3	-1	1	0	7
54640	LAUNDRY MGR - ADULT DETENTIO	0	1	-1	1	0	1
62270	MAINTENANCE PLUMBER-ADULT D	1	-1	0	0	0	0
62711	AIR CONDITIONING MECHANIC	1	-1	0	0	0	0
62739	BLDG MAINT MECHANIC-ADULT DE	6	-4	0	0	0	2
66419	BLDG & MAINTENANCE SUPER-COR	1	0	-1	1	0	1
74113	ADMIN SVCS MGR II	2	0	0	0	0	2
74199	ADMIN SVCS SUPV	2	0	0	0	0	2
77412	ACCOUNTANT II	1	0	-1	1	0	1
77413	SR ACCOUNTANT	0	3	0	0	0	3
77414	PRINCIPAL ACCOUNTANT	1	0	0	0	0	1
77459	CRIME ANALYST	1	0	0	0	0	1
79730	SUPV CORRECTIONAL COUNSELOR	1	0	0	0	0	1
79731	CORRECTIONAL COUNSELOR	3	3	-4	4	0	6
79735	CHAPLAIN	1	2	0	0	0	3
	Sum of Regular	1,450	148	-423	423	0	1,598
Temporary							
13865	OFFICE ASSISTANT II	0	1	0	0	0	1
13899	COUNTY TEMPORARY - SR	0	3	-3	3	0	3
	Sum of Temporary	0	4	-3	3	0	4
	Total changes for 2500400000	1,450	152	-426	426	0	1,602

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit:	**2500500000 SHERIFF COURT SERVICES**						
Regular							
13811	SHERIFF COURT SVCS ASST II	14	0	0	0	0	14
13812	SHERIFF COURT SVCS ASST III	7	0	0	0	0	7
13813	SUPV SHERIFF COURT SVCS ASST	3	0	0	0	0	3
13824	SHERIFF COURT SVCS ANALYST	1	0	0	0	0	1
15912	ACCOUNTING ASSISTANT II	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
15916	ACCOUNTING TECHNICIAN II	0	1	0	0	0	1
37571	INVESTIGATIVE TECH II	2	3	-2	2	0	5
37576	SHERIFF CORPORAL	16	0	-1	1	0	16
37602	DEP SHERIFF	125	3	0	0	0	128
37611	SHERIFF'S SERGEANT	9	0	0	0	0	9
37614	SHERIFF'S LIEUTENANT	3	0	0	0	0	3
37617	SHERIFF'S CAPTAIN	2	0	-1	1	0	2
52211	CORRECTIONAL DEPUTY II	1	0	0	0	0	1
52212	CORRECTIONAL CORPORAL	2	0	-2	2	0	2
52262	SHERIFF SERVICE OFFICER II	0	1	-1	1	0	1
52265	COMMUNITY SERVICES OFFICER II	1	0	0	0	0	1
74191	ADMIN SVCS MGR I	0	0	1	0	0	1
77412	ACCOUNTANT II	0	1	-1	1	0	1
77413	SR ACCOUNTANT	1	-1	1	-1	0	0
	Sum of Regular	190	8	-6	7	0	199
Temporary							
13899	COUNTY TEMPORARY - SR	9	2	-11	11	0	11
	Sum of Temporary	9	2	-11	11	0	11
	Total changes for 2500500000	199	10	-17	18	0	210
Budget Unit:	**2500600000 CAC SECURITY**						
Regular							
37602	DEP SHERIFF	2	0	-2	2	0	2
37611	SHERIFF'S SERGEANT	1	0	-1	2	0	2
	Sum of Regular	3	0	-3	4	0	4

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Total changes for 2500600000		3	0	-3	4	0	4

Budget Unit: **2500700000** **BEN CLARK TRAINING CENTER**

Regular

13865	OFFICE ASSISTANT II	5	2	-1	1	0	7
13866	OFFICE ASSISTANT III	5	6	-7	7	0	11
13867	SUPV OFFICE ASSISTANT I	1	0	0	0	0	1
15833	STOREKEEPER	2	2	-2	2	0	4
15913	SR ACCOUNTING ASST	1	2	-2	2	0	3
15915	ACCOUNTING TECHNICIAN I	3	0	0	0	0	3
37576	SHERIFF CORPORAL	3	6	-7	7	0	9
37602	DEP SHERIFF	9	10	-11	11	0	19
37608	SHERIFF INVESTIGATOR	2	-2	0	0	0	0
37611	SHERIFF'S SERGEANT	8	1	-3	3	0	9
37614	SHERIFF'S LIEUTENANT	3	1	-1	1	0	4
37617	SHERIFF'S CAPTAIN	1	0	0	0	0	1
37698	SHERIFF'S LEAD INV III B	0	2	-1	1	0	2
52211	CORRECTIONAL DEPUTY II	3	0	-2	2	0	3
52212	CORRECTIONAL CORPORAL	2	0	0	0	0	2
52213	CORRECTIONAL SERGEANT	2	0	0	0	0	2
52262	SHERIFF SERVICE OFFICER II	2	2	0	2	0	6
52263	ARMORER/RANGEMASTER	2	0	0	0	0	2
62142	GROUNDS CREW LEAD WORKER	0	1	-1	1	0	1
62171	GROUNDS WORKER	0	1	-1	1	0	1
62221	MAINTENANCE CARPENTER	1	0	0	0	0	1
74113	ADMIN SVCS MGR II	1	0	0	0	0	1
74233	PUBLIC INFORMATION SPECIALIST	0	0	1	1	0	2
74234	SR PUBLIC INFO SPECIALIST	0	0	1	0	0	1
77416	SUPV ACCOUNTANT	1	0	0	0	0	1
79785	VOLUNTEER SVCS PROGRAM MGR	0	1	0	0	0	1
86164	IT SYSTEMS ADMINISTRATOR II	0	1	-1	1	0	1
86185	IT USER SUPPORT TECH III	1	0	0	0	0	1
92701	GRAPHIC ARTS ILLUSTRATOR	0	0	1	0	0	1
92752	MEDIA PRODUCTION SPECIALIST	0	0	1	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
	Sum of Regular	58	36	-36	43	0	101
Temporary							
13898	COUNTY TEMPORARY	0	2	-2	2	0	2
13899	COUNTY TEMPORARY - SR	0	1	-1	1	0	1
74118	STUDENT AIDE II	0	1	-1	1	0	1
74180	PROF STUDENT INTERN	0	1	-1	1	0	1
	Sum of Temporary	0	5	-5	5	0	5
	Total changes for 2500700000	58	41	-41	48	0	106

Budget Unit: **2500800000 RAID**

Regular							
13865	OFFICE ASSISTANT II	1	0	0	0	0	1
	Sum of Regular	1	0	0	0	0	1
	Total changes for 2500800000	1	0	0	0	0	1

Budget Unit: **2501000000 SHERIFF CORONER**

Regular							
13821	MEDICAL TRANSCRIPTIONIST II	2	0	-1	1	0	2
13865	OFFICE ASSISTANT II	1	1	-1	1	0	2
13866	OFFICE ASSISTANT III	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
37498	CORONER TECHNICIAN	8	8	-12	12	0	16
37499	SR CORONER TECHNICIAN	2	0	-1	1	0	2
37501	DEP CORONER II	23	2	-8	8	0	25
37502	CORONER CORPORAL	2	0	-2	2	0	2
37503	CORONER SERGEANT	5	1	-2	2	0	6
37531	FORENSIC TECHNICIAN II	1	0	0	0	0	1
37611	SHERIFF'S SERGEANT	1	0	-1	1	0	1
37614	SHERIFF'S LIEUTENANT	1	0	0	0	0	1
37617	SHERIFF'S CAPTAIN	1	0	0	0	0	1
37625	CORONERS LIEUTENANT	0	1	-1	1	0	1
73893	CHF FORENSIC PATHOLOGIST	1	0	0	0	0	1
73894	FORENSIC PATHOLOGIST IV	4	0	0	0	0	4
98550	FORENSIC SVCS SPECIALIST II	0	1	-1	1	0	1
	Sum of Regular	54	14	-30	30	0	68

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Temporary							
13898	COUNTY TEMPORARY	0	4	0	0	0	4
13899	COUNTY TEMPORARY - SR	0	4	0	0	0	4
74180	PROF STUDENT INTERN	0	1	0	0	0	1
	Sum of Temporary	0	9	0	0	0	9
	Total changes for 2501000000	54	23	-30	30	0	77

Budget Unit: **2501100000** **PUBLIC ADMINISTRATION**

Regular							
13865	OFFICE ASSISTANT II	1	1	0	0	0	2
13867	SUPV OFFICE ASSISTANT I	1	0	0	0	0	1
15829	ESTATE PROPERTY TECHNICIAN	2	0	0	0	0	2
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
37506	ASST PUBLIC ADMINISTRATOR	1	0	0	0	0	1
37521	ESTATE INVESTIGATOR	3	0	0	0	0	3
37523	DEP PUBLIC ADMINISTRATOR	4	0	0	0	0	4
37527	SUPV DEP PUBLIC ADMIN	1	0	0	0	0	1
52262	SHERIFF SERVICE OFFICER II	1	0	0	0	0	1
	Sum of Regular	16	1	0	0	0	17
	Total changes for 2501100000	16	1	0	0	0	17

Budget Unit: **2505100000** **SHERIFF CAL - ID**

Regular							
13865	OFFICE ASSISTANT II	3	0	0	0	0	3
13867	SUPV OFFICE ASSISTANT I	1	0	-1	1	0	1
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
37536	FINGERPRINT TECHNICIAN II	9	0	0	0	0	9
37538	FINGERPRINT EXAMINER II	8	1	0	0	0	9
37539	SUPV FINGERPRINT EXAMINER	2	0	0	0	0	2
37602	DEP SHERIFF	1	0	0	0	0	1
37614	SHERIFF'S LIEUTENANT	1	0	0	0	0	1
52262	SHERIFF SERVICE OFFICER II	3	0	0	0	0	3
86164	IT SYSTEMS ADMINISTRATOR II	1	1	0	0	0	2
	Sum of Regular	30	2	-1	1	0	32

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Total changes for 2505100000		30	2	-1	1	0	32

Budget Unit: **2600100000** **JUVENILE HALL**

Per Diem							
79534	SUPV PROBATION OFFICER	0	0	1	0	0	1
Sum of Per Diem		0	0	1	0	0	1
Regular							
13865	OFFICE ASSISTANT II	5	0	0	0	0	5
13866	OFFICE ASSISTANT III	5	0	0	0	0	5
13867	SUPV OFFICE ASSISTANT I	1	0	0	0	0	1
13924	SECRETARY II	3	0	0	0	0	3
15833	STOREKEEPER	4	0	0	0	0	4
15912	ACCOUNTING ASSISTANT II	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	0	1	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	5	0	-1	0	0	4
52412	PROBATION CORR OFFICER II	250	-1	0	0	0	249
52413	SR PROBATION CORR OFFICER	41	1	0	0	0	42
52813	SUPV GROUP SUPV/INSTRUCTOR	1	0	0	0	0	1
52874	SR GRP SUPV/INST-CULINARY ART	4	0	0	0	0	4
52875	SR GRP SUPV/INST-INDUSTRL ART	4	0	0	0	0	4
54420	CORRECTIONAL COOK	11	0	0	0	0	11
54421	SR COOK - DETENTION	2	0	0	0	0	2
54422	CORRECTIONAL FOOD SVCS SUPV	3	0	0	0	0	3
54453	CORRECTIONAL SR FOOD SVC WR	17	-1	1	0	0	17
54480	HOUSE MANAGER	2	-1	1	0	0	2
54611	LAUNDRY WORKER	4	0	0	0	0	4
54631	SEWING SERVICES WORKER	2	0	0	0	0	2
57794	PROBATION ASSISTANT	4	-1	1	0	0	4
62141	GARDENER	4	0	0	0	0	4
62251	MAINTENANCE PAINTER	1	0	0	0	0	1
62740	BLDG MAINTENANCE MECHANIC	9	-1	0	0	0	8
62755	BLDG SERVICES ENGINEER	1	0	0	0	0	1
79530	PROBATION SPECIALIST	1	-1	1	0	0	1
79534	SUPV PROBATION OFFICER	32	0	-1	0	0	31

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
79535	ASST PROBATION DIVISION DIR	4	0	0	0	0	4
79536	PROBATION DIVISION DIRECTOR	5	0	0	0	0	5
	Sum of Regular	426	-4	2	0	0	424
Temporary							
13898	COUNTY TEMPORARY	5	0	0	0	0	5
13899	COUNTY TEMPORARY - SR	37	0	0	0	0	37
	Sum of Temporary	42	0	0	0	0	42
	Total changes for 2600100000	468	-4	3	0	0	467

Budget Unit: **2600200000 PROBATION**

Regular							
13865	OFFICE ASSISTANT II	29	-3	3	0	0	29
13866	OFFICE ASSISTANT III	48	0	0	0	0	48
13867	SUPV OFFICE ASSISTANT I	9	0	0	0	0	9
13868	SUPV OFFICE ASSISTANT II	2	0	0	0	0	2
13924	SECRETARY II	6	-1	1	0	0	6
15313	REVENUE & RECOVERY TECH II	1	0	0	0	0	1
15315	REVENUE & RECOVERY SUPV I	1	0	0	0	0	1
52412	PROBATION CORR OFFICER II	6	-6	0	0	0	0
52413	SR PROBATION CORR OFFICER	1	-1	0	0	0	0
57794	PROBATION ASSISTANT	23	-2	3	0	0	24
79530	PROBATION SPECIALIST	5	0	0	0	0	5
79532	DEP PROBATION OFFICER II	166	-3	1	0	0	164
79533	SR PROBATION OFFICER	48	0	-1	0	0	47
79534	SUPV PROBATION OFFICER	33	0	0	0	0	33
79535	ASST PROBATION DIVISION DIR	6	0	1	0	0	7
79536	PROBATION DIVISION DIRECTOR	6	0	0	0	0	6
	Sum of Regular	390	-16	8	0	0	382
Temporary							
13898	COUNTY TEMPORARY	1	0	0	0	0	1
13899	COUNTY TEMPORARY - SR	18	0	0	0	0	18
	Sum of Temporary	19	0	0	0	0	19
	Total changes for 2600200000	409	-16	8	0	0	401

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit:	**2600700000 PROBATION ADMINISTRATION**						
Regular							
13131	SR HUMAN RESOURCES CLERK	3	0	0	0	0	3
13439	HUMAN RESOURCES CLERK	3	0	0	0	0	3
13866	OFFICE ASSISTANT III	6	0	1	0	0	7
13923	SECRETARY I	1	0	-1	0	0	0
13924	SECRETARY II	2	1	0	0	0	3
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
13929	EXECUTIVE SECRETARY	1	0	0	0	0	1
15811	BUYER I	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	3	-2	1	0	0	2
15915	ACCOUNTING TECHNICIAN I	0	0	1	0	0	1
15916	ACCOUNTING TECHNICIAN II	1	0	0	0	0	1
52413	SR PROBATION CORR OFFICER	3	-2	1	0	0	2
57794	PROBATION ASSISTANT	2	-1	0	0	0	1
74106	ADMIN SVCS ANALYST II	2	0	0	0	0	2
74127	SR ADMINISTRATIVE ANALYST	2	-1	1	0	0	2
74204	CHF PROBATION OFFICER	1	0	0	0	0	1
74273	ADMIN SVCS MGR III	1	0	0	0	0	1
74740	DEPT H.R. COORDINATOR	1	0	0	0	0	1
77411	ACCOUNTANT I	0	0	1	0	0	1
77412	ACCOUNTANT II	0	1	0	0	0	1
77413	SR ACCOUNTANT	3	-1	-1	0	0	1
77414	PRINCIPAL ACCOUNTANT	1	0	0	0	0	1
77416	SUPV ACCOUNTANT	1	0	0	0	0	1
77462	RESEARCH ANALYST	0	1	0	0	0	1
79532	DEP PROBATION OFFICER II	3	0	0	0	0	3
79533	SR PROBATION OFFICER	7	0	0	0	0	7
79534	SUPV PROBATION OFFICER	6	1	0	0	0	7
79535	ASST PROBATION DIVISION DIR	0	1	1	0	0	2
79536	PROBATION DIVISION DIRECTOR	3	0	-1	0	0	2
79537	CHF DEP, PROBATION - ADMN SVC	1	0	0	0	0	1
79538	CHF DEP PROBATION OFFICER	3	0	0	0	0	3

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
86100	IT APPS DEVELOPER I	1	0	0	0	0	1
86101	IT APPS DEVELOPER II	1	1	0	0	0	2
86103	IT APPS DEVELOPER III	1	0	0	0	0	1
86117	IT BUSINESS SYS ANALYST III	1	0	-1	0	0	0
86119	IT SUPV BUSINESS SYS ANALYST	0	0	1	0	0	1
86141	IT OFFICER II	1	0	0	0	0	1
86155	IT NETWORK ADMIN III	2	0	0	0	0	2
86183	IT USER SUPPORT TECH II	1	0	-1	0	0	0
86185	IT USER SUPPORT TECH III	2	1	0	0	0	3
	Sum of Regular	72	0	3	0	0	75
Temporary							
13898	COUNTY TEMPORARY	2	0	2	0	0	4
13899	COUNTY TEMPORARY - SR	2	0	-2	0	0	0
	Sum of Temporary	4	0	0	0	0	4
	Total changes for 2600700000	76	0	3	0	0	79

Budget Unit: **2700200000** **FIRE PROTECTION - FOREST**

Regular							
13439	HUMAN RESOURCES CLERK	1	0	0	0	0	1
13807	PUBLIC SAFETY COMM OFFICER II	32	0	0	0	0	32
13808	SR PUBLIC SAFETY COMM OFFICE	4	0	0	0	0	4
13865	OFFICE ASSISTANT II	2	0	-1	0	0	1
13866	OFFICE ASSISTANT III	16	1	1	0	0	18
13924	SECRETARY II	1	0	0	0	0	1
13925	EXECUTIVE ASSISTANT I	1	-1	0	0	0	0
13926	EXECUTIVE ASSISTANT II	0	1	0	0	0	1
15313	REVENUE & RECOVERY TECH II	1	0	0	0	0	1
15808	BUYER ASSISTANT	2	0	0	0	0	2
15810	SR BUYER ASSISTANT	1	0	0	0	0	1
15811	BUYER I	1	0	0	0	0	1
15812	BUYER II	1	0	0	0	0	1
15831	STOCK CLERK	5	0	-3	0	0	2
15832	TRUCK DRIVER - DELIVERY	0	1	0	0	0	1
15833	STOREKEEPER	3	0	0	0	0	3

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
15834	SUPV STOREKEEPER	1	0	0	0	0	1
15838	FIRE SERVICE CENTER MANAGER	0	1	0	0	0	1
15912	ACCOUNTING ASSISTANT II	3	0	0	0	0	3
15913	SR ACCOUNTING ASST	3	0	0	0	0	3
15915	ACCOUNTING TECHNICIAN I	3	0	0	0	0	3
15916	ACCOUNTING TECHNICIAN II	3	0	0	0	0	3
37870	FIRE PREVENTION TECHNICIAN	5	0	0	0	0	5
37871	SUPV FIRE PREVENTION TECH	1	0	0	0	0	1
37872	FIRE SAFETY SPECIALIST	5	0	0	0	0	5
37873	FIRE SYSTEMS INSPECTOR	8	1	-1	0	0	8
37874	FIRE DEPT DEPUTY DIRECTOR-OES	1	0	0	0	0	1
37876	FIRE SAFETY SUPERVISOR	3	0	0	0	0	3
37877	FIRE PROTECTION ENGINEER	1	0	0	0	0	1
37879	DEP DIR, COUNTY FIRE DEPT-ADM	1	0	0	0	0	1
37880	DEP FIRE MARSHAL	1	0	0	0	0	1
37881	FIRE DEPT FACILITIES PLANNER	0	1	0	0	0	1
62221	MAINTENANCE CARPENTER	2	0	0	0	0	2
62222	LEAD MAINTENANCE CARPENTER	1	0	0	0	0	1
62231	MAINTENANCE ELECTRICIAN	0	1	0	0	0	1
62735	MAINTENANCE MECHANIC	1	-1	1	0	0	1
62771	BLDG MAINTENANCE SUPERVISOR	1	0	0	0	0	1
66451	HEAVY EQUIPMENT MECHANIC	8	-8	0	0	0	0
66453	FIRE APPARATUS TECH II	0	16	0	0	0	16
66455	SR HEAVY EQUIPMENT MECHANIC	8	-8	0	0	0	0
73992	REGISTERED NURSE V	-1	1	0	0	0	0
74106	ADMIN SVCS ANALYST II	7	0	1	0	0	8
74114	ADMIN SVCS ASST	2	1	0	0	0	3
74168	EMERGENCY SERVICES COORDINA	7	1	0	0	0	8
74169	EMERGENCY SERVICES PROG SUP	1	1	0	0	0	2
74199	ADMIN SVCS SUPV	2	0	0	0	0	2
74213	ADMIN SVCS OFFICER	1	0	-1	0	0	0
74233	PUBLIC INFORMATION SPECIALIST	1	1	0	0	0	2
74234	SR PUBLIC INFO SPECIALIST	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74684	SAFETY COORDINATOR - C	1	-1	0	0	0	0
77104	GIS ANALYST	-1	1	0	0	0	0
77105	GIS SUPERVISOR ANALYST	-1	1	0	0	0	0
77106	GIS SENIOR ANALYST	1	0	0	0	0	1
77412	ACCOUNTANT II	1	0	0	0	0	1
77413	SR ACCOUNTANT	1	1	0	0	0	2
79708	EMERGENCY MEDICAL SERVICE SP	1	3	0	0	0	4
79709	SR EMERGENCY MEDICAL SVCS SP	1	-1	0	0	0	0
79785	VOLUNTEER SVCS PROGRAM MGR	1	2	0	0	0	3
86117	IT BUSINESS SYS ANALYST III	2	0	0	0	0	2
86119	IT SUPV BUSINESS SYS ANALYST	-1	1	0	0	0	0
86124	IT COMMUNICATIONS ANALYST III	2	0	0	0	0	2
86125	IT SUPV COMMUNICATIONS ANALY	1	0	0	0	0	1
86131	IT COMMUNICATIONS TECH III	4	0	0	0	0	4
86139	IT DATABASE ADMIN III	1	0	0	0	0	1
86165	IT SYSTEMS ADMINISTRATOR III	1	0	0	0	0	1
86167	IT SUPV SYSTEMS ADMINISTRATOR	1	0	0	0	0	1
86183	IT USER SUPPORT TECH II	1	0	0	0	0	1
86185	IT USER SUPPORT TECH III	3	0	0	0	0	3
86196	IT WEB DEVELOPER III	3	-1	-1	0	0	1
86203	PUBLIC SAFETY CAD ADMIN III	3	-1	0	0	0	2
92753	SR MEDIA PRODUCTION SPECIALIS	1	0	0	0	0	1
	Sum of Regular	179	15	-4	0	0	190
Temporary							
13816	PUBLIC SERVICE EMPLOYEE C	2	0	0	0	0	2
	Sum of Temporary	2	0	0	0	0	2
	Total changes for 2700200000	181	15	-4	0	0	192

Budget Unit: **2700400000** **FIRE PROTECTION-CONTRACT SRVC**

Regular							
13865	OFFICE ASSISTANT II	2	-1	0	0	0	1
13866	OFFICE ASSISTANT III	3	0	0	0	0	3
37870	FIRE PREVENTION TECHNICIAN	1	0	0	0	0	1
37872	FIRE SAFETY SPECIALIST	7	-1	1	0	0	7

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
37873	FIRE SYSTEMS INSPECTOR	8	-2	0	0	0	6
37876	FIRE SAFETY SUPERVISOR	4	0	0	0	0	4
	Sum of Regular	25	-4	1	0	0	22
	Total changes for 2700400000	25	-4	1	0	0	22

Budget Unit: **2800100000** **AGRICULTURAL COMMISSIONER**

Regular

13866	OFFICE ASSISTANT III	4	0	0	0	0	4
13923	SECRETARY I	1	0	0	0	0	1
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
74240	AG COMM/SLR OF WTS & MEASURE	1	0	0	0	0	1
78708	AG & STANDARDS INVESTIGATOR I	31	2	-3	0	0	30
78709	SUPV AG & STANDARDS INVEST I	2	-1	0	0	0	1
78710	SUPV AG & STANDARDS INVEST II	3	1	0	0	0	4
78735	DEP AG COMMISSIONER-SEALER	5	0	-1	0	0	4
78737	ASST AG COMMISSIONER-SEALER	1	0	0	0	0	1
78792	WGHTS & MEASURE INSPECTOR II	1	0	0	0	0	1
78793	SR WEIGHTS & MEASURE INSPECT	1	0	0	0	0	1
	Sum of Regular	51	2	-4	0	0	49
	Total changes for 2800100000	51	2	-4	0	0	49

Budget Unit: **3100100000** **GIS**

Regular

77103	GIS SPECIALIST II	0	3	-3	0	0	0
77104	GIS ANALYST	3	3	-4	0	0	2
77105	GIS SUPERVISOR ANALYST	3	0	0	0	0	3
77106	GIS SENIOR ANALYST	3	0	0	0	0	3
77111	GIS RESEARCH SPECIALIST II	0	1	0	0	0	1
77462	RESEARCH ANALYST	1	0	-1	0	0	0
86103	IT APPS DEVELOPER III	1	0	0	0	0	1
86138	IT DATABASE ADMIN II	1	0	0	0	0	1
86140	IT SUPV DATABASE ADMIN	1	0	0	0	0	1
86143	IT OFFICER I	1	-1	0	0	0	0
	Sum of Regular	14	6	-8	0	0	12

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Total changes for 3100100000		14	6	-8	0	0	12

Budget Unit: **3100200000 TLMA ADMINISTRATION**

Regular

13439	HUMAN RESOURCES CLERK	1	0	0	0	0	1
13469	EMPLOYEE BENEFITS & REC SUPV	1	-1	0	0	0	0
13865	OFFICE ASSISTANT II	1	0	0	0	0	1
13866	OFFICE ASSISTANT III	2	1	-1	0	0	2
13924	SECRETARY II	1	-1	1	0	0	1
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
15812	BUYER II	1	0	0	0	0	1
15821	SUPPORT SERVICES SUPERVISOR	1	0	0	0	0	1
15826	SUPPORT SERVICES TECHNICIAN	2	0	0	0	0	2
15912	ACCOUNTING ASSISTANT II	1	3	-1	0	0	3
15913	SR ACCOUNTING ASST	6	0	0	0	0	6
15915	ACCOUNTING TECHNICIAN I	6	-2	0	0	0	4
15916	ACCOUNTING TECHNICIAN II	3	1	-1	0	0	3
15917	SUPV ACCOUNTING TECHNICIAN	1	0	0	0	0	1
73999	AGENCY PROGRAM ADMINISTRATO	1	0	0	0	0	1
74000	TLMA DEPUTY DIRECTOR OF ADMI	1	1	0	0	0	2
74213	ADMIN SVCS OFFICER	0	1	-1	0	0	0
74270	TLMA DIRECTOR	1	0	0	0	0	1
74271	TLMA REGIONAL OFFICE MGR	1	-1	0	0	0	0
74272	TLMA DIRECTOR OF ADMIN	1	-1	0	0	0	0
74273	ADMIN SVCS MGR III	1	0	0	0	0	1
74278	TLMA ADMIN SERVICES MANAGER	1	0	-1	0	0	0
74740	DEPT H.R. COORDINATOR	1	0	0	0	0	1
77413	SR ACCOUNTANT	0	1	0	0	0	1
77414	PRINCIPAL ACCOUNTANT	1	0	0	0	0	1
77416	SUPV ACCOUNTANT	1	-1	0	0	0	0
86103	IT APPS DEVELOPER III	1	0	0	0	0	1
86115	IT BUSINESS SYS ANALYST II	1	-1	0	0	0	0
86117	IT BUSINESS SYS ANALYST III	2	2	0	0	0	4
86138	IT DATABASE ADMIN II	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
86140	IT SUPV DATABASE ADMIN	1	0	0	0	0	1
86141	IT OFFICER II	0	1	0	0	0	1
86143	IT OFFICER I	2	-1	0	0	0	1
86153	IT NETWORK ADMIN II	1	0	0	0	0	1
86155	IT NETWORK ADMIN III	1	0	0	0	0	1
86164	IT SYSTEMS ADMINISTRATOR II	2	0	-1	0	0	1
86165	IT SYSTEMS ADMINISTRATOR III	3	-1	0	0	0	2
86167	IT SUPV SYSTEMS ADMINISTRATOR	1	0	0	0	0	1
86183	IT USER SUPPORT TECH II	4	0	0	0	0	4
86185	IT USER SUPPORT TECH III	4	0	0	0	0	4
	Sum of Regular	62	1	-5	0	0	58
	Total changes for 3100200000	62	1	-5	0	0	58

Budget Unit: **3100300000** **CONSOLIDATED COUNTER SERVICES**

Regular

13866	OFFICE ASSISTANT III	1	0	-1	0	0	0
15912	ACCOUNTING ASSISTANT II	2	1	-1	0	0	2
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
33252	LAND USE TECHNICIAN II	6	3	-3	0	0	6
33253	SUPV LAND USE TECHNICIAN	2	0	-1	0	0	1
74271	TLMA REGIONAL OFFICE MGR	2	0	0	0	0	2
74617	AGENCY PROGRAM SUPERVISOR	1	0	0	0	0	1
	Sum of Regular	15	4	-6	0	0	13
	Total changes for 3100300000	15	4	-6	0	0	13

Budget Unit: **3100500000** **ENVIRONMENTAL PROGRAMS**

Regular

13865	OFFICE ASSISTANT II	1	0	0	0	0	1
13923	SECRETARY I	1	0	0	0	0	1
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
73534	NATURAL RESOURCES MGR - EPD	1	0	0	0	0	1
74000	TLMA DEPUTY DIRECTOR	0	1	0	0	0	1
74193	DIR OF ENVIRONMENTAL PROGRA	1	-1	0	0	0	0
74213	ADMIN SVCS OFFICER	2	-1	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74809	PRINCIPAL PLANNER	2	0	0	0	0	2
74811	CHF DEP PLANNING DIRECTOR	1	-1	0	0	0	0
85060	ECOLOGICAL RESOURCES SPEC II	3	0	0	0	0	3
85070	SR ECOLOGICAL RESOURCES SPE	1	0	0	0	0	1
92271	PLANNING TECHNICIAN II	1	0	0	0	0	1
	Sum of Regular	15	-2	0	0	0	13
Seasonal							
79462	RCHCA OPEN SPACE HABITAT TEC	0	1	0	0	0	1
	Sum of Seasonal	0	1	0	0	0	1
	Total changes for 3100500000	15	-1	0	0	0	14

Budget Unit: **3110100000** **BUILDING AND SAFETY**

Regular							
13865	OFFICE ASSISTANT II	9	-1	1	0	0	9
13866	OFFICE ASSISTANT III	2	0	0	0	0	2
13868	SUPV OFFICE ASSISTANT II	1	0	0	0	0	1
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
15912	ACCOUNTING ASSISTANT II	2	0	0	0	0	2
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
33225	ENV COMPLIANCE INSPECTOR II	3	0	1	0	0	4
33226	SR ENV COMPLIANCE INSPECTOR	1	1	0	0	0	2
33232	BLDG INSPECTOR II	3	-1	0	0	0	2
33233	SR BUILDING INSPECTOR	6	-1	1	0	0	6
33235	PRINCIPAL BUILDING INSPECTOR	2	0	0	0	0	2
73999	AGENCY PROGRAM ADMINISTRATO	3	0	0	0	0	3
74000	TLMA DEPUTY DIRECTOR	0	1	0	0	0	1
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74236	DIR OF BUILDING & SAFETY	1	0	0	0	0	1
76417	PLANS EXAMINER IV	3	-1	0	0	0	2
76418	PLANS EXAMINER V	2	0	0	0	0	2
76426	SUBDIVISION ENGINEER	1	0	0	0	0	1
	Sum of Regular	42	-2	3	0	0	43
Temporary							
13871	TEMPORARY ASST	0	0	4	0	0	4

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Sum of Temporary		0	0	4	0	0	4
Total changes for 3110100000		42	-2	7	0	0	47

Budget Unit: **3120100000** **PLANNING**

Regular

13866	OFFICE ASSISTANT III	1	0	0	0	0	1
13923	SECRETARY I	1	0	0	0	0	1
13951	PLANNING COMMISSION SECRETA	1	2	-1	0	0	2
15912	ACCOUNTING ASSISTANT II	0	1	-1	0	0	0
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
73999	AGENCY PROGRAM ADMINISTRATO	1	0	-1	0	0	0
74000	TLMA DEPUTY DIRECTOR	0	1	0	0	0	1
74230	PLANNING DIRECTOR	1	0	0	0	0	1
74806	URBAN/REGIONAL PLANNER IV	15	1	-2	0	0	14
74809	PRINCIPAL PLANNER	7	2	-3	0	0	6
74811	CHF DEP PLANNING DIRECTOR	1	-1	0	0	0	0
74819	ASST PLANNING DIRECTOR	1	-1	0	0	0	0
74840	ARCHAEOLOGIST	1	0	0	0	0	1
76666	CHF ENGINEERING GEOLOGIST	1	0	0	0	0	1
92271	PLANNING TECHNICIAN II	2	3	9	0	-10	4
92272	PLANNING TECHNICIAN III	5	0	10	0	-10	5
	Sum of Regular	39	8	11	0	-20	38
	Total changes for 3120100000	39	8	11	0	-20	38

Budget Unit: **3130100000** **TRANSPORTATION**

Regular

13865	OFFICE ASSISTANT II	5	0	-1	0	0	4
13866	OFFICE ASSISTANT III	11	-2	-1	0	0	8
13923	SECRETARY I	5	-2	0	0	0	3
13924	SECRETARY II	3	1	0	0	0	4
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
13973	SR STENOGRAPHER CLERK	1	-1	0	0	0	0
15822	TRANSPORTATION WAREHSE WKR	4	-1	0	0	0	3
15823	TRANSPORTATION WAREHSE WKR	1	0	0	0	0	1

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	1	2
15916	ACCOUNTING TECHNICIAN II	3	0	1	0	0	4
15917	SUPV ACCOUNTING TECHNICIAN	1	0	0	0	0	1
54431	COOK	1	0	0	0	0	1
62202	LABORER	9	-5	0	0	0	4
66501	BRIDGE CREW WORKER	3	0	0	0	0	3
66502	CREW LEAD WORKER	4	0	0	0	0	4
66504	LEAD BRIDGE CREW WORKER	2	0	0	0	0	2
66509	DISTRICT ROAD MAINTENANCE SU	17	-1	0	0	0	16
66511	EQUIPMENT OPERATOR I	19	-2	0	0	0	17
66512	EQUIPMENT OPERATOR II	50	-1	-1	0	0	48
66513	SR EQUIPMENT OPERATOR	8	-1	0	0	0	7
66516	TRUCK & TRAILER DRIVER	23	0	0	0	0	23
66524	HIGHWAY MAINT SUPERINTENDEN	1	0	0	0	0	1
66526	HIGHWAY OPS SUPERINTENDENT	1	0	0	0	0	1
66529	MAINTENANCE & CONST WRKR	20	0	0	0	0	20
66561	ASST DISTRICT ROAD MAINT SUPV	14	0	0	0	0	14
66580	SIGN MAKER	1	0	0	0	0	1
66581	TRAFFIC CONTROL PAINTER	11	0	0	0	0	11
66582	LEAD TRAFFIC CONTROL PAINTER	2	0	0	0	0	2
66591	TREE TRIMMER	2	0	0	0	0	2
66592	LEAD TREE TRIMMER	2	0	0	0	0	2
74105	ADMIN SVCS ANALYST I	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	3	0	0	0	0	3
74213	ADMIN SVCS OFFICER	1	0	0	0	0	1
74249	COUNTY DIR OF TRANSPORTATION	1	0	0	0	0	1
74273	ADMIN SVCS MGR III	1	0	0	0	0	1
74278	TLMA ADMIN SERVICES MANAGER	1	0	-1	0	0	0
74810	TRANSPORTATION PROJ MGR - EC	1	0	0	0	0	1
74829	ASSOC TRANSPORTATION PLANNE	1	0	0	0	0	1
74831	SR TRANSPORTATION PLANNER	5	0	0	0	0	5
76405	DEP DIR OF TRANSPORTATION	2	0	0	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
76419	ENGINEERING PROJECT MGR	9	1	0	0	0	10
76420	JUNIOR ENGINEER	3	0	0	0	0	3
76422	ASST CIVIL ENGINEER	9	-1	1	0	0	9
76424	ASSOC CIVIL ENGINEER	12	-3	0	0	0	9
76425	SR CIVIL ENGINEER	8	-1	0	0	0	7
76452	ENGINEERING DIVISION MANAGER	6	0	0	0	0	6
77106	GIS SENIOR ANALYST	1	0	0	0	0	1
77412	ACCOUNTANT II	5	-2	0	0	-1	2
77413	SR ACCOUNTANT	2	2	0	0	0	4
77414	PRINCIPAL ACCOUNTANT	2	0	0	0	0	2
77416	SUPV ACCOUNTANT	1	0	0	0	0	1
97381	TRAFFIC SIGNAL TECH	6	-1	0	0	0	5
97382	SR TRAFFIC SIGNAL TECHNICIAN	2	-1	0	0	0	1
97383	TRAFFIC SIGNAL SUPERVISOR	1	0	0	0	0	1
97413	PRINCIPAL CONST INSPECTOR	4	0	0	0	0	4
97421	ENGINEERING AIDE	2	-1	0	0	0	1
97431	ENGINEERING TECH I	7	0	0	0	0	7
97432	ENGINEERING TECH II	23	-1	0	0	0	22
97433	SR ENG TECH	18	-1	1	0	0	18
97434	PRINCIPAL ENG TECH	7	0	1	0	0	8
97435	TECHNICAL ENG UNIT SUPERVISO	6	0	1	0	0	7
97437	SR ENG TECH - PLS/PE	1	0	-1	0	0	0
	Sum of Regular	379	-24	0	0	0	355
Temporary							
13871	TEMPORARY ASST	5	0	0	0	0	5
13898	COUNTY TEMPORARY	1	0	0	0	0	1
	Sum of Temporary	6	0	0	0	0	6
	Total changes for 3130100000	385	-24	0	0	0	361

Budget Unit: **3130200000 SURVEYOR**

Regular							
13866	OFFICE ASSISTANT III	2	-1	0	0	0	1
13923	SECRETARY I	1	0	0	0	0	1
74105	ADMIN SVCS ANALYST I	1	0	-1	0	0	0

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74106	ADMIN SVCS ANALYST II	0	1	0	0	0	1
76403	SUPV LAND SURVEYOR	2	0	0	0	0	2
76419	ENGINEERING PROJECT MGR	0	0	2	0	0	2
76483	SR SURVEYOR	1	0	0	0	0	1
76484	SR LAND SURVEYOR	3	0	0	0	0	3
76487	COUNTY SURVEYOR	1	0	0	0	0	1
97431	ENGINEERING TECH I	2	0	0	0	0	2
97432	ENGINEERING TECH II	7	-1	0	0	0	6
97433	SR ENG TECH	11	-2	0	0	0	9
97434	PRINCIPAL ENG TECH	6	0	0	0	0	6
97437	SR ENG TECH - PLS/PE	1	0	0	0	0	1
97438	PRINCIPAL ENG TECH - PLS/PE	3	0	0	0	0	3
	Sum of Regular	41	-3	1	0	0	39
	Total changes for 3130200000	41	-3	1	0	0	39

Budget Unit: **3130300000** **CROSSING GUARD**

Regular							
13411	CROSSING GUARD SUPERVISOR	1	0	0	0	0	1
	Sum of Regular	1	0	0	0	0	1
Seasonal							
13400	CROSSING GUARD	51	0	0	0	0	51
	Sum of Seasonal	51	0	0	0	0	51
	Total changes for 3130300000	52	0	0	0	0	52

Budget Unit: **3130700000** **TRANSPORTATION EQUIPMENT - ISF**

Regular							
13865	OFFICE ASSISTANT II	1	0	0	0	0	1
15912	ACCOUNTING ASSISTANT II	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
15916	ACCOUNTING TECHNICIAN II	1	0	0	0	0	1
62793	MACHINIST - WELDER	1	0	0	0	0	1
62901	MECHANICS HELPER	1	0	0	0	0	1
62931	EQUIPMENT TIRE INSTALLER	1	0	0	0	0	1
62932	LEAD EQUIPMENT TIRE INSTALLER	1	0	0	0	0	1
62951	GARAGE ATTENDANT	2	0	0	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
66413	EQUIPMENT SERVICE SUPV	1	0	0	0	0	1
66441	TRUCK MECHANIC	5	0	0	0	0	5
66451	HEAVY EQUIPMENT MECHANIC	2	0	0	0	0	2
66455	SR HEAVY EQUIPMENT MECHANIC	8	0	0	0	0	8
66475	EQUIPMENT FLEET SUPERVISOR	1	0	0	0	0	1
77412	ACCOUNTANT II	1	0	0	0	0	1
77416	SUPV ACCOUNTANT	1	0	0	0	0	1
	Sum of Regular	29	0	0	0	0	29
	Total changes for 3130700000	29	0	0	0	0	29

Budget Unit: **3130800000** **TLMA: AIRPORT LAND USE (ALUC)**

Regular

13951	PLANNING COMMISSION SECRETA	1	0	0	0	0	1
74806	URBAN/REGIONAL PLANNER IV	2	0	0	0	0	2
74809	PRINCIPAL PLANNER	1	0	0	0	0	1
	Sum of Regular	4	0	0	0	0	4
	Total changes for 3130800000	4	0	0	0	0	4

Budget Unit: **3140100000** **CODE ENFORCEMENT**

Regular

13423	CODE ENFORCEMENT TECHNICIAN	10	0	-2	0	0	8
13435	CODE ENFORCEMENT AIDE	19	0	0	0	0	19
13923	SECRETARY I	2	0	0	0	0	2
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
15916	ACCOUNTING TECHNICIAN II	5	0	0	0	0	5
15917	SUPV ACCOUNTING TECHNICIAN	1	0	0	0	0	1
33240	CODE ENFORCEMENT OFFICER III	47	1	0	0	0	48
33243	SR CODE ENFORCEMENT OFFICER	15	0	0	0	0	15
33244	SUPV CODE ENFORCEMENT OFFIC	8	0	0	0	0	8
33246	CODE ENFORCEMENT DIVISION MG	2	0	0	0	0	2
33247	DIR OF CODE ENFORCEMENT	1	0	0	0	0	1
33256	COMMUNITY IMPROVEMENT SPEC I	5	0	-5	0	0	0
33258	SUPV COMM IMPROVEMENT SPEC	1	0	-1	0	0	0
74000	TLMA DEPUTY DIRECTOR	0	1	-1	0	0	0

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74113	ADMIN SVCS MGR II	1	0	0	0	0	1
74213	ADMIN SVCS OFFICER	1	0	0	0	0	1
	Sum of Regular	119	2	-9	0	0	112
	Total changes for 3140100000	119	2	-9	0	0	112

Budget Unit: **4100100000** **MH PUBLIC GUARDIAN**

Regular

13865	OFFICE ASSISTANT II	3	0	0	0	0	3
13867	SUPV OFFICE ASSISTANT I	1	0	0	0	0	1
13923	SECRETARY I	1	0	0	0	0	1
15829	ESTATE PROPERTY TECHNICIAN	2	0	0	0	0	2
15912	ACCOUNTING ASSISTANT II	6	0	0	0	0	6
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
37522	PUBLIC GUARDIAN INVESTIGATOR	2	0	0	0	0	2
37525	DEP PUBLIC GUARDIAN	8	0	0	0	0	8
37526	SUPV DEP PUBLIC GUARDIAN	2	0	0	0	0	2
73952	REGISTERED NURSE II	1	0	0	0	0	1
77412	ACCOUNTANT II	1	0	0	0	0	1
77413	SR ACCOUNTANT	1	0	0	0	0	1
79718	M.H. SERVICE SUPV-B	1	0	0	0	0	1
79742	CLINICAL THERAPIST II	2	0	0	0	0	2
79797	M.H. SERVICES MGR - MEDICAL	1	0	0	0	0	1
	Sum of Regular	33	0	0	0	0	33
	Total changes for 4100100000	33	0	0	0	0	33

Budget Unit: **4100200000** **MH TREATMENT**

Per Diem

73612	PHARMACIST - PD	0	1	-1	0	0	0
73830	PSYCHIATRIST III - PD	46	3	-10	0	0	39
73833	CHILD PSYCHIATRIST - PD (D)	2	0	-1	0	0	1
	Sum of Per Diem	48	4	-12	0	0	40

Regular

13426	SR MEDICAL RECORDS TECHNICIA	1	0	0	0	0	1
13865	OFFICE ASSISTANT II	70	11	3	0	0	84
13866	OFFICE ASSISTANT III	16	3	1	0	0	20

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13867	SUPV OFFICE ASSISTANT I	4	0	-1	0	0	3
13868	SUPV OFFICE ASSISTANT II	1	1	0	0	0	2
13923	SECRETARY I	8	-1	0	0	0	7
15912	ACCOUNTING ASSISTANT II	2	0	0	0	0	2
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
57726	SOCIAL SERVICES ASSISTANT	1	0	-1	0	0	0
57741	LICENSED PSYCHIATRIC TECH	4	2	-2	0	0	4
57745	BEHAVIORAL HLTH SPECIALIST II	93	20	-11	0	0	102
57752	LICENSED VOC NURSE II	7	2	4	0	0	13
57781	NURSING ASSISTANT	1	0	0	0	0	1
57792	COMMUNITY SERVICES ASSISTANT	24	3	0	0	0	27
73436	OCCUPATIONAL THERAPIST II	1	0	0	0	0	1
73818	STAFF PSYCHIATRIST III	0	1	-1	0	0	0
73819	STAFF PSYCHIATRIST IV	36	2	8	0	0	46
73892	CHF OF PSYCHIATRY	1	0	0	0	0	1
73991	REGISTERED NURSE IV	8	2	-2	0	0	8
73992	REGISTERED NURSE V	4	2	0	0	0	6
74106	ADMIN SVCS ANALYST II	4	1	-1	0	0	4
74199	ADMIN SVCS SUPV	1	0	0	0	0	1
79715	SR CLINICAL PSYCHOLOGIST	10	5	-2	0	0	13
79717	M.H. SERVICE SUPV-A	1	0	-1	0	0	0
79718	M.H. SERVICE SUPV-B	40	2	3	0	0	45
79724	M.H. SERVICE SUPV-B - BLYTHE	1	0	0	0	0	1
79725	M.H. PEER SPECIALIST TRAINEE	1	-1	0	0	0	0
79726	M.H. PEER SPECIALIST	51	26	11	0	0	88
79727	SR M.H. PEER SPECIALIST	0	4	0	0	0	4
79742	CLINICAL THERAPIST II	187	14	7	0	0	208
79745	CLINICAL THERAPIST II - BLYTHE	3	-1	1	0	0	3
79751	BEHAVIORAL HLTH SPECIALIST III	20	2	-1	0	0	21
79781	VOLUNTEER SVCS COORDINATOR	1	0	0	0	0	1
79796	M.H. SERVICES PROGRAM MGR	3	-1	-1	0	0	1
79797	M.H. SERVICES MGR - MEDICAL	2	-1	-1	0	0	0
79806	M.H. SERVICES ADMINISTRATOR	3	4	-1	0	0	6

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
79861	STAFF DEVELOPMENT OFFICER	0	1	0	0	0	1
79891	EMPLOYMENT SVCS COUNSELOR II	5	0	0	0	0	5
	Sum of Regular	616	103	12	0	0	731
	Total changes for 4100200000	664	107	0	0	0	771

Budget Unit: **4100300000** **MH DETENTION**

Per Diem							
73830	PSYCHIATRIST III - PD	8	0	-3	0	0	5
73833	CHILD PSYCHIATRIST - PD (D)	0	1	0	0	0	1
	Sum of Per Diem	8	1	-3	0	0	6
Regular							
13426	SR MEDICAL RECORDS TECHNICIA	2	0	0	0	0	2
13865	OFFICE ASSISTANT II	8	1	-2	0	0	7
13923	SECRETARY I	1	0	0	0	0	1
57745	BEHAVIORAL HLTH SPECIALIST II	5	5	-3	0	0	7
73819	STAFF PSYCHIATRIST IV	2	-1	0	0	0	1
73991	REGISTERED NURSE IV	7	1	-2	0	0	6
73992	REGISTERED NURSE V	1	-1	0	0	0	0
79718	M.H. SERVICE SUPV-B	3	1	-2	0	0	2
79740	CLINICAL THERAPIST I	1	-1	0	0	0	0
79742	CLINICAL THERAPIST II	7	1	0	0	0	8
79796	M.H. SERVICES PROGRAM MGR	1	0	0	0	0	1
	Sum of Regular	38	6	-9	0	0	35
	Total changes for 4100300000	46	7	-12	0	0	41

Budget Unit: **4100400000** **MH ADMINISTRATION**

Per Diem							
73830	PSYCHIATRIST III - PD	2	0	-1	0	0	1
79743	CLINICAL THERAPIST II - PD	0	0	3	0	0	3
	Sum of Per Diem	2	0	2	0	0	4
Regular							
13488	MEDICAL RECORDS TECHNICIAN II	4	0	0	0	0	4
13865	OFFICE ASSISTANT II	15	0	0	0	0	15
13866	OFFICE ASSISTANT III	11	-1	0	0	0	10
13867	SUPV OFFICE ASSISTANT I	1	0	-1	0	0	0

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13923	SECRETARY I	1	2	-1	0	0	2
13924	SECRETARY II	2	0	0	0	0	2
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
15808	BUYER ASSISTANT	4	1	0	0	0	5
15810	SR BUYER ASSISTANT	1	0	0	0	0	1
15812	BUYER II	1	0	0	0	0	1
15906	INSURANCE BILLING SUPV I	1	0	0	0	0	1
15908	INSURANCE BILLING CLERK	7	0	0	0	0	7
15909	SR INSURANCE BILLING CLERK	1	0	0	0	0	1
15912	ACCOUNTING ASSISTANT II	16	0	0	0	0	16
15913	SR ACCOUNTING ASST	0	1	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	5	0	-1	0	0	4
15916	ACCOUNTING TECHNICIAN II	3	1	-1	0	0	3
57745	BEHAVIORAL HLTH SPECIALIST II	1	0	0	0	0	1
57752	LICENSED VOC NURSE II	4	1	2	0	0	7
73458	HEALTH EDUCATION ASST II	1	0	0	0	0	1
73819	STAFF PSYCHIATRIST IV	0	0	1	0	0	1
73834	SUPV RESEARCH SPECIALIST	1	0	0	0	0	1
73890	MEDICAL DIRECTOR, MH SERVICES	1	0	0	0	0	1
73991	REGISTERED NURSE IV	6	1	-2	0	0	5
73992	REGISTERED NURSE V	2	-1	0	0	0	1
74106	ADMIN SVCS ANALYST II	11	1	0	0	0	12
74114	ADMIN SVCS ASST	2	-1	1	0	0	2
74185	DEVELOPMENT SPECIALIST III	1	0	0	0	0	1
74199	ADMIN SVCS SUPV	4	0	0	0	0	4
74205	M.H. DIRECTOR	1	0	0	0	0	1
74213	ADMIN SVCS OFFICER	1	0	0	0	0	1
74273	ADMIN SVCS MGR III	1	0	0	0	0	1
74740	DEPT H.R. COORDINATOR	1	0	0	0	0	1
77412	ACCOUNTANT II	11	0	0	0	0	11
77413	SR ACCOUNTANT	1	-1	0	0	0	0
77414	PRINCIPAL ACCOUNTANT	1	1	-1	0	0	1
77416	SUPV ACCOUNTANT	4	0	0	0	0	4

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
77462	RESEARCH ANALYST	2	0	0	0	0	2
79701	PATIENTS RIGHTS ADVOCATE	5	0	0	0	0	5
79703	CHF PATIENTS RIGHTS ADVOCATE	1	0	-1	0	0	0
79718	M.H. SERVICE SUPV-B	5	1	-1	0	0	5
79726	M.H. PEER SPECIALIST	2	1	-1	0	0	2
79727	SR M.H. PEER SPECIALIST	7	2	2	0	0	11
79728	M.H. PEER POLICY & PLNG SPEC	2	1	0	0	0	3
79742	CLINICAL THERAPIST II	10	-1	1	0	0	10
79781	VOLUNTEER SVCS COORDINATOR	1	0	0	0	0	1
79796	M.H. SERVICES PROGRAM MGR	3	0	-1	0	0	2
79803	ASST MENTAL HEALTH DIRECTOR	2	0	0	0	0	2
79837	RESEARCH SPECIALIST I	4	0	0	0	0	4
79861	STAFF DEVELOPMENT OFFICER	1	-1	0	0	0	0
79886	SOCIAL SERVICE PLANNER	1	0	0	0	0	1
86117	IT BUSINESS SYS ANALYST III	9	-1	0	0	0	8
86138	IT DATABASE ADMIN II	1	-1	0	0	0	0
86144	IT OFFICER III	1	0	0	0	0	1
86153	IT NETWORK ADMIN II	1	0	0	0	0	1
86155	IT NETWORK ADMIN III	2	0	0	0	0	2
86157	IT SUPV NETWORK ADMIN	1	0	0	0	0	1
86175	IT SYSTEMS OPERATOR III	1	0	0	0	0	1
86183	IT USER SUPPORT TECH II	1	0	0	0	0	1
86185	IT USER SUPPORT TECH III	3	0	0	0	0	3
86187	IT SUPV USER SUPPORT TECH	1	0	0	0	0	1
86195	IT WEB DEVELOPER II	0	1	0	0	0	1
	Sum of Regular	196	7	-4	0	0	199
	Total changes for 4100400000	198	7	-2	0	0	203

Budget Unit: **4100500000** **MH SUBSTANCE ABUSE**

Regular

13865	OFFICE ASSISTANT II	26	0	-2	0	0	24
13866	OFFICE ASSISTANT III	4	0	0	0	0	4
13923	SECRETARY I	1	0	0	0	0	1
57726	SOCIAL SERVICES ASSISTANT	4	-1	0	0	0	3

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
57792	COMMUNITY SERVICES ASSISTANT	10	2	0	0	0	12
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74114	ADMIN SVCS ASST	1	1	0	0	0	2
74180	PROF STUDENT INTERN	1	-1	0	0	0	0
74199	ADMIN SVCS SUPV	1	0	0	0	0	1
79706	BEHAVIORAL HLTH SPECIALIST IV	4	1	-2	0	0	3
79717	M.H. SERVICE SUPV-A	1	0	0	0	0	1
79727	SR M.H. PEER SPECIALIST	0	1	0	0	0	1
79749	SUBSTANCE ABUSE SVCS PROG A	1	0	0	0	0	1
79751	BEHAVIORAL HLTH SPECIALIST III	61	0	-3	0	0	58
79753	SUPV BEHAVIORAL HEALTH SPEC	7	0	0	0	0	7
	Sum of Regular	123	3	-7	0	0	119
Temporary							
13898	COUNTY TEMPORARY	0	1	0	0	0	1
73837	MEDICAL CONSULTANT	1	0	-1	0	0	0
74118	STUDENT AIDE II	6	0	-2	0	0	4
	Sum of Temporary	7	1	-3	0	0	5
	Total changes for 4100500000	130	4	-10	0	0	124

Budget Unit: **4200100000** **PUBLIC HEALTH**

Regular							
13401	ADMISSIONS & COLLECTIONS CLER	12	3	0	0	0	15
13410	DEPARTMENTAL AIDE	2	-2	0	0	0	0
13426	SR MEDICAL RECORDS TECHNICIA	1	0	0	0	0	1
13427	QUALITY ASSURANCE COORDINAT	1	0	0	0	0	1
13432	SUPV MEDICAL RECORDS TECH	1	0	0	0	0	1
13487	MEDICAL RECORDS TECHNICIAN I	3	-1	1	0	0	3
13488	MEDICAL RECORDS TECHNICIAN II	3	0	0	0	0	3
13865	OFFICE ASSISTANT II	40	15	0	0	1	56
13866	OFFICE ASSISTANT III	31	0	0	0	0	31
13867	SUPV OFFICE ASSISTANT I	4	-1	0	0	0	3
13868	SUPV OFFICE ASSISTANT II	2	0	0	0	0	2
13923	SECRETARY I	10	1	-2	0	0	9
13924	SECRETARY II	2	1	-1	0	0	2

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	2	0	0	0	0	2
37566	CHA PROGRAM COORDINATOR II	10	0	1	0	0	11
57731	DENTAL ASSISTANT	2	0	0	0	0	2
57748	LICENSED VOC NURSE II - CHA	28	3	-3	0	0	28
57749	LICENSED VOC NURSE III - CHA	8	1	0	0	0	9
57755	DIETETIC TECHNICIAN	3	0	0	0	0	3
57775	CERTIFIED MEDICAL ASSISTANT	86	14	0	0	0	100
57793	HEALTH SERVICES ASSISTANT	131	18	9	0	5	163
73457	HEALTH EDUCATION ASST I	1	-1	0	0	0	0
73458	HEALTH EDUCATION ASST II	43	7	-1	0	3	52
73484	HEALTH EDUCATOR	7	-3	0	0	0	4
73487	SR HEALTH EDUCATOR	0	1	0	0	0	1
73490	P.H. PROGRAM DIRECTOR	7	0	1	0	0	8
73557	DEP DIR II, CHA	3	2	-1	0	0	4
73574	INDUSTRIAL HYGIENIST III	3	0	0	0	0	3
73575	SR INDUSTRIAL HYGIENIST	1	0	0	0	0	1
73790	NURSE PRACTITIONER III-DESERT	0	1	0	0	0	1
73794	PHYSICIAN IV - DESERT	0	3	0	0	0	3
73797	PHYSICIAN ASST III - DESERT	0	1	0	0	0	1
73804	PHYSICIAN IV	24	3	-1	0	0	26
73877	DENTIST	1	0	0	0	0	1
73881	DIR OF PUBLIC HEALTH	1	0	0	0	0	1
73888	CHF OF MEDICAL SVCS, CHA	1	0	0	0	0	1
73923	NURSE MANAGER	6	1	-1	0	0	6
73924	ASST NURSE MANAGER	20	3	-2	0	0	21
73941	NURSING EDUCATION INSTRUCTO	0	0	1	0	0	1
73954	ASST COMMUNICABLE DISEASE SP	1	0	0	0	0	1
73956	COMMUNICABLE DISEASES SPEC	19	0	0	0	0	19
73961	SR COMMUNICABLE DISEASES SPE	3	1	-1	0	0	3
73970	DIR OF PUBLIC HEALTH NURSING	1	0	0	0	0	1
73976	PHYSICIAN ASSISTANT III	5	-2	0	0	0	3
73984	NURSE PRACTITIONER III	6	2	0	0	0	8

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
73992	REGISTERED NURSE V	62	10	-9	0	0	63
73996	CHA PROGRAM CHIEF II	8	1	-1	0	0	8
74106	ADMIN SVCS ANALYST II	0	1	-1	0	0	0
74107	CHA PROGRAM COORDINATOR I	8	0	0	0	0	8
74114	ADMIN SVCS ASST	4	3	2	0	-1	8
74115	EPIDEMIOLOGY ANALYST	3	0	0	0	0	3
74168	EMERGENCY SERVICES COORDINA	1	0	0	0	0	1
74199	ADMIN SVCS SUPV	1	0	0	0	0	1
74201	CHA PROGRAM CHIEF III	1	0	0	0	0	1
74213	ADMIN SVCS OFFICER	3	0	0	0	0	3
74233	PUBLIC INFORMATION SPECIALIST	1	1	0	0	0	2
74257	DEP P.H. OFFICER	1	0	0	0	0	1
78344	SR NUTRITIONIST	15	2	1	0	1	19
78345	NUTRITIONIST	15	3	2	0	0	20
78347	SUPV NUTRITIONIST	7	0	1	0	1	9
78750	P.H. MICROBIOLOGIST II	5	-1	0	0	0	4
78755	SUPV P.H. MICROBIOLOGIST	1	0	0	0	0	1
79708	EMERGENCY MEDICAL SERVICE SP	6	0	0	0	0	6
79709	SR EMERGENCY MEDICAL SVCS SP	2	0	0	0	0	2
79742	CLINICAL THERAPIST II	2	0	0	0	0	2
79824	HEALTH CARE SOCIAL WORKER	18	4	-4	0	0	18
79832	MEDICAL SOCIAL WORKER II	1	0	0	0	0	1
79835	HEALTH CARE SOCIAL SVCS SUPV	3	-1	1	0	0	3
79837	RESEARCH SPECIALIST I	3	0	0	0	0	3
79861	STAFF DEVELOPMENT OFFICER	1	0	0	0	0	1
79875	SOCIAL SERVICES WORKER III	1	-1	0	0	0	0
79876	SOCIAL SERVICES WORKER IV	1	0	0	0	0	1
98532	SR LABORATORY ASSISTANT	5	0	0	0	0	5
98712	CLINICAL LAB SCIENTIST II	1	0	0	0	0	1
98724	RADIOLOGIC TECHNOLOGIST II	2	0	0	0	0	2
	Sum of Regular	718	93	-8	0	10	813
Temporary							
73837	MEDICAL CONSULTANT	2	0	0	0	0	2
	Sum of Temporary	2	0	0	0	0	2

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Total changes for 4200100000		720	93	-8	0	10	815

Budget Unit: **4200200000 CALIFORNIA CHILDREN'S SERVICES**

Regular

13627	CA CHILDREN SVCS TECH II	22	2	-2	0	0	22
13628	CA CHILDREN SVCS TECH COORD	3	1	-1	0	0	3
13865	OFFICE ASSISTANT II	25	1	-1	0	0	25
13866	OFFICE ASSISTANT III	3	1	-1	0	0	3
13867	SUPV OFFICE ASSISTANT I	0	1	-1	0	0	0
13923	SECRETARY I	0	0	1	0	-1	0
57770	PHYSICAL THERAPIST ASSISTANT	4	0	0	0	0	4
57771	MEDICAL THERAPY UNIT AIDE	8	0	0	0	0	8
57773	OCCUPATIONAL THERAPY ASST	4	0	0	0	0	4
73436	OCCUPATIONAL THERAPIST II	14	0	-1	0	0	13
73446	PHYSICAL THERAPIST II	12	2	-1	0	0	13
73466	SR THERAPIST	8	0	-7	0	0	1
73467	SUPV THERAPIST	8	0	0	0	0	8
73468	COORDINATING THERAPIST	1	1	-1	0	0	1
73469	CHF THERAPIST FOR PHC	1	0	0	0	0	1
73804	PHYSICIAN IV	1	0	0	0	0	1
73923	NURSE MANAGER	1	0	0	0	0	1
73924	ASST NURSE MANAGER	3	1	-1	0	0	3
73992	REGISTERED NURSE V	22	1	-1	0	0	22
74106	ADMIN SVCS ANALYST II	0	1	-1	0	0	0
74114	ADMIN SVCS ASST	2	0	0	0	0	2
79832	MEDICAL SOCIAL WORKER II	1	0	0	0	0	1
	Sum of Regular	143	12	-18	0	-1	136
	Total changes for 4200200000	143	12	-18	0	-1	136

Budget Unit: **4200300000 COMMUNITY HEALTH AGENCY ADMIN**

Regular

13865	OFFICE ASSISTANT II	1	1	0	0	0	2
13866	OFFICE ASSISTANT III	9	0	-1	0	0	8
13923	SECRETARY I	1	0	0	0	0	1

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13924	SECRETARY II	2	0	0	0	0	2
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
13926	EXECUTIVE ASSISTANT II	1	1	-1	0	0	1
15808	BUYER ASSISTANT	1	3	-3	0	0	1
15810	SR BUYER ASSISTANT	1	1	-1	0	0	1
15812	BUYER II	3	0	0	0	0	3
15820	SR SUPPORT SERVICES TECHNICIA	1	0	0	0	0	1
15821	SUPPORT SERVICES SUPERVISOR	2	1	0	0	0	3
15826	SUPPORT SERVICES TECHNICIAN	11	3	-2	0	0	12
15857	MATERIALS MGMT MANAGER	1	0	0	0	0	1
15908	INSURANCE BILLING CLERK	6	1	0	0	1	8
15909	SR INSURANCE BILLING CLERK	1	1	0	0	0	2
15912	ACCOUNTING ASSISTANT II	10	-1	0	0	0	9
15913	SR ACCOUNTING ASST	2	0	0	0	0	2
15916	ACCOUNTING TECHNICIAN II	8	0	0	0	0	8
62340	LEAD HOUSEKEEPER	7	0	0	0	0	7
62341	HOUSEKEEPER	22	0	-1	0	0	21
62771	BLDG MAINTENANCE SUPERVISOR	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	5	0	0	0	0	5
74113	ADMIN SVCS MGR II	1	0	0	0	0	1
74114	ADMIN SVCS ASST	1	1	-1	0	0	1
74140	CHF FINANCE OFFICER, CHA	1	0	0	0	0	1
74213	ADMIN SVCS OFFICER	4	0	0	0	0	4
74255	CHA DIRECTOR/P.H. OFFICER	1	0	0	0	0	1
74293	CONTRACTS & GRANTS ANALYST	1	0	0	0	0	1
74608	CHA INTERNAL AUDIT & COMP MGR	1	0	0	0	0	1
74611	ADMIN DIR - CHA	1	0	0	0	0	1
77412	ACCOUNTANT II	4	0	0	0	0	4
77413	SR ACCOUNTANT	1	0	0	0	0	1
77414	PRINCIPAL ACCOUNTANT	3	0	0	0	0	3
77416	SUPV ACCOUNTANT	1	0	0	0	0	1
77450	PATIENT ACCOUNTS MANAGER	1	1	-1	0	0	1
77499	FISCAL MANAGER	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
86103	IT APPS DEVELOPER III	2	0	0	0	0	2
86115	IT BUSINESS SYS ANALYST II	6	0	-1	0	0	5
86117	IT BUSINESS SYS ANALYST III	6	0	0	0	0	6
86119	IT SUPV BUSINESS SYS ANALYST	3	0	0	0	0	3
86130	IT COMMUNICATIONS TECH II	1	0	0	0	0	1
86141	IT OFFICER II	2	0	0	0	0	2
86144	IT OFFICER III	1	0	0	0	0	1
86164	IT SYSTEMS ADMINISTRATOR II	7	0	0	0	0	7
86165	IT SYSTEMS ADMINISTRATOR III	2	0	0	0	0	2
86167	IT SUPV SYSTEMS ADMINISTRATOR	2	0	0	0	0	2
86183	IT USER SUPPORT TECH II	11	2	0	0	0	13
86185	IT USER SUPPORT TECH III	2	0	0	0	0	2
86187	IT SUPV USER SUPPORT TECH	2	0	0	0	0	2
	Sum of Regular	166	15	-12	0	1	170
	Total changes for 4200300000	166	15	-12	0	1	170

Budget Unit: **4200400000** **ENVIRONMENTAL HEALTH**

Regular

13865	OFFICE ASSISTANT II	5	0	0	0	0	5
13866	OFFICE ASSISTANT III	22	1	-1	0	0	22
13868	SUPV OFFICE ASSISTANT II	3	-1	0	0	0	2
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
15912	ACCOUNTING ASSISTANT II	3	0	0	0	0	3
15913	SR ACCOUNTING ASST	3	0	0	0	0	3
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
15916	ACCOUNTING TECHNICIAN II	2	0	0	0	0	2
73543	DIR OF ENVIRONMENTAL HEALTH	1	0	0	0	0	1
73544	ENV HEALTH SPEC III - DESERT	19	1	-1	0	0	19
73545	ENV HEALTH SPEC III	39	2	-1	0	0	40
73546	ENV HEALTH SPEC IV - DESERT	4	0	0	0	0	4
73547	SUPV ENV HEALTH SPEC - DESERT	3	0	0	0	0	3
73548	ENV HEALTH SPEC IV	11	1	0	0	0	12
73550	SUPV ENV HEALTH SPECIALIST	9	0	0	0	0	9
73557	DEP DIR II, CHA	2	0	0	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
73582	SUPV HAZ MAT MGMT SPECIALIST	5	-1	0	0	0	4
73587	HAZARDOUS MTRLS MGMT SPEC III	19	1	0	0	0	20
73588	HAZARDOUS MTRLS MGMT SPEC IV	4	1	0	0	0	5
73996	CHA PROGRAM CHIEF II	4	0	0	0	0	4
74106	ADMIN SVCS ANALYST II	5	-1	0	0	0	4
74213	ADMIN SVCS OFFICER	1	0	0	0	0	1
76825	ASSOC P.H. PROF ENG/GEOLOGIST	1	0	0	0	0	1
77106	GIS SENIOR ANALYST	0	0	1	0	0	1
98572	ENV HEALTH TECHNICIAN I	10	0	0	0	0	10
98573	ENV HEALTH TECHNICIAN II	3	0	0	0	0	3
	Sum of Regular	180	4	-2	0	0	182
	Total changes for 4200400000	180	4	-2	0	0	182

Budget Unit: **4200600000** **ANIMAL CONTROL SERVICES**

Regular

13865	OFFICE ASSISTANT II	19	5	-2	0	0	22
13866	OFFICE ASSISTANT III	15	1	-2	0	0	14
13867	SUPV OFFICE ASSISTANT I	2	0	0	0	0	2
13923	SECRETARY I	2	0	-1	0	0	1
13924	SECRETARY II	1	0	0	0	0	1
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
15912	ACCOUNTING ASSISTANT II	3	0	0	0	0	3
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	2	1	0	0	0	3
57792	COMMUNITY SERVICES ASSISTANT	1	0	0	0	0	1
62380	ANIMAL CARE TECHNICIAN	23	4	-2	0	0	25
73500	SUPV REG VETERINARY TECHNICIA	2	1	0	0	0	3
73501	REGISTERED VETERINARY TECH	9	3	0	0	0	12
73502	SUPV ANIMAL CARE TECHNICIAN	4	0	0	0	0	4
73503	VETERINARY TECHNICIAN	5	1	0	0	0	6
73504	SR ANIMAL CARE TECHNICIAN	0	1	-1	0	0	0
73505	ANIMAL LICENSE INSPECTOR	0	4	1	0	0	5
73506	SR ANIMAL LICENSE INSPECTOR	0	1	0	0	0	1
73508	ANIMAL ADOPTION COUNSELOR	0	15	-14	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
73509	MOBILE SPAY/NEUTER CLINIC OP	0	1	-1	0	0	0
73510	ANIMAL CONTROL OFFICER II	35	6	-10	0	0	31
73513	OPS CHIEF, ANIMAL SERVICES	9	-1	-3	0	0	5
73514	SR ANIMAL BEHAVIORIST	0	1	-1	0	0	0
73515	SERGEANT OF FIELD SERVICES	5	0	-1	0	0	4
73517	LIEUTENANT OF FIELD SERVICES	3	0	0	0	0	3
73518	ANIMAL BEHAVIORIST	0	2	-2	0	0	0
73519	SR ANIMAL ADOPTION COUNSELOR	0	2	-1	0	0	1
73520	SUPV ANIMAL ADOPTION COUNSEL	0	1	-1	0	0	0
73521	COMMANDER OF FIELD SERVICES	1	0	0	0	0	1
73522	ANIMAL SERVICES DIRECTOR	1	0	0	0	0	1
73523	CHF VETERINARIAN	1	0	0	0	0	1
73524	VETERINARY SURGEON	3	1	-1	0	0	3
73557	DEP DIR II, CHA	2	0	0	0	0	2
73996	CHA PROGRAM CHIEF II	1	0	-1	0	0	0
74105	ADMIN SVCS ANALYST I	0	1	-1	0	0	0
74106	ADMIN SVCS ANALYST II	3	3	-2	0	0	4
74107	CHA PROGRAM COORDINATOR I	1	2	0	0	0	3
74113	ADMIN SVCS MGR II	2	0	-2	0	0	0
74114	ADMIN SVCS ASST	0	1	-1	0	0	0
74121	ADMIN ANALYST	1	0	-1	0	0	0
74213	ADMIN SVCS OFFICER	0	1	-1	0	0	0
74234	SR PUBLIC INFO SPECIALIST	1	0	0	0	0	1
79781	VOLUNTEER SVCS COORDINATOR	4	0	-1	0	0	3
79785	VOLUNTEER SVCS PROGRAM MGR	1	0	0	0	0	1
	Sum of Regular	164	58	-52	0	0	170
	Total changes for 4200600000	164	58	-52	0	0	170

Budget Unit: **4300100000** **RIV CO REGIONAL MEDICAL CNTR**

Per Diem

13884	TEMPORARY ASST EXEMPT - PD	0	0	20	0	0	20
13885	TAP REGISTRY NURSE - PD	0	0	1	0	0	1
13886	TEMPORARY ASST - PD	0	0	195	0	0	195
13897	TEMPORARY ASST - PD-ON CALL	0	0	240	0	0	240

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
57746	LICENSED PSYCHIATRIC TECH - PD	0	0	1	0	0	1
57754	LICENSED VOC NURSE II - PD	0	0	8	0	0	8
57784	NURSING ASSISTANT - PD	0	0	55	0	0	55
73612	PHARMACIST - PD	0	0	3	0	0	3
73806	PHYSICIAN II - PD	0	0	1	0	0	1
73807	PHYSICIAN III - PD	0	0	1	0	0	1
73808	PHYSICIAN IV - PD	0	0	2	0	0	2
73926	HOUSE SUPERVISOR - PD	0	0	3	0	0	3
73957	REGISTERED NURSE I - PD	0	0	1	0	0	1
73958	REGISTERED NURSE III - PD	0	0	41	0	0	41
74016	REGISTERED NURSE-PD III-AN-RS	0	0	25	0	0	25
79801	MEDICAL SOCIAL WORKER II - PD	0	0	2	0	0	2
98702	CLINICAL LAB SCIENTIST - PD	0	0	5	0	0	5
98722	RADIOLOGIC TECHNOLOGIST - PD	0	0	4	0	0	4
98732	RADIOLOGIC SPECIALIST - PD	0	0	2	0	0	2
98742	ELECTROCARDIOGRAPH TECH - PD	0	0	1	0	0	1
98758	RESP CARE PRAC I, REG ELIG-PD	0	0	3	0	0	3
98759	RESP CARE PRACT II, REG - PD	0	0	17	0	0	17
	Sum of Per Diem	0	0	631	0	0	631
Regular							
13260	MEDICAL INTERPRETER/TRANSLAT	6	0	0	0	0	6
13401	ADMISSIONS & COLLECTIONS CLER	65	-1	-3	0	0	61
13403	HOSPITAL ADMISSIONS SUPERVIS	3	0	-1	0	0	2
13404	MEDICAL UNIT CLERK	78	1	-3	0	0	76
13406	SR ADMISSIONS & COLL CLERK	5	0	0	0	0	5
13418	PHARMACY TECHNICIAN II	34	0	0	0	0	34
13419	ELIGIBILITY SERVICES CLERK	4	0	0	0	0	4
13420	SR PHARMACY TECHNICIAN	2	0	0	0	0	2
13425	MEDICAL TRANSPORTATION COOR	1	1	-1	0	0	1
13426	SR MEDICAL RECORDS TECHNICIA	3	0	0	0	0	3
13427	QUALITY ASSURANCE COORDINAT	2	0	0	0	0	2
13428	MEDICAL LIBRARY COORDINATOR	1	0	0	0	0	1
13431	MESSENGER	5	1	-1	0	0	5
13432	SUPV MEDICAL RECORDS TECH	2	0	0	0	0	2

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13433	MEDICAL TRANSPORTATION TECH	21	3	-2	0	0	22
13434	SR MEDICAL TRANSPORTATION TE	2	0	0	0	0	2
13436	SUPV PHARMACY TECHNICIAN	1	0	0	0	0	1
13446	MEDICAL RECORDS CODER	2	0	0	0	0	2
13449	MEDICAL REGISTRAR	3	0	0	0	0	3
13451	CERTIFIED MEDICAL RECORD COD	11	1	-1	0	0	11
13452	SUPV MEDICAL RECORDS CODER	1	0	0	0	0	1
13486	ASST MEDICAL RECORDS MANAGE	1	0	0	0	0	1
13488	MEDICAL RECORDS TECHNICIAN II	27	-1	2	0	0	28
13489	MEDICAL RECORDS MANAGER	1	0	0	0	0	1
13490	MGR, QA & INFECTION CONTROL	2	0	0	0	0	2
13821	MEDICAL TRANSCRIPTIONIST II	13	0	0	0	0	13
13823	SUPV MEDICAL TRANSCRIPTIONIST	1	0	0	0	0	1
13861	TELEPHONE OPERATOR	9	0	0	0	0	9
13865	OFFICE ASSISTANT II	70	3	-6	0	0	67
13866	OFFICE ASSISTANT III	36	0	-3	0	0	33
13867	SUPV OFFICE ASSISTANT I	4	0	-1	0	0	3
13923	SECRETARY I	20	0	-2	0	0	18
13924	SECRETARY II	13	-1	0	0	0	12
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
13960	MEDICAL STAFF COORDINATOR	1	3	-3	0	0	1
15312	REVENUE & RECOVERY TECH I	9	0	0	0	0	9
15313	REVENUE & RECOVERY TECH II	5	0	0	0	0	5
15315	REVENUE & RECOVERY SUPV I	1	0	0	0	0	1
15317	REVENUE & RECOVERY SUPV II	1	0	0	0	0	1
15808	BUYER ASSISTANT	0	2	-2	0	0	0
15811	BUYER I	2	0	0	0	0	2
15812	BUYER II	1	0	0	0	0	1
15831	STOCK CLERK	13	0	-1	0	0	12
15833	STOREKEEPER	4	0	0	0	0	4
15907	INSURANCE BILLING SUPV II	1	0	0	0	0	1
15908	INSURANCE BILLING CLERK	15	0	0	0	0	15

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
15909	SR INSURANCE BILLING CLERK	2	0	0	0	0	2
15911	ACCOUNTING ASSISTANT I	1	0	0	0	0	1
15912	ACCOUNTING ASSISTANT II	19	-1	-1	0	0	17
15913	SR ACCOUNTING ASST	10	0	0	0	0	10
15915	ACCOUNTING TECHNICIAN I	4	0	0	0	0	4
15916	ACCOUNTING TECHNICIAN II	1	0	0	0	0	1
33229	OSHPD INSPECTOR OF RECORD	1	0	0	0	0	1
54430	COOKS ASSISTANT	2	0	0	0	0	2
54431	COOK	5	0	0	0	0	5
54432	SR COOK	2	0	0	0	0	2
54433	SUPV COOK	1	0	0	0	0	1
54451	FOOD SVCS WORKER	10	0	0	0	0	10
54452	SR FOOD SERVICE WORKER	22	0	-2	0	0	20
54456	SUPV FOOD SERVICE WORKER	4	0	0	0	0	4
54611	LAUNDRY WORKER	5	0	0	0	0	5
54614	ASST LAUNDRY MANAGER (D)	1	0	0	0	0	1
57731	DENTAL ASSISTANT	2	0	0	0	0	2
57741	LICENSED PSYCHIATRIC TECH	3	0	0	0	0	3
57745	BEHAVIORAL HLTH SPECIALIST II	4	0	0	0	0	4
57751	LICENSED VOC NURSE I	1	0	0	0	0	1
57752	LICENSED VOC NURSE II	106	1	-4	0	0	103
57755	DIETETIC TECHNICIAN	3	1	0	0	2	6
57758	SURGICAL TECHNICIAN	23	11	-1	0	0	33
57770	PHYSICAL THERAPIST ASSISTANT	1	2	-1	0	0	2
57771	MEDICAL THERAPY UNIT AIDE	7	0	-1	0	0	6
57773	OCCUPATIONAL THERAPY ASST	0	1	-1	0	0	0
57780	TELEMETRY TECHNICIAN	8	0	0	0	0	8
57781	NURSING ASSISTANT	89	-1	31	0	0	119
57782	ANESTHESIOLOGY TECHNICIAN	3	0	-1	0	0	2
57783	LEAD ANESTHESIOLOGY TECHNICI	1	0	0	0	0	1
57791	OPTHALMOLOGY AIDE	3	0	-1	0	0	2
57793	HEALTH SERVICES ASSISTANT	42	-2	-6	0	0	34
62141	GARDENER	3	0	0	0	0	3

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
62142	GROUNDS CREW LEAD WORKER	1	0	0	0	0	1
62171	GROUNDS WORKER	3	-1	0	0	0	2
62201	ACCESS CONTROL TECHNICIAN	2	0	0	0	0	2
62221	MAINTENANCE CARPENTER	2	0	0	0	0	2
62231	MAINTENANCE ELECTRICIAN	4	0	0	0	0	4
62251	MAINTENANCE PAINTER	1	0	0	0	0	1
62271	MAINTENANCE PLUMBER	1	0	0	0	0	1
62340	LEAD HOUSEKEEPER	4	0	0	0	0	4
62341	HOUSEKEEPER	93	0	-3	0	0	90
62344	HOSPITAL ENV SVCS SUPV	4	0	0	0	0	4
62345	HOSPITAL ENV SVCS MGR	0	1	0	0	0	1
62346	ASST HOSPITAL ENV SVCS MGR	1	0	0	0	0	1
62711	AIR CONDITIONING MECHANIC	3	0	0	0	0	3
62735	MAINTENANCE MECHANIC	10	0	0	0	0	10
62750	SUPV STATIONARY ENGINEER	1	0	0	0	0	1
62751	STATIONARY ENGINEER	9	0	0	0	0	9
62762	CHA/RCRMC MAINT PROJ PLANNER	1	0	0	0	0	1
62769	CHF OF HOSPITAL PLANT OPS	1	0	0	0	0	1
62771	BLDG MAINTENANCE SUPERVISOR	0	1	0	0	0	1
72901	HOSPITAL PATIENT ADVOCATE	1	0	0	0	0	1
73425	MANAGER REHABILITATIVE SVCS	1	0	0	0	0	1
73435	SUPV OCCUPATIONAL THERAPIST	0	1	0	0	0	1
73436	OCCUPATIONAL THERAPIST II	8	0	0	0	0	8
73446	PHYSICAL THERAPIST II	9	0	3	0	0	12
73456	SPEECH-LANGUAGE PATHOLOGIST	3	0	-1	0	0	2
73461	RECREATION THERAPIST	1	0	0	0	0	1
73466	SR THERAPIST	1	0	0	0	0	1
73608	SR CLINICAL PHARMACIST	4	0	0	0	0	4
73611	PHARMACIST	3	0	0	0	0	3
73613	SR PHARMACIST	4	1	-2	0	0	3
73615	PHARMACY DIRECTOR	1	0	0	0	0	1
73616	CLINICAL PHARMACIST	13	0	-2	0	0	11
73617	SUPV PHARMACIST	1	0	0	0	0	1

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
73804	PHYSICIAN IV	21	10	7	0	0	38
73856	RES PHYS & SURGEON - 3RD YR-E	33	15	-16	0	0	32
73857	RES PHYS & SURGEON - 4TH YR-E	14	2	-2	0	0	14
73858	RES PHYS & SURGEON - 5TH YR-E	17	17	-1	0	0	33
73876	TRAUMA PROGRAM MANAGER	1	0	0	0	0	1
73879	DIR OF PATIENT CARE MGMT	1	0	0	0	0	1
73884	CHF OF FAMILY MED & PRIM CARE	1	0	0	0	0	1
73885	CHF OF MEDICAL SPECIALTY	4	1	-1	0	0	4
73886	CHF OF MEDICAL STAFF	1	0	0	0	0	1
73913	PRE HOSPITAL LIAISON NURSE	1	0	0	0	0	1
73921	EPIDEMIOLOGIST (D)	1	-1	0	0	0	0
73922	CLINICAL NURSE SPECIALIST	1	-1	0	0	0	0
73923	NURSE MANAGER	13	1	0	0	0	14
73924	ASST NURSE MANAGER	48	2	-4	0	0	46
73925	HOUSE SUPERVISOR	9	2	-1	0	0	10
73941	NURSING EDUCATION INSTRUCTO	6	0	0	0	0	6
73948	MANAGER, AMBULATORY CARE	1	0	0	0	0	1
73952	REGISTERED NURSE II	7	-6	0	0	0	1
73953	REGISTERED NURSE III	22	6	-3	0	0	25
73966	ASST DIR OF NURSING SVCS	4	1	0	0	0	5
73967	ASSOC CHF NURSING OFFICER	2	0	-2	0	0	0
73968	CHF NURSING OFFICER	1	0	0	0	0	1
73976	PHYSICIAN ASSISTANT III	0	1	2	0	0	3
73978	PHYSICIAN ASSISTANT FELLOWSHI	2	0	-1	0	0	1
73984	NURSE PRACTITIONER III	8	0	-1	0	0	7
73991	REGISTERED NURSE IV	17	0	4	0	0	21
73992	REGISTERED NURSE V	796	5	58	0	0	859
73998	PATIENT SVCS COORDINATOR	9	0	0	0	0	9
74022	CLINICAL INFORMATICS OFFICER	1	0	-1	0	0	0
74095	FOUNDATION EXECUTIVE DIR RCR	1	0	0	0	0	1
74103	ASST HOSPITAL ADMINISTRATOR II	7	1	0	0	0	8
74106	ADMIN SVCS ANALYST II	8	1	-1	0	0	8
74113	ADMIN SVCS MGR II	3	0	0	0	0	3

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74114	ADMIN SVCS ASST	1	0	0	0	0	1
74127	SR ADMINISTRATIVE ANALYST	1	0	0	0	0	1
74135	ASSOC MEDICAL CENTER ADMIN	1	0	0	0	0	1
74139	CHF FINANCE OFFICER, RCRMC	1	0	0	0	0	1
74173	MANAGED CARE DIRECTOR	1	0	0	0	0	1
74174	PROVIDER RELATIONS SUPERVISO	1	0	0	0	0	1
74199	ADMIN SVCS SUPV	1	0	0	0	0	1
74211	HOSPITAL BUD REIMBURSEMNT OF	1	0	0	0	0	1
74213	ADMIN SVCS OFFICER	3	2	0	0	1	6
74233	PUBLIC INFORMATION SPECIALIST	1	0	0	0	0	1
74234	SR PUBLIC INFO SPECIALIST	0	1	0	0	0	1
74250	HOSPITAL ADMINISTRATOR	1	0	0	0	0	1
74273	ADMIN SVCS MGR III	1	0	0	0	0	1
76401	HEALTHCARE ADMIN SURVEYOR M	1	0	-1	0	0	0
76402	HEALTHCARE ADMIN SURVEYOR	1	0	0	0	0	1
77409	BUDGET/REIMBURSEMENT ANALYS	2	0	0	0	0	2
77412	ACCOUNTANT II	4	1	-1	0	0	4
77413	SR ACCOUNTANT	1	0	0	0	0	1
77414	PRINCIPAL ACCOUNTANT	1	1	-1	0	0	1
77467	PATIENT ACCTS OFFICER, RCRMC	1	0	0	0	0	1
77491	HOSPITAL FISCAL OFFICER	1	0	0	0	0	1
77493	ASST PATIENT ACCT OFFCR,RCRM	1	0	0	0	0	1
78312	DIETITIAN II	7	2	0	0	0	9
78314	SUPV DIETITIAN	1	0	0	0	0	1
78334	ASST DIETARY SERVICES MANAGE	1	0	0	0	0	1
78335	FOOD & NUTRITION SERVICES MGR	1	0	0	0	0	1
79715	SR CLINICAL PSYCHOLOGIST	4	0	-1	0	0	3
79717	M.H. SERVICE SUPV-A	2	0	0	0	0	2
79718	M.H. SERVICE SUPV-B	1	0	0	0	0	1
79742	CLINICAL THERAPIST II	18	3	-5	0	0	16
79785	VOLUNTEER SVCS PROGRAM MGR	1	0	0	0	0	1
79832	MEDICAL SOCIAL WORKER II	17	1	-1	0	0	17
79833	MEDICAL SOCIAL WORKER SUPV	1	-1	0	0	0	0

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
79835	HEALTH CARE SOCIAL SVCS SUPV	0	1	0	0	0	1
79838	RESEARCH SPECIALIST II	1	0	0	0	0	1
86115	IT BUSINESS SYS ANALYST II	3	0	-1	0	0	2
86117	IT BUSINESS SYS ANALYST III	8	0	-1	0	0	7
86119	IT SUPV BUSINESS SYS ANALYST	3	-1	0	0	0	2
86131	IT COMMUNICATIONS TECH III	2	0	0	0	0	2
86139	IT DATABASE ADMIN III	1	1	0	0	0	2
86141	IT OFFICER II	2	0	0	0	0	2
86143	IT OFFICER I	1	0	0	0	0	1
86144	IT OFFICER III	1	0	0	0	0	1
86153	IT NETWORK ADMIN II	1	0	0	0	0	1
86155	IT NETWORK ADMIN III	1	0	0	0	0	1
86164	IT SYSTEMS ADMINISTRATOR II	0	0	1	0	0	1
86165	IT SYSTEMS ADMINISTRATOR III	2	0	0	0	0	2
86174	IT SYSTEMS OPERATOR II	7	2	-2	0	0	7
86175	IT SYSTEMS OPERATOR III	5	0	0	0	0	5
86177	IT SUPV SYSTEMS OPERATOR	1	0	0	0	0	1
86183	IT USER SUPPORT TECH II	1	0	0	0	0	1
86185	IT USER SUPPORT TECH III	4	1	0	0	0	5
86187	IT SUPV USER SUPPORT TECH	1	0	0	0	0	1
97351	MEDICAL ELECTRONICS TECHNICIA	6	1	-1	0	0	6
97355	SR MEDICAL ELECTRONICS TECH	1	0	0	0	0	1
98536	PATHOLOGY AIDE	2	0	0	0	0	2
98537	HISTOLOGY TECHNICIAN	2	0	0	0	0	2
98546	CLINICAL LAB ASSISTANT	24	0	-1	0	0	23
98548	SR CLINICAL LAB ASSISTANT	2	0	0	0	0	2
98561	HOSPITAL SUPPLY TECHNICIAN	28	0	-1	0	0	27
98562	SR HOSPITAL SUPPLY TECHNICIAN	1	0	0	0	0	1
98563	LEAD HOSPITAL SUPPLY TECH	5	0	0	0	0	5
98712	CLINICAL LAB SCIENTIST II	18	0	8	0	0	26
98713	SR CLINICAL LAB SCIENTIST	5	0	0	0	0	5
98714	CHF CLINICAL LAB SCIENTIST	1	0	0	0	0	1
98715	CLINICAL LAB SCIENTIST - Q.C.	2	0	0	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
98724	RADIOLOGIC TECHNOLOGIST II	17	0	0	0	0	17
98725	SR RADIOLOGIC TECHNOLOGIST	1	0	0	0	0	1
98726	RADIOLOGIC TECHNOLOGIST SUPV	2	0	0	0	0	2
98731	CYTOTECHNOLOGIST	1	0	0	0	0	1
98734	RADIOLOGIC SPECIALIST II	25	0	0	0	0	25
98736	RADIOLOGIC SPECIALIST SUPV	3	0	0	0	0	3
98740	CARDIAC SONOGRAPHER	2	1	0	0	0	3
98741	ELECTROCARDIOGRAPH TECH	3	0	0	0	0	3
98754	SUPV RESP CARE PRACTITIONER	7	0	1	0	0	8
98755	CARDIOPULMONARY MANAGER	1	0	0	0	0	1
98756	ASST CHF OF RESP THERAPY	1	0	0	0	0	1
98757	RESP CARE PRACT II, REG	36	-1	-3	0	0	32
98761	ELECTROENCEPHALO TECH, REG	2	0	0	0	0	2
98789	ORTHOPEDIC TECHNICIAN	2	0	0	0	0	2
98790	SR ORTHOPEDIC TECHNICIAN	1	0	0	0	0	1
98797	DIAGNOSTIC IMAGING MANAGER	1	0	0	0	0	1
	Sum of Regular	2,473	99	6	0	3	2,581
Temporary							
13871	TEMPORARY ASST	0	0	176	0	0	176
	Sum of Temporary	0	0	176	0	0	176
	Total changes for 4300100000	2,473	99	813	0	3	3,388

Budget Unit: **4300200000** **MED INDIGENT SERVICES PROGRAM**

Regular							
13865	OFFICE ASSISTANT II	2	0	1	0	0	3
13866	OFFICE ASSISTANT III	1	0	0	0	0	1
13924	SECRETARY II	0	0	1	0	0	1
15911	ACCOUNTING ASSISTANT I	2	0	0	0	0	2
15912	ACCOUNTING ASSISTANT II	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	2	0	0	0	0	2
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
15917	SUPV ACCOUNTING TECHNICIAN	1	0	1	0	0	2
15922	ELIGIBILITY SPECIALIST II	16	0	4	0	0	20
15923	ELIGIBILITY SPECIALIST III	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
15924	ELIGIBILITY SPECIALIST SUPV I	3	0	0	0	0	3
15925	ELIGIBILITY SPECIALIST SUPV II	1	0	0	0	0	1
	Sum of Regular	31	0	7	0	0	38
	Total changes for 4300200000	31	0	7	0	0	38

Budget Unit: **4300300000** **DETENTION HEALTH SYSTEMS**

Regular

13404	MEDICAL UNIT CLERK	1	5	-6	0	0	0
13418	PHARMACY TECHNICIAN II	2	0	0	0	0	2
13426	SR MEDICAL RECORDS TECHNICIA	1	0	0	0	0	1
13488	MEDICAL RECORDS TECHNICIAN II	1	1	0	0	0	2
13924	SECRETARY II	1	0	0	0	0	1
57731	DENTAL ASSISTANT	1	0	0	0	0	1
57753	LICENSED VOC NURSE - ADULT DE	5	6	-7	0	0	4
73802	PHYSICIAN II	0	2	0	0	0	2
73804	PHYSICIAN IV	3	1	-3	0	0	1
73878	CHF OF DENTISTRY	1	0	0	0	0	1
73885	CHF OF MEDICAL SPECIALTY	1	0	0	0	0	1
73955	INSTITUTIONAL NURSE	42	25	-36	0	0	31
73963	SUPV INSTITUTIONAL NURSE	2	1	-2	0	0	1
73969	SR INSTITUTIONAL NURSE	2	6	-6	0	0	2
73976	PHYSICIAN ASSISTANT III	0	1	-1	0	0	0
98724	RADIOLOGIC TECHNOLOGIST II	1	0	-1	0	0	0
	Sum of Regular	64	48	-62	0	0	50
	Total changes for 4300300000	64	48	-62	0	0	50

Budget Unit: **4500100000** **WASTE MANAGEMENT**

Regular

13325	GATE SERVICES ASSISTANT	10	1	1	0	0	12
13326	SR GATE SERVICES ASST	2	0	0	0	0	2
13865	OFFICE ASSISTANT II	1	0	0	0	0	1
13866	OFFICE ASSISTANT III	3	-1	0	0	0	2
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
15811	BUYER I	1	0	0	0	0	1

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
15824	EQUIPMENT PARTS HELPER	1	0	-1	0	0	0
15825	EQUIPMENT PARTS STOREKEEPER	1	0	0	0	0	1
15912	ACCOUNTING ASSISTANT II	5	0	0	0	0	5
15913	SR ACCOUNTING ASST	5	-1	-1	0	0	3
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
15917	SUPV ACCOUNTING TECHNICIAN	1	0	0	0	0	1
15928	ACCOUNTING MANAGER	1	0	0	0	0	1
62202	LABORER	24	-6	-18	0	0	0
62901	MECHANICS HELPER	3	0	-1	0	0	2
62920	EQUIPMENT MAINT WORKER	1	0	0	0	0	1
62951	GARAGE ATTENDANT	1	0	0	0	0	1
66406	AUTOMOTIVE MECHANIC I	1	0	0	0	0	1
66411	AUTOMOTIVE MECHANIC II	1	0	0	0	0	1
66413	EQUIPMENT SERVICE SUPV	1	0	0	0	0	1
66441	TRUCK MECHANIC	2	0	-1	0	0	1
66451	HEAVY EQUIPMENT MECHANIC	0	0	2	0	0	2
66455	SR HEAVY EQUIPMENT MECHANIC	3	0	0	0	0	3
66502	CREW LEAD WORKER	11	3	0	0	0	14
66507	OPS & MAINT SUPERVISOR	10	0	0	0	0	10
66511	EQUIPMENT OPERATOR I	11	-1	0	0	0	10
66512	EQUIPMENT OPERATOR II	22	-3	1	0	0	20
66513	SR EQUIPMENT OPERATOR	4	1	0	0	0	5
66529	MAINTENANCE & CONST WRKR	12	5	5	0	0	22
66571	RECYCLING SPECIALIST II	1	0	0	0	0	1
66575	LANDFILL SAFETY MONITOR	16	0	-3	0	0	13
66578	WASTE MGMT PROJECTS SUPERVI	1	0	0	0	0	1
73561	HAZARDOUS WASTE INSP I	2	0	0	0	0	2
73562	HAZARDOUS WASTE INSP II	7	0	-1	0	0	6
73563	SR HAZARDOUS WASTE INSP	1	0	0	0	0	1
74105	ADMIN SVCS ANALYST I	0	0	1	0	0	1
74114	ADMIN SVCS ASST	5	0	0	0	0	5
74191	ADMIN SVCS MGR I	1	0	0	0	0	1
74198	WASTE MGMT PROGRAM COORDIN	4	0	-1	0	0	3

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74208	WASTE MGMT PROGRAM ADMIN	1	0	0	0	0	1
74806	URBAN/REGIONAL PLANNER IV	2	-1	0	0	0	1
74809	PRINCIPAL PLANNER	0	0	1	0	0	1
76419	ENGINEERING PROJECT MGR	1	0	0	0	0	1
76422	ASST CIVIL ENGINEER	3	0	0	0	0	3
76423	ASSOC ENGINEER	2	0	0	0	0	2
76424	ASSOC CIVIL ENGINEER	5	1	0	0	0	6
76425	SR CIVIL ENGINEER	1	0	1	0	0	2
76478	ASST CHF WASTE MGMT ENGINEE	1	0	0	0	0	1
77412	ACCOUNTANT II	1	0	0	0	0	1
79781	VOLUNTEER SVCS COORDINATOR	0	1	0	0	0	1
86103	IT APPS DEVELOPER III	1	0	0	0	0	1
86143	IT OFFICER I	1	0	0	0	0	1
86153	IT NETWORK ADMIN II	1	0	0	0	0	1
86183	IT USER SUPPORT TECH II	1	0	-1	0	0	0
86185	IT USER SUPPORT TECH III	2	0	0	0	0	2
97421	ENGINEERING AIDE	1	0	1	0	0	2
97431	ENGINEERING TECH I	3	0	0	0	0	3
97432	ENGINEERING TECH II	6	0	0	0	0	6
97433	SR ENG TECH	4	0	-1	0	0	3
	Sum of Regular	215	-1	-16	0	0	198
Temporary							
74180	PROF STUDENT INTERN	1	-1	0	0	0	0
	Sum of Temporary	1	-1	0	0	0	0
	Total changes for 4500100000	216	-2	-16	0	0	198

Budget Unit: **5100100000** **DPSS ADMINISTRATION**

Regular							
13131	SR HUMAN RESOURCES CLERK	5	0	0	0	0	5
13396	CUSTOMER SUPPORT REP II	38	0	0	0	0	38
13397	CUSTOMER SUPPORT REP III	3	0	0	0	0	3
13398	LEAD CUSTOMER SUPPORT REP	4	0	0	0	0	4
13399	SUPV CUSTOMER SUPPORT REP	2	0	0	0	0	2
13416	DPSS OFFICE SUPPORT SUPV	66	-1	-1	0	0	64

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13419	ELIGIBILITY SERVICES CLERK	31	0	-1	0	0	30
13439	HUMAN RESOURCES CLERK	3	-2	0	0	0	1
13602	ELIGIBILITY TECHNICIAN II	715	121	-52	0	0	784
13603	ELIGIBILITY TECHNICIAN III	161	6	-12	0	0	155
13604	ELIGIBILITY SUPERVISOR	107	14	-5	0	0	116
13609	SUPV PROGRAM SPECIALIST	6	0	0	0	0	6
13786	DATA ENTRY OPERATOR II	1	0	0	0	0	1
13865	OFFICE ASSISTANT II	241	9	-5	0	0	245
13866	OFFICE ASSISTANT III	279	47	-26	0	0	300
13867	SUPV OFFICE ASSISTANT I	1	0	0	0	0	1
13924	SECRETARY II	9	0	0	0	0	9
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
13930	LEGAL SUPPORT ASST I	1	0	0	0	0	1
15312	REVENUE & RECOVERY TECH I	2	0	0	0	0	2
15313	REVENUE & RECOVERY TECH II	8	0	0	0	0	8
15317	REVENUE & RECOVERY SUPV II	1	0	0	0	0	1
15808	BUYER ASSISTANT	4	0	0	0	0	4
15811	BUYER I	1	0	0	0	0	1
15812	BUYER II	1	0	0	0	0	1
15820	SR SUPPORT SERVICES TECHNICIA	1	0	0	0	0	1
15821	SUPPORT SERVICES SUPERVISOR	1	0	0	0	0	1
15826	SUPPORT SERVICES TECHNICIAN	8	0	0	0	0	8
15833	STOREKEEPER	2	0	0	0	0	2
15911	ACCOUNTING ASSISTANT I	2	-1	0	0	0	1
15912	ACCOUNTING ASSISTANT II	12	-2	-2	0	0	8
15913	SR ACCOUNTING ASST	8	-2	0	0	0	6
15915	ACCOUNTING TECHNICIAN I	36	-2	1	0	-1	34
15916	ACCOUNTING TECHNICIAN II	2	0	0	0	0	2
15917	SUPV ACCOUNTING TECHNICIAN	7	0	-1	0	0	6
37570	INVESTIGATIVE TECH I	0	1	1	0	0	2
37571	INVESTIGATIVE TECH II	28	-5	0	0	0	23
37572	SR INVESTIGATIVE TECHNICIAN	3	1	0	0	0	4
37573	SUPV INVESTIGATIVE TECH	4	0	0	0	0	4

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
37591	WELFARE FRAUD INVESTIGATOR	22	1	0	0	0	23
37592	SUPV WELFARE FRAUD INV	4	0	0	0	0	4
37593	DPSS CHIEF OF INVESTIGATIONS	1	0	0	0	0	1
57726	SOCIAL SERVICES ASSISTANT	64	-1	-3	0	0	60
57728	EMPLOYMENT SVCS TECH	3	0	0	0	0	3
57792	COMMUNITY SERVICES ASSISTANT	16	-5	0	0	0	11
62971	RECORDS & SUPPORT ASSISTANT	2	0	0	0	0	2
73834	SUPV RESEARCH SPECIALIST	2	0	-1	0	0	1
74105	ADMIN SVCS ANALYST I	1	-1	0	0	0	0
74106	ADMIN SVCS ANALYST II	29	5	-2	0	0	32
74113	ADMIN SVCS MGR II	11	-1	0	0	0	10
74114	ADMIN SVCS ASST	8	1	0	0	0	9
74121	ADMIN ANALYST	4	-1	0	0	0	3
74127	SR ADMINISTRATIVE ANALYST	5	2	-1	0	1	7
74151	COMMUNITY PRGM SPECIALIST I	5	0	0	0	0	5
74152	COMMUNITY PRGM SPECIALIST II	6	0	0	0	0	6
74158	SR COMMUNITY PROG SPECIALIST	0	0	1	0	0	1
74163	COMMUNITY ACTION DIVISION SUP	1	0	0	0	0	1
74182	DPSS CONTRACTS & SVCS OFFICE	2	-1	1	0	0	2
74185	DEVELOPMENT SPECIALIST III	1	0	0	0	0	1
74191	ADMIN SVCS MGR I	1	0	0	0	0	1
74199	ADMIN SVCS SUPV	7	0	1	0	0	8
74213	ADMIN SVCS OFFICER	0	1	-1	0	0	0
74243	ASST DIR OF PUBLIC SOCIAL SVCS	2	1	0	0	0	3
74248	DIR OF PUBLIC SOCIAL SERVICES	1	0	0	0	0	1
74273	ADMIN SVCS MGR III	1	0	0	0	0	1
74740	DEPT H.R. COORDINATOR	2	0	0	0	0	2
74904	DPSS FACILITIES PROJ PLANNER	5	-1	0	0	0	4
77412	ACCOUNTANT II	17	-2	0	0	-3	12
77413	SR ACCOUNTANT	15	0	0	0	0	15
77414	PRINCIPAL ACCOUNTANT	9	-2	2	0	0	9
77416	SUPV ACCOUNTANT	1	0	0	0	0	1
77419	SYSTEMS ACCOUNTANT II	4	-1	-1	0	0	2

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
77427	DPSS SR INTERNAL AUDITOR	7	1	0	0	3	11
77499	FISCAL MANAGER	5	0	0	0	0	5
79802	SR EMPLOYMENT SVCS COUNSEL	27	8	-8	0	0	27
79807	ASST REG MGR-CHILDREN SOC SV	16	-1	0	0	-1	14
79808	CHILDREN'S SOCIAL SVC WKR III	1	0	0	0	0	1
79810	CHILDREN'S SOCIAL SVC WKR V	471	-51	16	0	0	436
79811	CHILDREN'S SOCIAL SVC SUPV I	8	0	0	0	0	8
79812	CHILDREN'S SOCIAL SVC SUPV II	107	-13	0	0	0	94
79815	PROGRAM SPECIALIST II, C.S.S.	12	0	0	0	0	12
79816	SR PROGRAM SPECIALIST - C.S.S.	2	1	0	0	0	3
79817	REGIONAL MGR, CHILD SOC SVCS	16	-2	0	0	1	15
79819	PROGRAM SPECIALIST II	29	-1	0	0	0	28
79820	SR PROGRAM SPECIALIST	6	-1	0	0	0	5
79821	APPEALS SPECIALIST	12	0	0	0	0	12
79837	RESEARCH SPECIALIST I	7	0	0	0	0	7
79838	RESEARCH SPECIALIST II	4	0	0	0	0	4
79860	COMPUTER BASED TRAINING OFFC	4	1	0	0	0	5
79861	STAFF DEVELOPMENT OFFICER	5	1	0	0	0	6
79862	COMPUTER BASED TRAINING SUPV	1	0	0	0	0	1
79863	STAFF DEVELOPMENT MANAGER	2	0	0	0	0	2
79872	INTAKE SPECIALIST	33	-1	0	0	0	32
79874	SOCIAL SERVICES WORKER II	109	-19	-6	0	0	84
79876	SOCIAL SERVICES WORKER IV	1	0	0	0	0	1
79878	SOCIAL SERVICES WORKER V	59	4	-3	0	0	60
79880	SOCIAL SERVICES SUPERVISOR II	8	3	-2	0	0	9
79881	TRAINING OFFICER	7	0	-1	0	0	6
79882	SR TRAINING OFFICER	1	0	0	0	0	1
79883	REGIONAL MGR, SOCIAL SERVICES	5	0	0	0	0	5
79885	DEP DIR OF PUBLIC SOCIAL SVCS	7	0	0	0	0	7
79886	SOCIAL SERVICE PLANNER	3	-1	0	0	0	2
79890	SUPV EMPLOYMENT SVCS COUNS	26	-2	-1	0	0	23
79891	EMPLOYMENT SVCS COUNSELOR II	153	1	-11	0	0	143
79893	REGIONAL MGR, ESS	2	0	0	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
79894	REGIONAL MGR, CALWORKS	22	-3	1	0	0	20
86101	IT APPS DEVELOPER II	2	3	0	0	0	5
86103	IT APPS DEVELOPER III	11	-2	0	0	0	9
86105	IT SUPV APPS DEVELOPER	4	-1	0	0	0	3
86111	BUSINESS PROCESS ANALYST II	5	-1	0	0	0	4
86115	IT BUSINESS SYS ANALYST II	4	0	0	0	0	4
86117	IT BUSINESS SYS ANALYST III	9	-1	0	0	0	8
86119	IT SUPV BUSINESS SYS ANALYST	5	-1	0	0	0	4
86121	IT COMMUNICATIONS ANALYST II	2	1	-1	0	0	2
86125	IT SUPV COMMUNICATIONS ANALY	1	0	0	0	0	1
86139	IT DATABASE ADMIN III	3	0	0	0	0	3
86141	IT OFFICER II	2	-2	0	0	0	0
86143	IT OFFICER I	2	0	0	0	0	2
86144	IT OFFICER III	1	0	0	0	0	1
86153	IT NETWORK ADMIN II	2	0	0	0	0	2
86164	IT SYSTEMS ADMINISTRATOR II	5	0	0	0	0	5
86165	IT SYSTEMS ADMINISTRATOR III	4	0	0	0	0	4
86167	IT SUPV SYSTEMS ADMINISTRATOR	2	0	0	0	0	2
86183	IT USER SUPPORT TECH II	16	2	-2	0	0	16
86185	IT USER SUPPORT TECH III	8	-1	0	0	0	7
86187	IT SUPV USER SUPPORT TECH	2	1	-1	0	0	2
92701	GRAPHIC ARTS ILLUSTRATOR	3	0	0	0	0	3
98555	IT FORENSICS EXAMINER III	0	1	-1	0	0	0
	Sum of Regular	3,328	103	-127	0	0	3,304
Temporary							
13871	TEMPORARY ASST	0	0	11	0	0	11
13898	COUNTY TEMPORARY	9	0	-3	0	0	6
74180	PROF STUDENT INTERN	0	3	-1	0	0	2
	Sum of Temporary	9	3	7	0	0	19
	Total changes for 5100100000	3,337	106	-120	0	0	3,323

Budget Unit: **5200100000** **LOCAL INITIATIVE ADMIN DCA**

Regular							
13866	OFFICE ASSISTANT III	3	0	0	0	0	3

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
15831	STOCK CLERK	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
57792	COMMUNITY SERVICES ASSISTANT	6	-1	1	0	0	6
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74114	ADMIN SVCS ASST	3	0	0	0	0	3
74133	DIR OF COMMUNITY ACTION	1	0	0	0	0	1
74141	ASST DIR OF COMMUNITY ACTION	1	0	0	0	0	1
74151	COMMUNITY PRGM SPECIALIST I	2	0	0	0	0	2
74152	COMMUNITY PRGM SPECIALIST II	1	0	0	0	0	1
74163	COMMUNITY ACTION DIVISION SUP	1	0	0	0	0	1
74234	SR PUBLIC INFO SPECIALIST	1	0	0	0	0	1
77412	ACCOUNTANT II	1	0	0	0	0	1
77416	SUPV ACCOUNTANT	1	0	0	0	0	1
79820	SR PROGRAM SPECIALIST	1	0	0	0	0	1
	Sum of Regular	26	-1	1	0	0	26
	Total changes for 5200100000	26	-1	1	0	0	26

Budget Unit: **5200200000 DCA-LOCAL INITIATIVE PROGRAM**

Regular

13468	ENERGY PROGRAM TECHNICIAN II	1	0	0	0	0	1
13865	OFFICE ASSISTANT II	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	1	0	0	0	0	1
57792	COMMUNITY SERVICES ASSISTANT	6	0	0	0	0	6
74114	ADMIN SVCS ASST	1	0	0	0	0	1
74151	COMMUNITY PRGM SPECIALIST I	1	0	0	0	0	1
74158	SR COMMUNITY PROG SPECIALIST	1	-1	1	0	0	1
74163	COMMUNITY ACTION PROGRAM SU	0	1	-1	0	0	0
77412	ACCOUNTANT II	1	0	0	0	0	1
97463	HOUSING SPECIALIST II	2	0	0	0	0	2
	Sum of Regular	15	0	0	0	0	15
	Total changes for 5200200000	15	0	0	0	0	15

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit:	**5200300000 DCA - OTHER PROGRAMS**						
Regular							
74152	COMMUNITY PRGM SPECIALIST II	1	0	0	0	0	1
	Sum of Regular	1	0	0	0	0	1
Temporary							
13871	TEMPORARY ASST	0	0	1	0	0	1
	Sum of Temporary	0	0	1	0	0	1
	Total changes for 5200300000	1	0	1	0	0	2
Budget Unit:	**5300100000 OFFICE ON AGING - TITLE III**						
Regular							
13609	SUPV PROGRAM SPECIALIST	2	0	0	0	0	2
13865	OFFICE ASSISTANT II	3	0	0	0	0	3
13866	OFFICE ASSISTANT III	4	0	0	0	0	4
15912	ACCOUNTING ASSISTANT II	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
15915	ACCOUNTING TECHNICIAN I	2	0	0	0	0	2
57710	SR CITIZEN NUTRITN PRG STE MGR	1	0	0	0	0	1
57711	SR CITIZEN NUTRITION PROG ASST	1	0	0	0	0	1
57729	OFFICE ON AGING SERVICES ASST	9	0	0	0	0	9
73457	HEALTH EDUCATION ASST I	1	0	0	0	0	1
73952	REGISTERED NURSE II	0	1	0	0	0	1
73992	REGISTERED NURSE V	2	0	0	0	0	2
74090	OFFICE ON AGING PROGRAM SPEC	2	3	0	0	0	5
74091	OFFICE ON AGING PROGRM SPEC I	4	-1	0	0	0	3
74105	ADMIN SVCS ANALYST I	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74114	ADMIN SVCS ASST	1	0	0	0	0	1
74132	PROGRAM OPERATIONS SUPERVIS	1	0	0	0	0	1
74288	DEP DIR FOR ADMIN-SR SVCS SYS	1	0	0	0	0	1
74289	DEP DIR FOR SENIOR PROGRAMS	1	0	0	0	0	1
74290	DIR OF SENIOR SERVICE SYSTEMS	1	0	0	0	0	1
74291	CONTRACTS & SERVICES OFFICER	1	0	0	0	0	1
77411	ACCOUNTANT I	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
77412	ACCOUNTANT II	1	0	0	0	0	1
77413	SR ACCOUNTANT	2	0	0	0	0	2
78345	NUTRITIONIST	1	0	0	0	0	1
79717	M.H. SERVICE SUPV-A	1	0	0	0	0	1
79781	VOLUNTEER SVCS COORDINATOR	1	0	0	0	0	1
79875	SOCIAL SERVICES WORKER III	3	0	0	0	0	3
79876	SOCIAL SERVICES WORKER IV	3	0	0	0	0	3
79878	SOCIAL SERVICES WORKER V	6	2	-1	0	0	7
79880	SOCIAL SERVICES SUPERVISOR II	1	0	0	0	0	1
86185	IT USER SUPPORT TECH III	1	0	0	0	0	1
	Sum of Regular	62	5	-1	0	0	66
Temporary							
57721	SERVICE AIDE I	84	55	-50	0	0	89
79777	TITLE V PROGRAM ASSISTANT	6	0	0	0	0	6
79778	SUPV TITLE V PROGRAM ASSISTAN	2	0	0	0	0	2
	Sum of Temporary	92	55	-50	0	0	97
	Total changes for 5300100000	154	60	-51	0	0	163

Budget Unit: **5400100000 VETERANS SERVICES**

Regular							
13865	OFFICE ASSISTANT II	3	0	0	0	0	3
13866	OFFICE ASSISTANT III	1	0	0	0	0	1
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
74210	DIR OF VETERANS SERVICES	1	0	0	0	0	1
79912	VETERANS SERVICES REP II	3	0	0	0	0	3
79913	SR VETERANS SERVICES REP	2	0	0	0	0	2
79915	ASST DIR OF VETERANS SVCS	1	0	0	0	0	1
	Sum of Regular	12	0	0	0	0	12
	Total changes for 5400100000	12	0	0	0	0	12

Budget Unit: **6300100000 COOPERATIVE EXTENSION**

Regular							
13865	OFFICE ASSISTANT II	2	0	0	0	0	2
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
15911	ACCOUNTING ASSISTANT I	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
79781	VOLUNTEER SVCS COORDINATOR	1	0	0	0	0	1
	Sum of Regular	5	0	0	0	0	5
	Total changes for 6300100000	5	0	0	0	0	5

Budget Unit: **7200100000** **FACILITIES MANAGEMENT ADMINISTRATION**

Regular

13865	OFFICE ASSISTANT II	1	0	1	0	0	2
13866	OFFICE ASSISTANT III	6	-5	0	0	0	1
13868	SUPV OFFICE ASSISTANT II	1	-1	0	0	0	0
13924	SECRETARY II	2	0	0	0	0	2
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
15812	BUYER II	1	0	0	0	0	1
15831	STOCK CLERK	2	0	0	0	0	2
15833	STOREKEEPER	2	0	0	0	0	2
15912	ACCOUNTING ASSISTANT II	3	0	-1	0	0	2
15913	SR ACCOUNTING ASST	6	0	-2	0	0	4
15915	ACCOUNTING TECHNICIAN I	6	2	1	0	0	9
15916	ACCOUNTING TECHNICIAN II	3	0	2	0	0	5
15917	SUPV ACCOUNTING TECHNICIAN	1	0	0	0	0	1
74105	ADMIN SVCS ANALYST I	2	-1	0	0	0	1
74106	ADMIN SVCS ANALYST II	2	1	0	0	0	3
74113	ADMIN SVCS MGR II	1	0	0	0	0	1
74196	DEP DIR OF EDA	1	0	0	0	0	1
74197	ASST DIR, FACILITIES MGMT	2	-2	0	0	0	0
74199	ADMIN SVCS SUPV	2	0	0	0	0	2
74231	ASST DIR OF EDA	2	0	0	0	0	2
74275	DEP DIR, FACILITIES MGT - ADMN	1	0	-1	0	0	0
74299	EDA PROCUREMENT SVCS MGR	1	0	0	0	0	1
74740	DEPT H.R. COORDINATOR	1	0	0	0	0	1
77411	ACCOUNTANT I	0	1	0	0	0	1
77412	ACCOUNTANT II	6	0	1	0	0	7
77413	SR ACCOUNTANT	2	0	0	0	0	2
77414	PRINCIPAL ACCOUNTANT	3	0	0	0	0	3
77416	SUPV ACCOUNTANT	2	0	0	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
77499	FISCAL MANAGER	1	0	0	0	0	1
86103	IT APPS DEVELOPER III	0	1	0	0	0	1
86111	BUSINESS PROCESS ANALYST II	1	0	0	0	0	1
86117	IT BUSINESS SYS ANALYST III	1	0	0	0	0	1
86143	IT OFFICER I	1	-1	0	0	0	0
86155	IT NETWORK ADMIN III	1	0	0	0	0	1
86183	IT USER SUPPORT TECH II	1	0	0	0	0	1
86185	IT USER SUPPORT TECH III	2	0	0	0	0	2
86187	IT SUPV USER SUPPORT TECH	1	0	0	0	0	1
97421	ENGINEERING AIDE	1	0	-1	0	0	0
	Sum of Regular	73	-5	0	0	0	68
	Total changes for 7200100000	73	-5	0	0	0	68

Budget Unit: **7200200000** **FACILITIES MANAGEMENT CUSTODIAL**

Regular							
13865	OFFICE ASSISTANT II	0	1	1	0	0	2
13866	OFFICE ASSISTANT III	2	0	0	0	0	2
13924	SECRETARY II	1	0	0	0	0	1
62321	CUSTODIAN	160	0	4	0	0	164
62322	LEAD CUSTODIAN	33	0	0	0	0	33
62323	CUSTODIAL SVCS SUPERINTENDE	3	0	0	0	0	3
62324	CUSTODIAL SUPERVISOR	7	0	0	0	0	7
62326	DEP DIR FOR CUSTODIAL SERVICE	1	0	0	0	0	1
62330	M.H. FAC HOUSEKEEPING SUPV	2	0	0	0	0	2
62341	HOUSEKEEPER	23	0	-2	0	0	21
62344	HOSPITAL ENV SVCS SUPV	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74196	DEP DIR OF EDA	1	0	-1	0	0	0
	Sum of Regular	235	1	2	0	0	238
Temporary							
13898	COUNTY TEMPORARY	0	0	5	0	0	5
	Sum of Temporary	0	0	5	0	0	5
	Total changes for 7200200000	235	1	7	0	0	243

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit:	**7200300000 FACILITIES MANAGEMENT MAINTENANCE**						
Regular							
13865	OFFICE ASSISTANT II	3	-2	0	0	0	1
13866	OFFICE ASSISTANT III	5	1	0	0	0	6
13868	SUPV OFFICE ASSISTANT II	1	0	0	0	0	1
13924	SECRETARY II	1	0	0	0	0	1
62141	GARDENER	1	0	-1	0	0	0
62142	GROUNDS CREW LEAD WORKER	5	0	0	0	0	5
62171	GROUNDS WORKER	29	-1	0	0	0	28
62202	LABORER	3	0	0	0	0	3
62221	MAINTENANCE CARPENTER	1	0	0	0	0	1
62222	LEAD MAINTENANCE CARPENTER	1	0	0	0	0	1
62231	MAINTENANCE ELECTRICIAN	15	0	0	0	0	15
62232	LEAD MAINTENANCE ELECTRICIAN	3	0	0	0	0	3
62251	MAINTENANCE PAINTER	9	0	0	0	0	9
62271	MAINTENANCE PLUMBER	17	0	0	0	0	17
62272	LEAD MAINTENANCE PLUMBER	3	0	0	0	0	3
62711	AIR CONDITIONING MECHANIC	19	0	0	0	0	19
62712	LEAD AIR CONDITIONING MECHANI	1	0	1	0	0	2
62730	BLDG MAINTENANCE WORKER	19	0	0	0	0	19
62731	SR BUILDING MAINTENANCE WORK	5	0	0	0	0	5
62732	BLDG MAINT SUPERINTENDENT	3	0	0	0	0	3
62734	DEP DIR FOR BLDG MAINTENANCE	1	0	0	0	0	1
62740	BLDG MAINTENANCE MECHANIC	28	2	0	0	0	30
62742	LEAD MAINTENANCE SVCS MECHA	10	0	0	0	0	10
62755	BLDG SERVICES ENGINEER	11	0	0	0	0	11
74184	DEVELOPMENT SPECIALIST II	1	-1	0	0	0	0
74185	DEVELOPMENT SPECIALIST III	1	-1	0	0	0	0
74186	SR DEVELOPMENT SPECIALIST	0	1	0	0	0	1
74196	DEP DIR OF EDA	1	0	-1	0	0	0
74213	ADMIN SVCS OFFICER	0	1	0	0	0	1
74221	PRINCIPAL DEVELOPMENT SPEC	1	0	0	0	0	1
76602	FACILITIES PROJECT MGR II	1	-1	0	0	0	0

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Sum of Regular		199	-1	-1	0	0	197
Total changes for 7200300000		199	-1	-1	0	0	197

Budget Unit: **7200400000** **FACILITIES MANAGEMENT REAL ESTATE**

Regular

13491	REAL PROPERTY COORDINATOR	3	0	0	0	0	3
13865	OFFICE ASSISTANT II	1	0	0	0	0	1
13866	OFFICE ASSISTANT III	1	0	2	0	0	3
13924	SECRETARY II	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	2	0	0	0	0	2
74183	DEVELOPMENT SPECIALIST I	1	0	0	0	0	1
74185	DEVELOPMENT SPECIALIST III	2	-1	0	0	0	1
74186	SR DEVELOPMENT SPECIALIST	1	-1	0	0	0	0
74196	DEP DIR OF EDA	1	0	0	0	0	1
74199	ADMIN SVCS SUPV	1	0	0	0	0	1
74297	EDA DEVELOPMENT MANAGER	1	0	0	0	0	1
74915	DEP DIR FOR REAL PROPERTY	1	0	0	0	0	1
74917	REAL PROPERTY AGENT III	5	1	0	0	0	6
74918	REAL PROPERTY AGENT II	2	0	0	0	0	2
74919	REAL PROPERTY AGENT I	3	0	0	0	0	3
74920	SUPV REAL PROPERTY AGENT	2	0	0	0	0	2
74921	SR REAL PROPERTY AGENT	4	1	0	0	0	5
74922	PRINCIPAL REAL PROPERTY AGEN	2	1	0	0	0	3
86143	IT OFFICER I	0	0	1	0	0	1
97421	ENGINEERING AIDE	0	0	1	0	0	1
97431	ENGINEERING TECH I	0	0	1	0	0	1
Sum of Regular		34	1	5	0	0	40
Total changes for 7200400000		34	1	5	0	0	40

Budget Unit: **7200500000** **FACILITIES MANAGEMENT DESIGN & CONSTRUCTION**

Regular

13865	OFFICE ASSISTANT II	3	-1	0	0	0	2
13866	OFFICE ASSISTANT III	11	-3	-2	0	0	6
13924	SECRETARY II	1	0	1	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
33202	CONSTRUCTION INSPECTOR II	4	0	0	0	0	4
33203	SR CONSTRUCTION INSPECTOR	1	0	0	0	0	1
33204	SUPV CONSTRUCTION INSPECTOR	1	0	0	0	0	1
33225	ENV COMPLIANCE INSPECTOR II	0	1	0	0	0	1
73539	SR ENVIRONMENTAL PLANNER	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	4	0	0	0	0	4
74114	ADMIN SVCS ASST	1	0	0	0	0	1
74127	SR ADMINISTRATIVE ANALYST	1	0	-1	0	0	0
74183	DEVELOPMENT SPECIALIST I	6	-3	-2	0	0	1
74184	DEVELOPMENT SPECIALIST II	9	-6	0	0	0	3
74185	DEVELOPMENT SPECIALIST III	14	-8	0	0	0	6
74186	SR DEVELOPMENT SPECIALIST	15	-6	-2	0	0	7
74199	ADMIN SVCS SUPV	1	0	0	0	0	1
74221	PRINCIPAL DEVELOPMENT SPEC	6	-5	1	0	0	2
74297	EDA DEVELOPMENT MANAGER	3	0	0	0	0	3
74803	ENV PLANNER II	3	-1	0	0	0	2
74805	ENV PLANNER III	1	0	0	0	0	1
76602	FACILITIES PROJECT MGR II	7	0	0	0	0	7
76606	SUPV FACILITIES PROJECT MGR	4	0	0	0	0	4
76608	FACILITIES PROJECT MGR III	9	-1	0	0	0	8
76610	DEP DIR FOR ARCHITECTURE & EN	1	0	0	0	0	1
86143	IT OFFICER I	1	0	-1	0	0	0
97431	ENGINEERING TECH I	1	0	-1	0	0	0
	Sum of Regular	109	-33	-7	0	0	69
	Total changes for 7200500000	109	-33	-7	0	0	69

Budget Unit: **7200600000** **ENERGY MANAGEMENT**

Regular

74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
76124	FACILITIES ENERGY MGMT COORD	1	0	0	0	0	1
	Sum of Regular	2	0	0	0	0	2
	Total changes for 7200600000	2	0	0	0	0	2

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit:	**7200700000 FACILITIES MANAGEMENT PARKING**						
Regular							
13858	PARKING ATTENDANT I	11	0	0	0	0	11
13859	PARKING ATTENDANT II	2	0	0	0	0	2
52740	PARKING/ORD ENFORCEMENT OFF	6	-1	0	0	0	5
52743	SR PARKING/ORD ENFORCEMENT	1	0	0	0	0	1
52744	SUPV PARKING/ORD OPS OFFICER	1	0	0	0	0	1
62327	CUSTOMER SVC OPERATIONS MGR	1	0	0	0	0	1
74105	ADMIN SVCS ANALYST I	0	1	-1	0	0	0
74106	ADMIN SVCS ANALYST II	1	-1	1	0	0	1
	Sum of Regular	23	-1	0	0	0	22
	Total changes for 7200700000	23	-1	0	0	0	22
Budget Unit:	**7201100000 FACILITIES MANAGEMENT PROJECT GROUP**						
Regular							
13866	OFFICE ASSISTANT III	1	-1	0	0	0	0
74106	ADMIN SVCS ANALYST II	2	-2	0	0	0	0
76602	FACILITIES PROJECT MGR II	4	-4	0	0	0	0
76606	SUPV FACILITIES PROJECT MGR	1	-1	0	0	0	0
76608	FACILITIES PROJECT MGR III	3	-3	0	0	0	0
	Sum of Regular	11	-11	0	0	0	0
	Total changes for 7201100000	11	-11	0	0	0	0
Budget Unit:	**7300100000 PURCHASING**						
Regular							
13865	OFFICE ASSISTANT II	1	0	0	0	0	1
15812	BUYER II	1	2	-2	0	0	1
15813	PROCUREMENT CONTRACT SPEC	11	2	-3	0	0	10
15814	SR PROCUREMENT CONTRACT SP	2	0	0	0	0	2
15913	SR ACCOUNTING ASST	0	1	-1	0	0	0
74098	ASST DIR, PURCH & FLEET SVCS	1	0	0	0	0	1
74144	PURCHASING MANAGER	1	0	0	0	0	1
74232	DIR OF PURCHASING & FLEET SVC	1	0	0	0	0	1
74710	COMPLIANCE CONTRACTS OFFICE	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
86111	BUSINESS PROCESS ANALYST II	1	-1	1	0	0	1
86153	IT NETWORK ADMIN II	1	-1	0	0	0	0
	Sum of Regular	21	3	-5	0	0	19
	Total changes for 7300100000	21	3	-5	0	0	19

Budget Unit: **7300300000** **PRINTING SERVICES - ISF**

Regular

13395	CUSTOMER SUPPORT REP I	2	0	0	0	0	2
15912	ACCOUNTING ASSISTANT II	1	0	0	0	0	1
62422	PRINTING TECH SPECIALIST I	4	0	0	0	0	4
62423	PRINTING TECH SPECIALIST II	1	0	0	0	0	1
62424	SR PRINTING TECH SPECIALIST	3	0	0	0	0	3
62430	OFFSET EQUIPMENT OPERATOR	4	0	0	0	0	4
62433	LEAD OFFSET EQUIPMENT OPERAT	1	-1	0	0	0	0
62435	PRINTING PRODUCTION SUPERVIS	1	0	0	0	0	1
62438	PRINTING/MAIL SERVICES MGR	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
77413	SR ACCOUNTANT	1	0	0	0	0	1
86101	IT APPS DEVELOPER II	1	0	0	0	0	1
92701	GRAPHIC ARTS ILLUSTRATOR	1	0	0	0	0	1
	Sum of Regular	22	-1	0	0	0	21
	Total changes for 7300300000	22	-1	0	0	0	21

Budget Unit: **7300400000** **SUPPLY SERVICES**

Regular

13395	CUSTOMER SUPPORT REP I	4	0	0	0	0	4
13396	CUSTOMER SUPPORT REP II	4	0	0	0	0	4
13399	SUPV CUSTOMER SUPPORT REP	1	0	0	0	0	1
15832	TRUCK DRIVER - DELIVERY	3	-1	0	0	0	2
15835	SUPPLY SERVICES SUPERVISOR	1	0	0	0	0	1
15836	LEAD TRUCK DRIVER - DELIVERY	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	1	0	0	0	0	1
86111	BUSINESS PROCESS ANALYST II	0	1	-1	0	0	0
	Sum of Regular	15	0	-1	0	0	14

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Total changes for 7300400000		15	0	-1	0	0	14

Budget Unit: **7300500000** **FLEET SERVICES**

Regular							
13448	SR FLEET SERVICES ASSISTANT	2	0	0	0	0	2
13865	OFFICE ASSISTANT II	1	0	0	0	0	1
13866	OFFICE ASSISTANT III	3	0	0	0	0	3
13925	EXECUTIVE ASSISTANT I	1	0	0	0	0	1
15286	SR AUTO EQUIPMENT PARTS STRK	1	0	0	0	0	1
15824	EQUIPMENT PARTS HELPER	2	0	0	0	0	2
15825	EQUIPMENT PARTS STOREKEEPER	1	0	0	0	0	1
15912	ACCOUNTING ASSISTANT II	2	0	0	0	0	2
15917	SUPV ACCOUNTING TECHNICIAN	1	0	0	0	0	1
62901	MECHANICS HELPER	1	0	0	0	0	1
62951	GARAGE ATTENDANT	10	0	0	0	0	10
62952	AUTOMOTIVE SERVICES WORKER	4	0	0	0	0	4
66405	AUTOMOTIVE MECHANIC III - CERT	5	1	-1	0	0	5
66410	SR AUTOMOTIVE MECHANIC	2	0	0	0	0	2
66412	AUTOMOTIVE MECHANIC III	12	0	-1	0	0	11
66414	GARAGE BRANCH SUPV	3	0	0	0	0	3
66415	AUTOMOTIVE SERVICE SUPERVISO	1	0	0	0	0	1
66416	FLEET SERVICES TECHNICIAN	1	-1	0	0	0	0
66417	AUTOMOTIVE SERVICE WRITER	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
74217	FLEET SERVICES OPERATIONS MG	1	0	0	0	0	1
74274	ASST DIR OF FLEET SVCS	1	0	0	0	0	1
77499	FISCAL MANAGER	1	0	0	0	0	1
86153	IT NETWORK ADMIN II	1	0	0	0	0	1
	Sum of Regular	59	0	-2	0	0	57
	Total changes for 7300500000	59	0	-2	0	0	57

Budget Unit: **7300600000** **CENTRAL MAIL SERVICES**

Regular							
13395	CUSTOMER SUPPORT REP I	5	2	-1	0	0	6

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
13396	CUSTOMER SUPPORT REP II	3	-1	0	0	0	2
13398	LEAD CUSTOMER SUPPORT REP	1	0	0	0	0	1
13399	SUPV CUSTOMER SUPPORT REP	1	0	0	0	0	1
	Sum of Regular	10	1	-1	0	0	10
	Total changes for 7300600000	10	1	-1	0	0	10

Budget Unit: **7400100000** **INFORMATIONAL TECHNOLOGY**

Regular

13439	HUMAN RESOURCES CLERK	1	0	0	0	0	1
13865	OFFICE ASSISTANT II	3	-1	-1	0	0	1
13866	OFFICE ASSISTANT III	2	0	0	0	0	2
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
15808	BUYER ASSISTANT	1	0	0	0	0	1
15820	SR SUPPORT SERVICES TECHNICIA	1	1	-1	0	0	1
15821	SUPPORT SERVICES SUPERVISOR	1	0	0	0	0	1
15826	SUPPORT SERVICES TECHNICIAN	4	0	0	0	0	4
15915	ACCOUNTING TECHNICIAN I	4	-1	0	0	0	3
15917	SUPV ACCOUNTING TECHNICIAN	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	6	0	0	0	0	6
74114	ADMIN SVCS ASST	2	1	-2	0	0	1
74213	ADMIN SVCS OFFICER	1	0	0	0	0	1
74235	CHF TECHNOLOGY OFFICER	1	0	0	0	0	1
74268	CHF INFORMATION OFFICER	1	0	0	0	0	1
74279	DEP DIR OF ADMINISTRATION - IT	1	0	0	0	0	1
76429	RADIO COMMUNICATIONS ENG II	1	0	0	0	0	1
76431	RADIO COMMUNICATIONS ENG I	1	0	0	0	0	1
77269	INFO SECURITY ANALYST II	1	0	0	0	0	1
77270	INFO SECURITY ANALYST III	6	0	0	0	0	6
77271	CHF INFO SECURITY OFFICER	1	0	0	0	0	1
77412	ACCOUNTANT II	1	0	0	0	0	1
77413	SR ACCOUNTANT	1	0	-1	0	0	0
77499	FISCAL MANAGER	1	0	0	0	0	1
86103	IT APPS DEVELOPER III	5	0	0	0	0	5
86105	IT SUPV APPS DEVELOPER	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
86115	IT BUSINESS SYS ANALYST II	3	1	-1	0	0	3
86117	IT BUSINESS SYS ANALYST III	3	0	0	0	0	3
86119	IT SUPV BUSINESS SYS ANALYST	2	-1	0	0	0	1
86121	IT COMMUNICATIONS ANALYST II	3	0	0	0	0	3
86124	IT COMMUNICATIONS ANALYST III	18	1	-1	0	0	18
86125	IT SUPV COMMUNICATIONS ANALY	3	0	0	0	0	3
86130	IT COMMUNICATIONS TECH II	18	1	-1	0	0	18
86131	IT COMMUNICATIONS TECH III	23	0	-1	0	0	22
86135	IT SUPV COMMUNICATIONS TECH	4	0	1	0	0	5
86138	IT DATABASE ADMIN II	1	0	0	0	0	1
86139	IT DATABASE ADMIN III	2	1	-1	0	0	2
86140	IT SUPV DATABASE ADMIN	1	0	0	0	0	1
86141	IT OFFICER II	7	1	-1	0	0	7
86164	IT SYSTEMS ADMINISTRATOR II	5	-1	-1	0	0	3
86165	IT SYSTEMS ADMINISTRATOR III	12	0	0	0	0	12
86167	IT SUPV SYSTEMS ADMINISTRATOR	6	0	0	0	0	6
86174	IT SYSTEMS OPERATOR II	2	1	-1	0	0	2
86175	IT SYSTEMS OPERATOR III	5	0	0	0	0	5
86177	IT SUPV SYSTEMS OPERATOR	1	-1	0	0	0	0
86183	IT USER SUPPORT TECH II	5	0	0	0	0	5
86185	IT USER SUPPORT TECH III	3	-1	0	0	0	2
86195	IT WEB DEVELOPER II	2	0	0	0	0	2
	Sum of Regular	179	2	-12	0	0	169
	Total changes for 7400100000	179	2	-12	0	0	169

Budget Unit: **7400300000** **PSEC - 800 MHz Radio Project**

Regular

13865	OFFICE ASSISTANT II	1	0	0	0	0	1
13866	OFFICE ASSISTANT III	0	1	-1	0	0	0
74106	ADMIN SVCS ANALYST II	1	0	0	0	0	1
76429	RADIO COMMUNICATIONS ENG II	2	1	-1	0	0	2
76431	RADIO COMMUNICATIONS ENG I	0	1	-1	0	0	0
77413	SR ACCOUNTANT	1	0	0	0	0	1
86115	IT BUSINESS SYS ANALYST II	0	1	-1	0	0	0

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
86119	IT SUPV BUSINESS SYS ANALYST	1	0	0	0	0	1
86124	IT COMMUNICATIONS ANALYST III	6	-2	0	0	0	4
86131	IT COMMUNICATIONS TECH III	0	0	1	0	0	1
86141	IT OFFICER II	1	0	0	0	0	1
	Sum of Regular	13	2	-3	0	0	12
	Total changes for 7400300000	13	2	-3	0	0	12

Budget Unit: **915201** **CSA 152 NPDES**

Regular							
13865	OFFICE ASSISTANT II	1	2	-2	0	0	1
13866	OFFICE ASSISTANT III	1	0	0	0	0	1
33256	COMMUNITY IMPROVEMENT SPEC I	0	0	5	0	0	5
33258	SUPV COMM IMPROVEMENT SPEC	0	0	1	0	0	1
62165	CSA FACILITIES CARETAKER	8	0	-3	0	0	5
62166	SR CSA FACILITIES CARETAKER	5	0	2	0	0	7
62171	GROUNDS WORKER	2	0	0	0	0	2
66541	PUBLIC WORKS OPERATOR I	1	1	0	0	0	2
66542	PUBLIC WORKS OPERATOR II	2	0	0	0	0	2
74105	ADMIN SVCS ANALYST I	0	0	1	0	0	1
74114	ADMIN SVCS ASST	1	0	0	0	0	1
74157	SERVICE AREA MANAGER I	5	-1	0	0	0	4
74160	SERVICE AREA MANAGER II	1	0	2	0	0	3
74167	SERVICE AREA MANAGER III	2	0	0	0	0	2
74183	DEVELOPMENT SPECIALIST I	2	1	-1	0	0	2
74184	DEVELOPMENT SPECIALIST II	2	0	0	0	0	2
74185	DEVELOPMENT SPECIALIST III	1	0	-1	0	0	0
74186	SR DEVELOPMENT SPECIALIST	2	3	-2	0	0	3
79467	RECREATION COORDINATOR	1	3	0	0	0	4
	Sum of Regular	37	9	2	0	0	48
Temporary							
13898	COUNTY TEMPORARY	2	0	0	0	0	2
	Sum of Temporary	2	0	0	0	0	2
	Total changes for 915201	39	9	2	0	0	50

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Budget Unit: **915202**	**CSA ADMINISTRATION OPERATIONS**						
Regular							
13865	OFFICE ASSISTANT II	1	2	-2	0	0	1
74183	DEVELOPMENT SPECIALIST I	0	0	1	0	0	1
74185	DEVELOPMENT SPECIALIST III	1	0	0	0	0	1
74186	SR DEVELOPMENT SPECIALIST	2	3	-2	0	0	3
74297	EDA DEVELOPMENT MANAGER	1	0	0	0	0	1
77497	FISCAL ANALYST	1	0	0	0	0	1
	Sum of Regular	6	5	-3	0	0	8
	Total changes for 915202	6	5	-3	0	0	8
Budget Unit: **931104**	**PARKS: REGIONAL PARKS DIST**						
Regular							
85001	ACCOUNTING ASSISTANT II-PARKS	1	0	0	0	0	1
85002	ACCOUNTING TECHNICIAN I -PARK	1	0	0	0	0	1
85003	ADMIN SVCS ASST - PARKS	1	0	0	0	0	1
85005	AREA PARK MANAGER - PARKS	2	0	0	0	0	2
85011	EXECUTIVE ASSISTANT I - PARKS	1	0	0	0	0	1
85013	GROUNDS WORKER - PARKS	12	2	-6	0	0	8
85014	HISTORIC PRESERVATION OFCR-P	1	0	0	0	0	1
85015	INTERPRETIVE SVCS SUPV - PARK	1	0	0	0	0	1
85017	MAINTENANCE CARPENTER - PARK	2	0	-1	0	0	1
85021	OFFICE ASSISTANT II - PARKS	1	0	0	0	0	1
85022	PARK ATTENDANT - PARKS	10	0	-2	0	0	8
85023	PARKS DIRECTOR - PARKS	1	0	0	0	0	1
85024	PARK INTERPRETER - PARKS	5	0	0	0	0	5
85026	PARK MAINTENANCE SUPV - PARK	1	0	0	0	0	1
85027	PARK MAINTENANCE WORKER-PAR	19	-1	-7	0	0	11
85029	PARK RANGER II - PARKS	12	0	-6	0	0	6
85030	PARK RANGER SUPV - PARKS	6	1	-3	0	0	4
85036	SECRETARY II - PARKS	1	0	0	0	0	1
85037	SR ACCOUNTANT - PARKS	1	0	0	0	0	1
85038	SR ACCOUNTING ASST - PARKS	2	0	0	0	0	2
85040	NATURAL RESOURCES SPEC - PAR	1	0	-1	0	0	0

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
85041	SR PARK RANGER - PARKS	2	0	0	0	0	2
85046	ADMIN SVCS SUPV - PARKS	1	0	0	0	0	1
85051	ADMIN SVCS ANALYST I - PARKS	1	0	-1	0	0	0
85052	ADMIN SVCS ANALYST II - PARKS	2	0	-1	0	0	1
85055	ACCOUNTANT II - PARKS	1	0	-1	0	0	0
85059	NATURAL RESOURCES MGR - PARK	2	0	-1	0	0	1
85061	ADMIN SVCS MGR II - PARKS	1	0	0	0	0	1
85062	PARK PLANNER	2	0	-1	0	0	1
85063	SR PARK PLANNER	2	0	-1	0	0	1
85065	RECREATION COORDINATOR - PAR	2	0	-2	0	0	0
85066	BUYER II - PARKS	1	0	0	0	0	1
85068	PARK MAINT WORKER-PARKS-DES	3	0	0	0	0	3
85071	PARK GRAPHIC ARTS ILLUSTRATO	1	0	0	0	0	1
85072	ACCOUNTING TECHNICIAN II-PARK	1	0	0	0	0	1
85073	ASST PARKS DIRECTOR - PARKS	1	0	0	0	0	1
85074	BUREAU CHIEF - PARKS	1	1	-1	0	0	1
85075	AQUATICS COORDINATOR - PARKS	1	0	-1	0	0	0
85076	AQUATICS TECHNICIAN - PARKS	0	1	-1	0	0	0
85099	IT USER SUPPORT TECH III-PARKS	1	0	0	0	0	1
	Sum of Regular	108	4	-37	0	0	75
Seasonal							
85013	GROUNDS WORKER - PARKS	2	0	1	0	0	3
85022	PARK ATTENDANT - PARKS	12	0	-4	0	0	8
85027	PARK MAINTENANCE WORKER-PAR	2	0	-2	0	0	0
85029	PARK RANGER II - PARKS	1	0	-1	0	0	0
85038	SR ACCOUNTING ASST - PARKS	1	-1	0	0	0	0
85048	LIFEGUARD - PARKS	0	76	-76	0	0	0
85049	PARK AIDE - PARKS	12	0	-1	0	0	11
85052	ADMIN SVCS ANALYST II - PARKS	1	-1	0	0	0	0
85077	POOL SUPERVISOR - PARKS	0	2	-2	0	0	0
85078	SR LIFEGUARD - PARKS	0	7	-7	0	0	0
85079	PUBLIC SERVICES WORKER - PARK	0	17	-13	0	0	4
	Sum of Seasonal	31	100	-105	0	0	26

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
Temporary							
13898	COUNTY TEMPORARY	2	0	-2	0	0	0
	Sum of Temporary	2	0	-2	0	0	0
	Total changes for 931104	141	104	-144	0	0	101

Budget Unit: **931116** **PARKS: MULTI-SPECIES RESERVE**

Regular							
85029	PARK RANGER II - PARKS	0	0	1	0	0	1
85059	NATURAL RESOURCES MGR - PARK	0	0	1	0	0	1
	Sum of Regular	0	0	2	0	0	2
Seasonal							
85027	PARK MAINTENANCE WORKER-PAR	0	0	2	0	0	2
	Sum of Seasonal	0	0	2	0	0	2
	Total changes for 931116	0	0	4	0	0	4

Budget Unit: **931120** **PARKS: SAPP PROP 13**

Regular							
85027	PARK MAINTENANCE WORKER-PAR	0	0	1	0	0	1
	Sum of Regular	0	0	1	0	0	1
	Total changes for 931120	0	0	1	0	0	1

Budget Unit: **931150** **REG PARKS & OPEN-SPACE DIST**

Regular							
85027	PARK MAINTENANCE WORKER-PAR	0	0	2	0	0	2
85029	PARK RANGER II - PARKS	0	0	2	0	0	2
85030	PARK RANGER SUPV - PARKS	0	0	1	0	0	1
85040	NATURAL RESOURCES SPEC - PAR	0	0	1	0	0	1
	Sum of Regular	0	0	6	0	0	6
	Total changes for 931150	0	0	6	0	0	6

Budget Unit: **931170** **HABITAT & OPEN SPACE MANAGEMENT**

Regular							
85027	PARK MAINTENANCE WORKER-PAR	0	0	2	0	0	2
85029	PARK RANGER II - PARKS	0	0	2	0	0	2
	Sum of Regular	0	0	4	0	0	4

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
	Total changes for 931170	0	0	4	0	0	4
Budget Unit:	**931180 RECREATION**						
Regular							
85013	GROUNDS WORKER - PARKS	0	0	2	0	0	2
85022	PARK ATTENDANT - PARKS	0	0	2	0	0	2
85027	PARK MAINTENANCE WORKER-PAR	0	0	1	0	0	1
85065	RECREATION COORDINATOR - PAR	0	0	2	0	0	2
85074	BUREAU CHIEF - PARKS	0	0	1	0	0	1
85075	AQUATICS COORDINATOR - PARKS	0	0	1	0	0	1
85076	AQUATICS TECHNICIAN - PARKS	0	0	1	0	0	1
	Sum of Regular	0	0	10	0	0	10
Seasonal							
85022	PARK ATTENDANT - PARKS	0	0	2	0	0	2
85048	LIFEGUARD - PARKS	0	0	76	0	0	76
85077	POOL SUPERVISOR - PARKS	0	0	2	0	0	2
85078	SR LIFEGUARD - PARKS	0	0	7	0	0	7
85079	PUBLIC SERVICES WORKER - PARK	0	0	13	0	0	13
	Sum of Seasonal	0	0	100	0	0	100
	Total changes for 931180	0	0	110	0	0	110
Budget Unit:	**938001 CHILDREN AND FAMILIES COMMISSION**						
Regular							
13865	OFFICE ASSISTANT II	0	1	0	0	0	1
13866	OFFICE ASSISTANT III	0	3	0	0	0	3
13923	SECRETARY I	0	3	0	0	0	3
13925	EXECUTIVE ASSISTANT I	0	1	0	0	0	1
13964	ADMIN SECRETARY II	0	1	0	0	0	1
15916	ACCOUNTING TECHNICIAN II	0	1	0	0	0	1
74106	ADMIN SVCS ANALYST II	0	3	0	0	0	3
74113	ADMIN SVCS MGR II	0	3	0	0	0	3
74233	PUBLIC INFORMATION SPECIALIST	0	1	0	0	0	1
74273	ADMIN SVCS MGR III	0	2	0	0	0	2
74286	DEP DIR FOR CFC	0	1	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74292	EXECUTIVE DIR FOR CFC	0	1	0	0	0	1
74294	PROGRAM COORD FOR CFC	0	1	0	0	0	1
77409	BUDGET/REIMBURSEMENT ANALYS	0	1	0	0	0	1
79819	PROGRAM SPECIALIST II	0	7	-2	0	0	5
	Sum of Regular	0	30	-2	0	0	28
	Total changes for 938001	0	30	-2	0	0	28

Budget Unit: **943001** **WRMD OPERATING**

Regular

80000	GENERAL MGR - CHF ENG - WRMD	1	0	0	0	0	1
80002	PRINCIPAL ENG - WRMD	2	0	0	0	0	2
80009	ASST CIVIL ENGINEER - WRMD	1	0	0	0	0	1
80010	ASSOC CIVIL ENGINEER - WRMD	2	0	0	0	0	2
80017	ENV COMPLIANCE MGR - WRMD	1	0	0	0	0	1
80018	ENGINEERING PROJECT MGR - WR	1	0	0	0	0	1
80024	EQUIPMENT OPERATOR II - WRMD	5	-1	-2	0	0	2
80034	RECYCLING SPECIALIST II - WRMD	1	0	0	0	0	1
80038	SR CIVIL ENGINEER - WRMD	1	0	0	0	0	1
80040	SUPV HAZ WASTE INSPECTOR-WR	1	0	0	0	0	1
80051	PROGRAM ADMINISTRATOR - WRM	2	0	0	0	0	2
80053	PROGRAM COORDINATOR - WRMD	1	0	0	0	0	1
80054	PROJECTS SUPERVISOR - WRMD	2	-1	0	0	0	1
80056	CREW LEAD WORKER - WRMD	1	0	-1	0	0	0
80058	OPS & MAINT SUPERVISOR - WRMD	3	-1	0	0	0	2
80060	SR ENG TECH - WRMD	3	1	0	0	0	4
80068	ACCOUNTING ASSISTANT I - WRMD	1	0	0	0	0	1
80071	ACCOUNTING TECHNICIAN I - WRM	1	0	0	0	0	1
80073	SR EQUIPMENT OPERATOR - WRM	2	-2	0	0	0	0
80081	URBAN/REGIONAL PLANNER IV-WR	1	0	0	0	0	1
80089	ADMIN SVCS ANALYST II - WRMD	1	0	0	0	0	1
80093	PRINCIPAL ENG TECH - WRMD	2	0	0	0	0	2
80094	SUPV EQUIP PARTS STOREKPR-W	1	0	0	0	0	1
80098	IT DATABASE ADMIN III - WRMD	1	0	0	0	0	1
80099	IT SUPV DATABASE ADMIN - WRMD	1	-1	0	0	0	0

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
80102	IT NETWORK ADMIN III - WRMD	1	0	0	0	0	1
80105	IT WEB DEVELOPER III - WRMD	1	0	-1	0	0	0
	Sum of Regular	41	-5	-4	0	0	32
	Total changes for 943001	41	-5	-4	0	0	32

Budget Unit: **947200** **FLOOD CONTROL**

Regular

13865	OFFICE ASSISTANT II	3	0	0	0	0	3
13866	OFFICE ASSISTANT III	3	0	0	0	0	3
13923	SECRETARY I	6	0	0	0	0	6
13924	SECRETARY II	1	0	0	0	0	1
13926	EXECUTIVE ASSISTANT II	1	0	0	0	0	1
15811	BUYER I	3	0	0	0	0	3
15812	BUYER II	1	0	0	0	0	1
15825	EQUIPMENT PARTS STOREKEEPER	1	0	0	0	0	1
15831	STOCK CLERK	1	0	0	0	0	1
15833	STOREKEEPER	1	0	0	0	0	1
15911	ACCOUNTING ASSISTANT I	1	0	0	0	0	1
15912	ACCOUNTING ASSISTANT II	1	0	0	0	0	1
15913	SR ACCOUNTING ASST	2	0	0	0	0	2
15915	ACCOUNTING TECHNICIAN I	9	0	0	0	0	9
15916	ACCOUNTING TECHNICIAN II	1	0	0	0	0	1
15917	SUPV ACCOUNTING TECHNICIAN	1	0	0	0	0	1
62731	SR BUILDING MAINTENANCE WORK	1	0	0	0	0	1
62951	GARAGE ATTENDANT	1	0	0	0	0	1
66406	AUTOMOTIVE MECHANIC I	1	0	0	0	0	1
66411	AUTOMOTIVE MECHANIC II	2	0	0	0	0	2
66413	EQUIPMENT SERVICE SUPV	1	0	0	0	0	1
66441	TRUCK MECHANIC	2	0	0	0	0	2
66455	SR HEAVY EQUIPMENT MECHANIC	2	0	0	0	0	2
66505	REGIONAL FLOOD CNTRL MAINT SP	2	0	0	0	0	2
66508	ASST REG FLOOD CNTRL MAINT SP	2	0	0	0	0	2
66511	EQUIPMENT OPERATOR I	20	0	0	0	0	20
66512	EQUIPMENT OPERATOR II	12	0	0	0	0	12

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
66513	SR EQUIPMENT OPERATOR	7	0	0	0	0	7
66521	LEAD FLOOD CONTROL WORKER	1	0	0	0	0	1
66529	MAINTENANCE & CONST WRKR	18	0	0	0	0	18
66531	OPS & MAINT SUPERINTENDENT	1	0	0	0	0	1
74106	ADMIN SVCS ANALYST II	4	0	0	0	0	4
74114	ADMIN SVCS ASST	1	0	0	0	0	1
74191	ADMIN SVCS MGR I	0	0	1	0	0	1
74199	ADMIN SVCS SUPV	1	0	0	0	0	1
74233	PUBLIC INFORMATION SPECIALIST	1	0	0	0	0	1
74252	GENERAL MGR-CHF FLD CNTRL EN	1	0	0	0	0	1
74273	ADMIN SVCS MGR III	1	0	0	0	0	1
74918	REAL PROPERTY AGENT II	1	0	0	0	0	1
74919	REAL PROPERTY AGENT I	1	0	0	0	0	1
74921	SR REAL PROPERTY AGENT	1	0	0	0	0	1
76403	SUPV LAND SURVEYOR	2	0	0	0	0	2
76419	ENGINEERING PROJECT MGR	12	0	0	0	0	12
76420	JUNIOR ENGINEER	9	0	0	0	0	9
76421	ASST ENGINEER	0	4	0	0	0	4
76422	ASST CIVIL ENGINEER	13	-4	0	0	0	9
76424	ASSOC CIVIL ENGINEER	27	0	3	0	0	30
76425	SR CIVIL ENGINEER	11	0	0	0	0	11
76464	FLOOD CONTROL CHF OF TECH INF	0	0	0	0	1	1
76465	CHF OF SURVEYING & MAPPING	1	0	0	0	0	1
76475	FLOOD CONTROL PRINCIPAL ENG	5	0	0	0	0	5
76477	ASST CHF FLOOD CONTROL ENG	1	0	0	0	0	1
76484	SR LAND SURVEYOR	2	0	0	0	0	2
76617	ASSOC ENG-AIR/WTR QLTY CONTR	1	0	3	0	0	4
76618	ASSOC ENG-AIR/WTR QLTY CONT-	3	0	1	0	0	4
77103	GIS SPECIALIST II	1	0	0	0	0	1
77104	GIS ANALYST	2	0	1	0	0	3
77412	ACCOUNTANT II	3	0	0	0	0	3
77413	SR ACCOUNTANT	1	0	0	0	0	1
77414	PRINCIPAL ACCOUNTANT	1	0	0	0	0	1

	Budgeted Job Code and Title	FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
77488	FLOOD CONTROL FINANCE OFFICE	1	0	0	0	0	1
86103	IT APPS DEVELOPER III	2	0	1	0	0	3
86117	IT BUSINESS SYS ANALYST III	2	0	0	0	0	2
86119	IT SUPV BUSINESS SYS ANALYST	1	0	0	0	0	1
86140	IT SUPV DATABASE ADMIN	1	0	0	0	0	1
86141	IT OFFICER II	1	0	0	0	-1	0
86164	IT SYSTEMS ADMINISTRATOR II	2	0	0	0	0	2
86183	IT USER SUPPORT TECH II	2	0	0	0	0	2
92284	PHOTOGRAMMETRIST	1	0	0	0	0	1
92285	SR PHOTOGRAMMETRIST	2	0	0	0	0	2
92286	SUPV PHOTOGRAMMETRIST	1	0	0	0	0	1
92748	ENGINEERING PHOTOGRAPHIC TE	1	0	0	0	0	1
97413	PRINCIPAL CONST INSPECTOR	2	0	0	0	0	2
97421	ENGINEERING AIDE	5	1	0	0	0	6
97431	ENGINEERING TECH I	13	0	0	0	-2	11
97432	ENGINEERING TECH II	27	0	0	0	2	29
97433	SR ENG TECH	11	2	0	0	0	13
97434	PRINCIPAL ENG TECH	4	0	0	0	0	4
97437	SR ENG TECH - PLS/PE	6	-1	0	0	0	5
97438	PRINCIPAL ENG TECH - PLS/PE	3	0	0	0	0	3
97449	FLOOD CONTROL ENG INFO COOR	1	0	0	0	0	1
	Sum of Regular	305	2	10	0	0	317
	Total changes for 947200	305	2	10	0	0	317

Budget Unit: **985101** **PUBLIC AUTHORITY - ADMIN**

Regular

13131	SR HUMAN RESOURCES CLERK	2	-2	1	0	0	1
13416	DPSS OFFICE SUPPORT SUPV	1	-1	1	0	0	1
13439	HUMAN RESOURCES CLERK	0	0	1	0	0	1
13865	OFFICE ASSISTANT II	0	1	-1	0	0	0
13866	OFFICE ASSISTANT III	7	-7	7	0	0	7
13924	SECRETARY II	1	0	0	0	0	1
57726	SOCIAL SERVICES ASSISTANT	6	-6	5	0	0	5
74106	ADMIN SVCS ANALYST II	1	-1	1	0	0	1

COUNTY OF RIVERSIDE
STATE OF CALIFORNIA
SUMMARY OF AUTHORIZED POSITIONS
FOR FISCAL YEAR BEGINNING JULY 1, 2011

Budgeted Job Code and Title		FY 10/11 Initial Authorization	FY 10/11 Cummulative Changes	FY 11/12 Changes in Recomm. Budget	FY 11/12 Final Adopt. Budg. Chngs	FY 11/12 Technical Chngs	FY 11/12 Initial Authorization
74127	SR ADMINISTRATIVE ANALYST	1	-1	2	0	0	2
74152	COMMUNITY PRGM SPECIALIST II	5	-5	5	0	0	5
74191	ADMIN SVCS MGR I	2	-2	2	0	0	2
79819	PROGRAM SPECIALIST II	1	-1	1	0	0	1
79884	IHSS PUB AUTHORITY EXEC DIR	1	0	0	0	0	1
	Sum of Regular	28	-25	25	0	0	28
	Total changes for 985101	28	-25	25	0	0	28
	Grand Total	**22,909**	**1,119**	**-2,378**	**1,195**	**6**	**22,851**

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County of Riverside

Part I - Financed Fixed Assets

For Fiscal Year 11/12

Schedule 21

Budget Unit		Original Cost	Remaining Balance	Final Date	Amount Requested	Amount Recmnded
10000-5100100000-00000	DPSS: ADMINISTRATION					
NEW LEASES IT-CISCO EQUIP		$ 75,000	$ 50,000	13/14	$ 25,000	$ 25,000
NEW LEASES IT-HP SERVER		450,000	300,000	13/14	150,000	150,000
SERVERS/EQUIPMENT NEW PROJECT		30,000	20,000	13/14	10,000	10,000
GENERAL REPLACEMENT/BREAK-FIX		500,000	333,334	13/14	166,667	166,667
FACILITIES		79,002	52,668	13/14	26,334	26,334
LEASE #L004138-6004		175,510	117,012	12/13	55,041	55,041
LEASE #L004126		392,234	261,489	12/13	122,905	122,905
Budget Unit Total:		**$ 1,701,746**	**$ 1,134,503**		**$ 555,947**	**$ 555,947**
10000-2700200000-00000	FIRE PROTECTION: FOREST					
LEASE L003839-20011 PRINCIPAL		$ 241,935	$ 199,878	09/2014	$ 61,099	$ 61,099
LEASE L003839-20011 INTEREST		24,325	16,458	09/2014	5,466	5,466
LEASE L003730-20010 PRINCIPAL		384,258	337,614	06/2016	51,803	51,803
LEASE L003730-20010 INTEREST		77,877	58,502	06/2016	14,216	14,216
LEASE L003638-20009 PRINCIPAL		1,152,263	1,012,349	04/2016	155,359	155,359
LEASE L003638-20009 INTEREST		233,062	175,073	04/2016	42,544	42,544
LEASE L003598-20008 PRINCIPAL		1,537,058	1,301,928	03/2016	210,051	210,051
LEASE L003598-20008 INTEREST		308,404	213,988	03/2016	53,586	53,586
LEASE L003508-20007 PRINCIPAL		1,153,442	976,834	02/2016	157,672	157,672
LEASE L003508-20007 INTEREST		230,034	159,592	02/2016	39,968	39,968
LEASE L003435-20006 PRINCIPAL		384,592	312,696	12/2016	53,392	53,392
LEASE L003435-20006 INTEREST		70,967	45,244	12/2016	11,688	11,688
LEASE L003407-20005 PRINCIPAL		1,153,776	938,713	11/2016	160,066	160,066
LEASE L003407-20005 INTEREST		217,538	138,748	11/2016	35,836	35,836
LEASE L003345-20004 PRINCIPAL		384,592	312,278	10/2016	53,465	53,465
LEASE L003345-20004 INTEREST		67,886	43,241	10/2016	11,175	11,175
LEASE L003314-20003 PRINCIPAL		125,755	73,349	09/2013	33,112	33,112
LEASE L003314-20003 INTEREST		11,685	3,961	09/2013	1,248	1,248
LEASE L003262-20002 PRINCIPAL		25,650	14,984	08/2013	6,768	6,768
LEASE L003262-20002 INTEREST		2,482	840	08/2013	265	265
LEASE L003249-20001 PRINCIPAL		767,468	597,846	07/2016	107,953	107,953
LEASE L003249-20001 INTEREST		133,629	77,977	07/2016	20,775	20,775
LEASE 726 CAP LEASE PRINCIPAL		166,463	85,461	06/2012	43,303	43,303
LEASE 726 CAP LEASE INTEREST		9,667	2,604	06/2012	730	730
LEASE 720 CAP LEASE PRINCIPAL		767,468	564,146	06/2015	109,447	109,447
LEASE 720 CAP LEASE INTEREST		85,480	44,967	06/2015	12,376	12,376
LEASE 717 CAP LEASE PRINCIPAL		175,388	89,942	05/2012	45,548	45,548
LEASE 717 CAP LEASE INTEREST		9,753	2,622	05/2012	735	735
LEASE 703 CAP LEASE PRINCIPAL		353,960	258,976	04/2015	50,490	50,490

County of Riverside

Part I - Financed Fixed Assets

For Fiscal Year 11/12

Schedule 21

Budget Unit		Original Cost	Remaining Balance	Final Date	Amount Requested	Amount Recmnded
10000-2700200000-00000	FIRE PROTECTION: FOREST					
LEASE 703 CAP LEASE INTEREST		$ 33,055	$ 17,312	04/2015	$ 4,767	$ 4,767
LEASE 700 CAP LEASE PRINCIPAL		586,033	299,376	04/2012	151,313	151,313
LEASE 700 CAP LEASE INTEREST		27,616	7,377	04/2012	2,064	2,064
LEASE 695 CAP LEASE PRINCIPAL		122,790	62,698	04/2012	31,681	31,681
LEASE 695 CAP LEASE INTEREST		5,624	1,510	04/2012	422	422
LEASE 684 CAP LEASE PRINCIPAL		1,118,583	779,381	03/2015	160,576	160,576
LEASE 684 CAP LEASE INTEREST		100,872	47,903	03/2015	13,589	13,589
LEASE 641 CAP LEASE PRINCIPAL		39,207	15,230	12/2012	5,150	5,150
LEASE 641 CAP LEASE INTEREST		2,452	385	12/2012	55	55
LEASE 635 CAP LEASE PRINCIPAL		97,716	38,114	11/2012	12,908	12,908
LEASE 635 CAP LEASE INTEREST		6,793	1,077	11/2012	155	155
LEASE 625 CAP LEASE PRINCIPAL		47,184	18,470	10/2012	6,264	6,264
LEASE 625 CAP LEASE INTEREST		3,595	570	10/2012	82	82
LEASE 609 CAP LEASE PRINCIPAL		188,008	61,829	08/2012	12,600	12,600
LEASE 609 CAP LEASE INTEREST		15,569	1,770	08/2012	119	119
LEASE 528 CAP LEASE PRINCIPAL		1,944,631	1,103,712	03/2014	290,081	290,081
LEASE 528 CAP LEASE INTEREST		271,040	83,254	03/2014	26,443	26,443
Budget Unit Total:		**$ 14,867,625**	**$ 10,600,779**		**$ 2,268,405**	**$ 2,268,405**
45500-7400100000-00000	IT: INFORMATION TECHNOLOGY					
DELL DISK STORAGE DRAWER		$ 30,000	$ 30,000	6/2016	$ 600	$ 600
VMWARE SRVR REPL PRJ & MEMORY		125,835	125,835	6/2016	-	-
JESKELL IBM Z890 ENT SRVR REPL		360,000	360,000	6/2015	-	-
MULTI FUNCTIONAL PRT DEVICE		150,000	150,000	6/2016	-	-
ERICSSON AASTRA TSE SW UPGRADE		6,504,001	7,154,401	6/2015	42,462	42,462
ERICSSON AASTRA LIM UPGRADE		125,000	125,000	6/2016	2,500	2,500
CISCO ASA5580 VPN		107,202	107,202	6/2016	4,928	4,928
ARUBA WIRELESS EQUIP		216,340	216,340	6/2016	4,327	4,327
(2) ANRITSU MS2722D		50,300	50,300	6/2016	1,006	1,006
N. MT BATTERY PLANT UPGRADE		50,000	50,000	6/2016	1,000	1,000
RCIT BDA IMPLEMENTATION		45,000	45,000	6/2016	900	900
RCIT ISP REDUNDANCY IN INDIO		75,000	75,000	6/2016	1,500	1,500
RCIT NTWK SYSLOG SERVER		17,000	17,000	6/2016	340	340
ARUBA 6000 CONTROLLER REDUND		45,000	45,000	6/2016	900	900
RV PUBLIC DEF MOVE TO MAIN ST		45,000	45,000	6/2016	900	900
MV RCRMC NEW MENTAL HLTH FAC		45,000	45,000	6/2016	900	900
PERRIS DPSS NEW BTS IT INFR		45,000	45,000	6/2016	900	900
DESERT HOT SP CHA NEW FAC		45,000	45,000	6/2016	900	900

County of Riverside

Part I - Financed Fixed Assets

For Fiscal Year 11/12

Schedule 21

Budget Unit	Original Cost	Remaining Balance	Final Date	Amount Requested	Amount Recmnded
45500-7400100000-00000	IT: INFORMATION TECHNOLOGY				
RCIT ER SECURITY UPGRADE	$ 60,000	$ 60,000	6/2016	$ 1,200	$ 1,200
RCIT TEL NTWK TSE SW UPG PH4	300,000	300,000	6/2016	6,000	6,000
RCRMC MV NEW OPS & DC FAC	45,000	45,000	6/2016	900	900
AASTRA EOL EQUIP REPL RV SYS	213,750	213,750	6/2016	4,275	4,275
SERVER AUTO ATTENDANT REPL	52,670	52,670	6/2016	10,534	10,534
DELL DISK STORAGE DRAWER	30,000	30,000	6/2016	6,000	6,000
VMWARE SRVR REPL PRJ & MEMORY	125,835	125,835	6/2016	25,167	25,167
RCIT ER SECURITY UPGRADE	60,000	60,000	6/2016	6,000	6,000
RCIT TEL NTWK TSE SW UPG PH4	300,000	300,000	6/2016	60,000	60,000
AASTRA EOL EQUIP REPL RV SYS	213,750	213,750	6/2016	42,750	42,750
RCRMC MV NEW OPS & DC FAC	45,000	45,000	6/2016	9,000	9,000
2 MX-ONE CHASSIS LIM SYS EQ	95,622	69,055	10/2014	2,677	2,677
AASTRA CHASSIS LIM SYS REPL EQ	236,578	203,837	8/2015	6,996	6,996
AASTRA CHASSIS LIM SYS REPL EQ	35,033	26,775	6/2014	915	915
PCS 3MX-ONE CHASSIS TSW LIM	96,183	60,332	6/2014	2,452	2,452
PCS 4LIM SYS, IT COMM SYS COMP	173,403	108,780	5/2014	4,432	4,432
PCS 2MX-ONE CHASSIS LIM & TSW	199,247	125,108	4/2014	5,208	5,208
PCS ASTRA BASIC TSW LIM	29,466	18,509	4/2014	777	777
QUAD CORE XEON VM SERVERS	39,518	3,486	8/2011	37	37
REPL CX500(CX3-40) DISK STORAG	160,848	66,808	6/2013	1,393	1,393
DELL CX500 DISK STORAGE	28,962	6,272	6/2012	161	161
ADIC SCALER I500 & ADIC ILINK	133,566	14,488	12/2011	201	201
MOTOROLA RADIO COMM SYS 3PTP 5	68,037	42,661	5/2014	1,719	1,719
ND4E CHANNEL BANK REPLACEMENT	83,182	39,683	8/2013	1,449	1,449
TUCKER ELECT(2)SPECTRUM ANLYZR	88,911	36,728	4/2013	653	653
ALCATEL MRD-4000 MW RADIO UPG	688,209	250,425	2/2013	4,807	4,807
TUCKER ELECT SPECTRUM ANLYZR	37,899	8,227	6/2012	217	217
MASTER 3 EDACS 800 MHZ BASE	20,670	4,468	6/2012	122	122
D & S LIM EQPT - ASSESSOR BOX	97,033	15,704	3/2012	288	288
CISCO NTWK SYS EQPT EOL ROUTER	1,425,842	1,031,059	10/2014	41,745	41,745
VERIZON ARUBA WIRELESS EQUIP	151,257	40,710	7/2012	1,158	1,158
NTWK GNRL CORP NTWK ANALYZER	62,495	13,566	6/2012	358	358
HIGH TWR SECURITY EVENT MGMT	55,148	11,921	6/2012	298	298
EN POINTE TECH DATA NTWK ANALY	48,488	7,877	3/2012	152	152
NEXUS NTWK EQUIP -METRO ETHNT	106,112	17,253	2/2012	336	336
AEROFLEX 2945B EDACS MONITORS	64,839	24,491	2/2014	1,587	1,587
SPECTRUM ANALYZER	35,095	3,821	11/2011	55	55

County of Riverside

Part I - Financed Fixed Assets

For Fiscal Year 11/12

Schedule 21

Budget Unit	Original Cost	Remaining Balance	Final Date	Amount Requested	Amount Recmnded
45500-7400100000-00000	IT: INFORMATION TECHNOLOGY				
GM FURN RECONF 2ND FL RIVCREST	$ 156,450	$ 25,446	2/2012	$ 496	$ 496
2 MX-ONE CHASSIS LIM SYS EQ	95,622	69,055	10/2014	18,685	18,685
AASTRA CHASSIS LIM SYS REPL EQ	236,578	203,837	8/2015	45,102	45,102
AASTRA CHASSIS LIM SYS REPL EQ	35,033	26,775	6/2014	8,583	8,583
SERVER AUTO ATTENDANT REPL	52,670	52,670	6/2016	1,170	1,170
JESKELL IBM Z890 ENT SRVR REPL	360,000	360,000	6/2015	90,000	90,000
MULTI FUNCTIONAL PRT DEVICE	150,000	150,000	6/2016	30,000	30,000
ERICSSON AASTRA TSE SW UPGRADE	6,504,001	7,154,401	6/2015	929,143	929,143
ERICSSON AASTRA LIM UPGRADE	125,000	125,000	6/2016	25,000	25,000
CISCO ASA5580 VPN	107,202	107,202	6/2016	21,440	21,440
ARUBA WIRELESS EQUIP	216,340	216,340	6/2016	43,268	43,268
(2) ANRITSU MS2722D	50,300	50,300	6/2016	10,060	10,060
N. MT BATTERY PLANT UPGRADE	50,000	50,000	6/2016	10,000	10,000
RCIT BDA IMPLEMENTATION	45,000	45,000	6/2016	9,000	9,000
RCIT ISP REDUNDANCY IN INDIO	75,000	75,000	6/2016	15,000	15,000
RCIT NTWK SYSLOG SERVER	17,000	17,000	6/2016	3,400	3,400
ARUBA 6000 CONTROLLER REDUND	45,000	45,000	6/2016	9,000	9,000
RV PUBLIC DEF MOVE TO MAIN ST	45,000	45,000	6/2016	9,000	9,000
PCS 3MX-ONE CHASSIS TSW LIM	96,183	60,332	6/2014	19,196	19,196
PCS 4LIM SYS, IT COMM SYS COMP	173,403	108,780	5/2014	34,608	34,608
PCS 2MX-ONE CHASSIS LIM & TSW	199,247	125,108	4/2014	39,762	39,762
PCS ASTRA BASIC TSW LIM	29,466	18,509	4/2014	5,880	5,880
PCS ASTRA BASIC TSW(2)LIM/ TMU	43,790	27,506	4/2014	8,738	8,738
ERICSSON PHONE SYS EQPT-DPSS	43,466	15,723	3/2013	8,915	8,915
MV RCRMC NEW MENTAL HLTH FAC	45,000	45,000	6/2016	9,000	9,000
BANNING/THOUSAND PALMS LIM REP	43,886	11,819	7/2012	9,407	9,407
D&S COMM LIM EQPT HEMET	76,259	16,417	5/2012	16,417	16,417
D&S COMM LIM EQPT ASSR BOX SPR	94,161	20,265	4/2012	20,265	20,265
DC PWR PLT ERICSN SYS RECTIFIE	45,923	19,458	3/2014	6,850	6,850
PERRIS DPSS NEW BTS IT INFR	45,000	45,000	6/2016	9,000	9,000
DESERT HOT SP CHA NEW FAC	45,000	45,000	6/2016	9,000	9,000
PCS ASTRA BASIC TSW(2)LIM/ TMU	43,790	27,506	4/2014	1,155	1,155
ERICSSON PHONE SYS EQPT-DPSS	43,466	15,723	3/2013	255	255
BANNING/THOUSAND PALMS LIM REP	43,886	11,819	7/2012	339	339
RIGHTFAX SOFTWR & SRVR SYS UPG	37,707	6,901	2/2012	6,901	6,901
D&S COMM LIM EQPT HEMET	76,259	16,417	5/2012	389	389
D&S COMM LIM EQPT ASSR BOX SPR	94,161	20,265	4/2012	478	478

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Budget Unit		Original Cost	Remaining Balance	Final Date	Amount Requested	Amount Recmnded
45500-7400100000-00000	IT: INFORMATION TECHNOLOGY					
QUAD CORE XEON VM SERVERS		$ 39,518	$ 3,486	8/2011	$ 3,486	$ 3,486
REPL CX500(CX3-40) DISK STORAG		160,848	66,808	6/2013	32,978	32,978
DC PWR PLT ERICSN SYS RECTIFIE		45,923	19,458	3/2014	623	623
DELL CX500 DISK STORAGE		28,962	6,272	6/2012	6,272	6,272
ADIC SCALER I500 & ADIC ILINK		133,566	14,488	12/2011	14,488	14,488
RIGHTFAX SOFTWR & SRVR SYS UPG		37,707	6,901	2/2012	221	221
MOTOROLA RADIO COMM SYS 3PTP 5		68,037	42,661	5/2014	13,579	13,579
ND4E CHANNEL BANK REPLACEMENT		83,182	39,683	8/2013	17,161	17,161
TUCKER ELECT(2)SPECTRUM ANLYZR		88,911	36,728	4/2013	18,164	18,164
ALCATEL MRD-4000 MW RADIO UPG		688,209	250,425	02/2013	141,797	141,797
TUCKER ELECT SPECTRUM ANLYZR		37,899	8,227	6/2012	8,227	8,227
MASTER 3 EDACS 800 MHZ BASE		20,670	4,468	6/2012	4,468	4,468
D & S LIM EQPT - ASSESSOR BOX		97,033	15,704	3/2012	15,704	15,704
CISCO NTWK SYS EQPT EOL ROUTER		1,425,842	1,031,059	10/2014	41,745	41,745
VERIZON ARUBA WIRELESS EQUIP		151,257	40,710	7/2012	32,403	32,403
NTWK GNRL CORP NTWK ANALYZER		62,495	13,566	6/2012	13,566	13,566
HIGH TWR SECURITY EVENT MGMT		55,148	11,921	6/2012	11,921	11,921
EN POINTE TECH DATA NTWK ANALY		48,488	7,877	3/2012	7,877	7,877
NEXUS NTWK EQUIP -METRO ETHNT		106,112	17,253	2/2012	17,253	17,253
AEROFLEX 2945B EDACS MONITORS		64,839	24,491	2/2014	13,095	13,095
SPECTRUM ANALYZER		35,095	3,821	11/2011	3,821	3,821
GM FURN RECONF 2ND FL RIVCREST		156,450	25,446	2/2012	25,446	25,446
Budget Unit Total:		**$ 27,110,766**	**$ 23,596,154**		**$ 2,245,279**	**$ 2,245,279**
45420-1109200000-00000	OASIS: FINANCIALS					
COMPUTER EQUIPMENT - INTEREST		$ 17,445	$ 3,040	0213	$ 2,188	$ 2,188
COMPUTER EQUIPMENT - INTEREST		168,596	29,620	0413	21,318	21,318
COMPUTER EQUIPMENT- PRINCIPAL		258,620	107,329	0213	52,996	52,996
COMPUTER EQUIPMENT- PRINCIPAL		2,313,671	963,148	0413	475,066	475,066
Budget Unit Total:		**$ 2,758,332**	**$ 1,103,137**		**$ 551,568**	**$ 551,568**
45420-1109300000-00000	OASIS: HRMS					
COMPUTER EQUIPMENT - INTEREST		$ 8,592	$ 3,217	0213	$ 1,078	$ 1,078
COMPUTER EQUIPMENT - PRINCIPAL		127,380	78,323	0213	10,500	10,500
COMPUTER EQUIPMENT - INTEREST		83,040	31,329	0413	26,103	26,103

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Budget Unit		Original Cost	Remaining Balance	Final Date	Amount Requested	Amount Recmnded
45420-1109300000-00000	OASIS: HRMS					
COMPUTER EQUIPMENT - PRINCIPAL		$ 1,139,569	$ 702,133	0413	$ 233,987	$ 233,987
Budget Unit Total:		**$ 1,358,581**	**$ 815,002**		**$ 271,668**	**$ 271,668**
45300-7300500000-00000	PURCHASING: FLEET SERVICES					
TBD 2012 PATROL - INT		$ -	$ 513,209	2014	$ 273,580	$ 273,580
TBD 2012 PATROL - PRINC		8,754,574	8,754,574	2014	2,815,682	2,815,682
WFARGO 2012 PATROL - INT		-	147,033	2015	51,076	51,076
WFARGO 2012 PATROL - PRINC		1,670,000	1,670,000	2015	323,077	323,077
WFARGO 2012 NON PATROL - INT		-	123,451	2016	40,593	40,593
WFARGO 2012 NON PATROL - PRINC		1,182,650	1,182,650	2016	212,936	212,936
WFARGO 2011 PATROL - INT		-	17,183	2014	10,536	10,536
WFARGO 2011 PATROL - PRINC		365,790	307,317	2014	119,464	119,464
WFARGO 2011 NON PATROL - INT		-	35,742	2015	16,775	16,775
WFARGO 2011 NON PATROL - PRINC		528,000	466,505	2015	126,724	126,724
WFARGO 2011 PATROL - INT		-	45,316	2015	25,478	25,478
WFARGO 2011 PATROL - PRINC		865,512	786,977	2015	271,904	271,904
WFARGO 2011 NON PATROL - INT		-	26,292	2016	12,187	12,187
WFARGO 2011 NON PATROL - PRINC		476,537	392,956	2016	118,239	118,239
WFARGO 2010 NON PATROL - INT		-	43,160	2015	23,567	23,567
WFARGO 2010 NON PATROL - PRINC		1,023,195	691,240	2015	293,268	293,268
WFARGO 2009 PATROL - INT		-	39,445	2012	39,406	39,406
WFARGO 2009 PATROL - PRINC		9,160,364	1,908,067	2012	1,904,584	1,904,584
WFARGO 2009 NON PATROL - INT		-	82,849	2014	63,680	63,680
WFARGO 2009 NON PATROL - PRINC		4,659,347	1,837,596	2014	1,142,552	1,142,552
BOFA 2008 PATROL - INT		-	672	2012	672	672
BOFA 2008 PATROL - PRINC		3,624,058	62,387	2012	62,387	62,387
BOFA 2008 NON PATROL - INT		-	21,553	2013	20,773	20,773
BOFA 2008 NON PATROL - PRINC		10,459,000	1,506,232	2013	1,449,890	1,449,890
BOFA 2007 NON PATROL - INT		-	17,184	2014	10,740	10,740
BOFA 2007 NON PATROL - PRINC		8,265,421	351,158	2014	153,426	153,426
BOFA 2006 NON PATROL - INT		-	5,921	2013	5,522	5,522
BOFA 2006 NON PATROL - PRINC		1,237,937	232,863	2013	185,505	185,505
Budget Unit Total:		**$ 52,272,385**	**$ 21,269,532**		**$ 9,774,223**	**$ 9,774,223**
45600-7300300000-00000	PURCHASING: PRINTING					
BOFA 2008 QP COPIERS - INT		$ -	$ 4,799	2013	$ 3,764	$ 3,764
BOFA 2008 QP COPIERS - PRINC		652,567	235,927	2013	133,794	133,794

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Budget Unit		Original Cost		Remaining Balance	Final Date		Amount Requested		Amount Recmnded
Budget Unit Total:	**$**	**652,567**	**$**	**240,726**		**$**	**137,558**	**$**	**137,558**
10000-2500100000-00000	SHERIFF: ADMINISTRATION								
1% MANAGEMENT FEE-ACES - 5500	$	-	$	-		$	258	$	258
CRIMINAL JUSTICE BLDG - 5500		-		-			25,793		25,793
1% MANAGEMENT FEE-ACES - 1200		-		-			485		485
CRIMINAL JUSTICE BLDG - 1200		-		-			48,504		48,504
1% MANAGEMENT FEE-ACES - 1100		-		-			886		886
CRIMINAL JUSTICE BLDG - 1100		-		-			88,592		88,592
Budget Unit Total:	**$**	**-**	**$**	**-**		**$**	**164,518**	**$**	**164,518**
22250-2505100000-00000	SHERIFF: CAL-ID								
LIVE SCAN DEVICE	$	-	$	-		$	-	$	50,001
CASE MANAGEMENT SYSTEM		-		-			-		300,000
Budget Unit Total:	**$**	**-**	**$**	**-**		**$**	**-**	**$**	**350,001**
10000-2500400000-00000	SHERIFF: CORRECTIONS								
1% MANAGEMENT FEE, ACES - 6200	$	-	$	-		$	239	$	239
CRIMINAL JUSTICE BLDG - 6200		-		-			23,856		23,856
1% MANAGEMENT FEE, ACES - 4100		-		-			141		141
CRIMINAL JUSTICE BLDG - 4100		-		-			14,128		14,128
Budget Unit Total:	**$**	**-**	**$**	**-**		**$**	**38,364**	**$**	**38,364**
10000-2500500000-00000	SHERIFF: COURT SERVICES								
1% MGMNT FEE, ACES-4100 CORAL	$	-	$	-		$	674	$	674
CRIMINAL JUSTICE BLDG, CAPITAL		-		-			67,391		67,391
Budget Unit Total:	**$**	**-**	**$**	**-**		**$**	**68,065**	**$**	**68,065**
10000-2500300000-00000	SHERIFF: PATROL								
COPIER - LEASE-3300	$	24,050	$	24,050	06-22	$	7,400	$	7,400
AIRCRAFT-INT-6200, NO. 378		465,170		43,883	10-13		31,538		31,538
AIRCRAFT-PRIN-6200, NO. 378		3,198,939		1,003,006	10-13		491,906		491,906
EUROCOPTER-INT-6200,NO 487		503,037		71,901	12-13		44,113		44,113
EUROCOPTER-PRIN-6200, NO 487		3,598,409		1,392,900	12-13		541,808		541,808
1 % FEE, JURUPA-4200, CORAL		-		-			4,047		4,047
JURUPA SHERIFF-4200,CORAL		11,993,068		-	01-28		404,659		404,659
1% FEE, CAPITAL LEASES, CORAL		-		-			353		353

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Budget Unit		Original Cost	Remaining Balance	Final Date	Amount Requested	Amount Recmnded
10000-2500300000-00000	SHERIFF: PATROL					
CJB-7100,CAPITAL LEASES, CORAL		$ -	$ -		$ 35,880	$ 35,880
Budget Unit Total:		**$ 19,782,673**	**$ 2,535,740**		**$ 1,561,704**	**$ 1,561,704**
10000-2500200000-00000	SHERIFF: SUPPORT					
1% MGT FEE, ACES-1500		$ -	$ -		$ 221	$ 221
CRIMINAL JUSTICE BUILDING-1500		-	-		22,101	22,101
1% MGT FEE, ACES-1400		-	-		831	831
CRIMINAL JUSTICE BUILDING-1400		-	-		83,056	83,056
1% MGT FEE, ACES-1100		-	-		831	831
CRIMINAL JUSTICE BUILDING-1100		-	-		83,056	83,056
Budget Unit Total:		**$ -**	**$ -**		**$ 190,096**	**$ 190,096**
10000-2500700000-00000	SHERIFF: TRAINING CENTER					
RANGE		$ 8,685,418	$ 7,365,154	11/2036	$ 287,452	$ 287,452
Budget Unit Total:		**$ 8,685,418**	**$ 7,365,154**		**$ 287,452**	**$ 287,452**
20260-3130200000-00000	Survey					
MULTI-FUNCTIONAL COLOR COPIER/		$ 100,000	$ 100,000	2017	$ 50,000	$ -
Budget Unit Total:		**$ 100,000**	**$ 100,000**		**$ 50,000**	**$ -**
20000-3130700000-00000	TLMA: TRANS EQUIP (GARAGE)					
EXISTING CAPITAL LEASES		$ 10,069,462	$ 2,404,773	06/2018	$ 890,516	$ 890,516
Budget Unit Total:		**$ 10,069,462**	**$ 2,404,773**		**$ 890,516**	**$ 890,516**
Grand Total:		**$ 139,359,555**	**$ 71,165,500**		**$ 19,055,363**	**$ 19,355,364**

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Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recmnded	Amount Recmnded
10000-1200100000-00000	ASSESSOR: ASSESSOR					
VMWARE PHASE 4 SOFTWARE		$ 15,000	1	$ 15,000	1	$ 15,000
REPLACEMENT ROUTER/SWITCHES		10,000	1	10,000	1	10,000
NETWORKER TAPE BACKUP		6,000	1	6,000	1	6,000
PROPERTY DATA COPIER/SCANNER		8,700	1	8,700	1	8,700
CANON DR7550C SCANNER		5,200	1	5,200	1	5,200
VMWARE PHASE		18,000	1	18,000	1	18,000
Budget Unit Total:		**$ 62,900**	**6**	**$ 62,900**	**6**	**$ 62,900**
10000-1200200000-00000	ASSESSOR: CLERK-RECORDER					
ERDS ENHANCEMENTS PHASE IIB &		$ 240,000	1	$ 240,000	1	$ 240,000
VMWARE PHASE 4 SOFTWARE		15,000	1	15,000	1	15,000
NETWORKER TAPE BACKUP		6,000	1	6,000	1	6,000
ATALASOFT FORM PROCESSING		5,000	1	5,000	1	5,000
FLYNET SOFTWARE PURCHASE		15,552	1	15,552	1	15,552
BIZHUB		5,500	1	5,500	1	5,500
ERDS HARDWARE		200,000	1	200,000	1	200,000
VMWARE PHASE		18,000	1	18,000	1	18,000
REPLACEMENT ROUTER/SWITCHES		10,000	1	10,000	1	10,000
REPLACEMENT TAPE DRIVE		20,000	1	20,000	1	20,000
Budget Unit Total:		**$ 535,052**	**10**	**$ 535,052**	**10**	**$ 535,052**
45100-1200300000-00000	ASSESSOR: RECORD MGT AND ARCH					
SCISSOR LIFT		$ 12,000	1	$ 12,000	1	$ 12,000
SCANNER		7,500	1	7,500	1	7,500
Budget Unit Total:		**$ 19,500**	**2**	**$ 19,500**	**2**	**$ 19,500**
45620-7300600000-00000	CENTRAL MAIL SERVICES-ISF					
MAIL METER		$ 12,000	5	$ 60,000	5	$ 60,000
Budget Unit Total:		**$ 12,000**	**5**	**$ 60,000**	**5**	**$ 60,000**
10000-4200300000-00000	CHA: ADMIN					

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Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recmnded	Amount Recmnded
10000-4200300000-00000	CHA: ADMIN					
COMPUTER EQUIP		$ 18,000	1	$ 18,000	1	$ 18,000
COMPUTER EQUIP		18,000	2	36,000	2	36,000
COMPUTER EQUIP		25,000	2	50,000	2	50,000
COMPUTER EQUIP		141,000	1	141,000	1	141,000
COMPUTER EQUIP		18,000	1	18,000	1	18,000
COMPUTER EQUIP		18,000	1	18,000	1	18,000
Budget Unit Total:		**$ 238,000**	**8**	**$ 281,000**	**8**	**$ 281,000**
10000-4200100000-00000	CHA: PUBLIC HEALTH					
IMPROVEMENTS-INFRASTRUCTURE		$ 50,000	1	$ 50,000	1	$ 50,000
EQUIPMENT OTHER		15,419	3	46,257	3	46,257
EQUIPMENT OTHER		24,539	3	73,617	3	73,617
EQUIPMENT OTHER		6,500	8	52,000	8	52,000
EQUIPMENT OTHER		5,875	4	23,500	4	23,500
EQUIPMENT OTHER		9,500	1	9,500	1	9,500
EQUIPMENT OTHER		50,000	1	50,000	1	50,000
Budget Unit Total:		**$ 161,833**	**21**	**$ 304,874**	**21**	**$ 304,874**
21770-4200100000-00000	CHA:CDC PHER H1N1 ALLOCATION					
EQUIP-OTHERS		$ 5,000	2	$ 10,000	2	$ 10,000
EQUIP-OTHERS		4,000	2	8,000	2	8,000
Budget Unit Total:		**$ 9,000**	**4**	**$ 18,000**	**4**	**$ 18,000**
10000-2300100000-00000	CHILD SUPPORT SERVICES					
ADMINISTRATIVE COPIERS		$ 12,500	2	$ 25,000	2	$ 25,000
Budget Unit Total:		**$ 12,500**	**2**	**$ 25,000**	**2**	**$ 25,000**
10000-3140100000-00000	CODE ENFORCEMENT					
COLOR COPIER		$ 5,965	1	$ 5,965	1	$ 5,965
Budget Unit Total:		**$ 5,965**	**1**	**$ 5,965**	**1**	**$ 5,965**

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Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recmnded	Amount Recmnded
22100-1910700000-00000	EDA: AIRPORT					
TRACTOR AND MOWER		$ 56,525	1	$ 56,525	1	$ 56,525
Budget Unit Total:		**$ 56,525**	**1**	**$ 56,525**	**1**	**$ 56,525**
10000-7200100000-00000	FACILITY MGMT: ADMINISTRATION					
SERVERS		$ 5,000	2	$ 10,000	2	$ 10,000
SERVERS		6,000	2	12,000	2	12,000
Budget Unit Total:		**$ 11,000**	**4**	**$ 22,000**	**4**	**$ 22,000**
10000-7200500000-00000	FACILITY MGMT: DESIGN _ CONST.					
OFFICE EQUIPMENT		$ 1	1	$ 1	1	$ 1
Budget Unit Total:		**$ 1**	**1**	**$ 1**	**1**	**$ 1**
10000-7200600000-00000	FACILITY MGMT: ENERGY MGMT					
ENERGYCAP-EXPORT PS IMPLMNTTN		$ 5,000	1	$ 5,000	1	$ 5,000
ENERGYCAP--BILL EXPORT MODULE		10,250	1	10,250	1	10,250
ENERGYCAP--METER CAPACITY INCR		9,500	2	19,000	2	19,000
Budget Unit Total:		**$ 24,750**	**4**	**$ 34,250**	**4**	**$ 34,250**
10000-2700200000-00000	FIRE PROTECTION: FOREST					
IT SERVER REPLACEMENTS		$ 13,000	6	$ 78,000	6	$ 78,000
ZOLL E SERIES DEFIBRILLATOR		20,000	1	20,000	1	20,000
EXTRICATION POWER UNIT ONLY		6,000	1	6,000	1	6,000
Budget Unit Total:		**$ 39,000**	**8**	**$ 104,000**	**8**	**$ 104,000**
33000-947100-00000	FLOOD: CAPITAL PROJECTS					
HVAC SYSTEM		$ 50,000	4	$ 200,000	4	$ 200,000
FIRE SPRINKLER UPGRADE		60,000	2	120,000	2	120,000
SECURITY LIGHTING ADDITION		30,000	1	30,000	1	30,000
SOIL LAB REFURBISH		25,000	1	25,000	1	25,000
NPDES DIVISION EXPANSION		125,000	1	125,000	1	125,000
POROUS PAVEMENT LID TEST PRJT		250,000	1	250,000	1	250,000

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Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recmnded	Amount Recmnded
33000-947100-00000	FLOOD: CAPITAL PROJECTS					
ADDL STORAGE-PARTITION BLDG		$ 5,000	1	$ 5,000	1	$ 5,000
REAL ESTATE-SATELLITE MAINT YD		2,500,000	1	2,500,000	1	2,500,000
ENTRANCE-PARKING LOT REDESIGN		880,000	1	880,000	1	880,000
BLDG/ARCHITECT SVCS BOARDROOM		250,000	1	250,000	1	250,000
LANDSCAPING - D T CONVERSION		250,000	1	250,000	1	250,000
	Budget Unit Total:	**$ 4,425,000**	**15**	**$ 4,635,000**	**15**	**$ 4,635,000**
48080-947320-00000	FLOOD: DATA PROCESSING					
FILE STORAGE SERVER		$ 15,000	1	$ 15,000	1	$ 15,000
NEW SERVER HARDWARE		10,000	2	20,000	2	20,000
	Budget Unit Total:	**$ 25,000**	**3**	**$ 35,000**	**3**	**$ 35,000**
15100-947200-00000	FLOOD: DISTRICT ADMIN					
TRMBLE VX ROBTICS TOTL STATION		$ 50,000	1	$ 50,000	1	$ 50,000
	Budget Unit Total:	**$ 50,000**	**1**	**$ 50,000**	**1**	**$ 50,000**
48020-947260-00000	FLOOD: GARAGE_FLEET OPS					
FRONT MOUNT DOZER BLADE		$ 6,000	1	$ 6,000	1	$ 6,000
FRONT MOUNT SWEEPER		7,000	1	7,000	1	7,000
DUMP TRUCK 10 WHEEL AWD		135,000	2	270,000	2	270,000
SPRAY TRUCK (3-AXLE AWD)		250,000	1	250,000	1	250,000
TILT BED TRAILER		20,000	2	40,000	2	40,000
FUEL SYSTEM UPGRADE		100,000	1	100,000	1	100,000
PARTICULATE TRAPS FOR TRUCKS		24,000	3	72,000	3	72,000
CAPITALIZED EQUIPMENT REPAIRS		150,000	1	150,000	1	150,000
D-5 DOZER/CRAWLER		165,000	1	165,000	1	165,000
WATER TRUCK		85,000	1	85,000	1	85,000
RUBBER TRACK SKID STEER		75,000	4	300,000	4	300,000
	Budget Unit Total:	**$ 1,017,000**	**18**	**$ 1,445,000**	**18**	**$ 1,445,000**
48000-947240-00000	FLOOD: HYDROLOGY					

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Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recmnded	Amount Recmnded
48000-947240-00000	FLOOD: HYDROLOGY					
AUTO SAMPLING EQUIPMENT		$ 6,000	15	$ 90,000	15	$ 90,000
Budget Unit Total:		**$ 6,000**	**15**	**$ 90,000**	**15**	**$ 90,000**
48060-947300-00000	FLOOD: MAPPING SERVICES					
HP PLOTTER		$ 16,000	1	$ 16,000	1	$ 16,000
B&W COPIER CANON - 3235		7,500	2	15,000	2	15,000
LARGE FORMAT COLOR SCANNER		20,000	1	20,000	1	20,000
Budget Unit Total:		**$ 43,500**	**4**	**$ 51,000**	**4**	**$ 51,000**
40650-947120-00000	FLOOD: PHOTOGRAMMETRY OPS					
CAPITALIZED EQUIPMENT REPAIRS		$ 15,000	1	$ 15,000	1	$ 15,000
Budget Unit Total:		**$ 15,000**	**1**	**$ 15,000**	**1**	**$ 15,000**
10000-1130100000-00000	HR: HUMAN RESOURCES					
SERVER		$ 15,000	2	$ 30,000	2	$ 30,000
Budget Unit Total:		**$ 15,000**	**2**	**$ 30,000**	**2**	**$ 30,000**
45500-7400100000-00000	IT: INFORMATION TECHNOLOGY					
REMEDY SOFTWARE		$ 260,000	1	$ 260,000	1	$ 260,000
NETFLOW SYSTEM		33,000	1	33,000	1	33,000
Budget Unit Total:		**$ 293,000**	**2**	**$ 293,000**	**2**	**$ 293,000**
10000-4100400000-00000	MENTAL HEALTH: ADMINISTRATION					
COPIER		$ 12,000	2	$ 24,000	2	$ 24,000
SERVER		8,615	6	51,690	6	51,690
Budget Unit Total:		**$ 20,615**	**8**	**$ 75,690**	**8**	**$ 75,690**
10000-4100200000-00000	MENTAL HEALTH: TREATMENT PROG					
COPIERS		$ 10,000	5	$ 50,000	5	$ 50,000
Budget Unit Total:		**$ 10,000**	**5**	**$ 50,000**	**5**	**$ 50,000**

County of Riverside

Part II - Cash Purchased Fixed Assets

For Fiscal Year 11/12

Schedule 22

Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recmnded	Amount Recmnded
45420-1109200000-00000	OASIS: FINANCIALS					
SOFTWARE		$ 16,667	1	$ 16,667	1	$ 16,667
ORACLE SOFTWARE		105,333	1	105,333	1	105,333
SERVER		7,666	1	7,666	1	7,666
CISCO SWITCH		5,000	1	5,000	1	5,000
COMPUTER EQUIPMENT		16,667	1	16,667	1	16,667
	Budget Unit Total:	**$ 151,333**	**5**	**$ 151,333**	**5**	**$ 151,333**
45420-1109300000-00000	OASIS: HRMS					
SOFTWARE		$ 13,333	1	$ 13,333	1	$ 13,333
ORACLE SOFTWARE		52,667	1	52,667	1	52,667
CISCO SWITCH		5,000	1	5,000	1	5,000
COMPUTER EQUIPMENT		14,666	1	14,666	1	14,666
	Budget Unit Total:	**$ 85,666**	**4**	**$ 85,666**	**4**	**$ 85,666**
10000-2400100000-00000	PUBLIC DEFENDER					
COPIERS		$ 16,000	4	$ 64,000	4	$ 64,000
	Budget Unit Total:	**$ 16,000**	**4**	**$ 64,000**	**4**	**$ 64,000**
45300-7300500000-00000	PURCHASING: FLEET SERVICES					
SECURITY CAMERA INSTALLATIONS		$ 200,000	1	$ 200,000	1	$ 200,000
FLEET FOCUS FUEL SYSTEM		500,000	1	500,000	1	500,000
VEHICLES		28,000	12	336,000	12	336,000
	Budget Unit Total:	**$ 728,000**	**14**	**$ 1,036,000**	**14**	**$ 1,036,000**
45600-7300300000-00000	PURCHASING: PRINTING					
CREASER		$ 18,000	1	$ 18,000	1	$ 18,000
ENVELOPE PRESS		186,000	1	186,000	1	186,000
INDUSTRIAL PAPER CUTTER		66,000	1	66,000	1	66,000
	Budget Unit Total:	**$ 270,000**	**3**	**$ 270,000**	**3**	**$ 270,000**
22250-2505100000-00000	SHERIFF: CAL-ID					

County of Riverside

Part II - Cash Purchased Fixed Assets

For Fiscal Year 11/12

Schedule 22

Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recmnded	Amount Recmnded
22250-2505100000-00000	SHERIFF: CAL-ID					
LIVE SCAN DEVICE		$ 16,667	3	$ 50,001	3	$ 50,001
CASE MANAGEMENT SYSTEM		300,000	1	300,000	1	300,000
Budget Unit Total:		**$ 316,667**	**4**	**$ 350,001**	**4**	**$ 350,001**
22250-2505300000-00000	SHERIFF: CAL-PHOTO					
CAPTURE/RETREIVE WORKSTATION		$ 22,000	1	$ 22,000	1	$ 22,000
FACIAL RECOGNITION SERVER		128,000	1	128,000	1	128,000
CAPITALIZED SOFTWARE		13,700	1	13,700	1	13,700
Budget Unit Total:		**$ 163,700**	**3**	**$ 163,700**	**3**	**$ 163,700**
10000-2500300000-00000	SHERIFF: PATROL					
MDC - SERT - 7100		$ 6,500	1	$ 6,500	1	$ 6,500
MDC'S - HDT - 6300		6,500	2	13,000	2	13,000
MDC'S - JURUPA VALLEY -4200		6,500	10	65,000	10	65,000
MDC'S - MORENO VALLY -4100		6,500	5	32,500	5	32,500
MDC'S -SW -3300		6,500	29	188,500	29	188,500
MDC'S -CABAZON-3100		6,500	5	32,500	5	32,500
MDC'S - PALM DESERT -2300		6,500	5	32,500	5	32,500
Budget Unit Total:		**$ 45,500**	**57**	**$ 370,500**	**57**	**$ 370,500**
20260-3130200000-00000	Survey					
TOPCON GR3 GPS RECEIVER		$ 33,000	2	$ 66,000	2	$ 66,000
DIGITAL LEVELS		9,000	2	18,000	2	18,000
ROBOTIC/REFLECTORLESS TOTAL ST		45,000	1	45,000	1	45,000
Budget Unit Total:		**$ 87,000**	**5**	**$ 129,000**	**5**	**$ 129,000**
20200-3100200000-00000	TLMA: ADMINISTRATION					
COLOR PRINTER REPLACEMENTS		$ 6,000	2	$ 12,000	2	$ 12,000
MS SQL SERVER 2008 STD W/SA		7,000	1	7,000	1	7,000
GIS/AGENCY CITRIX SERVER BLADE		8,000	2	16,000	2	16,000
VMWARE SERVER BLADES		16,000	2	32,000	2	32,000

County of Riverside

Part II - Cash Purchased Fixed Assets

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Schedule 22

Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recmnded	Amount Recmnded
20200-3100200000-00000	TLMA: ADMINISTRATION					
SQL SAN STORAGE		$ 15,000	1	$ 15,000	1	$ 15,000
GIS SAN STORAGE		15,000	1	15,000	1	15,000
SQL SERVER PERF/MONITORING SW		7,000	1	7,000	1	7,000
ARC GIS SERVER BLADE		8,000	1	8,000	1	8,000
MS SQL DATA WH SERVER BLADE		8,000	1	8,000	1	8,000
MS SQL DEV SERVER BLADE		8,000	1	8,000	1	8,000
Budget Unit Total:		**$ 98,000**	**13**	**$ 128,000**	**13**	**$ 128,000**
20200-3100100000-00000	TLMA: GIS					
HP PLOTTER DESIGNJET T1200		$ 9,000	1	$ 9,000	1	$ 9,000
ARCGIS ADVANCED SVR DEV/STAGIN		20,000	1	20,000	1	20,000
ARCGIS ADVANCE SVR LICENSE UPG		20,000	1	20,000	1	20,000
Budget Unit Total:		**$ 49,000**	**3**	**$ 49,000**	**3**	**$ 49,000**
20000-3130700000-00000	TLMA: TRANS EQUIP (GARAGE)					
COPY / SCANNER / PRINTER		$ 7,500	1	$ 7,500	1	$ 7,500
1 TON/CREW CAB SUR TRK W/UTIL		40,000	1	40,000	1	40,000
SKIP LOADER W/ GANNON - JCB		70,000	1	70,000	1	70,000
1 TON SIGN TRUCK - GMC / FORD		60,000	1	60,000	1	60,000
TILT BED TRAILER - INTERSTATE		31,000	1	31,000	1	31,000
PENUMATIC ROLLER - CAT		150,000	1	150,000	1	150,000
TRK W/ROTARY BROOM GMC / FORD		60,000	1	60,000	1	60,000
5 YARD DUMP TRK - FREIGHTLINER		100,000	5	500,000	5	500,000
AERIAL TRUCKS - TEREX		100,000	2	200,000	2	200,000
ROTARY SWEEPERS - WALDON		50,000	3	150,000	3	150,000
3/4 TON PICKUP TRK GMC / FORD		22,000	15	330,000	15	330,000
RUBBER TIRE LOADER		135,000	3	405,000	3	405,000
MOTOR GRADERS - CAT		185,000	3	555,000	3	555,000
BRUSH CHIPPER TRK - FREIGHTLIN		100,000	1	100,000	1	100,000
BRUSH CHIPPER - BANDIT 1490		45,000	1	45,000	1	45,000
Budget Unit Total:		**$ 1,155,500**	**40**	**$ 2,703,500**	**40**	**$ 2,703,500**

County of Riverside

Part II - Cash Purchased Fixed Assets

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Schedule 22

Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recmnded	Amount Recmnded
20000-3130100000-00000	TLMA: TRANSPORTATION					
SOFTWARE LICENSES		$ 7,500	1	$ 7,500	1	$ 7,500
ROAD REPAIR SOFTWARE		10,000	1	10,000	1	10,000
WET TRACK ABRASION TESTER		7,500	1	7,500	1	7,500
OFFICE COPIER		30,000	1	30,000	1	30,000
LARGE COPIER/SCANNER		20,000	1	20,000	1	20,000
NEW YARD PROPERTY ONLY		567,890	1	567,890	1	567,890
PERRIS YARD LIGHTING UPGRADE		10,000	1	10,000	1	10,000
MAGNESIUM CHORIDE		150,000	1	150,000	1	150,000
DRILL WELL AT ANZA		50,000	1	50,000	1	50,000
2-WAY RADIO REPLACEMENT		500,000	1	500,000	1	500,000
WASHINGTON ST YARD		500,000	1	500,000	1	500,000
YARD UPGRADES		150,000	1	150,000	1	150,000
CNG @ THERMAL		150,000	1	150,000	1	150,000
Budget Unit Total:		**$ 2,152,890**	**13**	**$ 2,152,890**	**13**	**$ 2,152,890**
40200-4500100000-00000	WASTE: DISPOSAL ENTERPRISE					
BOBCAT RETROFIT		$ 9,100	1	$ 9,100	1	$ 9,100
3/4-TON PICKUP		30,000	1	30,000	1	30,000
2-TON SERVICE TRUCK W/CRANE		160,000	1	160,000	1	160,000
FORKLIFTS - PS/ELSINORE PHHWCF		25,000	2	50,000	2	50,000
TARPS - BADLANDS & LAMB CANYON		165,000	1	165,000	1	165,000
IT NTWK SYSTEMS, REPLACE COMP		65,000	1	65,000	1	65,000
FLEET MAINTENANCE PADS		17,500	2	35,000	2	35,000
DBLE BUTTE DG GW MONIT WELL		10,000	1	10,000	1	10,000
BADLANDS FLARE #2		665,000	1	665,000	1	665,000
LAMB CANYON GCS ADD/MOD		160,000	1	160,000	1	160,000
BADLANDS GCS ADD/MOD		160,000	1	160,000	1	160,000
LC GW MONITORING WELLS		55,000	1	55,000	1	55,000
LAMB CYN EXPANSION & PERMIT		9,170,000	1	9,170,000	1	9,170,000
BADLANDS CYN EXPANSION, PERMIT		7,644,000	1	7,644,000	1	7,644,000
SCE EASEMENT IN WEST @ LC		100,000	1	100,000	1	100,000
DESERT CTR BLM LAND PURCHASE		16,000	1	16,000	1	16,000

County of Riverside

Part II - Cash Purchased Fixed Assets

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Schedule 22

Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recmnded	Amount Recmnded
Budget Unit Total:	$	18,451,600	18	$ 18,494,100	18	$ 18,494,100
Grand Total:	$	30,878,997	337	$ 34,446,447	337	$ 34,446,447

County of Riverside

New Vehicles

For Fiscal Year 11/12

Schedule 23

Budget Unit	Unit Cost	Units Requested	Amount Requested	Units Recommended	Amount Recommended
10000-4200100000-00000	CHA: PUBLIC HEALTH				
Ford Focus	$ 8,500	2	$ 17,000	$ 2	$ 17,000
Ford Focus	8,500	1	8,500	1	8,500
Ford Focus	8,500	1	8,500	1	8,500
Budget Unit Total:		**4**	**$ 34,000**	**$ 4**	**$ 34,000**
24250-912101-00000	CSA 121 BERNUDA DUNES LIGHTING				
SUV - Light Truck	$ 35,000	1	$ 35,000	$ 1	$ 35,000
Budget Unit Total:		**1**	**$ 35,000**	**$ 1**	**$ 35,000**
23375-903601-00000	CSA 36 IDYLLWILD LIGHTING				
SUV or Light Truck	$ 35,000	1	$ 35,000	$ 1	$ 35,000
Budget Unit Total:		**1**	**$ 35,000**	**$ 1**	**$ 35,000**
22100-1910700000-00000	EDA: AIRPORT				
2011 Ford F-150 XL	$ 26,800	1	$ 26,800	$ 1	$ 26,800
Budget Unit Total:		**1**	**$ 26,800**	**$ 1**	**$ 26,800**
10000-2700200000-00000	FIRE PROTECTION: FOREST				
Fire Engines	$ 500,000	8	$ 4,000,000	$ 8	$ 4,000,000
Budget Unit Total:		**8**	**$ 4,000,000**	**$ 8**	**$ 4,000,000**
48020-947260-00000	FLOOD: GARAGE_FLEET OPS				
4x4 EXT CAB/SHT BED TRUCK	$ 25,000	3	$ 75,000	$ 3	$ 75,000
FLAT BED MATERIAL TRUCK	75,000	1	75,000	1	75,000
4x4 EXT CAB 1/2 TON TRUCK	27,000	2	54,000	2	54,000
4x4 STAND CAB LONG BED TRUCK	25,000	1	25,000	1	25,000
Budget Unit Total:		**7**	**$ 229,000**	**$ 7**	**$ 229,000**

County of Riverside
New Vehicles
For Fiscal Year 11/12

Schedule 23

Budget Unit	Unit Cost	Units Requested	Amount Requested	Units Recommended	Amount Recommended
22900-980501-00000	PERRIS VALLEY CEMETERY				
Backhoe	$ 50,000	1	$ 50,000	$ 1	$ 50,000
Budget Unit Total:		**1**	**$ 50,000**	**$ 1**	**$ 50,000**
45300-7300500000-00000	PURCHASING: FLEET SERVICES				
Type 23 - Patrol SUV	$ 30,000	15	$ 450,000	$ 15	$ 450,000
Type 22 - FSize Sedan	18,700	2	37,400	2	37,400
Type 22 - FSize Sedan Bi Fuel	18,300	2	36,600	2	36,600
Type 20 - Patrol	30,000	25	750,000	25	750,000
Type 20 - Patrol Crown Vic	24,386	359	8,754,574	359	8,754,574
Type 19 - Jail Bus	470,000	1	470,000	1	470,000
Type 17 - Box Truck Hybrid	120,000	2	240,000	2	240,000
Type 15 - SUV 4WD	26,350	1	26,350	1	26,350
Type 14 - Mini SUV 4WD	24,625	2	49,250	2	49,250
Type 13 - 3/4 Pickup 4WD	25,650	2	51,300	2	51,300
Type 10 - 3/4 Pickup	22,600	1	22,600	1	22,600
Type 9 - 1/2 Pickup	19,800	2	39,600	2	39,600
Type 5 - Cargo Van	21,350	3	64,050	3	64,050
Type 5 - 8 Pass Van	22,600	2	45,200	2	45,200
Type 5 - 15 Pass Van	25,100	8	200,800	8	200,800
Type 4 - Mini Van	20,750	2	41,500	2	41,500
Type 3 - Mid Size Used	17,300	2	34,600	2	34,600
Type 3 - Mid Size	19,300	3	57,900	3	57,900
Type 3 - Mid Size Hybrid	27,100	4	108,400	4	108,400
Type 2 - Compact	22,700	1	22,700	1	22,700
Type 2 - Compact Hybrid	26,100	4	104,400	4	104,400
Budget Unit Total:		**443**	**$ 11,607,224**	**$ 443**	**$ 11,607,224**
10000-2500400000-00000	SHERIFF: CORRECTIONS				
Black and White	$ 15,500	1	$ 15,500	$ 1	$ 15,500
Budget Unit Total:		**1**	**$ 15,500**	**$ 1**	**$ 15,500**

County of Riverside

New Vehicles

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Schedule 23

Budget Unit		Unit Cost	Units Requested	Amount Requested	Units Recommended	Amount Recommended
10000-2500300000-00000	SHERIFF: PATROL					
SERT-7100, NEW, U#N/A,Ford		$ 45,000	1	$ 45,000	$ 1	$ 30,000
SERT-7100,RPL U#03-375,Ford		45,000	1	45,000	1	-
SERT-7100,RPL U#91-121,Ford		45,000	1	45,000	1	-
Hemet-3200,RPL U#02-184,Plain		25,000	-	-	-	-
Hemet-3200,RPL U#02-204,Plain		25,000	-	-	-	-
Hemet-3200,RPL U#06-231,B&W		25,000	-	-	-	-
Hemet-3200,RPL U#06-087,B&W		25,000	-	-	-	-
Blythe-2100,RPL U#06-201,Ford		28,000	-	-	-	-
Blythe-2100,RPL U#06-077, B&W		25,000	-	-	-	-
Budget Unit Total:			**3**	**$ 135,000**	**$ 3**	**$ 30,000**
20260-3130200000-00000	Survey					
SURVEY TRUCK W/UTILITY BED		$ 40,000	1	$ 40,000	$ -	$ -
Budget Unit Total:			**1**	**$ 40,000**	**$ -**	**$ -**
Grand Total:			**471.00**	**$ 16,207,524**	**$ 470**	**$ 16,062,524**

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40600	1900400000	EDA: Housing Authority	205
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32710	1900100000	EDA: Mitigation Fund	114
22350	1910200000	EDA: Thermal Construction & Land	116
21550	1900300000	EDA: Work Force Development	160
20200	3100500000	Environmental Programs	144
10000	1103800000	EO Subfund Budgets	108
10000	1100100000	Executive Office	103
10000	7200700000	Facilities Management: Parking	149
10000	7200100000	Facilities Mgmt: Administration	118
10000	7200500000	Facilities Mgmt: Design & Construction	120
10000	7200600000	Facilities Mgmt: Energy Management	120
30100	7200800000	Facilities Mgmt: Facilities CAP Projects	121
10000	7200200000	Facilities Mgmt: Housekeeping	119
10000	7200300000	Facilities Mgmt: Maintenance	119
10000	7201100000	Facilities Mgmt: Project Group	121
10000	7200400000	Facilities Mgmt: Real Estate	119
47210	7200300000	Facility Management: Maintenance	177
10000	2700400000	Fire Protection: Contracts	135
10000	2700200000	Fire Protection: Forest	134
30300	2700100000	Fire: Construction & Land Acq	117
21000	2700300000	Fire: Non Forest	135
33000	947100	Flood: Capital Projects	250
48080	947320	Flood: Data Processing	252
15100	947200	Flood: District Admin	250
40670	947160	Flood: Encroachment Permits	271
48020	947260	Flood: Garage/Fleet Ops	251
48000	947240	Flood: Hydrology	251
48060	947300	Flood: Mapping Services	252
25190	947560	Flood: NPDES Santa Ana	256
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40650	947120	Flood: Photogrammetry Ops	271
48040	947280	Flood: Project Maintenance Op	251
15000	947180	Flood: Special Accounting	250
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25110	947400	Flood: Zone 1 Operations	253
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25130	947440	Flood: Zone 3 Operations	253
25140	947460	Flood: Zone 4 Operations	254
25150	947480	Flood: Zone 5 Operations	254
25160	947500	Flood: Zone 6 Operations	255
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25400	931111	Historical Commission	260
21270	1900600000	Home Grant Program	160
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46060	1131200000	HR: Disability Insurance	189
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45870	1132800000	HR: Freedom Dental Plan	182
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33600	1200400000	Integrated Property-Tax Mgmt Sys	111
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10000	1300200000	Internal Audits	112
45500	7400100000	IT: Information Technology	195
10000	1102900000	Legislative_Admin Services	106
21200	1100400000	Library Const_Land	105
21200	1102200000	Library Lease - Purchase	172
24630	915201	LMD Wildomar	246
10000	4100400000	Mental Health: Administration	152
10000	4100300000	Mental Health: Detention Program	151
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21450	5300100000	Office On Aging Title III	165
25570	931113	Parks: Jensen Ranch Trust	260
22590	931150	Parks: MSHCP Reserve Mgt	264
25400	931104	Parks: Regional Parks Dist	259
25550	931101	Parks: Santa Ana River Mit	258
33160	931140	Parks: SAR Parkway to Prado Tr	264
33100	931105	Parks: Acq & Develop Trust	259
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33150	931102	Parks: Const & Acq	258
33120	931123	Parks: DIF - East Co Parks	262
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33120	931122	Parks: DIF - West Co Parks	262
33120	931124	Parks: DIF - West Co Trails	263
25500	931103	Parks: Fish & Game	258
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33110	931121	Parks: Prop 40 Capital Dev	262
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25510	931108	Parks: Residence Utility Tr	260
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35000	1104000000	Pension Obligation Bonds	172
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10000	2600100000	Probation: Juvenile Hall	133
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25420	931180	Recreation	265
10000	1700100000	Registrar of Voters	114
10000	2500900000	Sheriff: ADA Grant	131
10000	2500100000	Sheriff: Administration	127
10000	2500800000	Sheriff: Auto Theft	130
10000	2500600000	Sheriff: CAC Security	129
22250	2505200000	Sheriff: Cal-DNA	132
22250	2505100000	Sheriff: Cal-ID	132
22250	2505300000	Sheriff: Cal-Photo	133
10000	2501000000	Sheriff: Coroner	131
10000	2500400000	Sheriff: Corrections	128
10000	2500500000	Sheriff: Court Services	129
10000	2500300000	Sheriff: Patrol	128
10000	2501100000	Sheriff: Public Administrator	131
10000	2500200000	Sheriff: Support	127
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37050	1103400000	Teeter Debt Svc	107
22350	1910400000	TLMA: CONS Land-Chiraco	141
22350	1910500000	TLMA: CONS Land-Desert Center	141
20200	3100200000	TLMA: Administration	143
22650	3130800000	TLMA: Airport Land Use Comm	138
20250	3110100000	TLMA: Building & Safety	136
10000	3140100000	TLMA: Code Enforcement	138
20200	3100300000	TLMA: Consolidated Counter	143
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20300	3130100000	TLMA: Landscape Maint Dist	145
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31600	3130500000	TLMA: RBBD - Menifee	146
31640	3130500000	TLMA: RBBD - Mira Loma	147
31693	3130500000	TLMA: RBBD - Scott Road	148
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31690	3130500000	TLMA: Signal DIF	148
31630	3130500000	TLMA: Signal Mitigation	147
22400	3130400000	TLMA: Sup Road Dist No 4	145
20000	3130700000	TLMA: Trans Equip (Garage)	149
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20000	3130500000	TLMA: Transportation Const Project	146
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10000	1400100000	Treasurer-Tax Collector	113
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10000	1102100000	Interest On Trans	172
10000	1102900000	Legislative_Admin Services	106
10000	1103300000	Confidential Court Orders	123
10000	1103800000	EO Subfund Budgets	108
10000	1103900000	Court Facilities	123
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10000	1400100000	Treasurer-Tax Collector	113
10000	1500100000	County Counsel	113
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10000	2300100000	Child Support Services	125
10000	2400100000	Public Defender	126
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10000	2500100000	Sheriff: Administration	127
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10000	2500300000	Sheriff: Patrol	128
10000	2500400000	Sheriff: Corrections	128
10000	2500500000	Sheriff: Court Services	129
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10000	2500700000	Sheriff: Training Center	130
10000	2500800000	Sheriff: Auto Theft	130
10000	2500900000	Sheriff: ADA Grant	131
10000	2501000000	Sheriff: Coroner	131
10000	2501100000	Sheriff: Public Administrator	131
10000	2600100000	Probation: Juvenile Hall	133
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10000	4100300000	Mental Health: Detention Program	151
10000	4100400000	Mental Health: Administration	152
10000	4100500000	Mental Health: Substance Abuse	152
10000	4200100000	CHA: Public Health	153
10000	4200200000	CHA: CA Childrens Services	155
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10000	7200600000	Facilities Mgmt: Energy Management	120
10000	7200700000	Facilities Management: Parking	149
10000	7201100000	Facilities Mgmt: Project Group	121
10000	7300100000	Purchasing	122
15000	947180	Flood: Special Accounting	250
15100	947200	Flood: District Admin	250
20000	3130100000	TLMA: Transportation	144
20000	3130300000	TLMA: Crossing Guard	137
20000	3130500000	TLMA: Transportation Const Project	146
20000	3130700000	TLMA: Trans Equip (Garage)	149
20200	3100100000	TLMA: GIS	142
20200	3100200000	TLMA: Administration	143
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20250	3110100000	TLMA: Building & Safety	136
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21200	1101500000	County Free Library	167
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22100	1910700000	EDA: Airport	142
22200	1920100000	EDA: Desert Expocentre	117
22250	2505100000	Sheriff: Cal-ID	132
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22250	2505300000	Sheriff: Cal-Photo	133
22300	1100100000	AB 2766 Air Quality	104
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22350	1910600000	EDA: French Valley Construction & Lan	116
22400	3130400000	TLMA: Sup Road Dist No 4	145
22450	1103600000	Multi-Species Habitat Plan	141
22500	2800200000	Range Improvement	136
22590	931150	Parks: MSHCP Reserve Mgt	264
22650	3130800000	TLMA: Airport Land Use Comm	138
22700	4200100000	CHA: Proposition 10	155
22800	985101	DPSS: IHSS Public Authority	268
22900	980501	Perris Valley Cemetery	223
23000	4500300000	Waste: Area 8 Assessment	158
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23475	904301	CSA 43 Homeland Lighting	229
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25130	947440	Flood: Zone 3 Operations	253
25140	947460	Flood: Zone 4 Operations	254
25150	947480	Flood: Zone 5 Operations	254
25160	947500	Flood: Zone 6 Operations	255
25170	947520	Flood: Zone 7 Operations	255
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25190	947560	Flood: NPDES Santa Ana	256
25200	947580	Flood: NPDES Santa Margarita	257
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25400	931111	Historical Commission	260
25420	931180	Recreation	265
25500	931103	Parks: Fish & Game	258
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25520	931170	Habitat & Open Space Management	265
25535	931130	Natural Resources Education	263
25540	931116	Parks: Multi-Species Reserve	261
25550	931101	Parks: Santa Ana River Mit	258
25570	931113	Parks: Jensen Ranch Trust	260
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30300	2700100000	Fire: Construction & Land Acq	117
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37050	1103400000	Teeter Debt Svc	107
37100	934001	EDA: Community Redev Debt	224
39810	980502	Perris Valley Cemetery Endow	223
40050	4300100000	RCRMC: Medical Center	203
40200	4500100000	Waste: Disposal Enterprise	204
40250	943001	Waste: WRMD Operations	273
40400	912211	CSA 122 Mesa Verde Lighting	269
40420	906202	CSA 62 Ripley Debt Service	269
40440	906203	CSA 62 Ripley Debt Service	269
40600	1900400000	EDA: Housing Authority	205
40650	947120	Flood: Photogrammetry Ops	271
40660	947140	Flood: Subdivision Ops	271
40670	947160	Flood: Encroachment Permits	271
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45620	7300600000	Central Mail Services - ISF	201
45700	7300400000	Purchasing - Supply Services	202
45800	1132000000	HR: Exclusive Provider Option	179
45840	1132400000	HR: Concordia Preferred	180
45860	1130600000	HR: Delta Dental	181
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SANTA MARGARITA WATERSHED NPDES MUNICIPAL STORMWATER PERMIT

(NPDES No. CAS0108766)

JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP) ANNUAL REPORT

FOR

COUNTY of RIVERSIDE
FISCAL YEAR 2014 – 2015

October 31, 2015

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Attachment A Annual Report Checklist

ORDER NO. R9-2010-0016

Submitted to

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____ 9/24/15

George Johnson — Date
Chief Assistant County Executive Officer

[Note: per Attachment B: Standard Provisions, Reporting Requirements and Notifications, provision 5.(b)(2) of the 2010 SMR MS4 Permit: [Applications [40CFR 122.22(a)(3)] All permit applications shall be signed by either a principal executive officer or ranking elected official.]

I. EXECUTIVE SUMMARY

Executive Summary FY 2014-2015

The County of Riverside (County), the Riverside County Flood Control and Water Conservation District (District), Coachella Valley Water District (CVWD) and the twenty-nine cities of Riverside County including Banning, Beaumont, Blythe, Calimesa, Canyon Lake, Cathedral City, Coachella, Corona, Desert Hot Springs, Eastvale, Hemet, Indian Wells, Indio, Jurupa Valley (July 2011), La Quinta, Lake Elsinore, Menifee, Moreno Valley, Murrieta, Norco, Palm Desert, Palm Springs, Perris ,Rancho Mirage, Riverside, San Jacinto, Temecula and Wildomar (Cities) are regulated pursuant to the Federal Clean Water Act and the California Water Code through the following National Pollution Discharge Elimination System (NPDES) and Municipal Separate Storm Sewer System (MS4) permits depending on location:

- Whitewater River Basin, NPDES Permit No. CAS617002 and California Regional Water Quality Control Board, Colorado River Region, Board Order R7-2013-0011;

- Santa Ana River Watershed, NPDES Permit No. CAS601833 and California Regional Water Quality Control Board, Santa Ana River Region, Board Order R8-2010-0033; and

- Santa Margarita River Watershed, NPDES Permit No. CAS0108766 and California Regional Water Quality Control Board, San Diego Region, Board Order R-9-2010-016.

The District serves as the Principle Permittee within the three watersheds described above, with the unincorporated County areas, Cities (depending on geography) and CVWD (Whitewater River Basin only) designated as the Co-Permittees. Collectively the Permittees are required as part of the NPDES and MS4 permit process to adopt, develop and implement adaptable stormwater management programs to protect surface water quality to the maximum extent practicable (MEP) and to report annually on their progress with respect to specific compliance activities.

Executive Office

The County Executive Officer and his staff provide for management and administrative oversight for County activities including long range planning, budget, internal and inter-governmental affairs. The Executive Office coordinates all National Pollution Discharge Elimination System (NPDES) and Municipal Separate Storm Sewer System (MS4) activities with County departments to ensure consistency and regulatory compliance with all applicable laws and regulations.

Capital Improvement Projects

To ensure that all municipal construction projects have adequate funding and that all environmental requirements including CEQA, NPDES/stormwater and air quality criteria is considered, the County Executive Office formed the Capital Improvement Project Oversight and Review Committee. The makeup of the committee includes representatives from the Executive Office with finance, NPDES and construction expertise, Director of Economic Development Agency and management staff, County Information Technology staff. All

proposed projects must have adequate funding, be reviewed for various project requirements and approved prior to commencement of work.

Economic Development Agency
The Riverside County Economic Development Agency (EDA) includes various divisions made up of Community Development (Aviation, County Service Areas, and Housing) Economic Development and Redevelopment, Work Force Development, Life Style & Leisure (County Fair and National Date Festival) and Facilities Management including Capital Improvement Projects (CIP). The inclusion of Facilities Management Department within the Economic Development Agency was due to the fact that CIPs are managed from the conceptual idea, environmental study, project design, construction, and then maintained by Facilities Management. Economic and Redevelopment projects go through the same process as CIP. To save costs the building and construction functionality of EDA and Facilities Management was merged.

Leadership in Energy and Environmental Design (LEED™) Certification
The LEED™ "green building rating is a nationally accepted benchmark for the design, construction and operation of green buildings. LEED™ gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance in five key areas:
• Sustainable site development
• Water conservation
• Energy efficiency
• Materials selection, and
• Indoor air quality.

The County of Riverside EDA is on the cutting edge as it has incorporated LEED™ criteria into CIP per Board Policy H-29.

County Service Area 152 (CSA 152)
The Economic Development Agency assumed control of County Service Area's (CSAs) in July of 2002. CSAs are an alternative method of providing governmental services by the County within unincorporated areas to provide extended services such as sheriff protection, fire protection, local park maintenance services, water and sewer services, ambulance services, streetlight energy services, landscape services and street sweeping. CSA 152 is designated as the mechanism to provide limited street-sweeping maintenance for MS4 within the service area.

Transportation Land Management Agency
The Riverside County Transportation Land Management Agency (TLMA) is made up of the following departments: Transportation, Building & Safety, Code Enforcement, Planning, Environmental Programs, Administrative Services which includes Geographic Information System (GIS) and database management.

Building and Safety Department **–** In 2007, the County established a business registration and licensing ordinance. Ordinance 857, Section 13 provides for water quality inspections and enforcement of the MS4 permit requirements. Over 10,000 establishments have been registered within the unincorporated portion of the County. For those businesses that meet the criteria for a water quality inspection an additional inspection fee is charged. This is a revenue neutral program and the fee only covers the cost of registration and the time required to perform the water quality inspections.

I. EXECUTIVE SUMMARY

Code Enforcement Department- The Code Enforcement Department is the investigatory unit that does follow-up investigations on land use complaints. This includes illegal connections and illicit discharges (IC/ID) investigations. The Code Enforcement Department has taken a more proactive approach to community policing and outreach by implementing a community improvement planning process in the economically underserved communities throughout the County. The community improvement plan is used to address conditions that otherwise lead to blighted conditions. "The Posting" a monthly newsletter provides success stories throughout the area. Over the past few years during the recession, the Code Enforcement Department has been the hardest hit when it comes to layoffs. They have been reduced from a staff of 80 to approximately 40 to service one of the largest counties in the state.

Planning Department- The Planning Department is the entry portal for private residential and commercial development review for the unincorporated county areas. A checklist is utilized to ensure that projects conform to the MS4 permit requirements. Projects that meet specified criteria are subject to the submission of a Water Quality Management Plan (WQMP) which is synonymous with the Standard Urban Stormwater Mitigation Plan (SUSMP). Previously, the WQMP was reviewed by the Riverside County Flood Control and Water Conservation District for substantial conformity, with recommended conditions of approval forwarded to TLMA. This process has now been modified to provide better internal consistency and better customer service. WQMP reviews and approvals are now conducted by the Transportation Department. The WQMP is required to address post construction best management practices (BMPs), long term maintenance and monitoring.

Transportation Department- The County Transportation Department provides design specifications, construction, monitoring, and maintenance of publicly owned roads, right of way and some MS4 facilities. One of the tools utilized by the Transportation Department to ensure compliance of the MS4 facilities is through the formation of Landscape and Lighting Maintenance Districts (LLMDs). Each LLMD is responsible for ensuring that MS4 facilities and structural (fossil filter) BMPs in their right of way are routinely cleaned and maintained. County Service Area (CSA) 152 provides for street sweeping in the annexed areas. Another function of the Transportation Department is the mapping of MS4 facilities that are owned and operated by the department. GIS mapping is a fluid process and continues to grow as new areas in the county are developed. The Department's Environmental Compliance staff is responsible for WQMP reviews and approvals; and inspections of existing and businesses, residential and industrial/commercial development for MS4 compliance measures. Referrals are made to the Regional Board for observed non-compliance issues associated with the Statewide General Construction Permit and/or MS4 Permit.

Department of Environmental Health

The DEH responds to hazardous materials emergency spills and large sewage discharges (greater than 1000 gallons) that have the potential of entering the MS4. The DEH also performs complaint investigations for some IC/ID. The DEH also is part of the District Attorney's Environmental Crimes Task Force where some misdemeanor and felony environmental crimes investigations are handled. DEH acts as the Local Enforcement Agency (LEA) for solid waste issues. As part of the franchise trash haulers agreement some jurisdictions in the unincorporated portions of the county require mandatory trash pickup and street sweeping.

I. EXECUTIVE SUMMARY

Special Districts

Flood Control and Water Conservation District (District)

The Control and Water Conservation District (District) operates and maintains major flood control facilities such as dams, flood basins, levees, open channels and major underground storm drains. In most cases, the District does not maintain storm drain inlets or pipes less than 36 inches in diameter. These smaller facilities are typically maintained by City or County Transportation Department crews. The engineering design of all projects constructed by the District is performed under the direct supervision of one of the District's two design teams. They are responsible for coordinating all activities involved in moving projects forward from the conceptual planning phase to the actual start of construction.
The construction section administers all District construction contracts and inspects the construction of all flood control projects to be accepted for operation and maintenance by the District.

In addition, as part of the plan review process for private development and CIPs within the County, the District's planning section review and make recommendations on WQMP submittals.

Regional Parks and Open Space District

The Riverside County Regional Park and Open-Space District was created by the electorate in November 1990 by a 64% vote and formed on January 29, 1991. The District is an independent agency governed by the Board of Supervisors, which sits as the District Board of Directors. The Park District presently employs approximately 100 staff who bring to their jobs a high degree of dedication to the public and wide variety of skills and abilities.
At the present time, the district manages and operates more than 44,000 acres, which includes forty parks, reserves, historic or archaeological sites and ninety miles of regional trails. The staff includes professionals in the fields of accounting and finance, biology, building and grounds maintenance, carpentry and construction, ecology, as well as environmental restoration.
Additional fields include historic preservation, interpretation, landscape architecture, museum and curatorial management, park planning, personnel administration, recreation, security, trails planning and construction, weddings and special events, wildlife habitat management, and a host of other disciplines.

Waste Resources Department

The mission of the Riverside County Waste Resources Department is to provide for the protection of the general public health and welfare by efficient management of Riverside County's solid waste system through:

- Provision of facilities and programs which meet or exceed all applicable local, State, Federal and land use regulation;

- Utilization of up-to-date technological improvements;

- Development and maintenance of a system that is balanced economically, socially and politically; and

• Economically feasible recovery of waste materials.

The Waste Management Department currently operates six landfills; an additional privately owned and operated landfill is located in Western Riverside County. In addition to the landfills, there are eight privately owned and operated transfer stations.

Recycling and Specialty Programs

Household Hazardous Waste (HHW) – Residential Program

The County of Riverside established the Household Hazardous Waste Program in October 1988 with the formation of a mobile community HHW collection program. This HHW program has evolved and is comprised of a combination of three permanent HHW collection centers, two Antifreeze, Battery, Oil and Paint (latex only) ABOP collection centers and temporary collection events at 16 locations throughout the County.

Conditionally Exempt Small Quantity Generator (CESQG) – Business Program

As an enhancement to the HHW program and to encourage small businesses to properly handle their hazardous waste, the County provides the CESQG program as an affordable and legal solution for the proper disposal of hazardous waste. The program is on an appointment only basis; a hazardous waste disposal contractor comes to the business to ensure proper labeling, and documentation is provided.

Universal and e-Waste

Universal Wastes are hazardous wastes that are generated by several sectors of society, rather than a single industry or type of business. Universal Wastes contain harmful chemicals, which, if put in the trash may harm people or the environment. E-waste includes:

• Common Batteries – AA, AAA, C and D cell and button batteries (e.g. hearing aid and watch batteries). Automotive type batteries are not Universal Waste. When they become waste, they are regulated under a different law.

• Fluorescent Tubes, Bulbs and Other Mercury Containing Lamps – Fluorescent light tubes and bulbs, Hi Intensity discharge (HID), metal halide, sodium and neon bulbs.

• Electronic Devices – Televisions, computer monitors, computers, printers, VCR's, cell phones, telephones, radios, and microwave ovens.

• Mercury-Containing Devices – Thermostats, switches, thermometers, dental amalgam, pressure and vacuum gauges, novelty items, counterweights and dampers, and medical devices known as dilators.

• Non-Empty Aerosol Cans that Contain Hazardous Materials - Labeled Toxic, Flammable, or Corrosive.

I. EXECUTIVE SUMMARY

Riverside County's Backyard Composting Program

This program has been developed to aid the residents of Riverside County in composting their organic material, so that we can all recycle more and discard less. Composting harnesses the natural process of decomposition by turning organic matter (such as fruit and vegetable wastes, grass clippings, leaves, and some animal manures) into a useful product for your landscape or garden. Composting can also improve hard, depleted soils, so that flowers, vegetables, and fruit trees can thrive in a nutrient-rich environment. Composting also improves the soil by boosting its fertility, its moisture-holding capabilities, and its texture.

Composted material is actually rather expensive to buy. But anyone with a little extra room in a garden, a little extra time, and a good source of compostable materials can produce good, high quality compost in as little as four weeks – absolutely free! By composting, you return the earth's nutrients back to the soil, where your plants absorb them, thereby becoming healthier. Healthy plants are far more resistant to diseases and pests. Instead of throwing away your organic waste, compost them! You will cut down your trash collection service, and you will be prolonging the life of Riverside County's rapidly depleting landfill space!

Sharps

Hypodermic needles, lances, and other sharp material associated with medical treatment can be collected in sharps containers and brought to the HHW collection centers for proper disposal. Sharps containers can be obtained from your HHW collection center or local pharmacy.

Construction Activities

The Waste Management Department's construction and industrial activities include maintenance of County operated landfills and stabilization of closed landfills. This includes the requirement to prevent and mitigate stormwater or other discharges including sediment, solid waste and liquids from entering an MS4 system.

Pharmaceuticals and Outdated Medicines

The County has instituted as part of their Household Hazardous Waste Collection Program the ability for residents to bring outdated prescription drugs and other medications to the collection center for proper disposal.

I. EXECUTIVE SUMMARY

Concluding Remarks

The County continues to have budgetary challenges due to state mandates of other social service programs. Prison realignment (AB109) as well as pending litigation for mental health services of inmates is predicted to continue placing great strain on the general fund. Further, recent state changes in the new gas tax (Section 2103) program have reduced revenue projections in this fund source significantly. These changes are associated with the recent rapid decline in gas prices nationwide, especially in California. However, the County is anticipating no reductions in MS4 permit compliance funding.

II. INTRODUCTION

Due to the fact that Riverside County does not have a centralized public works agency, the County Executive Office provides management and administrative oversight for County departmental NPDES program activities. This includes coordination of the following Departments:

- *Economic Development Agency/Facilities Management*
- *Transportation Land Management Agency (TLMA), which includes:*
    - *o Building and Safety*
    - *o Code Enforcement*
    - *o Planning*
    - *o Transportation*
- *Environmental Health*
- *Parks District*
- *Waste Management Department*

During FY 14/15, the County moved its Building and Safety Environmental Compliance Inspectors into the Transportation Department's NPDES section. This move will help consolidate resources and provide greater efficiencies through inspections, WQMP review, and overall agency program management. In FY 15/16, the Business License and Registration was also moved out of Building and Safety into the Transportation Department's NPDES section. Further information will be provided in the FY 15/16 annual progress report. Lastly, FY 15/16 becomes the first year that the Transportation Department Environmental Compliance Inspectors begin the centralization of the County's post-construction BMP inspection program. Additional details about this program will also be included in the FY 15/16 annual progress report.

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1. DEVELOPMENT PLANNING
(SECTION F.1. of ORDER NO. R9-2010-0016)

New Development

1) General Plan/Environmental Review K.3.c.(4)1

a) Description of any amendments/updates to the General Plan as required by Section F.1.a. of the 2010 SMR MS4 Permit:

A comprehensive update to the County of Riverside General Plan (GPA No. 960) was recently adopted by the Board of Supervisors on September 22, 2015. Details regarding this update will be included in the FY 15/16 annual progress report.

b) Description of any amendments/updates to the environmental review process as required by Section F.1.b. of the 2010 SMR MS4 Permit.

The recent adoption of GPA 960 may require updates to internal environmental review processes. As GPA 960 is implemented during FY 15/16, any changes will be reported in the FY 15/16 annual progress report.

c) Description of any planned updates to the General Plan or the environmental review process within the next Annual Reporting period as required by Sections F.1.a.&b of the 2010 SMR MS4 Permit.

The County is already planning its next General Plan update after the recent adoption of GPA 960. Additional information will be provided within the FY 15/16 annual progress report.

2) SSMP status as required under Section F.1.d. of the 2010 SMR MS4 Permit K.3.c.(4)2.

Description of all revisions to the SSMP, including where applicable:

a) Identification and summary of where the SSMP fails to meet the requirements of the 2010 SMR MS4 Permit as required under Section F.1.d. of the 2010 SMR MS4 Permit:

Comments and a conditional approval were received on the revised draft SSMP from Regional Board staff on September 17, 2013. The County had 180 days to revise and implement the SSMP to reflect the outstanding conditions presented in the letter. Pursuant to the Conditional Finding of Adequacy, the County adopted the fully compliant SSMP in March 2014.

b) Updated procedures for identifying Pollutants of Concern for each Priority Development Project as required under Section F.1.d.(3) of the 2010 SMR MS4 Permit:

Updated procedures for identifying POCs are included in the 2014 SSMP.

c) Updated Treatment Control BMP ranking matrix as required by Section F.1.d.(6)(b)(i) of the 2010 SMR MS4 Permit:

An updated Treatment Control BMP ranking matrix is included in the 2014 SSMP.

d) Updated site design and Treatment Control BMP design standards as required by Sections F.1.d.(4)(c)(i) and F.1.d.(6)(b)(ii) of the 2010 SMR MS4 Permit.

Updated site design and Treatment Control BMP design standards are discussed in the 2014 SSMP. The Low Impact BMP Design Handbook was developed by the Riverside County Flood Control and Water Conservation District provides guidance on development projects within the county.

3) Priority Development Projects K.3.c.(4)3

a) The County of Riverside reviewed and approved nine (9) Priority Development Projects during the reporting period.

b) The following LID and Source Control BMPs were required as applicable approved Priority Development Projects as required by the 2010 SMR MS4 Permit:

Reference	LID BMP Requirements
F.1c.(2)(a)	**Conserve natural areas, including existing trees, other native vegetation, and soils.**
F.1c.(2)(b)	**Construct streets, sidewalks, or parking lots aisles to the minimum widths necessary, provided that public safety is not compromised.**
F.1c.(2)(c)	**Minimize the impervious footprint of the project**
F.1c.(2)(d)	**Minimize soil compaction to landscaped areas**
F.1c.(2)(e)	**Minimize disturbances to natural drainages**
F.1c.(2)(f)	**Disconnect impervious surfaces through distributed pervious areas**
F.1c.(2)(b)(i)	**Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and ephemeral and intermittent streams)**
F.1c.(2)(b)(ii)	**Construct pervious areas to effectively receive and infiltrate, retain and/or treat Runoff from Pervious areas, and to minimize soil compaction in these areas**
F.1c.(2)(b)(iii)	**Construct low-traffic areas with permeable surfaces, where appropriate soil conditions exist**
F.1c.(2)(c)(i)	**Structural Infiltration BMPs**
F.1c.(2)(c)(i)	**Structural Harvest and Use BMPs**
F.1c.(2)(c)(ii)	**Structural Bioretention BMPs**

	Source Control BMP Requirements
F.1.d.(5)(a)	**Prevent illicit discharges into the MS4**
F.1.d.(5)(b)	**Minimize storm water pollutants of concern in runoff**
F.1.d.(5)(c)	**Eliminate irrigation runoff**
F.1.d.(5)(d)	**Include storm drain system stenciling or signage**
F.1.d.(5)(e)	**Include properly designed outdoor material storage areas**
F.1.d.(5)(f)	**Include properly designed outdoor work areas**
F.1.d.(5)(g)	**Include properly designed trash storage areas**
F.1.d.(5)(h)	**Include water quality protection requirements applicable to individual priority project categories**

c) The following process was implemented to verify that Site Design, Source Control, and Treatment Control BMPs were required on all applicable Priority Development Projects as required under Section F.1.d.(9) of the 2010 SMR MS4 Permit:

The approved 2014 SSMP includes an updated guidance manual and template that all applicable Priority Development Projects must complete. In addition, a review checklist was created for plan check staff to utilize. These documents are available on the Flood Control District's website here:

http://www.floodcontrol.co.riverside.ca.us/NPDES/SantaMargaritaWS.aspx#SMmember

4) Following are the names and locations of all Priority Development Projects that were granted a waiver from implementing LID BMPs pursuant to Section F.1.d.(4) of the 2010 SMR MS4 Permit K.3.c.(4)4:

No projects were granted a waiver in FY 14/15.

5) Treatment Control BMPs K.3.c.(4)5 (Note: Verify that each of the following is applicable and true)

a) A current copy of the County of Riverside's BMP maintenance tracking database of approved Treatment Control BMPs and Treatment Control BMP maintenance required under F.1.f.(1) of the 2010 SMR MS4 Permit is attached. This database includes an identification of all high-priority Priority Development Projects that have a final approved Project-Specific WQMP and their structural post-construction BMPs implemented since July 2005.

A copy of the database is provided in Attachment B.

b) The County of Riverside verifies that the following structural post-construction BMPs on the inventoried WQMP projects have been implemented, are maintained, and are operating effectively through inspections, self-certifications, surveys, or other equally effective approaches as required under the 2010 SMR MS4 Permit:

Reference	LID BMP Requirements
F.1c.(2)(a)	**The implementation, operation, and maintenance of all (100 percent) approved and inventoried final public and private Project-Specific WQMPs are verified every five years**
F.1c.(2)(b)	**All (100 percent) projects with BMPs that are high priority are inspected annually prior to each Rainy Season**
F.1c.(2)(c)	**All (100 percent) of the Priority Development Projects with BMPs are inspected annually**
F.1c.(2)(d)	**As appropriate, the County of Riverside coordinates its inspections with the facility inspections implemented pursuant to Section F.3 of the 2010 SMR MS4 Permit**
F.1c.(2)(e)	**For verifications performed through a means other than direct inspection by the County of Riverside, adequate documentation is required to provide assurance that the required maintenance has been completed**
F.1c.(2)(f)	**Appropriate follow-up measures (including re-inspections, enforcement, maintenance. Etc.) are conducted to ensure the Treatment Control BMPs continue to reduce Storm Water Pollutants as originally designed**
F.1c.(2)(b)(i)	**Inspections note observations of vector conditions, such as mosquitoes. Where conditions are identified as contributing to mosquito production, the County of Riverside notifies its local vector control agency.**

6) **The following Priority Development Projects have been required to implement hydrologic control measures to protect downstream Beneficial Uses and prevent adverse physical changes to downstream channels in compliance with Section F.1.h of the 2010 SMR MS4 Permit K.3.c.(4)6:**

All PDPs that were submitted during this reporting year were required to implement HCOC's in compliance with the 2014 WQMP/SSMP and HMP as identified in the Order.

7) **The following table provides a description of all activities related to the enforcement of the Stormwater Ordinance in New Development and Redevelopment Projects in the County of Riverside as required under Section F.1.g. of the 2010 SMR MS4 Permit during the reporting period and a summary of the effectiveness of the enforcement activities K.3.c.(4)7:**

Please see database in Attachments B.

2. CONSTRUCTION
SECTION F.2. of ORDER NO. R9-2010-0016)

1) **Ordinances K.3.c.(4)1**

   a) **Describe updated relevant ordinances as required under Section F.2.a. of the 2010 SMR MS4 Permit (attach copies):**

   During this reporting period, no county ordinances were updated. However, the Board of Supervisors on July 21, 2015 adopted the updated Ordinance 859.3 Water Efficient Landscape Requirements, which, among other provisions, prohibits the use of natural turf grass in front yards of new residential subdivisions. This Ordinance exceeds the state's requirement, which allows turf to be irrigated using subsurface drip systems.

   b) **Describe planned ordinance updates within the next Annual Reporting period, if applicable:**

   In FY 15/16, County Ordinance 857 (adopted in 2006) will be re-evaluated, and potentially amended to: (1) appropriate inspection frequency; (2) meet current State mandates (specifically the provisions of the three NPDES MS4 Permits applicable to unincorporated County of Riverside); and (3) ensure Ordinance 857 has a clear and understandable goal of water quality compliance. Since the inception of Ordinance 857 in 2006, four cities have incorporated; therefore, less commercial/industrial facility oversight is required by the County. A re-evaluation of the Commercial/Industrial Facilities inventory and an assessment of facility inspection fees, protocol, and frequency is also warranted.

2) **Describe any changes to procedures used for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality as required by Section F.2.e of the 2010 SMR MS4 Permit K.3.c.(4)2:**

   No changes to procedures used for identifying priorities for inspecting sites have been identified during this reporting period.

3) **Describe any changes to the designated minimum and enhanced BMPs as described in Section F.2.d.(1) of the 2010 SMR MS4 Permit K.3.c.(4)3:**

   No changes to designated minimum and enhanced BMPs have been identified during this reporting period.

4) **Summarize the finding of the Construction Inspection Program specified in Section F.2.e. of the 2010 MS4 Permit K.3.c.(4)4:**
   a) **Total number and date of inspection conducted at each Construction Site**

2. CONSTRUCTION
(SECTION F.2. of ORDER NO. R9-2010-0016), CONT

Please see Database contained in Attachment C.

b) Number, date, and types of enforcement actions by Construction Site

Please see database in Attachment C.

c) Brief description of each high-level enforcement action at Construction Sites including the effectiveness of the enforcement:

No high-level enforcement in FY14/15 reporting period.

Other comments:

Currently, all Transportation Department Construction Projects with one (1) or more acres of new disturbance are uploaded to the SMARTS (Storm Water Multiple Application and Report Tracking System). The Transportation Department will continue this practice for tracking construction projects in FY15/16. The Department's Resident Engineer/Inspector conducts a site walk each day which includes a visual check of construction site BMPs. The Project QSP conducts and documents inspections in accordance with the Construction General Permit requirements. See Attachment C for additional details.

The Department currently has an NPDES Coordinator who comprehensively administers the Department's Municipal NPDES Program. The NPDES Coordinator works closely with the Planning and Design, Construction and Operations and Maintenance Divisions. The NPDES Coordinator is also responsible to disseminate NPDES compliance information to Department staff. Focused training refreshers were provided to appropriate employees in the Transportation Department to keep staff up to date on NPDES MS4 Permit regulations. The NPDES Coordinator regularly attends the SMR Technical Advisory Committee meetings.

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

1) *Attachment D* **contains the current inventory of all County of Riverside facilities and activities that have the potential to generate Pollutants as required under F.3.a.(1) of the 2010 SMR MS4 Permit [K.3.c.(4)1]:**

The Transportation Department owns and operates a total of 1066 Inlets, 130 Outlets, 716 Culverts, 18 Soft Bottom Swales, 17 Hard Bottom Channels, 1 Engineered Infiltration Trench, 1 Permeable Pavement facility and 1 Basin in the Santa Margarita River Watershed. The Transportation Department owns and operates a total of 2 Maintenance Yards and two Material Sites in the Santa Margarita River Watershed. Please see Transportation Inventory Attachment D titled "Santa Margarita River Watershed Transportation Department Facility Inspections" for an inventory of the facilities and inspections results.

2) **Following is the current list of minimum BMPs for the County of Riverside facilities included in the inventory addressed in item 1) above K.3.c.(4)2:**

BMP	Description	Used
SC-10	Non-Stormwater Discharges	☒ Yes ☐ No
SC-11	Spill Prevention, Control and Clean-up	☒ Yes ☐ No
SC-20	Vehicle and Equipment Fueling	☒ Yes ☐ No
SC-21	Vehicle and Equipment Cleaning	☒ Yes ☐ No
SC-22	Vehicle and Equipment Repair	☒ Yes ☐ No
SC-30	Outdoor Loading/Unloading of Materials	☒ Yes ☐ No
SC-31	Outdoor Liquid Container Storage	☒ Yes ☐ No
SC-32	Outdoor Equipment Maintenance	☒ Yes ☐ No
SC-33	Outdoor Storage of Raw Materials	☒ Yes ☐ No
SC-34	Waste Handling and Disposal	☒ Yes ☐ No
SC-35	Safe Alternative Products	☒ Yes ☐ No
SC-40	Contaminated or Erodible Areas	☒ Yes ☐ No
SC-41	Building and Grounds Maintenance	☒ Yes ☐ No
SC-42	Building Repair and Construction	☒ Yes ☐ No
SC-43	Parking/Storage Area Maintenance	☒ Yes ☐ No
SC-44	Drainage System Maintenance	☒ Yes ☐ No
SC-60	Housekeeping Practices	☒ Yes ☐ No
SC-61	Safe Alternative Products	☒ Yes ☐ No
SC-70	Road and Street Maintenance	☒ Yes ☐ No
SC-73	Landscape Maintenance	☒ Yes ☐ No
SC-74	Drainage System Maintenance	☒ Yes ☐ No
SC-75	Waste Handling and Disposal	☒ Yes ☐ No
SC-76	Water and Sewer Utility Maintenance	☐ Yes ☒ No

3) Describe any changes to procedures to assure that flood management projects assess the impacts on the water quality of Receiving Waters as required under Section F.3.a.(4) of the 2010 SMR MS4 Permit [K.3.c.(4)3]:

Please see the County of Riverside Flood Control and Water Conservation District's Annual Report.

4) Following is a summary and assessment of BMP retrofit projects implemented at flood control structures as specified in Section F.3.a.(4)(c) and F.3.d of the 2010 SMR MS4 Permit [K.3.c.(4)4]:

a) Listing of flood control facilities retrofitted:

Please see the County of Riverside Flood Control and Water Conservation District's Annual Report.

b) Listing and description of flood control structures evaluated for retrofitting:

Please see the County of Riverside Flood Control and Water Conservation District's Annual Report.

c) Listing of flood control structures still needing to be evaluated and the schedule for evaluation:

Please see the County of Riverside Flood Control and Water Conservation District's Annual Report.

5) Following is a summary of the municipal structural Treatment Control BMP operations and maintenance activities as specified in F.3.a.(6) of the 2010 SMR MS4 Permit [K.3.c.(4)5]:

The Transportation Department implements a schedule of inspection and maintenance activities to verify proper operation of all its Municipal Structural Treatment Controls BMPs designed to reduce storm water pollutant discharges to/or from its MS4 facilities.

Type of Structural Treatment Control BMP	Number of Inspections	Findings
Detention Basin (Rancho California Rd & Anza Rd Roundabout WQMP	8	10/02/2015 Semiannual (April & October) 8/7/2015 Routine 8/21/2015, 12/8/2015, 12/15/2015, 1/5/2015, 2/26/2015, 3/5/2015 Post-Rain Event, Basin is operating properly.
Infiltration Trench (Scott Rd Improvements WQMP	9	8/21/2014, 9/18/2014, 12/8/2014, 12/15/2014, 1/5/2015, 2/26/2015, 3/5/2015, 5/18/2015 Post-Rain Event 8/7/2014 Routine Infiltration Trench is operating properly.
Fossil Filter Inlet inserts in Landscaping and Lighting Maintenance District 89-1.	163	3 Times Annually. Fossil Filters needing replacement were replaced promptly. Litter and debris are removed from filters during each inspection to ensure they are operating properly.
Swale at Glenoaks Fire Station	1	9/2014 - Project is within it closeout process. Site construction verification issues yielded imperfections in BMP construction. The site's civil engineer and contractor modified BMPs for compliance.
Swales at Southwest Justice Center Parking Lot	1	This facility was inspected during the last reporting period, but was un-intentionally omitted from the annual report. It was inspected on 9/24/2014 and the maintenance personnel found deficiencies related to clogged drain

		inlets, missing vegetation, and clogged drain pipe. These deficiencies were subsequently rectified.
French Valley Airport Parking Lot Bioretention	**1**	**The BMPs at this site consist of twice monthly maintenance of the landscape in the basin by an outside contractor. Further, twice weekly visual inspections of the facility by maintenance staff for trash and debris where any noted items are picked up and removed is noted on airport inspection forms for the airside operations.**
Lake Skinner Recreation Area **Grass Filter Strip, Grass Swale, Landscape Filer Basin**	**1**	**The facility is routinely inspected by park maintenance staff and cleared of trash and debris to ensure maximum functionality.**

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

6) Summary of the MS4 facilities operations and maintenance activities, including amount material removed from, including justification for less than annual inspection as required under Section F.3.a.(6)(b) of the 2010 SMR MS4 Permit [K.3.c.(4)(6)]:

MS4 Facility Type	Number of Facilities Maintained	Amount of Material Removed (tons)	Facilities Planned for Bi-Annual Inspections and Justification
MS4 Facilities Inlets Outlets Culverts Soft Bottom Swales Hard Bottom Channels Basin Infiltration Trench Permeable Pavement Facility **Total**	Inspected Cleaned 1066 409 130 51 716 342 18 13 17 6 1 0 1 9 1 10 **1950 821**	**120.34 tons (wet weight)**	The Transportation Department owns and operates a total of 1066 Inlets, 130 Outlets, 716 Culverts, 18 Soft Bottom Swales, 17 Hard Bottom Swales, 1 Engineered Infiltration Trench, 1 Permeable Pavement Facility, and 1 Basin in the Santa Margarita River Watershed. The Transportation Department inspect and remove accumulated waste from all MS4 facilities at least once a year between May 1 and September 30 (dry season) of each year; and additional MS4 facilities cleaning performed as necessary between October 1 and April 30 as specified in the MS4 permit. See Attachment D for additional inspection schedule information.
Roadside Litter Removal Program	23 miles	20 tons (wet weight)	
Street Sweeping	18,914 curb miles (Countywide)	1,134 tons (wet weight)	
Facility Total		**1,274.34 tons (wet weight)**	

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

7) The following table contains a Summary of municipal areas/programs inspection activities as specified by Section F.3.a.(8)(a&b) of the 2010 SMR MS4 Permit [K.3.c.(4)6] including:

a) Number and date of inspections conducted at each facility [K.3.c.(4)7.(a)].

b) BMP violations identified during each facility inspection [K.3.c.(4)7.(b)].

c) The number, date and types of enforcement actions received at each facility [K.3.c.(4)7.(c)]

d) Summary of inspection findings and follow-up activities for each inspected facility [K3.c.(4)7.(d)]

Facility	Inspections		BMP Violation	Enforcement			Summary of Inspection	
	#	Date		#	Date	Type	Findings	Follow-up
Murrieta Maint. Yard	1	11/14/2014	0		N/A		Site is Compliant	
Anza Maintenance Yard	1	11/17/2014	0		N/A		Site is Compliant	
East Benton Material Site	1	11/14/2014	0		N/A		Site is Compliant	
Terwilliger Material Site	1	11/17/2014	0		N/A		Site is Compliant	
SW Justice Center Parking Lot	1	9/24/2014	1	1	9/24/2014	NC	Trash and Debris	Cleaned Trash and Debris
French Valley Airport Lot	1	9/14/2014	0		N/A		Site is Compliant	
Glenoaks Fire Station	1	8/28/2014	0		N/A		Site is Compliant	
Lake Skinner Rec. Area	1	Various	0		N/A		Site is Compliant	
Total	**8**							

8) The following activities implemented to address sewage infiltration into the MS4 as specified in F.3.a.(7) of the 2010 SM4 MS4 Permit [K.3.c.(4)8]

The County does not own or operate any sanitary sewer facilities or infrastructure.

9) Describe BMPs and their implementation for unpaved roads construction and maintenance as specified in F.3.a.(10) of the 2010 SMR MS4 [K.3.c.(4)8]:

The Transportation Department implements erosion and sediment control BMPs when conducting maintenance of unpaved roads. Whenever possible, unpaved roads that require maintenance are graded to direct runoff from unpaved roads onto adjacent flat, vegetated areas. When runoff must be direct onto a slope, the spacing of over side drains is reduced to minimize the volume and velocity of the runoff in any one location. Additionally, appropriate energy dissipation materials (gravel, bags, straw bales, riprap, fiber rolls, etc.) are used to reduce the velocity of flows and promote infiltration.

Maintenance of County- owned unpaved roads that are directly adjacent to creeks and riparian habitat are maintained only when absolutely necessary to protect public safety. When re-grading and maintenance of unpaved roads is necessary, roads are graded with consideration of road safety and minimizing the potential for erosion and sedimentation. When major maintenance requires the replacement of culverts, the natural stream geomorphology is considered in order to minimize future maintenance and to reduce the potential for failure.

For unpaved roads crossing jurisdictional drainages, the Transportation Department has entered into a "Long Term Routine Maintenance Lake and Streambed Alteration Agreement" with the California Department of Fish and Wildlife (CDFW) for the operation and maintenance of its roads and related drainage improvements within unincorporated Riverside County. The County-maintained system includes hundreds of miles of roads with various drainage improvements, some of which may encroach onto areas under the jurisdiction of the CDFW. The agreement requires the Transportation Department to implement measures (BMPs) to avoid, minimize, and/or mitigate potential impacts associated with the maintenance activity. An annual report detailing all the maintenance activities within or affecting jurisdictional areas of the CDFW is prepared and submitted to the CDFW. Additionally, for maintenance activities beyond those described in the agreement and for a single maintenance activity affecting 0.5 acre or more, the Transportation Department must make a pre-notification for review and comment by CDFG.

The Transportation Department no longer constructs new unpaved roads. Further, the Transportation Department no longer accepts new unpaved roads into their system of County maintained roads.

4. INDUSTRIAL / COMMERICIAL
(SECTION F.3.b. of ORDER NO. R9-2010-0016)

1) *Attachment E* **contains the updated inventory of Industrial and Commercial Facilities as required under Section F.3.b.(1) of the 2010 SMR Permit [K.3.c.(4)1&2]. This inventory includes the following information by facility or mobile business:**

a) Number and date of inspections conducted at each facility or mobile business.
b) BMP violations identified during the inspection.
c) Number, date, and type of enforcement actions.
d) Brief description of each high-level enforcement action at Industrial/Commercial sites including the effectiveness of the enforcement and follow-up activities.
See database contained in Attachment E.

2) All changes to the designated minimum and enhanced BMPs required under Section F.3.b.(2)b&c of the 2010 SMR MS4 Permit [K.3.c.(4)3.]:

Minimum BMP	CASQA BMP Fact Sheet	Used
Hazardous Waste/Materials storage areas are clean, no signs of leakage, and protected from rainfall and Runoff;	SC-34	☒ Yes ☐ No
Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and no signs of leakage from the trash bins	SC-34	☒ Yes ☐ No
Aboveground tanks have been properly maintained including no signs of leakage, and secondary containment in good condition	SC-11, SC-31, SC-33	☒ Yes ☐ No
Onsite storm drain inlets are protect from inappropriate non-storm water discharges	SC-44	☒ Yes ☐ No
Oil/water separators are connected to sanitary sewer	NA	☒ Yes ☐ No
Wash water from wash pads (steam cleaning or high pressure cleaning) is directed to the sanitary sewer and does not discharge to the MS4	SC-10	☒ Yes ☐ No
Mop bucket wash water is discharged to sanitary sewer via clarifier	SC-10	☒ Yes ☐ No
Parking lot areas are free of trash, debris, and fluids other than water	SC-43	☒ Yes ☐ No
Facility has coverage under the Industrial General Permit, if appropriate	NA	☒ Yes ☐ No
Minimum BMP	CASQA	☒ Yes ☐ No
Oil and grease Wastes are not discharged onto a parking lot, street or adjacent catch basin	SC-10	☒ Yes ☐ No
Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and the bins have not been washed out into the MS4	SC-43	☒ Yes ☐ No
Floor mats, filters and garbage containers are not washed in adjacent parking lots, alleys, sidewalks, or streets and that no wash water is discharged to MS4S	SC-10	☒ Yes ☐ No
Parking lot areas are cleaned by sweeping, not by hosing down, and that facility operator uses dry methods for spill cleanup	SC-43	☒ Yes ☐ No

3) Provide a list of Industrial Facilities, including each name, address, and SIC code in the Copermittee Name's jurisdiction, that may require coverage under the General Industrial Permit, but has not submitted an NOI [K.3.c.(4)4]:

See Database contained in Attachment E.

5. RESIDENTIAL
(SECTION F.3.c. of ORDER NO. R9-2010-0016)

1) **Provide an updated list of minimum BMPs required for residential areas and activities as required by Section F.3.c.(2)(b) of the 2010 SMR SM4 Permit [K.3.c.(4)1]"**

Please visit http://rcflood.org/Stormwater/ for the latest brochures regarding these activities.

Area of Activity		Designated BMPs	Reference Material
A	Automobile repair, maintenance, washing and parking	• Collect and properly dispose of automotive fluids and other waste • Clean up spills using dry cleanup methods where possible • Store Hazardous Materials away from rain and runoff • Avoid hosing down parking areas. • Prevent all wash water, leaks and/or spills from entering the street or MS4	**Brochures (see above link):** • Automotive Maintenance and Car Care Brochure • Outdoor Cleaning **CASQA BMP Fact Sheets:** • SC-20, • SC-21, • SC-22, • SC-43
B	Home and garden care activities and product use (pesticides, herbicides and fertilizers)	• Prevent irrigation runoff • Store and apply pesticides, fertilizers and other chemicals in accordance with their labeling • Avoid applying pesticides, herbicides and fertilizers before forecasted rain	**Brochures (see above link):** • Landscape and Garden • 10 Ways to Save Water Outdoors **CASQA BMP Fact Sheets:** • SC-73, • SD-10, • SD-12
C	Disposal of trash, pet waste, green waste, and Household Hazardous Waste (e.g., paints, cleaning products)	• Properly dispose of pet waste • Collect green waste and never blow such waste into the street, gutter or MS4 • Never dispose of waste in a street, gutter or MS4 • Take Household Hazardous Waste to a designated collection center	**Brochures (see above link):** • After the Storm • What's the Scoop • Tips for Horse Care • Landscape and Garden • Pools, Spas and Fountains **HHW and ABOP Collection Events** http://www.rivcowm.org/opencms/hhw/schedule.html **Videos:** • Animal Care • Household Hazardous Waste • Managing your Lawn and Garden • Outdoor Activities http://rcflood.org/stormwater/ (Videos found in the Media Library)

5. RESIDENTIAL
(SECTION F.3.c of ORDER NO. R9-2010-0016) CONT.

2) Provide a summary of the number and type of applicable runoff and stormwater enforcement actions taken within residential areas and activities as required under Section F.3.c.(3) of the 2010 SMR MS4 Permit [K.3.c.(4)2]:

Number by Area or Activity			Enforcement and Compliance Responses
A	B	C	
0	3	**15**	Education and information
0	10	**20**	Verbal Warning
0	3	**12**	Written Warning
0	0	**1**	Notice of Non-Compliance
0	0	**0**	Administrative Compliance Order
0	0	**0**	Misdemeanor
0	0	**0**	Infraction
0	0	**1**	Citation
0	0	**0**	Referral to SDRWQCB
0	**16**	**49**	**Total**

*Also, please see database contained in Attachment F***.**

3) Describe the County of Riverside's efforts to manage runoff and Stormwater Pollution in common interest areas and mobile home parks as required under Section F.3.c.(4) of the 2010 SMR MS4 Permit [K.3.c.(4)2]:

The County responds to and investigates citizen complaints. If issues are verified and/or discovered by County staff, the Code Enforcement Department will open a case against the proposed violator and bring the situation to remedy in conformance with the JRMP Enforcement and Compliance strategy. In addition to the enforcement and compliances efforts listed above, the Code Enforcement Department provides outreach via a newsletter called "The Posting" which highlights its achievements and recent abatement cases. Issues of the The Posting and a narrative summary of activities are contained in the Attachment G.

6. RETROFITTING EXISTING DEVELOPMENT (SECTION F.3.d. of ORDER NO. R9-2010-0016)

1) Provide an updated inventory and prioritization of existing developments identified as candidates for retrofitting as required under Section F.3.d.(2) of the 2010 SMR MS4 Permit [K.3.d.(4)1]:

APN: 964-450-030 Rancho Bella Vista Community Association.

2) Describe the County of Riverside efforts to retrofit existing developments during the reporting period as required under Section F.3.d.(2) of the 2010 SMR MS4 Permit [K.3.d.(4)2]:

The County's ability to retrofit existing development is extremely constrained. The elimination of redevelopment agencies in 2011 has significantly affected the County's ability to enhance or restore properties with structural BMPs. Further, the County is ineligible to apply for Prop 1 grants due non-compliance with CASGEM for the Cahuilla basin. CASGEM compliance is compounded by current federal/tribal adjudication/litigation that is still active within the court system that the county is not party to. However, the County is vigilant in identifying potential opportunities that could result in a public-public partnership, or private-public partnership. At present, the County is working with the Flood Control district to identify solutions for retrofitting those outfalls where exceedances apply. Site visits and preliminary discussions on engineering solutions are currently underway. Additionally, the County Transportation Department is currently evaluating locations at the Rancho Bella Vista community in unincorporated French Valley for retrofit of catch basins to include trash racks/screens.

3) Describe the County of Riverside's efforts taken to encourage private landowners to retrofit existing development as required under Section F.3.d.(4) of the 2010 SMR MS4 Permit [K.3.d.(4)3]:

On May 18, 2015, the County hosted a Drought Workshop to solicit feedback from County Departments, the public, and water districts to hear how they were mitigating the effects of the current, very prolonged drought. During this workshop, the County Board of Supervisors heard about several rebate programs for residents regarding turf buyback rebates, efficient sprinkler heads, and smart irrigation timers available for free or at a reduced cost. In addition, and with the assistance of the Flood Control District, the County created a website where residents can input their address and find out what water efficient rebate programs are available to them. Further, the County is a very active member of the Riverside County Water Task Force. Task Force meetings have been extremely beneficial to the public. Educating the public regarding reducing errant irrigation discharges from front lawns has been crucial to the County's effort to minimize and reduce pollutant transport to receiving waters.

6. RETROFITTING EXISTING DEVELOPMENT (SECTION F.3.d. of ORDER NO. R9-2010-0016)

4) Provide a list of all retrofit projects that have been implemented including site location, a description of the retrofit project pollutants expected to be treated, and the tributary acreage of runoff that will be treated as required under Section F.3.d.(5) of the 2010 SMR MS4 Permit [K.3.d.(4)4]:

In compliance with the Santa Margarita Region Retrofit Program Study prepared in 2012, the County is in the process of evaluating structural BMPs for use at Flood Control's outfall sites where the County is the response agency to dry-weather monitoring exceedances. The County Transportation Department is currently evaluating trash screens (with potential nutrient reduction media) for use in the Ranch Bella Vista housing development catch basins.

5) Describe any proposed retrofit or regional mitigation projects and timelines for future implementation [K.3.d.(4)5]:

During FY 15/16, the County, in coordination with Flood Control, will evaluate its two monitoring locations for retrofit. Further, the Transportation Department will begin evaluating trash capture screens for use in its catch basins within residential developments as a pilot program. The County wishes to utilize tested and proven technology to minimize maintenance problems and maximize public safety and thus is methodically analyzing the best locations for these devices.

6) Describe any proposed changes to the County of Riverside's overall retrofitting program [K.3.d.(4)6]:

No changes to the County's overall retrofitting program guidance occurred during this reporting period.

7. ILLICIT DISCHARGE DETECTION AND ELIMINATION (SECTION F.4 of ORDER NO. R9-2010-0016) CONT.

1) Describe any changes to the legal authority to implement Illicit Discharge Detection and Elimination (IDDE) activities as required under Section F.4.a.(1) of the 2010 SMR MS4 Permit [K.3.d.(4)1]:

There were no changes to legal authority during the reporting period.

2) Describe any changes to the established IDDE investigation procedures as specified under Section F.4.e. of the 2010 SMR MS4 permit [K.3.d.(4)2]:

In August 2014, the County of Riverside was selected by the USEPA for a MS4 program audit within the Santa Margarita Watershed. Findings of the audit team concluded that there could be procedural improvements within the JRMP for enhanced communication between departments, and that the Enforcement/Compliance Strategy should be revised for consistent enforcement across applicable departments. The County typically updates its JRMP near the close of the fiscal year. Proposed modifications during this FY will be reported in the following annual progress report. Otherwise, no changes to the established IDDE investigation procedures have been noted during this reporting period.

3) Describe any changes to public reporting mechanisms, including phone numbers and web pages as required under Section F.4.c of the 2010 SMR MS4 Permit [K.3.d.(4)3]:

None noted. See the Flood Control District's report for information regarding the telephone hotline and web pages.

4) Summarize Illicit Discharges (including spills and water quality data events) and how each significant case was resolved [K.3.d.(4)4]:

On December 17, 2014, the wet weather monitoring of the County's assigned outfall (902MS4263) did exceed the Stormwater Action Level (SAL) of 2.6mg/L for Nitrate and Nitrite at 2.97 mg/L. Based upon observations noted on the field data sheet, the stormwater flows appeared near stagnant and murky with vegetation present. The Transportation Department performed follow up for this exceedance and could not identify the cause.

On June 9, 2015, the dry weather monitoring of the County's assigned outfall (902MS4263) revealed exceedances of several constituents:

1. *Enterococcus is above the NAL (61 MPN/100mL) at >16,000 MPN/100mL.*
2. *Fecal Coliform is above the NAL (400 MPN/100mL) at 5,000 MPN/100mL.*
3. *Total Nitrogen is above the NAL (1 mg/L) at 3.6 mg/L.*
4. *Total Phosphorus is above the NAL (0.1 mg/L) at 0.22 mg/L.*
5. *DO measured at 4.84 mg/L at the Outfall*

Upon transmission of these findings from the monitoring team at Flood Control, the county initiated its IC/ID response. The results of the investigation by the Code Enforcement Department did not yield any findings of cause. Thus, the likely reason for these elevated levels is due to the that fact that the sample was collected from slow flowing water during dry, hot weather and it appears that the elevated levels of Bacterial Indicators and Nutrients may reflect the low flow, almost stagnant conditions, which would also explain the eutrophication evidenced by the low Dissolved Oxygen. Under these conditions, the combination of sunlight and presence of organic matter may have provided sufficient media to promote algal growth and the propagation of bacterial indicators, and concentration of nutrients. It should be noted that: a) No NAL exceedances were observed for the metals in comparison to the hardness-based criteria; b) there was no continuity of flow from the outfall to the downstream Mass Loading Station; and c) TPH was not required and thus not reported because no sheen was observed during sampling.

The County has taken the following steps to address the exceedances of constituents for this particular outfall:

1. *Face-to-face education and outreach to the Rancho Bella Vista HOA board meeting on August 4, 2014. Residents were in attendance.*
2. *Reminder of NPDES requirements to homeowners contained within CC&Rs appeared in the May 2015 HOA Newsletter which went out to every resident of the community.*
3. *Warning letters and fines sent by Eastern Municipal Water District for water waste*
4. *The Flood Control District has recently performed maintenance on the outfall to ensure flowlines are not blocked and that standing water is reduced to a minimum.*

In addition, the audit team from USEPA visited this outfall during the August 2014 program audit. Upon reaching the site, it was discovered that there was several pieces of trash and debris, including an open bag of fertilizer, lying around the maintenance turnaround pad. The County promptly called the Rancho Bella Vista Community HOA to have this trash and debris properly disposed of. Additional documentation regarding the SAL, NAL, community outreach and the USEPA audit site visit can be found in Attachment H.

Follow up actions planned for FY 15/16 include joint project evaluation and design with the Flood Control District for a retrofit project of dry weather diversion. In addition, the County will continue its education, outreach, and reporting within this community to ensure water quality targets are achieved.

5) Describe any instances when field screening and analytical data exceeded Action Levels, including those instances for which no investigation was conducted [K.3.d.(4)5]:

See responses to No. 4 above.

7. ILLICIT DISCHARGE DETECTION AND ELIMINATION (SECTION F.4 of ORDER NO. R9-2010-0016) CONT.

6) Describe the follow-up and enforcement actions taken in response to investigations of Illicit Discharges and a description of the outcome of the investigation/enforcement actions as required under Section F.4.e,f, & g. [K.3.d.(4)6]:

Illicit Discharge Incident	Follow-up and Enforcement Action	Outcome
CV1404375	Inspection conducted by the Code Enforcement Department	Written Warning
CV1500639	Inspection conducted by the Code Enforcement Department	Education and Information

8. WORKPLANS

1) Provide a summary of workplans including priorities, strategy, implementation schedule and effectiveness evaluations.

The Upper Santa Margarita Watershed Water Quality Workplan (Watershed Workplan) was developed in compliance with Directive G of the San Diego Regional Water Quality Control Board's Order No. R9-2010-0016.

The purpose of the Watershed Workplan is to:

1) Characterize the Receiving Water quality in the Upper Santa Margarita River Watershed's Receiving Waters

2) Identify and prioritize water quality problem(s) in terms of constituents by location in the Upper Santa Margarita River Watershed's Receiving Waters.

3) Identify the likely sources of the highest priority water quality problem(s) within the Upper Santa Margarita River Watershed.

4) Develop a watershed Best Management Practice (BMP) implementation strategy to attain Receiving Water Quality Objectives for the highest priority water quality problem(s).

5) Develop a strategy to monitor improvements in Receiving Water quality directly resulting from implementation of the BMP implementation strategy described in this Watershed Workplan.

6) Establish a schedule for development and implementation of the BMP and monitoring strategies outlined in this Watershed Workplan.

The Watershed Workplan is reviewed annually and updated to identify needed changes to prioritize water quality problem(s) listed in the Workplan.

Throughout Fiscal Year 2014-2015, the SMR Copermittees have been assessing the Watershed Workplan programs based upon the criteria set forth by CASQA. Section 12 of this JRMP Annual Report discusses the effectiveness of the implementation of the Watershed Workplan and the CASQA outcome levels achieved. The District and the Copermittees continue to implement the schedule as seen in Figure 1 of the Watershed Workplan that outlines implementation of various storm water programs. Further, and as noted above regarding the County's SAL and NAL exceedances which rank as a Priority 2 in the Watershed Workplan, the County will begin engineering and design studies to identify a potential retrofit at outfall No. 902MS4263.

9. NON-STORMWATER DISCHARGES

1) **Identify any non-stormwater discharge category listed in Requirement B.2 of Order No. R9-2010-0016 that was identified as a source of Pollutants to Waters of the U.S. during the reporting period. For each identified category, the Copermittee must report whether it elected to prohibit the discharge or to require BMPs to reduce Pollutants in the discharge to the MEP. If the discharge is not prohibited, the BMPs that will be implemented, or required to be implemented, are described below:**

Non-Stormwater Discharge Categories (per Requirement B.2)	Source of Pollutant	Prohibited	Required BMPs
Diverted stream flows	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Rising ground waters	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Uncontaminated pumped ground water	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Foundation drains	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Springs	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Water from crawl space pumps	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Footing drains	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Air conditioning condensation	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Flows from riparian habitats and wetlands	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Water line flushing	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Individual residential car washing	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Dechlorinated swimming pool discharges	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No

2) Provide a description of any updates to ordinances, orders, or similar means to prohibit non-storm water discharge categories identified under Section B.2 of the 2010 SMR MS4 Permit.

In conjunction with the Governor's emergency Order regarding irrigation overspray, the County is partnering with local water districts to eliminate irrigation overspray discharges to the MS4. Further, the County recently adopted a revision to Ordinance 859.2 Water Efficient Landscape Requirements, which among several updated provisions, prohibited natural turf in front yards of new residential subdivisions. On May 18, 2015, the Board of Supervisors hosted a drought workshop and reaffirmed their support for Governor Brown's Emergency Order, which stipulated, among other water conservation measures, that all sprinkler irrigation discharges that cause runoff be prohibited. See Attachment I for further details on the County's drought actions and Ordinance 859.3 update.

3) Identify any control measures to be required and implemented for non-stormwater discharge categories identified as needing controls by the San Diego Water Board.

See No. 2 above.

4) Provide a description of a program to address Pollutants from non-emergency firefighting flows identified by the County of Riverside to be significant sources of Pollutants:

As part of preparation of the County's JRMP, the County has prepared and submitted with its JRMP the "Best Management Practices Plan for Firefighting Activities" as Appendix C.1 to the JRMP. The purpose of this plan is to identify Best Management Practices (BMPs) used by firefighting agencies for Runoff management in the Santa Margarita Region of Riverside County. Section B.3 of the 2010 SMR MS4 Permit adopted by the San Diego Regional Water Quality Control Board (Regional Board) requires each Copermittee to develop and implement a program to address Pollutants from non-emergency firefighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified as significant sources of Pollutants to Waters of the U.S.

The Riverside County MS4 Permittees in cooperation with the Riverside County Fire Agencies have developed fire department activity procedures to provide guidance to Fire Prevention and Firefighting personnel for management of Runoff. Guidance is provided in the form of recommended BMPs that are incorporated as part of the individual Jurisdictional Runoff Management Plans (JRMP), and as applicable into Facility Pollution Prevention Plans. When followed, implementation of the BMPs will minimize discharges of Runoff to the municipal separate storm sewer system (MS4) associated with non-emergency firefighting activities.

12. ASSESSMENT AND RESPONSE REPORTING

This section includes the report required pursuant to Requirement A.3.a.(1) of Order No. R9-2010-0016, if applicable.

Requirement A.3.a.(1) states:

"Upon a determination by either a Copermittee or the San Diego Regional Board that storm water MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee must notify the San Diego Regional Board within 30 days and thereafter submit a report to the San Diego Regional Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any Pollutants that are causing or contributing to the exceedance of Water Quality Standards. The report may be incorporated in the Annual Report unless the San Diego Regional Board directs an earlier submittal. The report must include an implementation schedule. The San Diego Regional Board may require modifications to the report;"

The County provides funding in support of the Flood Control District's regional water quality monitoring program through the Implementation Agreement funding mechanism. The District provides notification to the County, where applicable, of any exceedances of an applicable water quality standard. In addition, the District has retained the services of a consultant to provide monitoring support within the upper SMR.

11. FISCAL ANALYSIS CONT.

1) The following table provides estimated expenditures for the current reporting period, the preceding reporting period, and the next reporting period. This table identifies the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities described in the County of Riverside's JRMP as required under Section H.2 of the 2010 SMR MS4 Permit. The analysis should also include a description of the source(s) of funds that are proposed to meet the necessary expenditures for the subsequent year.

Program Element	Funding Source	FY 2014-2015 Budget	FY 2014-2015 Expenditures	FY 2015-2016 Budget
Program Management and Reporting[1]	General Fund	$261,250	$239,520	$145,000
Annual Fee for MS4 NPDES Permit	General Fund	$60,000	$58,264	$60,000
Implementation Agreement Shared Cost[2]	General Fund	$430,000	$305,611	$430,000
Elimination of Illicit Connections & Illegal Discharges	Departmental Budgets	N/A	N/A	N/A
Municipal Facilities and Activities (EDA/Facilities Mgmt)	General Fund	$100,000	$125,000	$145,000
Development Planning[1]	DBF	$175,000	$171,250	$175,000
Private Development Construction (Inspections)[1]	DBF	$175,000	$171,250	$175,000
Industrial and Commercial Sources (Inspections)[1]	DBF	$175,000	$171,250	$175,000
Retrofit Program (CIP)	General Fund/Gas Tax/CSA 152	$0	$1,000	$10,000
Public Education & Outreach	Part of IA	N/A	N/A	N/A
Z5508000 - NPDES Program Administration[1]	Gas Tax	$140,000	$141,558	$152,000
Z5506000 – MS4 Mapping	Gas Tax	$100,000	$90,048	$108,300
Z5501000 –SMR River Watershed Activity MS4 Facilities Inspection & Cleaning Program	Gas Tax	$70,000	$71,480	$72,000

Z5502001 – Volcano Fire	Gas Tax	$100	$91	$117
Z5509000 – Municipal Inspections (Trans)[1]	Gas Tax	$14,000	$14,290	$16,750
Z5509001 – NPDES Inspections Transportation Yards	Gas Tax	$29,000	$28,565	$34,000
Street Sweeping CSA 152[1]	Gas Tax	$450,000	$448,726	$450,000
Roadside Litter Removal[1]	Gas Tax	$325,000	$323,404	$325,000
	Total	**$2,504,350**	**$2,361,307**	**$2,473,167**

[1]*Inlcudes funding for the three watershed regions.*

[2]*This includes area-wide programs for monitoring, public education, HHW, and Hazmat Response.*

2) Provide a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line item.

FY 15/16 budget included allocation of funds to begin engineering assessments of outfall retrofit. Additionally, the County Transportation Department is going start a pilot program for trash rack installations in the unincorporated areas around French Valley. As these items progress, additional information will be provided in the JRMP annual progress report.

12. ASSESSMENT AND RESPONSE REPORTING

1) **The following is the County of Riverside summary of its effectiveness assessments as required under Section J.3 of the 2010 SMR MS4 Permit. The Program Effectiveness reporting must include:**

a) The results of each of the effectiveness assessments performed pursuant to J.1.b, including the demonstrated CASQA effectiveness level(s);

12.1.a.1 Illicit Discharge Detection and Elimination Effectiveness Assessment

Measureable Metrics Collected	Data	CASQA Outcome Level
Number of IC/ID reports received (F.4.e.(3))	179	Level 1
Percentage/Number of Dry Weather Source ID Efforts that were completed and Findings	100/1	Level 5
Estimated volume of anthropogenic trash removed from County MS4 facilities (tons) (F.3.a.(6)(b)(vi))	**113.40 tons** (Countywide Street Sweeping Program) **28 tons** (SMR Roadside Litter Removal Program)	Level 4

12.1.a.2 Municipal Areas and Activities Effectiveness Assessment

Measureable Metrics Collected	Data	CASQA Outcome Level
Percent/Number of County facilities with appropriate BMPs identified (F.3.a.(2)(b))	100/8	Level 2
Number of Copermittee facility and MS4 operators and maintenance staff that attended Municipal training (F.6.b.(1))	4-Transportation Department	Level 1
Estimated tons of Waste removed by County street sweeping, (F.3.a.(5))	1134 (Countywide)	Level 4
Estimated tons of Waste removed from County Open Channels (F.3.a.(6)(b))	118.82	Level 4
Estimated tons of Waste removed from County storm drain inlets (F.3.a.(6)(b))	105.99	Level 4

12. ASSESSMENT AND RESPONSE REPORTING

12.1.a.3 Development Planning Effectiveness Assessment

Measureable Metric Collected	Data	CASQA Outcome Level
Number of acres of Redevelopment projects that incorporated LID-based BMPs that are built and completed (F.1.f.(1))	0	Level 5
Number of applicable planning staff that attended WQMP training[1] (F.6.b.(1))	29	Level 1

12.1.a.4 Private Development Construction Activity Effectiveness Assessment

Measureable Metrics Collected	Data	CASQA Outcome Level
Construction Site inventory updated (F.2.b.)	Database contained in Appendix G is up to date	Level 1
Number of construction inspection staff that attended Construction training[1] (F.6.b.(b))	40- Transportation Department 18-Code Enforcement 14- Building and Safety	Level 1

12.1.a.5 Industrial and Commercial Effectiveness Assessment

Measureable Metrics Collected	Data	CASQA Outcome Level
Industrial and Commercial Facilities inventory updated (F.3.b.(1)(a))	Database contained in Appendix G is up to date	Level 1
Number of applicable Industrial and Commercial Facility inspection staff that attended Industrial-Commercial training[1] (F.6.b.(1)(c))	4-Transportation Department 1-Building and Safety	Level 1

12.1.a.6 Residential Effectiveness Assessment

Measureable Metrics Collected	Data	CASQA Outcome Level
Gallons of used oil collected at collection events (F.3.c.(2)(c))[1]	N/A	Level 4
Total pounds collected at HHW/ABOP events (F.3.c.(2)(c))[1]	N/A	Level 4

[1]*The County Waste Resources Department runs these for the County. See Attachment J for details.*

12.1.a.7 Retrofit Program Effectiveness Assessment

Measureable Metrics Collected	Data	CASQA Outcome Level
Number of times the Retrofit Program has identified a potential solution to a specific identified problem	1	Level 1

[1]*Training Records are located in Attachment M*

12. ASSESSMENT AND RESPONSE REPORTING

12.1.a.8 Public Education Effectiveness Assessment

Measureable Metrics Collected	Data	CASQA Outcome Level
Number of outreach events to schools	3	Level 1
Number of Public Events where outreach was conducted	154	Level 1
Pounds of trash removed through watershed cleanup events	See RCFC Report	Level 4
Number of home improvement stores provided outreach / customer education information for pesticide use	4	Level 1
Number of E-Newsletters signups	318	Level 2
% of E-Newsletters clicked	28	Level 2

SMR data, not Copermittee specific. The Public Education Report is located in Attachment N.

12.1.a.9 Watershed Workplan Effectiveness Assessment

Measureable Metrics Collected	Data	CASQA Outcome Level
Annual Public Review Meeting conducted	✓	Level 1
Updated Characterization of Receiving Water Quality	✓	Level 1
Updated prioritization of water quality problems	✓	Level 1
Descriptions of likely sources updated	✓	Level 1
Updated BMP Implementation Strategy	✓	Level 1
BMPs implemented according to schedule	✓	Level 1
Number of Collaborative Meetings Attended [1]	5	Level 1

[1] *Meeting information is located in Attachment O.*

Updated Characterization of Receiving Water Quality:

As noted in the *Flood Control District's annual report submittal, The climate in the SMR is semi-arid, and most streams are ephemeral. The extended drought conditions in southern California increase the frequency of Visited Not Sampled (VNS) monitoring events. Although, it was another dry year with 71% of regional average annual rainfall, compared to the previous three years (see Table 9), it was an increase, which resulted in some improved metrics. While all Southern California Index of Biotic Integrity (SoCal IBI, or IBI) scores had been trending downward from 2011 through 2014, in 2015, all but one site improved substantially. Furthermore, abatement of streamside transient encampments (such as conducted at the upstream end of the Lower Temecula Creek sampling reach) have reduced trash contributions and streambed disturbances, which may have helped increase 2015 IBI scores.*

12. ASSESSMENT AND RESPONSE REPORTING

Updated BMP Implementation Strategy:

The County is currently implementing the BMP Implementation Strategy as set forth per Section 4 of the Upper Santa Margarita River Watershed Workplan.

BMPs Implemented According to Schedule:

As noted above, the County's assigned outfall's (902MS4263) and associated NAL and SAL exceedances will require not only continued educational outreach, but will likely require an engineered retrofit solution. The County is working with the Flood Control District to prepare a feasibility and capital requirements report during FY 15/16. Upon completion of this document, the Flood Control District will program its CIP budget appropriately for the FY 16/17 budget year based upon the findings of this report. These efforts will be documents in subsequent annual reports.

b) Response to effectiveness assessments:

The County's effectiveness assessments and the data collection effort to yield such data reveal that the County's continued push toward consolidation of programs is necessary from a database/IT perspective and personnel perspective. While the County is in the midst of introducing advanced software (Land Management System) for its land-use approval and inspection process, it is not anticipated to be fully integrated until the end of FY 15-16. Until then, the County is still reliant on proprietary software that proves challenging for data extraction purposes.

c) A description of any future steps needed to improve the County of Riverside's ability to assess program effectiveness.

During FY 15/16, the County will work on a "bridge" spreadsheet for data reporting until the new Land Management System is fully functional, and so that this data can be more readily disseminated using the upcoming reporting forms in the new Regional Permit.

13. CONCLUSIONS/RECOMMENDATIONS

The County continues to effectively balance competing prioritization of societal needs (e.g., indigent health, public safety protection, etc.) with receiving water protection, environmental stewardship, and drought mitigation planning efforts. While this past year has proven challenging from a drought perspective, the monitoring report shows favorable trends in water quality improvements and protection. However, the County is still experiencing compliance issues with outfall 902MS4263 related to sampling of ponded, near-stagnant water. Further, as general fund resources are increasingly subject to competition, the County is vigilant in identifying program efficiencies and other revenue sources. The following recommendations below will be executed in FY 15/16 and reporting in the subsequent annual report.

- *Outfall 902MS4263 engineering study and capital planning analysis*
- *Consolidation of the Business License program into the Transportation Dep. NPDES Group*
    - *Review and revision of Ordinance 857, and Ordinance of the County of Riverside Establishing a Business Registration and Licensing Program to ensure effectiveness and fairness*
- *Consolidation of county-wide Post-Construction BMP inspections for county owned and maintained facilities into the Transportation Department NPDES Group*
- *A centralized database for easier data collection methods*

During the August 2014 USEPA Audit, the audit team provided several suggestions for program improvement, and identified one potential permit violation. The potential permit violation is related to the counties underground mapping effort of its storm drain lines less than 36". Currently, the County Transportation Department has mapped, through GIS tools and analysis, approximately 50% of the underground stormdrain lines for which it maintains in the Santa Margarita Watershed. Please see Attachment K that shows an example of this completed linework. Other updates to the JRMP, including SOPs for WQMP inspection and review, construction site compliance SOPs that show revised Notice of Violation forms, and the Enforcement/Compliance Strategy updates can be found within the revised JRMP in Attachment L.

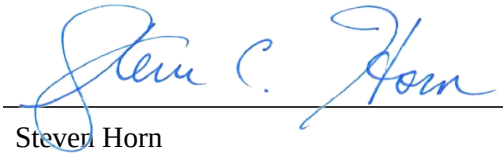
ATTACHMENT A: ANNUAL REPORT CHECKLIST

Annual Report Summary Checklist	
Order Requirements	
Were All Requirements of Order No. R9-2010-0016 met?	☒ Yes ☐ No
Construction	
Number of Active Sites	97
Number of Inactive Sites	15
Number of Sites Inspected	112
Number of Violations	13
Number of Construction Enforcement Actions Taken	0
New Development	
Number of Development Plan Reviews	98
Number of Grading Permits Issued	98
Number of Projects Exempted from Interim/Final Hydromodification Requirements	0
Post Construction Development	
Number of Priority Development Projects	9
Number of SUSMP Required Post-Construction BMP Inspections	18
Number of SUSMP Required Post-Construction BMP Violations	2
Number of SUSMP Required Post-Construction BMP Enforcement Actions Taken	0
Illicit Discharges and Connections	
Number of IC/ID Inspections	6
Number of IC/ID Detections by Staff	0
Number of IC/ID Detections from the Public	92
Number of IC/ID Eliminations	86
Number of IC/ID Violations	2
Number of IC/ID Enforcement Actions Taken	2
MS4 Maintenance	
Number of Inspections Conducted	1948
Amount of Waste Removed	140.34
Total Miles of MS4 Inspected	5,574

ATTACHMENT A: ANNUAL REPORT CHECKLIST CONT.

Annual Report Summary Checklist (cont.)	
Municipal/Commercial/Industrial	
Number of Facilities	393
Number of Inspections Conducted	230
Number of Facilities Inspected	205
Number of Violations	13
Number of Enforcement Actions Taken	0

I certify under penalty of law that this Annual Report Summary Checklist was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed:  10/5/2015

Steven Horn
Senior Management Analyst

ENGINEER'S REPORT

TO THE

BOARD OF SUPERVISORS

OF THE

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ON THE

NPDES PROGRAM

FOR THE

SANTA MARGARITA WATERSHED
BENEFIT ASSESSMENT AREA

JULY 2013

WARREN D. WILLIAMS
General Manager-Chief Engineer

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APPENDICES

APPENDIX A – Proposed NPDES Program Budget (FY 2013-2014)

APPENDIX B – RCFC&WCD Ordinance No. 14 (May 14, 1991)

APPENDIX C – Map of Santa Margarita Watershed Benefit Assessment Area (SMWBAA)

APPENDIX D – SMWBAA Assessment Roll (FY 2013-2014) (Under Separate Cover)

P8/153534

INTRODUCTION

In 1987, Congress amended the Federal Clean Water Act (CWA) to require public agencies which serve urbanized areas with a population greater than 100,000 and other designated areas to obtain permits to discharge urban stormwater runoff from municipally owned drainage facilities including streets, highways, storm drains and flood control channels. In November 1990, the United States Environmental Protection Agency (USEPA) promulgated enforceable regulations establishing Municipal Separate Storm Sewer System (MS4) Permit requirements under its National Pollutant Discharge Elimination System (NPDES) Program. In California, USEPA has delegated its NPDES permitting authority to the State Water Resources Control Board (SWRCB). The SWRCB issues and enforces NPDES MS4 Permits through its nine California Regional Water Quality Control Boards (CRWQCBs).

The Riverside County Flood Control and Water Conservation District (District) service area encompasses portions of three major watersheds (drainage areas): the Santa Ana, the Santa Margarita and the Whitewater. The discharge of stormwater from MS4s within each of these three watersheds is regulated pursuant to an NPDES MS4 Permit (NPDES Permit) administered by a separate CRWQCB. **The District must comply with the provisions of these NPDES Permits in order to legally operate and maintain its flood control and drainage system infrastructure.** The USEPA and the CRWQCB can impose significant penalties for non-compliance, as high as $32,500 per day per violation. In addition, private citizens can pursue enforcement actions under the Federal CWA.

In the case of the Santa Margarita Watershed, the District, along with the County of Riverside (County) and the City of Temecula obtained an "early"[1] NPDES Permit from the CRWQCB - San Diego Region (Regional Board) on July 16, 1990. The Regional Board added the then newly incorporated City of Murrieta to the Permit on May 18, 1992.

This first NPDES Permit was considered a "Developmental Permit". The Permittees (District, County, and the cities of Temecula and Murrieta) were authorized to continue discharging stormwater from their municipally owned storm drains and flood control facilities while developing various elements of an area-wide stormwater management program. Although the initial NPDES Permit "expired" on July 16, 1995, its provisions remained in effect in accordance with the applicable provisions of the NPDES Permit Program regulations. The Regional Board adopted a "second–round" NPDES Permit (Board Order 98-02) for the Santa Margarita Watershed on May 13, 1998. However, USEPA Region IX raised an objection to specific language that was included in Board Order 98-02 at the direction of the SWRCB. Region IX subsequently took action to issue its own NPDES Permit (CAS0108766) in accordance with the Memorandum of Agreement between Region IX and the SWRCB and the NPDES regulations at 40 CFR123.44(h). On June 25, 1999, Region IX "returned" the NPDES Permit to the Regional Board for implementation. On November 8, 2000, the Regional Board issued Addendum No. 1 to Board Order No. 98-02, which incorporated, by reference, the EPA Permit into their Board Board Order.

In general, both Board Order No. 98-02 and the USEPA Permit validated the Permittees' overall stormwater management efforts by incorporating the major elements of the initial 1993 Drainage

[1] The term "early" is used to indicate permits that were issued prior to the promulgation of the final USEPA rules for permitting municipal stormwater discharges [40CF122.26, November 1990].

Area Management Plan (1993 DAMP) and other stormwater management program elements that the Permittees have subsequently developed. However, both Board Order 98-02 and the USEPA Permit identified certain additional programs and activities that the Permittees were required to implement in accordance with specified time schedules in order to achieve compliance with Board Order No. 98-02, the USEPA Permit, and the Federal Clean Water Act. Board Order 98-02 expired on November 30, 2003. The Permittees submitted a joint Report of Waste Discharge (ROWD) on May 30, 2003, requesting renewal of the Permit by the Board. On July 14, 2004, the San Diego Regional Water Quality Board (Regional Board) adopted Board Order No. R9-2004-001, the Third-term Santa Margarita Region (SMR) MS4 Permit (Third-term SMR Permit). The Third-term SMR Permit required several additional or enhanced program elements, such as strict control on new developments, enhancements to construction, industrial and commercial inspection programs, and a new emphasis on water quality monitoring and program effectiveness evaluations. Compliance programs were developed or enhanced to address the Third-term MS4 Permit between July 2004 and July 2005. These program elements were then incorporated into the updated Drainage Area Management Plan for the Santa Ana/Santa Margarita Region (SA/SMR DAMP). The Permittees submitted a joint ROWD on January 15, 2009, requesting renewal of the Permit by the Regional Board. The Regional Board responded to the ROWD and permit renewal process on February 18, 2010. The District and Permittees worked with the Regional Board to develop the watershed's Fourth-term MS4 Permit which was adopted on November 10, 2010 and included the newly incorporated City of Wildomar. Although the District and Co-Permittees are currently being regulated under the fourth-term MS4 Permit, the District and Co-Permittees have been working with Regional Board staff in the development of a Regional NPDES Permit. The development of the Regional NPDES Permit initially began in early 2012 and was adopted in May 2013. The Regional NPDES Permit will regulate Permittees within portions of Riverside, San Diego and Orange County. The District and Co-Permittees will be regulated under the Regional NPDES Permit once the current 2010 NPDES Permit expires.

From the beginning, the Permittees' Stormwater Management Program has been guided by the following principles:

1. Utilize existing municipal departments/programs to meet NPDES Permit requirements whenever possible.

2. Minimize duplication of effort through coordinated Permittee compliance actions.

3. When necessary, develop new or enhanced stormwater management programs (Best Management Practices) that are both cost-effective and acceptable to the public.

The Santa Margarita Watershed Benefit Assessment Area (SMWBAA) was established pursuant to District Ordinance No. 14 on May 14, 1991 (copy attached - see Appendix B). The SMWBAA was formed to offset the District's program and administrative costs associated with the development, implementation and management of identified stormwater management activities required by the federally mandated NPDES Permit Program. **The District must continue to develop and implement these stormwater management activities in order to legally operate and maintain its flood control and drainage facilities.** A map showing the boundaries of the SMWBAA is attached hereto as Appendix C.

The cost of the District's various NPDES Permit compliance activities fluctuates from year to year. Although some expenses do not change significantly on a yearly basis, certain costs are

cyclical (*e.g.*, preparing Permit applications and negotiating Permit provisions), while expenses associated with collecting water samples and laboratory analysis may vary according to the amount of rainfall occurring in a given year or in response to certain information requests from the Regional Board. Costs associated with the development and production of public education materials are not always incurred on a Fiscal Year basis. Occasionally, additional consultant services may be needed to assist the District with the development of a particular Permit requirement or program activity. Also, certain activities or programs may be expanded or curtailed from time to time and, occasionally, new programs or activities must be developed and implemented.

Currently, the regulation and management of stormwater runoff is a topic of increasing interest amongst the public, municipalities, regulatory authorities, and legislators. Although new laws and/or regulations could result in changes to the assessment rate in future years, **the proposed assessment rate for Fiscal Year 2013-2014 is equal to or less than the assessment rate that was enrolled and levied for Fiscal Year 1996-1997 and all subsequent years.**

APPORTIONMENT METHODOLOGY

SMWBAA assessments are apportioned on the basis of proportionate stormwater runoff generated by each parcel. This method of assessment is consistent with State law and the District Act. The amount of benefit is computed based upon a parcel's size (acreage) and its use classification. A single-family residential structure on a 7,200 square foot lot (1/6 of an acre) is defined as one benefit assessment unit (BAU). The BAUs for other types of land use are calculated in proportion to the amount of runoff generated by a single-family residence on a 7,200 square foot lot.

In comparison with a typical single family residence, industrial and commercial properties typically generate more stormwater runoff and higher pollutant loads on a per acre basis. Thus, commercial/industrial parcels are assessed at a higher rate per acre than residential parcels. Because agricultural discharges are currently exempt under the NPDES Permit regulations, parcels within the SMWBAA that are used for agricultural purposes are exempted from the assessment. Vacant undeveloped parcels that effectively generate no urban pollutants are also exempt. In addition, large tracts of land that consist mostly of Federally or State owned forest or similar property have been excluded from the SMWBAA. Refer to Appendix B for a more detailed discussion of the apportionment methodology.

CURRENT YEAR ASSESSMENTS (FY 2012-2013)

In July 2012, the District's Board of Supervisors confirmed a benefit assessment rate for FY 2012-2013 of $4.00 per BAU. Following is a summary of FY 2012-2013 assessments:

Rate	Billed Parcels	BAUs	Assessments	Corrections	Amount Paid*
$4.00	83,022	131,829	$527,315.22	$0.00	$497,258.25

* Through April 30, 2013

Property owners may request a review of their assessment(s) by contacting the District. District staff considers each request by reviewing information such as assessor's parcel maps, aerial photographs, and, when necessary, conducting site visits. The Auditor/Controller is notified of any needed corrections and a new tax bill is issued or, in cases where the assessment has been paid, a refund is made. Last year, no corrections were processed.

RECOMMENDED BENEFIT ASSESSMENT RATES (FY 2013-2014)

The District recommends that for FY 2013-2014, the SMWBAA assessment rate remain unchanged at $4.00 per BAU. This BAU rate would result in an equivalent charge per acre for the following land uses:

Group	Land Use Category	BAU/Acre	Assessment Rate*
A	Commercial, Industrial	12	$48.00/acre
B	Apartments/Mobile Home Parks, Churches and Schools	9	$36.00/acre
C	Single-family Residential	6**	$24.00/acre
D	Agricultural/Vacant Undeveloped	Exempt	$0.00/acre
E	Golf Courses	0.10	$0.40/acre
F	Undeveloped Portions of Parcels	0.05	$0.20/acre

* Refer to Appendix B for a detailed discussion of the Benefit Assessment methodology.
** 1 BAU per single-family residence, assuming six equally sized residential parcels per acre.

The projected revenue for FY 2013-2014, using the proposed benefit assessment rate of $4.00 per BAU is as follows:

Rate	Parcels*	BAUs	Assessment*	Projected Revenue**
$4.00	83,022	131,829	$527,315.22	$487,766.58

* Based on FY 2012-2013 Assessor's information
** Assumes a 7.5% delinquency rate

The projected revenue along with any remaining portion of the ending fund balance from FY 2012-2013 will fund the District's NPDES Stormwater Management Program activities for the Santa Margarita Watershed area in FY 2013-2014. The proposed FY 2013-2014 budget is presented in Appendix A.

During the early years of the NPDES Program, there were many uncertainties regarding startup costs (consultant costs, amount of sampling that would be required, overall program scope, etc.) since the program was new for both the regulatory authorities and the Permittees. Consequently, the initial assessment rates were set conservatively to ensure that all permit obligations could be met. To date, the District has been able to maintain a modest fund balance since the benefit assessments were first levied in FY 1991-1992. The District is gradually reducing the fund balance by maintaining the current assessment rate while sustaining expenditure levels that are slightly above projected revenues. It should also be noted here that the current trend in

California is toward more stringent regulation of municipal stormwater runoff, and with the recent adoption of the fourth-term Santa Margarita NPDES MS4 Permit, it is expected that the District's NPDES Permit compliance costs will increase significantly in Fiscal Year 2013-2014 and over the next few years.

ASSESSMENT ROLL

The SMWBAA Assessment Roll provides a listing by Assessor's Parcel Number of the proposed FY 2013-2014 Benefit Assessment to be levied on each parcel of property in the SMWBAA. The Assessment Roll is identified as Appendix D and incorporated herein by this reference. This Engineer's Report along with the SMWBAA Assessment Roll will be placed at the following locations for review by the public:

Clerk of the Board of Supervisors
4080 Lemon Street, 1st floor
Riverside, CA 92501

Riverside County Flood Control
and Water Conservation District
1995 Market Street
Riverside, CA 92501

City of Murrieta
24601 Jefferson Avenue
Murrieta, CA 92562

City of Temecula
41000 Main Street
Temecula, CA 92590

The Engineer's Report may also be viewed or downloaded at
http://rcflood.org/NPDES/

NPDES PROGRAM HIGHLIGHTS (FY 2012-2013)

The following tasks were accomplished or are ongoing for the year ending June 30, 2013 in compliance with the 2010 Santa Margarita NPDES Permit:

A. The District and Co-Permittees participated in a series of meetings with stakeholders and staff at the Regional Board, discussing the draft Regional NPDES Permit, which the Regional Board adopted on May 8, 2013. The District and Santa Margarita Permittees will be regulated under the adopted Regional NPDES Permit, once the current 2010 NPDES Permit expires.

B. Developed the Standard Stormwater Mitigation Plan (SSMP) Template and Guidance documents for new development, in accordance with the 2010 NPDES Permit. The SSMP requires developers to submit a project-specific SSMP for qualified new development and redevelopment projects, and identifies water quality impacts of the proposed development, and mitigation measures for those impacts. The Regional Board required revision of the SSMP to incorporate an increased focus on low impact development (LID) design practices and BMPs. The SSMP Template and Guidance documents are currently awaiting Regional Board approval.

C. Developed the Transportation Project Guidance (TPG) Template and Guidance documents for Permittee road projects, in accordance with the 2010 NPDES Permit. The TPG requires the development and implementation of standard roadway design and post-construction BMP guidance that comply with the Development Planning requirements of the 2010 NPDES Permit as an alternative to preparing a project-specific SSMP.

D. Completed and submitted for Regional Board approval, the Jurisdictional Runoff Management Plan (JRMP). The JRMP is a Copermittee specific document which describes the programs and procedures the Co-Permittees will implement to comply with the provisions of the 2010 NPDES Permit, and the responsible departments and staff. The JRMP replaces two past compliance documents: the Drainage Area Management Plan (DAMP), and the individual Storm Water Management Plans (SWMP).

E. Initiated a Hydromodification Mapping study, which will be used as a regional Planning tool, and details rivers, streams and receiving waters within the Santa Margarita River watershed that will be susceptible to the effects of hydromodification from increased run-off due to new development.

F. The District and Co-Permittees are in the process of developing a Hydromodification Management Plan (HMP) per the requirements of the 2010 NPDES Permit. The HMP consists of managing increases in runoff discharge rates and durations from all Priority Development Projects. The HMP will be incorporated into the SSMP. The final draft HMP will be submitted to the Regional Board no later than June 30, 2013. Once approved, the District and each Copermittee will implement the HMP. A public training seminar will be held shortly after the Regional Board approval of the HMP. This seminar will focus on HMP requirements, and how to implement the HMP into development and redevelopment projects.

G. Completed and submitted the Watershed Workplan which identifies and prioritizes areas within the Santa Margarita River watershed that require action to improve water quality,

likely sources causing water quality problems, likely sources of pollutants, and an implementation strategy and schedule to attain receiving water quality objectives. The District and Co-Permittees are required to review and update the Watershed Workplan annually to identify any needed changes to the prioritized water quality problem(s) listed in the workplan. All updates are presented during Annual Watershed Review Meeting.

H. Developed a new JRMP Annual Reporting Form per the requirements of the 2010 NPDES Permit. Fiscal Year 2012-2013 will be the first year of implementing the new annual reporting form for the District and Co-Permittees.

I. Continued presentation of semi-annual municipal employee stormwater training programs. These training classes focus on the requisite knowledge for properly implementing the SWMP, and address Permittee functions such as Development Planning, Municipal Activities, Industrial/Commercial Inspections and Construction Inspections. Fall and spring training sessions were held at the District and also at the cities of Temecula and Wildomar to provide close proximity for the Co-Permittees.

J. Continued to chair the Santa Margarita Technical Advisory Committee, comprised of Co-Permittees; interested parties are also encouraged to attend. The Co-Permittees coordinate their Urban Runoff management activities to work toward achieving the greatest protection of Receiving Water quality. This committee serves as a forum to effectively disseminate information, discuss regional and statewide program issues, and plan and coordinate Co-Permittee actions to achieve compliance with the NPDES MS4 Permit.

K. Continued implementation of the Commercial/Industrial Compliance Assistance Program (CAP) to conduct focused outreach to restaurants, automotive repair shops and certain other commercial and industrial establishments to encourage implementation of appropriate stormwater Best Management Practices and facilitate consistent and coordinated enforcement of local stormwater quality ordinances. Site visits included use of a survey checklist to document stormwater management practices for each facility.

L. Continued financial support to area-wide Stormwater Pollution Prevention Programs, including Hazardous Materials Response (HAZMAT) Team, the Household Hazardous Waste (HHW) temporary and permanent collection events and "ABOP" (Anti-freeze, Batteries, Oil, and Paint) program.

M. Developed, prepared and submitted a comprehensive District Annual Report and Watershed Annual Report to the Regional Board.

N. Continued to utilize the District's $2.5 million LID Project to test, demonstrate and evaluate the effectiveness of LID practices in stormwater capture and management, treating pollutants of concern associated with urban runoff, mitigating the impacts of hydromodification from urban development, and identifying optimum design criteria and standards for LID BMPs in Riverside County. This project implements a variety of LID BMPs, and provides a facility in a centralized location which is convenient for educating residents, regulators, developers, municipal employees, engineers and other interested stakeholders from many Southern California communities. Data collected will also be provided to the regional Southern California Stormwater Monitoring Coalition (SMC) LID Project. As this project will have statewide and regional benefits, the project is partially funded by a Proposition 13 grant and in partnership with SAWPA.

O. The District completed development of an enhanced LID BMP Design Manual, which is focused on landscape-based BMPs and infiltration BMPs capable of addressing identified water quality impairments across Riverside County. The LID BMP Design Manual is available on the District's website. In May 2012, the District's Board of Supervisors adopted the LID BMP Manual and ordered the establishment of a Water Quality Facilities Maintenance Community Facilities District. The District is currently working on establishing consulting services agreements for the CFD formation and legal services. Once the agreements are executed, the funding generated by this CFD will support tracking and maintenance of residential and some commercial/industrial post-construction BMPs in the unincorporated County area.

P. Continued enhancement of the collection and analysis of water quality samples in accordance with the NPDES Permit's Monitoring and Reporting Program. Mass load sampling of three monitoring stations during three winter storms continues to be conducted.

Q. Continued active participation in the California Stormwater Quality Association (CASQA). On behalf of the Co-Permittees, the District serves many leadership roles within the organization, specifically: Jason Uhley, Board Member from 2010-present, Legislative Chair since 2003, Treasurer since 2010; and active contributory membership roles in the Monitoring & Science, Legislative, and Construction Sub-committees.

R. Continued active participation in the CASQA Pesticides Subcommittee, with the goal of facilitating changes to State and Federal pesticides regulations. These changes will improve processes for evaluating the environmental impacts on Receiving Waters of new pesticides, and also change labeling and use requirements for existing pesticides, such as pyrethroids.

S. Continued participation in the Stormwater Monitoring Coalition (SMC), a regional monitoring group comprised of Southern California Phase 1 Municipal NPDES Permit holders whose focus is developing effective, meaningful stormwater quality monitoring techniques.

T. Continued coordination with the SMC on a southern California bioassessment monitoring program.

U. Developed a new Stormwater Pollution Prevention Presentation for elementary schools, to be presented by the District's consultant.

V. Continued to chair the Public Education Subcommittee. Meetings include Co-Permittee representation from each watershed to review elements of regional public education programs and program materials.

W. Continued an ongoing effort to redesign the District's NPDES Public Education webpage to improve its effectiveness, usability and quality of information regarding MS4 compliance programs. The webpage is currently being reformatted extensively to add more usable and interactive data as well as add information pertinent to new permit requirements, based on recommendations from the District's consultant. The webpage will provide information for the general public, Permittees, regulators, public and in-house personnel.

X. Continued to host the District's NPDES website which provides information regarding the regional MS4 Permit compliance programs. The website provides pertinent information for Permittees, regulators, public and in-house personnel.

Y. Continued distribution of focused BMP brochures targeting Construction Activities, Pet Care, Guidelines for Swimming Pool, Jacuzzi and Garden Fountain Maintenance, Septic Tank Maintenance, Restaurant/Food Service Industry, Professional Mobile Services, Automobile Service Industry, Outdoor Cleaning Activities and Industrial Facilities. Efforts continue to ensure that brochures are updated as necessary.

Z. Implemented a new series of Home Gardening Workshops at local nurseries and garden centers to promote alternatives to fertilizer and pesticide usage, presented by the District's consultant. Store staff is trained and point-of-purchase displays are placed at paint, pesticide and fertilizer departments.

AA. Developed and executed informative e-newsletters. E-newsletters are sent out quarterly and focus on one key area of pollution prevention in each issue, for a variety of target audiences. The e-newsletters are also tightly integrated with the revised District website to enhance our ability to outreach to target audiences.

BB. Continued to provide outreach material for County and District new employee orientation sessions regarding appropriate stormwater stewardship practices including clean water information and promotional items that link back to the County's "Only Rain Down the Storm Drain" message. Attendees receive a carry bag containing After the Storm, Outdoor Cleaning Activities, Pool and Spa Maintenance, Pet Care and Tips for Horse Care brochures. Various promotional items that reinforce outreach messages such as dust pans (use dry cleanup methods), imprinted with the "Only Rain Down the Storm Drain" logo and the 1-800 Toll Free line are also distributed.

CC. Continued to apply for Proposition 84 Grant funding through the Upper Santa Margarita Watershed Integrated Regional Watershed Management Plan, for planning projects within the Santa Margarita Region that would additionally help provide funding for compliance document development required by the 2010 NPDES Permit. A grant was subsequently awarded in September 2012 to fund the development of nutrient water quality objectives and receiving water targets for the Santa Margarita River and Lagoon.

PROGRAM/WORK ITEMS (FY 2013-2014)

With adoption of the 4th Term NPDES Permit, Board Order No. R9-2010-0016, on November 10, 2010, significant development and revisions to compliance documents and programs have commenced in order to comply with the new requirements.

The following program activities will be emphasized for the coming year:

NPDES PERMIT COMPLIANCE PROGRAM IMPLEMENTATION

Board Order No. R9-2010-0016 was adopted by the Regional Board on November 10, 2010. Following the adoption of the NPDES Permit, the District was designated as the Principal Co-Permittee and began establishing teams of consultants to revise and develop compliance programs. Compliance documents which have been finalized and require implementation during FY 2012-2013 specifically include the:

- Jurisdictional Runoff Management Plan (JRMP),
- Water Quality Management Plan (WQMP),
- Watershed Workplan, and
- Consolidated Monitoring Program (CMP).

Costs to implement these programs will be significant; where feasible, these programs have been coordinated with the development of the Santa Ana NPDES Permit programs. However, there are many requirements in the Santa Margarita NPDES Permit that are unique from the Santa Ana Permit programs. For such requirements, the District's share of the cost for implementing these programs will be wholly from the SMWBAA funds. Additional information on these new compliance efforts is provided below

LID PROJECT

Construction of the District's $2.5 million LID Project was completed in Spring of 2012; this project implements a variety of LID BMPs, and is being used to test and demonstrate the effectiveness of LID practices in stormwater capture and management, treating pollutants of concern associated with urban runoff, mitigating the impacts of hydromodification from urban development, and identifying optimum design criteria and standards for LID BMPs in Riverside County. Water quality monitoring and hydrology studies will continue to be conducted over the coming years, and data collected is also being provided to the regional SMC LID Project.

The project provides a facility in a centralized location, which is convenient for educating residents, regulators, developers, municipal employees, engineers and other interested stakeholders from many Southern California communities.

PROGRAM MANAGEMENT

As Principal Permittee, the District conducts certain activities to coordinate the efforts of the other Co-Permittees and facilitate compliance with the 2010 NPDES Permit. These activities include chairing quarterly meetings of the Santa Margarita Technical Advisory Committee, administration of area-wide programs (e.g., public education, household hazardous waste collection, hazardous material spill response, stormwater sample collection and analysis), program development and preparation of the Annual Report to the Regional Board. Per 2010 NPDES Permit requirement, and due to an increase in program compliance documentation development, implementation of the programs detailed in the JRMP will be the most significant

program management activity for FY 2013-2014. The District will also focus its efforts on identifying and commenting on statewide issues that affect local stormwater programs.

AREA-WIDE PROGRAMS

The District will also continue to provide financial support for several important "area-wide" BMP programs implemented on behalf of the Co-Permittees, including:

Public Education

Coordination and oversight of the area-wide NPDES public education and outreach efforts, including public events, school and adult education programs, printed brochures and commercial mass-media campaigns. Continued development and distribution of focused educational outreach materials for specific industries and businesses such as restaurants, auto repair shops, outdoor cleaning businesses, and other commercial and industrial activities that are potential sources of stormwater pollution. Additionally, e-newsletters are developed and distributed quarterly, and the public education webpage is under an ongoing redesign effort to improve its effectiveness, usability and quality of information regarding MS4 compliance programs.

Training for Municipal Employees

Municipal training programs to improve understanding of NPDES Permit requirements and stormwater BMPs. The classes focus on methods to reduce and/or eliminate sources of stormwater pollution from public agency facilities and activities. Training is conducted specifically for construction inspection staff, industrial/commercial facilities inspection staff, municipal facilities maintenance staff, Compliance Assistance Program inspectors, and staff responsible for new development/re-development project review.

Hazardous Materials Emergency Spill Response

Providing financial support to the County Fire Department's Hazardous Materials Emergency Spill Response Team to ensure that hazardous chemical incidents (spills or illegal dumping) are responded to quickly, and effectively cleaned up.

Household Hazardous Waste Collection / ABOP

Providing financial support to the County Waste Management Department to support ongoing mobile Household Hazardous Waste (HHW) collection events and operation of the "ABOP" (Antifreeze, Batteries, used motor Oil, and latex Paint) program, which provide local residents with opportunities to properly dispose of HHW.

Compliance Assistance Program

Continuation of a partnership with the County Environmental Health Department to conduct outreach and education to specific commercial establishments and industrial facilities in conjunction with existing Facility Inspection Programs. In addition, this program provides feedback through survey forms concerning the compliance status of commercial and industrial facilities to both the Co-Permittees and the Regional Board.

WATER QUALITY MONITORING

On behalf of all Permittees, the District conducts both wet and dry weather sample collection and analysis in accordance with the 2010 NPDES Permit's Monitoring and Reporting Program. Program development for the additional monitoring required in the NPDES Permit's MRP was completed during FY 2012-2013. The Permittees have also been participating in a study of the Santa Margarita River to develop Numeric Nutrient Endpoints for a Santa Margarita River

Nutrient TMDL. Additionally, based on the results of the TRE special study, the District will continue to verify and address potential Pyrethroid Toxicity in both Murrieta and Temecula Creeks.

NEW DEVELOPMENT

In order to comply with the 2010 NPDES Permit requirements, the SSMP was revised during FY 2011-2012. The revised SSMP requirements impact both public and private projects. Significant revisions include the expansion of project types subject to the SSMP, LID and hydromodification requirements, requirements to establish an urban runoff fund or water quality credit system for those projects that cannot implement LID, and development of a database and inspection program to track and ensure maintenance of structural post-construction BMPs.

To implement these requirements, the Permittees will have to utilize and fine tune the following program items, which were created during the past fiscal year:

- GIS level mapping of stream segments in the Santa Margarita River Watershed which has determined streams that are susceptible to Hydromodification from new or existing development.
- Feasibility criteria for determining when infiltration, capture and re-use or evapotranspiration are not feasible for a specific development site. The NPDES Permit requires that these BMPs be used unless a technical feasibility study indicates that they are not feasible for a particular project.
- The revised LID BMP Design Manual to incorporate LID and HMP concepts including infiltration and filtration BMPs, capture and re-use technologies and evapotranspiration, and to mitigate increased runoff from Priority Development Projects.
- The updated project-specific WQMP Template, Guidance and training to assist Permittees and developers with the transition to the new requirements. During the upcoming fiscal year, the SSMP Template will be revised to account for the HMP requirements.
- The TPG Template and TPG Guidance to assist Co-Permittee transportation engineers to comply with the new requirements.

These program items will be implemented during FY 2013-2014.

INDIVIDUAL JURISDICTION RUNOFF MANAGEMENT PLANS

As part of the 2010 NPDES Permit, the District will implement a JRMP that describes its specific runoff management programs and activities implemented to comply with the requirements of the 2010 NPDES Permit. The JRMP is the principal document that comprehensively translates the NPDES Permit requirements into actions. The JMRP will be reviewed at least annually to incorporate new and revised compliance programs specified in the 2010 NPDES Permit.

WATERSHED WORKPLAN IMPLEMENTATION

In accordance with 2010 NPDES Permit requirements, the District developed a plan to indentify, prioritize, address and mitigate the highest priority water quality issues and/or pollutants in the Upper Santa Margarita River watershed. During FY 2013-2014, the items detailed within the Workplan will be implemented.

HYDROMODIFICATION MANAGEMENT PLAN (HMP) DEVELOPMENT

In accordance with 2010 NPDES Permit requirements, the District, in conjuction with the SMR Co-Permittees have been developing an HMP to manage increases in runoff discharge rates and durations from all Priority Development Projects. The HMP will require projects to have estimated post-project runoff discharge rates and durations that do not exceed pre-development discharge rates and durations. Amodeling software is currently being developed and finalized to perform the necessary calculations to estimate pre-development and post-project runoff discharge rates. A Hydromodification Susceptibility Map is also being developed, which will identify and address channel segments for their susceptibility and geomorphic stability.

CONSOLIDATED MONITORING PROGRAM

The District updated the Consolidated Monitoring Program (CMP) to describe the monitoring efforts that were implemented to comply with the 2010 NPDES Permit. During FY 2012-2013, these monitoring efforts were implemented. The CMP update describes significant increases in monitoring requirements including:

- Expansion of the IC/ID Program to require implementation of a more rigorous and proactive detection and elimination program based action levels. This includes development and implementation of Permittee specific schedules to conduct systematic investigations of MS4 facilities and outfalls with a diameter of 36 inches or larger to receiving waters as well as industrial areas tributary to outfalls with a diameter 18 inches or larger and with specified acreage as outlined in the NPDES Permit.
- Additional Bioassessment requirements, which require reconnaissance of three new viable sampling locations.
- New High Priority Inland Aquatic Habitat monitoring.
- Five special monitoring studies.

These efforts, which are unique to the Santa Margarita watershed, will continue to be implemented during the coming fiscal year.

INTEGRATED REGIONAL WATERSHED MANAGEMENT PLAN

The District and the County of Riverside are continuing to support Rancho California Water District in the implementation of an Integrated Regional Watershed Management Plan for the Santa Margarita River region in Riverside County. The plan identifies necessary coordination and projects to sustain water quality and water supply, control flooding, and protect and/or enhance open space and critical habitat areas. Several other agencies are also participating in the effort. The plan not only provides guidance for future planning efforts, it also opens the Santa Margarita Region to participate in solicitation of funds for various Integrated Watershed Management Plan grant programs associated with Propositions 40, 50 and 84.

CONCLUSIONS AND RECOMMENDATIONS

The area-wide Municipal Stormwater Program for the Santa Margarita Watershed has been implemented in an efficient, cost-effective manner through the ongoing cooperative efforts of the District, the Co-Permittees, the Regional Board and the Riverside County Fire Department and Environmental Health Department. The District's NPDES Program activities, which are funded by these SMWBAA assessments, are required to comply with the current NPDES Permit for the Santa Margarita Watershed and enforceable provisions of the California Water Code and the Federal Clean Water Act which regulate the discharge of stormwater from MS4s. These mandatory stormwater management program activities are an essential component of the District's continuing operation and maintenance of its critical public safety facilities; therefore, the following action is recommended:

Levy a Flood Control Benefit Assessment in the Santa Margarita Watershed Benefit Assessment Area at an unchanged rate of $4.00 per benefit assessment unit for FY 2013-2014.

GLOSSARY

ABOP – A permanent collection facility that accepts Anti-freeze, Batteries, Oil and latex Paint for recycling and/or proper disposal

BAU – Benefit Assessment Unit

BMP – Best Management Practice

CAP - Compliance Assistance Program. A stormwater outreach and reporting program conducted in conjunction with selected facility inspection programs conducted by the Riverside County Environmental Health Department.

CMP – Consolidated Monitoring Program

CRWQCB – California Regional Water Quality Control Board

CWA - Clean Water Act

DAMP – Drainage Area Management Plan

District – Riverside County Flood Control and Water Conservation District

FY – Fiscal Year

HAZMAT Team –Hazardous Materials Emergency Response Team

HHW – Household Hazardous Waste. Commonly used household chemicals that may be toxic or require special handling for proper disposal, *e.g.*, automotive fluids, pesticides, fertilizers, paint, cleaning products, pool chemicals, etc.

HMP – Hydromodificaiton Management Plan

JRMP – Jurisdictional Runoff Management Plan

LID – Low Impact Development

MS4 – Municipal Separate Storm Sewer System

NPDES – National Pollutant Discharge Elimination System.

Board Order No. R9-2004-001 – An Order of the California Regional Water Quality Control Board – San Diego Region to regulate stormwater discharges from municipal stormwater facilities owned or operated by the District, County of Riverside, or the Cities of Murrieta and Temecula.

Board Order No. R9-2010-0016 - An Order of the California Regional Water Quality Control Board – San Diego Region to regulate stormwater discharges from municipal stormwater facilities owned or operated by the District, County of Riverside, or the Cities of Murrieta, Temecula and Wildomar.

Regional Board – San Diego Regional Water Quality Control Board

ROWD – Report of Waste Discharge

SA – Santa Ana

SA/SMR DAMP – Santa Ana and Santa Margarita Regional Drainage Area Management Plan.

SAWPA – Santa Ana Watershed Project Authority

SMR – Santa Margarita Region of Riverside County

SMWBAA – Santa Margarita Watershed Benefit Assessment Area

SSMP - Standard Stormwater Mitigation Plan

SWRCB – State Water Resources Control Board

USEPA – United States Environmental Protection Agency

WQMP - Watershed Quality Management Plan

APPENDIX A

Proposed
NPDES Program Budget (FY 2013-2014)

APPENDIX A

SANTA MARGARITA WATERSHED BENEFIT ASSESSMENT AREA
PROPOSED NPDES PROGRAM BUDGET (FY 2013-2014)

STAFFING	
General Staff Salaries and Benefits	$306,900
Staff Standby/Differential/Overtime Pay	2,000
Subtotal	**$308,900**
ADMINISTRATION & OVERHEAD	
Administration & Overhead	$141,880
County Counsel Services	7,000
Equipment Lease / Rental	1,350
Vehicle Mileage	5,980
Photocopying / Reproduction	1,500
Miscellaneous (Photography, Communications, Supplies, etc.)	10,460
Subtotal	**$168,170**
GENERAL CONSULTANT SERVICES	
Technical / Regulatory Support	$200,000
Benefit Assessment Services	3,250
Subtotal	**$203,250**
PUBLIC EDUCATION PROGRAM	
Education Program: Staff / Contract Services / Presentations	$88,900
Education Program: Production / Materials / Media	24,350
Subtotal	**$113,250**
WATER QUALITY MONITORING PROGRAM	
Staff Time / Laboratory Services / Monitoring	$860,000
Small Tools & Equipment	52,000
Subtotal	**$912,000**
POLLUTION PREVENTION PROGRAMS	
HAZMAT Response Team (Fire Dept.)	$36,500
Household Hazardous Waste Program (Waste Management Dept.)	30,000
Integrated Regional Water Mgmt. RCWD	65,000
Contributions to other programs	$0
Subtotal	**$131,500**
PROGRAM SUBTOTAL	***$1,837,070***
CONTINGENCY (10%)	$183,707
Assessor's/Treasurer's Office Line Item Charges ($0.51/parcel)	$42,341
County Fee for Annual Submittal	$104
TOTAL EXPENDITURES	**$2,063,222**
FUND BALANCE FROM FY 2012-2013(est.)	$1,013,468
PROJECTED REVENUE	$487,767
PROJECTED EXTERNAL CONTRIBUTIONS	$1,253,620
CASH AVAILABLE	***$2,754,855***
PROJECTED FUND BALANCE	***$691,633***

APPENDIX B

RCFC&WCD Ordinance No. 14
(May 14, 1991)

0896

ORDINANCE NO. 14

AN ORDINANCE OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT ESTABLISHING A BENEFIT ASSESSMENT FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER PROGRAM

The Board of Supervisors of the Riverside County Flood Control and Water Conservation District, State of California, do ordain as follows:

ARTICLE I

GENERAL

Section 1. Title.

This Ordinance shall be known as the "NPDES Program - Benefit Assessment Ordinance" of the Riverside County Flood Control and Water Conservation District.

Section 2. Purpose.

The United States Environmental Protection Agency (the "EPA") has, consistent with Section 402 of the Federal Clean Water Act, as amended, promulgated the National Pollutant Discharge Elimination System Regulations (the "NPDES Regulations") pursuant to which the EPA, through the appropriate California Regional Water Quality Control Board (the "CRWQCB") has required the Riverside County Flood Control and Water Conservation District (the "District") and other affected public entities to secure a National Pollutant Discharge Elimination System Stormwater Permit (the "NPDES Permit") which does require the District to develop, implement and manage identified programs dealing with stormwater runoff. The parcels of land within the respective watersheds within the District's jurisdiction for which a NPDES Permit is

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required will benefit from these programs. The Board of Supervisors of the District has determined, pursuant to the Riverside County Flood Control and Water Conservation Act (the "District Act"), which is Chapter 48, as amended, of the California Water Code Appendix, to establish certain Benefit Assessment Areas in which the District will annually levy a Benefit Assessment to pay the cost of these programs required by the NPDES Permit. The Board of Supervisors of the District, consistent with Section 48-14 of the District Act, held a noticed public hearing at which time all testimony, oral and written, was considered. As the conclusion of the public hearing, the Board of Supervisors of the District adopted resolutions establishing the Benefit Assessment Areas. The provisions of this Ordinance confirming the establishment of the Benefit Assessment Areas and providing for the annual levy of a Benefit Assessment are consistent with the District Act and the reports prepared by the Chief Engineer of the District and accepted by the Board of Supervisors of the District.

The Board of Supervisors of the District finds that the Benefit Assessment to be annually levied shall be based on the proportional stormwater runoff generated by each lot or parcel within the Benefit Assessment Area. Revenues derived from the Benefit Assessment shall be applied exclusively to pay the District's administrative and program costs associated with the NPDES Permit required for the Benefit Assessment Area and are to be apportioned to the Benefit Assessment Area in which they are collected.

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ARTICLE II

DEFINITIONS

Section 1. Unless otherwise specifically provided or required by the context, certain terms or expressions used herein have the meanings set forth below:

a.) "Benefit Assessment" means the Benefit Assessment to be levied annually on each Parcel within a Benefit Assessment Area pursuant to Article IV of this Ordinance.

b.) "Benefit Assessment Area" means a Benefit Assessment Area formed pursuant to Section 48-14 of the District Act by the Board of Supervisors and identified in Article III of this Ordinance.

c.) "Board of Supervisors" means the Board of Supervisors of the Riverside County Flood Control and Water Conservation District.

d.) "Chief Engineer" means the Chief Engineer of the Riverside County Flood Control and Water Conservation District.

e.) "County" means the County of Riverside, State of California.

f.) "CRWQCB" means the California Regional Water Quality Control Board for the region in which the Benefit Assessment Area has been established.

g.) "District" means the Riverside County Flood Control and Water Conservation District.

h.) "District Act" means the Riverside County Flood Control and Water Conservation District Act, Statutes 1945, Chapter 1122, as amended; California Water Code,

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Appendix, Chapter 48.

i.) "EPA" means the United States Environmental Protection Agency, which, pursuant to the Clean Water Act of 1976, as amended by the Water Quality Act of 1987, has jurisdiction to establish the NPDES program and promulgate regulations pursuant thereto.

j.) "NPDES Permit" means the permit, issued by the regional CRWQCB, dealing with stormwater runoff in association with the National Pollutant Discharge Elimination System (NPDES) and the regulations promulgated by the EPA.

k.) "NPDES Regulations" means the final regulations dated November 16, 1990, and any subsequent amendments thereto promulgated by the EPA governing the National Pollutant Discharge Elimination System (NPDES).

l.) "Ordinance" means this Ordinance No. 14 of the Riverside County Flood Control and Water Conservation District.

m.) "Parcel" means a parcel of property identified by Assessor parcel number as shown on the equalized tax rolls of the County of Riverside, State of California.

ARTICLE III

ESTABLISHMENT OF BENEFIT ASSESSMENT AREAS

Section 1. Formation of Benefit Assessment Areas.

Pursuant to Section 48-14 of the District Act, the Board of Supervisors noticed three public hearings to consider the establishment of three Benefit Assessment Areas for each of which a NPDES Permit would be required by the NPDES Regulations. At the

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conclusion of the hearings, the Board of Supervisors adopted Resolutions Nos. F91-21, F91-22, and F91-23 which established, respectively, the Santa Ana Watershed Benefit Assessment Area, the Santa Margarita Watershed Benefit Assessment Area, and the Whitewater Watershed Benefit Assessment Area. The legal descriptions for each of the Benefit Assessments Areas are attached hereto, marked respectively Exhibits A, B, and C, and are by this reference incorporated herein.

Section 2. Amendment to or Additional Benefit Assessment Areas.

The District may amend the boundaries of each of the Benefit Assessment Areas or create additional Benefit Assessment Areas, if in the District's administrative judgment the NPDES Regulations and the NPDES Permits issued pursuant thereto so require. To amend the boundaries to a Benefit Assessment Area or to create an additional Benefit Assessment Area, the District is to comply with provisions of the District Act then governing the creation of a benefit assessment area.

ARTICLE IV

REPORT OF CHIEF ENGINEER, HEARING THEREON; CONFIRMATION OF BENEFIT ASSESSMENT BY THE BOARD OF SUPERVISORS

Section 1. Report.

The Chief Engineer shall cause to be prepared annually a written report for each Benefit Assessment Area regarding the Benefit Assessment to be levied and shall file each report with the Clerk of the Board of Supervisors.

Section 2. Content of the Report.

Each report shall contain the District's estimate of

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its administrative and program costs in association with the NPDES Permit for the Benefit Assessment Area for the ensuing fiscal year. Said estimate of cost shall be apportioned to each Parcel on the basis of proportionate stormwater runoff generated from each Parcel to be assessed. Only Parcels not otherwise exempted by this Ordinance or the NPDES Regulations shall have a Benefit Assessment levied on them. The report shall identify all Parcels by Assessor parcel number on which a Benefit Assessment is to be levied and the amount of the assessment.

Section 3. Resolution Accepting Report and Noticing Public Hearing.

Upon the report being filed with the Clerk of the Board of Supervisors, the Board of Supervisors is, by resolution, to accept, if appropriate, the report and to set a date, time and place for a hearing on said report. Prior to the date of the hearing, a notice specifying the date, time, place and purpose of the hearing and identifying those locations at which a property owner may review the report shall be published in a newspaper of general circulation within the Benefit Assessment Area pursuant to the provisions of Section 6066 of the California Government Code. In addition, the District shall cause the notice of the hearing to be posted in at least three public places within the boundaries of the Benefit Assessment Area at least seven (7) days prior to the date of the hearing.

Section 4. Hearing.

The Board of Supervisors shall hear the matter on the date and at the time specified in the notice, or as continued for good cause. At the hearing, the Board of Supervisors shall hear

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and consider all testimony, oral and written, presented, including all written protests. At the conclusion of the hearing, the Board of Supervisors may revise, change, reduce or modify any Benefit Assessment and shall make its determination upon each Benefit Assessment identified in the report. Thereafter, by resolution it shall confirm the assessments. Such confirming resolution shall be adopted no later than August 10 of each fiscal year in which the Benefit Assessment is to be levied and collected.

Section 5. Enrollment.

The District shall provide certified copies of the confirming resolutions and the roll of confirmed Benefit Assessments, in an acceptable format, to the Auditor-Controller of the County on or before August 10 of each fiscal year.

ARTICLE IV

LEVY OF BENEFIT ASSESSMENT

Section 1. Determination of the Amount to be Assessed.

The District is to estimate for the fiscal year in which the Benefit Assessment is to be levied the administrative and program costs that it will incur pursuant to the NPDES Permit issued for each Benefit Assessment Area. This estimate of costs is to be apportioned among the Parcels within each Benefit Assessment Area on the basis of proportionate stormwater runoff generated by each Parcel. The Benefit Assessment levied and collected within each Benefit Assessment Area may only be applied toward the costs incurred pursuant to the NPDES Permit for that Benefit Assessment Area. If at the conclusion of any fiscal year there remains in the account for a Benefit Assessment Area unexpended funds, the remaining balance shall be applied toward

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the estimated costs for the next fiscal year and thereby reduce the amount of the Benefit Assessment to be levied. Benefit Assessments levied and collected pursuant to this Ordinance may not be applied toward any other costs or expenses of the District nor may they be applied to the costs of a Benefit Assessment Area other than the Benefit Assessment Area for which they were levied and collected.

Section 2. Determination of Proportionate Storm Water Runoff and Amount of Benefit Assessment to be Levied.

a.) Benefit Assessment Unit. The District shall express the of proportionate stormwater runoff factor as a decimal. The standard against which all property is to be measured shall be a single-family residential parcel of 7,200 square feet (1/6 acre) in size to which a runoff factor of 0.40 is ascribed and shall be called a Benefit Assessment Unit (BAU).

The runoff factor for each of the classes listed in subsection (b) below are as follows:

Group A	0.80
Group B	0.60
Group C	0.40
Group D	Exempt
Group E	0.0067
Group F	0.0033

The runoff factor for each group is compared to the runoff factor of the standard Benefit Assessment Unit (Group C) as described above. This results in a runoff factor ratio. The runoff factor ratio shall be that ratio established by comparing Benefit Assessment Units assigned to one of the groups listed

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above, compared to the standard Benefit Assessment Unit represented by Group C. The number of Benefit Assessment Units per parcel size for each of the classes listed in subsection (b) below are as follows:

Group A	12 BAU/acre
Group B	9 BAU/acre
Group C	1 BAU/7200 sq. ft. lot
Group D	Exempt
Group E	0.10 BAU/acre
Group F	0.05 BAU/acre

b.) Classification of Parcels. All Parcels shall be assigned to one of the following classifications based on land use:

Group A: Commercial or industrial use

Group B: Institutional uses, ie. churches, or hospitals, or multiple family residential use having four or more units per parcel, ie. apartments or mobile home parks.

Group C: Single family residential or multiple family residential having three or fewer units on 1/6 of an acre parcel.

Group D: Agricultural uses, including dairies, poultry, livestock, groves, orchards, row crops, field crops, vines or dry farming.

Group E: Golf courses, cemeteries, etc. and that portion of a single family residential parcel in excess of 7,200 square feet (1/6 acre) but less than 2.5 acres.

Group F: The undeveloped portion of a parcel such

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as the portion of a single family residential parcel exceeding 2.5 acres.

Calculation of the Benefit Assessment Units to be attributed to a single family residential unit on a Parcel larger than 1/6 acre is cumulative with that portion of the Parcel in excess of the 1/6 acre which falls in either Group E or F being assigned the appropriate BAU for the amount of acreage falling within either Group E or F.

It is determined that Parcels used as a railroad, gas, water, telephone, cable television, electric utility right-of-way, electric line right-of-way or other utility right-of-way will benefit from the programs required by the NPDES Permit and will be subject to the Benefit Assessment to be levied pursuant to this Ordinance.

c.) Exempted Land Uses. All land uses expressly exempted by the NPDES Regulation will be exempted from the levy of a Benefit Assessment pursuant to this Ordinance. Those land uses exempted are:

1.) Agricultural uses, including dairies, poultry, livestock, groves, orchards, row crops, field crops, vines or dry farming.

2.) Vacant, undeveloped parcels.

3.) Publicly owned parcels which are parcels owned by a Federal, State or local public entity or agency and used for public purposes.

d.) Determination of Benefit Assessment Units per Parcel. Once a Parcel is classified and its acreage is

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determined, the appropriate BAU's per acre for its classification will be multiplied by the acreage to determine the total Benefit Assessment Units for the Parcel

e.) Determination of Benefit Assessment to be levied per Benefit Assessment Unit. The aggregate number of Benefit Assessment Units within a Benefit Assessment Area will be divided into the estimated administrative and program costs for the Benefit Assessment Area to determine the amount of Benefit Assessment to be levied per Benefit Assessment Unit. The Benefit Assessment to be levied on a Parcel is determined by the number of Benefit Assessment Units ascribed to the Parcel and the assessment value of each unit.

ARTICLE V

COLLECTION OF BENEFIT ASSESSMENT.

Section 1. Collection by Treasurer/Tax Collector.

The confirmed Benefit Assessment for each Parcel shall appear as a separate item on the tax bill issued by the Treasurer-Tax Collector of the County. The Benefit Assessment shall be levied and collected at the same time and in the same manner as the general ad valorem property taxes and shall be subject to the same penalties and the same procedures for sale in case of delinquency. If, for the first year the Benefit Assessment is levied, the property on which the Benefit Assessment is levied has been transferred or conveyed to a bona fide purchaser for value, or if a lien of a bona fide encumbrancer for value has been created and attached thereon, prior to the date on which the first installment of ad valorem property taxes would become delinquent, the Benefit Assessment shall not result in a

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lien against the real property but shall be transferred to the unsecured roll.

Section 2. Applicable Law.

All laws applicable to the levy, collection and enforcement of ad valorem property taxes shall be applicable to Benefit Assessments, except as otherwise provided herein.

Section 3. Validity of Benefit Assessment Not Affected by Time Limits.

Failure to meet the time limits set forth in this Ordinance for whatever reason shall not invalidate any Benefit Assessment levied hereunder.

ARTICLE VI

CORRECTION OR CHANGE TO THE TAX ROLL

Section 1. Initiation of the Correction or Change.

A correction or change to the tax roll with respect to a Benefit Assessment may be made by the Chief Engineer, either on his own initiative, or on application by a property owner (the "Assessee").

Section 2. Initiation by Flood Control Engineer.

The Chief Engineer may initiate a correction or change to the tax roll at any time within four (4) years of the date of the resolution of the Board of Supervisors confirming Benefit Assessments placed upon the tax roll.

Section 3. Initiation by the Assessee.

The Assessee may initiate a correction or change to the tax roll by filing a written application with the Chief Engineer within 60 days following his/her receipt of the tax bill reflecting the Benefit Assessment. The application shall contain

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or include the following information, together with such additional information deemed relevant by the Assessee or requested by the Chief Engineer:

1. Assessor's parcel number.

2. Gross acreage.

3. Use of property as of the preceding March 1st.

4. Measurements of man-made impervious area, if known.

5. Copy of the tax bill containing the benefit assessment.

Section 4. Categories of Corrections or Changes.

Upon approval of the Chief Engineer, corrections or changes shall be made with respect to:

1. Ownership of a Parcel;

2. Address of an owner of a Parcel;

3. Subdivision of an existing Parcel;

4. Land use category of all or part of a Parcel;

5. Computation of the area of a Parcel;

6. Erroneous computation of the Benefit Assessment.

Corrections to the tax roll shall not be valid unless and until approved by the Board of Supervisors. All corrections or changes must be reported by the Chief Engineer to the Auditor-Controller of the County, who shall prepare the amended billing, as the case may be. The Chief Engineer shall give written notice to the Assessee of the action taken on the application.

If the Assessee disagrees with the Chief Engineer's determination, he/she may file an appeal with the Board of Supervisors within 30 days after receipt of the written notice.

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The appeal shall be initiated by a written application filed with the Clerk of the Board of Supervisors for refund of all or part of the Benefit Assessment. The decision of the Board of Supervisors shall be final and shall complete the administrative process. Any further action by the Assessee for recovery of any part of the Benefit Assessment shall be by complaint for refund filed in the Superior Court.

ARTICLE VII

EFFECTIVE DATE OF ORDINANCE

This Ordinance shall take effect and be in force 30 days after the adoption by the Board of Supervisors. Before the expiration of fifteen (15) days after the effective date of this Ordinance it shall be published once in The Press-Enterprise, a newspaper of general circulation in the County of Riverside.

BOARD OF SUPERVISORS OF THE RIVERSIDE FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By _____
Chairman

ATTEST:
GERALD A. MALONEY, Clerk

By _____
DEPUTY

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WILLIAM C. KATZENSTEIN
COUNTY COUNSEL
SUITE 300
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RIVERSIDE, CALIFORNIA

Attest:

(Seal)

STATE OF CALIFORNIA)
) ss.
COUNTY OF RIVERSIDE)

I HEREBY CERTIFY that a regular meeting of the Board of Supervisors of the Riverside County Flood Control and Water Conservation District held on 6/4, 1991, the foregoing ordinance consisting of 7 articles was adopted by said Board by the following vote:

Dated: 6/4/91

CLERK OF THE BOARD
OF SUPERVISORS

(Seal)

By Bernie May
Deputy

TJD:cm/db
5/17/91
ID #107C

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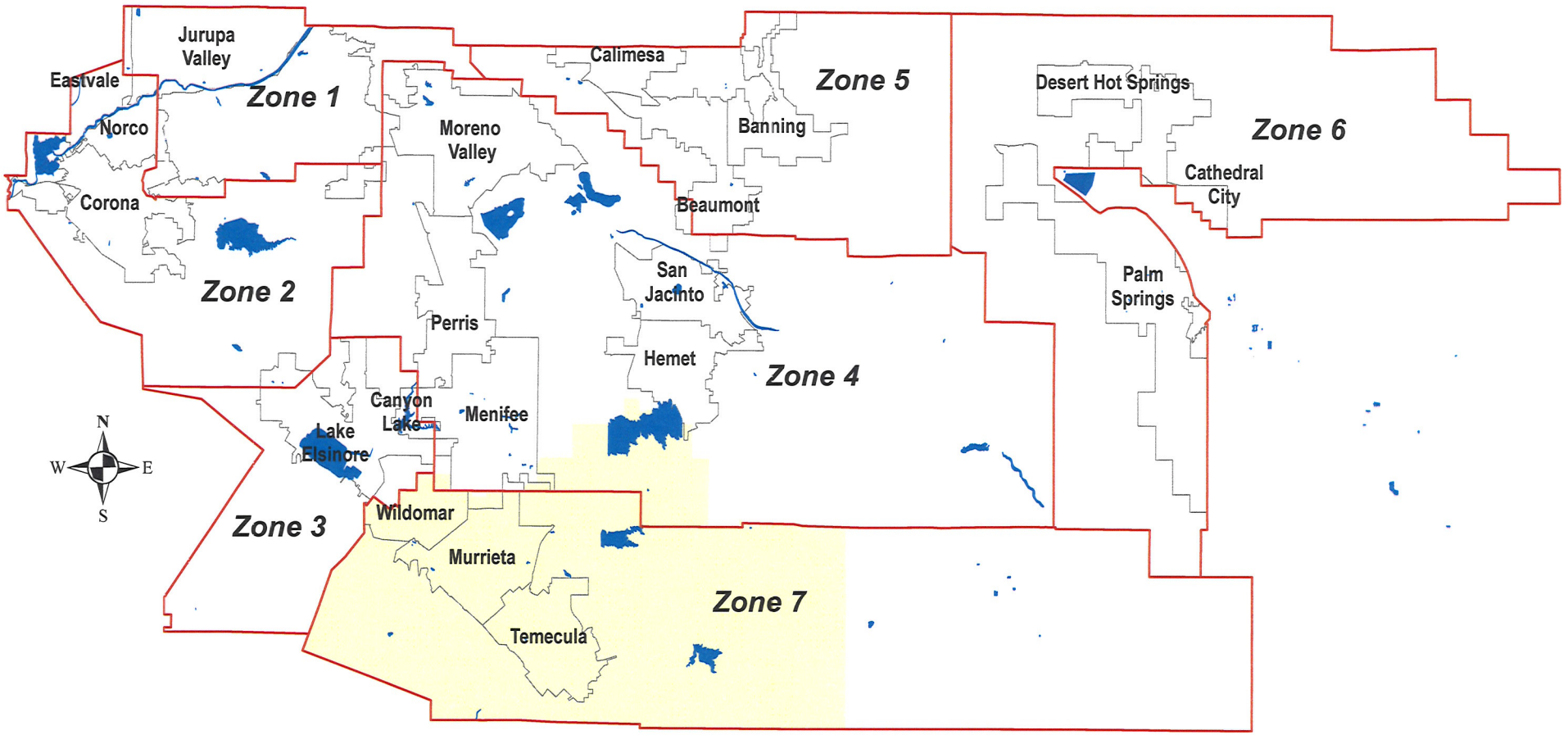
APPENDIX C

Map of Santa Margarita Watershed Benefit Assessment Area

Riverside County Flood Control and Water Conservation District

Map of Santa Margarita Watershed Benefit Assessment Area



Santa Margarita Watershed Benefit Assessment Area

RCFC and WCD Zone Areas

APPENDIX D

SMWBAA Assessment Roll (FY 2013-2014)
(UNDER SEPARATE COVER)

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 131

[FRL–0W–6118–9]

RIN–2040–AC56

Water Quality Standards Regulation

AGENCY: Environmental Protection Agency.

ACTION: Advance notice of proposed rulemaking.

SUMMARY: EPA is today publishing this advance notice of proposed rule making (ANPRM) seeking comments from interested parties on possible revisions to the Water Quality Standards Regulation at 40 CFR Part 131. This ANPRM is intended to initiate discussions on what if any changes are needed in the national water quality standards program to improve the effectiveness of water quality standards in restoring and maintaining the quality of the Nation's waters. EPA will consider all comments before deciding whether to propose revisions to the regulation. EPA is particularly interested in comments on certain key portions of the current Water Quality Standards Regulation (the regulation) contained in 40 CFR Part 131, which establishes requirements for adoption of water quality standards pursuant to section 303 of the Clean Water Act (CWA or the Act). This ANPRM identifies specific issues on which EPA solicits comment. In addition to the specific issues on which EPA solicits comments, EPA is interested in comments on any other aspects of the program. EPA requests comments with the objectives of: supporting watershed or place-based environmental water quality management, ensuring that current water quality criteria and water quality assessment science can be easily incorporated into State and Tribal water quality programs, and enhancing effective implementation of the Act.

DATES: Written comments must be submitted by midnight January 4, 1999.

ADDRESSES: Send written comments to W–98–01, WQS-ANPRM Comment Clerk, Water Docket, MC 4101, US EPA, 401 M Street, S.W., Washington, D.C. 20460. Comments may also be submitted electronically to OW-Docket@epamail.epa.gov. The record is available for inspection from 9:00 to 4:00 p.m., Monday through Friday, excluding legal holidays at the Water Docket, East Tower Basement, USEPA, 401 M St., S.W., Washington, D.C. For access to docket materials, please call (202) 260–3027 to schedule an appointment.

FOR FURTHER INFORMATION CONTACT: Rob Wood at U.S. EPA Standards and Applied Science Division (4305), 401 M Street SW, Washington, DC 20460 (e-mail: WOOD.ROBERT@EPA.GOV) (telephone: 202–260–9536).

SUPPLEMENTARY INFORMATION: EPA will hold a series of full-day public meetings for the purpose of discussion and debate on the issues presented in this notice. EPA plans to hold the public meetings during the 180-day public comment period on this notice. Dates, times and locations of public meetings will be announced to the public.

A. Potentially Affected Entities

This ANPRM by itself will have no regulatory impact or effect. The ANPRM does contain EPA interpretations of core areas of the regulation as well as EPA thinking about how the regulation may need to be changed. As discussed in more detail below, this ANPRM marks the beginning of a national dialogue on possible changes to the water quality standards regulation and program. If changes to the regulation are proposed and ultimately made final, to the extent such changes would require and/or authorize changes to State and Tribal water quality standards, States and authorized Tribes would be affected. If changes to State and Tribal water quality standards result from any final rule that EPA may promulgate in the future, entities subject to compliance with State or Tribal water quality standards would also potentially be affected. For example, States and Tribes authorized to implement the National Pollutant Discharge Elimination System (NPDES) Permit Program would need to ensure that permits they issue include any limitations on discharges necessary to comply with any water quality standards established as a result of any subsequent final rulemaking. Therefore, entities discharging pollutants to waters of the United States under NPDES could be affected by subsequent proposed and final rulemaking. Categories and entities that may ultimately be affected include:

Category	Examples of potentially affected entities
State, Tribes and Jurisdictional Governments	States, Tribes authorized to administer water quality standards, and jurisdictional governments.
Industry	Industrial dischargers of pollutants to waters of the U.S.
Municipalities	Publicly-owned treatment works discharging pollutants to waters of the U.S.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities that could be affected by any subsequent final rulemaking. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. Water Docket Information

The record for this notice has been established under docket number W–98–01 and includes supporting documentation. When submitting written comments to the Water Docket, (see **ADDRESSES** section above) please reference docket number [W–98–01] and submit an original and three copies of your comments and enclosures (including references). To ensure that EPA can read, understand and therefore properly respond to comments, the Agency would prefer that commenters cite the specific question(s) in the notice to which each comment refers. The questions presented in this notice for public comment are organized by subsection and numbered. Each question has a unique number (for example III.B.3.a., question 1) for this purpose.

Comments must be received or postmarked by midnight January 4, 1999. Commenters who want EPA to acknowledge receipt of their comments should enclose a self-addressed, stamped envelope. No facsimiles (faxes) will be accepted.

Electronic comments are encouraged and may be submitted to the Water Docket (see **ADDRESSES** section above). Electronic comments must be submitted as an ASCII file or a WordPerfect file avoiding the use of special characters and any form of encryption. Electronic comments must be identified by the docket number, [W–98–01], and be received by midnight of January 4, 1999. Comments and data will also be accepted on disks in WP5.1 format or

ASCII file format. No confidential business information (CBI) should be sent via e-mail.

The remainder of this Supplementary Information section is organized as follows:

I. Purpose and Objectives of This ANPRM
A. General Purpose and Vision
B. Objectives
II. Introduction to Water Quality Standards
A. Statutory History
B. Regulatory History
C. Water Quality Guidance for the Great Lakes System
III. Program Areas for Public Comment
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2. Refined Designated Uses
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4. 40 CFR 131.12 (a)(2) ''tier 2''
a. Identification of ''High Quality'' Waters
b. Tier 2 Implementation
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IV. Summary and Potential Program and Regulation Changes
V. Regulatory Assessment Requirements
A. Executive Order (E.O.) 12866, Regulatory Planning and Review
B. The Regulatory Flexibility Act (RFA) as Amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996
C. Paperwork Reduction Act

I. Purpose and Objectives of This ANPRM

A. General Purpose and Vision

On February 14, 1998, the visionary ''Clean Water Action Plan'' was announced by the Administrator of EPA and the Secretary of Agriculture. The ''Clean Water Action Plan'' is a blueprint for restoring and protecting the Nation's precious water resources. A key element of the plan is advancement of the watershed approach to water quality protection. EPA's belief is that refining designated uses and implementing better more integrated water quality criteria to protect the refined uses, two important themes of this ANPRM, are essential steps in carrying out the blueprint presented. Revision of the water quality standards regulation can be an essential component in implementing the vision of the ''Clean Water Action Plan.''

States, Tribes and EPA have developed functional water quality standards programs under the current regulation and these programs have provided the basis for significant water quality improvement in the United States. Simply put, the current regulation is not broken. Rather, with the renewed interest in watershed management combined with improved methods for water quality assessment, a comprehensive evaluation for the purpose of strengthening the regulation is appropriate at this time. EPA and the public need to examine whether changes in the regulation could enhance water quality management on a watershed basis and focus resources on areas of greatest concern. A review of the regulation will also complement similar outreach discussions EPA is currently undertaking for the purposes of reviewing the water quality planning and management and total maximum daily load (TMDL) programs as well as aspects of the NPDES program. EPA is committed to ensuring that these programs, combined, form an even stronger integrated basis for water quality planning, priority setting and implementation on a watershed basis.

In recent years there has been a rising level of scrutiny placed on water quality standards and the State, Tribal and EPA decisions based on water quality standards. The increased scrutiny comes from virtually all parties affected by water quality-based decisions and is evidenced by the growing tide of challenges to State standards, EPA policies and guidance, and individual water quality-based decisions. Remaining water quality problems in the U.S. are often difficult to assess, define and solve. Once agreed upon, the solutions will be less conventional than we are used to and may result in different regulatory approaches. Examples of such problems include aquatic and riparian habitat destruction from municipal and agricultural run-off and fish tissue contamination from chemicals with many and diverse sources.

EPA believes that this scrutiny will continue and that an evaluation of the water quality standards program and its regulatory and policy underpinnings to identify where these program underpinnings may need to be strengthened, clarified or revised is imperative. Our task under the Clean Water Act is to ensure adequate water quality even where it is difficult to do so. To accomplish this task, EPA envisions a national water quality standards program in which: the best possible information on whether designated uses are being attained and how to attain and maintain them is available and used; water quality criteria are selected from a wide-ranging menu of scientifically sound criteria that can be tailored to each watershed; national norms of consistency and flexibility in State and Tribal water quality standards are clear; and innovative, cost-effective approaches are

encouraged. To realize this vision, EPA believes that a structured national debate is needed to identify a focused set of issues that may ultimately lead to changes to the water quality standards regulation and policy.

The ANPRM process allows EPA to begin this work by consulting with all interested parties to find out what changes, if any, are necessary and desirable, to make the water quality standards regulation more responsive to current needs and to identify opportunities for further clarifications of policy and guidance by EPA. In the fourteen years since EPA last revised the water quality standards regulation, interested parties have gained considerable experience in developing and implementing water quality standards. This experience will provide valuable information for review of these regulations.

The most significant shift in water quality management programs in recent years has been the increased emphasis on the use of watershed based programs. It is increasingly apparent that EPA, States, Tribes, municipalities and the public share a common view that water quality programs, including water quality standards, can be better tailored to the characteristics, problems, risks and implementation tools available in individual watersheds or basins with meaningful involvement of the local communities. The water quality standards regulation should ensure that States and Tribes have the flexibility to define the water quality standards and hence the environmental objectives of a water body according to the characteristics of the ecosystem and the needs of the water's users within the bounds established under the CWA. The regulation must allow the States and Tribes to tailor water body use designations and criteria to protect these uses within individual basins or watersheds based on the needs in the basin. The present use of broad, jurisdiction-wide use classifications and lists of associated chemical criteria may be at once too general and too narrow for some waters, lacking the refinement necessary to tailor water quality management actions to specific watersheds. This general approach reflects the historical lack of information on specific basins or water bodies and the need to ensure that all waters receive adequate protection. Additionally, it should be made clear how much flexibility States and Tribes have to adjust use designations as information improves about whether a designated use or a higher use can be attained and to reflect natural and human caused changes in water quality that may have occurred. The challenge for EPA, States and Tribes is to identify and use opportunities to refine use designations for waters where it makes sense and better match the water quality criteria to the refined use, thus making water quality standards more flexible. In addition, to more effectively implement the standards, the criteria that are used need to better integrate multiple stressors and their cumulative impacts in order to more effectively protect designated uses.

Significant scientific advancements in recent years have added to the ability to assess environmental impacts and risks related to changes in water quality. As they are further developed, new and emerging sophisticated and integrated analytical tools such as bioassessment, criteria for bioaccumulative chemicals, sediment quality criteria and toxicity assessments will increasingly allow States, Tribes, EPA and the public to characterize better the ecological condition of water resources. At present, this improving capability, used in a tailored watershed planning and management framework, can enhance the ability of States and Tribes to characterize and protect locally agreed upon goals for maintaining and protecting the chemical, physical and biological integrity of individual basins. In the long term, chemical, physical and biological assessment methods will continue to improve. As they do, the water quality standards program should be designed to accommodate effectively the new science. In the meantime, progress should not be stalled by incomplete knowledge.

With the new science and assessment methodologies, however, come new challenges for States and Tribes to identify the resources necessary to make use of these advances. One of the main themes of this ANPRM is the need for better data, and new types of data, in order to support a more refined approach to water quality protection. EPA recognizes, however, that efforts to obtain such data, and develop the analytical capacity to integrate it into existing regulatory programs, could encounter significant resource constraints in some States and Tribes. EPA is well aware that in order for a new, data-intensive, watershed-specific approach to succeed, it must be workable for the States and Tribes that will have to implement it. EPA welcomes comments regarding concerns over resource constraints and ideas for how to address them.

The water quality standards program must protect the nation's waters as envisioned in the CWA. It must establish requirements that are necessary to attain and maintain healthy, sustainable ecosystems. It must be flexible enough for States and Tribes to ensure that standards are protecting water quality in a way that makes sense. EPA seeks to avoid a program that results in costly requirements that have little or no environmental benefit. Thus EPA intends to use its experience and that of the States, Tribes, municipalities, the regulated community, environmental groups and the general public in implementing and utilizing water quality standards over the last fourteen years, to evaluate the regulation and determine if changes are needed to allow greater State, Tribal and local flexibility to develop innovative, cost-effective ways to protect water quality.

EPA may determine through the ANPRM process that the concepts described above can be better integrated into water quality management decision making through development of new or revised policies and guidance rather than revisions to the regulation. Because of this possibility, EPA is reserving its decision whether to propose and finalize revisions to the regulation. At minimum, EPA believes that any revisions to the water quality standards regulation should result in a regulation that can be used to render protective, tailored, site-specific water quality-based decisions that bear reasonable compliance costs for the regulated community, as well as reasonable implementation costs for States, Tribes and EPA. At the same time, the regulation should allow sufficient flexibility to States and Tribes, if they choose, to implement water quality standards programs in a manner that is no more burdensome than under the existing regulation.

B. Objectives

In publishing this ANPRM, EPA is beginning a review of the regulation in a public forum in an attempt to identify possible amendments to the regulation, and new guidance or policy that may be needed to address three distinct objectives. They are: (1) to eliminate any barriers and develop incentives to enhance State and Tribal implementation of watershed-based water quality planning and management; (2) to enhance State and Tribal capability to incorporate current criteria and water quality assessment science into their water quality standards programs, and; (3) to improve the regulation so that it may be implemented more efficiently and effectively (including cost-effectively). Meeting these three objectives, EPA believes, will facilitate further water

quality improvements locally and nationally. EPA urges commenters to keep all three main objectives in mind when reviewing, analyzing and commenting on this ANPRM.

II. Introduction to Water Quality Standards

A. Statutory History

The first comprehensive legislation for water pollution control was the Water Pollution Control Act of 1948 (Pub. L. 845, 80th Congress). This law adopted principles of State-Federal cooperative program development, limited federal enforcement authority, and limited federal financial assistance. These principles were continued in the Federal Water Pollution Control Act (Pub. L. 660, 84th Congress) in 1956 and in the Water Quality Act of 1965. Under the 1965 Act, States were directed to develop water quality standards establishing water quality goals for interstate waters. By the early 1970's, all the States had adopted such water quality standards. Since then, States have revised their standards to reflect new scientific information, the impact on water quality of economic development and the results of water quality controls.

Due to enforcement complexities and other problems, an approach based solely on water quality standards was deemed too weak to make a difference. The purely water quality-based approach prior to 1972 lacked enforceable Federal mandates and standards, and a strong impetus to implement plans for water quality improvement. The result was an incomplete program that in Congress' view needed strengthening. In the Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92–500, Clean Water Act or CWA), Congress established the National Pollutant Discharge Elimination System (NPDES) whereby each point source discharger to waters of the U.S. is required to obtain a discharge permit. The 1972 Amendments required EPA to establish technology-based effluent limitations that are to be incorporated into NPDES permits. In addition, the amendments extended the water quality standards program to intrastate waters and required NPDES permits to be consistent with applicable State water quality standards. Thus, the CWA established complementary technology-based and water quality-based approaches to water pollution control. Now, after nearly 25 years of investment in technology-based controls and some $70 billion in sewage treatment plant construction, attention is turning back to water quality standards as a mechanism to make improvements in water quality beyond those that have been achieved through technology-based controls.

Water quality standards serve as the foundation for the water-quality based approach to pollution control and are a fundamental component of watershed management. Water quality standards are State or Tribal law or regulation that: define the water quality goals of a water body, or segment thereof, by designating the use or uses to be made of the water; set criteria necessary to protect the uses; and protect water quality through antidegradation provisions. Although the CWA gives EPA an important role in determining appropriate minimum levels of protection and providing national oversight, it also gives considerable flexibility and discretion to States and Tribes to design their own programs and establish levels of protection above the national minimum. States and Tribes adopt water quality standards to protect public health or welfare, enhance the quality of water, and serve the purposes of the Act. ''Serve the purposes of the Act'' (as defined in Sections 101(a), 101(a)(2), and 303(c) of the Act) means that water quality standards should: (1) include provisions for restoring and maintaining chemical, physical, and biological integrity of State and Tribal waters, (2) provide, wherever attainable, water quality for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water (''fishable/swimmable''), and (3) consider the use and value of State and Tribal waters for public water supplies, propagation of fish and wildlife, recreation, agricultural and industrial purposes, and navigation. See 40 CFR 131.2.

Section 303(c) of the CWA establishes the basis for the current water quality standards program. Section 303(c):

1. Defines water quality standards;
2. Identifies acceptable beneficial uses: public water supply, propagation of fish and wildlife, recreational purposes, agricultural and industrial water supplies and navigation;
3. Requires that State and Tribal standards protect public health or welfare, enhance the quality of water and serve the purposes of the Act;
4. Requires that States and Tribes review their standards every three years;
5. Establishes the process for EPA review of State and Tribal standards, including where necessary the promulgation of a superseding Federal rule in cases where a State's or Tribe's standards are not consistent with applicable requirements of the CWA or in situations where the Administrator determines that Federal standards are necessary to meet the requirements of the Act.

The decade of the 1970's saw State and EPA attention focus on creating the infrastructure necessary to support the NPDES permit program and development of technology-based effluent limitations. While the water quality standards program continued, it was a low priority in the overall CWA program. In the early 1980's, it began to be recognized that greater attention to the water quality-based approach to pollution control would be needed to effectively protect and enhance all of the nation's waters.

The first statutory evidence of this was the enactment of a CWA requirement that after December 29, 1984, no construction grant could be awarded for projects that discharged into stream segments which had not, at least once since December 1981, had their water quality standards reviewed and revised or new standards adopted as appropriate under Section 303(c). (Public Law 97–117, Section 24, ''Revised Water Quality Standards.'') The efforts by the States to comply with this one-time requirement essentially made the States' water quality standards current as of that date for segments with publicly-owned treatment works (POTWs) discharging into them.

Additional impetus to the water quality standards program occurred on February 4, 1987, when Congress enacted the Water Quality Act of 1987 (Pub. L. 100–4). Congressional impatience with the lack of progress in State adoption of standards for toxics (which had been a national program priority since the early 1980's) resulted in the 1987 adoption of new water quality standard provisions in the Water Quality Act amendments. These amendments reflected Congress' conclusion that toxic pollutants in water are one of the most pressing water pollution problems. One concern Congress had was that States were relying, for the most part, on narrative criteria to control toxics (e.g., ''no toxics in toxic amounts''), which made development of effluent limitations in permits difficult. To remedy this, Congress adopted section 303(c)(2)(B), which essentially required development of numeric criteria for those water body segments where toxic pollutants were likely to adversely affect designated uses.

The 1987 Amendments gave new teeth to the control of toxic pollutants. As Senator Mitchell put it, Section 303(c)(2)(B) requires ''States to identify waters that do not meet water quality

standards due to the discharge of toxic substances, to adopt numerical criteria for the pollutants in such waters, and to establish effluent limitations for individual discharges to such water bodies.'' (From Senator Mitchell, 133 Cong. Rec. S733.) To assist States in complying with Section 303(c)(2)(B), EPA issued program guidance in December 1988 and instituted an expanded program of training and technical assistance.

Section 518 was another major addition in the 1987 Amendments to the Act. This section extended participation in the water quality standards and 401 certification programs to certain Indian Tribes. The Act directed EPA to establish procedures by which a Tribe could ''qualify for treatment as a State,'' at its option, for purposes of administering the standards and 401 certification programs. The Act also required EPA to create a mechanism to resolve disputes that might develop when unreasonable consequences arise from a Tribe and a State or another Tribe adopting different water quality standards on common bodies of water.

Furthermore, with the 1987 Amendments, the Act explicitly recognized EPA's antidegradation policy for the first time. The intent of the antidegradation policy in EPA's regulation was and is to protect existing uses and the level of water quality necessary to protect existing uses and to provide a means for assessing activities that may impact high quality waters and ruling on whether such projects could proceed. Section 303(d)(4) of the Act requires that water quality standards in those waters that meet or exceed levels necessary to support designated uses ''may be revised only if such revision is subject to and consistent with the antidegradation policy established under this section.''

B. Regulatory History

In the late 1960's and early 1970's the water quality standards program was initiated and administered based on minimal guidance and Federal policies—many of which are still reflected in the water quality standards program today.

EPA first promulgated a water quality standards regulation in 1975 (40 CFR 130.17, 40 *FR* 55334, November 28, 1975) as part of EPA's water quality management regulations mandated under Section 303(e) of the Act. As discussed earlier, the standards program had a relatively low priority during this time. This was reflected in the minimal requirements of the first Water Quality Standards Regulation. Few requirements on designating water uses and procedures were included. The Regulation was general, requiring ''appropriate'' water quality criteria necessary to support designated uses and incorporating the antidegradation policy. Toxic pollutants or any other specific criteria were not mentioned.

Some States developed detailed water quality standards regulations while others adopted only general provisions which proved to be of limited use in the management of increasingly complex water quality problems and created disparities in requirements on regulated entities. The few water quality criteria that were adopted addressed a limited number of pollutants and primarily described fundamental water quality conditions (e.g., pH, temperature, dissolved oxygen and suspended solids) or dealt with conventional pollutants.

In the late 1970s, EPA determined that existing State water quality standards needed to be better developed. EPA moved to strengthen the water quality program to complement the technology based controls. EPA amended the Water Quality Standards Regulation to explicitly address toxic criteria requirements in State standards and other legal and programmatic issues. November 8, 1983 (54 *FR* 51400). This regulation is more comprehensive than its predecessor and includes more specific regulatory and procedural requirements. The 1983 regulation created the concept of use attainability analysis, added detail on the adoption of numeric criteria including authorization for site-specific criteria, and listed specific procedural requirements and definitions not included in the original 1975 regulation. The regulation specified the roles of the States and EPA and the administrative requirements for States in adopting and submitting their standards to EPA for review. It also delineated the EPA requirements for review of State standards and promulgation of federal standards.

The 1983 regulation provided States (and subsequently in 1991) Tribes with the option of refining their use designation process by allowing them to establish subcategories of uses, such as cold water and warm water aquatic life designations. The 1983 regulation also clarified that States (and subsequently Tribes) may adopt discretionary policies affecting the implementation of standards, such as mixing zones, low flows, and variances.

In support of the 1983 Regulation, EPA simultaneously issued program guidance entitled *Water Quality Standards Handbook* (December, 1983). The Handbook provided guidance on the interpretation and implementation of the Water Quality Standards Regulation. This document also contained information on scientific and technical analyses that are used in making decisions that would impact water quality standards. EPA also developed the *Technical Support Document for Water Quality-Based Toxics Control* (EPA 44/4–85–032, September, 1985) (TSD) which provided additional guidance for implementing State water quality standards. In 1991, EPA revised and expanded the TSD. (EPA 505/2–90–001, March 1991). In 1994, EPA issued the *Water Quality Standards Handbook: Second Edition* (EPA–823–B–94–006, August 1994).

To accelerate compliance with CWA section 303(c)(2)(B) (created by the 1987 Water Quality Act), EPA started action in 1990 to promulgate numeric water quality criteria for those States that had not adopted sufficient water quality standards for toxic pollutants. The intent of the rulemaking, known as the National Toxics Rule, was to strengthen State water quality management programs by increasing the level of protection afforded to aquatic life and human health through the adoption of all available criteria for toxic pollutants listed under 307(a) of the CWA (priority pollutants) present or likely to be present in State waters. This action culminated on December 22, 1992, with EPA promulgating Federal water quality criteria for priority toxic pollutants for 14 States and Territories (see 57 FR 60848).

Subsequent to the promulgation of criteria under the National Toxics Rule, EPA altered its national policy on the expression of aquatic life criteria for metals. On May 4, 1995 at 60 FR 22228, EPA issued a stay of several metals criteria (expressed as total recoverable metal) previously promulgated under the National Toxics Rule for the protection of aquatic life. EPA simultaneously issued an interim final rule that changed these metal criteria promulgated under the National Toxics Rule from the total recoverable form to the dissolved form.

The Water Quality Standards Regulation was amended in 1991 to implement Section 518 of the Act to expand the standards program to include Indian Tribes (56 FR 64893, December 12, 1991). EPA added 40 CFR 131.7 to describe the requirements of the issue dispute resolution mechanism (to resolve unreasonable consequences that may arise between a Tribe and a State or another Tribe when differing water quality standards have been adopted for a common body of water) and 40 CFR 131.8 to establish the

procedures by which a Tribe applies for authorization to assume the responsibilities of the water quality standards and section 401 certification programs.

Fourteen years since its last major revision, the water quality standards regulation is undergoing review and potential revision in light of experiences gained in its implementation by States, Tribes, EPA and the public. The review is intended to reflect the changing nature of the program and to identify specific changes that will strengthen water quality protection and restoration, facilitate watershed management initiatives, and incorporate evolving water quality criteria and assessment science into water quality standards programs. Based on the review and the comments expected on the ANPRM, EPA may decide to revise parts of the regulation and/or change some of its existing policies and guidance for the water quality standards program.

Water quality standards are essential to a wide range of surface water activities, including: (1) setting and revising water quality goals for watersheds and/or individual water bodies, (2) monitoring water quality to provide information upon which water quality-based decisions will be made, (3) calculating total maximum daily loads (TMDLs), waste load allocations (WLAs) for point sources of pollution, and load allocations (LAs) for natural background and nonpoint sources of pollution, (4) developing water quality management plans which prescribe the regulatory, construction, and management activities necessary to meet the water body goals, (5) calculating NPDES water quality-based effluent limitations for point sources, in the absence of TMDLs, WLAs, LAs, and/or water quality management plans, (6) preparing various reports and lists that document the condition of the State's or Tribe's water quality, and (7) developing, revising, and implementing an effective section 319 management program which outlines the State's or Tribe's control strategy for nonpoint sources of pollution.

Note: The term ''State'' as used in this Notice refers to the fifty States, all Territories of the United States, and the District of Columbia. The term ''Tribe'' or ''Tribal'' as used in this Notice generally refers to all Indian Tribes authorized to administer the water quality standards. On occasion, the term ''Tribe'' or ''Tribal'' refers to Indian Tribes that are eligible to seek authorization to administer the water quality standards, but have not yet secured such authorization. There are some parts of the law and regulation where ''State'' is now interpreted to mean ''State or Tribe.''

C. Water Quality Guidance for the Great Lakes System

On March 23, 1995, EPA published in the **Federal Register** its Water Quality Guidance for the Great Lakes System (60 FR 15366, March 23, 1995) (Great Lakes Guidance). The Guidance consists of water quality criteria for 29 pollutants to protect aquatic life, wildlife, and human health, and detailed methodologies to develop criteria for additional pollutants; implementation procedures to develop more consistent, enforceable water quality-based effluent limits in discharge permits, as well as TMDLs of pollutants that can be allowed to reach the Great Lakes and their tributaries from all sources; and antidegradation policies and procedures.

Section 118(c)(2) of the Clean Water Act (CWA) (Pub. L. 92–500 as amended by the Great Lakes Critical Programs Act of 1990 (CPA), Pub. L. 101–596, November 16, 1990) required EPA to publish proposed and final water quality guidance on minimum water quality standards, antidegradation policies, and implementation procedures for the Great Lakes System. EPA responded to these requirements by initiating a rulemaking, publishing the Proposed Water Quality Guidance for the Great Lakes System (proposed Guidance) in the **Federal Register** on April 16, 1993 (58 FR 20802). EPA also published four subsequent documents in the **Federal Register** identifying corrections and requesting comments on additional related materials. EPA received over 26,500 pages of comments, data, and information from over 6,000 commenters in response to these documents and from meetings with members of the public.

After reviewing and analyzing the information in the proposal and these comments, EPA developed and published the Great Lakes Guidance, codified at 40 CFR Part 132. Part 132 contains six appendixes of detailed methodologies, policies, and procedures. Detailed discussion of the final Guidance is provided in ''Final Water Quality Guidance for the Great Lakes System: Supplementary Information Document'' (SID), (EPA, 1995, 820–B–95–001) and in additional technical and supporting documents which are available in the docket for the rulemaking. Copies of the SID and other supporting documents are also available from EPA in electronic format, or in printed form for a fee upon request.

Developing the Great Lakes Guidance was an enormous effort based on extensive public comment and analysis on some of the same issues that are addressed in this ANPRM. One principal difference between the provisions in the Great Lakes Guidance and the regulation, policy and guidance that is the subject of this ANPRM is that where the Great Lakes Guidance addressed programs in the Great Lakes States only, this ANPRM addresses the national water quality standards regulation and program, and thus the programs of all States and Tribes with water quality standards authority. Where the Great Lakes Guidance addressed an issue or issue area that is also addressed in the ANPRM, that analysis and conclusion may or may not be relevant to the discussion of the national program. Where it is, today's ANPRM identifies the specific relevant Great Lakes Guidance provisions in the specific issue discussions. Many of the provisions in the Great Lakes Guidance were developed to address the unique problems in the Great Lakes Basin that stem from known contamination by bioaccumulative chemicals and the long retention time of water in the Lakes. Commenters should keep in mind that the Great Lakes provisions were derived for States that are in the Great Lakes Basin in whole or part and should consider the uniqueness of the Great Lakes Basin when evaluating Great Lakes Guidance provisions for application outside of the Great Lakes Basin.

III. Program Areas for Public Comment

A. Introduction

Entering its 33rd year, the water quality standards program has begun to evolve from one with a narrow focus on establishing water body uses and adopting chemical criteria for basic water quality characteristics addressing the most obvious sources of pollution to a more comprehensive program. In recent years the scientific community has developed greater knowledge of the full range of stressors adversely impacting surface waters. EPA believes the water quality standards program should evolve to keep pace with expanding science to address water quality problems in a more comprehensive way, accommodating more specific and sophisticated water use classifications, criteria for more pollutants, new forms of criteria and companion ecological and health indicators, and closer integration with other programs. At the same time, EPA realizes that such an evolution could require a significant increase in analytical resources from States, Tribes and the regulated community, and that changes to the existing program must be structured in a way that is workable.

This is an appropriate time to begin a structured national debate aimed at identifying the focused changes necessary to strengthen the underpinnings of water quality standards and implementation. In the fourteen years since the regulation was last revised, there have been numerous scientific developments, statutory changes, court decisions, and implementation issues affecting the water quality standards program. The shift in program focus beyond just chemical contamination to include ecosystem protection and watershed approaches necessitates reexamining basic program concepts. In addition, there is an opportunity to address possible barriers to effective water quality improvements where it is determined that regulatory changes are possible under existing law.

In recent years, EPA has heard from the States and Tribes as well as the environmental and regulated communities regarding the necessity and focus of a revision to the water quality standards regulation. As indicated by the wide range of issues and options presented in this advance notice, views of the different stakeholder groups often differ considerably. Many stakeholders believe that a revised regulation is needed for continued improvements in water quality protection. Others believe changes are needed to allow more flexible, cost-effective approaches by States and Tribes. Conversely, many stakeholders have said that the regulation is sufficient and does not need to be reviewed.

A key issue presented here relates to the degree of specificity necessary should EPA revise the regulation. There are many who support a more flexible regulation to allow States and Tribes to address new and changing circumstances. Under a more flexible regulation, States and Tribes could more easily tailor their programs to deal with pressing water quality restoration and protection needs that are not well addressed presently. Others support a regulation with more specific regulatory requirements. The latter would promote a more consistent minimal level of protection in State and Tribal water quality standards, provide more clarity on standards issues, and serve as a stronger tool in encouraging States and Tribes to take appropriate restoration and protection actions. EPA urges commenters to consider the appropriate balance between flexibility, national consistency, and consistency within States and Tribes when commenting on any of the ideas presented in this notice.

One of the outcomes of this ANPRM and follow-on actions can be establishment of a clearer set of national minimum policies and implementation procedures on which EPA will reliably and predictably base its approval and disapproval decisions on State and Tribal water quality standards submittals. EPA remains committed to making consistent decisions from State to State and Tribe to Tribe and State to Tribe to meet our obligation to ensure an appropriate level of protection nationally and that the goals of the Act are achieved. Clarifying these national norms will serve to better articulate the norms of protection from State to State and Tribe to Tribe and State to Tribe and also to clarify national norms of flexibility. Defining the appropriate level of consistency, in turn, defines the appropriate degree level of flexibility. In addition, establishing norms of consistency and flexibility should help to resolve State or Tribal differences with EPA on water quality standards early in the process, before the approval/disapproval stage.

While the following discussion describes specific areas and issues for public review, the public is welcome to comment on any aspect of the water quality standards program. EPA emphasizes, however, that publication of this Notice does not commit the Agency to proceeding with a regulatory change. EPA has not decided whether it will, in fact, propose regulatory amendments, and, if proposed, how extensive that effort might be. This decision will be made after considering the comments received and the need to address other priority activities as well as any Congressional and Executive Branch directives. A potential outcome of this public review may be additional guidance and/or policies rather than regulatory changes.

EPA has not determined the next steps it will take after evaluation of all the comments received on this ANPRM. It is likely that any follow-on proposed rule to amend 40 CFR 131 would focus on a relatively narrow set of issues and that many other issues could be resolved through policy and guidance. EPA requests that commenters identify the five to seven issues considered highest priority for possible regulatory amendments. The summary section at the end of this notice contains a brief summary of the potential changes to the water quality standards regulation that are discussed and considered in this ANPRM. The list of potential changes includes the full range of potential changes to the regulation on which EPA is specifically requesting comment. Each potential change to the regulation is discussed in detail in the corresponding section of the ANPRM.

B. Uses

1. Background

Section 131.10 of the current regulation describes States' and authorized Tribes' responsibilities for designating and protecting uses. The regulation requires that States and Tribes specify the water uses to be achieved and protected; requires protection of downstream uses; allows for sub-category and seasonal uses, for instance, to differentiate between cold water and warm water fisheries; sets out minimum attainability criteria; lists six factors of which at least one must be satisfied to justify removal of designated uses which are not existing uses; prohibits removal of existing uses; establishes a mandatory upgrading of uses which are existing but not designated; and establishes conditions and requirements for conducting use attainability analyses.

These provisions make a distinction between existing and designated uses and set out specific requirements to ensure protection of these two broad use categories. Designated uses are defined as those uses specified in water quality standards for each water body or segment whether or not they are being attained. EPA interprets existing uses as those uses actually attained in the water body on or after November 28, 1975 (the date of EPA's initial water quality standards regulation), whether or not they are included in water quality standards. 40 CFR 131.3(e). Designated uses focus on the attainable condition while existing uses focus on the past or present condition. Section 131.10 then links these two broad use categories in a manner which intends to ensure that States and Tribes designate appropriate water uses, reflecting both the existing and attainable uses of each water body. For this discussion it is important to consider both the distinction between and linkage of designated and existing uses.

It is in designating uses that States and Tribes establish the environmental goals for their water resources, and it is in designating uses that States and Tribes are allowed to evaluate the attainability of those goals. Because water quality standards perform the dual function of establishing water quality goals and ultimately serving as the regulatory basis for water quality-based treatment controls and strategies, typically, although not exclusively, via water quality criteria protecting those uses, a State or Tribe often weighs the environmental, social and economic

consequences of its decisions in designating uses. The regulation allows the State or Tribe some flexibility in weighing these considerations and adjusting these goals over time. Reaching a conclusion on the uses that appropriately reflect the potential for a water body, determining the attainability of those goals, and appropriately evaluating the consequences of a designation, however, can be a difficult and controversial task. Appropriate application of this process involves a balancing of environmental, scientific, technical, and economic and social considerations as well as public opinion and is therefore one of the most challenging areas of the current regulation.

To direct this decision making-process, the regulation establishes requirements that must be followed when designating uses or concluding that attaining a use is infeasible. When performing this attainability analysis, a State or Tribe considers physical, chemical, biological and economic factors that may limit the potential for achieving the goal use.

EPA's current water quality regulation effectively establishes a ''rebuttable presumption'' that ''fishable/swimmable'' uses are attainable and therefore should apply to a water body unless it is affirmatively demonstrated that such uses are not attainable. EPA believes that the rebuttable presumption policy reflected in these regulations is an essential foundation for effective implementation of the Clean Water Act as a whole. The ''use'' of a water body is the most fundamental articulation of its role in the aquatic and human environments, and all of the water quality protections established by the CWA follow from the water's designated use. This approach preserves States' and Tribes' paramount role in establishing water quality standards, in this instance, in weighing any available evidence regarding the attainable uses of a particular water body. The rebuttable presumption approach does not restrict the discretion that States and Tribes have to determine that ''fishable/swimmable'' uses are not, in fact, attainable in a particular case. Rather, if the water quality goals articulated by Congress are not to be met in a particular water body, the regulations simply require that such a determination be based upon a credible, ''structured scientific assessment'' of use attainability.

Because there is a presumption that the uses specified in sections 101(a)(2) and 303(c) of the Clean Water Act are attainable (protection and propagation of fish, shellfish and wildlife and recreation in and on the water [101(a)(2)]; public water supplies, propagation of fish and wildlife, recreational purposes, agricultural purposes, and navigation [303(c)(2)(A)]), the criteria for overcoming that presumption are carefully circumscribed. The economic use removal test, for example, requires a showing that the cost of compliance with the use(s) would result in ''substantial and widespread economic and social impact.'' This is a high threshold to ensure that the interim goals of section 101(a)(2) and the section 303(c) uses are not abandoned without appropriate cause.

The general construction of the § 131.10 requirements for designating uses, supplemented with specific Agency guidance, has worked well in most situations over the last 14 years, and the use designation process is well established in State and Tribal water quality standards programs. There are, however, a number of new issues that have arisen since the 1983 regulation was promulgated. Often these new issues are associated with site-specific decision-making, and EPA expects the trend toward site-specific application of water quality standards will accelerate as States and Tribes begin implementing watershed protection programs, using field biological information to more precisely describe aquatic communities to be protected or restored, and applying new watershed or ecosystem-specific approaches to criteria development. As explained in the ''Objectives'' discussion in this document, one of the principal reasons for this notice is to determine whether or not the current regulation is sufficiently flexible to accommodate an expected shift in program emphasis beyond chemical contaminants to ecosystem protection and watershed approaches that will necessarily place greater emphasis on integrated assessments of both chemical and non-chemical stressors and watershed-specific decision-making.

While it is important to identify potential barriers to needed flexibility, commenters should identify, as well, any changes or clarification that may be needed to ensure that an appropriate level of national consistency is maintained across and within all jurisdictions. In this section of the notice, EPA seeks comment on the following issues: (1) refined designated uses with more focus on watersheds and ecosystems, (2) existing uses, (3) attainability and removal of designated uses, and (4) alternatives to removal of designated uses.

2. Refined Designated Uses

The current regulation at 40 CFR 131.10(a), based on section 303 of the CWA, requires that States and authorized Tribes specify appropriate water uses to be achieved and protected, taking into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. The regulation also allows, but does not require, States and Tribes to identify more specific sub-categories of these general use categories.

Over the years, States and Tribes have created many different use classification systems ranging from a straightforward replication of uses specifically listed in section 303 of the Act to more complex systems that express designated uses in very specific terms or establish sub-classifications which identify different levels of protection. For example, some States simply specify ''water supply'' as a use classification applicable throughout the State while others may identify several specific sub-categories related to the quality of the raw water supply and anticipated treatment requirements. Similarly, some States designate general ''aquatic life'' uses while others list a variety of sub-categories based on a range of aquatic community types which may include descriptions of core aquatic species representative of each sub-category. Although a variety of approaches have evolved and become established in State and Tribal programs, the current regulation is not specific about the level of precision States or Tribes must achieve in designating uses.

There are advantages and drawbacks for either the general or specific use classification systems and it is not clear that either is necessarily superior in ensuring full protection of State or Tribal water quality. There is, however, a need for the use designation process, whether implementing a general or specific classification system, to clearly articulate and differentiate intended levels of protection with enough specificity so that decision-makers can appropriately develop and implement the standards on a site-or watershed-specific basis and so that the public can understand, identify with, and influence the goals set for waters they care about.

Lack of precision in uses and criteria assigned to protect those uses can inadvertently result in either a lesser or greater level of protection than was actually intended when the water quality standards were adopted. Although the designated use specificity

issue may apply to any of the Section 303 general use categories, it may be most relevant for aquatic life uses. Aquatic communities can vary significantly from water body-to-water body. As noted above, however, State and Tribal use classifications generally do not reflect the variability among aquatic community types and may list, instead, very general descriptions such as ''aquatic life'' as the designated use. Where this is the case, it is possible that measurable changes in aquatic community composition or production could occur at a specific site and still satisfy the definition of ''aquatic life,'' *unless* somewhere in its process the State or Tribe has documented information about its specific intent in applying the ''aquatic life'' classification to each water body. For example, an activity that causes the discharge of sediment, altering the physical habitat in the receiving water body, could result in a measurable change in aquatic community structure and function (e.g., the types of aquatic species found in that segment). Yet, that activity may arguably satisfy a general ''aquatic life'' use protection requirement simply because of a lack of specificity in the regulatory description of that designated use. In this case, lack of precision in the designation or description of the use could result in under protection of the resource, unless somewhere in the State or Tribal process an intended level of protection is specified.

Alternatively, lack of precision in uses and assigned criteria could result in standards that are over protective, resulting in application of unnecessary control requirements. In assigning criteria to protect general use classifications, a State or Tribe must ensure that the criteria are sufficiently protective to safeguard the full range of waters in the State or Tribe (i.e., criteria would be based on the most sensitive use). While this approach will result in full protection of all State or Tribal waters, the approach has been challenged, especially for aquatic life uses, where evidence suggests that the general use and criteria will require controls more stringent than needed to protect either the existing or potential aquatic community for a specific water body. Although EPA supports broad application of statewide or tribe-wide criteria to ensure that sensitive uses are protected where site-specific information is lacking, the Agency's current thinking is that there is a growing need to more precisely tailor use descriptions and criteria to match site-specific conditions, ensuring that uses and criteria provide an appropriate level of protection which, to the extent possible, is neither over nor under protective. This concept was reflected in the Agency's 1994 Combined Sewer Overflow Policy (59 FR 18688).

The level of protection issue is one of both use and criteria. To have a meaningful effect, a more precise use description must be accompanied by more focused criteria, appropriately tailored to the refined use description. EPA recognizes that, at present, national or statewide or tribe-wide criteria generally are not sufficiently precise to distinguish among all of the various sub-categories of uses. As water quality standards issues become more watershed-specific or site-specific, however, the trend will very likely be toward more specific use descriptions and; because the essential purpose of the criteria is to describe, evaluate attainment of, and protect the designated use; more site-specific criteria development.

A potential constraint for refining the aquatic life uses would be the resource commitment often associated with developing a comprehensive biological database. Because of the resource constraints, it may be difficult for a State or Tribe to develop designated uses (or use descriptions) for each segment that include a detailed biological description of the aquatic community to be protected. Simply from a practical standpoint, it may be more workable to reserve such precise determinations for watershed-specific decision-making. Therefore, in highlighting the issue of greater specificity, EPA is suggesting that one, but perhaps not the only, way to resolve this issue is to mandate much greater specificity in a State or Tribal use classification structure.

Obviously, there is a need for designated use descriptions in State and Tribal regulation to be defined, at a minimum, with sufficient specificity to ensure existing and potential uses will be protected and/or attained. The difficulty is in striking a balance between specificity sufficient to ensure uses are appropriately protected and flexibility needed to allow efficient widespread application of a classification system to all State or Tribal waters. A question has been raised about, and EPA is considering, whether or not the current regulation and guidance provide the framework needed to strike the appropriate balance and the guidance on when and how to refine uses.

Aquatic Life

An issue related to the manner in which States and Tribes define designated aquatic life uses is the occasional confusion expressed between the actual intent of the CWA section 101(a)(2) interim goals and the ''fishable/swimmable'' short hand expression often used to describe those interim goals. EPA acknowledges that the phrase ''fishable/swimmable'' does not fully describe the intent and scope of the CWA section 101(a)(2) interim goals. The confusion over the expression ''fishable'' often surfaces where there is an action aimed at removing an aquatic life use from a particular water body where there are no sport or commercial fisheries. In these instances, an argument is often made that the water body does not meet the ''fishable'' intent of the section 101(a)(2) interim goals because the water body naturally supports only ''minnows'' and/or aquatic invertebrates. EPA believes this is an unacceptable argument for removing an aquatic life designated use or excluding an aquatic life designated use. As explained in EPA's Questions and Answers on Antidegradation (USEPA, 1985, p. 3), the Agency considers the protection afforded by standards to focus on an appropriately representative aquatic community whether or not that community includes sport or commercial fish:

> The fact that sport or commercial fish are not present does not mean that the water may not be supporting an aquatic life protection function. An existing aquatic community composed entirely of invertebrates and plants, such as may be found in a pristine tributary alpine stream, should be protected whether or not such a stream supports a fishery. Even though the shorthand expression ''fishable/swimmable'' is often used, the actual objective of the Act is to restore the chemical, physical and biological integrity of our Nation's waters (Section 101(a)). The term ''aquatic life'' would more accurately reflect the protection of the aquatic community that was intended in Section 101(a)(2) of the Act.

Thus, EPA's current interpretation of the regulation means that the Agency will not approve State or Tribal action to exclude aquatic life protection based on a conclusion that a water body does not support a ''fishery'', implying a sport or commercial fishery. EPA's current thinking is that it would improve the regulatory text to reflect this interpretation explicitly.

More specific to this discussion of refined designated uses is the question of whether or not the Agency should mandate that a minimum ''aquatic life'' use sub-category or sub-categories be included in all State or Tribal designated use classification systems to ensure appropriate protection of waters

which do not support commercial or sport fisheries (or any fish).

Refined Designated Uses and Use Attainability Requirements

There is one additional issue related to the refined designated use discussion that should be addressed. A question has been raised about the applicability of the use attainability requirements when establishing refined designated uses (with particular emphasis of aquatic life uses). The question raised is: since refined designated uses may be less inclusive than broad designations, will EPA consider development of a more refined use description to be a change in use subject to the use attainability requirements? Under current regulation, the combination of a new use sub-category and less stringent criteria triggers the use attainability requirements in § 131.10 of the Federal regulation (see § 131.10(j)(2)). However, it is possible that under certain circumstances, this requirement could be modified.

Such a modification would focus on the kind of information that should accompany any refined use classification based on a more precise biological description, whether or not formal use attainability assessment requirements apply. Essentially, there are two issues to be addressed: (1) does the refined description of the aquatic community reflect the reference condition (i.e., natural states) for the kinds of waters to which the new classification is to be applied? and (2) are any newly proposed criteria scientifically defensible? These are basic questions which would have to be addressed whether or not the use attainability requirements were invoked. As a result, a proposal to refine use categories will have to be accompanied by a rationale explaining how it was determined that the proposed biological description appropriately reflects the potential for waters to which the new sub-classification is to be applied. If warranted, this refined description can then serve as the basis for deriving defensible and appropriate criteria specific to the new sub-classification.

Request for Comment Refining Use Designations

EPA seeks comment on the following questions:

1. The current regulation is not specific about the level of precision States or Tribes must achieve in designating uses. The regulation allows for subcategories of uses, but does not mandate such an approach. Should the regulation be revised to promote or require greater specificity in designated uses, particularly for aquatic life uses, to support watershed-specific decision-making such as is anticipated in implementing watershed or place-based initiatives?

2. Where a State or Tribe utilizes broadly-defined designated uses, could the desired level of specificity be adequately addressed in State or Tribal standards that clearly articulate the intent of the designated uses as they would apply to specific waters of the State or Tribe?

3. If EPA were to specify a required level of precision in establishing use categories, what factors should be considered in prescribing a level of specificity? That is, what factors should be considered in striking a balance between specificity sufficient to ensure uses are afforded an appropriate level of protection and flexibility/efficiency needed to allow widespread application of the classification system?

4. At a minimum, should the regulation require that State and Tribal aquatic life use categories include a sub-category or sub-categories that may be assigned to protect aquatic communities that do not include a ''fishery''? Alternatively, should the regulation explicitly reflect EPA's current interpretation of the regulations to the effect that State and Tribal aquatic life classification systems protect a range of aquatic communities whether or not there are sport or commercial fish (or any fish) present?

5. Should the use attainability requirements in 131.10(j)(2) be modified to recognize situations where scientifically defensible less stringent criteria may be appropriate for refined uses which reflect the reference condition for particular waters?

3. Existing Uses

a. Protection of Existing Uses. The requirement to protect existing uses is addressed in two places in the current regulation—Section 131.10, designation of uses and Section 131.12, antidegradation. (see discussion of antidegradation, ''tier 1'', in section III.D of this document) As discussed in the background section above, the regulation defines ''existing uses'' as ''those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.'' (40 CFR 131.3(e)) As a result, the focus of existing uses, is on the past or present condition of the water body. Furthermore, by establishing requirements prohibiting the removal of existing uses and ensuring those uses will be appropriately recognized in State and Tribal water quality standards, the current regulation ensures that the better of the past or present condition, at a minimum, will be maintained and protected. Determining whether or not an existing use has occurred in the past or is currently in place is not always a straightforward task, however, and over the years, a number of questions have been raised about exactly what the ''existing use'' provisions in 131.10 require. These questions generally fall into two categories: (1) what is the link between existing uses and the State or Tribal use classification system? and (2) what is the relationship between existing uses, existing water quality and potential uses, i.e. uses that may be attainable in the water body whether or not those uses are presently designated for the water body or are presently being attained?

The first question addresses the relationship between the existing use protection provisions in Section 131.10 and State or Tribal use classification systems. There appears to be some confusion on this point. The confusion seems to center on what may appear to be conflicting mandates—protect what is there and allow no further erosion of water quality, and appropriately designate the existing use in regulation using the established classification system. The existing use definition and the requirement that existing uses be protected suggests to some that the description of existing uses is constrained by the way in which a State or Tribe has described its designated uses in its classification system. That is, they argue that an existing use, to be adequately protected, needs to fit into one of the categories or sub-categories established in State or Tribal regulation, and as a result, a decision about whether or not a use is ''existing'' is likewise constrained by the use descriptions and criteria established in that classification system.

For purposes of Section 131.10, this is generally the case. Again, this Section of the Federal regulation establishes two requirements with respect to existing use protection: (1) a prohibition against removal of a designated use where that use is determined to be an existing use, and (2) a requirement that existing uses be protected by State or Tribal regulation. To ensure a workable process, EPA interprets Section 131.10 as necessarily recognizing a linkage between the existing use protection provisions and the established State or Tribal use classification system. This interpretation of the regulatory framework, however, also presumes a responsibility on the part of a State or Tribe to establish a classification system that is sufficiently flexible and/or

encompassing to assure an appropriate level of protection for the anticipated range of existing uses (see discussion on refined designated uses in this chapter).

As explained earlier in the discussion on refined designated uses, a variety of use classification systems has evolved and become established in State and Tribal programs. Although there are likely some advantages to a more refined use classification system when it comes to protecting existing uses (more precise categories in which to fit the existing use), such a system may not be necessary as long as the State or Tribal standards clearly articulate the intended and appropriate level of protection for existing uses (again, see discussion of refined designated uses). The following example illustrates the point. An acid bog is a water body type which may be fairly widespread but which, as a classification type, may not appear in many State or Tribal standards. Where the aquatic characteristics of an acid bog are discovered to constitute an existing use, a State or Tribe could: (1) establish a classification type and criteria for acid bogs to ensure appropriate protection by way of a specific designation, or (2) classify the bog within the existing, general classification system, e.g., warm water aquatic life, and adopt any needed site-specific criteria to ensure the existing nature and quality of this specific water resource is protected. Either approach can result in an appropriate level of protection and there may not be a need for States or Tribes to include an ''acid bog'' water body type in their classification system. Under either approach the standards must articulate clearly the intended and appropriate level of protection, ensuring protection of the existing use.

It is also important to remember that the existing use provisions in both §§ 131.10 and 131.12 must be considered together. The classification requirements in § 131.10 ensure that all existing uses will be recognized and protected through appropriate classification of those water bodies in the standards (and/or application of appropriate site-specific criteria where the existing classification system is broadly constructed). The antidegradation-based existing use protection provision guarantees that individual activities on individual water bodies will be examined to ensure those activities will not eliminate existing uses, whether or not those uses are currently recognized in the State or Tribal standards. The antidegradation provisions, through the general requirement that existing uses be protected, ensure immediate protection from specific activities which may threaten the existing use, and the classification requirements ensure recognition and longer-term protection from any present or future stressors through specific designation in the standards. Both these provisions apply and should not be considered in isolation. Together they constitute the existing use protection requirements, ensuring the existing uses and water quality to support those uses are maintained and protected.

The second question addresses the relationship between existing uses, existing water quality and potential uses. The Agency's guidance, Questions and Answers on Antidegradation, August, 1985 (Notice of Availability, 50 *FR* 34546, August 26, 1985 [included as appendices to *Water Quality Standards Handbook,* cited above]) addresses this issue, in part. The answer to ''question 7'' states: ''an existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur (unless there are physical problems which prevent the use regardless of water quality).'' Using an example of a healthy shellfish community which is not currently being harvested, the answer goes on to explain that the existence of a use (past or present) is not dependent solely upon a demonstration that the use is being satisfied in a functional sense (i.e., in this case, the shellfish harvested). In this example, ''shellfish harvesting'' is considered an existing use, even though there is presently no harvesting underway, because the water quality and habitat support a healthy shellfish community suitable for harvesting. The answer further explains that to assume otherwise ''* * *would be to say that the only time an aquatic protection use 'exists' is if someone succeeds in catching fish.'' As illustrated in this example, the existing use question must address both the current or past functional use *and* the current or past (since November 28, 1975) water quality, and the intent of the regulation is to ensure the existing use and the water quality necessary to support that use are maintained and protected. Thus, in this example, the shellfish harvesting use is to be protected by designated uses in water quality standards.

The shellfish example is a good one in that it clearly illustrates EPA's position that an existing use finding can be made either where the use is or has been ''actually attained'' or where the water quality necessary to support the use is in place even if the use, itself, is not currently established, as long as other site-specific factors, for example physical problems like flow or substrate, would not, despite the suitable water quality, prevent attainment of the use. The ''other factors'' caution is important in understanding EPA's position on existing uses. In making an existing use determination, there is a link between the use and water quality. To be considered an existing use, the use must have been actually attained in the past, is now attained or water quality is sufficient to support the use. However, for some sites, water quality, alone, may be an insufficient basis for making an existing use finding if there are other factors that would prohibit the use from taking place regardless of the quality of the water at a site. In the shellfish example, the necessary water quality is present, and there are no obvious limiting factors which would prohibit present or future shellfish harvesting.

Although this example is useful in illustrating important principles in implementing existing use protection requirements, it is a rather straightforward example. An appropriate resolution of the existing/designated use issue may be somewhat less clear-cut where either the existing water quality or the existing use is marginal (i.e., it is difficult to determine whether or not the use is actually attained, or whether or not there are factors, other than water quality, that could prohibit the use). It is in addressing these situations that questions have been raised about what the current regulation requires. A principal difficulty in addressing these questions may lie in resolving the linkage between the present and past conditions protected by the ''existing uses'' provisions and the attainable or potential condition protected by ''designated uses'' provisions. It may be useful to evaluate this issue by considering the link between existing and designated uses established in the current regulation.

Obviously, any decision about whether or not a use is an ''existing use'' must be a water body-specific determination. The existing use determination is, therefore, site-specific, and decisions should consider water quality and other limiting factors such as the physical habitat specific to a particular water body. A few examples may help illustrate the issue. A somewhat common existing use question applies to primary contact recreation: if a few people on a few occasions ''swim'' in a water body that does not have the quality or physical characteristics to support swimming, is this an existing use, even if the water body is posted ''no swimming'' due to

bacterial contamination and lacks the physical features to actually support swimming? The straightforward answer to this question is that ''swimming'' is not an existing use because the present (or past) condition does not support that use. This conclusion is based on the very limited actual ''use'' and, more importantly, the lack of suitable water quality and physical characteristics that would support a recreational swimming use now or in the future (as determined by the water quality requirements and recreational swimming considerations, including safety considerations, in the State or Tribal classification system for primary contact recreation).

A question has been raised as to how to interpret the regulation in the context of this example. One could determine that because the water body is not suitable for swimming, and has not been since 1975, primary contact recreation is not an existing use. Alternatively, one could determine primary contact recreation to be an existing use because the water body was actually used for swimming, even though the use was occasional and water quality and physical characteristics were not acceptable to support such a use. EPA believes the first alternative is the better interpretation of Agency regulations and guidance in this example, because the use is not established and the water quality and other factors would appear to prohibit actually attaining a recreational swimming use.

Stating that this is an appropriate interpretation of the regulation means that EPA would not object if a State or Tribe reached a conclusion, in a similar case, that this was not an existing use. As noted above, however, existing use decisions are very site-specific, and it is possible that, on a specific water body under similar circumstances, a different conclusion could be reached by a State or Tribe based on public comment at a hearing and a decision to take a protective approach to the incidental use for that specific resource. The Federal requirements do not prohibit a State or Tribe from taking a more protective approach than would be required by the water quality standards regulation.

Although, in the above example, a State or Tribe could conclude that primary contact recreation is not an existing use, it may well be an attainable use that must be protected as a designated use by the State's or Tribe's water quality standards. This finding would depend on whether the physical condition of the water body is suitable for swimming and whether the water quality problems limiting the use are controllable. (See 40 CFR 131.10(j) and discussion on use attainability analysis below). The point is that, although the existing use provisions most directly address past or present conditions, decisions about existing uses generally are not made in isolation. With respect to uses contained in CWA Section 101(a)(2), the regulation links existing and designated uses, and it may be useful to view these provisions as a continuum in examining the broader question of use protection.

Some States and Tribes have recognized that continuum in developing use attainability guidance for recreational uses which includes questions about the actual use, existing water quality, water quality potential, recreational facilities, location, safety considerations, physical conditions of the water body, and access

Note: access here means restricted access, as in fenced property; access is not intended to suggest the ''remoteness'' of the water body; in EPA's view, remoteness is not a valid basis for an attainability decision on recreation.

When all of these factors are considered, the adopted water quality standards are consistent with both the existing and designated use provisions. For example, suppose a city has created a greenway along a stream that receives wastewater effluent upstream of the greenway and has posted ''no swimming'' signs. The greenway attracts children leading to the inevitable ''unauthorized'' swimming. If the physical condition of the stream is suitable for swimming, the swimming occurs on a frequent basis and the greenway provides recreational facilities and access, the only factor limiting the use may be a water quality problem that in the judgement of the State or Tribe can be controlled to achieve the primary contact use. The linkage between existing and designated uses encourages the evaluation of this full suite of factors in making a decision about whether or not primary contact recreation should be protected.

A similar existing use question is often raised for aquatic life uses where the existing aquatic community is impaired as a result of marginal water quality. A common example in the western part of the country is a mountain stream impaired by historic hard rock mining (with the impacts occurring well before November 28, 1975). Although the physical condition of the stream may represent ideal trout habitat, the trout population may be severely limited, in poor condition or absent as a result of the toxic effects of metals. In its classification system, however, a State or Tribe may describe and designate this type of stream as a ''salmonid spawning'' use based on its physical habitat and potential. For streams such as these, where a few adult trout are present but there is no evidence of younger age classes, the question is asked—is this an existing ''salmonid spawning'' use?

Again, the appropriate answer, based on EPA regulations and guidance, is that this is not an existing use (although it may nonetheless be an appropriate designated use if it has the potential to support salmonid spawning). The current use, matching the classification description, is absent, and the limiting water quality problems have been in existence prior to November 28, 1975. (This does not mean, necessarily, there is not some existing aquatic life use which would then serve as the regulatory ''floor'' for this water body; see the ''limited'' aquatic life use discussion in the use attainability analysis discussion in this section below and the ''tier 1'' discussion in the antidegradation section, III. D) As in the ''swimming'' example, however, there can be a gradation of conditions, and occasionally it may be difficult to draw a bright line and conclude, with confidence, that this is where the existing use begins.

In situations similar to this impaired stream example, where the existing water quality problems are considered controllable by the State or Tribe, arguments have been made on both sides of the existing use issue: the salmonid spawning use is not existing, *or* the salmonid spawning use is in place, albeit currently at an impaired level. Disputes about the correct interpretation of Agency guidance become even more difficult to resolve where the existing impacts to water quality are not as great as those in the above example. Often streams impacted by historical mining, such as the one described above, are headwater streams. As the water moves downstream, clean water tributaries reduce the effect of the metals contamination, and fish, in number, begin to move into these ''improved'' waters. Nevertheless, many such streams would be considered impaired when compared to unaffected, similar waters (reference streams). And, despite supporting ''fairly good numbers'' of trout, the existing water quality in such streams often exceeds the chronic and, occasionally, acute standards for metals. In situations such as these, States and Tribes have had difficulty in reaching conclusions about whether or not an existing use, matching the classification, is in place. Because States and Tribes may evaluate existing uses when they are designating uses, threshold existing use

determinations may lead to questions about the potential for the water body and the appropriate designated uses for it.

EPA's current interpretation is that the existing use should be identified either where the use has taken place or the water quality sufficient to support the use has existed since November 28, 1975, or both. That is to say, State and Tribal existing use decisions can be based on a finding that the use, as defined in the classification system, and/or the water quality needed to support the use is in place (and there are no other factors that would prohibit actually attaining the use). This interpretation does not fully address the issue of partially impaired uses. Thus, a fuller explanation may be needed in the regulation or policy of how that interpretation is applied where the use or the water quality may be somewhat impaired. EPA is considering whether changes to the regulation or additional guidance is needed to explain the Agency's position and to offer direction in making such determinations.

Request for Comment on Existing Uses

EPA seeks comment on the following questions:

1. Does EPA need to further clarify the existing use protection provisions in § 131.10, more clearly explaining that existing uses are defined by the uses made of water bodies and existing water quality, where that quality is or was sufficient to allow the use to occur (and there are no other limiting factors)? If so, will the clarification require a regulatory amendment or can the needed clarification be accomplished in Agency policy or guidance?

2. Does EPA need to expand its guidance to explain how the current regulation addresses existing use decisions where there is some semblance of a use even though the water quality is insufficient to support the use in, for example a safe or healthful manner? Should this additional guidance clarify the linkage between existing and designated uses?

3. Should the regulatory definition of ''existing use'' at 40 CFR 131.3(e) be modified? If so, how?

4. Use Attainability.

a. Attainability of Uses. States and Tribes may remove a designated use, that is not an existing use, if they can demonstrate that attaining the designated use is infeasible. (40 CFR 131.10(g)) The current regulation identifies the factors that must be considered in making such a demonstration. As explained in the regulation, existing uses, by definition, are attainable and must be protected by designated uses in water quality standards (40 CFR 131.10(h)(1), 131.10(i) and 131.12(a)(1)). Further, at a minimum, uses are considered attainable if they can be achieved by implementing effluent limits required under Sections 301(b) and 306 of the Clean Water Act (Act) and by implementing cost-effective and reasonable best management practices (BMPs) for nonpoint source control. (40 CFR 131.10(h)(2)).

These existing uses, technology and BMP provisions establish the basic regulatory threshold test for what the attainable use of a water body is and thus what the minimum use designation for the particular water body must be. Where either the use is existing or the use can be attained through implementation of Clean Water Act technology requirements and/or implementation of applicable State requirements regarding BMPs for nonpoint source control, 40 CFR 131.10(h) establishes that the use is attainable and must be designated. Once a use is designated, it is presumed to be attainable and may not be removed (downgraded) unless the State or Tribe can demonstrate that attaining the designated use is not feasible based on one of the six use removal criteria (40 CFR 131.10(g)). Therefore, uses are considered attainable if: (1) the use is existing; (2) the use can be attained through application of CWA technology requirements and/or State or Tribe required BMPs; or, (3) none of the use removal criteria is satisfied. EPA has in the past recommended that these use removal criteria referenced under number 3 above, serve as additional tests, over and above numbers 1 and 2 above, for determining when a use is attainable. Clearly these use removal criteria (131.10(g)) are designed to determine whether a use is attainable and therefore can serve that purpose equally effectively when considering whether to remove a designated use (the situation where they are clearly required to be used) and when considering whether a use is attainable and should be designated. The discussion below on use attainability analysis (UAA) and non section 101(a)(2) uses further discusses the relationship between designation of attainable uses, UAAs, and the analysis required to justify use removal. That discussion solicits comment on whether the use removal criteria at § 131.10(g), in addition to being the regulatory justifications for use removal, should, consistent with EPA's interpretation of the regulation, be included in the basic elements of a UAA.

Despite what EPA believes are fairly clear guidelines in the current regulation and guidance, questions have been raised about EPA's minimum attainability requirements. The Agency's current thinking is that basic attainability requirements, the methods for demonstrating attainability, the circumstances under which attainability analysis must be done, and what that analysis must consist of should be clarified in the regulation.

b. Removal of Designated Uses. The regulation (at 40 CFR 131.10(g)) specifies that States and Tribes may remove a designated use which is not an existing use if attainment of a use is not feasible due to the following:

(1) Naturally occurring pollutant concentrations prevent the attainment of a use; or,

(2) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State or Tribal water conservation requirements to enable uses to be met; or,

(3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or;

(4) Dams, diversions or other types of hydrological modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or operate such modification in a way that would result in the attainment of a use; or,

(5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or,

(6) Controls more stringent than those required by Sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

The use removal criteria were included in the regulation to address those circumstances where the attainability of certain uses would be precluded by conditions over which the water quality protection provisions in the regulation had little or no control. The uncontrollable conditions considered most likely to limit attainability were: natural water quality or habitat limitations, irretrievable human-caused contamination or conditions, or insupportable economic and social costs. These general

conditions, then, formed the basis for the six use removal criteria. Although EPA believes the use removal criteria have functioned reasonably well, the growing number and reoccurring nature of the questions raised about these criteria have convinced EPA of the need to review this central element of the program.

Some have argued that the six criteria and their interpretation are overly stringent, making any proposal to remove a designated use futile even where a use was ''mistakenly'' designated. Others argue that the use removal criteria and their interpretation are overly generous, granting the possibility of use removal where the principal stressor is a condition which should not be immune from the water quality protection provisions in the federal regulation (operation of dams is one example used in arguing this position). Others complain that there seems to be no national consistency in the way the use removal criteria are interpreted by EPA, the States or the Tribes. And, finally, questions also have been raised about whether or not the criteria adequately address or apply to all uses equally. The key to appropriate application of the use removal criteria is to focus on whether or not a condition, at a specific site, would preclude attaining a designated use. A decision on this question is not always straightforward however, and as a result, there are questions about the application of the use removal criteria. A few examples may help the discussion.

Criterion number 1 allows removal of a designated use where ''naturally occurring pollutant concentrations prevent attainment of the use.'' A reoccurring question about this provision is: under what circumstances should ''naturally occurring pollutant concentrations'' be the justification for use removal versus the basis for calculating site-specific criteria, acknowledging that the natural condition defines the existing use? Often, the numerical criteria assigned to the designated use are the initial benchmark for estimating whether or not a designated use will be attained. In this approach, a comparison of the natural condition with the numerical criteria is used in the evaluation of attainability. Where such an analysis demonstrates clearly that the naturally occurring pollutant concentrations would *preclude* the designated use, the use may be removed. There are, however, examples of situations where statewide or national criteria for one or more contaminants are exceeded, and yet the available information on the overall condition of the water indicate the use is supported. This situation is most common for aquatic life uses where local populations of aquatic organisms may have acclimated to natural conditions outside the estimated ''normal'' tolerance range, where species on the edge of their distribution are reproducing but are physiologically stressed or where broadly derived criteria may not be appropriate for the particular aquatic community at that site. In such a situation, the observed condition of the resource obviously will take precedence over the predicted condition, and the natural water quality will form the basis for site-specific criteria since the use is clearly not precluded. Again, the key to answering the use removal question is to determine whether or not ''natural conditions'' preclude attainment of the use, and because of the site-specific circumstances discussed above, answering this question involves more than a simple comparison of numeric criteria with the natural condition.

Criterion number 2 allows removal of a designated use where natural, ephemeral, intermittent, or low flow conditions would preclude the use unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State or Tribal water conservation requirements to enable uses to be met (emphasis added). Questions have been raised about exactly what the above italicized language means. EPA's interpretation of this phrase is that, where an effluent discharge creates an essentially perennial flow for what naturally would be ephemeral or intermittent waters, the resulting aquatic community is to be protected. EPA's current thinking is that in situations such as these, the second criterion for use removal means that a State or Tribe cannot remove a use of a water body where the augmented flow supports an aquatic life use.

Criterion number 4 allows removal of a use where dams, diversions or other types of hydrological modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or operate such modification in a way that would result in the attainment of a use. As indicated above, some have argued that operation of dams is an inappropriate basis for concluding that Section 101(a)(2) uses are not attainable, and they have suggested this criterion be removed from the regulation. In arguing this position, these commenters have pointed to the 1986 amendments to the Federal Power Act (Electric Consumer's Protection Act, or ECPA) and the legislative history of these amendments as an indication of Congress' intent to give equal priority to protecting and restoring fish and wildlife habitat even where dams exist. Specifically, the ECPA states:

> * * *In deciding whether to issue any license the {Federal Energy Regulatory Commission}, in addition to the power and development purposes for which licenses are issued, shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damages to, and enhancement of fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality. (ECPA amending the Federal Power Act, Section 4(e), 16 U.S.C. Section 797(e))

The legislative history, these commenters believe, provides a particularly clear indication of congressional intent to protect and restore aquatic life uses. They specifically point to that part of the record which states that no one ''expect[s] 'business as usual,' '' but rather the expectation is that:

> [P]rojects licensed years earlier must undergo the scrutiny of today's values as provided in this law and other environmental laws applicable to such projects. If nonpower values cannot be adequately protected, FERC should exercise its authority to restrict or, particularly in the case of original licenses, even deny a license on a waterway. (H.R. Rep. No. 99–934, 99th Cong., 2d Sess. (1986) at 22)

Groups arguing for removal of criterion 4 use the amendments to the Federal Power Act as an example of the recognition being given today's environmental values and the importance of restoring and enhancing the aquatic habitats and recreational uses of water resources. They maintain that ''...the Water Quality Rule should be updated to recognize that aquatic and recreational uses can not be removed based simply on the existence of a dam.'' EPA's current thinking is that the above rationale and legislative history raise a serious question about whether the existence of a dam and the infeasibility of operating that dam in a way that will result in attaining the designated use, measured against today's values, is sufficient reason to remove a designated use. EPA is interested in commenters views on this issue.

Criterion number 5 allows removal of a designated use where physical conditions related to the natural features of the water body, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of

aquatic life protection uses. Notwithstanding the reference to aquatic life uses in 131.10(g)(5), some have argued that recreational uses, especially swimming uses, might also be limited by physical factors (especially where safety is an issue), and they have asked whether or not the physical factors consideration could be applied to evaluations of recreational use attainability. As now written, the regulatory language would not allow consideration of physical factors, alone, as the basis for removing a designated recreational use. In the preamble to the 1983 regulation, EPA explained that, while the Agency recognized that physical factors also affect recreational uses, States, and now Tribes, would need to give consideration to incidental uses of the water body even though it may not make sense to encourage use of a stream for swimming because of the flow, depth or velocity of the water. Instead, the preamble discussion explained that based on prudent public health considerations, the use protection question was not to be judged wholly on an analysis of the water body's suitability for swimming but rather on whether or not swimming would actually occur. EPA's current thinking is that physical factors, alone, would not be sufficient justification for removing or failing to designate a primary contact recreation use.

EPA's suggested approach to the recreational use question has been for States and Tribes to look at a suite of factors such as, the actual use, existing water quality, water quality potential, access, recreational facilities, location, safety considerations, and physical conditions of the water body in making any use attainability decision. The guidance suggests that any one of these factors, alone, may not be sufficient to conclude that designation of the use is not warranted. Nevertheless, there clearly are situations such as high flows caused by storm events where the physical conditions of a water body would make swimming, if not impossible, extremely dangerous. It is in addressing situations such as these that questions have been raised about the applicability of physical factors to the recreational use issue. The question is sometimes posed in terms of whether or not a State or Tribe would incur some liability by designating or continuing to designate such waters as swimmable. They argue that a reasonable, common sense approach is to acknowledge that there are certain waters for which primary contact recreation is not an attainable use solely because of the physical condition of the water. EPA is, therefore, considering whether the regulation or Agency guidance should be amended to allow consideration of physical factors, alone, as the basis for removing or not designating primary contact recreational uses.

The above discussion is about EPA's interpretation of the conditions that would have to be satisfied to either remove or not designate recreational uses. As explained earlier in this section, satisfying those conditions gives a State or Tribe the option of either removing or not designating the use. It does not, however, create an obligation. A specific example may help. A western State was concerned, partly for liability reasons, about designating swimming uses for a number of waters where the physical conditions and other factors made swimming, if it did occur, unwise. Although available information indicated the actual swimming use was limited or nonexistent, the State also wanted to ensure protection of that use, based on public health considerations, should it occur. The issue for the State was striking the appropriate balance between the two concerns: the possibility of inadvertently encouraging swimming where it should not occur because of safety considerations and protecting that use if it did occur. To resolve this issue, the State designated these waters for secondary contact recreation but assigned primary contact recreation bacteriological criteria to provide an appropriate level of protection should swimming occur, however unlikely. In this way, the State felt it did not inappropriately encourage swimming in these waters, but if swimming did occur, the required water quality would provide an appropriate level of protection. This is an approach to the ''incidental use'' issue, discussed in the existing use section of this chapter, that, while acknowledging uncertainty, errs on the side of protectiveness.

Consistency

EPA has provided guidance on implementing the requirements in § 131.10(g). Although EPA believes the guidance has been fairly comprehensive and has functioned reasonably well, the growing number and recurring nature of the questions raised about implementation of the use removal criteria have convinced EPA to solicit comments on the need for additional guidance or regulatory changes to ensure appropriate and consistent application of the use removal criteria.

As indicated in the introduction to this discussion, one of the reoccurring concerns about implementation of §§ 131.10(j) and 131.10(g) with respect to designating or removing uses, is that to some, there are instances of inconsistency in the way the § 131.10(g)(1)–(6) criteria are interpreted by EPA, the States or the Tribes. One example that has been cited is that the application of the fish consumption use is dissimilar in different regions of the country. In one area of the country, some maintain, the fish consumption use is applied to all waters assigned any aquatic life use without regard to whether or not there is a credible exposure pathway to humans by way of contaminated fish. In other areas of the country, the application of the fish consumption use allows consideration of occurrence, size and species of fish present and evidence that fishing actually occurs as a basis for concluding that there is a potential exposure pathway and the use should be designated. An associated consistency issue has to do with the manner in which the terms in § 131.10(g) are interpreted. An example is the term ''feasible'' in criterion number 4. Feasibility could be based on technical considerations, such as the ability to operate an impoundment in an efficient manner that does not degrade water quality, as EPA intended when it originally wrote the regulation. Alternatively, some have suggested that feasibility could be based on economic considerations or a balanced consideration of cost and technology (EPA's current thinking is that the term ''feasible'' in use removal criterion number 4, regarding the operation of dams should continue to refer to technical feasibility and not to economic feasibility. Criterion number 6, not number 4, is the appropriate avenue to address economic feasibility of attaining the designated use because it establishes an appropriate test of economic infeasibleness.)

EPA's view is that the use removal criteria should be clear and consistently interpreted. Questions and/or positions such as those described above suggest there may be a need for additional guidance on or interpretation of § 131.10(g) to ensure the § 131.10(g) criteria are consistently interpreted and applied, and to address whether review under § 131.10(g) could be done for categories of sources.

c. Use Attainability Analysis. A use attainability analysis (UAA) is a structured scientific assessment of the factors affecting the attainment of uses specified in section 101(a)(2) of the Act (the ''fishable/swimmable'' uses). The factors to be considered in such an analysis include the physical, chemical, biological, and economic use removal

criteria described in the current regulation (40 CFR 131.10(g)(1)–(6)). The current regulation (40 CFR 131.10(j)) establishes the requirement that States and Tribes conduct a UAA when designating uses that do not include the section 101(a)(2) uses, removing section 101(a)(2) uses, or designating new subcategories of section 101(a)(2) uses that require less stringent criteria.

New Information for Waters Without Section 101(a)(2) Use Designations

The current regulation (§ 131.20(a)) specifically requires the re-examination of water bodies with less than Section 101(a)(2) use designations every three years to determine if new information has become available. If new information indicates that a use is attainable, the State or Tribe is to revise the use accordingly. EPA interprets the current regulation as requiring review of past UAA-based use designation decisions when there is new information that could have a bearing on that use designation decision.

The 1983 preamble to the regulation explained that a State or Tribe need only conduct a UAA once for a given water body. The preamble went on to explain, however, that where the UAA is used as justification for removing a section 101(a)(2) use or failing to designate a section 101(a)(2) use, the State is required to review the basis for that decision in subsequent triennial reviews to determine whether or not the circumstances have changed in a way that would alter the original decision. EPA recognizes that the requirement to review new information about past UAA-based use designation decisions, because it creates a demand for further analysis of the decision by the State or Tribe, can serve to discourage States and Tribes from generating new information. EPA's current thinking is that interested parties should be encouraged to generate and consider relevant information that could have a bearing on the use designation decision for a particular water and that the trigger for reviewing past use designation decisions should be clear. In addition, EPA is interested in comments on whether there should be some definable burden placed on the State or Tribe to actively seek information for such waters. The Agency may need to be more specific in requiring that States and Tribes specify the procedures they will use in identifying water bodies where ''new information'' has become available and ensuring new information is generated where appropriate.

UAAs and Non Section 101(a)(2) Uses

The current regulation indicates that the UAA requirements apply to uses specified in Section 101(a)(2) of the Act. The regulation at 40 CFR 131.10(j) specifically requires that a State or Tribe conduct a UAA where: ''(1) the State [or Tribe] designates or has designated uses that do not include the uses specified in Section 101(a)(2) of the Act, or (2) the State [or Tribe] wishes to remove a designated use that is specified in Section 101(a)(2) of the Act or to adopt subcategories of uses specified in Section 101(a)(2) of the Act which require less stringent criteria.'' Although the regulation at 40 CFR 131.10(g) has always provided that States and Tribes may not remove a designated use unless they can demonstrate that attaining the use is not feasible, the regulatory language does not expressly require the State or Tribe to conduct a UAA as defined in 40 CFR 131.10(j) before a use not referenced in section 101(a)(2) may be removed. As a result, some have questioned whether or not the UAA requirements actually apply to uses other than those referenced in Section 101(a)(2), such as water supply or agriculture. EPA's position on this issue is that, while the analysis to downgrade a use not included in CWA section 101(a)(2) is not expressly referenced in § 131.10(j), 40 CFR 131.10(g) of its own terms requires the State or Tribe to document whether any use being considered for removal is attainable under the six criteria outlined in that section. Where such a use is shown to be attainable, it may not be removed (downgraded). In practice, EPA believes there is no cognizable difference between these two analyses. EPA is thus considering whether it should combine these elements of 40 CFR 131.10(g) and 131.10(j) or otherwise clarify the relationship between these provisions in the regulation. Given EPA's position that the regulation requires the use attainability of a water body to be documented before any of its uses may be removed, EPA is interested in a discussion of specific attainability issues that might arise in applying the UAA requirements to non-Section 101(a)(2) uses such as water supply or agriculture.

Information in UAAs

The regulation is not specific about what a UAA should contain other than the general description contained in the definition of a UAA at 40 CFR 131.3(g). Instead, EPA has issued various national and regional guidance documents to assist with the completion of such analyses. Some have suggested, however, that the regulation be amended to provide more specificity on information needed in a UAA. Topics for consideration might include: what specific questions should a use attainability analysis address? what are the data requirements? and what are the requirements for reporting the results of the analysis? EPA seeks comment on this issue.

UAAs and Refinement of ''Fishable/Swimmable'' Use Designation

As long as a State or Tribe designates uses that fall within the broad range of uses consistent with the section 101(a)(2) goals, there is no requirement to conduct a UAA. In fact, 40 CFR 131.10(k) explicitly states that ''a State is not required to conduct a use attainability analysis . . . whenever designating uses which include those specified in section 101(a)(2) of the Act.'' As a result, there does not appear to be a mechanism that ensures State or Tribal waters are not under-classified (i.e., a use subcategory is designated for a water when a higher or more protective subcategory is actually attainable). Some have suggested that the regulation be amended or guidance clarified to require a UAA (i.e., a structured scientific assessment) whenever an aquatic life use is designated (or refined) to ensure the level of protection assigned matches the potential for the water body. EPA's current thinking is that there needs to be a solid underlying rationale for use designations. One of the emerging themes from EPA and the larger community of parties interested in further protecting water quality is that refining designated uses and tailoring suites of criteria to the refined uses in watersheds is an important future direction of this program. Clearly for this approach to succeed, a solid evaluation of attainability must be at the heart of any decision to characterize designated uses in greater detail than has been the norm. EPA is interested in comment on this view, in particular as it relates to the rebuttable presumption that the generic uses described as fishable/swimmable are attainable.

Thresholds for Aquatic Life Use Designation

In part 2 of this section, ''Refined Designated Uses'', there is a discussion explaining EPA's position that the definition of ''aquatic life'' is not limited to those waters that support ''fisheries.'' That discussion explains that a more biologically-grounded definition of aquatic life would be sufficiently expansive to include aquatic communities made up, for example,

entirely of invertebrate organisms. This broad definition of ''aquatic life uses'' has an impact on the manner in which UAAs are planned and evaluated. The current regulation allows States and Tribes to designate uses for certain waters that do not include the section 101(a)(2) uses, where such uses are not attainable. As a result, some States and Tribes have waters which have not been assigned an aquatic life designated use. However, if aquatic life uses are defined broadly, as EPA believes they should be, there would be very few, if any, waters that would not be considered as supporting some type of existing aquatic life use.

Aquatic communities form a continuum, making it difficult, if not impossible in the biological sense, to identify where the threshold for aquatic life use begins. As a result, some have suggested that a broad definition of aquatic life would appear to revoke the option of excluding aquatic life protection from a water body since essentially all waters support some level of aquatic life. They have suggested, therefore, that there is a need to identify a threshold, based on some physical rather than biological limitation, that could be used as an acceptable justification for concluding that an aquatic life use is not attainable. For example, some States and Tribes have urged the use of a flow-based threshold to justify a conclusion that an aquatic life use in not attainable. Generally, ephemeral waters (waters whose channel does not intersect the ground water table and which are dependent on precipitation events for their flow) are suggested as an appropriate threshold. In a biological sense, this may not be a satisfactory solution since there are ecologically important ephemeral waters which should receive aquatic life use protection regardless of the temporal nature of the flow. This is especially true for many ephemeral wetlands. EPA is considering whether changes are needed in the regulation or guidance to address whether, and under what circumstances, UAAs may be used to justify a non-aquatic life use classification, given the broad range of aquatic communities that may exist.

Request for Comments on Use Removal and Use Attainability

EPA seeks comment on the following questions:

1. Although EPA believes the use removal criteria in § 131.10(g) have functioned reasonably well, questions have been raised about the applicability of specific section 131.10(g) criteria and the manner in which EPA interprets those criteria. EPA seeks comment on the use removal criteria. Are the six criteria sufficiently comprehensive or should other factors be considered as a basis for removing designated uses? Are the criteria too comprehensive and are certain of the criteria inappropriate as a basis for designated use removal? Is there a need to modify the existing criteria to more clearly address the full range of use removal issues that have developed since the regulation was originally published?

2. Even with the statements in the current regulation, questions have been raised about the minimum requirements of a use attainability analysis. Is there need for further clarification in guidance, policy or in the regulatory text on this issue?

3. Triennial review of UAA-based use designations that do not include section 101(a)(2) uses, are currently triggered only when new information becomes available. Should EPA require that States and Tribes specify procedures they will use in identifying what constitutes new information and thus when the review of the UAA-based use designations is required?

4. Although 40 CFR 131.10(g) requires an assessment of attainability before removal of any designated use, the regulatory language does not expressly require an analysis called a UAA as specified in 40 CFR 131.10(j) any time a State or Tribe seeks to designate a non section 101(a)(2) use. EPA, however, believes that the analysis under either provision is equivalent. Should the current regulation be revised to clarify that the UAA requirements apply to any ''downgrade'' of a use and not just the CWA Section 101(a)(2) uses? Can any needed clarification be achieved through guidance or policy? EPA would be interested in comments on factors to be considered in evaluating the attainability of non Section 101(a)(2) uses, such as water supply or agricultural uses which generally take place after the water is diverted from the natural water body.

5. How should the water quality standards regulation, guidance or policy be modified to provide more specificity on appropriate factors to consider in developing a use attainability analysis?

6. In order to ensure the present aquatic life use designation (or use subcategory) matches the attainable level of aquatic life use in a water body, should the water quality standards regulation, policy or guidance be modified to clarify that a periodic review of designated uses is required where a State or Tribe has designated only marginal or limited aquatic life uses?

7. Are changes needed in the water quality standards regulation, policy or EPA guidance to address whether, and under what circumstances, use attainability analyses may be used to justify a non-aquatic life use classification, given the broad range of aquatic communities that may exist?

d. Alternatives to ''Downgrade'' of the Designated Use. As discussed above, where a State or Tribe believes that a particular designated use is not attainable, States and Tribes have the option of refining a water body's designated use, for example by creating subcategories of the use and describing the use in more detail. A subcategory can, and may need to be, water body-specific if the State's or Tribe's use classification system is not sufficiently precise to accommodate the subcategory of designated use for the water body in question. States and Tribes also have the option of removing the designated use and replacing the removed use with a new one that, under the regulation, reflects attainable conditions in the water body. Use removal and to a lesser extent refinement are also commonly referred to as use ''downgrade.'' Both of these options, refinement and removal of the designated use, are not time-limited. That is, the designated use that results from exercising either of these options becomes the new goal use of the water body. In the following discussion, three alternatives to use downgrade that have been used by States are presented. They are variances, temporary standards, and ambient-based criteria. These alternatives are less ''draconian'' than use downgrading in the sense that they can provide adjustments to particular aspects of the standards—*i.e.*, to the criteria for particular pollutants or the criteria as applied to certain dischargers—without changing the designated use and the full suite of criteria to protect the designated use. EPA's current thinking is that often the attainable condition of particular water bodies is not well understood due to uncertainty about expected results of water quality improvement actions. In such situations, EPA believes it may be appropriate to implement water quality protection actions, assess the results of those actions, and implement additional measures where necessary to continue to improve water quality. EPA believes that iterative assessment and implementation in these types of situations is probably the best way to gain an understanding of the ultimate attainable condition of the water body. The mechanisms described below may be well-suited to this situation because they leave the designated use of the

water body, the ultimate goal, in place while providing a defined period of time (in the case of variances and temporary standards) to document, through implementation and assessment, the water quality improvements that are possible through various measures and thus, the attainability of the goal.

i. Variances. One option authorized under the regulation that is used by some States or Tribes is the water quality standard variance. A variance is a short-term exemption from meeting certain otherwise applicable water quality standards. EPA authorizes States and Tribes to include variances in their water quality standards. (see 40 CFR 131.13). Agency guidance on variances identifies what the Agency believes to be the essential elements of a variance:

—a variance should be granted only where there is a demonstration that one of the use removal factors (40 CFR 131.10(g)) has been satisfied;
—a variance is granted to an individual discharger for a specific pollutant(s) and does not otherwise modify the standards;
—a variance identifies and justifies the numerical criteria that will apply during the existence of the variance;
—a variance is established as close to the underlying numerical criteria as is possible;
—a variance is reviewed every three years, at a minimum, and extended only where the conditions for granting the variance still apply;
—upon expiration, of the variance, the underlying numerical criteria have full regulatory effect;
—a variance does not exempt the discharger from compliance with applicable technology or other water quality-based limits; and
—a variance does not affect effluent limitations for other dischargers.

With these safeguards in place, the principal difference between a variance and a downgrade of a designated use is that a variance is temporary. That is, when the variance expires, an affirmative showing would be needed to continue it, or the underlying standards are applicable. Because a variance is temporary, it actively supports the improved water quality goal, and it can, under appropriate circumstances serve as an environmentally preferable alternative to what otherwise might become a permanent change in a designated use.

Historically, the intent of the variance provision has been to: provide a mechanism by which permits can be written to meet a modified standard where discharger compliance with the underlying water quality standard is demonstrated to be infeasible within the meaning of § 131.10(g) at the present time (e.g., meeting the standard would cause substantial and widespread social and economic impact); encourage maintenance of original standards as goals rather than removing uses that may be ultimately attainable; and ensure the highest level of water quality achievable during the term of the variance.

EPA has approved State and Tribal use of variances when the individual variance is included in State or Tribal water quality standards, each variance is subject to the same public review as other changes in water quality standards, the State or Tribe demonstrates that meeting the standard is unattainable based on one or more of the grounds listed in 40 CFR 131.10(g) for removing a designated use, existing uses are protected, the variance secures the highest level of water quality attainable short of achieving the standard and the State or Tribe demonstrates that advanced treatment and alternative effluent control strategies have been considered (See 48 FR 51400, 51403 (Nov. 8, 1983); Water Quality Standards (WQS) Handbook at 5–12; Memorandum from EPA's Office of Water, ''Variances in Water Quality Standards,'' March 15, 1985; and Decision of the General Counsel No. 58, In Re Bethlehem Steel Corporation, March 29, 1977).

The Preamble to the 1983 water quality standards regulation revision suggested that substantial and widespread social and economic impact, the sixth element for use removal under § 131.10(g), is an important and appropriate test that, if met, could be used as the basis for granting a variance (see 48 *FR* 51403). Subsequently, on March 15, 1985, EPA issued further guidance on the conditions under which a variance might be granted. The 1985 EPA Office of Water guidance explained that it would be appropriate to grant short-term variances to individual dischargers based on any of the six factors for removing a designated use as listed at § 131.10(g). As variances represent a temporary downgrade in the water quality standards, EPA reasoned that more stringent treatment of variances than permanent downgrades would not be appropriate. In practice, however, the only factor that is commonly used to grant a discharger-specific variance is the economic test. The Office of Water guidance continued to interpret variances as being limited to individual dischargers.

In ''Guidance for State Implementation of Water Quality Standards for CWA Section 303(c)(2)(B)'' (December 1988; Notice of Availability published at 54 FR 346, January 5, 1989), EPA recommends that States and Tribes adopt a variance provision whenever adopting statewide or tribe-wide criteria for a large number of toxic pollutants for human health or aquatic life protection. The rationale behind this recommendation was to avoid unreasonable consequences from adopting State- or Reservation-wide criteria which could underestimate or overestimate the toxic potential of some pollutants in a specific water body.

The Water Quality Guidance for the Great Lakes System (Great Lakes Guidance) published March 1995 by EPA (56 FR 15366, March 23, 1995; 40 CFR section 132) contains provisions allowing for variances from water quality standards. Variances granted under the Great Lakes Guidance are pollutant-specific and point source-specific and are limited to five years or the term of the NPDES permit implementing the variance, whichever is less. Variances may be granted for any of the reasons listed at 40 CFR 131.10(g) for which a use downgrade may be considered. Like all revisions to State or Tribal water quality standards, EPA review and approval is required of any variance granted by a State or Tribe and variances may be renewed following the same procedure originally used for applying for a variance. Variances are also subject to review as part of a State's or Tribes triennial review of water quality standards. Multiple discharger variances (a variance that applies to multiple point sources discharging to the same water body) are also allowed under the Great Lakes Guidance. Variances granted under the Great Lakes Guidance provisions may not jeopardize the continued existence of any Federally listed threatened or endangered species. Further, under the Guidance, variances are not available for new or recommencing discharges. A recommencing discharge is a source that recommences discharge after terminating operations. (40 CFR 122.2).

The Great Lakes Guidance was developed in concert with many other provisions addressing designated uses, criteria, antidegradation and various implementation policies for the Great Lakes States and Tribes. Any evaluation of the level of protection afforded water quality under the Great Lakes Guidance variance procedures should be made in the context of the Great Lakes Guidance as a whole. Similarly, the water quality standards regulation is more than simply the sum of its parts. Any

approach to the implementation of water quality standards variances must be evaluated in the context of the entire regulation.

EPA is considering whether implementation of the variance provision has been a useful component of the water quality standards program, and the overall program for protection of water quality standards. In 1990, EPA conducted a survey of State variances and variance provisions (National Assessment of State Variance Procedures, Report, November 1990, Office of Water Regulations and Standards). This study showed that variances had been granted on a very limited basis. In fact, only 16 out of 57 States and Territories had granted variances and some of those had done so infrequently. EPA lacks detailed information on why variances are not being significantly utilized in most States and Tribes. EPA is interested in information regarding alternative mechanisms that are being used by States or Tribes in lieu of variances to provide necessary short term and temporary relief from applicable criteria, and how any alternative approaches address the feasibility of ultimately attaining the criteria associated with the underlying designated use.

EPA is considering whether it would be useful to include in the regulation more explicit language reflecting current EPA thinking and practice regarding variances. As explained above, in order to issue variances, States or Tribes must include variances as part of the State's or Tribe's water quality standards. EPA believes, however, that in some instances States may be misusing variances. For example, over the years, there have been instances where a State has improperly granted a ''variance'' from compliance with NPDES permit limits, failing to include these variances within the water quality standards themselves. There has also been some confusion regarding the necessity of formal adoption of individual variances into State and Tribal water quality standards and whether the public participation process associated with NPDES permit issuance sufficiently addresses those same needs for variance adoption. EPA is also considering whether to specify the degree to which individual dischargers must document the continued need for a variance before the variance can be renewed at each triennial review. EPA is considering whether the water quality standards regulation should provide more specific guidelines on the use and content of variance policies. EPA's current thinking is that the regulation may need to articulate certain aspects of variances more explicitly, including:

—explicit reference to the criteria listed in 40 CFR 131.10(g) as the criteria for granting a variance;
—explicit statement that the granting of a variance may not result in any loss or impairment of an existing use;
—explicit statement that before a variance can be granted, the applicant must provide documentation that treatment more advanced than that required by sections 303(c)(2)(A) and (B) of the CWA has been carefully considered, and that alternative effluent control strategies have been evaluated and reasonable progress is being made toward meeting the underlying or original standards;
—explicit statement requiring the highest level of water quality achievable under the relaxed, interim standard during the period of the variance.
—explicit statment that a variance shall not be granted if standards will be attained by implementing cost-effective and reasonable best management practices for nonpoint source control.

EPA believes that such a clarification of its policy regarding variances could serve to encourage proper use of variances by States and Tribes while at the same time reducing the possibility of inappropriate use.

ii. Temporary Standards. As indicated in the discussion on variances above, the 1985 EPA Office of Water guidance explained that it would be appropriate to grant short-term variances to individual dischargers based on *any* of the six factors for removing a designated use as listed at § 131.10(g). Of the six use removal factors, the first five address water quality and habitat features of the water body as a whole. These same factors are not, however, ideally suited to making decisions about the capabilities of individual dischargers. For example, it is not immediately clear how use removal factor five, ''physical conditions related to natural features of a water body * * * preclude attainment of a use'', could be applied to a decision about an individual discharger. On the other hand, the sixth factor, the substantial and widespread economic and social impact factor, is well suited to decisions about individual dischargers which explains why the economic hardship test has been historically applied in evaluating variances.

Several States have applied factors similar to the first five use removal factors in establishing variances for entire water body segments or portions of water body segments. These States sometimes refer to these as ''temporary standards'' or ''temporary modifications''. This has been done where the problems in a water body are significant and widespread, involving point and nonpoint sources of pollution and their impacts on water quality and habitat, that is waters significantly impaired by multiple sources and not just one or a few point sources. For example, where historic mining practices have severely impaired both water quality and habitat throughout a headwater basin, temporary standards have been used. Rather than downgrading these waters, the States have applied temporary standards with specific expiration dates for certain pollutants affected by the historic mining practices. In this way, the States have maintained designated uses and underlying criteria for other pollutants, while recognizing that existing ambient conditions for certain pollutants are not correctable in the short-term. In such cases, the temporary standards provide a basis for permit limits in the shorter-term. The temporary standards approach is then used by these States as the basis for remediation of damaged water resources because the underlying designated use and criteria to protect that use actively drive water quality improvements in the longer-term. EPA Regional Offices have approved the use of such temporary standards.

Temporary standards have been implemented to date with little specific Agency guidance on a water body approach to variances. EPA is considering whether the water quality standards regulation or guidance should specifically address temporary standards. EPA's current thinking is that if the regulation or Agency guidance were to specifically address temporary standards, such regulation or guidance would need to address certain relevant issues including: application criteria to be used in deciding which waters might qualify for temporary standards; a way of identifying the existing, impaired water quality conditions; a mechanism for specifying the water quality needed to fully attain the anticipated uses; and a plan and driving mechanism aimed at achieving needed water quality and habitat improvements to fully support compliance with the designated uses.

Where EPA has provided guidance to individual States on use of State temporary standards provisions, EPA has advised that any temporary standard should:

—be granted only where there is a demonstration that one of the use removal factors (40 CFR 131.10(g)(1) through (6) has been satisfied;

—be granted for a specific water body or portion of a specific water body as defined in State standards;
—identify and justify the numerical criteria that will apply during the existence of the temporary standard and identify a ''remediation plan'' aimed at compliance with the underlying designated uses and criteria;
—be established as close to the underlying numerical criteria as is possible;
—be reviewed every three years, at a minimum, and extended only where the conditions for granting the temporary standard still apply;
—be in effect only for the specified term of the temporary standard (or extension thereof), and upon expiration of the temporary standard, the underlying numerical criteria have full regulatory effect;
—not exempt any discharge to the water body from compliance with applicable technology or water quality-based limits (based on the temporary standards) or best management practices;
—not apply to any new discharger to the water body; and
—protect existing uses.

EPA is considering whether the use of temporary standards represents a viable alternative to use refinement or removal. EPA is also considering whether the regulation or guidance should explicitly address use of temporary standards, including specific limitations on the use of temporary standards like those listed above.

iii. Ambient-based Criteria. On a limited basis, States have developed and EPA has approved ''ambient-based criteria.'' These ambient-based criteria have been developed for specific water bodies and pollutants where such criteria are shown to protect the designated use and the existing use. EPA believes that ambient-based criteria can be preferable to a ''downgrade'' of a use because the underlying designated use is retained and because they may be limited to only a small subset of pollutants.

EPA has issued a policy memorandum concerning one type of ambient-based criteria, site-specific criteria for aquatic life protection that are based on natural conditions. (See Memorandum from Tudor T. Davies, Director Office of Science and Technology, Subject: Establishing Site-Specific Aquatic Life Criteria Equal to Natural Background, November 5, 1997.) This policy states that States and Tribes may establish site-specific aquatic life criteria equal to natural background conditions, but such criteria must be scientifically defensible. Additionally, the State's or Tribe's water quality standards should contain or provide specific authority for site-specific criteria based on natural background. States and Tribes should also identify procedures for determining natural background. EPA's current policy also states that the State or Tribal procedure for determining natural background needs to be specific enough to establish natural background concentration accurately and reproducibly. States and Tribes should also provide for public notice and comment on the provision, the procedure and the site-specific application of the procedure. The States or Tribes will also need to document the resulting site-specific criteria in its water quality standards, including specifying the water body segment the site-specific criterion applies to. This can be accomplished through adopting the site-specific criteria into the State and Tribal water quality standards, or, alternatively by appending the site-specific criteria to the water quality standards.

In addition, a second approach that some States have used and EPA has approved is where the State or Tribe could have met the test for downgrading a use under 40 CFR 131.10(g)(3) *i.e.*, ''Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place'', but instead of downgrading the use, the State or Tribe established certain criteria based on ambient conditions where those ambient conditions were shown to be irreversible. In addition to assuring that the existing use is protected, EPA is interested in assuring that where the ambient concentration of a pollutant cannot be improved, *i.e.*, it is irreversible, that such condition be maintained and not made worse. When this occurs, EPA believes that for other pollutants in the same water body for which applicable criteria are being or can be met, those criteria should remain in place and not be made less protective via a use downgrade. EPA's current thinking is that the ambient-based criteria need to be the best attainable. In addition, EPA's current thinking is that in order to establish ambient-based criteria, the State or Tribe should conduct an analysis equivalent to a use attainability analysis for a downgrade that should include a thorough description of the biota that will be protected via applicable water quality criteria (both the unchanged pre-existing criteria and the ambient-based criteria).

EPA is interested in hearing comments regarding these ambient-based criteria mechanisms, and specifically whether the regulation should discuss these mechanisms more specifically, and whether the regulation should be more explicit about the biological evaluation necessary to describe the aquatic life use being protected. EPA is also interested in comments on whether the other relief mechanisms based on the § 131.10(g) reasons, such as variances and temporary standards, should also require criteria which reflect the best attainable conditions.

Request for Comments on Alternatives to Downgrading a Designated Use

EPA seeks comment on the following questions:

1. EPA requests comment on whether variances, temporary standards and/or ambient-based criteria can under certain circumstances offer an environmentally preferable alternative to refinement or removal (downgrade) of the designated use? Under what circumstances?

2. Does the current water quality standards regulation or Agency guidance or policy discourage persons from seeking variances and/or discourage States and Tribes from granting variances (including temporary standards)? What components of the procedures are most problematic?

3. Reflecting EPA's current interpretation of the regulation, should the regulation make explicit that individual variances and temporary standards must be documented in a State's or Tribe's water quality standards before implementation as part of NPDES permits?

4. Reflecting EPA's current interpretation of the CWA and the regulation, should the regulation contain express reference to the factors listed in 40 CFR 131.10(g) as the criteria under which a variance (including temporary standards) from water quality standards will be allowed? Should any of these factors be deleted? Should any new factors be added?

5. Reflecting EPA's current interpretation of the CWA and the regulation regarding existing uses, should the variance portion of the regulation at 40 CFR 131.13 underscore that the granting of a variance must not result in any loss or impairment of an existing use, for example by cross-referencing the requirement at 40 CFR 131.12(a)(1) that existing uses must be protected?

6. To reflect current practice and EPA guidance, should the regulation be

amended to require documentation by either the applicant or the State or Tribe demonstrating that treatment more advanced than that required by sections 303(c)(2)(A) and (B) of the CWA has been carefully considered, and that alternative effluent control strategies have been evaluated and reasonable progress is being made toward meeting the underlying or original standards?

7. Should the regulation require that States and Tribes document in their water quality standards the criteria that are applicable to the water body or segment thereof during the period of a variance or temporary standards?

8. Should the regulation discuss ambient-based criteria mechanisms more specifically?

9. Should the regulation be more explicit about the biological evaluation necessary to describe the aquatic life use being protected where ambient-based criteria are used?

10. EPA is also interested in comments on whether the other relief mechanisms based on the § 131.10(g) reasons, such as variances and temporary standards, should in the regulation, expressly be required to require criteria which reflect the best attainable conditions?

11. Do the alternatives to use removal help address pulsed or intermittent impacts, such as those from urban and rural runoff?

C. Criteria

The following section discusses water quality criteria in the water quality standards programs. EPA is considering the implementation of and effectiveness of different types of criteria and on the desirability of changes to the water quality standards regulation as it pertains to criteria. The scope of the criteria section includes all Clean Water Act criteria for which EPA has issued national criteria guidance, and several types of criteria for which there is no national criteria guidance but where criteria guidance and policy are being contemplated.

1. Background

Water quality criteria are levels of individual pollutants or water quality characteristics, or descriptions of conditions of a water body that, if met, will generally protect the designated use of the water. EPA, under section 304(a) of the Act, periodically publishes recommendations (guidance) for use by States and Tribes to set water quality criteria. Water quality criteria are developed to protect aquatic life and human health, and in some cases wildlife, from the deleterious effects of pollutants and other effects of pollution. There are three principal categories of water quality criteria: criteria to protect human health, criteria to protect aquatic life, and criteria to protect wildlife. Within these broad categories, there are different types of criteria, for example within the human health category, there are chemical-specific and microbiological criteria. Within the aquatic life category, there are chemical-specific criteria, toxicity criteria, biological criteria, sediment criteria and physical criteria such as habitat and flow balance. These criteria may be expressed in either narrative or numeric forms. Many of these criteria may be developed to apply generally, or they may be developed to apply to site-specific situations. The CWA section 303(a)–(c) requires all States, and any Tribe that has water quality program authority, to evaluate the need for water quality criteria to protect a designated use and then adopt water quality criteria (either EPA's or its own) sufficient to protect uses designated for State or Tribal waters. Economic and technological factors (e.g., the ability of analytical techniques to detect the pollutant and treatment cost considerations) may not be used to justify adoption of criteria that do not protect the designated use.

Narrative criteria are descriptions of conditions necessary for the water body to attain its designated use. Often expressed as ''free from'' certain characteristics, narrative criteria can be the basis for controlling nuisance conditions, e.g. floating debris or objectionable deposits. Narrative criteria are often the basis for limiting toxicity in discharges. States and Tribes establish narrative criteria where numeric criteria cannot be established or to supplement numeric criteria under 40 CFR 131.11(b)(2). When a water body is classified for more than one use, criteria necessary to protect the most sensitive use must be applied to the water body. 40 CFR 131.11(a).

CWA section 304(a) directs EPA to develop criteria guidance. These criteria recommendations assist States and Tribes in developing water quality standards. The AWQC are published pursuant to Section 304(a)(1) of the CWA which states:

> The Administrator * * * shall develop and publish * * * (and from time to time thereafter revise) criteria for water quality accurately reflecting the latest scientific knowledge (A) on the kind and extent of all identifiable effects on health and welfare including, but not limited to, plankton, fish, shellfish, wildlife, plant life, shorelines, beaches, esthetics, and recreation which may be expected from the presence of pollutants in any body of water, including ground water; (B) on the concentration and dispersal of pollutants, or their byproducts, through biological, physical, and chemical processes; and (C) on the effects of pollutants on the biological community diversity, productivity, and stability, including information on the factors affecting rates of eutrophication and rates of organic and inorganic sedimentation for varying types of receiving waters.

Pursuant to section 304(a), EPA has developed to date, aquatic life criteria guidance for 31 chemicals and human health criteria guidance for 100 chemicals. For the most part, States and Tribes have found such EPA criteria guidance useful in setting standards to protect designated uses. Since 1980, most States and Tribes have adopted at least some of the criteria guidance published by EPA pursuant to CWA section 304(a). However, EPA's resources available to develop criteria guidance are limited. Thus, there are cases where the scientific information or data necessary to develop criteria exist but EPA has been unable to establish section 304(a) criteria guidance.

States and Tribes may establish numeric criteria using CWA section 304(a) criteria guidance, section 304(a) criteria guidance modified to reflect site-specific conditions, or other scientifically defensible methods. 40 CFR 131.11(b)(1). There are situations where EPA relies on the 304(a) criteria guidance when promulgating replacement standards for a State or Tribe pursuant to section 303(c). EPA promulgation of 304(a) criteria for States or Tribes is discussed in more detail below.

Numeric criteria are values expressed as levels, concentrations, toxicity units, or other numbers deemed necessary to protect designated uses. Water quality criteria developed under Section 304(a) are based solely on data and scientific judgments on the relationship between pollutant concentrations and environmental and human health effects. EPA criteria under section 304(a) do not reflect consideration of economic impacts or the technological feasibility of meeting the chemical concentrations in ambient water. As discussed below, 304(a) criteria are used by States and Tribes to establish water quality standards, and ultimately provide a basis for controlling discharges or releases of pollutants.

Numeric criteria are important because they provide a proven effective basis for implementation of the CWA. For example, these criteria often form the basis for NPDES water quality-based permit limits for point source dischargers and for establishing TMDLs for a water body as a whole. Numeric criteria can also be useful in assessing

and managing nonpoint source pollution problems.

The Act uses the term ''criteria'' in two separate ways. In section 303(c), the term is part of the definition of a water quality standard. That is, a water quality standard is comprised of designated uses, and the criteria necessary to protect those uses. Thus, States and Tribes are required to adopt regulations that contain legally enforceable criteria. However, in section 304(a) the term ''criteria'' is used in the scientific sense. That is, under section 304(a), EPA develops scientifically sound criteria guidance which may form the basis for State, Tribal or Federal adoption of water quality standards pursuant to section 303(c). Thus, two distinct purposes are served by the section 304(a) criteria. The first is as guidance to the States and Tribes in the development and adoption of water quality criteria that will protect designated uses, and the second is as the basis for promulgation of legally enforceable water quality criteria by the State or Tribe, or via a superseding Federal rule when such action is necessary.

As with all science, new information leads to new insights concerning pollutant impacts on water quality. This ongoing evolution affects two important and inter-related responsibilities of the Agency, which are carried out concurrently. First, from time to time EPA revises the 304(a) water quality criteria to reflect the latest data and advances in criteria science. EPA compiles the current water quality criteria guidance from time to time in a series of guidance documents: the Green Book in 1968, the Blue Book in 1972, the Red Book in 1976, and the Gold Book in 1986. The second responsibility pertains to the requirements of section 303(c).

As part of the water quality standards triennial review process defined in section 303(c)(1), the States and Tribes are responsible for maintaining and revising water quality standards. Section 303(c)(1) requires States and Tribes to review, and modify if appropriate, their water quality standards at least once every three years. If EPA determines that a new or revised standard is not consistent with the requirements of the CWA, or EPA determines that a revised standard is necessary to meet the requirements of the Act, Section 303(c)(4) authorizes EPA to promulgate replacement water quality standards. From time to time EPA has chosen to undertake such promulgations. In doing so, EPA considers the most current available scientific information, such as toxicity data and exposure assumptions.

With a number of Federal promulgations of water quality criteria under section 303(c)(4) occurring over time, or the publication of a new or revised 304(a) criteria guidance document, the criteria value(s) in an earlier Federal action may differ from the value(s) in a subsequent Federal action. This has led to some confusion among the public with regard to what EPA's current section 304(a) water quality criteria may be for a given chemical at any given time, and, what values EPA would promulgate for a State or Tribe under section 303(c). Currently, EPA interprets the most recent Federal action, whether taken pursuant to 303(c) or 304(a), as establishing the current section 304(a) criteria guidance. When EPA determines that a Federal rule is necessary to correct deficiencies in State criteria, EPA looks to the most recent criteria science, as articulated in either section 304(a) criteria guidance or EPA's most recent statement contained in a proposed or final section 303(c) rule.

To date, the most recent Federal recalculation of section 304(a) criteria occurred in the proposed California Toxics Rule (CTR)(62 FR 42160), July 30, 1997. The proposed CTR was undertaken pursuant to CWA section 303(c)(2)(B). In the Water Quality Act of 1987, Congress increased the emphasis on numeric criteria for toxic pollutants by enacting section 303(c)(2)(B). This section requires all States and any Tribe with water quality standards authority to adopt ambient water quality criteria for toxics (priority pollutants) for which EPA has published criteria under section 304(a), and for which the discharge or presence could reasonably be expected to interfere with the designated use adopted by the State or Tribe. In adopting such criteria, States and Tribes must establish numerical values based on: (1) 304(a) criteria; (2) 304(a) criteria modified to reflect site-specific conditions; or, (3) other scientifically defensible methods.

Again, EPA views the criteria program as constantly evolving. Whenever new or revised criteria are published, whether under 304(a) or a rule under 303(c), that action establishes the Agency's most current section 304(a) criteria guidance.

Whenever a State or Tribe revises its water quality criteria EPA compares the State criteria values and the basis of their derivation to the criteria contained in the most recent Federal action (either 303(c)(4) rule making or 304(a) criteria guidance publication). Thus, there may be cases where the applicable policies and science have evolved such that EPA would be comparing State or Tribe adopted criteria values to Federal criteria values other than those in older rules or criteria guidance to determine whether to approve the State's or Tribes's criteria. This approach is necessary to encourage State and Tribal adoption of the most recent section 304(a) criteria.

2. Ambient Water Quality Criteria to Protect Aquatic Life

Aquatic life criteria are scientifically-derived values, derived by States, Tribes, or EPA, to protect aquatic life from the deleterious effects of pollutants in ambient water. States and Tribes may use EPA's section 304(a) criteria guidance in developing such criteria. When developing numeric aquatic life criteria, States and Tribes usually express two concentrations; one that protects against acute effects (effects from short term exposure) and one that protects against chronic effects (effects from long term exposure). The short-term concentration is expressed as a Criterion Maximum Concentration (CMC) and is the highest ambient concentration of a toxicant to which aquatic organisms may be exposed for a short time period without causing an unacceptable effect. The long-term concentration is expressed as a Criterion Continuous Concentration (CCC) and is the highest ambient concentration of a toxicant to which aquatic organisms can be continuously exposed without causing an unacceptable effect.

Water quality criteria to protect aquatic life consist of three components—magnitude, duration and frequency. Magnitude refers to the acceptable concentration of a pollutant. Duration is the period of time (averaging period) over which the ambient concentration is averaged for comparison with criteria concentrations. Frequency is how often the criteria can be exceeded to allow the aquatic community sufficient time to recover from excursions of aquatic life criteria and to thrive after recovery.

The numerical aquatic life criteria are expressed as short-term and long-term concentrations in order that the criteria more accurately reflect toxicological and practical realities. The combination of a Criterion Maximum Concentration (CMC), over a one-hour acute duration (a short-term average acute limit), and a Criterion Continuous Concentration (CCC), over a four-day chronic duration (a long-term average chronic limit) provide protection of aquatic life and its uses. Recommended averaging periods are kept relatively short because excursions higher than the average can

kill or cause substantial damage in short periods.

The frequency limitations specify that both the acute and chronic criteria may be exceeded once in a three-year period on the average. The recommended once in a three-year period coupled with the 4-day chronic averaging period used for the CCC approximately corresponds to the historically used criterion concentrations that occurs in a once-in-ten year seven-day-average low flow (7Q10). The once-in-three-year period coupled with the one-hour acute averaging period used for the CMC approximately corresponds to the historically used criterion concentration that occurs in a once-in-ten year one-day-average low flow (1Q10)

The method by which EPA derives criteria is updated from time to time, to incorporate advances in the science. To overcome the limitations in the previous approaches to duration and frequency, a new risk assessment methodology is being developed. EPA expects that the new risk assessment methodology will include an approach that will better handle variable concentrations by use of a kinetic-based toxicity model coupled with a population response model. A kinetic-based toxicity model considers the speed at which effects appear in different individuals and at different concentrations. The kinetic-based model allows prediction of the toxicity of any series of time-variable concentrations. It can predict how often effects would occur, and what fraction of individuals in the species would be affected.

To weigh the full impact that a particular time series of concentrations would have on the exposed population of a species, an additional factor is being considered: how long it takes to replace those individuals lost due to the toxic effects. Consideration of this involves the use of a population model indicating rates of recovery of different taxonomic groups to stresses. The intent of this part of the derivation is to allow the toxic impact to be portrayed as the overall average reduction in the number of individuals in a species, both during lethal or sublethal periods and during recovery periods, accounting for both partial lethality and partial recovery.

Request for public comment on Aquatic Life Criteria

EPA requests comments on the following question:

1. Prior to completion of all of the aquatic life methodology revisions, should EPA use the tools that have thus far been developed (the kinetic model of individual organism response to derive the appropriate duration/averaging period of the criterion or to evaluate mixing zone alternatives and the population effects model to derive the allowable frequency of excursion above the criterion) to re-examine and possibly revise its recommendations on the duration and frequency of criteria excursions?

3. Site-Specific Criteria

EPA also provides guidance on how States and Tribes may develop site-specific numeric aquatic life criteria that are either more or less stringent than the criteria adopted by the State or Tribe and that would normally apply to a water body. Currently, national guidance only has recommendations and methods for establishing site-specific water quality criteria for aquatic life but guidance is under development for deriving site-specific sediment quality criteria as well.

The regulation currently specifies that States and Tribes may adopt numeric criteria based on published CWA section 304(a) guidance, section 304(a) guidance modified to reflect site-specific conditions, or other scientifically defensible methods. 40 CFR 131.11(b). EPA recognizes that States and Tribes may want to develop numeric criteria that vary from CWA section 304(a) guidance for specific waters (e.g., where chemical and physical characteristics of local waters alter the bioavailability and/or toxicity of a pollutant; or when the species or community actually present or desired may be more or less sensitive than the species or community represented by the criteria database.) In such situations, a site-specific criterion may be appropriate. EPA has developed and continues to develop guidance to assist States and Tribes in the development of site-specific criteria. (See *Water Quality Standards Handbook, Second Edition,* EPA 823–B–94–005a, August, 1994, pp 3–38 through 3–45 and documents cited therein.)

Site-specific criteria are allowed by regulation and must be submitted to EPA for review and approval, as are any changes to a WQS. The regulation at 40 CFR 131.11(b)(1) specifically provides States and authorized Tribes with the opportunity to adopt water quality criteria that are ''* * * modified to reflect site specific conditions.'' Under 40 CFR 131.5(a)(2), EPA reviews State and Tribal standards to determine ''whether a State has adopted criteria to protect the designated uses'' and whether such criteria are scientifically defensible (40 CFR 131.11(b)).

Existing guidance and practice are that EPA will approve site-specific criteria developed on the basis of sound scientific rationales.

Currently, EPA has specified three scientifically defensible procedures that States and Tribes may follow in deriving site-specific aquatic life criteria. These are the Recalculation Procedure, the Water-Effect Ratio Procedure and the Resident Species Procedure. These procedures can be found in the Water *Quality Standards Handbook* (USEPA, 1994). States may also develop other procedures for deriving such criteria as long as they are scientifically defensible. EPA also recognizes there may be naturally occurring concentrations of pollutants that may exceed the national criteria guidance published under Section 304(a) of the Clean Water Act.

The Great Lakes Guidance contains a procedure for developing site-specific criteria for protection of wildlife. While the Great Lakes States and Tribes must adopt a procedure consistent with that procedure, other States and Tribes may derive site-specific criteria using the procedure in the Great Lakes Guidance and such criteria can be more or less stringent than the applicable wildlife criteria where scientifically defensible. This is most likely to be in cases where a site-specific Bioaccumulation Factor (BAF) has been developed.

The Great Lakes Guidance also provides a procedure for modifying human health criteria on a site-specific basis based on differences in fish consumption or BAF. With regard to aquatic life criteria, if a State or Tribe could demonstrate that physical or hydrological conditions preclude aquatic life from remaining at a site for a period of time in which acute or chronic effects may occur, less stringent site-specific aquatic life criteria are allowed.

EPA's current thinking is that States and Tribes should identify in their water quality standards the methods they intend to use for site-specific criteria development and generally the circumstances under which such criteria may be developed. Additional discussion and request for comment on emerging rationales and methods for site-specific criteria, beyond that described and referenced above, is contained in section B.4.d of this notice, entitled ''Alternatives to Removal of the Designated Use.''

Request for Comments on Site-Specific Criteria

EPA seeks public comment on the following questions:

1. Should the regulation be modified to require States and Tribes to specifically authorize and identify the procedures for developing site-specific water quality criteria? Would additional EPA guidance be necessary?

2. Should the regulation or EPA guidance specify the circumstances under which site-specific criteria are necessary?

3. Does EPA need to develop guidance, policy, or clarify the regulation regarding site-specific criteria based on ambient conditions?

4. Should EPA explore broadening the concept of site-specific criteria to include watershed-specific or ecosystem-specific criteria perhaps in conjunction with a refined use designation? If so, what type of additional guidance or policy is necessary to fully explain these concepts and are any changes to the regulation needed to enable and/or facilitate use of watershed or ecosystem-specific criteria?

4. Narrative Water Quality Criteria

Narrative criteria can be an effective tool for controlling the discharge of pollutants when numeric criteria are not available. Narrative criteria, which have become known as ''free froms'', were first developed in 1968 and continue to be used in State and Tribal water quality standards. EPA guidance explains that these ''free froms'' apply to all waters of the United States at all flow conditions (including ephemeral and intermittent streams) (see *Water Quality Standards Handbook: Second Edition* (EPA–823-B–94–006, August 1994). Narrative 'free from' criteria guidance indicates that all waters be free from substances, for example, that (a) cause toxicity to aquatic life or human health, (b) settle to form objectionable deposits, (c) float as debris, oil, scum and other materials in concentrations that form nuisances, (d) produce objectionable color, odor, taste or turbidity, or (e) produce undesirable aquatic life or result in the dominance of nuisance species.

The toxic ''free froms'' include protection from both chronic and acute toxicity and include all pollutants which cause toxic effects, including but not limited to those listed under Section 307(a) if necessary to protect the designated use. All States have adopted narrative water quality criteria pursuant to section 303(c). See 48 FR 51400–51402, November 8, 1983. EPA guidance interprets these ''free froms,'' as with all criteria, to apply to the ambient water quality, not distinguishing between point sources and nonpoint sources of toxicity.

Currently, 40 CFR 131.11(a)(2) of the water quality standards regulation requires States and Tribes that have established narrative criteria for toxic pollutants to identify the methods by which the State or Tribe intends to regulate point source discharges of toxic pollutants based on such narrative criteria. EPA regulations at 40 CFR 122.44(d)(1)(v) and (vi) require narrative criteria to be implemented through NPDES permit limits. More specifically, when the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion, the permit must, under most circumstances, contain effluent limits for whole effluent toxicity. In addition, where the permitting authority determines that a specific pollutant for which the State or Tribe has not adopted a chemical criterion is in a discharge in an amount that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion, the permit must contain effluent limits for that pollutant that are based on an interpretation of the State's or Tribe's narrative criterion. The regulation provides three options for interpreting the narrative criterion, and in addition, EPA has provided guidance on this requirement in both the Technical Support Document for Water Quality-Based Toxics Control and the Water Quality Standards Handbook (both Cited above). The guidance advises States and Tribes to develop implementation procedures that explain the application and integration of all mechanisms used by the State or Tribe to ensure that narrative criteria are attained (e.g., chemical-specific requirements, whole effluent toxicity requirements, and biological criteria, where biological criteria programs have been developed by the State or Tribe). The rationale for this approach is that comprehensive written procedures facilitate implementation decisions, reduce inconsistencies that can result in different requirements for similar situations, and promote effective and sensible application of narrative toxics criteria.

Although all States and Tribes have some type of customary practice for implementing narrative criteria, and many States and Tribes have developed implementation policies on narrowly defined topics (e.g., to explain application of whole effluent toxicity testing requirements), very few, if any, States and Tribes have developed comprehensive written implementation procedures that address all of the narrative toxics criteria implementation issues. The result may be inconsistent application of narrative toxics requirements within those States and Tribes that have not developed such procedures. In addition, the lack of documented methods makes it difficult for EPA to evaluate whether aquatic life and or human health is being adequately protected.

Request for Comments on Narrative Criteria

EPA seeks public comment on the following questions:

1. Should the regulation require adoption of ''free froms'' and similar criteria as being the minimum floor allowable under the Clean Water Act.

2. Reflecting current practice, should the regulation specify that States and Tribes are required to adopt narrative criteria for all waters?

3. At this time, EPA has limited information about how States and Tribes are implementing narrative criteria with regard to nonpoint source activities. How can narrative criteria best be implemented in the nonpoint source context and what might EPA do, including modifying the regulation, to enhance or further the use of narrative criteria?

4. Does the existing requirement for States and Tribes to identify methods for implementing narrative toxics criteria need to be clarified, and if so, should EPA clarify the requirement with additional guidance, or with revisions to the regulation?

5. What minimum elements should be included in an implementation method for narrative toxics criteria? Should implementation methods describe application and integration of all of the various mechanisms used to regulate point sources, or should such methods focus on only certain aspects of toxics control (e.g., chemical-specific limits, whole effluent toxicity limits)?

6. The current regulation requires the State or Tribe to identify the method by which the State or Tribe intends to regulate point source discharges of toxic pollutants on water quality limited segments based on such narrative criteria.

Should this narrative criteria translation method apply only to point source discharges of toxic pollutants on water quality limited segments or to both point and non-point sources?

7. Should the regulation more explicitly require implementation procedures for narrative criteria other than toxics criteria? Should the regulation include minimum requirements for these implementation procedures?

5. State or Tribe Derived Criteria

States and Tribes may develop their own criteria although the water quality standards regulation 40 CFR 131.11 provides that where such criteria are less stringent than 304(a) criteria

guidance, the State or Tribe must demonstrate the criteria are scientifically defensible. Despite this available flexibility, and for a variety of reasons, most States and Tribes are reluctant to derive their own criteria. EPA is evaluating whether either changes to the water quality standards regulation or development of additional guidance would assist State or Tribal efforts to develop protective criteria. For example, for many pollutants where EPA criteria guidance has not been issued, information is available which would be useful in determining a protective water quality criterion. Sources of such information include relevant scientific literature, EPA's Integrated Risk Information System (IRIS), EPA's Aquatic Toxicity Database (AQUIRE), a database of high quality aquatic life toxicity data (under development), and other sources.

Request for Comment on State or Tribal Derived Criteria

EPA requests comment on the following question:

1. Would changes to the water quality standards regulation or development of additional guidance assist State or Tribal efforts to derive criteria? What changes or guidance would be most helpful?

6. Water Quality Criteria for Priority Pollutants

EPA has not revised the water quality standards regulation to incorporate CWA section 303(c)(2)(B) which was added to the CWA in 1987. EPA has, however, issued guidance on how States and Tribes may comply with section 303(c)(2)(B). The ''Guidance for State Implementation of Water Quality Standards for CWA Section 303(c)(2)(B):December, 1988'' provides three options for compliance:

Option 1 States and Tribes may adopt Statewide or Reservation-wide numeric chemical-specific criteria for all priority toxic pollutants where EPA has issued CWA section 304(a) criteria guidance.

Option 2 States and Tribes may adopt numeric chemical-specific criteria for those stream segments where the State or Tribe determines that the priority toxic pollutants for which EPA has issued CWA section 304(a) criteria guidance are present and can reasonably be expected to interfere with designated uses.

Option 3 States or Tribes may adopt a chemical-specific translator procedure that can be used to develop numeric criteria as needed.

The phrase ''translator procedure'' in this context means a method for translating a State's or Tribe's narrative toxics criterion into chemical-specific, numeric criteria sufficient to comply with CWA section 303(c)(2)(B). As discussed in EPA guidance (''Guidance for State Implementation of Water Quality Standards for CWA Section 303(c)(2)(B),'' December 1988, Notice of Availability at 54 FR 346, January 5, 1989), such translator procedures generally identify the equations, protocols, and data sources that are used to translate narrative criteria into derived chemical-specific criteria. Such translator procedures are different from the narrative criteria implementation procedures required in 40 CFR 131.11(a)(2) of the water quality standards regulation in that such implementation procedures must be adopted into the State's or Tribe's regulations and generally describe all mechanisms that are used and integrated to attain narrative criteria, including chemical-specific, whole effluent toxicity, and biological methods (see the discussion of narrative criteria implementation procedures in sub-section (c)(6) above). EPA believes that revisions to the water quality standards regulation to incorporate the CWA section 303(c)(2)(B) requirements would enhance public understanding of EPA's implementation of the provision.

EPA's guidance on CWA section 303(c)(2)(B) established a presumption that any information indicating that such pollutants are discharged or present in surface waters (now or in the future) may be considered sufficient justification to require adoption or derivation of numeric criteria. The guidance made clear that the requirement to adopt (or derive) criteria applies not just to pollutants that are already affecting surface waters, but also to pollutants that have the potential to affect surface waters in the future. The rationale for this approach is that it is important to have numeric criteria applied to waters where current or future activities may result in sources of priority toxics that warrant regulatory controls or other pollution abatement or assessment activities. This interpretation of section 303(c)(2)(B) is now reflected in EPA guidance included in the *Technical Support Document (TSD) for Water Quality-Based Toxics Control* (TSD) and the *Water Quality Standards Handbook* (see page 30 in the TSD).

In implementing CWA section 303(c)(2)(B), many States and Tribes have adopted statewide or reservation-wide criteria for all priority toxics where EPA has issued CWA section 304(a) criteria guidance. Taking this approach eliminates the need to determine whether a ''reasonable expectation'' for use interference exists on a water body-by-water body basis, and thus greatly simplifies the process for establishing numeric criteria for priority toxics. In other States and Tribes, however, broad application of numeric criteria for priority toxics has not occurred, and the ''reasonable expectation'' question has been a significant implementation issue. EPA is considering whether its existing guidance on this issue is adequate to support equitable decisions nationally.

Another issue stemming from CWA section 303(c)(2)(B) implementation concerns the State or Tribe option to develop a ''translator procedure'' to achieve compliance. In EPA's CWA section 303(c)(2)(B) guidance, this approach was described as Option 3. The guidance intended to be used are the 1980 Human Health Guidelines and 1985 Aquatic Life Guidelines. All of which have been both peer reviewed and publicly reviewed and thus meet the requirements of ''scientific defensibility'' under 40 CFR 131.11.

Although EPA believes that adoption of such chemical-specific translator procedures potentially provide a State or Tribe with a useful means of establishing criteria, there are several issues associated with the use of such procedures. For example:

(1) It may be difficult for the public to stay abreast of the current applicable criteria where a State or Tribe does not routinely publish an updated list of State or Tribe criteria and provide wide distribution.

(2) Public participation may occur primarily on the details of the procedure itself, rather than the pollutant-specific criteria resulting from application of the procedure.

(3) Without requirements to submit to EPA for review and approval the individual criteria generated using the translator procedure, there could be a tendency to not include such criteria in the State's or Tribe's water quality standards at the time they are generated.

A third issue that arises from State and Tribal efforts to implement CWA section 303(c)(2)(B) concerns the provision for priority toxic pollutants that are not the subject of CWA section 304(a) criteria guidance. Where such numeric criteria guidance is not available, and where necessary to protect the designated uses, CWA section 303(c)(2)(B) provides that when a State or Tribe (1) reviews Water Quality Standards or (2) revises or adopts new standards pursuant to this paragraph, States and Tribes are to adopt criteria based on biological monitoring or assessment methods.

When adopting criteria based on biological monitoring or assessment methods, States and Tribes currently

have considerable latitude to devise an approach to satisfy the requirement. For example, States and Tribes may establish ambient criteria for the parameter toxicity. Alternatively, States and Tribes could adopt narrative biological criteria. Clearly, a variety of approaches, representing a range of resource commitments, may be used to satisfy this requirement. All of these approaches must meet the test of ''scientific defensibility'' and be consistent with the goals of the CWA.

Request for Comments on Water Quality Criteria for Priority Pollutants

EPA seeks public comment on the following questions:

1. With regard to compliance with section CWA section 303(c)(2)(B), would it be better to include only a general requirement, such as one which repeats the language in the statute itself, or should the regulation reflect EPA's interpretation of the options to achieve compliance with the provision?

2. Have problems or issues arisen in the implementation of CWA section 303(c)(2)(B) that may need to be addressed by changes in the regulation or revised EPA guidance?

3. What factors should be considered in determining whether a ''reasonable expectation'' for use interference exists? How has the ''reasonable expectation'' threshold decision been interpreted and addressed by the States or Tribes? Does EPA need to clarify when a ''reasonable expectation'' for use interference exists, and if so, should the Agency clarify the requirement by issuing additional guidance, by issuing regulatory requirements, or a combination of the two approaches?

4. Where a State or Tribe adopts a chemical-specific translator procedure for derivation of numeric criteria, what process should the State or Tribe follow to ensure that notice of State derived criteria is provided to the public?

5. Should EPA require States or Tribes using translator procedures to publish an updated list of criteria for all water bodies?

6. Should EPA revise the regulation to explicitly require that, where a translator procedure is used to derive criteria, public participation is required for each individual criterion, even where an opportunity for public participation was previously provided when the procedure itself was adopted?

7. Should submission of each criterion derived using translator mechanisms for review and approval or disapproval be a requirement, even where EPA previously reviewed and approved the procedure itself? If so, should implementation of derived criteria (e.g., in NPDES permit renewal and development) proceed even where EPA has not yet issued an approval/disapproval decision?

8. Does this statutory provision need to be further clarified and interpreted by the Agency? Should changes to the water quality standards regulation or Agency guidance be pursued?

7. Criteria for Non-Priority Pollutants with Toxic Effects

Over the years, an issue which has periodically arisen, particularly for non-priority pollutants, has been the proper approach to identifying the circumstances for which adoption of numeric criteria is required. Currently, the regulation does not elaborate on how this question should be addressed; it only provides the general mandate to adopt criteria ''sufficient to protect uses.''

EPA's current thinking is that the regulation should probably be modified to further specify the circumstances under which numeric criteria for non-priority pollutants must be adopted. One approach would be to model the requirements for non-priority pollutants after the requirements included in CWA section 303(c)(2)(B) for priority pollutants. That is, for non-priority pollutants where EPA has issued criteria guidance, the regulation could require adoption of numeric chemical-specific criteria where the discharge or presence of the pollutant can reasonably be expected to interfere with designated uses. EPA could define ''reasonable expectation'' broadly to support adoption of criteria before new pollution sources are proposed, or more narrowly for non-priority pollutants, limiting such a requirement for adoption of criteria to only those water bodies and pollutants where uses are already being interfered with, or where pollution sources now exist or are certain to occur in the near future. Establishing Such a requirement would encourage development of criteria for commonly-discharged and highly toxic pollutants like ammonia and chlorine that are currently not considered priority pollutants under section 307(a) of the CWA.

Strengthening the requirements for adoption of criteria for non-priority pollutants would address a concern of some that many of the CWA section 307(a) priority pollutants are no longer an appropriate focal point for State, Tribe and EPA toxic control efforts (e.g., some of the pesticides included on that list are no longer in widespread use).

Request for Comments on Criteria for Non-Priority Pollutants With Toxic Effects

EPA seeks public comment on the following questions:

1. For what specific pollutants and under what circumstances should adoption of criteria for non-priority pollutants be required by regulation?

2. Should EPA amend the water quality standards regulation or issue additional guidance to clarify when adoption of numeric chemical-specific criteria for non priority pollutants is necessary to ''protect designated uses''?

3. Should EPA require States or Tribes to adopt narrative criteria and a narrative criteria translation method for both 307(a) and other pollutants which elicit toxic effects on organisms?

8. Criteria Where Data or Guidance is Limited

A key issue facing States and Tribes seeking to develop aquatic life and human health criteria concerns the data requirements necessary to support derivation of a criterion. (In developing national CWA section 304(a) criteria guidance, EPA has established minimum data requirements.) When sufficient, acceptable data are not available, however, many States and Tribes have resorted to adoption of lowest observed effect levels (LOELs) as criteria in order to ensure that some level of protection is in place. LOELs are based on the lowest observed concentration of a chemical at which a statistically significant adverse effect was observed in an aquatic test organism. However, EPA would counsel against adoption of water quality criteria based on LOELs alone because they may not ensure protection of aquatic life uses since: (1) they represent effect concentrations, and (2) there may be significant limitations in the database upon which they are supported.

Thus, if this approach is used, States and Tribes are encouraged to use safety factors to approximate better a protective water quality level. The particular safety factor employed generally depends on the amount and quality of data concerning the LOEL. EPA has approved this approach in particular instances because criteria based on such LOELs provide more protection than no criteria at all.

A better approach to developing values with sparse data was developed and promulgated by EPA as part of the Water Quality Guidance for the Great Lakes System (Great Lakes Guidance). Under that Guidance's Tier II procedure, States and Tribes derive values to interpret the narrative criteria for

pollutants where the minimum data requirements for derivation of a criterion are not satisfied (see appendix C of 40 CFR Part 132.) These values are then used in place of the absent criteria as the basis for NPDES permit limits where needed. EPA's current thinking is that this approach for establishing values for interpreting the narrative for pollutants where data are limited is preferable to adoption of criteria based on a LOEL.

The Tier II methodology in the Great Lakes Guidance is designed to be used in the absence of the full set of data needed to meet criteria data requirements. For pollutants for which criteria have not been adopted into State or Tribal water quality standards, Great Lakes States must, under the guidance, use methodologies consistent with either the criteria (GLI Tier I) or Tier II methodologies, depending on the data available to implement their existing narrative water quality criteria that prohibit toxic pollutants in toxic amounts in all waters.

In adopting the Great Lakes Tier II methodology, EPA, working with the States, determined that there is a need to regulate pollutants more consistently in the Great Lakes System when faced with limited data on which to base criteria. Many of the Great Lakes States are already employing procedures similar to the approach in the final Guidance to implement narrative criteria. EPA determined the Tier II approach improves upon existing mechanisms by utilizing all available data. The Tier II aquatic life methodology is used to derive Tier II values which can be calculated with fewer toxicity data than under the Tier I water quality criteria methodology. Tier II values can, in certain instances, be based on toxicity data from a single taxonomic family, provided the data are acceptable. The Tier II methodology generally produces more stringent values than the Tier I criteria methodology, to reflect greater uncertainty in the absence of additional toxicity data. As more data become available, the derived Tier II values tend to become less conservative. That is, they more closely approximate Tier I numeric criteria.

States and Tribes may also develop their own criteria derivation procedure under option 3 of EPA's CWA section 303(c)(2)(B) guidance for priority toxic pollutants. This approach allows for timely derivation of criteria based on the latest available data, and may be used to derive criteria for pollutants for which EPA has not issued guidance. However, as for all criteria, such a procedure would need to result in criteria that are scientifically defensible, so again the issue of minimum data requirements is important.

Request for Comment on Criteria Where Data or Guidance is Limited

EPA requests comment on the following questions:

1. Should adoption of a lowest observed effect concentration be considered an acceptable option where no other criteria guidance is available, or should use of an uncertainty factor (e.g., 0.1, 0.5) be required to better approximate a protective water quality level? If an uncertainty factor is used, should that factor vary based on the amount and quality of data used to drive the LOEL? If so how?

2. Should EPA develop a method for derivation of alternative values for pollutants where the minimum data requirements included in EPA's criteria guidelines are not satisfied, such as the tier 2 procedure in EPA's Water Quality Guidance for the Great Lakes System?

3. How applicable should the Tier 2 process be to States and Tribes outside of the Great Lakes? Does the regulation need to be modified to include Tier 2 specifically for the entire country?

4. Does the information included in EPA's toxicity databases (e.g., IRIS, AQUIRE) need to be made more accessible to States, Tribes, or others seeking to develop their own criteria? If so, how can this be accomplished?

9. Toxicity Criteria

Toxicity criteria are an additional type of water quality criteria used to protect aquatic life. Toxicity criteria are expressed in terms of ''toxic units'' that cause toxic effects to aquatic organisms and are determined by exposing aquatic organisms to water samples (e.g., ambient water or effluent discharges). Whole effluent toxicity (WET) testing can be effective for controlling discharges containing multiple pollutants. It can also provide a method for addressing synergistic and antagonistic effects on aquatic life.

EPA is considering revising the water quality standards regulation to require States and Tribes with water quality standards authority to develop a numeric quantification of acceptable surface water levels for the parameter ''toxicity.'' Doing so would implement the narrative criteria that waters be ''free from'' toxics in toxic amounts. Currently, States and Tribes use various approaches to implementing their narrative criteria, including using numeric toxicity values and implementing them through NPDES permits. However, there is no current requirement for States or Tribes to specify numeric criteria for toxicity in their water quality standards. Under current requirements and guidance, States and Tribes do not always specify implementation of toxicity criteria and test methods as a required means to implement the narrative water quality criteria.

Toxicity is commonly measured by exposing test organisms (e.g. Ceriodaphnia, Fathead minnow) to various concentrations of chemicals or chemical mixtures in water. EPA has promulgated methods for measuring aquatic toxicity in effluents and surface waters in 40 CFR Part 136. EPA provided a recommendation on the allowable magnitude of this parameter in the 1991 Technical Support Document for Water Quality-based Toxics Control (TSD) that would facilitate State or Tribal implementation of such a requirement. The recommendation reads: For protection against acute toxicity, ''the criterion maximum concentration (CMC) should not exceed 0.3 acute toxic units to the most sensitive of at least 3 test species; for chronic protection, the criterion continuous concentration (CCC) should not exceed 1.0 chronic toxic units to the most sensitive of at least 3 test species.'' Such a quantification serves, in conjunction with numeric criteria for individual pollutants and biological criteria, to establish an integrated and fully protective basis for assessment and control of pollutants.

Request for Comment on Toxicity Criteria

EPA seeks public comment on the following question:

1. Should the regulation be modified to explicitly require States and Tribes to adopt numeric toxicity criteria, or alternatively to use toxicity values and test methods as a required means to interpret and implement the narrative criteria? Or, is the current practice acceptable, whereby some States or Tribes have numeric toxicity criteria, some utilize toxicity methods to interpret their narrative requirements of no toxics in toxic amounts, and others use toxicity mainly as a tool to assess effluent quality, but not as the basis for permit limits?

10. Sediment Quality Criteria

Sediment quality criteria (SQC) are being developed by EPA pursuant to sections 304(a)(1) and 118(c)(7)(C) of the CWA in recognition that many water bodies are not meeting water quality goals even though ambient water quality criteria are being met. (See ''The Incidence and Severity of Sediment Contamination in Surface Waters of the

United States, Volume 1: National Sediment Inventory,'' Office of Science and Technology, September 1997, EPA–823–R–97–006.) The contaminants of interest are those that preferentially partition to sediments, become sequestered, and remain bioavailable to the aquatic community. SQC are intended to protect against chronic effects to benthic organisms resulting from sediment contamination. The development and implementation of SQC is intended primarily to enable development of pollutant-specific State standards and NPDES permit limits needed for implementation of a more effective source control program. In addition, SQC will be useful in other programs, such as developing clean-up levels for sediment remediation activities and in evaluating sediments dredged from the Nation's waterways.

Sediment quality criteria have been proposed for five non-ionic organic compounds: acenapthene, dieldrin, endrin, fluoranthene, and phenanthrene. See, Technical Basis for Deriving Sediment Quality Criteria for Nonionic Organic Contaminants for the Protection of Benthic Organisms by Using Equilibrium Partitioning (EPA–822–R–93–011); Acenapthene (EPA–822–R–93–013); Dieldrin (EPA–822–R–93–015); Endrin (EPA–822–R–93–016); Fluoranthene (EPA–822–R–93–012); Phenanthrene (EPA–822–R–93–014). In addition to non-ionic organic compounds, the Agency also is working to develop SQC for metals. After considering public comments, EPA intends to publish final SQC dieldrin and aldrin in final form. The proposed criteria for acenapthene, fluoranthene, and phenanthrene will not go final; instead, EPA plans to propose a total PAH sediment criterion. In addition to its work on SQC, the Agency also is working to develop standardized methods for performing chronic sediment bioassay tests.

The EPA Science Advisory Board subcommittee reviewing SQC for non-ionic organics concluded that: ''these criteria not be used as stand-alone, pass-fail values for all applications.'' (EPA–SAB–EPEC–93–002). EPA is developing a users manual to provide guidance on use of SQC in a regulatory context to ensure consistency with that recommendation. The guidance would recommend that SQC be used in conjunction with chronic sediment bioassay tests in determining compliance with State standards, such as in interpreting the narrative criterion of no toxics in toxic amounts. Such an approach is currently being developed in more detail, and the users guidance will be made available to the public for comment prior to being finalized.

Request for Comment on Sediment Quality Criteria

EPA seeks public comment on the following questions:

1. Should the current regulation be revised to specifically address sediment quality criteria, and if so, what should such revisions address?

2. What chemicals or classes of compounds should receive priority for development of SQC?

11. Biological Criteria

Biological Integrity, Assessments and Criteria '

The Clean Water Act directs EPA to work with States and Tribes to restore and maintain the biological integrity of the Nation's surface waters (CWA 101(a), 303, 518(e)). Biological integrity is defined as a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of a region (Karr and Dudley, EPA–440/5–90–004, 1981). Biological integrity does not necessarily represent an aquatic system untouched by human influence, but does represent one that is balanced, adaptive and reflects natural evolutionary processes. Designated uses and criteria to protect those uses in State and Tribal water quality standards programs provide the means to achieve biological integrity.

To more fully protect aquatic resources and provide more comprehensive assessments of aquatic life use attainment, it is EPA's policy that States and Tribes should designate aquatic life uses for their waters that appropriately address biological integrity and adopt biological criteria necessary to protect those uses (EPA–823–B–93–002, Office of Water Memorandum to EPA Regions, Policy on Bioassessment and Biological Criteria, 1991). Designated uses to support aquatic life can cover a broad range, or continuum, of biological conditions with some waters being closer to the ideal of biological integrity than others. The attainable levels of biological integrity for any water is a State and/or Tribal determination involving public participation.

For example, the State of Maine used the water quality classification law to establish the minimum standards for three levels of biological integrity. These levels correspond to the water quality classification system and are increasingly restrictive, proceeding from the minimum state standard, Class C, to Class A, the most protective standard. These refinements serve to explicitly specify the designated aquatic life uses that apply to each classification category. Class C requires that the structure and function of the biological community be maintained and provides for the support of all indigenous fish species. The intermediate standard of Class B requires that there be no detrimental changes to the aquatic community, that all indigenous species are supported and that habitat be unimpaired. The Class A standard requires that aquatic life be ''as naturally occurs'' and habitat be characterized as ''natural.'' Within Class A, there is even a subset, Class AA, that further specifies ''free-flowing'' habitat. Waters with the Class AA designation are protected from any additional discharge or alteration. Under this system, attainment of the aquatic life classification standards for a given water body is evaluated using numeric biological criteria that were statistically derived from a statewide database. The numeric biological criteria are slated to go to rule-making in 1998.

Biological assessments are used to evaluate the condition of a water body using direct measurements of the resident biota in surface waters. Biological assessments integrate the cumulative impacts of chemical, physical, and biological stressors on aquatic life. Biological criteria, derived from biological assessment information, can be used to define State and Tribal water quality goals for aquatic life by directly characterizing the desired biological condition for an aquatic life use designation. Biological criteria are narrative descriptions or numerical values that describe the reference condition of the aquatic biota inhabiting waters of a specific designated aquatic life use (EPA–440/5–90–004). Biological criteria are based on integrated measures, or indices, of the composition, diversity, and functional organization of a reference aquatic community. The reference condition describes the attainable biological conditions for water body segments with common characteristics within the same biogeographic region. In summary, biological criteria provide a direct measure of the desired condition of the aquatic biota. This capability serves a dual purpose—goal setting and environmental impact analysis. Biological assessments are then conducted to evaluate if a water body is attaining its designated aquatic life use.

Biological criteria can play an important role in water quality programs and when properly implemented, complement and support

other methods and criteria, such as chemical water quality criteria and whole effluent toxicity criteria. The latter are measures, or indicators, of environmental stress and exposure whereas the biological assessments and criteria measure the cumulative effects of stressors on the aquatic community, whether chemical, physical or biological stressors, singly or in combination. A water quality program that employs the full array of methods and criteria will develop the information needed for more accurate assessment of impairment and effective resource management.

The linkage of biological effects, stressor identification and exposure assessment is particularly important when there are multiple stressors impacting a water body, especially when a watershed management approach is taken, or where wet weather flows are a major source of impairment in the water body. A comprehensive water quality program with biological, chemical, toxicity, and physical components will enable States and Tribes to make better decisions and focus limited resources to maximize environmental gain. A critical issue facing EPA's National Water Program is the manner and extent to which biological assessments and criteria should be incorporated into water quality programs to transition to a more comprehensive water quality control program that will better identify impairments and track improvements. This includes integrating biological assessments and criteria into use designations and attainability analyses, watershed management strategies and source control requirements.

Biological criteria typically include measures of the types, abundance, and condition of aquatic plants and animals, providing information on the status and function of the aquatic community in response to the cumulative impact of both chemical and nonchemical stressors. For example, Ohio uses a multi metric approach to develop numeric biological criteria for two different assemblages: benthic macro invertebrates (bottom dwelling insects, etc.) and fish (Yoder, 1995). Biological indices have been derived that integrate measurable structural and functional characteristics of the in-stream fish and macro invertebrate communities which help assess the health of the community. Structural characteristics are based on measures of biological community structure such as diversity or taxa richness (e.g. total number of taxonomic groups) and the representation of specific taxonomic groups (e.g. number of mayfly or caddisfly taxonomic groups) within the community. Functional characteristics include measures of biological function such as feeding strategy (e.g. percent carnivores, omnivores), environmental tolerance (e.g. number of intolerant and tolerant species), and disease symptoms (e.g. percent diseased species and anomalies, including deformities, eroded fins, lesions and external tumors in fish).

The Ohio biological criteria were developed based on ecoregional reference conditions and provide a quantitative biological description of the State's designated aquatic life uses for warm water rivers and streams, including exceptional, general, modified and limited warm water habitat. The description and derivation of the indices and ecoregions are contained in the ''Biological Criteria for the Protection of Aquatic Life: Volume II. Users Manual for Biological Field Assessment of Ohio Surface Waters'' cited in Ohio's Water Quality Standards. Ohio uses biological criteria to support all aspects of its water quality management program (Yoder, 1995). Ohio's approach is another example of how a State can adopt biologically-based refined designated aquatic life uses and biological criteria consistent with EPA's policy.

Application of Biological Assessments and Criteria in State and Tribal Water Programs

Biological assessments and criteria can be an important component of State and Tribal watershed management programs by assisting in prioritization and targeting of actions, setting restoration goals and performance standards, and documenting results. For example, North Carolina has adopted narrative biological criteria into its water quality standards regulation that references standardized methods for data collection and analysis for fish and macro invertebrate communities. Specific biological indices, metrics, or numeric criteria are not included in the water quality standards regulation. However, by citing the standardized methods in the State's water quality standards, North Carolina established a mechanism for consistent, quantitative translation of the narrative biological criteria. Under the State's five year basin-wide management program, benthic macro invertebrate and fish community data are presented in individual basin-wide assessment reports. Macroinvertebrate and fish community surveys, special studies, and other water quality sampling activities are conducted in the second and third years of the cycle to provide information for assessing status and trends through the basin. Water quality management plans are being developed for all of the State's major river basins on five year cycles.

Biological assessments and criteria can fulfill several assessment functions within the NPDES permitting process. In conjunction with pollutant concentration and toxicity data, biological assessments can be used to detect previously undetected chemical water quality problems and to evaluate the effectiveness of control actions. Biological findings of use impairment can trigger the necessary technical investigations which can identify the source or sources of impairment and determine appropriate corrective measures through point or nonpoint source controls as appropriate. The State of Maine uses biological assessments and criteria to evaluate the effectiveness of controls and to inform the permit review process. Aquatic life criteria are specified in the water quality classification law and attainment is assessed using quantitative data and a multi variate statistical model. Findings of biological impairment trigger management intervention to identify possible causes. Permits have been modified and enforcement actions initiated to address biological impacts. Alternatively, favorable biological findings have been used in a tiered approach to re-direct limited agency and permittee resources to more urgent concerns.

In Maryland, investigators use bioassessments as an integral part of the Rapid Stream Assessment Technique (RSAT) to conduct watershed-wide stream quality reconnaissance, rapid screening of general storm water BMP performance and for elucidating general watershed land use—stream quality relationships (Galli, J., 1997). In Michigan, biological assessments have been used in the Wayne County Rouge River National Wet Weather Demonstration Project to identify impacts and to guide decision-makers and the public in evaluating options for preventing, reducing and minimizing pollution loading impacts on the river under a watershed approach to wet weather pollution management (Cave, 1997).

Biological assessments and criteria can be useful in evaluating highly variable or diffuse sources of pollution such as storm water runoff. These types of point source pollution do not lend themselves well to traditional chemical water quality monitoring and a biological assessment of their cumulative impact may effectively evaluate these discharges and the success of control actions.

Bioassessments have been successfully used in Florida to assess the cumulative impacts of multiple pollution sources within a watershed, in particular, storm water runoff and other nonpoint source discharges (McCarron, Livingston and Frydenborg, 1997). The Florida Storm water/Nonpoint Source Bioassessment Projects have found that bioassessments, over time, help reflect impacts from the fluctuating environmental conditions and highly variable pollutant inputs of wet weather discharges. Bioassessments also help to evaluate the habitat degradation typically associated with Storm water discharges. Bioassessments were also identified by key storm water experts from across the Nation as an important environmental indicator tool for assessing the impacts of storm water runoff and the effectiveness of storm water management strategies (Claytor and Brown, 1996).

When attempting to identify the specific sources of use impairment (stressors), the role that biological assessments and criteria will play needs to be carefully defined. Stressor identifications based solely on biological information may be straightforward in certain water bodies where a single source is the cause of impairment. In these cases, paired bioassessments, conducted above and below the discharge point, or in the vicinity of the source, may readily identify the degree of impairment and the efficacy of chosen control strategies. In small urban watersheds, dominated by storm water runoff, bioassessments and criteria may provide a direct means to measure and control the storm water impacts.

However, in complex water bodies, where numerous sources contribute to the observed biological impairment, it may be difficult for bioassessments to distinguish the relative degrees of impairment from each contributing source. Given these situations, EPA anticipates that a stressor identification evaluation (SIE) procedure will need to be developed to provide the technical tools and information that watershed managers can use to identify and evaluate the different sources of impairment that the bioassessments reveal and the specific stressors associated with each source (e.g. flow, turbidity, temperature, metals, etc.).

Guidance on Development of Biological Criteria

EPA has developed and will continue to develop technical guidance on conducting bioassessments and developing biological criteria for the following specific water body types: streams and wadable rivers, lakes and reservoirs, estuaries and near coastal waters, wetlands and large rivers. Technical guidance for streams and small rivers biological assessments and criteria was published in 1996 (EPA 822–B–96–001). Publication of technical guidance on lakes and reservoirs is expected in 1998 followed by guidance on estuaries and near coastal waters by 1999. Technical guidance development for wetlands was initiated in 1997 and for large rivers in 1998. Completion of these documents is planned within 5 years.

Guidance on Implementation of Biological Criteria

EPA is currently considering how to best advance State and Tribal adoption and implementation of biological criteria. A draft discussion document on implementation of biological criteria by States and Tribes sets forth an iterative, step-wise approach to development of biological criteria and adoption in State and Tribal water quality standards. (draft guidance document on biological criteria implementation, EPA, March 1998) Elements of a stepwise approach could include:

(1) establishment of a long term goal to restore and maintain biological integrity of State or Tribal surface waters where determined feasible;

(2) implementation plan for development of biological criteria for specific water body types, including time frame;

(3) development of standardized biological assessment methods, regional reference conditions, and biological database to support refinement of designated aquatic life uses and development of biological criteria;

(4) adoption of narrative biological criteria into water quality standards;

(5) adoption of quantitatively-based biological criteria in water quality standards.

In developing a flexible, stepwise approach, EPA is evaluating options for adoption of biological criteria that would result in the consistent translation of narrative biological criteria into numeric criteria (e.g. quantitatively-based biological criteria). A quantitatively-based biological criteria could be defined as:

(1) A narrative statement adopted into State or Tribal water quality standards that describes specific designated aquatic life uses and cites technical procedures existing outside of regulation. The technical procedures result in the translation of the narrative statement into quantitative measures; including description of how biological assessment data is collected and analyzed, and how the biological criteria are developed.

—and/or—

(2) A narrative statement as above plus the adoption of the technical procedures or the actual numeric biological criteria in State or Tribal water quality standards.

These two options for adopting quantitatively-based biological criteria are based on existing State models such as Maine, North Carolina and Ohio (EPA 230–R–96–007). North Carolina has adopted a narrative biological criteria for its aquatic life use classification and cites in the water quality standard regulation the standardized methods for data collection and analysis. Maine and Ohio have developed more refined classifications of their aquatic life uses and developed biological criteria for each specific use. Both States cite technical manuals specifying standardized methods. Ohio has adopted its numeric biological criteria directly into its standards regulation. As mentioned earlier, the Maine Department of Environmental Protection is currently embarking on a rule making process to adopt its existing standardized field methods, statistical analysis protocols and numeric classification criterion (numeric biological criteria) into its water quality regulation. Similar to Ohio, these rules will codify the technical procedures for determining attainment of aquatic life use classification. EPA describes these various States' work for consideration as possible models of biological criteria that would result in the consistent translation of narrative biological criteria into numeric criteria (e.g. quantitatively-based biological criteria).

A Regulatory Requirement for Biological Criteria

EPA is considering whether it should explicitly require States and Tribes to adopt biological criteria in either the narrative or numeric form, and, if not, whether an alternative approach to encouraging the use of biological criteria is appropriate. Some States and Tribes have already allocated resources to biological criteria development because a regulatory requirement is anticipated at some time in the future. Others have been unwilling to commit resources to development of biological criteria before specifically required to do so. Concerns have also been raised about yet another regulatory requirement to be imposed over existing requirements that are still not fully implemented—adding new layers of requirements in a piecemeal fashion without adequate resources. EPA is sensitive to the concern that

generating the data and developing the analytical capacity to incorporate biological criteria into water quality standards may present a significant resource challenge to some States and Tribes.

Advocates for a requirement for States and authorized Tribes to adopt biological criteria argue that States and Tribes will not implement biological criteria in a timely manner, if at all, without an explicit Federal regulatory requirement. The viewpoint has been expressed that States and authorized Tribes will not adequately increase program emphasis or resources if biological criteria are not required and, as a consequence, biological criteria will be relegated to a lesser role then chemical water quality criteria or whole effluent toxicity. Some States have either direct (i.e. executive orders, legislative mandates) or indirect limitations on adopting new regulations and policies that are more stringent than that required by Federal legislation. Adopting biological criteria may be seen in some States and Tribes as exceeding minimum Federal requirements. Concern has been expressed that without biological criteria as a fundamental component of a State or Tribal water quality standards program, transition of water quality standards programs to a more integrated ecosystem approach with an emphasis on watersheds will not succeed.

Adoption of Narrative Biological Criteria

As an alternative to requiring adoption of numeric biological criteria, EPA could require States and Tribes to adopt a narrative biological criteria. The narrative biological criteria could be a statement of intent adopted in a State's or Tribe's water quality standards to formally consider the fate and status of aquatic biological communities and to establish the framework for the consistent and quantitative translation of a State's or Tribe's designated aquatic life uses and development of numeric biological criteria. EPA has published a document on procedures for initiating narrative biological criteria (EPA–822–B–92–002). An example of a narrative biological criteria based upon that publication follows:

> The State will preserve, protect, and restore the water resources in their most natural condition deemed attainable. The condition of these water bodies shall be determined from the measures of physical, chemical, and biological characteristics of each surface water body type, according to its designated use. As a component of these measurements, the biological quality of any given water system shall be assessed by comparison to a reference condition(s) based upon similar regional hydrologic and watershed characteristics (reference standardized methods and operating protocols).
>
> Where attainable, such reference conditions or reaches of water courses shall be those observed to support the variety and abundance of aquatic life in the region as is expected to be or has been historically found in natural settings essentially undisturbed or minimally disturbed by human impacts, development or discharges. This condition shall be determined by consistent sampling and reliable measures of selected indicated communities of flora and/or fauna as established by [cite appropriate State agency or agencies] and may be used in conjunction with acceptable chemical, physical, and microbial water quality measurements and records judged to be appropriate to this purpose.
>
> Regulations and other management efforts relative to these criteria shall be consistent with the objective of preserving, protecting and restoring the most natural communities of fish, shellfish, and wildlife attainable in these waters; and shall protect against degradation of the highest existing or subsequently attained uses or biological conditions pursuant to State antidegradation requirement.

EPA is considering what could constitute approvable narrative biological criteria and the feasibility of EPA promulgating narrative biological criteria where a State or Tribe fails to adopt such criteria.

Time Frame for Adoption of Biological Criteria in State and Tribal Water Quality Standards

In 1991 EPA issued a policy that established as a long-term Agency goal the development and adoption of biological criteria in State and Tribal water quality programs (Transmittal of Final Policy on Biological Assessments and Criteria, memorandum from Tudor Davies, Director of the EPA Office of Science and Technology, to Regional Water Management Division Directors, June, 1991). EPA has identified as a program priority during the FY1997–1999 Water Quality Standards Triennium that States and Tribes initiate and continue to expand development of scientifically defensible biological-based classification systems (FY 1997–1999 Water Quality Standards Priorities, memorandum from Tudor Davies, Director of the EPA Office of Science and Technology, July 22, 1996). Based on State experiences, development of biological criteria can range between five to ten years, depending on several factors such as available resources, existing State expertise, existing data bases and geographic variability. If EPA were to require or recommend that States and Tribes adopt biological criteria, EPA would need to determine appropriate time frames for adoption and implementation of these criteria. EPA is considering whether the following are reasonable and appropriate time frames for adoption of biological criteria in State and Tribal water quality programs:

1. narrative biological criteria for streams and an implementation plan for development of quantitatively-based biological criteria for streams in the 2000–2003 Water Quality Standards Triennium.

2. narrative biological criteria and an implementation plan for development of quantitatively-based biological criteria for other applicable water body types (e.g. lakes and reservoirs, estuaries and near coastal waters, large rivers and wetlands) within ten years following EPA publication of technical guidance.

Linkage of Biological Criteria to Stressor-Identification

One of the potential benefits of developing a biological criteria program is the increased ability to assess water quality impairment due to nonpoint source pollution, broadening the scope of most water quality-based programs beyond regulation of effluent discharges. However, many currently regulated point source dischargers are skeptical that greater focus on nonpoint source would actually occur, particularly considering the time and resource constraints on most State and Tribal programs. Industry and municipalities are concerned that biological criteria bring an additional layer of regulatory and associated costs and that they may be an easy target for additional requirements whether their discharge is the source of impairment or not. EPA recognizes that the role biological assessments and criteria will play to help identify specific stressors or sources of use impairment will need to be carefully defined and is interested in practical, effective approaches to evaluate potential stressors and sources of impairment when a water body fails biological criteria.

Request for Comment on Biological Criteria, Assessment and Implementation

EPA is soliciting comment on the following questions:

1. Should EPA amend the regulation to explicitly require States and Tribes to adopt biological criteria or are there alternative approaches that EPA should consider? Should EPA seek to ensure that biological criteria will be developed and implemented in all State and Tribal water quality programs?

2. If EPA were to explicitly require States and Tribes to adopt biological

criteria, should it require a narrative only, or a combination of both narrative and numeric criteria as described in the draft implementation guidance (e.g quantitatively-based biological criteria)? What should EPA promulgate if a State or Tribe fails to adopt biological criteria in its water quality standards?

3. If EPA were to explicitly require biological criteria, what is a reasonable time frame for State or Tribal adoption?

4. What are practical, effective approaches to identify and evaluate potential stressors and sources of impairment when a water body fails biological criteria?

5. In what ways can biological criteria and biological assessments be used to effectively manage known stressors or sources of impairment, including urban and rural runoff?

12. Wildlife Criteria

Wildlife criteria are designed to protect mammals and birds from adverse impacts from pollutants due to consumption of food or water from a water body. A wildlife criteria methodology applicable to the Great Lakes Basin and a few wildlife criteria were published as part of the Great Lakes Guidance. EPA does not have an active wildlife criteria guidance program at this time but it is a potential emerging criteria program. The wildlife criteria that EPA promulgated in the Great Lakes Guidance are for the following four chemicals: DDT (and metabolites), mercury, PCBs, and dioxin (2,3,7,8–TCDD).

Request for Comment on Wildlife Criteria

EPA requests comment on the following question:

1. Does the regulation need to be clarified to specifically address the development of wildlife criteria guidance for the protection of aquatic dependent wildlife?

13. Physical Criteria

Physical criteria is a concept that takes into account the physical attributes of the aquatic environment, such as quality of habitat and hydrologic balance. Commenters on the draft ANPRM identified physical habitat and hydrologic balance criteria as additional important forms of criteria that should be discussed in the ANPRM. EPA agrees that physical habitat parameters, including flow, are important and often overlooked parameters that influence and at some sites control whether or not an aquatic life use is or will be attained. For example, research referenced by Schueler (see Schueler, T. The Importance of Imperviousness. Watershed Protection Techniques, Fall 1994) suggests that in many small urban streams substantial loadings from municipal separate storm sewer systems are severely degrading the aquatic habitat. The authors suggest that the primary cause of this habitat impairment is the high volume and velocity of the storm water flows into this type of stream. The high flows exceed the peaks in the natural flow regime of these streams and as a result stream bank erosion, turbidity and siltation occur and the local habitat is degraded. Further habitat destruction in larger downstream receiving waters often results from the physical deterioration of the upstream urban systems. For example, some recent studies have shown that in some lakes the biggest source of silt and sediment deposition into the lake is actually from the eroded material that comes directly out of the stream bed and stream banks that are scoured out during elevated wet weather peak discharges and extended hydrographs. This can lead to eutrophication, increased turbidity, decreased light penetration, submerged aquatic vegetation (SAV) loss, spawning bed smothering, and shellfish habitat damage.

Studies of this phenomenon suggest that until these man-made flow regimes are better managed and the resulting stresses to physical habitat corrected, no amount of control of pollutants is likely to restore the aquatic ecosystem to a level more closely resembling a natural state.

The character of natural waters is obviously affected by wet weather events. Flowing waters, especially, can change dramatically with the seasons and in response to specific precipitation events. Seasonal and event driven changes in flows, sediment loads, temperature, etc. are common and natural processes which are integral to the maintenance of natural waters and their aquatic communities. Human-caused changes to the landscape, however, have altered these natural processes, and for many waters, the altered flows and the contamination now associated with wet weather discharges (discharges that occur in whole or in part as the result of wet weather events) present significant environmental problems. Although these problems are generally well recognized, they have been difficult to address effectively precisely because of their magnitude and variable nature.

The CWA's objectives include the protection and restoration of the physical integrity of our nation's waters. Scientific experts agree that overall physical habitat loss is the single biggest factor in the loss of aquatic species. Physical habitat damage and loss to the nation's waters includes: (1) Wetlands losses; (2) the denuding of stream banks through unwise forestry, farming, mining, and urbanization; (3) the embedding of stream bottoms with fine-grained silt from poorly designed and managed farm and construction sites; (4) the damming of river systems; (5) the channelization and/or concrete lining of rivers and streams; (6) the obliteration of ephemeral and first-order streams and springs during urbanization and; (7) the widening and deepening of stream channels due to high-velocity urban storm flows.

All seven of these phenomena are common forms of aquatic habitat damage and loss, and yet there is little national guidance to address the physical parameters that contribute to these impacts. In addition, EPA does not have a clear picture of how often physical habitat parameters, including flow are used by States and Tribes to assess, manage, and/or regulate activities that damage habitat. Some commenters on the draft asserted that water quality criteria guidance is needed to address these forms of habitat loss, to create threshold values to protect designated uses and to provide measuring tools for monitoring watershed and water body health. EPA agrees that further investigation of the role of physical habitat parameters, including hydrologic balance, in water quality standards programs is necessary. EPA is considering the relative importance of such criteria guidance as compared to other forms of criteria guidance such as ambient water quality criteria, sediment criteria and biological criteria; and on the likelihood that States and Tribes would develop and implement such criteria if technical guidance and supporting policy were available. EPA is also interested in identifying examples of where such criteria guidance has already been used as the basis for assessing, managing and protecting water quality.

With respect to hydrologic balance, EPA discusses the issue in the antidegradation section of this ANPRM. Some commenters on the draft ANPRM suggested that maintaining hydrologic balance in surface waters, though important in the context of antidegradation, is also important for other aspects of water quality standards. These commenters suggested that hydrologic balance should be part of basic water quality criteria guidance for watershed and water body assessment and for long-term urban storm water abatement and prevention plans under

the storm water NPDES program, as well as for the traditional NPDES program.

EPA is further interested in issues associated with hydrologic imbalances created by various industries and land operations, and the options for researching and creating a set of hydrologic balance criteria guidance. These could include, for instance, regional minimum stream flow criteria on a seasonal or average monthly basis, a groundwater-recharge criterion meant to maintain adequate stream base flow, and a peak-flood and bank full discharge prevention criterion, perhaps based on hydrologic regions of the country.

Request for Comment on Physical Criteria

EPA seeks comment on the following questions:

1. Would it be useful to explicitly identify physical criteria such as habitat and hydrologic balance in 40 CFR 131 as a valid form of criteria that States and Tribes can adopt in their water quality standards?

2. Would EPA technical guidance on physical criteria be useful to States and Tribes? Is it necessary?

3. What are some examples of physical criteria that are being used today and what are they being used for?

4. What should be the principal uses for physical criteria? Would these help address pulsed or intermittent impacts, such as those from urban and rural runoff?

14. Human Health

Human health water quality criteria are scientifically derived values developed by States, Tribes, or EPA to protect human health from the deleterious effects of carcinogens and noncarcinogenic toxicants. Human health criteria take into account the health effects from the consumption of aquatic organisms and drinking water. Human health criteria are based on the potential of carcinogens and noncarcinogenic toxicants to cause adverse impacts to human health. When adopting criteria to protect human health, a State or Tribe may use EPA's Section 304(a) criteria documents or other information on factors to derive human health criteria. However, if a State or Tribe decides to adopt criteria less stringent than recommended by EPA, the State or Tribe must provide documentation which supports that the approach is based on sound scientific rationale.

Changes to the Human Health Criteria Methodology are anticipated for proposal in the **Federal Register** in 1998. These changes to the 1980 ambient water quality criteria (AWQC) derivation guidelines (45 FR 79347) are intended to reflect the many significant scientific advances that have occurred during the past 17 years in such key areas as cancer and noncancer risk assessments, exposure assessments and bioaccumulation. Comments on any of the key area issues, as well as implementation issues, are welcome and should be made during the public comment period following the anticipated 1998 proposal.

The following discussion focuses on three key policy-related issues, including: choice of risk levels; fish consumption assumptions and environmental justice, and the use of maximum contaminant levels.

a. Risk Levels. Criteria for specific pollutants for the protection of human health rely in part on risk levels (incidence of cancer). Numeric criteria for carcinogens are based on three inter-related assumptions: exposure, cancer potency, and risk level. Exposure considerations are based on a wide range of factors, including an estimate of the rate of fish and drinking water consumption, an estimate of the body weight of an exposed individual, and an estimate of the rate of a chemical's relative tendency to bioaccumulate in fish tissue as compared to the surrounding water. Cancer potency factors (q1*) provide a measure of a chemical's potential to cause cancer, and are typically derived from studies on laboratory animals. The risk level represents an incremental increase in cancer incidences resulting from exposure to the chemical.

EPA guidance sets forth a range of criteria values that result in calculated risk levels of 10^{-5}, 10^{-6}, and 10^{-7} for informational purposes. Most States and Tribes select either a 10^{-5} or 10^{-6} risk level as an appropriate value, i.e., one additional cancer incidence per one hundred thousand or one million exposed individuals, respectively. This level seems to represent some general scientific and public consensus that the cancer risks are acceptably small or insignificant. States and Tribes, however, are not limited to selecting among the risk levels published in the CWA section 304(a) guidance documents.

If exposure assumptions are changed, while the assumed risk level remains the same, the criterion will change accordingly. The risk to people who intake more than the default exposure assumptions increases with the degree of change in the intake rates. For example, if the State or Tribe chooses to protect at a risk level of 10^{-5} and assumes a fish consumption rate of 6.5 gm/day, but some individuals within the State or Tribe actually eat 65 gm/day of fish, the criterion actually protects those individuals at a risk level of 1 x 10^{-4} (one additional cancer case per 10,000 people). The risk level can change based on the relative change in each parameter. When adopting these standards, States and Tribes are strongly encouraged to provide documentation that the assumptions made in establishing the criteria are reasonable and adequately protect the population, including highly exposed subpopulations at the risk level asserted in the States' and Tribes' standards. EPA strongly encourages States and Tribes to highlight these provisions of their standards during the public participation process.

EPA's current criteria documents indicate the risk level within a range of 10^{-5} to 10^{-7} for the general population. The policy has been to allow States and Tribes to select appropriate risk levels and is consistent with the framework of the CWA that recognizes and supports State and Tribal primacy in making risk management decisions to protect its population provided that the goals of the Act are met. EPA's approval of different cancer risk levels to protect human health in different States or Tribes is subject to debate. Many have questioned States' and Tribes' selection and EPA's approval of various risk levels to protect human health. Some assert that EPA should require all States and Tribes to adopt a single risk level. Others believe EPA should require States and Tribes to develop data on the different exposure assumptions that may be present within the State or Tribe.

With regard to subpopulations that may consume higher amounts of fish than is assumed for the general population, EPA's Great Lakes Guidance stated that a risk level of 10^{-4} for such subpopulations in the Great Lakes basin can be protective.

In a draft proposal of the water quality criteria methodology revisions, EPA is considering proposing that risk levels in the range of 10^{-4} to 10^{-6} be adopted in deriving criteria. However, the proposed revisions also note that care must be taken in situations where the AWQC includes fish intake levels based on the general population to ensure that the risk to more highly exposed subgroups (subsistence, minority) does not exceed the 10^{-4} risk level. Furthermore, EPA is considering proposing the 10^{-6} risk level as the level that ensures protection for all exposed population groups. As stated before, all comments regarding methodology, including risk levels,

should be made during the public comment period following the anticipated 1998 Human Health Criteria Methodology proposal.

EPA intends to foster consistent approaches between Agency program offices, including its approach to determining allowable risk levels. The Food Quality Protection Act of 1996 (FQPA) amended the Federal Food, Drug and Cosmetic Act (FFDCA) to prohibit EPA from issuing tolerances for pesticide residues in or on food unless the Agency determined that there is a ''reasonable certainty'' that the residues will result in ''no harm.'' Tolerances are allowable levels of chemicals in food; food containing residues in excess of a tolerance may not be sold in commerce. The legislative history of FQPA indicated Congressional support for EPA's view that reasonable certainty of no harm would generally be met when a non-threshold risk is below a 10^{-6} level. For threshold risks, the legislative history contained general support for a margin of safety of 100, except that the Statute required the Agency to add an additional 10-fold margin of safety to protect infants and children, unless the Agency concluded on the basis of reliable data that a different margin would be safe for infants and children. In determining whether dietary exposures are safe, the FQPA also directs EPA to consider non-occupational exposures to chemicals used as pesticides, and to aggregate risks from chemicals that share a common mechanism of toxicity. EPA's Office of Pesticide Programs is in the process of developing new policies in response to the FQPA. EPA's Office of Water will consider these policies when they are completed.

b. Fish Consumption Assumptions. EPA's recommended human health criteria under CWA section 304(a) guidance are currently derived with a fish consumption rate of 6.5 grams per day (roughly one quarter ounce of fish and shellfish). This value represents an average based on market survey data gathered in 1973–74, and reflects a national average for all consumers and nonconsumers of fish and shellfish from estuarine and fresh waters. Again, EPA intends to propose revisions to the human health methodology for deriving ambient water quality criteria, including revisions of the fish consumption rate. Some assumptions regarding fish consumption and criteria policy are also discussed in FR Vol. 61, No. 239, 65183 (December 11, 1996).

EPA recognizes that, while important, the national fish consumption estimate is one of many different parameters used to set ambient water quality criteria to protect human health and that the interactions of these parameters adds substantial complexity to the methodology. However, because this component is easily understood, it receives the most attention from the general public. Overall, EPA considers its human health criteria methodologies to be conservative and protective of human health.

EPA also recognizes that there are subpopulations that consume greater quantities of fish and has considered this as part of the human health methodology for developing water quality criteria. State and Tribal human health criteria are often based on a risk level of 10^{-5} or 10^{-6} to protect people inclined to consume higher quantities than the average. In addition, with regulatory actions for carcinogens, individuals consuming even 20 times the 6.5 gram amount would still be protected at the 10^{-4} risk level. (EPA is *not* proposing a national risk level of 10^{-4} here, rather EPA is acknowledging that the level of risk is relative to the consumption of fish (i.e., it is greater for individuals consuming more fish than the national average).

A similar rationale for the protectiveness of a criterion may not apply to non-carcinogenic pollutants (i.e., RfD-based chemicals), where significantly higher fish consumption rates may (when combined with other exposure sources) result in exposures significantly exceeding the RfD. Although there are safety factors associated with an RfD, they are related to uncertainties associated with the toxicological evaluation, not with the sources and levels of exposure. Therefore, significantly higher intakes may require more stringent criteria to protect human health.

EPA is seeking ways to implement Executive Order 12898 (February 16, 1994, 59 FR 7629) regarding environmental justice to ensure that water quality criteria are developed taking into account populations such as Native Americans and other minorities, as well as other subsistence fishers. This would include working with the scientific community and the public to improve EPA's health assessments and risk assessments and incorporate relevant issues into its policies and guidance. This also includes mechanisms for public participation (e.g., meetings) for the purposes of fact-finding, receiving comments, and conducting inquiries concerning environmental justice.

Relevant to water quality standards, EPA recognizes the need to address issues regarding different fish consumption patterns among subsistence, minority populations. EPA acknowledges that these groups may consume a greater quantity of fish than the national average. In addition, these groups have asserted that States and Tribes should be required to take a more aggressive role in protecting them.

Guidance for Assessing Chemical Contaminated Data for Use in Fish Advisories (Vol. 1–IV, USEPA, 1993 and 1994) notes that fish and shellfish consumption rates vary greatly for sections of the U.S. population (e.g., by gender, race, age, cultural and recreational activity, and income levels). Given the wide variations in consumption patterns, it would not seem to be possible for States and Tribes to provide the same level of protection from contaminated fish for all consumers. EPA believes criteria should ensure adequate protection of all significant populations and subpopulations from reasonable risks.

States and Tribes are encouraged to consider local surveys when selecting fish consumption rates to protect their populations since the national average value may not be indicative of local consumption habits. In its Water Quality Guidance for the Great Lakes System (60 FR 15366, March 23, 1995), EPA included a Great Lakes-specific fish consumption rate of 15 grams per day. This rate was based on several fish consumption surveys from the Great Lakes (see 60 FR 15366 at 15374, March 23, 1995.) EPA has also published for external peer review ''Draft Guidance for Conducting Fish and Wildlife Consumption Surveys.'' (U.S. EPA 1997).

States and Tribes could be encouraged to modify criteria on a site-specific basis to provide additional protection appropriate for highly exposed subpopulations. That is, where high-end consumers would not be adequately protected by criteria derived using the default fish intake assumption, the State or Tribe may modify this assumption to provide appropriate additional protection. Again, such a recommendation was made in the Great Lakes Guidance. This preference will also be stated in the proposed revisions to the human health methodology for deriving ambient water quality criteria.

c. Maximum Contaminant Levels. Under the Safe Drinking Water Act (SDWA), EPA develops chemical-specific numeric values for use in protecting public drinking water supplies. They are maximum contaminant level goals (MCLGs) and maximum contaminant levels (MCLs). A MCLG is a non-enforceable concentration of a drinking water contaminant that is protective of

adverse human health effects and allows an adequate margin of safety. A MCL is the maximum permissible level of a contaminant in water which is delivered to any user of a public water system. MCLGs are based solely on human health considerations (i.e., an identified adverse effect to human health, combined with an exposure intake estimate). In contrast, MCLs are to be as close to the MCLG as feasible, taking into consideration the availability and the cost of treatment technologies as well as the availability of analytical methodologies. When these two additional factors beyond health (treatment cost and analytical factors) are considered, the MCL for some chemicals is a higher (i.e., less stringent) value than the MCLG. However, there are also many chemicals for which the MCL is equal to the MCLG. This is particularly true for noncarcinogens. Over 80% of all current MCLs for noncarcinogens are identical to the corresponding MCLG for that substance. For carcinogens, MCLs are always higher than MCLGs because MCLGs for carcinogens are routinely set to zero.

Some States and Tribes utilize MCLs and MCLGs, as criteria to protect human health under the CWA. For some chemicals, the MCL or MCLG is more stringent than CWA section 304(a) human health criteria. In other cases, CWA criteria are more stringent than the MCL or MCLG. These differences come about for three basic reasons. First, as noted above, the 304(a) criteria under the CWA and MCLGs under the SDWA are strictly health-based values that do not account for treatment costs or analytical limitations. The MCL, however, does take into account treatment costs and analytical limitations. Second, the methodologies used to calculate the 304(a) criterion and the MCLG—both health-based values—for the same chemical often differ. Third, the MCLG and the 304(a) criterion sometimes have been calculated at different times, often years apart, using the current risk and exposure information at the time. Where different information on risk and exposure was used, differences in the numerical values can be expected.

It is important to consider some of the methodological differences between the derivation of 304(a) criteria and MCLs and MCLGs. Although the methods under SDWA and CWA both use the same reference dose (RfD) or cancer potency slope, and both methods assume a 70 kg adult and consumption of 2 liters of water per day, there are several important differences. One difference is that MCLGs for chemicals that are known or likely carcinogens are usually set equal to zero, while CWA section 304(a) criteria for carcinogens are based on an incremental cancer risk level and are never set equal to zero. For chemicals with limited evidence of carcinogenicity, the MCLG is usually based on the chemical's reference dose (RfD) for noncancer effects with the application of an additional uncertainty factor of 1 to 10 to account for its possible carcinogenicity. In contrast, the 1980 CWA section 304(a) criteria guidelines do not differentiate among carcinogens with respect to the weight of evidence grouping; all were derived based on lifetime carcinogenic risk levels.

Another important difference between the two methodologies is that a single determined risk value (single reference dose or single cancer risk value within the 10^{-4} to 10^{-6} range) is used in setting an MCLG, while CWA section 304(a) criteria have been derived for each of the three incremental risk levels spanning 10^{-5} to 10^{-7}, with the decision on which value to adopt left to the State or Tribe.

Another important methodological difference is in the approach to accounting for exposure sources. MCLGs for RfD-based chemicals developed under the SDWA follow a relative source contribution (RSC) approach in which the percentage of exposure that is attributed to drinking water is determined relative to the total exposure from all sources (e.g., drinking water, food, air). The rationale for this approach is to ensure that an individual's total exposure to a chemical does not exceed the RfD. To develop CWA human health criteria for noncarcinogens, the 1980 CWA National Guidelines recommended taking non-fish dietary sources and inhalation into account. However, data on these other sources were generally not available. Therefore, it was typically assumed that an individual's total exposure to a chemical came solely from drinking water from the water body and consumption of fish and shellfish living in the water body. Also, CWA criteria are based on a prediction of exposure from fish and shellfish using a bioconcentration factor (BCF) to estimate the bioconcentration of the individual chemical, and a fish/shellfish consumption rate. To date, under the current MCLG methodology, BCFs have not been used in the exposure estimates and fish/shellfish consumption rates have been only marginally accounted for (e.g., via general FDA dietary estimate or conservative default assumption).

Because of the differences in the approach to exposure and the basis of toxicity values, the health-based drinking water goal (MCLG) is sometimes more stringent than the CWA human health criterion (304(a) criterion). However, the opposite is sometimes true. An example of the former is 1,4-dichlorobenzene, for which both the MCL and MCLG are 75 ug/L and the 304(a) criterion (for protection of human health from the exposures of drinking water and consuming contaminated fish) is 400 ug/L. In this case, the MCLG was developed based on an assumption that 20% of the total exposure is from drinking water (the RSC factor applied to this noncarcinogen), whereas the CWA criterion effectively assumes that non-water exposure is negligible. Additional sources of difference between the two values are: (1) the BCF/BAF for 1,4-dichlorobenzene is low and thus does not make the 304(a) value significantly lower; (2) the MCLG was derived from an RfD of 0.1 mg/kg/day, while the 304(a) criterion utilized an Acceptable Daily Intake (ADI, now replaced by the use of RfDs) of 0.013 mg/kg/day; and, (3) the MCLG included a safety factor of 10,000, whereas the water quality criterion included a safety factor of only 1,000.

In contrast, for noncarcinogens where the BCF/BAF is high, the CWA criteria may be roughly equivalent or more stringent than the health-based drinking water levels because of the considerable exposure via fish/shellfish consumption that is assumed in deriving the CWA criteria. As with the previous example, the difference may be compounded if the toxicological values have a different basis. An example is endrin, for which the MCL and MCLG are 2 ug/L and the CWA section 304(a) human health criterion (again, for protection from the exposures of drinking water and consuming contaminated fish) is 0.76 ug/L. In this case, the drinking water level is, again, developed based on the RSC assumption of 20%, whereas the CWA criterion assumes that non-water exposure is negligible. However, the BCF/BAF for endrin is quite high (3,970) and drives the 304(a) value significantly lower. Furthermore, the MCLG was derived from an RfD of 3.0×10^{-4} mg/kg/day, while the CWA criterion utilized an ADI of 1.0×10^{-3} mg/kg/day. With endrin, both the MCLG and the water quality criterion included a safety factor of 100.

Of course as noted above, the MCL takes into account the cost or availability of treatment technology or analytical methods, and may be much less stringent than the CWA human health criterion, regardless of the

exposure assumptions or toxicological basis (e.g., 1,1,2-trichloroethane).

Because of the differing methods used to implement the SDWA and the CWA, EPA has recommended that, where consideration of available treatment technology, costs, or availability of analytical methodologies has resulted in MCLs that are less protective than MCLGs or CWA section 304(a) criteria, States and Tribes should consider using MCLGs and/or health-based CWA section 304(a) criteria to protect surface waters that are designated for water supply use under the State's or Tribe's water quality standards. Furthermore, when adopting water quality criteria to protect a surface water designated for drinking water supply use, States and Tribes should carefully consider what value (e.g., the MCLG or the 304(a) value) provides a defensible estimate of the water quality level necessary to fully protect the use, and whether relevant exposure routes have been adequately considered in the derivation of each value.

EPA stated its policy on the use of Section 304(a) human health criteria versus MCLs in 45 FR 79318, November 28, 1980. Additionally, a memorandum from R. Hanmer to the EPA Regional Water Management Division Directors dated December 12, 1988, provided detailed guidance with regard to this policy. Specifically, for the protection of public water supplies, EPA encouraged the use of MCLs. When fish ingestion is considered an important activity, EPA recommended the use of 304(a) criteria to protect human health. In all cases, if a 304(a) criterion did not exist for a chemical, an MCL was deemed a suitable level of protection.

The forthcoming proposed human health criteria guidelines (scheduled for publication in 1998 and cited above) are expected to recommend a slightly different approach. Although EPA considers the use of MCLs to protect surface waters under the CWA to be acceptable in the absence of 304(a) criteria, EPA expects to recommend that:

—MCLs only be used when they are numerically the same as the MCLG and only when the sole concern is the protection of public water supply sources (e.g., where the chemically toxic form in water is not the form found in fish tissue and, therefore, fish ingestion exposure is not an issue of concern);

—where consideration of available treatment technology, costs, or availability of analytical methodologies has resulted in MCLs that are different than MCLG values or 304(a) criteria, States and Tribes consider using MCLGs and/or 304(a) criteria to protect surface waters designated for water supply use;

—where fish consumption is an existing or potential activity, States and Tribes ensure that their adopted human health criteria adequately address this exposure route;

—where fish consumption is a designated use, States and Tribes use 304(a) criteria to protect that use because fish consumption and bioaccumulation are explicitly addressed by the 304(a) methodology;

—where water monitored at existing drinking water intakes has concentrations at or below MCLGs, then the water could be considered to meet a CWA designated use as a drinking water supply and a criterion reflecting that level could be adopted; and,

—for carcinogens where the MCLG is equal to zero, States and Tribes base a criteria value at the drinking water intake on an acceptable cancer risk level (i.e., a level within the range of 10–4 to 10–6), to protect human health. It is not intended that MCLGs of zero would be used as the basis for State or Tribal water quality criteria.

As States and Tribes may be more stringent than EPA, States and Tribes may adopt an MCL or MCLG as a water quality criterion that is more stringent than EPA's recommended section 304(a) criterion. In situations where a recommended 304(a) criterion is less protective than an MCL, EPA expects to recommend in the 1998 human health criteria methodology proposal use of the MCL instead of the recommended 304(a) criterion because it would help to ensure adequate source water protection and avoid costly compliance problems for downstream water supply utilities.

EPA has considered extensively this issue of equivalency between the drinking water component of CWA section 304(a) criteria and MCLGs or MCLs. EPA expects to move toward similar assessment methodologies (including its exposure and relative source contribution [RSC] policies) for deriving CWA criteria and MCLGs. Consistent exposure evaluation methodologies for deriving CWA 304(a) criteria for human health protection *and* MCLGs under SDWA, would, over time, eliminate the need to consider using MCLs for adopting State water quality standards. In the meantime, where there are differences between the MCLG and the 304(a) criteria for human health protection, EPA expects to continue to recommend using as the water quality criterion the value that, in the judgement of the State or Tribe, best accounts for the relevant routes of exposure. Of course, EPA will also approve use of the more stringent value.

Request for Comments on Human Health Criteria

EPA seeks public comment on the following questions:

1. Should the regulation require, or should guidance recommend, higher intake assumptions for site-specific or regional situations when subpopulations that are highly exposed have been identified? If so, what should be the basis for such intake assumptions?

2. Should the regulation be modified to clarify (beyond the guidance being proposed in 1998) the use of MCLs and MCLGs in State water quality standards? [Note: Comments on the establishment of similar assessment methodologies for deriving CWA criteria and MCLGs should be made during the public comment period following the anticipated 1998 Human Health Criteria Methodology proposal.]

15. Microbiological Criteria

Currently EPA has a criteria document titled ''Ambient Water Quality Criteria for Bacteria—1986'' which provides information on microbiological indicator organisms, sampling frequencies, and risk based criteria guidance which States and Tribes can use in establishing State or Tribal standards, especially for recreational waters. The indicators used are the Enterococci for fresh and salt waters (33/100mL and 35/100mL respectively) and *E. Coli* for fresh waters (126/100mL). It is recommended that sampling be performed on a weekly basis and the acceptability criteria are based on a running average level of the indicators on a monthly basis. The EPA Office of Research has completed a new Enterococci method (See ''Membrane Filter Test Method for Enterococci in Water,'' EPA–821–R–97–004, May 1997). This indicator method allows samples to be read in 24 hours rather than the 48 hours of the old Enterococci method.

In 1997, EPA established the Beaches Environmental Assessment Closure and Health Program (''BEACH'' Program) to protect the health of beach goers through assistance to State, Tribal, and local health officials in designing, developing and implementing beach monitoring and advisory programs. The BEACH Program will also survey local beach authorities about their programs and develop an Internet website to provide the public with information on local beach water quality conditions,

beach advisories and closures, and health risks associated with swimming in contaminated water.

While the Enterococci and *E. Coli* indicators and criteria guidance are satisfactory for determining risks from acute gastrointestinal disease they are not necessarily acceptable for determining risks from enteric viruses nor from pathogenic enteric protozoa such as *Giardia* and *Crypto Sporidium* since these pathogens are much more resistant environmentally and experience different treatment effectiveness. EPA is currently evaluating how it may develop human health criteria for protection from these organisms.

EPA may conduct additional research to develop indicator methods for non-enteric pathogens that cause skin, respiratory, eye, ear, and throat infections that are not detected by the current indicator methods. EPA also intends to examine the phenomenon of regrowth of the current indicators on soil and vegetation in tropical areas, and if deemed necessary add indicator development studies to replace the current indicators in tropical recreational areas. Further studies are proposed to examine rapid chemical indicators of fecal pollution to see if a tiered sampling protocol can be established for recreational water monitoring. Also, EPA plans to examine the development of improved monitoring strategies that States, Tribes and local authorities could use to assess the true impact of pollution during wet weather events. Finally, EPA will examine various computer models that could be used to predict microbial pollution from storm water events in watersheds and at recreational areas. These models would be validated by microbiological monitoring.

Request for Public Comment on Microbiological Criteria

EPA seeks public comment on the following questions:

1. Where and how is it best to conduct future programs to determine the safety of recreational waters?

2. What communication strategies would best inform the public about pathogen exposures?

3. What guidance should EPA provide to States, Tribes, and local governments on how to conduct beach monitoring activities?

16. Nutrient Criteria

In the National Water Quality Inventory 1994 Report to Congress, nutrients (nitrogen and phosphorous) are cited as one of the leading causes of water quality impairment in our Nation's rivers, lakes and estuaries. While nutrients are essential to the health of aquatic ecosystems, excessive nutrient loadings can result in the growth of aquatic weeds and algae, leading to oxygen depletion, increased fish and macro invertebrate mortality and other water quality impairments. In December 1995, EPA held a National Nutrient Assessment Workshop with the goal of developing a comprehensive nutrient strategy which would provide tools that can be used in assessing and controlling nutrients in all types of water bodies. Major conclusions from that workshop were: (1) a single set of national nutrient criteria is not a realistic goal, and (2) nutrient criteria need to be set on an ecoregional or watershed basis. EPA has since been developing a national nutrient strategy in order to communicate the specific approach and activities necessary to meet the goals and major conclusions of the National Nutrient Assessment Workshop.

On February 14, 1998, the ''Clean Water Action Plan'' was announced by the Administrator of EPA and the Secretary of Agriculture. The ''Clean Water Action Plan'' is a blueprint for restoring and protecting the Nation's precious water resources. As part of this Action Plan, EPA intends to identify the major sources of nitrogen and phosphorous in our waters and to identify actions to address these sources. In particular, EPA intends to accelerate development of nutrient criteria guidance for waters in every geographic region in the country, so that EPA and the States and Tribes can begin implementing a criteria system for nitrogen and phosphorous runoff for lakes, rivers, and estuaries by the year 2000. EPA will assist States and Tribes in adopting numeric water quality criteria for nitrogen and phosphorous, which EPA expects will take the form either of State- or Tribe-derived criteria where data is available, or criteria based on EPA default ranges applicable to their ecoregion(s). Where a State or Tribe does not adopt appropriate nutrient standards, EPA intends to begin the process of promulgating nutrient standards. To support meeting these expectations, EPA anticipates the following actions described below.

First, EPA intends to publish a National Nutrient Strategy which will present currently available tools for assessing eutrophication, identify important implementation issues related to controlling eutrophication, and provide the Agency's plan for developing water body-type guidance on nutrient over enrichment.

This national strategy will also present EPA's expectations for action on the part of States and Tribes, namely, development of numeric nutrient criteria and standards on a regional/watershed basis. Second, by the end of the year 2000, EPA expects to publish the water body-type guidance documents which would serve as ''user manuals'' for assessing and controlling nutrient over enrichment for specific water body types: lakes and reservoirs, rivers and streams, and estuarine and coastal waters. These documents will include techniques for assessing the trophic state of a water body and a methodology for developing region-specific nutrient criteria. In each document, EPA intends to provide regional nutrient ranges for phosphorus and nitrogen (and other parameters), which EPA would expect States and Tribes to use in setting nutrient criteria in the absence of any criterion that has been developed site-specifically. EPA intends to use existing State and Tribal projects and data, supplemented with new regional case studies and demonstration projects that are being conducted to collect information in data-limited areas of the country. An important component in developing default nutrient values is determining the appropriate scale of application (e.g., watershed, ecoregion, Northern lakes/Southern lakes, etc.). Finally, in order to promote the use of the water body-specific guidance, and ensure the development of nutrient criteria on a watershed or ecoregional basis nationwide, EPA will undertake several activities, including: (1) training in EPA regions and States, and Tribes, through the use of Regional Technical Assistance Centers; (2) appointing EPA Regional Nutrient Coordinators who will oversee the development and implementation of nutrient criteria and standards in each of the EPA Regions; and (3) offering assistance grants which will provide financial support to States and Tribes in their efforts to assemble existing data, including nutrient endpoint data, and to establish nutrient criteria either by watershed or ecoregion, where sufficient data are available.

Request for Comments on Nutrient Criteria

EPA requests comment on the following questions:

1. Should the regulation specifically require States and Tribes to adopt and implement numeric nutrient criteria?

2. What capabilities do States and Tribes have right now for developing and implementing water quality criteria for nutrients?

3. What are the institutional impediments to collecting nutrient data and developing nutrient standards, for example, staff numbers and expertise and financial resources?

4. Which States or Tribes are using an ecoregion or watershed approach to develop numeric nutrient standards (EPA is aware of some States doing this)? For those States and Tribes that do not, on what scale do their nutrient standards apply—statewide or by water body type?

D. Antidegradation

1. Background

The Federal antidegradation policy has its roots in the Water Quality Act of 1965 (Pub. L. 89–234), which stated in its declaration of policy, ''The purpose of this Act is to enhance the quality and value of our water resources and to establish national policy for the prevention, control, and abatement of water pollution.'' Policy guidelines established by the Department of the Interior in 1966 for use in the approval of States' water quality standards contained additional direction on antidegradation, stating that ''In no case will standards providing for less than existing quality be acceptable'' and ''The water quality standards proposed by a state should provide for: . . . The maintenance and protection of quality and use or uses of waters now of a high quality or of a quality suitable for present and potential future uses.'' Secretary of the Interior Udall further defined the Federal policy on antidegradation in 1968, when he said that each State was to include a statement similar to the following in their water quality standards:

Waters whose existing quality is better than the established standards as of the date on which such standards become effective will be maintained at their existing high quality. These and other waters of a State will not be lowered in water quality unless and until it has been affirmatively demonstrated to the State water pollution control agency and the Department of the Interior that such change is justifiable as a result of necessary economic or social development and will not interfere with or become injurious to any assigned uses made of, or presently possible in, such waters. This will require that any industrial, public or private project or development which would constitute a new source of pollution or an increased source of pollution to high quality waters will be required, as part of the initial project design, to provide the highest and best degree of waste treatment available under existing technology, and, since these are also Federal standards, these waste treatment requirements will be developed cooperatively.

The Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92–500) continued to emphasize the prevention of pollution and, in 1973, EPA developed guidance for State water quality standards under the Amendments that essentially repeated the 1968 statements of Secretary Udall.

In 1975, EPA promulgated regulations at 40 CFR 130.17(e) that required the States to develop an antidegradation policy and implementation procedures. The 1975 rule contained provisions that are very similar to those in 40 CFR 131.12, and provided protection for existing uses, high quality waters, high quality waters that constituted an outstanding National resource, and waters impaired by thermal discharges. EPA issued final rules on November 8, 1983 (48 FR 51400) that retained, with certain changes, the 1975 antidegradation policy and incorporated it into the regulations at 40 CFR 131.12. The changes to the 1975 antidegradation policy are discussed in the preamble to the 1983 rulemaking (48 FR 51402–51403), but they were generally intended to clarify the policy with no change in coverage or effect. An exception to this was the change in the provisions applicable to outstanding National resource waters, which eliminated the strict ''no degradation'' requirement in favor of a limited exception for activities that result in temporary and short-term lowering of water quality. The 1983 regulation (40 CFR 131.12(a)) provides that a State or Tribe is to identify its method for implementing the antidegradation policy, i.e., decision measures for assessing activities that may impact the integrity of a water body.

The 1987 Water Quality Act Amendments to the Clean Water Act (CWA) explicitly incorporated reference to antidegradation policies in section 303(d)(4)(B), which requires that such antidegradation requirements be satisfied prior to modifying certain NPDES permits to include less stringent effluent limitations (this concept is referred to as antibacksliding).

On March 23, 1995, EPA published the final Water Quality Guidance for the Great Lakes System (the Great Lakes Guidance). The Great Lakes Guidance includes an antidegradation component that is intended to work in conjunction with the other components of the Great Lakes Guidance to address the most pressing threats to water quality in the Great Lakes. In order to achieve this end, the focus of the antidegradation component is on decisions pertaining to new or increased loadings of specified bioaccumulative chemicals of concern within the Great Lakes basin. For other types of pollutants, States and Tribes are required to comply with the existing regulations at 40 CFR 131.12.

In the course of establishing a framework for making decisions regarding increased loadings of bioaccumulative chemicals of concern, the Great Lakes Guidance touches on a number of issues. The Great Lakes Guidance provides a procedure for identifying high quality waters on a pollutant-by-pollutant basis. The Great Lakes Guidance also defines how a significant lowering of water quality will be identified for purposes of determining whether or not an antidegradation review is required. Finally, the Great Lakes Guidance includes implementation procedures that describe how an antidegradation review should be conducted. In all cases, the antidegradation components of the Great Lakes Guidance are tailored to the control of bioaccumulative chemicals of concern; other solutions may be necessitated by environmental threats faced elsewhere in the Nation.

EPA's current thinking is that on a national scale, antidegradation is not being used as effectively as it could be and that a structured national debate on antidegradation is key to improvement. The debate needs to identify deficiencies in antidegradation policy and implementation provisions and begin the process of strengthening antidegradation as a meaningful mechanism to attain and maintain water quality standards. EPA invites comments and suggestions on the three-tiered approach currently in use and described below, as well as possible other approaches to more effectively accomplish the intent of the antidegradation requirements. As part of the ''Clean Water Action Plan'' announced on February 14, 1998 by the Administrator of EPA and the Secretary of Agriculture, EPA plans to develop additional guidance on Antidegradation. The discussion below articulates current EPA thinking in several areas of antidegradation. Elements of this current EPA thinking will likely be incorporated into the Antidegradation guidance EPA develops under the ''Clean Water Action Plan.''

2. General Description of Antidegradation

An antidegradation policy performs an essential function as part of the of States' and Tribes' water quality standards. Designated uses establish the water quality goals for the water body, water quality criteria define the minimum conditions necessary to achieve the goals and an antidegradation policy specifies the framework to be used in making

decisions regarding changes in water quality. The intent of an antidegradation policy is to ensure that in all cases, at a minimum, water quality necessary to support existing uses is maintained (tier 1), that where water quality is better than the minimum level necessary to support protection and propagation of fish, shellfish and wildlife, and recreation in and on the water (''fishable/swimmable''), that water quality is also maintained and protected unless, through a public process, some lowering of water quality is deemed to be necessary to allow important economic or social development to occur (tier 2), and to identify water bodies of exceptional recreational or ecological significance and maintain and protect water quality in such water bodies (tier 3). Antidegradation plays a critical role in allowing States and Tribes to maintain and protect the finite public resource of clean water and ensure that decisions to allow reductions in water quality are made in a public manner and serve the public good.

The watershed approach may be a powerful tool to achieving antidegradation goals (i.e., maintaining the chemical, physical, and biological integrity of the Nation's waters). Many and varied uses are made of the Nation's waters and in some cases, these uses conflict. The ability of particular waters to accommodate all uses is limited. High quality surface waters are an important and finite resource whose availability affects the health, welfare, and economic well-being of all the citizens of the United States. When operating properly, the antidegradation policies of States and Tribes ensure that water quality is conserved where possible and lowered only when necessary, and that those affected by the lowering of water quality have a say in the final decision. As a result, antidegradation policies are well-suited to assist States, Tribes and local communities in establishing and achieving watershed goals. Sensitive or highly valued water bodies can be identified and protected from degradation through outstanding national resource water (ONRW) or related designations. In other water bodies, where water quality is better than the minimum necessary to support fish and aquatic life and recreation, water quality should be maintained unless there is a demonstrated need to lower water quality. Consistent with the watershed approach and community-based environmental management, States' and Tribes' antidegradation policies and procedures can be a basis for a systematic and accessible planning process that protects against development having negative impacts on water quality. Additional authorities exist at the local level beyond State, Tribal and federal authorities which may allow additional protections to be put in place in accordance with the watershed management plan.

The water quality standards regulation requires each State and authorized Tribe to adopt, as part of its water quality standards, an antidegradation policy consistent with 40 CFR 131.12 and identify implementation methods for such a policy. This antidegradation policy provides a multi-level approach for the protection of water quality and applies to both point and non-point source activities. The level of protection that is provided to a specific segment depends upon a number of factors (e.g., a key determinant is whether existing water quality is found to exceed levels necessary to support ''fishable/swimmable'' uses). Antidegradation requirements are typically triggered when an activity is proposed that may have some effect on existing water quality. Such activities are reviewed to determine, based on the level of antidegradation protection afforded to the affected water body segment, whether the proposed activity can be authorized. ''Antidegradation reviews'' under all three tiers of antidegradation should be documented and subjected to public review and comment (e.g., as part of the public review of the water quality certification, NPDES permit, or other regulatory action).

Identifying the universe of activities that trigger antidegradation requirements is a fundamental and often controversial issue because of the number and variety of activities that can affect water quality. Clearly, a wide range of activities that affect water quality may be subject to antidegradation requirements, and States and Tribes have considerable flexibility in applying antidegradation policies.

The federal antidegradation requirements do not create, nor were they intended to create, State or Tribal regulatory authority over otherwise unregulated activities. It is the position of EPA that, at a minimum, States and authorized Tribes must apply antidegradation requirements to activities that are ''regulated'' under State, Tribal, or federal law (i.e., any activity that requires a permit or a water quality certification pursuant to State, Tribal or federal law, such as CWA § 402 NPDES permits or CWA § 404 dredge and fill permits, any activity requiring a CWA § 401 certification, any activity subject to State or Tribal nonpoint source control requirements or regulations, and any activity which is otherwise subject to State or Tribal regulations that specify that water quality standards are applicable). Where a State or Tribe wishes to require antidegradation reviews for activities that are not currently ''regulated'' under this definition, EPA recommends that a complete discussion of the activities requiring an antidegradation review be included in the State or Tribal water quality standards or other State or Tribal regulation. Although States and authorized Tribes have discretion to apply antidegradation requirements more broadly than minimally required, application of antidegradation requirements to activities that are otherwise unregulated under State, Tribal, and federal water law is not required by the federal water quality standards regulation.

EPA's current thinking is that antidegradation principles can and should be considered in connection with a number of activities even where application of the antidegradation review requirements is not explicitly required by the regulation. EPA is interested in identifying ways to better implement antidegradation, especially for activities such as urban and agricultural run-off. As part of general planning for development that is likely to affect surface water quality, it makes sense to consider existing ambient water quality and evaluate available means to protect that water quality. Thus, although a State or Tribe may not require a formal antidegradation review for a particular activity (e.g., an unregulated nonpoint source), there may still be value in applying the antidegradation principles in an analysis of potential environmental impacts.

In sum, EPA's current thinking is that the antidegradation policy is significantly underused as a tool to attain and maintain water quality and plan for and channel important economic and social development that can impact water quality. EPA believes this is especially true for nonpoint source run-off. This ANPRM provides an opportunity to identify and evaluate options for clarifying and strengthening antidegradation policy and its implementation.

States and authorized Tribes often submit implementation procedures to EPA for review as part of the water quality standards triennial review required by section 303(c) of the Act. This enables EPA to determine if the implementation procedures fulfill the requirements of the antidegradation

policy. The antidegradation policy itself is expressly required by 40 CFR 131.20(c) to be submitted to EPA for review. EPA's longstanding policy is that the implementation procedure should also be submitted to EPA for review. Often, however, implementation procedures are not submitted to EPA. EPA's current thinking is that an important change to the regulation would be to clarify under 40 CFR section 131.20(c) that State and Tribal antidegradation implementation procedures (in addition to the policy) must be included in the submittal of a State's or Tribe's water quality standards. Such a change could establish the foundation for additional substantive changes to the regulation concerning national norms for antidegradation implementation procedures.

A State's or Tribe's implementation method is on occasion so constructed as to essentially set aside the intent of the antidegradation policy. EPA has disapproved this aspect of State standards where the implementation procedure is inconsistent with the policy. Revising the regulation to specify requirements addressing the content of such implementation procedures (e.g., a core set of issues that must be resolved), and clarifying that implementation procedures must be included in the submittal package, may help to clarify EPA's role in determining whether State or Tribal antidegradation implementation procedures adequately uphold and implement the State's or Tribe's antidegradation policy. In addition, specifying in the regulation the basic elements of an implementation procedure could serve to better establish national norms for State and tribal antidegradation procedures. EPA is considering whether it would assist States and Tribes if the regulation were amended to identify the basic elements that must be included in an antidegradation implementation method.

Guidance on developing antidegradation implementation methods is provided through EPA's Regional Offices. EPA has not issued national guidance on these implementation methods and is interested in comments on whether national guidance on antidegradation implementation methods is needed, and whether elements of such guidance should be referenced or included in the Regulation.

Request for Comments on General Antidegradation Policy

EPA requests comment on the following questions:

1. What changes or clarifications could be made to the current tiered approach to protecting waters under antidegradation that would streamline and enhance antidegradation implementation?

2. Should the regulation be amended to identify the basic elements that must be included in an antidegradation implementation method and would such changes assist States and Tribes in understanding the requirements and in utilizing the flexibility available?

3. Is national guidance on antidegradation implementation methods needed and should elements of such guidance be referenced or included in the Regulation?

3. 40 CFR 131.12 (a)(1) ''tier 1''

Section 131.12 (a)(1) of the antidegradation policy contained in the water quality standards regulation requires that existing uses and the water quality necessary to protect them be maintained and protected. This provision, in effect, establishes the floor of water quality in the U.S. It also protects the environment where the existing use of a water body happens to be better than the use designated by the State or Tribe. An existing use as defined in 40 CFR 131.3 can be established by demonstrating that a use has actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur, whether or not such uses are designated uses for the water body in question. All waters of the U.S. are subject to tier 1 protection. In general, waters that are subject to only tier 1 antidegradation policies are those water bodies that do not exceed the CWA Section 101(a)(2) goals, or do not have assimilative capacity to receive additional quantities of a pollutant(s) without jeopardizing the existing use. Existing uses and additional issues related to defining them and their relationship to designated uses are further discussed in section III(B)(3) of this document.

Antidegradation policies are generally implemented for tier 1 by a review procedure that evaluates any discharge to determine whether it would impair an existing use. Prior to authorizing any proposed activity, a State or authorized Tribe shall ensure that water quality sufficient to protect existing uses fully will be achieved. In addition to ensuring that existing uses will be protected, the State or Tribe should ensure that all existing uses are designated in accordance with 40 CFR 131.10(i).

a. Tier 1 Implementation. In order to implement tier 1, a State or Tribe must define what is meant by the term ''existing in-stream water use'' (40 CFR 131.12(a)(1)) and must also be able to identify the level of water quality that is required to permit an existing use to continue to occur. Section 131.3 defines existing uses as, ''those uses actually attained in the water body on or after November 28, 1975 * * *'' Traditionally, when establishing designated uses, States and Tribes tend to define uses in terms of broad classes, such as warm water fishery or secondary contact recreation. Inherent in each of the broad use categories are specific uses that may be affected by a change in water quality. For example, a warm water fishery designated use may include the existing use of large mouth bass fishery. Many people would be upset if the warm water fishery designated use was protected in such a way as to allow a decline in the bass population. The central question faced by States and Tribes in determining whether or not a proposed action will impact existing uses is whether each specific use within a use class must be maintained (each individual type of species), or whether only the use class itself must be maintained (allow changes in species composition, but maintain a fishery). State and Tribal interpretations of this requirement vary considerably and are often tied to the degree of precision the State or Tribe achieves in defining designated uses.

Many States and some Tribes have addressed these questions by using the same degree of precision for both designated and existing uses. EPA's current thinking is that this is an acceptable approach as long as the State's or Tribe's designated uses and criteria applicable to those uses are adequate to ensure that existing uses are maintained under the federal antidegradation provisions. It would not be acceptable, for example, for a state to allow the loss of an existing natural cold water community in favor of a warm water community because both satisfy the general use designation of ''aquatic life.'' Nor would it be acceptable to allow shifts from existing pollution intolerant communities to communities that tolerate degraded conditions. The advantage of this approach is that the same criteria used to protect the designated use can be assumed to also protect the existing use. Under this approach, however, the protection afforded to existing uses is limited by the degree of refinement associated with the designated uses. States and Tribes that have more specific designated uses (i.e., including a number of use sub-categories) can potentially provide more protection by addressing more subtle changes to the existing use. States and

Tribes with less specific designated uses would have less precision associated with their existing use protection scheme.

An important tier 1 implementation issue concerns how a State or Tribe will prevent negative or harmful impacts to existing uses when water quality criteria that have been established to protect the designated uses are not adequate to protect the existing uses. For example, a regulated discharge of uncontaminated sediment may result in significant negative or harmful impacts to aquatic life habitat and loss of aquatic life use. In such cases, where clean sediment or siltation criteria have not been developed for the site, and where the State or Tribe has not established clear procedures to implement narrative criteria governing sedimentation, it may be difficult to prohibit such loss of use, particularly where a State or Tribe has not adopted biological criteria.

A second example arises where a proposed activity will result in the discharge of a substance for which numeric criteria have not been adopted by the State or Tribe, but sufficient data to derive criteria or a numeric translation of the narrative criteria are available. Where a range of numeric criteria can potentially be justified for the particular substance to protect the designated and/or existing use, it may be difficult or contentious for the State or Tribe to derive effluent limits protective of the existing use.

A third example arises where a proposed hydrologic modification will result in diminished flow in a water body and create the potential for loss of existing aquatic life use either through increased temperatures or turbidity, or loss of habitat. State and Tribal water quality criteria generally do not describe minimum acceptable flows and may not, by themselves, adequately protect against such loss of use. In *P.U.D. No. 1 of Jefferson County and City of Tacoma* v. *Washington Department of Ecology,* (114 S.Ct 1900 (1994)), the Supreme Court ruled that State certifications under section 401 of the CWA may include conditions to ensure compliance not only with a State's water quality criteria, but also with a State's designated uses or antidegradation policy. The Court concluded that a State could require, in this case, a dam to be designed and operated in such a way as to maintain stream flows necessary to protect the designated use of a stream. While this specific case had to do with a dam and stream flows necessary to protect a use, it should be noted that the opinion applies more broadly than to just flow and that in addition to maintenance of in-stream flows to protect water quality standards, States may also apply any other parameter that may not be specifically identified in the State's standards. EPA notes that where such implementation methods are spelled out, as a practical matter, they may be more easily implemented. (See related discussion in Section III.B. on uses). EPA believes that tier 1 methods or policies for addressing situations such as those described above may need to be included in an antidegradation implementation procedure.

Request for Comments on Antidegradation Tier 1

EPA specifically requests public comment on the following questions:

1. Do State and Tribal programs under the existing regulation do an adequate job of protecting existing in-stream uses?

2. Is a more detailed definition of ''existing in-stream water uses'' needed in the regulation? Should it be the same as ''existing uses?'

3. Should the regulation define what constitutes loss of an existing in-stream water use?

4. Should a clear approach to maintaining and protecting existing uses that may not be adequately protected by strict application of water quality criteria be a required element of an antidegradation implementation procedure?

5. Should the regulation specify under antidegradation that protection of both existing and designated uses is required?

4. 40 CFR 131.12 (a)(2) ''tier 2''

''Tier 2'' (§ 131.12(a)(2)) antidegradation policies are intended to protect the waters in which water quality is better than necessary to support propagation of fish, shellfish and wildlife, and recreation in and on the water body. These are called high quality waters. For such high quality waters, existing water quality must be maintained and protected unless it is demonstrated that a lowering of water quality is necessary to accommodate important economic or social development. The protection of high quality waters envisioned by the regulation encourages a systematic, public decision making process for determining whether or not to allow limited deterioration of water quality in high quality waters.

a. Identification of ''High Quality'' Waters. Identifying waters that are ''high quality'' and subject to tier 2 protection is an important antidegradation issue. The water quality standards regulation requires application of tier 2 requirements ''where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.'' However, the regulation does not include specific guidelines for identifying high quality waters. Various EPA guidance documents, including those issued by EPA's Regional offices, make a variety of suggestions concerning approaches to defining tier 2 waters. Not surprisingly, States and Tribes have developed various ways to identify tier 2 waters.

Existing approaches for identifying high quality waters fall into two basic categories: (1) pollutant-by-pollutant approaches, and (2) water body-by-water body approaches. States and Tribes following the first approach determine whether water quality is better than applicable criteria for specific pollutants that would be affected by the proposed activity. Thus, available assimilative capacity for any given pollutant is always subject to tier 2 protection, regardless of whether the criteria for other pollutants are satisfied. Such determinations are made at the time of the antidegradation review (i.e., as activities that may degrade water quality are proposed). States and Tribes following the second approach weigh a variety of factors to judge a water body segment's overall quality. Such determinations may be made prior to the antidegradation review (i.e., the State or Tribe may assign ''high quality'' designations in the State or Tribal standards), or during the course of the antidegradation review. Under this water body-by-water body approach, sometimes referred to as the ''designational'' approach, assimilative capacity for a given pollutant may not be subject to tier 2 protection if, overall, the segment is not deemed ''high quality.''

There are advantages and disadvantages to each approach. EPA's current thinking is that neither approach is clearly superior and that either, when properly implemented, is acceptable. EPA has approved both approaches in State standards. Some States and Tribes have found the pollutant-by-pollutant approach to be easier to implement because the need for an overall assessment considering various factors is avoided. Also, decisions are driven strictly by water column data (i.e., rather than judgments concerning a segment's overall value or quality) and thus may be less susceptible to challenge. The pollutant-by-pollutant approach may result in more waters receiving some degree of tier 2 protection because it would cover

waters that are clearly not attaining goal uses (i.e., waters which are not supporting ''fishable/swimmable'' goal uses but that possess assimilative capacity for one or more pollutant).

The water body-by-water body approach, on the other hand, allows for a weighted assessment of chemical, physical, biological, and other information (e.g., unique ecological or scenic attributes). In this regard, the water body-by-water body approach may be better suited to EPA's stated vision for the water quality standards program: refined designated uses with tailored criteria, complete information on uses and use attainability, and clear national norms. The water body-by-water body approach preserves water quality even if criteria for certain pollutants are not attained or if criteria for certain uses may be limited, such as fish consumption. This approach also allows for the high quality water decision to be made in advance of the antidegradation review (and included in the water quality standards for the segment), which may facilitate implementation. A water body-by-water body approach also allows States and Tribes to focus limited resources on protecting higher-value State or Tribal waters. The water body-by-water body approach can also distinguish between high quality waters and high water quality and preserve high quality waters on the basis of physical and biological attributes, rather than high water quality attributes alone. However, the flexibility of the water body-by-water body approach is also its principal disadvantage where a State or Tribe does not develop inclusive qualification criteria. For example, where a State's or Tribe's implementation guidelines define a narrow universe of waters, many deserving high quality waters may not receive tier 2 protection. Thus water quality may actually decrease in the waters not classified for tier 2 protection without a public review of the development decision. Also, a potential problem can arise if the process of identifying high quality waters becomes so complicated, resource-intensive, and data-intensive that the primary purpose of tier 2 (i.e., seeking to maintain and protect existing quality by identifying whether there are reasonable less-degrading or non-degrading alternatives) is not adequately accomplished. In other words, the limited resources available for water quality protection could be spent on the identification process at the expense of analysis of the necessity for degradation.

b. Tier 2 Implementation. The current regulation provides a great deal of flexibility to States and Tribes in implementing tier 2 requirements. Some States and Tribes devote little effort to implementing their tier 2 requirements, some States and Tribes apply tier 2 requirements in an inconsistent or infrequent manner, and other States and Tribes have active programs that routinely and consistently implement tier 2. In general, those States and Tribes that actively implement their tier 2 requirements do so by conducting an antidegradation review to determine whether proposed activities that might affect water quality may be authorized. EPA's current sense is that the antidegradation policy, in reality, has little effect on decisions related to surface water quality unless the State or Tribe adopts an implementation procedure and uses it. EPA currently reviews all State and Tribal water quality standards at the time of adoption/revision to ensure they establish a clear approach to implementation. A brief discussion of a number of the major implementation issues is presented below.

i. Triggers for tier 2 Review. Although not discussed in 40 CFR 131.12 of the water quality standards regulation, State and on occasion Tribal tier 2 implementation procedures often include guidelines which are used to determine when the water quality degradation that will result from a proposed activity is significant enough to warrant further antidegradation review. Where the degradation is not significant, the antidegradation review is typically terminated for that proposed activity. The significance evaluation is usually conducted on a pollutant-by-pollutant basis, even where a water body-by-water body approach is used to identify high quality waters, and significant degradation for any one pollutant triggers further review for that pollutant.

Applying antidegradation requirements only to activities that will result in significant degradation is a useful approach that allows States and Tribes to focus limited resources where they may result in the greatest environmental protection. However, there is a great deal of variation in how States and Tribes define significant degradation. Significance tests range from simple to complex, involve qualitative or quantitative measures or both, and may vary depending upon the type of pollutant (e.g., the approach may be different for highly toxic or bioaccumulative pollutants). In some cases, States have also created categorical exemptions from tier 2 review (e.g., they have exempted entire categories of activities from antidegradation reviews based on a general finding that such activities do not result in significant degradation). States or Tribes that define a high threshold of significance may be unduly restricting the number of proposed activities that are subject to a full antidegradation review. Further the approach currently used by some States may not adequately prevent cumulative water quality degradation on a watershed scale. The current regulation does not specify a significance threshold below which an antidegradation review would not be required. EPA's current thinking is that a clear national norm regarding this ''significance test'' is necessary and should be developed and established in either the regulation or national guidance.

A related issue concerns whether tier 2 should be applied to pollutants where numeric criteria have not been adopted. For example, where there is a proposed discharge of a pollutant to a ''high quality'' segment, and the background concentration of the pollutant is at or near zero in the water body, should significant degradation be evaluated and should it be evaluated any differently where numeric criteria for the pollutant have not been adopted? For example, where a State or Tribe lacks numeric criteria for nutrients such as nitrogen and phosphorus (a common occurrence), increased discharges of these nutrients can be expected to result in changes in plant life or species diversity. If the State or Tribe relies entirely on a pollutant loadings comparison to numeric criteria for the tier 2 evaluation, new loadings of nutrients may not even be evaluated under tier 2.

EPA's sense is that, in practice, the current tier 2 requirements tend to be used to protect high quality waters only where such high quality supports fishing and swimming uses. However, limiting tier 2 protection to assimilative capacity associated with only fishing and swimming uses means that the protection afforded by tier 2 can end up being narrower than intended. For example, where a water has unique ecological significance (e.g., acid bog or thermal spring) not captured by ''fishable/swimmable,'' the State or Tribe may not believe it is appropriate to designate the water as high quality under tier 2. In this case, the unique ecological characteristic would warrant protection as an existing use. The State or Tribe also has the option of designating the water ONRW, yet, as discussed elsewhere in this section, EPA believes that many States and Tribes are not inclined to designate waters ONRW. The result in this example is that a water with unique

ecological significance that may warrant a relatively high level of protection, falls through the crack between tiers 1 and 2 where the State or Tribe interprets the level of protection afforded by those tiers too narrowly.

ii. ''Necessary'' Lowering of Water Quality. The water quality standards regulation requires that the water quality of high quality waters not be lowered unless the State or Tribe determines that such degradation is necessary to accommodate important social and economic development. Given the variety of available engineering approaches to pollution control and the emerging importance of pollution prevention, the finding of necessity is among the most important and useful aspects of an antidegradation program and potentially an extremely useful tool in the context of watershed planning. An approach that has been recommended by EPA is to require the proponent of the proposed activity to develop an analysis of pollution control/pollution prevention alternatives. In conducting its antidegradation review, the State or Tribe then ensures that all feasible alternatives to allowing the degradation have been adequately evaluated, and that the least degrading reasonable alternative is implemented. Also, note that where less-degrading alternatives are more costly than the pollution controls associated with the proposal, the State or Tribe should determine whether the costs of the less-degrading alternative are reasonable. EPA believes that such an alternatives analysis approach can be an effective tool for maintaining and protecting existing assimilative capacity. EPA's current thinking is that specifying what would constitute an acceptable alternatives analysis in the regulation, could result in the addition of substance and rigor to the ''tier 2'' antidegradation reviews conducted by States and Tribes.

iii. Identification of ''Important'' Social or Economic Activities. Another task that must be completed as part of an antidegradation review is to evaluate whether a proposed activity that will result in degradation is necessary to accommodate important social or economic development in the area in which the waters are located. (40 CFR 131.12(a)(2)) The significance of determining if an activity will provide for important social or economic benefit is that, absent important social or economic benefit, degradation under tier 2 must not be allowed. Factors that may be addressed in such an evaluation include: (a) employment (i.e., increasing, maintaining, or avoiding a reduction in employment), (b) increased production, (c) improved community tax base, (d) housing, and (e) correction of an environmental or public health problem. Some States or Tribes have addressed this issue by requiring the applicant to bear the burden of demonstrating the social and economic importance of the proposed activity. However, approaches for evaluating social and economic importance vary widely. EPA published *Interim Economic Guidance for Water Quality Standards: Workbook,* Appendix M to the ''Water quality Standards Handbook—Second Edition'' in March 1995 (EPA–823–B–95–002, March 1995). This guidance specifically addresses the determination of social and economic importance in the context of a tier 2 antidegradation review and should be useful to States and Tribes in determining the relative economic consequences of various development proposals and their relationship to water quality standards. EPA's current thinking is that determining the social and economic importance of a proposed activity is an important public question best addressed by State, Tribal or local interests, perhaps as part of the development of a basin plan.

iv. Tier 2 and Identification of Waters under CWA Section 303(d). Section 303(d) of the Clean Water Act and EPA regulations require States to develop lists of waters that do not meet State water quality standards, even after point sources of pollution install the minimum required levels of pollution control technology. Section 303(d) lists must be submitted to EPA every two years. The waters on the lists are called water quality-limited waters and are defined in EPA regulations as waters ''where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by section 301(b) and 306 of the [Clean Water] Act.'' 40 CFR 130.2(j). States are then required to develop total maximum daily loads (TMDLs) for water quality-limited waters.

EPA's current policy is that States include waters on section 303(d) lists if applicable water quality standards are not met or are not expected to be met by the next list submission deadline, i.e., within two years (see memorandum from Robert Wayland, Director Office of Wetlands, Oceans and Watersheds, to Water Management Division Directors, Regions I–X, Directors Great Water Body Programs and Water Quality Branch Chiefs, Regions I–X, Subject: National Clarifying Guidance for 1998 State and Territory Section 303(d) Listing Decisions, August 27, 1997). In determining whether to list waters, States should consider all aspects of applicable water quality standards, including narrative and numeric criteria, designated uses, and antidegradation policies.

EPA is currently discussing with stakeholders possible changes and clarifications to the water body listing regulations and guidance under section 303(d) of the Act. Changes and/or clarifications could include a statement in the regulation, or a clarification, that identifies existing tier 2 antidegradation analyses and decisions as ''existing and readily available water quality-related data and information'' that must be considered under 40 CFR 130.7(b)(5) when deciding whether to place a water body on a section 303(d) list. Information from existing antidegradation tier 2 reviews on assimilative capacity for particular water bodies could be used to determine whether a water body is likely to not meet water quality standards in the near future and thus required to be included on the section 303(d) list. In addition, EPA could amend the existing antidegradation regulations to direct States and Tribes to consider the 303(d) listing status of a water body, and the information supporting that status, when determining whether a proposed activity that is expected to degrade water quality in that water body can be authorized under tier 2 of the State's or Tribe's antidegradation provisions.

v. Achieving all cost-effective and reasonable best management practices for nonpoint sources. This implementation issue arises from one sentence that is included in the federal antidegradation policy at 40 CFR 131.12(a)(2):

> Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

This sentence has been somewhat controversial over the years because it could be interpreted to require a State or Tribe to include, in its water quality standards, a provision requiring adoption of authority for, as well as achievement of, best management practices (BMPs) for nonpoint sources prior to allowing degradation of high quality waters. EPA has interpreted 131.12(a)(2) as not requiring a State or Tribe to establish BMP requirements for nonpoint sources where such BMP requirements do not exist. As EPA clarified in a February 22, 1994 guidance memorandum, State and

Tribal antidegradation rules need only include provisions to assure achievement of BMPs that are required under State or Tribal nonpoint source control laws or regulations. (Memorandum from Tudor T. Davies, Director EPA Office of Science and Technology to EPA Water Management Division Directors, Regions I–X, Subject: Interpretation of Federal Antidegradation Regulatory Requirement, February 22, 1994) Thus, States and Tribes that have adopted nonpoint source controls must assure that such controls are properly implemented before authorization is granted to allow point source degradation of water quality.

EPA's current thinking is that the term ''all cost-effective and reasonable best management practices for nonpoint source control'' in 40 CFR 131.12(a)(2) would be more effective if read more broadly. In other words, the term could include nonpoint source best management practices established through Federal, State, Tribal, and local authorities and programs that address activities on the land or water that create or exacerbate impacts to surface waters. This construction is consistent with EPA's Total Maximum Daily Load (TMDL) program under Section 303(d) of the Clean Water Act. There, EPA's current policy is that in achieving pollutant load reductions from nonpoint sources, EPA and States should work in partnership, using all available Federal, State, and local authorities and programs. As EPA stated in an August 1997 TMDL guidance memorandum, States are expected to achieve nonpoint source pollutant load reductions through such authorities and programs, including non-regulatory, regulatory, or incentive-based programs. EPA is considering applying the same test to § 131.12(a)(2).

In addition, EPA's current thinking is that it may be time to begin to more actively ensure implementation of this requirement: to implement cost effective and reasonable best management practices for nonpoint source control before allowing lowering of water quality in a water body. One way to do this would be to specify that State and Tribal antidegradation implementation procedures include a step under which States and Tribes inventory their nonpoint source authorities and programs, and, as part of each antidegradation review, include in the record documentation on how those authorities and programs were applied to activities in a watershed in which additional loadings subject to an antidegradation review have been considered. Emphasizing this requirement by specifying it as a required aspect of a State or Tribal antidegradation implementation procedure, in EPA's view, would facilitate use of antidegradation policy as a tool to ensure that nonpoint sources are controlled where possible in accordance with water quality standards, before any additional assimilative capacity in a water body can be allocated to an activity. EPA is interested in comment on this current thinking and specifically on whether it would be helpful to revise the regulation to clarify the relationship between nonpoint source controls and tier 2 antidegradation requirements.

In summary, numerous stakeholders have commented to EPA that antidegradation reviews are conducted inconsistently across the country and that EPA should attempt to improve the national consistency of such reviews. EPA is interested in comment on the appropriate balance between national consistency and State and Tribal flexibility in the implementation of the tier 2 provision and on what changes may be needed to the regulation or EPA policy or guidance to ensure that the tier 2 provision is implemented in a nationally consistent manner that is consistent with the intent of the antidegradation provision, and whether a consistent approach should be the goal of States' and Tribes' watershed programs.

Request for Comments on Antidegradation Tier 2

EPA requests comment on the following questions:

1. Does the existing requirement to apply tier 2 ''where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water'' while at the same time ''protecting existing uses fully'' need to be clarified with respect to which waters are afforded tier 2 antidegradation protection, and if so, should the Agency clarify the requirement with additional guidance, or with revisions to the regulation?

2. What factors should be considered in identifying ''high quality'' waters? Should the decision be based strictly on chemical water column quality (i.e., a pollutant-by-pollutant approach), or should a segment's overall quality or other factors be considered (i.e., a water body-by-water body approach)?

3. Given EPA's current thinking that both approaches may be acceptable and neither is necessarily superior, are the two approaches compatible and could they be implemented together?

4. Should application of tier 2 be clarified so that protection of assimilative capacity associated with non-fishable/swimmable uses is clearly required?

5. What methods are currently being used by States and Tribes to define ''significant degradation''?

6. How should ''significant degradation'' be defined? Is there a need for a nationally consistent approach? Should EPA issue additional guidance, or revise the regulation to include, for purposes of implementing tier 2 requirements, a definition of significant degradation? Are categorical exemptions appropriate, and if so, under what circumstances?

7. How should cumulative effects in a watershed be considered in assessing the significance of the degradation that will occur as a result of a proposed activity?

8. How should the ''necessity'' of degradation be determined? When should the costs of less degrading alternatives be considered reasonable?

9. How should significant degradation be evaluated for pollutants where no numeric criterion has been adopted?

10. Is additional Agency guidance or regulatory requirements necessary to help States and Tribes address social and economic importance (e.g., additional methods or options beyond those discussed in the March 1995 Interim Economic Guidance document)?

11. Should evaluating the importance of proposed discharges be entirely a State or Tribal determination and not be a required element for EPA review?

12. Would it be appropriate to revise the regulation to clarify the relationship between nonpoint source controls and tier 2 antidegradation requirements?

13. Should EPA revise the regulation to expressly state that States and Tribes are to consider the 303(d) listing status of a water body, and the information supporting that status, when determining whether a proposed activity that is expected to degrade water quality in that water body can be authorized under tier 2 of the State's or Tribe's antidegradation provisions?

14. Is greater consistency between individual State and Tribal programs desirable and, if so, what changes may be needed to the regulation or EPA guidance to ensure that the tier 2 provision is implemented in a nationally consistent manner?

5. 40 CFR 131.12 (a)(3) ''Tier 3''

Tier 3 of the antidegradation policy is intended to identify and protect waters of extraordinary ecological, recreational or other significance. Tier 3 of the antidegradation policy incorporates the

concept of Outstanding National Resource Waters (ONRW). The rationale for this provision is that some water bodies are of such high quality or of such exceptional ecological significance that the commonly applied designated uses such as warm water fishery and primary contact recreation and criteria to protect those uses are not suitable or may not provide adequate protection to maintain the high water quality or ecological significance in a given water body.

ONRWs are intended to include the highest quality waters of the United States. Additionally, the ONRW antidegradation classification offers special protection for waters of ''exceptional ecological significance,'' i.e., those water bodies which are important, unique, or sensitive ecologically, but whose water quality, as measured by the traditional characteristics such as dissolved oxygen or pH, may not be particularly high, such as thermal springs. Waters of exceptional ecological significance also include waters whose characteristics cannot adequately be described by traditional parameters (such as wetlands and estuaries).

Tier 3 of the antidegradation policy provides the highest level of protection to water bodies by prohibiting the lowering of water quality. The only exception to this prohibition as discussed in the preamble to the water quality standards regulation is for activities that result in short-term and temporary changes in the water quality of the ONRW. EPA guidance has not defined temporary and short-term specifically, but views these terms as limiting water quality degradation for weeks or months, not years. The intent is to limit degradation to the shortest possible time.

a. Designating ONRWs. The designation of water bodies as ONRWs has been limited in its application. Overall, there are relatively few water bodies designated as ONRWs in the United States, although some States have designated a high percentage of State waters as ONRWs. Several States have been reluctant to adopt ONRWs because of concerns regarding the process for adopting ONRW classifications and the level of protection afforded to a water once it is classified as an ONRW.

Regarding the process for adoption of ONRWs, the existing regulation requires the State or Tribe to provide an ONRW level of protection in their antidegradation policies, but there is no requirement that any water body be so designated or any specificity as to how that is to be done. One way to address this issue may be for EPA to amend the regulation to require States and Tribes to establish a nomination process with criteria guidelines in which the public could petition the State or Tribe for designation of certain waters as ONRWs. It would then be up to the State or Tribe to set criteria for the ONRW selection process with the final decision made by the State or Tribe after consideration of the public comment. EPA currently recommends three categories of waters which could be eligible for ONRW designation: waters of (1) National and State parks, (2) wildlife refuges, and (3) exceptional recreational or ecological significance.

Regarding the level of protection that is afforded to a water body once it is classified as an ONRW, a common concern is that classifying a water as ONRW will result in a federal prohibition on any further development of any kind in the watershed. As described above, the federal antidegradation policy regarding ONRWs is that once classified as an ONRW, the water quality of the ONRW must be maintained and protected. One way, but perhaps not the only way, to ensure that the water quality is maintained and protected would be to prohibit activities that would generate additional pollutant loads and or water quality impacts in the ONRW. This approach is commonly referred to as ''no new or increased discharge'' and was explained by EPA in its promulgation of antidegradation provisions for the State of Pennsylvania in 1996 (61 FR 64816, December 9, 1996). As discussed in the Pennsylvania rule, the federal policy requiring the water quality to be maintained and protected is subject to some interpretation by States and Tribes.

EPA believes there is considerable uncertainty from jurisdiction to jurisdiction concerning the impact of the ONRW classification on the local community or the State or Tribe. How will the State or Tribe handle future needs for development in the area of the ONRW? What role does EPA play in ensuring that the State or Tribe provides the highest protection measures to ONRWs? EPA's current thinking is that this ''no further development in the watershed prohibition'' may be an overly strict interpretation of the protection required by tier 3 and that a public debate is necessary to clarify the level or range of protection that is afforded to a water by classifying it as an ONRW, and how that level or range should be determined.

One way to remove uncertainty surrounding the implications of ONRW designations is for States and Tribes to adopt concurrent with the ONRW the implementation methods for that water body that define what attributes of the water will be protected and how this will be accomplished by both point and nonpoint sources. It may make sense for the regulation to include this requirement in order for all parties concerned to know the impact on development of such a designation before adopting an ONRW.

i. Relationship of Tier 3 to the Wild and Scenic Rivers Act. Additionally some States have not adopted waters as ONRWs when there has been concern regarding ONRW requirements and the requirements of a wild, scenic, or recreational water body. Although the Department of Interior (DoI) founded the antidegradation policy from which the concept of an outstanding national resource water (ONRW) that EPA currently uses evolved, an ONRW is different from the Wild and Scenic Rivers program administered by DoI. ONRWs are designated by the State or Tribe in their water quality standards. Wild and scenic rivers are given their designation by Congress or the Department of Interior pursuant to the Federal Wild and Scenic Rivers Act. The main purpose of the Wild and Scenic Rivers Act is to keep waters free-flowing. The main purpose of an ONRW designation is to maintain and protect high quality waters that constitute outstanding resources due, for example, to their exceptional recreational or ecological significance, which can include free-flowing water. EPA does not see any conflict between these two programs.

b. Tier 3 Implementation. EPA in chapter 4 of the Water Quality Standards Handbook interprets the ''water quality to be maintained and protected'' provision of the regulation as requiring no new or increased discharges to ONRWs and no new or increased discharge to tributaries to ONRWs that would result in lower water quality in the ONRWs. The only exception is for short-term and temporary changes. In contrast, some States, Tribes, and EPA Regions have interpreted this provision to allow new discharges as long as the water quality is either maintained or improved. Alternatively, some States, Tribes and Regions have interpreted water quality in terms of the characteristics for which the water body was selected to be an ONRW and have strictly maintained those characteristics while allowing other characteristics to become degraded. EPA has also allowed a proposed activity that will result in a new or expanded source where the applicant agrees to implement or

finance upstream controls of point or nonpoint sources sufficient to offset the water quality effects of the proposed activity. This offset is generally called trading and is accomplished through a TMDL pursuant to CWA Section 303(d) requirements. Such TMDLs include an appropriate margin of safety and address, in particular, the uncertainties associated with any proposed nonpoint source controls, as well as variability in effluent quality for point sources.

This variability in interpretation has created ONRWs across the Nation that vary in terms of the stringency of point source controls, and types of water bodies considered to be ONRWs. Restrictions on physical changes have also been implemented in an inconsistent manner. EPA is considering whether the existing ONRW protection program is addressing an appropriate universe of waters and whether the flexibility provided under the regulation, in terms of coverage and protection requirements, needs to be further restricted, maintained, or expanded. It may make sense to have an ONRW designation which is permanent and allows no change in water quality and applicable to few waters while creating a subset of waters which can have some change in water quality under certain circumstances.

c. Tier 2½. Several States and Tribes have already created, as part of their antidegradation policy, a provision that is in between EPA's recommended tier 2—high quality waters and tier 3—Outstanding National Resource Waters, sometimes referred to as Tier 2½. This additional tier is given various names, such as Outstanding State Resource Waters, Outstanding Tribal Waters, Special Protection Waters, or Water of Exceptional Significance. When it supplements tier 2 and tier 3 provisions, EPA has accepted this provision as being consistent with the intent and spirit of the antidegradation policy. Inclusion of a tier 2½ within the regulation would encourage States and Tribes to apply more stringent controls than would be required under tier 2 but with more flexibility to make adjustments in criteria and permitting decisions than would normally be allowed if the water body in question were designated as an ONRW. Any additional flexibility that might be created by a tier 2½ classification to allow additional activities that could marginally affect water quality, might not be necessary where a State or Tribe (or EPA) considers such flexibility to already exist in the context of the ONRW classification. In commenting on the flexibility afforded by the tier 2½ classification, commenters are urged to state their understanding of the flexibility currently afforded in the ONRW classification.

Request for Comments on Antidegradation Tier 3

EPA seeks comment on the following questions:

1. Should EPA add definitions of important terms to the ONRW part of the regulation, including a definition of ''degradation'' which clarifies that temporary or short-term effects on ONRW waters could be authorized? Should definitions of ''short-term'' and ''significant'' also be included?

2. Should EPA require States and authorized Tribes to establish both a process and qualification criteria which would allow the public to nominate waters for the ONRW designation? Would EPA guidance be helpful?

3. Should the tier 2½ antidegradation policy concept be explicitly recognized in the federal regulation and what, if any, limits or factors for application of the tier should be included?

4. States (and Tribes) have differing interpretations of the level of protection afforded ONRWs. Should EPA further specify in the regulation what maintaining and protecting water quality in ONRWs means?

6. 40 CFR 131.12 (a)(4) ''Thermal Discharges''

The requirement to prevent potential water quality impairment associated with thermal discharges contained in § 131.12 (a)(4) of the regulation is intended to coordinate the requirements and procedures of the antidegradation policy with those established in the CWA for setting thermal discharge limitations. Regulations implementing section 316 may be found at 40 CFR 124.66. The statutory scheme and legislative history indicate that limitations developed under section 316 take precedence over other requirements of the CWA. EPA is not requesting comment on this section of the regulation. This provision is mentioned here only in the interest of completeness.

E. Mixing Zones

1. Background

The current regulation (at 40 CFR 131.13) describes States' and Tribes' discretionary authority to include, in their water quality standards, policies that affect the implementation of those standards. For example, States and Tribes may adopt policies on mixing zones, variances, and schedules of compliance for water quality-based NPDES permit limits. If included in their water quality standards or other implementing regulations, States and Tribes are required to submit such policies to EPA for review and approval. The policies governing the implementation of water quality standards are inseparable from the standards themselves and, consequently, EPA reviews both to determine whether implementation policies are compatible with the State or Tribal water quality standards provisions, technically well founded and consistent with the CWA.

Concerns have been expressed both by the regulated community and environmental groups over the lack of specificity in State and Tribal mixing zone policies and implementation procedures adopted under this general policies provision. These groups believe that this lack of specificity may result in rather subjective and inconsistent implementation of water quality standards, from site-to-site. EPA has also, through its ten regional offices, not always applied uniform standards in reviewing individual States' and Tribes' mixing zone provisions.

In encouraging the implementation of water quality management activities consistent with a broader watershed approach, EPA has encountered inconsistent implementation of mixing zone provisions across State and Tribal borders, within whole watersheds, and sometimes along a single water body. Remedies to water quality problems designed along watershed boundaries can be limited in their effectiveness as a result of differing policies, procedures and treatment of the same water body by different authorities. A certain amount of flexibility is, however, essential when dealing with complex water quality problems on a watershed or basin scale. EPA's current thinking is that it is preferable to be more explicit about where the program requires consistency and where flexibility is allowed or encouraged.

The current regulation does not articulate any EPA requirements regarding the content of mixing zone implementation procedures. Rather, EPA guidance addressing mixing zones, and stream design flows is contained in several documents, including the *Water Quality Standards Handbook: Second Edition* (the Handbook) and the *Technical Support Document for Water Quality-based Toxics Control, March, 1991* (the TSD). Although program and technical guidance identifies the approaches to standards implementation which EPA recommends and considers protective of water quality, guidance is not equally effective at delineating what constitutes

minimally acceptable content or the approaches EPA considers to be not approvable or inconsistent with the CWA. Further, most regulatory agencies, as well as the regulated community, are most concerned with what is required rather than what is recommended. Policy or guidance is not binding whereas regulation is. Guidance is better designed to provide detailed descriptions of the variety of technically sound implementation approaches and their underlying scientific basis; regulation provides the clearest direction regarding required minimal program content and identification of those components of the program where flexibility is allowed.

EPA is considering an expansion of the section of the regulation addressing general policies to provide clear, detailed and specific direction to States and Tribes on the development and content of mixing zone policies and implementation procedures. EPA's current thinking is that greater specificity within this portion of the regulation may be needed to clarify the minimum necessary elements of State and Tribal mixing zone policy and implementation procedures. EPA's current thinking is that this area of the regulation needs to articulate a clear level of national consistency in mixing zone implementation that results in a consistent level of protection across the country and at the same time, where State and Tribal flexibility is not only encouraged, but possibly essential to program efficiency and accuracy.

2. EPA Policy and Guidance on Mixing Zones

The concept of mixing zones as a regulatory tool to address the incomplete mixing of wastewater discharges in receiving waters has been embraced by both EPA and its predecessor agencies as part of a larger regulatory effort to ensure that point source discharges of wastes do not impair beneficial uses. EPA interprets the CWA as allowing the use of mixing zones as long as the provisions addressing toxicity at section 101(a)(3) are met and the designated uses of the water body as a whole are protected. One court has considered the application of a mixing zone in a discharge permit and upheld EPA's use of a limited mixing zone (*See Hercules* v. *EPA*, 598 F.2d 91 (D.C. Cir. 1978)). The concept of a mixing zone is covered by a series of guidance documents issued by EPA and its predecessor agencies (see, for example: *Water Quality Criteria* (Green Book), Federal Water Pollution Control Administration, 1968, pp. 29–31; *Water Quality Criteria 1972* (Blue Book), EPA, March 1973, pp. 112–115, 231–232, 403–457; *Guidelines for Developing or Revising Water Quality Standards*, January 1973; *Chapter 5—Guidelines for State and Areawide Water Quality Management Program Development*, November, 1976; *Allocated Impact Zones for Areas of Non-Compliance*, EPA Region 1, October 1986; *The Water Quality Standards Handbook*, August, 1994, pp.5–1 to 5–11; *Technical Support Document for Water Quality-based Toxics Control* (TSD), March, 1991, pp. 31–34, 56–60, 69–89).

Many definitions of mixing zones have been offered, differing primarily by perspective (i.e., engineering, hydrological, ecological, regulatory) and their application. From a hydrological/engineering perspective, mixing zones can be defined based upon the recognition of incomplete mixing of an effluent with its receiving water (e.g., ''that area or volume of dilution water necessary to reduce contaminant concentrations to some acceptable level or to a totally mixed condition''). Biologically, mixing zones can be defined based on the premise that surface water quality criteria can be exceeded under limited circumstances without causing unacceptable toxicity or, more broadly, impairment of the designated beneficial uses (e.g., ''the area contiguous to a discharge where receiving water quality is not required to meet water quality criteria nor other requirements applicable to the receiving water'').

EPA's policy on the use of mixing zones has evolved since its early recognition within general water quality guidance, primarily in association with the institution and evolution of the NPDES permit program (e.g., the TSD). Initially, guidance emphasized the need to ensure that the biological integrity of the aquatic community in the receiving stream was protected and that such determinations must be based on site-specific evaluations. In the late 1980's EPA and authorized NPDES States began increasing the development and issuance of water quality-based effluent limits. With this increase, came a demand for widely applicable national guidance to support those programs. EPA and States, in essence, needed wasteload allocation and water quality-based permit limit derivation methods that were relatively simple to use and could be implemented with little site-specific data. EPA met this demand by issuing revised guidance (the TSD and Handbook, cited above, are examples) and by accepting a wide range of State mixing zone practices. As a result, mixing zone provisions have become less prescriptive than earlier guidance that envisioned data rich, site-specific studies, and more reliant on often cursory evaluations, general mixing assumptions, and best professional judgement.

EPA's current policy addresses mixing zones as allocated impact zones (AIZs) where certain numeric water quality criteria may be exceeded as long as: there is no lethality to organisms passing through the mixing zone, there are no significant risks to human health, and the designated and existing uses of the water body are not impaired as a result. These AIZs or mixing zones, if disproportionately large, could unacceptably impact the integrity of the aquatic ecosystem and have unanticipated ecological consequences on the water body as a whole resulting in impairment of the designated or existing uses. Therefore, EPA's policy has emphasized a holistic approach to mixing zone regulation which considers location, size, shape, outfall design and in-zone quality. Mixing zone guidance produced by EPA since 1972 has consistently emphasized the need to protect both nonmotile benthic and sessile organisms in the mixing zone as well as swimming and drifting organisms (Water Quality Criteria 1972). States and Tribes, however, have focused primarily, if not exclusively, on the protection of swimming and drifting organisms and the need to provide ''zones of passage'' within waters with mixing zones. In its dependence upon conditions protective of swimming and drifting organisms to define mixing zones, this approach results in an incomplete implementation of the original concept supporting mixing zones. As originally designed, EPA's mixing zone policy provided for the prevention of lethality to swimming and drifting organisms by limiting the size of the mixing zone and to nonmotile organisms by limiting the placement or location of mixing zones.

Although existing EPA guidance on the implementation of mixing zones (cited above) is quite detailed, at present, the regulation itself simply provides that States and Tribes may adopt, as part of their water quality standards, mixing zone policies and that such policies are subject to EPA review and approval (40 CFR 131.13). In addition, EPA may separately review individual State and, once approved to administer NPDES, Tribal mixing zone determinations as part of the wasteload allocation and NPDES permit review process, outside the standards adoption and review process to ensure appropriate implementation of the State's mixing zone policy.

EPA is considering expanding the current provisions at 40 CFR 131.13 addressing State and Tribal development of mixing zone policies within their water quality standards program to address the content and design of those policies.

3. State and Tribal Mixing Zone Policies

While there are advantages to the more flexible general approach adopted in the late 1980's, the generality of the current regulation has led to some uncertainty as to what constitutes an approvable mixing zone policy. Because the regulation lacks detailed requirements concerning EPA's standards of review of State and Tribal mixing zone provisions, EPA is considering changing the language regarding State and Tribal adoption of mixing zone policies to address specifically the content of such policies. EPA's current thinking is that greater specificity would provide for increased public participation in State, Tribal and Federal decision-making; a clearer understanding by the State, Tribe and public of what EPA considers an approvable mixing zone policy; a reduction in the number of NPDES permit appeals and objections based on differing interpretations of a State or Tribal mixing zone policy; and a more consistent review of State and Tribal submissions by EPA itself.

Fundamental to any such policy, EPA is considering requiring States and Tribes to indicate explicitly in their water quality standards whether or not they allow mixing zones for each of the various uses designated for a given water body. Such provisions could address mixing zones applied to either acute or chronic aquatic life and other water quality criteria (e.g., public water supply, livestock watering, wildlife protection, etc.). Under this approach, if the State or Tribe does not explicitly authorize mixing zones, then no mixing zones would be allowed in State or Tribal waters, and all applicable criteria would have to be met at the end-of-pipe. (Memorandum from Robert Perciasepe, Assistant Administrator for Water to Water Program Directors, Regions I-X, Subject: EPA Guidance on Application of State Mixing Zone Policies in EPA-Issued NPDES Permits, August 6, 1996). Alternatively, States and Tribes could determine that such prohibitions would be applied to only a subset of uses or pollutants rather than across all use categories and pollutants. Some States or Tribes have used this approach to prohibit mixing zones in their highest use classes (e.g., class AA), while allowing mixing zones in more highly impacted watersheds (e.g., class C or D waters).

States and Tribes could also be required to specify the conditions under which mixing zones are allowed in each site-specific application and the limitations to those applications (e.g., size, shape, length, placement, etc.). In addition, States and Tribes could be required to identify any circumstances, pollutants, locations or conditions for which the use of mixing zones is prohibited. States and Tribes could specify circumstances where only chronic mixing zones would be allowed (i.e., no acute mixing zone or zone-of-initial dilution) and circumstances where acute and/or chronic mixing zones would be prohibited. Current EPA guidance, for example, recommends States and Tribes consider prohibition of mixing zones when bioaccumulative pollutants are present in the discharge or where an effluent is known to attract biota. Other circumstances where mixing zone prohibitions or location restrictions might be appropriate include areas used by aquatic life for breeding or feeding, locations of shellfish beds, locations of critical habitat for threatened and endangered species, across tributary mouths, shallows, near shore areas and in areas of critical habitat.

This change would clarify in the regulation the State and Tribal general authority to provide mixing zones, the scope of that authority, and the site-specific factors evaluated by States and Tribes when deciding whether a mixing zone is authorized in each individual case. EPA is considering making this potential clarification to the regulation, its implications, and how mixing zone policies can be designed to better support and foster a watershed management framework.

4. Mixing Zone Requirements

Some States and Tribes that have adopted mixing zone provisions within their water quality standards have not specified mixing zone requirements (e.g., water quality within mixing zones, the allowable size of mixing zones, etc.) under their mixing zone policies. EPA is therefore considering including as regulatory requirements certain specifications derived from EPA's guidance on mixing zones. Regarding policy content, EPA might revise the regulation to require that State and Tribal mixing zone policies address a minimum number of elements. Those required elements might include provisions that: identify conditions and circumstances (e.g., particular locations) when mixing zones are not permitted; identify any pollutants or classes of pollutants for which mixing zones are prohibited; identify the mechanisms to be used to ensure that mixing zones do not impinge on ecologically or recreationally sensitive areas; identify the mechanisms to be used to determine complete and incomplete mixing of effluent and receiving water; identify conditions when a mixing analysis is required; identify default design flows for implementing criteria; identify maximum allowable mixing zone size and configuration, as well as how mixing zones dimensions are determined; specify what water quality conditions must be met within mixing zones; state whether zones of initial dilution are allowed; and state whether there are special conditions established for bioaccumulative pollutants.

Identification in the regulation of minimum elements of State or Tribal mixing zones procedures would establish the basis for EPA review and approval of State and Tribal mixing zone provisions. It would also facilitate the review of individual mixing zone determinations made under the wasteload allocation/permit approval process by EPA, other agencies and the public. This would not significantly change EPA's guidance or current approach to mixing zone policies. Rather, it would clarify and codify the basis by which EPA will review and approve or disapprove State and Tribal mixing zone policies and their site-specific implementation through NPDES permits.

As discussed previously, EPA's mixing zone guidance is premised fundamentally on the prevention of lethality within the mixing zone and siting such that areas of critical habitat are avoided, resulting in the protection of designated uses. One aspect of this guidance is that, for aquatic life uses, water quality within the mixing zone should be such that, at a specified concentration of a contaminant (i.e., magnitude), any ''swimming or drifting'' organism would not remain in the mixing zone long enough to receive an exposure that is sufficiently long (i.e., duration) to cause lethality. If the combination of the concentration of a given pollutant or the combined effect of multiple pollutants (e.g., whole effluent toxicity) in a discharge and the duration of exposure to that concentration are low enough, there is no lethality within the mixing zone, and the criteria (magnitude and duration components together) are met.

This approach, however, only provides protection in situations in which water column organisms pass in and out of the mixing zone. This interpretation does not adequately

protect stationary or sessile organisms within the mixing zone; organisms that remain within the mixing zone for extended periods because the mixing zone extends into feeding or breeding areas or critical habitat (e.g., tributary mouths, shallows, shoreline habitat in large, fast-flowing rivers); critical habitat areas for endangered or threatened species; or instances where mixing zone conditions attract organisms. EPA's mixing zone policy and guidance address those instances where the provisions protecting swimming and drifting organisms are not adequate to protect nonmotile benthic and sessile organisms or critical habitat areas by limiting the location, size and shape of mixing zones. In some instances, this policy has been implemented in a fragmented manner. In such instances, these latter restrictions to mixing zone placement are inadequately addressed. EPA always has discretion to object to, and take over if necessary, permits that provide site-specific mixing zones in cases where such mixing zones would fail to protect all aspects of designated uses. However, oversight of individual permits is not an efficient approach to resolving program-level issues. To clarify the meaning of its policy and ensure a more complete implementation of protective mixing zone provisions, EPA is considering changes to the regulation.

EPA could require that State and Tribal mixing zone policies specifically identify prohibitions (where appropriate) or limit mixing zones where necessary to protect existing or designated uses. Some States and Tribes already include prohibitions against the use of mixing zones where they could intrude upon public drinking water supply intakes or public swimming beaches, or where mixing zones prove to be attractive to aquatic life or wildlife (e.g., water temperature). EPA might require that State and Tribal mixing zone provisions specifically address instances such as these where restrictions on mixing zones are appropriate. Additionally, EPA is considering requiring that State and Tribal water quality standards include a description of the State's or Tribe's methodology for specifying the location, geographic boundaries, size, shape and in-zone quality of mixing zones.

EPA could also clarify its current policy that an approvable mixing zone methodology must be scientifically defensible and ensure the protection of designated uses in the water body as a whole. This would require that the methodology, at a minimum, be sufficiently precise to support consistent regulatory actions (e.g., an NPDES permit). EPA is considering this change to ensure that State and Tribal mixing zones do not adversely affect the integrity of State and Tribal waters and to address inconsistent allocation of mixing zones from site-to-site. Under this approach, for example, when a State or Tribe assumes that either complete or incomplete mixing occurs, the State's or Tribe's implementation procedure could require the analyses supporting the mix assumption to be documented in the record (e.g., permit fact sheet). EPA is considering the need for additional language in the water quality standards regulation to clarify the essential elements of State or Tribal mixing zone provisions and, alternatively, whether such language would be better established in guidance. EPA's current thinking is that a certain amount of professional judgement is necessary in making site-specific mixing zone determinations and that clarifications to the regulation regarding the minimum mixing zone policies and implementation procedures should not preclude such flexibility. However, the policy and implementation procedures should be clarified so that the guidelines and framework for making site-specific mixing zone determinations are clear to everyone.

5. Mixing Analyses

The above discussion focuses on establishing State and Tribal mixing zone policies and procedures. The following discussion addresses the application of such procedures in individual permitting decisions.

Where point source discharges mix in a slow or ''incomplete'' manner with receiving waters and the State or Tribe has authority to provide a mixing zone, EPA guidance recommends that a mixing zone analysis be incorporated into the derivation of water quality-based effluent limits (WQBELs) in NPDES permits. The mixing zone analysis should demonstrate compliance with State or Tribal mixing zone requirements (e.g., size, shape, location and in-zone quality) that are included in the water quality standards. Providing a mixing zone in incomplete-mix situations acknowledges the mixing behavior of the discharge and limits excursions above criteria to a specified zone. Where a discharge mixes with the receiving water in a rapid and ''complete'' manner, by definition a mixing zone analysis is not needed and an evaluation of the assimilative capacity of the receiving water and a dilution allowance based on stream design flow conditions specified in the State or Tribal water quality standards is often incorporated into the derivation of WQBELs.

Presently, all State-issued NPDES permits are reviewable by EPA. EPA may object to individual permits and assume authority to issue such permits. When EPA is the permit issuing authority, it must follow the applicable State or Tribal water quality standards and ensure that any water quality-based effluent limits in the permit are derived from and comply with the applicable State or Tribal water quality requirements. A permit that does not include a defensible mixing zone analysis might not fully protect downstream designated uses. A common example is where a discharge mixes slowly (i.e., incomplete mixing is occurring), but the permit limit is based on an assumption that the entire design flow of the stream rapidly and completely dilutes the effluent. When this does not occur and not all of the dilution water mixes rapidly with the effluent discharge, the result may be a lengthy downstream plume (i.e., mixture of effluent and surface water) with water quality characteristics that exceed applicable chemical-specific or toxicity criteria, are potentially lethal to aquatic life, and may impair the designated use. Such plumes are of concern because:

(1) Chemical-specific criteria, ambient toxicity criteria or other narrative criteria may not be achieved in the extended plume;

(2) Effluent plumes can extend far downstream, causing impact beyond the limited area of a mixing zone and resulting in use impairment;

(3) There may be intakes for public drinking water systems located downstream, but within reach of an extended plume;

(4) Effluent plumes may be located along the shore in shallow waters that are critical nursery areas for sensitive species and which constitute important or critical habitat, particularly in large, channelized rivers;

(5) Aquatic life might be attracted to the plume because of its temperature differential or other characteristics;

(6) Threatened or endangered species may reside within or near the plume area, and

(7) Additional dischargers may be located downstream and the cumulative effects of all discharges may not be adequately considered, particularly regarding unintended overlapping plumes.

EPA believes the rate of ambient mixing and the complete versus incomplete mix decision is a critical but frequently overlooked component of water quality-based permitting.

Although a mixing zone analyses requires site-specific information and additional resources, EPA believes that the approach currently followed by some States and Tribes might be too simplistic, might allow lethality within areas of critical habitat or ecological importance and may not fully protect designated uses. EPA's current thinking is that the regulation should be made more explicit as to the circumstances under which mixing zones must be supported by site-specific data and analysis. EPA is considering the need for specific requirements within the regulation governing the development and content of mixing zone analysis procedures as part of State and Tribal implementation procedures.

6. Narrative Criteria for Mixing Zones

Historically, States have relied on narrative criteria as a means to provide baseline protection for water quality, to address toxicity from combinations of pollutants or unknown pollutants through whole effluent toxicity testing and limits, and to control pollutants for which there are no chemical-specific criteria available. EPA has consistently maintained that prevention of nuisance conditions (e.g., materials that will settle to form objectionable deposits, floating debris, oil, scum, foam and other matter, toxic conditions, etc.), through the application of narrative criteria, apply to all waters, at all times, including mixing zones. Despite this long-standing policy, EPA is unaware if, in practice, States and Tribes have had any difficulty ensuring the maintenance of these narrative criteria within mixing zones. EPA is interested in comment which might identify any instances where the application of narrative criteria has created difficulties for States and Tribes implementing these provisions in mixing zones.

In addition, EPA has traditionally interpreted these narrative ''free froms'' as including a prohibition against lethality in all waters, including within mixing zones. However, lethality is a non-conservative endpoint for measuring toxicity. Section 101(a)(3) of the CWA establishes a goal of prohibiting ''the discharge of toxic pollutants in toxic amounts'' which could be interpreted as applying to chronic as well as acute toxicity. EPA guidance on appropriate water quality within mixing zones also recommends that ''the total time-toxicity exposure history must not cause deleterious effects in exposed populations of important species, including post-exposure effects'' (EPA, 1973). EPA is considering how such an interpretation (i.e., applying chronic toxicity endpoints to water quality within a mixing zone) could be implemented in the context of the application of narrative criteria within a mixing zone.

Guidance developed by EPA in 1985 (TSD) established a rationale for allowing zones-of-initial-dilution (ZIDs) or acute mixing zones. That guidance limited the use of ZIDs to extremely small areas of the receiving water under limited conditions and to discharges using rapid diffusers which produce effluent discharge velocities exceeding 10 feet per second. That guidance was premised on the rationale that organisms would be *physically* precluded from maintaining a position within the ZID, thus preventing lethal exposures. Benthic and sessile organisms were also protected where ZID placement was controlled and directed away from such critical areas (e.g., near shore, shallows, etc.). In addition, EPA reasoned, high rate diffusers achieve compliance with both acute and chronic criteria within a smaller area, utilizing less receiving water volume for dilution than other discharge designs. Consequently, high rate diffusers are believed to provide greater protection of water quality by their rapid dispersion of effluent within a smaller volume of surface water. Where acute criteria are not applied at the end-of-pipe, current EPA guidance provides for a number of alternative means of protecting against lethality in a mixing zone, even in situations that do not rely on high rate diffusers. Alternatives to requiring compliance with acute criteria at the end-of-pipe or employing a high-rate diffuser to ensure compliance ''within a very short distance from the outfall'' require a significant amount of site-specific data. Such site-specific data could be requested of NPDES permit applicants. It is EPA's experience that the collection of this kind of data does not occur on a routine basis. EPA is interested in public comment on the relationship between ZIDs or acute mixing zones and narrative criteria prohibitions against lethality and States' and Tribes' experiences with the application of acute mixing zones under varying site-specific and discharge-specific conditions. EPA is also interested in comments on whether the water quality benefits of using high rate diffusers justify potentially detrimental effects on stream bed or shore line habitat.

7. Mixing Zones for Bioaccumulative Pollutants

States and Tribes should exercise caution when evaluating whether a mixing zone is appropriate in cases where bioaccumulative pollutants are present. The impacts of bioaccumulative compounds may extend beyond the boundaries of a given mixing zone with resulting impairment of a water body's designated uses, particularly where stationary species (e.g. shellfish) are present, where uncertainties exist regarding the assimilative capacity of a water body or where bioaccumulation in the food chain is known to be a problem. Sediment contamination has also become a major concern in both flowing and non-flowing water bodies. Concerns about sediment contamination require additional attention since typical mixing zone evaluations focus only on water column toxicity. The effects of persistent and bioaccumulative pollutants may not be detected for some distance from the point of discharge, well outside the mixing zone, or possibly not in the water column at all. Some members of the public have expressed concern regarding the use of mixing zones in situations where bioaccumulative pollutants are present in a discharge and have urged EPA to develop specific regulatory requirements prohibiting the use of mixing zones where these pollutants are present.

Mixing zone policies are developed to address complete and incomplete mixing conditions associated with point source discharges. These policies identify whether mixing zones are allowed and define how a State or Tribe will limit the amount of surface water allocated to mixing under a variety of circumstances. These circumstances include considerations specific to the effluent and pollutants discharged (e.g., toxicity, solubility) and to the water body receiving the waste (e.g., shallow, flowing or non-flowing, high flow or low flow, critical habitat). The potential for bioaccumulation problems can depend on a number of site-specific factors and the use of mixing zones for bioaccumulative pollutants may be best dealt with on a site- or basin-specific basis. EPA's mixing zone guidance emphasizes that the determination by a State or Tribe that a mixing zone is appropriate must be preceded by a separate determination that there is available assimilative capacity in the receiving water. Localized water quality concerns are to be balanced with the larger scale issue of overall pollutant loading to the entire water body or segment. Perhaps concerns about the fate and transport of bioaccumulative pollutants are more effectively addressed under total maximum daily load (TMDL) development and determinations of assimilative capacity which incorporate information on water

column, sediment and tissue contamination. EPA is considering the appropriateness of using mixing zones when controlling for bioaccumulative pollutants.

As discussed in more detail in Section C of this Notice, EPA has recently developed methodologies for deriving sediment quality criteria for non-ionic organics and metals and has proposed sediment quality criteria for five organics. In addition, EPA is working on implementation procedures or a ''user's guide'' for these sediment criteria which will address risk management decisions such as the application of mixing zones.

The regulatory impact of special restrictions on mixing zones for a particular family of pollutants is largely determined by how that family of pollutants is defined within the regulation. The issue of definition of bioaccumulative pollutants is also addressed in the discussion of water quality criteria in Section C of this notice.

In its Great Lakes Guidance, EPA established a twelve year phase out of mixing zones for existing discharges of bioaccumulative chemicals of concern (BCCs) in the Great Lakes Basin and a ban on such mixing zones for new discharges (effective March 1997). The Great Lakes Guidance also allowed States and Tribes to establish limited exceptions to the mixing zone phase-out for existing discharges based on water conservation or economic and technical considerations. The general prohibition on mixing zones for BCCs was established largely because of the persistent and toxic nature of even minute amounts of BCCs in the environment; an effect amplified in the Great Lakes by the tendency of the Lakes to act as ''sinks'' for pollutants discharged to the Great Lakes Basin. In addition, there are documented problems with effects of BCCs in Great Lakes waters (e.g., contamination of Great Lakes salmonid sport fisheries with PCBs and Basin-wide mercury contamination). The Great Lakes Guidance provision phasing out mixing zones for BCCs reflected the Agency's thinking that, in general, mixing zone allowances for BCCs are not appropriate.

On June 6, 1997, the United States Court of Appeals for the District of Columbia Circuit issued its decision in *American Iron and Steel Institute, et al.* v. *EPA, 115 F.3d 979 (D.C. Cir. 1997).* The Court's decision upheld the Great Lakes Guidance on all but three issues. One of these three issues was the phase out of on mixing zones for BCCs. Specifically, the Court vacated the final Guidance insofar as it would eliminate mixing zones for bioaccumulative chemicals of concern (BCCs). While the Court acknowledged the possibility of environmental benefit of the mixing zone provisions, the Court found that EPA failed to show that the provisions were justified in light of the costs. EPA continues to support elimination of mixing zones for BCCs within the Great Lakes Basin wherever it is technically and economically feasible to do so. Thus, EPA intends to propose reinstating this provision in the near future.

8. Stream Design Flow Policies

States and Tribes typically identify, within their water quality standards, stream design flow conditions to implement numeric water quality criteria. The stream flow conditions are typically expressed as predictable low flow conditions below which numeric water quality criteria do not apply. Examples of commonly used stream design flows include: the lowest seven consecutive day average stream flow that has the annual probability of occurring once in ten years (7Q10); the lowest single day stream flow that has the annual probability of occurring once in ten years (1Q10); and the harmonic mean stream flow. The stream design flows typically employed with aquatic life criteria (i.e., 7Q10 and 1Q10), sometimes referred to as critical low flows or drought flows, are intended to define stream flow conditions at and above which the designated uses are presumed to exist and applicable numeric water quality criteria must be met in order for those uses to be attained. The underlying concept is that these low flow events are a part of the dynamic hydrologic character of all flowing water bodies. Low flow conditions present special challenges to the integrity of the aquatic community. Even under these low flow conditions, however, the long-term beneficial use could be maintained unless toxic conditions stress the aquatic community beyond its ability to tolerate and recover.

In practice, stream design flows serve several purposes in addition to defining the minimum stream flows below which numeric water quality criteria do not apply. Many States and Tribes have used the stream design flows, or fractions thereof, to define the amount of stream flow that can be assumed to always be available to dilute effluent. Under rapid and complete mixing conditions, the entire stream design flow is used as the basis for determining permit limits. That is, no mixing zone is necessary. Under slow or incomplete mixing conditions, where a mixing zone is necessary, fractions of stream design flow are used to calculate assimilative capacity on which permit limits can be based; in other words, to crudely define the mixing zone. Often this default approach is used by regulatory agencies in response to limited resources, lack of site-specific information and the time pressures of permit reissuance. This default approach to defining the mixing zone is, in EPA's view, acceptable as long as the mixing of the effluent in the receiving water occurs away from critical areas and the amount of dilution provided is conservative for a broad range of possible effluent/receiving water dilution scenarios. However, where a complete mixing assumption does not hold true, such as where an effluent plume does not disperse quickly, and too much of the receiving water is allocated for dilution, this default assumption approach will not ensure attainment of water quality standards because numeric water quality criteria will be exceeded in a larger area than anticipated (outside the regulatory mixing zone). The default use of fractions of stream design flows instead of more exacting mixing zone determinations is not always appropriate. In some instances, the effluent plume may never fully mix with the specified amount of receiving water, resulting in plumes where criteria are exceeded extending far beyond what may be considered protective of designated uses or allowed under standards. EPA has recommended that site-specific information on the mixing characteristics of a discharge be collected to verify the level of protection assumed to be provided to a water body using default mixing zone provisions.

EPA believes it is important for individual States and Tribes to make consistent dilution allowance decisions from one site to the next. Requiring States and Tribes, as part of their water quality standards, to specify how dilution allowances under complete and incomplete mix situations will be established may be an appropriate way to ensure consistent decision-making.

To best define dilution allowances for implementing water quality standards, it is useful to define both stream design flows and effluent design flows. In particular, a distinction should be made between the stream design flows to be used for different ambient water quality criteria (e.g., aquatic life acute, aquatic life chronic, human health carcinogen). In addition, effluent design flows may vary in some cases based upon seasonal changes or production cycles. Stream design flows may be applied as a maximum dilution allowance or adjusted in individual cases based on

any stream-specific or pollutant-specific considerations. Stream design flows, if they are used, must correspond to the duration and frequency components of the ambient water quality criteria contained in the State or Tribal water quality standards. Currently, States and Tribes must justify the scientific validity of their stream design flow policies where they differ from EPA's recommendations. States and Tribes may also establish specific guidelines for restricting dilution allowances in individual cases (e.g., States and Tribes may adopt special restrictions on dilution allowances for human health criteria where a discharge is within 2 miles of a drinking water intake).

EPA's Great Lakes Guidance and its Technical Support Document for Water Quality-Based Toxics Control identify acute and chronic stream design flows to be utilized in drafting permit limits. The Guidance establishes a 7Q10 or 4-day, 3-year biologically-based stream design flow for implementation of the aquatic life criterion continuous concentration (chronic criteria); a 1Q10 for the implementation of the aquatic life criterion maximum concentration (acute criteria); harmonic mean flow for implementation of human health criteria; and a 90Q10 for the implementation of wildlife criteria.

In cases where complete and rapid mixing of effluent with receiving water does not occur, site-specific mixing determinations must be made. Although the selection of fractions of stream design flows for the assignment of available dilution for point source discharges does affect the size of the regulatory mixing zone, such default assignments are not hydrologically linked to the actual behavior of the effluent plume in the receiving water, may not protect swimming and drifting organisms or sessile or benthic organisms and are not equivalent to a mixing analysis. There may be other instances where the reliance on a fixed percentage of flow or cross-sectional area of the receiving stream in lieu of an actual mixing analysis may not reflect the mixing behavior of an effluent. In some high dilution situations, there may be more rapid dilution occurring than is assumed in dilution calculations.

If complete and instantaneous mixing actually occurs, using less than 100% of the design flow can be a means of accounting for situations where the actual assimilative capacity of the water body is unknown. States and Tribes typically determine water body assimilative capacity based on ambient background concentration of a pollutant, when data on such concentrations is available. The assimilative capacity is the difference between the background level of a pollutant and the highest level that would comply with the water quality criterion. Where information on all sources of a given contaminant to a specific water body is incomplete, or where the State or Tribe wishes to reserve assimilative capacity for the future, States and Tribes should allocate less than 100% of the assimilative capacity of that water body at design flow by utilizing less than 100% of the design flow for dilution. EPA is interested in comment addressing the use of these stream design flows or fractions of stream design flows in setting mixing zones and in reserving assimilative capacity in a water body.

The Great Lakes Guidance allows States and Tribes to use default assumptions for available dilution in the absence of site-specific mixing data. The default dilution assumption for open waters (e.g., lakes) provides for ten-to-one dilution. The Guidance also allows for a demonstration to determine actual mixing zone water quality, size, placement and behavior. Under the Guidance, for open waters, in no case can mixing zone size exceed that area in which discharge-induced mixing occurs. As a default, the Guidance restricts the mixing zone for protection of aquatic life from acute effects (i.e., the dilution allowed in calculating limits based on an acute aquatic life criterion or CMC) to 2 parts receiving water to 1 part effluent, at water body design flow or volume.

As a default for implementing criteria for the protection of aquatic life from chronic effects (CCC) in flowing waters (e.g., rivers and streams), the Great Lakes Guidance allows States and Tribes to use up to 25% of the design flow for dilution. If a site-specific mixing analysis is performed, a larger mixing zone may be established. Mixing zones for acute aquatic life criteria in flowing waters are limited to the final acute value or FAV (2× the acute criterion) just as in open waters. EPA is interested in comment on whether this FAV default ''cap'' approach is appropriate for waters outside the Great Lakes Basin.

As stated above, the Great Lakes Guidance allows increases above the default mixing zone allowances when site-specific mixing zone analyses are conducted. These demonstrations compile data on the mixing behavior of the effluent at a particular site (e.g., the size, shape and location of the mixing zone). The Guidance also required that mixing zones maintain existing and designated uses and comply with narrative water quality criteria (e.g., ''free froms'').

The Great Lakes Guidance also specifies that mixing zones may not jeopardize the existence of threatened or endangered species or their critical habitat.

EPA advocates the watershed approach to water quality protection. For the water quality standards program, the emphasis has been toward refinement of designated uses and incorporation of new and emerging sophisticated and integrated analytical tools as a means to better characterize the ecological condition of water resources and more effectively protect designated uses (see section I(A) ''General Purpose and Vision'' of this document). The development and implementation of mixing zone policies by States and Tribes constitutes risk management at the sub-watershed level. EPA has consistently emphasized the need to ensure that State and Tribal mixing zone provisions protect the designated uses of receiving waters. Site-specific data collected through a mixing zone analysis will ensure that designated uses will be protected the loss of ecological integrity from the discharge of effluents will be prevented. An emphasis on the protection of designated uses and maintenance of ecological integrity is essential to the watershed approach. The watershed approach requires increased site-specific information on local aquatic systems and an assessment of the impact of all discharges to local ecosystems. The watershed approach also depends upon the meaningful involvement of local communities in risk management decision-making. Explicit, clear implementation policies provide the public with the information necessary to understand decisions being made by regulators and the impact of those decisions on local resources.

Request for Comments on Mixing Zone Policies and Implementation Procedures

EPA requests comment on the following questions:

1. Should the regulation be changed to expressly require States and Tribes to include a statement in their water quality standards indicating whether mixing zones are allowed?

2. Should the regulation be changed to expressly require States and Tribes to specify procedures by which mixing zone decisions for individual discharges would be made?

3. Should the regulation be modified to identify the minimum requirements or elements for State and Tribal mixing zone policies (including size, location, and methodologies)?

4. Consistent with current EPA policy, should the regulation explicitly require narrative criteria to apply in mixing zones?

5. Should the regulation require States and Tribes to identify in their mixing zone provisions what minimum water quality conditions are required within mixing zones?

6. Are there any circumstances, types of pollutants or water body types (e.g., wet weather discharges) where mixing zones should be restricted or prohibited?

7. Should mixing zones for bioaccumulative pollutants be prohibited? If so, under what circumstances? Should such prohibitions be addressed on a water body- or basin-specific basis? Should EPA allow exceptions to any such prohibitions?

8. Should the regulation require States and Tribes to specify procedures and decision criteria for evaluating complete and incomplete mixing?

9. Should the regulation require different mixing zone/dilution procedures for complete and incompletely mixed situations?

10. Should an assumption of rapid and complete mixing within State and Tribal implementation procedures be prohibited except where a defensible technical rationale is included in each site-specific determination?

11. Should the regulation explicitly allow the use of default mixing zone assumptions based on fractions of stream design flow in the absence of site-specific data?

12. Should the regulation be clarified, consistent with current EPA policy, to require States and Tribes to identify the water body design flows or volumes upon which their water quality standards are based?

F. Wetlands as Waters of the United States

The current water quality standards regulation contains no definition of ''waters of the United States,'' although this term is used in the definition of ''water quality standards.'' The phrase ''waters of the United States'' has been defined elsewhere in Federal regulations, including regulations governing the National Pollutant Discharge Elimination System (NPDES). That definition at 40 CFR 122.2 includes wetlands whose use, degradation or destruction could affect interstate commerce and wetlands adjacent to other waters of the U.S. However, because this definition does not appear in 40 CFR 131, some have questioned whether Part 131 applies to wetlands. EPA's position is that the Part 131 regulations do apply to wetlands. EPA is considering including the definition for ''waters of the United States'' under the standards regulation as well, or, at a minimum, cross-referencing the definition at 40 CFR 122.2 as a means of clarifying that the existing regulation applies to wetlands that fall within the definition of waters of the United States. Currently, EPA plans no review or revision of the existing definition of ''waters of the United States'' as part of any revision of the water quality standards regulation. Therefore, under the ANPRM, EPA is interested in comment limited to whether the existing definition should be included within the standards regulation in some form.

EPA believes that some States or Tribes may not be providing the same protection to wetlands that they provide to other surface waters, including designation of attainable uses consistent with the CWA and assignment of protective water quality criteria. Therefore, EPA wishes to emphasize that wetlands require the same protection under water quality standards as other waters of the U.S. Section 303 of the CWA requires the protection of all ''waters of the U.S.'' under standards. Addition of the definition of ''waters of the U.S.'' under a revision of the regulations would not constitute an expansion of authority or application, but merely a clarification of those requirements already contained within the CWA. Treatment of jurisdictional issues would not be affected by such a revision, including treatment of waters constructed as waste treatment systems (e.g., wetlands constructed for wastewater treatment). Notwithstanding protection of wetlands under other provisions of the CWA (e.g., Section 404), Section 303 clearly establishes a baseline level of protection applicable to all waters. Further, it is this treatment under water quality standards which provides for protection of wetlands as applied under Section 404.

Necessary components of water quality standards for wetlands are designated uses and criteria, as defined in 40 CFR 131.6. EPA recognizes that uses and criteria should reflect the unique physical, chemical and biological characteristics of wetlands. States and Tribes are encouraged to develop and adopt appropriate classification systems which provide protection of beneficial uses of wetlands through the application of physical, chemical and biological criteria. EPA also recognizes that certain parameters, conditions or even pollutants may be most appropriately addressed by criteria which specifically reflect differences between wetlands and other surface waters.

Request for Comments on Wetlands

EPA requests public comment on the following questions:

1. Should ''waters of the United States'' be defined in the water quality standards regulation?

2. Should EPA provide explicit reference in the regulation to the applicability of water quality standards to wetlands?

3. Do the current regulation and existing guidance provide the necessary regulatory clarity, technical tools, and incentives for States and Tribes to develop appropriate standards for wetlands?

4. Are specific programmatic changes needed to facilitate the development of water quality standards for wetlands?

G. Independent Application Policy

1. Introduction

Section 101(a) of the Clean Water Act states: ''The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.'' To this end, States and Tribes designate single or multiple uses for their waters including aquatic life protection. For the purposes of assessing the extent to which aquatic life is protected and whether actions to protect aquatic life are needed, the CWA requires that States and Tribes adopt water quality criteria necessary to support designated uses. For waters where aquatic life protection is an applicable designated use, the extension of the CWA requires States and Tribes to adopt criteria protective of aquatic life. Taken together, chemical, physical, and biological integrity define the overall ecological integrity of an aquatic ecosystem. Over the years, EPA, States and Tribes have developed various tools to assess the extent to which water quality attains this objective. These tools have been developed to build on and support the capabilities of each other and provide a comprehensive set of elements necessary for implementing water quality standards and achieving the objective of the CWA. EPA policy and guidance recommends that States and Tribes use chemical-specific, toxicity, and biological criteria to monitor and protect designated uses. In 1991, EPA established its policy on independent application (U.S. EPA, transmittal memorandum of final policy on biological assessment and criteria from Tudor Davies to Regions, June 19, 1991). EPA's independent application policy speaks to how assessments based

on these three kinds of criteria are to be integrated into all forms of water quality management decision-making. EPA's independent application policy and the ensuing discussion here address the issue of how the three different kinds of assessments are interpreted only in the context of protection of aquatic life and aquatic life uses and not in the context of protection of human health or wildlife.

With the advent of different ways of assessing the health of aquatic systems comes the possibility of conflicting results. To address such conflicts, EPA developed the policy of independent application. Independent application states that where different types of monitoring data are available for assessment of whether a water body is attaining aquatic life uses or for identifying the potential of pollution sources to cause or contribute to non attainment of aquatic life uses, any one assessment is sufficient to identify an existing or potential impact/impairment, and no one assessment can be used to override a finding of existing or potential impact or impairment based on another assessment. The independent application policy takes into account that each assessment provides unique insights into the integrity and health of an aquatic system. In addition, each assessment approach has differing strengths and limitations, and assesses different stressors and their effects, or potential effects, on aquatic systems. For example, while biological assessments can provide information in determining the cumulative effect of past or current impacts from multiple stressors, these assessments may be limited in their ability to predict, and therefore prevent, impacts. While chemical-specific assessments are useful to evaluate and predict ecosystem impacts from single pollutants, chemical-specific methods are unable to assess the combined interactions of pollutants (e.g., additivity). Similar to biological assessments, toxicity testing provides a means of evaluating the aggregate toxic effects of pollutants, and like chemical assessments, can also be used when testing effluent to predict single chemical impacts. One of the limitations of toxicity testing, however, is that the identification of pollutants causing toxicity is not always possible or cost-effective. Each of these three assessment approaches relies on different kinds of water quality data, measures different endpoints and, in practice, will be interpreted in the context of implementing a water quality management program that includes assessment and pollution control. EPA's policy on independent application is based on the premise that any valid, representative data indicating an actual or projected water quality impairment must not be ignored when determining the appropriate action to be taken. Independent application recognizes the strengths and limitations of all three assessment approaches.

The next three sections briefly describe three assessment approaches (biological, toxicological and chemical) one could likely be evaluating when using independent application. Those three sections are then followed by two parallel discussions on different uses of water quality data. One use relates to the NPDES permits program to determine whether a permit must contain water quality-based chemical or toxicity limits, and what those numeric limits should be. The other relates to the use of such data to evaluate the quality, or condition, of waters under the CWA section 305(b) and 303(d) programs. At the core of both of these contexts is the question ''are the present applicable water quality criteria complete and appropriate for the water body, and how are we to measure attainment of the present or future criteria that apply to any water body in question?'' Thus, in its most basic sense, independent application remains a water quality standards question. Any changes to or clarifications of the policy on independent application must therefore be considered first under the rubric of water quality standards and then in the separate contexts of permitting and water quality evaluation which are based on water quality standards.

States and Tribes routinely determine whether water bodies are attaining their designated uses and whether existing pollution controls adequately protect those uses. Some States and Tribes have recommended to EPA that it modify the independent application policy. Currently, EPA's policy of independent application is the same for both NPDES permitting and water quality assessment programs. However, EPA recognizes that each of the programs has somewhat different data needs and attributes. Therefore, today's notice separates the two distinct uses of independent application to better focus the discussion.

a. Biological Assessments. Biological assessments are based on quantifying differences between expected biological community attributes such as structure, function and condition (known as a reference condition) and the biological community attributes found at a specific site being evaluated. The extent to which the community at the site deviates from the reference conditions is indicative of the degree of impairment at the specific site. The strength of biological assessments is their ability to provide a direct measure of the health of aquatic ecosystems. Biological assessments are also able to detect non-chemical impacts (e.g., habitat loss, sedimentation, temperature effects) in addition to chemical toxicity problems.

States and Tribes that use biological assessments, use them primarily to evaluate the ecological condition of water bodies and to determine whether a water body is healthy, threatened, or impaired (i.e., aquatic life use attainment decisions). In some instances, States and Tribes have used biological assessments to establish monitoring requirements in an NPDES permit, but generally, most use bioassessments to make non-regulatory, general, water resource management decisions. Data from a biological assessment can be compared to a gradient that shows the reference (expected) conditions without impairment on one end and the worst situation on the other. States and Tribes generally use the results to determine whether additional measures are needed to protect the water segment, or determine how close to attainment an impaired system is. Biological assessments can also play a role in linking impairment to causative agents. This link is often not definitive, but can be very useful in helping to identify the causes and sources of many impairments. Some States and Tribes have used indicator species or groups to distinguish effects of toxicity from effects of organic enrichment. For example, one State documented that a midgefly larvae is found to be predominant in areas contaminated by electroplating or metal wastes. Although biological assessments cannot be used to predict conditions in a mathematical modeling sense, over time they can be used to indicate the direction of change, and the degree of that change, in the condition at a particular site. This information, where it is based on enough data using relatively sensitive appropriate metrics, can be very valuable in deciding whether the current condition is likely to be maintained under similar conditions in the future, or whether there are early warning signs of biological impacts giving reason to believe that additional regulatory actions may be needed to prevent water quality standards impairment. Regulatory actions that are a response to measured change in biological condition will tend to be restorative more than preventative (i.e.,

once biological impact is measured, by definition, that impact was not prevented). Although, slight changes that are not sufficient to render a water in non-attainment of its aquatic life use, can provide early warning of potentially more significant future changes. In contrast, as noted above, regulatory actions based on impairment predicted, for example via a chemical-specific modeling analysis, tend to be preventative. To the extent that conditions in a water body do change (e.g., flow), biological assessments do not reveal potential future impacts under other exposure conditions (e.g., low-flow conditions). Programmatically, there are concerns regarding quality assurance and quality control for various biological assessment techniques since they have yet to be promulgated, or standardized, in any EPA programs. This is mainly due to the site-specific nature of biological assessments. Implementation of biological criteria is also discussed in section (B) of this notice.

b. Toxicological Assessments. Toxicological assessments are conducted by exposing aquatic organisms to effluent or ambient water samples or sediment samples in a laboratory and determining the effects on the exposed organisms. Because toxicity assessments evaluate the overall effects of the entire suite of constituents in a sample, they are ideal for identifying interactions between chemicals that can alter the expected effects of individual chemicals on exposed organisms. Toxicity assessments also capture the toxic effects of chemical compounds not commonly monitored for or for which chemical-specific criteria are lacking. In addition, because it can be manipulated in the laboratory, toxicity testing can predict the likelihood of ecological impacts before they occur. This allows safeguards to be put into place before an actual ecological impact occurs.

Toxicity assessments are usually limited by the variety of species that can be cultured in the laboratory. While numerous test species can be used to evaluate the toxicity of individual samples, typically only two or three species are used for such tests. By comparison, eight different families are required to develop chemical-specific criteria. For some toxicants, the broader sensitivity range provided by testing eight different families is particularly important, for example, where the mode of toxicity action is specific (e.g., pesticides). Identifying the cause of toxicity can, in some situations, be a difficult, expensive, and lengthy process. Another consideration is that toxicity testing does not detect habitat perturbations which can greatly limit a water resources aquatic life use. Finally, toxicity assessments are only valid for as long as all the sample testing conditions remain the same. Ambient conditions affecting toxicity may change over time necessitating additional testing.

c. Chemical Assessments. Chemical assessments measure individual chemical constituents (e.g., copper, lead) or chemical conditions (e.g., pH, temperature, hardness, organic content) in a medium. Chemical assessments may be performed on effluent or ambient water samples or sediment samples. Chemical analyses are usually simpler to conduct and generally less expensive than toxicity assessments or bioassessments, particularly if there are only a few chemicals of concern, but the information from these tests may provide limited insight into the ecological condition of the water body. If information is available on pollutant persistence and degradation, modeling can be used to predict pollutant fate and transport under a variety of exposure scenarios. Further, chemical-specific assessments are ideal for predicting the likelihood of ecological impacts where they may not yet have occurred either because a proposed activity affecting water quality has not been implemented or critical exposure conditions have not yet been experienced by the aquatic community. For these reasons, regulatory actions based on chemical-specific assessment can be preventative as well as restorative.

Basing regulatory and management decisions on chemical assessment of water quality is an important and proven aspect of water quality assessment and protection. However, as an indirect measure of aquatic health, one of the principal limitations to chemical assessments is dependence upon chemical-specific benchmarks (such as chemical water quality criteria) for determining whether water quality is suitable or unsuitable for attaining and maintaining aquatic life uses. As noted elsewhere in this notice, stressors other than specific chemicals in a water body are often a significant or even predominant cause of nonattainment of aquatic life uses. EPA's current thinking is that complete reliance on chemical-specific assessments of water quality is too narrow of a focus and fails to provide information on other important ecosystem stressors. In addition, as noted elsewhere in this notice, there are currently water quality criteria for the protection of aquatic life for 31 chemicals. There are tens of thousands of chemicals discharged into surface waters. (Note, however, that the chemicals for which there are criteria tend to be the most frequently discharged). Thus there is the added problem of too few criteria and too many chemicals, making it inappropriate to rely *exclusively* on the chemical-specific approach. Another substantial limitation of chemical-specific benchmarks is that for a given site, the benchmarks that are used, may not be the best that are available to reflect the level of protection applicable at the site. For example, site-specific aquatic life criteria are generally different (higher or lower) than the national recommendations for the same chemical. And yet absent site-specific criteria, the national recommendations are often used.

2. Independent Application and Water Quality Assessments

a. Independent Application. States and Tribes often collect or have access to monitoring data that measure the concentration of specific chemicals in an effluent or water body, the level of toxicity present in ambient water or discharges to a water body and/or the biological community composition within a water body. These data are then interpreted by comparing them to reference conditions or criteria to determine whether or not aquatic life uses are attained. EPA's 1991 policy on independent application was explicit about the use of independent application in water quality programs: ''This policy, therefore, states that appropriate action should be taken when any one of the three types of assessment determines that the standard is not attained. States and Tribes are encouraged to implement and integrate all three approaches into their water quality programs and apply them in combination or independently as site-specific conditions and assessment objectives dictate.'' In implementing this policy, EPA recommends that data from the three assessment approaches be applied independently in water quality programs since each method provides unique and distinct information on the characteristics of the water body. In other words, EPA recommends that differences in assessment results be resolved in one of two ways: either presume an adverse impact when any one source of data indicates an adverse impact, or reevaluate the complete data set and modify the applicable criteria to account for the new site-specific information. Given EPA's mission to protect the environment and absent definitive data to demonstrate that an assessment is in error or otherwise biased, EPA presumes

where an assessment indicates impairment, that assessment is valid.

In the context of applying the independent application policy to the assessment of water bodies, there are two distinct CWA provisions to consider: (1) section 305(b), which requires States and Tribes to report to EPA and EPA to report to Congress a description of the quality of the Nation's waters; and (2) section 303(d), which relates to identification of waters where technology-based limitations and other required controls are not stringent enough to ensure that applicable water quality standards will be attained and maintained. With respect to the section 305(b) Report, the CWA broadly calls for States and Tribes to assess water quality conditions in a biennial report. EPA transmits these reports to Congress, together with an analysis of the reports describing water quality conditions. Because these are water quality assessment reports that States and Tribes submit to EPA, and not specific regulatory decisions, there may be sufficient flexibility in the interpretation of data to allow a more integrated approach to evaluating limitations and inconsistencies in the interpretation of data produced under various approaches. For example, direct assessments of the condition of the waters (e.g., biological assessment) could be weighted more heavily than indirect measurements (e.g., chemical and toxicity).

With respect to section 303(d), the CWA and EPA's implementing regulations require States and Tribes to identify those waters for which technology-based limitations and other required controls are not stringent enough to achieve water quality standards applicable to such waters. *See* 303(d)(1)(A), 40 CFR 130.7(b)(1). When identifying waters pursuant to 303(d), the methods used to determine non-attainment of standards for water quality reporting under 305(b) should also be used. However, water bodies are eliminated from 303(d) list consideration if technology-based controls or other required Federal, State, Tribal or local requirements will result in the attainment of applicable water quality standards. TMDLS developed to secure restoration of designated uses are largely dependent upon chemical criteria and assessment to define acceptable pollutant loadings.

The question arises as to whether States and Tribes have the flexibility to exclude a water body from 305(b) reports and 303(d), i.e., conclude that the designated use was protected, even in the face of data indicating one or more excursions of the applicable chemical-specific water quality criteria. EPA would like to consider possible mechanisms under the existing CWA and the legal theories supporting them to address these questions.

As with determining the need for regulatory controls (permit limits), similar data evaluation issues face States, Tribes and EPA in performing water body assessments for purposes of sections 303(d) and 305(b) of the CWA. With respect to such assessments, EPA's goals for States and Tribes are twofold: (1) to encourage the use of chemical, toxicological, physical and biological data in making water body assessments; and, (2) to ensure that the data are interpreted and reported in a consistent and scientifically defensible manner so that documents such as the 305(b) report to Congress provide valid and useful information on the status of the Nation's waters as a whole, irrespective of State or Tribal boundaries.

EPA recognizes that there may be instances where these goals appear to be in conflict. It is possible that as States and Tribes implement biological assessment programs, they may identify new areas of impact that were previously undetected using other assessment techniques and that this may lead to a reluctance on the part of States and Tribes to develop the expertise necessary to conduct biological assessments. Although this tendency is contrary to the goals and objectives of the CWA, the fact is that addressing new and previously unaddressed threats to surface water quality places additional strain on already limited State and Tribal resources. Some also feel that adherence to a strict independent application policy for assessment purposes discourages the use of more data than minimally needed to make an aquatic life use assessment. In most cases, the minimal amount of data would be a chemical grab sample for a few water quality characteristics such as temperature, pH, BOD, or dissolved oxygen. Collecting minimal data for assessment reporting is much easier and less resource intensive for States and Tribes that are required to increase their reporting coverage, and these States and Tribes would not have to deal with differing interpretation of assessment results.

However, EPA believes that placement of waters on section 303(d) and section 305(b) lists should be based on broad thorough assessment data, not on limited and narrow data. The former will help ensure that targeted water quality controls and management actions are appropriate and will result in water quality standards attainment; the latter can result in significant outlays of State and Tribal resources targeted on waters where water quality problems are not well understood. EPA is considering how best to obtain accurate, high-quality assessment data and how to reconcile differences between assessments conducted using different techniques in a manner that fosters consistency and remains scientifically defensible.

b. Alternatives to Independent Application.

There is considerable sentiment among various stakeholder groups that there is a need to better incorporate more comprehensive data, particularly biological data, into the water quality assessment framework described above and that doing so will facilitate collection and use of more integrated and insightful water quality data. EPA shares this view. Some have used the term ''weight-of-evidence'' to describe an alternative to the present EPA policy of independent application that could facilitate integration of chemical, physical, toxicological and biological data into the assessment program. However, EPA recognizes that individuals' views about the meaning of the term ''weight of evidence'' vary considerably and this variation should be addressed. The term ''weight-of-evidence'' has been interpreted by some to mean that one approach to assessment, e.g., biological, could routinely be used to override conclusions drawn using another assessment technique, e.g., chemical. EPA believes that approach is hierarchical, not a weight-of-evidence approach. EPA's position is that each approach, chemical, toxicological, physical and biological has inherent strengths and limitations and that all valid water quality assessment data generated under any of these approaches should be used in assessing the health of aquatic ecosystems, in ways that adequately take into account the strengths and limitations of each approach.

EPA's current thinking is that as forms of water quality assessment data have become broader (chemical, physical, biological and toxicological), and as the amount of such data increases, the water quality standards and assessment programs need to facilitate continued collection and use of such data, and that doing so will lead to more thorough water quality assessments, more insightful water quality criteria, and better descriptions of aquatic life designated uses. EPA would not support an approach that could lead to collecting fewer and narrower water quality data by States, Tribes and dischargers. On the contrary,

EPA's current thinking is that to employ a weight-of-evidence approach, a State or Tribe (or EPA) would need to have a comprehensive set of water quality data to evaluate the chemical, physical, toxicological and biological conditions in a water and to conduct ecological impact assessment to determine the precise causes of impacts (chemical, physical, biological, and toxicological) and how best to address them. EPA's current thinking is that the most appropriate context for using a weight-of-evidence approach would be in establishing criteria. In addition, as discussed below, EPA is interested in evaluating the use of a weight-of-evidence approach for assessment and reporting under section 305(b) of the CWA. However, once the criteria are established for a water body, the assessment for purposes of listing under section 303(d) of the CWA and permitting under NPDES, must be based on all applicable water quality criteria.

EPA's 305(b) reporting guidelines interpret the independent application policy to apply to aquatic life use assessments for State 305(b) reports, not just to permitting for protecting waters due to reasonable potential to violate water quality standards. This policy helps protect against dismissing valuable information when evaluating aquatic life use attainment, particularly in detecting impairment. This approach is most protective when there is limited data available and when there is no documentation on the rigor of the assessment. EPA is concerned that lack of information can provide false confidence about the health of the nation's water bodies. However, EPA is now developing a comprehensive approach for conducting aquatic life use assessments which integrates chemical, toxicological, physical and biological data, and includes consideration of the strengths and limitations of the assessment methods and the data. This shift toward more integrated assessments is reflected in EPA's most recent guidance to the States and Tribes on conducting 305(b) assessments, particularly in determining nonattainment (EPA's Guidelines for Preparation of the 1996 State Water Quality Assessments (305(b)) reports, EPA 841 B–95–001) and is the primary focus of the Office of Water's Criteria and Standards program Plan. The 1996 305(b) guidelines are consistent with the Policy on Independent Application while incorporating a weight-of-evidence approach in determining the degree of impairment (partial or nonsupport). The 1996 guidelines do not allow for a finding of full support, or attainment, of aquatic life use when there are differences in assessment results. Under certain circumstances, however, the guidelines allow for the possibility of a finding of partial support, even where results of different assessments are not fully consistent. Generally, *in assessing severity of impairment,* assessments based on data with high levels of information, or rigor, should be weighted more heavily than those based on data with low levels of information, and, rigorous biological data should be weighted more heavily than other data types. EPA recommends that the results of biological assessments, especially those with high levels of information, be the basis for the overall aquatic life use support (ALUS) determination if the data indicate impairment. This is because rigorous biological data provide a direct measure of the status of the aquatic biota and detect the cumulative impact of multiple stressors on the aquatic community, including new or previously undetected stressors.

Determining the level of information or rigor for each assessment is a critical component of the 305(b) guidelines on making an ALUS determination. The levels of information allow characterization of the quality and the temporal and spatial coverage of the data States and Tribes utilize to conduct their use assessments. Levels of information are identified for assessments based on biological, physical, chemical and toxicological data. For example, measures of the condition of the aquatic community using indices incorporating multiple assemblages of aquatic organisms based on a regional reference approach would rate higher than a measure of a single organism or single metric or annual fixed station monitoring for chemical contaminants. Likewise, three years of bi-monthly fixed station monitoring for chemical contaminants would rate higher than annual fixed station monitoring for the same chemicals or a biological measure of a single organism or metric. Understanding the breadth and robustness of the assessment methods used in evaluating whether a water body is attaining its designated aquatic life use is important information for EPA, the States, and the public.

In the future, EPA will be evaluating possible scenarios where a finding of full support could be justified despite differences in assessment results. For example, a finding of full support based on rigorous biological data may be justified despite differences with chemical specific assessment results *depending* on the magnitude and frequency of the chemical exceedances and the applicability of the chemical benchmark to the site. It will be important for EPA to carefully evaluate such potential scenarios and to define the adequate data requirements and level of rigor necessary to support a determination of full support despite differences in assessment results. Equally important, EPA will need to carefully consider the ramifications of such determinations on other parts of its water program.

Another permutation of the weight-of-evidence approach to aquatic life use assessment is to establish a hierarchy in which the results of one method could always override the other methods should there be difference in assessment results. Most frequently, it has been argued that biological assessments could always override chemical assessments in determining whether the designated aquatic life uses are being attained. Some prefer this approach because a rigorous biological assessment provides a direct measure of existing ecosystem health and have expressed concern that the policy of independent application oversimplifies the relationship among different data sets used to assess current water quality conditions. Proponents of this approach contend that biological assessment is an integrated assessment that incorporates the information that would be provided through either chemical or toxicological assessments into a single, comprehensive measure of aquatic ecosystem health. Some advocate the acceptance of rigorous biological data as the ultimate arbiter of aquatic life use attainment. They also suggest that, at least with respect to current aquatic life condition assessments, chemical, toxicological, and biological assessments are not independent; each measures the same assessment endpoint, but from different stressors. These proponents say that biological assessment is the only assessment approach available to integrate and reflect current effects from chemical, toxicological, physical, and nonpoint source stressors. Because of this they suggest that rigorous data based on biological assessments and criteria should automatically supersede data from other sources when determining aquatic life use attainment. Some contend that if biological data demonstrate that biological criteria are attained, then the water body is attaining its designated use, even if other monitoring data such as toxicological or chemical data demonstrate an excursion, or potential for an excursion, above a water quality criterion.

Some also contend that rigorous biological assessments should be used

to supersede assessments based on predicted impacts such as water quality modeling and wasteload allocations in decision making for aquatic life use assessments. One concern with this perspective is that non-rigorous biological assessments could be used in such situations, though EPA has 305(b) reporting guidance which suggest minimum quality of biological assessments that could also be used for these situations. In this guidance, EPA recommends using more than one assemblage (fish and/or macro invertebrates/and or algae), several index values or metrics (multiple metrics), an index period for sampling, and ecoregional or other biogeographic regional calibration.

EPA agrees that rigorous biological assessment based on adequate site-specific data is a direct assessment of aquatic ecosystem health, unlike chemical and toxicity assessments. However, biological assessments are less well suited for use in preventing water quality impacts and will only reflect impacts once they have occurred. Though this may be less of a concern in waters with a relatively constant level of discharge where there has been ongoing biological assessment. A second objective of water quality assessment under the CWA, beyond assessing when the aquatic life use is impaired, is assessing when stressors, if left unchecked, will cause impairment. As discussed above, the chemical-specific approach is especially strong for use in identifying and predicting impacts before they happen.

EPA is concerned that the use of a hierarchical approach may ignore or undermine valuable information, whether that information is biological, physical, chemical, or toxicological, and not trigger the appropriate action to address the inconsistency (e.g., evaluation of existing criteria and development of site-specific criteria). Therefore, EPA does not support such an approach. EPA has a number of concerns with any approach wherein data from certain assessment techniques may be automatically superseded by those from others. A primary concern is the failure of such a system to make use of all valuable information. In all cases, criteria, whether chemical-specific, toxicological, physical or biological, are derived with the intent of identifying a threshold beyond which unacceptable impacts to aquatic ecosystems are expected to occur. In most cases, it is expected that when different assessment techniques (i.e., chemical and biological) are used for determining attainment of aquatic life uses, the techniques will yield similar results if all are done rigorously. In addition, it is expected to be rare for chemical assessments to indicate nonattainment where biological assessment indicate attainment; analyses conducted by the State of Ohio confirm this. (See Yoder, C., ''Answering Some Concerns about Biological Criteria Based on Experiences in Ohio.''). However, it is also expected that in certain cases, different assessment techniques will result in different determinations of aquatic life use attainment due to the fact that each technique evaluates aquatic life use attainment differently, and some take into account safety factors for ensuring future attainment while others focus on the current status of the condition. When different assessment techniques that are intended to measure similar environmental endpoints and yield comparable results fail to do so, it may be an indication that assumptions underlying the criteria are not valid for a particular site, or that the data were not rigorous.

While in some cases it may be appropriate to weigh one set of data more heavily than another in making a use attainment determination, in others it may be preferable to take advantage of such circumstances as opportunities to validate and cross-check criteria, making adjustments as indicated by the data. This could result, for example, in an adjustment to a specific chemical criterion in a particular water if rigorous biological assessment indicated that such an adjustment is appropriate. Such information is also useful to EPA in improving national criteria development methodologies.

Lack of comparability in assessments is also a concern for either a weight-of-evidence or a hierarchical approach to aquatic life use assessments. Therefore, it is important that there be a common understanding between States, Tribes and EPA as to how conflicts in data interpretation will be resolved in evaluating and reporting water quality. Developing comparable methods to handle data conflicts will make comparisons between States and Tribes more useful, such as in 305(b) reports. Without a consistent approach to resolving data conflicts, assessments of water quality data at the national level becomes problematic. EPA's policy of independent application is one way of providing a consistent and defensible framework for data evaluation in order to minimize this problem.

Request for Comments on integration of data in water quality assessments

EPA is interested in comment on how chemical, physical, toxicological, and biological assessments can be effectively incorporated and implemented in State and Tribal water quality standards programs to achieve the goals of the CWA.

EPA requests comments on the following questions:

1. How can conflicting interpretations of water quality assessment data be reconciled in a scientifically defensible manner? Should each kind of water quality information stand alone as a scientific measure of current water quality conditions and ecosystem health? Alternatively, are there situations where one type of data should be given more weight than another in determining use attainment?

2. How should States and Tribes evaluate water quality information generated using chemical, toxicological, physical, and biological methods when determining use attainment status?

3. When interpretation of water quality data indicate inconsistent results, what factors (i.e., data richness), if any, should EPA consider relevant to determining ''appropriate actions''?

4. Should EPA explicitly address in the water quality standards regulation the evaluation assessments using chemical, toxicological, physical and biological assessment methods?

5. Should an approach be instituted where independent application may be relaxed for water quality assessment strategies and decisions when a State or Tribe has established a comprehensive monitoring and assessment program including biological monitoring and assessment? What guidelines should be used to evaluate a State or Tribal biological monitoring and assessment program?

6. How should the policy of independent application address the distinction between situations where adequate rigorous data are available for each assessment technique and situations where available data for one or more of the assessment techniques are limited in quantity or quality? Specifically, should the policy be modified to more explicitly encourage or require, where feasible, additional monitoring, particularly where limited data are to be used as a basis for regulatory action?

3. Independent Application and NPDES Permitting

a. Independent Application. Clean Water Act section 101(a) states that ''[t]he objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.'' In the context of implementing water quality-based pollution controls under the NPDES program, EPA has maintained that independent

application of all forms of water quality assessment data (i.e., chemical, physical, toxicological and biological) is clearly consistent with this objective. In addition to restoring impaired surface waters, water quality-based pollution controls are often implemented to prevent water quality standards impairment that projections indicate will occur in the absence of the water quality-based controls. Thus, predictive assessment tools are necessary and have proven effective in the NPDES water quality-based program.

An important question in NPDES permitting that EPA's policy of independent application was specifically developed to address is: how should differences in interpretation of water quality data produced using different water quality assessment techniques for aquatic life uses be reconciled? Upon examination of this question, EPA determined that differences in data interpretation do not necessarily equate to contradictory results. Different assessment results may be complementary since the different approaches can measure different aspects of water quality. For aquatic life uses, all three data types (chemical, toxicological, and biological) provide useful information and should be used to protect designated uses. Because the different types of assessments often focus on different aspects of aquatic community health and each has different strengths and limitations, it is possible that any one type of assessment may fail to detect impairments, or potential impairments of the designated use. For that reason, EPA's current interpretation of the CWA and its implementing regulations is that all three types of data (chemical, toxicological, and biological) should be used when evaluating the reasonable potential for a discharge to cause or contribute to an excursion above a water quality criterion and, if one approach indicates that water quality is, or will be, impacted, the results from the other methods could not be used to refute that finding. Under this approach, where ''reasonable potential'' is found, the NPDES permitting authorities must take appropriate ''actions;'' that is, implement water quality-based effluent limits that are derived from and comply with the applicable water quality criteria. These ''actions'' may also include additional monitoring to determine whether a problem exists, or to derive site-specific criteria if a particular criterion is found to be inaccurate for a site. The policy on independent application is presented in further detail in Chapter 1 of EPA's 1991 Technical Support Document for Water Quality-based Toxics Control (TSD) and in chapter 1 of EPA's Water Quality Standards Handbook—Second Edition, September 1994 (Handbook) (both documents cited above).

In the Great Lakes Guidance, EPA maintained its policy of independent application with respect to determining the need for water quality-based effluent limits, making it an explicit implementation requirement in the Great Lakes States. The Guidance, in Appendix F, Procedure 5, section F ''Other Applicable Conditions,'' states ''When determining whether WQBELs are necessary, information from chemical-specific, whole effluent toxicity and biological assessments shall be considered independently.'' (40 CFR Part 132, Appendix F, Procedure 5, Section F.3.).

In the permitting context, EPA's independent application policy reflects language in sections 301(b)(1)(C) and 303 of the CWA and permit regulations implementing these statutory provisions at 40 CFR 122.44(d). Pursuant to section 303 of the CWA, States and Tribes adopt chemical-specific numeric criteria and toxicity criteria as part of their water quality standards. Section 303(c)(2)(B) of the CWA further requires States and Tribes to adopt, as part of their water quality standards, numeric criteria for toxic pollutants for which EPA has published guidance under section 304(a), and whose discharge or presence in State or Tribal waters could reasonably be expected to interfere with the designated uses adopted by the State or Tribe for those waters. (As discussed elsewhere in this document, all States and Tribes have narrative water quality criteria as well.)

Section 301(b)(1)(C) of the CWA requires effluent limitations in NPDES permits that are ''necessary to meet water quality standards'' or necessary to ''implement any applicable water quality standard.'' Consistent with this provision, EPA's permitting regulations at 40 CFR 122.44(d) require that effluent limits be imposed where the discharge has the ''reasonable potential'' to cause or contribute to an excursion above water quality criteria and specifically describe how those limits are to be expressed (e.g., chemical-specific versus WET limits). Therefore, once a numeric (or narrative) water quality criterion becomes part of a State's or Tribe's water quality standards, and a permitting authority determines that a discharge of a pollutant would have a reasonable potential to cause or contribute to an excursion above the applicable numeric or narrative criterion, the regulation requires that a limit for that pollutant be established as necessary to meet the water quality criterion. Although the CWA specifies that permit limits must meet water quality standards, it is the permitting regulations that specify the factors that must be considered when determining whether or not there is reasonable potential to cause or contribute to an excursion above a State or Tribal water quality standard, and specifically describe how such limits are to be expressed.

EPA regulations at 40 CFR 122.44(d)(1)(iii)–(v) describe the conditions under which water quality-based effluent limits for specific chemicals and for whole effluent toxicity are required in NPDES permits. While these regulations do not specifically use the term ''independent application,'' the concept is expressly laid out. These regulations require chemical-specific limits when the permitting authority determines there is a reasonable potential for the discharge to cause or contribute to the excursion above the chemical-specific criterion. Likewise, the regulations require limits for whole effluent toxicity if the permitting authority determines there is a reasonable potential for the discharge to cause or contribute to the excursion above the numeric criterion for toxicity or narrative criterion for water quality. Except under limited circumstances (where the State or Tribe lacks a chemical-specific criterion for a pollutant of concern), these regulations do not allow a permitting authority to forgo one type of limit, e.g. a chemical limit, where another type of data, e.g., toxicity, indicate no toxicity. Instead, the two types of data are required to be considered independently.

The independent application policy provides a consistent and coherent protocol for resolving conflicts in interpreting monitoring data when determining ''reasonable potential.'' Where such conflicts exist and cannot be reconciled, independent application directs States and Tribes to presume that the data that indicate a current or potential impact are valid and to take appropriate steps to prevent or remediate the impact. The reconciliation phase allows a State or Tribe to gather additional or more detailed data prior to taking regulatory action. Data interpretation conflicts may be best addressed by identifying the cause of the conflict and recalibrating the models and criteria to better reflect the newly acquired site-specific information. However, if the causes of the data interpretation conflicts cannot be resolved, under independent application, the State or Tribe must take

action based on the data indicating impairment or the reasonable potential for impairment of the water body.

EPA believes this procedure for addressing conflicting interpretations of monitoring data is appropriate for a number of reasons. First, as stated earlier, each of the different assessment techniques monitors aquatic ecosystem health from a slightly different perspective. Consequently, it is entirely plausible that only one of the assessment techniques would detect a real or potential impact. Second, assuming that the data generated by the different techniques are of comparable quality and relevance, an indication of a water quality problem using any of the techniques is sufficient reason to implement controls. That being the case, EPA believes the independent application of water quality data in determining when water quality-based effluent limits are necessary for individual dischargers is consistent with the CWA.

Reconciliation of data interpretation conflicts allows flexible evaluation of data. Once a permit application is received from a discharger, States and Tribes frequently engage in discussions with the discharger over the quality and representativeness of the data. This period of data review and evaluation is also an ideal time for addressing any data interpretation conflicts in order to ensure that permitting decisions are defensible and the permit limits that are imposed are necessary to protect designated uses. States and Tribes, together with permittees, may obtain additional data to verify earlier data or conduct timely studies to support the development of site-specific criteria. Ultimately, these site-specific criteria may serve as the basis for a permit limit, or a decision that it is not necessary to limit a pollutant in a particular discharge. All of the actions above are consistent with the independent application policy and the CWA.

Critics of EPA's policy believe either that data from certain types of water quality assessments have inherently greater value than data obtained by other means or that, in a sense, data quality and ecological significance should be averaged, such that if data obtained from two different assessment methods agree and data from a third disagree with the other two, the two could ''outweigh'' the one. In either case, all of the available data would be considered together, under the assumption that each assessment technique measures a similar endpoint. Under such an approach to data evaluation, limits on effluent toxicity would be appropriate and acceptable as surrogates for chemical-specific limits. Similarly, biological assessment data that do not indicate unacceptable levels of impact on the biological community could serve as the basis for a decision not to include either chemical-specific or effluent toxicity limits designed to support an aquatic life use in a facility's discharge permit. Proponents of this view argue that independent application forces them to take inappropriate regulatory actions when faced with conflicting assessment data. EPA does not agree in principle with this view.

b. Alternatives to Independent Application. States, Tribes, municipalities, and dischargers have expressed concerns that the policy of independent application results in more protection than is necessary to attain and maintain aquatic life designated uses. Many express a preference for an approach which invests data obtained using certain assessment techniques with greater credibility than those obtained in other ways. Such an approach, as discussed above, is sometimes referred to as a weight-of-evidence approach. Under such an alternative approach, assuming a high level of confidence in all the available data, one form of data—usually it is argued biological data— would be the ultimate arbiter of whether water quality-based effluent limits are needed in a discharger's permit. To determine, for example, whether a water quality-based effluent limit is needed for a particular chemical pollutant, the risk of adverse impact on the aquatic community would be determined based on all of the available data relying more heavily on high quality, thorough biological data and on the judgment of the individual conducting the evaluation. Several States and members of the regulated community have advanced this approach as preferable to EPA's independent application policy, arguing that such flexibility to exercise judgment is appropriate.

EPA's current thinking is that it should not promote an alternative approach to making ''reasonable potential'' decisions that places greater emphasis on biological data. Instead, EPA's current thinking is that such an evaluation of water quality and ecosystem health to determine the appropriate and applicable criteria against which discharges will be evaluated is most appropriately done during the setting of the applicable criteria for a water body. In that arena, it may be feasible to use biological assessment as a basis for determining the appropriate criteria for a given water body. However, once the criteria are set, EPA believes that the current regulation requires ''reasonable potential'' evaluations against all the applicable criteria, and that the policy of independent application in this context is appropriate.

If biological data indicate that designated uses are being attained in spite of projected or actual chemical-specific criteria exceedances, then additional site-specific analysis should be done to ensure that controls are developed that are necessary to adequately protect the water body from use impairment. Site-specific approaches could include mixing zone studies, more refined water quality modeling to support wasteload allocation, or the development of site-specific criteria. In any case, chemical-specific and toxicity criteria are proven and necessary bases of water quality-based effluent limits. In ''reasonable potential'' analysis, chemical-specific monitoring is usually focused on pollutant concentrations in the effluent and the projected ambient result of those concentrations being discharged. Thus, this type of analysis commonly yields projected rather than measured water quality impacts. Where biological impact is not detected using biological assessment methods, it is possible that impairment that is projected and plausible, may simply have not yet occurred. However, where discharges to a stream have been relatively constant over time and there has been ongoing biological assessment, this would be less of a concern. EPA's view is that it would be inappropriate to ignore projected impairment simply because the impairment has not yet been observed in the environment.

An additional argument in favor of retaining the independent application policy for ''reasonable potential'' determinations has to do with the suitability of certain types of data and the unsuitability of others for certain applications within the water pollution control program. For example, biological data are not amenable in the same way as chemical-specific data for use in waste load allocations, load allocations, total maximum daily load calculations or antidegradation reviews. An approach that would allow biological data to negate a finding of ''reasonable potential'' would suggest possible site-specific inadequacies of particular criteria without providing the information needed to determine definitively whether or not the criteria are appropriate or what any alternative criteria should be. As a consequence, a void would be created in the implementation of State or Tribal water quality standards which would render them unable to perform all of their

intended functions. Proponents of independent application contend that instead of discarding data and invalidating criteria where conflicting interpretations exist, an effort should be made to determine why the interpretations conflict and to refine the applicable criteria to better reflect the conditions found at the site. Taking this step would ensure that, over time, a full suite of appropriate criteria would be developed for every site and that all appropriate and necessary pollution controls are implemented. In addition, such an approach is consistent with the CWA. Some States and Tribes may be concerned, however, that revising water quality standards, especially where such revision is to deal with a single permitting decision, may be so resource intensive that it is not a realistic option.

As discussed above, if numeric water quality criteria exist and are applicable to a water body, permits for dischargers to the water body must ensure that those criteria are met under section 301(b)(1)(C) and the implementing regulations at 40 CFR 122.44(d). On occasion, States, Tribes and dischargers have asserted that biological and toxicity data from specific waters conflict with chemical data. EPA's current thinking is that instances of clear disagreement between biological and toxicity data and chemical data are infrequent. Based on this belief, EPA would not support a radical shift away from chemical criteria and limits or toxicity criteria and limits. Those tools are simply too important as proven tools for assessing potential impacts to surface waters and improving water quality. EPA's current thinking also suggests that it is important for there to be flexibility to resolve instances of disagreement between different forms of data and that perhaps mechanisms for such flexibility can be clarified or improved. EPA's current thinking is that through collection of broader and more thorough water quality data, EPA, States and Tribes will be able to develop more complete profiles of water body conditions and stressors and that through such evaluation the ''necessary actions'' (e.g., water quality-based effluent limits for one or more pollutants, listing of the water body as not attaining its aquatic life designated use, or best management practices to address nonpoint sources of pollution) to improve water quality in a given water will become more obvious.

Disagreement between biological, toxicity and chemical data for the same water is cited by some States and dischargers as a potential situation in which independent application would force unnecessary and burdensome requirements on dischargers. Those opposed to independent application of criteria would like to see States and Tribes given greater latitude to determine when limits based on a given criterion are necessary. They suggest that this could be achieved if States and Tribes were to include, in the chemical-specific criteria or toxicity criteria portions of their water quality standards, statements explaining circumstances under which the otherwise applicable criteria would not apply at a particular site or would have to undergo some review and revision, while assuring the designated use of the water body would be maintained. Such circumstances could include where the form of the pollutant in the effluent or receiving water is not the form addressed by the chemical criterion in the State or Tribe's standards; or, where a substantial amount of biological and or toxicity data indicate that discharges of the pollutant at levels that would exceed the chemical criteria are not causing the aquatic life use in a particular water body or segment of the water to be impaired. If these conditions could be met, permitting authorities would have the flexibility to determine that a numeric water quality-based effluent limit for the pollutant in question is not required, or that an alternate limit should apply. This type of flexibility, to rely on biological evaluations *in the criteria setting phase*, where data are sufficient to support such flexibility, could be a strong incentive for States and Tribes to develop stronger biological criteria and assessment programs including monitoring reference areas and complete chemical and toxicity monitoring programs, including site-specific data on most sensitive species to chemical(s) for which flexibility is being sought. EPA approval of water quality standards implementing such an option requires acceptance of an interpretation that sections 301(b)(1)(C) and 303(c)(2)(B) of the CWA allow States and Tribes to identify, within their water quality standards, conditions or circumstances which would render specific numeric criteria not applicable to certain waters in specific instances, or alternatively in need of refinement.

EPA has significant technical questions about how such an option could be implemented within the context of a State's or Tribe's water quality standards. EPA is especially interested in detailed technical comments describing how such an option would be included in a State's or Tribe's water quality standards, how such an option would ensure protection of designated uses in water bodies where criteria are deemed not applicable. In addition, EPA is soliciting comment on specific procedures that could be used by a State or Tribe to arrive at a decision that a criterion is not applicable at a specific site. In particular, EPA is interested in technical evaluations of what types of data would be necessary to support such a decision, the quantity and quality of the data and how the data would be evaluated. Finally, EPA seeks detailed technical comments indicating how other elements of the water quality standards program would function in situations where chemical or toxicological water quality criteria were adjusted based on biological assessments. For example, if a State or Tribe were to employ the option discussed above, it is not apparent how critical water quality program elements such as determining the need for permit limits or whether or not a new discharge could be allowed to a stream segment could occur absent chemical-specific or toxicity-based criteria applicable to the water body. To be workable, this option may need to be paired with a scientifically defensible mechanism for making decisions about activities such as permit limits and load increases. Since chemical criteria and chemical-specific interpretations of narrative criteria currently are the principal benchmark used for these functions, would pursuing the option discussed above be workable, or would it introduce a level of complexity into State and Tribal water quality standards that could result in slowed or suspended water pollution control programs, and expose aquatic ecosystems to greater risk because of the lack of an identified threshold of impact?

EPA's current thinking is that significant flexibility already exists within the current regulatory framework to account for available biological and toxicity data. For example, numeric criteria, once adopted, may be modified to better reflect conditions at a specific site. Bioassessment and toxicity data can play a valuable role in identifying sites where conditions differ sufficiently from those assumed in the calculation of the national or State or Tribe-wide criteria to warrant site-specific modification of the criteria. Bioassessment and toxicity data can also provide useful information in identifying instances where a given constituent in an effluent is toxicologically distinct from a similar substance for which a criterion is available, indicating the need for a separate criterion for the constituent in

question. Establishing site-specific criteria would provide relief similar to that contemplated in the option proposed above.

Lastly, public participation is a basic tenet of the water quality standards development process. Public participation is also sought in the context of issuing NPDES permits. During standards development, public input is sought to assist the regulatory agency in identifying the appropriate water quality goals for the waters under the jurisdiction of a State or Tribe. During NPDES permit issuance, public input is again sought to verify that the permit proposed to be issued is consistent with the water quality goals. Some assert that these two public participation steps seek input on different questions and are not interchangeable. Does the weight-of-evidence option discussed above reduce the opportunity for meaningful public participation in the standards setting process by making it more difficult for the public to determine which water quality criteria will apply to which water bodies, and, as a result, what the water quality goals for an individual water body are? EPA is considering how a weight-of-evidence approach might be implemented in a manner that does not restrict the opportunities for meaningful public participation in the water quality goal setting process.

Request for Comments on Independent Application

EPA requests comment on the following questions:

1. What is the rationale for modifying the independent application policy as it pertains to NPDES permitting? Under what circumstances could it be justified?

2. If there are circumstances where an approach other than independent application is acceptable, should any one type of water quality data receive greater weight and why?

3. How should States and Tribes evaluate effluent data generated using chemical, toxicity and biological methods in determining reasonable potential to cause or contribute to an impairment?

4. Would checks or oversight mechanisms be necessary to ensure that where decisions about reasonable potential are based on chemical, toxicity and biological methods, such decisions are made with integrity? For example, EPA or public oversight?

5. Are there any cases which indicate that either chemical-specific, whole effluent toxicity or biological approaches do not legitimately represent some aspect of use attainment?

6. Should EPA explicitly incorporate into the water quality standards regulation the independent application policy?

7. Should independent application be addressed the same or differently for permitting than for assessment and use attainment decisions under 305(b) reporting and 303(d) listing?

8. If EPA were to separate the use of independent application in determining the use attainment status of a water body from the use of independent application when determining reasonable potential for an effluent, what approach, independent application, weight-of-evidence, or hierarchical, should be used for use attainment decisions? NPDES permitting? What would the implications be if the programs used two different policies?

9. Would a policy allowing numeric criteria to not apply to all waters where supported by scientifically defensible data be workable? Would it unnecessarily complicate the regulatory program, for example by delaying the issuance of permits? Are existing mechanisms of criteria setting and permit issuance sufficiently flexible?

IV. Summary and Potential Program and Regulation Changes

EPA believes that the water quality standards program and decisions it yields will continue to be the focus of growing pressure and scrutiny as solutions to remaining surface water quality problems in this country are found to be increasingly elusive, difficult, and/or expensive. The task set forth by the Clean Water Act is to improve water quality even where it is difficult to do so. To accomplish this task, EPA envisions a national water quality standards program in which: the best possible information on whether designated uses are being attained and how to attain and maintain them is available and used; water quality criteria are selected from a wide-ranging menu of scientifically sound criteria and tailored to each watershed; and national norms of consistency and flexibility in State and Tribal water quality standards are clear.

With this vision in mind, EPA, through this ANPRM, begins a review of the water quality standards regulation in a public forum in an attempt to identify possible amendments to the regulation and new guidance or policy that may be needed to address three distinct objectives: (1) eliminate any barriers to, and otherwise enhance State and Tribal implementation of, watershed-based water quality planning and management; (2) facilitate use of new, more integrated water quality assessment and criteria science in water quality standards programs, and; (3) improve the regulation so that it can be implemented more efficiently and effectively (including cost-effectively).

The preceding pages of this ANPRM outline current regulatory provisions, accompanying guidance and policy, and current practices in the core areas of the water quality standards program. Each section of the ANPRM identifies issues that have been raised to EPA that come out of the collective experiences of States, Tribes, cities, industry and environmental advocates, as well as EPA's experience. The issue discussions are followed by specific questions that are intended to elicit focused comments. It is important for commenters to focus on these specific questions as a vehicle for developing comments. It is equally important for commenters to develop ideas that address the three objectives above in a more general sense and to identify the five to seven highest priority issues the commenter believes EPA should address in a follow-on regulatory proposal. EPA welcomes ideas on how the water quality standards regulation, policy and or guidance can be revised to facilitate water quality management on a watershed basis. In requesting comment on eliminating barriers to and facilitating implementation of watershed-based water quality planning and management, EPA directs commenters' attention primarily to the sections on designated uses, criteria, antidegradation, mixing zones and independent application. In requesting comment on how to facilitate use of new, more integrated water quality assessment and criteria science in water quality standards, EPA directs commenters' attention primarily to the sections on biological criteria, and independent application. In requesting comment on how to improve the efficiency and effectiveness (including cost-effectiveness) of the water quality standards program, all sections of the ANPRM are relevant for review.

EPA seeks a water quality standards program that protects the nation's waters as envisioned in the CWA, that establishes requirements that are necessary to attain and maintain healthy and sustainable ecosystems, and that is flexible enough for States and Tribes to protect water quality and at the same time avoid costly requirements that have little or no environmental benefit.

Below is a brief summary outline of the potential changes to the water quality standards program and

regulation that are discussed and considered in this ANPRM. The list of potential changes includes the potential changes to the program and regulation on which EPA is specifically requesting comment. Each area of potential change is discussed in detail in the specified section of the ANPRM. It is possible that EPA will ultimately propose some of the changes outlined below. It is also possible that EPA will conclude based on the public comments it receives that some or all of the issues presented in the ANPRM can be best addressed through non-regulatory mechanisms such as guidance or policy.

A. Uses

1. Refinement of use designations to achieve increased specificity in aquatic life and recreation uses being protected.
2. Minimum elements of a use attainability analysis (UAA).
3. When is UAA required/not required?
a. UAAs whenever an aquatic life use is designated (beyond fishable/swimmable) to see if the use reflects the highest potential for the water body.
b. Periodic review of marginal or limited aquatic life use designations.
c. When is a use considered attainable?
d. Conditions under which refinements in designated uses may be considered actions not requiring analysis to support use removal and alternatively the conditions under which such action is considered a use removal requiring justification under § 131.10(g).
e. Circumstances under which UAA is required and circumstances under which UAA must be reviewed.
4. Removal of designated uses.
a. Minimum aquatic life uses for all waters, because even degraded water bodies support some form of aquatic life.
b. Evaluate use removal provision at § 131.1(10)(g) allowing removal of a use due to the existence/operation of a dam.
c. Clarify whether the physical factors reason for removing a use includes removal of a recreational use due to poor physical access to the water. Alternatively, the removal of a use for physical factors could be limited to aquatic life uses only.
d. Clarify in § 131.10 that at least one of the six use removal criteria must be met to remove any use, not just aquatic life and recreation uses.
5. Alternatives to use downgrade such as variances, temporary standards and ambient-based criteria.
a. Recognize site-specific criteria set to natural background levels as a permissible alternative to use downgrade.
b. Recognize site-specific criteria set to irreversible anthropogenic background levels as a permissible alternative to use downgrade.

B. Criteria

1. Ambient Water Quality criteria for Aquatic Life Protection.
a. Examination and possible interim revisions to EPA recommendations on the duration and frequency of criteria excursions to account for organism response model and population response model.
2. Site-specific criteria and procedures.
a. Specify that States and Tribes must have regulatory procedures for establishing site-specific criteria.
b. Minimum requirements for development of site-specific criteria.
3. Narrative criteria and interpretation procedures.
a. Identify additional methods for implementation of narrative criteria.
b. Clarify that States and Tribes are required to adopt narrative criteria for all waters. (all States already have).
4. Codification of CWA requirement to adopt numeric toxics criteria.
a. Define ''reasonable expectation'' under 303(c)(2)(B). (''States and Tribes may adopt numeric chemical-specific criteria for those stream segments where the State or Tribe determines that the priority toxic pollutants for which EPA has issued CWA section 304(a) criteria guidance are present and can reasonably be expected to interfere with designated uses.'' emphasis added)
5. Chemical criteria beyond priority pollutants.
a. Develop and recommend or require criteria for certain non-priority pollutants.
6. Numeric values in the absence of criteria or data sufficient for criteria.
a. States and Tribes develop method for derivation of alternative values where minimum data requirements for criteria not satisfied. Specific EPA derivation procedure or guidelines.
7. Require or recommend that State and Tribes adopt numeric toxicity criteria.
8. Sediment quality criteria.
a. Require or recommend that States and Tribes adopt sediment criteria (narrative or numeric).
b. Specify in regulation that States and Tribes have the flexibility to adopt sediment quality criteria.
9. Biological criteria.
a. Require or recommend that States and Tribes adopt biological criteria (narrative or numeric).
b. Specify in regulation that States and Tribes have the flexibility to adopt biological criteria.
c. Specify linkage between biological criteria and stressor identification.
10. Wildlife Criteria.
a. Recognize in regulatory text that wildlife criteria are valid forms of water quality criteria.
b. Recognize in regulatory text that wildlife criteria endpoints other than bioaccumulation endpoints are valid bases for wildlife criteria.
11. Physical criteria: Existing and potential future role of.
a. Identify physical criteria such as habitat (including clean sediment) and hydrologic balance criteria in 40 CFR 131 as valid forms of criteria that States and Tribes can adopt in their water quality standards.
12. Human Health Criteria.
a. Higher fish consumption assumptions for site-specific or regional situations when subpopulations that are highly exposed have been identified.
b. Clarification of the use of MCLs and MCLGs in State and Tribal water quality standards.

C. Antidegradation

1. Minimum elements of State and Tribal antidegradation implementation procedures.
a. Revise regulation to include the minimum elements of a State and Tribal antidegradation implementation method.
b. Revise the regulation to explicitly say that State and Tribal antidegradation implementation procedures (in addition to just the policy) must be submitted in triennial review package and are reviewable by EPA.
2. Tier 1 protection (protection of existing uses).
a. Define or clarify what constitutes loss of an existing in-stream water use.
b. Specify that a clear approach to maintaining and protecting existing uses that may not be adequately protected by strict application of water quality criteria is a required element of an antidegradation implementation procedure.
3. Waters covered by tier 2 level protection.
a. Clarify waters subject to tier 2 level protection.
b. Clarify tier 2 provision requiring all cost effective and reasonable best management practices for nonpoint sources prior to allowing a lowering of water quality.
c. Clarify that States and Tribes are to consider the 303(d) listing status of a water body, and the information supporting that status, when determining whether a proposed activity that is expected to degrade water quality in that water body can be authorized under tier 2 of the State's or Tribe's antidegradation provisions.

4. Outstanding national resource water (ONRW) classification, level of protection, and public role in nominating.

a. Public nomination of ONRWs.

b. Level of protection afforded to ONRWs.

5. Creation of Antidegradation tier 2.5.

a. Revise the regulation to explicitly recognize tier 2.5 protection.

D. Mixing Zone Policy and Implementation Procedures

1. Specify that, to use mixing zones, States and Tribes must indicate in their water quality standards whether they allow mixing zones, conditions under which mixing zones are allowed, minimum requirements for mixing zones.

2. Procedures and decision criteria used in addressing complete and incomplete mixing.

3. Site-specific technical justification for rapid and complete mix assumption.

4. State and Tribe policies and procedures to address rate of mixing.

5. Clarify in regulation that narrative criteria apply in mixing zones.

6. Restrict Mixing zones for bioaccumulative chemicals of concern.

E. Applicability of Water Quality Standards to Wetlands

1. Clarify in 40 CFR Part 131 that wetlands with interstate commerce connection are waters of the U.S. requiring water quality standards.

F. Evaluation of EPA Policy of Independent Application (IA)

1. Increase use of chemical, toxicological, physical and biological data in making water body assessments in a consistent and scientifically defensible manner.

2. Specify how, and the circumstances under which, different forms of assessments (chemical, toxicological, physical and biological) can be used together to determine:

a. When a designated aquatic life use is or is not attained,

b. The type and value of criteria that should apply to a water, and

c. When water quality-based effluent limits are required in a permit.

3. Specify the adequate data base and level of rigor necessary in biological assessments to support a determination of full use support despite differences in assessment results.

In addition to the potential program and regulation changes outlined above, EPA is also requesting comment on the costs and benefits and potential reporting and record keeping requirements that might be associated with these changes. These issues are discussed more fully in the next section.

V. Regulatory Assessment Requirements

A. Executive Order (E.O.) 12866, Regulatory Planning and Review

Under Executive Order 12866, [58 **Federal Register** 51,735 (October 4, 1993)] the Agency must determine whether the regulatory action is ''significant'' and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

While this advance notice of proposed rule making establishes no regulatory requirements it could ultimately result in a rule that would satisfy one or more of the above criteria. It has therefore been determined that this action is a ''significant regulatory action'' under the terms of Executive Order (E.O.) 12866. As such this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations have been documented in the public record.

Under the terms of E.O. 12866, EPA is to prepare for any significant regulatory action an assessment of its potential costs and benefits. If that action satisfies the first of the criteria listed above, this assessment must include, to the extent feasible, a quantification of these costs and benefits, the underlying analyses supporting such quantification, and an assessment of the costs and benefits of reasonably feasible alternatives to the planned regulation. Because the purpose of this notice is to initiate a structured national debate on a broad set of issues rather than to propose specific regulatory changes, it is not feasible to quantify the costs and benefits of any resulting regulations at this time. The Agency is aware, however, that this notice could lead to a regulatory action for which the preparation of a quantitative assessment of costs and benefits would be appropriate. The Agency is thus requesting comment on the costs and benefits of any of the possible regulatory changes discussed in this notice, as well as on appropriate methodologies for assessing them. The Agency would be particularly interested to hear from States and Tribes that may already have experience implementing some of the measures discussed in this Notice and may already have prepared analyses of the costs and/or benefits of such measures. Other members of the public are also encouraged to submit any data they may have on the costs and benefits of specific measures (e.g., conducting biological assessments).

B. The Regulatory Flexibility Act (RFA) as Amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996

Under the RFA, (5 U.S.C. 601 *et seq.*), as amended by SBREFA, for proposed rules, EPA generally is required to conduct an initial regulatory flexibility analysis (IRFA) describing the impact of the regulatory action on small entities as part of rulemaking. However, under section 605(b) of the RFA, if the Administrator for the Agency certifies that the rule will not have a significant economic impact on a substantial number of small entities, EPA is not required to prepare an IRFA. The requirement applies to proposed rules only and as this notice is an ANPRM, these requirements do not apply to this notice.

C. Paperwork Reduction Act

Under the implementing regulations for the Paperwork Reduction Act, an agency is required to certify that any agency-sponsored collection of information from the public is necessary for the proper performance of its functions, has practical utility, is not unnecessarily duplicative of information otherwise reasonably accessible to the agency, and reduces to the extent practicable and appropriate the burden on those required to provide the information (5 CFR 1320.9). Any proposed collection of information must be submitted, along with this certification, to the Office of Management and Budget for approval before it goes into effect. Most of the potential regulatory changes discussed in this Notice could entail new reporting and record keeping requirements for States and Tribes and/or members of the regulated public. EPA

is interested in comments on any and all aspects of these potential paperwork requirements, and in particular on how they should be structured to fulfill the requirements that they have practical utility, are not unnecessarily duplicative of other available information, and are the least burdensome necessary to satisfy the purposes of the Water Quality Standards Program.

Dated: June 25, 1998.

Robert Perciasepe,

Assistant Administrator for Water.

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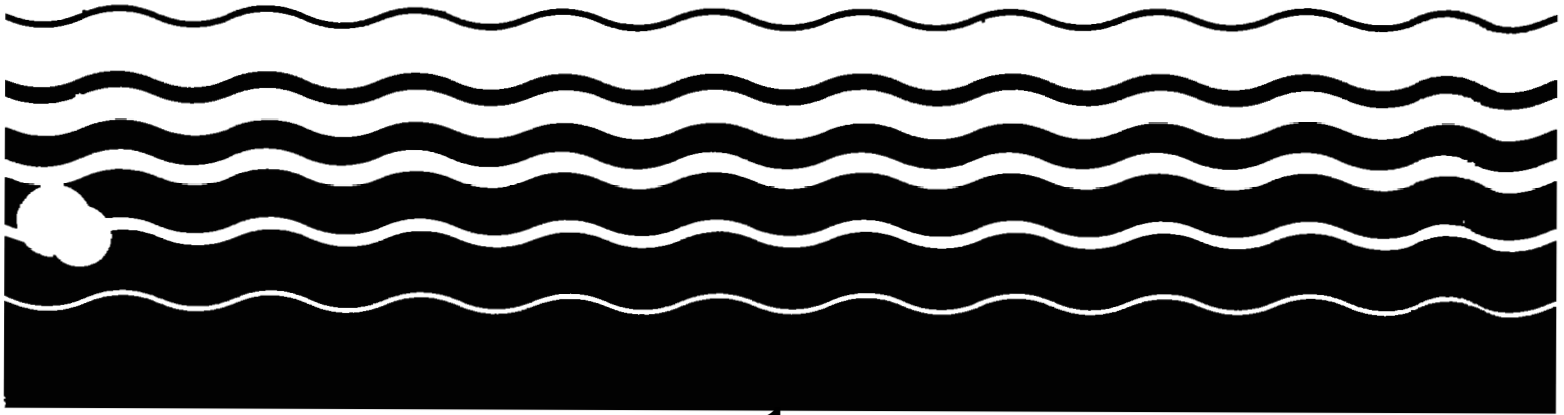
Guidance Manual For The Preparation Of Part 2 Of The NPDES Permit Applications For Discharges From Municipal Separate Storm Sewer Systems



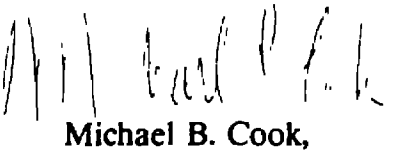
FOREWORD

This manual provides detailed guidance on the development of Part 2 permit applications for municipal separate storm sewer systems. It provides technical assistance and support for all municipal separate storm sewer systems subject to regulatory requirements under the National Pollutant Discharge Elimination System (NPDES) program for storm water point source discharges. This manual also emphasizes the application of pollution prevention measures and implementation of Best Management Practices (BMPs) to reduce pollutant loadings and improve water quality.

The control of pollution from urban and industrial storm water discharges is critical in maintaining and improving the quality of the Nation's waters. Pollutants in storm water discharges from many sources are largely uncontrolled. The *National Water Quality Inventory, 1990 Report to Congress*, provides a general assessment of water quality based on biennial reports submitted by the States under Section 305(b) of the Clean Water Act (CWA). The report indicates that roughly one third of the impairment in assessed waters is due to storm water runoff.

This document was issued in support of Environmental Protection Agency (EPA) regulations and policy initiatives involving the development and implementation of a national storm water program. This document is Agency guidance only. It does not establish or affect legal rights or obligations. Agency decisions in any particular case will be made applying the laws and regulations on the basis of specific facts when permits are issued or regulations promulgated.

This document will be revised and expanded periodically to reflect additional guidance. Comments from users are welcomed. Send comments to U.S. EPA, Office of Wastewater Enforcement and Compliance, 401 M Street, SW, Mail Code EN-336, Washington, D.C. 20460.



Michael B. Cook,
Director
Office of Wastewater Enforcement
and Compliance

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CHAPTER 1
INTRODUCTION

1.0 INTRODUCTION

1.1 OVERVIEW

Control of pollution from urban and industrial storm water discharges is an important factor in maintaining and improving the quality of the Nation's waters. To help improve the quality of storm water discharges, Congress passed the Water Quality Act (WQA) in 1987. The WQA added to the Clean Water Act (CWA) a provision [Section 402(p)] that directed the U.S. Environmental Protection Agency (EPA) to establish final regulations governing storm water discharges under the National Pollutant Discharge Elimination System (NPDES) program.

In response, EPA published regulations in the November 16, 1990, Federal Register (55 FR 47990) that established NPDES permit application requirements for storm water point source discharges As part of these regulations, municipal separate storm sewer systems (MS4s) that serve populations greater than 250,000 ("large MS4s"), MS4s that serve populations between 100,000 and 250,000 ("medium MS4s"), and other MS4s identified by the permitting authority must be covered by NPDES permits. The regulations establish a two-part application process for these MS4s In April 1991, EPA issued guidance on the preparation of Part 1 of the NPDES permit application for discharges from MS4s (EPA, 1991b). The present manual provides guidance on the preparation of Part 2 applications. The information in this manual should help municipalities focus their efforts on activities that meet the application requirements.

1.2 SUMMARY OF THE CLEAN WATER ACT REQUIREMENTS

Section 402 of the CWA prohibits the discharge of any pollutant to waters of the United States from a point source, unless that discharge is authorized by a NPDES permit. Efforts to improve water quality under the NPDES program have traditionally focused on reducing pollutants in discharges of industrial process wastewater and municipal sewage. As pollution control measures have been implemented for these discharges, it has become evident that diffuse sources of water pollution (those occurring over a wide area) are also major contributors to water quality degradation. Recent studies, including the Nationwide Urban Runoff Program (NURP) study (EPA, 1983), have shown that storm water runoff from urban and industrial areas typically contains the same general types of pollutants that are often found in wastewater in industrial discharges. Pollutants commonly found in storm water runoff include heavy metals, pesticides, herbicides, and synthetic organic compounds such as fuels, waste oils, solvents, lubricants, and grease. These compounds can have damaging effect on both human health and aquatic ecosystems. In addition to pollutants, the high volumes of storm water discharged from MS4s in areas of rapid urbanization have had significant impacts on aquatic ecosystems due to physical modifications such as bank erosion and widening of channels.

The statutory provisions governing discharges from MS4s are contained in CWA Section 402(p)(3)(B). In general, Congress provided that permits for discharges from MS4s:

- May be issued on either a system- or jurisdiction-wide basis;
- Shall effectively prohibit non-storm water discharges into the MS4, and
- Shall require controls to reduce the discharge of pollutants to the maximum extent practicable (MEP).

Under the storm water program, the initial round of NPDES permits will emphasize the use of Best Management Practices (BMPs) to reduce pollutant loadings from MS4s. These BMPs include pollution prevention measures, management practices, control techniques, and design and engineering practices. As with any discharger subject to the NPDES program, MS4s must meet technology-based requirements [in this case, the "maximum extent practicable" standard of Section 402(p)] as well as applicable water quality standards.

1.3 THE PERMIT APPLICATION PROCESS

The goal of the NPDES program for municipal storm water is the reduction and elimination of pollutants in storm water discharges from large and medium MS4s. The permit application process in 40 CFR 122.26(d) is designed to meet this goal by developing site-specific NPDES permits containing storm water management programs for individual MS4s. Site-specific permitting is crucial given the differing nature of discharges from MS4s in different parts of the country and the varying impacts of these discharges on receiving waters. To facilitate this process, the regulations specify a two-part permit application.

Part 1 of the permit application initiates the process through which municipalities began to identify sources of pollutants to the municipal storm sewer system. Part 1 also requires municipalities to propose strategies to characterize storm water discharges from their municipal separate storm sewer systems. *Guidance for the Preparation of Part 1 of The NPDES Permit Applications for Discharges From Municipal Separate Storm Sewer Systems* was issued in April 1991, and is available through EPA's Storm Water Hotline [(703) 821-4823].

The present manual describes how to meet the Part 2 permit application requirements for storm water discharges from large and medium MS4s Part 2 of the permit application builds upon the foundation established in Part 1 and provides for the development of comprehensive storm water management programs. Part 2 requires particular information that MS4s must have developed to have an effective storm water control plan. However, each applicant is given flexibility on how to present and organize this information in a way which best suits the MS4's needs and is most consistent with its overall storm water management strategy. This guidance presents examples which illustrate some alternative ways to present information that will fulfill the Part 2 permit application requirements.

1.4 WHO MUST SUBMIT A PART 2 APPLICATION

Municipalities, incorporated places, and counties with unincorporated urban areas that own or operate a large or medium MS4 that discharges to waters of the United States are required to obtain a NPDES storm water permit. In addition, small MS4s (less than 100,000) that are owned or operated by a municipality other than those identified in the NPDES regulation can be designated by the permitting authority as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers.

Under EPA's definition of MS4, "large" MS4s serve populations greater than 250,000, and "medium" MS4s serve populations of at least 100,000, but less than 250,000. Population is determined by the most recent Decennial Census by the Bureau of the Census. A list of large and medium municipalities identified in the November 16, 1990, rule is contained in Exhibit 1-1, in which population was based on the 1980 Census. **After the publication of the November 16, 1990, rule, the Bureau of the Census released data for 1990, and, as a result, some additional municipalities may be required to submit applications, while others may fall below 100,000. These changes are not reflected in Exhibit 1-1.**

Exhibit 1-1: Large and Medium MS4s
(Based on 1980 Census Data)

Municipalities, Counties, and Incorporated Areas With Populations greater than 250,000 which Must Submit NPDES Storm Water Applications

State	Entity
Alabama	Birmingham
Arizona	Phoenix
	Tucson
California	Long Beach
	Los Angeles
	Los Angeles County
	Oakland
	Sacramento
	Sacramento County
	San Diego
	San Diego County
	San Francisco
	San Jose
Colorado	Denver
Delaware	New Castle County
District of Columbia	
Florida	Dade County
	Jacksonville
	Miami
	Tampa
Georgia	Atlanta
	DeKalb County
Hawaii	Honolulu County
Illinois	Chicago
Indiana	Indianapolis
Kansas	Wichita
Kentucky	Louisville
Louisiana	New Orleans
Maryland	Anne Arundel County
	Baltimore County
	Baltimore
	Montgomery County
	Prince George's County
Massachusetts	Boston
Michigan	Detroit
Minnesota	Minneapolis
	St Paul
Missouri	Kansas City
	St. Louis
Nebraska	Omaha
New Jersey	Newark
New Mexico	Albuquerque
New York	Buffalo
	Bronx Borough
	Brooklyn Borough
	Manhattan Borough
	Queens Borough
	Staten Island Borough
North Carolina	Charlotte
Ohio	Cincinnati
	Cleveland
	Columbus
	Toledo
Oklahoma	Oklahoma City
	Tulsa
Oregon	Portland
Pennsylvania	Philadelphia
	Pittsburgh
Tennessee	Memphis
	Nashville/Davidson
Texas	Austin
	Dallas
	El Paso
	Fort Worth
	Harris County
	Houston
	San Antonio
Utah	Salt Lake County
Virginia	Fairfax County
	Norfolk
	Virginia Beach
Washington	King County
	Seattle
Wisconsin	Milwaukee

Municipalities, Counties, and Incorporated Areas with Populations between 100,000 and 250,000 which Must Submit NPDES Storm Water Applications.

State	Entity
Alabama	Huntsville
	Jefferson County
	Mobile
	Montgomery
Alaska	Anchorage
Arizona	Mesa
	Pima County
	Tempe
Arkansas	Little Rock
California	Alameda County
	Anaheim
	Bakersfield
	Berkeley
	Concord
	Contra Costa County
	Fremont
	Fresno
	Fullerton
	Garden Grove
	Glendale
	Huntington Beach
	Kern County
	Modesto
California, cont	Orange County
	Oxnard
	Pasadena
	Riverside
	Riverside County
	San Bernardino
	San Bernardino County
	Santa Ana
	Stockton
	Sunnyvale
	Torrance
Colorado	Aurora
	Colorado Springs
	Lakewood
	Pueblo
Connecticut	Bridgeport
	Hartford
	New Haven
	Stamford
	Waterbury
Florida	Broward County
	Escambia County
	Fort Lauderdale
	Hialeah
	Hillsborough County
	Hollywood
	Orange County
	Orlando
	Palm Beach County
	Pinellas County
	Polk County
	Sarasota County
	St Petersburg
Georgia	Clayton County
	Cobb County
	Columbus
	Macon
	Richmond County
	Savannah
Idaho	Boise City
Illinois	Peoria
	Rockford
Indiana	Evansville
	Fort Wayne
	Gary
	South Bend
Iowa	Cedar Rapids
	Davenport
	Des Moines
Kansas	Kansas City
	Topeka
Kentucky	Jefferson County
	Lexington-Fayette
Louisiana	Baton Rouge
	Jefferson Parish
	Shreveport

(continued)

Exhibit 1-1: Large and Medium MS4s (cont.)
(Based on 1980 Census Data)

Massachusetts	Springfield	North Carolina	Durham	Texas, cont'd	Corpus Christi
	Worcester		Greensboro		Garland
Michigan	Ann Arbor		Raleigh		Irving
	Flint		Winston-Salem		Lubbock
	Grand Rapids		Cumberland County		Pasadena
	Lansing	Ohio	Akron		Waco
	Livonia		Dayton	Utah	Salt Lake City
	Sterling Heights		Youngstown	Virginia	Alexandria
	Warren	Oregon	Eugene		Arlington County
Mississippi	Jackson		Multnomah County		Chesapeake
Missouri	Independence		Washington County		Chesterfield County
	Springfield	Pennsylvania	Allentown		Hampton
Nebraska	Lincoln		Erie		Henrico County
Nevada	Clark County	Rhode Island	Providence		Newport News
	Las Vegas	South Carolina	Columbia		Portsmouth
	Reno		Greenville County		Richmond
New Jersey	Elizabeth		Richland County		Roanoke
	Jersey City	Tennessee	Chattanooga	Washington	Snohomish County
	Paterson		Knoxville		Spokane
New York	Albany	Texas	Amarillo		Pierce County
	Rochester		Arlington		Tacoma
	Syracuse		Beaumont	Wisconsin	Madison
	Yonkers				

Source. 55 FR 48073, November 16, 1990.

The definition of MS4 excludes those conveyances that are designed to discharge storm water runoff combined with municipal sanitary sewers ("combined sewer systems"). Therefore, municipalities that own or operate combined sewer systems may petition to have their population, based on Bureau of the Census figures, reduced by the number of people served by the combined sewer system. If the total population served by the separate storm sewer system alone is less than 100,000, the municipality may be eligible for an exemption from NPDES storm water permit requirements. Municipalities should contact their permitting authority for additional information. **Exhibit 1-1 does not reflect any modifications in the application requirements for cities with combined sewer systems.**

1.5 SUBMITTING THE PART 2 APPLICATION

Completed Part 2 applications should be submitted to the appropriate permitting authority listed in Exhibit 1-2. For municipalities in States with authorized NPDES programs, the permitting authority is the State office listed in Exhibit 1-2. Because some of these States may have application requirements in addition to EPA's, municipalities in States with authorized NPDES programs should contact their States for guidance. For municipalities in States without approved NPDES programs, the permitting authority is the EPA Regional Office listed in Exhibit 1-2.

Municipalities with populations greater than 250,000 (large MS4s) were to submit their Part 2 applications by November 16, 1992. Municipalities with populations greater than 100,000, but less than 250,000 (medium MS4s), must submit Part 2 applications by May 17, 1993. Inquiries regarding Part 2 applications or the permitting process should be directed to the appropriate permitting authority.

Exhibit 1-2: NPDES Storm Water Program Permitting Authorities

State	Permit Auth	Contact
Alabama	State	Aubrey White Water Division 1751 Dickinson Dr Montgomery, AL 36130 (205) 271-7811
Alaska	EPA	Steve Bubnick U S EPA Region 10 WD-134 1200 6th Ave. Seattle, WA 98101 (206) 553-8399
Arizona	EPA	Eugene Bromley U S EPA Region 9 W-5-1 75 Hawthorne St. San Francisco, CA 94105 (415) 744-1906
Arkansas	State	Mark Bradley Permitting Section Chief 8001 National Dr. P O Box 8913 Little Rock, AR 72219-8913
California	State	Archie Matthews Div of Water Qual Control Dept. of State Water Res Bd. Mail Code G8 901 P Street Sacramento, CA 95814 (916) 657-0525
Colorado	State	Patricia Nelson Dept. of Health Water Quality Control Div WPCD-PE-B2 4300 Cherry Drive South Denver, CO 80222-1530 (303) 692-3590
Connect-icut	State	Permit Coordinator Dept of Envir Protection Water Management Bureau 165 Capitol Ave. Hartford, CT 06106 (203) 566-7167
Delaware	State	Chuck Schadel Dept of Natural Resources Surface Water Management 89 Kings Hwy , P O Box 1401 Dover, DE 19903 (302) 739-5731
District of Columbia	EPA	Kevin Magerr U S EPA Region 3 3WM53 841 Chestnut Bldg Philadelphia, PA 19107 (215) 597-1651
Florida	EPA	Chris Thomas U.S. EPA Region 4 4WM-FP 345 Courtland St. N E. Atlanta, GA 30365 (404) 347-2391
Georgia	State	Allen Hallum Municipal Permitting Prog Ga. Env Protection Div 4244 International Pkwy Suite 110 Atlanta, GA 30354 (404) 362-2680
Hawaii	State	Steve Chang Dept of Health Clean Water Branch Five Water Front Plaza #500 Ala Moana Blvd. Honolulu, HI 96813 (808) 586-4309
Idaho	EPA	Steve Bubnick U S EPA Region 10 WD-134 1200 6th Avenue Seattle, WA 98101 (206) 553-8399
Illinois	State	Sue Epperson EPA Water Poll. Control Permits Section #15 P O Box 19276 Springfield, IL 62794-9276 (217) 782-0610
Indiana	State	Catherine Hess Dept. of Env Mgmt. NPDES Permits Group Room #718 105 S Meridian St. P O Box 6015 Indianapolis, IN 46206-6015 (317) 232-8704

(Continued)

Exhibit 1-2: NPDES Storm Water Program Permitting Authorities (cont.)

State	Permit Auth	Contact
Iowa	State	Monica Wnuck Dept of Natural Resources Wallace State Building 900 E Grand Street Des Moines, IA 50319-0034 (515) 281-7017
Kansas	State	Don Carlson Dept. of Health and Env Bureau of Water Ind. or Mun. Progs. Section Forbes Field, Building 740 Topeka, KS 66620 (913) 296-5555
Kentucky	State	Douglas Allgeier Dept. of Env Protection Water Division 14 Reilly Road Frankfort, KY 40601 (502) 564-3410
Louisiana	EPA	Brent Larsen U S EPA Region 6 6W-PM 1455 Ross Ave Dallas, TX 75202 (214) 655-7175
Maine	EPA	Shelley Puleo U S EPA Region 1 JFK Building/WCP Boston, MA 02203 (617) 565-3525
Maryland	State	Brian Clevenger MD Dept. of Environment Sed. & Storm Water Admin. 2500 Broening Hwy Baltimore, MD 21224 (410) 631-3545
Mass-achusetts	EPA	Shelley Puleo U S EPA Region 1 WCP JFK Building Boston, MA 02203 (617) 565-3525
Michigan	State	Gary Boersen Dept of Natural Resources Surf Wtr Qual Div -Permits P O Box 30028 Lansing, MI 48909 (517) 373-1982
Minnesota	State	Scott Thompson Pollution Control Agency 520 Lafayette Rd St. Paul, MN 55155-3898 (612) 296-7203
Miss-issippi	State	Louis Lavalee Dept. of Env Quality Office of Pollution Control Ind. Wastewater Branch P O Box 10385 Jackson, MS 39289-0385 (601) 961-5074
Missouri	State	Karl Fett Dept. of Natural Resources Water Poll Control Program 205 Jefferson St P O Box 176 Jefferson City, MO 65102 (314) 526-2928
Montana	State	Fred Shewman Water Quality Bureau Cogswell Building Helena, MT 59620 (406) 444-2406
Nebraska	State	Clark Smith Environmental Quality P O Box 98922 Lincoln, NE 68509 (402) 471-4239
Nevada	State	Rob Saunders Conserv & Natural Res Environmental Protection 333 W Nye Lane Carson City, NV 89710 (702) 687-5870
New Hampshire	EPA	Shelley Puleo U S EPA Region 1 WCP JFK Building Boston, MA 02203 (617) 565-3525
New Jersey	State	Barry Chalofsky NJ DEPE Office of Regulatory Policy CN423 Trenton, NJ 08625-0423 (609) 633-7021

(Continued)

Exhibit 1-2: NPDES Storm Water Program Permitting Authorities (cont.)

State	Permit Auth	Contact
New Mexico	EPA	Brent Larsen U S EPA Region 6 6W-PM 1445 Ross Ave Dallas, TX 75202 (214) 655-7175
New York	State	Ken Stevens Wastewater Facilities Design NY State Dept. of Env Cons 50 Wolf Road Albany, NY 12233 (518) 457-1157
North Carolina	State	Colleen Sullins Environmental Management Water Permits & Eng P O Box 29535 Raleigh, NC 27626-0535 (919) 733-5083
North Dakota	State	Shelia McClenathan Dept of Health Water Quality Div 1200 Missouri Ave. P O Box 5520 Bismarck ND 585202-5520 (701) 221-5210
Ohio	State	John Morrison OEPA Water Pollution Control 1800 Watermark P O Box 1049 Columbus, OH 43266 (614) 644-2017
Oklahoma	EPA	Brent Larsen U S EPA Region 6 6W-PM 1445 Ross Avenue Dallas, TX 75202 (214) 655-7175
		Ted Williamson Discharge Permits Division Oklahoma Dept of Health 1000 N E. 10th Oklahoma City, OK 73117
Oregon	State	Ranei Nomura DEQ-Water Quality 811 SW 6th Ave Portland, OR 97204 (503) 229 5256
Pennsylvania	State	R B Patel Environmental Resources Water Quality Management P O Box 2063 Harrisburg, PA 17120 (717) 787-8184
Puerto Rico	EPA	Jose Rivera U S EPA Region 2 Wtr Permits & Compl. Br 26 Federal Plaza, Room 845 New York, NY 10278 (212) 264-2911
Rhode Island	State	Peter Duhamel Division of Water Resources 291 Promenade St Providence, RI 02908 (401) 277-6519
South Carolina	State	Arturo Ovalles DHEC Industry and Agriculture Wastewater Division 2600 Bull St Columbia, SC 29201 (803) 734-5241
South Dakota	EPA	Vern Berry U S EPA Region 8 8-WM-C Suite 500 999 18th St Denver, CO 80202 2466 (303) 293-1630
Tennessee	State	Robert Haley Dept of Env Wtr Poll Ctrl 401 Church St 6th Floor L & C Annex Nashville, TN 37243-1534 (615) 532 0625
Texas	EPA	Brent Larsen U S EPA Region 6 6W-PM 1445 Ross Ave. Dallas, TX 37243-1534
Utah	State	Harry Campbell Div of Water Qual P O Box 144870 Salt Lake City, UT 84114-4870 (801) 538-6146

(Continued)

Exhibit 1-2: NPDES Storm Water Program Permitting Authorities (cont.)

State	Permit Auth	Contact
Vermont	State	Brian Kooker Env Conserv Permits Compliance & Protection 103 S Main St. Annex Building Waterbury, VT 05671-0405 (802) 244-5674
Virgin Islands	State	Marc Pacifico Dept. of Planning & Nat Resources Div of Env Protection 1118 Watergut Project Box 1118 Christiansted St. Croix, VI 00820-5065 (809) 773-0565
Virginia	State	Burton Tuxford VA Water Control Board 4900 Cox Road Glen Allen, VA 23060 (804) 527-5000
Wash-ington	State	Ed O'Brien Dept. of Ecology Industrial Storm Water Unit Water Quality Div P O. Box 47696 Olympia, WA 98504-7696 (206) 438-7614
West Virginia	State	Jerry Ray Office of Water Resources 1201 Greenbriar St. Charleston, WV 25311 1088 (304) 558-0375
Wisconsin	State	Anne Manuel Dept. of Natural Resources Wastewater Management P.O Box 7921 Madison, WI 53707 (608) 267-7694
Wyoming	State	John Wagner Dept. of Envir Quality Herschler Building 4th Floor Cheyenne, WY 82002 (307) 777-7082

Source Poll of Regional and State offices

1.6 USE OF INFORMATION IN PART 1 AND PART 2 APPLICATIONS

The information submitted in the Part 1 and Part 2 permit applications provides applicants with a starting point for developing comprehensive storm water management programs. For example, the field screening data submitted with the Part 1 application provides a basis for a program to control illicit discharges. Also, the application information may assist in prioritizing controls and in long-term tracking of program effectiveness.

Permitting authorities will use the information from each municipality's Part 1 and 2 applications as the basis for establishing conditions in that municipality's NPDES storm water permit. For example, if a municipality submits a satisfactory application, all or part of its proposed storm water management program is likely to become an integral part of its permit

1.7 ORGANIZATION OF THIS MANUAL

Chapter 1, *Introduction*, provides a brief overview of the Part 2 permit application process It discusses who must submit a Part 2 application and how the information in the applications will be used It also contains a summary of the statutory and regulatory basis for the NPDES storm water program.

Chapter 2, *The Part 2 Application*, describes the statutory and regulatory requirements of municipal NPDES storm water permit applications in more detail. Chapter 2 outlines the specific requirements of the Part 1 and Part 2 applications, explains how Part 2 builds on the Part 1 application, and describes the interconnection among the various components of the Part 2 application.

Chapter 3, *Adequate Legal Authority*, describes how municipalities must demonstrate that they have adequate legal authority to carry out the program requirements [§122.26(d)(2)(i)]

Chapter 4, *Source Identification*, provides guidance on identifying major outfalls and inventorying dischargers to the MS4 [§122.26(d)(2)(ii)]

Chapter 5, *Discharge Characterization*, provides guidance for submitting quantitative data on the MS4 and developing a proposed monitoring program [§122.26(d)(2)(iii)].

Chapter 6, *Proposed Management Program*, describes the steps municipalities must take when they develop site-specific storm water management programs [§122.26(d)(2)(iv)]. These plans are the heart of the municipal permit application, and the permitting authority will probably incorporate all or part of the municipality's proposed management program into their NPDES storm water permit. In their proposed management programs, municipalities must describe management practices, control techniques and systems, design and engineering methods, and other provisions that are aimed at reducing the discharge of pollutants to the "maximum extent practicable"

Chapter 7, *Assessment of Controls*, explains how a municipality can assess the effectiveness of its storm water management program and target priorities through the use of direct and indirect measures [§122.26(d)(2)(v)]

Chapter 8, *Fiscal Analysis*, provides guidance on estimating necessary capital and operation and maintenance expenditures, and financing these expenditures [§122.26(d)(2)(vi)].

1.8 OTHER GUIDANCE AVAILABLE

Municipalities should use this guidance document together with the Part 1 guidance (EPA, 1991b). Exhibit 1-3 lists other sources of guidance available from EPA's Storm Water Hotline [(703) 821-4823] In addition, applicants may wish to obtain further information from the documents identified in the bibliography at the end of this guidance (Appendix A).

Exhibit 1-3
Documents Available from the EPA Storm Water Hotline
[(703) 821-4823]

November 16, 1990, Federal Register - 55 FR 47990 National Pollutant Discharge Elimination System (NPDES) Permit Application Requirements for Storm Water Discharges - Final Rule

March 21, 1991, Federal Register - 56 FR 12098 Application Deadline for Group Applications Final Rule; Application Deadline for Individual Applications - Proposed Rule

August 16, 1991, Federal Register - 56 FR 40948 NPDES General Permits and Reporting Requirements for Storm Water Discharges Associated with Industrial Activity - Proposed Rule

November 5, 1991, Federal Register - 56 FR 50548 Application Deadlines, Final Rule and Proposed Rule

April 2, 1992, Federal Register - 57 FR 11394 Application Deadlines, General Permit Requirements and Reporting Requirements, Final Rule

Summary of November 16, 1990, Storm Water Application Rule

Summary of August 16, 1991, Proposed Storm Water Implementation Rule

August 16, 1991, Proposed Storm Water Implementation Rule Package Fact Sheet

April 2, 1992, Storm Water Program Rule Fact Sheet

Guidance Manual for the Preparation of NPDES Permit Applications for Storm Water Discharges Associated with Industrial Activity (EPA 505/8-91-002, April 1991)

Guidance Manual for the Preparation of Part 1 of the NPDES Permit Applications for Discharges From Municipal Separate Storm Water Systems (EPA 505/8-91-003A, April 1991)

Typical Values of Annual Storm Events Statistics for Rain Zones of the United States ("Urban Targeting and BMP Selection", EPA Region V, November 1990)

List of EPCRA (SARA Title III) Section 313 Water Priority Chemicals (Draft)

List of State and EPA Regional Storm Water Contacts

State NPDES Program Status

Question and Answer Document

List of Reportable Quantities for Hazardous Substances Under CERCLA

NPDES Storm Water Sampling Guidance Document (EPA 833-B-92-001, July 1992)

(Continued)

Exhibit 1-3
Documents Available from the Storm Water Hotline (cont.)

September 9, 1992, Federal Register - 57 FR 41176 Final NPDES General Permits for Storm Water Discharges from Construction Sites - Notice

September 9, 1992, Federal Register - 57 FR 41236 Final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity - Notice

September 9, 1992 Federal Register - 57 FR 41344 National Pollutant Discharge Elimination System, Request for Comment on Alternative Approaches for Phase II Storm Water Program - Proposed Rule

* The following documents are available from the National Technical Information Service (NTIS) (1) *Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-006, September 1992), (2) *Storm Water Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-005, September 1992)

CHAPTER 2
THE PART 2 APPLICATION

2.0 THE PART 2 APPLICATION

2.1 BACKGROUND

The NPDES permit application requirements for MS4s [40 CFR 122.26(d)] establish a two-part application designed to meet the goal of developing comprehensive site-specific storm water quality management programs for MS4s.

The purpose of the two-part application process is to develop information, in a reasonable time frame, that will build successful storm water management programs and allow permitting authorities to make informed decisions about permit conditions. The application process is designed to focus the efforts of municipalities in two areas: prohibiting non-storm water discharges into storm sewers, and implementing controls that reduce the discharge of pollutants from MS4s to the maximum extent practicable.

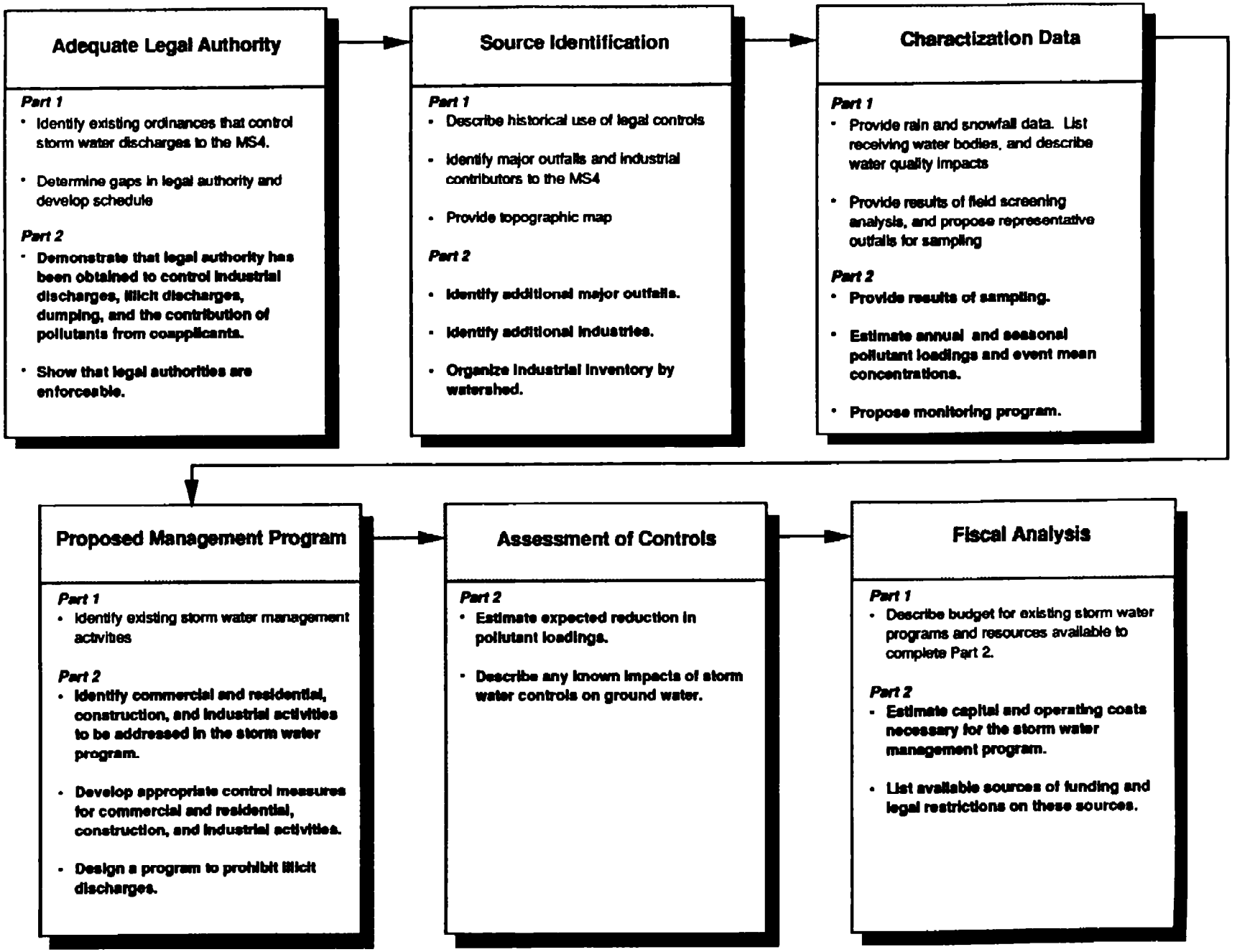
Part 1 of the application requires information on existing programs and legal authority. In addition, Part 1 requires the results from field screening of major outfalls to detect illicit connections. The **Part 2** application requirements are intended to build upon the information submitted with the Part 1 application Each part has virtually the same major areas of concern, but the Part 2 application requires a greater level of detail. Part 2 of the permit application requires a demonstration of adequate legal authority, additional information on pollutant sources and outfalls, a limited amount of representative quantitative sampling data, a proposed monitoring program, a proposed storm water management program, an estimate of the effectiveness of storm water controls, and a fiscal analysis. The requirements for the Part 1 and Part 2 applications are summarized briefly in Exhibit 2-1, and described in more detail in Section 2 2 The storm water regulations underlying this guidance can be found in Appendix B

Before applicants proceed with the detailed development of their permit applications; they **should recognize the fundamental** requirements:

- Who or what are the primary contributors of pollutants in storm water discharges from MS4s?
- Where are these sources of pollutants located in relation to receiving water resources?
- What is the magnitude of these pollutant sources and their potential impact on receiving waters?
- How does the municipality plan to reduce or eliminate the contribution of pollutants in storm water discharges or prevent the damaging influences of these discharges?
- Why did the municipality select the activities or best management practices (BMPs) it proposes?
- When will the municipality implement its proposed program?
- How will the applicant assess the effectiveness of the program? What criteria or measures will apply?
- How will the municipality fund proposed program activities?

Wherever appropriate, the applicant must also show that it has adequate legal authority to implement, enforce, or mandate compliance with applicable ordinances, statutes, contracts, or other similar vehicles as required by the storm water regulation.

Exhibit 2-1: Part 1 and Part 2 Storm Water Application Requirements.



These questions (described above) that an applicant must address follow a natural progression or development. For example, before applicants can identify how they will reduce the contribution of pollutants in storm water discharges (the fourth bullet point above), they must identify pollutant sources and estimate the magnitude of pollutant loads (bullet points 1-3 above).

2.2 PART 1 APPLICATIONS

Sections 2.2.1 and 2 2 2 provide overviews of the regulatory requirements of §122 26(d). Section 2 2 3 describes the relationship among the various application provisions.

2.2.1 Overview of the Part 1 Application

Part 1 applications consist of the following six elements

- **General information.** The applicant's name, address, telephone number of contact person, ownership status and status as a State or local government entity

- **Legal authority.** A description of existing legal authority to control discharges to the MS4, and if this authority does not meet the required criteria, a list of additional authority needed and a schedule and commitment to seek such authority.

- **Source identification.** A description of the historic use of ordinances, guidance, or other controls that limit non-storm water discharges to any publicly owned treatment works (POTW), and a topographic map covering an area one mile beyond the service boundaries of the MS4 showing:

  - the location of known municipal sewer system outfalls;

  - a description of all land use activities;

  - the location and activities of landfills;

  - the location and permit number of any known discharge to the MS4;

  - the location of major structural controls for storm water discharges (such as retention basins, or major infiltration devices); and

  - identification of publicly owned parks, recreational areas, and other open lands.

- **Discharge characterization.** A summary of the types and characteristics of storm water discharges, including:

  - monthly mean rain and snowfall estimates and the average number of storm events per month;

  - existing quantitative data describing the volume and quality of discharges from the MS4, including a description of the outfalls and sampling methods used;

  - a list of "downstream" water bodies receiving discharge from the MS4, and a description of the impact of outfall upon them;

  - the results of field screening analysis for illicit discharges at either selected field screening points or major outfalls covered in the permit application; and

  - a proposed characterization plan for conducting sampling and obtaining the quantitative data necessary to complete Part 2 of the application.

- **Management programs.** A description of existing management programs to control pollutants from the municipal separate storm sewer system. For example, what procedures are in place to control pollution from construction activities, and how do they work? What is the program (such as investigation procedures and how they operate) for identifying illicit connections to the municipal storm sewer system?

- **Fiscal resources** A presentation of the municipality's budget for existing storm water programs and for completing Part 2 of the permit application.

2.2.2 Overview of the Part 2 Application

The Part 2 application must include the following elements:

- **Adequate legal authority.** A demonstration that the municipality can operate according to the legal authority established by ordinance, statute, or series of contracts. The municipality also must demonstrate that its authority is enforceable. A discussion of how adequate legal authority may be demonstrated appears in Chapter 3 of this guidance.

- **Source identification.** An inventory, organized by watershed, of the facilities that may discharge storm water associated with industrial activity to the MS4. The applicant also must identify the location of any major outfall that discharges to waters of the United States that was not reported in Part 1. A discussion of the information to be submitted for each such facility in the inventory appears in Chapter 4 of this guidance.

- **Characterization data.** Sampling results for 5-10 outfalls designated by the permitting authority, estimates of cumulative annual pollutant loadings and event mean concentrations, and a proposed schedule to submit estimates of seasonal pollutant loadings and event mean concentrations for each major outfall identified in the source identification sections of Part 1 and 2. The *Characterization Data* provision of the Part 2 application also requires the development of an on-going monitoring program covering the term of the permit. Procedures for meeting the requirements of this section appear in Chapter 5.

- **Proposed management program.** A program that shows the municipality's comprehensive planning process for the reduction and control of pollutants, the staff and equipment available to implement the program, and a full description of how controls will be implemented to reduce pollutants from all sources of storm water. Municipalities must also describe how the program will be implemented and maintained. The Part 2 requirements for a proposed management program are described in Chapter 6.

- **Assessment of controls.** An estimate of the projected effectiveness of the municipal storm water management program, and an identification of the known impacts of storm water controls on ground water. The assessment of controls is discussed in Chapter 7.

- **Fiscal analysis.** A fiscal analysis of the capital and operation and maintenance expenditures needed to accomplish the activities (including implementation) required by the characterization data and proposed management program sections of the Part 2 application. This fiscal analysis must include projected expenses for each fiscal year of the permit term. A discussion of the fiscal analysis is included in Chapter 8.

2.2.3 Relationship Among Application Requirements

The required elements of the Part 2 application are related to each other. As a result, this guidance addresses how the application elements are related, and how information gathered for one requirement will assist the applicant in meeting other requirements. For example, the information gathered for the *Industrial Source Identification* provision of the Part 2 application will assist the municipality in.

- Targeting monitoring goals to potential pollutant sources, which may include selecting monitoring locations and chemical specific sampling frequencies (a requirement of the *Characterization Data* provision);

- Identifying illicit discharges (a requirement of the *Proposed Management Program's* illicit connection provision);

- Identifying facilities with the greatest potential for degrading receiving water quality (a requirement of the *Proposed Management Program's* industrial program provision), and

- Targeting sites that handle, store, or transport toxic or hazardous materials for on-site inspections (another requirement of the *Proposed Management Program's* industrial program provision).

As another example, the information that the applicant must prepare for the *Characterization Data* provision (e.g., the results of the sampling requirement and the estimated event mean concentrations and annual pollutant loads) may help the municipality:

- Evaluate the contribution of pollutants in storm water discharges from individual sources and determine which sources may require inspections or controls (a requirement of the *Proposed Management Program's* industrial program provision);

- Predict the impact of storm water discharges on receiving waters known to be impacted. (In the *Proposed Management Program*, additional controls may be warranted for construction sites or other industrial activities that discharge to these waters); and

- Determine what BMPs may be appropriate for given areas (another requirement of the *Proposed Management Program*)

Exhibit 2-2 summarizes some of these key interrelationships, although many other interrelationships exist. A more detailed discussion of specific information requirements and interrelationships among provisions is provided in subsequent chapters As municipalities prepare their permit applications, they should coordinate all program requirements.

Exhibit 2-2
Examples of Relationship Among Part 2 Requirements

					Fiscal Analysis
				Assessment of Controls	Cost/benefit analysis identifies the most cost-effective BMPs
			Proposed Management Program	Estimates of reductions in pollutant loadings predicts impact of storm water management activities	Fiscal analysis considers costs of controls, maintenance, and capital improvements Management program may include feasibility analyses that consider cost.
		Characterization Data	Annual pollutant loads help prioritize areas for BMPS On-going monitoring indicates success of BMPs and need to re-prioritize	On-going monitoring program verifies program effectiveness. Instream monitoring verifies biological recovery.	Fiscal analysis considers cost of on-going monitoring
	Source Identification	Land use information and organization of industry by watershed defines representative sampling points	Inventory of industrial users helps the city target facilities for inspections and control measures	Estimates of pollutant load reductions depend on land use	Industrial inventory identifies potential sources of storm water utility fees
Adequate Legal Authority	Some sources or outfalls may be outside a city's jurisdiction. Interjurisdictional agreements may be necessary.	Authority to require sampling and obtain information for industries and dischargers outside of the MS4's jurisdiction at sampling points	Legal authority needed to implement BMPS, control and inspect industry, and prohibit dumping and illicit discharge	Need information gathering and inspection authority where it is necessary to inspect, monitor, and enter the facility or the site	Legal authority is required for some financing plans, such as a storm water utility

2.3 ADDITIONAL FACTORS TO BE CONSIDERED IN DEVELOPING THE PART 2 APPLICATION

As discussed in the previous section, the various provisions of the Part 2 application process are interconnected

All municipalities covered by §122 26(d) must submit a Part 2 permit application that meets the requirements of the storm water permit application regulations. However, each MS4 is unique, and each Part 2 submission will be different. Municipal separate storm sewer systems differ in many ways, including population served, geologic and climatologic settings, density of development, and form of government These underlying factors make each applicant unique

The major factors that applicants should consider are

- Population and projected growth rate;
- Zoning and existing land use patterns;
- Nature of watershed and receiving waters;
- Climatic conditions, soil types, and watershed delineations,
- Existing municipal functions and municipal lands,
- Other environmental impacts;
- Public involvement; and
- Intergovernmental coordination.

In addition, municipalities must implement their storm water management programs in a manner that is consistent with other applicable Federal, State, and local environmental laws.

Population and Projected Growth Rates

Some storm water BMPs are more appropriate for densely developed areas, while other methods may be more useful in developing areas Consequently, defining current population densities and projecting future areas of population growth provides the basic information that can assist in the evaluation and prioritization of appropriate storm water control strategies

Zoning and Existing Land Use Patterns

Through ordinances, permits, or contracts, municipalities may mandate storm water controls for new residential, commercial, or industrial developments in order to improve or assure maintenance of the quality of receiving waters at or near pre-development levels. The Nationwide Urban Runoff Program (NURP) study (EPA, 1983), pointed out that some of the best opportunities for implementing cost effective measures to prevent or reduce pollutants in storm water occur during new development. These measures may include structural controls, such as storm water detention basins or constructed storm water wetlands, or nonstructural alternatives such as cluster development and buffer zones Sections 122.26(d)(1)(iii)(B)(2) and 122 26(d)(2)(ii) require the municipality to establish comprehensive management plans for new development (see Chapter 6)

Nature of Watershed and Receiving Waters

The types of storm water controls appropriate for a MS4 depend on the nature of the watershed and the receiving waters. This includes geologic and hydrologic features such as slope drainage patterns and stream size For example, roadside swales may not be practical in areas with steep terrain, but can be very useful in flat areas In addition, structural BMPs or other management measures that control the volume and timing of release are appropriate where uncontrolled storm water may cause physical impacts to receiving waters (especially small streams, rivers, and wetlands).

Information on the watershed and the receiving waters is required in the Part 1 permit application [§122 26(d)(1)(iv)(C)]. In Part 1, applicants are required to list water bodies that receive discharges from the MS4. The list of water bodies includes downstream segments, lakes, and estuaries where pollutants from the system discharges may accumulate and result in non-attainment of State water quality standards Part 1 also requires a description of known water quality impacts. Applicants must include a discussion of water bodies that were cited in:

- State reports required by CWA Sections 305(b), 304(l), and 314(a);
- The State Nonpoint Source Report; and
- Other reports identifying sensitive watersheds

Part 1 applicants should also include in this discussion a description of impacts caused by dissolved oxygen depression, bioaccumulation of toxics, excessive sedimentation, hydrologic modification, habitat destruction, etc.

Municipalities are expected to give priority consideration to those classes of pollutant sources that contribute significant loadings or pose a significant impact on receiving waters. Applicants must consider control methods that address storm water discharges from commercial and residential areas; illicit discharges and illegal disposal, storm water discharges from industrial areas; and storm water runoff from construction sites. Municipalities' permits will differ substantially in the emphasis placed on controlling various sources of pollutants in discharges from the MS4. Permits for older municipalities may emphasize control of cross-connections, while permits for municipalities with large areas of new development may emphasize the installation of permanent structural controls during construction

The Part 2 storm water permit application requires descriptions of management programs to address sources of pollutants discharged to separate storm sewer systems. For management strategies to be effective, municipalities must give prior consideration to the nature (e g., physical and biological parameters) and the designated uses of receiving waters such as streams, tributaries, and natural wetlands For example, a storm water management program for a newly developing area with an existing shallow, slow-moving stream could include provisions to ensure that the post-development peak discharge flow rate for the stream is held to a certain percentage of its historical or pre-development peak discharge flow rate

Climatic Conditions, Soil Types, and Watershed Delineations

Seasonal variations in precipitation can have a significant impact on storm water quality For example, extended dry seasons in areas such as the southwestern United States result in pollutant loads distinctly higher than in other parts of the country during the first several storms of the wet season. Areas with more frequent rain and snowfall throughout the year may have more storm water discharges, but the discharges may have consistently lower pollutant concentrations than those in the Southwest. In addition, areas with significant snowfall may experience a peak in storm water discharge volume and pollutant concentration during the spring thaw.

Natural soil conditions affect the potential for storm water to recharge ground water. Porosity and permeability are properties of the soil that govern the size and number of the interstitial spaces through which water may flow. Compaction (e.g , compression of the soil by heavy machinery) will reduce the amount of void space in the soil and thereby reduce the amount of rainfall that infiltrates through the soil to ground water. Natural soil conditions are very important when siting structures designed for storm water infiltration. In addition, identifying such sites must take into consideration potential ground water impacts

that may result whenever infiltration is part of the storm water management program

Existing Municipal Functions and Municipal Lands

The Part 2 application affords municipalities the opportunity to discuss alternatives in the *Proposed Storm Water Management Program*. When considering the wide range of municipal functions, applicants need to establish which agencies will be responsible for implementing each portion of a storm water management program. (This could be outlined in the *Adequate Legal Authority* chapter of the Part 2 application, as discussed in Chapter 3 of this guidance.) Many of these agencies, will have primary missions other than dealing with storm water or water quality. Expansion of the established charter of an agency to include an element of storm water control may require legislative action, moderately expanding the scope of other municipal agencies' missions to include storm water concerns can be much more cost effective than the initiation of entirely new programs.

Applicants should identify existing municipal functions that impact the quality of storm water discharges. These functions may include snow removal activities such as road deicing, vehicle maintenance operations, and herbicide, pesticide, and fertilizer application to public lands. Municipalities can modify these activities to improve storm water quality through oversight of future land development, modifications to flood management structures, changes in materials used or in material handling or application practices, maintenance of roads, and installation of structures such as retention basins

The municipal agency (or agencies) responsible for storm water runoff control should also consider the extent to which municipal lands and activities contribute pollutants to runoff. The same BMPs recommended for private lands may also be incorporated into the development and maintenance of a municipality's own lands and activities. For example, reduced use of pesticides and fertilizers on park land and open spaces usually decreases the contribution of these contaminants to storm water runoff. Implementing BMPs on municipal lands also shows the municipality's commitment to an effective storm water management program BMPs are discussed in greater detail in Section 6.4 of this guidance.

Other Environmental Impacts

Municipalities should consider those activities that can directly or indirectly alter the natural hydrograph of a stream and potentially degrade an otherwise stable aquatic habitat. These factors are particularly important when considering impacts to wetlands, riparian areas, ground water, small rivers, and streams. In addition, the installation of detention or rapid infiltration ponds may have negative impacts on ground water. The installation of culverts or concrete drainage channels and other such structures typically increases the volume and velocity of runoff, which can lead to increased erosion, siltation, and sedimentation in receiving waters. Therefore, installation of these structures can contribute to the degradation of a neighboring habitat.

Public Involvement

Municipal applicants must ensure that they provide adequate public education and ample opportunities for public participation. Public participation should focus on spreading awareness of program objectives and components. Education and public involvement programs must be defined as part of the *Proposed Storm Water Management Program* [§122.26(d)(2)(iv)]. Generally, the public should be involved as early as possible in storm water management initiatives.

Conflict and confusion can be minimized if the program includes a schedule for initial public contact and milestones for public involvement throughout the development and implementation phases. Public education programs are expected to target specific

audiences, including those regulated or affected by the storm water management program (e.g., developers, building contractors, and industrial operators) and those that can assist with program implementation (e.g., volunteers and citizens). For example, one large municipal applicant (Seattle) described an existing public participation program in its Part 1 Application submission. Elements of this program may be instructive to municipalities completing Part 2 of the application because it has generic components that are likely to be applicable to other large (and perhaps medium) municipalities. Excerpts from Seattle's public involvement program are provided in Exhibit 2-3 for reference.

Elements of this municipality's program that are particularly important to consider include of the role of an advisory and outreach group and its relationship to the entire process. Effective public participation programs clearly identify the role of the public

The potential exists for a considerable range in the level of participation the public may actually have in the decision-making process. Generally, the municipal authority is going to make the decisions. However, the authority can choose to use the "participation" process to simply inform the public of decisions, or to allow the views of the public to be registered prior to decision milestones In other cases, although uncommon, the public may have an actual voice or vote in making decisions.

The timing and frequency of meetings and the duration of the groups established for public participation will usually be dictated by the nature of the issues being addressed For example, an ad hoc group established to address a single issue may discover that the issue cannot be effectively addressed without consideration of a broader range of issues that the municipality may also be considering In this instance it may be appropriate for the group to expand its scope, hold regular meetings, and actively participate in the authority's decision making process Therefore, applicants should outline in their Part 2 applications how such coordination will be accomplished

Intergovernmental Coordination

If a number of municipal entities (e.g., multiple cities or a city and a county) are participating in the permit application process as coapplicants, various mechanisms can be used to improve intergovernmental coordination to ensure that the roles and responsibilities of each entity are well defined. Each entity must fulfill its responsibilities to implement applicable program measures. Examples of some of the appropriate coordination techniques and their benefits include:

- **Memoranda of agreement (MOA).** MOAs can define specific municipal roles, responsibilities, and points of coordination that help minimize duplication of effort and ensure accountability;

- **Cross-training of staff.** This allows for the identification of gaps in staffing (e.g., neglected areas of responsibility or insufficient staff levels) as well as providing the benefits of increased versatility and opportunities for learning from others;

- **Interagency advisory committees.** Their objective is to arm decision makers with a comprehensive understanding of the implications of proposed activities or decisions; and

- **Regularly scheduled intermunicipal staff meetings.** These can facilitate an open and thorough exchange of information and solidify new lines of communication

Exhibit 2-3
Excerpts from a Public Involvement Program

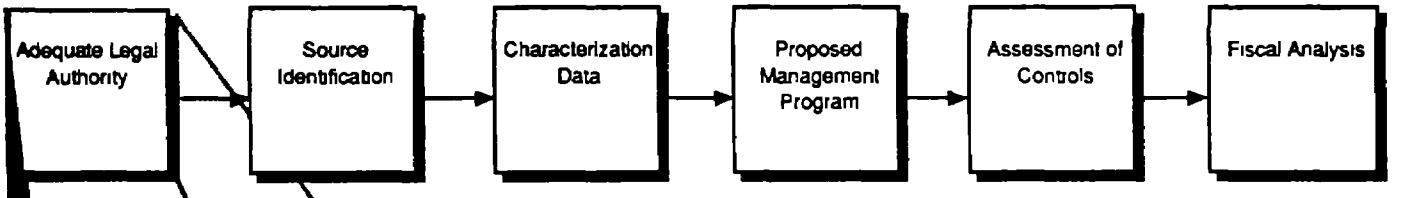
The public involvement program [of the City of Seattle] has been designed to assist in developing an acceptable city-wide plan for addressing drainage and water quality problems. Acceptable is defined as a plan that is both technically sound and sensitive to the needs and interests of the citizens. The involvement program has two major elements: a Citizen Advisory Committee (CAC) and a community outreach effort The initial role of the CAC was to provide guidance to City staff and consultants preparing various sections of a Comprehensive Drainage Plan Until the adoption of the Comprehensive Drainage Plan by the City Council, the CAC provided direction on drainage policy issues, assisted with the public review of the draft plan and environmental impact statement (EIS), and helped coordinate comments sent to the city from the public during the review period. Following council adoption of the plan, the CAC was reconstituted into a Drainage and Wastewater Advisory Committee which serves as an on-going sounding board to the Drainage and Wastewater Utility, the mayor, and the City Council on both sewer and drainage matters.

The community outreach effort was established for two purposes. The first was to ensure adequate public review and support of the Comprehensive Drainage Plan and EIS Comments received during the review were used by the Drainage and Wastewater Utility, the mayor, and the City Council in making decisions about the Drainage Plan and the City's on-going drainage program. The second purpose was to begin educating residents and business people about the importance of their role in solving flooding, landslide, and water quality problems throughout the city. This community outreach/education role remains an on-going effort of the Drainage and Wastewater Utility.

Source City of Seattle, *NPDES Storm Water Permit Application, Part 1*, City of Seattle, November 1991 37

Single municipalities with separate governing functions may face the same challenges as coapplicants when they prepare their Part 2 applications. Many of the same coordination steps may be necessary within a single municipal jurisdiction. The need for *intra*governmental coordination may be most crucial in large municipalities that have functions that impact storm water quality spread throughout the organizational structure of the municipality. For example, a planning department may be in charge of implementing a stream buffer policy, while a public works department may plan, site, and construct storm water BMPs Still other agencies may be responsible for implementing erosion and sediment control requirements, and permitting and inspection functions. Storm water-related responsibilities within governmental organizations may be allocated in this manner due to the relatively recent emergence of storm water quality as an important issue. Nonetheless, effective coordination within the government of a single municipality may be as critical to the success of the storm water management program as is intergovernmental coordination for coapplicants Therefore, applicants should outline in their Part 2 applications how such coordination will be accomplished.

CHAPTER 3
ADEQUATE LEGAL AUTHORITY



Adequate Legal Authority

Part 1

- Identify existing ordinances that control storm water discharges to the MS4
- Determine gaps in legal authority and develop schedule

Part 2

- **Demonstrate that legal authority has been obtained to control industrial discharges, illicit discharges, dumping, and contributions of pollutants from coapplicants.**
- **Show that legal authorities are enforceable.**

3.0 ADEQUATE LEGAL AUTHORITY

3.1 BACKGROUND

A crucial requirement of the NPDES storm water regulation is that a municipality must demonstrate that it has adequate legal authority to control the contribution of pollutants in storm water discharged to its MS4. This guidance manual and the storm water program emphasize development and implementation of storm water management programs as described in Chapter 6. In order to have an effective municipal storm water management program, a municipality must have adequate legal authority to control the contribution of pollutants discharged to the MS4.

Part 1 of the permit application requires applicants to describe their existing legal authority to control the discharge of pollutants from MS4s and evaluate the adequacy of these ordinances. Where existing ordinances were lacking, a proposed schedule to obtain the necessary authority was included with the Part 1 application. In Part 2 of the application, municipal applicants must demonstrate that they now possess adequate legal authority to:

- Control construction site and other industrial discharges to the MS4;
- Prohibit illicit discharges and control spills and dumping;
- Control potential sources of pollutants from discharges to or from coapplicants' MS4s, or MS4s that are interconnected or shared with other entities;
- Require compliance with all regulations and statutes, and
- Carry out inspection, surveillance, and monitoring procedures

Section 3.2 reviews each of these regulatory requirements. Section 3.3 describes specific procedures a municipality may use to demonstrate adequate legal authority.

3.2 SUMMARY OF REGULATORY REQUIREMENTS

3.2.1 Control Construction Site and Other Industrial Discharges to the MS4.

> §122.26(d)(2)(i)(A) [The applicant must demonstrate that it can control] through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity.

The municipality, as a permittee, is responsible for compliance with its permit and must have the authority to implement the conditions in its permit. To comply with its permit, a municipality must have the authority to hold dischargers accountable for their contributions to separate storm sewers.

"Control," in this context, means not only to require disclosure of information, but also to limit, discourage, or terminate a storm water discharge to the MS4. For example, construction sites (of 5 or more acres) and other industrial activities that discharge storm water through MS4s are required to obtain individual NPDES permits or coverage under general NPDES permits from EPA or an authorized NPDES State. These permits require compliance with applicable Federal and State regulations. However, a municipality, to satisfy its permit conditions may need to impose additional requirements on discharges

from permitted industrial facilities, as well as discharges from industrial facilities and construction sites not required to obtain permits. Therefore, a municipality should develop a mechanism to assure that all industrial facilities and constructions sites that discharge to the MS4 know their obligation to comply with the applicable terms of the municipality's storm water ordinances.

3.2.2 Prohibit Illicit Discharges and Control Spills and Dumping

> §122.26(d)(2)(i)(B) [The applicant must demonstrate that it can prohibit] through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer
>
> §122.26(d)(2)(i)(C) [The applicant must demonstrate that it can control] through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water

To demonstrate that it possesses adequate legal authority to control storm water discharges, a municipality must be able to effectively prohibit illicit discharges and illegal dumping An illicit discharge is "any discharge that is not composed entirely of storm water except discharges pursuant to a NPDES permit . . . and discharges resulting from fire fighting activities" [40 CFR 122.26(b)(2)].

3.2.3 Control Contributions of Coapplicants

> §122 26(d)(2)(i)(D) [The applicant must demonstrate that it can control] through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system

An operator of a MS4 may participate in an application with one or more other operators, or may submit an individual application for the separate storm sewer it operates. As indicated in the box above, the operator of a discharge from a large or medium MS4 may submit, through the use of interjurisdictional agreements, a system-wide permit application. The system-wide application can accommodate existing storm water programs, on a watershed basis, as well as programs which must take into account regional differences in climate, geography, and political institutions. Such an application should cover issues of liability, financial contributions, access to records, enforcement responsibilities, and any other applicable areas of mutual concern.

When two or more municipalities submit a joint application, each coapplicant must demonstrate that it individually possesses adequate legal authority over the entire municipal system it operates or owns. A coapplicant need not fulfill every component of legal authority specified in the regulations, as long as the combined legal authority of all coapplicants satisfies the regulatory criteria for every segment of the MS4 (including authority over all sources that discharge to the MS4).

As coapplicants, for example, a county and a flood control district within that county may together possess adequate legal authority. The flood control district may have legal authority to build, operate, and maintain structures associated with major drainage channels within the county. The county itself may have legal authority to control pollutants in discharges from privately owned lands to the MS4s and legal authority to build, operate, and maintain structures associated with minor drainage channels that tie into major drainage channels. In this situation, the combined legal authority of the coapplicants may be adequate for the system, provided that the only discharge to major drainage channels comes from the county's separate storm sewer system. As another example, a department of transportation or flood control district with no land use authority could be a co-permittee with

a city that does possess land use authority over the entire jurisdiction.

Coapplicants also may use interjurisdictional agreements to show adequate legal authority and to ensure planning, coordination, and the sharing of the resource burden of permit compliance When more than one entity is submitting an application for a MS4 (either as coapplicants or as individual applicants for different parts of a system), the role of each party must be well defined. Each applicant or coapplicant must show the ability to fulfill its responsibilities, including legal authority for the separate storm sewers it owns or operates.

Applicants and coapplicants may use the procedures outlined in Section 3 3 to demonstrate adequate legal authority in their Part 2 permit applications. These procedures are guidelines, however, and are not intended to be the only possible approaches that applicants may follow.

3.2.4 Require Compliance with all Regulations and Statutes

To meet the requirements of §122 26(d)(2)(i)(E), the applicant must show that it has adequate authority to enforce its ordinances.

> §122 26(d)(2)(i)(E) [The applicant must demonstrate that it can require] compliance with conditions in ordinances, permits, contracts or orders

One acceptable way to support a declaration of adequate legal authority, including the ability to enforce appropriate ordinances, is for the municipality to provide a certification from the Municipal General Counsel or equivalent The certification should state that the applicant has the legal authority to apply and enforce the requirements of §122 26(d)(2)(i)(A)-(F) in State or local courts The certification would, therefore, cite specific ordinances and the reasons why they are enforceable. The statement should discuss what the municipality can do to ensure full compliance with §122.26(d)(2)(i).

In a Part 2 application, through a statement from the Municipal General Counsel or through some other method, a municipality should identify the administrative and legal procedures available to mandate compliance with appropriate ordinances, and, therefore, with permit conditions. Applications should contain descriptions of how ordinances are implemented and appealed In particular, a municipality should indicate if it can issue administrative orders and injunctions or if it must go through the court system for enforcement actions

3.2.5 Carry Out Inspection, Surveillance, and Monitoring Procedures

In their Part 2 applications, municipalities must propose programs to control the contributions of pollutants from industrial facilities and prohibit illicit discharges For both of these activities, municipalities must have the legal authority to carry out inspection, surveillance, and monitoring procedures necessary to determine compliance.

> §122.26(d)(2)(i)(F). [The applicant must demonstrate that it can carry] out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.

To meet this requirement, municipalities may wish to consider establishing ordinances that require industrial facilities to perform inspections and report the results to the city. In many municipalities, these facilities may perform similar inspections under a pretreatment program. In their Part 2 applications, municipalities should provide

documentation of their authority to enter, sample, inspect, review, and copy records, etc., as well as demonstrate their authority to require regular reports

3.3 PROCEDURES FOR DEMONSTRATING ADEQUATE LEGAL AUTHORITY

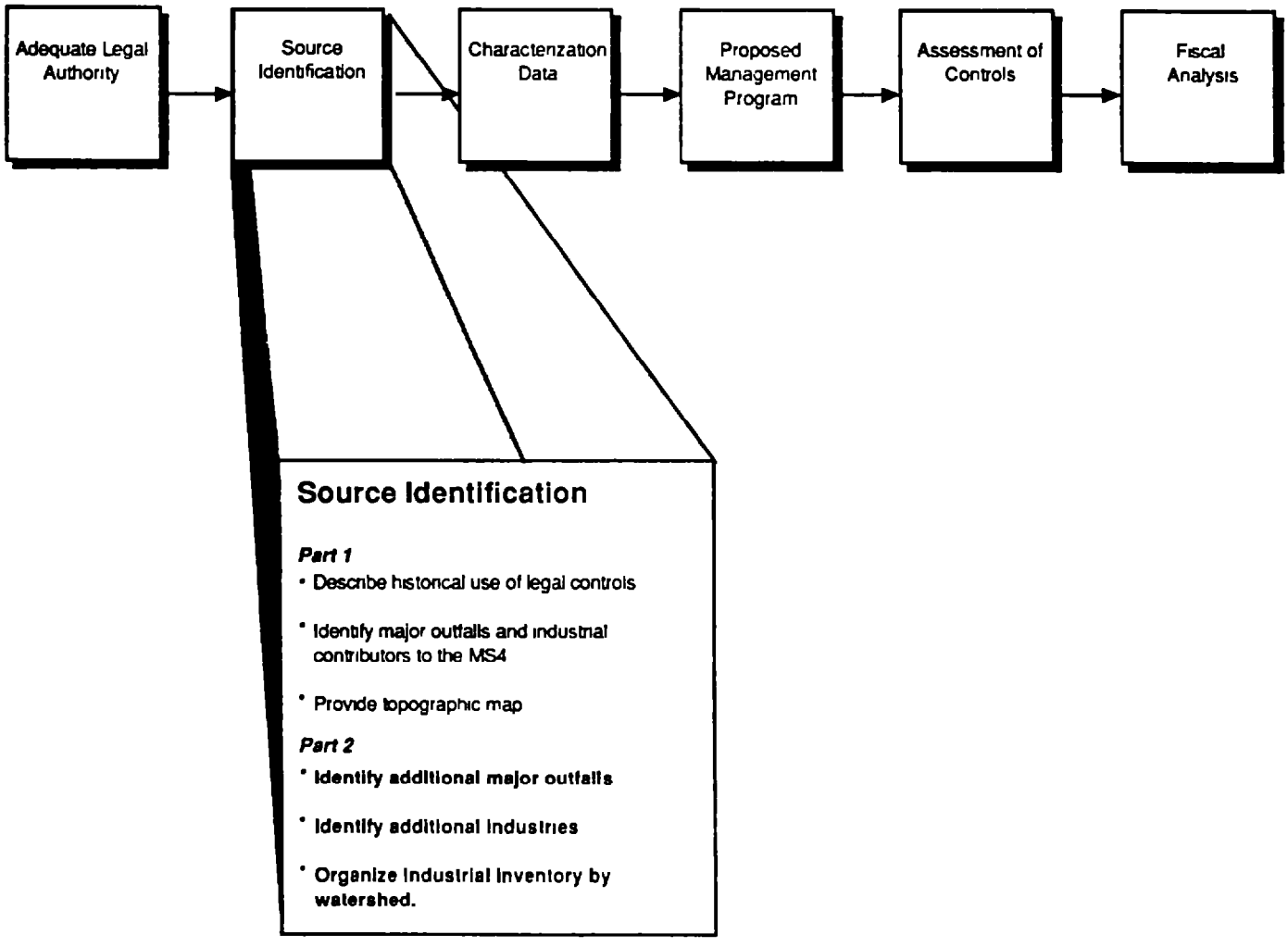
The Part 2 application requires the applicant or coapplicants to cite and describe specific ordinances currently in effect and demonstrate that the jurisdiction for these ordinances covers the entire area served by the MS4 In addition, the applicant may elect to discuss specific changes in ordinances passed since the submission of the Part 1 permit application to illustrate how legal authority has evolved to meet the regulatory requirements in §122 26(d)(2)(i) One method by which an applicant can partially demonstrate that it has adequate legal authority is to develop a matrix that compares, in a side-by-side format, the regulatory requirements in §122 26(d)(2)(i)(A)-(F) and the municipality's legal authority Once completed, the matrix would indicate whether an adequate legal framework exists to address all key regulatory requirements identified in §122 26(d)(2)(i)(A)-(F). Furthermore, the matrix could also illustrate where the authority to mandate compliance is vested.

In order to support an assertion of adequate legal authority, applicants should include the complete text of the applicable portions of the ordinances or other such provisions in the application The applicant should also provide a specific explanation of why and how the language of a particular ordinance or other authority meets Federal regulatory requirements The application should indicate to whom the ordinance applies and how it will operate to control, prevent, or stop discharges that violate permit conditions. For example, the municipality may describe and provide an excerpt from a city ordinance that prohibits non-storm water discharges to the MS4.

Appendix C illustrates one way to detail the existence of ordinances that establish the legal authority required in §122 26(d)(2)(i) A narrative discussion of the historical use of these ordinances to control pollutants in storm water discharges also may be included The example in Appendix C shows what the applicant may do to satisfy §122.26(d)(2)(i)

Substantial effort should be devoted to obtaining the necessary legal authority before the Part 2 application is submitted However, some municipalities may find that the two-year application process does not allow enough time to secure adequate legal authority as described in this section. This may be due to the need for State statutory or legislative changes In this instance, the Part 2 application must include a detailed description of what changes are needed and a schedule of when they will be accomplished. The schedule must include timetables for drafting proposed changes, public comment periods, and final authorizations

CHAPTER 4
SOURCE IDENTIFICATION



4.0 SOURCE IDENTIFICATION

4.1 BACKGROUND

In Part 1 of the NPDES storm water permit application, applicants are required to identify the location of known major outfalls discharging to waters of the United States from MS4s. Applicants also are required to provide information and data on existing land use activities. The identification of outfalls and land use activities is the first step in the process of:

- Identifying the sources of pollutants in storm water runoff;
- Linking the sources of pollutants in runoff to specific water quality impacts and other impacts that may result in degradation of aquatic resources;
- Identifying those activities or physical factors that have the most significant impact on water quality;
- Defining control measures that yield improvements in storm water quality; and
- Developing methodologies by which engineers, urban planners, and managers can make long term decisions that not only provide for economic growth, but also have discernible environmental benefits through imposed storm water controls.

The source identification requirements in the Part 2 permit application reflect three basic steps. First, municipalities must identify any major outfalls that were not already identified in the Part 1 application. Second, applicants must compile an inventory of industrial activities that may discharge storm water to a MS4. Third and finally, applicants must organize the inventory of industrial activities on a watershed basis.

Organizing the inventory by watershed allows the municipality to focus on activities within discrete areas that may contribute pollutants in storm water discharges to waters of the United States. For example, combining outfall data with the industrial inventory organized by watershed may help the municipality to identify probable areas of illicit connections. This information will also be useful for municipalities when they develop specific strategies [e.g., best management practices (BMPs)] as part of their proposed storm water management programs. The following sections discuss regulatory requirements and procedures for completing the source identification section of the Part 2 permit application. Section 4.2 provides guidance on identifying major outfalls, Section 4.3 provides guidance on compiling an inventory of industrial dischargers, and Section 4.4 provides guidance on organizing the inventory of industrial discharges by watershed.

4.2 MAJOR OUTFALLS

The first portion of the Part 2 Source Identification provision states:

> §122.26(d)(2)(ii) *Source Identification.* [The applicant must provide the] location of any major outfall that discharges to waters of the United States that was not reported [in Part 1 of the application]

4.2.1 Definition of a Major Outfall

According to 40 CFR 122 26(b)(5), a major outfall is a MS4 outfall that discharges from a single pipe with an inside diameter of at least 36 inches The term also includes discharges from a single conveyance other than a circular pipe serving a drainage area of more than 50 acres.

For those municipal separate storm sewer systems that receive storm water runoff from lands zoned for industrial activity, major outfalls also include outfalls that discharge from a single pipe with an inside diameter of 12 inches or more, or discharge from other than a circular pipe associated with a drainage area of 2 acres or more. This definition also applies to outfalls of drainage areas that have both industrial and non-industrial activity. For example, if a three acre drainage area is zoned half woodland and half industrial, the discharges from that area would still be considered a major outfall. Because the definition of major outfall includes consideration of drainage area, municipalities may need to consider conveyances such as ditches and swales when identifying major outfalls

4.2.2 Identifying Major Outfalls

The first step in this section of the Part 2 application is the identification of major outfalls not identified in the Part 1 application [§122.26(d)(2)(ii), cited in box above]. When identifying these major outfalls, municipalities should build upon the approach used in the Part 1 application. One way to identify major outfalls is a review of sewer system maps. These maps can provide information on sewer system type (e g , separate storm versus combined sewer), pipe size, and outfall location However, depending upon the age of the sewer system maps, they may not provide complete information about newly developed areas or improvements to older areas Often, interviews with sewer system maintenance personnel can provide information on the most recent changes to the sewer system The municipality should also consider conducting field surveys (e g., visual inspection of the banks of receiving waters) to locate major outfalls

When submitting a Part 2 permit application, municipalities should include a brief description of how additional major outfalls were identified This description is not intended to be a lengthy list of each sewer system employee interviewed, but rather an outline of the methods employed

4.3 INVENTORY OF INDUSTRIAL DISCHARGERS

The second step in this portion of the Part 2 application is assembling an inventory of industrial storm water dischargers

> **§122 26(d)(2)(ii)** *Source Identification* Provide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity

This section describes how municipalities may develop the inventory of industrial facilities Section 4.4, below, provides guidance on organizing these facilities by watershed.

4.3.1 Facilities that must be Included in the Inventory

As stated above, applicants must provide an inventory of each facility that may discharge to the MS4 storm water associated with industrial activity. Industrial storm water dischargers that must be included in this inventory fall into 11 classes of industrial activities as defined in the November 1990

regulations Six of these classes were defined in a narrative format and five were defined by Standard Industrial Classification (SIC) codes. Specific categories of industries are identified in §122.26(b)(14)(i)-(xi). Exhibit 4-1 provides a list of the SIC codes and industry categories cited in the regulatory definition.

4.3.2 Identifying the Industrial Facilities

As a first step in developing a comprehensive industrial storm water inventory, the applicant must review **facility notifications**. Industrial facilities were required to notify municipalities by May 15, 1991, of their intent to discharge storm water to the municipal storm sewer system [§122.26(a)(vi)(4)]. Each facility should have submitted to the municipality information including facility name, facility location, and facility type (such as SIC code or other industry categorization).

In addition, municipalities should explore other sources of information on industrial facilities to help identify gaps in inventory. One specific source of information a municipality should review is **facility information submitted under other programs**. For example, SIC codes are often required for air pollution permit applications, hazardous materials management permits, pretreatment program applications, building permits, business licenses, or local tax rolls. A municipality may take the list of SIC codes provided in Exhibit 4-1 and compare it with existing information on SIC codes or industrial categories which has been submitted by industrial facilities under other programs.

Under 40 CFR 122.28, facilities that discharge storm water associated with industrial activity must submit an individual permit application, participate in a storm water group permit application, or file a **Notice of Intent (NOI)** to be covered by a general permit. These applications and NOIs are another source of information on industrial dischargers. For existing facilities, applications or NOIs were to be submitted by October 1, 1992; for new facilities, they must be submitted prior to the commencement of industrial activity However, in the Intermodel Surface Transportation Efficiency Act of 1991, Congress provided that permit application requirements be reserved for industrial activities owned or operated by municipalities with a population of less than 100,000, with the exception of airports, power plants, and uncontrolled sanitary landfills If EPA is the permitting authority in a State, applications and NOIs should be submitted to EPA, if a State has NPDES authority, they should be submitted to the State. Section 308 of the CWA provides the legal authority for any individual (including a municipality) to obtain information from the NPDES permitting authority. A municipality may be able to obtain a list of the facilities in its jurisdiction that have applied for coverage under a general or individual permit or that have applied for coverage as a member of a group

Additional sources of information on industrial facilities may include **zoning maps** showing industrial parks, manufacturing and industrial listings in **telephone books, trade association listings, pretreatment industrial waste surveys, the Chamber of Commerce Manufacturing Directory, and Dunn and Bradstreet.**

In the Part 2 application, a municipality should provide a brief description of the sources it reviewed in identifying the industrial dischargers. As part of the proposed storm water management program, which is described in Chapter 6, municipalities should describe a plan for collecting new or updated information on industrial dischargers throughout the life of the permit.

Exhibit 4-1
Industry Categories Cited in the
Definition of Storm Water Associated with Industrial Activity

1. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category 11 below.

2 Facilities described by SIC 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373 *

3. Facilities described by SIC 10 through 14 (mineral industry), including:

   - active or inactive mining operations, except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434 11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990, and

   - oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations

4 Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA.

5. Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA.

6. Facilities involved in the recycling of materials (metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards) including but not limited to SIC 5015 and 5093

7. Steam electric power generating facilities, including coal handling sites.

8. Transportation facilities described by SIC 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171, which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under 1 - 7 or 9 - 11 are associated with industrial activity.

(Continued)

Exhibit 4-1 (continued)

9. Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that is located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR Part 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and which are not located within the facility, or areas that are in compliance with Section 405 of the CWA.

10 Construction activity including clearing, grading, and excavation activities except operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale **

11 Facilities described by SIC 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and which are not otherwise included within categories 2 - 10).*

Source 55 FR 48065, November 16, 1990

*Please note the SIC 285 is covered under Category 11 Also note that for the industries identified in Category 11, the term includes only storm water discharges from all areas (except access roads and rail lines) where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water

**On June 4, 1992, the United States Court of Appeals for the Ninth Circuit found that EPA's rationale for exempting construction sites of less than five acres and certain uncontaminated storm water discharges from Category 11 light industrial facilities from Phase I of the storm water program to be invalid and has remanded these exemptions for further proceedings (see *Natural Resources Defense Council* v *EPA* No 91-70176)

4.4 ORGANIZING THE INDUSTRIAL INVENTORY BY WATERSHED

Once the industrial inventory is complete, the applicant must organize the inventory by watershed, or drainage area. The main objective of this requirement is to associate discrete discharges with specific watersheds, which may help the municipality identify relationships between pollutant sources and receiving water quality problems To help organize the industrial inventory by watershed, municipalities should consider the long-term benefits of using automated database systems to help organize and update information on

- Locations of major outfalls or system modifications;
- Land use designations and composition;
- Dischargers of storm water associated with industrial activity,
- Other NPDES permit holders,
- Location/inventory of structural controls, and
- Locations of illicit connections

This information can help satisfy the requirement that discharges of storm water associated with industrial activity be organized by watershed Using an automated database system or the map submitted in the Part 1 application may be helpful in satisfying this requirement However, the regulations do not require Part 2 applicants to use a particular database or submit certain information, and municipalities may elect to use other methods.

The following procedure is provided as an example of one way to organize industrial dischargers by watershed:

1. Create a transparent overlay of tax maps covering the entire area served by the MS4.

2 Indicate on the maps the location of each industrial activity according to its address with an appropriate symbol or code.

3 Produce an overlay of existing watersheds from a topographical map, for example, United States Geological Survey (USGS) maps, covering the area that the MS4 supports Previously performed hydrological surveys may be helpful in delineating the boundaries of existing watersheds Municipalities may elect to sub-divide existing watersheds into smaller units if this will assist in management planning.

4 Align the tax map and watershed overlay so that industrial activity locations can be transposed to the watershed overlay.

A number of PC-based tools can be used to organize information on facilities and outfalls. For example, computer-aided design (CAD) packages, in conjunction with third-party software packages, are specifically designed to present information on separate transparent layers that can be "turned off and on" when necessary One layer could contain information on watershed topography and another could contain the locations of industrial storm water dischargers. Additional layers might contain information on the layout of the municipal system, locations of structural source controls and outfalls, and land-use patterns (both present and future)

A CAD-based system can be useful, not only in presenting information easily and graphically, but also in its ability to transfer spatial data, such as XYZ coordinates, to commonly available PC-based database applications This spatial data can be merged with other databases containing more generic information including facility name, address, and SIC codes However, one potential drawback to CAD systems is that most of them cannot store "real-world" (e g., latitude-longitude) coordinates and are not generally designed for spatial analyses

Information stored in a CAD format may also be input into a Geographic Information System (GIS) With some conversion, the CAD system coordinates may be transformed into the "real-world" coordinates typically employed by GIS GIS are integrated database management systems designed for the input, storage, retrieval, analysis, output, and display of geographically or spatially indexed data

The key attribute of GIS is the relational database capabilities that make these systems powerful tools for conducting spatial analyses. Using GIS, a municipality could overlay several layers of data and derive new information from this existing information. For example, using GIS, an applicant could overlay a map showing the 100-year flood plain with a map showing locations of industrial facilities The GIS could then calculate the amount of industrial area within the 100-year flood plain and plot this data on a new overlay This type of spatial analysis might be a powerful tool in the design of the municipality's storm water management program.

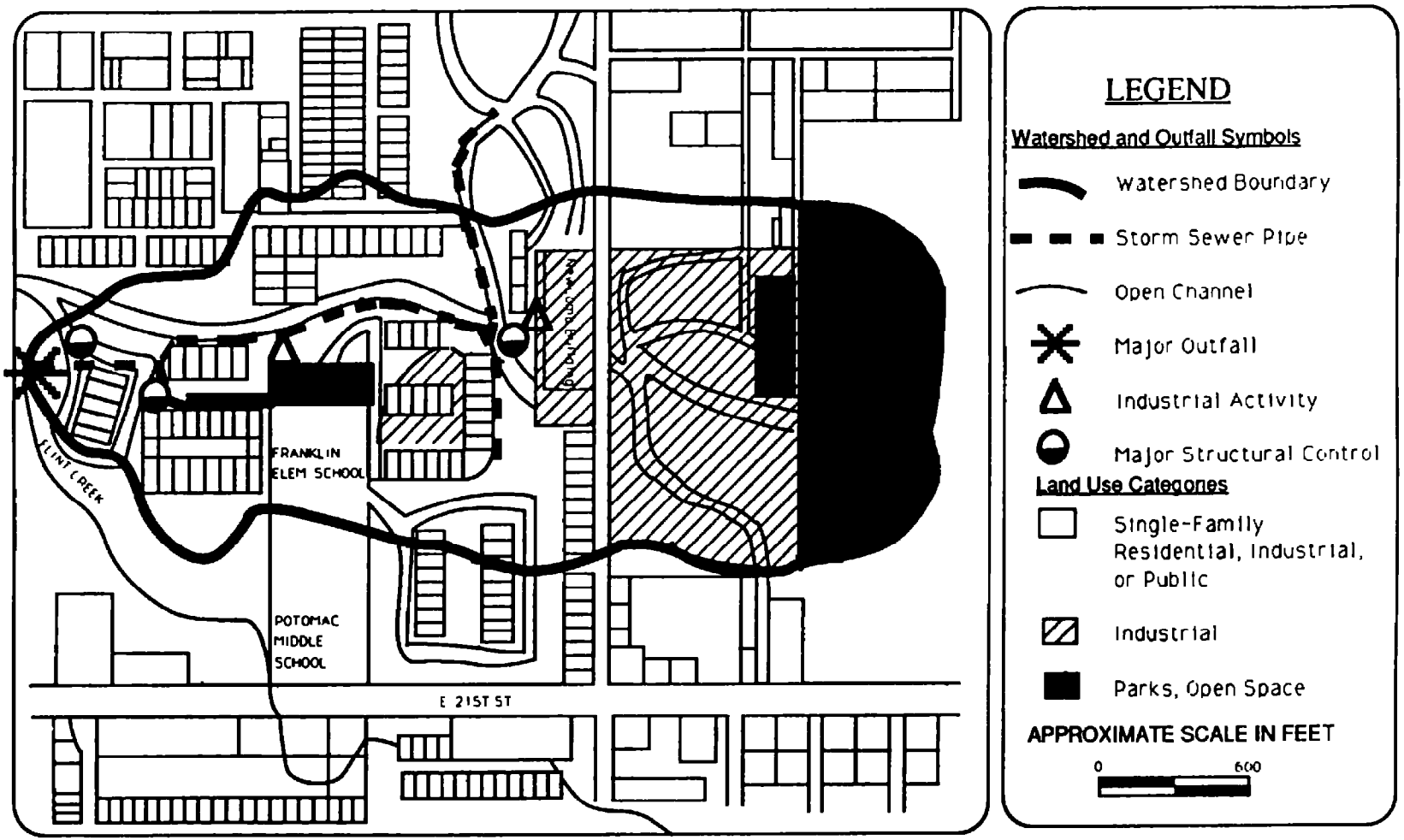
Another benefit of GIS is the ability for common data to be shared efficiently among several agencies. For example, the flood management agency, department of transportation, and storm water control agency could all contribute data to and use analyses from the same GIS. On the other hand, one potential drawback to GIS is their relatively high cost. Often, developing accurate, appropriate base maps is one of the most resource intensive parts of the system.

The techniques presented in this section to organize industrial dischargers by watershed are not the only methods that the applicant can use For example, municipalities may elect to present the information in tabular form. Using a CAD, GIS, or other automated system is entirely up to the municipality There is no requirement that municipalities use these systems in the development of either the Part 1 or Part 2 NPDES permit applications Each applicant will have to examine its existing resources (including computer systems, personnel, and budget) and projected needs before deciding which method will be the most efficient and most useful in the long term

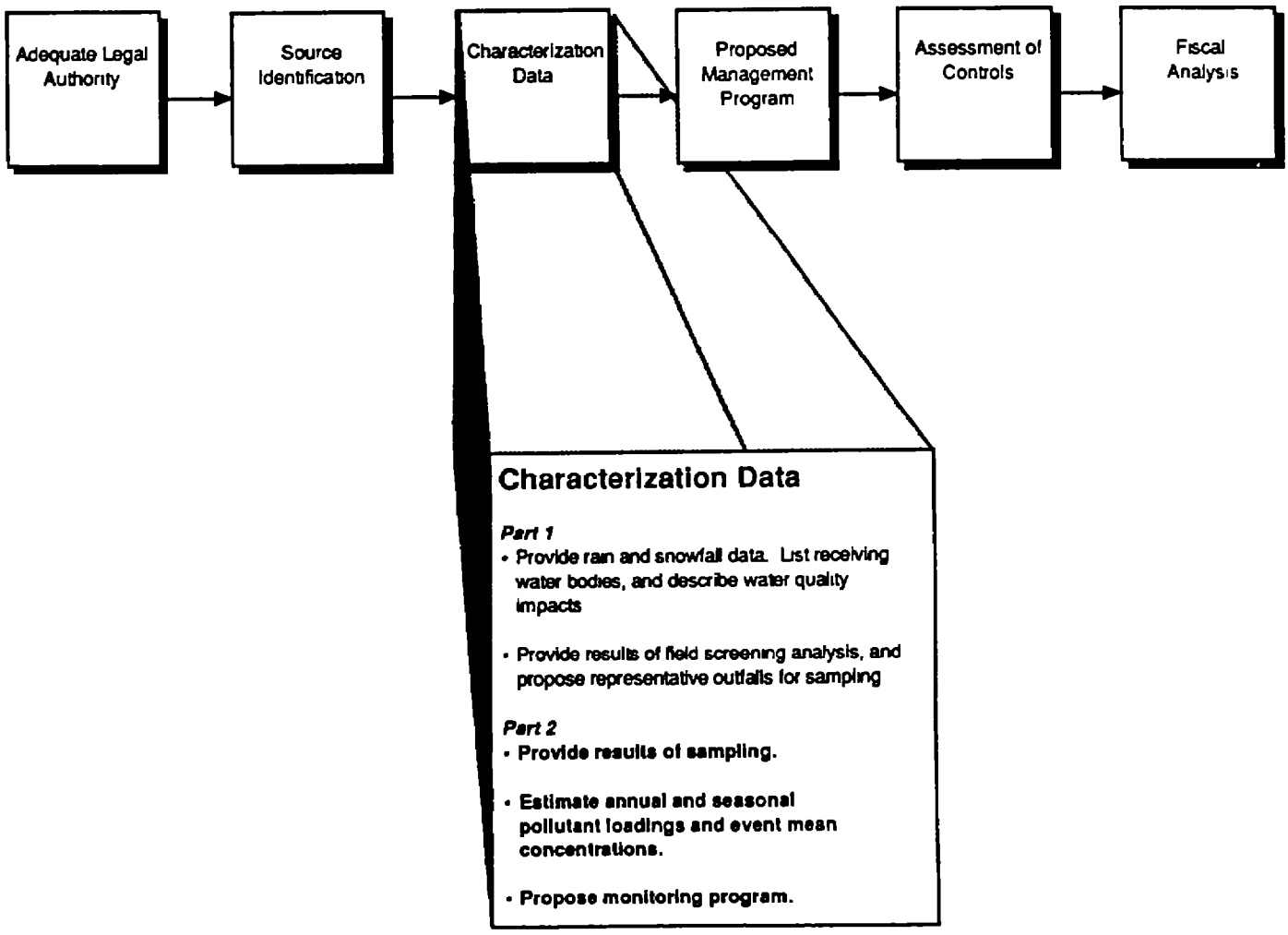
A discussion of maintaining and/or updating the industrial inventory is provided in Section 6.3.3.2 of this guidance.

Exhibit 4-2 illustrates an example of the procedure discussed in Sections 4.3 and 4 4

Exhibit 4-2
Example of a Map Organizing Industry by Watershed



CHAPTER 5
CHARACTERIZATION DATA



5.0 CHARACTERIZATION DATA

5.1 BACKGROUND

5.1.1 Objective of this Section

This section addresses the requirements for reporting the physical and chemical characteristics of municipal storm water runoff as specified by 40 CFR 122.26(d)(2)(iii). These requirements describe the minimum quantitative and descriptive data necessary to begin characterizing storm water discharges.

The applicant is encouraged to provide additional information, if available, which may provide a basis for a more effective storm water management program. The additional information may also help the permitting authority make more informed decisions regarding the specifications of the permit to be issued.

The NPDES permit application regulations require the applicant to identify all major outfalls that are part of the MS4 [§122.26(d)(1)(iii) and 126(d)(2)(ii)]. Part 1 requires the municipality to propose a sampling plan that identifies 5-10 outfalls that would be appropriate for representative data collection under Part 2 of the application [§122.26(d)(1)(iv)(E)]. The next step is to collect and analyze samples from these outfalls (or others designated by the permitting authority) for a variety of pollutant parameters from 3 representative storm events.

5.1.2 Potential Impacts of Storm Water Runoff

The Nationwide Urban Runoff Program (NURP) study showed that discharges from MS4s contribute to the degradation of water quality in the Nation's waters (EPA, 1983). The NURP study also concluded that the effects of urban runoff on receiving water quality are very site specific. The effects depend on the types, size, and hydrology of the water body, the designated beneficial use, the pollutants which affect that use, the urban runoff quality characteristics, and the amounts of urban runoff dictated by local rainfall patterns and land use. *The National Water Quality Inventory, 1990 Report to Congress* as required by Section 305(b) of the Clean Water Act, stated that one-third of the impairment in assessed waters is due to storm water runoff (EPA, 1990d).

Quantity Impacts

Urbanization often increases the quantity and reduces the quality of storm water runoff. For example, vegetated or forested areas with pervious surfaces are often replaced with impervious surfaces (e.g., concrete and asphalt) that prevent or minimize the amount of rainfall available for ground water recharge. This increases the volume and velocity of storm water runoff.

Vegetated areas play a crucial role in ground water recharge and in the maintenance of stream baseflow. This is especially true during extended dry periods, when ground water is often the only source that preserves stream baseflow. In highly urbanized areas, ground water recharge may be so severely reduced that ground water flow to perennial streams during dry periods is not sufficient. Further, the natural hydrology of a watershed is often altered by urbanization, because developing areas often provide drainage appurtenances that rapidly conduct storm water runoff away from these areas. Such drainage may also affect the geometry of natural streams, especially where natural streams have been modified through the installation of man-made channels. Ultimately, reduced perviousness due to urbanization increases the magnitude and the frequency of localized flooding which can have the long term effect of substantially increasing the width of natural streams through erosion and scouring.

Increases in peak discharge velocity and runoff volume can also result in substantial erosion of natural streambanks and the washout of benthic habitats. Since streambeds often consist of unconsolidated silt and sediment, they may be stripped away substantially by excessive discharge velocities Increased discharge velocities can also lead to undercutting and destabilization of streambanks, which may cause erosion that extends beyond the natural boundary of the streambank

Further, silt and sediment can increase the turbidity of the receiving water, thus interfering with the growth of aquatic plants which depend on photosynthesis. Increased turbidity can also interfere with aquatic feeding, eliminate spawning areas for fish, and cause abrasion and clogging of fish gills. Also, because silt and sediment may remain in the watershed, they can blanket benthic habitats and severely reduce streamflow capacity

In the presence of excessive volumes of storm water runoff and discharge velocities, the net impact on receiving waters can be almost indistinguishable from impacts commonly associated with the discharge of toxics (e g , increased mortality, reduced biodiversity, and reduced reproduction)

Deposition and Resuspension of Toxicants

Research is currently on-going to examine the impact of the deposition and resuspension of toxicants as a result of wet weather events Questions about the survivability of benthic habitats when exposed to toxicants in deposited sediments still remain. The impact of resuspended toxicants from the sediments is not well known since toxics are often bound to sediment particles that may reduce the concentrations available for biological uptake and subsequent bioaccumulation The applicant should also be aware that different metal contaminants in sediments can exhibit different solubilities Under varying conditions of pH and temperatures, metals deposited in sediment can become soluble again and be reintroduced into the water column

Excessive Bacterial Levels

The NURP study final report concluded that "coliform bacteria are present at high levels in urban runoff and can be expected to exceed EPA water quality criteria during and immediately after storm events." Thus is of significant concern, particularly in swimming and shellfish areas.

Dissolved Oxygen Depression

The presence of oxygen-consuming pollutants in receiving waters can lead to severe dissolved oxygen depression Factors that can cause dissolved oxygen depression include the resuspension of biodegradable organic material (which can occur in the presence of high flow velocities) or the discharge of organic pollutants in storm water discharges. The NURP study demonstrated that storm water discharges exhibit biochemical oxygen demand (BOD) levels in excess of levels commonly associated with secondary treated effluent from publicly owned treatment works (POTWs). Severe dissolved oxygen depression could contribute to fish kills, which are one of the most readily observable impacts of pollution on receiving waters.

Eutrophication

Eutrophication, or the aging of a water body, can be accelerated by excessive nutrient loadings from storm water. Advanced stages of eutrophication are often associated with substantial variations in dissolved oxygen concentration. Nutrients of concern are nitrogen and phosphorus. Phosphorus is typically the growth-limiting nutrient for plants in fresh water systems. Storm water discharges routinely contain excess concentrations of these nutrients, which can lead to excessive algal growth, commonly referred to as algal blooms. Excessive concentrations of algae can cause odor and taste problems in drinking water and can result in aesthetically unpleasant

environments. In addition, the eventual decomposition of large concentrations of algae can depress dissolved oxygen in the water body to levels where fish kills occur. In nature, the process of eutrophication occurs over a substantial period of time, however, storm water discharges can rapidly accelerate this process.

Exceedance of Chronic Toxicity Criterion

Long-term exposure to toxics in excess of chronic toxicity criteria can cause sublethal effects on aquatic life. Indicators of chronic toxicity include reduced fertility, reproduction, and growth rates and a decline in the diversity of aquatic organisms The NURP study clearly indicated that storm water discharges contain concentrations of trace metals, such as lead, cadmium, zinc, and copper in amounts that exceed the chronic toxicity criteria. Prolonged exposure to chronic concentration levels of toxics can also be lethal to aquatic organisms, primarily from the bioaccumulation of toxics within the cell tissue of the organism over a extended period of time

Thermal Impacts

The temperature of storm water runoff may become significantly elevated via conductive and convective heat transfer with impervious, man-made surfaces In the case of contact with impervious surfaces, the resulting temperature elevation of storm water runoff can be substantial. For example, the surface temperature of parking lots during summer months may exceed 100 degrees Fahrenheit. Consequently, storm water runoff from these parking lots will be elevated in temperature. Many aquatic organisms are extremely sensitive to changes in water temperature. Increased water temperature also reduces dissolved oxygen in streams, rivers, lakes, and wetlands Therefore, significant discharges of storm water at elevated temperatures can, over the long term, lead to the alteration of aquatic populations.

5.1.3 Use of the Characterization Data

The NURP study analyzed storm water discharge from 28 sites representing 12 major river basins of the United States NURP detected 77 EPA priority pollutants present in the storm water discharges sampled, including samples with concentrations that exceeded water quality criteria for certain pollutants. Those pollutants detected in at least 10 percent of the samples studied in NURP are identified in Exhibit 5-1.

The data gathered for storm water discharge characterization can be used to create a baseline measurement of pollutant concentration and loadings The data also can be used to evaluate the effectiveness of best management practices (BMPs) as well as help identify storm water control priorities. In addition, it can be used to help identify the sources of pollutants in storm water runoff, to help establish an effective monitoring program for the life of the permit, and to help predict the impact of storm water runoff on receiving waters that are known to be impaired.

5.1.4 Storm Water Sampling and Analysis Procedures

The regulation requires that the process of collecting quantitative data for storm water characterization follow certain guidelines

> §122.26(d)(2)(iii) *Characterization data* When "quantitative data" for a pollutant are required under paragraph (d)(1)(iii)(A)(3) of this paragraph, the applicant must collect a sample of effluent in accordance with 40 CFR 122.21(g)(7) and analyze it for the pollutant in accordance with analytical methods approved under 40 CFR part 136 When no analytical method is approved the applicant may use any suitable method but must provide a description of the method

Exhibit 5-1. Priority Pollutants Detected in at Least 10% of NURP Samples.

PARAMETERS	FREQUENCY OF DETECTION (%)
Metals and Inorganics	
Antimony	13
Arsenic	52
Beryllium	12
Cadmium	48
Chromium	58
Copper	91
Cyanides	23
Lead	94
Nickel	43
Selenium	11
Zinc	94
Pesticides	
Alpha hexachlorocyclohexane (alpha-BHC)	20
Alpha endosulfan	19
Chlordane	17
Lindane (gamma BHC)	15
Halogenated aliphatics	
Methane, dichloro-	11
Phenols and cresols	
Phenol	14
Phenol, pentachloro-	19
Phenol, 4-nitro	10
Phthalate esters	
Phthalate, bis(2-ethylhexyl)	22
Polycyclic aromatic hydrocarbons	
Chrysene	10
Fluoranthene	16
Phenanthrene	12
Pyrene	15

Source: U.S. Environmental Protection Agency, *Results of the Nationwide Urban Runoff Program*. EPA Planning Division (National Technical Information Service (NTIS) Accession No. PB84-8552). December 1983.

The data collection procedures must follow the guidelines for storm water sampling outlined in §122.21(g)(7), *Effluent Characteristics*. This portion of the NPDES regulation describes the conditions under which a storm water discharge will be sampled, and which collection procedure (grab sample versus flow-weighted composite sample) is required for the water quality parameter being analyzed. These guidelines are discussed in more detail in Sections 5.3.2 and 5.3.4 of this guidance manual. In addition, EPA has available a *Storm Water Sampling Guidance Document* that describes in detail the methods used for storm water discharge sampling (EPA, 1992a).

The methods for the chemical analyses of storm water discharge samples must be conducted in accordance with 40 CFR Part 136, *Guidelines for Establishing Test Procedures for the Analysis of Pollutants*. These guidelines refer the applicant to EPA-approved methods and cite the source of the approved methods (e.g., Standard Methods for the Examination of Water and Wastewater, ASTM methods, etc.). Note that alternative methods (i.e., those not included in Part 136) may be used under certain circumstances (see Section 5.3.4) as described in 40 CFR Part 136, and reiterated in the Characterization Data section of Part 2 of the storm water discharge NPDES permit.

The specific constituent pollutants and water quality parameters that must be analyzed in the storm water samples are presented in Section 5.3.4.

5.2 SUMMARY OF REGULATORY REQUIREMENTS

The following is a summary of the characterization data requirements for the Part 2 application:

- Quantitative data on physical and chemical characteristics of the discharge taken from at least 5 to 10 representative outfalls chosen by the permitting authority (Section 5.3).
- Estimates of both the annual pollutant load and event mean concentration of the cumulative discharges from all municipal outfalls during a storm event (Section 5.4).
- A proposed schedule to provide estimates for each major outfall of the seasonal pollutant load and the event mean concentration for constituents detected in required sampling (Section 5.5); and
- A proposed monitoring program for the life of the permit that meets specific requirements established in the regulations (Section 5.6).

5.3 QUANTITATIVE AND QUALITATIVE DATA REQUIREMENTS

5.3.1 Selection of Representative Sampling Sites

In the Part 1 application, the municipality is required to describe a plan for obtaining characterization data [§122.26(d)(1)(iv)(E)]. The plan should reflect the requirements of §122.26(d)(2)(iii).

Different types and intensities of land use activities influence, in part, the types of pollutants and the pollutant concentrations in municipal storm water runoff. Therefore, Part 1 of the permit application [§122.26(d)(1)(iii)(B)(2)] requires the applicant to describe the land use activity within the area to be covered by the permit. In Part 1, the applicant also must select a subset of all the major outfalls (see Section 4.2.1 for definition of major outfall) identified that represented surface runoff discharge of the various land use activities described. In some cases, a municipality preparing a Part 2 application may want to supplement its sampling program by collecting and analyzing samples from major outfalls that were not identified in the Part 1 application or designated by the permitting authority. This additional sampling may provide the

municipality with data that better characterizes its MS4 discharges

5.3.2 Criteria for Storm Water Discharge Sampling

Land use activities are not the only factors that affect the pollutant composition of storm water runoff Storm water composition also varies according to the nature of the storm event (e.g , duration, volume), and the composition may vary throughout the duration of a single storm event (i.e., the initial discharge, or "first flush," tends to have higher pollutant loads). In order to obtain data that represents an "average" storm event, EPA requires samples from three separate storm events to characterize the surface water runoff; however, the permitting authority may allow exemptions

> §122.26(d)(2)(iii)(A)(1) For each outfall or field screening point designated under this subparagraph, samples shall be collected of storm water discharges from three storm events occurring at least one month apart in accordance with the requirements at §122 21(g)(7) (the Director may allow exemptions to sampling three storm events when climatic conditions create good cause for such exemptions),

The criteria for sampling storm water discharge are detailed in §122.21(g)(7), *Effluent Characterization* EPA's *Storm Water Sampling Guidance Document* addresses these criteria. For the purpose of this discussion, a brief synopsis of these criteria follows:

- For each outfall or field screening point selected, samples must be collected from three separate storm events.
- The three storm events must be at least one month apart
- Each sampled storm event must have a rainfall of at least 0 1 inch in the drainage area
- There must be no storm event in excess of 0 1 inch in the drainage area for at least 72 hours prior to the sampled storm event
- The rainfall event should not vary by plus or minus 50 percent from the average or median per storm volume and duration for the region.

EPA understands that climatic conditions may make it difficult for some municipalities to sample storm events meeting these criteria. For example, storm events may be so infrequent in arid and semi-arid areas that sufficient samples cannot be obtained by the application deadline. In other areas, storms may be so frequent that it may not be possible to wait the required 72 hours between storm events. In such cases, the applicant should confer with the permitting authority in advance. In instances where representative storm events do not occur prior to the application due date, the municipality should submit its application with as much information as possible. It should include an explanation [certified by a principal executive officer or ranking elected official in accordance with §122.22(a)(3)] as to why sampling data were unavailable.

The municipality may need to perform some initial research and calculation to meet the requirements listed above In order to determine what constitutes an average storm event for the area, the applicant should contact the National Weather Service or National Oceanographic and Atmospheric Administration's National Climate Center Weather data is also available commercially and from airports. The applicant may also refer to the information provided in the *Storm Water Sampling Guidance Document.*

5.3.3 Narrative Description of Storm Event

> **§122.26(d)(2)(iii)(A)(2)** A narrative description shall be provided of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable (greater than 0 1 inch rainfall) storm event;

Under §122 26(d)(2)(iii)(A)(2), the municipality must provide a narrative description of each storm that produced the discharge to be chemically and physically characterized Such a narrative description must include

- The date and duration of the rainfall event that produced the discharge sampled Measurements describing the peak intensity of the storm, if available, should also be reported,
- The amount of rainfall Rainfall conditions may vary significantly across large drainage areas, so rainfall characteristics should be spatially averaged over the drainage area, if possible If more than one rain gauge is used, averages should be reported. Rain gauges operated near the drainage area by the National Weather Service may be used, or the discharger may collect this information,
- The time elapsed since the last rainfall event greater than 0.1 inches. Historical rainfall data from rainfall gauges can be used to provide this information. If a gauge records only daily data, municipal field personnel could be asked to provide information on times during the day a rainfall event began or ended

5.3.4 Chemicals/Water Quality Parameters to be Measured

The storm water discharge samples must be analyzed for a number of pollutant parameters

> **§122.26(d)(2)(iii)(A)(3)** For samples collected and described under paragraphs (d)(2)(iii)(A)(*1*) and (A)(2) of this section, quantitative data shall be provided for the organic pollutants listed in Table II, the pollutants listed in Table III (toxic metals, cyanide, and total phenols) of appendix D of 40 CFR part 122, and for the following pollutants
>
> Total suspended solids (TSS)
> Total dissolved solids (TDS)
> COD
> BOD_5
> Oil and grease
> Fecal coliform
> Fecal streptococcus
> Ph
> Total Kjeldahl nitrogen
> Nitrate plus nitrite
> Dissolved phosphorus
> Total ammonia plus organic nitrogen
> Total phosphorus
>
> [*Note that total kjeldahl nitrogen is actually a substitute for total ammonia plus organic nitrogen*]

The complete list of chemicals is provided in Exhibits 5-2, 5-3, and 5-4. Exhibits 5-2 and 5-3 are derived from 40 CFR Part 122, Appendix D, Tables II and III, respectively. Exhibit 5-4 comes from the text of the regulation (see box above) The EPA-approved analysis procedure for the pollutants in Exhibits 5-2 and 5-3 can be found in 40 CFR Part 136. If a municipality is seeking approval to use an alternative method of analysis, then a request should be made according to procedures outlined in 40 CFR 136 4

Exhibit 5-2: Pollutants Listed in Table II in Appendix D of 40 CFR Part 122

Pollutant		Pollutant	
Volatiles		**Acid Compounds**	
Acrolein	1,2 Dichloropropane	2 Chlorophenol	
Acrylonitrile	1,3-Dichloropropylene	2,4-Dichlorophenol	
Benzene	Ethylbenzene	2,4-Dimethylphenol	
Bromoform	Methyl bromide	4,6-Dinitro-o-cresol	
Carbon tetrachloride	Methyl chloride	2,4-Dinitrophenol	
Chlorobenzene	Methylene chloride	2-Nitrophenol	
Chlorodibromomethane	1,1,2,2-Tetrachloroethane	4-Nitrophenol	
Chloroethane	Tetrachloroethylene	p-Chloro-m-cresol	
2 Chloroethylvinyl ether	Toluene	Pentachlorophenol	
Chloroform	1,2-trans-Dichloroethylene	Phenol	
Dichlorobromomethane	1,1,1-Trichloroethane	2,4,6-Trichlorophenol	
1,1 Dichloroethane	1,1,2-Trichloroethane		
1,2 Dichloroethane	Trichloroethylene		
1,1-Dichloroethylene	Vinyl chloride		
Base/Neutral		**Pesticides**	
Acenaphthene	Diethyl phthalate	Aldrin	Endrin
Acenaphthylene	Dimethyl phthalate	Alpha BHC	Endrin aldehyde
Anthracene	Di n-butyl phthalate	Beta BHC	Heptachlor
Benzidine	2,4-Dinitrotoluene	Gamma BHC	Heptachlor epoxide
Benzo(a)anthracene	2,6-dinitrotoluene	Delta-BHC	PCB-1242
Benzo(a)pyrene	Di-n-octyl phthalate	Chlordane	PCB-1254
3,4-Benzofluoranthene	1,2-diphenylhydrazine (as azobenzene)	4,4'-DDT	PCB-1221
Benzo(ghi)perylene		4,4' DDE	PCB-1232
Benzo(k)fluoranthene	Fluoranthene	4,4'-DDD	PCB-1248
Bis(2 chloroethoxy)methane	Fluorene	Dieldrin	PCB-1260
Bis(2-chloroethyl)ether	Hexachlorobenzene	Alpha-endosulfan	PCB 1016
Bis(2-chloroisopropyl)ether	Hexachlorobutadiene	Beta-endosulfan	Toxaphene
Bis(2-ethylhexyl)phthalate	Hexachlorocyclopentadiene	Endosulfan sulfate	
4-bromophenyl phenyl ether	Hexachloroethane		
Butylbenzyl phthalate	Indeno(1,2,3-cd)pyrene		
2-Chloronaphthalene	Isophorone		
4-Chlorophenyl phenyl ether	Naphthalene		
Chrysene	Nitrobenzene		
Dibenzo(a,h)anthracene	N-nitrosodimethylamine		
1,2 Dichlorobenzene	N-nitrosodi-n-propylamine		
1,3-Dichlorobenzene	N-nitrosodiphenylamine		
1,4-Dichlorobenzene	Phenanthrene		
3,3'-Dichlorobenzidine	Pyrene		
	1,2,4-trichlorobenzene		

Source 40 CFR Part 122 Appendix D

Exhibit 5-3: Pollutants Listed in Table III in Appendix D of 40 CFR Part 122

Pollutant	Pollutant	Pollutant
Antimony, total	Copper, total	Silver, total
Arsenic, total	Lead, total	Thallium, total
Beryllium, total	Mercury, total	Zinc, total
Cadmium, total	Nickel, total	Cyanide, total
Chromium, total	Selenium, total	Phenols, total

Source 40 CFR Part 122, Appendix D

Exhibit 5-4. Conventional Pollutants Listed in Section 122.26(d)(2)(iii)(A)(3)

Pollutant	Pollutant
Total suspended solids (TSS)	pH
Total dissolved solids (TDS)	Total Kjeldahl nitrogen (TKN)*
COD	Nitrate plus nitrite
BOD_5	Dissolved phosphorus
Oil and grease	Total ammonia plus organic nitrogen
Fecal coliform	Total phosphorus
Fecal streptococcus	

* Total ammonia plus organic nitrogen is interchangeable with TKN

Source 40 CFR 122.26(d)(2)(iii)(A)(3)

Section 122.21(g)(7) specifies that certain pollutant parameters will be analyzed on grab samples taken from the outfall, whereas the remainder of the pollutant parameters require that composite samples be taken from the outfall. These types of sampling procedures are differentiated as follows:

Grab samples: discrete, individual samples taken within a short period of time (usually less than 15 minutes). Analysis of grab samples characterizes the quality of a storm water discharge at a given time of the discharge. The following measurements must be made from grab samples:

- pH
- Temperature
- Cyanide
- Total phenols
- Residual chlorine
- Oil and grease
- Fecal coliform
- Fecal streptococcus

Note that measurements of temperature and pH must be taken in the field to avoid time-dependent changes that may occur between sampling time and actual analyses.

Flow-weighted composite samples: single unit volumes composed of a mixture of samples collected proportional to flow throughout the entire runoff event or at least for the first three hours of the storm water event, if it lasts more than three hours. The flow-weighted composite sample must consist of at least three discrete aliquots per hour from the storm water discharge, or a continuous sampler may be used.

All parameters (see Exhibits 5-2, 5-3, 5-4) not listed under the description of grab samples above must be analyzed from flow-

weighted composite samples Details on taking flow-weighted composite samples may be found in the EPA *Storm Water Sampling Guidance Document*.

5.3.5 Additional Quantitative Data

Section 122 26(d)(2)(iii)(A) concludes with a provision that allows the permitting authority to request additional quantitative data if necessary to determine permit conditions.

> §122 26 (d)(2)(iii)(A)(4) Additional limited quantitative data required by the Director for determining permit conditions (the Director may require that quantitative data shall be provided for additional parameters, and may establish sampling conditions such as the location, season of sample collection, form of precipitation (snow melt, rainfall) and other parameters necessary to insure representativeness),

To ensure the storm water discharge system is accurately represented, the permitting authority may require that quantitative data include additional parameters and may establish specific sampling conditions, such as:

- Location where the sample is taken;
- Season of sample collection;
- Form of precipitation (snowmelt, rainfall);
- Evidence of impact to aquatic ecosystems, or
- Other parameters necessary to ensure the system is accurately characterized.

The data generated from the qualitative and quantitative analyses described under §122.26 (d)(2)(iii)(A) will be used to calculate the annual pollutant loads and event mean concentrations for each pollutant as described in subsequent parts of this section Estimates of annual pollutant loads and event mean concentrations would then be used to assist in establishing storm water management priorities and selecting BMPs

5.4 ESTIMATION OF SYSTEM-WIDE EVENT MEAN CONCENTRATIONS AND ANNUAL POLLUTANT LOADS

The applicant must submit estimates of the event mean concentration and annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls.

> §122.26(d)(2)(iii)(B) Estimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls and the event mean concentration of the cumulative discharges to waters of the United States from all identified municipal outfalls during a storm event (as described under §122 21(g)(7)) for BOD_5, COD, TSS, dissolved solids, total nitrogen, total ammonia plus organic nitrogen, total phosphorus, dissolved phosphorus, cadmium, copper, lead, and zinc Estimates shall be accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modelling, data analysis, and calculation methods,

Estimates of annual pollutant loads will be somewhat imprecise; however, municipalities should exercise best professional judgement in deriving these estimates A description of what assumptions were made to derive pollutant loadings must be included.

Under §122.26(d)(2)(iii)(B) (see box above) applicants must provide the following:

- Estimates for the event mean concentration for pollutants listed in Exhibit 5-5 below, which can be used to estimate the annual pollutant load associated with all municipal outfalls identified under §122 26(d)(1)(iii) and (d)(2)(ii);

- A description of the procedures for estimating constituent loads and concentrations, and

- Details on data analysis, models used, and calculation methods

Data sources and procedures that municipal applicants may use to estimate event mean concentrations and annual pollutant loads of the cumulative discharges are discussed below.

The primary purpose for estimating annual pollutant loads and event mean concentrations is to assign priorities for implementing BMPs. Municipalities should consider the magnitude of individual pollutant loadings when assigning priorities to resources to reduce these loadings. The areas receiving the highest priority for implementation of BMPs will be those portions of the MS4 that appear to contribute the largest load of pollutants to the system. Therefore, it is the relative value of these calculations that is of importance within this regulation, not the absolute value.

Over time the accuracy of the available methods to calculate loads and concentrations will improve and the use of these estimates may assume a larger role in determining permit conditions and estimating the success of the comprehensive municipal storm water management program. The emphasis for now, however, is on the application of the most practicable methods to reasonably estimate annual loads and event mean concentrations.

5.4.1 Data Sources

The Part 1 application requires municipalities to submit all existing storm water sampling data, along with all relevant water quality data, sediment data, fish tissue or other biosurvey data taken over the past 10 years. All historical data must accompanied by a narrative description of the watershed served by the outfall from which the data are obtained, a description of the sampling and quality control program, and the monitoring location of the receiving water.

To estimate an annual pollutant load for a given pollutant, a value must be derived for the average concentration, or event mean concentration, of that pollutant. To derive this value, applicants may use either site-specific data, or data from a national or regional study, such as NURP.

Municipalities with adequate historical data may choose to use these data to estimate annual pollutant loads in the Part 2 application. However, many applicants may not have enough site-specific data to develop valid estimates. These applicants may choose to use generic data (e.g., from regional and national studies), such as the data provided in the NURP study. The NURP study's estimated range of detected concentration for specific pollutants is summarized in Exhibit 5-6.

Exhibit 5-5: Pollutants for which Event Mean Concentrations and Annual Pollutant Loads Must be Calculated

Pollutant	Pollutant
BOD_5	Total phosphorus
COD	Dissolved phosphorus
TSS	Cadmium
Dissolved solids	Copper
Total nitrogen	Lead
Total ammonia plus organic nitrogen	Zinc

Source: 40 CFR 122.26(d)(2)(iii)(B) (55 FR 48070, November 16, 1990)

Exhibit 5-6. NURP Study Range of Detected Concentration for Specific Pollutants

Parameter	Concentrations µg/L
Metals and inorganics:	
Antimony	2.6 - 23
Arsenic	1 - 50.5
Beryllium	1 - 49
Cadmium	1 - 14
Chromium	1 - 90
Copper	1 - 100
Cyanides	2 - 300
Lead	4 - 23,000
Nickel	1 - 182
Selenium	0.2 - 0.8
Zinc	10 - 2400
Pesticides:	
Alpha-hexachlorocyclohexane (alpha-BHC)	0.027 - 0.10
Alpha-endosulfan	0.008 - 0.20
Chlordane	n/a
Lindane (gamma-BHC)	0.007 - 0.1
Halogenated aliphatics:	
Methane, dichloro-	5 - 14.5
Phenols and cresols:	
Phenol	1 - 13
Phenol, pentachloro-	1 - 115
Phenol, 4-nitro	1 - 37
Phthalate esters:	
Phthalate, bis(2-ethylhexyl)	4 - 62
Polycyclic aromatic hydrocarbons:	
Chrysene	0.6 - 10
Fluoranthene	0.3 - 2
Phenanthrene	0.3 - 10
Pyrene	0.3 - 16

Source. U.S. Environmental Protection Agency, *Results of the Nationwide Urban Runoff Program*, EPA Planning Division (National Technical Information Service (NTIS) Accession No. PB84-8552) December 1983

The applicant should be aware of limitations associated with data from national and regional studies before deciding on methods to estimate pollutant loadings In some cases, it may be more appropriate to use any available site-specific data rather than data from national or regional studies. For example, the NURP study did not collect pollutant concentration data from industrial areas. In this instance, even limited site specific concentration data from industrial areas may be more meaningful.

EPA encourages applicants to seek data from a variety of sources to better characterize the quality of their storm water discharges. Regardless of the data source, a description of the procedures for estimating constituent loads and concentrations, including any modeling, data analysis, and calculation methods, must be included

There will be a degree of uncertainty associated with estimating pollutant loadings in the Part 2 application The requirement to calculate pollutant loadings and concentrations is intended to be a planning and screening effort to assign program priorities, and not necessarily to determine absolute values.

5.4.2 Event Mean Concentrations

Event mean concentrations (C_i in Equation 1 on page 5-16) are determined from analyses of flow-weighted composite samples collected from each of the designated field screening points. Section 2 2 4 of the *Storm Water Sampling Guidance Document* describes procedures for collecting flow-weighted composite samples (EPA, 1992a). Concentration values must be reported in the applicant's Part 2 Permit Application for each representative storm event sampled. The applicant should report the average of these results as the event mean concentration for each parameter measured Municipalities are encouraged to present data in a tabular format However, the applicant has flexibility to present the data in other ways, provided the data is clearly presented.

As stated previously, applicants must sample storm events for at least three hours, or for the entire storm event if it lasts less than three hours If a storm event lasts more than three hours, the applicant may choose among three approaches for calculating the event mean concentration of the storm First, the applicant may report the event mean concentration for the first three hours of the event (or longer, if the applicant monitored more than three hours). Second, if the applicant has data available on the correlation between flow and concentration which allows it to be more specific about the event mean concentration, an estimation technique may be used to derive the event mean concentration. If the applicant uses such an estimation technique, the methodology must be explained Third and finally, the applicant may monitor the entire storm event and report the actual event mean concentration.

Whichever approach the applicant uses, the same method should be used to derive event mean concentrations in the future. This will assist the applicant in identifying meaningful trends in changes in event mean concentrations over time.

5.4.3 Annual Pollutant Loadings

Municipalities may choose from a variety of acceptable procedures for estimating the annual pollutant loads of the cumulative discharge. This guidance contains an example of calculating the annual pollutant loads using the "simple method," which is adapted from Schueler (1987). The guidance also discusses some dynamic models that applicants may wish to employ.

Regardless of which method applicants choose, they must describe and document the specific technique used. The description should include (but is not limited to) the key equations used to calculate reported values, such as.

- Assumptions for selecting site-specific parameters (e g., runoff coefficients),

- References to any source documentation (e g , previously completed studies or reference textbooks), and

- Justification for any assumed parameter values

The Simple Method

The following method of computing pollutant loadings is referred to as the "simple method" and is adapted from Schueler (1987). For purposes of satisfying Part 2 application requirements, the simple method provides a quick and reasonable estimate of pollutant loadings with a minimal amount of data required Although the regulations require a system wide (cumulative) annual pollutant load calculation for each of the pollutants listed in Exhibit 5-5 (above), the single pollutant load values provide limited insights into potential problem areas and what BMPs might yield the best results. Consequently, the municipality may want to consider using the simple method to estimate "individual" pollutant loadings from drainage areas The individual pollutant loadings can be aggregated to derive a cumulative annual pollutant loading for the entire MS4 In the procedure below, for example, Step 1 computes the annual loading for each outfall of the MS4 Then in Step 2, the resulting pollutant loadings are summed to derive annual pollutant loads on a per-watershed basis In Step 3, the annual pollutants loads for each watershed are summed to derive a system-wide annual pollutant load.

As stated above, this procedure is only one example of how a municipality could calculate a system-wide annual pollutant load. Estimates of annual pollutant loads for individual outfalls, watersheds, or other discrete areas are not specifically required by the regulations However, municipalities will find such estimates helpful in making relative comparisons among different areas of the MS4 Ultimately, these estimates could assist the municipality with selecting BMPs and assigning priorities to potential problem areas

Step 1: Use the Simple Method to Calculate Annual Pollutant Loads on a Per-Outfall Basis

The first step in this example is to calculate annual pollutant loads for individual outfalls. However, the applicant may choose to begin by calculating annual pollutant loads for each watershed or other discrete area. As stated above, this example uses the simple method, which is given by the following equation:

EQUATION 1:

$$L_i = \left[\frac{(P)(CF)(Rv_i)}{12}\right](C_i)(A_i)(2.72)$$

where: L_i = Annual pollutant load (lb/outfall/yr)
P = Annual precipitation (in/yr)
CF = Correction factor that adjusts for storms where no runoff occurs (a value of 0 9 is typically used)
Rv_i = Weighted-average runoff coefficient for the area served by the outfall (the calculation of runoff coefficients is discussed below)
C_i = Event mean concentration of pollutant (mg/L)
A_i = Catchment area (acres)

The numbers 12 and 2.72 are conversion factors that account for unit conversions.

Each of the parameters in Equation 1 is defined below:

- **Annual pollutant load** is the total amount of a specific pollutant discharged in pounds per time period (in this case, per year) for the particular segment of the MS4 being modeled (in this case for each outfall) Pollutant loads may also be expressed for alternative time periods, or on a system-wide or watershed basis

- **Annual precipitation** is the total inches of rainfall occurring in a single year plus the contribution of snowmelt Estimates of the annual rainfall can be based on the rainfall data provided in Part 1 of the application

- **Correction factor** is an adjustment factor for the number of storm events that do not actually produce any runoff (i.e., the percentage of storm events that have a total accumulation greater than a specific threshold value). This value will vary by region. Without this adjustment factor, the municipality would be assuming that all storm events produce runoff, which may or may not be the case. A typical value for this correction factor is 0.9 (90%). However, this value can vary between climatic regions. Municipalities should review historical rainfall data to estimate the percentage of storm events that produce runoff versus the number of storm events per year.

- **Weighted-average runoff coefficient** is a relative measure of imperviousness or the percentage of rainfall that becomes surface runoff Runoff coefficients are a function of the type of surface, intensity of the rainfall, the degree of soil saturation and storativity (storage capacity) of the soil. To determine runoff coefficients, the municipality may use Equations 2 or 3 (which follow). Alternatively, the municipality may use actual field measurements, relevant hydrologic studies, average values published in civil engineering reference manuals, or default values provided in Exhibit 3-12 of EPA's *NPDES Storm Water Sampling Guidance Document*

- **Event mean concentration of pollutant** is the event mean concentration value for the specific pollutant determined from the analysis of flow-weighted composite samples. Equation 1 requires a value for each pollutant concentration As discussed previously, the applicant may use site-specific concentration data (e g , storm water sampling data) or generic (e g , NURP) data to derive event mean concentrations In other words, the applicant should use best professional judgement to decide which of the following concentration values to use

  – a mean concentration value from the NURP study;

    OR

  – an average of all event mean concentrations from all samples over three representative storm events;

    OR

  – an event mean concentration attributable to a specific land use activity

  The applicant will have to consider the extent of the variability of the data when selecting an appropriate concentration value. NURP or other regional studies used to estimate pollutant concentrations can be compared to existing site-specific data in order to assess the uncertainty associated with generic approaches.

- **Catchment area** is the size of the drainage area for the particular segment of the MS4 being modeled (in this case, the outfall drainage area). Areas that are served by combined sewers or that are not otherwise served by the MS4 should not be included

Weighted-average runoff coefficient. Runoff coefficients can be based on flow measurements or estimated from land use characteristics. In order to determine an average runoff coefficient for an area with a diversity of land

use activities, the following equation should be used to estimate a weighted-average runoff coefficient

EQUATION 2

$$Rv_i = \frac{(\sum A_i R_v)}{\sum A_i}$$

where. Rv_i = Weighted-average runoff coefficient
A_i = Catchment area (acres)
R_v = Catchment runoff coefficient

As an alternative to Equation 2, Equation 3 can be used to estimate weighted-average runoff coefficients from percent imperviousness data (Shelley, 1986)

EQUATION 3

$$Rv_i = 0.05 + 0.009 * I$$

where. Rv_i = Weighted-average runoff coefficient
I = Percent imperviousness

The percent imperviousness can be estimated from land use data Residential land can be assumed to be 24% impervious, commercial land 75% impervious; industrial land 55% impervious; and open space 15% impervious The percent imperviousness of residential land was estimated from the following empirical equation of NURP and USGS data, which relates population density to percent imperviousness

EQUATION 4

$$I = 9 * D^{0.5}$$

where I = Percent imperviousness
D = Population density (persons/acre)

Similar to Equation 1, individual parameters for Equations 2, 3, and 4 can be used on a system-wide basis, or modified to reflect more realistic conditions within smaller or discrete segments (e g , individual watersheds or outfalls).

Step 2. Use the Per-Outfall Annual Pollutant Loads to Calculate Per-Watershed Annual Pollutant Loads

If the simple method is used to compute the annual loading on a per-outfall basis, Equation 5 may be used to estimate annual pollutant loadings on a per watershed basis. The approach of computing pollutant loadings on a watershed basis is used by some counties where larger watersheds are segregated into smaller watersheds or drainage areas on the basis of similar land use designations One county uses this method in conjunction with forecasts of future development within the county to develop preliminary estimates of future pollutant loadings This approach minimizes the possibility of computing an annual pollutant loading that is too conservative.

EQUATION 5

$$L_w = \sum L_i$$

where: L_w = Annual pollutant load for a particular watershed
ΣL_i = Summation of individual annual pollutant loadings from all major outfalls within a specific watershed

Step 3: Use the Watershed-Based Annual Pollutant Loads to Calculate System-Wide Annual Pollutant Loads

To calculate the annual loadings system-wide, use the following equation

EQUATION 6

$$L_n = \sum L_w$$

where L_n = Annual pollutant load for an entire MS4

ΣL_w = Summation of individual annual pollutant loadings from all watersheds within a municipal separate storm sewer system

Dynamic Models

In instances where a municipality has a significant amount of historical data for the drainage areas serviced by storm sewer outfalls, including historical precipitation data and receiving water concentration and flow data, the MS4 may elect to use dynamic models to derive pollutant loads and to analyze the effects of MS4 discharges on receiving waters.

Dynamic models are designed to calculate a complete probability distribution for the output being modeled Therefore, dynamic models take into consideration the inherent variability of data associated with MS4 discharges, such as variations in concentration, flow rate, and runoff volume

One benefit of using a dynamic model is that the calculation of a complete probability distribution allows the modeler to consider a multitude of "what-if" scenarios. For example, when sufficient historical data is available, the modeler could consider the benefits and risks associated with alternative BMP strategies.

Dynamic models have one additional benefit over steady-state models in that dynamic models determine the entire discharge concentration frequency distribution. Consequently, this would enable the modeler to examine the effects of storm water discharges on receiving water quality in terms of the frequency by which water quality standards may be exceeded For purposes of computing pollutant loadings, a number of models are available including EPA's Stormwater Management Model (SWMM) and Hydrologic Simulation Program (HSPF), U S Army Corps of Engineers' Storage, Treatment, Overflow, Runoff Model (STORM), and Illinois State Water Survey's Model QILLUDAS (or Auto-QI).

Regardless of the method employed, the applicant must document how pollutant loadings are derived Applicants must provide estimates of annual pollutant loads and event mean concentrations for each outfall with their Part 2 applications. However, some outfalls will need to be more completely characterized, and conditions will change after the permit is approved. This is one reason why, as described in Section 5.4, data collection will continue throughout the term of the permit. Estimates of the individual contribution of pollutant loadings for each watershed or major outfall will help the applicant select priorities for specific watersheds.

5.5 PROPOSED SCHEDULE FOR SEASONAL LOADS AND REPRESENTATIVE EVENT MEAN CONCENTRATIONS OF MAJOR OUTFALLS

§122.26(d)(2)(iii)(C) A proposed schedule to provide estimates for each major outfall identified in either paragraph (d)(2)(ii) or (d)(1)(iii)(B)(*1*) of this section of the seasonal pollutant load and of the event mean concentration of a representative storm for any constituent detected in any sample required under paragraph (d)(2)(iii)(A) of this section;

Seasonal pollutant loads are important because they are a more accurate representation of loadings that may occur during a short time interval. To further refine the annual pollutant load estimates, Part 2 requires the applicant to propose a schedule to estimate seasonal

pollutant loadings and event mean concentrations for each major outfall

The quality of the data available when the Part 2 application is prepared will affect the accuracy and usefulness of the initial estimates of pollutant loadings and average concentrations These estimates can be improved as more site-specific data are collected during the term of the permit. A long-term site specific monitoring program will capture the variability in data that is essential to estimate more accurate pollutant loadings over time. Therefore, the impacts associated with these loadings can also be estimated with greater certainty. In addition, a site specific record collected over a longer time frame allows the effectiveness of the comprehensive municipal storm water management program to be evaluated

Estimates must be submitted for any contaminant detected in any sample required under the Part 2 sampling effort [§122.26(d)(2)(iii)(B)]. Seasonal pollutant load estimates are required for any pollutants listed in Exhibits 5-2, 5-3, and 5-4 that were detected during the sampling procedure described in Section 5 3.4. Therefore, the analyses required for seasonal pollutant loads will potentially be more comprehensive than the analyses of annual pollutant loads This results from the possibility that additional pollutants will be detected as part of the storm water characterization studies.

In some regions, precipitation patterns vary significantly from season to season, resulting in significantly different pollutant loadings throughout the year. In arid and semi-arid parts of the country, pollutants accumulate during dry spells, resulting in significantly higher pollutant concentrations in storm water discharges after extended dry weather Because of the buildup of accumulated pollutants, pollutant concentrations in discharges from MS4s are typically highest during the "first flush," or initial discharge

In other regions, pollutants that accumulate in snow may lead to high pollutant concentrations in runoff from the spring thaw Therefore, using an annual average pollutant loading might disguise the impact of shock loadings (discharges that occur within a very short time period and which often exceed acute toxicity criteria) of certain pollutants. Numerous factors contribute to the total volume of snowmelt runoff including shortwave and longwave radiation, condensation or vaporization, convected heat transfer by wind, heat content of rain water, and conductive heat transfer from the ground. Therefore, for regions with significant snowfall, pollutant loading estimates need to be adjusted to account for the additional volume of runoff attributable to snowmelt.

Since snowmelt runoff can occur in either the presence or absence of a storm event, the computation of seasonal pollutant loadings becomes significantly more complex The determination of total snowmelt runoff, however, is beyond the scope of this manual. Affected municipalities are encouraged to contact the U.S. Geological Survey or the Army Corps of Engineers for historical data on snowmelt runoff.

The effects of pollutant load can also vary by season Nutrient pollutant loads from storm water discharges can promote algal blooms in receiving waters during the spring and summer, but they may be of little consequence during winter in surface waters with good flushing characteristics. Quantifying seasonal variations in pollutant loads may aid the development of more cost-effective storm water management programs.

Pollutant loads also may vary significantly from one outfall to another. Within a drainage area, the type of land use, the percent of surface that is impervious, and the extent of exposure of storm water to contaminants affect the pollutant load from an outfall. Procedures for estimating seasonal pollutant loadings must be proposed for major outfalls only

Under §122.26(d)(2)(iii)(C) the regulation requires a schedule to provide estimates of:

- The seasonal pollutant load for each identified major outfall.
- The event mean concentration of a representative storm for any constituent detected in any sample required.

The following steps can be taken to develop a proposed schedule for estimating seasonal loadings at major outfalls:

1. Use historical or long-term hydrologic data to define seasons.
2. Describe the procedure to be used to estimate seasonal loads. This could be an adaption of the simple method or another mathematical model used for annual loads (e.g., instead of using a total annual rainfall accumulation, use an average rainfall accumulation associated with a specific season). If the simple method is used, the municipality could still use Equation 1. However, the amount of rainfall (P) would no longer be an annual value. Instead, it would be the amount of rainfall associated with a particular season defined by the municipality. In addition, the applicant may have to adjust the average runoff coefficient to reflect seasonal changes (e.g., frozen ground can behave like an impervious surface and substantially increase the amount of runoff). Lastly, substantial differences in the frequency and duration of seasonal storm events may increase or decrease the correction factor CF (e.g., during a dry season, the number of storms that actually produce runoff may be substantially lower than during a wet weather season).
3. Identify data elements that need to be refined. In cases where there is substantial seasonal variation, revised runoff coefficient values may be necessary. For example, during rainy seasons, ground surfaces are more saturated than during the dry season. As a result, the same amount of rainfall in the wet season will lead to a greater volume of storm water runoff than in the dry season.
4. Proposed procedures for collecting the appropriate data or otherwise improving estimates.
5. Provide an approximate time frame for data collection and submission of seasonal load estimates.

Proposed procedures for estimating seasonal pollutant loadings and event mean concentrations should explain when and how data used for the estimates will be obtained. The data can be based on site-specific information, or they can be obtained from municipal systems with similar characteristics (such as Regional NURP data).

5.6 COLLECTION OF REPRESENTATIVE DATA FOR PROPOSED MONITORING PROGRAM FOR THE TERM OF THE PERMIT

Under §122.26(d)(2)(iii)(D), applicants are given the opportunity to propose monitoring programs to be carried out during the term of the permit.

> **§122.26(d)(2)(iii)(D)** A proposed monitoring program for representative data collection for the term of the permit that describes the location of outfalls or field screening points to be sampled (or the location of instream stations), why the location is representative, the frequency of sampling, parameters to be sampled, and a description of sampling equipment.

Applicants should consider their specific needs and identify priorities for the proposed

monitoring program After receiving the Part 2 application, the permitting authority will review proposed monitoring programs and make appropriate adjustments when establishing permit conditions

The applicant must propose a monitoring program for representative data collection for the term of the permit that describes·

- The location of outfalls or field screening points to be sampled (or the location of instream stations);
- Why the location is representative;
- The frequency of sampling;
- Parameters to be sampled, and
- A description of sampling equipment.

Municipalities must submit sampling data over the life of a permit so that changes in storm water quality can be assessed Like initial sampling data, the data from an ongoing monitoring program can be used by the municipality to allocate resources to achieve reduction in pollutants The monitoring data will also serve as an environmental indicator of the success of the storm water management program. Many municipalities may require an extended period of time (possibly the entire permit term) and substantial data to definitively evaluate the effectiveness of a storm water management program. Therefore, a plan for data collection must be proposed by the municipality for the five-year term of the permit. During the permit term, the results of the monitoring program will be submitted in the municipality's annual report [§122.42(c)(4), discussed in Section 7.3 of this guidance].

5.6.1 Goals of a Monitoring Program

The first and most important step in developing a proposed monitoring program is to define the program's objectives as clearly as possible Development of monitoring program goals should be closely coordinated with development of the proposed storm water management program Applicants are required to propose monitoring programs as part of their proposed management programs to reduce pollutants from industrial site runoff. The monitoring plan is part of *Characterization Data* [§122 26(d)(2)(iii)]. The storm water management program is discussed in Section 6.

A comprehensive monitoring program should be designed to support specific goals, including·

- Characterizing discharges;
- Evaluating the source of specific pollutants,
- Evaluating the performance of specific source controls; and
- Identifying the full range of chemical, physical, and biological water quality impacts.

5.6.1.1 Characterizing Discharges

Monitoring pollutants in discharges from MS4s serves several purposes. Quantitative data on specific pollutants in storm water runoff can support estimates of annual and seasonal pollutant loadings and modelling efforts to identify the magnitude of water quality impacts. Over the long term, monitoring data may suggest that new outfalls should be selected for sampling As municipalities gain experience in storm water sampling, they likely will target BMPs that achieve the greatest improvements in storm water quality.

5.6.1.2 Evaluating the Source(s) of Specific Pollutants

Some sources of storm water (e.g., industrial sources that must be covered by NPDES permits, highways with heavy traffic flows, and large parking lots) are expected to generate significantly higher concentrations of pollutants than typical urban runoff. Monitoring efforts to quantify sources of

priority pollutants can provide support for resource allocations to address pollutant sources posing the greatest environmental risk How proposed monitoring efforts will be structured to identify and quantify pollutant sources should be discussed in proposed storm water management programs.

The monitoring program may also include procedures to conduct dry-weather monitoring over the term of the permit to help detect illicit discharges and improper dumping. This can include recording visual observations and odors observed in dry weather flows.

5.6.1.3 Evaluating the Performance of Specific Controls

Pollutant removal efficiencies are fairly well known for certain structural BMPs. However, sampling may still be necessary to ensure that the BMP is meeting original design expectations The expected pollutant removal efficiency for a structural control must take into account site-specific conditions For example, an infiltration basin has a certain expected pollutant removal efficiency, but actual field efficiency is affected by subsurface soil conditions and the extent and frequency of maintenance

The efficiency of a particular structural control will be affected by many factors, such as detention time. However, efforts to determine the efficiency of structural controls must include consideration of pollutant concentrations and flow volumes into and out of the control. The efficiency of nonstructural source controls can be characterized by comparing discharges at a given location before and after the control measures are implemented. Over time, sufficient monitoring data may be gathered to draw substantive conclusions about the effectiveness of certain BMPs. Alternatively, discharges from a sampling site with source controls can be compared with discharges from a similar site that lacks source controls Efforts to monitor the effectiveness of controls should be closely coordinated with the assessment of control efficiencies discussed in Chapter 7

5.6.1.4 Identifying the Full Range of Chemical, Physical, and Biological Water Quality Impacts

Characterizing the effect of storm water discharges on water quality is complicated by a number of factors. EPA recommends an integrated approach to assessing water quality impacts associated with discharges from MS4s Monitoring procedures that help assess water quality impacts include:

- Discharge and receiving water monitoring to support water quality models and to identify hydraulic impacts of increased peak flows and to identify parameters of concern, and
- In-stream monitoring of water chemistry;
- Bioassessments and biosurveys; and
- Sediment sampling

Discharge and Receiving Water Monitoring to Support Water Quality Models

As discussed above, when there is sufficient historical data available from monitoring, these data may be used as inputs to models that predict or validate the effects of pollutant loadings from MS4s on receiving water quality characteristics. In addition to monitoring data, data on receiving water quality characteristics are also necessary to calibrate a particular model.

Once the model has been calibrated to reflect site-specific conditions, future monitoring data could be used to validate long term reductions in pollutant loadings, the effectiveness of nonstructural BMPs, and/or pollutant removal efficiencies of existing structural controls

The information gathered from this approach may also help define those BMPs that which appear to be the most effective. For example, in developing areas, monitoring data could eventually support future planning efforts that would seek to minimize the impact of future development on local receiving waters.

In-stream Monitoring

Using models to estimate pollutant concentrations in receiving waters can be inaccurate In-stream monitoring can directly measure pollutant concentrations. General designs for in-stream monitoring are:

- **Monitoring above and below a set location** This method is generally more useful for evaluating control effectiveness than documenting the severity of a diffuse source of pollutants

- **Monitoring at different times** Monitoring at different times and seasons can provide valuable information on seasonal variations in pollutant concentrations Dry weather in-stream monitoring can be compared with in-stream monitoring during storm events

- **Paired watersheds.** Evaluating similar water bodies can document management program improvements by controlling for meteorologic and hydrologic variability. This approach can also be used to compare receiving waters to background conditions associated with undeveloped watersheds

Detailed guidance on applying these approaches is provided in the draft *Nonpoint Source Monitoring and Evaluation Guide*, February 26, 1988, Nonpoint Source Branch, U S EPA

Bioassessments and Biosurveys

A biological assessment, or "bioassessment," is an evaluation of the biological condition of a water body using biological surveys and other direct measurements of resident biota in surface waters. A biological survey or "biosurvey," consists of collecting, processing, and analyzing representative portions of a resident aquatic community to determine the community structure and function Biosurveys and bioassessments can be used directly to evaluate the overall biological integrity (structure and/or functional characteristics) of an aquatic community Deviations from the biological integrity can be measured directly using biosurveys only when the impacted community is compared against a predetermined reference condition. Without the proper reference conditions, biosurveys may underestimate the extent of impairment.

Biosurveys are useful in that they can assess or detect the aggregate effect of impacts upon an aquatic community where discharges are multiple, complex, and variable, and where point, nonpoint, and storm water discharges are all affecting the biological condition of the receiving water Because of this, biosurveys cannot measure the impacts of one particular discharge or effluent being discharged to receiving waters. Currently, biosurveys cannot be used as a predictive water quality assessment tools.

Biosurveys provide a useful monitor of both aggregate ecological impact and historical trends in the condition of an aquatic ecosystem They can also detect impacts that other assessment methods may miss. More importantly, biosurveys can detect impacts caused by habitat degradation such as channelization, sedimentation, and historical contamination that disrupt the interactive balance of the components of the aquatic community

Sediment Sampling

Pollutants, both organic and inorganic, associated with storm water discharges may become physically or chemically bound with sediment particles Depending upon the size distribution of the sediment particles, a portion of the contaminated sediment particles will settle out of the water column Consequently, the potential exists for a buildup of contaminated sediment over time. The effects of heavily contaminated sediments on both benthic habitat and water quality have been documented to the extent that EPA is developing sediment quality criteria (SQC) that will allow assessments of the toxicological effects of contaminated sediments on varying types of receiving waters.

The amount of sediment material found in storm water discharges suggests that applying sediment quality criteria could be a useful component of a monitoring program. For example, sediment quality criteria could be a valuable preventative tool to ensure that point source discharges of storm water do not cause or contribute to the contamination of sediments

In addition, a MS4 could make comparisons of field measurements to sediment quality criteria as a means of providing an early warning of a potential problem. Consequently, an early warning could provide an opportunity to take corrective action to prevent further contamination For long term planning, consideration could also be given to the feasibility of establishing target levels or goals that would ensure that point sources discharges of storm water do not contribute to sediment contamination

5.6.2 Monitoring Procedures

Monitoring procedures will depend on the objectives of the monitoring effort To a large extent, the type of receiving water will be an important factor in developing monitoring procedures and techniques. For example, grab samples may be appropriate for monitoring discharges from a retention pond, while composite samples may be appropriate for monitoring flows into the pond The following information, at a minimum, should be included for each sampling site.

- The criteria for storm selection,
- Whether grab, composite, continuous, or other sampling techniques are to be used,
- The criteria on when to begin and end sample collection;
- The basis for selecting the time interval between sequentially collected samples,
- How seasonal factors affect the selection of monitoring frequencies,
- The method of estimating rates or volumes of flow passing the sampling point, and
- The analytical methods used for analyzing pollutant parameters and their detection limits

Location of Monitoring Sites and Description of Drainage Basins

The selection of monitoring sites should depend on the goals of the monitoring program. Applicants should identify the location of each proposed monitoring site and the boundary of its drainage basin. They should describe the estimated size and land use characteristics of the drainage basin for each sampling location The applicant also should explain why the sampling sites are representative or will otherwise provide information to support a monitoring program goal. Other monitoring sites can be selected to evaluate unique conditions in the drainage area that have significant or unusual potential for generating pollutants in storm water discharges

Samples should be analyzed in accordance with the analytical methods approved under 40 CFR Part 136

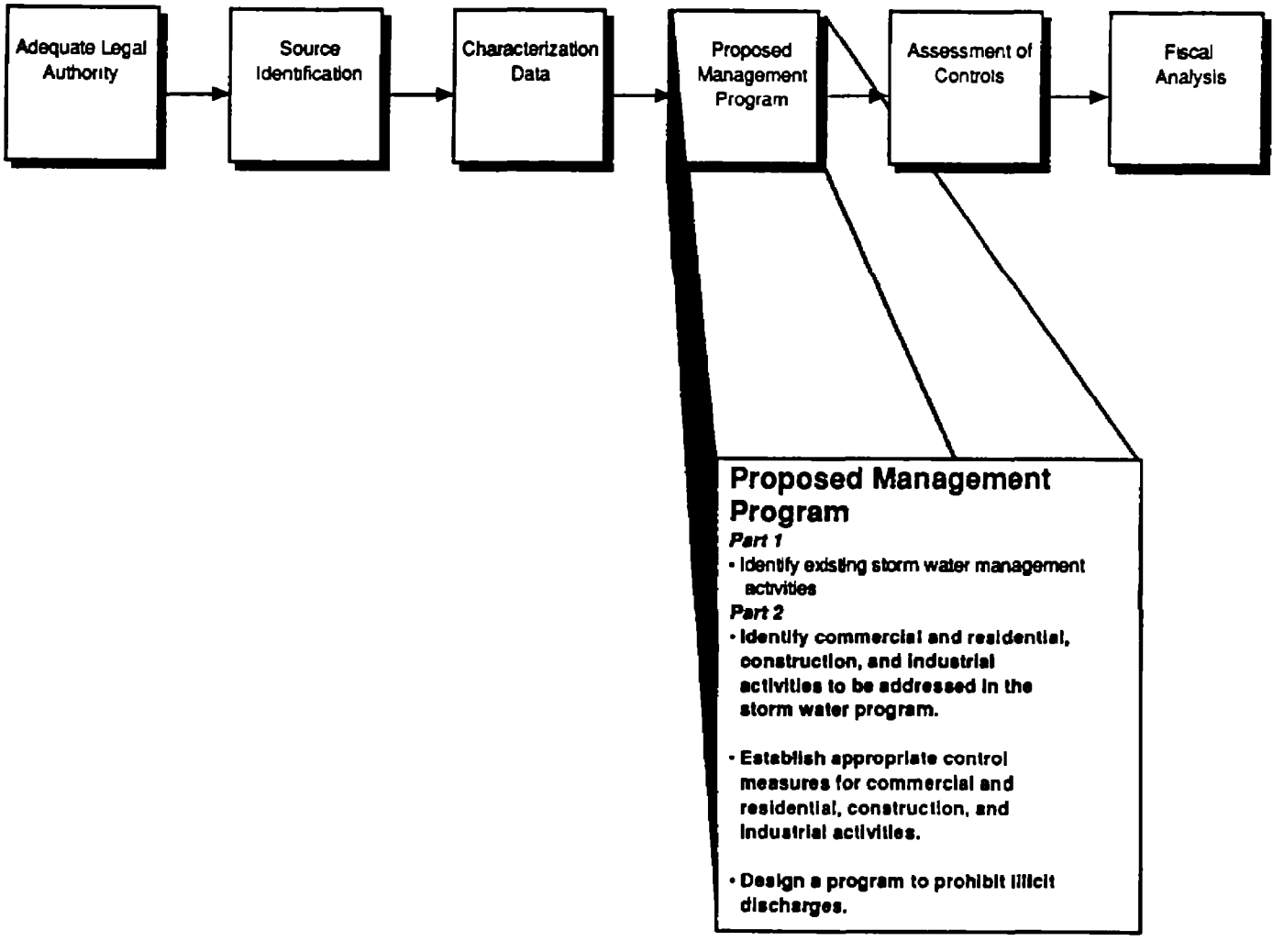
Parameters to be Analyzed

The applicant must list all parameters to be analyzed, which should depend on the objective of the sampling effort. For example, it may only be necessary to monitor several indicator parameters (such as TSS, settleable solids, nutrient, and a metal) to characterize the pollutant removal efficiency of a wet pond.

Sampling Equipment

The applicant must describe the equipment to be used in the proposed sampling program. Only the primary pieces of equipment need be identified. Descriptions can be made by reference to equipment supplied by a vendor or manufacturer if distinctive enough to be readily identified.

CHAPTER 6
PROPOSED MANAGEMENT PROGRAM



6.0 PROPOSED MANAGEMENT PROGRAM

6.1 BACKGROUND

Under the Part 2 application requirements, municipalities must propose site-specific storm water management programs. This is the most important aspect of the permit application. The Part 2 application requirements provide each MS4 with the flexibility to design a program that best suits its site-specific factors and priorities.

The regulations require the applicant to provide a description of the range of control measures considered for implementation during the term of the permit. Applicants must meet all the requirements of the Part 2 application regulation. However, flexibility in developing permit conditions is encouraged by allowing municipalities to emphasize the controls that best apply to their MS4. For example, a municipality that expects significant new development may focus more on requirements for new development and construction, while a municipality that does not expect significant new development may focus more on a program to prohibit illicit discharges or control industrial contributions. In any case, a satisfactory proposed management program will address· management practices; control techniques and systems; design and engineering methods, and other measures to ensure the reduction of pollutants to the "maximum extent practicable (MEP)."

If the municipality proposes a thorough and complete program, the permitting authority is likely to incorporate all or part of the proposed management program into the NPDES storm water permit written for that municipality Therefore, the proposed programs provide municipalities with the opportunity to have substantial input into their NPDES permit conditions.

This section of the guidance manual describes the minimum information requirements for proposed storm water management programs. Examples of how the program elements should be addressed are provided. These examples illustrate minimum information requirements for the program elements, and occasions when municipalities may opt to go beyond minimum requirements in order to meet the MEP standard

6.2 SUMMARY OF REGULATORY REQUIREMENTS

The municipality must develop and submit a proposed management program that covers the duration of the permit The program must integrate the information and actions described in the Part 1 application and portions of the Part 2 application (see Chapters 3, 4, and 5 of this guidance). The regulatory requirements for the proposed management program are in 40 CFR 122.26(d)(2)(iv)

At a minimum, the proposed management program must include:

- A comprehensive planning process that involves both public participation and intergovernmental coordination;
- A description of management practices, control techniques, and system design and engineering methods to reduce the discharge of pollutants to the MEP; and
- A description of staff and equipment available to set up and assess the storm water management program.

Additional provisions under §122 26(d)(2)(iv)(A) require applicants to include:

- Programs to control storm water runoff from commercial and residential areas, construction sites, and industrial

facilities (including waste handling sites), (Section 6 3),

- Identification of structural control measures to be included in these proposed programs, such as detention controls, infiltration controls, and filtration controls that the municipality plans to apply to the activities addressed in its storm water management program (Section 6.4); and

- Programs to detect and remove illicit discharges, and to control and prevent improper disposal into the MS4 of materials such as used oil or seepage from municipal sanitary sewers (Section 6.5).

6.3 PROGRAMS TO CONTROL STORM WATER RUNOFF FROM COMMERCIAL AND RESIDENTIAL AREAS, CONSTRUCTION SITES, AND INDUSTRIAL FACILITIES

A proposed management program must identify the activities or areas that require controls to reduce pollutants in storm water runoff Specifically, a proposed management program must address storm water runoff from **commercial and residential areas** (Section 6.3.1), **construction sites** (Section 6.3.2), and **industrial facilities** (Section 6.3 3). Also, areas where illicit connections or illegal discharges may occur must be identified (Section 6.5).

In addition to the requirements of the proposed storm water management program, other provisions of the Part 1 and Part 2 applications require information that will help enable the municipality to focus on identifying activities and areas that may need control measures Examples of these provisions include

- Identification of sources [Part 1, §122 2(d)(1)(iii)(B)(3)-(4), and Part 2, §122 26(d)(2)(ii)];

- Identification of water bodies that may be adversely affected by storm water runoff [Part 1, §122 26(d)(1)(iv)(C)],

- Organization of sources by watershed [Part 2, §122 26(d)(2)(ii)],

- Description of land use activities [Part 1, §122 26(d)(1)(iii)(B)(2)];

- Results of field screening analysis [Part 1, §122 26(d)(1)(iv)(D)];

- Results of the sampling program [Part 2, §122 26(d)(2)(iii)(A)(3)],

- Estimates of annual pollutant loads and event mean concentrations, and schedules to submit seasonal pollutant loads and event mean concentrations [Part 2, §122.26(d)(2)(iii)(B) and (C)], and

- Findings from an on-going monitoring program [Part 2, §122 26(d)(2)(iii)(D)].

6.3.1 Commercial and Residential Activities

Under §122.26(d)(2)(iv)(A), applicants must propose structural and source control measures to reduce pollutants from commercial and residential areas.

> **§122.26(d)(2)(iv)(A)** [The proposed management program must include a] description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls

To ensure that proposed control measures are effective, the applicant should study how storm water runoff from pollutant sources affects the existing municipal system, how the proposed

control measures will enhance the existing system, and what impact the proposed measures will have on receiving waters The control measures should recognize and emphasize the interaction between pollutant sources and the physical attributes of the municipal system and receiving waters.

Specific commercial and residential activities that must be addressed include maintenance activities and a maintenance schedule for structural controls to reduce pollutants in storm water runoff. This provision is discussed in Section 6.4.2. Other activities to be addressed include:

- Post-construction controls to reduce pollutants in discharges to MS4s resulting from new development and significant redevelopment (Section 6 3 1 1),
- Practices for maintaining and operating public streets, roads, and highways that will reduce the impact on receiving waters from storm water runoff discharges (Section 6 3 1 2);
- Procedures to assure that the impacts on receiving waters from flood management projects are assessed, and that existing structural control devices have been evaluated to determine if retrofit controls are feasible (Section 6 3.1.3);
- A program to monitor pollutants in runoff from operating or closed municipal landfills that identifies priorities and procedures for inspections and establishing and implementing control measures (Section 6.3 1.4); and
- A program to reduce to the maximum extent practicable, pollutants in storm water runoff associated with the application of pesticides, herbicides, and fertilizer (Section 6 3.1.5).

To reduce pollutants in storm water runoff from commercial and residential activities, a proposed management program might include the use of infiltration devices, detention and retention basins, vegetated swales, water quality inlets (which may include oil and water or oil/grit separators), screens, channel stabilization/riparian habitat enhancement efforts, wetland restoration and preservation projects, as well as various source control strategies and other nonstructural control measures

6.3.1.1 New Development and Significant Redevelopment

Summary of Regulatory Requirement

New development or redevelopment often increases impervious land surfaces, which usually leads to increased pollutant levels in storm water runoff Chemical and thermal changes in storm water runoff are commonly associated with new development and can adversely affect the quality of receiving waters In addition, urbanization results in an increase in the volume of storm water discharges.

The Nationwide Urban Runoff Program (NURP) study (EPA, 1983) and more recent investigations indicate that controlling the contribution of pollutants in storm water discharges at the onset of land development is the most cost-effective approach to storm water quality management Mitigating problems caused by pollutants after they have entered a MS4 is often more expensive and less efficient than preventing or reducing the discharge of pollutants at the source Therefore, a satisfactory proposed management program will propose structural and nonstructural measures to reduce pollutants in storm water discharges from areas of new development and redevelopment Examples of such measures are discussed below

§122.26(d)(2)(iv)(A)(2) [The applicant must include a] description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed

Provisions under §122.26(d)(2)(iv)(A)(2) focus on the reduction of pollutants in storm water runoff **after** construction in areas where new development or redevelopment is completed Controls that are required **during** construction are discussed in Section 6.3 2 of this guidance

Post-Construction Controls

Proposed storm water management programs should include planning procedures for both during and after construction to implement control measures to ensure that pollution is reduced to the maximum extent practicable in areas of new development and redevelopment. Design criteria and performance standards may be used to assist in meeting this objective

Further, storm water management program goals should be reviewed during planning processes that guide development to appropriate locations and steer intensive land uses away from sensitive environmental areas A municipality may, for example, include provisions in the planning process that ensure that all new development in targeted areas or zones provides for a certain percentage of undisturbed area to assist in preserving post-development runoff quality and velocity as similar as possible to pre-development conditions In its Part 2 application, a municipality should describe how it plans to implement the proposed standards (e g, through an ordinance requiring approval of storm water management programs, a review and approval process, and adequate enforcement)

The proposed storm water management program should identify and include **planning procedures** and **control measures** that will be used in the municipality.

Planning Procedures

Comprehensive planning procedures typically involve incorporation of land use goals and objectives into a plan document or a plan map. These plans are often called Master Plans, Comprehensive Land Use Plans, or Comprehensive Zoning Plans

Comprehensive or master plans are often non-binding. They provide support and direction to local officials that have the authority to make land use decisions

While applicants do not need to submit a complete comprehensive or master plan with the Part 2 application, they should detail the planning process employed by the municipality. They must thoroughly describe how the municipality's comprehensive plan is compatible with the storm water regulations The description should clearly

- Identify management objectives for streams, wetlands, and other receiving waters;
- Identify areas where urban development is likely to occur and areas that are sensitive to the effects of urbanization. Consideration should be given to receiving waters, topography, soil types, ground water uses and potential impacts, and other relevant factors;
- Describe standards such as design criteria and performance standards for storm water controls for new developments, such as buffer zones,

open space preservation, erosion and sediment controls, etc.;

- Describe other measures to minimize the effects of new development on storm water quality (these may include local code and ordinance requirements); and

- Identify or discuss the site development review process for the evaluation and approval of storm drainage or storm water management programs. Requirements in drainage or storm water management programs can be coordinated with review of other related plans such as those for site grading or landscaping.

There will be great variation among municipalities in their sophistication of land use planning If the municipality has recently updated its land use plan, it may detail storm water quality issues In other instances, there may be no policy to include storm water quality considerations in land use decisions. In such cases, the applicant must describe how consideration of those activities that affect storm water quality are to be incorporated into the municipality's comprehensive or master plan and its approval process for construction projects

Control Measures

Most traditional storm water control measures focus on efficient collection and conveyance of storm water runoff to an offsite location This approach can increase downstream property damage due to increased storm water runoff quantity and flow velocity. Corrective action often involves expensive public works projects, such as enlarging and reinforcing channels or constructing swales to provide an adequate outfall from affected or damaged areas The traditional approach has typically involved downstream channel stabilization projects However, these projects may also result in increased storm water runoff quantity and flow velocity.

Some recent approaches to storm water management include preserving the natural features of a watershed by maintaining vegetative cover and establishing buffer zones and open space or green areas. The benefit of employing this approach is the protection afforded to riparian areas and wetlands, as well as the preservation of a stable watershed. One additional benefit from this approach includes maintaining ground water recharge through infiltration. These approaches to storm water management minimize the impact of erosion, flooding, and other damage to natural drainage features such as streams, wetlands, and lakes. Preservation of natural habitat can be achieved through effective storm water quality control measures More recent approaches use storm water to:

- Recharge ground water sources with runoff from impervious areas;

- Preserve baseflows of surface water bodies;

- Augment water supplies used for street cleaning and other municipal functions, such as watering public lawns,

- Increase recreational opportunities including swimming, fishing, and boating; and

- Sometimes, augment drinking water supplies if it is treated and in compliance with all applicable drinking water standards.

The municipality should consider storm water controls and structural concerns in planning, zoning, and site or subdivision plan approval. An example of effective structural control is described in Exhibit 6-1. Non-structural control measures are highly recommended for new development. They can be included during the planning, site-selection, and development stages. Examples of non-structural controls include street sweeping, buffer strip preservation, and public education.

Exhibit 6-1
Storm Water Programs in Delaware and Florida

Delaware requirements for on-site measures include water quality ponds with permanent pools Ponds must be designed to release the equivalent volume of runoff from the first 1/2 inch of runoff from the site over a 24-hour period and have a storage volume designed to accommodate at least 1/2 inch of runoff from the site Water quality ponds without permanent pools may also be used in Delaware's program. These pools are to be designed to release the first inch of runoff from the site over a 24-hour period.

Developers are instructed to consider infiltration practices only after ponds are eliminated for engineering or hardship reasons. Infiltration structures must be designed to accept at least the first inch of runoff from all streets, roadways, and parking lots Other practices may be acceptable if they meet the equivalent removal efficiency of 80 percent for suspended solids. More stringent requirements may be established on a case-by-case basis.

The 80 percent removal efficiency for suspended solids that Delaware requires takes into account pollutant settling. The 24-hour detention period allows for substantial settling where most of the pollutant removal occurs. In addition, the requirement that the first inch of runoff be released over a period of no less than 24 hours reduces downstream erosion

Source Schueler, 1987

For significant redevelopment, municipalities can incorporate both structural and nonstructural storm water controls However, there are generally far more constraints and limitations on the control opportunities available at redevelopment sites One of the primary constraints is the availability of sufficient open area to accommodate structural controls such as detention ponds. In instances where redevelopment is occurring in densely urbanized areas, storm water runoff volumes may be so large that sufficient storage capacity can not be provided without further compounding problems associated with siting and retrofitting existing storm water conveyance systems In such cases, the municipality should consider nonstructural control measures such as traffic flow control, the use of porous construction materials for roads and parking lots, revisions to street sweeping or deicing policies, or public education programs

6.3.1.2 Public Streets, Roads, and Highways

Summary of Regulatory Requirement

Public streets, roads, and highways can be significant sources of pollutants in discharges from MS4s Therefore, proposed management programs must include a description of practices for operation and maintenance of public streets, roads, and highways, and procedures for reducing the impact of runoff from these areas on receiving waters.

§122.26(d)(2)(iv)(A)(3) [The application must include a] description of practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities

Road maintenance practices, especially snow management and road repair, and traffic are significant sources of pollutants in storm water discharges Measures to reduce the pollutants in storm water runoff from these sources should be addressed in the proposed management program

Snow Management

Deicing salts are the main source of pollutants in runoff of urban snowmelt. Municipalities can reduce these pollutants by calibrating equipment, educating equipment operators, using alternative deicing materials, and properly storing deicing materials. As alternatives to deicing salts, the Federal Highway Administration is considering many materials that may be less polluting. However, most of these deicers contain sodium or chloride ions that are harmful to roadside trees, shrubs, and soils. One deicer, calcium magnesium acetate (CMA) may be the best option for environmentally sensitive areas (Chollar, 1990) In salt storage facilities, salt piles should be completely covered, storage and handling areas should have impervious surfaces, and contaminated runoff should be contained

Road Repair

Road maintenance and repair activities may contribute pollutants through erosion caused by the elimination of stabilizing vegetation from roadside shoulders and ditches. Maintenance crews can decrease the potential for erosion by disturbing only the area under repair. Graded areas should also be limited in size so that repairs can be completed the same day and graded areas stabilized by the end of the workday. Other measures to reduce pollutants in storm water include scheduling potential pollutant-causing repair work during dry seasons, when possible

Municipal equipment yards and maintenance shops that support road maintenance activities can also be significant sources of pollutants Therefore, municipalities should consider instituting procedures that address spill prevention, material management practices, and good housekeeping

Traffic

Oil and grease and metals from traffic are the pollutants of most concern with respect to aquatic toxicity and their ability to "wash off" roadways and enter a MS4

In almost all instances, the pollutant concentrations in initial storm water discharge from heavily travelled streets is significant When the initial runoff reaches the velocity needed to entrain particulates, highly soluble pollutants that have accumulated between storms are transported to the storm sewer system. Therefore, shortly after a storm event begins, the pollutant loading in the initial flow to a MS4 is often the greatest

Pollutants from traffic can be minimized by using nonstructural controls (e.g, traffic reduction and improved traffic management), structural controls (e g, traditional and innovative BMPs), and changing maintenance activities. Traditional structural controls to reduce pollutants in road runoff include vegetated swales, infiltration devices and detention/retention basins Highways often afford opportunities for using structural controls such as detention basins on entrance or exit ramps and upstream or downstream of culvert crossings (Steward, 1992). Smaller roads may also have low-cost structural control opportunities available at culvert crossings such as vegetated swales Many structural controls can also be placed on public or private land that is outside the right-of-way, but still may be proximate enough to capture road runoff. Any time controls are placed at culvert crossings, potential wetland impacts and instream treatment issues need to be considered

Maintenance activities that can reduce pollutants in storm water discharges include catch basin cleaning, litter control, and targeted street sweeping For municipalities that have

developed transportation plans under the Clean Air Act, applicants should describe how they will review the plan, and amend it where appropriate, to address water quality concerns Potential locations for installing new structural controls to reduce pollutants from road and highway runoff should be identified by applicants.

6.3.1.3 Flood Management Projects

Summary of Regulatory Requirement

The traditional focus of storm water management in many communities has been water quantity (i e., flood) control. The proposed management program must demonstrate that flood management projects take into account the effects on the water quality of receiving water bodies, and the program must discuss whether existing structural flood control devices can be retrofitted to control water quality.

> §122.26(d)(2)(iv)(A)(4) [The application must include a] description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible

Opportunities for pollutant reduction should be considered when determining specific controls to be proposed as the MEP standard in the storm water management program.

Control Measures

Storm water management devices and structures that focus solely on water quantity are usually not designed to remove pollutants, and may sometimes harm aquatic habitat and aesthetic values. For example, channels that are completely lined with concrete typically do not provide for aquatic habitat and tend to increase potentially erosive velocities and elevate ambient water temperatures, resulting in downstream channel enlargement and increased pollutant loadings However, this condition can be mitigated through alternative stabilization methods.

Channel management measures that can enhance streams and their ecological values include corridor preservation, biological bank treatment, and, where necessary, geomorphic restoration (Ferguson, 1991). The municipality may also install structural devices to dampen the hydraulic energy of the flow and minimize downstream erosion. As another example, willow saplings could be planted between rip-rap, timbers, and other stabilization structures that are anchored into terraces on the side of the streambank.

Flood-control projects can be built or subsequently modified to address water quantity and water quality concerns. Sometimes existing flood control structures can be retrofitted to provide water quality benefits as well as water quantity control (EPA, 1989b). Basin retrofits are a common example. For such a retrofit, dry flood control or detention basins can be converted to wet basins by modifying outlet orifices Additional storage can be obtained by raising the elevation of the basin embankment.

Dry retention basins, or extended dry or wet retention basins can be used to improve water quality. Dry retention basins are not as efficient or as effective in improving water quality as extended dry or wet retention basins, but dry retention basins are generally less costly to design and maintain. The decision to use dry retention or extended dry or wet retention basins should consider all these factors.

Optimally, such measures should be considered in the planning process (discussed previously). However, they can also be implemented later in the land development

process (e g , site review or public facilities requirements stage)

If a flood control authority is responsible for a portion of the MS4, the applicant should take the lead in coordinating efforts to incorporate pollutant reduction considerations in flood control projects EPA recommends the use of Memoranda of Agreement and Memoranda of Understanding to clarify roles and responsibilities between two or more political entities.

6.3.1.4 Municipal Waste Facilities

Applicants must describe programs that identify measures to monitor and reduce pollutants in storm water discharges from facilities that handle municipal waste, including sewage sludge.

> §122.26(d)(2)(iv)(A)(5) [The application must include a] description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges

The first step is to identify facilities that handle municipal waste and summarize their operations The types of facilities that should be included are

- Active or closed municipal waste landfills,
- Publicly owned treatment works, including water and wastewater treatment plants,
- Incinerators,
- Municipal solid waste transfer facilities
- Land application sites,
- Uncontrolled sanitary landfills,
- Maintenance and storage yards for waste transportation fleets and equipment,
- Sites for disposing or treating sludge from municipal treatment works; and
- Other treatment, storage, or disposal facilities for municipal waste.

Applicants may combine this part of the proposed management program with the program established under §122 26(d)(2)(iv)(C), which sets standards for monitoring and controlling pollutants from similar types of solid waste facilities (e.g , those with hazardous wastes, or subject to the requirements of SARA Title III—Section 313 of the Emergency Protection and Community Right-to-Know Act). Monitoring should include all the parameters listed in §122 26(d)(2)(iv)(C) and any additional parameters listed in an effluent guideline. Procedures to evaluate, inspect, monitor, and establish control measures for municipal waste sites over the term of the NPDES permit should be described For example, after one year of monitoring each waste handling facility category listed above, the municipality may have collected enough data to decide which facilities or types of facilities should receive a higher priority for pollutant reduction More attention could then be focused on the high-priority sites

6.3.1.5 Pesticides, Herbicides, and Fertilizers

The proposed management program must include a description of procedures to reduce the contribution of pollutants associated with pesticides, herbicides, and fertilizers discharged to the MS4.

§122 26(d)(2)(iv)(A)(6) [The application must include a] description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities

The proposed program should include educational measures for the public and commercial applicators, and should include integrated pest management measures that rely on non-chemical solutions to pest control. The program should also describe how educational materials will be developed and distributed Applicants are encouraged to consider providing information for the collection and proper disposal of unused pesticides, herbicides, and fertilizers, or to establish their own program An effective and safe program would include

- Development of an inventory of products that may be accepted under the program, and collection of the Material Safety Data Sheets (MSDSs) for these products,
- Identification of transportation, storage, and disposal requirements,
- A shelf-life program to dispose of expired products,
- Applicator training or certification (the pretreatment program may be helpful as a source of industry-specific information or as a model approach for obtaining and tracking information on chemical applicators and distributors), and
- Safety training

Any certification/training program for the collection and disposal of pesticides, herbicides, and fertilizers must be in compliance with Federal, State, and local laws such as the Resource Conservation and Recovery Act, the Federal Insecticide, Fungicide, and Rodenticide Act, the Department of Transportation's hazardous materials regulations, and State and local ordinances.

In addition, applicants must include a discussion of controls for the application of pesticides, herbicides, and fertilizers in public-rights-of-way and at municipal facilities Planting low-maintenance vegetation, such as perennial ground covers, reduces pesticide and herbicide use. Native vegetation is often preferable because there is less need to apply fertilizers and herbicides, and to perform other forms of maintenance, such as mowing (Horner, 1988).

If herbicides are used, a herbicide-use plan must be proposed as part of the storm water management program The plan might include

- A list of selected herbicides and their specific uses,
- Information about the formulations of various products, including how to recognize the chemical constituents from the label, and directions and precautions for applicators that explain if products should be diluted, mixed, or only used alone,
- Application methods and estimated quantities to be used,
- Equipment use and maintenance,
- Training in safe use, storage, and disposal of pesticides (safety requirements for individual products are listed on the products' MSDSs),
- Inspection and monitoring procedures, and

- Recordkeeping and public notice procedures

6.3.2 Construction Sites

As specified in §122 26(d)(2)(iv)(D), applicants must describe proposed regulatory programs to reduce pollutants in storm water runoff from construction sites to the MS4.

> **§122.26(d)(2)(iv)(D) [The application must include a] description of a program to implement and maintain structural and nonstructural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system**

This part of the proposed management program must address

- Implementation of BMPs,
- Procedures for reviewing site plans to ensure that they are consistent with local sediment and erosion control plans,
- Inspection of construction sites; and
- Enforcement measures and educational activities for construction site developers and operators

EPA encourages municipalities to (1) coordinate requirements to reduce pollutants in construction site runoff with management programs to reduce pollutants from new development, and (2) maintain, to the degree possible, pre-construction hydrologic conditions (Section 6 3 1 1) Applicants are encouraged to describe these two proposed management program components together Implementation of this program component will rely on the establishment and maintenance of both structural and nonstructural BMPs This requirement extends to all construction activity within the municipality

All construction sites, regardless of size, must be addressed by the municipality To begin to identify these sites, the applicant should obtain lists of construction site operators that are covered by general or individual storm water NPDES permits from the NPDES permitting authority However, **construction sites not covered by a storm water discharge permit also need to be addressed by the municipality. The best way to identify these construction sites and implement an effective BMP program to reduce pollutants in their runoff is through the site planning process (see Section 6.3.2.1).**

The BMPs envisioned for construction site runoff are generally well established technologies and practices They rely predominantly on erosion and sediment controls and other measures applicable to construction sites (e.g , control of solid wastes, and prohibitions on discharging concrete truck washing runoff into storm drains) The technologies proposed should be referenced, and a description of when and how the controls will be used should be included Municipality-specific technical guidance for construction site operators, such as handbooks and inspection checklists, are examples of suitable reference sources If an applicant chooses to develop such handbooks and checklists, they should be referenced and described in the application

The major requirements of this program component include

- Site planning that considers the potential impacts on water quality,
- Nonstructural and structural best management practices,
- Procedures that consider physical site characteristics when identifying priorities for inspection and enforcement, and
- Educational and training measures for construction site operators

Each of these requirements, and the reasons that they are important elements of a proposed storm water management program, is described in more detail below

6.3.2.1 Site Planning

Sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times those of forest lands. Over a short period, construction sites can contribute more sediment to streams than had been deposited over several decades Runoff from construction sites can also include other pollutants such as phosphorus and nitrogen from fertilizer, pesticides, petroleum derivatives, construction chemicals, and solid wastes

To address these problems, the proposed management program should describe procedures for site planning that consider potential water quality impacts

> §122 26(d)(2)(iv)(D)(1) [The program for construction sites must include a] description of procedures for site planning which incorporate consideration of potential water quality impacts

The objective is for the municipality and the developer to address storm water discharges from construction activity early in the project design process so that potential water quality impacts can be eliminated or minimized and consequences to the aquatic environment assessed Nonstructural approaches to minimize the generation of runoff from the construction site will also need to be considered These measures may include phasing development to coincide with seasonal dry periods, minimizing areas that are cleared and graded to only the portion of the site that is necessary for construction, exposing areas for the briefest period possible, and stabilizing and reseeding disturbed areas rapidly after construction activity is completed

It is often easier and more effective to incorporate storm water quality controls during the site plan review process or earlier The process typically culminates with the developer of the construction site submitting detailed engineering plans to the municipality for review and approval

Upon completion of the site plan review stage, the developer and the municipality have invested considerable time and money into the project If storm water quality issues are considered only after significant detailed engineering has gone into the project, municipal site reviewers may only address minor drainage issues. In recent years, however, many municipalities have developed separate teams of site inspectors to implement erosion and sediment control measures in the field. In these municipalities, site inspectors should be part of the site review team (if they are not already) in order to incorporate their expertise on the appropriate erosion and sediment controls for the given circumstances

The above discussion reinforces the importance of site planning, as described in the section on site planning for new development (Section 6.3 1) In general, the sooner planners consider storm water quality issues, the better the opportunity for efficient and effective pollutant reduction In some cases storm water issues should be considered in the conceptual stage of planning (e g , as a planning or zoning function)

Some municipalities include a final step in the planning process that requires a developer to provide a far greater level of design detail than earlier conceptual design approvals This step may be required as a condition of the final approval for certain zoning categories Municipalities with such a step in the development process can consider potential storm water quality issues in detail at this stage Municipalities that do not currently require such detailed plans should consider adopting this procedure as part of their storm water management program

6.3.2.2 Nonstructural and Structural BMPs for Construction Activities

This component of the proposed management program should describe requirements for nonstructural and structural BMPs that operators of construction activities that discharge to MS4s must meet

> **§122.26(d)(2)(iv)(D)(2)** [The program for construction sites must include a] description of requirements for nonstructural and structural best management practices

As indicated above, applicants must propose site review and approval procedures that address sediment and erosion controls, storm water management, and other appropriate measures Approvals should be clearly tied to commitments to implement structural and nonstructural BMPs during the construction process Appropriate structural and nonstructural control requirements will vary by project Project type, size, and duration, as well as soil composition, site slope, and proximity to sensitive receiving waters will determine the appropriate structural and nonstructural BMPs Municipalities should acquire the authority to require operators to install and maintain applicable erosion and sediment control plans Exhibit 6-2 summarizes common construction-site BMPs

A description of the local erosion and sediment control law or ordinance is needed to satisfy this program requirement The description should include information that links the enforcement of the law or ordinance to the legal authority of the applicant, as discussed in Section 3 of this manual

While many municipalities have erosion and sediment control ordinances in place, their effectiveness is often limited because they are not adequately implemented and enforced Examples include silt fencing that is not maintained or excavated soils that are placed directly on top of the silt fencing Therefore, construction sites covered under NPDES permit regulations must indicate whether they are in compliance with State and local sediment and erosion control plans Site inspections are expected to be the primary enforcement mechanism by which erosion and sediment controls are maintained

To ensure that developers are in compliance with erosion and sediment control plans, applicants may wish to consider expanding the use of performance bonds. This approach might depart from a traditional site bonding approach For example, the size of bonds could be based on the amount of earth disturbed, the slope of the site, changes in grades, soil type, proximity to surface waters, sensitivity of surrounding area, and other relevant factors. In addition, the bond could clearly specify the storm water quality controls that must be included in the development. Appropriate maintenance and site cleanup could be tied to the bond-release process

6.3.2 3 Site Inspections and Enforcement of Controls For Construction Sites

Storm water BMPs associated with construction activities are highly susceptible to damage due to the intensity of activities commonly associated with construction Consequently, inspections are crucial to the effective operation of storm water BMPs Therefore, the proposed management program should describe construction site inspection and enforcement procedures The procedures should be flexible so that they can be tailored to specific construction activities and physical characteristics of the construction site

> **§122 26(d)(2)(iv)(D)(3)** [The program for construction sites must include a] description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality

Exhibit 6-2
Construction Site Controls and Their Applicability

Control Type	Slope Protection	Waterway Protection	Surface Drainage	Enclosed Drainage	Large Flat Areas	Borrow Areas	Adjacent Properties
Non-structural (cover)							
temporary seeding	●		●		●	●	●
mulching & matting	●				●	●	
plastic covering	●					●	
retain natural vegetation	●	●	●	●	●	●	●
buffer zones	●	●	●	●	●	●	●
seeding & planting	●				●	●	
sodding	●		●		●	●	●
topsoiling					●	●	
Structural-erosion control							
gravel entry/truck wash			●		●		
road stabilization			●				
dust control							
pipe slope drains					●	●	●
subsurface drains	●						
surface roughening	●				●		
gradient terraces	●					●	
bioengineered slopes	●					●	
level spreader			●				
interceptor dikes/swales	●					●	●
check dams			●				●
outlet protection		●	●				
riprap	●	●	●				
vegetative streambank stabilization		●					
bioengineered streambank stabilization		●					
structural streambank stabilization		●					
Structural-sediment retention							
filter fence		●		●			●
gravel filter berm	●	●			●		●
storm drain inlet protection	●			●			●
sediment trap or sump		●	●		●	●	●
sediment pond or basin		●	●	●	●	●	●

Source: Modified from WDOE *Public Review Draft - Stormwater Management Manual for the Puget* [illegible] Washington State Department of Ecology, Publication #90-73 June 1991

Effective inspection and enforcement requires adequate staff, systematic inspection procedures, penalties to deter infractions, and intervention by the municipal authority to correct violations. Enforcement mechanisms, such as the ability to require additional storm water controls, administrative penalties (e.g., stop work orders) and injunctive relief (via citizen suits) also must be described. In addition, the applicant should describe who has the authority to require compliance.

Proposed procedures for inspecting construction sites may include minimum frequencies and an inspector's checklist. For example, the State of Delaware requires a minimum of one inspection every two weeks for sites over 50,000 square feet.

The proposed program should also specify the minimum number of inspectors that will be employed during the permit term and how they will be trained. For example, some erosion and sediment control programs require that certified private inspectors be used. In such case, procedures for inspector training and certification must also be described.

In formulating procedures to identify priorities for inspecting sites and enforcing control measures, applicants are encouraged to begin early in the process (i.e., at the site planning stage, as discussed previously) and continue throughout all ground disturbing activities. Once the nature of the construction activity has been established or perhaps modified during the site plan review process, the physical site constraints can be evaluated so that effective controls can be implemented.

For example, if the controls specified in the site plan prove to be ineffective, or if changes occur that were not anticipated during the planning process, site inspection and enforcement mechanisms can be required to mitigate the potential for pollutants to enter a downstream MS4. In this instance, a perimeter barrier, such as a temporary diversion dike, could be used to divert the concentrated runoff to a pipe slope drain terminating with a level spreader. The spreader would dissipate the erosive velocity of the runoff and release it into an undisturbed area beyond the limits of the clearing and grading at the toe of the slope.

The proximity and sensitivity of the receiving water to which the construction site discharges is an important consideration. For construction sites that discharge to receiving waters that do not support their designated use or other waters of special concern, additional construction site controls are probably warranted and should be strongly considered. These receiving waters are identified in the Part 1 municipal NPDES storm water permit application [§122.26(d)(1)(i)(C)].

6.3.2.4 Educational Measures for Construction Site Operators

Construction site operators often need training and education about the sources, control, and impacts of pollutants in runoff from construction sites (see Virginia, 1988). Therefore, applicants must describe examples of informational materials and activities to be used in education programs.

> §122.26(d)(2)(iv)(D)(4). [The program for construction sites must include a] description of appropriate educational and training measures for construction site operators.

Implementation and enforcement of erosion and sediment controls have historically been major problems even with many programs that may be otherwise exemplary. Therefore, technical information on how to incorporate storm water management with erosion and sediment control and other BMP training courses are recommended for municipal employees and construction site operators. Training on the available alternatives will help operators recognize and correct problems promptly. *Tools for such training* include videos, workshops, seminars, and demonstrations or field trips

An acceptable program must include a training program, which should be supplemented by a certification program for all construction site operators (contractors and developers) plan reviewers, and inspectors that work on sites that discharge to a MS4 For example, one NPDES State has a certification program based on adequate training and minimum-competency level testing of all private individuals involved in the preparation and implementation of erosion and sediment control plans

6.3.3 Program to Control Pollutants in Storm Water Discharges from Waste Handling Sites and from Industrial Facilities

> §122.26(d)(2)(iv)(C) [The application must include a] description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system

The storm water regulations envision that NPDES permitting authorities and municipal operators will cooperate to develop programs to monitor and control pollutants in storm water discharges to municipal systems from various sites that handle waste and certain industrial facilities

Operators responsible for storm water discharges associated with industrial activity must obtain NPDES permits from EPA or an authorized NPDES State These industrial storm water permits will establish requirements such as controls, practices, and monitoring for storm water discharges from the industrial facilities to the MS4 The industrial storm water permits will also provide a basis for enforcement actions directly against the industrial owner or operator

NPDES permits for MS4s will establish responsibilities for municipal system operators to control pollutants from industrial storm water discharged through their system. Proposed storm water management programs must address the reduction of pollutants in storm water discharges from municipal landfills; hazardous waste treatment, storage and disposal facilities; facilities subject to SARA Title III; and other priority industrial facilities, as determined by the applicant. Municipalities should consider the information gathered for the Part 1 application and other parts of the Part 2 application (particularly the Source Identification and Characterization Data components) when prioritizing storm water discharges from these sites. In addition, Appendix B contains a list of pollutants commonly associated with various industries.

In the Part 2 application, the Source Identification component (see Section 4 of this guidance manual) requires the applicant to provide an inventory of pollutant sources, organized by watershed. This inventory identifies and describes the products and services of each industrial facility that may discharge storm water to the MS4. The *Source Identification* component suggests applicants use standard industrial classification (SIC) codes for this description. EPA strongly recommends this information be used to identify priority waste handling sites and industrial facilities. A similar technique could be developed for sites that do not meet the regulatory definition of "storm water discharge associated with industrial activity" (i.e. not included in the *Source Identification* and *Discharge Characterization* components), but are identified as a high priority under the proposed management program. Applicants can obtain information on how SIC codes are used to describe the industrial facilities located within their jurisdictions from their NPDES permitting authority

Characterization data should also be evaluated. Applicants should analyze quantitative data from representative outfalls to establish a monitoring and control program.

An integral part of this requirement is the adequacy of the applicant's legal authority. If a municipality believes that a discharge of storm water associated with industrial activity violates the industrial facility's NPDES permit limits, but the municipality does not have authority over the discharge, the municipality should contact the NPDES permitting authority for appropriate action. Examples of possible actions by the NPDES permitting authority are:

- For a facility that already has a NPDES individual permit, the permit may be reopened and further controls imposed,
- For a facility covered by a NPDES general permit, an individual site-specific permit application may be required, or
- For a facility not covered by a NPDES storm water permit, a permit may be required

The municipality is ultimately responsible for discharges from their MS4. Consequently, the proposed storm water management program should describe how the municipality will help EPA and authorized NPDES States

- Identify priority industries discharging to their systems,
- Review and evaluate storm water pollution prevention plans and other procedures that industrial facilities must develop under general or individual permits;
- Establish and implement BMPs to reduce pollutants from these industrial facilities (or require industry to implement them), and
- Inspect and monitor industrial facilities to verify that the industries discharging storm water to the municipal systems are in compliance with their NPDES storm water permit, if required

6.3.3.1 Identifying Priorities

Proposed management programs must clearly identify priority industrial facilities.

> **§122.26(d)(2)(iv)(C)(1).** [The applicant must] identify priorities and procedures for inspections and establishing and implementing control measures for such discharges

This section discusses how applicants might identify priority facilities Section 6.3.3.2 discusses how municipalities might develop procedures for inspections and implementation of control measures

At a minimum, priority facilities include:

- Operating and closed municipal landfills;
- Hazardous waste treatment, disposal or recovery facilities, and
- Facilities subject to SARA Title III

Municipalities must identify these and other priority industrial facilities and describe the criteria used to identify them For example, information from the Toxics Release Inventory is one source a municipality could use to identify industrial facilities subject to SARA Title III. Other sources may include CWA Section 205 or 208 use-attainability studies, other studies that indicate a site-specific beneficial use impairment immediately downstream of a storm water outfall, or records of industrial pretreatment programs or other permit programs that identify facilities that may be the source of a use impairment or

a major contribution of pollutants The program should also describe procedures for modifying the inventory of priority industries based on additional evaluation that occurs throughout the permit term

Applicants may initially focus their implementation efforts on known pollution sources The municipality may have previously identified these sources, or they may be identified through existing information compiled during the permit application process However, the initial management program implementation strategy should be based on information gathered while completing the *Adequate Legal Authority, Source Identification,* and *Discharge Characterization* sections of the permit application (See Chapters 3, 4, and 5, respectively)

During the term of the permit, as additional information becomes available, the municipality should target and set priorities for other program elements that emerge. For example, if the municipality has incomplete characterization data about waste handling sites identified in this program component because the inventory of dischargers to the MS4 has not been completed, the municipality could propose to direct monitoring programs to those areas Upon acquiring sufficient characterization data, the priority of the sites discharging to these portions of the MS4 can be either determined or modified

As noted above, when identifying priority sites, applicants must consider all the facilities listed in §122 26(d)(2)(iv)(C)(*1*). When municipalities develop criteria for identifying additional priority industrial facilities, they are advised to consider, at a minimum:

- The type of industrial activity (SIC codes can help characterize the type of industrial activity),
- The use and management of chemicals or raw products at the facility and the likelihood that storm water discharge from the site will be contaminated; and
- The size and location of the facility in relation to sensitive watersheds

6.3.3.2 Developing Procedures

This program component should describe the specific steps that the municipality will take if it identifies a waste handling site or priority industrial facility when preparing the Part 2 application or during the permit term [§122.26(d)(2)(iv)(C)(*1*), printed in the box above]. The proposed management program must include procedures for inspecting priority industrial sites. The results of inspection may be used as a basis for requiring storm water management controls and enhanced pollution prevention measures. It should also establish an inspection schedule for each priority facility at the time it is identified

Applicants may want to consider establishing prior notification procedures The applicant will need to evaluate the legal authority it has over priority facilities to determine if prior notification is required This is another example of how EPA expects the different components of the application process to be linked In this instance, the Adequate Legal Authority section is tied directly to the prior notification procedure of the inspection and evaluation component of the proposed management plan

Applicants also should consider developing inspection documents such as standard forms or checklists for recording observations Forms and checklists can be used to identify high risk areas of priority facilities and to make comparisons among sites When characterization data or baseline estimates are factored into the evaluation process, the effectiveness of pollution prevention activities at a particular site could be quantified and compared to similar sites Other procedures that applicants should describe to effectively incorporate inspections as well as establish and implement control measures for these types of discharges can be derived from monitoring data

Applicants also should describe a procedure for conducting follow-up inspections, where necessary, as part of this program component For example, follow-up inspections might be needed to verify the installation of a specific control or implementation of a practice specified in a negotiated agreement between the municipality and the industrial site A system-wide approach to establishing priorities for inspection procedures is recommended. The system-wide approach should begin with the evaluation of existing information, followed by the identification and evaluation of new information during the permit term. Therefore, applicants should link these procedures with information from the *Source Identification* and *Discharge Characterization* components

6.3.3.3 Establishing and Implementing Controls

A municipality must consider if it should place more stringent controls on discharges associated with industrial activity than are required in an industrial facility's existing NPDES storm water permit [§122 26(d)(2)(iv)(C)(1) printed in box above] Usually, the municipality will not need to impose controls beyond those required in the industrial facility's NPDES storm water permit (for more information on appropriate controls, refer to *Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices*, EPA 832-R-92-006, September, 1992)

However, nothing in the Federal regulations would prohibit the municipality from requiring additional controls beyond the permit requirements for industrial activities For this reason, EPA recommends that municipal applicants incorporate a provision in the proposed storm water management program that allows the municipality to require priority industrial facilities to implement the controls necessary for the municipality to meet its permit responsibilities

Finally, the applicant should suggest procedures for requiring pollutant control measures in runoff from priority industrial facilities Applicants should provide information to the industrial facilities that discharge to the MS4s and industry-specific guidance on appropriate control measures that industries discharging to their systems should follow (WDOE, 1991).

Priority industrial facilities should focus on controlling activities such as the use, storage, and handling of toxic chemicals Standard methods for implementing control measures at different types of facilities should be described To facilitate this, municipalities should obtain copies of the pollution prevention plans developed by industrial permittees Control measures that the municipality may suggest include preventing exposure of pollutant sources to precipitation, on-site pretreatment, and oil/water separators Applicants should provide a schedule for setting up this program component at priority industrial facilities. The schedule should include educational services for industrial site operators and technical BMP guidance, training courses, videos, workshops, and seminars for plan reviewers, inspectors, contractors, and developers

6.3.3.4 Inspection and Monitoring

The proposed management program should describe the inspection procedures that will be followed Storm water inspections can be coupled with inspections for other purposes (e.g., pretreatment programs, fire and safety) Proposed management programs should address minimum frequency for routine inspections. For example, how often, how much of the site, and how long an inspection may take are appropriate to explain in this proposed management program component Applicants should also describe procedures for conducting inspections and provide an inspector's checklist

In addition these inspection procedures should identify the minimum number of inspectors that will be employed and describe

the programs to train them For example, if the number of inspectors is expected to increase over the term of the permit, it should be noted in the proposed management program. Also, if storm water inspections are combined with other program inspections, means of cross-training inspectors and coordinating schedules should be outlined

Municipalities are urged to evaluate pollution prevention plans and discharge monitoring data collected by the industrial facility to ensure that the facility is in compliance with its NPDES storm water permit Site inspections should include (1) an evaluation of the pollution prevention plan and any other pertinent documents, and (2) an on-site visual inspection of the facility to evaluate the potential for discharges of contaminated storm water from the site and to assess the effectiveness of the pollution prevention plan. A municipality could begin the inspection process with information from the facility's notification to the municipality, which should have been submitted by May 15, 1991. Industrial facilities must also submit an individual NPDES permit application, participate in a group storm water permit application, or file a Notice of Intent (NOI) to be covered by a general permit to the NPDES permitting authority Section 308 of the CWA provides the legal authority for any individual (including a municipality) to obtain information from the NPDES permitting authority

The proposed management program also must include a description of a monitoring program for storm water discharges associated with industrial facilities [§122.26(d)(2)(iv)(C)(2)]

The monitoring program should describe the framework and rationale for selecting monitoring sites Sites that may be appropriate for monitoring include locations with several upstream industrial facilities, industrial facilities that are representative of a significant number of similar facilities, and priority industrial sites with significant potential for high levels of pollutants in their storm water discharges The description of the proposed

§122.26(d)(2)(iv)(C)(2) [The application must describe] a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C) of this section, to be implemented during the term of the permit, including the submission of qualitative data on the following constituents any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD_5, TSS, total phosphorus, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under 40 CFR 122.21(g)(7)(iii) and (iv).

monitoring program should address how the monitoring data will be used and what the frequency of the monitoring will be.

Identifying who will actually conduct the monitoring (e g , industry or municipality) is appropriate to include in the program description. Linking this element of the monitoring program to the Adequate Legal Authority section of the permit application is vital The legal authority to require monitoring should prescribe the specific monitoring protocols required elsewhere in the regulation [§122 26(d)(2)(i)(F)]. Applicants should describe proposed procedures for monitoring industrial facilities, including methods for determining parameters to be sampled throughout the term of the permit **At a minimum, parameters that must be considered for monitoring include**

- Any pollutant limited in effluent limitations guidelines for the subcategory of industry;
- Any pollutant that is controlled in a NPDES permit for the process discharge from an industrial site,
- Oil and grease, COD, pH, BOD_5, TSS, total phosphorus, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen; and

- Certain pollutant(s) known or suspected to be in the discharge, based on §122.21(g)(7)(iii) and (iv) (Section 5.3).

If a municipality believes (based on the results of monitoring and inspections) that an industrial facility is not meeting its NPDES permit requirements, the municipality should petition the NPDES authority to either require the facility to change its pollution prevention plan or institute an enforcement action. Municipalities may also file citizen suits under CWA Section 505 to enforce the conditions of the NPDES permit.

6.4 STRUCTURAL CONTROLS

6.4.1 Description of Structural Controls

Applicants are required to identify the location of major structural controls for storm water (retention basins, detention basins, major infiltration devices, etc.) in Part 1 of the application [§122.26(d)(1)(iii)(B)(5)]. In Part 2, applicants must describe additional controls that they plan to implement [§122.26(d)(2)(iv)]. The controls must address the activities described in Section 6.3. In addition, the applicant must describe maintenance procedures [§122.26(d)(2)(iv)(A)(1), discussed in Section 6.4.2]. Later, when the municipality submits its annual report, it will have to report on its progress in implementing these controls [§122.42(c)(1), discussed in Section 7.3 of this guidance].

The matrix in Exhibit 6-3 provides information on commonly used structural and source control BMPs. Structural practices to control urban storm water runoff rely on three basic mechanisms: **detention, infiltration,** and filtration. More detailed technical information about source controls (particularly in the selection of structural BMPs) is available in the technical BMP manuals (MWCOG, 1991, Schueler, 1987, WDOE 1991; and EPA 1990c). The following summary of structural and source control BMPs draws extensively from those manuals.

Applicants should note that CWA Section 404 permits may be required for some structural controls, including any control projects that involve the discharge of dredged or fill material into waters of the United States, including wetlands. States may also require permits that address water quality and quantity. To the extent possible, municipalities should avoid locating structural controls in natural wetlands. Before considering siting of controls in a natural wetland, the municipality should demonstrate that it is not possible or practicable to construct them in sites that do not contain natural wetlands, and that the use of other nonstructural or source controls are not practicable or as effective. In addition, impacts to wetlands should be minimized by identifying those wetlands that are severely degraded or that depend on runoff as the primary water source. Moreover, natural wetlands should only be used in conjunction with other practices, so that the wetland serves a "final polishing" function (usually targeting reduction of primary nutrients and sediments). Finally, practices should be used that settle solids, regulate flow, and remove contaminants prior to discharging storm water into a wetland.

Another concern for siting controls is the possible adverse effect that infiltration and detention controls may have on ground water. This issue is addressed in more detail in Section 7.2.3.

Exhibit 6-3
Structural Controls Matrix

CONTROL AND MAINTENANCE REQUIREMENTS	ADVANTAGES	DISADVANTAGES
Extended Detention Dry Basin • Periodic mowing • Regular debris removal • Sediment removal annually	• Provides peak flow control • Possible to provide good particulates removal • Can serve large development • Requires less capital cost and land area when compared to wet basin • Does not usually release warmed or oxygen-depleted water downstream • Protects against downstream channel erosion • Can create valuable wetland and meadow habitat when properly landscaped	• Low removal rates for soluble pollutants • Generally not feasible for drainage areas less than 10 acres • If not adequately maintained, can become a nuisance; (becomes unsightly, breeds mosquitos, and creates undesirable odors) • Periodic mowing and maintenance can be detrimental to nesting birds or other animals inhabiting the area
Vegetative Filter Strip • Inspection • Fertilizer use if necessary to maintain stable vegetation	• Low maintenance requirements • Can be used as part of the runoff conveyance system to provide pretreatment • Can reduce particulate pollutant levels in areas where runoff velocity is low to moderate • Enhances urban wildlife habitat diversity • Economical	• May concentrate water, significantly reducing effectiveness • Soluble pollutant removal highly variable • Limited feasibility in highly urbanized areas where runoff velocities are high and flow is concentrated • Requires periodic repair, regrading, and sediment removal to prevent channelization • Maintenance can be detrimental to nesting birds or other animals inhabiting the area • Fertilizer use can lead to higher nutrient loadings in storm water runoff
Grassed Swale • Periodic mowing • Fertilizer use if necessary to maintain stable vegetation	• Requires minimal land area • Can be used as part of the runoff conveyance system to provide pretreatment • Can provide sufficient runoff control to replace curb and gutter in single-family residential subdivisions and on highway medians • Economical and aesthetically pleasing	• Low pollutant removal rates • Leaching from culverts and fertilized lawns may actually increase the presence of trace metals and nutrients • Fertilizer use can lead to higher nutrient loadings in storm water runoff

Exhibit 6-3 (continued)
Structural Controls Matrix

CONTROL AND MAINTENANCE REQUIREMENTS	ADVANTAGES	DISADVANTAGES
Porous Pavement • Routine removal of fine particles from surface • May need weight limit of traffic imposed for protection	• Provides ground water recharge • Provides water quality control without additional consumption of land • Can provide peak flow control • High removal rates for sediment, nutrients, organic matter, and trace metals • When operating properly can replicate pre-development hydrologic conditions • Eliminates the need for storm water drainage, conveyance, and treatment systems off-site	• Requires regular maintenance • Possible risks of ground water contamination • Only feasible where soil is permeable, of sufficient depth to bedrock and water table, and gentle slopes are present • Not suitable for areas with high traffic volume or heavy vehicles • Need extensive feasibility tests, inspections, and very high level of construction workmanship • High failure rate due to clogging • Not suitable to serve large offsite pervious areas • Limited use in snowy climates where sanding and salting operations occur
Concrete Grid Pavement • Periodic mowing, if planted	• Provides peak flow control • Provides ground water recharge • Provides water quality control without additional consumption of land	• Requires regular maintenance • Not suitable for area with high traffic volume • Possible risk of contaminating ground water • Only feasible where soil is permeable, of sufficient depth to bedrock and water table, and gentle slopes are present
Filtration Basin • Periodic vacuuming and power washing	• Ability to accommodate moderately large-sized development (3-80 acres) • Flexibility to provide or not provide ground water recharge • Can provide peak volume control	• Requires pretreatment of storm water through sedimentation to prevent filter media from premature clogging

Exhibit 6-3 (continued)
Structural Controls Matrix

CONTROL AND MAINTENANCE REQUIREMENTS	ADVANTAGES	DISADVANTAGES
Wet Retention Basin • Periodic dredging, preferably from forebay area, if properly designed • Mowing of impoundment to prevent successional growth	• Provides peak flow control • Can serve large developments; most effective for large, intensively developed sites • Enhances species diversity, aesthetics, and provides recreational benefits • Little ground water discharge • Permanent pool in wet ponds helps prevent scour and resuspension of sediments • Provides moderate to high removal of both particulate and soluble pollutants	• Generally not feasible for drainage area less than 10 acres • Potential for safety and liability issues if not properly built and maintained • If not adequately maintained, can become a nuisance; (becomes unsightly, breeds mosquitos, and creates undesirable odors) • Requires considerable space, which limits use in densely urbanized areas with expensive land and property values • Not suitable for hydrologic soil groups "A" and "B" (SCS classification) • Potential for thermal discharge and oxygen depletion, which may severely impact downstream aquatic life
Extended Detention Wet Basin • Periodic dredging of sediment forebay	• Provides peak flow control • Can serve large developments; most effective for large, intensively developed sites • Enhances species diversity, aesthetics, and provides recreational benefits • Permanent pool in wet ponds helps prevent scour and resuspension of sediments • Provides better nutrient removal than traditional wet basin	• Not feasible for drainage area less than 10 acres • Potential for safety and liability issues if not properly built and maintained • If not adequately maintained, can become a nuisance; (becomes unsightly, breeds mosquitoes, and creates undesirable odors) • Requires considerable space, which limits use in densely urbanized areas with expensive land and property values • Not suitable for hydrologic soil groups "A" and "B" (SCS classification) • Potential for thermal discharge and oxygen depletion, which may severely impact downstream aquatic life

Sources Modified from MWCOG, 1991, Schueler 1987, and WDOE, 1991

6.4.1.1 Detention Controls

Detention controls temporarily store storm water runoff to control peak runoff rates and provide a reduction in pollutant concentrations by the gravitational settling of suspended solids and associated contaminants Except for incidental losses due to evaporation or percolation, essentially all the detained water is subsequently discharged to a surface water conveyance (e.g., a stream or MS4). The most common examples of detention practices are extended detention basins and wet (retention) basins

Variations on these basic detention controls include constructed storm water wetlands and multiple pond systems These types of controls also rely on detaining flows (leading to sedimentation) as the primary means of pollutant removal Recent investigations suggest that wetlands vegetation within a detention control can also reduce nutrient loads and certain other pollutants by incorporating them into plant tissue

If properly designed, detention controls can protect downstream channels by reducing the frequency of bankfull flood events and associated erosion Reduction in velocity and sediment load is also important for minimizing the adverse impacts of discharges to MS4s Detention facilities also can provide terrestrial and aquatic wildlife habitat if they are landscaped and planted appropriately

When considering detention controls, the municipality should consider the potential negative effects of downstream warming that may be caused by the shallowness of the water in the control The municipality should also consider negative impacts of detention controls, such as reduced baseflow; bacterial contamination due to waterfowl, and potential impacts to wildlife from concentrated contaminants, waterfowl diseases, and maintenance practices Safety and liability issues and nuisance factors, such as mosquitoes and odor, also should be considered. Setting detention controls in sensitive floodplains or in existing wetlands should generally be avoided. The flooding effect of impounding and detaining water is a particular concern if the upstream watershed drains more than 250 acres, because the volume of runoff and required detention times can cause inundation of upstream channels to occur.

Detention controls incorporating multiple pond systems and/or constructed storm water wetlands also treat runoff through the processes of absorption, filtration, biological uptake, volatilization, precipitation, and microbial decomposition. Recent investigations by the Metropolitan Washington Council of Governments suggest that multiple pond systems, in particular, have shown potential to provide higher and more consistent levels of treatment than traditional detention controls The redundancy afforded by the multiple pond system generally increases the reliability of the control. However, the potential concerns and drawbacks affecting retention basins also apply to these systems Many of these systems are currently being designed to include vegetative buffers and deep water areas to enhance wildlife habitat and to improve the appearance of the facility If a municipality selects one of these more innovative designs, it should recognize that periodic maintenance is necessary The effectiveness of these controls, like most controls, depends on proper operation, maintenance, and monitoring of the entire system

Wet (Retention) Basins

Wet (retention) basins are designed to maintain a permanent pool of water and temporarily store storm water runoff until it is released at a controlled rate Unlike extended detention ponds, wet basins cannot detain runoff for long times, because most of their storage capacity is needed for holding the permanent pool Enhanced designs include a forebay to trap incoming sediment where it can be easily removed A fringe wetland also can be established around the perimeter of the basin Similar to detention controls, locating

retention basins in sensitive floodplains or existing wetlands should be avoided if possible

Extended Detention Basins

Extended detention basins temporarily detain a portion of storm water runoff for 24 to 48 hours after a storm, gradually releasing the stored water through a fixed opening to allow urban pollutants to settle out. The basins normally return to a "dry" condition between storm events and do not have any permanent standing water. These basins are typically composed of two stages: an upper stage, which remains dry except during larger storms, and a lower stage, which is designed for typical storms. Pollutant removal from extended detention basins can be enhanced if they are equipped with plunge pools near the inlet, a micropool at the outlet, and an adjustable reverse-sloped pipe as the extended detention control device.

Water Quality Inlets

Water quality inlets (also referred to as catch basins) are small underground systems that, like retention basins, rely on settling to remove pollutants before discharging water to the MS4. Several designs of water quality inlets exist. In their simplest form, catch basins are single-chambered storm water inlets with the bottom lowered to provide 2 to 4 feet of additional space between the outlet pipe and the bottom of the structure for collection of trash and sediment. Some water quality inlets include a second chamber with a sand filter to provide additional removal by filtration The first chamber provides effective removal of coarse particles and helps prevent premature clogging of the filter media.

Water quality inlets may include an oil/grit separator. There are 3 basic types of oil/grit separators the spill control (SC), the coalescing plate interceptor (CPI), and a design credited to the American Petroleum Institute (API). Most of the oil/grit separators that are promoted for use in reducing hydrocarbon loads in storm water are a modification of the API design, although there are appropriate applications for all three separator designs. Oil/grit separators based on the API design consist of three chambers. The first chamber removes coarse material and debris. The second chamber provides separation of oil, grease, and gasoline from the storm water runoff; and the third chamber provides a safety relief should a blockage occur.

Recent experiences have shown that, because of their volume limitations, oil/grit separators have limited pollutant removal effectiveness. They are perhaps the best example of a structural control that is only effective with frequent maintenance. Proper disposal of the standing water, trapped sediments, and floating hydrocarbons are problems in the few locations that have been studied.

Constructed Storm Water Wetlands

Constructed storm water wetlands are a hybrid, drawing on elements of detention and retention basins. Constructed storm water wetlands are shallow pools and are often designed to simulate the pollutant removal functions of natural wetlands. Enhanced designs may include a sediment forebay, carefully contoured topography, and multiple species of wetland plants. Constructed storm water wetlands, while a promising technology for pollutant removal from storm water, may not replicate all the ecological functions of natural wetlands.

6.4.1.2 Infiltration Controls

Infiltration controls rely chiefly on absorption to treat storm water discharges. In the ideal case, storm water percolates through a porous medium and into native soils where filtration and biological action remove pollutants Typical controls of this type include infiltration trenches, infiltration basins, filtration basins, porous pavement, and concrete or block pavers. Systems that rely on soil absorption work best in deep, highly permeable soils that

are at least four feet away from the seasonal ground-water table.

The Soil Conservation Service (SCS) classifies soils into four major soil groups A-D. The soil groups are as follows:

Group A: Sand, loamy sand
Group B: Sandy loam, loam
Group C: Silt loam, sandy clay loam
Group D: Clay loam, silty clay loam, sandy clay, silty clay, and clay

Soils in Group A provide the highest infiltration rate while soils in Group D provide the lowest Suitable soils for infiltration-type controls typically fall in soil groups A and B. Other types of soils may be suitable, provided the clay content does not exceed 30 percent (clay has very low hydraulic conductivity). The clay content of soil may be determined from the SCS soil textural triangle, which can be found in many civil engineering references texts

If suitable soils are available, the widespread use of infiltration in a watershed can be useful in helping to maintain, restore, or replicate pre-development hydrology. Specific benefits of infiltration often include increased dry-weather baseflow in streams and a reduction in the frequency of bankfull floods. However, infiltration systems are not recommended unless soil conditions warrant. Also, infiltration should not be used where ground water requires protection. For example, the use of infiltration-type controls may not be appropriate in areas that recharge sole source aquifers.

Infiltration Basins

Infiltration basins are areas that intercept incoming storm water runoff and temporarily store it until it gradually infiltrates into the soil surrounding the basin. Infiltration basins should be designed to control drainage areas ranging from about 5 to 50 acres. They also should drain within 48 to 72 hours to maintain aerobic conditions favoring bacteria that aid in pollutant removal, and to ensure that the basin is ready to receive the next storm The runoff entering the basin is usually pretreated to remove coarse sediment that may clog the surface soil pores on the basin floor. Concentrated runoff may flow through a sediment trap or by sheet flow (vegetative filter strip).

Infiltration Trenches

Infiltration trenches are shallow (e.g., 2 to 10 feet deep) excavated ditches or vaults that have been backfilled with a coarse stone aggregate. The aggregate forms an underground reservoir that has approximately 40 percent void space. Storm water runoff diverted into the trench gradually infiltrates from the bottom of the trench into the subsoil and eventually into the ground water. Variations in the design of infiltration trenches include dry wells and percolation pits that are designed to control small volumes of runoff, such as the runoff from a rooftop A more complex variation is the enhanced infiltration trench, which is equipped with filter fabric or a more extensive pretreatment system to remove sediment and oil. Depending on the quality of the runoff, pretreatment may be necessary to lower the failure rate of the trench. Infiltration trenches are generally best suited for drainage areas of less than 10 acres They are particularly applicable for use on residential lots, small commercial areas, down slope from parking lots, and under drainage swales.

Grassed Swales

A grassed swale is an infiltration method that is usually used as a form of pretreatment before discharging runoff to another storm water control device (e.g., a detention basin) However, the grassed swale itself is a control that can remove significant amounts of pollutants through sediment entrainment A grassed swale is a shallow, vegetated, man-made ditch with the bottom elevation above the water table to allow runoff to infiltrate into the ground water. The vegetation helps to

prevent erosion, filters sediment, and allows for some uptake of nutrients.

Porous Pavement

Porous pavement, which is basically traditional asphalt aggregate without the fine particles, is an alternative to conventional pavement. Proper design and application of this control can reduce or eliminate the need for curbs and gutters, storm drains and sewers, and offside controls. Instead, runoff is diverted through a porous asphalt layer into an underground stone reservoir. The stored runoff gradually exfiltrates out of the stone reservoir into the subsoil. Soil considerations are important when evaluating the appropriateness of this control. Generally, grades should be gentle, and subsoil should be at least 3 feet thick (to bedrock) and moderately permeable (capable of infiltrating about one half inch per hour). Because porous pavement tends to clog with fine sediments and because it loses its effectiveness under heavy loads, its application should generally be limited to low-traffic areas (e g., overflow parking areas) and areas that are not exposed to large bearing loads caused by heavy vehicles

Concrete Grid Pavement

Concrete grid pavement has concrete blocks with regularly interdispersed void areas that are filled with pervious materials, such as gravel, sand, or grass The blocks are typically placed on a sand or gravel base. They are usually designed to provide a load-bearing surface adequate for supporting vehicles, while allowing infiltration of surface water into the underlying soil

6.4.1.3 Filtration Controls

Filtration controls treat storm water flows by using vegetation or sand to filter and settle pollutants Generally, these controls are most effective before the flows become concentrated (e g sheet flow) In certain instances, infiltration and treatment in the subsoil also may occur through the processes of absorption and adsorption After passing through the filtration media, the treated water is usually directed to a stream or MS4, although it may be evaporated or percolated into the ground Filtration controls include filter strips, grass swales, and sand filters Sand filters are particularly useful for ground water protection Applicants must consider the influence of climate when they select vegetative systems

Vegetative Filter Strips

Vegetative filter strips (also called bio-filters) are vegetated sections of land designed to accept runoff as overland sheet flow from upstream development They may adopt any natural vegetated form, from grassy meadow to small forest. The dense vegetative cover facilitates sediment reduction and pollutant removal Filter strips cannot treat high-velocity flows Therefore, these strips generally have been recommended for use in agriculture and low-density development and other situations where runoff does not tend to be concentrated Unlike grassed swales, filter strips are effective only for overland sheet flow, as opposed to concentrated flow Grading and level spreaders can be used to reduce the energy of concentrated flows and distribute the runoff evenly across the filter strip Vegetative filter strips are often used as pretreatment for other structural practices, such as infiltration trenches Leaving a buffer of natural vegetation along an urban stream valley is an example of a vegetative filter strip and also an example of a nonstructural control

Filtration Basins

Filtration basins are usually small impoundments lined with filter media, such as sand or gravel Storm water drains through the filter media and perforated pipes into the subsoil For optimal pollutant removal, recommended detention times range from 24 to 48 hours with a maximum drainage area of about 50 acres Grassed swales or other structural controls can be used to filter coarse sediments and thereby minimize clogging of the filter medium

6.4.2 Maintenance Activities

After summarizing the location of major structural storm water controls, applicants must submit a description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants.

> §122.26(d)(2)(iv)(A)(1) [The application must include a] description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers.

Typical maintenance requirements include:

- Inspection of basins and ponds after every major storm for the first few months after construction and annually thereafter,
- Mowing of grass filter strips and swales at the frequency necessary to prevent woody growth and promote dense vegetation,
- Regular removal of litter and debris from dry ponds, forebays, and water quality inlets,
- Periodic stabilization and revegetation of eroded areas,
- Periodic removal and replacement of filter media from infiltration trenches and filtration ponds,
- Deep tilling of infiltration basins to maintain infiltrative capability, and
- Frequent vacuuming or jet hosing of porous pavement or concrete grid pavements

Lack of maintenance often limits the effectiveness of storm water structural controls such as detention/retention basins and infiltration devices. Maintenance programs should address measures for catch basins and drainage channels in addition to major structural controls

The proposed program should provide for maintenance logs and identify specific maintenance activities for each class of control, such as removing sediment from retention ponds every five years, cleaning catch basins annually, and removing litter from channels twice a year. If maintenance activities are scheduled infrequently, inspections must be scheduled to ensure that the control is operating adequately. In cases where scheduled maintenance is not appropriate, maintenance should be based on inspections of the control structure or frequency of storm events If maintenance depends on the results of inspections or if it occurs infrequently, the applicant must provide an inspection schedule. The applicant should also identify the municipal department(s) responsible for the maintenance program.

Municipalities should use caution in adopting controls that do not have sufficient history of use for their performance characteristics and maintenance requirements to be adequately evaluated A good example is the oil/grit separator used on small commercial or retail sites Some municipalities have required the use of these technologies, but due to poor performance, municipalities have often rescinded the requirement. In these cases, it is not clear whether the control technology was ineffective or the maintenance program was flawed

Because maintenance is critical to successful program implementation, it must be considered throughout the term of the permit Applicants may wish to develop a matrix that identifies maintenance tasks on a timeline indicating criteria for inspection, repair, and replacement PERT charts, GANT charts, or other critical path analyses (available for personal computers) can help organize a maintenance program and schedule. For a summarized

listing of appropriate maintenance activities and schedules refer to the matrix in Exhibit 6-3.

6.4.3 Considerations for Planning and Siting Controls

The storm water management program should describe the criteria used to identify that a particular structural control is warranted and the circumstances under which it will be required. The possibilities for new control sites should be evaluated for their storm water quality control potential. Guidelines and performance standards that identify specific structural controls for new development should be proposed in the procedures for new development. From this evaluation, priorities based on the feasibility of implementing a particular control at a given location can be determined.

6.4.3.1 Use of Municipal Lands

Applicants should discuss existing major structural controls and sites that have the potential for new structural controls which could be installed on municipal lands and other major rights-of-way (e g , major roads and highways) Note that existing controls are identified in Part 1 applications [(§122 26(d) (1)(iii)(B)(5)] The location of publicly owned parks, recreational areas, and other open areas are also identified [§122 26(d)(1)(iii)(6)]

To determine what storm water quality controls are necessary for public lands and facilities, current activities and functions that may affect the quality of storm water discharges should be identified Such activities and functions include parks, trails, and other recreational land uses, road maintenance and snow management, and storage and repair yards/shops for municipal vehicles An inventory of public land uses may be necessary to help make determinations of what controls are needed An effective inventory should involve coordination among all of the local departments and agencies that have authority over the use of public lands and facilities

Opportunities for controlling storm water quality problems that are identified through the inventory process can be evaluated on a site-specific basis and included in the proposed management program

There are several benefits to the establishment of structural controls on municipal lands:

- Municipal lands often provide greater retrofit opportunities because they typically do not require additional property purchases;
- Municipal lands ensure opportunities to provide future maintenance and security in preservation of the retrofit control,
- Applicants may be able to adapt existing municipal functions (such as industrial pretreatment program implementation, fire-safety inspections, and flood-control activities) to address storm water quality concerns (Expanding their mission to address storm water concerns may be more cost-effective than initiating entirely new programs.),
- Applicants may be able to adapt functions of development on municipal lands (such as planning, zoning, and construction oversight functions), and
- After considering controls on municipal lands, the applicant will be in a better position to address the private land under its jurisdiction

As a precaution, however, applicants need to consider potential conflicts arising over the multiple use of public lands Criteria other than land ownership (e g , locating controls downstream of developed areas) also should be considered when deciding where to locate storm water runoff controls

6.4.3.2 Use of Private Lands

A municipality also may incorporate storm water quality controls into its land use plan to indicate controls that may be necessary for new development Some of the best opportunities to prevent pollution and to implement effective storm water quality controls occur during development Local governments typically play a strong role in overseeing new development and have, or can adapt, administrative infrastructure to address storm water quality concerns.

The storm water management process should begin with land use planning and zoning and continue through the development and redevelopment processes. Municipalities generally can obtain commitments from land developers more easily prior to relinquishing jurisdictional leverage over the parcel where the potential control is to be located Leverage can be achieved through plan approval or zoning changes The negotiation process for the dedication, condemnation, or other acquisition of land and the process for getting the land developer to construct or otherwise implement controls will vary dramatically among municipalities, particularly among those in different States

Source and structural controls are most cost-effective when development is planned with storm water quality controls in mind However, it is probably more appropriate for the municipality to propose a flexible plan that specifies a variety of program objectives through the development process rather than identifying a certain priority and rigid schedule Other benefits of early and flexible planning include ecological diversity, wetlands preservation, and the creation of controls that also function as amenities Comprehensive land use plans zoning ordinances, and subdivision ordinances are important mechanisms to implement these controls early in the development process Consideration of storm water quality during pre-development is one of the most effective ways to implement controls This is because the maximum flexibility (and opportunity) to incorporate BMPs exists prior to final land use decisions and construction activities (see Section 6.3 1 1)

6.4.3.3 Siting Considerations

Imperviousness

The degree of imperviousness affects the concentration of pollutants in storm water, which in turn affects the type of structural controls that may be necessary. As the imperviousness of an area increases, the runoff volume and the pollutant loading increase. Studies show that runoff from industrial areas, which generally have a high degree of imperviousness, can have a wider variety and greater concentration of pollutants than runoff from other land uses Recent studies also indicate that the degree of imperviousness can be inferred from the level of degradation in urban receiving streams (For example, see Schueler 1991 and Klien 1979) Population projections will not indicate the degree to which industrial land use will increase unless planning and zoning information is also considered

Soil Conditions

Controls designed to infiltrate storm water will be affected by site specific soil conditions For example, clay content of the soil and the antecedent moisture content (degree of soil saturation at the time of a given storm event) will strongly influence the effectiveness, and therefore the applicability, of infiltration controls for a given location

6.5 PROGRAM AND SCHEDULE TO DETECT AND REMOVE ILLICIT DISCHARGES AND IMPROPER DISPOSAL

NPDES permits for discharges from MS4s require effective detection and removal from the MS4 of illicit or improper discharges and disposal

§122 26(d)(2)(iv)(B) [The application must include a] description of a program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer

The NURP study concluded that the quality of urban runoff can be adversely impacted by illicit connections and illegal dumping. Often, large amounts of wastes, particularly used oils, are improperly disposed of in storm sewers. Elimination of these sources of pollutants would result in a dramatic improvement in the quality of storm water discharges from MS4s. Procedures to eliminate such discharges should be an important part of the proposed management program.

The regulatory requirement cited above is intended to directly implement the mandate of Section 402(p)(3)(B)(ii) of the CWA, which requires permits for MS4s to effectively prohibit non-storm water discharges into storm sewers In certain instances, the most appropriate action will be for the municipality to ensure that illicit discharges become covered by a NPDES permit However, in most cases, elimination of illicit discharges or improper dumping is the appropriate focus of this program component The quality of storm water runoff from inner-city core areas, particularly in older parts of the country, would benefit most from this component

The applicant should propose a schedule for implementing this program component throughout the initial permit term This schedule should reflect the priorities identified by the municipality during the application process and be based on the problems particular to the specific MS4

6.5.1 Prohibiting Illicit Discharges

The proposed management program must include a description of inspection procedures, orders, ordinances, and other legal authorities necessary to prevent illicit discharges to the MS4.

§122.26(d)(2)(iv)(B)(1) [The application must include a] description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program description shall address all types of illicit discharges, however the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States . . . . *[these sources are listed in the guidance].*

This proposed management program component also should describe how the prohibition on illicit discharges will be implemented and enforced. The description should include a schedule and allocation of staff and resources A direct linkage should exist between this program component and the adequate legal authority requirements for the ordinances and orders to effectively implement the prohibition of illicit discharges

While this program component is required to prohibit all types of illicit discharges, the following categories of non-storm water discharges need only be prohibited by the MS4 when they are identified by the MS4 as sources of pollutants to waters of the United States:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to separate storm sewers
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water

- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water

While EPA does not consider these flows to be innocuous, they are only regulated by the storm water program to the extent that they may be identified as significant sources of pollutants to waters of the United States under certain circumstances. If an applicant knows, for example, that landscape irrigation water from a particular site flows through and picks up pesticides or excess nutrients from fertilizer applications, there may be a reasonable potential for a storm water discharge to result in a water quality impact. In such an event, the applicant should contact the NPDES permitting authority to request that the authority order the discharger to the MS4 to obtain a separate NPDES permit (or in this case, the discharge could be controlled through the storm water management program of the MS4)

The applicant should consider the specific land use, age, and stage of development in this program component. For example, one study in an established metropolitan area found that 60 percent of automobile-related businesses had improper storm drain connections. While some of the problems discovered in this study were the result of improper plumbing or illegal connections to storm drains, the majority of the connections were approved by the municipality when they were built

For problem identification and problem-solving, a municipality may elect to implement a follow-up study that traces identified pollution incidents to their source (e.g , up the system) A variety of pollutant-tracing techniques and field screening can be used to identify illicit discharges

6.5.2 Field Screening

Part 1 of the application requires applicants to submit the results of field screening studies to evaluate the possible occurrence of illicit connections and improper dumping [§122 26(d)(1)(iv)(D)]. Dry weather flows that were encountered during the initial field screening were sampled and analyzed. The analysis was intended to provide information about illicit connections and improper dumping.

In Part 2, applicants are required to propose procedures for continued field screening during the term of the permit.

> §122 26(d)(2)(iv)(B)(2) [The application must include a] description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens

Applicants can propose to use procedures similar to those used for field screening required in Part 1 of the application or they can propose alternative procedures and techniques. The Part 1 field screening requirements are found in §122.26(d)(1)(iv)(D) and are explained in the Part 1 guidance manual

The Part 2 proposed field screening program component should describe areas of the system where the continuation of the field screening program will be conducted and the rationale for selecting these areas For example, the rationale for continuing field screening at a given location might be that a wide variation in results was obtained during the initial screens In addition, the applicant should propose field screening for a portion of any recently-identified major outfalls that were not known to the applicant when it prepared its Part 1 application, provided sampling of these outfalls is safe and practicable

The potential for illicit discharges and improper disposal is generally higher for areas of older development, areas with many automobile-related industries, and areas with significant numbers of heavy industrial facilities Therefore, in most cases applicants should include these areas in the proposed field screening program.

The description of the field screening component should provide a detailed summary of the departmental responsibility for field activities, frequency of inspections, procedures and equipment to be used, and the procedures for documenting field activities, both in the field and in the office. Generally, the Part 2 field screening program should reflect a continuously narrowing process to trace illicit and improper sources.

6.5.3 Investigation of Potential Illicit Discharges

In order to submit a comprehensive proposed management program, applicants are required to describe procedures for investigating portions of the municipal system where field screening or other information indicates a reasonable potential for illicit discharges

> §122 26(d)(2)(iv)(B)(3). [The application must include a] description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water (such procedures may include sampling procedures for constituents such as fecal coliform, fecal streptococcus, surfactants (MBAS), residual chlorine, fluorides and potassium, testing with fluorometric dyes, or conducting in storm sewer inspections where safety and other considerations allow Such description shall include the location of storm sewers that have been identified for such evaluation)

Applicants should propose criteria to identify portions of the system where follow-up investigations are appropriate For example, calculating a frequency distribution of dry weather flows at each screening site could aid in establishing criteria to identify where follow-up investigations are appropriate.

Procedures to investigate priority locations for illicit connections include inspection of the storm sewer system, use of remote-control cameras, on-site inspections and dye-testing at priority or suspect facilities, and additional discharge monitoring to pinpoint pollutant sources. In some cases, these investigations may be coordinated with pretreatment program inspections. Such approaches are summarized in Exhibit 6-4. Coordinating inspections can be a very effective use of resources. For example, portions of the sanitary sewer system that need evaluation to detect illicit discharge may already be undergoing inspection by operators of the municipal treatment plant.

A checklist should be developed for inspectors to use to detect illicit connections. The checklist should be structured to ensure a comprehensive evaluation of the problem and stipulate the use of the easiest and least expensive detection methods first

Regardless of the format in which information is compiled (e.g., table, list, text description), EPA suggests that the applicant prepare a map identifying the location of suspected problem areas. The map should be provided as part of the Part 2 application.

The proposed program component description should describe a step-by-step process to investigate, identify, and prohibit illicit discharges If field screening leads to positive tests of fecal coliform, fecal streptococcus, surfactants, residual chlorine, fluorides, or potassium, a municipality should reconsider whether any of the non-storm water discharges described in Section 6.5.1 are the source (see previous section)

Exhibit 6-4
Sample Illicit Discharge Investigation Procedures Options

Results of Initial Field Screen	Procedures for Detailed Analysis	Comments
Plumbing unidentifiable	Cameras	Effective for identifying deterioration
Uncertain use of facility	On-site inspections	May be combined with other inspections
Several facilities or complex plumbing	Dye-testing	Simple and accurate if system not interconnected
Unusual pollutants	Monitoring	Particularly useful for fingerprinting

6.5.4 Spill Response and Prevention

The proposed management program must describe procedures that the municipality will implement during the term of the permit to prevent, contain, and respond to spills that may discharge into the MS4

> §122.26(d)(2)(iv)(B)(4) [The application must include a] description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer

The municipality and the property owners (and/or operators) of sites where spills may occur need to implement procedures to prevent, contain and respond to spills One way to implement these procedures is to modify the land use planning process and ordinance enforcement Such modifications would require notification and emergency preparedness procedures for any land use activity that could lead to leaks and spills Another method is to coordinate with on-going programs in other regulated areas where detection of spills is important, such as pretreatment and hazardous materials management. The goal of a spill-prevention program is to reduce the frequency and extent of spills of hazardous materials, oils, and other materials which can cause water quality impairment. Spill-containment programs may establish minimum chemical storage and handling requirements, require users to submit prevention and control plans, and ensure site inspections The content of the descriptions that should be submitted with the Part 2 application for each of these program elements is discussed in more detail below

Spill-response programs are intended to reduce risk to the public and the environment Although these programs tend to focus on issues of public health and safety, such as exposure to toxic materials, fires, or explosions, spill-response teams should attempt to prevent or minimize contamination of surface water, ground water, and soil. Spill-response programs often require a coordinated response from a number of municipal departments (e.g., fire, police, health, and public works). Municipalities should describe how response procedures within these programs attempt to mitigate potential pollutant discharges to surface waters

For example, some industrial pretreatment programs specifically require that leaks or spills be routed to the storm sewer rather than the sanitary sewer generally to protect worker health and safety and to protect biological treatment capabilities This issue serves to reinforce the need for coordination between the various municipal programs that are related in some way to storm water.

The proposed program should identify the municipal departments responsible for implementing the program, and also should address employee training, reporting procedures, containment of spills, storage and disposal activities, documentation, and follow-up procedures Generally, the proposed program for spill response and prevention should focus on good housekeeping and materials management practices, which are discussed in more detail below.

One of the initial elements in the development of a successful spill response and prevention program is to assess the potential of various sources at a particular property to contribute pollutants to the storm water discharges from the site This assessment should inventory the land use, types of materials handled, and the location and types of materials management activities. Factors to consider when evaluating the pollution potential of runoff from various portions of a site include those that are likely to lead to the identification of specific structural or nonstructural controls to address problems

Other factors to consider are the toxicity and quantity of any chemicals used, produced, stored, or discharged from the site, the history of any NPDES permit violations from a site, history of significant leaks or spills of toxic or hazardous pollutants, and the designated uses of the receiving waters

This program element should also include a description of storm water management controls that are appropriate for the site that would control or allow for the mitigation of any leak or spill and a proposal to implement such controls. The priorities developed in the implementation proposal should reflect the nature of identified sources of pollutants at the site

The description of spill response and prevention activities should include the steps a municipality will take to prevent, and when necessary, adequately respond to spills discharged to its MS4. The MS4 might identify special training requirements for municipal employees in order to respond to spills of hazardous chemicals from a particular facility into the storm sewer system.

Sources with the greatest potential for spills to occur (or cause the most severe damage) should be identified in the proposed storm water management program If appropriate, specific materials handling procedures and storage requirements should be identified for these sources Requirements for these sources could be modeled after the Spill Prevention, Control, and Countermeasure (SPCC) Plans that are required for certain facilities under Section 311 of the CWA

Under the SPCC program, for example, personnel are trained and given responsibility for inspecting the facility for leaks and spills. These inspections include equipment and materials handling areas, which need to be investigated for evidence of, or the potential for, pollutants entering the drainage system Procedures to ensure the availability of appropriate personnel and equipment for cleaning up spills must be identified A system to ensure that appropriate corrective action has occurred in response to inadequacies identified during the inspection is also established under the program.

Not all of the SPCC program elements may be necessary for municipal applicants However, EPA recommends that the proposed storm water management program describe how the records of inspections will be maintained and made available for investigations of causal factors and program effectiveness Incidents of leaks, spills, and

improper dumping, along with other information describing the quality and quantity of storm water discharges should be included in the records Inspections and maintenance activities, such as containment berm integrity testing or the cleaning of oil/water separators should be documented and recorded in a maintenance log

6.5.5 Public Awareness and Reporting Program

Applicants must propose a management program component that promotes, publicizes, and facilitates public reporting of illicit discharges or water quality impacts associated with discharges from MS4s

> §122 26(d)(2)(iv)(B)(5) [The application must include a] description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers

Timely reporting by the public of improper disposal and illicit discharges are critical components of programs to control such sources.

To enhance public awareness, programs may include setting up a public information hotline number, educating school students, establishing community and volunteer "watchdog" groups (e g , "Adopt-a-Stream Program"), using inserts into utility bills; and newspaper, television and radio announcements to inform the public about what to look for and how to report incidents The public awareness efforts should clarify to the public that they are the ultimate beneficiaries of a successful storm water management program

6.5.6 Proper Management of Used Oil and Toxics

EPA estimates that annually, 267 million gallons of used oil, including 135 million gallons of used oil from do-it-yourself automobile oil changes, are disposed of improperly An additional 70 million gallons of used oil, most coming from service stations and repair shops, are used for road oiling (55 FR 48056, November 16, 1990). If private individuals find the proper disposal of used oil or toxic materials difficult, incidents of improper disposal increase For example, when a large fraction of service stations do not accept do-it-yourself used oil, improper disposal into the municipal storm sewer rises. Therefore, applicants are required to propose a program component that will facilitate the proper disposal of used oil and toxics from households by establishing municipally operated collection sites, or ensuring that privately-operated collection sites are available.

> §122.26(d)(2)(iv)(B)(6) [The application must include a] description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials

The proposed program should describe outreach plans to handlers of used oil and to the public, and operating plans for oil and household waste collection programs.

Examples of effective public outreach for these types of programs include dedicated municipal phone numbers (e.g , a used oil/toxic materials hotline), pamphlets, and requirements that oil retailers post the location of the nearest used oil collection facility. Programs can also inform the public about alternatives to toxic materials. Catch basin/storm sewer inlet stenciling programs can also be proposed as part of the program to increase public awareness of the connection between storm sewers and local water resources

6.5.7 Infiltration of Seepage

In order to effectively complete this portion of a proposed management plan, the applicant must describe controls to limit infiltration of seepage from municipal sanitary sewers to MS4s, if necessary.

> §122.26(d)(2)(iv)(B)(7). [The application must include a] description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary.

Raw sewage can seep from sanitary sewage collection systems through leaks and cracks in aging pipes, poorly constructed manholes and joints, and main breaks. Sewage from a leaky sanitary system can flow to storm sewers or contaminate ground water supplies. Interaction between sanitary sewers and separate storm sewers may occur at manholes and where sanitary sewer laterals and storm sewer trenches cross. Separate storm sewers and sanitary sewers may share the same trench, which is generally filled with very porous material such as gravel.

One indication of seepage from a sewage collection system may be infiltration of water. Often, the rate of exfiltration (seepage) from sanitary collection systems is significantly greater than the rate of infiltration into the system. An EPA study on sewer exfiltration found significant ratios of the rate of exfiltration of sewage to the rate of infiltration of ground water or storm water into sanitary sewers. Field and laboratory results found this ratio to vary between 1.5 to 1 and 14 to 1.

In some cases, preventive maintenance surveys or on-going infiltration and inflow (I&I) programs to determine where water is entering a sanitary sewer system may be modified to locate the source and fate of exfiltration from the system

Identifying infiltration of seepage into a MS4 is a good example of the need for various municipal functions to be effectively coordinated. Proposed storm water management programs might discuss how personnel responsible for inspections of the sanitary sewer system could inspect for sources of exfiltration during I&I inspections, and pass any findings to personnel responsible for maintaining the MS4. If seepage is believed to be a problem, a coordinated effort with the maintenance department of the municipal sanitary sewer system is recommended.

The proposed storm water management program also should include provisions to address the discovery of previously unknown problems. There should be procedures to enact a coordinated program between the operators of the storm sewer and sanitary sewer (which in many cases will be within the same municipal agency or department).

EPA recommends that the proposed storm water management program describe controls that will be used to address seepage from malfunctioning septic systems in areas not served by a sewage treatment works. Malfunctioning septic systems may lead to more significant surface runoff pollution problems than ground water problems. A malfunctioning septic system is less likely to cause ground water contamination where an impervious bacterial mat in the soil retards the downward movement of wastewater. (Poorly located septic systems that are operating properly are the greatest threat to ground water).

Surface malfunctions of septic systems are caused by clogged or impermeable soils, or when stopped up or collapsed pipes force untreated wastewater to the surface. Surface malfunctions can vary in degree from occasional damp patches on the surface to constant pooling or runoff of wastewater to a storm sewer. An improper remedy for a surface malfunction is to install a pipe or trench over soil absorption systems to route untreated overflow away from the septic

system. This results in direct discharges to drainage ditches, empty lots, or surface waters

Proper controls range from prescribing maximum intervals between tank pump-out to the installation of sand filters. Discharge from sand filters to surface waters may require a separate NPDES permit, because such discharge is not storm water.

Additional information about the most appropriate controls for use in correcting malfunctioning septic systems is probably best obtained from local or regional sources. Organizations such as extension services, soil and water conservation districts, and planning agencies may be good sources of information about methods that have been successful (and also those that have failed).

By obtaining this type of information, the applicant can determine what control techniques have been successful in correcting malfunctioning septic systems in similar types of soils The value of this approach is that the applicant will know that a certain control technique has been used to correct a malfunctioning septic system in the same types of soils that occur in the municipality. Where only part of the MS4 drainage area is served by septic systems, proposed programs should address setting and maintenance of septic systems, including draft requirements and implementation procedures.

6.6 SIGNATORY AND CERTIFICATION REQUIREMENTS

Under the Federal NPDES regulations [§122 22(a)], all NPDES permit applications (including municipal storm water permit applications) must be signed by an authorized person, as defined in the regulations Permit applications submitted by a municipality, State, Federal, or other public agency must be signed by either a principal executive officer or ranking elected official [§122 22(a)(3)] To fulfill the signatory requirements, the person signing the municipal application must provide his or her name (printed or typed), title, and date signed In addition, the applicant should provide the name, address, and telephone number of the person signing the application or another point of contact that can answer questions about the application.

In addition, §122.22(d) states that any person signing a permit application must make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

6.7 IMPLEMENTATION OF THE STORM WATER PROGRAM

EPA anticipates that municipal storm water management programs will mature over time to reflect advances in technology, additional data collection, changing conditions, program development, stage of implementation, and improvements in water quality. Therefore, applicants may emphasize different program components to reflect implementation priorities. The proposed management program should clearly identify each of the program components and include a schedule for implementation. Each component of the Part 2 application should be classified as: full implementation, phased implementation, pilot study, or feasibility analysis In annual reports on the progress of storm water management programs, municipalities must report on the status of implementing program provisions [§122 42(c)(1), or Section 7.3 of the guidance].

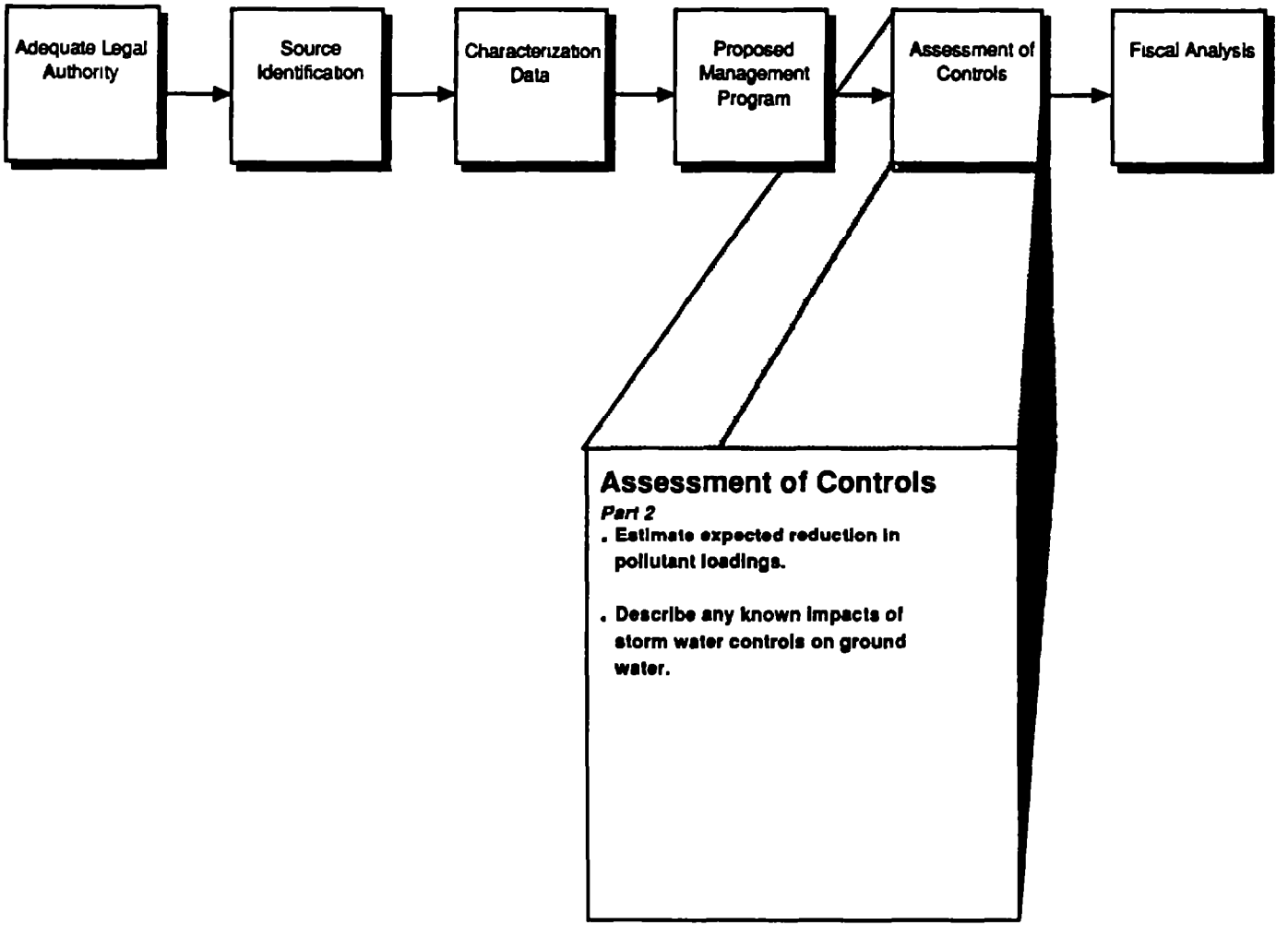
- **Full Implementation.** Fully implemented components should be proposed when the municipality is

prepared to begin or continue full implementation after its permit is issued and it expects to continue the component throughout the life of the permit. Full implementation of a program component is generally the preferred way of demonstrating the required level of control.

- **Phased Implementation.** Phased implementation should be proposed when the level of effort to implement the component will vary during the term of the permit. Phased implementation may be appropriate when additional data must be collected or technical guidance, training materials, or appropriate ordinances must be developed prior to full implementation. A schedule that includes milestones should be part of the description.

- **Pilot Studies.** Although the municipality must implement and comply with *each* provision of the municipal storm water permit, the municipality may choose to carry out pilot studies that involve limited experimental implementation of a program component. In some cases, pilot studies may be authorized by the permit. Used to evaluate the effectiveness of a program component, pilot studies may be appropriate when a technology is unproven or when data must be collected to develop operating standards or procedures. A schedule including milestones should be included in the description of a pilot study. This schedule should provide options for phased implementation of the program component, showing alternatives based on various possible results of the pilot study.

CHAPTER 7
ASSESSMENT OF CONTROLS



7.0 ASSESSMENT OF CONTROLS

7.1 BACKGROUND

Part 2 applications require that municipalities estimate the effectiveness of their proposed storm water quality management programs The regulations require an initial estimate or assessment because the performance of appropriate management controls is highly dependent on site-specific factors Program effectiveness can be estimated through both direct measurements (such as reductions in annual pollutant loads) and indirect measurements (such as measurements that demonstrate increased public awareness of storm water quality issues) At a minimum, applicants must submit estimated reductions in pollutant loads expected to result from implemented controls and describe known impacts of storm water controls on ground water

> 122 26(d)(2)(v) *Assessment of controls* [The application must include] estimated reductions in loadings of pollutants for discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program The assessment shall also identify known impacts of storm water controls on ground water

Reductions in pollutant loads due to the implementation and maintenance of structural controls provide direct measurements of the effectiveness of the storm water management program In addition, EPA encourages applicants to go beyond the minimum requirement and assess the effectiveness of their storm water management program through other direct measurements as well as indirect measurements As discussed below, indirect measurements provide surrogate estimates of qualitative factors, such as increased public awareness of storm water quality issues

Estimates of the effectiveness of the storm water management program will assist the municipality and the permit writer in:

- Determining whether the most cost-effective best management practices (BMPs) are included in the storm water management program;
- Ensuring that the storm water management program includes adequate public participation programs and intergovernmental coordination,
- Establishing on-going monitoring inspection and surveillance programs that help refine estimates of program effectiveness, and
- Developing a strategy to evaluate progress toward achieving water quality goals

7.2 ASSESSMENT OF STORM WATER MANAGEMENT PROGRAM

For some components of a proposed storm water management program, such as structural controls (e g , vegetative streambank stabilization, sediment pond or basin, etc.), the effect on pollution in storm water runoff is observable, and pollutant removal efficiencies can be estimated directly For other components, pollutant reductions may be difficult to quantify Applicants may need to use indirect estimates. For example, a program component may address source controls such as changing the behavior of citizens in the community, or improving the municipal control of industrial or commercial runoff For

components of the proposed management program where pollutant removal efficiency cannot be reasonably estimated, applicants are strongly encouraged to identify some indirect measurement that can be used to evaluate the success of the practice

7.2.1 Direct Measurements of Program Effectiveness

As discussed above, 40 CFR 122.26(d)(2)(v) requires that applicants submit estimates of expected pollutant load reductions with their Part 2 applications To supplement these estimates, applicants could provide estimates of other direct measurements of program effectiveness including

- Removal efficiencies of BMPs that control storm water quality,
- Reductions in the volume of storm water discharged,
- Reductions in event mean concentrations or
- Reductions in seasonal pollutant loadings

Such direct estimates do not have to be verified with quantitative data, but can be based on accepted engineering design practices However the applicant should describe its procedures for estimating the effectiveness of the control Applicants should present estimates of pollutant load reductions or other measurements separately for each component of the proposed management program Applicants should provide estimated reductions on a watershed basis and system-wide basis

Reductions in pollutant loadings can be estimated by first estimating the pollutant loading (based on concentrations and flows) that would result without the control measure The value should then be multiplied by the efficiency of the control expressed in terms of a fraction or percentage. Estimated control efficiencies can be obtained from published sources, such as Schueler (1987) (see bibliography in Appendix A) Note that for most control measures, the pollutant removal efficiency differs for different classes of pollutants

After the municipality's storm water management program is implemented, the municipality can work to refine its initial assessment of the program. For example, the permit will require applicants to submit estimates of event mean concentrations and estimates of annual pollutant loadings for each outfall in the system [§122.26(d)(2)(iii)(C), discussed in Section 5.5 of this guidance]. These estimates can be compared with the applicant's initial estimates

In addition, the estimated removal efficiencies can be refined through the monitoring program required by §122.26(d)(2)(iii)(D) (discussed in Section 5.6 of this guidance) To refine these estimates, the monitoring program should include measurements at the inflow and outflow points of the control Throughout the permit term, the municipality must submit refinements to its assessment or additional direct measurements of program effectiveness in its annual report (Section 7 3)

The applicant should use direct measurements of program effectiveness as it begins to assess its long-term progress in improving water quality through storm water management practices Direct measurements of program effectiveness may not provide meaningful conclusions on trends in water quality improvements for a couple of permit terms. However, applicants are encouraged to use direct measurements of program effectiveness, such as annual pollutant loads, event mean concentrations, and seasonal pollutant loadings, to begin to estimate long-term trends Several statistical methods that rely on linear regression have been developed

to model these measurements to determine if trends exist

7.2.2 Indirect Measurements of Program Effectiveness

When pollutant reductions cannot be estimated through direct measurement, appropriate indirect measurements may be used. These may include the estimated level of increased enforcement activity, increased public awareness, or reduction in number of illegal dumping incidents For example, a field screening program to identify illicit connections and improper dumping in Fort Worth, Texas, used reductions in observations of indicator pollutants as a measure of the success of the program (Fort Worth, 1988).

Other possible indirect measurements include.

- Gallons of used oil recycled,
- Amount of household hazardous waste collected,
- Number of educational brochures on storm water quality distributed;
- Number of public hearings on storm water and attendance at these hearings,
- Circulation of an annual report or periodic newsletters on progress in meeting storm water quality goals,
- Number of reports of illicit discharges or illegal dumping
- Number of spill clean-ups,
- Number of sewer inlets stenciled,
- Acres of open space,
- Number of construction and erosion and sediment control plans submitted and approved

Many of these indirect measurements will help to indicate whether the storm water management program includes adequate public participation and intergovernmental coordination.

7.2.3 Impacts of Storm Water Controls on Ground Water

Structural BMPs may have an impact on other media. Therefore, the Part 2 application requires that applicants discuss known impacts of storm water controls on ground water. Impacts should be identified separately for each component of the proposed management program. These controls may increase the quantity of ground water (such as infiltration leading to recharge), but degrade the quality of the ground water For example, in arid parts of the Southwest, imported water is often used for irrigation. This increases the quantity of ground water, but, because of high levels of nutrients and total suspended and dissolved solids in the irrigation water, also results in impacts on ground water quality

In addition, the applicant should evaluate whether structural controls for storm water impact other media, such as wetlands

7.3. ANNUAL REPORTS ON THE EFFECTIVENESS OF THE STORM WATER MANAGEMENT PROGRAM

Under §122.42(c), applicants must provide annual reports on the progress of their storm water management programs. These reports, which are due on the anniversaries of permit issuance, must include

- The status of implementing the components of the storm water management program that are required by the permit,
- Proposed changes to the storm water management programs that are established as permit conditions,

- Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application;

- Summary of data, including monitoring data, that are accumulated throughout the reporting year,

- Projected annual expenditures and budget for the year following each annual report;

- A summary describing the number and nature of enforcement actions, inspections, and public education programs; and

- Identification of water quality improvements or degradation

Applicants should refer to the specific regulatory language in §122 42(c) for a more complete discussion of annual reporting requirements

Although the Part 2 application requirements do not specifically address annual reporting requirements, applicants should consider their strategy for preparing annual reports when they complete their Part 2 applications. A municipality may develop a strategy to assess the progress of its storm water management program throughout the term of the permit in addition to providing a baseline assessment of its program. To develop the strategy, applicants should

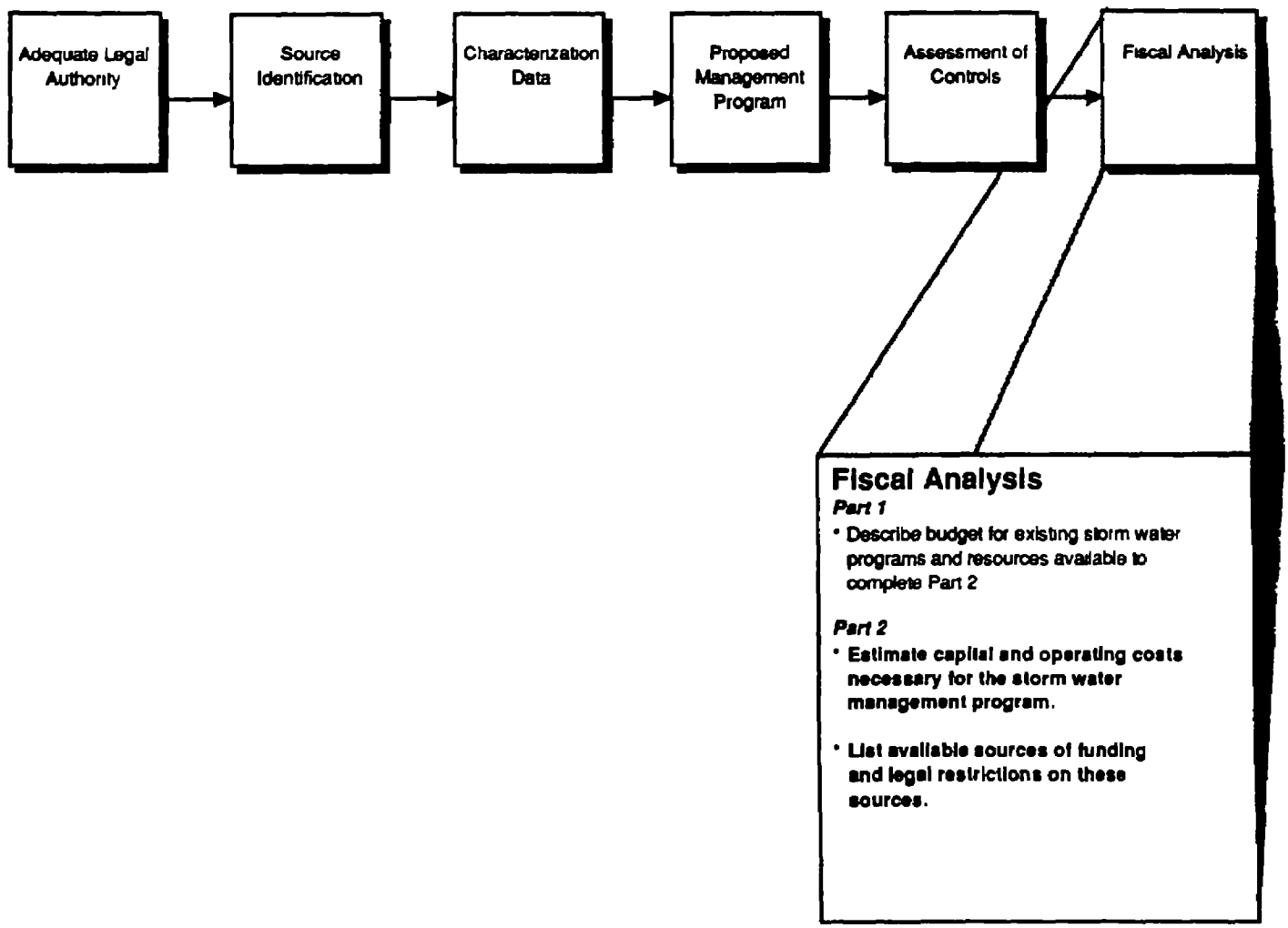
- Identify the direct or indirect measurements that will be used to track the long-term progress of the applicant's program towards achieving improvements in storm water quality (the results of this assessment would appear in the municipality's annual report);

- Discuss the role of monitoring data in substantiating or refining their assessment of the progress of their program towards established objectives and goals; and

- Discuss how future additions or revisions to the assessment measurements or strategy will be implemented by the municipality (e.g , what roles and responsibilities will participating municipal agencies and/or organizations have in this area)

It is anticipated that many municipalities will use the same criteria or measurements that were used in the baseline assessment to develop their long-term assessment strategy. This is an acceptable approach provided that the municipality delineates how their program provides for a longer term assessment of the progress of their storm water management program The municipality is encouraged to consider in advance the information requirements for annual reporting that are identified above when developing their long-term assessment strategy

CHAPTER 8
FISCAL ANALYSIS



8.0 FISCAL ANALYSIS

8.1 BACKGROUND

NPDES permits for discharges from MS4s will require municipal permittees to implement management programs, conduct long term storm water monitoring, and provide other information Because these activities will result in expense to the municipality, a fiscal analysis is required in the Part 2 application

Applicants must provide yearly cost estimates for these programs. Applicants also must provide a schedule indicating when funds will be available Examining the levels of proposed spending and funding allows the permitting authority to gauge the ability of the applicant to implement the program and predict its effectiveness The fiscal analysis also will help the permit writer determine whether the applicant has met the statutory requirement of reducing the discharge of pollutant to the MS4 to the maximum extent practicable Finally, the estimates help the applicant evaluate the feasibility and cost-effectiveness of its program A municipality must update its fiscal analysis each year for the annual report on the progress in implementing their storm water management program [40 CFR 122 42(c)(3) and (5), discussed in Section 7.3 of this guidance]

8.2 PROCEDURE FOR CONDUCTING A FISCAL ANALYSIS

Under §122 26(d)(2)(vi), each applicant must demonstrate sufficient financial resources to implement the conditions of the permit

Adequate resources may be demonstrated by performing a fiscal analysis of the estimated capital and operation and maintenance expenditures required to complete the activities required by the regulations This fiscal analysis must be performed for each fiscal year to be covered by the permit (5 years, in most cases). The analysis must describe the source of the funds used to meet the necessary expenditures, including any legal restrictions on the appropriated funds

> **§122.26(d)(2)(vi)** [The application must include] for each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2)(iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds

The following procedure is an example of a method of conducting the necessary fiscal analysis

Step 1. Identify the major tasks for each component covered by this application requirement, including

- Elements of the proposed management program,
- Estimates of seasonal loads and event mean concentrations for each major outfall covered by the permit, and
- Proposed monitoring program.

Step 2. Develop a schedule outlining when each of the tasks identified in Step 1 will be undertaken Some tasks may be performed just once, others may be on-going For example, the schedule should include, among other things·

- The installation of any new control measures identified in the proposed

management program [§122 26(d)(2)(iv), discussed in Section 6 4],

- A maintenance schedule for structural best management practices (BMPs) [§122 26(d)(2)(iv)(A)(*1*), discussed in Section 6 4.3];

- Development of seasonal pollutant loadings and event mean concentrations of a representative storm [§122.26(d)(2)(iii)(C), discussed in Section 5.5];

- Monitoring program for representative data collection for the term of the permit [§122.26(d)(2)(iii)(D), discussed in Section 5 6],

- Monitoring program for industrial facilities [§122 26(d)(2)(iv)(C)(2), discussed in Section 6.3.3];

- On-going field screening program for illicit discharges [§122.26(d)(2)(iv)(B), discussed in Section 6 5],

- Development of certification programs for construction workers or pesticide applicators, if appropriate [§122 26(d)(2)(iv), discussed in Sections 6.3.1 and 6 3 2], and

- Implementation schedules for other components of the storm water application that have not been fully implemented at the time of application, such as additional legal authority or comprehensive development plans

Step 3. Estimate the capital expenses necessary to accomplish the tasks identified in Step 1 and determine a schedule for purchase Applicants may elect to define categories of capital expenditures such as "monitoring equipment," "miscellaneous monitoring supplies," "personal protective equipment," etc

Step 4. Estimate other non-capital costs to implement the tasks identified in Step 1. Use the schedule developed in Step 2 to spread costs over the term of the permit Costs should be presented as a total annual cost for each proposed program component In addition, estimates of the total annual costs and annual per capita costs should be provided. Per capita costs can be compared with the per capita costs of other programs, such as sewage treatment programs.

These costs may include items such as :

- Newspaper ads announcing new programs or recycling centers;

- Holding public meetings or hearings, and

- Labor for department personnel to speak to citizens groups

Step 5. Identify funding to be applied. Applicants must describe the sources of funding and any legal restrictions on that funding Sources may include general revenues, storm water utilities, plan review fees, permit fees, industrial/commercial user fees, special assessment district funds, and revenue bonds Some funding sources, such as general revenues based on property taxes, are generally unrestricted, but can be allocated by local officials annually In a few cases, a local property tax may be dedicated to finance a storm water management program For example, one county finances its storm water management program through a dedicated property tax of $0.135 per $100 assessed valuation Other municipalities add special assessments to property tax bills.

A storm water utility is another source of funding dedicated to financing storm water management activities The storm water utility offers the advantage of a stable and predictable source of funds. Other advantages of storm water utilities over general revenues are that utility charges can be more equitably based on

the user's contribution to local storm water problems, and a utility provides a mechanism to incorporate incentives for on-site storm water management

In many cases, municipalities will evaluate sources of funds that are not currently available, such as a new storm water utility. In these cases, applicants must include a schedule of when funds will be available. For example, it usually takes a municipality 18 to 24 months of planning before local elected officials authorize a storm water utility, and another 6 to 12 months to implement the utility (Lindsey, 1988) Key milestones for planning and implementing the funding mechanism must be identified in the schedule The following components have been found to be important in establishing storm water utilities

- Determining the most appropriate administrative structure for implementing a storm water management program,
- Adopting a storm water utility ordinance,
- Estimating revenue needs and planning for cost recovery,
- Establishing a utility rate structure and billing system,
- Establishing a system for developer contributions, and
- Implementing a public information program

Step 6. Compare the funding sources with the funding needs. As a last step in this process, the municipality must ensure that adequate funding is available to cover the cost of implementing the storm water management program If adequate funding is not available, the municipality must consider alternate sources of funding such as a storm water utility

APPENDIX A:
BIBLIOGRAPHY

BIBLIOGRAPHY*

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* For additional sources of information, applicants may wish to consult the documents listed in the bibliography of Urban Drainage & Flood Control District, *Urban Storm Drainage Criteria Manual, Vol III*, Urban Drainage and Flood Control District, Denver CO September 1, 1992

APPENDIX B:
PART 2 APPLICATION REQUIREMENTS

certify, pursuant to 5 U S.C 605(b) that these amendments do not, have a significant impact on a substantial number of small entities.

List of Subjects in 40 CFR Parts 122, 123, and 124

Administrative practice and procedure Environmental protection, Reporting and recordkeeping requirements, Water pollution control

Authority: Clean Water Act, 33 U S C 1251 *et seq*

Dated October 31, 1990

William K. Reilly,

Administrator

For the reasons stated in the preamble, parts 122, 123, and 124 of title 40 of the Code of Federal Regulations are amended as follows

PART 122—EPA ADMINISTERED PERMIT PROGRAMS; THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Subpart B—Permit Application and Special NPDES Program Requirements

1 The authority citation for part 122 continues to read as follows

Authority Clean Water Act 33 U S C 1251 *et seq*

2 Section 122 1 is amended by revising paragraph (b)(2)(iv) to read as follows

§ 122.1 Purpose and scope

* * * * *

(b) * * *

(2) * * *

(iv) Discharges of storm water as set forth in § 122 26, and

* * * * *

3 Section 122 21 is amended by revising paragraph (c)(1) by removing the last sentence of paragraph (f)(7), by removing paragraph (f)(9) by adding two sentences at the end of paragraph (g)(3) by revising paragraph (g)(7) introductory text by removing and reserving paragraph (g)(10) and by revising the introductory text of paragraph (k) to read as follows

§ 122 21 Application for a permit (applicable to State programs, see § 123 25)

* * * * *

(c) *Time to apply* (1) Any person proposing a new discharge, shall submit an application at least 180 days before the date on which the discharge is to commence unless permission for a later date has been granted by the Director Facilities proposing a new discharge of storm water associated with industrial activity shall submit an application 180 days before that facility commences industrial activity which may result in a discharge of storm water associated with that industrial activity Facilities described under § 122.26(b)(14)(x) shall submit applications at least 90 days before the date on which construction is to commence. Different submittal dates may be required under the terms of applicable general permits Persons proposing a new discharge are encouraged to submit their applications well in advance of the 90 or 180 day requirements to avoid delay. See also paragraph (k) of this section and § 122.26 (c)(1)(i)(G) and (c)(1)(ii).

* * * * *

(g) * * *

(3) * * * The average flow of point sources composed of storm water may be estimated. The basis for the rainfall event and the method of estimation must be indicated.

* * * * *

(7) *Effluent characteristics.* Information on the discharge of pollutants specified in this paragraph (except information on storm water discharges which is to be provided as specified in § 122 26) When "quantitative data" for a pollutant are required, the applicant must collect a sample of effluent and analyze it for the pollutant in accordance with analytical methods approved under 40 CFR part 136 When no analytical method is approved the applicant may use any suitable method but must provide a description of the method When an applicant has two or more outfalls with substantially identical effluents the Director may allow the applicant to test only one outfall and report that the quantitative data also apply to the substantially identical outfalls The requirements in paragraphs (g)(7) (iii) and (iv) of this section that an applicant must provide quantitative data for certain pollutants known or believed to be present do not apply to pollutants present in a discharge solely as the result of their presence in intake water, however, an applicant must report such pollutants as present Grab samples must be used for pH, temperature, cyanide total phenols, residual chlorine, oil and grease, fecal coliform and fecal streptococcus For all other pollutants 24-hour composite samples must be used However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period greater than 24 hours In addition, for discharges other than storm water discharges, the Director may waive composite sampling for any outfall for which the applicant demonstrates that the use of an automatic sampler is infeasible and that the minimum of four (4) grab samples will be a representative sample of the effluent being discharged For storm water discharges, all samples shall be collected from the discharge resulting from a storm event that is greater than 0 1 inch and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in that area For all applicants, a flow-weighted composite shall be taken for either the entire discharge or for the first three hours of the discharge. The flow-weighted composite sample for a storm water discharge may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes (applicants submitting permit applications for storm water discharges under § 122 26(d) may collect flow weighted composite samples using different protocols with respect to the time duration between the collection of sample aliquots, subject to the approval of the Director) However, a minimum of one grab sample may be taken for storm water discharges from holding ponds or other impoundments with a retention period greater than 24 hours For a flow-weighted composite sample, only one analysis of the composite of aliquots is required For storm water discharge samples taken from discharges associated with industrial activities, quantitative data must be reported for the grab sample taken during the first thirty minutes (or as soon thereafter as practicable) of the discharge for all pollutants specified in § 122 26(c)(1) For all storm water permit applicants taking flow-weighted composites quantitative data must be reported for all pollutants specified in § 122 26 except pH temperature, cyanide total phenols residual chlorine, oil and grease fecal coliform, and fecal streptococcus, The Director may allow or establish appropriate site-specific sampling procedures or requirements including sampling locations, the season in which the sampling takes place the minimum duration between the previous measurable storm event and the storm event sampled the minimum or maximum level of precipitation required for an appropriate storm event, the form of precipitation sampled (snow melt or rain fall) protocols for collecting samples under 40 CFR part 136 and additional time for submitting data on a

case-by-case basis. An applicant is expected to "know or have reason to believe" that a pollutant is present in an effluent based on an evaluation of the expected use, production, or storage of the pollutant, or on any previous analyses for the pollutant. (For example, any pesticide manufactured by a facility may be expected to be present in contaminated storm water runoff from the facility.)

• • • • •

(k) *Application requirements for new sources and new discharges.* New manufacturing, commercial, mining and silvicultural dischargers applying for NPDES permits (except for new discharges of facilities subject to the requirements of paragraph (h) of this section or new discharges of storm water associated with industrial activity which are subject to the requirements of § 122.26(c)(1) and this section (except as provided by § 122.26(c)(1)(ii)) shall provide the following information to the Director, using the application forms provided by the Director:

• • • • •

4 Section 122.22(b) introductory text is revised to read as follows

§ 122.22 Signatories to permit applications and reports (applicable to State programs, see § 123.25).

• • • • •

(b) All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if

• • • • •

5 Section 122.26 is revised to read as follows

§ 122.26 Storm water discharges (applicable to State NPDES programs, see § 123.25)

(a) *Permit requirement.* (1) Prior to October 1, 1992, discharges composed entirely of storm water shall not be required to obtain a NPDES permit except:

(i) A discharge with respect to which a permit has been issued prior to February 4, 1987;

(ii) A discharge associated with industrial activity (see § 122.26(a)(4));

(iii) A discharge from a large municipal separate storm sewer system;

(iv) A discharge from a medium municipal separate storm sewer system;

(v) A discharge which the Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This designation may include a discharge from any conveyance or system of conveyances used for collecting and conveying storm water runoff or a system of discharges from municipal separate storm sewers, except for those discharges from conveyances which do not require a permit under paragraph (a)(2) of this section or agricultural storm water runoff which is exempted from the definition of point source at § 122.2. The Director may designate discharges from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination the Director may consider the following factors:

(A) The location of the discharge with respect to waters of the United States as defined at 40 CFR 122.2;

(B) The size of the discharge;

(C) The quantity and nature of the pollutants discharged to waters of the United States; and

(D) Other relevant factors.

(2) The Director may not require a permit for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with or that has not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

(3) *Large and medium municipal separate storm sewer systems.* (i) Permits must be obtained for all discharges from large and medium municipal separate storm sewer systems.

(ii) The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or medium municipal separate storm sewer system including, but not limited to all discharges owned or operated by the same municipality, located within the same jurisdiction; all discharges within a system that discharge to the same watershed, discharges within a system that are similar in nature, or for individual discharges from municipal separate storm sewers within the system.

(iii) The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either:

(A) Participate in a permit application (to be a permittee or a co-permittee) with one or more other operators of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system;

(B) Submit a distinct permit application which only covers discharges from the municipal separate storm sewers for which the operator is responsible; or

(C) A regional authority may be responsible for submitting a permit application under the following guidelines:

(*1*) The regional authority together with co-applicants shall have authority over a storm water management program that is in existence, or shall be in existence at the time part 1 of the application is due;

(*2*) The permit applicant or co-applicants shall establish their ability to make a timely submission of part 1 and part 2 of the municipal application;

(*3*) Each of the operators of municipal separate storm sewers within the systems described in paragraphs (b)(4)(i), (ii), and (iii) or (b)(7)(i), (ii), and (iii) of this section, that are under the purview of the designated regional authority, shall comply with the application requirements of paragraph (d) of this section.

(iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one system-wide permit covering all or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.

(v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system.

(vi) Co-permittees need only comply with permit conditions relating to discharges from the municipal separate storm sewers for which they are operators.

(4) *Discharges through large and medium municipal separate storm sewer systems* In addition to meeting the requirements of paragraph (c) of this section, an operator of a storm water discharge associated with industrial activity which discharges through a large or medium municipal separate storm sewer system shall submit, to the operator of the municipal separate storm sewer system receiving the discharge no later than May 15, 1991, or 180 days prior to commencing such discharge: the name of the facility; a contact person and phone number; the location of the discharge; a description, including Standard Industrial Classification, which best reflects the principal products or services provided by each facility; and any existing NPDES permit number.

(5) *Other municipal separate storm sewers.* The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)(1)(v) of this section on a system-wide basis, jurisdiction-wide basis, watershed basis or other appropriate basis, or may issue permits for individual discharges

(6) *Non-municipal separate storm sewers* For storm water discharges associated with industrial activity from point sources which discharge through a non-municipal or non-publicly owned separate storm sewer system, the Director, in his discretion, may issue a single NPDES permit, with each discharger a co-permittee to a permit issued to the operator of the portion of the system that discharges into waters of the United States; or, individual permits to each discharger of storm water associated with industrial activity through the non-municipal conveyance system

(i) All storm water discharges associated with industrial activity that discharge through a storm water discharge system that is not a municipal separate storm sewer must be covered by an individual permit, or a permit issued to the operator of the portion of the system that discharges to waters of the United States, with each discharger to the non-municipal conveyance a co-permittee to that permit

(ii) Where there is more than one operator of a single system of such conveyances, all operators of storm water discharges associated with industrial activity must submit applications

(iii) Any permit covering more than one operator shall identify the effluent limitations or other permit conditions, if any, that apply to each operator

(7) *Combined sewer systems* Conveyances that discharge storm water runoff combined with municipal sewage are point sources that must obtain NPDES permits in accordance with the procedures of § 122.21 and are not subject to the provisions of this section.

(8) Whether a discharge from a municipal separate storm sewer is or is not subject to regulation under this section shall have no bearing on whether the owner or operator of the discharge is eligible for funding under title II, title III or title VI of the Clean Water Act. *See* 40 CFR part 35, subpart I, appendix A(b)H.2.j.

(b) *Definitions.* (1) *Co-permittee* means a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.

(2) *Illicit discharge* means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

(3) *Incorporated place* means the District of Columbia, or a city, town, township, or village that is incorporated under the laws of the State in which it is located.

(4) *Large municipal separate storm sewer system* means all municipal separate storm sewers that are either:

(i) Located in an incorporated place with a population of 250,000 or more as determined by the latest Decennial Census by the Bureau of Census (appendix F); or

(ii) Located in the counties listed in appendix H, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or

(iii) Owned or operated by a municipality other than those described in paragraph (b)(4) (i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(4) (i) or (ii) of this section. In making this determination the Director may consider the following factors:

(A) Physical interconnections between the municipal separate storm sewers.

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(4)(i) of th section;

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters, and

(E) Other relevant factors, or

(iv) The Director may, upon petition, designate as a large municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraph (b)(4) (i), (ii), (iii) of this section.

(5) *Major municipal separate storm sewer outfall* (or "major outfall") means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres), or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharg from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more)

(6) *Major outfall* means a major municipal separate storm sewer outfall.

(7) *Medium municipal separate storm sewer system* means all municipal separate storm sewers that are either:

(i) Located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the latest Decennial Census by the Bureau of Census (appendix G), or

(ii) Located in the counties listed in appendix I, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties, or

(iii) Owned or operated by a municipality other than those described in paragraph (b)(4) (i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(4) (i) or (ii) of this section. In making this determination the Director may cons the following factors

(A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(7)(i) of this section;

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters, or

(E) Other relevant factors; or

(iv) The Director may, upon petition, designate as a medium municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (b)(7) (i), (ii), (iii) of this section.

(8) *Municipal separate storm sewer* means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains)

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States,

(ii) Designed or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2

(9) *Outfall* means a *point source* as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

(10) *Overburden* means any material of any nature, consolidated or unconsolidated, that overlies a mineral deposit, excluding topsoil or similar naturally-occurring surface materials that are not disturbed by mining operations.

(11) *Runoff coefficient* means the fraction of total rainfall that will appear at a conveyance as runoff.

(12) *Significant materials* includes, but is not limited to: raw materials; fuels, materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

(13) *Storm water* means storm water runoff, snow melt runoff, and surface runoff and drainage.

(14) *Storm water discharge associated with industrial activity* means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR part 122. For the categories of industries identified in paragraphs (b)(14) (i) through (x) of this section, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR part 401); sites used for the storage and maintenance of material handling equipment, sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in paragraph (b)(14)(xi) of this section, the term includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph (b)(14)(i)–(xi) of this section) include those facilities designated under the provisions of paragraph (a)(1)(v) of this section. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection.

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) in paragraph (b)(14) of this section);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations. (inactive mining operations are mining sites that are not being actively mined but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined

materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under subtitle D of RCRA.

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093.

(vii) Steam electric power generating facilities, including coal handling sites.

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (b)(14) (i)-(vii) or (ix)-(xi) of this section are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling and reclamation of municipal or domestic sewage including land dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of 1.0 mgd or more or required to have an approved pretreatment program under 40 CFR part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA.

(x) Construction activity including clearing, grading and excavation activities except operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale.

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and which are not otherwise included within categories (ii)-(x)).

(c) *Application requirements for storm water discharges associated with industrial activity*—(1) *Individual application.* Dischargers of storm water associated with industrial activity are required to apply for an individual permit, apply for a permit through a group application, or seek coverage under a promulgated storm water general permit. Facilities that are required to obtain an individual permit, or any discharge of storm water which the Director is evaluating for designation (*see* 40 CFR 124.52(c)) under paragraph (a)(1)(v) of this section and is not a municipal separate storm sewer, and which is not part of a group application described under paragraph (c)(2) of this section, shall submit an NPDES application in accordance with the requirements of § 122.21 as modified and supplemented by the provisions of the remainder of this paragraph. Applicants for discharges composed entirely of storm water shall submit Form 1 and Form 2F. Applicants for discharges composed of storm water and non-storm water shall submit Form 1, Form 2C, and Form 2F. Applicants for new sources or new discharges (as defined in § 122.2 of this part) composed of storm water and non-storm water shall submit Form 1, Form 2D, and Form 2F.

(i) Except as provided in § 122.26(c)(1)(ii)-(iv), the operator of a storm water discharge associated with industrial activity subject to this section shall provide:

(A) A site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) of the facility including each of its drainage and discharge structures, the drainage area of each storm water outfall, paved areas and buildings within the drainage area of each storm water outfall, each past or present area used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied, each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34), each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility;

(B) An estimate of the area of impervious surfaces (including paved areas and building roofs) and the total area drained by each outfall (within a mile radius of the facility) and a narrative description of the following: Significant materials that in the three years prior to the submittal of this application have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage or disposal of such materials; materials management practices employed, in the three years prior to the submittal of this application, to minimize contact by these materials with storm water runoff; materials loading and access areas; the location, manner and frequency in which pesticides, herbicides, soil conditioners and fertilizers are applied; the location and a description of existing structural and non-structural control measures to reduce pollutants in storm water runoff and a description of the treatment the storm water receives, including the ultimate disposal of any solid or fluid wastes other than by discharge;

(C) A certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges which are not covered by a NPDES permit. tests for such non-storm water discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. The certification shall include a description of the method used, the date of any testing, and the on site drainage points that were directly observed during a test.

(D) Existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility that have taken place within the three years prior to the submittal of this application.

(E) Quantitative data based on samples collected during storm events and collected in accordance with § 122.21 of this part from all outfalls containing a storm water discharge associated with industrial activity for the following parameters:

(*1*) Any pollutant limited in an effluent guideline to which the facility is subject.

(*2*) Any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit);

(*3*) Oil and grease, pH, BOD5, COD, TSS, total phosphorus, total Kjeldahl nitrogen, and nitrate plus nitrite nitrogen.

(*4*) Any information on the discharge required under paragraph § 122.21(g)(7)(iii) and (iv) of this part;

(5) Flow measurements or estimates of the flow rate and the total amount of discharge for the storm event(s) sampled, and the method of flow measurement or estimation; and

(6) The date and duration (in hours) of the storm event(s) sampled, rainfall measurements or estimates of the storm event (in inches) which generated the sampled runoff and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (in hours);

(F) Operators of a discharge which is composed entirely of storm water are exempt from the requirements of § 122.21 (g)(2), (g)(3), (g)(4), (g)(5), (g)(7)(i), (g)(7)(ii), and (g)(7)(v); and

(G) Operators of new sources or new discharges (as defined in § 122.2 of this part) which are composed in part or entirely of storm water must include estimates for the pollutants or parameters listed in paragraph (c)(1)(i)(E) of this section instead of actual sampling data, along with the source of each estimate. Operators of new sources or new discharges composed in part or entirely of storm water must provide quantitative data for the parameters listed in paragraph (c)(1)(i)(E) of this section within two years after commencement of discharge, unless such data has already been reported under the monitoring requirements of the NPDES permit for the discharge. Operators of a new source or new discharge which is composed entirely of storm water are exempt from the requirements of § 122.21 (k)(3)(ii), (k)(3)(iii), and (k)(5).

(ii) The operator of an existing or new storm water discharge that is associated with industrial activity solely under paragraph (b)(14)(x) of this section, is exempt from the requirements of § 122.21(g) and paragraph (c)(1)(i) of this section. Such operator shall provide a narrative description of

(A) The location (including a map) and the nature of the construction activity;

(B) The total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;

(C) Proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements;

(D) Proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements;

(E) An estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of fill material and existing data describing the soil or the quality of the discharge, and

(F) The name of the receiving water.

(iii) The operator of an existing or new discharge composed entirely of storm water from an oil or gas exploration, production, processing, or treatment operation, or transmission facility is not required to submit a permit application in accordance with paragraph (c)(1)(i) of this section, unless the facility:

(A) Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987, or

(B) Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or

(C) Contributes to a violation of a water quality standard.

(iv) The operator of an existing or new discharge composed entirely of storm water from a mining operation is not required to submit a permit application unless the discharge has come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

(v) Applicants shall provide such other information the Director may reasonably require under § 122.21(g)(13) of this part to determine whether to issue a permit and may require any facility subject to paragraph (c)(1)(ii) of this section to comply with paragraph (c)(1)(i) of this section.

(2) *Group application for discharges associated with industrial activity.* In lieu of individual applications or notice of intent to be covered by a general permit for storm water discharges associated with industrial activity, a group application may be filed by an entity representing a group of applicants (except facilities that have existing individual NPDES permits for storm water) that are part of the same subcategory (*see* 40 CFR subchapter N, part 405 to 471) or, where such grouping is inapplicable, are sufficiently similar as to be appropriate for general permit coverage under § 122.28 of this part. The part 1 application shall be submitted to the Office of Water Enforcement and Permits, U.S. EPA, 401 M Street, SW., Washington, DC 20460 (EN-336) for approval. Once a part 1 application is approved, group applicants are to submit Part 2 of the group application to the Office of Water Enforcement and Permits. A group application shall consist of:

(i) *Part 1.* Part 1 of a group application shall:

(A) Identify the participants in the group application by name and location. Facilities participating in the group application shall be listed in nine subdivisions, based on the facility location relative to the nine precipitation zones indicated in appendix E to this part.

(B) Include a narrative description summarizing the industrial activities of participants of the group application and explaining why the participants, as a whole, are sufficiently similar to be a covered by a general permit.

(C) Include a list of significant materials stored exposed to precipitation by participants in the group application and materials management practices employed to diminish contact by these materials with precipitation and storm water runoff.

(D) Identify ten percent of the dischargers participating in the group application (with a minimum of 10 dischargers, and either a minimum of two dischargers from each precipitation zone indicated in appendix E of this part in which ten or more members of the group are located, or one discharger from each precipitation zone indicated in appendix E of this part in which nine or fewer members of the group are located) from which quantitative data will be submitted in part 2. If more than 1,000 facilities are identified in a group application, no more than 100 dischargers must submit quantitative data in Part 2. Groups of between four and ten dischargers may be formed. However, in groups of between four and ten, at least half the facilities must submit quantitative data and at least one facility in each precipitation zone in which members of the group are located must submit data. A description of why the facilities selected to perform sampling and analysis are representative of the group as a whole in terms of the information provided in paragraph (c)(1)(i)(B) and (i)(C) of this section, shall accompany this section. Different factors impacting the nature of the storm water discharges such as processes used and material management shall be represented to the extent feasible in a manner roughly equivalent to their proportion in the group.

(ii) *Part 2.* Part 2 of a group application shall contain quantitative

data (NPDES Form 2F), as modified by paragraph (c)(1) of this section, so that when part 1 and part 2 of the group application are taken together, a complete NPDES application (Form 1, Form 2C, and Form 2F) can be evaluated for each discharger identified in paragraph (c)(2)(i)(D) of this section.

(d) *Application requirements for large and medium municipal separate storm sewer discharges.* The operator of a discharge from a large or medium municipal separate storm sewer or a municipal separate storm sewer that is designated by the Director under paragraph (a)(1)(v) of this section, may submit a jurisdiction-wide or system-wide permit application. Where more than one public entity owns or operates a municipal separate storm sewer within a geographic area (including adjacent or interconnected municipal separate storm sewer systems), such operators may be a coapplicant to the same application. Permit applications for discharges from large and medium municipal storm sewers or municipal storm sewers designated under paragraph (a)(1)(v) of this section shall include:

(1) *Part 1.* Part 1 of the application shall consist of:

(i) *General information.* The applicants' name, address, telephone number of contact person, ownership status and status as a State or local government entity.

(ii) *Legal authority.* A description of existing legal authority to control discharges to the municipal separate storm sewer system. When existing legal authority is not sufficient to meet the criteria provided in paragraph (d)(2)(i) of this section, the description shall list additional authorities as will be necessary to meet the criteria and shall include a schedule and commitment to seek such additional authority that will be needed to meet the criteria.

(iii) *Source identification.* (A) A description of the historic use of ordinances, guidance or other controls which limited the discharge of non-storm water discharges to any Publicly Owned Treatment Works serving the same area as the municipal separate storm sewer system.

(B) A USGS 7.5 minute topographic map (or equivalent topographic map with a scale between 1:10,000 and 1:24,000 if cost effective) extending one mile beyond the service boundaries of the municipal storm sewer system covered by the permit application. The following information shall be provided:

(*1*) The location of known municipal storm sewer system outfalls discharging to waters of the United States;

(*2*) A description of the land use activities (e.g. divisions indicating undeveloped, residential, commercial, agricultural and industrial uses) accompanied with estimates of population densities and projected growth for a ten year period within the drainage area served by the separate storm sewer. For each land use type, an estimate of an average runoff coefficient shall be provided;

(*3*) The location and a description of the activities of the facility of each currently operating or closed municipal landfill or other treatment, storage or disposal facility for municipal waste;

(*4*) The location and the permit number of any known discharge to the municipal storm sewer that has been issued a NPDES permit;

(*5*) The location of major structural controls for storm water discharge (retention basins, detention basins, major infiltration devices, etc.); and

(*6*) The identification of publicly owned parks, recreational areas, and other open lands.

(iv) *Discharge characterization.* (A) Monthly mean rain and snow fall estimates (or summary of weather bureau data) and the monthly average number of storm events.

(B) Existing quantitative data describing the volume and quality of discharges from the municipal storm sewer, including a description of the outfalls sampled, sampling procedures and analytical methods used.

(C) A list of water bodies that receive discharges from the municipal separate storm sewer system, including downstream segments, lakes and estuaries, where pollutants from the system discharges may accumulate and cause water degradation and a brief description of known water quality impacts. At a minimum, the description of impacts shall include a description of whether the water bodies receiving such discharges have been:

(*1*) Assessed and reported in section 305(b) reports submitted by the State, the basis for the assessment (evaluated or monitored), a summary of designated use support and attainment of Clean Water Act (CWA) goals (fishable and swimmable waters), and causes of nonsupport of designated uses;

(*2*) Listed under section 304(l)(1)(A)(i), section 304(l)(1)(A)(ii), or section 304(l)(1)(B) of the CWA that is not expected to meet water quality standards or water quality goals;

(*3*) Listed in State Nonpoint Source Assessments required by section 319(a) of the CWA that, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain water quality standards due to storm sewer construction, highway maintenance and runoff from municipal landfills and municipal sludge adding significant pollution (or contributing to a violation of water quality standards);

(*4*) Identified and classified according to eutrophic condition of publicly owned lakes listed in State reports required under section 314(a) of the CWA (include the following: A description of those publicly owned lakes for which uses are known to be impaired; a description of procedures, processes and methods to control the discharge of pollutants from municipal separate storm sewers into such lakes; and a description of methods and procedures to restore the quality of such lakes);

(*5*) Areas of concern of the Great Lakes identified by the International Joint Commission;

(*6*) Designated estuaries under the National Estuary Program under section 320 of the CWA;

(*7*) Recognized by the applicant as highly valued or sensitive waters;

(*8*) Defined by the State or U.S. Fish and Wildlife Services's National Wetlands Inventory as wetlands; and

(*9*) Found to have pollutants in bottom sediments, fish tissue or biosurvey data.

(D) *Field screening.* Results of a fie screening analysis for illicit connect and illegal dumping for either selecte field screening points or major outfalls covered in the permit application. At a minimum, a screening analysis shall include a narrative description, for either each field screening point or major outfall, of visual observations made during dry weather periods. If any flow is observed, two grab samples shall be collected during a 24 hour period with a minimum period of four hours between samples. For all such samples, a narrative description of the color, odor, turbidity, the presence of an oil sheen or surface scum as well as any other relevant observations regarding the potential presence of non-storm water discharges or illegal dumping shall be provided. In addition, a narrative description of the results of a field analysis using suitable methods to estimate pH, total chlorine, total copper, total phenol, and detergents (or surfactants) shall be provided along with a description of the flow rate. Where the field analysis does not involve analytical methods approved under 40 CFR part 136, the applicant shall provide a description of the method used including the name of the manufacturer of the test method along with the range and accuracy of the ' Field screening points shall be eithe major outfalls or other outfall points (or

any other point of access such as manholes) randomly located throughout the storm sewer system by placing a grid over a drainage system map and identifying those cells of the grid which contain a segment of the storm sewer system or major outfall. The field screening points shall be established using the following guidelines and criteria:

(*1*) A grid system consisting of perpendicular north-south and east-west lines spaced ¼ mile apart shall be overlayed on a map of the municipal storm sewer system, creating a series of cells;

(*2*) All cells that contain a segment of the storm sewer system shall be identified; one field screening point shall be selected in each cell; major outfalls may be used as field screening points;

(*3*) Field screening points should be located downstream of any sources of suspected illegal or illicit activity;

(*4*) Field screening points shall be located to the degree practicable at the farthest manhole or other accessible location downstream in the system, within each cell, however, safety of personnel and accessibility of the location should be considered in making this determination;

(*5*) Hydrological conditions; total drainage area of the site; population density of the site, traffic density; age of the structures or buildings in the area; history of the area; and land use types;

(*6*) For medium municipal separate storm sewer systems, no more than 250 cells need to have identified field screening points, in large municipal separate storm sewer systems, no more than 500 cells need to have identified field screening points, cells established by the grid that contain no storm sewer segments will be eliminated from consideration, if fewer than 250 cells in medium municipal sewers are created, and fewer than 500 in large systems are created by the overlay on the municipal sewer map then all those cells which contain a segment of the sewer system shall be subject to field screening (unless access to the separate storm sewer system is impossible), and

(*7*) Large or medium municipal separate storm sewer systems which are unable to utilize the procedures described in paragraphs (d)(1)(iv)(D) (*1*) through (*6*) of this section, because a sufficiently detailed map of the separate storm sewer systems is unavailable, shall field screen no more than 500 or 250 major outfalls respectively (or all major outfalls in the system, if less), in such circumstances, the applicant shall establish a grid system consisting of north-south and east-west lines spaced ¼ mile apart as an overlay to the boundaries of the municipal storm sewer system, thereby creating a series of cells; the applicant will then select major outfalls in as many cells as possible until at least 500 major outfalls (large municipalities) or 250 major outfalls (medium municipalities) are selected; a field screening analysis shall be undertaken at these major outfalls.

(E) *Characterization plan.* Information and a proposed program to meet the requirements of paragraph (d)(2)(iii) of this section. Such description shall include: the location of outfalls or field screening points appropriate for representative data collection under paragraph (d)(2)(iii)(A) of this section, a description of why the outfall or field screening point is representative, the seasons during which sampling is intended, a description of the sampling equipment. The proposed location of outfalls or field screening points for such sampling should reflect water quality concerns (*see* paragraph (d)(1)(iv)(C) of this section) to the extent practicable.

(v) *Management programs.* (A) A description of the existing management programs to control pollutants from the municipal separate storm sewer system. The description shall provide information on existing structural and source controls, including operation and maintenance measures for structural controls, that are currently being implemented. Such controls may include, but are not limited to. Procedures to control pollution resulting from construction activities; floodplain management controls; wetland protection measures; best management practices for new subdivisions, and emergency spill response programs. The description may address controls established under State law as well as local requirements.

(B) A description of the existing program to identify illicit connections to the municipal storm sewer system. The description should include inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented.

(vi) *Fiscal resources.* (A) A description of the financial resources currently available to the municipality to complete part 2 of the permit application. A description of the municipality's budget for existing storm water programs, including an overview of the municipality's financial resources and budget, including overall indebtedness and assets, and sources of funds for storm water programs.

(2) *Part 2.* Part 2 of the application shall consist of.

(i) *Adequate legal authority.* A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to.

(A) Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity;

(B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer;

(C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water;

(D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;

(E) Require compliance with conditions in ordinances, permits, contracts or orders; and

(F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.

(ii) *Source identification* The location of any major outfall that discharges to waters of the United States that was not reported under paragraph (d)(1)(iii)(B)(*1*) of this section Provide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity;

(iii) *Characterization data* When "quantitative data" for a pollutant are required under paragraph (d)(a)(iii)(A)(*3*) of this paragraph, the applicant must collect a sample of effluent in accordance with 40 CFR 122.21(g)(7) and analyze it for the pollutant in accordance with analytical methods approved under 40 CFR part 136. When no analytical method is approved the applicant may use any suitable method but must provide a description of the method. The applicant must provide information characterizing the quality and quantity of discharges covered in the permit application, including:

(A) Quantitative data from representative outfalls designated by the Director (based on information received

in part 1 of the application, the Director shall designate between five and ten outfalls or field screening points as representative of the commercial, residential and industrial land use activities of the drainage area contributing to the system or, where there are less than five outfalls covered in the application, the Director shall designate all outfalls) developed as follows

(*1*) For each outfall or field screening point designated under this subparagraph, samples shall be collected of storm water discharges from three storm events occurring at least one month apart in accordance with the requirements at § 122.21(g)(7) (the Director may allow exemptions to sampling three storm events when climatic conditions create good cause for such exemptions),

(*2*) A narrative description shall be provided of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable (greater than 0 1 inch rainfall) storm event,

(*3*) For samples collected and described under paragraphs (d)(2)(iii)(A)(*1*) and (A)(*2*) of this section, quantitative data shall be provided for the organic pollutants listed in Table II, the pollutants listed in Table III (toxic metals, cyanide and total phenols) of appendix D of 40 CFR part 122, and for the following pollutants

Total suspended solids (TSS)
Total dissolved solids (TDS)
COD
BOD_5
Oil and grease
Fecal coliform
Fecal streptococcus
pH
Total Kjeldahl nitrogen
Nitrate plus nitrite
Dissolved phosphorus
Total ammonia plus organic nitrogen
Total phosphorus

(*4*) Additional limited quantitative data required by the Director for determining permit conditions (the Director may require that quantitative data shall be provided for additional parameters, and may establish sampling conditions such as the location, season of sample collection, form of precipitation (snow melt, rainfall) and other parameters necessary to insure representativeness)

(B) Estimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls and the event mean concentration of the cumulative discharges to waters of the United States from all identified municipal outfalls during a storm event (as described under § 122.21(c)(7)) for BOD_5, COD, TSS, dissolved solids, total nitrogen, total ammonia plus organic nitrogen, total phosphorus, dissolved phosphorus, cadmium, copper, lead, and zinc. Estimates shall be accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modelling, data analysis, and calculation methods;

(C) A proposed schedule to provide estimates for each major outfall identified in either paragraph (d)(2)(ii) or (d)(1)(iii)(B)(*1*) of this section of the seasonal pollutant load and of the event mean concentration of a representative storm for any constituent detected in any sample required under paragraph (d)(2)(iii)(A) of this section; and

(D) A proposed monitoring program for representative data collection for the term of the permit that describes the location of outfalls or field screening points to be sampled (or the location of instream stations), why the location is representative, the frequency of sampling, parameters to be sampled, and a description of sampling equipment

(iv) *Proposed management program* A proposed management program covers the duration of the permit It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable Proposed management programs shall describe priorities for implementing controls Such programs shall be based on.

(A) A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls At a minimum, the description shall include.

(*1*) A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers;

(*2*) A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed. (Controls to reduce pollutants in discharges from municipal separate storm sewers containing construction site runoff are addressed in paragraph (d)(2)(iv)(D) of this section.

(*3*) A description of practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities.

(*4*) A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible.

(*5*) A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges (this program can be coordinated with the program developed under paragraph (d)(2)(iv)(C) of this section), and

(*6*) A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities

(B) A description of a program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer. The proposed program shall include:

(1) A description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program description shall address all types of illicit discharges, however the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (program descriptions shall address discharges or flows from fire fighting only where such discharges or flows are identified as significant sources of pollutants to waters of the United States).

(2) A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.

(3) A description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water (such procedures may include sampling procedures for constituents such as fecal coliform, fecal streptococcus, surfactants (MBAS), residual chlorine, fluorides and potassium, testing with fluorometric dyes, or conducting in storm sewer inspections where safety and other considerations allow. Such description shall include the location of storm sewers that have been identified for such evaluation).

(4) A description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer;

(5) A description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers;

(6) A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials; and

(7) A description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary;

(C) A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system. The program shall:

(1) Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges;

(2) Describe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C) of this section, to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD_5, TSS, total phosphorus, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under 40 CFR 122.21(g)(7) (iii) and (iv).

(D) A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system, which shall include:

(1) A description of procedures for site planning which incorporate consideration of potential water quality impacts;

(2) A description of requirements for nonstructural and structural best management practices;

(3) A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality; and

(4) A description of appropriate educational and training measures for construction site operators.

(v) *Assessment of controls.* Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water.

(vi) *Fiscal analysis.* For each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2) (iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

(vii) Where more than one legal entity submits an application, the application shall contain a description of the roles and responsibilities of each legal entity and procedures to ensure effective coordination.

(viii) Where requirements under paragraph (d)(1)(iv)(E), (d)(2)(ii), (d)(2)(iii)(B) and (d)(2)(iv) of this section are not practicable or are not applicable, the Director may exclude any operator of a discharge from a municipal separate storm sewer which is designated under paragraph (a)(1)(v), (b)(4)(ii) or (b)(7)(ii) of this section from such requirements. The Director shall not exclude the operator of a discharge from a municipal separate storm sewer identified in appendix F, G, H or I of part 122, from any of the permit application requirements under this paragraph except where authorized under this section.

(e) *Application deadlines.* Any operator of a point source required to obtain a permit under paragraph (a)(1) of this section that does not have an effective NPDES permit covering its storm water outfalls shall submit an application in accordance with the following deadlines:

(1) For any storm water discharge associated with industrial activity identified in paragraph (b)(14) (i)–(xi) of this section, that is not part of a group application as described in paragraph (c)(2) of this section or which is not covered under a promulgated storm water general permit, a permit application made pursuant to paragraph (c) of this section shall be submitted to the Director by November 18, 1991.

(2) For any group application submitted in accordance with paragraph (c)(2) of this section:

(i) Part 1 of the application shall be submitted to the Director, Office of Water Enforcement and Permits by March 18, 1991;

(ii) Based on information in the part 1 application, the Director will approve or deny the members in the group application within 60 days after receiving part 1 of the group application.

(iii) Part 2 of the application shall be submitted to the Director, Office of Water Enforcement and Permits no later than 12 months after the date of approval of the part 1 application.

(iv) Facilities that are rejected as members of a group by the permitting authority shall have 12 months to file an individual permit application from the date they receive notification of their rejection

(v) A facility listed under paragraph (b)(14) (i)–(xi) of this section may add on to a group application submitted in accordance with paragraph (e)(2)(i) of this section at the discretion of the Office of Water Enforcement and Permits, and only upon a showing of good cause by the facility and the group applicant, the request for the addition of the facility shall be made no later than February 18,1992; the addition of the facility shall not cause the percentage of the facilities that are required to submit quantitative data to be less than 10%, unless there are over 100 facilities in the group that are submitting quantitative data. approval to become part of group application must be obtained from the group or the trade association representing the individual facilities.

(3) For any discharge from a large municipal separate storm sewer system:

(i) Part 1 of the application shall be submitted to the Director by November 18, 1991.

(ii) Based on information received in the part 1 application the Director will approve or deny a sampling plan under paragraph (d)(1)(iv)(E) of this section within 90 days after receiving the part 1 application.

(iii) Part 2 of the application shall be submitted to the Director by November 16, 1992.

(4) For any discharge from a medium municipal separate storm sewer system.

(i) Part 1 of the application shall be submitted to the Director by May 18, 1992

(ii) Based on information received in the part 1 application the Director will approve or deny a sampling plan under paragraph (d)(1)(iv)(E) of this section within 90 days after receiving the part 1 application

(iii) Part 2 of the application shall be submitted to the Director by May 17, 1993.

(5) A permit application shall be submitted to the Director within 60 days of notice, unless permission for a later date is granted by the Director (*see* 40 CFR 124.52(c)), for:

(i) A storm water discharge which the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines that the discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States (see paragraph (a)(1)(v) of this section);

(ii) A storm water discharge subject to paragraph (c)(1)(v) of this section.

(6) Facilities with existing NPDES permits for storm water discharges associated with industrial activity shall maintain existing permits. New applications shall be submitted in accordance with the requirements of 40 CFR 122.21 and 40 CFR 122.26(c) 180 days before the expiration of such permits. Facilities with expired permits or permits due to expire before May 18, 1992, shall submit applications in accordance with the deadline set forth under paragraph (c)(1) of this section.

(f) *Petitions.* (1) Any operator of a municipal separate storm sewer system may petition the Director to require a separate NPDES permit (or a permit issued under an approved NPDES State program) for any discharge into the municipal separate storm sewer system.

(2) Any person may petition the Director to require a NPDES permit for a discharge which is composed entirely of storm water which contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) The owner or operator of a municipal separate storm sewer system may petition the Director to reduce the Census estimates of the population served by such separate system to account for storm water discharged to combined sewers as defined by 40 CFR 35 2005(b)(11) that is treated in a publicly owned treatment works. In municipalities in which combined sewers are operated, the Census estimates of population may be reduced proportional to the fraction, based on estimated lengths, of the length of combined sewers over the sum of the length of combined sewers and municipal separate storm sewers where an applicant has submitted the NPDES permit number associated with each discharge point and a map indicating areas served by combined sewers and the location of any combined sewer overflow discharge point.

(4) Any person may petition the Director for the designation of a large or medium municipal separate storm sewer system as defined by paragraphs (b)(4)(iv) or (b)(7)(iv) of this section.

(5) The Director shall make a final determination on any petition received under this section within 90 days after receiving the petition.

6. Section 122.28(b)(2)(i) is revised to read as follows:

§ 122.28 General permits (applicable to State NPDES programs, see § 123.25).

* * * * *

(b) * * *

(2) *Requiring an individual permit.* (i) The Director may require any discharger authorized by a general permit to apply for and obtain an individual NPDES permit. Any interested person may petition the Director to take action under this paragraph. Cases where an individual NPDES permit may be required include the following:

(A) The discharger or "treatment works treating domestic sewage" is not in compliance with the conditions of the general NPDES permit.

(B) A change has occurred in the availability of demonstrated techno or practices for the control or abate of pollutants applicable to the point source or treatment works treating domestic sewage.

(C) Effluent limitation guidelines are promulgated for point sources covered by the general NPDES permit.

(D) A Water Quality Management plan containing requirements applicable to such point sources is approved.

(E) Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary;

(F) Standards for sewage sludge use or disposal have been promulgated for the sludge use and disposal practice covered by the general NPDES permit, or

(G) The discharge(s) is a significant contributor of pollutants. In making this determination, the Director may consider the following factors:

(*1*) The location of the discharge with respect to waters of the United States,

(*2*) The size of the discharge;

(*3*) The quantity and nature of the pollutants discharged to waters of the United States, and

(*4*) Other relevant factors.

* * * * *

7. Section 122.42 is amended by adding paragraph (c) to read as follows.

§ 122.42 Additional conditions applicable to specified categories of NPDES permits (applicable to State NPDES programs, see § 123.25).

. . . . .

(c) *Municipal separate storm sewer systems.* The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

(1) The status of implementing the components of the storm water management program that are established as permit conditions.

(2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; and

(3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part.

(4) A summary of data including monitoring data, that is accumulated throughout the reporting year;

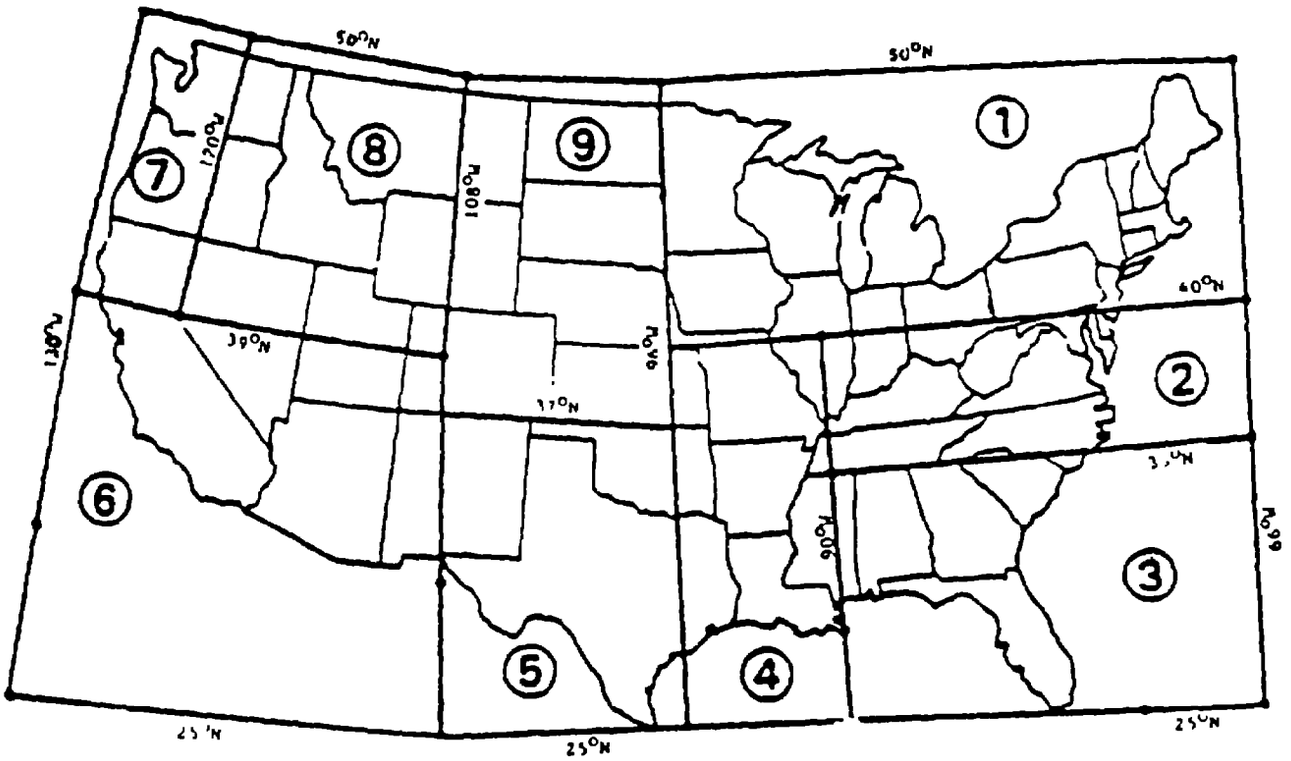
(5) Annual expenditures and budget for year following each annual report;

(6) A summary describing the number and nature of enforcement actions, inspections, and public education programs;

(7) Identification of water quality improvements or degradation;

7a. Part 122 is amended by adding appendices E through I as follows:

Appendix E to Part 122—Rainfall Zones of the United States



Not Shown: Alaska (Zone 7), Hawaii (Zone 7), Northern Mariana Islands (Zone 7), Guam (Zone 7), American Samoa (Zone 7), Trust Territory of the Pacific Islands (Zone 7), Puerto Rico (Zone 3), Virgin Islands (Zone 3).

Source: Methodology for Analysis of Detention Basins for Control of Urban Runoff Quality prepared for U.S. Environmental Protection Agency, Office of Water, Nonpoint Source Division, Washington, DC, 1986.

Appendix F to Part 122—Incorporated Places With Populations Greater Than 250,000 According to Latest Decennial Census by Bureau of Census.

State	Incorporated place
Alabama	Birmingham.
Arizona	Phoenix.
	Tucson.
California	Long Beach.
	Los Angeles.
	Oakland.
	Sacramento.
	San Diego.
	San Francisco.
	San Jose.
Colorado	Denver.
District of Columbia	
Florida	Jacksonville.
	Miami.
	Tampa.
Georgia	Atlanta.
Illinois	Chicago.
Indiana	Indianapolis.
Kansas	Wichita.
Kentucky	Louisville.
Louisiana	New Orleans.
Maryland	Baltimore.
Massachusetts	Boston.
Michigan	Detroit.
Minnesota	Minneapolis.
	St. Paul.

State	Incorporated place
Missouri	Kansas City
	St. Louis.
Nebraska	Omaha.
New Jersey	Newark.
New Mexico	Albuquerque.
New York	Buffalo.
	Bronx Borough.
	Brooklyn Borough.
	Manhattan Borough.
	Queens Borough.
	Staten Island Borough.
North Carolina	Charlotte.
Ohio	Cincinnati.
	Cleveland.
	Columbus.
	Toledo.
Oklahoma	Oklahoma City.
	Tulsa.
Oregon	Portland.
Pennsylvania	Philadelphia.
	Pittsburgh.
Tennessee	Memphis.
	Nashville/Davidson.
Texas	Austin.
	Dallas.
	El Paso.
	Fort Worth.
	Houston.
	San Antonio.
Virginia	Norfolk.
	Virginia Beach.
Washington	Seattle.
Wisconsin	Milwaukee.

Appendix G to Part 122—Incorporated Places With Populations Greater Than 100,000 and Less Than 250,000 According to Latest Decennial Census by Bureau of Census

State	Incorporated place
Alabama	Huntsville.
	Mobile.
	Montgomery.
Alaska	Anchorage.
Arizona	Mesa.
	Tempe.
Arkansas	Little Rock.
California	Anaheim.
	Bakersfield.
	Berkeley.
	Concord.
	Fremont.
	Fresno.
	Fullerton.
	Garden Grove.
	Glendale.
	Huntington Beach.
	Modesto.
	Oxnard.
	Pasadena.
	Riverside.
	San Bernadino.
	Santa Ana.
	Stockton.
	Sunnyvale.
	Torrance.
Colorado	Aurora.
	Colorado Springs.
	Lakewood.
	Pueblo.
Connecticut	Bridgeport.
	Hartford.
	New Haven.
	Stamford.
	Waterbury.
Florida	Fort Lauderdale.
	Hialeah.
	Hollywood.
	Orlando.
	St. Petersburg.
Georgia	Columbus.
	Macon.
	Savannah.
Idaho	Boise City.
Illinois	Peoria.
	Rockford.
Indiana	Evansville.
	Fort Wayne.
	Gary.
	South Bend.
Iowa	Cedar Rapids.
	Davenport.
	Des Moines.
Kansas	Kansas City.
	Topeka.
Kentucky	Lexington-Fayette.
Louisiana	Baton Rouge.
	Shreveport.
Massachusetts	Springfield.
	Worcester.
Michigan	Ann Arbor.
	Flint.
	Grand Rapids.
	Lansing.
	Livonia.
	Sterling Heights.
	Warren.
Mississippi	Jackson.
Missouri	Independence.
	Springfield.
Nebraska	Lincoln.
Nevada	Las Vegas.
	Reno.
New Jersey	Elizabeth.
	Jersey City.
	Paterson.
New York	Albany.
	Rochester.
	Syracuse.
	Yonkers.
North Carolina	Durham.
	Greensboro.
	Raleigh.
	Winston-Salem.
Ohio	Akron.
	Dayton.
	Youngstown.
Oregon	Eugene.
Pennsylvania	Allentown.
	Erie.
Rhode Island	Providence.
South Carolina	Columbia.
Tennessee	Chattanooga.
	Knoxville.
Texas	Amarillo.
	Arlington.
	Beaumont.
	Corpus Christi.
	Garland.
	Irving.
	Lubbock.
	Pasadena.
	Waco.
Utah	Salt Lake City.
Virginia	Alexandria.
	Chesapeake.
	Hampton.
	Newport News.
	Portsmouth.
	Richmond.
	Roanoke.
Washington	Spokane.
	Tacoma.
Wisconsin	Madison.

Appendix H to Part 122—Counties with Unincorporated Urbanized Areas With a *Population of 250,000 or More* According to the Latest Decennial Census by the Bureau of Census

State	County	Unincorporated urbanized population
California	Los Angeles	812,884
	Sacramento	449,856
	San Diego	304,758
Delaware	New Castle	257,184
Florida	Dade	781,949
Georgia	DeKalb	386,379
Hawaii	Honolulu	688,178
Maryland	Anne Arundel	271,458
	Baltimore	801,308
	Montgomery	447,993
	Prince George's	450,188
Texas	Harris	409,801
Utah	Salt Lake	304,832
Virginia	Fairfax	527,178
Washington	King	336,800

Appendix I to Part 122—Counties With Unincorporated Urbanized Areas Greater Than 100,000, But Less Than 250,000 According to the Latest Decennial Census by the Bureau of Census

State	County	Unincorporated urbanized population
Alabama	Jefferson	102,917
Arizona	Pima	111,479
California	Alameda	187,474
	Contra Costa	158,452
	Kern	117,231
	Orange	210,893
	Riverside	115,719
	San Bernardino	148,844
Florida	Broward	150,370
	Escambia	147,892
	Hillsborough	238,292
	Orange	245,325
	Palm Beach	167,089
	Pinellas	194,389
	Polk	104,150
	Sarasota	110,009
Georgia	Clayton	100,742
	Cobb	204,121
	Richmond	118,529
Kentucky	Jefferson	224,958
Louisiana	Jefferson	140,836
North Carolina	Cumberland	142,727
Nevada	Clark	201,775
Oregon	Multnomah	141,100
	Washington	109,348
South Carolina	Greenville	135,396
	Richland	124,684
Virginia	Arlington	152,599
	Henrico	161,204
	Chesterfield	108,348
Washington	Snohomish	103,490
	Pierce	186,113

PART 123—STATE PROGRAM REQUIREMENTS

8 The authority citation for part 123 continues to read as follows

Authority: Clean Water Act, 33 U.S.C. 1251 *et seq.*

9. Section 123.25 is amended by revising paragraph (a)(9) to read as follows:

§ 123.25 Requirements for permitting.

(a) * * *

(9) § 122.26—(Storm water discharges);

* * * * * *

PART 124—PROCEDURES FOR DECISIONMAKING

10. The authority citation for part 124 continues to read as follows:

Authority: Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq.*; Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*, Clean Water Act, 33 U.S.C. 1251 *et seq.*; and Clean Air Act, 42 U.S.C. 1857 *et seq.*

11. Section 124.52 is revised to read as follows.

§ 124.52 Permits required on a case-by-case basis.

(a) Various sections of part 122, subpart B allow the Director to determine, on a case-by-case basis, that certain concentrated animal feeding operations (§ 122.23), concentrated aquatic animal production facilities (§ 122.24), storm water discharges (§ 122.26), and certain other facilities covered by general permits (§ 122.28) that do not generally require an individual permit may be required to obtain an individual permit because of their contributions to water pollution.

(b) Whenever the Regional Administrator decides that an individual permit is required under this section, except as provided in paragraph (c) of this section, the Regional Administrator shall notify the discharger in writing of that decision and the reasons for it, and shall send an application form with the notice. The discharger must apply for a permit under § 122.21 within 60 days of notice, unless permission for a later date is granted by the Regional Administrator. The question whether the designation was proper will remain open for consideration during the public comment period under § 124.11 or § 124.118 and in any subsequent hearing.

(c) Prior to a case-by-case determination that an individual permit is required for a storm water discharge under this section (*see* 40 CFR 122.26 (a)(1)(v) and (c)(1)(v)), the Regional Administrator may require the discharger to submit a permit application or other information regarding the discharge under section 308 of the CWA. In requiring such information, the Regional Administrator shall notify the discharger in writing and shall send an application form with the notice. The discharger must apply for a permit under § 122.26 within 60 days of notice, unless permission for a later date is granted by the Regional Administrator. The question whether the initial designation was proper will remain open for consideration during the public comment period under § 124.11 or § 124.118 and in any subsequent hearing.

Note: The following form will not appear in the Code of Federal Regulations

BILLING CODE 6560-50-M

APPENDIX C:
ADEQUATE LEGAL AUTHORITY

contrivance for the elimination or destruction of human waste, within those portions of the watershed of the city contiguous to the intake of the city's water supply, as hereinafter described, or by placing any foul or putrescible substance, whether solid or liquid, and whether the same be buried or not, within the limits of the portion of the watershed so described.

Sec. 49-6. Application for permit.

(a) Any person who desires to use or develop any vegetated wetland and on and after January 1, 1983, any nonvegetated wetland, within this city, other than for those activities specified in section 49-3 above, shall first file an application for a permit with the wetlands board.

Sec. 49-22. Application for permit.

(a) Any person who desires to use or alter any coastal primary sand dune within this city, other than for those activities specified in section 49-20 above, shall first file an application for a permit with the wetlands board.

1.6 Authority to Meet Part 2 Permit Requirements

The NPDES stormwater permit application regulations require an assessment of whether existing legal authority is sufficient to meet the criteria for Part 2 of the permit application provided in *40 CFR 122.26(d)(2)(i)* as follows:

40 CFR 122.26(d)(2)(i)

A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to:

(A) Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer system by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity;

(B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer;

(C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water;

(D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;

(E) Require compliance with conditions in ordinances, permits, contracts or order; and

(F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.

The City Code sections identified above are referenced in an assessment of the individual Part 2 legal authority criteria.

(A) Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer system by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity. Section 39.1-19 of the City Code prohibits the discharge of sanitary sewer flow to the storm sewer system. Section 39.2-5 of the City Code prohibits the discharge of any sewage from a private sewage disposal facility on any public or private property in the City. Section 41.1-4 of the City Code prohibits pollutants to be discharged to the storm sewer system including the discharge of industrial process water, wash water, or other unpermitted industrial discharges in Section 41.1-4(c). Section 41.1-5 of the City Code provides the City with authority to order the correction of drainage problems on any site in the City. Sections 9-10, 30-69, 41-16, and 41-17 of the City Code prohibit pollution of waters of the City and littering. Sections 42-20.1 and 42-20.2 of the City Code prohibit the obstruction of drains or drainage areas. Sections 42-24, 42-25, and 42-46 of the City Code establish regulations for protecting the City from spills or deposits of liquid wastes. Section 46-28 of the City Code prohibits pollution of the City's water supply.

For development or redevelopment of industrial sites, the City's Zoning Ordinance establishes lot size, yard size, and maximum lot coverage requirements for industrial activity. Chapter 15 of the City Code establishes erosion and sedimentation control regulations If development or redevelopment of industrial sites occurs within a Chesapeake Bay Preservation Area, Section 494 of the City's Zoning Ordinance and Chapter 32.2 of the City Code establish stringent criteria for stormwater management, protection of water quality, and use of Best Management Practices. Chapter 49 of the City Code protects development within wetlands or coastal primary sand dunes by requiring a permit application with the wetlands board.

Enforcement provisions and penalties for violations of the referenced sections of City Code are also provided in specific chapters. Chapter 27 of the City Code provides additional authority for the abatement of nuisances.

(B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer. Section 39.1-19 of the City Code prohibits the discharge of sanitary sewer flow to the storm sewer system. Section 39.2-5 of the City Code prohibits the discharge of any sewage from a private sewage disposal facility on any public or private property in the City. Section 41.1-4 of the City Code prohibits pollutants to be discharged to the storm sewer system. Section 41.1-5 of the City Code provides the City with authority to order the correction of drainage problems on any site in the City. Sections 9-10, 30-69, 41-16, and 41-17 of the City Code prohibit pollution of waters of the City and littering. Sections 42-20.1 and 42-20.2 of the City Code prohibit the obstruction of drains or drainage areas. Sections 42-24, 42-25, and 42-46 of the City Code establish regulations for protecting the City from spills or deposits of liquid wastes. Section 46-28 of the City Code prohibits pollution of the City's water supply.

Enforcement provisions and penalties for violations of the referenced sections of City Code are also provided in specific chapters. Chapter 27 of the City Code provides additional authority for the abatement of nuisances.

(C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water. Section 39.1-19 of the City Code prohibits the discharge of sanitary sewer flow to the storm sewer system. Section 39.2-5 of the City Code prohibits the discharge of any sewage from a private sewage disposal facility on any public or private property in the City. Section 41.1-4 of the City Code prohibits pollutants to be discharged to the storm sewer system. Sections 9-10, 30-69, 41-16, and 41-17 of the City Code prohibit pollution of waters of the City and littering. Sections 42-24, 42-25, and 42-46 of the City Code establish regulations for protecting the City from spills or deposits of liquid wastes. Section 46-28 of the City Code prohibits pollution of the City's water supply.

Enforcement provisions and penalties for violations of the referenced sections of City Code are also provided in specific chapters. Chapter 27 of the City Code provides additional authority for the abatement of nuisances.

(D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system. The City of Norfolk owns the entire separate storm water system and is an individual NPDES permit applicant.

The City of Norfolk relies on its In-Town Reservoir System as a vital part of the water supply system. To protect water quality within the In-Town Reservoir System, the City of Norfolk will seek an intermunicipal agreement with the City of Virginia Beach to control nonpoint source pollution for the areas of the In-Town Reservoir System bordering and located within the jurisdiction of the City of Virginia Beach. After approval of Part 1 of the application by the EPA, the City of Norfolk will meet with the City of Virginia Beach to discuss the development of an agreement before submittal of Part 2 of the application on November 16, 1992.

(E) Require compliance with conditions in ordinances, permits, contracts or order. Enforcement provisions and penalties for violations of the referenced sections of City Code are provided in specific chapters. Chapter 27 of the City Codes provides additional authority for the abatement of nuisances.

(F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer. Chapter 41.1, entitled "Storm Water Management", provides authority for the City's Director of Public Works to establish procedures and enforce regulations pertaining to the storm water system in Section 41.1-3. Authority to prohibit and inspect for illicit connections to the storm sewer system is provided to the Department of City Planning and Codes Administration in Section 39.1-19. Authority to enforce violations of private sewage disposal regulations is provided to the Department of Health in Section 39.2-1 of the City Code. For development and redevelopment, the Department of City Planning and Codes Administration has authority over erosion and sediment control plans, the site review process, and stormwater management regulations required for activity within the Chesapeake Bay Preservation Area. Additional authority for enforcement of erosion and sediment control regulations and stormwater management is being established for the Department of Public Works in an ordinance currently under review by the state. Authority to enforce regulations and permits of the City's Tree Ordinance is provided in Section 30-23 of the City Code

1.7 Legal Authority Overview

Overall, the City of Norfolk has the existing legal authority, or is in the process of modifying existing City Code with ordinances, to control discharges to the municipal storm sewer system and meet the legal authority requirements of *40 CFR 122 26(d)(2)(i)*.

MS4 Permit Improvement Guide

U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF WATER

OFFICE OF WASTEWATER MANAGEMENT

WATER PERMITS DIVISION

APRIL 2010

EPA 833-R-10-001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 14 2010

OFFICE OF WATER

Dear NPDES Stormwater Managers,

I am pleased to announce that the Environmental Protection Agency (EPA) has completed the "Municipal Separate Storm Sewer System Permit Improvement Guide." The primary purpose of this guidance document is to assist National Pollutant Discharge Elimination System (NPDES) permit writers in strengthening municipal separate storm sewer system (MS4) permits.

This Guide contains examples of permit conditions and supporting rationale that could be used in fact sheets that accompany NPDES permits. The Guide also includes recommendations for permit writers on how to tailor the language depending on the type of permit. For example, permits covering traditional municipalities may contain different permit provisions than those covering non-traditional entities like departments of transportation, universities, and prisons.

I ask that permit writers review the permit language and corresponding discussion presented in this Guide and consider how to incorporate this, or similar, language into their MS4 permits. Some modification of the language may be necessary to make it suitable for use with specific MS4 permits, and to better tailor it to meet the needs and goals of the various permitting authorities.

The permit language suggested in this Guide is not intended to override already existing, more stringent or differently-worded provisions that are equally as protective in meeting the applicable regulations. EPA expects the permitting authority to continue to make significant progress and ensure that the intent of the regulations or more stringent requirements is captured in the permit.

In addition, EPA would like to particularly stress the following key principles:

- Permit provisions should be clear, specific, measurable, and enforceable. Permits should include specific deadlines for compliance, incorporate clear performance standards, and include measurable goals or quantifiable targets for implementation.
- Permits should contain a performance standard for post-construction that is based on the objective of maintaining or restoring stable hydrology to protect water quality of receiving waters or another mechanism as effective.

EPA has begun a rulemaking to strengthen the stormwater program. Using this Guide to improve permits represents the direction that EPA is taking to strengthen the program. This Guide is a living document that will be updated as new information for improving the stormwater program is obtained.

I appreciate your continued efforts in strengthening the NPDES municipal stormwater program. If you have any questions about this Guide or suggestions for further improvements, please contact Rachel Herbert of my staff at herbert.rachel@epa.gov or call her at 202-564-2649.

Sincerely,

Linda Y. Boornazian

Linda Y. Boornazian, Director
Water Permits Division

CC: State Stormwater Coordinators
Association of State and Interstate Water Pollution Control Administrators

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INTRODUCTION & GETTING STARTED

Purpose

The primary purpose of the MS4 Permit Improvement Guide (Guide) is to assist National Pollutant Discharge Elimination System (NPDES) permit writers in strengthening municipal separate storm sewer system (MS4) stormwater permits. The objective of the Guide is to facilitate the creation of MS4 permits which are clear, consistent with applicable regulations, and enforceable. This Guide contains examples of permit conditions and supporting rationale that could be used in fact sheets that accompany NPDES permits. Permit language should include controls that identify specific actions permittees must perform to comply with the Permit Requirements.

This Guide focuses in large part on permits for small (Phase II) MS4s. However, while the contents of the Guide are generally organized consistent with the six minimum control measures (40 CFR 123.34(b)) applicable to Phase II MS4 permits, however, permit writers may find this Guide useful for Phase I MS4 permits. In addition, the Guide specifically addresses Phase I MS4 Permit Requirements with regard to the industrial program elements set forth in the Phase I regulations at 40 CFR 122.26(d)(2)(ii) and (iv)(C). These are addressed in Chapter 7. The Guide may also be useful for "non-traditional" MS4 permittees, such as departments of transportation (DOTs), universities and prisons.

EPA has developed a Stormwater Phase II Final Rule Fact Sheet Series (www.epa.gov/npdes/stormwater/swfinal) to assist permitting authorities and permittees in understanding the Phase II regulations. Further, EPA has developed the National Menu of Stormwater Best Management Practices (www.epa.gov/npdes/stormwater/menuofbmps) which provides descriptive information in fact sheets about various best management practices associated with the Phase II six minimum control measures.

The Guide was created by reviewing numerous MS4 permits and fact sheets from around the country. Some of the example permit and fact sheet language presented in this Guide has been adapted from these permits; in those instances where existing language that meets the purpose of this document was not available, EPA has crafted new language.

Contents of this Guide

This document is divided into parts, as noted above, based largely on the six minimum control measures required in the Phase II stormwater regulations (see 40 CFR 122.34(b)). Chapters 1 -6 address development and implementation of a stormwater management program (SWMP) and the six minimum control measures that must be included in the SWMP. Chapter 7 addresses industrial facilities programs relevant for Phase I MS4 permits. Chapter 8, Overall Evaluation and Adaptive Management, discusses reporting, evaluation, and tracking requirements. This Guide does not focus on the water quality provisions of the Clean Water Act, which may require more stringent requirements than those programmatic elements specified here.

Each chapter opens with an introduction providing a brief overview of relevant regulatory requirements pertaining to the subject of the chapter. Each chapter is then divided into sections in which the following topics are addressed:

- *Example Permit Provision* – This section includes example MS4 permit language. The language has been formatted and numbered in such a way that each section corresponds directly to a permit structured in accordance with the chapter sequence of this Guide. EPA developed these examples by first surveying existing EPA and State MS4 permit language and drawing upon agency experience in implementing permits. EPA has identified the source of the language (in footnotes) if adapted from specific permits.
- *Example Permit Requirement Rationale for the Fact Sheet* – This section describes the rationale for the example permit provision. This language can assist the permit writer in developing the fact sheet, which accompanies all NPDES permits; however, it is up to the permit writer to ensure that a complete and customized version of the fact sheet accompanies the permit. Example Permit Requirement Rationale for the Fact Sheet sections often describe "requirements" or steps that "must" be taken. To the extent this language is used in these sections, it is intended to describe requirements included in the example permit provisions. It does not mean that all permits "must" include the specific "requirement" described.
- *Recommendations for the Permit Writer* (included where appropriate) – This section discusses issues the permit writer should consider in determining how to use the example permit provisions.

How to Use this Guide

This guidance includes "example" MS4 permit language for specific program elements, but is not intended to be definitive or comprehensive for all MS4 Permit Requirements.[1] EPA recommends that permit writers review the example permit language presented in this guide and consider how to incorporate this, or similar, language into MS4 permits as appropriate. Each state may have different NPDES requirements along with varied experience overseeing MS4 programs, and MS4 permittees vary widely in storm water management experience and sophistication, size, topography, precipitation patterns, land use, receiving water conditions and other factors. In most instances, EPA anticipates that permit writers will modify the language to make it suitable for specific MS4 permits, and to tailor example provisions to meet the various needs and goals that apply.

When possible, this Guide has tried to provide examples that can be used for both Phase I and Phase II permits. However, in some instances EPA has provided suggestions for how the language can be tailored to better fit within the context of a Phase I or Phase II permit. In addition, EPA acknowledges that some language presented in this Guide may be more suitable for an individual permit rather than a general permit. While EPA has presented a discussion for ways the language could be altered to fit these scenarios in Recommendations for the Permit Writer sections, it is up to the permit writer to determine the best use of the material for the permit being crafted.

[1] For example, the guide does not explicitly address provisions for compliance with CWA section 402(p)(3)(B)(ii), water quality standards, applicable wasteload allocations in TMDLs or such other conditions as the permitting authority deems necessary. For information on integrating TMDLs into stormwater permits see USEPA's DRAFT TMDLs to Stormwater Handbook (www.epa.gov/owow/tmdl/stormwater)

The example permit language in this Guide has been written as if the permit is a reissued permit and not an initial permit, since most MS4 permittees have been subject to NPDES permits for at least one permit term. Requirements to develop the initial SWMP are not included in this Guide since they would have been included in the first permit term. It is important that permit writers consider the different stages in the development and implementation of SWMPs when establishing permit conditions as well as the experience learned from other more advance programs. So, for example, this Guide includes brackets to indicate the place for an appropriate schedule or deadline rather than indicating specific timeframes in all instances. These examples are available to the permit writer, along with other resources such as the permittee's draft or existing SMWP document, annual reports, prior permit experience, receiving water quality information and the permit writer's best professional judgment, to issue permits suitable for their specific MS4s.

The permit language suggested in this Guide is not intended to override already existing, more stringent or differently-worded provisions that are equally as compliant in meeting the applicable regulations and protective of water quality standards. EPA expects the permitting authority to ensure that the intent of all applicable regulations is captured in the permit. States with more stringent permit provisions should continue to strengthen these provisions as the permits are reissued. This Guide includes suggestions on how to develop permit language for MS4 permittees. This Guide does not impose any new legally binding requirements on EPA, States, or the regulated community, and does not confer legal rights or impose legal obligations upon any member of the public. In the event of a conflict between the discussion in this Guide and any statute, regulation, or permit the statute, regulation or permit controls.

Terminology: SWMP and SWMP Document
This guide uses the term SWMP to refer to the stormwater management program that is required by the Phase I and Phase II regulations to be developed by MS4 permittees. The SWMP document is the written plan that is used to describe the various control measures and activities the permittee will undertake to implement the stormwater management program.

Preparing to Write an MS4 Permit

Most Phase II MS4 permittees are regulated under a general permit (with some exceptions where individual permits have been used for Phase II and non-traditional MS4 permittees). Phase I MS4 permittees are regulated under individual permits, and can include multiple co-permittees. EPA regulations require that initial MS4 permits (i.e. first permit term) set the foundation of the permittee's SWMP. For Phase II MS4 the focus is on the six minimum control measures in 40 C.F.R. 122.34(b), while the Phase I MS4 permittees are informed by the regulations at 40 C.F.R. 122.26(d). See Chapter 1 of this Guide.

As the permit writer prepares to reissue an MS4 permit, regardless of whether the permit is an individual or general permit, EPA recommends that the permit writer review, at a minimum, the following sources of information:

Past annual reports
For currently regulated MS4s, annual reports submitted by the permittee can include information that will help permit writers develop more specific and measurable Permit Requirements. The most recent annual report is usually the most helpful to review, but additional annual reports can be reviewed if time allows. If the permit writer is developing a general permit, a broad selection of

annual reports from various permittees should be reviewed. In particular, EPA recommends that the permit writer review, at a minimum, the following specific information:

Areas of obvious strengths or weaknesses in the SWMP

- For example, is the permittee vague about specific activities (often an indicator of a weak program area), or is the permittee clearly meeting the requirements of the permit and/or going above and beyond the minimum requirements?

Trends or common compliance problems

- For example, does the permittee analyze the data to assess the most common compliance problems, and then modify their controls/programs to address these problems? For example, do they use the common compliance issues identified to target their training and outreach/education efforts for construction operators?

Level of implementation of SWMP activities (e.g., frequency and numbers of inspections, frequency of catch basin cleaning, street sweeping)

- Does the permittee report the total universe when reporting the quantity of an activity achieved? For example, if the MS4 is required to conduct industrial inspections, does it report it did 100 inspections (which may be good or bad, depending on how many it was required to inspect), or that it did 100 out of 5,000 (only 2% of the total)?

Water quality priorities for the permittee (e.g. impaired waters, TMDLs, high quality waters)

- Does the permittee's annual report describe priority pollutants for impaired waters and other water quality programs and what was done to reduce and/or eliminate their contact with stormwater? Does the SWMP target both impaired and high quality waters?

Specific sources or pollutants of concern permittee is currently focusing on

- Does the SWMP target pollutants of concern in its activities?

Level and type of enforcement currently being used by permittee

- Does the annual report provide data and summary information on the different types of enforcement actions taken (how many verbal warnings, written notes, fines, etc)?

Any trends (i.e. water quality, compliance, control measure implementation levels) being reported by Permittees which indicate success or failure of particular SWMP components

- Does the permittee analyze the data, or just report the data in the MS4 annual report?

Types of measurable goals being applied and achieved by permittees

- Has the permittee met the measurable goals stated in the permit and SWMP?

Stormwater management program (SWMP)
Review the most current SWMP documents for potential gaps that may need to be specifically addressed in the reissued MS4 permit. EPA's *MS4 Program Evaluation Guidance* (available at www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf) can be used to assess the key elements in a SWMP.

NPDES MS4 audit reports, construction/industrial/commercial site inspection reports
Review the findings from any MS4 audits conducted during the past permit term to help identify key issues that should be addressed in the next permit. For example, if the audits identified weak or missing program elements and other controls, these should be addressed in the reissuance of the permit. Construction, industrial, and/or commercial site inspection reports for facilities within the MS4's boundary should be reviewed to determine if there are common compliance issues that should be addressed in the MS4 permit (for example, more training, more frequent inspections, more complete inventory or prioritization, etc.).

Monitoring/Information on Quality of Receiving Waters
Review any monitoring data collected by the permittee or any other entity that has collected useful monitoring data to identify potential pollutants of concern. In addition, the most recent information on impaired waters and total maximum daily loads (TMDLs) for the permit area should be reviewed. If there are waste load allocations (WLAs) applicable to the permittee, these should be addressed in the permit. If no WLA has been assigned to the MS4, the permit writer should still consider pollutants of concern identified in 303(d) lists and TMDLs when developing Permit Requirements. Such information will help identify whether more targeted permit conditions are needed to reduce the discharge of these pollutants. This Guide does not specifically address the inclusion of TMDL requirements in MS4 permits.

Permit renewal application data or past notice of intent (NOI) information
Review any permit renewal applications or NOIs submitted to establish coverage for the previous permit term. Permit writers should consider the recommendations made in the EPA "Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems" (www.epa.gov/npdes/pubs/owm0125.pdf) published in 1996 (40 CFR Part 122; Federal Register, Volume 61, Number 155). This document provides information which clarifies the MS4 reapplication requirements and explains that MS4 permit applicants and NPDES permit writers have discretion to customize appropriate and streamlined reapplication requirements on a case-by-case basis.

Previous MS4 permit
Finally, review any past MS4 permits to identify where permit language should be revised or completely rewritten, for example, because language was vague. This MS4 permit improvement Guide should be used help strengthen key areas in the permit.

Note that if the MS4 permit is being issued for the first time, some of the above information will not exist yet, such as past annual reports or old SWMP documents.

MS4 Permit Writing Tips

There are a few general tips to keep in mind when writing MS4 permits. First, and most importantly, permit provisions should be clear, specific, measurable, and enforceable. Permits should include specific

deadlines for compliance, incorporate clear performance standards, and include measurable goals or quantifiable targets for implementation. Doing so will allow permitting authorities to more easily assess compliance, and take enforcement actions as necessary.

For example, the following permit provision could be strengthened: "The permittee shall demonstrate compliance with this Permit through the timely implementation of control measures and other actions to reduce pollutants in discharges to the maximum extent practicable in accordance with their SWMP…" This permit provision does not define what "timely implementation" is, allowing the permittee to determine what is timely. Timely implementation could be, although it probably was not intended to be, interpreted as meaning up to five years, or it could mean that implementation must occur within six months. In addition, "other actions" are mentioned in this provision, but they are never described. If a permit requires "other actions," these actions should be specifically described in the permit. Finally, it is important to strike a balance of providing specific Permit Requirements while still allowing the permittee come up with innovative controls.

In addition, vague phrases such as "as feasible" and "as possible" should be avoided because they result in inconsistent implementation by permittees and difficulties in permit authority oversight and enforcement. The permit writer's role is to determine what is necessary to achieve in a permit term, and to develop clear, enforceable language that conforms to these determinations. Accordingly, the permit should set forth objective standards, criteria or processes, which will aid the permittee in complying with the permit, as well as the permitting authority in determining compliance in the MS4 permit.

In order for permit language to be clear, specific, measurable and enforceable, each Permit Requirement will ideally specify:

- *What* needs to happen
- *Who* needs to do it
- *How much* they need to do
- *When* they need to get it done
- *Where* it is to be done

For each Permit Requirement: "What" is usually the stormwater control measure or activity required. "Who" in most cases is implied as the permittee (although in some cases the permitting authority may need to specify who exactly will carry out the requirement if there are co-permittees). "How much" is the performance standard the permittee must meet (e.g., how many inspections). "When" is a specific time (or a set frequency) when the stormwater control measure or activity must be completed. "Where" indicates the specific location or area (if necessary). These questions will help determine compliance with the permit requirement.

The Use of Partnerships in MS4 Permits

Since the Phase II Rule applies to all small MS4s within an urbanized area regardless of political boundaries it is very likely that multiple governments and agencies within a single geographic area are subject to MS4 permitting requirements. For example, a city government that operates a small MS4 within an urbanized area may obtain permit coverage under a general Phase II permit while other MS4s in the same vicinity (such as a county, other cities, or a state DOT) may have individual Phase I MS4 permits. All permittees are responsible for permit compliance in their permitted area. Given the

potential for overlapping activities in close proximity, EPA encourages permittees in a geographic area to establish cooperative agreements in implementing their stormwater programs. Partnerships and agreements between permittees and/or other agencies can minimize unnecessarily repeating activities and result in using available resources as efficiently as possible. Using existing tools and programs instead of creating new ones can allow permittees to focus resources on high priority program components instead. In addition by forming partnerships, water quality can be examined and improved on a larger, consolidated scale rather than on a piece-meal, site-by-site basis.

In addition to requiring MS4 permittees to maintain records of program implementation such as inspection forms, monitoring data, dry weather screening reports, and notices of violation, EPA recommends that MS4 permits include requirements for permittees to summarize and analyze data and submit the analysis to the permitting authority. For example, as permittees are required to evaluate program compliance and appropriateness of best management practices, the permit could require permittees to address in annual reports questions such as:

- For illicit discharge data, what are the most prevalent sources and pollutants in the illicit discharge data, and where are these illicit discharges occurring? How many illicit discharges have been identified, and how many of those have been resolved? How many outfalls or screening points were visually screened, how many had dry weather discharges or flows, at how many were field analyses completed and for what parameters, and at how many were samples collected and analyzed? Does the permittee need to conduct more inspections in these areas, or develop more specific outreach targeting these sources and pollutants?
- For the construction data, what are the most common construction violations, and are there any trends in the data (e.g., construction operators who receive more violations than others, areas of the MS4 with more violations, need to refine guidance or standards to more clearly address common violations) How has the permittee responded to these trends? Over the last year, how many construction site SWPPP reviews were completed and approved? How many inspections were conducted, how many noncompliant sites were identified, and how many enforcement actions (and of what type) were taken?

Also, although the stormwater Phase II rule requires reports, after the first permit term, reports are required to be submitted only in years two and four of the permit term. EPA strongly encourages annual reports for all permittees. (See 40 CFR 122.34(g)(3))

CHAPTER 1: ESTABLISHMENT OF THE STORMWATER MANAGEMENT PROGRAM

Introduction

Included Concepts

- Requirement to develop a stormwater management program
- Necessary legal authority
- Enforcement Measures and Tracking
- Adequate resources

An over-arching legal authority framework must be established in order for the SWMP to be effective. Ensuring that the permittee has established the legal authority to meet the requirements of the permit, created a well described enforcement response plan (ERP), and allocated adequate resources will set a necessary foundation for the SWMP.

Legal Authority

Permittees must have the authority to carry out all aspects of their stormwater management programs, including requiring the control of pollutants flowing into the MS4 system, having access to inspect sources of pollutant discharges, and being able to compel compliance and issue citations in the event of violations. Legal authority is especially critical for construction site runoff control, post-construction/permanent runoff control, industrial and commercial inspections, and illicit discharge detection and elimination programs. (See 40 CFR 122.26(d)(2)(i) and 40 CFR 122.34(b)(3)(ii)(B), (b)(4)(ii)(A), and (b)(5)(ii)(B))

A permittee seeking permit coverage under individual permits is required to describe the legal authority it has to implement and enforce the SWMP. EPA recommends that general permits also require regulated MS4s to describe their applicable legal authority in their Notices of Intent (NOIs) (40 CFR 122.26(d)(2)(i), 122.33(b)). This legal authority is typically established through the adoption of one or more ordinances, or by modifying existing ordinances to provide the necessary authority. In some cases, a permittee might already have codified water quality provisions to address previous MS4 Permit Requirements; in this case, the permittee should be required to review existing codes and ordinances and prepare a statement detailing any necessary changes required to address the new MS4 permit requirements. Some permittees, such as, DOTs, universities, and prisons, may not have the authority to create and enforce ordinances. For these entities other mechanisms and authorities that they do possess should be utilized (e.g. DOT right-of-way permits).

Enforcement Measures and Tracking

Permittees are required by the Phase I and Phase II regulations to include in their ordinance, or other regulatory mechanism, penalty provisions to ensure compliance with construction and industrial requirements, to require the removal of illicit discharges, and to address noncompliance with post-construction requirements. In complying with these requirements, EPA recommends the use of enforcement responses that vary with the type of permit violation, and escalate if violations are repeated or not corrected. EPA recommends that the permittee be required to develop and implement an enforcement response plan (ERP), which clearly describes the action to be taken for common violations associated with the construction program, industrial and commercial program, or other SWMP programs. A well-written ERP provides guidance to inspectors on the different enforcement

responses available, actions to address general permit non-filers, when and how to refer violators to the State, and how to track enforcement actions.

Adequate Resources

Each permittee will fund its SWMP differently; therefore, in order to assess whether adequate resources have been allocated to carry out the requirements of the MS4 permit, the permitting authorities should require their permittees to submit an accounting of stormwater-related budgets, costs, and staffing resources updated annually. The fiscal analysis should document and explain changes to budgets from year to year and describe how each type of funding can and cannot be used for stormwater program activities. (See 40 CFR 122.26(d)(2)(vi)).

1.1 Requirement to Develop a Stormwater Management Program

Example Permit Provision

1.1.1 Requirement to Develop Program – The permittee must revise and update its written stormwater management program (SWMP) document and submit the SWMP to the [*insert name of Permitting Authority*] for review by [*insert deadline, e.g., within one year of permit issuance*]. The permittee must continue to implement the current SWMP until the revised SWMP is submitted. The SWMP does not contain effluent limitations; the limitations are contained in Parts [*insert relevant part of the permit*] of the permit.

1.1.2 Contents of the SWMP document – At a minimum, the permittee must include the following information in its SWMP document:

a. Ordinances, or other regulatory mechanisms, providing the legal authority necessary to implement and enforce the requirements of this permit (see Part 1.1);

b. Statement by the permittee's legal counsel certifying to adequacy of legal authority (see Part 1.2);

c. Written procedures describing how the permittee will implement provisions described in Parts 2-8.

1.1.3 Modifications to the SWMP document – The [*insert applicable name of permitting authority*]may notify the permittee of the need to modify the SWMP document to be consistent with the permit, in which case the permittee will have [*insert deadline, e.g. 90 days*] to finalize such changes to the program. The permittee is required to keep the SWMP document up to date during the term of the permit. Where the permittee determines that modifications are needed to address any procedural, protocol, or programmatic change, such changes must be made as soon as practicable, but not later than [*insert deadline, e.g. 90 days*].

Example Permit Requirement Rationale for the Fact Sheet

The permittee is required to develop a SWMP document that describes how the permittee will meet the control requirements in the permit. (See 40 CFR 122.26(d)(2)(iv), 122.34(a)). The SWMP document is a consolidation of all of the permittee's relevant ordinances or other regulatory requirements, the description of all programs and procedures (including standard forms to be used for reports and inspections) that will be implemented and enforced to comply with this permit and to document the selection, design, and installation of all stormwater control measures. The permittee is required to submit its SWMP document to the permitting authority. If modifications to the SWMP are necessary then the permitting authority will notify the permittee.

Recommendation for the Permit Writer

The permit writer should include in this section the relevant parts of the permit that require specific descriptions or justifications to be included in the SWMP document. Also, permit writers may need to include an additional requirement regarding the submittal of the SWMP document since some information contained in the SWMP document is required to be submitted prior to the permittee obtaining permit coverage. In addition, permit writers should refer to the memo entitled *Interim Guidance on Implementation of NPDES Regulations for Storm Water Phase II for Small Municipal Separate Storm Sewer Systems in Response to Recent Ninth Circuit Decision in Environmental Defense Center, et al. v. EPA, No. 00-70014 & consolidated cases (9th Cir.)* for additional guidance on the implementation of regulations for Phase II MS4s (www.epa.gov/npdes/pubs/interim_guidelines_memo_final.pdf).

1.2 Requirement to Develop Adequate Legal Authority to Implement and Enforce Stormwater Management Program

Example Permit Provision

1.2.1 Within [*insert deadline, e.g., one year from permit issuance*] the permittee must review and revise its relevant ordinances or other regulatory mechanisms, or adopt any new ordinances or other regulatory mechanisms that provide it with adequate legal authority to control pollutant discharges into and from its MS4, and to meet the requirements of this permit.

1.2.2 To be considered adequate, this legal authority must, at a minimum, address the following:

a. Authority to Prohibit Illicit Discharges – Prohibit and eliminate illicit connections and discharges to the MS4. Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4. Illicit discharges include all non-stormwater discharges except fire fighting discharges, discharges from NPDES permitted industrial sources and discharges not otherwise authorized under Part 1.2.2.b. of this permit.

b. Allowable Non-Stormwater Discharges –Exceptions to the prohibition in Part 1.2.2.a. may include the following, only if they are considered non-significant contributors of pollutants: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water.

c. Authority to Prohibit Spills or Other Releases – Control the discharge of spills, and prohibit dumping or disposal of materials other than stormwater into the MS4.

d. Authority to Require Compliance – Require compliance with conditions in the permittee's ordinances, permits, contracts, or orders (i.e., hold dischargers accountable for their contributions of pollutants and flows).

e. Authority to Require Installation, Implementation, and Maintenance of Control Measures – Require owners/operators of construction sites, new or redeveloped land, and industrial and commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of stormwater control measures consistent with [*insert references to applicable stormwater control measure manuals, guidance documents, etc.*].

f. Authority to Receive and Collect Information – The permittee must have the authority to request from operators of construction sites, new or redeveloped land, and industrial and commercial facilities information such as stormwater plans, inspection reports, and monitoring results, and other information deemed necessary to assess compliance with this permit. The permittee must also have the authority to review designs and proposals for new development and redevelopment to determine whether adequate stormwater control measures will be installed, implemented, and maintained.

g. Authority to Inspect – The permittee must have the authority to enter private property for the purpose of inspecting at reasonable times any facilities, equipment, practices, or operations related to stormwater discharges to determine whether there is compliance with local stormwater control ordinances/standards or requirements in this Permit.

h. Response to Violations – The permittee must have the ability to promptly require that violators cease and desist illicit discharges or discharges of stormwater in violation of any ordinance or standard and/or cleanup and abate such discharges, including the ability to:

    1. Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within [*insert deadline, e.g. 48 hours*] of notification; or

    2. For uncontrolled sources of pollutants that could pose an environmental threat, require abatement within [*insert timeframe, e.g. 30 days of notification*]; or,

3. Perform the clean up and abatement work and bill the responsible party, if necessary.
4. If a situation persists where pollutant-causing sources or activities are not abated, provide the option to order the cessation of activities until such problems are adequately addressed.
5. When all parties agree that clean-up activities cannot be completed within the timeframe provided, determine a new timeframe and notify the [*insert name of permitting authority*].

i. Monetary Penalties – The permittee must have the ability to:

1. Levy citations or administrative fines against responsible parties either immediately at the site, or within a few days.
2. Require recovery and remediation costs from responsible parties.

j. Civil/Criminal Penalties – The permittee must have the ability to impose more substantial civil or criminal sanctions (including referral to a city or district attorney) and escalate corrective response, consistent with its enforcement response plan developed pursuant to Part 1.3, for persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm.

k. Interagency Agreements – Control of the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements or other similar agreements with other owners of the MS4, such as [*insert other applicable permittees*].

1.2.3 The permittee must include as part of its written SWMP document a statement certified by its chief legal counsel that the permittee has taken the necessary steps to obtain and maintain full legal authority to implement and enforce each of the requirements contained in this permit. This statement must include:

a. Identification of all departments within the permittee's jurisdiction that conduct stormwater-related activities and their roles and responsibilities under this permit. Include an up-to-date organizational chart specifying these departments, key personnel, and contact information.

b. Identification of the local administrative and legal procedures and ordinances available to mandate compliance with stormwater-related ordinances and therefore with the conditions of this permit.

c. A description of how stormwater related-ordinances are implemented and appealed.

d. A description of whether the municipality can issue administrative orders and injunctions, or whether it must go through the court system for enforcement actions.

Example Permit Requirement Rationale for the Fact Sheet

Adequate legal authority is required to implement and enforce most parts of the SWMP. (See 40 CFR 122.26(d)(2)(i) and 40 CFR 122.34(b)(3)(ii)(B), (b)(4)(ii)(A), and (b)(5)(ii)(B)). Without

adequate legal authority the MS4 would be unable to perform many vital SWMP functions such as performing inspections and requiring installation of control measures. In addition, the permittee would not be able to penalize and/or attain remediation costs from violators.

Recommendations for the Permit Writer

A major difference between a traditional MS4 and a non-traditional MS4 (such as a DOT, military base, or university) is often the scope of legal authority available to the MS4. Non-traditional MS4 permittees often cannot pass "ordinances" nor do they have enforcement authority like a typical municipality, so legal authority may consist of policies, standards, or specific contract language. Non-traditional MS4 permittees also do not generally have the authority to impose a monetary penalty. Although these differences exist, just like traditional MS4s, non-traditional MS4s must have the legal authority to develop, implement, and enforce the program. Moreover, the scope of legal authority that may be exercised by MS4 operators that are municipalities may vary from state to state. Therefore, permit writers should tailor the legal authority section depending on the types of permittees covered and the scope of authority that may be exercised by the permittee. For example, non-traditional MS4 permittees often have authority over what their contracts require. Therefore, the permit could require that contracts for construction and maintenance activities include specific stormwater requirements that ensure the permittee's requirements are met. In addition, cooperative agreements could be maintained with those permittees that do possess the legal authorities to enforce stormwater measures within the permittee's MS4 boundary.

The discharge prohibitions listed in Part 1.2.2 are taken from the Phase II regulations and are the minimum requirements. Note that, unlike Phase II MS4s, Phase I MS4 permittees are required to address the sources of non-stormwater discharges in Part 1.2.2.b. when they are identified as sources of pollutants in stormwater discharges. (See 40 CFR 122.26(d)(2)(iv)(B)). The permit writer may choose to apply additional or more stringent prohibitions. For example, some states have chosen to prohibit discharges from street washing activities as they can be significant sources of pollutants such as oil and grease and heavy metals.

1.3 Enforcement Measures and Tracking

Example Permit Provision

1.3.1 The permittee must continue to implement, and revise within [*specify deadline for completion, e.g. 12 months of permit issuance*] if necessary, an enforcement response plan (ERP), which sets out the permittee's potential responses to violations and addresses repeat and continuing violations through progressively stricter responses as needed to achieve compliance. The ERP must describe how the permittee will use each of the following types of enforcement responses based on the type of violation:

a. Verbal Warnings – Verbal warnings are primarily consultative in nature. At a minimum, verbal warnings must specify the nature of the violation and required corrective action.

b. Written Notices – Written notices of violation (NOVs) must stipulate the nature of the violation and the required corrective action, with deadlines for taking such action.

c. Escalated Enforcement Measures – The Permittee must have the legal ability to employ any combination of the enforcement actions below (or their functional equivalent), and to escalate enforcement responses where necessary to address persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm:

   1. Citations (with Fines) – The ERP must indicate when the permittee will assess monetary fines, which may include civil and administrative penalties.
   2. Stop Work Orders – The permittee must have the authority to issue stop work orders that require construction activities to be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate control measures.
   3. Withholding of Plan Approvals or Other Authorizations – Where a facility is in non-compliance, the ERP must address how the permittee's own approval process affecting the facility's ability to discharge to the MS4 can be used to abate the violation.
   4. Additional Measures – The permittee may also use other escalated measures provided under local legal authorities. The permittee may perform work necessary to improve erosion control measures and collect the funds from the responsible party in an appropriate manner, such as collecting against the project's bond or directly billing the responsible party to pay for work and materials.

1.3.2 Enforcement Tracking – The Permittee must track instances of non-compliance either in hard-copy files or electronically. The enforcement case documentation must include, at a minimum, the following:

a. Name of owner/operator of facility or site of violation
b. Location of stormwater source (i.e., construction project, industrial facility)
c. Description of violation
d. Required schedule for returning to compliance
e. Description of enforcement response used, including escalated responses if repeat violations occur or violations are not resolved in a timely manner
f. Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violations)
g. Any referrals to different departments or agencies
h. Date violation was resolved.

1.3.3 Recidivism Reduction – The permittee is required to identify chronic violators of any SWMP component and reduce the rate of noncompliance recidivism. The permittee

must summarize inspection results by these chronic violators and include incentives, disincentives, or an increased inspection frequency at the operator's sites. [2]

Example Permit Requirement Rationale for the Fact Sheet

The permit requires permittees to have an established, escalating enforcement policy that clearly describes the action to be taken for common violations. The policy must describe the procedures to ensure compliance with local ordinances and standards, including the sanctions and enforcement mechanisms that will be used to ensure compliance. (See 40 CFR 122.26(d)(2)(i)). It is critical that the MS4 have the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance. Enforcement responses to individual violations must consider criteria such as magnitude and duration of the violation, effect of the violation on the receiving water, compliance history of the operator, and good faith of the operator in compliance efforts. Particularly for construction sites, enforcement actions must be timely in order to be effective.

Recommendations for the Permit Writer

Typical enforcement mechanisms include verbal warnings, written NOVs, administrative fines and orders, stop work orders, and civil or criminal penalties. Some non-traditional MS4 permittees, such as DOTs and universities, may not have the authority to use the mechanisms described above. Therefore the enforcement requirements in the permit should take the permittee's enforcement limitations and abilities into consideration, allow for alternative mechanisms such as related contract obligations or right-of-way permits, and/or require entities that cannot enforce to coordinate with those entities that can. For example, if a DOT discovers an illicit discharge to the right-of-way, a mechanism should be in place for the DOT to communicate with the adjacent municipality to eliminate the discharge in a timely manner.

Some permit writers include specific language as to when permittees can refer violations of NPDES permits to the permitting authority. Because of the often similar control measures required in MS4 construction programs and NPDES CGP SWPPP requirements, permit writers want the permittee to make an honest effort at achieving compliance with their local requirements before referring a violator to the NPDES permitting authority. An example of permit language on NPDES referrals, which require the MS4 permittee to make a good faith effort at ensuring compliance by conducting at least two inspections and notices of violation, follows:

> NPDES Permit Referrals–For those construction projects or industrial facilities subject to the [*insert name of applicable NPDES general construction/industrial permit*], the permittee must:

[2] Adapted from 2009 San Francisco Bay Municipal Regional Stormwater Permit (Order No. R2-2009-0074; www.swrcb.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2009/R2-2009-0074.pdf) and the Los Angeles MS4 Permit (Part 3; www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/ms4_permits/los_angeles/2001-2007/LA_MS4_Permit2001-2007.pdf)

a. Refer non-filers (i.e., those facilities that cannot demonstrate that they obtained permit coverage) to the [*insert name of permitting authority*] within [*insert number of days, e.g. 30 days*] of making that determination. In making such referrals, the permittee must include, at a minimum, the following documentation:

    1. Construction project or industrial facility location.
    2. Name of owner or operator.
    3. Estimated construction project size or type of industrial activity (including SIC code if known).
    4. Records of communication with the owner or operator regarding filing requirements.

b. Refer violations to the [*insert name of permitting authority*] provided that the permittee has made a good faith effort of progressive enforcement to achieve compliance with its own ordinances. At a minimum, the permittee's good faith effort must include documentation of two follow-up inspections and two warning letters or notices of violation. In making such referrals, the permittee must include, at a minimum, the following documentation:

    1. Construction project or industrial facility location
    2. Name of owner or operator
    3. Estimated construction project size or type of industrial activity (including SIC code if known)
    4. Records of communication with the owner or operator regarding the violation, including at least two follow-up inspections, two warning letters or notices of violation, and any response from the owner or operator

It is important to note that a referral to the permitting authority does not relieve the MS4 from its enforcement obligations. The MS4 must continue to work with the permitting authority, using all available enforcement authority in order to gain compliance.

1.4 Requirement to Ensure Adequate Resources to Comply with MS4 Permit

Example Permit Provision

1.4.1 Secure Resources – The permittee must secure the resources necessary to meet all requirements of this permit.

1.4.2 Annual Fiscal Analysis – The permittee must conduct an annual analysis of the capital and operation and maintenance expenditures needed, allocated, and spent as well as the necessary staff resources needed and allocated to meet the requirements of this permit, including any development, implementation, and

enforcement activities required. The analysis must include estimated expenditures for the reporting period, the preceding period, and the next reporting period and be submitted with the annual report.

a. Each analysis must include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

b. Each analysis must include a narrative description of circumstances resulting in a [*insert percentage, e.g. 25 percent or greater*] annual change for any budget line items.

c. Each analysis must include a description of the staff resources necessary to meet the requirements of this permit.

Example Permit Requirement Rationale for the Fact Sheet

The annual fiscal analysis will show the allocated resources, expenditures, and staff resources necessary to comply with the permit, and implement and enforce the permittee's SWMP. (See 40 CFR 122.26(d)(2)(vi). The annual analysis is necessary to show that the permittee has adequate resources to meet all Permit Requirements. The analysis can also show year-to-year changes in funding for the stormwater program. A summary of the annual analysis must be reported in the annual report (see Section 8.4 and Appendix A). This report will help the Permitting Authority understand the resources that are dedicated to compliance with this permit, and to implementation and enforcement of the SWMP, and track how this changes over time.

Recommendations for the Permit Writer

Permit writers should be specific when requesting financial analysis information from the permittee. The Annual Report Template provided in this Guide includes basic questions that should be adequate for Phase II MS4s. However, more detailed information may be warranted from more established programs and larger Phase I MS4s.

Because stormwater is a component in many different program areas, it can often be difficult to get an accurate accounting of costs. For example, inspection staff may have multiple responsibilities in addition to stormwater inspections. Is it appropriate to count an entire inspector's time (i.e. full-time equivalent (FTE)) as a stormwater cost if the inspector is also doing building inspections? Also, some permittees count street sweeping as a stormwater compliance cost, while others consider their street sweeping costs as an aesthetic or air quality cost. Permittees should provide a detailed breakdown of costs, along with background or additional discussion so the permit writer knows what the costs include.

CHAPTER 2: PUBLIC EDUCATION AND OUTREACH/PUBLIC INVOLVEMENT

Introduction

Included Concepts

- Developing a comprehensive stormwater education/ outreach program
- Involving the public in planning and implementing the SWMP

The Phase II Regulations require MS4 permittees to develop programs to educate the public about the impact of stormwater discharges on local waterways and the steps that citizens, businesses, and other organizations can take to reduce the contamination of stormwater (40 CFR 122.34(b)(1),(2)). Phase I MS4 permittees were also required to describe their proposed public education programs as part of their initial permit application, but the regulations are not as specific as Phase II. (See 40 CFR 122.26(d)(2)(iv) (B), (D)(4) and (A)(6)).

As the public gains a greater understanding of the benefits of stormwater management, an MS4 is likely to gain more support for the SWMP (including financial support) and increased compliance with the applicable regulatory requirements as the public understands how their actions impact water quality. Education and awareness programs help change human behavior with respect to reducing the amount of pollution generated from stormwater sources within the MS4 system. In addition to education, encouraging public participation in local stormwater programs can lead to program improvement as well as enabling people to identify and report a pollution-causing activity, such as spotting an illicit discharge.

2.1 Developing a Comprehensive Stormwater Education/Outreach Program

Example Permit Provision

2.1.1 The permittee must:

a. Continue to implement, and revise if necessary within [s*pecify the time when the development of the program must be completed, e.g., within the first year after permit issuance*], a comprehensive stormwater education/outreach program. The program must, at a minimum:

1. Define the goals and objectives of the program based on at least three high priority, community-wide issues (e.g. reduction of nitrogen in discharges from the MS4, promoting pervious techniques used in the MS4);
2. Identify and analyze the target audience(s);
3. Create an appropriate message(s) based on at least three targeted residential issues and three targeted industrial/commercial issues from the suggested list below (or three issues deemed more appropriate to the MS4):

Residential Community

- Residential car washing and auto maintenance control measures
- Off-pavement automobile parking
- Home and garden care activities (pesticides, herbicides, and fertilizers)
- Disposal of household hazardous waste (e.g. paints, cleaning products)
- Snow removal activities
- Using techniques that keep water onsite and/or reduce imperviousness (rain barrels, rain gardens, porous pavers, permeable concrete, porous asphalt, etc.)
- Litter prevention
- Importance of native vegetation for preventing soil erosion
- Public reporting of water quality issues
- Community activities (monitoring programs, environmental protection organization activities, etc.)
- Pet and other animal wastes

Industrial/Commercial Community

- Automobile repair and maintenance Control measures
- Control measure installation and maintenance
- Lawful disposal of vacuum truck and sweeping equipment waste
- Pollution prevention and safe alternatives
- Snow removal activities
- Using techniques that keep water onsite and/or reduce imperviousness (rain barrels, rain gardens, porous pavers, permeable concrete, porous asphalt, etc.)
- Equipment and vehicle maintenance and repair
- Importance of good housekeeping (e.g. sweeping impervious surfaces instead of hosing)
- Illicit discharge detection and elimination observations and follow-up during daily work activities
- Water quality impacts associated with land development (including new construction and redevelopment)
- Water quality impacts associated with road resurfacing and repaving

4. Develop appropriate educational materials (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, websites);
5. Determine methods and process of distribution;
6. Evaluate the effectiveness of the program; and
7. Utilize public input (e.g., the opportunity for public comment, or public meetings) in the development of the program.

b. During the term of the permit, the permittee must distribute the educational materials, using whichever methods and procedures determined appropriate by the permittee, in such a way that is designed to convey the program's message to [*insert percentage or other appropriate numeric threshold, e.g., 20%*] of the target audience each year.

c. Within [*insert deadline, e.g., within the permit term*], the permittee must assess changes in public awareness and behavior resulting from the implementation of the program such as using a statistically valid survey and modify the education/outreach program accordingly.

d. The permittee must assess its stormwater education/outreach program annually as specified in Part 8.3 of this permit. The permittee must adjust its educational materials and the delivery of such materials to address any shortcomings found as a result of this assessment.

e. Written procedures for implementing this program must be incorporated into the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

Without a focused and comprehensive program, outreach and education efforts will likely be poorly coordinated and possibly ineffective. The permit the permittee to develop an education/outreach program that addresses the six steps listed and also found in EPA's *Getting In Step: A Guide to Effective Outreach in Your Watershed (www.epa.gov/watertrain/gettinginstep/)*. This guide explains the steps in developing an outreach plan, presents information on creating outreach materials, and provides tips in working with the media. The permittee is encouraged to follow this guide in developing its outreach strategy.

The public education and outreach program must be tailored and targeted to specific water quality issues of concern in the relevant community. These community-wide and targeted issues must then guide the development of the comprehensive outreach program, including the creation of appropriate messages and educational materials. The permit includes a list of potential residential and commercial issues, but the permittee may also choose other issues that contribute significant pollutant loads to stormwater.

The permittee is encouraged to use existing public educational materials in its program. Examples of public educational materials for stormwater are available at EPA's *Nonpoint Source Outreach Toolbox (www.epa.gov/nps/toolbox)*. The permittee is also encouraged to leverage resources with other agencies and municipalities with similar public education goals.

Finally, the underlying principle of any public education and outreach effort is to change behaviors. The permittee must develop a process to assess how well its public education and outreach programs is changing public awareness and behaviors and to determine what changes are necessary to make its public education program more effective. This assessment of public education programs is typically conducted via phone surveys, but other assessment methods that quantify results can be used. The permittee is encouraged to use a variety of assessment methods to evaluate the effectiveness of different public education activities. The permit requires that the first evaluation assessment be conducted before the final year of the permittee's coverage under this permit, before the next permit is issued. The allows the permittee to make changes as appropriate before the next permit application is due, EPA's *Getting In Step: A Guide to Effective Outreach in Your Watershed (www.epa.gov/watertrain/gettinginstep/)* can provide useful information on setting up and conducting the evaluations.

Recommendations for the Permit Writer

EPA recommends that the requirement to identify high priority community-wide issues and targeted issues be set at least 3 to 6 months before the stormwater education/outreach program is to be implemented, so the permitting authority can review the issues and provide any feedback before the plan is completed.

The permit can be a means for increasing public awareness and understanding of stormwater impacts on local watersheds, including high quality watersheds that need protecting. EPA recommends that the permit writer consider requiring permittees to identify and describe issues, such as specific pollutants, the sources of those pollutants, impacts on biology, and the physical attributes of stormwater runoff, in their education/outreach program, which affect local watershed(s). Where applicable, the education/outreach program should identify and describe high quality watersheds in need of protection and the issues that may threaten the quality of these waters.

The list in Part 2.1.1.a(3) is not all-inclusive. Therefore, EPA recommends that the permit be written to allow the permittee to indentify priority issue(s) not listed that may contribute a significant pollutant load to stormwater. For Phase I, individual permits, it may be appropriate for the permit writer to specify the priority issues based on known issues, monitoring data, historical trends, etc. Phase II general permits will likely need to allow for more flexibility in selecting priority issues.

In addition, the permit writer will need to consider that DOTs and other "non-traditional" MS4s will likely have different priority concerns than the ones identified in the categories above. In fact, the categories (residential and commercial/industrial) may also need to be changed. In these instances, the permit writer may want to consider having the non-traditional permittees work together with any local government MS4s in their area to maximize the program and cost effectiveness of the outreach.

The permit writer may consider specifying the mechanism the permittee is required to use to measure the awareness of and behavior related to issues concerning stormwater runoff by the general public, or targeted audiences within the general public. Examples of evaluations could include:

- Direct Evaluations
- Surveys
- Tracking the number of attendees
- Interviews
- Review of media clippings
- Tracking the number of stormwater-related calls/emails/letters received

Permit writers should consider whether it is appropriate to require a baseline assessment of the public's awareness of stormwater issues, for example in the second year of the permit term, so that comparisons may be drawn in reference to the baseline. This would likely require the permittee to conduct two assessments in the first permit term that the assessment is required.

2.2 Involving the Public in Planning and Implementing the SWMP

Example Permit Provision

2.2.1 The permittee is required to involve the public in the planning and implementation of activities related to the development and implementation of the SWMP. At a minimum, the permittee must:

a. Establish a citizen advisory group or utilize existing citizen organizations. The permittee may establish a stand-alone group or utilize an existing group or process. The advisory group must consist of a balanced representation of all affected parties, including residents, business owners, and environmental organizations in the MS4 area and/or affected watershed. The permittee must invite the citizen advisory group to participate in the development and implementation of all parts of the community's SWMP.

b. Create opportunities for citizens to participate in the implementation of stormwater controls (e.g., stream clean-ups, storm drain stenciling, volunteer monitoring, and educational activities).

c. Ensure the public can easily find information about the permittee's SWMP.

2.2.2 Written procedures for implementing this program must be incorporated into the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

Stormwater management programs can be greatly improved by involving the community throughout the entire process of developing and implementing the program. Involving the public benefits both the permittee itself as well as the community. B y listening to the public's concerns and coming up with solutions together, the permittee will gain the public's support and the community will become invested in the program. The permittees will likewise gain even more insight into the most effective ways to communicate their messages.

This permit requires the involvement of the public, which includes a citizen advisory group or process to solicit feedback on the stormwater program, and opportunities for citizens to participate in implementation of the stormwater program. The citizen advisory group should meet with the local land use planners and provide input on land use code or ordinance updates so that land use requirements incorporate provisions for better management of stormwater runoff and watershed protection. Public participation in implementation of the stormwater program can include many different activities such as stream clean-ups, storm drain markings, and volunteer monitoring.

Permittees are encouraged to work together with other entities that have an impact on stormwater (for example, schools, homeowner associations, DOTs, other MS4 permittees). Permittees are also encouraged to use existing advisory groups or processes in order to implement these public involvement requirements.

Recommendations for the Permit Writer

Especially for Phase I permittees, permit writers may consider requiring more specific information such as requiring at least one contact that the public can reach (including phone number and/or e-mail address) be clearly posted on the website. The contact may be a general contact or a specific person. The permitting authority may want the MS4 to have a mechanism for the public to comment year round, not just at public meetings. This could be facilitated by a webpage and email or a stormwater hotline.

Some Phase II permittees may find it more difficult to establish and maintain a formal citizen advisory group simply because they tend to have smaller populations. The permit writer may want to provide flexibility for the Phase II permittees to utilize the public involvement mechanism which best suits their individual community. For example, groups which are already involved with other aspects of municipal governance or established events where input could be solicited (i.e. farmers markets, festivals) may serve to meet the objective of this section.

CHAPTER 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION

Introduction

Phase I (see 40 CFR 122.26 (d)(1)(v)(B) and (d)(1)(iv)(B)) and Phase II stormwater management programs (see 40 CFR 122.26(d)(2)(iv)(B)) are required to address illicit discharges into the MS4 system. An illicit discharge is defined as any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater, except allowable discharges pursuant to an NPDES permit (40 CFR 122.26(b)(2)). In addition to requiring permittee to have the legal authority to prohibit non-stormwater discharges from entering storm sewers (CWA Section 402(p)(3)(B)) (see Chapter I), MS4 permits must also require the development of a comprehensive, proactive Illicit Discharge Detection Elimination (IDDE) program.

Included Concepts

- IDDE program development
- MS4 mapping
- Identification of priority areas
- Field screening
- IDDE source investigations and elimination
- Public reporting of non-stormwater discharges and spills
- Illicit discharge education and training

An effective IDDE program is more than just a program to respond to complaints about illicit discharges or spills. Permittees must proactively seek out illicit discharges, or activities that could result in discharges, such as illegal connections to the storm sewer system, improper disposal of wastes, or dumping of used motor oil or other chemicals.

In order to trace the origin of a suspected illicit discharge or connection, the permittee must have an updated map of the storm drain system and a formal plan of how to locate illicit discharges and how to respond to them once they are located or reported. The permittee must provide a mechanism for public reporting of illicit discharges and spills, as well as an effective way for staff to be alerted to such reports. Regular field screening of outfalls for non-stormwater discharges needs to occur in areas determined to have a higher likelihood for illicit discharges and illegal connections. Proper investigation and enforcement procedures must be in place to eliminate the sources of the discharges, as well. Finally, in order for the permittee to adequately detect and eliminate sources of illicit discharges, both field and office staff must be properly trained to recognize and report the discharges to the appropriate parties.

EPA recommends that permittees refer to the Center for Watershed Protection's guide on *Illicit Discharge Detection and Elimination (IDDE): A Guidance Manual for Program Development and Technical Assistance* (IDDE Manual, available at www.cwp.org) when developing an IDDE program.

3.1 IDDE Program Development

Example Permit Provision

3.1.1 The permittee must continue to implement a program to detect, investigate, and eliminate non-stormwater discharges (see Part 1.2.2), including illegal dumping, into its system. The IDDE program must include the following:

a. An up-to-date storm sewer system map (see Part 3.2).
b. Procedures for identifying priority areas within the MS4 likely to have illicit discharges, and a list of all such areas identified in the system (see Part 3.3)
c. Field screening to detect illicit discharges (see Part 3.4)
d. Procedures for tracing the source of an illicit discharge (see Part 3.5)
e. Procedures for removing the source of the discharge (see Part 3.5)
f. Procedures for program evaluation and assessment (see Part 8.3)
g. Procedures to prevent and correct any on-site sewage disposal systems that discharge into the MS4. [3]

3.1.2 In implementing the IDDE program, the permittee may conduct such investigations, contract for investigation, coordinate with storm drain investigation activities of others, or use any combination of these approaches.

3.1.3 For non-traditional MS4 permittees, if illicit connections or illicit discharges are observed related to another operator's municipal storm sewer system then the permittee must notify the other operator within [*insert applicable deadline, e.g., within 48 hours*] of discovery.

3.1.4 If another operator notifies the permittee of an illegal connection or illicit discharge to the municipal separate storm sewer system then the permittee must follow the requirements specified in Part 3.5.4.

3.1.5 Written procedures for implementing this program, including those components described in Parts 3.1 – 3.7 must be incorporated into the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

EPA stormwater regulations define "illicit discharge" as "any discharge to a municipal separate storm sewer that is not composed entirely of stormwater" except discharges resulting from fire fighting activities and discharges from NPDES permitted sources (see 122.26(b)(2)). The applicable regulations state that the following non-stormwater discharges may be allowed if they are not determined to be a significant source of pollutants to the MS4 : water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water. If, however, these discharges are determined to be a significant source of pollution then they are prohibited.

Examples of common sources of illicit discharges in urban areas include apartments and homes, car washes, restaurants, airports, landfills, and gas stations. These so called "generating sites" discharge sanitary wastewater, septic system effluent, vehicle wash water, washdown from

[3] Vermont Phase II General Permit (www.vtwaterquality.org/stormwater/htm/sw_ms4.htm)

grease traps, motor oil, antifreeze, gasoline and fuel spills, among other substances. Although these illicit discharges can enter the storm drain system in various ways, they generally result from either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the storm drain system, spills, or "midnight dumping"). Illicit discharges can be further divided into those discharging continuously and those discharging intermittently.

One way of locating these dry weather discharges is to perform field screening of outfalls. If no rain has occurred prior to the screening then it is likely that any flow observed at an outfall is either groundwater or an illicit discharge. It is important to utilize resources effectively and to target field screening activities in priority areas that are the most common sources of illicit discharges. For example, municipalities with older neighborhoods should prioritize those areas for targeted investigation due to the likelihood of cross connections with the sanitary sewer. Older parts of the storm drain system may also be deteriorating and require repair or replacement.

In addition, it is important that permittees establish clear policies and procedures for tracing and eliminating illicit discharges to ensure that individual incidents are addressed consistently. These policies should include procedures to notify neighboring localities if a discharge is discovered either originating on or discharging to the neighboring storm sewer system.

Additional information is available in the Center for Watershed Protection's *IDDE Manual.*

Recommendations for the Permit Writer

In some instances the permit writer may choose to include more specific requirements. For example, if the priority areas are already known, then Part 3.1.1.a may be more specifically worded. In addition, regulations governing Phase I MS4 permits have somewhat different requirements including specific field screening procedures (40 CFR 122.26(d)(1)(iii)(D) and 122.26(d)(2)(iii)) and a program to detect and remove illicit discharges and improper disposal into the storm sewer (40 CFR 122.26(d)(2)(iv)(B).

3.2 MS4 Mapping

Example Permit Provision

3.2.1 The permittee must maintain an up-to-date and accurate storm sewer system map.

a. The storm sewer system map must show the following, at a minimum:

1. The location of all MS4 outfalls and drainage areas contributing to those outfalls that are operated by the permittee, and that discharge within the permittee's jurisdiction to a receiving water
2. The location (and name, where known to the permittee) of all waters receiving discharges from those outfall pipes. Each mapped outfall must be given an individual alphanumeric identifier, which must be noted on the map. When possible, the outfalls must be located using a geographic

position system (GPS) and photographs should be taken to provide baseline information and track operation & maintenance needs over time.[4]

3. Priority areas identified under Part 3.3
4. Field screening stations identified under Part 3.4.2.a

b. A copy of the storm sewer system map must be available onsite for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

In order to trace the origin of a suspected illicit discharge or connection, the permittee must have an up-to-date map of its storm drain system. This is critical in order to isolate the potential source of the non-stormwater discharges and the areas of potential impact. Ideally, the information would be available as a geographic information system (GIS) layer in a geo-locational database, however, paper maps are sufficient providing they have the necessary reference information.

The permit primarily requires the mapping of outfalls, drainage areas contributing to those outfalls, and receiving waters. The municipal facility inventory created to comply with the pollution prevention/good housekeeping requirements (see Part 6.1) must also be included either on this sewer system map or on a separate MS4 map.

Recommendations for the Permit Writer

Both Phase I and Phase II regulations require permittees to develop a map indicating outfalls and the waters that receive the MS4 discharges. This map is to be used to identify priority areas that have a reasonable potential for illicit discharges. The mapping requirements should be adjusted based on any existing mapping of the MS4 that has already been completed. For example, Phase I mapping should have been initiated during the initial permit application process. This map should not be static, however, since it would need to be updated as development patterns change and new collection and discharge components of the MS4 are added. The mapping requirement could be supplemented by adding a requirement to "modify existing maps to clearly identify all receiving waters."

3.3 Identification of Priority Areas

Example Permit Provision

3.3.1 The permittee must continue to identify the following as priority areas [*insert areas that may be more applicable to the jurisdiction*]:

a. Areas with older infrastructure that are more likely to have illicit connections;

[4] New Jersey Phase II General Permit (www.state.nj.us/dep/dwq/pdf/Tier_A_final.pdf), with modifications

b. Industrial, commercial, or mixed use areas;
c. Areas with a history of past illicit discharges;
d. Areas with a history of illegal dumping;
e. Areas with onsite sewage disposal systems;
f. Areas with older sewer lines or with a history of sewer overflows or cross-connections; and
g. Areas upstream of sensitive waterbodies.

3.3.2 The permittee must document the basis for its selection of each priority area and create a list of all priority areas identified in the system. This priority area list must be updated [*insert frequency, e.g., annually*] to reflect changing priorities and be available for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

The permit requires an evaluation of the permittee's neighborhoods and land uses to identify areas that are more likely to have illicit discharges. These areas must be prioritized for more frequent screening and investigations. Each permittee will have a different set of priority areas: newer communities with modern infrastructure are less likely to have sewer cross-connections and illegal connections to the storm drain system, whereas towns with rural areas may place an emphasis on illegal dumping and onsite sewage disposal systems. Prioritization must be based not only on land use but also on prior history and frequency of problems.

The identification of priority areas must include "hotspots" or areas where dumping, spills, or other illicit discharges are a common occurrence. These hotspots will help identify potential field screening locations and may help target educational activities. For example, if evidence of motor oil dumping is found quite frequently and traced to the same apartment complex, information about motor oil disposal could be distributed to residents in response.

Recommendations for the Permit Writer

Phase I permittees should have been documenting information regarding high priority areas for several permit terms. In these instances the permit writer should require the permittee to continually evaluate and update the priority areas as development patterns change or new "hotspot" areas are found. If the permit writer has information regarding priority areas which are specific to the Phase I permittee (e.g. certain high priority watersheds or land use types which typically discharge a pollutant of concern) then those specific areas should be specified as high priority.

3.4 Field Screening

Example Permit Provision

3.4.1 The permittee must continue to implement and revise if necessary within [*specify deadline for completion*] a written dry weather field screening and analytical monitoring procedures to detect and eliminate illicit discharges to the MS4. These procedures must be included as part of the IDDE program, and incorporated into the permittee's SWMP document. Dry weather field screening and analytical monitoring consists of (1) field observations; (2) field screening monitoring; and (3) analytical monitoring at selected stations.

3.4.2 Conduct dry weather field screening and analytical monitoring. At a minimum, the permittee must:

a. Identify a minimum of [*specify number*] stations within the priority areas it identified in Part 3.3.1 at which field screening and analytical monitoring will take place. In addition, if the permittee is made aware of non-stormwater discharges that occur during the permit term outside of the priority areas, the permittee must include field screening stations in those areas;

b. Conduct dry weather field screening and analytical monitoring at each station identified above at least once [*insert timeframe for dry part of year, or specify annually*].

c. Sample runoff according to requirements outlined in (1) and (2) below if flow or ponded runoff is observed at a field screening station and there has been at least seventy-two (72) hours of dry weather. The permittee must also record general information such as time since last rain, quantity of last rain, site descriptions (e.g., conveyance type, dominant watershed land uses), flow estimation (e.g., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (e.g., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).

1. Field screening requirements: The permittee is required to conduct a field screening analysis for the following constituents. Samples must be collected and analyzed consistent with the procedures required by 40 CFR Part 136.

   [*insert specific indicator pollutants that the permittee is required to monitor for.]*

2. Analytical monitoring requirements: In addition to field screening, the permittee is required to collect samples for analytical laboratory analysis of the following constituents for a minimum of [*insert percentage*] of the samples taken. Samples must be collected and analyzed consistent with the procedures required by 40 CFR Part 136.

   [*insert specific pollutants of concern that the permittee is required to monitor for*]

3. Develop benchmark concentration levels for dry weather field screening and analytical monitoring results whereby exceedance of the benchmark will

require follow-up investigations to be conducted to identify and eliminate the source causing the exceedance of the benchmark.

d. Conduct a follow-up investigation under Part 4.5 if the benchmarks associated with the constituents listed above in Part 3.4.2.c(1) and (2) are exceeded; and

e. Make and record all applicable observations and select another station from the list of alternate stations for monitoring if, after two subsequent field screening tests have been completed, the field screening station is dry (i.e., no flowing or ponded runoff).

3.4.3 The permittee must assess its IDDE program every [*specify deadline for completion, e.g., once per permit term*] to determine if updates are needed. Where updates are found to be necessary, the permittee must make such changes [*insert deadline for finalizing changes*].

Example Permit Requirement Rationale for the Fact Sheet

The permit requires the development of a dry weather field screening and analytical monitoring program. The program must identify stations (e.g., outfalls) within the identified "priority areas" where the field screening will be conducted. At a frequency set by the permitting authority, the permittee must screen outfalls during dry weather and, if flow or ponded water is observed, collect a sample for field screening and analytical monitoring.

Visually screening outfalls during dry weather and conducting field tests, where flow is occurring, of selected chemical parameters as indicators of the discharge source will assist permittees in determining the source of illicit discharges. For example, the presence of surfactants is an indicator that sewage could be present in the discharge (e.g., soaps being discharged into sewer system as an indicator that wastewater is being discharged). Specific conductivity, fluoride and/or hardness concentration, ammonia and/or potassium concentration, surfactant and/or fluorescence concentration, chlorine concentration, pH, and other chemicals may similarly be indicative of industrial sources.

The permit requires the permittee to develop benchmarks for dry weather screening and analytical monitoring results. An exceedance of the benchmark concentration level indicates the need to conduct a follow-up investigation. The results will help the permittee narrow down the possible sources causing the benchmark to be exceeded so that they can then be eliminated. This is a common protocol to trigger additional monitoring and/or implementation of BMPs at stormwater discharges (e.g. MSGP has sector-specific benchmark monitoring requirements).

Recommendations for the Permit Writer

There are many options for field screening programs available to the permit writer that will meet the requirements of the regulations. Phase I regulations require that permittees conduct initial field screening of the entire MS4 during the permit application process as well as on-going field screening activities during the life of the permit. Based on this historical information and data, permit writers may want to specify in Phase I individual permits which priority areas must be screened. They may

also want to specify how many outfalls or what percentage of the outfalls should be inspected during the permit term.

In addition, for new Phase II permittees, permit writers may want to require screening of all priority areas during the first permit term and then require on-going screening in the areas where illicit discharges were identified.

This permit language includes analytical monitoring at dry weather field screening locations. The monitoring required during field screening (Part 3.4.2.c.1.) should include appropriate indicator pollutants, i.e. pollutants that will indicate the presence of some sort of illicit discharge. For example, Phase II NPDES regulations suggest sampling for specific conductivity, ammonia, surfactant and/or fluorescence concentration, pH and other chemicals indicative of industrial sources.

Permit writers should select the additional pollutants to be monitored based upon specific pollutants of concern for the receiving water(s) and/or specific indicator pollutants which can assist the MS4 in the location of particular discharges of concern and the potential water quality impact of the discharge. For example, the Phase I San Diego MS4 Permit requires that permittees monitor the following parameters during field screening: total hardness, oil and grease, diazinon and chlorpyrifos, cadmium (dissolved), lead (dissolved), zinc (dissolved), copper (dissolved), Enterococcus bacteria, total coliform bacteria, and fecal coliform bacteria.

Permit writers should encourage or even require permittees to use the CWP *IDDE Manual* and/ or EPA's 2008 Multi-Sector General Permit (www.epa.gov/npdes/stormwater/msgp) to develop benchmarks for each parameter.

In the *IDDE Manual* it is strongly recommended that benchmarks be developed specifically for each area. As an example, the *IDDE Manual* lists the following benchmark concentrations (Table 3-1) to identify industrial discharges:

Table 3-1. Benchmark concentrations to identify Industrial Discharges (from CWP IDDE Manual, Table 45)

Indicator Parameter	Benchmark Concentration
Ammonia	>= 50 mg/L
Color	>= 500 units
Conductivity	>= 2,000 µS/cm
Hardness	<= 10 mg/L as CaCO3 or >= 2,000 mg/L as CaCO3
pH	<= 5
Potassium	>= 20 mg/L
Turbidity	>= 1,000 NTU

For comparison purposes, the chemical fingerprint for different flow types in Alabama is presented in Table 3-2. The chemical fingerprint for each flow type can differ regionally, so permittees should develop their own "fingerprint" library by sampling each flow type.

Table 3-2. Comparative "Fingerprint" (Mean Values) of Flow Types (from CWP IDDE Manual, Table 1)

Flow Type	Hardness (mg/L as CaCO3)	NH3 (mg/L)	Potassium (mg/L)	Conductivity (µS/cm)	Fluoride (mg/L)	Detergents (mg/L)
Sewage	50 (0.26)	25 (0.53)	12 (0.21)	1215 (0.45)	0.7 (0.1)	9.7 (0.17)
Septage	57 (0.36)	87 (0.4)	19 (0.42)	502 (0.42)	0.93 (0.39)	3.3 (1.33)

Table 3-2. Comparative "Fingerprint" (Mean Values) of Flow Types (from CWP IDDE Manual, Table 1)						
Laundry Washwater	45 (0.33)	3.2 (0.89)	6.5 (0.78)	463.5 (0.88)	0.85 (0.4)	758 (0.27)
Car Washwater	71 (0.27)	0.9 (1.4)	3.6 (0.67)	274 (0.45)	1.2 (1.56)	140 (0.2)
Plating Bath (Liquid Industrial Waste)	14330 (0.32)	66 (0.66)	1009 (1.24)	10352 (0.45)	5.1 (0.47)	6.8 (0.68)
Radiator Flushing (Liquid Industrial Waste)	5.6 (1.88)	26 (0.89)	2801 (0.13)	3280 (0.21)	149 (0.16)	15 (0.11)
Tap Water	52 (0.27)	<0.06 (0.55)	1.3 (0.37)	140 (0.07)	0.94 (0.07)	0 (NA)
Groundwater	38 (0.19)	0.06 (1.35)	3.1 (0.55)	149 (0.24)	0.13 (0.93)	0 (NA)
Landscape Irrigation	53 (0.13)	1.3 (1.12)	5.6 (0.5)	180 (0.1)	0.61 (0.35)	0 (NA)
The number in parentheses after each concentration is the Coefficient of Variation. Source: Robert Pitt data from CWP IDDE Manual						

The permit writer may also want to require the permittee to analyze a certain number of discharge samples to characterize the concentration of certain pollutants in the different drainage areas. This characterization sampling would be in addition to any characterization sampling completed for the Phase I permit application. This type of sampling would not necessarily aid in the elimination of the source of the discharge, however, the data would be useful in characterizing the discharge from the MS4.

For those areas that have ponding or flow during dry weather, permit writers may consider allowing permittees the flexibility to look for indicators of an illicit discharge before conducting water quality tests due to baseline flow (e.g. baseflow, groundwater flow, irrigation return flows) in certain areas. In these cases, permit writers could require that sensory indicators (i.e. odor, color, turbidity, and floatables) be evaluated.

For additional guidance on field screening, the *IDDE Manual* describes an outfall reconnaissance inventory (ORI) to assess outfalls and conduct indicator monitoring to help identify illicit discharges.

Regardless of the field screening scheme, it is also very important to emphasize in the permit conditions that monitoring must be done in compliance with 40 CFR 136.

3.5 IDDE Source Investigation and Elimination

Example Permit Provision

3.5.1 The permittee is required to develop written procedures for conducting investigations into the source of all identified illicit discharges, including approaches to requiring such discharges to be eliminated.

3.5.2 Minimum Investigation Requirements – At a minimum, the permittee is required to conduct an investigation(s) to identify and locate the source of any continuous or

intermittent non-stormwater discharge within [*specify time period*] of becoming aware of the illicit discharge.

a. Illicit discharges suspected of being sanitary sewage and/or significantly contaminated must be investigated first.

b. Investigations of illicit discharges suspected of being cooling water, wash water, or natural flows may be delayed until after all suspected sanitary sewage and/or significantly contaminated discharges have been investigated, eliminated and/or resolved.

c. The permittee must report immediately the occurrence of any dry weather flows believed to be an immediate threat to human health or the environment to [*insert state water quality emergency contact phone number*].

d. The permittee must track all investigations to document at a minimum the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed.

3.5.3 Determining the Source of the Illicit Discharge –The permittee is required to determine and document through its investigations, carried out in Part 3.5.1, the source of all illicit discharges. If the source of the illicit discharge is found to be a discharge authorized under [*insert NPDES discharge permit reference*] of an NPDES permit, no further action is required.

a. If an illicit discharge is found, but within six (6) months of the beginning of the investigation neither the source nor the same non-stormwater discharge has been identified/observed, then the permittee must maintain written documentation for review by the permitting authority.

b. If the observed discharge is intermittent, the permittee must document that a minimum of three (3) separate investigations were made to observe the discharge when it was flowing. If these attempts are unsuccessful, the Permittee must maintain written documentation for review by the permitting authority. However, since this is an ongoing program, the Permittee should periodically recheck these suspected intermittent discharges.[5]

3.5.4 Corrective Action to Eliminate Illicit Discharge – Once the source of the illicit discharge has been determined, the permittee must immediately notify the responsible party of the problem, and require the responsible party to conduct all necessary corrective actions to eliminate the non-stormwater discharge within [*specify deadline*]. Upon being notified that the discharge has been eliminated, the permittee must conduct a follow-up investigation and field screening, consistent with Part 3.4, to verify that the discharge has been eliminated. The permittee is required to document its follow-up investigation. The permittee may seek recovery and remediation costs from responsible parties consistent with Part 1.2, or require compensation for the cost of field screening and investigations. Resulting enforcement actions must follow the SWMP ERP.

[5] New Jersey Phase II Permit (www.state.nj.us/dep/dwq/pdf/Tier_A_final.pdf)

Example Permit Requirement Rationale for the Fact Sheet

The Clean Water Act, section 402(p)(3)(B)(ii) requires MS4 permits to "effectively prohibit non-stormwater discharges into the storm sewers." The permit implements this requirement, in part by requiring the development of procedures to investigate and eliminate illicit discharges. The permittee must develop a clear, step-by-step procedure for conducting the investigation of illicit discharges. The procedure must include an investigation protocol that clearly defines what constitutes an illicit discharge "case" and when a case is considered "closed." In many circumstances, sources of intermittent, illicit discharges are very difficult to locate, and these cases may remain unresolved. The permit requires that each case be conducted in accordance with the SOPs developed to locate the source and conclude the investigation, after which the case may be considered closed. A standard operating procedure (SOP) document is required in order to provide investigators with guidance and any necessary forms to ensure that consistent investigations occur for every illicit discharge incident.

Physical observations and field testing can help narrow the identification of potential sources of a non-stormwater discharge; however it is unlikely that either will pinpoint the exact source. Therefore, the permittee will need to perform investigations "upstream" to identify illicit connections to systems with identified problem outfalls.

Once the source of the non-stormwater discharge is determined through investigation, corrective action is required to eliminate the problem source. Resulting enforcement actions must follow the SWMP ERP. The permittee may conduct remediation activities on its own, in which case the permittee must require compensation for any and all costs related to eliminating the non-stormwater discharge. Non-traditional MS4 permittees may be limited in their ability to seek recovery.

Recommendations for the Permit Writer

Both Phase I and Phase II regulations require permittees to develop a process to trace the source of illicit discharges and eliminate them. The regulations also state that appropriate enforcement procedures and actions must be included in this process.

3.6 Public Reporting of Non-Stormwater Discharges and Spills

Example Permit Provision

3.6.1 The permittee must promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s through a central contact point, including phone numbers for complaints and spill reporting, and publicize to both internal permittee staff and the public. If 911 is selected, the permittee must also create, maintain, and publicize a staffed, non-emergency phone number with voicemail, which is checked daily.

3.6.2 The permittee must develop a written spill/dumping response procedure, and a flow chart or phone tree, or similar list for internal use, that shows the procedures for responding to public notices of illicit discharges, the various responsible agencies

and their contacts, and who would be involved in illicit discharge incidence response, even if it is a different entity other than the permittee.

3.6.3 The permittee must conduct reactive inspections in response to complaints and follow-up inspections as needed to ensure that corrective measures have been implemented by the responsible party to achieve and maintain compliance.[6]

Example Permit Requirement Rationale for the Fact Sheet

This provision serves to implement, in part, the statutory requirement that MS4 permits effectively prohibit non-stormwater discharges. Spills, leaks, sanitary sewer overflows, and illicit dumping or discharges can introduce a range of stormwater pollutants into the storm system. Prompt response to these occurrences is the best way to prevent or reduce negative impacts to waterbodies. The permittee must develop a spill response SOP that includes an investigation procedure similar to or in conjunction with the investigation SOP developed for illicit discharges in general (see Section 3.5). Often, a different entity might be responsible for spill response in a community (i.e. fire department), therefore, it is imperative that adequate communication exists between stormwater and spill response staff to ensure that spills are documented and investigated in a timely manner.

A stormwater hotline can be used to help permittees become aware of and mitigate spills or dumping incidents. Spills can include everything from an overturned gasoline tanker to sediment leaving a construction site to a sanitary sewer overflow entering into a storm drain. Permittees must set up a hotline consisting of any of the following (or combination thereof): a dedicated or non-dedicated phone line, E-mail address, or website.

Recommendations for the Permit Writer

Spills which occur due to municipal staff activities are considered illicit discharges, but, spill prevention could also be addressed in the municipal operations/good-housekeeping portion of the permit as in this Guide (Chapter 6).

Facilitating public reporting of illicit discharges is specifically required in the Phase I regulations and as a part of the plan to detect and address illicit discharge, EPA recommends that Phase II permittees also develop a venue to promote, publicize, and facilitate public reporting of these discharges.

It is also noteworthy that smaller Phase II MS4s may utilize outside agency resources for spill response and/or they may use a neighboring locality. In this case, permittees will need to coordinate with these agencies to ensure appropriate spill response occurs and the necessary documentation is completed.

[6] San Francisco Municipal Regional Stormwater permit (www.swrcb.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2009/R2-2009-0074.pdf), with modifications

3.7 Illicit Discharge Education & Training

Example Permit Requirement

*3.*7.1 The permittee must continue to implement a training program for all municipal field staff, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system. Contact information, including the procedure for reporting an illicit discharge, must be included in the permittee's fleet vehicles that are used by field staff. Training program documents must be available for review by the permitting authority.

3.7.2 By no later than [*insert applicable deadline, e.g., 6 months after permit authorization*], the permittee must train all staff identified in Section 3.7.1 above on the identification of an illicit discharge or connection, and on the proper procedures for reporting and responding to the illicit discharge or connection. Follow-up training must be provided as needed to address changes in procedures, techniques, or staffing. The permittee must document and maintain records of the training provided and the staff trained. [7]

Example Permit Requirement Rationale for the Fact Sheet

The permit requires the permittee to train field staff, who may come into contact or observe illicit discharges, on the identification and proper procedures for reporting illicit discharges. Field staff to be trained may include, but are not limited to, municipal maintenance staff, inspectors, and other staff whose job responsibilities regularly take them out of the office and into areas within the MS4 area. Permittee field staff are out in the community every day and are in the best position to locate and report spills, illicit discharges, and potentially polluting activities. With proper training and information on reporting illicit discharges easily accessible, these field staff can greatly expand the reach of the IDDE program.

Recommendations for the Permit Writer

Permit writers may wish to require training of office staff (or all permittee staff), as well as field staff, as they can act as additional "eyes and ears" since they typically live in the community. The training should consist of how to identify illicit discharges and dumping, as well as the appropriate people to contact based on the type of discharge that is occurring.

Existing permittees (Phase I and Phase II) may have been training staff for several permit terms. For this reason, the permit writer may want the permittee to focus on annual "refresher" trainings for existing staff and new employees within a certain time of their hire date.

[7] Washington State Phase I Permit (www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIpermit/MODIFIEDpermitDOCS/PhaseIpermitSIGNED.pdf)

CHAPTER 4: CONSTRUCTION

Introduction

MS4 permits must address construction-related requirements (and often more specific state requirements) found in the following Federal regulations – Phase I MS4 Regulations 40 CFR 122.26(d)(2)(iv)(D) and Phase II MS4 Regulations 40 CFR 122.34(b)(4). Specific Permit Requirements should vary based on state requirements, rainfall amounts or other site-specific factors, but, in general, the requirements imposed on MS4 permittees for stormwater management of discharges associated with construction activities consist of several common requirements.

Included Concepts

- Construction requirements and control measures
- Construction site inventory
- Construction plan review procedures
- Construction site inspections and enforcement
- MS4 staff training
- Construction site operator education and public involvement

Permits must require that the permittee enact, to the extent allowed by State, Tribal or local law, an ordinance or other regulatory mechanism as part of the construction program that controls runoff from construction sites with a land disturbance of greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale. As part of the ordinance or other regulatory mechanism, the permittee should provide commonly understood and legally binding definitions. These terms should be defined consistently across other related guidance and regulatory documents. Note that EPA's recommended definitions addressing this requirement are included in Appendix B.

Permits must require that MS4 permittees ensure that construction site operators select and implement appropriate erosion and sediment control measures to reduce or eliminate the impacts to receiving waters. The permit can require that permittees develop their own standards and specifications, but often it is preferable to require the permittees to utilize existing guidance that is approved by the permitting authority.

The permit must require that the permittee establish review procedures for construction site plans to determine potential water quality impacts and ensure the proposed controls are adequate. These procedures must include the review of individual pre-construction site plans to ensure consistency with local sediment and erosion control requirements. In addition, the permit must include requirements for inspection and enforcement of erosion and sediment control measures once construction begins.

Finally, Phase I MS4 permits must require the development of educational materials and training for construction site operators, and EPA recommends that training on stormwater controls for construction site operators be mandated in Phase II MS4 permits as well. Training should address site requirements for control measures, local stormwater requirements, enforcement activities, and penalties for non-compliance.

4.1 Construction Requirements and Control Measures

Example Permit Provision

4.1.1 The permittee must continue to implement a program which requires operators of public or private "construction activities" to select, install, implement, and maintain stormwater control measures that comply with [*Insert reference to documents including any and all applicable erosion and sediment control, pollution prevention, and other stormwater requirements, including applicable CGP, State, and local requirements*.] "Construction activity" for this permit includes, at a minimum, all public and private construction sites that result in a total land disturbance of [*insert disturbance threshold – either one or more acres or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale, or an alternative threshold that includes disturbances of less than one acre*]. Written procedures for implementing this program, including the components described in Parts 4.2 – 4.6, must be incorporated into the SWMP document. The permittee's construction program must ensure the following minimum requirements are effectively implemented for all construction activity discharging to its MS4:

[*Insert specific minimum requirements, such as:*

a. **Erosion and Sediment Controls**. Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

(1) Control stormwater volume and velocity within the site to minimize soil erosion;

(2) Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;

(3) Minimize the amount of soil exposed during construction activity;

(4) Minimize the disturbance of steep slopes;

(5) Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;

(6) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible; and

(7) Minimize soil compaction and, unless infeasible, preserve topsoil.

b. **Soil Stabilization**. Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed within a period of

time determined by the permittee. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed as specified by the permittee.

c. **Dewatering**. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.

d. **Pollution Prevention Measures**. Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

(1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;

(2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and

(3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Prohibited Discharges**. The following discharges are prohibited:

(1) Wastewater from washout of concrete, unless managed by an appropriate control;

(2) Wastewater from washout and cleanout of stucco, paint, from release oils, curing compounds and other construction materials;

(3) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and,

(4) Soaps or solvents used in vehicle and equipment washing.

f. **Surface Outlets**. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible.

Example Permit Requirement Rationale for the Fact Sheet

Stormwater discharges from construction sites generally includes sediment and other pollutants such as phosphorus and nitrogen, turbidity, pesticides, petroleum derivatives, construction chemicals, and solid wastes that may become mobilized when land surfaces are disturbed. The permit requires MS4 permittees to require construction site operators at defined sites to meet certain minimum stormwater requirements relating to erosion and sediment control and pollution prevention, and to meet other restrictions imposed on them by the State, or local regulations. These minimum requirements clearly specify the expectations for addressing

erosion control, sediment control, and pollution prevention control measures at construction sites.

EPA's Effluent Limitations Guidelines and Standards for the Construction and Development Point Source Category (74 FR 62996, December 1, 2009) require construction site owners and operators to implement a range of erosion and sediment control measures and pollution prevention practices to control pollutants in discharges from construction sites. These standards will be required in state construction general permits as they are reissued. These standards are broadly applicable to all construction activity disturbing one or more acres. They provide an objective means of describing appropriate erosion and sediment control best management practices, pollution prevention controls on construction site waste and storage of building materials and other reasonable components of the permittee's program to reduce pollutants to the maximum extent practicable in stormwater from construction sites that discharge through the MS4.

Recommendations for the Permit Writer

The Phase II stormwater regulations require permittees to develop a construction site program addressing "land disturbance of greater than or equal to one acre." However, some states may have more stringent requirements that apply to some permittees, or the permit writer may have discretion to lower the one acre threshold if this threshold is too high for particular permittees. For example, smaller, built-out cities may have many small redevelopment projects that fall below the one acre threshold. In such cases, controlling construction site stormwater entering the MS4 to the maximum extent practicable may require stormwater controls at smaller sites. Permit writers should review available construction and planning data from the MS4 to determine an appropriate project size threshold.

The example permit provision's list of minimum requirements for erosion controls, sediment controls, and pollution prevention measures is intended to establish specific requirements to implement the broader requirements in the Phase II rule (40 CFR 122.24(b)(4)). The list of minimum requirements in the example permit provision are from EPA's Construction and Development Effluent Guidelines (published December 1, 2009) which will eventually be required in all NPDES stormwater permits issued to construction site operators. At a minimum, the permit should reference the applicable state standards and, where appropriate, any local standards as well. Permit writers may wish to modify these specific requirements based on current standards or guidance on construction site stormwater controls in the State.

4.2 Construction Site Inventory

Example Permit Provision

4.2.1 The permittee must continue to maintain an inventory of all active public and private construction sites that result in a total land disturbance of [*insert disturbance threshold from Part 4.1.1.*]. The inventory must be continuously updated as new projects are permitted and projects are completed. The inventory must contain

relevant contact information for each project (e.g., name, address, phone, etc.), the size of the project and area of disturbance, whether the project has submitted for permit coverage under [*insert name of applicable NPDES general construction permit*], the date the permittee approved the [*insert name of local erosion and sediment control/stormwater plan]* in accordance with Part 4.3, and the permit tracking number issued by [*insert name of permitting authority*]. The permittee must make it available to the permitting authority upon request.

Example Permit Requirement Rationale for the Fact Sheet

To effectively conduct inspections, the permittee must know where construction activity is occurring. A construction site inventory tracks information such as project size, disturbed area, distance to any waterbody or flow channel, when the erosion and sediment control/stormwater plan was approved by the Permittee, and whether the project is covered by the permitting authority's construction general permit. This inventory will allow the permittee to track and target its inspections.

Recommendations for the Permit Writer

Because of state or local construction permitting requirements, many permittees have some system in place to track construction activity in their jurisdiction. If this is the first MS4 permit issued to the permittee, the permit writer should include a deadline for the development of the initial inventory.

Permit writers may want to request electronic copies of the inventory quarterly or yearly, if that information will be used by the State permitting or inspection staff.

4.3 Construction Plan Review Procedures

Example Permit Provision

4.3.1 The permittee must continue to require each operator of a construction activity to prepare and submit a [*insert name of local erosion and sediment control/stormwater plan*] prior to the disturbance of land for the permittee's review and written approval prior to issuance of a [*insert appropriate permit, i.e. grading or construction*]. The permittee must make it clear to operators of construction activity that they are prohibited from commencing construction activity until they receive receipt of written approval of the the plans. If the [*insert name of local erosion and sediment control/stormwater plan*] is revised, the permittee must review and approve those revisions.

4.3.2 The permittee must continue to implement site plan review procedures that meet the following minimum requirements:

a. The permittee must not approve any [*insert name of local erosion and sediment*

control/stormwater plan] unless it contains appropriate site-specific construction site control measures that meet the minimum requirements in Part 4.1.1 of this permit.

b. The stormwater pollution prevention plan (SWPPP) developed pursuant to [*insert name of applicable NPDES general construction permit*] may substitute for the [*insert name of local erosion and sediment control/stormwater plan*] for projects where a SWPPP is developed. The permittee is responsible for reviewing those portions of the SWPPP that comply with the [*insert name of local erosion and sediment control/stormwater plan*].

c. The [*insert name of local erosion and sediment control/stormwater plan*] must include the rationale used for selecting control measures, including how the control measure protects a waterway or stormwater conveyance.

d. The permittee must use qualified individuals, knowledgeable in the technical review of [*insert name of local erosion and sediment control/stormwater plan*] to conduct such reviews.

e. The permittee must document its review of each [*insert name of local erosion and sediment control/stormwater plan*] using a checklist or similar process. [8]

Example Permit Requirement Rationale for the Fact Sheet

The permit requires the review and prior approval of all local erosion and sediment control plans/stormwater plans to ensure that construction activities adhere to the permittee's minimum stormwater control requirements. Adequate review of erosion and sediment control/stormwater plans is necessary to verify compliance with all applicable requirements in the permittee's ordinance or other regulatory mechanism, as well as compliance with control measure standards and specifications. A formalized review procedure ensures consistent review of plans by specifying the requirements for plans being submitted, the schedule for review, and general conditions for approval. The site plan review process also provides a way to track construction activities and enforce standards.

A good site plan review process provides the permittee with the opportunity to comment – early and often – on a project's proposed number, type, location, and sizing of stormwater control measures that will be in place prior to, during, and at the conclusion of active construction. It is important to keep in mind that a site plan is a "living document" that may change during the life of the project; however, it is critical that the site plan be adequately reviewed and initially based on established policy, guidelines, and standards. The plan is the framework for stormwater control implementation, as well as the basis of any enforcement action on a project site.

The permit requires the permittee to review plans before construction activity begins to ensure that the plans are consistent with the standards specified in Part 4.1.1. The permit language also includes some key requirements during the plan review process:

[8] 2009 Ventura County, CA Phase I MS4 Permit (www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/ventura_ms4/09-0057/Transmittal%20Letter%20and%20MS4%20Permit%20Order%20No%2009%200057.pdf)

- If a SWPPP is developed for the State construction general permit, that plan may substitute for the local plan if it also includes/addresses the local requirements.
- The plan must include the rationale used for selecting or rejecting control measures (for example, why a silt fence was selected or why a sediment trap was not included).
- Finally, plan reviewers must be trained and must document their review. For example, this can be done by using a checklist or similar process.

Recommendations for the Permit Writer

Some MS4 permits include a requirement that, prior to approval of local permits, the permittee must verify that the construction site operator has existing coverage under the State's Construction General Permit, if necessary. This requirement helps to reduce the number of non-filers for the State general permit by providing a check for NPDES CGP permit coverage at the local level.

4.4 Construction Site Inspections and Enforcement

Example Permit Provision

4.4.1 The permittee must continue to implement procedures for inspecting public and private construction projects in accordance with the frequency specified in Table 4-1 below:

Table 4-1: Inspection Frequencies

Site	Inspection Frequency
a. All sites [*insert a size threshold that is considered large for the MS4 if large projects are common, e.g. 5 acres*] or larger in size	Inspection must occur within [*insert number of days/hours, e.g. 48 hours] of a [insert significant rain event size, e.g. ½ inch rain event] and no less than biweekly (every 2 weeks)*]
b. All sites one (1) acre or larger that discharge to a tributary listed by the state/tribe as an impaired water for sediment or turbidity under the CWA section 303(d)	
c. Other sites one (1) acre or more determined by the permittee or permitting authority to be a significant threat to water quality*	
d. All other construction sites with one (1) acre or more of soil disturbance not meeting the criteria specified in (A),(B), or (C) above	Inspection must occur at least monthly
e. Construction sites less than one (1) acre in size	Inspection must occur as needed based on the evaluation of the factors that are a threat to water quality*
*In evaluating the threat to water quality, the following factors must be considered: soil erosion potential; site slope; project size and type; sensitivity of receiving waterbodies; proximity to receiving waterbodies; non-stormwater discharges; past record of non-compliance by the operators of the construction site; and [*insert other factors relevant to particular MS4*].	

4.4.2 The permittee must adequately inspect all phases of construction.

a. Prior to Land Disturbance: Prior to allowing an operator to commence land disturbance, the permittee must perform an inspection to ensure all necessary erosion and sediment controls are in place.

b. During Active Construction: During active construction, the permittee is required to conduct inspections in accordance with the frequencies specified in Table 4-1 in Part 4.4.1.

c. Following Active Construction: At the conclusion of the project, the Permittee must inspect all projects to ensure that all graded areas have reached final stabilization and that all temporary control measures are removed (e.g., silt fence).

4.4.3 The permittee must have trained and qualified inspectors (See Part 4.5). The permittee must also continue to follow, and revise as necessary, written procedures outlining the inspection and enforcement procedures. Inspections of construction sites must, at a minimum:

a. Check for coverage under the [*insert name of applicable NPDES general construction permit*] by requesting a copy of any application or Notice of Intent (NOI) or other relevant application form during initial inspections.

b. Review the applicable [*insert name of local erosion and sediment control/stormwater plan*] and conduct a thorough site inspection to determine if control measures have been selected, installed, implemented, and maintained according to the plan.

c. Assess compliance with the permittee's ordinances and permits related to stormwater runoff, including the implementation and maintenance of designated minimum control measures.

d. Assess the appropriateness of planned control measures and their effectiveness.

e. Visually observe and record non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff.

f. Provide education and outreach on stormwater pollution prevention, as needed.

g. Provide a written or electronic inspection report generated from findings in the field

4.4.4 The permittee must track the number of inspections for the inventoried construction sites throughout the reporting period to verify that the sites are inspected at the minimum frequencies required. Inspection findings must be documented and maintained for review by the permitting authority.

4.4.5 Based on site inspection findings, the permittee must take all necessary follow-up actions (i.e., re-inspection, enforcement) to ensure compliance in accordance with the permittee's enforcement response plan required in Part 1.3. These follow-up and enforcement actions must be tracked and maintained for review by the permitting authority. [9]

[9] 2007 San Diego Phase I MS4 Permit (www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/sd_permit/r9_2007_0001/2007_0001final.pdf)

Example Permit Requirement Rationale for the Fact Sheet

The permit requires inspections of construction sites based on a prioritized ranking of sites (see 40 CFR 122.26(d)(2)(iv)(D)(3) and 122.34(b)(4)(ii)(F)). Larger construction sites and sites that discharge to a sediment impaired waterbody are inspected more frequently than small sites. In addition to inspections at a regular interval, inspections are required within a certain timeframe after a rain event.

Inspections are required before land disturbance to ensure erosion and sediment controls are in place and a plan has been developed, during active construction, and after the site has been stabilized. The permit language also contains specific requirements on what the inspection must include (such as a comparison of control measures in the approved plan to measures installed in the field).

Without adequate implementation and maintenance, stormwater controls will not function as designed. In order to ensure proper implementation and maintenance by site operators, a rigorous inspection protocol is necessary. This protocol must include a written SOP for site inspections and enforcement to ensure inspections and enforcement actions are conducted in a consistent manner. The SOP must include steps to identify priority sites for inspection and enforcement based on the nature and extent of the construction activity, slope of the site, proximity to receiving waters, the characteristics of soils, and the water quality status of the receiving water. This will allow inspection resources and staff time to be used most effectively. Documentation of inspections is critical to track noncompliance and enforcement. Regularly scheduled inspections, as well as post-storm event inspections, are necessary to be sure that regular maintenance occurs as well as repairs after storm events.

Recommendations for the Permit Writer

Selecting an appropriate inspection frequency is, by necessity, a case-by-case exercise. Inspection frequencies for one permittee will not necessarily be appropriate for other permittees. For example, appropriate inspection frequencies may vary among different permittees depending on such factors as topography and rainfall patterns, including whether the MS4 is located in a wet or arid region and/or has distinct wet and dry seasons. Appropriate inspection frequencies may also vary seasonally or geographically within a single MS4 based on seasonal variations in rainfall or snowfall, or differing topographical or geographic conditions in different parts of the MS4 area.

For individual MS4 permits, permit writers should consider seasonal rainfall patterns, the presence and location of impaired streams or sensitive habitats, soils, topography, and other MS4-specific factors. In addition, permit writers should review current inspection frequencies, as well as inspection and enforcement records.

The permit writer should also note that the permit language will need to be modified if the permittee was not previously required to develop written procedures for the inspection and enforcement conducted at construction sites.

4.5 MS4 Staff Training

Example Permit Provision

4.5.1 The permittee must ensure that all staff whose primary job duties are related to implementing the construction stormwater program, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. The training can be conducted by the permittee or outside training can be attended, however, this training must include, at a minimum:

a. Erosion and Sediment Control/Stormwater Inspectors:

1. Initial training, held within the first permit year, regarding proper control measure selection, installation, implementation, and maintenance, as well as administrative requirements such as inspection reporting/tracking and use of the permittee's enforcement responses; and
2. Annual refresher training for existing inspection staff to update them on preferred controls, regulation changes, permit updates, and policy or standards updates. Throughout the year, e-mails and/or memos must be sent out to update the inspectors as changes happen.

b. Other Construction Inspectors: Initial training must be held within the first permit year, on general stormwater issues, basic control measure implementation information, and procedures for notifying the appropriate personnel of noncompliance. Refresher training held at least once every two years.

c. Plan Reviewers:

1. Initial training, held within the first permit year, regarding control measure selection, design standards, and review procedures; and
2. Annual training regarding new control measures, innovative approaches, permit updates, regulation changes, and policy or standard updates.

d. Third-Party Inspectors and Plan Reviewers: If the permittee utilizes outside parties to conduct inspections and/or review plans, these outside staff must be trained per the requirements listed in Part 4.5.1.a (above).

Example Permit Requirement Rationale for the Fact Sheet

By setting up training for the permittee staff, the permittee can ensure that the erosion and sediment control requirements are understood and consistently applied since all staff will have been trained on the same information. The permit requires staff whose primary job duties are related to implementing the construction stormwater program to be trained. The training requirements vary by the type of staff. F or example, erosion and sediment control inspectors must be trained annually on a range of topics, while other construction inspectors (such as building inspectors) will receive more general training.

The permittee can conduct the training or the training can be provided by another entity (such as a State erosion and sediment control class). Ideally, the training should include classroom presentations, in-field training, and follow-up evaluations to determine whether the training was effective.

Also, the permittee should consider providing training to other in-field municipal staff so that problems associated with flooding and sedimentation from construction sites can be properly reported and addressed.

4.6 Construction Site Operator Education & Public Involvement

Example Permit Provision

4.6.1 Construction Operator Education. The permittee must develop and distribute educational materials to construction site operators as follows:

a. Each year, the permittee must either provide information on existing training opportunities or develop new training for construction operators on control measure selection, installation, implementation, and maintenance as well as overall program compliance.

b. The permittee must develop or utilize existing outreach tools (i.e. brochures, posters, website, plan notes, manuals etc.) aimed at educating construction operators on appropriate selection, installation, implementation, and maintenance of stormwater controls, as well as overall program compliance.

c. The permittee must make available appropriate outreach materials to all construction operators who will be disturbing land within the MS4 boundary. The permittees' contact information and website must be included in these materials.

d. The permittee must include information on appropriate selection, installation, implementation, and maintenance of controls, as well as overall program compliance, on the permittee's existing website.

4.6.2 Public Involvement.

a. The permittee must adopt and implement procedures for receipt and consideration of information submitted by the public regarding construction projects. This includes, but is not limited to, the public reporting mechanisms described in Part 3.6.

b. The permittee must hold public meetings for all public projects that have planned disturbance greater than or equal to an acre. [10]

[10] Eastern Washington MS4 Phase II Permit (Part 2 only) (www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseiiEwa/MODIFIEDpermitDOCS/EWpermitMODsigned.pdf)

Example Permit Requirement Rationale for the Fact Sheet

Education of construction site operators regarding stormwater management and regulatory requirements is an essential part of controlling stormwater discharges from construction sites. Making brochures, guidance documents and trainings available will increase the knowledge of operators and compliance in the field and can help them choose the correct structural control and processes, correctly install the controls, and successfully implement control measures. The permit requires the permittee to provide appropriate outreach materials to construction site operators. These materials can be made available during the normal course of business (i.e. in BMP manuals, in plan notes, during meetings) or via brochures or websites. In addition, the permittee must either provide training or notify the operators of available training opportunities.

Public involvement requirements include the development of a hotline or other telephone number for the public to call regarding stormwater concerns at construction sites.

CHAPTER 5: POST-CONSTRUCTION OR PERMANENT/LONG-TERM STORMWATER CONTROL MEASURES

Introduction

Phase I MS4s are required to address new development and significant redevelopment in their SWMPs through controls to reduce pollutants in stormwater discharges after construction is completed. See 40 CFR 122.26(d)(2)(iv)(A)(2).

Included Concepts

- Post-construction stormwater management program
- Site performance standards
- Site plan review
- Long-term maintenance of post-construction stormwater control measures
- Watershed protection
- Tracking of post-construction stormwater control measures
- Inspections and enforcement
- Retrofit plan

The Phase II regulations require regulated small MS4 operators to develop, implement, and enforce a program to address stormwater discharges from new development and redevelopment sites that disturb greater than or equal to one acre to the MS4 (including projects that disturb less than one acre that are part of a larger common plan of development or sale). The regulations also require that the MS4 ensure that control measures are installed and implemented that prevent or minimize water quality impacts. See 40 CFR 122.34(b)(5)(i)

As part of these Phase II requirements, the MS4 must:

- Develop and implement approaches to addressing post-construction stormwater discharges that include a combination of structural and/or non-structural controls;
- Adopt adequate legal authority to enable the MS4 to address post-construction stormwater discharges from new development and redeveloped sites; and
- Ensure adequate long-term operation and maintenance of applicable post-construction control measures. See 40 CFR 122.34(b)(5)(ii).

As of April 2010, most MS4 permits only require permittees to adopt a post-construction program with enforceable requirements designed to reduce stormwater impacts from new development and redevelopment, without specifying a performance standard. To meet this requirement many MS4s have adopted criteria in ordinances or other legally enforceable mechanisms based on already promulgated flood-control based standards (i.e., focused only on discharge rates). However, performance standards can be a very useful and meaningful mechanism in the post-construction toolbox to ensure that water quality objectives are met.

The example permit provisions that follow present the current thinking on how to strengthen the effectiveness of the permittee's stormwater program by preventing the harmful effects of increased stormwater flows and pollutant loads from new development and redeveloped sites on receiving waterbodies. EPA recognizes that there are a wide variety of approaches that some states have already

taken to control discharges from new development and redeveloped sites, some of which are more stringent than the permit language recommended below. The language below includes components that EPA believes would provide focus and enforceability, and would bring about significant improvements in stormwater controls on site. However, the "maximum extent practicable" may be greater than is reflected in the example permit language below for some MS4s, and EPA encourages states, where possible, to go beyond these example provisions and to achieve even better watershed planning and water quality outcomes. For these reasons, this chapter presents the minimum permit provisions EPA currently recommends to be included in permits in order for permittees to reduce their discharges to the maximum extent practicable as well as the optional, more stringent, requirements.

5.1 Post-Construction Stormwater Management Program

Example Permit Provision

5.1.1 The permittee must continue to implement a program to control stormwater discharges from new development and redeveloped sites that disturb at least one acre (including projects that disturb less than one acre that are part of a larger common plan of development or sale) that discharge into an MS4 [*or insert smaller alternative size*]. The program must apply to private and public development sites, including roads.

5.1.2 The program must require that controls are in place that will infiltrate, evapotranspire, or harvest and use stormwater from the site to meet the performance standards in Part 5.2 to protect water quality.

5.1.3 Written procedures for implementing this program, including the components described in Parts 5.2 – 5.8, must be incorporated into the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

The stormwater regulations require that an MS4 develop and implement a program to address post-construction discharges from new development and redeveloped sites, and ensure the long-term operation and maintenance of these controls (see Part 5.4 for the maintenance requirements). (See 40 CFR 122.34(b)(5)). The permit requires the use of specific stormwater controls, i.e., those that infiltrate, evapotranspire, or harvest and use stormwater, with the aim of maintaining or restoring the pre-development stormwater runoff conditions at the site.

Many traditional stormwater management practices, and the permit language that drives them, fail to address the hydrologic modifications that increase the quantity of stormwater discharges, and cause excessive erosion and stream channel degradation. Frequently the volume, duration, and velocity of stormwater discharges cause degradation to aquatic systems. Protecting and restoring the physical, chemical and biological integrity of receiving waters must be a central issue in stormwater permits. The recent report of the National Research Council (*Urban Stormwater Management in the United States*, National Academies Press, 2008, www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf) recommends that the NPDES stormwater

program examine the impacts of stormwater flow, treat flow as a surrogate for other pollutants, and includes the necessary control requirements in stormwater permits. Specifically the report recommends that the volume retention practices of infiltration, evapotranspiration and rainwater harvesting be used as primary stormwater management mechanisms. For this reason, EPA recommends use of a permit condition that is based on maintaining or restoring predevelopment hydrology although other forms of this permit condition maybe appropriate as well.

Additional information on the development of a post-construction program for Phase II permittees can be found in the Center for Watershed Protection's *Managing Stormwater In Your Community: A Guide for Building an Effective Post-Construction Program* (available at www.cwp.org/postconstruction). Also, EPA's green infrastructure website includes information on post-construction controls and programs (see www.epa.gov/greeninfrastructure).

5.2 Site Performance Standards

Example Permit Provision

5.2.1 The permittee must establish, implement and enforce a requirement that owners or operators of new development and redeveloped sites discharging to the MS4, which disturb greater than or equal to one acre (including projects that disturb less than one acre that are part of a larger common plan of development or sale), design, install, implement, and maintain stormwater control measures that infiltrate, evapotranspire, harvest, and use stormwater discharges.

5.2.2 Within [*insert deadline, e.g., 12 months, 24 months, etc.*] the permittee must require that stormwater discharges from such new development and redevelopment sites be managed such that post-development hydrology does not exceed the pre-development hydrology at the site, in accordance with the performance standard set forth in this paragraph. The SWMP must describe the site design strategies, control measures, and other practices deemed necessary by the permittee to maintain or improve pre-development hydrology.[11] [*Insert a new development performance standard, such as one or a combination of the following:*

Basis for Performance Standard	***Description***	***Performance Standard***
Rainfall	*Minimum storm volume to be retained on site.*	*Design, construct, and maintain stormwater management practices that manage rainfall on-site, and prevent the off-site discharge of the precipitation from [insert standards, such as "the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation"]. Discharge volume reduction can be achieved by canopy interception, soil amendments, evaporation, rainfall harvesting, engineered infiltration, extended filtration and/or evapotranspiration and any combination of the aforementioned practices. This first one inch of rainfall*

[11] *Big Darby Creek Watershed CGP, Part III.G.2.d. (web.epa.ohio.gov/dsw/permits/DarbyStormWater_Final_GP_sep06.pdf)*

		must be 100% managed with no discharge to surface waters, except when the permittee chooses to implement the conditions in Part 5.2.5.d below.[12]
Rainfall	*Minimum storm size to be retained on site.*	*Design, construct, and maintain stormwater management practices that manage rainfall on-site, and prevent the off-site discharge of the precipitation from all rainfall events less than or equal to [insert standards, such as "the 95th percentile rainfall event"]. This objective must be accomplished by the use of practices that infiltrate, evapotranspire and/or harvest and reuse rainwater. The 95th percentile rainfall event is the event whose precipitation total is greater than or equal to 95 percent of all storm events over a given period of record.*[13]
Recharge/Runoff	*Hydrologic analysis.*	*Design, construct, and maintain stormwater management practices that preserve the pre-development runoff conditions following construction. The post-construction rate, volume, duration and temperature of discharges must not exceed the pre-development rates and the pre-development hydrograph for 1, 2, 10, 25, 50 and 100 year storms must be replicated through site design and other appropriate practices. These goals must be accomplished through the use of infiltration, evapotranspiration, and/or rainwater harvesting and reuse practices. Defensible and consistent hydrological assessments and modeling methods must be used and documented.* [14]
Recharge	*Groundwater recharge requirement.*	*Any "major development" project, which is one that disturbs [insert standards, such as at least one (1) acre of land or creates at least 0.25 acres of new or additional impervious surface], must comply with one of the following two groundwater recharge requirements:* • *Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100 percent of the average annual pre-construction groundwater recharge volume for the site; or* • *Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater discharges volume from pre-construction to post-construction for the two-year storm is infiltrated.*[15]
Impervious Cover	*Limiting total impermeable surface (or effective impermeable surface)*	*Minimize total impervious cover resulting from new development and redevelopment to [insert standards, such as <10% of disturbed land cover and/or limit total amount of effective impervious surface to no more than 5% of the landscape].*

[12] *West Virginia Small MS4 Permit (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*
[13] *Section 438, Energy Independence & Security Act (EISA) Guidance (www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf)*
[14] *Section 438, Energy Independence & Security Act (EISA) Guidance (www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf)*
[15] *New Jersey Stormwater Management Rules, N.J.A.C. 7:8* (www.nj.gov/dep/rules/adoptions/2004_0202_njpdes.pdf)

5.2.3 Incentives for Redeveloped Sites. When considered at the watershed scale, certain types of developed sites can either reduce existing impervious surfaces, or at least create less 'accessory' impervious surfaces. The Permittee may develop a program to allow adjustments to the performance standard for new development or redevelopment sites that qualify. A reduction of [*insert the amount of stormwater the Permittee can reduce for utilizing redevelopment principles, e.g. 0.2 inches from the one inch runoff reduction standard*] may be applied to any of the following types of development. Reductions are additive up to a maximum reduction of [*insert amount, such as 0.75 inches*] for a project that meets four or more criteria. The permittee may choose to be more restrictive and allow a reduction of less than [*insert amount, such as 0.75 inches*] if they choose. In no case will the reduction be greater than [*insert amount, such as 0.75 inches*].

1. Redeveloped sites
2. Brownfield redeveloped site
3. High density (>7 units per acre)
4. Vertical Density, (Floor to Area Ratio (FAR) of 2 or >18 units per acre)
5. Mixed use and Transit Oriented Development (within ½ mile of transit)[16]

5.2.4 Additional Requirements and Exceptions: The permittee must implement the following additional requirements where applicable:

a. A site that is a potential hot spot with the reasonable potential for contaminating underground sources of drinking water must provide treatment for associated pollutants (e.g., petroleum hydrocarbons at a vehicle fueling facility).

b. A site that discharges or proposes to discharge to any surface water or ground water that is used as a source of drinking water must comply with all applicable requirements relating to source water protection and must not cause an exceedance of drinking water standards.[17]

c. Sites may not infiltrate stormwater in areas of soil contamination.

d. For projects that cannot meet 100% of the performance standard in Part 5.2.2 on site, two alternatives are available: off-site mitigation and payment in lieu. If these alternatives are chosen, then the permittee must develop and fairly apply criteria for determining the circumstances under which these alternatives will be available and establish reasonable schedules for mitigation and require payment in lieu of prior to project inception. A determination that standards cannot be met on site must include multiple criteria that would rule out fully meeting the performance standard in Part 5.2.2, such as: too small a lot outside of the building footprint to create the necessary infiltrative capacity even with amended soils; soil instability as documented by a thorough geotechnical

[16] *West Virginia Small MS4 Permit (Section C.b.5.a.ii.A.3) (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*
[17] *West Virginia Small MS4 Permit (Section C.b.5.a.ii.A.2) (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*

analysis; a site use that is inconsistent with capture and reuse of stormwater; or too much shade or other physical conditions that preclude adequate use of plants. Sites must still maximize stormwater retention on-site, before applying the remaining stormwater to one of the alternatives. In instances where alternatives are chosen, technical justification as to the infeasibility of on site management is required to be documented.[18]

Example Permit Requirement Rationale for the Fact Sheet

Developed land changes the hydrology of sites, leading to higher stormwater discharge volumes and higher pollutant loads. The purpose of this standard is to maintain or restore stable hydrology in receiving waters thereby protecting water quality by having post-construction hydrology mimic the natural hydrology of the area.

A simpler, but reasonably approximate 'mimicking the natural hydrograph' approach can typically be accomplished by retaining (as opposed to detaining stormwater for later discharge) on a developed site the volume of water that was retained prior to development, through the mechanisms of infiltration, evapotranspiration, and capture and use. By significantly reducing the volume of stormwater discharges, these mechanisms significantly reduce the discharge of pollutants in stormwater, making discharge volumes the ideal all-around focus and metric for stormwater management. These provisions must be clear about the retention requirement, e.g., an underdrained rain garden likely functions more as a detention and filtration system than an infiltration system.

In Part 5.2.3, the five types of development which qualify for incentives are redevelopment, brownfield redevelopment, high density, vertical density, and mixed use with transit oriented development. Redeveloping already degraded sites can reduce regional land consumption and minimize new land disturbance. Minimizing land disturbance and impervious cover is critical to maintaining watershed health. In addition to water quality benefits, cleaning up and reinvesting in brownfield properties increases local tax bases, facilitates job growth, utilizes existing infrastructure, takes development pressures off of undeveloped, open land, and both improves and protects the environment. The effect of low-density urbanization on watersheds and the hydrologic cycle is substantial. High-density development, including vertical density, slows land consumption rates and accommodates more land uses on a smaller footprint. Finally, mixing land uses and promoting transit-oriented development can directly reduce runoff since mixed-use developments have the potential to use surface parking lots and transportation infrastructure more efficiently, requiring less pavement.[19]

In Part 5.2.4.d, the permittee must establish clear and stringent criteria for the conditions under which payment in lieu and off-site mitigation could be used. These criteria must be related to physical constraints such as a combination of soils which limit infiltration opportunities, space or light limited situations restricting the amount of vegetation that can be used, and a land use that is not conducive to capture and use of stormwater. Further, appropriate schedules for

[18] *West Virginia Small MS4 Permit (Section C.b.5.a.ii.A.4)* *(www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*

[19] Adapted from the WV Phase II MS4 Fact Sheet (www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Pages/default.aspx)

payment and implementation of mitigation measures must be established to ensure stormwater impacts are addressed in a timely manner.

Recommendations for Permit Writer

Many communities have adopted criteria based on already promulgated flood-control based standards (i.e., focused only on discharge rates). This example permit language instead promotes the concept that effective standards should be based on the objective of maintaining or restoring stable hydrology to protect the quality of receiving waters by having post-construction hydrology mimic the natural hydrology of the area. The permit language provides a number of example standards that can be used to achieve this objective.

Performance standards should take into account the wide variability in hydrologic conditions in different areas. Ideally, standards should reflect the local naturally-occurring hydrology with respect to runoff, infiltration, evapotranspiration, and storage – that is, the water balance that would be present in the absence of development. Key parameters, such as rainfall patterns, soil characteristics, and topography, can be used to establish likely 'natural' hydrology. Where maintaining or reestablishing such hydrologic conditions is infeasible, off-site mitigation, payment-in-lieu, or fee programs may be used. Based on current (2010) information, EPA recommends that permits allow for a combination of techniques that utilize infiltration, capture and use, and evapotranspiration as appropriate, rather than relying only on infiltration or some other technique alone to meet performance standards.

The permit writer could include a performance standard that stipulates that predevelopment hydrographs match post-development hydrographs. In order for this type of performance standard to be effective, the permit writer should make sure that the permit clearly spells out all variables of the hydrograph (volume, rate, duration, frequency) to be matched, and not just the discharge rate. Many current pre-post hydrology standards focus only on discharge rate, which is primarily a flood control approach. In addition, a pre-development condition should also be defined, and that condition should be one that is reasonably 'natural', rather than simply the conditions (perhaps already fairly impervious) that existed immediately prior to the current developed site. A calculator tool based on key hydrologic parameters (soil, rainfall, slope, and vegetation) or an on-site rainfall retention standard that is appropriate for that area can help the permittee determine what constitutes pre-development hydrology and the means by which it may be matched.

As contemplated in the example permit provisions, permit writers may want to consider the difference between new development and redevelopment sites, as well as differences among some types of developed sites, in establishing performance standards. From the standpoint of imperviousness at a watershed scale, redeveloped sites are usually more desirable than new development sites, which replace relatively naturally functioning green spaces with impervious surfaces such as roads, and parking lots. Certain types of development generate less impervious surfaces than others. For example, typically, there is little or no increase in net stormwater discharges when redeveloping underused properties such as vacant properties, brownfield sites, or greyfield sites, since new impervious cover replaces existing impervious cover. The net discharge increase from already developed properties would likely be zero since the site was already predominately impervious cover. In many cases, redeveloped sites break up or remove some portion of the impervious cover, converting it to pervious cover and allowing for some stormwater infiltration. Redevelopment sites can produce a net improvement in regional water quality by decreasing total impervious area and its

associated stormwater discharges. Redeveloped sites can also reduce regional land consumption. By building on underused, already degraded land, the pressure to convert previously undeveloped land is reduced. Therefore differential standards for new development and redeveloped sites, as well as for different types of developed sites, may be reasonable. However, they should be crafted to minimize creation of imperviousness at the watershed scale, and still include some reasonable level of stormwater management at the site scale.

Redevelopment is the act of improving by renewing or restoring any developed property that results in the land disturbance of one acre or greater, and that has one of the following characteristics:

- Land that currently has an existing structure, such as buildings or houses, or
- Land that is currently covered with an impervious surface, such as a parking lot or roof, or
- Land that is currently degraded and is covered with sand, gravel, stones, or other non-vegetative covering.

Infiltration may not be appropriate in all cases. For example, a site that is a potential hot spot with the reasonable potential for significant pollutant loading(s) may not be appropriate for stormwater infiltration. Hot spots may include commercial, industrial, institutional, municipal, or transportation related operations that may produce higher levels of stormwater pollutants, and/or present a higher level or risk for spills, leaks, or illicit discharges such as: gas stations, petroleum wholesalers, vehicle maintenance and repair, auto recyclers, recycling centers and scrap yards, landfills, solid waste facilities, wastewater treatment plants, airports, railroad stations and associated maintenance facilities, and highway maintenance facilities.

In addition, the permit writer may want to consider what type of flexibility to afford sites where the owner/operator is not able to meet the performance standard on site. For instance, if a site is constrained by size or previous impervious surfaces, such that the use of control measures that infiltrate stormwater is severely limited, the permit could allow alternatives for meeting the performance standard in other ways such as payment in lieu and off-site mitigation within the same watershed.

Off-site mitigation and payment in lieu programs are options that can be used in these instances. Off-site mitigation generally means that control measures may be implemented at another location, in the same sewershed/watershed as the original project, and as approved by the regulatory agency. Payment in lieu programs generally mean that the developer pays a fee to the permittee which will then be applied to a stormwater control project, in lieu of installing the required control measures.

If the permit writer chooses to include an off-site mitigation or payment in lieu program in the permit, the permit writer could specify that the programs meet several criteria, for example, those described in the 2009 West Virginia Phase II General Permit Fact Sheet (www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Pages/default.aspx):

1. The permittee must establish clear and stringent criteria for the conditions under which these options are available that must be related to real physical constraints such as a combination of soils limiting infiltration opportunities, space or light limited situations restricting the amount of vegetation that can be used, and a land use that is not conducive to capture and use of

stormwater. While one or two of these characteristics should not be adequate to qualify for the alternative, the combination of multiple constraints could;

2. A minimal requirement for at least [*0.4 inch*] of stormwater managed on-site;

3. A [*1:1.5 ratio*] of the amount of requisite stormwater not managed on site to the amount of stormwater required to be mitigated at another site, or for which in-lieu payments must be made;

4. If demonstrated to the permittee that it is completely infeasible to manage the remainder [*0.4 inches*], then the ratio for this unmanaged portion is [*1:2*].

5. The necessary tracking systems for both types of programs, including the necessary inventory of public and retrofit projects for off-site mitigation; and,

6. The establishment of a credible valuation structure for payment in lieu, i.e., what is the actual cost for the permittee to provide retrofits for the necessary amount of stormwater, not just a token payment. The purpose of these provisions is to disincentivize the use of alternatives unless really needed, but also to provide a financial foundation for implementation of public stormwater management projects, including retrofits where those needs have been identified.

Additional justification for the development types which qualify for these incentives can be seen in the West Virginia Phase II MS4 Permit Fact Sheet (www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Pages/default.aspx).

5.3 Site Plan Review

Example Permit Provision

5.3.1 To ensure that all applicable new development and redeveloped sites conform to the performance standards required in Part 5.2, the permittee must continue to implement project review, approval, and enforcement procedures that include:

a. Procedures for the site plan review and approval process(es) that include inter-departmental consultations, as needed, and a required re-approval process when changes to an approved plan are desired; and

b. A requirement for submittal of 'as-built' certifications within 90 days of completion of a project.

5.3.2 The permittee must conduct site plan reviews, using the procedures described in Part 5.3.1, of all new development and redeveloped sites which will disturb greater than or equal to one acre [*or a smaller threshold as set by the permitting authority*] and discharge to the MS4 (including sites that disturb less than one acre that are part of a larger common plan of development or sale). The site plan review must specifically address how the project applicant meets the performance standards in Part 5.2 and how the project will ensure long-term maintenance as required in Part 5.4.

Example Permit Requirement Rationale for the Fact Sheet

Specific standards are a critical component of a stormwater management program. However, even the best requirements need to be supported by a review program to ensure that the standards are met. The example permit provision would require permittees to fully implement a comprehensive site plan review and approval program. To meet this requirement, the permittee must have the authority to withhold approvals when standards are not met.

Recommendations for the Permit Writer

The permit writer may want to consider adding a requirement for a pre-application concept plan meeting to occur (in addition to the requirement for the project applicant to submit a site plan for review). During this meeting the project land owner or developer, the project design engineer, and municipal planning staff could discuss the conceptual designs that would be used to ensure that they meet the performance standards. This meeting would ensure that stormwater and performance standards are addressed early in the development process. However, if this pre-application concept plan meeting is not consistent with local planning procedures, the permit writer could consider omitting this requirement.

5.4 Long-Term Maintenance of Post-Construction Stormwater Control Measures

Example Permit Provision

5.4.1 All structural stormwater control measures installed and implemented to meet the performance standards of Part 5.2 must be maintained in perpetuity. The permittee must ensure the long-term maintenance of structural stormwater control measures installed according to this Part through one, or both, of the following approaches:

a. Maintenance performed by the Permittee. See part 6.4.

b. Maintenance performed by the owner or operator of a new development or redeveloped site under a maintenance agreement. The permittee must require the owner or operator of any new development or redeveloped site subject to the performance standards in Part 5.2 to develop and implement a maintenance agreement addressing maintenance requirements for any structural control measures installed on site to meet the performance standards. The agreement must allow the permittee, or its designee, to conduct inspections of the structural stormwater control measures and also account for transfer of responsibility in leases and/or deeds. The agreement must also allow the permittee, or its designee, to perform necessary maintenance or corrective actions neglected by the property owner/operator, and bill or recoup costs from the property owner/operator when the owner/operator has not performed the necessary maintenance within thirty (30) days of notification by the permittee or its designee.

5.4.2 Verification of maintenance responsibilities. The permittee must require that property owners or operators of any new development or redeveloped site subject to the performance standards in Part 5.2 provide verification of maintenance for the approved structural stormwater control measures used to comply with the performance standards. Verification must include one or more of the following as applicable:

a. The owner/operator's signed statement accepting responsibility for maintenance with a provision for transferring maintenance responsibility if the property is legally transferred to another party; and/or

b. Written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance; and/or

c. Written conditions in project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to a home owner's association, or other appropriate group, for maintenance of structural and treatment control stormwater management practices; and/or

d. Any other legally enforceable agreement that assigns permanent responsibility for maintenance of structural or treatment control stormwater management practices.

Example Permit Requirement Rationale for the Fact Sheet

Appropriate operation and maintenance are critical aspects to the function of any suite of controls. In many cases, controls may be located on private property, and it is necessary to establish some provision to assure responsibility and accountability for the operation and maintenance of these controls.

The permittee must ensure maintenance of all structural stormwater control measures. In this Guide, structural controls also include many green infrastructure practices such as rainwater harvesting, rain gardens, permeable pavement, and vegetated swales.

Recommendations for the Permit Writer

Most non-traditional MS4 permittees will probably not have the legal authority to recoup costs where the owner/operator has not completed necessary maintenance. Permit writers may want to be more specific in this requirement to include other options for non-traditional MS4 permittees.

5.5 Watershed Protection

Example Permit Provision

5.5.1 When the Permittee revises its General Plan (or equivalent) or other relevant plans (e.g. Transportation Master, or Community Plan) they must include effective water

quality and watershed protection elements that require implementation of consistent water quality protection measures for new development and redeveloped sites within [*insert deadline*]. Examples of water quality and watershed protection elements to be considered include the following: [*insert principles and/or policies which are appropriate for the watershed such as,*

- Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each watershed, by minimizing the creation, extension and widening of parking lots, roads and associated development.
- Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to; riparian corridors, headwaters, floodplains and wetlands.
- Implement management practices that prevent or reduce thermal impacts to streams, including requiring vegetated buffers along waterways, and disconnecting discharges to surface waters from impervious surfaces such as parking lots.
- Prevent disturbances of natural waterbodies and natural drainage systems caused by development, including roads, highways, and bridges.
- Avoid development in areas that are particularly susceptible to erosion and sediment loss.
- Implement standards to protect trees, and other vegetation with important evapotranspirative qualities.
- Implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.
- Implement water conservation policies that will reduce both stormwater and non- stormwater discharges via storm sewer systems.[20]
- Implement policies that encourage stormwater practices close to the source of the runoff rather than downstream and lower in the watershed.]

Example Permit Requirement Rationale for the Fact Sheet

Imperviousness has been shown to correlate with water quality impacts. In order to minimize water quality impacts, the permittee must examine their planning principles to manage the creation of impervious surfaces at the watershed level, such as reducing the footprint of streets and parking lots. Also, ecologically sensitive areas can protect water quality by acting both as filters that reduce pollutants in stormwater discharges and as sponges to reduce the impact on the ecosystem's hydrology. Thermal pollution is also a concern that can impact biota in waterways. Stormwater discharges from impervious surfaces are often characterized by higher temperatures than natural, pervious surfaces. Reducing the chances of further increasing this temperature by preserving, protecting, and restoring natural features that provide shading for the waterway can further help reduce thermal pollution. Whenever possible natural waterways

[20] *West Virginia Small MS4 Permit (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*

must be protected and not disturbed by stormwater from developed sites. For example, areas that have a high potential for erosion must be avoided for development when possible. Protecting vegetation, native soils, and conserving water can also help ensure the hydrologic qualities of the site remain intact.

Consideration of stormwater impacts from development is critical during the planning phases of development. This not only includes planning on the site-level, but also with respect to discharges from the MS4 on the watershed level. To the extent possible, stormwater management must be an integral part of higher level planning documents that determine where and how development that will result in stormwater discharges to the MS4 should occur since these decisions affect water quality. Using land efficiently can result in better stormwater management by putting development where it is most appropriate. For example, by directing and concentrating new development in areas targeted for growth, communities can reduce or remove development pressure on undeveloped parcels and protect sensitive natural lands and recharge areas. Another strategy is redeveloping already degraded sites such as abandoned shopping centers or underutilized parking lots. In this case, the net increase in discharges from developed sites would likely be zero, and it would likely decrease, depending on the on-site infiltration practices used. Also, by allowing or encouraging denser development, less land is converted overall, and less total impervious area created.

Recommendations for the Permit Writer

Examining stormwater on a watershed basis and including watershed principles is an important part of protecting waterways in a holistic manner. Climate change may increase the size and frequency of storms in some area of the nation. Including watershed-type assessments and considerations as Permit Requirements will help the permittee better focus their efforts to ensure the best water protection outcomes for existing conditions and those anticipated future conditions. Therefore, permit writers should consider including watershed protection principles. Newer programs may not be ready for permit writers to include the exact example permit provision provided. If possible, permit writers should be as specific as possible for the needs of the watershed where the MS4 permittee is located. Permittees should be careful when installing new stormwater BMPs to ensure that there are not any negative, unintended consequences.

5.6 Tracking of Post-Construction Stormwater Control Measures

Example Permit Provision

5.6.1 Inventory of Post-Construction Stormwater Control Measures. The permittee must continue to maintain an inventory of all post-construction structural stormwater control measures installed and implemented at new development and redeveloped sites, including both public and private sector sites located within the permit area. The inventory must be searchable by property location (either on paper or electronic). New entries to the inventory must be made during the site plan review and approval process in Part 5.3.1.

5.6.2 Tracking Information. Each entry to the inventory must include basic information on each project, such as project name, owner's name and contact information, location, start/end date, etc. In addition, inventory entries must include the following for each project:

a. Short description of each stormwater control measure (type, number, design or performance specifications);

b. Latitude and longitude coordinates of each stormwater control measure;

c. Short description of maintenance requirements (frequency of required maintenance and inspections); and

d. Inspection information (date, findings, follow up activities, prioritization of follow-up activities, compliance status).

Based on inspections conducted under Part 5.7, the permittee must update the inventory as appropriate where changes occur in property ownership or the specific control measures implemented at the site. This inventory must be maintained and available for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

Creating an inventory of post-construction structural stormwater control measures, including tracking of specific information, will first enable permittees to know what control measures they are responsible for. Without this information the permittee will not be protecting water quality to their full potential since inspections, maintenance, and follow-up changes cannot be performed. Tracking information such as the latitude/longitude, maintenance and inspection requirements and follow-up will allow the permittee to be able to better allocate their resources for those activities that are immediately necessary. Although not required, including photographs will help the permittee assess how the control measure has changed since it was first created and will likely aid in determining proper maintenance and/or retrofitting opportunities if the measure is no longer providing the water quality benefits it was originally designed.

Recommendations for the Permit Writer

Permit writers may wish to specifically define the types of structural controls that must be included in the inventory. For example, rain barrels may be considered a structural control, but the MS4 likely does not need latitude and longitude coordinates of the rain barrels.

5.7 Inspections and Enforcement

Example Permit Provision

5.7.1 Inspection Frequency. To ensure that all stormwater control measures are operating correctly and are being maintained as required consistent with its applicable maintenance agreement, the permittee must conduct inspections of each project site covered under Part 5.2 performance standards, [*insert inspection frequency, e.g., at least one time during the permit term, 20% of sites per year, etc.*]. The inspections must be in accordance with those specified in the [*insert State manual that describes the maintenance of control measures*]. A description of inspection procedures must be included in the SWMP document.

5.7.2 Post-Construction Inspection. Within [*insert deadline, e.g., 1 week, 2 weeks, etc.*] of completion of construction of any project required to meet the Section 5.2 performance standards, the permittee must conduct a post-construction inspection to verify that the permittee's performance standards have been met. The permittee must include in its SWMP a procedure for being notified by construction operators/owners of their completion of active construction so that the post-construction inspection may be conducted.

5.7.3 Inspection Reports. The permittee must document its inspection findings in an inspection report. Each inspection report must include:

a. Inspection date;

b. Name and signature of inspector;

c. Project location (street address, latitude/longitude, etc.) and inventory reference number (from inventory established in Section 5.6.1)

d. Current ownership information (for example, name, address, phone number, fax, and email)

e. A description of the condition of the structural stormwater control measure including the quality of: vegetation and soils; inlet and outlet channels and structures; embankments, slopes, and safety benches; catch basins; spillways, weirs, and other control structures; and sediment and debris accumulation in storage and forebay areas as well as in and around inlet and outlet structures;

f. Photographic documentation of all critical structural stormwater control measure components; and

g. Specific maintenance issues or violations found that need to be corrected by the property owner or operator along with deadlines and reinspection dates.

The permittee must document and maintain records of inspection findings and enforcement actions and make them available for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

Inspection of post-construction control measures is key to ensuring the protection of water quality. If control measures are not inspected and maintained they could become sources of pollution rather than reducing pollution. By including detailed information in the inspection report, the permittee can better determine if maintenance is required and the permittee can have a snapshot of sorts to know the status of their control measures to prioritize funding.

Recommendations for the Permit Writer

Permit writers should clearly specify the requirements for inspections. Inspecting and properly maintaining structural stormwater controls to ensure they are working as designed is just as important as installing them in the first place. By having specific requirements, permittees will be reminded that they must allocate resources to ensure control measures are properly maintained and functioning. The permit writer may also want to add a prioritization scheme to the requirement to help the permittee determine what maintenance activities are priorities for protecting water quality and which ones are minor changes.

5.8 Retrofit Plan

Example Permit Provision

5.8.1 The permittee must develop a plan to retrofit existing developed sites that are impacting water quality. The retrofit plan must be developed within [*insert deadline, such as within two years of permit issuance*] and must emphasize controls that infiltrate, evapotranspire, or harvest and use stormwater discharges. The plan must include[21]:

a. An inventory of potential retrofit locations, which considers, at a minimum:

- Locations that contribute pollutants of concern to an impaired waterbody
- Locations that contribute to receiving waters that are significantly eroded
- Locations that are tributary to a sensitive ecosystem or protected area
- Locations that are tributary to areas prone to flooding

[21] Orange County Municipal Stormwater Permit (Section F.3.d) (www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/oc_stormwater.shtml)

b. An evaluation and ranking of the inventoried locations to prioritize retrofitting which includes, at a minimum:
   - Feasibility
   - Cost effectiveness
   - Pollutant removal effectiveness
   - Impervious area potentially treated
   - Maintenance requirements
   - Landowner cooperation
   - Neighborhood acceptance
   - Aesthetic qualities, and
   - Efficacy at addressing concern.

Example Permit Requirement Rationale for the Fact Sheet

It is clear that we cannot protect the nation's waters without also addressing degradation caused by stormwater discharges from existing developed sites. For that reason stormwater programs must include substantive retrofit provisions.

It is possible and reasonable to significantly improve water quality in many urban receiving waters. This requires more than just a new development and redeveloped sites program, however, which at best can only hold the line. To actually improve the quality of receiving waters it is necessary to mitigate discharges from existing developed sites, which generally means implementation of measures to bring about the retrofit the stormwater control measures at existing sites to retain most stormwater on site.

In addition, research indicates that most streambank restoration projects that actively stabilize eroding channels should not be implemented until after hydrologic retrofits have been completed that restore the hydrologic regime not concurrently with the implementation of the retrofits.

Municipal projects, such as traffic calming sites could also include stormwater retrofit components, such as curb bump outs that include bioretention features, rain gardens, and curb cuts.

Information on retrofit options and the development of a retrofit plan can be found in the Center for Watershed Protection's guidance on Urban Stormwater Retrofit Practices (available at www.cwp.org as Manual No. 3 under the Urban Subwatershed Restoration Manual Series).

Recommendations for the Permit Writer

Permittees may need a permit term or two to adequately develop and implement a retrofit plan. Some permittees may not be ready to have retrofit plans as part of their requirements. It is up to the permit writer to make this determination based on the specific information they have available on current programs. A retrofit plan should assess the areas where retrofitting is appropriate and will result in increased water quality protection and restoration. The permit writer should determine

the appropriate timeframe and language for a retrofit plan. For example, if the permittee was already required to develop a retrofit plan in a previous permit term the permit may specify a schedule for implementation rather than development.

CHAPTER 6: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Introduction

Federal stormwater regulations (see 40 CFR 122.34(b)(6) and 40 CFR 122.26(d)(2)(iv)(A)) require the operator of a regulated MS4 community to develop a program to:

- Prevent or reduce the amount of stormwater pollution generated by municipal operations and conveyed into receiving waters.
- Train employees on how to incorporate pollution prevention/good housekeeping techniques into municipal operations.
- Identify appropriate control measures and measurable goals for preventing or reducing the amount of stormwater pollution generated by municipal operations.

Included Concepts

- ► Municipal facility and control inventory
- ► Facility assessment
- ► Development of facility-specific stormwater management SOPs and Implementation of facility stormwater controls
- ► Storm sewer system maintenance activities
- ► Flood management
- ► Pesticide, herbicide, and fertilizer application and management
- ► Training and education
- ► Contractor requirements and oversight

The first step for the permittee is to evaluate and assess the areas and municipal facilities that it controls in order to determine which activities may currently have a negative impact on water quality and to find solutions for these activities. The simplest solution is to limit the number of activities that are conducted outside and exposed to stormwater.

Storm sewer systems need maintenance to ensure that structures within the storm sewer that are meant to reduce pollutants do not become sources of pollution. Regularly maintaining catch basins and cleaning storm sewer pipes prevent the accumulation of pollutants that are later released during rain events as well as blockages, backups, and flooding. Most permittees have an existing program to maintain the storm sewer infrastructure. EPA notes, however, that some of these programs have tended to focus on flood avoidance and complaint response rather than reducing water quality impacts from stormwater discharges.

The MS4 permit must require that the system be maintained to prevent the discharge of pollutants into receiving waters. System mapping and a schedule of regular maintenance are key to a successful pollution prevention program. EPA recommends establishing a tiered maintenance schedule for the entire storm sewer system area, with the highest priority areas being maintained at the greatest frequency. Priorities should be driven by water quality concerns and can be based on the land use within the MS4 area, the condition of the receiving water, the amount and type of material that typically accumulates in an area, or other location-specific factors. It is also advisable to use spill and illicit discharge data to track areas that may require immediate sewer infrastructure maintenance. It is also important for material that is collected to be disposed of in a responsible manner.

The procedures for storm sewer system operation and maintenance must be documented in the permittee's SOPs or similar type of documents, which are part of the permittee's SWMP. Employee training to carry out these pollution prevention measures is a required component of the program. The pollution prevention/good housekeeping/maintenance activities should be documented and, where possible, quantified (e.g., number and location of inspections and clean-outs, type and quantity of materials removed). Having permittees characterize the quantity, location, and composition of pollutants removed from catch basins can provide useful data that can later be used to assess the program's overall effectiveness, identify illicit discharges, and help the permittee better prioritize implementation activities in the future.

Specific pollution prevention requirements related to pollutant-generating activities such as landscaping techniques (including the application of pesticides, herbicides, and fertilizer) and operating and maintaining public streets, should also be included in the permit where applicable. For example, typical pollutants associated with street repair and maintenance include heavy metals, chlorides, hydrocarbons (e.g., benzene, toluene, ethylbenzene, xylene), concrete dust, sand, deicers, sediment, and trash. The permitting authority should consider requiring alternative landscaping practices such as integrated pest management (IPM), xeriscaping, or mechanical (non-chemical) removal of unwanted plants. Other landscaping controls, such as mulch management, chemical storage, reduction of soil compaction, and erosion control, should also be considered. Training and educating municipal and contracted staff is also important to ensure that everyone is knowledgeable and proficient in the newest and most effective approaches to minimizing pollutant discharges from municipal facilities and activities.

Additionally, permits should require that water quality be considered when designing flood management projects, and that existing structural flood control devices are evaluated to determine if retrofitting the device to remove/reduce pollutants from stormwater is necessary and practicable.

6.1 Municipal Facility and Control Inventory

Example Permit Provision

6.1.1 Development of a Municipal Facility and Stormwater Control Inventory – The permittee must continue to update and maintain an inventory of municipally-owned or operated facilities and stormwater controls, including but not limited to the following:

- Composting facilities
- Equipment storage and maintenance facilities
- Fuel farms
- Hazardous waste disposal facilities
- Hazardous waste handling and transfer facilities
- Incinerators
- Landfills
- Landscape maintenance on municipal property
- Materials storage yards

- Pesticide storage facilities
- Public buildings, including schools, libraries, police stations, fire stations, municipal buildings, and similar buildings
- Public parking lots
- Public golf courses
- Public swimming pools
- Public works yards
- Recycling facilities
- Salt storage facilities
- Solid waste handling and transfer facilities
- Street repair and maintenance sites
- Vehicle storage and maintenance yards
- Municipally-owned and/or maintained structural stormwater controls

6.1.2 Documentation– The list of municipally-owned or operated facilities and stormwater controls must be maintained and available for review by the permitting authority.

6.1.3 Mapping – On a map of the area covered by the MS4 permit, the permittee must identify where the municipally-owned or operated facilities and stormwater controls are located. The map must identify the stormwater outfalls corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The permittee must also identify the manager of each facility and their contact information. The map must be maintained and updated regularly and be available for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

Municipally-owned or operated facilities serve as hubs of activity for a variety of municipal staff from many different departments. Some municipalities will have one property at which all activities take place (e.g., the municipal maintenance yard), whereas others will have several specialized facilities such as those listed above. A comprehensive list and map of such facilities will help staff responsible for stormwater compliance build a better awareness of their locations within the MS4 service area and their potential to contribute stormwater pollutants. The facility inventory will also serve as a basis for setting up periodic facility assessments (see Part 6.2) and developing, where necessary, facility stormwater pollution prevention plans (see Part 6.3).

Recommendations for the Permit Writer

Permit writers should tailor the facilities listed in the assessment as best they can to include the facilities most likely to be owned or operated by the permittee. It is highly likely that some of the facilities listed in the Permit Requirement would not apply to most non-traditional and/or non-municipal MS4s.

6.2 Facility Assessment

Permit Requirement

6.2.1 Municipally-owned or operated facility assessment:

a. Comprehensive Assessment of Pollutant Discharge Potential –The permittee must review, reassess, and update the comprehensive assessment of all municipally-owned or operated facilities identified in Part 6.1 [*insert frequency, e.g., annually*] for their potential to discharge in stormwater the following typical urban pollutants: sediment, nutrients, metals, hydrocarbons (e.g., benzene, toluene, ethylbenzene and xylene), pesticides, chlorides, and trash. Other pollutants may be associated with, but not generated directly from, the municipally-owned or operated facilities, such as bacteria, chlorine, organic matter, etc. Therefore, the permittee must determine additional pollutants associated with its facilities that could be found in stormwater discharges. A description of the assessment process must be included in the SWMP document.

b. Identification of "High Priority" Facilities – Based on the Part 6.2.1.a comprehensive assessment, the permittee must identify as "high-priority" those facilities that have a high potential to generate stormwater pollutants. Among the factors that must be considered in giving a facility a high priority ranking is the amount of urban pollutants stored at the site, the identification of improperly stored materials, activities that must not be performed outside (e.g., changing automotive fluids, vehicle washing), proximity to waterbodies, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s). High priority facilities must include the permittee's maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in stormwater.

c. Documentation of Comprehensive Assessment Results – The permittee must document the results of the assessments and maintain copies of all site evaluation checklists used to conduct the comprehensive assessment. The documentation must include the results of the permittee's initial assessment, any identified deficiencies and corrective actions taken, and a list of the "high priority" facilities identified per Part 6.2.1.b.

Example Permit Requirement Rationale for the Fact Sheet

The initial ("first time") comprehensive assessment is necessary to identify which of the municipality's facilities are most likely to contribute stormwater pollutants and which are in need of stormwater controls. The assessments will involve a detailed site inspection that can identify improperly stored materials, activities that should not be performed outside (e.g., changing automotive fluids, vehicle washing), and poor housekeeping practices.

Recommendations for the Permit Writer

If the permitting authority has an established site inspection protocol to be used in the comprehensive assessment, it should be included and referenced here. The list of pollutants in this section should be modified or expanded based on pollutants of concern in the permitting authority's jurisdiction.

6.3 Development of Facility-Specific Stormwater Management SOPs and Implementation of Facility Stormwater Controls

Example Permit Provision

6.3.1 Facility-specific Stormwater Management SOPs for "High Priority" Facilities:

a. For each "high priority" facility or operation identified in Part 6.2, the permittee must develop a site-specific SOP that identifies stormwater controls (i.e., structural and non-structural controls, and operational improvements) to be installed, implemented, and maintained to minimize the discharge of pollutants in stormwater. At a minimum, the facility-specific SOP must include the stormwater control measures described below in Part 6.3.2, as well as inspection and visual monitoring procedures and schedules described in Part 6.3.3.

b. A copy of the facility-specific stormwater management SOP must be maintained and be available for review by the permitting authority. The SOP must be kept on-site at each of the municipally-owned or operated facilities' offices for which it was completed. The SOP must be updated as necessary.

c. The permittee must install, implement, and maintain all stormwater controls required per Part 6.3.2 of this permit and included in the facility's site-specific SOP.

6.3.2 Stormwater Controls for "High Priority" Facilities – The following stormwater controls must be implemented at all "high priority" municipally-owned or operated facilities identified in Part 6.2. A description of any controls included in this part and any standard operating procedures developed to comply with this part must be included as part of the of each facility's SOP:

a. General good housekeeping – The following good housekeeping practices must be implemented for all facilities identified as "high priority":

1. The permittee must keep all municipally-owned or operated facilities neat and orderly, minimizing pollutant sources through good housekeeping procedures and proper storage of materials.

2. Materials exposed to stormwater must be covered where feasible (without creating additional impervious surfaces, if possible).

b. De-icing material storage – The permittee must store salt and other de-icing materials in a permanent storage structure, unless stormwater runoff from the storage piles is not discharged, or if discharges from the piles are authorized under another stormwater permit. If a permanent storage structure is required but does not exist, one must be built within [*insert timeframe*], and seasonal

tarping must be used as an interim control measure until the permanent structure is completed. If a permanent storage facility is not feasible, the permittee must provide a rationale to the permitting authority as to why and what alternate BMPs will be utilized instead.

Where a permanent storage structure is present, the permittee must perform regular maintenance and inspections of the permanent storage structure.

c. Fueling operations – The permittee must continue to implement standard operating procedures for vehicle fueling and receiving of bulk fuel deliveries at municipally-owned or operated facilities with the goal of reducing the likelihood of spills, and providing spill controls in the event that accidental spills do occur.

d. Vehicle maintenance – The permittee must continue to implement a standard operating procedure for vehicle maintenance and repair activities that occur at municipally-owned or operated facilities with the goal of reducing the likelihood of spills or releases and providing controls in the event that accidental spills do occur. The standard operating procedures must include regular inspections of all maintenance areas and activities.

e. Equipment and vehicle washing – The discharge of equipment and vehicle wash wastewater to the MS4 or directly to receiving waters from municipal facilities is prohibited. The permittee may meet this requirement by either installing a vehicle wash reclaim system, capturing and hauling the wastewater for proper disposal, connecting to sanitary sewer (where applicable and approved by local authorities), ceasing the activity, and/or applying for and obtaining a separate stormwater permit.[22]

6.3.3 Inspections and Visual Monitoring:

a. Weekly visual inspections – The permittee must perform weekly visual inspections to ensure materials and equipment are clean and orderly, and to minimize the potential for pollutant discharge. The permittee must look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The weekly inspections must be tracked in a log for every facility, and records kept with the SWMP document. The inspection report must also include any identified deficiencies and the corrective actions taken to fix the deficiencies.

b. Quarterly comprehensive inspections – At least once per quarter, a comprehensive inspection of "high priority" facilities, including all stormwater controls, must be performed, with specific attention paid to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The quarterly inspection results must be documented and records kept with the SOP document. This inspection must be done in accordance with the developed SOPs. The inspection report must also include any identified deficiencies and the corrective actions taken to fix the deficiencies.

[22] New Jersey Tier A Phase II MS4 Permit (NJ0141852) (www.state.nj.us/dep/dwq/pdf/Tier_A_final.pdf)

c. Quarterly visual observation of stormwater discharges – At least once per quarter, the permittee must visually observe the quality of the stormwater discharges from the "high priority" facilities (unless climate conditions preclude doing so, in which case the permittee must attempt to evaluate the discharges four times during the wet season). Any observed problems (e.g., color, foam, sheen, turbidity) that can be associated with pollutant sources or controls must be remedied within three days or before the next storm event, whichever is sooner. Visual observations must be documented, and records kept with the SOP document. This inspection must be done in accordance with the developed SOPs. The inspection report must also include any identified deficiencies and the corrective actions taken to fix the deficiencies.

Example Permit Requirement Rationale for the Fact Sheet

Each municipal facility will require a different set of control measures depending on the nature of activities that occur there and the types of materials that are stored and used. Developing and maintaining a site-specific SOP for each facility will help to ensure that employees responsible for facility operation are aware of the stormwater controls required for the site.

There are a number of storage areas and activities that are common at municipal facilities that have a high potential for polluting stormwater:

- Deicing materials, particularly road salt, are easily liberated and transported by rainfall, and constituents such as chloride are not removed by most stormwater controls.
- Fueling and vehicle maintenance and storage areas are prone to spills and drips of various automotive fluids.
- Equipment and vehicle washing areas are designed to mix water with dirt and hydrocarbons, requiring special treatment of the wastewater (including pretreatment and diversion to the sanitary sewer, if allowed) and protection of wash areas from rainfall and runoff.

The best way to avoid pollutant discharges from these sources is to keep precipitation and runoff from coming into contact with stored chemicals and activity areas that use chemicals and materials, which can become sources of stormwater pollutants. For example, the permittee must cover stockpiles, create dedicated structures for stored materials, build berms around areas of pavement to prevent clean runoff from contacting contaminated areas, and maintain a minimum distance between stockpiles and stormwater infrastructure and receiving waters. These are just a few of the ways in which these potential pollutant sources can be protected from precipitation and runoff.

The permit requires that comprehensive site inspections be conducted quarterly, which is an appropriate frequency to ensure that material stockpiles that might be moved or utilized on a seasonal basis are protected from precipitation and runoff. Also, quarterly inspections will allow inspectors to observe different types of operations that occur at different times of the year (e.g., landscape maintenance crews are less active in the winter). Quarterly visual observations are required so that inspectors can see in real time the qualitative nature of the

stormwater discharge and so that corrective action can be taken where necessary to improve on-site stormwater controls.

The permit also specifies that inspection procedures, results, and controls for each facility be documented to ensure that the site inspections are consistent and that maintenance of stormwater controls remains part of the municipality's standard operating procedures. The requirement for an inspection log will allow the permitting authority to verify that periodic site inspections have been performed.

Recommendations for the Permit Writer

Neither Phase I nor Phase II regulations specifically require that MS4 permittees develop facility-specific stormwater management SOPs. However, both Phase I and Phase II require that permittees prevent or reduce pollutant discharge in stormwater from municipal facilities and activities. Requiring permittees to assess high priority facilities and develop appropriate controls for each is an effective way of requiring permittees to address potential sources of pollutants at facilities.

When setting frequency for facility inspections (see Part 6.3.3), the permit writer should consider the number of facilities and the size/complexity of the sites to ensure that enough time is available to complete the assessments.

The list of specific stormwater controls for municipal facilities will vary from place to place based on local and watershed priorities and climate considerations. The permit writer should specify stormwater controls that are appropriate for the local conditions. For example, if a permittee uses satellite locations for temporary storage of deicing materials during snow events, the permit writer may want to consider options other than the permanent storage requirement if the permittee uses the piles within a certain time frame and the piles are covered by temporary tarping or a similar control.

6.4 Storm Sewer System Maintenance Activities

Example Permit Provision

6.4.1 MS4 catch basin maintenance

a. Assessment/prioritization of catch basins – The permittee must assign a priority to each of its catch basin inlets within its jurisdiction as one of the following:

- Priority A – Catch basins that are designated as consistently generating the highest volumes of trash and/or debris
- Priority B – Catch basins that are designated as consistently generating moderate volumes of trash and/or debris
- Priority C – Catch basins that are designated as generating low volumes of trash and/or debris

The permittee must use information compiled from citizen complaints/reports to help in the determination of the appropriate priority level. A description of

the prioritization scheme must be included in the SWMP.

b. Catch basin inspection and cleaning

1. Based on the priorities assigned in Part 6.4.1.a., the permittee must inspect and clean catch basins in accordance with the following schedule:

- Priority A – [*Insert cleanout frequency, e.g., 3 times per year*]
- Priority B – [*Insert cleanout frequency, e.g., 2 times per year*]
- Priority C – [*Insert cleanout frequency, e.g., 1 time per year*]

The permittee must develop a catch basin cleaning schedule based on the frequency specified in this permit, along with a list of each of its catch basins and the priority assigned to them per Part 6.4.1.a.

2. In addition to catch basin cleanings performed above, the permittee must ensure that any catch basin that is inspected and found to be between one third and one half full of trash and/or debris must be cleaned within [*Insert cleanout frequency e.g., 1 week of discovery*].[23] The permittee must maintain a log of all maintenance performed.

3. The permittee must document that it has performed all required catch basin cleanings in a log that is to be made available for review by the permitting authority upon request.

c. Catch basin labeling – The permittee must ensure that each catch basin includes a legible stormwater awareness message (e.g., a label, stencil, marker, or pre-cast message such as "drains to the creek" or "only rain in the drain"). Catch basins with illegible or missing labels must be recorded and re-labeled within [*insert number of days*] of inspection.

d. Maintenance of surface drainage structures – The permittee must visually monitor permittee-owned open channels and other drainage structures for debris at least [*specify frequency, e.g., once per year*] and identify and prioritize problem areas, such as those with recurrent illegal dumping, for inspection at least [*specify frequency, e.g., three times per year*]. Removal of trash and debris from open channels and other drainage structures must occur [*insert frequency of open channel/drainage structure cleaning, e.g., annually*]. The permittee must document its drainage structure maintenance in a log that is to be made available for review by the permitting authority upon request.

e. Disposal of waste materials – The permittee must develop a procedure to dewater and dispose of materials extracted from catch basins. This procedure must ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.

6.4.2 Municipal activities and operations

a. Assessment of municipal activities and operations

[23] EPA's Office of Research and Development documented a threshold sump level of ½ as a break point where solids retainage was either erratic or negative (Catchbasin Technology Overview and Assessment #EPA-600/2-77-051 1977).

1. The permittee must maintain and revise as necessary the operation and maintenance (O&M) activity assessment. The following municipal O&M activities must be included in the assessment for their potential to discharge pollutants in stormwater:
    - Road and parking lot maintenance, including pothole repair, pavement marking, sealing, and re-paving
    - Bridge maintenance, including re-chipping, grinding, and saw cutting
    - Cold weather operations, including plowing, sanding, and application of deicing compounds and maintenance of snow disposal areas
    - Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation
    - Municipally-sponsored events such as large outdoor festivals, parades, or street fairs
2. The permittee must identify all materials that could be discharged from each of these O&M activities. Typical pollutants associated with these activities include metals, chlorides, hydrocarbons (e.g. benzene, toluene, ethylbenzene, xylene), sediment, and trash.
3. The permittee must develop a set of pollution prevention measures that, when applied during municipal O&M activities, will reduce the discharge of pollutants in stormwater. These pollution prevention measures must include, at a minimum:
    - Replacing materials/chemicals with more environmentally benign materials or methods (e.g., use mechanical methods vs. herbicides, or use water-based paints or thermoplastics rather than solvent-based paints for stripping)
    - Changing operations to minimize the exposure or mobilization of pollutants (e.g., mulch, compost or landfill grass clippings) to prevent them from entering surface waters
    - Placing barriers around or conducting runoff away from deicing chemical storage areas to prevent discharge into surface waters), consistent with Part 6.3.2.b

    [*If available in your particular State or the municipality, insert relevant section of SWMP, or other relevant document, that includes specific stormwater controls that must be used*.]
4. The permittee must develop and implement a schedule for instituting the pollution prevention measures. At a minimum, with respect to all roads, highways, and parking lots with more than 5,000 square feet of pollutant-generating impervious surface area that are owned, operated, or maintained, the permittee must implement all pollution prevention measures by [*insert deadline*].
5. The results of the assessments and pollution prevention measures, including schedules for implementation, must be documented and made available for review by the permitting authority upon request.

b. Inspection of pollution prevention measures – All pollution prevention measures implemented at municipal facilities must be visually inspected [*insert frequency, e.g., monthly or quarterly*] to ensure they are working properly; a log of inspections must be maintained and made available for review by the permitting authority upon request.

6.4.3 Street Sweeping and Cleaning

a. The permittee must continue to evaluate and rate all municipally-owned streets, roads, and public parking lots within their jurisdiction. The permittee must include in the evaluation the sweeping frequency, timing, and efficiency of existing street sweeping programs. The street sweeping frequency must be based on land use, trash and stormwater pollutant levels generated. At a minimum, the following areas must be regarded as "high priority," for sweeping activities while the "medium priority" and "low priority" areas are recommended:

- High priority – Streets, road segments, and public parking lots designated as high priority include, but are not limited to, high traffic zones, commercial and industrial districts, shopping malls, large schools, high-density residential dwellings, sport and event venues, and plazas. This designation must include areas that consistently accumulate high volumes of trash, debris, and other stormwater pollutants.
- Medium priority – Streets, road segments and public parking lots designated as medium priority include, but are not limited to, medium traffic zones; warehouse districts; and light, small-scale commercial and industrial areas.
- Low priority – Streets and road segments designated as low priority include, but are not limited to, light traffic zones and residential zones.

b. The permittee must show on a map of its service area how the streets, roads, and public parking lots have been rated in accordance with Part 6.4.3.a.

c. Implementing sweeping schedules – The permittee must sweep streets/roads/public parking lots in accordance with the following frequency:

- High priority – average of at least [*insert frequency, e.g., twice per month*]
- Medium priority – average of at least [*insert frequency, e.g., once per month*]
- Low priority – [*insert frequency, e.g., twice per year*]

If a permittee's existing overall street sweeping effort provides equivalent or greater street sweeping frequency relative to the requirements above, the permittee may continue to implement its existing street sweeping program.

d. For areas where street sweeping is technically infeasible (e.g., streets without curbs), the permittee must increase implementation of other trash/litter control procedures to minimize pollutant discharges to storm drains and creeks. The permittee must show on its Part 6.4.3.b map the location of these areas.

e. Sweeping equipment selection and operation

1. When replacing existing sweeping equipment, the permittee must select and operate high-performing sweepers that are efficient in removing pollutants,

including fine particulates, from impervious surfaces.

2. The permittee must follow equipment design performance specifications to ensure that street sweeping equipment is operated at the proper equipment design speed with appropriate verification, and that it is properly maintained.
3. The permittee must operate sweepers to optimize pollutant removal by permitting sweepers access to the curb through the use of parking restrictions that clear the curb or through effective public outreach to inform citizens of sweeping days and times so that voluntary curb clearing can occur.

f. Sweeper Waste Material Disposal – The permittee must develop a procedure to dewater and dispose of street sweeper waste material. This procedure must ensure that water and material will not reenter the MS4.

g. Operator training – Street sweeper operators must be trained to enhance operations for water quality benefit.

h. The permittee must include the following in the SWMP and update as changes are made:

1. A description of the street sweeping frequency and any significant changes in the sweeping frequency map, along with the basis for those changes
2. The types of sweepers used
3. A summary of the proper sweeping operation verification results and street sweeping methods, including the way in which the permittee specifies and confirms the rate or speed at which street miles are covered by sweeper operators
4. The use of additional resources in sweeping seasonal leaves or pick-up of other material
5. A description of the methods for addressing areas identified in Part 6.4.3, considered infeasible for street sweeping

6.4.4 Maintenance of municipally-owned and/or maintained structural stormwater controls

a. The permittee must inspect at least [*insert frequency, e.g., yearly*], and maintain if necessary, all municipally-owned or maintained structural stormwater controls. The permittee must also maintain all green infrastructure practices through regularly scheduled maintenance activities.

Example Permit Requirement Rationale for the Fact Sheet

MS4 Maintenance

Traditional municipal storm drain systems were designed to quickly collect and convey runoff to receiving waters. The purpose of catch basin, inlet, and storm drain cleanouts is to prevent blockages, flooding, and reduce pollution.

Fine particles and pollutants from run-on, atmospheric deposition, vehicle emissions, breakup of street surface materials, littering, and sanding can accumulate along the curbs of roads in between rainfall events. This results in the accumulation of pollutants such as sediment, nutrients, metals, hydrocarbons, bacteria, pesticides, trash and other toxic chemicals. Storm drain maintenance is often the last opportunity to remove pollutants before they enter the storm drain system. Because they effectively trap solids, they need to be cleaned out periodically to prevent those materials from being transported by high stormwater flows. By doing so the MS4 will prevent trash and litter from ultimately becoming sources of marine debris, which is any man-made, solid material that enters waterways either directly or indirectly.

The permit includes a priority ranking approach for catch basins so that municipal resources are directed to the areas and structures that generate the most pollutants. A priority ranking system is required because some catch basins will accumulate pollutants faster than others based on the nature of the drainage area and whether controls are present upstream of the catch basin. Catch basins with the highest accumulations will need to be cleaned more often than those with low accumulations. The permit language also includes a requirement that triggers catch basin cleaning when a catch basin is one-third full.

Proper storm drain system cleanout includes vacuuming or manually removing debris from catch basins; vacuuming or flushing pipes to increase capacity and remove clogs; removing sediment, debris, and overgrown vegetation from open channels; and repairing structures to ensure the integrity of the drainage system. It is important to conduct regular inspections of all storm sewer infrastructure and perform maintenance as necessary. Though these activities are intended to ensure that the sewer system is properly maintained and that any accumulated pollutants are removed prior to discharge, if not properly executed, cleanout activities can result in pollutant discharges. In selecting maintenance practices, the permittee must carefully evaluate each with an eye towards stormwater pollution potential to minimize unintended pollutant discharges, such as the use of flushing storm drain pipes to remove debris without recapturing the debris further down the pipe.

The materials removed from catch basins may not reenter the MS4. The material must be dewatered in a contained area and the water treated with an appropriate and approved control measure or discharged to the sanitary sewer. The solid material will need to be stored and disposed of properly to avoid discharge during a storm event. Some materials removed from storm drains and open channels may require special handling and disposal, and may not be authorized to be disposed of in a landfill.

Street Sweeping and Cleaning

Street and parking lot sweeping is a practice that most municipalities initially conducted for aesthetic purposes. However, the water quality benefits are now widely recognized. Street sweeping also prevents particulate matter associated with road dust from accumulating on public streets and washing into storm drains.

The permit language addresses a number of important factors that impact the effectiveness of a street sweeping program. The first factor is the type of equipment used; the permit language stipulates that when equipment needs to be replaced, high-performance sweepers are purchased preferentially. Street sweeping has traditionally been more effective at removing large-sized particles, but new equipment has been developed to remove smaller, fine-grained particles. Mechanical sweepers (broom-type) are usually the least expensive and are better suited to pick up

large-grained sediment. Vacuum and regenerative air sweepers are better at removing fine-grained sediment particles, but they are more expensive. Removal efficiency can be improved through tandem sweeping (i.e., two sweepers sweeping the same route, with one following the other to pick up missed material), or if the street sweeper makes multiple passes on a street.

The second factor influencing street sweeping effectiveness is the way in which the equipment is operated; the permit specifies that equipment be operated according to the manufacturers' operating instructions by operators who have been trained to sweep in accordance with the Permit Requirements in order to protect water quality.

The third determining factor is the degree to which parked cars block sweeper access to the curb; one of the best ways to ensure access to the curb is to establish parking restrictions based on sweeping schedules and to inform residents of the schedule so they can voluntarily move their cars. The permit requires that the permittee institute parking restrictions and/or a public outreach campaign requesting that cars be parked elsewhere to accommodate sweeping schedules.

Because not all streets are suitable for sweeping (e.g., those that don't have a curb and gutter), source controls can be used in place of sweeping in those areas.

The permittee is required to maintain documentation of sweeping events and characterize the quantity and composition of pollutants removed from roadways. Street sweeping data are relatively easy to track and maintain, so the permit includes requirements for reporting and assessment of the effectiveness of the sweeping activities based on equipment used, miles swept, and the amount of materials collected.

The street sweeping material may not reenter the MS4. The material must be dewatered in a contained area and the water treated with an appropriate and approved control measure or discharged to the sanitary sewer. The solid material will need to be stored and disposed of properly to avoid discharge during a storm event. Some materials may require special handling and disposal, and my not be authorized to be disposed of in a landfill.

Recommendations for the Permit Writer

MS4 Maintenance

MS4s should have a specific schedule to clean out their storm drains since it will ensure that the debris that is trapped in the system will not move into waterbodies and ultimately become marine debris in the ocean. For additional information to include on marine debris go to the EPA's Marine Debris website (www.epa.gov/owow/oceans/debris).

The frequency and timing of visual assessments and cleaning of storm drains and open channels can be tailored to local climate conditions. For example, one approach would be to require that visual observations and cleanings be conducted before the start of the wet season or before spring snowmelt.

The permitting authority should review and approve dewatering and disposal methods for materials removed from catch basins.

Catch basin labeling is believed to be an effective mechanism for educating residents since it involves a direct reminder that that water or other materials which flow into storm drains is not

treated in any way, but instead drains directly to nearby waterways. There are many methods for labeling catch basins and the permit writer should work with the permittee to determine the most feasible and cost effective method of delivering the "drains to stream" message.

Street Sweeping and Cleaning

Street sweeping frequency and timing can be based on climate conditions and seasonal variation in pollution loading. For example, in cold climates where sand is used for winter road maintenance, the permit language could specify increased sweeping during the winter and prior to the spring snowmelt. In areas with a rainy season, sweeping might be timed to occur before the rainy season starts.

In the fall, sweepers can be used to pick up leaves, as they can contribute 25 percent of nutrient loadings in catch basins. If more substantial piles of leaves are found in the community during the fall, street sweeping activities should be coordinated with leaf pick-up. Equally important is an early spring sweeping before rains begin to pick up sand, de-icing material, and winter debris. More frequent sweeping may reduce the need for catch basin cleaning.

The prioritization of sweeping activities (high, medium, low) should be based on standard categories that are based on traffic frequencies and used to determine service levels for the roadways. The example provided in the permit language is based on specific information for the location.

The permitting authority should review and approve dewatering and disposal methods for street sweeping material.

6.5 Flood Management

Example Permit Provision

6.5.1 Flood Management Projects – Within [*insert deadline, such as two years*] of permit issuance, the permittee must develop and implement a process to assess the water quality impacts in the design of all new flood management projects that are associated with the permittee or that discharge to the MS4. This process must include consideration of controls that can be used to minimize the impacts to site water quality and hydrology while still meeting the project objectives. Beginning [*insert deadline, such as three years*] from date of permit issuance, the permittee must assess at least [*insert number of projects to be evaluated, such as two*] existing flood management projects per year to determine whether changes or additions should be made to improve water quality. [24] A description of this process must be included in the SWMP document.

[24] Eastern Washington Phase II MS4 Permit (www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseiiEwa/MODIFIEDpermitDOCS/EWpermitMODsigned.pdf)

Example Permit Requirement Rationale for the Fact Sheet

This permit requires that existing flood management projects be prioritized and a set number be evaluated to identify opportunities for water quality retrofits. This is because the focus of stormwater management in the past had been to control flooding and mitigate property damage, with less emphasis on water quality protection. These structures may handle a significant amount of stormwater and therefore offer an opportunity to modify their design to include water quality features for less than the cost of building new controls. This requirement applies not only to new flood control projects, but also to existing structures.

6.6 Pesticide, Herbicide, and Fertilizer Application and Management

Example Permit Provision

6.6.1 Landscape maintenance

a. The permittee must evaluate the materials used and activities performed on public spaces such as parks, schools, golf courses, easements, public rights of way, and other open spaces for pollution prevention opportunities. Maintenance activities for the turf landscaped portions of these can include mowing, fertilization, pesticide application, irrigation, etc. Typical pollutants include sediment, nutrients, hydrocarbons, pesticides, herbicides and organic debris.

b. The permittee must implement the following practices to minimize landscaping-related pollutant generation:

   1. Educational activities, permits, certifications, and other measures for municipal applicators and distributors.
   2. Integrated pest management measures that rely on non-chemical solutions, including
      - Use of native plants, xeriscaping in arid/semi-arid regions (reduces water usage and fertilization)
      - Keeping clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling
      - Limiting application of pesticides and fertilizers if precipitation is forecasted within 24 hours or as specified in label instructions
      - Limiting or replacing pesticide use (e.g., manual weed and insect removal)
      - Limiting or eliminating the use of fertilizers, or, if necessary, prohibiting application within 5 feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a waterbody
      - Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing motorist safety
   3. Schedules for chemical application that minimize the discharge of such constituents due to irrigation and expected precipitation.

4. The collection and proper disposal of unused pesticides, herbicides, and fertilizers.[25]

Example Permit Requirement Rationale for the Fact Sheet

The permit focuses on requiring source controls to reduce the amount of chemicals used. The permit specifies the use of integrated pest management, selection of native vegetation that is naturally adapted to local conditions and therefore requires fewer chemical and water inputs, reducing exposure of the chemicals to water by scheduling application according to weather forecasts and plant needs, and ensuring that municipal employees who are responsible for storing and handling these materials are educated about their use, disposal, and possible impacts.

Recommendations for the Permit Writer

EPA is currently developing a general permit to control discharges from the application of pesticides to or over, including near, waters of the U.S. EPA is working closely with state NPDES and pesticide control authorities, the regulated community, and environmental organizations to develop its permit that will be required for such discharges beginning in April 2011. It is important to note that some of the permit language in this section may need to be altered to be consistent with the pesticide permit once it is finalized. For up-to-date information, go to EPA's website (www.epa.gov/npdes/agriculture).

6.7 Training and Education

Example Permit Provision

6.7.1 Employee Training Requirements – Permittees must develop an annual employee training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices in the preceding Parts. All new hires must receive training within the first year of their hire date. This annual training must include a general stormwater education component, any new technologies, operations, or responsibilities that arise during the year, and the Permit Requirements that apply to the staff being trained. A description of the program must be maintained for review by the permitting authority. The permittee must also identify and track all personnel requiring training and records must be maintained. Training must begin [*insert deadline*] from the effective date of permit authorization.

[25] San Diego Phase I MS4 Permit (CAS0108758) (www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/oc_permit/updates_8_13_09/R9-2009-0002_12Aug09.pdf)

Example Permit Requirement Rationale for the Fact Sheet

The regulations found at 40 CFR 122.34(b)(6) specifically requires that the permittee develop a "training component" that trains employees "to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance." This permit requires employee training for existing and new employees who are involved in performing pollution prevention and good housekeeping practices. All training must include a general stormwater educational component, including an overview of the requirements with which the municipality needs to comply. The permittee is responsible for identifying which staff must attend trainings based on the applicability of the topics listed, and they are required to conduct refresher training on an annual basis.

Recommendations for the Permit Writer

The topics included in the trainings should take into consideration the types of activities in which the municipality engages and the extent to which such activities are performed in-house or contracted.

6.8 Contractor Requirements and Oversight

Example Permit Provision

6.8.1 Requirements for Contractors:

a. Any contractors hired by the permittee to perform municipal maintenance activities must be contractually required to comply with all of the stormwater control measures, good housekeeping practices, and facility-specific stormwater management SOPs described above.

b. The permittee must provide oversight of contractor activities to ensure that contractors are using appropriate control measures and SOPs. Oversight procedures must be described in the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

Many municipalities use third-party contractors to conduct municipal maintenance activities in lieu of using municipal employees. Contractors performing activities that can affect stormwater quality must be held to the same standards as the permittee. Not only must these expectations be defined in contracts between the permittee and its contractors, but the permittee is responsible for ensuring, through contractually-required documentation or periodic site visits, that contractors are using stormwater controls and following standard operating procedures.

CHAPTER 7: INDUSTRIAL STORMWATER SOURCES

Introduction

Phase I MS4 permittees are required to develop and implement an inspection and oversight program to monitor and control pollutants in stormwater discharges to the MS4 from industrial facilities. Regulations addressing industrial stormwater management in Phase I MS4 permits is found at 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv). Requirements to regulate the stormwater discharges from commercial facilities are found at 40 CFR 122.26(d)(2)(iv)(A).

Included Concepts

- Facility inventory
- Industrial facility stormwater control measures
- Industrial and commercial facility inspections
- Staff training

This program component typically applies only to Phase I MS4 permittees as Phase II federal regulations (40 CFR 122.34(b)) do not specifically address stormwater discharges from industrial facilities and commercial businesses (other than as part of the education and outreach program). However, EPA recommends that permit writers consider including requirements pertaining to stormwater discharges to the MS4 from industrial sources in Phase II permits to further reduce stormwater pollutants from the MS4.

Phase I MS4 regulations specify that several key elements be included in Phase I MS4 stormwater management programs. These elements include: adequate legal authority to require compliance and inspect sites, inspection of priority industrial and commercial facilities, establishing control measure requirements for facilities that may pose a threat to water quality, and enforcing stormwater requirements. In order to implement these requirements, MS4 permits require the development of an inventory of facilities and prioritization protocol and adequate staff training to ensure proper inspection and enforcement of requirements.

7.1 Facility Inventory

Example Permit Provision

7.1.1 Source Identification

a. The permittee must continue to maintain an inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could discharge pollutants in stormwater to the MS4. The inventory must be updated [*insert frequency, e.g. annually*] and available for review by the permitting authority upon request.

b. The inventory must include the following minimum information for each industrial and commercial site/source:

   1. Name

2. Address
3. Physical location of storm drain receiving discharge
4. Name of receiving water
5. Pollutants potentially generated by the site/source
6. Identification of whether the site/source is (1) tributary to an impaired water body segment (i.e., whether it is listed under Section 303(d) of the Clean Water Act) and (2) whether it generates pollutants for which the water body segment is impaired
7. A narrative description including standard industrial classification (SIC) codes, which best reflects the principal products or services provided by each facility.

The use of a geolocational database system is highly recommended.

c. At a minimum, the following sites/sources must be included in the inventory:

1. Commercial Sites/Sources:

[*insert commercial sources that are a priority such as*

- Airplane repair, maintenance, fueling, or cleaning
- Animal facilities
- Automobile and other vehicle body repair or painting
- Automobile (or other vehicle) parking lots and storage facilities
- Automobile repair, maintenance, fueling, or cleaning
- Boat repair, maintenance, fueling, or cleaning
- Building material retailers and storage
- Cement mixing or cutting
- Eating or drinking establishments (e.g., restaurants), including food markets
- Equipment repair, maintenance, fueling, or cleaning
- Golf courses, parks and other recreational areas/facilities
- Landscaping
- Marinas
- Masonry
- Mobile automobile or other vehicle washing
- Mobile carpet, drape or furniture cleaning
- Nurseries and greenhouses
- Painting and coating
- Pest control services
- Pool and fountain cleaning
- Portable sanitary services

- Power washing services
- Retail or wholesale fueling]

2. Industrial Sites/Sources:
   - Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the Multi Sector General Permit or individual NPDES permit
   - Facilities subject to Title III of the Superfund Amendments and Reauthorization Act (SARA)
   - Hazardous waste treatment, disposal, storage and recovery facilities
3. All other commercial or industrial sites/sources tributary to an impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired
4. All other commercial or industrial sites/sources that the permittee determines may contribute a significant pollutant load to the MS4[26]

Example Permit Requirement Rationale for the Fact Sheet

The permit requires the permittee to develop an inventory of all potential commercial and industrial sites/sources that could contribute pollutants to the MS4. A list of specific commercial and industrial sites/sources is included in the permit, and additional sites/sources can be added if they are likely to discharge a pollutant of concern to an impaired waterbody or they are contributing a significant pollutant load to the MS4.

The inventory information will provide the permittee with information on potential pollutant sources that contribute to its MS4 system, and at what locations in the system into which they discharge. This information will also allow the permittee to prioritize inspections and tailor education and outreach efforts, which will best assist the facility in implementing appropriate pollution prevention practices or other on-site stormwater controls. In addition, the inventory data will allow the permittee to determine whether the facilities may discharge pollutants of concern into impaired waters. Finally, the information contained in the inventory will enable permittees to characterize these facilities and prioritize them based on their potential impact on stormwater quality. By prioritizing facilities in such a manner, the permittee may then establish a targeted approach towards conducting inspections (see Part 7.3 for a discussion of inspection frequency).

In addition, data from NPDES pretreatment programs within the MS4 boundary on significant industrial users (SIUs) could also be used to identify and prioritize the industrial sites in the stormwater program.

[26] San Diego MS4 Permit (www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/sd_permit/r9_2007_0001/2007_0001final.pdf), with modifications.

Recommendations for the Permit Writer

The example permit provision lists specific commercial and industrial sources to be included in the inventory, but permit writers should customize this list to meet specific issues in their area. For example, some permittees may have large industrial areas with few commercial businesses, while others may have a large number of restaurants and retail businesses but no industrial facilities at all. Other permittees may have had past water quality problems at certain types of commercial or industrial sites, in which case such facilities should be included in their inventories.

7.2 Industrial Facility Stormwater Control Measures

Example Permit Provision

7.2.1 The permittee must require industrial and commercial facilities included in the Part 7.1 inventory to select, install, implement, and maintain stormwater control measures. At a minimum, these control measures must:

a. Minimize Exposure – Industrial/commercial facilities must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended). The facilities must consider, where appropriate:

1. Using grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas
2. Locating materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)
3. Cleaning up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants
4. Using drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible
5. Using spill/overflow protection equipment
6. Draining fluids from equipment and vehicles prior to on-site storage or disposal
7. Performing all cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray
8. Ensuring that all wash water drains to a proper collection system (i.e., not the stormwater drainage system)

b. Follow Good Housekeeping Practices – Industrial/commercial facilities must keep clean all exposed areas that are potential sources of pollutants, using such

measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.

c. Conduct Maintenance – Industrial/commercial facilities must regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters.

d. Implement Spill Prevention and Response Procedures – Industrial/commercial facilities must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, the facilities must implement:

    1. Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides,") that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur

    2. Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling

    3. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available.

    4. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies [*Insert appropriate contacts for reporting*]

e. Implement Erosion and Sediment Controls – Industrial/commercial facilities must stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants.

f. Manage Runoff – Industrial/commercial facilities must divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff, to minimize pollutants in discharges.

g. Address Salt Storage Piles or Piles Containing Salt – Industrial/commercial facilities must enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. If a permanent storage structure is required but does not exist, one must be built within [*insert timeframe*], and seasonal tarping must be used as an interim control until the permanent structure is completed. Facilities must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if stormwater runoff from the piles is not discharged or if discharges from the piles are authorized under another NPDES permit.

h. Conduct Employee Training – All facility employees who work in areas where industrial materials or activities are exposed to stormwater, or who are

responsible for implementing activities necessary to manage stormwater must be trained. Training must be conducted [*insert frequency, e.g. at least annually*].

i. Address Non-Stormwater Discharges – Industrial/commercial facilities must eliminate non-stormwater discharges not authorized by an applicable NPDES permit.

j. Control Waste, Garbage and Floatable Debris – Facilities must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

k. Control Dust Generation and Vehicle Tracking of Industrial Materials – Industrial/commercial facilities must minimize generation of dust and off-site tracking of raw, final, or waste materials.[27]

7.2.2 Within the [*insert deadline, e.g. first two years of permit term*], the permittee must notify the owner/operator of each industrial and commercial site/source of the stormwater requirements for control measures in Part 7.2.1.

7.2.3 As necessary to minimize any pollutants causing the applicable receiving waterbody to be listed as impaired, the permittee must require implementation of additional controls for industrial and commercial sites/sources that are tributary to the impaired water body segments and that are likely to generate such impairment pollutants.[28]

Example Permit Requirement Rationale for the Fact Sheet

The permittee is required to ensure that the minimum control measures are implemented, as applicable, at every industrial/commercial facility included in its inventory. The minimum measures outlined, when properly selected, designed and implemented, promote prevention and source control, before treatment.

The control measures in this permit are consistent with the control measure requirements found in EPA's 2008 Multi-Sector General Permit (MSGP) for stormwater discharges from industrial activities. The permit writer should ensure that these requirements are consistent with the State's industrial stormwater permit. The control measures in this permit describe specific activities that the permittee must require industrial facilities and commercial sites to implement to minimize stormwater pollution. Another control measure is simply preventing pollutants from coming into contact with precipitation in the first place since this will ensure they are not carried into nearby waterways. General good housekeeping and maintenance procedures are also required. Additional control measures address spill prevention and response, erosion and sediment controls, managing runoff, and controlling discharges from salt storage piles.

[27] 2008 MSGP (Section 2) (www.epa.gov/npdes/pubs/msgp2008_finalpermit.pdf), with modifications
[28] San Diego MS4 Permit (www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/sd_permit/r9_2007_0001/2007_0001final.pdf), with modifications

The control measures must also include employee training, controlling non-stormwater discharges, addressing waste, garbage and floatable debris, and addressing dust generation and vehicle tracking.[29]

The permittee is required to notify industrial and commercial sites of the control measure requirements and their responsibility to implement and comply with the requirements.

Facilities that discharge into impaired waterbodies may be required to implement additional controls as necessary to prevent the discharge of the associated pollutants of concern.

7.3 Industrial and Commercial Facility Inspections

Example Permit Provision

7.3.1 Industrial and Commercial Site Inspection Program

a. The permittee must continue to implement a program to inspect all commercial and industrial facilities included in its Part 7.1(a) inventory. The permittee must describe how this will occur in the SWMP.

b. The inspection program must:

1. Prioritize all facilities into high, medium, and low categories on the basis of the potential for water quality impact using criteria such as pollutant sources on site, pollutants of concern, proximity to a water body, and violation history of the facility. The different priority categories will be assigned different inspection frequencies, with the highest priority facilities receiving more frequent inspections. Describe the process for prioritizing inspections and frequency of inspections. If any geographical areas are to be targeted for inspections due to high potential for stormwater pollution, these areas must be listed in the Inspection Plan.

3. Explain how the priority assigned to any one facility may be modified based on the site inspection findings and the facility's potential to discharge pollutants.

7.3.2 Minimum Inspection Requirements

a. Inspection Frequency – The permittee is required to conduct inspections at the following frequencies, at a minimum:

1. Facilities with high potential for water quality impact must be inspected [*insert frequency, e.g. annually*].

2. Facilities with medium potential for water quality impact must be inspected at least [*insert frequency, e.g. once every three years*].

3. Facilities with low potential for water quality impact must be inspected at least [*insert frequency, e.g. once every 5 years*].

[29] 2008 MSGP Fact Sheet (www.epa.gov/npdes/pubs/msgp2008_finalfs.pdf), with modifications

4. Facilities with either a [*insert violation type*] written violation occurring in the previous year must be inspected at least [*insert frequency, e.g. annually*] until compliance is achieved.
5. For facilities with no exposure of commercial or industrial activities to stormwater, no inspections are required. However, the permittee must continue to track these facilities for significant change in the exposure of their operations to stormwater.

b. Scope of Inspection – Inspections must at a minimum:
   1. Evaluate the facility's compliance with the Part 7.2 requirement to select, design, install, and implement stormwater control measures.
   2. Conduct a visual observation for evidence of unauthorized discharges, illicit connections, and potential discharge of pollutants to stormwater.
   3. Verify whether the facility is required to be authorized under the [*insert applicable NPDES general industrial stormwater permit*], and whether the facility has in fact obtained such permit coverage.[30]
   4. Evaluate the facility's compliance with any other relevant local stormwater requirements.

c. Documentation Requirements – At a minimum, the permittee must document the following for each inspection:

   The inspection date and time;

   The name(s) and signature(s) of the inspector(s);

   1. Weather information and a description of any discharges occurring at the time of the inspection;
   2. Any previously unidentified discharges of pollutants from the site;
   3. Any control measures needing maintenance or repairs;
   4. Any failed control measures that need replacement;
   5. Any incidents of noncompliance observed; and
   6. Any additional control measures needed to comply with the Permit Requirements.

d. Track Inspections – Inspection findings must be tracked to ensure inspections are conducted at the frequency specified in Part 7.3.2.b., highlight and document the recidivism of noncompliant facilities, and aid follow up and enforcement activities.

7.3.3 Enforcement – The permittee must ensure that all necessary follow up and enforcement activities are conducted as necessary to require necessary implementation and maintenance of the control measures described in Part 7.2. The permittee is required to utilize the approved ERP for all enforcement actions.

[30] San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (www.swrcb.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2009/R2-2009-0074.pdf), with modifications

Example Permit Requirement Rationale for the Fact Sheet

The permittee must design an inspection program that facilitates more frequent inspections of the highest priority facilities. (See 40 CFR 122.26(d)(iv)(C)(1)). This will help maximize use of the permittee's existing inspection resources and ensure that the permittee inspectors are the most visible and the most familiar with the facilities with the highest potential for water quality impact.

The permittee must develop a process for prioritizing inspections and designating all facilities in the industrial and commercial inventory as either a high, medium or low priority. The designation could occur by individual facility or by facility type. The prioritization for individual facilities may be adjusted after the first, or any subsequent, inspection (for example, if a facility is a high priority facility and the inspection reveals it has little potential for stormwater pollution, then the facility could be reprioritized as a low priority facility).

It is important that inspections be conducted in a thorough and consistent manner in accordance with a formal protocol for conducting an inspection. This protocol should be the basis for inspector training as well. Inspections should include a thorough walk-through of the facility.

The documentation of inspections is very important, not only when tracking noncompliance, but also to facilitate effective enforcement action when needed. A timeline of noncompliance and subsequent enforcement action is critical when escalating measures to gain compliance. Typically, the use of inspection forms facilitates complete and consistent documentation among inspectors and over time.

Recommendations for the Permit Writer

The permit writer may choose to define what criteria the permittee will use to determine the priority of each facility on its inventory. For example, the Phase I Los Angeles County MS4 permit specifies which facilities are Tier 1 and Tier 2 and provides the required inspection frequency for each. The permit writer could also automatically designate certain sets of industries to a certain priority category (e.g., all facilities subject to the State's Industrial General Permit could be designated as high priority facilities in the permit). If the permit does not define what criteria are to be used when prioritizing facilities, the permittee should be required to develop this protocol and submit it to the permitting authority for review.

The permit writer should review available industrial and commercial inventories to determine if more specific inspection frequencies should be set. For example, an MS4 with only 10 facilities in the inventory could probably inspect those facilities annually. However, an MS4 with over 2,000 facilities in the inventory may need to set the inspection frequency at a less frequent interval.

7.4 Staff Training

Example Permit Provision

7.4.1 The permittee must ensure that all staff whose primary job duties are implementing the industrial stormwater program is trained to conduct facility inspections. The training must cover what is required under this permit in terms of stormwater control measures, the requirements of other applicable Industrial Stormwater general permits or other related local requirements, the permittee's site inspection and documentation protocols, and enforcement procedures. Follow-up training must be provided every other year to address changes in procedures, techniques, or staffing. Permittees must document and maintain records of the training provided and the staff trained.[31]

Example Permit Requirement Rationale for the Fact Sheet

Inspectors responsible for conducting inspections at industrial/commercial facilities must be trained on the applicable stormwater requirements for the different types of facilities (i.e., industrial, commercial, other). Training must include a summary of federal, state, and local stormwater regulations that may apply to industrial/commercial facilities. Inspectors must be familiar with various types of stormwater control measures commonly used at the types of facilities typically found in the MS4 area and must be able to educate facility operators about such stormwater control measures. In addition, inspectors must understand and use the permittee's established enforcement response plan (see Chapter 1 of this Guide) to gain compliance as necessary. The inspection staff must be proficient in the enforcement escalation procedure and must properly document all enforcement actions accordingly per the ERP.

[31] Western Washington Phase I MS4 Permit (www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIpermit/MODIFIEDpermitDOCS/PhaseIpermitSIGNED.pdf), with modifications

CHAPTER 8: MONITORING, EVALUATION, AND REPORTING

Introduction

Phase I MS4s are required to conduct discharge characterization, field screening and develop a monitoring program. Phase I MS4s are also required to conduct an assessment of controls. See 40 CFR 122.26(d)(1)(iii), (d)(2)(iii), and (d)(2)(v).

Phase II MS4 regulations allow, but do not specifically require, monitoring. Phase II MS4s are required to evaluate program compliance, the appropriateness of identified control measures, and progress toward achieving identified measurable goals. See 40 CFR 122.34(g).

Included Concepts

- Consolidated information tracking system
- Development of a comprehensive monitoring and assessment program
- Evaluation of overall program effectiveness
- Requirements for annual reporting of MS4 activities

There are many components involved in monitoring and evaluating the effectiveness of a municipal stormwater program. Any comprehensive monitoring program should have clear monitoring objectives to help determine compliance and water quality impacts. Each monitoring program is unique and should be customized to the specific waterbodies, impairments, and pollutant sources of the MS4.

Evaluating the overall effectiveness of the municipal stormwater program should be done using information from the monitoring program, progress toward meeting measurable goals, and other indicators. Without assessing the effectiveness of the stormwater management program the permittee will not know which parts of the program need to be modified to protect and/or improve water quality and instead will essentially be operating blindly. Establishing a comprehensive monitoring and assessment program will enable the permittee to track progress in complying with permit provisions and implementing a program to protect water quality.

8.1 Consolidated Information Tracking System

Example Permit Provision

8.1.1 Within the first [*insert time frame which corresponds to the development of the monitoring program e.g. first two years of permit*], the permittee must develop a tracking system to track the information required in the permit as well as the information required to be reported in the annual report (see Part 8.4).

Example Permit Requirement Rationale for the Fact Sheet

An important part of any municipal stormwater program is to document and track information on activities the permittee undertakes to comply with the Permit Requirements. Tracking should be integrated into each of the minimum measures. For example, tracking the location of illicit discharges may indicate that a specific area has a high incidence of motor oil being dumped into storm drains. Investigations may reveal that homeowners are changing the motor oil in their cars, but not properly disposing it. Therefore, the permittee will need to educate the homeowners in that area regarding proper disposal.

The permittee must develop a tracking system to monitor implementation of its various programs in order to document the permittee's compliance with its Permit Requirements, such as the number of construction sites and industrial facilities inspected. In addition, the tracking system will allow the permitee to monitor the compliance status of those entities within its jurisdiction, such as construction sites and industrial facilities, and to ensure compliance of municipally-owned and operated facilities.

Any tracking system should be coordinated with the monitoring and evaluation programs developed by the permittee. Ideally, a monitoring and evaluation program will link the "actions" (e.g., the inspections, maintenance, education and other activities the permittee implements) with the "results" (e.g., water quality monitoring data, improvements in environmental indicators) of the monitoring program.

In addition, adequate tracking is necessary to generate and provide reports of program progress not only to the permitting authority, but to a permittee's internal management for planning and funding purposes. Ideally, a MS4 permittee will have at least one person in charge of overall coordination, including tracking. While many departments or agencies might implement various stormwater program components, it is helpful for a single person or department to gather and analyze applicable data. This can be accomplished in a number of ways and will vary based on existing data tracking mechanisms used by a permittee, the data being captured and the reporting requirements the permittee must comply with. Ideally, the program would have a database accessible by all parties which specifies the required data. Lacking this, the permittee will need to coordinate all responsible parties. The permittee will need to ensure that responsible parties "mine" all data necessary to adequately represent the program and permit compliance, and specify adequate internal reporting deadlines to guarantee that the data is available in a timely manner for program planning, effectiveness assessments and permit reporting. Some permittees create reporting forms for program component managers to complete and submit by internal deadlines. Regardless of how the permittee coordinates the effort internally, without adequate tracking of data the permittees will not be able to submit annual reports to the permitting authority that provide the necessary information to determine permit compliance.

Recommendations for the Permit Writer

To assist the permittee in ensuring appropriate data is gathered and analyzed, the permitting authority should be very clear regarding annual reporting requirements. In addition, the text for this section should be tailored depending on the permittee. For example, some permittees may be able to develop a GIS-based system complete with the option to upload pictures and inspection reports versus a spreadsheet. In the text provided either system would meet the requirements, but more detailed information can be obtained with the GIS-based system.

8.2 Development of a Comprehensive Monitoring & Assessment Program

Example Permit Provision

8.2.1 The permittee must continue to implement, and revise as necessary, a comprehensive monitoring and assessment program. A description of this program must be included in the SWMP document. The monitoring and assessment program must be designed to meet the following objectives:

a. Assess compliance with this permit;

b. Measure the effectiveness of the permittee's stormwater management program;

c. Assess the chemical, physical, and biological impacts to receiving waters resulting from stormwater discharges;

d. Characterize stormwater discharges;

e. Identify sources of specific pollutants;

f. Detect and eliminate illicit discharges and illegal connections to the MS4; and

g. Assess the overall health and evaluate long-term trends in receiving water quality.

NOTE: Because monitoring programs and requirements are very specific to the MS4 and local water quality impairments, permit writers are directed to the "Recommendations to the Permit Writer" section below for examples of comprehensive monitoring program Permit Requirements.

Example Permit Requirement Rationale for the Fact Sheet

Without clear monitoring objectives and a detailed monitoring plan, it will be difficult for permittees and permitting authorities to evaluate the effectiveness of the municipal stormwater program.

There are numerous factors that should be examined while setting up the water quality monitoring portion of the comprehensive program. Understanding and considering climatic conditions such as precipitation patterns, temperature, and seasonal variations will ensure the study design will collect data that are representative of typical storms in the area and that sampling occurs during times of the year when it is most logical to do so. Acknowledging the different types of land uses within the area will also help the permittee to prioritize monitoring efforts based on the areas most likely to be impacted by stormwater. The type of waterbody monitored must also be considered when selecting sampling locations since pollutants behave differently depending on the environment thereby impacting sampling protocols. For example, sampling in a freshwater lake involves different protocols than monitoring in a tidally influenced river or a first order stream. Waterbody type can also influence the data results and conclusions (e.g. freshwater wetlands typically have high denitrification rates that will likely impact the results of nitrate sampling).

Selection of specific sampling locations is also very important. If particular sites are of concern, then monitoring both above and below the sites to figure out their contributions to the overall water quality issues may make sense. Also, the actual location in the waterbody is important to specify for consistency. For example, should samples be taken close to the stream bank or in the center of the waterbody, in riffles or pools? The answers to these questions, of course, depend on the goals of the monitoring and the constituents (biological, chemical, hydrological) being examined.

In addition, the number and frequency of samples collected and stream assessments performed will determine how robust the data will be (see page 287 in *National Research Council's Report Urban Stormwater Management in the United States (2009*) available at www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf). Monitoring may or may not be tied to specific wet weather events (i.e. within 72 hours after a rainfall event). A combination of specific wet weather samples and dry weather samples may be appropriate.

Establishing objectives with associated indicators (environmental or administrative) for each minimum measure can help put each component into perspective when considering the overall program. Indicators are one way to evaluate the success of the program from the overall program level. Developing standard environmental indicators is a critical step to evaluate the SWMP. Permittees need practical tools, such as these indicators, in order to determine if their stormwater programs are working, and that help elucidate where additional efforts may be most critical. Environmental indicators should be selected based on the type (estuarine/freshwater/brackish) and condition (impaired/non-impaired) of the waterbody to which stormwater is discharged as well as the intended use of the area where the stormwater is discharged (source water protection area, etc.).

In addition, permittees should document certain administrative efforts associated with developing and implementing their SWMPs. In this context 'administrative' is considered quite broad, including such things as control measures, inspection programs, policies and rules, MS4 system scope and condition, educational efforts and any other variable or outcome that could reflect on the quality of a stormwater program other than the actual environmental quality outcomes, which are covered under 'Environmental Indicators'.

Good administrative indicators are numerous, and good suites of indicators will vary from one community to another. More information can be obtained on each of the environmental and administrative indicators listed by going to the Stormwater Manager's Resource Center (www.stormwatercenter.net) and selecting "Monitor/Assess" on the left navigation bar.

Several protocols have been developed to assess the effectiveness of stormwater control measures:

- Guidance for Evaluating Emerging Stormwater Treatment Technologies, Technology Assessment Protocol - Ecology (TAPE) www.ecy.wa.gov/biblio/0210037.html . This guidance document's primary purpose is to establish a testing protocol and process for evaluating and reporting on the performance and appropriate uses of emerging stormwater treatment technologies.
- Technology Acceptance Reciprocity Partnership (TARP) Protocol for Stormwater Best Management Practice Demonstrations www.dep.state.pa.us/dep/deputate/pollprev/techservices/tarp/pdffiles/Tier2protocol.pdf . The purpose of the TARP

Protocol is to provide a uniform method for demonstrating stormwater technologies and developing test quality assurance (QA) plans for certification or verification of performance claims.

- BMP Performance Verification Checklist. This is a tool that helps permittees provide a consistent set of questions for applicants proposing to use manufactured and proprietary BMP. It is available as Tool # 8 of the Center for Watershed Protection's *Managing Stormwater in Your Community*. The checklist is accompanied by an explanation and instructions for using the checklist, technical appendices, and a matrix that compares existing verification protocols, such as TARP and TAPE.

Additional monitoring resources include:

- CWP, 2008, *Monitoring to Demonstrate Environmental Results: Guidance to Develop Local Stormwater Monitoring Studies Using Six Example Study Designs* (www.cwp.org)
- Geosyntec Consultants and Wright Water Engineers, 2009, *Urban Stormwater BMP Performance Monitoring*, (bmpdatabase.org/MonitoringEval.htm)
- CASQA, 2007, *Municipal Stormwater Program Effectiveness Assessment Guidance* (www.casqa.org)

Recommendations for the Permit Writer

Because of the site-specific nature and variability of these monitoring programs between permittees, the detailed requirements should be provided by each permit writer. For example, the Phase I regulations included specific monitoring requirements while the Phase II regulations allow, but do not specifically require monitoring. To assist permit writers, several examples of monitoring requirements from existing MS4 permits are listed below:

- Baltimore County, MD Phase I MS4 permit (issued 2005); see the watershed assessment and planning requirements (Part II.F) and assessment of controls (Part II.H) www.mde.state.md.us/assets/document/sedimentStormwater/MSSPermit/BA%20final%20permit.pdf
- Southern California Regional Bioassessment Monitoring Program (this is a regional monitoring program involving coastal counties in Southern California) www.socalsmc.org/Docs/SMC-DesignofBioassessmentRegionalMonitoringProgram.pdf
- San Diego, CA Phase I MS4 Permit (issued 2007); see Receiving Waters and Urban Runoff Monitoring and Reporting Program. www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/docs/sd_permit/r9_2007_0001/2007_0001final.pdf

The permit writer could consider the role of partnerships among the MS4s in establishing and implementing the monitoring programs so that any data collected is robust, useful, and meaningful. In addition, communities may benefit more by working with local organizations and/or neighboring communities who are already collecting similar data. By doing so resources may be used more efficiently and results of testing may be more robust.

The permit writer should also require the permittee to assess the effectiveness of the SWMP in meeting applicable Permit Requirements. The sampling protocols developed must support the goals of the monitoring program. The monitoring and assessment program must include water quality monitoring as well as an assessment of environmental and administrative indicators. Along these lines, the permit writer could also add requirements such as the ones provided below:

Water Quality Monitoring

a. *The Permittee must develop a water quality monitoring program that includes [insert specific monitoring programs and requirements, such as:*

- Ambient receiving water monitoring,
- Biological monitoring,
- Control measure performance monitoring, or
- Discharge (wet weather) monitoring

Because the detailed monitoring program requirements are very unique to each MS4, the permitting authority should insert here the specific details of the relevant monitoring program, such as monitoring type, frequency, location, etc.]

b. When determining water quality monitoring components, the permittee must examine and consider a variety of factors, including, but not limited to:

- Climatic conditions, including precipitation patterns, temperature, and seasonal variations
- Land uses in the MS4
- Waterbody type

c. The permittee must consider and address specific sampling quality assurance/quality control protocols, including, but not limited to:

- Specific chemical constituents (pollutants), biological stream indicators, and physical stream indicators that will be monitored to best achieve the purpose of the monitoring
- Sampling locations
- Number and frequency of sample collection and assessments
- Timing of sample collection

d. The permittee must determine if any similar monitoring is occurring within the MS4 and if it is logical to link efforts.

Environmental Indicators

As part of the comprehensive monitoring and assessment program, the permittee must identify and track at least [*insert number of indicators to be tracked*] environmental

indicators from each category listed below (physical and hydrologic indicators; biological indicators; water quality indicators). The indicators must be appropriate to assess if the SWMP is meeting goals and objectives:

Physical and hydrological indicators

- Stream widening/ downcutting
- Physical habitat quality
- Impacted dry weather flows
- Increased flooding frequency
- Stream temperature monitoring

Biological indicators

- Fish assemblage analysis
- Macro-invertebrate assemblage
- Single species indicator
- Composite indicators
- Other biological indicators

Water quality indicators

- Water quality pollutant constituent monitoring
- Toxicity testing
- Non-point source loadings
- Exceedance frequencies of water quality standards
- Sediment contamination
- Human health criteria

Administrative indicators

As part of the comprehensive monitoring and assessment program, the permittee must identify and track at least [*insert number of indicators to be tracked*] administrative indicator from each category listed below (social indicators; programmatic indicators; site indicators). The indicators must be appropriate to assess if the SWMP is meeting goals and objectives:

Social indicators

- Public attitude surveys
- Industrial/commercial pollution prevention
- Public involvement and monitoring
- User perception

Programmatic indicators

- Number of illicit connections identified and corrected
- Number of control measures installed, inspected, and maintained
- Permitting and compliance
- Growth and development

Site indicators

- Control measure performance monitoring
- Industrial site compliance monitoring

Performance Monitoring of Stormwater Controls

When monitoring the performance of stormwater controls, EPA recommends that percent removal efficiencies are not calculated and compared since results can be misleading because the percentages may be based on differing levels of the influent concentration (see cfpub.epa.gov/npdes/stormwater/urbanbmp/bmptopic.cfm#percentremoval for further discussion; also see *National Research Council's Report Urban Stormwater Management in the United States (2009*) available at www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf).

Modeling can also be a useful tool to quantify the impacts of municipal stormwater management. The following resources provide summaries and reviews of different types of models available to

determine existing loading from an MS4 as well as the effects expected from various stormwater controls.

1. USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters
   www.epa.gov/nps/watershed_handbook/

   Chapter 8 of this document focuses on methods for estimating pollutant loads, including the use of watershed models. This chapter provides assistance in selecting and applying watershed models to estimate pollutant loads from existing conditions.

2. USEPA TMDL Model Evaluation and Research Needs
   www.epa.gov/nrmrl/pubs/600r05149/600r05149.htm

   This report documents the review of more than 60 available watershed and receiving water models. It discusses model selection on the basis of model capabilities and provides a series of tables rating the capabilities or applicability the models using the categories of TMDL endpoints, general land and water features, special land processes, special water processes, and application considerations including the selection of appropriate best management practices and their water quality impacts. The document also provides individual fact sheets for each reviewed model.

8.3 Evaluation of Overall Program Effectiveness

Example Permit Provision

8.3.1 *Annual Effectiveness Assessment* – The annual effectiveness assessment must:

a. Use the monitoring and assessment data described in Part 8.2 to specifically assess the effectiveness of each of the following:

   1. Each significant activity/control measures or type of activity/control measure implemented;
   2. Implementation of each major component of the Stormwater Management Program (Public Education/Involvement, Illicit Discharges, Construction, Post-Construction, Good Housekeeping); and
   3. Implementation of the Stormwater Management Program as a whole.

b. Identify and use measurable goals, assessment indicators, and assessment methods for each of the items listed in Part 8.3.1.a above.

c. Document the permittee's compliance with permit conditions.

8.3.2 Based on the results of the effectiveness assessment, the permittee must annually review its activities or control measures to identify modifications and improvements needed to maximize SWMP effectiveness, as necessary to achieve compliance with this permit. The permittee must develop and implement a plan and schedule to address the identified modifications and improvements. Municipal activities/control

measures that are ineffective or less effective than other comparable municipal activities/control measures must be replaced or improved upon by implementation of more effective municipal activities/control measures.

8.3.3 As part of its Annual Reports, the permittee must report on its SWMP effectiveness assessment as implemented under Part 8.3.1 above.

Example Permit Requirement Rationale for the Fact Sheet

A key requirement in the stormwater Phase II rule is a report (40 CFR 122.34(g)(3)) that includes "the status of compliance with permit conditions, an assessment of the appropriateness of identified [control measures] and progress towards achieving identified measurable goals for each of the minimum control measures." This assessment is critical to the stormwater program framework which uses the iterative approach of implementing controls, conducting assessments, and designating refocused controls leading toward attainment of water quality standards.

Building on the monitoring and assessment program developed in Part 8.2, the permittee must conduct an annual effectiveness assessment to assess the effectiveness of significant control measures, SWMP components, and the SWMP as a whole. The California Stormwater Quality Association's (CASQA) *Municipal Stormwater Program Effectiveness Guidance* describes strategies and methods for assessing effectiveness, including examples of effectiveness assessment for each SWMP program component. The CASQA Effectiveness Guidance is available at www.casqa.org for purchase. A two-hour EPA webcast focusing on the CASQA Guide is also available (available at www.epa.gov/npdes/training under "Assessing the Effectiveness of Your Municipal Stormwater Program"). A resources document from the webcast includes a 10 page summary of the Guide and example pages from the municipal chapter (www.epa.gov/npdes/outreach_files/webcast/jun0408/110961/municipal_resources.pdf).

The *Municipal Stormwater Program Effectiveness Assessment Guidance* synthesizes information on designing and conducting program effectiveness assessments. The document also explains how to select certain methods based on programmatic outcomes and goals. The reader is led through a series of questions and case studies to demonstrate how proper assessments are selected. Techniques are related to different level of outcomes: level one – documenting activities, level two – raising awareness, level 3 – changing behavior, level 4 – reducing loads from sources, level 5 – improving runoff quality, and level 6 – protecting receiving water quality. The Guide includes fact sheets for all six NPDES program elements, outlining methods and techniques for assessing effectiveness of each program.

Recommendations for the Permit Writer

Adaptive management is the appropriate process for assessing new opportunities for improving program effectiveness in controlling stormwater pollution. The permit writer should require the permittee to use adaptive management throughout the permit term to assess options for improving controls on stormwater discharges as compared with measurable goals and demonstrated by monitoring and assessment protocols. The permit writer should have the permittee monitor and

assess the data and analyses required under the permit as well as applicable information from other sources in the adaptive management process.

In addition, the permit writer should have the permittee assess and modify, as necessary, any or all existing SWMP components and adopt new or revised SWMP components to optimize reductions in stormwater pollutants through an iterative process. This iterative process should include routine assessment of the need to further improve water quality and protect beneficial uses, review of available technologies and practices to accomplish the needed improvement, and evaluate resources available to implement the technologies and practices.

8.4 Requirements for Annual Reporting of MS4 Activities

Example Permit Provision

8.4.1 Summary Annual Report - The Permittee must submit annual reports on or before [*specify deadline, e.g., the anniversary date of this permit*] for the reporting period [*specify the reporting period, e.g., July 1-June 30*]. The Permittee must use the Summary MS4 Annual Report template in Appendix A to document a summary of the past year activities. All of the information required on this form must be completed.

8.4.2 Detailed Annual Report - The Permittee must also submit a detailed annual report that addresses, for the activities described in the SWMP document required in Part 1.1, the following:

- A summary of past year activities, including where available, specific quantities achieved and summaries of enforcement actions. See Part 8.4.3 for required information specific to certain SWMP areas.
- A description of the effectiveness of each SWMP program component or activity (see Part 8.3); and
- Planned activities and changes for the next reporting period, for each SWMP program component or activity.
- Detailed fiscal analysis described in Part1.4.2.

8.4.3 [*Specify any additional information and/or data pertaining to implementation of priority activities the Permitting Authority would like to see in Annual Reports, e.g. a list of green roofs (with square footage) installed in the MS4, a summary of water quality monitoring data collected for a specific waterbody, etc*.]

The Annual Report must clearly refer to the Permit Requirements, and describe in quantifiable terms, the status of activities undertaken to comply with each requirement.

Example Permit Requirement Rationale for the Fact Sheet

In general, an annual report must document and summarize implementation of the SWMP during the previous year and evaluate program results and describe planned changes towards continuous improvement. The annual report also can serve as a "state of the SWMP" report for the general public or other stakeholders in the community. While records are to be kept and made available to the public, the annual report is an excellent summary document to provide as well.

Recommendations for the Permit Writer

EPA recommends using its Summary Annual Report Template (see Appendix A) in this guidance in order to obtain summary information about the status of MS4 programs. In addition to the summary annual report template, permittees must also submit a more detailed annual report.

The permit writer may determine that additional, more detailed, information is needed to determine compliance with the Permit Requirements. Even if these reporting details are not required within the permit, the permitting authority and enforcement officials can still request them at any time or during a program audit.

MS4 permits should require permittees to summarize and analyze data concerning the effectiveness of the SWMP and submit the analysis to the permitting authority. For example, the permittees should address such questions as:

- For illicit discharge data, what are the most prevalent sources and pollutants in the illicit discharge data, and where are these illicit discharges occurring? How many illicit discharges have been identified, and how many of those have been resolved? How many outfalls or screening points were visually screened, how many had dry weather discharges or flows, at how many were field analyses completed and for what parameters, and at how many were samples collected and analyzed? Does the MS4 need to conduct more inspections in these areas, or develop more specific outreach targeting these sources and pollutants?

- For the construction data, what are the most common construction violations, and are there any trends in the data (e.g., construction operators who receive more violations than others, areas of the MS4 with more violations, need to refine guidance or standards to more clearly address common violations). How has the permittee responded to these trends? Over the last year, how many construction site plan reviews were completed and approved? How many inspections were conducted, how many noncompliant sites were identified, and how many enforcement actions (and of what type) were taken?

At a minimum, the permit should require that the annual report clearly illustrate three key items for each SWMP area:

- **Summary of the Year's Activities**. The summary should describe and quantify program activities for each SWMP component. Responsible persons, agencies, departments or co-permittees should be included. Each activity should be described in relation to achievement of established goals or performance standards.

- **Description of SWMP Effectiveness**. An annual report should not only describe the previous year's activities, but should also highlight the SMWP's effectiveness (see Part 8.3) using the indicators required in Part 8.2.

- **Planned Activities and Changes**. The annual report should describe activities planned for the next year highlighting any changes made to improve control measures or program effectiveness.

Also, although the stormwater Phase II rule requires reports, after the first permit term, to be submitted in only years two and four of the permit term, EPA strongly encourages annual reports for all permittees.

APPENDIX A: SUMMARY ANNUAL REPORT TEMPLATE

National Pollutant Discharge Elimination System Stormwater Program
Small MS4 Report Form

The purpose of this report is to contribute information to an evaluation of the NPDES small municipal separate storm sewer system (MS4) permit program. Consistent with 40 CFR §122.37 the U.S. Environmental Protection Agency is assessing the status of the program nation-wide. A "no" answer to a question does not necessarily mean noncompliance with your permit or with the federal regulations. In order to establish the range of variability in the program it is necessary to ask questions along a fairly broad performance continuum. Your permitting authority may use some of this information as one component of a compliance evaluation.

1. MS4 Information

_____

Name of MS4

_____ _____ _____

Name of Contact Person (First) (Last) (Title)

_____ _____

Telephone (including area code) Email

_____

Mailing Address

_____ ____ _____

City State ZIP code

What size population does your MS4 serve? _____ NPDES number _____

What is the reporting period for this report? (mm/dd/yyyy) From _____ to _____

2. Water Quality Priorities

A. Does your MS4 discharge to waters listed as impaired on a state 303(d) list? ☐ Yes ☐ No

B. If yes, identify each impaired water, the impairment, whether a TMDL has been approved by EPA for each, and whether the TMDL assigns a wasteload allocation to your MS4. Use a new line for each impairment, and attach additional pages as necessary.

Impaired Water	Impairment	Approved TMDL		TMDL assigns WLA to MS4	
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No

C. What specific sources contributing to the impairment(s) are you targeting in your stormwater program?

_____

D. Do you discharge to any high-quality waters (e.g., Tier 2, Tier 3, outstanding natural resource waters, or other state or federal designation)? ☐ Yes ☐ No

E. Are you implementing additional specific provisions to ensure their continued integrity? ☐ Yes ☐ No

3. Public Education and Public Participation

A. Is your public education program targeting specific pollutants and sources of those pollutants? ☐ Yes ☐ No

B. If yes, what are the specific sources and/or pollutants addressed by your public education program?

_____

C. Note specific successful outcome(s) (e.g., quantified reduction in fertilizer use; NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period.

_____

D. Do you have an advisory committee or other body comprised of the public and other stakeholders that provides regular input on your stormwater program? ☐ Yes ☐ No

4. Construction

A. Do you have an ordinance or other regulatory mechanism stipulating:

Erosion and sediment control requirements? ☐ Yes ☐ No

Other construction waste control requirements? ☐ Yes ☐ No

Requirement to submit construction plans for review? ☐ Yes ☐ No

MS4 enforcement authority? ☐ Yes ☐ No

B. Do you have written procedures for:

Reviewing construction plans? ☐ Yes ☐ No

Performing inspections? ☐ Yes ☐ No

Responding to violations? ☐ Yes ☐ No

C. Identify the number of active construction sites ≥ 1 acre in operation in your jurisdiction at any time during the reporting period. _____

D. How many of the sites identified in 4.C did you inspect during this reporting period? _____

E. Describe, on average, the frequency with which your program conducts construction site inspections.

_____

F. Do you prioritize certain construction sites for more frequent inspections? ☐ Yes ☐ No

If Yes, based on what criteria? _____

G. Identify which of the following types of enforcement actions you used during the reporting period for construction activities, indicate the number of actions, or note those for which you do not have authority:

☐ Yes Notice of violation #____ No Authority ☐

☐ Yes Administrative fines #____ No Authority ☐

☐ Yes Stop Work Orders #____ No Authority ☐

☐ Yes Civil penalties #____ No Authority ☐

☐ Yes Criminal actions #____ No Authority ☐

☐ Yes Administrative orders #____ No Authority ☐

☐ Yes Other _____ #____

H. Do you use an electronic tool (e.g., GIS, data base, spreadsheet) to track the locations, inspection results, and enforcement actions of active construction sites in your jurisdiction? ☐ Yes ☐ No

I. What are the 3 most common types of violations documented during this reporting period?

_____

J. How often do municipal employees receive training on the construction program? _____

5. Illicit Discharge Elimination

A. Have you completed a map of all outfalls and receiving waters of your storm sewer system? ☐ Yes ☐ No

B. Have you completed a map of all storm drain pipes and other conveyances in the storm sewer system? ☐ Yes ☐ No

C. Identify the number of outfalls in your storm sewer system. _____

D. Do you have documented procedures, including frequency, for screening outfalls? ☐ Yes ☐ No

E. Of the outfalls identified in 5.C, how many were screened for dry weather discharges during this reporting period?

_____

F. Of the outfalls identified in 5.C, how many have been screened for dry weather discharges at any time since you obtained MS4 permit coverage? _____

G. What is your frequency for screening outfalls for illicit discharges? Describe any variation based on size/type.

_____

H. Do you have an ordinance or other regulatory mechanism that effectively prohibits illicit discharges? ☐ Yes ☐ No

I. Do you have an ordinance or other regulatory mechanism that provides authority for you to take enforcement action and/or recover costs for addressing illicit discharges? ☐ Yes ☐ No

J. During this reporting period, how many illicit discharges/illegal connections have you discovered? _____

K. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated?

_____

L. How often do municipal employees receive training on the illicit discharge program? _____

6. Stormwater Management for Municipal Operations

A. Have stormwater pollution prevention plans (or an equivalent plan) been developed for:

All public parks, ball fields, other recreational facilities and other open spaces ☐ Yes ☐ No

All municipal construction activities, including those disturbing less than 1 acre ☐ Yes ☐ No

All municipal turf grass/landscape management activities ☐ Yes ☐ No

All municipal vehicle fueling, operation and maintenance activities ☐ Yes ☐ No

All municipal maintenance yards ☐ Yes ☐ No

All municipal waste handling and disposal areas ☐ Yes ☐ No

Other _____

B. Are stormwater inspections conducted at these facilities? ☐ Yes ☐ No

C. If Yes, at what frequency are inspections conducted? _____

D. List activities for which operating procedures or management practices specific to stormwater management have been developed (e.g., road repairs, catch basin cleaning).

_____

E. Do you prioritize certain municipal activities and/or facilities for more frequent inspection? ☐ Yes ☐ No

F. If Yes, which activities and/or facilities receive most frequent inspections? _____

G. Do all municipal employees and contractors overseeing planning and implementation of stormwater-related activities receive comprehensive training on stormwater management? ☐ Yes ☐ No

H. If yes, do you also provide regular updates and refreshers? ☐ Yes ☐ No

I. If so, how frequently and/or under what circumstances? _____

7. Long-term (Post-Construction) Stormwater Measures

A. Do you have an ordinance or other regulatory mechanism to require:

Site plan reviews for stormwater/water quality of all new and re-development projects?	☐ Yes	☐ No
Long-term operation and maintenance of stormwater management controls?	☐ Yes	☐ No
Retrofitting to incorporate long-term stormwater management controls?	☐ Yes	☐ No

B. If you have retrofit requirements, what are the circumstances/criteria?

_____

C. What are your criteria for determining which new/re-development stormwater plans you will review (e.g., all projects, projects disturbing greater than one acre, etc.) _____

D. Do you require water quality or quantity design standards or performance standards, either directly or by reference to a state or other standard, be met for new development and re-development? ☐ Yes ☐ No

E. Do these performance or design standards require that pre-development hydrology be met for:

Flow volumes	☐ Yes	☐ No
Peak discharge rates	☐ Yes	☐ No
Discharge frequency	☐ Yes	☐ No
Flow duration	☐ Yes	☐ No

F. Please provide the URL/reference where all post-construction stormwater management standards can be found.

_____

G. How many development and redevelopment project plans were reviewed during the reporting period to assess impacts to water quality and receiving stream protection? _____

H. How many of the plans identified in 7.G were approved? _____

I. How many privately owned permanent stormwater management practices/facilities were inspected during the reporting period? _____

J. How many of the practices/facilities identified in I were found to have inadequate maintenance? _____

K. How long do you give operators to remedy any operation and maintenance deficiencies identified during inspections?

_____

L. Do you have authority to take enforcement action for failure to properly operate and maintain stormwater practices/facilities? ☐ Yes ☐ No

M. How many formal enforcement actions (i.e., more than a verbal or written warning) were taken for failure to adequately operate and/or maintain stormwater management practices? _____

N. Do you use an electronic tool (e.g., GIS, database, spreadsheet) to track post-construction BMPs, inspections and maintenance? ☐ Yes ☐ No

O. Do all municipal departments and/or staff (as relevant) have access to this tracking system? ☐ Yes ☐ No

P. How often do municipal employees receive training on the post-construction program? _____

8. Program Resources

A. What was the annual expenditure to implement MS4 permit requirements this reporting period? _____

B. What is next year's budget for implementing the requirements of your MS4 NPDES permit? _____

C. This year what is/are your source(s) of funding for the stormwater program, and annual revenue (amount or percentage) derived from each?

Source: _____ Amount $_____ OR %_____

Source: _____ Amount $_____ OR %_____

Source: _____ Amount $_____ OR %_____

D. How many FTEs does your municipality devote to the stormwater program (specifically for implementing the stormwater program; not municipal employees with other primary responsibilities)? _____

E. Do you share program implementation responsibilities with any other entities? ☐ Yes ☐ No

Entity	Activity/Task/Responsibility	Your Oversight/Accountability Mechanism

9. Evaluating/Measuring Progress

A. What indicators do you use to evaluate the overall effectiveness of your stormwater management program, how long have you been tracking them, and at what frequency? These are not measurable goals for individual management practices or tasks, but large-scale or long-term metrics for the overall program, such as macroinvertebrate community indices, measures of effective impervious cover in the watershed, indicators of in-stream hydrologic stability, etc.

Indicator	**Began Tracking (year)**	**Frequency**	**Number of Locations**

B. What environmental quality trends have you documented over the duration of your stormwater program? Reports or summaries can be attached electronically, or provide the URL to where they may be found on the Web.

10. Additional Information

In the space below, please include any additional information on the performance of your MS4 program. If providing clarification to any of the questions on this form, please provide the question number (e.g., 2C) in your response.

Certification Statement and Signature

I certify that all information provided in this report is, to the best of my knowledge and belief, true, accurate and complete. ☐ Yes

Federal regulations require this application to be signed as follows: **For a municipal, State, Federal, or other public facility**: by either a principal executive or ranking elected official.

_____ _____

Name of Certifying Official, Title Date (mm/dd/yyyy)

Submit

APPENDIX B: DEFINITIONS

Commencement of Construction – the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material). (Source: 2008 CGP)

Control Measure – any best management practice (BMP) or other method used to prevent or reduce the discharge of pollutants to waters of the United States. (Source: 2008 CGP)

Discharge – when used without qualification means the "discharge of a pollutant." (Source: 2008 CGP)

Discharge of Stormwater Associated with Construction Activity – as used in this permit, refers to a discharge of pollutants in stormwater from areas where soil disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck chute washdown, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located. (Source: 2008 CGP)

Illicit Discharge - any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities. (Source: 40 CFR 122.26)

Large Construction Activity – is defined at 40 CFR §122.26(b)(14)(x) and incorporated here by reference. A large construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than five acres of land or will disturb less than five acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than five acres. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site. (Source: 2008 CGP)

Non-Structural Controls – preventative actions that involve management and source controls. Refer also to 40 CFR 122.34(b)(5)(c)(iii). (Source: 40 CFR 122.26)

Qualified Personnel – A person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the construction activity. (Source: EPA's 2008 Construction General Permit)

Receiving Water – the "Water of the United States" as defined in 40 CFR §122.2 into which the regulated stormwater discharges. (Source: 2008 CGP)

Small Construction Activity –includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb

less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site. (Source: 2008 CGP)

Stormwater control measure – see control measure.

Structural Control - physically designed, installed, and maintained practices used to prevent or reduce the discharge of pollutants in stormwater, to minimize erosion, and/or to minimize the impacts of stormwater on waterbodies.

Wasteload Allocation – the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. Wasteload allocations constitute a type of water quality-based effluent limitation. (40 CFR 130.2)

MS4 Program Evaluation Guidance

U.S. Environmental Protection Agency Office of Wastewater Management

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1. Introduction and Background

1.1 Overview

Purpose of the Guidance

The National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Program Evaluation Guidance (Guidance) is intended to assist State and NPDES permitting authority staff to:

- Assess the compliance and effectiveness of Phase I and Phase II MS4 programs;
- Develop Phase II MS4 stormwater management programs (SWMPs);
- Assess pollutants of concern;
- Provide technical assistance.

TIP:

The questions and issues addressed in this MS4 Evaluation Guidance are intended to be used as a reference during an MS4 program evaluation, not as a script or checklist during the review.

Each evaluation should be customized to the issues and requirements specific to that MS4.

Unlike NPDES industrial wastewater permits which typically contain specific end-of-pipe effluent limits based on water quality standards or available treatment technology, MS4 permits usually include programmatic requirements involving the implementation of **best management practices** (BMPs) in order to reduce pollutants discharged to the "maximum extent practicable" (MEP). In addition, the permittees often are allowed flexibility in the types of BMPs and activities implemented to meet permit requirements. This flexibility, as well as the multifaceted nature of the requirements, makes it difficult to evaluate the effectiveness of MS4 stormwater programs. The purpose of this Guidance is to provide NPDES permitting authority staff the information and questions necessary to conduct a comprehensive MS4 program evaluation and determine if the permittee is implementing the program in order to reduce pollutants discharged to the MEP. This Guidance is not intended to be used as a checklist, rather as a reference to prepare for and conduct an MS4 evaluation. The evaluator must ultimately rely on personal experience and **best professional judgment** (BPJ) to conduct a comprehensive MS4 program evaluation.

An MS4 program evaluation is ultimately based on the requirements in the MS4 permit and commitments made in the stormwater management program (SWMP). These should serve as the primary references for a specific MS4 program evaluation, with this Guidance used as a tool to help assess compliance with the SWMP Plan and the permit. The evaluator may also recommend additional activities that should be conducted by the permittee to improve the SWMP. The term evaluation can refer to an audit, inspection or screening process depending on the level of detail utilized. These terms are defined under "Common Terms" below.

It is important to keep in mind that this Guidance is not an enforcement "how to" document, but can be used to *assist* in the enforcement process by describing a process for consistently and accurately assessing and documenting the compliance status of permittees based on permit or SWMP requirements. Notes, checklists, and reports developed as a result of an evaluation will be helpful when justifying and generating enforcement actions.

TIP:

Permittees may find this Guidance useful in conducting a self-audit to identify and proactively address issues.

Intended Audience

This Guidance is written for State and EPA staff responsible for NPDES MS4 permit issuance, compliance and inspections.

Permittees may also find the information in this Guidance useful in conducting a self-audit to improve the effectiveness of their SWMP.

Resources:

Information regarding permitting authorities or other NPDES information can be found at www.epa.gov/npdes/stormwater

Objective Evaluation

This Guidance is intended to provide information to evaluators to help them objectively evaluate if the permittee is implementing the SWMP to the MEP. This is going to vary from state to state and by permittee. For example, some states have requirements that go beyond the federal regulations, or have state programs or policies that affect the way in which certain requirements are articulated in a permit. In addition, individual NPDES MS4 permits may provide some details on the type of program elements the permittee must implement, but not describe in detail all activities necessary to implement each element. Typically these permits require that the permittee's SMWP Plan include this detail, however, and be submitted for approval. Or permits may specify goals or performance standards that the permittee must meet and then require them to develop the necessary program components to reach those goals or standards and describe them in their SWMP.

Each permittee may have a different approach to complying with a specific permit requirement based on MS4-specific traits or issues. For example, EPA regulations require permittees to develop "procedures for site inspection and enforcement" for addressing construction activities. MS4 permits will likely elaborate on this requirement in more detail, such as by specifying a minimum frequency for inspection. However, few MS4 permits will specify how the permittee should inventory their active construction projects or track enforcement activities. A permittee with only a few construction projects a year may be able to use a paper system to inventory and track construction projects. A permittee with hundreds or thousands of construction projects would likely need a database or similar electronic tracking system to ensure it was implementing the program to the MEP.

Some MS4 permits will not include any specific requirements at all and will only generally dictate that the required MS4 SMWP components are developed and implemented. These MS4 programs are often the hardest to objectively evaluate because there is no prescribed benchmarks to measure against. In these cases, the evaluator will need to subjectively assess the MS4's SWMP program against the intent of the associated regulations to reduce pollutants to the MEP. Evaluation techniques and tools (i.e. checklists) may need to be altered in these cases to best ascertain and assess the effectiveness and compliance status of such a program.

Common Terms

For purposes of this guidance, it is important to note that the term "evaluation" is generally used to define any assessment of an MS4 program. Evaluations are further defined as either "inspections", "audits", or "screenings" depending upon the level of review performed. These and other common terms used throughout this Guidance are defined as follows:

- Audit—comprehensive evaluation of all components of an MS4 program to assess overall implementation and identify problems
- MS4—the municipal separate storm sewer system (full text definition included in Appendix A); can refer to the conveyance system in addition to the jurisdiction(s) which own/operate the system.
- Permittee—the permitted owner/operator(s) of the MS4; the entity being evaluated
- Evaluation—any screening, audit or inspection of an MS4 program
- Evaluator—the NPDES permitting authority staff person who is conducting the evaluation of the MS4 program

- Inspection—focused evaluation of specific components of an MS4 program to verify compliance with permit requirements
- Municipal permittee—a general reference to a municipality that is the owner/operator of an MS4 and is covered by an NPDES MS4 permit
- Permit Area—Geographic area covered by the MS4 permit
- Permitting Authority—the State or EPA Region authorized to issue NPDES permits
- Screening—evaluation method used to get a basic impression of a program or uncover "red flags;" may be used as a precursor to a program evaluation
- Stormwater Management Program, or SWMP—the stormwater management program implemented by the permittee; also referred to as the "program"
- SWMP Plan—the document often used by permittees to document SWMP elements implemented or planned

How to Use this Guidance

The first part of this Guidance includes background information useful for review. Subsequent sections lead the evaluator through a series of steps to conduct an evaluation, which can be categorized into three parts: Advance Preparation, Conducting the Evaluation, and Post-Evaluation Activities.

The section titled "Conducting the Evaluation" is divided into subsections that describe in depth how to evaluate overall program management as well as each of the major SWMP components:

- MS4 public education and participation
- MS4 maintenance activities
- Construction activities
- Post-construction controls
- Industrial/commercial facilities
- Illicit discharge detection and elimination

For each subsection, the following information is provided:

- A description of regulatory requirements
- Resources for more information
- Common activities related to the SWMP component
- Materials to review prior to the evaluation
- Elements to address and questions to ask during the evaluation
- A description of any recommended in-field evaluation activities
- Common issues identified during evaluations

In addition, a glossary as well as multiple worksheets and checklists have been included in appendices as tools for the evaluator to prepare for and conduct an MS4 SWMP evaluation.

Appendix A—Glossary & Acronym List
Appendix B—Evaluation Worksheets

Appendix C—Field Visit Worksheets
Appendix D—Annual Report Review and Evaluation Worksheet

Note that this Guidance is best used as a preparatory tool and except for the worksheets in Appendices B and C does not lend itself well as a reference to be used *during* an evaluation.

1.2 Regulatory Overview

For More Information:
For information on stormwater programs and regulations visit www.epa.gov/npdes/stormwater

Background

A brief summary of EPA's stormwater regulations are presented below. Sections of relevant regulatory text are included in the Chapter 4 of this Guidance, however, MS4 stormwater program evaluators are referred to the NPDES Phase I and Phase II regulations, preamble, and other EPA guidance for detailed information on the stormwater regulations. State programs that wish to adopt this Guidance may want to add state-specific elements.

In 1987, Congress amended the **Clean Water Act** (CWA) to require implementation, in two phases, of a comprehensive national program for addressing stormwater discharges.

Stormwater Phase I

The first phase of the program, commonly referred to as "Phase I," was promulgated on November 16, 1990 (55 *Federal Regulations* (FR) 47990) and addresses MS4, active construction and industrial facilities.

Phase I requires NPDES permits for stormwater discharges from a large number of priority sources including medium and large MS4s generally serving populations of 100,000 or more, and several categories of industrial activity, including construction activity that disturbs five or more acres of land.

The Phase I permits mostly covered larger cities, and required them to develop a SWMP, conduct some monitoring, and submit periodic reports.

According to 40 CFR 122.26(b)(8), **municipal separate storm sewer system** means a "conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law)...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States. (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a **Publicly Owned Treatment Works** (POTW) as defined at 40 CFR 122.2."

TIP:
MS4 systems can be linear or more complex, open, piped, manmade, natural, or a combination of all of these things. Some carry groundwater or piped streams, are tidally influenced, or have some other constant source of non-stormwater discharge.

What constitutes an MS4 is often misinterpreted and misunderstood. An MS4 is not always just a system of underground pipes—it can include roads with drainage systems, gutters, and ditches. Although most entities with MS4s are local municipal governments (e.g., cities and counties), there are other governmental entities that manage storm drain systems at their facility, including state departments of transportation, universities, local sewer districts, hospitals, military installations, and prisons. As

previously stated in the "Common Terms" section, the term "MS4" can refer to the system itself or the entities which own and operate the system.

The operators of construction activities disturbing greater than 5 acres have been required to obtain NPDES permit coverage since 1992. General permits for large construction activity require construction operators to develop and implement a stormwater pollution prevention plan to control erosion, sediment and other wastes on the site.

The Phase I industrial stormwater program regulates eleven industrial categories, which EPA has further broken out into 30 sectors. Similar to construction activities, these industrial facilities have been required to obtain NPDES permit coverage since 1992. General permits require regulated industries to develop and implement a stormwater pollution prevention plan, including monitoring for some industries.

Stormwater Phase II

The second phase of the stormwater program, promulgated on December 8, 1999 (64 FR 68722) and amends existing Phase I regulations dealing with MS4s, active construction and industrial facilities.

Phase II Stormwater Minimum Measures

- ✓ Public education and outreach
- ✓ Public involvement/ participation
- ✓ Illicit discharge detection and elimination
- ✓ Construction site runoff control
- ✓ Post-construction stormwater management
- ✓ Pollution prevention/ good housekeeping for municipal operations

The Phase II regulations require NPDES permits for stormwater discharges from certain small municipal separate storm sewer systems and construction activity generally disturbing between 1 and 5 acres. The construction requirements essentially extended the Phase I threshold for construction activities from 5 acres down to 1 acre.

Under the Phase II MS4 stormwater program, operators of regulated small MS4s are required to

- Apply for NPDES permit coverage
- Develop a SWMP that addresses six minimum control measures
  - Public Education and Outreach on Stormwater Impacts
  - Public Involvement/Participation
  - Illicit Discharge Detection and Elimination
  - Construction Site Runoff Control
  - Post-Construction Stormwater Management in New Development and Redevelopment
  - Pollution Prevention/Good Housekeeping for Municipal Operations
- Implement the SWMP using appropriate stormwater management controls, or BMPs
- Develop measurable goals for the SWMP
- Evaluate the effectiveness of the SWMP
- Provide reports on program status

The Phase II regulations also required certain regulated industrial facilities, with no industrial activities exposed to stormwater runoff, to submit a certification of "no exposure" if the facility fell into one of the regulated eleven industrial categories but did not have an NPDES permit.

MS4 Permits

Phase I MS4 permittees were subject to the permit application requirements found at 40 *Code of Federal Regulations* (CFR) 122.26(d). The permit application consisted of two parts that provided the NPDES permitting authority comprehensive information to use in developing permit requirements. Information required in the application included a physical description of the MS4, legal authority of the MS4 operator, a characterization of the surrounding sources and the pollutants found in the stormwater discharge, and a description of fiscal resources. The most significant portion of the application was the development of a proposed SWMP that would meet the standard of "reducing pollutants to the MEP." Using the information submitted in the permit application, the NPDES permitting authority would then develop appropriate permit requirements. Phase I MS4 permittees were covered under individual permits issued to either single permittees or groups of co-permittees.

Although there are some exceptions, phase II MS4 permittees are primarily covered by general permits that require implementation of the six minimum control measures.

The specific requirements in MS4 permits vary greatly around the country. Some MS4 permits contain broad requirements that outline the basic SWMP components the permittee is required to implement, giving the permittee the flexibility to develop a program to meet these broad requirements. Other MS4 permits are more prescriptive and specify in detail the minimum activities and BMPs for each program element.

1.3 Types of Permittees

Traditional MS4 Programs

Many MS4 operators permitted under the NPDES program are either city or county governments. To evaluate this type of an MS4 program, an evaluator must have a basic understanding of the structure, operation and function of local governments. The structure and authority of local governments can vary by state (for example, the use of towns, townships, villages or parishes), therefore a general description of a common city/county local government structure is provided below.

TIP:
City and county stormwater management programs can be administered by various programs including: public works, building, and environmental program, or wastewater management staff, usually pretreatment.

Cities provide a variety of functions including fire and police protection, construction and maintenance of streets, stormwater and wastewater services, and providing for health, recreation, and social needs. Counties provide many of these same services in unincorporated areas. Cities are governed by a city council that establishes municipal policy and enacts local ordinances. Many cities are run by the council-manager system, where the elected council appoints a full-time professional manager to direct city departments and implement policy. Some cities are run by the mayor-council system, where a mayor (either elected or appointed by the council) works with the council to direct city departments and implement policy.

City boundaries can change through the annexation process. Unincorporated county land that is adjacent to the city can be annexed through a formal process.

Stormwater management responsibilities vary depending on the city or county. Some permittees assign stormwater program oversight and implementation to the public works department, while others assign stormwater to an environmental services department. Still others combine stormwater program implementation with wastewater treatment agencies, flood control authorities, or other regional entities. Also, some counties perform stormwater activities within incorporated cities (such as inspections). Each

permittee should clearly describe in the SWMP Plan the roles and responsibilities of each department involved in stormwater management.

Nontraditional MS4 Programs

As stated previously, the term MS4 does not solely refer to municipally owned storm sewer systems. Examples include, but are not limited to non-traditional entities such as state departments of transportation (DOTs), airports, universities, local sewer districts, hospitals, military installations, post offices, prisons, or irrigation districts.

For More Information:

The California Department of Transportation is a non-traditional MS4. To review the permit, programs, reporting, etc. visit: http://www.dot.ca.gov/hq/construc/stormwater/stormwater1.htm

Because of the unique structure and features of many non-traditional MS4s, some of the traditional SWMP elements may need to be modified or may not be entirely applicable. For example, a public education program for a state DOT or military base would be very different from a public education program for a traditional city.

TIP:

When evaluating non-traditional MS4 SWMPs, be sure to adjust interview topics and questions, field inspections, and documents evaluated to accommodate any unique characteristics of the MS4.

In other instances, some non-traditional MS4s may lack the legal authority or employ a different type of enforcement mechanism than a city/county government to implement a SWMP component. For example, a state DOT may not have the legal authority to enforce controls on illicit discharges into its system. In these situations the DOT is encouraged to work with the neighboring regulated permittees to develop and implement a shared SWMP in which each permittee is responsible for activities that are within their individual legal authorities and abilities. The DOT could work closely with the permittees that surround the DOT MS4 (i.e. country or city) and use their enforcement authority to eliminate illicit discharges. In other words, a municipal permittee can utilize regulations which prohibit polluted runoff from leaving an individual property and entering the DOT MS4 if the property is covered under an appropriate municipal code (e.g. building, health, etc.) An evaluation of a non-traditional MS4 program must be very specific to the particular circumstances, permittee relationships, and permit requirements applicable.

2. Pre-Evaluation Preparation

2.1 Evaluation Goals and Benefits

Evaluation Goals

A permitting authority can have one or more overall goals when conducting an MS4 program evaluation. Identifying the overall goals of the evaluation will help in developing an appropriate schedule and focus. The primary goals in conducting an MS4 SWMP evaluation can include

TIP:

An MS4 evaluation should not be confrontational. The evaluation process works smoothly if both parties use the evaluation as a mechanism to improve the program and increase coordination.

- **Determination of compliance status.** Assessing the compliance status of a permittee with its MS4 permit and SWMP Plan is often a principal goal of an evaluation.
- **Assistance with permit issuance or renewal process.** An on-site program evaluation might be very helpful after the issuance or during renewal of a permit. The evaluation process can be used to identify and answer questions about implementation of program components within the first year of permit issuance. Towards the end of the permit term, the permitting authority can use the evaluation to assist the permittee with the permit application or SWMP Plan revision and/or the evaluation may provide valuable information to the MS4 permit writer to assist in the permit renewal process (including the drafting of a new Phase II General Permit).
- **Phase II SWMP development.** Because most Phase II permittees are just beginning to implement SWMPs, a full compliance evaluation might not be necessary. Nevertheless, an evaluation can also be a compliance assistance tool that can help to correct deficiencies early in the program. Permitting authorities could conduct evaluations geared toward compliance assistance early in the Phase II program development process.
- **Assessing pollutants of concern.** If a water body is impaired or there is a concern regarding pollutants common in urban stormwater, it may be helpful to assess the implementation effectiveness of MS4 programs in the watershed to reduce those pollutants. If a **total maximum daily load** (TMDL) has been developed for a waterway receiving a discharge from a permittee, a program evaluation may assist the permitting authority in assigning an applicable **wasteload allocation**, and/or assist the permittee in implementing the steps necessary to comply with the wasteload allocation.
- **Technical assistance**. Providing technical assistance is an important goal of an MS4 SWMP evaluation. Often it is the only time that the permitting authority staff and the permittees meet face-to-face and can be a valuable opportunity to share technical expertise, advice, reference materials, and examples of successful SWMPs implemented elsewhere.

Benefits of an Evaluation

There are a number of benefits from conducting an MS4 SWMP evaluation of a permittee, including:

- Determination of compliance and assistance with execution of appropriate enforcement actions
- Stronger coordination and working relationship between the permitting authority and the permittee
- Better understanding by the permittee of the expectations and permit requirements of the permitting authority
- An opportunity to clarify any misunderstandings in the MS4 permit requirements or SWMP Plan

- Improved permitting authority knowledge of the permittee's operations, priorities, constraints and challenges faced when implementing a municipal stormwater program
- A more effective SWMP resulting in better water quality

2.2 Advance Preparation

Evaluation Options

Which permittee(s) should be evaluated?
The first question to be answered is which permittee should be evaluated. If the permitting authority has jurisdiction over numerous MS4 permits, ideally all MS4s would be evaluated on an annual basis. If staff resources are limited and only a select number of evaluations can be conducted in a given year, a permitting authority may want to evaluate those MS4s with suspected compliance issues, those located in watersheds of concern, or those with pending permit renewals most frequently. However, permitting authorities should visit each permittee on a regular basis, even if they are not considered "bad actors" however, as evaluations provide many valuable benefits beyond compliance determination or assistance with permit renewal.

If a selected permit covers more than one co-permittee, the evaluator then must determine which co-permittee or co-permittees should be evaluated during a single evaluation. Some permits may cover 20-30 or more co-permittees and it may be impossible to evaluate them all in a single evaluation or year. Evaluations conducted early in the permit cycle may focus on the larger MS4s or those that coordinate activities for smaller permittees. Subsequent evaluations may focus on the smaller co-permittees that have compliance issues or located in watersheds of concern.

After the evaluator has determined which permittees are to be evaluated, the evaluator must consider several questions when determining the level of detail for the evaluation and how best to facilitate and coordinate the process.

What Level of Detail is Possible or Necessary?
If limited time is available, a screening-level evaluation may be an efficient and effective method for developing a basic impression of the program's compliance status or as a way to determine if a more in-depth evaluation is necessary (see Chapter 3). A screening is a way to uncover "red flags" or obvious instances of noncompliance with the MS4 permit. A screening-level evaluation is comprised of a basic interview with the MS4 coordinator or main contact of the program along with a review of the most recent annual report and the SWMP Plan. Documents can be obtained during the screening and reviewed by the evaluator at a later date. The screening-level evaluation should take a minimal amount of time but should be thorough enough to answer general questions about permit compliance. This type of screening may be the precursor to a detailed evaluation (see Chapter 4) at a later date.

A detailed on-site evaluation involves a more intensive review of files and detailed interviews with all or most applicable office and field staff. This type of review is more time-consuming but will provide a more comprehensive picture of SWMP development, coordination, and implementation.

Type of Evaluation	Typical Allotted Time[1]
Screening-level	2-6 hours per permittee
Detailed on-site evaluation	2-3 days per permittee

[1] Assumes one evaluator

Which Program Component(s) will be Evaluated?
A program component-specific evaluation focuses on a specific stormwater program area, such as construction activities or new and significant redevelopment. This type of evaluation may allow the evaluator to get more details through a more extensive file review or more numerous field inspections. For example, during an evaluation focused strictly on the construction component the evaluator may be able to interview all plan reviewers on staff, do an in-depth review of multiple erosion and sediment control plans, review those site's compliance histories, and perform inspections of each. This type of a review is especially helpful if the permitting authority has specific concerns about implementation of a particular component. Such an in-depth evaluation will typically take 1 to 2 days, depending on the complexity of the program and the amount of information to be covered.

Primary Phase I Stormwater Components
- ✓ Program management
- ✓ Maintenance activities
- ✓ Construction
- ✓ Post-construction
- ✓ Illicit discharge detection and elimination
- ✓ Public education/Participation
- ✓ Industrial/Commercial

A detailed on-site evaluation addresses all of the generally accepted primary stormwater program components (i.e., program management, MS4 maintenance activities, construction, post-construction, illicit discharge detection and elimination, public education/participation and industrial/commercial for Phase I MS4 permittees). The intent of a detailed on-site evaluation is to assess the permittee's entire SWMP and possibly identify specific areas or issues that might require a component-specific review in the future.

The level of detail that can be achieved during either type of evaluation is often dictated by the amount of time devoted to each program area. Both the screening-level and detailed on-site evaluation can vary in terms of level of detail.

Will the Evaluation be Conducted in the Office, the Field, or Both?
To get an accurate picture of "on the ground" implementation of the construction and industrial/commercial components of a typical SWMP, the evaluator will need to accompany inspection staff into the field. In addition, many permittees manage municipal facilities such as maintenance yards, material storage facilities, or other municipal facilities that would be helpful to visit during the evaluation to ascertain the permittee's municipal housekeeping practices. If time allows and the evaluator has questions about implementation of these aspects of the SWMP, field time should be built into the evaluation schedule.

As previously stated, this level of detail may not be necessary for a compliance screening or component-specific inspection. In addition, if the program areas being evaluated do not have a field element (i.e., public education), then field activities will not be necessary.

Evaluation Logistics
The MS4 program coordinator or primary contact should be notified well in advance to allow for proper coordination and scheduling amongst parties responsible for program implementation. The contact should be in charge of determining who the appropriate people are to include in the evaluation. Some examples of pertinent staff includes:

TIP:
It is helpful to exchange cell phone numbers to facilitate schedule changes, alternative meeting places, inspection schedules, etc.

- Program managers
- Inspectors

- Administrative staff
- Outreach specialists
- Legal staff

One or more conference calls prior to the evaluation may be necessary to establish the schedule, determine appropriate participants, and answer any questions. Establishing email contact with all of the players well in advance is key to providing necessary information, resources, as well. A final call is helpful the week before the evaluation to answer any last-minute questions, exchange contact information (especially cell phone numbers), confirm the schedule and meeting locations, and make necessary changes. A final evaluation schedule should be developed and distributed to all contacts well in advance to ensure everyone is prepared and expecting the evaluator(s) on the correct dates.

When conducting a component-specific inspection, depending on the complexity of the program, roughly 2 – 4 hours should be assumed for an adequate in-depth office review of each program component. Evaluation of inspection activities in the field can be time consuming due to travel times between sites and facilities, so it is important to allow adequate time in the field as well. Normally, four hours per component (e.g., construction, industrial/commercial) is adequate to evaluate inspection staff. Evaluation of municipal maintenance activities should include adequate field time to inspect the municipal public works yard or similar facility, but normally this should not take more than 1 – 2 hours. All of these time estimates should be confirmed with the permittee when establishing the draft schedule.

Depending upon the size of the area covered under the MS4 permit, the scope of the SWMP, and the type of evaluation to be conducted, a single evaluator could require three days for a comprehensive, in-depth office and in-field program audit.

More than one evaluator can be used to conduct a comprehensive audit as well. This allows one person to interview office staff and another to perform field activities thereby minimizing the number of days to complete the audit.

In addition, multiple evaluators can be used to assess multiple permittees covered under one permit simultaneously. This can be accomplished either by assigning evaluators or "teams" to a particular permittee or to a specific component for all permittees. For example, Team 1 would assess all construction programs for three separate permittees covered under the same permit during a three day period. This approach allows for a consistent review of the all three permittees' construction programs and helps to ensure an equitable assessment between them. Or, Team 1 could review all program components for the City of Pleasantville, while another evaluator reviews the Town of Bliss. This allows the evaluators to become intimately familiar with all facets of their respective MS4 permittees, SMWP, implementation challenges, etc.

It is helpful to try and minimize travel between office locations whenever possible and establish a central meeting place, such as a conference room in a city hall, to save time.

Often it is helpful for the evaluator to coordinate a "kickoff" meeting at the start of the evaluation to review the schedule, answer any last minute questions and finalize logistics. An outbrief session is helpful to coordinate at the conclusion the audit to give a tentative summary of findings from the evaluation. Care must be taken to caveat all

TIP:

Outbrief sessions should be limited to the findings the evaluator feels comfortable revealing prior to a more thorough review of documents, interview responses, and inspection results. In addition, it should be stated that the outbrief findings are subject to change. Rebuttals and questions by the MS4 staff should be limited to clarification of incorrect findings or misunderstandings.

findings as preliminary at that time subject to change based on further review of evaluation materials, the permit, or the SWMP Plan.

Below is an example of a comprehensive, 3-day MS4 program evaluation schedule that addresses the major SWMP components for typical Phase I and Phase II permittees.

Example Schedule for a Phase I Permittee

Monday

8:30 – 9:00	Evaluation Kickoff
9:00 – 12:00	Illicit Discharge Detection and Elimination & Industrial and Commercial Facilities (office)
1:30 – 5:00	Industrial and Commercial Facilities (field)

Tuesday

8:30 – 12:00	MS4 Maintenance Activities (office and field)
1:00 – 5:00	New Development/Redevelopment & Construction Activities (office)

Wednesday

8:30 – 12:00	Construction Inspections (field)
1:30 – 3:00	Outbrief Session

Example Schedule for a Phase II Permittee

Monday

8:30 – 9:00	Kick-off Meeting
9:00 – 10:30	Program Management, Effectiveness and Assessment
10:30 – 12:00	Public Education and Outreach Public Involvement/Participation
1:00 – 5:00	Post-Construction Stormwater Management Construction Activities (office)

Tuesday

8:30 – 12:00	Pollution Prevention/Good Housekeeping for Municipal Operations (office and field)
1:00 – 4:00	Construction Site Runoff Control (field)

Wednesday

8:30 – 10-30	Illicit Discharge Detection and Elimination
10:30 – 12:00	Outbrief Session

2.3 Materials to Review Before the Evaluation

The information provided below should be reviewed before an on-site evaluation. The level of review varies depending on the evaluator's experience with the particular permittee program being evaluated and the type of evaluation being conducted.

- **MS4 NPDES permit.** Because the evaluation is ultimately an assessment of the permittee's compliance with its NPDES permit, the evaluator must be very familiar with the permit and its requirements.
- **SWMP Plan.** The evaluator must review the permittee's latest SWMP planning document(s) and note the commitments and schedules for specific activities.
- **Latest annual report.** The most recent annual report must be reviewed to establish the current status of implementation. Previous annual reports could be reviewed if time permits and if the evaluator wants to assess trends before the on-site evaluation. See Chapter 2.4 below for guidance on Annual Report review.
- **Permitting authority correspondence with the permittee.** Review any relevant correspondence with the permittee regarding its stormwater program. This material might include permitting authority comments on the permittee's SWMP Plan, comments on annual reports, notices of violation (NOVs), or other notices.
- **Permitting authority inspections within the MS4.** Ideally, the evaluator should be aware if an NPDES permitting authority industrial or construction inspector has found violations within the permittee's jurisdiction. If this review is not completed before an evaluation is conducted, it should occur after the on-site evaluation and before the final evaluation report is developed. Any findings should be incorporated into the final report.
- **Permittee Web sites.** Often, permittees have developed stormwater Web sites that can provide copies of reports, guidance documents, and other more current information on the stormwater program.
- **Legal authority.** Review the permittee's legal authority, especially with respect to any exemptions or exclusions from the applicable ordinance.
- **Special water quality concerns.** Be aware of any impaired waters, TMDLs, high quality or protected status, or other water quality-related designations for water bodies to which the MS4 discharges.
- **Other water programs affecting the permittee.** A significant source of frustration to permittees is trying to meet requirements for multiple programs arising from a single agency (i.e. EPA or state environmental protection agency) when program staff within that agency do not understand the trade-offs (sometimes even contradictions) in funding and implementing the requirements of various regulations and programs. For example, an MS4 SWMP evaluator should at least be aware if the municipality being evaluated has a drinking water program, a state revolving fund loan, wastewater permit(s), **combined sewer overflow** (CSO) long-term control plan, or other requirement for which it must also account to the permitting authority. If there is time, it is helpful to find out a little bit about the program requirements applicable to the municipality. There may even be ways to streamline, modify or combine certain requirements to meet multiple program goals.

For More Information:

Chittendon County, Vermont, has developed a Web site to educate the general public about stormwater and the regional management program. Visit http://www.smartwaterways.org

Resources

✓ TMDLs
http://www.epa.gov/owow/tmdl/

Resources

✓ Combined Sewer Overflows
www.epa.gov/npdes/cso

✓ State Revolving Fund
www.epa.gov/owm/cwfinance/cwsrf/index.htm

2.4 Annual Report Reviews

Applicable federal regulations for the NPDES stormwater Phase I regulations and Phase II Rule require that annual reports be submitted. Many permitting authorities include more specific requirements for reporting in their MS4 permits. These reporting requirements can include specific information required for each program component, or it can specify the format for the annual report. For permits with multiple co-permittees, often a central organization or lead co-permittee will coordinate the annual report and submit one to cover all co-permittees.

In general, an annual report should document implementation of the SWMP during the previous year; evaluate program results and describe planned changes towards continuous improvement. Generally written for the permitting authority, an annual report can also be written for the citizens of the community as a way to report progress in meeting water quality goals. To this end, an annual report should clearly illustrate three key items for each SWMP area:

- **Permit and SWMP Requirements.** These requirements either will be specifically prescribed in the permit itself, or described in the permittee's SWMP. The SWMP normally is considered a binding document and part of the permit once it is submitted and approved by the permitting authority. A description of applicable goals or performance standards for each SWMP component should be stated in this summary as well.

- **Summary of Year's Activities.** The summary should describe and quantify program activities for each SWMP component. Responsible persons, agency, department or copermittee should be included. Each activity should be described in relation to achievement of established goals or performance standards.

- **Planned Activities and Changes.** The annual report should describe activities planned for the next year highlighting any changes made to improve BMP or program effectiveness.

An annual report should describe not only the activities during the previous year, but should highlight the SMWP's effectiveness as well. It should be assumed that the ultimate goal of the SWMP is the protection or improvement of water quality; however, there may be multiple, smaller program goals. Identification of direct measures of success for a stormwater program is very difficult, therefore, what is considered 'effective' and how the permittee chooses to assess this effectiveness will vary. Ideally the permittee and permitting authority will establish performance standards or goals in an attempt to define and quantify what is "effective" when the permit is issued. If the performance standards or goals include definitive milestones or schedules, the annual report should highlight these as well.

In addition to the items described above, the annual report should include appropriate program budget information, and a summary of any required monitoring data.

It is important to remember that annual reporting and program assessment are valuable exercises for the permittee as well as the permitting authority. Reporting should not be seen as merely a 'bean counting' effort. The permittee benefits greatly as an annual program assessment guides program focus, helps to budget and target resources, helps justify program support, and facilitates participation among the affected departments and permittees.

Step 1: Related Document Review and Preparation

Prior to beginning the annual report review, an evaluator should review or obtain the following information:

- **NPDES permit provisions.** The NPDES permit requirements will serve as the primary basis for the annual report review. The permit should describe basic program requirements, discharge prohibitions and reporting requirements.

- **SWMP provisions.** The permittee's SWMP document will describe the overall management structure of the program, planned activities, milestones, schedules and any established performance standards or goals. The SWMP should describe if there is a blanket organization which coordinates the co-permittees and if the organization is coordinated by co-permittee staff or a consultant.

- **Previous annual report review comments.** If the previous year's annual report was received and reviewed by the permitting authority, any comments or response should be reviewed to determine if requested changes to report were made, requested information was provided, etc.

- **Previous annual reports.** It is helpful to have access to previous years' reports as certain documents may have been submitted which may be helpful to have on hand (i.e., an ordinance which established legal authority).

Step 2: Background Information

It is helpful to first document basic information about the permittee and permit. Each permittee has different land use, socioeconomic, and water quality issues which will shape the SWMP. All of this information may not be included in the annual report, but can be obtained through a cursory internet search.

- What is the population served by the permittee?
- What is the primary industry within the permittee's boundary?
- What are the primary land uses within the permittee's boundary?
- What are the priority pollutants within the watersheds of the permittee's boundary?
- Are there impaired waterways impacted by the permittee?
- Have TMDLs been established?
- Are there other sensitive areas of concern within the permittee's boundary?

Step 3: Legal Authority

While most important during the first permit year annual report review, it is helpful to confirm a permittee's legal authority to implement all components of the SWMP on an annual basis. Note any described changes to the SMWP and confirm that existing legal authority will support the implementation of those changes (i.e., requiring existing gas stations to install catch basin insert treatment BMPs). Any changes to applicable ordinances should be included in the annual report as well. If the actual codes or ordinances are not included in the annual report or previous annual reports, they should be obtained during an on-site evaluation.

Step 4: Fiscal Analysis

Phase I regulations require that annual expenditures and budget for the year following be included in each annual report. No such requirement exists for Phase II. If included, this information should be reviewed to determine if budget changes are being made. If funding changes are planned, an explanation should be provided (i.e., an additional inspector is being added or additional expenditures are not expected for the development of new outreach materials as they were developed during year one of the permit).

Step 5: SWMP Component Review

TIP:

When reviewing an annual report with the Worksheet provided, pay special attention to questions in the Worksheet answered "unknown." Program components for which little information was provided may be good candidates for an on-site evaluation.

While each MS4 SWMP will differ based on various factors (i.e., permit requirements, priority pollutants), the Worksheet lists some basic information that should be provided for each program component. In addition, each target established in the permit or SWMP should be documented and verified on the Worksheet as well. It is helpful to document all quantifiable data during the review to highlight what vital information may be missing and what, if any "red flags" need to be addressed with the permittee. For example, if the permittee provides the total number of construction inspections conducted, but does not provide the prioritized list of active construction sites, the reviewer cannot determine the frequency of inspections or whether high-priority sites were adequately monitored and assessed. Further if the permittee had established a goal of inspecting all active sites within 48 hours of every rain event, the reviewer would be unable to ascertain whether this goal had been met.

For each program component, the annual report should describe applicable training of staff which occurred during the previous year. It is helpful if agendas or presentation materials are included.

As described in the Conducting an Evaluation section of this Guidance, information regarding the implementation of the following SWMP components should be provided in a Phase I MS4 annual report (additional components may be required by the MS4 permitting authority):

- Program to detect and eliminate illicit discharges to the system
- Program to prevent, contain, and respond to spills
- Program to educate and allow citizens to report illicit discharges or other potential impacts to water quality
- Educational program to encourage the proper disposal of used oil and other toxic materials
- Program to reduce infiltration of sewage into the storm sewer system
- Program to reduce pollutants from active construction sites
- Programs to reduce pollutants in runoff from industrial, commercial, and residential areas

Phase II permittees are required to develop SWMPs which include similar minimum measures, each of which should be addressed in an annual report:

- Public education and outreach program
- Public involvement/participation program
- Illicit discharge detection and elimination program
- Construction site stormwater runoff control program
- Post-construction SWMP for new development and redevelopment (for development greater than or equal to one acre)
- Pollution prevention/good housekeeping program for municipal operations

For purposes of this Guidance and annual report review Worksheet, the above SWMP requirements have been combined and categorized into the following components for both Phase I and Phase II MS4s:

- Program Management
- Public Education and Public Participation
- Municipal Maintenance/Good Housekeeping
- Construction Activities
- New Development and Significant Redevelopment
- Industrial/Commercial Facilities
- Illicit Discharge Detection and Elimination

Step 6: Follow-Up Activities

The information obtained during the annual report review can be used in various ways.

1. To provide feedback to the permittee regarding program development or implementation. Often, permittees have limited contact with permitting authority staff and the submittal of an annual report is the primary means of communication during the year. It is important that the permitting authority review annual reports in a timely manner and respond with any comments, suggestions or criticisms.

2. To determine the need for an on-site evaluation. If the annual report elicited numerous questions about SWMP implementation, an on-site evaluation may be very helpful in determining compliance or effectiveness of the MS4 program.

3. To prepare for an on-site program evaluation. If a permittee has been selected for an on-site evaluation, the most recent and historic annual reports should be reviewed prior.

4. To determine the compliance status of the permittee and progress towards achieving permit requirements, milestones or measurable goals. The permitting authority may choose to use the annual report to determine compliance and issue necessary enforcement actions.

5. To note exceptional approaches, programs, or BMPs used by the permittee that might be helpful to other permittees. Often it is beneficial for permittees to share information, program ideas, educational tools or implementation approaches and annual reports are a good way to facilitate the distribution of ideas.

3. Conducting a Screening-Level Evaluation

3.1 Screening-Level Procedures

TIP:

Conduct a screening-level evaluation when you have limited time and want a "quick" assessment of the MS4.

The majority of this Guidance (Chapter 4 and the worksheets in Appendix B) describes how to conduct a detailed on-site evaluation of an MS4 program. However, if an evaluator does not have enough time to conduct a detailed on-site evaluation, a more limited screening-level evaluation could be conducted. The intent of the screening-level evaluation is to quickly identify the program areas that are deficient or noncompliance and should be targeted for a more in-depth evaluation. The screening-level evaluation is not intended to be an assessment of compliance with all permit conditions.

TIP:

Benefits of a screening-level evaluation:

- A quick "snapshot" of MS4 compliance
- Identify major strengths and weaknesses of a program
- Can be conducted in a relatively short amount of time

The screening-level evaluation ideally should be conducted on-site at the permittee's offices after a review of the permittee's annual report (see chapter 2.4). The screening-level evaluation could cover all program components or focus on specific program components that are of particular interest due to pollutants of concern, past compliance issues, or other factors. Depending on the level of detail, the complexity of the program and the number of program components to be reviewed, the screening-level evaluation could last from 2 hours to a full day.

To conduct a screening-level evaluation, the evaluator should be familiar with the permittee's NPDES permit and most recent annual report. The screening-level evaluation will need to be customized to the unique permit requirements and issues of each MS4, however, some of the more common questions and information to review during a screening-level evaluation are listed below. An evaluator should use this list as a guide to help them quickly assess whether a more comprehensive evaluation is necessary for a certain program component or to review the entire SWMP.

3.2 Common Screening-Level Questions

Program Management

Key questions to ask:

- ✓ Does your written stormwater management plan include specific milestones and quantities for each program/BMP?
- ✓ Describe how your SWMP is coordinated across departments.
- ✓ Describe the impaired waters, pollutants of concern and TMDLs for the waterbodies you discharge to. Does your SWMP include programs or BMPs specifically addressing these impairments?
- ✓ Describe how you evaluate the success of your stormwater management program.

Potential information to review:

- ✓ Stormwater management plan document
- ✓ Most recent annual report
- ✓ Organizational chart showing departments with stormwater responsibilities

Public Education and Participation

Key questions to ask:

- ✓ Describe your overall approach to educating the public on stormwater issues.
- ✓ What are the primary pollutants or behaviors you target with your public education program?
- ✓ Describe your top three target audiences and the messages you plan to deliver. How do they relate to the primary pollutants or behaviors?
- ✓ How do you evaluate the effectiveness of your outreach activities? Have you conducted any public awareness surveys?

Potential information to review:

- ✓ Public outreach strategy
- ✓ Results of any public awareness surveys
- ✓ Information tracking the distribution of outreach materials

MS4 Maintenance Activities

Key questions to ask:

- ✓ Describe your current MS4 mapping resources (e.g., has the permittee mapped storm drains, outfalls, inlets, municipal facilities, etc.).
- ✓ Describe your procedures for catch basin cleaning, street sweeping and MS4 maintenance.
- ✓ Do your municipal facilities have SWPPPs? If not, why?
- ✓ How are maintenance staff trained with respect to stormwater activities and BMPs?

Potential information to review:

- ✓ Catch basin cleaning records for the month of _____
- ✓ Stormwater plan or SWPPP for main municipal maintenance facility (including any self-inspection records)
- ✓ Standard Operating Procedures (SOPs) for stormwater-related maintenance activities

Construction Activities

Key questions to ask:

- ✓ Describe your legal authority to require erosion and sediment control BMPs and enforce stormwater requirements.
- ✓ Describe your system for tracking construction plans, active construction projects, inspections, and enforcement actions (including the number of projects disturbing greater than one acre last year).
- ✓ How do you coordinate implementation of your local erosion and sediment control requirements with the States (or EPA's) NPDES construction general permit requirements?
- ✓ Describe your process for reviewing plans to ensure stormwater BMPs are addressed. What BMPs does a plan reviewer look for on a plan?

- ✓ Interview an inspector to assess how stormwater inspections are conducted at construction sites. Ask about the frequency of inspections and the number of inspectors.
- ✓ Describe the most recent training attended by inspectors and plan review staff

Potential information to review:

- ✓ List of active construction projects disturbing greater than one acre for the month of _____
- ✓ Erosion and sediment control plan reviewed and approved by permittee (selected from list)
- ✓ Inspection reports for a selected project (including any enforcement actions for noncompliance)

Post-Construction Controls

Key questions to ask:

- ✓ Describe your post-construction design standards and legal authority.
- ✓ Describe your process for reviewing plans to ensure post-construction BMPs are addressed. Do plan reviewers use checklists to ensure consistent plan review?
- ✓ Describe your post-construction operation and maintenance (O&M) program (including your inventory of post-construction BMPs and your inspection and maintenance schedule).

Potential information to review:

- ✓ Post-construction plan reviewed and approved by MS4
- ✓ Records for post-construction BMP inspection and maintenance; both private and public if applicable
- ✓ An O&M plan for post-construction BMPs from a recently approved project

Industrial/Commercial Facilities

Key questions to ask:

- ✓ Describe your industrial/commercial facility program, including the types and numbers of facilities covered. How were these facilities selected?
- ✓ Describe the types of BMPs or stormwater requirements these facilities must meet.
- ✓ Describe your industrial/commercial inspection program (including the frequency of inspections and the number of inspectors)
- ✓ Interview an inspector to assess how industrial/commercial stormwater inspections are conducted. Ask about the frequency of inspections and the number of inspectors.

Potential information to review:

- ✓ List of industrial/commercial facilities subject to stormwater requirements
- ✓ Inspection report(s) for selected facilities
- ✓ Enforcement records for a facility out of compliance

Illicit Discharge Detection and Elimination

Key questions to ask:

- ✓ Describe your legal authority to prohibit illicit discharges and illegal dumping to the MS4 (including an exemptions).

- ✓ Describe any field screening activities. If an illicit discharge is discovered during screening, what is the process for determining the source and eliminating the discharge.
- ✓ Describe your illicit discharge investigation and spill response programs, including staff and equipment available.
- ✓ How are the locations of illicit discharges tracked and used to steer other SWMP components (i.e. industrial inspections, public education, etc).

Potential information to review:

- ✓ List of illicit discharge events investigated over the past _____
- ✓ Records on investigation, follow-up and enforcement relating to one or more event(s)

3.3 Screening-Level Evaluation Follow-Up

After a screening-level evaluation, an evaluator has several options:

- Submit a report to the permittee summarizing the findings and asking for deficiencies to be corrected
- Conduct a detailed on-site evaluation of those program components found deficient
- Conduct a detailed on-site evaluation of all program components

If an evaluator conducted a screening-level assessment of multiple permittees, common deficiencies can be used to target either more detailed evaluations or additional compliance assistance on those program components. Additional information on post-evaluation activities, including preparing a written report and follow-up activities, are described in Chapter 5.

4. Conducting a Detailed On-Site Evaluation

The following chapter describes the process and content of a detailed on-site evaluation. The following program areas are covered:

- Program Management
- Public Education and Participation
- MS4 Maintenance Activities
- Construction Activities
- Post-Construction Controls
- Industrial/Commercial Facilities
- Illicit Discharge Detection and Elimination

Each program area section includes a list of regulatory requirements that apply to that program area and describes activities that typically are performed by permittees to meet permit requirements. The sections also include a description of documents to be reviewed before the evaluation and a series of questions to be asked during the interviews. Also included is a list of common problems identified during evaluations.

Approach and Demeanor

An evaluator's approach and demeanor can have a significant impact on the success of the interviews by putting the interviewees at ease. Evaluations can be a stressful process for the permittee, which could result in stilted discussions and overly brief answers to questions. It is best to use a friendly approach and start by asking open-ended, broad questions that allow the interviewees to talk freely about their programs. Since MS4 stormwater programs are not "one size fits all," it is sometimes best to have the interviewees describe their approach to each program area up front rather than ask questions from a list that may not be organized in a way that makes sense in the context of their program's activities. To ensure that all topics are covered in sufficient depth, the evaluator should ask for clarification throughout and take a break at the end of the session to review the list of topics and ask follow-up questions if needed. Maintaining a conversational style will allow the interviewees to explain their answers and feel as though they can provide input into the interview process.

Kick-off Meeting

The first day of an evaluation should begin with a kickoff meeting to allow for introductions and an overview of the process and goals of the evaluation. The meeting usually includes all staff who will be interviewed, and it is a good time for higher-level managers and officials to be introduced to the process and understand what will be happening over the next few days.

The following is a sample agenda for the kickoff meeting. The evaluator should tailor the agenda to suit his or her own objectives:

- **Introductions.** The evaluator should introduce him- or herself and can provide a brief overview of his or her background in stormwater program evaluations. Then each person in the room can introduce him- or herself in turn. It is helpful to distribute a sign-in sheet at this time to collect the names, positions, and contact information for the people being interviewed throughout the week in case follow up is needed.

- **Goals and benefits.** Describe the goals and outline some of the benefits of the evaluation process. These are described in depth in Section 2.1 of this guidance.
- **Schedule.** Review the schedule for the week's interviews and discuss which topics will be discussed during each session. It is also helpful to clarify what type or level of staff should participate in each session and what documentation should be available for review.
- **Products and timeline.** The evaluator should describe the general content and organization of the report and provide a timeline for when a final report will be produced.
- **Questions.** Limit questions to the evaluation process, procedures, and report. Questions about a specific program topic can be addressed during that session.

4.1 Program Management

Regulatory Requirements

Applicable federal regulations for the Phase I and Phase II NPDES regulations are listed at right. NPDES MS4 permits must address these requirements and often more specific state requirements as well.

Common Activities

Comprehensive Stormwater Management Planning

Phase I and Phase II permittees are required to develop SWMPs designed to reduce the discharge of pollutants from the MS4 to the MEP. Ideally, a SWMP is developed with input from internal and external stakeholders including, but not limited to, departments, agencies, and co-permittees within the permitted area, the general public, nonprofit organizations, state agencies, and watershed groups. This program should be described in a planning document (SWMP Plan) that details organizational structure and coordination scheme and a detailed description of the proposed controls or program components (i.e., public education and outreach) that includes performance standards or goals, standards, or timelines and a prioritization of existing resources.

Multiple co-permittees or different agencies may be involved in the development and implementation of the MS4 SWMP programs and Plan. To ensure that the program is implemented consistently by all, it is important that the SWMP describe the communication mechanisms between the co-permittees, and between the co-permittees and other agencies. Within a permittee's stormwater management structure there might be different departments that are to develop, implement, and enforce various components of the program. The SWMP should describe how the various departments communicate and coordinate activities.

Performance standards and goals are important tools for permittees to use to gauge the success of their programs in achieving measurable benefits and improving water quality. The development of performance standards or goals may not be required for many Phase I permittees, however, you should discuss the establishment of water quality-or performance-based goals for SWMP components and refer Phase I permittee's to available measurable goals guidance developed in response to the Phase II regulations (see Resources text box).

Assessment and Evaluation

SWMP evaluations not only demonstrate progress, but also allow the permittee to adjust programming, funding, or staffing levels for the upcoming year to best use existing resources to maximize water quality benefit. Evaluations should examine both direct measures, such as water quality indicators, and indirect measures of program

Federal NPDES Regulations

- ✓ Phase I MS4 Regulations
  40 CFR 122.26(d)(2)(iv)
  40 CFR 122.42(c)
- ✓ Phase II MS4 Regulations
  40 CFR 122.34(a)
  40 CFR 122.34(d)
  40 CFR 122.34(g)(1)
  40 CFR 122.34(g)(3)
  40 CFR 122.35(a)

Resources

- ✓ Menu of BMPs
  www.epa.gov/npdes/stormwater/menuofbmps
- ✓ Measurable Goals Guidance for Phase II Small MS4s
  http://cfpub.epa.gov/npdes/stormwater/measurablegoals/index.cfm
- ✓ Stormwater Phase II Fact Sheet Series
  http://cfpub.epa.gov/npdes/stormwater/swfinal.cfm
- ✓ National Management Measures to Control Nonpoint Source Pollution from Urban Areas
  www.epa.gov/owow/nps/urbanmm/index.html
- ✓ Stormwater Phase II Compliance Assistance Guide
  www.epa.gov/npdes/pubs/comguide.pdf
- ✓ Institutional Aspects of Urban Runoff Management
  www.stormwater.ucf.edu/publications/urban_runoff.pdf
- ✓ Stormwater Authority
  www.stormwaterauthority.com
- ✓ Stormwater Manager's Resource Center
  www.stormwatercenter.net

effectiveness, such as improved compliance rates of construction operations resulting from inspections.

Measurable Goals

According to the Stormwater Phase II Regulations, small MS4 operators must reduce pollutants in stormwater to the MEP to protect water quality. The regulations specify that compliance with the MEP requirement can be attained by developing a SWMP that addresses the six minimum control measures previously described in this Guidance. One component required in the Phase II MS4 SWMP is the selection of measurable goals to evaluate the effectiveness of the individual control measures and the SWMP as a whole. Phase I MS4 regulations do not specify the creation of measurable goals per se, but require the assessment of water quality improvements or degradation and propose changes to the SWMP necessary to improve effectiveness. Requiring measurable goals of Phase I permittees allow permitting authorities to track the permittee's progress in implementing BMPs and the overall SWMP. The process for developing measurable goals and the benefits of incorporating them into the evaluation of a MS4 program are the same for Phase I or Phase II permittees.

Resources

- ✓ Measurable Goals Guidance for Phase II Small MS4s. http://cfpub.epa.gov/npdes/stormwater/measurablegoals/index.cfm
- ✓ Measurable Parameters http://cfpub.epa.gov/npdes/stormwater/measurablegoals/parameters.cfm
- ✓ California Stormwater Quality Association. An Introduction to Stormwater Program Effectiveness Assessment. http://www.casqa.org/resources/product.php

To determine the effectiveness and success of a stormwater management program, managers must first determine the ultimate outcomes they wish to achieve. Then, programmatic, social, physical, and hydrological, or environmental indicators can be used to assess the achievement of the desired goals, or outcomes.

TIP:

Often, permittees do not develop measurable goals that truly quantify and track progress towards desired outcomes in the SWMP. Many times "performance standards" primarily consist of a list of BMPs. Performance standards should include quantifiable activities that can be tracked or criteria against which progress towards desired outcomes can be measured.

The California Stormwater Quality Association[1] (CASQA) asserts that there are six levels of stormwater management program outcomes. Each successive level represents increasingly difficult outcomes to not only achieve, but to assess.

The levels are:

1. Compliance with activity-based permit requirements
2. Changes in attitudes, knowledge and awareness
3. Behavioral change and BMP implementation
4. Pollutant load reductions
5. Changes in urban runoff and discharge quality
6. Changes in receiving water quality

Stormwater program managers may strive to achieve some or all of these outcomes; however, in general the "implementation outcomes" (1, 2, and 3 above) typically are easier to measure than the more complex goals of reducing loading and achieving changes in discharge and receiving water quality. In addition, these outcome levels are not independent of one another; the hope is that movement towards one will result in progress towards achieving another.

[1] CASQA. 2005. *An Introduction to Stormwater Program Effectiveness Assessment.* August 2005. http://www.casqa.org/resources/product.php

It is important that some measure of assessment be determined in conjunction with the establishment of each goal. A goal can be expressed qualitatively or quantitatively, and the associated index should be measurable, relevant, reliable, available, scientifically valid, replicable, and focused on measuring the outcome.

EPA has developed sets of "measurable parameters" for stormwater program managers to use as a guide when developing quantifiable goals. For example, the following implementation parameters could be used to quantify and track the effectiveness of an illicit discharge detection and elimination program component:

- Inventory conducted and sites prioritized for inspection
- Number of field tests conducted in high-risk areas
- Whether or not an ordinance was developed to allow entrance into private buildings for the purpose of conducting tests
- Number of illicit connections reported by business employees
- Number of survey responses indicating a possible illicit connection
- Number of illicit connections found
- Number of illicit connections repaired/replaced
- Whether or not an ordinance was developed for mandatory inspections of new buildings
- Number of new buildings inspected

CASQA asserts that depending on the outcome, various methods of obtaining necessary measurement data are available, including the following:

Method	Definition	Example
Confirmation	Documenting whether a task has been completed.	Development of an construction operator BMP outreach brochure
Tabulation	Tracking an absolute number or value of something	Number of brochures distributed to construction operators
Surveying	Determining knowledge, awareness, etc. of a group of people	Phone survey of 100 construction operators, 50 of whom had received the BMP brochure, to gauge any differences in stormwater awareness
Quantification	Estimating pollutant loading	Modeling to determine sediment load reductions prior to initiating construction operator outreach program – assumption made about BMP use before and after program
Inspections or site visits	Observing activities or BMPs	Inspections of construction projects before and after initiating construction operator outreach program
Reporting	Utilizing reports generated by third parties	Audit of construction component of the SWMP indicated that BMPs observed and the level of understanding demonstrated by operators had improved during the last year

Method	Definition	Example
Monitoring	Sampling or observation in the field to determine environmental or water quality conditions	Water quality monitoring above and below three comparable active construction sites (Site 1 – trained on construction BMPs, Site 2 – no training, Site 3 – random control, unknown level of BMP understanding) to determine any differences in per/acre disturbed loading of sediment

Permittees need to perform sampling and conduct scientific field assessments to assess specific water quality-related SWMP goals (i.e., pollutant load reductions, changes in urban runoff and discharge quality, and changes in receiving water quality). Some MS4 permits require water quality monitoring to establish baseline water quality conditions, determine the quality of discharges from different land uses or subwatersheds, measure the effectiveness of structural BMPs, or to participate in regional watershed monitoring efforts to track water quality trends.

Evaluating Program Management

Effective program management is essential to help guide SWMP development, implementation, administration, and continued assessment. Each program should have a management process that facilitates stormwater activity coordination between departments within each permittee, between co-permittees, and between the permittee and other organizations and agencies interested in stormwater quality. Some permits that regulate multiple co-permittees may allow for a separate "umbrella" management structure to perform certain functions, one of which may be management of certain components (e.g. public education) of the program and coordination among copermittees. These umbrella structures can be managed by the lead permittee or by consultants hired collectively by all co-permittees.

For More Information:

For an example of a program that uses an "umbrella" management structure, the Contra Costa Clean Water Program manages the stormwater program for nineteen co-permittees in Contra Costa County, California. Visit http://www.cccleanwater.org.

Another important aspect of program management is the development of goals or standards to measure effectiveness of the program from a water quality perspective. This is normally required by the permitting authority in addition to being helpful to MS4 SWMP coordinators for use in budgeting, staff allocation, and long-term planning. When evaluating a SWMP, you should question permittee staff regarding the desired outcomes for the program as a whole and for each individual program component. You should determine what, if any, assessment measures have been established for each goal and question the MS4 staff regarding progress.

The findings of the MS4 evaluation should not be based solely on the level of achievement of measurable goals. It is important, however, that the permittee's SWMP includes the use of measures to assess progress towards meeting goals that benefit water quality and not rely on "bean-counting." You should be confident that the SWMP is being regularly assessed and modified as necessary to improve effectiveness.

Typically, each MS4 SWMP would have a coordinator or other principal contact. This person would be the best to interview regarding program management procedures.

TIP:

Normally, it is not within the scope of a typical MS4 program evaluation to review or evaluate water quality monitoring data. Because of the amount of data, monitoring methods, and monitoring plans, this is an exercise best undertaken by NPDES staff that specializes in ambient water quality monitoring protocols and analysis.

Before the Program Evaluation

To prepare for the program management evaluation, an evaluator should review or obtain the following information prior to the evaluation:

Pre-Evaluation Checklist
- ✓ MS4 permit provisions
- ✓ SWMP provisions
- ✓ Most recent annual report
- ✓ Memorandums of understanding

- **MS4 NPDES permit provisions.** Review the permit requirements for program management to identify any specific requirements (such as annual reporting details). The NPDES permit will serve as the primary basis for the program evaluation.
- **SWMP provisions.** The permittee's SWMP planning document(s) should describe the overall management structure of the program.
- **Latest annual report.** The annual report should be reviewed to help you become familiar with the management structure of the program.
- **Memorandums of Understanding (MOUs)** or other written agreements between or among co-permittees or other agencies stipulating arrangements and responsibilities for meeting permit requirements.

Records Review

The following records might help in evaluating the permittee's program management structure. Ask for copies of relevant information where it will help in writing the report or documenting a permit violation.

Documentation	What to Look For
▪ Stormwater program staff lists ▪ Organizational charts ▪ Contact names and responsibilities	▪ Are specific departments and/or individual positions identified as responsible for each part of the SWMP? ▪ Are lines of authority and responsibility clear?
▪ Performance standards ▪ Program goals/measurable goals ▪ Implementation schedule	▪ Has the permittee documented a schedule and goals for guiding the SWMP in subsequent years? ▪ Are these goals specific enough for the SWMP to be evaluated?
MOUs or other agreements	▪ Does the permittee document partnerships with other agencies, nonprofit organizations, or other cooperating entities? ▪ Are the roles and responsibilities of each entity clearly identified?
▪ Tracking systems ▪ Reporting and assessment procedures	▪ Has the permittee established procedures or deadlines for reporting or program assessment, both within the permittee's structure and between agencies or co-permittees?
Coordination meeting schedules, task force rosters	▪ Do permittee staff responsible for implementing the SWMP meet periodically? ▪ Do municipal agency representatives meet to discuss SWMP implementation? ▪ Does the permittee meet with cooperating entities to discuss SWMP implementation?

Elements to Address During the Program Evaluation

A successful management structure will generally be composed of the following elements:

- Comprehensive stormwater management planning
  - Public participation
  - Intergovernmental, agency, and department coordination
  - Staff inventory and organization
  - Performance standards or goals
  - Prioritization of resources
- Data collection and reporting
- Assessment and evaluation
- Program adjustments based on ongoing assessments

The common program elements are the key issues to consider during the review. For each of the elements listed above, this Guidance presents common program activities and questions to consider during the program evaluation. The questions are suggested for you to address each program component. Of course, a comprehensive SWMP evaluation must be tailored to the specific issues associated with each permittee and should include more specific questions regarding the permittee's permit structure and management challenges.

COMPREHENSIVE STORMWATER MANAGEMENT PLANNING

SWMP Planning Documents

- ✓ Has a SWMP Plan been developed? If so, when? Last revised?
- ✓ If a SWMP plan has not been developed, what guidance does the permittee use to implement components of the SWMP?
- ✓ Is there a schedule for revision of the SWMP plan?
- ✓ If multiple co-permittees are included in the program, does each permittee have their own SWMP planning document?
- ✓ Is there an additional MS4-wide document, plan, or program? Who developed it?
- ✓ How were internal and external stakeholders included in the development or revision of the SWMP plan?

Intergovernmental, Agency, and Department Coordination

- ✓ If the permit covers more than one permittee, does the program contain a description of the roles and responsibilities of each permittee and procedures to ensure effective coordination?
- ✓ Is there an "umbrella" group that facilitates administration and coordination among the co-permittees?
  - What functions does this group perform?
  - Are there task forces or committees who are used to coordinate program-wide components and to address specific issues related to different program topics (e.g., Public Education and Outreach Committee)?

- Who are members of these committees?
- Are there regular meetings to coordinate amongst the co-permittees?

- ✓ Is there a formal agreement (e.g., an MOU) between the co-permittees?
- ✓ Discuss with the permittee the institutional arrangements between city departments that have been developed to ensure coordination and collaboration on stormwater management activities.
- ✓ Is there a stormwater committee (or equivalent) within the municipal permittee to help ensure coordination among city departments?
- ✓ How often does the committee meet? Who are the members, and are all the relevant city departments involved?
- ✓ Is the stormwater program coordinated with nonpoint source, **brownfield** redevelopment, transportation planning, underground injection control, coastal zone, household hazardous waste, recycling, and other relevant programs?
- ✓ Does the stormwater program use nonprofit organizations, watershed groups or other community organizations to administer required elements of their permit or minimum measures?

Staff Inventory and Organization

- ✓ Does the permittee have a person designated to lead and coordinate the stormwater program and activities?
- ✓ Does the SWMP planning document include an organization chart listing responsible parties for each SWMP component?

Performance Standards or Goals

- ✓ Has the permittee established measurable goals or performance standards for program components?
- ✓ If performance standards have been established, are they measurable or are they essentially BMP recommendations with level of service (i.e., number of miles swept) requirements?
- ✓ Does the permittee attempt to quantify or assess a program or a BMP's water quality impact or effectiveness as opposed to merely tracking level of service? For example, the percentage of violation recidivism for industrial facilities reinspected during a permit term may provide better information about the effectiveness of the industrial inspection program than the total number of facilities inspected in a year.

Prioritization of Resources

- ✓ Has the permittee identified specific pollutants of concern for its local water bodies?
- ✓ Are these pollutants of concern consistent with priorities identified in the **303(d)-listed** impairments for local water bodies?
- ✓ Are these pollutants of concern consistent with any water quality monitoring data or studies conducted by the permittee or another agency?
- ✓ Has the permittee developed strategies to specifically address those pollutants?
- ✓ How does the permittee decide on program priorities? Are these reassessed periodically?
- ✓ Does the SWMP include a schedule of activities?
- ✓ Does the MS4 discharge to a water body on the state's list of impaired waters?
    - What pollutants are identified on the list?

- Has stormwater been identified as a source?
- Does the SWMP specifically address this pollutant?
- Does the SWMP identify BMPs specifically for sources or discharges to the listed water body?

✓ Has a TMDL been developed for a water body to which the MS4 discharges and for which stormwater has been identified as a pollutant source?

- What pollutants are addressed in the TMDL?
- Does the TMDL specifically address (or include wasteload allocations for) stormwater?
- Has the corrective action plan or other planning to address TMDLs been reviewed for integration with the SWMP?
- Does the permittee's stormwater program address the pollutants of concern identified in the TMDL?

✓ Is the permittee participating in any watershed planning efforts?

✓ Have any goals been developed based on watershed issues, strategies, or challenges?

✓ Has the permittee established a set of indicators or parameters to assess progress toward meeting the goal(s) of the watershed plan?

✓ Is the permittee's stormwater program implemented on a watershed basis?

ASSESSMENT AND EVALUATION

Programs

✓ Does the permittee regularly measure progress against the established performance standards and goals?

✓ Are the goals quantifiable?

✓ Is the permittee analyzing data in the annual report to identify program activities that may need to change to address problem areas?

✓ Has the SWMP been altered based on this evaluation?

BMPs

✓ Is the permittee able to track both structural BMPs and non-structural BMPs and activities?

✓ Has the permittee set measurable goals or performance standards to evaluate individual BMPs and activities or suites of BMPs that address a particular pollutant source?

✓ Is there a process to evaluate or revise individual BMPs and suites of BMPs when receiving water outcomes or endpoints are not being met?

✓ Do assessments evaluate impacts of BMPs on ground water?

✓ Is the permittee analyzing data in the annual report to identify individual BMPs or suites of BMPs that may need to change to address problem areas?

Water Quality

- ✓ Has the permittee documented environmental, water quality, stream corridor, habitat, or other types of improvements?
- ✓ Has the permittee estimated reductions in pollutant loadings from the MS4 or other quantifiable water quality benefits expected as the result of the municipal stormwater program?

MONITORING

Note: It is important to tailor these questions to each permittee's monitoring requirements as specified in their permit.

Wet Weather Outfall Screening and Monitoring

- ✓ Does the permittee conduct wet weather screening at outfalls to characterize stormwater flows from the MS4?
- ✓ Does the permittee have written screening procedures?
- ✓ What is the permittee's schedule for screening the sites?
- ✓ Are parts of the permit area prioritized for screening based on incidents of illicit discharges, land use, dumping reports, etc.?
- ✓ What parameters are being tested?
- ✓ How does the permittee prioritize sites for follow-up (e.g., magnitude and nature of suspected discharge)?
- ✓ Who conducts the sampling? What kind of training have sampling personnel received?
- ✓ What type of records are kept?
    - o Analytical results
    - o Date and duration (in hours) of the storm events sampled (rainfall data)
    - o Rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff (rainfall data)
    - o Duration (in hours) of the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (rainfall data)
    - o Estimate of the total flow of the discharge sampled (stage and velocity)
- ✓ What analytical methods are used (i.e., 40 CFR Part 136)?
- ✓ What are the results of the initial sampling and analysis?
- ✓ Has the permittee made any changes to the monitoring program based on past results and experience?
- ✓ How have monitoring results been used to assess program components?
- ✓ Are monitoring data used to estimate pollutant loads for a TMDL?

Dry Weather Outfall Screening and Monitoring

- ✓ Does the permittee conduct dry weather screening at outfalls to identify non-stormwater discharges?
- ✓ Does the permittee have written screening procedures?
- ✓ What is the permittee's schedule for screening the sites?
- ✓ Are parts of the permit area prioritized for screening based on incidents of illicit discharges, land use, dumping reports, etc.?
- ✓ What parameters are being tested?
- ✓ How does the permittee prioritize sites for follow-up (e.g., magnitude and nature of suspected discharge)?
- ✓ Who conducts the sampling? What kind of training have sampling personnel received?
- ✓ What type of records are kept?
    - o Analytical results
    - o Date and duration (in hours) of the storm events sampled (rainfall data)
    - o Rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff (rainfall data)
    - o Duration (in hours) of the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (rainfall data)
    - o Estimate of the total flow of the discharge sampled (stage and velocity)
- ✓ What analytical methods are used (i.e., 40 CFR Part 136)?
- ✓ What are the results of the initial sampling and analysis?
- ✓ Has the permittee made any changes to the monitoring program based on past results and experience?
- ✓ How have monitoring results been used to assess program components?
- ✓ Are monitoring data used to estimate pollutant loads for a TMDL?

Biological Monitoring

- ✓ Does the permittee perform biological sampling?
- ✓ Has a plan been developed to conduct biological sampling? If so, does the plan include the following:
    - o Identification of sampling stations and rationale for selection
    - o Location of known major MS4 outfalls discharging to water bodies in which sampling stations were chosen
    - o Land use activities near sampling stations
    - o Frequency of monitoring
- ✓ Who conducts biological sampling and what training have they received?

- ✓ Has the permittee made any changes to the monitoring program based on past results and experience?
- ✓ How have monitoring results been used to assess program components?

Ambient Monitoring

- ✓ Does the permittee conduct ambient monitoring to characterize water quality conditions in receiving waters?
- ✓ How were the sampling sites selected?
- ✓ Is sampling conducted both during dry weather and wet weather?
- ✓ What is the frequency of sampling?
- ✓ What parameters are analyzed? What sampling and analytical methods have been used?
- ✓ Does the permittee have a written protocol or procedures for this sampling program?
- ✓ Who conducts the sampling and what training have they received?
- ✓ Has the permittee made any changes to the monitoring program based on past results and experience?
- ✓ How have monitoring results been used to assess program components?
- ✓ Are monitoring data used to estimate pollutant loads for a TMDL?

DATA COLLECTION AND REPORTING

- ✓ What reporting requirements are included in the MS4 NPDES permit?
- ✓ If multiple permittees are covered, are there different requirements for the co-permittees and the "umbrella" group?
- ✓ For co-permittees or Phase II permittees that rely on other entities to implement required elements of the program, how are data provided or reported?
- ✓ How are the required data collected, tracked, and reported?
    - o Is there a database?
    - o Are there reporting forms?
- ✓ Are there internal reporting deadlines within the municipal program structure?
- ✓ Are the appropriate data being collected by the permittee to be able to measure effectiveness and determine if performance standards are being met?
- ✓ How are data disseminated to those who use them, if at all?

<u>In-Field Program Evaluation Activities</u>
In-field activities are not necessary to evaluate program management.

Common Issues Identified During Program Evaluations

- ✓ The permittee lacks necessary intradepartmental coordination on stormwater issues.
- ✓ The permittee does not describe a formal, coordinated program framework.
- ✓ The SWMP does not identify pollutants of concern or program priorities.

- ✓ The program does not have measurable goals to track and quantify progress towards desired outcomes.
- ✓ The "umbrella" group for multiple co-permittees has a program or plan, but nothing has been developed for each specific co-permittee to detail actual implementation or goals specific to each co-permittee's program.
- ✓ No SWMP planning document(s) exist to guide the implementation of SWMP components.
- ✓ The SWMP has not been revised and updated based on evaluations of effectiveness.

4.2 Public Education and Participation

Regulatory Requirements

EPA's federal NPDES regulations for the stormwater Phase I and Phase II are listed at right. NPDES MS4 permits must address these requirements and often include more specific provisions.

Public education is not addressed as a separate program area in the Phase I regulations. Two general public education requirements are contained in the illicit discharge detection and elimination program requirements, as well requirements for education of pesticide, herbicide, and fertilizer applicators and construction site operators. The latter two programs are discussed in greater detail in the MS4 Maintenance and Construction Activities sections of Conducting an Evaluation.

The NPDES Phase II regulation's minimum control measures include requirements for Public Education and Public Participation.

Common Activities

Public education efforts aim to project information to the audience, while the goal of a public participation and involvement program is to encourage volunteerism, public comment and input on policy, and activism in the community. Many activities can and often do achieve both goals, therefore many permittees combine the two into one public outreach program component and develop joint materials. For example, a brochure about stormwater impacts could also invite residents to participate in a stream cleanup. In addition, it is common for several co-permittees to combine funds and produce one set of public outreach materials to distribute regionally or simply use another permittee's materials.

Goals and Objectives

Although not specified in NPDES regulations, ideally a stormwater outreach program should have a strategy to address public education and participation. The outreach strategy should be outlined in a document that may only be a few pages but should establish who is responsible for specific tasks, how much is budgeted, and the dates of implementation (especially if the permittee has to apply for funding support) and completion.

A permittee's outreach program should include goals based on specific stormwater quality issues in the community or pollutants of concern as well as specific target audiences. The goals can be quantitative (i.e., numbers of classroom presentations per year) or qualitative (i.e., increased stormwater awareness among Spanish-speaking residents regarding illegal dumping demonstrated by awareness surveys). Goals can be short-term or long-term but should be designed to be reassessed on a regular basis. Goals should also be progressive; for example, a goal for the first two years may be based on increasing public awareness of certain issues, whereas a goal for

Federal NPDES Regulations

NPDES MS4 permits must address these requirements and often include more specific state requirements:

✓ Phase I MS4 Regulations

Public Education
40 CFR 122.26(d)(2)(iv)(B)
40 CFR 122.26(d)(2)(iv)(D)(4)
40 CFR 122.26(d)(2)(iv)(A)(6)

Public Participation
40 CFR 122.26(d)(2)(iv)(D)

✓ Phase II MS4 Regulations

Public Education
40 CFR 122.34(b)(1)

Public Participation
40 CFR 122.34(b)(2)

Resources

- ✓ EPA Menu of BMPs http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm
- ✓ Getting In Step http://www.epa.gov/owow/watershed/outreach/documents/getnstep.pdf
- ✓ EPA Stormwater Month Outreach Materials and Reference Documents www.epa.gov/npdes/stormwatermonth
- ✓ Think Blue San Diego, an overview of San Diego's stormwater pollution prevention program http://www.thinkbluesd.org/why.htm
- ✓ CTIC Know Your Watershed http://www.ctic.purdue.edu/KYW/

subsequent years would be based on measurable changes in behavior as a result of increased awareness.

Though each permittee may select its own unique set of goals, the ultimate outcome of all programs should be to elicit specific changes in behavior that benefit water quality. Brochures and presentations are means to this end, but they do not necessarily indicate a meaningful and successful public education program.

Message Development

The permittee's stormwater outreach messages should be clear, specific, and tied directly to elements that each specific audience values, in addition to goals established in the SWMP. Multiple messages may be necessary to address various audiences or behaviors.

Target Audiences

An outreach strategy should identify target audiences a permittee wants to reach with appropriate messages. Target audiences can be segmented by geographic location, demographics, occupation, or behavior patterns. Selection of a target audience can be based on stormwater quality issues and behaviors to be altered. The permittee should determine what information the target audience needs, gather information on the profile of the target audience, and collect information on the barriers to reaching this target audience. As stormwater awareness is evaluated and the program evolves, the target audience may change as well.

Message Packaging

Permittees use various packages to deliver messages to different target audiences. The packages should be appropriate to the audience (i.e., demographic, employment, geographic location, etc.). Packages for messages can include brochures, TV and radio spots, videos, presentations, events, and other formats.

Distribution Mechanisms

There are many ways to distribute outreach messages and materials. Distribution methods should be specific to the message and audience. Often, co-permittees or other partners (i.e., nonprofit organizations, watershed groups, other government agencies) share the distribution costs to best use available resources. Often goals or permit requirements are tied to distribution; therefore, permittees should track distribution of materials, program-related presentations, and other delivery methods.

Evaluation Methods

Permittees can evaluate the effectiveness of an outreach strategy in a number of ways, but any method should be linked to established measurable goals. Some use public surveys to gauge changes in awareness or behavior of the target audiences. The surveys can be conducted in person at events, on the phone, or using Web-based survey tools. Others track quantifiable data such as brochures distributed, people trained, participation in events, volunteer hours, etc. Ultimately, permittees should track metrics showing the adoption of desirable behavior changes.

Public Participation Activities

Ideally, permittees give the public the opportunity to participate in the development, implementation, evaluation, and improvement of the stormwater program. At the very least, permittees need to notify the public about the availability of the SWMP and notice of intent and solicit comments. Some permittees have stakeholder workgroups that are involved in developing policy and programs. Many permittees encourage and facilitate involvement by coordinating or promoting community events and promoting volunteerism in the community through activities such as storm drain stenciling, stream cleanups, riparian tree plantings, and other programs.

Evaluating Public Education and Participation Programs

The public education and participation component of a SWMP may be implemented by one person or department (e.g., a communications office) or be a combination of efforts by many people, departments, or agencies. An evaluator should question the SWMP coordinator about key staff to talk with prior to the evaluation. It may be possible for the coordinator to relay all necessary information without having to track down numerous staff. It is also a good idea for you to request that copies of pertinent outreach materials be compiled to review during the evaluation or taken to review after.

Some permittees will want to present all stormwater public education activities as an independent program area, while other permittees describe education activities in each relevant SWMP component (for example, education of construction operators is addressed in the construction component or public education on illicit discharges is addressed in the illicit discharge component). An evaluator should take note of how the permittee organizes its education activities and adjust the evaluation process accordingly.

Before the Program Evaluation

An evaluator should review or obtain the following information prior to the evaluation:

Pre-Evaluation Checklist
- ✓ MS4 permit provisions
- ✓ SWMP provisions
- ✓ Most recent annual report

- **MS4 NPDES permit provisions.** Review the permit requirements for public education and public participation to identify any specific requirements (such as the type of activities the program must include or the pollutants the program must address). The NPDES permit will serve as the primary basis for the program evaluation.
- **SWMP provisions.** The permittee's SWMP should describe the overall outreach structure of the program and any measurable goals.
- **Latest annual report.** The annual report should be reviewed to help you become familiar with the activities that have been conducted in the past and the progress made towards achieving measurable goals of the program component.

Records Review

The following records might help in evaluating the compliance and performance of the permittee's public education and participation program. Ask for copies of relevant information where it will help in writing a report or documenting a permit violation.

Documentation	What to Look For
Public outreach or communication strategy	Target audiences, specific stormwater messages, tracking methods, measurable goals, a plan to review and modify the strategy over time.
Stormwater Web site	Pamphlets, calendars of events, hotlines, contact information, access to stormwater permit requirements and SWMP documentation, general stormwater information, volunteer opportunities
Public awareness survey	Public awareness surveys may be available to assess either baseline awareness or movement towards measurable goals.

Elements to Address During the Program Evaluation

This Guidance presents common program activities and questions to consider during the program evaluation. Of course, a comprehensive program evaluation must be tailored to the specific issues associated with each permittee and should include more specific questions regarding the permittee's permit structure and management challenges.

GOALS AND OBJECTIVES

- ✓ Does the permittee have a strategy document for education and participation?
- ✓ Does the document include specific goals?
- ✓ On what are the goals based?
- ✓ Are the goals measurable? How?

MESSAGE DEVELOPMENT

- ✓ Have specific messages been developed for stormwater outreach?
- ✓ On what are the messages based? Pollutants of concern? General awareness? Problem target audience? All of the above?
- ✓ Are different messages used for different target audiences (i.e., children, homeowners, industry, etc.) or is one central message used for all?
- ✓ Do the messages encourage participation in stormwater-related activities?
- ✓ Do the messages educate about behavior changes that the audience can make to contribute to a solution?
- ✓ Have messages been developed specific to reducing illicit discharges with information about how to report them to the appropriate authorities?
- ✓ Have messages been developed to educate pesticide, fertilizer, and herbicide applicators (including homeowners) about ways to reduce stormwater pollution?

TARGET AUDIENCES

- ✓ Has the permittee identified target audiences for outreach efforts? How are these target audiences selected? What are the target audiences?
- ✓ What land use groups (i.e. industry, commercial businesses) has the permittee targeted?
- ✓ Have certain ethnic groups or nationalities been identified as audiences to be targeted based on an evaluation of local demographics?
- ✓ Have the target groups been reevaluated based on evaluation of the strategy and progress that has been made?
- ✓ Has the Phase I permittee targeted pesticide, herbicide, and fertilizer applicators (including homeowners) and construction site operators for outreach?
- ✓ Has the Phase II permittee targeted industries or commercial businesses of concern for outreach?

MESSAGE PACKAGING

- ✓ Does the permittee have a variety of written educational materials?
- ✓ Does the permittee have a variety of other packages (i.e., Web site, presentations, displays) for educational materials?
- ✓ Did the permittee produce the education and outreach materials in the different languages that are spoken in the community?
- ✓ Do the permittee's materials explain stormwater issues in easy-to-understand terms?

DISTRIBUTION MECHANISMS

- ✓ Does the permittee track distribution of materials to measure effectiveness?
- ✓ Is the permittee focused solely on distribution or is an effort made to evaluate the impact of the messages?
- ✓ Does the permittee use a variety of distribution mechanisms to target various audiences?

EVALUATION METHODS

- ✓ How does the permittee evaluate the effectiveness of the outreach strategy?
- ✓ Has the permittee conducted a public awareness survey?
- ✓ Which outreach materials have been the most effective in soliciting public involvement and participation? Changing audience behaviors? Increasing general stormwater awareness?
- ✓ Have any changes been made to the outreach strategy or materials based on an evaluation of effectiveness?

PUBLIC PARTICIPATION ACTIVITIES

- ✓ What opportunities does the permittee give to the public to review and comment on any changes to the SWMP, such as public comment via a Web site, a public meeting, or a stormwater advisory group?
- ✓ What volunteer opportunities (i.e., stream cleanups, storm drain stenciling) does the permittee coordinate or publicize to encourage the public to participate in stormwater-related activities?
- ✓ Does the permittee sponsor or promote any of the following activities?
    - o Beach/stream/lake cleanups
    - o Volunteer stream monitoring
    - o Stream clean-ups or equivalent activities
    - o Stormwater citizen panel

<u>In-Field Program Evaluation Activities</u>

The evaluation for this program area will be primarily conducted with the permittee in the office or by reviewing materials before or after the evaluation. However, evaluators can take note during other field activities to observe the stormwater educational materials available and distributed. For example, when visiting the permittee's permit counter, assess the types of stormwater outreach materials available to applicants for new construction projects. When driving around the permit area, observe if posters,

billboards, or other signs display stormwater messages. These types of field observations about the permittee's public education activities can help assess the effectiveness of the program.

Common Issues Identified During Program Evaluations

The following should be closely considered during evaluations of permittees:

- ✓ Permittees set inappropriate or immeasurable goals for activities.
- ✓ Permittees are not including key target audiences.
- ✓ Permittees are not customizing the materials for the target audience.
- ✓ Permittees are not developing materials for commonly spoken languages.
- ✓ Permittees are not distributing the materials adequately using appropriate methods for the target audience.
- ✓ Permittees are not facilitating involvement in program development, implementation, and improvement during the course of the permit term.
- ✓ Permittees are not coordinating or promoting events or activities that would improve water quality or change behaviors of concern.

4.3 MS4 Maintenance Activities

Regulatory Requirements

Applicable Phase I and Phase II federal NPDES regulations are listed at right.

General Permits

Although MS4 maintenance activities are addressed in MS4 NPDES permits, it is important to note that some permittees will also have coverage under industrial stormwater general permits or have individual permits for maintenance facilities that fall under one of the covered industrial categories, such as landfills, waste transfer stations, or transportation facilities.

Federal NPDES Regulations

NPDES MS4 permits must address these requirements and often include more specific state requirements:

- ✓ Phase I MS4 Regulations 40 CFR 122.26(d)(2)(iv)(A)
- ✓ Phase II MS4 Regulations 40 CFR 122.34(b)(6)(i)

Common Activities

Infrastructure Mapping and Characterization

Debris, **floatables**, sediment, metals, and other pollutants are caught in the MS4 and a regular program to inspect, clean, and repair components of this infrastructure will reduce the pollutants leaving the system and entering surface waters. A map of the MS4 is important for the permittee to plan for and track proper maintenance of inlets, catch basins, outlets, conduits, and management structures such as detention basins.

Public Streets Operation and Maintenance

The SWMP should address and include various practices for operating and maintaining public streets, roads, and highways that reduce the impact on receiving waters of discharges from municipal storm sewer systems. These practices should include regular street sweeping and proper use of BMPs during street maintenance activities. In addition, where applicable, permittees should consider deicing agent application methods that minimize the discharge of pollutants into the MS4, as well as salt and sand storage, fleet maintenance, fueling, and washing.

Flood Management

Permittees should assure that the impacts on the water quality of receiving water bodies are assessed in municipal or regional flood management projects and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from stormwater is feasible.

Public Facilities Operation and Maintenance

The SWMP should include a mechanism to inventory and assess the impact of stormwater runoff from municipal facilities. The inventory should include all facilities that treat, store, or transport municipal waste as well as industrial/commercial facilities (facilities covered by a general permit as well as those defined by the Industrial/Commercial Facilities program component). Facilities

Resources

- ✓ Menu of BMPs www.epa.gov/npdes/menuofbmps
- ✓ California Stormwater Quality Association's Municipal BMP Handbook www.cabmphandbooks.com/Municipal.asp
- ✓ National Management Measures to Control Nonpoint Source Pollution from Urban Areas http://www.epa.gov/owow/nps/urbanmm/index.html
- ✓ North Texas Council of Governments - Stormwater Pollution Prevention Training Module Series http://www.nctcog.org/envir/SEEclean/stormwater/program-areas/pollution_prevention/CD/Version_1/P2_Training_Materials.asp

MS4 Facilities

- ✓ Municipal maintenance yard
- ✓ Fleet maintenance facility
- ✓ Chemical storage facility
- ✓ Household hazardous waste facility
- ✓ Solid waste transfer station
- ✓ Animal control facility
- ✓ Salt storage facility

with activities characterized as a potential threat should be inspected and BMPs should be implemented to reduce water quality impact.

Pesticide, Herbicide and Fertilizer Application and Management
The SWMP should include a component to reduce pollutants associated with the application of pesticides, herbicides, and fertilizer. This program should include, as appropriate, educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at permittee owned or operated facilities, such as playing fields and other recreational facilities.

Training and Education
To ensure that maintenance staff is knowledgeable and proficient in the newest and most effective approaches to minimizing stormwater pollution from facilities and activities, many permittees require annual BMP training for field staff. This training may be presented in-house or staff may attend trainings provided by the permitting authority or industry. It is important to cross-train or educate any contracted staff used for field work as well. Many permittees also provide general stormwater awareness training to all employees.

TIP:

MS4 permittees are not required to enforce the NPDES (state or federal) industrial stormwater general permit, but they are required to comply with this permit at their own facilities. This includes the submittal of a notice of intent, development of a stormwater pollution prevention plan (SWPPP) or equivalent, inspections, and other requirements specified in the applicable industrial stormwater general permit.

Evaluating MS4 Maintenance Programs

MS4 maintenance encompasses a large variety of facilities and activities necessary to operate and maintain a permittee's infrastructure, which include streets, facilities, and the storm drain system. MS4 maintenance activities typically are designed to maintain a certain level of service to maintain the aesthetics of public areas, provide public safety, maintain public infrastructure, and provide flood management, rather than for stormwater quality protection. When reviewing MS4 maintenance programs, however, an evaluator should focus on activities that might impact stormwater quality. The following should be evaluated:

1. How the permittee has inventoried all its infrastructure and facility maintenance activities
2. How the permittee has reviewed maintenance activities to assess potential impacts on stormwater quality
3. Whether the permittee has revised activities or implemented new measures to protect stormwater quality

MS4 maintenance staff should be trained on stormwater BMPs and principles, and have clear guidance on appropriate stormwater BMPs to use during typical maintenance operations and facilities management.

Various departments may be involved in the MS4 maintenance component of a SWMP. Within a municipality, the majority of functions normally are performed by public works staff. However, be sure to discuss the areas to be evaluated with the SWMP coordinator to ensure that the appropriate staff are available to interview during the evaluation. Departments or agencies that might need to be interviewed include streets and highways, facilities management, water authority, fire department, wastewater treatment plant, flood control district, solid waste, and parks and recreation. As previously stated, it is important to interview managers as well as field staff whenever possible.

Before the Program Evaluation

To prepare for the MS4 maintenance program evaluation, an evaluator should review or obtain the following information prior to the evaluation:

Pre-Evaluation Checklist
- ✓ MS4 permit provisions
- ✓ SWMP provisions
- ✓ Most recent annual report
- ✓ NPDES-permitted municipal facilities
- ✓ Municipal facility inspection reports

- **MS4 NPDES permit provisions.** Review the permit requirements for the MS4 maintenance program to identify any specific requirements (such as a minimum street sweeping frequency). The NPDES permit will serve as the primary basis for the program evaluation.
- **SWMP provisions.** The permittee's SWMP planning document(s) should describe the activities and BMPs that the permittee has committed to implement and may include measurable goals that provide deadlines for program implementation.
- **Latest annual report.** The annual report should be reviewed to identify past activities and help you become familiar with the permittee's SWMP.
- **List of permittee-owned or -operated facilities with NPDES permits.** Try to obtain a list of industrial facilities owned or operated by the permittee that are covered by an NPDES industrial stormwater permit issued by the permitting authority (i.e., household hazardous waste collection facility). This list can be used during the program evaluation to determine whether the permittee is including the facilities that are covered by an industrial stormwater general permit in the inspection program and to understand the types of facilities present in the permit area. The list can also help identify potential sites for the field inspections.
- **MS4 maintenance facility inspection reports.** Review reports from inspections performed by the permitting authority within the permit area and talk to state inspectors to determine if there have been past stormwater violations at facilities owned or operated by the permittee.

Records Review

The following records might help in evaluating the compliance and performance of the permittee's MS4 maintenance activities. Ask for copies of relevant information where it will help in writing the report or documenting a permit violation.

Documentation	What to Look For

Tracking systems
✓ Catch basin cleaning
✓ Street sweeping
✓ Pump station maintenance
✓ Structural BMP maintenance
	▪ What type of water quality-related information is tracked (i.e., tons of material swept)
	▪ Does the permittee set priorities and goals for MS4 maintenance activities each year?
	▪ How are these priorities and goals established?
	  ▪ Pollutants of concern
	  ▪ Watersheds of concern
	▪ Review how these activities are summarized for the annual report

In-field inspection sheets	▪ What guidance is provided to inspectors or maintenance crews to ensure they're properly inspecting and maintaining stormwater infrastructure?

Documentation	What to Look For
Maintenance SOPs	▪ Review standard operating procedures or any employee manuals or fact sheets used by permittee staff to conduct their day-to-day activities to determine if stormwater BMPs are described
List of municipal facilities	▪ Have the facilities been prioritized based on potential water quality impacts? ▪ Are the facilities inspected? How often? Who inspects?
MS4 maintenance facility SWPPPs	▪ Are SWPPPs (or equivalent) for permittee-owned or -operated maintenance yards, wastewater treatment plants, public transit facilities that perform maintenance, or other facilities adequately addressing stormwater? ▪ When were the SWPPPs last updated?
Training schedule	▪ Review training records to determine how often training is provided, who is required to attend
Pesticides, herbicides, and fertilizers ✓Application records and protocols ✓Applicator certifications and training	▪ Has the permittee tracked the types and amounts of chemicals applied in the permit area? ▪ Does the permittee have state-certified pesticide applicators? ▪ Are the applicators' certifications up to date?
Flood management program	▪ Review the permittee's capital improvement project list for flood drainage or flood management projects. ▪ Review the permittee's watershed master plans or flood drainage master plans for flood management projects. ▪ What types of evaluation criteria have been used to prioritize the projects on the (CIP) list or in the watershed master plan (e.g., water quality impacts)? ▪ Determine whether permittee has a documented evaluation showing why it is not feasible to retrofit existing flood management projects.

Elements to Address During the Program Evaluation

Although the specific nature of a successful municipal program is not specified in NPDES regulations, it will generally be composed of the following components:

- Stormwater infrastructure management and maintenance
- Public streets operation and maintenance
- Flood management
- Public facilities operations and maintenance
- Pesticide, herbicide and fertilizer application and management, as well as erosion control, landscaping, and turf grass care

- Standards, BMPs, and outreach for municipal staff
- Training and education

For each of the elements listed above, this Guidance presents questions to consider during the program evaluation. Of course, a comprehensive program evaluation must be tailored to the specific issues associated with each permittee and should include more specific questions regarding the permittee's permit structure and management challenges.

STORMWATER INFRASTRUCTURE OPERATION AND MAINTENANCE

Infrastructure Mapping and Characterization

- ✓ Does the permittee have a map showing all inlets, outfalls, storm drain conduits, stormwater management facilities, and receiving water bodies?
    - o Does this map include catch basins and structural stormwater controls?
    - o Is the map readily available and used by maintenance field staff when performing maintenance activities?
    - o Is the map in hard copy format only or is it also in a geographic information system (GIS)?
- ✓ Are infrastructure assets or components named or numbered to better track necessary maintenance and repairs?

TIP:

A map is also required for the illegal connection and illicit discharge detection and elimination programs described in this Guidance. The maps developed for MS4 maintenance and illegal connection and illicit discharge programs can be the same to best use resources.

- ✓ Is information regarding stormwater infrastructure maintained in a database or mapping system? What types of data are maintained?
    - o Type of structure or asset
    - o Location (address, latitude/longitude)
    - o Photo
    - o Date built
    - o Date last inspected
    - o Date last cleaned/maintained

Catch Basin Cleaning

- ✓ Does the permittee have a schedule for routine maintenance or cleaning of catch basins?
    - o How many are cleaned and how often?
    - o Has the permittee targeted certain areas for more frequent maintenance? Does this targeting help minimize stormwater pollution?
    - o Does the permittee set goals for how many basins are inspected and cleaned each year?
    - o How does the permittee track and record cleaning and maintenance needs?
    - o What information is documented? Does the permittee track which catch basins are cleaned, how much material is removed, and so forth?
    - o How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency? Are they used to identify areas for targeted outreach?
- ✓ What are the permittee's procedures for disposing of waste removed from catch basins or storm drains?
    - o Does the permittee flush material that could potentially discharge to surface water?

- If the material is removed using a wet vacuum, how is the material dewatered? How is the decanted water disposed?

- ✓ Does the permittee have a schedule for routine maintenance or inspection of storm drain pipes?
- ✓ What are the permittee's maintenance procedures for cleaning clogged storm drain pipes?

Stormwater Management Structures

- ✓ Are catch basins and other inlet structures marked so that the public knows they drain to surface waters?
- ✓ Has the permittee inventoried the type and location of public stormwater management structures in its jurisdiction? How are the data collected and stored?
  - Pump stations
  - Drainage structures (debris basins, detention basins, regional ponds, etc.)
  - Structural treatment controls
  - Open channels
- ✓ How is vegetation maintained in grassed swales, rain gardens, pond perimeters, and other vegetated stormwater controls?
- ✓ Has the permittee mapped private stormwater management structures?
- ✓ How often are these facilities inspected?
- ✓ Are the stormwater management structures regularly maintained by the permittee?
  - Are records kept of material and debris removed during maintenance?
  - How is maintenance conducted? Are chemicals used to maintain vegetation and pests?
- ✓ How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency? Are they used to identify areas for targeted outreach based on type and volume of materials removed?

TIP:

Governmental Accounting Standards Board (GASB) Statement No. 34, Basic Financial Statements and Management's Discussion and Analysis for State and Local Governments (Statement 34) establishes new requirements for the annual financial reports of state and local governments. The Statement was developed to make annual reports easier to understand and more useful to the people who use governmental financial information to make decisions. Statement 34 requires governments to document and report existing infrastructure and depreciate their capital assets.

Permittees can utilize the information obtained through this required reporting to inventory assets such as maintenance facilities, stormwater management structures and MS4 infrastructure (i.e. outfalls, storm sewer pipes, catch basin).

http://www.gasb.org/

PUBLIC STREETS OPERATION AND MAINTENANCE

Street Sweeping

- ✓ Does the permittee regularly sweep streets? Public parking lots?
- ✓ What is the schedule for street sweeping?
- ✓ Are areas scheduled for sweeping based on aesthetics only or is consideration given for reducing impacts on the stormwater management infrastructure and surface water?
- ✓ What types of sweepers are used? Wet or dry?

TIP:

It is a good idea to question both managers and field staff regarding BMPs used. It is helpful to ascertain the level of understanding at the field level as well what types of BMPs are deemed appropriate and feasible for the specific MS4.

- ✓ How is street-sweeping debris disposed? If the debris is dewatered, how is this done? How is the decanted water disposed?
- ✓ Are records kept of the amount of debris collected?
- ✓ How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency?

Yard Debris Reduction and Disposal

- ✓ Does the permittee offer guidance or services to encourage mulching and/or composting of grass clippings and other yard debris?
- ✓ Does the permittee offer seasonal recycling or disposal services to collect leaf litter, Christmas trees, yard debris, or other seasonal organic materials?

Public Streets, Roads, and Highways Maintenance

- ✓ What types of public streets, roads, and highways operation and maintenance practices and procedures are performed by the permittee?
- ✓ Are BMPs used by field crews to minimize stormwater impacts during road maintenance or repair activities?
- ✓ What types of BMPs are used? Discuss BMPs used for such activities as:
    - o Ditch cleaning
    - o Sidewalk repair
    - o Asphalt patching
    - o Curb and gutter repair
    - o Street striping
    - o Sign painting
    - o Maintaining dirt and gravel roads (preventing erosion, dust control)

Deicing Activities

- ✓ What types of deicing agents does the permittee use? If salt is used, has the permittee investigated alternatives?
- ✓ How are deicing agents, sand, or other materials stored? Is the material covered and/or bermed to prevent runoff?
- ✓ Does the permittee track the locations and volumes of deicing agents, sand, or other materials applied?
- ✓ Is the material picked up after the snow/ice event is concluded? Is there a schedule for picking it up after an event?

FLOOD MANAGEMENT

- ✓ Does the permittee have an inventory of structural flood management structures?
- ✓ Have these structures been assessed to determine whether retrofitting could provide additional water quality benefits?
- ✓ How often are flood management projects inspected and/or maintained?
- ✓ Are new flood management projects being designed or planned to include water quality considerations?

PUBLIC FACILITIES OPERATION AND MAINTENANCE

Facility Inventory

- ✓ Does the permittee have an inventory of public facilities? At a minimum, this list should include the following:
    - o Public works yards
    - o Public transit facilities
    - o Wastewater and domestic water treatment plants
    - o Sanitary sewer system overflow locations
    - o Public parks/open areas
    - o Public parking lots
    - o Public buildings
    - o Landfills and hazardous waste disposal sites, transfer locations, or storage facilities
- ✓ Have the facilities been inspected and assessed for water quality impacts?
- ✓ Are any facilities required to apply for coverage under a general industrial permit? Do these facilities have SWPPPs?

Maintenance Yard Management

- ✓ If the permittee is a municipality, does the municipal public works yard have a SWPPP?
- ✓ Who is responsible for implementing and maintaining the SWPPP?
- ✓ Who is responsible for periodically inspecting the yard for stormwater compliance?

Parks Operation and Maintenance

- ✓ Are there adequate trash enclosures available at park facilities? Are they emptied regularly?
- ✓ Does the permittee provide any stormwater education or signage at parks and other areas?
- ✓ How are public restrooms cleaned and maintained? What chemicals are used? How is cleanup water disposed of?
- ✓ How are public pools maintained? How is the chlorinated water disposed of?
- ✓ Does the permittee include pet waste disposal stations with signage and baggies in public parks?
- ✓ What BMPs are used to address:
    - o Stormwater impacts from turf grass maintenance?
    - o The transport of pesticides, herbicides, and fertilizers by stormwater?
    - o Erosion?
- ✓ What types of vegetated BMPs are implemented at parks (e.g., alternative landscaping to minimize high-maintenance turf grass, streamside buffers, reduced mowing frequency, etc.)
- ✓ Does the permittee implement water conservation measures at its park facilities?

Building Operation and Maintenance

- ✓ Are the permittee's parking lots regularly swept?
- ✓ How are enclosed parking structures and other public buildings cleaned? If power washing is used, are BMPs implemented to protect storm drain inlets?

Sanitary Sewer System Maintenance, Overflow, and Spill Prevention

- ✓ Does the permittee have a program to mitigate or prevent **sanitary sewer overflows (SSO)** from entering the MS4?
- ✓ Have flow pathways from SSO locations to catch basins or other points of entry to the MS4 been identified?
- ✓ Have spill prevention and cleanup plans been prepared?
- ✓ Does the permittee have a written procedure to ensure that the MS4 is protected from a sewage overflow or spill? Do the procedures include protection of the storm drain system during and after the cleanup of a spill or overflow?
- ✓ Does the permittee implement a reporting protocol to ensure that all spills and overflows are reported to the appropriate authorities or the department designated to collect and report the permittee's annual report?
- ✓ If the jurisdiction includes residential homes with septic tanks, how does the permittee educate homeowners about proper maintenance of the systems?

Water Supply Operation and Maintenance

- ✓ Have procedures been developed to ensure that field staff integrate stormwater management BMPs into their operation and maintenance activities?
- ✓ Are BMPs implemented to address the testing and flushing of new or existing water lines?
- ✓ Are BMPs implemented to address hydrant testing?
- ✓ Are BMPs implemented to address maintenance activities required to maintain underground water lines (e.g., trenching, excavation)?
- ✓ Does the permittee coordinate source water protection efforts with the stormwater program?

Chemical and Hazardous Material Use and Disposal

- ✓ What types of chemicals or hazardous materials are used by the permittee?
- ✓ Where are these materials stored?
- ✓ Has the permittee implemented an alternative materials program to reduce the use of hazardous materials?
- ✓ Has the permittee implemented an inventory reduction program to reduce the quantity of chemicals and hazardous materials stored and used?
- ✓ Does the permittee have a household hazardous waste collection center for the public?
    - o Are records of the quantity of materials collected maintained by type of material?
    - o How does the permittee notify the public of these sites?
    - o Does the permittee have special household hazardous waste collection days?
- ✓ How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize maintenance frequency? Are they used to identify areas of targeted outreach?

PESTICIDE, HERBICIDE AND FERTILIZER APPLICATION AND MANAGEMENT

- ✓ What kind of program has been established to address pollutants associated with the application of pesticides, herbicides, and fertilizer at public facilities?
- ✓ Are the permittee's fertilizer/pesticide applicators certified? Are permits or other certifications required?
- ✓ Where are the chemicals stored? Are appropriate procedures and secondary containment followed?
- ✓ Is there a pesticide/fertilizer application plan?
- ✓ Does the permittee practice integrated pest management (IPM) or use alternatives to pesticides?
- ✓ How does the permittee implement alternative landscaping to minimize the use of fertilizers and pesticides?
- ✓ What types of educational activities does the permittee conduct for applicators?
- ✓ What types of BMPs are used during application of pesticides in public rights-of-way?
- ✓ What types of BMPs are used during application of pesticides at municipal facilities such as parks?

STANDARDS, BMPS, AND OUTREACH

Municipal Staff

- ✓ Have standard operating procedures or their equivalent been developed to ensure that municipal field staff integrate stormwater quality BMPs into their daily activities?
- ✓ Have BMPs or standards been officially adopted by the permittee for use by municipal field staff?
- ✓ What reference materials or guidance documents are provided to field staff regarding BMP specifications and details?
- ✓ How does the permittee ensure that staff are fulfilling their responsibilities as outlined in standard operating procedures? Do managers provide oversight on a regular basis?

Contracted Services Staff

- ✓ Does the permittee require contractors to incorporate stormwater quality BMPs into their activities?
- ✓ How are BMPs required? Are the requirements outlined in requests for proposals? Are they included in contracts?
- ✓ Have BMPs or standards been officially adopted by the permittee for use by contractual staff?
- ✓ What reference materials or guidance documents are provided to contractual staff regarding BMP specifications and details?

TIP:

Educational programs for pesticide, herbicide, and fertilizer applicators used by the permittee may be addressed during the public education and participation portion of the evaluation.

- ✓ How does the permittee ensure that contractors are fulfilling their responsibilities as outlined in their contracts? Are inspections performed? Are periodic reports submitted?

General Public

- ✓ Does the permittee provide any information to the public regarding:

- Cleaning up after pets
- Household hazardous waste disposal
- Oil recycling
- Litter reduction

TRAINING AND EDUCATION

- ✓ What type of general stormwater training is provided to staff that are not involved in field activities? How often?
- ✓ How are new employees trained?
- ✓ What types of activity-specific training is provided to field staff? Is information on specific BMPs provided?
- ✓ Is any training provided to contract staff?

In-Field Program Evaluation Activities

The primary in-field evaluation activity is an inspection of the permittee's public works yard(s) or other type of permittee owned or operated facility (i.e. fleet maintenance). The intent of this inspection is to verify that activities are performed as described in the SWMP. The facility should be inspected as if it were a typical industrial facility. During the inspection, look for the following:

TIP:

Other MS4 facilities, such as parks, marinas, and household hazardous waste collection facilities, should be visited if there is adequate time.

- ✓ Are chemicals, bulk materials, or other potential pollutants stored outside? Is there secondary containment? Are the materials covered?
- ✓ Where are the permittee's vehicles washed? Are wash racks and dewatering areas plumbed to sanitary sewers, if allowed? If not allowed, are wastewaters from wash racks and dewatering areas prohibited from entering the MS4?
- ✓ Where are the permittee's vehicles maintained? If outside, what BMPs are used to prevent polluted runoff?
- ✓ Does the facility have structural stormwater BMPs (e.g., stormwater detention ponds, stormwater filter devices) installed?
  - If so, how are they maintained?
  - What is the frequency of maintenance?
- ✓ Are inoperable vehicles stored and maintained in a way to prevent polluted runoff and leaching of contaminants to groundwater?
- ✓ Are storm drain inlets at the yard free of debris and regularly cleaned?
- ✓ Is the yard swept regularly? Are there oil stains and spills at the yard?

An additional in-field evaluation activity could include visiting maintenance staff as they conduct maintenance. For example, you could visit staff as they clean catch basins, perform street repairs, or conduct other similar activities to ascertain whether stormwater BMPs are being implemented and identify whether staff are knowledgeable about BMPs.

Document all findings in the field in as much detail as possible. An MS4 Facilities Inspection Worksheet has been included as Appendix C to assist in this documentation.

Common Issues Identified During Program Evaluations

The following are some typical problem areas associated with MS4 maintenance programs. These areas should be closely considered during evaluations:

- ✓ The permittee's MS4 maintenance staff lack training on and awareness of stormwater management BMPs.
- ✓ Permittee staff lack adequate guidance (e.g., MS4 maintenance BMP manual, SOPs, fact sheets) on proper stormwater management BMPs.
- ✓ Stormwater BMPs and procedures are not incorporated during routine MS4 maintenance activities.
- ✓ Maintenance yards lack SWPPPs and adequate controls to prevent stormwater contamination.
- ✓ Contractual staff performing operation and maintenance activities for the permittee are not required to consider stormwater quality and implement appropriate BMPs.

4.4 Construction Activities

Regulatory Requirements

EPA's federal regulations for the stormwater NPDES Phase I and Phase II regulations are listed at right. NPDES MS4 permits must address these requirements and often include more specific state requirements.

General Permits

As described above, stormwater Phase I and Phase II MS4 permittees must implement a SWMP that includes erosion and sediment controls on construction sites disturbing at least one acre. In addition to the regulation of construction site stormwater at the local level, EPA regulations also require construction sites disturbing greater than one acre to obtain an NPDES permit. This permit can be issued by the state permitting authority or EPA, depending on whether the state has been delegated the NPDES authority. This dual regulation of construction sites at both the local and state or federal level can be confusing to permittees and construction operators.

Although there are many similarities between the NPDES construction general permit and the MS4 construction program requirements, Municipalities are not required to ensure that local construction projects comply with NPDES construction general permits. Federal NPDES MS4 regulations describe broad requirements for a stormwater program to control construction site runoff to the MS4 and give the permittees flexibility in designing a local program to meet their needs. However, to avoid duplication and confusion between the two programs, some permittees choose to require the same BMPs and plan submittals (i.e., SWPPPs) as required by NPDES regulations.

Common Activities

Ordinance/Legal Authority

Many municipal permittees address legal authority for construction site stormwater runoff control in a grading or stormwater ordinance. The ordinance(s) should specify which sites are required to implement controls (i.e., MS4 regulations require all sites greater than one acre, but many permittees use a smaller area or volume threshold, such as 50 cubic feet of earth moved or proximity to water bodies). The ordinance should require erosion and sediment control BMPs to be implemented and maintained, a performance standard, and penalties for noncompliance.

Construction Site Inventory

The permittee should have an inventory of active and completed construction projects that includes information about the site and inspections that the permittee has conducted, including inspection findings and follow-up (letters, enforcement actions, additional inspections). Permittees should consider prioritizing the inventory to

Federal NPDES Regulations

NPDES MS4 permits must address these requirements and often include more specific state requirements:

- ✓ Phase I MS4 Regulations 40 CFR 122.26(d)(2)(iv)(D)
- ✓ Phase II MS4 Regulations 40 CFR 122.34(b)(4)

TIP:

MS4 permittees are not required to enforce the NPDES (state or federal) construction general permit, but they are required to comply with this permit for their own public construction projects (e.g., capital improvement projects, road construction). This includes the submittal of a notice of intent, development of a SWPPP or equivalent, inspections, and other requirements specified in the state's construction general permit.

Resources

- ✓ Menu of BMPs http://www.epa.gov/npdes/menuofbmps
- ✓ Construction Industry Compliance Assistance Center http://www.cicacenter.org/
- ✓ International Erosion Control Association http://www.ieca.org/
- ✓ Kentucky Erosion Prevention and Sediment Control Field Guide http://www.tetratech-ffx.com/wstraining/pdf/esc_guide.pdf

better target inspections based on project size, location, threat to water quality, or other factors. The permittee should also develop procedures for the receipt and consideration of complaints submitted by the public. Ideally, this information would be managed in a database and linked to a GIS for optimum tracking.

Resources (continued)

- ✓ California Stormwater Quality Association's Stormwater Best Management Practice Handbooks http://www.cabmphandbooks.com/Construction.asp
- ✓ MPCA Inspection guide and compliance assistance toolkit http://www.pca.state.mn.us/water/stormwater/index.html

Construction Requirements and BMPs

While the legal authority described above should require BMPs at construction sites, a permittee should also have additional specifications or guidance on what types of BMPs are expected at sites. These requirements and standards and specifications for BMPs should be readily available to project applicants.

Plan Review Procedures

The review of erosion and sediment control plans (or SWPPPs if required under an NPDES construction permit) should be based on formal review specifications, a checklist, or similar criteria. Plan review staff should document the BMPs considered, whether they were addressed on the plans, and any identified deficiencies.

TIP:

You should have a clear understanding of the plan review and approval process and how stormwater and erosion and sediment control requirements are included in this process.

Some municipal permittees require that projects submit a copy of the **notice of intent (NOI)** that has been submitted to the State or EPA before approving a project. In some states, the state requires that the permittee receive local erosion and sediment control approval prior to submitting a NOI. At a minimum, permittees should make sure that project applicants are aware of the requirement to apply for NPDES permit coverage for projects disturbing greater than one acre.

Some municipal permittees use contract staff to review some or all plans. Be sure to review plans completed by contractual as well as municipal employees.

Construction Site Inspections

A key element of the construction component is the frequency at which sites are inspected. Some permittees identify a minimum frequency of inspections (such as weekly and/or following a rain event) for all projects. Other permittees will rely on building inspectors to conduct erosion and sediment control inspections at the same time as other types of required inspections (e.g., electrical). This approach, however, can result in sites not being inspected for long periods of time if the building inspector is not called out for an inspection. Also, building inspectors are not necessarily trained to recognize erosion and sediment control problems or have other priorities besides stormwater.

TIP:

Some municipal permittees have different inspectors for their public and private projects, be sure to evaluate each in the field.

Inspections are often targeted to specific types of sites or during specific periods (especially immediately following a rain event). For permittees with numerous active construction projects, it is recommended that a prioritization process be developed to ensure that the sites with the greatest threat to water quality are considered high priority and inspected more frequently. Inspection results should be documented using paper forms or electronic databases.

Program Support and Resources
Permittees should have an established source of funding for their construction program, including adequate resources for frequent inspections and plan review. Funds often come from fees paid by the construction operators. If general funds are used to support the program, permittees should ensure that construction inspections are a line-item appropriation not subject to reduction or elimination based on board politics or budget constraints.

Enforcement
Permittees should have an established, escalating enforcement policy that clearly describes the action to be taken for common violations. Enforcement authority typically includes verbal and written warnings, fines, and "stop work" orders. Verbal warnings should be documented in addition to all written violation notices. The enforcement policy should also address how repeat or serious violations will be addressed, including referral of the case to the NPDES permitting authority in the most egregious cases.

TIP:

Review enforcement cases to assess whether the permittee is adequately ensuring compliance. Lack of fines, "stop work" orders, or other enforcement actions do not necessarily indicate that the permittee's enforcement program is inadequate. A lack of enforcement cases could be the result of an effective inspection program, or it could indicate problems with the inspection records, inspector training, inspection procedures, or even the lack of commitment from the permittee to escalate enforcement.

Training and Education
A SWMP should include training to plan review and inspection staff. This training should include classroom presentations, in-field training, and follow-up evaluations to determine whether the training was effective. Although some permittees also provide training to construction operators, most simply provide educational materials such as fact sheets or brochures that describe local requirements and recommended BMPs.

Public Construction Projects
Public construction projects must comply with both the local program and the applicable NPDES construction general permit (state or federal). This requires the permittee to take on dual roles as both local regulator and permittee. Permittees must apply the same local requirements to public construction projects as are required of private projects. Some permittees develop and design public construction projects in-house without direct involvement from the department that reviews most private construction projects; therefore, it is important that the public project designers are trained and proficient in stormwater BMPs as well. If a permittee hires outside designers for public projects, it is important that stormwater guidelines be provided to them to ensure compliance with local and NPDES permit requirements.

After the project is designed, many permittees will hire contractors to build the project. Interested applicants submit proposals to bid on the project. To ensure that successful applicants will abide by all stormwater requirements, it is recommended that the request for proposals (RFP) include specific language regarding installation and maintenance of all BMPs. Many permittees also include additional language in subsequent contracts (if there is a document separate from the proposal) obligating contractors to appropriate stormwater measures and outlining potential enforcement penalties (i.e. delayed or reduced payment). An evaluation of public construction projects should include a review of RFP or contract language relating to stormwater controls.

Evaluating Construction Programs

The evaluation of a permittee's construction program should focus on the regulatory mechanism to require and enforce the program, plan review procedures, and erosion and sediment control inspection procedures. The evaluation should begin with a thorough review of the permittee's ordinances, standards,

approved plans, and other relevant written materials. Ask staff to walk through the planning and approval process from initial plan receipt to final approval.

You should determine how erosion and sediment control BMPs are required in construction site plans and how they are implemented and enforced in the field. Inspectors from multiple departments might also inspect different portions of a development project. For example, building department inspectors may be charged with site inspections during the construction of the buildings, whereas public works inspectors may be responsible for the inspection of construction activities within the right-of-way, such as streets, sewer, and water. Various departments may inspect a site during different stages of the project. You must be sure to interview all applicable staff and departments, which could include building, planning, engineering, or public works. Questioning planners and engineers in addition to questioning inspectors is helpful in determining how well various staff work together to achieve "on the ground" BMP implementation.

Some municipal permittees manage public construction projects (including capital improvement projects or CIPs) differently than private construction projects, for example, in some communities private projects are reviewed and approved by the planning or building department, whereas public projects may be entirely planned, reviewed, approved, and developed by the public works department. Make sure you distinguish between these two types of projects during the evaluation, and if necessary, repeat the same questions for both private and public projects.

Before the Program Evaluation

To prepare for the construction program evaluation, an evaluator should review or obtain the following information:

Pre-Evaluation Checklist
- ✓ MS4 permit provisions
- ✓ SWMP provisions
- ✓ Most recent annual report
- ✓ State or EPA Construction General Permit
- ✓ List of NPDES construction projects
- ✓ NPDES Construction inspection reports

- **MS4 NPDES permit provisions.** Review the permit requirements for the construction program to identify any specific requirements (such as a minimum inspection frequency). The NPDES permit will serve as the primary basis for the program evaluation.
- **SWMP provisions.** The permittee's SWMP planning document(s) will describe the activities and BMPs it is committed to implement and include measurable goals that provide deadlines for program implementation.
- **Latest annual report.** The most recent annual report should be reviewed to identify past activities and help the inspector become familiar with the permittee's program.
- **State or EPA NPDES Construction General Permit.** You should be very familiar with the requirements of the state or EPA's construction general permit, whichever applies, to ensure that conflicts between the SWMP and the state or EPA permit can be identified and violations of the state or EPA permit can be found.
- **List of NPDES construction projects.** Obtain a recent list of construction projects within the permit area that have been issued coverage under an NPDES general permit by the permitting authority (one acre or greater disturbed area). This list can be used during the program evaluation to determine whether the permittee has any public construction projects. The list can also help identify potential construction sites for field inspections. The list can also be crosschecked with a similar list requested and obtained from the permittee. Obtain information such as the operator name, name of the construction site, address, size, and other relevant information.
- **NPDES construction inspection reports.** Review inspection reports from construction inspections in the permittee's jurisdiction conducted by the permitting authority and/or EPA. Talk

to state or federal construction inspectors to determine if there have been past stormwater violations at construction sites in the permitted area and any role the permittee played in resolving the violations.

Records Review

The following records might help in evaluating the compliance and performance of the permittee's construction program. Ask for copies of relevant information where it will help in writing a report or documenting a permit violation.

Documentation	What to Look For
Local ordinances	One or more of the following ordinances may be used by a municipal permittee to regulate erosion and sediment control. ▪ Grading ordinance ▪ Erosion control ordinance ▪ Stormwater ordinance ▪ Landscaping ordinance ▪ Health and safety codes
Design standards, BMP manuals, and fact sheets.	These can be state or local standards or be taken from a non-regulatory source
Construction plans reviewed and approved by the permittee	Where possible, try to review the plans for projects that you will also visit during the field portion of the evaluation
Construction project inventory or database	▪ Does one exist? ▪ How often is it updated? ▪ What is the source for the inventory?
Enforcement escalation response plan or procedure	▪ Is the enforcement process documented and codified? ▪ Are roles of individuals or departments clearly defined?

Elements to Address During the Program Evaluation

Although not specified in detail in NPDES regulations, a successful construction program will generally be composed of the following elements:

- Ordinance/legal authority
- Construction project inventory
- Construction requirements and BMPs
- Plan review procedures
- Construction site inspections

- Program support and resources
- Enforcement/referrals
- Training and education

The common program elements are the key issues to consider during the review.

ORDINANCE/LEGAL AUTHORITY

- ✓ What legal authority does the permittee have to require erosion and sediment control BMPs on construction sites and to ensure compliance?
- ✓ Does the permittee's legal authority address stormwater quality for all projects disturbing at least one acre?
- ✓ What exemptions does the ordinance or other legal authority allow?
- ✓ Does the legal authority authorize the permittee to require erosion and sediment control plans?

CONSTRUCTION SITE INVENTORY

- ✓ How does the permittee track construction projects?
- ✓ What information is collected?
    - o The number and status (active/inactive/completed) of construction sites
    - o The number, frequency, results, and follow-up actions resulting from inspections
    - o The actions taken to resolve the issues and dates when compliance was achieved.
    - o The number and type of enforcement actions taken at sites in violation
    - o Complaints submitted by the public
- ✓ Does the inventory include construction sites disturbing less than 1 acre?
- ✓ What is the threshold for tracking projects?
- ✓ Does the inventory track which sites have submitted an NOI for coverage under a state/EPA construction general permit?
- ✓ How is the inventory updated? How often?
- ✓ Does the permittee prioritize projects for more frequent or targeted inspections?
    - o If yes, based on what criteria?

CONSTRUCTION REQUIREMENTS AND BMPS

- ✓ What technical guidance (e.g., BMP manual or fact sheets) does the permittee use as the standard for design and selection of nonstructural and structural construction BMPs?
    - o Are project applicants required to follow these technical manuals?
    - o Does the guidance set minimum operation and maintenance requirements for BMPs?

TIP:

You should ask the permittee for a copy of the information packet that they provide to new project applicants. What type of stormwater information is included? Does it describe the types of BMPs and stormwater requirements that could apply to their project?

- Does the guidance include installation requirements for the BMPs?
- Does the guidance provide proper siting and use criteria for BMPs to ensure that adequate BMPs are being selected and implemented?

✓ Does the permittee provide guidance as to recommended BMPs to be used?

✓ Does the permittee have different requirements or standards for different times of the year (i.e., during the rainy season vs. the dry season)?

PLAN REVIEW PROCEDURES

✓ Does the permittee hold pre-application meetings on any construction projects? Are stormwater and erosion and sediment control requirements addressed at these meetings?

✓ Is there any plan review coordination with other city departments such as smart growth, redevelopment, traffic engineering, etc.?

✓ What is the permittee's threshold for plan review? (For example, does the permittee review plans for all projects disturbing greater than 1 acre, or do they use another threshold?)

✓ Does the permittee apply standard conditions that incorporate erosion and sediment control requirements into its plan review process?

- Get a copy of the standard conditions to determine if they specifically address erosion and sediment control

✓ Do the plan reviewers verify whether the project applicant has submitted an NOI to the state or EPA? Is evidence of NOI submission required before a plan can be approved or a local permit issued?

✓ Do plan reviewers use specific criteria or a checklist when reviewing plans?

✓ Does the permittee consider during the review process whether the construction project discharges to a TMDL/impaired water?

✓ When reviewing plans approved by the permittee, you should:

- Look for whether adequate BMPs are included on plans, details, and drawings for the installation of certain BMPs when applicable, what types of standard conditions or notes are included, and whether maintenance requirements are specified.
- Are inadequate or incomplete plans automatically returned to the applicant? Are these returns accompanied by an explanation of what is needed for approval?
- Are BMPs addressing other construction activities, such as materials storage and waste disposal, incorporated into the construction plans?
- Do the plans include notes addressing the prohibition of non-stormwater discharges?
- Were comments provided by the permittee to the project proponent reasonable and appropriate?

TIP:

You should select at least 2 to 3 approved projects with erosion and sediment control plans to review with the permittee. Try to choose different project types (residential, commercial) and sizes. Also review at least one public project plan to see if the permittee is applying adequate standards to municipal construction.

CONSTRUCTION SITE INSPECTIONS

- ✓ Does the permittee adequately inspect all phases of construction?
  - o Clearing and grubbing and site preparation
  - o Mass grading and public infrastructure/utility construction
  - o Building construction and final grading
  - o Final stabilization
- ✓ What departments are charged with erosion and sediment control inspections? Is the department responsible based on the location of the site (i.e. right-of-way vs. building site) or phase of development (i.e., grading vs. building)?
- ✓ Do the inspectors use a checklist or inspection form during each inspection?
- ✓ How many inspectors does the permittee use to verify erosion and sediment control compliance at construction sites?
- ✓ Does this number appear adequate to assess active construction occurring in the permitted area? Compare this to the total number of construction sites that need to be inspected at any one time (number of inspections per construction site per year). Consider project durations and phasing, local conditions (e.g., dry vs. wet seasons), and additional duties assigned to inspectors.
- ✓ Does the permittee have an established prioritization process for establishing inspection frequency? If so, on what factors is the prioritization based (i.e., size, proximity to water body, sensitive areas)?
- ✓ How often are sites inspected?
- ✓ Does the permittee target inspections during and immediately after wet weather events? If so:
  - o What size rain event triggers an inspection?
  - o How soon after a rain event?
- ✓ Is there an established rainy season for the area? Are sites inspected prior to the start of the rainy season to determine preparedness?

TIP:

Review inspection records to determine how the permittee corrects identified problems. If an inspection report identifies missing BMPs or a non-stormwater discharge, verify that there is an inspection record showing that the site was reinspected within a reasonable timeframe. Was the problem corrected?

PROGRAM SUPPORT AND RESOURCES

- ✓ Does the program have a dedicated source of funding to support plan review staff and inspectors?

ENFORCEMENT

- ✓ What types of enforcement actions are provided for in applicable ordinances (e.g., notices of violation, “stop work” orders, fines)?
- ✓ Is use of these actions outlined in an established, escalating enforcement policy?
- ✓ Review with the permittee statistics on enforcement of construction site erosion and sediment controls.
  - o How many enforcement actions are taken per year?
  - o Are follow-up inspections conducted to verify compliance?

- ✓ Are there limitations on the permittee's enforcement authority (e.g., limits on the dollar amount of fines, inability to issue civil penalties)?
- ✓ Do staff feel that their enforcement authority is adequate to achieve compliance on construction projects?
- ✓ What is the relationship with the City Attorney or other relevant prosecuting authority?

TRAINING AND EDUCATION

Staff training

- ✓ What type of training do construction inspectors receive? Are plan reviewers trained on erosion and sediment control BMPs and requirements?
- ✓ How often is training conducted? How many staff have been trained?
- ✓ What type of follow-up is conducted by the permittee to verify that the training is effective?

Construction operator education

- ✓ What types of educational materials have been developed and distributed to construction operators?
- ✓ How are they distributed? At the permit desk? During inspections?
- ✓ What type of training does the permittee provide or advertise to local construction operators?
- ✓ How often is this training conducted? How many construction site operators have been trained?
- ✓ Are contractors and developers required to attend?
- ✓ Does the training cover any of the following?
  - o Local and state erosion and sediment control requirements and permits
  - o Proper erosion and sediment control BMP design and installation
  - o Maintenance requirements for BMPs
  - o General construction stormwater permit requirements (state or federal)
- ✓ Are training sessions held in cooperation with other local permittees or regional authorities?

TIP:

Permittees must train their primary inspectors, but they should also provide at least basic stormwater training to other field inspectors not directly involved in the stormwater program, such as building inspectors and code compliance staff. At a minimum, this will encourage these staff to refer stormwater problems to the permittee's designated stormwater inspector.

PUBLIC CONSTRUCTION PROJECTS

- ✓ Do RFPs or contracts include language specifying stormwater requirements?
- ✓ Are inspection and maintenance requirements specified in the contract?
- ✓ What oversight does the permittee implement to ensure the contractor is implementing all requirements appropriately and adequately?
- ✓ What penalties are in place to require compliance from the permittee's contractors?

In-Field Program Evaluation Activities

In-field activities to evaluate the construction inspection program typically consist of accompanying one or more construction inspectors in the field as they conduct inspections. The construction inspector is to conduct the inspection; you are to strictly observe. Discourage construction inspectors from merely describing the inspection process. It is best to accompany more than one construction inspector, if possible, to see whether the permittee is providing adequate training to all inspectors.

TIP:

Let the inspector lead the inspection—just observe. Don't let the inspector "explain" how they would conduct the inspection—tell them to show you.

The main purpose of the field evaluation is to assess the permittee's construction inspection program—how knowledgeable the inspectors are about stormwater requirements and BMPs, how thorough of an inspection they conduct, and how they handle problems identified at construction sites. This assessment can sometimes be made after only one or two construction site inspections, while for other permittees it may take multiple inspections and visits with several inspectors to assess their inspection program. Try to limit the number of people that join each inspection—too many staff can overwhelm a construction site, making it harder for the construction inspector to conduct an actual inspection.

Schedule at least a half-day for construction inspections. Travel time between sites may be significant, so plan accordingly. For a large permit area with a lot of active construction, schedule a full day if possible to visit both private and public projects. Stress the need to visit as many construction projects as possible while still following the inspector's standard procedures. Try to observe a large variety of sites, such as small residential projects, larger housing developments, commercial projects, and public construction projects, projects in mass grading, projects close to completion, and projects adjacent to waterways.

As the inspector conducts the construction inspection, observe the following:

- ✓ Is the inspector knowledgeable about stormwater BMPs, requirements, and ordinances?
- ✓ Is the inspector familiar with the applicable construction stormwater general permit?
- ✓ Does the inspector check the approved plans at the construction site? (Note that some inspectors visit sites frequently and this is not always practical. Also, plans at small construction sites might not be kept on-site.)
    - o Ask the inspector if he or she has visited this particular site before. If the answer is no, the inspector should ask to see the plans, have reviewed them ahead of time, or brought a copy so he or she knows what BMPs have been approved for that site.
- ✓ Does the inspector use a checklist or otherwise document inspection findings in the field?
- ✓ What kind of written feedback is provided to the operator and within what timeframe do violations need to be addressed?
- ✓ What kind of report is generated as a result of the inspection? Does it detail all problems found at the site or does it document only that the inspection occurred?
- ✓ Are findings from inspections tracked in a central location or database?

TIP:

Be aware that permittees will often match you up with their "best" inspectors and want to take you to the most compliant sites. Visiting sites that are "bad actors" or typically non-compliant can also be very helpful in characterizing the inspector's knowledge and abilities. "Dirty" projects do not necessarily indicate inadequate inspections or inept inspection staff. It is sometimes helpful to the inspectors to have another set of eyes at a problem site to assess the issues and provide insight for solutions.

- ✓ How does the inspector track required follow-up inspections or enforcement actions?
- ✓ Is the inspector thorough? Does the inspector walk the entire site and identify all potential problems?
- ✓ Does the inspector note flow pathways and check for discharges from the site at outfalls or to storm drain inlets?
- ✓ What type of stormwater training has the inspector received?

The in-field activity is a good opportunity for you to ask the inspectors some of the same questions asked during the office portion of the program evaluation to see if the answers differ. Often, inspectors are more open to discussing "problems" with the program than are the program managers. Try to spend some time with the construction inspector talking informally about the program. (The drive between inspections is a good time for this talk.)

Document all findings in the field in as much detail as possible. A Construction Inspection Worksheet has been included in Appendix C to assist in this documentation.

Common Issues Identified During Program Evaluations

The following are some common problems with construction programs. These areas should be closely considered during evaluations:

- ✓ When erosion and sediment control inspections are included as part of building inspections, erosion and sediment control is seen as a less important aspect of the inspection compared to other aspects, such as electrical or plumbing.
- ✓ The inspectors may lack the training and time necessary to conduct thorough erosion and sediment control inspections.
- ✓ Construction inspectors sometimes lack the authority to enforce the local ordinance.
- ✓ The inspectors may not follow a formal, written, escalating enforcement policy, or such a policy does not exist.
- ✓ Construction inspectors do not document inspection results using a checklist or other document.
- ✓ Inspectors do not conduct thorough inspections (i.e., drive-by inspections are common).
- ✓ Construction inspectors do not verify that BMPs approved on plans are actually installed at the project.
- ✓ Construction inspectors do not inspect to determine if BMPs are adequately maintained.
- ✓ The permittee is not adequately tracking inspections and inspection results.
- ✓ The permittee is not verifying general permit coverage before approving plans for construction disturbing one acre or more.
- ✓ Plan review staff lack adequate guidance and criteria for reviewing erosion and sediment control plans.
- ✓ Inspectors of public projects (in-house or contractual staff) are not knowledgeable about the applicable construction general permit (this is a significant liability because the inspector is usually responsible for ensuring compliance with this permit).

4.5 Post-Construction Controls

Regulatory Requirements

EPA's federal regulations for the stormwater Phase I and Phase II NPDES MS4 regulations are listed at right. NPDES MS4 permits must address these requirements and often include more specific requirements.

General Permits

As described above, stormwater Phase I and Phase II permittees must implement a SWMP that includes a post-construction component that addresses stormwater runoff at the completion of construction of new or redevelopment sites that disturb at least one acre.

Federal NPDES Regulations

NPDES MS4 permits must address these requirements and often include more specific state requirements:

- ✓ Phase I MS4 Regulations
  40 CFR 122.26(d)(2)(iv)(D)
- ✓ Phase II MS4 Regulations
  40 CFR 122.23(b)(5)
  40 CFR 122.23(b)(5)

Common Activities

Ordinance/Legal Authority

The ordinance should have language requiring that all new development and significant redevelopment projects incorporate stormwater management BMPs and submit a plan that complies with design standards, zoning codes and comprehensive or master plans. Some permittees review required construction general permit SWPPPs, while others require the development and submittal of a separate post-construction plan to address local stormwater requirements. In addition, some permittees require that projects smaller than one acre implement post-construction stormwater controls. These requirements should be detailed in an ordinance to establish legal authority. Ideally, the ordinance will outline the contents of an approvable plan and responsibilities for operation and maintenance of approved BMPs. The operation and maintenance section should also describe who is responsible for inspections and maintenance (e.g., the homeowner, homeowners' association, permittee, etc.).

Comprehensive or Master Planning

Often, when the MS4 is a municipality, the permittees address stormwater management using the established local comprehensive or master planning process. Comprehensive or master planning typically is required by state law and is to be used as guide in decision-making about the built and natural environment by the governing body of the permittee (i.e., city council, planning commission, county board). A comprehensive plan contains long-term planning recommendations for the community and often addresses water quality issues either directly with specific water quality goals or indirectly through the encouragement of land use practices that minimize impervious surface (i.e., high density "villages") or encourage open space.

Resources

- ✓ Menu of BMPs
  www.epa.gov/npdes/stormwater/menuofbmps
- ✓ California Stormwater Quality Association's New Development and Redevelopment Handbook
  http://www.cabmphandbooks.com/Development.asp
- ✓ Georgia Quality Growth Program
  www.georgiaqualitygrowth.com
- ✓ EPA Smart Growth Web site
  www.epa.gov/dced/
- ✓ Smart Growth Online
  www.smartgrowth.org/
- ✓ EPA Low Impact Development Resource Center
  www.epa.gov/owow/nps/lid/
- ✓ Low Impact Development Center
  www.lowimpactdevelopment.org

The inclusion of water quality-related goals in the comprehensive plan could assist local planners and policymakers to institutionalize the stormwater principles necessary to implement an effective SWMP.

However, the comprehensive plan is not a substitute for a SWMP Plan because it cannot be changed or updated readily and does not include necessary implementation details of the stormwater program.

Post-Construction BMP Standards

While the legal authority described above should require the installation of BMPs at sites, a permittee should also have additional specifications or guidance on what types of BMPs are expected or required. Ideally, the ordinance will include language that refers to a guidance manual for BMP design and implementation. The recommended manual should contain sizing criteria, performance criteria, and guidance on selection and location of BMPs. The manual and preferred BMPs should be available to project applicants early in the planning phase of a project. The standards should include guidance for proper district or subarea design (e.g., a redevelopment district), proper site design (e.g., sending gutter water into landscaping), source control (e.g., covering trash cans), and stormwater treatment BMPs (e.g., sand filters).

Plan Review and Approval Procedures

The review of post-construction plans should be based on formal review specifications, a checklist, or similar criteria. Plan review staff should document the BMPs considered, whether they were addressed on the plans, and any identified deficiencies. Some permittees use contract staff to review some or all plans. Be sure to review plans completed by contractual as well as permittee staff.

TIP:

Review several types of recent development projects that have gone through the review process. Include small residential and large commercial development projects as well as both new development and redevelopment projects, if applicable.

Post-Construction BMP Inventory

The permittee should maintain inventory detailing the types and locations of planned and installed post-construction BMPs projects. There may be two types of inventories: (1) a traditional database for site-level structural BMPs, and (2) a tracking system for planning or development practices BMPs. Ideally, both types of information would be managed in a database and linked to a GIS for optimum tracking. Structural post-construction BMPs must be inspected and maintained to remain effective. Tracking the locations, conditions, ages of the structural BMPs as well as the inspection findings is critical to ensuring the proper maintenance occurs for the life of the BMP. For planning-related BMPs, tracking systems may be linked to code revisions or development permits. Note that some revisions may occur with State or regional codes or standards, which might require a separate tracking system.

BMP Inspection and Maintenance

Proper BMP installation, operation, and maintenance are critical to optimizing the effectiveness of post-construction BMPs. If BMPs are not maintained, they can become concentrated sources of pollutants themselves. Comprehensive “as built” inspections are necessary at the conclusion of a project to ensure the BMP has been built properly and regular inspections are critical to ensure the BMP is being maintained as needed. Permittees may inspect private BMPs or require that the owners/operators of the facility inspect them through maintenance agreements or other mechanisms. Often, permittees require that facility owner/operators submit documentation detailing inspection dates and maintenance performed.

Enforcement

Legal authority is needed to require owner/operators to maintain BMPs. This can be outlined in a maintenance agreement or other binding contract, but it must be included in municipal code or regulation as well. The permittee should have available enforcement actions to require the owner/operator to perform necessary inspections and maintenance. Some permittees have authority to abate problem facilities (i.e., maintain the facility and charge the owner/operator) if necessary.

Public Construction Projects

Municipal permittees must apply the same local requirements to public construction projects as is required of private projects. Some municipal permittees develop and design public construction projects in-house without direct involvement from the department that reviews most private construction projects; therefore, it is important that the public project designers are trained and proficient in stormwater BMPs as well. If the permittee hires outside designers for public projects, stormwater guidelines should be provided to them to ensure compliance with local and general permit requirements. Permittees should have an inventory of publicly owned stormwater management and treatment facilities and should have an inspection and maintenance program established.

Training and Education

Permittees should provide training to plan review and BMP inspection staff (if applicable). This training should include classroom presentations and in-field training as well as follow-up evaluations to demonstrate that the training was effective.

TIP:

A review of existing codes and land development regulations can be extensive. The following are previous efforts to evaluate development codes that may be helpful in this process:

Center for Watershed Protection Codes and Ordinances worksheet http://www.cwp.org/COW_worksheet.htm

EPA list of smart growth scorecards www.epa.gov/smartgrowth/scorecards/project.htm

King County Washington "Built Green" Checklists http://www.builtgreen.net/checklists.html

Evaluating Post-Construction Programs

Development can significantly alter landscapes by increasing imperviousness (e.g., roofs, driveways, parking lots) and changing drainage patterns, thereby increasing the volume and velocity of runoff from the site. Increased volume leads to degradation of receiving waters and increased flood frequency. Stormwater from newly developed impervious areas can also contain a variety of pollutants that are detrimental to water quality, such as sediment, nutrients, road salts, heavy metals, pathogenic bacteria, and petroleum hydrocarbons. Two groups of BMPs can minimize the impacts of stormwater from new development and redevelopment projects: nonstructural site design or source control measures, which prevent or reduce the generation of pollutants, and structural treatment BMPs that detain and treat stormwater to control the volume of runoff and reduce pollutant loading to receiving waters.

Postconstruction stormwater impacts are not likely to be controlled entirely with site-level BMPs. Thus regional, district and subarea planning is increasingly recognized as a means to control overall imperviousness. Postconstruction BMP standards are likely to include many interlinking requirements that affect common land development practices, such as street design, community layout, and land use mix. The aim of such standards is to revise building practices that drive impervious surface generation within a watershed to reduce the effects of the built environment at a meaningful scale. Note that this approach to stormwater management is new, so an evaluation of this area may address future planning activities in addition to current activities.

There are several approaches permittees may use to implement planning-level BMPs, each of which is are appropriate in different development settings and offers a unique set of benefits. Four of these approaches or frameworks—redevelopment, infill, compact design, and conservation development—are described below and may be found in a comprehensive plan or SWMP:

- *Redevelopment*: Under this framework, a permittee is looking to redevelop already impervious districts and lots. Programs to support redevelopment include downtown redevelopment plans, vacant property reforms, brownfields redevelopment, and corridor redevelopment plans. These programs are typically more successful when supported by financial programs (e.g., tax incentives and grants), policy support (e.g., priority infrastructure), and technical assistance and staffing support.

- *Infill*: Infill development, like redevelopment, takes place in areas supported by existing road, water, and sewer infrastructure. Infill development tends to have a smaller footprint than conventional new development projects. Infill sites, whether individual lots or larger parcels, are generally undeveloped and may be able to manage stormwater flows onsite. The policies described above for redevelopment would apply to infill development, as well as any policies to mitigate flows from infill.

- *Compact Design*: Compact designs seek to meet development needs on a smaller footprint to achieve both development and conservation goals. These designs can be used in redevelopment (e.g., transit-oriented development) or new development (e.g., cluster housing or rural or urban villages) situations and are suitable in urban, urbanizing, and rural settings. The key to successful designs lies in coordinating interlinking aspects of transportation, land use, and open spaces. This framework is particularly amenable to design guidelines for a district, including stormwater management.

- *Conservation Development*: This framework, typically used in rural areas or along the urbanizing fringe, is targeted for the lowest impact development. Successful programs will be tied to specific conservation objectives (e.g., habitat preservation, groundwater recharge) and will link the rural development scheme with rural economic development objectives.

TIP:
When permittees review development codes to identify areas where stormwater benefits can be incorporated, the following are typically examined:

- ✓ Review of parking demand or indications of overly high parking ratios
- ✓ Overlarge setbacks from the street or other lot lines
- ✓ Minimum lot size requirements in urbanizing areas
- ✓ Highly separated uses embedded in codes
- ✓ Subdivision and street requirements
- ✓ A review of barriers to low impact development, redevelopment or other land efficient forms, including State or institutional barriers and standards

When evaluating the post-construction, new and redevelopment component of a SWMP, it is helpful to discuss the process chronologically in the order that a project would occur. Ask the permittee's planning staff to walk you through the process as if you were a developer proposing a project. Discuss what post-construction stormwater BMPs are required for new and redevelopment projects, how and when developers are informed of the stormwater requirements in the initial planning stages, how plans are reviewed for stormwater standards, on what legal authority requirements and standards are based, what is required for plan approval, how the BMPs are inspected during and after construction, and how the permittee ensures that BMPs are adequately operated and maintained.

Typically, an on-site evaluation for post-construction BMPs will involve interviewing planning and engineering staff. Planners usually work with developers to determine what is required for plan submittal, but engineering staff may actually review the plans and verify design calculations.

Before the Program Evaluation

To prepare for the post-construction program evaluation, you should review or obtain the following information:

- **NPDES MS4 permit provisions.** Review the permit requirements for the post-construction program to identify any specific requirements (such as a design standard for post-construction controls). The NPDES permit will serve as the primary basis for the program evaluation.

Pre-Evaluation Checklist
- ✓ MS4 permit provisions
- ✓ SWMP provisions
- ✓ Most recent annual report
- ✓ Comprehensive plans
- ✓ Economic development plans

- **SWMP provisions.** The permittee's SWMP planning document(s) will describe the activities and BMPs the permittee has committed to implement and include measurable goals that provide deadlines for program implementation.
- **Latest annual report.** The annual report should be reviewed to identify past activities and help the inspector become familiar with the permittee's program.

Records Review

The following records might help in evaluating the compliance and performance of the permittee's post-construction program. Ask for copies of relevant information where it will help in writing a report or documenting a permit violation.

Documentation	What to Look For
Local ordinances	One or more of the following ordinances may be used by a permittee to regulate post-construction BMPs ▪ Grading ordinance ▪ Stormwater ordinance ▪ Landscaping ordinance ▪ Other portions of the code used by code enforcement staff to enforce aesthetic concerns ▪ Zoning codes or land development regulations (where the permittee chooses to amend existing codes to implement post-construction improvements) ▪ Economic development and capital improvement plans that support the district or comprehensive planning goals ▪ Design guidelines for larger development areas (e.g. subdivisions, mixed use districts, downtown redevelopment programs) ▪ Local and district open space and park plans that serve to support the post-construction program
Comprehensive or General Plans	Review for language that requires consideration of water quality concerns when evaluating development projects
Design standards, BMP manuals, or fact sheets	These can be state or local standards or be taken from a non-regulatory source
Post-construction plans reviewed and approved by the permittee	Where possible, try to review the plans for projects that you will also visit during the field portion of the evaluation
Post-construction BMP tracking system	Database or other system used to track the location of post-construction BMPs that have been installed and the maintenance performed or required for each BMP

Elements to Address During the Program Evaluation

Although not specified in detail in NPDES regulations, a successful post-construction program will generally be composed of the following elements:

- Ordinance/legal authority
- Comprehensive or master planning
- Post-construction BMP standards

- Plan Review and approval procedures
- Post-construction BMP inventory
- BMP inspections
- Enforcement
- Public construction projects
- Training and education

The common program elements are the key issues to consider during the review. For each of the elements listed above, this Guidance presents common program activities and questions to consider during the program evaluation. The questions are suggested for you to address each program component. Of course, a comprehensive program evaluation must be tailored to the specific issues associated with each permittee and should include more specific questions regarding the permittee's permit structure and management challenges.

ORDINANCE/LEGAL AUTHORITY

- ✓ What legal authority does the permittee have to require post-construction BMPs on development sites and to ensure maintenance?
- ✓ Does the permittee's legal authority address post-construction requirements for all projects disturbing one acre or more?
- ✓ Does the legal authority require site design, source control, and stormwater treatment BMPs?
- ✓ What exemptions does the ordinance or other legal authority allow?
- ✓ What procedures for alternative compliance (i.e., planning-level BMPs and other non-structural controls) are allowed?
- ✓ Does the legal authority authorize the permittee to require stormwater management plans to address post-construction impacts?

COMPREHENSIVE OR MASTER PLANNING

- ✓ Does the comprehensive or master plan include elements encouraging the control of water quality or quantity (e.g., flooding) from existing or new developments?
- ✓ Does the plan include elements to encourage protection of natural features (such as wetlands, buffer strips, etc.)?
- ✓ Does the comprehensive or master plan include elements to encourage minimization of impervious surfaces?
- ✓ Does the comprehensive plan include elements to encourage open space?

POST-CONSTRUCTION BMP STANDARDS

- ✓ What technical guidance (e.g., BMP manual) does the permittee use as the standard for design and selection of post-construction BMPs? It is not necessary to do a thorough review of the manual or standards used by the permittee. Question the planners regarding the following key items:
    - o Are project proponents required to follow the technical manual?

- Does the guidance provide siting and use criteria for the BMPs to ensure proper and adequate BMPs are being selected and implemented?
- Does the guidance provide siting and use criteria for BMP selection based on the development context (i.e., BMP selection appropriate for ultra urban-areas versus those more appropriate for more rural settings with larger parcels)?
- Are pollutants of concern that are typically generated by the proposed development type considered when selecting or approving BMPs?
- Does the technical manual provide guidance on sizing, performance, and location of BMPs?
- When was the BMP manual last updated?

✓ Does the permittee have different requirements or standards for different types of developments (e.g., specific post-construction requirements for gas stations or automobile repair facilities)?

✓ Does the permittee have design manuals related to land-efficient site designs (e.g. better site design, better models for large retailers)?

✓ Does the permittee promote source control and site design standards to reduce the generation of pollutants in addition to treatment BMPs?

✓ Does the permittee include in standards and manuals specifications for innovative site design practices, such as low-impact development and other techniques that manage runoff on-site?

✓ Are project applicants encouraged or required to use vegetative BMPs that promote infiltration, such as swales, biofiltration practices, etc., where possible?

✓ Does the permittee offer financial incentives to support post-construction stormwater goals (e.g., programs to support redevelopment, such as enterprise zones, or stormwater utility credits)?

TIP:

Select 2 to 3 approved projects with post-construction BMPs to review with the permittee. Try to choose different project types (residential, commercial) and sizes. Also review at least one public project plan to see if the permittee is applying adequate standards to municipal developments.

PLAN REVIEW AND APPROVAL PROCEDURES

✓ What is the project size threshold for the permittee to require post-construction BMPs?

✓ Does the permittee apply standard conditions that incorporate post-construction installation and maintenance requirements into its plan review process?

- Obtain a copy of the standard conditions. Do they specifically address post-construction stormwater management?

✓ Do plan reviewers use specific criteria or a checklist when reviewing plans?

✓ Does the permittee consider pollutants of concern or whether the project discharges to a 303(d) listed impaired water when determining which BMPs are required?

✓ Does the permittee consider such regional concerns as smart growth initiatives, watershed master plans, and other larger-scale planning efforts to ensure that each new development and redevelopment plan is consistent with the goals of these initiatives?

✓ When reviewing plans approved by the permittee:

- Look for whether adequate BMPs are included on plans, details, and drawings, what types of standard conditions or notes are included, whether maintenance requirements are specified, and whether the location of BMPs would hinder maintenance.
- Look for BMPs that may not be easily characterized, in particular the comprehensive planning and land-efficient planning BMPs.
- For commercial/industrial projects, review whether adequate source control BMPs are required on plans.
- Were comments provided by the permittee to the project proponent reasonable and appropriate?

✓ What types of projects must be reviewed by the permittee for post-construction stormwater controls? Does the permittee have a process to identify priority projects identified in the MS4 NPDES permit?

✓ What types of standards or technical guidance do the permittee's reviewers use to review projects?

✓ Does the permittee condition improvements to existing developments with requirements for post-construction stormwater controls? How are these redevelopment requirements triggered?

POST-CONSTRUCTION BMP INVENTORY

✓ How does the permittee track the installation and maintenance of post-construction BMPs?

✓ What information is collected?

- Location
- Owner/operator
- Recommended maintenance schedule
- Inspection findings

BMP INSPECTION AND MAINTENANCE

✓ Does the permittee require maintenance agreements for all projects with post-construction BMPs?

✓ Are "as-built" inspections required at the conclusion of a development project?

- Do staff conduct these inspections or are they self-certified?

✓ Does the permittee inspect private facilities or require inspections by owner/operators?

✓ If the permittee performs the inspections, how often are they performed?

✓ If owner/operators are required to inspect and maintain their BMPs, how is this authorized? Through a MOU? Through conditions of approval? Through another type of agreement?

✓ How does the permittee ensure inspections are occurring?

- Does the permittee send reminder notices?
- Does the permittee require the owner/operator to submit inspection reports?

ENFORCEMENT

- ✓ How does the permittee require proper maintenance and repair after the inspection?
- ✓ What types of enforcement actions are provided by ordinance (e.g., notices of violation, abatement)?
- ✓ Is the permittee's enforcement authority limited (e.g., limits on the dollar amount of fines, inability to issue civil penalties)?

PUBLIC CONSTRUCTION PROJECTS

- ✓ Does the permittee use post-construction BMPs for public projects?
- ✓ Has the permittee instituted a pilot program to test and showcase innovative BMPs on public property or in public buildings?
- ✓ Are they tracking the location, inspection history, and condition of the BMPs?
- ✓ Who inspects them? How often?

TRAINING AND EDUCATION

Training for staff

- ✓ Are plan reviewers trained on post-construction BMPs and requirements?
- ✓ What type of training do staff performing "as built" and post-construction inspections receive?
- ✓ How often are the trainings conducted?
- ✓ How many staff have been trained?
- ✓ What type of training or education does the permittee provide to city-contracted developers and engineers on post-construction requirements?

Developer and plan designer education

- ✓ What types of educational materials have been developed and distributed to developers and designers regarding post-construction BMPs and application requirements?
- ✓ How are the materials distributed? At the permit desk? During inspections?
- ✓ What type of training does the permittee provide or advertise to local developers and designers?
    - o How often is this training conducted?
    - o How many developers and designers have been trained?
- ✓ Are they required to attend?

<u>In-Field Program Evaluation Activities</u>

In-field evaluation activities primarily focus on verifying that structural and source control BMPs approved by the permittee were installed and are being maintained properly in the field. Select several completed projects that were subject to post-construction requirements. Take along the approved plans so that the locations and types of BMPs can be verified.

Note whether BMPs are installed as designed or if BMPs have been modified or removed after the project has been completed. For example, trash storage areas could have been modified after installation, slopes might have become destabilized, or storm drain stenciling could have been removed or become illegible.

In addition, in-field evaluation activities should include inspections of publicly owned stormwater BMPs, such as detention basins, to verify that they are being adequately maintained.

Common Issues Identified During Program Evaluations

The following are some areas where past on-site evaluations have found problems in post-construction programs. These areas should be closely considered during evaluations:

- ✓ The plan review staff lack training on design requirements for development standards and conditioning of new development projects.
- ✓ The permittee lacks review criteria, checklists, or a formal plan review process to assist plan review staff in reviewing development projects.
- ✓ The permittee does not assess BMPs for effectiveness at more than one scale (e.g., at both the site and watershed scales).
- ✓ The permittee institutes blanket BMP requirements (i.e., those that apply to all projects) that do not take into account the development setting.
- ✓ The permittee institutes BMP requirements that act as unintended barriers to better models for development and redevelopment.
- ✓ The permittee developed its program from a "Menu of BMPs" that has resulted in BMPs that are easy to administer but are not the most effective or do not address target stressors.
- ✓ The permittee does not consistently condition plans with post-construction stormwater controls.
- ✓ The permittee does not require inspection and maintenance of post-construction controls.
- ✓ The permittee lacks a system to track approved structural and source control BMPs for inspections and ongoing maintenance.
- ✓ The permittee's BMP tracking system is based on conventional, structural measures that are more readily quantified than non-structural techniques that work on a watershed basis, such as comprehensive planning or improved street designs.
- ✓ The permittee has not updated approved BMP lists to reflect advances in low impact development or comprehensive planning-related BMPs.

4.6 Industrial/Commercial Facilities

Regulatory Requirements

Applicable federal regulations for the NPDES stormwater Phase I and Phase II MS4 regulations are listed at right. NPDES MS4 permits must address these requirements and often include more specific state requirements. This program area is mainly applicable to Phase I MS4 permittees; Phase II MS4 permittees address stormwater discharges from industrial facilities and commercial businesses as part of their education programs.

Federal Regulations

NPDES MS4 permits must address these requirements and often include more specific state requirements:

- ✓ Phase I MS4 Regulations
  - 40 CFR 122.26(d)(2)(iv)(C)
  - 40 CFR 122.26(d)(2)(i)(A)
  - 40 CFR 122.26(d)(2)(ii)
- ✓ Phase II MS4 Regulations
  - 40 CFR 122.34(b)(ii)

General Permits

To minimize the impact of stormwater discharges from industrial facilities, the NPDES program includes an industrial stormwater permitting component. Operators of industrial facilities included in one of the 11 categories of stormwater discharges associated with industrial activity that discharge or have the potential to discharge stormwater to an MS4 or directly to waters of the United States require authorization under an NPDES industrial stormwater permit. Construction activity is one of these 11 categories, but because of the nature of construction stormwater controls, the category is discussed separately from the other 10 categories. Most states are authorized to implement the NPDES stormwater permitting program. EPA remains the permitting authority in several states and territories, on Indian Country lands, and at some federal facilities.

Resources

- ✓ EPA Menu of BMPs www.epa.gov/npdes/stormwater/menuobmps
- ✓ Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices www.epa.gov/npdes/pubs/contents_indguide.pdf
- ✓ Sacramento County Industrial Stormwater Compliance Program www.sactostormwater.org/industrial/compliance.asp
- ✓ Multi-Sector General Permit www.epa.gov/npdes/msgp

For those areas where EPA is the permitting authority, the **Multi-Sector General Permit (MSGP)** provides facility-specific requirements for many types of industrial facilities with a single permit. The permit outlines steps that facility operators must take prior to being eligible for permit coverage, including development and implementation of a SWPPP.

It is important to note that some permittees will also have coverage under industrial stormwater general permits or have individual permits for maintenance facilities that fall under one of the covered industrial categories, such as landfills, waste transfer stations, or transportation facilities. Please refer to the "MS4 Maintenance Activities" section of Conducting an Evaluation for information regarding municipal facilities that may also require industrial stormwater permit coverage.

Common Activities

The industrial and commercial facilities program component can be implemented by various departments and staff. Many municipal permittees use existing pretreatment and restaurant inspectors to fulfill the stormwater requirements. Some permittees choose to hire outside consultants to perform inspections and maintain the inventory of facilities.

Legal Authority

Many municipal permittees have adopted stormwater ordinances that outline general or specific discharge prohibitions that apply to industrial and commercial properties. These ordinances should list discharge exemptions, inspection requirements, and penalties for non-compliance. Some permittees, however, must

rely on multiple existing codes (i.e., health, building, hazardous materials) designed to protect health and human safety. In these cases, the program coordinator and inspection staff should be able to articulate the combination of codes that provide the authority to inspect, prohibit, or stop illegal discharges, require BMPs, and enforce instances of noncompliance.

Facility Inventory

The types of industrial and commercial facilities that a permittee needs to inspect can vary significantly from permittee to permittee. Some localities may have large industrial areas with few commercial businesses, while others may have a large number of restaurants and retail businesses but no industrial facilities at all. Still other permittees may have a mix of many different types of industrial and commercial facilities. Permittees should characterize the facilities and prioritize them based on their potential impact on stormwater quality, and the inspection program should be based on this prioritization approach.

Many permittees have developed a database to inventory industrial/commercial facilities and manage the inspection program. The inventory can be created using multiple resources, such as the permitting authority's list of facilities that are covered under the state industrial general permit, business licenses, list of pretreatment significant industrial users, and phone books or other professional directories. As per the federal regulations, the inventory should be organized by watershed with a description (such as standard industrial classification (SIC) codes) that "best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, stormwater associated with industrial activity." The database inventory should include facility type, past inspection or enforcement results, proximity to receiving waters, potential pollutant sources on-site, and other pertinent information to assist in inspection prioritization and management. Many permittees use the same database to manage the construction inspection program as well.

Standards, BMPs, and Outreach

Many municipal permittees have stormwater ordinances that include specific BMPs or standards for industrial and commercial facilities to protect water quality and minimize stormwater pollution. Others have adopted pollution prevention standards for new or redevelopment of industrial/commercial facilities that are required through conditions of approval, improvement permits, etc. Phase I MS4 permittees have developed brochures, fact sheets, and posters to hand out to operators during inspections to educate them about appropriate BMPs. Many permittees have developed these materials in multiple languages to use in a variety of communities. Some permittees have Web sites with links to relevant outside resources for more information. Many permittees also acknowledge that educating facility operators is essential to implementing BMPs and minimizing stormwater pollution and should be done, not only during inspections, but also through workshops, conferences, and professional meetings.

Staff Training

To ensure that inspectors are knowledgeable and proficient in the newest and most effective approaches to minimizing stormwater pollution from industrial/commercial facilities, many permittees require annual BMP training for inspection staff. This training may be presented in-house or staff may attend trainings provided by the permitting authority or industry. It is important to cross-train any other staff (e.g., pretreatment, health department) used for stormwater inspections as well.

Inspections

Most effective industrial/commercial inspection programs maintain a complete facility inventory and group them according to priorities established by the permittee. An inspection frequency is determined based on priority, and a database is used to manage such information as inspection findings, enforcement actions, and required follow-up activities. Many permittees use and cross-train existing staff to perform industrial/commercial inspections, but some permittees may need to maintain an exclusive stormwater inspector due to a potentially large number of high-priority facilities. There should be an inspection

standard operating procedure that has been formalized and documented. It should include a checklist to be used during the inspection and possibly a report format. Inspectors should be aware of federal, state, and local stormwater regulations that may apply to industrial/commercial facilities. Inspectors should be familiar with various types of BMPs commonly used at the types of facilities typically found in the permit area and should be able to educate facility operators about such BMPs. In addition, inspectors should understand and use the permittee's established enforcement escalation response plan to gain compliance as necessary. The inspection staff should be proficient in the enforcement escalation procedure and should properly document all enforcement actions accordingly. Inspections should be used not only to identify non-compliance issues, but as an opportunity to educate facility operators about proper stormwater BMPs.

Program Support and Resources

Permittees should have an established source of funding for their industrial/commercial facilities program, including adequate resources for frequent inspections. Funds can come from fees paid by the business owners. If general funds are used to support the program, permittees should ensure that industrial and commercial inspections are line-item appropriations not subject to reduction or elimination based on board politics or budget constraints.

Enforcement

The ordinance establishing legal authority for the industrial/commercial inspection component of the SMWP should define all stormwater discharge prohibitions, describe any exemptions or waivers, detail the enforcement escalation procedure, and outline any fines or other penalties for noncompliance. Inspectors should have the ability to levy a penalty such as a compliance directive, notice of violation (NOV), or administrative fine to the facility during an inspection if non-compliance is noted. Significant fines or penalties should be included in the ordinance for egregious violations or recidivism.

Evaluating Industrial/Commercial Inspection Programs

The evaluation of an industrial/commercial inspection program focuses on the permittee's legal authority to require and enforce their program, prioritization of facilities, and in-field inspection procedures. The evaluation should begin with a thorough review of the permittee's ordinances, standards, guidance, and other relevant written materials.

Before the Program Evaluation

To prepare for the industrial/commercial inspection program evaluation, you should review or obtain the following information prior to the evaluation:

Pre-Evaluation Checklist
- ✓ MS4 permit provisions
- ✓ SWMP provisions
- ✓ Most recent annual report
- ✓ List of NPDES facilities
- ✓ Inspection reports

- **MS4 NPDES permit provisions.** Review the permit requirements for the industrial/commercial inspection program to identify any specific requirements (such as a minimum inspection frequency). The NPDES permit will serve as the primary basis for the program evaluation.
- **SWMP provisions.** The permittee's SWMP planning document(s) will describe the activities and BMPs the permittee has committed to implement and may include measurable goals that provide deadlines for program implementation.
- **Latest annual report.** The most recent annual report should be reviewed to identify past activities and help you become familiar with the permittee's program.
- **List of NPDES industrial facilities.** Try to obtain a list of industrial facilities in the permit area that are covered under an industrial stormwater general permit issued by the permitting authority or are included in the pretreatment program of local or regional POTWs. This list can be used during the program evaluation to determine whether the permittee is including these facilities in

the inspection program and to understand the types of facilities that are found in the permit area. The list can also help identify potential sites for field inspections. The list can also be crosschecked with a similar list requested and obtained from the permittee.

- **Industrial inspection reports.** Review reports from inspections performed by the permitting authority and talk to state or EPA inspectors to determine if there have been past industrial stormwater violations at facilities located in the permit area.

Records Review

During the evaluation, you should ask for copies of relevant information to assist in writing the report or documenting a permit violation. The following records might help in evaluating the compliance and performance of the permittee's industrial/commercial inspection program.

Documentation	What to Look For
Local ordinances, regulations, or policies that might apply to industrial/commercial facilities	▪ Stormwater ordinance ▪ Health codes ▪ Municipal code sections dealing with aesthetics; vehicles; dumpsters, trash, solid waste; and litter, trash, sweeping ▪ Building codes
Enforcement escalation procedure or response plan	Flow chart or procedure that specifies a process by which fines can be levied and legal action taken against facility operators or business owners who violate stormwater rules and ordinances
Tracking system	Database or other system used to track the following information: ▪ The number and type of industrial facilities in the permit area ▪ Prioritization scheme or other method that determines inspection schedule and frequency ▪ The number, frequency, and results, along with follow-up actions resulting from inspections ▪ The number and type of enforcement actions at facilities
Examples of inspection reports	▪ Hand-written field notes and formal write-ups if both are used
Examples of enforcement files or cases	▪ Records should document enforcement and follow-up activities ▪ Review both a completed file and one that is in progress if possible
Training	▪ Review any records documenting how often training has been provided to municipal inspectors, who prepared and delivered the training, who attended, and how long the training lasted, as well as any examples of the training materials used ▪ Educational information, brochures, or other BMP guidance used by staff or distributed to facility operators

Elements to Address During a Phase I MS4 Program Evaluation

Although not specified in detail in the NPDES Phase I MS4 regulations, a successful industrial/commercial inspection program will generally be composed of the following elements:

- Legal authority
- Facility inventory/prioritization
- Standards, BMPs, and outreach
- Staff training
- Facility inspections
- Program support and resources
- Enforcement/referrals

The common program elements are the key issues to consider during the review.

LEGAL AUTHORITY

- ✓ Does the Phase I permittee have the authority to require industrial and commercial facilities to implement stormwater BMPs? Does the Phase I permittee have the authority to conduct inspections and enforce requirements?
    - o What ordinance(s), code, or policy provides this legal authority?
- ✓ What types of facilities are covered under this legal authority?
- ✓ Who (e.g., specific staff, department, etc.) has the authority to enforce the ordinances and/or inspect the facilities?
- ✓ What exemptions does the ordinance or other legal authority allow?

FACILITY INVENTORY

- ✓ Has the permittee completed an inventory of industrial/commercial facilities discharging to the stormwater system?
- ✓ What types of facilities are included on the inventory?
- ✓ What sources were used to create the inventory?
    - o Facilities that filed NOIs for EPA MSGP or state industrial general permit coverage?
    - o Significant industrial users within the pretreatment program?
    - o Business licenses?
    - o Phone book?
    - o "Windshield" survey?
- ✓ Does the inventory include all the industrial/commercial facilities subject to the industrial general permit?
    - o Does the permittee periodically check to see if new facilities that must be covered by an industrial stormwater general permit have filed an NOI?
    - o What is the process for notifying the permitting authority of non-filers?
- ✓ If applicable, does the inventory include all the facilities specified as required in the MS4 NPDES permit?
- ✓ How is the inventory updated? How often?

- ✓ What information is maintained about the facilities?
- ✓ How is the inventory maintained and stored?
- ✓ Does the permittee prioritize the facilities?
- ✓ Is the prioritization based on facility type, past inspection or enforcement results, proximity to receiving waters, potential pollutant sources on-site, and so forth?
- ✓ Is the prioritization used to determine frequency of inspections?
- ✓ Has the permittee mapped the locations of prioritized facilities to cross-reference reports of dumping, illicit discharges, or other water quality issues?

STANDARDS, BMPS, AND OUTREACH

- ✓ Has the permittee adopted standards or BMPs that industrial/commercial facilities are required to implement (e.g., all car dealerships must install a wash rack plumbed to the sanitary sewer)?
- ✓ Are the requirements for new developments only or are they triggered by improvements of existing facilities? Are there schedules for implementing retrofits?
- ✓ Are these standards applicable to existing facilities, new facilities, or both?
- ✓ Does the permittee refer facility operators to specific stormwater BMP or standards guidance documents?
- ✓ What type of educational program has been developed for industrial and commercial facility operators?
- ✓ What type of brochures, handouts, or guidance on BMPs is provided to these facilities by the permittee?
- ✓ When is this information provided? During inspections? During training events? During professional organization presentations?

STAFF TRAINING

- ✓ What type of training do the industrial and commercial inspectors receive?
- ✓ How often?
- ✓ If additional inspectors are used (e.g., food safety inspectors for restaurant inspections, pretreatment inspectors), are they trained specifically on stormwater BMPs and requirements? By whom?

INSPECTIONS

- ✓ Who performs inspections and for what types of facilities (e.g., health inspectors for restaurants, pretreatment inspectors for industrial facilities with a pretreatment permit)
- ✓ How often are industrial and commercial facilities inspected?
  - o How is the frequency determined?
- ✓ Does the permittee's industrial/commercial inspector(s) use a standard checklist during inspections?

TIP:
It is a good idea to ride with the inspector during the in-field portion of the evaluation. This is a good time to talk informally about the any program, staffing, and noncompliance issues.

- ✓ Is a report written after the inspection? How is the inspection documented in the file?
- ✓ Does the permittee verify NPDES permit coverage for facilities?
- ✓ For industrial facilities, does the inspector review the SWPPP and monitoring data during the inspection?
- ✓ Does the permittee refer non-filers to the permitting authority?
- ✓ Do inspectors provide educational materials during inspections? What types?
- ✓ If multiple departments or agencies perform inspections, how is information transferred or cataloged?

PROGRAM SUPPORT AND RESOURCES

- ✓ Does the program have a dedicated source of funding to support inspectors?

ENFORCEMENT

- ✓ In instances of noncompliance, do the inspection staff use a formalized, approved enforcement escalation procedure?
- ✓ How was the enforcement escalation procedure developed? Is it used? Is it effective?
- ✓ Who is authorized to apply various enforcement procedures (e.g., NOVs, fines)?
- ✓ What types of penalties are readily available to the inspection staff?
- ✓ What is the most common method of gaining compliance (e.g., NOVs, fines, abatement)?
- ✓ Have the permittee describe a recent non-compliance issue at an industrial/commercial facility to assess how compliance was achieved.
- ✓ At what point are non-compliance cases referred to the NPDES permitting authority? How many have been referred in the last 12 months?

In-Field Phase I Program Evaluation Activities

To determine whether the permittee is adequately inspecting for compliance at industrial/commercial facilities, it is necessary to observe the inspectors "in action." Discourage inspectors from merely describing the inspection process; you need to observe an actual inspection in process.

Schedule at least a half-day for this in-field activity being sure to allow enough time for travel between facilities. If the permittee is conducting both commercial and industrial inspections, try to observe inspections at each type of facility. If the permittee has more than one inspector, accompany a different inspector at each type of facility. In general, small, less complex facilities are better to visit than large industrial facilities. Work with the permittee to select typical facilities. For example, if the vast majority of facilities are vehicle maintenance facilities, visit several of those. It should be made clear that the inspectors are to conduct the inspections; you are only to observe.

Try to limit the number of people that attend each inspection. Too many staff can overwhelm a small facility, making it harder for the inspector to conduct a representative inspection. Discuss which facilities are to be inspected early in the evaluation process. This will allow enough time to schedule inspection staff and arrange transportation logistics.

Many times, inspectors do not participate in the office evaluation, so the in-field activity is a good opportunity to ask the same questions to see if the answers are consistent. Also, many inspectors are more open to discussing "problems" with the program than are stormwater program managers. Try to spend some time with the municipal inspector talking informally about the program.

First and foremost, during a site visit the municipal inspector should be able to determine whether illegal discharges are occurring or could be imminent from industrial/commercial facilities. Visiting a site during a rain event is optimal to observe potential issues. In the event that the inspector does feel immediate action is necessary, it is important that the inspector either have the legal authority to cease discharges and require immediate BMPs, or be aware of who does have this ability and under what legal authority. The inspector should be aware of all applicable ordinances, as well as administrative, civil, and criminal recourse in the event of non-compliance. The inspector should be aware of the enforcement escalation procedure or plan as well.

As the inspector conducts the industrial or commercial inspection, observe the following:

- ✓ Is the inspector knowledgeable about stormwater BMPs, requirements, and ordinances?
- ✓ Is the inspector familiar with the applicable industrial stormwater general permit (state or federal)?
- ✓ When inspecting an industrial facility, does the inspector check whether the facility has a waste discharge identification number, and does the inspector review the facility's SWPPP?

TIP:

It is a good practice to visit at least one facility with historic or existing compliance issues. This can be an excellent way to demonstrate how effective the inspection and enforcement program is, and often the inspector will welcome outside assistance and advice.

- ✓ Does the inspector use a checklist or otherwise document inspection findings in the field?
- ✓ What kind of written feedback is provided to the operator and within what timeframe do violations need to be addressed?
- ✓ What kind of report is generated as a result of the inspection? Does it detail all problems found at the facility or does it document only that the inspection occurred?
- ✓ Are findings from inspections tracked in a central location or database?
- ✓ How does the inspector track follow-up inspections or enforcement actions?
- ✓ Is the inspector thorough? Does the inspector walk the entire site and identify all potential pollutant sources?
- ✓ Does the inspector note flow pathways and check for discharges from the facility at outfalls or to storm drain inlets?
- ✓ Is the inspector able to educate the facility manager on proper BMPs or requirements? What educational material is provided?

Document all findings in the field in as much detail as possible. An Industrial/Commercial Inspection Worksheet has been included as Appendix C to assist in this documentation.

Elements to Address During a Phase II MS4 Program Evaluation

- ✓ Has the permittee identified specific business sectors that might be a significant source of stormwater pollutants to the MS4?
- ✓ What type of educational program has been developed to address stormwater discharges from industrial facilities and commercial businesses?
- ✓ What type of brochures, handouts, or guidance on BMPs is provided to these businesses by the permittee?
- ✓ How is this information provided? As a result of complaints or illicit discharge incidents? During training events? During professional organization presentations?
- ✓ How does the permittee evaluate the effectiveness of education and outreach efforts in terms of measuring changes in stormwater management and pollution prevention practices at industrial facilities and commercial businesses?

Common Issues Identified During Program Evaluations

The following are some typical problem areas associated with the industrial/commercial SWMP component. These areas should be closely considered during evaluations:

- ✓ The permittee has yet to fully implement an inspection program for industrial and/or commercial facilities.
- ✓ The inventory of industrial/commercial facilities is not complete and is not regularly updated.
- ✓ Facilities have not been prioritized according to water quality threat.
- ✓ The permittee has not conducted outreach to facilities on the types of stormwater BMPs that should be implemented.
- ✓ Industrial/commercial inspectors have not been trained on stormwater BMPs and requirements.
- ✓ The permittee does not have a process to identify non-filers to the permitting authority.
- ✓ The permittee lacks written procedures and standards for conducting industrial/commercial inspections and for enforcement.
- ✓ The permittee cross-trains existing inspectors (e.g., pretreatment, food safety) to perform stormwater inspections but does not provide adequate time and resources to perform them.

4.7 Illicit Discharge Detection and Elimination

Regulatory Requirements

EPA's federal regulations for the stormwater Phase I and Phase II MS4 regulations are listed at right. NPDES MS4 permits must address these requirements and often include more specific requirements.

Federal Regulations

- ✓ Phase I MS4 Regulations 122.26(d)(2)(iv)(B)
- ✓ Phase II MS4 Regulations 40 CFR 122.34(b)(3)

Common Activities

Legal Authority

Permittees must develop and implement an effective program to prohibit illicit discharges from entering the MS4. The prohibition of illicit discharges should be linked to legal authority to ensure proper enforcement. This legal authority can be included in public health and safety regulations, specific stormwater regulations, sewer use bylaws, local ordinance, or a combination of several parts of the code.

Resources

- ✓ Menu of BMPs www.epa.gov/npdes/stormwater/menuofbmps
- ✓ Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments www.cwp.org/
- ✓ Illicit Discharge Detection and Elimination Manual www.neiwpcc.org/PDF_Docs/iddmanual.pdf

Mapping

Phase I MS4 permittees should have developed a map of known municipal outfalls discharging to waters of the United States as part of their source identification conducted for Part I of their NPDES application. Phase II permittees are required to develop a map of outfalls and the names of locations of all waters of the United States that receive discharges from those outfalls. To be useful, these maps should also include the storm drain pipe network and catch basin locations, along with other relevant information such as the location of stormwater treatment facilities, watershed boundaries for each outfall, critical land uses and pollutant sources, and municipal facilities. Outfalls and drainage areas should be prioritized in order of their potential to be a source of illicit discharges. Ideally, this information would be managed in a database linked to a GIS.

Field Screening

Field screening of outfalls during dry weather can help to identify illicit discharges in priority areas. Of particular concern are areas of older development, areas with a high concentration of automobile-related industries, and areas with high concentrations of industrial facilities among others. Documentation of the illicit discharge detection and elimination (IDDE) program component in the SWMP Plan should include a detailed summary of the departmental responsibility for field activities, frequency of inspections, inspection procedures, inspection equipment, and documentation procedures for field activities.

Investigation of Potential Illicit Discharges

Municipalities should have a written procedure for how they will locate, eliminate, and prevent illicit discharges to the MS4. The procedure should address both spills and illegal connections to the MS4 and should be available to all staff responsible for responding to illicit discharges. The procedure should also specify how spills and illicit discharge incidents are tracked.

Spill Response and Prevention

The purpose of spill response programs is to reduce the risk of spills and improve response and cleanup when they occur. These programs usually require coordination among fire, police, health, and public works departments. The departments responsible for implementing the program should be identified and the SMWP should address employee training, reporting procedures, spill containment, storage and

disposal activities, documentation, and follow-up procedures. For each of these elements, particular attention should be given to good housekeeping and materials management practices. Procedures can be implemented through modification of ordinances and enforcement or through coordination with existing spill prevention or spill containment programs. Most permittees address this element through the development of a spill response plan.

Public Awareness and Reporting Program

Permittees should promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges to the MS4 or receiving waters. Typical public awareness and reporting programs may include developing a hotline number, educating school students, using inserts in utility bills, and developing media announcements. Permittees should have a system in place to quickly route all public calls to appropriate staff, track the calls, and document response and enforcement, if used, for reporting purposes.

TIP:

IDDE public awareness efforts are often discussed during the evaluation of the public education and involvement program.

Proper Management of Used Oil and Toxics

Permittees should provide information on where the public can safely recycle or dispose of used oil and toxic materials to minimize illegal dumping.

Preventing Sanitary Sewer Discharges

Although not a specific requirement of Phase II programs, Phase I MS4 permittees are required to limit infiltration to the MS4 of seepage from municipal sanitary sewers. Many permittees have developed a sanitary sewer overflow program to address discharges from their sanitary sewers. Others have developed programs to promote proper maintenance of septic tanks.

TIP:

Maintenance field crews are usually the best "eyes and ears" available to the permittee to detect illicit discharges and illegal dumping activities. It is important that the information observed in the field is communicated the appropriate staff for follow up and outreach.

Education and Training

Training for staff should include spill response procedures and procedures on how to locate, eliminate, and prevent illicit discharges. Permittees should also educate the public on the hazards of illegal dumping and illicit discharges to the MS4.

Evaluating Illicit Discharge Detection and Elimination Programs

Common sources of illegal, non-stormwater discharges include sanitary wastewater, automobile maintenance waste products such as motor oil or antifreeze, laundry wastewater, household toxic substances, spills from car accidents, runoff from excess irrigation, and industrial sources of cooling waters, rinse water, and other process wastewater. Although these illicit discharges can enter the storm sewer system in various ways, they generally result from either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the storm drain system or spills). Illicit discharges can be further divided into those discharging continuously and those discharging intermittently.

Phase I NPDES MS4 regulations require that a program be developed to detect and remove illicit discharges into the storm sewer by prohibiting these discharges, field screening outfalls, investigating potential illicit discharges, controlling the infiltration of sanitary sewage into the storm sewer, and developing programs for spill response and prevention, public awareness and reporting, and used oil and toxics disposal.

Typically, staff charged with implementing the IDDE SWMP component are from multiple departments and agencies, although this varies from permittee to permittee. The primary responsibility for detecting and investigating illicit discharges normally falls to the public works department. Public works field crews are in the field every day and are the best source of information about what is happening in the permit area. Also, public works departments often have access to the maps and equipment necessary to track discharges to their source. Normally, public works field staff are not authorized to use enforcement against dischargers, so code enforcement staff may be necessary to investigate cases. Many permittees use the fire department for cleanup of spills, and sometimes police departments are charged with manning a "hotline" for complaints called in by citizens and for ultimately investigating dumping or other illegal activities.

Before the Program Evaluation

To prepare for the IDDE program evaluation, an evaluator should review or obtain the following information prior to the evaluation:

Pre-Evaluation Checklist
- ✓ MS4 permit provisions
- ✓ SWMP provisions
- ✓ Most recent annual report

- **MS4 NPDES permit provisions.** Review the permit requirements for the IDDE program to identify any specific requirements, such as a proactive outfall screening. The NPDES permit will serve as the primary basis for the program evaluation.
- **SWMP provisions.** The permittee's SWMP planning document(s) will describe the activities and BMPs they have committed to implement and may include measurable goals that provide deadlines for program implementation.
- **Latest annual report.** The annual report should be reviewed to identify past activities and help you become familiar with the IDDE program.

Records Review

Consider reviewing the following records during the on-site evaluation to determine the permittee's capabilities and extent of implementation.

Documentation	What to Look For
Ordinance and policies	▪ Code which allows the permittee to prohibit illicit discharges from commercial, industrial, or residential sources ▪ Should include or reference an enforcement escalation policy
Enforcement escalation policy	▪ Should describe the process for eliminating the source of an illicit discharge and for obtaining recourse or abatement if necessary ▪ Should describe which staff are authorized to enforce the applicable ordinances and which enforcement mechanisms are available
Illicit discharge tracking records and databases	Database or other system used to track the following information: ▪ The number and type of illicit discharges located in the permit area ▪ Follow-up actions once discharges are located ▪ Locations of discharge incidents (e.g., on a map or in a GIS)

Documentation	What to Look For
Dry-weather monitoring or screening records	▪ Describes the location and description of dry weather flows ▪ Monitoring data associated with a discharge ▪ Information about the source of a discharge and actions take to identify sources
Spill Response Plan and records	▪ These records may be maintained by a different agency such as the fire department, but the permittee should have access to the information and be provided a regular report of spills that impact the MS4
Recycled oil and household hazardous waste educational materials	▪ These materials may be presented during the public outreach part of the evaluation
Web site or other educational materials for reporting illicit discharges and dumping	▪ Review educational materials to determine if the general public has adequate information to identify and report illicit discharges ▪ Materials should have a reporting number that is viable 24 hours a day
Training records	▪ Training records should be available to document that the permittee's employees are regularly trained on recognize an illicit discharge

Elements to Address During the Program Evaluation

The NPDES regulations specifically require the following elements in an IDDE program for both Phase I and Phase II programs:

- Legal authority
- Mapping
- Field screening
- Investigation of potential illicit discharges
- Spill response and prevention
- Public awareness and reporting program
- Proper management of used oil and toxics
- Preventing sanitary sewer discharges
- Education and training

The common program elements are the key issues to consider during the review. For each of the elements listed above, this Guidance presents common program activities and questions to consider during the program evaluation. The questions are suggested for you to address each program component. Of course, a comprehensive program evaluation must be tailored to the specific issues associated with each permittee and should include more specific questions regarding the permittee's permit structure and management challenges.

LEGAL AUTHORITY

- ✓ Does the permittee have an ordinance to prohibit illicit discharges and dumping to the MS4?
- ✓ What exclusions are included in this ordinance?
- ✓ What enforcement mechanisms are authorized in the event of an illicit discharge being detected?
- ✓ Has an enforcement escalation plan been developed?

MAPPING

- ✓ Does the permittee have a map showing storm drain pipes, outfalls, and storm drain inlets?
- ✓ Is the map readily available to the personnel who would respond to an illicit discharge incident?
- ✓ Does the permittee have a map of the storm drain system showing the locations of outfalls and municipally maintained structural stormwater controls?

TIP:

The IDDE mapping and field screening discussion may need to be coordinated with the discussion of MS4 maintenance activities. Ideally, the maps developed for public agency activities and for IDDE would be the same because often public works field maintenance crews are involved with inspections of outfalls.

FIELD SCREENING

- ✓ How are field screening areas identified?
- ✓ Are areas of the MS4 prioritized based on incidents of illicit discharges, land use, dumping reports, etc.?
- ✓ How often are field screening areas evaluated?
- ✓ Are outfalls inspected during dry weather to identify any potential dry-weather discharges? What does the inspection include?
- ✓ If dry-weather flows are present, are they being sampled to determine potential sources of pollutants? For what parameters?
- ✓ Does the permittee have a database (or other method) to track locations of illicit discharges, spills, and illegal dumping?
- ✓ Does the database track dry-weather monitoring or screening data?

INVESTIGATION OF POTENTIAL ILLICIT DISCHARGES

- ✓ Does the permittee have a procedure for tracing the source of an active illicit discharge?
- ✓ Who performs the investigations?
- ✓ Are these procedures written in a document or plan?
- ✓ What equipment does the permittee use to find illicit discharges?
- ✓ Does the permittee have equipment to videotape storm drains, or can it quickly contract out this work?
- ✓ How are investigations tracked?
- ✓ Has an enforcement response plan been adopted for use when an illicit discharge source has been located?

- ✓ Review complete paperwork trails for several illicit discharge events (including a spill and an unknown illicit discharge in the storm drain system).
    - o Was the full investigation process documented?
    - o Are adequate enforcement actions taken when required?
- ✓ Does the permittee have the ability to collect cleanup and abatement costs from the responsible party?

SPILL RESPONSE AND PREVENTION

- ✓ Does the permittee have a clear set of procedures in place that details who is responsible for responding to spills and emergency situations?
- ✓ Do field staff have spill containment supplies in their vehicles, and are they trained to contain minor spills?
- ✓ Is a contractor or other entity available for larger spills?
- ✓ Does the permittee have the ability to collect cleanup and abatement costs from the responsible party?
- ✓ How are spills and spill response tracked to ensure adequate reporting?

PUBLIC AWARENESS AND REPORTING PROGRAM

- ✓ Does the permittee prioritize subwatersheds or neighborhoods and assign resources for educational efforts based on frequency and types of illicit discharge incidents?
- ✓ Is there a general phone number or "hotline" in the phone book or Web site that people can call to report a spill or dumping?
- ✓ What types of public outreach materials are available to publicize public reporting?
- ✓ Does the permittee track the number of public calls or complaints reporting illicit discharges?

PROPER MANAGEMENT OF USED OIL AND TOXICS

- ✓ Assess education activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials such as household hazardous waste.
- ✓ Does the permittee have recycling or collection facilities to which the public can take used oil and other toxics?
- ✓ What type of toxics does the permittee manage recycling and disposal?

PREVENTING SANITARY SEWER DISCHARGES

- ✓ Has the permittee conducted any studies or evaluations to determine whether sanitary sewers are contributing pollutants to the MS4?
- ✓ What is the extent of infiltration and inflow into the sanitary sewer system? How is this impacting discharge from the MS4?
- ✓ If the permittee also operates a sanitary sewer system, do they have procedures to prevent sewage spills and SSOs to the MS4?

EDUCATION AND TRAINING

- ✓ What type of training do field staff (e.g., storm sewer maintenance crews, street sweepers) receive on spill response and IDDE?
- ✓ Are staff generally educated about what illicit discharges are and how to report them?

In-Field Program Evaluation Activities

IDDE activities can be difficult to evaluate in the field. If, during an on-site evaluation, the permittee receives a report of a potential illicit discharge, you could accompany the response staff (if allowed) to view their response procedures. Other in-field activities include viewing the equipment available for responding to illicit discharge events (e.g., response trucks, spill containment equipment, video equipment for investigating storm drains) and talking to field staff about their knowledge of and training in illicit discharge identification, reporting, and response.

Another field activity is observing the dry-weather screening program. Staff can take you to screening/sampling points to demonstrate the permittee's dry-weather sampling procedures. An Outfall Visual Inspection Worksheet has been included in Appendix C to assist in this field inspection.

Although field activities are somewhat subjective, during all field activities you should get a sense of whether the staff are aware of illicit discharges and proactive in identifying and addressing them. For example, if the industrial inspector observes obvious illicit discharges while driving to an inspection, does the inspector ignore these incidents or stop and report them?

Common Issues Identified During Program Evaluations

The following are some areas in which past on-site program evaluations have found problems with IDDE program components. Consider these activities as you conduct evaluations:

- ✓ IDDE programs are largely reactionary spill response programs and do not contain a proactive element to detect or prevent discharges.
- ✓ The permittee lacks adequate documented procedures for how to conduct illicit connection and illegal discharge investigations (e.g., the permittee does not have written procedures for tracking and identifying the source of a discharge).
- ✓ The permittee fails to conduct any dry-weather screening to identify illicit discharges.
- ✓ If a discharge is found, the permittee does not have specific criteria, which could include numeric criteria, to determine whether the discharge is illicit. In most cases, unless the discharge is obviously illicit (e.g., presence of discoloration, oil sheen), the permittee assumes the discharge is either irrigation runoff or groundwater and does not conduct further investigation of the quality or source of the discharge.
- ✓ Staff are not adequately trained on illicit discharge identification, reporting, and response.
- ✓ The permittee does not track illicit discharge events and does not target areas of the MS4 for additional inspection based on areas with past incidents.

5. Post-Evaluation Activities

5.1 Preparing the Written Report

After the MS4 SWMP evaluation, it is important that a written description of findings is provided to the permittees. Using only an oral outbrief is not a sufficient way to convey any recommendations or requirements for program improvement. Keep in mind that an NPDES permit is a contract between the permittee and the permitting authority and all correspondence regarding that contract should be in writing. Also, remember that a SWMP evaluation is typically taken very seriously by MS4 staff and management. The written findings often are distributed amongst upper management or to the governing body of the MS4 (i.e., city council). And finally, the permittee has undoubtedly invested numerous staff hours preparing for the evaluation and providing you with necessary information during the on-site evaluation itself. Therefore, it is incumbent upon you to take the necessary time to develop a concise, thorough, and fair written assessment of the findings obtained.

As soon as possible after the evaluation, it is recommended that you review all notes and supporting information obtained prior to and during the on-site evaluation and document the findings and conclusions. As a general guideline, the final report should be provided to the permittee within 6 to 8 weeks after the evaluation. Less time may be needed to prepare a report for an abbreviated program evaluation or for a screening level evaluation. On the other hand, more time may be needed if contractors perform the evaluation because the draft report would need to be reviewed by permitting authority staff to approve all findings, conclusions, and recommendations.

Conclusions drawn should be defensible and based on permit requirements and conditions, the SWMP, measurable goals, or a best professional judgment interpretation of the NPDES regulations and Clean Water Act. In addition, it is critical that conclusions drawn are consistently applied to all permittees evaluated. If a permitting authority uses more than one staff person to conduct an evaluation, an effort should be made to calibrate assessment techniques to ensure equitable evaluations. This can be accomplished by daily discussions amongst the evaluators to compare findings during the evaluation as well as quality assurance reviews of the resulting evaluation report.

The report should state which permittee(s) were evaluated, for what SWMP components, the date, a basic description of how the evaluation was conducted, relevant findings, and any recommendations for future evaluations or follow-up activities.

Depending upon the goals of the evaluation, there are many different ways to document the findings:

- **Determination of compliance status.** If assessing the compliance status of a permittee with its MS4 permit and SWMP is the only goal of an evaluation, then the report can very simply, describe each permit requirement the MS4 is not complying with and the associated requirement. The report can also indicate the areas of compliance as well, or state up front that if the permit requirement is not discussed in the report, no recommendations or requirements apply to that item.
- **Assistance with permit issuance or renewal process.** If the evaluation is conducted after the issuance of a new permit or during renewal of an existing permit (Phase I or Phase II MS4s), the report might discuss recommendations for effective implementation of the new SMWP or discuss recommended changes to the existing SWMP determined during the audit.

- **Assessing pollutants of concern.** If the permitting authority conducted the evaluation to assign an applicable waste load allocation, or to assist the permittee in implementing the waste load allocation for a particular pollutant of concern, the report may focus on only those components which minimize that pollutant. Or the report may make recommendations about how the SWMP could be changed to better address an existing waste load allocation.

As previously stated, the most common goal of an evaluation is to determine compliance with an existing permit. In this instance, in addition to providing recommendations for improvement or required actions to gain compliance, the permitting authority may find it helpful to provide positive feedback as well. Typically, it is not advisable to describe SWMP components that are not associated with a particular evaluation finding as this type of descriptive detail is found in the annual reports.

Findings can be divided into three categories:

1. **Permit violations.** Permit violations are areas where the evaluation found the permittee not in compliance with a specific permit requirement or SWMP commitment. Use of the qualifier "potential" can be used depending on the severity of the violation.
2. **Program deficiencies or recommendations for improvement.** Program deficiencies are areas of concern impeding effective program implementation. They are typically areas where the permit or SWMP does not describe specifically how the permittee should conduct an activity, yet the permitting authority evaluator believes the permittee should alter how they conduct the activity to meet water quality goals. Deficiencies can also be areas where future permit violations could result if the permittee continues on its present path.
3. **Positive or commendable program elements.** Positive program elements indicate activities that are "above and beyond" the requirements of the permit and SWMP. It is always a good idea to commend innovative approaches and techniques utilized by permittees. Not only does this encourage the permittee to continue implementing the program, it allows other permittees to learn about the approach if they read the evaluation document.

EXAMPLE FINDING:

The Parks and Recreation Department has developed a pollutant-based BMP manual.

The manual is innovative in that a diverse work group first identified the pollutants of concern and then developed suites of BMPs to minimize their occurrence or impacts on receiving waters. The resulting manual provides about 30 individual BMPs grouped into four categories: organic, chemical, maintenance, and administrative.

Each BMP description provides procedures; maps; monitoring frequency; additional references; the names of city and non-city employees who perform the task; site-specific equipment needs; possible locations of use; possible surfaces affected; procedures for spilled, dumped, or mishandled products or activities; evaluation criteria; and the staff responsible for BMP development.

People from multiple department sections collaborated on the BMPs to ensure that they are appropriate and can be implemented. The manual could be a guide for other city departments or Phase I and II programs throughout the country because it describes the entire BMP development process from conception through field-testing.

The following are format suggestions to use when drafting findings from the MS4 program evaluation:

- Organize findings by program component (e.g., all findings related to the industrial/commercial facilities component)
- Group similar findings for that component together (i.e., all positive attributes)

- Provide a heading for each individual finding that is a complete sentence and that clearly summarizes the significant point. For example, if there is a permit violation, the heading should state what the permittee is doing that is a violation: "The City does not currently inspect all industrial facilities annually as required by the permit."
- Describe each finding in detail. The narrative description should clearly define the finding and then describe the supporting information obtained or observed during the evaluation that led to this conclusion. The finding narrative should describe what the permittee was required to do (which is particularly important for a permit violation), briefly restate (paraphrase) the finding, and then provide the information obtained during the evaluation that supports this finding in as much detail as possible. When describing a positive attribute the finding should clearly state how the activity being described is innovative and not merely compliant.
- Insert applicable permit citations and language in potential permit violations. If a program deficiency relates to a particular part of the permit or SWMP, be sure to cite the appropriate language as well.

EXAMPLE FINDING:

The City has failed to notify industries and commercial facilities of the stormwater requirements and appropriate BMPs for implementation.

Part F.3.b(4) of the permit requires the permittee to implement, or require the implementation of, designated minimum BMPs (based on the site's threat to water quality rating) at each industrial site within its jurisdiction. BMP implementation was to occur by no later than 365 days after the permit was adopted. At the time of the evaluation, the City had yet to implement, or inform applicable industrial sites of their responsibility to implement, appropriate BMPs. The City needs to inform all applicable industrial sites of their responsibility and also needs to provide them with the minimum BMPs outlined in the SWMP.

In some cases, it might not be possible to determine compliance with a program component because of the limitations of the MS4 program evaluation process (i.e., not reviewing each industrial inspection report), because of time constraints, or because the requirement itself is not definable. The written report should then state that this is the case and provide as much supporting information as possible, such as "Compliance with public education and participation permit requirements could not be determined because…" If there were no findings of note for a particular SWMP component, it is important to state this fact so it is clear that the component was reviewed: "No recommendations or requirements were identified for this program component."

After an MS4 program evaluation report is developed, the permitting authority typically distributes the report to the permittee(s) evaluated with a cover letter summarizing the findings of the evaluation and any enforcement action being taken or corrections required. It is important that the report be distributed in a timely manner to ensure that requirements and recommendations can be instituted by the permittee(s).

The cover letter should request a written response within a specific time period (e.g., 30 to 60 days) addressing any permit violations or deficiencies noted. Normally, permittees are given an opportunity to refute findings or appeal violations noted. A meeting also can be scheduled with the permittee(s) to discuss proposed modifications to its SWMP to address the permit violations and deficiencies described in the report. In either case, the permitting authority should request a formal response describing the compliance process and schedule including appropriate milestones. The permitting authority should review the response and continue to work with the permittee(s) to improve the SWMP per the evaluations findings.

Photo Logs

Photo logs are used to visually illustrate items noted during field inspections. A photo log can be an important part of an MS4 program evaluation report and can assist a permitting authority in assessing potential permit violations. It is important to keep in mind that you are not inspecting the actual construction sites and industrial facilities visited for compliance with general permit or SWPPP conditions, but documenting the condition of these facilities with photos can help to assess compliance with MS4 permit conditions.

TIP:

Photos do not need to be used in the MS4 program evaluation report. An evaluator can take photos to help remember issues identified during field visits. The photos can also help you build a photo library of stormwater BMPs and problems.

To address potential legal concerns related to digital photographs, EPA published a guidance document on the use of digital photographs—*Digital Camera Guidance for EPA Civil Inspections and Investigations.* This document identifies requirements necessary to ensure the integrity of digital pictures. It addresses image capturing, storage, and handling and provides an overview of digital camera technology, peripheral equipment, and recommended steps. If digital images are to be used in court, their credibility usually depends on reliability, reproducibility, and security. As stated in the guidance, it is acceptable to make changes to digital images such as cropping, enlarging, or making them lighter/darker to improve the sharpness, provided the evaluator does all the following:

- Records how, when, and where the picture was taken,
- Logs the steps used in processing the image when they include techniques other than those used in a traditional photographic darkroom,
- Complies with a written SOP that includes the recommended steps set forth in this document, and
- Ensures the preservation of the original digital image.

To view EPA's *Digital Camera Guidance for EPA Civil Inspections and Investigations*, visit http://www.epa.gov/compliance/resources/publications/monitoring/cwa/inspections/npdesinspect/npdesinspectapph.pdf.

In general, it is important to keep careful notes of the photographs taken, including location and why the photograph was taken. It is helpful for the first photo taken to be of the facility sign or building. This helps to orient the photo log layout when photos are viewed after the evaluation.

For an MS4 program evaluation, it is not necessary to photo document all aspects of the facilities inspected, however, photos should be used to highlight issues on site that may lend credence to an issue described in the MS4 program evaluation report. For example, stormwater problems at a municipal maintenance yard should be documented with photos to provide additional documentation of problems. During inspections of construction sites or industrial facilities, photos can help document the issues the permittee's inspector addressed. At a minimum, even if the photos are not used in a formal report, the photos can help recall conditions at the sites visited.

Taking Photos

A digital camera should be used to take pictures where possible. Also, it is usually not necessary to set the resolution of the camera to its highest settings—most photo logs do not need high-resolution photos. Additional tips on taking good photos during an MS4 program evaluation include:

- **Take lots of pictures.** With digital cameras, deleting extra photos is easy. For something particularly important, take at least 4-5 pictures.
- **Use photos to identify sites.** When inspecting multiple sites, use the first picture to photograph the sign, SWPPP cover, or file name to be able to identify the facility later.
- **Consider perspective.** Have someone stand in the photo or place something of recognizable size, like a hard hat or clip board, to gain perspective.

Creating Photo Logs

Photo logs are often created using word processing software or presentation (e.g., PowerPoint) software. The following steps for creating a photo log are based on Microsoft Word:

- It is recommended that photo logs be created in Microsoft Word and the photos saved in a standard format such as jpeg or gif. Consider the resolution of the photos: many reports are made available electronically, and high-resolution photos can cause file size to exceed many users' download capabilities.
- Size the photos to be 3.5" tall with the width set by Microsoft Word for landscape view and 3.5" width with the height set by Microsoft Word for portrait view.
- Center the photos and captions on the page. (Note: Microsoft Word requires that the picture layout not be "in line with text" in order for the photo to be centered on the page.) Generally a page will have two landscape oriented photos or one portrait.
- Each photo should be numbered.
- Document the date and/or time to help identify photos.
- Photo captions should briefly describe what is observed in the picture and the location (both the facility or site name and the location within the facility or site).
- A photo log can contain a separate narrative to describe the findings, or individual photos can be referred to within the body of the MS4 program evaluation report.

Photo 1: Improperly installed silt fence

5.2 Follow-Up Activities

An MS4 program evaluation can result in several different follow-up activities, from enforcement to technical assistance to permit reissuance. Several of these activities are described below.

Technical Assistance

Many MS4 program evaluation findings will result in a deficiency that requires the permittee to modify or improve a program area to achieve compliance. The permitting authority can help ensure compliance by providing technical assistance to the permittee on issues related to these deficiencies. As a reference and useful tool for permittees, EPA has developed case studies of selected stormwater programs available at http://cfpub.epa.gov/npdes/stormwater/casestudies.cfm

Where necessary, the permitting authority may wish to provide additional technical assistance or training to address specific deficiencies identified during the evaluation.

Follow-Up MS4 Program Evaluations

Follow-up MS4 program evaluations should be conducted where major deficiencies have been identified and the permittee needs additional time to correct them. The permittee should be given time to correct any deficiencies, but a follow-up evaluation should be scheduled for deficiencies that cannot be documented via annual reports or written correspondence.

Targeted Evaluations

If an MS4 program evaluation identifies a program area that appears to be a common problem amongst several permittees, then the permitting authority may want to conduct targeted evaluations of that program area at additional permittees. For example, if stormwater compliance problems are identified at most of the public works yards visited, the permitting authority might want to target additional inspections for those yards.

Permit Issuance or Renewal

A thorough review of submitted annual reports along with an on-site evaluation is very helpful when issuing MS4 permits. Specific permit requirements could be drafted to address any deficiencies identified during the evaluation. Also, the evaluation may reveal current permit requirements that are no longer applicable or need to be revised to meet current conditions. An MS4 program evaluation is also an excellent time to collect additional data for permit reissuance, or verify data or clarify information submitted with the permit reapplication.

MS4 Enforcement

Taking enforcement on a violation identified during an evaluation will obviously depend on a variety of factors including the severity of the violation, any discharge to a water of the U.S., history of past violations, and other factors. To make a case for an enforcement action, it is important to collect information that documents the violation, including copies of records, photographs, or other documentation. An enforcement action is the last course of action to ensure compliance, but even the possible threat of an enforcement action will usually help bring about compliance.

Appendix A – Glossary & Acronyms

Authorized Program Or Authorized State – A state, Territorial, Tribal, or interstate NPDES program which has been approved or authorized by EPA under 40 CFR Part 123.

Best Management Practice (BMP) – Policies or practices that prevent, reduce, or mitigate the impacts of stormwater runoff. These methods can be structural (e.g., devices, ponds) or non-structural (e.g., policies to reduce imperviousness). BMPs classified as "non-structural" are those that rely predominantly on behavioral changes rather than construction in order to be effective. "Structural" BMPs are engineered or constructed to prevent or manage stormwater. BMPs are often further classified into (1) source control BMPs to prevent pollution, (2) water quality BMPs to reduce or prevent pollutants in runoff, (3) flow control BMPs to reduce the volume of stormwater and (4) infiltration BMPs to increase infiltration.

Best Professional Judgment (BPJ) – Using all reasonably available and relevant data to make a decision.

CIP – Capital Improvement Project

Clean Water Act – Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. section 1251 et seq.

Construction General Permit (CGP) – Where EPA is the permitting authority, the Construction General Permit (CGP) outlines a set of provisions construction operators must follow to comply with the requirements of the NPDES stormwater regulations. The CGP covers any site one acre and above, including smaller sites that are part of a larger common plan of development or sale, and replaces and updates previous EPA permits.

Co-permittee – A permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.

Combined Sewer Overflow (CSO) – A discharge of untreated wastewater from a combined sewer system at a point prior to the headworks of a publicly owned treatment works. CSOs generally occur during wet weather (rainfall or snowmelt). During periods of wet weather, these systems become overloaded, bypass treatment works, and discharge directly to receiving waters.

Comprehensive Plan – A general plan that identifies a community's long-range growth and development goals. Comprehensive plans and watershed plans often overlap in areas of natural resources, analysis of current conditions, and growth trends. Comprehensive and/or watershed plans often include smaller subarea plans, with additional details on infrastructure, open space, parks, neighborhood design, drainage, and circulation.

DOT – Department of Transportation

EPA – United States Environmental Protection Agency

Floatables – Plastics and other floating debris (e.g., oil, grease, toilet paper).

General permit – An NPDES permit issued under 40 CFR 122.28 that authorizes a category of discharges under the CWA within a geographical area. A general permit is not specifically tailored for an individual discharger.

Geographic Information System (GIS) – A computer application used to store, view, and analyze geographical information, especially maps (*taken from the American Heritage Dictionary*).

IDDE – Illicit Discharge Elimination and Detection

Illicit Discharge – Any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities.

Impervious Surface – A hard surface area that either prevents or retards the entry of water into the soil mantle as occurs under natural conditions (prior to development), and from which water runs off at an increased rate of flow or in increased volumes. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, parking lots, compacted soil, and roadways. "Effective impervious surface" is commonly used to describe impervious surfaces connected to receiving water directly or with a conveyance device (e.g., curbs, pipes, gutters).

Integrated Pest Management (IPM) – Planned program that coordinates economically and environmentally acceptable methods of pest control with the judicious and minimal use of toxic pesticides. IPM programs are based on a careful assessment of local conditions, including such factors as climate, crop characteristics, the biology of the pest species, agricultural practices, soil quality, and government regulations. The tactics employed range from changes in agricultural methods, such as better tillage to prevent soil erosion and interplanting of different crop varieties; natural biological weapons, such as the introduction of beneficial insects that eat the harmful species; and mechanical tools, such as vacuums that pull the insects off of the crops. Toxic pesticides are used only when all other methods have failed (*taken from the Columbia Press Encyclopedia*).

MOU – Memorandum of Understanding

MEP – Maximum extent practicable

Multi-Sector General Permit (MSGP) – Authorizes the discharge of stormwater from industrial facilities, consistent with the terms of the permit, in areas of the United States where EPA manages the NPDES permit program.

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law)...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States. (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) – A national program under Section 402 of the Clean Water Act for regulation of discharges of pollutants from point sources to waters of the United States. Discharges are illegal unless authorized by an NPDES permit.

Notice of Intent (NOI) – Submission of a completed NOI constitutes notice that the entity intends to be authorized to discharge pollutants to waters of the United States, from the facility or site identified in the

form, under a State or EPA general permit such as the Phase II MS4 General Permit, the Multi-Sector General Permit (MSGP) for industrial stormwater, or the Construction General Permit (CGP).

Notice of Violation (NOV) – Enforcement mechanism used to inform regulated entities of noncompliance

Outfall – A point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

Permitting Authority – The United States Environmental Protection Agency, EPA, a Regional Administrator of the Environmental Protection Agency or an authorized representative.

Pollutant of concern (POC) – Any pollutant that has been identified as a cause of impairment in any water body to which the MS4 discharges.

Publicly Owned Treatment Works (POTW) – A treatment works, as defined by Section 212 of the CWA, that is owned by the state or municipality. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant [40 CFR 403.3]. Privately-owned treatment works, Federally-owned treatment works, and other treatment plants not owned by municipalities are not considered POTWs.

Sanitary sewer overflow (SSO) – Occasional unintentional discharges of raw sewage from municipal sanitary sewers. SSOs have a variety of causes, including but not limited to severe weather, improper system operation and maintenance, and vandalism. EPA **estimates that there are at least 40,000 SSOs each year**.

Stormwater – Stormwater runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Pollution Prevention Plan (SWPPP) – Plan developed to minimize the discharge of pollutants from an industrial site (including construction activities) to the maximum extent practicable using BMPs.

Total Maximum Daily Load (TMDL) – A water quality assessment that determines the source or sources of pollutants of concern for a particular waterbody, considers the maximum amount of pollutants the waterbody can assimilate, and then allocates to each source a set level of pollutants that it is allowed to discharge (i.e., a wasteload allocation).

Waters of the United States – 1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; 2. All interstate waters, including interstate wetlands"; 3. All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters: a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or c. Which are used or could be used for industrial purposes by industries in interstate commerce; 4. All impoundments of waters otherwise defined as waters of the United States under this definition; 5. Tributaries of waters identified

in paragraphs (1) through (4) of this definition; 6. The territorial sea; and 7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs 1. through 6. of this definition.

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United States Environmental Protection Agency (EPA)
National Pollutant Discharge Elimination System (NPDES)

MULTI-SECTOR GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY (MSGP)

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act (CWA), as amended (33 U.S.C. 1251 *et seq.*), operators of stormwater discharges associated with industrial activity located in an area identified in Appendix C where EPA is the permitting authority are authorized to discharge to waters of the United States in accordance with the eligibility and Notice of Intent (NOI) requirements, effluent limitations, inspection requirements, and other conditions set forth in this permit. This permit is structured as follows:

- general requirements that apply to all facilities are found in Parts 1 through 7;
- industry sector-specific requirements are found in Part 8; and
- specific requirements that apply in individual States and Indian Country Lands are found in Part 9.

The Appendices (A through K) contain additional permit conditions that apply to all operators covered under this permit.

This permit becomes effective on September 29, 2008.

This permit and the authorization to discharge expire at midnight, September 29, 2013.

Robert W. Varney, Regional Administrator
EPA Region 1

Carl-Axel P. Soderberg, Division Director, Caribbean Environmental Protection Division
EPA Region 2

Jon M. Capacasa, Director, Water Protection Division
EPA Region 3

Timothy C. Henry, Acting Director, Water Division
EPA Region 5

Miguel I. Flores, Director, Water Quality Protection Division
EPA Region 6

Alexis Strauss, Director, Water Division
EPA Region 9

Michael Gearheard, Director, Office of Water and Watersheds
EPA Region 10

NPDES MULTI-SECTOR GENERAL PERMITS FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY
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1. Coverage under this Permit.

1.1 Eligibility.

1.1.1 Facilities Covered.

To be eligible to discharge under this permit, you must (1) have a stormwater discharge associated with industrial activity from your primary industrial activity, as defined in Appendix A, provided your primary industrial activity is included in Appendix D, or (2) be notified by EPA that you are eligible for coverage under Sector AD of this permit.

1.1.2 Allowable Stormwater Discharges.

Unless otherwise made ineligible under Part 1.1.4, the following discharges are eligible for coverage under this permit:

1.1.2.1 Stormwater discharges associated with industrial activity for any primary industrial activities and co-located industrial activities, as defined in Appendix A;

1.1.2.2 Discharges designated by EPA as needing a stormwater permit as provided in Sector AD;

1.1.2.3 Discharges that are not otherwise required to obtain NPDES permit authorization but are commingled with discharges that are authorized under this permit;

1.1.2.4 Discharges subject to any of the national stormwater-specific effluent limitations guidelines listed in Table 1-1; and

Table 1-1. Stormwater-specific Effluent Limitations Guidelines

Regulated Discharge	40 CFR Section	MSGP Sector	New Source Performance Standard (NSPS)	New Source Date
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Part 429, Subpart I	A	Yes	1/26/81
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	Part 418, Subpart A	C	Yes	4/8/74
Runoff from asphalt emulsion facilities	Part 443, Subpart A	D	Yes	7/28/75
Runoff from material storage piles at cement manufacturing facilities	Part 411, Subpart C	E	Yes	2/20/74

Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, and D	J	No	N/A
Runoff from hazardous waste and non-hazardous waste landfills	Part 445, Subparts A and B	K, L	Yes	2/2/00
Runoff from coal storage piles at steam electric generating facilities	Part 423	O	Yes	11/19/82 (10/8/74)[1]

1.1.2.5 Discharges subject to any New Source Performance Standards (NSPS) identified in Table 1-1 (i.e., where facilities were constructed after the promulgation of that industry's NSPS), provided that you obtain and retain the following EPA documentation with your SWPPP, prior to submitting your NOI, and that you comply with any limits pursuant to Part 2.4:

- Determination of "No Significant Impact" under the National Environmental Policy Act (NEPA); or
- A completed Environmental Impact Statement in accordance with an environmental review conducted by EPA pursuant to 40 CFR 6.102(a)(6)[2].

1.1.3 Allowable Non-Stormwater Discharges.

The following are the non-stormwater discharges authorized under this permit, provided the non-stormwater component of your discharge is in compliance with Part 2.1.2.10:

- Discharges from fire-fighting activities;
- Fire hydrant flushings;
- Potable water, including water line flushings;
- Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
- Irrigation drainage;
- Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
- Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);
- Routine external building washdown that does not use detergents;
- Uncontaminated ground water or spring water;

[1] NSPS promulgated in 1974 were not removed via the 1982 regulation; therefore wastewaters generated by Part 423-applicable sources that were New Sources under the 1974 regulations are subject to the 1974 NSPS.

[2] Note that if you have previously completed an Environmental Impact Statement or obtained a "No Significant Impact" statement for discharges subject to NSPS, you have met your obligation under this provision and you only need to retain this documentation for your files.

- Foundation or footing drains where flows are not contaminated with process materials; and
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

1.1.4 Limitations on Coverage.

1.1.4.1 Discharges Mixed with Non-Stormwater. Stormwater discharges that are mixed with non-stormwater, other than those non-stormwater discharges listed in Part 1.1.3, are not eligible for coverage under this permit.

1.1.4.2 Stormwater Discharges Associated with Construction Activity. Stormwater discharges associated with construction activity disturbing one acre or more are not eligible for coverage under this permit, unless in conjunction with mining activities or certain oil and gas extraction activities as specified in Sectors G, H, I, and J of this permit.

1.1.4.3 Discharges Currently or Previously Covered by Another Permit. Unless you received written notification from EPA specifically allowing these discharges to be covered under this permit, you are not eligible for coverage under this permit for any of the following:

- Stormwater discharges associated with industrial activity that are currently covered under an individual NPDES permit or an alternative NPDES general permit;
- Discharges covered within five years prior to the effective date of this permit by an individual permit or alternative general permit where that permit established site-specific numeric water quality-based limitations developed for the stormwater component of the discharge; or
- Discharges from facilities where any NPDES permit has been or is in the process of being denied, terminated, or revoked by EPA (this does not apply to the routine reissuance of permits every five years).

1.1.4.4 Stormwater Discharges Subject to Effluent Limitations Guidelines. For discharges subject to stormwater effluent limitation guidelines under 40 CFR, Subchapter N, only those stormwater discharges identified in Table 1-1 are eligible for coverage under this permit.

1.1.4.5 Endangered and Threatened Species and Critical Habitat Protection. Coverage under this permit is available only if your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not adversely affect any species that are federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) and will not result in the adverse modification or destruction of habitat that is federally-designated as "critical habitat" under the ESA. You must meet one of the criteria below, following the procedures in Appendix E:

Criterion A. No federally-listed threatened or endangered species or their designated critical habitat are likely to occur in the "action area" as defined in Appendix A; or

Criterion B. Consultation between a Federal agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service (together, the "Services") under section 7 of the ESA has been concluded. Consultations can be either formal or informal, and would have occurred only as a result of a separate federal action (e.g., during application for an individual wastewater discharge permit or the issuance of a wetlands dredge and fill permit).

The consultation must have addressed the effects of your facility's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and must have resulted in either:

i. a biological opinion finding no jeopardy to federally-listed species or destruction/adverse modification of federally-designated critical habitat; or

ii. written concurrence from the Service(s) with a finding that the facility's stormwater discharges associated with industrial activity, discharge-related activities and allowable non-stormwater discharges are not likely to adversely affect federally-listed species or federally-designated critical habitat; or

Criterion C. Your industrial activities are authorized through the issuance of a permit under section 10 of the ESA, and authorization addresses the effects of the stormwater discharges associated with industrial activity, discharge-related activities, and allowable non-stormwater discharges on federally-listed species and federally-designated critical habitat; or

Criterion D. Coordination between you and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service has been concluded. The coordination must have addressed the effects of the facility's stormwater discharges associated with industrial activity, discharge-related activities, and allowable non-stormwater discharges on federally-listed threatened or endangered species and federally-designated critical habitat. The result of the coordination must be a written statement from the Service concluding that authorizing your stormwater discharges, discharge-related activities, and allowable non-stormwater discharges is consistent with the determination that the issuance of the MSGP is not likely to adversely affect federally-listed threatened or endangered species and federally-designated critical habitat. Any conditions or prerequisites deemed necessary to achieve consistency with the "not likely to adversely effect" determination become eligibility conditions for MSGP coverage, and permit requirements under Part 2.3; or

Criterion E. Authorizing your stormwater discharges associated with industrial activity, discharge-related activities, and allowable non-stormwater discharges is

consistent with the determination that the issuance of the MSGP is not likely to adversely affect any federally-listed endangered and threatened ("listed") species or designated critical habitat ("critical habitat"). To support your determination that you meet Criterion E, you must provide supporting documentation for your determination.

i. If you are an existing discharger, you must provide the following information with your completed Notice of Intent (NOI) form: (1) a list of the federally-listed threatened or endangered species or their designated critical habitat that are likely to occur in the "action area"; (2) a list of the pollutant parameters for which you have ever exceeded an applicable benchmark or effluent limitations guideline, or for which your discharge has ever been found to cause or contribute to an exceedance of an applicable water quality standard, or to violate State or Tribal water quality requirements (Part 9); and (3) your rationale supporting your determination that you meet Criterion E, including appropriate measures to be undertaken to avoid or eliminate the likelihood of adverse effects.

ii. If you are a new discharger, you must provide the following information with your completed NOI form: (1) a list of the federally-listed threatened or endangered species or their designated critical habitat that are likely to occur in the "action area"; (2) a list of the potential pollutants in your discharge; and (3) your rationale supporting your determination that you meet Criterion E, including appropriate measures to be undertaken to avoid or eliminate the likelihood of adverse effects; or

Criterion F. The facility's stormwater discharges associated with industrial activity, discharge-related activities, and allowable non-stormwater discharges were already addressed in another operator's valid certification of eligibility that included these discharges and activities and there is no reason to believe that federally-listed species or federally-designated critical habitat not considered in the prior certification may be present or located in the "action area". To certify eligibility under this criterion there must be no lapse of coverage in the other operator's certification. By certifying eligibility under this criterion, you agree to comply with any measures or controls upon which the other operator's certification was based. You must comply with any applicable terms, conditions, or other requirements developed in the process of meeting the eligibility requirements of the criteria in this section to remain eligible for coverage under this permit. If your certification is based on another operator's certification under Criterion E, that certification is valid only if you have documentation showing that the other operator had certified under Criterion E, and you provide EPA with the supporting information required of existing dischargers in Criterion E (above, under subparagraph (i)) in your NOI form.

1.1.4.6 Historic Properties Preservation. Coverage under this permit is available only if your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-

related activities meet one of the eligibility criteria below, following the procedures in Appendix F:

Criterion A. Your stormwater discharges and allowable non-stormwater discharges do not have the potential to have an effect on historic properties and you are not constructing or installing new stormwater control measures on your site that cause subsurface disturbance; or

Criterion B. Your discharge-related activities (i.e., construction and/or installation of stormwater control measures that involve subsurface disturbance) will not affect historic properties; or

Criterion C. Your stormwater discharges, allowable non-stormwater discharges, and discharge-related activities have the potential to have an effect on historic properties, and you have consulted with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative regarding measures to mitigate or prevent any adverse effects on historic properties, and you have either (1) obtained and are in compliance with a written agreement that outlines all such measures, or (2) been unable to reach agreement on such measures; or

Criterion D. You have contacted the State Historic Preservation Officer, Tribal Historic Preservation Officer, or other tribal representative and EPA in writing informing them that you have the potential to have an effect on historic properties and you did not receive a response from the SHPO, THPO, or tribal representative within 30 days of receiving your letter.

If you have been unable to reach agreement with a SHPO, THPO, or other tribal representative regarding appropriate measures to mitigate or prevent adverse effects, EPA may notify you of additional measures you must implement to be eligible for coverage under this permit.

1.1.4.7 New Discharges to Water Quality Impaired Waters. If you are a new discharger you are not eligible for coverage under this permit to discharge to an "impaired water", as defined in Appendix A unless you:

a. prevent all exposure to stormwater of the pollutant(s) for which the waterbody is impaired, and retain documentation of procedures taken to prevent exposure onsite with your SWPPP; or

b. document that the pollutant(s) for which the waterbody is impaired is not present at your site, and retain documentation of this finding with your SWPPP; or

c. in advance of submitting your NOI, provide to the appropriate EPA Regional Office data to support a showing that the discharge is not expected to cause or contribute to an exceedance of a water quality standard, and retain such data

onsite with your SWPPP. To do this, you must provide data and other technical information to the Regional Office sufficient to demonstrate:

i. For discharges to waters without an EPA approved or established TMDL, that the discharge of the pollutant for which the water is impaired will meet in-stream water quality criteria at the point of discharge to the waterbody; or

ii. For discharges to waters with an EPA approved or established TMDL, that there are sufficient remaining wasteload allocations in an EPA approved or established TMDL to allow your discharge and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards.

You are eligible under Part 1.1.4.7.c if you receive an affirmative determination from the Regional Office that your discharge will not contribute to the existing impairment, in which case you must maintain such determination onsite with your SWPPP, or if the Regional Office fails to respond within 30 days of submission of data to the Regional Office.

1.1.4.8 New Discharges to Waters Designated as Tier 3 for Antidegradation Purposes. If you are a new discharger, you are not eligible for coverage under this permit for discharges to waters designated by a State or Tribe as Tier 3 (outstanding natural resource waters) for antidegradation purposes under 40 CFR 131.13(a)(3) (see list of Tier 3 waters on EPA's website at http://www.epa.gov/npdes/stormwater/msgp).

1.2 Permit Compliance.

Any noncompliance with any of the requirements of this permit constitutes a violation of the Clean Water Act. As detailed in Part 3 (Corrective Actions) of this permit, failure to take any required corrective actions constitute an independent, additional violation of this permit and the Clean Water Act. As such, any actions and time periods specified for remedying noncompliance do not absolve parties of the initial underlying noncompliance. However, where corrective action is triggered by an event that does not itself constitute permit noncompliance, such as an exceedance of an applicable benchmark, there is no permit violation provided you take the required corrective action within the relevant deadlines established in Part 3.3.

1.3 Authorization under this Permit.

1.3.1 How to Obtain Authorization.

To obtain authorization under this permit, you must:

- Be located in a State, territory, or Indian Country, or be a Federal Facility identified in Appendix C where EPA is the permitting authority;
- Meet the Part 1.1 eligibility requirements;

- Select, design, install, and implement control measures in accordance with Part 2.1 to meet numeric and non-numeric effluent limits;
- Submit a complete and accurate Notice of Intent (NOI) either using EPA's electronic Notice of Intent (eNOI) system (accessible at www.epa.gov/npdes/eNOI) or using a paper form (included in Appendix G of this permit) and then submitting that paper form to the address listed in Part 7.6.1; and
- Develop a SWPPP according to the requirements in Part 5 of this permit.

EPA will post on the Internet, at www.epa.gov/npdes/noisearch, all NOIs received. Late NOIs will be accepted but authorization to discharge will not be retroactive.

Timeframes for discharge authorization are contained in Table 1-2. Some authorization dates in Table 1-2 are dependent on you posting a copy of your SWPPP on the Internet. Posting requires that (1) your NOI identifies the Uniform Resource Locator (URL) that provides direct access to your SWPPP, (2) you post a complete copy of your SWPPP at that URL, and (3) the SWPPP is available from that URL at least for the period starting the day you submit your NOI until you are authorized to discharge. You are not required to post any confidential business information (CBI) at this URL, but you must clearly identify those portions of the SWPPP that are being withheld from public access as a result of your determination of CBI.

Table 1-2. NOI Submittal Deadlines/Discharge Authorization Dates		
Category	**NOI Submission Deadline**	**Discharge Authorization Date[1]**
Existing Dischargers – in operation as of October 30, 2005 and authorized for coverage under MSGP 2000.	No later than January 5, 2009.	30 days after EPA posts your NOI. Your authorization under the MSGP 2000 is automatically continued until you have been granted coverage under this permit or an alternative permit, or coverage is otherwise terminated.
New Dischargers or New Sources - have commenced discharging between October 30, 2005 and January 5, 2009.	As soon as possible but no later than January 5, 2009.	30 days after EPA posts your NOI.
New Dischargers or New Sources - commence discharging after January 5, 2009.	A minimum of 60 days prior to commencing discharge, or a minimum of 30 days if your SWPPP is posted on the Internet during this period and the Internet address (i.e., URL) to your SWPPP is provided on the NOI form.	If you post your SWPPP on the Internet, 30 days after EPA posts your NOI. Otherwise, 60 days after EPA posts your NOI.
New Owner/Operator of Existing Discharger - transfer of ownership and/or operation of a facility whose discharge is authorized under this permit	A minimum of 30 days prior to date that the transfer will take place to the new owner/operator.	30 days after EPA posts your NOI.
Other Eligible Dischargers - in operation prior to October 30, 2005, but not covered under the MSGP 2000 or another NPDES permit.	Immediately, to minimize the time discharges from the facility will continue to be unauthorized.	If you post your SWPPP on the Internet, 30 days after EPA posts your NOI. Otherwise, 60 days after EPA posts your NOI.

[1] Based on a review of your NOI or other information, EPA may delay your authorization for further review, notify you that additional effluent limitations are necessary, or may deny coverage under this permit and require submission of an application for an individual NPDES permit, as detailed in Part 1.6. In these instances, EPA will notify you in writing of the delay, of the need for additional effluent limits, or of the request for submission of an individual NPDES permit application.

1.3.2 Continuation of this Permit.

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 CFR 122.6 and remain in force and effect. If

you were authorized to discharge under this permit prior to the expiration date, any discharges authorized under this permit will automatically remain covered by this permit until the earliest of:

- Your authorization for coverage under a reissued permit or a replacement of this permit following your timely and appropriate submittal of a complete NOI requesting authorization to discharge under the new permit and compliance with the requirements of the new permit; or
- Your submittal of a Notice of Termination; or
- Issuance or denial of an individual permit for the facility's discharges; or
- A formal permit decision by EPA not to reissue this general permit, at which time EPA will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease at the end of this time period.

1.4 Terminating Coverage.

1.4.1 Submitting a Notice of Termination.

To terminate permit coverage, you must submit a complete and accurate Notice of Termination either electronically (strongly encouraged) at www.epa.gov/npdes/eNOI or using the paper Notice of Termination form included in Appendix H of this permit, to the address listed in Part 7.6.1. Your authorization to discharge under this permit terminates at midnight of the day that a complete Notice of Termination is processed and posted on EPA's website (www.epa.gov/npdes/noisearch). If you submit a Notice of Termination without meeting one or more of the conditions identified in Part 1.4.2, then your Notice of Termination is not valid. You are responsible for meeting the terms of this permit until your authorization is terminated.

1.4.2 When to Submit a Notice of Termination.

You must submit a Notice of Termination within 30 days after one or more of the following conditions have been met:

- A new owner or operator has taken over responsibility for the facility; or
- You have ceased operations at the facility, there are not or no longer will be discharges of stormwater associated with industrial activity from the facility, and you have already implemented necessary sediment and erosion controls as required by Part 2.1.2.5;
- You are a Sector G, H, or J facility and you have met the applicable termination requirements; or
- You have obtained coverage under an individual or alternative general permit for all discharges required to be covered by an NPDES permit, unless EPA has required that you obtain such coverage under authority of Part 1.6.1, in which case coverage under this permit will terminate automatically.

1.5 Conditional Exclusion for No Exposure.

If you are covered by this permit, and become eligible for a no exposure exclusion from permitting under 40 CFR 122.26(g), you may file a No Exposure Certification. You are no longer required to have a permit upon submission of a complete and accurate no exposure certification to EPA. If you are no longer required to have permit coverage because of a no exposure exclusion and have submitted a No Exposure Certification form to EPA, you are not required to submit a Notice of Termination. You must submit a No Exposure Certification to EPA once every five years. File your No Exposure Certification using the eNOI system at www.epa.gov/npdes/eNOI.

1.6 Alternative Permits.

1.6.1 EPA Requiring Coverage under an Alternative Permit.

EPA may require you to apply for and/or obtain authorization to discharge under either an individual NPDES permit or an alternative NPDES general permit in accordance with 40 CFR 122.64 and 124.5. Any interested person may petition EPA to take action under this paragraph. If EPA requires you to apply for an individual NPDES permit, EPA will notify you in writing that a permit application is required. This notification will include a brief statement of the reasons for this decision and will provide application information. In addition, if you are an existing discharger authorized to discharge under this permit, the notice will set a deadline to file the permit application, and will include a statement that on the effective date of the individual NPDES permit, or the alternative general permit as it applies to you, coverage under this general permit will terminate. EPA may grant additional time to submit the application if you request it. If you are covered under this permit and fail to submit an individual NPDES permit application as required by EPA, then the applicability of this permit to you is terminated at the end of the day specified by EPA as the deadline for application submittal. EPA may take appropriate enforcement action for any unpermitted discharge.

1.6.2 Permittee Requesting Coverage under an Alternative Permit.

You may request to be excluded from coverage under this general permit by applying for an individual permit. In such a case, you must submit an individual permit application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request, to EPA at the applicable EPA Regional Office listed in Part 7.6.2 of this permit. The request may be granted by issuance of an individual permit or authorization of coverage under an alternative general permit if your reasons are adequate to support the request.

When an individual NPDES permit is issued to you or you are authorized to discharge under an alternative NPDES general permit, your authorization to discharge under this permit is terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit.

1.7 Severability.

Invalidation of a portion of this permit does not necessarily render the whole permit invalid. EPA's intent is that the permit is to remain in effect to the extent possible; in the event that any part of this permit is invalidated, EPA will advise the regulated community as to the effect of such invalidation.

2. Control Measures and Effluent Limits.

In the technology-based limits included in Part 2.1 and in Part 8, the term "minimize" means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

2.1 Control Measures.

You must select, design, install, and implement control measures (including best management practices) to address the selection and design considerations in Part 2.1.1, meet the non-numeric effluent limits in Part 2.1.2, and meet limits contained in applicable effluent limitations guidelines in Part 2.1.3. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer's specifications. Note that you may deviate from such manufacturer's specifications where you provide justification for such deviation and include documentation of your rationale in the part of your SWPPP that describes your control measures, consistent with Part 5.1.4. If you find that your control measures are not achieving their intended effect of minimizing pollutant discharges, you must modify these control measures as expeditiously as practicable. Regulated stormwater discharges from your facility include stormwater run-on that commingles with stormwater discharges associated with industrial activity at your facility.

2.1.1 Control Measure Selection and Design Considerations

You must consider the following when selecting and designing control measures:

- preventing stormwater from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from stormwater;
- using control measures in combination is more effective than using control measures in isolation for minimizing pollutants in your stormwater discharge;
- assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;
- minimizing impervious areas at your facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches) can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;

- attenuating flow using open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;
- conserving and/or restoring of riparian buffers will help protect streams from stormwater runoff and improve water quality; and
- using treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

2.1.2 Non-Numeric Technology-Based Effluent Limits (BPT/BAT/BCT).

2.1.2.1 Minimize Exposure. You must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, you should pay particular attention to the following:

- use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas;
- locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas);
- clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;
- use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible;
- use spill/overflow protection equipment;
- drain fluids from equipment and vehicles prior to on-site storage or disposal;
- perform all cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and
- ensure that all washwater drains to a proper collection system (i.e., not the stormwater drainage system).

The discharge of vehicle and equipment washwater, including tank cleaning operations, is not authorized by this permit. These wastewaters must be covered under a separate NPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or disposed of otherwise in accordance with applicable law.

Note: Industrial materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged to receiving waters or if discharges are authorized under another NPDES permit.

2.1.2.2 Good Housekeeping. You must keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.

2.1.2.3 Maintenance. You must regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters. You must maintain all control measures that are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If you find that your control measures need to be replaced or repaired, you must make the necessary repairs or modifications as expeditiously as practicable.

2.1.2.4 Spill Prevention and Response Procedures. You must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, you must implement:

- Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides," etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
- Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
- Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of your stormwater pollution prevention team (see Part 5.1.1); and
- Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC, metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302 as soon as you have knowledge of the discharge. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available.

2.1.2.5 Erosion and Sediment Controls. You must stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions you must take to meet this limit, you must place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to consult with EPA's internet-based resources relating to BMPs for erosion and sedimentation, including the sector-specific *Industrial Stormwater*

Fact Sheet Series, (www.epa.gov/npdes/stormwater/msgp), *National Menu of Stormwater BMPs* (www.epa.gov/npdes/stormwater/menuofbmps), and *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (www.epa.gov/owow/nps/urbanmm/index.html), and any similar State or Tribal publications.

2.1.2.6 Management of Runoff. You must divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff, to minimize pollutants in your discharges. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to consult with EPA's internet-based resources relating to runoff management, including the sector-specific *Industrial Stormwater Fact Sheet Series*, (www.epa.gov/npdes/stormwater/msgp), *National Menu of Stormwater BMPs* (www.epa.gov/npdes/stormwater/menuofbmps), and *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (www.epa.gov/owow/nps/urbanmm/index.html), and any similar State or Tribal publications.

2.1.2.7 Salt Storage Piles or Piles Containing Salt. You must enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if stormwater runoff from the piles is not discharged or if discharges from the piles are authorized under another NPDES permit.

2.1.2.8 Sector Specific Non-Numeric Effluent Limits. You must achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Part 8.

2.1.2.9 Employee Training. You must train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team. Training must cover both the specific control measures used to achieve the effluent limits in this Part, and monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit. EPA recommends training be conducted at least annually (or more often if employee turnover is high).

2.1.2.10 Non-Stormwater Discharges. You must eliminate non-stormwater discharges not authorized by an NPDES permit. See Part 1.2.3 for a list of non-stormwater discharges authorized by this permit.

2.1.2.11 Waste, Garbage and Floatable Debris. You must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

2.1.2.12 Dust Generation and Vehicle Tracking of Industrial Materials. You must minimize generation of dust and off-site tracking of raw, final, or waste materials.

2.1.3 Numeric Effluent Limitations Based on Effluent Limitations Guidelines

If you are in an industrial category subject to one of the effluent limitations guidelines identified in Table 6-1 (see Part 6.2.2.1), you must meet the effluent limits referenced in Table 2-1 below:

Table 2-1. Applicable Effluent Limitations Guidelines

Regulated Activity	40 CFR Part/Subpart	Effluent Limit
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Part 429, Subpart I	See Part 8.A.7
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	Part 418, Subpart A	See Part 8.C.4
Runoff from asphalt emulsion facilities	Part 443, Subpart A	See Part 8.D.4
Runoff from material storage piles at cement manufacturing facilities	Part 411, Subpart C	See Part 8.E.5
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, or D	See Part 8.J.9
Runoff from hazardous waste landfills	Part 445, Subpart A	See Part 8.K.6
Runoff from non-hazardous waste landfills	Part 445, Subpart B	See Part 8.L.10
Runoff from coal storage piles at steam electric generating facilities	Part 423	See Part 8.O.8

2.2 Water Quality-Based Effluent Limitations.

2.2.1 Water Quality Standards

Your discharge must be controlled as necessary to meet applicable water quality standards.

EPA expects that compliance with the other conditions in this permit will control discharges as necessary to meet applicable water quality standards. If at any time you become aware, or EPA determines, that your discharge causes or contributes to an exceedance of applicable water quality standards, you must take corrective action as required in Part 3.1, document the corrective actions as required in Parts 3.4 and 5.4, and report the corrective actions to EPA as required in Part 7.2.

Additionally, EPA may impose additional water quality-based limitations on a site-specific basis, or require you to obtain coverage under an individual permit, if information in your NOI, required reports, or from other sources indicates that your discharges are not controlled as necessary to meet applicable water quality standards.

2.2.2 Discharges to Water Quality Impaired Waters.

2.2.2.1 Existing Discharge to an Impaired Water with an EPA Approved or Established TMDL. If you discharge to an impaired water with an EPA approved or established TMDL, EPA will inform you if any additional limits or controls are necessary for your discharge to be consistent with the assumptions of any available wasteload allocation in the TMDL, or if coverage under an individual permit is necessary in accordance with Part 1.6.1.

2.2.2.2 Existing Discharge to an Impaired Water without an EPA Approved or Established TMDL. If you discharge to an impaired water without an EPA approved or established TMDL, you are required to comply with Part 2.2.1 and the monitoring requirement of Part 6.2.4. Note that this provision also applies to situations where EPA determines that your discharge is not controlled as necessary to meet water quality standards in a downstream water segment, even if your discharge is to a receiving water that is not specifically identified on a Section 303(d) list.

2.2.2.3 New Discharge to an Impaired Water. If your authorization to discharge under this permit relied on Part 1.1.4.7 for a new discharge to an impaired water, you must implement and maintain any control measures or conditions on your site that enabled you to become eligible under Part 1.1.4.7, and modify such measures or conditions as necessary pursuant to any Part 3 corrective actions. You are also required to comply with Part 2.2.1 and the monitoring requirements of Parts 6.2.4.

2.2.3 Tier 2 Antidegradation Requirements for New or Increased Dischargers

If you are a new discharger, or an existing discharger required to notify EPA of an increased discharge consistent with Part 7.4 (i.e., a "planned changes" report), and you discharge directly to waters designated by a State or Tribe as Tier 2 or Tier 2.5 for antidegradation purposes under 40 CFR 131.12(a) (see list of Tier 2 and 2.5 waters on EPA's website at http://www.epa.gov/npdes/stormwater/msgp), EPA may notify you that additional analyses, control measures, or other permit conditions are necessary to comply with the applicable antidegradation requirements, or notify you that an individual permit application is necessary in accordance with Part 1.6.1.

2.3 Requirements Relating to Endangered Species and Historic Properties

If your eligibility under either Part 1.1.4.5 or Part 1.1.4.6 was made possible through your, or another operator's, agreement to include certain measures or prerequisite actions, or implement certain terms and conditions, you must comply with all such agreed-upon requirements to maintain eligibility under the MSGP.

2.4 Requirements Relating to the National Environmental Policy Act (NEPA) Review

If your eligibility under Part 1.1.2.5 was made possible through your agreement to implement any mitigation measures as a result of the NEPA review process, you must comply with all such agreed-upon measures to maintain eligibility under the MSGP.

3. Corrective Actions

3.1 Conditions Requiring Review and Revision to Eliminate Problem

If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to ensure that the condition is eliminated and will not be repeated in the future:

- an unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit) occurs at your facility;
- a discharge violates a numeric effluent limit;
- you become aware, or EPA determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
- an inspection or evaluation of your facility by an EPA official, or local, State, or Tribal entity, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
- you find in your routine facility inspection, quarterly visual assessment, or comprehensive site inspection that your control measures are not being properly operated and maintained.

3.2 Conditions Requiring Review to Determine if Modifications Are Necessary

If any of the following conditions occur, you must review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits in this permit:

- construction or a change in design, operation, or maintenance at your facility significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharged; or
- the average of 4 quarterly sampling results exceeds an applicable benchmark. If less than 4 benchmark samples have been taken, but the results are such that an exceedence of the 4 quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than 4 times the benchmark level) this is considered a benchmark exceedence, triggering this review.

3.3 Corrective Action Deadlines

You must document your discovery of any of the conditions listed in Parts 3.1 and 3.2 within 24 hours of making such discovery. Subsequently, within 14 days of such discovery, you

must document any corrective action(s) to be taken to eliminate or further investigate the deficiency, or if no corrective action is needed, the basis for that determination. Specific documentation required within 24 hours and 14 days is detailed in Part 3.4. If you determine that changes are necessary following your review, any modifications to your control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. These time intervals are not grace periods, but are schedules considered reasonable for documenting your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

3.4 Corrective Action Report

Within 24 hours of discovery of any condition listed in Parts 3.1 and 3.2, you must document the following information (i.e., questions 3-5 of the Corrective Actions section in the Annual Reporting Form, provided in Appendix I):

- Identification of the condition triggering the need for corrective action review;
- Description of the problem identified; and
- Date the problem was identified.

Within 14 days of discovery of any condition listed in Parts 3.1 and 3.2, you must document the following information (i.e., questions 7-11 of the Corrective Actions section in the Annual Reporting Form, provided in Appendix I):

- Summary of corrective action taken or to be taken (or, for triggering events identified in Part 3.2 where you determine that corrective action is not necessary, the basis for this determination);
- Notice of whether SWPPP modifications are required as a result of this discovery or corrective action;
- Date corrective action initiated; and
- Date corrective action completed or expected to be completed.

You must submit this documentation in an annual report as required in Part 7.2 and retain a copy onsite with your SWPPP as required in Part 5.4.

3.5 Effect of Corrective Action

If the event triggering the review is a permit violation (e.g., non-compliance with an effluent limit), correcting it does not remove the original violation. Additionally, failing to take corrective action in accordance with this section is an additional permit violation. EPA will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations.

3.6 Substantially Identical Outfalls

If the event triggering corrective action is linked to an outfall that represents other substantially identical outfalls, your review must assess the need for corrective action for each outfall represented by the outfall that triggered the review. Any necessary changes to control measures that affect these other outfalls must also be made before the next storm event if possible, or as soon as practicable following that storm event.

4. Inspections

You must conduct the inspections in Parts 4.1, 4.2, and 4.3 at your facility.

4.1 Routine Facility Inspections.

4.1.1 Routine Facility Inspection Procedures.

Conduct routine facility inspections of all areas of the facility where industrial materials or activities are exposed to stormwater, and of all stormwater control measures used to comply with the effluent limits contained in this permit. Routine facility inspections must be conducted at least quarterly (i.e., once each calendar quarter) although in many instances, more frequent inspection (e.g., monthly) may be appropriate for some types of equipment, processes, and control measures or areas of the facility with significant activities and materials exposed to stormwater. Perform these inspections during periods when the facility is in operation. You must specify the relevant inspection schedules in your SWPPP document as required in Part 5.1.5. These routine inspections must be performed by qualified personnel (for definition see Appendix A) with at least one member of your stormwater pollution prevention team participating. At least once each calendar year, the routine facility inspection must be conducted during a period when a stormwater discharge is occurring.

4.1.2 Routine Facility Inspection Documentation.

You must document the findings of each routine facility inspection performed and maintain this documentation onsite with your SWPPP as required in Part 5.4. You are not required to submit your routine facility inspection findings to EPA, unless specifically requested to do so. At a minimum, your documentation of each routine facility inspection must include:

- The inspection date and time;
- The name(s) and signature(s) of the inspector(s);
- Weather information and a description of any discharges occurring at the time of the inspection;
- Any previously unidentified discharges of pollutants from the site;
- Any control measures needing maintenance or repairs;
- Any failed control measures that need replacement;
- Any incidents of noncompliance observed; and
- Any additional control measures needed to comply with the permit requirements.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part 3 of this permit.

4.1.3 Exceptions to Routine Facility Inspections.

Inactive and Unstaffed Sites: The requirement to conduct routine facility inspections on a quarterly basis does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. Such a facility is only required to conduct an annual comprehensive site inspection in accordance with the requirements of Part 4.3. To invoke this exception, you must maintain a statement in your SWPPP pursuant to Part 5.1.5.2 indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to precipitation, in accordance with the substantive requirements in 40 CFR 122.26(g)(4)(iii). The statement must be signed and certified in accordance with Appendix B, Subsection 11. If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately resume quarterly facility inspections. If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must include the same signed and certified statement as above and retain it with your records pursuant to Part 5.4.

Inactive and unstaffed facilities covered under Sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), and J (Non-Metallic Mineral Mining and Dressing), are not required to meet the "no industrial materials or activities exposed to stormwater" standard to be eligible for this exception from routine inspections, consistent with the requirements established in Parts 8.G.8.4, 8.H.8.1, and 8.J.8.1.

4.2 Quarterly Visual Assessment of Stormwater Discharges.

4.2.1 Quarterly Visual Assessment Procedures.

Once each quarter for the entire permit term, you must collect a stormwater sample from each outfall (except as noted in Part 4.2.3) and conduct a visual assessment of each of these samples. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but should be collected in such a manner that the samples are representative of the stormwater discharge.

The visual assessment must be made:

- Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30

minutes and you must document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from your site; and

- For storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if you document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period.

You must visually inspect the sample for the following water quality characteristics:

- Color;
- Odor;
- Clarity;
- Floating solids;
- Settled solids;
- Suspended solids;
- Foam;
- Oil sheen; and
- Other obvious indicators of stormwater pollution.

4.2.2 Quarterly Visual Assessment Documentation.

You must document the results of your visual assessments and maintain this documentation onsite with your SWPPP as required in Part 5.4. You are not required to submit your visual assessment findings to EPA, unless specifically requested to do so. At a minimum, your documentation of the visual assessment must include:

- Sample location(s)
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination,
- If applicable, why it was not possible to take samples within the first 30 minutes.

Any corrective action required as a result of a quarterly visual assessment must be performed consistent with Part 3 of this permit.

4.2.3 Exceptions to Quarterly Visual Assessments.

Adverse Weather Conditions: When adverse weather conditions prevent the collection of samples during the quarter, you must take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included with your SWPPP records as described in Part 5.4. Adverse conditions are

those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions.

Climates with Irregular Stormwater Runoff: If your facility is located in an area where limited rainfall occurs during many parts of the year (e.g., arid or semi-arid climate) or in an area where freezing conditions exist that prevent runoff from occurring for extended periods, then your samples for the quarterly visual assessments may be distributed during seasons when precipitation runoff occurs.

Areas Subject to Snow: In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge, as described in Part 6.1.3, taking into account the exception described above for climates with irregular stormwater runoff.

Inactive and unstaffed sites: The requirement for a quarterly visual assessment does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. To invoke this exception, you must maintain a statement in your SWPPP as required in Part 5.1.5.2 indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to precipitation, in accordance with the substantive requirements in 40 CFR 122.26(g)(4)(iii). The statement must be signed and certified in accordance with Appendix B, Subsection 11. If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately resume quarterly visual assessments. If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must include the same signed and certified statement as above and retain it with your records pursuant to Part 5.4.

Inactive and unstaffed facilities covered under Sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), and J (Non-Metallic Mineral Mining and Dressing), are not required to meet the "no industrial materials or activities exposed to stormwater" standard to be eligible for this exception from quarterly visual assessment, consistent with the requirements established in Parts 8.G.8.4, 8.H.8.1, and 8.J.8.1.

Substantially identical outfalls: If your facility has two or more outfalls that you believe discharge substantially identical effluents, as documented in Part 5.1.5.2, you may conduct quarterly visual assessments of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s) provided that you perform visual assessments on a rotating basis of each substantially identical outfall throughout the period of your coverage under this permit.

If stormwater contamination is identified through visual assessment performed at a substantially identical outfall, you must assess and modify your control measures as appropriate for each outfall represented by the monitored outfall.

4.3 Comprehensive Site Inspections.

4.3.1 Comprehensive Site Inspection Procedures.

You must conduct annual comprehensive site inspections while you are covered under this permit. Annual, as defined in this Part, means once during each of the following inspection periods beginning with the period you are authorized to discharge under this permit:

Year 1: September 29, 2008 – September 29, 2009
Year 2: September 29, 2009 – September 29, 2010
Year 3: September 29, 2010 – September 29, 2011
Year 4: September 29, 2011 – September 29, 2012
Year 5: September 29, 2012 – September 29, 2013

You are waived from having to perform a comprehensive site inspection for an inspection period, as defined above, if you obtain authorization to discharge less than three months before the end of that inspection period.

Should your coverage be administratively continued after the expiration date of this permit, you must continue to perform these inspections annually until you are no longer covered.

Comprehensive site inspections must be conducted by qualified personnel with at least one member of your stormwater pollution prevention team participating in the comprehensive site inspections.

Your comprehensive site inspections must cover all areas of the facility affected by the requirements in this permit, including the areas identified in the SWPPP as potential pollutant sources (see Part 5.1.3) where industrial materials or activities are exposed to stormwater, any areas where control measures are used to comply with the effluent limits in Part 2, and areas where spills and leaks have occurred in the past 3 years. The inspections must also include a review of monitoring data collected in accordance with Part 6.2. Inspectors must consider the results of the past year's visual and analytical monitoring when planning and conducting inspections. Inspectors must examine the following:

- Industrial materials, residue, or trash that may have or could come into contact with stormwater;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;
- Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas; and
- Control measures needing replacement, maintenance, or repair.

Stormwater control measures required by this permit must be observed to ensure that they are functioning correctly. If discharge locations are inaccessible, nearby downstream locations must be inspected.

Your annual comprehensive site inspection may also be used as one of the routine inspections, as long as all components of both types of inspections are included.

4.3.2 Comprehensive Site Inspection Documentation.

You must document the findings of each comprehensive site inspection and maintain this documentation onsite with your SWPPP as required in Part 5.4. In addition, you must submit this documentation in an annual report as required in Part 7.2. At a minimum, your documentation of the comprehensive site inspection must include (see the Annual Reporting Form included as Appendix I):

- The date of the inspection;
- The name(s) and title(s) of the personnel making the inspection;
- Findings from the examination of areas of your facility identified in Part 4.3.1;
- All observations relating to the implementation of your control measures including:
  - previously unidentified discharges from the site,
  - previously unidentified pollutants in existing discharges,
  - evidence of, or the potential for, pollutants entering the drainage system;
  - evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall, including flow dissipation measures to prevent scouring, and
  - additional control measures needed to address any conditions requiring corrective action identified during the inspection.
- Any required revisions to the SWPPP resulting from the inspection;
- Any incidents of noncompliance observed or a certification stating the facility is in compliance with this permit (if there is no noncompliance); and
- A statement, signed and certified in accordance with Appendix B, Subsection 11 of the permit.

Any corrective action required as a result of the comprehensive site inspection must be performed consistent with Part 3 of this permit.

5. Stormwater Pollution Prevention Plan (SWPPP).

You must prepare a SWPPP for your facility before submitting your Notice of Intent (NOI) for permit coverage. If you prepared a SWPPP for coverage under a previous NPDES permit, you must review and update the SWPPP to implement all provisions of this permit prior to submitting your NOI. The SWPPP does not contain effluent limitations; the limitations are contained in Part 2 of the permit, and for some sectors, Parts 8 and 9 of the permit. The SWPPP is intended to document the selection, design, and installation of control measures. As distinct from the SWPPP, the additional documentation requirements (see Part 5.4) are intended to

document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements.

5.1 Contents of Your SWPPP.

For coverage under this permit, your SWPPP must contain all of the following elements:

- Stormwater pollution prevention team (see Part 5.1.1);
- Site description (see Part 5.1.2);
- Summary of potential pollutant sources (see Part 5.1.3);
- Description of control measures (see Part 5.1.4);
- Schedules and procedures (see Part 5.1.5);
- Documentation to support eligibility considerations under other federal laws (see Part 5.1.6); and
- Signature requirements (see Part 5.1.7).

Where your SWPPP refers to procedures in other facility documents, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS) developed for a National Environmental Performance Track facility, copies of the relevant portions of those documents must be kept with your SWPPP.

5.1.1 Stormwater Pollution Prevention Team.

You must identify the staff members (by name or title) that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities. Your stormwater pollution prevention team is responsible for assisting the facility manager in developing and revising the facility's SWPPP as well as maintaining control measures and taking corrective actions where required. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit and your SWPPP.

5.1.2 Site Description.

Your SWPPP must include the following:

- *Activities at the Facility.* Provide a description of the nature of the industrial activities at your facility.
- *General location map*. Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of your facility and all receiving waters for your stormwater discharges.
- *Site map.* Provide a map showing:
  - the size of the property in acres;
  - the location and extent of significant structures and impervious surfaces;
  - directions of stormwater flow (use arrows);
  - locations of all existing structural control measures;

- locations of all receiving waters in the immediate vicinity of your facility, indicating if any of the waters are impaired and, if so, whether the waters have TMDLs established for them;
- locations of all stormwater conveyances including ditches, pipes, and swales;
- locations of potential pollutant sources identified under Part 5.1.3.2;
- locations where significant spills or leaks identified under Part 5.1.3.3 have occurred;
- locations of all stormwater monitoring points;
- locations of stormwater inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall No. 1, No. 2, etc), indicating if you are treating one or more outfalls as "substantially identical" under Parts 4.2.3, 5.1.5.2, and 6.1.1, and an approximate outline of the areas draining to each outfall;
- municipal separate storm sewer systems, where your stormwater discharges to them;
- locations and descriptions of all non-stormwater discharges identified under Part 2.1.2.10;
- locations of the following activities where such activities are exposed to precipitation:
  - fueling stations;
  - vehicle and equipment maintenance and/or cleaning areas;
  - loading/unloading areas;
  - locations used for the treatment, storage, or disposal of wastes;
  - liquid storage tanks;
  - processing and storage areas;
  - immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
  - transfer areas for substances in bulk; and
  - machinery; and
- locations and sources of run-on to your site from adjacent property that contains significant quantities of pollutants.

5.1.3 Summary of Potential Pollutant Sources.

You must document areas at your facility where industrial materials or activities are exposed to stormwater and from which allowable non-stormwater discharges are released. *Industrial materials or activities* include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. *Material handling activities* include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each area identified, the description must include:

5.1.3.1 Activities in the area. A list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).

5.1.3.2 Pollutants. A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity. The pollutant list must include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to stormwater in the 3 years prior to the date you prepare or amend your SWPPP.

5.1.3.3 Spills and Leaks. You must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. You must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the 3 years prior to the date you prepare or amend your SWPPP.

Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602. This permit does not relieve you of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances.

5.1.3.4 Non-Stormwater Discharges. You must document that you have evaluated for the presence of non-stormwater discharges and that all unauthorized discharges have been eliminated. Documentation of your evaluation must include:

- The date of any evaluation;
- A description of the evaluation criteria used;
- A list of the outfalls or onsite drainage points that were directly observed during the evaluation;
- The different types of non-stormwater discharge(s) and source locations; and
- The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.

5.1.3.5 Salt Storage. You must document the location of any storage piles containing salt used for deicing or other commercial or industrial purposes.

5.1.3.6 Sampling Data. You must summarize all stormwater discharge sampling data collected at your facility during the previous permit term.

5.1.4 Description of Control Measures.

5.1.4.1 Control Measures to Meet Technology-Based and Water Quality-Based Effluent Limits. You must document the location and type of control measures you have installed and implemented at your site to achieve the non-numeric effluent limits in Part 2.1.2, and where applicable in Part 8, the effluent limitations guidelines-based limits in Part 2.1.3,

the water quality-based effluent limits in Part 2.2, and any agreed-upon endangered species or NEPA-related requirements in Parts 2.3 and 2.4, and describe how you addressed the control measure selection and design considerations in Part 2.1.1. This documentation must describe how the control measures at your site address both the pollutant sources identified in Part 5.1.3, and any stormwater run-on that commingles with any discharges covered under this permit.

5.1.5 Schedules and Procedures

5.1.5.1 Pertaining to Control Measures Used to Comply with the Effluent Limits in Part 2. The following must be documented in your SWPPP:

- Good Housekeeping (See Part 2.1.2.2) – A schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers;
- Maintenance (See Part 2.1.2.3) – Preventative maintenance procedures, including regular inspections, testing, maintenance, and repair of all industrial equipment and systems, and control measures, to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line;
- Spill Prevention and Response Procedures (See Part 2.1.2.4) – Procedures for preventing and responding to spills and leaks. You may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) developed for the facility under Section 311 of the CWA or BMP programs otherwise required by an NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review consistent with Part 5.3; and
- Employee Training (Part 2.1.2.9) – A schedule for all types of necessary training.

5.1.5.2 Pertaining to Monitoring and Inspection. You must document in your SWPPP your procedures for conducting the five types of analytical monitoring specified by this permit, where applicable to your facility, including:

- Benchmark monitoring (see Part 6.2.1);
- Effluent limitations guidelines monitoring (see Part 6.2.2);
- State- or Tribal-specific monitoring (see Part 6.2.3);
- Impaired waters monitoring (see Part 6.2.4); and
- Other monitoring as required by EPA (see Part 6.2.5).

For each type of monitoring, your SWPPP must document:

- Locations where samples are collected, including any determination that two or more outfalls are substantially identical;
- Parameters for sampling and the frequency of sampling for each parameter;
- Schedules for monitoring at your facility, including schedule for alternate monitoring periods for climates with irregular stormwater runoff (see Part 6.1.6);

- Any numeric control values (benchmarks, effluent limitations guidelines, TMDL-related requirements, or other requirements) applicable to discharges from each outfall; and
- Procedures (e.g., responsible staff, logistics, laboratory to be used, etc.) for gathering storm event data, as specified in Part 6.1.

If you are invoking the exception for inactive and unstaffed sites for benchmark monitoring, you must include in your SWPPP the information to support this claim as required by Part 6.2.1.3.

You must document the following in your SWPPP if you plan to use the substantially identical outfall exception for your quarterly visual assessment requirements in Part 4.2 or your benchmark monitoring requirements in Part 6.2.1:

- Location of each of the substantially identical outfalls;
- Description of the general industrial activities conducted in the drainage area of each outfall;
- Description of the control measures implemented in the drainage area of each outfall;
- Description of the exposed materials located in the drainage area of each outfall that are likely to be significant contributors of pollutants to stormwater discharges;
- An estimate of the runoff coefficient of the drainage areas (low = under 40%; medium = 40 to 65%; high = above 65%); and
- Why the outfalls are expected to discharge substantially identical effluents.

You must document in your SWPPP your procedures for performing, as appropriate, the three types of inspections specified by this permit, including:

- Routine facility inspections (see Part 4.1);
- Quarterly visual assessment of stormwater discharges (see Part 4.2); and
- Comprehensive site inspections (see Part 4.3).

For each type of inspection performed, your SWPPP must identify:

- Person(s) or positions of person(s) responsible for inspection;
- Schedules for conducting inspections, including tentative schedule for facilities in climates with irregular stormwater runoff discharges (see Part 4.2.3); and
- Specific items to be covered by the inspection, including schedules for specific outfalls.

If you are invoking the exception for inactive and unstaffed sites relating to routine facility inspections and quarterly visual assessments, you must include in your SWPPP the information to support this claim as required by Parts 4.1.3 and 4.2.3.

5.1.6 Documentation to Support Eligibility Considerations Under Other Federal Laws.

5.1.6.1 Documentation Regarding Endangered Species. You must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.5 (Endangered and Threatened Species and Critical Habitat Protection).

5.1.6.2 Documentation Regarding Historic Properties. You must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.6 (Historic Properties Preservation).

5.1.6.3 Documentation Regarding NEPA Review. You must keep with your SWPPP the documentation supporting your certification of eligibility under Part 1.1.2.5 (Discharges Subject to Any New Source Performance Standards).

5.1.7 Signature Requirements.

You must sign and date your SWPPP in accordance with Appendix B, Subsection 11, including the date of signature.

5.2 Required SWPPP Modifications.

You must modify your SWPPP whenever necessary to address any of the triggering conditions for corrective action in Part 3.1 and to ensure that they do not reoccur, or to reflect changes implemented when a review following the triggering conditions in Part 3.2 indicates that changes to your control measures are necessary to meet the effluent limits in this permit. Changes to your SWPPP document must be made in accordance with the corrective action deadlines in Parts 3.3 and 3.4, and must be signed and dated in accordance with Appendix B, Subsection 11.

5.3 SWPPP Availability.

You must retain a copy of the current SWPPP required by this permit at the facility, and it must be immediately available to EPA; a State, Tribal, or local agency approving stormwater management plans; the operator of an MS4 receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an onsite inspection or upon request. EPA may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) may be withheld from the public, but may not be withheld from those staff cleared for CBI review within EPA, USFWS, or NMFS.

EPA encourages you to post your SWPPP online and provide the website address on your NOI.

5.4 Additional Documentation Requirements.

You are required to keep the following inspection, monitoring, and certification records with your SWPPP that together keep your records complete and up-to-date, and demonstrate your full compliance with the conditions of this permit:

- A copy of the NOI submitted to EPA along with any correspondence exchanged between you and EPA specific to coverage under this permit;
- A copy of the acknowledgment letter you receive from the NOI Processing Center or eNOI system assigning your permit tracking number;
- A copy of this permit (an electronic copy easily available to SWPPP personnel is also acceptable);
- Descriptions and dates of any incidences of significant spills, leaks, or other releases that resulted in discharges of pollutants to waters of the U.S., through stormwater or otherwise; the circumstances leading to the release and actions taken in response to the release; and measures taken to prevent the recurrence of such releases (see Part 2.1.2.4);
- Records of employee training, including date training received (see Part 2.1.2.9);
- Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, date(s) that the control measure(s) returned to full function, and the justification for any extended maintenance/repair schedules (see Part 2.1.2.3);
- All inspection reports, including the Routine Facility Inspection Reports (see Part 4.1), the Quarterly Visual Assessment Reports (see Part 4.2), and the Comprehensive Site Inspection Reports (see Part 4.3);
- Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (e.g., adverse weather or it was impracticable to collect samples within the first 30 minutes of a measurable storm event) (see Parts 4.2.1, 6.1.4, and 6.2.1.2);
- Description of any corrective action taken at your site, including triggering event and dates when problems were discovered and modifications occurred;
- Documentation of any benchmark exceedances and how they were responded to, including either (1) corrective action taken, (2) a finding that the exceedence was due to natural background pollutant levels, or (3) a finding that no further pollutant reductions were technologically available and economically practicable and achievable in light of best industry practice consistent with Part 6.2.1.2;
- Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if you discharge directly to impaired waters, and that such pollutants were not detected in your discharge or were solely attributable to natural background sources (see Part 6.2.4.2); and
- Documentation to support your claim that your facility has changed its status from active to inactive and unstaffed with respect to the requirements to conduct routine facility inspections (see Part 4.1.3), quarterly visual assessments (see Part 4.2.3), and/or benchmark monitoring (see Part 6.2.1.3).

6. Monitoring.

You must collect and analyze stormwater samples and document monitoring activities consistent with the procedures described in Part 6 and Appendix B, Subsections 10 – 12, and any additional sector-specific or State/Tribal-specific requirements in Parts 8 and 9, respectively. Refer to Part 7 for reporting and recordkeeping requirements.

6.1 Monitoring Procedures

6.1.1 Monitored Outfalls.

Applicable monitoring requirements apply to each outfall authorized by this permit, except as otherwise exempt from monitoring as a "substantially identical outfall." If your facility has two or more outfalls that you believe discharge substantially identical effluents, based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of their drainage areas, you may monitor the effluent of just one of the outfalls and report that the results also apply to the substantially identical outfall(s). As required in Part 5.1.5.2, your SWPPP must identify each outfall authorized by this permit and describe the rationale for any substantially identical outfall determinations. The allowance for monitoring only one of the substantially identical outfalls is not applicable to any outfalls with numeric effluent limitations. You are required to monitor each outfall covered by a numeric effluent limit as identified in Part 6.2.2.

6.1.2 Commingled Discharges.

If discharges authorized by this permit commingle with discharges not authorized under this permit, any required sampling of the authorized discharges must be performed at a point before they mix with other waste streams, to the extent practicable.

6.1.3 Measurable Storm Events.

All required monitoring must be performed on a storm event that results in an actual discharge from your site ("measurable storm event") that follows the preceding measurable storm event by at least 72 hours (3 days). The 72-hour (3-day) storm interval does not apply if you are able to document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period. In the case of snowmelt, the monitoring must be performed at a time when a measurable discharge occurs at your site.

For each monitoring event, except snowmelt monitoring, you must identify the date and duration (in hours) of the rainfall event, rainfall total (in inches) for that rainfall event, and time (in days) since the previous measurable storm event. For snowmelt monitoring, you must identify the date of the sampling event.

6.1.4 Sample Type.

You must take a minimum of one grab sample from a discharge resulting from a measurable storm event as described in Part 6.1.3. Samples must be collected within the first 30 minutes of a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and documentation must be kept with the SWPPP explaining why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge.

6.1.5 Adverse Weather Conditions.

When adverse weather conditions as described in Part 4.2.3 prevent the collection of samples according to the relevant monitoring schedule, you must take a substitute sample during the next qualifying storm event. Adverse weather does not exempt you from having to file a benchmark monitoring report in accordance with your sampling schedule. You must report any failure to monitor as specified in Part 7.1 indicating the basis for not sampling during the usual reporting period.

6.1.6 Climates with Irregular Stormwater Runoff.

If your facility is located in areas where limited rainfall occurs during parts of the year (e.g., arid or semi-arid climates) or in areas where freezing conditions exist that prevent runoff from occurring for extended periods, required monitoring events may be distributed during seasons when precipitation occurs, or when snowmelt results in a measurable discharge from your site. You must still collect the required number of samples.

6.1.7 Monitoring Periods.

Monitoring requirements in this permit begin in the first full quarter following either April 1, 2009 or your date of discharge authorization, whichever date comes later. If your monitoring is required on a quarterly basis (e.g., benchmark monitoring), you must monitor at least once in each of the following 3-month intervals:

- January 1 – March 31;
- April 1 – June 30;
- July 1 – September 30; and
- October 1 – December 31.

For example, if you obtain permit coverage on June 2, 2009, then your first monitoring quarter is July 1 - September 30, 2009. This monitoring schedule may be modified in accordance with Part 6.1.6 if the revised schedule is documented with your SWPPP and provided to EPA with your first monitoring report.

6.1.8 Monitoring for Allowable Non-Stormwater Discharges

You are only required to monitor allowable non-stormwater discharges (as delineated in Part 1.1.3) when they are commingled with stormwater discharges associated with industrial activity.

6.2 Required Monitoring.

This permit includes five types of required analytical monitoring, one or more of which may apply to your discharge:

- Quarterly benchmark monitoring (see Part 6.2.1)
- Annual effluent limitations guidelines monitoring (see Part 6.2.2);
- State- or Tribal-specific monitoring (see Part 6.2.3);
- Impaired waters monitoring (see Part 6.2.4); and
- Other monitoring as required by EPA (see Part 6.2.5).

When more than one type of monitoring for the same parameter at the same outfall applies (e.g., total suspended solids once per year for an effluent limit and once per quarter for benchmark monitoring at a given outfall), you may use a single sample to satisfy both monitoring requirements (i.e., one sample satisfying both the annual effluent limit sample and one of the 4 quarterly benchmark monitoring samples).

All required monitoring must be conducted in accordance with the procedures described in Appendix B, Subsection 10.D.

6.2.1 Benchmark Monitoring.

This permit stipulates pollutant benchmark concentrations that may be applicable to your discharge. The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore, is not a permit violation. Benchmark monitoring data are primarily for your use to determine the overall effectiveness of your control measures and to assist you in knowing when additional corrective action(s) may be necessary to comply with the effluent limitations in Part 2.

6.2.1.1 Applicability of Benchmark Monitoring. You must monitor for any benchmark parameters specified for the industrial sector(s), both primary industrial activity and any co-located industrial activities, applicable to your discharge. Your industry-specific benchmark concentrations are listed in the sector-specific sections of Part 8. If your facility is in one of the industrial sectors subject to benchmark concentrations that are hardness-dependent, you are required to submit to EPA with your first benchmark report a hardness value, established consistent with the procedures in Appendix J, which is representative of your receiving water.

Samples must be analyzed consistent with 40 CFR Part 136 analytical methods and using test procedures with quantitation limits at or below benchmark values for all benchmark parameters for which you are required to sample.

6.2.1.2 Benchmark Monitoring Schedule. Benchmark monitoring must be conducted quarterly, as identified in Part 6.1.7, for your first 4 full quarters of permit coverage commencing no earlier than April 1, 2009. Facilities in climates with irregular stormwater runoff, as described in Part 6.1.6, may modify this quarterly schedule provided that this revised schedule is reported to EPA when the first benchmark sample is collected and reported, and that this revised schedule is kept with the facility's SWPPP as specified in Part 5.4.

Data not exceeding benchmarks: After collection of 4 quarterly samples, if the average of the 4 monitoring values for any parameter does not exceed the benchmark, you have fulfilled your monitoring requirements for that parameter for the permit term. For averaging purposes, use a value of zero for any individual sample parameter, analyzed using procedures consistent with Part 6.2.1.1, which is determined to be less than the method detection limit. For sample values that fall between the method detection level and the quantitation limit (i.e., a confirmed detection but below the level that can be reliably quantified), use a value halfway between zero and the quantitation limit.

Data exceeding benchmarks: After collection of 4 quarterly samples, if the average of the 4 monitoring values for any parameter exceeds the benchmark, you must, in accordance with Part 3.2, review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits in this permit, and either:

- Make the necessary modifications and continue quarterly monitoring until you have completed 4 additional quarters of monitoring for which the average does not exceed the benchmark; or

- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limits or are necessary to meet the water-quality-based effluent limitations in Parts 2 of this permit, in which case you must continue monitoring once per year. You must also document your rationale for concluding that no further pollutant reductions are achievable, and retain all records related to this documentation with your SWPPP. You must also notify EPA of this determination in your next benchmark monitoring report.

In accordance with Part 3.2, you must review your control measures and perform any required corrective action immediately (or document why no corrective action is required), without waiting for the full 4 quarters of monitoring data, if an exceedance of the 4 quarter average is mathematically certain. If after modifying your control measures and conducting 4 additional quarters of monitoring, your average still exceeds the benchmark (or if an exceedance of the benchmark by the 4 quarter average is mathematically certain prior to conducting the full 4 additional quarters of monitoring), you must again review your control measures and take one of the two actions above.

***Natural background pollutant levels*:** Following the first 4 quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than 4 quarters of data, see above), if the average concentration of a pollutant exceeds a benchmark value, and you determine that exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background, you are not required to perform corrective action or additional benchmark monitoring provided that:

- The average concentration of your benchmark monitoring results is less than or equal to the concentration of that pollutant in the natural background;
- You document and maintain with your SWPPP, as required in Part 5.4, your supporting rationale for concluding that benchmark exceedances are in fact attributable solely to natural background pollutant levels. You must include in your supporting rationale any data previously collected by you or others (including literature studies) that describe the levels of natural background pollutants in your stormwater discharge; and
- You notify EPA on your final quarterly benchmark monitoring report that the benchmark exceedances are attributable solely to natural background pollutant levels.

Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources which are not naturally occurring.

6.2.1.3 Exception for Inactive and Unstaffed Sites. The requirement for benchmark monitoring does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater. To invoke this exception, you must do the following:

- Maintain a statement onsite with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to stormwater in accordance with the substantive requirements in 40 CFR 122.26(g) and sign and certify the statement in accordance with Appendix B, Subsection 11; and
- If circumstances change and industrial materials or activities become exposed to stormwater or your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable benchmark monitoring requirements under Part 6.2 as if you were in your first year of permit coverage. You must indicate in your first benchmark monitoring report that your facility has materials or activities exposed to stormwater or has become active and/or staffed.
- If you are not qualified for this exception at the time you are authorized under this permit, but during the permit term you become qualified because your facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then you must notify EPA of this change in your next benchmark monitoring report. You may discontinue benchmark monitoring once

you have notified EPA, and prepared and signed the certification statement described above concerning your facility's qualification for this special exception.

Note: This exception has different requirements for Sectors G, H, and J (see Part 8).

6.2.2 Effluent Limitations Monitoring.

6.2.2.1 Monitoring Based on Effluent Limitations Guidelines. Table 6-1 identifies the stormwater discharges subject to effluent limitation guidelines that are authorized for coverage under this permit. Beginning in the first full quarter following April 1, 2009 or your date of discharge authorization, whichever date comes later, you must monitor once per year at each outfall containing the discharges identified in Table 6-1 for the parameters specified in the sector-specific section of Part 8.

Table 6-1. Required Monitoring for Effluent Limits Based on Effluent Limitations Guidelines

Regulated Activity	Effluent Limit	Monitoring Frequency	Sample Type
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	See Part 8.A.7	1/year	Grab
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	See Part 8.C.4	1/year	Grab
Runoff from asphalt emulsion facilities	See Part 8.D.4	1/year	Grab
Runoff from material storage piles at cement manufacturing facilities	See Part 8.E.5	1/year	Grab
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	See Part 8.J.9	1/year	Grab
Runoff from hazardous waste landfills	See Part 8.K.6	1/year	Grab
Runoff from non-hazardous waste landfills	See Part 8.L.10	1/year	Grab
Runoff from coal storage piles at steam electric generating facilities	See Part 8.O.8	1/year	Grab

6.2.2.2 Substantially Identical Outfalls. You must monitor each outfall discharging runoff from any regulated activity identified in Table 6-1. The substantially identical outfall monitoring provisions are not available for numeric effluent limits monitoring.

6.2.3 State or Tribal Provisions Monitoring

6.2.3.1 Sectors Required to Conduct State or Tribal Monitoring. You must comply with any State or Tribal monitoring requirements (see Part 9) applicable to your facility's location.

6.2.3.2 State or Tribal Monitoring Schedule. If a monitoring frequency is not specified for an applicable requirement in Part 9, you must monitor once per year for the entire permit term.

6.2.4 Discharges to Impaired Waters Monitoring.

6.2.4.1 Permittees Required to Monitor Discharges to Impaired Waters. If you discharge to an impaired water, you must monitor for all pollutants for which the waterbody is impaired and for which a standard analytical method exists (see 40 CFR Part 136).

If the pollutant for which the waterbody is impaired is suspended solids, turbidity or sediment/sedimentation, you must monitor for Total Suspended Solids (TSS). If the pollutant for which the waterbody is impaired is expressed in the form of an indicator or surrogate pollutant, you must monitor for that indicator or surrogate pollutant. No monitoring is required when a waterbody's biological communities are impaired but no pollutant, including indicator or surrogate pollutants, is specified as causing the impairment, or when a waterbody's impairment is related to hydrologic modifications, impaired hydrology, or temperature.

6.2.4.2 Impaired Waters Monitoring Schedule.

Discharges to impaired waters without an EPA approved or established TMDL:
Beginning in the first full quarter following April 1, 2009 or your date of discharge authorization, whichever date comes later, you must monitor once per year at each outfall (except substantially identical outfalls) discharging stormwater to impaired waters without an EPA approved or established TMDL. This monitoring requirement does not apply after one year if the pollutant for which the waterbody is impaired is not detected above natural background levels in your stormwater discharge, and you document, as required in Part 5.4 (Additional Documentation Requirements), that this pollutant is not expected to be present above natural background levels in your discharge.

If the pollutant for which the water is impaired is not present and not expected to be present in your discharge, or it is present but you have determined that its presence is caused solely by natural background sources, you should include a notification to this effect in your first monitoring report, after which you may discontinue annual monitoring. To support a determination that the pollutant's presence is caused solely by natural background sources, you must keep the following documentation with your SWPPP records:

- An explanation of why you believe that the presence of the pollutant causing the impairment in your discharge is not related to the activities at your facility; and
- Data and/or studies that tie the presence of the pollutant causing the impairment in your discharge to natural background sources in the watershed.

Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources which are not naturally occurring.

Discharges to impaired waters with an EPA approved or established TMDL: For stormwater discharges to waters for which there is an EPA approved or established TMDL, you are not required to monitor for the pollutant for which the TMDL was written unless EPA informs you, upon examination of the applicable TMDL and/or WLA, that you are subject to such a requirement consistent with the assumptions of the applicable TMDL and/or WLA. EPA's notice will include specifications on which pollutant to monitor and the required monitoring frequency during the first year of permit coverage. Following the first year of monitoring:

- If the TMDL pollutant is not detected in any of your first year samples, you may discontinue further sampling, unless the TMDL has specific instructions to the contrary, in which case you must follow those instructions. You must keep records of this finding onsite with your SWPPP.

- If you detect the presence of the pollutant causing the impairment in your stormwater discharge for any of the samples collected in your first year, you must continue monitoring annually throughout the term of this permit, unless the TMDL specifies more frequent monitoring, in which case you must follow the TMDL requirements.

6.2.5 Additional Monitoring Required by EPA.

EPA may notify you of additional discharge monitoring requirements. Any such notice will briefly state the reasons for the monitoring, locations, and parameters to be monitored, frequency and period of monitoring, sample types, and reporting requirements.

6.3 Follow-up Actions if Discharge Exceeds Numeric Effluent Limit.

You must conduct follow-up monitoring within 30 calendar days (or during the next qualifying runoff event, should none occur within 30 days) of implementing corrective action(s) taken pursuant to Part 3 in response to an exceedance of a numeric effluent limit contained in this permit. See Part 9 for specific monitoring requirements applicable to individual States or Tribes. Monitoring must be performed for any pollutant(s) that exceeds the effluent limit. If this follow-up monitoring exceeds the applicable effluent limitation, you must comply with both Parts 6.3.1 and 6.3.2.

6.3.1 Submit an Exceedance Report.

You must submit an Exceedance Report consistent with Part 7.3.

6.3.2 Continue to Monitor.

You must continue to monitor, at least quarterly, until your discharge is in compliance with the effluent limit or until EPA waives the requirement for additional monitoring.

7. Reporting and Recordkeeping

7.1 Reporting Monitoring Data to EPA.

All monitoring data collected pursuant to Parts 6.2 and 6.3 must be submitted to EPA using EPA's online eNOI system (www.epa.gov/npdes/eNOI) no later than 30 days (email date or postmark date) after you have received your complete laboratory results for all monitored outfalls for the reporting period. If you cannot access eNOI, paper reporting forms must be submitted by the same deadline to the appropriate address identified in Part 7.6.1. If you are using paper reporting forms, EPA strongly recommends that you use the MSGP discharge monitoring report (MDMR) available at www.epa.gov/npdes/stormwater/msgp. See Part 9 for specific reporting requirements applicable to individual States or Tribes.

For benchmark monitoring, note that you are required to submit sampling results to EPA no later than 30 days after receiving laboratory results for each quarter that you are required to collect benchmark samples, in accordance with Part 6.2.1.2. If you collect multiple samples in a single quarter (e.g., due to adverse weather conditions, climates with irregular stormwater runoff, or areas subject to snow), you are required to submit all sampling results to EPA within 30 days of receiving the laboratory results.

7.2 Annual Report

You must submit an annual report to EPA that includes the findings from your Part 4.3 comprehensive site inspection and any corrective action documentation as required in Part 3.4. If corrective action is not yet completed at the time of submission of this annual report, you must describe the status of any outstanding corrective action(s). In addition to the information required in Parts 3.4 (Corrective Action Report) and 4.3.2 (Comprehensive Site Inspection Documentation), you must include the following information with your annual report:

- Facility name
- NPDES permit tracking number
- Facility physical address
- Contact person name, title, and phone number

EPA strongly recommends that you submit this report using the Annual Reporting Form provided as Appendix I. You must submit the annual report to EPA within 45 days (postmark date) after conducting the comprehensive site inspection to the address identified in Part 7.6.1.

7.3 Exceedance Report for Numeric Effluent Limits

If follow-up monitoring pursuant to Part 6.3 exceeds a numeric effluent limit, you must submit an Exceedance Report to EPA no later than 30 days after you have received your lab results. Your report must include the following:

- NPDES permit tracking number;

- Facility name, physical address and location;
- Name of receiving water;
- Monitoring data from this and the preceding monitoring event(s);
- An explanation of the situation; what you have done and intend to do (should your corrective actions not yet be complete) to correct the violation; and
- An appropriate contact name and phone number.

7.4 Additional Reporting.

In addition to the reporting requirements stipulated in Part 7, you are also subject to the standard permit reporting provisions of Appendix B, Subsection 12.

Where applicable, you must submit the following reports to the appropriate EPA Regional Office listed in Part 7.6.2, as applicable. If you discharge through an MS4, you must also submit these reports to the MS4 operator (identified pursuant to Part 5.1.2).

- 24-hour reporting (see Appendix B, Subsection 12.F) - You must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances;
- 5-day follow-up reporting to the 24 hour reporting (see Appendix B, Subsection 12.F) - A written submission must also be provided within five days of the time you become aware of the circumstances;
- Reportable quantity spills (see Part 2.1.2.4) - You must provide notification, as required under Part 2.1.2.4, as soon as you have knowledge of a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity.

Where applicable, you must submit the following reports to EPA Headquarters at the appropriate address in Part 7.6.1:

- Planned changes (see Appendix B, Subsection 12.A) – You must give notice to EPA as soon as possible of any planned physical alterations or additions to the permitted facility that qualify the facility as a new source or that could significantly change the nature or significantly increase the quantity of pollutants discharged;
- Anticipated noncompliance (see Appendix B, Subsection 12.B) – You must give advance notice to EPA of any planned changes in the permitted facility or activity which you anticipate will result in noncompliance with permit requirements;
- Transfer of ownership and/or operation – You must submit a complete and accurate NOI in accordance with the requirements of Appendix G of this permit and by the deadlines specified in Table 1-2;
- Compliance schedules (see Appendix B, Subsection 12.F) - Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date;

- Other noncompliance (see Appendix B, Subsection 12.G) - You must report all instances of noncompliance not reported in your monitoring report (pursuant to Part 7.1), compliance schedule report, or 24-hour report at the time monitoring reports are submitted; and
- Other information (see Appendix B, Subsection 12.H) – You must promptly submit facts or information if you become aware that you failed to submit relevant facts in your NOI, or that you submitted incorrect information in your NOI or in any report.

7.5 Recordkeeping.

You must retain copies of your SWPPP (including any modifications made during the term of this permit), additional documentation requirements pursuant to Part 5.4 (including documentation related to corrective actions taken pursuant to Part 3), all reports and certifications required by this permit, monitoring data, and records of all data used to complete the NOI to be covered by this permit, for a period of at least 3 years from the date that your coverage under this permit expires or is terminated.

7.6 Addresses for Reports

7.6.1 EPA Addresses

Paper copies of any reports required in Part 6 and 7, not otherwise submitted electronically via EPA's eNOI system (www.epa.gov/npdes/eNOI) must be sent to one of the following addresses:

Via U.S. mail:

U.S. Environmental Protection Agency
Office of Water, Water Permits Division
Mail Code 4203M, ATTN: MSGP Reports
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Or Via Overnight/Express Delivery:

U.S. Environmental Protection Agency
Office of Water, Water Permits Division
Room 7420, ATTN: MSGP Reports
1201 Constitution Avenue, NW
Washington, D.C. 20004
Phone number: 202-564-9545

Notices of Intent and Notices of Termination should be submitted using EPA's eNOI system (www.epa.gov/npdes/eNOI) or sent to EPA's NOI Center (see Appendix G for the address).

All other written correspondence concerning discharges in any State, Indian Country land, Territory, or from any Federal facility covered under this permit and directed to the EPA, including individual permit applications, must be sent to the address of the appropriate EPA Regional Office listed below:

7.6.2 Regional Addresses

7.6.2.1 Region 1: Connecticut, Massachusetts, and New Hampshire, Rhode Island, Vermont.

U.S. EPA Region 1
Office of Ecosystem Protection
One Congress Street - CIP
Boston, MA 02114

7.6.2.2 Region 2: New Jersey, New York, Puerto Rico, and Virgin Islands.

For Puerto Rico and the Virgin Islands

U.S. EPA Region 2
Caribbean Environmental Protection Division
Environmental Management Branch
Centro Europa Building
1492 Ponce de Leon Avenue, Suite 417
San Juan, PR 00907-4127

For New Jersey and New York:

(Coverage not available under this permit.)

U.S. EPA Region 2
Division of Environmental Planning and Protection
290 Broadway
New York, NY 10007-1866

7.6.2.3 Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia.

U.S. EPA Region 3
Water Protection Division (3WP40)
Stormwater Coordinator
1650 Arch Street
Philadelphia, PA 19103

7.6.2.4 Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee.

(Coverage not available under this permit.)

U.S. EPA Region 4
Clean Water Act Enforcement Section
Water Programs Enforcement Branch
Water Management Division
Atlanta Federal Center
61 Forsyth Street SW
Atlanta, GA 30303

7.6.2.5 Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin.

U.S. EPA Region 5
Water Division
NPDES Programs Branch
77 W. Jackson Blvd.
Mail Code WN16J
Chicago, IL 60604

7.6.2.6 Region 6: Arkansas, Louisiana, Oklahoma, Texas, and New Mexico (except see Region 9 for Navajo lands, and see Region 8 for Ute Mountain Reservation lands).

U.S. EPA Region 6
Stormwater Coordinator
Compliance Assurance and Enforcement Division (6EN-WC)
EPA SW MSGP
P.O. Box 50625
Dallas, TX 75205

7.6.2.7 Region 7: Iowa, Kansas, Missouri, Nebraska.

(Coverage not available under this permit.)

U.S. EPA - Region 7
901 N. 5th Street
Kansas City, KS 66101

7.6.2.8 Region 8: Colorado, Montana, North Dakota, South Dakota, Wyoming, Utah (except see Region 9 for Goshute Reservation and Navajo Reservation lands), the Ute Mountain Reservation in New Mexico, and the Pine Ridge Reservation in Nebraska.

(Coverage not available under this permit.)

U.S. EPA Region 8
Stormwater Coordinator (8P-W-P)
999 18th Street, Suite 300
Denver, CO 80202-2466

7.6.2.9 Region 9: Arizona, California, Hawaii, Nevada, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Goshute Reservation in Utah and Nevada, the Navajo Reservation in Utah, New Mexico, and Arizona, the Duck Valley Reservation in Idaho, Fort McDermitt Reservation in Oregon.

U.S. EPA Region 9
Water Management Division, WTR-5
Stormwater Coordinator
75 Hawthorne Street
San Francisco, CA 94105

7.6.2.10 Region 10: Alaska, Idaho, Oregon (except see Region 9 for Fort McDermitt Reservation), Washington.

U.S. EPA Region 10
Office of Water and Watersheds OWW-130
Stormwater Coordinator
1200 6th Avenue
Seattle, WA 98101

7.6.3 State and Tribal Addresses.

See Part 9 (States and Tribes) for the addresses of applicable States or Tribes that require submission of information to their agencies.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart A – Sector A – Timber Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.A.1 Covered Stormwater Discharges.

The requirements in Subpart A apply to stormwater discharges associated with industrial activity from Timber Products facilities as identified by the SIC Codes specified under Sector A in Table D-1 of Appendix D of the permit.

8.A.2 Limitation on Coverage

8.A.2.1 *Prohibition of Discharges.* (See also Part 1.1.4) Not covered by this permit: stormwater discharges from areas where there may be contact with the chemical formulations sprayed to provide surface protection. These discharges must be covered by a separate NPDES permit.

8.A.2.2 *Authorized Non-Stormwater Discharges.* (See also Part 1.1.3) Also authorized by this permit, provided the non-stormwater component of the discharge is in compliance with the requirements in Part 2.1.2 (Non-Numeric Effluent Limits): discharges from the spray down of lumber and wood product storage yards where no chemical additives are used in the spray-down waters and no chemicals are applied to the wood during storage.

8.A.3 Additional Technology-Based Effluent Limits.

8.A.3.1 *Good Housekeeping.* (See also Part 2.1.2.2) In areas where storage, loading and unloading, and material handling occur, perform good housekeeping to limit the discharge of wood debris, minimize the leachate generated from decaying wood materials, and minimize the generation of dust.

8.A.4 Additional SWPPP Requirements.

8.A.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: processing areas, treatment chemical storage areas, treated wood and residue storage areas, wet decking areas, dry decking areas, untreated wood and residue storage areas, and treatment equipment storage areas.

8.A.4.2 *Inventory of Exposed Materials.* (See also Part 5.1.3.2) Where such information exists, if your facility has used chlorophenolic, creosote, or chromium-copper-arsenic formulations for wood surface protection or preserving, document in your SWPPP the following: areas where contaminated soils, treatment equipment, and stored materials still remain and the management practices employed to minimize the contact of these materials with stormwater runoff.

8.A.4.3 *Description of Stormwater Management Controls.* (See also Part 5.1.4) Document measures implemented to address the following activities and sources: log, lumber, and wood product storage areas; residue storage areas; loading and unloading areas; material handling areas; chemical storage areas; and equipment and vehicle maintenance, storage, and repair areas. If your facility performs wood surface protection and preservation activities, address the specific control measures, including any BMPs, for these activities.

8.A.5 Additional Inspection Requirements.

See also Part 4.1. If your facility performs wood surface protection and preservation activities, inspect processing areas, transport areas, and treated wood storage areas monthly to assess the usefulness of practices to minimize the deposit of treatment chemicals on unprotected soils and in areas that will come in contact with stormwater discharges.

8.A.6 Sector-Specific Benchmarks

Table 8.A-1 identifies benchmarks that apply to the specific subsectors of Sector A. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table 8.A-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector A1. General Sawmills and Planing Mills (SIC 2421)	Chemical Oxygen Demand (COD)	120.0 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	Total Zinc[1]	Hardness Dependent
Subsector A2. Wood Preserving (SIC 2491)	Total Arsenic	0.15 mg/L
	Total Copper[1]	Hardness Dependent
Subsector A3. Log Storage and Handling (SIC 2411)	Total Suspended Solids (TSS)	100 mg/L
Subsector A4. Hardwood Dimension and Flooring Mills; Special Products Sawmills, not elsewhere classified; Millwork, Veneer, Plywood, and Structural Wood; Wood Pallets and Skids; Wood Containers, not elsewhere classified; Wood Buildings and Mobile Homes; Reconstituted Wood Products; and Wood Products Facilities not elsewhere classified (SIC 2426, 2429, 2431-2439 (except 2434), 2441, 2448, 2449, 2451, 2452, 2493, and 2499)	Chemical Oxygen Demand (COD)	120.0 mg/L
	Total Suspended Solids (TSS)	100.0 mg/L

[1] The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	Copper (mg/L)	Zinc (mg/L)
0-25 mg/L	0.0038	0.04
25-50 mg/L	0.0056	0.05
50-75 mg/L	0.0090	0.08
75-100 mg/L	0.0123	0.11
100-125 mg/L	0.0156	0.13
125-150 mg/L	0.0189	0.16
150-175 mg/L	0.0221	0.18
175-200 mg/L	0.0253	0.20
200-225 mg/L	0.0285	0.23
225-250 mg/L	0.0316	0.25
250+ mg/L	0.0332	0.26

8.A.7 Effluent Limitations Based on Effluent Limitations Guidelines (See also Part 6.2.2.1 of the permit.)

Table 8.A-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table 8.A-2[1]		
Industrial Activity		
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	pH	6.0 - 9.0 s.u
	Debris (woody material such as bark, twigs, branches, heartwood, or sapwood)	No discharge of debris that will not pass through a 2.54-cm (1-in.) diameter round opening

[1] Monitor annually.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart B – Sector B – Paper and Allied Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.B.1 Covered Stormwater Discharges.

The requirements in Subpart B apply to stormwater discharges associated with industrial activity from Paper and Allied Products Manufacturing facilities, as identified by the SIC Codes specified under Sector B in Table D-1 of Appendix D of the permit.

8.B.2 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.B-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector B1. Paperboard Mills (SIC Code 2631)	Chemical Oxygen Demand (COD)	120 mg/L

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart C – Sector C – Chemical and Allied Products Manufacturing, and Refining.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.C.1 Covered Stormwater Discharges.

The requirements in Subpart C apply to stormwater discharges associated with industrial activity from Chemical and Allied Products Manufacturing, and Refining facilities, as identified by the SIC Codes specified under Sector C in Table D-1 of Appendix D of the permit.

8.C.2 Limitations on Coverage.

8.C.2.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) The following are not covered by this permit: non-stormwater discharges containing inks, paints, or substances (hazardous, nonhazardous, etc.) resulting from an onsite spill, including materials collected in drip pans; washwater from material handling and processing areas; and washwater from drum, tank, or container rinsing and cleaning.

8.C.3 Sector-Specific Benchmarks

Table 8.C-1 identifies benchmarks that apply to the specific subsectors of Sector C. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table 8.C-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector C1. Agricultural Chemicals (SIC 2873-2879)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Lead[1]	Hardness Dependent
	Total Iron	1.0 mg/L
	Total Zinc[1]	Hardness Dependent
	Phosphorus	2.0 mg/L
Subsector C2. Industrial Inorganic Chemicals (SIC 2812-2819)	Total Aluminum	0.75 mg/ L
	Total Iron	1.0 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
Subsector C3. Soaps, Detergents, Cosmetics, and Perfumes (SIC 2841-2844)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Zinc[1]	Hardness Dependent
Subsector C4. Plastics, Synthetics, and Resins (SIC 2821-2824)	Total Zinc[1]	Hardness Dependent

[1] The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	**Lead** (mg/L)	**Zinc** (mg/L)
0-25 mg/L	0.014	0.04
25-50 mg/L	0.023	0.05
50-75 mg/L	0.045	0.08
75-100 mg/L	0.069	0.11
100-125 mg/L	0.095	0.13
125-150 mg/L	0.122	0.16
150-175 mg/L	0.151	0.18
175-200 mg/L	0.182	0.20
200-225 mg/L	0.213	0.23
225-250 mg/L	0.246	0.25
250+ mg/L	0.262	0.26

8.C.4 Effluent Limitations Based on Effluent Limitations Guidelines (See also Part 6.2.2.1 of the permit.)

Table 8.C-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table 8.C-2[1]		
Industrial Activity	**Parameter**	**Effluent Limit**
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	Total Phosphorus (as P)	105.0 mg/L, daily maximum
		35 mg/L, 30-day avg.
	Fluoride	75.0 mg/L, daily maximum
		25.0 mg/L, 30-day avg.

[1] Monitor annually.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart D – Sector D – Asphalt Paving and Roofing Materials and Lubricant Manufacturing.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.D.1 Covered Stormwater Discharges.

The requirements in Subpart D apply to stormwater discharges associated with industrial activity from Asphalt Paving and Roofing Materials and Lubricant Manufacturing facilities, as identified by the SIC Codes specified under Sector D in Table D-1 of Appendix D of the permit.

8.D.2 Limitations on Coverage.

The following stormwater discharges associated with industrial activity are not authorized by this permit (See also Part 1.1.4)

8.D.2.1 Discharges from petroleum refining facilities, including those that manufacture asphalt or asphalt products, that are subject to nationally established effluent limitation guidelines found in 40 CFR Part 419 (Petroleum Refining); or

8.D.2.2 Discharges from oil recycling facilities; or

8.D.2.3 Discharges associated with fats and oils rendering.

8.D.3 Sector-Specific Benchmarks

Table 8.D-1 identifies benchmarks that apply to the specific subsectors of Sector D. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table 8.D-1.

Subsector	Parameter	Benchmark Monitoring Concentration
Subsector D1. Asphalt Paving and Roofing Materials (SIC 2951, 2952)	Total Suspended Solids (TSS)	100 mg/L

8.D.4 Effluent Limitations Based on Effluent Limitations Guidelines (See also Part 6.2.2.1 of the permit.)

Table 8.D-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table 8.D-2[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from asphalt emulsion facilities.	Total Suspended Solids (TSS)	23.0 mg/L, daily maximum 15.0 mg/L, 30-day avg.
	pH	6.0 - 9.0 s.u.
	Oil and Grease	15.0 mg/L, daily maximum
		10 mg/L, 30-day avg.

[1]Monitor annually.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart E – Sector E – Glass, Clay, Cement, Concrete, and Gypsum Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.E.1 Covered Stormwater Discharges.

The requirements in Subpart E apply to stormwater discharges associated with industrial activity from Glass, Clay, Cement, Concrete, and Gypsum Products facilities, as identified by the SIC Codes specified under Sector E in Table D-1 of Appendix D of the permit.

8.E.2 Additional Technology-Based Effluent Limits.

8.E.2.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2) With good housekeeping, prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), kiln dust, fly ash, settled dust, or other significant material in stormwater from paved portions of the site that are exposed to stormwater. Consider sweeping regularly or using other equivalent measures to minimize the presence of these materials. Indicate in your SWPPP the frequency of sweeping or equivalent measures. Determine the frequency based on the amount of industrial activity occurring in the area and the frequency of precipitation, but it must be performed at least once a week if cement, aggregate, kiln dust, fly ash, or settled dust are being handled or processed. You must also prevent the exposure of fine granular solids (cement, fly ash, kiln dust, etc.) to stormwater, where practicable, by storing these materials in enclosed silos, hoppers, or buildings, or under other covering.

8.E.3 Additional SWPPP Requirements.

8.E.3.1 *Drainage Area Site Map*. (See also Part 5.1.2) Document in the SWPPP the locations of the following, as applicable: bag house or other dust control device; recycle/sedimentation pond, clarifier, or other device used for the treatment of process wastewater; and the areas that drain to the treatment device.

8.E.3.2 *Certification.* (See also Part 5.1.3.4) For facilities producing ready-mix concrete, concrete block, brick, or similar products, include in the non-stormwater discharge certification a description of measures that ensure that process waste waters resulting from washing trucks, mixers, transport buckets, forms, or other equipment are discharged in accordance with NPDES requirements or are recycled.

8.E.4 Sector-Specific Benchmarks.

Table 8.E-1 identifies benchmarks that apply to the specific subsectors of Sector E. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table 8.E-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Cutoff Concentration**
Subsector E1. Clay Product Manufacturers (SIC 3251-3259, 3261-3269)	Total Aluminum	0.75 mg/L
Subsector E2. Concrete and Gypsum Product Manufacturers (SIC 3271-3275)	Total Suspended Solids (TSS)	100 mg/L
	Total Iron	1.0 mg/L

8.E.5 Effluent Limitations Based on Effluent Limitations Guidelines (See also Part 6.2.2.1 of the permit.)

Table 8.E-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table 8.E-2[1]		
Industrial Activity	**Parameter**	**Effluent Limit**
Discharges from material storage piles at cement manufacturing facilities	Total Suspended Solids (TSS)	50 mg/L, daily maximum
	pH	6.0 - 9.0 s.u.

[1]Monitor annually.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart F – Sector F – Primary Metals.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.F.1 Covered Stormwater Discharges.

The requirements in Subpart F apply to stormwater discharges associated with industrial activity from Primary Metals facilities, as identified by the SIC Codes specified under Sector F in Table D-1 of Appendix D of the permit.

8.F.2 Additional Technology-Based Effluent Limits

8.F.2.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2) As part of your good housekeeping program, include a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, especially areas where material loading and unloading, storage, handling, and processing occur; and, where practicable, the paving of areas where vehicle traffic or material storage occur but where vegetative or other stabilization methods are not practicable (institute a sweeping program in these areas too). For unstabilized areas where sweeping is not practicable, consider using stormwater management devices such as sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures that effectively trap or remove sediment.

8.F.3 Additional SWPPP Requirements.

8.F.3.1 *Drainage Area Site Map.* (See also Part 5.1.2) Identify in the SWPPP where any of the following activities may be exposed to precipitation or surface runoff: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operations, etc., and could result in a discharge of pollutants to waters of the United States.

8.F.3.2 *Inventory of Exposed Material.* (See also Part 5.1.3.2) Include in the inventory of materials handled at the site that potentially may be exposed to precipitation or runoff, areas where deposition of particulate matter from process air emissions or losses during material-handling activities are possible

8.F.4 Additional Inspection Requirements. (See also Part 4.1) As part of conducting your quarterly routine facility inspections (Part 4.1), address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitators, scrubbers, and cyclones), for any signs of degradation (e.g., leaks,

corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. Consider monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts. Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material losses due to wind or stormwater runoff.

8.F.5 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.F-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Cutoff Concentration
Subsector F1. Steel Works, Blast Furnaces, and Rolling and Finishing Mills (SIC 3312-3317)	Total Aluminum	0.75 mg/L
	Total Zinc[1]	Hardness Dependent
Subsector F2. Iron and Steel Foundries (SIC 3321-3325)	Total Aluminum	0.75 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	Total Copper[1]	Hardness Dependent
	Total Iron	1.0 mg/L
	Total Zinc[1]	Hardness Dependent
Subsector F3. Rolling, Drawing, and Extruding of Nonferrous Metals (SIC 3351-3357)	Total Copper[1]	Hardness Dependent
	Total Zinc[1]	Hardness Dependent
Subsector F4. Nonferrous Foundries (SIC 3363-3369)	Total Copper[1]	Hardness Dependent
	Total Zinc[1]	Hardness Dependent

[1] The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	Copper (mg/L)	Zinc (mg/L)
0-25 mg/L	0.0038	0.04
25-50 mg/L	0.0056	0.05
50-75 mg/L	0.0090	0.08
75-100 mg/L	0.0123	0.11
100-125 mg/L	0.0156	0.13
125-150 mg/L	0.0189	0.16
150-175 mg/L	0.0221	0.18
175-200 mg/L	0.0253	0.20
200-225 mg/L	0.0285	0.23
225-250 mg/L	0.0316	0.25
250+ mg/L	0.0332	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart G – Sector G – Metal Mining.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.G.1 Covered Stormwater Discharges.

The requirements in Subpart G apply to stormwater discharges associated with industrial activity from Metal Mining facilities, including mines abandoned on Federal lands, as identified by the SIC Codes specified under Sector G in Table D-1 of Appendix D. Coverage is required for metal mining facilities that discharge stormwater contaminated by contact with, or that has come into contact with, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the operation.

8.G.1.1 Covered Discharges from Inactive Facilities. All stormwater discharges.

8.G.1.2 Covered Discharges from Active and Temporarily Inactive Facilities. Only the stormwater discharges from the following areas are covered: waste rock and overburden piles if composed entirely of stormwater and not combining with mine drainage; topsoil piles; offsite haul and access roads; onsite haul and access roads constructed of waste rock, overburden, or spent ore if composed entirely of stormwater and not combining with mine drainage; onsite haul and access roads not constructed of waste rock, overburden, or spent ore except if mine drainage is used for dust control; runoff from tailings dams or dikes when not constructed of waste rock or tailings and no process fluids are present; runoff from tailings dams or dikes when constructed of waste rock or tailings and no process fluids are present, if composed entirely of stormwater and not combining with mine drainage; concentration building if no contact with material piles; mill site if no contact with material piles; office or administrative building and housing if mixed with stormwater from industrial area; chemical storage area; docking facility if no excessive contact with waste product that would otherwise constitute mine drainage; explosive storage; fuel storage; vehicle and equipment maintenance area and building; parking areas (if necessary); power plant; truck wash areas if no excessive contact with waste product that would otherwise constitute mine drainage; unreclaimed, disturbed areas outside of active mining area; reclaimed areas released from reclamation requirements prior to December 17, 1990; and partially or inadequately reclaimed areas or areas not released from reclamation requirements.

8.G.1.3 Covered Discharges from Exploration and Construction of Metal Mining and/or Ore Dressing Facilities. All stormwater discharges.

8.G.1.4 Covered Discharges from Facilities Undergoing Reclamation. All stormwater discharges.

8.G.2 Limitations on Coverage.

8.G.2.1 *Prohibition of Stormwater Discharges.* Stormwater discharges not authorized by this permit: discharges from active metal mining facilities that are subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).

NOTE: Stormwater runoff from these sources are subject to 40 CFR Part 440 if they are mixed with other discharges subject to Part 440. In this case, they are not eligible for coverage under this permit. Discharges from overburden/waste rock and overburden/waste rock-related areas are not subject to 40 CFR Part 440 unless they: (1) drain naturally (or are intentionally diverted) to a point source; and (2) combine with "mine drainage" that is otherwise regulated under the Part 440 regulations. For such sources, coverage under this permit would be available if the discharge composed entirely of stormwater does not combine with other sources of mine drainage that are not subject to 40 CFR Part 440, and meets the other eligibility criteria contained in Part 1.2 of the permit. Permit applicants bear the initial responsibility for determining if they are eligible for coverage under this permit, or must seek coverage under another NPDES permit. EPA recommends that permit applicants contact the relevant NPDES permit issuance authority for assistance to determine the nature and scope of the "active mining area" on a mine-by-mine basis, as well as to determine the appropriate permitting mechanism for authorizing such discharges.

8.G.2.2 *Prohibition of Non-Stormwater* Discharges. Not authorized by this permit: adit drainage, and contaminated springs or seeps discharging from waste rock dumps that do not directly result from precipitation events (see also the standard Limitations on Coverage in Part 1.1.4).

8.G.3 Definitions.

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

8.G.3.1 *Mining operation* - Consists of the active and temporarily inactive phases, and the reclamation phase, but excludes the exploration and construction phases.

8.G.3.2 *Exploration phase* - Entails exploration and land disturbance activities to determine the viability of a site. The exploration phase is not considered part of “mining operations.”

8.G.3.3 *Construction phase* - Includes the building of site access roads and removal of overburden and waste rock to expose mineable minerals. The construction phase is not considered part of “mining operations.”

8.G.3.4 *Active phase* - Activities including the extraction, removal or recovery of metal ore. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of “active mining area” found at 40 CFR 440.132(a). The active phase is considered part of “mining operations.”

8.G.3.5 *Reclamation phase* - Activities undertaken, in compliance with applicable mined land reclamation requirements, following the cessation of the "active phase", intended to return the land to an appropriate post-mining land use in order to meet applicable Federal and State reclamation requirements. The reclamation phase is considered part of "mining operations."

8.G.3.6 *Active metal mining facility* - A place where work or other activity related to the extraction, removal, or recovery of metal ore is being conducted. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 440.132(a).

8.G.3.7 *Inactive metal mining facility* - A site or portion of a site where metal mining and/or milling occurred in the past but is not an active facility as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable State or Federal agency. An inactive metal mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an NPDES industrial stormwater permit.

8.G.3.8 *Temporarily inactive metal mining facility* - A site or portion of a site where metal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable State or Federal agency.

8.G.3.9 *Final Stabilization* - A site or portion of a site is "finally stabilized" when it has implemented all applicable Federal and State reclamation requirements.

8.G.4 Technology-Based Effluent Limits for Clearing, Grading, and Excavation Activities.

Clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of mining activities are covered under this permit.

8.G.4.1 Management Practices for Clearing, Grading, and Excavation Activities.

8.G.4.1.1 *Selecting and installing control measures*. For all areas affected by clearing, grading, and excavation activities, you must select, design, install, and implement control measures that meet applicable Part 2 effluent limits.

8.G.4.1.2 *Good Housekeeping*. Litter, debris, and chemicals must be prevented from becoming a pollutant source in stormwater discharges.

8.G.4.1.3 *Retention and Detention of Stormwater Runoff*. For drainage locations serving more than one acre, sediment basins and/or temporary sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for side slope boundaries as necessary based on individual site conditions) of the development area unless a sediment basin providing storage for a calculated

volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided. You are required to remove sediment from sediment traps or sedimentation ponds when design capacity has been reduced by 50 percent. Due to high sediment discharges from some Sector G facilities, permittees may need to implement a combination of structural BMP approaches to sufficiently decrease discharge of sediment from their facilities.

8.G.4.2 Inspection of Clearing, Grading, and Excavation Activities.

8.G.4.2.1 *Inspection Frequency*. Inspections must be conducted either at least once every 7 calendar days, or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized (pursuant to Part 8.G.4.3.2), if runoff is unlikely due to winter (e.g., site is covered with snow or ice) or frozen conditions, or construction is occurring during seasonal dry periods in arid areas and semi-arid areas.

8.G.4.2.2 *Location of Inspections*. Inspections must include all areas of the site disturbed by clearing, grading, and/or excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to waters of the United States, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of significant off-site sediment tracking.

8.G.4.2.3 *Inspection Reports*. For each inspection required above, you must complete an inspection report. At a minimum, the inspection report must include the information required in Part 4.1.

8.G.4.3 Requirements for Cessation of Clearing, Grading, and Excavation Activities.

8.G.4.3.1 *Inspections and Maintenance.* Inspections and maintenance of control measures, including BMPs, associated with clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of a mining operation must continue until final stabilization has been achieved on all portions of the disturbed area, or until the commencement of the active mining phase for those areas that have been temporarily stabilized as a precursor to mining.

8.G.4.3.2 *Temporary Stabilization of Disturbed Areas*. Stabilization measures should be initiated immediately in portions of the site where clearing, grading and/or excavation activities have temporarily ceased, but in no case more than 14 days after the clearing, grading and/or excavation activities in that portion of the site have temporarily ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial

vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site, where exploration and/or construction has permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until such time as the active mining phase commences.

8.G.4.3.3 *Final Stabilization of Disturbed Areas.* Stabilization measures should be initiated immediately in portions of the site where exploration and/or construction activities have permanently ceased, but in no case more than 14 days after the exploration and/or construction activity in that portion of the site has permanently ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers, must be used.

8.G.5 Additional Technology-Based Effluent Limits.

8.G.5.1 *Employee Training.* (See also Part 2.1.2.9) Conduct employee training at least annually at active and temporarily inactive sites.

8.G.5.2 *Stormwater Controls.* Apart from the control measures you implement to meet your Part 2 effluent limits, consider implementing the following control measures at your site. The potential pollutants identified in Part 8.G.6.3 shall determine the priority and appropriateness of the control measures selected.

8.G.5.2.1 *Stormwater Diversions*: Consider diverting stormwater away from potential pollutant sources. Following are some options: interceptor or diversion controls (e.g., dikes, swales, curbs, or berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.

8.G.5.2.2 *Capping*: When capping is necessary to minimize pollutant discharges in stormwater, identify the source being capped and the material used to construct the cap.

8.G.5.2.3 *Treatment*: If treatment of stormwater (e.g., chemical or physical systems, oil and water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. Passive and/or active treatment of stormwater runoff is encouraged where practicable. Treated runoff may be discharged as a stormwater source regulated under this permit

provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).

8.G.5.3 *Certification of Discharge Testing.* (See also Part 5.1.3.4) Test or evaluate all outfalls covered under this permit for the presence of specific mining-related non-stormwater discharges such as seeps or adit discharges, or discharges subject to effluent limitations guidelines (e.g., 40 CFR Part 440), such as mine drainage or process water. Alternatively (if applicable), you may keep a certification with your SWPPP consistent with Part 8.G.6.6.

8.G.6 Additional SWPPP Requirements.

8.G.6.1 *Nature of Industrial Activities*. (See also Part 5.1.2) Briefly document in your SWPPP the mining and associated activities that can potentially affect the stormwater discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities**.**

8.G.6.2 *Site Map*. (See also Part 5.1.2) Document in your SWPPP the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each stormwater outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual NPDES permit, outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage (where water leaves mine) or other process water; tailings piles and ponds (including proposed ones); heap leach pads; off-site points of discharge for mine drainage and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.

8.G.6.3 *Potential Pollutant Sources.* (See also Part 5.1.3) For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, identify the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. Consider these factors: the mineralogy of the ore and waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with stormwater; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing ore or waste rock or overburden characterization data and test results for potential generation of acid rock. If any new data is acquired due to changes in ore type being mined, update your SWPPP with this information.

8.G.6.4 *Documentation of Control Measures.* Document all control measures that you implement consistent with Part 8.G.5.2. If control measures are implemented or planned but are not listed in Part 8.G.5.2 (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPPP.

8.G.6.5 *Employee Training.* All employee training(s) must be documented in the SWPPP.

8.G.6.6 *Certification of Permit Coverage for Commingled Non-Stormwater Discharges:* If you are able, consistent with Part 8.G.5.3 above, to certify that a particular discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and that permit subjects the non-stormwater portion to effluent limitations prior to any commingling, retain such certification with your SWPPP. This certification must identify the non-stormwater discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied.

8.G.7 Additional Inspection Requirements.

(See also Part 4.1 and 8.G.4.2.) Except for areas of the site subject to clearing, grading, and/or excavation activities conducted as part of the exploration and construction phase, which are subject to Part 8.G.4.2.1, inspect sites at least quarterly unless adverse weather conditions make the site inaccessible. Sites which discharge to waters designated as outstanding waters or waters which are impaired for sediment or nitrogen must be inspected monthly. See Part 8.G.8.4 for inspection requirements for inactive and unstaffed sites.

8.G.8 Monitoring and Reporting Requirements. (See also Part 6 of the permit.)

Note: There are no Part 8.G.8 monitoring and reporting requirements for inactive and unstaffed sites.

8.G.8.1 *Benchmark Monitoring for Active Copper Ore Mining and Dressing Facilities.* Active copper ore mining and dressing facilities, must sample and analyze stormwater discharges for the pollutants listed in Table 8.G-1.

Table 8.G-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector G1. Active Copper Ore Mining and Dressing Facilities (SIC 1021)	Total Suspended Solids (TSS)	100 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L

8.G.8.2 *Benchmark Monitoring Requirements for Discharges From Waste Rock and Overburden Piles at Active Metal Mining Facilities.* For discharges from waste rock and overburden piles, perform benchmark monitoring once in the first year for the parameters listed in Table 8.G-2, and twice annually in all subsequent years of coverage under this permit for any parameters for which the benchmark has been exceeded. You are also required to conduct analytic monitoring for the parameters listed in Table 8.G-3 in accordance with the requirements in Part 8.G.6.3. The Director may also notify you that you must perform additional monitoring to accurately characterize the quality and quantity of pollutants discharged from your waste rock and overburden piles.

Table 8.G-2.		
Subsector (Discharges may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Cutoff Concentration**
Subsector G2. Iron Ores; Copper Ores; Lead and Zinc Ores; Gold and Silver Ores; Ferroalloy Ores, Except Vanadium; and Miscellaneous Metal Ores (SIC Codes 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099) (Note: when analyzing hardness for a suite of metals, it is more cost effective to add analysis of calcium and magnesium, and have hardness calculated than to require hardness analysis separately)	Total Suspended Solids (TSS)	100 mg/L
	Turbidity	50 NTU
	pH	6.0-9.0 s.u.
	Hardness (as $CaCO_3$; calc. from Ca, Mg)[1]	no benchmark value
	Total Antimony	0.64 mg/L
	Total Arsenic	0.15 mg/ L
	Total Beryllium	0.13 mg/L
	Total Cadmium[1]	Hardness Dependent
	Total Copper[1]	Hardness Dependent
	Total Iron	1.0 mg/L
	Total Lead[1]	Hardness Dependent
	Total Mercury	0.0014 mg/L
	Total Nickel[1]	Hardness Dependent
	Total Selenium	0.005 mg/L
	Total Silver[1]	Hardness Dependent
	Total Zinc[1]	Hardness Dependent

[1] The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	**Cadmium** (mg/L)	**Copper** (mg/L)	**Lead** (mg/L)	**Nickel** (mg/L)	**Silver** (mg/L)	**Zinc** (mg/L)
0-25 mg/L	0.0005	0.0038	0.014	0.15	0.0007	0.04
25-50 mg/L	0.0008	0.0056	0.023	0.20	0.0007	0.05
50-75 mg/L	0.0013	0.0090	0.045	0.32	0.0017	0.08
75-100 mg/L	0.0018	0.0123	0.069	0.42	0.0030	0.11
100-125 mg/L	0.0023	0.0156	0.095	0.52	0.0046	0.13
125-150 mg/L	0.0029	0.0189	0.122	0.61	0.0065	0.16
150-175 mg/L	0.0034	0.0221	0.151	0.71	0.0087	0.18
175-200 mg/L	0.0039	0.0253	0.182	0.80	0.0112	0.20
200-225 mg/L	0.0045	0.0285	0.213	0.89	0.0138	0.23
225-250 mg/L	0.0050	0.0316	0.246	0.98	0.0168	0.25
250+ mg/L	0.0053	0.0332	0.262	1.02	0.0183	0.26

8.G.8.3 Additional Analytic Monitoring Requirements for Discharges From Waste Rock and Overburden Piles at Active Metal Mining Facilities. In addition to the monitoring required in Part 8.G.6.2 for discharges from waste rock and overburden piles, you must also conduct monitoring for additional parameters based on the type of ore you mine at your site. Where a parameter in Table 8.G-3 is the same as a pollutant you are required

to monitor for in Table 8.G-2 (i.e., for all of the metals, you must use the corresponding benchmark in Table 8.G-2 and you may use any monitoring results conducted for Part 8.G.6.2 to satisfy the monitoring requirement for that parameter for Part 8.G.6.3. For radium and uranium, which do not have corresponding benchmarks in Table 8.G-2, there are no applicable benchmarks.) The frequency and schedule for monitoring for these additional parameters is the same as that specified in Part 6.2.1.2.

Table 8.G-3. Additional Monitoring Requirements for Discharges from Waste Rock and Overburden Piles

Supplemental Requirements			
Type of Ore Mined	**Pollutants of Concern**		
	Total Suspended Solids (TSS)	**pH**	**Metals, Total**
Tungsten Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Nickel Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Aluminum Ore	X	X	Iron
Mercury Ore	X	X	Nickel (H)
Iron Ore	X	X	Iron (Dissolved)
Platinum Ore			Cadmium (H), Copper (H), Mercury, Lead (H), Zinc (H)
Titanium Ore	X	X	Iron, Nickel (H), Zinc (H)
Vanadium Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Molybdenum	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Mercury, Zinc (H)
Uranium, Radium, and Vanadium Ore	X	X	Chemical Oxygen Demand, Arsenic, Radium (Dissolved and Total), Uranium, Zinc (H)

Note: An "X" indicated for TSS and/or pH means that you are required to monitor for those parameters. (H) indicates that hardness must also be measured when this pollutant is measured.

8.G.8.4 Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirements for Quarterly Visual Assessments and Routine Facility Inspections. As a Sector G facility, if you are seeking to exercise a waiver from the quarterly visual assessment and routine facility inspection requirements for inactive and unstaffed sites (including temporarily inactive sites), you are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater" in Part 4.2.3. This exemption is conditioned on the following:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the quarterly visual assessment requirements; and
- EPA retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause,

or contributes to an instream excursion above an applicable water quality standard, including designated uses.

Subject to the two conditions above, if your facility is inactive and unstaffed, you are waived from the requirement to conduct quarterly visual assessments and routine facility inspections. You are not waived from conducting the Part 4.3 comprehensive site inspection. You are encouraged to inspect your site more frequently where you have reason to believe that severe weather or natural disasters may have damaged control measures or increased discharges.

Table 8.G-4. Applicability of the Multi-Sector General Permit to Stormwater Runoff From Active Mining and Dressing Sites, Temporarily Inactive Sites, and Sites Undergoing Reclamation

Discharge/Source of Discharge	Note/Comment
Piles	
Waste rock/overburden	If composed entirely of stormwater and not combining with mine drainage. See note below.
Topsoil	--
Roads constructed of waste rock or spent ore	
Onsite haul roads	If composed entirely of stormwater and not combining with mine drainage. See note below.
Offsite haul and access roads	--
Roads not constructed of waste rock or spent ore	
Onsite haul roads	Except if mine drainage is used for dust control
Offsite haul and access roads	--
Milling/concentrating	
Runoff from tailings dams and dikes when constructed of waste rock/tailings	Except if process fluids are present and only if composed entirely of stormwater and not combining with mine drainage. See Note below.
Runoff from tailings dams/dikes when not constructed of waste rock and tailings	Except if process fluids are present
Concentration building	If stormwater only and no contact with piles
Mill site	If stormwater only and no contact with piles
Ancillary areas	
Office and administrative building and housing	If mixed with stormwater from the industrial area
Chemical storage area	--
Docking facility	Except if excessive contact with waste product that would otherwise constitute mine drainage
Explosive storage	--
Fuel storage (oil tanks/coal piles)	--
Vehicle and equipment maintenance area/building	--
Parking areas	But coverage unnecessary if only employee and visitor-type parking
Power plant	
Truck wash area	Except when excessive contact with waste product that would otherwise constitute mine drainage

Table 8.G-4. Applicability of the Multi-Sector General Permit to Stormwater Runoff From Active Mining and Dressing Sites, Temporarily Inactive Sites, and Sites Undergoing Reclamation	
Reclamation-related areas	
Any disturbed area (unreclaimed)	Only if not in active mining area
Reclaimed areas released from reclamation requirements prior to Dec. 17, 1990	--
Partially/inadequately reclaimed areas or areas not released from reclamation requirements	--

Note: Stormwater runoff from these sources are subject to the NPDES program for stormwater unless mixed with discharges subject to 40 CFR Part 440 that are regulated by another permit prior to mixing. Non-stormwater discharges from these sources are subject to NPDES permitting and may be subject to the effluent limitation guidelines under 40 CFR Part 440. Discharges from overburden/waste rock and overburden/waste rock-related areas are not subject to 40 CFR Part 440 unless: (1) it drains naturally (or is intentionally diverted) to a point source; and (2) combines with "mine drainage" that is otherwise regulated under the Part 440 regulations. For such sources, coverage under this permit would be available if the discharge composed entirely of stormwater does not combine with other sources of mine drainage that are not subject to 40 CFR Part 440, as well as meeting other eligibility criteria contained in Part 1.1 of the permit. Permit applicants bear the initial responsibility for determining the applicable technology-based standard for such discharges. EPA recommends that permit applicants contact the relevant NPDES permit issuance authority for assistance to determine the nature and scope of the "active mining area" on a mine-by-mine basis, as well as to determine the appropriate permitting mechanism for authorizing such discharges.

8.G.9. Termination of Permit Coverage

8.G.9.1 *Termination of Permit Coverage for Sites Reclaimed After December 17, 1990.* A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part 8.G.7.2.

8.G.9.2 *Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990.* A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart H – Sector H – Coal Mines and Coal Mining-Related Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.H.1 Covered Stormwater Discharges.

The requirements in Subpart H apply to stormwater discharges associated with industrial activity from Coal Mines and Coal Mining-Related facilities as identified by the SIC Codes specified under Sector H in Table D-1 of Appendix D.

8.H.2 Limitations on Coverage.

8.H.2.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) Not covered by this permit: discharges from pollutant seeps or underground drainage from inactive coal mines and refuse disposal areas that do not result from precipitation events, and discharges from floor drains in maintenance buildings and other similar drains in mining and preparation plant areas.

8.H.2.2 *Discharges Subject to Stormwater Effluent Guidelines.* (See also Part 1.1.4.4) Not authorized by this permit: stormwater discharges subject to an existing effluent limitation guideline at 40 CFR Part 434.

8.H.3 Definitions

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

8.H.3.1 *Mining operation* - Consists of the active and temporarily inactive phases, and the reclamation phase, but excludes the exploration and construction phases.

8.H.3.2 *Exploration phase* - Entails exploration and land disturbance activities to determine the financial viability of a site. The exploration phase is not considered part of "mining operations."

8.H.3.3 *Construction phase* - Includes the building of site access roads and removal of overburden and waste rock to expose mineable coal. The construction phase is not considered part of "mining operations."

8.H.3.4 *Active phase* - Activities including the extraction, removal or recovery of coal. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 434.11(b). The active phase is considered part of "mining operations."

8.H.3.5 *Reclamation phase* - Activities undertaken, in compliance with applicable mined land reclamation requirements, following the cessation of the "active phase", intended to return the land to an appropriate post-mining land use. The reclamation phase is considered part of "mining operations."

8.H.3.6 *Active coal mining facility* - A place where work or other activity related to the extraction, removal, or recovery of coal is being conducted. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 434.11(b).

8.H.3.7 *Inactive coal mining facility* - A site or portion of a site where coal mining and/or milling occurred in the past but is not an active facility as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable State or Federal agency. An inactive coal mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an NPDES industrial stormwater permit.

8.H.3.8 *Temporarily inactive coal mining facility* - A site or portion of a site where coal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable State or Federal agency.

8.H.3.9 *Final Stabilization* - A site or portion of a site is "finally stabilized" when it has implemented all applicable Federal and State reclamation requirements.

8.H.4 Technology-Based Effluent Limits for Clearing, Grading, and Excavation Activities.

Clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of mining activities are covered under this permit.

8.H.4.1 Management Practices for Clearing, Grading, and Excavation Activities.

8.H.4.1.1 *Selecting and installing control measures.* For all areas affected by clearing, grading, and excavation activities, you must select, design, install, and implement control measures that meet applicable Part 2 effluent limits.

8.H.4.1.2 *Good Housekeeping.* Litter, debris, and chemicals must be prevented from becoming a pollutant source in stormwater discharges.

8.H.4.1.3 *Retention and Detention of Stormwater Runoff.* For drainage locations serving more than one acre, sediment basins and/or temporary sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and side slope boundaries as necessary based on individual site conditions) of the development area unless a sediment basin providing storage for a calculated volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage

per acre drained is provided. You are required to remove sediment from sediment traps or sedimentation ponds when design capacity has been reduced by 50 percent. Due to high sediment discharges from some Sector H facilities, permittees may need to implement a combination of structural BMP approaches to sufficiently decrease discharge of sediment from their facilities.

8.H.4.2 *Inspection of Clearing, Grading, and Excavation Activities.*

8.H.4.2.1 *Inspection Frequency.* Inspections must be conducted either at least once every 7 calendar days, or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized (pursuant to Part 8.H.4.3.2), if runoff is unlikely due to winter (e.g., site is covered with snow or ice) or frozen conditions, or construction is occurring during seasonal dry periods in arid areas and semi-arid areas.

8.H.4.2.2 *Location of Inspections.* Inspections must include all areas of the site disturbed by clearing, grading, and/or excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to waters of the United States, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of significant off-site sediment tracking.

8.H.4.2.3 *Inspection Reports.* For each inspection required above, you must complete an inspection report. At a minimum, the inspection report must include the information required in Part 4.1.

8.H.4.3 *Requirements for Cessation of Clearing, Grading, and Excavation Activities.*

8.H.4.3.1 *Inspections and Maintenance.* Inspections and maintenance of control measures, including BMPs, associated with clearing, grading, and/or excavation activities being conducted as part of the exploration and construction phase of a mining operation must continue until final stabilization has been achieved on all portions of the disturbed area.

8.H.4.3.2 *Temporary Stabilization of Disturbed Areas.* Stabilization measures should be initiated immediately in portions of the site where clearing, grading and/or excavation activities have temporarily ceased, but in no case more than 14 days after the clearing, grading and/or excavation activities in that portion of the site have temporarily ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable.

Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site, where exploration and/or construction has permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until such time as the active mining phase commences.

8.H.4.3.2 *Final Stabilization of Disturbed Areas.* Stabilization measures should be initiated immediately in portions of the site where exploration and/or construction activities have permanently ceased, but in no case more than 14 days after the exploration and/or construction activity in that portion of the site has permanently ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has permanently ceased, temporary vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers, must be used.

8.H.5 Additional Technology-Based Effluent Limits.

8.H.5.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2) As part of your good housekeeping program, consider using sweepers and covered storage, watering haul roads to minimize dust generation, and conserving vegetation (where possible) to minimize erosion.

8.H.5.2 *Preventive Maintenance.* (See also Part 2.1.2.3) Perform inspections or other equivalent measures of storage tanks and pressure lines of fuels, lubricants, hydraulic fluid, and slurry to prevent leaks due to deterioration or faulty connections.

8.H.6 Additional SWPPP Requirements.

8.H.6.1 *Other Applicable Regulations.* Most active coal mining-related areas (SIC Codes 1221-1241) are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the Surface Mining Control and Reclamation Act (SMCRA). OSM has granted authority to most coal-producing states to implement SMCRA through State SMCRA regulations. All SMCRA requirements regarding control of stormwater-related pollutant discharges must be addressed and then documented with the SWPPP (directly or by reference).

8.H.6.2 *Site Map.* (See also Part 5.1.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: haul and access roads; railroad spurs, sliding, and internal hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas; acidic spoil, refuse, or unreclaimed disturbed areas; and liquid storage tanks containing pollutants such as caustics, hydraulic fluids, and lubricants.

8.H.6.3 *Potential Pollutant Sources.* (See also Part 5.1.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them: truck traffic on haul roads and resulting generation of sediment subject to runoff and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid, or other potential harmful liquids; and loading or temporary storage of acidic refuse or spoil.

8.H.7 Additional Inspection Requirements.

8.H.7.1 *Inspections of Active Mining-Related Areas.* (See also Part 4) Except for areas of the site subject to clearing, grading, and/or excavation activities conducted as part of the exploration and construction phase, which are subject to Part 8.H.4.2.1, perform quarterly inspections of active mining areas covered by this permit, corresponding with the inspections as performed by SMCRA inspectors, of all mining-related areas required by SMCRA. Also maintain the records of the SMCRA authority representative. See Part 8.H.8.1 for inspection requirements for inactive and unstaffed sties.

8.H.7.2 *Sediment and Erosion Control.* (See also Part 2.1.2.5) As indicated in Part 8.H.6.1, SMCRA requirements regarding sediment and erosion control measures must be complied with for those areas subject to SMCRA authority, including inspection requirements.

8.H.7.3 *Comprehensive Site Inspections.* (See also Part 4.3) Your inspection program must include inspections for pollutants entering the drainage system from activities located on or near coal mining-related areas. Among the areas to be inspected are haul and access roads; railroad spurs, sliding, and internal hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas.

8.H.8 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.H-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector H1. Coal Mines and Related Areas (SIC 1221-1241)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Suspended Solids (TSS)	100 mg/L

8.H.8.1 *Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirement for Routine Inspections, Quarterly Visual Assessments, and Benchmark Monitoring.* As a Sector H facility, if you are seeking to exercise a waiver from either the quarterly visual assessment or the benchmark monitoring requirements for inactive and unstaffed sites (including temporarily inactive sites), you are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to

stormwater" in Parts 4.2.3 and 6.2.1.3, respectively. Additionally, if you are seeking to reduce your required quarterly routine inspection frequency to a once annual comprehensive inspection, as is allowed under Part 4.1.3, you are also conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater." These conditional exemptions are based on the following requirements:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable benchmark monitoring requirements as if you were in your first year of permit coverage, and the quarterly visual assessment requirements; and
- EPA retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause or contribute to an instream excursion above an applicable water quality standard, including designated uses.

Subject to the two conditions above, if your facility is inactive and unstaffed, you are waived from the requirement to conduct quarterly visual assessments and routine facility inspections. You are not waived from conducting the Part 4.3 comprehensive site inspection. You are encouraged to inspect your site more frequently where you have reason to believe that severe weather or natural disasters may have damaged control measures or increased discharges.

8.H.9 Termination of Permit Coverage

8.H.9.1 *Termination of Permit Coverage for Sites Reclaimed After December 17, 1990.* A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part 8.H.7.2.

8.H.9.2 *Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990.* A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart I – Sector I – Oil and Gas Extraction.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.I.1 Covered Stormwater Discharges.

The requirements in Subpart I apply to stormwater discharges associated with industrial activity from Oil and Gas Extraction facilities as identified by the SIC Codes specified under Sector I in Table D-1 of Appendix D of the permit.

Discharges of stormwater runoff from field activities or operations associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities are exempt from NPDES permit coverage unless, in accordance with 40 CFR 122.26(c)(1)(iii), the facility:

- Has had a discharge of stormwater resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987; or
- Has had a discharge of stormwater resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or
- Contributes to a violation of a water quality standard.

Any stormwater discharges that require permit coverage as a result of meeting one of the conditions of 122.26(c)(1)(iii) may be covered under this permit unless otherwise required to obtain coverage under an alternative NPDES general permit or an individual NPDES permit as specified in Part 1.6.1.

8.I.2 Limitations on Coverage.

8.I.2.1 *Stormwater Discharges Subject to Effluent Limitation Guidelines.* (See also Part 1.1.4.4) This permit does not authorize stormwater discharges from petroleum drilling operations that are subject to nationally established effluent limitation guidelines found at 40 CFR Part 435, respectively.

8.I.2.2 *Non-Stormwater Discharges.* Discharges of vehicle and equipment washwater, including tank cleaning operations, are not authorized by this permit. Alternatively, washwater discharges must be authorized under a separate NPDES permit, or be discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements.

8.I.3 Additional Technology-Based Effluent Limits.

8.I.3.1 *Vegetative Controls.* Implement vegetative practices designed to preserve existing vegetation, where attainable, and revegetate open areas as soon as practicable after grade drilling. Consider the following (or equivalent measures): temporary or permanent seeding, mulching, sod stabilization, vegetative buffer strips, and tree protection practices. Begin implementing appropriate vegetative practices on all disturbed areas within 14 days following the last activity in that area.

8.I.4 Additional SWPPP Requirements.

8.I.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: Reportable Quantity (RQ) releases; locations used for the treatment, storage, or disposal of wastes; processing areas and storage areas; chemical mixing areas; construction and drilling areas; all areas subject to the effluent guidelines requirements for "No Discharge" in accordance with 40 CFR 435.32; and the structural controls to achieve compliance with the "No Discharge" requirements.

8.I.4.2 *Potential Pollutant Sources.* (See also Part 5.1.3) Also document in your SWPPP the following sources and activities that have potential pollutants associated with them: chemical, cement, mud, or gel mixing activities; drilling or mining activities; and equipment cleaning and rehabilitation activities. In addition, include information about the reportable quantity (RQ) release that triggered the permit application requirements: the nature of the release (e.g., spill of oil from a drum storage area), amount of oil or hazardous substance released, amount of substance recovered, date of the release, cause of the release (e.g., poor handling techniques and lack of containment in the area), areas affected by the release (i.e., land and water), procedure to clean up release, actions or procedures implemented to prevent or improve response to a release, and remaining potential contamination of stormwater from release (taking into account human health risks, the control of drinking water intakes, and the designated uses of the receiving water).

8.I.4.3 *Erosion and Sedimentation Control.* (See also Part 2.1.2.5) Unless covered by the current Construction General Permit (CGP), the additional documentation requirements for sediment and erosion controls for well drillings and sand/shale mining areas include the following:

8.I.4.3.1 *Site Description.* Also include a description in your SWPPP of the nature of the exploration activity, estimates of the total area of site and area disturbed due to exploration activity, an estimate of runoff coefficient of the site, a site drainage map, including approximate slopes, and the names of all receiving waters.

8.I.4.3.2 *Vegetative Controls.* Document vegetative practices used consistent with Part 8.I.3.1 in the SWPPP.

8.I.5 Additional Inspection Requirements.

All erosion and sedimentation control measures must be inspected every 7 days.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart J – Sector J – Non-Metallic Mineral Mining and Dressing.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.J.1 Covered Stormwater Discharges.

The requirements in Subpart J apply to stormwater discharges associated with industrial activity from Active and Inactive Non-Metallic Mineral Mining and Dressing facilities as identified by the SIC Codes specified under Sector J in Table D-1 of Appendix D of the permit.

8.J.1.1 *Covered Discharges from Inactive Facilities.* All stormwater discharges.

8.J.1.2 *Covered Discharges from Active and Temporarily Inactive Facilities.* All stormwater discharges, except for most stormwater discharges subject to the existing effluent limitation guideline at 40 CFR Part 436. Mine dewatering discharges composed entirely of stormwater or uncontaminated ground water seepage from: construction sand and gravel, industrial sand, and crushed stone mining facilities in Regions 1, 2, 3, 6, 9, and 10 are covered by this permit.

8.J.1.3 *Covered Discharges from Exploration and Construction of Non-Metallic Mineral Mining Facilities.* All stormwater discharges.

8.J.1.4 Covered Discharges from Sites Undergoing Reclamation. All stormwater discharges.

8.J.2 Limitations on Coverage.

Most stormwater discharges subject to an existing effluent limitation guideline at 40 CFR Part 436 are not authorized by this permit. The exceptions to this limitation, which are covered by this permit, are mine dewatering discharges composed entirely of stormwater or uncontaminated ground water seepage from construction sand and gravel, industrial sand, and crushed stone mining facilities in Regions 1, 2, 3, 6, 9, and 10.

8.J.3 Definitions.

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

8.J.3.1 *Mining operations* - Consists of the active and temporarily inactive phases, and the reclamation phase, but excludes the exploration and construction phases.

8.J.3.2 *Exploration phase* - Entails exploration and land disturbance activities to determine the financial viability of a site. The exploration phase is not considered part of "mining operations."

8.J.3.3 *Construction phase* - Includes the building of site access roads and removal of overburden and waste rock to expose mineable minerals. The construction phase is not considered part of "mining operations".

8.J.3.4 *Active phase* - Activities including the extraction, removal or recovery of minerals. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 440.132(a). The active phase is considered part of "mining operations."

8.J.3.5 *Reclamation phase* - Activities undertaken, in compliance with applicable mined land reclamation requirements, following the cessation of the "active phase", intended to return the land to an appropriate post-mining land use. The reclamation phase is considered part of "mining operations".

NOTE: The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

8.J.3.6 *Active Mineral Mining Facility* - A place where work or other activity related to the extraction, removal, or recovery of minerals is being conducted. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 440.132(a).

8.J.3.7 *Inactive Mineral Mining Facility* - A site or portion of a site where mineral mining and/or milling occurred in the past but is not an active facility as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable State or Federal agency. An inactive mineral mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an NPDES industrial stormwater permit.

8.J.3.8 *Temporarily Inactive Mineral Mining Facility* - A site or portion of a site where metal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable State or Federal agency.

8.J.3.9 *Final Stabilization* - a site or portion of a site is "finally stabilized" when it has implemented all applicable Federal and State reclamation requirements.

8.J.3.10 *Uncontaminated* - Free from the presence of pollutants attributable to industrial activity.

8.J.4 Technology-Based Effluent Limits for Clearing, Grading, and Excavation Activities.

Clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of mining activities are covered under this permit.

8.J.4.1 *Management Practices for Clearing, Grading, and Excavation Activities.*

8.J.4.1.1 *Selecting and installing control measures.* For all areas affected by clearing, grading, and excavation activities, you must select, design, install, and implement control measures that meet applicable Part 2 effluent limits.

8.J.4.1.2 *Good Housekeeping.* (See also Part 2.1.2.2) Litter, debris, and chemicals must be prevented from becoming a pollutant source in stormwater discharges.

8.J.4.1.3 *Retention and Detention of Stormwater Runoff.* For drainage locations serving more than one acre, sediment basins and/or temporary sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the development area unless a sediment basin providing storage for a calculated volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided.

8.J.4.2 *Inspection of Clearing, Grading, and Excavation Activities.* (See also Part 4)

8.J.4.2.1 *Inspection Frequency.* Inspections must be conducted either at least once every 7 calendar days or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized (pursuant to Part 8.J.4.3.2), if runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), or construction is occurring during seasonal arid periods in arid areas and semi-arid areas.

8.J.4.2.2 *Location of Inspections.* Inspections must include all areas of the site disturbed by clearing, grading, and/or excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures implemented must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to waters of the United States, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of significant off-site sediment tracking.

8.J.4.2.3 *Inspection Reports.* (See also Part 4.1) For each inspection required above, you must complete an inspection report. At a minimum, the inspection report must include the information required in Part 4.1.

8.J.4.3 *Requirements for Cessation of Clearing, Grading, and Excavation Activities.*

8.J.4.3.1 *Inspections and Maintenance.* Inspections and maintenance of control measures, including any BMPs, associated with clearing, grading, and/or excavation activities being conducted as part of the exploration and construction phase of a mining operation must continue until final stabilization has been achieved on all portions of the disturbed area or until the

commencement of the active mining phase for those areas that have been temporarily stabilized as a precursor to mining

8.J.4.3.2 *Temporary Stabilization of Disturbed Areas.* Stabilization measures should be initiated immediately in portions of the site where clearing, grading and/or excavation activities have temporarily ceased, but in no case more than 14 days after the clearing, grading and/or excavation activities in that portion of the site have temporarily ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site, where exploration and/or construction has permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until such time as the active mining phase commences.

8.J.4.3.3 *Final Stabilization of Disturbed Areas.* Stabilization measures should be initiated immediately in portions of the site where mining, exploration, and/or construction activities have permanently ceased, but in no case more than 14 days after the exploration and/or construction activity in that portion of the site has permanently ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers must be used.

8.J.5 Additional Technology-Based Effluent Limits.

8.J.5.1 *Employee Training.* Conduct employee training at least annually at active and temporarily inactive sites. (See also Part 2.1.2.9)

8.J.5.2 *Stormwater Controls.* Apart from the control measures you implement to meet your Part 2 effluent limits, where necessary to minimize pollutant discharges, implement the following control measures at your site. The potential pollutants identified in Part 8.J.5.3 shall determine the priority and appropriateness of the control measures selected.

8.J.5.2.1 *Stormwater Diversions:* Consider diverting stormwater away from potential pollutant sources. Following are some control measure options: interceptor or diversion controls (e.g., dikes, swales, curbs, or berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.

8.J.5.2.2 *Capping:* When capping is necessary to minimize pollutant discharges in stormwater, identify the source being capped and the material used to construct the cap.

8.J.5.2.3 *Treatment:* If treatment of stormwater (e.g., chemical or physical systems, oil and water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. Passive and/or active treatment of stormwater runoff is encouraged. Treated runoff may be discharged as a stormwater source regulated under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Mineral Mining and Processing Point Source Category (40 CFR Part 436).

8.J.5.3 *Certification of Discharge Testing:* (See also Part 5.1.4.4) Test or evaluate all outfalls covered under this permit for the presence of specific mining-related non-stormwater discharges such as discharges subject to effluent limitations guidelines (e.g., 40 CFR Part 436). Alternatively (if applicable), you may keep a certification with your SWPPP.

8.J.6 Additional SWPPP Requirements.

The requirements in Part 8.J.6 are applicable for sites undergoing exploration and construction, active mineral mining facilities, temporarily inactive mineral mining facilities, and sites undergoing reclamation. The requirements in Part 8.J.6 are not applicable to inactive mineral mining facilities.

8.J.6.1 *Nature of Industrial Activities.* (See also Part 5.1.2) Document in your SWPPP the mining and associated activities that can potentially affect the stormwater discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities**.**

8.J.6.2 *Site Map.* (See also Part 5.1.2) Document in your SWPPP the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each stormwater outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual NPDES permit, outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage dewatering or other process water; heap leach pads; off-site points of discharge for mine dewatering and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.

8.J.6.3 *Potential Pollutant Sources.* (See also Part 5.1.3) For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, document in your SWPPP the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. For example, phosphate mining facilities will likely need to document pollutants such as selenium, which can be present in significant amounts in their discharges. Consider these factors: the mineralogy of the waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the

likelihood of contact with stormwater; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing waste rock or overburden characterization data and test results for potential generation of acid rock drainage.

8.J.6.4 *Stormwater Controls.* To the extent that you use any of the control measures in Part 8.J.5.2, document them in your SWPPP pursuant to Part 5.1.4. If control measures are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPPP.

8.J.6.4 *Employee Training.* All employee training(s) conducted in accordance with Part 8.J.5.1 must be documented with the SWPPP.

8.J.6.5 *Certification of Permit Coverage for Commingled Non-Stormwater Discharges.* If you determine that you are able to certify, consistent with Part 8.J.5.3, that a particular discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and that permit subjects the non-stormwater portion to effluent limitations prior to any commingling, you must retain such certification with your SWPPP. This certification must identify the non-stormwater discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied.

8.J.7 Additional Inspection Requirements.

Except for areas of the site subject to clearing, grading, and/or excavation activities conducted as part of the exploration and construction phase, which are subject to Part 8.J.4.2.1, you must inspect sites at least quarterly unless adverse weather conditions make the site inaccessible. Sites which discharge to waters which are designated as outstanding waters or waters which are impaired for sediment or nitrogen must be inspected monthly. See Part 8.J.8.1 for inspection requirements for inactive and unstaffed sites. (See also Part 4.1 and 8.J.4.2.)

8.J.8 Sector-Specific Benchmarks

Table 8.J-1 identifies benchmarks that apply to the specific subsectors of Sector J. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table 8.J-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector J1. Sand and Gravel Mining (SIC 1442, 1446)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Suspended Solids (TSS)	100 mg/L
Subsector J2. Dimension and Crushed Stone and Nonmetallic Minerals (except fuels) (SIC 1411, 1422-1429, 1481, 1499)	Total Suspended Solids (TSS)	100 mg/L

8.J.8.1 *Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirement for Routine Inspections, Quarterly Visual Assessments, and Benchmark Monitoring.* As a Sector J facility, if you are seeking to exercise a waiver from either the routine inspection, quarterly visual assessment or the benchmark monitoring requirements for inactive and unstaffed sites (including temporarily inactive sites), you are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater" in Parts 4.2.3 and 6.2.1.3, respectively. This exemption is conditioned on the following:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the applicable benchmark monitoring requirements as if you were in your first year of permit coverage, and the quarterly visual assessment requirements; and
- EPA retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.

Subject to the two conditions above, if your facility is inactive and unstaffed, you are waived from the requirement to conduct quarterly visual assessments and routine facility inspections. You are not waived from conducting the Part 4.3 comprehensive site inspection. You are encouraged to inspect your site more frequently where you have reason to believe that severe weather or natural disasters may have damaged control measures or increased discharges.

8.J.9 Effluent Limitations Based on Effluent Limitations Guidelines (See also Part 6.2.2.1 of the permit)

Table 8.J-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table 8.J-2

Industrial Activity	Parameter	Effluent Limit[1]
Mine dewatering discharges at crushed stone mining facilities (SIC 1422 - 1429)	pH	6.0 - 9.0
Mine dewatering discharges at construction sand and gravel mining facilities (SIC 1442)	pH	6.0 - 9.0
Mine dewatering discharges at industrial sand mining facilities (SIC 1446)	Total Suspended Solids (TSS)	25 mg/L, monthly avg.
		45 mg/L, daily maximum
	pH	6.0 - 9.0

[1]Monitor annually.

8.J.10 Termination of Permit Coverage

8.J.10.1 *Termination of Permit Coverage for Sites Reclaimed After December 17, 1990.* A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part 8.J.7.2.

8.J.10.2 *Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990.* A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart K – Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.K.1 Covered Stormwater Discharges.

The requirements in Subpart K apply to stormwater discharges associated with industrial activity from Hazardous Waste Treatment, Storage, or Disposal facilities (TSDFs) as identified by the Activity Code specified under Sector K in Table D-1 of Appendix D of the permit.

8.K.2 Industrial Activities Covered by Sector K.

This permit authorizes stormwater discharges associated with industrial activity from facilities that treat, store, or dispose of hazardous wastes, including those that are operating under interim status or a permit under subtitle C of RCRA.

Disposal facilities that have been properly closed and capped, and have no significant materials exposed to stormwater, are considered inactive and do not require permits.

8.K.3 Limitations on Coverage.

8.K.3.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) The following are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory-derived wastewater, and contact washwater from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

8.K.3.2 *Limitations on Coverage for Facilities Providing Commercial TSDF Services.* For facilities located in Region 6 (see Appendix C) coverage is limited to hazardous waste TSDFs that are self-generating (including occasionally accepting wastes from community household hazardous waste collection events as public service), handle only residential wastes, and/or only store hazardous wastes and do not treat or dispose of them. Coverage under this permit is not available to commercial waste disposal and treatment facilities located in Region 6 that dispose and treat on a commercial basis any produced hazardous wastes (i.e., not their own) as a service to commercial or industrial generators.

8.K.4 Definitions.

8.K.4.1 *Contaminated stormwater* - stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in Part 8.K.4.5. Some specific areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

8.K.4.2 *Drained free liquids* - aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

8.K.4.3 *Landfill* - an area of land or an excavation in which wastes are placed for permanent disposal, but that is not a land application or land treatment unit, surface impoundment, underground injection well, waste pile, salt dome formation, salt bed formation, underground mine, or cave as these terms are defined in 40 CFR 257.2, 258.2, and 260.10.

8.K.4.4 *Landfill wastewater* - as defined in 40 CFR Part 445 (Landfills Point Source Category), all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated groundwater, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated stormwater, and contact washwater from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

8.K.4.5 *Leachate* - liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

8.K.4.6 *Non-contaminated stormwater* - stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in Part 8.K.4.4. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

8.K.5 Sector-Specific Benchmarks

Table 8.K-1 identifies benchmarks that apply to the specific subsectors of Sector K. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table 8.K-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector K1. ALL - Industrial Activity Code "HZ" (Note: permit coverage limited in some States). Benchmarks only applicable to discharges not subject to effluent limitations in 40 CFR Part 445 Subpart A (see below).	Ammonia	2.14 mg/L
	Total Magnesium	0.064 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Total Arsenic	0.15 mg/L
	Total Cadmium[1]	Hardness Dependent
	Total Cyanide	0.022 mg/ L
	Total Lead[1]	Hardness Dependent
	Total Mercury	0.0014 mg/ L
	Total Selenium	0.005 mg/L
	Total Silver[1]	Hardness Dependent

[1] The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	**Cadmium** (mg/L)	**Lead** (mg/L)	**Silver** (mg/L)
0-25 mg/L	0.0005	0.014	0.0007
25-50 mg/L	0.0008	0.023	0.0007
50-75 mg/L	0.0013	0.045	0.0017
75-100 mg/L	0.0018	0.069	0.0030
100-125 mg/L	0.0023	0.095	0.0046
125-150 mg/L	0.0029	0.122	0.0065
150-175 mg/L	0.0034	0.151	0.0087
175-200 mg/L	0.0039	0.182	0.0112
200-225 mg/L	0.0045	0.213	0.0138
225-250 mg/L	0.0050	0.246	0.0168
250+ mg/L	0.0053	0.262	0.0183

8.K.6 Effluent Limitations Based on Effluent Limitations Guidelines (See also Part 6.2.2.1 of the permit.)

Table 8.K-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table 8.K-2[1]		
Industrial Activity	**Parameter**	**Effluent Limit**
Discharges from hazardous waste landfills subject to effluent limitations in 40 CFR Part 445 Subpart A (see footnote).	Biochemical Oxygen Demand (BOD_5)	220 mg/L, daily maximum
		56 mg/L, monthly avg. maximum
	Total Suspended Solids (TSS)	88 mg/L, daily maximum
		27 mg/L, monthly avg. maximum
	Ammonia	10 mg/L, daily maximum
		4.9 mg/L, monthly avg. maximum
	Alpha Terpineol	0.042 mg/L, daily maximum
		0.019 mg/L, monthly avg. maximum
	Aniline	0.024 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Benzoic Acid	0.119 mg/L, daily maximum
		0.073 mg/L, monthly avg. maximum
	Naphthalene	0.059 mg/L, daily maximum
		0.022 mg/L, monthly avg. maximum
	p-Cresol	0.024 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Phenol	0.048 mg/L, daily maximum
		0.029 mg/L, monthly avg. maximum
	Pyridine	0.072 mg/L, daily maximum
		0.025 mg/L, monthly avg. maximum
	Total Arsenic	1.1 mg/L, daily maximum
		0.54 mg/L, monthly avg. maximum
	Total Chromium	1.1 mg/L, daily maximum
		0.46 mg/L, monthly avg. maximum
	Total Zinc	0.535 mg/L, daily maximum
		0.296 mg/L, monthly avg. maximum
	pH	Within the range of 6-9 standard pH units (s.u.)

[1] Monitor annually. As set forth at 40 CFR Part 445 Subpart A, these numeric limitations apply to contaminated stormwater discharges from hazardous waste landfills subject to the provisions of RCRA Subtitle C at 40 CFR Parts 264 (Subpart N) and 265 (Subpart N) except for any of the following facilities:

(a) landfills operated in conjunction with other industrial or commercial operations when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;

(b) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;

(c) landfills operated in conjunction with Centralized Waste Treatment (CWT) facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

(d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart L – Sector L – Landfills, Land Application Sites, and Open Dumps.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.L.1 Covered Stormwater Discharges.

The requirements in Subpart L apply to stormwater discharges associated with industrial activity from Landfills and Land Application Sites and Open Dumps as identified by the Activity Code specified under Sector L in Table D-1 of Appendix D of the permit.

8.L.2 Industrial Activities Covered by Sector L.

This permit may authorize stormwater discharges for Sector L facilities associated with waste disposal at landfills, land application sites, and open dumps that receive or have received industrial waste, including sites subject to regulation under Subtitle D of RCRA. This permit does not cover discharges from landfills that receive only municipal wastes.

8.L.3 Limitations on Coverage.

8.L.3.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) The following discharges are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory wastewater, and contact washwater from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

8.L.4 Definitions.

8.L.4.1 *Contaminated stormwater* - stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Some areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

8.L.4.2 *Drained free liquids* - aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

8.L.4.3 *Landfill wastewater* - as defined in 40 CFR Part 445 (Landfills Point Source Category) all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated groundwater, and wastewater from recovery pumping wells. Landfill process wastewater includes, but is not limited to, leachate; gas collection condensate; drained free liquids; laboratory-derived wastewater; contaminated stormwater; and contact washwater from washing truck,

equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

8.L.4.4 *Leachate* - liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

8.L.4.5 *Non-contaminated stormwater* - stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

8.L.5 Additional Technology-Based Effluent Limits.

8.L.5.1 *Preventive Maintenance Program.* (See also Part 2.1.2.3) As part of your preventive maintenance program, maintain the following: all elements of leachate collection and treatment systems, to prevent commingling of leachate with stormwater; the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary), to minimize the effects of settlement, sinking, and erosion.

8.L.5.2 *Erosion and Sedimentation Control.* (See also Part 2.1.2.5) Provide temporary stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles) for the following: materials stockpiled for daily, intermediate, and final cover; inactive areas of the landfill or open dump; landfills or open dump areas that have gotten final covers but where vegetation has yet to establish itself; and land application sites where waste application has been completed but final vegetation has not yet been established.

8.L.5.3 *Unauthorized Discharge Test Certification.* (See also Part 5.1.3.4) The discharge test and certification must also be conducted for the presence of leachate and vehicle washwater.

8.L.6 Additional SWPPP Requirements.

8.L.5.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: active and closed landfill cells or trenches, active and closed land application areas, locations where open dumping is occurring or has occurred, locations of any known leachate springs or other areas where uncontrolled leachate may commingle with runoff, and leachate collection and handling systems.

8.L.5.2 *Summary of Potential Pollutant Sources.* (See also Part 5.1.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them: fertilizer, herbicide, and pesticide application; earth and soil moving; waste hauling and loading or unloading; outdoor storage of significant materials, including daily, interim, and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.

8.L.7 Additional Inspection Requirements. (See also Part 4)

8.L.7.1 *Inspections of Active Sites.* Except in arid and semi-arid climates, inspect operating landfills, open dumps, and land application sites at least once every 7 days. Focus on areas of landfills that have not yet been finally stabilized; active land application areas, areas used for storage of material and wastes that are exposed to precipitation, stabilization, and structural control measures; leachate collection and treatment systems; and locations where equipment and waste trucks enter and exit the site. Ensure that sediment and erosion control measures are operating properly. For stabilized sites and areas where land application has been completed, or where the climate is arid or semi-arid, conduct inspections at least once every month.

8.L.7.2 *Inspections of Inactive Sites.* Inspect inactive landfills, open dumps, and land application sites at least quarterly. Qualified personnel must inspect landfill (or open dump) stabilization and structural erosion control measures, leachate collection and treatment systems, and all closed land application areas.

8.L.8 Additional Post-Authorization Documentation Requirements.

8.L.8.1 *Recordkeeping and Internal Reporting.* Keep records with your SWPPP of the types of wastes disposed of in each cell or trench of a landfill or open dump. For land application sites, track the types and quantities of wastes applied in specific areas.

8.L.9 Sector-Specific Benchmarks

Table 8.L-1 identifies benchmarks that apply to the specific subsectors of Sector L. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table 8.L-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration[1]
Subsector L1. All Landfill, Land Application Sites and Open Dumps (Industrial Activity Code "LF")	Total Suspended Solids (TSS)	100 mg/L
Subsector L2. All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60 (Industrial Activity Code "LF")	Total Iron	1.0 mg/L

[1]Benchmark monitoring required only for discharges not subject to effluent limitations in 40 CFR Part 445 Subpart B (see Table L-2 above).

8.L.10. Effluent Limitations Based on Effluent Limitations Guidelines (See also Part 6.2.2.1 of the permit.)

Table 8.L-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table 8.L-2[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from non-hazardous waste landfills subject to effluent limitations in 40 CFR Part 445 Subpart B.	Biochemical Oxygen Demand (BOD_5)	140 mg/L, daily maximum
		37 mg/L, monthly avg. maximum
	Total Suspended Solids (TSS)	88 mg/L, daily maximum
		27 mg/L, monthly avg. maximum
	Ammonia	10 mg/L, daily maximum
		4.9 mg/L, monthly avg. maximum
	Alpha Terpineol	0.033 mg/L, daily maximum
		0.016 mg/L monthly avg. maximum
	Benzoic Acid	0.12 mg/L, daily maximum
		0.071 mg/L, monthly avg. maximum
	p-Cresol	0.025 mg/L, daily maximum
		0.014 mg/L, monthly avg. maximum
	Phenol	0.026 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Total Zinc	0.20 mg/L, daily maximum
		0.11 mg/L, monthly avg. maximum
	pH	Within the range of 6-9 standard pH units (s.u.)

[1] Monitor annually. As set forth at 40 CFR Part 445 Subpart B, these numeric limitations apply to contaminated stormwater discharges from MSWLFs that have not been closed in accordance with 40 CFR 258.60, and to contaminated stormwater discharges from those landfills that are subject to the provisions of 40 CFR Part 257 except for discharges from any of the following facilities:

(a) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;

(b) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation, or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;

(c) landfills operated in conjunction with CWT facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

(d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart M – Sector M – Automobile Salvage Yards.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.M.1 Covered Stormwater Discharges.

The requirements in Subpart M apply to stormwater discharges associated with industrial activity from Automobile Salvage Yards as identified by the SIC Code specified under Sector M in Table D-1 of Appendix D of this permit.

8.M.2 Additional Technology-Based Effluent Limits.

8.M.2.1 *Spill and Leak Prevention Procedures.* (See also Part 2.1.2.4) Drain vehicles intended to be dismantled of all fluids upon arrival at the site (or as soon thereafter as feasible), or employ some other equivalent means to prevent spills and leaks.

8.M.2.2 *Employee Training.* (See also Part 2.1.2.9) If applicable to your facility, address the following areas (at a minimum) in your employee training program: proper handling (collection, storage, and disposal) of oil, used mineral spirits, anti-freeze, mercury switches, and solvents.

8.M.2.3 *Management of Runoff.* (See also Part 2.1.2.6) Consider the following management practices: berms or drainage ditches on the property line (to help prevent run-on from neighboring properties); berms for uncovered outdoor storage of oily parts, engine blocks, and above-ground liquid storage; installation of detention ponds; and installation of filtering devices and oil and water separators.

8.M.3 Additional SWPPP Requirements.

8.M.3.1 *Drainage Area Site Map.* (See also Part 5.1.2) Identify locations used for dismantling, storage, and maintenance of used motor vehicle parts. Also identify where any of the following may be exposed to precipitation or surface runoff: dismantling areas, parts (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers) storage areas, and liquid storage tanks and drums for fuel and other fluids.

8.M.3.2 *Potential Pollutant Sources.* (See also Part 5.1.3) Assess the potential for the following to contribute pollutants to stormwater discharges: vehicle storage areas, dismantling areas, parts storage areas (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers), and fueling stations.

8.M.4 Additional Inspection Requirements. (See also Part 4.1) Immediately (or as soon thereafter as feasible) inspect vehicles arriving at the site for leaks. Inspect quarterly for signs of leakage all equipment containing oily parts, hydraulic fluids, any other types of fluids, or mercury switches. Also, inspect quarterly for signs of leakage all vessels and

areas where hazardous materials and general automotive fluids are stored, including, but not limited to, mercury switches, brake fluid, transmission fluid, radiator water, and antifreeze.

8.M.5 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.M-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector M1. Automobile Salvage Yards (SIC 5015)	Total Suspended Solids (TSS)	100 mg/L
	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Lead[1]	Hardness Dependent

[1] The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	**Lead** (mg/L)
0-25 mg/L	0.014
25-50 mg/L	0.023
50-75 mg/L	0.045
75-100 mg/L	0.069
100-125 mg/L	0.095
125-150 mg/L	0.122
150-175 mg/L	0.151
175-200 mg/L	0.182
200-225 mg/L	0.213
225-250 mg/L	0.246
250+ mg/L	0.262

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart N – Sector N – Scrap Recycling and Waste Recycling Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.N.1 Covered Stormwater Discharges.

The requirements in Subpart N apply to stormwater discharges associated with industrial activity from Scrap Recycling and Waste Recycling facilities as identified by the SIC Code specified under Sector N in Table D-1 of Appendix D of the permit.

8.N.2 Limitation on Coverage.

Separate permit requirements have been established for recycling facilities that only receive source-separated recyclable materials primarily from non-industrial and residential sources (i.e., common consumer products including paper, newspaper, glass, cardboard, plastic containers, and aluminum and tin cans). This includes recycling facilities commonly referred to as material recovery facilities (MRF).

8.N.2.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) Non-stormwater discharges from turnings containment areas are not covered by this permit (see also Part 8.N.3.2.3). Discharges from containment areas in the absence of a storm event are prohibited unless covered by a separate NPDES permit.

8.N.3 Additional Technology-Based Effluent Limits.

8.N.3.1 *Scrap and Waste Recycling Facilities (Non-Source Separated, Nonliquid Recyclable Materials).* Requirements for facilities that receive, process, and do wholesale distribution of nonliquid recyclable wastes (e.g., ferrous and nonferrous metals, plastics, glass, cardboard, and paper). These facilities may receive both nonrecyclable and recyclable materials. This section is not intended for those facilities that accept recyclables only from primarily non-industrial and residential sources.

8.N.3.1.1 *Inbound Recyclable and Waste Material Control Program.* Minimize the chance of accepting materials that could be significant sources of pollutants by conducting inspections of inbound recyclables and waste materials. Following are some control measure options: (a) provide information and education to suppliers of scrap and recyclable waste materials on draining and properly disposing of residual fluids (e.g., from vehicles and equipment engines, radiators and transmissions, oil filled transformers, and individual containers or drums) and removal of mercury switches from vehicles before delivery to your facility; (b) establish procedures to minimize the potential of any residual fluids from coming into contact with precipitation or runoff; (c) establish procedures for accepting scrap lead-acid batteries (additional requirements for

the handling, storage, and disposal or recycling of batteries are contained in the scrap lead-acid battery program provisions in Part 8.N.3.2.6); (d) provide training targeted for those personnel engaged in the inspection and acceptance of inbound recyclable materials; and (e) establish procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and non-leaking containers and are disposed of or recycled in accordance with the Resource Conservation and Recovery Act (RCRA).

8.N.3.1.2 *Scrap and Waste Material Stockpiles and Storage (Outdoor).* Minimize contact of stormwater runoff with stockpiled materials, processed materials, and nonrecyclable wastes. Following are some control measure options: (a) permanent or semi-permanent covers; (b) sediment traps, vegetated swales and strips, catch basin filters, and sand filters to facilitate settling or filtering of pollutants; (c) dikes, berms, containment trenches, culverts, and surface grading to divert runoff from storage areas; (d) silt fencing; and (e) oil and water separators, sumps, and dry absorbents for areas where potential sources of residual fluids are stockpiled (e.g., automobile engine storage areas).

8.N.3.1.3 *Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage).* Minimize contact of surface runoff with residual cutting fluids by: (a) storing all turnings exposed to cutting fluids under some form of permanent or semi-permanent cover, or (b) establishing dedicated containment areas for all turnings that have been exposed to cutting fluids. Any containment areas must be constructed of concrete, asphalt, or other equivalent types of impermeable material and include a barrier (e.g., berms, curbing, elevated pads) to prevent contact with stormwater run-on. Stormwater runoff from these areas can be discharged, provided that any runoff is first collected and treated by an oil and water separator or its equivalent. You must regularly maintain the oil and water separator (or its equivalent) and properly dispose of or recycle collected residual fluids.

8.N.3.1.4 *Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage).* Minimize contact of residual liquids and particulate matter from materials stored indoors or under cover with surface runoff. Following are some control measure options: (a) good housekeeping measures, including the use of dry absorbents or wet vacuuming to contain, dispose of, or recycle residual liquids originating from recyclable containers, or mercury spill kits for spills from storage of mercury switches; (b) not allowing washwater from tipping floors or other processing areas to discharge to the storm sewer system; and (c) disconnecting or sealing off all floor drains connected to the storm sewer system.

8.N.3.1.5 *Scrap and Recyclable Waste Processing Areas.* Minimize surface runoff from coming in contact with scrap processing equipment. Pay attention to operations that generate visible amounts of particulate residue (e.g., shredding) to minimize the contact of accumulated particulate matter and residual fluids with runoff (i.e., through good housekeeping, preventive maintenance, etc.). Following are some control measure options: (a) regularly

inspect equipment for spills or leaks and malfunctioning, worn, or corroded parts or equipment; (b) establish a preventive maintenance program for processing equipment; (c) use dry-absorbents or other cleanup practices to collect and dispose of or recycle spilled or leaking fluids or use mercury spill kits for spills from storage of mercury switches; (d) on unattended hydraulic reservoirs over 150 gallons in capacity, install protection devices such as low-level alarms or equivalent devices, or secondary containment that can hold the entire volume of the reservoir; (e) containment or diversion structures such as dikes, berms, culverts, trenches, elevated concrete pads, and grading to minimize contact of stormwater runoff with outdoor processing equipment or stored materials; (f) oil and water separators or sumps; (g) permanent or semi-permanent covers in processing areas where there are residual fluids and grease; (h) retention or detention ponds or basins; sediment traps, and vegetated swales or strips (for pollutant settling and filtration); (i) catch basin filters or sand filters.

8.N.3.1.6 *Scrap Lead-Acid Battery Program.* Properly handle, store, and dispose of scrap lead-acid batteries. Following are some control measure options (a) segregate scrap lead-acid batteries from other scrap materials; (b) properly handle, store, and dispose of cracked or broken batteries; (c) collect and dispose of leaking lead-acid battery fluid; (d) minimize or eliminate (if possible) exposure of scrap lead-acid batteries to precipitation or runoff; and (e) provide employee training for the management of scrap batteries.

8.N.3.1.7 *Spill Prevention and Response Procedures.* (See also Part 2.1.2.4)Install alarms and/or pump shutoff systems on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in the event of a line break. Alternatively, a secondary containment system capable of holding the entire contents of the reservoir plus room for precipitation can be used. Use a mercury spill kit for any release of mercury from switches, anti-lock brake systems, and switch storage areas.

8.N.3.1.8 *Supplier Notification Program.* As appropriate, notify major suppliers which scrap materials will not be accepted at the facility or will be accepted only under certain conditions.

8.N.3.2 Waste Recycling Facilities (Liquid Recyclable Materials).

8.N.3.2.1 *Waste Material Storage (Indoor).* Minimize or eliminate contact between residual liquids from waste materials stored indoors and from surface runoff. The plan may refer to applicable portions of other existing plans, such as Spill Prevention, Control, and Countermeasure (SPCC) plans required under 40 CFR Part 112. Following are some control measure options (a) procedures for material handling (including labeling and marking); (b) clean up spills and leaks with dry absorbent materials, a wet vacuum system; (c) appropriate containment structures (trenching, curbing, gutters, etc.); and (d) a drainage system, including appurtenances (e.g., pumps or ejectors, manually operated valves), to handle discharges from diked or bermed areas. Drainage should be

discharged to an appropriate treatment facility or sanitary sewer system, or otherwise disposed of properly. These discharges may require coverage under a separate NPDES wastewater permit or industrial user permit under the pretreatment program.

8.N.3.2.2 *Waste Material Storage (Outdoor).* Minimize contact between stored residual liquids and precipitation or runoff. The plan may refer to applicable portions of other existing plans, such as SPCC plans required under 40 CFR Part 112. Discharges of precipitation from containment areas containing used oil must also be in accordance with applicable sections of 40 CFR Part 112. Following are some control measure options (a) appropriate containment structures (e.g., dikes, berms, curbing, pits) to store the volume of the largest tank, with sufficient extra capacity for precipitation; (b) drainage control and other diversionary structures; (c) corrosion protection and/or leak detection systems for storage tanks; and (d) dry-absorbent materials or a wet vacuum system to collect spills.

8.N.3.2.3 *Trucks and Rail Car Waste Transfer Areas.* Minimize pollutants in discharges from truck and rail car loading and unloading areas. Include measures to clean up minor spills and leaks resulting from the transfer of liquid wastes. Following are two control measure options: (a) containment and diversionary structures to minimize contact with precipitation or runoff, and (b) dry clean-up methods, wet vacuuming, roof coverings, or runoff controls.

8.N.3.3 *Recycling Facilities (Source-Separated Materials).* The following identifies considerations for facilities that receive only source-separated recyclables, primarily from non-industrial and residential sources.

8.N.3.3.1 *Inbound Recyclable Material Control.* Minimize the chance of accepting nonrecyclables (e.g., hazardous materials) that could be a significant source of pollutants by conducting inspections of inbound materials. Following are some control measure options: (a) providing information and education measures to inform suppliers of recyclables about acceptable and non-acceptable materials, (b) training drivers responsible for pickup of recycled material, (c) clearly marking public drop-off containers regarding which materials can be accepted, (d) rejecting nonrecyclable wastes or household hazardous wastes at the source, and (e) establishing procedures for handling and disposal of nonrecyclable material.

8.N.3.3.2 *Outdoor Storage.* Minimize exposure of recyclables to precipitation and runoff. Use good housekeeping measures to prevent accumulation of particulate matter and fluids, particularly in high traffic areas. Following are some control measure options (a) provide totally enclosed drop-off containers for the public; (b) install a sump and pump with each container pit and treat or discharge collected fluids to a sanitary sewer system; (c) provide dikes and curbs for secondary containment (e.g., around bales of recyclable waste paper); (d) divert surface water runoff away from outside material storage areas; (e) provide covers over containment bins, dumpsters, and roll-off boxes;

and (f) store the equivalent of one day's volume of recyclable material indoors.

8.N.3.3.3 *Indoor Storage and Material Processing.* Minimize the release of pollutants from indoor storage and processing areas. Following are some control measure options (a) schedule routine good housekeeping measures for all storage and processing areas, (b) prohibit tipping floor washwater from draining to the storm sewer system, and (c) provide employee training on pollution prevention practices.

8.N.3.3.4 *Vehicle and Equipment Maintenance.* Following are some control measure options for areas where vehicle and equipment maintenance occur outdoors (a) prohibit vehicle and equipment washwater from discharging to the storm sewer system, (b) minimize or eliminate outdoor maintenance areas whenever possible, (c) establish spill prevention and clean-up procedures in fueling areas, (d) avoid topping off fuel tanks, (e) divert runoff from fueling areas, (f) store lubricants and hydraulic fluids indoors, and (g) provide employee training on proper handling and storage of hydraulic fluids and lubricants.

8.N.4 Additional SWPPP Requirements.

8.N.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: scrap and waste material storage, outdoor scrap and waste processing equipment; and containment areas for turnings exposed to cutting fluids.

8.N.4.2 *Maintenance Schedules/Procedures for Collection, Handling, and Disposal or Recycling of Residual Fluids at Scrap and Waste Recycling Facilities.* If you are subject to Part 8.N.3.1.3, your SWPPP must identify any applicable maintenance schedule and the procedures to collect, handle, and dispose of or recycle residual fluids.

8.N.5 Additional Inspection Requirements.

8.N.5.1 *Inspections for Waste Recycling Facilities.* The inspections must be performed quarterly, pursuant to Part 4.1, and include, at a minimum, all areas where waste is generated, received, stored, treated, or disposed of and that are exposed to either precipitation or stormwater runoff.

8.N.6 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.N-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector N1. Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling (SIC 5093)	Chemical Oxygen Demand (COD)	120 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	Total Recoverable Aluminum	0.75 mg/L
	Total Recoverable Copper[1]	Hardness Dependent
	Total Recoverable Iron	1.0 mg/L
	Total Recoverable Lead[1]	Hardness Dependent
	Total Recoverable Zinc[1]	Hardness Dependent

[1] The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	**Copper** (mg/L)	**Lead** (mg/L)	**Zinc** (mg/L)
0-25 mg/L	0.0038	0.014	0.04
25-50 mg/L	0.0056	0.023	0.05
50-75 mg/L	0.0090	0.045	0.08
75-100 mg/L	0.0123	0.069	0.11
100-125 mg/L	0.0156	0.095	0.13
125-150 mg/L	0.0189	0.122	0.16
150-175 mg/L	0.0221	0.151	0.18
175-200 mg/L	0.0253	0.182	0.20
200-225 mg/L	0.0285	0.213	0.23
225-250 mg/L	0.0316	0.246	0.25
250+ mg/L	0.0332	0.262	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart O – Sector O – Steam Electric Generating Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.O.1 Covered Stormwater Discharges.

The requirements in Subpart O apply to stormwater discharges associated with industrial activity from Steam Electric Power Generating Facilities as identified by the Activity Code specified under Sector O in Table D-1 of Appendix D.

8.O.2 Industrial Activities Covered by Sector O.

This permit authorizes stormwater discharges from the following industrial activities at Sector O facilities:

8.O.2.1 steam electric power generation using coal, natural gas, oil, nuclear energy, etc., to produce a steam source, including coal handling areas;

8.O.2.2 coal pile runoff, including effluent limitations established by 40 CFR Part 423; and

8.O.2.3 dual fuel facilities that could employ a steam boiler.

8.O.3 Limitations on Coverage.

8.O.3.1 *Prohibition of Non-Stormwater Discharges.* Non-stormwater discharges subject to effluent limitations guidelines are not covered by this permit.

8.O.3.2 *Prohibition of Stormwater Discharges.* Stormwater discharges from the following are not covered by this permit:

8.O.3.2.1 ancillary facilities (e.g., fleet centers and substations) that are not contiguous to a stream electric power generating facility;

8.O.3.2.2 gas turbine facilities (providing the facility is not a dual-fuel facility that includes a steam boiler), and combined-cycle facilities where no supplemental fuel oil is burned (and the facility is not a dual-fuel facility that includes a steam boiler); and

8.O.3.2.3 cogeneration (combined heat and power) facilities utilizing a gas turbine.

8.O.4 Additional Technology-Based Effluent Limits. The following good housekeeping measures are required in addition to Part 2.1.2.2:

8.O.4.1 *Fugitive Dust Emissions.* Minimize fugitive dust emissions from coal handling areas. To minimize the tracking of coal dust offsite, consider procedures such as installing

specially designed tires or washing vehicles in a designated area before they leave the site and controlling the wash water.

8.O.4.2 *Delivery Vehicles.* Minimize contamination of stormwater runoff from delivery vehicles arriving at the plant site. Consider procedures to inspect delivery vehicles arriving at the plant site and ensure overall integrity of the body or container and procedures to deal with leakage or spillage from vehicles or containers.

8.O.4.3 *Fuel Oil Unloading Areas.* Minimize contamination of precipitation or surface runoff from fuel oil unloading areas. Consider using containment curbs in unloading areas, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and using spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

8.O.4.4 *Chemical Loading and Unloading.* Minimize contamination of precipitation or surface runoff from chemical loading and unloading areas. Consider using containment curbs at chemical loading and unloading areas to contain spills, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and loading and unloading in covered areas and storing chemicals indoors.

8.O.4.5 *Miscellaneous Loading and Unloading Areas.* Minimize contamination of precipitation or surface runoff from loading and unloading areas. Consider covering the loading area; grading, berming, or curbing around the loading area to divert run-on; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.

8.O.4.6 *Liquid Storage Tanks.* Minimize contamination of surface runoff from above-ground liquid storage tanks. Consider protective guards around tanks, containment curbs, spill and overflow protection, dry cleanup methods, or equivalent measures.

8.O.4.7 *Large Bulk Fuel Storage Tanks.* Minimize contamination of surface runoff from large bulk fuel storage tanks. Consider containment berms (or their equivalent). You must also comply with applicable State and Federal laws, including Spill Prevention, Control and Countermeasure (SPCC) Plan requirements.

8.O.4.8 *Spill Reduction Measures.* Minimize the potential for an oil or chemical spill, or reference the appropriate part of your SPCC plan. Visually inspect as part of your routine facility inspection the structural integrity of all above-ground tanks, pipelines, pumps, and related equipment that may be exposed to stormwater, and make any necessary repairs immediately.

8.O.4.9 *Oil-Bearing Equipment in Switchyards.* Minimize contamination of surface runoff from oil-bearing equipment in switchyard areas. Consider using level grades and gravel surfaces to retard flows and limit the spread of spills, or collecting runoff in perimeter ditches.

8.O.4.10 *Residue-Hauling Vehicles.* Inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body. Repair

vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

8.O.4.11 *Ash Loading Areas.* Reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before departure of each loaded vehicle.

8.O.4.12 *Areas Adjacent to Disposal Ponds or Landfills.* Minimize contamination of surface runoff from areas adjacent to disposal ponds or landfills. Reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

8.O.4.13 *Landfills, Scrap yards, Surface Impoundments, Open Dumps, General Refuse Sites.* Minimize the potential for contamination of runoff from these areas.

8.O.5 Additional SWPPP Requirements.

8.O.5.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas (e.g., coal or limestone piles).

8.O.5.2 *Documentation of Good Housekeeping Measures.* You must document in your SWPPP the good housekeeping measures implemented to meet the effluent limits in Part 8.O.4.

8.O.6 Additional Inspection Requirements.

8.O.6.1 *Comprehensive Site Compliance Inspection.* (See also Part 4.3) As part of your inspection, inspect the following areas monthly: coal handling areas, loading or unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

8.O.7 Sector-Specific Benchmarks

Table 8.O-1 identifies benchmarks that apply to the specific subsectors of Sector O. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table 8.O-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector O1. Steam Electric Generating Facilities (Industrial Activity Code "SE")	Total Iron	1.0 mg/L

8.O.8 Effluent Limitations Based on Effluent Limitations Guidelines (See also Part 6.2.2.1 of the permit.)

Table 8.O-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table 8.O-2[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from coal storage piles at Steam Electric Generating Facilities	TSS	50 mg/l[2]
	pH	6.0 min - 9.0 max

[1] Monitor annually.

[2] If your facility is designed, constructed, and operated to treat the volume of coal pile runoff that is associated with a 10-year, 24-hour rainfall event, any untreated overflow of coal pile runoff from the treatment unit is not subject to the 50 mg/L limitation for total suspended solids.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart P – Sector P – Land Transportation and Warehousing.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.P.1 Covered Stormwater Discharges.

The requirements in Subpart P apply to stormwater discharges associated with industrial activity from Land Transportation and Warehousing facilities as identified by the SIC Codes specified under Sector P in Table D-1 of Appendix D of the permit.

8.P.2 Limitation on Coverage

8.P.2.1 *Prohibited Discharges* (see also Parts 1.1.4 and 8.P.3.6) This permit does not authorize the discharge of vehicle/equipment/surface washwater, including tank cleaning operations. Such discharges must be authorized under a separate NPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or recycled on-site.

8.P.3 Additional Technology-Based Effluent Limits.

8.P.3.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2) In addition to the Good Housekeeping requirements in Part 2.1.2.2, you must do the following. Recommended control measures are discussed as indicated:

8.P.3.1.1 *Vehicle and Equipment Storage Areas.* Minimize the potential for stormwater exposure to leaky or leak-prone vehicles/equipment awaiting maintenance. Consider the following (or other equivalent measures): use of drip pans under vehicles/equipment, indoor storage of vehicles and equipment, installation of berms or dikes, use of absorbents, roofing or covering storage areas, and cleaning pavement surfaces to remove oil and grease.

8.P.3.1.2 *Fueling Areas.* Minimize contamination of stormwater runoff from fueling areas. Consider the following (or other equivalent measures): Covering the fueling area; using spill/overflow protection and cleanup equipment; minimizing stormwater run-on/runoff to the fueling area; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

8.P.3.1.3 *Material Storage Areas.* Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., "Used Oil," "Spent Solvents," etc.). Consider the following (or other equivalent measures): storing the materials indoors; installing berms/dikes around the areas; minimizing runoff of stormwater to the areas; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

8.P.3.1.4 *Vehicle and Equipment Cleaning Areas.* Minimize contamination of stormwater runoff from all areas used for vehicle/equipment cleaning. Consider the following (or other equivalent measures): performing all cleaning operations indoors; covering the cleaning operation, ensuring that all washwater drains to a proper collection system (i.e., not the stormwater drainage system); treating and/or recycling collected washwater, or other equivalent measures.

8.P.3.1.5 *Vehicle and Equipment Maintenance Areas.* Minimize contamination of stormwater runoff from all areas used for vehicle/equipment maintenance. Consider the following (or other equivalent measures): performing maintenance activities indoors; using drip pans; keeping an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting wet clean up practices if these practices would result in the discharge of pollutants to stormwater drainage systems; using dry cleanup methods; treating and/or recycling collected stormwater runoff, minimizing run on/runoff of stormwater to maintenance areas.

8.P.3.1.6 *Locomotive Sanding (Loading Sand for Traction) Areas.* Consider the following (or other equivalent measures): covering sanding areas; minimizing stormwater run on/runoff; or appropriate sediment removal practices to minimize the offsite transport of sanding material by stormwater.

8.P.3.2 *Employee Training.* (See also Part 2.1.2.9) Train personnel at least once a year and address the following activities, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

8.P.4 Additional SWPPP Requirements.

8.P.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Identify in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: Fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.

8.P.4.2 *Potential Pollutant Sources.* (See also Part 5.1.3) Assess the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: Onsite waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; illicit plumbing connections between shop floor drains and the stormwater conveyance system(s); and fueling areas. Describe these activities in the SWPPP.

8.P.4.3 *Description of Good Housekeeping Measures.* You must document in your SWPPP the good housekeeping measures you implement consistent with Part 8.P.3.

8.P.4.4 *Vehicle and Equipment Washwater Requirements.* If applicable, attach to or reference in your SWPPP, a copy of the NPDES permit issued for vehicle/equipment washwater or, if an NPDES permit has not been issued, a copy of the pending application. If an

industrial user permit is issued under a local pretreatment program, attach a copy to your SWPPP. In any case, implement all non-stormwater discharge permit conditions or pretreatment conditions in your SWPPP. If washwater is handled in another manner (e.g., hauled offsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in the plan.

8.P.5 Additional Inspection Requirements. (See also Part 4.1) Inspect all the following areas/activities: storage areas for vehicles/equipment awaiting maintenance, fueling areas, indoor and outdoor vehicle/equipment maintenance areas, material storage areas, vehicle/equipment cleaning areas and loading/unloading areas.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart Q – Sector Q – Water Transportation.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.Q.1 Covered Stormwater Discharges.

The requirements in Subpart Q apply to stormwater discharges associated with industrial activity from Water Transportation facilities as identified by the SIC Codes specified under Sector Q in Table D-1 of Appendix D of the permit.

8.Q.2 Limitations on Coverage.

8.Q.2.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) Not covered by this permit: bilge and ballast water, sanitary wastes, pressure wash water, and cooling water originating from vessels.

8.Q.3 Additional Technology-Based Effluent Limits.

8.Q.3.1 *Good Housekeeping Measures.* You must implement the following good housekeeping measures in addition to the requirements of part 2.1.2.2:

8.Q.3.1.1 *Pressure Washing Area.* If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate NPDES permit. Collect or contain the discharges from the pressures washing area so that they are not co-mingled with stormwater discharges authorized by this permit.

8.Q.3.1.2 *Blasting and Painting Area.* Minimize the potential for spent abrasives, paint chips, and overspray to discharge into receiving waters or the storm sewer systems. Consider containing all blasting and painting activities or use other measures to minimize the discharge of contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

8.Q.3.1.3 *Material Storage Areas.* Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. Specify which materials are stored indoors, and consider containment or enclosure for those stored outdoors. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials onsite.

8.Q.3.1.4 *Engine Maintenance and Repair Areas.* Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair. Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the maintenance area.

8.Q.3.1.5 *Material Handling Area.* Minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). Consider the following (or their equivalents): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing runoff of stormwater to material handling areas.

8.Q.3.1.6 *Drydock Activities.* Routinely maintain and clean the drydock to minimize pollutants in stormwater runoff. Address the cleaning of accessible areas of the drydock prior to flooding, and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, and fuel spills occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding and making absorbent materials and oil containment booms readily available to clean up or contain any spills.

8.Q.3.2 *Employee Training.* (See also Part 2.1.2.9) As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.

8.Q.3.3 *Preventive Maintenance.* (See also Part 2.1.2.3) As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

8.Q.4 Additional SWPPP Requirements.

8.Q.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance and repair; vessel maintenance and repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; locations used for the treatment, storage, or disposal of wastes; liquid storage tanks; liquid

storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

8.Q.4.2 *Summary of Potential Pollutant Sources.* (See also Part 5.1.3) Document in the SWPPP the following additional sources and activities that have potential pollutants associated with them: outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting.)

8.Q.5 Additional Inspection Requirements.

(See also Part 4.1) Include the following in all quarterly routine facility inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

8.Q.6 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.Q-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector Q1. Water Transportation Facilities (SIC 4412-4499)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Lead[1]	Hardness Dependent
	Total Zinc[1]	Hardness Dependent

[1] The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	Lead (mg/L)	Zinc (mg/L)
0-25 mg/L	0.014	0.04
25-50 mg/L	0.023	0.05
50-75 mg/L	0.045	0.08
75-100 mg/L	0.069	0.11
100-125 mg/L	0.095	0.13
125-150 mg/L	0.122	0.16
150-175 mg/L	0.151	0.18
175-200 mg/L	0.182	0.20
200-225 mg/L	0.213	0.23
225-250 mg/L	0.246	0.25
250+ mg/L	0.262	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart R – Sector R – Ship and Boat Building and Repair Yards.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.R.1 Covered Stormwater Discharges.

The requirements in Subpart R apply to stormwater discharges associated with industrial activity from Ship and Boat Building and Repair Yards as identified by the SIC Codes specified under Sector R in Table D-1 of Appendix D of the permit.

8.R.2 Limitations on Coverage.

8.R.2.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) Discharges containing bilge and ballast water, sanitary wastes, pressure wash water, and cooling water originating from vessels are not covered by this permit.

8.R.3 Additional Technology-Based Effluent Limits.

8.R.3.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2)

8.R.3.1.1 *Pressure Washing Area.* If pressure washing is used to remove marine growth from vessels, the discharged water must be permitted as a process wastewater by a separate NPDES permit.

8.R.3.1.2 *Blasting and Painting Area.* Minimize the potential for spent abrasives, paint chips, and overspray to discharging into the receiving water or the storm sewer systems. Consider containing all blasting and painting activities, or use other measures to prevent the discharge of the contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

8.R.3.1.3 *Material Storage Areas.* Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials onsite.

8.R.3.1.4 *Engine Maintenance and Repair Areas.* Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair. Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of

materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the maintenance area.

8.R.3.1.5 *Material Handling Area.* Minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). Consider the following (or their equivalents): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing stormwater run-on to material handling areas.

8.R.3.1.6 *Drydock Activities.* Routinely maintain and clean the drydock to minimize pollutants in stormwater runoff. Clean accessible areas of the drydock prior to flooding and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, or fuel spills occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding, and having absorbent materials and oil containment booms readily available to clean up and contain any spills.

8.R.3.2 *Employee Training.* (See also Part 2.1.2.9) As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.

8.R.3.4 *Preventive Maintenance.* (See also Part 2.1.2.3) As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

8.R.4 Additional SWPPP Requirements.

8.R.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance or repair; vessel maintenance or repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; treatment, storage, and waste disposal areas; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

8.R.4.2 *Potential Pollutant Sources.* (See also Part 5.1.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them (if applicable): outdoor manufacturing or processing activities (e.g., welding,

metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting).

8.R.4.3 *Documentation of Good Housekeeping Measures.* Document in your SWPPP any good housekeeping measures implemented to meet the effluent limits in Part 8.R.3.

8.R.4.3.1 *Blasting and Painting Areas.* Document in the SWPPP any standard operating practices relating to blasting and painting (e.g., prohibiting uncontained blasting and painting over open water or prohibiting blasting and painting during windy conditions, which can render containment ineffective).

8.R.4.3.2 *Storage Areas.* Specify in your SWPPP which materials are stored indoors, and consider containment or enclosure for those stored outdoors.

8.R.5 Additional Inspection Requirements.

(See also Part 4.1) Include the following in all quarterly routine facility inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart S – Sector S – Air Transportation.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.S.1 Covered Stormwater Discharges.

The requirements in Subpart S apply to stormwater discharges associated with industrial activity from Air Transportation facilities identified by the SIC Codes specified under Sector S in Table D-1 of Appendix D of the permit.

8.S.2 Limitation on Coverage

8.S.2.1 *Limitations on Coverage.* This permit authorizes stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations or deicing operations.

Note: "deicing" will generally be used to imply both deicing (removing frost, snow or ice) and anti-icing (preventing accumulation of frost, snow or ice) activities, unless specific mention is made regarding anti-icing and/or deicing activities.

8.S.2.2 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4 and Part 8.S.3) This permit does not authorize the discharge of aircraft, ground vehicle, runway and equipment washwaters; nor the dry weather discharge of deicing chemicals. Such discharges must be covered by separate NPDES permit(s). Note that a discharge resulting from snowmelt is not a dry weather discharge.

8.S.3 Additional Technology-Based Effluent Limits.

8.S.3.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2)

8.S.3.1.1 Aircraft, Ground Vehicle and Equipment Maintenance Areas. Minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers). Consider the following practices (or their equivalents): performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the stormwater runoff from the maintenance area and providing treatment or recycling.

8.S.3.1.2 Aircraft, Ground Vehicle and Equipment Cleaning Areas. (See also Part 8.S.3.6) Clearly demarcate these areas on the ground using signage or other

appropriate means. Minimize the contamination of stormwater runoff from cleaning areas.

8.S.3.1.3 Aircraft, Ground Vehicle and Equipment Storage Areas. Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and minimize the contamination of stormwater runoff from these storage areas. Consider the following control measures, including any BMPs (or their equivalents): storing aircraft and ground vehicles indoors; using drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.

8.S.3.1.4 Material Storage Areas. Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., "used oil," "Contaminated Jet A," etc.). Minimize contamination of precipitation/runoff from these areas. Consider the following control measures (or their equivalents): storing materials indoors; storing waste materials in a centralized location; and installing berms/dikes around storage areas.

8.S.3.1.5 Airport Fuel System and Fueling Areas. Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system. Consider the following control measures (or their equivalents): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting stormwater runoff.

8.S.3.1.6 Source Reduction. Minimize, and where feasible eliminate, the use of urea and glycol-based deicing chemicals, in order to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact. Chemical options to replace ethylene glycol, propylene glycol and urea include: potassium acetate; magnesium acetate; calcium acetate; and anhydrous sodium acetate.

8.S.3.1.6.1 Runway Deicing Operation: Minimize contamination of stormwater runoff from runways as a result of deicing operations. Evaluate whether over-application of deicing chemicals occurs by analyzing application rates, and adjust as necessary, consistent with considerations of flight safety. Also consider these control measure options (or their equivalents): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installing a runway ice detection system; implementing anti-icing operations as a preventive measure against ice buildup.

8.S.3.1.6.2 Aircraft Deicing Operations. Minimize contamination of stormwater runoff from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and

adjust as necessary, consistent with considerations of flight safety. This evaluation should be carried out by the personnel most familiar with the particular aircraft and flight operations in question (versus an outside entity such as the airport authority). Consider using alternative deicing/anti-icing agents as well as containment measures for all applied chemicals. Also consider these control measure options (or their equivalents) for reducing deicing fluid use: forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, and thermal blankets for MD-80s and DC-9s. Also consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems.

8.S.3.1.7 Management of Runoff. (See also 2.1.2.6) Where deicing operations occur, implement a program to control or manage contaminated runoff to minimize the amount of pollutants being discharged from the site. Consider these control measure options (or their equivalents): a dedicated deicing facility with a runoff collection/ recovery system; using vacuum/collection trucks; storing contaminated stormwater/deicing fluids in tanks and releasing controlled amounts to a publicly owned treatment works; collecting contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing runoff into vegetative swales or other infiltration measures. Also consider recovering deicing materials when these materials are applied during non-precipitation events (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains, etc.) to prevent these materials from later becoming a source of stormwater contamination. Used deicing fluid should be recycled whenever possible.

8.S.3.2 *Deicing Season.* You must determine the seasonal timeframe (e.g., December-February, October - March, etc.) during which deicing activities typically occur at the facility. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season. If you meet the deicing chemical usage thresholds of 100,000 gallons glycol and/or 100 tons of urea, the deicing season you identified is the timeframe during which you must obtain the four required benchmark monitoring event results for deicing-related parameters, i.e., BOD, COD, ammonia and pH. See also Part 8.S.6.

8.S.4 Additional SWPPP Requirements.

An airport authority and tenants of the airport are encouraged to work in partnership in the development of a SWPPP. If an airport tenant obtains authorization under this permit and develops a SWPPP for discharges from his own areas of the airport, prior to authorization, that SWPPP must be coordinated and integrated with the SWPPP for the entire airport. Tenants of the airport facility include air passenger or cargo companies, fixed based operators and other parties

who have contracts with the airport authority to conduct business operations on airport property and whose operations result in stormwater discharges associated with industrial activity.

8.S.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

8.S.4.2 *Potential Pollutant Sources.* (See also Part 5.1.3) In your inventory of exposed materials, describe in your SWPPP the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If you use deicing chemicals, you must maintain a record of the types (including the Material Safety Data Sheets [MSDS]) used and the monthly quantities, either as measured or, in the absence of metering, as estimated to the best of your knowledge. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Tenants or other fixed-based operations that conduct deicing operations must provide the above information to the airport authority for inclusion with any comprehensive airport SWPPPs.

8.S.4.3 *Vehicle and Equipment Washwater Requirements.* Attach to or reference in your SWPPP, a copy of the NPDES permit issued for vehicle/equipment washwater or, if an NPDES permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, include a copy in your SWPPP. In any case, if you are subject to another permit, describe your control measures for implementing all non-stormwater discharge permit conditions or pretreatment requirements in your SWPPP. If washwater is handled in another manner (e.g., hauled offsite, retained onsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in your SWPPP.

8.S.4.4 *Documentation of Control Measures Used for Management of Runoff:* Document in your SWPPP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

8.S.5 Additional Inspection Requirements.

8.S.5.1 *Inspections.* (See also Part 4.1) At a minimum conduct routine facility inspections at least monthly during the deicing season (e.g., October through April for most mid-latitude airports). If your facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used. The Director may specifically require you to increase inspection frequencies.

8.S.5.2 *Comprehensive Site Inspections.* (See also Part 4.3) Using only qualified personnel, conduct your annual site inspection during periods of actual deicing operations, if possible. If not practicable during active deicing because of weather, conduct the

inspection during the season when deicing operations occur and the materials and equipment for deicing are in place.

8.S.6 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Monitor per the requirements in Table 8.S-1.

Table 8.S-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
For airports where a single permittee, or a combination of permitted facilities use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis, monitor the first four parameters in ONLY those outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581).	Biochemical Oxygen Demand (BOD_5)[1]	30 mg/L
	Chemical Oxygen Demand (COD)[1]	120 mg/L
	Ammonia[1]	2.14 mg/L
	pH[1]	6.0 - 9.0 s.u.

[1] These are deicing-related parameters. Collect the four benchmark samples, and any required follow-up benchmark samples, during the timeframe defined in Part 8.S.3.2 when deicing activities are occurring.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart T – Sector T – Treatment Works.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.T.1 Covered Stormwater Discharges.

The requirements in Subpart T apply to stormwater discharges associated with industrial activity from Treatment Works as identified by the Activity Code specified under Sector T in Table D-1 of Appendix D of the permit.

8.T.2 Industrial Activities Covered by Sector T.

The requirements listed under this part apply to all existing point source stormwater discharges associated with the following activities:

8.T.2.1 Treatment works treating domestic sewage, or any other sewage sludge or wastewater treatment device or system used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge; that are located within the confines of a facility with a design flow of 1.0 million gallons per day (MGD) or more; or are required to have an approved pretreatment program under 40 CFR Part 403.

8.T.2.2 The following are not required to have permit coverage: farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located within the facility, or areas that are in compliance with Section 405 of the CWA.

8.T.3 Limitations on Coverage.

8.T.3.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) Sanitary and industrial wastewater and equipment and vehicle washwater are not authorized by this permit.

8.T.4 Additional Technology-Based Effluent Limits.

8.T.4.1 *Control Measures.* (See also the non-numeric effluent limits in Part 2.1.2) In addition to the other control measures, consider the following: routing stormwater to the treatment works; or covering exposed materials (i.e., from the following areas: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station).

8.T.4.2 *Employee Training.* (See also Part 2.1.2.9) At a minimum, training must address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and controls; fueling procedures; general good

housekeeping practices; and proper procedures for using fertilizer, herbicides, and pesticides.

8.T.5 Additional SWPPP Requirements.

8.T.5.1 *Site Map.* (See also Part 5.1.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides, and pesticides.

8.T.5.2 *Potential Pollutant Sources.* (See also Part 5.1.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them, as applicable: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and access roads and rail lines.

8.T.5.3 *Wastewater and Washwater Requirements.* Keep a copy of all your current NPDES permits issued for wastewater and industrial, vehicle and equipment washwater discharges or, if an NPDES permit has not yet been issued, a copy of the pending application(s) with your SWPPP. If the washwater is handled in another manner, the disposal method must be described and all pertinent documentation must be retained onsite.

8.T.6 Additional Inspection Requirements.

(See also Part 4.1) Include the following areas in all inspections: access roads and rail lines; grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart U – Sector U – Food and Kindred Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.U.1 Covered Stormwater Discharges.

The requirements in Subpart U apply to stormwater discharges associated with industrial activity from Food and Kindred Products facilities as identified by the SIC Codes specified in Table D-1 of Appendix D of the permit.

8.U.2 Limitations on Coverage.

8.U.2.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) The following discharges are not authorized by this permit: discharges containing boiler blowdown, cooling tower overflow and blowdown, ammonia refrigeration purging, and vehicle washing and clean-out operations.

8.U.3 Additional Technology-Based Limitations.

8.U.3.1 *Employee Training.* (See also Part 2.1.2.9) Address pest control in your employee training program.

8.U.4 Additional SWPPP Requirements.

8.U.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP the locations of the following activities if they are exposed to precipitation or runoff: vents and stacks from cooking, drying, and similar operations; dry product vacuum transfer lines; animal holding pens; spoiled product; and broken product container storage areas.

8.U.4.2 *Potential Pollutant Sources.* (See also Part 5.1.3) Document in your SWPPP, in addition to food and kindred products processing-related industrial activities, application and storage of pest control chemicals (e.g., rodenticides, insecticides, fungicides) used on plant grounds.

8.U.5 Additional Inspection Requirements.

(See also Part 4.1) Inspect on a quarterly basis, at a minimum, the following areas where the potential for exposure to stormwater exists: loading and unloading areas for all significant materials; storage areas, including associated containment areas; waste management units; vents and stacks emanating from industrial activities; spoiled product and broken product container holding areas; animal holding pens; staging areas; and air pollution control equipment.

8.U.6 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.U-1.		
Subsector (You may be subject to requirements for more than one Sector / Subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector U1. Grain Mill Products (SIC 2041-2048)	Total Suspended Solids (TSS)	100 mg/L
Subsector U2. Fats and Oils Products (SIC 2074-2079)	Biochemical Oxygen Demand (BOD_5)	30 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Suspended Solids (TSS)	100 mg/L

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart V – Sector V – Textile Mills, Apparel, and Other Fabric Products.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.V.1 Covered Stormwater Discharges.

The requirements in Subpart V apply to stormwater discharges associated with industrial activity from Textile Mills, Apparel, and Other Fabric Product manufacturing as identified by the SIC Codes specified under Sector V in Table D-1 of Appendix D of the permit.

8.V.2 Limitations on Coverage.

8.V.2.1 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4) The following are not authorized by this permit: discharges of wastewater (e.g., wastewater resulting from wet processing or from any processes relating to the production process), reused or recycled water, and waters used in cooling towers. If you have these types of discharges from your facility, you must cover them under a separate NPDES permit.

8.V.3 Additional Technology-Based Limitations.

8.V.3.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2)

8.V.3.1.1 *Material Storage Areas.* Plainly label and store all containerized materials (e.g., fuels, petroleum products, solvents, and dyes) in a protected area, away from drains. Minimize contamination of the stormwater runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances. For storing empty chemical drums or containers, ensure that the drums and containers are clean (consider triple-rinsing) and that there is no contact of residuals with precipitation or runoff. Collect and dispose of washwater from these cleanings properly.

8.V.3.1.2 *Material Handling Areas.* Minimize contamination of stormwater runoff from material handling operations and areas. Consider the following (or their equivalents): use of spill and overflow protection; covering fueling areas; and covering or enclosing areas where the transfer of material may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals, dyes, or wastewater.

8.V.3.1.3 *Fueling Areas.* Minimize contamination of stormwater runoff from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing run-on of stormwater to the fueling areas, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the fueling area.

8.V.3.1.4 *Above-Ground Storage Tank Area.* Minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves. Consider the following (or their equivalents): regular cleanup of these areas; including measures for tanks, piping and valves explicitly in your SPCC program; minimizing runoff of stormwater from adjacent areas; restricting access to the area; inserting filters in adjacent catch basins; providing absorbent booms in unbermed fueling areas; using dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

8.V.3.2 *Employee Training.* (See also Part 2.1.2.9) As part of your employee training program, address, at a minimum, the following activities (as applicable): use of reused and recycled waters, solvents management, proper disposal of dyes, proper disposal of petroleum products and spent lubricants, spill prevention and control, fueling procedures, and general good housekeeping practices.

8.V.4 Additional SWPPP Requirements.

8.V.4.1 *Potential Pollutant Sources. (See also Part 5.1.3) Document in your SWPPP the following additional sources* and activities that have potential pollutants associated with them: industry-specific significant materials and industrial activities (e.g., backwinding, beaming, bleaching, backing bonding, carbonizing, carding, cut and sew operations, desizing, drawing, dyeing locking, fulling, knitting, mercerizing, opening, packing, plying, scouring, slashing, spinning, synthetic-felt processing, textile waste processing, tufting, turning, weaving, web forming, winging, yarn spinning, and yarn texturing).

8.V.4.2 *Description of Good Housekeeping Measures for Material Storage Areas.* Document in the SWPPP your containment area or enclosure for materials stored outdoors in connection with Part 8.V.3.1.1 above.

8.V.5 Additional Inspection Requirements.

(See also Part 4.1) Inspect, at least monthly, the following activities and areas (at a minimum): transfer and transmission lines, spill prevention, good housekeeping practices, management of process waste products, and all structural and nonstructural management practices.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart W – Sector W – Furniture and Fixtures.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.W.1 Covered Stormwater Discharges.

The requirements in Subpart W apply to stormwater discharges associated with industrial activity from Furniture and Fixtures facilities as identified by the SIC Codes specified under Sector W in Table D-1 of Appendix D of the permit.

8.W.2 Additional SWPPP Requirements.

8.W.2.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: material storage (including tanks or other vessels used for liquid or waste storage) areas; outdoor material processing areas; areas where wastes are treated, stored, or disposed of; access roads; and rail spurs.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart X – Sector X – Printing and Publishing.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.X.1 Covered Stormwater Discharges.

The requirements in Subpart X apply to stormwater discharges associated with industrial activity from Printing and Publishing facilities as identified by the SIC Codes specified under Sector X in Table D-1 of Appendix D of the permit.

8.X.2 Additional Technology-Based Effluent Limits.

8.X.2.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2)

8.X.2.1.1 *Material Storage Areas.* Plainly label and store all containerized materials (e.g., skids, pallets, solvents, bulk inks, hazardous waste, empty drums, portable and mobile containers of plant debris, wood crates, steel racks, and fuel oil) in a protected area, away from drains. Minimize contamination of the stormwater runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances.

8.X.2.1.2 *Material Handling Area.* Minimize contamination of stormwater runoff from material handling operations and areas (e.g., blanket wash, mixing solvents, loading and unloading materials). Consider the following (or their equivalents): using spill and overflow protection, covering fueling areas, and covering or enclosing areas where the transfer of materials may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals or wastewater.

8.X.2.1.3 *Fueling Areas.* Minimize contamination of stormwater runoff from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing runoff of stormwater to the fueling areas, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the fueling area.

8.X.2.1.4 *Above Ground Storage Tank Area.* Minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves. Consider the following (or their equivalents): regularly cleaning these areas, explicitly addressing tanks, piping and valves in the SPCC program, minimizing stormwater runoff from adjacent areas, restricting access to the area, inserting filters in adjacent catch basins, providing absorbent booms in unbermed fueling areas, using dry cleanup methods, and permanently sealing drains within critical areas that may discharge to a storm drain.

8.X.2.2 *Employee Training.* (See also Part 2.1.2.9) As part of your employee training program, address, at a minimum, the following activities (as applicable): spent solvent management, spill prevention and control, used oil management, fueling procedures, and general good housekeeping practices.

8.X.3 Additional SWPPP Requirements.

8.X.3.1 *Description of Good Housekeeping Measures for Material Storage Areas.* In connection with Part 8.X.2.1.1, describe in the SWPPP the containment area or enclosure for materials stored outdoors.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart Y – Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.Y.1 Covered Stormwater Discharges.

The requirements in Subpart Y apply to stormwater discharges associated with industrial activity from Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries facilities as identified by the SIC Codes specified under Sector Y in Table D-1 of Appendix D of the permit.

8.Y.2 Additional Technology-Based Effluent Limits.

8.Y.2.1 *Controls for Rubber Manufacturers.* (See also Part 2.1.2) Minimize the discharge of zinc in your stormwater discharges. Parts 8.Y.2.1.1 to 8.Y.2.1.5 give possible sources of zinc to be reviewed and list some specific control measures to be considered for implementation (or their equivalents). Following are some general control measure options to consider: using chemicals purchased in pre-weighed, sealed polyethylene bags; storing in-use materials in sealable containers, ensuring an airspace between the container and the cover to minimize "puffing" losses when the container is opened, and using automatic dispensing and weighing equipment.

8.Y.2.1.1 *Zinc Bags.* Ensure proper handling and storage of zinc bags at your facility. Following are some control measure options: employee training on the handling and storage of zinc bags, indoor storage of zinc bags, cleanup of zinc spills without washing the zinc into the storm drain, and the use of 2,500-pound sacks of zinc rather than 50- to 100-pound sacks.

8.Y.2.1.2 *Dumpsters.* Minimize discharges of zinc from dumpsters. Following are some control measure options: covering the dumpster, moving the dumpster indoors, or providing a lining for the dumpster.

8.Y.2.1.3 *Dust Collectors and Baghouses.* Minimize contributions of zinc to stormwater from dust collectors and baghouses. Replace or repair, as appropriate, improperly operating dust collectors and baghouses.

8.Y.2.1.4 *Grinding Operations.* Minimize contamination of stormwater as a result of dust generation from rubber grinding operations. One control measure option is to install a dust collection system.

8.Y.2.1.5 *Zinc Stearate Coating Operations.* Minimize the potential for stormwater contamination from drips and spills of zinc stearate slurry that may be released

to the storm drain. One control measure option is to use alternative compounds to zinc stearate.

8.Y.2.2 *Controls for Plastic Products Manufacturers.* Minimize the discharge of plastic resin pellets in your stormwater discharges. Control measures to be considered for implementation (or their equivalents) include minimizing spills, cleaning up of spills promptly and thoroughly, sweeping thoroughly, pellet capturing, employee education, and disposal precautions.

8.Y.3 Additional SWPPP Requirements.

8.Y.3.1 *Potential Pollutant Sources for Rubber Manufacturers.* (See also Part 5.1.3) Document in your SWPPP the use of zinc at your facility and the possible pathways through which zinc may be discharged in stormwater runoff.

8.Y.4 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.Y-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector Y1. Rubber Products Manufacturing (SIC 3011, 3021, 3052, 3053, 3061, 3069)	Total Zinc[1]	Hardness Dependent

[1] The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	Zinc (mg/L)
0-25 mg/L	0.04
25-50 mg/L	0.05
50-75 mg/L	0.08
75-100 mg/L	0.11
100-125 mg/L	0.13
125-150 mg/L	0.16
150-175 mg/L	0.18
175-200 mg/L	0.20
200-225 mg/L	0.23
225-250 mg/L	0.25
250+ mg/L	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart Z – Sector Z – Leather Tanning and Finishing.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.Z.1 Covered Stormwater Discharges.

The requirements in Subpart Z apply to stormwater discharges associated with industrial activity from Leather Tanning and Finishing facilities as identified by the SIC Code specified under Sector Z in Table D-1 of Appendix D of the permit.

8.Z.2 Additional Technology-Based Effluent Limits.

8.Z.2.3 *Good Housekeeping Measures.* (See also Part 2.1.2.2)

8.Z.2.3.1 *Storage Areas for Raw, Semiprocessed, or Finished Tannery By-products.* Minimize contamination of stormwater runoff from pallets and bales of raw, semiprocessed, or finished tannery by-products (e.g., splits, trimmings, shavings). Consider indoor storage or protection with polyethylene wrapping, tarpaulins, roofed storage, etc. Consider placing materials on an impermeable surface and enclosing or putting berms (or equivalent measures) around the area to prevent stormwater run-on and runoff.

8.Z.2.3.2 *Material Storage Areas.* Label storage containers of all materials (e.g., specific chemicals, hazardous materials, spent solvents, waste materials) minimize contact of such materials with stormwater.

8.Z.2.3.3 *Buffing and Shaving Areas.* Minimize contamination of stormwater runoff with leather dust from buffing and shaving areas. Consider dust collection enclosures, preventive inspection and maintenance programs, or other appropriate preventive measures.

8.Z.2.3.4 *Receiving, Unloading, and Storage Areas.* Minimize contamination of stormwater runoff from receiving, unloading, and storage areas. If these areas are exposed, consider the following (or their equivalents): covering all hides and chemical supplies, diverting drainage to the process sewer, or grade berming or curbing the area to prevent stormwater runoff.

8.Z.2.3.5 *Outdoor Storage of Contaminated Equipment.* Minimize contact of stormwater with contaminated equipment. Consider the following (or their equivalents): covering equipment, diverting drainage to the process sewer, and cleaning thoroughly prior to storage.

8.Z.2.3.6 *Waste Management.* Minimize contamination of stormwater runoff from waste storage areas. Consider the following (or their equivalents): covering

dumpsters, moving waste management activities indoors, covering waste piles with temporary covering material such as tarpaulins or polyethylene, and minimizing stormwater runoff by enclosing the area or building berms around the area.

8.Z.3 Additional SWPPP Requirements.

8.Z.3.1 *Drainage Area Site Map.* (See also Part 5.1.2) Identify in your SWPPP where any of the following may be exposed to precipitation or surface runoff: processing and storage areas of the beamhouse, tanyard, and re-tan wet finishing and dry finishing operations.

8.Z.3.2 *Potential Pollutant Sources.* (See also Part 5.1.3) Document in your SWPPP the following sources and activities that have potential pollutants associated with them (as appropriate): temporary or permanent storage of fresh and brine-cured hides; extraneous hide substances and hair; leather dust, scraps, trimmings, and shavings.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart AA – Sector AA – Fabricated Metal Products

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.AA.1 Covered Stormwater Discharges.

The requirements in Subpart AA apply to stormwater discharges associated with industrial activity from Fabricated Metal Products facilities as identified by the SIC Codes specified under Sector AA in Table D-1 of Appendix D of the permit.

8.AA.2 Additional Technology-Based Effluent Limits.

8.AA.2.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2)

8.AA.2.1.1 *Raw Steel Handling Storage.* Minimize the generation of and/or recover and properly manage scrap metals, fines, and iron dust. Include measures for containing materials within storage handling areas.

8.AA.2.1.2 *Paints and Painting Equipment.* Minimize exposure of paint and painting equipment to stormwater.

8.AA.2.2 *Spill Prevention and Response Procedures.* (See also Part 2.1.2.4) Ensure that the necessary equipment to implement a cleanup is available to personnel. The following areas should be addressed

8.AA.2.2.1 *Metal Fabricating Areas.* Maintain clean, dry, orderly conditions in these areas. Consider using dry clean-up techniques.

8.AA.2.2.2 *Storage Areas for Raw Metal.* Keep these areas free of conditions that could cause, or impede appropriate and timely response to, spills or leakage of materials. Consider the following (or their equivalents): maintaining storage areas so that there is easy access in the event of a spill, and labeling stored materials to aid in identifying spill contents.

8.AA.2.2.3 *Metal Working Fluid Storage Areas.* Minimize the potential for stormwater contamination from storage areas for metal working fluids.

8.AA.2.2.4 *Cleaners and Rinse Water.* Control and clean up spills of solvents and other liquid cleaners, control sand buildup and disbursement from sand-blasting operations, and prevent exposure of recyclable wastes. Substitute environmentally benign cleaners when possible.

8.AA.2.2.5 *Lubricating Oil and Hydraulic Fluid Operations.* Minimize the potential for stormwater contamination from lubricating oil and hydraulic fluid operations. Consider using monitoring equipment or other devices to detect and control

leaks and overflows. Consider installing perimeter controls such as dikes, curbs, grass filter strips, or equivalent measures.

8.AA.2.2.6 *Chemical Storage Areas.* Minimize stormwater contamination and accidental spillage in chemical storage areas. Include a program to inspect containers and identify proper disposal methods.

8.AA.2.3 *Spills and Leaks.* (See also Part 5.1.3.3) In your spill prevention and response procedures, required by Part 2.1.2.4, pay attention to the following materials (at a minimum): chromium, toluene, pickle liquor, sulfuric acid, zinc and other water priority chemicals, and hazardous chemicals and wastes.

8.AA.3 Additional SWPPP Requirements.

8.AA.3.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: raw metal storage areas; finished metal storage areas; scrap disposal collection sites; equipment storage areas; retention and detention basins; temporary and permanent diversion dikes or berms; right-of-way or perimeter diversion devices; sediment traps and barriers; processing areas, including outside painting areas; wood preparation; recycling; and raw material storage.

8.AA.3.2 *Potential Pollutant Sources.* (See also Part 5.1.3) Document in your SWPPP the following additional sources and activities that have potential pollutants associated with them: loading and unloading operations for paints, chemicals, and raw materials; outdoor storage activities for raw materials, paints, empty containers, corn cobs, chemicals, and scrap metals; outdoor manufacturing or processing activities such as grinding, cutting, degreasing, buffing, and brazing; onsite waste disposal practices for spent solvents, sludge, pickling baths, shavings, ingot pieces, and refuse and waste piles.

8.AA.4 Additional Inspection Requirements

8.AA.4.1 *Inspections.* (See also Part 4) At a minimum, include the following areas in all inspections: raw metal storage areas, finished product storage areas, material and chemical storage areas, recycling areas, loading and unloading areas, equipment storage areas, paint areas, and vehicle fueling and maintenance areas.

8.AA.4.2 *Comprehensive Site Inspections.* (See also Part 4.3) As part of your inspection, also inspect areas associated with the storage of raw metals, spent solvents and chemicals storage areas, outdoor paint areas, and drainage from roof. Potential pollutants include chromium, zinc, lubricating oil, solvents, aluminum, oil and grease, methyl ethyl ketone, steel, and related materials.

8.AA.5 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.AA-1		
Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Subsector AA1. Fabricated Metal Products, except Coating (SIC 3411-3499; 3911-3915)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Zinc[1]	Hardness Dependent
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
Subsector AA2. Fabricated Metal Coating and Engraving (SIC 3479)	Total Zinc[1]	Hardness Dependent
	Nitrate plus Nitrite Nitrogen	0.68 mg/L

[1] The benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix J, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 6.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	**Zinc** (mg/L)
0-25 mg/L	0.04
25-50 mg/L	0.05
50-75 mg/L	0.08
75-100 mg/L	0.11
100-125 mg/L	0.13
125-150 mg/L	0.16
150-175 mg/L	0.18
175-200 mg/L	0.20
200-225 mg/L	0.23
225-250 mg/L	0.25
250+ mg/L	0.26

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart AB – Sector AB – Transportation Equipment, Industrial or Commercial Machinery Facilities.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.AB.1 Covered Stormwater Discharges.

The requirements in Subpart AB apply to stormwater discharges associated with industrial activity from Transportation Equipment, Industrial or Commercial Machinery facilities as identified by the SIC Codes specified under Sector AB in Table D-1 of Appendix D of the permit.

8.AB.2 Additional SWPPP Requirements.

8.AB.2.1 *Drainage Area Site Map.* (See also Part 5.1.2) Identify in your SWPPP where any of the following may be exposed to precipitation or surface runoff: vents and stacks from metal processing and similar operations.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart AC– Sector AC –Electronic and Electrical Equipment and Components, Photographic and Optical Goods.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.AC.1 Covered Stormwater Discharges.

The requirements in Subpart AC apply to stormwater discharges associated with industrial activity from facilities that manufacture Electronic and Electrical Equipment and Components, Photographic and Optical goods as identified by the SIC Codes specified in Table D-1 of Appendix D of the permit.

8.AC.2 Additional Requirements.

No additional sector-specific requirements apply.

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart AD – Sector AD – Stormwater Discharges Designated by the Director as Requiring Permits.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.AD.1 Covered Stormwater Discharges.

Sector AD is used to provide permit coverage for facilities designated by the Director as needing a stormwater permit, and any discharges of stormwater associated with industrial activity that do not meet the description of an industrial activity covered by Sectors A-AC.

8.AD.1.1 *Eligibility for Permit Coverage.* Because this sector is primarily intended for use by discharges designated by the Director as needing a stormwater permit (which is an atypical circumstance), and your facility may or may not normally be discharging stormwater associated with industrial activity, you must obtain the Director's written permission to use this permit prior to submitting an NOI. If you are authorized to use this permit, you will still be required to ensure that your discharges meet the basic eligibility provisions of this permit at Part 1.2.

8.AD.2 Sector-Specific Benchmarks and Effluent Limits. (See also Part 6 of the permit.)

The Director will establish any additional monitoring and reporting requirements for your facility prior to authorizing you to be covered by this permit. Additional monitoring requirements would be based on the nature of activities at your facility and your stormwater discharges.

9. Permit Conditions Applicable to Specific States, Indian Country Lands, or Territories

9.1 Region 1

9.1.1 CTR05000I: Indian Country lands within the State of Connecticut

No additional requirements.

9.1.2 MAR050000: Commonwealth of Massachusetts, except Indian Country lands.

Permittees in Massachusetts must also meet the following conditions.

9.1.2.1 Additional Section 401(a) conditions required by the Commonwealth of Massachusetts. Discharges covered by the general permit must comply with the provisions of 314 CMR 3.00; 314 CMR 4.00; 314 CMR 9.00; and 314 CMR 10.00 and any other related policies adopted under the authority of the Massachusetts Clean Waters Act, MGL c.21, ss. 26-53 and Wetlands Protection Act, MGL s. 40.

New facilities or redevelopment of existing facilities subject to this permit must comply with applicable stormwater performance standards prescribed by state regulation or policy. A permit under 314 CMR 3.04 is not required for existing facilities which meet state stormwater performance standards. An application for a permit under 314 CMR 3.00 is required only when required under 314 CMR 3.04(2)(b) {designation of a discharge on a case-by-case basis} or is otherwise identified in 314 CMR 3.00 or any Department policy as a discharge requiring a permit application. Department regulations and policies may be obtained through the State House Bookstore or online at www.mass.gov/dep.

9.1.2.2 SWPPP Availability. The Department may request a copy of the Stormwater Pollution Prevention Plan (SWPPP) and the permittee is required to submit the SWPPP to the Department within 14 days of such a request.

9.1.2.3 Authorization to Inspect. The Department may conduct an inspection of any facility covered by this permit to ensure compliance with state law requirements, including state water quality standards. The Department may enforce its certification conditions.

9.1.2.4 Submission of Monitoring Data. The results of any monitoring required by this permit must be sent to the appropriate Regional Office of the Department [attention: Bureau of Waste Prevention] where the monitoring identifies exceedances of any effluent limits or benchmarks for any parameter for which monitoring is required under this permit. In addition, any follow-up monitoring and a description of the corrective actions required and undertaken to meet the effluent limits or benchmarks must be sent to the appropriate Department Regional Office.

9.1.2.5 Sector-Specific Requirements. The Massachusetts Coastal Zone Management Program submitted the following conditions to be added to the permit in order to meet the Programs Consistency Review and which will be included in the requirements of this Water Quality Certification:

- In Sector Q [Water Transportation] add copper to the required monitoring parameters.
- In Sector R [Ship and Boat Building and Repair Yards] add aluminum, iron, lead, and copper to the list of required monitoring parameters.
- Modify the monitoring requirements [Part 6.2.1.2 of the permit] such that all four of the quarterly monitoring samples must meet the benchmarks rather than the average of the four before no further monitoring is required.

9.1.3 MAR05000I: Indian Country lands within the Commonwealth of Massachusetts.

No additional requirements.

9.1.5 NHR050000: State of New Hampshire.

Permittees in New Hampshire must also meet the following conditions:

9.1.5.1 On-site Infiltration of Stormwater. In Part 2.1.1 (Control Measure Selection and Design Considerations), you are required to consider opportunities for infiltrating runoff onsite. This is encouraged, but it should only be done if consistent with the statutes and rules of the Department of Environmental Services written to protect groundwater. Infiltration BMPs are not recommended at industrial sites except in areas where industrial activities do not occur, such as at office buildings and their associated parking facilities, or in drainage areas at the facility where a certification of no exposure will always be possible [see 40 CFR 122.26(g)]. Other justifiable reasons for not using on-site infiltration BMPs include the following:

- The facility is located in a wellhead protection area as defined in RSA 485-C:2; or
- The facility is located in an area where groundwater has been reclassified to GAA, GAI or GA2 pursuant to RSA 485-C and Env-Ws 420; or
- Any areas that would be exempt from the groundwater recharge requirements contained in Env-Ws 415.41, including all land uses or activities considered to be a "High-load site."

9.1.5.2 Maintenance of infiltration best management practices. In addition to the requirements in Part 5, the SWPPP must contain the following:

- A description of and the location of each on-site infiltration BMP installed;
- The maintenance procedures that will be followed to ensure proper operation, including the removal of sediment from pretreatment devices;

- The inspection procedures that will be followed at least annually. These should include the procedures for ensuring that the stormwater being infiltrated is not exposed to industrial pollutants and the procedures for ensuring proper drainage to prevent mosquito breeding;
- The employee name (or title of the position) who is a member of the stormwater pollution prevention team (see Part 5.1.1) who will be responsible for the maintenance required in this section, the inspections required in this section, and any necessary corrective actions required in Part 3; and
- Records for all maintenance performed, inspections conducted, and corrective actions taken.

9.1.5.3 Discontinue, Permit or Register On-site Infiltration BMP if Necessary. If at any time a certification of no exposure can no longer be made for any of the stormwater to be infiltrated, then the infiltration BMP must cease for that portion of the runoff or the discharge must be permitted or registered as appropriate. The following may be required:

- Infiltration BMP that meet the definition of a Class V well or that infiltrates stormwater via a subsurface structure (i.e. concrete chambers, dry well, leach field, etc.) will need an underground injection control (UIC) registration from NHDES; and
- Permitting as a groundwater discharge as required in Env-Ws 1500, if the stormwater will or may contain regulated contaminants.

The SWPPP must be modified immediately if new infiltration BMPs are proposed or if existing infiltration BMPs will cease.

9.1.5.4 Required NHDES notification.

- Notify the NHDES Groundwater Discharge Permit Coordinator immediately if you believe that any infiltration BMP may need to be permitted or registered (See Part 9.1.5.3) during the permit term.
- Notify the NHDES Wastewater Engineering Bureau immediately of any plans to discharge any new non-stormwater discharges during the permit term. This does not include the allowable non-stormwater discharges listed in Part 1.1.3.

9.1.5.5 Information that may be requested by NHDES. To ensure compliance with RSA 485-C, RSA 485-A, RSA 485-A:13, I(a), Env-Wq 400 and Env-Ws 401 the following information may be requested by NHDES. This information must be kept on site unless you receive a written request from NHDES that it be sent to the address shown in Part 9.1.5.6.

- A site map required in Part 5.1.2, showing the type and location of all on-site infiltration BMPs utilized at the facility or the reason(s) why none were installed.
- A list of all non-stormwater discharges that occur at the facility, including their source locations and the control measures being used (See Sections 1.1.3 and 5.1.3.4).
- A copy of the Annual Reports required in Part 7.2.

9.1.5.6 Where to Submit Information. All required or requested documents must be sent to: NH Department of Environmental Services, Wastewater Engineering Bureau, Permits & Compliance Section, P.O. Box 95, Concord, NH 03302-0095.

9.1.5.7 Modification of Clean Water Act Section 401 Water Quality Certification. When NHDES determines that additional water quality certification requirements are necessary to the protect water quality, it may require individual dischargers to meet additional conditions to obtain or continue coverage under the MSGP. Any such conditions must be supplied to the permittee in writing. Any required pollutant loading analyses and any designs for structural best management practices necessary to protect water quality must be prepared by a civil or sanitary engineer registered in New Hampshire.

9.1.6 RIR05000I: Indian Country lands within the State of Rhode Island.

No additional requirements.

9.1.7 VTR05000F: Federal Facilities in the State of Vermont.

No additional requirement.

9.2 Region 2

9.2.1 PPR050000: Commonwealth of Puerto Rico

No additional requirements.

9.3 Region 3

9.3.1 DCR050000: The District of Columbia

Permittees in the District of Columbia must also meet the following conditions:

9.3.1.1 Compliance with District of Columbia Laws and Regulations. Discharges covered by the MSGP must comply with the District of Columbia Water Pollution Control Act, (D.C. Code § 8-103.01 *et seq.*) and its implementing regulations in Title 21, Chapters 11 and 19 of the District of Columbia Municipal Regulations. Nothing in this permit will be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to District of Columbia laws and regulations.

9.3.1.2 Submission of SWPPP. The Stormwater Pollution Prevention Plan (SWPPP) shall be submitted to the District Department of the Environment (Department) at the same time the NOI is submitted to EPA, to ensure compliance with District of Columbia laws and regulations.

9.3.1.3 Submission of No Exposure Certification and NOT. Copies of the No Exposure Certification and Notice of Termination (NOT) shall be submitted to the Department at the same time it is submitted to EPA.

9.3.1.4 Authorization to Inspect. The permittee shall allow the Department to inspect any facilities, equipment, practices, or operations regulated or required under this permit and to access records maintained under the conditions of this permit.

9.3.1.5 Submission of Reports. Signed copies of all reports required under this permit including the reporting requirements of Appendix B.12 shall be submitted to the Department at the same time it is submitted to EPA.

9.3.1.6 Where to Submit Information. All required or requested documents shall be sent to the: District Department of the Environment, Natural Resources Administration, 51 N Street, NE, 5th Floor, Washington, D.C. 20002, Attention: Associate Director, Water Quality Division.

9.3.2 DER05000F: Federal Facilities within the State of Delaware.

No additional requirements.

9.4 Region 4

Permit coverage not available.

9.5 Region 5

9.5.1 MIR05000I: Indian Country Lands within the State of Michigan

No additional requirements.

9.5.2 MNR05000I: Indian Country Lands within the State of Minnesota

9.5.2.1 Fond du Lac Reservation

The following conditions apply only to discharges on the Fond du Lac Reservation.

9.5.2.1.1 Submission of NOI and NOT. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) shall be submitted to the Office of Water Protection at the same time it is submitted to EPA.

9.5.2.1.2 Submission of SWPPP. A copy of the Stormwater Pollution Plan (SWPPP) shall be submitted to the Office of Water Protection at least thirty (30) days in advance of submitting the NOI to EPA.

9.5.2.1.3 Benchmark Monitoring for TSS. Benchmark Monitoring Concentration (BMC) for Total Suspended Solids (TSS) shall be 10 mg/L for Sector A (Timber Products), Sector J (Mineral Mining and Dressing), and Sector M (Automobile Salvage Yards) that conduct Industrial Activities on the Fond du Lac Reservation.

9.5.2.1.4 Benchmark Monitoring for Nitrate plus Nitrite Nitrogen. Benchmark Monitoring Concentration (BMC) fro Nitrate plus Nitrite Nitrogen shall be 0.12mg/L for Sector J (Mineral Mining and Dressing) that conduct Industrial Activities on the Fond du Lac Reservation.

9.5.2.1.5 Submission of Monitoring Reports. Copies of all Monitoring Reports required by this permit shall be submitted to the Office of Water Protection.

9.5.2.1.6 Where to Submit Information. All required or requested documents shall be sent to the: Fond du Lac Reservation Office of Water Protection (OWP) at Fond du Lac Reservation, Office of Water Protection, 1720 Big Lake Road, Cloquet, Minnesota 55720.

9.5.2.2 Grand Portage Reservation

The following conditions apply only to discharges on the Grand Portage Reservation.

9.5.2.2.1 Compliance with Grand Portage Reservation Laws and Regulations. All industrial stormwater discharges authorized by this permit must comply with the Grand Portage Water Quality Standards, Applicable Federal Standards, and the Grand Portage Water Resources Ordinance, as amended, ("Water Resources Ordinance").

9.5.2.2.2 Additional Monitoring Required by Grand Portage Reservation. The Board must be contacted, at the address in Part 9.5.2.2.10, at the onset of writing the Stormwater Pollution Prevention Plan (SWPPP). Grand Portage may require monitoring of stormwater discharges as determined on a case-by-case basis. If the Board determines that a monitoring plan is necessary, the monitoring plan must be prepared and incorporated in the SWPPP before the Notice of Intent (NOI) is submitted to EPA.

9.5.2.2.3 Submission of SWPPP and NOI. A copy of the SWPPP and NOI must be submitted to the Board for review and approval at least 30 days before submitting the NOI to EPA.

9.5.2.2.4 Submission of NOT. A copy of the Notice of Termination (NOT) must be submitted to the Board at the address in Part 9.5.3.10 at the same time it is submitted to EPA.

9.5.2.2.5 Additional Information. If requested by the Grand Portage Environmental Department, the permittee is required to provide additional information necessary for a case-by-case eligibility determination to assure compliance with the Grand Portage Water Quality Standards and any Applicable Federal Standards.

9.5.2.2.6 ***Submission of Monitoring Data.*** All analytical data (e.g., Discharge Monitoring Reports, etc.) must be submitted to the Board at the same time it is submitted to EPA.

9.5.2.2.7 ***Water Quality Standards.*** Discharges that the Board has determined to be or may reasonably be expected to be contributing to a violation of Grand Portage Water Quality Standards or Applicable Federal Standards are not authorized by this permit. Upon receipt of this determination EPA will notify the permittee to either improve their SWPPP to comply with Grand Portage Water Standards or apply for and obtain an individual NPDES permit for these discharges.

9.5.2.2.8 ***Appeals.*** Appeals related to Tribal decisions actions, or enforcement taken pursuant to any of the preceding conditions will be heard by the Grand Portage Tribal Court.

9.5.2.2.9 ***Definitions.*** The definitions set forth in the Grand Portage Water Resources Ordinance, as amended, govern these certification conditions.

9.5.2.2.10 ***Where to Submit Information.*** All required or requested documents shall be sent to the: Grand Portage Environmental Resources Board, P.O. Box 428, Grand Portage, MN 55605.

9.5.3 WIR05000I: Indian Country lands within the State of Wisconsin, except those on Sokaogon Chippewa Community lands

No additional requirements.

Note: Facilities in the Sokaogon Chippewa Community are not eligible for stormwater discharge coverage under this permit. Contact the EPA Region 5 office for an individual permit application.

9.6 Region 6

9.6.1 LAR05000I: Indian Country Lands within the State of Louisiana

No additional requirements.

9.6.2 The State of New Mexico, except Indian Country lands.

Permittees in New Mexico must also meet the following conditions:

9.6.2.1 ***Certification Requirements.*** Operators are not eligible to obtain authorization under this permit for all new and existing stormwater discharges to outstanding national resource waters (ONRWs) (also referred to as "Tier 3" waters.) As of 2/16/06, the following ONRWs have been designated by the SWQB in New Mexico (see Subsection D of 20.6.4.9 NMAC). (1) Rio Santa Barbara, including the west, middle and east forks from their headwaters downstream to the boundary of the Pecos Wilderness; and (2) the water

within the US forest service Valle Vidal special management unit including: (a) Rio Costilla, including Comanche, La Cueva, Fernandez, Chuckwagon, Little Costilla, Holman, Gold, Grassy, LaBelle, and Vidal creeks, from their headwaters downstream to the boundary of the US forest service Valle Vidal special management unit. (b) Middle Ponil creek, including the waters of Greenwood Canyon, from their headwaters downstream to the boundary of the Elliott S. Barker wildlife management area; (c) Shuree lakes; (d) North Ponil creek, including McCrystal and Seally Canyon creeks, from their headwaters downstream to the boundary of the US forest service Valle Vidal special management unit; and (e) Leandro creek from its headwaters downstream to the boundary of the US forest service Valle Vidal.

9.6.3 Indian Country lands within the State of New Mexico, except Ute Mountain Reservations Lands (see Region 8) and Navajo Reservation Lands (see Region 9).

9.6.3.1 Pueblo of Acoma.

The following condition applies only to discharges on the Pueblo of Acoma:

9.6.3.1.1 Submission of NOI and NOT. The Pueblo will require the owner/operator of each facility on or bordering the Pueblo of Acoma to submit copies of its Notice of Intent (NOI) and Notice of Termination (NOT) to the Haaku Water Office (HWO) Director at the same time it is submitted to EPA.

9.6.3.1.2 SWPPP Availability. The HWO may request a copy of the Stormwater Pollution Prevention Plan (SWPPP) and the permittee is required to submit the SWPPP to the HWO upon such request.

9.6.3.1.3 Submission of Monitoring Data. All analytical data shall also be provided to the HWO at the same time it is submitted to EPA.

9.6.3.1.4 Where to Submit Information. All required or requested documents shall be sent to: HWO Director, Haaku Water Office, P.O. Box 309, Pueblo of Acoma, NM 87034.

9.6.3.2 Pueblo of Isleta.

The following conditions apply only to discharges on the Pueblo of Isleta:

9.6.3.2.1 Submission of SWPPP. The Stormwater Pollution Prevention Plan (SWPPP) must be submitted to the Pueblo of Isleta prior to submitting the Notice of Intent (NOI) to EPA.

9.6.3.2.2 SWPPP Modification. Any update or amendment of the SWPPP shall be submitted to the Pueblo of Isleta within 5 calendar days of its finalization.

9.6.3.2.3 Submission of Monitoring Data. All monitoring data and reports shall be submitted to the Pueblo of Isleta at the same time they are submitted to EPA.

9.6.3.2.4 Submission of Inspection Reports. All inspection reports, including the Compliance Evaluation Report, shall be submitted to the Pueblo of Isleta within 5 calendar days of their finalization.

9.6.3.2.6 Additional Reporting. Any spill or leak directly to waters designated by the Pueblo of Isleta as 'Primary Contact Recreation' and/or 'Primary Contact Ceremonial' shall be considered significant if it contains toxic or hazardous pollutants, oil or petroleum products. The Pueblo of Isleta shall be notified of any spill containing toxic or hazardous pollutants and of any spill of oil or petroleum product within 8-hours of spill detection.

9.6.3.2.7 Benchmark Monitoring. Following 4 quarters of benchmark monitoring, if the maximum value of the 4 monitoring values does not exceed the benchmark, you have fulfilled your monitoring requirements for that parameter for the permit term. If any of the 4 monitoring values exceeds the benchmark, quarterly monitoring shall continue until no exceedances of the benchmark are detected in four consecutive quarters. Following this determination, you may reduce monitoring for that pollutant to once per year for the duration of the permit period unless an exceedance is again detected at which time quarterly sampling will again be required.

9.6.3.2.8 Corrective Action. You must take corrective action following any benchmark exceedance if you determine as a result of reviewing your SWPPP that your SWPPP does not meet the requirements of Part 5 of this permit.

9.6.3.2.9 Conditions applicable only to Sector G, Metal Mining. (See Part G.4.2.1. Inspection Frequency). Inspections must be conducted at least once every 7 calendar days or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.25 inches or greater. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized, if runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), or construction is occurring during seasonal arid periods in arid areas and semi-arid areas.

9.6.3.2.10 Where to Submit Information. All required or requested documents shall be sent to: Director, Environment Department, Pueblo of Isleta, P.O. Box 1270, Isleta, NM 87022.

9.6.3.3 Pueblo of Nambe.

The following conditions apply only to discharges on the Pueblo of Nambe:

9.6.3.3.1 Submission of NOI and NOT. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) shall be submitted to the Pueblo of Nambe at the same time it is submitted to EPA.

9.6.3.3.2 SWPPP Availability. A copy of the Stormwater Pollution Prevention Plan (SWPPP) must also be submitted to the Pueblo of Nambe, if requested, at the same time the NOI is submitted to EPA.

9.6.3.3.3 Submission of Reports. All analytical data and a copy of all written reports shall be provided to the Pueblo of Nambe at the same time they are provided to the EPA, if requested by the Pueblo of Nambe.

9.6.3.3.4 Where to Submit Information. All required or requested documents shall be sent to: Alan G Hook, Manager, Pueblo of Nambe, Department of Environment and Natural Resources (DENR), Rt. 1 Box 117-BB, Sante Fe, NM 87506.

9.6.3.4 Pueblo of Pojoaque.

The following conditions apply only to discharges on the Pueblo of Pojoaque:

9.6.3.4.1 Submission of NOI and NOT. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) shall be provided at the same time it is provided to EPA.

9.6.3.4.2 SWPPP Availability. The Pueblo may request a copy of the Stormwater Pollution Prevention Plan (SWPPP) and the permittee is required to submit the SWPPP to the Pueblo upon such request.

9.6.3.4.3 Submission of Monitoring Data. All analytical data (e.g., Discharge Monitoring Reports, etc) shall be submitted to the Pueblo at the same time it is submitted to EPA.

9.6.3.4.4 Where to Submit Information. All required or requested documents shall be sent to: Luke Mario Duran, Director, Environment Department, 5 West Gutierrez, Suite 2B, Sante Fe, NM 87506.

9.6.3.5 Ohkay Owingeh - (formerly known as San Juan Pueblo).

The following condition applies only to discharges on Ohkay Owingeh (formerly known as San Juan Pueblo):

9.6.3.5.1 Submission of NOI and NOT. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) shall be submitted to Ohkay Owingeh at the same time it is submitted to EPA.

9.6.3.5.2 Submission of Monitoring Data and Additional Reporting. Copies of monitoring data or other documents required under the permit must also be submitted to Ohkay Owingeh upon request.

9.6.3.5.3 Where to Submit Information. All required or requested documents shall be sent to the: Ohkay Owingeh, Office of Environmental Affairs, P.O. Box 1099, San Juan Pueblo, NM 87566.

9.6.3.6 Pueblo of Sandia.

The following conditions apply only to discharges on the Pueblo of Sandia:

9.6.3.6.1 Submission of NOI. A copy of the Notice of Intent (NOI) must be submitted to the Environment Director at the same time it is submitted to EPA.

9.6.3.6.2 Submission of NOT. A copy of the Notice of Termination (NOT) must be submitted to the Environment Director at the same time it is submitted to EPA. The Pueblo of Sandia must verify termination of activities prior to EPA's termination of the permit.

9.6.3.6.3 SWPPP Availability. The Stormwater Pollution Prevention Plan (SWPPP) must be made available to Pueblo of Sandia Environment Department personnel upon request.

9.6.3.6.4 Submission of Monitoring Data. All analytical data (e.g., Discharge Monitoring Reports, follow-up monitoring reports, Exceedance reports, etc) shall be submitted to the Environment Director at the same time it is submitted to EPA.

9.6.3.6.5 Submission of Quarterly Visual Assessments. Copies of all "Quarterly Visual Assessments" (Part 4.2) must be submitted to the Environment Director within 7 days of completion.

9.6.3.6.6 Submission of Comprehensive Site Inspection Reports. Copies of all "Comprehensive Site Inspection Reports" (Part 4.3) must be submitted to the Environment Director within 10 days of completion.

9.6.3.6.7 Additional Reporting. Any notice of release of oils or hazardous substances shall be provided to the Environment Director within twenty-four (24) hours of becoming aware of the circumstance, followed by the reporting requirements of 40 CFR 110, 40 CFR 302, and 40 CFR 302 relating to spills or other releases of oil or hazardous substances.

The permittee must also telephone the Pueblo of Sandia Environment Department at (505) 867-4533 of any spills or unauthorized discharges that may affect drinking water supplies, ceremonial and recreational surface waters, elicit fish kills, harm wildlife or endangered species or endanger human health or the environment within ten (10) hours of becoming aware of the circumstance, followed by the written report when it is sent to the EPA.

9.6.3.6.8 Water Quality Standards. If requested by the Pueblo of Sandia Environment Department, the permittee shall provide additional information necessary for a "case by case" eligibility determination to assure compliance with Pueblo of Sandia Water Quality Standards.

Note: Upon receipt of a determination by the Pueblo of Sandia that discharges from a perimittee have reasonable potential to be causing or contributing to a violation of Pueblo of Sandia Water Quality Standards, EPA Region 6 would be notified. EPA Region 6 would then notify the permittee to either improve their Stormwater Pollution Prevention Plan (SWPPP) to achieve compliance with the Pueblo of Sandia Water Quality Standards or apply for and obtain an individual NPDES permit for these discharges per CFR 122.28(b)(3).

9.6.3.6.9 Authorization to Inspect. If requested by the Pueblo of Sandia Environment Department the permittee must allow the Pueblo to perform its own routine or compliance inspection to ensure the permittee is in compliance and any discharge is not contributing to a violation of the Pueblo of Sandia's Water Quality Standard.

9.6.3.6.10 Alternative Permit. Any industry discharging to waters of the United States that has been designated by the EPA as an impaired water shall not be covered under the Multi-Sector General Permit but will be required to obtain an individual permit.

9.6.3.6.11 Where to Submit Information. All required or requested documents shall be sent to: Environment Director, Pueblo of Sandia Environment Department at 481 Sandia Loop, Bernalillo, New Mexico 87004

9.6.3.7 Pueblo of Santa Clara.

The following condition applies only to discharges on the Santa Clara Indian Pueblo:

9.6.3.7.1 Submission of NOI and NOT. The Notice of Intent (NOI) and Notice of Termination (NOT) must be submitted to the Santa Clara Pueblo Governor's Office at the same time it is submitted to EPA

9.6.3.7.2 SWPPP Availability. A copy of the Stormwater Pollution Prevention Plan must be made available to the Pueblo of Santa Clara staff upon request.

9.6.3.7.3 Where to Submit Information. All required or requested documents shall be sent to the: Santa Clara Pueblo, Governor's Office, P.O. Box 580, Espanola, NM 87532.

9.6.3.8 Pueblo of Taos

The following conditions apply only to discharges on the Pueblo of Taos:

9.6.3.8.1 Submission of NOI and NOT. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) shall be provided at the same time it is provided to EPA.

9.6.3.8.2 Submission of SWPPP. Upon request by the Pueblo, a copy of the Stormwater Pollution Prevention Plan must be provided to the Taos Pueblo Environmental Officer.

9.6.3.8.3 Submission of Data and Reports. All analytical data and a copy of all written reports shall be provided to the Pueblo at the same time it is provided to the EPA.

9.6.3.8.4 Where to Submit Information. All requested materials shall be sent to Program Manager, Taos Pueblo Environmental Office Program Manager, P.O. Box 1846, Taos, NM, 97571.

9.6.3.9 Pueblo of Tesuque.

The following conditions apply only to discharges on the Pueblo of Tesuque:

9.6.3.9.1 Submission of NOI and NOT. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) shall be provided at the same time it is provided to EPA.

9.6.3.9.2 Submission of SWPPP. A copy of the Stormwater Pollution Prevention Plan must also be made available to the Pueblo of Tesuque at the time the NOI submitted.

9.6.3.9.3 Submission of Monitoring Data. All analytical data (e.g., Discharge Monitoring Reports, etc) shall be provided to the Pueblo at the same time it is provided to the EPA.

9.6.3.9.4 Where to Submit Information. All required or requested documents shall be sent to: Jennifer Montoya, Director, Pueblo of Tesuque Environment Department, Rt. 42 Box 360-T, Santa Fe, NM 87506.

9.6.4 OKR05000I: Indian Country lands within the State of Oklahoma

9.6.4.1 ***Certification Requirements.*** In order to protect downstream waters subject to the state of Oklahoma's Water Quality Standards (OAC 785:45-5-25) coverage under this permit is not available for any new or proposed discharges located within the watershed of any part of the Oklahoma Scenic Rivers system, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork Creek, Little Lee Creek, and Big Lee Creek or to any water designated as an Outstanding Resource Water (ORW). Existing discharges of stormwater in these watersheds may be permitted under this permit only from point sources existing as of June 25, 1992, whether or not such stormwater discharges were permitted as point sources prior to June 25, 1992. For any such existing discharge, increased load of any pollutant above levels of June 25, 1992 is prohibited. Any new or proposed discharges not eligible for permit coverage under this paragraph must apply for an individual permit.

9.6.4.2 Pawnee Nation of Oklahoma

The following conditions apply only to discharges on the Pawnee Nation of Oklahoma:

9.6.4.2.1 Submission of NOI and NOT. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) shall be provided at the same time it is provided to EPA.

9.6.4.2.2 ***Submission of SWPPP.*** Copies of the Stormwater Pollution Prevention Plan must be provided to the Director of the Pawnee Nation Department of Environmental Conservation and Safety (DECS) no later than the same time as submitted to EPA.

9.6.4.2.3 ***Submission of Data and Reports***. All analytical data and a copy of all written reports shall be provided to DECS no later than the same time it is submitted to the EPA.

9.6.4.2.4 ***Spills or Leaks.*** All spills or leaks of any size or amount occurring upon the Pawnee Nation shall be reported to DECS and the Bureau of Indian Affairs – Pawnee Agency, Bureau of Land Management-Moore Office, Oklahoma City, immediately upon detection as required under Title X, Article 6, section 611 (Pawnee Nation Oil Pollution Control Act – Emergency Response/Notification) of the Pawnee Nation Law and Order Code.

9.6.4.2.5 ***Discharges from Secondary Containment.*** Discharge of stormwater from secondary containment is prohibited and shall not be authorized as cited in Title X, Article 6, Section 604(B) (Pawnee National Oil Pollution Control Act – Secondary Containment).

9.6.4.2.6 ***Where to Submit Information.*** All required or requested documents shall be sent to: Director of the Pawnee Nation Department of Environmental Conservation and Safety (DECS), P.O. Box 470, Pawnee, OK 74058.

9.6.5 OKR05000F: Facilities in the State of Oklahoma not under the jurisdiction of the Oklahoma Department of Environmental Quality, except those on Indian Country lands.

9.6.5.1 ***Certification Requirements.*** In accordance with Oklahoma's Water Quality Standards (OAC 785:45-5-25) coverage under this permit is not available for any new or proposed discharges located within the watershed or any part of the Oklahoma Scenic Rivers system, including Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork River, Little Lee Creek, and Big Lee Creek or to any water designated as an Outstanding Resource Water (ORW). Existing discharges of stormwater in these watersheds may be permitted under this permit only from point sources existing as of June 25, 1992, whether or not such stormwater discharges were permitted as point sources prior to June 25, 1992. For any such existing discharge, increased load of any pollutant above levels of June 25, 1992 is prohibited. Any new or proposed discharges not eligible for permit coverage under this paragraph must apply for an individual permit.

9.6.6 TXR05000F: Facilities in the State of Texas not under the jurisdiction of the Texas Commission on Environmental Quality, except those on Indian Country lands.

No additional requirements.

9.6.7 TXR05000I: Indian Country lands within the State of Texas.

No additional requirements.

9.7 Region 7

Permit coverage not available

9.8 Region 8

Permit coverage not available

9.9 Region 9

9.9.1 ASR050000: The islands of American Samoa

The following condition applies only to discharges on the American Samoa:

9.9.1.1 Submission of NOI. All Notices of Intent (NOIs) for stormwater discharges covered under the general permits in American Samoa shall be submitted to the American Samoa Environmental Protection Agency at the same time it is submitted to EPA.

9.9.1.2 Submission of SWPPPs. All SWPPPs for stormwater discharges in American Samoa shall be submitted to the American Samoa Environmental Protection Agency for review and approval.

9.9.2 AZR05000I: Indian Country lands within the State of Arizona, including Navajo Reservation lands in New Mexico and Utah.

9.9.2.1 Hualapai Tribe (Arizona)

The following condition applies only to discharges on the Hualapai Tribe:

9.9.2.1.1 Submission of NOI and SWPPP. All Notices of Intent (NOIs) and Stormwater Pollution Plans (SWPPPs) for stormwater discharges on Hualapai Tribal lands shall be submitted to the Water Resource Program through the Tribal Chairman for review and approval

9.9.2.1.2 Where to Submit Information. All required or requested documents shall be sent to: Water Resource Program through the Tribal Chairman, P.O. Box 179, Peach Springs, AZ 86434.

9.9.2.2 Navajo Nation (Arizona).

The following conditions apply only to discharges on the Navajo Nation:

9.9.2.2.1 Submission of NOI. Notices of Intent (NOI) must be submitted to Navajo EPA for review, comment and tracking.

9.9.2.2.2 Submission of SWPPP. Copies of Stormwater Water Pollution Plans (SWPPPs) and supporting Best Management Practices (BMPs) must be submitted to Navajo EPA for review and concurrence.

9.9.2.2.3 Submission of Monitoring Data. Copies of all monitoring reports must be provided to Navajo EPA.

9.9.2.3 White Mountain Apache Tribe (Arizona).

The following condition applies only to discharges on the White Mountain Apache Tribe:

9.9.2.3.1 Submission of NOI. All Notices of Intent for proposed stormwater discharges under the MSGP must be submitted to the Tribal Environmental Office.

9.9.2.3.2 Where to Submit Information. All required or requested documents shall be sent to the: Tribal Environmental Office, Attention: Doreen E. Gatewood, P.O. Box 1000, Whiteriver, AZ 85941.

9.9.3 CAR05000I: Indian Country lands within the State of California.

9.9.3.1 Big Pine Paiute Tribe of the Owens Valley (California).

The following condition applies only to discharges on the Big Pine Paiute Tribe of the Owens Valley:

9.9.3.1.1 Submission of NOI. Copies of Notices of Intent (NOIs) shall be submitted to the Tribe at the same time (or prior to) it is submitted to EPA.

9.9.3.2 Bishop Paiute Tribe (California).

The following condition applies only to discharges on the Bishop Paiute Tribe:

9.9.3.2.1 Submission of NOI. Copies of Notices of Intent (NOIs) for proposed stormwater discharges must be submitted to the Tribe's Environmental Management Office for review and comment by the Tribal Environmental Protection Agency (TEPA) Board.

9.9.3.3 Hoopa Valley Tribe (California).

The following conditions apply only to discharges on the Hoopa Valley Tribe:

9.9.3.3.1 ***Submission of NOI.*** All Notices of Intent (NOI) submitted for stormwater discharges under the general permits in Hoopa Valley Indian Reservation (HVIR) shall be submitted to the Tribal Environmental Protection Agency (TEPA).

9.9.3.3.2 ***Submission of SWPPP.*** All Stormwater Pollution Plans (SWPPPs) for stormwater discharges in HVIR shall be submitted to TEPA for review and approval.

9.9.3.4 Twenty-Nine Palms Band of Mission Indians (California)

The following conditions apply only to discharges on the Twenty-Nine Palms Band of Mission Indians:

9.9.3.4.1 ***Submission of NOI.*** Notices of Intent (NOI) must be submitted to the 29 Palms Tribal EPA for review, comment, and tracking.

9.9.3.4.2 ***Submission of SWPPP.*** Copies of Stormwater Pollution Prevention Plans (SWPPPs) and supporting best management practices (BMPs) must be submitted to the 29 Palms Tribal EPA for review and compliance.

9.9.3.4.3 ***Submission of Monitoring Data.*** Copies of all monitoring reports must be provided to the 29 Palms Tribal EPA.

9.9.4 GUR050000: The Island of Guam.

No additional requirements.

9.9.5 JAR050000: Johnston Atoll.

No additional requirements.

9.9.6 MWR050000: Midway Island and Wake Island.

No additional requirements.

9.9.7 Commonwealth of the Northern Mariana Islands

The following conditions apply only to discharges on the Commonwealth of the Northern Mariana Islands (CNMI):

9.9.7.1 ***Submission of NOI.*** Pursuant to Part 10.3(h)(5) of the Standards, every Notice of Intent (NOI) submitted to EPA for activities in the CNMI that are to be covered under this permit must be postmarked no less than seven (7) calendar days prior to any stormwater discharges and a copy must be submitted to the Director of Division of Environmental Quality (DEQ) no later than seven (7) calendar days prior to any stormwater discharges.

9.9.7.2 Submission of SWPPP. Pursuant to Part 10.3(h)(3) of the Standards, for any activity subject to the permit in the CNMI, a Stormwater Pollution Prevention Plan (SWPPP) for stormwater discharges associated with industrial activities must be submitted to DEQ and approved by the Director of DEQ prior to submission of the NOI to EPA.

9.9.7.3 Submission of SWPPP Approval Letter. Pursuant to Part 10.3(h)(4) of the Standards, every NOI submitted to EPA for activities in the CNMI that are to be covered under this permit must be accompanied by a SWPPP approval letter from DEQ.

9.9.7.4 Submission of Monitoring Data. Pursuant to Part 10.3(h)(6) of the Standards, permittees covered under this permit must submit copies of all monitoring reports to DEQ.

9.9.7.5 Certification. Pursuant to Section 10.6 of the Standards, this certification shall be subject to amendment or modification if and to the extent that existing water quality standards are made more stringent, or new water quality standards are adopted, by DEQ.

This certification does not relieve the applicant from obtaining other applicable local or federal permits.

9.9.8 NVR05000I: Indian Country lands within the State of Nevada, including the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Confederated Tribes of the Goshute Reservation in Utah

9.9.8.1 Pyramid Lake Paiute Tribe (Nevada)

The following conditions apply only to discharges on the Pyramid Lake Paiute Tribe:

9.9.8.1.1 Submission of NOI. Notice of Intents (NOI) must be submitted to the Tribe for review, comments, and tracking.

9.9.8.1.2 Submission of SWPPP. **C**opies of Stormwater Pollution Prevention Plans (SWPPPs) and supporting best management practices (BMPs) must be submitted to the Pyramid Lake Paiute Tribe for review and concurrence.

9.9.8.1.3 Submission of Monitoring Data. Copies of all monitoring reports must be submitted to the Pyramid Lake Paiute Tribe.

9.10 Region 10

Table 9.10-1 NOI Submittal Deadlines/Discharge Authorization Dates for Facilities within Region 10 Areas		
Category	**NOI Submission Deadline**	**Discharge Authorization Date**[1]
Existing Dischargers - in operation as of October 30, 2005 and authorized for coverage under MSGP 2000.	No later than May 27, 2009.	30 days after EPA posts your NOI. Your authorization under the MSGP 2000 is automatically continued until you have been granted coverage under this permit or an alternative permit, or coverage is otherwise terminated.
New Dischargers or New Sources - have commenced discharging between October 30, 2005 and May 27, 2009.	As soon as possible but no later than May 27, 2009.	30 days after EPA posts your NOI.
New Dischargers or New Sources - commence discharging after May 27, 2009.	A minimum of 60 days prior to commencing discharge, or a minimum of 30 days if your SWPPP is posted on the Internet during this period and the Internet address (i.e., URL) to your SWPPP is provided on the NOI form.	If you post your SWPPP on the Internet, 30 days after EPA posts your NOI. Otherwise, 60 days after EPA posts your NOI.
New Owner/Operator of Existing Discharger - transfer of ownership and/or operation of a facility whose discharge is authorized under this permit	A minimum of 30 days prior to date that the transfer will take place to the new owner/operator.	30 days after EPA posts your NOI.
Other Eligible Dischargers - in operation prior to October 30, 2005, but not covered under the MSGP 2000 or another NPDES permit.	Immediately, to minimize the time discharges from the facility will continue to be unauthorized.	If you post your SWPPP on the Internet, 30 days after EPA posts your NOI. Otherwise, 60 days after EPA posts your NOI.

[1] Based on a review of your NOI or other information, EPA may delay your authorization for further review, notify you that additional effluent limitations are necessary, or may deny coverage under this permit and require submission of an application for an individual NPDES permit, as detailed in Part 1.6. In these instances, EPA will notify you in writing of the delay, of the need for additional effluent limits, or of the request for submission of an individual NPDES permit application.

9.10.1 AKR050000: The State of Alaska, except Indian Country lands.

Deadlines for the submittal of Notices of Intent are listed in Table 9.10-1. Permittees in Alaska must also meet the following conditions:

9.10.1.1 Submission of NOI, NOT and all other information. A copy of the Notice of Intent, the No Exposure Certification, the Notice of Termination, all information collected and submitted to EPA pursuant to Parts 3.4 and 7, and reports required under Appendix B.12, shall be sent to the Alaska Department of Environmental Conservation (ADEC) at the same time it is submitted to the EPA. Submittals to ADEC shall be made to the following address:

Alaska Department of Environmental Conservation
Wastewater Discharge/Storm Water
555 Cordova St.
Anchorage, AK 99501

9.10.1.2 Plan approval for nondomestic wastewater treatment works. For all new facilities operators who construct, install or operate any part of a nondomestic wastewater treatment works shall submit a copy of the engineering plans to ADEC for review at the address given above (see 18 AAC 72.600), and pay an engineering plan review fee (see 18 AAC 72.955). Engineering plan approval must be obtained from ADEC prior to construction. Nondomestic wastewater includes stormwater runoff.

9.10.1.3 Submission of SWPPP for new dischargers. Operators who have not previously obtained coverage under the MSGP must submit a copy of the Storm Water Pollution Prevention Plan (SWPPP) for the facility, developed by qualified person, to ADEC for review at the time of submittal of the NOI. The SWPPP shall be accompanied by the state-required plan review fee (see 18 AAC 72.955).

9.10.1.4 Submission of SWPPP for existing dischargers. Operators who submitted a SWPPP to ADEC under the previous MSGP must submit copies of any modifications of their SWPPP to meet the requirements of the MSGP 2008 with their NOI.

9.10.1.5 Submission of Additional Information. ADEC reserves the right to request copies of the SWPPP modifications made to comply with Part 5.2. The operator shall submit the SWPPP modification to ADEC within 14 days of such a request.

9.10.1.6 Conditions Applicable to New Dischargers and New Sources under Sector G (Metal Mining) and Sector H (Coal Mining). For new dischargers and new sources operating under Sector G, Metal Mining (specifically, those facilities that are designed to process 500 or more tons per day) and Sector H, Coal Mining, the following conditions apply:

- The operator shall develop a new SWPPP for each phase of the project: i.e., the exploration, construction, active mining, inactive mining, and reclamation phases;

- The operator shall submit the construction phase SWPPP to ADEC for review at least 90 days prior to the start of construction;
- The operator shall submit the active mining phase SWPPP to ADEC for review at least 90 days prior to the start of the active mining;
- The operator shall submit a copy of engineering plans for nondomestic wastewater treatment facilities used during both the construction phase and the active mining phase to ADEC for review at least 90 days prior to the start of construction;
- Representatives of the operator and the prime site construction contractor shall meet with ADEC representatives in a pre-construction conference at least 20 days before the start of the construction phase to discuss the details of the construction phase SWPPP and stormwater management during construction;
- The operator shall have at least one person on-site during construction that is qualified and trained in the principles and practices of erosion and sediment control and that has the authority to direct the maintenance of stormwater control measures.

9.10.1.7 Benchmark Monitoring for pH and turbidity. The benchmark monitoring concentrations, as described in Part 8, may exceed the Alaska water quality standards. In those instances where the benchmark monitoring concentration exceeds the Alaska water quality standard, the Alaska water quality standard shall be used as the benchmark monitoring concentration. The following provides the instances where the Alaska Water Quality Standards shall be used as the benchmark values:

- For Sectors A, D, E, G, J, K, L, O, and S, the acceptable range for pH is 6.5 to 8.5 and may not vary more than 0.5 pH units from natural conditions. See 18 AAC 70.020(b)(6).
- For Sector G, turbidity in fresh water may not exceed 5 nephelometric turbidity units (NTU) above natural conditions when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. See 18 AAC 70.020(b)(12)(A)(i).

9.10.2 AKR05000I: Indian Country lands within Alaska

No additional requirements.

9.10.3 IDR050000: The State of Idaho, except Indian Country lands

Deadlines for the submittal of Notices of Intent are listed in Table 9.10-1. Permittees in Idaho must also meet the following conditions:

9.10.3.1 Monitoring Frequency for Numeric Effluent Limitations. Given the inherent variability in stormwater discharges, the monitoring for parameters with numeric effluent limitations as described in Part 6.2.2 must occur twice per year.

9.10.3.2 Follow-up Monitoring for Benchmark Concentrations. If all four quarterly samples do not exceed the benchmark, the permittee is not required to conduct any additional quarterly monitoring for that parameter. If any of the four quarterly samples exceed the benchmark, then the permittee must follow the additional requirements in Part 6.2.1.2 of the MSGP, with the following modifications:

- If the permittee elects to make any necessary modifications and continue quarterly monitoring, such monitoring must occur until the results from four consecutive quarters of monitoring are less than the benchmark concentration.

9.10.3.3 Monitoring of Discharges to Impaired Waters with an applicable WLA in an EPA-approved TMDL. In order to waive any additional monitoring as allowed by Part 6.2.4.2 of the permit, the permittee must also include documentation in their SWPPP that the pollutant(s) of concern is not expected to be present in the discharge. If such documentation can not be made, then the permittee must conduct annual monitoring for the duration of the permit.

9.10.3.4 Stormwater Pollution Prevention Plan (SWPPP) Availability. If requested by Idaho Department of Environmental Quality (DEQ), the permittee must submit a copy of the SWPPP to DEQ within fourteen (14) days of the request.

9.10.3.5 Submission of NOIs, Monitoring Data, and Additional Reporting. Copies of the following information must be sent to the appropriate DEQ regional office at the same time it is submitted to EPA:

- NOIs for facilities with stormwater discharges to impaired waters;
- Monitoring data collected pursuant to Parts 6.2 and 6.3 of this permit, well as any additional monitoring data required by this Part;
- Exceedance Reports as required by Part 6.3.

Both monitoring data and exceedance reports must be sent to the appropriate DEQ regional office with thirty (30) days of receipt of analytical results.

9.10.3.6 Where to Submit Information or to Obtain Additional Information Regarding Impaired Waters and Approved TMDLs. Information regarding impaired waters and approved TMDLs may be obtained from the appropriate regional DEQ office. Contact information for DEQ offices can be obtained from the DEQ website at http://www.deq.idaho.gov/about/contact_us.cfm.

9.10.3.7 Additional Reporting of Discharges Containing Hazardous Materials or Oil. Any unauthorized discharges containing hazardous materials or oil must be reported to the Idaho State Communications Center (1-800-632-8000) or to the appropriate DEQ Regional Office (see IDAPA 58.01.02.850) as follows:.

Regional Office	Phone #	Regional Office	Phone #
Boise	(208) 373-0550	Lewiston	(208) 373-4370
Coeur d'Alene	(208) 769-1422	Pocatello	(208) 236-6168
Idaho Falls	(208) 528-2650	Twin Falls	(208) 736-2190

9.10.3.8 Additional Conditions Applicable to Sector L (Landfills, Land Application Sites and Open Dumps). Stormwater entering a landfill must be managed as leachate, including run off from areas that have received daily cover which may have contacted waste material, and thus is not eligible for coverage under the MSGP (See 40 CFR 258.26 (a)(2); Municipal Solid Waste Landfill Criteria Technical Manual, EPA 530-R-93-017, 1998). Stormwater from a closed landfill or from areas of the landfill that have received final cover is not leachate, and may be covered under the MSGP.

9.10.3.9 .Benchmark Values for Selenium. The benchmark value for selenium (as found in Sectors G and K) is equal to 0.005 mg/L, which is equivalent to the chronic water quality criterion. Given storms are discrete events of relatively short duration, DEQ believes it is more appropriate to use the acute water quality criteria as a benchmark value. Therefore, benchmark values for selenium can be set equal to the acute criteria of 0.02. mg/L and still comply with Idaho WQS.

9.10.4 IDR05000I: Indian Country lands within the State of Idaho, except Duck Valley Reservation lands, which are covered under Nevada permit NVR05000I listed in Part C.9

No additional requirements.

9.10.5 ORR05000I: Indian Country lands within the State of Oregon, except Fort McDermitt Reservation lands, which are covered under Nevada permit NVR05000I listed in Part C.9

9.10.5.1 Confederated Tribes of the Umatilla Indian Reservation

Deadlines for the submittal of Notices of Intent are listed in Table 9.10-1. Permittees located within the Confederated Tribes of the Umatilla Indian Reservation must also meet the following conditions:

9.10.5.1.1 Water Quality Standards. The operator shall be responsible for achieving compliance with Confederated Tribes of the Umatilla Indian Reservation's (CTUIR) Water Quality Standards.

9.10.5.1.2 Submission of NOI. The operator shall submit a copy of the Notice of Intent (NOI to be covered by the general permit to the CTUIR Water Resources Program at the address below, at the same time it is submitted to EPA.

9.10.5.1.3 Submission of SWPPP. The operator shall be responsible for submitting all Stormwater Pollution Prevention Plans (SWPPPs) required under this general permit to

the CTUIR Water Resources Program for review and determination that the SWPPP is sufficient to meet Tribal Water Quality Standards, prior to the beginning of any discharge activities taking place.

9.10.5.1.4 Additional Reporting. The operator shall be responsible for reporting an exceedance to Tribal Water Quality Standards to the CTUIR Water Resources Program at the same time it is reported to EPA.

9.10.5.1.5 Additional Requirements for Historic Properties Preservation. If the project is an undertaking as defined in section 106 of the National Historic Preservation Act (NHPA), a cultural resource investigation must occur. The operator shall provide the CTUIR Tribal Historic Preservation Office (THPO) 30 days to comment on the area of potential effect (APE) as defined in the permit application.

- All fieldwork must be conducted by qualified personnel (as outlined by the Secretary of Interior's Standards and Guidelines) and documented using Oregon Reporting Standards. The resulting report must be submitted to the THPO and the THPO must concur with the findings and recommendations before any ground disturbing work can occur. The THPO requires 30 days to review all reports.
- The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties.

9.10.5.1.6 Where to Submit Information. The NOI, SWPPP, and reports must be sent to:

CTUIR Water Resources Program
P.O. Box 638
Pendleton, OR 97801
(541) 966-2420

All required Historic Properties Preservation information must be sent to:

CTUIR Cultural Resources Protection Program
Tribal Historic Preservation Office
P.O. Box 638
Pendleton, OR 97801
(541) 276-3629

9.10.6 WAR05000I: Indian Country lands within the State of Washington

9.10.6.1 Lummi Nation.

Deadlines for the submittal of Notices of Intent are listed in Table 9.10-1. Permittees located within the Lummi Nation must also meet the following conditions:

9.10.6.1.1 Additional Requirements. Pursuant to Lummi Code of Laws (LCL) 17.05.020(a), the operator must also obtain a land use permit from the Lummi Planning Department as provided in Title 15 of the Lummi Code of Laws and regulations adopted thereunder.

9.10.6.1.2 Submission of SWPPP for Review and Approval. Pursuant to LCL 17.05.020, each operator shall develop and submit a Storm Water Pollution Prevention Plan to the Lummi Water Resources Division for review and approval by the Water Resources Manager prior to beginning any discharge activities.

9.10.6.1.3 Water Quality Standards. Pursuant to LCL Title 17, each operator shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi Indian Reservation (Lummi Administrative Regulations [LAR]17LAR07.010 through 17LAR 07.210).

9.10.6.1.4 Submission of NOI, Monitoring Data, Reports and NOT. Each operator shall submit a copy of the Notice of Intent, analytical monitoring results, and Exceedance Reports, Annual Reports, and Notice of Termination to the Lumni Water Resources Division at the same time it is submitted to the EPA.

9.10.6.1.5 Where to Submit Information or to Obtain Additional Information. All required information shall be submitted to:

Lummi Natural Resources Department
ATTN: Water Resources Manager
2616 Kwina Road
Bellingham, WA 98226

Please see the Lummi Nation website (www.1ummi-nsn.gov)to review a copy of Title 17 of the Lummi Code of Laws and the references upon which the conditions identified above are based.

This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Lummi tribal agencies.

9.10.6.2 Puyallup Tribe of Indians.

Deadlines for the submittal of Notices of Intent are listed in Table 9.10-1. Permittees discharging from tribal trust lands, or to tribal waters of the Puyallup Tribe of Indians (including to the Lower Puyallup River and portions of the Blair and Hylebos waterways) must meet the following conditions:

9.10.6.2.1 Submission of NOI, NOT and No Exposure Certification. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT), and No Exposure Certification shall be submitted to the Puyallup Tribe's Natural Resources Department.

9.10.6.2.2 Submission of the SWPPP. A copy of the Stormwater Pollution Plan (SWPPP) shall be submitted to the Natural Resources Department at least thirty (30) days in advance of submitting the NOI to EPA.

9.10.6.2.3 Compliance with Tribe's Water Quality Standards. Each permittee shall be responsible for achieving compliance with the Tribe's Water Quality Standards, including anti-degradation provisions.

9.10.6.2.4 Submission and Approval of Sampling Plan. A sampling plan shall be submitted to the Natural Resources Department and approved by the Tribe prior to initiation of monitoring required under Part 6 of this permit.

9.10.6.2.5 Submission of Monitoring Data and Reports. The results of any monitoring required by this permit and all reports must be sent to the Natural Resources Department, including a description of the corrective actions required and undertaken to meet effluent limits or benchmarks (as applicable).

9.10.6.2.6 Authorization to Inspect. The Natural Resources Department may conduct an inspection of any facility covered by this permit to ensure compliance with tribal water quality standards. The Department may enforce its certification conditions.

9.10.6.2.7 Tribal Endangered Species Act Consultation. Consultation with the Tribe that addresses the effects of your facility's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and designated critical habitat. Information required as part of the consultation shall include:

- Basis of the determination that your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not adversely affect federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) and will not result in the adverse modification or destruction of designated critical habitat including appropriate measures to be undertaken to avoid or eliminate the likelihood of adverse effects (under Criterion E in Section 1.1.4.5); and
- Notice of Intent form complete with extent of action area, list of federally-listed threatened or endangered species or designated critical habitat likely to occur in action area, list of potential pollutants (if you are a new discharger) or list of pollutants for which you have ever exceeded an applicable benchmark or effluent limitations guideline, or for which your discharge has ever been found to cause or contribute to an exceedance of an applicable water quality standard (if you are an existing discharger).

9.10.6.2.8 Where to Submit Information. All required or requested documents shall be sent to:

Puyallup Tribe of Indians
Department of Natural Resources
c/o Bill Sullivan and Char Naylor
3009 E. Portland Avenue
Tacoma, Washington 98404

9.10.7 WAR05000F: Federal Facilities in the State of Washington, except those located on Indian Country lands.

No additional requirements. Deadlines for the submittal of Notices of Intent are listed in Table 9.10-1.

Appendix A

Definitions, Abbreviations and Acronyms

Appendix A. Definitions, Abbreviations, and Acronyms (for the purposes of this permit)**.**

Action Area – all areas to be affected directly or indirectly by the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities, and not merely the immediate area involved in these discharges and activities.

Arid Climate – areas where annual rainfall averages from 0 to 10 inches.

Best Management Practices (BMPs) – schedules of activities, practices (and prohibitions of practices), structures, vegetation, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. See 40 CFR 122.2.

Co-located Industrial Activities – Any industrial activities, excluding your primary industrial activity(ies), located on-site that are defined by the stormwater regulations at 122.26(b)(14)(i)-(ix) and (xi). An activity at a facility is not considered co-located if the activity, when considered separately, does not meet the description of a category of industrial activity covered by the stormwater regulations or identified by the SIC code list in Appendix D.

Control Measure – refers to any BMP or other method (including effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

Director – a Regional Administrator of the Environmental Protection Agency or an authorized representative. See 40 CFR 122.2.

Discharge – when used without qualification, means the "discharge of a pollutant." See 40 CFR 122.2.

Discharge of a pollutant – any addition of any “pollutant” or combination of pollutants to “waters of the United States” from any “point source,” or any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. See 40 CFR 122.2.

Discharge-related activities – activities that cause, contribute to, or result in stormwater and allowable non-stormwater point source discharges, and measures such as the siting, construction and operation of BMPs to control, reduce, or prevent pollution in the discharges.

Drought-stricken area – a period of below average water content in streams, reservoirs, ground-water aquifers, lakes and soils.

EPA Approved or Established Total Maximum Daily Loads (TMDLs) – "EPA Approved TMDLs" are those that are developed by a State and approved by EPA. "EPA Established TMDLs" are those that are developed by EPA.

Existing Discharger – an operator applying for coverage under this permit for discharges authorized previously under an NPDES general or individual permit.

Facility or Activity – any NPDES "point source" (including land or appurtenances thereto) that is subject to regulation under the NPDES program. See 40 CFR 122.2.

Federal Facility – any buildings, installations, structures, land, public works, equipment, aircraft, vessels, and other vehicles and property, owned by, or constructed or manufactured for the purpose of leasing to, the federal government.

Impaired Water (or "Water Quality Impaired Water" or "Water Quality Limited Segment") – A water is impaired for purposes of this permit if it has been identified by a State or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State water quality standards (these waters are called "water quality limited segments" under 40 CFR 30.2(j)). Impaired waters include both waters with approved or established TMDLs, and those for which a TMDL has not yet been approved or established.

Indian Country – (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation; (b) all dependent Indian communities within the borders of the United States, whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. This definition includes all land held in trust for an Indian tribe. (18 U.S.C. 1151)

Industrial Activity – the 10 categories of industrial activities included in the definition of "stormwater discharges associated with industrial activity" as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi).

Industrial Stormwater – stormwater runoff from industrial activity.

Municipal Separate Storm Sewer – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying stormwater;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2. See 40 CFR 122.26(b)(4) and (b)(7).

New Discharger – a facility from which there is a discharge, that did not commence the discharge at a particular site prior to August 13, 1979, which is not a new source, and which has never received a finally effective NPDES permit for discharges at that site. See 40 CFR 122.2.

New Source – any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

- after promulgation of standards of performance under section 306 of the CWA which are applicable to such source, or
- after proposal of standards of performance in accordance with section 306 of the CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal. See 40 CFR 122.2.

New Source Performance Standards (NSPS) – technology-based standards for facilities that qualify as new sources under 40 CFR 122.2 and 40 CFR 122.29.

No exposure – all industrial materials or activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. See 40 CFR 122.26(g).

Operator – any entity with a stormwater discharge associated with industrial activity that meets either of the following two criteria:

(i) The entity has operational control over industrial activities, including the ability to modify those activities; or
(ii) The entity has day-to-day operational control of activities at a facility necessary to ensure compliance with the permit (e.g., the entity is authorized to direct workers at a facility to carry out activities required by the permit).

Person – an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof. See 40 CFR 122.2.

Point source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff. See 40 CFR 122.2.

Pollutant – dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal and agricultural waste discharged into water. See 40 CFR 122.2.

Pollutant of concern – A pollutant which causes or contributes to a violation of a water quality standard, including a pollutant which is identified as causing an impairment in a state's 303(d) list.

Primary industrial activity – includes any activities performed on-site which are (1) identified by the facility's primary SIC code; or (2) included in the narrative descriptions of 122.26(b)(14)(i), (iv), (v), or (vii), and (ix). [For co-located activities covered by multiple SIC codes, it is recommended that the primary industrial determination be based on the value of receipts or revenues or, if such information is not available for a particular facility, the number of employees or production rate for each process may be compared. The operation that generates the most revenue or employs the most personnel is the operation in which the facility is primarily engaged. In situations where the vast majority of on-site activity falls within one SIC code, that activity may be the primary industrial activity.] Narrative descriptions in 40 CFR 122.26(b)(14) identified above include: (i) activities subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards; (iv) hazardous waste treatment storage, or disposal facilities including those that are operating under interim status or a permit under subtitle C of the Resource Conservation and Recovery Act (RCRA); (v) landfills, land application sites and open dumps that receive or have received industrial wastes; (vii) steam electric power generating facilities; and (ix) sewage treatment works with a design flow of 1.0 mgd or more.

Qualified Personnel – Qualified personnel are those who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at your facility, and who can also evaluate the effectiveness of control measures.

Reportable Quantity Release – a release of a hazardous substance at or above the established legal threshold that requires emergency notification. Refer to 40 CFR Parts 110, 117, and 302 for complete definitions and reportable quantities for which notification is required.

Runoff coefficient – the fraction of total rainfall that will appear at the conveyance as runoff. See 40 CFR 122.26(b)(11).

Semi-Arid Climate – areas where annual rainfall averages from 10 to 20 inches.

Significant materials – includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges. See 40 CFR 122.26(b)(12).

Special Aquatic Sites – sites identified in 40 CFR 230 Subpart E. These are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region.

Stormwater – stormwater runoff, snow melt runoff, and surface runoff and drainage. See 40 CFR 122.26(b)(13).

Stormwater Discharges Associated with Construction Activity – a discharge of pollutants in stormwater runoff from areas where soil disturbing activities (e.g., clearing, grading, or excavating), construction materials, or equipment storage or maintenance (e.g., fill piles, borrow areas, concrete truck washout, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located. See 40 CFR 122.26(b)(14)(x) and 40 CFR 122.26(b)(15).

Stormwater Discharges Associated with Industrial Activity – the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under Part 122. For the categories of industries identified in this section, the term includes, but is not limited to, stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with stormwater drained from the above described areas. Industrial facilities include those that are federally, State, or municipally owned or operated that meet the description of the facilities listed in 40 CFR 122.26(b)(14). The term also includes those facilities designated under the provisions of 40 CFR 122.26(a)(1)(v). See 40 CFR 122.26(b)(14).

Tier 2 Waters – For antidegradation purposes, pursuant to 40 CFR 131.12(a)(2), Tier 2 waters are characterized as having water quality that exceeds the levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.

Tier 2.5 Waters – For antidegradation purposes, Tier 2.5 waters are those waters designated by States or Tribes as neither Tier 2 nor Tier 3. States have special requirements for these waters.

These waters are given a level of protection equal to and above that given to Tier 2 waters, but less than that given Tier 3 waters.

Tier 3 Waters – For antidegradation purposes, pursuant to 40 CFR 131.12(a)(3), Tier 3 waters are identified by states as having high quality waters constituting an Outstanding Natural Resource Water (ONRW), such as waters of National Parks and State Parks, wildlife refuges, and waters of exceptional recreational or ecological significance.

Total Maximum Daily Loads (TMDLs) – A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL includes wasteload allocations (WLAs) for point source discharges; load allocations (LAs) for nonpoint sources and/or natural background, and must include a margin of safety (MOS) and account for seasonal variations. (See section 303(d) of the Clean Water Act and 40 CFR 130.2 and 130.7).

Water Quality Impaired – See 'Impaired Water'.

Water Quality Standards – A water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States and EPA adopt water quality standards to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (See CWA sections 101(a)2 and 303(c)). Water quality standards also include an antidegradation policy. See P.U.D. o. 1 of Jefferson County et al v. Wash Dept of Ecology et al, 511 US 701, 705 (1994).

"You" and "Your" – as used in this permit are intended to refer to the permittee, the operator, or the discharger as the context indicates and that party's facility or responsibilities. The use of "you" and "your" refers to a particular facility and not to all facilities operated by a particular entity. For example, "you must submit" means the permittee must submit something for that particular facility. Likewise, "all your discharges" would refer only to discharges at that one facility.

A.2. ABBREVIATIONS AND ACRONYMS

BAT – Best Available Technology Economically Achievable

BOD5 – Biochemical Oxygen Demand (5-day test)

BMP – Best Management Practice

BPJ – Best Professional Judgment

BPT – Best Practicable Control Technology Currently Available

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

CGP – Construction General Permit

COD – Chemical Oxygen Demand

CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 *et seq*)

CWT – Centralized Waste Treatment

DMR – Discharge Monitoring Report

EPA – U. S. Environmental Protection Agency

ESA – Endangered Species Act

FWS – U. S. Fish and Wildlife Service

LA – Load Allocations

MDMR – MSGP Discharge Monitoring Report

MGD – Million Gallons per Day

MOS – Margin of Safety

MS4 – Municipal Separate Storm Sewer System

MSDS – Material Safety Data Sheet

MSGP – Multi-Sector General Permit

NAICS – North American Industry Classification System

NEPA – National Environmental Policy Act

NHPA – National Historic Preservation Act

NMFS – U. S. National Marine Fisheries Service

NOI – Notice of Intent

NOT – Notice of Termination

NPDES – National Pollutant Discharge Elimination System

NRC – National Response Center

NRHP – National Register of Historic Places

NSPS – New Source Performance Standard

NTU – Nephelometric Turbidity Unit

OMB – U. S. Office of Management and Budget

ORW – Outstanding Resource Water

OSM – U. S. Office of Surface Mining

POTW – Publicly Owned Treatment Works

RCRA – Resource Conservation and Recovery Act

RQ – Reportable Quantity

SARA – Superfund Amendments and Reauthorization Act

SHPO – State Historic Preservation Officer

SIC – Standard Industrial Classification

SMCRA – Surface Mining Control and Reclamation Act

SPCC – Spill Prevention, Control, and Countermeasures

SWPPP – Stormwater Pollution Prevention Plan

THPO – Tribal Historic Preservation Officer

TMDL – Total Maximum Daily Load

TSDF – Treatment, Storage, or Disposal Facility

TSS – Total Suspended Solids

USGS – United States Geological Survey

WLA – Wasteload Allocation

WQS – Water Quality Standard

Appendix B
Standard Permit Conditions

Appendix B. Standard Permit Conditions.

Standard permit conditions in Appendix B are consistent with the general permit provisions required under 40 CFR 122.41.

B.1 Duty To Comply.

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

A. You must comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards, even if the permit has not yet been modified to incorporate the requirement.

B. Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (61 FR 252, December 31, 1996, pp. 69359-69366, as corrected in 62 FR 54, March 20, 1997, pp.13514-13517) as mandated by the Debt Collection Improvement Act of 1996 for inflation on a periodic basis. This rule allows EPA's penalties to keep pace with inflation. The Agency is required to review its penalties at least once every 4 years thereafter and to adjust them as necessary for inflation according to a specified formula. The civil and administrative penalties following were adjusted for inflation starting in 1996.

1. Criminal Penalties.

1.1 Negligent Violations. The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than $2,500 nor more than $25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation or by imprisonment of not more than two years, or both.

1.2. *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

1.3. *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than $250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision be subject to a fine of not more than $1,000,000 and can fined up to $2,000,000 for second or subsequent convictions.

1.4. *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

2. *Civil Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently $32,500 per day for each violation).

3. *Administrative Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows

3.1. *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently $11,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $32,500).

3.2. *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently $11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $157,500).

B.2 Duty to Reapply.

If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain authorization as required by the new permit once EPA issues it.

B.3 Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for you in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B.4 Duty to Mitigate.

You must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

B.5 Proper Operation and Maintenance.

You must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by you to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by you only when the operation is necessary to achieve compliance with the conditions of this permit.

B.6 Permit Actions.

This permit may be modified, revoked and reissued, or terminated for cause. Your filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B.7 Property Rights.

This permit does not convey any property rights of any sort, or any exclusive privileges.

B.8 Duty to Provide Information.

You must furnish to EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), within a reasonable time, any information which EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. You must also furnish to EPA or an authorized representative upon request, copies of records required to be kept by this permit.

B.9 Inspection and Entry.

You must allow EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), upon presentation of credentials and other documents as may be required by law, to:

A. Enter upon your premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

B.10 Monitoring and Records.

A. Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.

B. You must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date the permit expires or the date the permittee's authorization is terminated. This period may be extended by request of EPA at any time.

C. Records of monitoring information must include:

1. The date, exact place, and time of sampling or measurements;

2. The individual(s) who performed the sampling or measurements;

3. The date(s) analyses were performed

4. The individual(s) who performed the analyses;

5. The analytical techniques or methods used; and

6. The results of such analyses.

D. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.

E. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

B.11 Signatory Requirements.

A. All applications, including NOIs, must be signed as follows:

1. For a corporation: By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

3. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for

the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

B. Your SWPPP, including changes to your SWPPP to document any corrective actions taken as required by Part 3.1, and all reports submitted to EPA, must be signed by a person described in Appendix B, Subsection 11.A above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described in Appendix B, Subsection 11.A;

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

3. The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

C. All other changes to your SWPPP, and other compliance documentation required under Part 5.4, must be signed and dated by the person preparing the change or documentation.

D. Changes to Authorization. If an authorization under Appendix B, Subsection 11.B is no longer accurate because the industrial facility has been purchased by a different entity, a new NOI satisfying the requirements of Subsection 11.B must be submitted to EPA. See Table 1-2 in Part 1.3.1 of the permit. However, if the only change that is occurring is a change in contact information or a change in the facility's address, the operator need only make a modification to the existing NOI submitted for authorization.

E. Any person signing documents in accordance with Appendix B, Subsections 11.A or 11.B above must include the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

F. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

B.12 Reporting Requirements.

A. Planned changes. You must give notice to EPA as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

B. Anticipated noncompliance. You must give advance notice to EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

C. Transfers. This permit is not transferable to any person except after notice to EPA. Where a facility wants to change the name of the permittee, the original permittee (the first owner or operators) must submit a Notice of Termination pursuant to Part 1.4. The new owner or operator must submit a Notice of Intent in accordance with Part 1.3.1 and Table 1-2. See also requirements in Appendix B, Subsections 11.B and 11.D.

D. Monitoring reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.

1. Pursuant to Part 7.1, all monitoring data collected pursuant to Part 6.2 and 6.3 must be submitted to EPA using EPA's online eNOI system (www.epa.gov/npdes/eNOI). Alternatively, if you cannot access eNOI, monitoring results should be reported on the MSGP Discharge Monitoring Report (MDMR) form, available at www.epa.gov/npdes/stormwater/msgp, and submitted to EPA.

2. If you monitor any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or as specified in the permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the MDMR.

3. Calculations for all limitations which require averaging of measurements must use an arithmetic mean. For averaging purposes, use a value of zero for any

individual sample parameter, which is determined to be less than the method detection limit. For sample values that fall between the method detection level and the quantitation limit (i.e., a confirmed detection but below the level that can be reliably quantified), use a value halfway between zero and the quantitation limit.

E. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

F. Twenty-four hour reporting.

1. You must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances. A written submission must also be provided within five days of the time you become aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2. The following shall be included as information which must be reported within 24 hours under this paragraph.

   a. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR 122.41(m)(3)(ii))

   b. Any upset which exceeds any effluent limitation in the permit

   c. Violation of a maximum daily discharge limit for any numeric effluent limitation. (See 40 CFR 122.44(g).)

3. EPA may waive the written report on a case-by-case basis for reports under Appendix B, Subsection 12.F.2 if the oral report has been received within 24 hours.

G. Other noncompliance. You must report all instances of noncompliance not reported under Appendix B, Subsections 12.D, 12.E, and 12.F, at the time monitoring reports are submitted. The reports must contain the information listed in Appendix B, Subsection 12.F.

H. Other information. Where you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Permitting Authority, you must promptly submit such facts or information.

B.13 Bypass.

A. Definitions.

1. Bypass means the intentional diversion of waste streams from any portion of a treatment facility See 40 CFR 122.41(m)(1)(i).

2. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR 122.41(m)(1)(ii).

B. Bypass not exceeding limitations. You may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Appendix B, Subsections 13.C and 13.D. See 40 CFR 122.41(m)(2).

C. Notice.

1. Anticipated bypass. If you know in advance of the need for a bypass, you must submit prior notice, if possible at least ten days before the date of the bypass. See 40 CFR 122.41(m)(3)(i).

2. Unanticipated bypass. You must submit notice of an unanticipated bypass as required in Appendix B, Subsection 12.F (24-hour notice). See 40 CFR 122.41(m)(3)(ii).

D. Prohibition of bypass. See 40 CFR 122.41(m)(4).

1. Bypass is prohibited, and EPA may take enforcement action against you for bypass, unless:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. You submitted notices as required under Appendix B, Subsection 13.C.

2. EPA may approve an anticipated bypass, after considering its adverse effects, if EPA determines that it will meet the three conditions listed above in Appendix B, Subsection 13.D.1.

B.14 Upset.

A. Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41(n)(1).

B. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Appendix B, Subsection 14.C are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. See 40 CFR 122.41(n)(2).

C. Conditions necessary for a demonstration of upset. See 40 CFR 122.41(n)(3). A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that you can identify the cause(s) of the upset;

2. The permitted facility was at the time being properly operated; and

3. You submitted notice of the upset as required in Appendix B, Subsection 12.F.2.b (24 hour notice).

4. You complied with any remedial measures required under Appendix B, Subsection 4.

D. Burden of proof. In any enforcement proceeding, you, as the one seeking to establish the occurrence of an upset, have the burden of proof. See 40 CFR 122.41(n)(4).

Appendix C
Areas Covered

Appendix C. Permit Area.

EPA can only provide permit coverage in these areas and for classes of discharges that are outside the scope of a State's NPDES program authorization.

C.1 EPA Region 1: Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 1:

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
CTR05000I	Indian Country within the State of Connecticut
MAR050000	Commonwealth of Massachusetts, except Indian Country
MAR05000I	Indian Country within the Commonwealth of Massachusetts
NHR050000	State of New Hampshire
RIR05000I	Indian Country within the State of Rhode Island
VTR05000F	Federal facilities in the State of Vermont

For stormwater discharges in EPA Region 1 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

C.2 EPA Region 2: New Jersey, New York, Puerto Rico, Virgin Islands.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 2:

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
PRR050000	Commonwealth of Puerto Rico

For stormwater discharges in EPA Region 2 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

C.3 EPA Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 3:

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
DCR050000	District of Columbia
DER05000F	Federal facilities in the State of Delaware

For stormwater discharges in EPA Region 3 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

C.4 EPA Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee (Coverage not available under this permit).

For stormwater discharges in EPA Region 4, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

C.5 EPA Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 5:

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
MIR05000I	Indian Country within the State of Michigan
MNR05000I	Indian Country within the State of Minnesota
WIR05000I	Indian Country within the State of Wisconsin, except those on Sokaogon Chippewa Community lands

For stormwater discharges in EPA Region 5 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

C.6 EPA Region 6: Arkansas, Louisiana, Oklahoma, Texas, and New Mexico (except see Region 9 for Navajo lands, and see Region 8 for Ute Mountain Reservation lands).

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 6:

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
LAR05000I	Indian Country within the State of Louisiana
NMR050000	The State of New Mexico, except Indian Country
NMR05000I	Indian Country within the State of New Mexico, except Ute Mountain Reservation lands that are covered under Colorado permit COR05000I listed in Part C.8 and Navajo Reservation lands that are covered under Arizona permit AZR05000I listed in Part C.9.
OKR05000I	Indian Country within the State of Oklahoma
OKR05000F	Facilities in the State of Oklahoma not under the jurisdiction of the Oklahoma Department of Environmental Quality, except those on Indian Country. EPA jurisdiction facilities include SIC Codes 1311, 1381, 1382, 1389, and 5171 and point source (but not nonpoint source) discharges associated with agricultural production, services, and silviculture.

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
TXR05000F	Facilities in the State of Texas not under the jurisdiction of the Texas Commission on Environmental Quality, except those on Indian Country. EPA-jurisdiction facilities include SIC Codes 1311, 1321, 1381, 1382, and 1389 (other than oil field service company "home base" facilities).
TXR05000I	Indian Country within the State of Texas

For stormwater discharges in EPA Region 6 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

C.7 EPA Region 7: Iowa, Kansas, Missouri, Nebraska (Coverage not available under this permit).

For stormwater discharges in EPA Region 7, please contact EPA Region 7 or your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

C.8 EPA Region 8: Colorado, Montana, North Dakota, South Dakota, Wyoming, Utah (Coverage not available under this permit).

For stormwater discharges in EPA Region 8 please contact EPA Region 8 or your State NPDES permitting authority to obtain coverage under an NPDES permit.

C.9 EPA Region 9: California, Hawaii, Nevada, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Confederated Tribes of the Goshute Reservation in Utah and Nevada, Indian Country within the State of Arizona including the Navajo Reservation in Utah and New Mexico and Arizona, the Duck Valley Reservation in Idaho, and the Fort McDermitt Reservation in Oregon.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 9:

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
ASR050000	The islands of American Samoa
AZR05000I	Indian Country within the State of Arizona, including Navajo Reservation lands in New Mexico and Utah
CAR05000I	Indian Country within the State of California
GUR050000	The island of Guam
JAR050000	Johnston Atoll
MWR050000	Midway Island and Wake Island
NIR050000	Commonwealth of the Northern Mariana Islands
NVR05000I	Indian Country within the State of Nevada, including the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Confederated Tribes of the Goshute Reservation in Utah

For stormwater discharges in EPA Region 9 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

C.10 Region 10: Alaska, Idaho (except see Region 9 for Duck Valley Reservation lands), Oregon (except see Region 9 for Fort McDermitt Reservation), Washington.

This permit offers NPDES permit coverage for stormwater discharges associated with industrial activity from the following areas in EPA Region 10:

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
AKR050000	The State of Alaska, except Indian Country lands
AKR05000I	Indian Country lands within Alaska
IDR050000	The State of Idaho, except Indian Country lands
IDR05000I	Indian Country lands within the State of Idaho, except Duck Valley Reservation lands, which are covered under Nevada permit NVR05000I listed in Part C.9
ORR05000I	Indian Country lands within the State of Oregon, except Fort McDermitt Reservation lands, which are covered under Nevada permit NVR05000I listed in Part C.9
WAR05000I	Indian Country lands within the State of Washington
WAR05000F	Federal facilities in the State of Washington, except those located on Indian Country lands

For stormwater discharges in EPA Region 10 outside the areas of coverage identified above, please contact your State NPDES permitting authority to obtain coverage under a State-issued NPDES permit.

Appendix D
Activities Covered

Appendix D. Facilities and Activities Covered

Your permit eligibility is limited to discharges from facilities in the "sectors" of industrial activity summarized in Table D-1. These sector descriptions are based on Standard Industrial Classification (SIC) Codes and Industrial Activity Codes. References to "sectors" in this permit (e.g., sector-specific monitoring requirements) refer to these groupings.

Table D-1. Sectors of Industrial Activity Covered by This Permit

Subsector (May be subject to more than one sector/subsector)	SIC Code or Activity Code[1]	Activity Represented
SECTOR A: TIMBER PRODUCTS		
A1	2421	General Sawmills and Planing Mills
A2	2491	Wood Preserving
A3	2411	Log Storage and Handling
A4	2426	Hardwood Dimension and Flooring Mills
	2429	Special Product Sawmills, Not Elsewhere Classified
	2431-2439 (except 2434)	Millwork, Veneer, Plywood, and Structural Wood (see Sector W)
	2448	Wood Pallets and Skids
	2449	Wood Containers, Not Elsewhere Classified
	2451, 2452	Wood Buildings and Mobile Homes
	2493	Reconstituted Wood Products
	2499	Wood Products, Not Elsewhere Classified
A5	2441	Nailed and Lock Corner Wood Boxes and Shook
SECTOR B: PAPER AND ALLIED PRODUCTS		
B1	2631	Paperboard Mills
B2	2611	Pulp Mills
	2621	Paper Mills
	2652-2657	Paperboard Containers and Boxes
	2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes
SECTOR C: CHEMICALS AND ALLIED PRODUCTS		
C1	2873-2879	Agricultural Chemicals
C2	2812-2819	Industrial Inorganic Chemicals
C3	2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations
C4	2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass
C5	2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; in vitro and in vivo Diagnostic Substances; and Biological Products, Except Diagnostic Substances
	2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	**SIC Code or Activity Code[1]**	**Activity Represented**
	2861-2869	Industrial Organic Chemicals
	2891-2899	Miscellaneous Chemical Products
	3952 (limited to list of inks and paints)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors
	2911	Petroleum Refining
SECTOR D: ASPHALT PAVING AND ROOFING MATERIALS AND LUBRICANTS		
D1	2951, 2952	Asphalt Paving and Roofing Materials
D2	2992, 2999	Miscellaneous Products of Petroleum and Coal
SECTOR E: GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCTS		
E1	3251-3259	Structural Clay Products
	3261-3269	Pottery and Related Products
E2	3271-3275	Concrete, Gypsum, and Plaster Products
E3	3211	Flat Glass
	3221, 3229	Glass and Glassware, Pressed or Blown
	3231	Glass Products Made of Purchased Glass
	3241	Hydraulic Cement
	3281	Cut Stone and Stone Products
	3291-3299	Abrasive, Asbestos, and Miscellaneous Nonmetallic Mineral Products
SECTOR F: PRIMARY METALS		
F1	3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills
F2	3321-3325	Iron and Steel Foundries
F3	3351-3357	Rolling, Drawing, and Extruding of Nonferrous Metals
F4	3363-3369	Nonferrous Foundries (Castings)
F5	3331-3339	Primary Smelting and Refining of Nonferrous Metals
	3341	Secondary Smelting and Refining of Nonferrous Metals
	3398, 3399	Miscellaneous Primary Metal Products
SECTOR G: METAL MINING (ORE MINING AND DRESSING)		
G1	1021	Copper Ore and Mining Dressing Facilities
G2	1011	Iron Ores
	1021	Copper Ores
	1031	Lead and Zinc Ores
	1041, 1044	Gold and Silver Ores
	1061	Ferroalloy Ores, Except Vanadium
	1081	Metal Mining Services
	1094, 1099	Miscellaneous Metal Ores

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	**SIC Code or Activity Code[1]**	**Activity Represented**
SECTOR H: COAL MINES AND COAL MINING-RELATED FACILITIES		
H1	1221-1241	Coal Mines and Coal Mining-Related Facilities
SECTOR I: OIL AND GAS EXTRACTION AND REFINING		
I1	1311	Crude Petroleum and Natural Gas
	1321	Natural Gas Liquids
	1381-1389	Oil and Gas Field Services
SECTOR J: MINERAL MINING AND DRESSING		
J1	1442	Construction Sand and Gravel
	1446	Industrial Sand
J2	1411	Dimension Stone
	1422-1429	Crushed and Broken Stone, Including Rip Rap
	1481	Nonmetallic Minerals Services, Except Fuels
	1499	Miscellaneous Nonmetallic Minerals, Except Fuels
J3	1455, 1459	Clay, Ceramic, and Refractory Materials
	1474-1479	Chemical and Fertilizer Mineral Mining
SECTOR K: HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES		
K1	HZ	Hazardous Waste Treatment, Storage, or Disposal Facilities, including those that are operating under interim status or a permit under subtitle C of RCRA
SECTOR L: LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS		
L1	LF	All Landfill, Land Application Sites and Open Dumps
L2	LF	All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60
SECTOR M: AUTOMOBILE SALVAGE YARDS		
M1	5015	Automobile Salvage Yards
SECTOR N: SCRAP RECYCLING FACILITIES		
N1	5093	Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling
N2	5093	Source-separated Recycling Facility
SECTOR O: STEAM ELECTRIC GENERATING FACILITIES		
O1	SE	Steam Electric Generating Facilities, including coal handling sites
SECTOR P: LAND TRANSPORTATION AND WAREHOUSING		
P1	4011, 4013	Railroad Transportation
	4111-4173	Local and Highway Passenger Transportation
	4212-4231	Motor Freight Transportation and Warehousing
	4311	United States Postal Service

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	**SIC Code or Activity Code[1]**	**Activity Represented**
	5171	Petroleum Bulk Stations and Terminals
SECTOR Q: WATER TRANSPORTATION		
Q1	4412-4499	Water Transportation Facilities
SECTOR R: SHIP AND BOAT BUILDING AND REPAIRING YARDS		
R1	3731, 3732	Ship and Boat Building or Repairing Yards
SECTOR S: AIR TRANSPORTATION FACILITIES		
S1	4512-4581	Air Transportation Facilities
SECTOR T: TREATMENT WORKS		
T1	TW	Treatment Works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR Part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA
SECTOR U: FOOD AND KINDRED PRODUCTS		
U1	2041-2048	Grain Mill Products
U2	2074-2079	Fats and Oils Products
U3	2011-2015	Meat Products
	2021-2026	Dairy Products
	2032-2038	Canned, Frozen, and Preserved Fruits, Vegetables, and Food Specialties
	2051-2053	Bakery Products
	2061-2068	Sugar and Confectionery Products
	2082-2087	Beverages
	2091-2099	Miscellaneous Food Preparations and Kindred Products
	2111-2141	Tobacco Products
SECTOR V: TEXTILE MILLS, APPAREL, AND OTHER FABRIC PRODUCT MANUFACTURING; LEATHER AND LEATHER PRODUCTS		
V1	2211-2299	Textile Mill Products
	2311-2399	Apparel and Other Finished Products Made from Fabrics and Similar Materials
	3131-3199	Leather and Leather Products (note: see Sector Z1 for Leather Tanning and Finishing)
SECTOR W: FURNITURE AND FIXTURES		
W1	2434	Wood Kitchen Cabinets
	2511-2599	Furniture and Fixtures

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	**SIC Code or Activity Code[1]**	**Activity Represented**
SECTOR X: PRINTING AND PUBLISHING		
X1	2711-2796	Printing, Publishing, and Allied Industries
SECTOR Y: RUBBER, MISCELLANEOUS PLASTIC PRODUCTS, AND MISCELLANEOUS MANUFACTURING INDUSTRIES		
Y1	3011	Tires and Inner Tubes
	3021	Rubber and Plastics Footwear
	3052, 3053	Gaskets, Packing and Sealing Devices, and Rubber and Plastic Hoses and Belting
	3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified
Y2	3081-3089	Miscellaneous Plastics Products
	3931	Musical Instruments
	3942-3949	Dolls, Toys, Games, and Sporting and Athletic Goods
	3951-3955 (except 3952 – see Sector C)	Pens, Pencils, and Other Artists' Materials
	3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal
	3991-3999	Miscellaneous Manufacturing Industries
SECTOR Z: LEATHER TANNING AND FINISHING		
Z1	3111	Leather Tanning and Finishing
SECTOR AA: FABRICATED METAL PRODUCTS		
AA1	3411-3499 (except 3479)	Fabricated Metal Products, Except Machinery and Transportation Equipment, and Coating, Engraving, and Allied Services.
	3911-3915	Jewelry, Silverware, and Plated Ware
AA2	3479	Fabricated Metal Coating and Engraving
SECTOR AB: TRANSPORTATION EQUIPMENT, INDUSTRIAL OR COMMERCIAL MACHINERY		
AB1	3511-3599 (except 3571-3579)	Industrial and Commercial Machinery, Except Computer and Office Equipment (see Sector AC)
	3711-3799 (except 3731, 3732)	Transportation Equipment Except Ship and Boat Building and Repairing (see Sector R)
SECTOR AC: ELECTRONIC, ELECTRICAL, PHOTOGRAPHIC, AND OPTICAL GOODS		
AC1	3571-3579	Computer and Office Equipment
	3812-3873	Measuring, Analyzing, and Controlling Instruments; Photographic and Optical Goods, Watches, and Clocks
	3612-3699	Electronic and Electrical Equipment and Components, Except Computer Equipment

Table D-1. Sectors of Industrial Activity Covered by This Permit		
Subsector (May be subject to more than one sector/subsector)	**SIC Code or Activity Code[1]**	**Activity Represented**
SECTOR AD: NON-CLASSIFIED FACILITIES		
AD1		Other stormwater discharges designated by the Director as needing a permit (see 40 CFR 122.26(a)(9)(i)(C) & (D)) or any facility discharging stormwater associated with industrial activity not described by any of Sectors A-AC. NOTE: Facilities may not elect to be covered under Sector AD. Only the Director may assign a facility to Sector AD.

[1] A complete list of SIC Codes (and conversions from the newer North American Industry Classification System" (NAICS)) can be obtained from the Internet at www.census.gov/epcd/www/naics.html or in paper form from various locations in the document titled *Handbook of Standard Industrial Classifications*, Office of Management and Budget, 1987.

Appendix E
Procedures Relating to Endangered Species Protection

Appendix E. Procedures Relating to Endangered Species Protection

E.1 Assessing the Effects of Your Discharge and Discharge-Related Activities

You must follow the procedures in this appendix to assess the potential effects of applicable stormwater discharges, discharge-related activities, and allowable non-stormwater discharges on listed species and their critical habitat and determine which of the eligibility criterion (see Part E.2), if any, you qualify under. In accordance with Part 5.1.6.1 of this permit, you must keep documentation with your SWPPP to support your determination of eligibility under Part 1.1.4.5, including the process employed and results of the endangered species investigation.

If you are seeking renewal of coverage under the MSGP, you must complete this analysis using any data collected when your site was fully active and operational, even if you are now claiming that your site is inactive and no industrial materials or activities are exposed to stormwater. If no such data exist for your facility, you should utilize the best available information from any industrial facility(ies) expected to discharge substantially similar effluents, based on the similarities of the general industrial activity, control measures, and runoff coefficients of their drainage areas. You should contact EPA if you need assistance in obtaining data from a facility with a substantially similar effluent.

When evaluating the potential effects of your activities, you must consider effects to listed species or critical habitats within the "action area." Action area is defined in Appendix B as all areas affected directly or indirectly by the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities, and not merely the immediate area involved in these discharges and activities. This includes areas beyond the footprint of the facility that are likely to be affected by stormwater discharges, discharge-related activities, and allowable non-stormwater discharges. For example, normal construction, operations and maintenance activities can result in noise impacts and discharges of pollutants into downstream areas which can increase the "action area" beyond the footprint of the facility. "Facility" is defined in Appendix A.

Step One: *Determine if the Eligibility Requirements of Criterion B, C, or F Can Be Met.*

You should first determine whether you are eligible under Criteria B, C, or F because of a previously completed ESA section 7 consultation, a previously issued ESA Section 10 permit, or because your activities were already addressed in another discharger's certification of eligibility as follows:

i. The effects of your activities have been addressed in a consultation under ESA Section 7 on a separate Federal action (check box B corresponding to Criterion B).

ii. The effects of your activities have been addressed through approval of a Habitat Conservation Plan under Section 10 of the ESA (check box C corresponding to Criterion C). Stormwater discharges from your industrial facility may be

authorized by this MSGP if some activity is authorized through the issuance of a permit under section 10 of the ESA and that authorization addressed the effects of your stormwater discharges on federally-listed species and designated critical habitat. You must follow U.S. Fish and Wildlife Service (FWS) and/or National Marine Fisheries Service, also known as NOAA Fisheries (NMFS) procedures when applying for an ESA Section 10 permit (see 50 CFR 17.22(b)(1) for FWS and 222.22 for NMFS). Application instructions for section 10 permits for FWS and NMFS can be obtained by accessing the FWS and NMFS websites (www.fws.gov and www.nmfs.noaa.gov) or by contacting the appropriate FWS and NMFS regional office.

iii. You are covered under the eligibility certification of another operator for the project area (check box F corresponding to Criterion F). Your stormwater discharges, discharge-related activities, and allowable non-stormwater discharges were already addressed in another discharger's certification of eligibility under Criteria A, B, C, D, or E, which also included your facility and determined that federally listed endangered or threatened species or designated critical habitat would not be jeopardized. To certify eligibility under this criterion there must be no lapse of coverage in the other operator's certification. By certifying eligibility under Criterion F, you agree to comply with any measures or controls upon which the other discharge certification under Criterion B, C, or D was based. If your certification is based on another operator's certification under Criterion E, that certification is valid only if you have documentation showing that the other operator had certified under Criterion E, and you provide EPA with the relevant supporting information in your NOI form. Certification under Criterion F is discussed in more detail in the Fact Sheet that accompanies this permit.

Step Two: *Determine if Listed Threatened or Endangered Species and Critical Habitat are Present in the Action Area.*

Next, you should first determine whether federally-listed species are likely to occur in your action area. If you determine that there is a federally-listed species likely to occur in your action area, follow Step 3. If you determine that there are no federally-listed species likely to occur in your action area, you can certify that the facility meets Criteria A (check box A corresponding to Criteria A).

You can do this by obtaining a list of threatened and endangered species that are likely to occur in your general area, including the appropriate receiving water for your discharges. County-specific or sometimes township-specific lists of Federally threatened and endangered species are available from the local offices of FWS, and NMFS, or on their internet sites. The types of species that are likely to be present determine which Service office you should contact (in general, NMFS has jurisdiction over marine, estuarine, and anadromous species). Visit www.epa.gov/npdes/stormwater/cgp to find the appropriate site for your state or check with your local Service office. If there are listed species in your county or township, you must then determine, as best you are able, whether any of the species are likely to occur in your action area

(use the Services or State and Tribal Heritage Centers, as necessary). General species information can be found at www.fws.gov/endangered.wildlife.html.

You must also check to see if critical habitat has been designated and whether such areas overlap your action area. Critical habitat should be listed on the species list for your county or township available from the appropriate Service office. You can also find critical habitat designations at 50 CFR Parts 17 and 226 www.access.gpo.gov and at www.fws.gov/endangered/wildlife.html.

If there are no listed species and no critical habitat areas that overlap your action area, or if your local FWS or NMFS indicates that listed species are not likely to occur in your action area, you have satisfied your eligibility obligations under Criterion A (check box A on the Notice of Intent Form). If there are listed species and if you determine or your local FWS, NMFS, or State or Tribal Heritage Center indicates that these species could occur in the action area, you will need to evaluate whether your action area supports habitat(s) that are suitable for listed species or the constituent elements of critical habitat. Your evaluation may utilize one or more of the following approaches:

Gather information about the species and critical habitat that are likely to occur in your action area (www.fws.gov/endangered/wildlife.html). Conduct a visual inspection of the action area to assess the potential presence of listed species and their habitats. Compare the size and types of habitats available in your action area and adjacent areas with the size and types of habitats used by listed species and constituent elements of critical habitat. This method may be particularly suitable for facilities where the action area is smaller in size or located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no natural habitat, or for facilities that discharge directly into municipal separate storm sewer systems.

Conduct a formal biological survey (typically performed by environmental consulting firms). In some cases, biological surveys may be an appropriate way to assess whether species are likely to be located in the action area and whether there could be adverse effects to such species. A biological survey may in some cases be useful in conjunction with Steps Two, Three or Four of these instructions. However, biological surveys can often be inconclusive and some survey methods may require a special State or Federal permit. You should coordinate with the appropriate Service office before conducting biological surveys for threatened and endangered species.

Reference an environmental assessment completed for the site under the National Environmental Policy Act (NEPA). Such assessments may indicate whether listed species and critical habitats are likely to occur in the action area. Coverage under this MSGP may trigger a requirement for such an assessment for new sources (that is, dischargers subject to New Source Performance Standards under section 306 of the Clean Water Act). Other facilities might require an assessment under NEPA for other reasons, such as federal funding or other federal involvement in the facility. If the action area likely supports listed threatened or endangered species or critical habitat, you must evaluate the potential for impacts to species and/or habitat when following Steps Three through Five. Note that many but not all measures implemented to protect listed species under these steps will also protect critical habitat. Thus, meeting the

eligibility requirements of this MSGP may require measures to protect critical habitat that are separate from those to protect listed species.

Step Three: *Determine if your Activities Are Not Likely to Adversely Affect Listed Threatened or Endangered Species or Designated Critical Habitat*

To receive MSGP coverage, you must analyze the effects of your activities, which may include not only your discharge, but also any construction, operation, and maintenance activities related to stormwater management. You must be able to conclude that your discharge and stormwater management related activities are not likely to adversely affect threatened or endangered species or designated critical habitat that are likely to occur in your action area. To arrive at this conclusion, you should be able to conclude that listed species and critical habitat are not likely to be exposed to the effects of your activities, or if they are exposed, they are not likely to respond to the effects, or if they do respond, the responses are not sufficient to reduce an individual's chances of surviving and reproducing or diminish the amount or suitability of constituent elements of critical habitat. Construction, operation, and maintenance of facilities related to your stormwater discharge can potentially result in the following adverse effects:

- **Hydrological.** Stormwater discharges may adversely affect receiving waters from pollutant parameters such as temperature, salinity or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a stormwater discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely. Industrial activity itself may also alter drainage patterns on a site where construction occurs, which can impact listed species, their habitat, and critical habitat.

- **Habitat.** Outdoor activities, such as storage of materials and land disturbances associated with stormwater management-related activities, such as the installation or placement of stormwater control measures, may adversely affect listed species, their habitat, and critical habitat. Stormwater may drain or inundate listed species habitat.

- **Toxicity.** Pollutants in stormwater may have toxic effects on listed species and adversely affect critical habitat. Exceedances of benchmarks, effluent limitation guidelines, or State or Tribal water quality requirements may be indicative of potential adverse affects on listed species or critical habitat.

The scope of effects to consider will vary with each site. If you are having difficulty determining whether your facility is likely to adversely affect listed species or critical habitat, or one of the Services has already raised concerns to you, you must contact the appropriate office of the FWS or NMFS for assistance. If adverse effects are not likely, you have satisfied your eligibility obligations under Criterion E and you may proceed to submitting your NOI for coverage under the MSGP (check box E corresponding to Criterion E). As part of certifying your compliance with Criterion E, you must submit information to support your findings. If you are an existing discharger, you are required to (1) identify any pollutant parameters for which you have ever exceeded the benchmark or effluent limitations guideline, or have ever been found to have caused or contributed to an exceedance of an applicable water quality standard, or

violated a State or Tribal water quality requirement; (2) provide a list of the federally-listed threatened or endangered species or their designated critical habitat that are likely to occur in the action area; and (3) provide your rationale supporting your determination that you qualify under Criterion E. If you are a new discharger, you must provide the list of species or critical habitat and the technical evaluation (described in (2) and (3) above, respectively), and you must also include a list of the potential pollutants in your discharge.

If you can not yet conclude your stormwater discharge is not likely to adversely affect listed species or critical habitat, or if you conclude that your stormwater discharge could potentially adversely affect listed species or critical habitat, you must follow Step Four.

Step Four: *Determine if Measures Can Be Implemented to Avoid Adverse Effects or If Further Analysis Supports the Conclusion that Adverse Effects Are Not Likely.*

If you could not make a preliminary determination in Step 3 that adverse effects to listed species and/or critical habitat are not likely to occur, you can still receive coverage under Criterion E if appropriate measures are undertaken to avoid or eliminate the likelihood of adverse effects prior to applying for MSGP coverage. These measures may be relatively simple, e.g., re-routing a stormwater discharge to bypass an area where species are located, relocating control measures, or changing the "footprint" of the industrial activity. Provided you are able to install and implement appropriate measures, you may proceed to submitting your NOI for coverage under the MSGP (check box E corresponding to Criterion E). As part of certifying your compliance with Criterion E, you must submit information to support your findings. If you are an existing discharger, you are first required to (1) identify any pollutant parameters for which you have ever exceeded a benchmark or an effluent limitations guideline, or have ever been found to have caused or contributed to an exceedance of an applicable water quality standard, or violated a State or Tribal water quality requirement; (2) provide a list of the federally-listed threatened or endangered species or their designated critical habitat that are likely to occur in the action area; and (3) provide your rationale supporting your determination that you qualify under Criterion E, including a description of measures you will implement to avoid or eliminate the likelihood of adverse effects. If you are a new discharger, you must provide the list of species or critical habitat and the technical evaluation (described in (2) and (3) above, respectively), and you must also include a list of the potential pollutants in your discharge.

If you cannot ascertain which measures to implement to avoid the likelihood of adverse effects, you must follow Step Five.

Step Five: *Determine if the Eligibility Requirements of Criteria D Can Be Met.*

Where adverse effects are likely and you are unable to avoid or eliminate the likelihood of adverse effects, you must contact the FWS and/or NMFS. However, you may still be eligible for MSGP coverage if any likely adverse effects can be addressed through meeting Criteria D as follows:

You have coordinated your activities with the appropriate Service office (see Criterion D). In the absence of any other conditions set forth in Step Four, you may still be able to

qualify for coverage under this MSGP if you coordinate with the FWS or NMFS and the Service provides a letter or memorandum concluding that permitting your stormwater discharges under the MSGP is consistent with the "not likely to adversely affect" determination for the MSGP. If you adopt measures to avoid or eliminate adverse effects, per the Service's requirements or recommendations, you must abide by those measures for the duration of your coverage under the MSGP. Any such measures must be described in the Stormwater Pollution Prevention Plan and are enforceable MSGP conditions and/or conditions for meeting the eligibility criteria in Part 1.1.4.5.

You must comply with any terms and conditions imposed under the eligibility requirements to ensure that your stormwater discharges, discharge-related activities, and allowable non-stormwater discharges are protective of listed species and/or critical habitat. See Part 2.3 of the permit. If the eligibility requirements cannot be met, and maintained, then you are not eligible for coverage under this MSGP. In these instances, you may consider applying to EPA for an individual permit.

E.2 Eligibility Criterion

As required by Part 1.1.4.5, you must meet one or more of the following six criteria (A-F) to be eligible for coverage under the permit for your stormwater discharge, discharge-related activities, and allowable non-stormwater discharges:

Criterion A. No federally-listed threatened or endangered species or their designated critical habitat are likely to occur in the "action area"; or

Criterion B. Consultation between a Federal agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service (together, the "Services") under section 7 of the ESA has been concluded. Consultations can be either formal or informal, and would have occurred only as a result of a separate federal action (e.g., during application for an individual wastewater discharge permit or the issuance of a wetlands dredge and fill permit).

The consultation must have addressed the effects of your facility's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and must have resulted in either:

i. a biological opinion finding no jeopardy to federally-listed species or destruction/adverse modification of federally-designated critical habitat; or

ii. written concurrence from the Service(s) with a finding that the facility's stormwater discharges associated with industrial activity, discharge-related activities and allowable non-stormwater discharges are not likely to adversely affect federally-listed species or federally-designated critical habitat; or

Criterion C. Your industrial activities are authorized through the issuance of a permit under section 10 of the ESA, and authorization addresses the effects of the stormwater discharges associated with industrial activity, discharge-related activities, and allowable non-stormwater discharges on federally-listed species and federally-designated critical habitat; or

Criterion D. Coordination between you and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service has been concluded. The coordination must have addressed the effects of the facility's stormwater discharges associated with industrial activity, discharge-related activities, and allowable non-stormwater discharges on federally-listed threatened or endangered species and federally-designated critical habitat. The result of the coordination must be a written statement from the Service concluding that authorizing your stormwater discharges, discharge-related activities, and allowable non-stormwater discharges is consistent with the determination that the issuance of the MSGP is not likely to adversely affect federally-listed threatened or endangered species and federally-designated critical habitat. Any conditions or prerequisites deemed necessary to achieve consistency with the "not likely to adversely effect" determination become eligibility conditions for MSGP coverage, and permit requirements under Part 2.3; or

Criterion E. Authorizing your stormwater discharges associated with industrial activity, discharge-related activities, and allowable non-stormwater discharges is consistent with the determination that the issuance of the MSGP is not likely to adversely affect any federally-listed endangered and threatened ("listed") species or designated critical habitat ("critical habitat"). To support your determination that you meet Criterion E, you must provide supporting documentation for your determination.

i. If you are an existing discharger, you must provide the following information with your completed Notice of Intent (NOI) form: (1) a list of the federally-listed threatened or endangered species or their designated critical habitat that are likely to occur in the "action area"; (2) a list of the pollutant parameters for which you have ever exceeded the benchmark or applicable effluent limitations guideline, or for which you have ever been found to have caused or contributed to an exceedance of an applicable water quality standard or to have violated a State or Tribal water quality requirement (Part 9); and (3) your rationale supporting your determination that you meet Criterion E, including appropriate measures to be undertaken to avoid or eliminate the likelihood of adverse effects.

ii. If you are a new discharger, you must provide the following information with your completed NOI form: (1) a list of the federally-listed threatened or endangered species or their designated critical habitat that are likely to occur in the "action area"; (2) a list of the potential pollutants in your discharge; and (3) your rationale supporting your determination that you meet Criterion E, including

appropriate measures to be undertaken to avoid or eliminate the likelihood of adverse effects; or

Criterion F. The facility's stormwater discharges associated with industrial activity, discharge-related activities, and allowable non-stormwater discharges were already addressed in another operator's valid certification of eligibility that included the industrial activities and there is no reason to believe that federally-listed species or federally-designated critical habitat not considered in the prior certification may be present or located in the "action area". To certify eligibility under this criterion there must be no lapse of coverage in the other operator's certification. By certifying eligibility under this criterion, you agree to comply with any measures or controls upon which the other operator's certification was based. You must comply with any applicable terms, conditions, or other requirements developed in the process of meeting the eligibility requirements of the criteria in this section to remain eligible for coverage under this permit. Documentation must be kept with your SWPPP. If your certification is based on another operator's certification under Criterion E, that certification is valid only if you have documentation showing that the other operator had certified under Criterion E, and you provide EPA with the relevant supporting information required of existing dischargers in Criterion E (above, under subparagraph (i)) in your NOI form.

Appendix F
Procedures Relating to Historic Properties Preservation

Appendix F – Procedures Relating to Historic Properties Preservation

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of Federal "undertakings" on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. The term Federal "undertaking" is defined in the NHPA regulations to include a project, activity, or program of a Federal agency including those carried out by or on behalf of a Federal agency, those carried out with Federal financial assistance, and those requiring a Federal permit, license or approval. See 36 CFR 800.16(y). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the National Register of Historic Places. This term includes artifacts, records, and remains that are related to and located within such properties. See 36 CFR 800.16(1).

EPA's issuance of the Multi-Sector General Permit is a Federal undertaking within the meaning of the NHPA regulations. To address any issues relating to historic properties in connection with issuance of the permit, EPA has included criteria for applicants to certify that potential impacts of their covered activities on historic properties have been appropriately considered and addressed. Although individual applications for coverage under the general permit do not constitute separate Federal undertakings, the screening criteria and certifications provide an appropriate site-specific means of addressing historic property issues in connection with EPA's issuance of the permit. Applicants seeking coverage under the MSGP are thus required to make certain certifications regarding the potential effects of their stormwater discharge, allowable non-stormwater discharge, and discharge-related activities on properties listed or eligible for listing on the National Register of Historic Places.

You must meet one or more of the four criteria (A-D), which are also included in Part 1.1.4.6, to be eligible for coverage under this permit.

Criterion A. Your stormwater discharges and allowable non-stormwater discharges do not have the potential to have an effect on historic properties and you are not constructing or installing new stormwater control measures on your site that cause subsurface disturbance; or

Criterion B. Your discharge-related activities (i.e., construction and/or installation of stormwater control measures that involve subsurface disturbance) will not affect historic properties; or

Criterion C. Your stormwater discharges, allowable non-stormwater discharges, and discharge-related activities have the potential to have an effect on historic properties, and you have obtained and are in compliance with a written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative regarding measures to mitigate or prevent any adverse effects on historic properties, and you have either (1) obtained and are in compliance with a written agreement that outlines all such measures, or (2) been unable to reach agreement on such measures; or

Criterion D. You have contacted the State Historic Preservation Officer, Tribal Historic Preservation Officer, or other tribal representative and EPA in writing informing them that you have the potential to have an effect on historic properties and you did not receive a response from the SHPO, THPO, or tribal representative within 30 days of receiving your letter.

If you have been unable to reach agreement with a SHPO, THPO, or other tribal representative regarding appropriate measures to mitigate or prevent adverse effects, EPA may notify you of additional measures you must implement in order to be eligible for coverage under this permit.

Activities with No Potential to Have an Effect on Historic Properties

A determination that a Federal undertaking has no potential to have an effect on historic properties fulfills an agency's obligations under the NHPA. EPA has reason to believe that the vast majority of activities authorized under the MSGP have no potential to have effects on historic properties. The purpose of this permit is to control pollutants that may be transported in stormwater runoff from industrial facilities. EPA does not anticipate effects on historic properties from the pollutants in the stormwater and allowable non-stormwater discharges from these industrial facilities. Thus, to the extent EPA's issuance of this general permit authorizes discharges of such constituents, confined to existing stormwater channels or natural drainage areas; the permitting action does not have the potential to cause effects on historic properties.

In addition, the overwhelming majority of sources covered under this permit will be facilities that are seeking renewal of previous permit coverage. These existing dischargers should have already addressed NHPA issues in the 2000 MSGP as they were required to certify that they were either not affecting historic properties or they had obtained written agreement from the applicable State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) regarding methods of mitigating potential impacts. Both existing and new dischargers must follow the historic property screening procedures to determine their eligibility. EPA is not aware of any impacts on historic properties from activities covered under the 2000 MSGP, or, for that matter, any need for a written agreement. Therefore, to the extent this permit authorizes renewal of prior coverage without relevant changes in operations, it has no potential to have an effect on historic properties.

Activities with Potential to Have an Effect on Historic Properties

EPA believes this permit may have some potential to have an effect on historic properties where permittees construct and/or install stormwater control measures that involve subsurface disturbance and impact less than one (1) acre of land to comply with this permit. (Ground disturbances of one (1) acre or more require coverage under a different permit, the Construction General Permit.) Where you have to disturb the land through the construction and/or installation of control measures, there is a possibility that artifacts, records, or remains associated with historic properties could be impacted. Therefore, if you are establishing new or altering existing control measures to manage your stormwater that will involve subsurface ground disturbance of less than one (1) acre, you will need to ensure (1) that historic properties will not be impacted by

your activities or (2) that you have consulted with the appropriate SHPO, THPO, or other tribal representative regarding measures that would mitigate or prevent any adverse effects on historic properties.

Examples of Control Measures Which Involve Subsurface Disturbance

EPA reviewed typical control measures currently employed to determine which practices involve some level of earth disturbance. The types of control measures that are presumptively expected to cause subsurface ground disturbance include:

- Dikes
- Berms
- Catch Basins
- Ponds
- Ditches
- Trenches
- Culverts
- Land manipulation: contouring, sloping, and grading
- Channels
- Perimeter Drains
- Swales

EPA cautions dischargers that this list is non-inclusive. Other control measures that involve earth disturbing activities that are not on this list must also be examined for the potential to affect historic properties.

Historic Property Screening Process

You should follow the following screening process in order to certify your compliance with historic property eligibility requirements under this permit (see Part 1.1.4.6). The following four steps describe how applicants can meet the permit eligibility criteria for protection of historic properties under this permit:

Step One: *Are you an existing facility that is reapplying for certification under the 2008 MSGP?*

If you are an existing facility you should have already addressed NHPA issues. To gain coverage under the 2000 MSGP you were required to certify that you were either not affecting historic properties or had obtained written agreement from the relevant SHPO or THPO regarding methods of mitigating potential impacts. As long as you are not constructing or installing any new stormwater control measures then you have met eligibility Criterion A of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If you are an existing facility and will construct or install stormwater control measures that require subsurface disturbance of less than one (1) acre then you should proceed to Step Three. (Note: Construction activities disturbing one (1) acre or more are not eligible for coverage under this permit.)

If you are a new facility then you should proceed to Step Two.

Step Two: *Are you constructing or installing any stormwater control measures that require subsurface disturbance of less than one (1) acre?*

If, as part of your coverage under this permit, you are not building or installing control measures on your site that cause less than one (1) acre of subsurface disturbance, then your discharge-related activities do not have the potential to have an effect on historic properties. You have no further obligations relating to historic properties. You have met eligibility Criterion A of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If the answer to the Step Two question is yes, then you should proceed to Step Three.

Step Three: *Have prior earth disturbances determined that historic properties do not exist, or have prior disturbances precluded the existence of historic properties?*

If previous construction either revealed the absence of historic properties or prior disturbances preclude the existence of historic properties, then you have no further obligations relating to historic properties. You have met eligibility Criterion B of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If the answer to the Step Three question is no, then you should proceed to Step Four.

Step Four: *Contact the appropriate historic preservation authorities*

Where you are building and/or installing control measures affecting less than one (1) acre of land to control stormwater or allowable non-stormwater discharges associated with this permit, and the answer to Step Three is no, then you should contact the relevant SHPO, THPO, or other tribal representative to determine the likelihood that artifacts, records, or remains are potentially present on your site. This may involve examining local records to determine if historic artifacts have been found in nearby areas, as well as limited surface and subsurface examination carried out by qualified professionals.

If through this process it is determined that such historic properties potentially exist and may be impacted by your construction or installation of control measures, you should contact the relevant SHPO, THPO, or tribal representative in writing and request to discuss mitigation or prevention of any adverse effects. The letter should describe your facility, the nature and location of subsurface disturbance activities that are contemplated, any known or suspected historic properties in the area, and any anticipated effects on such properties. The letter should state that if the SHPO, THPO, or tribal representative does not respond within 30 days of receiving your letter, you may submit your NOI without further consultation. EPA encourages applicants to contact the appropriate authorities as soon as possible in the event of a potential adverse effect to an historic property.

If the SHPO, THPO, or tribal representative sent you a response within 30 days of receiving your letter and you enter into, and comply with, a written agreement with the SHPO, THPO, or other tribal representative regarding how to address any adverse impacts on historic properties, you have met eligibility Criterion C. In this case, you should retain a copy of the written agreement consistent with Part 5.1.6.2 of the MSGP. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA delay authorization based on concerns about potential adverse impacts to historic properties. However, EPA would generally accept any written agreement as fully addressing such concerns unless new information was brought to the Agency's attention that was not considered in your previous discussions with the SHPO, THPO or other tribal representative.

If you receive a response within 30 days after the SHPO, THPO, or tribal representative received your letter and you consult with the SHPO, THPO or tribal representative regarding adverse impacts to historic properties and measures to mitigate them but an agreement cannot be reached between you and the SHPO, THPO, or other tribal representative, you have still met the eligibility for Criterion C. In this case you should include in your SWPPP a brief description of potential effects to historic properties, the consultation process, any measures you will adopt to address the potential adverse impacts, and any significant remaining disagreements between you and the SHPO, THPO or other tribal representative. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA delay authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If you have contacted the SHPO, THPO, or tribal representative in writing regarding your potential to have an effect on historic properties and the SHPO, THPO, or tribal representative did not respond within 30 days of receiving your letter, you have met eligibility Criterion D. You are advised to get a receipt from the post office or other carrier confirming the date on which your letter was received. In this case, you should submit a copy of your letter notifying the SHPO, THPO or tribal representative of potential impacts with your NOI. After you submit your NOI, there is a 30-day waiting period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may

request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

Addresses for State Historic Preservation Officers and Tribal Historic Preservation Officers may be found on the Advisory Council on Historic Preservation's website (www.achp.gov/programs.html). In instances where a Tribe does not have a Tribal Historic Preservation Officer, you should contact the appropriate Tribal government office when responding to this permit eligibility condition.

Appendix G
Notice of Intent (NOI) Form

Appendix G –Notice of Intent (NOI) Form

To obtain coverage under this permit, you must submit a Notice of Intent (NOI). You must submit an NOI using either (1) EPA's Electronic Notice of Intent (eNOI) system, available at www.epa.gov/npdes/eNOI, or (2) file a paper copy of the NOI, a copy of which follows.

NPDES FORM 3510 -6

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460
NOTICE OF INTENT (NOI) FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY UNDER THE NPDES MULTI-SECTOR GENERAL PERMIT

Form Approved.
OMB No. 2040-0086

Submission of this completed Notice of Intent (NOI) constitutes notice that the operator identified in Section B of this form requests authorization to discharge pollutants to waters of the United States from the facility or site identified in Section C under EPA's NPDES Stormwater Multi-Sector General Permit (MSGP) for industrial stormwater. Submission of this NOI constitutes your notice to EPA that the facility identified in Section C of this form meets the eligibility conditions of Part 1.1 of the MSGP. Please read and make sure you comply with all eligibility requirements, including the requirement to prepare a stormwater pollution prevention plan. Refer to the instructions at the end of this form to complete your NOI.

A. Permit Number: | | R | | | | | | (see Appendix C of the MSGP for the list of eligible permit numbers)

Tracking Number (EPA Use Only): | | | | | | | |

B. Facility Operator Information

1. Name:

2. IRS Employer Identification Number (EIN): –

3. Mailing Address:

a. Street:

b. City: c. State: d. Zip Code: -

e. Phone: - - f. Fax (optional): - - g. E-mail:

C. Facility Information

1. Facility Name:

2. Have stormwater discharges from your site been covered previously under an NPDES permit? ☐ YES ☐ NO

a. If yes, provide the Tracking Number if you had coverage under EPA's MSGP 2000 or the NPDES permit number if you had coverage under an EPA individual permit.

b.1 If no, was your facility in operation and discharging stormwater prior to October 30, 2005? ☐ YES ☐ NO

b.2 If no to C.2.b.1, did your facility commence discharging after October 30, 2005 and before January 5, 2009? ☐ YES ☐ NO

3. Location Address:

a. Street

b. City:

c. County or similar government subdivision: d. State: e. Zip Code: -

f. Latitude: (use any one of the three formats provided.)
1. ___ ___° ___ ___′ ___ ___″ N (degrees, minutes, seconds)
2. ___ ___° ___ ___. ___ ___′ N (degrees, minutes, decimal)
3. ___ ___. ___ ___ ___ ___° N (degrees decimal)

g. Longitude: (use any of these 3 formats)
1. ___ ___ ___° ___ ___′ ___ ___″ W (degrees, minutes, seconds)
2. ___ ___ ___° ___ ___. ___ ___′ W (degrees, minutes, decimal)
3. ___ ___ ___. ___ ___ ___ ___° W (degrees decimal)

h. Lat/Long Data Source: ☐ USGS topographic map ☐ EPA web site ☐ GPS ☐ Other:

If you used a USGS topographic map, what was the scale?

4. Estimated area of industrial activity at your site exposed to stormwater: _____ (acres)

5. Is this a federal facility? ☐ YES ☐ NO

6. Is your facility located on Indian Country lands? ☐ YES ☐ NO

If yes, name of reservation, or if not part of a reservation, put "Not Applicable:"

D. Discharge information

1. Does your facility discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? ☐ YES ☐ NO

If yes, name of MS4 operator: _____

2. Receiving Waters and Wetlands (**Note**: If additional space is needed for this question, fill out Attachment 1.)

a. What is the name(s) of your receiving water(s) that receive stormwater directly and/or through an MS4)? If your receiving water is impaired then identify the name of the impaired segment, if applicable, in parentheses following the receiving water name.	b. Are any of your discharges directly into any segment of an "impaired" water?	If you answered yes to question D.2.b, then answer the following three questions:		
		b.1. What pollutant(s) are causing the impairment?	b.2. Are the pollutant(s) causing the impairment present in your discharge?	b.3. Has a TMDL been completed for the pollutant(s) causing the impairment?
	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO
	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO
	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO
	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO
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	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO
	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO
	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO

3. Water Quality Standards (for new dischargers only)

a. Are any of your discharges into any portion of a receiving water designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water)? ☐ YES ☐ NO

b. Has the receiving water(s) been designated by the state or tribal authority under its antidegradation policy as a Tier 3 water (Outstanding Natural Resource Water)? ☐ YES ☐ NO

4. Federal Effluent Limitation Guidelines and Sector-Specific Requirements

a. Are you requesting permit coverage for any stormwater discharges subject to effluent limitation guidelines? ☐ YES ☐ NO

b. If yes, which effluent limitation guidelines apply to your stormwater discharges?

40 CFR Part/Subpart	Eligible Discharges	Affected MSGP Sector	Check if Applicable
Part 411, Subpart C	Runoff from material storage piles at cement manufacturing facilities	E	☐
Part 418 Subpart A	Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products (SIC 2874)	C	☐
Part 423	Coal pile runoff at steam electric generating facilities	O	☐
Part 429, Subpart I	Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	A	☐
Part 436, Subpart B, C, or D	Mine dewatering discharges at crushed stone mines, construction sand and gravel mines, or industrial sand mines	J	☐
Part 443, Subpart A	Runoff from asphalt emulsion facilities	D	☐
Part 445, Subparts A & B	Runoff from hazardous waste and non-hazardous waste landfills	K, L	☐

c. If you are a Sector S (Air Transportation) facility, do you anticipate using more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis? ☐ YES ☐ NO

5. Identify the 4-digit Standard Industrial Classification (SIC) code or 2-letter Activity Code that best represents the products produced or services rendered for which your facility is primarily engaged, as defined in MSGP:

Primary SIC Code: ☐☐☐☐ OR Primary Activity Code ☐☐

6. Identify the applicable sector(s) and subsector(s) of industrial activity, including co-located industrial activity, for which you are requesting permit coverage:

a. Sector ☐☐ Subsector ☐ b. Sector ☐☐ Subsector ☐ c. Sector ☐☐ Subsector ☐

d. Sector ☐☐ Subsector ☐ e. Sector ☐☐ Subsector ☐ f. Sector ☐☐ Subsector ☐

7.a. Is your site presently inactive and unstaffed? ☐ YES ☐ NO

b1. If yes, is your site expected to be inactive and unstaffed for the entire permit term? ☐ YES ☐ NO

b2. If you select "no" in 7.b1 above, then indicate the length of time that you expect your facility to be inactive and unstaffed _____

E. Stormwater Pollution Prevention Plan (SWPPP) Contact Information

1a. SWPPP Contact Name:

b. Phone: ___ - ___ - ___ Ext. ___ c. E-mail: _____

2. URL of SWPPP (if applicable): _____

F. Endangered Species Protection

1. Using the instructions in Appendix E of the MSGP, under which criterion listed in Part 1.1.4.5 are you eligible for coverage under this permit?

☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

2. If you select criterion E from Part 1.1.4.5:

a. What federally-listed species or federally-designated critical habitat are in your "action area?" _____

_____

b. List the pollutants expected to be present in your discharge _____

_____

c. If you are an existing discharger, do you have effluent monitoring data from EPA's MSGP 2000, or another previous NPDES permit? ☐ YES ☐ NO

c.1 If no, why not? ☐ No monitoring required for my sector ☐ Inactive/unstaffed site ☐ Other _____

c.2 Do you have any other data characterizing pollutants in your stormwater (describe)? _____

c.3 If you have benchmark monitoring data, did you exceed any of the applicable benchmarks? ☐ YES ☐ NO

c.4 Did you exceed any applicable effluent limitation guideline or cause or contribute to an exceedance of a State or Tribal water quality standard? ☐ YES ☐ NO

c.5 If you answered "yes" to either question F.2.c.3 or F.2.c.4 above, for what pollutant(s)? _____

d. Attach documentation supporting criterion E eligibility. Documentation should address species and habitat listed in F.2.a and the potential effects of pollutants listed in F.2.b (including any monitoring data for these pollutants) on the listed species and habitat.

3. If you select criterion F from Part 1.1.4.5, provide the operator's NPDES Tracking Number under which you are certifying eligibility:

G. Historic Preservation

Using the instructions in Appendix F of the MSGP, under which criterion listed in Part 1.1.4.6 are you eligible for coverage under this permit?

☐ A ☐ B ☐ C ☐ D

H. Certifier Name and Title

I certify under penalty of law that I meet the eligibility conditions of this permit and that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Print Name:

Title:

Signature: _____ Date:

E-mail: _____

NOI Preparer (Complete if NOI was prepared by someone other than the certifier)

Prepared by:

Organization:

Phone: ___ - ___ - ___ Ext. ___ E-mail: _____

Attachment 1. (Fill in as necessary if more space is required for D.2 a-e)

a. What is the name(s) of your receiving water(s) that receive stormwater from your facility (directly and/or through an MS4)? If your receiving water is impaired then identify the name of the impaired segment, if applicable, in parentheses following the receiving water name.	b. Are any of your discharges directly into any segment of an “impaired” water?	If you answered yes to question D.2.b, then answer the following three questions:		
		b.1. What pollutant(s) are causing the impairment?	b.2. Are the pollutant(s) causing the impairment present in your discharge?	b.3. Has a TMDL been completed for the pollutant(s) causing the impairment?
	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO
	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO
	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO
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	☐ YES ☐ NO		☐ YES ☐ NO	☐ YES ☐ NO

NOI Submittal Deadlines/Discharge Authorization Dates		
Category	**NOI Deadline**	**Discharge Authorization Date**[1]
Existing Dischargers - in operation as of October 30, 2005 and authorized for coverage under MSGP 2000.	No later than January 5, 2009.	30 days after EPA posts your NOI. Your authorization under the MSGP 2000 is automatically continued until you have been granted coverage under this permit or an alternative permit, or coverage is otherwise terminated.
New Dischargers or New Sources - have commenced discharging between October 30, 2005 and January 5, 2009.	As soon as possible but no later than January 5, 2009.	30 days after EPA posts your NOI.
New Dischargers or New Sources - commence discharging after January 5, 2009.	A minimum of 60 days prior to commencing operation of the facility, or a minimum of 30 days if your SWPPP is posted on the Internet during this period and the Internet address (i.e., URL) to your SWPPP is provided on the NOI form.	If you post your SWPPP on the Internet, 30 days after EPA posts your NOI. Otherwise, 60 days after EPA posts your NOI.
New Owner/Operator of Existing Discharger - transfer of ownership and/or operation of a facility whose discharge is authorized under this permit	A minimum of 30 days prior to date that the transfer will take place to the new owner/operator.	30 days after EPA posts your NOI.
Other Eligible Dischargers - in operation prior to October 30, 2005 but not covered under the MSGP 2000 or another NPDES permit.	Immediately, to minimize the time discharges from the facility will continue to be unauthorized.	If you post your SWPPP on the Internet, 30 days after EPA posts your NOI. Otherwise, 60 days after EPA posts your NOI.

[1] Based on a review of your NOI or other information, EPA may delay your authorization for further review, notify you that additional effluent limitations are necessary, or may deny coverage under this permit and require submission of an application for an individual NPDES permit, as detailed in MSGP Part 1.6. In these instances, EPA will notify you in writing of the delay or the request for submission of an individual NPDES permit application. EPA will post these NOIs on its website at www.epa.gov/npdes/enoi.

Who Must File a Notice of Intent with EPA?

Under section 402(p) of the Clean Water Act (CWA) and regulations at 40 CFR Part 122, stormwater discharges associated with industrial activity are prohibited to waters of the United States unless authorized under a National Pollutant Discharge Elimination System (NPDES) permit. You can obtain coverage under the MSGP by submitting a completed NOI if you operate a facility:

- that is located in a jurisdiction where EPA is the permitting authority, listed in Appendix C of the MSGP,
- that discharges stormwater associated with industrial activities, identified in Appendix D of the MSGP,
- that meets the eligibility requirements in Part 1.1 of the permit,
- that develops a stormwater pollution prevention plan (SWPPP) in accordance with Part 5 of the MSGP; and
- that installs and implements control measures in accordance with Part 2 to meet numeric and non-numeric effluent limits.

If you are unsure if you need an NPDES stormwater permit, contact your EPA or State NPDES stormwater permit program. Contacts are listed at www.epa.gov/npdes/stormwatercontacts.

One NOI must be submitted for each facility or site for which you are seeking permit coverage. You do not need to submit separate NOIs for each type of industrial activity present at your facility, provided your SWPPP covers all activities.

When to File the NOI Form

Do not file your NOI until you have obtained and thoroughly read a copy of the MSGP. A copy of the MSGP is located on the EPA website (www.epa.gov/npdes/stormwater/msgp). The MSGP describes procedures to ensure your eligibility, prepare your SWPPP, install and implement appropriate stormwater control measures, and complete the NOI form questions – all of which must be done before you sign the NOI certification statement attesting to the accuracy and completeness of your NOI. You will also need a copy of the MSGP once you have obtained coverage so that you can comply with the implementation requirements of the permit.

Where to File the NOI Form

EPA encourages you to complete the NOI form electronically via the Internet. EPA's Electronic Notice of Intent System (eNOI) can be found at www.epa.gov/npdes/enoi. Filing electronically is the fastest way to obtain permit coverage and help ensure that your NOI is complete. If you choose not to file electronically, you must send the NOI to one of the addresses listed below.

NOIs sent regular mail:
Stormwater Notice Processing Center (4203M)
USEPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

NOIs sent overnight/express mail:
Stormwater Notice Processing Center
EPA East Building, Rm. 7420
1201 Constitution Avenue, NW
Washington, DC 20004
202-564-9545

If you have questions, please contact EPA's Stormwater Notice Processing Center toll free at (866) 352-7755.

- **If you file a paper NOI, please submit the original with a signature in ink – Do Not Send Copies. Also, faxed copies will not be accepted.**
- **Your SWPPP does not need to be submitted for review unless specifically requested by EPA or as otherwise required in Part 9 of the MSGP (State, Territory, and Tribal requirements). You must keep a copy of your SWPPP on-site or otherwise make it available to facility personnel responsible for implementing provisions of the permit.**

Completing the NOI Form

To complete this form, type or print in uppercase letters in the appropriate areas only. Please make sure you complete all questions. Make sure you make a photocopy for your records before you send the completed original form to the address above. You may also use this paper form as a checklist for the information you will need when filing an NOI electronically via EPA's eNOI system.

Section A. Permit Number

Appendix C of the MSGP 2008 contains a list of geographic areas covered by the permit. If your facility is located in one of the listed areas, include the appropriate permit number in this section. (For example, if you facility is located in Massachusetts, and not on Indian Lands, you would write MAR050000 in this space.) If your facility is located in an area not covered by the MSGP, please contact your EPA Region, state or territorial NPDES stormwater coordinator (see www.epa.gov/npdes/stormwatercontacts for a list of contacts).

Section B. Facility Operator Information

1. Provide the legal name of the person, firm, public organization or any other public entity that operates the facility described in this application. An operator of a facility is a legal entity that controls the operation of the facility.
2. Provide the Employer Identification Number (EIN from the Internal Revenue Service (IRS)), commonly referred to as your taxpayer ID number. If the operator does not have an EIN, enter "NA" in the space provided.
3. Provide the operator's mailing address, telephone number, fax number (optional), and email address. Correspondence will be sent to this address.

Section C. Facility Information

1. Enter the facility's official or legal name. Unless the name of your facility has changed, please use the same name provided on prior NOIs or permit applications. You can use EPA's NOI Search website (www.epa.gov/npdes/noisearch) to view your previous NOI.

2. Indicate if industrial stormwater discharges from your facility were previously covered by an NPDES permit.

2a. If your facility was covered by EPA's MSGP-2000, please include the tracking number that you received in your confirmation letter or email from EPA's Stormwater Notice Processing Center. You can find the tracking number assigned to your previous NOI on EPA's NOI Search website (www.epa.gov/npdes/noisearch).

2b1. If your facility was not previously covered by an NPDES permit and discharged industrial stormwater, then indicate if it was in operation before October 30, 2005 and not covered under the MSGP 2000. If you select "yes" to this question then you have a 30 day waiting period before you are authorized to discharge.

2b2. If you select "no" in C.2.b.1, then indicate if your facility discharged stormwater between October 30, 2005 and January 5, 2009. If you select "yes" to this

question then you have a 30 day waiting period before you are authorized to discharge. If you select "no" to this question and you post your SWPPP on the Internet and provide EPA the URL in E.2, then you have a 30 day waiting period before you are authorized to discharge. If you select "no" to this question, but do not post your SWPPP on the Internet and therefore do not answer E.2, then you have a 60 day waiting period before you are authorized to discharge.

3.a-e. Enter the street address, including city, state, zip code, county or similar government subdivision of the actual physical location of the facility. Do not use a P.O. Box.

3.f-g. Provide the facility latitude and longitude in one of three formats: (1) degrees, minutes, seconds; (2) degrees, minutes, decimal; or(3) degrees decimal. You can obtain your facility's latitude and longitude though Global Positioning System (GPS) receivers, U.S. Geological Survey (USGS) quadrangle or topographic maps, and EPA's web-based siting-tools, among other methods. Refer to www.epa.gov/npdes/stormwater/msgp for guidance on the use of these methods. For consistency, EPA requests you take measurements from the location of your facility's stormwater outfall. Outfalls are locations where the stormwater exits the facility, including pipes, ditches, swales, and other structures that transport stormwater. If there is more than one outfall present, measure at the primary outfall (i.e., the outfall with the largest volume of stormwater discharge associated with industrial activity).

3.h. Identify the data source that you used to determine the facility latitude and longitude. If you did not use a USGS quadrangle or topographic map, the EPA website, or GPS receivers, then select "Other" and write the method used on the line provided. If you used a USGS quadrangle or topographic map, write the map scale on the line provided. Scale should be identified on the map.

4. Enter the estimated area of industrial activity at your site exposed to stormwater, in acres.

5. Indicate if the facility is considered a "federal facility" - Federal facilities include any buildings, installations, structures, land, public works, equipment, aircraft, vessels, and other vehicles and property, owned or leased by the federal government.

6. Indicate whether the facility is located in Indian Country, and, if so, provide the name of the reservation, if applicable.

Section D. Discharge Information

1. Indicate whether stormwater from your site will be discharged into a municipal separate storm sewer system (MS4). An MS4 is a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, storm drains, curbs and gutters, ditches and man-made channels, owned or operated by a state, city, town, borough, county, parish, district, association or other public body, used to collect or convey stormwater. If you check "Yes" then identify the name of the MS4 operator on the line provided. If you are uncertain of the MS4 operator, contact your local government for that information. MS4s are different than combined sewers, which are designed to convey both stormwater and sanitary wastewater. Discharges to combined sewers do not require an NPDES permit but may be subject to other CWA requirements (contact the combined sewer operator for more information).

2. Enter information regarding your discharge. If additional space is needed fill out Attachment 1.

2a. Indicate in column "a" of the table the name(s) of the receiving water(s) into which stormwater from your facility will discharge. Also provide in parentheses the name of the impaired water (and segment, if applicable) into which your stormwater is discharged. If you identified more than on receiving water for your facility, indicate the first receiving water and complete question 2b and 2.b.1-3 (if applicable), before entering the next receiving water. The EPA's Water Locator Tool can help you identify the closest receiving water to your facility (www.epa.gov/npdes/msgp). Your receiving water may be a lake, stream, river, ocean, wetland or other waterbody, and may or may not be located adjacent to your facility. Your stormwater may discharge directly to the receiving water or indirectly via a storm sewer system, an open drain or ditch, or other conveyance structure. Do NOT list a man-made conveyance, such as a storm sewer system, as your receiving water. Indicate the first receiving water your stormwater discharge enters. For example, if your discharge enters a storm sewer system, that empties into Trout Creek, which flows into Pine River, your receiving water is Trout Creek, because it is the first waterbody your discharge will reach. Similarly, a discharge into a ditch that feeds Spring Creek should be identified as "Spring Creek" since the ditch is a manmade conveyance. If you discharge into a municipal separate storm sewer system (MS4), you must identify the waterbody into which that portion of the storm sewer discharges. That information should be readily available from the operator of the MS4.

2b. Indicate in column "b" of the table whether you discharge directly to an impaired water (lake, stream segment, estuary, etc), listed as "impaired" under section 303(d) of the Clean Water Act. Each state water quality agency maintains a list of waters that are impaired. Most state agencies publish these lists online. The EPA's Water Locator Tool may also help you identify if the nearest receiving water is impaired (www.epa.gov/npdes/msgp). If you discharge into a stream segment that is upstream of a listed impaired water but which is not itself on the State's impaired waters list, answer "no" to this question. In this case, requirements in the MSGP for discharges into impaired waters do not apply to you, unless notified otherwise by EPA.

Answer the following three questions only if you answered "Yes" to D 2.b:

2b1. Provide the pollutant(s) listed as causing the impairment in the water identified in D.2.b.1 above. Enter each pollutant individually on a separate row in the table.

2b2. Out of the pollutant(s) that you identified in D.2.b.1 above, indicate which pollutants you believe will be present in your discharge. If you do not expect the pollutant(s) to be in your discharge, then select "no."

2b3.Indicate the pollutant(s) that have a Total Maximum Daily Load (TMDL) for the impaired stream segment that you identified in D.2.b.2 above. Check with your state water quality agency for lists of waters with approved or established TMDLs. See www.epa.gov/npdes/msgp for more information.

3. Water Quality Standards

3a.If you selected "no" in C.2 indicating that stormwater discharges from your facility have not been previously covered under an NPDES permit, then you are considered a new discharger and must answer this question; otherwise you are considered an existing discharger and may skip this question. State water quality agencies are responsible for setting water quality standards for waters within the state's boundaries. Check EPA's website (www.epa.gov/npdes/msgp) to determine if the water(s) that you discharge into are designated as a "Tier 2 (or Tier 2.5) water" (See Appendix A of the MSGP 2008 for definitions of "Tier 2 water" and "Tier 2.5 water"). If you discharge into these waters, EPA may impose additional permit conditions to ensure that you do not violate the State's antidegradation policy.

3.b Idenitfy whether your receiving water is designated as a Tier 3 waterbody. Go to www.epa.gov/npdes/msgp for a list of Tier 3 waterbodies. Note that new discharges into designated Tier 3 waters are not eligible for coverage under the MSGP 2008.

4. Federal Effluent Limitation Guidelines and Sector-Specific Requirements

4.a-b. Depending on your industrial activities, your facility may be subject to effluent limitation guidelines which include additional effluent limits and monitoring requirements for your facility. Please review these requirements, described in Part 2.1.3 of the MSGP, and check any appropriate boxes on the NOI form.

4.c. For Sector S facilities (Air Transportation), indicate whether you anticipate that the entire airport facility will use more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis. If so, additional effluent limits and monitoring conditions apply to your discharge (see Part 8 Sector S of the MSGP 2008).

5. List the four-digit Standard Industrial Classification (SIC) code and/or two character activity code that best describes the primary industrial activities performed by your facility under which you are required to obtain permit coverage. Your primary industrial activity includes any activities performed on-site which are (1) identified by the facility's one SIC code for which the facility is primarily engaged; and (2) included in the narrative descriptions of 40 CFR 122.26(b)(14)(i), (iv), (v), or (vii), and (ix). See Appendix D of the MSGP for a complete list of SIC codes and activities codes.

6. If your site has co-located industrial activities that are not identified as your primary industrial activity, identify the sector and subsector codes that describe these other industrial activities. For a complete list of sector and subsector codes, see Appendix D of the MSGP.

7.a-b Indicate whether your facility is currently inactive and unstaffed. If so then indicate whether your facility will be inactive and unstaffed for the entire permit term, or if not, specify the specific length of time in units of days, weeks, months, or years (e.g. 3 months) that you expect the facility to be inactive and unstaffed.

Section E. Facility Contact Information and SWPPP Location

1.a-c. Identify the name, telephone number, and email address of the person who will serve as a contact for EPA on issues related to stormwater management at your facility. This person should be able to answer questions related to stormwater discharges, the SWPPP, and other issues related to stormwater permit coverage, or have immediate access to individuals with that knowledge. This person does not have to be the facility operator, but should have intimate knowledge of stormwater management activities at the facility.

2. If you are making your Stormwater Pollution Prevention Plan publicly available on a website provide the appropriate Internet URL address. (Please note that by posting your SWPPP on the web, you may qualify for a shortened authorization waiting period. See Table 1-2 of the MSGP for more information.)

Section F. Endangered Species Protection

1. Based on the instruction provided in Appendix E of the MSGP 2008, indicate which permit criterion (A,B,C,D,E, or F) listed in Part 1.1.4.5 you are using to satisfy your eligibility obligations for protection of endangered and threatened species, and designated critical habitat.

2.a. If you select criterion E (not likely to adversely affect), list those federally-listed endangered or threatened species and any federally-listed designated critical habitat expected to exist in proximity to your facility.

2.b List the pollutants that you expect to be present in your stormwater discharge. Include any pollutants that you may have included in D.2.b.3 above.

2.c If you selected "yes" in C.2 then you are considered an existing discharger and must answer all the questions in F.2.c.1--5; otherwise you are considered a new discharger and may skip the questions under F.2.c. If you are an existing discharger who was previously covered under the MSGP 2000, indicate whether you have any previous effluent monitoring data.

2.c1-2.If you select "No," to F.2.c then indicate why you don't have any data. Also indicate if you have any other data characterizing pollutants in your stormwater discharge.

2.c.3. If you select "Yes," to F.2.c then indicate whether you exceeded any benchmark.

2.c.4 Indicate whether you have exceeded any applicable effluent limitation guideline, or caused or contributed to an exceedance of state or tribal water quality requirement(s).

2.c.5. If you select "Yes" to F.2.c.3.and/or F.2.c.4 then indicate the pollutant parameters for which you exceeded the benchmark, applicable effluent limitation guideline, or State or Tribal water quality requirement(s).

2.d. Attach your supporting rationale for your determination of the applicability of Criterion E for your facility (applies to both new and existing dischargers). Your documentation should address species and habitat listed in F.2.a and the potential effects of pollutants listed in F.2.b on the listed species and habitat. This should include consideration of any available data characterizing pollutants in your stormwater discharge, or in the discharge of similar facilities if data for you facility is not available, that may be of concern to listed species.

3. If you select Criterion F (already addressed in another operator's valid certification), provide the tracking number that the operator received in their confirmation letter or email from EPA's NOI Processing Center (see Appendix E). You can find the tracking number assigned to your previous NOI on EPA's NOI Search website (www.epa.gov/npdes/noisearch). An example where criterion F may apply includes airports where several individual airlines have applied for coverage under the MSGP, and the entire airport also has applied for or obtained coverage. If the airport has already certified under Appendix E, and that certification addresses any potential impacts from the individual airlines, then the airlines may reference the airport's permit tracking number.

Section G. Historic Preservation

Based on the instruction provided in Appendix F of the MSGP 2008, indicate which permit criterion (A, B, C, or D) listed in Part 1.1.4.6 of the MSGP you used to satisfy your eligibility obligations for protection of historic properties.

Section H. Certification

Certification statement and signature (see Section B.11 of Appendix B of the MSGP for more information). Enter certifier's printed name, title and email address. Sign and date the form. (CAUTION: An unsigned or undated NOI form will prevent the granting of permit coverage.) Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means:

(i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or

(ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor; or

For a municipal, State, Federal, or other public facility: by either a principal executive or ranking elected official.

If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the name, organization, phone number and email address of the NOI preparer.

Paperwork Reduction Act Notice

Public reporting burden for this certification is estimated to average 3.7 hours per certification, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose to provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Office of Environmental Information Services, Collection Services Division (2823), USEPA, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Include the OMB control number of this form on any correspondence. Do not send the completed NOI form to this address.

Appendix H
Notice of Termination (NOT) Form

Appendix H – Notice of Termination (NOT) Form

To terminate coverage under this permit, you must submit a Notice of Termination (NOT). You must either (1) terminate coverage using EPA's online eNOI system, available at www.epa.gov/npdes/eNOI or (2) file a paper copy of the NOT, a copy of which follows.

This Form Replaces Previous Form 2040-0086 (Please See Instructions Before Completing This Form)

NPDES FORM 3510-7

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460
NOTICE OF TERMINATION (NOT) OF COVERAGE UNDER A NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

Form Approved.
OMB No. 2040-0086

Submission of this Notice of Termination (NOT) constitutes notice that the party identified in Section B of this form is no longer authorized to discharge stormwater associated with industrial activity under the NPDES program for the facility identified in Section C of this form. All necessary information must be included on this form. Refer to the instructions at the end of this form.

A. Permit Number:

1. NPDES Permit Tracking Number:

2. Reason for Termination (check one only):
   - a. ☐ You transferred operational control to another operator.
   - b. ☐ You no longer have a stormwater discharge associated with industrial activity subject to regulation under the NPDES program, and you have already implemented necessary sediment and erosion controls as required by Part 2.1.2.5.
   - c. ☐ You are a Sector G, H, or J facility and you have met the applicable termination requirements.
   - d. ☐ You obtained coverage under an alternative NPDES permit.

B. Facility Operator Information

1. Name:

2. IRS Employer Identification Number (EIN): –

3. Mailing Address:

a. Street:

b. City: c. State: d. Zip Code: -

e. Phone: - - f. Fax (optional): - - g. E-mail: _____

C. Facility Information

1. Facility Name:

2. Location Address:

a. Street

b. City:

c. County or similar government subdivision: d. State: e. Zip Code: -

D. Certifier Name and Title

I certify under penalty of law that I have met at least one of the reasons for terminating permit coverage listed in Section A.2 above. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge stormwater associated with industrial activity under this general permit, and that discharging pollutants in stormwater associated with industrial activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this Notice of Termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

Print Name:

Title:

Signature: _____ Date:

E-mail: _____

Instructions for Completing the Notice of Termination for Stormwater Discharges Associated with INDUSTRIAL ACTIVITY under the Multi-Sector General Permit (MSGP)

Who May File Notice of Termination (NOT) Form

Permittees currently covered by EPA's NPDES Stormwater Multi-Sector General Permit may submit a Notice of Termination (NOT) form. You must submit an NOT within 30 days after one or more of the following conditions have been met:

- a new owner or operator has assumed responsibility for the facility; or
- you have ceased operations at the facility and there are not or no longer will be discharges of stormwater associated with industrial activity from the facility, and you have already implemented necessary sediment and erosion controls as required by Part 2.1.2.5;
- you are a Sector G, H, or J facility and you have met the applicable termination requirements; or
- you have obtained coverage under an individual or alternative general permit for all discharges required to be covered by an NPDES permit.

See the MSGP Part 1.4 for more information.

Where to File NOT form

EPA encourages you to complete the NOT form online, via the Internet. The Electronic Notice of Intent System (eNOI) is found at www.epa.gov/npdes/eNOI. If you cannot access the electronic system, you must send the NOT to the address listed below.

NOTs sent regular mail:
Stormwater Notice of Termination (4203M)
USEPA
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

NOTs sent overnight/express
Stormwater Notice of Termination
US EPA East Building, Rm 7420
1201 Constitution Avenue, NW
Washington, D.C. 20004
(202) 564-9545

Completing the Form

To complete this form, type or print in uppercase letters in the appropriate areas only. Please make sure you complete all questions. Make sure you make a photocopy for your records before you send the completed original form to the address above. Please use ink when you sign the original document – DO NOT send copies. If you have any questions about this form, you may call the EPA's Stormwater Notice Processing Center at (866) 352-7755.

Section A. Permit Information

1. Enter the NPDES tracking number assigned by EPA's Stormwater Notice Processing Center to the facility. If you do not know the tracking number, you can find the tracking number assigned to your previous NOI on EPA's NOI Search website (www.epa.gov/npdes/noisearch).

2. Indicate your reason for submitting this Notice of Termination by checking the appropriate box (see MSGP Part 1.4 for more information).

Section B. Facility Operator Information

1. Give the legal name of the person, firm, public organization, or any other entity that operates the facility described in this application. The operator of the facility is the legal entity which controls the facility's operation, rather than the plant or site manager. Do not use a colloquial name.

2-3. Enter the facility operator's IRS Employer Identification Number (also know as the tax payer ID number). Enter the complete mailing address, email address and telephone number of the operator. This address will be used for any future correspondence between EPA and the facility operator.

Section C. Facility Information

1-2. Enter the facility's official or legal name and complete address, including city, county or similar government subdivision, state, and ZIP code.

Section D. Certification

Certification statement and signature (see Section B.11 of Appendix B of the MSGP for more information). Enter certifier's printed name, title and email address. Sign and date the form. Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of the principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor; or

For a municipality State, Federal, or other facility: by either a principal executive office or ranking elected official.

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 0.5 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, Office of Environmental Information Services, Collection Services Division (2823), USEPA, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Include the OMB control number of this form on any correspondence. Do not send the completed NOT form to this address.

Appendix I
Annual Reporting Form

NPDES Permit Tracking No.:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

Annual Reporting Form

A. GENERAL INFORMATION

1. Facility Name:

2. NPDES Permit Tracking No.:

3. Facility Physical Address:

a. Street:

b. City: c. State: d. Zip Code: -

4. Lead Inspectors Name: Title:

Additional Inspectors Name(s):

5. Contact Person: Title:

Phone: - - Ext. E-mail:

6. Inspection Date: / /

B. GENERAL INSPECTION FINDINGS

1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to stormwater?
☐ YES ☐ NO

If NO, describe why not:

NOTE: *Complete Section C of this form for each industrial activity area inspected and included in your SWPPP or as newly identified in B.2 or B.3 below where pollutants may be exposed to stormwater.*

2. Did this inspection identify any stormwater or non-stormwater outfalls not previously identified in your SWPPP? ☐ YES ☐ NO

If YES, for each location, describe the sources of those stormwater and non-stormwater discharges and any associated control measures in place:

NPDES Permit Tracking No.:

3. Did this inspection identify any sources of stormwater or non-stormwater discharges not previously identified in your SWPPP? ☐ YES ☐ NO

If YES, describe these sources of stormwater or non-stormwater pollutants expected to be present in these discharges, and any control measures in place:

4. Did you review stormwater monitoring data as part of this inspection to identify potential pollutant hot spots? ☐ YES ☐ NO ☐ NA, no monitoring performed

If YES, summarize the findings of that review and describe any additional inspection activities resulting from this review:

5. Describe any evidence of pollutants entering the drainage system or discharging to surface waters, and the condition of and around outfalls, including flow dissipation measures to prevent scouring:

6. Have you taken or do you plan to take any corrective actions, as specified in Part 3 of the permit, since your last annual report submission (or since you received authorization to discharge under this permit if this is your first annual report), including any corrective actions identified as a result of this annual comprehensive site inspection?
☐ YES ☐ NO

If YES, how many conditions requiring review for correction action as specified in Parts 3.1 and 3.2 were addressed by these corrective actions? | |

NOTE: *Complete the attached Corrective Action Form (Section D) for each condition identified, including any conditions identified as a result of this comprehensive stormwater inspection.*

NPDES Permit Tracking No.:

C. INDUSTRIAL ACTIVITY AREA SPECIFIC FINDINGS

Complete one block for each industrial activity area where pollutants may be exposed to stormwater. Copy this page for additional industrial activity areas.

In reviewing each area, you should consider:

- Industrial materials, residue, or trash that may have or could come into contact with stormwater;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;
- Offsite tracking of industrial or waste materials from areas of no exposure to exposed areas; and
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas.

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description**:**

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised control measures necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised c necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

NPDES Permit Tracking No.:

NOTE: *Copy this page and attach additional pages as necessary*

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

NPDES Permit Tracking No.:

D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # ☐☐ of ☐☐ for this reporting period.

2. Is this corrective action:

- ☐ An update on a corrective action from a previous annual report; or
- ☐ A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- ☐ Unauthorized release or discharge
- ☐ Numeric effluent limitation exceedance
- ☐ Control measures inadequate to meet applicable water quality standards
- ☐ Control measures inadequate to meet non-numeric effluent limitations
- ☐ Control measures not properly operated or maintained
- ☐ Change in facility operations necessitated change in control measures
- ☐ Average benchmark value exceedance
- ☐ Other (describe): _____

4. Briefly describe the nature of the problem identified:

5. Date problem identified: ☐☐/☐☐/☐☐☐☐

6. How problem was identified:

- ☐ Comprehensive site inspection
- ☐ Quarterly visual assessment
- ☐ Routine facility inspection
- ☐ Benchmark monitoring
- ☐ Notification by EPA or State or local authorities
- ☐ Other (describe): _____

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:

8. Did/will this corrective action require modification of your SWPPP? ☐ YES ☐ NO

9. Date corrective action initiated: ☐☐/☐☐/☐☐☐☐

10. Date correction action completed: ☐☐/☐☐/☐☐☐☐ or expected to be completed: ☐☐/☐☐/☐☐☐☐

11. If corrective action not yet completed, provide the status of corrective action at the time of the comprehensive site inspection and describe any remaining steps (including timeframes associated with each step) necessary to complete corrective action:

NPDES Permit Tracking No.:

E. ANNUAL REPORT CERTIFICATION

1. Compliance Certification

Do you certify that your annual inspection has met the requirements of Part 4.2 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? ☐ YES ☐ NO

If NO, summarize why you are not in compliance with the permit:

2. Annual Report Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Representative Printed Name: Title:

Signature: Date Signed:

Appendix J
Calculating Hardness in Receiving Waters for Hardness Dependent Metals

Appendix J. Calculating Hardness in Receiving Waters for Hardness Dependent Metals

Overview

EPA adjusted the benchmarks for six hardness-dependent metals (i.e., cadmium, copper, lead, nickel, silver, and zinc) to further ensure compliance with water quality standards and provide additional protection for endangered species and their critical habitat. For any sectors required to conduct benchmark samples for a hardness-dependent metal, EPA includes 'hardness ranges' from which benchmark values are determined. To determine which hardness range to use, you must collect data on the hardness of your receiving water(s). Once the site-specific hardness data have been collected, the corresponding benchmark value for each metal is determined by comparing where the hardness data fall within 25 mg/L ranges, as shown in Table 1.

Table 1. ***Hardness Ranges to Be Used to Determine Benchmark Values for Cadmium, Copper, Lead, Nickel, Silver, and Zinc.***

All Units mg/L	Benchmark Values (mg/L, total)					
	Cadmium	Copper	Lead	Nickel	Silver	Zinc
0-25 mg/L	0.0005	0.0038	0.014	0.15	0.0007	0.04
25-50 mg/L	0.0008	0.0056	0.023	0.20	0.0007	0.05
50-75 mg/L	0.0013	0.0090	0.045	0.32	0.0017	0.08
75-100 mg/L	0.0018	0.0123	0.069	0.42	0.0030	0.11
100-125 mg/L	0.0023	0.0156	0.095	0.52	0.0046	0.13
125-150 mg/L	0.0029	0.0189	0.122	0.61	0.0065	0.16
150-175 mg/L	0.0034	0.0221	0.151	0.71	0.0087	0.18
175-200 mg/L	0.0039	0.0253	0.182	0.80	0.0112	0.20
200-225 mg/L	0.0045	0.0285	0.213	0.89	0.0138	0.23
225-250 mg/L	0.0050	0.0316	0.246	0.98	0.0168	0.25
250+ mg/L	0.0053	0.0332	0.262	1.02	0.0183	0.26

How to Determine Hardness for Hardness-Dependent Parameters.

You may select one of three methods to determine hardness, including; individual grab sampling, grab sampling by a group of operators which discharge to the same receiving water, or using third-party data. Regardless of the method used, you are responsible for documenting the procedures used for determining hardness values. Once the hardness value is established, you are required to include this information in your first benchmark report submitted to EPA so that the Agency can make appropriate comparisons between your benchmark monitoring results and the corresponding benchmark. You must retain all report and monitoring data in accordance with Part 7.5 of the permit. The three method options for determining hardness are detailed in the following sections.

(1) Permittee Samples for Receiving Stream Hardness

This method involves collecting samples in the receiving water and submitting these to a laboratory for analysis. If you elect to sample your receiving water(s) and submit samples for

analysis, hardness must be determined from the closest intermittent or perennial stream downstream of your point of discharge. The sample can be collected during either dry or wet weather. Collection of the sample during wet weather is more representative of conditions during stormwater discharges; however, collection of in-stream samples during wet weather events may be impracticable or present safety issues.

Hardness must be sampled and analyzed using approved methods as described in 40 CFR Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants).

(2) Group Monitoring for Receiving Stream Hardness

You can be part of a group of permittees discharging to the same receiving waters and collect samples that are representative of the hardness values for all members of the group. In this scenario, hardness of the receiving water must be determined using 40 CFR Part 136 procedures and the results shared by group members. To use the same results, hardness measurements must be taken on a stream reach within a reasonable distance of the discharge points of each of the group members.

(3) Collection of Third-Party Hardness Data

You can submit receiving stream hardness data collected by a third party provided the results are collected consistent with the approved 40 CFR Part 136 methods. These data may come from a local water utility, previously conducted stream reports, TMDLs, peer reviewed literature, other government publications, or data previously collected by the permittee. Data should be less than 10 years old.

Water quality data for many of the nation's surface waters are available on-line or by contacting EPA or a state environmental agency. EPA's data system STORET, short for STOrage and RETrieval, is a repository for receiving water quality, biological, and physical data and is used by state environmental agencies, EPA and other federal agencies, universities, private citizens, and many others. Similarly, state environmental agencies and the U.S. Geological Service (USGS) also have water quality data available that, in some instances, can be accessed online. "Legacy STORET" codes for hardness include: 259 hardness, carbonate; 260 hardness, noncarbonated; and 261 calcium + magnesium, while more recent, "Modern STORET" data codes include: 00900 hardness, 00901 carbonate hardness, and 00902 noncarbonate hardness; or the discrete measurements of calcium (00915) and magnesium (00925) can be used to calculate hardness. Hardness data historically has been reported as "carbonate," "noncarbonate," or "Ca + Mg." If these are unavailable, then individual results for calcium (Ca) and magnesium (Mg) may be used to calculate hardness using the following equation:

$$\text{mg/L } CaCO_3 = 2.497 \text{ (Ca mg/L)} + 4.118 \text{ (Mg mg/L)}$$

When interpreting the data for carbonate and non-carbonate hardness, note that total hardness is equivalent to the sum of carbonate and noncarbonate hardness if both forms are reported. If only carbonate hardness is reported, it is more than likely that noncarbonate hardness is absent and the total hardness is equivalent to the available carbonate hardness.

Appendix K
No Exposure Certification Form

NPDES FORM 3510-11

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

Form Approved
OMB No. 2040-0211

NO EXPOSURE CERTIFICATION FOR EXCLUSION FROM NPDES STORMWATER PERMITTING

Submission of this No Exposure Certification constitutes notice that the entity identified in Section A does not require permit authorization for its stormwater discharges associated with industrial activity in the State identified in Section B under EPA's Stormwater Multi Sector General Permit due to the existence of a condition of no exposure.

A condition of no exposure exists at an industrial facility when all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. A storm resistant shelter is not required for the following industrial materials and activities:

- drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak. "Sealed" means banded or otherwise secured and without operational taps or valves;
- adequately maintained vehicles used in material handling; and
- final products, other than products that would be mobilized in stormwater discharges (e.g., rock salt).

A No Exposure Certification must be provided for each facility qualifying for the no exposure exclusion. In addition, the exclusion from NPDES permitting is available on a facility-wide basis only, not for individual outfalls. If any industrial activities or materials are or will be exposed to precipitation, the facility is not eligible for the no exposure exclusion.

By signing and submitting this No Exposure Certification form, the entity in Section A is certifying that a condition of no exposure exists at its facility or site, and is obligated to comply with the terms and conditions of 40 CFR 122.26(g).

ALL INFORMATION MUST BE PROVIDED ON THIS FORM.

Detailed instructions for completing this form and obtaining the no exposure exclusion are provided on pages 3 and 4.

A. Facility Operator Information

1. Name: 2. Phone: ( ) - -

3. Email:

4. Mailing Address: a. Street

b. City: c. State d. Zip Code: –

B. Facility/Site Location Information

1. Facility Name:

2. a. Street Address:

b. City: c. County:

d. State: e. Zip Code: –

3. Is the facility located on Indian Lands? ☐ YES ☐ NO

4. Is this a Federal facility? ☐ YES ☐ NO

5. a. Latitude: ° ' " b. Longitude: ° ' "

6. a. Was the facility or site previously covered under an NPDES stormwater permit? ☐ YES ☐ NO

b. If yes, enter NPDES permit number or tracking number:

7. SIC/Activity Codes: Primary: Secondary (if applicable):

8. Total size of site associated with industrial activity: acres

9. a. Have you paved or roofed over a formerly exposed, pervious area in order to qualify for the no exposure exclusion? ☐ YES ☐ NO

b. If yes, please indicate approximately how much area was paved or roofed over. Completing this question does not disqualify you for the no exposure exclusion. However, your permitting authority may use this information in considering whether stormwater discharges from your site are likely to have an adverse impact on water quality, in which case you could be required to obtain permit coverage.

Less than one acre ☐ One to five acres ☐ More than five acres ☐

C. Exposure Checklist

Are any of the following materials or activities exposed to precipitation, now or in the foreseeable future? (Please check either "Yes" or "No" in the appropriate box.) **If you answer "Yes" to any of these questions (1) through (11), you are <u>not</u> eligible for the no exposure exclusion.**

	Yes	No
1. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to stormwater	☐	☐
2. Materials or residuals on the ground or in stormwater inlets from spills/leaks	☐	☐
3. Materials or products from past industrial activity	☐	☐
4. Material handling equipment (except adequately maintained vehicles)	☐	☐
5. Materials or products during loading/unloading or transporting activities	☐	☐
6. Materials or products stored outdoors (except final products intended for outside use [e.g., new cars] where exposure to stormwater does not result in the discharge of pollutants)	☐	☐
7. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers	☐	☐
8. Materials or products handled/stored on roads or railways owned or maintained by the discharger	☐	☐
9. Waste material (except waste in covered, non leaking containers [e.g., dumpsters])	☐	☐
10. Application or disposal of process wastewater (unless otherwise permitted)	☐	☐
11. Particulate matter or visible deposits of residuals from roof stacks and/or vents not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater outflow	☐	☐

D. Certification Statement

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "no exposure" and obtaining an exclusion from NPDES stormwater permitting.

I certify under penalty of law that there are no discharges of stormwater contaminated by exposure to industrial activities or materials from the industrial facility or site identified in this document (except as allowed under 40 CFR 122.26(g)(2)).

I understand that I am obligated to submit a no exposure certification form once every five years to the NPDES permitting authority and, if requested, to the operator of the local municipal separate storm sewer system (MS4) into which the facility discharges (where applicable). I understand that I must allow the NPDES permitting authority, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of stormwater from the facility.

Additionally, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Print Title: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Signature: _____

Date: |_|_| / |_|_| / |_|_|_|_|

Mo Day Year

Email: |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Instructions for the NO EXPOSURE CERTIFICATION for Exclusion from NPDES Stormwater Permitting

Who May File a No Exposure Certification

Federal law at 40 CFR Part 122.26 prohibits point source discharges of stormwater associated with industrial activity to waters of the U.S. without a National Pollutant Discharge Elimination System (NPDES) permit. However, NPDES permit coverage is not required for discharges of stormwater associated with industrial activities identified at 40CFR 122.26(b)(14)(i)-(ix) and (xi) if the discharger can certify that a condition of "no exposure" exists at the industrial facility or site.

Stormwater discharges from construction activities identified in 40 CFR 122.26(b)(14)(x) and (b)(15) are not eligible for the no exposure exclusion.

Obtaining and Maintaining the No Exposure Exclusion

This form is used to certify that a condition of no exposure exists at the industrial facility or site described herein. This certification is only applicable in jurisdictions where EPA is the NPDES permitting authority and must be re-submitted at least once every five years.

The industrial facility operator must maintain a condition of no exposure at its facility or site in order for the no exposure exclusion to remain applicable. If conditions change resulting in the exposure of materials and activities to stormwater, the facility operator must obtain coverage under an NPDES stormwater permit immediately.

Where to File the No Exposure Certification Form

No Exposure Forms sent regular mail:

SW No Exposure Certification (4203M)
USEPA
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Forms sent overnight/express:

SW No Exposure Certification
US EPA East Building, Rm. 7420
1201 Constitution Avenue, NW
Washington, D.C. 20004
(202) 564-9545

Completing the Form

You must type or print, using uppercase letters, in appropriate areas only. Enter only one character per space (i.e., between the marks). Abbreviate if necessary to stay within the number of characters allowed for each item. Use one space for breaks between words. One form must be completed for each facility or site for which you are seeking to certify a condition of no exposure. Additional guidance on completing this form can be accessed at EPA's website: www.epa.gov/npdes/stormwater. Please make sure you have addressed all applicable questions and have made a photocopy for your records before sending the completed form to the above address.

Section A. Facility Operator Information

1. Provide the legal name of the person, firm, public organization, or any other entity that operates the facility or site described in this certification. The name of the operator may or may not be the same as the name of the facility. The operator is the legal entity that controls the facility's operation, rather than the plant or site manager.
2. Provide the telephone number of the facility operator.
3. Provide the email address of the facility operator.
4. Provide the mailing address of the operator (P.O. Box numbers may be used). Include the city, state, and zip code. All correspondence will be sent to this address.

Section B. Facility/Site Location Information

1. Enter the official or legal name of the facility or site.
2. Enter the complete street address (if no street address exists, provide a geographic description [e.g., Intersection of Routes 9 and 55]), city, county, state, and zip code. Do not use a P.O. Box number.
3. Indicate whether the facility is located on Indian Lands.
4. Indicate whether the industrial facility is operated by a department or agency of the Federal Government (see also Section 313 of the Clean Water Act).
5. Enter the latitude and longitude of the approximate center of the facility or site in degrees/minutes/seconds. Latitude and longitude can be obtained from United States Geological Survey (USGS) quadrangle or topographic maps, by calling 1-(888) ASK-USGS, or by accessing the Census Bureau at: www.census.gov/cgi-bin/gazetteer

   Latitude and longitude for a facility in decimal form must be converted to degrees (°), minutes ('), and seconds (") for proper entry on the certification form. To convert decimal latitude or longitude to degrees/minutes/seconds, follow the steps in the following example.

   Example: Convert decimal latitude 45.1234567 to degrees (°), minutes ('), and seconds (").

   a) The numbers to the left of the decimal point are the degrees: 45°.

   b) To obtain minutes, multiply the first four numbers to the right of the decimal point by 0.006: 1234 x 0.006 = 7.404.

   c) The numbers to the left of the decimal point in the result obtained in (b) are the minutes: 7'.

   d) To obtain seconds, multiply the remaining three numbers to the right of the decimal from the result obtained in (b) by 0.06: 404 x 0.06 = 24.24. Since the numbers to the right of the decimal point are not used, the result is 24".

   e) The conversion for 45.1234567 = 45° 7' 24".
6. Indicate whether the facility was previously covered under an NPDES stormwater permit. If so, include the permit number or permit tracking number.
7. Enter the 4-digit SIC code which identifies the facility's primary activity and second 4-digit SIC code identifying the facility's secondary activity, if applicable. SIC codes can be obtained from the Standard Industrial Classification Manual, 1987.
8. Enter the total size of the site associated with industrial activity in acres. Acreage may be determined by dividing square footage by 43,560, as demonstrated in the following example.

   Example: Convert 54,450 ft^2 to acres

   Divide 54,450 ft^2 by 43,450 square feet per acre:
   54, 450 ft^2 ÷ 43,560 ft^2/acre = 1.25 acres.
9. Check "Yes" or "No" as appropriate to indicate whether you have paved or roofed over a formerly exposed, pervious area (i.e., lawn, meadow, dirt or gravel road/parking lot) in order to qualify for no exposure. If yes, also indicate approximately how much area was paved or roofed over and is now impervious area.

Section C. Exposure Checklist

Check "Yes" or "No" as appropriate to describe the exposure condition at your facility. If you answer "Yes" to **ANY** of the questions (1) through (11) in this section, a potential for exposure exists at your site and you cannot certify to a condition of no exposure. You must obtain (or already have) coverage under an NPDES stormwater permit. After obtaining permit coverage, you can institute modifications to eliminate the potential for a discharge of stormwater exposed to industrial activity, and then certify to a condition of no exposure.

Section D. Certification Statement

Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means:

(i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or

(ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor, or

For a municipal, State, Federal, or other public facility: by either a principal executive or ranking elected official.

Paperwork Reduction Act Notice

Public reporting burden for this certification is estimated to average 1.0 hour per certification, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose to provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, OPPE Regulatory Information Division (2137), USEPA, 401 M Street, SW, Washington, D.C. 20460. Include the OMB control number of this form on any correspondence. Do not send the completed No Exposure Certification form to this address.

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National Pollutant Discharge Elimination System (NPDES)

CONTACT US <https://epa.gov/npdes/forms/contact-us-about-npdes>

NPDES Stormwater Program

More Information on the Stormwater Program

- Long-Term Stormwater Planning <https://epa.gov/npdes/stormwater-planning>
- Stormwater Rules and Notices <https://epa.gov/npdes/stormwater-rules-and-notices>
- Stormwater Best Management Practices Fact Sheets <https://epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater>
- Stormwater Webcasts <https://epa.gov/npdes/npdes-stormwater-webcasts>

NPDES stormwater program areas:

- Stormwater Discharges from Construction Activities <https://epa.gov/npdes/stormwater-discharges-construction-activities>
- Stormwater Discharges from Industrial Activities <https://epa.gov/npdes/stormwater-discharges-industrial-activities>
- Stormwater Discharges from Municipal Sources <https://epa.gov/npdes/stormwater-discharges-municipal-sources>
- Stormwater Discharges from Transportation Sources <https://epa.gov/npdes/stormwater-discharges-transportation-sources>
- Oil and Gas Stormwater Permitting <https://epa.gov/npdes/oil-and-gas-stormwater-permitting>

- EPA's Residual Designation Authority <https://epa.gov/npdes/epas-residual-designation-authority>
- Stormwater Maintenance <https://epa.gov/npdes/stormwater-maintenance>
- Long-Term Stormwater Planning <https://epa.gov/npdes/stormwater-planning>

Problems with Stormwater Pollution

Stormwater runoff is generated from rain and snowmelt events that flow over land or impervious surfaces, such as paved streets, parking lots, and building rooftops, and does not soak into the ground. The runoff picks up pollutants like trash, chemicals, oils, and dirt/sediment that can harm our rivers, streams, lakes, and coastal waters. To protect these resources, communities, construction companies, industries, and others, use stormwater controls, known as best management practices (BMPs). These BMPs filter out pollutants and/or prevent pollution by controlling it at its source.

The NPDES stormwater program regulates some stormwater discharges from three potential sources: municipal separate storm sewer systems (MS4s), construction activities, and industrial activities. Operators of these sources might be required to obtain an NPDES permit before they can discharge stormwater. This permitting mechanism is designed to prevent stormwater runoff from washing harmful pollutants into local surface waters.

- Authorization Status for EPA's Stormwater Construction and Industrial Programs <https://epa.gov/node/124105> – Most states are authorized to implement the stormwater NPDES permitting program. EPA remains the permitting authority in a few states, territories, and on most land in Indian Country.

Population growth and the development of urban/urbanized areas are major contributors to the amount of pollutants in the runoff as well as the volume and rate of runoff from impervious surfaces. Together, they can cause changes in hydrology and water quality that result in habitat modification and loss, increased flooding, decreased aquatic biological diversity, and increased sedimentation and erosion. The benefits of effective stormwater runoff management can include:

- protection of wetlands and aquatic ecosystems,

- improved quality of receiving waterbodies,
- conservation of water resources,
- protection of public health, and
- flood control.

Traditional stormwater management approaches that rely on peak flow storage have generally not targeted pollutant reduction and can exacerbate problems associated with changes in hydrology and hydraulics.

See the following for additional information:

- National Research Council Report on Urban Stormwater <https://epa.gov/npdes/npdes-stormwater-pollution-additional-documents>
- National Water Quality Inventory Report to Congress (305(b) report) <https://epa.gov/waterdata/national-water-quality-inventory-report-congress>
- Impaired Waters on the 303(d) List <https://epa.gov/tmdl/impaired-waters-restoration-process-listing>
- Chapter 4 (Environmental Assessment) from EPA's Preliminary Data Summary of Urban Stormwater Best Management Practices (1999) <https://epa.gov/npdes/npdes-stormwater-pollution-additional-documents>
- Protecting Water Quality from Urban Runoff <https://epa.gov/npdes/npdes-stormwater-pollution-additional-documents>

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  - Municipal Sources <https://epa.gov/npdes/stormwater-discharges-municipal-sources>
  - Transportation Sources <https://epa.gov/npdes/stormwater-discharges-transportation-sources>
  - Oil and Gas Permitting <https://epa.gov/npdes/oil-and-gas-stormwater-permitting>
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National Recommended Water Quality Criteria - Aquatic Life Criteria Table

This table contains the most up to date criteria for aquatic life ambient water quality criteria. Aquatic life criteria for toxic chemicals are the highest concentration of specific pollutants or parameters in water that are not expected to pose a significant risk to the majority of species in a given environment or a narrative description of the desired conditions of a water body being "free from" certain negative conditions. The table lists EPA's recommended aquatic life criteria. State and tribal governments may use these criteria or use them as guidance in developing their own.

Select pollutant name for current criteria document.

On this page:

- National Recommended Aquatic Life Criteria Table
- Appendix A - Conversion Factors for Dissolved Metals
- Appendix B - Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent

Related Information

- Aquatic Life Criteria and Methods for Toxics <https://epa.gov/wqc/aquatic-life-criteria-and-methods-toxics>
- Human Health Criteria Table <https://epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table>
- Organoleptic Effects Criteria Table <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>

National Recommended Aquatic Life Criteria table

Pollutant (P = Priority Pollutant)	CAS (Chemical Abstracts Service) Number	Freshwater CMC (Criteria Maximum Concentration)[1] (acute) (µg/L)	Freshwater CCC (Criterion Continuous Concentration)[2] (chronic) (µg/L)	Saltwater CMC (Criteria Maximum Concentration)[1] (acute) (µg/L)	Saltwater CCC (Criterion Continuous Concentration)[2] (chronic) (µg/L)	Publication Year
Acrolein <https://epa.gov/sites/default/files/2018-12/documents/ambient-wqc-acrolein.pdf> (P)	107028	3ug/L	3ug/L	—	—	2009
Aesthetic Qualities <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	—	—	—	—	1986
Aldrin <https://epa.gov/sites/default/files/2019-03/documents/ambient-wqc-aldrin-1980.pdf> (P)	309002	3.0	—	1.3	—	1980

Alkalinity	—	—	20000	—	—	1986
alpha-Endosulfan (P)	959988	0.22	0.056	0.034	0.0087	1980
Aluminum <https://epa.gov/node/177579> pH 5.0 - 10.5	7429905	--	--	—	—	2018

Ammonia <https://epa.gov/wqc/aquatic-life-criteria-ammonia>	7664417	—	—	—	—	2013 (Freshwater), 1989 (Saltwater)
Arsenic	7440382	340	150	69	36	1995
Atrazine	1912249					

beta-Endosulfan (P)	33213659	0.22	0.056	0.034	0.0087	1980
Boron <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	—	—	—	—	1986

Cadmium <https://epa.gov/wqc/aquatic-life-criteria-cadmium> (P)	7440439	1.8	0.72	33	7.9	2016
Carbaryl <https://epa.gov/wqc/aquatic-life-criteria-carbaryl>	63252	2.1	2.1	1.6	—	2012

Chlordane <https://epa.gov/sites/default/files/2019-03/documents/ambient-wqc-chlordane-1980.pdf> (P)	57749	2.4	0.0043	0.09	0.004	1980
Chloride <https://epa.gov/sites/default/files/2018-08/documents/chloride-aquatic-life-criteria-1988.pdf>	16887006	860000	230000	—	—	1988
Chlorine <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	7782505	19	11	13	7.5	1986
Chlorpyrifos <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	2921882	0.083	0.041	0.011	0.0056	1986

Chromium (III) <https://epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf> (P)	16065831	570	74	—	—	1995
Chromium (VI) <https://epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf> (P)	18540299	16	11	1,100	50	1995
Color <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	—	—	—	—	1986

Copper <https://epa.gov/wqc/aquatic-life-criteria-copper> (P)	7440508	—	—	4.8	3.1	2007
Cyanide <https://epa.gov/sites/default/files/2019-03/documents/ambient-wqc-cyanide-1984.pdf> (P)	57125	22	5.2	1	1	1985
Demeton <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	8065483	—	0.1	—	0.1	1985
Diazinon <https://epa.gov/sites/default/files/2019-03/documents/ambient-wqc-diazinon-final.pdf>	333415	0.17ug/L	0.17ug/L	0.82ug/L	0.82ug/L	2005

Dieldrin <https://epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf> (P)	60571	0.24	0.056	0.71	0.0019	1995
Endrin <https://epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf> (P)	72208	0.086	0.036	0.037	0.0023	1995

gamma-BHC (Lindane) <https://epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf> (P)	58899	0.95	—	0.16	—	1995
Gases, Total Dissolved <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	—	—	—	—	1986
Guthion <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	86500	—	0.01	—	0.01	1986
Hardness <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	—	—	—	—	1986

Heptachlor (P)	76448	0.52	0.0038	0.053	0.0036	1980

Heptachlor Epoxide <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf> (P)	1024573	0.52	0.0038	0.053	0.0036	1981
Iron <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	7439896	—	1000	—	—	1986

Lead <https://epa.gov/wqc/aquatic-life-criteria-lead> (P)	7439921	65	2.5	210	8.1	1984
Malathion <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	121755	—	0.1	—	0.1	1986
Mercury <https://epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf> (P)	7439976 22967926	1.4	0.77	1.8	0.94	1995
Methoxychlor <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	72435	—	0.03	—	0.03	1986

Methyl Tertiary-Butyl Ether (MTBE) <https://epa.gov/wqc/aquatic-life-criteria-methyl-tertiary-butyl-ether-mtbe>						
Mirex <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	2385855	—	0.001	—	0.001	1986
Nickel <https://epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf> (P)	7440020	470	52	74	8.2	1995
Nonylphenol <https://epa.gov/sites/default/files/2019-03/documents/ambient-wqc-nonylphenol-final.pdf>	84852153	28 ug/L	6.6 ug/L	7 ug/L	1.7 ug/L	2005
Nutrients <https://epa.gov/nutrient-policy-data/epas-recommended-ambient-water-quality-criteria-nutrients>	—	—	—	—	—	—

Oil and Grease <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	—	—	—	—	1986
Oxygen, Dissolved Freshwater <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf> Oxygen, Dissolved Saltwater <https://epa.gov/node/219283>	7782447	—	—	—	—	1986
Parathion <https://epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf>	56382	0.065	0.013	—	—	1995
Pentachlorophenol <https://epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf> (P)	87865	19	15	13	7.9	1995

pH <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	—	6.5 – 9	—	6.5 – 8.5	1986
Phosphorus Elemental <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	7723140	—	—	—	—	1986
Polychlorinated Biphenyls (PCBs) (P)	—	—	0.014	—	0.03	—
Selenium <https://epa.gov/wqc/aquatic-life-criterion-selenium> (P)	7782492	—	---	290	71	2016 Freshwater 1999 Saltwater

Silver <https://epa.gov/sites/default/files/2019-03/documents/ambient-wqc-silver-1980.pdf> (P)	7440224	3.2	—	1.9	—	1980
Solids Suspended and Turbidity <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	—	—	—	—	1986
Sulfide-Hydrogen Sulfide <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	7783064	—	2.0	—	2.0	1986
Tainting Substances <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	—	—	—	—	1986
Temperature <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	—	—	—	—	1986
Toxaphene <https://epa.gov/sites/default/files/2019-03/documents/ambient-wqc-toxaphene-1986.pdf> (P)	8001352	0.73	0.0002	0.21	0.0002	1986

Tributyltin (TBT) <https://epa.gov/wqc/aquatic-life-criteria-tributyltin-tbt>	—	0.46	0.072	0.42	0.0074	2004
Zinc <https://epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf> (P)	7440666	120	120	90	81	1995
4,4'-DDT <https://epa.gov/sites/default/files/2019-03/documents/ambient-wqc-ddt-1980.pdf> (P)	50293	1.1	0.001	0.13	0.001	1980

Appendix A

Conversion Factors for Dissolved Metals

Metal	Freshwater CMC	Freshwater CCC	Saltwater CMC	Saltwater CCC
Arsenic	1.000	1.000	1.000	1.000
Cadmium	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]	0.994	0.994
Chromium III	0.316	0.860	—	—
Chromium VI	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead	1.46203-[(ln hardness)(0.145712)]	1.46203-[(ln hardness)(0.145712)]	0.951	0.951
Mercury	0.85	0.85	0.85	0.85
Nickel	0.998	0.997	0.990	0.990
Selenium	—	—	0.998	0.998
Silver	0.85	—	0.85	—

Metal	Freshwater CMC	Freshwater CCC	Saltwater CMC	Saltwater CCC
Zinc	0.978	0.986	0.946	0.946

Appendix B

Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent

Chemical	mA	bA	mC	bC	Freshwater Conversion Factors (CF)	
					CMC	CCC
Cadmium	0.9789	-3.866	0.7977	-3.909	1.136672-[(*ln*hardness)(0.041838)]	1.101672-[(*ln*hardness)(0.041838)]
Chromium III	0.8190	3.7256	0.8190	0.6848	0.316	0.860
Lead	1.273	-1.460	1.273	-4.705	1.46203-[(*ln*hardness)(0.145712)]	1.46203-[(*ln*hardness)(0.145712)]
Nickel	0.8460	2.255	0.8460	0.0584	0.998	0.997
Silver	1.72	-6.59	—	—	0.85	—
Zinc	0.8473	0.884	0.8473	0.884	0.978	0.986

Hardness-dependant metals' criteria may be calculated from the following:

CMC (dissolved) = exp{mA [*ln*(hardness)]+ bA} (CF)

CCC (dissolved) = exp{mC [*ln*(hardness)]+ bC} (CF)

1/ CMC: Criterion Maximum Concentration
2/ CCC: Criterion Continuous Concentration

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National Recommended Water Quality Criteria - Human Health Criteria Table

Human health ambient water quality criteria represent specific levels of chemicals or conditions in a water body that are not expected to cause adverse effects to human health. EPA provides recommendations for “water + organism” and “organism only” human health criteria for states and authorized tribes to consider when adopting criteria into their water quality standards. These human health criteria are developed by EPA under Section 304(a) of the Clean Water Act.

Select pollutant name for current criteria document.

Related Information

- Human Health Criteria Calculation Matrix <https://epa.gov/sites/default/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf>
- Human Health Criteria and Methods for Toxics <https://epa.gov/wqc/human-health-water-quality-criteria-and-methods-toxics>

- Organoleptic Effects Criteria Table <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>
- Aquatic Life Criteria Table <https://epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table>

Pollutant	CAS Number	Human Health for the consumption of Water + Organism (µg/L)	Human Health for the consumption of Organism Only (µg/L)	Publication Year	Notes
Acenaphthene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0234> (P)	83329	70	90	2015	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>.

Acrolein EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0211> (P)	107028	3	400	2015	
Acrylonitrile EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0162> (P)	107131	0.061	7.0	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Aldrin EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0163> (P)	309002	0.00000077	0.00000077	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

alpha-Hexachlorocyclohexane (HCH) EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0164> (P)	319846	0.00036	0.00039	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
alpha-Endosulfan EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0235> (P)	959988	20	30	2015	
Anthracene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0236> (P)	120127	300	400	2015	

Antimony <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf> (P)	7440360	5.6	640	1980	This criterion was revised to reflect EPA's q1* or RfD as contained in the Integrated Risk Information System (IRIS) <https://epa.gov/iris> as of May 17, 2002. The fish tissue bioconcentration factor (BCF) is from the 1980 Ambient Water Quality Criteria document. EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Arsenic <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf> (P)	7440382	0.018	0.14	1992	This criterion is based on carcinogenicity of 10-6 risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10-5, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>. This recommended water quality criterion for arsenic refers to the inorganic form only.

Asbestos <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf> (P)	1332214	7 million fibers/L	—	1991	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Barium <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	7440393	1,000	—	1986	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>. This human health criterion is the same as originally published in the Quality Criteria for Water, 1976 ("Red Book") <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1976.pdf> which predates the 1980 methodology and did not utilize the fish ingestion BCF approach. This same criterion value is published in the Quality Criteria for Water, 1986 ("Gold Book") <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>.

Benzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0165> (P)	71432	0.58-2.1	16-58	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>. This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Benzidine EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0166> (P)	92875	0.00014	0.011	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

Benzo(a)anthracene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0176> (P)	56553	0.0012	0.0013	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Benzo(a)pyrene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0177> (P)	50328	0.00012	0.00013	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Benzo(b)fluoranthene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0178> (P)	205992	0.0012	0.0013	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Benzo(k)fluoranthene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0179> (P)	207089	0.012	0.013	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Beryllium <https://epa.gov/sites/default/files/2018-12/documents/ambient-wqc-beryllium.pdf> (P)	7440417	—	—	—	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

beta-Hexachlorocyclohexane (HCH) EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0167> (P)	319857	0.0080	0.014	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
beta-Endosulfan EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0237> (P)	33213659	20	40	2015	
Bis(2-Chloro-1-methylethyl) Ether EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0212> (P)	108601	200	4,000	2015	
Bis(2-Chloroethyl) Ether EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0180> (P)	111444	0.030	2.2	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

Bis(2-Ethylhexyl) Phthalate EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0168> (P)	117817	0.32	0.37	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>. This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Bis(Chloromethyl) Ether EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0181>	542881	0.00015	0.017	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

Bromoform EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0192> (P)	75252	7.0	120	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>. This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Butylbenzyl Phthalate EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0213> (P)	85687	0.10	0.10	2015	This criterion is based on carcinogenicity of 10-6 risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10-5, move the decimal point in the recommended criterion one place to the right).

Cadmium <https://epa.gov/sites/default/files/2019-03/documents/ambient-wqc-cadmium-2001.pdf> (P)	7440439	—	—	—	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Carbon Tetrachloride EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0182> (P)	56235	0.4	5	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>. This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

Chlordane EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0183> (P)	57749	0.00031	0.00032	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>. This criterion is based on carcinogenicity of 10-6 risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10-5, move the decimal point in the recommended criterion one place to the right).

Chlorobenzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0214> (P)	108907	100	800	2015	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>. EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Chlorodibromomethane EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0193> (P)	124481	0.80	21	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>. This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Chloroform EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0215> (P)	67663	60	2,000	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Chlorophenoxy Herbicide (2,4-D) EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0238>	94757	1,300	12,000	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Chlorophenoxy Herbicide (2,4,5-TP) [Silvex] EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0216>	93721	100	400	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Chromium (III) <https://epa.gov/sites/default/files/2018-12/documents/ambient-wqc-chromium.pdf> (P)	16065831	Total	—	—	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Chromium (VI) <https://epa.gov/sites/default/files/2018-12/documents/ambient-wqc-chromium.pdf> (P)	18540299	Total	—	—	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Chrysene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0184> (P)	218019	0.12	0.13	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Copper <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf> (P)	7440508	1,300	—	1992	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). This chemical has a criterion for organoleptic (taste and odor) effects. In some cases, the organoleptic criterion may be more stringent. EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Cyanide EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0239> (P)	57125	4	400	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Cylindrospermopsin <https://epa.gov/system/files/documents/2021-08/final-tsd-implement-2019-rwqc.pdf.pdf>	143545-90-8	—	—	2019	The national recommended human health recreational criterion or swimming advisory for cylindrospermopsin is 15 µg/L. When applied as a Clean Water Act section 304(a) water quality criterion, EPA recommends no more than 3 excursions (10-day assessment periods) within a recreational season in more than one year. When used as a swimming advisory, EPA recommends the value not be exceeded on any single day.

Dibenzo(a,h)anthracene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0185> (P)	53703	0.00012	0.00013	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Dichlorobromomethane EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0195> (P)	75274	0.95	27	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Dieldrin EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0171> (P)	60571	0.0000012	0.0000012	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Diethyl Phthalate EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0240> (P)	84662	600	600	2015	

Dimethyl Phthalate EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0241> (P)	131113	2,000	2,000	2015	The 2015 Update of Human Health Ambient Water Quality Criteria for Dimethyl Phthalate and 1980 Ambient Water Quality Criteria for Phthalate Esters incorrectly cite a study by Draize et al. (1948) as the critical study used to derive a reference dose for dimethyl phthalate. The correct citation for the two-year feeding study in female rats is Lehman, 1955 (Lehman, AJ. 1955. Insect repellants. Association of Food and Drug Officials of the United States Quarterly Bulletin 19:87-99).
Di-n-Butyl Phthalate EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0242> (P)	84742	20	30	2015	
Dinitrophenols EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0217>	25550587	10	1,000	2015	
Endosulfan Sulfate EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0243> (P)	1031078	20	40	2015	

Endrin EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0218> (P)	72208	0.03	0.03	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Endrin Aldehyde EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0219> (P)	7421934	1	1	2015	
Ethylbenzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0244> (P)	100414	68	130	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Fluoranthene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0220> (P)	206440	20	20	2015	
Fluorene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0221> (P)	86737	50	70	2015	

gamma-Hexachlorocyclohexane (HCH) [Lindane] EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0222> (P)	58899	4.2	4.4	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Heptachlor EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0196> (P)	76448	0.0000059	0.0000059	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Heptachlor Epoxide EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0197> (P)	1024573	0.000032	0.000032	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Hexachlorobenzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0198> (P)	118741	0.000079	0.000079	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Hexachlorobutadiene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0199> (P)	87683	0.01	0.01	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

Hexachlorocyclohexane (HCH) -Technical EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0172>	608731	0.0066	0.010	2015	This criterion is based on carcinogenicity of 10-6 risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10-5, move the decimal point in the recommended criterion one place to the right).
Hexachlorocyclopentadiene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0245> (P)	77474	4	4	2015	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>. EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Hexachloroethane EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0186> (P)	67721	0.1	0.1	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Indeno(1,2,3-cd)pyrene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0187> (P)	193395	0.0012	0.0013	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Isophorone EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0188> (P)	78591	34	1,800	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

Manganese <https://epa.gov/sites/default/files/2018-12/documents/dw-criteria-manganese.pdf>	7439965	50	100	1993	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>. The Human Health for the consumption of Water + Organism criterion for manganese is not based on toxic effects, but rather is intended to minimize objectionable qualities such as laundry stains and objectionable tastes in beverages.
Methylmercury <https://epa.gov/wqc/human-health-criteria-methylmercury> (P)	22967926	—	0.3 mg/kg	2001	This fish tissue residue criterion for methylmercury is based on a total fish consumption rate of 0.0175 kg/day.

Methoxychlor EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0223>	72435	0.02	0.02	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Methyl Bromide EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0224> (P)	74839	100	10,000	2015	
Methylene Chloride EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0200> (P)	75092	20	1,000	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Microcystins <https://epa.gov/sites/default/files/2019-05/documents/hh-rec-criteria-habs-document-2019.pdf>	101043-37-2	—	—	2019	The national recommended human health recreational criterion or swimming advisory for microcystins is 8 µg/L. When applied as a Clean Water Act section 304(a) water quality criterion, EPA recommends no more than 3 excursions (10-day assessment periods) within a recreational season in more than one year. When used as a swimming advisory, EPA recommends the value not be exceeded on any single day.
Nickel <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf> (P)	7440020	610	4,600	1998	This criterion was revised to reflect EPA's q1* or RfD as contained in the Integrated Risk Information System (IRIS) <https://epa.gov/iris> as of May 17, 2002. The fish tissue bioconcentration factor (BCF) is from the 1980 Ambient Water Quality Criteria document.

Nitrates <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	14797558	10,000	—	1986	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Nitrobenzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0246> (P)	98953	10	600	2015	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>.
Nitrosamines <https://epa.gov/sites/default/files/2018-12/documents/ambient-wqc-nitrosamines.pdf>	—	0.0008	1.24	1980	This criterion is based on carcinogenicity of 10-6 risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10-5, move the decimal point in the recommended criterion one place to the right).

Nitrosodibutylamine <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf>	924163	0.0063	0.22	2002	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Nitrosodiethylamine <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf>	55185	0.0008	1.24	2002	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
Nitrosopyrrolidine <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf>	930552	0.016	34	2002	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

N-Nitrosodimethylamine <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf> (P)	62759	0.00069	3.0	2002	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
N-Nitrosodi-n-Propylamine (P)	621647	0.0050	0.51	2002	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
N-Nitrosodiphenylamine (P)	86306	3.3	6.0	2002	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

Nutrients	—	—	—		Refer to EPA's criteria for nutrients in lakes and reservoirs <https://epa.gov/nutrient-policy-data/ambient-water-quality-criteria-address-nutrient-pollution-lakes-and-reservoirs>, which are linked to the national recommendations for human health recreational water quality criteria and swimming advisory <https://epa.gov/sites/default/files/2019-05/documents/hh-rec-criteria-habs-document-2019.pdf> and the health advisory for microcystins. <https://epa.gov/sites/default/files/2017-06/documents/microcystins-report-2015.pdf>

Pathogen and Pathogen Indicators <https://epa.gov/wqc/recreational-water-quality-criteria-and-methods>	—	—	—	2012	Refer to EPA's 2012 Recreational Water Quality Criteria <https://epa.gov/wqc/recreational-water-quality-criteria-and-methods> For Shellfish refer to Quality Criteria for Water 1986 ("Gold Book") <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>
Pentachlorobenzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0225>	608935	0.1	0.1	2015	

Pentachlorophenol EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0201> (P)	87865	0.03	0.04	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>. EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
pH	—	5 – 9	—	1986	

Phenol EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0247> (P)	108952	4,000	300,000	2015	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>.

Polychlorinated Biphenyls (PCBs) (P)		0.000064	0.000064	2002	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). This criterion applies to total PCBs (e.g., the sum of all congener or all isomer or homolog or Aroclor analyses). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Pyrene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0248> (P)	129000	20	30	2015	

Selenium <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf> (P)	7782492	170	4200	2002	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Solids Dissolved and Salinity <https://epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>	—	250,000	—	1986	
Tetrachloroethylene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0189> (P)	127184	10	29	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Thallium EXIT <https://www.federalregister.gov/documents/2003/12/31/03-32211/national-recommended-water-quality-criteria-for-the-protection-of-human-health> (P)	7440280	0.24	0.47	2003	
Toluene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0226> (P)	108883	57	520	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Toxaphene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0202> (P)	8001352	0.00070	0.00071	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Trichloroethylene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0173> (P)	79016	0.6	7	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

Vinyl Chloride EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0174> (P)	75014	0.022	1.6	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
Zinc (P)	7440666	7,400	26,000	2002	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>.

1,1,1-Trichloroethane <https://epa.gov/sites/default/files/2015-10/documents/final-1-1-1-trichloroethane.pdf> (P)	71556	10,000	200,000	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
1,1,2,2-Tetrachloroethane EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0175> (P)	79345	0.2	3	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

1,1,2-Trichloroethane EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0156> (P)	79005	0.55	8.9	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
1,1-Dichloroethylene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0204> (P)	75354	300	20,000	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
1,2,4,5-Tetrachlorobenzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0227>	95943	0.03	0.03	2015	

1,2,4-Trichlorobenzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0205> (P)	120821	0.071	0.076	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>. This criterion is based on carcinogenicity of 10-6 risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10-5, move the decimal point in the recommended criterion one place to the right).
1,2-Dichlorobenzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0206> (P)	95501	1,000	3,000	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

1,2-Dichloroethane EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0190> (P)	107062	9.9	650	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

1,2-Dichloropropane EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0157> (P)	78875	0.90	31	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
1,2-Diphenylhydrazine EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0158> (P)	122667	0.03	0.2	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

Trans-1,2-Dichloroethylene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0249> (P)	156605	100	4,000	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.
1,3-Dichlorobenzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0207> (P)	541731	7	10	2015	
1,3-Dichloropropene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0191> (P)	542756	0.27	12	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
1,4-Dichlorobenzene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0208> (P)	106467	300	900	2015	EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>.

	2,3,7,8-TCDD (Dioxin) <https://epa.gov/sites/production/files/2018-12/documents/hh-criteria-calculation-matrix-2002.pdf> (P)	1746016	5.0E-9	5.1E-9	2002	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). EPA has issued a Maximum Contaminant Level (MCL) for this chemical which may be more stringent. Refer to EPA's National Primary Drinking Water Regulations <https://epa.gov/dwreginfo>. The CWA section 304(a) water quality criteria for dioxin is expressed in terms of 2,3,7,8-Tetrachloro-dibenzo-p-dioxin (2,3,7,8-TCDD) and should be used in conjunction with the recommended toxicity equivalence factors for dioxin and dioxin-like compounds (USEPA, 2010

					<https://epa.gov/node/39781>) to account for the additive effects of other dioxin-like compounds.
2,4,5-Trichlorophenol EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0228>	95954	300	600	2015	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>.

2,4,6-Trichlorophenol EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0159> (P)	88062	1.5	2.8	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right). The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>.
2,4-Dichlorophenol <https://epa.gov/sites/default/files/2015-10/documents/final-2-4-dichlorophenol.pdf> (P)	120832	10	60	2015	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>.

2,4-Dimethylphenol <https://epa.gov/sites/default/files/2015-10/documents/final-2-4-dimethylphenol.pdf> (P)	105679	100	3,000	2015	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>.
2,4-Dinitrophenol <https://epa.gov/sites/default/files/2015-10/documents/final-2-4-dinitrophenol.pdf> (P)	51285	10	300	2015	
2,4-Dinitrotoluene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0160> (P)	121142	0.049	1.7	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
2-Chloronaphthalene EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0209> (P)	91587	800	1,000	2015	

2-Chlorophenol EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0210> (P)	95578	30	800	2015	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>.
2-Methyl-4,6-Dinitrophenol <https://epa.gov/sites/default/files/2015-10/documents/final-2-methyl-4-6-dinitrophenol.pdf> (P)	534521	2	30	2015	
3,3'-Dichlorobenzidine EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0161> (P)	91941	0.049	0.15	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

3-Methyl-4-Chlorophenol <https://epa.gov/sites/default/files/2015-10/documents/final-3-methyl-4-chlorophenol.pdf> (P)	59507	500	2,000	2015	The criterion for organoleptic (taste and odor) effects may be more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects <https://epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects>.
p,p′-Dichlorodiphenyldichloroethane (DDD) EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0169> (P)	72548	0.00012	0.00012	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).
p,p′-Dichlorodiphenyldichloroethylene (DDE) EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0194> (P)	72559	0.000018	0.000018	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

p,p′-Dichlorodiphenyltrichloroethane (DDT) EXIT <https://www.regulations.gov/document/epa-hq-ow-2014-0135-0170> (P)	50293	0.000030	0.000030	2015	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

NOTE: (P)= Priority Pollutant

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National Pollutant Discharge Elimination System (NPDES)

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NPDES Permit Basics

- **What is an NPDES permit?**
  - The Clean Water Act prohibits anybody from discharging "pollutants" through a "point source" into a "water of the United States" unless they have an NPDES permit. The permit will contain limits on what you can discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health. In essence, the permit translates general requirements of the Clean Water Act into specific provisions tailored to the operations of each person discharging pollutants.
- **What is a point source?**
  - The term point source is also defined very broadly in the Clean Water Act and it has been through 25 years of litigation. It means any discernible, confined and discrete conveyance, such as a pipe, ditch, channel, tunnel, conduit, discrete fissure, or container. It also includes vessels or other floating craft from which pollutants are or may be discharged. By law, the term "point source" also includes concentrated animal feeding operations, which are places where animals are confined and fed. By law, agricultural stormwater discharges and return flows from irrigated agriculture are not "point sources"

- **What is a water of the United States?**
  - The term water of the United States" is also defined very broadly in the Clean Water Act and after 25 years of litigation. It means navigable waters, tributaries to navigable waters, interstate waters, the oceans out to 200 miles, and intrastate waters which are used: by interstate travelers for recreation or other purposes, as a source of fish or shellfish sold in interstate commerce, or for industrial purposes by industries engaged in interstate commerce.

- **What is a pollutant?**
  - The term pollutant is defined very broadly in the Clean Water Act . It includes any type of industrial, municipal, and agricultural waste discharged into water. Some examples are dredged soil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste. By law, a pollutant is not sewage from vessels or discharges incidental to the normal operation of an Armed Forces vessel, or certain materials injected into an oil and gas production well.

- **Do I need an NPDES permit?**
  - It depends on where you send your pollutants. If you discharge from a point source into the waters of the United States, you need an NPDES permit. If you discharge pollutants into a municipal sanitary sewer system, you do not need an NPDES permit, but you should ask the municipality about their permit requirements. If you discharge pollutants into a municipal storm sewer system, you may need a permit depending on what you discharge. You should ask the NPDES permitting authority.

- **Where do I apply for a NPDES permit?**
  - NPDES permits are issued by states that have obtained EPA approval to issue permits or by EPA Regions in states without such approval. View a map illustrating the states with full, partial, and no NPDES Authority.
    <https://epa.gov/npdes/npdes-program-authorizations>

- **How do NPDES permits protect water?**
  - An NPDES permit will generally specify an acceptable level of a pollutant or pollutant parameter in a discharge (for example, a certain level of bacteria). The permittee may choose which technologies to use to achieve that level. Some permits, however, do contain certain generic 'best management practices' (such as installing a screen over the pipe to keep debris out of the waterway). NPDES permits make sure that a state's mandatory standards for clean water and the federal minimums are being met.

- **Who issues permits in my State?**
  - NPDES permits are issued by the EPA or authorized states. In many states, most NPDES permits are issued by the authorized state. EPA is the sole permitting authority in three states (Massachusetts, New Hampshire, and New Mexico) and for certain discharges in other states, territories, and Indian Country. Detailed information on which states are authorized to issue NPDES permits is provided at NPDES State Program Authority <https://epa.gov/npdes/npdes-state-program-authority>.

- **Are there facilities with NPDES permitted discharges near me?**
  - EPA's Enforcement and Compliance History Online tool <https://echo.epa.gov/trends/loading-tool/water-pollution-search> can be used to search for facilities in your community.

- **Can the general public participate in NPDES permitting decisions?**
  - Yes. The NPDES administrative procedures require that the public be notified and allowed to comment on NPDES permit applications. When EPA authorizes a state to issue NPDES permits, EPA requires that the state provide the public with this same access. For more information see Public Participation in the NPDES Permit Issuance Process (pdf) <https://epa.gov/system/files/documents/2022-06/public%20participation%20brochure%20v2.pdf> (828.93 KB)

- **How are the conditions in NPDES permits enforced by EPA and the states?**
  - There are various methods used to monitor NPDES permit conditions. The permit will require the facility to sample its discharges and notify EPA and the state regulatory agency of these results. In addition, the permit will require the facility to notify EPA and the state regulatory agency when the facility determines it is not in compliance with the requirements of a permit. EPA and state regulatory agencies also will send inspectors to companies in order to determine if they are in compliance with the conditions imposed under their permits.
  - Federal laws provide EPA and authorized state regulatory agencies with various methods of taking enforcement actions against violators of permit requirements. For example, EPA and state regulatory agencies may issue administrative orders which require facilities to correct violations and that assess monetary penalties. The laws also allow EPA and state agencies to pursue civil and criminal actions that may include mandatory injunctions or penalties, as well as jail sentences for persons found willfully violating requirements and endangering the health and welfare of the public or environment. Equally important is how the general public can enforce permit conditions. The facility monitoring reports are public documents, and the general public can review them. If any member of the general public finds that a facility is violating its NPDES permit, that member can independently start a legal action, unless EPA or the state regulatory agency has taken an enforcement action.

- **What is the NPDES Permit Backlog?**
  - The Clean Water Act specifies that NPDES permits may not be issued for a term longer than five years. Permittees that wish to continue discharging beyond the five year term must submit a complete application for permit renewal at least 180 days prior to the expiration date of their permit. If the permitting authority receives a complete application, but does not reissue the permit prior to the expiration date, the permit may be "administratively continued." Existing permits are considered backlogged if they are administratively continued for 180 days or more. Additionally, applications for new EPA-issued permits are considered backlogged if not issued or denied within 365 days of receipt of the application. See NPDES permit backlog <https://epa.gov/npdes/npdes-program-management-and-oversight#backlog> for more information.

- **Is it legal to have wastewater coming out of a pipe into my local receiving water (e.g., lake, stream, river, wetland)?**
    - As long as the wastewater being discharged is covered by and in compliance with an NPDES permit, there are enough controls in place to make sure the discharge is safe and that humans and aquatic life are being protected. To find out if a discharge is covered by an NPDES permit, call the EPA Regional office or the state office responsible for issuing NPDES permits.
- **Is there any information available to me on permits in my area?**
    - Yes, EPA's Enforcement and Compliance History Online <https://echo.epa.gov/> (or “ECHO”) website provides information on NPDES permitted facilities. You can search by your location to find NPDES permitted facilities near you. You can find out more about your local watershed through EPA's "Surf Your Watershed" <http://cfpub.epa.gov/surf/locate/index.cfm>.
- **Typically, how long are NPDES permits effective?**
    - The Clean Water Act limits the length of NPDES permits to five years. NPDES permits can be renewed (reissued) at any time after the permit holder applies. In addition, NPDES permits can be administratively extended if the facility reapplies more than 180 days before the permit expires, and EPA or the state regulatory agency that issued the original permit, does not renew the permit before its expiration date through no fault of the permittee.
- **Is there a fee for coverage under an NPDES permit?**
    - EPA does not charge a fee for applying for or obtaining coverage under EPA-issued National Pollutant Discharge Elimination System (NPDES) permits; however, many of the NPDES-authorized states do charge fees for permit applications, Notices of Intent, and/or permit coverage.

- **What are the primary differences between an NPDES individual permit and an NPDES general permit?**
    - A National Pollutant Discharge Elimination System (NPDES) individual permit is written to reflect site-specific conditions of a single discharger (or in rare instances to multiple co-permittees) based on information submitted by that discharger in a permit application and is unique to that discharger whereas an NPDES general permit is written to cover multiple dischargers with similar operations and types of discharges based on the permit writer's professional knowledge of those types of activities and discharges. Individual permits are issued directly to an individual discharger whereas a general permit is issued to no one in particular with multiple dischargers obtaining coverage under that general permit after it is issued, consistent with the permit eligibility and authorization provisions. As such, dischargers covered under general permits know their applicable requirements before obtaining coverage under that permit. Furthermore, obtaining coverage under a general permit is typically quicker than an individual permit with coverage under a general permit often occurring immediately (depending on how the permit is written) or after a short waiting period. Coverage under an individual permit may take six months or longer.

- **What is the process for applying for coverage under an NPDES general permit?**
    - National Pollutant Discharge Elimination System (NPDES) general permits do not require that Operators "apply" for coverage; rather, general permits typically rely on the submission of a document called a Notice of Intent (NOI). An NOI differs from an individual permit application in that it is submitted by Operators after the general permit is issued by the permitting authority. An NOI for a general permit is a notice to the NPDES permitting authority of an Operator's intent to be covered under a general permit, and typically contains basic information about the Operator and the planned discharge for which coverage is being requested. Some general permits, such as the EPA's Pesticide General Permit, automatically cover some Operator discharges without submission of an NOI. In these instances, Operators must comply with applicable permit requirements for their pesticide applications without submission of any paperwork to the permitting authority (or in some instances, submission of some other type of notification document).

- **How do Operators apply for coverage under an NPDES individual permit?**
  - An Operator must submit a permit application to apply for coverage under a National Pollutant Discharge Elimination System (NPDES) individual permit. The application form must be submitted to the permitting authority at least180 days before the expected commencement of the discharge. NPDES permit application requirements are in Part 122, Subpart B and identified on forms developed by EPA. NPDES-authorized states are not required to use the EPA application forms; however, any alternative form used by an NPDES-authorized state must include the federal requirements at a minimum. EPA's application forms are available at the permit applications and forms page.

- **What does submittal of an NOI mean?**
  - A Notice of Intent (NOI) for a general permit is similar to a permit application, in that it is notification to the regulatory authority of a planned discharge for which coverage under a specific National Pollutant Discharge Elimination System (NPDES) general permit is needed and contains information about the discharge and the Operator of that discharge. The NOI serves as the Operator's notice to the permitting authority that the Operator intends for the discharge to be authorized under the terms and conditions of that general permit. By signing and submitting the NOI, the Operator is certifying that the discharge meets all of the eligibility conditions specified in the general permit (e.g., that a pesticide discharge management plan has been developed if necessary) and that the Operator intends to follow the terms and conditions of the permit. A fraudulent or erroneous NOI invalidates permit coverage. An incomplete NOI delays permit coverage until such time as the NOI has been completed.

- **Since filing a Notice of Intent (NOI), the preparer and/or certifying official on that NOI no longer hold that position with the company (or have left the company altogether). How does a new preparer, new certifying official or duly authorized representative of the Decision-maker file the annual report electronically?**
  - The new preparer and/or new certifying official needs to register a new account in EPA's Central Data Exchange <https://cdx.epa.gov>. Once registered, they must contact the eNOI processing center to have the old information linked to the new account.

- **How can I find out about a proposed permit for a facility near me so that I can participate in the permitting process?**
  - If a facility near you has applied for an NPDES permit, the permitting authority or company will have provided notice in a major local newspaper, usually in the legal section of the classified ads, or in an official publication such as the Federal Register. You also may call the appropriate state regulatory agency for information on applications for permits. For more information, refer to the Permitting Contacts section of this web site.

NPDES Home <https://epa.gov/npdes>

About NPDES

Permit Basics

State Program Information <https://epa.gov/npdes/npdes-state-program-information>

Permit Limits <https://epa.gov/npdes/npdes-permit-limits>

Program Management and Oversight <https://epa.gov/npdes/npdes-program-management-and-oversight>

NPDES Regulations <https://epa.gov/npdes/npdes-regulations>

Other Federal Laws that Apply to the NPDES Permit Program <https://epa.gov/npdes/other-federal-laws-apply-npdes-permit-program>

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- Pesticide Permitting <https://epa.gov/npdes/pesticide-permitting>
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Stormwater Discharges from Municipal Sources

OVERVIEW | **Developing an MS4 Program** <https://epa.gov/node/255281> |

Resources <https://epa.gov/node/255283>

Recent Developments

- Interim Guidance on Census Elimination of "Urbanized Area" Definition <https://epa.gov/npdes/interim-guidance-census-elimination-urbanized-area-definition>
- Green Infrastructure Permit Compendium (pdf) <https://epa.gov/system/files/documents/2022-06/green%20infrastructure%20ms4%20compendium%202022_3.pdf> (2.71 MB)
- Recorded Webinar: Clean Watersheds Needs Survey Stormwater Training for State Stormwater and Green Infrastructure Staff <https://epa.gov/cwns/clean-watersheds-needs-survey-webinars>

Interim Guidance on Census Elimination of "Urbanized Area" Definition <https://epa.gov/npdes/interim-guidance-census-elimination-urbanized-area-definition> - Provides interim guidance on the effect of recent revisions to the Census Bureau criteria for defining urban areas on the MS4 permitting program.

Quick links to relevant information on stormwater discharges from municipal sources:

- NEW Stormwater Smart Outreach Tools <https://epa.gov/npdes/forms/stormwater-smart-outreach-tools-coming-soon>
- Community Solutions for Stormwater Management: A Guide for Voluntary Long-Term Planning <https://epa.gov/npdes/stormwater-planning>
- Stormwater Discharges from Transportation Sources <https://epa.gov/npdes/stormwater-discharges-transportation-sources>
- Proposed National Rulemaking to Strengthen the Stormwater Program <https://epa.gov/npdes/proposed-national-rulemaking-strengthen-stormwater-program>
- National Menu of Best Management Practices (BMPs) for Stormwater <https://epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater>
- Stormwater Maintenance <https://epa.gov/npdes/stormwater-maintenance>

View a larger version of this map <https://epa.gov/system/files/images/2021-07/national_map_of_regulated_ms4s4.11.17-900x597.jpg>

Polluted stormwater runoff is commonly transported through municipal separate storm sewer systems (MS4s), and then often discharged, untreated, into local water bodies.

An MS4 is a conveyance or system of conveyances that is:

- owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.,
- designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches),
- not a combined sewer, and
- not part of a sewage treatment plant, or publicly owned treatment works (POTW).

To prevent harmful pollutants from being washed or dumped into MS4s, certain operators are required to obtain NPDES permits and develop stormwater management programs (SWMPs). The SWMP describes the stormwater control practices that will be implemented consistent with permit requirements to minimize the discharge of pollutants from the sewer system.

Phase I MS4s	**Phase II MS4s**
The 1990 Phase I regulation requires medium and large cities or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for their stormwater discharges. There are approximately 855 Phase I MS4s covered by 250 Individual Permits	The 1999 Phase II regulation requires small MS4s in U.S. Census Bureau defined urbanized areas, as well as MS4s designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges. Phase II also includes non-traditional MS4s such as public universities, departments of transportation, hospitals and prisons. Most of the 6,695 Phase II MS4s are covered by statewide General Permits, however some states use individual permits. There are three Watershed Permits that cover 3 Phase I and 40 Phase II MS4s.

Urbanized Area Maps for NPDES MS4 Phase II Stormwater Permits
<https://epa.gov/npdes/urbanized-area-maps-npdes-ms4-phase-ii-stormwater-permits>

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Pesticide Permitting <https://epa.gov/npdes/pesticide-permitting>

Stormwater

Construction Activities <https://epa.gov/npdes/stormwater-discharges-construction-activities>

Industrial Activities <https://epa.gov/npdes/stormwater-discharges-industrial-activities>

Municipal Sources

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Oil and Gas Permitting <https://epa.gov/npdes/oil-and-gas-stormwater-permitting>

EPA's Residual Designation Authority <https://epa.gov/npdes/epas-residual-designation-authority>

Rules and Notices <https://epa.gov/npdes/stormwater-rules-and-notices>

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United States Environmental Protection Agency
Office of Water (4203)
EPA 833-F-00-001
January 2000 (revised December 2005)
Fact Sheet 1.0

Stormwater Phase II Final Rule

An Overview

Stormwater Phase II Final Rule Fact Sheet Series

Overview

1.0 – Stormwater Phase II Final Rule: An Overview

Small MS4 Program

2.0 – Small MS4 Stormwater Program Overview

2.1 – Who's Covered? Designation and Waivers of Regulated Small MS4s

2.2 – Urbanized Areas: Definition and Description

Minimum Control Measures

2.3 – Public Education and Outreach

2.4 – Public Participation/ Involvement

2.5 – Illicit Discharge Detection and Elimination

2.6 – Construction Site Runoff Control

2.7 – Post-Construction Runoff Control

2.8 – Pollution Prevention/Good Housekeeping

2.9 – Permitting and Reporting: The Process and Requirements

2.10 – Federal and State-Operated MS4s: Program Implementation

Construction Program

3.0 – Construction Program Overview

3.1 – Construction Rainfall Erosivity Waiver

Industrial "No Exposure"

4.0 – Conditional No Exposure Exclusion for Industrial Activity

Why Is the Phase II Stormwater Program Necessary?

Since the passage of the Clean Water Act (CWA), the quality of our Nation's waters has improved dramatically. Despite this progress, however, degraded waterbodies still exist. According to the 2000 National Water Quality Inventory (Inventory), a biennial summary of State surveys of water quality, approximately 40 percent of surveyed U.S. waterbodies are still impaired by pollution and do not meet water quality standards. A leading source of this impairment is polluted runoff. In fact, according to the Inventory, 13 percent of impaired rivers, 18 percent of impaired lake acres and 32 percent of impaired estuaries are affected by urban/suburban stormwater runoff.

Phase I of the U.S. Environmental Protection Agency's (EPA) stormwater program was promulgated in 1990 under the CWA. Phase I relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address stormwater runoff from: (1) "medium" and "large" municipal separate storm sewer systems (MS4s) generally serving populations of 100,000 or greater, (2) construction activity disturbing 5 acres of land or greater, and (3) ten categories of industrial activity.

The Stormwater Phase II Final Rule is the next step in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted stormwater runoff. The Phase II program expands the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted stormwater runoff. See Fact Sheets 2.0 and 3.0 for overviews of the Phase II programs for MS4s and construction activity.

Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. The environmental problems associated with discharges from MS4s in urbanized areas and discharges resulting from construction activity are outlined below.

MS4s in Urbanized Areas

Stormwater discharges from MS4s in urbanized areas are a concern because of the high concentration of pollutants found in these discharges. Concentrated development in urbanized areas substantially increases impervious surfaces, such as city streets, driveways, parking lots, and sidewalks, on which pollutants from concentrated human activities settle and remain until a storm event washes them into nearby storm drains. Common pollutants include pesticides, fertilizers, oils, salt, litter and other debris, and sediment. Another concern is the possible illicit connections of sanitary sewers, which can result in fecal coliform bacteria entering the storm sewer system. Stormwater runoff picks up and transports these and other harmful pollutants then discharges them – untreated – to waterways via storm sewer systems. When left uncontrolled, these discharges can result in fish kills, the destruction of spawning and wildlife habitats, a loss in aesthetic value, and contamination of drinking water supplies and recreational waterways that can threaten public health.

Construction Activity

Uncontrolled runoff from construction sites is a water quality concern because of the devastating effects that sedimentation can have on local waterbodies, particularly small streams. Numerous studies have shown that the amount of sediment transported by stormwater runoff from construction sites with no controls is significantly greater than from sites with controls. In addition to sediment, construction activities yield pollutants such as pesticides, petroleum products, construction chemicals, solvents, asphalts, and acids that can contaminate stormwater runoff. During storms, construction sites may be the source of sediment-laden runoff, which can overwhelm a small stream channel's capacity, resulting in streambed scour, streambank erosion, and destruction of near-stream vegetative cover. Where left uncontrolled, sediment-laden runoff has been shown to result in the loss of in-stream habitats for fish and other aquatic species, an increased difficulty in filtering drinking water, the loss of drinking water reservoir storage capacity, and negative impacts on the navigational capacity of waterways.

Are Municipally Operated Sources Exempted by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 Affected by the Final Rule?

Provisions within ISTEA temporarily delayed the deadline for Phase I industrial activities (with the exception of power plants, airports, and uncontrolled sanitary landfills) operated by municipalities with populations of less than 100,000 people to obtain an NPDES stormwater discharge permit. Congress delayed the permitting deadline for these facilities to allow small municipalities additional time to comply with NPDES requirements. The Phase II Final Rule ended this temporary exemption from permitting. Since March 10, 2003, all ISTEA-exempted municipally operated industrial activities were required to obtain permit coverage.

How Was the Phase II Final Rule Developed?

EPA developed the Phase II Final Rule during extensive consultations with a cross-section of interested stakeholders brought together on a subcommittee chartered under the Federal Advisory Committee Act, and with representatives of small entities participating in an advisory process mandated under the Small Business Regulatory Enforcement Fairness Act. In addition, EPA considered comments submitted by over 500 individuals and organizations during a 90-day public comment period on the proposed rule.

Why Does Part of the Phase II Final Rule Use a Question and Answer Format?

The provisions pertaining to operators of small MS4s are written in a "readable regulation" form that uses the "plain language" method. Questions and answers are used to create more reader-friendly and understandable regulations. The plain language method uses "must" instead of "shall" to indicate a requirement and words like "should," "could," or "encourage" to indicate a recommendation or guidance.

Who Is Covered by the Phase II Final Rule?

The final rule "automatically" covers two classes of stormwater dischargers on a nationwide basis:

(1) Operators of small MS4s located in "urbanized areas" as delineated by the Bureau of the Census. A "small" MS4 is any MS4 not already covered by Phase I of the NPDES stormwater program. See Fact Sheets 2.1 and 2.2 for more information on small MS4 coverage.

(2) Operators of small construction activities that disturb equal to or greater than 1 (one) and less than 5 (five) acres of land. See Fact Sheet 3.0 for more information on small construction activity coverage.

Waivers

Permitting authorities may waive "automatically designated" Phase II dischargers if the dischargers meet the necessary criteria. See Fact Sheets 2.1 (small MS4 waivers overview), 3.0 (construction waivers overview) and 3.1 (construction rainfall erosivity waiver) for details.

Phased-in Permit Coverage

Permitting authorities may phase-in permit coverage for small MS4s serving jurisdictions with a population under 10,000 on a schedule consistent with a State watershed permitting approach.

Additional Designations by the Permitting Authority

Small MS4s located outside of urbanized areas, construction activity disturbing less than 1 acre, and any other stormwater discharges can be designated for coverage if the NPDES permitting authority or EPA determines that stormwater controls are necessary. See Fact Sheet 2.1 for more information on the designation of small MS4s located outside of urbanized areas.

What Does the Phase II Final Rule Require?

Operators of Phase II-designated small MS4s and small construction activity are required to apply for NPDES permit coverage, most likely under a general rather than individual permit, and to implement stormwater discharge management controls (known as "best management practices" (BMPs)). Specific requirements for each type of discharge are listed below.

Small MS4s

- ❑ A regulated small MS4 operator must develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants from their MS4 to the "maximum extent practicable," to protect water quality, and to satisfy the appropriate water quality requirements of the CWA. The rule assumes the use of narrative, rather than numeric, effluent limitations requiring implementation of BMPs.

- ❑ The small MS4 stormwater management program must include the following six minimum control measures: public education and outreach; public participation/involvement; illicit discharge detection and elimination; construction site runoff control; post-construction runoff control; and pollution prevention/good housekeeping. See Fact Sheets 2.3 through 2.8 for more information on each measure, including BMPs and measurable goals.

- ❑ A regulated small MS4 operator must identify its selection of BMPs and measurable goals for each minimum measure in the permit application. The evaluation and assessment of those chosen BMPs and measurable goals must be included in periodic reports to the NPDES permitting authority. See Fact Sheet 2.9 for more information on permitting and reporting.

Small Construction Activity

- ❑ The specific requirements for stormwater controls on small construction activity will be defined by the NPDES permitting authority on a State-by-State basis.

- ❑ Many NPDES permitting authorities have adapted their existing Phase I general permits for large construction activity to also include small construction activity. Where this has occurred, a stormwater pollution prevention plan is required for small construction activity. See Fact Sheet 3.0 for more information on potential program requirements and appropriate BMPs for small construction activity.

What Is the Phase II Program Approach?

The Phase II program, based on the use of federally enforceable NPDES permits:

- ❑ Encourages the use of general permits;

- ❑ Provides flexibility for regulated operators to determine the most appropriate stormwater controls;

- ❑ Allows for the recognition and inclusion of existing NPDES and non-NPDES stormwater programs in Phase II permits;

- ❑ Includes public education and participation efforts as primary elements of the small MS4 program;

- ❑ Attempts to facilitate and promote watershed planning and to implement the stormwater program on a watershed basis; and

- ❑ Works toward a unified and comprehensive NPDES stormwater program with Phase I of the program.

How Does the Phase II Final Rule Address the Phase I Industrial "No Exposure" Provision?

In addition to establishing a deadline for ISTEA facilities and designating two new classes of dischargers, the Phase II Final Rule revises the "no exposure" provision originally included in the 1990 regulations for Phase I of the NPDES stormwater program. The provision was remanded to EPA for further rulemaking and, subsequently, included in its revised form in the Phase II rule.

Under the Phase II Final Rule, a conditional no exposure exclusion is available to operators of *all* categories of Phase I regulated industrial activity (except category (x) construction activity) who can certify that all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. To obtain the no exposure exclusion, written certification must be submitted to the NPDES permitting authority. The final rule includes a *No Exposure Certification* form for use only by operators of industrial activity in areas where EPA is the NPDES permitting authority. See Fact Sheet 4.0 for more information on the conditional no exposure exclusion for industrial activity.

What Resources are Available for Phase II Communities?

EPA is committed to providing tools to facilitate implementation of the final Phase II stormwater program in an effective and cost-efficient manner. The stormwater Web site includes fact sheets, case studies, guidance documents, the National Menu of BMPs, and the Measurable Goals Guidance, as well as other compliance assistance information. This information can be accessed at EPA's stormwater Web site at www.epa.gov/npdes/stormwater.

What Is the Schedule for the Phase II Rule?

- ❑ The Phase II Final Rule was published in the *Federal Register* on December 8, 1999 (64 *FR* 68722).
- ❑ The Conditional No Exposure Exclusion option is available in States where EPA is the permitting authority (see http://www.epa.gov/npdes/authorization).
- ❑ The NPDES permitting authorities were required to issue general permits for Phase II-designated small MS4s and small construction activity by December 9, 2002.
- ❑ Operators of Phase II "automatically" designated regulated small MS4s and small construction activity were required to obtain permit coverage within 90 days of permit issuance.
- ❑ The NPDES permitting authority may phase-in coverage for small MS4s serving jurisdictions with a population under 10,000 on a schedule consistent with a State watershed permitting approach.
- ❑ Operators of regulated small MS4s must fully implement their stormwater management programs by the end of the first permit term, typically a 5-year period.

For Additional Information

Contacts

☞ U.S. EPA Office of Wastewater Management
http://www.epa.gov/npdes/stormwater
Phone: 202-564-9545

☞ Your NPDES Permitting Authority. Most States and Territories are authorized to administer the NPDES Program, except the following, for which EPA is the permitting authority:

Alaska	Guam
District of Columbia	Johnston Atoll
Idaho	Midway and Wake Islands
Massachusetts	Northern Mariana Islands
New Hampshire	Puerto Rico
New Mexico	Trust Territories
American Samoa	

☞ A list of names and telephone numbers for each EPA Region and State is located at http://www.epa.gov/npdes/stormwater (click on "Contacts").

Reference Documents

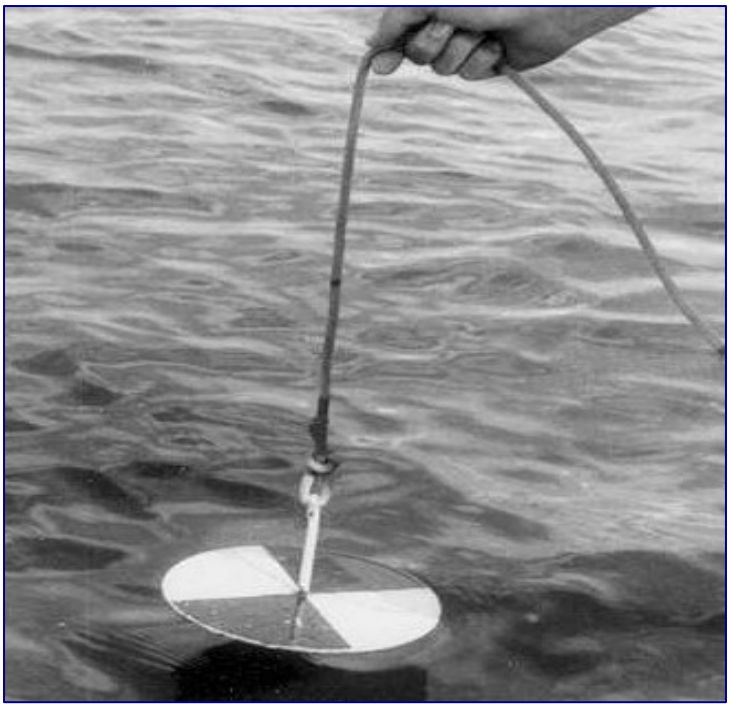
☞ EPA's Stormwater Web Site
http://www.epa.gov/npdes/stormwater
- Stormwater Phase II Final Rule Fact Sheet Series
- Stormwater Phase II Final Rule (64 *FR* 68722)
- National Menu of Best Management Practices for Stormwater Phase II
- Measurable Goals Guidance for Phase II Small MS4s
- Stormwater Case Studies
- And many others

Turbidity

Turbidity is a measure of the clarity of a water body and is related to erosion and sedimentation which impacts streams and lakes. Turbidity can affect the oxygen content and light penetration of the water while sedimentation can change the physical structure of habitats, stress organisms within the water body and smother macroinvertebrates. Causes of high turbidity include: soil erosion, wastewater discharges, urban runoff, farming and forestry practices, eroding stream banks, and excessive algae growth.

Suspended materials in a stream at Tuolumne Me-Wuk.

Understanding the Impact of Turbidity: A turbidity measurement is actually a measurement of the amount of suspended particles in the water body. The suspended particles absorb more heat which can raise water temperature and affect the oxygen content of water. When the suspended materials settle at the bottom of a water body they can clog fish gills and smother fish eggs, along with other organisms. Check tribal, state, or federal standards to determine an acceptable range for turbidity in your water body of interest.



Secchi Disk

Monitoring Equipment: The following is a list of the types of monitoring equipment commonly used to measure turbidity in surface water bodies. All options can be found in laboratory supply stores. Contract laboratories may also be used if necessary.

Lakes and Resevoirs:

- Secchi disc
- Kits
- Meters
- Multiparameter probes

Streams:

- Turbidity tube
- Kits
- Meters
- Multiparameter probes

For additional information:
www.epa.gov/owow/monitoring/volunteer/stream

12–28–09 Monday
Vol. 74 No. 247 Dec. 28, 2009

Pages 68477–68660

Federal Register

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agricultural commodities (60 FR 47487, September 13, 1995) (FRL–4973–3).

The Agency will take separate actions to propose revocation of any affected tolerances that are not supported for import purposes only.

B. Docket Content

1. *Review docket.* The registration review docket contains information that the Agency may consider in the course of the registration review. The Agency may include information from its files including, but not limited to, the following information:

- An overview of the registration review case status.
- A list of current product registrations and registrants.
- **Federal Register** notices regarding any pending registration actions.
- **Federal Register** notices regarding current or pending tolerances.
- Risk assessments.
- Bibliographies concerning current registrations.
- Summaries of incident data.
- Any other pertinent data or information.

The docket contains a document summarizing what the Agency currently knows about the ethylene case and a preliminary work plan for anticipated data and assessment needs. Additional documents provide more detailed information. During this public comment period, the Agency is asking that interested persons identify any additional information they believe the Agency should consider during the registration review of the pesticide ethylene. The Agency identifies in the docket the areas where public comment is specifically requested, though comment in any area is welcome.

2. *Other related information.* More information on the ethylene case, including the active ingredients for the case, may be located in the registration review schedule on the Agency's website at *http://www.epa.gov/oppsrrd1/registration_review/schedule.htm.* Information on the Agency's registration review program and its implementing regulation may be seen at *http://www.epa.gov/oppsrrd1/registration_review.*

3. *Information submission requirements.* Anyone may submit data or information in response to this document. To be considered during a pesticide's registration review, the submitted data or information must meet the following requirements:

- To ensure that EPA will consider data or information submitted, interested persons must submit the data or information during the comment period. The Agency may, at its discretion, consider data or information submitted at a later date.
- The data or information submitted must be presented in a legible and useable form. For example, an English translation must accompany any material that is not in English and a written transcript must accompany any information submitted as an audiographic or videographic record. Written material may be submitted in paper or electronic form.
- Submitters must clearly identify the source of any submitted data or information.
- Submitters may request the Agency to reconsider data or information that the Agency rejected in a previous review. However, submitters must explain why they believe the Agency should reconsider the data or information in the pesticide's registration review.

As provided in 40 CFR 155.58, the registration review docket for the ethylene case will remain publicly accessible through the duration of the registration review process; that is, until all actions required in the final decision on the registration review case have been completed.

List of Subjects

Environmental protection, Pesticides and pests.

Dated: December 16, 2009.

Keith A. Matthews,

Acting Director, Biopesticides and Pollution Prevention Division, Office of Pesticide Programs.

[FR Doc. E9–30622 Filed 12–24–09; 8:45 am]

BILLING CODE 6560–50–S

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OW–2009–0817; FRL–9095–3]

Stakeholder Input; Stormwater Management Including Discharges From New Development and Redevelopment

AGENCY: Environmental Protection Agency.

ACTION: Notice.

SUMMARY: The Environmental Protection Agency (EPA) is announcing its plans to initiate national rulemaking to establish a comprehensive program to reduce stormwater discharges from new development and redevelopment and make other regulatory improvements to strengthen its stormwater program. The purpose of this notice is to request input from the public to help EPA shape such a comprehensive program and to announce EPA's intent to hold several public ''listening sessions'' in January 2010. EPA seeks input on this undertaking regarding performance, effectiveness and cost of stormwater control measures; ecological data, including ecological benefits from stormwater controls; technical information on design, implementation and operation and maintenance of stormwater control measures; suggestions for how the existing program may be modified to better meet the goals of the Clean Water Act; and any other information that may help EPA develop improvements to the existing program, including better control of pollutants in stormwater from the built environment created by development and redevelopment.

DATES: Written comments must be submitted on or before February 26, 2010.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OW–2009–0817, by one of the following methods:

- *http://www.regulations.gov:* Follow the online instructions for submitting comments.
- *E-mail: OW-Docket@epa.gov,* Attention Docket ID No. EPA–HQ–OW–2009–0817.
- *Fax:* 202–566–9744.
- *Mail:* Water Docket, U.S. Environmental Protection Agency, Mail code: 4203M, 1200 Pennsylvania Ave., NW., Washington, DC 20460. Attention Docket ID No. EPA–HQ–OW–2009–0817.
- *Hand Delivery:* Water Docket, EPA Docket Center, EPA West Building Room 3334, 1301 Constitution Ave., NW., Washington, DC, Attention Docket ID No. EPA–HQ–OW–2009–0817. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OW–2009–0817. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or e-mail. The *http://www.regulations.gov* Web site is an ''anonymous access'' system, which

means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through *http://www.regulations.gov* your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket, visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm*.

FOR FURTHER INFORMATION CONTACT: For further information on the notice, contact Jonathan Angier, EPA Headquarters, Office of Water, Office of Wastewater Management at tel.: 202–564–0729 or e-mail: *angier.jonathan@epa.gov*.

Public Listening Sessions: EPA will hold several informal public listening sessions in January 2010 to gather input on possible regulatory changes to the stormwater program. The public listening sessions will provide a review of EPA's current regulatory approach to permitting stormwater discharges, a summary of the recommendations from the National Research Council report *Urban Stormwater Management in the United States* (The National Academies Press, 2009), and potential considerations for regulatory changes to strengthen the program. The public listening sessions will afford an opportunity for the public to provide input on regulatory actions that EPA is considering. Brief oral comments (three minutes or less) will be accepted at the sessions, and written statements will be accepted. The dates and locations of the listening sessions are as follows:

- January 19, 2010, 10 a.m. to 3 p.m. at EPA Region 5 Office, 77 W. Jackson Blvd., Chicago, IL 60604
- January 20, 2010, 10 a.m. to 3 p.m. at EPA Region 9 Office, 75 Hawthorne Street, San Francisco, CA 94105
- January 25, 2010, 10 a.m. to 3 p.m. at EPA Region 8 Office, 1595 Wynkoop Street, Denver, CO 80202–1129
- January 26, 2010, 10 a.m. to 3 p.m. at EPA Region 6 Office, 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202
- January 28, 2010, 10 a.m. to 3 p.m. at EPA HQ Office, Ariel Rios Building, 1200 Pennsylvania Ave. NW., Washington, DC 20004

In order to provide adequate seating for those wishing to attend EPA's public listening sessions, interested individuals must register to attend by January 15, 2010 on the Internet at *http://www.epa.gov/npdes/stormwater/rulemaking.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. How Can I Get Copies of This Document and Other Related Information?

1. Docket. EPA has established an official public docket for this action under Docket ID No. EPA–HQ–OW–2009–0817. The official public docket is the collection of materials that is available for public viewing at the Water Docket in the EPA Docket Center, (EPA/DC) EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. Although all documents in the docket are listed in an index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Publicly available docket materials are available in hard copy at the EPA Docket Center Public Reading Room, open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Water Docket is (202) 566–2426.

2. Electronic Access. You may access this **Federal Register** document electronically through the EPA Internet under the ''Federal Register'' listings at *http://www.epa.gov/fedrgstr/*. Electronic versions of this notice and other stormwater documents are available at EPA's stormwater Web site *http://www.epa.gov/npdes/stormwater/rulemaking*.

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at *http://www.epa.gov/edocket/* to submit or view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Once in the system, select ''search'', then key in the appropriate docket identification number.

Certain types of information will not be placed in the EPA Dockets. Information claimed as CBI and other information whose disclosure is restricted by statute, which is not included in the official public docket, will not be available for public viewing in EPA's electronic public docket. EPA policy is that copyrighted material will not be placed in EPA's electronic public docket but will be available only in printed, paper form in the official public docket. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility identified in Section I.A.1.

Submitting CBI. Do not submit this information to EPA through regulations.gov or e-mail. Clearly mark all of the information that you claim to be CBI. For CBI information on computer discs mailed to EPA, mark the surface of the disc as CBI. Also identify electronically the specific information contained in the disc or that you claim is CBI. In addition to one complete version of the specific information claimed as CBI, you must submit a copy that does not contain the information claimed as CBI for inclusion in the public document. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR Part 2.

It is important to note that EPA's policy is that public input, whether submitted electronically or in paper, will be made available for public viewing in EPA's electronic public docket as EPA receives them and without change, unless the input contains copyrighted material, CBI, or other information whose disclosure is restricted by statute. When EPA identifies any input containing copyrighted material, EPA will provide a reference to that material in the version of the document that is placed in EPA's electronic public docket. The entire printed submittal, including the copyrighted material, will be available in the public docket.

Documents submitted on computer disks that are mailed or delivered to the docket will be transferred to EPA's electronic public docket. Input that is mailed or delivered to the Docket will be scanned and placed in EPA's electronic public docket. Where practical, physical objects will be photographed, and the photograph will be placed in EPA's electronic public docket along with a brief description written by the docket staff.

B. How and to Whom Do I Submit Input?

You may submit input electronically, by mail, through hand delivery/courier, or in person by attending one of the 5 listening sessions. To ensure proper receipt by EPA, identify the appropriate

docket identification number in the subject line on the first page of your input. Please ensure that your input is submitted within the specified comment period.

1. Electronically. If you submit electronic input as prescribed below, EPA recommends that you include your name, mailing address, and an e-mail address or other contact information in the body of your comment. Also include this contact information on the outside of any disk or CD–ROM you submit, and in any cover letter accompanying the disk or CD–ROM. This ensures that you can be identified as the submitter of the comment and allows EPA to contact you in case EPA cannot read your submittal due to technical difficulties or needs further information on the substance of your input. EPA's policy is that EPA will not edit your input, and any identifying or contact information provided in the body of the text will be included as part of the input that is placed in the official public docket, and made available in EPA's electronic public docket. If EPA cannot read your submittal due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your input.

i. EPA Dockets. Your use of EPA's electronic public docket to provide input to EPA electronically is EPA's preferred method for receiving comments. Go directly to EPA Dockets at *http://www.epa.gov/edocket*, and follow the online instructions for submitting input. Once in the system, select ''search'', and then key in Docket ID No. EPA–HQ–OW–2009–0817. The system is an ''anonymous access'' system, which means EPA will not know your identity, e-mail address, or other contact information unless you provide it.

ii. E-mail. Input may be sent by electronic mail (e-mail) to *ow-docket@epa.gov*, Attention Docket ID No. EPA–HQ–OW–2009–0817. In contrast to EPA's electronic public docket, EPA's e-mail system is not an ''anonymous access'' system. If you send an e-mail directly to the Docket without going through EPA's electronic public docket, EPA's e-mail system automatically captures your e-mail address. E-mail addresses that are automatically captured by EPA's e-mail system are included as part of the submittal that is placed in the official public docket, and made available in EPA's electronic public docket.

iii. Disk or CD–ROM. You may submit input on a disk or CD–ROM that you mail to the mailing address identified in this section. These electronic submissions will be accepted in Microsoft Word or ASCII file format. Avoid the use of special characters and any form of encryption.

2. By Mail. Send the original and three copies of your input to: Water Docket, Environmental Protection Agency, Mailcode: 4101T, 1200 Pennsylvania Ave., NW., Washington, DC 20460, Attention Docket ID No. EPA–HQ–OW–2009–0817.

3. By Hand Delivery or Courier. Deliver your input to: Public Reading Room, Room B102, EPA West Building, 1301 Constitution Avenue, NW., Washington, DC 20004, Attention Docket ID No. EPA–HQ–OW–2009–0817. Such deliveries are only accepted during the Docket's normal hours of operation (8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays).

II. Background

Statutory and Regulatory Overview

Under section 402(p) of the Clean Water Act, the Environmental Protection Agency regulates stormwater discharges from municipal separate storm sewer systems (publicly owned conveyances or systems of conveyances that discharge to waters of the U.S. and are designed or used for collecting or conveying storm water, are not combined sewers, and are not part of a publicly owned treatment works), stormwater discharges associated with industrial activity, and stormwater discharges from construction sites of one acre or larger. See 40 CFR 122.26(a). Under EPA's regulations, these stormwater discharges are required to be covered by National Pollutant Discharge Elimination System (NPDES) permits.

EPA developed the stormwater regulations under section 402(p) in two phases, as directed by the statute. In the first phase, under section 402(p)(4), EPA promulgated regulations establishing application requirements for NPDES permits for stormwater discharges from medium and large municipal separate storm sewer systems (MS4s) (serving populations of 100,000 or more) and stormwater discharges associated with industrial activity. EPA published the final Phase I rule on November 16, 1990 (55 FR 47990). *See* 40 CFR 122.26. The Phase I rule, among other things, defined ''stormwater discharges associated with industrial activity'' to include construction sites of five acres or larger. 40 CFR 122.26(b)(14)(x). In the second phase, under section 402(p)(5) and (6), EPA was required to conduct a study to identify other stormwater discharges that needed further controls to protect water quality, report to Congress on the results of the study, and to designate for regulation additional categories of stormwater discharges not regulated in Phase I. EPA promulgated the Phase II rule on December 8, 1999, designating small MS4s and small construction sites (1–5 acres) and requiring NPDES permits for these discharges. 64 FR 68722.

With respect to MS4s, the Phase I regulations are primarily application requirements that identify components that must be addressed in permit applications from large and medium MS4s. The regulations require these MS4s to develop a stormwater management program (SWMP), track and oversee industrial facilities regulated under the NPDES stormwater program, conduct monitoring, and submit periodic reports.

Under the Phase II rule, regulated small MS4s are generally defined as any MS4 that is not already covered by the Phase I program and that are located within the urbanized area boundary as determined by the U.S. Decennial Census. Separate storm sewer systems such as those serving military bases, universities, large hospital or prison complexes, and highways are also included in the definition of ''small MS4.'' 40 CFR 122.26(b)(16). In addition, a small MS4 located outside of an urbanized area may be designated as a regulated small MS4 if the NPDES permitting authority determines that its discharges cause, or have the potential to cause, an adverse impact on water quality. *See* 40 CFR 122.32(a)(2), 123.35(b)(3).

Phase II stormwater regulations also require that the MS4, under the permit, implement stormwater management programs (SWMPs), and require that the SWMPs include six minimum control measures. The minimum control measures are: Public education and outreach, public participation and involvement, illicit discharge detection and elimination, construction site runoff control, post construction runoff control, pollution prevention and good housekeeping. Regulations applicable to Phase II MS4 permits are found in 40 CFR 122.30–122.37. In general, Phase II MS4 permits are general permits, although small MS4s may apply for individual permits under the Phase I rule's application provisions in 40 CFR 122.26(d).

Under section 402(p)(6), EPA is authorized to designate additional stormwater discharges to be regulated other than those already regulated, and to establish a comprehensive program to regulate them. In addition, under EPA's stormwater regulations, EPA (or States authorized to administer the NPDES program) may require NPDES permits

for currently unregulated stormwater discharges by designating discharges pursuant to 40 CFR 122.26(a)(9)(i)(C) or (D).

National Research Council Report

In 2006, EPA asked the National Research Council (NRC) to conduct a review of its stormwater program, considering all entities regulated under the program, i.e., municipal, industrial and construction. In October 2008, the National Research Council released the report *Urban Stormwater Management in the United States* (The National Academies Press, 2009) finding, among other things, that ''the rapid conversion of land to urban and suburban areas has profoundly altered how water flows during and following storm events, putting higher volumes of water and more pollutants into the nation's rivers, lakes, and estuaries. These changes have degraded water quality and habitat in virtually every urban stream system.''

This report recommends a number of actions, including conserving natural areas, reducing hard surface cover (e.g., roads and parking lots—impervious surface areas), and retrofitting urban areas with features that hold and treat stormwater (NRC, *Report in Brief,* 2008). EPA takes seriously the significant findings and recommendations included in the NRC Report, and continues to evaluate how the Agency's stormwater program can be strengthened in light of the report. The *Report in Brief* can be accessed at: *http://dels.nas.edu/dels/rpt_briefs/stormwater_discharge_final.pdf.* A full copy of the report can be obtained from The National Academies Press, *http://books.nap.edu/catalog.php?record_id=12465.* A prepublication copy is available at: *http://www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf.*

EPA shares the NRC Committee's perspective that it is imperative that the stormwater regulations be as effective as possible in protecting water quality. The NRC Report has provided EPA with the opportunity to reexamine the effectiveness of its stormwater programs, some of which are nearly 20 years old. For instance, EPA is interested in assessing the level of accountability that the regulations and the permits issued under the regulations provide to MS4s to minimize the discharge of pollutants in stormwater. The role of MS4s in reducing stormwater impacts from the built environment is crucial and growing, given that these sources of adverse water quality impacts are continually expanding. As the urban, suburban and exurban human environment expands, there is an increase in impervious land cover and therefore an increase in stormwater discharges. This increase in impervious land cover reduces or eliminates the natural infiltration of precipitation, which greatly increases the volume of stormwater discharges. This increased volume of stormwater discharges results in the scouring of rivers and streams; degrading the physical integrity of aquatic habitats, stream function and overall water quality. In addition, the increase in impervious land cover results in the increase of the pollutant load discharged from storm sewers. As precipitation moves across roads, rooftops, and other impervious surfaces, it picks up pollutants that are then discharged, either directly or through storm sewers, to our Nation's waters.

To address the degradation of water quality caused by stormwater discharges from impervious cover, EPA is exploring regulatory options that would strengthen the stormwater program, including establishing specific post construction requirements for stormwater discharges from, at a minimum, new development and redevelopment. EPA does not currently regulate stormwater discharges from new development and redevelopment directly. However, both Phase I MS4s and Phase II MS4s are required through the MS4 permit to address stormwater discharges from new development and redevelopment in their SWMPs, but the regulations do not include specific management practices or standards to be implemented. Among the Phase I requirements for a SWMP is a ''comprehensive master plan to develop, implement, and enforce controls to reduce the discharge of pollutants from municipal storm sewers, which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.'' (40 CFR 122.26(d)(2)(iv)(A)(2)).

Phase II regulations include post construction requirements as one of the six minimum control measures to be addressed in the SWMP. Small MS4s must ''develop, implement, and enforce a program to address'' stormwater discharges from new development and redevelopment projects of one acre or greater to ''ensure that controls are in place that would prevent or minimize water quality impacts.'' 40 CFR 122.34(b)(5). The program must include strategies including structural and/or non-structural best management practices (BMPs) appropriate for the community; use of ordinances or other regulatory mechanisms to the extent allowable under State, Tribal or local law; and measures to ensure adequate long-term operation and maintenance of BMPs. The Phase II rule recommends (but does not require) that the program to address stormwater from new development and redevelopment should attempt to maintain pre-development runoff conditions by installing and implementing stormwater control measures.

As stated in the report, the NRC found that ''stormwater permits leave a great deal of discretion to the regulated community to set their own standards and to self-monitor.'' As a result, across the Nation there is inconsistency in the NPDES program and in stormwater management programs required by NPDES permit with respect to stormwater discharges from MS4s caused by stormwater discharges from development. Despite the lack of specificity in the current regulations, some permitting authorities have required controls for stormwater discharges from developed property that neutralize the impacts from stormwater by promoting practices that retain stormwater on-site through infiltration, evapotranspiration, or stormwater reuse. To help make permitting more consistent and robust nationally, EPA is considering ways to strengthen the MS4 permit regulations, including establishing specific requirements for stormwater discharges from, at a minimum, new development and redevelopment; expanding the area defined as MS4s to include rapidly developing areas; and devising a single set of consistent regulations for all MS4s. In addition, EPA is exploring regulatory options to directly address stormwater discharges from new development and redevelopment, including new and redeveloped sites outside the MS4 boundary, that may be contributing to waterbody impairment, through the designation of an additional category or categories of discharges under CWA section 402(p)(6).

Proposed Information Collection Request (ICR)

EPA has proposed an Information Collection Request (ICR) to collect data to support this effort to strengthen the stormwater regulations (published October 30, 2009, 74 FR 56191). The proposed ICR discusses the administration of three questionnaires: The first for the owners, operators, developers, and contractors of new development and redevelopment; the second for the owners and operators of MS4s (including those not federally

regulated); and the third for the States and territories. The data collected through this ICR would support EPA's rulemaking activities by providing EPA with information to characterize the current level of stormwater controls and stormwater control measures; the area currently covered by federal and state stormwater requirements; the current burden and expenditures by States and MS4s associated with existing requirements; and technical, financial, and environmental data needed to quantify the incremental pollutant removals, compliance costs, and impacts for various regulatory options that EPA might consider. Under the proposed ICR, EPA seeks any available information concerning current stormwater control practices, including those referred to as green infrastructure or low-impact development. For further information, see: *http://www.epa.gov/npdes/stormwater/rulemaking*.

III. Input on Stormwater Practices and Considerations for Modifying Regulations

Today's notice is being issued to make the public aware of opportunities to provide input on current stormwater practices and to inform the public of and solicit comment on EPA's preliminary considerations for modifying or supplementing EPA's stormwater regulations. EPA is accepting information during the listening sessions and/or by submission of written comments in order to gain early public input on stormwater practices and regulations.

A. Solicitation for Additional Input Regarding Stormwater Control Practices

1. In addition to the information collection request described above, EPA is soliciting comment and input from the general public concerning current stormwater control practices, as well as information concerning innovative approaches to stormwater control. In particular, EPA is seeking information on the following aspects of structural approaches to stormwater control: design, performance, operation and maintenance, capital and lifetime cost, and environmental and economic benefit information on practices that retain stormwater on-site through infiltration, evapotranspiration, or stormwater reuse. EPA solicits comment and input on these retention practices that have been used for ''green field'' development, redevelopment (where there was some pre-existing infrastructure), and retrofitting existing development. While a significant amount of data has been collected and is available (see, EPA's Urban BMP Performance Tool (*http://www.epa.gov/npdes/stormwater/urbanbmp*) or the International Stormwater BMP Database (*http://www.bmpdatabase.org*)), EPA is accepting any more recent information that is not already available in these databases.

2. Cost comparisons of different stormwater management approaches for specific sites. EPA solicits comment and input on different stormwater management approaches, including comparison of stormwater management systems that rely primarily on conveyance and detention of excess discharge with stormwater management systems that relies primarily on on-site retention. Cost comparisons should preferably be between similar sized projects and/or between individual management methods of similar scope and capability.

3. Design, performance, operation and maintenance, capital and lifetime costs, and environmental and economic benefit information for communities and/or site owners or operators that have elected to modify or retrofit their stormwater management practices for existing development, as a separate effort that is not in conjunction with redevelopment. This may occur if the existing stormwater management practices were insufficient to reduce pollutants, restore habitat and stabilize stream morphology, or to correct past mistakes. This may also occur as part of a larger watershed restoration plan. EPA is also soliciting comments and input on: where retrofit practices have been installed, what the drivers were for the project, and information on the specific retrofit practices that were installed.

4. EPA is also soliciting comments and input on monitoring information that may have been collected to show the impacts of stormwater control measures on water quality and/or flow rates in the receiving waterbody. This includes information on the effects of retrofits for existing discharges (before and after installation, if possible), as well as any water monitoring information obtained before and after new development and redevelopment.

B. Preliminary Considerations for Modifying/Supplementing EPA's Stormwater Regulations

By today's notice, EPA is informing the public of its preliminary considerations for modifying or supplementing EPA's stormwater regulations and soliciting public input on these considerations. The following are ideas that EPA is considering for strengthening the stormwater requirements and for which EPA seeks input:

1. *Expand the area subject to federal stormwater regulations.* EPA currently requires MS4s within Census-designated urbanized areas to apply for permit coverage (see *http://www.epa.gov/npdes/stormwater/urbanmaps* for maps of all urbanized areas). Based on the 1990 Census, there are 405 urbanized areas in the United States that cover 2% of total U.S. land area and contain approximately 63 percent of the Nation's population. Under the present regulations, development that is occurring outside currently regulated MS4s may not be subject to federal controls to protect water quality notwithstanding the fact that the resulting stormwater discharges may be contributing to waterbody impairment. For example, for Phase II MS4s, only the portion of the municipal jurisdiction (i.e. township) that is within the Census-designated urbanized area is required to be regulated, which may leave stormwater discharges in parts of the jurisdiction unregulated.

EPA solicits comments and input from the public on the need for expanding the area subject to federal regulation, and, if needed, how to expand the coverage of the federal stormwater program beyond the Census urbanized area boundary. EPA would be interested in views on (1) How to identify the appropriate jurisdictional boundaries for permit coverage, including the township, county, sewer district, or others; (2) how to identify areas that should be covered based on development pressures and to protect water quality; and (3) whether EPA should consider regulating stormwater discharges from particular types or sizes of development that are not covered by an MS4 permit.

2. *Establish specific requirements to control stormwater discharges from new development and redevelopment.* EPA is considering establishing specific requirements, including standards, to control stormwater discharges from new development and redevelopment. EPA welcomes comments on what standard or standards could apply to new development and redevelopment that promote sustainable practices that mimic natural processes to (1) Infiltrate and recharge, (2) evapotranspire, and/or (3) harvest and reuse precipitation. For example, there could be a national requirement for on-site stormwater controls such that post development hydrology mimics predevelopment hydrology on a site-specific basis. EPA could establish a suite of specific options of standards for meeting such a requirement, for example, on-site retention of a specific size storm event in an area, limits on the amount of

effective impervious surfaces (defined as impervious surfaces with direct hydraulic connection to the downstream drainage (or stream) system, also referred to as directly connected impervious area), use of site-specific calculations to determine predevelopment hydrology, and/or use of regional specific standards to reflect local circumstances. EPA could require these standards as part of the MS4 permit on a site-specific basis. EPA is interested in input regarding the need for and the type of standards to set. Should the standard be different for discharges from new development versus redevelopment and, if so, how should it differ? Are there specific circumstances in which (for example) a requirement for new development and redevelopment to maintain pre-development hydrology would not be advisable or would cause other environmental impacts? Finally, EPA is interested in input regarding responsibility for maintaining stormwater control measures that infiltrate, evapotranspirate and/or reuse water.

The impacts from stormwater discharges from new and redevelopment occur not only within the MS4 but also from sources outside the MS4 regulated areas. EPA is interested in input regarding the appropriate framework for implementing standards for new and redevelopment outside of the MS4 regulations.

3. Develop a single set of consistent requirements for Phase I and Phase II MS4s. EPA's Phase I regulations primarily contain application requirements that identify components that must be addressed in permit applications. The Phase II regulations establish six ''minimum measures'' that must be included in an MS4 permit that were more specific than Phase I. Many Phase I and Phase II permits address issues that are virtually identical. EPA requests input on whether EPA should modify the regulations to develop a consistent set of requirements that would apply to all regulated MS4s. For example, should EPA apply the six minimum measures to all MS4s? Should EPA add other measures? For instance, Phase I MS4s are required to implement a program to control discharges for industrial facilities in their service area. Should this requirement be extended to all MS4s? EPA also requests input on any other modifications to improve the stormwater regulations.

4. Require MS4s to address stormwater discharges in areas of existing development through retrofitting of the sewer system, drainage area, or individual structures with improved stormwater control measures. Stormwater discharge from large areas of impervious cover in developed areas is a significant contributor to water quality impairments in the receiving waters of urban areas. Changes to the stormwater management practices in areas of existing development will reduce these impacts. In some states, MS4 permits now require the MS4 to install retrofit practices that infiltrate or otherwise retain stormwater in areas of existing development to reduce these impacts. EPA requests input on whether it should consider requirements for the retrofit of existing development to address stormwater. In particular, EPA requests comment on requiring MS4s to develop a long-term retrofit implementation plan that is targeted to addressing stormwater problems in urban waters.

5. Whether EPA should include additional changes to the stormwater regulations (for example, requiring permits to include buffer requirements) in sensitive areas. EPA is interested in views on whether it should consider making any other changes to the current regulatory program (e.g., specific structural or nonstructural stormwater control measures) in addition to the ones described above to protect waterbodies in sensitive areas.

Dated: December 17, 2009.

Peter Silva,

Assistant Administrator, Office of Water.

[FR Doc. E9–30627 Filed 12–24–09; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL DEPOSIT INSURANCE CORPORATION

Agency Information Collection Activities: Renewal of a Currently Approved Collection; Comment Request

AGENCY: Federal Deposit Insurance Corporation (FDIC).

ACTION: Notice and request for comment.

SUMMARY: In accordance with requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.), the FDIC may not conduct or sponsor, and the respondent is not required to respond to, an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. The FDIC hereby gives notice that it is seeking public comment on renewal of its ''Foreign Banks'' information collection (OMB No. 3064–0114). At the end of the comment period, any comments and recommendations received will be analyzed to determine the extent to which the FDIC should modify the collection prior to submission to OMB for review and approval.

DATES: Comments must be submitted on or before February 26, 2010.

ADDRESSES: Interested parties are invited to submit written comments. All comments should refer to the name of the collection. Comments may be submitted by any of the following methods:

- *http://www.FDIC.gov/regulations/laws/federal/notices.html.*
- *E-mail: comments@fdic.gov.*
- *Mail:* Leneta G. Gregorie (202.898.3719), Counsel, Federal Deposit Insurance Corporation, 550 17th Street, NW., Washington, DC 20429.
- *Hand Delivery:* Comments may be hand-delivered to the guard station at the rear of the 550 17th Street Building (located on F Street), on business days between 7 a.m. and 5 p.m.

A copy of the comments may also be submitted to the FDIC Desk Officer, Office of Information and Regulatory Affairs, Office of Management and Budget, New Executive Office Building, Room 10235, Washington, DC 20503.

FOR FURTHER INFORMATION CONTACT: For further information about the information collection discussed in this notice, please contact Leneta G. Gregorie, by telephone at (202) 898–3719 or by mail at the address identified above.

SUPPLEMENTARY INFORMATION: The FDIC is proposing to renew, without change, the following information collection.

Title: Foreign Banks.

Estimated Number of Respondents and Burden Hours:

FDIC collection	Hours per response	Number of respondents	Times per year	Burden hours
Application to move a branch	8	1	1	8
Application for consent to operate a noninsured branch	8	1	1	8
Application to conduct activities	8	1	1	8
Recordkeeping	120	10	1	1,200

APPENDIX G

SANTA MARGARITA REGION MONITORING ANNUAL REPORT

FISCAL YEAR 2006-2007

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G-1.0 INTRODUCTION

In July, 2004 the San Diego Regional Water Quality Control Board (SDRWQCB) issued Monitoring and Reporting Program No. R9-2004-001, NPDES Permit No. CAS0108766 for the Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the County of Riverside, the City of Murrieta, the City of Temecula and the Riverside County Flood Control and Water Conservation District (RCFCD) within the Santa Margarita Watershed in the San Diego Region (MRP). The goals are identified in section I of the MRP and the management questions that the MRP is designed to address are listed in section IIA of the MRP.

Per the requirements of the MRP, the RCFCD developed and implemented a monitoring program based on the program outline in the MRP and the guidance in the Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California (SMC, 2004). The Model Monitoring Program was prepared by the Southern California Stormwater Monitoring Coalition (SMC), which consists of Permittees, Regional Water Quality Control Boards, citizen's groups, Southern California Coastal Watershed Research Project (SCCWRP), private consultants, and other agencies.

The RCFCD established water quality monitoring stations throughout the Santa Margarita Region (SMR). The monitoring stations are generally located at the downstream end of a major MS4 to allow for detection of illicit discharges, characterization of flows, and a better understanding of the water quality as prescribed in the MRP.

This Monitoring Annual Report is designed to meet the requirements of MRP Section III, Reporting Program, Part B, Receiving Waters Monitoring Reporting Requirements. This report presents the results of the Riverside County MS4 program for 2006-2007, the third year of the program. It contains the following components:

- Description of each receiving water monitoring station
- Description of monitoring methods
- Monitoring results
- Methods used to evaluate the data
- Discussion of results and analyses of each Monitoring Program Component

The fourth year (2007-2008) report will contain, in addition to the above information:

- Discussion of any long-term trends that can be detected from existing data
- Recommendations for future monitoring
- Recommendations for modification to individual or watershed SWMPs.

As stated in the MRP,

> *"Receiving Waters Monitoring consists of: 1) **Core Monitoring** requirements to address on-going, site specific need, such as estimating pollutant loads and assessing trends; 2) **Regional Monitoring** to address watershed-wide issues; and 3) **Special Studies** to address specific research or management issues."*

This report presents the results of the Core Monitoring at the stations throughout the SMR, which includes dry weather and illicit discharge monitoring, wet weather sampling, mass loading sampling, toxicity testing, bioassesments, and Toxicity Identification Evaluations (TIEs) and Toxicity Reduction Evaluations (TREs). In addition to the Core Monitoring, the RCFCD participates in Regional Monitoring

and Special Studies. Regional Monitoring initiatives are discussed under the results and analyses of each Monitoring Program Component heading. Special Studies are discussed in Section 7. Also included in this report are precipitation and fire information, and recommended immediate actions based on the data collected to date.

G-2.0 DESCRIPTION OF MONITORING METHODS FOR EACH TYPE OF MONITORING

The Consolidated Monitoring Program (CMP) contains a description of monitoring methods for each type of monitoring, including but not limited to:

- Monitoring equipment
- Sampling procedures
- Quality Assurance/quality control (QA/QC) procedures
- Laboratory analytical methods including the method detection limits (MDLs)

The CMP identifies monitoring elements common to the MS4 permits applicable to Riverside County by the Colorado River, San Diego and Santa Ana Regional Water Quality Control Boards. Watershed-specific appendices include specific MS4 permit provisions. The CMP was revised in 2004 to include the provisions for the recently adopted Board Order R9-2004-001, Santa Ana Region TMDL requirements, and other recent amendments to the Monitoring and Reporting Programs (MRP) of other MS4 permit regions within the County. The CMP is reviewed and updated annually based on program findings and changes in program needs, including TMDL development and implementation. The draft CMP outlines four objectives:

1. Develop and support an effective MS4 management program.

2. Identify those Receiving Waters, which, without additional action to control pollution from Urban Runoff, cannot reasonably be expected to achieve or maintain applicable Water Quality Standards.

3. Characterize pollutants associated with Urban Runoff and assess the influence of Urban land uses on Receiving Water quality.

4. Analyze and interpret the collected data to identify trends, if any, both to prevent impairments through the implementation of preventative BMPs and to track improvements based on the MS4 management program.

These objectives support the goal of the MS4 Urban Runoff management program, which is to manage the quality of Urban Runoff within the Permittee's jurisdictions to prevent impacts on Receiving Waters. These objectives are also a superset of the Model Monitoring Program core management questions developed by the Southern California Stormwater Monitoring Coalition.

The CMP includes the following sampling types:

- Dry Weather
- Wet Weather
- Bioassessment
- Toxicity
- Special Studies

In addition, the CMP contains:

- Health and Safety Guidance
- Field Reconnaissance Guidance

- Water Chemistry Guidance
- Toxicity Guidance
- Bioassessment Guidance
- Special Study Guidance
- Sampling Procedures
- Monitoring Costs
- Quality Assurance/Quality Control Procedures
- Data Collection and Analysis Procedures

Discussion previously contained in the Monitoring Annual Report regarding these standardized guidance and procedures is now provided in the CMP. The CMP will continue to be updated and referred to in this Monitoring Annual Report.

During the first storm event of the monitoring period, samples collected at the Triad stations are to be analyzed for the complete list of priority pollutants (40 CFR 122, Appendix D). For the remaining wet and dry weather monitoring events, samples are to be analyzed for the parameters listed in Table 1 of the MRP, reproduced below as Table G-1. The detected analytical results are provided in Table G-12 in Section 7.1 of this report.

Table G-1 Triad Station – Analytical Parameters

Trace Metals	**Pesticides**
Total Cadmium	Diazinon
Total Chromium	Chloropyrifos
Total Copper	Other OP Pesticides
Total Nickel	
Total Lead	**Conventionals**
Total Zinc	Temperature
Nutrients	pH
Ammonia (NH_3)	Hardness
Total Kjeldahl Nitrogen (TKN)	Specific conductance
Nitrate (NO_3)	Dissolved oxygen
Total phosphorus	MBAS
Bacteria	**PAHs**
Total coliform	
Fecal coliform	**Volatiles** (dry weather only)
E. coli	
	Total suspended solids

Per the MRP, monitoring of the tributary stations consists of the collection of grab samples during the first storm event, an additional storm event and two dry weather events. The samples will be analyzed for the Constituents of Concern listed in Table G-2. Constituents of Concern for 2006-2007 were those constituents that exceeded the BPO or CTR values in 2005-2006. In addition, hardness is included so that CTR values may be calculated.

Table G-2 Tributary Stations – Constituents of Concern

Physical Properties	**Trace Metals**
Turbidity (Field)	Copper
Turbidity (Lab)	Iron
Color	Manganese
Total Hardness	**Pesticides**
Total Dissolved Solids (TDS) (Field)	Chlorpyrifos (ELISA)
Total Dissolved Solids (TDS) (Residue)	Diazinon
Nutrients	**Bacteriological**
Total Nitrogen (as N)	Total Coliform
Total Phosphorus (as P)	Fecal Coliform
	E. coli

In addition to the Constituents of Concern listed in Table G-2, the laboratory analyzed for a number of parameters not mandated by the MRP and not requested by the District. As required by the MRP, results for the analyses of these parameters are displayed graphically in Attachment A and are summarized in Section G-6.0.

G-3.0 DESCRIPTION OF EACH MONITORING STATION

The SMR includes only the upper portion of the Santa Margarita River watershed. The SMR is further subdivided into the Temecula Creek and Murrieta Creek sub-watersheds. The Murrieta Creek sub-watershed is further subdivided into five smaller urbanized sub-watersheds tributary to Murrieta Creek (Empire Creek, Long Canyon Creek, Santa Gertrudis Creek, Warm Springs Creek, and Wildomar Channel). The confluence of Murrieta Creek and Temecula Creek, which forms the Santa Margarita River, occurs just upstream of the Riverside County line.

The MRP requires Triad Monitoring (chemistry, bioassessment, and toxicity) on both Temecula Creek and Murrieta Creek just upstream of their confluence. An additional Triad station known as Cole Creek is located west of, and tributary to, Murrieta Creek. It is used to establish reference water quality conditions for an un-urbanized watershed. Due to a lack of flow in Cole Creek during summer, Adobe Creek was alternatively used to collect reference condition dry weather flows as it is fed part of the year by rising ground water. Monitoring of four Tributary stations (chemistry only) at major MS4 outfalls tributary to Murrieta Creek and Temecula Creek is also required.

A map showing the locations of the CMP Triad and Tributary stations is provided as Figure 1. Station names corresponding to the station numbers shown on the maps are provided in Table G-3. Table G-3 also provides a summary of the location and character of current and past CMP stations, and notes when samples were collected at each station. Table G-4 contains an additional summary of the land use acreages and percentages for several major drainage areas tributary to the Santa Margarita River. Descriptions for each Triad and Tributary CMP station are provided. The descriptions for each station contain location information, photographs, and background information on the monitoring site. They also contain two maps, one showing the location of the drainage or subdrainage area and the other depicting the land uses within the area.

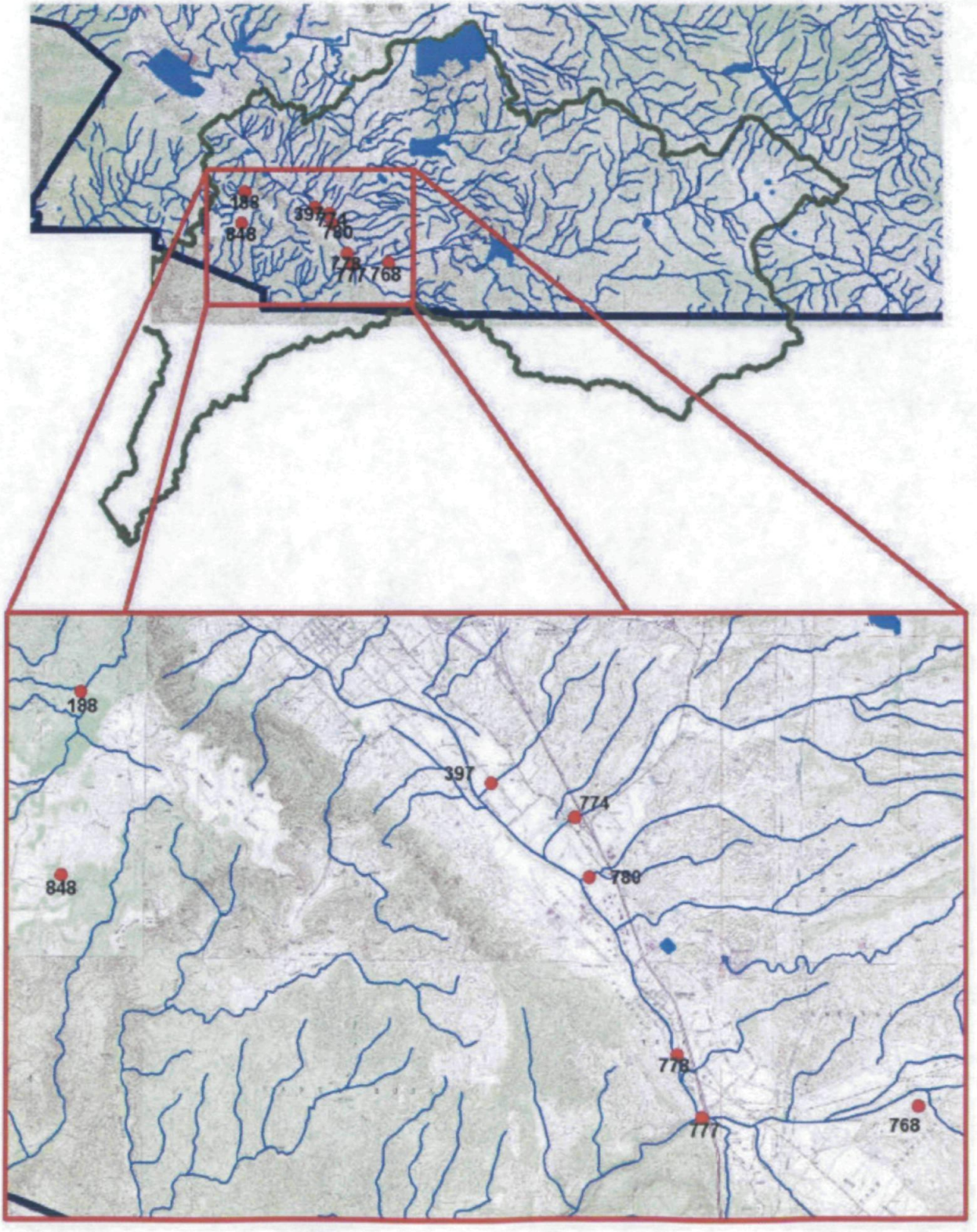
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Table G-3 Santa Margarita Region Monitoring Station Summary

Stn #	Station Name	Easting	Northing	Flow Gauge?	Class	Type	Receiving Water	Comp. BPO	HUC	Co-Permittee	1993*	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
TRIAD																									
188	Cole Creek-wet weather and dry weather when flowing	6285284.6	2062605.6	Active	Reference	Dirt	Murrieta Ck	902.3	902.32	County									X		X	X	X	X	
777	Temecula Creek below Pala Rd	6293503.1	2117224.4	---	Rec Wat	River	Santa Margarita	902.5	902.52	Temecula		X	X	X	X	X	X					X	X	X	X
778	Lower Murrieta Creek @ USGS Weir	6288711	2121113.1	Active	Rec Wat	River	Santa Margarita	902.3	902.32	Temecula		X	X	X	X	X	X	X	X		X	X	X	X	X
848	Adobe Creek-dry weather alternate	6252588.9	2131581.1	--	Reference	Dirt	De Luz Creek	902.2	902.21	County												X	X	X	X
TRIBUTARY																									
397	Warm Springs Channel	6278893.1	2138431.9	---	Outfall	Trap	Murrieta Ck	902.3	902.32	Murrieta												X	X	X	X
768	Redhawk Channel D/S of Overland Dr.	6303424	2118127.7	---	Outfall	Trap	Temecula Ck	902.5	902.51	County		X	X	X	X	X	X	X	X		X	X	X	X	X
774	Lateral A of Sta.Gert.Chan – Temecula	6282551.1	2135419.3	---	Outfall	RCP	Santa Gertrudis	902.4	902.42	Temecula		X	X									X	X	X	X
780	Long Canyon	6284564.6	2131769.1	---	Outfall	Trap	Murrieta Ck	902.3	902.32	Murrieta												X	X	X	X
HISTORICAL																									
404	Wildomar NPDES Channel Outlet below Central Av	6250323.5	2163023.3	---	Outfall	Trap	Murrieta Ck	902.3	902.31	County		X	X	X		X	X	X	X	X	X	X	X		
769	Empire Crk Chan Outlet @ Murrieta Crk –Temecula	6285276.3	2128652.3	---	Outfall	Trap	Murrieta Ck	902.3	902.32	Temecula		X	X	X	X	X	X	X	X	X	X	X	X		
770	C Street Storm Drain Outlet @ Murrieta Crk –Temecula	6288450.8	2122521.7	---	Outfall	RCP	Murrieta Ck	902.3	902.32	Temecula		X	X												
771	Rancho Way Storm Drain Outlet @ Murrieta Crk –Temecula	6284801.7	2128453.2	---	Outfall	CMP	Murrieta Ck	902.3	902.32	Temecula		X	X												
772	Via Montezuma Storm Drain Outlet –Temecula	6284020.8	2130014.9	---	Outfall	RCP	Murrieta Ck	902.3	902.32	Temecula			X		X										
773	Avenida Alvarado Storm Drain Outlet @ Murrieta Crk	6282403.1	2131912.8	---	Outfall	Dirt	Murrieta Ck	902.3	902.32	Temecula		X	X												
775	Murrieta Line F-3 Outlet near Kalmia & Washington	6266628.7	2147621.4	---	Outfall	RCP	Murrieta Ck	902.3	902.32	Murrieta			X												
776	Cal Oaks Channel- Murrieta line F	6268557.7	2149290.7	Active	Outfall	Trap	Murrieta Ck	902.3	902.32	Murrieta		X	X	X	X	X	X	X	X	X	X	X	X	X	X
779	Upper Murrieta Creek @ Cole Canyon Junction	6261438.6	2148708.4	---	Rec Wat	River	Murrieta Ck	902.3	902.32	Murrieta				X		X		X							
796	Hoover Ranch Pond -Murrieta-Clinton Keith Rd	6250729.3	2157542.3	---	Rec Wat	Lake	Murrieta Ck	902.3	902.31	County				X											
801	I-215 FB –Murrieta	6278139.5	2150286.4	---	Outfall	FB	Murrieta Ck	902.3	902.32	Murrieta					X		X		X			X			
828	Santa Margarita River near Temecula	6289592.0	2117064.5	Active	Rec Wat	River		902.5	902.52	Temecula								X	X	X	X	X	X	X	X
825	Region 9 Misc. & Complaints	0	0	---	Misc.	Misc.	Misc.			Varies				X			X			X					

Table G-4 Santa Margarita Region - Land Uses of Selected Drainage Areas (As of October 2007)

	188 Cole Canyon Creek		397 Warm Springs Creek		768 Redhawk Channel		774 Lateral A of Santa Gertrudis Channel		777 Lower Temecula Creek		778 Lower Murrieta Creek		780 Long Canyon Creek		848 Adobe Creek	
LAND USE	Area (ac)	%	Area (ac)	%	Area (ac)	%	Area (ac)	%	Area (ac)	%	Area (ac)	%	Area (ac)	%	Area (ac)	%
Streets	403.97	6.8%	2154.74	8.0%	183.44	11.6%	1494.44	8.1%	4426.95	2.5%	8807.35	8.9%	361.95	15.4%	0.00	0.0%
Agriculture	100.91	1.7%	4805.49	17.8%	111.65	7.1%	3547.09	19.2%	15543	8.8%	12478.62	12.6%	178.88	7.6%	0.00	0.0%
Commercial	0.00	0.0%	186.34	0.7%	0.00	0.0%	336.13	1.8%	747.16	0.4%	2020.99	2.0%	225.62	9.6%	0.00	0.0%
Exempt Public Properties	1364.77	23.0%	3465.59	12.8%	219.09	13.8%	1428.04	7.7%	64369.91	36.6%	13421.92	13.6%	66.45	2.8%	85.78	21.8%
Industrial	0.00	0.0%	125.26	0.5%	0.00	0.0%	65.05	0.4%	47.47	0.0%	896.4	0.9%	48.19	2.1%	0.00	0.0%
Preserves OpenSpace	308.96	5.2%	4359.33	16.1%	238.35	15.1%	3218.61	17.4%	28502.17	16.2%	16342.3	16.6%	489.18	20.8%	0.00	0.0%
Parks & Recreation	3562.90	60.0%	204.54	0.8%	114.49	7.2%	24.76	0.1%	1080.1	0.6%	706.05	0.7%	9.87	0.4%	0.00	0.0%
Rural	0.00	0.0%	8915.39	33.0%	354.97	22.4%	7227.11	39.1%	58356.94	33.2%	32773.9	33.2%	220.59	9.4%	307.81	78.2%
Urban	192.02	3.2%	2804.80	10.4%	360.39	22.8%	1120.58	6.1%	2683.59	1.5%	11237.89	11.4%	747.23	31.8%	0.00	0.0%
TOTAL	5933.53		27021.48		1582.38		18461.81		175757.29		98685.42		2347.96		393.59	

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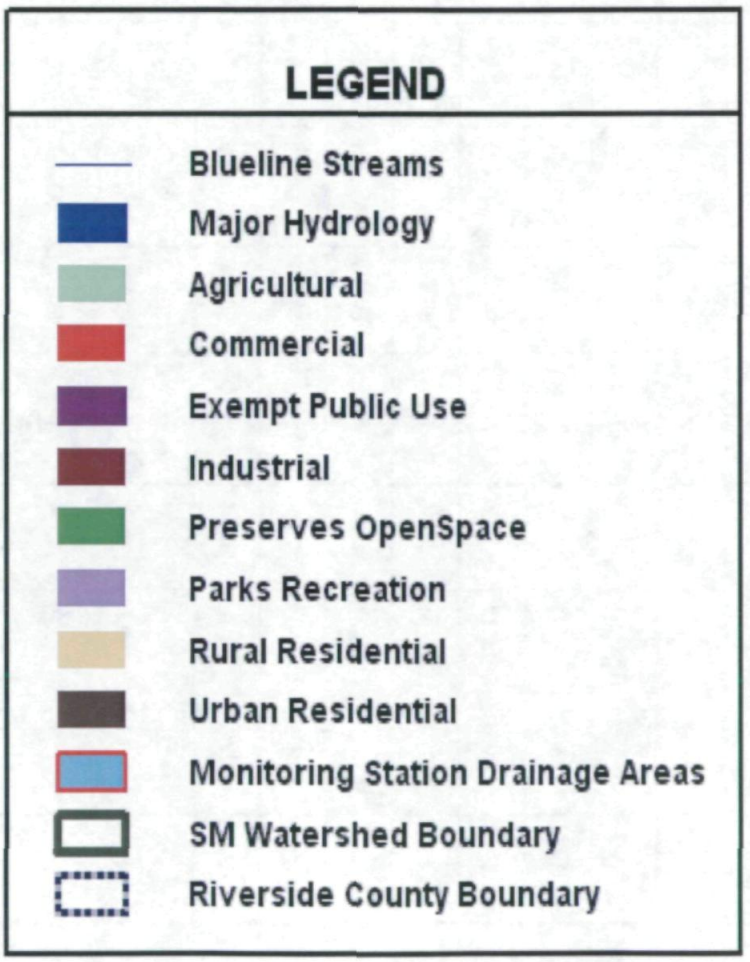
Below is the legend for the maps within this section.



G-3.1 Station Name: Temecula Creek below Pala Road (Lower Temecula Creek)

Hydstra Reference #: 777

Location:

Latitude	33°28'26.4" N
Longitude	117°07'46.1" W
Elevation	1,008 ft
Thomas Bros Pg	979B3

Classification: Receiving Water - Triad

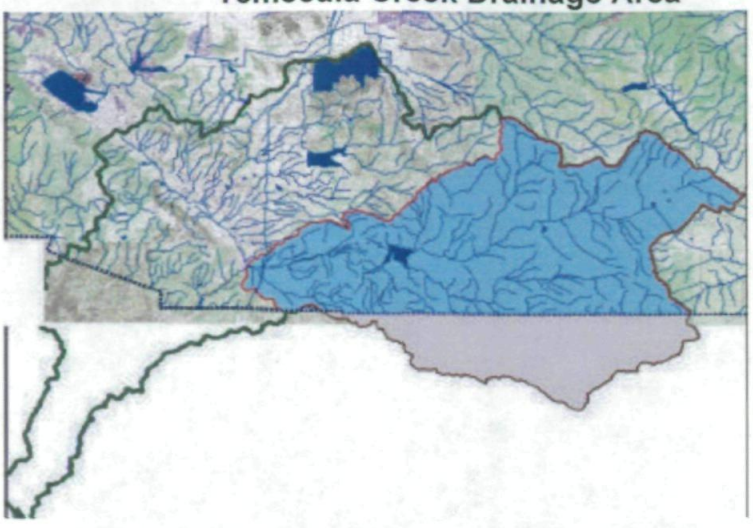
Type of Channel: Natural River

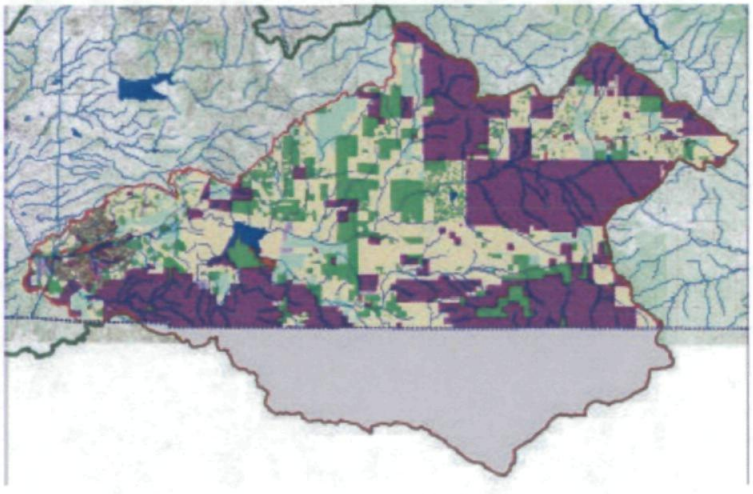
Receiving water: Santa Margarita River

Directions to the site:
Drive south on the I-215 freeway and exit at SR 79 South/Old Town Front Street. Go west of the freeway and turn left at the first stoplight. Turn left about 100 feet past the stop light onto a gravel/dirt road. Turn right, before the yellow EMWD gate. Drive to the dirt road that goes left and up. Go about 100 feet and turn right onto the dirt road. Go about 1,700 feet and drive to where the dirt road meets up with the gravel road. Follow the gravel road to the L3437 Pala II Pump Station. Park just past the pump station. Walk to the east and sample water from the stream flow just under the bridge.

Temecula Creek at Pala Road dry except when there is a significant storm event. No aquatic habitat exists in this reach. Conditions for benthic invertebrates tend to be poor at best. Primary flow at this location is rising groundwater. Vail Lake lies approximately 18 miles upstream of the Pala Road Crossing and traps some of the Temecula Creek storm flows; discharges from Vail Lake flow into infiltration basins above Butterfield Stage Road. The soil profile in this 18-mile reach of Temecula Creek consists of deep alluvium with a high infiltration rate. Non-significant storm flows infiltrate prior to reaching the Santa Margarita River. Less than 5% of this watershed tributary to this station is urbanized and within the Permittee's jurisdiction. Any urban drainages to Temecula Creek flow into a 100-foot-wide vegetated strip that is approximately 13,000 feet long and starts approximately 3½ miles upstream of this sampling location.

Temecula Creek Drainage Area





Total drainage area - 232,403.90 acres, of which 175,757.29 acres are within Riverside County.

Land uses by frequency:

Land Use	%
Exempt Public Properties	36.62
Rural Residential	33.20
Preserves Open Space	16.22
Agriculture	8.84
Streets	2.52
Urban Residential	1.53
Parks & Recreation	0.61
Commercial	0.43
Industrial	0.03

G-3.2 Station Name: Murrieta Creek at Temecula (Lower Murrieta Creek)

Hydstra Reference #: 778

Location:

Latitude	33°28'47.0" N
Longitude	117°08'34.8" W
Elevation	1,030 ft
Thomas Bros Pg	978J2

Classification: Receiving Water - Triad

Type of Channel: Natural River

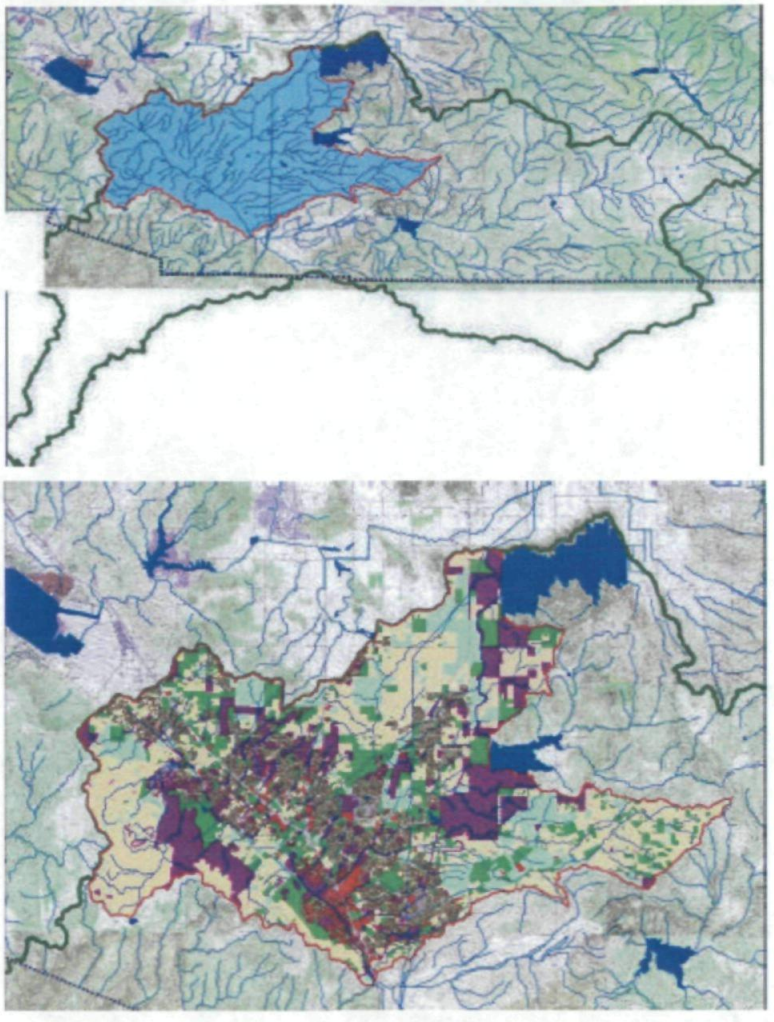
Receiving water: Santa Margarita River

Directions to the site:
Exit Rancho California Road from Interstate 15. Drive west of the freeway and turn left to Front Street. Turn right to Main Street. Turn left to Pujol Street. When Pujol Street goes from asphalt to a dirt road, drive about 500 feet and turn left at the two (2) yellow vertical bollards. CAUTION: A 4-Wheel drive is recommended when driving in this area. Drive straight toward the creek. The picture shows the sampling location which is approximately 100 feet upstream of the RCWD blow-off and approximately 600 feet upstream of the USGS gage house. Note: During storm events, sampling is conducted at the USGS Gage House, upstream of the USGS Weir due to safety.

Lower Murrieta Creek at is a receiving water station. It is located within Murrieta Creek, which is earthen at this location (except for a weir at the USGS gauge). It is the most downstream station within Murrieta Creek. Atributary to the Santa Margarita River, flows during dry weather at this station consist of rising groundwater that begins approximately ½- to ¼-mile from Murrieta Creek's confluence with the Santa Margarita River. There is an active USGS flow gauge at this station.

This sampling site is 0.4 miles upstream of the confluence of Temecula Creek and Murrieta Creek. The soil profile here indicates bedrock at the surface. The flow seen in the photo above is supplied by the mandated RCWD blow off just 100 yards upstream of the gauge and sampling point.

Murrieta Creek Drainage Area



Total drainage area - 98,685.42 acres

Land uses by frequency:

Land Use*	%
Rural Residential	33.21
Preserves Open Space	16.56
Exempt Public Properties	13.60
Agriculture	12.64
Urban Residential	11.39
Streets	8.92
Commercial	2.05
Industrial	0.91
Parks & Recreation	0.72

* Land use area represents portion of watershed below Lake Skinner.

G-3.3 Station Name: Cole Creek

Hydstra Reference #: 188

Location:

Latitude	33°32'37.1" N
Longitude	117°15'47.5" W
Elevation	1,700 ft
Thomas Bros Pg	957D1

Classification: Reference - Triad

Type of Channel: Natural Creek

Receiving water: Murrieta Creek

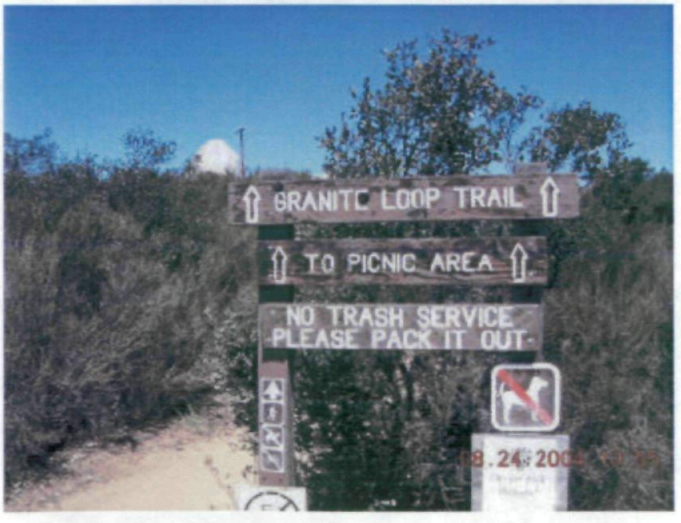
Directions to the site:
See following pages for detailed directions to the sampling location.

Cole Creek was added to the CMP in 2000 as a reference station. It is located within the Santa Rosa Plateau Ecological preserve and is a natural channel. Cole Creek is a tributary to Murrieta Creek. The Creek at the sampling location only flows when there is a significant winter storm event. The tributary watershed is plateau grassland meadows with a few ranch residences also in the watershed. Approximately 3% of the upper end of the watershed tributary to this station contains urban land uses.

Driving directions to Cole Creek:
Exit the 15 Freeway at Clinton Keith Road and drive west (southwest) of the freeway. Drive about 4 miles and turn left into the "Santa Rosa Plateau Ecological Reserve Visitor Center". You will see this sign at the entrance.

You will also see this sign at the entrance to the Santa Rosa Plateau. When you drive past the sign, park on the left side of the gravel parkway in front of or near the sign that says "Granite Loop Trail".

Walk down the "Granite Loop Trail". It is advisable to use a walking stick; just in case of any critters…namely snakes. Continue walking this trail to the picnic tables.



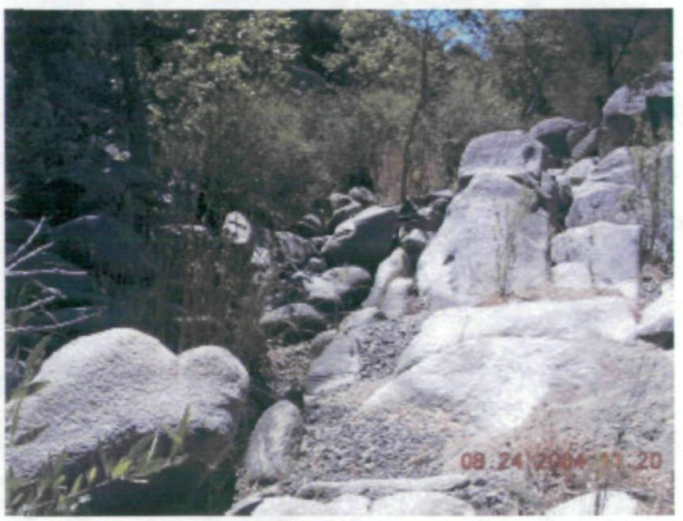
When you get to this picnic area, continue walking the trail past the picnic tables and slightly to the right. Walk about 500' past the picnic tables and take small path to the left off of the main trail. Walk the foot trail and keep the small drainage area to your left as you walk. Continue walking this trail until the small drainage area meets up with Cole Creek. Turn right at this confluence and walk south parallel to Cole Creek until you start seeing big rocks on the banks (slopes) of Cole Creek.

You will see this metal box that contains the gage sensor. The staff gage for Cole Creek is down the slope from this box.

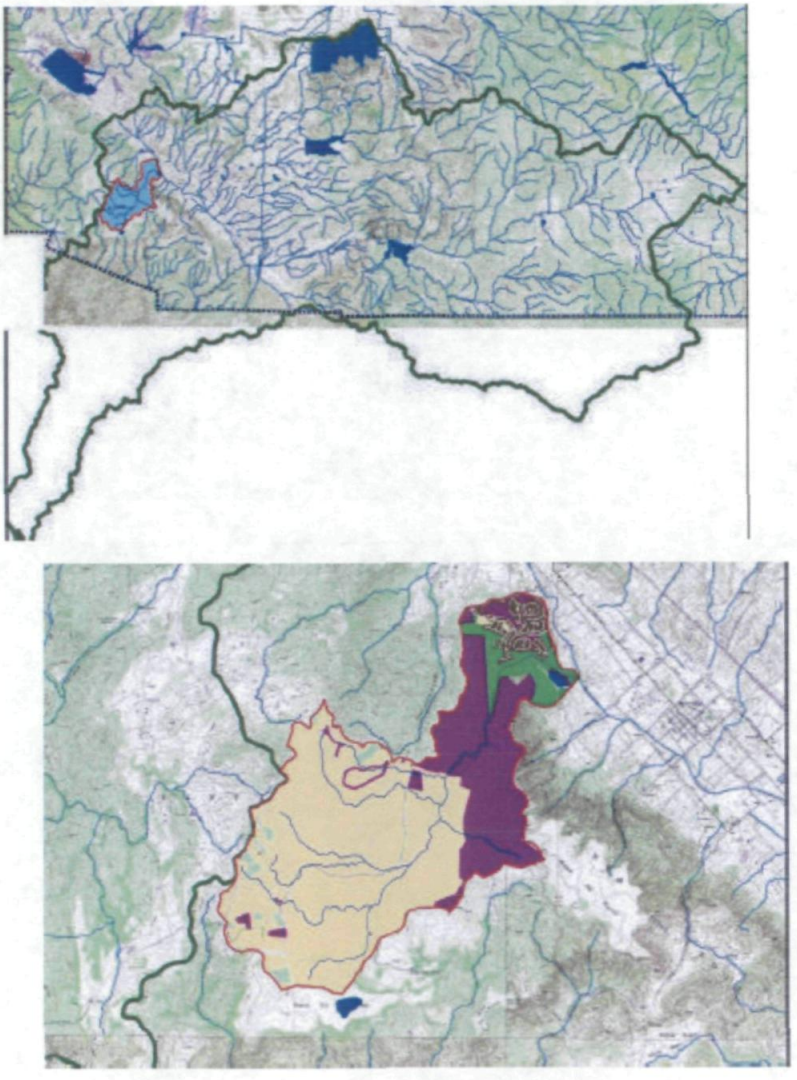
There is a staff gage on both sides of Cole Creek. You can sample at this gage if there are higher flows. Be careful with footing if there are rapid flows in this area.

This picture just shows some of the bigger rocks that are in Cole Creek where the water will flow over and around. Be careful with footing on these rocks.

These rocks are located about 200 feet south (upstream) of the staff gage. During lower flows, it is recommended to sample water that runs over and around these rocks.



Cole Creek Sub-drainage Area



Total drainage area - 5,733.53 acres

Land uses by frequency:

Land Use	%
Parks & Recreation	60.05
Exempt Public Properties	23.00
Streets	6.81
Preserves Open Space	5.21
Urban Residential	3.24
Agriculture	1.70
Industrial	0.00
Commercial	0.00
Rural Residential	0.00

G-3.4 Station Name: Redhawk Channel Downstream of Overland Dr.

Hydstra Reference #: 768

Location:

Latitude	33°28'34.6" N
Longitude	117°05'40.8" W
Elevation	1,040 ft
Thomas Bros Pg	979F3

Classification: Outfall - Tributary

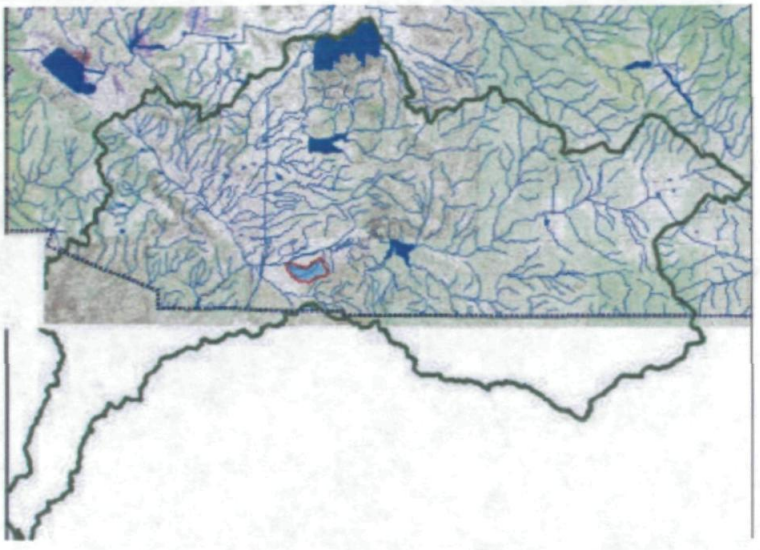
Type of Channel: Earthen

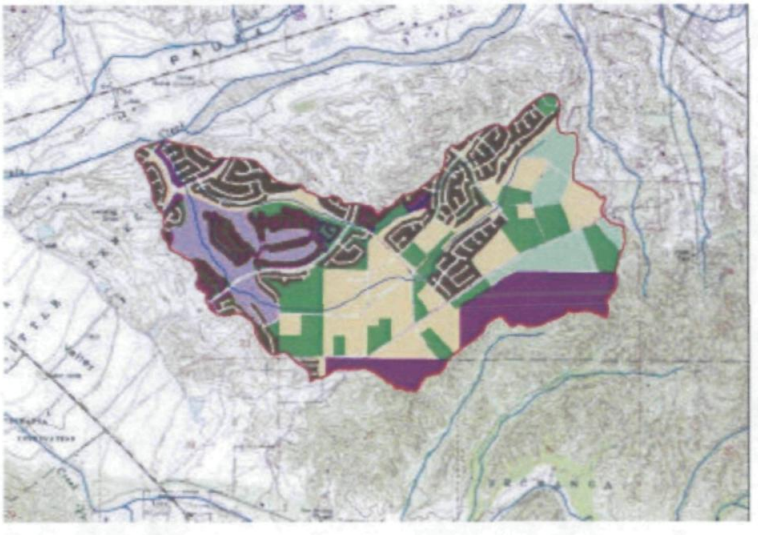
Receiving water: Temecula Creek

Directions to the site:
Exit Highway #79 East (to Indio) from Interstate 15 freeway. Turn right to Redhawk Parkway. Turn left to Overland. Turn left into first driveway and park there. Property belongs to County of Riverside Fire Department. Walk across the street and through the swing gate. Sampling location is just south (upstream) of the concrete lined channel. The picture shows the sampling location.

Redhawk Channel Downstream of Overland Drive is an outfall station. The sampling location is in an earthen reach of the channel just upstream of the rip-rap side sloped, soft bottomed channel. Dry weather flows appears to be from a natural spring in a tributary contained within an upstream golf course. Also, reclaimed water from RCWD used to irrigate a park channel side slope nearby adds to dry weather flows. A tributary to Temecula Creek, non-storm runoff from the channel infiltrates into Temecula Creek within a few hundred feet of the confluence. While approximately 23% of the tributary watershed is urbanized, it should be noted that over 50% of the watershed is outside of the jurisdiction of the permittees.

Redhawk Channel Sub-drainage Area





Total drainage area - 1,582.38 acres

Land uses by frequency:

Land Use	%
Urban Residential	22.78
Rural Residential	22.43
Preserves Open Space	15.06
Exempt Public Properties	13.85
Streets	11.59
Parks & Recreation	7.24
Agriculture	7.06
Industrial	0.00
Commercial	0.00

G-3.5 Station Name: Lateral A of Santa Gertrudis Channel - Temecula

Hydstra Reference #: 774

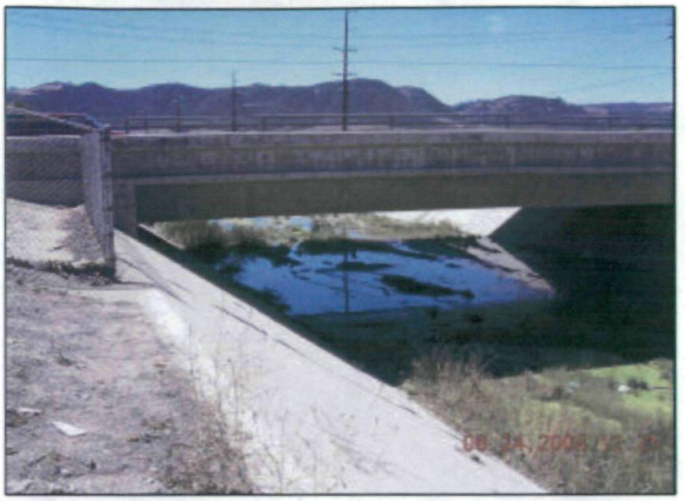
Location:

Latitude:	33°31'28.0" N
Longitude:	117°9'50.0" W
Elevation	1,045 ft
Thomas Bros Pg	958F4

Classification: MS4

Type of Channel: Concrete Trapezoidal

Receiving water: Murrieta Creek

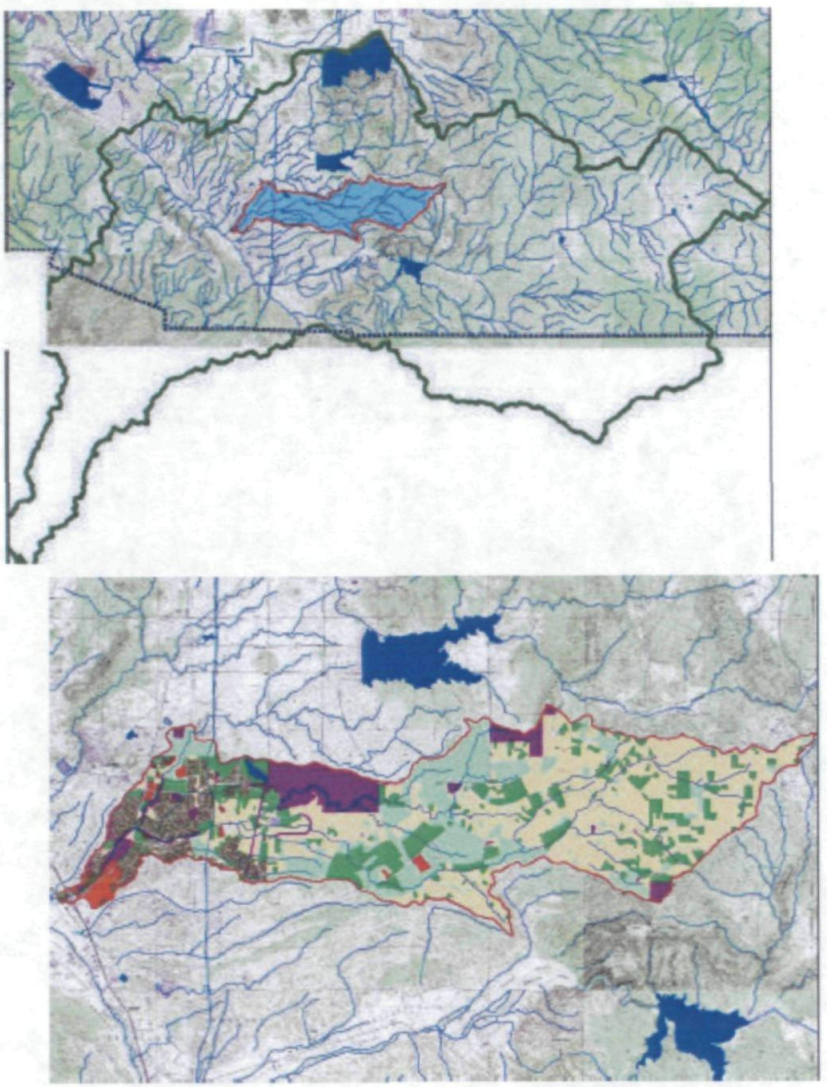


Directions to the site:
Exit Winchester Road from Interstate 15. Drive west of the freeway and turn right on to Jefferson Avenue. Drive about 450 feet and turn left into the access gate on the north side of the channel. The sampling point is off the bridge at Jefferson Street. The channel slope is too steep to climb in and out without a ladder. Note: It is twenty-two feet from the water line to the bridge rail during dry conditions.

Santa Gertrudis Channel (774) is an outfall station tributary to Murrieta Creek. It is a concrete lined trapezoidal channel. Significant non-storm flows are provided from well blow offs into the channel that tend to occur in the mornings and evenings. One well blow off valve and outlet owned and operated by RCWD is located adjacent to the confluence of Santa Gertrudis and Murrieta Creeks. These daily blow offs can each release several CFS of water for short durations of time. Non-storm flows tend to infiltrate within a few hundred yards of the confluence with Murrieta Creek. Sediment and vegetation tends to accumulate near the confluence of Santa Gertrudis Channel and Murrieta Creek due to aggradation of Murrieta Creek.

More than half of the watershed tributary to the Santa Gertrudis station is controlled by the dam that forms Skinner Lake. Storm flows in Santa Gertrudis and the downstream reach of Murrieta Creek are therefore lower than they would be under natural conditions. There is an active USGS flow gauge at this station.

Santa Gertrudis at the USGS Station



Total drainage area – 18,461.81 acres

Land uses by frequency:

Land Use	%
Rural Residential	39.15
Agriculture	19.21
Preserves Open Space	17.43
Streets	8.09
Exempt Public Properties	7.74
Urban Residential	6.07
Commercial	1.82
Industrial	0.35
Parks & Recreation	0.13

G-3.6 Station Name: Long Canyon Creek near Murrieta Creek

Hydstra Reference #: 780

Location:

Latitude	33°30'38" N
Longitude	117°09'40" W
Elevation	1,005 ft
Thomas Bros Pg	958G5

Classification: Outfall - Tributary

Type of Channel: Rip-Rap Trapezoidal Channel

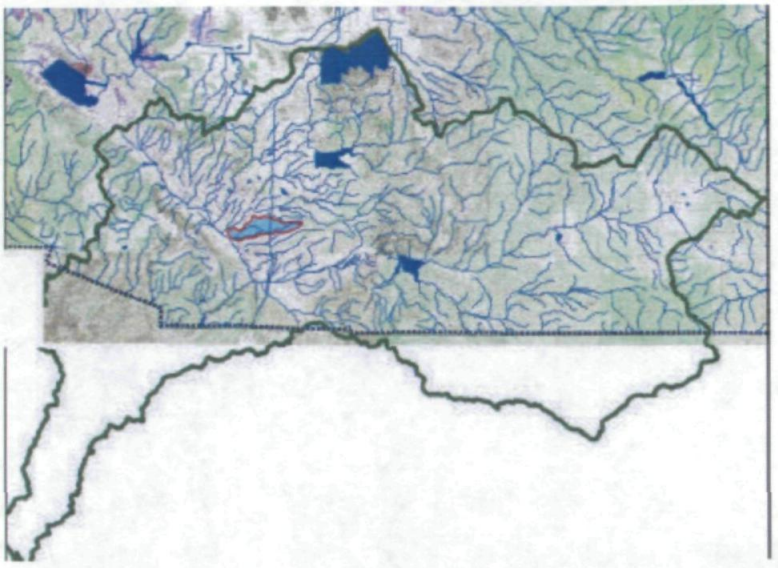
Receiving water: Murrieta Creek

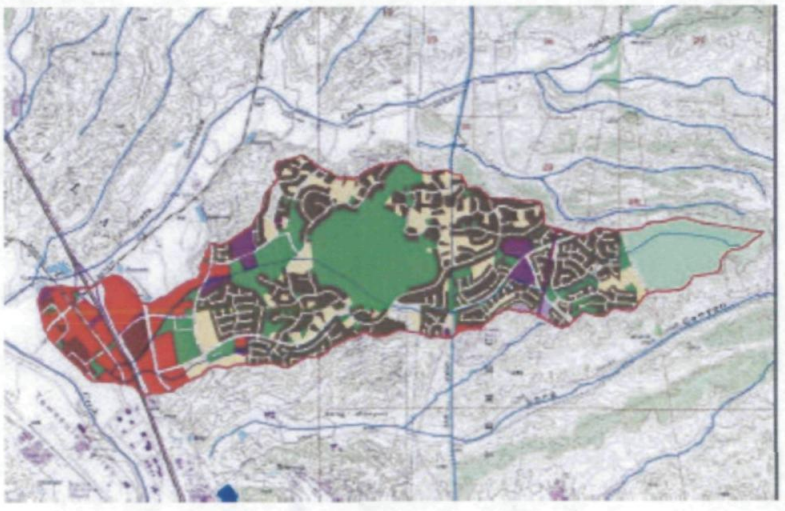
Directions to site: Exit Winchester Road from Interstate 15. Drive west of the freeway and turn left on to Jefferson Avenue. Drive about 900 feet and turn right on to Overland Drive. Turn left on to Commerce Center Drive. Drive about 230 feet and turn right into the access gate. Dry weather samples can be taken in the channel with hip boots and a backpack. Wet weather sampling should be conducted off of the Commerce Center Drive Bridge with a rope and bucket.

Long Canyon Channel Outlet at Murrieta Creek

Long Canyon (780) is an outfall station tributary to Murrieta Creek. It is a rip-rap trapezoidal channel. Non-storm flows from Long Canyon Channel tend to infiltrate within a few hundred feet of the confluence.

Long Canyon Creek Sub-drainage Area





Total drainage area - 2,347.96 acres

Land uses by frequency

Land Use	%
Urban Residential	31.82
Preserves Open Space	20.83
Streets	15.42
Commercial	9.61
Rural Residential	9.39
Agriculture	7.62
Exempt Public Properties	2.83
Industrial	2.05
Parks & Recreation	0.42

G-3.7 Station Name: Warm Springs Creek near Murrieta

Hydstra Reference #: 397

Location:

Latitude	33°31'56" N
Longitude	117°10'34" W
Elevation	1,040 ft
Thomas Bros Pg	958E3

Classification: MS4

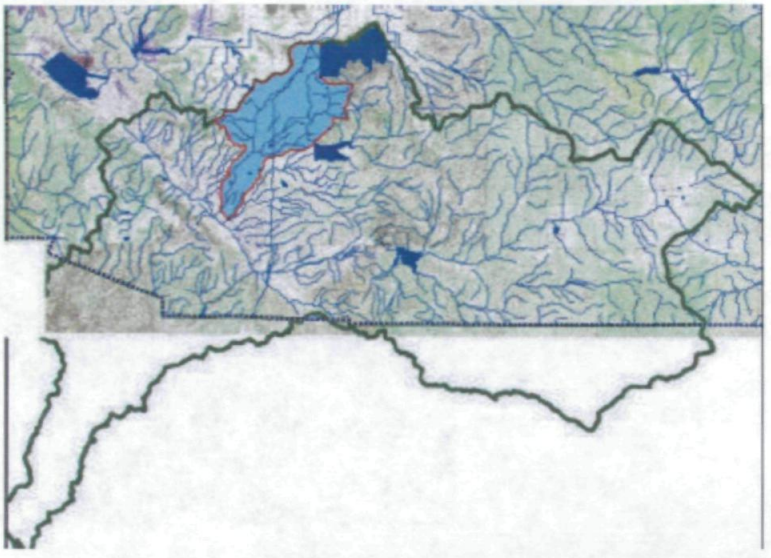
Type of Channel: Concrete side-sloped, soft bottom trapezoidal

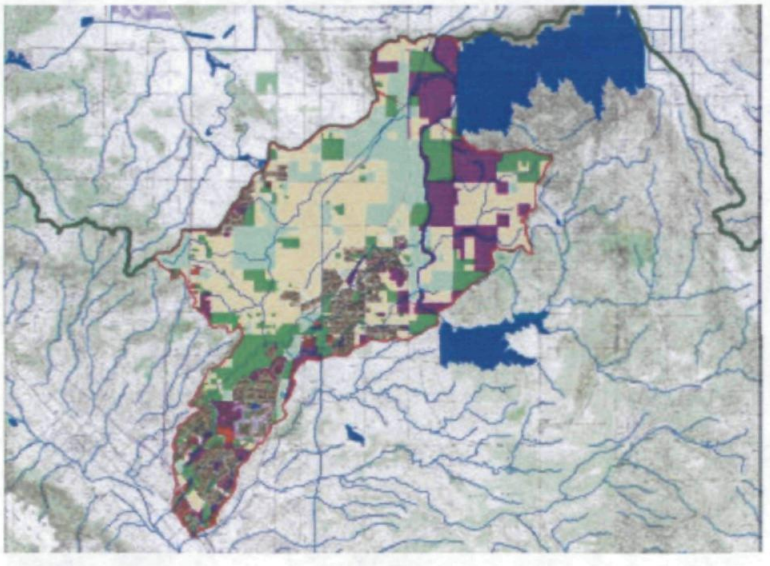
Receiving water: Murrieta Creek

Directions to the site:
Exit Winchester Road from Interstate 15. Drive west of the freeway and turn right on to Jefferson Avenue. Drive about 1 mile and turn left on to Eastman Drive. Turn right on to Adams Avenue. Drive about 250 feet and turn left on to dirt access road located south of the stream. Dry weather sampling can be performed downstream of the Adams Avenue bridge. Wet weather sampling should be conducted from the Adams Avenue Bridge using a bucket and rope. Note that it is 18 feet from the streambed to the bridge rail.

Warm Springs (397) is an outfall monitoring station. Warm Springs Channel is a concrete side-sloped, soft bottom channel tributary to Murrieta Creek. Flow in Warm Springs Channel only occurs during storm events. There may also be sediment aggradations near the confluence of Warm Springs and Murrieta Creeks.

Warm Springs Sub-Drainage Area





Total drainage area – 27,021.48 acres
Land uses by frequency:

Land Use	%
Rural Residential	32.99
Agriculture	17.78
Preserves Open Space	16.13
Exempt Public Properties	12.83
Urban Residential	10.38
Streets	7.97
Parks & Recreation	0.76
Commercial	0.69
Industrial	0.46

G-3.8 Station Name: Adobe Creek

Hydstra Reference #: 848

Location:

Latitude	33°30'48.10" N
Longitude	117°16'04.40" W
Elevation	1,749 ft.
Thomas Bros Pg:	957 D5

Classification: Reference Triad

Type of Channel: Natural Stream

Receiving water: Sandia Canyon to Santa Margarita River

Adobe Creek is a dry weather reference receiving water station located within the Santa Rosa Plateau. The Creek is tributary to De Luz Creek. During dry weather, flows at this station consist of rising groundwater.

Directions to site: From the RCFC District, drive east on the 60 Freeway and connect with the 215 Freeway southbound. Exit at Clinton Keith Road. Turn right at the end of the off ramp heading west on Clinton Keith Road. Continue past the 15 Freeway and past the Murrieta city limits. When you get to the area of the Santa Rosa Plateau Ecological Reserve, Clinton Keith Road will head at a 90° turn to the right. Before turning to the right, there is a gate to the left that enters the Plateau Reserve. There is a number combination lock on this gate – 2020. After entering past this gate, the dirt road will come to a tee. Turn right and continue the dirt road for about 1 mile, follow the signs that say "Adobe Ranch". Park at the "Ranch house".

- There is a foot trail that goes to the north of the Ranch; walk this trail past the "windmill" to the Adobe Loop Trail. Follow the sign that takes you on to the Adobe Loop Trail.

- Be careful of mountain lions!

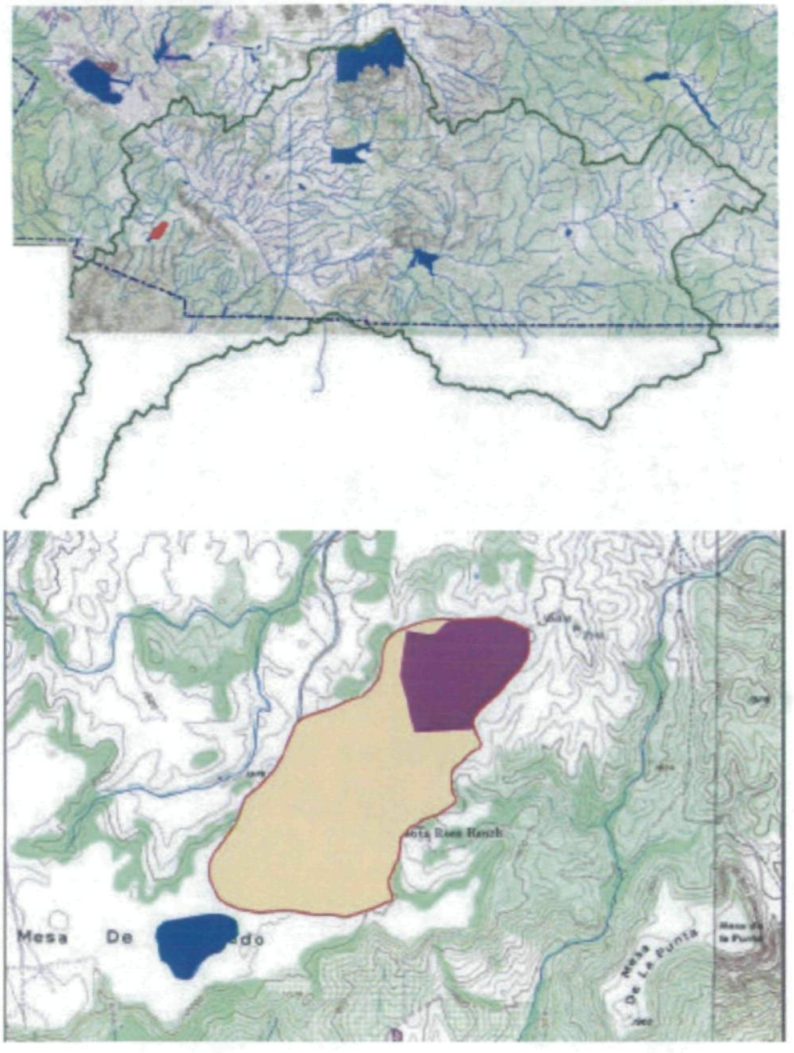
- Continue to walk along the foot trail along the Adobe Loop Trail.

This bridge crosses over the Adobe Creek.

- Walk approximately 80' past the bridge to the sampling site.

- This is the sampling location.

848 - Adobe Creek Sub-Drainage Area



Total drainage area – approximately 393.59 acres

Land uses by frequency:

Land Use	%
Rural Residential	78.21%
Exempt Public Properties	21.79%
Streets	0.00%
Agriculture	0.00%
Commercial	0.00%
Industrial	0.00%
Preserves Open Space	0.00%
Parks & Recreation	0.00%
Urban Residential	0.00%

G-4.0 PRECIPITATION WITHIN THE SANTA MARGARITA WATERSHED

Annual precipitation amounts for the four weather stations (Wildomar, Murrieta Creek, Temecula Creek, and Skinner Lake) located in the Santa Margarita watershed and the watershed averages are presented in Table G-5 below.

Table G-5 Annual Rainfall (inches)

Year Ending*	Murrieta Creek	Skinner Lake	Temecula	Wildomar	Watershed Average
1993	29.82	28.39	36.10	31.86	31.54
1994	11.42	12.96	15.60	10.97	12.74
1995	25.64	20.57	27.60	23.29	24.28
1996	8.50	8.09	9.10	8.84	8.63
1997	10.98	10.77	13.60	10.13	11.37
1998	27.61	24.92	31.90	28.41	28.21
1999	5.75	7.04	8.20	6.28	6.82
2000	9.60	7.51	10.10	8.34	8.89
2001	11.70	9.75	13.70	12.64	11.95
2002	3.80	3.05	3.80	3.06	3.43
2003	18.10	13.81	16.05	18.10	16.52
2004	9.09	6.96	7.80	8.12	7.99
2005	34.82	25.33	33.75	34.55	32.11
2006	7.17	7.70	9.84	8.36	8.27
2007	2.60	2.53	3.43	2.61	2.79

*Fiscal Year (July 1 – June 30)

Table G-6 presents the annual average rainfall and other information for the four weather stations. Note that quality control of reporting routines used to generate these reports has led to a modification of totals reported in prior reports.

Table G-7 presents the annual rainfall as a percent of normal for each of the four stations and the watershed as a whole. Percent of normal is calculated using the current year rainfall (Table G-5) and dividing it by the annual average rainfall (Table G-6). In this analysis, if the current year rainfall equals the annual average rainfall the result would be 100%. For example, in 2005 the Skinner Lake station received 25.33/12.43 = 204% or approximately 2 times the annual average rainfall. In contrast the 2007 season brought only 20% or 1/5 the annual average rain fall and is classified as a dry year.

Table G-8 presents the daily total rainfall from July 1, 2006 to June 30, 2007 for each of the four reference stations. Daily totals are for 24-hour intervals ending at 0800 of the date indicated.

Table G-6 Average Annual Precipitation at Each Station

Name	Station ID	Annual Average Rainfall (In.)	Number of Years	Location
Murrieta Cr	128	15.41	40	7S/3W-18
Skinner Lake	205	12.43	60	7S/2W-10
Temecula	217	15.73	51	8S/3W-12
Wildomar	246	14.06	98	7S/4W-2

Table G-7 Percent (%) of Normal = Current Year / Average Year

Year Ending*	Murrieta Creek	Skinner Lake	Temecula	Wildomar	Watershed	Result
1993	194%	228%	229%	227%	219%	wet
1994	74%	104%	99%	78%	88%	normal
1995	166%	165%	175%	166%	168%	wet
1996	55%	65%	58%	63%	60%	dry
1997	71%	87%	86%	72%	79%	dry
1998	179%	200%	203%	202%	196%	wet
1999	37%	57%	52%	45%	47%	dry
2000	62%	60%	52%	59%	62%	dry
2001	76%	78%	64%	90%	83%	dry
2002	25%	25%	24%	22%	24%	dry
2003	117%	111%	102%	129%	115%	normal
2004	59%	56%	50%	58%	55%	dry
2005	226%	204%	215%	246%	223%	wet
2006	47%	62%	63%	59%	57%	dry
2007	17%	20%	22%	19%	19%	very dry

*Fiscal Year = July 01 thru June 30
100 = Normal

Table G-8 Daily Rainfall for Fiscal Year 2006-2007 (inches) Santa Margarita Watershed

Day	July				August				September			
	Murrieta Creek	Skinner Lake	Temecula	Wildomar	Murrieta Creek	Skinner Lake	Temecula	Wildomar	Murrieta Creek	Skinner Lake	Temecula	Wildomar
1												
2					0.02							
3												
4												
5												
6									0.59	0.13	0.07	0.01
7										0.10		
8												
9												
10												
11												
12												
13												
14												
15												
16					0.01							
17												
18				0.01								
19												
20												
21												
22												
23	0.04		0.20									
24												
25												
26												
27												
28												
29												
30												
31												
Sum	0.04	0.00	0.20	0.01	0.03	0.00	0.00	0.00	0.59	0.23	0.07	0.01
Total	0.04	0.00	0.20	0.01	0.07	0.00	0.20	0.01	0.66	0.23	0.27	0.02

Sum represents total for each month. Total represents total cumulative rainfall for the fiscal year through the end of the month.

Table G-8 (continued) Daily Rainfall for Fiscal Year 2006-2007 (inches) Santa Margarita Watershed

Day	Oct				Nov				Dec			
	Murrieta Creek	Skinner Lake	Temecula	Wildomar	Murrieta Creek	Skinner Lake	Temecula	Wildomar	Murrieta Creek	Skinner Lake	Temecula	Wildomar
1												
2												
3												
4												
5												
6												
7	0.01											
8												
9												
10									0.29	0.56	0.38	0.43
11									0.01			0.01
12										0.01		
13												
14	0.13	0.04	0.11	0.11								
15	0.01	0.01	0.01									
16												
17									0.06	0.06	0.14	0.23
18										0.02	0.01	
19												
20												
21												
22									0.03			
23									0.04	0.02	0.02	0.05
24												
25												
26												
27									0.10	0.16	0.16	0.06
28					0.03	0.05	0.09	0.17	0.02			
29							0.01					
30												
31												
Sum	0.15	0.05	0.12	0.11	0.03	0.05	0.10	0.17	0.55	0.83	0.71	0.78
Total	0.81	0.28	0.39	0.13	0.84	0.33	0.49	0.30	1.39	1.16	1.20	1.08

Sum represents total for each month. Total represents total cumulative rainfall for the fiscal year through the end of the month.

Table G-8 (continued) Daily Rainfall for Fiscal Year 2006-2007 (inches) Santa Margarita Watershed

Day	Jan				Feb				Mar			
	Murrieta Creek	Skinner Lake	Temecula	Wildomar	Murrieta Creek	Skinner Lake	Temecula	Wildomar	Murrieta Creek	Skinner Lake	Temecula	Wildomar
1											0.01	
2												
3												
4												
5	0.01		0.12	0.05								
6	0.01											
7												
8												
9												
10												
11												
12						0.06	0.09	0.06				
13					0.01		0.02					
14						0.02						
15												
16												
17												
18												
19					0.17	0.15	0.28	0.21				
20					0.02	0.02	0.08	0.03				
21						0.01				0.02	0.06	0.05
22										0.01		0.02
23					0.15	0.22	0.33	0.24				
24					0.01							
25												
26												
27					0.06	0.20	0.25	0.17	0.02	0.03	0.06	0.02
28					0.18	0.14	0.24	0.19		0.02		
29										0.01		
30			0.01									
31	0.02	0.02	0.08	0.02								
Sum	0.04	0.02	0.21	0.07	0.60	0.82	1.29	0.90	0.02	0.09	0.13	0.09
Total	1.43	1.18	1.41	1.15	2.03	2.00	2.70	2.05	2.05	2.09	2.83	2.14

Sum represents total for each month. Total represents total cumulative rainfall for the fiscal year through the end of the month.

Table G-8 (continued) Daily Rainfall for Fiscal Year 2006-2007 (inches) Santa Margarita Watershed

Day	Apr				May				Jun			
	Murrieta Creek	Skinner Lake	Temecula	Wildomar	Murrieta Creek	Skinner Lake	Temecula	Wildomar	Murrieta Creek	Skinner Lake	Temecula	Wildomar
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16			0.01									
17												
18												
19												
20												
21	0.53	0.39	0.58	0.47								
22		0.01										
23	0.02	0.04	0.01									
24												
25												
26												
27												
28												
29												
30												
31												
Sum	0.55	0.44	0.60	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.60	2.53	3.43	2.61	2.60	2.53	3.43	2.61	2.60	2.53	3.43	2.61

Sum represents total for each month. Total represents total cumulative rainfall for the fiscal year through the end of the month.

G-5.0 FIRES WITHIN THE SANTA MARGARITA WATERSHED

Several significant fires occurred during the FY 2006-2007 reporting period. Fires impact a watershed for several years after their initial burn due to loss of ground cover and chemical changes in the soil. Naturally occurring elements that are usually retained by forest vegetation and soils can be washed away during storm events, in addition to large amounts of sediment. Daniel Cozad, former Deputy General Manager of the Santa Ana Watershed Project Authority, stated[1], "Normally, the forest filters water naturally absorbing nitrates, phosphorus and other elements. Because of the fires, more contaminants will reach stream channels.... Increasingly, rain will cause rocks and soil that usually trap particulate matter on the forest floor to fill watercourses, washing pollutants such as lead, mercury, copper, zinc and phosphorus into debris basins and groundwater."

As it takes several years for ashes and sediments displaced by forest fires to be washed down, fires that occurred in previous years could be a significant source of elevated levels of pollutants. Table G-9 presents pertinent information about the fires that occurred in 2006-2007, including the dates the fires started, their location, and the number of acres that were burned. The District continues to track fires within the County of Riverside in order to document potential future impacts to receiving water(s).

The figures on the following pages show the locations of the fires and the CMP stations that could show water quality impacts from them. Fire names shown on the maps that are not listed in Table G-9 occurred after June 30, 2007.

Fires that occurred upstream of the Skinner and Vail Reservoirs would not substantially impact downstream water quality due to limited to no discharge, although airborne deposition may still pose impacts to downstream water courses. Fires that occurred downstream of the Skinner and Vail Reservoirs can potentially impact downstream water quality by introducing fire retardant components, sediments, and/or organic debris.

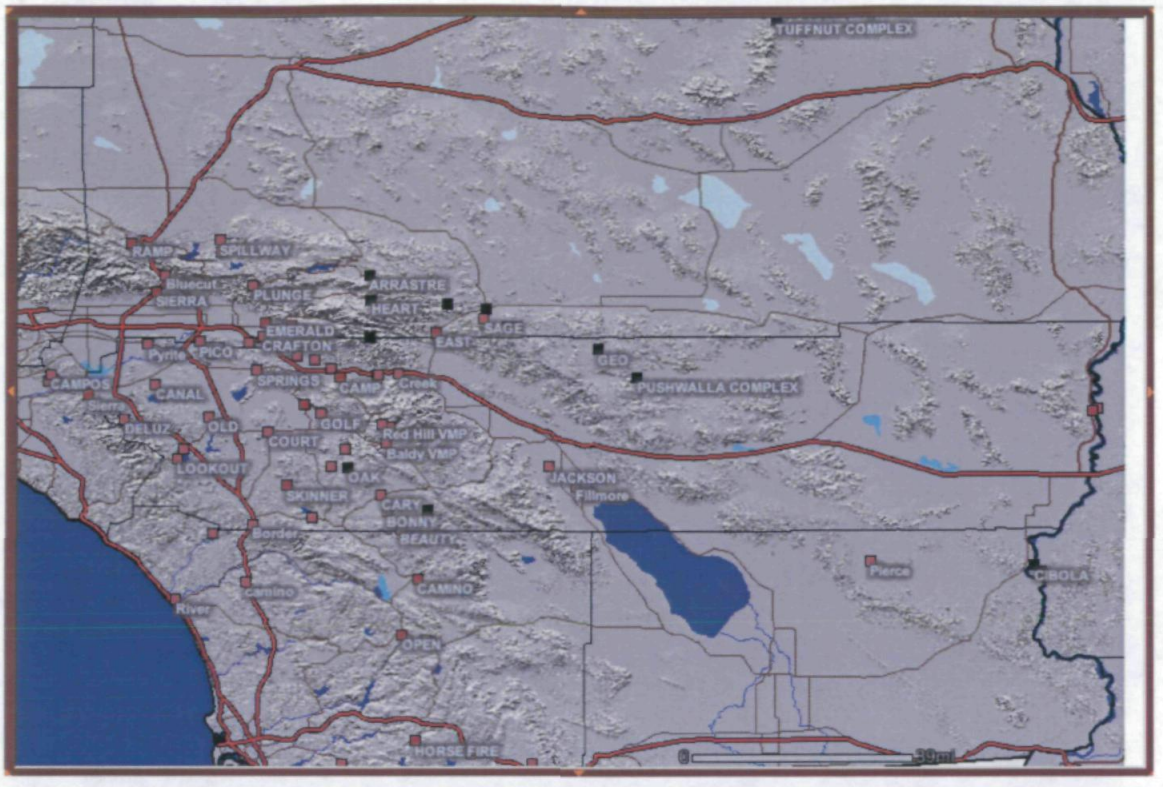
[1] "Forest Burned, Filter Broken – Water quality suffers after fires", by Daniel Cozad, California Forests, Winter 2004, pgs. 6-7.

Table G-9 Fires within the Santa Margarita Region for duration of January 2006 thru June 20072

Event_ID	Fire Name	Start Date	Acres	Location	Percent Contained	Latitude	Longitude
2006 Fires							
CA-RRU-8807	OAK	1/30/2006	4	Red mountain Rd x Oak Dr Sage	100	33.631	-116.896
CA-RRU-289252	LAKE-WALES-TEST	3/15/2006	100	Hwy 79 x Vail Lake Rd in sage	100	33.470	-116.953
CA-RRU-37873	BEAUTY	5/6/2006	5	ANZA	100	33.430	-116.682
CA-RRU-45343	SKINNER	5/30/2006	317	WARREN RD/BOREL RD LAKE SKINNER NEAR MURRIETA	100	33.571	-117.031
CA-RRU-45911	BONNY	6/1/2006	38	Bonny Ln. x Tule Peak Rd. Aguanga	100	33.489	-116.724
CA-MVU-005855	CASTLE	6/29/2006	100	OLD CASTLE RD & CHAMPAGNE	100	33.418	-117.259
CA-RRU-055217	BORDER	6/30/2006	150	South of Temecula	100	33.447	-117.136
CA-RRU-059241	CARY	7/12/2006	161	ANZA	100	33.542	-116.741
CA-RRU-62919	COYOTE COMPLEX	7/23/2006	478	ANZA CA		33.493	-116.598
CA-BDF-7258	OAK	7/23/2006	190	ANZA	100	33.627	-116.843
2007 Fires							
CA-RRU-27872	LAKE SKINNER VMP	4/10/2007	1	Lake Skinner @ Borel Road	100	33.569	-117.053
CA-RRU-033645	JOHNSON RANCH VMP	4/16/2007	73	Lake Skinner area of Temecula	100	33.572	-117.077
CA-RRU-000166	SANTA ROSA VMP	4/24/2007	445	Santa Rosa Plateau	100	33.509	-117.365
CA-RRU-66244	DAILY	7/29/2007	210	Scott Rd X Daily Rd (Menifee area north of Murrieta)	100	33.641	-117.191

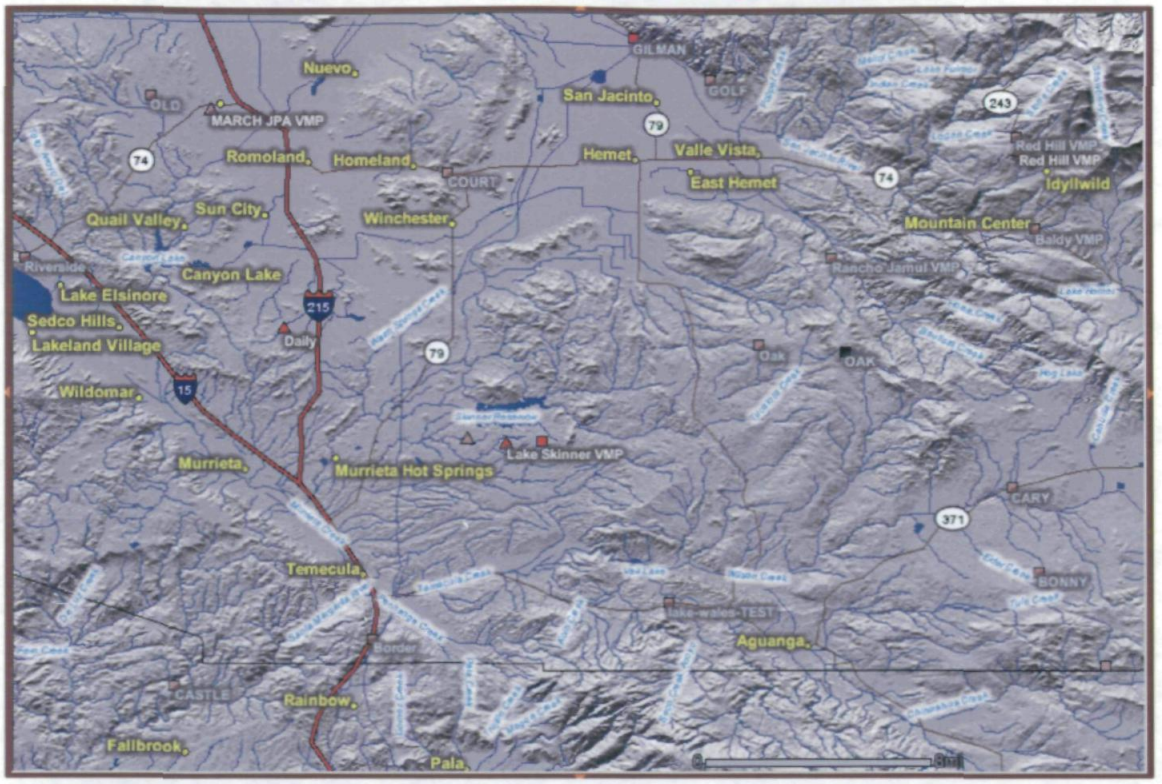
[2] Source: GeoMAC Wildfire Information (http://geomac.usgs.gov)

Summary Aerial images of fires that occurred near Riverside County - 2006■

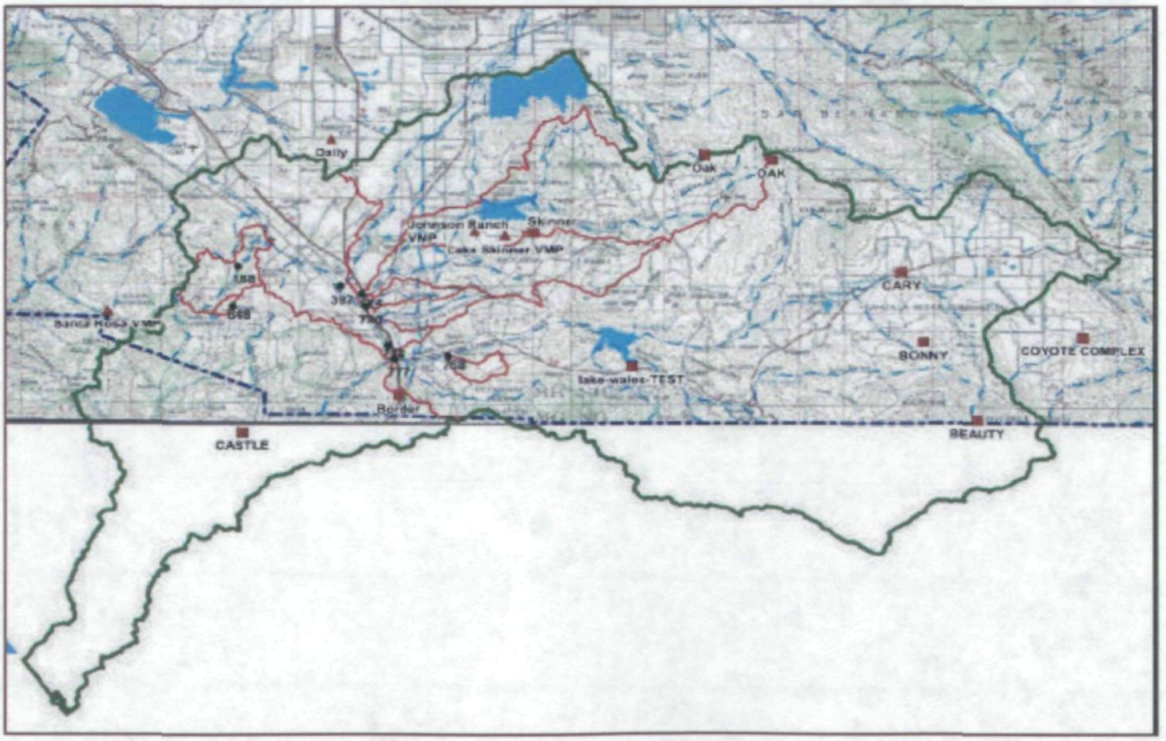


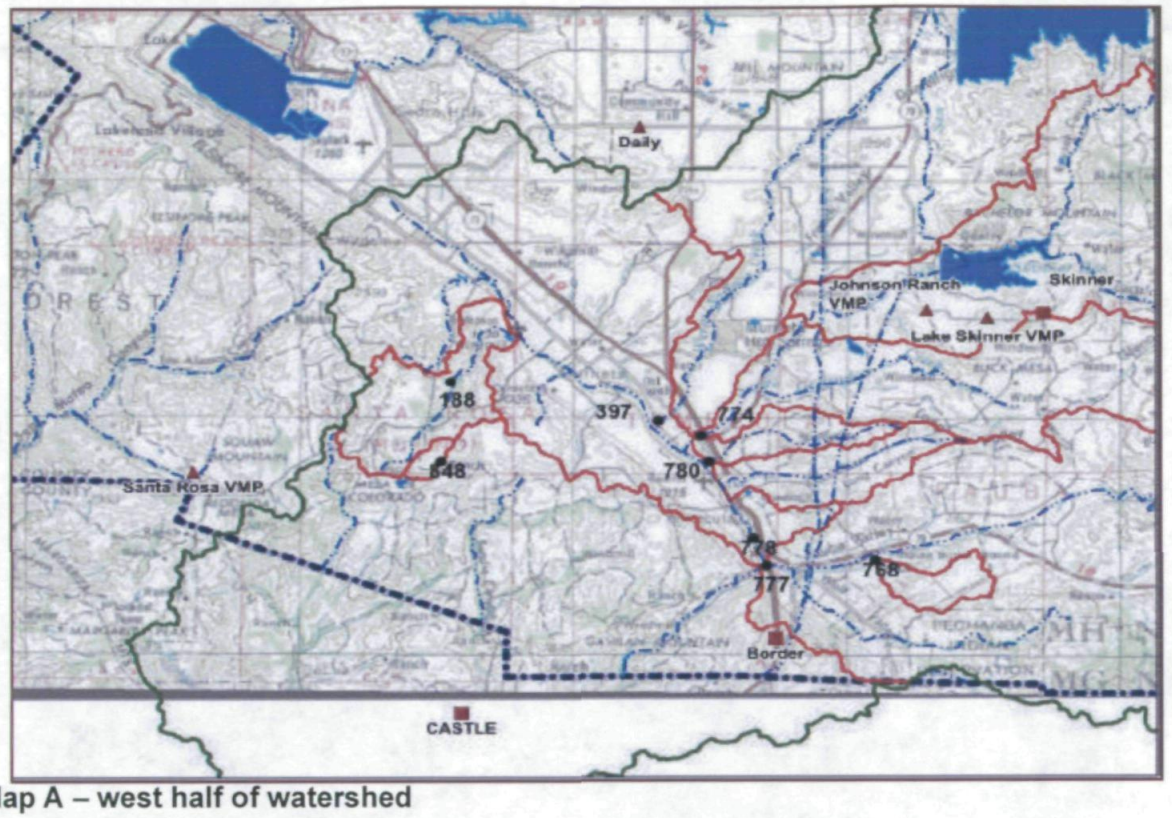
Summary Aerial images of fires that occurred near Riverside County - 2007▲

Summary Aerial images of fires that have occurred near Santa Margarita Watershed 2006■ thru June 2007▲

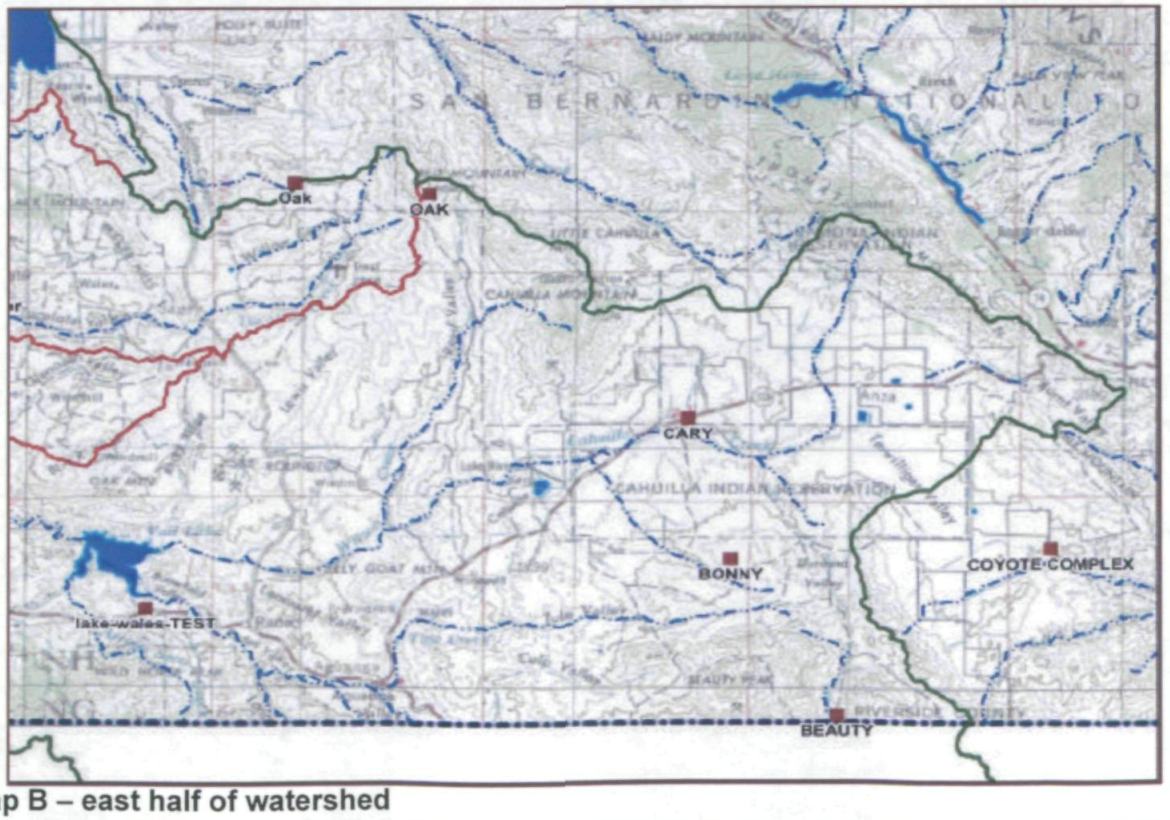


Summary Aerial Images of fires that occurred near Santa Margarita Watershed CMP Stations - 2006■ and 2007▲

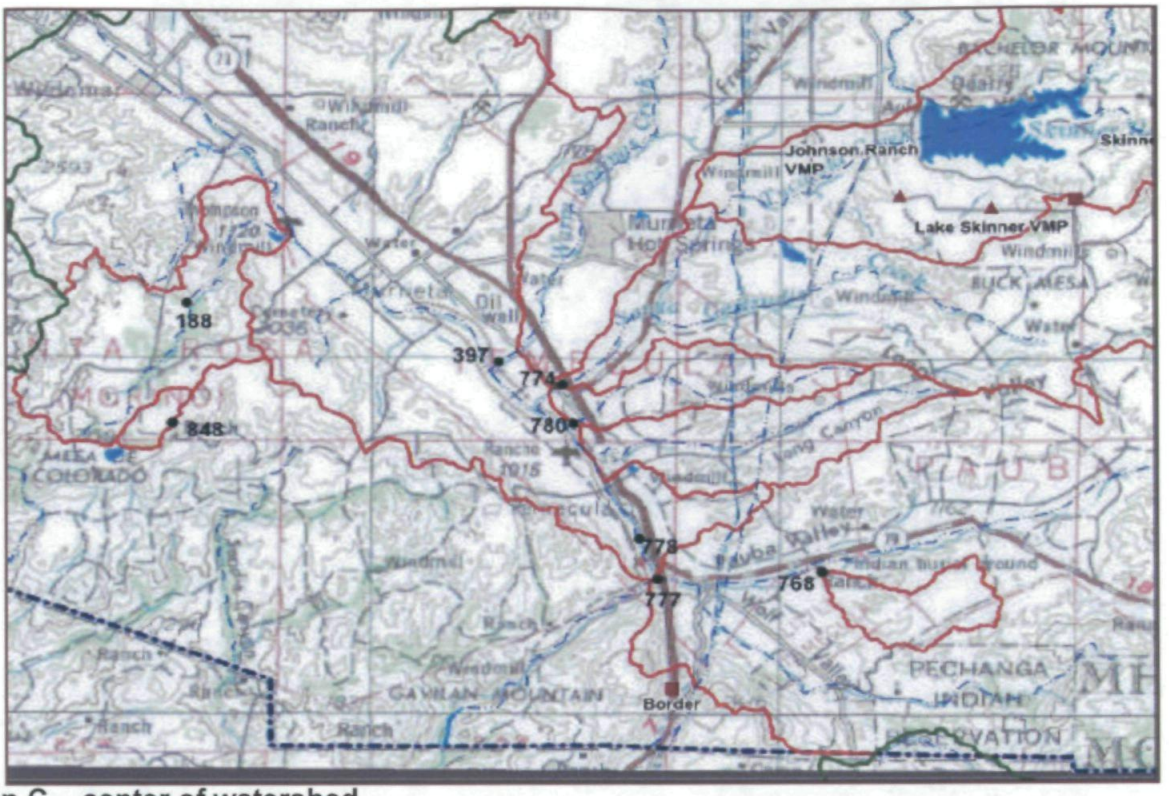




Map A – west half of watershed



Map B – east half of watershed



Map C – center of watershed

G-6.0 DESCRIPTION OF MONITORING RESULTS

G-6.1 Sampling Events and Core Monitoring

Sampling Events

The MRP requires that wet-weather samples be collected during the reporting period:

- From the first storm event that produces sufficient flow to collect a composite sample at triad stations;
- From the first storm event and an additional storm event at tributary stations; and
- From any two additional storm events at triad stations.

The MRP specifies that a monitoring year, for the purposes of collecting wet and dry weather samples, begins July 1 and ends June 30 of the following year.

The RCFCD has developed guidance on when wet weather samples should be collected. Two National Weather Service weather forecasts are monitored by the RCFCD:

- The normal 7-day National Weather Service forecast for the possibility of a rain event, and
- When within 3 days of a storm, the Quantitative Precipitation Statement (QPS), to determine how much rain is predicted to fall in 6-hour increments over the next 24-hour period and in 24-hour blocks for the following two days.

The antecedent moisture condition (AMC) of the watershed is also evaluated. The AMC is a subjective measure of runoff potential. AMC I represents low runoff potential, such as from a dry watershed. AMC II represents moderate runoff potential. AMC III represents high runoff potential, such as a watershed saturated from previous rain events. Based on the QPS and AMC, the following guidelines are used to determine when to mobilize for a wet weather event:

- AMC I and QPS of ½ inch of precipitation in 24 hours
- AMC II and QPS of $^{3}/_{8}$ inch of precipitation in 24 hours
- AMC III and QPS of ¼ inch of precipitation in 24 hours

These guidelines may be modified based on field experience.

Table G-10 summarizes the storm parameters for the dates samples were collected, including the QPS total amount of rain that fell during the storm.

Table G-10 Upper Santa Margarita Watershed Sampling Events

Start Date	24-hr QPS (in.)	Total Rain(in.)*	Event Type
12/16/2006	0.40	0.12	Wet weather – Tributaries sampled. Triads visited, not sampled.
2/22/2007	0.69	0.23	Wet weather – Triads and Tributaries visited, not sampled
04/20/2007	0.38	0.49	Wet weather – Triads and Tributaries sampled

Notes:

*Average of the four rain gauges listed in Table G-6

Table G-11 summarizes the event dates and types of samples collected for each station.

Table G-11 Sampling Event Summary at each Location

Station Type	Location	09/14/06 (dry)	10/17/06 (dry)	12/16/06 (wet)	03/20/07 (dry)	04/20/07 (wet)	05/10/07 (dry)
Triad	Adobe Creek (848)		X				X
	Cole Creek (188)						
	Temecula Creek (777)		X			X	X
	Murrieta Creek (778)		X			X	X
Tributary	Lat.A of Santa Gert. Chan (774)			X		X	
	Long Canyon (780)			X		X	
	Redhawk Channel (768)	X		X	X	X	
	Warm Springs Creek (397)			X		X	

Notes:
X indicates sample collected, blank spaces indicate no flow at the site.

Core Monitoring

Core Monitoring stations were established to generate data to answer water quality management questions established in Section II.A. of the MRP and to achieve the goals listed in Section 1 of the MRP. Several of these management questions are also reflected in the design of the CMP.

G-6.1.1 Core Monitoring – Triad Stations

Triad stations are those that were monitored for chemical parameters, toxicity, and bioassessment. The Triad stations were:

- Station No. 777: Lower Temecula Creek
- Station No. 778: Lower Murrieta Creek at the USGS Weir
- Station No. 188: Cole Creek
- Station No. 848: Adobe Creek

During 2006–2007, water quality samples were collected at Triad stations 777 and 778 during one wet weather monitoring event and two dry weather events. Stations 188 and 848 were reference stations that were selected by the RCFCD to be representative of natural, undeveloped conditions. Due to their accessibility and flow, the RCFCD selected the Cole Creek station (188) for wet weather sampling and the Adobe Creek station (848) for dry weather sampling. During 2006-2007, two samples were collected during dry weather events at Adobe Creek. An attempt was made to collect a sample from Cole Creek during wet weather, but no sample was collected due to insufficient flow.

During the first storm event of the reporting period, samples collected at the Triad stations were analyzed for the complete list of priority pollutants (40 CFR 122, Appendix D). For the remaining wet and dry weather monitoring events, samples were analyzed for the parameters listed in Table G-1. The detected analytical results are provided in Table G-12.

G-6.1.2 Core Monitoring – Tributary Stations

Tributary stations were established to generate data to identify specific sources of pollution. The Tributary stations were selected to be representative of urban/urbanizing drainage areas and included:

- Station No. 774: Lateral A of Santa Gertrudis Channel near Temecula
- Station No. 780: Long Canyon Creek, near the confluence with Murrieta Creek
- Station No. 768: Redhawk Channel, near the confluence with Temecula Creek
- Station No. 397: Warm Springs Creek near Murrieta

Four dry weather and two wet-weather sampling events were monitored at the Tributary stations during the 2006-2007 reporting period. Wet weather samples were analyzed for the Constituents of Concern in Table G-2. Dry weather samples were collected and analyzed as described in the Illicit Connection/Illicit Discharge (IC/ID) discussion in Section 7.3.5. The detected analytical results are provided in Table G-12.

G-6.1.3 Analytical Laboratories

Wet and dry weather samples were collected by the District under Chain-of-Custody procedures and were submitted to E.S. Babcock & Sons (an analytical laboratory certified by the National Environmental Laboratory Accreditation Conference, Certificate No. 0201CA, Environmental Laboratory Certification No. 1156) for analysis. Babcock & Sons utilized the standard methods called for in the CMP. Toxicity and Bioassessment samples were sub-contracted by Babcock and Sons to Aquatic Bioassay & Consulting Laboratories, Inc., and some toxicity samples were sub-contracted to Nautilus Environmental. Diazinon and Chlorpyrifos analyses were performed by Aqua-Science Environmental Toxicology Consultants, Davis, CA.

G-6.2 Data and Data Products

G-6.2.1 Actual Data

The detected analytical results for Triad and Tributary stations are provided in Table G-12.

Chemical data are summarized in graphs contained in Attachment A (electronic version only). Water column toxicity testing was conducted during each wet weather sampling event at each of the Triad stations during the reporting period. The results of the water column toxicity testing are discussed for each Triad station in Section G-6.2.4 and are presented in Table G-17 and Table G-18. Bioassessment monitoring was conducted at the Triad stations bi-annually. Bioassessment data are summarized in Section G-6.2.5, Table G-19.

Table G-12: Detected Results

Triad Station - Adobe Creek (848)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Bacteria									
Total Coliforms			MPN/100 mL						70
Conventionals									
Dissolved Oxygen	< 5		mg/L		19.45				
Eh					169				
O2%Sat					19.5				
pH - field	6.5<pH<8.5		pH Units		7.9				7.5
pH - lab	6.5<pH<8.5		pH Units		8				8
Specific Conductance			umhos/cm		440				426
Temperature C - field			degrees C		15.4				19
Total Dissolved Solids			mg/L		260				
Total Hardness			mg/L		180				170
Total Suspended Solids					< 5				10
Turbidity	20		NTU		0.92				4.3
Turbidity, Field	20		NTU		**86.8**				
Nutrients									
Kjeldahl Nitrogen			mg/L		0.16				0.36
Nitrate as N	10		mg/L		0.5				0.29
Total Phosphorus	0.1		mg/L		**0.45**				0.08
Metals									
Calcium			mg/L		44				41

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

0001404

Table G-12: Detected Results
Triad Station - Adobe Creek (848)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Metals									
Copper			mg/L		0.0008				0.0007
Magnesium			mg/L		18				16
Nickel	0.1		mg/L		0.0019				< 0.001
Total Chromium			mg/L		0.0019				0.0016
Zinc			mg/L		< 0.001				0.0011
Pesticides									
Chlorpyrifos (1178)		0.041	ug/L		0.02				0.0094
Diazinon (ELISA)			ug/L		0.0244				0.0096

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

0001405

Table G-12: Detected Results

Triad Station - Murrieta Creek (778)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Bacteria									
Escherichia Coliforms			MPN/100 mL		20				500
Fecal Coliforms	2000		MPN/100 mL		20				500
Total Coliforms			MPN/100 mL		1100				1700
Conventionals									
Dissolved Oxygen	< 5		mg/L		19.99				
Eh					95				
O2%Sat					19.99				
pH - field	**6.5<pH<8.5**		pH Units		**8.7**			8.08	8.1
pH - lab	**6.5<pH<8.5**		pH Units		8				8.5
Specific Conductance			umhos/cm		1200			214	1080
Temperature C - field			degrees C		19.1			12.5	26.5
Total Dissolved Solids			mg/L		700				
Total Hardness			mg/L		300				210
Turbidity	20		NTU		0.91				4.2
Turbidity, Field	20		NTU		15.7				
Nutrients									
Kjeldahl Nitrogen			mg/L		0.33				0.51
Total Phosphorus	0.1		mg/L		< 0.05				0.06
Metals									
Antimony	0.006		mg/L					0.0013	

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

0001406

Table G-12: Detected Results

Triad Station - Murrieta Creek (778)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Metals									
Arsenic	0.05		mg/L					0.0025	
Beryllium	0.004		mg/L					0.0008	
Calcium			mg/L		71				45
Copper			mg/L		0.0028			0.036	0.0035
Hexavalent Chromium			mg/L		< 0.025			0.0024	< 0.01
Magnesium			mg/L		29				24
Nickel	0.1		mg/L		0.003			0.012	0.0018
Total Chromium			mg/L		0.0023			0.023	0.0027
Zinc			mg/L		< 0.001			0.14	0.0054
Pesticides									
Chlorpyrifos (1178)		0.041	ug/L		0.0201				0.0118
Diazinon (ELISA)			ug/L		0.0182				0.0138
Surfactants									
MBAS	0.5		mg/L		< 0.05				0.06

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

55

00014407

Table G-12: Detected Results

Triad Station - Temecula Creek (777)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Bacteria									
Escherichia Coliforms			MPN/100 mL		1300				230
Fecal Coliforms	2000		MPN/100 mL		**2400**				230
Total Coliforms			MPN/100 mL		16000				5000
Conventionals									
Dissolved Oxygen	< 5		mg/L		19.99				
Eh					61				
O2%Sat					19.99				
pH - field	**6.5<pH<8.5**		pH Units		7.8			7.99	7.1
pH - lab	**6.5<pH<8.5**		pH Units		7.4				7.7
Specific Conductance			umhos/cm		1700			186	1649
Temperature C - field			degrees C		17.8			13.3	18.3
Total Dissolved Solids			mg/L		1000				
Total Hardness			mg/L		610				540
Turbidity	20		NTU		1.2				0.54
Turbidity, Field	20		NTU		17.9				
Nutrients									
Kjeldahl Nitrogen			mg/L		0.16				0.17
Nitrate as N	10		mg/L		1.5				0.7
Total Phosphorus	0.1		mg/L		0.1				0.1

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

56

0001408

Table G-12: Detected Results

Triad Station - Temecula Creek (777)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Metals									
Antimony	0.006		mg/L					0.0012	
Arsenic	0.05		mg/L					0.0027	
Beryllium	0.004		mg/L					0.0006	
Cadmium	0.005		mg/L		< 0.0003			0.0004	< 0.0003
Calcium			mg/L		180				160
Copper			mg/L		0.0038			0.046	0.0024
Lead			mg/L		< 0.0005			0.014	< 0.0005
Magnesium			mg/L		40				35
Nickel	0.1		mg/L		0.0074			0.013	0.0021
Total Chromium			mg/L		0.0035			0.017	0.0027
Zinc			mg/L		0.0017			0.15	0.0014
Pesticides									
Chlorpyrifos (1178)		0.041	ug/L		0.0206				0.0087
Diazinon (ELISA)			ug/L		0.0169				0.0075

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

57

00014409

Table G-12: Detected Results

Tributary Station - Long Canyon (780)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Bacteria									
Escherichia Coliforms			MPN/100 mL					17000	
Fecal Coliforms	2000		MPN/100 mL					**17000**	
Total Coliforms			MPN/100 mL					160000	
Conventionals									
Color	20		units			**80**		**40**	
Dissolved Oxygen	< 5		mg/L	19.9			19.62		
Eh							74		
Oil & Grease (HEM)			mg/L			5.6		< 5.1	
pH - field	**6.5<pH<8.5**		pH Units	**8.6**		7.7	8.4	7.61	
pH - lab	**6.5<pH<8.5**		pH Units			7.6		7.6	
Specific Conductance			umhos/cm	1000		242	1200	103	
TDS (Residue)	750		mg/L			210		94	
Temperature C - field			degrees C	20.3		10.8	15.7	13.6	
Total Dissolved Solids			mg/L	700			800		
Total Hardness			mg/L			81		31	
Turbidity	20		NTU			**120**		**54**	
Turbidity, Field	20		NTU	**32.1**			**149**		
Nutrients									
Ammonia-Nitrogen			mg/L			1.1		0.4	
Kjeldahl Nitrogen			mg/L			4.3		3.7	

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

Table G-12: Detected Results

Tributary Station - Long Canyon (780)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Nutrients									
Nitrate as N	10		mg/L			1.2		0.52	
Total Nitrogen	1		mg/L			**5.5**		**4.2**	
Total Phosphorus	0.1		mg/L			**0.81**		**0.44**	
Metals									
Calcium			mg/L			21		8.6	
Copper			mg/L			0.045		0.017	
Copper, Diss		0.009	ug/L			9.6 (11)		**7.3 (4)**	
Iron	0.3		mg/L			**8.7**		**3.7**	
Magnesium			mg/L			6.8		< 2.5	
Manganese	0.05		mg/L			**0.16**		**0.068**	
Pesticides									
Chlorpyrifos (1178)		0.041	ug/L			**0.1007**		0.0409	
Diazinon (ELISA)			ug/L			0.1972		0.2237	
Surfactants									
MBAS	0.5		mg/L			**0.97**		0.26	

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

59

0001411

Table G-12: Detected Results

Tributary Station - Redhawk Channel (768)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Bacteria									
Escherichia Coliforms			MPN/100 mL	300			170	5000	
Fecal Coliforms	2000		MPN/100 mL	**3000**			170	**8000**	
Total Coliforms			MPN/100 mL	50000			2800	160000	
Conventionals									
Color	20		units	**60**		**40**	**45**	**60**	
Dissolved Oxygen	< 5		mg/L	19.99			18.15		
Eh				82			49		
pH - field	**6.5<pH<8.5**		pH Units	**9.4**		7.9	**9.8**	7.96	
pH - lab	**6.5<pH<8.5**		pH Units	**9**		8.1	**9**	7.8	
Specific Conductance			umhos/cm	1200		337	1200	238	
TDS (Residue)	750		mg/L	**770**		220	**800**	200	
Temperature C - field			degrees C	25.2		10.1	17.2	14.1	
Total Dissolved Solids			mg/L	800			700		
Total Hardness			mg/L	260		110	240	78	
Turbidity	20		NTU	3.5		**220**	7.9	**130**	
Turbidity, Field	20		NTU	18			**51.7**		
Nutrients									
Ammonia-Nitrogen			mg/L	< 0.1		0.57	< 0.1	0.41	
Kjeldahl Nitrogen			mg/L	1.2		3.1	1.4	3	
Nitrate as N	10		mg/L	0.47		0.9	0.79	0.68	

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

0001412

Table G-12: Detected Results

Tributary Station - Redhawk Channel (768)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Nutrients									
Total Nitrogen	1		mg/L	**1.7**		**4**	**2.2**	**3.7**	
Total Phosphorus	0.1		mg/L	**0.65**		**0.94**	**0.6**	**0.92**	
Metals									
Calcium			mg/L	70		23	64	19	
Copper			mg/L	0.0089		0.023	0.011	0.017	
Copper, Diss		0.009	ug/L	8.6 (33)		4.3 (15)	10 (31)	4.3 (11)	
Iron	0.3		mg/L	**0.33**		**28**	0.07	**16**	
Magnesium			mg/L	22		13	19	7.5	
Manganese	0.05		mg/L	0.038		**0.43**	0.038	**0.24**	
Pesticides									
Chlorpyrifos (1178)		0.041	ug/L	0.0216		**0.0502**	0.0212	0.0328	
Diazinon (ELISA)			ug/L	0.0184		0.1215	0.0203	0.2489	
Surfactants									
MBAS	0.5		mg/L	0.05		< 0.25	0.06	0.15	

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

0001413

Table G-12: Detected Results

Tributary Station - Santa Gertrudis Creek (774)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Bacteria									
Escherichia Coliforms			MPN/100 mL					5000	
Fecal Coliforms	2000		MPN/100 mL					**11000**	
Total Coliforms			MPN/100 mL					160000	
Conventionals									
Color	20		units			**60**		**50**	
Dissolved Oxygen	< 5		mg/L	19.99					
Eh				87					
pH - field	**6.5<pH<8.5**		pH Units	**8.7**		8.2		8.4	
pH - lab	**6.5<pH<8.5**		pH Units			8.2		8.3	
Specific Conductance			umhos/cm	1300		362		253	
TDS (Residue)	750		mg/L			260		220	
Temperature C - field			degrees C	20.3		11.1		13.4	
Total Dissolved Solids			mg/L	800					
Total Hardness			mg/L			120		77	
Turbidity	20		NTU			**78**		15	
Turbidity, Field	20		NTU	17.5					
Nutrients									
Ammonia-Nitrogen			mg/L			0.43		0.38	
Kjeldahl Nitrogen			mg/L			2.9		1.7	
Nitrate as N	10		mg/L			0.77		0.56	

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

Table G-12: Detected Results

Tributary Station - Santa Gertrudis Creek (774)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Nutrients									
Nitrite as N	1		mg/L			0.11		< 0.1	
Total Nitrogen	1		mg/L			**3.8**		**2.3**	
Total Phosphorus	0.1		mg/L			**0.73**		**0.58**	
Metals									
Calcium			mg/L			32		21	
Copper			mg/L			0.015		0.011	
Copper, Diss		0.009	ug/L			4.7 (16)		6 (11)	
Iron	0.3		mg/L			**5.9**		**3.4**	
Lead, Diss		0.0025	mg/L			< 0.5 (0.0815)		**0.6 (0.0463)**	
Magnesium			mg/L			8.6		5.9	
Manganese	0.05		mg/L			**0.15**		**0.067**	
Pesticides									
Chlorpyrifos (1178)		0.041	ug/L			**0.079**		0.0329	
Diazinon (ELISA)			ug/L			0.0745		0.1136	
Surfactants									
MBAS	0.5		mg/L			0.35		0.23	

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

0001415

Table G-12: Detected Results

Tributary Station - Warm Springs Creek (397)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Bacteria									
Escherichia Coliforms			MPN/100 mL					3000	
Fecal Coliforms	2000		MPN/100 mL					**8000**	
Total Coliforms			MPN/100 mL					160000	
Conventionals									
Color	20		units			**50**		**35**	
pH - field	6.5<pH<8.5		pH Units			8.05		8.01	
pH - lab	6.5<pH<8.5		pH Units			7.9		8.1	
Specific Conductance			umhos/cm			1007		314	
TDS (Residue)	750		mg/L			620		280	
Temperature C - field			degrees C			10		13.2	
Total Hardness			mg/L			230		95	
Turbidity	20		NTU			20		**140**	
Nutrients									
Ammonia-Nitrogen			mg/L			0.44		0.26	
Kjeldahl Nitrogen			mg/L			1.6		2.1	
Nitrate as N	10		mg/L			0.77		0.7	
Total Nitrogen	1		mg/L			**2.4**		**2.8**	
Total Phosphorus	0.1		mg/L			**0.31**		**0.68**	
Metals									
Calcium			mg/L			58		24	

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

0001416

Table G-12: Detected Results

Tributary Station - Warm Springs Creek (397)

Constituent	BPO	CTR*	Units	Dry 9/14/2006	Dry 10/17/2006	Wet 12/16/2006	Dry 3/20/2007	Wet 4/20/2007	Dry 5/10/2007
Metals									
Copper			mg/L			0.014		0.015	
Copper, Diss		0.009	ug/L			12 (29)		6 (13)	
Iron	0.3		mg/L			**1.3**		**11**	
Magnesium			mg/L			19		8.3	
Manganese	0.05		mg/L			**0.083**		**0.17**	
Pesticides									
Chlorpyrifos (1178)		0.041	ug/L			**0.0631**		0.0266	
Diazinon (ELISA)			ug/L			0.0655		0.0747	
Surfactants									
MBAS	0.5		mg/L			0.43		0.12	

Notes:

* CTR Freshwater Contiunous Concentration Hardness dependent values from matrix at 40 CFR 131.38(b)(1) calculated using hardness of 100 mg/L. Numbers in parentheses, adjacent to individual results, are CTR objectives for dissolved metals adjusted for the hardness of the sample.

Bold Indicates the result exceeds either the BPO or CTR objective.

Indicates sample was not analyzed or collected for this constituent.

< Sample was not detected above the reporting limit following the "<" symbol.

0001417

G-6.2.2 Identification of Parameters Detected Above BPO and CTR Objectives

Parameters detected above BPO and CTR objectives are indicated by bold-faced font in Table G-12. Table G-13 presents the percentage of each parameter that was detected above a Basin Plan Objective (BPO) and Table G-14 presents the percentage of each parameter that was detected above a California Toxics Rule Criterion Continuous Concentration (CTR). The CTR values for the dissolved metals were adjusted for hardness according to the CTR. The corresponding figures that display these results are provided as graphs in Attachment A (electronic version only).

It should be noted that the Policy of Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SWRCB Res. No. 2000-015) states:

> *"This Policy does not apply to regulation of storm water discharges. The SWRCB has adopted precedential decisions addressing regulation of municipal stormwater discharges in Orders WQ 91-03, 91-04, 96-13, 98-01, and 99-05".*

Data comparison with CTR limits in this report is provided for information purposes only.

There were a number of instances where the analytical result was reported as non-detect, or less than the laboratory's established Reporting Detection Limit (RDL). For some of the results, the RDL was greater than the CTR. Therefore, some samples with results listed as non-detects may actually have concentrations that exceed the CTR or BPO. The District will continue to work with the analytical laboratory to achieve an RDL that is less than the CTR or BPO, as appropriate.

Table G-13 Water Quality Parameters Measured Above Basin Plan Objectives (Exceedances : Samples)

07/01/2006 through 06/30/2007

Analyte Class	Parameter	Adobe Creek (848)	Lower Murrieta Creek (778)	Lower Temecula Creek (777)	Long Canyon Creek (780)	Redhawk Channel (768)	Santa Gertrudis Creek (774)	Warm Springs Creek (397)
Bacteria	Fecal Coliforms	0 : 1	0 : 2	1 : 2	1 : 1	2 : 3	1 : 1	1 : 1
Conventionals	Color	Not Sampled	Not Sampled	Not Sampled	2 : 2	4 : 4	2 : 2	2 : 2
	pH - field	0 : 2	1 : 3	0 : 3	1 : 4	2 : 4	1 : 3	0 : 2
	pH - lab	0 : 2	0 : 2	0 : 2	0 : 2	2 : 4	0 : 2	0 : 2
	TDS (Residue)	Not Sampled	Not Sampled	Not Sampled	0 : 2	2 : 4	0 : 2	0 : 2
	Turbidity	0 : 2	0 : 2	0 : 2	2 : 2	2 : 4	1 : 2	1 : 2
	Turbidity, Field	1 : 1	0 : 1	0 : 1	2 : 2	1 : 2	0 : 1	Not Sampled
Nutrients	Total Nitrogen	Not Sampled	Not Sampled	Not Sampled	2 : 2	4 : 4	2 : 2	2 : 2
	Total Phosphorus	1 : 2	0 : 2	0 : 2	2 : 2	4 : 4	2 : 2	2 : 2
Metals	Iron	Not Sampled	Not Sampled	Not Sampled	2 : 2	3 : 4	2 : 2	2 : 2
	Manganese	Not Sampled	Not Sampled	Not Sampled	2 : 2	2 : 4	2 : 2	2 : 2
Surfactants	MBAS	0 : 2	0 : 2	0 : 2	1 : 2	0 : 4	0 : 2	0 : 2

67

0001419

Table G-14 Water Quality Parameters Measured Above California Toxics Rule Plan Criterion Continuous Concentration (Exceedances : Samples)

07/01/2005 through 06/30/2006

Analyte Class	Parameter	Warm Springs Creek (397)	Redhawk Channel (768)	Santa Gertrudis Creek (774)	Lower Temecula Creek (777)	Lower Murrieta Creek (778)	Long Canyon Creek (780)	Adobe Creek (848)
Metals	Copper, Diss	Not Sampled	Not Sampled	Not Sampled	1 : 2	0 : 4	0 : 2	0 : 2
	Lead, Diss	Not Sampled	Not Sampled	Not Sampled	0 : 2	0 : 4	1 : 2	0 : 2
Pesticides	Chlorpyrifos (1178)	0 : 2	0 : 2	0 : 2	1 : 2	1 : 4	1 : 2	1 : 2

0001420

G-6.2.3 Estimated Mass Loadings

Estimated instantaneous mass loads were calculated for detected parameters at the Triad stations. The load was calculated by multiplying the concentration for the constituent by the flow rate. The flow rates for Adobe Creek and Temecula Creek were estimated in the field. The flow rate for Murrieta Creek is the average flow for the day calculated from USGS 15 minute interval flow data. The estimated instantaneous mass load results are displayed in Table G-15.

Annual mass loadings (lbs) were estimated for Adobe Creek, Temecula Creek and Murrieta Creek. The estimated annual mass loadings (lbs) are displayed in Table G-16. The annual mass loading at each Triad station was calculated by multiplying the average of the detected concentrations by the total annual flow volume. The annual flow volume, in cubic feet, was calculated based on the hydrology data available. The annual flow volume at Murrieta Creek was calculated using annual USGS 15-minute-interval flow data. The total flow volume at Adobe Creek for 2007 was estimated based on the assumption that total volume is proportional to the rainfall amount. The total annual rainfall for 2005 was compared to the total annual rainfall for 2007 to determine a ratio. This ratio was applied to the total flow volume for 2005 for Adobe Creek to estimate a total flow volume for 2007. The annual flow volume of Temecula creek was estimated based on the assumption that the flow of the Santa Margarita River is equal to the flow of Temecula Creek, Murrieta Creek, and discharge from the Rancho California Water District (RCWD) discharge. The USGS Gage below the confluence of Temecula and Murrieta Creeks is downstream of the RCWD discharge. Total annual flow for the Santa Margarita River was calculated using USGS daily average flow data. Total annual flow for the RCWD was calculated from the daily total flow provided by RCWD. The total annual flow of Temecula Creek was calculated by subtracting the flow volumes of Murrieta Creek and the Rancho California pipe from the flow volume of Santa Margarita.

Annual mass loadings were not calculated for Cole Creek because Cole Creek was not sampled during this monitoring season.

Table G-15 Instantaneous Mass Loading

	Station Number:	848		777			778		
	Station Name:	Adobe Creek		Temecula Creek below Pala Rd			Murrieta Creek at Temecula		
	Sample Date:	10/17/2007	5/10/2007	10/172007	4/20/2007	5/10/2007	10/17/2007	4/20/2007	5/10/2007
	Flow (cfs):	0.1	0.06	0.15	40	0.6	2.9	16	0.05
Analyte Class	Analyte	Load (lbs/day)	Load (lbs/day)	Load (lbs/day)	Load (lbs/day)	Load (lbs/day)	Load (lbs/day)	Load (lbs/day)	Load (lbs/day)
Conventionals	Total Dissolved Solids	70.0		808.2			10937.6		
Nutrients	Nitrogen, nitrate (N)	0.1	0.0	1.2		2.3			
	Nitrogen, total Kjeldahl (N)	0.0	0.0	0.1		0.5	5.2		0.1
	Phosphorus, total (P)	0.1	0.0	0.1	3.0	0.3			0.0
Metals	Antimony				0.3			0.1	
	Arsenic				0.6			0.2	
	Beryllium				0.1			0.1	
	Cadmium				0.1			0.03	
	Calcium	11.9	1.1	145.5	3.7	517.2	0.1		12.1
	Chromium, all valences	0.0	0.0	0.0	9.9	0.0	0.0	2.0	0.0
	Hexavalent Chromium				0.2			0.2	
	Copper	0.0	0.0	0.0		0.0	0.0	3.1	0.0
	Lead				3.0			0.9	
	Magnesium	4.8	0.4	32.3		113.1			
	Nickel	0.0		0.0	2.8	0.0	0.0	1.0	0.0
	Zinc		0.0	0.0	3.2	0.0		12.1	0.0
Pesticides	Chlorpyrifos (ELISA)	0.0	0.0	0.0		0.0	0.0		0.0
	Diazinon	0.0	0.0	0.0		0.0	0.0		0.0
SVOCs	Pyrene				12.9				

0001422

Table G-16 Annual Mass Loading

	Station Number/ Name:	848 / Adobe Creek		777 / Temecula Creek below Pala Rd		778 / Murrieta Creek at Temecula	
	Volume(ac-ft/yr):	15.09		172.250		425.140	
Analyte Class	Analyte	Average Concentration (mg/l)	Load (lbs)	Average Concentration (mg/l)	Load (lbs)	Average Concentration (mg/l)	Load (lbs)
Conventionals	Total Dissolved Solids	240	28,680	200	93580	688	794,600
Nutrients	Nitrogen, nitrate (N)	0.5	58	0.9	400		
	Nitrogen, total Kjeldahl (N)	0.2	22	0.2	80	0.3	1
	Phosphorus, total (P)	0.4	51	0.1	50	0.001	1
Metals	Antimony			0.001	1	0.001	2
	Arsenic			0.003	1	0.003	3
	Beryllium			0.001	0	0.001	1
	Cadmium			0.000	0	0.000	0
	Calcium	44	5,310	160	76,700	71	81,500
	Chromium, all valences	0.002	0	0.02	8	0.02	26
	Hexavalent Chromium			0.001	1	0.002	3
	Copper	0.001	0	0.05	20	0.04	40
	Lead			0	0	0.01	10
	Magnesium	18	2,160	36	16,800	28	33,400
	Nickel	0.002	0	0.01	6	0.01	13
	Zinc	0.000	0	0.02	7	0.10	160
Pesticides	Chlorpyrifos (ELISA)	0.2	0	0.01	0	0.02	0
	Diazinon	0.02	0	0.01	0	0.02	0
Surfactants	MBAS					0.001	0
SVOCs	Pyrene			0.06	28		

G-6.2.4 Toxicity Testing Results

G-6.2.4.1 Toxicity

Monitoring for toxicity was initiated at the Triad stations in 2005 – 2006, making this the second full season of toxicity monitoring. Toxicity is expressed in toxic units (TU) for both acute and chronic toxicity. In this program, the organisms used to measure acute toxicity were the amphipod *Hyalella azteca* and the water flea *Ceriodaphnia dubia*. Survival is the acute endpoint used for both of these test organisms. Acute toxicity units are calculated as follows:

$$TU_a = 100/LC_{50}, \text{ where}$$

The LC_{50} is the concentration of sample expected to cause an adverse effect to 50 percent of the test organisms. The LC_{50} is extrapolated from the results of the toxicity test and cannot be calculated if no toxicity is observed. Therefore, TU_a values range from a lower limit of 0.0 (in the case of no mortality) to values much greater than 1.0 (in the case of very high mortality). If there is less than 50 percent mortality in the undiluted sample (i.e. LC_{50} >100 percent sample), acute toxicity units are calculated as follows:

$$TU_a = \log (100 - \%\text{survival in undiluted sample}) / 1.7$$

The organism used to measure chronic toxicity in samples collected from the Triad stations was the freshwater green algae *Pseudokirchneriella subcapitata* (formerly known as *Selenastrum capricornutum*). Growth inhibition is the endpoint used to measure chronic toxicity. Toxicity is determined using a NOEC, or No Observed Effect Concentration value. The NOEC is the highest concentration tested where no toxicity is observed. The NOEC is used to calculate the TU_c value, which can range from a lower limit of 1.0 (in the case of no toxicity) to values much greater than 1.0 (in the case of a very high toxicity). Chronic toxicity units are calculated as follows:

$$TU_c = 100 / NOEC$$

No toxicity was observed in either the chronic *Pseudokirchneriella* test or the acute *Ceriodaphnia* test for any sample tested. However, statistically reduced survival in at minimum the highest two concentrations tested for both Lower Temecula Creek and Lower Murrieta Creek samples indicate a toxic response with the acute *Hyalella* test. No sample was collected from the reference site, Cole Creek, during this season of testing. A summary of toxicity testing results is presented in Table G-17. A summary of the raw data and statistical results for the toxicity testing is presented in Table G-18.

Table G-17 Toxicity Testing Results in Toxicity Units

Sample Sites and Collection Dates	Acute Toxicity *Hyalella*	Acute Toxicity *Ceriodaphnia*	Chronic Toxicity *Selenastrum*
L. Murrieta Creek, 4/20/07	2.95	0.41	1.00
L. Temecula Creek, 4/20/07	6.32	0.00	1.00

Table G-18 Summary of Raw Data and Statistical Results for Toxicity Testing

		Acute Toxicity *Hyalella*		Acute Toxicity *Ceriodaphnia*		Chronic Toxicity *Pseudokirchneriella*	
Sample Sites and Collection Dates	% Sample Conc.	Survival (%)	LC_{50} (% Sample)	Survival (%)	LC_{50} (%)	Algal Growth (cells/ml)	LC_{50} (% Sample)
L. Murrieta Creek 4/20/07	Lab Control	100	33.9	100	>100	2.28×10^6	>100
	25	85		95		2.31×10^6	
	50	5		95		2.52×10^6	
	100	0		95		2.47×10^6	
	100-filtered	10		na		na	
L. Temecula Creek 4/20/07	Lab Control	95	15.8	100	>100	2.28×10^6	>100
	25	20		100		2.55×10^6	
	50	0		100		2.52×10^6	
	100	0		100		3.33×10^6	
	100-filtered	0		na		na	

na – not applicable

The current year of toxicity testing exhibited results similar to those obtained during the previous monitoring and reporting cycle. Toxicity of *Hyalella* was noted in both creek samples collected; neither of the other two test species exhibited a response. As with the prior year, microscopic protozoans were observed in the samples and infesting dead *Hyalella*. The cause of toxicity to *Hyalella* at both Temecula and Murrieta Creek sample locations was evaluated further by performing Toxicity Identification Evaluations (TIEs), with results and a discussion provided in Section G-6.4.3.

G-6.2.5 Bioassessment Data and Analysis

Bioassessments consisting of a combined evaluation of physical habitat quality and macroinvertebrate assemblages were conducted at the three designated triad stations. Physical habitat quality was assessed using U.S. Environmental Protection Agency (USEPA) Rapid Bioassessment Protocols (RBPs)[3]. Biological sampling and laboratory procedures for the bioassessment surveys followed the California Stream Bioassessment Procedure (CSBP)[4].

The three stream bioassessment sites were located within the upper Santa Margarita River watershed, defined as that portion of the Santa Margarita River above the confluence of Murrieta and Temecula Creeks. Two of the sampling locations were selected based upon their proximity to urban development, with one in Murrieta Creek and the other in Temecula Creek. Adobe Creek was selected as the reference site due to the absence of flow in Cole Creek during dry periods.

The Murrieta Creek site, at an elevation of 987 feet, is located below the gauging station in southern Temecula where Highway 79 crosses the I-15 just before its confluence with Temecula Creek. The

3 Barbour, M.T., et al. 1999. Revision to rapid bioassessment protocols for use in stream and rivers: periphyton, BMIs and fish. USEPA 841-D-97-002. U.S. Environmental Protection Agency. Washington D.C.

4 CSBP. Harrington, J.M. 1999. California stream bioassessment procedures. California Department of Fish and Game, Water Pollution Control Laboratory. Rancho Cordova, CA.

Murrieta Creek site is located in a section of bedrock just downstream from a portion of the creek recently (2004) graded as a result of an Army Corps of Engineers project (Murrieta Creek Phase I Project). Physical habitat at the sampling site fluctuates dramatically from primarily bedrock to deep sand. The Temecula Creek site, at an elevation of 968 feet, is located just west of the I-15 Freeway overpass, before its confluence with Murrieta Creek. During both sampling events of the season, creek flow was subsurface approximately 100 yards upstream of the I-15 Freeway. During the fall 06 sampling event, the 100-meter reach sampled was just east of the overpass. However, due to an influx of vegetation in the creek, the spring 2007 sampling occurred west of the overpass with the eastern most portion of the 100-meter reach located at the overpass.

The Adobe Creek site, at an elevation of 1,614 feet, is located in a small ravine just below its spring fed source in the Santa Rosa Plateau Reserve in an open and relatively undisturbed area.

Bioassessment data for this reporting period were collected on October 17, 2006 and May 10, 2007. Data collected during the previous reporting period on May 23, 2006 have been included in this report for comparison of the effect of dry weather flows over the summer of 2006 on IBI and habitat metrics. These data and the qualitative stream ratings are presented in Table G-19. Mean stream habitat characteristics for each collection event are presented in Table G-20. Analysis and interpretation of these metrics is contained in Section G-6.4.2. The Southern California Index of Biological Integrity (So CA IBI) developed by Ode et al. (2005)[5] was used to evaluate and rank the individual sites.

5 Ode, P.R., A.C. Rehn, and J.T. May. 2005. A quantitative tool for assessing the integrity of Southern Coastal California Streams. Env. Man. Vol. 35, No. 4, pp. 493-504.

Table G-19 Selected Biological Metric Values, IBI Scores and Physical Habitat Parameters of the Upper Santa Margarita Watershed [a]

	[redacted]			[redacted]			[redacted]		
Survey Date	May 06	Oct 06	May 07	May 06	Oct 06	May 07	May 06	Oct 06	May 07
Biological Metrics[b]									
# Coleoptera Taxa[d]	0.7 (2)	0.7 (2)	0.3 (0)	0.7 (2)	1.7 (4)	0 (0)	4.3 (7)	7.0 (10)	5.0 (8)
# EPT Taxa[d]	3.0 (1)	8.3 (4)	4.7 (3)	3.3 (1)	2.0 (1)	3.7 (2)	7.3 (4)	8.3 (4)	11.7 (6)
# Predator Taxa[d]	5.0 (2)	6.3 (3)	6.7 (4)	2.7 (0)	1.3 (0)	7.0 (4)	8.7 (6)	5.7 (3)	10.3 (7)
% Intolerant Individuals[d]	0 (0)	0.4 (0)	0 (0)	0 (0)	4.4 (2)	0 (0)	8.7 (3)	14.1 (5)	13.7 (5)
% Collector Individuals[e]	95.6 (1)	60.7 (9)	90.8 (2)	96.0 (1)	80.3 (5)	91.2 (2)	64.3 (8)	62.3 (9)	75.7 (5)
% Non-Insect Taxa[e]	9.0 (9)	36.0 (3)	48.7 (0)	5.3 (10)	18.4 (7)	35.1 (3)	10.3 (9)	24.5 (6)	23.7 (6)
% Tolerant Taxa[e]	6.7 (9)	23.7 (4)	31.5 (2)	4.7 (9)	24.1 (4)	14.9 (7)	9.3 (8)	15.6 (7)	12.9 (7)
Index of Biological Integrity [c] (IBI)/Qualitative Rating	34.3 (Poor)	35.8 (Poor)	15.7 (Very Poor)	32.9 (Poor)	32.9 (Poor)	25.7 (Poor)	64.4 (Good)	62.9 (Good)	62.9 (Good)
Physical Habitat Parameters									
Riffle Frequency	7	6	5	1	3	8	5	15	14
Sediment Deposition	15	16	16	2	2	3	16	14	16
Instream Cover	11	13	11	6	5	5	15	16	17
Embeddedness	15	13	17	3	1	8	15	17	16
Channel Flow	14	14	4	6	6	6	16	14	6
Channel Alteration	11	11	17	12	13	14	16	19	20
Bank Stability	13	18	19	13	13	8	12	12	13
Velocity/Depth Regime	16	9	13	4	8	10	8	14	15
Vegetative Protection	7	15	19	12	16	14	10	15	20
Riparian Vegetation Zone Width	17	14	12	13	16	11	18	16	15
Physical Habitat Score	126 (Sub-Optimal)	129 (Sub-Optimal)	133 (Sub-Optimal)	72 (Marginal)	83 (Marginal)	87 (Marginal)	131 (Sub-Optimal)	152 (Optimal)	152 (Optimal)

Table G-19 Selected Biological Metric Values, IBI Scores and Physical Habitat Parameters of the Upper Santa Margarita Watershed (continued)

[a] Biological metrics denoted: Individual metric value, with corresponding So CA IBI score in parenthesis

[b] Biological metrics were calculated using a different method from the 2005-06 annual report. See Section G.7.3.2 for details

[c] Index of Biological Integrity adjusted from 70 to 100 point scale by multiplying sum of IBI scores by 1.43

[d] Considered a positive (beneficial) stream characteristic

[e] Considered a negative (deleterious) stream characteristic

Table G-20 Summary of Selected Mean Habitat Characteristics of the Upper Santa Margarita Watershed for the Fall 06 Bioassessment Sampling Event

Parameter	Sampling Site		
	Murrieta Creek	Temecula Creek	Adobe Creek
Physical Habitat Scores			
Epifaunal Substrate Cover	13	5	16
Embeddedness	13	1	17
Velocity/Depth Regime	9	8	14
Sediment Deposition	16	2	14
Channel Flow Status	14	6	14
Channel Alteration	11	13	19
Riffle Frequency	6	3	15
Bank Stability	18	13	12
Vegetative Protection	15	16	15
Riparian Vegetative Zone	14	16	16
Reach Total	**129**	**83**	**152**
Qualitative Rating	**Sub-optimal**	**Marginal**	**Optimal**
Mean Habitat Characteristics[1]			
Reach Length (m)	100	100	100
Average Riffle Length (m)	3.6	3.7	2.0
Average Riffle Width (m)	0.4	1.0	0.6
Average Riffle Depth (cm)	9.3	5.4	4.7
Riffle Velocity (m/sec)	0.31	0.34	0.32
% Canopy Cover	31	59	97
Substrate Complexity	low	low	mod
Embeddedness	low	high	low
Substrate Consolidation	high	low	mod-high
Gradient (%)	1	1	1
Substrate Composition (%):			
Fines (<0.1 in.)	3	78	20
Gravel (0.1 - 2.0 in.)	8	22	63
Cobble (2 - 10 in.)	2	0	17
Boulder (>10 in.)	0	0	0
Bedrock (solid)	87	0	0
Water Quality			
Water Temperature (°C)	20.6	17.4	14.7
pH (pH units)	7.34	6.13	7.32
Dissolved Oxygen (mg/L)	9.5	3.0	9.2
Specific Conductance (µS/cm)	1126	1646	453

[1] Average of three riffles sampled.

Table G-20 Summary of Selected Mean Habitat Characteristics of the Upper Santa Margarita Watershed for the Spring 07 Bioassessment Sampling Event (continued)

Parameter	Sampling Site		
	Murrieta Creek	Temecula Creek	Adobe Creek
Physical Habitat Scores			
Epifaunal Substrate Cover	11	5	17
Embeddedness	17	8	16
Velocity/Depth Regime	13	10	15
Sediment Deposition	16	3	16
Channel Flow Status	4	6	6
Channel Alteration	17	14	20
Riffle Frequency	5	8	14
Bank Stability	19	8	13
Vegetative Protection	19	14	20
Riparian Vegetative Zone	12	11	15
Reach Total	**133**	**87**	**152**
Qualitative Rating	**Sub-Optimal**	**Marginal**	**Optimal**
Mean Habitat Characteristics[1]			
Reach Length (m)	100	100	100
Average Riffle Length (m)	1.6	5.1	2.4
Average Riffle Width (m)	0.34	0.8	0.35
Average Riffle Depth (cm)	6.2	5.1	7.6
Riffle Velocity (m/sec)	0.33	0.54	0.19
% Canopy Cover	35	56	97
Substrate Complexity	low	low	high
Embeddedness	low	high	low
Substrate Consolidation	high	low	mod
Gradient (%)	1	1	1
Substrate Composition (%):			
Fines (<0.1 in.)	6.7	74	0
Gravel (0.1 - 2.0 in.)	0.3	25	25
Cobble (2 - 10 in.)	0	1	75
Boulder (>10 in.)	0	0	0
Bedrock (solid)	93	0	0
Water Quality			
Water Temperature (°C)	25.4	17.9	19.5
pH (pH units)	8.26	7.06	7.62
Dissolved Oxygen (mg/L)	10.9	6.0	8.7
Specific Conductance (µS/cm)	ns	1649	426

[1] Average of three riffles sampled.

ns - not sampled

G-6.2.6 Graphical Summaries of Data

Graphical summaries of the chemical and toxicity data collected between 1993 and 2007 from the Santa Margarita watershed are provided in Attachment A in the electronic version only, due to the large amount of data.

G-6.3 Methods used to evaluate data

Monitoring data were evaluated by comparing analytical results to regulatory goals, including BPO[6], and the CTR Continuous Concentration Criterion (CCC)[7]. Site by site summaries and comparisons of results at the monitoring stations for wet and dry weather are discussed in the following sections.

Chemical and bacteriological monitoring has been conducted on various Tributary and Triad stations intermittently since 1993. Bioassessment monitoring was initiated at Murrieta Creek and Adobe Creek in the 2003-2004 reporting period. Toxicity and bioassessment monitoring at all of the Triad stations, including Temecula Creek, was initiated in 2004-2005. This is the third year of monitoring for which all three Triad stations are being monitored for chemistry, toxicity, and bioassessment. Chemicals that exceed available CTR CCC and/or BPO levels are summarized briefly in this section.

Persistent exceedances are defined, per the MRP, as the exceedance of relevant BPO or CTR objectives by 20% for three sampling events.

Follow up actions for the Triad stations were determined as per the MRP and the Model Monitoring Program. Both documents contain a matrix that provides the follow-up action based on findings of persistent exceedances of water quality objectives, evidence of toxicity, and indications of benthic alteration. These three criteria, and the action called for by the combination of the results, are presented for each Triad station.

All analytes measured during this and the previous reporting period were compared to Basin Plan Objectives or California Toxics Rule criteria as required in the Monitoring and Reporting Program Board Order R9-2004-01.

G-6.3.1 Site-by-site summaries and comparisons of results at Triad and Tributary stations for wet and dry weather.

G-6.3.1.1 Individual Station Analyses – Triad Stations

Cole Creek/Adobe Creek – 188/848

Both Cole Creek and Adobe Creek are established reference sites to be used as a basis for comparison for this study. Cole Creek was added to the CMP as a reference site during the 2000-2001 season and Adobe Creek was added during the 2004-2005 study and reporting period. Adobe Creek is sampled during the dry seasons for both chemistry and bioassessment. Cole Creek is an ephemeral stream that routinely ceases flow during the dry season. Cole Creek is used as the reference station for chemistry and toxicity during wet weather events due to wet weather safety and access issues at Adobe Creek.

6 Regional Water Quality Control Board San Diego. 1994. Basin Plan. September 8, 1994
7 U.S. Environmental Protection Agency. National Recommended Water Quality Criteria. 2004

Dry Weather Monitoring Results at Adobe Creek - 848

Dry weather flows at Adobe Creek arise from natural springs in the headwaters. Samples were collected during two dry weather events, October 17, 2006 and May 10, 2007. During the first dry weather event, turbidity (field) and total phosphorus were detected above the BPO by more than 20%. During the second dry weather event, no pollutants were detected above the respective BPO or CTR levels. Historical measurements also indicate no exceedances of these two constituents since sample collections began in 2004. The bioassessment results ranked the physical habitat as "Optimal" in both October 2006 and May 2007. The biological integrity (IBI score) was ranked as "Good" for both sampling periods.

Wet Weather Monitoring Results at Cole Creek -188

An attempt was made to sample Cole Creek during wet weather, but no sample was collected due to insufficient flow.

Triad Site Summary

Adobe Creek has good physical habitat and no indication of benthic alteration. This is the first time turbidity and total phosphorus have been above BPO limits at this site, thus it is not possible to determine if the exceedances observed during this reporting period should be classified as persistent, based on the MRP criteria of a 20% exceedance of BPO or CTR objectives for 3 or more sampling events.

Table G-21 Cole Creek/Adobe Creek Dry Weather Triad Analysis

Chemistry	Toxicity	Bioassessment	Recommended Action
No persistent detections exceedances	Toxicity sampling was not conducted in dry weather during 2006-2007	No indication of benthic alteration	No action necessary.

Table G-22 Cole Creek/Adobe Creek Wet Weather Triad Analysis

Chemistry	Toxicity	Recommended Action
No wet weather sample collected.		

Murrieta Creek – 778

Murrieta Creek has been monitored for chemical constituents during wet and dry sampling events since 1995. This is the third season for which Murrieta Creek has been classified as a Triad station and for which all three lines of evidence have been collected. Bioassessment evaluations were initiated in November 2003 and toxicity in the reporting period of 2004-2005. Dry weather flows in Murrieta Creek tend to originate from a natural spring located just upstream of its confluence with Temecula Creek.

Dry Weather Monitoring Results

Two dry weather events on October 17, 2006 and May 10, 2007 were sampled during this monitoring period. The field measurement for pH during the first dry event was measured at 8.7, less than 20% above the BPO, but the lab measured pH at 8.0, within the BPO range. Chlorpyrifos was detected at a concentration below the CTR criteria during the first dry weather sampling event. There were no analytical parameters detected above the BPO or CTR during the second dry weather sampling event. Chlorpyrifos has been analyzed for this site since August 1999. The highest chlorpyrifos level found during any dry weather event was 0.11 µg/L, which occurred in September 1999.

The physical habitat score for both the bioassessments conducted in October 2006 and May 2007 remained consistent at 129 and 133 respectively (indicating "Sub-Optimal" habitat). However, sharp decrease was noted in the IBI score from 35.8 to 15.7. This decrease changed the qualitative category of the macrobenthic community from "Poor" to "Very Poor", primarily due to an increase in both non-insect and tolerant taxa.

Wet Weather Monitoring Results

Samples were collected from one wet weather event on April 20, 2007 during this monitoring period. No constituents were above BPO or CTR water quality criteria for this sampling event.

Both *Pseudokirchneriella* and *Ceriodaphnia* bioassay tests showed no toxicity. The *Hyalella* acute test, however, exhibited toxicity (2.95 TUs). A TIE initiated to determine the cause of *Hyalella* toxicity identified pyrethroid pesticides, and is discussed further in Section G-6.4.3.

Triad Site Summary

Persistent toxicity has been observed for *Hyalella*, and TIEs have identified pyrethroid pesticides (note that chlorpyrifos is not a pyrethroid pesticide) as a class of toxicants responsible for observed effects. Additional testing will be required in the future to determine consistency of this outcome, and to identify the specific toxic compounds.

Bioassessment scores classify Murrieta Creek as having sub-optimal habitat with poor to very poor benthic community structure.

Table G-23 Murrieta Creek Dry Weather Triad Analysis

Chemistry	Toxicity	Bioassessment	Recommended Actions
No persistent exceedances	Toxicity sampling was not conducted in dry weather during 2006-2007	"Sub-Optimal" habitat and "Poor" to "Very Poor" benthic community	Conduct TIE to identify* contaminants of concern, based on TIE metric, initiate TRE

Table G-24 Murrieta Creek Wet Weather Triad Analysis

Chemistry	Toxicity	Recommended Actions
No persistent exceedances	No toxicity with *Pseudokirchneriella* or *Ceriodaphnia*. Persistent toxicity with *Hyalella*	Conduct TIE to identify* contaminants of concern, based on TIE metric, initiate TRE

* Based on findings initiated during prior year's annual report.

Temecula Creek - 777

Temecula Creek has been monitored for wet and dry weather sampling events since 1995. The primary source of dry weather flows at the Temecula Creek station is rising groundwater just east of, and adjacent to, the I-15 Freeway.

Dry Weather Monitoring Results

Two dry weather events were sampled during this monitoring period. During the first dry weather sampling event on October 17, 2006, fecal coliform was detected above the BPO by 20% or more. In addition, the pesticide chlorpyrifos was detected at a concentration below the CTR criteria on October 17, 2006. There were no analytical parameters detected above the BPO or CTR objectives during the second dry weather sampling event. The two bioassessment events of October 2006 and May 2007 ranked the physical habitat as "Marginal" and the biotic integrity as "Poor". No toxicity testing was conducted on dry weather samples.

Wet Weather Monitoring Results

One wet weather event, April 20, 2007, was sampled during this monitoring period. No constituents were detected above the objectives. Historical data shows that metals have been commonly found in wet weather samples from this site and occasionally at levels exceeding current water quality objectives.

No toxicity was observed in either the *Pseudokirchneriella* chronic or the *Ceriodaphnia* acute test. The sample was acutely toxic to *Hyalella* with a TU value of 6.32. A TIE was subsequently initiated to determine the cause of toxicity to *Hyalella*. The TIE identified pyrethroid pesticides, and is discussed further in Section G-6.4.3.

Triad Site Summary

Metals have exceeded the objectives in the past. Detections this season were below the BPO and CTR objectives.

Persistent toxicity has been observed to *Hyalella* (four of five samples collected since 2005) and TIEs have identified pyrethroid pesticides as a class of toxicants responsible for observed effects. Additional testing will be required in the future to determine consistency of this outcome, and identify the specific toxic compounds.

Bioassessment scores classify Temecula Creek as having "Marginal" habitat with "Poor" benthic community structure.

Table G-25 Temecula Creek Dry Weather Triad Analysis

Chemistry	Toxicity	Bioassessment	Recommended Action
No persistent exceedances	Toxicity sampling was not conducted in dry weather during 2006-2007	"Marginal" habitat and "Poor" benthic community	Conduct TIE to identify* contaminants of concern, based on TIE metric, initiate TRE

Table G-26 Temecula Creek Wet Weather Triad Analysis

Chemistry	Toxicity	Recommended Action
No persistent exceedances	No toxicity with *Pseudokirchneriella* or *Ceriodaphnia*. Consistent toxicity with *Hyalella*.	Conduct TIE to identify* contaminants of concern, based on TIE metric, initiate TRE

* Based on actions initiated as part of prior year's annual report.

G-6.3.1.2 Individual Station Analyses – Tributary Stations

Long Canyon Creek – 780

Dry weather flows at the Long Canyon Creek station generally infiltrate into the creek bed within a few hundred yards of the confluence with Murrieta Creek. Rarely, if ever, do dry weather flows discharge into the receiving water. The Long Canyon Creek station was monitored for the first time during the 2004–2005 reporting period.

Dry Weather Monitoring Results

Ponded water was found at the Long Canyon station on September 14, 2006 and March 20, 2007. Field measurements for turbidity were above the BPO by more than 20%, and pH was above the BPO during the first dry weather event. Samples were not collected for laboratory analysis due to ponded conditions and absence of flow.

Wet Weather Monitoring Results

Two wet weather events were sampled during this monitoring period on December 16, 2006 and April 20, 2007. Color, turbidity, total nitrogen, total phosphorus, iron, and manganese were measured at levels above the respective BPO by more than 20% during both of the wet weather monitoring events. Chlorpyrifos and MBAS were detected above the CTR and BPO, respectively, by more than 20% on December 16, 2006. On April 20, 2007, fecal coliform was greater than the BPO, and dissolved copper was greater than the CTR objective by more than 20%. Chlorpyrifos was detected below the CTR objective. Fecal coliform bacteria have often been measured above water quality standards during wet weather events, generally exhibiting their highest level during the first collection of each year.

Redhawk Channel - 768

The predominant source of dry weather flow in the Redhawk Channel is rising groundwater from headwaters within the Redhawk Golf Course, supplemented by dry weather urban runoff from upstream developments. These flows generally infiltrate into the channel bed within a few hundred yards of the confluence with Temecula Creek. Rarely, if ever, do dry weather flows discharge into the receiving water. Wet and dry weather event monitoring have occurred at the Redhawk Channel since 1995.

Dry Weather Monitoring Results

Ponded water was observed at Redhawk Channel on September 14, 2006. A grab sample was taken on March 20, 2007. In both cases, the field pH exceeded the BPO with results of 9.4 and 9.8 pH units, respectively. On March 20, 2007, the field measurement for turbidity exceeded the BPO with a result of 51.7 NTU. Samples were collected for laboratory analysis. Color, pH, TDS (residue), total nitrogen, and total phosphorus exceeded the BPO by more than 20%. On September 14, 2006, fecal coliform exceeded the BPO by more than 20%, and iron exceeded the BPO by less than 20%.

Wet Weather Monitoring Results

During 2006-2007, there were two wet weather sampling events on December 16, 2006 and April 20, 2007. During both sampling events, exceedances of greater than 20% of the respective BPO were observed for color, turbidity, total nitrogen, total phosphorus, iron, and manganese. On December 16, 2007, chlorpyrifos was detected above the CTR objective. During the second storm event, fecal coliform concentrations were detected above the BPO more than 20%, and chlorpyrifos was detected below the CTR objective.

Santa Gertrudis Channel - 774

Dry weather flow in the Santa Gertrudis Channel combines with discharges of various groundwater pumping (well blow-offs) into the channel. These co-mingled flows generally infiltrate into the channel bed within a few hundred yards of the confluence with Murrieta Creek. Rarely, if ever, do dry weather flows discharge into the receiving water. Wet and dry weather monitoring have occurred at the Santa Gertrudis Channel since 1993.

Dry Weather Monitoring Results

Ponded water was observed at Santa Gertrudis Channel on September 14, 2006. The field pH exceeded the BPO with a result of 8.7 pH units. Samples were not collected for laboratory analysis due to ponded conditions and absence of flow.

Wet Weather Monitoring Results

Two wet weather sampling events were collected on December 16, 2006 and April 20, 2007 during the 2006 - 2007 monitoring period. During both wet weather monitoring events color, total nitrogen, total phosphorus, iron, and manganese were measured at levels above the BPO by more than 20%. During the first storm, turbidity and chlorpyrifos were detected above the BPO and CTR objectives, respectively, by more than 20%. During the second storm, fecal coliform was measured above the BPO, and dissolved lead was measured above the CTR objective by more than 20%. Chlorpyrifos was measured below the CTR objective.

Warm Springs Creek - 397

Dry weather flows in Warm Springs Creek generally infiltrate into the Creek bed within a few hundred yards of the confluence with Murrieta Creek. Rarely, if ever, do dry weather flows discharge into the

receiving water. Warm Springs Creek was recently established as a Tributary station, and monitoring began in 2004.

Dry Weather Monitoring Results
Warm Springs Creek was dry during dry weather sampling events in 2006-2007.

Wet Weather Monitoring Results
During the 2006-2007 reporting period, there were two wet weather events sampled on December 16, 2006 and April 20, 2007. During both sampling events, exceedances of the BPO by more than 20% were recorded for color, total nitrogen, total phosphorus, iron, and manganese. Chlorpyrifos was detected above the CTR objective by more than 20% on December 16. On April 20, 2007, fecal coliform exceeded the BPO by more than 20%.

G-6.3.2 Rough Estimates of the Relative Contribution of Urban Runoff to Total Pollutant Loads

The hydrologic characteristics of runoff in the SMR differ significantly between dry weather and storm events. The source and chemical characteristics of storm flows primarily represent non-urban sources, which constitutes the majority of the watershed. During dry weather, flow consists of localized urban runoff and rising groundwater. Virtually all of the dry weather urban runoff infiltrates into the creek bed prior to entering Receiving Waters. The most significant source of dry weather flow is rising groundwater.

During wet weather, the contribution of urban runoff to Murrieta and Temecula Creeks appears to be a small portion of the total flow. The flow data collected to date, although consistent with Permit requirements, are insufficient (see the assumptions in Section G-6.2.3) for calculating accurate loads for the creeks or the tributary contributors. The Permittees, in conjunction with the Bureau of Reclamation, are in the process of developing a model for the watershed that may be able to be used to better calculate load contributions.

G-6.3.3 Maps of Potential Sources of Pollutants

Section G-3.0 of the Monitoring Annual Report includes descriptions of each station, including tributary land uses. Until more data are collected, land uses can best indicate potential sources of pollutants. For example, industrial and transportation land uses are likely contributors of metals, while agricultural land uses may be the source of nutrients or pesticides. Chlorpyrifos has been detected at most of the stations, possibly indicating that it does not come from a single source.

G-6.4 Discussion of Results and Analyses of each Monitoring Program Component

G-6.4.1 Discussion of Pollutants of Concern and Their Potential Sources

Pollutants of concern are those constituents that persistently exceed BPO or CTR objectives at the receiving water (Triad) stations. This section discusses pollutants that were detected at levels greater than Basin Plan, or CTR objectives by 20% or more for either the dry or wet weather sampling events. Sample results that were detected above the objectives are identified in Table G-12. Attachment A includes graphs of all historical (1993-2006) water quality data collected at both the Triad and Tributary stations. Due to its size, Attachment A is only provided in the electronic format for this report.

The following constituents were detected above the objectives at the Tributary or Triad stations during 2006-2007:

- Chlorpyrifos
- Color
- Copper, dissolved
- Fecal coliform
- Iron
- Lead, dissolved
- Manganese
- MBAS
- Nitrogen
- pH (field)
- Phosphorous
- Total Dissolved Solids (residue)
- Turbidity

Most of these constituents exceeded the objective in multiple samples from multiple sites, however, dissolved copper, dissolved lead, MBAS, and TDS (residue) each exceeded the objective only once during the season.

Table G-27 summarizes the extent of the constituents of concern resulting from the 2006-2007 fiscal year.

Table G-27 also lists the priority given to the constituent in the 2005-2006 Watershed SWMP, and the priority assigned for future monitoring efforts. Priority was assigned based on the following criteria:

- Low: Constituents that were not detected above the objectives at the receiving water (Triad) Stations
- Medium: Constituents detected intermittently at Triad and Tributary Stations
- Medium: Constituents detected persistently at Triad and Tributary Stations and also in the reference stream locations.
- High: Constituents detected persistently above the objectives by more than 20% at Triad and Tributary Stations.

Table G-27 Summary of Constituents of Concern

Constituent	Objective Exceedances			06-07 Ranking	Established Priority
	Triad	Tributary	Reference		
Chlorpyrifos	No	Detected above CTR intermittently at all tributary stations during both dry and wet weather	No	Low	N/A
Color	No	Detected intermittently above BPO during wet weather at all tribs	No	Low	N/A
Dissolved Copper	No	Detected above CTR at one wet weather event at Long Canyon	No	Low	Monitor
Fecal Coliform	Detected above the BPO at Temecula Creek during one dry weather event	Detected above BPO at all tributaries during wet weather	No. However fecal coliform has been detected in excess of BPO in prior years.	Medium	Monitor
Iron	No	Detected intermittently above BPO during wet and dry weather at all tributaries.	No	Low	N/A
Lead, dissolved	No	Detected above BPO at one wet weather event at Santa Gertrudis	No	Low	N/A
Manganese	No	Detected above BPO during wet weather events at all tribs	No	Low	N/A
MBAS	No	Detected above BPO during one wet weather event at Long Canyon	No	Low	N/A
Nitrogen	No	Detected above BPO during wet weather events at all tributaries and during one dry weather at Redhawk.	No	Low	Focus Effort
pH	One field measurement outside of BPO at Murrieta Creek, although lab measurement complied	Detected above BPO intermittently during dry weather at all tributaries.	No	Low	N/A
TP	No	Detected above BPO at all tributaries during wet weather and during dry weather at Redhawk	Yes	Low	Focus Effort
TDS	No	Detected above BPO during dry weather at Redhawk	No	Low	Focus Effort (sediment controls)
Turbidity	No	Detected above BPO during wet weather at all tributaries and during dry weather at Long Canyon and Redhawk	Detected above BPO at Adobe during dry weather	Low	Focus Effort (sediment controls)

Based on the current year's monitoring data, no changes to the established priorities are recommended. Discussions of the Constituents of Concern and their possible sources are provided in the following sections.

G-6.4.1.1 Chlorpyrifos (ELISA)

Chlorpyrifos is an organophosphate pesticide. USEPA reports it as one of the most widely used organophosphate insecticides in the United States. It is used on more than 40 agricultural crops, in non-agricultural settings as a termiticide, in homes, lawns, and offices, and on pet collars.

At the Tributary stations, concentrations of chlorpyrifos were detected with levels ranging from 0.0212 µg/l to 0.1007 µg/l in wet and dry weather sampling events. Chlorpyrifos was measured above the CTR objective at all Tributary stations during the first wet weather sampling event, and below the CTR at all Tributary stations during the second event. At the Triad stations, concentrations of chlorpyrifos were detected with levels ranging from 0.0087 µg/l to 0.0201 µg/l in dry weather sampling events. Chlorpyrifos was detected at the reference station (Adobe Creek) at a concentration of 0.02 µg/l, indicating that chlorpyrifos may be widespread throughout the watershed and not attributable to a point source. Chlorpyrifos does not appear to be a constituent of concern at the Triad stations.

G-6.4.1.2 Color

There are numerous natural sources of color in water including breakdown of minerals (especially those containing iron or manganese compounds) or vegetable matter, humus, peat, tannins, algae, weeds, and protozoa. Waters flowing through erodible soils, such as those found in the Santa Margarita River watershed, are likely to have a detectable color concentration.

Color results ranged from 35 to 80 units at all Tributary stations during both wet weather events. Color does not appear to be a constituent of concern at the Triad stations.

G-6.4.1.3 Copper, dissolved

Sources of copper in storm water may include industrial (i.e., corrosion of copper and brass tubing, pipes, and roofing), copper compounds used for algae control in reservoirs, brake pad wear, and geologic formations. Transportation land uses may be a significant source of copper as a result of tire and brake pad wear.

Dissolved copper was detected at a concentration of 7.3 µg/l at the Long Canyon Tributary station during the wet weather event on April 20, 2007. Adjusted for hardness, the CTR objective was 4.0 µg/l. No other exceedances of dissolved copper were detected during the 2006-2007 season. Total and/or dissolved copper were detected below the objectives in most samples, indicating a non-point source for copper. Copper does not appear to be a constituent of concern at the Triad stations.

G-6.4.1.4 Fecal Coliform Bacteria

Coliform organisms are intestinal bacteria that are in excretions from humans, mammals, amphibians, and birds. They are also found, primarily in the non-fecal forms, on fibrous and vegetable matter in the water. The urban areas within the watershed are relatively new and have modern municipal waste water treatment systems, so human waste is not a likely source of fecal coliform bacteria in stormwater. However, urban areas can increase the levels of bacteria from natural sources. For example, pet waste and bird droppings may wash untreated into a storm drain, instead of infiltrating the ground.

Fecal coliform bacteria were detected at levels above the BPO at all Tributary stations during the wet weather monitoring event on April 20, 2007 and during a dry weather monitoring event at the Redhawk Station. At the Triad stations, fecal coliform bacteria were detected at a level above the BPO at the Temecula Creek station during a dry weather monitoring event.

G-6.4.1.5 Iron

Iron may be found naturally from the corrosion of iron in soil, mineral deposits, and iron-bearing ground water. Industrial sources may include pickling operations, and corrosion from iron pipes and other materials.

Levels of iron above the regulatory objective have been noted in the past at all Tributary stations. During the 2006 – 2007 monitoring period, iron was detected at all Tributary stations at levels above the BPO, ranging from 1.3 to 28 mg/L, during both wet weather events. The greatest concentrations were measured during the wet weather sampling events at Redhawk Channel on December 16, 2006. Iron was measured at 10% above the BPO during one dry weather event at Redhawk Channel. Iron does not appear to be a constituent of concern at the Triad Stations.

G-6.4.1.6 Lead, dissolved

Natural sources of lead in water include leaching from mountain limestone and galena. Industrial sources of lead include mining effluents. Fires may release lead in soil and mineral deposits. Residual lead from the use of leaded gasoline remains in the environment[8]. Streets and parking lots, which accumulate pollutants generated from motor vehicles that are washed-off during storm events, have been identified as major sources of copper, lead, and zinc in storm water runoff from urban areas[9].

Dissolved lead was detected at the Santa Gertrudis Creek station at a concentration above the CTR objective during the wet weather event on April 20, 2007. Lead does not appear to be a constituent of concern at the Triad Stations.

G-6.4.1.7 Manganese

Potential sources of manganese include manufacture of dry-cell batteries, glass and ceramics, paints and varnished, inks and dyes, and its use in agriculture to enrich manganese-deficient soils.

Manganese was detected at levels above the BPO by 20% or more at all Tributary stations during both wet weather events. The BPO is 0.05 mg/L, and concentrations ranged from 0.067 mg/L to 0.43 mg/L. The highest concentration was at Redhawk Channel on December 1, 2006. Manganese does not appear to be a constituent of concern at the Triad stations.

G-6.4.1.8 MBAS

Soaps, detergents, emulsifiers, wetting agents, and penetrants are the primary sources of MBAS. These surfactants lower the surface tension or other interfacial properties of their solvents. This allows dirt to be removed from clothing and for greater absorptions of pesticides into their target organisms.

8 A recent presentation noting that residual lead in the environment can be traced to the past use of leaded gasoline was given at the 2006 CASQA Conference. "Sources of Dissolved and Particule-Bound Constituents in Highway Run-off", Peter G. Green, H.M.Hwang, M. Kayhanian and T.M.Young.

9 U.S. Environmental Protection Agency (USEPA), 1983, Results of the National Urban Runoff Program, Volume I - Final Report, Water Planning Division, Washington DC, NTIS Publication No. 83-185552.

The MBAS concentration at the Long Canyon Tributary station exceeded the BPO by more than 20% during the wet weather event on December 16, 2006. MBAS was detected at concentrations below the BPO in all other samples from Tributary stations. MBAS was detected at a low level in one dry weather sample from the Murrieta Creek Triad station. MBAS does not appear to be a constituent of concern at the Triad stations.

G-6.4.1.9 Nitrogen

Nitrogen is present in natural and polluted waters as ammonia, organic nitrogen, nitrites, and nitrates. The total concentration of nitrogen is not as important as the form in which it exists. Organic nitrogen, amino acids, and ammonia may inhibit biological growth whereas nitrates stimulate phytoplankton. Nitrates are an essential fertilizer for plant life. Potential uses of nitrogen may include field application of fertilizer, livestock wastes, and irrigated agriculture. Nitrates may also be present in groundwater as a result of excessive application of fertilizer or cesspool or septic tank leachate. Total Kjeldahl nitrogen may indicate the presence of treated effluent or manure-based wastes.

Total nitrogen was detected above the BPO by more than 20%, with concentrations ranging from 2.3 mg/L to 5.5 mg/L at all Tributary stations during both wet weather events. Total nitrogen was detected above the BPO at Redhawk Channel during two dry weather events. Nitrogen in other forms was detected below the BPO at Tributary stations during both wet and dry sampling events. Nitrate and Kjeldhal nitrogen were not detected or were detected at levels below the BPO at the Triad stations. Nitrogen does not appear to be a constituent of concern at the Triad stations.

G-6.4.1.10 pH

pH is an indicator of pollution. Natural waters and treated sewage are usually neutral or slightly alkaline (pH above 7.0), but many industrial wastes are strongly acidic (pH below 7.0) or alkaline. Acid wastes include tan liquors, acid dyes, coal-mine drainage, sulfite waste liquors, pickling liquors, and some brewery wastes. Alkaline wastes include masonry wastes, soda- and sulfate-pulp rinse waters, laundry wastes, and bottle wash waters.

Field measurements of pH were above the BPO of 8.5 pH units during the dry weather sampling at the Tributary stations, but within the BPO range during wet weather. The highest measurements were 9.4 and 9.8 pH units at the two dry weather events at Redhawk Channel. Laboratory results for both of these samples were 9.0 pH units. pH was measured in the field at 8.7 pH units at one dry weather event at Murrieta Creek. The laboratory result was below the BPO at 8.0 pH units. pH does not appear to be a constituent of concern at the Triad stations.

G-6.4.1.11 Phosphorous

Phosphorus in nature is found in the form of phosphates in several minerals and it is a constituent of fertile soils, plants, and the protoplasm, nervous tissue and bones of animals. It is an essential nutrient for plant and animal growth. However, excessive phosphorus may lead to an overabundance of algae growth.

Phosphorous was detected above the BPO by more than 20%, at concentrations ranging from 0.31 mg/L to 0.94 mg/L, at all Tributary stations during both wet weather events. At Redhawk Channel, phosphorous was detected above the BPO during two dry weather events. Phosphorous was detected below the BPO at Murrieta Creek and Temecula Creek. Phosphorous was detected above the BPO at the Adobe Creek Triad station during the dry weather event on October 17, 2006, indicating that natural sources may be a contribute to phosphorous in the receiving waters.

G-6.4.1.12 Total Dissolved Solids (TDS)

In natural waters the dissolved solids consist mainly of carbonates, bicarbonates, chlorides, sulfates, phosphates, and possibly nitrates of calcium, magnesium, sodium, and potassium with traces of iron, manganese and other substances. Sources of dissolved solids may include chemical wastes, dissolved salts, acids, alkalis, or drainage waters from irrigated land. Evaporation increases TDS and throughout the monitoring program it has been noted that concentrations tend to be higher during dry weather.

At Redhawk, TDS (residue) was measured above the BPO by less than 20% during two dry weather events. TDS does not appear to be a constituent of concern at the Triad stations.

G-6.4.1.13 Turbidity

Turbidity in water is attributable to suspended and colloidal matter, which diminishes light penetration. Increased turbidity may also indicate the presence of pathogens. Natural sources of turbidity include microorganisms or organic detritus; silica or other mineral substances including zinc, iron, and manganese compounds; and clay or silt. Erosion, as well as domestic sewage and industrial wastes, may also lead to increased turbidity.

Turbidity was detected at all Tributary stations during both wet weather events (except for one sample from each event) above the BPO at concentrations ranging from 54 NTU to 220 NTU. Field turbidity measurements were also above the BPO during dry weather events at the Long Canyon and Redhawk Channel Tributary Stations. Field measurements indicated that turbidity was detected at a level above the BPO at Adobe Creek during the dry weather event on October 17, 2006, however, the laboratory result was below the BPO.

G-6.4.2 Interpretation of Bioassessment Metric Values

The results of the current bioassessment data sets are presented in Table G-19 and Table G-20. The Upper Santa Margarita watershed is a dynamic system with large seasonal variations in flow. In addition, the variability inherent in biological assessment data necessitates that a suitably sized database be established in order for meaningful long-term trends in biological conditions to be realized. This is the third season in which all three Triad sites have been sampled for bioassessment. The overall IBI metric score for data collected during this reporting period was calculated using the updated Southern California Index of Biological Integrity developed by Ode et al. (2005)[10]. The seven individual biological metrics comprising the overall Southern California Index of Biological Integrity score were evaluated using a different method than in the previous annual report. The 2005-2006 annual report bioassessment metrics were calculated by pooling data from individual field replicates for each site to obtain a single metric value. Bioassessment metric values for the current reporting period were determined by calculating a mean value of the individual field replicates. The method used for the current report better takes into account the natural variability of field biological assessment data. Comparisons of the 2006-2007 dataset with the previous sets were performed on a limited basis due to this difference in calculation methods of the individual metrics. However, in order to determine the impacts of dry weather flow on IBI metrics, the May 2006 metrics from the prior reporting period were recalculated using the updated method. Biological metric scores from prior sampling events will be recalculated for comparison when the more integrative long-term analysis is performed following the 2007-2008 season. Several apparent differences existed among the data sets that are noteworthy, but it should be noted that these observations are drawn from a limited data set and may not be representative of long-term trends.

10 Ode, P.R., A.C. Rehn, and J.T. May. 2005. A quantitative tool for assessing the integrity of Southern Coastal California Streams. Env. Man. Vol. 35, No. 4, pp. 493-504.

G-6.4.2.1 Relationships between Dry Weather Flows and IBI and Habitat Metrics

Murrieta Creek

Habitat quality scores at Murrieta Creek remained similar at 126 (sub-optimal) and 129 (sub-optimal), and the IBI scores increased only slightly from 34.3 (poor) to 35.8 (poor) during the dry weather flow period of May 2006 to October 2006. Given that the physical habitat quality score remained stable, it is not surprising that the IBI score remained stable as well. No important changes in individual physical habitat parameters were observed. Although the overall IBI scores did not change much, a significant percentage increase was observed for mean percent tolerant taxa and mean percent non-insect taxa, both considered negative stream characteristics. This was primarily offset by increases in number of EPT taxa and number of predator taxa, both considered positive stream characteristics. One notable difference in mean habitat characteristics was the continued transition in substrate composition from fines to bedrock after heavy sedimentation following the 2004 winter storms. Mean percent fines decreased from 79 to 15 to 3 percent over the three sampling periods encompassing October 2005 to October 2006, while mean percent bedrock increased from 0 to 55 to 87 percent over the same period.

Temecula Creek

Over the dry weather flow period of summer 2006, the habitat quality scores increased slightly from 72 (marginal) to 83 (marginal), while the IBI score remained the same at 32.9 (poor) for both the May 2006 and October 2006 sampling periods. None of the individual physical habitat quality parameters changed dramatically, with the largest increases occurring in vegetative protection and velocity/depth regime. Similar to Murrieta Creek, although the overall IBI score did not change, a substantial percent increase in mean percent tolerant taxa and mean percent non-insect taxa was observed. However, this was largely offset by increases in number of coleopteran taxa and percent intolerant individuals, both considered positive stream characteristics. One clear change in habitat characteristics was a shift in the substrate composition from 50 to 78 percent fines over the summer 2006. The source of the fine sediment is unclear.

Adobe Creek

The physical habitat score at this reference station increased from 131 (sub-optimal) to 152 (optimal) between May 2006 and October 2006. This change was largely related to increases in the riffle frequency and velocity/depth regime. Both riffle frequency and velocity/depth regime scores decreased during the October 2004 and May 2005 sampling periods largely as a result of increased sedimentation from upstream sources of erosion. Since then, scores for these habitat quality parameters have been increasing, and are now reaching the "sub-optimal" category not seen since the April 2004 sampling event. The IBI metric scores remained relatively stable, decreasing slightly from 64.4 (good) to 62.9 (good) over this dry weather flow period. Increases in percent tolerant taxa and percent non-insect taxa were also observed in Adobe Creek, although the magnitude of the change was slightly less than that observed in the other two triad sites.

G-6.4.2.2 Relationships between Wet Season and Dry Weather IBI and Habitat Scores

Murrieta Creek

The physical habitat quality score at Murrieta Creek remained relatively stable, increasing four points from 129 (sub-optimal) to 133 (sub-optimal). The IBI scores, however, decreased substantially from 35.8 (poor) to 15.7 (very poor) during the wet season period of October 2006 to May 2007. Very little rain fell during the winter of 2006-2007 and as a result, very low flows were observed across all sites of this sampling event. Although the overall physical habitat quality score increased slightly, the channel flow status score decreased 10 points, decreasing two qualitative categories from "sub-optimal" to "poor". As a result of the low flow conditions, average riffle length, width, and depth also decreased. The largest biological metric contributors to the decrease in the overall IBI score were increases in all three parameters considered negative stream characteristics: percent collector individuals, percent tolerant taxa, and percent non-insect taxa. In addition, a 50-percent decrease in the mean number of EPT taxa was also observed over this same period.

Temecula Creek

Over the 2006-2007 wet season, Temecula Creek exhibited a slight increase physical habitat quality score from 83 (marginal) to 87 (marginal). The IBI score decreased from 32.9 (poor) to 25.7 (poor). Two of the three negative stream characteristics, percent collector individuals and percent non-insect taxa, increased during this period. Conversely, the mean number of predator taxa increased from 1.3 to 7.0.

Adobe Creek

Both the IBI and physical habitat quality scores remained the same over the 2006-2007 wet season at 62.9 (good) and 152 (optimal), respectively. This stability and consistently high ranking in IBI and habitat quality scores may be attributed to the fact that Adobe Creek's habitat consists of a headwater stream with a small tributary area containing relatively little development. Overall, the individual physical habitat quality parameters remained stable with the exception of channel flow status, which also exhibited a decrease due to low flow conditions.

G-6.4.2.3 Overall Trends of Bioassessment Data

Biological Metrics (IBI scores)

The reference site, Adobe Creek, exhibited a relatively stable IBI score over all three sampling periods from May 2006 to May 2007, ranging from 62.9 to 64.4. Murrieta Creek and Temecula Creek were also stabile between May and October 2006, but the IBI scores for both creeks were lower in May 2007. One potential cause for the lower scores is the decrease in flow observed during the 2006-2007 season, which is attributable to the very low rainfall during the season. Little urban runoff is tributary to these sites during dry weather; the flows are almost exclusively caused by rising groundwater. Examining the individual metrics comprising the overall IBI score reveals some potential trends. Of the biological metrics considered negative stream characteristics, the percent of collector individuals consistently increased across all Triad sites during spring sampling events, while decreasing during fall events. This trend is particularly pronounced, however, at both Temecula and Murrieta Creeks when compared to the reference site and may speak to the fact that Temecula and Murrieta Creek watersheds represent a much larger land area. This may be partially due to spring storms washing greater amounts of fine sediments and organic debris downstream where collectors utilize it. Fine sediments in increasing amounts can be harmful to benthic macro-invertebrate communities by covering and filling interstitial areas of boulder, gravel, and cobble that aquatic insects utilize. Relatively little change was observed in the percent collector individuals at Adobe Creek over the three sampling periods and may speak to a more stable, less

erodible habitat. In addition, the percent non-insect taxa showed a substantial increasing trend at both Temecula and Murrieta Creeks, steadily increasing from 5.3 to 35.1 and 9.0 to 48.7 percent over the three sampling periods, respectively. Percent tolerant taxa also exhibited an increasing trend at Murrieta Creek, steadily increasing from 6.7 to 31.5 percent over the three periods.

Of those biological metrics considered positive stream characteristics, none of the lower watershed sites, including Temecula and Murrieta Creek, exhibited a noteworthy trend, generally oscillating back and forth with no observable pattern. The mean number of EPT taxa increased with each sampling event at Adobe Creek, while the percent intolerant individuals increased over the summer of 2006 and then remained steady in the spring of 2007.

Physical Habitat Quality Metrics

An upward trend was observed in the physical habitat quality score for all three Triad sites. Adobe Creek increased from 133 to 152 during the summer of 2006, and then remained stable at 152 during the last sampling period. Over the course of the three sampling periods Temecula Creek increased its habitat quality score from 72 to 87, however was still categorized in the "Marginal" class. Murrieta Creek saw the smallest increase in habitat quality score increasing a total of seven points from 126 to 133. Decreased channel flow scores were noted across all sites, except Temecula Creek (which consistently scores low channel flow) in the spring of 2007. These low channel flow scores are more than likely due to the 2006-2007 rainy season being one of the driest on record with approximately 25% of the normal amount of rainfall. Murrieta Creek has shown increased sediment deposition scores improving from 5 in May and October 2005 to 16 in May 2007, due to a decrease in sediment. This site was covered in fine sediment as a result of an upstream grading project during the winter of 2004. The sediment deposition score has been recovering since then as the sediment works its way out of the system. Since monitoring began in Temecula Creek, sediment deposition scores have been low, with a high of 7 during the first monitoring period in October 2004. Sediment deposition scores since then have been lower ranging from 1 to 3. Instream cover has paralleled this trend with its highest score of 12 in October 2004 and declining since then to 5 in May 2007. Embeddedness scores for Temecula Creek have also consistently remained low from the resulting sedimentation. The bed of Temecula Creek is broad and sandy, and sediment movement is not unexpected. Adobe Creek has seen an increasing trend in instream cover and velocity/depth regime over the past five sampling periods. Regression analysis revealed no statistically significant relationships between overall physical habitat quality scores and IBI scores. However, the individual physical habitat metric of channel flow status did correlate well with IBI scores at Murrieta Creek ($r^2 = 0.9955$, $p = <0.0427$). Interestingly, this relationship was an inverse one. However, because of the small sample size (n=3), the overall confidence in this result is low. Additional samples will improve the confidence of statistical tests if the additional samples decrease the variability of the results.

Much of the degradation in the biological community of Murrieta and Temecula Creeks seen in the spring of 2007 could be the result of low flow conditions and not the result of any overall decrease in physical habitat quality. It is also possible that the decreased benthic community IBI score could have been the result of a short-term exposure to impaired water quality. The storm occurring three weeks prior to the spring sampling event caused high toxicity to *Hyalella azteca* during bioassay testing. It appears that the degradation of these creeks is not the result of a general decrease in habitat quality, due to the physical habitat score actually increasing slightly over this same period.

G-6.4.3 Discussion of any TIEs that Were Conducted and the Potential Sources of Toxic Pollutants

Toxicity monitoring at Temecula Creek and Murrieta Creek was initiated in 2004 using three species, *Ceriodaphnia*, *Selenastrum*, and *Hyalella*. During the 2004-2005 and 2005-2006 reporting periods, toxicity to Hyalella was observed in 1 of 3 and 3 of 4 stormwater collections respectively, for both Temecula and Murrieta Creeks. During the 2006-2007 reporting period, 1 of 1 stormwater collections

resulted in toxicity to Hyalella. Toxicity was not observed to either Ceriodaphnia or Selenastrum in any of the eight samples collected over the last 3 annual reporting cycles. Dry weather samples have not been tested for toxicity to date. Toxicity testing during the 2005-2006 season categorized the toxicity in both creeks as persistent.

The Monitoring and Reporting Program No. R9-2004-001 (MRP), Section II.A. I. 4, states,

> *"When results from the chemistry, toxicity, and bioassessment monitoring indicate urban runoff-induced degradation, Permittees shall evaluate the extent and causes of urban runoff pollution in receiving waters and prioritize management actions to eliminate or reduce sources. Toxicity Identification Evaluations (TIEs) shall be used to determine the cause of toxicity, and Toxicity Reduction Evaluations (TREs) shall be used to identify sources and implement management actions to reduce pollutants in urban runoff causing toxicity."*

A TIE was completed on July 7, 2007 of the data collected during the 2006-2007 reporting period in accordance with Table 2 in the MRP, and identified pyrethroids as a potential source of toxicity and biological degradation of both Murrieta and Temecula Creeks. Bioassessments at both of these creeks have indicated "Fair" to "Poor" benthic communities and physical habitats ranging from "Suboptimal" to "Marginal". Pyrethroid pesticides are not currently measured in either creek. During the four wet weather collection events between 2005 and 2007, measured analytes do not appear to exhibit a relationship with toxicity.

Due to limited rainfall during the 2006-2007 reporting period, only a single TIE was able to be conducted. A single TIE assessment of pyrethroids as the source of toxicity is not sufficient to verify the persistence of pyrethroids as the sole source of toxicity. Further, additional data collection is necessary to characterize likely sources of pyrethroid toxicity.

Further, methods to measure pyrethroid TIE methods have proven challenging because method development requires the ability to measure low concentrations of the toxicant, which remains a challenge for pyrethroids. Phase II TIE Methods are not yet available. However, TIE methods for pyrethroids are progressing well and moving towards standardization (Pesticides in Urban Surface Water Annual Review of New Scientific Findings 2007, San Francisco Estuary Project, June 2007, pg. 7). A detailed discussion of the TIE procedures and results follows.

Acute testing using the two freshwater species *Ceriodaphnia dubia* and *Hyalella azteca* and chronic testing using the freshwater alga *Pseudokirchneriella capricornutum*, was performed on two stormwater samples collected April 20, 2007. Samples were identified as A7D1961-01 and A7D1961-02, hereafter referred to as Temecula Creek and Murrieta Creek, respectively.

A summary of results for the initial toxicity tests can be found in Section G-6.2.4. Toxicity tests initiated on April 21, 2007 indicated no toxicity to either *Ceriodaphnia* or *Pseudokirchneriella*, but a reduction in *Hyalella* survival was noted in all concentrations of Temecula Creek and in the two highest concentrations of Murrieta Creek. In 2005-2006, similar toxicity was noted, and upon inspection of those samples, microorganisms were found both in the samples and infesting dead *Hyalella*. It was suspected that the microorganisms might have been the cause of toxicity. Prior to initiating the current round of tests, the samples were observed under a 400X microscope and microorganisms larger than 10 microns were observed. To address this, an aliquot of each sample was filtered to 10 microns to remove native microorganisms and tested concurrently with untreated sample for the *Hyalella* tests. Although visible microorganisms were removed, toxicity was similar to that in the unfiltered sample.

To further investigate potential effects of microorganisms to *Hyalella*, follow-up tests were initiated on April 27, 2007 with samples filtered further to a screen size of 0.45-microns, small enough to remove

most bacteria. A summary of these results is presented in Table G-28. By the initiation date of this second round of testing, the toxicity of both samples appeared to have decreased as evidenced by increased survival in the unmanipulated (baseline) samples from zero percent during the initial screens to 30 and 40 percent for Temecula Creek and Murrieta Creek, respectively. Both filtration treatments decreased toxicity further, exhibiting a positive relationship with filter pore size. This result supports the hypothesis of microorganisms as a possible cause of toxicity. Filtration of the samples, however, can also physically remove toxicants bound to particulates, as well as organic toxicants that may adsorb to the filter material.

Table G-28 Summary of *Hyalella* TIE Results Investigating Microorganism Toxicity

Treatment	Temecula Creek		Murrieta Creek	
	Mean 72hr Survival (%)	Mean 120hr Survival (%)	Mean 72hr Survival (%)	Mean 120hr Survival (%)
Lab Control	100	100	100	100
100% Sample Unfiltered (Baseline)	80	30	100	40
100% Sample 10-micron filtered	90	70	100	70
100% Sample 0.45-micron filtered	100	100	100	100

To further investigate effects due to microorganisms versus toxicants removed by filtration, two additional sets of treatments were performed: 1) addition of piperonyl butoxide (PBO) to identify whether organophosphorous (OP) or pyrethroid pesticides may be contributing to toxicity; and 2) a chlorination/dechlorination treatment to eliminate microorganisms prior to testing.

Piperonyl Butoxide Treatment

Both OP and pyrethroid pesticides have been identified as toxicants of concern in local watersheds, as well as other watersheds throughout California (Sheipline, 1993[11] and Wheelock et al, 2004[12]). *Hyalella* are known to be extremely sensitive to both classes of pesticides. Based on this information, treatments were selected to identify if these compounds may be responsible for the observed effects to Hyalella in the samples from the Santa Margarita Watershed. Both classes of compounds are non-polar and have a high affinity for particulates and propensity to sorb to solid surfaces. PBO was added to both filtered (0.45-micron) and unfiltered samples at two concentrations. Piperonyl butoxide added to a sample can perform a dual function by reducing toxicity due to organophosphorous pesticides, while increasing the toxicity of pyrethroid pesticides. Results for these treatments are shown in Table G-29.

11 Sheipline, R. 1993. Background information on nine selected pesticides. California Regional Water Quality Control Board. Sacramento, CA, USA.

12 Wheelock, C.E., J.L. Miller, M.J. Miller, S.J. Gee, G. Shan, B.D. Hammock. 2004. Development of toxicity identification evaluation procedures for pyrethroid detection using esterase activity. Environ. Tox. Chem. Vol. 23(11): 2699-2708.

Results from this round of testing showed further diminished baseline toxicity in Murrieta Creek, while the toxicity of Temecula Creek remained relatively unchanged from the previous round. The addition of PBO dramatically increased the toxicity of both samples. Based on complete removal of toxicity in the 0.45-micron filtration treatments from the previous round of testing, it appears that addition of PBO to the post-filtered sample enhanced its toxicity. Both of these treatments suggest toxicity due to pyrethroid pesticides. At this point, it appears that any toxicity removed by filtration is due to the adsorption of a pesticide to the filter or particulates.

Table G-29 Summary of *Hyalella* TIE Results Investigating Pesticide Toxicity

Treatment	Temecula Creek		Murrieta Creek	
	Mean 48hr Survival (%)	Mean 96hr Survival (%)	Mean 48hr Survival (%)	Mean 96hr Survival (%)
Lab Control	100	90	100	90
0.45 micron filtered w/ 100 ug/L PBO Control	80	60	80	60
50 ug/L PBO Control	100	100	100	100
100 ug/L PBO Control	35	20	35	20
100% Sample (Baseline)	95	25	100	75
0.45 micron filtered w/ 100 ug/L PBO	85	45	75	60
50 ug/L PBO	10	0	20	0
100 ug/L PBO	10	0	0	0

Chlorination Dechlorination Treatment

A final treatment was performed on May 10, 2007 to further address whether microorganisms may be related to observed toxic effects with *Hyalella*. The samples and a method control were spiked to 2.0 mg/L sodium hypochlorite for 30 minutes, then dechlorinated prior to initiation. Although some toxicity was present in the baseline samples, results from this round of testing displayed further diminished toxicity in both samples. Increased toxicity was observed in the chlorination/dechlorination treated samples; however, based on similar results seen in the method control it is likely that most of the increased toxicity observed was due to the treatment procedure itself.

Carboxyl esterase / PBO Treatments

A final set of treatments were performed with the two samples to confirm the suspicion of a pyrethroid pesticide(s) causing toxicity. One of three preserved C-18 columns for each sample was eluted with 100% methanol. The elutions were then treated with carboxyl esterase enzyme (CEE) and piperonyl

butoxide (PBO) to determine the relative contribution of toxicity due to pyrethroid and/or organophosphorous pesticides. CEE is an enzyme that has been found to be an effective inhibitor of pyrethroid pesticide toxicity. Carboxyl esterases are enzymes that hydrolyze ester-containing compounds (e.g., pyrethroids) into relatively non-toxic products. As mentioned earlier, PBO can either reduce the toxicity of an organophosphorous pesticide or increase the toxicity of a pyrethroid pesticide.

A summary of results is provided in Table G-30. The untreated baseline elutions, concentrated 2 times, were less toxic than expected (85 and 70 percent survival for elutions from Temecula and Murrieta Creeks, respectively) given the magnitude of toxicity in the original samples. This reduction in toxicity is likely explained by a combination of toxicant dissipation over time during holding and partial inefficiencies related to the elution process itself. The samples were originally collected on April 20 and preserved on the C18 columns used for this evaluation as a contingency on May 1. Given the hydrophobicity of many contaminants (especially pyrethroids), toxicity may have partially dissipated due to binding of toxicants to particulates in the sample and/or the sample container itself prior to preservation on the C-18 column. Second, elution of C-18 columns with methanol is typically not 100 percent efficient at removing highly non-polar toxicants off the column. The elution efficiency can vary depending on the toxicant(s) in question and potential interference from other organics in the sample.

Despite incomplete recovery of toxicity, the TIE results were fairly definitive. In both samples the PBO treatment increased toxicity dramatically. This is a fingerprint for pyrethroids, as PBO is known to enhance pyrethroid toxicity. In addition, the CEE treatment, which reduces toxicity due to pyrethroid pesticides, enhanced survival in the Murrieta elution from 70 to 90 percent. Unfortunately, although survival was increased in the CEE treatment of the Temecula Creek elution, it was minimal due to the high survival already present in the unmanipulated baseline elution.

A bovine serum albumin (BSA) treatment was added to the testing suite as a control for the CEE treatment. Due to the proteinaceous nature of the carboxyl esterase enzyme carrier, it can act as a binding site for organic constituents in the sample. Therefore, it is possible that any reduction in toxicity observed may be the result of addition of the protein matrix itself binding up organic toxicants present, and not a product of the enzyme activity specifically. BSA is an enzyme-free proteinaceous matrix that serves as a control for this. Although increased mortality was noted in the 0.5 U/ml BSA method control as well as the samples, mortality in the 0.25 U/ml BSA treatments of both samples mimicked that in the untreated baseline methanol elutions. Thus, the protein matrix did not reduce toxicity of the samples, suggesting the response for the CEE treatment was related to the carboxyl esterase enzyme itself.

These results currently provide multiple lines of evidence that toxicity in Samples A7D1961-01 and A7D1961-02 is related to pyrethroid pesticide(s). Additional Phase II/III methods would be needed to positively ID specific pesticides.

At the present time, based on the limited studies performed, results suggest that the toxicity to *Hyalella* observed in these Santa Margarita samples is most likely due to a pyrethroid pesticide. The relatively rapid decline in toxicity in the samples is consistent with this hypothesis because these compounds have a high affinity for plastic surfaces and will adhere to the sides of a holding container. In addition, based on an in-house study and literature review, *Hyalella* are much more sensitive to pyrethroid pesticides than either *Ceriodaphnia* or *Pseudokirchneriella.*

Table G-30 Summary of *Hyalella* TIE Results Investigating Pesticide Toxicity

Stormwater Samples (C18 methanol elutions)

Sample	Replicate	Percent Survival (96 hours)						
		2x Methanol Elution (unmanipulated)	Elution + 25 ug/L PBO	Elution + 50 ug/L PBO	Elution + 0.25 U/ml CEE	Elution + 0.50 U/ml CEE	Elution + 0.25 U/ml BSA (protein control)	Elution + 0.50 U/ml BSA (protein control)
Temecula Creek	1	80	80	0	100	80	100	40
	2	100	20	0	100	80	100	80
	3	100	20	20	80	100	80	80
	4	60	60	0	100	100	80	80
	Mean	85	45	5	95	90	90	70
Murrieta Creek	1	80	0	0	100	100	100	20
	2	80	0	20	100	80	60	80
	3	60	0	0	80	80	40	40
	4	60	0	0	80	100	40	0
	Mean	70	0	5	90	90	60	35

Treatment Controls

Sample	Replicate	Percent Survival (96 hours)						
		Lab Control (LC)	LC + 25 ug/L PBO	LC + 50 ug/L PBO	LC + 0.25 U/ml CEE	LC + 0.50 U/ml CEE	LC + 0.25 U/ml BSA	LC + 0.50 U/ml BSA
Lab Control Water	1	100	80	80	80	80	100	60
	2	100	100	100	100	80	100	100
	3	100	100	100	100	100	100	100
	4	100	100	100	100	80	100	40
	Mean	100	95	95	95	85	100	75

Sample	Replicate	Percent Survival (96 hours)	
		Methanol Control (25 ug/L)	Methanol Control (50 ug/L)
Methanol (Control for PBO stock made in methanol)	1	100	100
	2	100	80
	3	100	100
	4	100	100
	Mean	100	95

PBO - Piperonyl butoxide (pyrethroid potentiator, OP pesticide inhibitor)
CEE - Carboxyl esterase enzyme (pyrethroid inhibitor)
BSA - Bovine serum albumin (protein control for CEE)
U = Units
* 5 animals per replicate added

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G-6.4.4 Discussion of the development, implementation and results of any TREs

A TIE was conducted during the 2006-2007 reporting period in accordance with Table 2 in the MRP (see Section G-6.4.3), and identified pyrethroids as a potential source of toxicity and biological degradation of both Murrieta and Temecula Creeks.

After receiving the TIE results on July 7, 2007, the RCFCD initiated work on developing a TRE. The District is currently preparing a scope of work to conduct a TRE to identify the source of the pyrethroid toxicity consistent with the requirements of the permit. However, in anticipation of the necessary requirements to further characterize sources for the TRE, additional dry weather toxicity data collection and direct pyrethroid sampling of dry weather flows (and follow up TIEs if necessary) have already been initiated. A first set of samples were collected on October 16, 2007. This TRE study is being designed to answer the following management questions:

1. Is the pyrethroid toxicity persistent in the receiving waters?
2. Does the toxicity occur during dry weather?
3. Are there any obvious sources of illicit discharges of pyrethroids that can be abated by the Permittees?
4. What are the likely sources of pyrethroid toxicity in the Santa Margarita Watershed?
5. What potential management measures are available to mitigate the impacts of pyrethroid pesticide application?

It is anticipated that the draft scope of work will be finalized by the end of October, 2007. Implementation of the Work Plan will be initiated in early 2008.

G-6.4.5 Discussion of any relevant information or conclusions from the Illicit Discharge Monitoring Program

In accordance with Section II. B. of the MRP, sixteen locations throughout the Santa Margarita watershed are monitored during dry weather for illicit connections and illicit discharges (IC/IDs). Four locations are monitored by each of the four Permittees (the County of Riverside, the City of Murrieta, the City of Temecula, and the RCFCD). Follow up actions due to IC/ID monitoring results are detailed in the individual Permittee Annual Reports.

Per the Permit, each Permittee performs illicit discharge monitoring at each of its designated four IC/ID stations. At each inspected site, general information was recorded, such as time since and quantity of the previous rainfall, and an estimation of flow and visual observations. If flow or ponded water was observed at a station and there were at least 72 hours of dry weather, field screening was conducted for the following constituents: specific conductance, turbidity, pH, temperature, and dissolved oxygen. If the results of the field screening indicate a potential illicit discharge, a sample is collected for laboratory analysis.

Section II. B. 3. of the MRP requires the Permittees to develop numeric criteria for field screening and analytical monitoring results that will trigger follow-up investigations to identify the source causing the exceedances of the criteria. RCFCD has determined the following criteria, which the Cities and County also generally follow:

- *Specific Conductance >25% higher than WQO*
- *Total Dissolved Solids >25% higher than WQO*
- *Turbidity >25% higher than the long-term average*

- *pH below 6 or above 9.5*
- *Dissolved Oxygen below 4 mg/L*

During the 2006-2007 reporting period, dry weather observations were conducted. Results are presented in Table G-31 below. Results for the four Tributary stations monitored by the RCFCD are also presented in Table G-12.

Table G-31 IC/ID Investigations Conducted by Co-Permittees

IC/ID Station Name	Date	TDS (g/L)	Sp. Cond. (µmhos/cm)	Turbidity (NTU)	pH	T (°C)	DO (mg/L)
Empire Creek	8/31/2006		2.07	10	8.45	27.6	10.27
	6/15/2007		1.74	10	7.8	22.8	7.58
Pechanga Creek	8/31/2006	Dry. No field measurements.					
	6/15/2007						
Pechanga Road Storm Channel	8/31/2006		1.47	10	9.2	28.7	11.37
	6/15/2007		1.09	10	8.9	23.4	9.4
Temecula Creek	8/31/2006		1.65	26	8.74	25.9	8.61
	6/15/2007		1.28	32	8.21	22.3	8.48
Pechanga Creek @ Pala Road	9/14/2006	Dry. No field measurements.					
	3/20/2007						
California Oaks Channel	9/12/2006	1,225	1.75	15	8.75	25.8	7.33
	5/24/2007	1,176	1.68	12	7.91	26.7	8.58
Catt Road	9/12/2006	1,470	2.1	18	8.58	27.3	9.49
	5/24/2007	1,386	1.98	21	8.98	29.8	12.01
Benton Creek @ Van Gaele Lane	9/14/2006	0.8	1200	21.2	8.3	20.6	19.99
	3/20/2007	0.7	1100	118	8.1	15.0	13.70
Tucaloca Creek (u/s MHS Road)	9/14/2006	Dry. No field measurements.					
	3/20/2007	1.0	1600	98.3	8.8	15.9	18.52
Murrieta Creek @ Clinton Keith Rd.	9/14/2006	Dry. No field measurements.					
	3/20/2007	1.9	3000	198	8.1	14.0	17.40
Redhawk Channel	9/14/2006	0.8	1200	18.0	9.4	25.2	>19.99
	8/31/2006		1.33	3	9.15	31.5	11.6
	3/20/2007	0.7	1200	51.7	9.8	17.2	18.15
	6/15/2007	Dry. No field measurements.					
Long Canyon Channel	9/14/2006	0.7	1000	32.1	8.6	20.3	19.90
	3/20/2007	0.8	1200	149.0	8.4	15.7	19.62
Santa Gertrudis Chnl. near Murrieta	9/14/2006	0.8	1300	17.5	8.7	20.3	19.99
	3/20/2007	Ponded. Insufficient water for field measurements.					
Warm Springs Creek near Murrieta	9/14/2006	Dry. No field measurements.					
	3/20/2007						

G-6.4.6 Discussion of the Progress Towards Answering the Management Questions Listed in Section II.A. of the MRP and Achieving the Goals Listed in Section 1 of the MRP.

The purpose of the monitoring program, as defined in Section I of the MRP, is to meet the following goals:

- Assess compliance with the Order No. R9-2004-001
- Measure and improve the effectiveness of the SWMPs
- Assess the chemical, physical, and biological impacts to receiving waters resulting from urban runoff
- Characterize urban runoff discharges
- Identify sources of specific pollutants
- Prioritize drainage and sub-drainage areas that need management actions
- Detect and eliminate illicit discharges and illicit connections to the MS4, and
- Assess the overall health of the receiving waters.

Section II.A.1 of the MRP states:

> *"In order to achieve the above goals, the triad and tributary Core Monitoring requirements are intended to generate water quality data that will build on existing data to begin answering the following management questions:*
>
> - *Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?*
> - *What is the extent and magnitude of the current or potential receiving water problems?*
> - *What is the relative urban runoff contribution to the receiving water problems?*
> - *What are the sources of urban runoff that contribute to receiving water problems?*
> - *Are conditions in receiving waters getting better or worse?"*

Discussion of progress achieved to address these goals and questions as a result of data presented in this report follows.

Assess compliance with Order No. R9-2004-001

This report is intended to meet the requirements of Section III. B. of the MRP.

Measure and improve the effectiveness of the SWMPs

As stated in Section III B. 1. d) of the MRP, the fourth year Monitoring Report shall include:

- A discussion of any long term trends that can be detected from existing data
- Recommendations for future monitoring
- Recommended modifications to Individual or Watershed SWMPs

Actions to improve the effectiveness of the program based on the data collected to date are provided in Section G-8.0.

Assess the chemical, physical, and biological impacts to receiving waters resulting from urban runoff

Chemical, toxicity, and bioassessment data have been collected for three years under the MRP. Due to the high variability in storm water and dry weather urban runoff, only limited conclusions about the impacts to receiving waters can be drawn. The composite data collected under the MRP, and the data to

be collected during the fourth year, are the foundation of a data set that may be analyzed to meet this goal. Table G-27 also summarizes the Permittees' analysis of data to date and identifies those pollutants that the Permittees target as part of their urban runoff program.

Characterize urban runoff discharges

Four Tributary stations are being monitored under the current program to characterize urban runoff. IC/ID investigations are being conducted to identify sources of flow and pollutants. A TRE is also being conducted to assess potential urban contributions of detected toxicity in receiving waters. Data collected to date indicate non-point sources of the constituents of concern.

Identify sources of specific pollutants

Due to the high variability in storm water and the limited number of storms monitored under the MRP, data collected to date are insufficient to distinguish between natural and urban sources of pollutants. The TRE currently being conducted and continued monitoring will provide further information. Constituents of concern have been identified, and their likely sources are described in Section G-6.4.1. Turbidity and total phosphorous have been detected at the reference stations (Adobe Creek and Cole Creek). These findings indicate natural sources for these constituents.

Prioritize drainage and sub-drainage areas that need management action

Results to date indicate that the constituents of concern appear throughout the watershed. The initial number of samples collected and variability inherent in stormwater prevent prioritizing of specific areas. The TRE being developed may contribute to the identification of drainage areas that need specific management action. At this time, due to the small size of the watershed, limited number of residents within the watershed, and homogeneity of pollutants of concern, the Permittees continue to implement progress uniformly across the watershed.

Detect and eliminate illicit discharges and illicit connections to the MS4

Sixteen stations within the Santa Margarita watershed are monitored regularly for illicit connections and illicit discharges. Results of the IC/ID monitoring and any follow-up investigations are addressed in each Permittee's Annual Report.

Assess the overall health of the receiving waters

Significant progress has been made in characterizing the health of Murrieta and Temecula Creeks and the Santa Margarita watershed. In the Upper Santa Margarita watershed, 94% of the land area is comprised of non-urban (rural residential, agriculture, state lands, federal lands and tribal lands) land uses.[13] Section 2.4 of the Riverside County Drainage Area Management Plan (DAMP) for the Santa Ana and Santa Margarita Regions contains a detailed discussion of population, land use, climate, hydrology, geology, and water quality within the SMR. Key points from this discussion include:

- Over 50% of the Upper Santa Margarita River watershed has been controlled since 1949 by the construction of Vail Dam and by the Skinner Reservoir in 1974, which created significant storage capacity in the upper watershed.[14] Due to this storage capacity, peak flow rates during major flow events below these facilities in Murrieta and Temecula Creeks for both

13 County of Riverside Assessor, 2002.

14 Phillip Williams & Associates, Santa Margarita Watershed Study: Hydrology and Watershed Processes, October 26, 1998, p. 14.

existing and future land use conditions will be lower than under natural conditions (assuming average storage conditions in the reservoirs).[15] Modifications to the hydrology of the watershed caused by Vail Dam and the Skinner Reservoir may affect stream sedimentation. Physical habitat conditions may change substantially in response to storm flows, and areas of aggregation and degradation of the stream courses will be observed. These processes may be reflected at the bioassessment stations.

- The climate of the SMR is considered Mediterranean, characterized by warm dry summers and cool rainy winters. Precipitation amounts range from less than 10 inches per year near Vail Reservoir to over 40 inches west of Palomar Observatory. However, shading from the coastal ranges forming the western boundary of the watershed lead to substantially less precipitation throughout valley areas of this inland watershed.

- Runoff in the receiving waters is primarily due to rainfall. Almost all streams are ephemeral, only flowing during and immediately after rainfall events. A handful of mountainous streams are fed by groundwater and flow through parts of the summer. Rising groundwater near the confluence of Murrieta and Temecula Creeks also provides a small perennial base flow to the Santa Margarita River.

- Due to lack of flow, significant aquatic habitat is limited to a few locations.

Beneficial uses of the Upper Santa Margarita watershed are presented in Table G-32.

Table G-32 Beneficial Uses of Upper Santa Margarita Watershed

Beneficial Use	Murrieta Creek	Cole Canyon	Warm Springs Creek	Santa Gertrudis Creek	Long Valley	Temecula Creek	Santa Margarita River
Municipal and Domestic Supply	X	X	X	X	X	X	X
Agricultural Supply	X	X	X	X	X	X	X
Industrial Service Supply	X	X	X	X	X	X	X
Industrial Process Supply	X	X	X	X	X	X	
Ground Water Recharge	X					X	
Contact Water Recreation				X	X	X	X
Non-contact Water Recreation	X	X	X	X	X	X	X
Warm Freshwater Habitat	X	X	X	X	X	X	X
Cold Freshwater Habitat							X
Wildlife Habitat	X	X	X	X	X	X	X
Rare, Threatened or Endangered Species							X

The USEPA has indicated that major potential sources creating impacts to the Upper Santa Margarita watershed include urban runoff/storm sewers as well as unknown point sources. In the Upper Santa Margarita watershed, Murrieta Creek has been listed as impaired because of high levels of total phosphorous. However, phosphorous was only detected at Murrieta Creek during one dry weather event

15 Phillip Williams & Associates, Santa Margarita Watershed Study: Hydrology and Watershed Processes, October 26, 1998, p. 20.

during the 2006-2007 season, and the concentration was below the BPO. This may be a result of the variability in storm water runoff or of improving water quality. The upper Santa Margarita watershed experienced significant fires during the fall of 2003, as well as fires in 2004, 2005, and 2006. In addition, the wet season of 2004-2005 had rainfall greater than 200% of the annual average (see Section G-4.0). The combined effect of the fires and storms likely contributed to the variability in the levels of contaminants of concern for the monitored events under the MRP.

Constituents of concern for the watershed, as determined by data collected under the MRP, are presented in Section G-6.4.1.

Toxicity among the lower watershed sites was consistent with previous results. Toxicity was associated with storm water at Temecula and Murrieta Creeks and appears to be a chronic condition, as seven of the last eight samples have exhibited acute toxicity to *Hyalella azteca*. Toxicity Identification Evaluations on Temecula and Murrieta Creeks indicated a pyrethroid pesticide to be the probable cause of toxicity.

A complete historical bioassessment evaluation is unavailable due to the differences in IBI calculation methods of past data. The latest bioassessment results in May 2007 indicate a drop in the overall biological integrity (represented as the IBI score) at all sites. The reduction is possibly related to the low-flow conditions and not water quality impairment. However, the continuously degraded "poor" IBI bioassessment results at Murrieta Creek may indicate anthropogenic inputs. Temecula Creek was categorized as having a "poor" benthic macroinvertebrate community. Chronic "marginal" physical habitat conditions may contribute to this assessment, particularly in relation to sedimentation. However, Temecula Creek upstream of this location is a broad sandy wash and sediment movement is an expected natural variable. Chemical exceedances have been noted in Temecula Creek, however it is difficult to differentiate between the conditions attributable to chemical and physical stressors. Adobe Creek has consistently scored high IBI and physical habitat quality scores. Bioassessment analysis will continue and a more integrative historical assessment of data will be performed following the 2007-2008 cycle.

Bioassessment results for the reference station Adobe Creek were "good" during this reporting period. However, physical habitat quality scores for Murrieta Creek and Temecula Creek are classified as "sub-optimal" and "marginal", respectively, and biological conditions at were "poor" at both sites. Murrieta Creek and Temecula Creek are classified as "impaired" based on all three lines of evidence of the Triad approach, as analyzed under the current requirements of the MRP.

A poor relationship between the biological condition of the stream and the physical habitat quality at Murrieta Creek indicates that water quality may be the driver of the chronic biological impairment. Specifically, the physical habitat quality at Murrieta Creek is currently within 17 points of being categorized as "optimal" and appears to have improved continuously over the last five sampling periods. However, the IBI score has remained relatively stable at "poor." The TIE conducted indicated a pyrethroid pesticide(s) as the likely cause of toxicity.

Bioassessment data also categorized Temecula Creek as having "poor" biological integrity. Similar to Murrieta Creek, physical habitat quality scores have generally increased while biological integrity scores have remained low. The only constituent found to be in exceedance of their criteria in samples collected concurrent to the October 2006 bioassessment sampling event was fecal coliform bacteria. The decrease in the IBI score in the spring of 2007 compared to previous bioassessments at Temecula Creek may have been a result of low flow conditions. Samples were also toxic to *Hyalella* in the wet weather sample collected three weeks prior to the bioassessment event.

A more informative dataset will be produced after the 2007-2008 reporting period by re-analyzing historical bioassessment data in light of the new Southern California IBI assessment metrics, and comparing the results to four complete years of analytical data for constituents of concern, and two years

of toxicity data followed up with a TRE to identify the probable cause(s) of toxicity. Also, in order to conduct a thorough Triad Approach as outlined in the MMP, commencing in the 2007-2008 monitoring year, all three assessments (Bioassessment, Chemistry, and Toxicity) will be conducted during dry weather sampling events and analysis will separately be conducted of dry and wet weather conditions to allow for better characterization of conditions.

G-7.0 SPECIAL STUDIES

Required Special Studies

Special studies are intended to address specific research or management issues that are not addressed by the routine core monitoring program. The Permittees have conducted the following special studies as directed by the Executive Officer:

Numeric Criteria to Control Runoff from New Developments

The Permittees developed numeric criteria for controlling the volume, velocity, duration and peak discharge rate of runoff from new developments (required in section F.2.b(9) of Order No. 2004-001) to minimize erosion of natural stream channels and impacts to instream habitat. Since July 2005, the Permittees have implemented the SUSMP, which establishes numeric criteria for Priority Development Projects. Each permittee's details of implementation are described in each respective individual SWMP.

To develop final numeric criteria in compliance with the Permit, the Permittee's have also initiated the following special studies:

LID BMP Testing and Evaluation Facility: In October 2007, the Santa Ana Watershed Project Authority (SAWPA) awarded the District a Proposition 13 grant to construct a LID testing and demonstration facility. This $1.2 million dollar project will be implemented in cooperation with the SMC and will be constructed at the District's offices in Riverside. The facility will be used to monitor the performance of LID features in the field, to illustrate LID features in training workshops, and to assist in the development of technical guidance regarding LID features. The BMPs include porous pavements, bioswales, and water quality planters. The BMPs will be designed based on the current state of science and will specifically incorporate mechanisms to allow both inflow and effluent water quality and flow volume measurements. The results of the study will be used to establish numeric criteria for crediting flow reductions to developments that implement these BMPs. The project is proposed to initiate construction in September 2008. Monitoring duration will be dependent on power analyses conducted as part of the development of the final monitoring plan. Data will be coordinated with the SMCs overarching LID BMP evaluation project.

SCCWRP Hydromodification Study: The District continues to participate in SCCWRPs efforts to develop regional design criteria for hydromodification.

Through the Southern California Coastal Water Research Project and Colorado State University, the Santa Margarita Permittees are participating in a Hydromodification Study. This special study is addressing the following questions:

- Which streams are at the greatest risk of effects of hydromodification?
- What are the anticipated effects, in terms of increased erosion, sedimentation, or habitat loss associated with increases in impervious cover?
- What are some potential management measures that could be implemented to offset hydromodification effects?

The Hydromodification Study will produce three tools for use by MS4 Program managers:

- Screening tool to evaluate whether a project is likely to be of concern for hydromodification.

- Effects tool to evaluate the expected magnitude or intensity of the effects of hydromodification.
- Mitigation tools to guide mitigation and management measures.

The District used a specific site selection criterion to identify 14 locations in the Santa Ana and Santa Margarita Watershed for consideration as part of the Study. SCCWRP staff visited each of these sites and made assessments on the appropriateness of each location. Sites were characterized as either *Modeling* or a *Screening sites*. *Modeling sites* will be physically surveyed and will be used to determine how a particular stream will react for a variety of hypothetical situations. *Screening sites* will be used to identify the significant thresholds between stream types. Out of the fourteen (14) possible sites, five (5) monitoring sites were selected as modeling sites based on their value toward the goals of this study. In addition, the District has identified at least 5 possible screening sites, but the final number of sites will be determined by SCCWRP's staff.

Unfortunately, the sites identified within the Santa Margarita watershed were eliminated by SCCWRP staff because the sites did not meet specific study criteria. The District has been assured by SCCWRP staff that the sites available in this study will provide enough data to be representative of the specific conditions in the Santa Margarita watershed. The SCCWRP staff has conducted a gap analysis to ensure that all of the various watershed conditions necessary to complete the study are analyzed. Therefore, Santa Ana and other watershed sites will act as surrogates for Santa Margarita sites. The District offered the most number of sites of any municipality in the study and providing comprehensive support for implementing project tasks. The District plans to continue to actively participate with this effort.

Toxicity Identification Evaluation (TIE)

Toxicity monitoring at Temecula Creek and Murrieta Creek was initiated in 2004 using *Ceriodaphnia*, *Selenastrum*, and *Hyalella*. During the 2004-05 and 2005-06 reporting periods, toxicity to *Hyalella* was observed in 1 of 3 and 3 of 4 stormwater collections respectively, for both Temecula and Murrieta Creeks. During the 2006-07 reporting period, 1 of 1 stormwater collections resulted in toxicity to *Hyalella*. Toxicity was not observed to either *Ceriodaphnia* or *Selenastrum* in any of the eight samples collected over the last 3 annual reporting cycles. Dry weather samples have not been tested for toxicity to date. Toxicity testing during the 2005-06 season categorized the toxicity in both creeks as persistent.

The MRP Section II. A. I. 4, states:

> *"When results from the chemistry, toxicity, and bioassessment monitoring...indicate urban runoff-induced degradation, Permittees shall evaluate the extent and causes of urban runoff pollution in receiving waters and prioritize management actions to eliminate or reduce sources. Toxicity Identification Evaluations shall be used to determine the cause of the toxicity, and Toxicity Reduction Evaluations shall be used to identify sources and implement management actions to reduce pollutants in urban runoff causing toxicity."*

A TIE was completed on July 7, 2007 of the data collected during the 2006-2007 reporting period in accordance with Table 2 in the MRP, and identified pyrethroids as a potential source of toxicity and biological degradation of both Murrieta and Temecula Creeks. Bioassessments at both of these creeks have indicated "Fair" to "Poor" benthic communities and physical habitats ranging from "Suboptimal" to "Marginal". Pyrethroid pesticides are not currently measured in either creek. During the four toxic wet weather collection events between 2005 and 2007, measured analytes do not appear to exhibit a relationship with toxicity.

Due to limited rainfall during the 2006-2007 reporting period, only a single TIE was able to be conducted.

A single TIE assessment of pyrethroids as the source of toxicity is not sufficient to verify the persistence of pyrethroids as the sole source of toxicity. Further, additional data collection is necessary to characterize likely sources of pyrethroid toxicity.

Further, methods to measure pyrethroid TIE methods have proven challenging because method development requires the ability to measure low concentrations of the toxicant, which remains a challenge for pyrethroids; Phase II TIE Methods are not yet available. However, TIE methods for pyrethroids are progressing well and moving towards standardization (Pesticides in Urban Surface Water Annual Review of New Scientific Findings 2007, San Francisco Estuary Project, June 2007, pg. 7).

Toxicity Reduction Evaluation

After receiving the TIE results on July 7, 2007, the District initiated work on developing a TRE. The District is currently developing a TRE to identify the source of the pyrethroid toxicity consistent with the requirements of the permit. However, in anticipation of the necessary requirements to further characterize sources for the TRE, additional dry weather toxicity data collection and direct pyrethroid sampling of dry weather flows (and follow up TIEs if necessary) have already been initiated. A first set of dry weather pyrethroid, toxicity samples were collected at the TRIAD stations on October 16, 2007. This study is being designed to answer the following management questions:

1) Is the pyrethroid toxicity persistent in the receiving waters?
2) Does the toxicity occur during dry weather?
3) Are there any obvious sources of illicit discharges of pyrethroids that can be abated by the Permittees?
4) What are the likely sources of pyrethroid toxicity in the Santa Margarita Watershed?
5) What potential management measures are available to mitigate the impacts of pyrethroid pesticide application?

Implementation of the TRE will begin in 2007-2008 and interim results will be submitted as part of the 2007-2008 Annual Report.

Investigation Order No. R9-2006-0076

The San Diego Regional Board issued Investigation Order No. 1 R9-2006-0076 (Order) to address, in part, impairment of the Santa Margarita Lagoon by eutrophication. This Order was issued to stakeholders in the watershed tributary to the lagoon and requires the development of water quality monitoring data to develop TMDLs and load and wasteload allocations and reductions.

During fiscal year 2006-2007, the Santa Margarita Region Permittees have participated with other parties named in the Order in the development of a monitoring program workplan. The workplan will guide the collection of monitoring data needed to characterize dry weather flow and storm flow influenced water quality in order to complete development of TMDLs and load and wasteload allocations and reductions and will address the applicable questions presented in item A.1 of the Order. Monitoring commenced in October 2007.

Additional Special Studies

In addition the special studies directed by the Executive Officer of the San Diego Regional Board, the Santa Margarita MS4 Permittees supported the implementation of the following special studies.

Development of Local Pesticide Regulatory Activities

Through CASQA, the Permittees are supporting a special study to develop local regulatory activities to more effectively control pesticide usage to protect receiving waters. This study is being conducted under a grant from the State Water Resources Control Board, and is also funded by the San Francisco and Central Valley Regional Water Quality Control Boards.

Laboratory Inter-calibration

Through the SMC, the Riverside County Permittees are supporting the implementation of laboratory inter-calibration studies for toxicity, chemistry and bioassessment. The goal of this three-year special study is to ensure quality and comparability among SMC analytical laboratories. This study will develop two basic products: a laboratory guidance manual and standard language for proposals and contracts.

Standardization of Toxicity Testing Methods

The toxicity testing methods described in the MS4 permits issued to the San Diego, Orange County and Riverside County Permits issued by the San Diego Regional Board are all different. In addition, there are differences between toxicity testing methods described in the MS4 permits issued to Riverside County by the San Diego, Santa Ana and Colorado Regional Boards. The Santa Margarita Region MS4 Permittees are participating in a special study to coordinate development of standard toxicity testing methods to facilitate implementation of the requirements and to provide more comparable data between MS4 permit areas. This study will develop minimum monitoring criteria, conduct inter-calibration testing and develop a toxicity testing guidance manual.

Index of Biological Integrity for Low Gradient Streams

Through the SMC, the Permittees are participating in the development of an index of biological integrity (IBI) that is appropriate for Low Gradient Streams. The southern California (SC IBI) was tested in 15 low gradient streams of varying levels of impact. It was clear from this study that the IBI is not the best assessment tool for describing impact in these habitats. The low gradient project was so successful that the Working Group helped SCCWRP and CDFG to prepare a State Consolidated Grant proposal to test the SC IBI in another important habitat; non-perennial streams.

Regional Watershed Monitoring Program

Through the SMC, the Permittees participated in the development of the Regional Watershed Monitoring Program. The Regional Watershed Monitoring Program addresses three questions of importance to regulated agencies, regulatory organizations, and public:

1. What is the condition of streams in Southern California?
2. What are the major stressors to aquatic life?
3. Are conditions in locations of special interest getting better or worse?

Each of these questions is answered by a different component of the monitoring program. Together, these components determine the spatial and temporal extent of impacts, their magnitude, and potential causes.

The first question addresses the magnitude and spatial extent of impacts of all streams in the region using a probabilistic sampling design. The goal will be to achieve an estimate of impacted stream miles at varying severity of impairment. In addition, the spatial extent of impact will be compared among watersheds and land uses. At each site, multiple indicators will be used to assess the ecological health of

the stream including water chemistry, aquatic toxicity, benthic macroinvertebrate community structure, algal biomass, and physical habitat.

The second question addresses the stressors that affect the health of streams in Southern California. The goal of this component is to build upon the data collected in the first component to develop a relative risk index (Van Sickle et al. 2006). The response variables will focus on ecological health endpoints such as biological measures of assemblage metrics or indices (i.e., IBI or O/E).

The third question addresses the temporal changes in stream health at locations of primary interest to managers. The goal is to assess if stream health is improving, degrading, or remaining static over time. To answer this question, a network of long-term monitoring sites will be established across the region. At each site, water chemistry and toxicity will be evaluated at least annually during dry weather.

G-8.0 ACTIONS

Data collected to date indicate that several actions are called for to improve the monitoring program and respond to the monitoring results. These actions may be taken immediately, with the goal of improving the monitoring program before final recommendations are made after the fourth year of effort.

Continue the TRE
A Toxicity Reduction Evaluation was begun in the spring of 2007 with the TIE. The TRE is described in Section G-6.4.4.

Sample Toxicity During Dry Weather Bioassessment Events
Toxicity is currently being sampled for at the Triad stations during wet weather events, but the bioassessments occur during dry weather. However, according to the Model Monitoring Program, the three components of the Triad approach (chemistry, toxicity, and bioassessment) should be conducted at the same time. Bioassessments can not be conducted during wet weather due to safety concerns and the planning necessary. Beginning with the 2007-2008 season, toxicity sampling will be conducted during dry weather, at the same time as the bioassessments and dry weather chemistry sampling event are conducted. Thus, the Triad approach will be conducted during dry weather. Wet weather monitoring will focus on toxicity and chemistry. This action will modify the current program to be consistent with Model Monitoring Program approach.

Section G-2.0 and Section I of the Watershed Annual Report identify actions based on Pollutants of Concern and recommend activities to be conducted jointly by the Permittees to address the identified water quality problems.

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Storm Water Panel Recommendations to the California State Water Resources Control Board. The feasibility of numeric effluent limits applicable to discharges of stormwater associated with municipal, industrial, and construction activities. July 19, 2006.

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U.S. Environmental Protection Agency (USEPA), 1983, Results of the National Urban Runoff Program, Volume 1 - Final Report, Water Planning Division, Washington, D.C, NTIS Publication No. 83-185552.

GeoMAC Wildfire Information (http://geomac2.cr.usgs.gov/#)

Attachment A

Station Fact Sheets

Digital Copies Only

Attachment B

Summary of SMR
Monitoring Program Parameters Analyzed

Ambient Air Temperature (#1017, °C; #1018, °F) No BPO

Air temperature can affect water temperature, which can, in turn affect the concentration of dissolved oxygen and un-ionized ammonia. Drinking water standards for fluoride are based on maximum daily air temperatures. Benthic organisms may not thrive as well in warmer climates.

Ammonia-nitrogen (#1051) No BPO for total ammonia
BPO = 0.025 mg/l for unionized ammonia

Ammonia may be found naturally in surface or ground waters from the decomposition of nitrogenous organic matter, being one of the constituents of the complex nitrogen cycle. Rivers known to be unpolluted have very low ammonia concentrations, generally less than 0.2 mg/L as N. Ammonia may be discharged in industrial wastes. Ammonia is also a component of fertilizer, and its presence may indicate agricultural use or over-application in domestic and recreational areas. In water, ammonia occurs in two forms, which together are called the total ammonia nitrogen. Chemically, these two forms are represented as ionized ammonia (NH_4) and un-ionized ammonia (NH_3). This is important to know, since NH_3, unionized ammonia, is the form that is toxic. Water temperature and pH will effect which form of ammonia is predominant at any given time in an aquatic system.

Arsenic (#1070) BPO = 0.05 mg/l
CTR = 0.15 mg/l

Elemental arsenic may be found to a small extent in nature mostly as the arsenides of true metals or pyrites. Its major use, however, is as a component of pesticides (insects, weeds, fungi) and as a wood preservative.

Bacteria; Fecal coliforms (#1075) BPO = 2,000 MPN

Fecal coliform organisms are intestinal bacteria that originate in excretions from humans, mammals, amphibians, and birds.

Bacteria; Total coliforms (#1085) No BPO

Includes all coliforms, including the non-fecal forms on fibrous and vegetable matter in the water.

Bacteria; *E. coli* (#1077) No BPO

Escherichia coli is a specific strain of bacteria that is one of the main species of bacteria that live in the lower intestines of mammals and is of special concern to human health.

Beryllium (#1120) BPO = 0.004 mg/l

Beryllium is relatively rare and not likely to occur in natural waters. Industrial uses of beryllium include metallurgy and electrodes for neon signs.

Cadmium (#1145) BPO = 0.005 mg/l
CTR = 0.25 µg/l

Cadmium has many industrial uses, including metallurgy, electroplating, ceramics, pigmentation, photography, and textile printing. Cadmium salts are sometimes employed as insecticides and antihelminthics.

Chlorpyrifos (#1178) CTR = 0.041 µg/l
0.02 µg/l (WQ objective set by US DF&G)

Chlorpyrifos is an organophosphate pesticide. USEPA reports it as one of the most widely used organophosphate insecticides in the United States. It is used on more than 40 agricultural crops, in non-agricultural settings as a termiticide, in homes, lawns, and offices, and on pet collars.

Chromium, all valences (#1180) BPO = 0.05 mg/l

Chromium wastes can occur in both the hexavalent and trivalent forms. Potential industrial sources include metal pickling and plating operations, aluminum anodizing, cooling water antifouling, textile dyeing, ceramic and glass manufacturing, photography, and in the manufacture of paints, dyes, explosives, ceramics, and paper.

Color (#1195) BPO = 20 units

There are numerous natural sources of color in water including breakdown of minerals (especially those containing iron or manganese compounds) or vegetable matter, humus, peat, tannins, algae, weeds, and protozoa. Sources may include irrigation return water and chemicals. It can be expected that waters flowing through erodible soils, such as those found in the Santa Margarita River watershed, will have a detectable color concentration.

Conductance, specific (#1200, field; #1205, lab) No BPO

Specific conductance measures the ion concentration of water. Increased conductivity increases the osmotic pressure of water, which can be harmful to aquatic organisms. Natural inland waters usually contain small quantities of mineral salts in solution, but waters containing brine, chemical, and agricultural irrigation wastes may have excessive levels of specific conductance.

Copper (#1210) No BPO
CTR = 9 µg/l

Copper salts are not commonly found in natural surface waters. Potential industrial sources of copper may include corrosion of copper and brass tubing, copper compounds used to control undesirable plankton organisms, alloy production, electrical wiring, pipes, roofing, and many purposes where its conductivity or corrosion resistance are important. Copper salts are also used in insecticides and fungicides and many industrial processes.

Cyanide, total (#1215) No BPO
CTR = 5.2 µg/l

Cyanides may be found in effluents from metal cleaning and electroplating processes, and from chemical industries. Cyanide concentrations are usually well below the CTR, and are often below the detection limit (RDL = 5 µg/l). Cyanide has not been monitored since 1994.

Detergent – MBAS (#1225) BPO = 0.5 mg/l

Surface-active agents such as soaps, detergents, emulsifiers, wetting agents, and penetrants lower the surface tension or other interfacial properties of their solvents. This allows dirt to be removed from clothing and for greater absorptions of pesticides into their target organisms.

Diazinon (#1227) No BPO
0.16 µg/l (WQ objective set by US DF&G)

Diazinon is an organophosphate pesticide. The USEPA reports it as one of the most widely used organophosphate insecticides in the United States. It is used on more than 60 agricultural crops, in non-

agricultural settings as a termiticide, and in homes, lawns, and offices. Its use is considered a risk to humans, birds, and other forms of wildlife.

Discharge Level (Hydron # 232) No BPO

Also known as the flow rate, high discharge rates may cause erosion in an earthen channel. Discharge is used along with chemical concentration to calculate the mass loading. In a well-defined channel, the water level, along with the rating curve, can be used to calculate the flow rate.

As discussed in the main body of this Section, outfall discharge rates during dry weather are very low to nonexistent during dry weather, and there are almost no flows in the receiving waters. At the bottom of the watershed, approximately ¼ - ½ mile from their confluence with the Santa Margarita River, surfacing bedrock forces groundwater to rise, creating perennial flows. Where there are dry-weather flows, there has not been a significant change over time. Observing trends in flows near the bottom of the watershed are confounded by the continual addition of imported flows and well blowoff by the Rancho California Water District.

Wet weather flows depend on the size and duration of the storm, the antecedent moisture condition (e.g., moisture content of the soil prior to the storm), and the rate at which the rain falls.

Hardness, total (as $CaCO_3$) (#1265) No BPO

Total hardness measures the concentration of the following ions (converted to an equivalent concentration of $CaCO_3$):

Ca^{+2} HCO_3^- Mg^{+2} SO_4^{-2} Na^+ Cl^- K^+

Analyses of specific ions are included elsewhere in this section. Hardness in water may be caused by the natural accumulation of salts (primarily calcium and magnesium ions) from contact with soil and geological formations. Potential sources may include irrigation return flows. Imported water may also be a source of elevated hardness levels, for example, Colorado River Water has an average hardness of 250-300 mg/L, which is considered hard water.

Iron (#1285) BPO = 0.3 mg/l
CTR = 1.0 mg/l

Iron may be found naturally from the corrosion of iron in mineral deposits and iron-bearing ground water. Industrial sources include pickling operations and corrosion from iron pipes and other materials.

Lead (#1290) No BPO
CTR = 2.5 µg/l

Lead is a harmful substance that can lead to neurological damage. Natural sources of lead in water include leaching from mountain limestone and galena. Potential industrial sources of lead may include legacy pollution from use in motor fuels and use in solder in electronics and piping.

Manganese (#1305) BPO = 0.05 mg/l

Potential sources of manganese may include manufacture of dry-cell batteries, glass and ceramics, paints and varnished, inks and dyes, and in agriculture to enrich manganese-deficient soils.

Mercury (#1310) BPO = 0.002 mg/l
CTR = 0.77 µg/l

Mercury can appear in the metallic state in some natural waters, but the ionic form is most harmful to aquatic life. Potential industrial sources of mercury may include use in scientific and electrical instruments, in dentistry, in solders, in the manufacture of lamps and batteries, and in the improper disposal of thermostat switches and old thermometers and manometers.

Nickel (#1320) BPO = 0.1 mg/l
CTR = 0.052 mg/l

Nickel, in its pure metal form, is not a problem as it is not soluble in water. However, many nickel salts are highly soluble in water. Nickel salts can by a by-product of many industrial uses, such as the metal-plating industry.

Nitrogen: Nitrate (N) (#1340) No BPO

Nitrates are an essential fertilizer for plant life, and are therefore rarely found in natural surface waters at elevated concentrations. Nitrates may also be present in groundwaters as a result of excessive application of fertilizer or cesspool or septic tank leachate. Potential uses of nitrogen may include field application of fertilizer, livestock wastes, and irrigated agriculture.

Nitrogen: Total (N) (#1355) BPO = 1 mg/l

Nitrogen is present in natural and polluted waters as ammonia, organic nitrogen, nitrites, and nitrates. The total concentration of nitrogen is not as important as the form in which it exists. Organic nitrogen, amino acids, and ammonia may inhibit biological growth whereas nitrates stimulate phytoplankton. The various components of total nitrogen are discussed under separate headings.

Nitrogen: total Kjeldahl (N) (#1360) No BPO

High total Kjeldahl nitrogen concentrations may indicate the presence of treated effluent or manure-based wastes.

Odor (#1375) No BPO

Natural sources of odor in water include living microscopic organisms and decaying vegetation, including weeds, bacteria, fungi, actinomycetes, algae, and decaying organic matter. Sources that may generate odor-causing wastes include: petroleum, gasoline, and rubber; chemicals and dyes; and milk products, and other food products.

Odor is reported in terms of "threshold odor number" (TON), which is calculated from the amount of sample in the most diluted portion giving perceptible odor. The threshold odor number equals the volume of the dilution divided by the volume of the sample in the dilution.

It is frequently difficult, if not impossible, to identify the specific cause of an odor or taste, as many substances may cause what appears to be the same effect, or because mixtures of substances may be involved. Chemicals responsible for tastes and odors may include halogens, sulfides, ammonia, turpentine, phenols and cresols, picrates, various hydrocarbons and unsaturated organic compounds, mercaptans, tar and tar oils, hydrocarbons, detergents, pesticides, and innumerable others, many of unknown identity.

Oil & Grease (#1380) No BPO

Oil and grease in water may coat aquatic life and create undesirable odors. Potential industrial sources of oil and grease may include machining operations and garages.

Oxygen, dissolved (#1435) BPO = 5 mg/l

Dissolved oxygen concentration is a function of the temperature and salinity of the water. Increasing temperature or salinity decreases the oxygen-holding capacity of water. Dissolved oxygen is not constant in a natural system, as organisms, chemical reactions, and physical conditions use or generate oxygen at various rates. As dissolved oxygen levels decrease, aquatic life suffers or dies, and in the absence of oxygen, anaerobic decomposition may lead to unfavorable odors and colors in the water.

Oxygen; field saturation (#1445) No BPO

Oxygen saturation is a function of air oxygen pressure, water temperature, and dissolved solids present. Oxygen solubility is higher in fresh waters than in saline waters.

pH (#1705, field; #1710, lab) BPO = 6.5 to 8.5 units

pH is not a pollutant in itself, but an indicator of pollution. Natural waters and treated sewage are usually neutral or slightly alkaline, but many industrial wastes are strongly acidic or alkaline. Acid wastes include tan liquors, acid dyes, coal-mine drainage, sulfite waste liquors, pickling liquors, and some brewery wastes. Alkaline wastes may include masonry wastes, soda- and sulfate-pulp rinse waters, laundry wastes, and bottle wash waters.

Phenolic Compounds (#1459) BPO 1.0 µg/l

Phenols are widely used as disinfectants, in the manufacture of synthetic resin, medical, and industrial compounds, and as a reagent for chemical analyses. Potential sources of phenolic wastes may include the distillation of wood, coke ovens, oil refineries, chemical plants, sheep dips, and human and animal refuse.

Phosphorus, total (P) (#1485) BPO = 0.1 mg/l

Phosphorus in nature is found in the form of phosphates in several minerals and it is a constituent of fertile soils, plants, and the protoplasm, nervous tissue and bones of animals. It is an essential nutrient for plant and animal growth. Excessive phosphorus may lead to an overabundance of algae growth.

Selenium (#1520) BPO = 0.05 mg/l
CTR = 5 µg/l

Selenium is found in some soils as ferric selenite or calcium selenate. It may also be found in decayed plant tissue. Industrial sources of selenium include pigmentation in paints, dyes, and glass production; as a component of rectifiers, semiconductors, photo-electrical cells, and other electrical apparatus; as a supplement to sulfur in the rubber industry; as a component of alloys; and for insecticide sprays. Selenium may also be found in the municipal sewage from industrial communities.

Silver (#1535) BPO = 0.1 mg/l

Industrial sources of silver include manufacture of jewelry and silverware, in alloys, for electroplating, and in the processing of food and beverages. Silver nitrate is used in photography, ink manufacture, electroplating, coloring porcelain, and as an antiseptic.

Solids, total dissolved (#1625) BPO = 750 mg/l

In natural waters the dissolved solids consist mainly of carbonates, bicarbonates, chlorides, sulfates, phosphates, and possibly nitrates of calcium, magnesium, sodium, and potassium with traces of iron, manganese and other substances. Potential sources of dissolved solids may include chemical wastes, dissolved salts, acids, alkalis, or drainage waters from irrigated land

Solids, total suspended (#1630) No BPO

In natural waters, suspended solids consist normally of erosion silt, organic detritus, and plankton. Sources of suspended solids include industrial and domestic wastes, increased erosion from cleared or cultivated land, gravel washings and dusts that are blown into streams.

Temperature, field (#1655, deg. C; #1660, deg. F) No BPO

Water temperature in natural waters is influenced by ambient air temperature, vegetative cover, nature of bed material (*e.g.*, gravel vs. sand), and stream depth. Many industrial and agricultural wastes lead to raising of water temperatures, as does concrete-lining of streams. Increased water temperature may result in decreased oxygen capacity, generation of anaerobic zones, and fungal growth.

Thallium (#1665) BPO = 0.002 mg/l

Thallium salts are used as poisons for rodents, as ant bait, and are used in dyes and pigments in fireworks, in optical glass, and as a depilatory.

Turbidity (#1690, field; #1695, lab) BPO = 20 NTU

The turbidity of a water sample is a measure of the extent to which the intensity of light passing through is reduced by the suspended matter. Turbidity in water is attributable to suspended and colloidal matter, which diminishes light penetration. Increased turbidity may also indicate the presence of pathogens. Natural sources of turbidity include microorganisms or organic detritus; silica or other mineral substances including zinc, iron, and manganese compounds; and clay or silt. Erosion may also lead to increased turbidity as well as domestic sewage and industrial wastes, such as mining, dredging, logging, and pulp and paper manufacturing.

Zinc (#1700) No BPO
CTR = 120 µg/l

Potential industrial sources of zinc and zinc salts may include galvanizing, alloy manufacture, for electrical purposes, in printing plates, dye manufacture and the dyeing process, paint pigments, cosmetics, pharmaceutics, dyes, and insecticides.

Attachment C

Historical Water Quality Data

Source: Bulletin No. 57, Santa Margarita River Investigation, Vol. I, State of California Dept. of Public Works, Division of Water Resources, June 1956, pgs. 89-90

Historical data that exceed current BPOs are marked with a box around the value.

TYPICAL MINERAL ANALYSES OF SURFACE WATERS[a]

Stream	Stream mile	Date Time[b]	Dis-charge, second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids, ppm	Total hardness as $CaCO_3$, ppm	Per cent sodium
Hydrographic Unit 1																			
Cole Canyon Creek	93-30.1-9.0-0.1	1-25-54	23	149	7.6	10 / 0.5	6 / 0.50	10 / 0.5	2 / 0.06	--	43 / 0.7	15 / 0.32	14 / 0.4	7 / 0.11	0.3	0.01	132	50	30
Murrieta Creek	93-30.1-0.4	6- 4-54	1[e]	1,266	7.6	44 / 2.2	15 / 1.22	196 / 8.53	15 / 0.38	--	256 / 4.1	76 / 1.58	223 / 6.3	4 / 0.06	0.6	0.4	743	171	69
Santa Gertrudis Creek	93-30.1-3.9-0.6	1-25-54	55	96	7.0	8 / 0.4	3 / 0.25	5 / 0.23	2 / 0.06	--	11 / 0.5	10 / 0.20	7 / 0.2	6 / 0.09	0.0	0.01	109	32	24
Warm Springs Creek	93-30.1-4.8-0.5	2-27-53	0.12	1,040	7.9	38 / 1.9	11 / 0.89	162 / 7.05	--	--	140 / 2.3	80 / 1.67	216 / 6.1	2 / 0.03	--	1.05	586[d]	140	73
		3-22-54	110	417	7.6	28 / 1.4	8 / 0.67	40 / 1.73	4 / 0.09	--	79 / 1.3	50 / 1.05	50 / 1.4	5 / 0.07	0.1	0.03	306	104	45
Hydrographic Unit 2																			
Coahuila Creek	93-41.6-11.3	12- 9-53 1515	0.17	600	8.0	40 / 2.0	13 / 1.10	73 / 3.19	4 / 0.11	--	166 / 2.7	83 / 1.72	67 / 1.9	4 / 0.07	0.4	0.1	419	155	50
Lancaster Creek	93-41.6-5.5	11-21-50 1615	0.28	1,410	8.6	60 / 3.0	33 / 2.7	250 / 10.90	--	--	248 / 4.0	247 / 5.14	210 / 6.2	4 / 0.06	--	0.0	936[d]	285	67
Wilson Creek	93-41.6-7.2-1.8	5-14-54 0855	0.19	1,321	8.3	126 / 6.3	39 / 3.25	125 / 5.43	7 / 0.17	--	226 / 3.5	257 / 5.35	119 / 3.35	2 / 0.04	0.6	0.1	957	478	36
Hydrographic Unit 3																			
Arroyo Seco Creek	93-41.1-1.7	4- 8-54	5[e]	357	8.1	35 / 1.75	11 / 0.90	34 / 1.45	3 / 0.07	--	149 / 2.45	41 / 0.86	32 / 0.9	4 / 0.06	0.4	0.1	282	132	35
Chihuahua Creek	93-55.1-4.0	1-10-51 1730	0.02	2,130	8.1	234 / 11.7	92 / 7.50	230 / 10.0	--	--	290 / 6.4	802 / 16.7	125 / 5.5	2 / 0.03	--	0.1	1,751[d]	960	34
Temecula Creek	93-45.0	3-22-54	350	135	7.3	16 / 0.8	2 / 0.2	8 / 0.35	2 / 0.05	0 / 0	49 / 0.8	15 / 0.31	2 / 0.05	1 / 0.02	0.1	0.01	116	50	27
	93-45.2	11-30-51	0.5[e]	1,920	8.3	250 / 12.5	2 / 0.2	210 / 9.13	--	--	406 / 7.8	470 / 9.80	160 / 4.5	2 / 0.03	--	0.2	1,337[d]	635	42

TYPICAL MINERAL ANALYSES OF SURFACE WATERS[a]
(continued)

Stream	Stream mile	Date Time[b]	Dis-charge, second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids, ppm	Total hardness as $CaCO_3$, ppm	Percent sodium
Hydrographic Unit 3 (continued)																			
Temecula Creek	93-55.6	11-19-51 1630	0.5	710	8.5	72 / 3.59	21 / 1.70	64 / 3.01	--	--	262 / 4.4	115 / 2.39	43 / 1.2	4 / 0.06	--	0.1	457[d]	262	37
Hydrographic Unit 4																			
Temecula Creek	93-30.9	4-12-54 1200	12[c]	1,058	7.9	87 / 4.31	21 / 1.73	120 / 5.22	3 / 0.07	0 / 0	307 / 5.04	144 / 3.0	108 / 3.05	0 / 0	--	0.1	620	304	46
	93-35.6	4-19-54	0.12	870	7.9	70 / 3.5	20 / 1.62	106 / 4.60	2 / 0.04	--	244 / 4.0	131 / 2.72	89 / 2.5	2 / 0.04	0.6	0.1	596	256	47
Hydrographic Unit 5																			
De Luz Creek	93-12.2-6.5	12-22-53	0.14	490	7.8	38 / 1.9	18 / 1.47	48 / 2.09	1 / 0.03	--	208 / 3.4	36 / 0.75	60 / 1.7	4 / 0.07	0.2	0.0	333	168	38
Santa Margarita River	93-20.0	5-12-52[e] 1100	6	1,010	7.9	67 / 3.34	25 / 2.06	106 / 4.61	43 / 0.11	10 / 0.33	264 / 4.33	110 / 2.29	118 / 3.33	1 / 0.01	0.4	0.3	607[d]	270	46
Hydrographic Unit 6																			
Pallbrook Creek	93-8.8-7.9	4- 2-54 1130	--	1,710	8.3	107 / 5.35	50 / 4.15	173 / 7.54	1 / 0.02	--	275 / 4.5	264 / 5.51	238 / 6.7	27 / 0.44	0.7	0.3	1,138	475	44

a. All Analyses by Division of Water Resources unless otherwise noted.
b. Pacific Standard Time indicated by 24-hour time system.
c. Estimated.
d. Total dissolved solids determined by summation.
e. Analyzed by United States Geological Survey, Water Quality Branch, unpublished records subject to revision.

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Water Body Name	TMDL Priority	Estimated Size Affected	Unit	Pollutant Stressor	Potential Sources	Proposed TMDL Completion
Murrieta Creek	Low	12	Miles	Phosphorus	Urban Runoff/Storm Sewers	
Murrieta Creek	Low	12	Miles	Phosphorus	Unknown Nonpoint Source	
Murrieta Creek	Low	12	Miles	Phosphorus	Unknown point source	
Santa Margarita River (Upper)	Low	18	Miles	Phosphorus	Urban Runoff/Storm Sewers	
Santa Margarita River	Low	18	Miles	Phosphorus	Unknown Nonpoint	

Water Body Name	TMDL Priority	Estimated Size Affected	Unit	Pollutant Stressor	Potential Sources	Proposed TMDL Completion
(Upper)					Source	
Santa Margarita River (Upper)	Low	18	Miles	Phosphorus	Unknown point source	

MS4 (Municipal Separate Storm Sewer System) – An MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, natural drainage features or channels, modified natural channels, man-made channels, or storm drains): (i) Owned or operated by a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under Section 208 of the CWA that discharges to Waters of the U.S.; (ii) Designated or used for collecting of conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the POTW as defined at 40 CFR 122.2.

Historic and current developments make use of natural drainage patterns and features as conveyances for Urban Runoff. Urban streams used in this manner are part of the municipalities MS4 regardless of whether they are natural, man-made, or partially modified features. In these cases, the urban stream is both an MS4 and a receiving water.

"non-point source" - Non-point source refers to diffuse, widespread sources of pollution. These sources may be large or small, but are generally numerous throughout a watershed. Non-point sources, include but are not limited to urban, agricultural or industrial area, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation. Non-point source pollution can occur year round any time rainfall, snowmelt, irrigation, or any other source of water runs over land or through the ground, picks up pollutants from these numerous, diffuse sources and deposits them into rivers, lakes and coastal waters or introduces them into ground water.

"non-storm water" – Non-storm water consists of all discharges to and from a storm water conveyance system that do not originate from precipitation events (i.e., all discharges from a conveyance system other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges and NPDES permitted discharges. An illicit discharge is defined at 40 CFR 122.26(b)(2) as any discharge to a MS4 that is not composed entirely of storm water except discharges pursuant to a separate NPDES permit and discharges resulting from emergency fire fighting activities.

NPDES (National Pollutant Discharge Elimination System) – Permits issued under Section 402(p) of the CWA for regulating discharge of pollutants to Waters of the U.S.

"nuisance" – As defined in the Porter-Cologne Water Quality Control Act a nuisance is "anything which meets all of the following requirements:

1) Is injurious to health, or is indecent, or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

3) Occurs during, or as a result of, the treatment or disposal of wastes."

Order

In the Santa Margarita Region: Order No. 98-02 (NPDES No. CAS0108766), currently in revision.

Permit Area -

In the Santa Margarita Region: "The permitted area is delineated by the Santa Ana RWQCB-SDRWQCB boundary line on the north, the SDRWQCB-Colorado River Basin RWQCB boundary line on the east, and the County of Riverside boundary line on the south and west."

"point source" – Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged.

"pollutant" – A pollutant is broadly defined as any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated.

"pollution" – As defined in the Porter-Cologne Water Quality Control Act, pollution is the alteration of the quality of the Waters of the U.S. by waste, to a degree that unreasonably affects either of the following: A) the waters for beneficial uses; or 2) facilities that serve these beneficial uses. Pollution may include contamination.

POTW – Publicly-Owned Treatment Works

Principal Permittee - Riverside County Flood Control and Water Conservation District.

Rainy Season – October 1 through May 31st of each year.

RCFC&WCD - Riverside County Flood Control and Water Conservation District

"receiving water(s)" – The Waters of the U.S. that includes surface and ground waters.

Receiving Water(s) - The receiving waters within the Permit Area

Receiving Water Limitations – Receiving Water Limitations are requirements included in Orders issued by a Regional Board to assure that the regulated discharges do not violate water quality standards established in the Basin Plan at the point of discharge to Waters of the U.S. Receiving Water Limitations are used to implement the requirement of CWA Section 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

Receiving Water Quality Objectives - Water quality objectives specified in a Basin Plan for Receiving Waters.

Regional Board - California Regional Water Quality Control Board, San Diego Region

Riverside County - Territory within the geographical boundaries of the County.

"sediment" – Soil, sand, and minerals washed from land into water. Sediment resulting from

anthropogenic sources (i.e. human induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

SMR - Santa Margarita River Watershed within Riverside County

"source control BMPs" – In general, activities or programs to educate the public or provide low cost non-physical solutions, as well as facility design or practices aimed to limit the contact between pollutant sources and storm water or authorized non-storm water. Examples include: activity schedules, prohibitions of practices, street sweeping, facility maintenance, detection and elimination of illicit connections and illegal dumping, and other non-structural measures. Facility design examples include providing attached lids to trash containers, or roof or awning over material and trash storage areas to prevent direct contact between water and pollutants. Additional examples are provided in Section 4 of Supplement A to the **DAMP** dated April 1996.

State Board - California State Water Resources Control Board

"storm water" – Runoff from urban, open space, and agricultural areas consisting only of those discharges that originates from precipitation events. Storm water is that portion of precipitation that flows across a surface to the MS4 or receiving waters. Examples of this phenomenon include: the water that flows off a building's roof when it rains (runoff from an impervious surface); the water that flows into streams when snow on the ground begins to melt (runoff from a semi-pervious surface); and the water that flows from a vegetated surface when rainfall is in excess of the rate at which it can infiltrate into the underlying soil (runoff from a pervious surface). During precipitation events in urban areas, rain water picks up and transports pollutants through storm water conveyance systems, and ultimately to Waters of the U.S.

TDS - Total dissolved solids.

TMDL (Total Maximum Daily Load) – TMDL is the maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under CWA Section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

"toxicity" – Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

TSS - Total suspended solids.

Urban Runoff – Urban Runoff includes those discharges from residential, commercial, industrial, and construction areas within the Permit Area and excludes discharges from feedlots, dairies, farms, and open space. Urban Runoff discharges consist of storm water and non-storm water surface runoff from drainage sub-areas with various, often mixed, land uses within all of the hydrologic drainage areas that discharge into the Waters of the U. S. In addition to Urban Runoff, the MS4s regulated by this Order receive flows from agricultural activities, open space, state and federal properties and other non-urban land uses not under the control of the Permittees. The quality of the discharges from the MS4s varies considerably and is affected by, among other things, past and present land use activities, basin hydrology, geography and geology, season, the frequency and duration of storm events, and the presence of past or present illegal and allowed disposal practices and illicit connections.

The Permittees lack legal jurisdiction over storm water discharges into their respective MS4s from agricultural activities, California and federal facilities, utilities and special districts, Native American tribal lands, wastewater management agencies and other point and non-point source discharges otherwise permitted by or under the jurisdiction of the Regional Board. The Regional Board recognizes that the Permittees should not be held responsible for such facilities and/or discharges. Similarly, certain activities that generate pollutants present in Urban Runoff are beyond the ability of the Permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography.

USEPA - United States Environmental Protection Agency

Waste Discharge Requirements – As defined in Section 13374 of the California Water Code, the term "waste discharge requirements" is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board usually reserves reference to the term "permit" to Waste Discharge Requirements for discharges to surface Waters of the U.S.

Water Code - California Water Code

Waters of the U.S. – Waters of the U.S. can be broadly defined as navigable surface waters and all tributary surface waters to navigable surface waters. Groundwater is not considered to be a Waters of the U.S. As defined in 40 CFR 122.2, the Waters of the U.S. are defined as: (a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as Waters of the U.S. under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the USEPA.

"water quality objectives" – Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water [California Water Code Section 13050 (h)]. California's water quality objectives are established by the State/Regional Water Boards in the Water Quality Control Plans.

As stated in the Porter-Cologne requirements for discharge (CWC 13263): "(Waste discharge) requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241."

Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial

uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a Receiving Water and still generally ensure that the beneficial uses of the Receiving Water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne's definition of pollution. A condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are the reason why all waste discharge requirements implementing the federal NPDES regulations require compliance with water quality objectives. (Water quality objectives are also called water quality criteria in the CWA.)

"water quality standards" – are defined as the water quality goals of a waterbody (or a portion of the waterbody) designating beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.,) to be made of the water and the water quality objectives or criteria necessary to protect those uses.

"watershed" – That geographical area which drains to a specified point on a watercourse, usually a confluence of streams or rivers (also known as drainage area, catchments, or river basin).

Riverside County Flood Control And Water Conservation District

ANNUAL

BUDGET

(INFORMATIONAL)

Fiscal Year 2011-2012

(July 1, 2011 – June 30, 2012)

Riverside County Flood Control And Water Conservation District

1995 Market Street
Riverside, California 92501
951.955.1200

ANNUAL

BUDGET

(INFORMATIONAL)

Fiscal Year 2011-2012

OFFICERS RESPONSIBLE FOR BUDGET REPORT

Warren D. "Dusty" Williams - General Manager-Chief Engineer
Stephen C. Thomas - Assistant Chief Engineer
Ivan M. Chand - Finance Director

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ANNUAL BUDGET
(INFORMATIONAL)
FISCAL YEAR 2011-2012

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MESSAGE FROM THE GENERAL MANAGER-CHIEF ENGINEER

The Rest of Our Name

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RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

ANNUAL BUDGET
(INFORMATIONAL)
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FUND 25200 (679)
NPDES
SANTA MARGARITA ASSESSMENT

This Special Revenue fund was established to account for revenue and expenditures related to the Federally mandated National Pollutant Discharge Elimination System (NPDES) program in the Santa Margarita River watershed area of the District. The fund is financed primarily by revenue from a Benefit Assessment.

FUND: 25200 (679)
DEPT: 947580
NAME: NPDES SANTA MARGARITA ASSESSMENT

FUND BALANCE FORWARD:

Fund No.	Description	Actual FY 10-11	Estimated FY 11-12	Estimated FY 11-12
25200	NPDES Santa Margarita Assessment	$668,650	$498,920	$498,920
	TOTAL FUND BALANCE FORWARD	**$668,650**	**$498,920**	**$498,920**

REVENUES:

Type	OASIS Acct Code	IFAS Acct Code	Description	Actual FY 09-10	BOS Adopted FY 10-11	Projected FY 10-11	Requested FY 11-12	BOS Adopted FY 11-12
	DEPARTMENTAL REVENUE:							
D	770100	R8752	Special Assessments	$470,472	$476,000	$476,000	$476,000	$476,000
D	781560	R9922	Contributions-Other Agencies	467,830	500,000	467,830	1,500,000	1,500,000
D	790600	R9951	Contrib from Other Funds	0	0	0	1,000	1,000
			Total Departmental Revenue	**$938,302**	**$976,000**	**$943,830**	**$1,977,000**	**$1,977,000**
	NON-DEPARTMENTAL REVENUE:							
N	740020	R1613	Interest-Invested Funds	$6,072	$4,000	$4,000	$4,000	$4,000
			Total Non-Departmental Revenue	**$6,072**	**$4,000**	**$4,000**	**$4,000**	**$4,000**
			TOTAL REVENUE	**$944,374**	**$980,000**	**$947,830**	**$1,981,000**	**$1,981,000**

FUND: 25200 (679)
DEPT: 947580
NAME: NPDES SANTA MARGARITA ASSESSMENT

APPROPRIATIONS:

Class	OASIS Acct Code	IFAS Acct Code	Description	Actual FY 09-10	BOS Adopted FY 10-11	Projected FY 10-11	Requested FY 11-12	BOS Adopted FY 11-12
	SALARIES AND BENEFITS:							
1	510040	10101	Regular Salaries	$158,881	$259,500	$267,000	$351,000	$351,000
1	510320	11101	Temporary Salaries	$0	$0	$1,000	$3,380	$3,380
1	510420	14101	Overtime	26,319	5,000	17,000	5,000	5,000
1	518100	20201	Budgeted Benefits	66,619	107,600	110,600	155,700	155,700
			Total Class 1	**$251,819**	**$372,100**	**$395,600**	**$515,080**	**$515,080**
	SERVICES AND SUPPLIES:							
2	520105	31102	Protective Gear	$0	$300	$0	$300	$300
2	520330	32101	Communication Services	0	300	0	300	300
2	523100	40101	Memberships	2,060	5,630	2,060	2,130	2,130
2	523220	40103	Licenses and Permits	0	4,000	0	4,000	4,000
2	523620	42102	Books/Publications	183	510	100	510	510
2	523700	42318	Office Supplies	175	1,000	100	1,000	1,000
2	523720	42104	Photocopying	263	3,700	2,500	1,700	1,700
2	523800	48140	Printing/Binding	4,371	4,500	2,500	4,500	4,500
2	524500	53101	Administrative Support-Direct	53,970	62,690	62,690	54,430	54,430
2	524700	43104	County Counsel	2,667	9,000	2,500	5,920	5,920
2	524760	43602	Data Processing Services	23,821	32,200	32,200	32,200	32,200
2	525160	43148	Photography Services	308	600	400	600	600
2	525340	43109	Temporary Help Services	849	3,380	0	0	0
2	525440	43101	Professional Services	335,841	470,360	519,310	1,266,940	1,266,940
2	526410	44101	Legally Required Notices	870	800	800	400	400
2	526530	45101	Rent-Lease Equipment	0	0	0	300	300
2	526960	30152	Small Tools and Instruments	0	9,200	600	56,700	56,700
2	527240	43140	NPDES Contributions	87,693	101,960	81,500	143,100	143,100
2	527660	44201	Operational Marketing	16,609	24,920	5,000	11,400	11,400
2	527780	48101	Special Program Expense	391	7,930	2,800	4,350	4,350
2	528060	30100	Materials	53	470	100	470	470
2	528920	50202	Car Pool Expense	6,493	5,000	6,500	5,980	5,980
2	529040	50203	Private Mileage Reimbursement	0	200	0	200	200
2	529540	51101	Utilities	251	400	300	400	400
			Total Class 2	**$536,867**	**$749,050**	**$721,960**	**$1,597,830**	**$1,597,830**
	OPERATING TRANSFERS OUT:							
5	551100	85201	Contribution to Other Funds	$0	$0	$0	$0	$0
			Total Class 5	**$0**	**$0**	**$0**	**$0**	**$0**
			TOTAL APPROPRIATIONS	**$788,686**	**$1,121,150**	**$1,117,560**	**$2,112,910**	**$2,112,910**

ENDING FUND BALANCE:

Fund No.	Description	Estimated FY 10-11	Estimated FY 11-12	Estimated FY 11-12
25200	NPDES Santa Margarita Assessment	$498,920	$367,010	$367,010
	TOTAL ENDING FUND BALANCE	**$498,920**	**$367,010**	**$367,010**

Comprehensive Annual Financial Report
Fiscal Year Ended June 30, 2015

Riverside County Flood Control and Water Conservation District
(A Component Unit of the County of Riverside)
Riverside, California

Comprehensive Annual Financial Report
Fiscal Year Ended June 30, 2015

Photos: Eagle Canyon Dam

Submitted by:

Warren D. Williams
General Manager-Chief Engineer

Jeanine J. Rey
Finance Director

Riverside County Flood Control
and Water Conservation District
(A Component Unit of the County of Riverside)
Riverside, California

Riverside County Flood Control and Water Conservation District
Comprehensive Annual Financial Report
Year Ended June 30, 2015

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Riverside County Flood Control and Water Conservation District
Statement of Revenues, Expenditures and Changes in Fund Balances
Governmental Funds
For the Year Ended June 30, 2015
(Amounts Expressed in Thousands)

	General Fund	Zone 1	Zone 2	Zone 3
REVENUES				
Property Taxes	$ 3,255	$ 7,092	$ 12,377	$ 1,657
Redevelopment Pass-thru	503	1,779	1,309	627
Special Assessments	-	-	-	-
Intergovernmental	42	91	161	565
Charges for Services	750	21	10	124
Area Drainage Fees	-	917	5	-
Investment Earnings (Loss)	24	92	313	42
Use of Assets	-	82	-	-
Total Revenues	4,574	10,074	14,175	3,015
EXPENDITURES				
General Government	5,873	-	-	-
Public Ways and Facilities	-	10,697	8,989	3,767
Capital Outlay	144	-	4,189	-
Total Expenditures	6,017	10,697	13,178	3,767
Excess (Deficiency) of Revenues Over (Under) Expenditures	(1,443)	(623)	997	(752)
OTHER FINANCING SOURCES (USES)				
Transfers In	236	80	62	22
Transfers Out	-	(55)	(77)	(22)
Proceeds From Issuance of Long-Term Debt	-	-	-	-
Original Issue Premium	-	-	-	-
Total Other Financing Sources (Uses)	236	25	(15)	-
Net Change in Fund Balances	(1,207)	(598)	982	(752)
Fund Balances, Beginning of Year	4,382	23,101	68,228	10,826
Fund Balances, End of Year	$ 3,175	$ 22,503	$ 69,210	$ 10,074

The accompanying notes are an integral part of this statement.

Zone 4	Zone 5	Zone 6	Zone 7	NPDES Whitewater	NPDES Santa Ana
$ 12,347	$ 2,641	$ 3,635	$ 4,091	$ -	$ -
1,707	473	917	383	-	-
-	-	-	-	300	2,311
168	20	46	54	362	500
10	-	-	8	-	-
1,855	-	-	188	-	-
268	52	74	107	5	21
16	-	4	-	-	-
16,371	3,186	4,676	4,831	667	2,832
-	-	-	-	-	-
35,190	5,890	7,218	21,380	406	2,185
494	-	-	117	-	-
35,684	5,890	7,218	21,497	406	2,185
(19,313)	(2,704)	(2,542)	(16,666)	261	647
142	16	51	49	1	1
(125)	(19)	(38)	(32)	(3)	(13)
21,000	-	-	-	-	-
2,423	-	-	-	-	-
23,440	(3)	13	17	(2)	(12)
4,127	(2,707)	(2,529)	(16,649)	259	635
73,296	13,834	19,435	37,685	1,293	5,133
$ 77,423	$ 11,127	$ 16,906	$ 21,036	$ 1,552	$ 5,768

The accompanying notes are an integral part of this statement.

Riverside County Flood Control and Water Conservation District
Statement of Revenues, Expenditures and Changes in Fund Balances
Governmental Funds - Continued
For the Year Ended June 30, 2015
(Amounts Expressed in Thousands)

	NPDES Santa Margarita	Flood Control Capital Project Fund	Total
REVENUES			
Property Taxes	$ -	$ -	$ 47,095
Redevelopment Pass-thru	-	-	7,698
Special Assessments	506	-	3,117
Intergovernmental	1,403	-	3,412
Charges for Services	-	-	923
Area Drainage Fees	-	-	2,965
Investment Earnings (Loss)	6	-	1,004
Use of Assets	-	-	102
Total Revenues	1,915	-	66,316
EXPENDITURES			
General Government	-	-	5,873
Public Ways and Facilities	1,398	-	97,120
Capital Outlay	-	27	4,971
Total Expenditures	1,398	27	107,964
Excess (Deficiency) of Revenues Over (Under) Expenditures	517	(27)	(41,648)
OTHER FINANCING SOURCES (USES)			
Transfers In	1	-	661
Transfers Out	(7)	-	(391)
Proceeds From Issuance of Long-Term Debt	-	-	21,000
Original Issue Premium	-	-	2,423
Total Other Financing Sources (Uses)	(6)	-	23,693
Net Change in Fund Balances	511	(27)	(17,955)
Fund Balances, Beginning of Year	1,369	45	258,627
Fund Balances, End of Year	$ 1,880	$ 18	$ 240,672

The accompanying notes are an integral part of this statement.

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A) Reporting Entity

The Riverside County Flood Control and Water Conservation District (the District) was created by an act of the State Legislature on July 7, 1945 to provide financing for the construction and maintenance of flood control facilities. The governing board of the District consists of the same five members of the Board of Supervisors as Riverside County, California, and the Board has the authority to impose its will on the District. Therefore, the District is considered to be a component unit of the County for financial reporting purposes. As required by accounting principles generally accepted in the United States of America, these financial statements present all the fund types of the District.

B) Basis of Presentation

Government-wide Financial Statements

The statement of net position and statement of activities display information about the District's activities. These statements include the financial activities of the District, except for fiduciary activities. It is the District's policy to make eliminations to minimize the double counting of internal activities. These statements distinguish between the *governmental* and *business-type activities* of the District. *Governmental activities*, which normally are supported by taxes and intergovernmental revenues, are reported separately from *business-type activities*, which rely, to a significant extent, on fees charged to external parties.

The *statement of activities* presents a comparison between program expenses and program revenues for each segment of the *business-type activities* of the District and for each function of the District's *governmental activities*. *Program expenses* include such direct expenses that are specifically associated with a program or function and therefore, are clearly identifiable to a particular function. *Program revenues* include 1) charges paid by the recipients of goods or services offered by the programs and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular program. Revenues that are not classified as program revenues, including all taxes, are presented instead as *general revenues*.

When an expense is incurred for a purpose for which both restricted and unrestricted net assets are available, management has discretion as to which resources apply. It is the District's policy to use restricted resources before unrestricted resources.

C) Fund Financial Statements

The fund financial statements provide information about the District's funds, including fiduciary funds. Separate statements for each fund category - *governmental*, *proprietary*, and *fiduciary* - are presented. The emphasis of the fund financial statements is on major governmental and enterprise funds, each displayed in a separate column. All remaining governmental and enterprise funds are separately aggregated and reported as nonmajor funds.

Proprietary fund *operating revenues*, such as charges for services, result from exchange transactions associated with the principal activity of the fund. Exchange transactions are those in which each party receives and gives up essentially equal values. *Nonoperating revenues*, such as subsidies and investment earnings, result from nonexchange transactions or ancillary activities.

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

C) Fund Financial Statements - Continued

The District reports the following as major governmental funds:

- The *General Fund* is used to account for all revenues and expenditures necessary to carry out basic governmental activities of the District that are not accounted for through other funds. For the District, the General Fund includes such activities as general government and capital outlay.

- *Zones 1 through 7* are special revenue funds established to account for revenues and expenditures related to providing flood control in each geographical zone. These funds are financed primarily by ad valorem property taxes, developer fees, local cooperative agreements, federal monies, and monies from other local governments.

- *NPDES Whitewater* is a special revenue fund used to account for revenues and expenditures related to the National Pollutant Discharge Elimination System (NPDES) in the Whitewater assessment area. Primarily the benefit assessment area finances this fund.

- *NPDES Santa Ana* is a special revenue fund used to account for revenues and expenditures related to the National Pollutant Discharge Elimination System (NPDES) in the Santa Ana assessment area. Primarily the benefit assessment area finances this fund.

- *NPDES Santa Margarita* is a special revenue fund used to account for revenues and expenditures related to the National Pollutant Discharge Elimination System (NPDES) in the Santa Margarita assessment area. Primarily the benefit assessment area finances this fund.

- The *Flood Control Capital Project Fund* was established to account for financial resources to be used for the acquisition or construction of major capital facilities other than those financed by proprietary fund types.

The District reports the following major enterprise funds:

- The *Subdivision Operations Fund* accounts for various services needed by developers in the construction of projects within the County. Revenues are primarily for charges for services.

The District reports the following additional fund types:

- *Internal Service Funds* account for the District's Hydrology Services, Garage, Project Maintenance, Mapping Services, Data Processing and Photography, on a cost-reimbursement basis.

- The *Agency Funds* account for assets held by the District as an agent for individuals, private organizations, boards, commissions and other governmental entities or funds not part of the District's reporting entity, but for which the District acts in a fiduciary capacity. The District reports on 3 different agency funds.

D) Basis of Accounting and Measurement Focus

The government-wide and proprietary fund financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded at the time liabilities are incurred, regardless of when the related cash flows take place. Nonexchange transactions, in which the District gives (or receives) value without directly receiving (or giving) equal value in exchange, include property taxes, special assessments, grants, entitlements and donations. On an accrual basis, revenue from property taxes is recognized in the fiscal year for which the taxes are levied.

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

D) Basis of Accounting - Continued

Revenues from grants, entitlements and donations are recognized in the fiscal year in which all eligibility requirements have been satisfied. Agency funds report only assets and liabilities under the accrual basis and have no measurement focus.

Governmental fund type financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Under this method, revenues and other governmental fund type financial resources are recognized when they become susceptible to accrual - that is, when they become both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. Property taxes, contracts and other nonexchange transactions are considered available and are accrued when received within sixty days after fiscal year-end. Revenue received from expenditure driven (cost-reimbursement) grants, as defined by GASB Statement No. 33, *Accounting and Financial Reporting for Nonexchange Transactions*, are considered available and accrued if expected to be received within twelve months after fiscal year-end.

E) Cash and Investments and Cash and Investments with Fiscal Agents

The District's cash from operations is deposited in the County Treasury. The County pools its funds with other government agencies in the County and invests them as prescribed by the California Government Code and the County of Riverside's Investment Policy. The District's deposits in the County pool may be accessed at any time. The District is allocated interest income on monies deposited with the County based on its proportional share of the pooled investments. All pooled investments and investments with fiscal agent are carried at fair value. The fair value of participants' positions in the pool is not the same as the value of the pooled shares. Restricted cash of $1,956 and $2,963, for governmental and proprietary funds respectively, consists mostly of developer and other agency deposits for specific purposes.

In December 1994, the Board of Supervisors created an Investment Oversight Committee to work with the County Treasurer to oversee County investment policies, to include the District. The Committee reviews the County's investment strategy and the status of the County's investments and reports its finding to the Board. The Investment Oversight Committee has reviewed and approved investment policies for funds held outside the County Treasury.

For purposes of the statement of cash flows, the District considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents.

F) Deferred Outflows/Inflows of Resources

The statement of financial position reports a separate section for deferred outflows of resources. This separate financial statement element, *deferred outflows of resources*, represents a consumption of net position that applies to a future period(s) and so will *not* be recognized as an outflow of resources (expense/ expenditure) until then. The District recognizes deferred outflows of resources on the government-wide financial statements in relation to pensions.

The statement of financial position reports a separate section for deferred inflows of resources. This separate financial statement element, *deferred inflows of resources*, represents an acquisition of net position that applies to a future period(s) and so will *not* be recognized as an inflow of resources (revenue) until that time. The District reports an item under this category on the governmental funds balance sheet, under the modified accrual basis of accounting, labeled *unavailable revenue* from two sources: property taxes and special assessments expected to fund the current year but received in a future period. The District also recognizes deferred inflows of resources on the government-wide financial statements in relation to pensions.

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

G) Property Taxes

Under California law, property taxes are assessed and collected by counties for up to 1 percent of assessed value, plus other increases as approved by affected voters. Property tax revenues are pooled and then allocated based on assessed valuation. Property taxes on the secured rolls are payable in two installments, November 1 and February 1. Property tax payments become delinquent after December 10 and April 10, respectively.

Remittance of property taxes to the District is accounted for within each appropriate fund. Under the Teeter Plan, the District receives its current-year tax from the County without regard for the delinquency factors.

Property taxes are assessed and collected each fiscal year according to the following property tax calendar:

Lien Date	January 1		
Levy Date	July 1 to June 30		
Due Date	November 1	-	1st Installment
	February 1	-	2nd Installment
Delinquent Date	December 10	-	1st Installment
	April 10	-	2nd Installment

H) Inventories and Prepaid Items

Inventories, which consist of materials and supplies held for consumption, are valued at the lower of cost (on a first-in, first-out basis) or market in the proprietary funds. Inventories for all governmental funds are valued at average cost. The consumption method is used to account for inventories. Under the consumption method, inventories are recorded as expenditures when consumed rather than when purchased. Material amounts of inventory are reported as assets of the respective fund.

Certain payments to vendors reflect costs applicable to future accounting periods and are recorded as prepaid items in both the government-wide and fund financial statements. The cost of prepaid items is recorded as expenditures/expenses when consumed rather than when purchased.

I) Capital Assets

Capital assets, which include property (e.g. land and easements), plant (e.g. buildings, improvements), equipment (e.g. vehicles, computers, office equipment) and infrastructure (e.g. drainage systems, flood control, and similar structures), are reported in the applicable governmental or business-type activities columns in the government-wide financial statements and in the proprietary funds statement of net position. Capital assets are recorded at historical cost or estimated cost if purchased or constructed. Donated capital assets are recorded at estimated fair value at the date of donation.

The costs of normal maintenance and repairs that do not add to the value of the assets or materially extend asset lives are not capitalized. The capitalization thresholds are as follows: $5 for equipment, $1 dollar for buildings (structures), land and land improvements and $150 for infrastructure.

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

I) Capital Assets - Continued

Capital assets are depreciated using the straight-line method over the following estimated useful lives:

Infrastructure:	Flood Channels and Levees	99 years
	Dams/Basins	99 years
	Storm Drains	65 years
Structure and	Buildings	50 years
Improvements:	Building improvements	50 years
Equipment:	Autos, personal computers and equipment valued at less than $25	3 years
	Computer items, small trucks and equipment valued between $25 and $75	5 years
	Large trucks and equipment valued at greater than $75	7 years

J) Compensated Absences

Permanent District employees earn from 10 to 20 vacation days annually, depending upon their length of employment, and 12 sick days a year. Employees can carry forward up to a maximum of three times their annual vacation accrual and an unlimited number of sick days for use in subsequent years.

Upon termination or retirement, District employees are entitled to receive compensation at their current salary for all unused vacation time. If an employee retires from the District with at least five years of service, the employee is entitled to receive from 10 percent to 50 percent of the value of any unused sick leave up to 120 days.

K) Long-term Debt

The District reports long-term debt of governmental funds at face value in the government-wide statement of net position. Certain other governmental fund obligations not expected to be financed with current available financial resources are also reported in the government-wide statement of net position. Long-term debt and other obligations financed by the proprietary fund types are reported as liabilities in the appropriate proprietary fund types and in the government-wide statement of net position. Governmental funds report the effect of issuance costs, premiums, discounts, and similar items when debt is first issued. The premiums, discounts, and deferred gains and losses are reported in the government-wide statement of net position and are amortized over the life of the debt.

L) Operating/Nonoperating Revenues and Expenses

The District defines its operating revenues as revenues derived from charges for services. All other revenue that is not derived directly from charges for services, including interest income and gain/loss on sale of assets, is classified as nonoperating in the accompanying statement of revenues, expenses, and changes in fund net position.

Consistent with the treatment in the accompanying statement of cash flows, all expenses, with the exception of interest expense, are treated as operating expenses on the accompanying statement of revenues, expenses and changes in fund net position.

M) Estimates

The preparation of basic financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

N) Interfund Transactions

Interfund transactions are reflected as loans, provided services, reimbursements or transfers. Loans are reported as receivables and payables as appropriate, are subject to elimination upon consolidation and are referred to as either "due to/from other funds" (i.e., the current portion of interfund loans) or "advances to/from other funds" (i.e., the noncurrent portion of interfund loans). Any residual balances outstanding between the governmental activities and the business-type activities are reported in the government-wide financial statements as "internal balances".

Advances between funds, as reported in the fund financial statements, are offset by a fund balance reserve account in applicable governmental funds to indicate that they are not available for appropriation and are not available financial resources.

Provided services, deemed to be at market or near market rates, are treated as revenues and expenditures/expenses. Reimbursements are when one fund incurs a cost, charges the appropriate benefiting fund and reduces its related cost as a reimbursement. All other interfund transactions are treated as transfers. Transfers between governmental or proprietary funds are netted as part of the reconciliation to the government-wide presentation.

O) Net Position/Fund Balances

The government-wide and business-type activities fund financial statements utilize a net position presentation. Net position is categorized as net investment in capital assets, restricted and unrestricted.

- Investment in Capital Assets - This category reports all capital assets, including infrastructure, into one component of net position. Accumulated depreciation reduces the balance in this category.

- Restricted Net Position - This category presents external restrictions imposed by creditors, grantors, contributors or laws or regulations of other governments and restrictions imposed by law through constitutional provisions or enabling legislation.

- Unrestricted Net Position - This category represents the net position of the District, not restricted for any project or other purpose.

When expenses are incurred for purposes of which both restricted and unrestricted net positions are available, the District's policy is to apply restricted net position first, then unrestricted net position as needed.

In accordance with Government Accounting Standards Board Statement No. 54 - *Fund Balance Reporting and Governmental Fund Type Definitions* and the District's Fiscal Policy F2, Fund Balance Policy, the District classifies governmental fund balances as follows:

- Nonspendable - includes amounts either not in spendable form, or legally or contractually required to be maintained intact.

- Restricted - constraints placed on the use of amounts are either externally imposed by creditors, grantors, contributors, or laws and regulations of other governments; or imposed by law through constitutional provisions or enabling legislation.

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

O) Net Position/Fund Balances - Continued

- Committed - includes amount committed for specific purposes by the Board of Supervisors, the District's highest level of decision making authority, by adopting an ordinance prior to the end of the fiscal year to commit fund balance. Amounts classified as "Committed" are not subject to legal enforceability like restricted fund balance; however, those amounts cannot be used for any other purpose unless the Board of Supervisors removes or changes the limitation by taking the same form of action it employed to previously impose the limitation. Action to constrain resources must occur prior to year end; however, the amount can be determined in the subsequent year.

- Assigned - includes amounts, intended by the District, to be used for specific purposes. Amounts are neither restricted nor limited. The Board of Supervisors has, by resolution, delegated the authority to assign amounts to be used for specific purposes to the Finance Director and District management for the purpose of reporting these amounts in the financial statements.

- Unassigned - includes any remaining amounts after classifying fund balances according to the fund balance categories of nonspendable, restricted, committed and assigned. The general fund is the only governmental fund that reports a positive amount of unassigned fund balance. However, if a governmental fund other than the general fund were to have nonspendable, restricted, and committed fund balance in excess of total fund balance, the difference would be reported as negative unassigned fund balance.

Fund Balance Spending Order

Unless legal requirements disallow it, the District will spend the most restricted dollars before less restricted in the following order: (1) Nonspendable (if the funds become spendable), (2) Restricted, (3) Committed, (4) Assigned, (5) Unassigned.

Minimum Fund Balance Policy for Governmental Funds

The following minimum fund balance guidelines for governmental funds have been established by the District's Fiscal Policy F2, Fund Balance Policy, to ensure a sufficient level of fund balance is maintained for unanticipated expenditures, delays in revenue receipt, or revenue shortfalls:

- Unrestricted Fund Balance - General Fund

  The District shall achieve an unrestricted fund balance in its General Fund equal to a minimum of 66 percent of General Fund expenditures. The District will annually evaluate the minimum fund balance provisions and make adjustments according to an assessment of current events and circumstances as well as changing forecasts, projections and other related risks.

  The District has established a contingency account and budgets the minimum assigned fund balance in the General Fund with the recommended budget submitted to the Board of Supervisors for approval each fiscal year. Should the minimum fund balance drop below the prescribed level, the District will develop a plan to replenish the minimum fund balance within two years and include the plan with the recommended budget submitted to the Board of Supervisors for approval in the following budget year.

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

P) Developer And Other Agency Deposits

Developer and other agency deposits are deposits made by developers and other governmental agencies to support services or work performed by the District on behalf of said developers and governmental agencies. Revenue is recognized when it is earned and the liability is decreased accordingly.

Q) Pensions

The pension expense is for the measurement period of 2013-14 and the net pension liability is measured as of June 30, 2014. Liabilities are based on the results of the actuarial calculations performed as of June 30, 2013 and were rolled forward to June 30, 2014.

For the purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Plan and addition to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by the CalPERS Financial Office. For this purpose, benefit payments (including refunds of employee contributions) are recognized when currently due and payable in accordance with the benefit terms.

Investments are reported at fair value. Projected earnings on pension investments are recognized as a component of pension expense. Differences between projected and actual investment earnings are reported as deferred inflows of resources or deferred outflows of resources and amortized as a component of pension expense on a closed basis over a five year period.

R) Implementation of Governmental Accounting Standards Board (GASB) Pronouncements

Governmental Accounting Standards Board Statement No. 68

In June of 2012, GASB issued Statement No. 68, *Accounting and Financial Reporting for Pensions - an Amendment of GASB Statement No. 27.* This statement was issued to improve the financial reporting by state and local governments for pensions. It also improves information provided by state and local governmental employers about financial support for pensions with regard to providing decision-useful information, supporting assessments of accountability and inter-period equity, and creating additional transparency. This statement replaces the requirements of Statement No. 27, *Accounting for Pensions by State and Local Governmental Employers*, as well as the requirements of Statement No. 50, *Pension Disclosures*, as they relate to pensions that are provided through pension plans administered as trust or equivalent arrangements that meet certain criteria. The requirements of Statements 27 and 50 remain applicable for pensions that are not covered by the scope of this statement. Statement No. 68 is effective for periods beginning after June 15, 2014. The District has implemented GASB No. 68 which is reflected on the District's financial statements and beginning net position.

Governmental Accounting Standards Board Statement No. 69

In January of 2013, GASB issued Statement No. 69, *Government Combinations and Disposals of Government Operations.* This statement was issued to improve the decision usefulness of financial reporting by requiring that disclosures be made by governments about combination arrangements in which they engage and for disposals of government operations. Statement No. 69 is effective for periods beginning after December 15, 2013. Currently, this statement has no effect on the District's financial statements.

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

R) Implementation of Governmental Accounting Standards Board (GASB) Pronouncements - Continued

Governmental Accounting Standards Board Statement No. 71

In November of 2013, GASB issued Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date – An Amendment of GASB Statement No. 68.* This statement was issued to eliminate the source of potential significant understatement of restated beginning net position and expense in the first year of implementation of Statement 68 in the accrual-basis financial statements of employers and nonemployer contributing entities. This Statement amends paragraph 137 of Statement 68, *Accounting and Financial Reporting for Pensions - an Amendment of GASB Statement No. 27*, to require that, at transition, a government recognize a beginning deferred outflow of resources for its pension contributions, if any, made subsequent to the measurement date of the beginning net pension liability. Statement 68, as amended, continues to require that beginning balances for other deferred outflows of resources and deferred inflows of resources related to pensions be reported at transition only if it is practical to determine all such amounts. The provisions for Statement No. 71 are required to be applied simultaneously with the provisions of Statement 68, which is effective for periods beginning after June 15, 2014. The District has implemented GASB No. 71 which is reflected on the District's financial statements.

S) Future Governmental Accounting Standards Board (GASB) Pronouncements

Governmental Accounting Standards Board Statement No. 72

In February of 2015, GASB issued Statement No. 72, *Fair Value Measurement and Application.* This statement was issued to enhance comparability of financial statements among governments by requiring measurement of certain assets and liabilities at fair value using a consistent and more detailed definition of fair value and accepted valuation techniques. This Statement requires disclosures to be made about fair value measurements, the level of fair value hierarchy and valuation techniques. It also requires additional disclosures regarding investments in certain entities that calculate net asset value per share (or its equivalent). Statement No. 72 is effective for periods beginning after June 15, 2015. Currently, this statement has no effect on the District's financial statements.

Governmental Accounting Standards Board Statement No. 73

In June of 2015, GASB issued Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68.* This Statement establishes requirements for defined benefit pensions that are not within the scope of Statement No. 68, Accounting and Financial Reporting for Pensions, as well as for the assets accumulated for purposes of providing those pensions. In addition, it establishes requirements for defined contribution pensions that are not within the scope of Statement 68. It also amends certain provisions of Statement No. 67, Financial Reporting for Pension Plans, and Statement 68 for pension plans and pensions that are within their respective scopes. Statement No. 73 is effective for periods beginning after June 15, 2015. The District has elected not to early implement GASB No. 71 and has not determined its effect on the District's financial statements.

1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

S) Future Governmental Accounting Standards Board (GASB) Pronouncements - Continued

Governmental Accounting Standards Board Statement No. 74

In June of 2015, GASB issued Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans.* This Statement will improve the usefulness of information about postemployment benefits other than pensions (other postemployment benefits or OPEB) included in the general purpose external financial reports of state and local governmental OPEB plans for making decisions and assessing accountability. This Statement replaces Statements No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, as amended, and No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans. Statement No. 74 is effective for periods beginning after June 15, 2016. The District has elected not to early implement GASB No. 74 and has not determined its effect on the District's financial statements.

Governmental Accounting Standards Board Statement No. 75

In June of 2015, GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions.* This Statement will improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). This Statement replaces the requirements of Statements No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions, as amended, and No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans, for OPEB. Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, establishes new accounting and financial reporting requirements for OPEB plans. Statement No. 75 is effective for periods beginning after June 15, 2017. The District has elected not to early implement GASB No. 75 and has not determined its effect on the District's financial statements.

Governmental Accounting Standards Board Statement No. 76

In June of 2015, GASB issued Statement No. 76, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments.* This Statement reduces the GAAP hierarchy to two categories of authoritative GAAP and addresses the use of authoritative and nonauthoritative literature in the event that the accounting treatment for a transaction or other event is not specified within a source of authoritative GAAP. Statement No. 75 is effective for periods beginning after June 15, 2015. The District has elected not to early implement GASB No. 76 and has not determined its effect on the District's financial statements.

Governmental Accounting Standards Board Statement No. 77

In August of 2015, GASB issued Statement No. 77, *Tax Abatement Disclosures.* This Statement improves financial reporting by helping users better understand how tax abatements affect a government’s future ability to raise resources and meet its financial obligations and the impact those abatements have on a government’s financial position and economic condition. Statement No. 77 is effective for periods beginning after December 15, 2015. The District has elected not to early implement GASB No. 77 and has not determined its effect on the District's financial statements.

Riverside County Flood Control and Water Conservation District
Budgetary Comparison Schedule
Special Revenue Fund - NPDES - Santa Margarita
For the Year Ended June 30, 2015
(Amounts Expressed in Thousands)

	Budgeted Amounts		Actual	Variance with Final Budget Positive
	Original	Final	Amounts	(Negative)
REVENUES				
Special Assessments	$ 490	$ 490	$ 506	$ 16
Intergovernmental	1,884	1,884	1,403	(481)
Investment Earnings (Loss)	4	4	6	2
Total Revenues	2,378	2,378	1,915	(463)
EXPENDITURES				
Public Ways and Facilities	2,363	2,353	1,398	955
Total Expenditures	2,363	2,353	1,398	955
Excess (Deficiency) of Revenues Over (Under) Expenditures	15	25	517	492
OTHER FINANCING SOURCES (USES)				
Transfers In	-	-	1	1
Transfers Out	-	(10)	(7)	3
Total Other Financing Sources (Uses)	-	(10)	(6)	4
Net Change in Fund Balance	15	15	511	496
Fund Balance, Beginning of Year	750	750	1,369	619
Fund Balance, End of Year	$ 765	$ 765	$ 1,880	$ 1,115

SANTA MARGARITA WATERSHED
NPDES MUNICIPAL STORMWATER PERMIT
(NPDES No. CAS0108766)

JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP) ANNUAL REPORT

FOR

Riverside County Flood Control and Water Conservation District

FISCAL YEAR 2014 – 2015

October 31, 2015

	Certification
I.	Executive Summary
II.	Introduction
1.	New Development
2.	Construction
3.	Municipal
4.	Industrial/Commercial
5.	Residential
6.	Retrofitting Existing Development
7.	Illicit Discharge Detection and Elimination
8.	Workplans
9.	Non-Stormwater Discharges
10.	Receiving Water Limitations
11.	Fiscal Analysis
12.	Assessment and Response Reporting
13.	Conclusions
14.	Recommendation
Attachment A	Annual Report Checklist
Attachment B	IC/ID & NAL/SAL Exceedance Investigation Reports
Attachment C	Watershed Water Quality Workplan Updates
Attachment D	Reference Material
Attachment E	MS4 Facility Map

ORDER NO. R9-2010-0016

Submitted to:

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

CERTIFICATION

Santa Margarita Watershed
JRMP Annual Report
Fiscal Year 2014-2015

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____

STUART MCKIBBIN
Chief of Watershed Protection Division
Riverside County Flood Control
and Water Conservation District

P8/200549

I. EXECUTIVE SUMMARY CONTD.

The Riverside County Flood Control and Water Conservation District (District) individual Jurisdictional Runoff Management Plan (JRMP) Annual Report (Annual Report) documents the specific urban runoff management programs and activities implemented by the District to comply with the requirements of Board Order R9-2010-0016, which is the fourth-term Municipal Separate Storm Sewer System (MS4) Permit issued to the District by the San Diego Regional Water Quality Control Board (Regional Board) on November 10, 2010 (2010 MS4 Permit). The 2010 MS4 Permit was adopted by the Regional Board on November 10, 2010.

The 2010 MS4 Permit regulates stormwater discharges from Co-Permittee owned MS4s within the Santa Margarita Watershed Region of Riverside County (SMR). The following municipal governments are Co-Permittees on the 2010 MS4 Permit:

- The District (serving as Principal Co-Permittee)
- The County of Riverside
- The City of Murrieta
- The City of Temecula
- The City of Wildomar

Portions of the cities of Wildomar and Menifee lie within the Santa Margarita Watershed; however, being newly incorporated cities, they were not Co-Permittees under the third-term MS4 Permit. The City of Wildomar has been added as a Co-Permittee on the 2010 MS4 Permit. Additionally, during the permit renewal process and negotiations for the 2010 MS4 Permit, an agreement between the Santa Ana Regional Water Quality Control Board (SARWQCB) and San Diego Regional Water Quality Control Board for a jurisdictional swap was drafted and finalized, and is now in effect. The entire City of Menifee is now governed by the SARWQCB, and the entire jurisdictional areas of the cities of Murrieta and Wildomar are governed by the San Diego Regional Board. The only exception to this swap is with regard to TMDLs; any TMDL adopted by the Regional Board and incorporated into the SMR Permit must be complied with by Menifee. Similarly, TMDLs in the Santa Ana MS4 Permit must be complied with by Wildomar and Murrieta.

The goal of the 2010 MS4 Permit is to protect and enhance the quality of surface waters within the watershed to protect their beneficial uses as described in the Basin Plan. As stated above, this report documents the specific activities and programs of the District to reduce pollutants in discharges from District-owned MS4 to the MEP, and to effectively prohibit illegal discharges.

The 2010 MS4 Permit requires each Co-Permittee to develop an individual JRMP. Individual Co-Permittee JRMP Annual Reports are required to be submitted to the Regional Board on or before October 31st of each calendar year. As Principal Co-Permittee, the District is tasked with coordinating the submittal of the Individual JRMP Annual Reports for the other Co-Permittees within the SMR.

This Annual Report covers the period extending from July 1, 2014 through June 30, 2015 and specifically addresses reporting requirements specified in Section K.3. of the 2010 MS4 Permit; this includes identifying program progress and effectiveness evaluations.

I. EXECUTIVE SUMMARY CONTD.

The District was created by an act of the State Legislature, and is charged with providing flood protection within the limits of its service area. The District constructs, owns, and maintains an expansive network of MS4s throughout the western portion of Riverside County including in the SMR; however, its legislative charter does not provide any authority (police power) to regulate land-use for areas tributary to these MS4 systems. As such, the District's activities continue to be limited to MS4 maintenance activities, public outreach, training, water quality monitoring and IC/ID activities. The District relies on combined legal authority with the Co-Permittees for all enforcement activities outside of District right-of-way.

Program Implementation Highlights

The District continues to evaluate and optimize its programs based on the observations of District staff, Regional Board audits and other sources of input. Highlights for the 14/15 reporting period are as follows:

- The District continued to coordinate and implement the regional programs described in the District's SMR JRMP.
- The District coordinated development and submittal of the SMR Report of Waste Discharge (ROWD); this effort began in early 2015, and the document was submitted to the Regional Board on May 10, 2015.
- Continued improvement of the Development Planning Program:
    - In collaboration with the Co-Permittees, the development of the SMR Hydromodification Management Plan (HMP) document was completed, and approved by the Regional Board. The final draft HMP was submitted to the Regional Board on July 11, 2014, at which time the District and each of the Co-Permittees began implementation. Training seminars were held for Co-Permittee staff and the development community in June, August, and December 2014. These seminars focused on HMP requirements, and how to implement the HMP into development and redevelopment projects.
    - Completed development of the SMR Hydrology Model (SMRHM). The SMRHM was also submitted to the Regional Board for final approval in July 2014, and became effective on July 11, 2014. The SMRHM is a tool that provides continuous simulation of peak flow runoff rates, from 10% of the 2-year runoff event up to the 10-year runoff event for Priority Development Projects (PDPs). The software is a Hydrologic Simulation Program FORTRAN (HSPF) model that allows users to demonstrate compliance with the HMP performance standards through an interactive graphic user interface.
    - The District completed the overhaul of the existing BMP Design Handbook to include enhanced LID BMP design guidance and worksheets. The BMP Design Handbook is

currently being updated once more to reflect the recently approved HMP; during the interim, hydrologic control BMP design and selection criteria are located within the SMRHM software.

- The SMR Standard Stormwater Mitigation Plan (also referred to as Model WQMP) was also approved and became effective on July 11, 2014.
- Continued to utilize the District's LID Project to test and demonstrate stormwater capture, management, and treatment using LID practices. This project implements a variety of LID BMPs, and provides a facility in a centralized location which is convenient for educating residents, regulators, developers, municipal employees, engineers and other interested stakeholders from many southern California communities. Since completion of the LID Project, District staff have provided dozens of informational project tours.
- The District continues to review applicable WQMPs for development projects within unincorporated County areas, at the request of the County of Riverside.

- Continued to chair the Santa Margarita Technical Advisory Committee, comprised of Co-Permittees, Regional Board staff, and interested parties. The Co-Permittees coordinate their urban runoff management activities to work toward achieving the greatest protection of receiving water quality. This committee serves as a forum to effectively disseminate information, discuss regional and statewide program issues, and plan and coordinate Co-Permittee actions to achieve compliance with the 2010 MS4 Permit.
- Conducted the Annual Watershed Review Meeting in April 2015. The Annual Watershed Review Meeting is held annually during the month of April, and was established per requirements of the 2010 MS4 Permit. A schedule of implementing the meeting was based upon the submitted schedule in the Watershed Workplan; the meeting is open to the public.
- Continued financial support to area-wide Stormwater Pollution Prevention Programs, including the Hazardous Materials Response (HAZMAT) Team, the Household Hazardous Waste (HHW) temporary and permanent collection events, and the "ABOP" (Anti-freeze, Batteries, Oil, and Paint) program.
- Continued proactive efforts to inform regulators and policy makers by working with the Permittees to provide comments on various draft policy and legislation which have potential to shape District, County, and Co-Permittee MS4 Permit compliance activities.
- Developed, prepared, and submitted a comprehensive District JRMP Annual Report to the Regional Board.
- Continued collection and analysis of water quality samples in accordance with the 2010 Permit and the Consolidated Monitoring Program (CMP) for water quality monitoring. Water

quality samples are collected during dry and wet weather at MS4 outfalls and receiving water stations, and are analyzed for required constituents. Dry weather stream assessment at designated receiving water stations, and mass load sampling of three monitoring stations during three winter storms continues to be conducted.

- In June 2012, the CMP was revised to address the monitoring efforts that will be implemented to comply with the County's three MS4 Permits. Since then the CMP (Volume III - Santa Margarita Region Monitoring Plan) has been updated as-needed to reflect refined programmatic adjustments, such as lessons learned in each monitoring year, global revisions to provide standardization and clarity, updates of key staff assignments, and improvements to sampling procedures. In July 2014, said updates included continued data collection for the Co-Permittees' SMR perennial stream segment characterization, and working with the contracted laboratories to improve quality assurance and quality control. The CMP includes procedures for collection and analysis of water quality samples at MS4 outfalls and receiving waters sites for a variety of constituents, and includes reference to additional monitoring components that are required by the MS4 Permits.
- Continued participation in the Stormwater Monitoring Coalition (SMC), a regional monitoring group comprised of southern California Phase 1 Municipal NPDES Permit holders whose focus is developing effective, meaningful stormwater quality monitoring techniques.
- Continued coordination with the SMC on a long-term (i.e., five-year) southern California bioassessment monitoring program.
- Continued active participation in the California Stormwater Quality Association (CASQA). On behalf of the Co-Permittees, the District remains active within the organization, specifically: Darcy Kuenzi currently serves as Legislative Co-Chair. District staff also actively participates in the Monitoring & Science, BMP and Policy and Permitting subcommittees.
- Continued active participation in the CASQA Pesticides Subcommittee, with the goal of facilitating changes to State and Federal pesticides regulations. These changes will improve processes for evaluating the environmental impacts on receiving waters of new pesticides, and also change labeling and use requirements for existing pesticides, such as pyrethroids.
- Continued presentation of semi-annual municipal employee stormwater training programs. These training classes focus on the requisite knowledge for properly implementing the JRMP, WQMP and HMP. The training classes also address Permittee functions such as development planning, municipal activities, industrial/commercial inspections, and construction inspections. Fall and spring training sessions were held at the District and also at the cities of Temecula and Palm Springs to provide close proximity training for the Co-Permittees.
- Continued to provide stormwater pollution prevention presentations in local elementary

schools; 22 assembly style presentations were provided County-wide in 2014-2015, reaching over 7,590 students.

- Continued to chair the Public Education Subcommittee. Meetings include Co-Permittee representation from each watershed to review elements of regional public education programs and program materials.
- Continued an ongoing effort to redesign the District's NPDES public education webpage to improve its effectiveness, usability, and quality of information regarding MS4 compliance programs. The webpage is currently being reformatted to add more usable and interactive data as well as add information pertinent to new permit requirements. The webpage will provide information for the general public, Permittees, regulators, and in-house personnel.
- Continued to host the District's NPDES website which provides information regarding the Regional MS4 Permit compliance programs**.** The website provides pertinent information for the general public, Permittees, regulators, and in-house personnel.
- Continued distribution of focused BMP brochures targeting construction activities, pet care, guidelines for swimming pool, jacuzzi and garden fountain maintenance, septic tank maintenance, restaurant/food service industry, professional mobile services, automobile service industry, outdoor cleaning activities and industrial facilities. Efforts continue to ensure that brochures are updated as necessary.
- Continued partnership and support in the Upper Santa Margarita Watershed Integrated Regional Watershed Management Group. The Regional Watershed Management Group involves multiple agencies, stakeholders, individuals and groups, and collaborates to apply for Proposition 84 Grant funding through the Upper Santa Margarita Watershed Integrated Regional Watershed Management Plan for planning projects within the SMR that would additionally help provide funding for compliance activities required by the 2010 MS4 Permit.

For purposes of this Annual Report, the terms "Upper Santa Margarita River Watershed Water Quality Workplan" and "Standard Stormwater Mitigation Plan" referenced in the Permit are referred to as the "Watershed Workplan" and "Water Quality Management Plan" (WQMP), respectively, to be consistent with terminology previously established and in use by the Co-Permittees.

11. FISCAL ANALYSIS

1) The following table provides estimated expenditures for the current reporting period, the preceding reporting period, and the next reporting period. This table identifies the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities described in the District's JRMP as required under Section H.2 of the 2010 SMR MS4 Permit.

Expenditures identified below reflect costs incurred by the District for implementing its own NPDES program as described in the District's JRMP. The District does not track its direct implementation costs separately nor does it track costs separately for many permit provisions.

Table 11-1: Program Element Expenditures

Program Element	Fiscal Year 2013-2014		Fiscal Year 2014-2015		Fiscal Year 2015-2016	
	Capital Expenditures	O&M/Admin Expenditures	Capital Expenditures	O&M/Admin Expenditures	Capital Expenditures	O&M/Admin Expenditures
Program Management [(a)]	N/A	$1,001,045	N/A	$860,945	N/A	$1,615,420
Illicit Connections & Illegal Discharges Program [(b)]	N/A	N/A	N/A	N/A	N/A	N/A
Municipal Facilities and Activities [(b)]	N/A	Uncalculated	N/A	Uncalculated	N/A	Uncalculated
Public Education & Outreach [(c)]	N/A	$34,760	N/A	$23,976	N/A	$83,250
Monitoring Program [(c)]	N/A	$508,981	N/A	$445,316	N/A	$702,000
Total	$0	$1,544,786	$0	$1,330,237	$0	$2,400,670

(a) Program Management includes all costs not directly listed in the Program Elements. Cost includes staffing, administration and overhead, consultant services and regional programs associated with program development.

(b) The District does not have any individual costs associated with this program element. Estimates are not included due to the fact that costs are included in Program Management, Public Education and Monitoring.

(c) Costs for this element are not tracked separately from the District-Implemented Regional Programs and as such, shown costs are inclusive of costs incurred for implementing the regional element.

2) A description of the source(s) of funds that are proposed to meet the necessary expenditures for the subsequent year.

Table 11-2: Source of Funds

Source of Funds [(a)]	FY 2015-2016 Revenues	Restrictions on Use (if applicable)
Santa Margarita Watershed Benefit Assessment Fund (Projected Revenue)	$495,701	District NPDES compliance cost, excess funds used fund regional NPDES activities
Santa Margarita Watershed Co-Permittee Implementation Agreement (Estimated contributions)	$1,904,969	Fund Regional NPDES Compliance Programs
Total	**$2,400,670**	

(a) Revenue sources do not change from year to year

3) Provide a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line item.

The Regional Board has scheduled adoption of the Tentative Order to enroll the SMR Co-Permittees into the San Diego Regional MS4 Permit for November 18, 2015; the proposed effective date of the Regional Permit is January 7, 2016. The coming fiscal year will involve extensive collaboration, planning and development of compliance documentation under the Regional MS4 Permit. If the full projected budget is not used, the subsequent fiscal year budget will be appropriately adjusted.

Voter Approval for Local Government Taxes. Limitations on Fees, Assessments, and Charges. Initiative Constitutional Amendment.

Official Title and Summary Prepared by the Attorney General

VOTER APPROVAL FOR LOCAL GOVERNMENT TAXES. LIMITATIONS ON FEES, ASSESSMENTS, AND CHARGES. INITIATIVE CONSTITUTIONAL AMENDMENT.

- Limits authority of local governments to impose taxes and property-related assessments, fees, and charges. Requires majority of voters approve increases in general taxes and reiterates that two-thirds must approve special tax.
- Assessments, fees, and charges must be submitted to property owners for approval or rejection, after notice and public hearing.
- Assessments are limited to the special benefit conferred.
- Fees and charges are limited to the cost of providing the service and may not be imposed for general governmental services available to the public.

Summary of Legislative Analyst's Estimate of Net State and Local Government Fiscal Impact:

- Short-term local government revenue losses of more than $100 million annually.
- Long-term local government revenue losses of potentially hundreds of millions of dollars annually.
- Local government revenue losses generally would result in comparable reductions in spending for local public services.

Analysis by the Legislative Analyst

OVERVIEW

Local governments provide many services to people and businesses in their communities. To pay for these services, local governments raise revenues by imposing fees, assessments, and taxes. This constitutional measure would make it more difficult for local governments to raise these revenues. As a result, this measure would:

- Reduce the amount of fees, assessments, and taxes that individuals and businesses pay.
- Decrease spending for local public services.

PROPOSAL

This measure would constrain local governments' ability to impose fees, assessments, and taxes. The measure would apply to all cities, counties, special districts, redevelopment agencies, and school districts in California.

Fees

Current Practice. Local governments charge fees to pay for many services to their residents. Some of these fees pay for services to property, such as garbage collection and sewer service. Fees are also called "charges."

Local governments often establish several fee amounts for a service, each based on the approximate cost of providing the service to different types of properties (such as commercial, industrial, or residential property). Local governments usually send monthly bills to property owners to collect these fees, although some fees are placed on the property tax bill. Local governments generally hold public hearings before creating or increasing such a fee, but do not hold elections on fees.

Proposed Requirements for Property-Related Fees. This measure would restrict local governments' ability to charge "property-related" fees. (Fees for water, sewer, and refuse collection service probably meet the measure's definition of a property-related fee. Gas and electric fees and fees charged to land developers are specifically exempted.)

Specifically, the measure states that *all* local property-related fees must comply by July 1, 1997, with the following restrictions:

- No property owner's fee may be more than the cost to provide service to that property owner's land.
- No fee may be charged for fire, police, ambulance, library service, or any other service widely available to the public.
- No fee revenue may be used for any purpose other than providing the property-related service.
- Fees may only be charged for services immediately available to property owners.

In addition, the measure specifies that before adopting a *new* property-related fee (or increasing an *existing* one), local governments must: mail information about the fee to every property owner, reject the fee if a majority of the property owners protest in writing, and hold an election on the fee (unless it is for water, sewer, or refuse collection service).

Taken together, these fee restrictions would require local governments to reduce or eliminate some existing fees. Unless local governments increased taxes to replace these lost fee revenues, spending for local public services likely would be decreased. The measure's requirements would also expand local governments' administrative workload. For example, local governments would have to adjust many property-related fees, potentially (1) setting them on a block-by-block or parcel-by-parcel basis and (2) ending programs that allow low-income people to pay reduced property-related fees. Local governments would also have to mail information to every property owner and hold elections.

Assessments

Current Practice. Local governments charge assessments to pay for projects and services that benefit specific properties. For example, home owners may pay assessments for sidewalks, streets, lighting, or recreation programs in their neighborhood. Assessments are also called "benefit assessments," "special assessments," "maintenance assessments," and similar terms. Local governments typically place assessment charges on the property tax bill.

To create an assessment, state laws require local governments to determine which properties would benefit from a project or service, notify the owners, and set assessment amounts based on the approximate benefit property owners would receive. Often, the rest of the community or region also receives some general benefit from the project or service, but does not pay a share of cost. Typical assessments that provide general benefits include fire, park, ambulance, and mosquito control assessments. State laws generally require local governments to reject a proposed assessment if more than 50 percent of the property owners protest in writing.

Some local governments also levy "standby charges," which are similar to assessments. Standby charges commonly finance water and sewer service expansions to new households and businesses. (The measure treats standby charges as assessments.)

Proposed Requirements for Assessments. This measure would place extensive requirements on local governments charging assessments. Specifically, the measure requires all *new* or *increased* assessments—and some *existing* assessments—to meet four conditions.

- First, local governments must estimate the amount of "special benefit" landowners receive—or would receive—from a project or service. Special benefit is defined as a particular benefit to land and buildings, not a general benefit to the public at large or a general increase in property values. If a project provides both special benefits *and* general benefits, a local government may charge landowners only for the cost of providing the special benefit. Local government must use general revenues (such as taxes) to pay the remaining portion of the project or service's cost. In some cases, local government may not have sufficient revenues to pay this cost, or may choose not to pay it. In these cases, a project or service would not be provided.

- Second, local governments must ensure that no property owner's assessment is greater than the cost to provide the improvement or service to the owner's property. This provision would require local governments to examine assessment amounts in detail, potentially setting them on a parcel-by-parcel or block-by-block basis.
- Third, local governments must charge schools and other public agencies their share of assessments. Currently, public agencies generally do not pay assessments.
- Finally, local governments must hold a mail-in election for each assessment. Only property owners and any renters responsible for paying assessments would be eligible to vote. Ballots cast in these elections would be weighted based on the amount of the assessment the property owner or renter would pay. For example, if a business owner would pay twice as much assessment as a homeowner, the business owner's vote would "count" twice as much as the homeowner's vote.

Figure 1 summarizes the existing assessments that would be exempt from the measure's requirements. We estimate that more than half of all existing assessments would qualify for an exemption. All other existing assessments must meet the measure's requirements—including the voter approval requirement—by July 1, 1997.

Figure 1

Existing Assessments Exempt from the Measure's Requirements

- Assessments previously approved by voters—or by all property owners at the time the assessment was created.
- Assessments where all the funds are used to repay bond obligations.
- Assessments where all the funds are used to pay for sidewalks, streets, sewers, water, flood control, drainage systems or, "vector control" (such as mosquito control).

Taxes

Current Practice. Local governments typically use taxes to pay for general government programs, such as police and fire services. Taxes are "general" if their revenues can be used to pay for many government programs, rather than being reserved for specific programs. Proposition 62—a statutory measure approved by the voters in 1986—requires new local general taxes to be approved by a majority vote of the people. Currently, there are lawsuits pending as to whether this provision applies to cities that have adopted a local charter, such as Los Angeles, Long Beach, Sacramento, San Jose, and many others.

Proposed Requirements for Taxes. The measure states that all *future* local general taxes, including those in cities with charters, must be approved by a majority vote of the people. The measure also requires *existin* local general taxes established after December 31, 1994, without a vote of the people to be placed before the voters within two years.

Other Provisions

Burden of Proof. Currently, the courts allow local governments significant flexibility in determining fee and assessment amounts. In lawsuits challenging property fees and assessments, the taxpayer generally has the "burden of proof" to show that they are not legal. This measure shifts the burden of proof in these lawsuits to local government. As a result, it would be easier for taxpayers to win lawsuits, resulting in reduced or repealed fees and assessments.

Initiative Powers. The measure states that Californians have the power to repeal or reduce any local tax, assessment, or fee through the initiative process. This provision broadens the existing initiative powers available under the State Constitution and local charters.

FISCAL IMPACT

Revenue Reductions

Existing Revenues. By July 1, 1997, local governments would be required to reduce or repeal existing property-related fees and assessments that d not meet the measure's restrictions on (1) fee ana assessment amounts or (2) the use of these revenues. The most likely fees and assessments affected by these provisions would be those for: park and recreation programs, fire protection, lighting, ambulance, business improvement programs, library, and water service. Statewide, local government revenue reductions probably would exceed $100 million annually. The actual level of revenue reduction would depend in large part on how the courts interpret various provisions of the measure. In addition, because local governments vary significantly in their reliance upon fees and assessments, the measure's impact on individual communities would differ greatly.

Within two years, local governments also would be required to hold elections on some recently imposed taxes and existing assessments. The total amount of these taxes and assessments is unknown, but probably exceeds $100 million statewide. If voters do not approve these existing taxes and assessments, local governments would lose *additional* existing revenues.

New Revenues. The measure's restrictions and voter-approval requirements would constrain new and increased fees, assessments, and taxes. As a result, local government revenues in the future would be lower than they would be otherwise. The extent of these revenue reductions would depend on court interpretation of the measure's provisions and local government actions to replace lost revenues.

Summary of Revenue Reductions. In the short term, local government revenues probably would be reduced by more than $100 million annually. Over time, cal government revenues would be significantly lower ıan they would otherwise be, potentially by hundreds of millions of dollars annually. Individual and business payments to local government would decline by the same amount. In general, these local government revenue losses would result in comparable reductions in spending for local public services.

Cost Increases

Local governments would have significantly increased costs to hold elections, calculate fees and assessments, notify the public, and defend their fees and assessments in court. These local increased costs are unknown, but could exceed $10 million initially, and lesser amounts annually after that.

School and community college districts, state agencies, cities, counties, and other public agencies would have increased costs to pay their share of assessments. The amount of this cost is not known, but could total over $10 million initially, and increasing amounts in the future.

For text of Proposition 218 see page 108

218 Voter Approval for Local Government Taxes. Limitations on Fees, Assessments, and Charges. Initiative Constitutional Amendment.

Argument in Favor of Proposition 218

VOTE YES ON PROPOSITION 218. IT WILL GIVE YOU THE RIGHT TO VOTE ON TAX INCREASES!

Proposition 218 guarantees your right to vote on local tax increases—even when they are called something else, like "assessments" or "fees" and imposed on homeowners.

Proposition 218 guarantees your right to vote on taxes imposed on your water, gas, electric, and telephone bills.

Proposition 218 does NOT prevent government from raising and spending money for vital services like police, fire and education. If politicians want to raise taxes they need only convince local voters that new taxes are really needed.

Proposition 218 simply extends the long standing constitutional protection against politicians imposing tax increases without voter approval.

After voters passed Proposition 13, politicians created a loophole in the law that allows them to raise taxes without voter approval by calling taxes "assessments" and "fees."

Once this loophole was created, one lawyer working with politicians wrote, assessments "are now limited only by the limits of human imagination."

How imaginative can the politicians be with assessments? Here are a few examples among thousands:

- A view tax in Southern California—the better the view of the ocean you have the more you pay.
- In Los Angeles, a proposal for assessments for a $2-million scoreboard and a $6-million equestrian center to be paid for by property owners.
- In Northern California, taxpayers 27 miles away from a park are assessed because their property supposedly benefits from that park.
- In the Central Valley, homeowners are assessed to refurbish a college football field.

TAXPAYERS HAVE *NO RIGHT TO VOTE* ON THESE TAX INCREASES AND OTHERS LIKE THEM UNLESS PROPOSITION 218 PASSES!

Proposition 218 will significantly tighten the kind of benefit assessments that can be levied.

Here are examples of why fees and assessments and other nonvoted taxes are so unfair:

- The poor pay the same assessments as the rich. An elderly widow pays exactly the same on her modest home as a tycoon with a mansion.
- There are now over 5,000 local districts which can impose fees and assessments without the consent of local voters. Special districts have increased assessments by over 2400% over 15 years. Likewise, cities have increased utility taxes 415% and raised benefit assessments 976%, a ten-fold increase.

Non-voted taxes on electricity, gas, water, and telephone services hit renters and homeowners hard.

And, retired homeowners get hit doubly hard!

To confirm the impact of fees and assessments on you, look at your property tax bill. You will see a growing list of assessments imposed without voter approval. The list will grow even longer unless Proposition 218 passes.

Proposition 218 will allow you and your neighbors—not politicians—to decide how high your taxes will be. It will allow those who pay assessments to decide if what they are being asked to pay for is worth the cost.

FOR THE RIGHT TO VOTE ON TAXES, VOTE YES C PROPOSITION 218.

JOEL FOX
President, Howard Jarvis Taxpayers Association

JIM CONRAN
President, Consumers First

RICHARD GANN
President, Paul Gann's Citizens Committee

Rebuttal to Argument in Favor of Proposition 218

PROPOSITION 218 IS NO FALSE ALARM . . . IT HURTS

Propositions can deceive, so carefully judge who you believe.

Beware of wild claims for new "constitutional rights" and people who pretend concern about widows and orphans.

Read Proposition 218 yourself and see how large corporations, big landowners and foreign interests gain more voting power than YOU.

Promoters say you get "tax reform" . . . you may actually get serious cutbacks in local service and FEWER VOTING RIGHTS for millions of California citizens.

Sometimes we hear hysterical warnings about bad things that never occur . . . Proposition 218 is a REAL threat. On Proposition 218 consider the harm to EXISTING local services, not vague future threats:

- May reduce CURRENT funding for police, fire and emergency medical programs across California.
- Worsens SCHOOL CROWDING by making public schools pay NEW TAXES, cutting classroom teaching.
- Could eliminate LifeLine utility support for SENIORS and disabled citizens.

CONSTITUTIONAL POWER SHIFT.

Proposition 218 etches this into the state Constitution:

- Blocks 3 million Californians from voting on tax assessments. The struggling young couple renting a small home, WILL HAVE NO VOTE on the assessments imposed on the house they rent.
- Grants special land interests more voting power than average homeowners. The "elderly widow" promoters cite will be banned from voting if she is a renter, or her voting power dwarfed by large property owners.
- Gives non-citizens voting rights on your community taxes.

Proposition 218 is a great deal for wealthy special interests. But it's a bad deal for the average taxpayer, homeowner and renter.

HOWARD OWENS
Congress of California Seniors

LOIS TINSON
President, California Teachers Association

RON SNIDER
President, California Association of Highway Patrolmen

Voter Approval for Local Government Taxes. Limitations on Fees, Assessments, and Charges. Initiative Constitutional Amendment.

218

Argument Against Proposition 218

PROPOSITION 218 DILUTES VOTING RIGHTS, HURTS LOCAL SERVICES

In the disguise of tax reform, Proposition 218's Constitutional Amendment REDUCES YOUR VOTING POWER and gives huge voting power to corporations, foreign interests and wealthy land owners.

It cuts police, fire, library, park, senior, and disabled services and diverts funds needed for classroom-size reductions.

Read Proposition 218 carefully—it's a wolf, not a lamb!

YOU LOSE RIGHTS; CORPORATIONS, DEVELOPERS, NON-CITIZENS GAIN VOTING POWER

Section 4(e) of Proposition 218 changes the Constitution to give corporations, wealthy landowners and developers MORE VOTING POWER THAN HOMEOWNERS. It lets large outside interests control community taxes—against the will of local citizens.

EXAMPLE: An oil company owns 1000 acres, you own one acre; the oil corporation gets 1000 times more voting power than you.

While Prop. 218 gives voting power to outside interests, Section 4(g) denies voting rights to more than 3,000,000 California renters.

Reducing American citizens' Constitutional rights, it grants voting rights to corporations and absentee landowners—even foreign citizens.

EXAMPLE: A shopping center owned by a foreign citizen is worth 100 times as much as your home; that person gets 100 imes more voting power than you!

Every citizen should have the right to vote if a community is voting on local assessments for police, fire, emergency medical and library programs. It's unfair to give voting power to non-citizens, big landowners and developers, yet deny it to millions of Californians.

MAY CUT LOCAL POLICE, FIRE PROTECTION

Section 6(b)(5) eliminates vital funding sources for local police, fire, emergency medical and library services.

Proposition 218 goes too far—may forbid emergency assessments for earthquakes, floods and fires.

Don't handcuff police and firefighters. The California Police Chiefs Association, Fire Chiefs Association and California Professional Firefighters ask you to vote NO.

The impartial Legislative Analyst's report shows how Proposition 218 could impede LifeLine support for the elderly and disabled. It prohibits seniors and disabled from receiving needed utility services unless they pay all costs themselves.

Proposition 218 cuts more than $100 million from local services, yet wastes tens of millions each year by changing the Constitution to require 5,000 local elections even if local citizens don't want an election . . . even if the election cost is more than the potential revenue.

MAKES SCHOOL CROWDING WORSE

California teachers oppose Proposition 218 because Section 4(a) imposes a new tax on public school property, diverting millions from classroom programs to pay for non-school expenses.

California already has the most crowded classrooms in America (dead last of 50 states). Proposition 218 makes school crowding worse.

SHELL GAME

This measure takes a few good ideas, but twists and perverts them. It cripples the best local services and puts more power into the hands of special interests and non-citizens.

Proposition 218 goes too far. Assessment laws DO need improvement, but Proposition 218 is the wrong way to do it. It does more harm than good, restricting our voting rights, hurting schools, seniors and public safety programs.

Please vote NO on Proposition 218.

FRAN PACKARD
President, League of Women Voters of California

CHIEF RON LOWENBERG
President, California Police Chiefs' Association

CHIEF JEFF BOWMAN
President, California Fire Chiefs' Association

Rebuttal to Argument Against Proposition 218

Arguments against Proposition 218 are misleading and designed to confuse voters. In truth:

1. Proposition 218 expands your voting rights. It CONSTITUTIONALLY GUARANTEES your right to vote on taxes.
2. Under Proposition 218, only California registered voters, including renters, can vote in tax elections. Corporations and foreigners get no new rights.
3. Current law already allows property owners, including nonresidents, to act on property assessments based on the assessment amount they pay. This is NOT created by Proposition 218.
4. "Lifeline" rates for elderly and disabled for telephone, gas, and electric services are NOT affected.
5. Proposition 218 allows voter approved taxes for police, fire, education.

Proposition 218 simply gives taxpayers the right to vote on axes and stops politicians' end-runs around Proposition 13.

That's why ordinary taxpayers, seniors, parents, homeowners, renters, consumer advocates, support Proposition 218.

Under Proposition 218, officials must convince taxpayers that tax increases are justified. Politicians and special interest groups don't like this idea. But they can't win by saying "taxpayers should not vote on taxes," so they use misleading statements to confuse a simple question.

That question: DO YOU BELIEVE TAXPAYERS SHOULD HAVE THE RIGHT TO VOTE ON TAXES? If you answered "yes", VOTE YES ON PROPOSITION 218.

Read the nonpartisan, independent SUMMARY by the Attorney General, which begins "VOTER APPROVAL FOR LOCAL GOVERNMENT TAXES." And, by all means read your property tax bill, due out now. Then you'll know the truth.

FOR THE RIGHT TO VOTE ON TAXES, VOTE YES ON PROPOSITION 218!

CAROL ROSS EVANS
Vice-President, California Taxpayers Association

FELICIA ELKINSON
Past President, Council of Sacramento Senior Organizations

LEE PHELPS
Founder, Alliance of California Taxpayers and Involved Voters (ACTIV)

AN OVERVIEW OF STATE BOND DEBT

This section of the ballot pamphlet provides an overview of the state's current bond debt. It also provides a discussion of the impact the bond measures on this ballot, if approved, would have on this debt level.

Background

What Is Bond Financing? Bond financing is a type of long-term borrowing used to raise money for specific projects. The state gets money by selling bonds to investors. The state must pay back the amount of the bonds along with interest.

The money raised from bonds primarily funds large capital outlay projects, such as prisons, schools, and colleges. The state uses bond financing mainly because these facilities are used for many years and their large dollar costs are difficult to pay for all at once.

General Fund Bond Debt. Most of the bonds the state issues are *general obligation* bonds. The General Fund makes debt payments on about three-fourths of these bonds. The remaining general obligation bonds (such as veterans' housing bonds) are self-supporting and, therefore, do not require General Fund support. The money in the General Fund comes primarily from state personal and corporate income taxes and sales taxes. General obligation bonds must be approved by the voters, and are placed on the ballot by legislative action or by initiative.

The state also issues bonds known as *lease-payment* bonds. These bonds do not require voter approval. The state has used these bonds to fund capital outlay projects in higher education, to construct prisons, and to build state offices. The General Fund also makes debt payments on these bonds.

What Are the Direct Costs of Using Bonds? The state's cost for using bonds depends primarily on the interest rate that is paid on the bonds and the number of years over which they are paid off. Most general obligation bonds are paid off over a period of 20 to 30 years. Assuming an interest rate of 6 percent, the cost of paying off bonds over 25 years is about $1.78 for each dollar borrowed—$1 for the dollar borrowed and 78 cents for the interest. These payments, however, are spread over the entire period, so the cost after adjusting for inflation is less. This is because future payments are made with cheaper dollars. Assuming a 3 percent future annual inflation rate, the cost of paying off the bonds in today's dollars would be about $1.30 for each $1 borrowed.

The State's Current Debt Situation

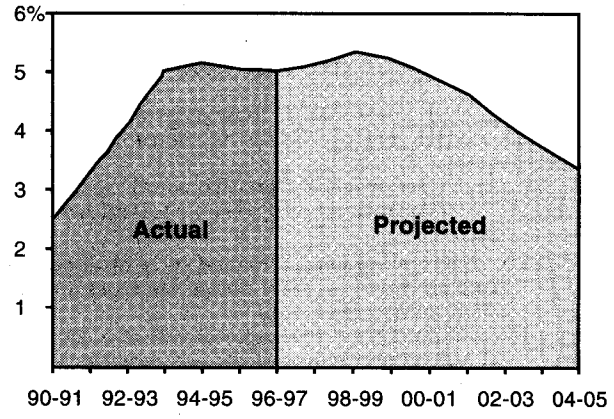
The Amount of State Debt. As of July 1, 1996, the state had about $20.2 billion of General Fund bond debt—$14.3 billion of general obligation bonds and $5.9 billion of lease-payment bonds. Also, about $9 billion of authorized bonds had not been sold because the projects to be funded by the bonds had not been undertaken.

Debt Payments. We estimate that payments on the state's General Fund bond debt will be around $2.4 billion during the 1996–97 fiscal year. As currently authorized bonds are sold, bond debt payments will increase to about $2.9 billion in 1999–00 and declin thereafter.

The level of debt payments expressed as a percentage of state General Fund revenues is referred to as the state's "debt ratio." Figure 1 shows actual and projected debt ratios from 1990–91 through 2004–05. The figure shows that as currently authorized bonds are sold, the state's debt ratio will increase to 5.3 percent in 1998–99 and decline thereafter.

Figure 1

State Debt Service Ratios [a]
1990-91 Through 2004-05



[a] Based on sales of *currently* authorized bonds.

Bond Measures Proposed for the Ballot

There are three general obligation bond measures on this ballot that total $2.1 billion:

- $995 million for water-related programs (Proposition 204).
- $700 million for local jails and juvenile justice facilities (Proposition 205).
- $400 million for veterans' housing loans (Proposition 206). These bonds are self-supporting and do not affect the state's debt ratio.

If these bond measures are approved, we estimate that the state's bond debt payments would remain at about $2.9 billion through 2001–02 and the state's General Fund bond debt would total $21.3 billion (after accounting for the sale of some authorized bonds and the retirement of some debt). The debt ratio would remain at the projected peak of 5.3 percent through 1999–00 and decline thereafter. Voter approval of additional bonds at future elections or legislative authorization of additional lease-payment bonds would increase the state's debt.

PROPOSITION 26

REQUIRES THAT CERTAIN STATE AND LOCAL FEES BE APPROVED BY TWO-THIRDS VOTE. FEES INCLUDE THOSE THAT ADDRESS ADVERSE IMPACTS ON SOCIETY OR THE ENVIRONMENT CAUSED BY THE FEE-PAYER'S BUSINESS. INITIATIVE CONSTITUTIONAL AMENDMENT.

OFFICIAL TITLE AND SUMMARY — PREPARED BY THE ATTORNEY GENERAL

REQUIRES THAT CERTAIN STATE AND LOCAL FEES BE APPROVED BY TWO-THIRDS VOTE. FEES INCLUDE THOSE THAT ADDRESS ADVERSE IMPACTS ON SOCIETY OR THE ENVIRONMENT CAUSED BY THE FEE-PAYER'S BUSINESS. INITIATIVE CONSTITUTIONAL AMENDMENT.

- Requires that certain state fees be approved by two-thirds vote of Legislature and certain local fees be approved by two-thirds of voters.
- Increases legislative vote requirement to two-thirds for certain tax measures, including those that do not result in a net increase in revenue, currently subject to majority vote.

Summary of Legislative Analyst's Estimate of Net State and Local Government Fiscal Impact:

- Decreased state and local government revenues and spending due to the higher approval requirements for new revenues. The amount of the decrease would depend on future decisions by governing bodies and voters, but over time could total up to billions of dollars annually.
- **Additional state fiscal effects from repealing recent fee and tax laws: (1) increased transportation program spending and increased General Fund costs of $1 billion annually, and (2) unknown potential decrease in state revenues.**

ANALYSIS BY THE LEGISLATIVE ANALYST

BACKGROUND

State and local governments impose a variety of taxes, fees, and charges on individuals and businesses. Taxes—such as income, sales, and property taxes—are typically used to pay for general public services such as education, prisons, health, and social services. Fees and charges, by comparison, typically pay for a particular service or program benefitting individuals or businesses. There are three broad categories of fees and charges:

- User fees—such as state park entrance fees and garbage fees, where the user pays for the cost of a specific service or program.
- Regulatory fees—such as fees on restaurants to pay for health inspections and fees on the purchase of beverage containers to support recycling programs. Regulatory fees pay for programs that place requirements on the activities of businesses or people to achieve particular public goals or help offset the public or environmental impact of certain activities.
- Property charges—such as charges imposed on property developers to improve roads leading to new subdivisions and assessments that pay for improvements and services that benefit the property owner.

Figure 1

Approval Requirements: State and Local Taxes, Fees, and Charges

	State	Local
Tax	Two-thirds of each house of the Legislature for measures increasing state revenues.	• Two-thirds of local voters if the local government specifies how the funds will be used. • Majority of local voters if the local government does not specify how the funds will be used.
Fee	Majority of each house of the Legislature.	Generally, a majority of the governing body.
Property Charges	Majority of each house of the Legislature.	Generally, a majority of the governing body. Some also require approval by a majority of property owners or two-thirds of local voters.

ANALYSIS BY THE LEGISLATIVE ANALYST **CONTINUED**

State law has different approval requirements regarding taxes, fees, and property charges. As Figure 1 shows, state or local governments usually can create or increase a fee or charge with a majority vote of the governing body (the Legislature, city council, county board of supervisors, etc.). In contrast, increasing tax revenues usually requires approval by two-thirds of each house of the state Legislature (for state proposals) or a vote of the people (for local proposals).

Disagreements Regarding Regulatory Fees. Over the years, there has been disagreement regarding the difference between regulatory fees and taxes, particularly when the money is raised to pay for a program of broad public benefit. In 1991, for example, the state began imposing a regulatory fee on businesses that made products containing lead. The state uses this money to screen children at risk for lead poisoning, follow up on their treatment, and identify sources of lead contamination responsible for the poisoning. In court, the Sinclair Paint Company argued that this regulatory fee was a tax because: (1) the program provides a broad public benefit, not a benefit to the regulated business, and (2) the companies that pay the fee have no duties regarding the lead poisoning program other than payment of the fee.

In 1997, the California Supreme Court ruled that this charge on businesses was a regulatory fee, not a tax. The court said government may impose regulatory fees on companies that make contaminating products in order to help correct adverse health effects related to those products. Consequently, regulatory fees of this type can be created or increased by (1) a majority vote of each house of the Legislature or (2) a majority vote of a local governing body.

PROPOSAL

This measure expands the definition of a tax and a tax increase so that more proposals would require approval by two-thirds of the Legislature or by local voters. Figure 2 summarizes its main provisions.

Figure 2

Major Provisions of Proposition 26

✓ **Expands the Scope of What Is a State or Local Tax**
- Classifies as taxes some fees and charges that government currently may impose with a majority vote.
- As a result, more state revenue proposals would require approval by two-thirds of each house of the Legislature and more local revenue proposals would require local voter approval.

✓ **Raises the Approval Requirement for Some State Revenue Proposals**
- Requires a two-thirds vote of each house of the Legislature to approve laws that increase taxes on any taxpayer, even if the law's overall fiscal effect does not increase state revenues.

✓ **Repeals Recently Passed, Conflicting State Laws**
- Repeals recent state laws that conflict with this measure, unless they are approved again by two-thirds of each house of the Legislature. Repeal becomes effective in November 2011.

For text of Proposition 26, see page 114.

ANALYSIS BY THE LEGISLATIVE ANALYST CONTINUED

Definition of a State or Local Tax

Expands Definition. This measure broadens the definition of a state or local tax to include many payments currently considered to be fees or charges. As a result, the measure would have the effect of increasing the number of revenue proposals subject to the higher approval requirements summarized in Figure 1. Generally, the types of fees and charges that would become taxes under the measure are ones that government imposes to address health, environmental, or other societal or economic concerns. Figure 3 provides examples of some regulatory fees that could be considered taxes, in part or in whole, under the measure. This is because these fees pay for many services that benefit the public broadly, rather than providing services directly to the fee payer. The state currently uses these types of regulatory fees to pay for most of its environmental programs.

Certain other fees and charges also could be considered to be taxes under the measure. For example, some business assessments could be considered to be taxes because government uses the assessment revenues to improve shopping districts (such as providing parking, street lighting, increased security, and marketing), rather than providing a direct and distinct service to the business owner.

Some Fees and Charges Are Not Affected. The change in the definition of taxes would not affect most user fees, property development charges, and property assessments. This is because these fees and charges generally comply with Proposition 26's requirements already, or are exempt from its provisions. In addition, most other fees or charges in existence at the time of the November 2, 2010 election would not be affected unless:

- The state or local government later increases or extends the fees or charges. (In this case, the state or local government would have to comply with the approval requirements of Proposition 26.)
- The fees or charges were created or increased by a state law—passed between January 1, 2010 and November 2, 2010—that conflicts with Proposition 26 (discussed further below).

Approval Requirement for State Tax Measures

Current Requirement. The State Constitution currently specifies that laws enacted "for the purpose

Figure 3

Regulatory Fees That Benefit the Public Broadly

Oil Recycling Fee

The state imposes a regulatory fee on oil manufacturers and uses the funds for:

- Public information and education programs.
- Payments to local used oil collection programs.
- Payment of recycling incentives.
- Research and demonstration projects.
- Inspections and enforcement of used-oil recycling facilities.

Hazardous Materials Fee

The state imposes a regulatory fee on businesses that treat, dispose of, or recycle hazardous waste and uses the funds for:

- Clean up of toxic waste sites.
- Promotion of pollution prevention.
- Evaluation of waste source reduction plans.
- Certification of new environmental technologies.

Fees on Alcohol Retailers

Some cities impose a fee on alcohol retailers and use the funds for:

- Code and law enforcement.
- Merchant education to reduce public nuisance problems associated with alcohol (such as violations of alcohol laws, violence, loitering, drug dealing, public drinking, and graffiti).

ANALYSIS BY THE LEGISLATIVE ANALYST CONTINUED

of increasing revenues" must be approved by two-thirds of each house of the Legislature. Under current practice, a law that increases the amount of taxes charged to some taxpayers but offers an equal (or larger) reduction in taxes for other taxpayers has been viewed as not increasing revenues. As such, it can be approved by a majority vote of the Legislature.

New Approval Requirement. The measure specifies that state laws that result in *any* taxpayer paying a higher tax must be approved by two-thirds of each house of the Legislature.

State Laws in Conflict With Proposition 26

Repeal Requirement. Any state law adopted between January 1, 2010 and November 2, 2010 that conflicts with Proposition 26 would be repealed one year after the proposition is approved. This repeal would not take place, however, if two-thirds of each house of the Legislature passed the law again.

Recent Fuel Tax Law Changes. In the spring of 2010, the state increased fuel taxes paid by gasoline suppliers, but decreased other fuel taxes paid by gasoline retailers. Overall, these changes do not raise more state tax revenues, but they give the state greater spending flexibility over their use.

Using this flexibility, the state shifted about $1 billion of annual transportation bond costs from the state's General Fund to its fuel tax funds. (The General Fund is the state's main funding source for schools, universities, prisons, health, and social services programs.) This action decreases the amount of money available for transportation programs, but helps the state balance its General Fund budget. Because the Legislature approved this tax change with a majority vote in each house, this law would be repealed in November 2011—unless the Legislature approved the tax again with a two-thirds vote in each house.

Other Laws. At the time this analysis was prepared (early in the summer of 2010), the Legislature and Governor were considering many new laws and funding changes to address the state's major budget difficulties. In addition, parts of this measure would be subject to future interpretation by the courts. As a result, we cannot determine the full range of state laws that could be affected or repealed by the measure.

FISCAL EFFECTS

Approval Requirement Changes. By expanding the scope of what is considered a tax, the measure would make it more difficult for state and local governments to pass new laws that raise revenues. This change would affect many environmental, health, and other regulatory fees (similar to the ones in Figure 3), as well as some business assessments and other levies. New laws to create—or extend—these types of fees and charges would be subject to the higher approval requirements for taxes.

The fiscal effect of this change would depend on future actions by the Legislature, local governing boards, and local voters. If the increased voting requirements resulted in some proposals not being approved, government revenues would be lower than otherwise would have occurred. This, in turn, likely would result in comparable decreases in state spending.

Given the range of fees and charges that would be subject to the higher approval threshold for taxes, the fiscal effect of this change could be major. Over time, we estimate that it could reduce government revenues and spending statewide by up to billions of dollars annually compared with what otherwise would have occurred.

Repeal of Conflicting Laws. Repealing conflicting state laws could have a variety of fiscal effects. For example, repealing the recent fuel tax laws would increase state General Fund costs by about $1 billion annually for about two decades and increase funds available for transportation programs by the same amount.

Because this measure could repeal laws passed *after* this analysis was prepared and some of the measure's provisions would be subject to future interpretation by the courts, we cannot estimate the full fiscal effect of this repeal provision. Given the nature of the proposals the state was considering in 2010, however, it is likely that repealing any adopted proposals would decrease state revenues (or in some cases increase state General Fund costs). Under this proposition, these fiscal effects could be avoided if the Legislature approves the laws again with a two-thirds vote of each house.

For text of Proposition 26, see page 114.

PROP 26 REQUIRES THAT CERTAIN STATE AND LOCAL FEES BE APPROVED BY TWO-THIRDS VOTE. FEES INCLUDE THOSE THAT ADDRESS ADVERSE IMPACTS ON SOCIETY OR THE ENVIRONMENT CAUSED BY THE FEE-PAYER'S BUSINESS. INITIATIVE CONSTITUTIONAL AMENDMENT.

★ ARGUMENT IN FAVOR OF PROPOSITION 26 ★

YES ON PROPOSITION 26: STOP POLITICIANS FROM ENACTING HIDDEN TAXES

State and local politicians are using a loophole to impose Hidden Taxes on many products and services by calling them "fees" instead of taxes. Here's how it works:

At the State Level:

- California's Constitution requires a two-thirds vote of the Legislature for new or increased taxes, but the politicians use a gimmick to get around this by calling their taxes "fees" so they can pass them with only a *bare majority vote.*

At the Local Level:

- Most tax increases at the local level require voter approval. Local politicians have been calling taxes "fees" so they can bypass voters and raise taxes without voter permission—taking away your right to stop these Hidden Taxes at the ballot.

PROPOSITION 26 CLOSES THIS LOOPHOLE

Proposition 26 requires politicians to meet the same vote requirements to pass these Hidden Taxes as they must to raise other taxes, protecting California taxpayers and consumers by requiring these Hidden Taxes to be passed by a two-thirds vote of the Legislature and, at the local level, by public vote.

PROPOSITION 26 PROTECTS ENVIRONMENTAL AND CONSUMER REGULATIONS AND FEES

Don't be misled by opponents of Proposition 26. California has some of the strongest environmental and consumer protection laws in the country. Proposition 26 preserves those laws and PROTECTS LEGITIMATE FEES SUCH AS THOSE TO CLEAN UP ENVIRONMENTAL OR OCEAN DAMAGE, FUND NECESSARY CONSUMER REGULATIONS, OR PUNISH WRONGDOING, and for licenses for professional certification or driving.

DON'T LET THE POLITICIANS CIRCUMVENT OUR CONSTITUTION TO TAKE EVEN MORE MONEY FROM US

Politicians have proposed more than *$10 billion* in Hidden Taxes. Here are a few examples of things they could apply Hidden Taxes to unless we stop them:

- Food
- Gas
- Toys
- Water
- Cell Phones
- Electricity
- Insurance
- Beverages
- Emergency Services
- Entertainment

PROPOSITION 26: HOLD POLITICIANS ACCOUNTABLE

"State politicians already raised taxes by $18 billion. Now, instead of controlling spending to address the budget deficit, they're using this gimmick to increase taxes even more! It's time for voters to STOP the politicians by passing Proposition 26."—Teresa Casazza, California Taxpayers' Association

Local politicians play tricks on voters by disguising taxes as "fees" so they don't have to ask voters for approval. They need to control spending, not use loopholes to raise taxes! It's time to hold them accountable for runaway spending and to stop Hidden Taxes at the local level.

YES ON PROPOSITION 26: PROTECT CALIFORNIA FAMILIES

California families and small businesses can't afford new and higher Hidden Taxes that will kill jobs and hurt families. When government increases Hidden Taxes, consumers and taxpayers pay increased costs on everyday items.

"The best way out of this recession is to grow the economy and create jobs, not increase taxes. Proposition 26 will send a message to politicians that it's time to clean up wasteful spending in Sacramento."—John Kabateck, National Federation of Independent Business/California

VOTE YES ON PROPOSITION 26 TO STOP HIDDEN TAXES—*www.No25Yes26.com*

TERESA CASAZZA, President
California Taxpayers' Association
ALLAN ZAREMBERG, President
California Chamber of Commerce
JOEL FOX, President
Small Business Action Committee

★ REBUTTAL TO ARGUMENT IN FAVOR OF PROPOSITION 26 ★

Do you want corporations to write special protections into California's Constitution?

Should California protect polluters at the expense of public safety?

That's what Prop. 26 is: big oil, tobacco, and alcohol companies want taxpayers to pay for cleaning their mess. As a result, local police and fire departments will have fewer resources to keep us safe.

The claim that Prop. 26 won't harm consumers and the environment is false. Corporations are spending millions misleading voters into thinking that the payments made by companies that pollute or harm public health are "hidden taxes." The campaign's own website cited "Oil severance fee to mitigate oil spill clean up, and build larger response and enforcement capabilities" as a hidden tax.

Here are some other fees they don't want to pay—listed in their own documents:

- Fees on polluters to clean up hazardous waste
- Fees on oil companies for oil spill cleanup
- Fees on tobacco companies for the adverse health effects of tobacco products.

PROPOSITION 26 IS BAD FOR THE ENVIRONMENT, PUBLIC SAFETY, & TAXPAYERS.

The California Professional Firefighters, League of Women Voters of California, California Nurses Association, Sierra Club, Planning & Conservation League, Californians Against Waste, and California Tax Reform Association all oppose 26 because it would force ordinary citizens to pay for the damage done by polluters.

Californians can't afford to clean up polluters' messes when local governments are cutting essential services like police and fire departments.

WE NEED TO PROTECT THE PUBLIC, NOT POLLUTERS! VOTE NO on 26.

RON COTTINGHAM, President
Peace Officers Research Association of California
WARNER CHABOT, Chief Executive Officer
California League of Conservation Voters
PATTY VELEZ, President
California Association of Professional Scientists

Arguments printed on this page are the opinions of the authors and have not been checked for accuracy by any official agency.

PROP 26 REQUIRES THAT CERTAIN STATE AND LOCAL FEES BE APPROVED BY TWO-THIRDS VOTE. FEES INCLUDE THOSE THAT ADDRESS ADVERSE IMPACTS ON SOCIETY OR THE ENVIRONMENT CAUSED BY THE FEE-PAYER'S BUSINESS. INITIATIVE CONSTITUTIONAL AMENDMENT.

★ ARGUMENT AGAINST PROPOSITION 26 ★

Should polluters be protected from paying to clean up the damage they do?

Should taxpayers foot the bill instead?

The answer is NO, and that's why voters should reject Proposition 26, the Polluter Protection Act.

Who put Prop. 26 on the ballot? Oil, tobacco, and alcohol companies provided virtually all the funding for this measure, including Chevron, Exxon Mobil, and Phillip Morris.

Their goal: to shift the burden of paying for the damage these companies have done onto the taxpayers.

How does this work? Prop. 26 redefines payments for harm to the environment or public health as tax increases, requiring a 2/3 vote for passage.

Such payments, or pollution fees on public nuisances, would become much harder to enact—leaving taxpayers to foot the bill. California has enough problems without forcing taxpayers to pay for cleaning up after polluting corporations.

Companies that pollute, harm the public health, or create a public nuisance should be required to pay to cover the damage they cause.

But the big oil, tobacco, and alcohol corporations want you, the taxpayer, to pay for cleaning up their messes. That's why these corporations wrote Proposition 26 behind closed doors, with zero public input, and why they put up millions of dollars to get Proposition 26 on the ballot.

Proposition 26 is just another attempt by corporations to protect themselves at the expense of ordinary citizens. The problem isn't taxes "hidden" as fees; it's the oil and tobacco companies hiding their true motives:

- Polluters don't want to pay fees used to clean up hazardous waste.
- Oil companies don't want to pay fees used for cleaning up oil spills and fighting air pollution.
- Tobacco companies don't want to pay fees used for addressing the adverse health effects of tobacco products.
- Alcohol companies don't want to pay fees used for police protection in neighborhoods and programs to prevent underage drinking.

One of the so-called "hidden taxes" identified by the Proposition 26 campaign is a fee that oil companies pay in order to cover the cost of oil spill clean-up, like the one in the Gulf. The oil companies should be responsible for the mess they create, not the taxpayers.

Proposition 26 will harm local public safety and health, by requiring expensive litigation and endless elections in order for local government to provide basic services. Fees on those who do harm should cover such costs as policing public nuisances or repairing damaged roads.

The funds raised by these fees are used by state and local governments for essential programs like fighting air pollution, cleaning up environmental disasters and monitoring hazardous waste. They require corporations such as tobacco companies to pay for the harm they cause.

If Proposition 26 passes, these costs would have to be paid for by the taxpayers.

DON'T PROTECT POLLUTERS. Join California Professional Firefighters, California Federation of Teachers, California League of Conservation Voters, California Nurses Association, Consumer Federation of California, and California Alliance for Retired Americans, and vote NO on 26.

www.stoppolluterprotection.com

JANIS R. HIROHAMA, President
League of Women Voters of California

JANE WARNER, President
American Lung Association in California

BILL MAGAVERN, Director
Sierra Club California

★ REBUTTAL TO ARGUMENT AGAINST PROPOSITION 26 ★

Proposition 26 fixes a loophole that allows politicians to impose new taxes on businesses and consumers by falsely calling them "fees".

Proposition 26 stops politicians from increasing Hidden Taxes on food, water, cell phones and even emergency services—BILLIONS OF DOLLARS IN HIGHER COSTS THAT CONSUMERS WILL PAY, NOT BIG CORPORATIONS.

Politicians and special interests oppose Prop. 26 because they want to take more money from working California families by putting "fees" on everything they can think of. Their interest is simple—more taxpayer money for the politicians to waste, including on lavish public pensions.

Here are the facts:

Prop. 26 protects legitimate fees and WON'T ELIMINATE OR PHASE OUT ANY OF CALIFORNIA'S ENVIRONMENTAL OR CONSUMER PROTECTION LAWS, including:

- Oil Spill Prevention and Response Act
- Hazardous Substance Control Laws
- California Clean Air Act
- California Water Quality Control Act
- Laws regulating licensing and oversight of Contractors, Attorneys and Doctors

"Proposition 26 doesn't change or undermine a single law protecting our air, ocean, waterways or forests—it simply stops the runaway fees politicians pass to fund ineffective programs."—Ryan Broddrick, former Director, Department of Fish and Game

Here's what Prop. 26 really does:

- *Requires a TWO-THIRDS VOTE OF THE LEGISLATURE FOR PASSING STATEWIDE HIDDEN TAXES* disguised as fees, just like the Constitution requires for regular tax increases.
- *Requires a POPULAR VOTE TO PASS LOCAL HIDDEN TAXES* disguised as fees, just like the Constitution requires for most other local tax increases.

YES on 26—Stop Hidden Taxes. Preserve our Environmental Protection Laws.

www.No25Yes26.com

JOHN DUNLAP, Former Chairman
California Air Resources Board

MANUEL CUNHA, JR., President
Nisei Farmers League

JULIAN CANETE, Chairman
California Hispanic Chamber of Commerce

(b) The Governor and the Governor-elect may require a state agency, officer or employee to furnish whatever information is deemed necessary to prepare the budget.

(c) (l) The budget shall be accompanied by a budget bill itemizing recommended expenditures.

(2) The budget bill shall be introduced immediately in each house by the persons chairing the committees that consider the budget.

(3) The Legislature shall pass the budget bill by midnight on June 15 of each year.

(4) Until the budget bill has been enacted, the Legislature shall not send to the Governor for consideration any bill appropriating funds for expenditure during the fiscal year for which the budget bill is to be enacted, except emergency bills recommended by the Governor or appropriations for the salaries and expenses of the Legislature.

(d) No bill except the budget bill may contain more than one item of appropriation, and that for one certain, expressed purpose. Appropriations from the General Fund of the State, except appropriations for the public schools; *and appropriations in the budget bill and in other bills providing for appropriations related to the budget bill,* are void unless passed in each house by rollcall vote entered in the journal, two-thirds of the membership concurring.

(e) (1) Notwithstanding any other provision of law or of this Constitution, the budget bill and other bills providing for appropriations related to the budget bill may be passed in each house by rollcall vote entered in the journal, a majority of the membership concurring, to take effect immediately upon being signed by the Governor or upon a date specified in the legislation. Nothing in this subdivision shall affect the vote requirement for appropriations for the public schools contained in subdivision (d) of this section and in subdivision (b) of Section 8 of this article.

(2) For purposes of this section, "other bills providing for appropriations related to the budget bill" shall consist only of bills identified as related to the budget in the budget bill passed by the Legislature.

~~(e)~~ *(f)* The Legislature may control the submission, approval, and enforcement of budgets and the filing of claims for all state agencies.

~~(f)~~ *(g)* For the 2004–05 fiscal year, or any subsequent fiscal year, the Legislature may not send to the Governor for consideration, nor may the Governor sign into law, a budget bill that would appropriate from the General Fund, for that fiscal year, a total amount that, when combined with all appropriations from the General Fund for that fiscal year made as of the date of the budget bill's passage, and the amount of any General Fund moneys transferred to the Budget Stabilization Account for that fiscal year pursuant to Section 20 of Article XVI, exceeds General Fund revenues for that fiscal year estimated as of the date of the budget bill's passage. That estimate of General Fund revenues shall be set forth in the budget bill passed by the Legislature.

(h) Notwithstanding any other provision of law or of this Constitution, including subdivision (c) of this section, Section 4 of this article, and Sections 4 and 8 of Article III, in any year in which the budget bill is not passed by the Legislature by midnight on June 15, there shall be no appropriation from the current budget or future budget to pay any salary or reimbursement for travel or living expenses for Members of the Legislature during any regular or special session for the period from midnight on June 15 until the day that the budget bill is presented to the Governor. No salary or reimbursement for travel or living expenses forfeited pursuant to this subdivision shall be paid retroactively.

SEC. 5. Severability.

If any of the provisions of this measure or the applicability of any provision of this measure to any person or circumstances shall be found to be unconstitutional or otherwise invalid, such finding shall not affect the remaining provisions or applications of this measure to other persons or circumstances, and to that extent the provisions of this measure are deemed to be severable.

PROPOSITION 26

This initiative measure is submitted to the people in accordance with the provisions of Section 8 of Article II of the California Constitution.

This initiative measure amends sections of the California Constitution; therefore, existing provisions proposed to be deleted are printed in ~~strikeout type~~ and new provisions proposed to be added are printed in *italic type* to indicate that they are new.

PROPOSED LAW

SECTION 1. Findings and Declarations of Purpose.

The people of the State of California find and declare that:

(a) Since the people overwhelmingly approved Proposition 13 in 1978, the Constitution of the State of California has required that increases in state taxes be adopted by not less than two-thirds of the members elected to each house of the Legislature.

(b) Since the enactment of Proposition 218 in 1996, the Constitution of the State of California has required that increases in local taxes be approved by the voters.

(c) Despite these limitations, California taxes have continued to escalate. Rates for state personal income taxes, state and local sales and use taxes, and a myriad of state and local business taxes are at all-time highs. Californians are taxed at one of the highest levels of any state in the nation.

(d) Recently, the Legislature added another $12 billion in new taxes to be paid by drivers, shoppers, and anyone who earns an income.

(e) This escalation in taxation does not account for the recent phenomenon whereby the Legislature and local governments have disguised new taxes as "fees" in order to extract even more revenue from California taxpayers without having to abide by these constitutional voting requirements. Fees couched as "regulatory" but which exceed the reasonable costs of actual regulation or are simply imposed to raise revenue for a new program and are not part of any licensing or permitting program are actually taxes and should be subject to the limitations applicable to the imposition of taxes.

(f) In order to ensure the effectiveness of these constitutional limitations, this measure also defines a "tax" for state and local purposes so that neither the Legislature nor local governments can circumvent these restrictions on increasing taxes by simply defining new or expanded taxes as "fees."

SECTION 2. Section 3 of Article XIII A of the California Constitution is amended to read:

SEC. 3. *(a)* ~~From and after the effective date of this article, any changes in state taxes enacted for the purpose of increasing revenues collected pursuant thereto~~ *Any change in state statute which results in any taxpayer paying a higher tax* ~~whether by increased rates or changes in methods of computation~~ must be imposed by an ~~Act~~ *act* passed by not less than two-thirds of all members elected to each of the two houses of the Legislature, except that no new ad valorem taxes on real property, or sales or transaction taxes on the sales of real property may be imposed.

(b) As used in this section, "tax" means any levy, charge, or exaction of any kind imposed by the State, except the following:

(1) A charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the State of conferring the benefit or granting the privilege to the payor.

(2) A charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the State of providing the service or product to the payor.

(3) A charge imposed for the reasonable regulatory costs to the State incident to issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof.

(4) A charge imposed for entrance to or use of state property, or the purchase, rental, or lease of state property, except charges governed by Section 15 of Article XI.

(5) A fine, penalty, or other monetary charge imposed by the judicial branch of government or the State, as a result of a violation of law.

(c) Any tax adopted after January 1, 2010, but prior to the effective date of this act, that was not adopted in compliance with the requirements of this section is void 12 months after the effective date of this act unless the tax is reenacted by the Legislature and signed into law by the Governor in compliance with the requirements of this section.

(d) The State bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity.

SECTION 3. Section 1 of Article XIII C of the California Constitution is amended to read:

SECTION 1. Definitions. As used in this article:

(a) "General tax" means any tax imposed for general governmental purposes.

(b) "Local government" means any county, city, city and county, including a charter city or county, any special district, or any other local or regional governmental entity.

(c) "Special district" means an agency of the State, formed pursuant to general law or a special act, for the local performance of governmental or proprietary functions with limited geographic boundaries including, but not limited to, school districts and redevelopment agencies.

(d) "Special tax" means any tax imposed for specific purposes, including a tax imposed for specific purposes, which is placed into a general fund.

(e) As used in this article, "tax" means any levy, charge, or exaction of any kind imposed by a local government, except the following:

(1) A charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege.

(2) A charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product.

(3) A charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof.

(4) A charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property.

(5) A fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law.

(6) A charge imposed as a condition of property development.

(7) Assessments and property-related fees imposed in accordance with the provisions of Article XIII D.

The local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity.

SECTION 4. Conflicting Measures.

In the event that this measure and another measure or measures relating to the legislative or local votes required to enact taxes or fees shall appear on the same statewide election ballot, the provisions of the other measure or measures shall be deemed to be in conflict with this measure. In the event that this measure shall receive a greater number of affirmative votes, the provisions of this measure shall prevail in their entirety, and the provisions of the other measure or measures relating to the legislative or local votes required to enact taxes or fees shall be null and void.

SECTION 5. Severability.

If any provision of this act, or any part thereof, is for any reason held to be invalid or unconstitutional, the remaining provisions shall not be affected, but shall remain in full force and effect, and to this end the provisions of this act are severable.

PROPOSITION 27

This initiative measure is submitted to the people in accordance with the provisions of Section 8 of Article II of the California Constitution.

This initiative measure amends the California Constitution and repeals sections of the Government Code; therefore, existing provisions proposed to be deleted are printed in ~~strikeout type~~ and new provisions proposed to be added are printed in *italic type* to indicate that they are new.

PROPOSED LAW

SECTION 1. Title.

This Act shall be known and may be cited as the "Financial Accountability in Redistricting Act" or "FAIR Act."

SECTION 2. Findings and Purpose.

The people of the State of California hereby make the following findings and declare their purpose in enacting the FAIR Act is as follows:

(a) Our political leadership has failed us. California is facing an unprecedented economic crisis and we, the people (not the politicians), need to prioritize how we spend our limited funds. We are going broke. Spending unlimited millions of dollars to create multiple new bureaucracies just to decide a political game of Musical Chairs is a waste—pure and simple. Under current law, a group of unelected commissioners, making up to $1 million a year

Chapter Overview

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Turbidity, Total Suspended Solids & Water Clarity

What are Total Suspended Solids?

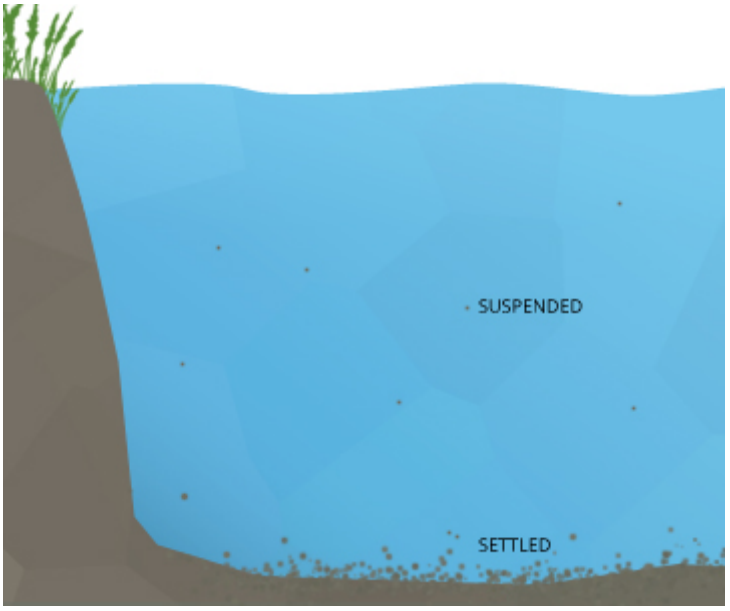
Total suspended solids (TSS) are particles that are larger than 2 microns found in the water column. Anything smaller than 2 microns (average filter size) is considered a dissolved solid. Most suspended solids are made up of inorganic materials, though bacteria and algae can also contribute to the total solids concentration [3].

Both organic and inorganic particles of all sizes can contribute to the suspended solids concentration.

These solids include anything drifting or floating in the water, from sediment, silt,and sand to plankton and algae [1]. Organic particles from decomposing materials can also contribute to the TSS concentration. As algae, plants and animals decay, the decomposition process allows small organic particles to break away and enter the water column as suspended solids [17]. Even chemical precipitates are considered a form of suspended solids [20]. Total suspended solids are a significant factor in observing water clarity [3]. The more solids present in the water, the less clear the water will be.

Some suspended solids can settle out into sediment at the bottom of a body of water over a period of time [3]. Heavier particles, such as gravel and sand, often settle out when they enter an area of low or no water flow. Although this settling improves water clarity, the increased silt can smother benthic organisms and eggs [1]. The remaining particles that do not settle out are called colloidal or nonsettleable solids [4]. These suspended solids are either too small or too light to settle to the bottom.

Settleable solids are also known as bedded sediments, or bedload [37]. These sediments can vary from larger sand and gravel to fine silt and clay, depending on the flow rate of water. Sometimes these sediments can move downstream even without rejoining the suspended solids concentration. When settleable solids are moved along the bottom of a body of water by a strong flow, it is called bedload transport [7].



Some sediment will settle to the bottom of a body of water, while others remain suspended.

What is Turbidity?

This river owes its muddy appearance to high turbidity levels.

Turbidity is an optical determination of water clarity [1]. Turbid water will appear cloudy, murky, or otherwise colored, affecting the physical look of the water. Suspended solids and dissolved colored material reduce water clarity by creating an opaque, hazy or muddy appearance. Turbidity measurements are often used as an indicator of water quality based on clarity and estimated total suspended solids in water.

The turbidity of water is based on the amount of light scattered by particles in the water column [2]. The more particles that are present, the more light that will be scattered. As such, turbidity and total suspended solids are related. However, turbidity is not a direct measurement of the total suspended materials in water. Instead, as a measure of relative clarity, turbidity is often used to indicate changes in the total suspended solids concentration in water without providing an exact measurement of solids [1].

Turbidity can come from suspended sediment such as silt or clay, inorganic materials, or organic matter such as algae, plankton and decaying material. In addition to these suspended solids, turbidity can also include colored dissolved organic matter (CDOM), fluorescent dissolved organic matter (FDOM) and other dyes [14]. CDOM is also known as humic stain. Humic stain refers to the tea color produced from decaying plants and leaves underwater due to the release of tannins and other molecules.

This discoloration is often found in bogs, wetlands or other water bodies with high amounts of decaying vegetation in the water. CDOM can cause water to appear red or brown, depending on the type of plants or leaves present. These dissolved substances may be too small to be counted in a suspended solids concentration, but they are still part of a turbidity measurement as they affect water clarity.

Tannins from decomposing vegetation have colored this river red.

What is Water Clarity?

Water clarity is a physical characteristic defined by how clear or transparent water is. Clarity is determined by the depth that sunlight penetrates in water [9]. The further sunlight can reach, the higher the water clarity. The depth sunlight reaches is also known as the photic zone. The clearer the water, the deeper the photic zone and the greater the potential for photosynthetic production [10]. The photic zone (and thus water clarity) has a maximum depth of 200 m based on the light absorption properties of water.

Ocean water is usually clearer than freshwater due to the effect of salinity on suspended solids.

Water clarity is directly related to turbidity, as turbidity is a measure of water clarity. The transparency of water is affected by the amount of sunlight available, suspended particles in the water column and dissolved solids such as colored dissolved organic material (CDOM) present in the water.

Salinity also affects water clarity [10]. This is due to the effect of salt on the aggregation and settling velocity of suspended particles. In other words, salt ions collect suspended particles and bind them together, increasing their weights and thus their likelihood of settling to the bottom. Due to this mechanism, oceans and estuaries tend to have a higher clarity (and lower average turbidity) than lakes and rivers [10]. These marine environments also have a higher rate of sedimentation as solids are pulled out of the water column to the seafloor.

Salt ions can cause suspended particle to aggregate and settle at the bottom of a body of water.

Turbidity vs Suspended Solids – What is the difference?

Turbidity and total suspended solids refer to particles present in the water column. Turbidity and water clarity are both visual properties of water based on light scattering and attenuation. All three parameters are related to particles in the water column, whether directly or indirectly.

Turbidity is determined by the amount of light scattered off of these particles [6]. While this measurement can then be used to estimate the total dissolved solids concentration, it will not be exact. Turbidity does not include any settled solids or bedload (sediment that "rolls" along the riverbed) [7]. In addition, turbidity measurements may be affected by colored dissolved organic matter [5]. While this dissolved matter is not included in TSS measurements, it can cause artificially low turbidity readings as it absorbs light instead of scattering it [8].

Total suspended solids, on the other hand, are a total quantity measurement of solid material per volume of water [6]. This means that TSS is a specific measurement of all suspended solids, organic and inorganic, by mass. TSS includes settleable solids, and is the direct measurement of the total solids present in a water body. As such, TSS can be used to calculate sedimentation rates, while turbidity cannot [1,6].

While turbidity and total suspended solids often overlap, there are a few outlying factors that only contribute to one or the other.

Water clarity is strictly relative to sunlight penetration. While this is usually determined by the amount of suspended solids in water, it can also be affected by CDOM and other dissolved solids [10]. Water clarity is the most subjective measurement of the these three parameters, as it is usually determined by human observation [5].

Is this water clear, or murky, or just slightly opaque? Human observation of clarity allows for personal perception and judgement.

Why are Turbidity and Total Suspended Solids Important?

Turbidity and TSS are the most visible indicators of water quality. These suspended particles can come from soil erosion, runoff, discharges, stirred bottom sediments or algal blooms [1]. While it is possible for some streams to have naturally high levels of suspended solids, clear water is usually considered an indicator of healthy water [9,14]. A sudden increase in turbidity in a previously clear body of water is a cause for concern. Excessive suspended sediment can impair water quality for aquatic and human life, impede navigation and increase flooding risks [7].

A sediment-laden river flows into Tuscaloosa Lake. Photo Credit: City of Tuscaloosa via USGS

Water Chemistry

In terms of water quality, high levels of total suspended solids will increase water temperatures and decrease dissolved oxygen (DO) levels [1]. This is because suspended particles absorb more heat from solar radiation than water molecules will. This heat is then transferred to the surrounding water by conduction. Warmer water cannot hold as much dissolved oxygen as colder water, so DO levels will drop [13]. In addition, the increased surface temperature can cause stratification, or layering, of a body of water [3]. When water stratifies, the upper and lower layers do not mix. As decomposition and respiration often occur in the the lower layers, they can become too hypoxic (low dissolved oxygen levels) for organisms to survive.

Suspended solids can increase the temperature of water as they absorb additional heat from the sun. This can also cause dissolved oxygen levels to drop below the thermocline, creating hypoxic conditions.

Photosynthesis Production

Turbidity can also inhibit photosynthesis by blocking sunlight. Halted or reduced photosynthesis means a decrease in plant survival and decreased dissolved oxygen output [9]. The higher the turbidity levels, the less light that can reach the lower levels of water. This reduces plant productivity at the bottom of an ocean, lake or river [15]. Without the needed sunlight, seaweed and bay grasses below the water's surface will not be able to continue photosynthesis and may die [16].

Underwater vegetation die-off has two main effects. First, as photosynthetic processes decrease, less dissolved oxygen is produced, thus further reducing DO levels in a body of water [13]. The subsequent decomposition of the organic material can drop dissolved oxygen levels even lower. Second, seaweed and underwater plants are necessary food sources for many aquatic organisms. As they die off, the amount of vegetation available for other aquatic life to feed on is reduced. This can cause population declines up the food chain [21].

Suspended solids, particularly algae, can block sunlight from reaching submerged plants. This can cause dissolved oxygen levels to drop, as the plants rely on respiration (consuming oxygen) instead of photosynthesis.

Erosion

An increase in turbidity can also indicate increased erosion of stream banks, which may have a long-term effect on a body of water [3]. Erosion reduces habitat quality for fish and other organisms. In terms of water clarity, reduced light penetration due to suspended sediment can obscure aquatic organisms' vision,

reducing their ability to find food [17]. These suspended particles can also clog fish gills and affect growth rates [13].

Erosion can contribute to shallower, filled-in lakes and streams as some of the suspended particles settle out [15]. These settleable solids can suffocate benthic organisms and fish eggs [1]. In addition, the sediment may smother insect larvae and other fish food sources [13]. When this occurs in rivers and channels, the increased sediment loads can reduce navigability for ships and boats [7]. In cases of excessive sedimentation, settleable solids from erosion and runoff can even halt freight passage completely.

Bank erosion along a river can be cause by runoff , flooding or strong water flow. Photo Credit: Soil-Net photo library.

Contamination

Pollutants such as dissolved metals and pathogens can attach to suspended particles and enter the water [2]. This is why an increase in turbidity can often indicate potential pollution, not just a decrease in water quality. Contaminants include bacteria, protozoa, nutrients (e.g. nitrates and phosphorus), pesticides, mercury, lead and other metals [17]. Several of these pollutants, especially heavy metals, can be detrimental and often toxic to aquatic life [26]. The addition of nutrients can encourage the development of harmful algal blooms.

When the suspended solids concentration is due to organic materials, particularly sewage effluent and decaying organic matter, the presence of bacteria, protozoa and viruses are more likely. These organic suspended solids are also more likely to decrease dissolved oxygen levels as they are decomposed [19].

Wastewater effluent can carry pathogens and other contaminants into a water body if it is not treated properly. Photo Credit: EPA

Human Concerns

These microbes and heavy metals can impact not only aquatic organisms, but drinking water as well [2]. Organic suspended solids, such as decomposing matter or sewage effluent often naturally include high levels of microorganisms such as protozoa, bacteria and viruses [19]. Such pathogens contribute to waterborne diseases like cryptosporidiosis, cholera and giardiasis [25]. Turbid water, whether due to organic or inorganic material, cannot be easily disinfected, as the suspended particles will “hide” these microorganisms [20].

In a lake or river, turbidity may also reduce visibility of underwater structures such as logs or large boulders, negatively affecting a water body’s recreational use [19]. In industrial processes, turbidity can contribute to clogged tanks and pipes [20]. The particles can also scour machines, potentially damaging them.

What Contributes to Suspended Solids?

Suspended solids in a body of water are often due to natural causes. These natural solids include organic materials such as algae, and inorganic materials such as silt and sediment. Some algae, such as phytoplankton, are regular occurrences, especially in the ocean. Inorganic materials can easily become suspended due to runoff, erosion and resuspension from seasonal water flow. However, when suspended solids exceed expected concentrations, they can negatively impact a body of water. Excess over background amounts are often attributed to human influence, whether directly or indirectly [37]. Pollution may contribute to either organic or inorganic suspended solids, depending on the source. Algae, sediment and pollution will affect water quality in different ways depending on the quantity present.

Turbidity is caused by include organic materials such as algae, and inorganic materials such as silt and sediment.

Algae

Algae are plantlike, photosynthesizing organisms that can thrive in both freshwater and saltwater [11]. These organisms come in different sizes, from microscopic phytoplankton to giant sea kelp forests [12]. Both the phytoplankton and seaweed forms of algae will consume nutrients in the water and can increase dissolved oxygen levels through photosynthesis. When they die, however, the organic material is decomposed by microbes in the water column. This decomposition process can decrease dissolved oxygen levels to below normal levels [42].

Different algae can float in the water or be found rooted on a riverbed. Some, like kelp and seaweed, look like underwater plants.

Seaweed and kelp are found rooted to the seafloor, but phytoplankton and other micro-algae can be found at the water's surface or throughout the water column [11]. In particular, cyanobacteria, or blue-green algae, have floating mechanisms that keep them at the surface, blocking sunlight from the water [19]. These phytoplankton contribute to the total suspended solids concentration, while rooted vegetation or attached streambed-mat forms of algae do not. However, if these rooted algae become detached (usually when the algae dies or if it is forcefully removed), then their mass becomes part of the suspended solids measurement [6].

The most obvious examples of algae's contribution to turbidity are found in algal blooms [11]. An algal bloom occurs when an excessive amount of algae grows quickly across the surface of a body of water. These blooms usually occur due to an influx of nutrients such as nitrogen and phosphorus due to agricultural runoff or decomposition, though warmer water temperatures and longer daylight hours also contribute to their growth [15]. Floating algal blooms can block sunlight, release toxins, and deplete oxygen levels in a body of water [11].

While some algae growth occurs naturally (often seasonally), excessive growth is often attributed nutrient pollution.Turbidity monitoring can be used to determine if an increase in suspended solids is natural or due to agricultural runoff [6].

Algal blooms can coat the surface of the water and prevent light from penetrating.

Sediment: Runoff and Erosion

Sediment is comprised of any solid material that can be transported by water, wind or ice [23]. It is usually defined as the soil particles (including silt, clay and sand) that are deposited on the bottom of a body of water [21]. These particles are usually classified by size from smallest (clay is less than 0.00195 mm in diameter) to largest (coarse sand can be up to 1.5 mm) [19]. Silt falls in between, ranging from 0.0049 to 0.047 mm.

Sediment particles can be fine silt or clay, sand and even gravel. Photo Credit: USGS via Massachusetts Bay Program

In areas of high flow, even rocks can be considered sediment as they are deposited in water [22]. However, not all sediment is suspended. The amount and size of suspended sediment is dependent on water flow [17]. The faster the flow, the larger the particle that can be suspended. Higher flow rates can also support a higher concentration of suspended solids. Particles larger than 0.5 mm usually settle out as water flow decreases [19]. Most of the suspended sediment that remains (colloidal solids) consists of fine sand, silt, and clay [19].

The majority of suspended sediment present in water bodies comes from runoff and erosion [6]. If the land surrounding a body of water has only sparse vegetation, the topsoil can easily be washed away into the water [3]. Highly vegetated areas will absorb most of the runoff, keeping the body of water clearer.

In addition to collecting suspended particles from runoff, rivers and streams can slowly erode soft riverbanks due to the constant water flow. An increase in river volume and flow (due to rain or other causes) can increase the rate of erosion [18]. On the other side of the spectrum, bedrock-based streams may not have much sediment available to suspend. The local geology will determine natural turbidity levels based on normal flow rates, soil type, land structure and vegetation [6]. If the surrounding land is altered by agriculture, construction or other soil-disturbing use, it can accelerate erosion and runoff, increasing turbidity [3].

Runoff causes erosion, washing soil and other particulates into a body of water.

Pollution

Any potentially harmful substance that is added to the environment by humans, whether directly or indirectly, is considered pollution [29]. This can vary from bacteria riding along on a sewage plant discharge, to coal and iron ore particulates that float in from a mining zone. If these pollutants are larger than 2 microns, they will contribute to the total suspended solids concentration.

Some of the more common suspended solid pollutants are pathogens (bacteria, protozoa, helminths), microbeads (from exfoliating soaps), wastewater effluent, sewage, airborne particulates, and road particles (e.g. asphalt and tire flecks). Colored wastewater discharge and dyes are pollutants that will affect turbidity, but not suspended solids.

Nutrients like nitrate and phosphorus are often considered pollutants, but as they are a dissolved substance, they do not contribute directly to the suspended solids concentration [30]. Instead, they are an indirect contributor as they fuel algal blooms, which do affect TSS and turbidity.

Pollution ranges from large garbage to microplastics, flecks of metal or asphalt, and chemical dyes.

These dissolved nutrients, along with dissolved metals, chemicals, and refractory organics, will impact the quality of a body of water [29]. Nitrate and phosphorus can cause eutrophication (excessive plant and algae growth) which in turn causes low dissolved oxygen levels due to plant respiration and microbial decomposition. Refractory organics are often carcinogenic, while heavy metals and other chemicals can be toxic to aquatic organisms [29].

While these contaminants can enter the water as a dissolved substance, many of them ride along on grains of soil or other larger pieces of pollution (e.g. paint flecks or asphalt particles)[29]. When this is the case, they can be picked up in suspended sediment samples. Chemical dyes will affect turbidity readings as the colored molecules will affect light absorption, but they will not be included in a suspended solids measurement.

Factors that Influence Turbidity

Suspended solids can be comprised of organic and inorganic materials such as sediment, algae, and other contaminants. However, there are specific factors that can affect turbidity levels in a body of water. These are water flow, point source pollution, land use and resuspension.

Water Flow and Weather

Turbidity and water flow are causally related [18]. High flow rates keep particles suspended instead of letting them settle to the bottom. Thus in rivers and other naturally-occurring high flow environments, turbidity can be a constant presence [2]. In these areas, it is important to monitor for changes in turbidity at the same point each time to ensure that the data is not affected by a lower or higher water velocity [18].

Stream flow and turbidity are often directly related; as water flow increases, so will turbidity levels.

Weather, particularly heavy rainfall, also affects water flow, which in turn affects turbidity. Rainfall can increase stream volume and thus stream flow, which can resuspend settled sediments and erode riverbanks [1].

Rain can also directly increase the level of total suspended solids through runoff. As water flows over a surface, it can pick up particles and deposit them in a body of water [2]. Runoff can also wash away topsoil, and contribute to riverbank erosion [3]. If the flow rate increases enough, it can resuspend bottom sediments, further raising TSS concentrations [2].

Heavy rainfall will cause turbidity to spike, as this storm event graph shows. This is due to increased water flow and increased sediment from runoff.

In areas of dry, loose soil or earth-disturbed sites (e.g. mining or construction areas), wind can blow dust, sediment and other particles into the water [29]. The addition of new particles will increase the suspended solids concentration. However, wind will generally not increase turbidity levels in the water alone. In wave-dominated estuaries and coastal areas, turbidity is naturally low [41]. In comparison, tidal areas, where the water flow is strong enough to resuspended bottom sediments, have high natural turbidity levels. Wind-driven turbidity increases only occur in shallow zones where waves are tall enough to resuspend sediment [40]. Tides, wind, and rain can influence turbidity levels due to their effect on water flow and introduced sediment loads [9].

Tributaries can also alter turbidity. When a freshwater stream or river enters a saltwater estuary, the change in water flow can cause turbidity levels to increase. This mixing area is often called a turbidity maximum zone [16]. These zones tend to have little aquatic vegetation due to the high suspended solids concentrations. Estuaries are often subject to tidal influences as well, which can pull in sand and sediment from the shoreline and resuspended bottom sediments [16].

Turbid rivers can carry their suspended sediments into the ocean. Photo Credit: NASA Visible Earth, via USGS

Point-Source Pollution

If pollution can be tracked to a single, identifiable source, it is considered point-source pollution [34]. Point-source pollution can increase turbidity through the addition of suspended solids and colored effluent (wastewater) to a body of water. For water quality, common examples include discharge pipes from factories and wastewater treatment plants. In addition, farms can also fall under the category of point-source pollution [33]. These sources can release harmful pathogens (bacteria) and chemicals into the water, in addition to suspended solids.

Many factories, wastewater treatment plants, and sewage treatment plants discharge effluent into local water bodies or sewer systems. Sometimes this water is treated or filtered before it is discharged, but sometimes it is not [33]. The EPA has created several guidelines for effluent discharge, but they are all based on the technology used, and not the final impact on the local water body [32]. While most wastewater treatment plants include a settling period in the treatment process, this does not affect colloidal (nonsettleable) solids [13]. When this wastewater is discharged, these suspended solids may still be present unless treated with additional filters. In addition, colored effluent cannot be trapped by a filter. While dyes and colored dissolved organic material (CDOM) are not included in a suspended solids measurement, they will contribute to turbidity readings due to their effects on light absorption.

Farms that are identified as point sources often allow fertilizer and animal waste to enter local bodies of water. Most agricultural pollution is due to runoff, and not a specific discharge. While this runoff is not intentional, it can be detrimental to water quality as these pollutants are untreated [33]. Animal wastes can increase pathogen concentrations in the water, while the fertilizer can contribute to eutrophication and excessive algal growth.

Here is an example of point source pollution. Photo Credit: NOAA Ocean Service

Land Use

A major factor in increased turbidity and total suspended solids concentrations is due to land use. Construction, logging, mining and other disturbed sites have an increased level of exposed soil and decreased vegetation [17]. Agricultural areas are also considered disturbed areas after they are tilled [18]. Land development, whether it is agricultural or construction, disturbs and loosens soil, increasing the opportunities for runoff and erosion [15]. The loosened soils caused by these sites can then be carried away by wind and rain to a nearby body of water.

Construction sites loosen soil that could run off into a body of water. Photo Credit: NCDOTcommunications via Flickr

This leads to an increase in runoff rates, causing erosion and increased turbidity in local streams and lakes [6]. Settleable solids in the runoff can be deposited on the bottom of a lake, river or ocean, damaging benthic habitats [15]. Erosion due to land use is considered a non-point source of turbidity. The use of silt fences and sedimentation basins at construction sites can prevent soils from reaching nearby water sources [13].

In addition to increasing turbidity levels through suspended sediment, agricultural runoff often includes nutrients as well. Due to the presence of these nutrients, this runoff can fuel the growth of algal blooms [9]. These effects can be seen in local streams, lakes, and even estuaries like the Chesapeake Bay. Water quality can be affected anywhere that these nutrients and sediments are carried. No-till farming practices can reduce the potential for erosion and help maintain nearby water quality [13].

Sediment- and pollutant-filled runoff can also occur in urban areas. When it rains, soil, tire particles, debris and other solids can get washed into a water system [17]. This often occurs at a high flow rate due to the amount of impervious surface areas (e.g. roads and parking lots). Water cannot penetrate these surfaces, so sediment cannot settle out [17]. Instead, the stormwater runoff flows right over the pavement, carrying the suspended solids with it. Even in areas with storm drains, these drains usually lead directly to a local water source without filtration [21]. To minimize the pollution and turbidity caused by urban runoff, stormwater retention ponds can be constructed [13]. These basins allow suspended particles to settle before water drains downstream [28].

Urban runoff flushes contaminants such as sediment, asphalt and tire particles. Photo Credit: Robert Lawton via Wikimedia Commons

Resuspension

Even carp and other bottom-feeding fish can contribute to increased turbidity levels [17]. As they remove vegetation, sediment can become resuspended in the water. Sediment at the bottom of a body of water can be stirred up by shifting water flow, bottom-feeding fish, and anthropogenic causes such as dredging. Dredging projects, which remove built-up sediment in navigation channels, are a major source of resuspended sediments in the surrounding water [3]. Dredging can cause high turbidity levels as it disturbs large amounts of settled sediment in a relatively short period of time. These stirred-up particles are mostly silt and sand. When they resettle, they can alter habitats, smother fish eggs and suffocate bottom-dwelling organisms.

Dredging project underway at Kings Lake. Photo Credit: Biswarup Ganguly via Wikimedia Commons

TSS and Turbidity Units

Total suspended solids, as a measurement of mass are reported in milligrams of solids per liter of water (mg/L) [18]. Suspended sediment is also measured in mg/L [36]. The most accurate method of determining TSS is by filtering and weighing a water sample [44]. This is often time consuming and difficult to measure accurately due to the precision required and the potential for error due to the fiber filter [44].

Turbidity, on the other hand, is most often measured with a turbidity meter. Turbidity is reported in units called a Nephelometric Turbidity Unit (NTU), or a Jackson Turbidity Unit (JTU) [6]. The JTU was the original turbidity unit based on the visibility of candlelight in a tube (Jackson Candle Turbidimeter) [43]. However, this method is considered out of date and inaccurate in comparison to newer methods.

While some organizations consider the two units to be approximately equal, there are some specific differences [20]. In particular, NTU is more precise and has a wider range (JTU cannot measure above 25 JTU/NTU) [43]. In addition NTU is the standard unit of many broadband output (400-680 nm wavelength) turbidit meters. Nephelometric refers to the measurement technology used. This technology method requires the photodetector in the meter to be placed at a 90 degree angle from the illumination source [14]. As light bounces off the suspended particles, the photodetector can measure the scattered light.

The USGS also suggests the use of the Formazin Nephelometric Unit (FNU) if a turbidity meter only has a monochrome/infrared output, as opposed to the white/broadband output [14]. This applies to instruments that are in compliance with the European drinking-water protocol, including most submersible turbidity meters [34]. Both NTU and FNU will show equal measurements when calibrating as they both use nephelometric technology, but may operate differently in the field due to the different light source [14]. Turbidity meters that use FNU units are able to compensate for dissolved colored materials (such as humic stain), while NTU turbidity meters cannot [14].

Secchi discs are used to measure water clarity. Photo Credit: Minnesota Pollution Control Agency via NASA

Water clarity, when not measured in terms of turbidity, is measured by Secchi depth [1]. This measurement is based on the depth that a black and white Secchi disc can be lowered into a body of water. At the point visibility is lost, the depth of the disc is recorded, and is known as the Secchi depth [16]. High Secchi depths correspond with low turbidity levels, while low Secchi depths are associated with high levels of suspended solids. This method is generally only useful in oceans, lakes and deep, low-flow rivers. In marine environments, a larger solid white disc is often used, while some shallower lakes use a black disc and take a horizontal measurement [39].

Due to the effects of salt on suspended sediment, ocean clarity is often much higher than lake or river clarity. Most Secchi disc records reach around 65-80 m [39]. Water clarity has a theoretical limit of 200 m, based on light penetration and calculations with distilled and ultrapure water [10]. However, most Secchi discs are not large enough to be seen at that depth.

In shallower streams, a Secchi tube can be used [38]. A Secchi tube is usually one meter long and is filled with collected water. A small Secchi disc is then lowered into the tube and read at the point of disappearance, just as it is in a larger body of water [38].

Turbidity Meters and Measurements

Regardless of whether readings are in NTU, FNU or other less common units, it is important to note that a turbidimeter's optical design will affect turbidity readings [14]. As turbidity is a measurement of light scatter, the placement and designs of the detectors with the meter can influence the readings. This simply means that raw data from two different turbidity meters cannot be directly compared without an established relationship between them [14]. Turbidity readings can vary based on wavelengths emitted, light source instability, high particle density or due to the presence of colored dissolved or suspended material. The more detectors present in a turbidimeter, the less variability there will be in measurements [14].

Typical Levels

In most situations, a total suspended solids concentration below 20 mg/L appears clear, while levels over 40 mg/L may begin to appear cloudy [13]. In comparison, a turbidity reading below 5 NTU appears clear, while a reading of 55 NTU will start to look cloudy and a reading over 500 NTU will appear completely opaque [2].

It is important to note that this is dependent on the size and nature of the suspended solids. Typical turbidity and TSS levels are difficult to quantify due to their natural variation by season, local geology, water flow and weather events. During a low-flow period, most rivers and lakes are fairly clear with a turbidity reading below 10 NTU. These readings can easily jump into the hundreds due to runoff during a rainstorm, snowmelt or a dredging project [1].

At 5 NTU, water still appears clear. It is cloudy at 55 NTU and opaque at 515 NTU. Photo Credit: USGS

Turbidity will often spike annually due to spring rains and snow melt.

In general, marine environments have lower turbidity levels than freshwater sources [10]. The salinity of the ocean or estuary will cause the the suspended solids to aggregate, or combine. As the aggregate weight increases, the solids begin to sink and will settle on the seafloor [10]. This effect offers greater water clarity than is available in most lakes and rivers. The higher the salinity, the greater the effect [10]. However, in tidal zones, a turbidity maximum may occur due to the constant resuspension of these settled solids [16]. Freshwater sources may also carry out additional suspended particles into the delta.

Saltwater is typically clearer than freshwater.

As the concentrations of total suspended solids are difficult to measure and predict, most states do not have a set standard. Even the National Academy of Sciences only recommends that "TSS should not reduce light penetration by more than 10%" [3]. Kentucky does not have a quantitative standard for acceptable levels of total suspended solids. Instead, they simply state that there should be no adverse affects to the body of water or its inhabitants [3]. Michigan is another example of a state with only a "narrative standard" for total suspended solids and turbidity [13]. There is no set level or concentration, only a recommendation against unnatural physical properties (e.g. turbidity, color, films, floating or suspended solids) in "injurious" quantities [13].

Instead, many countries and organizations have established recommended turbidity levels from a baseline of prior measurements. In the case of drinking water, recommended levels are based on several filtration and disinfection studies [31]The Ireland EPA advises treatment plants to have turbidity levels below 0.2 NTU, with a mandatory maximum of 1 NTU for drinking water [31]. According to the World Health Organization, water for human consumption should have turbidity levels below 1 NTU, though for some regions, up to 5 NTU is allowed if it can be proven to be disinfected [19,20]. The American Water Works Association suggests that a level of 5 NTU or lower is acceptable for recreation purposes [19]. As a state example, the North Carolina code allows up to 10 NTU for trout waters, 25 NTU for non-trout streams and as high as 50 NTU for non-trout lakes.

Other states have determined allowable fluctuations from an established baseline. The state of Washington does not have a standard for TSS, but it does for turbidity, depending on the body of water. In some streams, turbidity cannot increase by more than 5 NTU from the baseline. For others, turbidity may be allowed to fluctuate by up to 20% [6].

Drinking water should have less than 5 NTU, preferably less than 1 NTU and ideally below 0.1 NTU.

Consequences of Unusual Levels

In addition to to being a warning sign for pollution, suspended solids can harbor pathogens such as bacteria and protozoa [2]. These microorganisms attach to the suspended particles, aiding in their transportation and hiding them from disinfectants [2]. These pathogens can infect aquatic or human life if the sediment is not

removed.

Algal Blooms

Algal blooms, while initially increasing dissolved oxygen levels, may create hypoxic conditions as they decompose [42]. When an algal bloom appears, it blocks sunlight from reaching any submerged vegetation, killing those plants and decreasing the amount of dissolved oxygen produced. Then, when the bloom dies off, microbes consume more oxygen as they decompose the organic material. This causes dissolved oxygen levels to plummet even lower, creating hypoxic (low DO) or even anoxic (no DO) conditions.

As this graph shows, the appearance of an algal bloom results in a dramatic dissolved oxygen decrease shortly thereafter.

Furthermore, some blooms produce toxins that are damaging to aquatic and human life [16]. These harmful algal blooms include cyanobacteria, red tide (Karenia brevis) and ciguartera (gambierdiscus toxicus) [27].

Settleable Solids

Settleable solids can impair lakes and other water bodies. If sedimentation rates are high, they can alter and often destroy fish habitats and spawning beds [37]. If eggs or benthic organisms are present, they can become buried by the sediment and die. Sediment deposition can reduce egg and embryo survival by reducing oxygen supply and crusting over the egg, preventing the embryo from escaping [37].

As sediment build-up increases, the shallower body of water means an increased risk of flooding and a decrease in navigability for boats and ships [24]. Dredging projects attempt to remove excessive sediment deposits from navigation channels, but this can be just as damaging to the local fish habitats and spawning beds.

Turbidity

High turbidity levels can diminish visibility and often feeding behaviors, in addition to physically harming aquatic life. The suspended solids may disrupt the natural movements and migrations of aquatic populations [13]. Fish that rely on sight and speed to catch their prey are especially affected by high turbidity levels. These fish often flee areas of high turbidity for new territories [37]. For the fish that remain in the turbid environment, suspended sediment can begin to physically affect the fish. Fine sediment can clog fish gills and lower an organism's resistance to disease and parasites [37]. Some fish may consume suspended solids, causing illness and exposing the fish to potential toxins or pathogens on the sediment. If the consumed sediment does not kill the fish, it can alter the organism's blood chemistry and impair its growth [37].

Turbidity will also affect submerged plant growth. Levels over 15 NTU are considered detrimental to bay grass growth in estuary zones [16]. As turbidity increases, the amount of light available to submerged aquatic vegetation (SAV) decreases. Without enough light, photosynthesis will stop, and the SAV will no longer

produce dissolved oxygen. In addition to reducing the dissolved oxygen concentration in the water, the plants will eventually die [40]. As the aquatic vegetation dies off, the organisms that feed on it will also decline due to the reduced food sources available [13]. If turbidity levels remain elevated, the effects can be seen up the food chain [37].

Even aquatic life that does not strongly depend on vegetation for survival will be affected by the low dissolved oxygen levels [40]. If these fish and invertebrate cannot escape the anoxic area, they will die.

Cite This Work

Fondriest Environmental, Inc. “Turbidity, Total Suspended Solids and Water Clarity.” Fundamentals of Environmental Measurements. 13 Jun. 2014. Web. < https://www.fondriest.com/environmental-measurements/parameters/water-quality/turbidity-total-suspended-solids-water-clarity/ >.

Additional Information

- Turbidity Measurement Methods
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Measuring CDOM

Measuring Dissolved Oxygen

Measuring Turbidity, TSS, and Water Clarity

Monitoring Equipment

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median lethal concentration

The average concentration of a chemical or mixture in air as a gas, vapour, mist, fume or dust capable of killing 1/2 of the test animals exposed by inhalation under specific conditions. Median lethal concentration (LC50) is often expressed in ppm or mg/m3.

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LC_{50}

Median lethal concentration, see there.

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LC50

[Fm. **lethal concentration**]

An abbreviation for the concentration of a toxin that will kill 50% of organisms exposed to it.

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culvert

noun

cul·vert | \ ˈkəl-vərt \

Definition of *culvert*

1 : a transverse drain
2 : a conduit for a culvert
3 : a bridge over a culvert

Examples of *culvert* in a Sentence

Recent Examples on the Web Four days after Carla was taken, a patrol officer spotted something in a *culvert* on a remote road southwest of town. — *NBC News*, 1 Feb. 2022 Pupfish—tiny, minnow-like fish that occupy pools and streams at various points along the Amargosa River—were once thought to be extinct in Shoshone, but in 1986 they were rediscovered in a *culvert* next to the R.V. park. — Alex Ross, *The New Yorker*, 4 Jan. 2022
Video shot by OnScene TV showed a black Toyota sedan on its side in the *culvert* with two air bags deployed. — *San Diego Union-Tribune*, 5 Aug. 2021 The body of Manuel Mandujano, 39, of Minneapolis, was found in a *culvert*

under a field approach 1 mile east of Chippendale Avenue and W. 255th Street in Castle Rock Township, according to a Sheriff's Office news release. — Alex Chhith, *Star Tribune*, 28 Apr. 2021 The bridge -- which has a *culvert* underneath -- is displaced and unstable to the point where our safety vehicles and heavy vehicles can't go over. — John Benson, *cleveland*, 6 Dec. 2021 For now, officials plan to install a temporary *culvert*, fill in the area and cover it with a recycled asphalt for the winter, according to Kelley. — Tess Williams, *Anchorage Daily News*, 5 Nov. 2021 Regarding infrastructure projects, Seven Hills in 2021 installed new sewer pipe liners on several streets, rebuilt the Cheryl Ann Drive *culvert* and dredged the Calvin Park and Somerset retention basins. — John Benson, *cleveland*, 22 Dec. 2021 Lora is also looking for funds to surround the *culvert* with a large fence that curves at the top. — Topher Sanders, *ProPublica*, 9 Dec. 2021

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1773, in the meaning defined at sense 1

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The first known use of *culvert* was in 1773

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verb

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pro·hib·it | \ prō-ˈhi-bət , prə- \
prohibited; prohibiting; prohibits

Definition of *prohibit*

transitive verb

1 : to forbid by authority : enjoin
2a : to prevent from doing something
b : preclude

Synonyms & Antonyms Choose the Right Synonym Example Sentences Learn More About *prohibit*

Synonyms & Antonyms for *prohibit*

Synonyms

- ban,
- bar,
- enjoin,
- forbid,
- interdict,
- outlaw,
- proscribe

Antonyms

- allow,
- let,
- permit,
- suffer

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Choose the Right Synonym for *prohibit*

forbid, prohibit, interdict, inhibit mean to debar one from doing something or to order that something not be done. forbid implies that the order is from one in authority and that obedience is expected. smoking is *forbidden* in the building prohibit suggests the issuing of laws, statutes, or regulations. *prohibited* the sale of liquor interdict implies prohibition by civil or ecclesiastical authority usually for a given time or a declared purpose. practices *interdicted* by the church inhibit implies restraints or restrictions that amount to prohibitions, not only by authority but also by the exigencies of the time or situation. conditions *inhibiting* the growth of free trade

Examples of *prohibit* in a Sentence

The rules *prohibit* dating a coworker. The prison's electric fence *prohibits* escape.
Recent Examples on the Web Anna Staver about Ohio Senate Bill 202, which would *prohibit* courts and child-placing entities from using a person’s disability as the reason to limit or deny them from caring for a child. — Laura Hancock, *cleveland*, 29 Mar. 2022 City Council members this year are expected to reintroduce a bill that would *prohibit* the collection of DNA from minors in all cases without a parent’s consent. — *New York Times*, 22 Mar. 2022 Arizona lawmakers are pushing a bill that would *prohibit* abortions after 15 weeks, modeled after a Mississippi law. — Celina Tebor, *USA TODAY*, 15 Mar. 2022 See More

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First Known Use of *prohibit*

15th century, in the meaning defined at sense 1

History and Etymology for *prohibit*

Middle English, from Latin *prohibitus*, past participle of *prohibēre* to keep off, from *pro-* forward + *habēre* to hold — more at pro-, give

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Krista

i saw it from this guy ^^^ kyler lovato. Perfect last name btw

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More Definitions for *prohibit*

prohibit

verb

pro·hib·it | \ prō-ˈhi-bət \
prohibited; prohibiting

Kids Definition of *prohibit*

1 **:** to forbid by authority Parking is *prohibited*.
2 **:** to make impossible The high walls *prohibit* escape.

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 122, 123, and 124

[FRL-3834-7]

RIN 2040-AA79

National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Today's final rule begins to implement section 402(p) of the Clean Water Act (CWA) (added by section 405 of the Water Quality Act of 1987 (WQA)), which requires the Environmental Protection Agency (EPA) to establish regulations setting forth National Pollutant Discharge Elimination System (NPDES) permit application requirements for: storm water discharges associated with industrial activity; discharges from a municipal separate storm sewer system serving a population of 250,000 or more; and discharges from municipal separate storm sewer systems serving a population of 100,000 or more, but less than 250,000.

Today's rule also clarifies the requirements of section 401 of the WQA, which amended CWA section 402(1)(2) to provide that NPDES permits shall not be required for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities, composed entirely of flows which are from conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with, or do not come into contact with, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of such operations. This rule sets forth NPDES permit application requirements addressing storm water discharges associated with industrial activity and storm water discharges from large and medium municipal separate storm sewer systems.

DATES: This final rule becomes effective December 17, 1990. In accordance with 40 CFR 23.2, this rule shall be considered final for purposes of judicial review on November 30, 1990, at 1 p.m. eastern daylight time. The public record is located at EPA Headquarters, EPA Public Information Reference Unit, room 2402, 401 M Street SW., Washington DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For further information on the rule contact: Thomas J. Seaton, Kevin Weiss, or Michael Mitchell Office of Water Enforcement and Permits (EN-336), United States Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 475-9518.

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SUPPLEMENTARY INFORMATION:

I. Background and Water Quality Concerns

The 1972 amendments to the Federal Water Pollution Control Act (referred to as the Clean Water Act or CWA), prohibit the discharge of any pollutant to navigable waters from a point source unless the discharge is authorized by an NPDES permit. Efforts to improve water quality under the NPDES program traditionally and primarily focused on reducing pollutants in discharges of industrial process wastewater and municipal sewage. This program emphasis developed for a number of reasons. At the onset of the program in 1972, many sources of industrial process wastewater and municipal sewage were not adequately controlled and represented pressing environmental problems. In addition, sewage outfalls and industrial process discharges were easily identified as responsible for poor, often drastically degraded, water quality conditions. However, as pollution control measures were initially

developed for these discharges, it became evident that more diffuse sources (occurring over a wide area) of water pollution, such as agricultural and urban runoff were also major causes of water quality problems. Some diffuse sources of water pollution, such as agricultural storm water discharges and irrigation return flows, are statutorily exempted from the NPDES program.

Since enactment of the 1972 amendments to the CWA, considering the rise of economic activity and population, significant progress in controlling water pollution has been made, particularly with regard to industrial process wastewater and municipal sewage. Expenditures by EPA, the States, and local governments to construct and upgrade sewage treatment facilities have substantially increased the population served by higher levels of treatment. Backlogs of expired permits for industrial process wastewater discharges have been reduced. Continued improvements are expected for these discharges as the NPDES program continues to place increasing emphasis on water quality-based pollution controls, especially for toxic pollutants.

Although assessments of water quality are difficult to perform and verify, several national assessments of water quality are available. For the purpose of these assessments, urban runoff was considered to be a diffuse source or nonpoint source pollution. From a legal standpoint, however, most urban runoff is discharged through conveyances such as separate storm sewers or other conveyances which are point sources under the CWA. These discharges are subject to the NPDES program. The "National Water Quality Inventory, 1988 Report to Congress" provides a general assessment of water quality based on biennial reports submitted by the States under section 305(b) of the CWA. In preparing the section 305(b) Reports, the States were asked to indicate the fraction of the States' waters that were assessed, as well as the fraction of the States' waters that were fully supporting, partly supporting, or not supporting designated uses. The Report indicates that of the rivers, lakes, and estuaries that were assessed by States (approximately one-fifth of stream miles, one-third of lake acres and one-half of estuarine waters), roughly 70% to 75% are supporting the uses for which they are designated. For waters with use impairments, States were asked to determine impacts due to diffuse sources (agricultural and urban runoff and other sources), municipal sewage, industrial process wastewaters, combined sewer overflows, and natural and other sources, then combine impacts to arrive at estimates of the relative percentage of State waters affected by each source. In this manner, the relative importance of the various sources of pollution that are causing use impairments was assessed and weighted national averages were calculated. Based on 37 States that provided information on sources of pollution, industrial process wastewaters were cited as the cause of nonsupport for 7.5% of rivers and streams, 10% of lakes, and 6% of estuaries. Municipal sewage was the cause of nonsupport for 13% of rivers and streams, 5% lakes, 48% estuaries, 41% of the Great Lake shoreline, and 11% of coastal waters. The Assessment concluded that pollution from diffuse sources, such as runoff from agricultural, urban areas, construction sites, land disposal and resource extraction, is cited by the States as the leading cause of water quality impairment. These sources appear to be increasingly important contributors of use impairment as discharges of industrial process wastewaters and municipal sewage plants come under increased control and as intensified data collection efforts provide additional information. Some examples of diffuse sources cited as causing use impairment are: for rivers and streams, 9% from separate storm sewers, 6% from construction and 13% from resource extraction; for lakes, 28% from separate storm sewers and 26% from land disposal; for the Great Lakes shoreline, 10% from separate storm sewers, 34% from resource extraction, and 82% from land disposal; for estuaries, 28% from separate storm sewers and 27% from land disposal; and for coastal areas, 20% from separate storm sewers and 29% from land disposal.

The States conducted a more comprehensive study of diffuse pollution sources under the sponsorship of the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) and EPA. The study resulted in the report "America's Clean Water—The States' Nonpoint Source Assessment, 1985" which indicated that 38 States reported urban runoff as a major cause of beneficial use impairment. In addition, 21 States reported construction site runoff as a major cause of use impairment.

To provide a better understanding of the nature of urban runoff from commercial and residential areas, from 1978 through 1983, EPA provided funding and guidance to the Nationwide Urban Runoff Program (NURP). The NURP included 28 projects across the Nation, conducted separately at the local level but centrally reviewed, coordinated, and guided.

One focus of the NURP was to characterize the water quality of discharges from separate storm sewers which drain residential, commercial, and light industrial (industrial parks) sites. The majority of samples collected in the study were analyzed for eight conventional pollutants and three metals. Data collected under the NURP indicated that on an annual loading basis, suspended solids in discharges from separate storm sewers draining runoff from residential, commercial and light industrial areas are around an order of magnitude greater than solids in discharges from municipal secondary sewage treatment plants. In addition, the study indicated that annual loadings of chemical oxygen demand (COD) are comparable in magnitude to effluent from secondary sewage treatment plants. When analyzing annual loadings associated with urban runoff, it is important to recognize that discharges of urban runoff are highly intermittent, and that the short-term loadings associated with individual events will be high and may have shockloading effects on receiving water, such as low dissolved oxygen levels. NURP data also showed that fecal coliform counts in urban runoff are typically in the tens to hundreds of thousands per 100 ml of runoff during warm weather conditions, although the study suggested that fecal coliform may not be the most appropriate indicator organism for identifying potential health risks in storm water runoff. Although NURP did not evaluate oil and grease, other studies have demonstrated that urban runoff is an extremely important source of oil pollution to receiving waters, with hydrocarbon levels in urban runoff typically being reported at a range of 2 to 15 mg/l. These hydrocarbons tend to accumulate in bottom sediments where they may persist for long periods of time and exert adverse impacts on benthic organisms.

A portion of the NURP study involved monitoring 120 priority pollutants in storm water discharges from lands used for residential, commercial and light industrial activities. Seventy-seven priority pollutants were detected in samples of storm water discharges from residential, commercial and light industrial lands taken during the NURP study, including 14 inorganic and 63 organic pollutants. Table A-1 shows the priority pollutants which were detected in at least ten percent of the discharge samples which were sampled for priority pollutants.

TABLE A-1.— PRIORITY POLLUTANTS DETECTED IN AT LEAST 10% OF NURP SAMPLES

[In percent]

	Frequency of detection
Metals and inorganics:	
Antimony	13
Arsenic	52
Beryllium	12
Cadmium	48
Chromium	58
Copper	91
Cyanides	23
Lead	94
Nickel	43
Selenium	11
Zinc	94
Pesticides:	
Alpha-hexachlorocyclohexane	20
Alpha-endosulfan	19
Chlordane	17
Lindane	15
Halogenated aliphatics:	
Methane, dichloro-	11
Phenols and cresols:	
Phenol	14
Phenol, pentachloro-	19
Phenol, 4-nitro	10
Phthalate esters:	
Phthalate, bis(2-ethylhexyl)	22
Polycyclic aromatic hydrocarbons:	
Chrysene	10
Fluoranthene	16
Phenanthrene	12
Pyrene	15

The NURP data also showed a significant number of these samples exceeded various EPA freshwater water quality criteria.

The NURP study provides insight on what can be considered background levels of pollutants for urban runoff, as the study focused primarily on monitoring runoff from residential, commercial and light industrial areas. However, NURP concluded that the quality of urban runoff can be adversely impacted by several sources of pollutants that were not directly evaluated in the study and are generally not reflected in the NURP data, including illicit connections, construction site runoff, industrial site runoff and illegal dumping.

Other studies have shown that many storm sewers contain illicit discharges of non-storm water and that large amounts of wastes, particularly used oils, are improperly disposed in storm sewers. Removal of these discharges present opportunities for dramatic improvements in the quality of storm water discharges. Storm water discharges from industrial facilities may contain toxics and conventional pollutants when material management practices allow exposure to storm water, in addition to wastes from illicit connections and improperly disposed wastes.

In some municipalities, illicit connections of sanitary, commercial and industrial discharges to storm sewer systems have had a significant impact on the water quality of receiving waters. Although the NURP study did not emphasize the identification of illicit connections to storm sewers (other than to assure that monitoring sites used in the study were free from sanitary sewage contamination), the study concluded that illicit connections can result in high bacterial counts and dangers to public health. The study also noted that removing such discharges presented opportunities for dramatic improvements in the quality of urban storm water discharges.

Studies have shown that illicit connections to storm sewers can create severe, wide-spread contamination problems. For example, the Huron River Pollution Abatement Program inspected 660 businesses, homes and other buildings located in Washtenaw County, Michigan and identified 14% of the buildings as having improper storm drain connections. Illicit discharges were detected at a higher rate of 60% for automobile related businesses, including service stations, automobile dealerships, car washes, body shops and light industrial facilities. While some of the problems discovered in this study were the result of improper plumbing or illegal connections, a majority were approved connections at the time they were built.

Intensive construction activities may result in severe localized impacts on water quality because of high unit loads of pollutants, primarily sediments. Construction sites can also generate other pollutants such as phosphorus and nitrogen from fertilizer, pesticides, petroleum products, construction chemicals and solid wastes. These materials can be toxic to aquatic organisms and degrade water for drinking and water-contact recreation. Sediment loadings rates from construction sites are typically 10 to 20 times that of agricultural lands, with runoff rates as high as 100 times that of agricultural lands, and typically 1,000 to 2,000 times that of forest lands. Even a small amount of construction may have a significant negative impact on water quality in localized areas. Over a short period of time, construction sites can contribute more sediment to streams than was previously deposited over several decades.

II. Water Quality Act of 1987

The WQA contains three provisions which specifically address storm water discharges. The central WQA provision governing storm water discharges is section 405, which adds section 402(p) to the CWA. Section 402(p)(1) provides that EPA or NPDES States cannot require a permit for certain storm water discharges until October 1, 1992, except: for storm water discharges listed under section 402(p)(2). Section 402(p)(2) lists five types of storm water discharges which are required to obtain a permit prior to October 1, 1992:

(A) A discharge with respect to which a permit has been issued prior to February 4, 1987;

(B) A discharge associated with industrial activity;

(C) A discharge from a municipal separate storm sewer system serving a population of 250,000 or more;

(D) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more, but less than 250,000; or

(E) A discharge for which the Administrator or the State, as the case may be, determines that the storm water discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the United States.

Section 402(p)(4)(A) requires EPA to promulgate final regulations governing storm water permit application requirements for storm water discharges associated with industrial activity and discharges from large municipal separate storm sewer systems (systems serving a population of 250,000 or more), "no later than two years" after the date of enactment (*i.e.*, no later than February 4, 1989). Section 402(p)(4)(B) also requires EPA to promulgate final regulations governing storm water permit application requirements for discharges from medium municipal separate storm sewer systems (systems serving a population of 100,000 or more but less than 250,000) "no later than four years" after enactment (*i.e.*, no later than February 4, 1991).

In addition, section 402(p)(4) provides that permit applications for storm water discharges associated with industrial activity and discharges from large municipal separate storm sewer systems "shall be filed no later than three years" after the date of enactment of the WQA (*i.e.*, no later than February 4, 1990). Permit applications for discharges from medium municipal systems must be filed "no later than five years" after enactment (*i.e.*, no later than February 4, 1992).

The WQA clarified and amended the requirements for permits for storm water discharges in the new CWA section 402(p)(3). The Act clarified that permits for discharges associated with industrial activity must meet all of the applicable provisions of section 402 and section 301

including technology and water quality based standards. However, the new Act makes significant changes to the permit standards for discharges from municipal storm sewers. Section 402(p)(3)(B) provides that permits for such discharges:

(i) May be issued on a system- or jurisdiction-wide basis;

(ii) Shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers; and

(iii) Shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

These changes are discussed in more detail later in today's rule.

The EPA, in consultation with the States, is required to conduct two studies on storm water discharges that are in the class of discharges for which EPA and NPDES States cannot require permits prior to October 1, 1992. The first study will identify those storm water discharges or classes of storm water discharges for which permits are not required prior to October 1, 1992, and determine, to the maximum extent practicable, the nature and extent of pollutants in such discharges. The second study is for the purpose of establishing procedures and methods to control storm water discharges to the extent necessary to mitigate impacts on water quality. Based on the two studies the EPA, in consultation with State and local officials, is required to issue regulations no later than October 1, 1992, which designate additional storm water discharges to be regulated to protect water quality and establish a comprehensive program to regulate such designated sources. This program must, at a minimum, (A) Establish priorities, (B) establish requirements for State storm water management programs, and (C) establish expeditious deadlines. The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate.

Section 401 of the WQA amends section 402(1)(2) of the CWA to provide that the EPA shall not require a permit for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities if the storm water discharge is not contaminated by contact with, or does not come into contact with, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of such operations.

Section 503 of the WQA amends section 502(14) of the CWA to exclude agricultural storm water discharges from the definition of point source.

III. Remand of 1984 Regulations

On December 4, 1987, the United States Court of Appeals for the District of Columbia Circuit vacated 40 CFR 122.26, (as promulgated on September 26, 1984, 49 FR 37998, September 26, 1984), and remanded the regulations to EPA for further rulemaking (*NRDC* v. *EPA*, No. 80-1607). EPA had requested the remand because of significant changes made by the storm water provisions of the WQA. The effect of the decision was to invalidate the storm water discharge regulations then found at § 122.26.

Storm water discharges which had been issued an NPDES permit prior to February 4, 1987, were not affected by the Court remand or the February 12, 1988, rule implementing the court order (53 FR 4157). (*See* section 402(p)(2)(A) of the CWA.) Similarly, the remand did not affect the authority of EPA or an NPDES State to require a permit for any storm water discharge (except an agricultural storm water discharge) designated under section 402(p)(2)(E) of the CWA. The notice of the remand clarified that such designated discharges meet the regulatory definition of point source found at 40 CFR 122.2 and that EPA or an NPDES State can rely on the statutory authority and require the filing of an application (Form 1 and Form 2C) for an NPDES permit with respect to such discharges on a case-by-case basis.

IV. Codification Rule and Case-by-Case Designations

Codification Rule

On January 4, 1989, (54 FR 255), EPA published a final rule which codified numerous provisions of the WQA into EPA regulations. The codification rule included several provisions dealing with storm water discharges. The codification rule promulgated the language found at section 402(p) (1) and (2) of the amended Clean Water Act at 40 CFR 122.26(a)(1). In addition, the codification rule promulgated the language of Section 503 of the WQA which exempted agricultural storm water discharges from the definition of point source at 40 CFR 122.2, and section 401 of the WQA addressing uncontaminated storm water discharges from mining or oil and gas operations at 40 CFR 122.26(a)(2).

EPA also codified the statutory authority of section 402(p)(2)(E) of the CWA for the Administrator or the State Director, as the case may be, to designate storm water discharges for a permit on a case-by-case basis at 40 CFR 122.26(a)(1)(v).

Case by Case Designations

Section 402(p)(2)(E) of the CWA authorizes case-by-case designations of storm water discharges for immediate permitting if the Administrator or the State Director determines that the storm water discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

In determining that a storm water discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States for the purpose of a designation under section 402(p)(2)(E), the legislative history for the provision provides that "EPA or the State should use any available water quality or sampling data to determine whether the latter two criteria (contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States) are met, and should require additional sampling as necessary to determine whether or not these criteria are met." Conference Report, *Cong. Rec.* S16443 (daily ed. October 16, 1986). In accordance with this legislative history, today's rule promulgates permit application requirements for certain storm water discharges, including discharges designated on a case-by-case basis. EPA will consider a number of factors when determining whether a storm water discharge is a significant contributor of pollution to the waters of the United States. These factors include: the location of the discharge with respect to waters of the United States; the size of the discharge; the quantity and nature of the pollutants reaching waters of the United States; and any other relevant factors. Today's rule incorporates these factors at 40 CFR 122.26(a)(1)(v).

Under today's rule, case-by-case designations are made under regulatory procedures found at 40 CFR 124.52. The procedures at 40 CFR 124.52 require that whenever the Director decides that an individual permit is required, the Director shall notify the discharger in writing that the discharge requires a permit and the reasons for the decision. In addition, an application form is sent with the notice. Section 124.52 provides a 60 day period from the date of notice for submitting a permit application. Although this 60 day period may be appropriate for many designated storm water discharges, site specific factors may dictate that the Director provide

additional time for submitting a permit application. For example, due to the complexities associated with designation of a municipal separate storm sewer system for a system- or jurisdiction-wide permit, the Director may provide the applicant with additional time to submit relevant information or may require that information be submitted in several phases.

V. Consent Decree of October 20, 1989

On April 20, 1989, EPA was served notice of intent to sue by Kathy Williams *et al*, because of the Agency's failure to promulgate final storm regulations on February 4, 1989, pursuant to Section 402(p)(4) of the CWA. A suit was filed by the same party on July 20, 1989, alleging the same cause of action, to wit: the Agency's failure to promulgate regulations under section 402(p)(4) of the CWA. On October 20, 1989, EPA entered into a consent decree with Kathy Williams *et al*, wherein the Federal District Court, District of Oregon, Southern Division, decreed that the Agency promulgate final regulations for storm water discharges identified in sections 402(p)(2) (B) and (C) of the CWA no later than July 20, 1990. *Kathy Williams et al.*, v. *William K. Reilly, Administrator, et al.*, No. 89–6265–E (D-Ore.) In July 1990, the consent degree was amended to provide for a promulgation date of October 31. Today's rule is promulgated in compliance with the terms of the consent decree as amended.

VI. Today's Final Rule and Response to Comments

A. Overview

Section 405 of the WQA alters the regulatory approach to control pollutants in storm water discharges by adopting a phased and tiered approach. The new provision phases in permit application requirements, permit issuance deadlines and compliance with permit conditions for different categories of storm water discharges. The approach is tiered in that storm water discharges associated with industrial activity must comply with sections 301 and 402 of the CWA (requiring control of the discharge of pollutants that utilize the Best Available Technology (BAT) and the Best Conventional Pollutant Control Technology (BCT) and where necessary, water quality-based controls), but permits for discharges from municipal separate storm sewer systems must require controls to reduce the discharge of pollutants to the maximum extent practicable, and where necessary water quality-based controls, and must include a requirement to effectively prohibit non-storm water discharges into the storm sewers. Furthermore, EPA in consultation with State and local officials must develop a comprehensive program to designate and regulate other storm water discharges to protect water quality.

This final regulation establishes requirements for the storm water permit application process. It also sets forth the required components of municipal storm water quality management plans, as well as a preliminary permitting strategy for industrial activities. In implementing these regulations, EPA and the States will strive to achieve environmental results in a cost effective manner by placing high priority on pollution prevention activities, and by targeting activities based on reducing risk from particularly harmful pollutants and/or from discharges to high value waters. EPA and the States will also work with applicants to avoid cross media transfers of storm water contaminants, especially through injection to shallow wells in the Class V Underground Injection Control Program.

In addition, EPA recognizes that problems associated with storm water, combined sewer overflows (CSOs) and infiltration and inflow (I&I) are all interrelated even though they are treated somewhat differently under the law. EPA believes that it is important to begin linking these programs and activities and, because of the potential cost to local governments, to investigate the use of innovative, non-traditional approaches to reducing or preventing contamination of storm water.

The application process for developing municipal storm water management plans provides an ideal opportunity between steps 1 and 2 for considering the full range of nontraditional, preventive approaches, including municipalities, public awareness/education programs, use of vegetation and/or land conservancy practices, alternative paving materials, creative ways to eliminate I&I and illegal hook-ups, and potentials for water reuse. EPA has already announced its plans to present an award for the best creative, cost effective approaches to storm water and CSOs beginning in 1991.

This rulemaking establishes permit application requirements for classes of storm water discharges that were specifically identified in section 402(p)(2). These priority storm water discharges include storm water discharges associated with industrial activity and discharges from a municipal separate storm sewer serving a population of 100,000 or more.

This rulemaking was developed after careful consideration of 450 sets of comments, comprising over 3200 pages, that were received from a variety of industries, trade associations, municipalities, State and Federal Agencies, environmental groups, and private citizens. These comments were received during a 90-day comment period which extended from December 7, 1988, to March 7, 1989. EPA received several requests for an extension of the comment period from 30-days up to 90-days. Many arguments were advanced for an extension including: the extent and complexity of the proposal, the existence of other concurrent EPA proposals, and the need for technical evaluations of the proposal. EPA considered these comments as they were received, but declined to extend the comment period beyond 90 days. The standard comment period on proposals normally range from 30 to 60 days. In light of the statutory deadline of February 4, 1989, additional time for the comment period beyond what was already a substantially lengthened comment period would have been inappropriate. The number and extent of the comments received on this proposal indicated that interested parties had substantially adequate time to review and comment on the regulation. Furthermore, the public was invited to attend six public meetings in Washington DC, Chicago, Dallas, Oakland, Jacksonville, and Boston to present questions and comments. EPA is convinced that substantial and adequate public participation was sought and received by the Agency.

Numerous commenters have also requested that the rule be reproposed due to the extent of the proposal and the number of options and issues upon which the Agency requested comments. EPA has decided against a reproposal. The December 7, 1988, notice of proposed rulemaking was extremely detailed and thoroughly identified major issues in such a manner as to allow the public clear opportunities to comment. The comments that were received were extensive, and many provided valuable information and ideas that have been incorporated into the regulation. Accordingly, the Agency is confident it has produced a workable and rational approach to the initial regulation of storm water discharges and a regulation that reflects the experience and knowledge of the public as provided in the comments, and which was developed in accordance with the

procedural requirements of the Administrative Procedures Act (APA). EPA believes that while the number of issues raised by the proposal was extensive, the number of detailed comments indicates that the public was able to understand the issues in order to comment adequately. Thus, a reproposal is unnecessary.

B. Definition of Storm Water

The December 7, 1988, notice requested comment on defining storm water as storm water runoff, surface runoff, street wash waters related to street cleaning or maintenance, infiltration (other than infiltration contaminated by seepage from sanitary sewers or by other discharges) and drainage related to storm events or snow melt. This definition is consistent with the regulatory definition of "storm sewer" at 40 CFR 35.2005(b)(47) which is used in the context of grants for construction of treatment works. This definition aids in distinguishing separate storm water sewers from sanitary sewers, combined sewers, process discharge outfalls and non-storm water, non-process discharge outfalls.

The definition of "storm water" has an important bearing on the NPDES permitting scheme under the CWA. The following discusses the interrelationship of NPDES permitting requirements for storm water discharges addressed by this rule and NPDES permitting requirements for other non-storm water discharges which may be discharged via the storm sewer as a storm water discharge. Today's rule addresses permit application requirements for storm water discharges associated with industrial activity and for discharges from municipal separate storm sewer systems serving a population of 100,000 or more. Storm water discharges associated with industrial activity are to be covered by permits which contain technology-based controls based on BAT/BCT considerations or water quality-based controls, if necessary. A permit for storm water discharges from an industrial facility may also cover other non-storm water discharges from the facility. Today's rule establishes individual (Form 1 and Form 2F) and group application requirements for storm water discharges associated with industrial activity. In addition, EPA or authorized NPDES States with authorized general permit programs may issue general permits which establish alternative application or notification requirements for storm water discharges covered by the general permit(s). Where a storm water discharge associated with industrial activity is mixed with a non-storm water discharge, both discharges must be covered by an NPDES permit (this can be in the same permit or with multiple permits). Permit application requirements for these "combination" discharges are discussed later in today's notice.

Today's rule also addresses permit application requirements for discharges from municipal separate storm sewer systems serving a population of 100,000 or more. Under today's rule, appropriate municipal owners or operators of these systems must obtain NPDES permits for discharges from these systems. These permits are to establish controls to the maximum extent practicable (MEP), effectively prohibit non-storm water discharges to the municipal separate storm sewer system and, where necessary, contain applicable water quality-based controls. Where non-storm water discharges or storm water discharges associated with industrial activity discharge through a municipal separate storm sewer system (including systems serving a population of 100,000 or more as well as other systems), which ultimately discharges to a waters of the United States, such discharges through a municipal storm sewer need to be covered by an NPDES permit that is independent of the permit issued for discharges from the municipal separate storm sewer system. Today's rule defines the term "illicit discharge" to describe any discharge through a municipal separate storm sewer that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not authorized under the CWA. Section 402(p)(3)(B) of the CWA requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer. As discussed in more detail below, today's rule begins to implement the "effective prohibition" by requiring municipal operators of municipal separate storm sewer systems serving a population of 100,000 or more to submit a description of a program to detect and control certain non-storm water discharges to their municipal system. Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit (other than the permit for the discharge from the municipal separate storm sewer). For reasons discussed in more detail below, in general, municipalities will not be held responsible for prohibiting some specific components of discharges or flows listed below through their municipal separate storm sewer system, even though such components may be considered non-storm water discharges, unless such discharges are specifically identified on a case-by-case basis as needing to be addressed. However, operators of such non-storm water discharges need to obtain NPDES permits for these discharges under the present framework of the CWA (rather than the municipal operator of the municipal separate storm sewer system). (Note that section 516 of the Water Quality Act of 1987 requires EPA to conduct a study of de minimis discharges of pollutants to waters of the United States and to determine the most effective and appropriate methods of regulating any such discharges.)

EPA received numerous comments on the proposed regulatory definition of storm water, many of which proposed exclusions or additions to the definition. Several commenters suggested that the definition should include or not include detention and retention reservoir releases, water line flushing, fire hydrant flushing, runoff from fire fighting, swimming pool drainage and discharge, landscape irrigation, diverted stream flows, uncontaminated pumped ground water, rising ground waters, discharges from potable water sources, uncontaminated waters from cooling towers, foundation drains, non-contact cooling water (such as HVAC or heating, ventilation and air conditioning condensation water that POTWs require to be discharged to separate storm sewers rather than sanitary sewers), irrigation water, springs, roof drains, water from crawl space pumps, footing drains, lawn watering, individual car washing, flows from riparian habitats and wetlands. Most of these comments were made with regard to the concern that these were commonly occurring discharges which did not pose significant environmental problems. It was also noted that, unless these flows are classified as storm water, permits would be required for these discharges.

In response to the comments which requested EPA to define the term "storm water" broadly to include a number of classes of discharges which are not in any way related to precipitation events, EPA believes that this rulemaking is not an appropriate forum for addressing the appropriate regulation under the NPDES program of such non-storm water discharges, even though some classes of non-storm water discharges may typically contain only minimal amounts of pollutants. Congress did not intend that the term storm water be used to describe any discharge that has a de minimis amount of pollutants, nor did it intend for section 402(p) to be used to

provide a moratorium from permitting other non-storm water discharges. Consequently, the final definition of storm water has not been expanded from what was proposed. However, as discussed in more detail later in today's notice, municipal operators of municipal separate storm sewer systems will generally not be held responsible for "effectively prohibiting" limited classes of these discharges through their municipal separate storm sewer systems.

The proposed rule included infiltration in the definition of storm water. In this context one commenter suggested that the term infiltration be defined. Infiltration is defined at 40 CFR 35.2005(b)(20) as water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections or manholes. Infiltration does not include, and is distinguished from, inflow. Another commenter urged that ground water infiltration not be classified as storm water because the chemical characteristics and contaminants of ground water will differ from surface storm water because of a longer contact period with materials in the soil and because ground water quality will not reflect current practices at the site. In today's rule, the definition of storm water excludes infiltration since pollutants in these flows will depend on a large number of factors, including interactions with soil and past land use practices at a given site. Further infiltration flows can be contaminated by sources that are not related to precipitation events, such as seepage from sanitary sewers. Accordingly the final regulatory language does not include infiltration in the definition of storm water. Such flows may be subject to appropriate permit conditions in industrial permits. As discussed in more detail below, municipal management programs must address infiltration where identified as a source of pollutants to waters of the United States.

One commenter questioned the status of discharges from detention and retention basins used to collect storm water. This regulation covers discharges of storm water associated with industrial activity and discharges from municipal separate storm sewer systems serving a population of 100,000 or more into waters of the United States. Therefore, discharges from basins that are part of a conveyance system for a storm water discharge associated with industrial activity or part of a municipal separate storm sewer system serving a population of 100,000 or more are covered by this regulation. Flows which are channeled into basins and which do not discharge into waters of the United States are not addressed by today's rule.

Several commenters requested that the term illicit connection be replaced with a term that does not connote illegal discharges or activity, because many discharges of non-storm water to municipal separate storm sewer systems occurred prior to the establishment of the NPDES program and in accordance with local or State requirements at the time of the connection. EPA disagrees that there should be a change in this terminology. The fact that these connections were at one time legal does not confer such status now. The CWA prohibits the point source discharge of non-storm water not subject to an NPDES permit through municipal separate storm sewers to waters of the United States. Thus, classifying such discharges as illicit properly identifies such discharges as being illegal.

A commenter wanted clarification of the terms "other discharges" and "drainage" that are used in the definition of "storm water." As noted above, today's rule clarifies that infiltration is not considered storm water. Thus the portion of the definition of storm water that refers to "other discharges" has also been removed. However, the term drainage has been retained. "Drainage" does not take on any meaning other than the flow of runoff into a conveyance, as the word is commonly understood.

One commenter stated that irrigation flows combined with storm water discharges should be excluded from consideration in the storm water program. The Agency would note that irrigation return flows are excluded from regulation under the NPDES program. Section 402(l)(1) states that the Administrator or the State shall not require permits for discharges composed entirely of return flows from irrigated agriculture. The legislative history of the 1977 Clean Water Act, which enacted this language, states that the word "entirely" was intended to limit the exception to only those flows which do not contain additional discharges from activities unrelated to crop production. Congressional Record Vol. 123 (1977), pg. 4360, Senate Report No. 95-370. Accordingly, a storm water discharge component, from an industrial facility for example, included in such "joint" discharges may be regulated pursuant to an NPDES permit either at the point at which the storm water flow enters or joins the irrigation flow, or where the combined flow enters waters of the United States or a municipal separate storm sewer.

Some commenters expressed concern about including street wash waters as storm water. One commenter argued including street wash waters in the definition of storm water should not be construed to eliminate the need for management practices relating to construction activities where sediment may simply wash into storm drains. EPA agrees with these points and the concerns that storm sewers may receive material that pose environmental problems if street wash waters are included in the definition. Accordingly, such discharges are no longer in the definition as proposed, and must be addressed by municipal management programs as part of the prohibition on non-storm water discharges through municipal separate storm sewer systems.

Several commenters requested that the terms discharge and point source, in the context of permits for storm water discharge, be clarified. Several commenters stated that the EPA should clarify that storm water discharge does not include "sheet flow" off of an industrial facility. EPA interprets this as request for clarification on the status of the terms "point source" and "discharge" under these regulations. In response, this rulemaking only covers storm water discharges from point sources. A point source is defined at 40 CFR 122.2 as "any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff." EPA agrees with one commenter that this definition is adequate for defining what discharges of storm water are covered by this rulemaking. EPA notes that this definition would encompass municipal separate storm sewers. In view of this comprehensive definition of point source, EPA need clarify in this rulemaking only that a storm water discharge subject to NPDES regulation does not include storm water that enters the waters of the United States via means other than a "point source." As further discussed below, storm water from an industrial facility which enters and is subsequently discharged through a municipal separate storm sewer is a "discharge associated with industrial

activity" which must be covered by an individual or general permit pursuant to today's rule.

EPA would also note that individual facilities have the burden of determining whether a permit application should be submitted to address a point source discharge. Those unsure of the classification of storm water flow from a facility, should file permit applications addressing the flow, or prior to submitting the application consult permitting authorities for clarification.

One commenter stated that "point source" for this rulemaking should be defined, for the purposes of achieving better water quality, as those areas where "discharges leave the municipal [separate storm sewer] system." EPA notes in response that "point source" as currently defined will address such discharges, while keeping the definition of discharge and point source within the framework of the NPDES program, and without adding potentially confusing and ambiguous additional definitions to the regulation. If this comment is asserting that the term point source should not include discharges from sources through the municipal system, EPA disagrees. As discussed in detail below, discharges through municipal separate storm sewer systems which are not connected to an operable treatment works are discharges subject to NPDES permit requirements at (40 CFR 122.3(c)), and may properly be deemed point sources.

One industry argued that the definition of "point source" should be modified for storm water discharges so as to exclude discharges from land that is not artificially graded and which has a propensity to form channels where precipitation runs off. EPA intends to embrace the broadest possible definition of point source consistent with the legislative intent of the CWA and court interpretations to include any identifiable conveyance from which pollutants might enter the waters of the United States. In most court cases interpreting the term "point source", the term has been interpreted broadly. For example, the holding in *Sierra Club* v. *Abston Construction Co., Inc.*, 620 F.2d 41 (5th Cir. 1980) indicates that changing the surface of land or establishing grading patterns on land will result in a point source where the runoff from the site is ultimately discharged to waters of the United States:

> Simple erosion over the material surface, resulting in the discharge of water and other materials into navigable waters, does not constitute a point source discharge, absent some effort to *change the surface*, to *direct* the water flow or otherwise impede its progress * * * Gravity flow, resulting in a discharge into a navigable body of water, may be part of a point source discharge if the (discharger) at least initially collected or channeled the water and other materials. A point source of pollution may also be present where (dischargers) design spoil piles from discarded overburden such that, during periods of precipitation, erosion of spoil pile walls results in discharges into a navigable body of water by means of ditches, gullies and similar conveyances, even if the (dischargers) have done nothing beyond the mere collection of rock and other materials * * * Nothing in the Act relieves (dischargers) from liability simply because the operators did not actually construct those conveyances, so long as they are reasonably likely to be the means by which pollutants are ultimately deposited into a navigable body of water. Conveyances of pollution formed either as a result of natural erosion or by material means, and which constitute a component of a * * * drainage system, may fit the statutory definition and thereby subject the operators to liability under the Act." 620 F.2d at 45 (emphasis added).

Under this approach, point source discharges of storm water result from structures which increase the imperviousness of the ground which acts to collect runoff, with runoff being conveyed along the resulting drainage or grading patterns.

The entire thrust of today's regulation is to control pollutants that enter receiving water from storm water conveyances. It is these conveyances that will carry the largest volume of water and higher levels of pollutants. The storm water permit application process and permit conditions will address circumstances and discharges peculiar to individual facilities.

One industry commented that the definition of waters of the State under some State NPDES programs included municipal storm sewer systems. The commenter was concerned that certain industrial facilities discharging through municipal storm sewers in these states would be required to obtain an NPDES permit, despite EPA's proposal not to require permits from such facilities generally. In response, EPA notes that section 510 of the CWA, approved States are able to have stricter requirements in their NPDES program. In approved NPDES States, the definition of waters of the State controls with regard to what constitutes a discharge to a water body. However, EPA believes that this will have little impact, since, as discussed below, all industrial dischargers, including those discharging through municipal separate storm sewer systems, will be subject to general or individual NPDES permits, regardless of any additional State requirements.

One municipality commented that neither the term "point source" nor "discharge" should be used in conjunction with industrial releases into urban storm water systems because that gives the impression that such systems are navigable waters. EPA disagrees that any confusion should result from the use of these terms in this context. In this rulemaking, EPA always addresses such discharges as "discharges through municipal separate storm sewer systems" as opposed to "discharges to waters of the United States." Nonetheless, such industrial discharges through municipal storm sewer systems are subject to the requirements of today's rule, as discussed elsewhere.

One commenter desired clarification with regard to what constituted an outfall, and if an outfall could be a pipe that connected two storm water conveyances. This rulemaking defines outfall as a point of discharge into the waters of the United States, and not a conveyance which connects to Sections of municipal separate storm sewer. In response to another comment, this rulemaking only addresses discharges to waters of United States, consequently discharges to ground waters are not covered by this rulemaking (unless there is a hydrological connection between the ground water and a nearby surface water body. *See, e.g., Exxon Corp.* v. *Train*, 554 F.2d 1310, 1312 n.1 (5th Cir. 1977); *McClellan Ecological Seepage Situation* v. *Weinberger*, 707 F.Supp. 1182, 1195–96 (E.D. Cal. 1988)).

In the WQA and other places, the term "storm water" is presented as a single word. Numerous comments were received by EPA as to the appropriate spelling. Many of these comments recommended that two words for storm water is appropriate. EPA has decided to use an approach consistent with the Government Printing Office's approved form where storm water appears as two words.

C. Responsibility for Storm Water Discharges Associated With Industrial Activity Through Municipal Separate Storm Sewers

The December 7, 1988, notice of proposed rulemaking requested comments on the appropriate permitting scheme for storm water discharges associated with industrial activity through municipal separate storm sewers. EPA proposed a permitting scheme that would define the requirement to obtain coverage under an NPDES permit for a storm water discharge associated with industrial activity through a municipal separate storm sewer in terms of the classification of the municipal separate storm sewer. EPA proposed holding municipal operators of large or medium

municipal separate storm sewer systems primarily responsible for applying for and obtaining an NPDES permit covering system discharges as well as storm water discharges (including storm water discharges associated with industrial activity) through the system. Under the proposed approach, operators of storm water discharges associated with industrial activity which discharge through a large or medium municipal separate storm sewer system would generally not be required to obtain permit coverage for their discharge (unless designated as a significant contributor of pollution pursuant to section 402(p)(2)(E)) provided the municipality was notified of: The name, location and type of facility and a certification that the discharge has been tested (if feasible) for non-storm water (including the results of any testing). The notification procedure also required the operator of the storm water discharge associated with industrial activity to determine that: The discharge is composed entirely of storm water; the discharge does not contain hazardous substances in excess of reporting quantities; and the facility is in compliance with applicable provisions of the NPDES permit issued to the municipality for storm water.

In the proposal, EPA also requested comments on whether a decision on regulatory requirements for storm water discharges associated with industrial activity through other municipal separate storm sewer systems (generally those serving a population of less than 100,000) should be postponed until completion of two studies of storm water discharges required under section 402(p)(5) of the CWA.

EPA favored these approaches because they appeared to reduce the potential administrative burden associated with preparing and processing the thousands of permit applications associated with the rulemaking and provide EPA additional flexibility in developing permitting requirements for storm water discharges associated with industrial activity. EPA also expressed its belief, based upon an analysis of ordinances controlling construction site runoff in place in certain cities, that municipalities generally possessed legal authority sufficient to control contributions of industrial storm water pollutants to their separate storm sewers to the degree necessary to implement the proposed rule. EPA commented that municipal controls on industrial sources implemented to comply with an NPDES permit issued to the municipality would likely result in a level of storm water pollution control very similar to that put directly on the industrial source through its own NPDES permit. This was to be accomplished by requiring municipal permitees, to the maximum extent practicable, to require industrial facilities in the municipality to develop and implement storm water controls based on a consideration of the same or similar factors as those used to make BAT/BCT determinations. (*See* 40 CFR 125.3 (d)(2) and (d)(3)).

The great majority of commenters on the December 7, 1988, notice addressed this aspect of the proposal. Based on consideration of the comments received on the notice, EPA has decided that it is appropriate to revise the approach in its proposed rule to require direct permit coverage for all storm water discharges associated with industrial activity, including those that discharge through municipal separate storm sewers. In response to this decision, EPA has continued to analyze the appropriate manner to respond to the large number of storm water discharges subject to this rulemaking. The development of EPA's policy regarding permitting these discharges is discussed in more detail in the section VI.D of today's preamble.

EPA notes that the status of discharges associated with industrial activity which pass through a municipal separate storm sewer system under section 402(p) raises difficult legal and policy questions. EPA believes that treating these discharges under permits separate from those issued to the municipality will most fully address both the legal and policy concerns raised in public comment.

Certain commenters supported EPA's proposal. Some commenters claimed that EPA lacked any authority to permit industrial discharges which were not discharged immediately to waters of the U.S. Other commenters agreed with EPA's statements in the proposal that its approach would result in a more manageable administrative burden for EPA and the NPDES states. However, numerous comments also were received which provided various arguments in support of revising the proposed approach. These comments addressed several areas including the definition of discharge under the CWA, the requirements and associated statutory time frames of section 402(p), as well as the resource and enforcement constraints of municipalities. EPA is persuaded by these comments and has modified its approach accordingly. The key comments on this issue are discussed below.

EPA disagrees with commenters who suggested that EPA lacks authority to permit separately industrial discharges through municipal sewers. The CWA prohibits the discharge of a pollutant except pursuant to an NPDES permit. Section 502(12)(A) of the CWA defines the "discharge of a pollutant" as "any addition of any pollutant to navigable waters from any point source." [1] There is no qualification in the statutory language regarding the source of the pollutants being discharged. Thus, pollutants from a remote location which are discharged through a point source conveyance controlled by a different entity (such as a municipal storm sewer) are nonetheless discharges for which a permit is required.

EPA's regulatory definition of the term "discharge" reflects this broad construction. EPA defines the term to include

> additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; *discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which does not lead to a treatment works;* and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

40 CFR § 122.2 (1989) (emphasis added). The only exception to this general rule is the one contemplated by section 307(b) of the CWA, *i.e.*, the introduction of pollutants into publicly-owned treatment works. EPA treats these as "indirect discharges," subject not to NPDES requirements, but to pretreatment standards under section 307(b).

In light of its construction of the term discharge, EPA has consistently maintained that a person who sends pollutants from a remote location through a point source into a water of the U.S. may be held liable for the unpermitted discharge of that pollutant. Thus, EPA asserts the authority to require a permit either from the operator of the point source conveyance, (such as a municipal storm sewer or a privately-owned treatment works), or from any person causing pollutants to be present in that conveyance and discharged through the point source, or both. *See Decision of the General Counsel (of EPA) No. 43* ("In re Friendswood Development Co.") (June 11, 1976) (operator of privately owned treatment work and dischargers to it are both subject to NPDES permit requirements). *See also*, 40 CFR 122.3(g), 122.44(m)

[1] Indeed, the DC Circuit has held, in the storm water context, that EPA may not exempt any point source discharges of pollutants from the requirement to obtain an NPDES permit. *NRDC v. Costle*, 569 F.2d 1369, 1377 (DC Cir. 1977).

(NPDES permit writer has discretion to permit contributors to a privately owned treatment works as direct dischargers). In other words, where pollutants are added by one person to a conveyance owned/operated by another person, and that conveyance discharges those pollutants through a point source, EPA may permit either person or both to ensure that the discharge is properly controlled. Pollutants from industrial sites discharged through a storm sewer to a point source are appropriately treated in this fashion.

Furthermore, EPA believes that storm water from an industrial plant which is discharged through a municipal storm sewer is a "discharge associated with industrial activity." Today's rule, as in the proposal, defines discharges associated with industrial activity solely in terms of the origin of the storm water runoff. There is no distinction for how the storm water reaches the waters of the U.S. In other words, pollutants in storm water from an industrial plant which are discharged are "associated with industrial activity," regardless of whether the industrial facility operates the conveyance discharging the storm water (or whether the storm water is ultimately discharged through a municipal storm sewer). Indeed, there is no distinction in the "industrial" nature of these two types of discharges. The pollutants of concern in an industrial storm water discharge are present when the storm water leaves the facility, either through an industrial or municipal storm water conveyance. EPA has no data to suggest that the pollutants in industrial storm water entering a municipal storm sewer are any different than those in storm water discharged immediately to a water of the U.S. Thus, industrial storm water in a municipal sewer is properly classified as "associated with industrial activity." Although EPA proposed not to cover these discharges by separate permit, the Agency believes that it is clearly not precluded from doing so.

Many comments also supported the proposed approach, noting that holding municipalities primarily responsible for obtaining a permit which covers industrial storm water discharges through municipal systems would reduce the administrative burden associated with preparing and processing thousands of permit applications—permit applications that would be submitted if each industrial discharger through a large or medium municipal separate storm sewer system had to apply individually (or as part of a group application).

EPA appreciates these concerns. Yet EPA also recognizes that there are also significant problems with putting the burden of controlling these sources on the municipalities (except for designated discharges) which must be balanced with the concerns about the permit application burden on industries. The industrial permitting strategy discussed in section VI.D below attempts to achieve this balance.

EPA also does not believe that the administrative burden will be nearly as significant as originally thought, for several reasons. First, as discussed in section VI.F.2 below and in response to significant public comment, EPA has significantly narrowed the scope of the definition of "associated with industrial activity" to focus in on those facilities which are most commonly considered "industrial" and thought to have the potential for the highest levels of pollutants in their storm water discharges. EPA believes this is a more appropriate way to ensure a manageable scope for the industrial storm water program in light of the statutory language of section 402(p), since it does not attempt to arbitrarily distinguish industrial facilities on the basis of the ownership of the conveyance through which a facility discharges its storm water. Second, EPA's industrial permitting strategy discussed in section VI.D is designed around aggressive use of general permits to cover the vast majority of industrial sources. These general permits will require industrial facilities to develop storm water control plans and practices similar to those that would have been required by the municipality. Yet, general permits will eliminate the need for thousands of individual or group permit applications, greatly reducing the burden on both industry EPA/States. Finally, even under the proposal, EPA believes that a large number of industrial dischargers would have been appropriate for designation for individual permitting under section 402(p)(2)(E), with the attendant individual application requirements. Today's approach will actually decrease the overall burden on these facilities; rather than filing an individual permit application upon designation, these facilities will generally be covered by a general permit.

By contrast, several commenters asserted that not only does EPA have the authority to cover these discharges by separate permit, it is required to by the language of section 402(p). As discussed above, storm water from an industrial plant which passes through a municipal storm sewer to a point source and is discharged to waters of the U.S. is a "discharge associated with industrial activity." Therefore, it is subject to the appropriate requirements of section 402(p). The operator of the discharge (or the industrial facility where the storm water originates) must apply for a permit within three years of the 1987 amendments (*i.e.*, Feb. 4, 1990); [2] EPA must issue a permit by one year later (Feb. 4, 1991); and the permit must require compliance within three years of permit issuance. That permit must ensure that the discharge is in compliance with all appropriate provisions of sections 301 and 402. Commenters asserted that EPA's proposal would violate these two requirements of the law. First, the statute requires all industrial storm water discharges to obtain a permit in the first round of permitting (*i.e.*, February 4, 1990). However, Congress established a different framework to address discharges from small municipal separate storm sewer systems. Section 402(p) requires EPA to complete two studies of storm water discharges, and based on those studies, promulgate additional regulations, including requirements for state storm water management programs by October 1, 1992. EPA is prohibited from issuing permits for storm water discharges from small municipal systems until October 1, 1992 unless the discharge is designated under section 402(p)(2)(E). Thus, industrial storm water discharges from these systems would not be covered by a permit until later than contemplated by statute. Second, permits for municipal storm sewer systems require controls on storm water discharges "to the maximum extent practicable," as opposed to the BAT/BCT requirements of section 301(b)(2). Yet, all industrial storm water discharges must comply with section 301(b)(2). Thus, covering industrial storm water under a municipal storm water permit will not ensure the legally-required level of control of industrial storm water discharges.

In addition to comments on the requirements of section 402(p), EPA received several comments questioning whether EPA's proposal to cover industrial pollutants in municipal separate storm sewers solely in the permit issued to the municipality would ensure adequate control of these pollutants due to both inadequate

[2] It should be noted that EPA did not promulgate the required storm water regulations by February, 1989, as contemplated by section 402(p)(4)(A). As discussed below, today's rule generally requires industrial storm water discharges to file a permit application in one year.

resources and enforcement. Some municipalities stated that the burdens of this responsibility would be too great with regard to source identification and general administration of the program. These commenters claimed they lacked the necessary technical and regulatory expertise to regulate such sources. Commenters also noted that additional resources to control these sources would be difficult to obtain given the restrictions on local taxation in many states and the fact that EPA will not be providing funding to local governments to implement their storm water programs.

Municipalities also expressed concerns regarding enforcement of EPA's proposed approach. Some municipalities remarked that they did not have appropriate legal authority to address these discharges. Several commenters also stated that requiring municipalities to be responsible for addressing storm water discharges associated with industrial activity through their municipal system would result in unequal treatment of industries nationwide because of different municipal requirements and enforcement procedures. Several municipal entities expressed concern with regard to their responsibility and liability for pollutants discharged to their municipal storm sewer system, and further asserted that it was unfair to require municipalities to bear the full cost of controlling such pollutants. Other municipalities suggested that overall municipal storm water control would be impaired, since municipalities would spend a disproportionate amount of resources trying to control industrial discharges through their sewers, rather than addressing other storm water problems. In a related vein, certain commenters suggested that, where industrial storm water was a significant problem in a municipal sewer, EPA's proposed approach would hamper enforcement at the federal/state level, since all enforcement measures could be directed only at the municipality, rather than at the most direct source of that problem.

In response to all of these concerns, EPA has decided to require storm water discharges associated with industrial activity which discharge through municipal separate storm sewers to obtain separate individual or general NPDES permits. EPA believes that this change will adequately address all of the key concerns raised by commenters.

The Agency was particularly influenced by concerns that many municipalities lacked the authority under state law to address industrial storm water practices. EPA had assumed that since several cities regulate construction site activities, that they could regulate other industrial operations in a similar manner. Several commenters suggested otherwise. In light of these concerns, EPA agrees with certain commenters that municipal controls on industrial facilities, in lieu of federal control, might not comply with section 402(p)(3)(A) for those facilities.[3] This calls into question whether EPA's proposed approach would have reasonably implemented Congressional intent to address industrial storm water early and stringently in the permitting process.

EPA also agrees with those commenters who argued that municipal controls on industrial storm water sources were not directly analogous to the pretreatment program under section 307(b), as EPA suggested in the preamble to the proposal. The authority of cities to control the type and volume of industrial pollutants into a POTW is generally unquestioned under the laws of most states, since sewage and industrial waste treatment is a service provided by the municipality. Thus, EPA has greater confidence that cities can and will adopt effective pretreatment programs. By contrast, many cities are limited in the types of controls they can impose on flows into storm sewers; cities are more often limited to regulations on quantity of industrial flows to prevent flooding the system. So too, the pretreatment program allows for federal enforcement of local pretreatment requirements. Enforcement against direct dischargers (including dischargers through municipal storm sewers) is possible only when the municipal requirements are contained in an NPDES permit.

Although today's rule will require industrial discharges through municipal storm sewers to be covered by separate permit, EPA still believes that municipal operators of large and medium municipal systems have an important role in source identification and the development of pollutant controls for industries that discharge storm water through municipal separate storm sewer systems is appropriate. Under the CWA, large and medium municipalities are responsible for reducing pollutants in discharges from municipal separate storm sewers to the maximum extent practicable. Because storm water from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls for storm water discharges associated with industrial activity through their system in their storm water management program. (*See* section VI.H.7. of today's preamble.) The CWA provides that permits for municipal separate storm sewers shall require municipalities to reduce pollutants to the maximum extent practicable. Permits issued to municipalities for discharges from municipal separate storm sewers will reflect terms, specified controls, and programs that achieve that goal. As with all NPDES permits, responsibility and liability is determined by the discharger's compliance with the terms of the permit. A municipality's responsibility for industrial storm water discharged through their system is governed by the terms of the permit issued. If an industrial source discharges storm water through a municipal separate storm sewer in violation of requirements incorporated into a permit for the industrial facility's discharge, that industrial operator of the discharge may be subject to an enforcement action instituted by the Director of the NPDES program.

Today's rule also requires operators of storm water discharges associated with industrial activity through large and medium municipal systems to provide municipal entities of the name, location, and type of facility that is discharging to the municipal system. This information will provide municipalities with a base of information from which management plans can be devised and implemented. This requirement is in addition to any requirements contained in the industrial facility's permit. As in the proposal, the notification process will assist cities in development of their industrial control programs.

EPA intends for the NPDES program, through requirements in permits for storm water discharges associated with industrial activity, to work in concert with municipalities in the industrial component of their storm water management program efforts. EPA believes that permitting of municipal storm sewer systems and the industrial discharges through them will act in a complementary manner to fully control the pollutants in those sewer systems. This will fully implement the intent of

[3] EPA notes that the legal issue raised by commenters regarding whether industrial storm water would be controlled to BAT if covered by a municipal permit at the MEP level is primarily a theoretical issue. As explained above, the proposal assumed that cities would establish controls on industry very similar to those established in an NPDES permit using best professional judgment. EPA's key concern, rather, is whether cities can, in fact, establish such controls. Thus, today's final rule should not appreciably change the requirements to be imposed on industrial sources, only how those requirements are enforced.

Congress to control industrial as well as large and medium municipal storm water discharges as expeditiously and effectively as possible. This approach will also address the concerns of municipalities that they lack sufficient authority and resources to control all industrial contributions to their storm sewers and will be liable for discharges outside of their control.

The permit application requirements for large and medium municipal separate storm sewer systems, discussed in more detail later in today's preamble, address the responsibilities of the municipal operators of these systems to identify and control pollutants in storm water discharges associated with industrial activity. Permit applications for large and medium municipal separate storm sewer systems are to identify the location of facilities which discharge storm water associated with industrial activity to the municipal system (*see* section VI.H.7. of the preamble). In addition, municipal applicants will provide a description of a proposed management program to reduce, to the maximum extent practicable, pollutants from storm water discharges associated with industrial activity which discharge to the municipal system (*see* section VI.H.7.c of this preamble). EPA notes that each municipal program will be tailored to the conditions in that city. Differences in regional weather patterns, hydrology, water quality standards, and storm sewer systems themselves dictate that storm water management practices will vary to some degree in each municipality. Accordingly, similar industrial storm water discharges may be treated differently in terms of the requirements imposed by the municipality, depending on the municipal program. Nonetheless, any individual or general permit issued to the industrial facility must comply with section 402(p)(3)(A) of the CWA.

EPA intends to provide assistance and guidance to municipalities and permitting authorities for developing storm water management programs that achieve permit requirements. EPA intends to issue a guidance document addressing municipal permit applications in the near term.

Controls developed in management plans for municipal system permits may take a variety of forms. Where necessary, municipal permittees can pursue local remedies to develop measures to reduce pollutants or halt storm water discharges with high levels of pollutants through municipal storm sewer systems. Some local entities have already implemented ordinances or laws that are designed to reduce the discharge of pollutants to municipal separate storm sewers, while other municipalities have developed a variety of techniques to control pollutants in storm water. Alternatively, where appropriate, municipal permittees may develop end-of-pipe controls to control pollutants in these discharges such as regional wet detention ponds or diverting flow to publicly owned treatment works. Finally, municipal applicants may bring individual storm water discharges, which cannot be adequately controlled by the municipal permittees or general permit coverage, to the attention of the permitting authority. Then, at the Director's discretion, appropriate additional controls can be required in the permit for the facility generating the targeted storm water discharge.

One commenter suggested that municipal operators of municipal separate storm sewers should have control over all storm water discharges from a facility that discharges both through the municipal system and to waters of the United States. In response, under this regulatory and statutory scheme, industries that discharge storm water directly into the waters of the United States, through municipal separate storm sewer systems, or both are required to obtain permit coverage for their discharges. However, municipalities are not precluded from exercising control over such facilities through their own municipal authorities.

It is important to note that EPA has established effluent guideline limitations for storm water discharges for nine subcategories of industrial dischargers (Cement Manufacturing (40 CFR part 411), Feedlots (40 CFR part 412), Fertilizer Manufacturing (40 CFR part 418), Petroleum Refining (40 CFR part 419), Phosphate Manufacturing (40 CFR part 422), Steam Electric (40 CFR part 423), Coal Mining (40 CFR part 434), Ore Mining and Dressing (40 CFR part 440) and Asphalt (40 CFR part 441)). Most of the existing facilities in these subcategories already have individual permits for their storm water discharges. Under today's rule, facilities with existing NPDES permits for storm water discharges through a municipal storm sewer will be required to maintain these permits and apply for an individual permit, under § 122.26(c), when existing permits expire. EPA received numerous comments supporting this decision because requiring facilities that have existing permits to comply with today's requirements immediately would be inefficient and not serve improved water quality.

Sections 402(p)(1) and (2) of the CWA provide that discharges from municipal separate storm sewer systems serving a population of less than 100,000 are not required to obtain a permit prior to October 1, 1992, unless designated on a case-by-case basis under section 402(p)(2)(E). However, as discussed above, storm water discharges associated with industrial activity through such municipal systems are not excluded. Thus, under today's rule, all storm water discharges associated with industrial activity that discharge through municipal separate storm sewer systems are required to obtain NPDES permit coverage, including those which discharge through systems serving populations less than 100,000. EPA believes requiring permits will address the legal concerns raised by commenters regarding these sources. In addition, it will allow for control of these significant sources of pollution while EPA continues to study under section 402(p)(6) whether to require the development of municipal storm water management plans in these municipalities. If these municipalities do ultimately obtain NPDES permits for their municipal separate storm sewer systems, early permitting of the industrial contributions may aid those cities in their storm water management efforts.

In the December 7, 1988, proposal, EPA recognized that storm water discharges associated with industrial activity from Federal facilities through municipal separate storm sewer systems may pose unique legal and administrative situations. EPA received numerous comments on this issue, with most of these comments coming from cities and counties. The comments reflected a general concern with respect to a municipality's ability to control Federal storm water discharges through municipal separate storm sewer systems. Most municipalities stated that they do not have the legal authority to adequately enforce against problem storm water discharges from Federal facilities and that these facilities should be required to obtain separate storm water permits. Some commenters stated that they have no Constitutional authority to regulate Federal facilities or establish regulation for such facilities. Some commenters indicated that Federal facilities could not be inspected, monitored, or subjected to enforcement for national security and other jurisdictional reasons. Some commenters argued that without clearly stated legal authority for the municipality, such dischargers should be required to obtain permits. One

municipality pointed out that Federal facilities within city limits are exempted from their Erosion and Sediment Control Act and that permits for these facilities should be required.

Under today's rule, Federal facilities which discharge storm water associated with industrial activity through municipal separate storm sewer systems will be required to obtain NPDES permit coverage under Federal or State law. EPA believes this will cure the legal authority problems at the local level raised by the commenters. EPA notes that this requirement is consistent with section 313(a) of the CWA.

D. Preliminary Permitting Strategy for Storm Water Discharges Associated With Industrial Activity

Many of the comments received on the December 7, 1988, proposal focused on the difficulties that EPA Regions and authorized NPDES States, with their finite resources, will have in implementing an effective permitting program for the large number of storm water discharges associated with industrial activity. Many commenters noted that problems with implementing permit programs are caused not only by the large number of industrial facilities subject to the program, but by the difficulties associated with identifying appropriate technologies for controlling storm water at various sites and the differences in the nature and extent of storm water discharges from different types of industrial facilities.

EPA recognizes these concerns; and based on a consideration of comments from authorized NPDES States, municipalities, industrial facilities and environmental groups on the permitting framework and permit application requirements for storm water discharges associated with industrial activity, EPA is in the process of developing a preliminary strategy for permitting storm water discharges associated with industrial activity. In developing this strategy, EPA recognizes that the CWA provides flexibility in the manner in which NPDES permits are issued.[4] EPA intends to use this flexibility in designing a workable and reasonable permitting system. In accordance with these considerations, EPA intends to publish in the near future a discussion of its preliminary permitting strategy for implementing the NPDES storm water program.

The preliminary strategy is intended to establish a framework for developing permitting priorities, and includes a four tier set of priorities for issuing permits to be implemented over time:

- *Tier I—baseline permitting:* One or more general permits will be developed to initially cover the majority of storm water discharges associated with industrial activity;
- *Tier II—watershed permitting:* Facilities within watersheds shown to be adversely impacted by storm water discharges associated with industrial activity will be targeted for permitting.
- *Tier III—industry specific permitting:* Specific industry categories will be targeted for individual or industry-specific permits; and
- *Tier IV—facility specific permitting:* A variety of factors will be used to target specific facilities for individual permits.

Tier I—Baseline Permitting

EPA intends to issue general permits that initially cover the majority of storm water discharges associated with industrial activity in States without authorized NPDES programs. These permits will also serve as models for States with authorized NPDES programs.

The consolidation of many sources under one permit will greatly reduce the otherwise overwhelming administrative burden associated with permitting storm water discharges associated with industrial activity. This approach has a number of additional advantages, including:

- Requirements will be established for discharges covered by the permit;
- Facilities whose discharges are covered by the permit will have an opportunity for substantial compliance with the CWA;
- The public, including municipal operators of municipal separate storm sewers which may receive storm water discharges associated with industrial activity, will have access under section 308(b) of the CWA to monitoring data and certain other information developed by the permittee;
- EPA will have the opportunity to begin to collect and review data on storm water discharges from priority industries, thereby supporting the development of subsequent permitting activities;
- Applicable requirements of municipal storm water management programs established in permits for discharges from municipal separate storm sewer systems will be enforceable directly against non-complying industrial facilities that generate the discharges;
- The public will be given an opportunity to comment on permitting activities;
- The baseline permits will provide a basis for bringing selected enforcement actions by eliminating many issues which might otherwise arise in an enforcement proceeding; and
- Finally, the baseline permits will provide a focus for public comment on the development of subsequent phases of the permitting strategy for storm water discharges, including the development of priorities for State storm water management programs developed under section 402(p)(6) of the CWA.

Initially, the coverage of the baseline permits will be broad, but the coverage is intended to shrink as other permits are issued for storm water discharges associated with industrial activities pursuant to Tier II through IV activities.

2. Tier II—Watershed Permitting

Facilities within watersheds shown to be adversely impacted by storm water discharges associated with industrial activity will be targeted for individual and general permitting. This process can be initiated by identifying receiving waters (or segments of receiving waters) where storm water discharges associated with industrial activity have been identified as a source of use impairment or are suspected to be contributing to use impairment.

3. Tier III—Industry Specific Permitting

Specific industry categories will be targeted for individual or industry-specific general permits. These permits will allow permitting authorities to focus attention and resources on industry categories of particular concern and/or industry categories where tailored requirements are appropriate. EPA will work with the States to coordinate the development of model permits for selected classes of industrial storm water discharges. EPA is also working to identify priority industrial categories in the two reports to Congress required under section 402(p)(5) of the CWA. In addition, group applications that are received can be used to develop model permits for the appropriate industries.

[4] The courts in *NRDC* v. *Train*, 396 F.Supp. 1393 (D.D.C. 1975) *aff'd*, *NRDC* v. *Costle*, 568 F.2d 1369 (DC Cir. 1977), have acknowledged the administrative burden placed on the Agency by requiring individual permits for a large number of storm water discharges. These courts have recognized EPA's discretion to use certain administrative devices, such as area permits or general permits to help manage its workload. In addition, the courts have recognized flexibility in the type of permit conditions that are established, including requirements for best management practices.

4. Tier IV—Facility Specific Permitting

Individual permits will be appropriate for some storm water discharges in addition to those identified under Tier II and III activities. Individual permits should be issued where warranted by: the pollution potential of the discharge; the need for individual control mechanisms; and in cases where reduced administrative burdens exist. For example, individual NPDES permits for facilities with process discharges should be expanded during the normal process of permit reissuance to cover storm water discharges from the facility.

5. Relationship of Strategy to Permit Applications Requirements

The preliminary long-term permitting strategy described above identifies several permit schemes that EPA anticipates will be used in addressing storm water discharges associated with industrial activity. One issue that arises with this strategy is determining the appropriate information needed to develop and issue permits for these discharges. The NPDES regulatory scheme provides three major options for obtaining permit coverage for storm water discharges associated with industrial activity: (1) Individual permit applications; (2) group applications; and (3) case-by-case requirements developed for general permit coverage.

a. *Individual permit application requirements.* Today's notice establishes requirements for individual permit applications for storm water discharges associated with industrial activity. These application requirements are applicable for all storm water discharges associated with industrial activity, except where the operator of the discharge is participating in a group application or a general permit is issued to cover the discharge and the general permit provides alternative means to obtain permit coverage. Information in individual applications is intended to be used in developing the site-specific conditions generally associated with individual permits.

Individual permit applications are expected to play an important role in all tiers of the Strategy, even where general permits are used. Although general permits may provide for notification requirements that operate in lieu of the requirement to submit individual permit applications, the individual permit applications may be needed under several circumstances. Examples include: where a general permit requires the submission of a permit application as the notice of intent to be covered by the permit; where the owner or operator authorized by a general permit requests to be excluded from the coverage of the general permit by applying for a permit (*see* 40 CFR 122.28(b)(2)(iii) for EPA issued general permits); and where the Director requires an owner or operator authorized by a general permit to apply for an individual permit (*see* 40 CFR 122.28(b)(2)(ii) for EPA issued general permits).

b. *Group applications.* Today's rule also promulgates requirements for group applications for storm water discharges associated with industrial activity. These applications provide participants of groups with sufficiently similar storm water discharges an alternative mechanism for applying for permit coverage.

The group application requirements are primarily intended to provide information for developing industry specific general permits. (Group applications can also be used to issue individual permits in authorized NPDES States without general permit authority or where otherwise appropriate). As such, group application requirements correlate well with the Tier III permitting activities identified in the long-term permitting Strategy.

c. *Case-by-case requirements.* 40 CFR 122.21(a) excludes persons covered by general permits from requirements to submit individual permit applications. Further, the general permit regulations at 40 CFR 122.28 do not address the issue of how a potential permittee is to apply to be covered under a general permit. Rather, conditions for notification of intent (NOI) to be covered by the general permit are established in the permits on a case-by-case basis, and operate in lieu of permit application requirements. Requirements for submitting NOIs to be covered by a general permit can range from full applications (this would be Form 1 and Form 2F for most discharges composed entirely of storm water discharges associated with industrial activity), to no notice. EPA recommends that the NOI requirements established in a general permit for storm water discharges associated with industrial activity be commensurate with the needs of the permit writer in establishing the permit and the permit program. The baseline general permit described in Tier I is intended to support the development of controls for storm water discharges associated with industrial activity that can be supported by the limited resources of the permitting Agency. In this regard, the burdens of receiving and reviewing NOI's from the large number of facilities covered by the permit should also be considered when developing NOI requirements. In addition, NOI requirements should be developed in conjunction with permit conditions establishing reporting requirements during the term of the permit.

NOI requirements in general permits can establish a mechanism which can be used to establish a clear accounting of the number of permittees covered by the general permit, the nature of operations at the facility generating the discharge, their identity and location. The NOI can be used as an initial screening tool to determine discharges where individual permits are appropriate. Also, the NOI can be used to identify classes of discharges appropriate for more specific general permits, as well as provide information needed to notify such dischargers of the issuance of a more specific general permit. In addition, the NOI can provide for the identification of the permittee to provide a basis for enforcement and compliance monitoring strategies. EPA will further address this issue in the context of specific general permits it plans to issue in the near future.

Today's rule requires that individual permit applications for storm water discharges associated with industrial activity be submitted within one year from the date of publication of this notice. EPA is considering issuing general permits for the majority of storm water discharges associated with industrial activity in those States and territories that do not have authorized State NPDES programs (MA, ME, NH, FL, LA, TX, OK, NM, SD, AZ, AK, ID, District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Trust Territory of the Pacific Islands) before that date to enable industrial dischargers of storm water to ascertain whether they are eligible for coverage under a general permit (and subject to any alternative notification requirements established by the general permit in lieu of the individual permit application requirements of today's rule) or whether they must submit an individual permit application (or participate in a group application) before the regulatory deadlines for submitting these applications passes. Storm water application deadlines are discussed in further detail below.

E. Storm Water Discharge Sampling

Storm water discharges are intermittent by their nature, and pollutant concentrations in storm water discharges will be highly variable. Not only will variability arise between given events, but the flow and pollutant

concentrations of such discharges will vary with time during an event. This variability raises two technical problems: how best to characterize the discharge associated with a single storm event; and how best to characterize the variability between discharges of different events that may be caused by seasonal changes and changes in material management practices, for example.

Prior to today's rulemaking, 40 CFR 122.21(g)(7) required that applicants for NPDES permits submit quantitative data based on one grab sample taken every hour of the discharge for the first four hours of discharge. EPA has modified this requirement such that, instead of collecting and analyzing four grab samples individually, applicants for permits addressing storm water discharges associated with industrial activity will provide data as indicators of two sets of conditions: data collected during the first 30 minutes of discharge and flow-weighted average storm event concentrations. Large and medium municipalities will provide data on flow-weighted average storm event concentrations only.

Data describing pollutants in a grab sample taken during the first few minutes of the discharge can often be used as a screen for non-storm water discharges to separate storm sewers because such pollutants may be flushed out of the system during the initial portion of the discharge. In addition, data from the first few minutes of a discharge are useful because much of the traditional structural technology used to control storm water discharges, including detention and retention devices, may only provide controls for the first portion of the discharge, with relatively little or no control for the remainder of the discharge. Data from the first portion of the discharge will give an indication of the potential usefulness of these techniques to reduce pollutants in storm water discharges. Also, such discharges may be primarily responsible for pollutant shocks to the ecosystem in receiving waters.

Studies such as NURP have shown that flow-weighted average concentrations of storm water discharges are useful for estimating pollutant loads and for evaluating certain concentration-based water quality impacts. The use of flow-weighted composite samples are also consistent with comments raised by various industry representatives during previous Agency rulemakings that continuous monitoring of discharges from storm events is necessary to adequately characterize such discharges.

EPA requested comment on the feasibility of the proposed modification of sampling procedures at § 122.21(g)(7) and the ability to characterize pollutants in storm water discharges with an average concentration from the first portion of the discharge compared to collecting and separately analyzing four grab samples. It was proposed that an event composite sample be collected, as well as a grab sample collected during the first 20 minutes of runoff. Comments were solicited as to whether or not this sampling method would provide better definition of the storm load for runoff characterization than would the requirement to collect and separately analyze four grab samples.

Many commenters questioned the ability to obtain a 20 minute sample in the absence of automatic samplers. Some believed that pollutants measured by such a sample can be accounted for in the event composite sample. Others argued that this is an unwarranted sampling effort if municipal storm water management plans are to be geared to achieving annual pollutant load reductions. Many commenters advised that problems accessing sampling stations and mobilizing sampling crews, particularly after working hours, made sampling during the first 20 minutes impractical. These comments were made particularly with respect to municipalities, where the geographical areas could encompass several hundred square miles. Several alternatives were suggested including: the collection of a sample in the first hour, and representative grab sampling in the next three hours, one per hour; or perform time proportioned sampling for up to four hours.

Because of the logistical problems associated with collecting samples during the first few minutes of discharge from municipal systems, EPA will only require such sampling from industrial facilities. Municipal systems will be spread out over many square miles with sampling locations potentially several miles from public works departments or other responsible government agencies. Reaching such locations in order to obtain samples during the first few minutes of a storm event may prove impossible. For essentially the same reasons, the requirement has been modified to encompass the first 30 minutes of the discharge, instead of 20 minutes, for industrial discharges. The rule also clarifies that the sample should be taken during the first 30 minutes or as soon thereafter as practicable. Where appropriate, characterization of this portion of the discharge from selected outfalls or sampling points may be a condition to permits issued to municipalities. With regard to protocols for the collection of sample aliquots for flow-weighted composite samples, § 122.21(g)(7) provides that municipal applicants may collect flow-weighted composite samples using different protocols with respect to the time duration between the collection of sample aliquots, subject to the approval of the Director or Regional Administrator. In other words, the period may be extended from 15 minutes to 20 or 25 minutes between sample aliquots, or decreased from 15 to 10 or 5 minutes.

Other comments raised issues that apply both to the impact of runoff characterization and the first discharge representation. These primarily pertained to regions that have well defined wet and dry seasons. Comments questioned whether or not it is fair to assume that the initial storm or two of a wet season, which will have very high pollutant concentrations, are actually representative of the runoff concentrations for the area.

In response, EPA believes that it is important to represent the first part of the discharge either separately or as a part of the event composite samples. This loading is made up primarily of the mass of unattached fine particulates and readily soluble surface load that accumulates between storms. This load washes off of the basin's directly connected paved surfaces when the runoff velocities reach the level required for entrainment of the particulate load into the surface flow. It should be noted that for very fine particulates and solubles, this can occur very soon after the storm begins and much sooner than the peak flow. The first few minutes of discharge represents a shock load to the receiving water, in terms of concentration of pollutants, because for many constituents the highest concentrations of the event will occur during this initial period. Due to the need to properly quantify this load, it is not necessary to represent the first discharge from the upper reaches of the outfall's tributary area. In runoff characterization basins, the assumption is that the land use in the basin is homogeneous, or nearly so, and that the first discharge from the lower reaches for all intents and purposes is representative of the entire basin. If a sample is taken during the first 30 minutes of the runoff, it will be composed primarily of first discharge. If the sample is taken at the outfall an hour into the event, it may contain

discharge from the remote portions of the basin. It will not be representative of the discharge because it will also contain later washoff from the lower reaches of the basin, resulting in a low estimation of the first discharge load of most constituents. Conversely, larger suspended particulates that normally are not present in first discharge due to inadequate velocities will appear in this later sampling scenario because of the influence of higher runoff rates in the lower basin. Many commonly used management practices are designed based on their ability to treat a volume of water defined by the first discharge phenomenon. It is important to characterize the first discharge load because most management practices effectively treat only, or primarily, this load.

It should be noted that first discharge runoff is sometimes contaminated by non-storm water related pollutants. In many urban catchments, contaminants that result from illicit connections and illegal dumping may be stored in the system until "flushed" during the initial storm period. This does not negate the need for information on the characteristic first discharge load, but does indicate that the first phase field screen results for illicit connections should be used to help define those outfalls where this problem might exist.

Several methods can be used to develop an event average concentration. Either automatic or manual sampling techniques can be used that sample the entire hydrograph, or at least the first four hours of it, that will result in several discrete samples and associated flow rates that represent the various flow regimes of an event. These procedures have the potential for providing either an event average concentration, an event mean concentration, or discrete definition of the washoff process. Automatic sampling procedures are also available that collect a single composite sample, either on a time-proportioned or flow proportioned basis.

When discrete samples are collected, an event average composite sample can be produced by the manual composite of the discrete samples in equal volumes. Laboratory analysis of time proportioned composite samples will directly yield the event average concentration. Mathematical averaging of discrete sample analysis results will yield an event average concentration.

When discrete samples are collected, a flow-weighted composite sample can be produced based on the discharge record. This is done by manually flow proportioning the volumes of the individual samples. Laboratory analysis of flow weighted composite samples will directly yield an event mean concentration. Mathematical integration of the change in concentrations and mass flux of the discharge for discrete sample data can produce an event mean concentration. This procedure was used during the NURP program.

EPA wishes to emphasize that the reason for sampling the type of storm event identified in § 122.21(g)(7) is to provide information that represents local conditions that will be used to create sound storm water management plans. Based on the method to be used to generate system-wide estimates of pollutant loads, either method, discrete or event average concentrations, may be preferable to the other. If simulation models will be used to generate loading estimates, analysis of discrete samples will be more valuable so that calibration of water quality and hydrology may be performed. On the other hand, simple estimation methods based on event average or event mean concentrations may not justify the additional cost of discrete sample analysis.

EPA believes that the first discharge loading should be represented in the permit application from industrial facilities and, if appropriate, permitting authorities may require the same in the discharge characterization component of permits issued to municipalities. The first discharge load should also be represented as part of an event composite sample. This requirement will assist industries in the development of effective storm water management plans.

EPA requested comments on the appropriateness of the proposed rules and of proposed amendments to the rules regarding discharge sampling. Comments were received which addressed the appropriateness of imposing uniform national guidelines. Several commenters are concerned that uniform national guidelines may not be appropriate due to the geographic variations in meteorology, topography, and pollutant sources. While some assert that a uniform guideline will provide consistency of the sample results, others prefer a program based on regional or State guidelines that more specifically address their situation.

Several commenters, addressing industrial permit application requirements, preferred that the owner/operator be allowed to set an individual sampling protocol with approval of the permit writer. Some commenters were concerned that one event may not be sufficient to characterize runoff from a basin as this may result in gross over-estimation or underestimation of the pollutant loads. Others indicated confusion with regard to sampling procedures, lab analysis procedures, and the purpose of the program.

In response, today's regulations establish certain minimum requirements. Municipalities and industries may vary from these requirements to the extent that their implementation is at least as stringent as outlined in today's rule. EPA views today's rule as a means to provide assurance as to the quality of the data collected; and to this end, it is important that the minimum level of sampling required be well defined.

In response to EPA's proposal that the first discharge be included in "representative" storm sampling, several commenters made their concerns known about the possible equipment necessary to meet this requirement. Several commenters are concerned that in order to get a first discharge sample, automatic sampling equipment will be required. Concerns related to the need for this equipment surfaced in the comments frequently; most advised that the equipment is expensive and that the demand on sampling equipment will be too large for suppliers and manufacturers to meet. Although equipment can be leased, some commenters maintained that not enough rental equipment is available to make this a viable option in many instances.

EPA is not promoting or requiring the use of automated equipment to satisfy the sampling requirements. A community may find that in the long run it would be more convenient to have such equipment since sampling is required not only during preparation of the application, but also may be required during the term of the permit to assure that the program goals are being met. Discharge measurement is necessary in order for the sample data to have any meaning. If unattended automatic sampling is to be performed, then unattended flow measurement will be required too.

EPA realizes that equipment availability is a legitimate concern. However, there is no practical recommendation that can be made relative to the availability of equipment. If automatic sampling equipment is not available, manual sampling is an appropriate alternative.

F. Storm Water Discharges Associated With Industrial Activity

1. Permit Applicability

a. *Storm water discharges associated with industrial activity to waters of the United States.* Under today's rule dischargers of storm water associated

with industrial activity are required to apply for an NPDES permit. Permits are to be applied for in one of three ways depending on the type of facility: Through the individual permit application process; through the group application process; or through a notice of intent to be covered by general permit.

Storm water discharges associated with the industrial activities identified under § 122.26(b)(14) of today's rule may avail themselves of general permits that EPA intends to propose and promulgate in the near future. The general permit will be available to be promulgated in each non-NPDES State, following State certification, and as a model for use by NPDES States with general permit authority. It is envisioned that these general permits will provide baseline storm water management practices. For certain categories of industries, specific management practices will be prescribed in addition to the baseline management practices. As information on specific types of industrial activities is developed, other, more industry-specific general permits will be developed.

Today's rule requires facilities with existing NPDES permits for storm water discharges to apply for individual permits under the individual permit application requirements found at 122.26(c) 180 days before their current permit expires. Facilities not eligible for coverage under a general permit are required to file an individual or group permit application in accordance with today's rule. The general permits to be proposed and promulgated will indicate what facilities are eligible for coverage by the general permit.

b. *Storm water discharges through municipal storm sewers.* As discussed above, many operators of storm water discharges associated with industrial activity are not required to apply for an individual permit or participate in a group application under § 122.26(c) of today's rule if covered by a general permit. Under the December 7, 1988, proposal, dischargers through large and medium municipal separate storm sewer systems were not required, as a general rule, to apply for an individual permit or as a group applicant. Today's rule is a departure from that proposal. Today's rule requires all dischargers through municipal separate storm sewer systems to apply for an individual permit, apply as part of a group application, or seek coverage under a promulgated general permit for storm water discharges associated with industrial activity.

Municipal operators of large and medium municipal separate storm sewer systems are responsible for obtaining system-wide or area permits for their system's discharges. These permits are expected to require that controls be placed on storm water discharges associated with industrial activity which discharge through the municipal system. It is anticipated that general or individual permits covering industrial storm water dischargers to these municipal separate storm sewer systems will require industries to comply with the terms of the permit issued to the municipality, as well other terms specific to the permittee.

c. *Storm water discharges through non-municipal storm sewers.* Under today's rulemaking all operators of storm water discharges associated with industrial activity that discharge into a privately or Federally owned storm water conveyance (a storm water conveyance that is not a municipal separate storm sewer) will be required to be covered by an NPDES permit (*e.g.* an individual permit, general permit, or as a co-permittee to a permit issued to the operator of the portion of the system that directly discharges to waters of the United States). This is a departure from the "either/or" approach that EPA requested comments on in the December 7, 1988, notice. The "either/or" approach would have allowed either the system discharges to be covered by a permit issued to the owner/operator of the system segment that discharged to waters of the United States, or by an individual permit issued to each contributor to the non-municipal conveyance.

EPA requested comments on the advantages and disadvantages of retaining the "either/or" approach for non-municipal storm sewers. An abundance of comment was received by EPA on this particular part of the program. A number of industrial commenters and a smaller number of municipalities favored retaining the "either/or" approach as proposed, while most municipal entities, one industry, and one trade association favored requiring permits for each discharger.

Two commenters stated that private owners of conveyances may not have the legal authority to implement controls on discharges through their system and would not want to be held responsible for such controls. EPA agrees that this is a potential problem. Therefore, today's rule will require permit coverage for each storm water discharge associated with industrial activity.

One commenter supported the concept of requiring all the facilities that discharge to a non-municipal conveyance to be co-permittees. EPA agrees that this type of permitting scheme, along with other permit schemes such as area or general permits, is appropriate for discharges from non-municipal sewers, as long as each storm water discharge through the system is associated with industrial activity and thus currently subject to NPDES permit coverage.

One State agency commented that in the interest of uniformity, all industries that discharge to non-municipal conveyances should be required to conform to the application requirements. One industry stated that the rules must provide a way for the last discharger before the waters of the U.S. to require permits for facilities discharging into the upper portions of the system. EPA agrees with these comments. Today's rule provides that each discharger may be covered under individual permits, as co-permittees to a single permit, or by general permit rather than holding the last discharger to the waters of the United States solely responsible.

In response to one commenter, the term "non-municipal" has been clarified to explain that the term refers to non-publicly owned or Federally-owned storm sewer systems.

Some commenters supporting the approach as proposed, noted that industrial storm water dischargers into such systems can take advantage of the group application process. EPA agrees that in appropriate circumstances, such as when industrial facilities discharging storm water to the same system are sufficiently similar, group applications can be used for discharges to non-municipal conveyances. However, EPA believes that it would be inappropriate to approve group applications for those facilities whose only similarity is that they discharge storm water into the same private conveyance system. The efficacy of the group application procedures is predicated on the similarity of operations and other factors. The fact that several industries discharge storm water to the same non-municipal sewer system alone may not make these discharges sufficiently similar for group application approval.

One commenter suggested that EPA has not established any deadlines for submission of permit applications for storm water discharges associated with industrial activity through non-municipal separate storm sewer systems. EPA wants to clarify that industrial storm water dischargers into privately owned or Federally owned storm water conveyances are required to apply for permits in the same time frame as individual or group applicants (or as otherwise provided for in a general permit).

One commenter stated that the operator of the conveyance that accepts discharges into its system has control and police power over those that discharge into the system by virtue of the ability to restrict discharges into the system. This commenter stated that these facilities should be the entity required to obtain the permit in all cases. Assuming that this statement is true in all respects, the larger problem is that one's theoretical ability to restrict discharges is not necessarily tied to the reality of enforcing those restrictions or even detecting problem discharges when they exist. In a similar vein one commenter urged that a private operator will not be in any worse a position than a municipal entity to determine who is the source of pollution up-stream. EPA agrees that from a hydrological standpoint this may be true. However, from the standpoint of detection resources, police powers, enforcement remedies, and other facets of municipal power that may be brought to bear upon problem dischargers, private systems are in a far more precarious position with respect to controlling discharges from other private sources.

In light of the comments received, EPA has decided that the either/or approach as proposed is inappropriate. Operators of non-municipal systems will generally be in a poorer position to gain knowledge of pollutants in storm water discharges and to impose controls on storm water discharges from other facilities than will municipal system operators. In addition, best management practices and other site-specific controls are often most appropriate for reducing pollutants in storm water discharges associated with industrial activity and can often only be effectively addressed in a regulatory scheme that holds each industrial facility operator directly responsible. The either/or approach as proposed is not conducive to establishing these types of practices unless each discharger is discharging under a permit. Also, some non-municipal operators of storm water conveyances, which receive storm water runoff from industrial facilities, may not be generating storm water discharges associated with industrial activity themselves and, therefore, they would otherwise not need to obtain a permit prior to October 1, 1992, unless specifically designated under section 402(p)(2)(E). Accordingly, EPA disagrees with comments that dischargers to non-municipal conveyances should have the flexibility to be covered by their permit or covered by the permit issued to the operator of the outfall to waters to the United States.

2. Scope of "Associated with Industrial Activity"

The September 26, 1984, final regulation divided those discharges that met the regulatory definition of storm water point source into two groups. The term Group I storm water discharges was defined in an attempt to identify those storm water discharges which had a higher potential to contribute significantly to environmental impacts. Group I included those discharges that contained storm water drained from an industrial plant or plant associated areas. Other storm water discharges (such as those from parking lots and administrative buildings) located on lands used for industrial activity were classified as Group II discharges. The regulations defined the term "plant associated areas" by listing several examples of areas that would be associated with industrial activities. However, the resulting definition led to confusion among the regulated community regarding the distinctions between the Group I and Group II classifications.

In amending the CWA in 1987, Congress did not explicitly adopt EPA's regulatory classification of Group I and Group II discharges. Rather, Congress required EPA to address "storm water discharges associated with industrial activity" in the first round of storm water permitting. In light of the adoption of the term "associated with industrial activity" in the CWA, and the ongoing confusion surrounding the previous regulatory definition, EPA has eliminated the regulatory terms "Group I storm water discharge" and "Group II storm water discharge" pursuant to the December 7, 1987, Court remand and has not revived it. In addition, today's notice promulgates a definition of the term "storm water discharge associated with industrial activity"at § 122.26(b)(14) and clarified the scope of the term.

In describing the scope of the term "associated with industrial activity", several members of Congress explained in the legislative history that the term applied if a discharge was "directly related to manufacturing, processing or raw materials storage areas at an industrial plant." (Vol. 132 Cong. Rec. H10932, H10936 (daily ed. October 15, 1986); Vol. 133 Cong. Rec. H176 (daily ed. January 8, 1987)). Several commenters cited this language in arguing for a more expansive or less expansive definition of "associated with industrial activity." EPA believes that the legislative history supports the decision to exclude from the definition of industrial activity, at § 122.26(b)(14) of today's rule, those facilities that are generally classified under the Office of Management and Budget Standard Industrial Classifications (SIC) as wholesale, retail, service, or commercial activities.

Two commenters recommended that all commercial enterprises should be required to obtain a permit under this regulation. Another commenter recommended that all the facilities listed in the December 7, 1988, proposal, including those listed in paragraphs (xi) through (xvi) on page 49432 of the December 7, 1988, proposal, should be included. EPA disagrees since the intent of Congress was to establish a phased and tiered approach to storm water permits, and that only those facilities having discharges associated with industrial activity should be included initially. The studies to be conducted pursuant to section 402(p)(5) will examine sources of pollutants associated with commercial, retail, and other light business activity. If appropriate, additional regulations addressing these sources can be developed under section 402(p)(6) of the CWA. As further discussed below, EPA believes that the facilities identified in paragraphs (xi) through (xvi) are more properly characterized as commercial or retail facilities, rather than indutrial facilities.

Today's rule clarifies the regulatory definition of "associated with industrial activity" by adopting the language used in the legislative history and supplementing it with a description of various types of areas that are directly related to an industrial process (*e.g.*, industrial plant yards, immediate access roads and rail lines, drainage ponds, material handling sites, sites used for the application or disposal of process waters, sites used for the storage and maintenance of material handling equipment, and known sites that are presently or have been used in the past for residual treatment, storage or disposal). The agency has also incorporated some of the suggestions offered by the public in comments.

Three commenters suggested that the permit application should focus only on storm water with the potential to come into contact with industrial-related pollutant sources, rather than focusing on how plant areas are utilized. These commenters suggested that facilities that are wholly enclosed or have their operations entirely protected from the elements should not be subject to permit requirements under today's rule. EPA agrees that these comments have merit with regard to certain types of facilities. Today's rule defines the term "storm water discharge associated with

industrial activity" to include storm water discharges from facilities identified in today's rule at 40 CFR 122.21(b)(14)(xi) (facilities classified as Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221–25) only if:

areas where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery at these facilities are exposed to storm water. Such areas include: material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment; storage or disposal; shipping and receiving areas; manufacturing buildings; material storage areas for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

The critical distinction between the facilities identified at 40 CFR 122.26(b)(14)(xi) and the facilities identified at 40 CFR 122.26(b)(14)(i)–(x) is that the former are not classified as having "storm water discharges associated with industrial activity" unless certain materials or activities are exposed to storm water. Storm water discharges from the latter set of facilities are considered to be "associated with industrial activity" regardless of the actual exposure of these same materials or activities to storm water.

EPA believes this distinction is appropriate because, when considered as a class, most of the activity at the facilities in § 122.26(b)(14)(xi) is undertaken in buildings; emissions from stacks will be minimal or non-existent; the use of unhoused manufacturing and heavy industrial equipment will be minimal; outside material storage, disposal or handling generally will not be a part of the manufacturing process; and generating significant dust or particulates would be atypical. As such, these industries are more akin or comparable to businesses, such as retail, commercial, or service industries, which Congress did not contemplate regulating before October 1, 1992, and storm water discharges from these facilities are not "associated with industrial activity." Thus, these industries will be required to obtain a permit under today's rule only when the manufacturing processes undertaken at such facilities would result in storm water contact with industrial materials associated with the facility.

Industrial categories in § 122.26(b)(14)(xi) all tend to engage in production activities in the manner described in the paragraph above. Facilities under SIC 20 process foods including meats, dairy food, fruit, and flour. Facilities classified under SIC 21 make cigarettes, cigars, chewing tobacco and related products. Under SIC 22, facilities produce yarn, etc., and/or dye and finish fabrics. Facilities under SIC 23 are in the business of producing clothing by cutting and sewing purchased woven or knitted textile products. Facilities under SIC 2434 and 25 are establishments engaged in furniture making. SIC 265 and 267 address facilities that manufacture paper board products. Facilities under SIC 27 perform services such as bookbinding, plate making, and printing. Facilities under SIC 283 manufacture pharmaceuticals and facilities under 285 manufacture paints, varnishes, lacquers, enamels, and allied products. Under SIC 30 establishments manufacture products from plastics and rubber. Those facilities under SIC 31 (except 311), 323, 34 (except 3441), 35, 36, and 37 (except 373) manufacture industrial and commercial metal products, machinery, equipment, computers, electrical equipment, and transportation equipment, and glass products made of purchased glass. Facilities under SIC 38 manufacture scientific and electrical instruments and optical equipment. Those under SIC 39 manufacture a variety of items such as jewelry, silverware, musical instruments, dolls, toys, and athletic goods. SIC 4221–25 are warehousing and storage activities.

In contrast, the facilities identified by SIC 24 (except and 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, 373 when taken as a group, are expected to have one or many of the following activities, processes occurring on-site: storing raw materials, intermediate products, final products, by-products, waste products, or chemicals outside; smelting; refining; producing significant emissions from stacks or air exhaust systems; loading or unloading chemical or hazardous substances; the use of unhoused manufacturing and heavy industrial equipment; and generating significant dust or particulates. Accordingly, these are classes of facilities which can be viewed as generating storm water discharges associated with industrial activity requiring a permit. Establishments identified under SIC 24 (except 2434) are engaged in operating sawmills, planing mills and other mills engaged in producing lumber and wood basic materials. SIC 26 facilities are paper mills. Under SIC 28, facilities produce basic chemical products by predominantly chemical processes. SIC 29 describes facilities that are engaged in the petroleum industry. Under SIC 311, facilities are engaged in tanning, currying, and finishing hides and skins. Such processes use chemicals such as sulfuric acid and sodium dichromate, and detergents, and a variety of raw and intermediate materials. SIC 32 manufacture glass, clay, stone and concrete products form raw materials in the form quarried and mined stone, clay, and sand. SIC 33 identifies facilities that smelt, refine ferrous and nonferrous metals from ore, pig or scrap, and manufacturing related products. SIC 3441 identifies facilities manufacturing fabricated structural metal. Facilities under SIC 373 engage in ship building and repairing. The permit application requirements for storm water discharges from facilities in these categories are unchanged from the proposal.

Today's rule clarifies that the requirement to apply for a permit applies to storm water discharges from plant areas that are no longer used for industrial activities (if significant materials remain and are exposed to storm water) as well as areas that are currently being used for industrial activities. EPA would also clarify that all discharges from these areas including those that discharge through municipal separate storm sewers are addressed by this rulemaking.

One commenter questioned the use of the word "or" instead of the word "and" to describe storm water "which is located at an industrial plant 'or' directly related to manufacturing, processing, or raw material storage areas at an industrial plant." The comment expressed the concern that discharges from areas not located at an industrial plant would be subject to permitting by this language and questioned whether this was EPA's intent. EPA agrees that this is a potential source of confusion and has modified this language to reflect the conjunctive instead of the alternative. This change has been made to provide consistency in the rule whereby some areas at industrial plants, such as administrative parking lots which do not have storm water discharges commingled with discharges from manufacturing areas, are not included under this rulemaking.

Two commenters wanted clarification of the term "or process water," in the definition of discharge associated with industrial activity at § 122.26(b)(14). This rulemaking replaces this term with the term "process waste water" which is defined at 40 CFR part 401.

One commenter took issue with the decision to include drainage ponds, refuse sites, sites for residual treatment, storage, or disposal, as areas associated with industrial activity, because it was the commenter's view that such areas are unconnected with industrial activity. EPA disagrees with this comment. If refuse and other sites are used in conjunction with manufacturing or the by-products of manufacturing they are clearly associated with industrial activity. As noted above, Congress intended to include discharges directly related to manufacturing and processing at industrial plants. EPA is convinced that wastes, refuse, and residuals are the direct result or consequence of manufacturing and processing and, when located or stored at the plant that produces them, are directly related to manufacturing and processing at that plant. Storm water drainage from such areas, especially those areas exposed to the elements (*e.g.* rainfall) has a high potential for containing pollutants from materials that were used in the manufacturing process at that facility. One commenter supported the inclusion of these areas since many toxins degrade very slowly and the mere passage of time will not eliminate their effects. EPA agrees and finalizes this part of the definition as proposed. One commenter requested clarification of the term "residual" as used in this context. Residual can generally be defined to include material that is remaining subsequent to completion of an industrial process. One commenter noted that the current owner of a facility may not know what areas or sites at a facility were used in this manner in the past. EPA has clarified the definition of discharge associated with industrial activity to include areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. The Agency believes that the current owner will be in a position to establish these facts.

One commenter suggested including material shipping and receiving areas, waste storage and processing areas, manufacturing buildings, storage areas for raw materials, supplies, intermediates, and finished products, and material handling facilities as additional areas "associated with industrial activity." EPA agrees that this would add clarification to the definition, and has incorporated these areas into the definition at § 122.26(b)(14).

One commenter stated that the language "point source located at an industrial plant" would include outfalls located at the facility that are not owned or operated by the facility, but which are municipal storm sewers on easements granted to a municipality for the conveyance of storm water. EPA agrees that if the industry does not operate the point source then that facility is not required to obtain a permit for that discharge. A point source is a conveyance that discharges pollutants into the waters of the United States. If a facility does not operate that point source, then it would be the responsibility of the municipality to cover it under a permit issued to them. However, if contaminated storm water associated with industrial activity were introduced into that conveyance by that facility, the facility would be subject to permit application requirements as is all industrial storm water discharged through municipal sewers.

EPA disagrees with several comments that road drainage or railroad drainage within a facility should not be covered by the definition. Access roads and rail lines (even those not used for loading and unloading) are areas that are likely to accumulate extraneous material from raw materials, intermediate products and finished products that are used or transported within, or to and from, the facility. These areas will also be repositories for pollutants such as oil and grease from machinery or vehicles using these areas. As such they are related to the industrial activity at facilities. However, the language describing these areas of industrial activity has been clarified to include those access roads and rail lines that are "used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility." For the same reasons haul roads (roads dedicated to transportation of industrial products at facilities) and similar extensions are required to be addressed in permit applications. Two industries stated that haul roads and similar extensions should be covered by permits by rule. EPA is not considering the use of a permit by rule mechanism under this regulation, however this issue will be addressed in the section 402(p)(5) reports to Congress and in general permits to be proposed and promulgated in the near future. EPA would note however that facilities with similar operations and storm water concerns that desire to limit administrative burdens associated with permit applications and obtaining permits may want to avail themselves of the group application and/or general permits.

In response to comments, EPA would also like to clarify that it intends the language "immediate access roads" (including haul roads) to refer to roads which are exclusively or primarily dedicated for use by the industrial facility. EPA does not expect facilities to submit permit applications for discharges from public access roads such as state, county, or federal roads such as highways or BLM roads which happen to be used by the facility. Also, some access roads are used to transport bulk samples of raw materials or products (such as prospecting samples from potential mines) in small-scale prior to industrial production. EPA does not intend to require permit applications for access roads to operations which are not yet industrial activities.

EPA does agree with comments made by several industries that undeveloped areas, or areas that do not encompass those described above, should generally not be addressed in the permit application, or a storm water permit, as long as the storm water discharge from these areas is segregated from the storm water discharge associated with the industrial activity at the facility.

Numerous commenters stated that maintenance facilities, if covered, should not be included in the definition. EPA disagrees with this comment. Maintenance facilities will invariably have points of access and egress, and frequently will have outside areas where parts are stored or disposed of. Such areas are locations where oil, grease, solvents and other materials associated with maintenance activities will accumulate. In response to one commenter, such areas are only regulated in the context of those facilities enumerated in the definition at § 122.26(b)(14), and not similar areas of retail or commercial facilities.

Another commenter requested that "storage areas" be more clearly defined. EPA disagrees that this term needs further clarification in the context of this section of the rule. However, in response to one comment, tank farms at industrial facilities are included. Tank farms are in existence to store products and materials created or used by the facility. Accordingly they are directly related to manufacturing processes.

Regarding storage areas, one commenter stated that the regulations should emphasize that only facilities that are not totally enclosed are required to submit permit applications. EPA does not agree with this interpretation since use of the generic term storage area indicates no exceptions for certain physical characteristics. Thus discharges from enclosed storage areas are also covered by today's rule (except as discussed above). EPA also disagrees with one

comment asserting that small outside storage areas of finished products at industrial facilities should be excluded under the definition of associated with industrial activity. EPA believes that such areas are areas associated with industrial activity which Congress intended to be regulated under the CWA. As noted above, the legislative history refers to storage areas, without reference to whether they are covered or uncovered, or of a certain size.

The same language, in the legislative history cited above, was careful to state that the term "associated with industrial activity" does not include storm water "discharges associated with parking lots and administrative and employee buildings." To accommodate legislative intent, segregated storm water discharges from these areas will not be required to obtain a permit prior to October 1, 1992. Many commenters stated that this was an appropriate method in which to limit the scope of "associated with industrial activity." However, if a storm water discharge from a parking lot at an industrial facility is mixed with a storm water discharge "associated with industrial activity," the combined discharge is subject to permit application requirements for storm water discharges associated with industrial activity. EPA disagrees with some commenters who urged that office buildings and administrative parking lots should be covered if they are located at the plant site. EPA agrees with one commenter that inclusion of storm water discharge from these areas would be overstepping Congressional intent unless such are commingled with storm water discharges from the plant site. Several commenters requested that language be incorporated into the rule which establishes that storm water discharges from parking lots and administrative areas not be included in the definition of associated with industrial activity. EPA agrees and has retained language used in the proposal which addresses this distinction.

Storm water discharges from parking lots and administrative buildings along with other discharges from industrial lands that do not meet the regulatory definition of "associated with industrial activity" and that are segregated from such discharges may be required to obtain an NPDES permit prior to October 1, 1992, under certain conditions. For example, large parking facilities, due to their impervious nature may generate large amounts of runoff which may contain significant amounts of oil and grease and heavy metals which may have adverse impacts on receiving waters. The Administrator or NPDES State has the authority under section 402(p)(2)(E) of the amended CWA to require a permit prior to October 1, 1992, by designating storm water discharges such as those from parking lots that are significant contributors of pollutants or contribute to a water quality standard violation. EPA will address storm water discharges from lands used for industrial activity which do not meet the regulatory definition of "associated with industrial activity" in the section 402(p)(5) study to determine the appropriate manner to regulate such discharges.

Several commenters requested clarification that the definition does not include sheet flow or discharged storm water from upstream adjacent facilities that enters the land or comingles with discharge from a facility submitting a permit application. EPA wishes to clarify that operators of facilities are generally responsible for its discharge in its entirety regardless of the initial source of discharge. However, where an upstream source can be identified and permitted, the liability of a downstream facility for other storm water entering that facility may be minimized. Facilities in such circumstances may be required to develop management practices or other run-on/run-off controls, which segregates or otherwise prevents outside runoff from comingling with its storm water discharge. Some commenters expressed concern about other pollutants which may arrive on a facility's premises from rainfall. This comment was made in reference to runoff with a high or low pH. If an applicant has reason to believe that pollutants in its storm water discharge are from such sources, then that needs to be addressed in the permit application and brought to the attention of the permitting authority, which can draft appropriate permit conditions to reflect these circumstances.

EPA requested comments on clarifying the types of facilities that involve industrial activities and generate storm water. EPA preferred basing the clarification, in part, on the use of Standard Industrial Classification (SIC) codes, which have been suggested in comments to prior storm water rulemakings because they are commonly used and accepted and would provide definitions of facilities involved in industrial activity. Several commenters supported the use by EPA of Standard Industrial Classifications for the same reasons identified by EPA as a generally used and understood form of classification. It was also noted that using such a classification would allow targeting for special notification and educational mailings. Three municipalities and three State authorities commented that SICs were appropriate and endorsed their use as a sound basis for determining which industries are covered.

One municipality questioned how SIC classifications will be assigned to particular industries. SICs have descriptions of the type of industrial activity that is engaged in by facilities. Industries will need to assess for themselves whether they are covered by a listed SIC and submit an application accordingly. Another commenter questioned if Federal facilities that do not have an SIC code identification are required to file a permit application. Federal facilities will be required to submit a permit application if they are engaged in an industrial activity that is described under § 122.26(b)(14). The definition of industrial activity incorporates language that requires Federal facilities to submit permit applications in such circumstances. The language has been further clarified to include State and municipal facilities.

EPA requested comments on the scope of the definition (types of facilities addressed) as well as the clarity of regulation. EPA identified the following types of facilities in the proposed regulation as those facilities that would be required to obtain permits for storm water discharges associated with industrial activity:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N (except facilities with toxic pollutant effluent standards which are also identified under category (xi) of this paragraph). One commenter (a municipality) agreed with EPA that these industries should be addressed in this rulemaking. No other comments were received on this category. EPA agrees with this comment since these facilities are those that Congress has required EPA to examine and regulate under the CWA with respect to process water discharges. The industries in these categories have generally been identified by EPA as the most significant dischargers of process wastewaters in the country. As such, these facilities are likely to have storm water discharges associated with industrial activity for which permit applications should be required.

One commenter stated that because oil and gas producers are subject to effluent guidelines, EPA is disregarding the intent of Congress to exclude

facilities pursuant to section 402(1). EPA disagrees with this comment. EPA is not prohibited from requiring permit applications from industries with storm water discharge associated with industrial activity. EPA is prohibited only from requiring a permit for oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water that is not contaminated by contact with or has not come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations such discharges. In keeping with this requirement, EPA is requiring permit applications from oil and gas exploration, production, processing, or treatment operations, or transmission facilities that fall into a class of dischargers as described in § 122.26(c)(iii).

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3411, 373 and *(xi). Facilities classified as Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221–25.* One large municipality and one industry agreed with EPA that facilities covered by these SICs should be covered by this rulemaking. Many commenters, however, took exception to including all or some of these industries. However as noted elsewhere these facilities are appropriate for permit applications.

One commenter stated that within certain SICs industries, such as textile manufacturers use few chemicals and that there is little chance of pollutants in their storm water discharge. EPA agrees that some industries in this category are less likely than others to have storm water discharges that pose significant risks to receiving water quality. However, there are many other activities that are undertaken at these facilities that may result in polluted storm water. Further, the CWA is clear in its mandate to require permit applications for discharges associated with industrial activity. Excluding any of the facilities under these categories, except where the facility manufacturing plant more closely resembles a commercial or retail outlet would be contrary to Congressional intent.

One State questioned the inclusion of facilities identified in SIC codes 20–39 because of their temporary and transient nature or ownership. Agency disagrees that simply because a facility may transfer ownership that storm water quality concerns should be ignored. If constant ownership was a condition precedent to applying for and obtaining a permit, few if any facilities would be subject to this rulemaking.

One State estimated that the proposed definition would lead to permits for 18,000 facilities in its State. Consequently this commenter recommended that the facilities under SIC 20–39 should be limited to those facilities that have to report under section 313 of title III, Superfund Amendments and Reauthorization Act. However, as noted by another commenter, limiting permit requirements to these facilities would be contrary to Congressional intent. While use of chemicals at a facility may be a source of pollution in storm water discharges, other every day activities at an industrial site and associated pollutants such as oil and grease, also contribute to the discharge of pollutants that are to be addressed by the CWA and these regulations. While the number of permit applications may number in the thousands, EPA intends for group applications and general permits to be employed to reduce the administrative burdens as greatly as possible.

Two commenters felt the permit applications should be limited to all entities under SIC 20–39. EPA disagrees that all the industrial activities that need to be addressed fall within these SICs. Discharges from facilities under paragraphs (i) through (xi) such as POTWs, transportation facilities, and hazardous waste facilities, are of an industrial nature and clearly were intended to be addressed before October 1, 1992.

Two commenters stated that SIC 241 should be excluded in that logging is a transitory operation which may occur on a site for only 2–3 weeks once in a 20–30 year period. It was perceived that delays in obtaining permits for such operations could create problems in harvest schedule and mill demand. This commenter stated that runoff from such operations should be controlled by BMPs in effect for such industries and that such a permit would not be practical and would be cost prohibitive.

EPA agrees with the commenter that this provision needs clarification. The existing regulations at 40 CFR 122.27 currently define the scope of the NPDES program with regard to silvicultural activities. 40 CFR 122.27(b)(1) defines the term "silvicultural point source" to mean any discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States. Section 122.27(b)(1) also excludes certain sources. The definition of discharge associated with industrial activity does not include activities or facilities that are currently exempt from permitting under NPDES. EPA does not intend to change the scope of 40 CFR 122.27 in this rulemaking. Accordingly, the definition of "storm water discharge associated with industrial activity" does not include sources that may be included under SIC 24, but which are excluded under 40 CFR 122.27. Further, EPA intends to examine the scope of the NPDES silvicultural regulations at 40 CFR 122.27 as it relates to storm water discharges in the course of two studies of storm water discharges required under section 402(p)(5) of the CWA.

In response to one comment, EPA intends that the list of applicable SICs will define and identify what industrial facilities are required to apply. Facilities that warehouse finished products under the same code at a different facility from the site of manufacturing are not required to file a permit application, unless otherwise covered by this rulemaking.

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(l) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990 and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations. Several commenters urged that Congress intended to require permits or permit applications only for the manufacturing sector of the oil and gas industry (or those activities that designated in SIC 20 through 39). EPA disagrees with this argument. The fact that Congress used the language cited above and not the appropriate the SIC definition explicitly does not indicate that a broader definition or less exclusive definition was contemplated. According to these comments, all storm water discharges from oil and gas

exploration and production facilities would be exempt from regulation. However, EPA is convinced that a facility that is engaged in finding and extracting crude oil and natural gas from subsurface formations, separating the oil and gas from formation water, and preparing that crude oil for transportation to a refinery for manufacturing and processing into refined products, will have discharges directly relating to the processing or raw material storage at an industrial plant and are therefore discharges associated with industrial activity.

For further clarification EPA is intending to focus only on those facilities that are in SIC 10–14. Furthermore, in response to several comments, this rulemaking will require permit applications for storm water discharges from currently inactive petroleum related facilities within SIC codes 10–14, if discharges from such facilities meet the requirements as described in section VI.F.7.a. and § 122.26(c)(1)(iii). Inactive facilities will have storm water associated with industrial activity irrespective of whether the activity is ongoing. Congress drew no distinction between active and inactive facilities in the statute or in the legislative history.

(iv) Hazardous waste treatment, storage, or disposal facilities that are operating under interim status or a permit under Subtitle C of the Resource, Conservation and Recovery Act. One commenter believed that all RCRA and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) facilities should be specifically identified using SIC codes for further clarification. EPA considers this to be unnecessarily redundant, since the RCRA/CERCLA identification is sufficient.

Several industries asserted that storm water discharge from landfills, dumps, and land application sites, properly closed or otherwise subject to corrective or remedial actions under RCRA, should not be included in the definition. One commenter noted that the runoff from these areas is like runoff from undeveloped areas. One commenter also concluded that landfills, dumps, and land application sites should also be excluded if they are properly maintained under RCRA.

One commenter also rejected the idea of requiring permits from all active and inactive landfills and open dumps that have received any industrial wastes, and subtitle C facilities. This commenter felt that these facilities were already adequately covered under RCRA.

Two industry commenters felt that it would be redundant to have hazardous waste facilities regulated by RCRA and the NPDES storm water program. One felt this was especially so if there are current pretreatment standards.

The Agency disagrees that all activities that may contribute to storm water discharges at RCRA subtitle C facilities are being fully controlled and that requiring NPDES permits for storm water discharges at RCRA subtitle C facilities is redundant. First, the vast majority of permitted hazardous waste management facilities are industrial facilities involved in the manufacture or processing of products for distribution in commerce. Their hazardous waste management activities are incidental to the production-related activities. While RCRA subtitle C regulations impose controls in storm water runoff from hazardous waste management units and require cleanup of releases of hazardous wastes, they generally do not control non-systematic spills or process. These releases, from the process itself or the storage of raw materials or finished products are a potential source of storm water contamination. In addition, RCRA subtitle C (except via corrective action authority) does not address management of "non hazardous" industrial wastes, which nevertheless could also potentially contaminate storm water runoff.

Second, at commercial hazardous waste management facilities, the RCRA subtitle C permitting requirements and management standards do not control all releases of potentially toxic materials. For example, some permitted commercial treatment facilities may store and use chemicals in the treatment of RCRA hazardous wastes. Releases of these treatment chemicals from storage areas are a potential source of storm water contamination.

Finally, many RCRA subtitle C facilities have inactive Solid Waste Management Units (SWMU's) on the facility property. These SWMU's may contain areas on the land surface that are contaminated with hazardous constituents. RCRA requires that hazardous waste management facilities must investigate these areas of potential contamination, and then perform corrective action to remediate any SWMU's that are of concern. However, the corrective action process at these facilities will not be completed for a number of years due to the complexity of the cleanup decisions, and due to the fact that many hazardous waste management facilities do not yet have RCRA permits. Until corrective action has been completed at all such subtitle C facilities, SWMU's are a potential source of storm water contamination that should be addressed under the NPDES program. Finally, under section 1004(27) of RCRA, all point source discharges, including those at RCRA regulated facilities, are to be regulated by the NPDES program. Thus, there is no concern of regulatory overlap, and to the extent that the storm water regulations are effectively implemented, it will help address these units in a way that alleviates the need for expensive corrective action in the future.

(v) Landfills, land application sites, and open dumps that receive or have received industrial wastes and that are subject to regulation under subtitle D of RCRA. EPA received numerous comments supporting the regulation of municipal landfills which receive industrial waste and are subject to regulation under subtitle D of RCRA. EPA agrees with these comments. These industries have significant potential for storm water discharges that can adversely affect receiving water.

Two States argued that landfills should be addressed under the non-point source program. EPA disagrees that the non-point source program is sufficient for addressing these facilities. Further, addressing a class of facilities under the non-point source program does not exempt storm water discharges from these facilities from regulation under NPDES. The CWA requires EPA to promulgate regulations for controlling point source discharges of storm water from industrial facilities. Point sources from landfills consisting of storm water are such discharges requiring an NPDES permit. Several commenters argued that these discharges are adequately addressed by RCRA and that regulating them under this storm water rule would be redundant. However, as discussed above, RCRA expressly does not regulate point source discharges subject to NPDES permits. Given the nature of these facilities and of the material stored or disposed, EPA believes storm water permits are necessary. Similarly EPA rejects the comment that storm water discharges from these facilities are already adequately regulated by State authority. Congress has mandated that storm water discharges associated with industrial activity have an NPDES permit.

One commenter wanted EPA to define by size what landfills are covered. In response, it is the intent of these regulations to require permit applications from all landfills that receive industrial waste. Storm water discharges from such facilities are addressed because of the nature of the material with which the storm water comes in contact. The size of facility

will not dictate what type of waste is exposed to the elements.

One commenter requested that the definition of industrial wastes be clarified. For the purpose of this rule, industrial waste consists of materials delivered to the landfill for disposal and whose origin is any of the facilities described under § 122.26(b)(14) of this regulation.

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093. One commenter suggested that the recycling of materials such as paper, glass, plastics, etc., should not be classified as an industrial activity. EPA disagrees that such facilities should be excluded on that basis. These facilities may be considered industrial, as are facilities that manufacture such products absent recycling.

Other facilities exhibit traits that indicate industrial activity. In junkyards, the condition of materials and junked vehicles and the activities occurring on the yard frequently result in significant losses of fluids, which are sources of toxic metals, oil and grease and polychlorinated aromatic hydrocarbons. Weathering of plated and non-plated metal surfaces may result in contributions of toxic metals to storm water. Clearly such facilities cannot be classified as commercial or retail.

One municipality felt that "significant recycling" should be defined or clarified. EPA agrees that the proposed language is ambiguous. It has been clarified to require permit applications from facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093. These SIC codes describe facilities engaged in dismantling, breaking up, sorting, and wholesale distribution of motor vehicles and parts and a variety of other materials. The Agency believes these SIC codes clarify the term significant recycling.

One municipality stated that regulation of these facilities under NPDES would be duplicative if they are publicly owned facilities. One State expressed the view that automobile junkyards, salvage yards could not legitimately be considered industrial activity. As noted above, EPA disagrees with these comments. Facilities that are actively engaged in the storage and recycling of products including metals, oil, rubber, and synthetics are in the business of storing and recycling materials associated with or once used in industrial activity. These activities are not commercial or retail because they are engaged in the dismantling of motors for distribution in wholesale or retail, and the assembling, breaking up, sorting, and wholesale distribution of scrap and waste materials, which EPA views as industrial activity. Further, being a publicly owned facility does not confer non-industrial status.

(vii) Steam electric power generating facilities, including coal handling sites, and onsite and offsite ancillary transformer storage areas. Most of the comments were against requiring permit applications for onsite and offsite ancillary transformer facilities. One commenter stated that these transformers did not leak in storage and if there were leakage problems in handling transformers, such leaks were subject to Federal and State spill clean-up procedures. The same commenter suggested that if EPA required applications from such facilities that it exclude those that have regular inspections, management practices in place, or those that store 50 transformers at any one time.

EPA agrees that such facilities should not be covered by today's rule. As one commenter noted, the Toxic Substances Control Act (TSCA) addresses pollutants associated with transformers that may enter receiving water through storm water discharges. EPA has examined regulations under TSCA and agrees that regulation of storm water discharges from these facilities should be the subject of the studies being performed under section 402(p)(5), rather than regulations established by today's rule. Under TSCA, transformers are required to be stored in a manner that prevents rain water from reaching the stored PCBs or PCB items. 40 CFR 761.65(b)(1)(i). EPA considers transformer storage to be more akin to retail or other light commercial activities, where items are inventoried in buildings for prolonged periods for use or sale at some point in the future, and where there is no ongoing manufacturing or other industrial activity within the structure.

One commenter stated that this category of industries should be loosened so that all steam electric facilities are addressed—oil fired and nuclear. EPA believes that the language as proposed broadly defines the type of industrial activity addressed without specifying each mode of steam electric production. One commenter noted that the EPA has no authority under the CWA (*Train* v. *CPIR, Inc.*, 426 U.S. 1 (1976) to regulate the discharge of source, special nuclear and by-product materials which are regulated under the Atomic Energy Act. EPA agrees permit applications may not address those aspects of such facilities, however the facility in its entirety may not necessarily be exempt. A permit application will be appropriate for discharges from non-exempt categories.

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221–25), 43, 44, 45, and 5171 which have vehicle maintenance shops, material handling facilities, equipment cleaning operations or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or which are identified in another subcategory of facilities under EPA's definition of storm water discharges associated with industrial activity. One commenter requested clarification of the terms "vehicle maintenance." Vehicle maintenance refers to the rehabilitation, mechanical repairing, painting, fueling, and lubricating of instrumentalities of transportation located at the described facilities. EPA is declining to write this definition into the regulation however since "vehicle maintenance" should not cause confusion as a descriptive term. One commenter wanted railroad tracks where rail cars are set aside for minor repairs excluded from regulation. In response, if the activity involves any of the above activities then a permit application is required. Train yards where repairs are undertaken are associated with industrial activity. Train yards generally have trains which, in and of themselves, can be classified as heavy industrial equipment. Trains, concentrated in train yards, are diesel fueled, lubricated, and repaired in volumes that connote industrial activity, rather than retail or commercial activity.

One commenter argued that if gasoline stations are not considered for permitting, then all transportation facilities should be exempt. EPA disagrees with the thrust of this comment. Transportation facilities such as bus depots, train yards, taxi stations, and airports are generally larger than individual repair shops, and generally engage in heavier more expansive forms of industrial activity. In keeping with Congressional intent to cover all industrial facilities, permit applications from such facilities are appropriate. In contrast, EPA views gas stations as retail commercial facilities not covered

by this regulation. It should be noted that SIC classifies gas stations as retail.

(ix) POTW lands used for land application treatment technology/ sludge disposal, handling or processing areas, and chemical handling and storage areas. One commenter wanted more clarification of the term POTW lands. Another commenter requested clarification of the terms sludge disposal, sludge handling areas, and sludge processing areas. One State recommended that a broader term than POTW should be used. EPA notes that on May 2, 1989, it promulgated NPDES Sewage Sludge Permit Regulations; State Sludge Management Program Requirements at 40 CFR part 501. This regulation identified those facilities that are subject to section 405(f) of the CWA as "treatment works treating domestic sewage."

In response to the above comments, EPA has decided to use this language to define what facilities are required to apply for a storm water permit. Under this rulemaking "treatment works treating domestic sewage," or any other sewage sludge or wastewater treatment device or system used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge, with a design flow of 1.0 mgd or more, or facilities required to have an approved pretreatment program under 40 CFR part 403, will be required to apply for a storm water permit. However, permit applications will not be required to address land where sludge is beneficially reused such as farm lands and home gardens or lands used for sludge management that are not physically located within the confines (offsite facility) of the facility or where sludge is beneficially reused in compliance with section 405 of the Clean Water Act (proposed rules were published on February 6, 1989, at 54 FR 5746). EPA believes that such activity is not "industrial" since it is agricultural or domestic application (non-industrial) unconnected to the facility generating the material.

EPA received many comments on the necessity and appropriateness of requiring permit applications for storm water discharges from POTW lands. It was anticipated by numerous commenters that the above cited sludge regulations would adequately address storm water discharges from lands where sludge is applied. However, the sewage sludge regulations do not directly address NPDES permit requirements for storm water discharges from POTW lands and related areas to the extent required by today's rulemaking; the regulations cover only permits for use or disposal of sludge. Also, the regulations proposed on February 4, 1989, cover primarily the technical standards for the composition of sewage sludge which is to be used or disposed. They do not include detailed permitting requirements for discharges of storm water from lands where sludge has been applied to the land. To that extent, EPA is not persuaded by these commenters that POTWs and POTW lands should be excluded from these storm water permit application requirements.

Two commenters noted that some States already regulate sludge use or disposal activities substantially and that EPA should refrain from further regulation. EPA disagrees that this is a basis for excluding facilities from Federal requirements. Notwithstanding regulations in existence under State law, EPA is required by the CWA to promulgate regulations for permit application for storm water associated with industrial activity. Under the NPDES program, States are able to promulgate more rigorous requirements. However a minimum level of control is required under Federal law. One commenter also indicated that a State's sludge land application sites must follow a well defined plan to ensure there is no sludge related runoff. Notwithstanding that a State may require storm water controls for sludge land applications, as noted above, EPA is required to promulgate regulations requiring permit applications from appropriate facilities. EPA views facilities such as waste treatment plants that engage in on-site sludge composting, storage of chemicals such as ferric chloride, alum, polymers, and chlorine, and which may experience spills and bubbleovers are suitable candidates for storm water permits. Facilities using such materials are not characteristic of commercial or retail activities. Use and storage of chemicals and the production of material such as sludge, with attendant heavy metals and organics, is activity that is industrial in nature. The size and scope of activities at the facility will determine the extent to which such activities are undertaken and such materials used and produced at the facility. Accordingly, EPA believes limiting the facilities covered under this category to those of 1.0 mgd and those covered under the industrial pretreatment program is appropriate.

To the extent that permit applicants are already required to employ certain management practices regarding storm water, these may be incorporated into permits and permit conditions issued by Federal and State permitting authorities. EPA has selected facilities identified under 40 CFR part 501 (*i.e.* those with a design flow of 1.0 mgd or more or those required to have an approved pretreatment program) since these facilities will have largest contribution of industrial process discharges. Sludge from such facilities will contain higher concentrations of heavy metal and organic pollutants.

One commenter stated that sludge disposal is a public activity that should be addressed in a public facility's storm water management program under a municipal storm water management program. EPA disagrees. Industrial facilities, whether publicly owned or not, are required to apply for and obtain permits when they are designated as industrial activity.

Another comment stated that a permit should not be required for facilities that collect all runoff on site and treat it at the same POTW. EPA believes that a permit application should be required from such facilities. However, the above practice can be incorporated as a permit condition for such a facility. One commenter stated storm water from sludge and chemical handling areas can be routed through the headworks of the POTW. The agency agrees that this may be an appropriate management practice for POTWs as long as other NPDES regulatory requirements are fulfilled with regard to POTWs.

(x) Construction activities, including clearing, grading and excavation activities except operations that result in the disturbance of less than five acre total land area which are not part of a larger common plan of development or sale. EPA addresses whether these facilities should be covered by today's rule in section VI.F.8.

The December 7, 1988, proposal also requested comments on including the following other categories of discharges in the definition of industrial activities: (xii) Automotive repair shops classified as Standard Industrial Classification 751 or 753; (xiii) Gasoline service stations classified as Standard Industrial Code 5541; (xiv) Lands other than POTW lands (offsite facilities) used for sludge management; (xv) Lumber and building materials retail facilities classified as Standard Industrial Classification 5211; (xvi) Landfills, land application sites, and open dumps that do not receive industrial wastes and that are subject to regulation under subtitle D of RCRA; (xvii) Facilities classified as Standard Industrial Classification 46 (pipelines, except natural gas), and 492 (gas production and distribution); (xviii) Major electrical powerline corridors.

EPA received numerous comments on whether to require permit applications for these particular facilities. The December 7, 1988, proposal reflected EPA's intent not to require permits for these facilities, but rather to address these facilities in the two studies required by CWA sections 402(p)(5) and (6). After reviewing the comments on this issue, EPA believes that these facilities should be addressed under these sections of the CWA. Most of these facilities are classified as light commercial and retail business establishments, agricultural, facilities where residential or domestic waste is received, or land use activities where there is no manufacturing. It should be noted that although EPA is not requiring the facilities identified as categories (xii) to (xviii), in the December 7, 1988, proposal to apply for a permit application under this rulemaking, such facilities may be designated under section 402(p)(2)(E) of the CWA.

Three commenters recommended that EPA clarify that non-exempt Department of Energy and Department of Defense facilities should be covered by the storm water regulation. The regulation clearly states that Federal Facilities that are engaged in industrial activity (*i.e.* those activities in § 122.26(b)(14)(i)–(xi)) are required to submit permit applications. Those applying for permits covering Federal facilities should consult the Standard Industrial Classifications for further clarification.

One commenter questioned how EPA intended to regulate municipal facilities engaged in industrial activities. Municipal facilities that are engaged in the type of industrial activity described above and which discharge into waters of the United States or municipal separate storm sewer systems are required to apply for permits. These facilities will be covered in the same manner as other industrial facilities. The fact that they are municipally owned does not in any way exclude them from needing permit applications under this rulemaking.

One commenter suggested exempting those facilities that have total annual sales less than five million dollars or occupy less than five acres of land. Another commenter thought that all minor permittees should be exempt. EPA believes that the quality of storm water and the extent to which discharges impact receiving water is not necessarily related to the size of the facility or the dollar value of its business. What is important in this regard, is the extent to which steps are taken at facilities to curb the quantity and type of material that may pollute storm water discharges from these facilities. Therefore EPA has not excluded facilities from permitting on such a basis. This same commenter stated that the proposed rules should not address facilities with multiple functions (industrial and retail). EPA disagrees. If a facility engages in activity that is defined in paragraphs (i) through (xi) above, it is required to apply for a permit regardless of the fact that it also has a retail element. Such facilities need only submit a permit application for the industrial portion of the facility (as long as storm water from the non-industrial portion is segregated, as discussed above). This commenter also felt that more studies needed to be undertaken to determine the best way to regulate industries. EPA agrees that storm water problems need further study and for that reason EPA has devoted substantial manpower and resources to complete comprehensive studies under section 402(p)(5), while also addressing industrial sources that need immediate attention under this rulemaking.

One commenter requested that EPA give examples of storm water discharges from each of the facilities that have been designated for submitting permit applications. Agency believes that this is unnecessary and impractical since every facility, regardless of the type of industry, will have different terrain, hydrology, weather patterns, management practices and control techniques. However, EPA intends to issue guidance on filing permit applications for storm water discharges from industrial facilities which details how an industry goes about filing an industrial permit and dealing with storm water discharges.

Today's rulemaking for storm water discharges associated with industrial activity at § 122.26(c)(1)(i) includes special conditions for storm water discharges originating from mining operations, oil or gas operations (§ 122.26(c)(1)(iii)), and from the construction operations listed above (§ 122.26(c)(1)(ii)). These requirements are discussed in more detail in section VI.F.7 and section VI.F.9 of today's notice.

3. Individual Application Requirements

Today's rule establishes individual and group permit application requirements for storm water discharges associated with industrial activity. These requirements will address facilities precluded from coverage under the general permits to be proposed and promulgated by EPA in the near future. EPA considers it necessary to obtain the information required in individual permit applications from certain facilities because of the nature of their industrial activity and because of existing institutional mechanisms for issuing and tracking NPDES permits. Furthermore, some States will not have general permitting authority. Facilities located in such States will be required to submit individual applications or participate in a group application. The following response to comments received on these requirements pertains to these facilities.

Under the September 26, 1984, regulation operators of Group I storm water discharges were required to submit NPDES Form 1 and Form 2C permit applications. In response to post-regulation comments received on that rule, EPA proposed new permit application requirements (March 7, 1985, (50 FR 9362) and August 12, 1985, (50 FR 32548)) which would have decreased the analytical sampling requirements of the Form 2C and provided procedures for group applications. Passage of the WQA in 1987 gave the EPA additional time to consider the appropriate permit application requirements for storm water discharges. On December 7, 1988, application requirements were proposed and numerous comments were received. Based upon these comments, modifications and refinements have been made to the industrial storm water permit application.

Some commenters expressed the view that the permit application requirements are too burdensome, require too much paperwork, are of dubious utility, and focus too greatly on the collection of quantitative data. EPA disagrees. In comparison to prior approaches for permitting storm water discharges and other existing permitting programs, EPA has streamlined the permit application process, limited the quantitative data requirements, and required narrative information that will be used to determine permit conditions that relate to the quality of storm water discharge. To the extent that EPA needs non-quantitative information to develop appropriate permit conditions, EPA disagrees with the view of some commenters that the information required is excessive. In response to comments on earlier rulemakings and a comment received on the December 7, 1988, proposal (stressing that the emphasis should be on site management, rather than monitoring, sampling, and reporting) EPA has shifted the emphasis of the permit application requirements for storm water discharges associated with industrial activity from the existing requirements for collection of

quantitative data (sampling data) in Form 2C towards collection of less quantitative data supplemented by additional information needed for evaluation of the nature of the storm water discharges.

The permit application requirements proposed for storm water discharges reduce the amount of quantitative data required in the permit application and exempt discharges which contain entirely storm water (*i.e.* contain no other discharge that, without the storm water component, would require an NPDES permit), from certain reporting requirements of Form 2C. The proposed modifications also would exempt applicants for discharges which contain entirely storm water from several non-quantitative information collection provisions currently required in the Form 2C. The proposed modifications would rely more on descriptive information for assessing impacts of the storm water discharge. One commenter proposed that information that the applicant has submitted for other permits be incorporated by reference into the storm water permit application. EPA disagrees that incorporation by reference is appropriate. The permitting authority will need to have this information readily available for evaluating permit application and permit conditions. Furthermore, EPA feels that the applicant is in the best position to provide the information and verify its accuracy. However, if the applicant has such information and it accurately reflects current circumstances, then the applicant can rely on the information for meeting the information requirements of the application. Another commenter suggested that EPA should only require the information in § 122.26(c)(1) (A) and (B) (*i.e.*, the requirement for a topographic map indicating drainage areas and estimate of impervious areas and material management practices). As explained in greater detail below, EPA is convinced that some quantitative data and the other narrative requirements are necessary for developing appropriate permit conditions.

Form 2F addressing permit applications for storm water discharges associated with industrial activity is included in today's final rule. A complete permit application for discharges composed entirely of storm water, will be comprised of Form 2F and Form 1. Operators of discharges which are composed of both storm water and non-storm water will submit, where required, a Form 1, an entire Form 2C (or Form 2D) and Form 2F when applying. In this case, the applicant will provide quantitative data describing the discharge during a storm event in Form 2F and quantitative data describing the discharge during non-storm events in Form 2C. Non-quantitative information reported in the Form 2C will not have to be reported again in the Form 2F.

Under today's rule, Form 2F for storm water discharges associated with industrial activity would not require the submittal of all of the quantitative information required in Form 2C, but would require that quantitative data be submitted for:

- Any pollutant limited in an effluent guideline for an industrial applicant's subcategory;
- Any pollutant listed in the facility's NPDES permit for its process wastewater;
- Oil and grease, TSS, COD, pH, BOD5, total phosphorus, total Kjeldahl nitrogen; nitrate plus nitrite nitrogen; and
- Any information on the discharge required under 40 CFR 122.2l(g)(7) (iii) and (iv).

In order to characterize the discharge(s) sampled, applicants need to submit information regarding the storm event(s) that generated the sampled discharge, including the date(s) the sample was taken, flow measurements or estimates of the duration of the storm event(s) sampled, rainfall measurements or estimates from the storm event(s) which generated the sampled runoff, and the duration between the storm event sampled and the end of the previous storm event. Information regarding the storm event(s) sampled is necessary to evaluate whether the discharge(s) sampled was generally representative of other discharges expected to occur during storm events and to characterize the amount and nature of runoff discharges from the site.

One commenter stated that the quantitative information should be limited to those pollutants that are expected to be known to the applicant. EPA believes this would be inappropriate since there will be no way of determining initially whether these pollutants are present despite the expectations of the applicant. Once the data is provided, permits can be drafted which address specific pollutants. This rulemaking requires that the applicant test for oil and grease, COD, pH, BOD5, TSS, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen and total phosphorus. Oil and grease and TSS are a common component of storm water and can have serious impacts on receiving waters. Oxygen demand (COD and BOD5) will help the permitting authority evaluate the oxygen depletion potential of the discharge. BOD5 is the most commonly used indicator of potential oxygen demand. COD is considered a more inclusive indicator of oxygen demand, especially where metals interfere with the BOD5 test. The pH will provide the permitting authority with important information on the potential availability of metals to the receiving flora, fauna and sediment. Total Kjeldahl nitrogen, nitrate plus nitrite nitrogen and total phosphorus are measures of nutrients which can impact water quality. Because this data is useful in developing appropriate permit conditions, EPA disagrees with the argument made by one commenter that quantitative data requirements should be a permit condition and not part of the application process.

In the proposed rule, the Agency used total nitrogen as a parameter. This has been changed to total Kjeldahl nitrogen and nitrate plus nitrite nitrogen for clarity.

Today's rule defines sampling at industrial sites in terms of sampling for those parameters that have effluent limits in existing NPDES permits, as well as for any other conventional or nonconventional parameter that might be expected to be found at the outfall. Comments on the appropriateness of the defined parameters were solicited by the proposal. Numerous commenters maintained that either the parameter list be made industry specific, or that pollutant categories not detected in the initial screen be exempted from further testing. Some suggested that only conventional pollutants, inorganics, and metals be sampled unless reason for others is found.

In terms of specific water quality parameters, it was recommended that surfactants not be tested for unless foam is visible. One commenter also suggested that fecal coliform sampling is inappropriate for industrial permits applications. One commenter favored testing for TOC instead of VOC. In response, VOC has been eliminated from the list of parameters because it will not yield specific usable data. VOC is not specifically required in any sampling in today's rule, except where priority pollutant scans are required.

Some recommended that procedures be modified to facilitate quicker, less expensive lab analyses. Concern was also raised that industry might be required to collect its own rainfall data if there is no nearby observation station. Some commenters stated that EPA should not allow automatic sampling for either biological or oil and grease sampling due to the potential for contamination in sampling equipment.

In response, EPA believes that the sampling requirements for industry in today's rule are reasonable and not burdensome. These requirements address parameters that have effluent limits in existing NPDES permits, as well as for any other conventional or nonconventional parameter that might be expected to be found at the applicants outfall. Under this procedure both industry-specific and site-specific contaminants are already identified in the existing permit. Whether all these parameters need to be made a part of any discharge characterization plans, under the terms of the permit, will be a case-by-case determination for the permitting authority. EPA maintains that the test for surfactants (if in effluent guidelines or in the facility's NPDES permit for process water) is justifiable even when a foam is not obvious at the outfall. The presence of detergents in storm water may be indicated by foam, but the absence of foam does not indicate that detergents are not present.

EPA requested comments on fecal coliform as a parameter. Fecal coliform was included on the list as an indicator of the presence of sanitary sewage. In large concentrations, fecal coliform may be an effective indicator of sanitary sewage as opposed to other animal wastes. EPA believes that sanitary cross connections will also be found at industrial facilities. Furthermore, the test for fecal coliform is an inexpensive test and its inclusion or exclusion should make little impact financially on the individual application costs. Sampling for volatile organic carbon shall be accomplished when required, as it is an appropriate indicator of industrial solvents and organic wastes.

In response to comments, EPA acknowledges that there are certain pollutants that are capable of leaving residues in automatic sampling devices that will potentially contaminate subsequent samples. In these cases, such as for biological monitoring, if such a problem is perceived to exist and it is expected that the contaminant will render the subsequent samples unusable, manual grab samples may be needed. This would include grab samples for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus. EPA is not disallowing the use of automatic sampling because of possible contamination, as this type of sampling may be the best method for obtaining the necessary samples from a selected storm events.

In addition to the conventional pollutants listed above, this final rule requires applicants, when appropriate, to sample other pollutants based on a consideration of site-specific factors. These parameters account for pollutants associated with materials used for production and maintenance, finished products, waste products and non-process materials such as fertilizers and pesticides that may be present at a facility. Applicants must sample for any pollutant limited in an effluent guideline applicable to the facility or limited in the facility's NPDES permit. These pollutants will generally be associated with the facility's manufacturing process or wastes. Other process and non-process related pollutants, will be addressed by complying with the requirements of 40 CFR 122.21(g)(7) (iii) and (iv).

Section 122.21(g)(7)(iii) requires applicants to indicate whether they know or have reason to believe that any pollutant listed in Table IV (conventional and nonconventional pollutants) of appendix D to 40 CFR part 122 is discharged. If such a pollutant is either directly limited or indirectly limited by the terms of the applicant's existing NPDES permit through limitations on an indicator parameter, the applicant must report quantitative data. For pollutants that are not contained in an effluent limitations guideline, the applicant must either report quantitative data or describe the reasons the pollutant is expected to be discharged. With regard to pollutants listed in Table II (organic pollutants) or Table III (metals, cyanide and total phenol) of appendix D, the applicant must indicate whether they know or have reason to believe such pollutants are discharged from each outfall and, if they are discharged in amounts greater than 10 parts per billion (ppb), the applicant must report quantitative data. An applicant qualifying as a small business under 40 CFR 122.21(g)(8), (*e.g.*, coal mines with a probable total annual production of less than 100,000 tons per year or, for all other applicants, gross total annual sales averaging less than $100,000 per year (in second quarter 1980 dollars)), is not required to analyze for pollutants listed in Table II of appendix D (the organic toxic pollutants).

Section 122.21(g)(7)(iv) requires applicants to indicate whether they know or have reason to believe that any pollutant in Table V of appendix D to 40 CFR part 122 (certain hazardous substances) is discharged. For every pollutant expected to be discharged, the applicant must briefly describe the reasons the pollutant is expected to be discharged and report any existing quantitative data it has for the pollutant.

When collecting data for permit applications, applicants may make use of 40 CFR 122.2l(g)(7), which provides that "when an applicant has two or more outfalls with substantially identical effluents, the Director may allow the applicant to test only one outfall and report that the quantitative data also applies to the substantially identical outfalls." Where the facility has availed itself of this provision, an explanation of why the untested outfalls are "substantially identical" to tested outfalls must be provided in the application. Where the amount of flow associated with the outfalls with substantially identical effluent differs, measurements or estimates of the total flow of each of the outfalls must be provided. Several commenters stated that the time and expense associated with sampling and analysis would be saved if the applicant was able to pick substantially identical outfalls without prior approval of the permitting authority. EPA disagrees that this would be an appropriate devolution of authority to the permit applicant. The permitting authority needs to ensure that these outfalls have been grouped according to appropriate criteria (for example do the outfalls serve similar drainage areas at the facility). Furthermore, EPA is not requiring that the permit applicant engage in sampling to demonstrate that the outfalls are indeed substantially identical, because that would of course defeat the purpose of § 122.21(g)(7). The procedure for establishing identical outfalls is not that onerous and provides a means for industry to save substantially on time and resources for sampling.

EPA proposed and requested comment on a requirement that the facility must sample a storm event that is typical for the area in terms of duration and severity The storm event must be greater than 0.1 inches and must be at least 96 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. In general, variance of the parameters (such as the duration of the event and the total rainfall of the event) should not exceed 50 percent from the parameters of the average rainfall event in that area. EPA also requested comments on addressing snow melt events under this definition.

Commenters stated that: median or average rainfall is not an acceptable approach; the minimum depth and duration of rainfall must be specified; the allowable 50% variation is questionable; the total depth of the storm is irrelevant; and the storm should be viewed based on the average intensity of the storm. One commenter

suggested that using the median rainfall event would be a better approach than the average rainfall event.

Others insisted that "representative" or typical storms do not exist in semi-arid climates and that representative rainfall must be site-specific (regional) and seasonal. Several commenters contended that the requirement for 96 dry hours between events is not acceptable, with 48 and 72 hours identified as possible alternatives.

One commenter believed that a typical standard design storm, such as the 1-year, 24-hour, or 10-year, 1-hour, would be preferable. Another commenter felt that the storm event should be based on the rainfall required to generate a minimum discharge level. One commenter questioned whether the storm is to be sampled at all sites simultaneously.

To clarify its decision on what storm event should be sampled, EPA notes that its selection of the storm event considers both regional and seasonal variation of precipitation. This is evidenced in the rule with regard to sites in the municipal application (three events sampled), and in the requirements for industrial group applications (a minimum of two applicants, or one applicant in groups of less than 10, to be represented in each precipitation zone (*see* section VI.F.4 below).

The definition of a 0.1 inch minimum was determined by NURP and other studies to be the minimum rainfall depth capable of producing the rainfall/runoff characteristics necessary to generate a sufficient volume of runoff for meaningful sample analysis. EPA believes by requiring the average storm to be used as the basis for sampling that depth, duration, and therefore average rainfall intensity are being regionally defined. The Agency has also added the option of using the median rainfall event instead of the average. The potential for monitoring events that may not meet this specification should be minimized by allowing the proposed 50 percent variation in rainfall depth and/or duration from event statistics. However, the 50 percent variation need only be met when possible. Further, there is flexibility in the rule where the Director may allow or establish site specific requirements such as the minimum duration between the previous measurable storm event and the storm event sampled, the amount of precipitation from the storm event to be sampled, and the form of precipitation sampled (snowmelt or rainfall). If data is obtained from a rain event that does not meet the criteria above, the Director has the discretion to accept the data as valid.

The December 7, 1988, proposal called for a 96-hour period between events of measurable rainfall, here defined as 0.1 inch, which provided a four day minimum for the accumulation of pollutants on the surface of the outfalls' tributary areas. The key word in the definition is "measurable", which means that the 96-hour period did not necessarily have to be dry, only that no cleansing rainfall (*i.e.* 0.1 inch rain event) has occurred. However, after reviewing comments on this issue EPA has decided to change the period to 72 hours. Many commenters indicated that 96 hours is too restrictive and that securing a sample under such circumstances would be unnecessarily difficult. EPA agrees that the quality or representativeness of the sample would not be adversely affected by this change.

EPA does not agree with comments that the requirement of a particular "design" storm would be appropriate. Many commenters have expressed concern that they might sample an event not meeting the requirements for industrial group applications as defined. Because there is no way to know with sufficient certainty beforehand that an upcoming event will approximate a one-year, twenty-four hour storm, many events would be unnecessarily sampled before this event is realized.

EPA does not intend that a municipality or industry be required to sample all required outfalls for a single storm. This would represent a unmanageable investment in equipment and manpower In some areas, it may be necessary to sample multiple sites for a single event due to the irregularity of rainfall, but not all sites.

EPA described parameters for selecting storm events for sampling of municipal and industrial outfalls in the December 7, 1988, proposal. EPA has received several comments regarding the problems that rainfall measurement in general presents. A recurring comment relative to reporting rainfall, and in verifying that the storm itself is representative, deals with the spatial distribution of rainfall. The rainfall measured at an airport does not always represent rainfall at the site, particularly in summer months when thunderstorms are prevalent. One commenter stated that it would be easier to base the selected storm on either a minimum discharge, or on a discharge duration other than on the total precipitation, because these parameters are easily measured at the site and are not dependent on the airport gauges receiving the same rainfall as the site. A few commenters questioned how to determine typical storm characteristics. One commenter advised that NOAA rainfall reporting stations provide data that represent only daily rainfall totals, not storm event data. One commenter pointed out that the time frame of the sampling requirement does not consider that a particular region may be in the midst of a multi-year drought cycle, and that what little rainfall occurs may have uncharacteristically high levels of pollutants.

The type of rain event sampled is an important parameter in any attempt to characterize system-wide loads based on the sampling results. Rainfall gauges that report only event total depth will provide the information necessary to characterize most events, provided that a reasonable estimate of the event duration can be made. If simulation models are to be used in estimating system-wide loads, rainfall measurement based on time and depth of rainfall will be needed. If the recording stations are not believed to accurately reflect this distribution, then the data will need to be collected by the applicant at a location central to the tributary area of the outfall.

The rainfall data collected by NOAA are in most cases available in the form of hourly rainfall depths. This information can be analyzed to develop characteristic storm depths and durations. In some cases, this information has already been analyzed for many long term reporting stations by various municipalities, states, and universities. The results of these investigations should be available to the applicants.

EPA realizes that prolonged rainless periods occur for both semi-arid areas and areas experiencing droughts and that the first storm after a prolonged dry period may well not be representative of "normal" runoff conditions. In order for the appropriate system-wide characterization of loads to be made, data must be collected. With regard to the municipal permit application, today's rule states that runoff characterization data will be collected during three events at from five to ten sites. The rule gives the Director the flexibility of modifying these requirements.

EPA has defined the parameters for selecting the storm event to be sampled such that at the discretion of the Director, seasonal, including winter, sampling might be required. EPA has received several comments regarding the problems that snowmelt sampling may present. Several commenters are

opposed to monitoring of snowmelt events. The reasons cited include equipment problems and the unreasonableness of expecting this sampling, because of temperatures and the time required for personnel to be waiting for events. A few comments addressed the issues of snow pack depth, ambient temperature, and solar radiation levels, and that the snow pack may filter suspended solids or refreeze such that final melting is uncharacteristically over-polluted relative to normal conditions. Another commenter contended that it is impossible to manage the melting process and therefore unreasonable to expect controls to be implemented relative to snowmelt. In essence, it is contended that there is no first discharge unless the snow pack depth is low and melts quickly.

A few commenters favor monitoring snowmelt, for precisely the same reason that most oppose it: that the runoff from snowmelt is the most polluted runoff generated in some areas on an annual basis. Where this is the case, sampling snowmelt should be undertaken in order to accurately assess impacts to receiving streams. EPA is confident that in areas where automated sampling cannot be relied upon, grab sampling can probably be performed because the nature of the snowmelt process tends to make the timing of samples less of a problem when compared to typical rainfall events. EPA disagrees that management practices, either at industrial facilities or with regard to municipalities, cannot address snowmelt. Some areas may need to reassess their salt application procedures. In addition retention and detention devices may address snowmelt, as well as erosion controls at construction sites. Thus, obtaining samples of snowmelt is appropriate to allow development of such permit conditions.

Today's rule also modifies the Form 2C requirements by exempting applicants from the requirements at § 122.21(g)(2) (line drawings), (g)(4) (intermittent flows), (g)(7) (i), (ii), and (v) (various sampling requirements to characterize discharges) if the discharge covered by the application is composed entirely of storm water. Permit applications for discharges containing storm water associated with industrial activity would require applicants to provide other non-quantitative information which will aid permit writers to identify which storm water discharges are associated with industrial activity and to characterize the nature of the discharge.

Numerous comments were received regarding the requirement to submit a topographic map and site drainage map. Many of these comments offered alternatives to EPA's proposal. Two commenters suggested that a simple sketch of the site would be sufficient. Two commenters stated that one or the other should be adequate. One commenter believed that the drainage map was a good idea, but that the topographic map should be optional. Several commenters submitted that a topographic map was sufficient and that only SPCC plans or SARA submittals should supplement that. Another commenter argued that information relating to the location of the nearest surface water or drinking wells would be sufficient. Other commenters believed that a drainage map alone would indicate all relevant site specific information. Numerous commenters expressed concern that the drainage area map would be too detailed and that one which depicts the general direction of flow should be sufficient. Clarification was requested on whether the final rule would require the location of any drinking water wells. One commenter stated that a U.S.G.S. 7.5 quadrangle map will not illustrate drainage systems in all cases, and that therefore the requirement should be optional.

Several commenters agreed with EPA's proposal. One commenter maintained that drainage maps should be required from developments greater than three acres and from all individual applicants. Several commenters agreed with EPA's proposal that both maps should be provided, with arrows indicating site drainage and entering and leaving points. It was advised that drainage maps are useful in locating sources of storm water contamination, and it is useful to identify areas and activities which require source controls or remedial action. One commenter recommended that the map should extend far enough offsite to demonstrate how the privately owned system connects to the publicly owned system.

After considering the merits of all the comments and the reasons supporting EPA's proposal, EPA is convinced that a topographic map and a site drainage map are necessary components of the industrial application. Existing permit application regulations at 40 CFR 122.21(f)(7) require all permit applicants to submit as part of Form 1 a topographic map extending one mile beyond the property boundaries of the source depicting: the facility and each intake and discharge structure; each hazardous waste treatment, storage, or disposal facility; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in the map area in public records or otherwise known to the applicant within one-quarter mile of the facility property boundary. (*See* 47 FR 15304, April 8, 1982.) However, as indicated by the comments the information provided under § 122.21(f)(7) is generally not sufficient by itself for evaluating the nature of storm water discharges associated with industrial activity.

As stated in comments, a drainage map can provide more important site specific information for evaluating the nature of the storm water discharge in comparison to existing requirements, which require a larger map with only general information. The volume of storm water discharge and the pollutants associated with it will depend on the configuration and activities occurring at the industrial site. One commenter suggested that it would be appropriate to submit an aerial photograph of the site with all the topographic and drainage information superimposed on the photograph. EPA agrees that this may be an appropriate method of providing this information. EPA is not requiring a specific format for submitting this information.

EPA is also requiring that a narrative description be submitted to accompany the drainage map. The narrative will provide a description of on-site features including: existing structures (buildings which cover materials and other material covers; dikes; diversion ditches, etc.) and non-structural controls (employee training, visual inspections, preventive maintenance, and housekeeping measures) that are used to prevent or minimize the potential for release of toxic and hazardous pollutants; a description of significant materials that are currently or in the past have been treated, stored or disposed outside; and the method of treatment, storage or disposal used. The narrative will also include: a description of activities at materials loading and unloading areas; the location, manner and frequency in which pesticides, herbicides, soil conditioners and fertilizers are applied; a description of the soil; and a description of the areas which are predominately responsible for first flush runoff. This requirement is unchanged from the proposal.

Some commenters believed that information on pesticides, herbicides, and fertilizers and similar products is irrelevant, incidental to the facility's production activities, and should not be

addressed by this rulemaking. EPA disagrees. As these materials are applied outside and hence subject to storm events, they are significant sources of pollutants in storm water discharges whether applied in residential or industrial settings. By providing this information in the permit application the permit writer will be able to determine whether such activity is associated with industrial activity and the subject of appropriate permit conditions. Nominal or incidental application of these materials at industrial facilities and non-detects in sampling of storm water discharges for the permit application will result, in most cases, in these materials not being addressed specifically in storm water permits.

Today's rule also requires that permit applicants for storm water discharges associated with industrial activity certify that all of the outfalls covered in the permit application have been tested or evaluated for non-storm water discharges which are not covered by an NPDES permit. (The applicant need not test for nonstorm water if the certification of the plant storm water discharges can be evaluated through the use of schematics or other adequate method). Section 405 of the WQA added section 402(p)(3)(B)(ii) to the CWA to require that permits for municipal separate storm sewers effectively prohibit non-storm water discharges to the storm sewer system. As discussed in part VI.F.7.b of today's preamble, untreated non-storm water discharges to storm sewers can create severe, widespread contamination problems and removing such discharges presents opportunities for dramatic improvements in the quality of such discharges. Although section 402(p)(3)(B)(ii) specifically addresses municipal separate storm sewers, EPA believes that illicit non-storm water discharges are as likely to be mixed with storm water at a facility that discharges directly to the waters of the United States as it is at a facility that discharges to a municipal storm sewer. Accordingly, EPA feels that it is appropriate to consider potential non-storm water discharges in permit applications for storm water discharges associated with industrial activity. The certification requirement would not apply to outfalls where storm water is intentionally mixed with process waste water streams which are already identified in and covered by a permit.

This rulemaking requires applicants for individual permits to submit known information regarding the history of significant spills at the facility. Several commenters indicated that the extent to which this information is required should be modified. One commenter stated that the requirement should be limited to those spills that resulted in a complaint or enforcement action. EPA disagrees. EPA believes that significant spills at a facility should generally include releases of oil or hazardous substances in excess of reportable quantities under section 311 of the Clean Water Act (*see* 40 CFR 110.10 and 40 CFR 117.21) or section 102 of CERCLA (*see* 40 CFR 302.4). Such a requirement is consistent with these regulations and the perception that such spills are significant enough to mandate the reporting of their occurrence. Some commenters stated that industries have already submitted this information in other contexts and should not be required to have to do it again. For the same reason another commenter felt that submittal of this information represents a waste of manpower and resources. EPA disagrees that requiring this information is unduly burdensome. If this information has already been provided for another purpose it follows that it is readily available to the industrial applicant. Thus, the burden of providing this information cannot be considered undue. Furthermore, the permit authority will need to have this available in order to determine which drainage areas are likely to generate storm water discharges associated with industrial activity, evaluate pollutants of concern, and develop appropriate permit conditions. However, to keep this information requirement within reasonable limits and limited to information already available to individual facilities, EPA has declined to expand the reporting requirements to spills of other materials, such as food as one commenter has suggested. However, EPA has decided to add raw materials used in food processing or production to the list of significant materials. Materials such as these may find their way into storm water discharges in such quantities that serious water quality impacts occur. These materials may find there way into storm water from transportation vehicles carrying materials into the facility, loading docks, processing areas, storage areas, and disposal sites.

One commenter urged that any information requested should be limited to a period of three years, which is the general NPDES records retention requirement under 40 CFR 122.21(p) and 40 CFR 112.7(d)(8). EPA agrees with this comment and has limited historical information requirements to the 3 years prior to the date the application is submitted. In this manner this regulation will be consistent with records keeping practices under the NPDES and Oil Spill Prevention programs, except sludge programs.

The December 7, 1988, proposal required the applicant to submit a description of each past or present area used for outdoor storage or disposal of significant materials. One commenter felt that the definition of significant material was too imprecise. EPA disagrees that the language should be made more precise by delineating every conceivable material that may add pollutants to storm water. Rather the definition is broad, to encourage permit applicants to list those materials that have the potential to cause water quality impacts. Stating what materials are addressed in meticulous detail may result in potentially harmful materials remaining unconsidered in permits. However, EPA has decided to add "fertilizers, pesticides, and raw materials used in the production or processing of food" to the definition in response to the comment of one State authority that such materials need to be accounted for due to their potential danger to storm water discharge quality. This same commenter recommended that "hazardous chemicals" should be added. EPA agrees, and will delineate those chemicals as "hazardous substances" which are designated under section 101(14) of CERCLA. Further clarification has been added by requiring the listing of any chemical the facility is required to report pursuant to section 313 of title III of SARA.

Another commenter felt that EPA should not require information of past storage of significant materials. EPA agrees that this proposed requirement is overbroad and has limited the time frame to those materials that were stored in areas 3 years or fewer from the date of the permit application. The 3-year limit is consistent with other Agency reporting requirements as discussed above.

One commenter questioned EPA's proposal not to provide for a waiver from the requirement to submit quantitative data if the applicant can demonstrate that it is unnecessary for permit issuance. Another commenter said that a waiver is inappropriate. EPA believes relevant quantitative data are essential to the process, but in this rulemaking the number of pollutants that must be sampled and analyzed is reduced compared to previous regulations. The proposed requirements for quantitative data are limited to pollutants that are appropriate for given

site-specific operations, thereby making a waiver unnecessary.

Although the concept of a waiver is attractive because of the perceived potential reduction in burdens for applicants, EPA believes that because the storm water discharge testing requirements have already been streamlined, a waiver would not in practice provide significant reductions in burden for either applicants or permit issuing authorities. Requirements to provide and verify data demonstrating that a waiver is appropriate for a storm water discharge may prove to be more of a burden to the applicant and the permitting authorities. Establishing such a waiver procedure would be administratively complex and time-consuming for both EPA and the applicants, without any justifiable benefit. Therefore, this rulemaking does not include a waiver provision.

In response to one commenter, EPA wishes to emphasize that if a facility has zero storm water discharge because it is discharging to a detention pond only, a permit application is not required. Only those discharges to the waters of the United States or municipal systems need submit notifications, individual or group permit applications, or notices of intent where applicable. However, if the detention pond overflows or the discharger anticipates that it may overflow, then a permit application should be submitted.

Two commenters agreed with EPA's proposed requirement to have a description of past and present material management practices and controls. EPA believes that this is important information directly relating to the quality of storm water that can be expected at a particular facility and this requirement is retained in today's rule. However, as with other historical information requirements, EPA is limiting past practices to those that occurred within three years of the date that the application is submitted. One commenter argued that past practices should not be considered unless there is evidence that past practices cause current storm water quality problems. EPA anticipates that the information submitted by the applicant will be used to make this determination and that appropriate permit conditions can be developed accordingly.

One commenter requested clarification on the certification requirement that the data and information in the application is true and complete to the best of the certifying officer's knowledge. This is a fundamental and integral part of all NPDES permit applications. It essentially requires the signatory to assure the permit writer, based upon his or her personal knowledge, that the information has been submitted without a negligent, reckless, or purposeful misrepresentation. EPA intends to interpret this requirement in the same manner for storm water applications as other applications.

4. Group Applications

Today's final rule provides some industries with the option of participating in a group application, in lieu of submitting individual permits. There are several reasons for the group application. First, the group application procedure provides adequate information for issuing permits for certain classes of storm water discharges associated with industrial activity. Second, numerous commenters supported the concept of the group application as a way to reduce the costs and administrative burdens associated with storm water permit applications. Third, group applications will reduce the burden on the regulated community by requiring the submission of quantitative data from only selected members of the group. Fourth, the group application process will reduce the burden on the permit issuing authority by consolidating information for reviewing permit applications and for developing general permits suited to certain industrial groups. Where general permits are not appropriate or cannot be issued, a group application can be used to develop model individual permits, which can significantly reduce the burden of preparing individual permits.

As noted above in today's preamble, EPA intends to promulgate a general permit that will cover many types of industrial activity. Industrial dischargers eligible for such permits will generally be required to seek coverage by submittal of a notice of intent. Facilities that are ineligible for coverage under the general permit will be required to submit an individual permit application or submit a group application. The group application process promulgated today will serve as an important component to implement Tier III of EPA's industrial storm water permitting strategy discussed above. The general permit which EPA intends to promulgate in the near future shall set forth what types of facilities are eligible for coverage.

Some commenters criticized the group application procedure as an abdication of EPA's responsibility to effectively deal with pollutants in storm water discharges. One commenter stated that every facility subject to these regulations should be required to submit quantitative data. In response EPA believes, as do numerous commenters, that the group application procedure is a legitimate and effective way of dealing with a large volume of currently uncontrolled discharges. The only difference between the group application procedure and issuing individual permits based on individual applications is that the quantitative data requirements from individual facilities will be less if certain procedures are followed. EPA is convinced that marked improvements in the process of issuing permits will be achieved when these procedures are followed. Where the storm water discharge from a particular facility is identified as posing a special environmental risk, it can be required to submit individual applications and therefore separate quantitative data. It should also be noted that submittal of a group application does not exempt a facility from submitting quantitative data on its storm water discharge during the term of the permit.

The final rule refines and clarifies some of the requirements of the group application approach set forth in the December 7, 1988 proposal. Several commenters requested that EPA add a provision which would allow a facility that becomes subject to the regulations to "add on" to a group application after that group application has already been submitted. One commenter indicated that some trade associations are prohibited from engaging in an activity which would not apply to all its members, and that an "add on" provision was needed in the event such a prohibition was invoked. Another commenter noted that where a group is particularly large, for example one that consists of several thousand members, that it would be a logistical feat to ensure that all facilities eligible as members of the group are properly identified and listed on the application within the 120 day deadline for submitting part 1A of the application.

EPA believes that a group applicant should have a limited ability to add facilities to the group after part 1A has been submitted and that a provision which allows a group or group representative an unbridled ability to "add on" is impractical for a number of reasons. First, 10% of the facilities must submit quantitative data. Adding facilities after the group has been formed and approved would change the number of facilities that have to submit quantitative data on behalf of the group. This would result in an unwarranted administrative burden on the reviewing authority, which is in the position of having to examine the quantitative data and determine the appropriateness of group members (and those that are

required to submit quantitative data) within 2 months of receiving part 1 of the group application. Further, during the permit application process permitting authorities will be developing permit conditions for an identified and pre-determined group of facilities. Allowing potentially significant numbers of permit applicants to suddenly inject themselves into a group application could unnecessarily hamper or disrupt the timely development of general and model permits. In addition, if a facility were "added on" the number of facilities having to submit quantitative data may drop below 10%. Thus the facility desiring to "add on" may be put in the position of having to submit the quantitative data themselves, which would clearly defeat the purpose of being a part of the group application.

Nevertheless, EPA has added a provision to 122.26(e) which enables facilities to add on to a group application at the discretion of the EPA's Office of Water Enforcement and Permits, and upon a showing of good cause by the group applicant. For the reasons noted above, EPA anticipates this provision will be invoked only in limited cases where good cause is shown. Facilities not properly identified in the group application, and which cannot meet the good cause test will be required to submit individual permit applications. EPA will advise such facilities within 30 days of receiving the request as to whether the facility may add on.

However, the "add on" facility must meet the following requirements: The application for the additional facility is made within 15 months of the final rule; and the addition of the facility does not reduce the percentage of the facilities that are required to submit quantitative data to below 10% unless there are over 100 facilities that are submitting quantitative data. Approval to become part of a group application is obtained from the group or the trade association and is certified by a representative of the group; approval for adding on to a group is obtained from the Office of Water Enforcement and Permits.

Several commenters stated that the application requirements for groups are so burdensome that the advantages of the process are undermined. These concerns are addressed in greater detail below. Among the requirements which commenters objected are the requirements to list every group member's company by name and address. EPA is convinced that a condition precedent to approving a group application is at least identifying the members of the group. Without such information it would be impossible to determine if all the facilities are sufficiently similar. EPA disagrees that industries will be dissuaded from using the group application process because the advantages of the process are undermined. Although commenters perceived many burdens associated with individual permit applications, by far the most significant burden identified by the comments is the requirement for obtaining and submitting quantitative data. The group application significantly reduces this burden by requiring only10% of the facilities to submit quantitative data if the number in the group is over 100. If the number in the group is over 1000, then only 100 of the facilities need submit quantitative information. If group applicants develop cost sharing procedures to reduce the financial and administrative burdens of submitting quantitative data, it is evident that utilizing the group application could save industries as much as 90% on the most economically burdensome aspect of the application.

Several commenters perceived that the group application procedure did not offer them significant savings because under the proposal their particular industry would only be required to test for COD, BOD5, pH, TSS, oil and grease, nitrogen, and phosphorous. These commenters stated that sampling for these pollutants is not particularly expensive. EPA believes that even if a group is required only to submit minimal quantitative data on particular pollutants, substantial savings can accrue to a particular industry if the group has many members. This is particularly true when the number of outfalls to be sampled, the information on storm events, and flow measurements are factored into the cost analysis. An additional benefit for members of the group as well as for permit issuing agencies is that the process of developing a permit, including drafting and responding to public comments on the permit, is consolidated by the group application process. Accordingly, it is less resource intensive for the group to work with permit issuance authorities to develop well founded permit conditions.

One commenter raised a concern about the situation where one of the facilities that is designated for submitting quantitative data drops out of the group. If this happened, then another facility would have to submit quantitative data. In response, EPA notes that one approach would be for the group to have one or two more facilities submit quantitative data than needed to avoid problems from such a departure or to account for new additions to the group. Certainly this issue goes directly to the facility selection process which is a critical component of the group application; the facilities need to be carefully selected and reviewed by the group to prevent such difficulties.

Several comments indicated a confusion over what facilities are eligible to take advantage of the group application procedure. Any industry or facility that is required to submit a storm water permit application under these regulations is eligible to participate in a group application. However, whether a facility can obtain a storm water permit under a group application procedure will depend upon whether that facility is a member of the same effluent guideline subcategory, or is sufficiently similar to other members of the group to be appropriate for a general permit or individual permit issued pursuant to the group application. Accordingly, group applications are not limited to national trade associations. The agency believes that the language in § 122.26(c)(2) adequately addresses these concerns. The process does not prohibit a particular company with multiple facilities from filing a group application as long as those facilities are sufficiently similar.

One commenter expressed concern that a single company would not be able to take advantage of the group application benefits unless the company had more than ten facilities. Under such circumstances the company would have to become integrated with a larger group of facilities owned by other companies in order to take advantage of the benefits afforded by the group application procedure. In response, the Agency is providing for a group application of between four and ten members, however at least half the facilities must submit data. One commenter stated that the number of facilities required to submit quantitative data should be determined on a case by case basis. EPA believes that 10 percent for groups with over ten members will be easiest to implement for both industry and EPA, and will ensure that adequate representative quantitative data are obtained so that meaningful determinations of facility similarity can be made and appropriate permit conditions in general or model permits can be developed.

Another commenter suggested that one facility with a multitude of storm water discharge points should be able to use the group permit application to reduce the amount of quantitative data

that it is required to submit. This is an accurate observation but only to the extent that the facility combines with several other facilities to form a group, in which case only 10% of the facilities need submit quantitative data. The group application procedure in today's rule is designed for use by multiple facilities only. However, if an individual facility has 10 outfalls with ten substantially identical effluents the discharger may petition the Director to sample only one of the outfalls, with that data applying to the remaining outfalls. See § 122.21(g)(7). Thus, existing authority already allows for a "group-like" process for sampling a subset of storm water outfalls at a single facility.

Concern was expressed that the spill reporting requirement from each facility in part 1B would preclude any group from demonstrating that the facilities sampled are "representative," because the incidence of past spills is very site-specific. EPA notes that since it has dropped the part 1B requirements for other reasons discussed below, this comment is now moot.

Numerous commenters noted that if a facility is part of a group application and is subsequently rejected as a group applicant, such an entity would not have a full year to submit an individual permit application. EPA agrees that this is a significant concern. Accordingly, those facilities that apply as a member of a group application will be afforded a full year from the time they are notified of their rejection as a member of the group to file an individual application. EPA notes that it intends to act on group application requests within 60 days of receipt; thus this approach will only provide facilities that are rejected from a group application a short extension of the deadline for other individual applications.

One commenter complained that the cost of defending a group's choice of representative facilities may exceed the cost of submitting an individual permit application, thereby reducing the incentive to apply as group. The agency anticipates that the selection process will be one open to negotiation between the affected parties and one that will end in a mutually satisfactory group of facilities. It is the intent of EPA to reduce the costs of submitting a permit application as much as possible, while providing adequate information to support permitting activities.

Another commenter argued that the use of model permits will create a disincentive for participating in a group because model permits may be used by the permit issuing authority to issue individual permits for discharges from similar facilities that did not participate in the group application. EPA does not agree. The benefit of applying as a group applicant is to take advantage of reduced representative quantitative data requirements. This incentive will exist regardless of whether or how model permits are used. Further, technology transfer can occur during the development of permits based on individual applications as well as those based on group applications.

One commenter suggested moving some of the facility specific information requirements of part 1 of the group application to part 2 of the group application in order to provide more incentive to apply as a group. EPA has considered this and believes such a change would be inappropriate. Part 1 information will be used to make an informed decision about whether individual facilities are appropriate as group members and appropriate for submitting representative quantitative data. Furthermore, information burdens from providing site specific factors in part 1 is relatively minimal, and the information requirements in the proposed part 1B application have been eliminated.

One commenter suggested that trade associations develop model permits since they have the most knowledge about the characteristics of the industries they represent. As noted above, EPA expects that the industries and trade associations will have input, through the permit application process, as to how permit conditions for storm water discharges are developed. While the applicant can submit proposed permit conditions with any type of application, EPA however cannot delegate the drafting of model permits to the permittees. EPA is developing and publishing guidance in conjunction with this rulemaking for developing permit conditions.

One commenter suggested that new dischargers should be able to take advantage of general permits developed pursuant to group applications. As with other general permits, EPA anticipates that such discharges will be able to fall within the scope of a general permit based on a group application where appropriate.

One commenter stated that the group application does not benefit municipalities since there is no requirement for industrial discharges through municipal sewers to apply for a permit. As noted in a previous discussion, industrial discharges through municipal sewers must be covered by an NPDES permit. Such facilities may avail themselves of the group application procedure. Also, municipalities are not precluded from developing a group application procedure under their management plan for industries that discharge into their municipal system, in order to streamline developing controls for such industries.

One industry wanted clarification that facilities located within a municipality would be eligible to participate in a group application. All industrial activities required to submit an individual permit are entitled to submit as part of group application, except those with existing NPDES permits covering storm water. Those facilities that discharge through a municipal separate storm sewer systems required to submit an individual application (because they do not fall within a general permit) are not precluded from using the group application procedure if appropriate.

Other municipalities expressed confusion over the industrial group application concept. The following responds to these comments. First, municipalities are not eligible for participation in a group application because the group application process is designed for industrial activities. Sampling requirements for municipal permit applications are already limited to a small subset of the outfalls from the system, as discussed below. Furthermore, permits for municipal separate storm sewer systems will be issued on a system-wide or jurisdiction-wide basis, rather than individually for each outfall. Thus, today's regulation already incorporates a "grouplike" permit application process for municipalities. Furthermore, it is highly unlikely that various municipal storm sewer systems would be "substantially similar" enough to justify group treatment in the same way as industrial facilities. In response to another comment, this regulation does not directly give the municipality enforcement power over members of an industrial group who may be discharging through its system. Only the permitting authority and private citizens and organizations (including the municipality acting in such a capacity) will have enforcement power over members of the group once permits are issued to those members.

One commenter believed that the States with authorized NPDES programs rather than EPA should establish permit terms for permits based on group applications. In response to this comment, EPA wishes to clarify its role in the group application process. Group applications will be submitted to EPA headquarters where they will be reviewed and summarized. The

summaries of the group application will be distributed to authorized NPDES States. EPA wishes to emphasize that NPDES States are not bound by draft model permits developed by EPA. States may adopt model permits for use in their particular area, making adjustments for local water quality standards and other regional characteristics. Where general permit coverage is believed to be inappropriate, facilities may be required to apply for individual permits. One commenter objected to the group application procedure because it is not consistent with existing Federal permitting procedures, which will lead to confusion in the regulated community. The agency disagrees with this assessment. The group application is a departure from established NPDES program procedures. However, the comments, when viewed in their entirety, reflect widespread support from the regulated community for a group application procedure. Further, the comments reflect that those affected by this rulemaking understand the components of the group application and the procedures under which permits will be obtained pursuant to the group application.

One commenter expressed concern regarding how BAT limits for groups of similar industries will be developed. Technology based limits will be developed based on the information received from the group applicants. If the group applicants possess similar characteristics in terms of their discharge, BAT/BCT limitations and controls will be developed accordingly for those members of the group. If the discharge characteristics are not similar then applying industries are not appropriate for the group.

One commenter has suggested that the proposed group application is too complex with regard to the part 1A, part 1B, and part 2 group application requirements and that EPA should repropose these provisions. As discussed below, EPA has simplified the industrial group application requirements by eliminating the part 1B application. Thus, reproposal is unnecessary.

One commenter criticized the group application concept as not achieving any type of reduction in administrative burden for NPDES States. EPA disagrees with this assessment. If industries take advantage of the group application procedure, EPA will have an opportunity to review information describing a large number of dischargers in an organized manner. EPA will perform much of the initial review and analysis of the group application, and provide NPDES States with summaries of the applications thereby reducing the burden on the States. Furthermore, the procedure encourages a potentially large number of facilities to be covered by a general permit, which will clearly reduce the administrative burden of issuing individual permits.

The final rule establishes a regulatory procedure whereby a representative entity, such as a trade association, may submit a group application to the Office of Water Enforcement and Permits (OWEP) at EPA headquarters, in which quantitative data from certain representative members of a group of industrial facilities is supplied. Information received in the group application will be used by EPA headquarters to develop models for individual permits or general permits. These model permits are not issued permits, but rather they will be used by EPA Regions and the NPDES States to issue individual or general permits for participating facilities in the State. In developing such permits, the Region or NPDES State will, where necessary, adapt the model permits to take into account the hydrological conditions and receiving water quality in their area. One commenter expressed the view that having this procedure managed by EPA headquarters would cause delays and it should be delegated to the States and Regions. EPA disagrees that delay will ensue using this procedure. Furthermore, consistency in development of model and general permits can be achieved if application review is coordinated at EPA headquarters.

a. Facilities Covered. Under this rule the group application is submitted for only the facilities specifically listed in the application and not necessarily for an entire industry. The facilities in the group application selected to do sampling must be representative of the group, not necessarily of the industry.

Facilities that are sufficiently similar to those covered in a general permit (issued pursuant to a group application) that commence discharging after the general permit has been issued, must refer to the provisions of that general permit to determine if they are eligible for coverage. Facilities that have already been issued an individual permit for storm water discharges will not be eligible for participation in a group application. Several commenters believed that this restriction is inequitable since they have experienced the administrative burden of submitting a permit application. EPA disagrees. Industries that have already obtained a permit for storm water discharges have developed a storm water management program, engaged in the collection of quantitative data, and possess familiarity and experience with submitting storm water permit applications. The Agency sees no point to instituting an entirely new permit application process for facilities that have storm water permits issued individually. It makes little sense for these industries to be involved with submitting another permit application before their current permit expires.

As noted above, once a general permit has been issued to a group of dischargers, a new facility may request that they be covered by the general permit. The permitting authority can then examine the request in light of the general permit applicability requirements and determine whether the facility is suitable or not.

b. Scope of Group Applications. Numerous comments were received on how facilities should be evaluated as members of a group application. Several commenters stated that effluent limitation guideline subcategories are not relevant to pollutants found in storm water, but rather to the facility's everyday activities, and therefore similarity should be based on each facility's discharge or the similarity of pollutants expected to be found in a facility's discharge. Other commenters felt that similarity of operations at facilities should be the criteria. Others, believed that an examination of the facility's impact on storm water quality should be the applied criteria. Other commenters suggested that EPA provide more guidance as to how broadly groups can be defined and that a failure to do so would discourage facilities from going to the trouble and expense of entering into the group application process. Some commenters were concerned that facilities would be rejected as a group because of variations in processes and process wastewater characteristics.

EPA does not agree that effluent limitation guideline subcategories are inappropriate as a method for determining group applications. EPA guideline subcategories are functional classifications, breaking down facilities into groups, for purposes of setting effluent limitations guidelines. The use of EPA subcategories will save time for both applicants and permitting authorities in determining whether a particular group is appropriate for a group application. Furthermore, EPA believes that this method of grouping provides adequate guidance for determining what facilities are grouped together. Establishing groups on the extent to which a facility's discharge

affects storm water quality would not provide applicants with sufficient guidance as to the appropriateness of individual industries for group applications and would not provide information needed to draft appropriate model permit conditions for potentially different types of industries, industrial processes, and material management practices.

However, EPA recognizes that the subcategory designations may not always be available or an effective methodology for grouping applicants. Also, there are situations where processes that are subject to different subcategories are combined. EPA agrees that the group application option should be flexible enough to allow groups to be created where subcategories are too rigid or otherwise inappropriate for developing group applications or where facilities are integrated or overlap into other subcategories. For these reasons, this rulemaking does not limit the submission to EPA subcategories alone, but rather allows groups to be formed where facilities are similar enough to be appropriate for general permit coverage.

In determining whether a group is appropriate for general permit coverage, EPA intends that the group applicant use the factors set forth in 40 CFR 122.28(a)(2)(ii), the current regulations governing general permits, as a guide. If facilities all involve the same or similar types of operations, discharge the same types of wastes, have the same effluent limitation and same or similar monitoring requirements, where applicable, they would probably be appropriate for a group application. To that extent, facilities that attempt to form groups where the constituent makeup of its process wastewater is dissimilar may run the risk of not being accepted for purposes of a group application.

Some commenters expressed the view that categories formed using general permit factors are too broad or that the language is too vague. One commenter expressed the view that the standard is too subjective and that permit writers will be evaluating the similarity of discharge too subjectively, while other commenters felt that the criteria should be broad and flexible. Other commenters stated that the effluent guideline subcategory or general permit coverage factors are not related to storm water discharges, because much of the criteria are based upon what is occurring inside the plant, rather than activities outside of the plant. EPA believes that these criteria are reasonable for defining the scope of a group application. EPA disagrees that the procedure, which is adequate for the issuance of general permits, is inadequate for the development of a group application. EPA believes that the activities inside a facility will generally correspond to activities outside of the plant that are exposed to storm events, including stack emissions, material storage, and waste products. Furthermore, if facilities are able to demonstrate their storm water discharge has similar characteristics, that is one element in the analysis needed for establishing that the group is appropriate. EPA disagrees that the criteria are too vague. If facilities are concerned that general permit criteria is insufficient guidance, then subcategories under 40 CFR subchapter N should be used. EPA believes that the program will function best if flexibility for creating groups is maintained.

If a NPDES approved State feels that a tighter grouping of applicants is appropriate individual permit applications can be requested from those permit applicants. One commenter indicated that it was not clear whether the group application procedure could be used for all NPDES requirements. EPA would clarify that the group application is designed only to cover storm water discharges from the industrial facilities identified in § 122.26(b)(14).

As noted above, EPA wishes to clarify that facilities with existing individual NPDES permits for storm water are not eligible to participate in the group application process. From an administrative standpoint EPA is not prepared to create an entirely different mechanism for permitting industries which already have such permits.

c. Group Application Requirements. The group application, as proposed, included the following requirements in three separate parts. Part 1A of a group application included: (A) Identification of the participants in the group application by name and location; (B) a narrative description summarizing the industrial activities of participants; (C) a list of significant materials stored outside by participants; and (D) identification of 10 percent of the dischargers participating in the group application for submitting quantitative data. A proposed part 1B of the group application included the following information from each participant in the group application: (A) A site map showing topography (or indicating the outline of drainage areas served by the outfall(s) and related information; (B) an estimate of the area of impervious surfaces (including paved areas and building roofs) and the total area drained by each outfall and a narrative description of significant materials; (C) a certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested for the presence of non-storm water discharges; (D) existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility; (E) a narrative description of industrial activities at the facility that are different from or that are in addition to the activities described under part 1A; and (F) a list of all constituents that are addressed in a NPDES permit issued to the facility for any of non-storm water discharge. Part 2 of a group application required quantitative data from 10 percent of the facilities identified.

Some commenters felt that spill histories, drainage maps, material management practices, and information on significant materials stored outside are too burdensome or meaningless for evaluating similarity of discharges among group applicants. Several commenters stated that such requirements where the group may consist of several thousand facilities were impractical and would not assist EPA in developing model permits. Many commenters insisted that the requirements imposed in part 1B would effectively discourage use of the group application procedure. EPA agrees in large part with these comments. After reevaluating the components of part 1B, and the entire rationale for instituting the group application procedure, EPA has decided to excise part 1B from the requirements, and rely on part 1A and part 2 for developing appropriate permit condition. Where appropriate, EPA may require facilities to submit the information, formerly in part 1B, during the term of the permit. In other cases, EPA will establish which facilities must submit individual permit applications where more site specific permits are appropriate.

Under the revised part 1 and part 2, EPA will receive information pertaining to the types of industrial activity engaged in by the group, materials used by the facilities, and representative quantitative data. EPA can use such information to develop management practices that address pollutants in storm water discharges from such facilities. For most facilities, general good housekeeping or management practices will eliminate pollutants in storm water. Such requirements can be further refined by determining the nature of a group's industrial activity and by obtaining information on material used at the facility and representative quantitative data from a

percentage of the facilities. Thus, EPA is confident that model permits and general permits can be developed from the information to be submitted under part 1 and part 2.

One commenter felt that more guidance on what makes a facility representative for sampling as part of a group is needed. In response, the Agency believes the rule as currently drafted provides adequate notice.

Another commenter asked how much sampling needed to be done and how much monitoring will transpire over the life of the permit for members of a group. This will vary from permit to permit and will be determined in permit proceedings. This rulemaking only covers the quantitative data that is to be submitted in the context of the group permit application.

One commenter indicated that because of the amount of diversity in the operations of a particular industry, obtaining a sample that could be considered representative would be extremely difficult. EPA recognizes that obtaining representative quantitative data through the group application process will prove to be difficult; however, EPA has sought to minimize these perceived problems. Under the group application concept, industries must be sufficiently similar to qualify. Industries which have significantly different operations from the rest of the group that affects the quality of their storm water discharge may be required to obtain an individual permit. Use of the nine precipitation zones will enable the data in the permit application to be more easily analyzed and patterns observed on the basis of hydrology and other regional factors. How EPA will evaluate the representativeness of the sample is discussed below.

Several commenters asked why the precipitation zone of group members is relevant to the application. The need to identify precipitation zones arises because the amount of rainfall is likely to have a significant impact on the quality of the receiving water. According to an EPA study (Methodology for Analysis of Detention Basins for Control of Urban Runoff Quality; Office of Water, Nonpoint Source Branch, Sept. 1986) the United States can be divided into nine general precipitation zones. These zones are characterized by differences in precipitation volume, precipitation intensity, precipitation duration, and precipitation intervals. Industrial facilities that seek general permits via the group application option may show significantly different loading rates as a result of these regional precipitation differences. As an example, precipitation in Seattle, Washington, located in Zone 7, approaches the mean annual storm intensity of .024 inches/hour with a mean annual storm duration of 20 hours for that Zone. In contrast, precipitation in Atlanta, Georgia, located in Zone 3 approaches the mean annual storm intensity of .102 inches/hour and a mean storm duration of 6.2 hours for that Zone. Atlanta, receives on the average four times more precipitation per hour with storms lasting one-third as long. As a result of these differences, if identical facilities within a group application were situated in each of these areas, their storm water discharges would likely exhibit different pollutant characteristics. Accordingly, data should be submitted from facilities in each zone.

One commenter felt that the EPA should abandon or modify its rainfall zone concept, because storm water quality will depend more on what materials are used at the facility than rainfall. EPA disagrees. Because storm water loading rates may differ significantly as a result of regional precipitation differences, it is necessary that for each precipitation zone containing representatives of a group application, the group must provide samples from some of those representatives. In comments to previous rulemakings it was argued that the amount of rainfall will affect the degree of impact a storm water discharge may have on the receiving stream.

One commenter stated that the precipitation zones illustrated in appendix E of the proposed rulemaking do not adequately reflect regional differences in precipitation and that in some cases the zones cut through cities where there are concentrations of industries without differences in their precipitation patterns. The rainfall zone map is a general guide to determining what areas of the country need to be addressed when determining representative rainfall events and quantitative data. When dealing with rainfall on a national scale, it is near impossible to make generalized statements with a great deal of accuracy. In the case of rainfall zones, rainfall patterns may be similar for facilities in close proximity to each other but none the less in different rainfall zones. In response, EPA has created these zones to reflect regional rainfall patterns as accurately as possible. Because of the variable nature of rainfall such circumstances are sure to arise. However, in order to obtain a degree of representativeness EPA is convinced that the use of these rainfall zones as described is appropriate for the submittal of group applications and the quantitative data therein.

The second and third requirements of part 1 of the group application instruct the applicant to describe the industrial activity (processes) and the significant materials used by the group. For the significant materials listed, the applicant is to discuss the materials management practices employed by members of the group. For example, the applicant should identify whether such materials are commonly covered, contained, or enclosed, and whether storm water runoff from materials storage areas is collected in settling ponds prior to discharge or diverted away from such areas to minimize the likelihood of contamination. Also, the approximate percentage of facilities in the group with no practices in place to minimize materials stored outside is to be identified.

EPA considers that the processes and materials used at a particular facility may have a bearing on the quality of the storm water. Thus, if there are different processes and materials used by members of the group, the application must identify those facilities utilizing the different processes and materials, with an explanation as to why these facilities should still be considered similar.

One commenter felt that a facility should be able to describe in its permit application the possibility of individual materials entering receiving waters. EPA supports the applicant adding site specific information which will assist the permit writer making an informed decision about the nature of the facility, the quality of its storm water discharge, and appropriate permit conditions.

The fourth element of part 1 of the group application is a commitment to submit quantitative data from ten percent of the facilities listed. EPA proposed that there must be a minimum of ten and a maximum of one hundred facilities within a group that submit data. Comments reflected some dissatisfaction with this requirement. Some commenters asserted that ten percent was too high a number and would discourage group applications, while one commenter suggested a lesser percentage would be appropriate where the group can certify that facilities are representative. One commenter suggested that EPA have the discretion to allow for a smaller percentage. Several commenters argued that EPA should be satisfied with fewer than ten percent because EPA often relies on data from less than ten percent of the plants in a subcategory when promulgating effuent guidelines and that EPA should rely on data collection goals

with affected groups as was done in the 1985 storm water proposal. Other commenters pointed out that an anomalous situation could arise where the group was small and facilities were scattered throughout the precipitation zones. For example, if a group consisted of 20 members where a minimum of ten facilities had to submit samples, and two or more members were in each precipitation zone; a total of 18 facilities (90% of the group) would have to submit quantitative data. EPA believes that there must be a sufficient number of facilities submitting data for any patterns and trends to be detectable. However, in light of these comments EPA has decided to modify the language in § 122.26(c) to allow 1 discharger in each precipitation zone to submit quantitative data where 10 or fewer of the group members are located in a particular precipitation zone. EPA believes, however, that one hundred facilities would in most cases be sufficient to characterize the nature of the runoff and thus 100 should remain the maximum. If the data are insufficient, EPA has the authority to request more sampling under section 308 of the CWA.

One commenter suggested that the ten facility cutoff was unreasonable, and that instead of cutting off the group at ten, allow a smaller number in the group and allow the facilities to sample ten percent of their outfalls instead. EPA agrees, in part, and will allow groups of between four and ten to submit a group application. However, the ten percent rule would not be effective in such cases. Therefore, at least half the facilities in a group of four to ten will be required to provide quantitative data from at least one outfall, with each precipitation zone represented by at least one facility.

For any group application, in addition to selecting a sufficient number of facilities from each precipitation zone, facilities selected to do the sampling should be representative of the group as a whole in terms of those characteristics identifying the group which were described in the narrative, i.e., number and range of facilities, types of processes used, and any other relevant factors. If there is some variation in the processes used by the group (40 percent of the group of food processors are canners and 60 percent are canners and freezers, for example), the different processes are to be represented. Also, samples are to be provided from facilities utilizing the materials management practices identified, including those facilities which use no materials management practices. The representation of these different factors, to the extent feasible, is to be roughly equivalent to their proportion in the group.

EPA wishes to emphasize that the provision that ten percent of the facilities need to submit quantitative data only applies to the permit application process. The general or individual permit itself may require quantitative data from each facility.

Submittal of Part 2 of the Group Application. As with part 1, part 2 of the Group Application would be submitted to the Office of Water Enforcement and Permits, in Washington, DC. If the information is incomplete, or simply is found to be an inadequate basis for establishing model permit limits, EPA has the authority under section 308 of the Clean Water Act to require that more information be submitted, which may include sampling from facilities that were part of the group application but did not provide data with the initial submission. If the group application is used by a Region or NPDES State to issue a general permit, the general permit should specify procedures for additional coverage under the permit.

If a part 2 is unacceptable or insufficient, EPA has the option to request additional information or to require that the facilities that participated in the group application submit complete individual applications (e.g. facilities that have submitted Form 1 with the group application may be required to submit Form 2F, or facilities which have submitted complete Form 1 and Form 2F information in the group application generally would not have to submit additional information).

Once the group applications are reviewed and accepted, EPA will use the information to establish draft permit terms and conditions for models for individual and general permits. NPDES approved States and EPA regional offices will continue to be the permit-issuing authority for storm water discharges. The NPDES approved States accepting the group application approach and the EPA Regions may then take the model permits and adapt them for their particular area, making adjustments for local water quality standards and other localized characteristics, and making determinations as to the need for an individual storm water permit where general permit coverage is felt to be inappropriate. Permits would be proposed by the Region or NPDES approved State in accordance with current regulations for public comment before becoming final. In NPDES States without general permit authority, or where an individual permit is deemed appropriate, the model permit can serve as the basis for issuing an individual permit.

The group application is an NPDES permit application just like any other and, as such, would be handled through normal permitting procedures, subject to the regulatory provisions applicable to permit issuance. Incomplete or otherwise inadequate submissions would be handled in the same manner as any other inadequate permit application. The permit issuing authority would retain the right to require submission of Form 1, Form 2C and Form 2F from any individual discharger it designates.

Some commenters offered other procedures for developing a group application procedure; however, these were frequently entirely different approaches or so novel that a reproposal would be required. One commenter suggested that those industries that are identified as being likely to pollute should be required to submit quantitative data. Numerous commenters contended that a generic approach for meeting the required information requirements for group applications would allow EPA to develop adequate general permits. EPA does not view these approaches as appropriate.

5. Group Application: Applicability in NPDES States

Many commenters expressed concern about how the group application procedure will work within the framework of an NPDES approved State. The relationship between EPA and the States that are authorized to administer the NPDES program, including implementation of the storm water program, is a complicated aspect of this rulemaking. Approved States (there are 38 States and one territory so approved) must have requirements that are at least as stringent as the Federal program; they may be more stringent if they choose. Authority to issue general permits is optional with NPDES States.

EPA has determined that ten percent of the facilities must provide quantitative data in the permit application as noted above. Furthermore, these applications are submitted to EPA headquarters. Consequently States, whether NPDES approved or not, are not in a position to reject or modify this requirement. Such States may determine the amount of sampling to be done pursuant to permit conditions. If they choose to issue general permits they may include such authority in their NPDES program and,

upon approval of the program by EPA, may then issue general permits. Within the context of the NPDES provisions of the CWA, if States do not have general permitting authority, then general permits are not available in those States.

In response to one comment, EPA does not have authority to issue general or individual permits to facilities in NPDES approved states. Today's rule provides a means for affected industries to be covered by general permits developed via the group application procedure as well as from general permits developed independently of the group application process. Accordingly, today's rule anticipates that most NPDES States will seek general permit issuance authority to implement the storm water program in the most efficient and economical way. Without general permit issuance authority NPDES States will be required to issue individual permits covering storm water discharges to potentially thousands of industrial facilities.

One commenter recommended that States with approved NPDES programs should be involved in determining what industries are representative for submitting quantitative data. EPA recognizes that States will have an interest in this determination and may possess insight as to the appropriateness of using some facilities. However, EPA may be managing hundreds of group applications and approving or disapproving them as expeditiously as possible. EPA believes that involving the States in this already administratively complex and time consuming undertaking would be counterproductive. In any event, NPDES approved States are not bound by the determinations of EPA as to the appropriateness of groups or the issuance of permits based on model permits or individual permits. However, States will be encouraged to use model permits that are developed by EPA. EPA will endeavor to design general and model permits that are effective while also adaptable to the concerns of different States. Again, States are able to develop more stringent standards where they deem it to be appropriate. There are currently seventeen States that have authority to issue general permits: Arkansas, Colorado, Illinois, Kentucky, Minnesota, Missouri, Montana, New Jersey, North Dakota, Oregon, Rhode Island, Utah, Washington, West Virginia and Wisconsin. As suggested in the comments, EPA is encouraging more States to develop general permit issuing authority in order to facilitate the permitting process.

One commenter advised that the rules should state that a NPDES approved State may accept a group application or require additional information. EPA has decided not to explicitly state this in the rule. However, this comment does raise some points that need to be addressed. Because the group application option is a modification of existing NPDES permit application requirements, the State is free to adopt this option, but is not required to. If the State chooses to adopt the group application and it does not have general permit authority, the group application can be used to issue individual permits. If an approved NPDES State chooses to not issue permits based on the group application, facilities that discharge storm water associated with industrial activity that are located in that State must submit individual applications to the State permitting authority. Before submitting a group application, facilities should ascertain from the State permitting authority whether that State intends to issue permits based upon a group application approved by EPA for the purpose of developing general permits. For facilities that discharge storm water associated with industrial activity which are named in a group application, the Director may require an individual facility to submit an individual application where he or she determines that general permit coverage would be inappropriate for the particular facility.

One commenter stressed that EPA should streamline the procedure for States desiring to obtain general permit coverage. EPA has, over the last year, streamlined this procedure and encourages States to take advantage of this procedure. EPA recommends that States consider obtaining general permit authority as a means to efficiently issue permits for storm water discharges. These States should contact the Office of Water Enforcement and Permits at EPA Headquarters as soon as possible.

6. Group Application: Procedural Concerns

One commenter claimed that the proposed group application process and procedures violated federal law. This commenter claimed that EPA was abrogating its responsibility by allowing a trade association to design a data collection plan in lieu of completing an NPDES application form designed by EPA, thus violating the Federal Advisory Committee Act. The commenter stated that EPA would be improperly influenced by special interests if trade associations were able to design their own storm water data gathering plans. The commenter further asserted that any decisions by EPA on the content of specific group applications would be rulemakings and thus subject to the provisions of the Administrative Procedure Act.

EPA disagrees with the comment that the group application violates the Federal Advisory Committee Act (FACA). FACA governs only those groups that are established or "utilized" by an agency for the purpose of obtaining "advice" or "recommendations." The group application option does not solicit or involve any "advice" or "recommendations." It simply allows submission of data by certain members of a group in accordance with specific regulatory criteria for determining which facilities are "representative" of a group. As such, the group application is merely a submission in accordance and in compliance with specific regulatory requirements and does not contain discretionary uncircumscribed "advice" or "recommendations" as to which facilities are representative of a group.

Thus, the determination of which facilities should submit testing data in accordance with regulatory criteria is little different from many other regulatory requirements where an applicant must submit information in accordance with certain criteria. For example, under 40 CFR 122.21 all outfalls must be tested except where two or more have "substantially identical" effluents. Similarly, quantitative data for certain pollutants are to be provided where the applicant knows or "has reason to believe" such pollutants are discharged. Both of these provisions allow the applicant to exercise discretion in making certain judgments but such action is circumscribed by regulatory standards. EPA further has authority to require these facilities to submit individual applications. In none of these instances are "recommendations" or "advice" involved. EPA also notes that it is questionable whether, in providing for group applications, it is "soliciting" advice or recommendations from groups or that such groups are being "utilized" by EPA as a "preferred source" of advice. See 48 FR 19324 (April 28, 1983). Furthermore, this data collection effort may be supplemented by EPA if, after review of the data, EPA determines additional data is necessary for permit issuance. Other information gathering may act as a check on the group applications received.

EPA also does not agree with this commenter's claim that the group application scheme represents an

impermissible delegation of the Administrator's function in violation of the CWA regarding data gathering. The Administrator has the broadest discretion in determining what information is needed for permit development as well as the manner in which such information will be collected. The CWA does not require every discharger required to obtain a permit to file an application. Nor does the CWA require that the Administrator obtain data on which a permit is to be based through a formal application process (see 40 CFR 122.21). For years "applications" have not been required from dischargers covered by general permits. EPA currently obtains much information beyond that provided in applications pursuant to section 308 of the CWA. This is especially true with respect to general permit and effluent limitations guidelines development. The group application option is simply another means of data gathering. The Administrator may always collect more data should he determine it necessary upon review of a groups' data submission. And, he may obtain such additional data by whatever means permissible under the Statute that he deems appropriate. Thus, it can hardly be said that by this initial data gathering effort the Administrator has delegated his data gathering responsibilities. In addition, since groups are required to select "representative" facilities, etc., in accordance with specific regulatory requirements established by the Administrator and because EPA will scrutinize part 1 of the group applications and either accept or reject the group as appropriate for a group application, no impermissible delegation has occurred. EPA will make an independent determination of the acceptability of a group application in view of the information required to be submitted by the group applicant, other information available to EPA (such as information on industrial subcategories obtained in developing effluent limitations guidelines as well as individual storm water applications received as a result of today's rule) and any further information EPA may request to supplement part 1 pursuant to section 308 of the CWA. Moreover, any concerns that a general permit may be based upon biased data can be dealt with in the public permit issuance process.

Finally, EPA also does not agree that the group application option violates the Administrative Procedures Act. Again, the group application scheme is simply a data gathering device. EPA could very well have determined to gather data informally via specific requests pursuant to section 308 of the CWA. In fact, general permit and effluent limitations guideline development proceed along these lines. It would make little sense if the latter informal data gathering process were somehow illegal simply because it is set forth in a rule that allows applicants some relief upon certain showings. In this respect, several of EPA's existing regulations similarly allow an applicant to be relieved from certain data submission requirements upon appropriate demonstrations. For example, testing for certain pollutants and or certain outfalls may be waived under certain circumstances. Most importantly, the operative action of concern that impacts on the public is individual or general permit issuance based upon data obtained. As previously stated, ample opportunity for public participation is provided in the permit issuance proceeding.

7. Permit Applicability and Applications for Oil and Gas and Mining Operations

Oil, gas and mining facilities are among those industrial sites that are likely to discharge storm water runoff that is contaminated by process wastes, toxic pollutants, hazardous substances, or oil and grease. Such contamination can include disturbed soils and process wastes containing heavy metals or suspended or dissolved solids, salts, surfactants, or solvents used or produced in oil and gas operations. Because they have the potential for serious water quality impacts, Congress recognized, throughout the development of the storm water provisions of the Water Quality Act of 1987, the need to control storm water discharges from oil, gas, and mining operations, as well as those associated with other industrial activities.

However, Congress also recognized that there are numerous situations in the mining and oil and gas industries where storm water is channeled around plants and operations through a series of ditches and other structural devices in order to prevent pollution of the storm water by harmful contaminants. From the standpoint of resource drain on both EPA as the permitting agency and potential permit applicants, the conclusion was that operators that use good management practices and make expenditures to prevent contamination must not be burdened with the requirement to obtain a permit. Hence, section 402(1)(2) creates a statutory exemption from storm water permitting requirements for uncontaminated runoff from these facilities.

To implement section 402(1)(2), EPA intends to require permits for contaminated storm water discharges from oil, gas and mining operations. Storm water discharges that are not contaminated by contact with any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations will not be required to obtain a storm water discharge permit.

The regulated discharge associated with industrial activity is the discharge from any conveyance used for collecting and conveying storm water located at an industrial plant or directly related to manufacturing, processing or raw materials storage areas at an industrial plant. Industrial plants include facilities classified as Standard Industrial Classifications (SIC) 10 through 14 (the mining industry), including oil and gas exploration, production, processing, and treatment operations, as well as transmission facilities. See 40 CFR 122.26(b)(14)(iii). This also includes plant areas that are no longer used for such activities, as well as areas that are currently being used for industrial processes.

a. Oil and Gas Operations. In determining whether storm water discharges from oil and gas facilities are "contaminated", the legislative history reflects that the EPA should consider whether oil, grease, or hazardous materials are present in storm water runoff from the sites described above in excess of reportable quantities (RQs) under section 311 of the Clean Water Act or section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). [Vol. 132 Cong. Rec. H10574 (daily ed. October 15, 1986) Conference Report].

Many of the comments received by EPA regarding this exemption focused on the concern that EPA's test for requiring a permit is and would subject an unnecessarily large number of oil and gas facilities to permit application requirements. Specific comments made in support of this concern are addressed below.

A primary issue raised by commenters centered on how to determine when a storm water discharge from an oil or gas facility is "contaminated", and therefore subject to the permitting program under section 402 of the CWA. Many of the comments received from industry representatives objected to the Agency's intent as expressed in the proposal to use past discharges as a trigger for submitting permit applications.

The proposed rule provided that the notification requirements for releases in excess of RQs established under the CWA and CERCLA would serve as a

basis for triggering the submittal of permit applications for storm water discharges from oil and gas facilities. As described in the proposal, oil and gas operations that have been required to notify authorities of the release of either oil or a hazardous substance via a storm water route would be required to submit a permit application. In other words, any facility required to provide notification of the release of an RQ of oil or a hazardous substance in storm water in the past would be required to apply for a storm water permit under the current rule. In addition, any facility required to provide notification regarding a release occurring from the effective date of today's rule forward would be required to apply for a storm water permit.

Commenters maintained that the use of historical discharges to require permit applications is inconsistent with the language and intent of section 402(1)(2) of the CWA, and relevant legislative history, both of which focus on present contamination. Requiring storm water permits based solely on the occurrence of past contaminated discharges, even where no present contamination is evident, would go beyond the statutory requirement that EPA not issue a permit absent a finding present contamination. Commenters also noted that the proposal did not take into account the fact that past problems leading to such releases may have been corrected, and that requiring an NPDES permit may no longer be necessary. The result of such a requirement, commenters maintained, would be an excessive number of unnecessary permit applications being submitted, at significant cost and minimal benefit to both regulated facilities and regulating authorities.

Commenters also indicated that using the release of reportable quantities of oil, grease or hazardous substances as a permit trigger would identify discharges of an isolated nature, rather than the continuous discharges, which should be the focus of the NPDES permit program under section 402. Such an approach, commenters maintained, is inconsistent with existing regulations under section 311 of the CWA, and would result in permit applications from facilities that are more appropriately regulated under section 311.

Despite these criticisms, many commenters recognized that the Agency is left with the task of determining when discharges from oil and gas facilities are contaminated, in order to regulate them under section 402(1)(2). It was suggested by numerous commenters that the EPA adopt an approach similar to that used under section 311 of the CWA for Spill Prevention Control and Countermeasure (SPCC) Plans. Under SPCC, facilities that are likely to discharge oil into waters of the United States are required to maintain a SPCC plan. In the event the facility has a spill of 1,000 gallons or 2 or more reportable quantities of oil in a 12 month period, the facility is required to submit its SPCC plan to the Agency. The triggering events proposed by the commenters for storm water permits for oil and gas operations are six reportable sheens or discharges of hazardous substances (other than oil) in excess of section 311 or section 102 reportable quantities via a storm water point source route over any thirty-six month period. It was suggested that if this threshold is reached, an operator would then file a permit application (or join a group application) based upon the presumption that its current storm water discharges are contaminated.

In response to these comments, the Agency believes that past releases that are reportable quantities can be a valid indicator of the potential for present contamination of discharges. The legislative history as cited above supports this conclusion. EPA would note that the existence of a RQ release would serve only as a triggering mechanism for a permit application. Under the proposed rule, evidence of past contamination would merely require submission of a permit application and would not be used as conclusive evidence of current contamination. The determination as to whether a permit would be actually required due to current contaminated discharge would be made by the permitting authority after reviewing the permit application. The fact of a past RQ release does not necessarily imply a conclusive finding of contamination, only that sufficient potential for contamination exists to warrant a permit application or the collection of other further information. Today's rule does not change the proposed approach in this respect. Thus, EPA does not believe that today's rule exceeds the authority of section 402(1)(2).

EPA believes that there is no legal impediment to using past RQ discharges as a trigger for requiring a storm water permit application. EPA notes that, as mentioned above, even those commenters who objected to the proposed test on legal authority grounds merely offered an alternate test that requires more releases to have occurred within a shorter period of time before a permit application is required.

Therefore, the only disagreement that remains is over what constitutes a reasonable test that will identify facilities with the potential for storm water contamination. EPA notes that neither the statute nor the legislative history provides any guidance on this question. Furthermore, EPA disagrees with the commenters who suggested that 6 releases in the past 3 years or 2 releases in the past year are necessarily more valid measures of the potential for current contamination than EPA's proposed test. There is no statistical or other basis for preferring one test to the other. However, EPA does agree with those commenters that suggest that a single release in the distant past may not accurately reflect current conditions and the current potential for contamination.

EPA has therefore amended today's rule to provide that only oil and gas facilities which have had a release of an RQ of oil or hazardous substances in storm water in the past three years will be required to submit a permit application. EPA believes that limiting the permit trigger to events of the past three years will address commenters' concerns regarding the use of "stale history" in determining whether an application is required. EPA notes that the three year cutoff is consistent with the requirement for industrial facilities to report significant leaks or spills at the facility in their storm water permit applications. See 40 CFR 122.26(c)(1)(i)(D).

Commenters asserted that EPA and the States must have some reasonable basis for concluding that a storm water discharge is contaminated before requiring permit applications or permits. Commenters believed that § 122.26(c)(1)(iii)(B) as proposed implied that the Agency's authority in this respect is unrestricted. In response, EPA may collect such data by whatever appropriate means the statute allows, in order to obtain information that a permit is required. Usually, the most practical tool for doing so is the permit application itself. However, if necessary to supplement the information made available to the Agency, EPA has broad authority to obtain information necessary to determine whether or not a permit is required, under section 308 of the Clean Water Act. Given the plain language of the CWA and the Congressional intent as manifested in the legislative history, the Agency is convinced that the approach described above is appropriate. Yet, as further discussed below, EPA has also deleted as redundant § 122.26(c)(1)(iii)(B).

Regarding the types of facilities included in the storm water regulation, a number of commenters suggested that the Agency has misconstrued the meaning of facilities "associated with

industrial activity", and has proposed an overly broad definition of such facilities in the oil and gas industry. Specifically, commenters suggested that only the manufacturing sector of the oil and gas industry should be subject to storm water permit application requirements, and that exploration and production activities, gas stations, terminals, and bulk plants should all be exempted from storm water permitting requirements. Commenters maintain that this broad interpretation would subject many oil and gas facilities to the storm water permit requirements, when these were not intended by Congress to be so regulated. As a second point related to this issue, some commenters felt that transmission facilities were not intended to be regulated under the storm water provisions, and should be exempted from permit requirements. This would be consistent, it was argued, with legislative history which concluded that transmission facilities do not significantly contribute to the contamination of water.

The Agency disagrees that these facilities do not fall under the storm water permitting requirements as envisioned by Congress. SIC 13, which is relied upon by EPA to identify these oil and gas operations, describes oil and gas extraction industries as including facilities related to crude oil and natural gas, natural gas liquids, drilling oil and gas wells, oil and gas exploration and field services. Moreover, legislative history as it applies to industrial activities, and thus to oil and gas (mining) operations, expressly includes exploration, production, processing, transmission, and treatment operations within the purview of storm water permitting requirements and exemptions. EPA's intent is for storm water permit requirements (and the exemption at hand) to apply to the activities listed above (exploration, production, processing, treatment, and transmission) as they relate to the categories listed in SIC 13.

Commenters requested clarification from the Agency that storm water discharges from oil and gas facilities require a permit or the filing of a permit application only when they are contaminated at the point of discharge into waters of the United States. Commenters noted that large amounts of potentially contaminated stormwater may not enter waters of the United States, or may enter at a point once the discharge is no longer "contaminated". In these cases, it should be clear that no permit or permit application is required.

EPA agrees that oil and gas exploration, production, processing, or treatment operations or transmission facilities must only obtain a storm water permit when a discharge to waters of the U.S. (including those discharges through municipal separate storm sewers) is contaminated. A permit application will be required when any discharge in the past three years or henceforth meets the test discussed above.

Under the proposed rule, the Agency stated at § 122.26(c)(1)(iii)(B) that the Director may require on a case-by-case basis the operator of an existing or new storm water discharge from an oil or gas exploration, production, processing, or treatment operation, or transmission facility to submit an individual permit application. The Agency has removed this section since CWA section 402(1)(2), as codified in 122.26(c)(1)(iii)(A), adequately addresses every situation where a permit should be required for these facilities.

b. Use of Reportable Quantities to Determine if a Storm Water Discharge from an Oil or Gas Operation is Contaminated. Section 311(b)(5) of the CWA requires reporting of certain discharges of oil or a hazardous substance into waters of the United States (see 44 FR 50766 (August 29, 1979)). Section 304(b)(4) of the Act requires that notification levels for oil and hazardous substances be set at quantities which may be harmful to the public health or welfare of the United States, including but not limited to fish, shellfish, wildlife, and public or private property, shorelines and beaches. Facilities which discharge oil or a hazardous substance in quantities equal to or in excess of an RQ, with certain exceptions, are required to notify the National Response Center (NRC).

Section 102 of CERCLA extended the reporting requirement for releases equal to or exceeding an RQ of a hazardous substance by adding chemicals to the list of hazardous substances, and by extending the reporting requirement (with certain exceptions) to any releases to the environment, not just those to waters of the United States.

Pursuant to section 311 of the CWA, EPA determined reportable quantities for discharges by correlating aquatic animal toxicity ranges with 5 reporting quantities, i.e., 1-, 10-, 100-, 1000-, and 5000- pounds per 24 hour period levels. Reportable quantity adjustments made under CERCLA rely on a different methodology. The strategy for adjusting reportable quantities begins with an evaluation of the intrinsic physical, chemical, and toxicological properties of each designated hazardous substance. The intrinsic properties examined, called "primary criteria," are aquatic toxicity, mammalian toxicity (oral, dermal, and inhalation), ignitability, reactivity, and chronic toxicity. In addition, substances that were identified as potential carcinogens have been evaluated for their relative activity as potential carcinogens. Each intrinsic property is ranked on a five-tier scale, associating a specific range of values on each scale with a particular reportable quantity value. After the primary criteria reportable quantities are assigned, the hazardous substances are further evaluated for their susceptibility to certain extrinsic degradation processes (secondary criteria). Secondary criteria consider whether a substance degrades relatively rapidly to a less harmful compound, and can be used to raise the primary criteria reportable quantity one level.

Also pursuant to section 311, EPA has developed a reportable quantity for oil and associated reporting requirements at 40 CFR part 110. These requirements, known as the oil sheen regulation, define the RQ for oil to be the amount of oil that violates applicable water quality standards or causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or causes a sludge or emulsion to be deposited.

Reportable quantities developed under the CWA and CERCLA were not developed as effluent guideline limitations which establish allowable limits for pollutant discharges to surface waters. Rather, a major purpose of the notification requirements is to alert government officials to releases of hazardous substances that may require rapid response to protect public health, welfare, and the environment. Notification based on reportable quantities serves as a trigger for informing the government of a release so that the need for response can be evaluated and any necessary response undertaken in a timely fashion. The reportable quantities do not themselves represent any determination that releases of a particular quantity are actually harmful to public health, welfare, or the environment.

EPA requested comment on the use of RQs for determining contamination in discharges from oil and gas facilities. As noted above numerous commenters supported the concept of using reportable quantities under certain circumstances. Comments on the measurement of oil sheens for the purpose of triggering a permit application were divided. Some commented that it is much too stringent because the amount of oil creating a

sheen may be a relatively small amount. Others viewed the test as a quick, easy, practical method that has been effective in the past.

In relying on the reporting requirements associated with releases in excess of RQs for oil or hazardous substances to trigger the submittal of permit applications for oil and gas operations, the Agency believes that the use of the reporting requirements for oil will be particularly useful. The Agency believes that the release of oil to a storm water discharge in amounts that cause an oil sheen is a good indicator of the potential for water quality impacts from storm water releases from oil and gas operations. In addition, given the extremely high number of such operations (the Agency estimates that there are over 750,000 oil wells alone in the United States), relying on the oil sheen test to determine if storm water discharges from such sites are "contaminated" will be a far easier test for operators to determine whether to file a storm water permit application than a test based on sampling. The detection of a sheen does not require sophisticated instrumentation since a sheen is easily perceived by visual observation. EPA agrees with those comments calling the oil sheen test an appropriate measure for triggering a storm water permit application. In adopting this approach, EPA recognizes, as pointed out by many commenters that an oil sheen can be created with a relatively small amount of oil.

One commenter suggested that contamination must be caused by contact with on-site material before being subject to permit application requirements. The Agency agrees with this comment. Those facilities that have had releases in excess of reportable quantities will generally have contamination from contact with on-site material as described in the CWA. Thus, use of the RQ test is an appropriate trigger. As discussed above, determination of whether contamination is present to warrant issuance of a permit will be made in the context of the permit proceeding.

One commenter believed that the use of RQs is inappropriate because "the statute intended to exempt only oil and gas runoff that is not contaminated at all." The Agency wishes to clarify that reportable quantities are being used to determine what facilities need to file permit applications and to describe what is meant by the term "contaminated." The Director may require a permit for any discharges of storm water runoff contaminated by contact with any overburden, raw material, intermediate product, finished product, by product or waste product at the site of such operations. The use of RQs is solely a mechanism for identifying the facilities most likely to need a storm water permit consistent with the legislative history of section 402(l)(2).

c. Mining Operations. The December 7, 1988 proposal would establish background levels as the standard used to define when a storm water discharge from a mining operation is contaminated. When a storm water discharge from a mining site was found to contain pollutants at levels that exceed background levels, the owner or operator of the site was required to submit a permit application for that operation. The proposal was founded upon language in the legislative history stating that the determination of whether storm water is contaminated by contact with overburden, raw material, intermediate product, finished product, byproduct, or waste products "shall take into consideration whether these materials are present in such stormwater runoff . . . above natural background levels". [Vol. 132 Cong. Rec. H10574 (daily ed. Oct. 15, 1986) Conference Report].

Comments received on this component of the rule suggested that background levels of pollutants would be very difficult to calculate due to the complex topography frequently encountered in alpine mining regions. For example, if a mine is located in a mountain valley surrounded on all sides by hills, the site will have innumerable slopes feeding flow towards it. Under such circumstances, determining how the background level is set would prove impractical. Commenters indicated that it is very difficult to measure or determine background levels at sites where mining has occurred for prolonged periods. In many instances, data on original background levels may not be available due to long-term site activity. As a result, any background level established will vary based on the type and level of previous activity. In addition, mining sites typically have background levels that are naturally distinct from the surrounding areas. This is due to the geologic characteristics that makes them valuable as mining sites to begin with. This also makes it difficult to establish accurate background levels.

Because of these concerns EPA has decided to drop the use of background levels as a measure for determining whether a permit application is required. Accordingly, a permit application will be required when discharges of storm water runoff from mining operations come into contact with any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site. Similar to the RQ test for oil and gas operations, EPA intends to use the "contact" test solely as a permit application trigger. The determination of whether a mining operation's runoff is contaminated will be made in the context of the permit issuance proceedings.

If the owner or operator determines that no storm water runoff comes into contact with overburden, raw material, intermediate product, finished product, byproduct, or waste products, then there is no obligation to file a permit application. This framework is consistent with the statutory provisions of section 402(1)(2) and is intended to encourage each mining site to adopt the best possible management controls to prevent such contact.

Several commenters stated that EPA's use of total pollutant loadings for determining permit applicability is not consistent with the general framework of the NPDES program. Their concern is that such evaluation criteria depart from how the NPDES program has been administered in the past, based on concentration limits. In addition, commenters requested that EPA clarify that information on mass loading will be used for determining the need for a permit only. Since the analysis of natural background levels as a basis for a permit application has been dropped from this rulemaking, these issues are moot.

Commenters noted that the proposed rule did not specify what impact this rulemaking has on the storm water exemptions in 40 CFR 440.131. The commenters recommended not changing any of these provisions. Some commenters indicated that mining facilities that have NPDES permits should not be subject to additional permitting under the storm water rule. EPA does not intend that today's rule have any effect on the conditional exemptions in 40 CFR 440.131. Where a facility has an overflow or excess discharge of process-related effluent due to stormwater runoff, the conditional exemptions in 40 CFR 440.131 remain available.

Several commenters note that the term overburden, as used in the context of the proposed storm water rule, is not defined and recommended that this term should be defined to delineate the scope of the regulation. EPA agrees that the term overburden should be defined to help properly define the scope the storm water rule. In today's rule, the term

overburden has been clarified to mean any material of any nature overlying a mineral deposit that is removed to gain access to that deposit, excluding topsoil or similar naturally-occurring surface materials that are not disturbed by mining operations. This definition is patterned after the overburden definition in SMCRA, and is designed to exclude undisturbed lands from permit coverage as industrial activity. However, the definition provided in this regulation may be revised at a later date, to achieve consistency with the promulgation of RCRA Subtitle D mining waste regulations in the future.

Numerous commenters raised issues pertaining to the inclusion of inactive mining areas as subject to the stormwater rule. Some commenters indicated that including inactive mine operations in the rule would create an unreasonable hardship on the industry. EPA has included inactive mining areas in today's rule because some mining sites represent a significant source of contaminated stormwater runoff. EPA has clarified that inactive mining sites are those that are no longer being actively mined, but which have an identifiable owner/operator. The rule also clarifies that active and inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities required for the sole purpose of maintaining the mining claim are undertaken. The Agency would clarify that claims on land where there has been past extraction, beneficiation, or processing of mining materials, but there is currently no active mining are considered inactive sites. However, in such cases the exclusion discussed above for uncontaminated discharges will still apply.

EPA's definition of active and inactive mining operations also excludes those areas which have been reclaimed under SMCRA or, for non-coal mining operations, under similar applicable State or Federal laws. EPA believes that, as a general matter, areas which have undergone reclamation pursuant to such laws have concluded all industrial activity in such a way as to minimize contact with overburden, mine products, etc. EPA and NPDES States, of course, retain the authority to designate particular reclaimed areas for permit coverage under section 402(p)(2)(E).

The proposed rule had included an exemption for areas which have been reclaimed under SMCRA, although the language of the proposed rule inadvertently identified the wrong universe of coal mining areas. The final rule language has been revised to clarify that areas which have been reclaimed under SMCRA (and thus are no longer subject to 40 CFR part 434 subpart E) are not subject to today's rule. Today's rule thus is consistent with the coal mining effluent guideline in its treatment of areas reclaimed under SMCRA.

In response to comments, EPA has also expanded this concept to exclude from coverage as industrial activity non-coal mines which are released from similar State or Federal reclamation requirements on or after the effective date of this rule. EPA believes it is appropriate, however, to require permit coverage for contaminated runoff from inactive non-coal mines which may have been subject to reclamation regulations, but which have been released from those requirements prior to today's rule. EPA does not have sufficient evidence to suggest that each State's previous reclamation rules and/or Federal requirements, if applicable, were necessarily effective in controlling future storm water contamination.

8. Application Requirements for Construction Activities

As discussed above, EPA has included storm water discharges from activities involving construction operations that result in the disturbance of five acres total land in the regulatory definition of storm water discharges associated with industrial activity.

This is a departure from the proposed rule which required permit applications for discharges from activities involving construction operations that result in the disturbance of less than one acre total land area and (which are not part of a larger common plan of development or sale; or operations that are for single family residential projects, including duplexes, triplexes, or quadruplexes, that result in the disturbance of less than five acre total land areas and which are not part of a larger common plan of development or sale). The reasons for this change are noted below.

Many commenters representing municipalities, States, and industry requested that clearing, grading, and excavation activities not be included in the definition of storm water discharges associated with industrial activity. It was suggested that EPA delay including construction activities until after the studies mandated in section 402(p)(5) of the CWA are completed. Other commenters felt that NPDES permits are not appropriate for construction discharges due to their short term, intermediate and seasonal nature. Another commenter felt that only the construction activities on the sites of the industrial facilities identified in the other subsections of the definition of "associated with industrial activity" should be included.

EPA believes that storm water permits are appropriate for the construction industry for several reasons. Construction activity at a high level of intensity is comparable to other activity that is traditionally viewed as industrial, such as natural resource extraction. Construction that disturbs large tracts of land will involve the use of heavy equipment such as bulldozers, cranes, and dump trucks. Construction activity frequently employs dynamite and/or other equipment to eliminate trees, bedrock, rockwork, and to fill or level land. Such activities also engage in the installation of haul roads, drainage systems, and holding ponds that are typical of the industrial activity identified in § 122.26(b)(14)(i-x). EPA cannot reasonably place such activity in the same category as light commercial or retail business.

Further, the runoff generated while construction activities are occurring has potential for serious water quality impacts and reflects an activity that is industrial in nature. Where construction activities are intensive, the localized impacts of water quality may be severe because of high unit loads of pollutants, primarily sediments. Construction sites can also generate other pollutants such as phosphorus, nitrogen and nutrients from fertilizer, pesticides, petroleum products, construction chemicals and solid wastes. These materials can be toxic to aquatic organisms and degrade water for drinking and water-contact recreation. Sediment runoff rates from construction sites are typically 10 to 20 times that of agricultural lands, with runoff rates as high as 100 times that of agricultural lands, and 1,000 to 2,000 times that of forest lands. Even small construction sites may have a significant negative impact on water quality in localized areas. Over a short period of time, construction sites can contribute more sediment to streams than was previously deposited over several decades.

EPA is convinced that because of the impacts of construction discharges that are directly to waters of the United States, such discharges should be addressed by permits issued by Federal or NPDES State permitting authorities. It is evident from numerous studies and reports submitted under section 319 of the CWA that discharges from construction sites continue to be a major source of water quality problems and water quality standard violations.

Accordingly EPA is compelled to address these source under these regulations and thereby regulate these sources under a nationally consistent program with an appropriate level of enforcement and oversight.

Techniques to prevent or control pollutants in storm water discharges from construction are well developed and understood. A primary control technique is good site planning. A combination of nonstructural and structural best management practices are typically used on construction sites. Relatively inexpensive nonstructural vegetative controls, such as seeding and mulching, are effective control techniques. In some cases, more expensive structural controls may be necessary, such as detention basins or diversions. The most efficient controls result when a comprehensive storm water management system is in place. Another reason that EPA has decided to address this class of discharges is that it is part of the Agency's recent emphasis on pollution prevention. Studies such as NURP indicate that it is much more cost effective to develop measures to prevent or reduce pollutants in storm water during new development than it is to correct there problems later on. Many of these prevention and control practices, which can take the form of grading patterns as well as other controls, generally remain in place after the construction activities are completed.

a. Permit Application Requirements. In today's rulemaking, EPA has set forth distinct permit application requirements for these construction activities, at § 122.26(c)(1)(ii), to be used where general permits to be developed and promulgated by EPA are inapplicable. Such facilities will be required to provide a map indicating the site's location and the name of the receiving water and a narrative description of:

- The nature of the construction activity;
- The total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;
- Proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a description of applicable Federal requirements and State or local erosion and sediment control requirements;
- Proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a description of applicable State or local requirements, and
- An estimate of the runoff coefficient (fraction of total rainfall that will appear as runoff) of the site and the increase in impervious area after the construction addressed in the permit application is completed, a description of the nature of fill material and existing data describing the soil or the quality of the discharge.

Permit application requirements for construction activities do not include the submission of quantitative data. EPA believes that the changing nature of construction activities at a site to be covered by the permit application requirements generally would not be adequately described by quantitative data. The comments received by EPA support this determination. One State commented that a program they instituted has been based on quantitative data for the past 10 years and has proven to be very awkward, even unworkable.

Twenty commenters responded to the issue of appropriate construction site application deadlines including: Three towns (<100,000 population); one medium municipality; one large municipality; one agency associated with a large municipality; three agencies associated counties; three agencies associated with States; two industries; five industrial associations; and one private organization representing industry. The commenters primarily focused on actual deadlines and permitting authority response time.

Applicants for permits to discharge storm water into the waters of the United States from a construction site would normally be required to submit permits in the same time frame as new sources and new discharges. This rulemaking requires permit applications from such sources to be submitted at least 180 days prior to the date on which the discharge is to commence. Four commenters agreed with the application deadline of 180 days prior to commencement of discharge. Three commenters felt it would be difficult to apply 180 days prior to when the discharge was to begin. Three commenters recommended shortening the time period to 90 days. Numerous other commenters were concerned over delays during the permitting authority's review of the permit application. The commenters requested that a maximum response time be set in the regulation. Suggested maximum response times were 90 and 30 days.

In response to these comments, EPA has changed the application deadline for construction permits from at least 180 days prior to discharge to at least 90 days prior to the date when construction is to commence. This change reflects EPA's recognition of the nature of construction operations in that developers/builders may not be aware of projects 180 days before they are scheduled to begin.

Numerous commenters expressed concern over who should be responsible for applying for the permit. Two commenters felt the owner should be responsible so that construction bid documents can include the storm water management requirements and to avoid confusion among multiple subcontractors. One commenter thought that either the owner/developer, or general contractor should be responsible. Another commenter suggested that the designer should obtain the permit which would allow all necessary erosion controls to be part of the project plan. Several commenters requested that the responsibility simply be more clearly defined.

In response to these comments, EPA would clarify that the operator will generally be responsible for submitting the permit application. Under existing regulations at § 122.21(b), when a facility is owned by one person but operated by another, then it is the duty of the operator to apply for the permit. Due to the temporary nature of construction activities, EPA believes that the operator is the most appropriate person to be responsible for both short and long term best management practices included on the site. EPA considers the term "operator" to include a general contractor, who would generally be familiar enough with the site to prepare the application or to ensure that the site would be in compliance with the permit requirements. General contractors, in many cases, will often be on site coordinating the operation among his/her staff and any subcontractors. Furthermore, the operator/general contractor would be much more familiar with construction site operations than the owner and should be involved in the site planning from its initial stages. The application requirements in today's rule are designed to provide flexibility in developing controls to reduce pollutants in storm water discharges from construction sites. A significant aspect to this is the role of State and local authorities in control of construction storm water discharges. Sixty-three commenters addressed the question of what the role of State and local authorities should be. Most of these commenters supported local government control of construction discharges and that qualified State programs should satisfy Federal requirements.

Many commenters representing municipalities, States, and industry, felt that local government should have full control over construction storm water

discharges, either under existing programs or those required by their municipal permit. EPA agrees with these comments as far as discharges through municipal storm sewers are concerned. EPA is requiring municipalities that are required to submit municipal permit applications under this regulation to describe their program for controlling storm water discharges from construction activities into their separate storm sewers. It is envisioned that municipalities will have primary responsibility over these discharges through NPDES municipal storm water permits. However, EPA also plans to cover such discharges under general permits to be promulgated in the near future.

In response to several comments that the regulation should provide flexibility for qualified State programs to satisfy Federal requirements, the application requirements recognize that many States have implemented erosion and sediment control programs. The permit application requires a brief description of these programs. This is intended to ensure consistency between NPDES permit requirements and other State controls. Permit applicants will be in the best position to pass on this site-specific information to the permitting authority. States or Federal NPDES authorities will have the ability to exercise authority over these discharges as will other State and local authorities responsible for construction. EPA envisions NPDES permitting efforts will be coordinated with any existing programs.

The proposed rule requested comments on appropriate measures to reduce pollutants in construction site runoff. Numerous commenters representing municipalities, States, and industry responded. Some commenters recommended specific best management practices (BMPs) whereas others suggested ways in which the measures should be incorporated into the program. One commenter suggested that EPA establish design and performance standards for appropriate BMPs. One State commenter recommended requiring a schedule or sequence for use of BMPs. A municipality suggested developing guidance on erosion control at construction sites and disseminating the guidance to educate contractors and construction workers in proper erosion control techniques. The Agency is continuing to review these recommendations for the purposes of permit development and issuance.

Another commenter suggested that further research be done to determine the effectiveness of particular BMPs in reducing pollutants in construction site runoff. EPA agrees that more research and studies can be undertaken to develop methodologies for more effective storm water controls and will continue to lookat these concerns pursuant to section 402(p)(5) studies. However, EPA is convinced that enough information, technology, and proven BMP's are available to address these discharges in this regulation.

Specific BMPs suggested by the commenters include: wheel washing; locked exit roadways, street cleaning methods which exclude sheet washing; clearing and grading codes; construction standards; riparian corridors; solids retention basins; soil erosion barriers; selected excavation; adequate collection systems; vegetate disturbed areas; proper application of fertilizers; proper equipment storage; use of straw bales and filter fabrics; and use of diversions to reduce effective length of slopes. EPA is continuing to evaluate these suggestions for developing appropriate permit conditions for construction activity.

b. Administrative Burdens. Many commenters representing municipalities, States, and industry commented on the administrative burdens of individually permitting each construction site discharging to waters of the United States. The extensive use of general permits for storm water discharges from construction activities that are subject to NPDES requirements is anticipated to minimize administrative delays associated with permit issuance. Many commenters strongly endorsed extensive use of general permits. In addition the Agency will provide as much assistance as possible for developing appropriate permit conditions.

Many commenters responded to the use of acreage limits in determining which construction sites are required to submit a permit application, including several cities, counties and States. Some commenters generally supported the use of an acre limit. Many commenters suggested increasing the acreage limit. Several suggested using a five acre limit for both residential and nonresidential development. Others suggested greater acreage as the cutoff. Two commenters concurred with the proposed limit of one acre/five acres and one commenter suggested lowering the residential limit to one acre.

Other factors were suggested as a means to create a cutoff for requiring permit applications. Several commenters suggested exempting construction that would be completed with a certain time frame, such as construction of less than 12 months. EPA believes that this is inappropriate because some construction can be intensive and expansive, but nonetheless take place over a short period of time, such as a parking lot. One commenter suggested basing the limit on the quantity of soil moved, i.e., cubic yards. In response, this approach would not be particularly helpful since removal of soil will not necessarily relate to the amount of land surface disturbed and exposed to the elements. Another commenter suggested that where there is single family detached housing construction that should trigger applications as well as the proposed acreage limit. This would not be appropriate since EPA is attempting to focus only on those construction activities that resemble industrial activity. After considering these and similar comments EPA has limited the definition of "storm water discharge associated with industrial activity" by exempting from the definition those construction operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale. In considering the appropriate scope of the definition of storm water discharge associated with industrial activity as it relates to construction activities, EPA recognized that a wide variety of factors can affect the water quality impacts associated with construction site runoff, including the quality of receiving waters, the size of the area disturbed, soil conditions, seasonal rainfall patterns, the slope of area disturbed, and the intensity of construction activities. These factors will be considered by the permit writer when issuing the permit. However, as noted above, EPA views such site-specific factors to be too difficult to define in a regulatory framework that is national in scope. For example, attempting to adjust permit application triggers based upon a myriad of regional rainfall patterns is not a practical solution. However, permit conditions adjusted for specific geographical areas may be appropriate.

Under the December 7, 1988, proposal the definition of industrial activity exempted: construction operations that resulted in the disturbance of less than one acre total land area which was not part of a larger common plan of development or sale; or operations for single family residential projects, including duplexes, triplexes, or quadruplexes, that result in the disturbance of less than five acre total land areas which were not part of a larger common plan of development or sale. EPA distinguished between single family residential development and

other commercial development because other commercial development is more likely to occur in more densely developed areas. Also, it was reasoned that other commercial development provides a more complete opportunity to develop controls that remain in place after the construction activity is completed, since continued maintenance after the permit has expired, is more feasible.

However, EPA has decided to depart from the proposal and use an unqualified five acre area in today's final rule. This limit has been selected, in part, because of administrative concerns. EPA recognizes that State and local sediment and erosion controls may address construction activities disturbing less five acres for residential development; the five acre limit in today's rule is not intended to supersede more stringent State or local sediment and erosion controls. In light of the comments, EPA is convinced that the acreage limit is appropriate for identifying sites that are amount to industrial activity. Several comments suggested higher acreage limits without giving a supporting rationale except administrative concerns. Several commenters agreed that the five acre limit is suitable, but again without specifying why they agreed. EPA is convinced, however, that the acreage limits as finalized in today's rule reflect an earth disturbance and/or removal effort that is industrial in magnitude. Disturbances on large tracts of land will employ more heavy machinery and industrial equipment for removing vegetation and bedrock.

For construction facilities that are not included in the definition of storm water discharge associated with industrial activity, EPA will consider the appropriate procedures and methods to reduce pollutants in construction site runoff under the studies authorized by section 402(p)(5) of the CWA. EPA will also consider under section 402(p)(5) appropriate procedures and methods during post-construction for maintaining structural controls developed pursuant to NPDES permits issued for storm water discharges associated with industrial activity from construction sites.

Numerous commenters requested clarification as to whether permits for storm water discharges from construction activities at an industrial facility are required. EPA is requiring permits for all storm water discharges from construction activities where the land disturbed meets the requirements established in § 122.26(b)(14)(x) and which discharge into waters of the United States. The location of the construction activity or the ultimate land use at the site does not factor into the analysis.

C. Municipal Separate Storm Sewer Systems

1. Municipal Separate Storm Sewers

Today's rule defines "municipal separate storm sewer" at § 122.26(b)(8) to include any conveyance or system of conveyances that is owned or operated by a State or local government entity and is designed for collecting and conveying storm water which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2. It is important to note that today's permit application requirements for discharges from municipal separate storm sewer systems serving a population of 100,000 or more do not apply to discharges from combined sewers (systems designed as both a sanitary sewer and a storm sewer). For purposes of calculating whether a municipal separate storm sewer system meets the large or medium population criteria, a municipality may petition to have the population served by a combined sewer deducted from the total population. Section 122.26(f) of today's rule describes this procedure.

EPA requested comments on whether different language for the definition of municipal separate storm sewer would clarify responsibility under the NPDES permit system. Comments were also requested on whether the definition needed to be clarified by explicitly stating that municipal streets and roads with drainage systems (curb and gutter, ditches, etc.) are part of the municipal storm sewer system, and that the owners or operators of such roads are responsible for such discharges. Numerous comments were received by EPA on this issue. Some commenters questioned whether road culverts and road ditches were municipal separate storm sewers, while others specifically recommended that further clarifying language should be added so that owners and operators of roads and streets understand that they are covered by this regulation. In light of these comments, EPA has clarified that municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains that discharge into the waters of the United States are municipal separate storm sewers. One commenter asked if "other wastes" in the proposed definition of municipal separate storm sewer (40 CFR 122.26 (b)(8)(i)) included storm water. In response, EPA has added "storm water" to this definition in order to clarify that the rule addresses such systems.

EPA requested comments on whether legal classifications such as "storm sewers that are not private (e.g. public, district or joint district sewers)" would provide a clearer definition of municipal separate storm sewer than an owner or operator criterion, especially for the purpose of determining responsibility under the NPDES program. Most commenters agreed that the owner/operator concept, and the additional language noted above, is sufficient for this purpose. EPA also requested comments on to what extent the owner/operator concept should apply to municipal governments with land-use authority over lands which contribute storm water runoff to the municipal storm sewer system, and how the responsibility should be clarified. In response to comments on this point, EPA has addressed these concerns in the context of clarifying what municipal entities are responsible for applying for a permit covering storm water discharges from municipal systems in section VI.H. below.

One commenter expressed a desire for clarification as to whether conveyances that were once used for the conveyance of storm water, but are no longer used in that manner, are covered by the definition. EPA emphasizes that this rulemaking only addresses conveyances that are part of a separate storm sewer system that discharges storm water into waters of the United States.

One commenter stated that if EPA intends to regulate roadside collection systems then EPA must repropose since these were not considered by the public. EPA disagrees with this comment since one of the options specifically addressed the inclusion of roadside drainage systems and roads in the definition of municipal separate storm sewer system. In addition, the public recognized the issue in comments on the proposal. EPA would note that several commenters specifically endorsed EPA's inclusion of these conveyances.

2. Effective Prohibition on Non-Storm Water Discharges

Section 402(p)(3)(B)(ii) of the amended CWA requires that permits for discharges from municipal storm sewers shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers. Based on the legislative history of section 405 of the WQA, EPA does not interpret the effective prohibition on non-storm water discharges to municipal separate storm sewers to apply to discharges that are not composed entirely of storm water, as long as such discharge has been issued a separate NPDES permit. Rather,

an "effective prohibition" would require separate NPDES permits for non-storm water discharges to municipal storm sewers. In many cases in the past, applicants for NPDES permits for process wastewaters and other non-storm water discharges have been granted approval to discharge into municipal separate storm sewers, provided that the permit conditions for the discharge are met at the point where the discharge enters into the separate storm sewer. Permits for such discharges must meet applicable technology-based and water-quality based requirements of Sections 402 and 301 of the CWA. If the permit for a non-storm water discharge to a municipal separate storm sewer contains water-quality based limitations, then such limitations should generally be based on meeting applicable water quality standards at the boundary of a State established mixing zone (for States with mixing zones) located in the receiving waters of the United States.

All options will be considered when an applicant applies for a NPDES permit for a non-storm water discharge to a municipal separate storm sewer. In some cases, permits will be denied for discharges to storm sewers that are causing water quality problems in receiving waters. However, not all discharges present such problems; and in these cases EPA or State permit writers may allow such discharges to municipal separate storm sewers within appropriate permit limits.

Today's rule has two permit application requirements that are designed to begin implementation of the effective prohibition. The first requirement discussed in VI.H.6.a., below, addresses a screening analysis which is intended to provide sufficient information to develop priorities for a program to detect and remove illicit discharges. The second provision, discussed in VI.H.7.b., requires municipal applicants to develop a recommended site-specific management plan to detect and remove illicit discharges (or ensure they are covered by an NPDES permit) and to control improper disposal to municipal separate storm sewer systems.

Several commenters suggested that either the definition of "storm water" should include some additional classes of nonprecipitation sources, or that municipalities should not be held responsible for "effectively prohibiting" some classes of nonstorm water discharges into their municipal storm sewers. The various types of discharges addressed by these comments include detention and retention reservoir releases, water line flushing, fire hydrant flushing, runoff from fire fighting, swimming pool drainaqe and discharge, landscape irrigation, diverted stream flows, uncontaminated pumped ground water, rising ground water, discharges from potable water sources, uncontaminated waters from cooling towers, foundation drains, non-contact cooling water (such as heating, ventilation, air conditioning (HVAC) water that POTWs require to be discharged to separate storm sewers rather than sanitary sewers), irrigation water, springs, roofdrains, water from crawl space pumps, footing drains, lawn watering, individual car washing, flows from riparian habitats and wetlands. Most of these comments were made with regard to the concern that these were commonly occurring discharges which did not pose significant environmental problems.

EPA disagrees that the above described flows will not pose, in every case, significant environmental problems. At the same time, it is unlikely Congress intended to require municipalities to effectively prohibit individual car washing or discharges resulting from efforts to extinguish a building fire and other seemingly innocent flows that are characteristic of human existence in urban environments and which discharge to municipal separate storm sewers. It should be noted that the legislative history is essentially silent on this point. Accordingly, EPA is clarifying that section 402(p)(3)(B) of the CWA (which requires permits for municipal separate storm sewers to 'effectively' prohibit non-storm water discharges) does not require permits for municipalities to prohibit certain discharges or flows of nonstorm water to waters of the United States through municipal separate storm sewers in all cases. Accordingly, § 122.26(d)(2)(iv)(B)(1) states that the proposed management program shall include: "A description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; the program description shall address the following categories of non-storm water discharges or flows only where such discharges are identified by the municipality as sources of pollutants to waters of the United States: Water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncontaminated pumped ground water discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash waters. Program descriptions shall address discharges from fire fighting only where such discharges or flows are identified as significant sources of pollutants to waters of the United States."

However, the Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharges where appropriate. In the case of fire fighting it is not the intention of these rules to prohibit in any circumstances the protection of life and public or private property through the use of water or other fire retardants that flow into separate storm sewers. However, there may be instances where specified management practices are appropriate where these flows do occur (controlled blazes are one example).

Conveyances which continue to accept other "non-storm water" discharges (e.g. discharges without an NPDES permit) with the exceptions noted above do not meet the definition of municipal separate storm sewer and are not subject to section 402(p)(3)(B) of the CWA unless the non-storm water discharges are issued separate NPDES permits. Instead, conveyances which continue to accept non-storm water discharges which have not been issued separate NPDES permits are subject to sections 301 and 402 of the CWA. For example, combined sewers which convey storm water and sanitary sewage are not separate storm sewers and must comply with permit application requirements at 40 CFR 122.21 as well as other regulatory criteria for combined sewers.

3. Site-Specific Storm Water Quality Management Programs for Municipal Systems

Section 402(p)(3)(iii) of the CWA mandates that permits for discharges from municipal separate storm sewers shall require controls to reduce the discharge of pollutants to the maximum extent practicable (MEP), including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Director determines appropriate for the control of such pollutants.

When enacting this provision, Congress was aware of the difficulties in regulating discharges from municipal

separate storm sewers solely through traditional end-of-pipe treatment and intended for EPA and NPDES States to develop permit requirements that were much broader in nature than requirements which are traditionally found in NPDES permits for industrial process discharges or POTWs. The legislative history indicates, municipal storm sewer system "permits will not necessarily be like industrial discharge permits. Often, an end-of-the-pipe treatment technology is not appropriate for this type of discharge." [Vol. 132 Cong. Rec. S16425 (daily ed. Oct. 16, 1986)].

A shift towards comprehensive storm water quality management programs to reduce the discharge of pollutants from municipal separate storm sewer systems is appropriate for a number of reasons. First, discharges from municipal storm sewers are highly intermittent, and are usually characterized by very high flows occurring over relatively short time intervals. For this reason, municipal storm sewer systems are usually designed with an extremely high number of outfalls within a given municipality to reduce potential flooding. Traditional end-of-pipe controls are limited by the materials management problems that arise with high volume, intermittent flows occurring at a large number of outfalls. Second, the nature and extent of pollutants in discharges from municipal systems will depend on the activities occurring on the lands which contribute runoff to the system. Municipal separate storm sewers tend to discharge runoff drained from lands used for a wide variety of activities. Given the material management problems associated with end-of-pipe controls, management programs that are directed at pollutant sources are often more practical than relying solely on end-of-pipe controls.

In past rulemakings, much of the criticism of the concept of subjecting discharges from municipal separate storm sewers to the NPDES permit program focused on the perception that the rigid regulatory program applied to industrial process waters and effluents from publicly owned treatment works was not appropriate for the site-specific nature of the sources which are responsible for the discharge of pollutants from municipal storm sewers.

The water quality impacts of discharges from municipal separate storm sewer systems depend on a wide range of factors including: The magnitude and duration of rainfall events, the time period between events, soil conditions, the fraction of land that is impervious to rainfall, land use activities, the presence of illicit connections, and the ratio of the storm water discharge to receiving water flow. In enacting section 405 of the WQA, Congress recognized that permit requirements for municipal separate storm sewer systems should be developed in a flexible manner to allow site-specific permit conditions to reflect the wide range of impacts that can be associated with these discharges. The legislative history accompanying the provision explained that "[p]ermits for discharges from municipal separate stormwater systems * * * must include a requirement to effectively prohibit non-stormwater discharges into storm sewers and controls to reduce the discharge of pollutants to the maximum extent practicable, * * * These controls may be different in different permits. All types of controls listed in subsection [(p)(3)(C)] are not required to be incorporated into each permit" [Vol. 132 Cong. Rec. H10576 (daily ed. October 15, 1986) Conference Report]. Consistent with the intent of Congress, this rule sets out permit application requirements that are sufficiently flexible to allow the development of site-specific permit conditions.

Several commenters agreed with this approach. One municipality recommended that there be as much flexibility as possible so that the permitting authority can work with each municipality in developing meaningful long-term goals with plans for improving storm water quality. This commenter noted that too many specific regulations that apply nationwide do not take into consideration the climatic and governmental differences within the States. EPA agrees that as much flexibility as possible should be incorporated into the program. However, flexibility should not be built into the program to such an extent that all municipalities do not face essentially the same responsibilities and commitment for achieving the goals of the CWA. EPA believes that these final regulations build in substantial flexibility in designing programs that meet particular needs, without abandoning a nationally consistent structure designed to create storm water control programs.

4. Large and Medium Municipal Storm Sewer Systems

During the 1987 reauthorization of the CWA, Congress established a framework for EPA to implement a permit program for municipal separate storm sewers and establishing phased deadlines for its implementation. The amended CWA establishes priorities for EPA to develop permit application requirements and issue permits for discharges from three classes of municipal separate storm sewer systems. The CWA requires that NPDES permits be issued for discharges from large municipal separate storm sewer systems (systems serving a population of more than 250,000) by no later than February 4, 1991. Permits for discharges from medium municipal separate storm sewer systems (systems serving a population of more than 100,000, but less than 250,000) must be issued by February 4, 1992. After October 1, 1992, the requirements of sections 301 and 402 of the CWA are restored for all other discharges from municipal separate storm sewers.

The priorities established in the Act are based on the size of the population served by the system. Municipal operators of these systems are generally thought to be more capable of initiating storm water programs and discharges from municipal separate storm sewers serving larger populations are thought to present a higher potential for contributing to adverse water quality impacts. NURP and other studies have verified that the event mean concentration of pollutants in urban runoff from residential and commercial areas remains relatively constant from one area to another, indicating that pollutant loads from urban runoff strongly depend on the total area and imperviousness of developed land, which in turn is related to population.

The term "municipal separate storm sewer system" is not defined by the Act. By not defining the term, Congress intended to provide EPA discretion to define the scope of municipal systems consistent with the objectives of developing site-specific management programs in NPDES permits. EPA considered two key issues in defining the scope of municipal separate storm sewer system: (1) What is a reasonable definition of the term "system," and (2) how to determine the number of people "served" by a storm sewer system. EPA found these two issues to be intertwined. Different approaches to defining the scope of a system allowed for greater or lesser certainty in deterining the population served by the system.

In the December 7, 1988, proposal, EPA described seven options for defining "municipal separate storm sewer system." In developing these options the EPA considered:

- The inter-jurisdiction complexities associated with municipal governments;
- The fact that many municipal storm water management programs have traditionally focused on water quantity

concerns, and have not evaluated water quality impacts of system discharges or developed measures to reduce pollutants in such discharges;

- The advantages of developing system-wide storm water management programs for municipal systems;
- The geographic basis necessary for planning of comprehensive management programs to reduce pollutants in discharges from municipal separate storm sewers to the maximum extent practicable;
- The geographic basis necessary to provide flexibility to target controls on areas where water quality impacts associated with discharges from municipal systems are the greatest and to provide an opportunity to develop cost effective controls;
- The need to establish a reasonable number of permits for municipal systems during the initial phases of program development that will provide an adequate basis for a storm water quality management program for over 13,000 municipalities after the October 1, 1992 general prohibition on storm water permits expires; and
- Congressional intent to allow the development of jurisdiction-wide, comprehensive storm water management programs with priorities given to the most heavily populated areas of the country.

a. Overview of Proposed Options and Comments. The December 7, 1988, proposal requested comment on seven options for defining large and medium municipal separate storm sewer system. With the addition of a watershed-based approach suggested by certain commenters, eight options or approaches were addressed by the over 200 commenters on this issue: Option 1—systems owned or operated by incorporated places augmented by integrated discharges; Option 2—systems owned or operated by incorporated places augmented with significant other municipal discharges; Option 3—systems owned or operated by counties; Option 4—systems owned and operated by States or State departments of transportation; Option 5—systems within the boundaries of an incorporated place; Option 6—systems within the boundaries of counties; Option 7—systems in census designated urbanized areas; and Option 8—systems defined by watershed boundaries.

Generally, these options can be classified into two categories. The first category of options, Options 1, 2 and 3, define municipal systems in terms of the municipal entity which owns or operates storm sewers within municipal boundaries of the requisite population. The second category of options would define municipal systems on a geographic basis. Under Options 4, 5, 6, 7 and 8 all municipal separate storm sewers within the specified geographic area would be part of the municipal system, regardless of which municipal entity owns or operates the storm sewer. EPA did not propose to define the scope of a municipal separate storm sewer system in engineering terms because of practical problems determining the boundaries of and the populations served by "systems" defined in such a manner. In addition an engineering approach based on physical interconnections of storm sewer pipes by itself does not provide a rational basis for developing a storm water program to improve water quality where a large number of individual storm water catchments are found within a municipality.

In the December 7, 1988, proposal, EPA favored those options that relied primarily on the municipal entity which owns or operates or otherwise has jurisdiction over storm sewers. These options were preferred because it was anticipated that the administrative complexities of developing the permit programs would be reduced by decreasing the number of affected municipal entities. However, most commenters were not satisfied that such an approach would reduce administrative burdens or complexities.

The diversity of arguments and rationales offered in comments justifying the selection of particular option, or combinations thereof, were generally a function of geographic, climatic, and institutional differences around the country. As such, there was little substantive agreement with how this program should be implemented as far as defining large and medium municipal separate storm sewer systems. Of all the options, Option 1 generally received the most favorable comment. However, the overwhelming majority of comments suggested different options or other alternatives. Having reviewed the comments at length, EPA is convinced that the definition of municipal separate storm sewers should possess elements of several of the options enumerated above and a mechanism that enables States or EPA Regions to define a system that best suits their various political and geographical conditions.

The following comments were the most pervasive, and represent those issues and concerns of greatest importance to the public: (1) The approach chosen initially must be realistic and achievable administratively; (2) the definition must be flexible enough to accommodate development of the program on a watershed basis, and incorporate elements of existing programs and frameworks and regional differences in climate, geography, and political institutions; (3) permittees must have legal authority and control over land use; (4) discharges from State highways, identified as a significant source of runoff and pollutants, should be included in the program and combined in some manner with one or more of the other options; (5) the definition should address how the inclusion of interrelated discharges into the municipal separate storm sewer system are timed, decided upon, dealt with, etc.; (6) any approach must address the major sources of pollutants; (7) development of co-permittee management plans must be coordinated or developed on a regional basis and in the same time frame—fragmented or balkanized programs must be avoided; (8) municipalities should be regulated as equitably as possible; (9) flood control districts should be addressed as a system or part of a system; (10) the definition must conform to the legal requirements of the Clean Water Act; and (11) the definition should limit the number of co-permittees as much as possible.

b. Definition of large and medium municipal separate storm sewer system. A combination of the options outlined in the 1988 proposal would address most of these concerns, while achieving a realistic and environmentally beneficial storm water program. Accordingly, EPA has adopted the following definition of large and medium municipal separate storm sewer systems. Large and medium separate storm sewer systems are municipal separate storm sewers that:

(i) Are located in an incorporated place with a population of 100,000 or more or 250,000 or more as determined by the latest Decennial Census by the Bureau of Census (see appendices F and G of part 122 for a list of these places based on the 1980 Census);

(ii) Are located within counties having areas that are designated as urbanized areas by latest decennial Bureau of Census estimates and where the population of such areas exceeds 100,000, after the population in the incorporated places, townships or towns within such counties is excluded (see appendices H and I for a listing of these counties based on the 1980 census) (incorporated places, towns, and townships within these counties are excluded from permit application requirements unless they fall under paragraph (i) or are designated under paragraph (iii)); or (iii) are owned or

operated by a municipality other than those described in paragraph (i) or (ii) that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraphs (i) or (ii). In making this determination the Director may consider the following factors:

(A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in subparagraph (i);

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters; or

(E) Other relevant factors.

(iv) The Director may, upon petition, designate as a system, any municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (i), (ii), and (iii).

Under today's rule at § 122.26(a)(3)(iii) the regional authority shall be responsible for submitting a permit application under the following guidelines: The regional authority together with co-applicants shall have authority over a storm water management program that is in existence, or shall be in existence at the time part 1 of the application is due; the permit applicant or co-applicants shall establish their ability to make a timely submission of part 1 and part 2 of the municipal application; each of the operators of municipal separate storm systems described in paragraphs 122.26(b)(4) (i), (ii), and (iii) and (7)(i), (ii), and (iii), that are under the purview of the designated regional authority, shall comply with the application requirements of § 122.26(d).

As noted above, the finalized definition of large and medium municipal separate storm sewer system is combination of the approaches as proposed. (In the following discussion "paragraph (i)" refers to §§ 122.26 (b)(4)(i) and (b)(7)(i); "paragraph (ii)" refers to §§ 122.26(b)(4)(ii) and (b)(7)(ii); "paragraph (iii)" refers to §§ 122.26 (b)(4)(iii) and (b)(7)(iii); and "paragraph (iv)" refers to §§ 122.26 (b)(4)(iv) and (b)(7)(iv)). Paragraph (i) originates from proposed Option 5 (boundaries of incorporated places); paragraph (ii) originates from Option 6 (boundaries of counties) and Option 7 (urbanized areas); paragraph (iii) originates from Options 1 and 5; and paragraph (iv) is an outgrowth of comments on all options, especially Option 4 (State owned systems/State highways) and Option 8 (watersheds).

This definition creates a system by virtue of the fact that storm sewers within defined geographical and political areas, and the owner/operators of separate storm sewers in those areas, are addressed or required to obtain permits. Although within these systems, different segments and discharges of storm water conveyances may be owned or operated by different public entities, EPA is convinced by comments that discharges from such conveyances are interrelated to such an extent that all of these conveyances may be properly considered a "system." These comments are identified and discussed in greater detail below.

c. Response to comments. Many commenters urged that the approach taken must be administratively achievable. Option 5 of the proposal (boundaries of incorporated places), which can be equated to paragraphs (i) and (iii) above, was identified by several commenters as the most workable of all the options. Many commenters stated that Option 1 (systems owned or operated by incorporated places) was inappropriate because of special districts and other owners of systems within the incorporated area; and although EPA proposed a designation provision for interrelated discharges in Option 1, commenters advised that it would be impossible to identify these systems, account for their discharges, and exclude or include them in a timely manner if Option 1 was selected (Option 1 only addresses those systems owned or operated by the incorporated place). The final rule would obviate these concerns, since all the publicly owned sewers within the boundaries of the municipality will be required to be covered by a permit.

Other commenters noted that cities sometimes have storm water conveyances owned or operated by numerous entities. One municipality commented that these problems could be more easily resolved using a unified permit/district wide approach, which the final approach outlined above can accomplish. One county stated that Option 1 of the proposal would result in a permanent balkanization of stormwater programs and that a regional approach focusing on the entire system should be established. Another municipality recommended that all the systems of conveyances within the incorporated city boundaries be issued a permit. In rejecting Option 1 of the proposal, one municipality stated that program inefficiencies would result from implementing a piecemeal program in a contiguous urban environment with different owners and operators. One State conveyed similar concerns. Using a geographical approach, as described in paragraph (i) of the final definition, will best address all of these concerns.

One commenter criticized proposed Option 1 as being contrary to the legal requirements of the WQA, and a further example of EPA's continuing attempt to minimize the scope of a national storm water program. It was noted that the legislative history regarding requirements for large and medium municipal separate storm sewer systems in section 402(p) of the CWA generally does not reference incorporated cities or towns. As a result, the commenter recommended that the term "municipal" in municipal separate storm sewer system refer to separate storm sewers operated by municipal entities meeting the definition of "municipality" in section 502 of the CWA and that the scope of the term "municipal separate storm sewer system" be defined as broadly as possible. This approach would result in defining large and medium municipal separate storm sewer systems to include all municipal separate storm sewers within the 410 counties with a population of 100,000 or more. EPA has adopted the commenter's recommendation to extend the scope of the program to the extent that today's rule covers all municipal separate storm sewers within certain areas rather than only those operated by an incorporated place. EPA disagrees however that it must define the term "system" to include sewers within any municipal boundary of sufficient population with reference to section 502(4). By not providing explicit definitions, section 402(p)(3)(B) of the CWA gives EPA discretion to define how municipal separate storm sewer systems are defined. There is no indication in the language of the CWA or the legislative history that Congress intended that the scope of "municipality" and the scope of "municipal separate storm sewer system" to be identical, particularly since the latter term is not defined in the statute. Furthermore, for the reasons discussed elsewhere in this section, EPA believes that today's definition is a reasonable accommodation of the many conflicting concerns surrounding the proper way to delineate the extent of a

municipal separate storm sewer system serving over 100,000 people.

Several commenters concluded that EPA should be flexible enough to allow the permitting authority broad discretion to establish system wide permits, with flood control districts and/or counties acting as co-permittees with the various incorporated cities within the district boundaries. Commenters expressed concern that Option 1 would not allow for such flexibility.

Arguments that were advanced by commenters in support of proposed Option 1 are equally applicable to paragraph (i), above. Like proposed Option 1, the approach outlined above targets major cities. However, it also has the advantage of addressing municipal separate storm sewer systems which may be interrelated to those owned by the city, a benefit recognized by one municipality that endorsed the selection of proposed Option 5. This will also give the permitting authority more discretion to establish co-permittee relationships.

Paragraph (ii) of the final definition also uses a geographical approach to the definition of municipal storm sewer systems to include municipal storm sewers within urbanized counties. Thus, it closely resembles Option 7 of the proposal. The counties identified in paragraph (ii) have, based on the 1980 Census, a population of 100,000 or more in urbanized,[5] unincorporated portions of the county. In the unincorporated areas of these counties (or in the 20 States where the Census recognizes minor civil divisions, unincorporated county areas outside of towns or townships), the county is the primary local government entity. In these cases, the county performs many of the same functions as incorporated cities with a population of 100,000, and is generally expected to have the necessary legal and land use authority in these areas to begin to implement storm water management programs. Due to the urbanized nature of their population, discharges from the municipal separate storm sewers in these counties will have many similarities to discharges from municipal systems in incorporated cities with a population of 100,000 or more. Addressing these counties in this fashion will not adversely affect small municipalities (incorporated places, towns and townships) within the county, as municipal separate storm sewers that are located in the small incorporated places, townships or towns within these counties are not automatically included as part of the system.

EPA has focused on the unincorporated areas because permit applications cannot be required from systems that serve a population less than 100,000, unless designated. EPA received the comment that if the sewers in incorporated places within such counties were included as part of the system for that county, there would be the potential for systems serving a population less than 100,000 to be improperly subject to permit requirements. EPA agrees with the comment, except that EPA reserves the authority to designate sewers in small incorporated places as part of the system subject to permitting, pursuant to paragraph (iii) of the final definition. Incorporated areas within the identified counties will be required to file permit applications if the population served by the municipal separate storm sewer system is 100,000 or more.

As one commenter noted, the counties addressed by the definition will generally be areas of high growth with a growing tax base that can finance a storm water management program. Numerous counties affected by paragraph (ii) commented on the proposal. Several of these indicated a preference for the county government as the permittee. Others indicated that their county had the ability to perform the functions of the permit applicant and permittee. One county brought to EPA's attention that the county had laid plans for a storm water utility scheduled to be in operation in 1989. Several of the counties supported the use of watersheds, or flexible regional approaches, as the basis for the definition of municipal separate storm sewer systems. The modified definition should satisfy these concerns.

EPA recognizes that some of the counties addressed by today's rule have, in addition to areas with high unincorporated urbanized populations, areas that are essentially rural or uninhabited and may not be the subject of planned development. While permits issued for these municipal systems will cover municipal system discharges in unincorporated portions of the county, it is the intent of EPA that management plans and other components of the programs focus on the urbanized and developing areas of the county. Undeveloped lands of the county are not expected to have many, if any, municipal separate storm sewers.

Paragraphs (i) and (ii) above will help resolve the problems associated with permittees not having adequate land use controls, the legal authority to implement controls, and the ownership of the conveyances. This factor was mentioned by numerous commenters on the proposed options, especially county governments. Under paragraphs (i) and (ii), all publicly owned separate storm sewers within the appropriate municipal boundaries will be defined as part of the municipal system. In many cases, a number of municipal operators of these storm sewers will be responsible for discharges from these systems. Since a number of co-permittees may be addressed in the permits for these discharges, problems associated with the ability to control pollutants that are contributed from interrelated discharges will be minimized. State highways or flood control districts, which may have no land use authority in incorporated cities, will be co-permittees with the city which does possess land use authority. EPA envisions that permit conditions for these systems will be written to establish duties that are commensurate with the legal authorities of a co-permittee. For example, under a permit, a flood control district may be responsible for the maintenance of drainage channels that they have jurisdiction over, while a city is responsible for implementing a sediment and erosion ordinance for construction sites which relates to discharges to the drainage channel. Confusion over ownership of conveyances or systems, at least for the purposes of determining whether they require a permit, will be minimized since all conveyances will be covered. Similarly, under paragraph (ii), the affected counties are expected to have the necessary legal and land use authority to implement programs and controls in unincorporated, urbanized areas because the county government is the primary political or governing entity in these geographical areas.

Many commenters from all levels of State and local government expressed concern about controlling pollutants from State highways. Paragraphs (i) and (ii) will result in discharges from separate storm sewers serving State highways and other highways through storm sewers that are located within incorporated places with the appropriate population or highways in unincorporated portions of specified counties being included as part of the large or medium municipal separate storm sewer system, since all municipal separate storm sewers within the boundaries of these political entities are included. Paragraph (iv) can facilitate

[5] The Bureau of Census defines urbanized areas to provide a description of high-density development. Urbanized areas are comprised of a central city (or cities) with a surrounding closely settled area. The population of the entire urbanized area must be greater than 50,000 persons, and the closely settled area outside of the city, the urban fringe, must generally have a population density greater than 1,000 persons per square mile (just over 1.5 persons per acre) to be included

the submission of a permit application for storm sewers operated as part of an entire State highway system. Paragraph (iv) would allow an entire system in a geographical region under the purview of a State agency (such as a State Department of Transportation) to be designated, where all the permit application requirements and requirements established under § 122.26(a)(iii)(C) can be met.

Paragraphs (i) and (ii) can effectively deal with many of the major sources of pollutants. One municipality noted that Option 5 (paragraph (i)) would require all systems in the incorporated boundaries to obtain permits and institute control measures, rather than just the few owned or operated by incorporated cities. Another municipality noted that this approach could deal with many of the regional variations in sources of pollution. Many commenters, including environmental groups, believed that proposed Option 3 (systems owned or operated by counties), Option 6 (systems within the boundaries of counties), and Option 7 (system in urbanized areas) were good approaches because more sources of pollution would be addressed. It was also maintained that Options 3, 6 and 7 could incorporate watershed planning which, in the view of some commenters, is the only effective way to address pollutants in storm water.

Commenters noted that addressing counties and urbanized areas would focus attention on developing areas which would otherwise be left out in the initial phases of permitting. One commenter noted that most new development in large urbanized areas occurs outside of core cities (incorporated cities with a population of 100,000 or more). Newly developing areas provide opportunities for installing pollutant controls cost effectively. EPA agrees with these comments and notes that paragraph (ii) addresses a significant number of counties with highly developed or developing areas.

However, EPA is convinced that addressing all counties or urbanized areas in the initial phases of the storm water program is ill-advised. Commenters noted that some counties have inappropriate or nonexistent governmental structures, and that a program that addressed all counties in the country with a population of 100,000 or more would be unmanageable, because too many municipal entities nationwide would be involved in the program initially. Commenters advised that defining municipal storm sewer systems solely in terms of the boundaries of census urbanized areas (Option 7) would result in systems which did not correspond to jurisdictions that are in a position to implement a storm water programs. Thus, EPA has modified Option 7 and combined it with Option 6 to create paragraph (ii) above.

Paragraph (iii) incorporates a designation authority such that municipalities that own or operate discharges from separate storm sewers systems other than those described in paragraph (i) or (ii) may be designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the other discharges of the designated storm sewer and the discharges from the large or medium municipal separate storm sewers. In making this determination the physical interconnections between the municipal separate storm sewers, the location of discharges from the designated municipal separate storm sewer relative to discharges from large or medium municipal separate storm sewers, the quantity and nature of pollutants discharged to waters of the United States, the nature of the receiving waters, or other relevant factors may be considered.

Comments indicated that the designation authority as proposed and described above should be retained. One State noted that this approach gives the most flexibility in making the case-by-case designations, while also delineating in sufficient detail what criteria are used to make the determination. This commenter was concerned about being able to regulate many of the interrelated discharges from counties surrounding incorporated cities.

Paragraph (iv) of the final definition allows the permitting authority, upon petition, to designate as a medium or large municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (i), (ii), (iii).

Paragraph (iv) was added to the final definitions to respond to a variety of concerns of commenters. One of the prime concerns of commenters was that the definition of large and medium municipal separate storm sewer systems must be flexible enough to accommodate: Programs on a watershed basis, existing storm water programs and frameworks and regional differences in climate, geography, and political institutions. Some States were particularly expressive regarding this concern. One State maintained that an inflexible program could totally disrupt ongoing State efforts. Other commenters urged that the regulation encourage the establishment of regional storm water authorities or other mechanisms that can deal with storm water quality on a watershed basis. One State proposed defining the municipal separate storm sewer system to include all municipal separate storm sewers within a core incorporated place of 100,000 or more, and all surrounding incorporated places within the State defined watershed. One of the State water districts advised that the regulations should be flexible enough to allow regional water quality boards to apply the regulations geographically. One national association expressed concern that existing institutional arrangements for flood control and drainage would be ignored, while another warned against fostering a proliferation of inconsistent patchwork programs based on arbitrary definitions and jurisdictions which bear no relationship to water quality.

EPA is convinced that the mechanism described in paragraph (iv) provides a means whereby the mechanisms and concepts identified above can be utilized or created in appropriate circumstances. In addition, § 122.26(f)(4) provides a means for State or local government agencies to petition the Director for the designation of regional authorities responsible for a portion of the storm water program. For example, some States or counties may currently or in the near future have regional storm water management authorities that have the ability to apply for permits under today's rule and carry out the terms of the permit. Some of these authorities may encompass within their jurisdiction large or medium municipal separate storm sewer systems as defined in today's rule. EPA wishes to encourage such entities to assume the role as permittee under today's rule. That is the purpose of paragraph (iv). Such authorities may petition the Director to assume such a role.

Many commenters expressed the view that municipal management plans must be coordinated or developed among co-permittees on a regional basis and in the same timeframe. Paragraphs (i), (iii) and (iv) would bring in all appropriate municipal entities with jurisdiction over a specified geographical area in the same timeframe. Several commenters, including one State, noted proposed Option 1 would lead to fragmented, ill-coordinated programs. Paragraphs (i), (iii), and (iv) do not suffer this drawback

to the same extent since all the municipal separate storm sewers are addressed within the incorporated place, instead of only those owned or operated by the incorporated place.

Equal treatment of municipalities within a watershed or other specified area was a major subject of comment. Many commenters urged that a degree of fairness could be achieved by requiring permit applications, and the concomitant expenditure of municipal dollars and resources, from all municipalities within an entire urban area that contributes to storm water pollution, rather than from a discrete system within an arbitrary political boundary. Paragraph (i), especially when coupled with paragraphs (ii), (iii), and (iv), can best accomplish a more equitable approach, because all owners and operators of municipal separate storm sewers within a system have responsibilities. In addition, some of the areas outside the incorporated city limits which are engaged in expansive urban or suburban development will be brought into the program. Paragraph (iv) will provide a means for State or regional authorities to use existing or emerging mechanisms to set up storm water management programs, and would require multiple agencies either to become regional co-permittees or to be subject to a regional permit.

Paragraphs (i), (ii), (iii), and (iv) could also require flood control districts to be co-permittees, which was a major concern of counties and numerous cities. One municipality stated that the inclusion of flood control districts would greatly reduce the administrative burden required to prepare a single inter-city discharge agreement and would establish a common legal authority to implement the program. Numerous county agencies believed it imperative that flood control districts be brought into a system-wide permit strategy.

Paragraphs (i) and (iii) may not accommodate the concern of several commenters that the number of co-permittees be kept to a minimum. The fact that all the municipal separate storm sewers within the boundaries of the appropriate incorporated places will be addressed dictates that some permits will have several co-permittees. This is a major concern since it goes directly to achieving an effective initial storm water program. There is concern about being able to bring all the co-permittees together under intra-municipal agreements or contracts within regulatory deadlines. This problem would be resolved in the short term by selecting Option 1. However, Option 1 may still require inter-municipal agreements because of the designation authority under § 122.26 (b)(4)(ii) and (b)(7)(ii) of the proposal. In addition, such inter-jurisdictional problems will arise after October 1, 1992 when the moratorium on requiring NPDES permits for discharges from other municipal separate storm sewers ends. Under the permitting goals established by the CWA, multi-jurisdictional storm water programs and agreements cannot be avoided. Despite interest in limiting the number of co-permittees, EPA decided not to adopt Option 1 for the reasons already stated.

Section 402(p)(3)(B)(i) of the amended CWA provides that permits for municipal discharges from municipal storm sewers may be issued on a system-wide or jurisdiction-wide basis. This provision is an important mechanism for developing the comprehensive storm water management programs envisioned by the Act.

Under the permit application requirements of today's rule, if the appropriate co-applicants are identified, one permit application may be submitted for a large or medium municipal separate storm sewer system (see section VI.G.4 above). System-wide permit applications can in turn be used to issue system-wide permits which could cover all discharges in the system.

Where several municipal entities are responsible for obtaining a permit for various discharges within a single system, EPA will encourage system-wide permit applications involving the several municipal entities for a number of reasons. The system-wide approach not only provides an appropriate basis for planning activities and coordinating development, but also provides municipal entities participating in a system-wide application the means to spread the resource burden of monitoring, evaluating water quality impacts, and developing and implementing controls.

The system-wide approach provided in today's rule recognizes differences between individual municipalities with responsibilities for discharges from the municipal system. Today's application rule requires information to be submitted that enables the permit issuing authorities to develop tailored programs for each permittee with responsibility for certain components, segments, or portions of the municipal separate storm sewer system. The permit application requirements allow individual municipal entities, participating in system-wide applications, to submit site specific information regarding storm water quality management programs to reduce pollutants in system discharges as a whole, or from specific points within the system.

In some cases, it may be undesirable for all municipal entities with storm water responsibility within a municipal system to be co-permittees under one system-wide permit. The permit application requirements in today's rule allow individual municipal entities within the system to submit permit applications and obtain a permit for that portion of the storm sewer system for which they are responsible. Thus, several permits may be issued to cover various subdivisions of a single municipal system.

In summary, EPA believes that the definition of municipal storm sewer system adopted in today's rule has several distinct advantages that were identified in comments:

- The definition adopts features of several options;
- The definition targets areas that have the necessary police powers and land use authority to implement the program;
- The definition can utilize watersheds or accommodate existing administrative frameworks and storm water programs;
- The definition provides that all systems within a geographical area including highways and flood control districts will be covered, thereby avoiding fragmented and ill-coordinated programs;
- The definition has flexible designation authority; and
- The definition addresses major sources of pollutants without being overly broad.

H. Permit Application Requirements for Large and Medium Municipal Systems

1. Implementing the Permit Program

Given the differing nature of discharges from municipal separate storm sewer systems in different parts of the country and the varying water quality impacts of municipal storm sewer discharges on receiving waters, today's permit application requirements are designed to lead to the development of site-specific storm water management programs. In order to effectively implement this goal, EPA intends to retain the overall structure of the municipal permit application as proposed in the December 7, 1988, proposal.

2. Structure of the Permit Application

EPA proposed a two-part permit application designed to meet the goal of

developing site-specific storm water quality management programs in NPDES permits. In response to a request for comments on this aspect of the proposal, numerous comments were received. After reviewing these comments, EPA has decided to retain the two-part permit application. Many commenters agreed that the approach as proposed is appropriate for phasing in and developing site specific storm water management programs. One large municipality strongly endorsed the two-part application, stating that it would facilitate the identification of water quality problem areas and the development of priorities for control measures, thereby allowing for more cost-effective program development. Two State agencies expressed the same view, and noted that the two-part approach is reasonable and well structured for efficient development of programs. One large municipality noted it would allow the permit authority and the permit applicant the time needed to gain the knowledge and data to develop site-specific permits. A medium municipality expressed similar views.

Numerous commenters submitted endorsements of a proposal offered by one of the national municipal associations. This approach responded to EPA's request for comments on alternatives to a two-part application process. These comments recommended having permit applicants submit information regarding their existing legal authority, prepare source identification information, describe existing management plans, provide discharge characterization information based on existing data, and prepare a monitoring, characterization and illicit discharge and removal plan in a one-part application. The remaining requirements such as: implementing plans to remove illicit connections, obtaining legal authority, monitoring and characterization, plans for structural controls, preparation of control assessments, preparation of fiscal analysis, and management plan implementation would be part of the permit and take place during the compliance period of the permit. It was argued that this would result in a more orderly development of stormwater management programs while allowing for quick implementation of efforts to eliminate illicit discharges and initiate some BMPs.

After careful review and consideration of these comments, EPA is convinced that this approach would not meet the goals and requirements of section 402 of the Clean Water Act. Section 402(p)(3)(B) of the CWA requires that permits effectively prohibit non-storm water discharges into storm sewers and incorporate controls that reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques, and system design and engineering methods. The above comments suggesting an alternative for achieving this goal are not entirely compatible with these requirements. In light of the language in the statute, permit conditions should do more than plan for controls during the term of the permit. A strong effort to have the necessary police powers and controls based on pollutant data should be undertaken before permits are issued. In short, the one-part application described by these comments would result in permits that would focus too much on preparation and not enough on implementing controls for pollutants.

In comparison, EPA's approach requires municipalities to submit a two-part application over a two year period. Part one of the application would require information regarding existing programs and the means available to the municipality to control pollutants in its storm water discharges. In addition, part one would require field screening of major outfalls to detect illicit connections. Part two of the permit application would require a limited amount of representative quantitative data and a description of proposed storm water management plans. The purpose of the two-part application process is to develop information, in a reasonable time frame, that would build successful municipal storm water management programs and allow the permit writer to make informed decisions with regard to developing permit conditions. This will include initiating efforts to effectively prohibit non-storm water discharges into storm sewers, and initially implementing controls that reduce the discharge of pollutants to the maximum extent practicable, including management practices and control techniques during the term of the permit. Such an approach clearly meets the statutory mandate of section 402(p)(3)(B).

a. Part 1 Application. Part 1 of the permit application is intended to provide an adequate basis for identifying sources of pollutants to the municipal storm sewer system, to preliminarily identify discharges of storm water that are appropriate for individual permits, and to formulate a strategy for characterizing the discharges from municipal separate storm sewer systems. Several commenters supported retaining these components of the application process. The components of part 1 of the permit application include:

- General information regarding the permit applicant or co-applicants (§ 122.26(d)(1)(i));
- A description of the existing legal authority of the applicant(s) to control pollutants in storm water discharges and a plan to augment legal authority where necessary (§ 122.26(d)(1)(ii));
- Source identification information including: a topographic map, description of the historic use of ordinances or other controls which limited the discharge of non-storm water discharges to municipal separate storm sewer systems, the location of known municipal separate storm sewer outfalls, projected growth, location of structural controls, and location of waste disposal facilities (§ 122.26(d)(1)(iii));
- Information characterizing the nature of system discharges including existing quantitative data, the results of a field screening analysis to detect illicit discharges and illegal dumping to the municipal system, an identification of receiving waters with known water quality impacts associated with storm water discharges, a proposed plan to characterize discharges from the municipal storm sewer system by estimating pollutant loads and the concentration of representative discharges, and a plan to obtain representative data (§ 122.26(d)(1)(iv)); and
- A description of existing structural and non-structural controls to reduce the discharge of pollutants from the municipal storm sewer (§ 122.26(d)(1)(v)).

One commenter disagreed that source identification should be made part of the permit application process beyond the identification of major municipal storm sewer outfalls. In reply, EPA is convinced that the other elements of the source identification are critical for identifying sources of pollutants and creating a base of knowledge from which informed decisions about permit conditions and further data requirements can be determined. One county stated that it already had engaged in extensive monitoring and modeling of watersheds and that its programs should be substituted for EPA's. In response, EPA anticipates that information collected under various State, county or city programs that matches the information requirements in this rulemaking may be used by the applicants in submissions under this rulemaking where the requirements of the rule are met. However, because of the divergence in data collection techniques and information collected by

these programs, EPA disagrees that it would be appropriate to accept a substitution in its entirety without tailoring such a program to today's specific information requirements. One municipality noted that municipal systems are not well documented and responsibility for them is in question. In response, EPA notes that the source identification procedure is designed, in part, to address such shortcomings.

Several municipalities suggested that legal authority could be demonstrated by providing EPA with copies of appropriate local ordinances to demonstrate their legal authority and a statement from the city attorney. EPA agrees that these methods are appropriate for making this demonstration.

Several commenters noted that there was adequate existing municipal legal authority to carry out the program requirements or such authority could be obtained by the municipality. Other commenters stated that municipalities possess some authority over certain activities but may not have authority over discharges from roads and construction. Numerous commenters, however, claimed that certain municipalities had no existing legal authority to carry out the permit requirements and that obtaining all the necessary legal authority could take several years due to cumbersome legislative and political processes. In response, part 1 of the permit application will establish a schedule for the development of legal authority that will be needed to accomplish the goals of the permit application and permits. Some municipalities will have more advanced storm water programs with appropriate legal authority or the ability to establish necessary ordinances. Providing an appropriate schedule will not present difficulties in these circumstances. EPA also notes that the definitions of large and medium municipal separate storm sewer systems finalized in today's rule will in many cases result in a number of co-applicants participating in a system wide application. It is anticipated that the development of adequate inter-jurisdictional agreements specifying the various responsibilities of the co-permittees may in some cases be very complex, thereby justifying the development of a schedule to complete the task. For example, clarifying the authority over discharges from roads may present difficulties where a number of municipal entities operate different roads in a given jurisdiction. In other limited cases, the MEP standard for municipal permits may translate into permit conditions that extend the schedule for obtaining necessary legal authority into the term of the permit. These situations will be evaluated on a case-by-case basis by permit issuing authorities.

Numerous commenters supported the field screening analysis as proposed. Comments from three municipalities noted that it would be a cost effective means of identifying problem areas. One municipality noted that illicit connections can be reliably detected by the screening method proposed. In view of these comments EPA has decided to retain this portion of the regulation. However many commenters expressed concern over how the proposed approach would work given the particular circumstances under which some municipal storm water systems are arranged. Several commenters questioned the effectiveness of dry weather monitoring for several reasons, including the shallow depth of some cities' water tables. Accordingly, an alternative approach may be utilized by the municipal permittee, and this is discussed later in section VI.H.3.

Some comments suggested that if any field screening is required that it be done during the term of the permit. EPA believes that field screening should not be done during the term of the permit exclusively. Unless a field screening is accomplished during the permit application phase there will be scant knowledge, if any, upon which illicit connection programs can be established for the term of the permits. EPA views field screening during the application process as an appropriate means of beginning to meet the CWA's requirement of effectively prohibiting non-storm water discharges into municipal separate storm sewers.

The submittal of part 1 of the permit application will allow EPA, or approved NPDES States, to adjust part 2 permit application requirements to assure flexibility for submitting information under part 2, given the site specific characteristics of each municipal storm sewer system.

EPA agrees with the concerns of commenters regarding the estimate of the reduction of pollutant loads from existing management programs. EPA agrees that sufficient data may not be available to establish meaningful estimates. Therefore this component of the proposed part 1 is not a requirement of today's rule.

b. Part 2 Application. Part 2 of the proposed permit application is designed to supplement information found in part 1 and to provide municipalities with the opportunity of proposing a comprehensive program of structural and non-structural control measures that will control the discharge of pollutants, to the maximum extent practicable, from municipal storm sewers. The components of the proposed part 2 of the permit application included:

- A demonstration that the legal authority of the permit applicant satisfies regulatory criteria (§ 122.26(d)(2)(i));
- Supplementation of the source identification information submitted in part 1 of the application to assure the identification of all major outfalls and land use activities (§ 122.26(d)(2)(ii);
- Information to characterize discharges from the municipal system;
- A proposed management program to control the discharge of pollutants to the maximum extent practicable, from municipal storm sewers (§ 122.26(d)(2)(iv));
- Assessment of the performance of proposed controls (§ 122.26(d)(2)(v));
- A financial analysis estimating the cost of implementing the proposed management programs along with identifying sources of revenue § 122.26(d)(2)(vi);
- A description of the roles and responsibilities of co-applicants (§ 122.26(d)(2)(vii)).

One municipality agreed that the assessment of the performance of controls was a critical component of establishing a viable program and one that could be accomplished within the time frame of the permit application deadlines. One commenter suggested that the applicant describe what financial resources are currently available. In response, EPA will require applicants to describe the municipality's existing budget for storm water programs in part 1 of the permit application requirements. This information will be useful to evaluate the municipality's ability to prepare and implement management plans. In response to other comments, this information will also include an overview of the municipality's financial resources and a description of the municipality's budget, including overall indebtedness and assets.

EPA has retained the financial analysis in this portion of the rule on the advice of two municipal commenters, who agreed that this was an important component of establishing a viable program and one that could be accomplished within the time frame of the permit application deadlines. Another commenter noted that this requirement is appropriate to justify a municipality's proposed management plan.

3. Major Outfalls

In past rulemakings, a controversial issue has been the appropriate sampling requirements for municipal separate storm sewer systems. Earlier storm water rulemakings have been based primarily on the principle that all discharges to waters of the United States from municipal separate storm sewers located in urban areas must be covered by an individual permit. This approach requires that individual permit applications contain quantitative data to be submitted for all such discharges. This approach was criticized because of a potentially unmanageable number of outfalls in some municipal separate storm sewer systems. Most incorporated cities with a population of 100,000 or more do not know the exact number of outfalls from their municipal systems; but based on the comments, the number ranges from 500 to 8,000 or more.

In light of the increased flexibility provided by the WQA and the development of EPA's system-wide approach for regulating municipal separate storm sewer discharges, today's rule will not require submittal of individual permit applications with quantitative data for each outfall of a municipal system. Rather today's rule will encourage system-wide permit applications to provide information suitable for developing effective storm water management programs. Under this approach, not all outfalls of the municipal system will be sampled, but rather more specific and accurate models for estimating pollutant loads and discharge concentrations will be used. The use of these models will require the identification of sources which are responsible for discharging pollutants into municipal separate storm sewers and will not require as much data to calibrate due to the source-specific nature of the model. A number of standard and localized models have been developed for estimating pollutant loads from storm water discharges.

Several commenters support the use of models for developing management plans and estimating pollutant loadings and concentrations. EPA encourages their use where applicable to particular systems.

By adopting an approach that incorporates source identification measures, the amount of quantitative data required to characterize discharges from the municipal system will be reduced because of the increased accuracy of the site-specific models which can be used. Consistent with a system-wide permit application approach, EPA proposed to focus source identification measures on "major outfalls." The proposed definition of major outfalls includes any municipal separate storm sewer outfall that discharges from a pipe with a diameter of more than 36 inches or its equivalent (discharges from a drainage area of more than 50 acres), or for municipal separate storm sewers that receive storm water from lands zoned for industrial activities, an outfall that discharges from a pipe with a diameter of more than 12 inches or its equivalent (discharges from a drainage area of 2 acres or more).

Numerous entities offered comments on this definition. Several commenters concurred with this proposed definition. One commenter maintained that the data collected at such outfalls would be sufficient to estimate pollutant loads as well as concentrations using well calibrated models. Another municipality stated that 50 acres was an excellent approximation for the average drainage area served by a 36-inch storm sewer. Two States and one county supported the definition as proposed. One large municipal entity supported the definition, stating that screening major outfalls could be accomplished with available staff over a three month period. In light of these comments, EPA has decided to retain, in part, the definition as proposed.

Numerous commenters suggested alternative definitions or otherwise disagreed with the proposed definition. Most of these comments expressed concern about the number of outfalls that would have to be tested or screened if the definition was retained. For this reason EPA has decided to limit the total number of major outfalls or equivalent sampling points that have to be tested to 250 or 500 for medium or large systems respectively. This change is discussed in further detail below.

The following are examples of comments that opposed the definition of a "major outfall" as proposed. Several commenters stated that, in the southwest, 6 to 12 foot outfalls are the norm, and that smaller outfalls should not be addressed unless there is a compelling reason to suspect illicit connections. One commenter suggested a size of 54 inches and 50 acres, while another commenter suggested that 48 inches would be appropriate. One commenter suggested that the diameter for industrial pipes should be 18 inches, while another commenter suggested that 50 acres should be the only criterion.

One commenter noted that pipe size will vary according to rainfall patterns and that a single approach would not work universally. This comment, and other similar points of view as noted herein, convinces that Agency that a more flexible approach is needed to identify field screening and sampling locations. However, EPA is also convinced that a universal standard is necessary for purposes of identifying drainage areas within the municipal system and discrete areas of land use that are drained by certain sized outfalls. This information is critical since these conveyances, and lands they drain, are sources of pollutants to waters of the United States from municipal systems and are properly the subject of appropriate permit conditions.

Many commenters suggested placing a limit on the number of major outfalls addressed during the field screening phase of the permit application. Two municipalities stated that the proposed definition of major outfalls in terms to the pipe diameter was too small and that too many outfalls would be covered. One municipality stated that under the proposed definition, it would have over 4700 "major outfalls," a number viewed as being unacceptably large. Several municipalities argued that they would be penalized for over-design of their storm drain system. One municipality stated field screening of outfalls should be limited to 200 for medium cities and 500 for large cities. Some commenters suggested EPA set a percentage of major outfalls for screening, because all pipes in some municipalities meet the definition of major outfall. One commenter suggested that a sliding scale be used to determine the number of outfalls tested: those with 50 test all, those with 100–200 test 50%, etc. Other commenters suggested a flat percentage of outfalls or flat number such as 100.

4. Field Screening Program

EPA also received several comments in response to the proposed field screening methodology. Among the major concerns were: End of pipe sampling may not be practical and the more appropriate and accessible location is likely to be the nearest upstream manhole; the type of discharge should be the criterion for selecting sampling points as opposed to pipe size; a system wide evaluation is more appropriate than checking each outfall; within some systems, major outfalls or pipe size will not reflect discharges from suspect or old land use areas; efforts should be focused on locations where illicit connections are expected; sites should be determined by looking at sites within drainage basin areas based on land use within those basins; land use and hydrology of the watershed should be the criteria for selecting points;

screening should be performed at locations that will allow for the location of upstream discharges; the focus should be exclusively on drainage areas rather than pipe size, since pipe size will vary with slope; a prescribed percentage of total flow may be more appropriate; state water quality standards should be utilized along with focusing on actual quality in the reaches of a stream.

EPA is convinced by these comments that today's rule should allow applicants to either field screen all major outfalls as proposed (first procedure) or use a second procedure to provide for the strategic location of sampling points to pinpoint illicit connections. EPA agrees with comments that the size of the outfall will not always reflect the chance of uncovering illicit connections or discharges, and that field screening points should be easily accessible.

This second procedure is as follows: field screening points and/or outfalls are randomly located throughout the storm sewer system by placing a grid over a drainage system map and identifying those cells of the grid which contain a major outfall or segment of the storm sewer system. The grid shall be established using the following guidelines and criteria:

(1) A grid system consisting of perpendicular north-south and east-west lines spaced 1/4 mile apart shall be overlaid on a map of the municipal storm sewer system, creating a series of cells;

(2) All cells that contain a segment of the storm sewer system shall be identified; one field screening point shall be selected in each cell; major outfalls may be used as field screening points;

(3) Field screening points or major outfalls should be located downstream of any sources of suspected illegal or illicit activity;

(4) Field screening points shall be located to the degree practicable at the farthest manhole or other accessible location downstream in the system, within each cell; however, safety of personnel and accessibility of the location should be considered in making this determination;

(5) The assessment and selection of cells shall use the following criteria: Hydrological conditions; total drainage area of the site; population density of the site; traffic density; age of the structures or buildings in the area; history of the area; land use types;

(6) For medium municipal separate storm sewer systems, no more than 250 cells need have identified field screening points; in large municipal separate storm sewer systems, no more than 500 cells need to have identified field screening points for detecting illicit connections; cells established by the grid that contain no storm sewer segments will be eliminated from consideration; if fewer than 250 cells in medium municipal sewers are created, and fewer than 500 in large systems are created by the overlay on the municipal sewer map, then all those cells which contain a segment of the sewer system shall be subject to field screening (unless access to the separate storm sewer system is impossible);

(7) Large or medium municipal separate storm sewer systems which are unable to utilize the procedures described in paragraphs (1) through (6) above, because a sufficiently detailed map of the separate storm sewer systems is unavailable, shall field screen at least 250 or 500 major outfalls respectively using the following method: the applicant shall establish a grid system consisting of north-south and east-west lines spaced 1/4 mile apart overlaid on a map of the boundaries of a large or medium municipal entity described at § 122.26(b), thereby creating a series of cells; major outfalls in as many different cells as possible shall be selected until 500 major outfalls (large municipalities) or 250 major outfalls (medium municipalities) are selected; a field screening analysis shall be undertaken at these major outfalls.

The methodology outlined above is in response to public comments which indicated that the field screening and sampling of major outfalls as proposed would lead to insurmountable logistical problems in some municipal systems. EPA believes that the above is an effective approach to pinpointing suspected problem points along a given trunkline or segment of separate storm sewer system. Jurisdictions with no extensive or previous history of monitoring, or lack of an intensive monitoring program can utilize the methods described in establishing a program. Furthermore, the approach will allow for the prioritization of outfalls, sampling points, or areas within the municipality where there are suspected illicit connections or discharges, or other circumstances creating higher concentrations and loadings of pollutants.

Paragraph (7) enables municipalities to select major outfalls without regard to the municipal sewer system map that is required for using the procedure described in paragraphs (1) through (6). However, the applicant must still select outfalls within the cells created by overlaying a 1/4 mile grid over a map of the boundaries of the large or medium municipal entity defined under § 122.26(b), and select major outfalls within as many of those cells as possible, up to 500 (large municipal systems) or 250 (medium municipal systems). In this manner, as many different areas and land uses within the municipal system will be covered by the field screening component of the municipal application.

In order to keep the costs of the program within the anticipated limits of the proposed regulation, the number of outfalls or sampling locations using the grid system is to be limited to 500 for large municipal separate storm sewer systems and 250 for medium municipal separate storm sewer systems.

In response to several comments, EPA has clarified the definition of major outfalls with regard to the words, "pipe with an inside diameter of 36 inches or more or its equivalent" and "a pipe with an inside diameter of 12 inches or more or its equivalent." This definition has been modified to specify that single pipes or single conveyances with the appropriate diameter or equivalent are covered.

EPA's proposal required municipal permit applicants to submit a fiscal analysis of expenditures that will be required in order to implement the proposed management plans required in part 2 of the application. The description of fiscal resources should include a description of the source of the funds. Some commenters felt that a fiscal analysis should only be required during the term of the permit. In response, EPA believes that during the two years of permit application development, the permit applicant should be in a position to submit information on the ability and means for financing storm water management programs during the term of the permit. EPA views this information as an important means of evaluating the scope of program and whether the permittee will be devoting adequate resources to implementing the program before that program is mapped out in the permit itself.

5. Source Identification

The identification of sources which contribute pollutants to municipal separate storm sewers is a critical step in characterizing the nature and extent of pollutants in discharges and in developing appropriate control measures. Source identification can be useful for providing an analysis of pollutant source contribution and for identifying the relationship between pollutant sources and receiving water quality problems. In cases where end-of-pipe controls alone are not practicable, it is essential to identify the source of pollutants into the municipal storm

sewer systems to support a targeted approach to control pollutant sources.

The relative contribution of pollutants from various sources will be highly site-specific. The first step in developing a targeted approach for controlling pollutants in discharges from municipal storm sewer systems is identifying the various sources in each drainage basin that will contribute pollutants to the municipal storm sewer system.

This rulemaking phases in the source identification requirements of the permit program by establishing minimum objectives in part 1 of the application and by requiring applicants to submit a source identification plan in part 2 of the application to provide additional information during the term of the permit. The minimum source identification requirements of part 1 of the application have been designed to provide sufficient information to provide an initial characterization of pollutants in the discharges from the municipal storm sewer system. EPA realizes that with many large, complex municipal storm sewer systems, it may be difficult to identify all outfalls during the permit application process. Accordingly, EPA is requiring that known outfalls be reported in part 1 of the application. Part 1 of the application will also include: A description of procedures and a proposed program to identify additional major outfalls; the identification of the drainage area associated with known outfalls; a description of major land use classifications in each drainage area, descriptions of soils, the location of industrial facilities, open dumps, landfills or RCRA hazardous waste facilities which discharge storm water to the municipal storm sewer system; and ten year projections of population growth and development activities (population data and development projections will be useful for future predictions of loadings to receiving waters from municipal storm sewer systems, and capacities required for treatment systems). In general, population projections should reflect various scenarios of development (high, medium, low relative to recent trends).

Part 2 of the application will supplement the information reported in part 1 of the application so that, at a minimum, all major outfalls are identified.

Under today's rule, municipal or public entities responsible for applying for and obtaining an NPDES permit will be required to identify the location of an open dump, sanitary landfill, municipal incinerator or hazardous waste treatment, storage, and disposal facility under RCRA which may discharge storm water to the system as well as all facilities which discharge storm water associated with industrial activity into a large or medium municipal separate storm sewer system.

Requiring these source identification measures is supported by the legislative history of section 405 of the WQA, which instructs that "[i]n writing any permit for a municipal separate storm sewer, EPA or the State should pay particular attention to the nature and uses of the drainage area and the location of any industrial facility, open dump, landfill, or hazardous waste treatment, storage, or disposal facility which may contribute pollutants to the discharge." (emphasis added) [Vol 133 Cong. Rec. S752 (daily ed. Jan. 14, 1987].

One municipality questioned the purpose of the topographic map and commented that the scale of the topographic map is too large to indicate any of the required outfall, drainage, industrial or structural control information. In response, the purpose of the topographic map is to identify receiving waters, major storm water sewer lines that contribute discharges to these waters, and potential sources of storm water pollution. EPA disagrees that a USGS 7.5 scale map is inappropriate for identifying these features within a municipal system. The scale afforded by such a map provides sufficient detail to allow specified delineation of outfalls, while not requiring an overly burdensome map in terms of size. Numerous commenters noted the value of source identification information and generally supported submitting this information in the permit application.

Many commenters questioned the value of the source identification information for the purpose of characterizing pollutant loads and concentrations. Conversely, one commenter opined that the requirement would provide sufficient information to estimate pollutant loadings from each outfall using loading models to estimate loadings by watershed. In response, the source identification information serves several purposes. It is the first step for identifying potential sources of pollutants from which more in depth analysis can be accomplished, under the discharge characterization component of the application. Also, where appropriate, it may be used in conjunction with models to estimate loadings and concentrations. EPA has also taken note of the many comments that question or dismiss the concept of determining pollutant loads and concentrations solely from source identification. Accordingly, EPA is convinced that at least some of the sampling requirements as proposed are necessary to facilitate more accurate system specific estimates of pollutant concentrations and loadings. These are discussed below, in the discharge characterization section.

One commenter suggested that aerial photos be submitted in lieu of topographic maps. EPA agrees that an aerial photograph of the appropriate scale that communicates the same information as a topographic map may be substituted. Today's final rule reflects this flexibility.

The source identification component of the municipal application also requires that municipal applicants identify the industrial activity within the drainage area associated with each major outfall. One commenter stated that where multiple storm sewers outfalls discharge to a stream reach, municipalities should be allowed to delineate a single sewer-shed for identifying sources of industrial activity. In response, the rule does not delimit an applicant's ability to identify industries in groups according to a common series of storm sewer outfalls, if that is an easier or more appropriate methodology for that particular applicant. However, EPA would view this as appropriate only where the land use is of one type, such as industrial. Where land use is mixed within the drainage area associated with each major outfall, such differences need to be identified.

In response to comments, to the extent that EPA is requesting that applicants identify the types of industrial facilities operating within the municipality, the municipality is free to use Standard Industrial Classification (SIC) or other systems which identify the principal products or services of the facility. One commenter disagreed with EPA's decision to require a list of water bodies that are listed under CWA sections 304(1), 319(a), 314(a), and 320, because the States already have this information and that requesting it from permittees could result in "omissions, misunderstandings, and mistakes." EPA believes that these waters should be identified in the application so that appropriate permit conditions can be developed that address storm water discharges that are adversely effecting such waters. EPA believes that having this information immediately at the disposal of the municipality and the permit writer will speed the process and alert the municipality of storm water discharges to listed water bodies and potentially polluted storm water discharges to those waters.

6. Characterization of Discharges

The characterization plan and data collection required in today's rule as elements of Part-one and Part-two of the municipal permit application is comprised of several major components:

- A screening analysis to provide information to develop a program for detecting and controlling illicit connections and illegal dumping to the municipal separate storm sewer system;
- Initial quantitative data to allow the development of a representative sampling program to be incorporated as a permit condition;
- System-wide estimates of annual pollutant loadings and the mean concentration of pollutants in storm water discharges, and a schedule to provide estimates during the term of the permit for each major outfall of the seasonal pollutant loadings and the event mean concentration of pollutants in storm water discharges; and
- An identification of receiving waters with known water quality impacts associated with storm water discharges.

Several commenters noted the importance of developing and targeting management programs based on discharge characterization data and monitoring. Numerous other commenters stressed the importance of a program to identify and eliminate illicit connections and improper disposal. EPA agrees that discharge characterization is an important component of developing management programs. Most of the discharge characterization components of the municipal application procedure have been retained as proposed. However some changes and clarifications have been made, and these are noted below.

a. *Screening analysis for illicit discharges (part 1 of application).* Illicit discharges (non-storm water discharges without a NPDES permit), and illegal dumping to municipal separate storm sewer systems occur in a relatively haphazard manner. Due to the unpredictability of such discharges, today's permit applications require a field analysis for the development of priorities for detecting and controlling such discharges. A field screening approach will provide a means of detecting high levels of pollutants in dry weather flows, which is one indicator of illicit connections. Results of a field test of such discharges will provide further information about the nature of the discharge to determine if further investigation is warranted. Visual observation of dry weather flows has been shown to be one the mos' effective means for tracking down illicit connections and improper disposal.

As discussed in greater detail in section VI.H.7.b of today's preamble, EPA is proposing to require that municipal applicants submit a comprehensive plan to develop a program to detect and control illicit connections and illegal dumping. In order to develop appropriate priorities for these programs, applicants shall submit the results of a screening analysis to be performed on major outfalls or "field screening points" in the systems to detect the presence of illicit hookups and illegal dumping. The results of the screening analysis, referred to as the field screen, would be reported in part 1 of the permit application.

Under the requirements for a field screen, the applicant or co-applicants will submit a description of observations of dry weather discharges from major outfalls or "field screening points" identified in part 1 of the application. At a minimum, the field screen would include a description of visual observations made during a dry weather period. If any flow is observed during a dry weather period, two grab samples will be collected during a 24 hour period with a minimum period of four hours between samples. For all such samples, a description of the color, odor, turbidity, the presence of an oil sheen or surface scum as well as any other relevant observation regarding the potential presence of non-storm water discharges or illegal dumping would be provided. In addition, the applicant should provide the results of a field screen which includes on-site estimates of pH, total chlorine, total copper, total phenol, detergents (or surfacants) along with a description of the flow. EPA is not requiring analytical methods approved under 40 CFR part 136 be used exclusively in the field screen. Rather, the use of inexpensive field sampling techniques such as the use of colormetric detection methods is anticipated. Where the field screen does not involve analytical methods approved under 40 CFR part 136, the applicant is required to provide a description of the method used which includes the name of the manufacturer of the test method, including the range and accuracy of the test. Appropriate field techniques for a field screen of dry weather discharges are discussed in EPA guidance for municipal storm water discharge permit applications.

It should be clarified that data from the field screen is generally not appropriate for comprehensive evaluation of water quality impacts, or estimating pollutant loadings. Rather, the information from the field screen in part 1 of the application will be used along with other information, such as the age of development and degree of industrial activity in the drainage basin, to identify areas or outfalls which are appropriate targets for management programs and for investigations directed at identifying and controlling non-storm water discharges to separate storm sewers during the term of the permit.

In the December 7, 1988, proposal, EPA proposed a second phase of the screening analysis requiring that wet-weather and dry-weather samples be collected and analyzed in accordance with analytical methods approved under 40 CFR part 136 from designated major outfalls for a larger set of pollutants identified with illicit connections. Comments essentially viewed this proposal as too ambitious for the permit application. One commenter recommended that this procedure could best be accomplished during the term of the permit. Some comments maintained that the collection of analytical samples as a follow up to an initial field screen analysis was not the most cost-effective, practicable or efficient method for pinpointing illicit connections. EPA recognizes that several municipal programs to detect and control illicit connections and other non-storm water discharges have been successfully developed and implemented without the use of extensive analytical sampling (for example, programs in Fort Worth, TX and Washtenaw County, MI). After identifying and analyzing the comments on this aspect of the proposal EPA has withdrawn this element of the proposal from today's rule. EPA believes that a follow-up phase to the initial field screening is more appropriate during the term of the permit. Thus, EPA has dropped the field screening requirement proposed for Part 2 of the application.

b. *Representative data (Part 2 of application).* The NURP study showed that pollutant concentrations in urban runoff can exhibit significant variation. Pollutant concentrations in such discharges vary during storm events and from storm event to storm event. Given the complex, variable nature of storm water discharges from municipal systems, EPA favors a permit scheme where the collection of representative data is primarily a task that will be accomplished through monitoring programs during the term of the permit. Permit writers have the necessary flexibility to develop monitoring requirements that more accurately reflect the true nature of highly variable and complex discharges.

Today's rule provides for an initial assessment of the quality of discharges from municipal separate storm sewers based primarily on source identification measures and existing information received in the permit application. This information will be used to begin to characterize system discharges. The analysis developed under this approach will not rely soley on sampling data collected during the application process, but will also incorporate existing data bases such as the one developed under the NURP study. Today's rule requires that some quantitative data will be collected to ensure the system discharges can be appropriately represented by the various existing data bases and to provide a basis for developing a monitoring plan to be implemented as a permit condition.

Today's rule requires that quantitative data be submitted for discharges from selected storm events at between 5 and 10 outfalls or field screening points. The municipality will recommend and the Director will then designate the outfalls or field screening points as representative of the commercial, residential and industrial land use activities of the drainage area contributing to the system, on the basis of information received in part 1 of the application. The applicant will be required to collect samples of a storm discharge from three storm events occurring one month apart for each designated outfall or field screening point. This is a modification to the December 7, 1988, proposal wherein only one of the 5 to 10 outfalls was to be sampled during three storm events, and the remaining sampled only once. This requirement may be modified by the Director if the type and frequency of storm events require different sampling. The Director may require samples of discharges to be collected during snow melts or during specified seasons. The Director may also require additional testing during a single event if it is unlikely that there will be three storm events suitable for sampling during the year. Furthermore, the Director may allow exemptions to the three storm event requirement when climatic conditions create good cause for such exemptions; for example, arid regions or areas experiencing drought conditions during the period when applications are developed could be exempted.

EPA has added requirements to sample more storm events in response to comments that the sampling procedure proposed would not necessarily yield representative data. Commenters indicated that: rain events of different intensity may yield different levels and types of pollutants; a rain event after a dry spell of several months will not be representative when compared to rain events occurring closer together, due to the build up of constituents; one sample may reflect short term effects such as improper disposal rather than long term effects; and that rain events are generally too variable to rely on the limited sampling as proposed. Clearly the data collected from sampling storm water discharges has a tendency to vary greatly. The more sampling that is accomplished, the greater extent to which this variability may be accounted for and appropriate management programs developed.

In selecting the amount of data to be collected during the permit application process, EPA has attempted to balance the usefulness of this data against the economic and logistical constraints in actually obtaining it. In some cases the data obtained will support initial loading and concentration estimates obtained using various modeling techniques, from which appropriate permit conditions can be developed. Data obtained may be supplemented with further data collection during the term of the permit.

EPA believes that the requirement that selected major municipal outfalls or "field screening points" be sampled for more than one event will provide verification that the characterization of discharge is valid. Where an ongoing sampling program is defined for the term of the permit, samples taken during the first few years of this period can be used to verify the application results. If a municipality or an industry questions the conclusions drawn from the characterization sampling, it may at its discretion choose to perform additional sampling to either confirm or dispel these concerns.

All samples collected will be analyzed for all pollutants listed in Table II, (organic pollutants), and Table III, (toxic metals, cyanide and total phenol) of appendix D of 40 CFR part 122, and for the pollutants listed in Table M-1 below:

Table M-1

Total suspended solids (TSS).	Total dissolved solids.
COD	BOD_5.
Oil and grease	Fecal coliform.
Fecal streptococcus	pH.
Dissolved phosphorus	
Total ammonia plus organic nitrogen.	Total phosphorus.
Total Kjeldahl nitrogen	Nitrate plus nitrite.

A portion of the NURP program involved monitoring 120 priority pollutants in storm water discharges from lands used for residential, commercial and light industrial activities. The NURP program excluded testing for asbestos and dioxin. Results for seven other organic priority pollutants were not considered valid due to changes in, or constraints on test methods. Seventy-seven priority pollutants were detected in samples of storm water discharges from lands used for residential, commereial and light industries taken during the NURP study, including 14 inorganic and 63 organic pollutants. Table M-2 shows the priority pollutants which were detected in at least ten percent of the discharge samples which were sampled for priority pollutants.

TABLE M-2.—PRIORITY POLLUTANTS DETECTED IN AT LEAST 10% OF NURP SAMPLES

[In percent]

Metals and inorganics	Frequency of detection
Antimony	13
Arsenic	52
Beryllium	12
Cadmium	48
Chromium	58
Copper	91
Cyanides	23
Lead	94
Nickel	43
Selenium	11
Zinc	94
Pesticides:	
Alpha-hexachlorocyclohexane	20
Alpha-endosulfan	19
Chlordane	17
Lindane	15
Halogenated aliphatics:	
Methane, dichloro-	11
Phenols and cresols:	
Phenol	14
Phenol, pentachloro-	19
Phenol, 4-nitro	10
Phthalate esters:	
Phthalate, bis(2-ethylhexyl)	22
Polycyclic aromatic hydrocarbons:	
Chrysene	10
Fluoranthene	16
Phenanthrene	12
Pyrene	15

The NURP data also showed a significant number of these samples exceeded various freshwater water quality criteria. The exceedence of water quality criteria does not necessarily imply that an actual violation of standards will exist in the receiving water body in question. Rather, the enumeration of exceedences serves as a screening function to identify those constituents whose presence in urban storm water runoff may warrant high priority for further evaluation.

Members of this group represent all of the major organic chemical fractions

found in Table II of appendix D of 40 CFR part 122 (volatiles, acid compounds, base/neutrals, pesticides). Today's rule requires testing for all organic constituents in Table II rather than limiting the sampling requirements to the 24 toxic constituents found in the NURP study because they will provide a better description of the discharge at essentially the same cost. (The cost of analyzing samples for organic chemicals strongly depends on the number of major organic chemical fractions tested). The NURP study focused on characterizing storm water discharges from lands used for residential, commercial and light industrial activities. In general, the NURP study did not focus on other sources of pollutants to municipal separate storm sewer systems and, therefore, does not reflect all potential pollutants that may be present in discharges from municipal separate storm sewer systems.

The sampling requirements for the permit application address a limited number of sampling locations but require analysis for a wide range of pollutants. Sampling for a wide range of pollutants as a permit application requirement should provide permit writers with appropriate data to target more specific pollutants when developing requirements for a monitoring program during the term of the permit.

Numerous commenters stated that monitoring for all priority pollutants seemed excessive. However, EPA is convinced that it is more appropriate for permit conditions to focus on and prioritize particular pollutant problems after data covering a broad spectrum of pollutants are developed. As noted above, NURP identified 77 priority pollutants in urban runoff, but only from residential, commercial, and light industrial (*e.g.* industrial parks) areas. One municipal entity stated that this approach is a reasonable and realistic means of providing some useful baseline data, while others recommended sampling a variety of parameters that are included in Tables M–1 and M–2. Another municipal entity stated that characterization of outfall discharge quality during storm events is necessary as a means of targeting source control activities.

EPA is working with the United States Geological Survey (USGS) to evaluate the availability of USGS technical assistance to municipalities through cooperative funding programs to aid in collecting representative quantitative data of storm water discharges from municipal systems.

USGS data collection programs with municipalities typically include storm water discharge samples obtained at various times during a storm hydrograph event. Various USGS field procedures can be used to obtain discharge data for pipes, culverts, etc., typically found in urban areas. Pollutant models can be calibrated with data and long-term rainfall records to simulate the quality of system discharges and compared to other storm water models.

In addition, EPA recognizes that many municipalities have participated in studies, such as NURP, that involve sampling of urban runoff as well as other components of discharges from municipal separate storm sewer systems. All existing storm water sampling data along with relevant water quality data, sediment data, fish tissue data or biosurvey data taken over the last ten years is considered relevant and, under today's rule, must be submitted with part 1 of the application. Sampling data that is submitted must be accompanied with a narrative description of the drainage area served by the outfall monitored, a description of the sampling and quality control program, and the location of receiving water monitoring.

EPA requested comments on the use of existing data, such as that generated under the NURP study, to satisfy the requirement of providing representative sampling data. Commenters did not agree on the value of NURP results as an indicator of representative data. Several commenters expressed the view that existing data could be used to satisfy in whole or in part the representative sampling requirements of the storm water permit application. However, commenters generally did not offer suggested criteria that could be used to verify the validity of existing data. One commenter believed that intensive sampling over a period of ten years in 12 basins, when combined with NURP data, would be adequate.

One commenter supported the use of data, such as that obtained from the NURP study, to target sampling programs. EPA supports such a methodology and has retained this portion of the proposed discharge characterization component. EPA received strong support from an environmental group for retaining this information requirement in part 1 of the application.

In light of these comments EPA believes it is appropriate to retain the representative sampling requirements without resorting to the use of existing data exclusively. Because of the inherent variability in reliability and applicability of existing data, EPA is convinced that a nationally consistent methodology for collecting data is appropriate. This data can then be used in conjunction with other existing data and models to develop appropriate site specific management programs and more generalized management program strategies. Where existing data and data collected under today's rule varies or does not match, further sampling under the term of the permit will be accomplished to more accurately assess the discharge of pollutants.

c. Loading and Concentration Estimates (part 2 of application). The assessment of the water quality impacts of discharges from municipal separate storm sewer systems on receiving waters requires the analysis of both pollutant loadings and concentrations of pollutants in discharges.

The loading and concentration estimates in today's rule will be used to evaluate two types of water quality impacts: (1) Short-term impacts; and (2) long-term impacts. Specifically, the regulation requires estimates of the annual pollutant load of the cumulative discharges to waters of the United States from municipal outfalls and the event mean concentration of the cumulative discharges to waters of the United States municipal outfalls during a storm event for BOD_5, COD, TSS, dissolved solids, total nitrogen, total ammonia plus organic nitrogen, total phosphorus, dissolved phosphorus, cadmium, copper, lead, and zinc. Estimates shall be accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modelling, data analysis, and calculation methods. Municipalities have options in the use of methodologies, including those presented in NURP for calculating loads.

Short term impacts from discharges from municipal separate storm sewers involve changes in water quality that occur during and shortly after storm events. Examples of short-term impacts that can lead to impairments include periodic dissolved oxygen depression due to the oxidation of contaminants, high bacteria levels, fish kills, acute effects of toxic pollutants, contact recreation impairments and loss of submerged macrophytes. Characterization of instream pollutant concentrations based on estimated pollutant concentrations in system discharges are important for evaluating these types of impacts.

Long-term water quality impacts from discharges from municipal separate storm sewers may be caused by contaminants associated with suspended solids that settle in receiving water sediments and by nutrients which enter receiving water systems with long

retention times. Pollutant loading data are important for evaluation of impairments such as loss of storage capacity in streams, estuaries, reservoirs, lakes and bays, lake eutrophication caused by high nutrient loadings, and destruction of benthic habitat. Other examples of the long-term water quality impacts include depressed dissolved oxygen caused by the oxidation of organics in bottom sediments and biological accumulation of toxics as a result of uptake by organisms in the food chain. An estimate of annual pollutant loading associated with discharges from municipal storm water sewer systems is necessary to evaluate the magnitude and severity of the environmental impacts of such discharges and to evaluate the effectiveness of controls which are imposed at a later time.

Municipal storm water sewer systems generally handle runoff from large drainage areas and the sources of pollution are usually very diffuse. The concentrations of many pollutants in discharges from these systems are often low relative to many industrial process and POTW discharges. The water quality impacts of low concentration pollution discharges tend to be cumulative and need to be evaluated in terms of aggregate loadings as well as pollutant concentrations. A site-specific loading analysis can be used to evaluate the relative contribution of various pollutant sources.

7. Storm Water Quality Management Plans

Today's rule facilitates the development of site-specific permit conditions by requiring large and medium municipal permit applicants to submit, along with other information, a description of existing structural and non-structural prevention and control measures on discharges of pollutants from municipal storm sewers in part I of the permit application. Section 122.26(d)(2)(iv) requires the applicant to identify in part 2 of the application, to the degree necessary to meet the MEP standard, additional prevention or control measures which will be implemented during the life of the permit. Although, in many cases, it will not be possible to identify all prevention and control measures that are appropriate as permit conditions, EPA believes that the process of identifying components of a comprehensive prevention and/or control program should begin early and that applicants should be given the opportunity to identify and propose the components of the program that they believe are appropriate for first preventing or controlling discharges of pollutants.

As noted earlier, EPA recognizes that problems associated with storm water, combined sewer overflows (CSOs) and infiltration and inflow (I&I) are all interrelated even though they are treated somewhat differently under the law. EPA believes that it is important to begin linking these programs and activities and, because of the potential cost to local governments, to investigate the use of innovative, nontraditional approaches to reducing or preventing contamination of storm water. The application process for developing municipal storm water management plans provides an ideal opportunity between steps 1 and 2 for considering the full range of nontraditional, preventive approaches.

The permit application requirements in today's rule require the applicant or co-applicants to develop management programs for four types of pollutant sources which discharge to large and medium municipal storm sewer systems. Discharges from large and medium municipal storm sewer systems are usually expected to be composed primarily of: (1) Runoff from commercial and residential areas; (2) storm water runoff from industrial areas; (3) runoff from construction sites; and (4) non-storm water discharges. Part 2 of the permit application has been designed to allow the applicant the opportunity to propose MEP control measures for each of these components of the discharge. Discharges from some municipal systems may also contain pollutants from other sources, such as runoff from land disposal activities (leaking septic tanks, landfills and land application of sewage sludge). Where other sources, such as land disposal, contribute significant amounts of pollutants to a municipal storm sewer system, appropriate control measures should be included on a site-specific basis. Proposed management programs will then be evaluated in the development of permit conditions.

There is some overlap in the manner in which these pollutant sources are characterized and their sources identified. For instance, improper disposal of oil into storm drains is often associated with do-it-yourself automobile oil changes in residential areas, or improper application or over-use of herbicides and pesticides in residential areas can also occur in industrial areas. Also, some control measures will reduce pollutant loads for multiple components of the municipal storm sewer discharge. These measures should be identified under all appropriate places in the application; as discussed below, however, double counting of pollutant removal must be avoided when the total assessment of control measures is performed.

Although many land use programs have multiple purposes, including the reduction of pollutants in discharges from municipal separate storm sewer systems, the proposed management programs in today's rule are intended to address only those controls which can be implemented by the permit applicant or co-applicants. EPA cannot abrogate its responsibilities under the CWA to implement the NPDES permit program by relying on pollution control programs that are outside the NPDES program. For example, municipal permit management programs may not rely exclusively on erosion or sediment control laws for implementing that portion of management programs that address discharges from construction sites, unless such laws implement NPDES permit program requirements entirely and that such implementation is a part of the permit.

EPA anticipates that storm water management programs will evolve and mature over time. The permits for discharges from municipal separate storm sewer systems will be written to reflect changing conditions that result from program development and implementation and corresponding improvements in water quality. The proposed permit applications will require applicants to provide a description of the range of control measures considered for implementation during the term of the permit. Flexibility in developing permit conditions will be encouraged by providing applicants an opportunity to identify in the permit application priority controls appropriate for the initial implementation of management programs. Many commenters endorsed the flexible site-specific storm water program approach as proposed as a method for addressing regional water quality control programs in a cost effective manner. To this extent, EPA agrees with one municipality that management programs should focus on more serious problems and sources of pollutants identified in the municipal system. However, EPA believes that to implement section 402(p)(3), comprehensive storm water management programs which address a number of major sources of pollutants to a system are necessary. Municipal programs should not be focused solely on a single source of pollution, such as illicit connections.

One commenter maintained that management program development

should be flexible enough to allow for consideration of what is attainable based on the area's climate, vegetation, hydrology, and land uses. EPA agrees with this comment. Some strategies for reducing pollutants in the northeast will not be practical in the southwest, such as management programs for deicing activities. The permit application process will determine what strategies are appropriate in different locations.

Several commenters supported addressing storm water pollutant problems through management practices or programs rather than end of pipe controls or treatment. EPA agrees with this comment to the extent that storm water management practices are a general theme of this rulemaking with regard to municipal permits. However, there will be cases where such discharges are best addressed through technology such as retention, detention or infiltration ponds.

One commenter reacted unfavorably to the flexible site-specific management plan approach stating that there is no hard criteria upon which to judge the adequacy of programs. Another commenter felt that there should be a BAT standard for municipal permits. Another commenter stated that the rule should contain specific BMPs that the permittee must comply with. EPA disagrees with these comments. The Clean Water Act requires municipalities to apply for permits that will reduce pollutants in discharges to the maximum extent practicable and sets out the types of controls that are contemplated to deal with storm water discharges from municipalities. The language of CWA section 402(p)(3) contemplates that, because of the fundamentally different characteristics of many municipalities, municipalities will have permits tailored to meet particular geographical, hydrological, and climatic conditions. Management practices and programs may be incorporated into the terms of the permit where appropriate. Permit conditions, which require that storm water management programs be developed and implemented or require specific practices, are enforceable in accordance with the terms of the permit. EPA disagrees with the notion that this regulation, which addressed permit application requirements, should create mandatory permit requirements which may have no legitimate application to a particular municipality. The whole point of the permit scheme for these discharges is to avoid inflexibility in the types and levels of control. Further, to the degree that such mandatory requirements may be appropriate, these requirements should be established under the authority of section 402(p)(6) of the CWA and not in this rulemaking, which addresses permit application requirements.

Some commenters suggested that management programs should be developed as part of the permit conditions and not as part of the permit application. EPA agrees that management programs and their ongoing development should be part of the permit term. However, EPA is convinced, and many commenters agree, that the permit application should contain information on what the permittee has done to date and what it proposes and plans to do during the permit term based upon its discharge characterization and source identification data. This is a reasonable and logical approach and one that meets the intent and letter of section 402(p)(3) of the CWA. As stated above, this would be an appropriate method for implementing storm water management programs that should mature and evolve over time.

Applicants will propose priorities based on a consideration of appropriate controls including, but not limited to, consideration of controls that address: reducing pollutants to municipal separate storm sewer system discharges that are associated with storm water from commercial and residential areas (§ 122.26(d)(2)(iv)(A)); illicit discharges and illegal disposal (§ 122.26(d)(2)(iv)(B)); storm water from industrial areas (§ 122.26(d)(2)(iv)(C)); and runoff from construction sites (§ 122.26(d)(2)(iv)(D)). Permits for different municipalities will place different emphasis on controlling various components of discharges from municipal storm sewers. For example, the potential for cross-connections (such as municipal sewage or industrial process wastewater discharges to a municipal separate storm sewer) is generally expected to be greater in municipalities with older developed areas. On the other hand, municipalities with larger areas of new development will have a greater opportunity to focus controls to reduce pollutants in storm water generated by the area after it is developed, discharges from construction sites, and other planning activities.

EPA requested comments on the process and methods for developing appropriate priorities in management programs proposed in applications and how the development of these priorities can be coordinated with controls on other discharges to ensure the achievement of water quality standards and the goals of the CWA.

Discharges from diffuse sources in residential areas was recognized by several commenters as a significant source of pollutants. Accordingly, these elements of the management plans have been retained. In conjunction with the importance of developing programs for illicit connections, numerous commenters stated that education programs are a priority. Another commenter emphasized that ordinances prohibiting such discharges and their enforcement is a crucial means of a successful program in this regard. EPA agrees with these comments and consequently will retain those portions of management program development that include a description of a program for educational activities such as public information for the proper disposal of oil and toxic materials and the use of herbicides, pesticides and fertilizers.

Some commenters noted that discharge characterization is necessary for development of appropriate management plans. EPA agrees with these comments and has retained the discharge characterization components in this rulemaking. However, EPA disagrees that the results of all discharge characterization procedures (*i.e.*, part 1 and part 2) are necessary to describe and propose a program as required in part 2 of the application. The application of various models is available to permit applicants, where needed, to develop appropriate management programs. All available site specific discharge characterization data should be available to the permit writer to draft appropriate conditions for the term of the permit.

One commenter noted that an important aspect of developing management plans is establishing the necessary legal authority to improve water quality. EPA agrees with this comment and has retained those aspects of the regulation which call for development and attainment of adequate legal authority in both parts of the municipal application.

One commenter stated that programs should address previously identified water quality problems in other programs that are required by section 304(1) of the CWA. EPA agrees that identified water quality problems need to be addressed by management programs, and the municipal permit application will call for an identification of these waters. However, EPA does not endorse addressing these waters to the exclusion of all others within the boundaries of the municipal separate storm sewer system. Some waters may experience substantial degradation after rain events and still not be listed under

section 304(1). Further, water quality impacts in listed waters may not be related to storm water discharges, while other non-listed waters do have water quality impacts from storm water discharges. Similarly, EPA agrees with one commenter that it may be desirable to focus attention and resources on certain problem watersheds within a municipality, and controls may be imposed and programs prioritized on that basis. However, such a focus should not be to the exclusion of other waters and watersheds that have water quality problems (although less troublesome) traceable to storm water discharges. The CWA requires that permits address discharges to waters of the United States, not just waters previously targeted under special programs.

Some commenters expressed concern that the permit application requires the design of management programs before knowing what will be in the permits. EPA disagrees with the thrust of this comment, that is that the order of requirements is inappropriate. The permit applicant will have two years to develop proposed plans which can be considered by permit writers in the development of the permit. Based upon a consideration of the management program proposed by the municipality and other relevant information, permits can be tailored for individual programs. One commenter stated that the cornerstone of management programs are inspection and enforcement programs. EPA agrees that these two elements are important components. Without inspection and enforcement mechanisms the programs will undoubtedly falter. Accordingly these requirements in the description of management programs in the permit application have been retained. In a similar vein, one commenter emphasized the importance of developing legal authority, financial capability, and administrative infrastructure. EPA agrees with this comment and has retained those aspects of the regulation that call for a description of applicants plans and resources in these areas.

One commenter stressed that control of discharges into the municipal system from industries is an important goal of municipal storm water management programs. EPA agrees with this comment and has retained the proposed description of management programs to address discharges from industrial sources. Other commenters identified industries as the principal contributors of pollutants to municipal separate storm sewer systems.

In addition, EPA will continue to evaluate procedures and methods to control storm water discharges to the extent necessary to mitigate impacts on water quality in the studies required under section 402(p)(5) of the CWA. One purpose of these studies will be to evaluate the costs and water quality benefits associated with implementing these procedures and methods. This evaluation will address a number of factors which impact the implementation costs associated with these programs, such as the extent to which similar municipal ordinances are currently being implemented, the degree to which existing municipal programs (such as flood management programs or construction site inspections) can be expanded to address water quality concerns, the resource intensiveness of the control, and whether the control program will involve public or private expenditures. This information, along with information gained during permit implementation will aid in the dynamic long-term development of municipal storm water management programs.

a. *Measures to reduce pollutants in runoff from commercial and residential areas.* The NURP program evaluated runoff from lands primarily dedicated to residential and commercial activities. The areas evaluated in the study reflect some other activities, such as light industry, which are commonly dispersed among residential and commercial areas. The NURP study selected sampling locations that were thought to be relatively free of illicit discharges and storm water from heavy industrial sites including storm water runoff from heavy construction sites. Of course, in a study such as NURP it was impossible to totally isolate various contributions to the runoff. In developing the permit application requirements in today's rule EPA has, in general, relied on the NURP definition of urban runoff—runoff from lands used for residential, commercial and light industrial activities.

NURP and numerous other studies have shown that runoff from residential and commercial areas washes a number of pollutants into receiving waters. Of equal importance is the volume of storm water runoff leaving urban areas during storm events. Large intermittent volumes of runoff can destroy aquatic habitat. As the percentage of paved surfaces increases, the volume and rate of runoff and the corresponding pollutant loads also increase. Thus, the amount of storm water runoff from commercial and residential areas and the pollutant loadings associated with storm water runoff increases as development progresses; and they remain at an elevated level for the lifetime of the development.

Proposed § 122.26(d)(2)(iv)(A) requires municipal storm sewer system applicants to provide in part 2 of the application a description of a proposed management program that will describe priorities for implementing management programs based on a consideration of appropriate controls including:

- A description of maintenance activities and a maintenance schedule for structural controls;
- A description of planning procedures including a comprehensive master plan to control after construction is completed, the discharge of pollutants from municipal separate storm sewers which receive discharges from new development and significant redevelopment after construction is completed (in response to comment this contemplates an engineering policy and procedure strategy with long term planning);
- A description of practices for operating and maintaining public highways and procedures for reducing the impact on receiving waters of such discharges from municipal storm sewer system;
- A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies; and
- A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.

Water quality problems caused by municipal storm sewer discharges will generally be most acute in heavily developed areas. Prevention measures may be desirable and cost effective. However, structural control measures may also be effective, although opportunities for implementing these measures may be limited in previously developed areas. Commonly used structural technologies include a wide variety of treatment techniques, including first flush diversion systems, detention/infiltration basins, retention basins, extended detention basins, infiltration trenches, porous pavement, oil/grit separators, grass swales, and swirl concentrators. A major problem associated with sound storm water management is the need for operating

and maintaining the system for its expected life.

The unavailability of land in highly developed areas often makes the use of structural controls infeasible for modifying many existing systems. Non-structural practices can play a more important role. Non-structural practices can include erosion control, streambank management techniques, street cleaning operations, vegetation/lawn maintenance controls, debris removal, road salt application management and public awareness programs.

As noted above, the first component of the proposed program to reduce pollutants in storm water from commercial and residential areas which discharge to municipal storm sewer systems is to describe maintenance activities and schedule. The second component of the proposed program to reduce pollutants in storm water from commercial and residential areas which discharge to municipal storm sewer systems provides that applicants describe the planning procedures and a comprehensive master plan that will assure that increases of pollutant loading associated with newly developed areas are, to the maximum extent practicable, limited. These measures should address storm water from commercial and residential areas which discharge to the municipal storm sewer that occur after the construction phase of development is completed. Controls for construction activities are addressed later in today's rule. One commenter noted the feasibility of developing management plans for newly developing areas. EPA agrees with this comment and has retained that portion of the regulation that deals with a description of controls for areas of new development. Similarly, one municipality stressed the importance and achievability of addressing storm water discharges from construction sites.

As urban development occurs, the volume of storm water and its rate of discharge increases. These increases are caused when pavement and structures cover soils and destroy vegetation which otherwise would slow and absorb runoff. Development also accelerates erosion through alteration of the land surface. Areas that are in the process of development offer the greatest potential for utilizing the full range of structural and non-structural best management practices. If these measures are to provide controls to reduce pollutant discharges after the area has been developed, comprehensive planning must be used to incorporate these measures as the area is in the process of developing. These measures offer an important opportunity to limit increases in pollutant loads.

The third component of § 122.26(d)(2)(iv)(A) provides a description of practices for operating and maintaining public roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems. General guidelines recommended for managing highway storm water runoff include litter control, pesticide/herbicide use management, reducing direct discharges, reducing runoff velocity, grassed channels, curb elimination, catchbasin maintenance, appropriate streetcleaning, establishing and maintaining vegetation, development of management controls for salt storage facilities, education and calibration practices for deicing application, infiltration practices, and detention/retention practices.

The fourth component of § 122.26(d)(2)(iv)(A) provides that applicants identify procedures that enable flood management agencies to consider the impact of flood management projects on the water quality of receiving streams. A well-developed storm water management program can reduce the amount of pollutants in storm water discharges as well as benefit flood control objectives. As discussed above, increased development can increase both the quantity of runoff from commercial and residential areas and the pollutant load associated with such discharges. Disturbing the land cover, altering natural drainage patterns, and increasing impervious area all increase the quantity and rate of runoff, thereby increasing both erosion and flooding potential. An integrated planning approach helps planners make the best decisions to benefit both flood control and water quality objectives.

The fifth component of § 122.26(d)(2)(iv)(A) would provide that municipal applicants submit a description of a program to reduce, to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer. Such a program may include controls such as educational activities and other measures for commercial applicators and distributors and controls for application in public rights-of-way and at municipal facilities. Discharges of these materials to municipal storm sewer systems can be controlled by proper application of these materials. Some commenters noted that insecticides used in residential areas are a probable source of pollutants in storm water discharges from residential areas, as well as salting and other de-icing activities. In response to this comment, part of a community management plan may include controls or education programs to limit the impacts of these sources of pollutants. One commenter noted that many communities already have household toxic disposal programs. Where appropriate these can be incorporated into municipal management programs.

Some commenters suggested substituting the management program description for residential and commercial areas with a simple identification of applicable management practices. EPA agrees that identification of appropriate management practices is a critical component of a program description for these areas. In essence, this is what the program description is designed to achieve. However, for the reasons discussed in greater detail above, EPA is convinced that an appropriate program must address all of the components of the management program for residential and commercial areas that are outlined in today's rule. Further, for the purposes of writing a permit with enforceable conditions, the application should identify a schedule to implement management practices. The applicant should be able to estimate the reduction in pollutant loads as a result of the development of certain management practices and programs (§ 122.26(d)(2)(v). A program may also include public education programs, which are not necessarily viewed as traditional BMPs.

b. *Measures for illicit discharges and improper disposal.* The CWA requires that NPDES permits for discharges from municipal storm sewers "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers." In today's rule, EPA will begin to implement this statutory mandate by focusing on two types of discharges to large and medium municipal separate storm sewer systems. *See* § 122.26(d)(1)(iv)(D) and (d)(2)(iv)(B). One type of non-storm water discharges are illicit discharges which are plumbed into the system or that result from leakage of sanitary sewage system. The other class of non-storm water discharges result from the improper disposal of materials such as used oil and other toxic materials.

Illicit discharges. In some municipalities, illicit connections of sanitary, commercial and industrial discharges to storm sewer systems have had a significant impact on the water quality of receiving waters. Although the

NURP study did not emphasize identifying illicit connections to storm sewers other than to assure that monitoring sites used in the study were free from sanitary sewage contamination, the study concluded that illicit connections can result in high bacterial counts and dangers to public health. The study also noted that removing such discharges presented opportunities for dramatic improvements in the quality of urban storm water discharges.

Other studies have shown that illicit connections to storm sewers can create severe, wide-spread contamination problems. For example, the Huron River Pollution Abatement Program inspected 660 businesses, homes and other buildings located in Washtenaw County, Michigan and identified 14% of the buildings as having improper storm drain connections. Illicit discharges were detected at a higher rate of 60% for automobile related businesses, including service stations, automobile dealerships, car washes, body shops and light industrial facilities. While some of the problems discovered in this study were the result of improper plumbing or illegal connections, a majority were approved connections at the time they were built. Many commenters emphasized the identification and elimination of illicit connections as a priority, including leakage from sanitary sewers. EPA agrees with these comments and intends to retain this portion of the program without modification.

A wide variety of technologies exist for detecting illicit discharges. The effectiveness of these measures largely depends upon the site-specific design of the system. Under today's rule, permit applicants would develop a description of a proposed management program, including priorities for implementing the program and a schedule to implement a program to identify illicit discharges to the municipal storm sewer system. This rulemaking will require the initial priorities for analyzing various portions of the system and the appropriate detection techniques to be used.

Improper disposal. The permit application requirements for municipal storm sewer systems include a requirement that the municipal permit applicant describe a program to assist and facilitate in the proper management of used oil and toxic materials. Improper management of used oil can lead to discharges to municipal storm sewers that in turn may have a significant impact on receiving water bodies. EPA estimates that, annually, 267 million gallons of used oil, including 135 million gallons of used oil from do-it-yourself automobile oil changes, are disposed of improperly. An additional 70 million gallons of used oil, most coming from service stations and repair shops, are used for road oiling. Many commenters emphasized the elimination of discharges composed of improperly disposed of oil and toxic material. One commenter identified motor oil as the major source of oil contamination and that EPA needs to encourage proper disposal of used oil. Several other commenters emphasized the importance of recycling programs for oil. EPA agrees with these comments and intends to retain this portion of the program without modification. One commenter identified public awareness and timely reporting of illegal dumping as critical components of this portion of the program. EPA agrees with this comment and intends for management programs to deal with this problem.

c. *Measures to reduce pollutants in storm water discharges through municipal separate storm sewers from municipal landfills, hazardous waste treatment, disposal and recovery facilities that are subject to section 313 of title III of SARA.* As discussed in section VI.C of today's preamble, industrial facilities that discharge storm water through a large or medium municipal separate storm sewer system are required to apply for a permit under § 122.26(c) or seek coverage under a promulgated general permit. Today's rule also requires the municipal storm sewer permittee to describe a program to address industrial dischargers that are covered under the municipal storm sewer permit. Today's rule requires the municipal applicant to identify such discharges (*see* source identification requirements under § 122.26(d)(2)(ii)), provide a description of a program to monitor pollutants in runoff from certain industrial facilities that discharge to the municipal separate storm sewer system, identify priorities and procedures for inspections, and establish and implement control measures for such discharges. Should a municipality suspect that an individual discharger is discharging pollutants in storm water above acceptable limits, and the owner/operator of the system has no authority over the discharge, the municipality should contact the NPDES permitting authority for appropriate action. Two example of possible action are: if the facility already has an individual permit, the permit may be reopened and further controls imposed; or if the facility is covered by a promulgated general permit, then an individual site-specific permit application may be required.

In the December 7, 1988, proposal, EPA requested comments concerning what storm water discharges from industrial facilities through municipal systems should be monitored. One of the proposed approaches was to require data on portions of the municipal system which receive storm water from facilities which are listed in the proposed regulatory definition at § 122.26(b)(14) of "storm water discharge associated with industrial activity" (with the exception of construction activities and uncontaminated storm water from oil and gas operations) which discharge through the municipal system. However, given the large number of facilities meeting this definition that discharge through municipal systems, a monitoring program that requires the submission of quantitative data regarding portions of the municipal systems receiving storm water from such facilities may not be practicable. Such a requirement could, for some systems, potentially become the most resource intensive requirements in the municipal permit. Therefore, EPA proposed various ways to develop appropriate targeting for monitoring programs.

EPA requested comments on a requirement that, at a minimum, monitoring programs address discharges from municipal separate storm sewer outfalls that contain storm water discharges from municipal landfills, hazardous waste treatment, disposal and recovery facilities, and runoff from industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). Section 313 of title III requires that operators or certain facilities that manufacture, import, process, or otherwise use certain toxic chemicals report annually their releases of those chemicals to any environmental media. Section 313(b) of title III specifies that a facility is covered for the purposes of reporting if it meets all of the following criteria:

- The facility has ten or more full-time employees;
- The facility is in Standard Industrial Classification (SIC) codes 20 through 39;
- The facility manufactured (including quantities imported), processed, or otherwise used a listed chemical in amounts that exceed certain threshold quantities during the calendar year for which reporting is required.

Listed chemicals include 329 toxic chemicals listed at 40 CFR 372.45. After 1989, the threshold quantities of listed chemicals that the facility must manufacture, import or process (in order to trigger the submission of a release

report) is 25,000 pounds per year. The threshold for a use other than manufacturing, importing or processing of listed toxic chemicals is 10,000 pounds per year. EPA promulgated a final regulation clarifying these reporting requirements on February 16, 1988, (53 FR 4500).

EPA received numerous comments regarding limiting the types of facilities that are initially subject to monitoring and municipal management programs. Numerous municipalities agreed that focusing on the above facilities is an appropriate means for setting priorities for the development of control measures to eliminate or reduce pollutants associated with industrial facilities. Commenters agreed that the potential for toxic materials in discharges is high because of the high volume of such materials at these facilities and that information regarding discharges and material management practices will be available through section 313 of SARA. One commenter noted that building on an established program will contribute to establishing an effective storm water program. Accordingly, EPA has specified at § 122.26(d)(2)(ii)(C) that the municipal applicant must describe a program that identifies priorities and procedures for inspections and establishing and implementing control measures for these facilities.

Several commenters suggested that these facilities should not be singled out because the presence of the threshold amounts of SARA 313 chemicals does not indicate that significant quantities of those chemicals are likely to enter the facility's storm water runoff. Instead it was suggested that municipalities should monitor storm sewers as a whole to determine what chemicals are present and therefore what facilities are responsible. EPA disagrees with these comments. The object of these requirements is initially to set priorities for monitoring requirements. Then, if the situation requires, controls can be developed and instituted. If a facility is a member of this class of facilities and does not discharge excessive quantities of SARA 313 chemicals, then it may not be subjected to further monitoring and controls. As noted above, the selection of facilities is only a means of setting priorities for facilities for the development of municipal plans.

EPA agrees, however, that there will be other facilities that are significant sources of pollutants and should be addressed by municipalities as soon as possible under management programs. Accordingly, those industrial facilities that the municipal permit applicant determines to be contributing a substantial pollutant loading to the municipal storm sewer system shall be addressed in this portion of the municipal management program.

EPA also requested comments on monitoring programs for municipal discharges including the submission of quantitative data on the following constituents;

- Any pollutants limited in an effluent guidelines for the industry subcategories, where applicable;
- Any pollutant listed in a discharging facility's NPDES permits for process wastewater, where applicable;
- Oil and grease, pH, BOD5, COD, TSS, total phosphorus, total Kjeldahl nitrogen, and nitrate plus nitrite nitrogen;
- Any information on discharges required under 40 CFR 122.21(g)(7)(iii) and (iv).

These are the same constituents that are to be addressed in individual permit applicants for storm water discharges associated with industrial activity.

Several industries and municipalities submitted comments on this issue. Some commenters agreed that these are appropriate parameters. Some commenters advised that the ability of municipalities to implement this aspect of the program depended on industries submitting this data. Several industries provided comments suggesting that the approach should allow the permittee flexibility in determining which parameters are chosen because of the burdens of monitoring and the complexity of materials and flows in municipal systems.

In light of these comments, EPA has retained § 122.26(d)(2)(iv)(C) as proposed requiring municipalities to describe a monitoring program which utilizes the above parameters. Monitoring for these parameters provides consistency with the individual application requirements for industries, provides uniformity in municipal applications, and will narrow the parameters to conform to the types of industries discharging into the municipal systems. Monitoring programs may consist of programs undertaken by the municipality exclusively or requirements imposed on industry by the municipality, or a combination of approaches. Appropriate procedures are discussed in municipal permit application guidance.

EPA requested comments on appropriate means for municipalities to determine what facilities are contributing pollutants to municipal systems. Many commenters responded with numerous methodologies. Some of these have been addressed in guidance. Municipalities will have options in selecting the most appropriate methodology given their circumstances as described in their permit applications.

EPA initially favors establishing monitoring requirements to be applied to those outfalls that directly discharge to waters of the United States. EPA received one comment from a municipality with regard to this issue which agreed that this was the most logical approach. Monitoring of outfalls close to the point of discharge to waters of the United States is generally preferable when attempting to identify priorities for developing pollutant control programs. However, under certain circumstances, it may be preferable to monitor at the point where the runoff from the industrial facility discharges to the municipal system. For example, if many facilities discharge substantially similar storm water to a municipal system it may be more practicable to monitor discharges from representative facilities in order to characterize pollutants in the discharge.

As noted by numerous industries, if municipal characterization plans reveal problems from certain industrial dischargers, then such facilities may be required to provide further data from their own monitoring. As noted above, EPA envisions that this data could then be used to develop appropriate control practices or techniques and/or require individual permit applications if a general permit covering the facility proves inadequate.

Comments were also solicited as to whether end-of-pipe treatment generally was more appropriate than source controls for storm water from industrial facilities which discharge to municipal systems. Many commenters, including both municipalities and industries, stated that source controls are the only practical and feasible means of controlling pollutants in storm water runoff, and specifically opposed the concept of end-of-pipe treatment or other controls. Some commenters maintained that, from an economic and environmental standpoint, end-of-pipe treatment may be the only effective means. One advised that the prompt cleanup of spills, controlled wash down of process areas, covering of material loading areas, storm water runoff diversion, covered storage areas, detention basins or other such mechanisms would prevent storm water from mixing with pollutants and possibly discharging them into receiving waters. Another noted that in the urban areas, there is little potential for treatment; consequently, it would seem

that controls and/or retrofitting existing facilities would be necessary when violations are found and that citizens will be better served by source controls appropriate to the individual problem.

EPA agrees with these comments to the extent that source controls and management programs are the general thrust of these regulations. However, in some situations end-of-pipe treatment, such as holding ponds, may be the only reasonable alternative. EPA disagrees with one industrial commenter that the municipalities should be almost entirely responsible for treating municipal discharges at the end of-the-pipe without reliance on source controls by industrial dischargers. Municipal programs may require controls on industrial sources with demonstrated storm water discharge problems. One industrial association noted that its member companies already have incentive to properly handle their materials and facilities because of other environmental programs with spill and erosion controls.

Numerous commenters stated that the program addressing industrial dischargers through municipal systems needs to be clearly defined in order to eliminate, as much as possible, potential conflicts between the system operator and dischargers. EPA has provided a framework for development of management plans to control pollutants from these particular sources. However, because of the differences in municipal systems and hydrology nationwide, EPA is not convinced that program specificity is an appropriate approach. The concept of the management program is to provide flexibility to the permit applicants to develop regional site specific control programs.

One commenter suggested that required controls should be limited to a facility's proportional contribution (based on concentration) of pollutants. EPA disagrees. Most facilities discharging through a municipal separate storm sewer will need to be covered by a general or individual permit. These permits will control the introduction of pollutants from that facility through the municipal storm sewer to the waters of the U.S. Any additional controls placed on the facility by the municipality will be at the discretion of the municipality. EPA is not requiring municipalities to adopt a particular level of controls on industrial facilities as suggested by the commenter.

One commenter questioned how dischargers that discharged both into the waters of the United States and through a municipal system will be addressed and whether there is a potential for inconsistent requirements. Industries that discharge storm water associated with industrial activity into the waters of the United States are required to be covered by individual permits or general permits for such discharges. Dischargers of storm water associated with industrial activity through municipal separate storm sewer systems will be subject to municipal management programs that address such discharges as well as to an individual or general NPDES permit for those discharges. EPA does not believe there is a significant risk of inconsistent requirements, since each industrial facility must meet BAT/BCT-level controls in its NPDES permit. EPA doubts that municipalities will impose much more stringent controls.

Many commenters stated that if cities and municipalities are to be responsible for industrial storm water discharges through their system, then municipalities should have authority to make determinations as to what industries should be regulated, how they are regulated, and when enforcement actions are undertaken. In response, EPA notes that the proposal has been changed and that municipalities will not be solely responsible for industries discharging through their system. Nonetheless, municipalities will be required to meet the terms of their permits related to industrial dischargers. Municipalities may undertake programs that go beyond the threshold requirements of the permit. Some municipal entities stated that municipal permittees should be able to require permit applications from industries in the same manner that EPA does and also require permits. In response, if operators of large and medium municipal separate storm sewer systems wish to employ such a program, then this portion of the management program may incorporate such practices.

d. *Measures to reduce pollutants in runoff from construction sites into municipal systems.* Section VI.F.8 of today's rule discusses EPA's proposal to define the term "storm water discharge associated with industrial activity" to include runoff from construction sites, including preconstruction activities except operations that result in the disturbance of less than 5 acres total land area which are not part of a larger common plan of development or sale. Under today's rule, facilities that discharge runoff from construction sites that meet this definition will be required to submit permit applications unless they are to be covered by another individual or general NPDES permit. Permit application requirements for such discharges are at 40 CFR 122.26(c)(1)(ii).

Section 122.26(d)(2)(iv)(D) of today's rule requires applicants for a permit for large or medium municipal separate storm sewer systems to submit a description of a proposed management program to control pollutants in construction site runoff that discharges to municipal systems. Under this provision, municipal applicants will submit a description of a program for implementing and maintaining structural and non-structural best management practices for controlling storm water runoff at construction sites. The program will address procedures for site planning, enforceable requirements for nonstructural and structural best management practices, procedures for inspecting sites and enforcing control measures, and educational and training measures. Generally, construction site ordinances are effective when they are implemented. However, in many areas, even though ordinances exist, they have limited effectiveness because they are not adequately implemented. Maintaining best management practices also presents problems. Retention and infiltration basins fill up and silt fences may break or be overtopped. Weak inspection and enforcement point to the need for more emphasis on training and education to complement regulatory programs. Permits issued to municipalities will address these concerns.

8. Assessment of Controls

EPA proposed that municipal applicants provide an initial assessment of the effectiveness of the control method for structural or non-structural controls which have been proposed in the management program. Some commenters stated that the assessment of controls should be left to the term of the permit because the effectiveness of controls will be hard to establish. EPA believes that an initial estimate or assessment is needed because the performance of appropriate management controls is highly dependent on site-specific factors. The assessment will be used in conjunction with the development of pollutant loading and concentration estimates (*see* VI.H.6.c) and the evaluation of water quality benefits associated with implementing controls. Such assessments do not have to be verified with quantitative data, but can be based on accepted engineering design practices. Further more precise assessments based upon quantitative data can be undertaken during the term of the permit.

I. Annual Reports

As discussed earlier in today's preamble, EPA has provided for proposed flexible permit application requirements to facilitate the development of site-specific programs to control the discharge of pollutants from large and medium municipal separate storm sewer systems. Many municipalities are in the early stages of the complex task of developing a program suitable for controlling pollutants in discharges under a NPDES permit, while other municipalities have relatively sophisticated programs in place. In order to ensure that such site-specific programs are developed in a timely manner, EPA proposed to require permittees of municipal separate storm sewer systems to submit status reports every year which reflect the development of their control programs.

The reports will be used by the permitting authority to aid in evaluating compliance with permit conditions and where necessary, modify permit conditions to address changed conditions. EPA requested comments on the appropriate content of the annual reports. Based on these comments EPA has added the following in these reports: an analysis of data, including monitoring data, that is accumulated throughout the year; new outfalls or discharges; annual expenditures; identification of water quality improvements or degradation on watershed basis; budget for year following each annual report; and administrative information including enforcement activities, inspections, and public education programs. EPA views this information as important for evaluating the municipal program. Annual monitoring data and identified water quality improvements are important for evaluating the success of management programs in reducing pollutants. If new outfalls come into existence during the term of the permit, these may be sources of pollutants and appropriate permit conditions will be developed. Annual reports should reflect the level of enforcement activity and inspections undertaken to ensure that the legal authority developed by the municipality is properly exercised. Many of the management programs depend upon an ongoing high level of public education. Accordingly, the undertaking of these programs on an annual basis should be documented.

J. Application Deadlines

The CWA provided a statutory time frame for implementing the storm water permit application process and issuance and compliance with permits.

The CWA requires EPA to promulgate permit application requirements for storm water discharges associated with industrial activity and for large municipal separate storm sewer systems by "no later than two years" after the date of enactment (*i.e.* no later than February 4, 1989). In conjunction with this requirement, the Act requires that permit applications for these classes of discharges be submitted within one year after the statutory date by which EPA is to promulgate permit application requirements by providing that such applications "shall be filed no later than three years" after the date of enactment of the WQA (*i.e.*, no later than February 4, 1990).

The CWA also requires EPA to promulgate final regulations governing storm water permit application requirements for discharges from municipal separate storm sewer systems serving a population of 100,000 or more but less than 250,000 by "no later than four years" after enactment (*i.e.* no later than February 4, 1991). Permit applications for medium municipal separate storm sewer systems "shall be filed no later than five years" after the date of enactment of the CWA (*i.e.*, no later than February 4, 1992). The CWA did not establish the time period between designation and permit application submittal for case-by-case designations under section 402(p)(2)(E).

Comments on earlier rulemakings involving storm water application deadlines have established that applicants need adequate time to obtain "representative" storm water samples. Many commenters have indicated that at least one full year is needed to obtain such samples. This is because many discharges are located in areas where testing during dry seasons or winter would not be feasible. The intermittent and unpredictable nature of storm water discharges can result in difficult and time-consuming data gathering. Moreover, some operators of municipal separate storm sewer systems have many storm water discharges associated with industrial activity, which can require considerable time to identify, analyze, and submit applications. This creates a tremendous practical problem for the extremely high number of unpermitted storm water discharges. The public's interest in a sound storm water program and the development of a useful storm water data base is best served by establishing an application deadline which will allow sufficient time to gather, analyze, and prepare meaningful applications. Based on a consideration of these factors, EPA proposed that individual permit applications for storm water discharges associated with industrial activity which currently are not covered by a permit and that are required to obtain a permit, be submitted one year after the final rule is promulgated.

EPA received numerous comments from industries on the one year requirement for submitting applications. Several commenters supported the proposed deadline as realistic, while others believed more time was needed to meet the information and quantitative requirement.

EPA rejects the assertion by some commenters that a year is too short a period of time to obtain the required quantitative data. Today's rule generally requires applications for storm water discharges associated with industrial activity to be submitted on or before November 18, 1991. Operators of storm water discharges associated with industrial activity which discharge through a municipal separate storm sewer are subject to the same application deadline as other storm water discharges associated with industrial activity. Since final regulation at § 122.21(g)(7) provides considerable latitude for selecting rain events for quantitative data, EPA is convinced that in most cases data can be obtained during the one year time frame. If data cannot be collected during the one year time frame because of anomalous weather (*e.g.* drought conditions), then permitting authorities may grant additional time for submitting that data on a case-by-case basis. *See* § 122.21(g)(7).

Operators of storm water discharges which are currently covered by a permit will not be required to submit a permit application until their existing permit expires. In recognition of the time required to collect storm water discharge data, EPA will allow facilities which currently have a NPDES permit for a storm water discharge and which must reapply for permit renewal during the first year following promulgation of today's permit application requirements the option of applying in accordance with existing Form 1 and Form 2C requirements (in lieu of applying in accordance with the revised application requirements).

As discussed in section VI.D.4 and section VI.F.6 of today's preamble, EPA has established a two part permit application both for both group applications for sufficiently similar facilities that discharge storm water associated with industrial activity and for operators of large or medium municipal separate storm sewer systems. The deadlines for submitting

permit applications in today's rule provide adequate time for: (1) Applicants to prepare Part 1 of the application; (2) EPA or an approved State to adequately review applications; and (3) applicants to prepare the contents of the part 2 application.

Part 1 of the group application for storm water discharges associated with industrial activity must be submitted within 120 days from the publication of these final permit application regulations. This time is necessary to form groups and for individual members of the group to prepare the non-quantitative information required in part 1 of the application. Part 1 of the group application will be submitted to EPA Headquarters in Washington, DC and reviewed within 60 days after being received. Part 2 of the application would then be submitted within one year after the part 1 application is approved. It should be noted that many facilities located in States in which general permits can be issued, will be eligible for coverage by a storm water general permit to be promulgated in the near future. Such facilities may either seek coverage under such general permits or participate in the group application.

Several comments were received by EPA that indicated that a period of 120 days was too short a period for groups to be formed. EPA disagrees with these comments. The information that EPA is requiring to be submitted by the group or group representative is information that is generally available such as the location of the facility, its industrial activity, and material management practices. EPA believes that 120 days is sufficient to gather and submit this information along with an identification of 10% of the facilities which will submit quantitative data. To ameliorate any difficulties for applicants, EPA has provided a means for late facilities to "add on" where appropriate, on a case-by-case basis, as discussed in section VI.F.4. above.

Several comments were received with regard to the requirement that new dischargers submit an application at least 180 days before the date on which the discharge is to commence. One commenter noted that it will be difficult for a facility to know when a storm water discharge is to commence since precipitation and runoff cannot be predicted to any degree of accuracy. In response, new dischargers must apply for a storm water permit application 180 days before that facility commences manufacturing, processing, or raw material storage operations which may result in the discharge of pollutants from storm water runoff, and 90 days for new construction sites.

For large municipal separate storm sewer systems (systems serving a population of more than 250,000), EPA proposed that part 1 of the permit application be submitted within one year of the date of the final regulations, with approval or disapproval by the permit issuing authority of the provisions of the part 1 permit application within 90 days after receiving part 1 of the application. The Part 2 portion of the application was to be submitted within two years of the date of promulgation.

For medium municipal separate storm sewer systems (systems serving a population of more than 100,000, but less than 250,000), EPA proposed that permit applications would be required nine months after the date of the final rule, with approval or disapproval of the provisions of the part 1 permit application within 90 days after receiving the part 1 application. The part 2 portion of the application would then be submitted no later than one year after the part 1 application has been approved.

Numerous comments were received by EPA from municipalities on these proposed deadlines. Many of these comments reflect the sentiment that the deadlines are too tight and that the required information would not be available for submission within the required time frame. Some commenters suggested deadlines that would add over three years to the permit application process. Other commenters suggested a revamped application process and a shorter deadline of 18 months. Some commenters explained that additional time would be needed to obtain adequate legal authority, while another stated that an inventory of outfalls required more time. One commenter maintained that intergovernmental agreements will require more time to prepare, and others expressed the view that more time was needed for the review of part 1 of the application by permitting authorities. Others felt more time was needed for collecting data, or hiring additional staff to accomplish the work. Most of these commenters did not provide specific details regarding what would be an appropriate amount of time and why.

After reviewing these comments EPA has decided to modify some of the deadlines as proposed. EPA is convinced that to properly achieve the goals of the CWA, the permit application requirements as discussed in previous sections are appropriate; but that the deadlines for medium municipal separate storm sewer systems should be adjusted so that the program's goals can be properly accomplished. After reviewing comments, EPA believes that medium municipalities will have fewer resources and existing institutional arrangements than large cities and therefore more time should be granted to these cities for submitting parts 1 and 2 of the application.

Accordingly EPA will require large municipal systems to submit part 1 of the permit application no later than November 18, 1991. Part 1 will be reviewed and approved or disapproved by the Director within 90 days. Part 2 of the application will then be submitted November 16, 1992. Medium municipal systems will submit part 1 of the application on May 18, 1992. Approval or disapproval by the Director will be accomplished within 90 days. Part 2 of the application will be submitted by May 17, 1993. These deadlines will give large systems two years to complete the application process, and medium systems 2 years and 6 months to submit applications. EPA is convinced that the permit application schedule is warranted and should provide adequate time to prepare the application.

In establishing these regulatory deadlines EPA is fully aware that they are not synchronized with the statutory deadlines as established by Congress. One commenter argued that the deadlines as proposed were contrary to the deadlines established by Congress and that EPA had no authority to extend these deadlines. (For large municipal separate storm sewer systems and storm water discharges associated with industrial activity, Congress established a deadline of February 4, 1990, for submission of permit applications; for medium municipal separate storm sewer systems, the deadline is February 4, 1992.) In response, this regulation provides certain deadlines for meeting the substantive requirements of this rulemaking—requirements which EPA is convinced are necessary for the development of enforceable and sound storm water permits. EPA believes it is important to give applicants sufficient time to reasonably comply with the permit application requirements set out today. EPA will therefore accept applications for storm water discharge permits up to the dates specified in today's rule. By establishing these regulatory deadlines, however, EPA is not attempting to waive or revoke the statutory deadlines established in Section 402(p) of the CWA and does not assert the authority to do so. The statutory permit application deadlines

continue to be enforceable requirements.

EPA was not able to promulgate the final application regulations for storm water discharges before the February 4, 1990, deadline for industrial and large municipal dischargers despite its best efforts. Further, as noted above, EPA is not able to waive the statutory deadline. Dischargers concerned with complying with the statutory deadline should submit a permit application as required under this rulemaking as expeditiously as possible.

Operators of storm water discharges that are not specifically required to file a permit application under today's rule may be required to obtain a permit for their discharge on the basis of a case-by-case designation by the Administrator or the NPDES State.

The Administrator or NPDES State may also designate storm water discharges (except agricultural storm water discharges), that contribute to a violation of a water quality standard or that are significant contributors of pollutants to waters of the United States for a permit. Prior to a case-by-case determination that an individual permit is required for a storm water discharge, the Administrator or NPDES State may require the operator of the discharge to submit a permit application. 40 CFR 124.52(c) requires the operator of designated storm water discharges to submit a permit application within 60 days of notice, unless permission for a later date is granted. The 60-day deadline is consistent with the procedures for designating other discharges for a NPDES permit on a case-by-case basis found at 40 CFR 124.52. The 60-day deadline recognizes that case-by-case designations often require an expedited response, however, flexibility exists to allow for case-by-case extensions.

The December 7, 1988, proposal also proposed Part 504 State Storm Water Management Programs. The Agency has not included this component in today's rule. The Agency believes this program element is appropriate for addressing in regulations promulgated under section 402(p)(6) of the CWA.

VII. Economic Impact

EPA has prepared an Information Collection Request for the purpose of estimating the information collection burden imposed on Federal, State and local governments and industry for revisions to NPDES permit application requirements for storm water discharges codified in 40 CFR part 122. EPA is promulgating these revisions in response to Section 402(p)(4) of the Clean Water Act, as amended by the Water Quality Act of 1987 (WQA). The revisions would apply to: Storm water discharges associated with industrial activity; discharges from municipal separate storm sewer systems serving a population of 250,000 or more and discharges from municipal separate storm sewer systems serving a population of 100,000 or more, but less than 250,000.

The estimated annual cost of applying for NPDES permits for discharges from municipal separate storm sewer systems is $4.2 million. EPA estimates that an average permit application for a large municipality will cost $76,681 and require 4,534 hours to prepare. The average application for a medium municipality will cost $49,249 (2,912 hours) to prepare. The annual respondent cost for NPDES permit applications, notices of intent, and notifications for facilities with discharges associated with industrial activity is estimated to be $9.5 million (271,248 hours). EPA estimates that the average preparation cost of an individual industrial permit application would be $1,007 (28.6 hours). Average Group application will cost $74.00 per facility (2.1 hours). The average cost of the notification and notice of intent to be covered by general permit is $17.00 (0.5 hours).

The annual cost to the Federal Government and approved States for administration of the program is estimated to be $588,603. The total cost for municipalities, industry, and State and Federal authorities is estimated to be $14.5 million annually.

In general, the cost estimates provided in the ICR focus primarily on the costs associated with developing, submitting and reviewing the permit applications associated with today's rule. EPA will continue to evaluate procedures and methods to control storm water discharges to the extent necessary to mitigate impacts on water quality in the studies required under section 402(p)(5) of the CWA. Executive Order 12291 requires EPA and other agencies to perform regulatory analyses of major regulations. Major rules are those which impose a cost on the economy of $100 million or more annually or have certain other economic impacts. Today's proposed amendments would generally make the NPDES permit application regulations more flexible and less burdensome for the regulated community. These regulations do not, satisfy any of the criteria specified in section 1(b) of the Executive Order and, as such, do not constitute a major rule. This regulation was submitted to the Office of Management and Budget (OMB) for review.

VIII. Paperwork Reduction Act

The information collection requirements in this rule have been submitted for approval to the Office of Management and Budget (OMB) under provision of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and have been assigned OMB control number 2040–0086.

Public reporting burden for permit applications for storm water discharges associated with industrial activity (other than from construction facilities) is estimated to average 28.6 hours per individual permit application, 0.5 hours per notice of intent to be covered by general permit, and 2.1 hours per group applicant. The public reporting burden for permit applications for storm water discharges associated with industrial activity from construction activities submitting individual applications is estimated to average 4.5 hours per response. The public reporting burden for facilities which discharge storm water associated with industrial activity to municipal separate storm sewers serving a population over 100,000 to notify the operator of the municipal separate storm sewer system is estimated to average 0.5 hours per response.

The reporting burden for system-wide permit applications for discharges from municipal separate storm sewer systems serving a population of 250,000 or more is estimated to average 4,534 hours per response. The reporting burden for system-wide permit applications for discharges from municipal separate storm sewer systems serving a population of 100,000 or more, but less than 250,000 is estimated to average 2,912 hours per response. Estimates of reporting burden include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

IX. Regulatory Flexibility Act

Under the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, EPA is required to prepare a Regulatory Flexibility Analysis to assess the impact of rules on small entities. No Regulatory Flexibility Analysis is required, however, where the head of the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.

Today's amendments to the regulations would generally make the NPDES permit applications regulations more flexible and less burdensome for permittees. Accordingly, I hereby

certify, pursuant to 5 U.S.C. 605(b), that these amendments do not, have a significant impact on a substantial number of small entities.

List of Subjects in 40 CFR Parts 122, 123, and 124

Administrative practice and procedure, Environmental protection, Reporting and recordkeeping requirements, Water pollution control.

Authority: Clean Water Act, 33 U.S.C. 1251 *et seq.*

Dated: October 31, 1990.

William K. Reilly,

Administrator.

For the reasons stated in the preamble, parts 122, 123, and 124 of title 40 of the Code of Federal Regulations are amended as follows:

PART 122—EPA ADMINISTERED PERMIT PROGRAMS; THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Subpart B—Permit Application and Special NPDES Program Requirements

1. The authority citation for part 122 continues to read as follows:

Authority: Clean Water Act, 33 U.S.C. 1251 *et seq.*

2. Section 122.1 is amended by revising paragraph (b)(2)(iv) to read as follows:

§ 122.1 Purpose and scope.

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(b) * * *

(2) * * *

(iv) Discharges of storm water as set forth in § 122.26; and

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3. Section 122.21 is amended by revising paragraph (c)(1), by removing the last sentence of paragraph (f)(7), by removing paragraph (f)(9), by adding two sentences at the end of paragraph (g)(3), by revising paragraph (g)(7) introductory text, by removing and reserving paragraph (g)(10) and by revising the introductory text of paragraph (k) to read as follows:

§ 122.21 Application for a permit (applicable to State programs, see § 123.25).

* * * * *

(c) *Time to apply.* (1) Any person proposing a new discharge, shall submit an application at least 180 days before the date on which the discharge is to commence, unless permission for a later date has been granted by the Director. Facilities proposing a new discharge of storm water associated with industrial activity shall submit an application 180 days before that facility commences industrial activity which may result in a discharge of storm water associated with that industrial activity. Facilities described under § 122.26(b)(14)(x) shall submit applications at least 90 days before the date on which construction is to commence. Different submittal dates may be required under the terms of applicable general permits. Persons proposing a new discharge are encouraged to submit their applications well in advance of the 90 or 180 day requirements to avoid delay. See also paragraph (k) of this section and § 122.26 (c)(1)(i)(G) and (c)(1)(ii).

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(g) * * *

(3) * * * The average flow of point sources composed of storm water may be estimated. The basis for the rainfall event and the method of estimation must be indicated.

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(7) *Effluent characteristics.* Information on the discharge of pollutants specified in this paragraph (except information on storm water discharges which is to be provided as specified in § 122.26). When "quantitative data" for a pollutant are required, the applicant must collect a sample of effluent and analyze it for the pollutant in accordance with analytical methods approved under 40 CFR part 136. When no analytical method is approved the applicant may use any suitable method but must provide a description of the method. When an applicant has two or more outfalls with substantially identical effluents, the Director may allow the applicant to test only one outfall and report that the quantitative data also apply to the substantially identical outfalls. The requirements in paragraphs (g)(7) (iii) and (iv) of this section that an applicant must provide quantitative data for certain pollutants known or believed to be present do not apply to pollutants present in a discharge solely as the result of their presence in intake water; however, an applicant must report such pollutants as present. Grab samples must be used for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform and fecal streptococcus. For all other pollutants, 24-hour composite samples must be used. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period greater than 24 hours. In addition, for discharges other than storm water discharges, the Director may waive composite sampling for any outfall for which the applicant demonstrates that the use of an automatic sampler is infeasible and that the minimum of four (4) grab samples will be a representative sample of the effluent being discharged. For storm water discharges, all samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inch and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in that area. For all applicants, a flow-weighted composite shall be taken for either the entire discharge or for the first three hours of the discharge. The flow-weighted composite sample for a storm water discharge may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes (applicants submitting permit applications for storm water discharges under § 122.26(d) may collect flow weighted composite samples using different protocols with respect to the time duration between the collection of sample aliquots, subject to the approval of the Director). However, a minimum of one grab sample may be taken for storm water discharges from holding ponds or other impoundments with a retention period greater than 24 hours. For a flow-weighted composite sample, only one analysis of the composite of aliquots is required. For storm water discharge samples taken from discharges associated with industrial activities, quantitative data must be reported for the grab sample taken during the first thirty minutes (or as soon thereafter as practicable) of the discharge for all pollutants specified in § 122.26(c)(1). For all storm water permit applicants taking flow-weighted composites, quantitative data must be reported for all pollutants specified in § 122.26 except pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus. The Director may allow or establish appropriate site-specific sampling procedures or requirements, including sampling locations, the season in which the sampling takes place, the minimum duration between the previous measurable storm event and the storm event sampled, the minimum or maximum level of precipitation required for an appropriate storm event, the form of precipitation sampled (snow melt or rain fall), protocols for collecting samples under 40 CFR part 136, and additional time for submitting data on a

case-by-case basis. An applicant is expected to "know or have reason to believe" that a pollutant is present in an effluent based on an evaluation of the expected use, production, or storage of the pollutant, or on any previous analyses for the pollutant. (For example, any pesticide manufactured by a facility may be expected to be present in contaminated storm water runoff from the facility.)

* * * * *

(k) *Application requirements for new sources and new discharges.* New manufacturing, commercial, mining and silvicultural dischargers applying for NPDES permits (except for new discharges of facilities subject to the requirements of paragraph (h) of this section or new discharges of storm water associated with industrial activity which are subject to the requirements of § 122.26(c)(1) and this section (except as provided by § 122.26(c)(1)(ii)) shall provide the following information to the Director, using the application forms provided by the Director:

* * * * *

4. Section 122.22(b) introductory text is revised to read as follows:

§ 122.22 Signatories to permit applications and reports (applicable to State programs, see § 123.25).

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(b) All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

* * * * *

5. Section 122.26 is revised to read as follows:

§ 122.26 Storm water discharges (applicable to State NPDES programs, see § 123.25).

(a) *Permit requirement.* (1) Prior to October 1, 1992, discharges composed entirely of storm water shall not be required to obtain a NPDES permit except:

(i) A discharge with respect to which a permit has been issued prior to February 4, 1987;

(ii) A discharge associated with industrial activity (see § 122.26(a)(4));

(iii) A discharge from a large municipal separate storm sewer system;

(iv) A discharge from a medium municipal separate storm sewer system;

(v) A discharge which the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This designation may include a discharge from any conveyance or system of conveyances used for collecting and conveying storm water runoff or a system of discharges from municipal separate storm sewers, except for those discharges from conveyances which do not require a permit under paragraph (a)(2) of this section or agricultural storm water runoff which is exempted from the definition of point source at § 122.2. The Director may designate discharges from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination the Director may consider the following factors:

(A) The location of the discharge with respect to waters of the United States as defined at 40 CFR 122.2.

(B) The size of the discharge;

(C) The quantity and nature of the pollutants discharged to waters of the United States; and

(D) Other relevant factors.

(2) The Director may not require a permit for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with or that has not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

(3) *Large and medium municipal separate storm sewer systems.* (i) Permits must be obtained for all discharges from large and medium municipal separate storm sewer systems.

(ii) The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or medium municipal separate storm sewer system including, but not limited to: all discharges owned or operated by the same municipality; located within the same jurisdiction; all discharges within a system that discharge to the same watershed; discharges within a system that are similar in nature; or for individual discharges from municipal separate storm sewers within the system.

(iii) The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either:

(A) Participate in a permit application (to be a permittee or a co-permittee) with one or more other operators of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system;

(B) Submit a distinct permit application which only covers discharges from the municipal separate storm sewers for which the operator is responsible; or

(C) A regional authority may be responsible for submitting a permit application under the following guidelines:

(*1*) The regional authority together with co-applicants shall have authority over a storm water management program that is in existence, or shall be in existence at the time part 1 of the application is due;

(*2*) The permit applicant or co-applicants shall establish their ability to make a timely submission of part 1 and part 2 of the municipal application;

(*3*) Each of the operators of municipal separate storm sewers within the systems described in paragraphs (b)(4)(i), (ii), and (iii) or (b)(7)(i), (ii), and (iii) of this section, that are under the purview of the designated regional authority, shall comply with the application requirements of paragraph (d) of this section.

(iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.

(v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system.

(vi) Co-permittees need only comply with permit conditions relating to discharges from the municipal separate storm sewers for which they are operators.

(4) *Discharges through large and medium municipal separate storm sewer systems.* In addition to meeting the requirements of paragraph (c) of this section, an operator of a storm water discharge associated with industrial activity which discharges through a large or medium municipal separate storm sewer system shall submit, to the operator of the municipal separate storm sewer system receiving the discharge no later than May 15, 1991, or 180 days prior to commencing such discharge: the name of the facility; a contact person and phone number; the location of the discharge; a description, including Standard Industrial Classification, which best reflects the principal products or services provided by each facility; and any existing NPDES permit number.

(5) *Other municipal separate storm sewers.* The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)(1)(v) of this section on a system-wide basis, jurisdiction-wide basis, watershed basis or other appropriate basis, or may issue permits for individual discharges.

(6) *Non-municipal separate storm sewers.* For storm water discharges associated with industrial activity from point sources which discharge through a non-municipal or non-publicly owned separate storm sewer system, the Director, in his discretion, may issue: a single NPDES permit, with each discharger a co-permittee to a permit issued to the operator of the portion of the system that discharges into waters of the United States; or, individual permits to each discharger of storm water associated with industrial activity through the non-municipal conveyance system.

(i) All storm water discharges associated with industrial activity that discharge through a storm water discharge system that is not a municipal separate storm sewer must be covered by an individual permit, or a permit issued to the operator of the portion of the system that discharges to waters of the United States, with each discharger to the non-municipal conveyance a co-permittee to that permit.

(ii) Where there is more than one operator of a single system of such conveyances, all operators of storm water discharges associated with industrial activity must submit applications.

(iii) Any permit covering more than one operator shall identify the effluent limitations, or other permit conditions, if any, that apply to each operator.

(7) *Combined sewer systems.* Conveyances that discharge storm water runoff combined with municipal sewage are point sources that must obtain NPDES permits in accordance with the procedures of § 122.21 and are not subject to the provisions of this section.

(8) Whether a discharge from a municipal separate storm sewer is or is not subject to regulation under this section shall have no bearing on whether the owner or operator of the discharge is eligible for funding under title II, title III or title VI of the Clean Water Act. *See* 40 CFR part 35, subpart I, appendix A(b)H.2.j.

(b) *Definitions.* (1) *Co-permittee* means a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.

(2) *Illicit discharge* means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

(3) *Incorporated place* means the District of Columbia, or a city, town, township, or village that is incorporated under the laws of the State in which it is located.

(4) *Large municipal separate storm sewer system* means all municipal separate storm sewers that are either:

(i) Located in an incorporated place with a population of 250,000 or more as determined by the latest Decennial Census by the Bureau of Census (appendix F); or

(ii) Located in the counties listed in appendix H, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or

(iii) Owned or operated by a municipality other than those described in paragraph (b)(4) (i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(4) (i) or (ii) of this section. In making this determination the Director may consider the following factors:

(A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(4)(i) of this section;

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters: and

(E) Other relevant factors; or

(iv) The Director may, upon petition, designate as a large municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraph (b)(4) (i), (ii), (iii) of this section.

(5) *Major municipal separate storm sewer outfall* (or "major outfall") means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

(6) *Major outfall* means a major municipal separate storm sewer outfall.

(7) *Medium municipal separate storm sewer system* means all municipal separate storm sewers that are either:

(i) Located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the latest Decennial Census by the Bureau of Census (appendix G); or

(ii) Located in the counties listed in appendix I, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or

(iii) Owned or operated by a municipality other than those described in paragraph (b)(4) (i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(4) (i) or (ii) of this section. In making this determination the Director may consider the following factors:

(A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(7)(i) of this section;

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters; or

(E) Other relevant factors; or

(iv) The Director may, upon petition, designate as a medium municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (b)(7) (i), (ii), (iii) of this section.

(8) *Municipal separate storm sewer* means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

(9) *Outfall* means a *point source* as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

(10) *Overburden* means any material of any nature, consolidated or unconsolidated, that overlies a mineral deposit, excluding topsoil or similar naturally-occurring surface materials that are not disturbed by mining operations.

(11) *Runoff coefficient* means the fraction of total rainfall that will appear at a conveyance as runoff.

(12) *Significant materials* includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

(13) *Storm water* means storm water runoff, snow melt runoff, and surface runoff and drainage.

(14) *Storm water discharge associated with industrial activity* means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR part 122. For the categories of industries identified in paragraphs (b)(14) (i) through (x) of this section, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in paragraph (b)(14)(xi) of this section, the term includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph (b)(14)(i)–(xi) of this section) include those facilities designated under the provisions of paragraph (a)(1)(v) of this section. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) in paragraph (b)(14) of this section);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined

materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221–25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (b)(14) (i)–(vii) or (ix)–(xi) of this section are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA;

(x) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221–25, (and which are not otherwise included within categories (ii)–(x));

(c) *Application requirements for storm water discharges associated with industrial activity*—(1) *Individual application.* Dischargers of storm water associated with industrial activity are required to apply for an individual permit, apply for a permit through a group application, or seek coverage under a promulgated storm water general permit. Facilities that are required to obtain an individual permit, or any discharge of storm water which the Director is evaluating for designation (*see* 40 CFR 124.52(c)) under paragraph (a)(1)(v) of this section and is not a municipal separate storm sewer, and which is not part of a group application described under paragraph (c)(2) of this section, shall submit an NPDES application in accordance with the requirements of § 122.21 as modified and supplemented by the provisions of the remainder of this paragraph. Applicants for discharges composed entirely of storm water shall submit Form 1 and Form 2F. Applicants for discharges composed of storm water and non-storm water shall submit Form 1, Form 2C, and Form 2F. Applicants for new sources or new discharges (as defined in § 122.2 of this part) composed of storm water and non-storm water shall submit Form 1, Form 2D, and Form 2F.

(i) Except as provided in § 122.26(c)(1)(ii)–(iv), the operator of a storm water discharge associated with industrial activity subject to this section shall provide:

(A) A site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) of the facility including: each of its drainage and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each past or present area used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied, each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility;

(B) An estimate of the area of impervious surfaces (including paved areas and building roofs) and the total area drained by each outfall (within a mile radius of the facility) and a narrative description of the following: Significant materials that in the three years prior to the submittal of this application have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage or disposal of such materials; materials management practices employed, in the three years prior to the submittal of this application, to minimize contact by these materials with storm water runoff; materials loading and access areas; the location, manner and frequency in which pesticides, herbicides, soil conditioners and fertilizers are applied; the location and a description of existing structural and non-structural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the ultimate disposal of any solid or fluid wastes other than by discharge;

(C) A certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges which are not covered by a NPDES permit; tests for such non-storm water discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. The certification shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during a test;

(D) Existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility that have taken place within the three years prior to the submittal of this application;

(E) Quantitative data based on samples collected during storm events and collected in accordance with § 122.21 of this part from all outfalls containing a storm water discharge associated with industrial activity for the following parameters:

(*1*) Any pollutant limited in an effluent guideline to which the facility is subject;

(*2*) Any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit);

(*3*) Oil and grease, pH, BOD5, COD, TSS, total phosphorus, total Kjeldahl nitrogen, and nitrate plus nitrite nitrogen;

(*4*) Any information on the discharge required under paragraph § 122.21(g)(7)(iii) and (iv) of this part;

(5) Flow measurements or estimates of the flow rate, and the total amount of discharge for the storm event(s) sampled, and the method of flow measurement or estimation; and

(6) The date and duration (in hours) of the storm event(s) sampled, rainfall measurements or estimates of the storm event (in inches) which generated the sampled runoff and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (in hours);

(F) Operators of a discharge which is composed entirely of storm water are exempt from the requirements of § 122.21 (g)(2), (g)(3), (g)(4), (g)(5), (g)(7)(i), (g)(7)(ii), and (g)(7)(v); and

(G) Operators of new sources or new discharges (as defined in § 122.2 of this part) which are composed in part or entirely of storm water must include estimates for the pollutants or parameters listed in paragraph (c)(1)(i)(E) of this section instead of actual sampling data, along with the source of each estimate. Operators of new sources or new discharges composed in part or entirely of storm water must provide quantitative data for the parameters listed in paragraph (c)(1)(i)(E) of this section within two years after commencement of discharge, unless such data has already been reported under the monitoring requirements of the NPDES permit for the discharge. Operators of a new source or new discharge which is composed entirely of storm water are exempt from the requirements of § 122.21 (k)(3)(ii), (k)(3)(iii), and (k)(5).

(ii) The operator of an existing or new storm water discharge that is associated with industrial activity solely under paragraph (b)(14)(x) of this section, is exempt from the requirements of § 122.21(g) and paragraph (c)(1)(i) of this section. Such operator shall provide a narrative description of:

(A) The location (including a map) and the nature of the construction activity;

(B) The total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;

(C) Proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements;

(D) Proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements;

(E) An estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of fill material and existing data describing the soil or the quality of the discharge; and

(F) The name of the receiving water.

(iii) The operator of an existing or new discharge composed entirely of storm water from an oil or gas exploration, production, processing, or treatment operation, or transmission facility is not required to submit a permit application in accordance with paragraph (c)(1)(i) of this section, unless the facility:

(A) Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987; or

(B) Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or

(C) Contributes to a violation of a water quality standard.

(iv) The operator of an existing or new discharge composed entirely of storm water from a mining operation is not required to submit a permit application unless the discharge has come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

(v) Applicants shall provide such other information the Director may reasonably require under § 122.21(g)(13) of this part to determine whether to issue a permit and may require any facility subject to paragraph (c)(1)(ii) of this section to comply with paragraph (c)(1)(i) of this section.

(2) *Group application for discharges associated with industrial activity.* In lieu of individual applications or notice of intent to be covered by a general permit for storm water discharges associated with industrial activity, a group application may be filed by an entity representing a group of applicants (except facilities that have existing individual NPDES permits for storm water) that are part of the same subcategory (*see* 40 CFR subchapter N, part 405 to 471) or, where such grouping is inapplicable, are sufficiently similar as to be appropriate for general permit coverage under § 122.28 of this part. The part 1 application shall be submitted to the Office of Water Enforcement and Permits, U.S. EPA, 401 M Street, SW., Washington, DC 20460 (EN-336) for approval. Once a part 1 application is approved, group applicants are to submit Part 2 of the group application to the Office of Water Enforcement and Permits. A group application shall consist of:

(i) *Part 1.* Part 1 of a group application shall:

(A) Identify the participants in the group application by name and location. Facilities participating in the group application shall be listed in nine subdivisions, based on the facility location relative to the nine precipitation zones indicated in appendix E to this part.

(B) Include a narrative description summarizing the industrial activities of participants of the group application and explaining why the participants, as a whole, are sufficiently similar to be a covered by a general permit;

(C) Include a list of significant materials stored exposed to precipitation by participants in the group application and materials management practices employed to diminish contact by these materials with precipitation and storm water runoff;

(D) Identify ten percent of the dischargers participating in the group application (with a minimum of 10 dischargers, and either a minimum of two dischargers from each precipitation zone indicated in appendix E of this part in which ten or more members of the group are located, or one discharger from each precipitation zone indicated in appendix E of this part in which nine or fewer members of the group are located) from which quantitative data will be submitted in part 2. If more than 1,000 facilities are identified in a group application, no more than 100 dischargers must submit quantitative data in Part 2. Groups of between four and ten dischargers may be formed. However, in groups of between four and ten, at least half the facilities must submit quantitative data, and at least one facility in each precipitation zone in which members of the group are located must submit data. A description of why the facilities selected to perform sampling and analysis are representative of the group as a whole in terms of the information provided in paragraph (c)(1) (i)(B) and (i)(C) of this section, shall accompany this section. Different factors impacting the nature of the storm water discharges, such as processes used and material management, shall be represented, to the extent feasible, in a manner roughly equivalent to their proportion in the group.

(ii) *Part 2.* Part 2 of a group application shall contain quantitative

data (NPDES Form 2F), as modified by paragraph (c)(1) of this section, so that when part 1 and part 2 of the group application are taken together, a complete NPDES application (Form 1, Form 2C, and Form 2F) can be evaluated for each discharger identified in paragraph (c)(2)(i)(D) of this section.

(d) *Application requirements for large and medium municipal separate storm sewer discharges.* The operator of a discharge from a large or medium municipal separate storm sewer or a municipal separate storm sewer that is designated by the Director under paragraph (a)(1)(v) of this section, may submit a jurisdiction-wide or system-wide permit application. Where more than one public entity owns or operates a municipal separate storm sewer within a geographic area (including adjacent or interconnected municipal separate storm sewer systems), such operators may be a coapplicant to the same application. Permit applications for discharges from large and medium municipal storm sewers or municipal storm sewers designated under paragraph (a)(1)(v) of this section shall include;

(1) *Part 1.* Part 1 of the application shall consist of;

(i) *General information.* The applicants' name, address, telephone number of contact person, ownership status and status as a State or local government entity.

(ii) *Legal authority.* A description of existing legal authority to control discharges to the municipal separate storm sewer system. When existing legal authority is not sufficient to meet the criteria provided in paragraph (d)(2)(i) of this section, the description shall list additional authorities as will be necessary to meet the criteria and shall include a schedule and commitment to seek such additional authority that will be needed to meet the criteria.

(iii) *Source identification.* (A) A description of the historic use of ordinances, guidance or other controls which limited the discharge of non-storm water discharges to any Publicly Owned Treatment Works serving the same area as the municipal separate storm sewer system.

(B) A USGS 7.5 minute topographic map (or equivalent topographic map with a scale between 1:10,000 and 1:24,000 if cost effective) extending one mile beyond the service boundaries of the municipal storm sewer system covered by the permit application. The following information shall be provided:

(*1*) The location of known municipal storm sewer system outfalls discharging to waters of the United States;

(*2*) A description of the land use activities (e.g. divisions indicating undeveloped, residential, commercial, agricultural and industrial uses) accompanied with estimates of population densities and projected growth for a ten year period within the drainage area served by the separate storm sewer. For each land use type, an estimate of an average runoff coefficient shall be provided;

(*3*) The location and a description of the activities of the facility of each currently operating or closed municipal landfill or other treatment, storage or disposal facility for municipal waste;

(*4*) The location and the permit number of any known discharge to the municipal storm sewer that has been issued a NPDES permit;

(*5*) The location of major structural controls for storm water discharge (retention basins, detention basins, major infiltration devices, etc.); and

(*6*) The identification of publicly owned parks, recreational areas, and other open lands.

(iv) *Discharge characterization.* (A) Monthly mean rain and snow fall estimates (or summary of weather bureau data) and the monthly average number of storm events.

(B) Existing quantitative data describing the volume and quality of discharges from the municipal storm sewer, including a description of the outfalls sampled, sampling procedures and analytical methods used.

(C) A list of water bodies that receive discharges from the municipal separate storm sewer system, including downstream segments, lakes and estuaries, where pollutants from the system discharges may accumulate and cause water degradation and a brief description of known water quality impacts. At a minimum, the description of impacts shall include a description of whether the water bodies receiving such discharges have been:

(*1*) Assessed and reported in section 305(b) reports submitted by the State, the basis for the assessment (evaluated or monitored), a summary of designated use support and attainment of Clean Water Act (CWA) goals (fishable and swimmable waters), and causes of nonsupport of designated uses;

(*2*) Listed under section 304(l)(1)(A)(i), section 304(l)(1)(A)(ii), or section 304(l)(1)(B) of the CWA that is not expected to meet water quality standards or water quality goals;

(*3*) Listed in State Nonpoint Source Assessments required by section 319(a) of the CWA that, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain water quality standards due to storm sewers, construction, highway maintenance and runoff from municipal landfills and municipal sludge adding significant pollution (or contributing to a violation of water quality standards);

(*4*) Identified and classified according to eutrophic condition of publicly owned lakes listed in State reports required under section 314(a) of the CWA (include the following: A description of those publicly owned lakes for which uses are known to be impaired; a description of procedures, processes and methods to control the discharge of pollutants from municipal separate storm sewers into such lakes; and a description of methods and procedures to restore the quality of such lakes);

(*5*) Areas of concern of the Great Lakes identified by the International Joint Commission;

(*6*) Designated estuaries under the National Estuary Program under section 320 of the CWA;

(*7*) Recognized by the applicant as highly valued or sensitive waters;

(*8*) Defined by the State or U.S. Fish and Wildlife Services's National Wetlands Inventory as wetlands; and

(*9*) Found to have pollutants in bottom sediments, fish tissue or biosurvey data.

(D) *Field screening.* Results of a field screening analysis for illicit connections and illegal dumping for either selected field screening points or major outfalls covered in the permit application. At a minimum, a screening analysis shall include a narrative description, for either each field screening point or major outfall, of visual observations made during dry weather periods. If any flow is observed, two grab samples shall be collected during a 24 hour period with a minimum period of four hours between samples. For all such samples, a narrative description of the color, odor, turbidity, the presence of an oil sheen or surface scum as well as any other relevant observations regarding the potential presence of non-storm water discharges or illegal dumping shall be provided. In addition, a narrative description of the results of a field analysis using suitable methods to estimate pH, total chlorine, total copper, total phenol, and detergents (or surfactants) shall be provided along with a description of the flow rate. Where the field analysis does not involve analytical methods approved under 40 CFR part 136, the applicant shall provide a description of the method used including the name of the manufacturer of the test method along with the range and accuracy of the test. Field screening points shall be either major outfalls or other outfall points (or

any other point of access such as manholes) randomly located throughout the storm sewer system by placing a grid over a drainage system map and identifying those cells of the grid which contain a segment of the storm sewer system or major outfall. The field screening points shall be established using the following guidelines and criteria:

(*1*) A grid system consisting of perpendicular north-south and east-west lines spaced ¼ mile apart shall be overlayed on a map of the municipal storm sewer system, creating a series of cells;

(*2*) All cells that contain a segment of the storm sewer system shall be identified; one field screening point shall be selected in each cell; major outfalls may be used as field screening points;

(*3*) Field screening points should be located downstream of any sources of suspected illegal or illicit activity;

(*4*) Field screening points shall be located to the degree practicable at the farthest manhole or other accessible location downstream in the system, within each cell; however, safety of personnel and accessibility of the location should be considered in making this determination;

(*5*) Hydrological conditions; total drainage area of the site; population density of the site; traffic density; age of the structures or buildings in the area; history of the area; and land use types;

(*6*) For medium municipal separate storm sewer systems, no more than 250 cells need to have identified field screening points; in large municipal separate storm sewer systems, no more than 500 cells need to have identified field screening points; cells established by the grid that contain no storm sewer segments will be eliminated from consideration; if fewer than 250 cells in medium municipal sewers are created, and fewer than 500 in large systems are created by the overlay on the municipal sewer map, then all those cells which contain a segment of the sewer system shall be subject to field screening (unless access to the separate storm sewer system is impossible); and

(*7*) Large or medium municipal separate storm sewer systems which are unable to utilize the procedures described in paragraphs (d)(1)(iv)(D) (*1*) through (*6*) of this section, because a sufficiently detailed map of the separate storm sewer systems is unavailable, shall field screen no more than 500 or 250 major outfalls respectively (or all major outfalls in the system, if less); in such circumstances, the applicant shall establish a grid system consisting of north-south and east-west lines spaced ¼ mile apart as an overlay to the boundaries of the municipal storm sewer system, thereby creating a series of cells; the applicant will then select major outfalls in as many cells as possible until at least 500 major outfalls (large municipalities) or 250 major outfalls (medium municipalities) are selected; a field screening analysis shall be undertaken at these major outfalls.

(E) *Characterization plan.* Information and a proposed program to meet the requirements of paragraph (d)(2)(iii) of this section. Such description shall include: the location of outfalls or field screening points appropriate for representative data collection under paragraph (d)(2)(iii)(A) of this section, a description of why the outfall or field screening point is representative, the seasons during which sampling is intended, a description of the sampling equipment. The proposed location of outfalls or field screening points for such sampling should reflect water quality concerns (*see* paragraph (d)(1)(iv)(C) of this section) to the extent practicable.

(v) *Management programs.* (A) A description of the existing management programs to control pollutants from the municipal separate storm sewer system. The description shall provide information on existing structural and source controls, including operation and maintenance measures for structural controls, that are currently being implemented. Such controls may include, but are not limited to: Procedures to control pollution resulting from construction activities; floodplain management controls; wetland protection measures; best management practices for new subdivisions; and emergency spill response programs. The description may address controls established under State law as well as local requirements.

(B) A description of the existing program to identify illicit connections to the municipal storm sewer system. The description should include inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented.

(vi) *Fiscal resources.* (A) A description of the financial resources currently available to the municipality to complete part 2 of the permit application. A description of the municipality's budget for existing storm water programs, including an overview of the municipality's financial resources and budget, including overall indebtedness and assets, and sources of funds for storm water programs.

(2) *Part 2.* Part 2 of the application shall consist of:

(i) *Adequate legal authority.* A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to:

(A) Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity;

(B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer;

(C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water;

(D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;

(E) Require compliance with conditions in ordinances, permits, contracts or orders; and

(F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.

(ii) *Source identification.* The location of any major outfall that discharges to waters of the United States that was not reported under paragraph (d)(1)(iii)(B)(*1*) of this section. Provide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity;

(iii) *Characterization data.* When "quantitative data" for a pollutant are required under paragraph (d)(a)(iii)(A)(*3*) of this paragraph, the applicant must collect a sample of effluent in accordance with 40 CFR 122.21(g)(7) and analyze it for the pollutant in accordance with analytical methods approved under 40 CFR part 136. When no analytical method is approved the applicant may use any suitable method but must provide a description of the method. The applicant must provide information characterizing the quality and quantity of discharges covered in the permit application, including:

(A) Quantitative data from representative outfalls designated by the Director (based on information received

in part 1 of the application, the Director shall designate between five and ten outfalls or field screening points as representative of the commercial, residential and industrial land use activities of the drainage area contributing to the system or, where there are less than five outfalls covered in the application, the Director shall designate all outfalls) developed as follows:

(*1*) For each outfall or field screening point designated under this subparagraph, samples shall be collected of storm water discharges from three storm events occurring at least one month apart in accordance with the requirements at § 122.21(g)(7) (the Director may allow exemptions to sampling three storm events when climatic conditions create good cause for such exemptions);

(*2*) A narrative description shall be provided of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event;

(*3*) For samples collected and described under paragraphs (d)(2)(iii)(A)(*1*) and (A)(*2*) of this section, quantitative data shall be provided for: the organic pollutants listed in Table II; the pollutants listed in Table III (toxic metals, cyanide, and total phenols) of appendix D of 40 CFR part 122, and for the following pollutants:

Total suspended solids (TSS)
Total dissolved solids (TDS)
COD
BOD_5
Oil and grease
Fecal coliform
Fecal streptococcus
pH
Total Kjeldahl nitrogen
Nitrate plus nitrite
Dissolved phosphorus
Total ammonia plus organic nitrogen
Total phosphorus

(*4*) Additional limited quantitative data required by the Director for determining permit conditions (the Director may require that quantitative data shall be provided for additional parameters, and may establish sampling conditions such as the location, season of sample collection, form of precipitation (snow melt, rainfall) and other parameters necessary to insure representativeness);

(B) Estimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls and the event mean concentration of the cumulative discharges to waters of the United States from all identified municipal outfalls during a storm event (as described under § 122.21(c)(7)) for BOD_5, COD, TSS, dissolved solids, total nitrogen, total ammonia plus organic nitrogen, total phosphorus, dissolved phosphorus, cadmium, copper, lead, and zinc. Estimates shall be accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modelling, data analysis, and calculation methods;

(C) A proposed schedule to provide estimates for each major outfall identified in either paragraph (d)(2)(ii) or (d)(1)(iii)(B)(*1*) of this section of the seasonal pollutant load and of the event mean concentration of a representative storm for any constituent detected in any sample required under paragraph (d)(2)(iii)(A) of this section; and

(D) A proposed monitoring program for representative data collection for the term of the permit that describes the location of outfalls or field screening points to be sampled (or the location of instream stations), why the location is representative, the frequency of sampling, parameters to be sampled, and a description of sampling equipment.

(iv) *Proposed management program.* A proposed management program covers the duration of the permit. It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable. Proposed management programs shall describe priorities for implementing controls. Such programs shall be based on:

(A) A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls. At a minimum, the description shall include:

(*1*) A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers;

(*2*) A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed. (Controls to reduce pollutants in discharges from municipal separate storm sewers containing construction site runoff are addressed in paragraph (d)(2)(iv)(D) of this section;

(*3*) A description of practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities;

(*4*) A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible;

(*5*) A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges (this program can be coordinated with the program developed under paragraph (d)(2)(iv)(C) of this section); and

(*6*) A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.

(B) A description of a program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer. The proposed program shall include:

(*1*) A description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program description shall address all types of illicit discharges, however the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncomtaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (program descriptions shall address discharges or flows from fire fighting only where such discharges or flows are identified as significant sources of pollutants to waters of the United States);

(*2*) A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens;

(*3*) A description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water (such procedures may include: sampling procedures for constituents such as fecal coliform, fecal streptococcus, surfactants (MBAS), residual chlorine, fluorides and potassium; testing with fluorometric dyes; or conducting in storm sewer inspections where safety and other considerations allow. Such description shall include the location of storm sewers that have been identified for such evaluation);

(*4*) A description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer;

(*5*) A description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers;

(*6*) A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials; and

(*7*) A description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary;

(C) A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system. The program shall:

(*1*) Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges;

(*2*) Describe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C) of this section, to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD_5, TSS, total phosphorus, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under 40 CFR 122.21(g)(7) (iii) and (iv).

(D) A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system, which shall include:

(*1*) A description of procedures for site planning which incorporate consideration of potential water quality impacts;

(*2*) A description of requirements for nonstructural and structural best management practices;

(*3*) A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality; and

(*4*) A description of appropriate educational and training measures for construction site operators.

(v) *Assessment of controls.* Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water.

(vi) *Fiscal analysis.* For each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2) (iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

(vii) Where more than one legal entity submits an application, the application shall contain a description of the roles and responsibilities of each legal entity and procedures to ensure effective coordination.

(viii) Where requirements under paragraph (d)(1)(iv)(E), (d)(2)(ii), (d)(2)(iii)(B) and (d)(2)(iv) of this section are not practicable or are not applicable, the Director may exclude any operator of a discharge from a municipal separate storm sewer which is designated under paragraph (a)(1)(v), (b)(4)(ii) or (b)(7)(ii) of this section from such requirements. The Director shall not exclude the operator of a discharge from a municipal separate storm sewer identified in appendix F, G, H or I of part 122, from any of the permit application requirements under this paragraph except where authorized under this section.

(e) *Application deadlines.* Any operator of a point source required to obtain a permit under paragraph (a)(1) of this section that does not have an effective NPDES permit covering its storm water outfalls shall submit an application in accordance with the following deadlines:

(1) For any storm water discharge associated with industrial activity identified in paragraph (b)(14) (i)–(xi) of this section, that is not part of a group application as described in paragraph (c)(2) of this section or which is not covered under a promulgated storm water general permit, a permit application made pursuant to paragraph (c) of this section shall be submitted to the Director by November 18, 1991;

(2) For any group application submitted in accordance with paragraph (c)(2) of this section:

(i) Part 1 of the application shall be submitted to the Director, Office of Water Enforcement and Permits by March 18, 1991;

(ii) Based on information in the part 1 application, the Director will approve or deny the members in the group application within 60 days after receiving part 1 of the group application.

(iii) Part 2 of the application shall be submitted to the Director, Office of Water Enforcement and Permits no later than 12 months after the date of approval of the part 1 application.

(iv) Facilities that are rejected as members of a group by the permitting authority shall have 12 months to file an individual permit application from the date they receive notification of their rejection.

(v) A facility listed under paragraph (b)(14) (i)–(xi) of this section may add on to a group application submitted in accordance with paragraph (e)(2)(i) of this section at the discretion of the Office of Water Enforcement and Permits, and only upon a showing of good cause by the facility and the group applicant; the request for the addition of the facility shall be made no later than February 18,1992; the addition of the facility shall not cause the percentage of the facilities that are required to submit quantitative data to be less than 10%, unless there are over 100 facilities in the group that are submitting quantitative data; approval to become part of group application must be obtained from the group or the trade association representing the individual facilities.

(3) For any discharge from a large municipal separate storm sewer system;

(i) Part 1 of the application shall be submitted to the Director by November 18, 1991;

(ii) Based on information received in the part 1 application the Director will approve or deny a sampling plan under paragraph (d)(1)(iv)(E) of this section within 90 days after receiving the part 1 application;

(iii) Part 2 of the application shall be submitted to the Director by November 16, 1992.

(4) For any discharge from a medium municipal separate storm sewer system;

(i) Part 1 of the application shall be submitted to the Director by May 18, 1992.

(ii) Based on information received in the part 1 application the Director will approve or deny a sampling plan under paragraph (d)(1)(iv)(E) of this section within 90 days after receiving the part 1 application.

(iii) Part 2 of the application shall be submitted to the Director by May 17, 1993.

(5) A permit application shall be submitted to the Director within 60 days of notice, unless permission for a later date is granted by the Director (*see* 40 CFR 124.52(c)), for:

(i) A storm water discharge which the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines that the discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States (see paragraph (a)(1)(v) of this section);

(ii) A storm water discharge subject to paragraph (c)(1)(v) of this section.

(6) Facilities with existing NPDES permits for storm water discharges associated with industrial activity shall maintain existing permits. New applications shall be submitted in accordance with the requirements of 40 CFR 122.21 and 40 CFR 122.26(c) 180 days before the expiration of such permits. Facilities with expired permits or permits due to expire before May 18, 1992, shall submit applications in accordance with the deadline set forth under paragraph (e)(1) of this section.

(f) *Petitions.* (1) Any operator of a municipal separate storm sewer system may petition the Director to require a separate NPDES permit (or a permit issued under an approved NPDES State program) for any discharge into the municipal separate storm sewer system.

(2) Any person may petition the Director to require a NPDES permit for a discharge which is composed entirely of storm water which contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) The owner or operator of a municipal separate storm sewer system may petition the Director to reduce the Census estimates of the population served by such separate system to account for storm water discharged to combined sewers as defined by 40 CFR 35.2005(b)(11) that is treated in a publicly owned treatment works. In municipalities in which combined sewers are operated, the Census estimates of population may be reduced proportional to the fraction, based on estimated lengths, of the length of combined sewers over the sum of the length of combined sewers and municipal separate storm sewers where an applicant has submitted the NPDES permit number associated with each discharge point and a map indicating areas served by combined sewers and the location of any combined sewer overflow discharge point.

(4) Any person may petition the Director for the designation of a large or medium municipal separate storm sewer system as defined by paragraphs (b)(4)(iv) or (b)(7)(iv) of this section.

(5) The Director shall make a final determination on any petition received under this section within 90 days after receiving the petition.

6. Section 122.28(b)(2)(i) is revised to read as follows:

§ 122.28 General permits (applicable to State NPDES programs, see § 123.25).

* * * * *

(b) * * *

(2) *Requiring an individual permit.* (i) The Director may require any discharger authorized by a general permit to apply for and obtain an individual NPDES permit. Any interested person may petition the Director to take action under this paragraph. Cases where an individual NPDES permit may be required include the following:

(A) The discharger or "treatment works treating domestic sewage" is not in compliance with the conditions of the general NPDES permit;

(B) A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source or treatment works treating domestic sewage;

(C) Effluent limitation guidelines are promulgated for point sources covered by the general NPDES permit;

(D) A Water Quality Management plan containing requirements applicable to such point sources is approved;

(E) Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary;

(F) Standards for sewage sludge use or disposal have been promulgated for the sludge use and disposal practice covered by the general NPDES permit; or

(G) The discharge(s) is a significant contributor of pollutants. In making this determination, the Director may consider the following factors:

(*1*) The location of the discharge with respect to waters of the United States;

(*2*) The size of the discharge;

(*3*) The quantity and nature of the pollutants discharged to waters of the United States; and

(*4*) Other relevant factors;

* * * * *

7. Section 122.42 is amended by adding paragraph (c) to read as follows:

§ 122.42 Additional conditions applicable to specified categories of NPDES permits (applicable to State NPDES programs, see § 123.25).

* * * * *

(c) *Municipal separate storm sewer systems.* The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

(1) The status of implementing the components of the storm water management program that are established as permit conditions;

(2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; and

(3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part;

(4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;

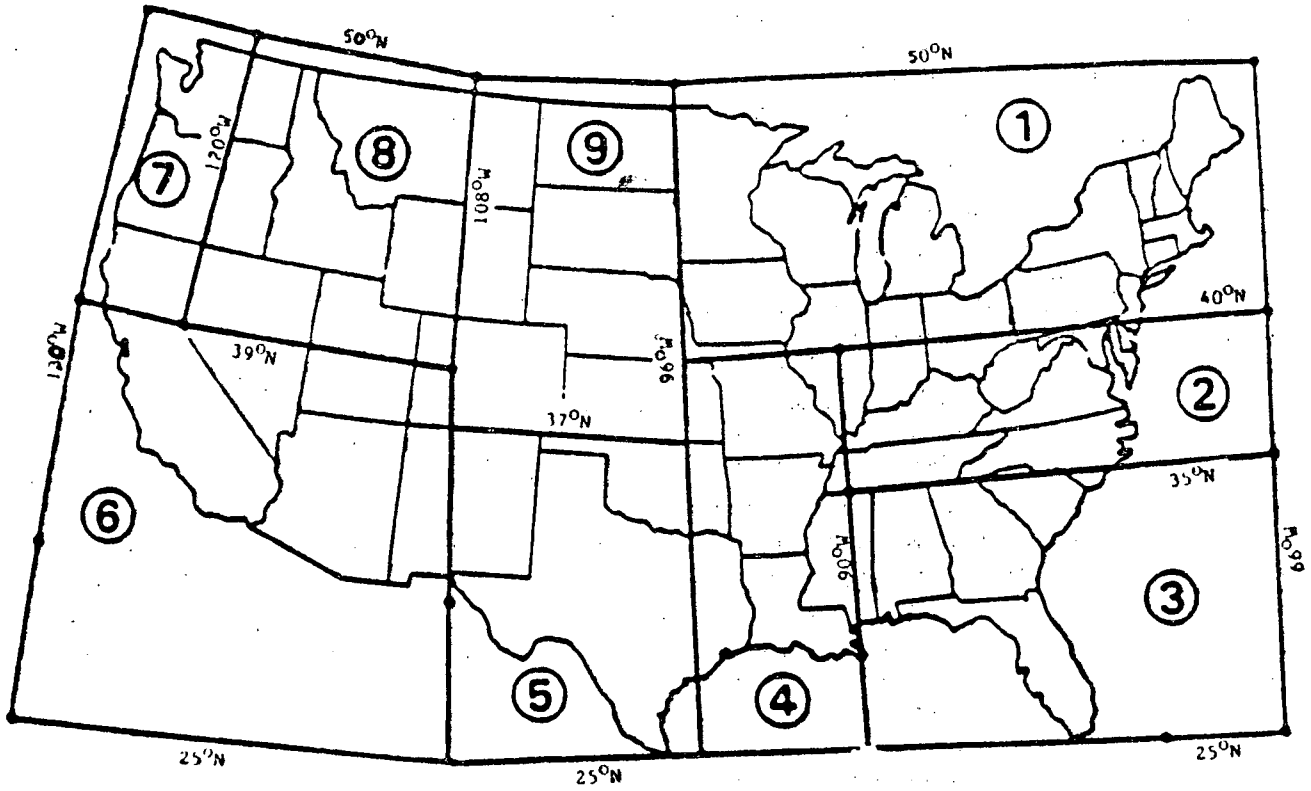
(5) Annual expenditures and budget for year following each annual report;

(6) A summary describing the number and nature of enforcement actions, inspections, and public education programs;

(7) Identification of water quality improvements or degradation;

7a. Part 122 is amended by adding appendices E through I as follows:

Appendix E to Part 122—Rainfall Zones of the United States



Not Shown: Alaska (Zone 7); Hawaii (Zone 7); Northern Mariana Islands (Zone 7); Guam (Zone 7); American Samoa (Zone 7); Trust Territory of the Pacific Islands (Zone 7); Puerto Rico (Zone 3) Virgin Islands (Zone 3).

Source: Methodology for Analysis of Detention Basins for Control of Urban Runoff Quality, prepared for U.S. Environmental Protection Agency, Office of Water, Nonpoint Source Division, Washington, DC, 1986.

Appendix F to Part 122—Incorporated Places With Populations Greater Than 250,000 According to Latest Decennial Census by Bureau of Census.

State	Incorporated place
Alabama	Birmingham.
Arizona	Phoenix.
	Tucson.
California	Long Beach.
	Los Angeles.
	Oakland.
	Sacramento.
	San Diego.
	San Francisco.
	San Jose.
Colorado	Denver.
District of Columbia	
Florida	Jacksonville.
	Miami.
	Tampa.
Georgia	Atlanta.
Illinois	Chicago.
Indiana	Indianapolis.
Kansas	Wichita.
Kentucky	Louisville.
Louisiana	New Orleans.
Maryland	Baltimore.
Massachusetts	Boston.
Michigan	Detroit.
Minnesota	Minneapolis
	St. Paul.

State	Incorporated place
Missouri	Kansas City.
	St. Louis.
Nebraska	Omaha.
New Jersey	Newark.
New Mexico	Albuquerque.
New York	Buffalo.
	Bronx Borough.
	Brooklyn Borough.
	Manhattan Borough.
	Queens Borough.
	Staten Island Borough.
North Carolina	Charlotte.
Ohio	Cincinnati.
	Cleveland.
	Columbus.
	Toledo.
Oklahoma	Oklahoma City.
	Tulsa.
Oregon	Portland.
Pennsylvania	Philadelphia.
	Pittsburgh.
Tennessee	Memphis.
	Nashville/Davidson.
Texas	Austin.
	Dallas.
	El Paso.
	Fort Worth.
	Houston.
	San Antonio.
Virginia	Norfolk.
	Virginia Beach.
Washington	Seattle.
Wisconsin	Milwaukee.

Appendix G to Part 122—Incorporated Places With Populations Greater Than 100,000 and Less Than 250,000 According to Latest Decennial Census by Bureau of Census

State	Incorporated place
Alabama	Huntsville.
	Mobile.
	Montgomery.
Alaska	Anchorage.
Arizona	Mesa.
	Tempe.
Arkansas	Little Rock.
California	Anaheim.
	Bakersfield.
	Berkeley.
	Concord.
	Fremont.
	Fresno.
	Fullerton.
	Garden Grove.
	Glendale.
	Huntington Beach.
	Modesto.
	Oxnard.
	Pasadena.
	Riverside.
	San Bernadino.
	Santa Ana.
	Stockton.
	Sunnyvale.
	Torrance.
Colorado	Aurora.
	Colorado Springs.
	Lakewood.
	Pueblo.
Connecticut	Bridgeport.
	Hartford.
	New Haven.
	Stamford.
	Waterbury.
Florida	Fort Lauderdale.
	Hialeah.
	Hollywood.
	Orlando.
	St. Petersburg.
Georgia	Columbus.
	Macon.
	Savannah.
Idaho	Boise City.
Illinois	Peoria.
	Rockford.
Indiana	Evansville.
	Fort Wayne.
	Gary.
	South Bend.
Iowa	Cedar Rapids.
	Davenport.
	Des Moines.
Kansas	Kansas City.
	Topeka.
Kentucky	Lexington-Fayette.
Louisiana	Baton Rouge.
	Shreveport.
Massachusetts	Springfield.
	Worcester.
Michigan	Ann Arbor.
	Flint.
	Grand Rapids.
	Lansing.
	Livonia.
	Sterling Heights.
	Warren.
Mississippi	Jackson.
Missouri	Independence.
	Springfield.
Nebraska	Lincoln.
Nevada	Las Vegas.
	Reno.
New Jersey	Elizabeth.
	Jersey City.
	Paterson.
New York	Albany.
	Rochester.
	Syracuse.
	Yonkers.
North Carolina	Durham.
	Greensboro.
	Raleigh.
	Winston-Salem.
Ohio	Akron.
	Dayton.
	Youngstown
Oregon	Eugene.
Pennsylvania	Allentown.
	Erie.
Rhode Island	Providence.
South Carolina	Columbia.
Tennessee	Chattanooga.
	Knoxville.
Texas	Amarillo.
	Arlington.
	Beaumont.
	Corpus Christi.
	Garland.
	Irving.
	Lubbock.
	Pasadena.
	Waco.
Utah	Salt Lake City.
Virginia	Alexandria.
	Chesapeake.
	Hampton.
	Newport News.
	Portsmouth.
	Richmond.
	Roanoke.
Washington	Spokane.
	Tacoma.
Wisconsin	Madison.

Appendix H to Part 122— Counties with Unincorporated Urbanized Areas With a Population of 250,000 or More According to the Latest Decennial Census by the Bureau of Census

State	County	Unincorporated urbanized population
California	Los Angeles	912,664
	Sacramento	449,056
	San Diego	304,758
Delaware	New Castle	257,184
Florida	Dade	781,949
Georgia	DeKalb	386,379
Hawaii	Honolulu	688,178
Maryland	Anne Arundel	271,458
	Baltimore	601,308
	Montgomery	447,993
	Prince George's	450,188
Texas	Harris	409,601
Utah	Salt Lake	304,632
Virginia	Fairfax	527,178
Washington	King	336,800

Appendix I to Part 122—Counties With Unincorporated Urbanized Areas Greater Than 100,000, But Less Than 250,000 According to the Latest Decennial Census by the Bureau of Census

State	County	Unincorporated urbanized population
Alabama	Jefferson	102,917
Arizona	Pima	111,479
California	Alameda	187,474
	Contra Costa	158,452
	Kern	117,231
	Orange	210,693
	Riverside	115,719
	San Bernardino	148,644
Florida	Broward	159,370
	Escambia	147,892
	Hillsborough	238,292
	Orange	245,325
	Palm Beach	167,089
	Pinellas	194,389
	Polk	104,150
	Sarasota	110,009
Georgia	Clayton	100,742
	Cobb	204,121
	Richmond	118,529
Kentucky	Jefferson	224,958
Louisiana	Jefferson	140,836
North Carolina	Cumberland	142,727
Nevada	Clark	201,775
Oregon	Multnomah	141,100
	Washington	109,348
South Carolina	Greenville	135,398
	Richland	124,684
Virginia	Arlington	152,599
	Henrico	161,204
	Chesterfield	108,348
Washington	Snohomish	103,493
	Pierce	196,113

PART 123—STATE PROGRAM REQUIREMENTS

8. The authority citation for part 123 continues to read as follows:

Authority: Clean Water Act, 33 U.S.C. 1251 *et seq.*

9. Section 123.25 is amended by revising paragraph (a)(9) to read as follows:

§ 123.25 Requirements for permitting.

(a) * * *

(9) § 122.26—(Storm water discharges);

* * * * *

PART 124—PROCEDURES FOR DECISIONMAKING

10. The authority citation for part 124 continues to read as follows:

Authority: Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq.*; Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*; Clean Water Act, 33 U.S.C. 1251 *et seq.*; and Clean Air Act, 42 U.S.C. 1857 *et seq.*

11. Section 124.52 is revised to read as follows:

§ 124.52 Permits required on a case-by-case basis.

(a) Various sections of part 122, subpart B allow the Director to determine, on a case-by-case basis, that certain concentrated animal feeding operations (§ 122.23), concentrated aquatic animal production facilities (§ 122.24), storm water discharges (§ 122.26), and certain other facilities covered by general permits (§ 122.28) that do not generally require an individual permit may be required to obtain an individual permit because of their contributions to water pollution.

(b) Whenever the Regional Administrator decides that an individual permit is required under this section, except as provided in paragraph (c) of this section, the Regional Administrator shall notify the discharger in writing of that decision and the reasons for it, and shall send an application form with the notice. The discharger must apply for a permit under § 122.21 within 60 days of notice, unless permission for a later date is granted by the Regional Administrator. The question whether the designation was proper will remain open for consideration during the public comment period under § 124.11 or § 124.118 and in any subsequent hearing.

(c) Prior to a case-by-case determination that an individual permit is required for a storm water discharge under this section (*see* 40 CFR 122.26 (a)(1)(v) and (c)(1)(v)), the Regional Administrator may require the discharger to submit a permit application or other information regarding the discharge under section 308 of the CWA. In requiring such information, the Regional Administrator shall notify the discharger in writing and shall send an application form with the notice. The discharger must apply for a permit under § 122.26 within 60 days of notice, unless permission for a later date is granted by the Regional Administrator. The question whether the initial designation was proper will remain open for consideration during the public comment period under § 124.11 or § 124.118 and in any subsequent hearing.

Note: The following form will not appear in the Code of Federal Regulations.

BILLING CODE 6560-50-M

Please print or type in the unshaded areas only

EPA ID Number *(copy from Item I of Form 1)*

Form Approved. OMB No. 2040-0086
Approval expires 5/31/92

Form 2F NPDES

EPA

United States Environmental Protection Agency
Washington, DC 20460

Application for Permit To Discharge Stormwater Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number *(list)*	B. Latitude	C. Longitude	D. Receiving Water *(name)*

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*	Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed, in the last three years, to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1

V. Nonstormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharges from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name and Official Title *(type or print)*	Signature	Date Signed

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

EPA ID Number *(copy from Item I of Form 1)*

Continued from Page 2

VII. Discharge Information

A,B,C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E: Potential discharges not covered by analysis - Is any pollutant listed in Table 2F-2 a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes *(list all such pollutants below)* ☐ No *(go to Section VIII)*

VIII. Biological Toxicity Testing Data

☐ Yes *(list results below)* ☐ No *(go to Section IX)*

IX. Contract Analysis Information

☐ Yes ☐ No *(go to Section X)*

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed

X. Certification

A. Name & Official Title *(type or print)*	B. Area Code and Phone No.
C. Signature	D. Date Signed

EPA ID Number *(copy from Item I of Form 1)*

Form Approved. OMB No. 2040-0086
Approval expires 5/31/92

VII. Discharge Information *(Continued from page 3 of Form 2F)*

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil nd Grease						
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Kjeldahl Nitrogen						
Nitrate plus Nitrite Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		

EPA Form 3510-2F (12-88) Page VII-1 Continue on Reverse

Continued from the Front

Part C - List each pollutant shown in Tables 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		

Part D - Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum floe rate during rain event *(gallons/minute or specify units*	6. Total flow from rain event *(gallons or specify units)*	7. Season sample was taken	8. Form of Precipitation *(rainfall, snowmelt)*

9. Provide a description of the method of flow measurement or estimate.

Instructions - Form 2F
Application for Permit to Discharge Storm Water Associated with Industrial Activity

Who Must File Form 2F

Form 2F must be completed by operators of facilities which discharge storm water associated with industrial activity or by operators of storm water discharges that EPA is evaluating for designation as a significant contributor of pollutants to waters of the United States, or as contributing to a violation of a water quality standard.

Operators of discharges which are composed entirely of storm water must complete Form 2F (EPA Form 3510-2F) in conjunction with Form 1 (EPA Form 3510-1).

Operators of discharges of storm water which are combined with process wastewater (process wastewater is water that comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, waste product, or wastewater) must complete and submit Form 2F, Form 1, and Form 2C (EPA Form 3510-2C).

Operators of discharges of storm water which are combined with nonprocess wastewater (nonprocess wastewater includes noncontact cooling water and sanitary wastes which are not regulated by effluent guidelines or a new source performance standard, except discharges by educational, medical, or commercial chemical laboratories) must complete Form 1, Form 2F, and Form 2E (EPA Form 3510-2E).

Operators of new sources or new discharges of storm water associated with industrial activity which will be combined with other nonstormwater new sources or new discharges must submit Form 1, Form 2F, and Form 2D (EPA Form 3510-2D).

Where to File Applications

The application forms should be sent to the EPA Regional Office which covers the State in which the facility is located. Form 2F must be used only when applying for permits in States where the NPDES permits program is administered by EPA. For facilities located in States which are approved to administer the NPDES permits program, the State environmental agency should be contacted for proper permit application forms and instructions.

Information on whether a particular program is administered by EPA or by a State agency can be obtained from your EPA Regional Office. Form 1, Table 1 of the "General Instructions" lists the addresses of EPA Regional Offices and the States within the jurisdiction of each Office.

Completeness

Your application will not be considered complete unless you answer every question on this form and on Form 1. If an item does not apply to you, enter "NA" (for not applicable) to show that you considered the question.

Public Availability of Submitted Information

You may not claim as confidential any information required by this form or Form 1, whether the information is reported on the forms or in an attachment. Section 402(j) of the Clean Water Act requires that all permit applications will be available to the public. This information will be made available to the public upon request.

Any information you submit to EPA which goes beyond that required by this form, Form 1, or Form 2C you may claim as confidential, but claims for information which are effluent data will be denied.

If you do not assert a claim of confidentiality at the time of submitting the information, EPA may make the information public without further notice to you. Claims of confidentiality will be handled in accordance with EPA's business confidentiality regulations at 40 CFR Part 2.

Definitions

All significant terms used in these instructions and in the form are defined in the glossary found in the General Instructions which accompany Form 1.

EPA ID Number

Fill in your EPA Identification Number at the top of each odd-numbered page of Form 2F. You may copy this number directly from item I of Form 1.

Item I

You may use the map you provided for item XI of Form 1 to determine the latitude and longitude of each of your outfalls and the name of the receiving water.

Item II-A

If you check "yes" to this question, complete all parts of the chart, or attach a copy of any previous submission you have made to EPA containing the same information.

Item II-B

You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

Item III

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including:

each of its drainage and discharge structures;

the drainage area of each storm water outfall;

paved areas and building within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied;

each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous waste for less than 90 days under 40 CFR 262.34);

each well where fluids from the facility are injected underground; and

springs, and other surface water bodies which receive storm water discharges from the facility;

Item IV-A

For each outfall, provide an estimate of the area drained by the outfall which is covered by impervious surfaces. For the purpose of this application, impervious surfaces are surfaces where storm water runs off at rates that are significantly higher than background rates (e.g., predevelopment levels) and include paved areas, building roofs, parking lots, and roadways. Include an estimate of the total area (including all impervious and pervious areas) drained by each outfall. The site map required under item III can be used to estimate the total area drained by each outfall.

Item IV-B

Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored, or disposed in a manner to allow exposure to storm water; method of treatment, storage or disposal of these materials; past and present materials management practices employed, in the last three years, to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied. Significant materials should be identified by chemical name, form (e.g., powder, liquid, etc.), and type of container or treatment unit. Indicate any materials treated, stored, or disposed of together. "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

Item IV-C

For each outfall, structural controls include structures which enclose material handling or storage areas, covering materials, berms, dikes, or diversion ditches around manufacturing, production, storage or treatment units, retention ponds, etc. Nonstructural controls include practices such as spill prevention plans, employee training, visual inspections, preventive maintenance, and housekeeping measures that are used to prevent or minimize the potential for releases of pollutants.

Item V

Provide a certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges which are not covered by an NPDES permit. Tests for such non-storm water discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. Part B must include a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test. All non-storm water discharges must be identified in a Form 2C or Form 2E which must accompany this application (see beginning of instructions under section titled "Who Must File Form 2F" for a description of when Form 2C and Form 2E must be submitted).

Item VI

Provide a description of existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years.

Item VII-A, B, and C

These items require you to collect and report data on the pollutants discharged for each of your outfalls. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part. The following general instructions apply to the entire item.

General Instructions

Part A requires you to report at least one analysis for each pollutant listed. Parts B and C require you to report analytical data in two ways. For some pollutants addressed in Parts B and C, if you know or have reason to know that the pollutant is present in your discharge, you may be required to list the pollutant and test (sample and analyze) and report the levels of the pollutants in your discharge. For all other pollutants addressed in Parts B and C, you must list the pollutant if you know or have reason to know that the pollutant is present in the discharge, and either report quantitative data for the pollutant or briefly describe the reasons the pollutant is expected to be discharged. (See specific instructions on the form and below for Parts A through C.) Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your raw materials, material management practices, maintenance chemicals, history of spills and releases, intermediate and final products and byproducts, and any previous analyses known to you of your effluent or similar effluent.

A. **Sampling:** The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater or storm water discharges. You may contact EPA or your State permitting authority for detailed guidance on sampling techniques and for answers to specific questions. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative, to the extent feasible, of your treatment system operating properly with no system upsets. Samples should be collected from the center of the flow channel, where turbulence is at a maximum, at a site specified in your present permit, or at any site adequate for the collection of a representative sample.

   For pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliform, grab samples taken during the first 30 minutes (or as soon thereafter as practicable) of the discharge must be used (you are not required to analyze a flow-weighted composite for these parameters). For all other pollutants both a grab sample collected during the first 30 minutes (or as soon thereafter as practicable) of the discharge and a flow-weighted composite sample must be analyzed. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period of greater than 24 hours.

   All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in that area.

   A grab sample shall be taken during the first thirty minutes of the discharge (or as soon thereafter as practicable), and a flow-weighted composite shall be taken for the entire event or for the first three hours of the event.

   Grab and composite samples are defined as follows:

Grab sample: An individual sample of at least 100 milliliters collected during the first thirty minutes (or as soon thereafter as practicable) of the discharge. This sample is to be analyzed separately from the composite sample.

Flow-Weighted Composite sample: A flow-weighted composite sample may be taken with a continuous sampler that proportions the amount of sample collected with the flow rate or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire event or for the first three hours of the event, with each aliquot being at least 100 milliliters and collected with a minimum period of fifteen minutes between aliquot collections. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. Where GC/MS Volatile Organic Analysis (VOA) is required, aliquots must be combined in the laboratory immediately before analysis. Only one analysis for the composite sample is required.

Data from samples taken in the past may be used, provided that:

All data requirements are met;

Sampling was done no more than three years before submission; and

All data are representative of the present discharge.

Among the factors which would cause the data to be unrepresentative are significant changes in production level, changes in raw materials, processes, or final products, and changes in storm water treatment. When the Agency promulgates new analytical methods in 40 CFR Part 136, EPA will provide information as to when you should use the new methods to generate data on your discharges. Of course, the Director may request additional information, including current quantitative data, if they determine it to be necessary to assess your discharges. The Director may allow or establish appropriate site-specific sampling procedures or requirements, including sampling locations, the season in which the sampling takes place, the minimum duration between the previous measurable storm event and the storm event sampled, the minimum or maximum level of precipitation required for an appropriate storm event, the form of precipitation sampled (snow melt or rainfall), protocols for collecting samples under 40 CFR Part 136, and additional time for submitting data on a case-by-case basis.

B. **Reporting:** All levels must be reported as concentration and as total mass. You may report some or all of the required data by attaching separate sheets of paper instead of filling out pages VII-1 and VII-2 if the separate sheets contain all the required information in a format which is consistent with pages VII-1 and VII-2 in spacing and in identification of pollutants and columns. Use the following abbreviations in the columns headed "Units."

Concentration		Mass	
ppm	parts per million	lbs	pounds
mg/1	milligrams per liter	ton	tons (English tons)
ppb	parts per billion	mg	milligrams
ug/1	micrograms per liter	g	grams
kg	kilograms	T	tonnes (metric tons)

All reporting of values for metals must be in terms of "total recoverable metal," unless:

(1) An applicable, promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form; or

(2) All approved analytical methods for the metal inherently measure only its dissolved form (e.g., hexavalent chromium); or

(3) The permitting authority has determined that in establishing case-by-case limitations it is necessary to express the limitations on the metal in dissolved, valent, or total form to carry out the provisions of the CWA. If you measure only one grab sample and one flow-weighted composite sample for a given outfall, complete only the "Maximum Values" columns and insert "1" into the "Number of Storm Events Sampled" column. The permitting authority may require you to conduct additional analyses to further characterize your discharges.

If you measure more than one value for a grab sample or a flow-weighted composite sample for a given outfall and those values are representative of your discharge, you must report them. You must describe your method of testing and data analysis. You also must determine the average of all values within the last year and report the concentration mass under the "Average Values" columns, and the total number of storm events sampled under the "Number of Storm Events Sampled" columns.

C. **Analysis:** You must use test methods promulgated in 40 CFR Part 136; however, if none has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of the pollutant in your discharge provided that you submit a description of the method or a reference to a published method. Your description should include the sample holding time, preservation techniques, and the quality control measures which you used. If you have two or more substantially identical outfalls, you may request permission from your permitting authority to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted by the permitting authority, on a separate sheet attached to the application form, identify which outfall you did test, and describe why the outfalls which you did not test are substantially identical to the outfall which you did test.

Part VII-A

Part VII-A must be completed by all applicants for all outfalls who must complete Form 2F.

Analyze a grab sample collected during the first thirty minutes (or as soon thereafter as practicable) of the discharge and flow-weighted composite samples for all pollutants in this Part, and report the results except use only grab samples for pH and oil and grease. See discussion in General Instructions to Item VII for definitions of grab sample collected during the first thirty minutes of discharge and flow-weighted composite sample. The "Average Values" column is not compulsory but should be filled out if data are available.

Part VII-B

List all pollutants that are limited in an effluent guideline which the facility is subject to (see 40 CFR Subchapter N to determine which pollutants are limited in effluent guidelines) or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See discussion in General Instructions to item VII for definitions of grab sample collected during the first thirty minutes (or as soon thereafter as practicable) of discharge and flow-weighted composite sample. The "Average Values" column is not compulsory but should be filled out if data are available.

Analyze a grab sample collected during the first thirty minutes of the discharge and flow-weighted composite samples for all pollutants in this Part, and report the results, except as provided in the General Instructions.

Part VII-C

Part VII-C must be completed by all applicants for all outfalls which discharge storm water associated with industrial activity, or that EPA is evaluating for designation as a significant contributor of pollutants to waters of the United States, or as contributing to a violation of a water quality standard. Use both a grab sample and a composite sample for all pollutants you analyze for in this part except use grab samples for residual chlorine and fecal coliform. The "Average Values" column is not compulsory but should be filled out if data are available. Part C requires you to address the pollutants in Table 2F-2, 2F-3, and 2F-4 for each outfall. Pollutants in each of these Tables are addressed differently.

Table 2F-2: For each outfall, list all pollutants in Table 2F-2 that you know or have reason to believe are discharged (except pollutants previously listed in Part VII-B). If a pollutant is limited in an effluent guideline limitation which the facility is subject to (e.g., use of TSS as an indicator to control the discharge of iron and aluminum), the pollutant should be listed in Part VII-B. If a pollutant in table 2F-2 is indirectly limited by an effluent guideline limitation through an indicator, you must analyze for it and report data in Part VII-C. For other pollutants listed in Table 2F-2 (those not limited directly or indirectly by an effluent limitation guideline), that you know or have reason to believe are discharges, you must either report quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

Table 2F-3: For each outfall, list all pollutants in Table 2F-3 that you know or have reason to believe are discharged. For every pollutant in Table 2F-3 expected to be discharged in concentrations of 10 ppb or greater, you must submit quantitative data. For acrolein, acrylonitrile, 2,4 dinitrophenol; and 2-methyl-4,6 dinitrophenol, you must submit quantitative data if any of these four pollutants is expected to be discharged

in concentrations of 100 ppb or greater. For every pollutant expected to be discharged in concentrations less than 10 ppb (or 100 ppb for the four pollutants listed above), then you must either submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

Small Business Exemption - If you are a "small business," you are exempt from the reporting requirements for the organic toxic pollutants listed in Table 2F-3. There are two ways in which you can qualify as a "small business". If your facility is a coal mine, and if your probable total annual production is less than 100,000 tons per year, you may submit past production data or estimated future production (such as a schedule of estimated total production under 30 CFR 795.14(c)) instead of conducting analyses for the organic toxic pollutants. If your facility is not a coal mine, and if your gross total annual sales for the most recent three years average less than $100,000 per year (in second quarter 1980 dollars), you may submit sales data for those years instead of conducting analyses for the organic toxic pollutants. The production or sales data must be for the facility which is the source of the discharge. The data should not be limited to production or sales for the process or processes which contribute to the discharge, unless those are the only processes at your facility. For sales data, in situations involving intracorporate transfer of goods and services, the transfer price per unit should approximate market prices for those goods and services as closely as possible. Sales figures for years after 1980 should be indexed to the second quarter of 1980 by using the gross national product price deflator (second quarter of 1980=100). This index is available in National Income and Product Accounts of the United States (Department of Commerce, Bureau of Economic Analysis).

Table 2F-4: For each outfall, list any pollutant in Table 2F-4 that you know or believe to be present in the discharge and explain why you believe it to be present. No analysis is required, but if you have analytical data, you must report them. **Note:** Under 40 CFR 117.12(a)(2), certain discharges of hazardous substances (listed at 40 CFR 177.21 or 40 CFR 302.4) may be exempted from the requirements of section 311 of CWA, which establishes reporting requirements, civil penalties, and liability for cleanup costs for spills of oil and hazardous substances. A discharge of a particular substance may be exempted if the origin, source, and amount of the discharged substances are identified in the NPDES permit application or in the permit, if the permit contains a requirement for treatment of the discharge, and if the treatment is in place. To apply for an exclusion of the discharge of any hazardous substance from the requirements of section 311, attach additional sheets of paper to your form, setting forth the following information:

1. The substance and the amount of each substance which may be discharged.
2. The origin and source of the discharge of the substance.
3. The treatment which is to be provided for the discharge by:
    a. An onsite treatment system separate from any treatment system treating your normal discharge;
    b. A treatment system designed to treat your normal discharge and which is additionally capable of treating the amount of the substance identified under paragraph 1 above; or
    c. Any combination of the above.

See 40 CFR 117.12(a)(2) and (c), published on August 29, 1979, in 44 FR 50766, or contact your Regional Office (Table 1 on Form 1, Instructions), for further information on exclusions from section 311.

Part VII-D

If sampling is conducted during more than one storm event, you only need to report the information requested in Part VII-D for the storm event(s) which resulted in any maximum pollutant concentration reported in Part VII-A, VII-B, or VII-C.

Provide flow measurements or estimates of the flow rate, and the total amount of discharge for the storm event(s) sampled, the method of flow measurement; or estimation. Provide the data and duration of the storm event(s) sampled, rainfall measurements, or estimates of the storm event which generated the sampled runoff and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event.

Part VII-E

List any toxic pollutant listed in Tables 2F-2, 2F-3, or 2F-4 which you currently use or manufacture as an intermediate or final product or byproduct. In addition, if you know or have reason to believe that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) is discharged or if you use or manufacture 2,4,5-trichlorophenoxy acetic

acid (2,4,5,-T); 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5,-TP); 2-(2,4,5-trichlorophenoxy) ethyl, 2,2-dichloropropionate (Erbon); O,O-dimethyl O-(2,4,5-trichlorphenyl) phosphorothioate (Ronnel); 2,4,5-trichlorophenol (TCP); or hexachlorophene (HCP); then list TCDD. The Director may waive or modify the requirement if you demonstrate that it would be unduly burdensome to identify each toxic pollutant and the Director has adequate information to issue your permit. You may not claim this information as confidential; however, you do not have to distinguish between use or production of the pollutants or list the amounts.

Item VIII

Self explanatory. The permitting authority may ask you to provide additional details after your application is received.

Item X

The Clean Water Act provides for severe penalties for submitting false information on this application form.

Section 309(c)(4) of the Clean Water Act provides that "Any person who knowingly makes any false material statement, representation, or certification in any application, . . . shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than 2 years, or by both. If a conviction of such person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or by both." 40 CFR Part 122.22 requires the certification to be signed as follows:

(A) For a corporation: by a responsible corporate official. For purposes of this section, a responsible corporate official means (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25,000,000 (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegation of authority to responsible corporate officers identified in 122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate position under 122.22(a)(1)(ii) rather than to specific individuals.

(B) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(C) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

Table 2F-1
Codes for Treatment Units

Physical Treatment Processes

1-A	Ammonia Stripping	1-M	Grit Removal
1-B	Dialysis	1-N	Microstraining
1-C	Diatomaceous Earth Filtration	1-O	Mixing
1-D	Distillation	1-P	Moving Bed Filters
1-E	Electrodialysis	1-Q	Multimedia Filtration
1-F	Evaporation	1-R	Rapid Sand Filtration
1-G	Flocculation	1-S	Reverse Osmosis (Hyperfiltration)
1-H	Flotation	1-T	Screening
1-I	Foam Fractionation	1-U	Sedimentation (Setting)
1-J	Freezing	1-V	Slow Sand Filtration
1-K	Gas-Phase Separation	1-W	Solvent Extraction
1-L	Grinding (Comminutors)	1-X	Sorption

Chemical Treatment Processes

2-A	Carbon Adsorption	2-G	Disinfection (Ozone)
2-B	Chemical Oxidation	2-H	Disinfection (Other)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (Chlorine)	2-L	Reduction

Biological Treatment Processes

3-A	Activated Sludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application
3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filtration

Other Processes

4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection

Sludge Treatment and Disposal Processes

5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

Table 2F-2

Conventional and Nonconventional Pollutants Required To Be Tested by Existing Discharger if Expected To Be Present

Bromide
Chlorine, Total Residual
Color
Fecal Coliform
Fluoride
Nitrate-Nitrite
Nitrogen, Total Kjedahl
Oil and Grease
Phosphorus, Total Radioactivity
Sulfate
Sulfide
Sulfite
Surfactants
Aluminum, Total
Barium, Total
Boron, Total
Cobalt, Total
Iron, Total
Magnesium, Total
Molybdenum, Total
Magnesium, Total
Tin, Total
Titanium, Total

Table 2F-3

Toxic pollutants required to be identified by applicant if expected to be present

Toxic Pollutants and Total Phenol

Antimony, Total	Copper, Total	Silver, Total
Arsenic, Total	Lead, Total	Thallium, Total
Beryllium, Total	Mercury, Total	Zinc, Total
Cadmium, Total	Nickel, Total	Cyanide, Total
Chromium Total	Selenium, Total	Phenols, Total

GC/MS Fraction Volatiles Compounds

Acrolein	Dichlorobromomethane	1,1,2,2,-Tetrachloroethane
Acrylonitrile	1,1-Dichloroethane	Tetrachloroethylene
Benzene	1,2-Dichloroethane	Toluene
Bromoform	1,1-Dichloroethylene	1,2-Trans-Dichloroethylene
Carbon Tetrachloride	1,2-Dichloropropane	1,1,1-Trichloroethane
Chlorobenzene	1,3-Dichloropropylene	1,1,2-Trichloroethane
Chlorodibromomethane	Ethylbenzene	Trichloroethylene
Chloroethane	Methyl Bromide	Vinyl Chloride
2-Chloroethylvinyl Ether	Methyl Chloride	
Chloroform	Methylene Chloride	

Acid Compounds

2-Chlorophenol	2,4-Dinitrophenol	Pentachlorophenol
2,4-Dichlorophenol	2-Nitrophenol	Phenol
2,4-Dimethylphenol	4-Nitrophenol	2,4,6-Trichlorophenol
4,6-Dinitro-O-Cresol	p-Chloro-M-Cresol	

Base/Neutral

Acenaphthene	2-Chloronaphthalene	Fluroranthene
Acenaphthylene	4-Chlorophenyl Phenyl Ether	Fluorene
Anthracene	Chrysene	Hexachlorobenzene
Benzidine	Dibenzo(a,h)anthracene	Hexachlorobutadiene
Benzo(a)anthracene	1,2-Dichlorobenzene	Hexachloroethane
Benzo(a)pyrene	1,3-Dichlorobenzene	Indeno(1,2,3-cd)pyrene
3,4-Benzofluoranthene	1,4-Dichlorobenzene	Isophorone
Benzo(ghi)perylene	3,3'-Dichlorobenzidine	Napthalene
Benzo(k)fluoranthene	Diethyl Phthalate	Nitrobenzene
Bis(2-chloroethoxy)methane	Dimethyl Phthalate	N-Nitrosodimethylamine
Bis(2-chloroethyl)ether	Di-N-Butyl Phthalate	N-Nitrosodi-N-Propylamine
Bis(2-chloroisopropyl)ether	2,4-Dinitrotoluene	N-Nitrosodiphenylamine
Bis(2-ethylyhexyl)phthalate	2,6-Dinitrotoluene	Phenanthrene
4-Bromophenyl Phenyl Ether	Di-N-Octylphthalate	Pyrene
Butylbenzyl Phthalate	1,2-Diphenylhydrazine (as Azobenzene)	1,2,4-Trichlorobenzene

Pesticides

Aldrin	Dieldrin	PCB-1254
Alpha-BHC	Alpha-Endosulfan	PCB-1221
Beta-BHC	Beta-Endosulfan	PCB-1232
Gamma-BHC	Endosulfan Sulfate	PCB-1248
Delta-BHC	Endrin	PCB-1260
Chlordane	Endrin Aldehyde	PCB-1016
4,4'-DDT	Heptachlor	Toxaphene
4,4'-DDE	Heptachlor Epoxide	
4,4'-DDD	PCB-1242	

Table 2F-4

Hazardous substances required to be identified by applicant if expected to be present

Toxic Pollutant

Asbestos

Hazardous Substances

Acetaldehyde	Dinitrobenzene	Napthenic acid
Allyl alcohol	Diquat	Nitrotoluene
Allyl chloride	Disulfoton	Parathion
Amyl acetate	Diuron	Phenolsulfonate
Aniline	Epichlorohydrin	Phosgene
Benzonitrile	Ethion	Propargite
Benzyl chloride	Ethylene diamine	Propylene oxide
Butyl acetate	Ethylene dibromide	Pyrethrins
Butylamine	Formaldehyde	Quinoline
Carbaryl	Furfural	Resorcinol
Carbofuran	Guthion	Stronthium
Carbon disulfide	Isoprene	Strychnine
Chlorpyrifos	Isopropanolamine	Styrene
Coumaphos	Kelthane	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
Cresol	Kepone	TDE (Tetrachlorodiphenyl ethane)
Crotonaldehyde	Malathion	2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanoic acid]
Cyclohexane	Mercaptodimethur	Trichlorofan
2,4-D (2,4-Dichlorophenoxyacetic acid)	Methoxychlor	Triethylamine
Diazinon	Methyl mercaptan	Trimethylamine
Dicamba	Methyl methacrylate	Uranium
Dichlobenil	Methyl parathion	Vanadium
Dichlone	Mevinphos	Vinyl acetate
2,2-Dichloropropionic acid	Mexacarbate	Xylene
Dichlorvos	Monoethyl amine	Xylenol
Diethyl amine	Monomethyl amine	Zirconium
Dimethyl amine	Naled	

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FACT SHEET/TECHNICAL REPORT

FOR

SDRWQCB ORDER NO. R9-2004-001
MUNICIPAL STORM WATER PERMIT

FOR

THE COUNTY OF RIVERSIDE, THE CITY OF MURRIETA, THE CITY OF TEMECULA, AND THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
WITHIN THE SANTA MARGARTIA WATERSHED
IN THE SAN DIEGO REGION
(UPPER SANTA MARGARITA WATERSHED)

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I. LIST OF ACRONYMS

ADT – Average Daily Traffic

BAT – Best Available Technology

BMP – Best Management Practice

CEQA – California Environmental Quality Act

CWA – Clean Water Act

CWC – California Water Code

DAMP – Santa Margarita Regional Drainage Area Management Plan

EPA – United States Environmental Protection Agency

GIS – Geographic Information System

MEP – Maximum Extent Practicable

MS4 – Municipal Separate Storm Sewer System

NOI – Notice of Intent

NPDES – National Pollutant Discharge Elimination System

NURP – Nationwide Urban Runoff Program

RWQCB – Regional Water Quality Control Board

SDRWQCB – San Diego Regional Water Quality Control Board

SIC – Standard Industrial Classification Code

SUSMP – Standard Urban Storm Water Mitigation Plan

SWMP – Storm Water Management Plan

SWRCB – State Water Resources Control Board

SWPPP – Storm Water Pollution Prevention Plan

TAC - State Water Resources Control Board Urban Runoff Technical Advisory Committee

TMDL – Total Maximum Daily Load

II. FACT SHEET FORMAT

This Fact Sheet briefly sets forth the principle facts and the significant factual, legal, methodological, and policy questions that the San Diego Regional Water Quality Control Board (SDRWQCB) considered in preparing Order No. R9-2004-001. In accordance with the Code of Federal Regulations (CFR) title 40 parts 124.8 and 124.56, this Fact Sheet includes, but is not limited to, the following information:

- **Contact information (Section III);**
- **Public process and notification procedures (Section IV);**
- **A brief description of the type of facility or activity that is being regulated by the Order (Section V);**
- **The type and quantity of pollutants discharged (Section VI);**
- **A brief summary of the basis for the requirements in the Order, including references to the applicable statutory or regulatory provisions (Section VII); and**
- **A discussion of the requirements in the Order (Sections VIII and IX).**

Findings contained in the Order are discussed throughout this Fact Sheet. The findings that broadly apply to the entire Order are discussed in Sections V, VI and VII. Findings that justify specific requirements in the Order are discussed in the applicable subsections of Section VIII.

III. CONTACT INFORMATION

SDRWQCB

Northern Watershed Protection Unit
Bob Morris, Senior WRC Engineer
Megan Quigley, Environmental Scientist C
9174 Sky Park Court, Suite 100
San Diego, CA 92123
858-268-5363
858-571-6972 (fax)
email: mquigley@rb9.swrcb.ca.gov

The Order and other related documents can be downloaded from the SDRWQCB website at: http://www.swrcb.ca.gov/rwqcb9/programs/rsd_stormwater.html

All documents referenced in this Fact Sheet and in Order No. R9-2004-001 are available for public review at the SDRWQCB office, located at the address listed above. Public records are available for inspection during regular business hours, from 8:00 am to 5:00 pm Monday through Friday. To schedule an appointment to inspect public records, contact Megan Quigley at 858-268-5363, or DiAnne Broussard at 858-492-1763.

Permittees

Riverside County Flood Control and Water Conservation District, Principal Permittee
Warren D. Williams, General Manager-Chief Engineer
1995 Market Street
Riverside, CA 92501
909-955-1200
909-788-9965 (fax)

County of Riverside
Alex Gann, Management Analyst
Riverside County Executive Office
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Murrieta, CA 92562
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909-698-4509 (fax)

City of Temecula
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Temecula, CA 92589
909-694-6411
909-694-6475 (fax)

IV. PUBLIC PROCESS AND NOTIFICATION PROCEDURES

The SDRWQCB followed the schedule listed below for the preparation of Order No. R9-2004-001:

- The SDRWQCB received the Report of Waste Discharge (ROWD) on May 30, 2003
- On December 15, 2003, the SDRWQCB released the Order and supporting Fact Sheet, beginning the public comment period. The documents were available on the SDRWQCB web page at http://www.swrcb.ca.gov/rwqcb9/programs/rsd_stormwater.html and mailed to the Permittees and all other parties who requested a copy.
- A public notice was published in the Riverside Press-Enterprise on December 20, 2003 notifying the public of the opportunity to submit written comments and to present verbal comments to the San Diego Regional Board at the February 11, 2004 meeting.
- The SDRWQCB held a public workshop on January 23, 2004 at the Temecula City Hall. The purpose of the workshop was to answer questions regarding the Order and to discuss the affect of potential new requirements on the business community.
- A public hearing to receive testimony at the San Diego Regional Board meeting was conducted on February 11, 2004.
- The public comment period closed at 5:00 pm on March 10, 2004.
- A response to written comments received during the public comment period and the revised Order were issued on May 7, 2004.
- After deliberation, the San Diego Regional Board adopted the Order at the July 14, 2004 meeting.

In addition to the public process described above, various informal meetings have been conducted with SDRWQCB staff and the Permittees. The meetings served as workshops for the Permittees to express their concerns and questions regarding the permit.

V. DESCRIPTION OF THE TYPE OF FACILITY OR ACTIVITY THAT IS BEING REGULATED BY THE NPDES PERMIT

A. Permit History (Finding Nos. 1 and 2)

The Riverside County Flood Control and Water Conservation District (District), the County of Riverside, and the Cities of Murrieta and Temecula (hereinafter called Permittees), own or operate municipal separate storm sewer systems (MS4s) through which urban runoff is discharged into waters of the United States (U.S.) within the portion of the Santa Margarita watershed located in Riverside County in the San Diego Region (hereinafter referred to as the Upper Santa Margarita Watershed) (**Finding No. 1**). Pursuant to the 1987 Water Quality Act (WQA) and the U. S. Environmental Protection Agency's (EPA) final storm water regulations (the "Phase I rule" at 55 Fed. Reg. 47990), the Permittees obtained a National Pollutant Discharge Elimination System (NPDES) permit for discharges from their MS4(s) to waters of the U.S. in the Upper Santa Margarita Watershed.

In July of 1990, the District, the County, and the City of Temecula obtained a first-round NPDES permit (Order No. R9-90-46). Following its incorporation, the City of Murrieta was added to that permit on May 18, 1992. Then, on May 13, 1998, the SDRWQCB adopted Order No. R9-98-02 as a second-round MS4 permit for the Upper Santa Margarita Watershed. The EPA objected to the order due to the Receiving Water Limitations (RWL) language, which EPA determined did not comply with the federal Clean Water Act (CWA) and its implementing regulations. EPA assumed responsibility and reissued the permit on April 27, 1999. Subsequently on November 8, 2000, the SDRWQCB issued Addendum No. 1 to Order R9-98-02, which incorporated EPA's permit by reference. On May 30, 2003, the District, as the Principal Permittee, submitted a Report of Waste Discharge (ROWD) for renewal of their NPDES MS4 permit (**Finding No. 2**). Order No. R9-2004-001 is the third-round Phase I NPDES MS4 permit for the Upper Santa Margarita Watershed.

B. Permit Coverage (Finding Nos. 19 and 20)

The Order regulates discharges of urban runoff from MS4s owned or operated by the Permittees, and discharges into MS4s from areas within the Permittees' jurisdiction. In the Order, urban runoff is defined as "all flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water illicit discharges (dry weather flows)."

A MS4 is defined in the federal regulations as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), owned or operated by a Permittee, and designed or used for collecting or conveying urban runoff (EPA, 2000a). In addition, natural drainage patterns and urban streams are frequently used by municipalities to convey urban runoff away from development within their jurisdiction. Therefore, as stated in **Finding No.19**, the SDRWQCB considers natural drainages that are used for conveyances of urban runoff, regardless of whether or not they've been altered by the municipality, as both part of the MS4s **and** as receiving waters. To clarify, an unaltered natural drainage, which receives runoff from a point source (channeled by a Permittee to drain an area within their

jurisdiction), which then conveys the runoff to an altered natural drainage or a man-made MS4 is both an MS4 and a receiving water (SDRWQCB, 2001c). Whereas, a natural channel which receives sheet flow from a property in a rural area is not part of the MS4.

Federal, state, regional, or local entities within the Permittees' boundaries, and which are not named in the Order, may operate storm drain facilities and/or discharge urban runoff to storm drains and water courses covered by the Order. In addition, discharges into the Permittees' MS4s from agricultural and other activities identified in 40 CFR 122.3 are excluded from federal NPDES regulations. However, the Permittees are responsible for all discharges from their MS4s to receiving waters, and discharges from entities and activities not specifically regulated by the Order may cause or contribute to a condition of contamination or exceedances of water quality objectives. Therefore, Permittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to a MS4 that conveys discharges to waters of the U.S., the operator of the MS4 that does not prohibit or control discharges into its own system essentially accepts responsibility for those discharges (**Finding No. 20**).

In their comments on the Order, the Permittees proposed a procedure to address discharges from third parties outside of their jurisdictions (Permittees, 2004a). The proposed procedure includes documenting and sampling discharges, utilizing the Hazardous Materials Emergency Response Team in emergency situations, verbally notifying the discharger, notifying the appropriate enforcement agency and/or the SDRWQCB, and notifying the discharger of available assistance to address the discharge. The proposed procedure meets the SDRWQCB's expectations for addressing discharges from third parties.

C. Description of Permitted Area (Finding No. 3)

The Upper Santa Margarita Watershed is approximately 548 square miles and includes unincorporated portions of Riverside County, the Cities of Murrieta and Temecula, as well as portions of the Cleveland and San Bernardino National Forests, and the Cahuilla, Ramona, Pauma, and Pechanga Indian Reservations. Approximately 168,400 people reside within the permitted area (Permittees, 2003). Approximately 36,400 people reside in the unincorporated area while approximately 132,000 people reside within the Cities of Murrieta and Temecula (Permittees, 2003).

Temecula Creek, which drains the Palomar Mountains, and Murrieta Creek, which drains the Santa Ana Mountains, are the main drainages in the permitted area. They join to form the Santa Margarita River near the City of Temecula. Main tributaries to Murrieta Creek include Warm Springs Creek and Santa Gertrudis Creek. Main tributaries to Temecula Creek include Pechanga Creek and Arroyo Seco Creek. Vail Lake, Skinner Reservoir, and Diamond Valley Reservoir are major impoundments in the permitted area. For more information about watershed characteristics, see the ROWD (Permittees, 2003).

The Water Quality Control Plan for the San Diego Basin (SDRWQCB, 1994) identifies the following beneficial uses for water bodies in the Santa Margarita Watershed: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1) (potential use), Non-contact Water Recreation (REC2), Warm Freshwater Habitat

WARM, Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), and Rare, Threatened, or Endangered Species (RARE) (**Finding No. 3**).[1]

In addition to providing habitat and recreation opportunities, residents and businesses in the permitted area rely heavily on local water for drinking, agriculture, and industrial supply. Over 40% of water used in the watershed is locally produced (Jenks, 2002). In 2001, local water production in the watershed was 41,765 acre-feet. Imported supplies totaled 66,369 acre-feet. Of the total water supply, 49,212 acre-feet were used for agriculture, 5,390 acre-feet were used for commercial purposes, and 41,802 acre feet were used for domestic purposes (Jenks, 2002). In addition, portions of Fallbrook in San Diego County and the U.S. Marine Corps Base Camp Pendleton, depend on surface and ground water that originates form the Upper Santa Margarita Watershed.

The Santa Margarita River is one of the few remaining natural gorge rivers in Southern California, with approximately 70 species of special concern (rare, threatened, or endangered, regularly inhabiting the watershed, including 30 that are currently protected under the Federal Endangered Species Act (Stein, 1998). Although the majority of the river is not within the jurisdiction of the Permittees, the riparian systems in the upper watershed play an integral role in the maintenance of sensitive downstream ecological functions (Stein, 1998). The upper watershed riparian habitats are in direct hydrologic contact with downstream systems and are associated with freshwater recharge to a series of downstream aquifers (Shapiro, 1991). In addition, these riparian systems in the Upper Santa Margarita Watershed often provide breeding, migratory, or escape habitat for many animal species that reside in the lower watershed (Stein, 1998).

VI. TYPE AND QUANTITY OF POLLUTANTS DISCHARGED

A. Background

Pollutants in Urban Runoff (Finding Nos. 4, 5 and 6)

Urban runoff contains waste, as defined in the California Water Code (CWC), and pollutants that adversely affect the quality of waters of the State. The discharge of urban runoff from an

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[1] **MUN** – Municipal and Domestic Supply – Uses of water for community, military, or individual water supply systems (i.e., drinking water).
AGR – Agricultural Supply – Uses of water for farming, horticulture, or ranching.
IND – Industrial Service Supply – Uses of water for industrial activities that do not depend primarily on water quality (i.e., mining, cooling water supply, gravel washing, fire protection).
PROC – Industrial Process Supply – Uses of water for industrial activities that depend primarily on water quality.
GWR – Ground Water Recharge – Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.
REC1 – Contact Water Recreation – Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible (i.e., swimming, wading, fishing, and white water activities). * Means this is a potential use.
REC2 – Non-contact Water Recreation – Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water (i.e., picnicking, hiking, camping, boating, and sightseeing).
WARM – Warm Freshwater Habitat – Uses of water that support warm water ecosystems.
COLD – Cold Freshwater Habitat – Uses of water that support cold water ecosystems including.
WILD – Wildlife Habitat – Uses of water that support terrestrial ecosystems.
RARE – Rare, Threatened, or Endangered Species – Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant and animal species established under state or federal law as rare, threatened, or endangered.

MS4 is a "discharge of pollutants from a point source" into waters of the United States as defined in the CWA (**Finding No. 4**). Section 13050(d) of the CWC defines "waste" as "sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal." 40 CFR 122.2 defines "point source" as "any discernable, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff." 40 CFR 122.2 defines "discharge of a pollutant" as "Any addition of any pollutant or combination of pollutants to waters of the U.S. from any point source." Also, the justification for control of pollution into Californian waters can be found at CWC section 13260(a)(1), and State Water Resource Control Board (SWRCB) Order WQ 2001-15 verifies that urban runoff contains waste (SWRCB, 2001).

The quality of urban runoff is fundamentally important to the health of the environment and the quality of life in Southern California. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance (**Finding No. 6**). The 1992, 1994, and 1996 National Water Quality Inventory Reports to Congress prepared by the EPA showed a trend of impairment in the Nation's waters from contaminated storm water and urban runoff (EPA, 2000b). The 1998 National Water Quality Inventory Report showed that urban runoff discharges affect 11% of rivers, 12% of lakes, and 28% of estuaries (EPA, 2000b). The report states that ocean shoreline impairment due to urban runoff increased from 55% in 1996 to 63% in 1998. The report notes that urban runoff discharges are the leading source of pollution and the main factor in the degradation of surface water quality in California's coastal waters, rivers, and streams (EPA, 2000b).

Furthermore, the National Urban Runoff Program (NURP) Study found that pollutant levels from illicit discharges were high enough to significantly degrade receiving water quality, and threaten aquatic life, wildlife, and human health (EPA, 1993b).

The most common categories of pollutants in urban runoff include total suspended solids, sediment (due to anthropogenic activities); pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers), oxygen-demanding substances (decaying vegetation, animal waste), and trash (**Finding No. 5**). The NURP study showed that heavy metals, organics, coliform bacteria, nutrients, oxygen demanding substances (e.g., decaying vegetation), and total suspended solids are found at relatively high levels in urban runoff (EPA, 1993b). It also found that MS4 discharges draining residential, commercial, and light industrial areas contain significant loadings of total suspended solids and other pollutants. The Basin Plan goes on to identify urban runoff pollutants to include lawn and garden chemicals, household and automotive care products dumped or drained on streets, and sediment that

erodes from construction sites (SDRWQCB, 1994). In addition, the SWRCB Urban Runoff Technical Advisory Committee (TAC) finds that urban runoff pollutants include sediments, nutrients, oxygen-demanding substances, heavy metals, petroleum hydrocarbons, pathogenic bacteria, viruses, and pesticides (SWRCB, 1994). Water that flows over streets, parking lots, construction sites, and industrial, commercial, residential, and municipal areas carries these untreated pollutants through storm drain networks directly to the receiving waters of the Upper Santa Margarita Watershed.

According to the Center for Watershed Protection, the quality of both surface and ground water in urbanizing areas of arid and semi-arid regions of the southwest is strongly shaped by urbanization. Since rain events are so rare, pollutants have more time to build up on impervious surfaces compared to humid regions. Therefore, the pollutant concentrations of storm water runoff from arid watersheds tends to be higher than that of humid watersheds (Center for Watershed Protection, Article 66).

Impacts From Urbanization (Finding No. 12)

The Natural Resources Defense Council (NRDC) 1999 Report, "Stormwater Strategies, Community Responses to Runoff Pollution" identifies two main causes of the storm water pollution problem in urban areas (NRDC, 1999). Both causes are directly related to development in urban and urbanizing areas:

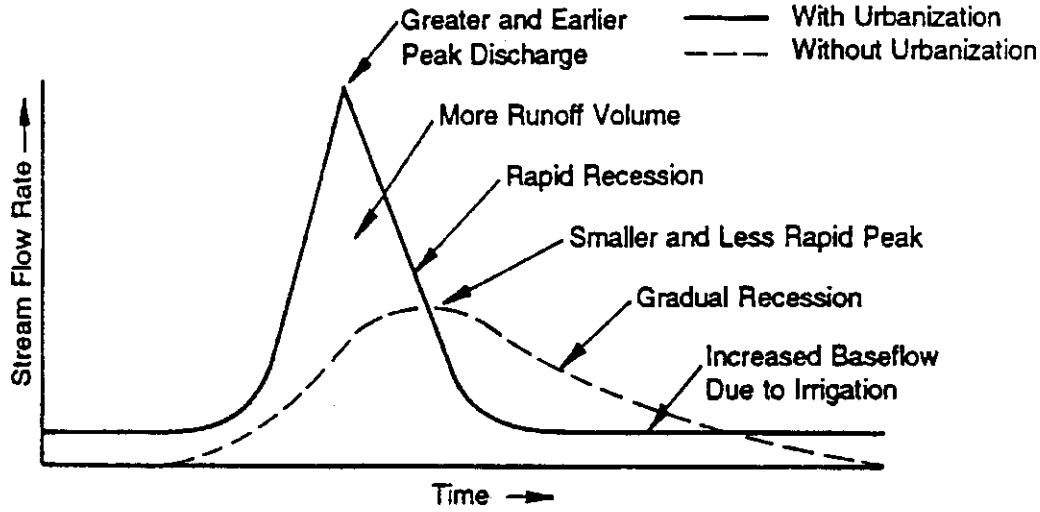
1. Increased volume and velocity of surface runoff. There are three types of human-made impervious covers that increase the volume and velocity of runoff: (i) rooftop, (ii) transportation imperviousness, and (iii) non-porous (impervious) surfaces. As these impervious surfaces increase, infiltration will decrease, forcing more water to run off the surface, picking up speed and pollutants.
2. The concentration of pollutants in the runoff. As discussed above, certain industrial, commercial, residential and construction activities are large contributors of pollutant concentrations in urban runoff. As human population density increases, it brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc.

As a result of these two causes, runoff leaving developed urban areas is significantly greater in volume, velocity, and pollutant load than pre-development runoff from the same area (**Finding No. 12**). The Permittees have demonstrated their support for this finding in the DAMP (Permittees, 1993), which states:

> "Many storm water runoff problems are primarily a consequence of urbanization. Water that previously soaked into the ground, removing pollutants by filtering through soil, and eventually replenishing groundwater supplies, now must flow overland and therefore enters local streams more rapidly. The rapid transport of water increases the erosion of stream banks and hillsides and does not permit filtering of pollutants. Sediment carried by storm water runoff can build up in streambeds, harming fish and aquatic habitat. The sediment acts as a transport mechanism for pollutants which adhere to soil particles. Typical urban runoff pollutants found in surface waters include heavy metals, nutrients, petroleum products, sediment, bacteria, chemicals, and litter."

Studies have shown that the level of imperviousness in an area strongly correlates with the quality of nearby receiving waters (EPA, 1999b). One comprehensive study, which looked at numerous areas, variables, and methods, revealed that stream degradation occurs at levels of imperviousness as low as 10 – 20% (EPA, 1999b). Stream degradation is a decline in the biological integrity and physical habitat conditions that are necessary to support natural biological diversity. For instance, few urban streams can support diverse benthic communities with imperviousness greater than or equal to 25% (EPA, 1999b). To provide some perspective, a medium density, single-family home area can be from 25% to 60% impervious (variation due to street and parking design) (Schueler, 1994).

To demonstrate the principle of increased volume and velocity of runoff from urbanization, the following figure shows the flow rate of an urban vs. a natural stream. What the figure demonstrates is that urban stream flows have greater peaks and volumes, as well as shorter retention times than natural stream flows. The greater peak flows and volumes result in stream degradation through increased erosion of stream banks and damage to aquatic habitat. The shorter retention times result in less time for sediments and other pollutants to settle before being carried out to the ocean. This sediment, and the associated pollutants it carries, can be a significant cause of water quality degradation.



Source: Adapted from Schueler, 1997

Increased volume and velocity of runoff adversely impacts receiving waters and their beneficial uses in many ways. According to the TAC report (SWRCB, 1994), increases in population density and imperviousness result in changes to stream hydrology including:

1. Increased peak discharges compared to pre-development levels;
2. Increased volume of storm water runoff with each storm compared to pre-development levels;
3. Decreased travel time to reach receiving water; increased frequency and severity of floods;
4. Reduced stream flow during prolonged periods of dry weather due to reduced levels of infiltration;

5. Increased runoff velocity during storms due to a combination of effects of higher discharge peaks, rapid time of concentration, and smoother hydraulic surfaces from channelization, and
6. Decreased infiltration and diminished ground water recharge.

Even though the rainfall depths in arid watersheds are lower, watershed development can greatly increase peak discharge rates during rare flood events (Center for Watershed Protection, Article 66). A study conducted in arid watersheds around Riverside, CA showed that, over two decades, impervious cover increased from 9% to 22%, which resulted in an increase of more than 100% in the peak flow rate for the two-year storm event. The study also showed that the average annual storm water runoff volume had increased by 115% to 130% over the same time span (Center for Watershed Protection, Article 66).

Flooding caused by the increased volume and velocity of runoff from urbanization in the Upper Santa Margarita Watershed are clear examples of the effects described above. Disastrous flooding has occurred more frequently in recent years. In the last century, major flood events occurred in 1938, 1969, 1980, 1993, 1995, and 1998 (U.S. Army Corps of Engineers, 2000). In the 1993 flood event, the Cities of Murrieta and Temecula sustained $12 million dollars in damage, and Camp Pendleton sustained $88 million in damage (U.S. Army Corps of Engineers, 2000). Future flooding is expected to occur more frequently because of continued urban development within the watershed, and flood damages are expected to continue accruing at an estimated annual rate of $1,780,300 (U.S. Army Corps of Engineers, 2000).

Impacts to Aquatic Life (Finding No. 9)

In addition to chemical and physical impacts, urban runoff often contains pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters (**Finding No. 9**). A study of urban runoff samples from Chollas Creek in San Diego County, revealed toxic concentrations of organophospate pesticides and metals (Bay, 2001). In Los Angeles County, storm water samples were found to be toxic to various aquatic organisms in the Los Angeles River, the San Gabriel River, Ballona Creek, and the Santa Monica Bay (LARWQCB, 2001). Also, a water quality data assessment conducted in Aliso Creek in Orange County showed that storm events caused varying degrees of mortality to test organisms (SDRWQCB, 2002a). To date, there has not been sufficient monitoring to determine if toxicity from urban runoff exists in the Upper Santa Margarita Watershed, however, the land uses causing toxicity in other urbanized areas of Southern California are little different than urbanized areas in Murrieta and Temecula.

Impacts to Human Health (Finding No. 7)

In addition to impairing receiving water quality and aquatic life, pollutants in urban runoff can also threaten human health. According to the EPA, spilled fuel, solvents, waste oil, paints, and other maintenance fluids pose a risk to the environment but may be especially harmful if they enter someone's drinking water supply (EPA, 2004b). "The percolation of

contaminated runoff can cause unacceptable consequences to ground water resources." Urban runoff discharges were identified in a California Department of Health Services assessment as one of the most prevalent possible contaminating activities for drinking water sources (EPA, 2004b). This issue of potential source water contamination is of fundamental importance, because of the dependence on local water for domestic use in the Santa Margarita Watershed. Rancho California Water District and Eastern Municipal Water District, which serve the Upper Santa Margarita Watershed, the Fallbrook Public Utilities District, which serves the community of Fallbrook, and Camp Pendleton are among those agencies in the watershed who are directly dependent on surface and ground water for domestic use.

Human health is also a concern related to body contact recreation. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters (**Finding No. 7**). A landmark study, conducted by the Santa Monica Bay Restoration Project, found that there was an increased occurrence of illness in people that swam in proximity to a flowing storm drain (Haile, 1996). Although the Upper Santa Margarita Watershed is inland, the watershed drains to the Pacific Ocean, and pollutants generated in the permitted area may impact coastal waters. For example, the Santa Margarita River system provides the main source of beach sand for the beaches of northern San Diego County (Shapiro, 1991). Also, residents in the permitted area who recreate at Southern California beaches benefit from clean water.

Furthermore, urban runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may eventually be consumed by humans (**Finding No. 7**). Pollutants such as heavy metals and pesticides, which are commonly found in urban runoff, have been found to bioaccumulate and biomagnify in long-lived organisms at the higher trophic levels (Abel, 1996). Since many aquatic species are utilized for human consumption, toxic substances accumulated in species' tissues can pose a significant threat to public health. The EPA supports this finding when it states, "As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such and lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans" (EPA, 2000c).

Environmentally Sensitive Areas (Finding No. 8)

Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use and CWA section 303(d) impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. Therefore, additional control to reduce pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an environmentally sensitive area (**Finding No. 8**). ESAs are defined in the Order as "areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would easily be disturbed or degraded by human activities and developments (California Public Resources Code section 30107.5). ESAs subject to urban runoff requirements include but are not limited to

all CWA section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the SWRCB (Basin Plan); water bodies designated with the RARE beneficial use by the SWRCB (Basin Plan); areas within the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP) plan area that contain rare or especially valuable plant or animal life or their habitat; and any other equivalent environmentally sensitive areas which the Permittees have identified." Areas that meet this definition are inherently sensitive habitats containing unique, rare, threatened, or endangered species, or are not achieving their designated beneficial uses. As discussed above, urban runoff is known to contain a wide range of pollutants and have demonstrated toxicity to plants and animals. Therefore, it is necessary to apply additional controls for developments within, adjacent to, or directly discharging to ESAs. This need for additional controls is addressed within each component of the Order.

The EPA supports the requirement for additional controls, stating "For construction sites that discharge to receiving waters that do not support their designated use or other waters of special concern, additional construction site controls are probably warranted and should be strongly considered" (EPA, 1992a). Further support for requiring additional controls to reduce pollutants in discharges to ESAs can be found in *Mitigation of Storm Water Impacts From New Developments in Environmentally Sensitive Areas*, a technical report written by the LARWQCB (LARWQCB, 2001b).

B. Water Quality Concerns in the Upper Santa Margarita Watershed

In addition to the general information about typical urban runoff-related pollutants discussed above in Section VI.A, various sources document water quality concerns in the Upper Santa Margarita Watershed. **Tables 1 and 2** below summarize existing and potential problems. **Table 3** summarizes exceedances of urban runoff-related pollutants reported in the Permittees water quality monitoring reports, and **Table 4** lists potential sources of the reported exceedances.

Table 1. Water Quality Concerns in the Santa Margarita Watershed

Source	Existing or Potential Problem
SWRCB 303(d) List[2]	**Listings:** Phosphorus (entire 12 miles of Murrieta Creek and upper 18 miles of Santa Margarita River) Eutrophication (estuary) **Constituents of concern:** sedimentation/siltation, iron, manganese, TDS
Riverside County General Plan[3]	Sediment from construction-related erosion; Pollution due to urban storm water runoff
San Diego County WURMP[4]	Eutrophication, nitrogen, phosphorus, diazinon, TDS, other toxic substances, trash
SDRWQCB	Degraded biological and physical integrity

[2] SDRWQCB. 2003. Final 2002 Clean Water Act Section 303(d) List of Water Quality Limited Segments.

[3] County of Riverside. October 2003. County of Riverside General Plan: Multipurpose Open Space Element. Chapter 5, OS-10.

[4] County of San Diego. January 2003. Watershed Urban Runoff Management Program for the Santa Margarita Watershed. Table 4-5.

Bioassessment Data[5]	
SDRWQCB, EPA Draft Operational Guidebook for reference based assessment[6]	Severe physical impacts (Excessive erosion, down cutting, sedimentation, etc.) from rapid and high volumes of urban runoff and a lack of effective runoff management practices
Santa Margarita Regional DAMP[7]	Oxygen demanding substances, heavy metals, pesticides, herbicides, oil and grease, nutrients, settleable solids, TDS, TSS Volatile organic carbon, pathogens, and debris

Impairments and Pollutants of Concern (Finding Nos. 10 and 11)

According to the *Final 2002 CWA Section 303(d) List of Water Quality Limited Segments* (SDRWQCB, 2003a), the entire length of Murrieta Creek (12 miles) and the upper 18 miles of the Santa Margarita River are impaired for phosphorus. Potential sources of the phosphorus impairment include urban runoff and unknown point and nonpoint sources. The Santa Margarita Lagoon is listed as impaired for eutrophication. (**Finding No. 10**). In addition to the impairments, the SDRWQCB has identified various constituents of potential concern (SWRCB, 2003b). These constituents, listed above in Table 1, were not included on the 2002 303(d) list as impairments because available data was not adequate and more information is needed to determine whether water quality objectives and beneficial uses are being met. The impairments and constituents of concern were based on quarterly data collected and analyzed by Camp Pendleton from 1997-2000, data collected and analyzed by the Department of Water Resources from May 1998-November 2000, Rancho California Water District's receiving water monitoring, and grab sampling conducted by the SDRWQCB in June 1998.

The San Diego County's *Watershed Urban Runoff Management Program (WURMP) for the Santa Margarita Watershed* (San Diego County, 2003) states that eutrophication (associated with low dissolved oxygen, and the presence of solids and excessive nutrients), toxic substances (trace elements and synthetic organics), diazinon contamination, and high levels of TDS are potential water quality issues in the watershed, and that these constituents of concern may have detrimental impacts to the beneficial uses. The WURMP prioritizes the problems based on potential beneficial use impairment (Table 2 below). The WURMP states that data is limited and further data collection and assessment should be made to substantiate concerns.

Table 2. WURMP Prioritization of Water Quality Problems[8]

[5] California Department of Fish and Game. 2002. SDRWQCB 2002 Biological Assessment Report: Results of May 2001 Reference Site Study and Preliminary Index of Biotic Integrity.

[6] EPA. November 2003. Draft Operational Guidebook for reference based assessment of the functions of riverine waters/wetlands in the Santa Margarita Watershed, Riverside County. Chapter 4.

[7] Permittees, 1993

[8] Table 2 was modified from Table 4-5 of the WURMP (San Diego County, 2003)

Constituents of Concern	Potential Beneficial Use Impairment	Priority
Eutrophication, nitrogen, phosphorus	MUN, REC1, REC2, WARM, COLD, WILD, and RARE	High
Toxic substances – diazinon	WARM, COLD, WILD and RARE	Medium
TDS	MUN and AGR	Medium
Toxic substances – other	WARM, COLD, WILD and RARE	Low
Trash	REC1, REC2, WARM, COLD, WILD and RARE	Low

In addition to the sources discussed above, the Permittees have been conducting water quality monitoring pursuant to the MS4 permit since 1993. Although the program has many deficiencies (SDRWQCB, 2002b), the data shows various persistent exceedances of water quality objectives for urban runoff-related pollutants. Table 3 below lists the monitoring stations and the constituents for which multiple or persistent exceedances of water quality objectives have been reported (Permittees, 2002a, 2002b, and 2003b). Due to inadequate monitoring and reporting, it was not possible to conduct a detailed analysis.

Table 3. MS4 Monitoring Results[9]

Stn #	Station Name	Multiple or Persistent Exceedances of Water Quality Objectives[10] (from 1993 – 2003)
188	Cole Creek	Color, Total Nitrogen, Total Phosphorus, Iron, Manganese
404	Wildomar outlet	MBAS, Color, Total Nitrogen, Total Phosphorus, Fecal Coliform, Chromium, Iron, Manganese, Nitrogen-Nitrate, Ammonia, Odor, Thallium, Turbidity, pH, Antimony, Beryllium, Chlorpyrifos, Diazinon
768	Redhawk Channel	Boron, MBAS, Color, Total Nitrogen, Total Phosphorus, Fecal Coliform, Fluoride, Iron, Manganese, Nitrogen-Nitrate, Ammonia, Odor, DO, TDS, Sulfate, Turbidity, pH, Antimony, Beryllium, Chlorpyrifos, Diazinon
769	Empire Creek	Boron, MBAS, Color, Total Nitrogen, Total Phosphorus, Fecal Coliform, Chromium, Iron, Manganese, Nitrogen-Nitrate, Odor, DO (increasing trend), TDS, Thallium, Turbidity, pH, Antimony, Beryllium, Chlorpyrifos, Diazinon
776	Cal Oaks Channel (Line F)	MBAS, Color, Total Nitrogen, Total Phosphorus, Fecal Coliform, Chromium, Iron, Manganese, Nitrogen-Nitrate, Ammonia, Odor, TDS, Turbidity, pH, Antimony, Chlorpyrifos, Diazinon
777	Temecula Creek	Color, Total Nitrogen, Total Phosphorus, Fecal Coliform, Iron, Manganese, Nitrogen-Nitrate, DO, TDS, Sulfate, Turbidity, Antimony
778	Lower Murrieta	Color, Total Nitrogen, Total Phosphorus, Fecal Coliform,

[9] Information obtained from Permittee Annual Program Reports (Permittees, 2002a, 2002b, and 2003b).

[10] Does not include California Toxics Rule

	Creek	Iron, Manganese, Nitrogen-Nitrate, Odor, DO, TDS, Sulfate, Turbidity, Antimony, Chlorpyrifos, Diazinon
779	Upper Murrieta Creek	Color, Total Nitrogen, Total Phosphorus, Fecal Coliform, Iron, Manganese, Nitrogen-Nitrate, Ammonia, TDS, Turbidity, pH, Antimony
828	Santa Margarita River near Temecula	Color, Total Nitrogen, Total Phosphorus, Fecal Coliform, Chromium, Iron, Manganese, Nitrogen-Nitrate, Odor, DO, TDS, Turbidity, Antimony, Chlorpyrifos, Diazinon

Table 4 below identifies potential sources of the pollutants that exceeded water quality objectives at the majority of the MS4 monitoring stations. This information indicates that urban runoff from construction, residential, industrial, commercial and municipal activities is contributing to the degradation of water quality. Specifically, the data indicate potential illicit discharges from industrial and commercial activities, over-application of pesticides and fertilizers by residents and/or businesses, and sediment discharges from construction sites and/or eroding channels.

Table 4. Potential Sources of Pollutants[11]

Pollutant	Potential Sources
Antimony	Industrial activity
Chlorpyrifos	Organophosphate pesticide commonly used in residential areas
Chromium	Industrial activity (plating operations, manufacture of paints, dyes, explosives, ceramics, and paper)
Diazinon	Organophosphate pesticide commonly used in residential areas
Dissolved oxygen	Biodegradable organics, increased temperatures and salinity decrease dissolved oxygen
Fecal coliform	Bacteria originating from humans, animals, amphibians and birds
Iron	Industrial activity, acid mine drainage, corrosion from iron pipes and other material
Manganese	Industrial sources (manufacture of steel alloys, dry-cell batteries, glass and ceramics, paints and varnishes, inks and dyes, matches and fireworks and agriculture
MBAS	Detergents typically associated with dry cleaners
Nitrogen	Excessive application of fertilizer in agriculture and urban areas, septic tank leachate
Phosphorus	Excessive application of fertilizer in agriculture and urban areas
PH	Industrial wastes can be strongly acidic, and laundry waste, and soda and sulfate-pump rinse water are alkaline wastes
Sulfate	Agricultural runoff, mining, tanneries, sulfate-pump mills, and other plants that use sulfates or sulfuric acid

[11] Potential source information from Permittees, 2003b and San Diego County, 2003.

Turbidity	Microorganisms, detritus, mineral substances, manganese compounds, industrial wastes, and eroded soil and silt.
TDS	Urban runoff, imported water, irrigation practices

Biological and Physical Concerns

In addition to the chemical water quality data described above, biological and physical monitoring in the Upper Santa Margarita Watershed also indicates impacts to receiving waters from urbanization.

According to the *San Diego Regional Water Quality Control Board: 2002 Biological Assessment Report*, based on data collected from 1998 – 2001, the bioassessment stations located in lower Murrieta Creek, lower Temecula Creek, and upper Santa Margarita River exhibited degraded biological and physical integrity (Index of Biotic Integrity (IBI) ranged from "Very Poor" to "Good"). As a comparison, the reference stations in the watershed, located in Sandia Creek and DeLuz Creek, were characterized by a high degree of biological and physical integrity (IBI was consistently "Very Good"). This data indicates that urbanization, not agriculture, is contributing to the impairment of the biological and physical integrity of the receiving waters.

The *Draft Operational Guidebook for reference based assessment of the functions of riverine waters/wetlands in the Santa Margarita Watershed, Riverside and San Diego Counties, California* (EPA, 2003) documents the physical impacts that have resulted from urbanization, including but not limited to:

- Temecula and Murrieta Creeks have been moderately to severely impacted by development and degradation of their watersheds. No hydrogeomorphic reference standard conditions were observed. Local effects are caused by **(a) massive earthwork associated with flood control projects, (b) channelization, (c) hardening of the channel bed and banks with concrete, rip-rap, etc., (d) rapid and high volume inputs of storm water runoff from impervious surfaces associated with urbanizing areas, (e) rapid and concentrated inputs of urban pollutants associated with untreated storm water, and (f) large accumulations of trash/debris**. "Currently, development pressures along the Temecula, Murrieta and Wilson Creeks are severe and apparently irreversible in the context of current land use practices and rates of urbanization."
- **Storm water inputs from roads, yards, and parking areas tend to be direct, without benefit of oil-water separators, grit removal, or retention/detention of storm flows**. "The consequences of poor watershed, riparian, and channel management practices in agricultural and developing areas are clear."
- **It is clear that Murrieta and Temecula Creeks are not performing hydrologic functions to their potential.** Specifically, given the urban setting of these creeks, the degree of development taking place within and near their floodplains, and **the current lack of effective stormwater management practices**, improvements in ecosystem functioning within these systems are likely to occur very slowly, if at all. **"Functional improvements in Murrieta and Temecula Creeks depend not only on changes in stream management techniques, but also upon BMPs throughout the upper watershed."**

- "As a result of urban/suburban development, infiltration rates have decreased, peak flows have increased, and base flows have been diminished in both durations and volume"
- "Significant impacts from erosion resulted from poor sediment and erosion control practices and/or development of impervious and smoothed surfaces in the contributing area."
- **"Landscape-scale development in the Santa Margarita watershed appears to be causing main stem hydrologic and biogeochemical functions to degrade at unprecedented rates."**

A recent environmental assessment of Murrieta Creek (USFWS, 2000) further describes some of the physical impacts that have occurred as a result of urbanization in the Upper Santa Margarita Watershed:

> "Since the 1980's, rapid development and urbanization in Murrieta Creek's watershed, including its floodplain and riparian corridor, has severely altered the watershed's drainage. The urbanization has simultaneously introduced artificial flows from activities such as landscape irrigation, washing down of parking lots, and washing of personal vehicles, and has increased impervious surface, which reduces groundwater recharge. Consequently, the volumes and velocities of the discharges from the surface flows and flows through the storm water conveyance systems into Murrieta Creek have increased dramatically. The changes in the hydrology and the hydraulics of Murrieta Creek and its watershed caused by development, flood control activities, ground water dewatering, and a reduction in groundwater recharge, have upset the natural fluvial processes and greatly diminished the ecological value of Murrieta Creek and its riparian corridor. The increased volumes and velocities have intensified the erosion along the stream bed and banks of Murrieta Creek, its tributaries, and downstream of Murrieta Creek. This erosion has exacerbated the sediment loading into Murrieta Creek and the Santa Margarita River."

The assessment goes on to say that, without appropriate controls, water quality is expected to continue to decline. "Advancing erosion and downcutting of stream channels will continue to feed larger amounts of sediment into the system. [...] Increasing development of the watershed is expected to continue to impact available habitat. In addition, an elimination of infiltration zones, increase in peak discharges with associated impacts on downstream riparian area, and the replacement of native plants with non-native species would likely occur." (USFWS, 2000)

Overall, the chemical, biological, and physical data and information described above indicate that urban runoff is causing degradation of the quality and the biological and physical integrity of the receiving waters in the Santa Margarita Watershed.

VII. BASIS FOR PERMIT REQUIREMENTS

This section discusses the broad legal authority that supports the requirements contained in Order No. R9-2004-001. It also discusses the intent of the federal NPDES storm water regulations and several findings that broadly support all requirements in the Order.

A. Broad Legal Authority (Finding No. 22)

Order No. R9-2004-001 implements the CWA, the Porter-Cologne Water Quality Control Act (Division 7 of the CWC, commencing with Section 13000), applicable state and federal regulations, all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the SWRCB, and the Basin Plan adopted by the SDRWQCB (**Finding No. 22**).

In 1987, Congress established CWA Amendments to create requirements for storm water discharges under the NPDES program, which provides for permit systems to regulate the discharge of pollutants. Under the Porter-Cologne Water Quality Control Act, the SWRCB and each Regional Water Quality Control Board (RWQCB) have primary responsibility for the coordination and control of water quality, including the authority to implement the CWA. Porter Cologne (section 13240) directs the RWQCBs to set water quality objectives via adoption of Basin Plans that conform to all state policies for water quality control. As a means for achieving those water quality objectives, Porter Cologne (section 13243) further authorizes the RWQCBs to establish waste discharge requirements (WDRs) to prohibit waste discharges in certain conditions or areas. Since 1990 the SDRWQCB has issued area-wide MS4 NPDES permits. The Order will renew Order No. R9-98-02 as a means to attain water quality objectives in the Basin Plan by limiting the contributions of pollutants conveyed by urban runoff and to comply with CWA. Further discussions of the broad and specific legal authority associated with the prohibitions and directives of the Order are provided throughout this document.

Specific federal regulations include 40 CFR parts 122, 123, 124 (NPDES Permit Application Regulations for Storm Water Discharges, Final Rule), Part II of 40 CFR Parts 9, 122, 123, and 124 (NPDES – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule), and 40 CFR 131 Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule (California Toxics Rule).

The following broad legal authority citations generally apply to all requirements in Order No. R9-2004-001, and provide the SDRWQCB with ample underlying authority to require each of the directives.

CWA 402(p)(3)(B)(ii) – The CWA requires in section 402(p)(3)(B)(ii) that permits for discharges from MS4s "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers."

CWA 402(p)(3)(B)(iii) – The CWA requires in section 402(p)(3)(B)(iii) that permits for discharges from MS4s "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."

40 CFR 122.26(d)(2)(i)(B,C,E, and F) – Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B,C,E, and F) provide that each Permittee's permit application "shall consist of: (i) Adequate legal authority. A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to: [...] (B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer; (C) Control through

ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water; [...] (E) Require compliance with condition in ordinances, permits, contracts or orders; and (F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer."

40 CFR 122.26(d)(2)(iv) – Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) provides that the Permittee shall develop and implement a proposed management program which "shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. [...] Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. [...] Proposed management programs shall describe priorities for implementing controls."

CWC section 13377 – CWC section 13377 provides that "Notwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the Federal Water Pollution Control Act (CWA), as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with anymore stringent effluent standards or limitation necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance."

In addition to the broad legal authority items cited above, which underlie all of the directives in Order No. R9-2004-001, additional specific legal authority citations applicable to particular directives of the Order are provided in this Fact Sheet as necessary.

Order No. R9-2004-001 is an essential mechanism for achieving the water quality objectives that have been established for protecting the beneficial uses of the water resources in the Santa Margarita Watershed. Federal NPDES regulation 40 CFR 122.44(d)(1) requires MS4 permits to include any requirements necessary to "achieve water quality standards established under CWA section 303, including State narrative criteria for water quality." The term "water quality standards" in this context refers to a water body's beneficial uses and the water quality objectives necessary to protect those beneficial uses, as established in the Basin Plan.

B. Maximum Extent Practicable (Finding No. 14)

Under CWA section 402(p), municipalities are required to reduce the discharge of pollutants from their MS4s to the maximum extent practicable (MEP). MEP is the critical technology-based performance standard that municipalities must attain in order to comply with their MS4 permits. The MEP standard establishes the level of pollutant reductions the municipality must achieve. The MEP standard can be achieved by means of implementing pollution prevention and source control BMPs (as the first line of defense) in combination with treatment control BMPs serving as a backup (additional line of defense).

The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of storm water pollutants to the MEP requires Permittees to conduct and document evaluation and assessment of each program component and revise activities, control measures, best management practices (BMPs), and measurable goals, as necessary to meet MEP. Because MEP is a dynamic performance standard, it is necessary to describe in greater detail, necessary and effective measures that are essential for compliance. **(Finding No. 14)**

To achieve the MEP standard, municipalities must employ whatever BMPs are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive. In selecting BMPs to achieve the MEP standard, the following factors may be useful to consider:

1. Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?
2. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?
3. Public Acceptance: Does the BMP have public support?
4. Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?
5. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?

If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive BMPs, it is likely that MEP has not been met. On the other hand, if a municipal discharger employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost is prohibitive, it would have met the standard. Where a choice may be made between two BMPs that should provide generally comparable effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs that would address a pollutant source, or to pick a BMP base solely on cost, which would be clearly less effective. In selecting BMPs the municipality must make a serious attempt to comply and practical solutions may not be lightly rejected. In any case, the burden would be on the municipal discharger to show compliance with its permit. After selecting a menu of BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented. (SWRCB, 1993)

A definition of MEP is not provided in either the federal statute or in the federal regulations. The final determination regarding whether a municipality has reduced pollutants to the MEP can only be made by the SDRWQCB or the SWRCB, and not by the municipal discharger. While the SDRWQCB or the SWRCB ultimately define MEP, it is the responsibility of the Permittees to initially propose actions that implement BMPs to reduce pollution to the MEP. In other words, the Permittees' Individual and Watershed SWMPs to be developed under the Order are the Permittees' proposals of MEP. Their total collective and individual activities

conducted pursuant to their SWMPs become their proposal for MEP as it applies both to their overall effort, as well as to specific activities.

It is the SDRWQCB's responsibility to evaluate the proposed programs and specific BMPs to determine what constitutes MEP, using the above guidance and the court's 1994 decision in NRDC v. California Department of Transportation, Federal District Court, Central District of California. The federal court stated that a permittee must evaluate and implement BMPs except where (1) other effective BMPs will achieve greater or substantially similar pollution control benefits; (2) the BMP is not technically feasible; or (3) the cost of BMP implementation greatly outweighs the pollution control benefits. In the absence of a proposal acceptable to the SDRWQCB, the SDRWQCB will define MEP by requiring implementation of additional measures by the Permittees.

The Order represents the SDRWQCB's definition of MEP. The Order provides a minimum framework that allows Permittees the flexibility to develop and implement their own unique programs and BMP requirements and to improve and modify them as necessary to achieve and maintain compliance with the Order, and therefore, the MEP standard. The EPA supports the SDRWQCB's finding that the Order is consistent with the MEP standard when it states, "Overall, we believe that the permit [Order No. R9-2004-001] is fully consistent with the Clean Water Act (CWA), EPA regulations, and is appropriate for the Santa Margarita Watershed..." (EPA, 2004).

C. BMP Implementation (Finding Nos. 15, 16 and 17)

Pollutants can be effectively reduced in urban runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants from urban runoff. (**Finding No. 15**)

The SWRCB finds in its Order WQ 98-01 that BMPs are effective in reducing pollutants in urban runoff, stating that "implementation of BMPs [is] generally the most appropriate form of effluent limitations when designed to satisfy technology requirements, including reduction of pollutants to the maximum extent practicable." The TAC further supports this finding by recommending "that nonpoint source pollution control can be accomplished most effectively by giving priority to [BMPs] in the following order:

1. Pollution Prevention – implementation of practices that use or promote pollution free alternatives;
2. Source Control – implementation of control measures that focus on preventing or minimizing urban runoff from contacting pollution sources;
3. Treatment Control – implementation of practices that require treatment of polluted runoff either onsite or offsite."

Pollution prevention, the reduction or elimination of pollutant generation at its source, is an essential aspect of BMP implementation. By limiting the generation of pollutants by urban activities, less pollutants are available to be washed from urban areas, resulting in reduced

pollutant loads in storm water discharges from these areas. In addition, there is no need to control or treat pollutants that are not initially generated. Furthermore, pollution prevention BMPs are generally more cost effective than removal of pollutants by treatment facilities or cleanup of contaminated media (Schueler, 2000).

In the Pollution Prevention Act of 1990, Congress established a national policy that emphasizes pollution prevention over control and treatment. CWC section 13263.3(a) also supports pollution prevention, stating "The Legislature finds and declares that pollution prevention should be the first step in a hierarchy for reducing pollution and managing wastes, and to achieve environmental stewardship for society. The Legislature also finds and declares that pollution prevention is necessary to support the federal goal of zero discharge of pollutants into navigable waters." Finally, the Basin Plan also supports this finding by stating "To eliminate pollutants in storm water, one can either clean it up by removing pollutants or prevent it from becoming polluted in the first place. Because of the overwhelming volume of storm water and the enormous costs associated with pollutant removal, pollution prevention is the only approach that makes sense" (SDRWQCB, 1994).

Controlling urban runoff pollution by using a combination of onsite source control BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. Whereas, onsite source control BMPs can be applied during all runoff conditions; (2) End-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention (**Finding No. 17**).

The EPA also supports the utilization of a combination of BMPs to address pollutants in urban runoff. For example, the EPA has found there has been success in addressing illicit discharge related problems through BMP initiatives like storm drain stenciling and recycling programs, including household hazardous waste special collection days (EPA, 1999b). Structural BMP performance data has also been compiled and summarized by the EPA (EPA, 1999e). This data indicates that structural BMPs can be effective in reducing pollutants in urban runoff discharges. The summary provides the performance ranges of various types of structural BMPs for removing suspended solids, nutrients, pathogens, and metals from storm water flows. These pollutants are in general the pollutants of most concern in storm water in the San Diego Region. For suspended solids, the least effective structural BMP type was found to remove 30-65% of the pollutant load, while the most effective was found to remove 65-100% of the pollutant load. For nutrients, the least effective structural BMP type was found to remove 15-45% of the pollutant load, while the most effective was found to remove 65-100% of the pollutant load. For pathogens, the least effective structural BMP type was found to remove <30% of the pollutant load, while the most effective was found to remove 65-100% of the pollutant load. For metals, the least effective structural BMP type was found to remove 15-45% of the pollutant load, while the most effective was found to remove 65-100% of the pollutant load.

As discussed above, developing minimum BMPs and implementing or requiring their implementation at industrial and commercial facilities, construction sites, and residential areas is necessary for the Permittees to ensure that, ultimately, discharges of pollutants into and from its MS4 are reduced to the MEP (**Finding No. 16**). Therefore, **Sections F through H of the Order** require Permittees to develop and require the implementation of minimum BMPs, including pollution prevention as a first line of defense, to reduce the discharge of pollutants in urban runoff to the MEP from all areas and activities with their jurisdictions.

D. Permittee Responsibility for Requiring BMPs (Finding No. 28)

Through its permitting processes, each Permittee authorizes the three major phases of urban development within its jurisdiction. Therefore, each Permittee must assume responsibility for its urban development decisions. The federal regulations clearly require municipalities to address urban runoff during each stage of development. Regarding BMP implementation during each stage of urban development, the EPA recommends that Permittees ensure the appropriate implementation of the structural BMPs by considering some or all of the following: pre-construction review of BMP designs; inspections during construction to verify BMPs are built as designed; post-construction inspection and maintenance of BMPs; and penalty provisions for noncompliance with design, construction or operation and maintenance (EPA, 1999b).

Since municipalities approve and permit construction and land use within their jurisdiction, they must assume responsibility for urban runoff discharges from these activities and land uses. The Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A – D) are clear in placing responsibility on municipalities for control of urban runoff from third party activities and land uses to their MS4 (EPA, 2000a). In order for municipalities to assume this responsibility, they must implement ordinances, permits, and plans addressing urban runoff from third parties. Assessments for compliance with their ordinances, permits, and plans are essential for a municipality to ensure that third parties are not causing the municipality to be in violation of its municipal storm water permit. When conditions of non-compliance are determined, enforcement is necessary to ensure that violations of municipality ordinances and permits are corrected. As stated in **Finding No. 28**, each Permittee is responsible for adoption and enforcement of ordinances and/or policies, implementation of identified BMPs, and for the allocation of funds for the capital, operation, and maintenance, and enforcement expenditures necessary to implement and enforce such BMPs within its jurisdiction. Therefore, when a Permittee determines a violation of its storm water ordinance, it must pursue correction of the violation. Without enforcement, third parties do not have incentive to correct violations. The EPA supports inspections and enforcement by municipalities when it states "Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations. Enforcement mechanisms [...] also must be described" (EPA, 1992a).

MS4 permits are issued to municipalities because of their land use authority. The ultimate responsibility for the pollutant discharges, increased runoff, and inevitable long-term water quality degradation that results from urbanization lies with local governments. This responsibility is based on the fact that it is the local governments that have authorized the urbanization (i.e., conversion of natural pervious ground cover to impervious urban surfaces) and the land uses that generate the pollutants and runoff. Furthermore, the MS4 through which

the pollutants and increased flows are conveyed, and ultimately discharged into natural receiving waters, are owned and operated by the same local governments. In summary, the Permittees under the Order are responsible for discharges into and out of their MS4s because (1) they own and operate the MS4; and (2) they have the legal authority that authorizes the very development and land uses with generate the pollutants and increased flows in the first place.

For example, since grading cannot commence prior to the issuance of a local grading permit, the Permittees have a built-in mechanism to ensure that all grading activities are protective of receiving water quality. The Permittee has the authority to withhold issuance of the grading permit until the project proponent has demonstrated to the satisfaction of the Permittee that the project will not violate the Permittee's ordinances or cause the Permittee to be in violation of its MS4 permit. Since the Permittee will ultimately be held responsible for any discharges from the grading project by the SDRWQCB, the Permittee will want to use its own permitting authority to ensure that whatever measures the Permittee deems necessary to protect discharges into its MS4 are in fact taken by the project proponent.

Order No. R9-2004-001 holds the local government accountable for this direct link between its land use decisions and water quality degradation. The Order recognizes that each of the three major stages in the urbanization process (development planning, construction, and the use or operational stage) are controlled by and must be authorized by the local government. Developing minimum BMPs and implementing or requiring their implementation at industrial and commercial facilities, construction sites, and residential areas is necessary for the Permittees to ensure that, ultimately, discharges of pollutants into and from its MS4 are reduced to the MEP (**Finding No. 16**). As discussed in **Finding No. 20**, Permittees cannot passively receive and discharge pollutants from third parties (within or outside of their jurisdiction). In the absence of BMPs, these discharges may cause or contribute to a condition of contamination or exceedances of receiving water quality objectives. Accordingly, the Order requires the local government to implement, or require others to implement, appropriate BMPs to reduce pollutant discharges and increased flow during each of the three stages of urbanization.

E. Dual Regulation of Industrial and Construction Sites (Finding No. 21)

In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (state and local) storm water regulation. Under this dual system, the SDRWQCB is responsible for enforcing the statewide General Construction Activities Storm Water Permit, SWRCB Order 97-03 DWQ, NPDES No. CAS000001 (General Construction Permit) and the statewide General Industrial Activities Storm Water Permit, SWRCB Order 99-08 DWQ, NPDES No. CAS000002 (General Industrial Permit), and each municipal Permittee is responsible for enforcing its local permits, plans, and ordinances, which may require the implementation of additional BMPs than required under the statewide general permits. (**Finding No. 21**)

According to the EPA, the storm water regulations envision that NPDES permitting authorities [SDRWQCB] and municipal operators [the Permittees] will cooperate to develop programs to monitor and control pollutants in storm water discharges from industrial facilities (EPA, 1992a).

The EPA discusses the "dual regulation" of construction sites in its Storm Water Phase II Compliance Assistance Guide (EPA, 2000c), which states "Even though all construction sites that disturb more than one acre are covered nationally by an NPDES storm water permit, the construction site runoff control minimum measure [...] is needed to induce more localized site regulation and enforcement efforts, and to enable operators [...] to more effectively control construction site discharges into their MS4s." While the Storm Water Phase II Compliance Assistance Guide applies to small municipalities, it is applicable to the Permittees, because they are similar in size and have the potential to discharge similar pollutant types as Phase II municipalities.

Municipalities assume initial responsibility for enforcement against illegal discharges from land uses and activities within their jurisdiction because of their land use authority. Since the municipality approves and permits development and land use, it must ensure that its development or land use decisions do not result in receiving water quality degradation. The SDRWQCB will assist municipalities in enforcement against non-compliant sites after the municipality has exhibited a good faith effort to bring the site into compliance.

VIII. DISCUSSION OF PERMIT REQUIREMENTS

This section discusses each component of Order No. R9-2004-001. Each discussion includes the specific legal authority in addition to the broad legal authority discussed in section VII.A of this Fact Sheet, a discussion of the requirements, and comments on the Permittees' existing and proposed programs related to each component.

A. PROHIBITIONS (Order Section A)

1. Specific Legal Authority for Prohibitions

- CWA section 402(p)(3)(B)(ii) states that municipalities shall "effectively prohibit non-stormwater discharges **into** the storm sewers."
- CWA section 402(p)(3)(B)(iii) requires that permits for discharges from MS4s "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."
- Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(A - D) require municipalities to have legal authority to control various discharges **to** their MS4.
- Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in urban runoff **from** commercial, residential, industrial, and construction land uses or activities.
- Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."

- The Basin Plan contains the following waste discharge prohibition: "The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in California Water Code section 13050, is prohibited."
- CWC section 13050(l) states "(1) 'Pollution' means an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either of the following: (A) The water for beneficial uses. (B) Facilities which serve beneficial uses. (2) 'Pollution' may include 'contamination'."
- CWC section 13050(k) states "'Contamination' means an impairment of the quality of waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. 'Contamination' includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected."
- CWC section 13050(m) states "'Nuisance' means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of wastes."
- CWC section 13241 requires each RWQCB to "establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance [...]."
- CWC section 13243 provides that "A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted."
- CWC section 13263(a) provides that waste discharge requirements prescribed by the SDRWQCB implement the Basin Plan.

2. Discussion of Prohibitions

The entire thrust of Order No. R9-2004-001 is to prevent discharges from MS4s from causing, or threatening to cause, a condition of pollution, contamination, or nuisance. In fact, **Prohibition A.1** exhibits a major component of the SDRWQCB's mission, and is included in its Basin Plan. The SDRWQCB seeks to preserve and enhance the quality of the region's waters, and one primary method to achieve this is by preventing conditions of pollution, contamination, or nuisance in the region's waters.

Because discharges that enter the MS4 are generally discharged unimpeded directly into receiving waters, **Prohibition A.1** applies to both discharges into and from MS4s. Federal NPDES regulations clearly provide the SDRWQCB with the legal authority to require municipalities to control discharges from third parties into their MS4. 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in urban runoff from commercial, residential, industrial, and construction land uses or activities. Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(A - D) require municipalities to have legal

authority to control various discharges to their MS4. This concept is further supported in the Preamble to the Phase II Final Rule NPDES storm water regulations, which states "The operators of regulated small MS4s cannot passively receive and discharge pollutants from third parties" (EPA, 1999b). As discussed in section VII.E of this Fact Sheet, Phase II Final Rule findings are applicable to the Permittees. Finally, underlying the Federal NPDES storm water regulations is the CWA, which states in Section 402(p)(3)(B)(ii) that municipalities shall "effectively prohibit non-stormwater discharges into the storm sewers."

As with Prohibition A.1, **Prohibition A.2** also characterizes a primary goal of Order No. R9-2004-001 and the SDRWQCB. This goal is to protect the beneficial uses of the region's waters and achieve the water quality objectives necessary to protect those uses. The overarching intent of the CWA embodies **Prohibition A.2** as well; the CWA's objective is to "restore and maintain all chemical, physical and biological integrity of the Nation's waters [to make all surface waters] fishable [and] swimmable."

Prohibition A.3 is consistent with the direction provided in SWRCB Order WQ 2001-15 (SWRCB, 2001). The CWA and Federal NPDES regulations clearly require operators of MS4s to reduce pollutants in discharges from MS4s to the MEP. Therefore, the SDRWQCB has prohibited discharges that do not meet this requirement.

Prohibition A.4 pertains to the Basin Plan Prohibitions, which were established by the SDRWQCB pursuant to CWC section 13243. The SDRWQCB is required to implement Basin Plan Prohibitions in Order No. R9-2004-001 pursuant to CWC section 13263(a).

3. Comments on Existing and Proposed Programs Related to Prohibitions

The Permittees report in Section 2.5 of the ROWD states "The Permittees shall continue to maintain adequate legal authority to control the contribution of pollutants to the MS4s by urban runoff and enforce those authorities." The Permittees further report that they are taking "the necessary steps... to ensure that non-storm water discharges to their MS4s do not cause or contribute to violations of water quality objectives or discharge pollutants to waters of the U.S." In addition, Section 3.1 of the ROWD states "The Permittees shall prohibit illicit discharges from entering into the MS4 and require controls to reduce the discharge of pollutants to the [MEP]." The Permittees should determine if they need to revise their existing ordinances to provide the authority to specifically prohibit discharges from their MS4s that have not been reduced to the MEP.

Discharge Prohibition A.4 is not specifically addressed in the ROWD. Again the Permittees should determine if they need to revise their existing ordinances to provide the authority to specifically prohibit discharges in violation of Basin Plan prohibitions cited in Attachment A to Order No. R9-2004-001.

B. NON-STORM WATER DISCHARGES (Order Section B)

1. Specific Legal Authority for Non-Storm Water Discharge Requirements

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B) requires MS4 operators "to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer."

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Permittees shall prevent all types of illicit discharges into the MS4 except for the non-storm water discharges listed in Prohibition B.2, provided that these discharges are not found to be a significant source of pollutants to waters of the U.S.
- CWA section 402(p)(3)(B)(ii) requires each Permittee to prohibit non-storm water discharges into its MS4.
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) requires that Permittees shall provide "A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) provides that Permittees shall "investigate portions of the separate storm sewer system that, based on the results of a field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources on non-storm water."
- CWC section 13267 provides that "the regional board may require that any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires."

2. Discussion of Non-Storm Water Discharge Requirements

The discharges listed in Non-Storm Water Discharges **Requirement B.2** are referred to as "de minimis" discharges in the Federal NPDES regulations. However, if a municipality identifies any of these discharges as a source of pollutants to waters of the U.S., they must be addressed in the municipalities storm water management plan (40 CFR 122.26(d)(2)(iv)(B)(1)).

The list of "de minimis" discharges in **Requirement B.2** is essentially the same as the current list prescribed by EPA in NPDES Permit No. CAS0108766 and identical to the list in State Board Order No. 2003-0005-DWQ, the General Storm Water Permit for small MS4s (SWRCB, 2003).

3. Comments on Existing and Proposed Programs Related to Non-Storm Water Discharge Requirements

The Permittees currently have the legal authority to prohibit non-storm water discharges to the MS4, and their existing ordinance contains a list of non-prohibited non-storm water discharges that is consistent with the Order.

In Section 3.1 of the ROWD, the Permittees proposed to add street wash water, fire hydrant testing and flushing, and other types of discharges identified and recommended by the Permittees to their list of allowable non-storm water discharges. Fire hydrant testing and flushing is a category of discharge that is considered by the SDRWQCB as a Non-emergency fire fighting flow (**Requirement B.2.q.**). Order No. R9-2004-001 requires that Permittees address discharges from non-emergency fire fighting activities when those discharges are identified as a significant source of pollutants. However, the EPA determined street wash water to be contaminated and deleted it as a non-prohibited discharge when it issued NPDES Permit CAS0108766 in April 1999 (EPA, 1999d). The Permittees have not provided

monitoring data to document that street wash water does not contain pollutants that pose a threat to water quality. In addition, SWRCB Order No. 99-06-DWQ, the Statewide Storm Water permit for Caltrans and State Board Order No. 2003-0005-DWQ, the General Storm Water Permit for small MS4s do not include street wash water as a non-prohibited discharge. Therefore, the SDRWQCB did not include street wash water on the list in **Requirement B.2** of the Order.

The discharge categories in 40 CFR 122.26(d)(2)(iv)(B)(1) comprise an inclusive and not exemplary list. Consequently, the SDRWQCB does not have the authority to add other discharge categories to the list. Pursuant to **Requirement B.1**, discharges other than those listed in Requirement B.2. are allowed if authorized by a separate NPDES permit.

Although Section 3.1 of the ROWD states that Permittees will prohibit any of the listed discharges if they are identified by the Permittees or the SDRWQCB as a source of pollutants, **Requirement B.2** of the Order allows the Permittees the option to implement BMPs to reduce pollutants to the MEP.

Pursuant to Order No. R9-98-02, the Permittees developed BMPs to address fire fighting activities (Permittees, 2000). These BMPs should be incorporated into the Permittees' SWMPs.

C. RECEIVING WATER LIMITATIONS (Order Section C)

1. Specific Legal Authority for Receiving Water Limitations (RWL) Requirements

- CWC section 13241 provides that the "SDRWQCB shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance."
- CWC section 13263(a) provides that waste discharge requirements prescribed by the SDRWQCB implement the Basin Plan.

2. Discussion of RWL Requirements

As stated in **Finding No. 23**, the RWL language specified in the Order is consistent with language recommended by the EPA and established in SWRCB Order WQ-99-05 (SWRCB, 1999a). The RWL in the Order require compliance with water quality standards through an iterative approach for implementing improved and better-tailored BMPs over time.

The iterative BMP process requires the implementation of increasingly stringent BMPs until receiving water standards are achieved. This is necessary because implementation of BMPs alone cannot ensure attainment of receiving water quality objectives. For example, a BMP that is effective in one situation may not be applicable in another. An iterative process of BMP development, implementation, and assessment is needed to promote consistent compliance with receiving water quality objectives. If assessment of a given BMP confirms that the BMP is ineffective, the iterative process should be restarted, with redevelopment of a new BMP that is anticipated to result in compliance with receiving water quality objectives.

On October 14, 1999, the SWRCB issued a legal opinion on the federal appellate decision and provided advice to the RWQCBs on how to proceed in the future (SWRCB, 1999b). In the memorandum, the SWRCB concludes that the recent Ninth Circuit opinion upholds the

discretion of the EPA and the State to (continue to) issue permits to MS4s that require compliance with water quality standards through iterative BMPs. Moreover, the memorandum states, "[...] because most MS4 discharges enter impaired water bodies, there is a real need for permits to include stringent requirements to protect those water bodies. As total maximum daily loads (TMDLs) are developed, it is likely that MS4s will have to participate in pollutant load reductions, and the MS4 permits are the most effective vehicles for those reductions." In summary, the SWRCB concludes that the RWQCBs should continue to include the RWL language established in SWRCB Order WQ 99-05 in all future permits.

It should be noted that while implementation of the iterative BMP process is a means to achieve compliance with water quality objectives, it does not shield the discharger from enforcement actions for continued non-compliance with water quality objectives. Consistent with EPA guidance (EPA, 1998a and 1998b) regardless of whether or not an iterative process is being implemented, discharges that cause or contribute to an exceedance of water quality objectives are in violation of Order No. R9-2004-001.

3. Comments on Existing and Proposed Programs Related to RWL Requirements

The RWL requirements were not discussed in the ROWD.

D. LEGAL AUTHORITY (Order Section D)

1. Specific Legal Authority for Legal Authority Requirements

- Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that the Permittees shall develop and implement legal authority to "Control through ordinance, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that the Permittees shall develop and implement legal authority to "Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system."
- Illicit discharge is defined under Federal NPDES regulation 40 CFR 122.26(b)(2) as "any discharge to a municipal separate storm sewer system that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities."
- Federal NPDES regulation 40 CFR 122.26(b)(14) provides that "The following categories of facilities are considered to be engaging in 'industrial activity' for purposes of this subsection: [...] Construction activity including clearing, grading and excavation activities [...]."
- Federal NPDES regulation 40 CFR 122.26(d)(1)(ii) requires from the Permittee "A description of existing legal authority to control discharges to the municipal separate storm sewer system."

- Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in urban runoff from commercial, residential, industrial, and construction land uses or activities.
- CWC section 13243 also provides that a "regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted."

2. Discussion of Legal Authority Requirements

An important means for a municipality to control the discharge of pollutants in urban runoff is through development of municipal legal authority. The EPA states "A crucial requirement of the NPDES storm water regulation is that a municipality must demonstrate that it has adequate legal authority to control the contribution of pollutants in storm water discharged **to** its MS4. [...] In order to have an effective municipal storm water management program, a municipality must have adequate legal authority to control the contribution of pollutants to the MS4. [...] 'Control,' in this context, means not only to require disclosure of information, but also to limit, discourage, or terminate a storm water discharge to the MS4" (EPA, 1992a).

Since discharges that enter the MS4 are generally discharged unimpeded directly into receiving waters, the Permittees' legal authority is to apply to both discharges **into** and **from** MS4s. Federal NPDES regulations clearly provide the SDRWQCB with the legal authority to require municipalities to control discharges from third parties into their MS4. 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in urban runoff from commercial, residential, industrial, and construction land uses or activities. Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(A - D) require municipalities to have legal authority to control various discharges **to** their MS4. This concept is further supported in the Preamble to the Phase II NPDES storm water regulations, which states "The operators of regulated small MS4s cannot passively receive and discharge pollutants **from** third parties" (EPA, 1999b). As discussed in section VII.E of this Fact Sheet, Phase II findings for small municipalities are applicable to the Permittees. Finally, underlying the Federal NPDES storm water regulations is the CWA, which states in section 402(p)(3)(B)(ii) that municipalities shall "effectively prohibit non-stormwater discharges **into** the storm sewers."

In order to effectively prohibit illicit or non-storm water discharges, legal authority addressing the discharges must be developed and implemented by each Permittee (see discussion of **Finding No. 28** in Section VII.D of this Fact Sheet). An illicit connection is a connection to the MS4 that carries an illicit discharge. Because illicit discharges to the MS4 are prohibited, illicit connections are also prohibited and must be eliminated. In order to effectively prohibit and eliminate illicit connections, legal authority addressing the discharges must be developed and implemented by each Permittee.

In order for the ordinances to be effective, each Permittee must be able to require compliance with the ordinances. Lack of ordinance enforcement by a Permittee allows third parties to violate a municipality's ordinances with little fear of retribution, leading to receiving water quality degradation. The EPA recommends that a municipality in its urban runoff management program "identify the administrative and legal procedures available to mandate compliance with appropriate ordinances, and therefore, with permit conditions. [Programs] should contain descriptions of how ordinances are implemented and appealed. In particular,

a municipality should indicate if it can issue administrative orders and injunctions or if it must go through the court system for enforcement actions" (EPA, 1992a).

Discharges from Permittees that share an MS4 eventually reach the same receiving water body. Each Permittee that discharges to the shared MS4 is therefore responsible for discharges from the shared MS4, and the impacts of those discharges on receiving waters. The Permittees of a shared MS4 must demonstrate that together they can control the contribution of pollutants over the whole shared MS4. To this effect, the EPA states "When two or more municipalities submit a joint application, each coapplicant must demonstrate that it individually possesses adequate legal authority over the entire municipal system it operates and owns. A coapplicant need not fulfill every component of legal authority specified in the regulations, as long as the combined legal authority of all coapplicants satisfies the regulatory criteria for every segment of the MS4 (including authority over all sources that discharge to the MS4). [...] Coapplicants also may use interjurisdictional agreements to show legal authority and to ensure planning, coordination, and the sharing of the resource burden of permit compliance" (EPA, 1992a).

The Permittees' ability to determine compliance and noncompliance with permit conditions is critical to control pollutant discharges to and from MS4s. Determination of compliance and noncompliance allows for significant sources of pollutants to be identified and addressed, thereby minimizing the discharge of pollutants from the MS4 and the resulting receiving water quality degradation. For this reason each Permittee must have legal authority to carry out the inspections, surveillance, and monitoring necessary to assess compliance. Regarding compliance determination, the EPA states "municipalities should provide documentation of their authority to enter, sample, inspect, review, and copy records, etc., as well as demonstrate their authority to require regular reports" (EPA, 1992a).

Permittees must demonstrate that they can operate pursuant to legal authority to meet the requirements of Federal NPDES regulations 40 CFR 122.26(d)(2)(A-F). For the Permittee to demonstrate this legal authority, the EPA suggests that "One acceptable way to support a declaration of adequate legal authority, including the ability to enforce appropriate ordinances, is for the municipality to provide a certification from the Municipal General Counsel or equivalent. The certification should state that the applicant has the legal authority to apply and enforce the requirements of 40 CFR 122.26(d)(2)(i)(A-F) in State or local courts. The certification would, therefore, cite specific ordinances and the reasons why they are enforceable. The statement should discuss what the municipality can do to ensure full compliance with 40 CFR 122.26(d)(2)(i)" (EPA, 1992a).

3. Comments on Existing and Proposed Programs Related to Legal Authority

Section 2.4.1 of the ROWD states that the Permittees have adopted a comprehensive storm water ordinance and have previously provided a certification of adequate legal authority to the SDRWQCB. The Permittees may have had adequate legal authority to implement Order No. R9-98-02, but the existing ordinances may need to be updated to reflect requirements contained in Order No. R9-2004-001 (i.e. the required implementation of designated minimum BMPs that each Permittee develops for industrial and commercial sites, residential areas and activities, and construction sites), and a new certification will need to be submitted. The Permittees report in Section 2.4 of the ROWD that the Permittees have the legal authority

to prohibit the disposal of pollutants onto public or private land, to prohibit illicit connections and discharges and to prohibit non-storm water discharges (except for those specifically listed).

Section 2.4.1 of the ROWD states that Permittees have the authority to require construction activity to comply with local erosion and sediment control ordinances. Industrial sites are not specifically addressed in the ROWD. However, the ordinances that are currently in place in Riverside County and the City of Temecula state that any industrial discharger, discharger associated with construction activity, or other discharger subject to an NPDES permit shall comply with all requirements of such permit. Compliance with the General Industrial Permit and the General Construction Permit is specifically required.

Section 2.4.1 of the ROWD states that the Permittees have the authority to prohibit illicit connections and discharges to the MS4 and to prohibit the disposal of pollutants on public or private land.

Section 2.4.2.2 of the ROWD lists various enforcement/compliance mechanisms, but is vague about how they will be used. The ROWD states that the SDRWQCB will take the lead in initiating enforcement actions related to high priority incidents. This is incorrect and must be revised in the SWMP. Permittees are responsible for enforcing compliance with all aspects of Order No. R9-2004-001.

Although specific **Requirements D.1.g., D.1.h. and D.1.i**. are not addressed in the ROWD, the model urban runoff ordinance adopted by the Permittees (Riverside County, 1995), requires compliance with existing and future MS4 permits. This general statement may provide adequate legal authority to comply with these requirements of Order No. R9-2004-001.

It should be noted that the ROWD states that the SDRWQCB will take the lead in initiating enforcement actions related to high priority incidents. This is incorrect and must be revised in the SWMP. Permittees are responsible for enforcing compliance with all aspects of Order No. R9-2004-001.

It should also be noted that the District does not have an ordinance to prohibit illicit discharges to its MS4(s) or to require implementation of MS4 permits. The District relies on the legal authority of the municipalities that have jurisdiction over the land uses within the District.

E. STORM WATER MANAGEMENT PLAN (SWMP) (Order Section E)

1. Specific Legal Authority for SWMP Requirements

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A) – (D) require that permittees develop a management program that covers the duration of the permit. The regulations require that permittee plans include descriptions of each required program component to demonstrate how they will reduce pollutants to the MEP using management practices, control techniques and systems, design and engineering methods.

2. Discussion of SWMP Requirements

To meet the above-referenced federal requirements, Section E of the Order requires the development of **Individual and Watershed SWMPs**, and Attachment D provides specific

information that, where applicable, must be included in each Permittee's SWMP. The framework provided in Attachment D allows the Permittees to develop the programs, activities, and measures that will satisfy or exceed the requirements of the federal regulations, and therefore, the Order. It provides the Permittees with the flexibility and discretion to build upon existing programs and develop BMP requirements most appropriate for their jurisdiction.

The Order requires each Permittee to develop its own **Individual SWMP**. This is necessary for each Permittee to describe their own specific programs and activities that will be implemented to reduce pollutants in discharges of urban runoff within their jurisdiction to the MEP. For example, Permittees may have different enforcement protocol or development project review procedures, while another Permittee may lack a program component altogether (i.e., the District has no jurisdiction over residential, commercial, or industrial areas). Therefore, individual plans specific to each Permittee are necessary.

Section E of the Order also requires the development of a **Watershed SWMP**. This is necessary because watershed-wide issues should be addressed collectively (see Section VIII.K of this Fact Sheet for a discussion of the watershed management approach). Also, some programs are conducted collectively by the Permittees, or solely by the Principal Permittee on behalf of the Permittees. For example, the Permittees collaborate to develop materials and implement the public education program. These area-wide programs and activities should be described in an area-wide plan.

The Order requires the Permittees to develop, submit, and implement the SWMP within one year from the date of adoption (**Finding No. 13**). The one-year time schedule is both necessary and feasible for the following reasons:

- In accordance with 40 CFR 122.26(d)(2)(iv)(A) – (D), the Permittees should have developed a comprehensive SWMP as part of their application for permit renewal. In various correspondence, beginning in July of 2002, the SDRWQCB provided the Permittees with specific information that should have been addressed in the management plan to be submitted as an application. The Permittees have disregarded these requests for a detailed SWMP and submitted an application that stated that the DAMP would be revised within 18 months of permit adoption. Providing the Permittees 365 days from the date of permit adoption, is essentially providing them with an additional year. Further additional time is not justified.
- The requirements are based on federal NPDES regulations that have been in place for 13 years. Therefore, the Permittees should have an existing plan that can feasibly be improved to meet the current expectation of the MEP standard within one year.
- 34 other permittees in the San Diego Region were given 365 days to develop and implement similar requirements. All of these permittees met the requirements in a timely fashion. The City of Escondido said the one-year schedule was reasonable, including the inter-departmental planning and review, public meetings, Planning Commission review and approval, and City Counsel approval. The Permittees have not proven that they are significantly different procedurally from the 34 other permittees to warrant additional time.

- The SDRWQB has provided the Permittees with several acceptable models that can be used as examples.
- In order to reduce pollutants in runoff to the MEP, the Permittees, in the rapidly-developing Upper Santa Margarita Watershed, must implement improved urban runoff management programs as soon as possible.

3. Comments on Existing and Proposed Programs Related to SWMP Requirements

As part of the ROWD, the Permittees proposed to update and modify their existing DAMP, dated March 1993, to incorporate new programs and commitments. Section E and Attachment D of the Order provide direction to the Permittees in revising the DAMP, which serves the purpose of, and should be referred to as, a SWMP. It is not required or necessary for the Permittees to abandon existing programs and management measures. The SWMP is just a framework for each Permittee to describe existing and improved programs that will be implemented during the permit term.

The Permittees proposed to improve the DAMP within 18 months from the adoption of the Order. For the reasons described above, and considering that Permittees will be building on existing programs, one year is ample time to develop a SWMP (consisting of the Individual and Watershed SWMPs).

F. DEVELOPMENT PLANNING (Order Section F)

1. Specific Legal Authority for Development Planning Requirements

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(2) provides that Permittees' proposed SWMPs must include "A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed." This regulation generally applies to all directives contained in Requirements F.1-F.4 of Order No. R9-2004-001.

2. Discussion of Development Planning Requirements

As discussed in section VI of this Fact Sheet, urban development can negatively impact water quality by increasing the pollutant load, volume, and velocity of urban runoff. An effective means for minimizing these impacts is to address water quality concerns during the planning phase of urban development. The EPA supports this, stating "Post-construction storm water management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly effect receiving water bodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost-effective approach to storm water quality management" (EPA, 2000c). The Preamble to the Phase I Final Rule emphasizes that municipalities with large areas of new development have a greater opportunity to focus controls to reduce pollutants in storm water generated by new developments during the planning phase (55 Fed. Reg. 48053). For these reasons, section F

of the Order No. R9-2004-001 includes requirements for the development and implementation of BMPs to reduce the discharge of pollutants in urban runoff from development projects to the MEP.

The EPA finds that the Permittee "must thoroughly describe how the municipality's comprehensive plan is compatible with the storm water regulations" (EPA, 1992a). To achieve this, in accordance with **Requirement F.1**, the Permittee shall incorporate water quality and watershed protection principles and policies into its general plan (or equivalent plan). The EPA supports addressing urban runoff problems in general plans (or equivalent plans) when it states "Runoff problems can be addressed efficiently with sound planning procedures. Master plans, comprehensive plans, and zoning ordinances can promote improved water quality by guiding the growth of a community away from sensitive areas and by restricting certain types of growth (industrial, for example) to areas that can support it without compromising water quality" (EPA, 2000c).

In the Santa Margarita Watershed, there is concern among resource managers that the cumulative impacts associated with rapid development of the upper watershed will degrade the ecological integrity of the entire watershed (Stein and Ambrose, 1998). Controls on new development are critical for the protection of the sensitive ecological functions and downstream aquifers in the Santa Margarita Watershed.

The principles and policies included in **Requirement F.1** are based on TAC findings (SWRCB, 1994). They incorporate basic measures that have been found to minimize pollutants in urban runoff from new development and redevelopment.

Requirement F.2 directs Permittees to incorporate post-construction BMPs into all new development and redevelopment projects during the planning and approval. The EPA finds that review of development plans during the project approval process is necessary, stating:

> "Proposed storm water management programs should include planning procedures for both during and after construction to implement control measures to ensure that pollution is reduced to the maximum extent practicable in areas of new development and redevelopment. Design criteria and performance standards may be used to assist in meeting this objective. Further, storm water management program goals should be reviewed during planning processes that guide development to appropriate locations and steer intensive land uses away from sensitive environmental areas. [...] A municipality should describe how it plans to implement the proposed standards (e.g., through an ordinance requiring approval of storm water management programs, a review and approval process, and adequate enforcement)" (EPA, 1992a).

Regarding conditions of approval in storm water permits, the EPA finds that "Proposed storm water management programs should include planning procedures for both during and after construction to implement control measures to ensure that pollution is reduced to the maximum extent practicable in areas of new development and redevelopment. Design criteria and performance standards may be used to assist in meeting this objective" (EPA, 1992a). The EPA further finds that "The municipality should consider storm water controls and structural controls in planning, zoning, and site or subdivision plan approval" (EPA, 1992a). In addition, the EPA states each Permittee should "have an ordinance or other

regulatory mechanism requiring the implementation of post-construction runoff controls [...]" (EPA 2000c).

Furthermore, in its Phase II Final Rule, EPA requires small municipalities to "Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects [...]" (EPA, 1999b). As discussed in section VII.E of this Fact Sheet, Phase II findings and guidance are applicable to the Permittees.

Standard Urban Storm Water Mitigation Plan (SUSMP) - (Requirement F.2.b):

As part of the SWMP, Permittees must also develop SUSMPs for Priority Development Projects. The SUSMPs include requirements for implementation of minimum source control and treatment control BMPs. The treatment control BMPs also have numeric sizing criteria that must be met based on volume or flow (of runoff). By developing and implementing the SUSMPs, the Permittees are reducing the potential negative impacts of urban runoff on receiving waters.

SUSMP requirements are necessary due to the potential for new development to increase the volume, flow velocity, and pollutant load of urban runoff. As the TAC states, "Urban development often results in impacts to the land and consequently the water bodies adjacent to the land. The two major changes that result from urbanization are changes in stream hydrology and an increase in pollutant loading" (SWRCB, 1994). To alleviate these potential negative impacts on receiving waters, each Permittee must develop and implement a SUSMP for various categories of development. This is consistent with EPA guidance, which states "Through ordinances, permits, or contracts, municipalities may mandate storm water controls for new residential, commercial, or industrial developments in order to improve or assure maintenance of the quality of receiving water at or near pre-development levels (EPA, 1992a)". Also, EPA recommends design criteria (such as numeric sizing criteria) and performance standards for post construction BMPs at development sites (EPA, 1992a).

The post-construction requirements and design standards contained in **Section F** of Order No. R9-2004-001 are consistent SWRCB guidance, Superior Court decision, and RWQCB requirements. The SWRCB and RWQCBs have made several recent decisions in regards to inclusion of SUSMP in MS4 permits. In a precendential decision, SWRCB WQ Order No. 2000-11 (SWRCB, 2000b), SWRCB found that the SUSMP provisions constitute MEP for addressing pollutant discharges resulting from Priority Development Projects (**Finding No. 24**). The provisions of Section F of the Order are consistent with those previously issued by the SDRWQCB for Orange County (Order No. R9-2002-0001) and San Diego County (Order No. R9-2001-001), as well as requirements in the Los Angeles County MS4 permit (Order No. R4-2001-182). In SWRCB Order WQ 2001-15, the SWRCB reaffirmed the inclusion of SUSMP requirements as meeting MEP (SWRCB, 2001). On February 13, 2003, the State Superior Court dismissed an appeal of the San Diego County MS4 permit (Order No. R9-2001-001) that includes the SUSMP requirements (Superior Court of CA, 2003).

Requirement F.2.b. gives the Permittees 365 days to develop, adopt, and implement local SUSMPs. This requirement is reasonable because the SUSMPs have been implemented by various neighboring municipalities and several examples of documents and programs exist for the Permittees to use in the development of their own local SUSMPs. For example, on June 12, 2002, the SDRWQCB approved a Final Model SUSMP as meeting the new development and redevelopment controls and SUSMP requirements of the San Diego County

Permit (San Diego Co-Permittees, 2002). The Orange County permittees developed a Model Water Quality Management Plan that can also be used for guidance (County of Orange, 2003). The 640 days for SUSMP implementation requested by the Permittees has not been incorporated into the Order. In addition to the multiple SUSMP examples already available for the Permittees, the City of Murrieta and Riverside County will have developed SUSMP-type requirements pursuant to the Santa Ana RWQCB MS4 permit (Order No. R8-2002-0011) by January 2005, well before the 365-day schedule contained in the Order. Furthermore, the Permittees already have the authority to require BMPs for new development through their existing storm water ordinances. Overall, the 365-day time schedule is practicable for the Permittees.

Priority Development Project Categories

Priority Development Projects include: a) all new development projects; and b) those redevelopment projects that create, add or replace at least 5,000 square feet of impervious surfaces on an already developed site[12], that are listed under the project categories or locations in **Requirement F.2.b.(1)**. The project categories generally result in the large increases in impervious surfaces, are potential significant sources of pollutants, or have a history of storm water mismanagement. SWRCB Order WQ Order 2000-11 addressed the majority of the categories included in **Requirement F.2.b.(1)** and gave RWQCBs discretion to include additional categories or locations in SUSMP requirements in future MS4 permits (SWRCB, 2000b). Those categories that were not included in the precedential outcome of the SWRCB Order are discussed below.

Requirement F.2.b.1.(h) includes streets, roads, highways, and freeways as a SUSMP Priority Development Project category. This is due to their potential to be a significant contributor of pollutants in urban runoff. A Federal Highway Administration (FHA) report finds that concentrations of total suspended solids, nitrate + nitrite nitrogen, and zinc exceed EPA benchmark values for concentrations of these pollutants in urban runoff (FHA, 1990). Another study found that, "Water quality impacts due to highway runoff could be significant particularly in environmentally sensitive areas, such as wetlands, ground-water recharge zones, and drinking water supply watershed" (CTE, 1998). Streets, roads, highways, and freeways also consist of extensive impervious surfaces, which alter flow regimes and increase potential for downstream erosion.

Requirement F.2.b.1.(i) includes retail gasoline outlets (RGOs) as a Priority Development Project category because RGOs are points of confluence for motor vehicles for automotive related surfaces such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly greater loadings of hydrocarbons and trace metals (including copper and zinc) than other urban areas. To meet MEP, source control and structural treatment BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day. These are

[12] Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. Where redevelopment results in an increase of less then fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to SUSMP requirements, the numeric sizing criteria discussed in Requirement F.2.b.(3) applies only to the addition, and not to the entire development.

appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of urban runoff from RGOs on receiving waters. (**Finding No. 25**)

In SWRCB WQ Order No. 2000-11, the SWRCB removed RGOs as a SUSMP category because they were already heavily regulated, and limited on their ability to construct infiltration devices or perform treatment. Order No. 2000-11 also acknowledged that a threshold (size, average daily traffic, etc.) appropriate to trigger SUSMP requirements should be developed and that specific findings regarding RGOs should be included in MS4 permits to justify the requirement (SWRCB, 2000b). The SWRCB removed the RGO category from the San Diego County MS4 permit (Order No. R9-2001-01) because the SDRWCB did not specifically address the issues raised in WQ Order No. 2000-11. As discussed below, the LARWQCB and the SDRWQCB have adequately addressed the issues, and RGOs have been included as a SUSMP category in the Los Angeles County MS4 permit (Order No. R4-01-182), and the statewide general Phase II MS4 permit (WQ Order No. 2003-0005-DWQ). Additional detailed supporting information can found in the technical Report, *Retail Gasoline Outlets: New Development Design Standards for Mitigation of Storm Water Impacts* (LA and SDRWQCB, 2001b).

- Heavily Regulated - The heavily regulated distinction does not remove RGOs as significant source of pollutants in urban runoff and therefore should not be a basis for exempting them. Other regulation of RGOs is separate from regulation under the CWA and does not necessarily relate to water quality from urban runoff. Other municipalities already require that RGOs implement structural BMPs even though they are regulated under other programs.

- Treatment Limitations - Structural treatment BMPs are available for RGOs to reduce pollutants and control peak flow rates and velocities that that are both inexpensive and effective. Studies have shown that catch basin inserts can remove hydrocarbons and heavy metals that are the pollutants of concern. Sand or media filters have also been found to be effective and available for use at RGOs. Cisterns are examples of established BMPs to control flow, but RGOs could also use site design measures such as small weirs, baffles, and redirecting roof runoff to pervious areas.

- Safety - No evidence has been provided to indicate that use of these structural BMPs will pose a safety risk. In fact, filter BMP have been installed at RGOs in other municipalities without apparent adverse safety effects. In addition, similar BMPs such as oil/water separators have been used for years by RGOs without apparent adverse safety risks.

- Threshold - Studies indicate that runoff from RGOs contains similar pollutants to runoff from commercial parking lots. In precedential WQ Order 2000-11, the SWRCB determined that parking lots with a size threshold of 5,000 square feet or more is an appropriate SUSMP category (SWRCB, 2000b). Based in part on the similarity of pollutants, the 5,000 square feet size threshold was also included for RGOs in the Order. In addition, other municipalities currently use similar size thresholds for RGOs to require design standards to mitigate storm water runoff. To provide additional flexibility for the Permitees, another threshold of 100 or more motor vehicles ADT has been added to the Order. This threshold is based on requirements from Washington and Oregon for what is

considered a "high use" site. This is an appropriate threshold since vehicular traffic is a good indicator of the amount of pollutants generated at a site.

The SDRWQCB followed the SWRCB's direction for the inclusion of RGOs as a Priority Development Project category by including the above discussion in this Fact Sheet, as well as a specific finding (Finding No. 25) that justifies the regulation of urban runoff from RGOs that meet certain criteria. The SWRCB also addressed the inclusion of RGOs through the appeals of MS4 permits issued by the Los Angeles and San Francisco RWQCBs that included RGOs as a priority development category. The SWRCB held a workshop that identified RGOs as significant sources of pollutants and dismissed the petitions for removal of RGOs from the SUSMP requirements in the permits. The Western States Petroleum Association, who filed the petitions to the inclusion of RGOs, did not appeal the SWRCB's dismissal of the petitions and did not comment on the Order. Finally, the SWRCB adopted a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ), which includes RGOs as a priority development category.

Considering all of the supporting documentation discussed above, it is appropriate to include RGOs as a Priority Development Project category.

ESAs are also included as a Priority Development Project location for the reasons discussed in section VI of this Fact Sheet. For further information regarding the inclusion of ESAs is contained in the technical report, *Mitigation of Storm Water Impacts from New Development in Environmentally Sensitive Areas* (LARWQCB, 2000c).

Requirement F.2.b.2 specifies that SUSMPs include a list of recommended source control and treatment control BMPs for all projects falling under the Priority Development Project categories. This requirement also establishes criteria that these BMPs must meet. The intent of the requirement is to allow the Permittees and developers flexibility in choosing which combination of source control and treatment control BMPs are to be implemented at a site and to define what minimum performance standards must be met by these selected BMPs.

As described in **Finding No. 18**, urban runoff treatment and/or mitigation in accordance with any of the requirements in Order No. R9-2004-001 must occur prior to the discharge of storm water or urban runoff into receiving waters. Allowing polluted runoff to enter a receiving water prior to treatment to the MEP will result in degradation of the water body and potential exceedances of water quality standards, from the discharge point to the point of dissipation, infiltration, or treatment. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This requirement is supported by federal regulation 40 CFR 131.10(a) and EPA guidance. According to the EPA, "To the extent possible, municipalities should avoid locating structural controls in natural wetlands. Before considering siting of controls in a natural wetland, the municipality should demonstrate that it is not possible or practicable to construct them in sites that do not contain natural wetlands... Practices should be used that settle solids, regulate flow, and remove contaminants prior to discharging storm water into a wetland" (EPA, 1992a).

The numeric sizing criteria is included to ensure that structural BMPs are sized effectively to remove the pollutants of concern. The sizing criteria are based on capture of runoff from a

24-hour 85th percentile rainfall depth. The 24-hour 85th percentile storm represents the "knee" of a precipitation probability curve from which it is no longer cost effective to treat runoff. The precipitation curve is calculated by using local historical rainfall data on the number and intensity of storm events. SDRWQCB staff has calculated the average 24-hour 85th percentile rainfall depth for area covered by the permit to be 0.6 inch (See Table 2 below). The San Diego SUSMP Staff Report developed for the San Diego MS4 Permit is available for example calculations on how staff determined the average 85th percentile rainfall depth t (SDRWQCB, 2001b). However, the requirements allow needed flexibility for the Permittees and developers to mitigate runoff based on either volume or flow. In addition, the requirements allow for several different options to calculate the amount of runoff to ensure that projects are not required to capture runoff from storm events beyond the point of diminishing returns. For example, a project proponent may demonstrate that the 24-hour 85th rainfall depth may be less than the average 0.6 inch by using local precipitation data.

Table 5. Calculation of 85th Percentile Rainfall Depth for the Upper Santa Margarita Watershed

Wildomar

Total Range (Inches)	Number of Storms	Cumulative	Cumulative Percent
0.01 - 0.09	917	917	29.80
0.10 - 0.49	1344	2261	73.46
0.50 - 0.99	467	2728	88.63
1.00 - 1.99	246	2974	96.62
2.00 - 2.99	78	3052	99.16
3.00 - 3.99	14	3066	99.61
4.00 - 4.99	8	3074	99.87
5.00 - 5.99	2	3076	99.93
6.00 – 6.99	2	3078	100.00

Temecula

Total Range (Inches)	Number of Storms	Cumulative	Cumulative Percent
0.01 - 0.09	652	652	33.94
0.10 - 0.49	758	1410	73.40
0.50 - 0.99	281	1691	88.03
1.00 - 1.99	171	1862	96.93
2.00 - 2.99	44	1906	99.22
3.00 - 3.99	10	1916	99.74
4.00 – 4.99	5	1921	100.00

Winchester

Total Range (Inches)	Number of Storms	Cumulative	Cumulative Percent
0.01 - 0.09	725	725	36.47
0.10 - 0.49	826	1551	78.02
0.50 - 0.99	281	1832	92.15
1.00 - 1.99	126	1958	98.49
2.00 - 2.99	26	1984	99.80
3.00 - 3.99	3	1987	99.95
5.00 – 5.99	1	1988	100.00

Average 85th Percentile Rainfall Depth For Area=(Wildomar + Temecula + Winchester)/3 (0.4 + 0.8 + 0.6)/3= 0.6 inch 85th Percentile Rainfall Depth for Southern Riverside County

Requirement F.2.b.4 allows Permittees the opportunity to develop an equivalent method for calculating the volume or flow to be mitigated. The intent of the requirement is to provide necessary flexibility to Permittees to develop equivalent methods in calculating the volume or flow that must be mitigated from the 24-hour 85th percentile rainfall depth.

As part of the SUSMP (**Requirement F.2.b.5**), the Permittees are required to develop a procedure to identify pollutants or conditions or concern for each Priority Development Project. Identifying the pollutants or conditions or concern for a project is crucial to selecting the appropriate BMPs.

Requirement F.2.b.7 allows Permittees to waive treatment control BMPs when all available BMPs have been considered and rejected as infeasible. The requirement also allows the Permittees to develop a program to require projects that receive waivers, to transfer the cost savings to a fund. The intent of the requirements is to allow Permittees necessary flexibility to waive treatment control BMPs when it can be established that the implementation of treatment control BMPs that meet numeric sizing criteria is not feasible at a given site. This provision also allows Permittees discretion to transfer the costs saving from such a waiver to a fund for water quality projects within the watershed.

Requirement F.2.b.8 defines what restrictions to protect groundwater quality are placed on treatment control BMPs that are designed to primarily function as infiltration devices, but allows Permittees to develop alternative restrictions. Applying large amounts of runoff water in a small area has the potential to adversely impact groundwater quality. The intent of these requirements is to provide necessary restrictions for use of these structural BMPs to protect the beneficial uses (municipal, agricultural, industrial) of groundwater in the Santa Margarita watershed. The intent of the requirements is also to provide the Permittees needed flexibility to develop alternative restrictions for projects or locations.

Requirement F.2.b.9 directs Permittees to develop numeric criteria to ensure discharges from Priority Development Projects maintain or reduce pre-development downstream erosion and protect stream habitat. Development can cause increases in runoff amount and velocity causing down erosion problems. Simply maintaining the peak flow rate may not be adequate to prevent increased downstream erosion because of the increase in duration of erosive flows. According to several studies, this approach is an oversimplification of geomorphological processes (Brown, 2001). Simply controlling the post-development peak discharge rate

causes the duration of erosive flows to increase, which may actually exacerbate channel erosion since bank are exposed to a longer duration of erosive events (Brown, 2001). Development of numeric criteria over the permit cycle is needed to establish a design storm type and level of discharge that is appropriate to protect downstream habitat from increased erosion. Due to urbanization, there is a substantial increase in volume and rates of runoff during smaller storm events. The intent of the requirements in the Order to control peak rates, velocities, volumes, and durations from these smaller storms (typically 1 or 2 year storm events) to maintain downstream erosion and not the larger storm events (Brown, 2001). Section II.A of Monitoring and Reporting Program No. R9-2004-001 requires the Permittees to conduct a study to help develop the numeric criteria.

The Ventura County Flood Control District and the Southern California Coastal Water Research Project are currently conducting studies to evaluate the erosive effects on urbanization in part, to quantitatively predict downstream impacts due to development. The development of numeric criteria by the Permittees should build upon these efforts and not duplicate them. The intent of these requirements is to mitigate these potential increases and prevent downstream erosion problems like the severe bank erosion and channel degradation that has occurred in Murrieta Creek (USFWS, 2000 and EPA, 2003).

The Permittees are encouraged to use any existing programs to meet these requirements and should provide detail on how these programs are implemented in the SUSMPs. It is expected that the Permittees will utilize information from any studies that are conducted on numeric criteria to protect downstream erosion and incorporate them into their development of their own numeric criteria by 2009.

Requirement F.3 requires the Permittees to consider the effects of development projects on water quality during project approval processes. This measure will help ensure that potential water quality problems resulting from the development are identified and addressed. The EPA finds that "Proposed storm water management programs should include planning procedures for both during and after construction to implement control measures to ensure that pollution is reduced to the maximum extent practicable in areas of new development and redevelopment. Design criteria and performance standards may be used to assist in meeting this objective" (EPA, 1992a). The EPA further finds that "The municipality should consider storm water controls and structural controls in planning, zoning, and site or subdivision plan approval" (EPA, 1992a). The TAC advises that the Permittees' CEQA initial study checklists be revised to include consideration of water quality effects from new development or redevelopment. The questions included in Requirement F.3. are based on questions recommended by the TAC (SWRCB, 1994).

Requirement F.4 requires Permittees to educate staff (on an annual basis) and the development community on the impacts from development and the requirements of the Order. Training of municipal planning and development review staff is a critical aspect of an urban runoff management program. With adequate training, municipal planning and development review staff can require implementation of BMPs early in the project planning process, thereby minimizing the urban runoff impacts of development in a cost effective manner. The EPA supports training of municipal staff when it identifies "training for

appropriate employees" as a measurable goal of an urban runoff management program (EPA, 2000c).

Education on urban runoff planning issues for the public sector involved with development is equally critical. When the public sector has knowledge of urban runoff issues and regulations, it is more likely to incorporate storm water planning in the development and redevelopment process. In this manner, implementation of measures to address these issues will be included in development plans, saving time and money for the developer and the municipality. The TAC finds that Permittees should "Establish an education/information dissemination program that includes such things as: brochures to distribute to developers and contractors at permit counters and by mail; reference and training manuals for planners, engineers, inspectors, developers, contractors; and training and information exchange workshops" (SWRCB, 1994).

Furthermore, in its Phase II Final Rule, EPA requires small municipalities to "...implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities [...]" (EPA, 1999b). As discussed in section VII.E oft his Fact Sheet, Phase II findings are applicable to the Permittees.

3. Comments on Existing and Proposed Programs Related to Development Planning

Section 6.3 of the ROWD states that, "Within 10 months of permit adoption, each Co-Permittee will review its general plan and land use ordinances to assess whether the following principles and policies are properly considered:

1. Limit disturbance of natural water bodies and drainage systems; conserve natural areas; protect slopes and channels; minimize impacts from urban runoff on the biological integrity of natural drainage systems and water bodies;
2. Minimize changes in hydrology and pollutant loading; require incorporation of source control and structural BMPs to mitigate the projected increases in pollutant loads and flows; ensure that post-construction runoff rates and velocities from a site do not result in significant adverse impact on downstream erosion and stream habitat; limit the quantity of Urban Runoff directed to impermeable surfaces and the MS4s; and maximize the percentage of permeable surfaces to allow more percolation of Urban Runoff in to the ground;
3. Preserve wetlands, riparian corridors, and buffer zones, establish reasonable limits on the clearing of vegetation from the project site;
4. Encourage the use of BMPs to manage Urban Runoff quality and quantity;
5. Provide for appropriate permanent measures to reduce pollutant loads in Urban Runoff from the development site; and
6. Establish development guidelines for areas particularly susceptible to erosion and sediment loss.

In addition each Co-Permittee shall provide a summary of the review and assessment in that year's Annual Progress Report and within 24 months the Co-Permittees shall revise their general plans and land use ordinances as determined necessary during review and assessment."

This proposal is basically consistent with **Requirement F.1**.

Section 6.3 of the ROWD proposes that Permittees will reduce pollutants and runoff flows form new developments and significant redevelopment to the MEP by:

1. Reviewing and revising their respective land use approval and CEQA review processes to ensure that they address urban runoff issues.
2. Developing and implementing a public/business education program.

To be consistent with the **Requirement F.2.a**. the Permittees' proposal must also provide that BMPs will be required and that new developments will not cause or contribute to an exceedance of water quality standards.

Section 6.3 of the ROWD states that Permittees will continue to implement the New Development Guidelines and will continue to address the maintenance, operation and funding of structural BMPs that ensure management of Urban Runoff quality from new development. The Permittees' current processes, including the New Development Guidelines, do not contain specific requirements consistent with those in **Requirement F.2.b.(1)**.

Section 6.3 of the ROWD proposes that, within 9 months of permit adoption, the Permittees will develop a Model Water Quality Management Plan (WQMP) identifying BMPs, including design standards for source control and structural BMPs to be applied when discretionary approval is sought. The WQMP is intended to address regional and sub-regional BMPs and to provide guidelines for site-specific, post-construction BMPs to address management of urban runoff quantity and quality in new development and significant redevelopment projects. The ROWD does not specify priority development categories, numeric criteria, or any other specific provisions required in **Requirement F.b**, which must be included in the WQMP. It should also be noted that the SDRWQCB requires the use of site-specific source and treatment control BMPs and does not encourage the use of regional or sub-regional BMPs. Regional and sub-regional BMPs are sometimes necessary in an area that has already been developed without urban runoff management measures, but it is not justified for a developing area that has the opportunity to incorporate low-impact designs and management measures into new developments during the planning process.

Also, if the Permittees choose to develop a model document, this should be completed within 6 months of the permit adoption date, so that Permittees have sufficient time to begin implementation of SUSMP requirements within 1 year. Permittees are encouraged to use existing model SUSMP documents (County of Orange, 2003; San Diego Co-Permittees, 2002), which the SDRWQCB has previously approved, so that resources can be focused on program implementation instead of developing another similar model.

Section 6.3 of the ROWD proposes that, within 10 months of permit adoption, Permittees shall review their land use approval and CEQA processes to ensure that urban runoff issues are properly considered, and revise if necessary to mitigate impacts to water quality. The ROWD states that the following six factors will be considered in each Permittee's environmental assessment:

- Potential impact that construction of the project may have on urban runoff;
- Potential impact that operation of the project may have on urban runoff;

- Potential for discharge of pollutant in urban runoff from areas identified within the project site to be used for material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas;
- Potential for pollutants in urban runoff discharged from a project site to affect the beneficial uses of receiving waters;
- Potential for significant changes in the flow velocity or volume of urban runoff from a project site to result in environmental harm; and
- Potential for significant increases in erosion of a project site or surrounding areas.

These factors are similar to the examples listed in **Requirement F.3**, therefore, this proposal is sufficient to comply with the **Requirement F.3**.

No specific internal or external training regarding development planning is proposed in the ROWD. It states that the New Development Guidelines, which contains the information needed to acquaint developers and contractors with the requirements for post-construction BMPs, will be made available during the review process for project planning and permitting. This proposal does not meet the MEP standard and, therefore, is insufficient to meet the requirements in **Requirement F.4**.

G. CONSTRUCTION (Order Section G)

1. Specific Legal Authority for Construction Requirements

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D) provides that the proposed management program include "A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(1) provides that the proposed management program include "A description of procedures for site planning which incorporate consideration of potential water quality impacts."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(2) provides that the proposed management program include "A description of requirements for nonstructural and structural best management practices."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Permittee must demonstrate that it can control "through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity."
- Federal NPDES regulation 40 CFR 122.26(b)(14) provides that "The following categories of facilities are considered to be engaging in 'industrial activity' for the purposes of this subsection: [...] Construction activity including clearing, grading and excavation activities [...]."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(3) provides that the proposed management program include "A description of procedures for identifying priorities for

inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality."

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) provides that the proposed management program include "A description of appropriate educational and training measures for construction site operators."

2. Discussion of Construction Requirements

CWA sections 402(p)(3)(B)(ii-iii) requires each Permittee to prohibit non-storm water discharges into its MS4 and to reduce the discharge of pollutants to the MEP for all urban land uses. The purpose of these two broad requirements is to minimize the short and long-term impacts of urban runoff on receiving water quality. Land used for construction activities is clearly identified in the federal regulations as one of several high priority land uses from which pollutants in urban runoff discharges must be reduced to the MEP by each Permittee.

Requirements G.2 and G.3 are consistent with the EPA statement that "A description of the local erosion and sediment control law or ordinance is needed to satisfy this requirement [i.e., Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(2)]" (EPA, 1992a). Regarding Permittee approval of construction activities, the EPA further states, "applicants must propose site review and approval procedures that address sediment and erosion controls, storm water management, and other appropriate measures. Approvals should be clearly tied to commitments to implement structural and nonstructural BMPs during the construction process" (EPA, 1992a).

Furthermore, the EPA requires small municipalities to develop and implement for construction sites "An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance [...]" (EPA, 2000c).

Requirement G.2 provides the Permittees with 365 days to update their grading ordinances and not the 640 days requested the Permittees. The Permittees will have adequate authority to require and enforce minimum BMPs at construction sites prior to the next rainy season and 365 days is adequate to allow for the only minor changes needed in the grading ordinances.

An effective means for reducing pollutants discharges from construction and grading activities is specified under **Requirement G.3** for the Permittees to develop conditions of approval for grading and construction permits that require measures to minimize pollutant discharges. The EPA recommends approval processes which consider water quality impacts, stating that approval process requirements should "include phasing development to coincide with seasonal dry periods, minimizing areas that are cleared and graded to only the portion of the site that is necessary for construction, exposing areas for the briefest period possible, and stabilizing and reseeding disturbed areas rapidly after construction activity is completed (EPA, 1992a)". Other suggested construction and grading conditions of approval listed in this item are based on TAC recommendations (SWRCB, 1994).

During approval and issuance of grading and construction permits, each Permittee must review construction and grading plans to ensure that the conditions of approval are met. The EPA states that to determine if a construction site is in compliance with construction and

grading ordinances and permits, the "MS4 operator should review the site plans submitted by the construction site operator before ground is broken" (EPA, 2000c). Furthermore, the EPA requires small municipalities to develop and implement for construction sites "Procedures for site plan review which incorporate consideration of potential water quality impacts" (EPA, 1999b).

Development of an inventory of construction sites as specified by **Requirement G.4**. will help identify potential sources of pollutants in storm water. By assessing information provided in the inventory (such as site topography and site proximity to receiving waters), sites can be prioritized by threat to water quality. Those sites that pose the greatest threat can then be targeted for inspection and monitoring. This will allow for limited inspection and monitoring time to be most effective. The EPA requires that all construction sites be addressed (and therefore inventoried), stating: "All construction sites, regardless of size, must be addressed by the municipality. To begin to identify these sites, the applicant should obtain lists of construction site operators that are covered by general or individual storm water NPDES permits from the NPDES permitting authority. However, construction sites not covered by a storm water discharge permit also need to be addressed by the municipality. The best way to identify these construction sites and implement an effective BMP program to reduce pollutants in their runoff is through the site planning process" (EPA, 1992a).

Designation of a set of minimum BMPs for construction sites as specified by **Requirement G.5** will help ensure that appropriate, consistent controls are implemented and that discharges of pollutants from construction sites are reduced to the MEP. **Requirement G.5.c.** provides the Permittees with the flexibility to allow different BMPs for the wet and dry seasons. See the discussions regarding BMP Implementation and Permittee Responsibility for Requiring BMPs in Sections VII.C. and VII.D of this Fact Sheet.

Regarding designation of BMPs to be implemented, the EPA states, "the proposed management program should describe requirements for nonstructural and structural BMPs that operators of construction activities that discharge to MS4s must meet" (EPA, 1992a). While minimum BMPs will be required at all construction sites, implementation of particular BMPs will be site specific in order to address various conditions at different sites. Regarding site specific BMPs, the EPA states, "Appropriate structural and nonstructural control requirements will vary by project. Project type, size, and duration, as well as soil composition, site slope, and proximity to sensitive receiving waters will determine the appropriate structural and nonstructural BMPs" (EPA, 1992a).

In order to comply with Order No. R9-2004-001 requirements, implemented BMPs may need to be more stringent than those required under the General Construction Permit. The EPA implies that local sediment and erosion control requirements may be more stringent than General Construction Permit requirements when it states that "construction sites covered under NPDES permit regulations must indicate whether they are in compliance with State and local sediment and erosion control plans" (EPA, 1992a).

Requirement G.6. specifies requirements for inspecting construction sites. Inspections provide a necessary means by which Permittees can evaluate compliance with their municipal ordinances. Inspections are especially important at high-risk areas for pollutant discharges, such as industrial and construction sites. The Order (Attachment C - Definitions) defines the wet season as Oct 1 through April 30, which is consistent with Order No. R9-

2001-001, Order No. R9-2001-0001, Order No. R8-2002-0011, and the SDRWQCB implementation of the General Construction Permit. To ensure that BMPs are properly installed and maintained, the EPA states MS4 operators should "develop procedures for site inspection and enforcement of control measures to deter infractions" (EPA, 1992a).

The EPA further states that "Site inspections are expected to be the primary enforcement mechanism by which erosion and sediment controls are maintained" (EPA, 1992a). When inspections result in findings of noncompliance, follow-up by the Permittee to ensure compliance is necessary. The EPA states "Effective inspection and enforcement requires [...] intervention by the municipal authority to correct violations" (EPA, 1992a). This is supported by the North Carolina Study that provided empirical support for the importance of inspections in increasing construction site compliance with local and state ordinances. Both the frequency and duration of project inspections were positively associated with the level of installation and maintenance compliance at the construction sites (Malcom, 1990). The EPA further finds "inspections give the MS4 operator an opportunity to provide additional guidance and education, issue warnings or assess penalties" (EPA, 2000c). Frequent inspections by Permittees of high priority construction sites will keep compliance a priority, and allow opportunities for inspectors to enhance problem-solving skills among site personnel.

Construction site inspection frequencies are to be based on threat to water quality. The EPA supports this, stating that site inspection procedures should "identify priority sites for inspection and enforcement based on the nature and extent of the construction activity, topography, and the characteristics of soils and receiving water quality" (EPA, 2000c). For example, construction sites that are considered a high threat to water quality are to be given a high priority for inspection. This will allow for limited inspection and monitoring time to be most effective. Bi-weekly to monthly inspection of high threat sites is necessary due to the dynamic nature of construction activities. Medium and low threat construction sites can be inspected less frequently, due to their reduced risk of negatively impacting receiving waters. The minimum inspection schedule in the Permit is reasonable for the Permittees to ensure that construction sites are implementing adequate BMPs. More frequent inspections may be necessary due to site conditions. Review of storm water pollution prevention plans (SWPPPs) can be one effective tool for determining frequency of site inspections. Construction sites that effectively implement the measures of a comprehensive SWPPP may not need to be inspected as frequently as less diligent sites.

Each Permittee must develop grading and storm water ordinances under its Individual SWMP. When a Permittee determines a violation of its grading or storm water ordinance, it must pursue correction of the violation. A critical aspect of the correction of violations is enforcement of ordinances. Enforcement increases the probability of correction of a violation. The EPA supports development of enforceable ordinances and permits when it states "applicants must describe proposed regulatory programs to reduce pollutants in storm water runoff from construction sites to the MS4" (EPA, 1992a). The EPA supports enforcement of these ordinances and permits at construction sites when it states "Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations. Enforcement mechanisms [...] also must be described" (EPA, 1992a).

Furthermore, the EPA requires small municipalities to develop and implement "An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance [...]" (EPA, 1999b).

Implementation of an education program is an important best management practice for construction sites and activities. The TAC "recognizes that education with an emphasis on pollution prevention is the fundamental basis for solving nonpoint source pollution problems." The TAC points out several target communities for education efforts, including "Government: Educate agencies and officials to achieve better communication, consistency, collaboration, and coordination at the federal, state and local levels" and "Development Community: Educate the development community, including developers, contractors, architects, and local government planners, engineers, and inspectors, on nonpoint source pollution problems associated with development and redevelopment and construction activities and involve them in problem definitions and solutions" (SWRCB, 1994).

The EPA also supports education efforts for parties involved in construction, stating "technical information on how to incorporate storm water management with erosion and sediment control and other BMP training courses are recommended for municipal employees and construction site operators" (EPA, 1992a).

3. Comments on Existing and Proposed Programs Related to Construction

Pollution Prevention as required in **Requirement G.1** is not specifically mentioned in the ROWD.

Section 2.5 of the ROWD proposes that Permittees will, within 18 months of permit adoption, review and revise grading/erosion control ordinances in order to reduce erosion caused by new development and significant redevelopment. The ROWD proposal does not include the specific provisions required in **Requirement G.2**, and ordinances must be revised and adopted no later than 6 months following permit adoption (SWMPs must be implemented in full within 1 year).

The ROWD does not indicate that the Permittees' construction approval processes will be modified to include the requirements in **Requirement G.3**, except that the requirement for evidence of coverage under the General Construction Permit prior to issuance of grading permits.

Section 5.2 of the ROWD states that, within 10 months of permit adoption, "each Permittee will develop an inventory (database) of active construction sites within its jurisdiction for projects for which a building or grading permit has been issued for a site that is 1 acre or larger." This proposal is not consistent with **Requirement G.4** of the Order, since all construction sites, regardless of size, must be included in the inventory.

Section 5.2 of the ROWD proposed that, within 6 months of permit adoption, Permittees shall develop a list of erosion control BMPs appropriate for use during construction. The proposed time frame is adequate, but the list must also include minimum erosion prevention and sediment control BMPs that address **Requirement G.5**. Also, the ROWD does not state that the BMPs will be required, which is necessary to comply with Order No. R9-2004-001. The ROWD does not require additional controls for construction sites that are tributary to

CWA section 303(d) water bodies or within/adjacent to or discharging directly to receiving waters within environmentally sensitive areas, which is necessary to comply with the Order.

The ROWD proposes to initiate inspections of all inventoried sites within 11 months of permit adoption. The ROWD proposal is not sufficient to meet the requirements in Order No. R9-2004-001 because it does not include inspection frequencies. Also, construction inspections should be ongoing, as they were required in Order No. R9-98-02, until new programs begin. Stating that inspections will be "initiated" 11 months after permit adoption would cause Permittees to be in violation of the requirement to continue implementation of Order No. R9-98-02 until the SWMP is fully implemented.

Section 2.4.2.2. of the ROWD, which describes enforcement and compliance responses, states that Permittees will emphasize and encourage voluntary compliance and will initiate enforcement/compliance actions within 60 days form the date a violation was identified. It also says that the SDRWQCB will take all enforcement actions related to compliance with the General Construction Permit and that the SDRWQCB will take the lead in initiating enforcement actions related to high-priority incidents. The Permittees are responsible for enforcing their ordinances and permits related to all violations, especially those of high priority. The SDRWQCB is responsible for enforcement of the General Construction Permit, however, if Permittee ordinances are also violated, Permittees must address these violations. Furthermore, 60 days is an inappropriately long amount of time to allow a violation to occur. The ROWD does not include adequate sanctions to ensure that BMPs are implemented at construction sites. The authority to issue sanctions (including the authority to stop work) at construction sites for lack of adequate BMPs is necessary to proactively prevent discharges. The Enforcement/Compliance Strategy, as described in the ROWD, is insufficient to maintain compliance with Order No. R9-2004-001.

Section 5.2 of the ROWD proposes that, within 10 months of permit adoption, each Permittee will have arranged for training of its current inspection staff and on an annual basis thereafter, and new hires and transfers will be trained within 6 months of starting inspection duties. This proposal to train municipal staff on an annual basis is adequate to meet permit requirements. However, the ROWD does not address external training.

H. EXISTING DEVELOPMENT (Order Section H)

The Existing Development section contains the following three sections:

H.1 Municipal Program

H.2 Industrial/Commercial Facilities Program

H.3 Residential Program

H.1 MUNICIPAL PROGRAM (Order Section H.1)

1. Specific Legal Authority for Municipal Program Requirements

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(1) provides that the proposed management program include "A description of maintenance activities and a

maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers."

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(3) provides that the proposed management program include "A description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(4) provides that the proposed management program include "A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(5) provides that the proposed management program include "A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include "A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities."
- Federal NPDES regulation 40 CFR 122.26(d)(1)(iii) requires source identification, including the location of MS4 outfalls, the location and description of the activities of each currently operating or closed municipal land fill or other treatment, storage or disposal facility for municipal waste, the location of major structural controls for storm water discharge, and the identification of publicly owned parks, recreational areas, and other open lands.

2. Discussion of Municipal Program Requirements

Municipal facilities and activities are clearly identified in the federal regulations as one of several high priority land uses from which pollutants in urban runoff discharges must be reduced to the MEP. The EPA targets municipal areas and activities "to help ensure a reduction in the amount and type of pollution that (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems" (EPA, 2000c).

As specified by **Requirement H.1.b**, Permittees must first identify all of the municipal areas and activities that generate pollutants within their jurisdiction. The areas and activities listed in **Requirement H.1.b** are either specifically addressed in the federal NPDES regulations

referenced above, or have been determined by the Permittees (Permittees, 2003), the SDRWQCB (SDRWQCB, 2002a), or the EPA (EPA, 1992a) to contribute pollutants to the MS4. Source identification is necessary to characterize the nature and extent of pollutants in discharges and to develop appropriate control measures. It is the first step in developing a targeted approach to urban runoff management.

Regarding **Requirement H.1.d**, MS4 Maintenance is critical to the successful implementation of every SWMP. The requirement to conduct a maintenance program is specifically directed in both the Phase I and Phase II storm water regulations. The EPA finds that "Lack of maintenance often limits the effectiveness of storm water structural controls such as detention/retention basins and infiltration devices. [...] The proposed program should provide for maintenance logs and identify specific maintenance activities for each class of control, such as removing sediment from retention ponds every five years, cleaning catch basins annually, and removing litter from channels twice a year" (EPA, 1992a). Regarding catch basin cleaning, the EPA states, "The removal of sediment, decaying debris, and highly polluted water from catch basins has aesthetic and water quality benefits, including reducing foul odors, reducing suspended solids, and reducing the load of oxygen-demanding substances that reach receiving waters" (EPA, 1999c). It goes on to say, "Catch basin cleaning is an efficient and cost-effective method for preventing the transport of sediment and pollutants to receiving water bodies. The requirement (Requirement H.1.d.(d)) is necessary to identify problem areas and sources of debris in catch basins.

Requirement H.1.e, Management of Pesticides, Herbicides and Fertilizers, is supported by the EPA finding that "The proposed program should include educational measures for the public and commercial applicators, and should include integrated pest management measures that rely on non-chemical solutions to pest control. The program should also describe how educational materials will be developed and distributed. Applicants are encouraged to consider providing information for the collection and proper disposal of unused pesticides, herbicides, and fertilizers, or to establish their own program. [...] In addition, applicants must include a discussion of controls for the application of pesticides, herbicides, and fertilizers in public rights-of-way and at municipal facilities. Planting low-maintenance vegetation, such as perennial ground covers, reduces pesticide and herbicide use. Native vegetation is often preferable because there is less need to apply fertilizers and herbicides, and to perform other forms of maintenance, such as mowing" (EPA, 1992a).

Requirement No. H.1.f, Inspections of Municipal Facilities and Activities, is specified to insure that proper measures are being undertaken to reduce pollutant discharges to the MEP. The EPA supports inspections of municipal areas and activities, stating "Applicants must describe programs that identify measures to monitor and reduce pollutants in storm water discharges from facilities that handle municipal waste, including sewage sludge. [...] The types of facilities that should be included are: active or closed municipal waste landfills; publicly owned treatment works, including water and wastewater treatment plants; incinerators; municipal solid waste transfer facilities; land application sites; uncontrolled sanitary landfills; maintenance and storage yards for waste transportation fleets and equipment; sites for disposing or treating sludge from municipal treatment works; and other treatment, storage, or disposal facilities for municipal waste" (EPA, 1992a). The EPA further states, "Procedures to evaluate, inspect, monitor, and establish control measures for

municipal waste sites over the term of the NPDES permit should be described" (EPA, 1992a)."

3. Comments on Existing and Proposed Municipal Programs

Section 4.1 of the ROWD describes the Municipal Facilities Strategy, which the Permittees developed pursuant to Order No. R9-98-02 to identify BMPs for activities conducted at municipal facilities. This section of the ROWD identifies the types of municipal facilities and the activities conducted at those facilities that have the potential to contribute pollutants to urban runoff (ROWD Table 4-1). The Permittees identified maintenance yards, vehicle and equipment maintenance areas, waste transfer stations, corporation and storage yards, and parks and recreational facilities as "facilities of concern". The number of each type of facility operated by each Permittee is listed in Table 4-2 of the ROWD. All other facilities that may be sources of pollutants, including parking areas, hazardous material collection facilities, and other facilities covered under the General Industrial Permit were not identified as "facilities of concern", and were not included in Table 4-2. As discussed above, all facilities and activities listed in **Requirement H.1.b** of the Order must be identified in the inventory. Also, Table 4-2 only lists the number of each type of facility in each Permittee's jurisdiction. The inventory must include, at a minimum, the name, address, and description of activities conducted at each facility.

The ROWD also identifies potential pollutants of concern from municipal facilities and activities (Table 4-3) and "potential" source control BMPs to address the pollutant-generating activities (Table 4-4). The Permittees propose to "maintain up-to-date site-specific Urban Runoff pollution prevention plans for public agency facilities and activities." If the "potential" BMPs listed in Table 4-4 include pollution prevention methods, and are required to be implemented (as applicable) these programs are adequate to comply with **Requirements H.1.a and c** of the Order.

It is important to note that the ROWD claims that brake pad wear, the operation of internal combustion engines, and tire wear, among other thing, are beyond the ability of the Permittees to control. The EPA and the SDRWQCB do not concur with this claim. The EPA states, "proposed management programs must include a description of practices for operation and maintenance of public streets, roads, and highways, and procedures for reducing the impact of runoff from these areas on receiving waters. [...] Pollutants from traffic can be minimized by using nonstructural controls (e.g., traffic reduction and improved traffic management), structural controls (e.g., traditional and innovative BMPs), and changing maintenance activities" (EPA, 1992a).

Regarding MS4 maintenance, Section 4.2 of the ROWD proposes that, within 12 months of permit adoption, Permittees will develop "Model Maintenance Procedures" for public agency activities and drainage facilities. However, in December 1999, the Permittees submitted proposed "Storm Drain System Inspection and Maintenance" programs, pursuant to Order No. R9-98-02 (Permittees, 1999). Each Permittee's proposed program would satisfy the requirements in **Requirement H.1.d** of the Order. Because such plans have already been submitted, the Permittees do not need 12 months to develop another program, and they do not need additional time to implement maintenance activities. Considering that this is a third-round permit, the Permittees should already be conducting the proposed MS4

maintenance activities and continued implementation would be adequate for compliance with Order No. R9-2004-001 without requiring additional resources.

Regarding the management of pesticides, herbicides, and fertilizers, Section 4.2 of the ROWD proposes that "Permittees shall continue to provide training to municipal staff and to contract field operations staff on fertilizer and pesticide management, maintenance procedures, and other pollution control measures. Permittee staff shall attend at least 3 out of 5 annual training sessions." This proposal satisfies **Requirement H.1.e** of the Order, but it does not address the requirements to include integrated pest management measures that rely on non-chemical solutions.

Section 4.2 of the ROWD proposes to "review municipal activities and facilities annually to identify needed revisions of the Municipal Facilities Strategy". In order to identify needed revisions to BMP requirements and municipal programs, inspections are necessary. Therefore, it is assumed that the Permittees proposal includes inspections of municipal facilities and activities. Considering the small number of municipal facilities that each Permittee operates, with the exception of parks (ROWD Table 4-2), inspecting each facility annually is feasible.

Regarding parks and recreation facilities, the Permittees identified these areas as facilities of concern in the ROWD due to their potential to generate pollutants. Therefore, parks and recreation facilities, or the municipal activity conducted at the facilities must be inspected annually. If the same municipal maintenance staff perform similar landscaping or other activities at all parks, the inspection process could be streamlined to focus on the activities. For example, the Permittees could possibly develop one pollution prevention plan for all parks that includes all activities conducted at municipal parks, and conduct annual inspections of the activities performed to ensure that effective BMPs are being implemented (not necessarily inspecting all parks annually).

Enforcement of municipal areas and activities is not specifically addressed in the ROWD. This program will need to be developed as part of each Permittee's Individual SWMP.

Overall, with minor refinement, the existing and proposed municipal programs are adequate to meet the requirements of **Requirement H.1** of the Order.

H.2 INDUSTRIAL/COMMERCIAL FACILITIES PROGRAM (Order Section H.2)

1. Specific Legal Authority for Industrial/Commercial Facilities Requirements

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C) provides that the proposed management program include "A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to Section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(1) provides that the permittee must "identify priorities and procedures for inspections and establishing and implementing control measures for such discharges."

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A) provides that the permittee develop a proposed management program which includes "A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(ii) provides that the permittee "Provide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity."
- Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."

2. Discussion of Industrial/Commercial Facilities Requirements

The requirements contained in Section H.2 provide a framework for developing management programs to reduce pollutants in urban runoff discharges from industrial and commercial facilities to the MEP.

The EPA supports the industrial/commercial facility requirements when it states, "NPDES permits for MS4s will establish responsibilities for municipal system operators to control pollutants from industrial storm water discharged through their system" (EPA, 1992a). The guidance further states that Permittees are ultimately responsible for discharges to their MS4. Therefore, storm water management programs should do the following:

- Identify priority industries discharging to their systems;
- Review and evaluate SWPPPs and other procedures that industrial facilities must develop under general or individual permits;
- Establish and implement BMPs to reduce pollutants from these industrial facilities (or require industry to implement them); and
- Inspect and monitor industrial facilities to verify that the industries discharging storm water to the MS4 are in compliance with their NPDES storm water permit, if required.

Source identification is necessary to characterize the nature and extent of pollutants in discharges and to develop appropriate BMPs. The industrial and commercial facilities listed in **Requirement H.2.b** are either specifically addressed in the federal NPDES regulations referenced above, or have been determined by the Permittees, or the SDRWQCB (SDRWQCB, 2002a) to contribute pollutants to the MS4. The Permittees have not provided data, or other information, documenting that any of the facilities should be removed from the list because they are not a source of pollutants in the Upper Santa Margarita Watershed.

The EPA supports the list of facilities in the Order when it states the following (EPA, 2004):

> "EPA regulations at 40 CFR 122.26(d)(2)(iv)(A) provide for a broad program of 'source control and structural control measures to reduce pollutants from runoff from commercial and residential areas...' We believe that this regulation provides a firm basis for the permit's [Order] requirements related to commercial facilities. The requirements for outreach to commercial facilities, inspections, and the follow-up enforcement would all be consistent with a program of 'source control' measures to be included in a storm water management program..."

Regarding the list of industrial facilities, EPA goes on to say:

> "The issue of industrial inspections also arose for the Los Angeles County MS4 permit. The State Board, in a memo dated November 9, 2001, from Michael Lauffer of the State Board to Dennis Dickerson, Executive Officer of the Los Angeles Regional Board, noted that under Section 402 (p)(3)(B)(iii) of the CWA, the Board has broad authority to require 'such other provisions...as the State determines appropriate...' and that this would provide a basis for requirements that go beyond specific provisions of the EPA regulations. We would agree with the State Board on this matter, and that the Regional Board would have the authority to require inspections of all the industrial facilities listed in the permit [Order], notwithstanding the specific provisions of the EPA regulations."

Regarding **Requirement H.2.c**, BMP Implementation, guidance from the EPA makes it clear that Permittees are required to designate BMPs for industrial and commercial facilities when it states that permittees should, "Establish and implement BMPs to reduce pollutants from these facilities (or require industry to implement them)" (EPA, 1992a). The EPA goes on to say that BMPs more stringent than those required under the General Industrial Permit may be necessary. The EPA finds that "nothing in the Federal regulations would prohibit the municipality from requiring additional controls beyond the permit requirements for industrial activities. For this reason, the EPA recommends that municipal applicants incorporate a provision in the proposed storm water management program that allows the municipality to require priority industrial facilities to implement the controls necessary for the municipality to meet its permit responsibilities" (EPA, 1992a). These statements from the EPA support the requirement for dual regulation of facilities covered by the General Industrial Permit (see discussion in support of **Finding No. 21** in Section VII.E of this Fact Sheet).

In support of **Requirement H.2.c.(3)**, the EPA recommends that Permittees provide BMP guidance to industrial facilities, stating, "The applicant should suggest procedures for requiring pollutant control measures in runoff from priority industrial facilities. Applicants should provide information to the industrial facilities that discharge to the MS4s and industry-specific guidance on appropriate control measures that industries discharging to the systems should follow" (EPA, 1992a). The EPA goes on to say, "Applicants should provide information to the industrial facilities that discharge to the MS4s and industry-specific guidance on appropriate control measures that industries discharging to their systems should follow" (EPA, 1992a).

Furthermore, inspections are necessary to verify that industries are in compliance with the MS4 permit and local ordinances (EPA, 1992a). According to the EPA, "The proposed management program should describe the inspection procedures that will be followed. [...]

Proposed management programs should address minimum frequency for routine inspections. For example, how often, how much of the site, and how long an inspection may take are appropriate to explain in this proposed management program component. Applicants should also describe procedures for conducting inspections and provide an inspector's checklist" (EPA, 1992a). In further support of inspections and dual regulation of industrial facilities, the EPA states "Municipalities are urged to evaluate pollution prevention plans and discharge monitoring data collected by the industrial facility to ensure that the facility is in compliance with its NPDES storm water permit. Site inspections should include (1) an evaluation of the pollution prevention plan and any other pertinent documents, and (2) an onsite visual inspection of the facility to evaluate the potential for discharges of contaminated storm water from the site and to assess the effectiveness of the pollution prevention plan" (EPA, 1992a).

The EPA also finds that follow-up actions are to be implemented based upon site inspection findings: "The results of inspection may be used as a basis for requiring storm water management controls and enhanced pollution prevention measures" (EPA, 1992a).

Industrial site inspection frequencies specific in **Requirement H.2.d** are based on threat to water quality prioritization in order to allow for limited inspection resources to be most effective. Annual or bi-annual inspection of high threat sites is necessary to ensure that changes to the site that may be detrimental to water quality are identified and addressed.

Requirement H.2.f, Reporting of Non-Filers, is necessary to ensure effective oversight of industrial facilities.

3. Comments on Existing and Proposed Industrial/Commercial Programs

Pursuant to Order No. R9-98-02, the Permittees have developed and implemented an industrial/commercial facilities program that meets or exceeds several of the requirements in Section H.2 of the Order. Each Permittee has already developed a prioritized list of facilities, including industrial facilities as defined at 40 CFR 122.26(b)(14), food facilities, and all other facilities that store, generate, or handle hazardous waste. The method of prioritization used in developing the current lists is consistent with what the SDRWQCB considers to be "high", "medium", and "low". Section 7.3 of the ROWD proposes that, within 9 months of permit adoption, each Permittee will update its existing inventories of industrial and commercial facilities within its jurisdiction that have the potential to discharge pollutants to the MS4. The ROWD says that the industrial and commercial facilities databases will include the name, address, location reference, facility contact and phone number, SIC code, WDID number, assessor's parcel number, and site size.

Also pursuant to Order No. R9-98-02, the Permittees developed the Commercial/Industrial Compliance Assistance Program (CAP) as a mechanism to conduct the required inspections of inventoried facilities. The CAP was formed as an agreement between the District and the County's Department of Environmental Health and involves the completion of a "storm water compliance survey" in addition to the routine inspections that the Department Environmental Health conducts pursuant to other regulations. Through the CAP, the County currently inspects sites with underground storage tanks once per year, sites that handle and generate hazardous waste every two years (began in May 2002), and retail food facilities 1-3 times annually (began in January 2002). Section 7.3 of the ROWD proposes that, within 12

months of permit adoption, each Permittee will implement an inspection frequency for industrial and commercial facilities of no less than:

- Once a year for industrial facilities designated as high priority;
- Once biannually for commercial facilities designated as medium priority; and
- Once during the permit term for facilities designated as low priority.

Except for the facilities that are not captured under the CAP, which must be addressed by each Permittee, the Permittees existing and proposed programs are adequate to comply with the requirements in **Requirement H.2.b and H.2.d.**

Section 7.2 of the ROWD states that, "In conducting a commercial/industrial facility inspection, if it appears that the facility may be required to have coverage under the General Permit for Stormwater Discharges Associated with Industrial Activities and the facility operator has indicated that an NOI has not been filed, the inspector will provide the operator with an informational sheet on the requirements of the General Permit for Stormwater Discharges Associated with Industrial Activities. The inspector also documents the name, address, and SIC code of the facility. Subsequently, a listing of such facilities is compiled and forwarded to the San Diego Regional Board staff on a frequency to be determined by the Permittees." This proposal meets **Requirement H.2.f.**

It is important to note that there are approximately 25 industrial facilities currently covered by the General Industrial Permit within the Upper Santa Margarita Watershed. Most of these facilities are already included in the Permittees' inventories and covered under the CAP. The remaining few that will require inspections and oversight will not constitute a significant burden on the Permittees. Therefore, dual regulation of these sites should not be an issue. In the Permittees comments on the Order, they proposed BMP requirements to comply with Requirement H.2.c.1. The proposed BMPs may be adequate minimum requirements for food facilities and for facilities that store hazardous waste. However, broadly applying these few BMPs to all types of inventoried industrial and commercial facilities may not be adequate or appropriate. Adequate minimum BMPs should address all facility types and activities that could potentially contribute pollutants to the MS4.

Regarding enforcement, Section 2.4.2.2. of the ROWD states that Permittees will emphasize and encourage voluntary compliance and will initiate enforcement/compliance actions within 60 days form the date a violation was identified. It also says that the SDRWQCB will take all enforcement actions related to compliance with the General Industrial Permit and that the SDRWQCB will take the lead in initiating enforcement actions related to high-priority incidents. These statements are incorrect and do not meet the requirements of **Requirement H.2.e**. As discussed in Sections VII.D and VII.E of this Fact Sheet, the Permittees are responsible for enforcing their ordinances and permits related to ALL violations, especially those of high priority. The SDRWQCB is responsible for enforcement of the General Industrial Permit, however, if Permittee ordinances are also violated, Permittees must address these violations. Furthermore, 60 days is an inappropriately long amount of time to allow a violation to occur. The Permittees' Enforcement/Compliance Strategy, as described in the ROWD, is insufficient to meet the enforcement requirements contained in Order No. R9-2004-001.

Section 7.3 of the ROWD proposes that, within 1 year of permit adoption, each Permittee will have arranged for adequate training of all staff inspectors and on an annual basis thereafter. New hires that will be performing inspections will be trained within 6 months of starting field duties. This proposed training schedule meets **Requirement H.2.g** of the Order.

H.3 RESIDENTIAL PROGRAM (Order Section H.3)

1. Specific Legal Authority for Residential Requirements

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A) provides that the Permittee develop a proposed management program which includes "A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls."
- Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."

2. Discussion of Residential Requirements

Land used for residential activities is clearly identified in the federal regulations as one of several high priority land uses from which pollutants in urban runoff discharges must be reduced to the MEP by each Permittee (40 CFR 122.26(d)(2)(iv)). Residential activities have the potential to be significant sources of pollutants in urban runoff. In residential areas, pollution sources conveyed by the MS4 include activities related to automobile maintenance, landscaping/gardening, home-improvement, pets, and others, including those listed in **Requirement H.3.b.** The requirements contained in Section H.3 will provide a program for the development and implementation of BMPs to reduce pollutants in urban runoff discharges from residential activities to the MEP (see discussion of **BMP Implementation** in Section VII.C of this Fact Sheet).

Pursuant to Order No. R9-98-02 and pre-existing programs, the Permittees have instituted or promoted residential pollution prevention BMPs, including street sweeping, household hazardous waste collections, and education. Nationally, education is increasingly being used as a tool for pollution prevention in residential areas, where the use of regulatory enforcement actions has traditionally been less than in other land use areas. Pollution prevention can encourage responsible residential nutrient management, such as proper fertilization rates and proper pet waste disposal, when a connection is established between such practices and local or regional water quality needs (Nonpoint Source News Notes, 2000). Similarly, source control is vital to protect urban watersheds from pesticides that are applied in residential areas and are transported to streams via the MS4. For example in a

review, "Diazinon Sources in Runoff from the San Francisco Region," the Center for Watershed Protection concluded that, "the only real tool to control diazinon in urban watersheds is source control to either reduce the use of diazinon or to apply it in a safer manner." In addition, where structural BMPs or MS4 facilities are owned or operated by the residential community, pollution prevention activities taken by local governments can include maintenance guidance.

3. Comments on Existing And Proposed Residential Programs

Section 8.0 of the ROWD states that pollution prevention is a major focus of the Permittees' existing StormWater/CleanWater Protection Program, and the following pollution prevention themes are emphasized in public outreach activities and materials:

- Proper disposal of household hazardous waste;
- Proper disposal of used motor oil;
- Pesticide and fertilizer use guidelines;
- Good housekeeping BMPs; and
- Proper disposal of pet waste.

Section 8.2 of the ROWD proposes to educate the public regarding pollutants in urban runoff. Education and outreach may be sufficient to reduce the discharge of pollutants to the MEP from residential areas, however, additional BMPs may be necessary in some cases. These minimum BMP requirements should be identified in each Permittee's Individual SWMP.

I. EDUCATION (Order Section I)

1. Specific Legal Authority for Education Requirements

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include "A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(6) provides that the proposed management program include "A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) provides that the proposed management program include "A description of appropriate educational and training measures for construction site operators."

2. Discussion of Education Requirements

Education is a critical BMP and an important aspect of the SWMP. The EPA finds that "An informed and knowledgeable community is critical to the success of a storm water management program since it helps ensure the following:

> "Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important. [...]
>
> Greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters". (EPA, 2000c)

Regarding target audiences, EPA states "The public education program should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children" (EPA, 2000c). The target communities included in Requirement I. are based on recommendations of the TAC (SWRCB, 1994).

3. Comments on Existing and Proposed Education Programs

Public education was strongly emphasized in the Permittees' 1993 DAMP implemented under the first and second term permits. Consequently, the Permittees already have well-developed education programs that may be readily reviewed and revised, as necessary, to satisfy the requirements of Order No. R9-2004-001.

Section 8.2 of the ROWD includes several good program commitments, such as conducting a survey to measure changes in awareness, which should be incorporated into the SWMP.

J. ILLICIT DISCHARGE DETECTION AND ELIMINATION (Order Section J)

1. Specific Legal Authority for Illicit Discharge Detection and Elimination Requirements

- Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) and 40 CFR 122.26(d)(2)(iv)(B)(1) generally apply to all directives under Section J. Illicit Discharge Detection and Elimination of Order No. R9-2004-0001.
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) provides that the permittee include in its proposed management program "a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens."
- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) provides that the permittee include in its proposed management program "procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water."
- Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(5) provides that the permittee include in its proposed management program "a description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges

or water quality impacts associated with discharges from municipal separate storm sewers."

- Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(6) provides that the permittee include in its proposed management program "a description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials."

2. Discussion of Illicit Discharge Detection and Elimination Requirements

In accordance with 40 CFR 122.26(d)(2)(iv)(B) and 122.26(d)(2)(iv)(B)(1), **Requirement J.1** requires each Permittee to actively seek and eliminate illicit discharges and illicit connections. As guidance for detecting and eliminating illicit discharges and connections, the EPA suggests "The proposed management program must include a description of inspection procedures, orders, ordinances, and other legal authorities necessary to prevent illicit discharges to the MS4" (EPA, 1992a).

In order to detect illicit discharges and connections, **Requirement J.2** requires each Permittee to develop and maintain an accurate, up-to-date map of its MS4. An accurate map of the MS4 will enable the Permittees to monitor the system for illicit discharges and connections and to be aware of the entire MS4 within its jurisdiction.

Requirement J.3 requires Permittees to develop and implement an Illicit Discharge Monitoring Program as specified in **section II.B of Monitoring and Reporting Program No. R9-2004-001 (hereafter referred to as the MRP)**. If results indicate that an illicit discharge or connection may be present, **Requirement J.4** specifies that the Permittees shall conduct follow-up procedures to pinpoint the source of the illicit discharge or connection. Once the illicit discharge or connection source is identified, steps may be taken to eliminate the discharge or connection. In this manner, monitoring of dry weather urban runoff can lead to the elimination of illicit discharges and connections and the reduction of pollutants in urban runoff.

Requirement J.5 requires the elimination of illicit discharges and illicit connections as soon as possible. The time needed to eliminate the discharge/connection will depend on the nature and circumstance of the problem including conditions that are not under the control of the Permittees. However, discharges that the Permittees have the ability to eliminate immediately must be eliminated immediately. The EPA supports elimination as soon as possible when it states, "Once the source is identified, the offending discharger should be notified and directed to correct the problem. Education efforts and working with the discharger can be effective in resolving the problem before taking legal action" (EPA, 1992a).

The EPA states that the "proposed management program component should describe how the prohibition on illicit discharges will be implemented and enforced. The description could include a schedule and allocation of staff and resources. A direct linkage should exist between this program component and the adequate legal authority requirements for the ordinances and orders to effectively implement the prohibition of illicit discharges" (EPA, 1992a). Consistent with this statement, **Requirement J.6** requires Permittees to implement and enforce its ordinance, orders, or other legal authority over illicit discharges and connections.

Requirement J.7 pertains to sewage spill prevention and response. Such spills into and from the MS4 can severely impair receiving water quality and pose a significant threat to public health. To avoid these negative impacts, the Order requires Permittees to implement appropriate procedures to prevent, contain, and respond to spills that may discharge into the MS4. The Order contains suggestions of possible appropriate actions. The EPA states, "The goal of a spill prevention program is to reduce the frequency and extent of spills of hazardous materials which can cause water quality impairment" (EPA, 1992a).

Requirement J.8 pertains to public reporting of illicit discharges or water quality impacts associated with discharges from MS4s. Regarding this issue, the EPA states "Timely reporting by the public of improper disposal and illicit discharges are critical components of programs to control such sources. To enhance public awareness, programs may include setting up a public information hotline number, educating school students, community and volunteer watchdog groups, using inserts into utility bills, and newspaper, radio, and television announcements to inform the public about what to look for and how to report incidents" (EPA, 1992a).

The EPA states "If private individuals find the proper disposal of used oil or toxic materials difficult, incidents of improper disposal (such as into the MS4) increase" (EPA, 1992a). Therefore **Requirement J.9** directs the Permittees to propose a program component that will facilitate the proper disposal of used oil and toxics from households by establishing municipally operated collection sites, or ensuring that privately operated collections sites are available. The EPA suggests this program component "should describe outreach plans to handlers of used oil and to the public, and operating plans for oil and household waste collection programs" (EPA, 1992a).

3. Comments on Existing and Proposed Illicit Discharge Detection and Elimination Programs

The ROWD references a reconnaissance survey that the Permittees conducted pursuant to their first-round MS4 permit (Order No. R9-90-46), which identified and removed any illicit connections. According to the 2001-2002 Annual Progress Report, the Reconnaissance survey showed that illicit connections were almost non-existent within the Upper Santa Margarita Watershed, whereas illegal discharges were more commonplace (Permittees, 2001). Based on these results, the Permittees concluded that focusing on inspections of open channels and the curtailment of illicit discharges is a more effective use of resources than inspections of underground storm drains. The EPA concurs with this conclusion when it says, "Permits for older municipalities may emphasize control of cross-connections, while permits for municipalities with large areas of new development may emphasize the installation of permanent structural controls during construction" (EPA, 1992a). **Requirement J.1** of the Order gives the Permittees the flexibility to focus their programs on priority areas, so long as they are actively seeking and eliminating illegal discharges. It should be noted that the reconnaissance survey was conducted 10 years ago and the length of the MS4 has increased significantly. The survey, dated September 30, 1993, covered approximately 25.2 miles of underground storm drains and over 8.9 miles of open channels. According to the ROWD, the District's MS4 currently consists of about 71 miles of open and closed storm drains, and the City of Murrieta's MS4 currently consists of about 18 miles of open and closed storm drains. The total length of Temecula's MS4 is unknown. Therefore, the survey covered less than half

of the current MS4 and cannot serve as evidence that illicit connections are currently non-existent.

Section 3.2 of the ROWD states that the Permittees have programs in place to identify and eliminate illicit connections. According to the 2001-2002 Annual Progress Report, the City of Murrieta conducts annual video inspections of portions of its MS4 and investigates any illicit connections identified, and District and County staff perform visual inspections of open storm drains to check for discharges. The City of Temecula seems to have a reactive program that relies on reports of illegal discharges.

Regarding **Requirement J.2**, the District and the City of Murrieta submitted a map of their MS4s with the ROWD. The City of Temecula has not yet submitted a map.

Section 3.5 of the ROWD proposes that Permittees shall continue to implement and improve routine inspection and monitoring and reporting programs for their MS4s. In order to satisfy **Requirement J.3** of the Order, each Permittee shall describe their inspection and monitoring programs to meet the requirements of Section II.B of the MRP in their Individual SWMPs.

Section 3.5 of the ROWD proposes that, "If routine inspections or dry weather monitoring indicate illicit connections or illegal discharges, they shall be investigated and eliminated or permitted within sixty (60) calendar days of receipt of notice." Sixty days is an unreasonably long time frame for the investigation and elimination of illicit discharges and connections. As stated above, these discharges can cause or contribute to receiving water degradation and are prohibited. Also, illicit discharges are often a discrete event that must be investigated immediately to identify the source. Therefore, the proposed timeframe for investigation and elimination must be decreased to represent the most immediate response time as is possible for the Permittees. In accordance with **Requirement J.5**, illicit discharges that pose a serious threat to public health or the environment must be eliminated immediately, and all others must be eliminated as soon as possible.

Section 3.2 of the ROWD states that the Permittees have programs in place to identify, eliminate, and respond to illicit connections and discharges. However, these programs are not described. According to the 2001-2002 Annual Progress Report, the District manages a toll-free reporting hotline, which satisfies **Requirement J.8** of the Order (Permittees, 2002a). The reports do not mention hotlines for the Cities of Murrieta and Temecula and it is not clear if the countywide hotline is coordinate with the other Permittees. In order for the Cities to satisfy this requirement, Individual SWMPs must either discuss individual public reporting hotlines or describe how the countywide hotline is coordinated.

As indicated in Section 3.3 of the ROWD, the Permittees already have mechanisms in place to facilitate the proper management and disposal of used oil and toxic materials that meet or exceed **Requirement J.8**.

K. WATERSHED-BASED ACTIVITIES (Order Section K)

1. Discussion of Watershed Requirements

Management of urban runoff on a watershed basis is recommended by the SWRCB and the SDRWQCB. The TAC defines watershed-based water quality protection as "the prevention/control of pollution and management of human activities in a geographically or other defined drainage area to protect, restore, and/or enhance the natural resources and

beneficial uses within the watershed" (SWRCB, 1994). The TAC recommends that "All NPDES permits and Waste Discharge Requirements should be considered for reissuance on a watershed basis" (SWRCB, 1994). The SDRWQCB also recommends watershed-based water quality protection, stating in the Basin Plan that "Public agencies and private organizations concerned with water resources have come to recognize that a comprehensive evaluation of pollutant contributions on a watershed scale is the only way to realistically assess cumulative impacts and formulate workable strategies to truly protect our water resources" (SDRWQCB, 1994).

The requirements in Section K of the Order are necessary for the Permittees to identify and mitigate sources of pollutants in urban runoff from the entire watershed that impact common downstream receiving waters. This is the key to addressing the impacts from areas and activities within the Permittees' jurisdiction on downstream receiving waters and their beneficial uses (i.e. Camp Pendleton's drinking water supply) as well as addressing pollutant sources in the watershed which are outside the Permittees' jurisdiction. **Finding No. 20** emphasizes the need for watershed-based activities and collaboration among dischargers in a common watershed. It states, "As operators of the MS4s, the Permittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or exceedances of receiving water quality objectives." Permittees could be held responsible for discharges of pollutants from sources outside of their jurisdiction if they cause or contribute to exceedances of water quality objectives, therefore, it is necessary for Permittees to make efforts to address all sources of pollutants in the watershed.

2. Comments on Existing and Proposed Watershed Programs

The Permittees already collaborate with each other through monthly meetings. However, these meetings, as well as many aspects of the existing DAMP, are countywide. In order to address watershed-specific issues, the Permittees should meet separately to focus on the Upper Santa Margarita Watershed. The Permittees also already participate in San Diego County's current effort to develop a Santa Margarita Watershed Management Plan, the Southern California Stormwater Monitoring Coalition, and the Santa Margarita River Executive Management Team. At this time, this level of participation is appropriate to meet the objectives of Requirement K.3. of the Order.

L. MONITORING AND REPORTING PROGRAM (Order Section L)

See discussion in Section IX of this Fact Sheet.

M. PRINCIPAL PERMITTEE RESPONSIBILITIES (Order Section M)

1. Specific Legal Authority for Principal Permittee Responsibility Requirements

- Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that "[The Permittee must demonstrate that it can control] through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system."

- Federal NPDES regulation 40 CFR 122.26(a)(3)(iii)(C) provides that "A regional authority may be responsible for submitting a permit application."

2. Discussion of Principal Permittee Responsibility Requirements

The Principal Permittee responsibilities required in Section M are necessary to facilitate intergovernmental coordination and for the standardization and compilation of required reports. Standardized documents provide for easier assessment and application of report data, making reports more useful for the SDRWQCB and the Permittees, which can result in more effective urban runoff management. The EPA recommends intergovernmental coordination, such as a memorandum of understanding, to define specific municipal roles, responsibilities and points of coordination (EPA, 1992a).

3. Comments on Existing and Proposed Principal Permittee Responsibilities

The Permittees currently operate under an Implementation Agreement, which was executed in November 1998. The Implementation Agreement sets forth the responsibilities of the Principal Permittee and the Permittees and provides for funding of "umbrella" activities. In Section 2.1 of the ROWD, the Permittees propose to amend the implementation agreement to set forth the responsibilities of the Permittees in accordance with the Order.

N. STANDARD PROVISIONS (Order Section O and Attachment B)

The standard provisions included in **Attachment B** of Order No. R9-2004-001 are consistent to all NPDES permits and are generally found in federal NPDES regulation 40 CFR sections 122.22, 122.41, 122.42 and the CWC (specific citations are provided in **Attachment B** of Order No. R9-2004-001).

IX. MONITORING AND REPORTING PROGRAM

The MRP consists of requirements for receiving waters monitoring, monitoring of dry weather flows/illicit discharges, and annual reporting.

A. RECEVING WATERS MONITORING

1. Specific Legal Authority for Receiving Waters Monitoring Requirements

Federal NPDES regulations at 40 CFR 122.26(d)(2)(iii)(D) require municipal permittees to propose a monitoring program for representative data collection for the term of the permit that describes the location of outfalls, field screening points, instream stations, why the location is representative, the frequency of sampling, parameters to be sampled, and a description of sampling equipment.

2. Discussion of Monitoring Requirements

According to the EPA, the benefits of sampling data include, but are not limited to (EPA, 1992b):

- Providing a means for evaluating the environmental risk of storm water discharges by identifying types and amounts of pollutants present;

- Determining the relative potential for storm water discharges to contribute to water quality impacts or water quality standard violations;
- Identifying potential sources of pollutants; and
- Eliminating or controlling identified sources more specifically through permit conditions.

Most importantly, monitoring programs are an essential link in urban runoff management efforts. Data collected from monitoring programs can be assessed to determine the effectiveness of management programs and practices, which is vital for the success of the iterative approach used to meet the MEP standard. Specifically, when data indicates that a particular BMP is not effective, an improved BMP can be selected. Also, when water quality data indicate that water quality standards or objectives are being exceeded, particular pollutants, sources, and drainage areas can be identified and targeted for urban runoff management and specific education efforts.

Considering the benefits described above, the MRP has been designed to determine impacts to receiving water quality and beneficial uses from urban runoff and to use the results to refine the SWMP for the reduction of pollutant loadings to the MEP. The primary goals of the MRP include:

1. Assess compliance with Order No. R9-2004-001;
2. Measure and improve the effectiveness of the SWMPs;
3. Assess the chemical, physical, and biological impacts of receiving waters from urban runoff;
4. Characterize urban runoff discharges;
5. Identify sources of specific pollutants;
6. Prioritize drainage and sub-drainage areas that need management actions;
7. Detect and eliminate illicit discharges and illicit connections to the MS4; and
8. Assess the overall health of receiving waters.

Each of the components of the Receiving Waters and Illicit Discharge Monitoring Programs is necessary to meet the objectives listed above. The justifications for each component are discussed below.

Framework

The SDRWQCB typically uses the following framework in NPDES MRPs:

1. Core monitoring to address ongoing, site-specific needs, such as estimating pollutant loads and assessing trends;
2. Regional monitoring to address large spatial scales at infrequent (i.e. every five years) intervals. Regional monitoring is useful to put localized site-specific results into context of the larger ecosystem; and
3. Special studies to address directed needs or to answer specific questions. This monitoring is useful to address unique issues, oftentimes triggered by routine monitoring

to help understand results or identify efficient management measures. Special studies are short-term studies with a predefined beginning, middle and end.

Core Monitoring

Section II.A.1 of the MRP requires mass loading monitoring at three triad[13] and four tributary stations. The mass loading monitoring will provide data representing the total pollutant loadings from specific drainage and sub-drainage areas. This data can be used to help achieve the MRP goals listed above and answer the following management questions:

- Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
- What is the extent and magnitude of the current or potential receiving water problems?
- What is the relative urban runoff contribution to the receiving water problem(s)?
- What are the sources of urban runoff that contribute t receiving water problem(s)?
- Are conditions in receiving waters getting better or worse?

The number and locations of triad and tributary stations are consistent with the Permitees' proposal (Permittees, 2004b). In addition to one reference station, the triad stations are existing Permittee monitoring stations located in lower Murrieta Creek and lower Temecula Creek. These stations are located at the downstream end of the Upper Santa Margarita Watershed and should be representative of discharges from the entire permitted area. The tributary station locations were proposed by the Permittees and are representative of urbanized sub-drainage areas. Data from these locations will allow the Permittees to better identify sources of pollutants, prioritize drainage areas for management actions, and determine the conditions of the tributary streams (MRP Goals 4,5,6 and 8).

Federal NPDES regulations at 40 CFR 122.21(g)(7)(ii) require the sampling protocols specified in **section II.A.1 of the MRP.** These protocols are necessary to ensure consistent sampling, adequate representation of storm events, and accurate, comparable data.

Section II.A.2 of the MRP requires the Permittees to conduct toxicity monitoring to evaluate the extent and causes of toxicity in receiving waters. Toxicity testing is used to assess the impact of urban runoff on the overall quality of aquatic systems (Center for Watershed Protection, 1996). Evidence of toxicity indicates that pollutants are bioavailable and have the potential to cause degradation to aquatic systems. When combined with chemical data, which by itself does not necessarily reveal the impacts of urban runoff to aquatic life or the beneficial uses of receiving waters, toxicity monitoring data can be used to better determine the extent and causes of impacts to aquatic systems (MRP Goals 3 and 8).

Toxicity testing can also be used to evaluate the effectiveness of urban runoff BMPs and other management measures (MRP Goal No. 2). The Center for Watershed Protection rated it as a "very useful" indicator for assessing municipal storm water programs. Permittees can use the results of toxicity testing to identify areas of high concern and to establish priority locations for BMPs (MRP Goal No. 6).

[13] Triad means a station where chemical, toxicity, and bioassessment monitoring occur.

Section II.A.2.a specifies three freshwater test species for use, because multiple species are needed to provide a more complete assessment of the causes of toxicity in urban runoff (Bay, 2001). Different species vary in their sensitivity to contaminants and, therefore, multiple species can reveal when varying contaminants are present at toxic levels (Bay, 2001). Reliance on single species tests may not provide an accurate assessment of toxicity (Center for Watershed Protection, 1996). The rationale for the specified test species is as follows:

- *Ceriodaphnia dubia* (water flea): represents the invertebrates that live in the water column and serve as a food source for larger invertebrates and small fish. This species is known to be sensitive to metals and pesticides in water, as well as other contaminants. (San Diego County, 2004)
- *Hyalella azteca* (freshwater amphipod): an invertebrate associated with the sediment at the bottom of streams and lakes. It serves as a food source for larger invertebrates as well as fish. This species is generally sensitive to metals and pesticides, as well as nitrogen compounds such as ammonia. (San Diego County, 2004)
- *Pseudokirchneriella subcapitata*, formally known as *Selenastrum capricornutum*: unicellular algae present in the water column of streams and lakes. It is the base of the food chain in freshwater systems. It is sensitive to herbicides and metals and its growth is greatly affected by nutrient loads. (San Diego County, 2004)

An additional reason to use the species listed above, is for consistency with other monitoring in the Santa Margarita Watershed. Pursuant to the County of San Diego's MS4 permit (Order No. R9-2001-01), toxicity testing using these three species occurs at the mass loading station near the mouth of the Santa Margarita River. Using the same species throughout the watershed will allow the results to be comparable and potential sources of toxicity to be better identified.

For cost purposes, toxicity testing is only required on wet weather samples.

Section II.A.3 of the MRP requires the Permittees to conduct bioassessment monitoring. Bioassessment data is a cost-effective tool that measures the effects of water quality over time (CDFG, 2002). It is an important indicator of stream health and impacts from urban runoff. It can detect impacts that chemical and toxicity monitoring cannot. The EPA encourages permitting authorities to consider requiring biological monitoring methods to fully characterize the nature and extent of impacts from urban runoff (EPA, 1996c). Therefore, the SDRWQCB and other RWQCBs commonly require bioassessment monitoring in MS4 and other types of discharge permits.

Bioassessment is the direct measurement of the biological and physical condition, and the attainment of beneficial uses (COLD, WARM, WILD, and RARE) of receiving water, using benthic macroinvertebrates. Bioassessment monitoring integrates the effects of both water chemistry and physical habitat impacts (e.g., sedimentation or erosion) of various discharges on the biological community native to the receiving waters. Moreover, bioassessment is a direct measurement of the impact of cumulative, sub-lethal doses of pollutants that may be below reasonable water chemistry detection limits, but that still have biological affects.

Because bioassessment focuses on communities of living organisms as integrators of cumulative impacts resulting from water quality or habitat degradation, it defines the ecological risks resulting from urban runoff. Bioassessment not only identifies that an

impact has occurred, but also measures the effect of the impact and tracks recovery when control or restoration measures have been taken. These features make bioassessment a powerful tool to assess compliance, evaluate the effectiveness of BMPs, and to track both short and long-term trends (MRP Goals 1,2,3, and 8).

From 1998 through 2001, the SDRWQCB implemented the Ambient Bioassessment Monitoring Program, which monitored rivers and streams in the San Diego region. The monitoring concluded that waters in the Upper Santa Margarita Watershed, including Murrieta Creek, Temecula Creek, and the upper Santa Margarita River, exhibited degraded biological and physical integrity (Index of Biotic Integrity (IBI) ranged from "Very Poor" to "Good"). As a comparison, the reference stations in the watershed, located in Sandia Creek and De Luz Creek, were characterized by a high degree of biological and physical integrity (IBI was consistently "Very Good") (CDFG, 2002). These conclusions support the need for continued bioassessment monitoring to determine the long-term health of the receiving waters and impacts from MS4 discharges.

Through a CWC section 13225 directive, issued in March 2003, the Permittees were required to begin implementing a bioassessment monitoring program. The bioassessment required in the MRP replaces that required under the directive. The program consists of sampling, monitoring, and analysis of data at the three triad stations. The Permittees began bioassessment monitoring four stations in November 2003, pursuant to the directive. For cost purposes, the number of stations was reduced to three.

Section II.A.4 of the MRP requires the Permittees to use the results of the chemistry, toxicity, and bioassessment monitoring, to determine if impacts from urban runoff are occurring and when follow-up actions are necessary. The triad approach allows a wide range of measurements to be combined to more efficiently identify pollutants, their sources, and appropriate follow-up actions. Results from the three types of monitoring shall be assessed to evaluate the extent and causes of pollution in receiving waters and to prioritize management actions to eliminate or reduce the sources. The framework provided in Table 6 below shall be used to determine conclusions from the data and appropriate follow-up actions. The framework in Table 6 was derived from the *Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California* (SMC, 2004).

When, based on the framework in Table 6, data indicates the presence of toxic pollutants in runoff, Permittees are required to conduct a Toxicity Identification Evaluation (TIE). A TIE is a set of procedures used to identify the specific chemical(s) responsible for toxicity to aquatic organisms. When discharges are toxic to a test organism, a TIE must be conducted to confirm potential constituents of concern and rule out others, therefore allowing Permittees to determine and prioritize appropriate management actions. If a sample is toxic to more than one species, it is necessary to determine the toxicant(s) affecting each species. If the type and source of pollutants can be identified based on the data alone and an analysis of potential sources in the drainage area, a TIE is not necessary.

When a TIE identifies a pollutant associated with urban runoff as a cause of toxicity, it is then necessary to conduct a toxicity reduction evaluation (TRE). A TRE is a study conducted in a step-wise process to identify the causative agents of toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. A TRE should include an analysis and discussion of all potential

source(s) causing toxicity, proposed BMPs to eliminate or reduce the pollutants causing toxicity, and suggested follow-up monitoring to demonstrate that toxicity has been removed.

Table 6. Triad Approach to Determining Follow-Up Actions

	Chemistry	Toxicity	Bioassessment	Possible Conclusion Determining Action	Action
1.	Persistent[14] exceedance of water quality objectives	Evidence of toxicity[15]	Indications of benthic alteration[16]	Strong evidence of pollution-induced degradation	Conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
2.	No persistent exceedances of water quality objectives	No evidence of toxicity	No indications of benthic alteration	No evidence of pollutant-induced degradation	No action necessary
3.	Persistent exceedance of water quality objectives	No evidence of toxicity	No indications of benthic alteration	Contaminants are present but not bioavailable	Assess possible upstream sources of pollutants causing exceedances
4.	No persistent exceedances of water quality objectives	Evidence of toxicity	No indications of benthic alteration	Unmeasured contaminants exist with the potential to cause degradation to aquatic life	Conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
5.	No persistent exceedances of water quality objectives	No evidence of toxicity	Indications of benthic alteration	Alteration probably not due to toxic pollutants	No action necessary due to toxic chemicals Initiate TRE for physical sources of benthic alteration
6.	Persistent exceedance of water quality objective	Evidence of toxicity	No indications of benthic alteration	Toxic contaminants are bioavailable, but in situ effects are not demonstrable	If chemical and toxicity tests indicate persistent degradation, conduct TIE to identify

[14] Persistent exceedance shall mean the exceedance of relevant Basin Plan or CTR objectives by 20% for three sampling events.

[15] Evidence of toxicity shall mean a high score, in relation to other stations, on metric that combines magnitude and persistence of toxicity over an entire year.

[16] Indications of benthic alteration shall mean an IBI score of Fair, Poor, or Very Poor.

					contaminants of concern, based on TIE metric, initiate TRE
7.	No persistent exceedances of water quality objectives	Evidence of toxicity	Indications of benthic alteration	Unmeasured toxic contaminants are causing degradation	Conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
8.	Persistent exceedance of water quality objectives	No evidence of toxicity	Indications of benthic alteration	Inconclusive	Initiate upstream source identification (TIE cannot be conducted when toxicity is not present)

Regional Monitoring

Section II.A.II of the MRP requires that the Permittees participate and coordinate with federal, state, and local agencies and other dischargers in the Santa Margarita Watershed in development and implementation of a regional monitoring program as directed by the Executive Officer. The purpose of regional monitoring is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled resources of the watershed. If a coordinated watershed sampling effort is approved or directed by the Executive Officer, the Permittees' sampling and analytical efforts may be reallocated.

Special Studies

Special studies are intended to address specific research or management issues that are not addressed by the routine core monitoring program. The MRP requires the Permittees to develop and implement a study to determine appropriate numeric criteria for controlling the volume, velocity, duration, and peak discharge rate of runoff to minimize erosion of natural channels and impacts to in-stream habitat. The study is necessary to comply with section F.2.b.9 of the Order.

Various similar studies and other efforts have occurred in southern California to address the issue of downstream erosion caused by increased runoff rates, volumes, velocities and durations. MS4 permits in San Diego, Orange, Los Angeles, and Ventura Counties have similar requirements, and the Southern California Stormwater Monitoring Coalition (SMC) is in the process of conducting a study (funded by Los Angeles County) to assess the connection between stream erosion and urbanization in natural drainage systems in southern California (SCCWRP, 2004). Ventura County has also conducted a similar study. It is expected that the Permittees will build on existing work and utilize the results and

conclusions of previous studies. The Permittees are encouraged to continue the SMC study in an area in the Santa Margarita Watershed.

3. Comments on Existing and Proposed Monitoring Program

The current monitoring program, the *Consolidated Program for Water Quality Monitoring* (District, 1994), was submitted as an element of the NPDES Municipal Storm Water Application for Permit Renewal, Santa Margarita Watershed, dated January 17, 1995. The objectives and components of the program are listed below (the program does not contain sampling frequencies):

1. Program Objectives:
   - Assessment of mass loadings from storm drains
   - Assess influence of land use on water quality
   - Verification and control of illicit discharges
   - Compliance monitoring of water quality
   - Assess effectiveness of various urban practices designed to control pollution
   - Identify problem areas and/or trends
   - Establish database for future reference
   - Identify baseline conditions
   - Identify pollutants of concern

2. Dry weather sampling stations:
   - Wildomar Channel
   - Cal Oaks Drain (permanent station)
   - Empire Creek Channel
   - Redhawk Parkway Drain

3. Wet weather stations:
   - Wildomar Channel
   - Cal Oaks Drain
   - Empire Creek Channel

4. Sediment sampling at the above stations plus the I-15 basin

5. Receiving water stations
   - Upper Murrieta
   - Lower Murrieta
   - Temecula Creek

6. Toxicity testing

The *Consolidated Program for Water Quality Monitoring* contains many of the same program objectives and components as the Monitoring Program. However, as determined and discussed in several documents (SDRWQCB, 2002b, 2002d, 2003b; Permittees, 2002b), the current program has been inadequate to meet its objectives and needs to be improved.

For details regarding previous monitoring, see the documents referenced herein. The Permittees did not propose a monitoring program as part of the ROWD.

B. ILLICIT DISCHARGE MONITORING PROGRAM

1. Specific Legal Authority for Illicit Discharge Monitoring Requirements

- Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) provides that the permittee include in its proposed management program "a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens."

2. Discussion of Illicit Discharge Monitoring Requirements

Section II.B of the MRP describes the Illicit Discharge Monitoring Program. The requirements are consistent with the specifications for developing a field screening program contained at 40 CFR 122.26 (d)(1)(iv)(D). Although the minimum number of inspections is set at twice during the period of May 1st to September 30th of each year, it is expected that more frequent inspections may be necessary. An emphasis is placed on designing a program with clear criteria and rationale. The programs designed should be flexible and implemented in a manner that will enable the Permittees to identify illicit discharges and illegal connections, respond to citizen complaints, and follow-up on ongoing investigations to identify and eliminate sources.

3. Discussion of Existing and Proposed Dry Weather Monitoring

The Permittees' current water quality monitoring program identifies four dry weather monitoring stations, but no sampling frequencies, sampling protocol, or specific screening program are specified. In order to comply with **Requirement J.3** of the Order, Permittees will need to develop an Illicit Discharge Monitoring Program that meets the requirements in **section II.B of the MRP**.

C. MONITORING COSTS

The cost of the Receiving Waters and Illicit Discharge Monitoring Programs is reasonable, considering the need for the data in the Upper Santa Margarita Watershed. All of the monitoring requirements are necessary to meet the goals of the MRP, stated in Section IX.A above, and are consistent with other MS4 monitoring programs in southern California.

As part of their written comments on the Order (Permittees, 2004b), the Permittees provided cost estimates for the MRP, dated December 15, 2003, and for their proposed revised MRP. The Permittees estimated that the annual cost of the original Receiving Waters and Dry Weather Monitoring Programs would be $468,353. They estimated the annual cost of their proposed revised program to be $255,873. Due to variability of necessary overtime, parameters to be analyzed, necessary TIEs, etc., it is difficult to estimate a total cost of the monitoring program. Therefore, the SDRWQCB is assuming that the Permittees' estimate is representative.

In response to the cost information the Permittees submitted, the SDRWQCB revised and reduced the Receiving Waters and Illicit Discharge Monitoring Program requirements to the essential equivalent of the Permittees' proposal. Therefore, the cost should be equivalent to the Permittees' estimate and is reasonable for an MS4 monitoring program in southern California.

D. REPORTING REQUIREMENTS

1. Specific Legal Authority for Reporting Requirements

- Standard provisions and reporting requirements are consistent to all NPDES permits and are generally found in federal NPDES regulation 40 CFR 122.41.
- Federal NPDES regulation 40 CFR 122.42(c) requires that "The operator of a large or medium municipal separate storm sewer system of a municipal separate storm sewer system that has been designated by the Director under section 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and (7) Identification of water quality improvements or degradation."

2. Discussion of Annual Reporting Requirements

SWMP Reporting Requirements (Section III.A of the MRP)

All of the SWMP reporting requirements are necessary to meet the above-referenced federal requirements and to measure the effectiveness of programs and BMPs. According to the EPA, measurable goals are necessary to evaluate the effectiveness of individual BMPs and the storm water management program as a whole (EPA, 2000d). The EPA strongly recommends that measurable goals include: (1) The activity, or BMP, to be implemented; (2) A schedule or date of implementation; and (3) A quantifiable target to measure progress toward achieving the activity or BMP (EPA, 2002d). The Order is structured so that the descriptions of programs and BMPs are included in the SWMP, and the quantifiable measurements are reported in each annual report.

The current permit, Order No. R9-98-02 requires the annual report to be submitted on September 15 of each year. However, the District submitted a request, dated November 3, 2003, to change the annual report date to October 31. The District's request was based on the difficulty of obtaining necessary materials with sufficient time to prepare a report. The SDRWQCB concurs with the request.

Monitoring Provisions and Reporting Requirements (Sections II.C and III.B of the MRP)

The majority of the monitoring provisions and reporting requirements contained in sections II.C and III.B of the MRP are specified in 40 CFR 122.41. Those that are not are standard provisions in SDRWQCB NPDES permits, or are necessary to meet the objectives of the MRP.

Section II.C.h of the MRP specifies that the Minimum Levels (MLs) listed in Appendix 4 of the State Board Policy for Implementation of Toxics Standards for Inland Surface Water, Enclosed

Bays, and Estuaries of California, 2000 (SIP) shall be used for analyses of priority toxic pollutants identified in the CTR (65 Fed. Reg. 31682). The MLs from the SIP represent the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences (SWRCB, 2000a). The SIP's MLs therefore represent the best available science for determining the presence of toxic pollutants at concentrations of concern. If MLs are not used, concentrations of concern of priority toxic pollutants may not be detected. Detection and control of toxic pollutants in surface waters is necessary to achieve the CWA's goals and objectives (65 Fed. Reg. 31683). Using MLs will also provide quantifiable data that is necessary to better assess water quality and BMP effectiveness. Non-detects cannot be used to accurately determine mass loadings. Therefore, the method detection limits (MDLs) used for analysis of priority toxic pollutants must be equivalent to or lower than the MLs in Appendix 4 of the SIP.

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
MONITORING AND REPORTING PROGRAM No. R9-2004-001
NPDES PERMIT No. CAS0108766
FOR THE DISCHARGES OF URBAN RUNOFF FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) DRAINING THE COUNTY OF RIVERSIDE, THE CITY OF MURRIETA, THE CITY OF TEMECULA AND THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT WITHIN THE SANTA MARGARITA WATERSHED IN THE SAN DIEGO REGION

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I. PURPOSE

This Monitoring and Reporting Program (MRP) is intended to meet the following goals:

1. Assess compliance with Order No. R9-2004-001;
2. Measure and improve the effectiveness of the SWMPs;
3. Assess the chemical, physical, and biological impacts of receiving waters resulting from urban runoff;
4. Characterize urban runoff discharges;
5. Identify sources of specific pollutants;
6. Prioritize drainage and sub-drainage areas that need management actions;
7. Detect and eliminate illicit discharges and illicit connections to the MS4; and
8. Assess the overall health of receiving waters.

II. MONITORING PROGRAM

The Monitoring Program consists of the Receiving Waters Monitoring, Illicit Discharge Monitoring, Monitoring Provisions, and the program assessments required under Section III.B of this MRP. All monitoring program components shall be implemented no later than October 2004, unless otherwise specified herein.

A. Receiving Waters Monitoring

The Receiving Waters Monitoring consists of: 1) **Core Monitoring** requirements to address on-going, site-specific needs, such as estimating pollutant loads and assessing trends; 2) **Regional Monitoring** to address watershed-wide issues; and 3) **Special Studies** to address specific research or management issues.

A.I Core Monitoring

In order to achieve the above goals, the triad[1] and tributary Core Monitoring requirements are intended to generate water quality data that will build upon existing data to begin answering the following management questions:

- Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
- What is the extent and magnitude of the current or potential receiving water problems?
- What is the relative urban runoff contribution to the receiving water problem(s)?
- What are the sources of urban runoff that contribute to receiving water problem(s)?
- Are conditions in receiving waters getting better or worse?

1. Mass Loadings

   a) The Permittees shall monitor mass loadings from the following three triad stations. Alternative locations representative of urban/urbanizing drainage areas may be selected.

      (1) Lower Temecula Creek;

      (2) Lower Murrieta Creek @ USGS Weir; and

      (3) A reference station representative of natural, undeveloped conditions. Permittees shall evaluate the reference station annually for suitability and select new reference stations as needed.

[1] Triad means a station where chemical, toxicity, and bioassessment monitoring occur.

b) At each triad station, the Permittees shall monitor the first storm event of each monitoring year[2] that produces sufficient flow to collect a composite sample, and a minimum of two additional storm events during each monitoring year.

c) In the event that the required number of storm events are not sampled during one monitoring year at any given station, the Permitees shall submit, with the subsequent Annual Report, a written explanation for a lack of sampling data, including streamflow data from the nearest USGS gauging station.

d) In addition to the storm events, the Permittees shall analyze a minimum of two dry weather samples from each triad station per monitoring year. If flow is insufficient to collect a sample, this shall be documented in the subsequent annual report.

e) Sampling at triad stations shall begin no later than the first storm after October 2004 that produces sufficient flow to collect a composite sample.

f) Mass loading sampling and analysis protocols shall be consistent with 40 CFR 122.21(g)(7)(ii) and with the EPA Storm Water Sampling Guidance Document (EPA 833-B-92-001). Storm water samples shall be flow-weighted composites[3], collected during the first 3 hours of flow, or for the duration of the storm if it is less than 3 hours. A minimum of 3 sample aliquots, separated by a minimum of 15 minutes, shall be taken within each hour of discharge, unless the SDRWQCB Executive Officer approves an alternate protocol. Automatic samplers are recommended, but manual samples may be collected from mass loading stations where it is not feasible to install an automatic sampler. Grab samples[4] shall be taken for pathogen indicators and oil and grease. Grab samples are acceptable for dry weather sample collection.

g) Permittees shall measure or estimate flow rates and volumes for each triad sampling event in order to determine mass loadings of pollutants. Data from nearby USGS gauging stations may be utilized, or flow rates may be estimated in accordance with the EPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), Section 3.2.1.

h) At triad stations, the first storm of every sampling year shall be analyzed for the full EPA priority pollutant list (40 CFR 122, Appendix D). For the remaining sampling events, analysis may be reduced to the constituents listed in Table below, unless data from the first storm indicate the need for additional constituents.

[2] A monitoring year is from July 1 through June 30.
[3] A flow-weighted composite sample is a mixed or combined sample that is formed by combining a series of individual and discrete samples of specific volume in proportion to flow.
[4] A grab sample is a discrete, individual sample taken within a short period of time (usually less than 15 minutes).

Table 1. Short List of Constituents	
Trace Metals	**Pesticides**
Total Cadmium	Diazinon
Total Chromium	chlorpyrifos
Total Copper	Other OP pesticides
Total Nickel	
Total Lead	**Conventionals**
Total Zinc	Temperature
Nutrients	pH
Ammonia (NH_3)	Hardness
Total Kjeldahl Nitrogen (TKN)	Specific conductance
Nitrate (NO_3)	Dissolved oxygen
Total phosphorus	MBAS
Bacteria	**PAHs**
Total coliform	
Fecal coliform	**Volatiles** (dry weather only)
E. coli	
	Total suspended solids

2. Water Column Toxicity Testing

The Permittees shall conduct toxicity testing at triad stations to evaluate the extent and causes of toxicity in receiving waters.

a) The Permittees shall analyze all storm samples (at least three annually) collected at the three triad stations for toxicity. The Permittees shall conduct toxicity testing using the following three species and EPA protocol for each sample:

- *Ceriodaphnia dubia* (water flea) – EPA-821-R-02-012 or EPA-821-R-02-013;
- *Hyalella azteca* (freshwater amphipod) – EPA-821-R-02-012; and
- *Pseudokirchneriella subcapitata*, formally known as *Selenastrum capricornutum*, (unicellular algae) – EPA-821-R-02-013.

b) The presence of acute toxicity shall be determined in accordance with EPA protocol (EPA-821-R-02-012). The presence of chronic toxicity shall be determined in accordance with EPA protocol (EPA-821-R-02-013).

3. Bioassessment

The Permittees shall conduct bioassessment monitoring at the three triad stations to evaluate the biological integrity of receiving waters, to detect biological responses to pollutants in urban runoff, and to identify probable causes of impairment not detected by chemical and toxicity monitoring. The program required in this section replaces the program currently being conducted by the Permittees under CWC section 13225 Directive for Assessing Water Quality Impacts of Urban Runoff in the Santa Margarita Watershed, issued by the SDRWQCB on March 6, 2003. Bioassessment monitoring shall include the following:

a) Each bioassessment station shall be monitored twice annually, in May and October of each year. A minimum of three replicate samples shall be collected at each station during each sampling event.

b) Sampling, laboratory, quality assurance, and analysis procedures shall follow the standardized procedures set forth in the California Department of Fish and Game's California Stream Bioassessment Procedure (CSBP)[5]. Analysis procedures shall include comparison between station mean values for various biological metrics and the Preliminary San Diego Index of Biotic Integrity (IBI)[6], or any subsequently developed applicable IBI. Sampling, laboratory, quality assurance, and analytical procedures shall follow the standardized "Non-Point Source Bioassessment Sampling Procedures" for professional bioassessment set forth in the CSBP. In the event that the CSBP "Point-Source Professional Bioassessment Procedure" is performed in place of the "Non Point Source Bioassessment Sampling Procedure," justification and documentation of the procedure shall be submitted with the annual monitoring report.

c) A professional environmental laboratory shall perform all sampling, laboratory, quality assurance, and analytical procedures. Permittee staff trained in CSBP methods may collect samples, but data collected by volunteer monitoring organizations shall not be submitted in place of professional assessments.

4. Follow-up Analysis and Actions Based on Triad Approach

When results from the chemistry, toxicity, and bioassessment monitoring described above indicate urban runoff-induced degradation, Permittees shall evaluate the extent and causes of urban runoff pollution in receiving waters and prioritize management actions to eliminate or reduce sources. Toxicity Identification Evaluations (TIEs) shall be used to determine the cause of toxicity, and Toxicity Reduction Evaluations (TRE) shall be used to identify sources and implement management actions to reduce pollutants in urban runoff causing toxicity. Permittees shall conduct TIE(s) and TRE(s) based on Table 2 below.

[5] California Stream Bioassessment Procedure (Protocol Brief for Biological and Physical/Habitat Assessment in Wadeable Streams), California Department of Fish and Game – Aquatic Bioassessment Laboratory, May 1999.
[6] This document can be downloaded from http://www.swrcb.ca.gov/rwqcb9/programs/bioassessment.html

Table 2. Triad Approach to Determining Follow-Up Actions				
	Chemistry	**Toxicity**	**Bioassessment**	**Action**
1.	Persistent[7] exceedance of water quality objectives	Evidence of toxicity[8]	Indications of benthic alteration[9]	Conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
2.	No persistent exceedances of water quality objectives	No evidence of toxicity	No indications of benthic alteration	No action necessary
3.	Persistent exceedance of water quality objectives	No evidence of toxicity	No indications of benthic alteration	Assess possible upstream sources causing exceedances
4.	No persistent exceedances of water quality objectives	Evidence of toxicity	No indications of benthic alteration	Conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
5.	No persistent exceedances of water quality objectives	No evidence of toxicity	Indications of benthic alteration	No action necessary due to toxic chemicals Initiate TRE for physical sources of benthic alteration
6.	Persistent exceedance of water quality objective	Evidence of toxicity	No indications of benthic alteration	If chemical and toxicity tests indicate persistent degradation, conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
7.	No persistent exceedances of water quality objectives	Evidence of toxicity	Indications of benthic alteration	Conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
8.	Persistent exceedance of water quality objectives	No evidence of toxicity	Indications of benthic alteration	Initiate upstream source identification

[7] Persistent exceedance shall mean the exceedance of relevant Basin Plan or California Toxics Rule objectives by 20% for 3 sampling events.
[8] Evidence of toxicity shall mean a high score, in relation to other stations, on metric that combines magnitude and persistence of toxicity over an entire year.
[9] Indications of benthic alteration shall mean an IBI score of Fair, Poor, or Very Poor.

a) Toxicity Identification Evaluations (TIE)

The goal of a TIE is to identify the pollutant(s) causing toxicity in the receiving waters.

(1) Permittees shall conduct Phase I TIEs in accordance with Table 2 above. Permittees shall use EPA protocol described in *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003) or subsequent editions.

(2) If the Phase I TIE is not sufficient to identify the toxicant(s), a Phase II TIE may be required in order to identify or confirm the identity of the pollutants causing toxicity. Phase II TIEs shall be conducted in accordance with Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/080), or subsequent editions.

(3) In the event that the pollutant causing toxicity has been sufficiently identified through previous TIEs or corresponding chemical monitoring data, a TIE may not need to be conducted.

b) Toxicity Reduction Evaluations (TRE)

The purpose of a TRE is to investigate the cause of and to identify corrective actions to eliminate toxicity from urban runoff in receiving waters.

When a TIE identifies a pollutant(s) associated with urban runoff as a cause of toxicity, Permittees shall initiate a TRE immediately. The TRE shall include all reasonable steps to identify the source(s) of toxicity and propose appropriate BMPs to eliminate the causes of toxicity. Once the source of toxicity and appropriate BMPs are identified, the Permittees shall submit the TRE to the SDRWQCB for review. Within 30 days following the approval by the SDRWQCB, Permittees shall revise their SWMPs to incorporate the modified BMPs that will be implemented. At a minimum, a TRE shall include a discussion of the following items:

(1) The potential sources of pollutant(s) causing toxicity;

(2) A list of municipalities and other entities that may have jurisdiction over sources of pollutant(s) causing toxicity; and

(3) Proposed actions that will be taken to reduce the pollutants causing toxicity and methods to measure the effectives of those actions.

5. Tributary Monitoring

a) The Permittees shall collect a grab sample from the first storm event of each monitoring year, a minimum of one additional storm event, and two dry weather events during each monitoring year at the following four tributary stations to help identify sources of pollutants. Alternative locations representative of urban/urbanizing drainage areas may be selected.

(1) Warm Springs Creek, near the confluence with Murrieta Creek;

(2) Santa Gertudis Creek, near the confluence with Murrieta Creek;

(3) Long Canyon Creek near the confluence with Murrieta Creek; and

(4) Redhawk Channel, near the confluence with Temecula Creek

b) If flow is insufficient to collect a sample, this shall be documented in the subsequent annual report.

c) Tributary samples shall be analyzed for constituents of concern. Constituents of concern shall be determined based on exceedances of water quality objectives at respective triad and dry weather monitoring stations, as well as land uses in the area.

d) Sampling at tributary stations shall begin no later than the first storm after October 2004.

A.II Regional Monitoring

The Permittees shall participate and coordinate with federal, state, and local agencies and other dischargers in the Santa Margarita Watershed in development and implementation of a regional watershed monitoring program as directed by the Executive Officer. The intent of a regional monitoring program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled resources of the watershed. During a coordinated watershed sampling effort, the Permittees' sampling and analytical effort may be reallocated to provide a regional assessment of the impact of discharges to the watershed.

A.III Special Studies

Special studies are intended to address specific research or management issues that are not addressed by the routine core monitoring program. The Permittees' shall conduct special studies as directed by the Executive Officer, including the study described below.

Numeric Criteria to Control Runoff from New Developments

The Permittees shall develop and implement a study to determine numeric criteria for controlling the volume, velocity, duration, and peak discharge rate of runoff from new developments (required in section F.2.b(9) of Order No. 2004-001) to minimize erosion of natural stream channels and impacts to instream habitat. The Permittees shall propose numeric criteria and a time-schedule for implementation of the criteria on Priority Development Projects within 365 days of the identification of the criteria and no later than the fourth-year Annual Report, or the application for permit renewal. In each Annual Report, the Permittees shall describe the status of this special study, details of implementation, and progress towards the development of numeric criteria. Permittees may satisfy this requirement if they can demonstrate to the SDRWQCB that criteria developed in other areas of Southern California are applicable to and protective of the conditions in the Upper Santa Margarita Watershed. This should be accomplished through demonstrating similarities in areas monitored as part of studies outside of the Santa Margarita Watershed.

B. Illicit Discharge Monitoring

Each Permittee shall develop and implement an Illicit Discharge Monitoring program that meets or exceeds the requirements of this section within 365 days of the adoption of Order No. R9-2004-001. Each Permittees' program shall be designed to emphasize frequent, geographically widespread inspections, monitoring, and follow-up investigations to detect illicit discharges and connections. Each Permittees' Illicit Discharge Monitoring Program shall be described in the Individual SWMP.

1. Station Location

   a) Each Permittee shall select Illicit Discharge Monitoring stations within its jurisdiction. The number of stations shall be sufficient to represent the MS4 and detect illicit discharges that may occur throughout the system. Stations shall be accessible points in the MS4 (i.e., outfalls, manholes or open channels) located downstream of potential sources of illicit discharges (i.e., commercial, industrial, and residential areas). Permittees shall use the MS4 map, developed pursuant to section J.2 of Order No. R9-2004-001, to help locate dry weather monitoring stations and to determine the number necessary to adequately represent the entire MS4. Each identified station shall be inspected at least twice between May 1st and September 30th of each year, and more frequently if the Permittee determines necessary to comply with section J of Order No. R9-2004-001.

   b) In addition to the stations required in section B.1.a. above, each Permittee shall inspect all other dry weather flows that are observed or reported.

2. Illicit Discharge Monitoring Methods

   a) At each inspected site, Permittees shall record the following general information:
      - Time since last rain;
      - Quantity of last rain;
      - Site descriptions (i.e., conveyance type, dominant land uses in drainage area);
      - Flow estimation (i.e., width of surface, approximate depth of water, approximate flow velocity, flow rate); and
      - Visual observations (e.g., odor, color, clarity, floatables, deposits/stains, oil sheen, surface scum, vegetation condition, structural condition, and biology).

   b) If flow or ponded water is observed at a station and there has been at least seventy-two hours of dry weather, a field screening analysis using suitable methods to estimate the following constituents shall be conducted:

      (1) Specific conductance (or calculate estimated Total Dissolved Solids);
      (2) Turbidity;
      (3) PH;
      (4) Temperature; and
      (5) Dissolved Oxygen.

   c) If field screening analysis or visual observations at a site indicate a potential illicit discharge, a sample shall be collected for laboratory analysis. At a minimum, samples shall be analyzed at a laboratory for the following constituents:

      (1) Total hardness;

(2) Oil and grease;
(3) Ammonia Nitrogen;
(4) Total phosphorus;
(5) Copper (total and dissolved);
(6) Surfactants (MBAS);
(7) Diazinon and Chlorpyrifos;
(8) Lead (dissolved);
(9) Nitrate Nitrogen;
(10) E. coli;
(11) Total coliform; and
(12) Fecal coliform.

3. As part of the Illicit Discharge Monitoring Program, the Permittees shall develop numeric criteria for field screening and analytical monitoring results that will trigger follow-up investigations to identify the source causing the exceedance of the criteria. In the event of an exceedance of the criteria, Permittees shall implement the follow-up investigation procedures developed pursuant to section J.4 of Order No. R9-2004-001.

C. Monitoring Provisions

All monitoring activities shall meet the following requirements:

a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR 122.41(j)(1)].

b) The Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the SDRWQCB or EPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge. [40 CFR 122.41(j)(2), CWC section 13383(a)]

c) Records of monitoring information shall include [40 CFR 122.41(j)(3)]:

(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and,
(6) The results of such analyses.

d) All sampling, sample preservation, and analyses must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in this MRP or approved by the Executive Officer [40 CFR 122.41(j)(4)].

e) Where procedures are not otherwise specified in this MRP, sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Program Plan (QAPP) for the State of California's Surface Water Ambient Monitoring Program, adopted

by the State Water Resources Control Board (SWRCB). The QAPP can be downloaded from the SWRCB web page at: http://www.swrcb.ca.gov/swamp/docs/swamp_qapp.pdf.

f) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. [40 CFR 122.41(j)(5)]

g) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this MRP [40 CFR 122.41(l)(4)(iii)].

h) All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.

i) For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 *Fed. Reg.* 31682), the Permittees shall instruct its laboratories to establish calibration standards that are equivalent to or lower than the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). If a Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Permittee must submit documentation from the laboratory to the SDRWQCB for approval prior to raising the ML for any priority toxic pollutant.

j) The SDRWQCB Executive Officer or the SDRWQCB may make revisions to this MRP at any time during the term of Order No R9-2004-001, and may include a reduction or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

III. REPORTING PROGRAM

A. SWMP Reporting Requirements

The Principal Permittee shall submit a SWMP Annual Report to the SDRWQCB on or before October 31 annually. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted on or before October 31, 2005 shall cover the reporting period July 1, 2004 to June 30, 2005. The SWMP Annual Report shall contain the Watershed Annual Report, and the four Individual Annual Reports.

1. **Individual Annual Report** - Each Individual Annual Report shall be a documentation of the activities conducted by each Permittee during the previous annual reporting period. Each Permittee shall submit their Individual Annual Report to the Principal Permittee by a date determined by the Principal Permittee for inclusion in the SWMP Annual Report. Each Individual Annual Report shall, at a minimum, contain the following:

   a) Comprehensive description of all activities conducted by the Permittee to meet all requirements of Order No. R9-2004-001, including, but not limited to, the following information:

      (1) Development Planning (Section F):
         (i) Description of any amendments to the General Plan or the development project approval process;
         (ii) Number of grading permits issued;
         (iii) Number of developments conditioned to meet SUSMP requirements*;
         (iv) Attach one example of a development project that was conditioned to meet SUSMP requirements and a description of the required BMPs;
         (v) Description of any updates to the environmental review process;
         (vi) Description and number of training efforts conducted during the reporting period (for staff, developers, contractors, etc.), including the number of staff trained; and
         (vii) An assessment of program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.*

      (2) Construction (Section G):
         (i) Number of inspections conducted;
         (ii) Number and type of enforcement actions related to construction sites;
         (iii) Description of modifications made to the construction and grading approval process;
         (iv) Description and number of training efforts conducted during the reporting period (for staff inspectors, contractors, and construction site operators); and
         (v) An assessment of program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.*

      (3) Municipal (Section H.1):
         (i) Number of municipal inspections conducted;
         (ii) Number and types of enforcement actions taken;
         (iii) Number of catch basins and inlets that were inspected and the number that were cleaned;

* Items with an asterisk are not applicable to the first annual report.

(iv) Assessment of the amount and type of debris removed from catch basins, streets, and open channels, including an identification of problem areas that generate the most pollutants;

(v) Assessment of effectiveness of BMPs that have been implemented for municipal facilities and activities;

(vi) Description and number of training efforts conducted over the last year (for municipal facility operators and/or inspectors); and

(vii) An assessment of program effectiveness based on the measurable goals established in each Permittee's Individual SWMP.*

(4) Industrial/Commercial (Section H.2):

(i) Number of inspections conducted;

(ii) Number and type of enforcement actions taken; and

(iii) An assessment of overall program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.*

(5) Residential (Section H.3):

(i) A description of residential areas that were focused on during the past year;

(ii) Number and types of enforcement actions taken; and

(iii) Assessment of overall program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.*

(6) Education (Section I):

(i) Description of education efforts conducted by the Permittee (not collectively with other Permittees) during the previous year;

(ii) Assessment of overall program effectiveness based on the measurable goals established in the Permitee's Individual SWMP.*

(7) Illicit Discharge Detection and Elimination (Section J):

(i) Number of illicit discharges, connections and spills reported and/or identified during the reporting period;

(ii) Number of illicit discharges or connections investigated during the reporting period and the outcome of the investigations;

(iii) Number and types of enforcement actions taken for illicit discharges or connections during the reporting period;

(iv) Number of times your agency's hotline was called during the reporting period, as compared to previous reporting periods;

(v) Number and location of dry weather monitoring sites that were monitored during the reporting period;

(vi) Summary of Illicit Discharge Monitoring Program results, including: 1) All inspection, field screening, and analytical monitoring results; 2) All follow-up and elimination activities; and 3) Any proposed changes to station locations and/or sampling frequencies; and

(vii) An assessment of overall program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.*

(8) Public Participation – a description of efforts to include the public in urban runoff management programs during the reporting period (i.e., river clean-ups, volunteer monitoring, Permittee council meetings related to the SWMP, etc.).

b) Assessment of Program Effectiveness - each Permittee shall include an assessment of the effectiveness of its Individual SWMP using the measurable goals and direct and indirect assessment measurements developed in the SWMP, in accordance with **Attachment D** of Order No. R9-2004-001.

c) Fiscal Analysis Component - each Permittee shall include an annual fiscal analysis, for each fiscal year covered by Order No. R9-2004-001, in its Individual Annual Report. This analysis shall evaluate the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities of the Pemittee's Individual SWMP. The analysis shall include the following:

(1) A report of the previous reporting period's budget, and a budget for the upcoming reporting period. To the extent possible, the budgets should be broken down by the following programs:

(i) Program management;
(ii) Construction Inspections;
(iii) Development plan review/SUSMP implementation;
(iv) Industrial/Commercial inspections;
(v) Illicit discharge and connection response and elimination;
(vi) Municipal activities (catch basin cleaning, BMP maintenance, etc.);
(vii) Education;
(viii) Monitoring; and
(ix) Other

(2) A description of the source(s) of funds that were utilized during the previous fiscal year and the source(s) of funds proposed to meet the necessary expenditures for the subsequent year, including legal restrictions on the use of such funds.

d) Non-Storm Water Discharges – Permittees shall report on any discharge category listed in Requirement B.2 of Order No. R9-2004-001 that was identified as a source of pollutants during the reporting period. For each identified category, the Permittee shall report whether it elected to prohibit the discharge or to require BMPs to reduce pollutants in the discharge to the MEP. If the discharge is not prohibited, the BMPs that will be implemented, or required to be implemented, shall be described in each Permittee's Individual SWMP Annual Report.

e) Receiving Water Limitations – the report required pursuant to Requirement C.2.a. of Order No. R9-2004-001, if applicable.

f) A summary of all urban runoff related data not included in the annual monitoring report (e.g., special investigations); and

g) Proposed revisions to the Individual SWMP, including areas in need of improvement based on the assessment of effectiveness of each program component.

2. **Watershed Annual Report** – The Watershed Annual Report, to be produced by the Principal Permittee shall describe the area-wide and watershed-based programs and activities (as described in

the Watershed SWMP) conducted during the previous reporting period. At a minimum, the Watershed Annual Report shall contain the following information:

a) A description of all area-wide and watershed-based activities conducted during the reporting period;

b) A description of efforts to coordinate with other stakeholders in the Santa Margarita Watershed, such as San Diego County and the U.S. Marine Corps Base Camp Pendleton;

c) An assessment of water quality in the Santa Margarita watershed area of Riverside County, this assessment shall include data from the previous monitoring report;

d) Identification of water quality improvement or degradation;

e) A prioritization of water quality problems and potential sources;

f) A description of watershed-specific educational activities conducted during the reporting period;

g) Recommended activities to be conducted jointly by the Permittees to address the identified water quality problems;

h) An assessment of overall program effectiveness based on the measurable goals established in the Watershed SWMP; and

i) Proposed revisions to the Watershed SWMP.

B. Receiving Waters Monitoring Reporting Requirements

1. Monitoring Program Annual Report

The Principal Permittee shall submit the Monitoring Program Annual Report (Monitoring Report) to the SDRWQCB on or before October 31 of each year. The Monitoring Report shall contain tabular and graphical summaries as well as discussions and interpretations of the receiving water monitoring data obtained during the previous monitoring year. At a minimum, each Monitoring Report shall include the following:

a) Description of each receiving water monitoring station, including but not limited to:

(1) Station location (latitude and longitude, and a narrative description).
(2) Photographs of triad stations.
(3) Approximate size and land uses of the drainage area.
(4) Any other relevant information.

b) A description of monitoring methods for each type of monitoring, including but not limited to:

(1) Monitoring equipment.
(2) Sampling procedures.
(3) Quality assurance/quality control (QA/QC) procedures (laboratory QA/QC documentation shall be submitted with the report).
(4) Laboratory analytical methods including the method detection limits (MDLs). Analytical data shall be reported with one of the following methods, as appropriate:

- An actual numerical value for sample results greater than or equal to the MDL;
- "Not-detected (ND)" for sample results less than the laboratory's MDL; or

- "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML. The estimated chemical concentration of the sample shall also be reported. This is the concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

c) A description of monitoring results, including but not limited to:

(1) Data and data products, including but not limited to:

- Actual data.
- Identification of exceedances of Basin Plan and CTR objectives.
- Estimated annual mass loadings at each station.
- Toxicity testing results in Toxic Units (TUs).
- Bioassessment data (including electronic data formatted to California Department of Fish and Game Aquatic Bioassessment Laboratory specifications) and analysis using metrics in the CSBP and the San Diego IBI.
- Graphical summaries of data.

(2) Methods used to evaluate data. Methods shall be appropriate to answer the management questions listed in Section II.A of this MRP and to assess the progress towards achieving the goals listed in Section I of this MRP. Examples of methods include, but are not limited to:

- Site-by-site summaries and comparisons of results at triad and tributary stations for wet and dry weather, including graphs of concentrations and toxicity.
- Rough estimates of the relative contribution of urban runoff to total pollutant loads.
- Maps of potential sources of pollutants.
- Any other appropriate analysis.

(3) Discussion of results and analyses of each Monitoring Program Component, including but not limited to:

- Discussion of pollutants of concern and their potential sources.
- Interpretation of bioassessment metric values.
- Discussion of any TIEs that were conducted and the potential sources of toxic pollutants.
- If applicable, a discussion of the development, implementation, and results of any TREs.
- Discussion of any relevant information or conclusions from the Illicit Discharge Monitoring Program.
- Discussion of the progress towards answering the management questions listed in Section II.A of this MRP and achieving the goals listed in Section I of this MRP.
- Discussion of any other data analyses performed.

d) In addition to the information required above, the fourth-year Monitoring Report due no later than October 31, 2008, shall include:

- A discussion of any long-term trends that can be detected from existing data (from all previous permit terms).
- Recommendations for future monitoring based on the results of previous efforts and the progress towards answering the management questions listed in Section II.A of this MRP and achieving the goals listed in Section I of this MRP.
- Recommended modifications to Individual or Watershed SWMPs to address identified source of pollutants in urban runoff.

e) If the Permittees monitor any pollutant more frequently than required by this MRP using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results

of this monitoring shall be included in the calculation and reporting of the data submitted in the Monitoring Reports [40 CFR 122.41(l)(4)(ii)].

f) All Monitoring Reports shall be submitted in both electronic and paper formats.

C. Certified Perjury Statement

All reports submitted to the SDRWQCB shall include the following signed, certified perjury statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Monitoring and Reporting Program adopted by the California Regional Water Quality Control Board, San Diego Region, on July 14, 2004.

John. H. Robertus
Executive Officer

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
SANTA MARGARITA REGION

ORDER NO. R9-2010-0016

JUNE 30, 2012

CERTIFICATION

I certify under penalty of law that this document and all attachments, including the Watershed Workplan and Water Quality Management Plan, were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____ Date: June 30, 2012

JASON E. UHLEY
Chief of Watershed Protection Division
Riverside County Flood Control
and Water Conservation District

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Acronyms and Abbreviations

ABOP	Anti-freeze, Batteries, Oil, and Latex Paint
ASB	Area of Special Biological Significance
AST	Active/Passive Sediment Treatment
BMP	Best Management Practice
Cal-EMA	California Emergency Management Agency
Cal-EPA	California Environmental Protection Agency
CAP	Compliance Assistance Program
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CESQG	Conditionally Exempt Small Quantity Generator
CIA	Common Interest Area
CIEP	Compliance Inspection and Enforcement Program
CMP	Consolidated Monitoring Program
Copermittees	District, County, and Cities of Murrieta, Temecula and Wildomar
Construction General Permit	NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
DEH	County Department of Environmental Health
District	Riverside County Flood Control and Water Conservation District
ESA	Environmentally Sensitive Area
FPPP	Facility Pollution Prevention Plan
HHW	Household Hazardous Waste
HMP	Hydromodification Management Plan
HOA	Homeowners Association
IC/ID	Illicit Connection/Illegal Discharge
IDDE	Illicit Discharge Detection and Elimination
Industrial General Permit	NPDES General Permit for Stormwater Discharges Associated with Industrial Activities
IPM	Integrated Pest Management

JRMP	Jurisdictional Runoff Management Plan
LID	Low Impact Development
MEP	Maximum Extent Practicable
MHP	Mobile Home Park
MSHCP	Multi Species Habitat Conservation Plan
MS4	Municipal Separate Storm Sewer System
NAL	Non-Stormwater Dry Weather Action Levels
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
O&M	Operation & Maintenance
SAL	Stormwater Action Level
San Diego Regional Board	San Diego Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SIC	Standard Industrial Classification
SMARTS	Stormwater Multiple Application and Report Tracking System
SMR	Santa Margarita Region
State Board	State Water Resources Control Board
SWPPP	Stormwater Pollution Prevention Plan
SWQPA	State Water Quality Protected Area
TMDL	Total Maximum Daily Load
WDID	Waste Discharge Identification
WQMP	Water Quality Management Plan for the Santa Margarita Region of Riverside County
WQMP Projects	Priority Development Projects with a final approved Project-Specific WQMP
WLA	Waste Load Allocation
2010 SMR MS4 Permit	Order No. R9-2010-0016

EXECUTIVE SUMMARY

This Jurisdictional Runoff Management Program (JRMP) describes the specific Runoff management programs and activities implemented to comply with the requirements of the Municipal Separate Storm Sewer System (MS4) Permit, Order No. R9-2010-0016, issued to the Riverside County Copermittees in the Santa Margarita Region (SMR) by the San Diego Regional Water Quality Control Board (San Diego Regional Board) on November 10, 2010 (2010 SMR MS4 Permit). This JRMP is the principal document that comprehensively translates the MS4 Permit requirements into actions that the Riverside County Flood Control and Water Conservation District (District) is implementing to comply with the 2010 SMR MS4 Permit. This JRMP will be reviewed at least annually to incorporate new and revised compliance programs specified in the 2010 SMR MS4 Permit.

This JRMP is based on a SMR-wide template developed jointly by the Copermittees to promote consistency in the compliance programs implemented in the SMR. The JRMP has been customized to describe the District's compliance procedures and requirements. The terms and acronyms used in this JRMP are defined in the glossary (Appendix A) and defined terms are capitalized. References in brackets {} are references to provisions of the 2010 SMR MS4 Permit.

2.0 INTRODUCTION TO THE DISTRICT JRMP

2.1 Program Overview

The Clean Water Act of 1987 (CWA) established requirements for discharges of Urban Runoff from MS4s under the National Pollution Discharge Elimination System (NPDES) program. The 2010 SMR MS4 Permit regulates discharges of Runoff from MS4 facilities in the SMR. The Copermittees covered under the 2010 SMR MS4 Permit are the County of Riverside, Riverside County Flood Control and Water Conservation District (District) and the cities within the SMR. Each Copermittee is responsible for compliance with the 2010 SMR MS4 Permit.

This JRMP is a programmatic document developed by the District to describe its specific internal management of the Runoff management program as well as ordinances, plans, policies and procedures necessary to manage Runoff and comply with the 2010 SMR MS4 Permit. This JRMP comprehensively translates the 2010 SMR MS4 Permit requirements into programs and implementation plans for the District.

2.2 Description of District MS4 Facilities

The major MS4 facilities owned and operated by the District and regulated under the 2010 SMR MS4 Permit consist of underground storm drains, open channels, retention basins, and detention basins. A map of the District's MS4 facilities is provided in Appendix C. Each year, the District provides an updated map of its MS4 facilities, with modifications and additions to its major MS4 facilities, in the JRMP Annual Report.

Within the jurisdictional boundaries of the District, additional MS4 facilities and discharges may be present that are not owned by the District. These may include MS4 facilities owned or operated by other non MS4 Copermittee entities, including federal, state, tribal and private entities and discharges otherwise permitted by the San Diego Regional Board or the State Water Resources Control Board (State Board).

Table 2-1 lists the Receiving Waters that may receive discharges from the District's MS4 facilities and the associated 303(d) listings. It should be noted that the District is not alone responsible for potential or actual water quality problems or 303(d) listings within any of the identified Receiving Waters; however, the programs identified within this JRMP are designed to reduce the discharge of Stormwater Pollutants from the MS4 to the MEP, effectively prohibit Non-Stormwater discharges, and prevent Runoff discharges from the District's MS4 from causing or contributing to a violation of Water Quality Standards.

Table 2-1: 303(d) Listed Receiving Waters Within and Downstream of the District's Jurisdiction

Receiving Water	303(d) Listings
Long Canyon Creek	Chlorpyrifos, Fecal Coliform, Iron
Murrieta Creek	Chlorpyrifos, Copper, Iron, Manganese, Nitrogen, Phosphorus, Toxicity
Rainbow Creek	Iron, Nitrogen, Phosphorus, Sulfates
Redhawk Channel	Sulfates, Total Dissolved Solids, Chlorpyrifos, Copper, Diazinon, E. coli, Fecal Coliform, Iron, Manganese, Nitrogen, Phosphorus
Sandia Creek	Iron, Sulfates, Total Dissolved Solids
Santa Gertrudis Creek	Chlorpyrifos, Copper, E. coli, Fecal Colifom, Iron, Manganese, Phosphorus
Santa Margarita River (Upper)	Phosphorus, Toxicity
Temecula Creek	Chlorpyrifos, Copper, Phosphorus, Total Dissolved Solids, Toxicity
Warm Springs Creek	Chlorpyrifos, E. coli, Fecal Coliform, Iron, Manganese, Phosphorus, Total Nitrogen as N

3.0 PROGRAM MANAGEMENT

3.1 Departmental Responsibilities

There are multiple District sections with the responsibility to implement elements of this JRMP and to meet the requirements of the 2010 SMR MS4 Permit. An organizational chart depicting the sections involved in implementing the NPDES program is provided in Appendix B. Additionally, key personnel (position title) with implementation responsibilities, and a matrix showing each applicable JRMP element, the departments with implementation responsibilities, the specific responsibilities of each department and organizational unit, and the key personnel by position title are provided in Appendix B.

3.2 Cooperative Activities

3.2.1 Implementation Agreement

The District participates in a cooperative Implementation Agreement with the following Copermittees within the SMR.

- County of Riverside
- City of Murrieta
- City of Temecula
- City of Wildomar

Through this agreement, the District and the other listed Copermittees contribute funds to implement elements of the 2010 SMR MS4 Permit requirements on a region-wide basis. This approach allows for more consistent compliance with many elements of the 2010 SMR MS4 Permit and implementation of programs, as well as increasing cost effectiveness, and providing consistent messages for the public. The regional programs that the District jointly funds and implements regionally through this Implementation Agreement include:

- Joint development of compliance documents required by the 2010 SMR MS4 Permit among the Copermittees
- Funding of the additional responsibilities of the District as Principal Copermittee (described in Section M of the 2010 SMR MS4 Permit)
- Regional public education activities
- Regional training programs for Copermittee staff
- Water quality monitoring as described in the 2010 SMR MS4 Permit Attachment E, Sections II.A through II.F, exclusive of source identification efforts that may be required of the District.
- Joint support for other Regional Programs, including:

- The Compliance Assistance Program (CAP) including Food Service and Hazardous Materials facility inspections
- Household Hazardous Waste and Antifreeze, Batteries, Oil and Latex Paint (ABOP) collection programs
- Participation in the California Stormwater Quality Association (CASQA)

3.2.2 County Department of Environmental Health – CAP Program

The District, on behalf of the other Copermittees, and with funding through the implementation agreement, maintains an agreement with the County of Riverside Department of Environmental Health. Through this agreement, the Department of Environmental Health provides supplemental inspections at businesses inspected by the Department of Environmental Health, to address potential runoff concerns and assist with complying with the inspection requirements of the 2010 SMR MS4 Permit.

3.2.3 County Waste Management Department: HHW / ABOP

The District, on behalf of the other Copermittees, and with funding through the implementation agreement, maintains an agreement with the County of Riverside Waste Management Department. This agreement provides additional financial support to the County's Household Hazardous Waste (HHW) and Antifreeze, Batteries, Oil and Paint (ABOP) collection activities, to help ensure that adequate collection events are available in the Santa Margarita Region.

3.2.4 County Fire Deaprtment: HAZMAT Response Team

The District, on behalf of the other Copermittees, and with funding through the implementation agreement, maintains an agreement with the County of Riverside Fire Department. This agreement provides additional financial support for the County's Hazardous Materials (HAZMAT) Response Team to ensure discharges of hazardous materials that are discharged to or threatening to discharge to MS4 facilities are promptly responded to by the HAZMAT Response Teams.

Major modifications to the interagency agreements and changes in the cooperative activities are described in Annual Reporting to the Regional Board.

3.3 Fiscal Analysis {H.}

The District makes capital expenditures and incurs operation and maintenance (O&M) costs to implement this JRMP and to meet the requirements of the 2010 SMR MS4 Permit. Each year, the capital expenditures and O&M costs incurred during the reporting period and the budgeted capital expenditures and O&M costs planned for the next fiscal year are provided in the Annual Report. Table 3-1 below describes the sources of funding that the District has available to fund these programs.

Table 3-1. Fiscal Resources

Program Element	Funding Source(s)
Program Management and Reporting	NPDES Benefit Assessment
Annual Fee for SMR MS4 Permit	NPDES Benefit Assessment
Implementation Agreement Shared Cost	NPDES Benefit Assessment
Elimination of Illicit Connections & Illegal Discharges	NPDES Benefit Assessment, Zone 7 Maintenance Funds
Municipal Facilities and Activities	Zone 7 Capital Improvement Fund, Zone 7 Maintenance Fund NPDES Benefit Assessment
Development Planning	Developer Fees
Private Development Construction (Inspections)	Not Applicable[1]
Industrial and Commercial Sources (Inspections)	Not Applicable[1]
Retrofit Program	NPDES Benefit Assessment
Public Education & Outreach	NPDES Benefit Assessment,

Table 3-2 below describes limitations on how the District can use the various sources of funding.

Table 3-2. Restrictions on Use of Funding Sources

Source of Funds	Restrictions on Use (if applicable)
Zone 7 Maintenance Funds	District MS4 Maintenance Activities within District's Zone 7
NPDES Benefit Assessment	District Compliance Activities
Zone 7 Capital Improvement Fund	District MS4 facilities within District's Zone 7

3.4 Legal Authority {E.}

A certification of the District's adequate legal authority to comply with 40 CFR 122.26(d)(2)(I)(A-F) and the 2010 SMR MS4 Permit is provided in Appendix B. However, since the District's enabling act (Act 6642) does not provide land use or police powers to the District to control industrial, commercial or development. Therefore, the District does not have ordinances to regulate private development activities, private construction or grading activities, or private businesses or residences.

To ensure compliance with the requirements of the 2010 MS4 Permit, the District relies on the legal concept of Combined Legal Authority with the Copermittees of the 2010 SMR MS4 Permit. Combined Legal Authority, which has been established through a cooperative Implementation Agreement with the

[1] The District's enabling act does not provide the District with land use or police powers. Therefore, the District cannot regulate private, industrial or commercial facilities. See Section 3.4.

Copermittees (see Appendix B-1), assures that violations of the 2010 SMR MS4 Permit related to compliance programs beyond the District's authority can and will be acted upon by the appropriate Copermittee. The Runoff Management and Discharge Controls addressed by the District and Copermittees through Combined Legal Authority include:

- Control the contribution of Pollutants in discharges of Runoff associated with industrial and construction activity to its MS4 facilities and control the quality of Runoff from Industrial and Construction Sites. This requirement applies both to Industrial and Construction Sites which have coverage under the statewide General Permit for Stormwater Discharges Associated with Industrial Activity (Industrial General Permit) or General Permit for Stormwater Discharges Associated with Construction Activity (Construction General Permit), as well as to those sites which do not. Grading ordinances must be updated and enforced as necessary to comply with this Order;
- Prohibit all identified Illicit Discharges not otherwise allowed pursuant to Section B.2 of the 2010 SMR MS4 Permit;
- Prohibit and eliminate Illicit Connections to the MS4;
- Control the discharge of spills, dumping, or disposal of materials other than Stormwater into the MS4;
- Require compliance with conditions in District's and Copermittees' ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 facilities accountable for their contributions of Pollutants and flows);
- Utilize enforcement mechanisms to require compliance with Copermittees' Stormwater Ordinances, permits, contracts, or orders;
- Control the contribution of Pollutants from one portion of the MS4 to another through interagency agreements with other Copermittees;
- Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with the Copermittees' Stormwater Ordinance and permits and with the 2010 SMR MS4 Permit, including the prohibition on Illicit Discharges to the MS4. The Copermittees have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from Industrial Facilities discharging into its MS4 facilities, including Construction Sites;
- Require the use of BMPs to prevent or reduce the discharge of Pollutants into the MS4 from Stormwater to the MEP;
- Require documentation on the effectiveness of BMPs implemented to reduce the discharge of Stormwater Pollutants to the MS4 to the MEP; and
- Implement and enforce Copermittee ordinances within Common Interest Area (CIA) / Homeowners Association (HOA) areas and mobile home parks (MHP).

While the District does not have the authority to regulate private industrial, commercial or development, construction or residential activities within its jurisdictional area, the District does maintain the ability to regulate third-party activities within its rights-of-way through Encroachment Permits, construction contracts and other legal agreements. Within its rights-of-way, the District can:

- Prohibit Illicit Connections and Illegal Discharges (IC/IDs) to District MS4s.
- Prohibit the disposal of Pollutants within District rights-of-way.
- Ensure that private construction activities comply with the Construction General Permit and Copermittees' Stormwater Ordinances.
- Allow for stop work orders or financial securities (bonds) to ensure compliance with the 2010 SMR MS4 Permit provisions.

Table 3-3 lists the District's Ordinances which provide the District authority to regulate activities within its rights-of-way.

Table 3-3. Ordinances Providing Legal Authority

Ordinance No.	Ordinance Short Title	Provision(s) of Ordinance and Description of Authorities Granted	Availability of Ordinance (Online URL or front counter)	Date of last update/status (Pending, draft, or adopted)
14	NPDES Program – Benefit Assessment Ordinances	Establishes the Benefit Assessment Areas in which the District will annually levy a Benefit Assessment to pay for the cost of programs required by the NPDES Program.	Available at the District's main office.	Last updated on June 4, 1991.
19	Encroachment Permit Fees	This ordinance delegates to the General Manager-Chief Engineer of the District the administration of the use of District facilities, right of way, and/or easements for excavation, connections, and other types of encroachments, and the issuance, modification and revocation of permits for such uses, along with the establishment of a Deposit Based Fee schedule for District services.	Available at the District's main office.	Last updated on December 3, 2004.

3.5 Enforcement/Compliance Strategy

As described within this JRMP, the District's enabling act does not provide authority to require compliance of private or public property owners with 2010 SMR MS4 Permit requirements. The District's authority is limited to those activities that occur within its rights-of-way through encroachment permits, contract and other legal agreements. The District relies on Combined Legal Authority for areas outside of its rights-of-way in order to meet the goals of the 2010 SMR MS4 Permit. If the District is made aware of, or observes a violation of a requirement of the 2010 SMR MS4 Permit or Copermittee ordinances that occurs outside of its rights-of-way, the District will forward the information to the appropriate Copermittee for investigation and enforcement under their authorities and ordinances. The District and the other Copermittees must necessarily rely on the actions or inactions of independent third parties such as residents and businesses for the protection of water quality. Accordingly, consistent with the 2010 SMR MS4 Permit and pursuant to the legal authorities described in Section 3.4, compliance with Copermittees' Ordinances is mandated through implementation of various enforcement mechanisms.

This section describes a program wide Enforcement / Compliance Strategy that serves as guidance to the District in prioritizing and conducting enforcement activities within District rights-of-way that are consistent with the 2010 MS4 Permit and appropriate to the severity of the violation. The processes and procedures for conducting enforcement outside of District rights-of-way are described in the other Copermittee JRMPs.

3.5.1 Prioritize Violations

The Copermittees' Stormwater Ordinances cover a wide range of prohibited activities which have varying magnitudes of potential impact on the Beneficial Uses of Receiving Waters. For example, discharges of either Hazardous Materials (e.g., solvents and pesticides) or Non-Hazardous Materials (e.g., food wastes, trash, and debris) into the MS4 are violations of Copermittee Stormwater Ordinances and are subject to enforcement. Similarly, an accidental spill into a catch basin inlet and an intentional discharge from an Illicit Connection are both violations. Prioritizing violations is important in focusing the finite resources of the Copermittees and the District on those violations that may have the greatest potential impact on the quality of Receiving Waters.

Prioritizing violations is based on many factors, including the experience and professional judgment of Copermittee and District staff. The factors that are commonly considered in prioritizing violations of the Copermittee's Stormwater Ordinances and erosion control ordinance and the 2010 SMR MS4 Permit are presented in Table 3-4.

Table 3-4. Prioritization Factors for Violations

Prioritization Factor	Description
Characteristics of the Potential Pollutant	Based on chemical characteristics and potential to impact Beneficial Uses of Receiving Waters. The more Toxic, hazardous, or detrimental to the Beneficial Uses of the Receiving Waters a Pollutant is, the higher priority the discharge.
Sensitivity of the Affected Receiving Waters	The sensitivity of the affected Receiving Waters should be considered directly proportional to the priority of the violation because, for example, a more sensitive Receiving Water may suffer severe adverse effects from the discharge of a particular Pollutant whereas a less sensitive Receiving Water may suffer no adverse effects from the same Pollutant discharge. It is also important to consider that a Receiving Water may be highly sensitive to one potential Pollutant discharge while, at the same time, completely insensitive to another potential Pollutant. Examples of Receiving Waters that may be particularly sensitive include those with municipal supply or wildlife habitat designated Beneficial Uses.
Proximity of Receiving Waters	The closer a Receiving Water is to the discharge, the less chance there is for dispersion, dilution, or degradation of the potential Pollutant. Therefore, the closer the discharge is to Receiving Waters, the higher priority of the violation.
Magnitude of Discharge (volume and mass)	A larger Illegal Discharge should be of a higher priority than a smaller Illegal Discharge because as the magnitude of the Pollutant discharge increases, the extent of impact of the discharge on the environment increases as well.
Responsiveness of the Discharger in taking corrective actions	A discharger who is responsive and implements a good faith effort to correct a violation is more likely to minimize adverse impacts to surface water quality than a discharger who takes no action to correct a violation. Therefore, the priority of a violation should decrease as the responsiveness of the discharger increases.
Intent of the Discharger	Is the violation accidental or the result of an accident or a deliberate attempt to circumvent regulations?
Frequency of the Violation	Violations of Copermittee Stormwater Ordinances and erosion control ordinances that are continuous or reoccurring should be of a higher priority than isolated occurrences of violations. The more frequent a violation, the more likely it is that the discharge will impact surface water quality.
Previous History of Non-Compliance of the Responsible Party	A poor history of non-compliance of a discharger should result in a higher prioritization of subsequent violations as compared to a discharger with a good history of compliance because a history of non-compliance is evidence of a discharger's lack of concern for complying with local Stormwater and erosion control ordinances.

Table 3-5 provides general guidance for categorizing the relative severity of violations based upon the factors and/or circumstances associated with a violation.

Table 3-5. Relative Severity of Violations

Factors Affecting the Severity of Violations	Severity Priority Level		
	High	Medium	Low
Pollutant characteristics	Hazardous Materials (e.g., pesticides and solvents)	Metals, nutrients, sediment, other non-Hazardous Materials	Trash and debris
Sensitivity of Receiving Waters	Drinking water source, wildlife refuge, Illegal Discharges containing Pollutants identified as Impairing the Receiving Water	Recreational reservoir, riparian habitat	Dry, ephemeral stream
Proximity of Receiving Waters	Adjacent	Several hundred feet away	Several hundred yards away
Discharge magnitude	1000's gallons	100's gallons	10's gallons
Responsiveness of discharger	No action to contain or mitigate discharge	Reactive to control discharge when requested (i.e., cooperative)	Implements spill control plan at own initiative or shows good faith effort to respond
Intent of violation	Intentional	Discharge due to lack of controls or negligence	Implemented and maintained controls that failed (i.e., accident)
Frequency of violation	Continuous	Intermittent	Isolated incident
Previous history of discharger	Enforcement and cleanup historically resisted and more than one previous violation	Enforcement and cleanup performed when threatened and one or less previous violations	Enforcement and cleanup performed when requested and no previous violations

Because violations may not clearly fall into any single priority level described in Table 3-5, the priority assigned by Copermittee and District staff to particular violations may involve a subjective weighting of various factors.

3.5.2 Select Appropriate Enforcement Actions

The District will emphasize and encourage voluntary compliance with the District's encroachment permits, contract and other legal agreements to the MEP. Where more advanced enforcement becomes necessary, the District will either conduct enforcement for actions or activities within its rights-of-way or coordinate with the Copermittee who has jurisdiction over the land use or activity for enforcement actions as described in that Copermittee's JRMP. The enforcement or compliance response will be based on the severity of the violation in consideration of the factors in Table 3-5. The types of enforcement/compliance responses available, depending on the circumstances, and in typical order of increasing severity, are:

- Education and information,

When more severe enforcement or compliance responses are required, the District will forward information regarding the violation to the appropriate Copermittee contact with jurisdiction over the land use or activity. The following enforcement actions will be implemented by the District and/or the Copermittee, as appropriate, and described in the following sub-sections:

- Verbal warning,
- Written warning,
- Notice of violation or noncompliance,
- Stop work order or cease and desist order,
- Civil citation or injunction,
- Bonding,
- Administrative fine, and
- Referral to the Environmental Crimes Strike Force for criminal prosecution (infraction or misdemeanor).

3.5.2.1 Administrative Remedies

Education and Information, and Verbal and Written Warnings. Education and information is provided to dischargers by District staff as an element of each enforcement action. Verbal and written warnings may also be provided by Copermittee staff depending on the circumstances of the condition that is causing or threatening to cause a violation of the Copermittees' Stormwater Ordinances. However, unless the condition is an initial violation of the Copermittees' Stormwater Ordinances and consists of a low priority and severity violation, additional enforcement action may be appropriate.

Notice of Noncompliance. The Notice of Noncompliance constitutes a basic request that the property owner or facility operator rectify the condition causing or threatening to cause noncompliance. The Notice of Noncompliance is generally issued by District and/or Copermittee staff when one or more of the following circumstances exist:

- The violation or threat is not significant and has been short in duration.
- The responsible party is cooperative and has indicated a willingness to remedy the conditions.
- The violation or threat is an isolated incident.
- The violation or threat does not affect and will not harm human health or the environment.
- An actual condition of noncompliance exists, but the condition cannot be remedied within a relatively short period of time.
- The owner of the property or facility operator has indicated willingness to come into compliance by meeting milestones established in a reasonable schedule.
- The violation does not pose an immediate threat to human health or the environment.

Stop Work Order or Cease and Desist Order. The Stop Work Order or Cease and Desist Order are appropriate when immediate action is necessary to stop an existing illegal discharge. The Cease and Desist Order may also be appropriately issued as a first step in ordering the removal of nuisance conditions, which threaten to cause an unauthorized discharge of Pollutants if exposed to rain or surface water Runoff. The Cease and Desist Order is generally issued when one or more of the following circumstances exist:

- The violation or threat is immediate in nature and may require an emergency spill response or immediate nuisance abatement if left unattended.
- The violation or threat exhibits a potential situation that may harm human health or the environment.
- Contacts with the property owner or facility operator indicate that further authority of the Copermittee may need to be demonstrated before remedial action is forthcoming.
- Prior Notices of Noncompliance have not obtained a favorable response.

Prior to issuance of any Cease and Desist Order or commencement of other civil or criminal enforcement action against any person, District and/or Copermittee staff should deliver to the discharger a written Notice of Noncompliance, which states the act or acts constituting the violation and directs that the violation be corrected. The Notice of Noncompliance should provide the discharger with a reasonable time period to correct the violation before further proceedings are brought against the discharger. However, a Notice of Noncompliance should not be the first enforcement method used if egregious or unusual circumstances indicate that a stronger enforcement method is appropriate.

3.5.2.2 Criminal Enforcement

Since the District does not have police powers, it relies on the Copermittees for Criminal Enforcement. The criminal enforcement process is described within the Copermittees' JRMPs.

3.5.2.3 Appropriate Enforcement/Compliance Responses

Table 3-6 provides an example of appropriate enforcement responses that correspond to the severity of a violation as determined from Table 3-5. Recognizing the unique characteristics of mobile businesses, enforcement actions against such businesses will typically follow the procedure described in Section 3.5.3 below.

Table 3-6. Enforcement Responses for Violations Where Overlapping Authority Exists

Incident Severity Priority Level	Appropriate Enforcement Responses[1]	Lead Enforcement Agency	
		Copermittee	Regional Board Support
High	Referral to Environmental Crimes Strike Force	X	X
	Citation	X	X
	Infraction	X	X
	Misdemeanor	X	X
Medium	Infraction	X	X
	Misdemeanor	X	X
	Stop work order or cease and desist order	X	
	Notice of non-compliance	X	
Low	Notice of non-compliance	X	
	Written warning	X	
	Verbal warning	X	
	Education and information	X	

[1] Education and information should be incorporated into all enforcement responses.

The District will take the lead in initiating enforcement actions related to violations within District rights-of-way and will engage the other Copermittees with jurisdiction where the enforcement escalates beyond written warnings or notices of non-compliance. For violations outside of District rights-of-way, the applicable Copermittees will take the lead in initiating enforcement actions related to violations within their respective jurisdictions. Where appropriate, however, the Regional Board may be asked to provide support in enforcement actions related to incidents that are or escalate to a high-priority status. State law limits the Authority of the Copermittees, including the District, to assess significant fines and penalties. However, the Regional Board has substantial abilities to assess fines and penalties under state and federal law that can be used to augment local enforcement where superior regulatory Authority and the ability to assess fines and penalties would be beneficial. Additionally, the Regional Board will be responsible for performing all inspections and enforcement actions related to compliance with the Statewide General Permits or other NPDES permits or waivers adopted by the Regional Board.

3.5.3 Enforcement Strategy for Violations Originating from Mobile Businesses {F.3.b.(3)(ii)}

The process for the enforcement of Mobile Business activities is described within the Copermittees' JRMP.

3.5.4 Coordination of Enforcement/Compliance Activities

Coordination with other the Copermittees and government agencies, including the Regional Board, is essential for successful implementation of an enforcement/compliance program. The entire MS4 is not controlled by a single federal, tribal, state, local or private entity, nor does any single entity have authority to take enforcement action for violations occurring outside of its jurisdiction. Further, other governmental agencies may have additional enforcement authorities that are appropriate to the situation. The District coordinates enforcement activities, as practicable, with the appropriate Copermittees, government agencies and tribes in accordance with the following guidelines:

3.5.4.1 Identify Lead Agency

- Enforcement will be coordinated when multiple agencies have jurisdiction and an agency has not been able to obtain compliance from the discharger.
- Unless otherwise agreed to in writing, the lead enforcement agency role will be assigned on the basis of the origin of the discharge.
- The Regional Board may be asked to be the lead enforcement agency for higher priority Illegal Discharges in areas of overlapping Authority, such as for discharges to Receiving Waters, and will be the lead enforcement agency for all enforcement actions related to compliance with the State Industrial or Construction General Permits and other NPDE permits or waivers issued by the Regional Board.
- Investigation and other relevant information will be shared between the participating agencies in a timely fashion.

3.5.4.2 Lead Enforcement Agency Responsibilities.

The lead enforcement agency will assume the following responsibilities:

- Coordinating activities and assigning responsibilities (e.g., investigations, site visits, etc.) among participating agencies;
- Maintaining communication and information exchange among participating agencies;
- Ensuring that follow-up actions are implemented; and
- Documentation and reporting as required.

3.5.4.3 Coordination with the Regional Board

Under the Porter-Cologne Water Quality Act, the State has provided the Regional Boards with overriding Authority to manage water quality and administer compliance with state and federal water quality law. This Authority includes the ability to impose more significant fines and other sanctions than the Copermittees. With this Authority, the Regional Board may be more effective in obtaining the cooperation and compliance from those who violate Stormwater regulations. The Regional Board is notified by the District when findings of potential non-compliance with the State's Industrial or Construction General Permits have been identified The list of contact names maintained by the District identifies the appropriate Regional Board staff to contact to initiate coordination of enforcement activities or to notify the Regional Board of potential findings of non-compliance. Where appropriate, notifications of potential non-compliance should be forwarded to the designated Regional Board contact person by the District's NPDES Section.

3.5.4.4 Coordination with Other Agencies

In addition to the Regional Board, the District may also find it useful or necessary to coordinate or report findings of potential non-compliance to other government agencies with jurisdiction over water quality issues including the California Department of Fish and Game and the United States Fish and Wildlife Service. The list of contact names maintained by the District identifies the appropriate staff at these agencies to contact to initiate coordination of enforcement activities or to notify of potential findings of non-compliance.

3.5.5 Recordkeeping

Enforcement actions taken, and tools such as citations or tickets utilized, and the discharger's return to compliance are tracked in the databases described in the JRMP. Information to be retained by the District regarding their enforcement program includes:

- Documentation of staff training;
- Inspection notes or reports;
- Warning letters, violation notices, etc.;
- Documentation of follow-up actions;
- Contact reports from meetings or conversations with violators, other Copermittees, or other agencies; and
- Copies of notifications of potential non-compliance.

3.6 Receiving Water Limitations {A.3.}

The 2010 SMR MS4 Permit states that discharges from a District MS4 facility that have been found to cause or contribute to the violation of Water Quality Standards (designated Beneficial Uses, Water Quality Objectives developed to protect Beneficial Uses, and the State policy with respect to maintaining high quality waters) are prohibited. The District complies with this prohibition through timely implementation of control measures and other actions as described in this JRMP to reduce Pollutants in Stormwater discharges from District MS4 facilities in accordance with the 2010 SMR MS4 Permit.

If it is determined that discharges from District MS4 facilities are causing or contributing to exceedances of Water Quality Standards that persist, notwithstanding implementation of the control measures specified in the JRMP, the District will collaborate with the Copermittees with jurisdiction over the contributing drainage areas to implement the following procedure:

Notification

If the District determines that discharges from its MS4 facilities are causing or contributing to an exceedance within a Receiving Water of an applicable Receiving Water Quality Standard, within thirty (30) working days, the District's Watershed Protection Division will provide oral or e-mail notification to the Executive Officer, identifying the pertinent information and data supporting the determination, and commit to submitting a full report in accordance with the reporting procedures below.

If the District is notified by the Executive Officer of a determination by the Regional Board that discharges from the District's MS4 are causing or contributing to an exceedance within a Receiving Water of an applicable Receiving Water Quality Standard, within ten (10) working days the Watershed Protection Division will via e-mail acknowledge such notification, and formally request any pertinent supporting information and data not included in the original notification. Following receipt and validation of all information supporting such a determination, the District will commit to providing a full report in accordance with the reporting procedures below.

Reporting

If the Water Quality Standard exceedance documented pursuant to the notification above is solely due to discharges to the MS4 from activities or areas outside the District's or other Coopermittees' jurisdiction or control, within ten (10) working days of becoming aware of the situation, the District will provide documentation of these discharges to the Executive Officer. Subsequently, the District will document the situation within the Annual Report.

Otherwise, following the notifications above the District will, within the Annual Report covering the date of the notification (unless the Executive Officer directs an earlier submittal), provide a report with:

1) A description of the BMPs that are currently being implemented through the JRMP and any additional BMPs that will be implemented to prevent or reduce those Pollutants that are causing or contributing to the exceedance of the applicable Receiving Water Quality Standards. The report may be incorporated in the Annual Report unless the San Diego Regional Board directs an earlier submittal; and

2) An implementation schedule for any new/revised BMPs. If the Executive Officer directs any modifications to the report, within thirty (30) days, the District will submit a revised report.

Update Compliance Programs

Within thirty (30) days following approval by the Executive Officer of the report described above, the District will revise the applicable sections of this JRMP and the monitoring program, to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required. The District will implement the revised JRMP and monitoring program in accordance with the approved schedule for implementation of any new/revised BMPs.

3.7 Program Reporting, Evaluation, and Revision {K.3}

The District implements the following Annual Reporting, program evaluation, and program revision requirements as described in the 2010 SMR MS4 Permit.

3.7.1 Annual Reporting {K.3.a.}

Each year the District prepares a JRMP Annual Report summarizing the implementation of the jurisdictional activities described in this JRMP during the reporting period for submittal to the Regional Board. Each Annual Report must verify and document compliance with the applicable provisions of the 2010 SMR MS4 Permit. The District retains records in accordance with the Standard Provisions in Attachment B of the 2010 SMR MS4 Permit, available for review, that document compliance with each requirement of the Permit. The District submits the Annual Report including documentation of implementation of the compliance programs utilizing standardized reporting forms. The reporting forms will be amended as needed to facilitate changes in compliance programs or more accurate reporting of compliance programs.

3.7.2 Program Effectiveness Assessment and Reporting {J.}

The NPDES Section regularly assesses the District's compliance programs described in the JRMP to identify improvements that will promote the reduction of Pollutants in Runoff to the MEP while also supporting the responsible management and allocation of the public resources available for implementation. The strategy for assessing the effectiveness of the Copermittees' JRMP is described in Appendix B.

3.7.3 JRMP Revisions {F.}

As part of the Annual Reporting process, the NPDES Section will review the JRMP to identify the need, if any, for revisions. The District may propose revisions to the JRMP under the following conditions:

- Where needed improvements are identified based on staff experience in implementing the JRMP
- Upon completion of newly developed program elements
- In response to Effectiveness Assessments as described in Section 3.7.2
- In response to persistent Action Level exceedances
- In response to the BMP strategy identified in the Watershed Workplan (see Section 3.8)
- As directed by the Executive Officer to reflect regional and watershed-specific requirements and/or Waste Load Allocations (WLAs) developed and approved pursuant to the Total Maximum Daily Load (TMDL) process for Impaired Waterbodies

- As directed by the Executive Officer where the JRMP must be revised in order to address exceedances of Receiving Water Limitations that have been determined to be contributed to or caused by Runoff

3.8 Watershed Workplan {G}

The District participates in the development and updating of a Watershed Water Quality Workplan (Watershed Workplan) that is designed to identify, prioritize, address and mitigate the highest priority water quality issues/Pollutants in the Upper Santa Margarita watershed within Riverside County.

This plan is available at: http://rcflood.org/NPDES/SantaMargaritaWS.aspx

4.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE){F.4.}

The District implements the following program to actively detect and eliminate Illicit Discharges and disposal into the MS4, in accordance with Provision F.4. of the 2010 SMR MS4 Permit.

4.1 Overview

4.1.1 Prohibited Discharges

The District, through its legal Authority (Section 3.4), enforcement mechanisms (Section 3.5), and various other programs summarized in Section 4.2 below, effectively prohibits all types of Non-Stormwater discharges into its MS4 facilities unless such discharge is authorized by a separate NPDES permit or specifically allowed under the 2010 SMR MS4 Permit (summarized in Section 4.1.2 below).

4.1.2 Conditionally Allowed Non-Stormwater Discharges {B.2.}

The District is not required to prohibit the discharges categories identified below.

- Diverted stream flows;
- Rising ground waters;
- Uncontaminated groundwater infiltration (as defined in 40 CFR 35.2005 (20)) to MS4s;
- Uncontaminated pumped groundwater[2];
- Foundation drains[3];
- Springs;
- Water from crawl space pumps[4];
- Footing drains[5];
- Air conditioning condensation;
- Flows from riparian habitats and wetlands;
- Water line flushing;[6& 7]

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[2] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[3] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[4] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[5] Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4.

[6] This exemption does not include fire suppression sprinkler system maintenance and testing discharges. Those discharges may be regulated under Section B.3 of the 2010 SMR MS4 Permit

[7] Requires enrollment under Order R9-2002-0020.

- Discharges from potable water sources not subject to NPDES No. CAG679001, other than water main breaks;
- Individual residential car washing;
- Dechlorinated swimming pool discharges;[8] and
- Emergency fire fighting flows (i.e. flows necessary for the protection of life or property).[9]

4.2 IC/ID Prevention {F.4.}

The programs described in Sections 5 through 9 of the Copermittees' JRMPs are designed to prevent IC/IDs from occurring. Additionally, Section 11 describes the public education efforts implemented to ensure that the public is informed of these requirements. Below are some highlights of specific elements of the District's programs that help prevent IC/IDs.

4.2.1 Legal Authority {F.4.a.(1)}

As described in Section 3.4, the District relies on Combined Legal Authority in order to prohibit IC/IDs.

4.2.2 Connections to Riverside County Flood Control And Water Conservation District MS4 Facilities

The District's Operations and Maintenance Division – Operations Engineering Section requires all proposed or detected third party connections to its MS4 facilities to obtain an Encroachment Permit. Through the Encroachment Permit process, the District ensures that Connections are not designed to drain Illegal Discharges into the MS4.

4.2.3 Inspections {F.4.a.(2)}

The inspection programs implemented by the District described in Sections 5 through 9 of this JRMP provide an opportunity to identify Illicit Connections and for inspectors to work with the Copermittees and property owners to remedy problems that may potentially result in an Illegal Discharge. If routine inspections or Dry Weather monitoring indicate IC/IDs, they will be investigated and eliminated or permitted[10] as described in Sections 4.3 and 4.4.

4.2.4 Maintain MS4 Map {F.4.b.}

An updated map of MS4 facilities owned by the District is maintained and provided to the Regional Board in the JRMP Annual Report. The map includes all segments of the MS4 owned, operated and maintained by the District, all known locations of connections with other MS4s (e.g., Caltrans), and all known locations of District-owned major MS4 outfalls that discharge Runoff to Receiving Waters. The MS4 map will be updated at least annually. The MS4 map, including any Geographical Information

[8] Excluding saline swimming pool discharges.

[9] Specifically excluding non-emergency fire fighting flows, i.e. flows from controlled or practice blazes and maintenance activities, and building fire suppression system maintenance discharges, i.e. sprinkler line flushing.

System (GIS) layers, will be submitted annually with the updated JRMP. This map is useful in identifying and narrowing down potential source areas in response to an observed IC/ID or Action Level exceedance.

4.2.5 Outfall Monitoring {F.4.d.}

The District conducts Dry Weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 facilities within its jurisdiction to detect IC/IDs as described in Section 13.

4.2.6 Waste Collection Programs

4.2.6.1 Household Hazardous Waste (HHW) Collection and ABOP Collection Programs

Through the Implementation Agreement (see Section 3.2), the District participates in the HHW and ABOP collection programs in conjunction with the Riverside County Waste Management Department. Mobile HHW collection events are held at sites in the SMR and are scheduled periodically on weekends from 9:00 a.m. until 2:00 p.m. Through the Implementation Agreement, the District also supports one permanent ABOP collection site in the SMR, which is located at:

Murrieta Maintenance Yard / Riverside County Transportation Department
25315 Jefferson Avenue, Murrieta, 92562

The site is open Saturdays from 9:00 a.m. until 2:00 p.m. with the exception of holiday weekends. Mobile and permanent site locations may vary over time. Details, site locations, maps and schedules of operation for both the HHW and ABOP collection events are available on the County Department of Environmental Health (DEH) website at:

http://www.rivcowm.org/opencms/hhw/pdf/HHWEventFlyerPDFs/91709-MASTERHHWSchedule.pdf

or by calling 1-888-722-4234 or 951-358-5055.

Along with materials collected at HHW and ABOP sites, cathode ray tubes can be taken to County landfills for recycling. Used motor oil for recycling may be taken to certified collection centers throughout Riverside County in addition to the ABOP sites.

4.2.6.2 Conditionally Exempt Small Quantity Generator (CESQG)

The CESQG Program is a Hazardous Waste pick-up disposal service for eligible businesses/non-profit organizations in Riverside County. This program provides an affordable way to legally dispose of limited quantities of Hazardous Waste.

Businesses that generate 27 gallons or 220 pounds of Hazardous Waste or 2.2 pounds of extremely Hazardous Waste per month can participate in the CESQG program. Businesses are required to use a licensed hauler to manifest and transport their Hazardous Waste. The most common participants in the CESQG program are painters, print shops, auto shops, builders, churches, schools, non-profit groups and property managers. An appointment for pickup of Hazardous Waste or further information on the CESQG program can be obtained by calling 1-800-952-5566.

4.3 IC/ID Detection {F.4}

In the mid-1990s, the Riverside County Copermittees conducted reconnaissance surveys to identify IC/IDs to the MS4s. The reconnaissance surveys were limited to underground storm drains of 36-inch diameter or larger and open channels and utilized videotaping. Each undocumented connection to the MS4 was traced to its origin. Although 200 undocumented connections to the underground MS4 facilities were found County-wide, none of the connections were determined to be Illicit Connections with regard to the MS4 NPDES program. As underground facilities are difficult to access and the Copermittees inspect the construction of new underground MS4 facilities to verify that no Illicit Connections are being made, it has been determined that additional inspections of the underground MS4 facilities are not warranted. However, the District conducts inspections of open channel MS4 facilities to identify Illicit Connections as an element of routine facility maintenance. Illicit Connections identified during these surveys are documented and removed where necessary in order to comply with the 2010 MS4 Permit.

Although the overall programs described in this JRMP are designed to help prevent IC/IDs into the MS4, the following summarizes the specific methods implemented by the District to detect and eliminate potential IC/IDs

4.3.1 MS4 Facility Inspections {F.4.e}

During the regular maintenance as described in Section 5.3 herein, MS4 facilities are inspected to identify potential Illicit Connections, and evidence of any Illegal Discharges. This is the most direct method to detect IC/IDs. Appropriate field personnel are trained to identify potential IC/IDs during the course of their normal duties. The District staff is familiar with the existing MS4 and the drainage patterns within its jurisdiction and can take steps to identify the source of what appears to be an IC/ID.

4.3.2 Public IC/ID Reports / Hotline {F.4.c}

Predominantly, Illegal Discharges are reported by the public or by District field personnel. Third-party notifications are a direct source of IC/ID information. The public is encouraged to call the Police/Sheriff Department/Code Enforcement to report observed spills or Illegal Discharges.

Additionally, as described in Section 11, the Riverside County Copermittees maintain a Public Education and Outreach program that includes education regarding IC/IDs. Procedures to educate the public about Illegal Discharges and Pollution Prevention where problems are found are included in this program. The District operates, on behalf of the Copermittees, a centralized 24-hour hotline (1-800-506-2556) that may be used by the public to, among other things, report Illegal Discharges from urban areas into public streets, the MS4 and other waterbodies. These calls can be received in English or Spanish and are routed to the appropriate District divisions or contacts.

Upon receiving notification from staff or a third-party, District staff follows the procedures identified in Section 4.4 below.

4.3.3 IC/ID: Construction Site Inspections {F.1.e.(6)(d)}

As described in Sections 5 and 7 herein, the District implements programs to track and verify that District Construction Sites and Private Construction activities within District rights-of-way conducted under an Encroachment Permit issued by the District are in compliance with the 2010 SMR MS4 Permit. As part

of that program, the District supplements the Illicit Discharge Detection and Elimination (IDDE) program by assuring that appropriate BMPs are being implemented to prevent Illegal Discharges, and that no Illicit Connections occur during the installation phase of new MS4 facilities. Illegal Connections are prohibited by the District and are initially verified during the plan check process. The District verifies conformance with the approved plans and conducts inspections at Construction Sites. A Stop Work Order is issued if an IC/ID is observed during an inspection within District rights-of-way, and where applicable, District staff will follow the relevant procedures described below. The Stop Work Order will cease after the IC/ID has been removed or eliminated.

4.3.4 Monitoring Activities {Attachment E, II.C.}

The District, in cooperation with the Copermittees, implements a Non-Stormwater Dry Weather Action Level (NAL) monitoring program at the Major Outfalls from the MS4 facilities. This monitoring program is intended, in part, to help identify MS4 Outfalls and sub-drainage areas that may have Illegal Discharges. The monitoring program is described in the Consolidated Monitoring Program (CMP) http://rcflood.org/NPDES/Monitoring.aspx. Where an Action Level exceedance is detected at a Major Outfall, source identification efforts are conducted as described in Section 4.4.2.

4.3.5 Non-Jurisdictional IC/IDs

Where Non-Jurisdictional IC/IDs to the District's MS4 facilities are identified, the responsible party is notified of the Regional Board requirements and the Executive Officer is notified of the Non-Jurisdictional IC/ID. The District also implements Wet and Dry Weather monitoring programs that may indicate the presence of IC/IDs as described in Section 13.

4.4 IC/ID Response and Reporting {F.4.}

The 2010 SMR MS4 Permit and the CWA requires the Copermittees to prohibit, consistent with the MEP standard, Illegal Discharges (including the discharge of spills, leaks, or dumping of any materials other than Stormwater and Conditionally Authorized Non-Stormwater discharges) into the MS4.

As described in Section 3.4, the District relies on Combined Legal Authority with the Copermittees to control discharges to the MS4. The District coordinates with the Copermittees to implement the following procedures to investigate and inspect portions of the MS4 that, based on the results of field screening, analytical monitoring, or other appropriate information, indicate a reasonable potential of containing IC/IDs or other sources of Pollutants in Non-Stormwater.

After receiving notification of a water Pollution problem on the area-wide hotline, the NPDES Section coordinates with the appropriate Copermittee Stormwater Coordinator to investigate the problem as follows:

4.4.1 Initial Response Timeframe and Requirements

Based on the information reported, the District's Watershed Protection Division – Hydrologic Data Collections Section (Hydrologic Data Collections Section) will assess if the IC/ID is an Emergency Situation that poses an immediate threat to human health or the environment. Any sewage spill over 1,000 gallons or that could impact water contact recreation, any spill that could impact wildlife, any Hazardous Material spill where residents are evacuated, any spill of reportable quantities of Hazardous

Waste (as defined by 40 CFR 117 and 40 CFR 302), or any other spill reportable to the California Emergency Management Agency (Cal-EMA, formerly known as the Office of Emergency Services or OES) is classified as a threat to human health or the environment.

a. If the discharge is a threat to human health or the environment:
    i. Such discharges must be reported immediately by phone to Cal-EMA at 1-800-852-7550 and should also be reported to the Executive Officer of the Regional Board by telephone: 858-467-2952. If these reports to these agencies have already been submitted by other parties, this reporting need not be repeated by the District.
    ii. Investigation (if the source is not immediately known) and elimination activities (as described below) must occur immediately within 24 hours of being put on notice by staff or a third-party.

b. If there are obvious Illicit Discharges (i.e. color, odor, or significant exceedances of Action Levels (>10x the Action Level) investigation as described below must occur within one business day.

c. If Field Screening Data collected as part of the NAL Monitoring program (as described in Section 4.0 of Volume III of the CMP and Section 13.2 of the JRMP) exceeds Action Levels, the District will either:
    i. Coordinate with the applicable Copermittee(s) with jurisdiction over the tributary land use to initiate an investigation (as described below) to identify the source of the discharge within two (2) business days of receiving the data, or
    ii. Document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation will be included in the JRMP Annual Report.

d. If Analytical laboratory results collected as part of the NAL Monitoring Program (as described in Section 4.0 of Volume III of the CMP and Section 13.2 of the JRMP) exceeds Action Levels at an outfall, the District will either:
    i. Coordinate with the applicable Copermittee(s) with jurisdiction over the tributary land use to initiate an investigation (as described below) to identify the source of the discharge within five (5) business days of receiving the data, or
    ii. Document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation will be provided to the Copermittee who has jurisdictionover the tributary area for inclusion in their JRMP Annual Report.

e. Other reported potential Illicit Discharges that do not meet the criteria identified above will be responded to in a timely manner. Responses to all IC/ID reports may be prioritized.

4.4.2 Investigation {F.4.e.}

The District coordinates with the Copermittees to take appropriate actions to eliminate all detected IC/IDs to its MS4 facilities and coordinates with the Copermittees to conduct investigations based on the data or reports as described above. The following investigative steps will be taken:

1. If there is no active discharge, standing water, or other evidence of recent discharges (stains) at the reported location, Outfall or NAL exceedance location, reconnaissance is complete at that location and observations are documented in the District's complaint database. If necessary, the location may be marked for future additional follow-up.

2. If there are multiple active discharges at the reported location or outfall, staff will coordinate with the applicable Copermittee(s) with jurisdiction over the tributary land use to:
    a. Observe the flows for any odd odors or discoloration
    b. Take photographs of the discharge and the point of entry to MS4 (if known)
    c. Attempt to trace the flow/flows to its origin

3. If there is an active discharge or evidence of recent Dry Weather flow at the reported location or Outfall, staff will coordinate with the applicable Copermittee(s) with jurisdiction over the tributary land use to:
    a. Take photographs of the discharge and the point of entry to MS4 (if known)
    b. Attempt to trace the flow/flows to its origin
    c. Collect the following field parameters – pH, temperature, and specific conductivity
    d. If the field parameters exceed follow-up criteria identified in the CMP, or if there is other visible evidence of an Illegal Discharge (e.g., stains), a continued investigation will be necessary, see Step 4

4. Where the initial investigation identified in Step 3 indicated a potential Illegal Discharge, the District will coordinate with the applicable Copermittee(s) as described above to perform a source investigation as follows:
    a. If active discharge with flow
        - Trace the source of the discharge as far upstream as possible.
        - Additional field measurements and/or lab analyses may be performed and documented (as outlined above) where there is no other evidence of the IC/ID source
    b. If no active discharge but evidence of a recent IC/ID is present at time of investigation, trace the source of the discharge as far upstream as possible

4.4.3 Elimination {F.4.f}

1. If the source is not identified, the District will coordinate with the Copermittee(s) with jurisdiction over the tributary area who will:
    a. Attempt to narrow down potential source areas, and make note in the investigation file
    b. Where appropriate, provide public education material in area
    c. Mark the location for future follow-up where appropriate. Follow-up visit(s) can confirm if the IC/ID has recurred and an attempt will be made by the Copermittee to locate

source. If the IC/ID has not recurred or has been eliminated it is noted and complaint/investigation is closed.

d. If the investigation was initiated in response to a Non-Stormwater Action Level (NAL) exceedance:
    i. The District will conduct additional NAL sampling at the Outfall in subsequent years
    ii. If the results of the additional sampling indicate recurring exceedances of the same NAL(s) with an unidentified source, then the District will coordinate with the appropriate Copermittees with jurisdiction over the tributary land uses to provide an evaluation of needed changes to the programs described in the applicable Copermittees' JRMPs to address the common contributing sources that may be causing such an exceedance. This evaluation will be provided in the District and/or Copermittee JRMP Annual Reports as appropriate. Applicable updates will be made to the Watershed Water Quality Workplan (G. of the 2010 SMR MS4 Permit), Retrofitting Existing Development (F.3.d. of the 2010 SMR MS4 Permit) and Program Effectiveness Assessment and Reporting (J. 2010 SMR MS4 Permit) work plans.

2. If the source is identified, and if:
    a. The source is natural (non-anthropogenically influenced) in origin and in conveyance into the MS4 then the District need not prohibit the discharge.
        i. The District and/or the Copermittee(s) with jurisdiction over the tributary area to the outfall, as appropriate, will report its findings and documentation of its source investigation to the Regional Board in their JRMP Annual Reports covering the period in which the findings were made as appropriate.
    b. The source of the exceedance is a conditionally approved category of Non-Stormwater discharge as described in Section 4.1.2, then the Copermittees will determine if this is an isolated circumstance or if the problem is recurrent to the point that the category of discharges must be addressed through the prohibition of that category of discharge as an Illicit Discharge.
        i. The applicable Copermittee(s) will submit its findings including a description of the steps taken to address the discharge and the category of discharge, to the Regional Board for review in the applicable JRMP Annual Report covering the period in which the findings were made. Such description will include relevant updates to existing ordinances or new ordinances, orders, or other legal means of addressing the category of discharge, and the anticipated schedule for doing so. The Copermittees must also submit a summary of its findings with the Report of Waste Discharge.
    c. The source is in the jurisdiction of another Copermittee, the appropriate Copermittee is notified, and further action is performed by that Copermittee.
    d. The source is a discharge separately permitted by the Regional Board and/or the State Board that is in violation or potential violation of that permit, then
        i. If applicable, a copy of the regulatory permit authorizing the discharge will be obtained, if possible.

ii. The Copermittee must report, within three business days, the findings to the San Diego Water Board including all pertinent information regarding the discharger and discharge characteristics.
iii. The findings of the investigation will be noted in the file and the case will be closed.
iv. If a permitted discharge is perceived to be a threat to human health or the environment it will be reported to the San Diego Regional Board and Cal-EPA as described in Section 4.4.1

e. The source is an Illegal Discharge within the jurisdiction of the District rights-of-way:
i. The source is provided with educational material about IC/IDs, and an attempt is made to have the source resolve the situation immediately.
ii. Where appropriate, District staff will implement enforcement procedures consistent with Section 3.5 of this JRMP.
iii. Follow-up as appropriate to ensure that the IC/ID is eliminated.
iv. Report the findings, including any enforcement action(s) taken, and documentation of the source investigation will be forwarded to the San Diego Water Board in the Annual Report.
v. If unable to eliminate the source of discharge prior to the Annual Report submittal, the District will submit, as part of its JRMP Annual Report, its plan and timeframe to eliminate the source of the exceedance.
vi. Those dischargers seeking to continue such a discharge must obtain coverage under a separate NPDES permit prior to continuing any such discharge.

f. The source is part of a HazMat incident; it is reported to the Incident Commander upon arrival. Coordination with the HazMat team takes place and samples are only collected with approval of the Incident Commander as samples may be done in conjunction with future legal action. Under no circumstances is a site entered or field measurements collected if conditions are unsafe.

4.4.4 Clean-up

The District coordinates with the applicable Copermittees with jurisdiction to ensure that Illegal Discharges are cleaned up where necessary and that no further environmental degradation occurs and the responsible party(ies) restore the area back to its original state to the MEP.

4.4.5 Sanitary Wastes {F.4.h}

The District cooperates and coordinates with the local sanitation districts as described in Appendix C to swiftly respond to and contain sewage spills that may discharge into its MS4 facilities.

As part of those efforts, the District allows local sanitation districts immediate 24-hour access to its MS4 facilities to address and contain sewage spills. The District also works cooperatively with the local sanitation districts to determine and control the impact of infiltration from leaking sanitary sewer systems on Runoff quality.

5.0 DISTRICT AREAS AND ACTIVITIES {F.3.A}

The District implements the following program that is designed to meet the requirements of provision F.3.a of the 2010 SMR MS4 Permit, prevent Illicit Discharges into the MS4, reduce District discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent District discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

5.1 Planning District Facilities {F.1}

The District's mission is to protect people, property and watersheds of Riverside County from damage or distribution from flood and stormwaters, and to conserve, reclaim and save such waters for beneficial use. In service to that mission, the District may, where necessary, design and build Watershed Protection Projects within the Santa Margarita Region. The District implements the applicable processes and procedures described in Section 6 of this JRMP in the planning and design of District projects. If the District builds Priority Development Projects within the Santa Margarita Region, such as a satellite maintenance yard, a WQMP for the project will be completed.

5.1.1 Priority Development Projects {F.1.d}

- If the District pursues a Priority Development Project as discussed in Section 1 of the SMR WQMP, the Design and Construction Division – Design Section or Engineering Services Section (Design Section) will prepare a Project-Specific WQMP, consistent with the requirements of the SMR WQMP.
- The Preliminary Project-Specific WQMP, whether developed in-house by the Design Section or by a contractor, will be forwarded to the NPDES Section for a thorough review of all items required in the SMR WQMP. The reviewer will use the District's "WQMP Review Checklist" to determine if the Project-Specific WQMP is complete. The Design Section EPM will approve the final Project-Specific WQMP.
- Prior to initiating grading or construction activities, the Design Section will ensure that the construction plans for its Priority Development Projects incorporate the BMPs described in the approved final Project-Specific WQMP. Appendix B includes the Position/Title of the reviewers under the respective departments responsible for implementing these reviews and approvals.
- The O&M Plan described in the Project-Specific WQMP will be integrated into a Facility Pollution Prevention Plan (FPPP) (see Section 5.3.4.1).

5.1.2 Public Works Transportation Projects {F.1.i}

The District does not plan, design or construct transportation projects.

5.1.3 Public Works Unpaved Roads {F.1.i.}

District projects that construct Unpaved Roads must follow the BMP guidance described in Section 6.6.7 of this JRMP.

5.1.4 Design of Flood Control Projects {F.3.a.(4)(a)}

During the design of flood control projects, the applicable Section of the District's Design and Construction Division, in consultation with the Regulatory Division assesses the project's potential

impacts on Receiving Water quality. As such Watershed Protection Projects are not Development Projects intended for human use or occupation, typically no additional Runoff or Pollutants will be expected to be discharged into Receiving Waters as a result of the construction of flood control projects.

5.1.5 Other District Projects

All other District Projects will comply with Section 6.6.

5.2 District Construction Activities {F.2.}

The District implements the applicable requirements of Section 7 of this JRMP in the construction of District projects. This includes, where applicable, compliance with the latest version of the Construction General Permit. As described in Section 5.1 above, the District will prepare a WQMP for all applicable District Priority Development Projects as described in Section 1 of the WQMP.

District construction projects one acre or larger or which are part of a construction project one acre or larger must comply with the Construction General Permit. Prior to commencement of construction activities, the District's Design and Construction Division – Contract Administration Section (Contract Administration Section), files Permit Registration Documents by using the State Board's Storm Water Multiple Application and Report Tracking System (SMARTS) and submitting a Notice of Intent (NOI) fee. Upon completion of the construction project, the Contract Administration Section files a Notice of Termination (NOT) and other project close-out documentation via the State Board SMARTS. The SMARTS website can be accessed at:

https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

During construction closeout the District will assure satisfactory completion of the requirements in an applicable District project-specific WQMP by:

- Verifying that Structural Stormwater BMPs have been constructed and installed in conformance with approved plans and specifications;
- Assuming responsibility for the long-term funding and implementation, operation, maintenance, repair, and/or replacement of BMPs; and
- Confirming that procedures are in place to implement all Non-Structural BMPs.

Where applicable, the operation and maintenance procedures for the Treatment Control BMPs included in the project-specific WQMP will be incorporated into a municipal FPPP, as described in Section 5.3.4.1. For DistrictWQMP projects, upon completion of construction when contract close-out occurs the responsibility for implementation, operation, and maintenance of BMPs will transfer from the contractor to the Operations and Maintenance Division – Operations Engineering Section (Operations Engineering Section) and become part of the District's program for O&M of District facilities, described in Section 5.3 below.

5.3 Operation and Maintenance of District Areas and Activities {F.3.a.}

The District implements the following measures that have been designed to ensure that District's Areas and Activities meet the requirements of Section F.3.a. of the 2010 SMR MS4 Permit, reduce District

discharges of Stormwater Pollutants from its MS4 facilities to the MEP, and prevents discharges from its MS4 facilities from causing or contributing to a violation of Water Quality Standards. This section describes the program implemented by the District for the operation, maintenance and inspection of the District's Areas and Activities.

5.3.1 Source Identification / Inventory {F.3.a.(1)}

The District maintains an inventory of its Municipal Areas (properties) and Activities (maintenance) that have the potential to generate Pollutants. This inventory is maintained by the Operations and Maintenance Division and a copy is included with each JRMP Annual Report to the Regional Board. Once the construction of a District facility is completed, the Operations and Maintenance Division will work with the District's IT Division to will add the facility to the District's facility GIS database. Linear facilities, such as roads, streets and highways, will not need to be individually inventoried, however, the District's MS4 Facilities are shown on an MS4 map included in Appendix C which is updated and provided in each JRMP Annual Report.

This inventory includes the name, address (if applicable), and a description of the area/activity; which Pollutants are potentially generated by the area/activity; whether the area/activity is adjacent to an Environmentally Sensitive Area (ESA); and identification of whether the area/activity is tributary to and within the same hydrologic subarea as a CWA Section 303(d) water body segment and generates Pollutants for which the water body segment is Impaired.

5.3.2 Typical Minimum BMPs {F.3.a.(2)(b)

Based on the Areas and Activities inventoried and the Pollutants of Concern identified, a list of potential minimum Source Control / Pollution Prevention BMPs was developed; appropriate minimum BMPs applicable to specific facilities or activities are identified per 5.3.3 and 5.3.4 below. The BMPs listed are both effective and widely accepted. The District consults other sources of BMP information and considers implementation of additional methods and measures as appropriate. Appropriate BMPs for each District Area are incorporated into the FPPPs, as applicable. In addition, minimum BMPs for the District's mobile activities are also incorporated into the District's FPPPs.

5.3.3 BMPs for District Activities

The Activities conducted by the District within the Santa Margarita Region include:

- Pesticide and/or herbicide application
- Unpaved Road maintenance
- Painting
- Outdoor loading/unloading of materials
- Outdoor storage of raw materials
- Waste handling and disposal
- Grading
- Construction

- Fence Repair
- Mowing

The District's FPPP describes the specific BMPs deployed for each of these activities {F3.a.(2)}

5.3.4 BMPs for District Areas

5.3.4.1 Facility Pollution Prevention Plan (FPPP) {F.3.a.(2)}

An FPPP is maintained that covers all District Facilities and is designed to identify the minimum Pollution Prevention Methods and BMPs applicable to each District Facility and the District's mobile maintenance activities. The FPPP is maintained at the District's headquarters in Riverside, CA. The District's Operations and Maintenance Division, with assistance from the NPDES Section, is responsible for implementation and update of the FPPP. The FPPP also includes a Facility Inspection Form that is used to record inspection findings.

For any District Facilities that are tributary to and within the same hydrologic unit as a 303(d) listed waterbody and/or within, adjacent to, or discharging directly to an ESA, the FPPP includes any enhanced measures deemed necessary to mitigate Pollutants shown to be generated by the site, for which the water body segment is Impaired. As TMDLs are developed and/or Action Level exceedances are detected, the BMPs implemented at these facilities may be revisited to ensure that all appropriate enhanced measures deemed necessary by the District are implemented.

For other District owned areas that do not have an FPPP (such as vacant land), appropriate BMPs including those identified in the remaining Subsections of 5.3.4. are implemented on an as-needed basis as problems are identified.

5.3.4.2 BMP Implementation for Management of Pesticides, Herbicides, and Fertilizers {F.3.a.(3)}

The District implements BMPs to reduce the contribution of Stormwater Pollutants to the MEP associated with the application, storage and disposal of pesticides, herbicides and fertilizers from District Areas and Activities to MS4 facilities and Receiving Waters. Such BMPs are described in the FPPP applicable to the facility and generally include:

(a) Educational activities, permits, certifications and other measures for District applicators and distributors;

(b) Integrated Pest Management (IPM) measures that rely on non-chemical solutions where possible;

(c) The use of native vegetation where consistent with the facility's intended use and landscaping plan;

(d) Schedules for irrigation and chemical application such that they are not applied in advance of anticipated rain events or during rain events ; and

(e) The collection and proper disposal of unused pesticides, herbicides, and fertilizers.

5.3.4.3 BMP Implementation for Flood Control Structures {F.3.a.(4)}

(a) The District implements procedures to assure that new flood management projects assess the impacts on the water quality of Receiving Waters. See Section 5.1.3.

(b) The District includes water quality protection measures, where feasible, when retrofitting existing flood control structural devices.

(c) The District's Operations and Maintenance Division – Maintenance Section (Maintenance Section) evaluates its existing flood control structures as part of ongoing routine maintenance. For any structures that are found to be causing or contributing to a condition of Pollution, the District implements measures to reduce or eliminate the structure's effect on Pollution, and evaluates the feasibility of retrofitting the structural flood control device. The inventory and evaluation is completed by and submitted to the Regional Board in each JRMP Annual Report.

5.3.4.4 District Maintained Unpaved Roads Maintenance {F.3.a.(10)}

(a) The District implements or requires implementation of BMPs for Erosion and sediment control measures, and to minimize potential impacts on streams and wetlands during their maintenance activities on District maintained unpaved roads, particularly in or adjacent to Receiving Waters. Such BMPs may include, as applicable to the maintenance activity:

- Access roads are stabilized immediately after grading, using gravel to prevent erosion.
- Access roads that are prone to flood damage are stabilized with rock.

(b) The District maintains as necessary its unpaved roads adjacent to streams and riparian habitat to reduce Erosion and sediment transport.

(c) Re-grading of unpaved roads during maintenance is sloped outward where consistent with road engineering safety standards or alternative equally effective BMPs are implemented to minimize Erosion and Sedimentation from unpaved roads; and

(d) Through maintenance of unpaved roads, the District examines the feasibility of replacing existing culverts or design of new culverts or bridge crossings to reduce Erosion and maintain natural stream geomorphology.

5.3.5 Operation and Maintenance of MS4 Facilities and Treatment Controls {F.3.a.(6)}

The District's open channels, catch basins, storm drain inlets, and retention/detention basins are inspected, cleaned, and maintained as described below. Wastes and materials removed are disposed of per applicable laws and appropriate BMPs are deployed as necessary to minimize impacts to the Receiving Waters to the MEP. During the annual inspection and maintenance of MS4 facilities, the District inspects for visual evidence of Illegal Discharges, litter and/or debris accumulation, and other maintenance issues.

(a) Treatment Controls: Currently, the District does not own nor operate any Structural Treatment Control BMPs in the Santa Margarita Watershed.

If the District constructs or maintains any such BMPs in the future, the BMPs will be integrated and identified within the applicable FPPP (see Section 5.3.4.1), and will be inspected as described in Section 5.4 below.

(b) MS4 Facilities: The District implements a schedule of maintenance activities for its MS4 facilities (including but not limited to catch basins, storm drain inlets, detention basins, etc). The maintenance activities include:

i. Inspection and removal of accumulated Waste at least annually between May 1st and September 30th of each year for all open MS4 facilities;

ii. Additional facility cleaning as necessary between October 1st and April 30th of each year;

iii. Open channels and basins are cleaned of observed anthropogenic litter in a timely manner;

iv. Maintenance activities within open channels must not adversely impact Beneficial Uses;

v. Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed;

vi. Proper disposal of Waste removed pursuant to applicable laws; and

vii. Measures to eliminate Waste discharges during MS4 maintenance and cleaning activities.

(c) Low Priority MS4 Facilities: Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year. MS4 facilities that have met these criteria and will be inspected every other year are identified below

- *None identified at this time*

5.3.5.1 Flood Control Structure Evaluations {F.3.a.(4)(c)}

The Maintenance Section evaluates its existing flood control structures as part of the ongoing routine maintenance described above, to identify structures that are causing or contributing to a condition of Pollution. For any such structures, where feasible, the District implements measures to reduce or eliminate the structure's effect on Pollution, and evaluates the feasibility of retrofitting the structural flood control device. The inventory and evaluation findings are submitted to the San Diego Regional Board in each JRMP Annual Report.

5.3.5.2 Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance {F.3.a.(7)}

The District does not own nor operate a municipal sanitary sewer system, however, the District does cooperate with the local sewer agencies for responding to and addressing any observed infiltration into the District's MS4 facilities. In addition, the District implements the following controls to limit infiltration of seepage from sanitary sewers to MS4 facilities where necessary:

i. Adequate plan checking by the Operations Engineering Section, Design Sections and Contract Administration Section for Encroachment Permits, District Flood Control Projects and any District Priority Development Projects for which the District will assume ownership and maintenance responsibilities;

ii. Incident response training for its field maintenance employees who may identify sanitary sewer spills;

iii. Notification to the appropriate Copermittee for Code enforcement inspections;

iv. MS4 maintenance and inspections;

v. Interagency coordination with sewer agencies; and

vi. Proper education of its staff and contractors conducting field operations on the MS4.

5.4 Inspection of District Areas and Activities {F.3.A.(8)}

(a) In addition to the inspections identified in Section 5.3.5 above, the District inspects the following high priority District Areas and Activities annually:

i. Flood management projects and flood control devices not otherwise inspected per Section F.3.a.(6)(b) of the 2010 SMR MS4 Permit – None at this time

ii. Areas and Activities tributary to and within the same hydrologic subarea as a CWA Section 303(d) Impaired water body segment, where an Area or Activity generates Pollutants for which the water body segment is Impaired – None at this time

iii. District Areas and Activities within or adjacent to or discharging directly to Receiving Waters within ESAs

iv. District Facilities:

[a] maintenance and storage yards for materials, waste, equipment and vehicles

v. All District WQMP projects with Structural post-construction BMPs, including verification that the Structural post-construction BMPs on those projects have been appropriately maintained consistent with the WQMP and/or the FPPP. {F.1.f.(2)(b)(iii)} – None at this time

vi. Other District Areas and Activities that the District determines may contribute a significant Pollutant load to the MS4 – None at this time

(b) Inspections of the District's MS4 facilities are performed concurrently with the maintenance schedule described in Section 5.3.5 above.

(c) Other District Areas and Activities are inspected as needed and in response to water quality data, valid public complaints, and findings from District or contract staff.

(d) Based upon site inspection findings, the District implements all follow-up actions necessary to comply with this Order.

5.5 Enforcement of District Areas and Activities {F.3.a.(9)}

Where necessary, the District will conduct enforcement as discussed in Section 3.4, to ensure that District Areas and Activities are in compliance with the 2010 SMR MS4 Permit.

6.0 DEVELOPMENT PLANNING {F.1.}

6.1 Introduction

As discussed in Section 5, the District primarily designs and builds Watershed Protection Projects. If the District builds a Development Project in the Santa Margarita Region in the future, such as a satellite maintenance yard, the District will implement the applicable provisions of this section. The District supports the County's implementation of the following programs related to the planning and permitting of Development Projects within unincorporated Riverside County. The County's programs are designed to:

- Reduce Development Project discharges of Stormwater Pollutants from the MS4 to the MEP;
- Prevent Development Project discharges from the MS4 from causing or contributing to a violation of Water Quality Standards;
- Prevent Illicit Discharges into the MS4; and
- Manage increases in Runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt Pollutant generation, or other impacts to Beneficial Uses and stream habitat due to increased erosive force.

This program element links the County's General Plan, environmental review process, and development approval and permitting processes to the later phases of detailed design, construction and operation. A General Plan specifies policies that guide development. The environmental review process examines potential impacts from proposed development with respect to the General Plan policies and many environmental issues, including water quality, and includes consideration of mitigation measures to reduce any identified potentially significant impacts. The development approval and permitting processes carry forth project-specific requirements in the form of conditions of approval, design specifications, tracking, inspection, and enforcement actions. The County's JRMP includes a generalized flow diagram that depicts the relationship of the County's General Plan, environmental review process and development planning and permit process, as well as the project design, construction, and operation phases.

6.2 General Plan {F.1.a.}

The District does not maintain a General Plan. Watershed protection principles and objectives for managing Urban Runoff for land developments are reflected in the appropriate polices, goals and objectives of the Copermittees' General Plans.

6.3 Environmental Review Process {F.1.b.}

The District does not regulate private developments. The County's environmental review process, as it relates to private Development Projects, is described in the County JRMP.

6.4 WATER QUALITY MANAGEMENT PLAN {F.1.d}, {F.1.c.}

The District, in collaboration with the other Copermittees, has developed a WQMP for the Santa Margarita Region of Riverside County, which describes the process for application of required LID Principles (Site Design), Source Control BMPs, LID BMPs, and Treatment Control BMPs, on Priority Development Projects to ensure that the land use approval and permitting process will:

- Reduce Priority Development Project discharges of Stormwater Pollutants from the MS4 to the MEP, and
- Prevent Priority Development Project Runoff discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

The SMR WQMP and a Project-Specific WQMP template are provided on the following website at: http://rcflood.org/NPDES/Developers.aspx

6.5 Hydromodification Management Plan {F.1.h.}

A Hydromodification Management Plan (HMP) is being developed collectively by the Copermittees to manage increases in Runoff discharge rates and duration from Priority Development Projects. The objectives of the HMP are:

- Estimated proposed project Runoff discharge rates and durations do not exceed the pre-project discharge rates and durations.
- For proposed projects on an already developed site, the estimated proposed project Runoff discharge rates and durations do not exceed the pre-project discharge rates and durations, where the pre-project discharge rates and durations are that of the pre-development, naturally occurring condition.

Upon completion of the HMP in 2013, the HMP will be incorporated into the SMR WQMP. Until that HMP is developed and approved by the Regional Board, the interim Hydromodification requirements described in the SMR WQMP are in effect.

6.6 Development Project Review, Approval, and Permitting {F.1.d.}

6.6.1 Process Overview

During the County's planning process, prior to project approval and issuance of local permits, the District, provides recommended conditions of approval to the County, so that Priority Development Project discharges of Stormwater Pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of Water Quality Standards, and will comply with the County's ordinances, permits, plans, requirements, and with the 2010 SMR MS4 Permit.

All Development Projects that are submitted to the County for discretionary approval or permitting are required by the County to fill out a Project Application Form. Based on the results of that checklist, each project is categorized as either a "Priority Development Project" or as an "Other Development Project." Since July 2005 the County has required a project applicant prepare a project-specific WQMP for all Priority Development Projects. The requirements for Other Development Projects are described in Section 6.6.6.

The County's Planning Department coordinates the land use case processing, which includes compliance with CEQA procedures, General Plan conformity, ordinance consistency, and public health and safety requirements. The County's Planning Department works closely with many other departments to ensure proper review of these issues. The District provides land development review services to the County with regard to flood hazard risk reduction/mitigation and WQMOs for the unincorporated areas of the County. The District's Planning Division – Development Review Section (Development Review Section) reviews

Priority Development Projects for water quality and flood risks, recommends conditions of approval related to water quality and flood hazard mitigation, and reviews and recommends approval of preliminary and final project-specific WQMPs for Priority Development Projects in unincorporated County of Riverside. Together, these departments review proposed Development Projects for applicability and compliance with WQMP requirements.

6.6.2 Identification of Development Projects Requiring a Project-Specific WQMP {F1.d(1) & (2)}

The County Planning Department's Project Application Form includes a WQMP Applicability Checklist as discussed in Section 6.6.6.

In reviewing project applications, the County's Planning Department reviews the WQMP Applicability Checklist and the other information provided in the project application to verify the applicant's determination as a *Priority Development Project* or an *Other Development Project*.

If a Project-Specific WQMP is required, the County's Planning Department will verify that a preliminary Project-Specific WQMP is included with the project application packet. The County's Planning Department will then forward copies of the project application, including the Project-Specific WQMP, to the District's Development Review Section for review, and as applicable, the District will recommend conditions of approval. Recommended conditions of approval for the project will not be issued unless the preliminary WQMP is submitted and found to be acceptable.

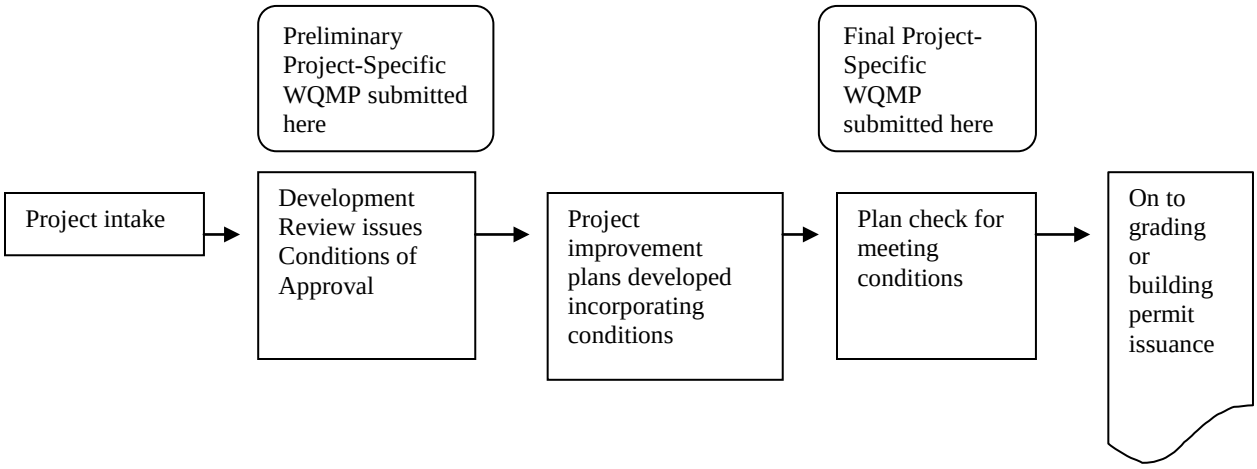
6.6.3 Conditions of Approval {F.1.c}

The District's Development Review Section recommends to the County conditions of approval to assist the County in ensuring that their requirements of the 2010 SMR MS4 Permit are met. The District has developed standardized conditions of approval that may be used. Standard Conditions of Approval used by the District are provided in Appendix D.

6.6.4 Review of Preliminary Project-Specific WQMPs

The County's Planning Department requires preliminary Project-Specific WQMPs to be submitted with the project application for all Priority Development Projects. The level of detail in the preliminary Project-Specific WQMP must be consistent with the level of detail for the overall project design at the time project approval is sought. Prior to issuance of grading or building permits, the project applicant must submit the final Project-Specific WQMP for review and approval. The District's Development Review Section uses a WQMP Review Checklist to facilitate thorough and consistent reviews of preliminary and final project-specific WQMPs. The Project WQMP Review Checklist is an exhibit to the SMR WQMP. Figure 6-2 shows a typical review and approval process.

Figure 6-2. Flowchart of Project Review, Approval & Permitting Process



6.6.5 Review and Approval of Final Project-Specific WQMPs {F.1.d.(9)(a)}

Based on the Conditions of Approval and prior to approval of a final Project-Specific WQMP, the County, in coordination with the District's Development Review Section, will ensure that:

- The final Project-Specific WQMP is prepared and is consistent with the requirements of the SMR WQMP;
- LID BMPs have been incorporated into the site to the extent feasible; or if the project proponent has acceptably demonstrated that LID BMPs are technically infeasible for the project, the Development Review/Plan Check Section will document within the project file a finding of technical infeasibility;
- The entity or entities responsible for BMP implementation and maintenance have been identified; and
- The mechanism for BMP funding is identified.

The District's Development Review Section will advise the County that the conditions of approval have been met prior to the County's approval of a final Project-Specific WQMP.

6.6.6 Requirements for All Development Projects [F.1.c]

Where requested by the County, the District's Development Review Section recommends conditions of approval for Other Development Projects (Development Projects that are not Priority Development Projects), to incorporate LID Principles (Site Design) and Source Control BMPs, where applicable and feasible, into project plans. LID BMPs and Treatment Control BMPs may be required on a case-by-case basis for Other Development Projects that directly discharge Runoff to Receiving Waters listed as Impaired on California's CWA Section 303(d) List of Water Quality Limited Segments. In addition, District Projects that qualify as an Other Development Project will similarly implement the requirements below.

Discharges from Other Development Projects are subject to the following management measures:

(1) Source control BMPs that reduce Stormwater Pollutants of Concern in Runoff; prevent Illicit Discharges into the MS4; prevent irrigation runoff; storm drain system stenciling or signage; properly design outdoor material storage areas; properly design outdoor work areas; and properly design trash storage areas.

(2) The following LID BMPs listed below must be implemented at all Development Projects where applicable and feasible:

(a) Conserve natural areas, including existing trees, other vegetation, and soils;
(b) Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised;
(c) Minimize the impervious footprint of the project;
(d) Minimize soil compaction of landscaped areas;
(e) Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.); and
(f) Disconnect impervious surfaces through distributed pervious areas.

(3) Buffer zones for natural water bodies, where technically feasible. Where buffer zones are technically infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc.

(4) Other measures necessary so that grading or other construction activities meet the provisions specified in Section 7.0 of this JRMP.

(5) Submittal of documentation of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.

(6) Infiltration and Groundwater Protection

To protect groundwater quality, restrictions are applied to the use of Treatment Control BMPs that are designed to primarily function as large, centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions are designed so that the use of such infiltration Treatment Control BMPs does not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each Treatment Control BMP designed to primarily function as a centralized infiltration device is required to meet the restrictions below, unless the Development Project demonstrates that a restriction is not necessary to protect groundwater quality.

(a) Infiltration BMPs must not be used for areas of industrial or light industrial activity, and other high threat to water quality land uses and activities as designated by each Copermittee unless first treated or filtered to remove Pollutants prior to infiltration.
(b) The seasonal high groundwater mark must be at least 10 feet below the invert of the Infiltration BMP.
(c) Infiltration BMPs must be located a minimum of 100 feet horizontally from any water supply wells.
(d) No part of an Infiltration BMP should be within a 2:1 (horizontal:vertical) influence line extending from any septic leach line.
(e) Infiltration BMPs must not be located in soils that, according to a licensed Geotechnical Engineer, do not have adequate physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) for the protection of groundwater.

(7) Where feasible, landscaping with native or low water species shall be preferred in areas that drain to the MS4 or to Waters of the U.S.

(8) Rain water harvesting and water reuse, where feasible, must be encouraged as part of the site design and construction to reduce Pollutants in Stormwater discharges to the MEP.

Additionally, where an Other Development Project proposes a new Unpaved Road, the applicant must incorporate the following or alternative BMPs that are equally effective:

- Identify practices that will minimize road related Erosion and sediment transport;
- Grade Unpaved Roads to slope outward where consistent with road engineering safety standards;
- Incorporate installation of water bars as appropriate; and
- Provide Unpaved Road and culvert designs that do not impact creek functions.

6.6.7 Unpaved Roads Development {F.1.i}

The County implements or requires the implementation of Erosion and sediment control BMPs after construction of new Unpaved Roads. Such BMPs are required for Priority Development Projects and are discussed in the 2012 SMR WQMP, and for Other Development Projects as discussed in Section 6.6.6 above.

6.6.8 Plan Check: Issuance of Grading or Building Permits

6.6.8.1 Plan Check for Priority Development Projects

Construction plans pertaining to the implementation of the final WQMP submitted by the project applicant to the County for plan check will be reviewed by the District's Development Review Section to verify that they properly incorporate all Site Design, Structural LID and/or Treatment Control BMPs identified in the approved final Project-specific WQMP and that they are consistent with the conditions of approval imposed by the County. The designs of Structural Source Control BMPs, LID BMPs, and Treatment Control BMPs are reviewed to verify inclusion of control measures necessary to effectively minimize the creation of Nuisance or Pollution associated with vectors, such as mosquitoes, rodents, flies, etc. The design review during plan check also verifies that Structural BMPs provide adequate access for ongoing maintenance of the BMP after construction. The construction plans are also reviewed for consistency with the BMP design criteria and guidance provided in the SMR WQMP.

6.6.8.2 Plan Check for Other Development Projects

For Other Development Projects, the County's Planning Department reviews the construction plans submitted for a grading or building permit to ensure that the plans incorporate all applicable and appropriate Site Design, Source Control and LID BMPs as described in Section 6.6.6.

6.6.8.3 Standard Notes for Improvement Plans

Prior to the issuance of a grading or building permit, the County's Building and Safety Department requires standard notes to be added to the plan set to address Pollution Prevention during the construction phase of a project.

6.7 Field Verification of BMPs & Permit Closeout{F.1.e.}

The Field verification of BMPs and Permit closeout process is described within the County's JRMP.

6.8 Structural Post-Construction BMP Database and Maintenance Verification {F.1.f}

The County's Planning Department implements a program, as described within the County's JRMP, to verify the maintenance and effectiveness of post construction Structural BMPs constructed pursuant to an approved final Project-Specific WQMP.

6.9 Enforcement for Development {F.1.g}

The programs for enforcement for Development Projects are described within the County's JRMP.

7.0 PRIVATE DEVELOPMENT CONSTRUCTION ACTIVITY {F.2.}

The District regulates private construction activities that occur within its rights-of-way through conditions established in Encroachment Permit, as well as District Construction Projects as discussed in Section 5.1. In areas outside of District rights-of-way, the other Copermittees within their respective jurisdictions implement programs, as described within their respective JRMPs. These programs are designed to:

- Meet the requirements of provision F.2 of the 2010 SMR MS4 Permit;
- Require implementation and maintenance of Structural and Non-Structural BMPs to reduce Pollutants in Stormwater Runoff from Construction Sites to the MS4;
- Reduce Construction Site discharges of Stormwater Pollutants from the MS4 to the MEP; and
- Prevent Construction Site discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.

7.1 Source Identification and Inventory {F.2.b}

The Operations Engineering Section maintains a database of private Construction Sites occurring within District rights-of-way, and the Contract Administration Section maintains an inventory of District construction sites. Construction Sites include any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation. Construction Sites are included in the database regardless of whether the Construction Site is subject to the Construction General Permit or other individual construction Stormwater NPDES permits. This database is updated when a project applicant submits an application to the District for an Encroachment Permit or when a new District project begins construction. The District's database includes the following project information:

- Assigned Encroachment Permit number
- Project number, name, drawing number and associated sheets of District facilities involved
- Tract Map or Case Numbers
- Watershed or Subwatershed
- Project priority
- Date of inspections performed at each site
- WDID number, if applicable
- Required documents as part of the Application
- Permit Status
- Description of activity occurring within District's rights of way
- Agency involved (cities, County, etc.)
- Design and Construction Division – Contract Administration Section Inspection Staff assigned to monitor construction of the project
- Location information (Latitude and Longitude)

7.2 Construction Site Planning and Project Approval Process {F.2.c}

Prior to issuance of Encroachment Permits for private construction within District's rights-of-way, and for District Construction Projects, the District:

- Requires implementation of the applicable designated BMPs (Section 7.3) and other measures to ensure that Illegal Discharges into the MS4 are prevented, Stormwater Pollutants discharged from the Construction Site are reduced to the MEP, and construction activity discharges from the MS4 are prevented from causing or contributing to a violation of Water Quality Standards in Receiving Waters.

- Ensures that the project proponent's Runoff management plan (or equivalent Construction Site BMP plan) is reviewed by the NPDES Section to verify compliance. The Construction Site BMP plan does not need to be reviewed to ensure that it complies with the Construction General Permit.

- The Operations Engineering Section will verify that project proponents applying for an Encroachment Permit from the District, which are subject to the Construction General Permit, have existing coverage. Where coverage under the Construction General Permit appears to apply, the Operations Engineering Section verifies coverage on the State Board's web page at:

  http://www.swrcb.ca.gov/water_issues/programs/stormwater/databases.shtml#const_db

  For such projects, the Regional and/or the State Board are responsible for conducting inspections and verifying compliance with the Construction General Permit. The Operations Engineering Section's review of the project's Runoff management plan, as well as the Contract Administration Section inspections conducted as described in Section 7.4 below, are to ensure compliance with the Encroachment Permit conditions, as applicable, and the 2010 MS4 Permit.

- Categorizes the project as a high, medium, or low threat to water quality for the purposes of inspection, as described in Section 7.4.

7.3 Construction Site BMPs {F.2.d}

The District has designated a minimum set of BMPs and other measures to be implemented at all Construction Sites within District rights-of-way, as applicable to the site and the activities thereon. The District requires implementation of the designated minimum BMPs and any additional measures necessary to comply with the 2010 SMR MS4 Permit at each Construction Site within its jurisdiction year round. BMP implementation requirements, however, can vary based on Rainy and Dry Seasons. Dry Season BMP implementation must plan for and address unseasonal rain events that may occur during the Dry Season (May 1 through September 30).

7.3.1 Minimum Erosion and Sediment Control Practices {F.2.d(1)(b)}

- Erosion prevention. Erosion prevention is to be used as the most important measure for keeping sediment on site during construction;

- Sediment controls. Sediment controls are to be used as a supplement to erosion prevention for keeping sediment on-site during construction;

- Slope stabilization must be used on all active slopes during rain events regardless of the season and on all inactive slopes during the Rainy Season and during rain events in the Dry Season;

- Permanent revegetation or landscaping as early as feasible; and

- Erosion and sediment controls must be required during the construction of Unpaved Roads.

7.3.2 Minimum Management Measures {F.2.D(1)(a)}

BMP Name	Stormwater BMP Handbook Portal: Construction	Caltrans Construction Site BMP Manual	MS4 Permit Requirement Reference F.2.d.(1):
Stabilize Exposed Soils (one or more or the methods below will be used as needed)			
Chemical Stabilization (Soil Binders)	EC-5	SS-5	(a): (iv), (vii) (viii) (b): (i)
Polyacrylamide	SE-11		(a): (iv), (vii) (viii) b): (i)
Mulching			
Hydraulic Mulch	EC-3	SS-3	(a): (iv), (vii) (viii) b): (i)
Straw Mulch	EC-6	SS-6	(a): (iv), (vii) b): (i),
Wood Mulching	EC-8	SS-8	(a): (iv), (vii) b): (i)
Permanent Seeding			(a): (iv), (vii) b): (i) (iv)
Sodding			(a): (iv), (vii), (viii) b): (i) (iv)
Soil Roughening			
Temporary Seeding/Hydroseeding	EC-4	SS-4	(a): (iv), (vii) (viii) b): (i)
Protect Steep Slopes			
Earth Dikes/Drainage Swales/Lined Ditches	EC-9	SS-9	b): (i), (iii)
Fiber Roll	SE-5	SC-5	b): (i) (iii)
Geotextiles	EC-7	SS-7	b): (i) (iii)
Gradient Terraces			b): (i) (iii)
Soil Retention			b): (i) (iii)
Straw Bale Barrier	SE-9	SC-9	b): (i) (iii)
Temporary Slope Drain	EC-11	SS-11	b): (i) (iii)
Protect Waterways			
Check Dams	SE-4	SC-4	
Outlet Protection/Velocity Dissipation Devices	EC-10	SS-10	(a): (xii) b): (i)
Streambank Stabilization	EC-12	SS-12	(a): (xii)
Temporary Stream Crossings	NS-4	NS-4	b): (i)
Vegetated Buffer			

Phase Construction			
Construction Sequencing (Scheduling)	EC-1	SS-1	(a): (ii), (iii), (iv), (v), (vi), vii b): (i)
Dust Control (Wind Erosion Control)	WE-1	WE-1	(a): (iv), (viii)
Preserve Site Condition			
Entrance/Outlet Tire Wash	TC-3	TC-3	(a): (ix),
Preservation of Existing Vegetation	EC-2	SS-2	(iii) (iv), (xii) b): (i)
Stabilized Construction Entrance/Exit	TC-1	TC-1	(a): (ix)
Stabilized Construction Roadway	TC-2	TC-2	(a): (ix) b): (i) (iv)
Scheduling			(a): (ii) (iii), (iv), (v), (vi), vii b): (i)
Waste Management			
Waste Handling and Disposal	SC-34		(a): (i), (xi.), (x), (xi)
Pollution Prevention			
Spill prevention, Control and Cleanup	SC-11		(a): (i.), (x)

The Operations Engineering Section requires project proponents applying for an Encroachment Permit to submit for review a Runoff Management Plan, SWPPP/Erosion Control Plan or describe other process for requiring a Runoff Management Plan appropriate to various project types/sizes that identifies each of the BMPs used during the construction phase and their deployment at the Construction Site. Similarly, the Contract Administration Section requires a Runoff Management Plan for all District Construction Projects. The Runoff Management Plan:

- Establishes limitations of grading to a maximum disturbed area as determined by Operations Engineering Section before either temporary or permanent erosion controls are implemented to prevent Stormwater Pollution. This maximum area is established on a case-by-case basis depending on the specifics of each project.

  The District has the option of authorizing a temporary increase in the size of disturbed soil areas, by a set amount beyond the maximum, if the individual site is in compliance with the requirements of this JRMP and the site has adequate control practices implemented to prevent Stormwater Pollution;

- Requires preservation of natural hydrologic features where feasible;

- Preserves riparian buffers and corridors where feasible;

- Requires the evaluation and maintenance of all BMPs, until removed; and

- Retains, reduces and provides proper management of all Stormwater Pollutant discharges on site to the MEP standard.

Since BMP technology is constantly changing, the District may consider other BMPs of equivalent or better performance on a case-by-case basis.

7.3.3 Enhanced BMPs {F.2.d.(2)}

The District requires implementation of enhanced measures to address the threat to water quality posed by all Construction Sites tributary to CWA Section 303(d) water body segments Impaired for sediment or turbidity. Currently the District's MS4 facilities do not discharge into CWA Section 303(d) water body segments Impaired for sediment or turbidity. Where necessary, the Encroachment Section also requires implementation of enhanced measures for Construction Sites within, or adjacent to, or discharging directly to Receiving Waters within an ESA (as defined in Attachment C of the 2010 SMR MS4 Permit).

7.3.4 Active/Passive Sediment Treatment (AST) {F.2.d.(3)}:

The Operations Engineering Section and/or the Contract Administration Section, as applicable, requires implementation of AST for sediment at Construction Sites within District rights-of-way (or portions thereof) that it determines to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors are to be considered by the Encroachment Permit Section:

(a) Soil erosion potential or soil type;

(b) The site's slopes;

(c) Project size and type;

(d) Sensitivity of Receiving Water bodies;

(e) Proximity to Receiving Water bodies;

(f) Non-Stormwater discharges;

(g) Ineffectiveness of other BMPs;

(h) Proximity and sensitivity of aquatic threatened and endangered species of concern;

(i) Known effects of AST chemicals; and

(j) Any other relevant factors.

As defined in the MS4 Permit, AST is a treatment mechanism that uses mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge. Such measures are highly expensive and are expected only to be required in cases where there is an exceptional threat and/or demonstrable impacts to receiving water quality and all other available BMPs have been ineffective for the site.

7.4 Construction Site Inspection {F.2.E}

The Contract Administration Section upon request from the Operations and Maintenance Division, conducts Construction Site inspections within District rights-of-way, for compliance with the conditions in the Encroachment Permit (where applicable), and the 2010 SMR MS4 Permit. When conducting inspections of Construction Sites the Contract Administration Section utilizes the inspection form provided in Appendix E. Priorities for inspecting Construction Sites must consider the nature and size of the construction activity, topography, and the characteristics of soils and Receiving Water quality. The Contract Administration Section inspection staff and/or the Operating Engineering Section inspect the inventoried Construction Sites according to the schedule below.

7.4.1 Rainy Season[11] Inspection Frequency

Table 7-1: Construction Site Inspection Frequency

Priority	Supporting Criteria [(a)]	Rainy Season Inspection Frequency
High	• Sites that disturb an area greater than 30 acres with rough grading or with active, unstabilized slopes occurring during the Rainy Season • Sites disturbing an area greater than one (1) acre within the same hydrologic subarea and tributary to Receiving Waters with CWA Section 303(d) listed waters for sediment or turbidity Impairments or within, directly adjacent to, or discharging directly to a Receiving Water within an ESA. • Other sites determined by the District as a significant threat to water quality, considering the following factors: o Soil erosion potential (e.g. Hillside sites) o Project size and type o Sensitivity of and proximity to Receiving Waters (particularly ESAs since no Receiving Waters are 303(d) listed for sediment or turbidity) o History or presence of Illegal Non-Stormwater Discharges o Known past record of non-compliance by the operators of the Construction Site o Any other relevant factors.	Every Two Weeks
Medium	Project Size Sites disturbing an area of one acre or more.	Monthly
Low	Project Size Sites disturbing less than 1 acre.	As needed

7.4.2 Dry Season Inspection Frequency

The District inspects all Construction Sites within District rights-of-way as needed during the Dry Season. High priority sites as defined in Table 7-1 are inspected at least once in August or September each year.

7.4.3 Re-inspections

Based upon site inspection findings, the Contract Administration Section implements all follow-up actions (i.e., re-inspection, enforcement) necessary to comply with the 2010 SMR MS4 Permit. Re-inspection frequencies are determined by the Contract Administration Section based upon the severity of deficiencies, the nature of the construction activity, and the characteristics of soils and Receiving Water quality.

7.4.4 Conducting Inspections

At a minimum, the following items are addressed by Contract Administration Section staff in consultation with the NPDES Section during Construction Site inspections using the construction inspection checklist identified for the Runoff Management Plan:

- Check for coverage under the Construction General Permit NOI and/or WDID No. during initial inspections;
- Assessment of compliance with the conditions listed within the Encroachment Permit and District Construction Contract Documents relating to Runoff issues, including the implementation and maintenance of designated minimum BMPs;
- Assessment of BMP effectiveness;
- Visual observations for Non-Stormwater discharges, potential Illicit Connections, and potential discharge of Pollutants in Stormwater Runoff;
- Review of site monitoring data results, if the site monitors its Runoff in accordance with the Construction General Permit;
- Education and outreach on Stormwater Pollution prevention, as needed; and
- Creation of a written or electronic inspection report.

The Contract Administration Section tracks the number of inspections for each inventoried Construction Site within the District's rights-of-way throughout the JRMP Annual Reporting period to verify that each site is inspected at the minimum frequency required. The Construction Site inspection form is included in Appendix E.

7.5 Enforcement {F.2.f }

The District has developed and implements an escalating enforcement process (Section 3.5) that is designed to achieve prompt corrective actions at Construction Sites for non-compliance with the District's Encroachment Permit conditions or the requirements of the 2010 SEMR MS4 Permit.

The Contract Administration Section responds to construction complaints received from third parties and works with the NDPES Section to assure the San Diego Regional Board that corrective actions have been implemented, if warranted.

7.6 Reporting of Non-Compliant Construction Sites {F.2.g}

If the Operations Engineering Section or Contract Administration Section discovers a violation during inspection that may require high level enforcement, these sections will forward information of the violation to the NPDES Section for further evaluation. The NPDES Section will notify the San Diego Regional Board when the District issues high level enforcement (as defined in Section 3.5) to a

Construction Site that poses a significant threat to water quality in its jurisdiction as a result of violations of the conditions listed within the Encroachment Permit.

In addition, the NPDES Section annually notifies the San Diego Regional Board, prior to the commencement of the Rainy Season (October 1st), of all Construction Sites with alleged violations that pose a significant threat to water quality. Information may be provided as part of the JRMP Annual Report if submitted prior to the Rainy Season. Information provided must include, but not be limited to, the following:

(a) WDID number if enrolled under the Construction General Permit

(b) Site location, including address

(c) Current violations or suspected violations

8.0 INDUSTRIAL AND COMMERCIAL SOURCES {F.1.B.}

As discussed in Section 3.4, the District does not have land use or police powers. Therefore, the District does not have the authority to regulate industrial or commercial facilities. The other Copermittees, within their respective jurisdictions, implement programs, as described within their JRMP, designed to help prevent or reduce discharges to the MS4 from causing or contributing to a violation of Water Quality Standards in Receiving Waters.

9.0 RESIDENTIAL SOURCES {F.C}

As discussed in Section 3.4, the District does not have land use or police powers. Therefore, the District does not have the authority to regulate residential activities. The other Copermittees, within their respective jurisdictions, implement programs designed to help prevent or reduce discharges to the MS4 from residential activities from causing or contributing to a violation of Water Quality Standards in Receiving Waters.

10.0 RETROFITTING EXISTING DEVELOPMENT{F.3.D.}

The District has no jurisdiction over Existing Developments with the Santa Margarita Region. The other Copermittees who have jurisdiction over Existing Developments have conducted and implement a Retrofit Project as described in their Respective JRMPs.

11.0 PUBLIC EDUCATION COMPONENT{F.6.}

Developing programs to increase public awareness and to involve the public can be an effective method for controlling Pollution associated with Runoff. Emphasizing the relevant impact of Runoff to target audiences increases the likelihood that the messages will be noticed and that the audience will support and participate in program implementation. The Riverside County Permittees have developed a County-wide Public Education and Outreach Program that is implemented on their behalf by the District, through the Implementation Agreement.

To leverage Copermittee resources, the Public Education and Outreach Program may partner with other entities including Riverside County's Waste Management Department, Western Riverside Council of Governments, other County-wide Stormwater public education programs in Southern California, the Riverside-Corona Resource Conservation District, and others to promote conservation, Pollution Prevention and environmental awareness. The public education program may also expand outreach opportunities by collaborating with entities such as Riverside County's Agricultural Commissioner and University California Cooperative Extension to promote proper use of pesticides and herbicides to specific target groups such as pesticide applicators and home gardeners.

The Public Education and Outreach Program maintains an Internet website that provides information to residents and businesses about Stormwater management and offers Stormwater Pollution Prevention activities. The website also provides a materials order form for educational materials, and has a tracking mechanism for the number of queries. The website address is http://rcflood.org/stormwater/

11.1 Target Audiences

The District ensures that appropriate education and outreach is available to the following target audiences:

- Copermittee departments and personnel
- New Development / Redevelopment project applicants, developers, contractors, property owners, and other responsible parties
- Construction Site owners and operators
- Commercial Facility owners and operators
- Industrial Facility owners and operators
- Residential community and general public

11.2 Education of Public Audiences

11.2.1 General Education

The NPDES Section, through the Implementation Agreement described in Section 3.2.1, coordinates with the other Copermittees to develop and implement County-wide educational activities through the regional 'Only Rain Down the Storm Drain' program implemented by the NPDES Section. Where necessary those

regional activities are supplemented by the Copermittees with additional localized educational / outreach activities.

In general, these education programs educate each target audience on the following topics, as appropriate and applicable to the target audience's potential Stormwater and Non-Stormwater discharges to the MS4:

(a) Applicable water quality laws, regulations, permits, and requirements;

(b) BMPs;

(c) General Runoff concepts;

(d) Existing water quality, including local water quality conditions, Impaired waterbodies and ESAs; and

(e) Other topics, as determined by the Copermittee(s), such as public reporting mechanisms, water conservation, LID techniques, and public health and vector issues associated with Runoff.

In addition, the NPDES Section implements educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.

11.2.2 Target Audience Topics

The NPDES Section ensures that their education programs provides the following information:

New Development / Redevelopment and Construction Sites {F.6.b.(2)}

As the District does not regulate private Developments and Redevelopments, the County and Cities JRMPs describe the process for educating this Target Audience. For Construction Activities within District rights-of-way, the Contract Administration Section notifies parties the contractor about the importance of educating all construction workers in the field about Stormwater issues and BMPs, in addition to the general topics under Section 11.2.1.

Commercial and Industrial Sites / Sources {F.6.b.(3)}

Not applicable. No Industrial or Commercial Sites are located on District right-of-way.

Residential and General Public {F.6.b.(4)}

Although the District does not have regulatory authority over residences and the general public, the District, through the implementation agreement, collaborates with the other Copermittees to fund the development and implementation of the regional 'Only Rain Down the Storm Drain' public education program. One of the goals of this program is to educate residential and general public target communities on potential Pollutant generating activities (e.g., car washing, mobile operations, yard maintenance) and Pollutant generating products (e.g., pesticides, fertilizers, household chemicals). The target audiences of the residential and general public education programs includes underserved target audiences (e.g.,

disadvantaged communities), residents and managers of CIA/HOA areas, and owners and residents of MHPs.

11.2.3 Methods

Table 11-1 describes the public education and outreach methods that target public audiences:

Table 11-1: Public Education Education/Outreach Methods

Target Audience	JRMP Program Areas Addressed	Education / Outreach Methods
New Development / Redevelopment Project Applicants, Developers, Contractors, Property Owners, and other Responsible Parties	• F.1 • F.6.a • F.6.b.(2)	**Training** • Regional SMR WQMP Launch Training (upon approval of revised SMR WQMP) • Regional HMP Launch Training (upon approval of HMP) **Guidance Documents** • SMR WQMP and HMP Guidance • Regional LID BMP Design Handbook (http://rcflood.org/npdes/lidbmp.aspx) • CASQA Low Impact Development Manual for Southern California (https://www.casqa.org/LID/tabid/240/Default.aspx) • CASQA Stormwater BMP Handbooks (http://www.cabmphandbooks.com/) **Applications / Forms** • WQMP Applicability Checklist **Electronic Outreach** • Regional Quarterly E-newsletters • Website **Other** • Regional Quarterly E-newsletters
Construction Site Owners and Operators	• F.2. • F.6.a. • F.6.b.(2)	**Applications / Forms** • Construction Checklist (a sample is provided in WQMP Chapter 5) **Print Material** • After the Storm • General Construction site supervision • Outdoor Cleaning Activities • Construction Poster **Electronic Outreach** • Regional Quarterly E-newsletters • Website

Target Audience	JRMP Program Areas Addressed	Education / Outreach Methods
Commercial / Industrial Owners and Operators	• F.3.b. • F.6.a. • F.6.b.(3)	**Direct Outreach** • Business Partnerships with garden centers / nurseries, paint stores, hardware stores, home improvement stores, and pet facilities, including training for store staff on specific stormwater / BMP issues **Print Material** • After the Storm • Did you know your facility may need a stormwater permit? • Automotive Maintenance and Car Care • Outdoor Cleaning Activities • Food Service Industry • Industrial / Commercial Facilities • Landscape and Garden • Pools, Spas and Fountains **Electronic Outreach** • Regional Quarterly E-newsletters • E-blasts to mobile service providers • Website
Residential Community and General Public	• F.3.c. • F.6.a. • F.6.b.(4)	**Direct Outreach** • Attendance at region-wide community events • Attendance at local community events • Elementary School Presentations • Outreach at Home Improvement Stores **Print Material** • After the Storm • 10 Ways to Save Water Outdoors • Landscape and Garden • Living on the Edge • Stream Stabilization Fact Sheet • Tips for Horse Care • Septic Tank Systems • Automotive Maintenance and Car Care • Outdoor Cleaning Activities • Pools, Spas and Fountains • What's the Scoop? • Tearsheets on various BMP topics placed in stores as part of Commercial / Industrial outreach **Electronic Outreach** • Regional Quarterly E-newsletters • Website

12.0 DISTRICT STAFF TRAINING{F.6.}

The NPDES Section ensures that District staff and contractors (and Planning Boards and Elected Officials, if applicable) responsible for implementing the requirements of the 2010 SMR MS4 Permit have an understanding of the following topics as applicable to their responsibilities:

(i) Applicable water quality laws and regulations;

(ii) The potential effects and impacts that District departments and personnel activities related to their job duties can have on water quality;

(iii) Plan review policies and procedures to verify consistent application;

(iv) Methods of minimizing impacts to Receiving Water quality resulting from development, construction, and other potential Pollutant generating activities;

(v) Proper implementation of erosion and sediment control, Source Control, Treatment Control, and other BMPs to minimize the impacts to Receiving Water quality resulting from development, construction, and other potential Pollutant generating activities;

(vi) Applicable recordkeeping and tracking mechanisms; and

(vii) Inspection and enforcement procedures, BMP implementation, and review of monitoring data.

12.1 Methods

The following table describes the educational activities conducted that target District staff:

Table 12-1: District Staff Education/Outreach Methods

Target Audience	JRMP Program Area Addressed	Education / Outreach Methods
Management	All	• Staff Meetings • Regional City Manager coordination meetings
NPDES Coordinator	All	• SMR Technical Advisory Committee (TAC) Meetings • SMR Copermittee staff meetings • Regional NPDES training (all applicable modules)
Development Planning Staff	• F.1. • F.6.a. • F.6.b.(1)	• Regional WQMP Training • HMP Training (to be developed upon approval of HMP) • District staff training

Target Audience	JRMP Program Area Addressed	Education / Outreach Methods
Construction Site Approval Inspection and Enforcement	• F.2. • F.4. • F.6.a. • F.6.b.(1)	• Regional Construction Inspection Training • Copermittee staff training
Operation and Maintenance	• F.3.a. • F.4. • F.6.a. • F.6.b.(1)	• Regional Municipal Maintenance Training • Pesticide applicator certification • Copermittee staff training

12.2 Frequency {F.6.b.(1)(b)(2)}

The District trains its staff responsible for oversight and conducting Stormwater compliance inspections and enforcement of construction activities (e.g., construction, inspectors, and other responsible construction staff) annually prior to the rainy season.

13.0 MONITORING PROGRAM {N.}

13.1 Overview

The NPDES Section, through the Implementation Agreement (Section 3.2.1), implements the Santa Margarita Monitoring Plan on behalf of the Copermittees. The Monitoring Plan, available at: http://rcflood.org/NPDES/Monitoring.aspx, addresses the District's responsibilities in the Receiving Waters, MS4 Discharge and Reporting Program No. R9-2010-0016 (MRP, Attachment E to the 2010 SMR MS4 Permit).

Additionally, the NPDES Section conducts source identification monitoring as required per Section II.B.2. and II.C.2. of the MRP, in response to an exceedance of an Action Level.

13.2 Non-Stormwater Dry Weather Action Levels {C.}

The NPDES Section will notify the Copermittees of Analytical results (either laboratory or field screening) that exceed the NALs presented in Table 3 of the 2010 SMR MS4 Permit. In response to such an exceedance, the Copermittees will investigate and seek to identify the source of the exceedance in a timely manner following the procedures described in Section 4.4.2 and 4.4.3. However, if the Copermittee identifies a number of NAL exceedances that prevents it from adequately conducting source investigations at all sites in a timely manner, then the Copermittee will submit a prioritization plan and timeline that identifies the timeframe and planned actions to investigate and report its findings on all of the exceedances to the Regional Board.

The 2010 MS4 Permit notes that neither the absence of exceedances of NALs nor compliance with required actions following observed exceedances, excuses any non-compliance with the requirement to effectively prohibit all types of unauthorized Non-Stormwater discharges into the MS4 or any non-compliance with the prohibitions in the 2010 SMR MS4 Permit.

During any Annual Reporting period in which one or more exceedances of NALs have been documented the District will report a description of whether and how the observed exceedances did or did not result in a discharge from the MS4 that caused, or threatened to cause or contribute to a condition of Pollution, Contamination, or Nuisance in the Receiving Waters.

13.3 Stormwater Action Levels {D.}

The NPDES Section implements the Wet Weather MS4 Discharge Monitoring program and annually evaluates the data compared to the SALs identified in Table 4 of the 2010 SMR MS4 Permit. At each monitoring station, a running average of 20% or greater of exceedances of any discharge of Stormwater from the MS4 to Waters of the U.S. that exceed the SALs for each of the Pollutants listed in Table 4 (below) in Receiving Waters receiving discharges from the District's MS4 facilities requires the District to affirmatively augment and implement all necessary stormwater controls and measures described in this JRMP to reduce the discharge of the associated class of Pollutants(s) to the MEP. The District will utilize the exceedance information when adjusting and executing its annual work plans. The magnitude, frequency, and number of constituents exceeding the SAL(s), in addition to Receiving Water quality data and other information, will be considered when prioritizing and reacting to SAL exceedances in an iterative manner.

APPENDIX - A

GLOSSARY

APPENDIX - B

PROGRAM MANAGEMENT

APPENDIX - C

DISTRICT FACILITIES AND ACTIVITIES

APPENDIX - D

DEVELOPMENT PLANNING

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CONSTRUCTION ACTIVITIES

APPENDIX - F

INDUSTRIAL AND COMMERCIAL SOURCES

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RETROFIT PROGRAM STUDY

APPENDIX - A

GLOSSARY

Glossary

Name	Definition
2010 SMR MS4 Permit	Order R9-2010-0016, an NPDES MS4 Permit issued by the San Diego Regional Board.
Action Level	See Non-Stormwater Action Levels and Stormwater Action Levels
Beneficial Use	The uses of water necessary for the survival or well being of man, plants and wildlife. These uses of water serve to promote the tangible and intangible economic, social and environmental goals. "Beneficial Uses" of the waters of the State that may be protected include, but are not limited to, domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing Beneficial Uses are uses that were attained in the surface or groundwater on or after November 28, 1975; and potential Beneficial Uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under Federal law. [California Water Code Section 13050(f)].
Best Management Practice (BMP)	Any procedure or device designed to minimize the quantity of Pollutants that enter the MS4 or to control stormwater flow. See Chapter Two.
Bioretention BMP	A type of LID Retention BMP that is designed to capture the Design Capture Volume and absorb that volume entirely into a biologically active soil media. Water retained in this soil media is then evapotranspired by plants in the BMP, or slowly allowed to infiltrate into the underlying soils. This BMP inherently maximizes both Infiltration and Evapotranspiration of Runoff based on the actual limitations of the soil and environment.
Biotreatment BMP	A type of **LID BMP** that can be used in certain circumstances when LID Retention BMPs are not feasible. These BMPs provide similar functions and benefits as LID Bioretention BMPs, such as inclusion of natural biological processes and maximizing opportunities for Infiltration and Evapotranspiration, however, they are not designed to retain the Design Capture Volume in an engineered soil media. Examples of Biotreatment BMPs include extended detention basins, bioswales and constructed wetlands.
California Stormwater Quality Association (CASQA)	Publisher of the California Stormwater Best Management Practices Handbooks, available at www.cabmphandbooks.com
Cease and Desist Order	See Stop Work Order
CEQA	California Environmental Quality Act
Citation	An official summons to appear (as before a court)

Glossary

Name	Definition
Combined Legal Authority	As required by Provision E of the 2010 SMR MS4 Permit, each Copermitee must establish, maintain, and enforce adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. However, as described in USEPA's Part 2 Permit Application Guidance, an individual copermitte is not required to fulfill every component as required in Provision E if the sum of all the Copermittees legal authorities satisfies the regulatory requirement for legal authority. The sum of all the Copermittees legal authorities, in this case, is referred to as Combined Legal Authority.
Condition of Concern	Conditions that may affect the designated Beneficial Uses of a Receiving Water
Condition(s) of Approval (COA)	Requirements a Copermittee may adopt for a project in connection with a discretionary action (e.g., approval of a subdivision map or issuance of a use permit). COAs may specify features required to be incorporated into the final plans for the project and may also specify uses, activities, and operational measures that must be observed over the life of the project.
Construction Site	Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to clearing, grading, disturbances to ground such as stockpiling, and excavation.
Copermittee	District, County and Cities of Murrieta, Temecula and Wildomar. The terms *'local Copermittee'* and *'your Copermittee'* refers to the Copermittee that has jurisdiction over the proposed **Priority Development Project**.
CWA	The Federal Clean Water Act
Design Capture Volume (VBMP)	The volume of runoff from the **Design Storm**. This is design sizing standard for LID BMPs, as well as for conventional Treatment Control BMPs whose design is based on treating a particular volume of runoff.
Design Flow Rate (QBMP)	The flow rate resulting from an hourly rainfall intensity of 0.2 inch per hour. The Design Flow Rate will depend on the types of post-development surfaces on the site. Flow-based BMP designs can only be used when implementing conventional Treatment Control BMPs.
Design Storm	The 85th percentile 24-hour storm depth, based on local historical rainfall records. See Exhibit A of the SMR WQMP.
Development Project	Any project that proposes construction, rehabilitation, redevelopment, or reconstruction of any public or private residential, industrial or commercial facility, or any other projects designed for post-construction human activity or occupation.
Directly Connected	Any impervious surface which drains into a catch basin, area drain, or other conveyance structure (such as a street) without first directing the flow across pervious areas (e.g., lawns).

Glossary

Name	Definition
Discretionary Approval	A project which requires the exercise of judgment or deliberation by the public agency or body when they decide to approve or disapprove a particular activity. Discretionary approvals are distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances or regulations. **Check with the Copermittee to determine if a particular action is considered Discretionary.**
Drainage Management Area (DMA)	Individual, discrete drainage areas that typically follow grade breaks and roof ridge lines
Drawdown Time	The time required for a detention or retention BMP to drain and return to the dry-weather condition. For detention BMPs, Drawdown Time is a function of basin volume and outlet orifice size. For infiltration BMPs, Drawdown Time is a function of basin volume and infiltration rate. For Harvest and use BMPs, Drawdown Time is a function of the cistern volume and the demand for use of captured stormwater.
Dry Season	May 1st through September 30th
Dry Weather	Weather is considered dry if the preceding 72 hours has been without precipitation.
DU	Dwelling Unit
EIATIA	Effective Impervious Area To Irrigated Area that would be required to achieve the minimum 40% long-term retention of runoff when harvesting stormwater runoff for outdoor irrigation. See Section 2 of the SMR WQMP.
EIR	Environmental Impact Report
Emergency Situation	IC/IDs that pose an immediate threat to human health or the environment. Any sewage spill over 1,000 gallons or that could impact water recreation, any spill that could impact wildlife, any Hazardous Material spill where residents are evacuated, any spill of reportable quantities of Hazardous Waste (as defined by 40 CFR 117 and 40 CFR 302), or any other spill reportable to the California Emergency Management Agency (Cal-EMA, formerly known as the Office of Emergency Services or OES) is classified as a threat to human health or the environment.
Encroachment Permits	A permit that is required for any person, which includes firms, corporations, public districts, public agencies or political subdivisions, for any excavation, construction, installation or maintenance of any improvement, structure, utility or encroachment in, on, over or under any District rights of way.
Ephemeral	Water bodies, or segments thereof, that contain water only for a short period following precipitation events.

Glossary

Name	Definition
Erosion	When land is diminished or worn away due to wind, water or glacial ice. Often the eroded debris (silt or sediment) becomes a Pollutant via Stormwater Runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building and timber harvesting.
ESA	Environmentally Sensitive Area. At minimum, as defined in the 2010 MS4 Permit, all Receiving Waters are considered ESAs.
Evapotranspiration	The process of transferring moisture from the earth to the atmosphere by evaporation of water and transpiration from plants.
Facility Pollution Prevention Plan (FPPP)	A plan that the Copermittee maintains that describes the BMPs that are implemented at their municipal facilities to reduce stormwater pollution to the MEP and prohibit illegal discharges.
Final Project-Specific WQMP	A fully completed version of the Water Quality Management Plan that must be submitted and approved prior to recordation of the final map, parcel map or issuance of building permit. See also Preliminary Project-Specific WQMP.
General Plan	Document that specifies policies that guide development.
Harvest and Use BMPs	Stormwater BMPs that capture stormwater runoff in a vault or cistern, and stores that water for later use, such as for irrigation.
Hazardous Materials	Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by the USEPA in 40 CFR 116 to be reported if a designated quantity of the material is spilled into the Waters of the U.S. or emitted into the environment.
Hazardous Waste	As defined by 40 CFR 117 and 40 CFR 302
Head	In hydraulics, energy represented as a difference in elevation. In slow-flowing open systems, such as most stormwater BMPs, this is the difference in water surface elevation, e.g., between an inlet and outlet.
Hydrograph	Runoff flow rate graphed as a function of time.
Hydrologic Soil Group (HSG)	Classification of soils by the NRCS into A, B, C and D groups according to infiltration characteristics.
Hydromodification	The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport.
Hydromodification Management Plan (HMP)	A Plan that, once developed by the Copermittees, will specify requirements that must be implemented so that projects will not cause Hydromodification.

Glossary

Name	Definition
Illegal Discharge	Defined in 40 CFR 122.26(b)(2) as any discharge to the MS4 that is not composed entirely of stormwater, except discharges pursuant to an NPDES permit, discharges that are identified in Section 4.1.2 of the JRMP, and other discharges authorized by the Executive Officer of the Regional Board.
Illicit Connection	Any unauthorized connection to the MS4 that conveys an Illicit Discharge
Impairment	Describes a condition where a waterbody is presumed by the Regional Board to not be supporting its Beneficial Uses, based on exceedances of certain water quality objectives..
Impervious Area	
Impervious surface	Any surface in the landscape that cannot effectively absorb or infiltrate urban runoff; for example, conventionally paved: sidewalks, rooftops, roads and parking areas.
Implementation Agreement	An agreement among the Copermittees that establishes the responsibilities of each Copermittee and a procedure for funding the shared costs.
Industrial Facility	Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including: those subject to the General Industrial Permit or other individual NPDES permit; Operating and closed landfills; Facilities subject to SARA Title III; and Hazardous waste treatment, disposal, storage and recovery facilities.
Infiltration BMPs	A type of LID Retention BMP where the primary treatment mechanism is through seepage of runoff into a site's underlying soil.
Infiltration Rate	Rate at which water can be added to a soil without creating runoff (in/hr).
Infraction	Violation
Integrated Pest Management (IPM)	A decision-making process for managing pests that combines biological, cultural, mechanical, physical and chemical tools, and other management practices to control pests in a safe, cost effective and environmentally sound manner that contributes to the protection of public health
Intermittent	Waterbodies, or segments thereof, that contain water for extended periods during the year, but not at all times.
JRMP	Jurisdictional Runoff Management Plan
JRMP Annual Report	Report summarizing a Copermittee's compliance information to be submitted annually to the Regional Board on or before each October 31st of each year, beginning on October 31, 2013. The reporting period for these JRMP Annual Reports must be the previous fiscal year.

Glossary

Name	Definition
LID BMPs	LID BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the Pollution of Waters of the United states through Stormwater management and land development strategies that emphasize conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. LID BMPs include retention practices that do not allow Runoff, suchas infiltration, rain water harvesting and reuse, and evapotranspiration. LID BMPs also include flow-through practices such as biofiltration that may have some discharge of Stormwater following Pollutant reduction.
LID Principles	LID Principles are Site Design concepts that help prevent or minimize the causes (or drivers) of project impacts, and help mimic the pre-development hydrology. Implementing LID Principles will help minimize the need for specific Stormwater BMPs on a project.
LID Retention BMP	A type of Stormwater BMP that is designed to store the Design Capture Volume, and avoid any discharge to downstream systems in storms up to the Design Storm. For the purposes of this WQMP, LID Retention BMPs include Infiltration BMPs, Harvest and Use BMPs, Pervious Pavement BMPs and Bioretention BMPs. See also Other LID BMPs
Low Impact Development (LID)	A stormwater management and land development strategy that emphasizes conservation and the use of onsite natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.
Major Outfall	Outfalls owned by a Copermittee with a pipe diameter of 36 inches or greater or drainage areas draining 50 acres or more. See also **Outfall.**
Maximum Extent Practicable (MEP)	Standard, established by the 1987 amendments to the Clean Water Act, for the reduction of Pollutant discharges from MS4s.
Misdemeanor	A crime less serious than a felony.
Mobile Business	Businesses that conduct services listed in section 8.1.1 but do not operate out of a fixed location.
Municipal Facility	A facility owned by a Copermittee
Municipal Separate Storm Sewer System (MS4)	A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains) as defined in 40 CFR 122.26(b)(8).
National Pollutant Discharge Elimination System (NPDES)	As part of the 1972 Clean Water Act, Congress established the NPDES permitting system to regulate the discharge of Pollutants from municipal sanitary sewers and industries. The NPDES was expanded in 1987 to incorporate permits for discharges from MS4s as well (aka MS4 Permits).
Non-Hazardous Materials	For example, food wastes, trash and debris

Glossary

Name	Definition
Non-Jurisdictional IC/ID	An IC/ID originating from a property over which the Copermittee has no applicable jurisdictional authority such as a special district (e.g., school, water, wastewater), federal, state, or tribal property.
Non-Stormwater	All discharges to and from an MS4 that do not originate from precipitation events (i.e., all discharges from an MS4 other than Stormwater). Non-Stormwater includes Illicit Discharges, non-prohibited discharges, and NPDES permitted discharges.
Non-Stormwater Action Levels	This Order includes action levels for pollutants in non-stormwater, dry weather discharges from the MS4. The non-stormwater action levels are designed to ensure that the Order's requirement to effectively prohibit all types of unauthorized discharges of non-stormwater into the MS4 is being complied with. Non-stormwater action levels in the Order are based upon numeric or narrative water quality objectives and criteria as defined in the Basin Plan, the State Water Board's Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (State Implementation Policy or SIP). An exceedance of an action level requires specified responsive action by the Copermittees. This Order describes what actions the Copermittees must take when an exceedance of an action level is observed. Exceedances of non-stormwater action levels do not alone constitute a violation of this Order but could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-stormwater discharges into the MS4 or other prohibitions established in this Order. Failure to undertake required source investigation and elimination action following an exceedance of a non-stormwater action level (NAL or action level) is a violation of this Order. The San Diego Water Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-stormwater discharges because there may be some discharges in which pollutants do not exceed established action levels. However, establishing NALs at levels appropriate to protect water quality standards is expected to lead to the identification of significant sources of pollutants in dry weather non-stormwater discharges.
Non-Structural BMPs	See LID Principles
Notice of Noncompliance	The Notice of Noncompliance constitutes a basic request that the property owner or facility operator rectify the condition causing or threatening to cause noncompliance
NRCS	Natural Resources Conservation Service
O&M	Operation and Maintenance. All BMPs implemented as part of a WQMP must continue to be operational and must be maintained throughout the life of the project.

Glossary

Name	Definition
Operational Source Control BMPs	Source Control programs or activities implemented by a site operator to prevent pollution. Examples include regular sweeping of parking lots and other 'housekeeping' efforts.
Other Development Projects	All Discretionary Development Projects that are not categorized as Priority Development Projects.
Other LID BMPs	Stormwater BMPs that incorporate features that provide for natural biological processes while maximizing opportunities for Infiltration and Evapotranspiration. These are distinguished from **LID Retention BMPs**, with the latter being BMPs that, in addition to the above features, are also designed to retain stormwater runoff.
Outfall	Means a Point Source as defined by 40 CFR 122.2.a, the point where a municipal separate storm sewer discharges to Waters of the U.S. and does not include open conveyances connecting two municipal separate storm sewers, pipes, tunnels or other conveyances which connect segments of the same stream or other Waters of the U.S. and are used to convey waters of the U.S. [40 CFR 122.26(b)(9)].
Permanent Source Control BMP	A type of source control BMP that is a structural part of the site, such as roofs and berms over and around trash and recycling areas.
Permeable or Pervious or Porous Pavements	Pavements for roadways, sidewalks, or plazas that are designed to infiltrate runoff *through* the pavement. Types of Permeable Pavements include pervious concrete, pervious asphalt, porous pavers and granular materials.
Pollutant	Any agent that may cause or contribute to the degradation of water quality such that a condition of Pollution or Contamination is created or aggravated.
Pollutant of Concern	Pollutants for which water bodies are listed as impaired under CWA Section 303(d), pollutants associated with the land use type of a development, and/or pollutants commonly associated with runoff.
Pollution Prevention BMP	Practices that reduce or eliminate the generation of Pollutants.
Pre-Development	Conditions that would exist naturally.
Preliminary Project-Specific WQMP	A preliminary project-specific WQMP is commonly required to be submitted with an application for entitlements and development approvals and must be approved by the Copermittee before any approvals or entitlements will be granted.
Priority Development Project	Development Projects that meet the categories and criteria identified in Table 1-1 (see 2010 SMR MS4 Permit, item F.1.d.).
Priority Pollutant of Concern	Pollutants that are associated with a proposed project and are listed as impaired under CWA Section 303(d).
Project-Specific WQMP	A plan specifying and documenting permanent LID Principles and Stormwater BMPs to control post-construction Pollutants and stormwater runoff for the life of the project, and to maintain Stormwater BMPs for the life of the project. Copermittees may require a preliminary Project-Specific WQMP submittal, to be followed by a final Project-Specific WQMP.

Glossary

Name	Definition
Proprietary Stormwater BMPs	Products designed and marketed by private businesses for treatment of stormwater.
Rainy Season	October 1st through April 30th
Rational Method	A method of calculating runoff flows based on rainfall intensity, tributary area, and a coefficient representing the proportion of rainfall that runs off. In the Rational Method Q=C*I*A as further described in Section 2 of the WQMP.
Receiving Water	Any water body that is identified in the San Diego Basin Plan. The San Diego Basin Plan is available from the San Diego Regional Board's website at www.waterboards.ca.gov/sandiego.
Redevelopment	A Development Project that involves the creation, addition and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.
Regional Water Quality Control Board (or Regional Board)	Regional Boards are responsible for implementing Pollution control provisions of the CWA and California Water Code within their jurisdiction. There are nine Regional Boards in California. The Regional Boards issued the 2010 MS4 Permit to the Copermittees on November 10, 2010.
Retrofit	Programs and projects to address the impacts of existing development through reducing the impacts from hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of Stormwater Pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of Water Quality Standards.
Rights of Way	Any strip or area of land, including surface, overhead, or underground, granted by deed or easement, for construction or maintenance according to designated use, such as for drainage channels, storm drains, flowage easements or impoundment of surface water
Runoff	All flows in a stormwater conveyance system that consists of the following components: (1) stormwater (wet weather flows) and (2) non-stormwater including dry weather flows.
Runoff Management Plan	A site-specific plan identifying BMPs to manage the quality and quantity of runoff from a project site.

Glossary

Name	Definition
Santa Margarita Region (SMR)	The portion of Riverside County covered by Order R9-2010-0016, an NPDES MS4 Permit issued by the Santa Diego Regional Board.
Sedimentation	The action or process of forming or depositing sediment.
Self-treating area	Natural or landscaped area (as described in Section 3.3 of the WQMP) that drains offsite without comingling with developed portions of the site.
Site Design	See **LID Principles**.
Source Control BMP	A facility or procedure to prevent Pollutants from coming into contact with rainfall and/or runoff.
Stop Work Order or Cease and Desist Order	As used in the JRMP, an order from a Copermittee to stop a particular activity.
Stormwater	Per 40 CFR 122.26(b)(13), means stormwater runoff, snowmelt runoff, and surface runoff and drainage. Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.
Stormwater Action Level	SALs were computed as the 90th percentile of the data set, utilizing the statistical based population approach, one of three approaches recommended by the State Water Board's Storm Water Panel in its report 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006)". SALs are identified in Section D of the 2010 SMR MS4 Permit. Copermittees must implement a timely, comprehensive, cost-effective stormwater pollution control program to reduce the discharge of pollutants in stormwater from the permitted areas so as not to exceed the SALs. Exceedance of SALs may indicate inadequacy of programmatic measures and BMPs required in this Order.
Stormwater Ordinance	The ordinance or set of ordinances that are consistent with the Legal Authorities described in section 3.4 of this JRMP.
Stormwater Pollutant	A Pollutant associated with Stormwater.
Stormwater Pollution Prevention Plan (SWPPP)	A plan providing for temporary measures to control sediment and other Pollutants *during* construction. In contrast with the WQMP which is a plan to reduce pollutant in runoff during the post-construction use and life of the project.
Structural Stormwater BMPs	Structural Post-Construction BMPs that are designed to address stormwater runoff impacts from the completed site, and throughout the use and life of the project.. Stormwater BMPs consist of LID Principles, LID BMPs, Conventional Treatment BMPs, Hydromodification BMPs, and Permanent Source Control BMPs.
Total Maximum Daily Load (TMDL)	A TMDL is the maximum amount of a Pollutant that can be discharged into a waterbody from all sources (point and non-point) and still maintain Water Quality Standards. Under CWA Section 303(d), TMDLs must be developed for all waterbodies that do not meet Water Quality Standards after application of technology-based controls.

Glossary

Name	Definition
Toxicity	Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.
Treatment Control BMP	Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological or chemical process.
TUTIA	Toilet Users To Impervious Area ratio, that would be required to achieve the minimum 40% long-term retention of runoff when harvesting stormwater runoff for toilet use. See Chapter 2 of the WQMP.
Unpaved Road	A long, narrow stretch without pavement used for traveling by motor passenger vehicles between two or more points. Unpaved roads are generally constructed of dirt, gravel, aggregate or macadam and may be improved or unimproved.
Waste	As defined in CWC Section 13050(d), "waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal."
Waste Discharge Requirements	As defined in Section 13374 of the California Water Code, the term "Waste Discharge Requirements" is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board usually reserves reference to the term "permit" to Waste Discharge Requirements for discharges to surface Waters of the U.S.
Water Quality Management Plan (WQMP, or SMR WQMP)	Referred to as a Standard Stormwater Mitigation Plan (SSMP) in the 2010 SMR MS4 Permit. This is a plan to reduce the discharge of pollutants to the MEP from the post-construction use and life of a project.

Glossary

Name	Definition
Water Quality Objectives	Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water. [California Water Code Section 13050 (h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans. Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a receiving water and still generally ensure that the beneficial uses of the receiving water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne's definition of pollution. A condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are the reasons why all waste discharge requirements implementing the Federal NPDES regulations require compliance with water quality objectives. (Water quality objectives are also called water quality criteria in the CWA.)
Water Quality Standards	The beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.) of water and the Water Quality Objectives necessary to protect those uses.

Glossary

Name	Definition
Waters of the U.S.	As defined in the 40 CFR 122.2, the Waters of the U.S. are defined as: "(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water
Wet Season	October 1st to April 30th
Wet Weather	Weather is considered wet if precipitation measuring over 0.10 inches has been received during the preceding 72 hours.

APPENDIX - B

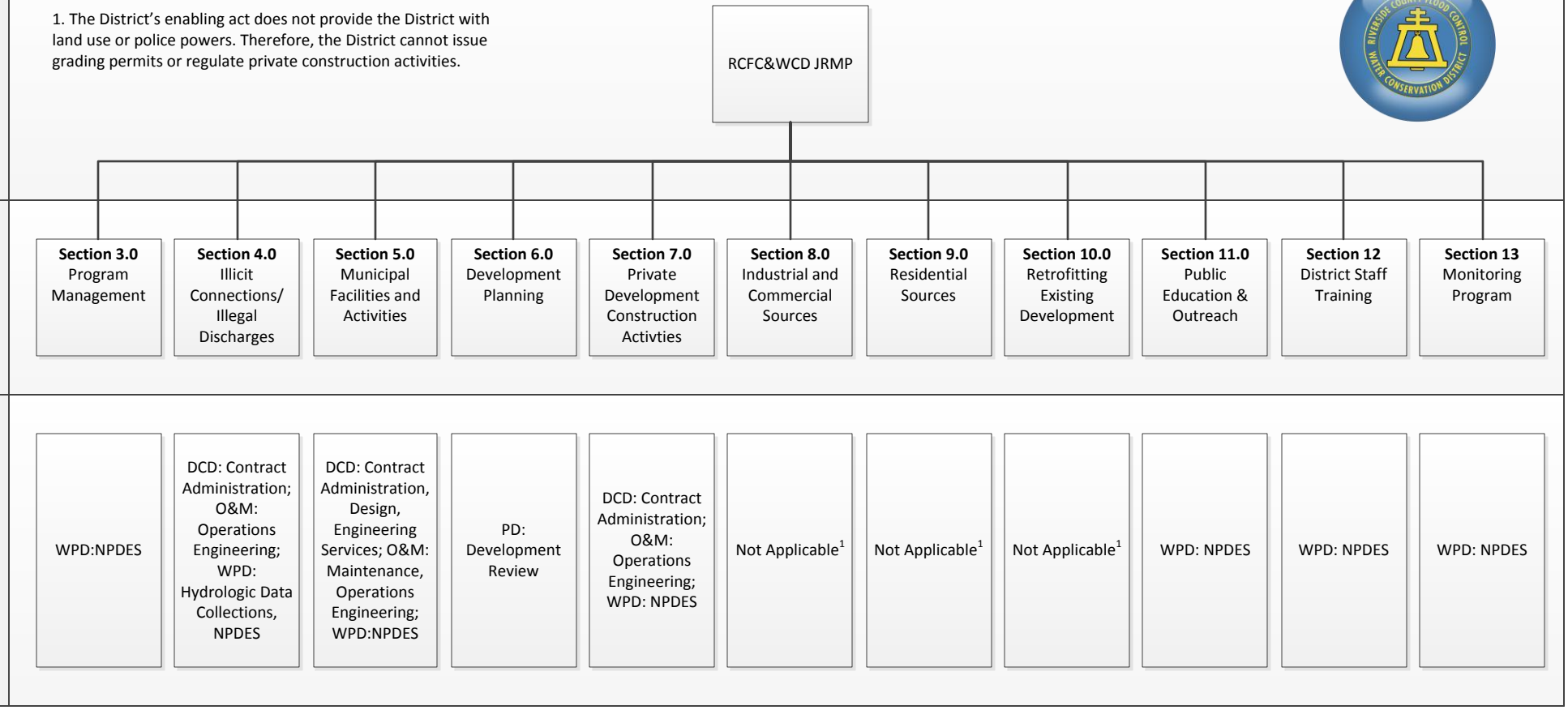
PROGRAM MANAGEMENT

APPENDIX B-1
JRMP ORGANIZATIONAL CHART AND DEPARTMENTAL RESPONSIBILITIES MATRIX

Appendix B.1. District JRMP Implementation Organizational Chart

Notes:

1. The District's enabling act does not provide the District with land use or police powers. Therefore, the District cannot issue grading permits or regulate private construction activities.



Acronyms and Abbreviations

DCD	Design and Construction Division
ERS	Environmental Review Services
O&M	Operations and Maintenance Division
NPDES	National Pollutant Discharge Elimination System
PD	Planning Division
WPD	Watershed Protection Division

Table B-1. JRMP Departmental Responsibilities

Program Element	JRMP Section {Permit reference}	Primary Responsible Division / Section	Responsible Staff (Name or Title as appropriate)
3.0 Program Management	3.1 – Departmental Responsibilities – Maintain matrix	Watershed Protection/NPDES	Engineering Project Manager (EPM)/Senior Civil Engineer
	3.2 – Cooperative Activities		
	3.3 – Fiscal Analysis {H}		
	3.4 – Legal Authority{E.}		
	3.5 – Enforcement/Compliance Strategy	(see individual program sections)	(see individual program sections)
	3.6 – Receiving Water Limitations{A.}	Watershed Protection/NPDES	EPM/Senior Civil Engineer
	3.7 – Program Reporting, Evaluation and Revision {J., K., L}		
4.0 Elimination of Illicit Connections and Illegal Discharges {F.4}	4. 1Overview {A.1., 2}	Watershed Protection/NPDES	EPM/Senior Civil Engineer
	4.2.1 Legal Authority {E.}	See 3.4 above	See 3.4 above
	4.2.2 Connections to MS4 Facilities - Maintain Inventory & Map - Public Works Department	Operations and Maintenance/Operations Engineering	EPM/Senior Civil Engineer
	4.2.3 Inspections	(see individual program sections)	(see individual program sections)
	4.2.4 Maintain MS4 Facility Map{F.4.b.}	Watershed Protection/NPDES	EPM/Senior Civil Engineer
	4.2.5 Outfall Monitoring	Watershed Protection/NPDES	EPM/Civil Senior Engineer

Program Element	JRMP Section {Permit reference}	Primary Responsible Division / Section	Responsible Staff (Name or Title as appropriate)
	4.2.6 Waste Collection Programs	RCFC administers contract with Riverside County Waste Management **Administration of Contract** – Watershed Protection/NPDES	EPM/Civil Senior Engineer
	4.3.1 MS4 Facility Inspections {F.4.e}	As described for section 5	As described for section 5
	4.3.2 Public IC/ID Reports {F.4.c}	Watershed Protection/NPDES	EPM/Senior Civil Engineer
	4.3.3 IC/ID Construction Site Inspections {F.1.e.(6)(d); F.2.e}	Design and Construction/Contract Administration	EPM/ Senior Civil Engineer
		Operations and Maintenance/Operations Engineering	EPM/Senior Civil Engineer
	4.3.4 IC/ID Industrial / Commercial Facilities Inspections {F.3.b.(4)(vi)}	N/A	
	4.3.5 IC/ID Monitoring Activities {Attachment E. II.C}	Watershed Protection/Hydrologic Data Collections	EPM/Senior Civil Engineer
	4.3.6 Non-Jurisdictional IC/IDs (Notification)	Watershed Protection/NPDES	EPM/Senior Civil Engineer
	4.4 IC/ID Response and Reporting {F.4}	**Initial Investigation –** Watershed Protection/Hydrologic Data Collections	EPM/Senior Civil Engineer
		Source Investigation – Watershed Protection/Hydrologic Data Collections	EPM/Senior Civil Engineer
		Elimination – **Coordination with local code enforcement agencies and known Dischargers:** Watershed Protection/Hydrologic Data Collections	EPM/Senior Civil Engineer

Program Element	JRMP Section {Permit reference}	Primary Responsible Division / Section	Responsible Staff (Name or Title as appropriate)
		Elimination – **Reporting:** Watershed Protection/NPDES	EPM / Senior Civil Engineer
	4.4.4 Clean Up	Watershed Protection/Hydrologic Data Collections	EPM / Senior Civil Engineer
	4.4.5 Sanitary Wastes F.4.h}	Sanitary Sewer Overflows into District MS4 **Coordination and Reporting:** Watershed Protection/Hydrologic Data Collection	EPM/Senior Civil Engineer
5.0 Permittee Facilities and Activities {F.3.a}	5.1 Planning Facilities {F.1}	Planning/Project Planning	EPM/Senior Civil Engineer
	5.1.1 - Public Works Priority Development Projects {F.1.d}	**Review WQMP Applicability Checklist** – Design and Construction/Design	EPM/Senior Civil Engineer
	5.1.2 – Public Works Transportation Projects F.1.d.(2)(g)}	N/A	
	5.1.3 Public Works Unpaved Roads {F.1.i}	Design and Construction/Design	EPM/Senior Civil Engineer
	5.1.4 Design of Flood Control Projects {F.3.a.(4)(a)		
	5.1.5 Other public works projects {	N/A	
	5.2 – District Construction Activities {F.2.}	**Submit PRDs –** Design and Construction	EPM/Senior Civil Engineer (Submittal of documents), Principal Engineer (Approval)

Program Element	JRMP Section {Permit reference}	Primary Responsible Division / Section	Responsible Staff (Name or Title as appropriate)
		Prepare 90% Construction SWPPP – Design and Construction/Design and/or Engineering Services Sections,	EPM/Senior Civil Engineer
		Review of 90% SWPPP – Watershed Protection/NPDES	EPM/Senior Civil Engineer
		Final SWPPP - Contractor	N/A
		Inspection – Design and Construction / Contract Administration	EPM/Senior Civil Engineer
		Incorporation into District FPPP as necessary – Watershed Protection / NPDES	EPM/Senior Civil Engineer
		Notify Executive Officer of District Construction Sites in Significant Non Compliance prior to Oct. 1 – Watershed Protection	Principal Engineer
		Notify Watershed Protection of Such Sites – Design and Construction	Principal Engineer
		Conduct CGP monitoring – Design and Construction/Contract Administration	EPM/Senior Civil Engineer
		Submit NOT – Design and Construction/Contract Administration	Principal Engineer
	5.3.1 Source Identification/ Inventory {F.3.a.(1)}	Operations and Maintenance/Maintenance	Maintenance Supervisor
	5.3.3.1 Special Event BMPs {F.e.a(2)(c)}	N/A	
	5.3.3.2 Fire BMPs {B.3.a.}	N/A	
	5.3.3 BMPs for District Activities {F.3.a.(a)(2)(b)}	**Identification** - Watershed Protection/NPDES	EPM/Senior Civil Engineer
		Implementation – Operations and	Maintenance Supervisor

Program Element	JRMP Section {Permit reference}	Primary Responsible Division / Section	Responsible Staff (Name or Title as appropriate)
		Maintenance / Maintenance	
	5.3.4 BMPs for District Areas	**Identification** - Watershed Protection/NPDES	EPM /Senior Civil Engineer
		Implementation – Operations and Maintenance / Maintenance	Maintenance Supervisor
	5.3.5 Maintenance of MS4 facilities and treatment control BMPs {F.3.a.(6)}	Operations and Maintenance/Maintenance	Maintenance Supervisor
	5.4 Annual Inspection {F.3.A.(8)}	Operations and Maintenance/Maintenance	Maintenance Supervisor
	5.5 Enforcement of Municipal Areas and Activities {F.3.a.(9)}	Operations and Maintenance/Operations Engineering	EPM/Senior Civil Engineer
6.0 Development Planning {F.1.}	6.2 General Plan {F.1.a}	N/A	
	6.3.2 LID Barriers Review {{F.1.d.(4)(a)}		
	6.6.2 Identify Priority Development Projects {F.1.d.(1) & (2)}	Planning/Development Review	EPM/Senior Civil Engineer
	6.6.3 Conditions of Approval	Planning/Development Review	EPM/Senior Civil Engineer
	6.6.4 Review Preliminary Project-Specific WQMPs{F.1.d.(9)(a)}		
	6.6.6 Approval Process Criteria and Requirements for All Development Projects {F.1.c.}		
	6.6.7 Unpaved Roads Development	Design and Construction /Design Sections	EPM/Senior Civil Engineer
	6.6.8 Plan Check: Issuance of Grading or Building Permits	Planning/Development Review	EPM/Senior Civil Engineer
	6.7 Field Verify BMPs & Permit Closeout {F.1.e.}	N/A for District, Refer to County JRMP	
	6.7.2 BMP Maintenance Tracking {F.1.f.}	N/A for District, Refer to County JRMP	

Program Element	JRMP Section {Permit reference}	Primary Responsible Division / Section	Responsible Staff (Name or Title as appropriate)
	6.8 Structural Post-Construction BMP Database and Maintenance Verification {F.1.f}	N/A for District, Refer to County JRMP	
	6.8.4 Change of Ownership Recordation {F.1.d.(9)(b)}	N/A for District, Refer to County JRMP	
	6.9 Enforcement for Development {F.1.g}	N/A for District, Refer to County JRMP	
7.0 Private Development and District Construction Activity {F.2.}	7.1 Source Identification and Inventory {F.2}	Operations and Maintenance/Operations Engineering, Design and Construction/Contract Administration	EPM/Senior Civil Engineer
	7.2 Construction Site Planning and Project Approval Process {F.2.c}	Operations and Maintenance/Operations Engineering, Design and Construction/Contract Administration, Watershed Protection/NPDES	EPM/Senior Civil Engineer
	7.3 Construction Site BMPs {F.2.d}	Operations and Maintenance/Operations Engineer, Design and Construction/Contract Administration	EPM/Senior Civil Engineer
	7.4 Construction Site Inspections	Design and Construction/Contract Administration	
	7.5 Enforcement	Design and Construction/Contract Administration	
	7.6 Reporting of Non-Compliant Construction Sites	Design and Construction/Contract Administration, Operations and Maintenance/Operations Engineering	
8.0 Industrial and Commercial Sources {F.3.b.}	N/A		
9.0 Residential	N/A		

Program Element	JRMP Section {Permit reference}	Primary Responsible Division / Section	Responsible Staff (Name or Title as appropriate)
Sources {F.1.c.}			
10.0 Retrofitting Existing Development {F.3.d.}			
	10.1 Identification of Conditions of Concern {{F.3.d.(1)}	Watershed Protection/NPDES in coordination with local County / City Jurisdiction.	EPM/Senior Civil Engineer
	10.2 Source Assessment & Identification {F.3.d.(2)}		
	10.3 Identification of Candidate Areas for Retrofitting {F.3.d.(2)}		
	10.4 Prioritization of Candidate Areas for Retrofitting {F.3.d.(2)}		
	10.5 Prioritizing Retrofitting Work Plans 10.3 {F.3.d.(3)}		
	10.6 Private Retrofitting Projects {F.3.d.(4)}		
	10.7 Tracking Retrofit BMPs {F.3.d.(5)}		
	10.8 Regional Mitigation Projects {F.3.d.7)}		
11.0 Education {F.6.}			
	11.1 Target Audiences	Watershed Protection/NPDES	EPM/Senior Civil Engineer
	11.2 Residential and General Public F.6.b.(4)}	Watershed Protection/NPDES	EPM/Senior Civil Engineer
12.0 Copermittee Staff Training	Copermittee Staff	Watershed Protection/NPDES	EPM/Senior Civil Engineer
13.0 Monitoring			

Program Element	JRMP Section {Permit reference}	Primary Responsible Division / Section	Responsible Staff (Name or Title as appropriate)
Program {N}			
	13.1 Overview (Monitoring Plan)	Watershed Protection/Water Quality Planning	EPM/Senior Civil Engineer
	13.2 NALs {C}	Watershed Protection/NPDES	EPM/Senior Civil Engineer
	13.3 SALs {D}		

APPENDIX B-2
INTERAGENCY AND/OR INTERDEPARTMENTAL AGREEMENTS

AGREEMENT

The RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, hereinafter called "DISTRICT", and the RIVERSIDE COUNTY WASTE MANAGEMENT DEPARTMENT, hereinafter called "WASTE MANAGEMENT", hereby agree as follows:

RECITALS

A. In 1987, Congress added Section 402(p) to the Federal Clean Water Act (CWA) {33 U.S.C. §1342(p)}; and

B. Section 402(p) requires certain municipalities to obtain National Pollutant Discharge Elimination System (NPDES) Permits in order to discharge stormwater from Municipal Separate Storm Sewer Systems (MS4s) to waters of the United States; and

C. Section 402(p) also requires operators of certain industrial facilities to obtain NPDES Permits for stormwater discharges associated with designated industrial activities; and

D. Section 402(p) further requires the United States Environmental Protection Agency (USEPA) to promulgate regulations requiring NPDES Permits for designated industrial activities and certain MS4s; and

E. USEPA promulgated such regulations in November 1990; and

F. USEPA has delegated its NPDES permitting authority to the State Water Resources Control Board (SWRCB) to administer the NPDES permitting process within the State; and

G. SWRCB has in turn delegated its NPDES permitting authority to the respective California Regional Water Quality Control Boards (CRWQCB); and

H. DISTRICT was created to provide for the control of flood and stormwaters within the County of Riverside and is empowered to investigate, examine, measure, analyze, study and inspect matters pertaining to flood and stormwaters; and

I. DISTRICT, the County of Riverside, Coachella Valley Water District and the incorporated cities within the County of Riverside (except for Blythe), have obtained NPDES MS4 Permits from the appropriate CRWQCB pursuant to Section 402(p) of the CWA; and

J. USEPA regulations and the NPDES MS4 Permits require municipalities to control the contribution of pollutants to the municipal storm sewer by stormwater discharges associated with industrial activity and the quality of stormwater discharged from sites of industrial activity; and

K. DISTRICT, in accordance with its responsibilities as a Principal Permittee, is developing comprehensive stormwater management programs within the County of Riverside and in the region; and

L. WASTE MANAGEMENT conducts certain area-wide programs and activities pertaining to hazardous waste management, hazardous materials facility compliance inspections, and health and safety code inspections; and

M. Certain aspects of WASTE MANAGEMENT'S activities are consistent with the goals and objectives of NPDES MS4 Permits and the Best Management Practices (BMP) included in the Permittee's regional Drainage Area Management Plans (DAMP); and

N. DISTRICT wishes to support certain WASTE MANAGEMENT programs and activities by entering into this Agreement with WASTE MANAGEMENT to contribute a sum of money to sustain the scope of WASTE MANAGEMENT programs and activities to meet the requirements of NPDES MS4 Permits; and

O. It is understood that this Agreement does not change existing responsibilities for compliance with any NPDES MS4 Permit, and WASTE MANAGEMENT, through any services provided, is not assuming responsibility for NPDES MS4 Permit compliance requirements as they exist or may be established; and

P. Cooperation between DISTRICT and WASTE MANAGEMENT in these matters is in the best interest of the public.

NOW, THEREFORE, the parties hereto do mutually agree as follows:

1. NPDES PROGRAM ACTIVITIES – WASTE MANAGEMENT will perform certain NPDES PROGRAM ACTIVITIES as long as adequate manpower is available within WASTE MANAGEMENT'S staff and reimbursement from DISTRICT is sufficient to perform the activities agreed to including the following: Household Hazardous Waste (HHW) Collection Program, and Antifreeze, Battery, Oil and Latex Paint (ABOP) Program. A scope of services and budget for the HHW and ABOP Programs are described below.

(a) TEMPORARY HHW COLLECTION FACILITY (THHWCF) PROGRAM:

(i) WASTE MANAGEMENT shall conduct not less than fifteen (15) HHW collection events during the first Fiscal Year of this Agreement. Additional events for future Fiscal Years will be scheduled based on the amount of DISTRICT'S contribution to specifically support the HHW program. A minimum of two (2) THHWCF events or a single permanent HHW site shall be established in each of the three (3) NPDES MS4 Permit areas (Santa Ana, Santa Margarita and Whitewater watersheds).

(ii) WASTE MANAGEMENT and DISTRICT shall advertise scheduled HHW collection events in countywide and/or local newspapers.

(iii) DISTRICT and WASTE MANAGEMENT shall work cooperatively with the County of Riverside, incorporated cities, and other interested parties to provide technical assistance and/or coordinate additional HHW collection sites within the NPDES Permit areas.

(b) PERMANENT HHW COLLECTION FACILITY (PHHWCF) AND ABOP PROGRAM:

(i) WASTE MANAGEMENT shall operate at least one (1) PHHWCF and/or ABOP collection center in each of the Santa Ana, Santa Margarita and Whitewater River Watersheds.

(ii) DISTRICT and WASTE MANAGEMENT shall work cooperatively with the County of Riverside, incorporated cities, and other interested parties to facilitate the establishment of additional PHHWCF and/or collection centers within the NPDES Permit areas.

2. ANNUAL PROGRAM REVIEW – During January of each year, DISTRICT and WASTE MANAGEMENT representatives shall meet and review program status, scope, costs, priorities, projected activities and available funding sources for NPDES PROGRAM ACTIVITIES:

(a) DISTRICT and WASTE MANAGEMENT staff shall review available funding resources and develop a preliminary schedule for NPDES program activities based on DISTRICT'S contribution to NPDES PROGRAM ACTIVITIES for the upcoming Fiscal Year.

3. USE OF ABOP/HHW CONTRIBUTION – WASTE MANAGEMENT shall use CONTRIBUTION only for salaries, training, equipment, supplies, waste disposal and other expenses related to providing NPDES PROGRAM ACTIVITIES as agreed upon by DISTRICT and WASTE MANAGEMENT.

4. INDEMNITY AND HOLD HARMLESS - WASTE MANAGEMENT shall indemnify and hold DISTRICT, its officers, employees and agents free and harmless from all claims, actions, damages and liabilities of whatsoever kind and nature arising from death, personal injury property damage or other cause asserted or based upon any act or omission of or by person or persons associated with NPDES PROGRAM ACTIVITIES relating to or in any way connected with the accomplishment of the work or performance of services of NPDES PROGRAM ACTIVITIES. As part hereto of the foregoing indemnity, WASTE MANAGEMENT agrees to protect and to defend at its own expense, including attorneys' fees, DISTRICT, its officers, agents and employees from any and all legal action based upon any negligent acts or omissions, as stated herein, by any person or persons.

5. REPORTS AND INFORMATION – WASTE MANAGEMENT shall submit to DISTRICT on or before October 1st a report on NPDES PROGRAM ACTIVITIES performed by WASTE MANAGEMENT during the previous Fiscal Year (July 1st through June 30th). The report shall include but not be limited to:

(a) Narrative describing the HHW Program (to include a summary of each collection event) and ABOP Program performed by WASTE MANAGEMENT pursuant to this Agreement during the prior Fiscal Year.

(b) Quantities of materials collected by the HHW and ABOP Programs, cost of waste disposal, and costs associated with labor, supply, equipment and materials costs.

6. HHW EVENT – For the purposes of this Agreement, an event is a THHWCF event operated by WASTE MANAGEMENT.

7. PAYMENT – DISTRICT shall contribute a lump sum amount of up to three hundred thousand dollars ($300,000.00) (CONTRIBUTION), no later than May 31st of each Fiscal Year to WASTE MANAGEMENT to support HHW events and ABOP activities for the respective Fiscal Year. Annually, WASTE MANAGEMENT shall submit to DISTRICT a billing statement (invoice) for reimbursement. DISTRICT shall pay CONTRIBUTION to WASTE MANAGEMENT within 30 days upon receipt of WASTE MANAGEMENT'S invoice.

8. CONTINGENCY – CONTRIBUTION and reimbursement shall be contingent upon the approval by DISTRICT'S Board of Supervisors of the annual Benefit Assessment levies for the Santa Ana, Santa Margarita and Whitewater Watershed Benefit Assessment Areas and based on available funding. If CONTRIBUTION or reimbursement determined to be available will be less than the agreed upon not to exceed amount for the next Fiscal Year, DISTRICT will notify WASTE MANAGEMENT in January of the current Fiscal Year of the deficiency in the Benefit Assessment Area's funds so it may adjust, after

consultation and agreement by DISTRICT, the scope of NPDES PROGRAM ACTIVITIES to be provided during the current or next Fiscal Year.

9. COMPLIANCE WITH NPDES PERMITS – NPDES PROGRAM ACTIVITIES, as specified herein, will be performed by WASTE MANAGEMENT under this Agreement. Nothing in this Agreement shall be construed as making WASTE MANAGEMENT responsible for NPDES Permit compliance.

10. NON-INTERFERENCE – DISTRICT understands and agrees that it shall not directly supervise or interfere with any of WASTE MANAGEMENT'S activities contemplated hereunder.

11. TERM OF AGREEMENT – This Agreement shall commence on the date of execution thereof and shall continue in effect until June 30, 2013.

12. TERMINATION OF AGREEMENT – Either party may terminate the provisions of this Agreement related to the HHW and ABOP Programs subject to six (6) months written notice thereof.

13. APPLICABILITY OF PRIOR AGREEMENTS – This Agreement constitutes the entire Agreement between the parties with respect to the subject matter; all prior agreements, representations, statements, negotiations and understandings are hereby superseded.

14. NOTICES – Any and all notices sent or required to be sent to the parties of this Agreement will be mailed by first class mail, postage prepaid, to the following addresses:

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
1995 Market Street
Riverside, CA 92501

RIVERSIDE COUNTY WASTE
MANAGEMENT DEPARTMENT
14310 Frederick Street
Moreno Valley, CA 92553
Attn: Diane Christensen

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IN WITNESS WHEREOF, the parties hereto have executed this

Agreement on_____.
(to be filled in by Clerk of the Board)

RECOMMENDED FOR APPROVAL:
DISTRICT

By_____
WARREN D. WILLIAMS
General Manager-Chief Engineer

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION

By_____
MARION ASHLEY, Chairman
Riverside County Flood Control and Water Conservation District Board of Supervisors

ATTEST:

NANCY ROMERO
Clerk of the Board

By_____
Deputy

(SEAL)

RECOMMENDED FOR APPROVAL:

By_____
HANS W. KERNKAMP
General Manager-Chief Engineer

APPROVED AS TO FORM:

JOE S. RANK
County Counsel

By_____
NEAL R. KIPNIS
Deputy County Counsel

COUNTY OF RIVERSIDE

By_____
ROY WILSON, Chairman
County of Riverside Board of Supervisors

ATTEST:

NANCY ROMERO
Clerk of the Board

By_____
Deputy

(SEAL)

Household Hazardous Waste Collection Program Agreement

AAM:blj

7/9/2008

AGREEMENT

The RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, hereinafter called "DISTRICT", and the COUNTY OF RIVERSIDE, hereinafter called "COUNTY", hereby agree as follows concerning COUNTY'S Hazardous Materials Emergency Response Team:

RECITALS

A. Congress in 1987 added Section 402(p) to the Federal Clean Water Act (CWA) {33 U.S.C. §1342(p)}; and

B. Section 402(p) requires certain municipalities to obtain a National Pollutant Discharge Elimination System (NPDES) Permit to discharge stormwater from Municipal Separate Storm Sewer Systems (MS4s) into waters of the United States; and

C. Pursuant to 33 U.S.C. §1342(p) (2) (C), (D) and (E), DISTRICT, COUNTY, the Coachella Valley Water District (CVWD) and certain incorporated Cities within Riverside County have obtained NPDES Permits for municipal stormwater discharges; and

D. Section 402(p) further requires the United States Environmental Protection Agency (USEPA) to promulgate regulations requiring NPDES Permit applications; and

E. EPA promulgated such regulations and adopted them in November 1990; and

F. EPA delegated authority to the California Regional Water Quality Control Board (RWQCB) to administer the NPDES Permit process within the boundaries of their regions; and

G. DISTRICT was created to provide for the control of flood and stormwaters within the County of Riverside and is empowered to investigate, examine, measure, analyze, study and inspect matters pertaining to flood and stormwaters; and

H. DISTRICT, COUNTY, CVWD and certain incorporated Cities within Riverside County have obtained NPDES Permits from the respective RWQCBs in order to comply with Section 402(p); and

I. The NPDES Permits require the municipal permittees to develop comprehensive stormwater discharge management programs to improve water quality in the County of Riverside and in the region and to respond to emergency incidents to control the discharge of pollutants to the waters of the United States; and

J. COUNTY, through the Riverside County Fire Department, staffs and maintains a HAZARDOUS MATERIALS RESPONSE TEAM, hereinafter called "TEAM"; and

K. DISTRICT in accordance with certain responsibilities described in the NPDES Permits and the NPDES Stormwater Discharge Permit Implementation Agreements for the Santa Ana Region (Santa Ana Drainage Area) dated December 16, 2003; for the San Diego Region (Santa Margarita Drainage Area) dated July 14, 2004; and for the Colorado River Basin Region (Whitewater Drainage Area) dated October 14, 2004; wishes to contribute a sum of money, hereinafter called "CONTRIBUTION", to the funding of TEAM to support TEAM'S existence and current activity status.

NOW, THEREFORE, the parties hereto do mutually agree as follows:

1. TEAM BUDGET CONTRIBUTION – DISTRICT shall contribute the sum of up to three hundred sixty-five thousand dollars ($365,000) per fiscal year to COUNTY on July 1st of each year after execution of this Agreement for the funding of TEAM, as set forth herein. Payment for Fiscal Year 2007-2008 shall be made within 30 days of execution of this Agreement. DISTRICT'S continuing CONTRIBUTION shall be contingent upon sufficient NPDES funds being available for the next Fiscal Year.

2. ANNUAL PROGRAM REVIEW – During January of each year, DISTRICT and COUNTY representatives shall meet and review program status, scope, costs, priorities, projected activities, and available funding for TEAM activities. The DISTRICT shall inform COUNTY of the actual CONTRIBUTION amount for the upcoming fiscal year at this meeting.

3. USE OF CONTRIBUTION – COUNTY shall use CONTRIBUTION only for salaries, equipment and maintenance of TEAM.

4. INDEMNITY AND HOLD HARMLESS – COUNTY shall indemnify and hold DISTRICT, its officers, employees and agents free and harmless from all claims, actions, damages and liabilities of whatsoever kind and nature arising from death, personal injury, property damage or other cause asserted or based upon any act or omission of TEAM relating to or in any way connected with the accomplishment of the work or performance of services of TEAM. As part hereto of the foregoing indemnity, COUNTY agrees to protect and to defend at its own expense, including attorneys' fees, DISTRICT, its officers, agents and employees from any and all legal action based upon any negligent acts or omissions, as stated hereinabove, by any person or persons.

5. REPORTS AND INFORMATION – COUNTY shall submit to DISTRICT on or before August 15th a report summarizing the activities, responses, and cases handled or performed by TEAM between July 1st and June 30th of the previous Fiscal Year. The report shall consist of a narrative describing TEAM, its operations and any major spills, and a categorization of TEAM'S responses showing the following: responses inside and outside DISTRICT'S jurisdiction, traffic related responses, industrial related responses, drug enforcement responses, and other response categories. The report shall also include a description of current TEAM operating expenses and revenue sources (budget).

6. TEAM OPERATIONS – This Agreement does not give DISTRICT any authority to dictate the day to day activities of TEAM, or grant DISTRICT any authority over any

TEAM personnel other than that stated in this paragraph. TEAM shall, at DISTRICT'S request, provide timely response to emergency incidents where a hazardous material is entering or has a reasonable potential to enter a DISTRICT owned storm drain facility, provided that TEAM is not already committed to another incident. TEAM shall respond to emergency incidents irrespective of the local jurisdiction (City or County) in which said DISTRICT facilities are located.

7. TERM OF AGREEMENT – This Agreement shall commence on the date of execution thereof and shall continue in effect until June 30, 2012.

8. TERMINATION OF AGREEMENT – Either party may terminate the provisions of this AGREEMENT subject to (6) months written notice thereof.

9. NOTICES – Any and all notices sent or required to be sent to the parties of this Agreement will be mailed by first class mail, postage prepaid, to the following addresses:

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
1995 Market Street
Riverside, CA 92501

COUNTY OF RIVERSIDE FIRE
DEPARTMENT
210 West San Jacinto Avenue
Perris, CA 92570
Attn: Kevin Gaines, Battalion Chief

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IN WITNESS WHEREOF, the parties hereto have executed this agreement on

_____.
(to be filled in by Clerk of the Board)

RECOMMENDED FOR APPROVAL:

By_____
WARREN D. WILLIAMS
General Manager-Chief Engineer

APPROVED AS TO FORM:

JOE S. RANK
County Counsel

By_____
NEAL R. KIPNIS
Deputy County Counsel

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By_____
MARION ASHLEY, Chairman
Riverside County Flood Control and Water Conservation District Board of Supervisors

ATTEST:

NANCY ROMERO
Clerk to the Board

By_____
Deputy

(SEAL)

RECOMMENDED FOR APPROVAL:

By_____
JOHN R. HAWKINS, Unit Chief
CAL FIRE/Riverside County Fire Chief

COUNTY OF RIVERSIDE

By_____
ROY WILSON, Chairman
County of Riverside Board of Supervisors

ATTEST:

NANCY ROMERO
Clerk to the Board

By_____
Deputy

(SEAL)

Hazardous Materials Emergency Response Team Agreement
5/23/2008
AAM:blj

AGREEMENT

National Pollutant Discharge Elimination System
Stormwater Discharge Permit
Implementation Agreement
San Diego Region

(Santa Margarita Drainage Area)

This Implementation Agreement ("Agreement"), entered into by the RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT (the "DISTRICT"), the COUNTY OF RIVERSIDE (the "COUNTY"), and the CITIES OF MURRIETA, TEMECULA and WILDOMAR (the "CITIES"), collectively referred to as "COPERMITTEES" and sometimes also referred to as "Parties", individually each as "Party", establishes the responsibilities of each Party concerning the implementation of and compliance with the National Pollutant Discharge Elimination System ("NPDES") Municipal Separate Storm Sewer System ("MS4") Discharge Permit issued by the California Regional Water Quality Control Board – San Diego Region (CRWQCB-SDR) pursuant to Order No. R9-2010-0016 (the "NPDES Permit").

RECITALS

WHEREAS, Congress in 1987 added Section 402(p) to the Federal Clean Water Act ("CWA") (33 U.S.C.§1342(p)); and

WHEREAS, Section 402(p) of the CWA requires certain municipalities to obtain NPDES Permits in order to discharge stormwater from MS4s to waters of the United States; and

WHEREAS, Section 402(p) of the CWA requires operators of certain industrial facilities to obtain NPDES permits for stormwater discharges associated with designated industrial activities, including construction activities; and

WHEREAS, Section 402(p) further requires the United States Environmental Protection Agency ("EPA") to promulgate regulations for NPDES permit applications; and

WHEREAS, EPA adopted such regulations in November 1990; and

WHEREAS, EPA delegated authority to the California State Water Resources Control Board ("SWRCB") to administer the NPDES permit process within the boundaries of the State of California; and

WHEREAS, SWRCB has in turn delegated its NPDES permitting authority to the California Regional Water Quality Control Boards to administer the NPDES permit process within the boundaries of their respective regions; and

WHEREAS, the jurisdiction of the CRWQCB-SDR includes that portion of Riverside County known as the Santa Margarita Region; and

WHEREAS, DISTRICT was created to provide for, among other things, the control of flood and stormwaters within the County of Riverside and is empowered to investigate, examine, measure, analyze, study and inspect matters pertaining to flood and stormwaters; and

WHEREAS, on January 15, 2009, DISTRICT, COUNTY and CITIES submitted a Report of Waste Discharge as an application to renew NPDES Permit No. CAS0108766; and

WHEREAS, the application for renewal of the NPDES Permit was submitted in accordance with the provisions of the previous NPDES permit (Order No. R9-2004-001) which expired on July 14, 2009; and

WHEREAS, on November 10, 2010, the CRWQCB-SDR adopted Order No. R9-2010-0016 to serve as Waste Discharge Requirements in accordance with Section 13263(a) of the California Water Code and as an NPDES permit pursuant to Section 402(p) of the CWA; and

WHEREAS, the NPDES Permit meets or exceeds the requirements of Section 402(p)(3)(B) of the CWA; and

WHEREAS, the NPDES Permit designates the DISTRICT, COUNTY and CITIES as COPERMITTEES; and

WHEREAS, the NPDES Permit requires designation of a "Principal Copermittee", and DISTRICT, COUNTY and CITIES have agreed that DISTRICT will serve as Principal Copermittee for the term of the NPDES Permit; and

WHEREAS, the Parties believe that cooperation between COPERMITTEES in the administration and implementation of the NPDES Permit is in the best interest of COPERMITTEES; and

WHEREAS, the NPDES Permit provides that the COPERMITTEES collaborate

in the development and implementation of various requirements of the NPDES Permit; and

WHEREAS, DISTRICT is willing to utilize its staff to coordinate the activities of COPERMITTEES to facilitate compliance with the NPDES Permit and CWA requirements; and

WHEREAS, DISTRICT established the Santa Margarita Watershed Benefit Assessment Area (the "BENEFIT ASSESSMENT") pursuant to District Ordinance 14 on May 14, 1991 to offset the DISTRICT'S program and administrative costs associated with the development, implementation and management of the Federally-mandated NPDES Program and DISTRICT is willing to use BENEFIT ASSESSMENT funds to support the DISTRICT's role as Principal Permittee and to support regional program costs to the extent that BENEFIT ASSESSMENT funds are available and can be used for regional programs; and

WHEREAS, COPERMITTEES are to perform and/or execute certain activities prescribed in the NPDES Permit that will benefit all COPERMITTEES.

NOW, THEREFORE, the Parties do mutually agree as follows:

1. Incorporation of the NPDES Permit. The NPDES Permit is hereby incorporated by reference in its entirety and made a part of this Agreement as Exhibit "A".

2. Delegation of Responsibilities. The responsibilities of each of the COPERMITTEES under the NPDES Permit are reiterated below in subsections 2.a. and 2.b. Additional delegated responsibilities of the Parties under this Agreement to implement and/or comply with the NPDES Permit are set forth below in subsections 2.c. through 2.h.:

a. DISTRICT shall:

(1) Comply with Section M (Principal Copermittee Responsibilities), including coordinating the development of updates and reports on programs required under the NPDES Permit that are jointly required of each COPERMITTEE, including the Watershed Water Quality Workplan ("Watershed Workplan"), Standard Storm Water Mitigation Plan ("SSMP"), Hydromodification Management Plan ("HMP"), a model Jurisdictional Runoff

Management Plan ("JRMP"), the Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016, and any other reports prepared by the DISTRICT on behalf of the COPERMITTEES as required by Sections K.1 and K.2 of the NPDES Permit. DISTRICT will provide COUNTY and CITIES an opportunity to participate in the development and review of, and comment on, such programs, plans and reports prior to submittal to the CRWQCB-SDR.

(2) Comply with Sections A through P (Prohibitions and Receiving Water Limitations, Non-Stormwater Discharges, Non-Stormwater Dry Weather Action Levels, Stormwater Action Levels, Legal Authority, JRMP, Watershed Workplan, Fiscal Analysis, Total Maximum Daily Loads ("TMDLs"), Program Effectiveness Assessment and Reporting, Reporting, Modifications of Programs, Receiving Waters and MS4 Discharge Monitoring and Reporting Program, Standard Provisions, Reporting Requirements and Notifications, as well as Additional Provisions, respectively), as they pertain to pollutant discharges from DISTRICT owned and operated MS4 which are generated directly from or by DISTRICT facilities and operations, at no cost to COUNTY and CITIES.

b. COUNTY and CITIES, at no cost to DISTRICT, shall, for land area within their individual jurisdictions:

(1) Comply with Sections A through P (Prohibitions and Receiving Water Limitations, Non-Stormwater Discharges,

Non-Stormwater Dry Weather Action Levels, Stormwater Action Levels, Legal Authority, JRMP, Watershed Workplan, Fiscal Analysis, TMDLs, Program Effectiveness Assessment and Reporting, Reporting, Modifications of Programs, Receiving Waters and MS4 Discharge Monitoring and Reporting Program, Standard Provisions, Reporting Requirements and Notifications, as well as Additional Provisions, respectively), as they pertain to pollutant discharges from COUNTY/CITY owned and operated MS4, which are generated by jurisdictional land uses, facilities, and operations of the respective COUNTY and CITIES.

(2) Demonstrate compliance with NPDES Permit requirements through timely implementation of the JRMPs; any COPERMITTEE-specific elements of the Watershed Workplan and Monitoring and Reporting Program; and any approved modifications, revisions or amendments thereto.

(3) Provide to DISTRICT (on DISTRICT-provided forms) information needed to satisfy the reporting requirements as described in Sections G, N, and Provision III of Attachment E, or to respond to information requests from the CRWQCB-SDR. COUNTY and CITIES shall specifically:

(a) Submit data necessary to prepare updates to the Watershed Workplan to the DISTRICT no later than August 31st of each year.

(b) Submit any monitoring and sampling data individually collected pursuant to the MS4 Permit, to the DISTRICT at least quarterly as necessary for

DISTRICT to track and prepare reports under the Monitoring and Reporting Program. All applicable monitoring and sampling data individually collected within each fiscal year must be received by DISTRICT no later than August 15th of each year, for inclusion in the monitoring annual report that will be prepared and submitted by the District, pursuant to Section 2.e. herein.

(c) Provide one completed bound hard copy, and two electronic copies (PDF preferred) on CD or DVD, of the completed JRMP annual report to the DISTRICT no later than October 15th of each year.

(d) Provide information on existing MS4 facilities, "major outfalls" (as defined in the NPDES Permit) and/or other data as it pertains to facilities of the COUNTY or CITIES when requested by DISTRICT.

c. Public Education Program. On behalf of COPERMITTEES, DISTRICT shall conduct public education activities on a regional basis that focus on reducing pollution of urban runoff within the Santa Margarita Region, including, as appropriate, developing and disseminating broadcast, online and/or print outreach and advertising, developing brochures, and attending public events. DISTRICT shall also develop and implement mechanisms to determine the effectiveness of the regional public education program. The COUNTY and CITIES shall be individually responsible for developing and implementing any supplemental public education programs that may be necessary to target

individual communities or stakeholders within their respective jurisdictions, pursuant to Section F.6. of the NPDES Permit.

d. COPERMITTEE Training Program. On behalf of COPERMITTEES, and as requested by the COPERMITTEES, DISTRICT shall develop and conduct regional training sessions for COPERMITTEE personnel, covering the aspects of the programs developed by DISTRICT pursuant to Section 2.a.(1) of this AGREEMENT that are regionally uniform among COPERMITTEES. The COUNTY and CITIES shall be individually responsible for developing and implementing and reporting upon any supplemental training that may be necessary to ensure that their personnel are trained adequately regarding local policies and procedures for implementing the requirements of the NPDES Permit, pursuant to section F.6. of the NPDES Permit.

e. Monitoring Program. On behalf of the COPERMITTEES, DISTRICT shall perform sampling of surface water and urban runoff in accordance with the provisions of the NPDES Permit Monitoring and Reporting Program ("MRP"), Attachment E Provisions II.A and II.D-II.F, and prepare and submit Monitoring Reports in accordance with Provision III of Attachment E. The location of the sampling sites shall be determined by COPERMITTEES, subject to approval by CRWQCB-SDR. For Provision II.B. and II.C of the MRP, DISTRICT will coordinate with COPERMITTEES in developing a plan for identifying the list of outfalls to be sampled each year in accordance with the NPDES Permit, and COPERMITTEES shall be individually responsible for conducting outfall sampling, source identifications, and enforcement as necessary for their outfalls. The COPERMITTEES

may, subject to Section 3 herein, request the DISTRICT to conduct the initial outfall sampling required in Provisions II.B. and II.C. on behalf of the COPERMITTEES, however, all source identifications (including any follow-up sampling) and enforcement that may be required will remain the individual responsibility of the respective COPERMITTEES. The DISTRICT shall also enter into a contract with a local lab to provide analysis of water quality samples collected under the MRP. The contract shall be used strictly for water quality samples collected to comply with Provision II of the MRP. DISTRICT shall prepare and submit Monitoring Reports, as required by Provision III of Attachment E, based on data collected by the DISTRICT on behalf of the COPERMITTEES, and data provided to the DISTRICT by the COPERMITTEES in accordance with Section 2.b.(3)(b) of this Agreement.

f. Consultant Services. In the event DISTRICT requires the services of a consultant(s) to assist in performing duties conducted on behalf of the COPERMITTEES pursuant to Section 2 of this Agreement, the cost of said consultant(s) services shall be shared by COPERMITTEES in accordance with the cost sharing provisions set forth in Section 3 of this Agreement. COUNTY and CITIES shall be notified in writing of DISTRICTS request for proposals from one or more consultants, selection of a consultant, consultant's fee, contract timetable and payment schedule, and be allowed the opportunity to participate in decisions related to consultant's services. All consultant agreements are contingent upon the consulting firm's ability to meet DISTRICT standards and requirements, and where applicable approval by the DISTRICT'S

Board of Supervisors.

g. Support for Regional Programs. The COPERMITTEES shall jointly provide funding for certain regional efforts that benefit the Santa Margarita Region, including but not limited to: County Environmental Health's Compliance Assistance Program; the County Fire Department's Hazardous Materials Team; County Environmental Health's Household Hazardous Waste and Antifreeze, Batteries, Oil and Paint collection program; the DISTRICT'S membership with the California Stormwater Quality Association on behalf of COPERMITTEES; the DISTRICT'S administration of Principal Permittee duties, and other NPDES support activities as described in this Agreement, or as needed and agreed to by the COPERMITTEES. Where these programs are implemented countywide in support of other NPDES permit regions, the DISTRICT shall estimate the portion of the total cost of these regional programs that benefits the Santa Margarita Region.

h. Regulation and Enforcement. COUNTY and CITIES shall be responsible for the regulation and enforcement of local ordinances and regulations within their respective jurisdictions to ensure compliance with the NPDES Permit, and to prevent pollutants originating from within their respective jurisdictions from being discharged into the jurisdiction of another Party in a manner which could cause that Party to violate the NPDES Permit. This includes the exercise of police powers and land use controls and the enforcement of ordinances that COUNTY or CITIES presently have adopted or may adopt in the future.

3. Shared Costs. Costs for services to be performed in accordance with Sections 2.c., 2.d., 2.e. and 2.f. of this Agreement shall be shared by the Parties in accordance with the procedure specified below. In December of each year of this Agreement the DISTRICT shall:

a. Estimate the costs of services specified in Sections 2.c., 2.d., 2.e. of this Agreement and 2.f. for the upcoming fiscal year ("ESTIMATED COSTS");

b. Estimate the DISTRICT'S internal costs for developing, implementing and administering the NPDES program in the Santa Margarita Region as specified in 2.a. ("INTERNAL COSTS");

c. Estimate the revenues expected from the BENEFIT ASSESSMENT program ("ASSESSMENT REVENUES");

d. Determine actual costs for NPDES programs administered in the previous fiscal year; and

e. Determine Credits or Debits ("CREDITS" or "DEBITS") due to COUNTY and CITIES based on the difference of the actual contributions from the previous fiscal year with the actual contributions provided by the COUNTY and CITIES for that fiscal year.

By February 1st of each year of this Agreement, the DISTRICT, CITIES and COUNTY, through a NPDES representative assigned by the General Manager-Chief Engineer, City Managers, and County Executive Office, respectively, shall approve, by majority vote, ESTIMATED COSTS for the upcoming fiscal year.

3.1 DISTRICT Contribution

The DISTRICT contribution ("DISTRICT CONTRIBUTION") to programs specified in Sections 2.c., 2.d., 2.e., and 2.f. for the upcoming fiscal year shall be determined using the following formula:

DISTRICT CONTRIBUTION = ASSESSMENT REVENUES -

INTERNAL COSTS - 20% ASSESSMENT REVENUE. [1]

If the calculation yields a negative result, the DISTRICT shall have no contribution for the upcoming fiscal year other than the INTERNAL COSTS it has incurred.

3.2 COUNTY and CITIES Contribution

The total shared COUNTY and CITIES contribution (the "COMBINED CONTRIBUTION") shall be determined using the following formula:

COMBINED CONTRIBUTION = ESTIMATED COSTS - DISTRICT CONTRIBUTION.

The COUNTY'S and individual CITIES' respective pro rata share of the COMBINED CONTRIBUTION ("INDIVIDUAL CONTRIBUTION") shall be determined on the basis of an equally weighted average of population and Benefit Assessment Units within the Santa Margarita Region of Riverside County. More specifically, such percentage contribution shall be calculated as the equally weighted average of:

(a) The population of COUNTY or individual CITIES within the Santa Margarita Region, divided by the total population of the COUNTY and CITIES in the Santa Margarita Region and;

(b) The calculated number of Benefit Assessment Units ("BAU") for COUNTY or individual CITIES, divided by the total BAU for COUNTY and individual CITIES.

The INDIVIDUAL CONTRIBUTION shall be further adjusted by any CREDITS or DEBITS due from the previous fiscal year.

The population of CITIES shall be determined by the latest California State Department of Finance population figures issued in May of each year. COUNTY population shall be based on the most current Tax Rate Area ("TRA") information best fitting the Santa Margarita Region.

The BAU count of COUNTY and CITIES shall be estimated by comparing the most current TRA information best fitting the Santa Margarita Region with the Assessment

[1] District retains 20% of assessment revenue as a reserve for District's administrative and program costs associated with the NPDES Permit pursuant to RCFC&WCD Ordinance No. 14.

Rolls from the current fiscal year's BENEFIT ASSESSMENT Engineer's Report.

COUNTY and CITIES may generate credits toward payments due by providing labor or services in lieu of cash payments. DISTRICT shall determine value of labor or services based on ESTIMATED COSTS for the fiscal year.

DISTRICT shall invoice COUNTY and CITIES for INDIVIDUAL CONTRIBUTION at the beginning of each fiscal year and said invoice shall be due and payable by COUNTY and CITIES within 60 days of receipt of invoice from DISTRICT. The COMBINED CONTRIBUTION for COUNTY and CITIES shall not exceed $2,200,000 (two million, two hundred thousand dollars) annually under this Agreement.

4. Term of the Agreement. The term of this Agreement shall commence on the date of execution by the duly authorized representative of at least three of the five COPERMITTEES. The term of this Agreement shall extend for up to eighteen (18) months beyond the period of time in which the term of the NPDES Permit remains in valid force and effect, unless terminated prior to that date by agreement by all the Parties or withdrawal of all of the Parties in accordance with the terms of this Agreement.

5. Additional Parties. Any City which incorporates after the date of issuance of the NPDES Permit and/or after the commencement of this Agreement ("Prospective City") may file a written request with DISTRICT asking to be added as a Party. Upon receipt of such a request, DISTRICT shall solicit the approval or denial of the Parties. If a majority of the Parties, each having one, co-equal vote, approves the addition of the Prospective City, this Agreement shall be amended to reflect the addition, and the Prospective City shall thereafter become a Party under this Agreement. Upon execution of the Amended Agreement, the Prospective City shall be responsible for the shared costs discussed in Section 3 of this Agreement for the then-current budget year and any subsequent budget year.

6. Withdrawal from the Agreement. Any Party shall be eligible to withdraw from this Agreement after first giving 60 days written notice to the DISTRICT and the CRWQCB-SDR. The withdrawing Party shall agree in such notice to apply with the CRWQCB-SDR for a separate NPDES permit and to comply with all of the requirements established by

CRWQCB-SDR. In addition, withdrawal shall constitute forfeiture of all of the withdrawing Party's already-paid share of the costs allocated pursuant to Section 3. The withdrawing Party shall be responsible for any lawfully assessed penalties as a consequence of its withdrawal. In addition, the withdrawing Party shall remain liable as an Indemnitor Party after the effective date of its withdrawal as described in Section 7 below. The cost allocations to the remaining Parties shall be recalculated in the following budget year.

7. Mutual Indemnification. Each Party (hereafter "Indemnitor Party") shall indemnify, defend and hold harmless any other Party, together with that Party's employees, officers, managers, governing board members, counsel, representatives and agents (collectively "Indemnitee Parties"), from and against any and all damages, liabilities, losses, demands, lawsuits, orders, actions, causes of action, penalties, judgments, claims, costs and expenses (including reasonable attorneys' fees, including through all appeals) arising from or related to any violation of the NPDES Permit or this Agreement (collectively "Losses") to the extent caused by (i) by the acts or omissions of the Indemnitor Party and its employees, agents and representatives, (ii) discharges from the Indemnitor Party's jurisdictional area or facilities, and/or (iii) discharges from any MS4 owned or operated by the Indemnitor Party. The obligations of the Indemnitor Party set forth in this Section 7 are non-exclusive and are in addition to, and do not replace or modify, any other rights of action, whether at law or in equity, that any Party may have against another Party. Nothing in this Agreement shall limit the ability of any Party to seek any relief, legal or equitable, against any non-Party. The obligations set forth in this Section 7 shall survive the termination of this Agreement as to all such acts, omissions or discharges as described in subparts (i) through (iii) hereinabove that occurred, or are alleged to have occurred, while a Party during the term of the Agreement up until such time that it is terminated.

8. Amendments to the Agreement. Except as provided in Section 5, this Agreement may only be amended by consent of all Parties. No amendment to this Agreement shall be effective unless it is in writing and signed by the duly authorized representatives of all Parties.

9. Authorized Signatories. The General Manager-Chief Engineer of DISTRICT, the Chief Executive Officer of COUNTY and the City Managers of CITIES (or their designees) shall be authorized to execute all documents and take all other procedural steps necessary to file for and obtain an NPDES permit(s) or amendments thereto.

10. Notices. All notices shall be deemed duly given when delivered by hand; or three (3) days after deposit in the U.S. Mail, postage prepaid. Notice to the Parties shall be sent to the publically advertised mailing address for the Party.

11. Governing Law and Severability. This Agreement shall be governed and construed in accordance with the laws of the State of California. If any provision or provisions of this Agreement shall be determined to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired hereby.

12. Consent to Waiver and Breach. No term or provision hereof shall be deemed waived and no breach excused, unless the waiver or breach is consented to in writing, and signed by the Party or Parties affected. Consent by any Party to a waiver or breach by any other Party shall not constitute consent to any different or subsequent waiver or breach.

13. Entire Agreement. This Agreement and the exhibits attached hereto constitute the entire agreement between the Parties with respect to the subject matter therein; all prior agreements, representations, statements, negotiations and undertakings are superseded hereby.

14. Execution in Counterparts. This Agreement may be executed and delivered in any number of counterparts or copies (counterparts) by the Parties. As each Party has signed and delivered at least one counterpart to the other Parties, each counterpart shall be deemed an original and, taken together, shall constitute one and the same Agreement, which shall be binding and effective as to the Parties.

15. Non-Waiver of Objections. The entry into, and the performance of this Agreement by the Parties shall not constitute, nor be construed as, any waiver of the COPERMITTEES' objection to any provisions of the NPDES Permit including, without

limitation, any provisions identified in the Petition for Review filed by the COPERMITTEES with the SWRCB, or that provisions of the NPDES Permit constitute an unfunded State mandate without subvention of State funds.

/ / /

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the dates set forth below.

RECOMMENDED FOR APPROVAL:

By_____
WARREN D. WILLIAMS
General Manager-Chief Engineer

Dated:_____

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By _____
MARION ASHLEY, Chairman
Riverside County Flood Control and Water Conservation District Board of Supervisors

APPROVED AS TO FORM:

By_____
PAMELA J. WALLS
County Counsel

Dated:_____

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

RECOMMENDED FOR APPROVAL:

Dated:_____

COUNTY OF RIVERSIDE

By _____
BOB BUSTER, Chairman
Riverside County Board of Supervisors

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

WHEN DOCUMENT IS FULLY EXECUTED RETURN
CLERK'S COPY
to Riverside County Clerk of the Board, Stop 1010
Post Office Box 1147, Riverside, Ca 92502-1147
Thank you.

JU:AMM:cw
11/03/11

DEC 06 2011 3.4

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the dates set forth below.

RECOMMENDED FOR APPROVAL:

By _____
WARREN D. WILLIAMS
General Manager-Chief Engineer

Dated: 11/22/11

APPROVED AS TO FORM:

PAMELA J. WALLS
County Counsel

By _____
KARIN WATTS-BAZAN
Principal Deputy County Counsel

Dated: November 21, 2011

RECOMMENDED FOR APPROVAL:

By _____
LARRY PARRISH
Interim County Executive Officer

Dated: _____

JU:AMM:cw
11/03/11

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By _____
MARION ASHLEY, Chairman
Riverside County Flood Control and Water Conservation District Board of Supervisors

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

COUNTY OF RIVERSIDE

By _____
BOB BUSTER, Chairman
Riverside County Board of Supervisors

ATTEST:

KECIA HARPER-IHEM
Clerk to the Board

By _____
Deputy

(SEAL)

DEC 0 6 2011 11.1

APPROVED AS TO FORM:

By _____
City Attorney

CITY OF MURRIETA

By _____
Mayor

ATTEST:

By _____
City Clerk

Dated: January 17, 2012

DEC 06 2011 5.4

APPROVED AS TO FORM:

By _____
Peter M. Thorson, City Attorney

CITY OF TEMECULA

By _____
Chuck Washington, Mayor

ATTEST:

By _____
Susan W. Jones, MMC, City Clerk

Dated: 1/10/12

APPROVED AS TO FORM:

By _____
City Attorney

CITY OF WILDOMAR

By _____
Mayor

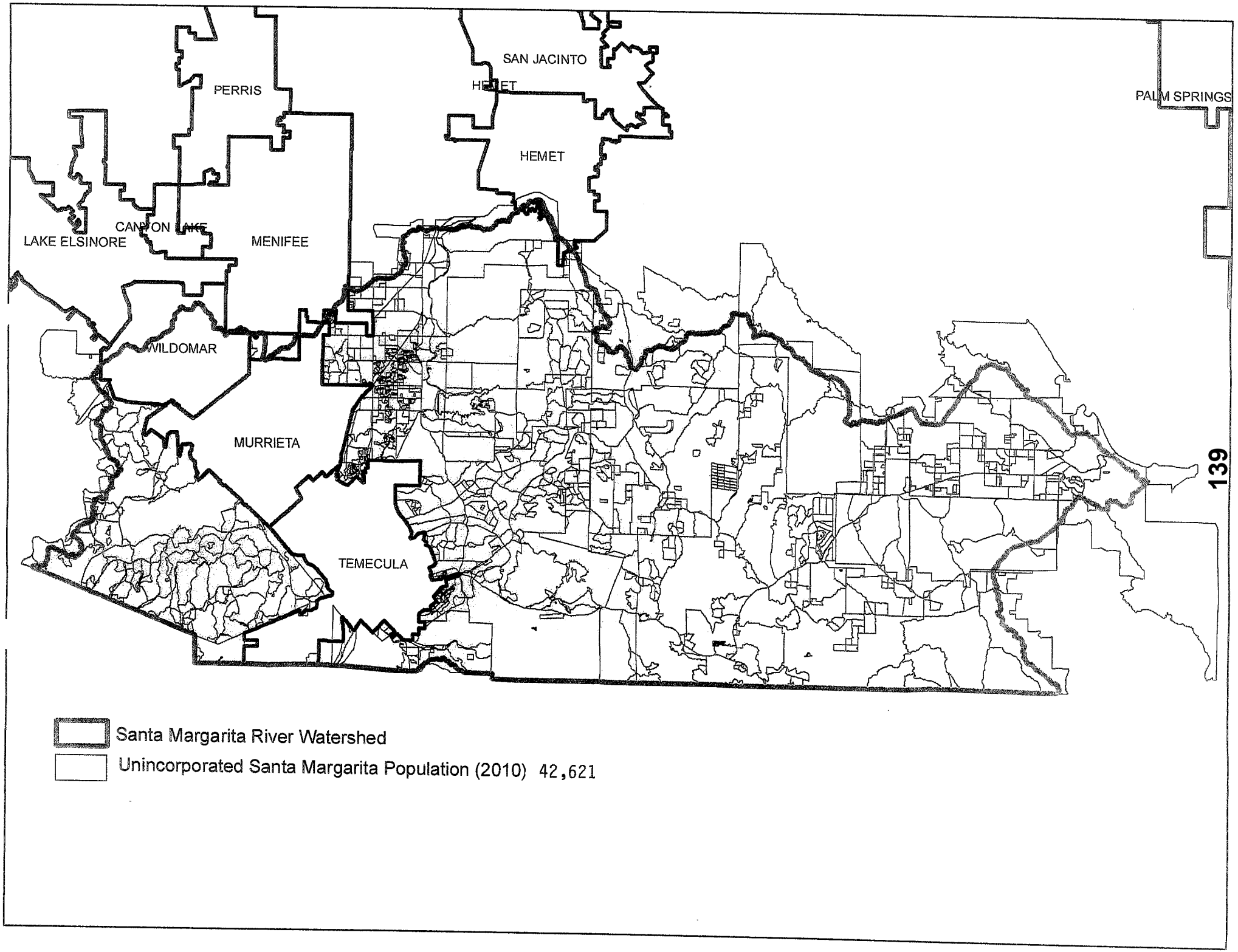
ATTEST:

By _____
City Clerk

Dated: 01-19-12

2011-2012 NPDES Cooperative Agreement Cost Sharing Estimates
Approximate Numbers for Budgeting Consideration

Municipality	Population	SMR
Riverside County	42,621	$288,052
Murrieta	101,487	$527,612
Temecula	105,029	$581,716
Wildomar	31,907	$146,637
Total	281,044	$1,544,017


PERRIS
SAN JACINTO
HEMET
HEMET
PALM SPRINGS
CANYON LAKE
LAKE ELSINORE
MENIFEE
WILDOMAR
MURRIETA
TEMECULA
139
Santa Margarita River Watershed
Unincorporated Santa Margarita Population (2010) 42,621

1. TEST CLAIM TITLE

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016

2. CLAIMANT INFORMATION

County of Riverside
Name of Local Agency or School District

Larry Parrish
Claimant Contact

Interim Chief Executive Officer
Title

4080 Lemon Street, Suite 400
Street Address

Riverside, CA 95201
City, State, Zip

951-955-1110
Telephone Number

951-955-1105
Fax Number

ceo@rceo.org
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

David W. Burhenn
Claimant Representative Name

Attorney
Title

Burhenn & Gest LLP
Organization

624 S. Grand Avenue, Suite 2200
Street Address

Los Angeles, CA 90017
City, State, Zip

213-629-8788
Telephone Number

213-688-7716
Fax Number

dburhenn@burhenngest.com
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2010-0016 (adopted November 10, 2010)

☑ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

(Revised 1/2008)

8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Larry Parrish
Print or Type Name of Authorized Local Agency or School District Official

Interim Chief Executive Officer
Print or Type Title

Signature of Authorized Local Agency or School District Official

November 7, 2011
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

APPENDIX B-3
CERTIFICATION OF LEGAL AUTHORITY

PAMELA J. WALLS
County Counsel

KATHERINE A. LIND
Assistant County Counsel

OFFICE OF COUNTY COUNSEL
COUNTY OF RIVERSIDE

3960 ORANGE STREET, SUITE 500
RIVERSIDE, CA 92501-3674
TELEPHONE: 951/955-6300
FAX: 951/955-6322 & 951/955-6363

June 25, 2012

Mr. David Gibson, Executive Officer
California Regional Water Quality Control Board –
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Re: Order No. R9-2010-0016 (NPDES No. CAS 0108766) of the California Regional Water Quality Control Board – San Diego Region.

Dear Mr. Gibson:

This letter is being provided to you and your Board pursuant to Requirement E.2. of the above-referenced Order. This office serves as legal counsel for both the County of Riverside (the "County") and the Riverside County Flood Control and Water Conservation District (the "Flood Control District"). We have reviewed the provisions of the above-referenced Order, the applicable Ordinances of the County of Riverside and the Flood Control District, applicable statutes with regard to organization and police powers of the County and the organization of the Flood Control District, and all other laws, statutes, ordinances, regulations and rules that we deemed appropriate.

Based on this review, this office is of the opinion that the County and the Flood Control District, as "Copermittees," as this term is defined in said Order, both appear to have adequate legal authority to perform their responsibilities as set forth in said Order, and when required by said Order to do so, appear to have adequate legal authority to implement and enforce the applicable provisions of said Order in accordance with applicable state and federal laws. Moreover, the County and the Flood Control District reserve the right to modify and/or update their legal authority as the need arises during the term of said Order so that the provisions contained therein may be more effectively carried out.

Pursuant to Requirement E.2. (a) of the above-referenced Order, runoff-related ordinances for the County are enforceable under the police powers of the California Constitution and/or other provisions of California statutory law and includes the following: Riverside County Ordinance Nos. 348, 427, 457, 460, 461, 541, 592, 615, 617, 650, 651, 689, 728, 754, 812, 830, 843, 856, 857, 858, 859 and 864. In addition, runoff-related ordinances for the Flood Control District are enforceable under certain provisions of the California Constitution, the Riverside County Flood Control and Water Conservation Act (California Water Code – Appendix) and/or other provisions of California statutory law and includes the following: Ordinance Nos. 14, 19 and 20.

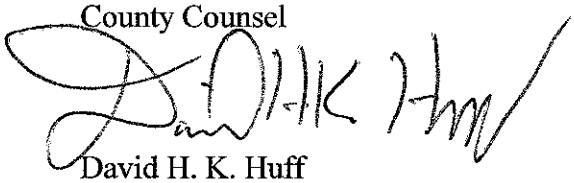
Pursuant to Requirement E.2. (b) of the above-referenced Order, Riverside County Ordinance No. 725 provides local administrative and legal procedures to help assist with mandating compliance with the County's runoff-related ordinances and provides for enforcement actions that can be undertaken through administrative, civil or criminal case avenues.

Pursuant to Requirement E.2. (c) of the above-referenced Order, the County's and the Flood Control District's runoff-related ordinances are adopted by the legislative body of each agency in accordance with provisions of the California Government Code, the Riverside County Flood Control and Water Conservation Act (California Water Code – Appendix) and other applicable provisions of California statutory law. Legal challenges to the County's and the Flood Control District's adopted runoff-related ordinances may be pursued through resort to the judicial court system and in accordance with applicable California and/or Federal law.

Please do not hesitate to contact me in the event that you have any questions or comments, I may be reached at (951) 955-6316 and the e-mail address noted below.

Sincerely,

PAMELA J. WALLS
County Counsel



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APPENDIX B-4
EFFECTIVENESS ASSESSMENTS

Appendix B-4

Performance Evaluation Assessment

Compliance with Section J.1

Section J.1 of the 2010 SMR MS4 Permit requires each Copermittee to annually assess and report upon the effectiveness of the JRMP and Watershed Workplan implementation to (1) reduce the discharge of Storm Water Pollutants from its MS4 facilities to the MEP; (2) prohibit Non-Stormwater discharges; and (3) prevent runoff discharges from the MS4 from causing or contributing to a violation of Water Quality Standards. With submittal of the Report of Waste Discharge, the Copermittees will determine whether their program implementation is resulting in the protection and/or improvement of water quality through an integrated assessment.

Overview

The purpose of the overall program assessment is to ensure that the Copermittee's programs continue to be effective at managing the effects of Runoff on Receiving Water quality as required under section J.1 of the 2010 SMR MS4 Permit. To achieve this objective, the Copermittees have developed an overall program effectiveness assessment strategy. The overall program effectiveness assessment is an iterative process as depicted in Figure 1.

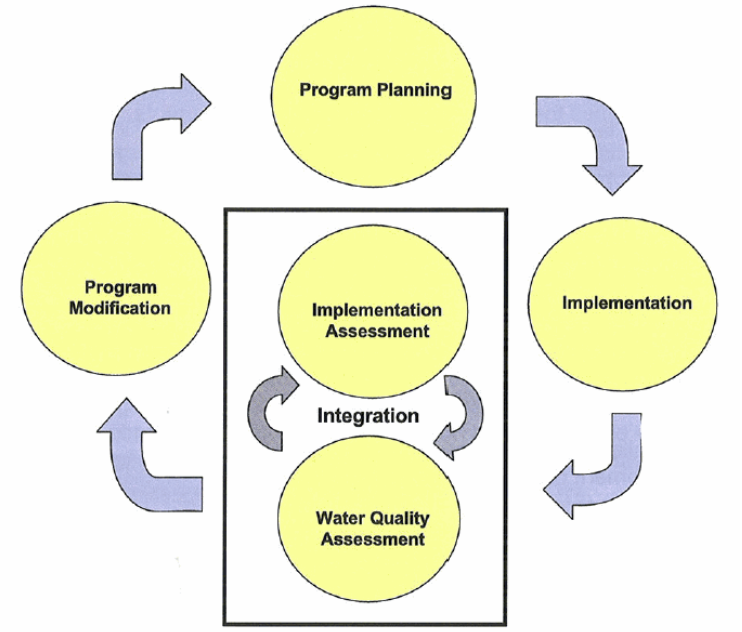


Figure 1

Measurable metrics that will be collected annually. These metrics generally involve: Confirmation of activities, Tabulation of data, Surveys of the public, results from Inspections or site visits, Quantification, and information from the Monitoring program.

CASQA Outcome Levels for each metric; to indicate how each metric can demonstrate the effectiveness of the Permittee's programs (as described below). Data collected through program implementation will be used to assess Level 1 – 4/5 outcomes. The results from the monitoring program will be used to identify water quality trends to evaluate Level 5 & 6 Outcomes

Assessment Intervals at which the Copermittees will evaluate the measurable metrics to determine the applicable CASQA Outcome Levels.

Timeframes in which the Copermittees expect to be able to achieve the desired CASQA Outcome Level. If a desired outcome is not attained within the specified timeframe, the Copermittee(s) will re-assess the BMP to identify any improvements that may be needed to improve their ability to detect and attain the outcome.

CASQA Outcome Levels

CASQA has established six effectiveness assessment levels which are described below. Generally lower level outcomes must be achieved before the higher level outcomes can be expected.

Level 1 – Documenting activities. Level 1 Outcomes provide the program managers with direct feedback on whether the control measures are being developed and implemented as planned and on schedule. Level 1 Outcomes are assumed to be beneficial to water quality and reflect program implementation and are not indicators of the impact of implementation on the environment.

Level 2 – Raising awareness. Level 2 Outcomes provide program managers with feedback on how effective the control measures have been in raising awareness and changing attitudes of target audiences. Level 2 Outcomes are assumed to be beneficial to the environment as increased awareness and attitudinal changes provide the basis for behavioral change.

Level 3 – Changing behavior. By building on Level 2, Level 3 Outcomes provide program managers with feedback on how effective the program elements and control measures have been in motivating target audiences to change their behaviors and implement appropriate BMPs. At Level 3, control measures focus on providing information and incentives for target audiences to take action by changing behavior and implementing recommended BMPs. Both quantitative (i.e., statistically valid) and qualitative methods are used to measure behavior changes. Methods used to measure behavior changes include those used for Level 2 Outcomes as well as direct observation via site visits. Level 3 Outcomes may take the form of a percent and/or change in the percentage of the target audience demonstrating that a behavior change has occurred such as an increase in number of BMPs implemented and maintained at construction sites.

Level 4 – Reducing loads from sources. Level 4 Outcomes provide program managers with feedback regarding reductions in the amounts of pollutants associated with specific sources

resulting from the implementation or enhancement of a BMP. If a large enough portion of the target audience is moved to take action (Level 3), loads into the MS4 are prevented. At Level 4, programs collect data to allow estimation of loads from Pollutant sources that are prevented from being either generated or discharged into the MS4.

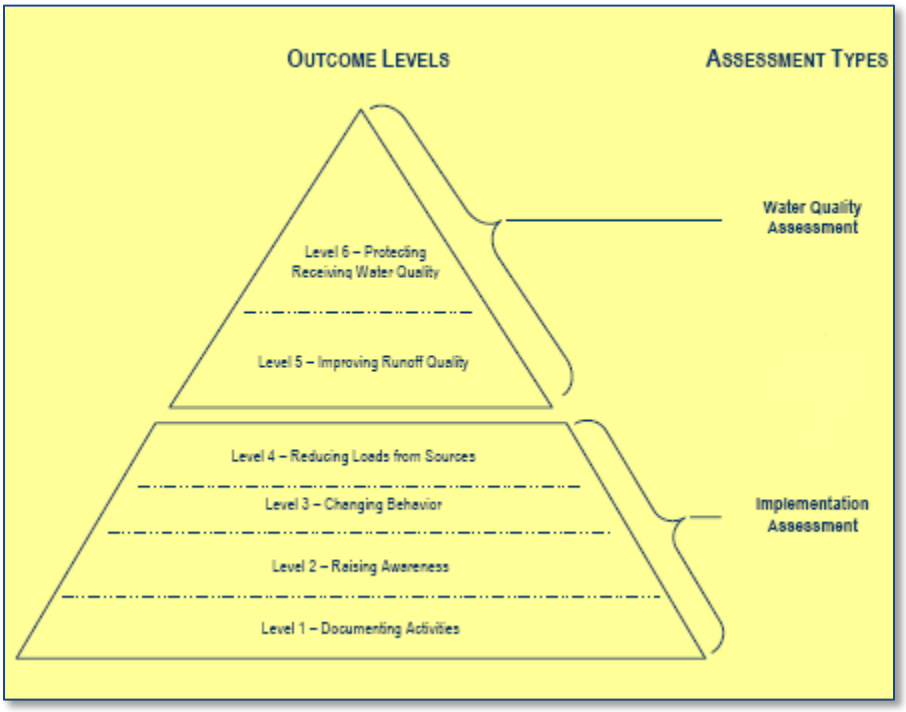
Level 5 – Improving runoff quality. Level 5 Outcomes may be measured as reductions in one or more specific Pollutants, and may reflect effectiveness at a variety of scales ranging from site-specific to programmatic. Over time, as loads are prevented from entering the MS4, runoff and discharge quality are expected to improve. At Level 5, baseline measurements of runoff quality should be measured to allow comparison. Multi-year data sets are needed to have any confidence in the measured change.

Level 6 – Protecting Receiving Water quality. At Level 6, program managers will focus on Outcomes such as compliance with Water Quality Standards, protection of biological integrity, and Beneficial Use attainment. Regardless of the Outcomes targeted, Receiving Water quality usually reflects more than the quality of MS4 discharges. Other influences may have a significant impact on Receiving Water quality, including sanitary sewer overflows, rising groundwater, agricultural and other Non-Point Source discharges. Changes in Receiving Waters and the environment resulting from stormwater programs may only be seen over long periods of time that allow the cumulative impacts of multiple control measures and program elements to result in measurable change in water quality.

Categories of Assessments

The program elements addressed in the overall program effectiveness assessment can generally be broken down into two categories, implementation assessments, and water quality assessments, as shown in the figure below:

Appendix B-4



Assessment Strategy

JRMP Implementation Assessments

The Copermittees have identified implementation assessment metrics for each compliance program area which can potentially demonstrate multiple outcome levels, as summarized below:

JRMP Program	Table #	Potential Outcome Levels					
		1	2	3	4	5	6
IC/ID	1	X		X	X	X	
Permittee Facilities	2	X	X	X	X		
Development Planning	3	X		X		X	
Construction	4	X		X			
Industrial / Commercial	5	X		X			
Residential	6			X	X		
Retrofit	7	X			X	X	
Public Education	8	X	X	X	X		

The specific metrics and associated CASQA Effectiveness Metrics are shown in Tables 1-8 of the Performance Evaluation Assessment.

Water Quality Assessments

In addition to the implementation assessments identified above, data from the Monitoring program will be used to perform Water Quality Assessments, as summarized below:

Appendix B-4

Monitoring Program Element	Potential Outcome Levels					
	1	2	3	4	5	6
Outfalls – Dry Weather				X	X	
Outfalls – Wet Weather				X	X	
Outfalls – High Priority Inland Aquatic Habitat				X	X	
Receiving Waters - Stream Assessment Monitoring				X	X	X
Receiving Waters – MLS Dry Weather				X	X	X
Receiving Waters – MLS Dry Weather				X	X	X

The specific metrics and associated CASQA Effectiveness Metrics for the Monitoring Program Element are shown in Table 9 of the Performance Evaluation Assessment. The revised Santa Margarita Monitoring Program (Volume III of the CMP) describes the monitoring program that will collect the necessary data.

The specific metrics and associated CASQA Effectiveness Metrics for the Watershed Workplan Program Element are shown in Table 10 of the Performance Evaluation Assessment. The Watershed Workplan is discussed in section 3.8 of the JRMP.

Reporting of Effectiveness Assessments

The continued implementation of the BMPs required in the 2010 SMR MS4 Permit are anticipated to result in incremental, but overall improvement in the metrics that may or may not be discernible within the term of the 2010 SMR MS4 Permit, however this assessment program is intended to be an iterative process that can transcend MS4 Permit terms, to ensure that improvements are made consistent with the MEP standard.

Beginning with the FY 2012-2013 Annual Reports, a summary of the Implementation Assessments will be provided within each JRMP Annual Report, and a summary of the Water Quality Assessments will be provided within each Monitoring Annual Report.

These effectiveness summaries will include:

a. The data collected for each of the measurable metrics identified in tables 1-10.

b. A determination of the applicable CASQA outcome level(s) for each metric, upon completion or the applicable assessment interval.

c. Responses to effectiveness assessments: Where the assessments indicate that the desired outcome level has not been achieved at the end of the projected timeframe, the Copermittee(s) will review its(their) applicable activities and BMPs to identify any modifications and improvements needed to maximize effectiveness, as necessary to comply with the 2010 SMR MS4 Permit. If the Copermittee(s) determines that the existing activities/BMPs are adequate, or that the projected timeframe should be

extended, justification and an updated timeframe for attainment of the outcome level will be provided in the Annual Report.

d. A work plan and schedule to address any program modifications and improvements in response to the findings of the assessments will be developed and implemented. The work plan and schedule will be provided and updated with the applicable Annual Report. The work plans will include, at a minimum, the following:

1) The problems and priorities identified during the assessment;
2) A list of Priority Pollutants and known or suspected sources;
3) A brief description of the strategy employed to reduce, eliminate or mitigate the negative impacts;
4) A description and schedule for new and/or modified BMPs. The schedule will include dates for significant milestones;
5) A description of how the selected activities will address an identified high priority problem. This will include a description of the expected effectiveness and benefits of the new and/or modified BMPs;
6) A description of implementation effectiveness metrics;
7) A description of how efficacy results will be used to modify priorities and implementation; and
8) A review of past activities implemented, progress in meeting Water Quality Standards, and planned program adjustments.

Table 1: IDDE (Section 4.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities* *2 - Raising Awareness* *3 - Changing Behavior* *4 - Reducing Loads* *5 - Improving Runoff Quality* *6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Number of IC/ID reports received (F.4e.(3))	1	Annual	Annual
Percentage/Number of Dry Weather Source ID Efforts that were completed, and Findings	5	Annual	N/A, Outcome level will depend on outcome of Source ID
Percent/Number of IC/ID related enforcement actions that reached each level of enforcement, as described in section 3.5.2.3 of the JRMP (F.4.f.)	3	ROWD	10+ Years
Estimated volume of anthropogenic trash removed from Permittee MS4 facilities (cubic yards) (F.3.a.(6)(b)(vi))	4	Annual	Annual

Table 2: Municipal Areas and Activities (Section 5.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities* *2 - Raising Awareness* *3 - Changing Behavior* *4 - Reducing Loads* *5 - Improving Runoff Quality* *6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Percent/Number of Permittee facilities with appropriate BMPs identified (F.3.a.(2)(b))	2	Annual	Permit Term
Percent/Number of annual facility inspections that require follow-up actions (F.3.a.(8)(c))	3	ROWD	10+ years
Average percent/number of follow-up actions identified in the previous year's Permittee facility inspections that were addressed (F.3.a.(8)(c))	3	ROWD	10+ years
Number of Permittee facility and MS4 operators and maintenance staff that attended Municipal training (F.6.b.(1))	1	Annual	Annually
Estimated tons of Waste removed by Permittee street sweeping, where applicable (F.3.a.(5))	4	Annual	Annually
Estimated tons of Waste removed from Permittee Open Channels (F.3.a.(6)(b))	4	Annual	Annually
Estimated tons of Waste removed from Permittee storm drain inlets (F.3.a.(6)(b)	4	Annual	Annually

Table 3: Development Planning (Section 6.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Number of acres of **Redevelopment** projects that incorporated LID-based BMPs that are built and completed (F.1.f.(1)) *	5	Annual	N/A**
Number of applicable planning staff that attended WQMP training (F.6.b.(1))	1	Annual	Annual
Number / percent of WQMP Projects where Post-Construction BMP verifications have confirmed that BMPs are properly maintained. (F.1.f.(2))	3	ROWD	10+ years

* *Redevelopment of existing sites is understood to have a Level 5 outcome, based on the implementation of updated stormwater controls such as LID on sites that otherwise may have had the potential to discharge a higher level of pollutants. However the Permittees recognize that the improvements in runnoff quality that are expected from redeveloped sites cannot be directly quantified.*

** *No Outcome Timeframe is established as the Copermittees have no control over the rate or timing of Redevelopment*

Table 4: Private Development Construction Activity (Section 7.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities* *2 - Raising Awareness* *3 - Changing Behavior* *4 - Reducing Loads* *5 - Improving Runoff Quality* *6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Construction Site inventory updated (F.2.b.)	1	Annual	Annual
Number of construction sites disturbing over 1 acre that are discovered without applicable building/grading permits. (F.2.e.(6)(b))	3	ROWD	10+ Years
Percent/Number of Construction Sites subjected to enforcement beyond verbal/written warnings (F.2.f.(1))	3	ROWD	10+ Years
Percent/Number of enforcement actions that reached each level of enforcement (F.2.f.(1))	3	ROWD	10+ Years
Number of construction inspection staff that attended Construction training (F.6.b.(b))	1	Annual	Annual

Table 5: Industrial and Commercial (Section 8.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Industrial & Commercial Facilities inventory updated (F.3.b.(1)(a))	1	Annual	Annual
Percent/Number of active Industrial and Commercial sites subjected to enforcement beyond verbal/written warnings (F.3.b.(5))	3	ROWD	10+ Years
Percent/Number of enforcement actions that reached each level of enforcement (F.3.b.(5))	3	ROWD	10+ Years
Number of applicable Industrial & Commercial Facility inspection staff that attended Industrial-Commercial training (F.6.b.(1)(c))	1	Annual	Annual

Table 6: Residential (Section 9.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Gallons of used oil collected at collection events (F.3.c.(2)(c))	4	Annual	ROWD
Total pounds collected at HHW/ABOP events (F.3.c.(2)(c))	4	Annual	ROWD
Total number of participants at HHW/ABOP events (F.3.c.(2)(c))	3	ROWD	10+ Years
Percent/Number of residences in Permittee jurisdiction subjected to enforcement beyond verbal/written warnings (F.3.c.(3))	3	ROWD	10+ Years

Table 7: Retrofit Program Section 10.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities* *2 - Raising Awareness* *3 - Changing Behavior* *4 - Reducing Loads* *5 - Improving Runoff Quality* *6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*
Number of times the Retrofit Program has identified a potential solution to a specific identified problem	1	Annual
Number of non-structural 'retrofit' BMPs that have been implemented	4	ROWD
Number of structural 'retrofit' BMPs that have been implemented	5	ROWD

* *As described in the Retrofit Program, Retrofit BMPs (Non-structural and/or Structural) may not be required to address all identified problems. Accordingly no timeframe has been established to achieve the*

Outcome Timeframe *(time at which program will be reassessed if desired outcome has not been achieved)*
Annual
N/A*
N/A*

potential outcomes.

Table 8: Public Education Section (Section 11.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Number of outreach events to schools	1	Annual	Annual
Number of Public Events where outreach was conducted	1	Annual	Annual
Results of Public Ed Surveys	2	ROWD	Permit term
Pounds of trash removed through watershed cleanup events	4	Annually (as events occur)	Annually (as events occur)
Number of home improvement stores provided outreach and custombe education information for pesticide use	1	Annual	Annual
Number of E-newsletters signups	2	Annual	ROWD
% of E-Newsletters Clicked	2	Annual	ROWD

Table 9: Santa Margarita Monitoring Plan (Section 13.0)

Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Number / Percent of Sampled Outfalls exceeding NALs	5	ROWD	10+ Years*
Number / Percent of Sampled Outfalls exceeding SALs	5	ROWD	10+ Years*
Inland Aquatic Habitat Monitoring	6	ROWD	15+ Years*
Receiving Water Stream Assessment Monitoring	6	ROWD	15+ Years*
Receiving Water MLS Dry Weather Monitoring	6	ROWD	15+ Years*
Receiving Water MLS Wet Weather Monitoring	6	ROWD	15+ Years*

* *Accumulation of an adequate dataset to accurately detect changes in water quality may require multiple permit terms.*

Table 10: Watershed Workplan

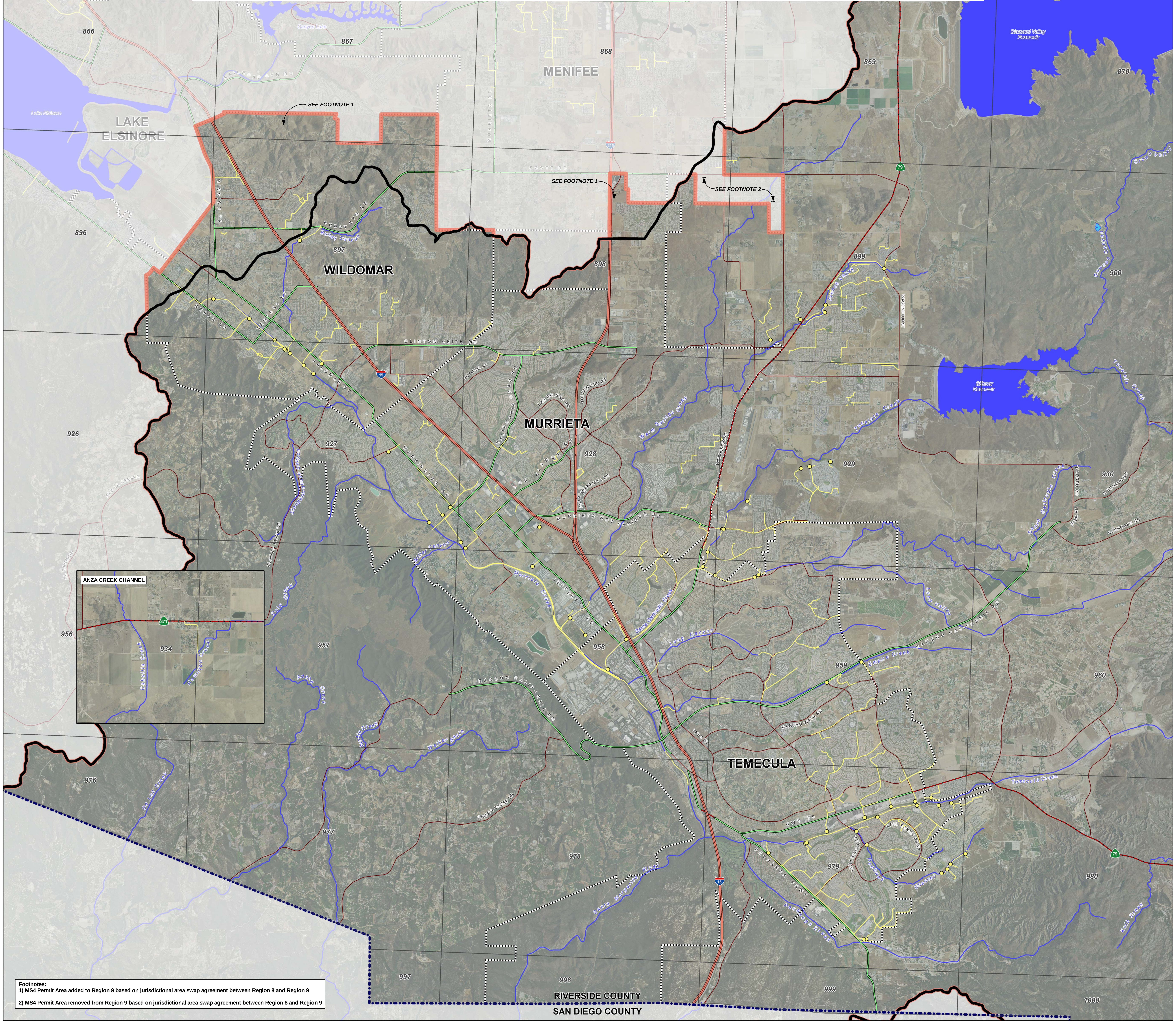
Measureable Metrics Collected *(Data Compiled Annually)*	**Highest Potential CASQA Outcome Level** *1 - Documenting Activities; 2 - Raising Awareness; 3 - Changing Behavior; 4 - Reducing Loads; 5 - Improving Runoff Quality; 6 - Protecting Receiving Water Quality*	**Assessment Interval** *(how frequently the annually collected data will be assessed for meeting potential CASQA Outcome Levels)*	**Outcome Timeframe** *(time at which program will be reassessed if desired outcome has not been achieved)*
Annual Public Review Meeting conducted	1	Annual	Annual
Updated Characterization of Receiving Water Quality	1	Annual	Annual
Updated prioritization of water quality problems	1	Annual	Annual
Descriptions of likely sources updated	1	Annual	Annual
Updated BMP Implementation Strategy	1	Annual	Annual
BMPs implemented according to schedule	1	Annual	Annual
Number of Collaborative Meetings Attended	1	Annual	Annual
Numeric Nutrient Endpoints Study	6	ROWD	5+ Years
Brake Pad Legistlation	3	ROWD	5+ years
Pyrethroid Toxicity Reduction Evaluation plan implemented	3	ROWD	5+ Years

APPENDIX - C

DISTRICT FACILITIES AND ACTIVITIES

APPENDIX C-1
DISTRICT MS4 FACILITIES MAP
DISTRICT, COUNTY, AND CITY MS4 FACILITIES MAP

DISTRICT MS4 FACILITY MAP IN SANTA MARGARITA REGION



LEGEND

- RCFC & WCD OUTFALLS
- RCFC&WCD MS4 FACILITIES
- RECEIVING WATERS
- RECEIVING WATERS
- SANTA MARGARITA RIVER WATERSHED BOUNDARY
- SANTA MARGARITA RIVER MS4 PERMIT AREA BOUNDARY
- COUNTY BOUNDARY
- INCORPORATED AREAS
- FREEWAYS
- HIGHWAYS
- MAJOR ROADS
- SECONDARY ROADS
- WATERBODEIS
- THOMAS BROS MAPS PAGE GRID

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JUNE 12, 2012

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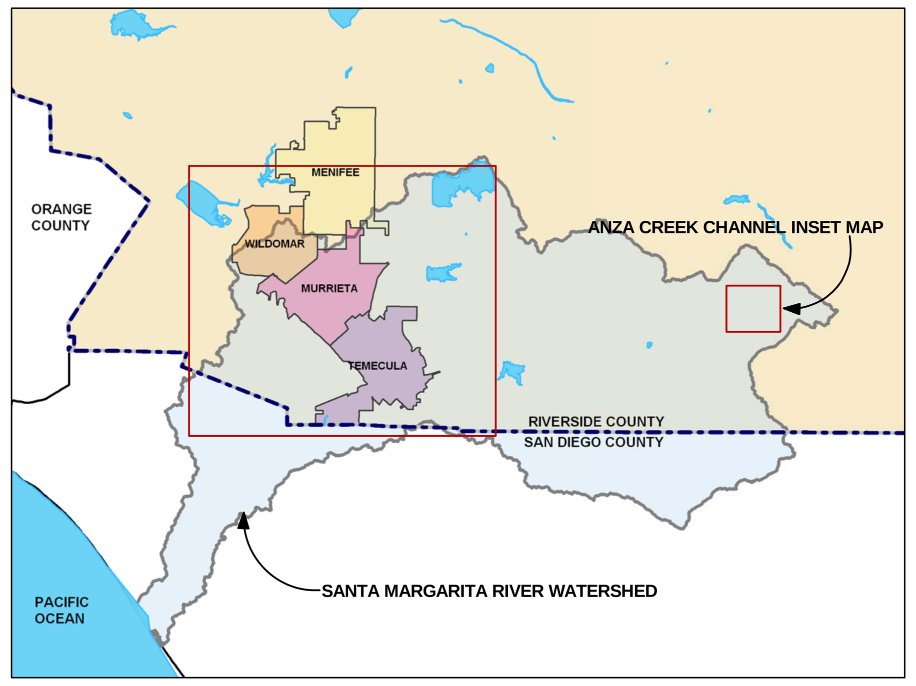

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RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT GEOGRAPHIC INFORMATION SYSTEM

MS4 FACILITY MAP IN SANTA MARGARITA REGION

LEGEND

- RCFC&WCD MS4 FACILITIES
- RIVERSIDE COUNTY MS4 FACILITIES
- CITY MS4 FACILITIES
- RECEIVING WATERS
- RECEIVING WATERS
- SANTA MARGARITA RIVER WATERSHED BOUNDARY
- SANTA MARGARITA RIVER MS4 PERMIT AREA BOUNDARY
- COUNTY BOUNDARY
- INCORPORATED AREAS
- FREEWAYS
- HIGHWAYS
- MAJOR ROADS
- SECONDARY ROADS
- WATERBODEIS
- THOMAS BROS MAPS PAGE GRID

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JUNE 30, 2012

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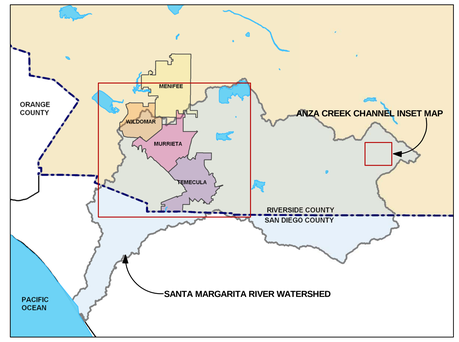
ANZA CREEK CHANNEL INSET MAP



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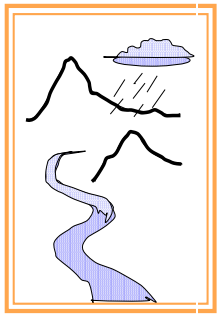
Footnotes:
1) MS4 Permit Area added to Region 9 based on jurisdictional area swap agreement between Region 8 and Region 9

2) MS4 Permit Area removed from Region 9 based on jurisdictional area swap agreement between Region 8 and Region 9

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT GEOGRAPHIC INFORMATION SYSTEM

APPENDIX C-2
SANITARY SEWER OVERFLOW PROCEDURES



Unified Sanitary Sewer Spill Response Procedure

Submitted to the
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

(SDRWQCB ORDER NO. R9-2010-0016)

June 30, 2012

BY THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISRICT, COUNTY OF RIVERSIDE, AND CITIES OF RIVERSIDE COUNTY (SAN DIEGO REGION)

NPDES

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Unified Sanitary Sewer Spill Response Procedure

1.0 Background

On November 10, 2010, the California Regional Water Quality Control Board – San Diego Region (Regional Board) issued an area-wide Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (2010 MS4 Permit) to the Riverside County Flood Control and Water Conservation District (District), the County of Riverside (County), and the incorporated cities of Riverside County within the San Diego Region (collectively, Copermittees).

The 2010 MS4 Permit requires the Copermittees to control the discharge of Pollutants into and from the MS4s to Waters of the United States, including from Sewage Spills. The Copermittees however do not own nor operate any portion of the sanitary sewer system nor associated treatment facilities. Sewering agencies that own or operate sanitary sewer collection systems greater than one mile in length are regulated under State Water Resources Control Board Water Quality Order No. 2006-0003 and the accompanying amendment to its monitoring and reporting program (WQ 2008-0002-EXEC). This order, known as the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Sanitary Sewer Order) serves, among other purposes, to prevent and minimize Potential Pollutants from sanitary sewer overflows (SSOs) originating from these sewer collection systems from entering surface waters. Copermittees that own or operate applicable sanitary sewer collection systems are required to obtain coverage under the Sanitary Sewer Order.

The Regional Board has found that effluent from SSOs that may enter the MS4 can ultimately have a negative impact on Beneficial Uses of Receiving Waters. The Copermittees have developed this Sanitary Sewer Spill Response Procedure to prevent, respond to, contain and clean up sewage from SSOs that have or could impact the MS4.

2.0 Purpose

The local Sewering agenciesare required to provide notification, documentation, spill response and reporting of SSOs from their sanitary sewer collection systems pursuant to established federal and state regulations (including the Sanitary Sewer Order), and individual NPDES permits. This Sanitary Sewer Spill Response Procedure provides a mechanism to ensure effective coordination between those sewering agencies and the Copermittees in the event that an SSO threatens to impact, or impacts, the MS4. This procedure will:

- Enhance communication between the Copermittees, sewering agencies and the Regional Board;
- Clarify and streamline interagency SSO response procedures; and
- Provide additional protection of Receiving Waters.

3.0 SSO Response Procedure

Upon determination by a sewering agency or Copermittee, persons in charge, contractor or field crew that an SSO has occurred that may impact the MS4, the following notification, reporting, response, and sampling procedures will be implemented.

3.1 Notifications

3.1.1 Notification Requirements Applicable to Sewering Agencies:

In compliance with the Sanitary Sewer Order, the following notification requirements are applicable to sanitary sewer collection systems and other facilities owned or operated by sewering agencies:

- For any discharges of sewage that result in a discharge to a drainage channel or surface water, the sewering agency will as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the OES, the County Department of Environmental Health, and the Regional Board.
- As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the sewering agency will submit to the Regional Board a certification that the OES and the County Department of Environmental Health have been notified of the discharge.

The sewering agency with jurisdiction for the spill will provide notification immediately (within 24 hours of becoming aware of the circumstances) for all discharges that endanger human health or the environment as follows:

- By phone to the OES at 800-582-7550 and to the Regional Board at 858-467-2952
- At a minimum:
  - Any sewage spill greater than 1,000 gallons
  - Any sewage spill that could impact water contact recreation
  - Any discharge of sewage into or on any Waters of the State (reportable to OES[1])

In addition, the sewering agency will notify the Highway Patrol of SSOs affecting a State Highway in accordance with OES guidance[2].

1 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 4. http://www.oes.ca.gov/

2 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

Other spill incidents, including any unauthorized discharges that are not reportable to the OES, are reported to the Regional Board's Executive Officer as part of the Annual Report as described in Section 3.3.

3.1.2 Notification Requirements Applicable to Copermittees Not Owning or Operating a Sanitary Sewer Collection System

Should a Copermittee discover an SSO or determine that sewage is entering the MS4, the Copermittee shall immediately notify the appropriate sewering agency.

1. Where the sewering agency determines that the SSO originates from its sewer collection system or facilities, the sewering agency will follow the notification procedures described in Section 3.1.1 and established reporting procedures. No further notification or reporting is required by the Copermittee.
2. Where the sewering agency determines that the SSO originates from a private lateral or private property, the sewering agency will contact the property owner for clean up responsibility and will contact the Copermittee with jurisdiction of the spill. For more information on private property SSOs, see Section 6.0. The Copermittee with jurisdiction for the spill will provide notification immediately (within 24 hours of becoming aware of the circumstances) for all discharges that endanger human health or the environment as follows:
    - By phone to the OES at 800-582-7550 and to the Regional Board at 858-467-2952
    - At a minimum:
        - Any sewage spill greater than 1,000 gallons
        - Any sewage spill that could impact water contact recreation
        - Any discharge of sewage into or on any Waters of the State (reportable to OES[3])
    - In addition, the Copermittee with jurisdiction for the spill will notify the Highway Patrol of SSOs affecting a State Highway in accordance with OES guidance[4].

Should a Copermittee discover discharges of sewage in an area not served by a sewering agency, the Copermittee with jurisdiction for the spill will follow the procedures in sections 3.5 and 4.4.5 of the JRMP as applicable.

Other spill incidents, including any unauthorized discharges that are not reportable to the OES, are reported to the Regional Board's Executive Officer as part of the Annual Report as described in Section 3.3.

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3 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

4 "California Hazardous Material Spill/Release Notification Guidance." April 2006. California Office of Emergency Services. Page 6. http://www.oes.ca.gov/

3.1.3 Agency Contact Information

To identify sewering agency with jurisdiction in the spill area, **see Attachment A**. A list of the current contact phone numbers for various agencies is provided below:

CONTACT:	**PHONE NUMBER:**
County Department of Environmental Health / Environmental Resources Management	951-955-8980
Governor's Office of Emergency Services (OES)	800-852-7550
Copermittee Staff (whose MS4 may be affected by spill)	**See Attachment B**
Regional Water Quality Control Board: San Diego Region	858-467-2952
Riverside County Flood Control and Water Conservation District	951-955-1200
Sewering agency with jurisdiction in spill area	**See Attachment A**
California Highway Patrol (if highway affected by spill)	**911**

3.2 Minimum Information for Notification

Copermittee staff providing notice should make reasonable attempts to reach sewering agency contacts during and after normal working hours. In cases where sewering agency contacts are not available, messages shall be left. The following minimum information should be conveyed by Copermittee staff as appropriate:

- Identity of caller
- Location, date and time of SSO, status of the SSO (actual or threatened release)
- Quantity of sewage released (estimate of flow or volume)
- Need for public safety or traffic control measures
- Cause of the SSO, if known
- Description of immediate measures taken to contain/mitigate SSO
- Estimate of additional containment and/or clean-up options
- Determination if sewage was discharged to MS4 or areas otherwise impacting the MS4 **(Refer to Attachment A)**
- Determination if SSO reached a state highway

A copy of a sample SSO reporting form is included in **Attachment C**.

3.3 Reporting Requirements

Each Sewering agency is responsible for filing all SSO reports as required under federal and state law for discharges from their sanitary sewer systems, including any applicable NPDES or other permits. Sewering agencies are required to report any discharges to the Department of Environmental Health immediately, per the requirements of Health and Safety Codes Section 5411.5.

Copermittees shall additionally follow specific reporting requirements as described in Section 4 of the JRMP.

The Person in Charge at the responsible sewering agency must CC: the final SSO Report provided to the Regional Board to the affected Copermittees via hard copy or electronic means.

3.4 Response Requirements

Responsible sewering agencies will lead response to SSOs and will assume Person in Charge responsibilities in most cases. Person in Charge of spill response:

- Will take all immediate measures necessary to contain release or potential release of sewage and prevent/minimize impacts to water quality and the MS4.

- May cut locks, open manholes, or otherwise enter MS4 as necessary to contain and clean up SSOs.

- Will contact the maintenance/public works department of the appropriate Copermittee as necessary, and as soon as possible, to notify them of actions within their MS4. Contact numbers are included in **Attachment B**. If necessary, Copermittee staff will support spill response by providing MS4 maps or other support if available.

- Will coordinate with Copermittee staff as necessary to ensure that the clean up adequately remedies impacts of the sewage released to the MS4. It should be noted that the Regional Board prefers that MS4 facilities not be sanitized with disinfectant where not immediately impacting public health (i.e. no chlorine shall be used when discharge is within 1,500 feet of a waterway).

- Will coordinate with local fire, police, and traffic departments as necessary to ensure the safety of the response effort, and to manage traffic and local residents.

4.0 Training Requirements

Sewering Agencies and Copermittee staff will ensure that training for this procedure is incorporated into appropriate training programs related to SSO response.

5.0 Detection Involving Infiltration into MS4

In the event that Copermittees encounter evidence of potential sewage infiltration into the MS4 due to water quality monitoring or field observation, the Copermittees will notify the relevant sewering agency (**see Attachment A**) to coordinate a response.

6.0 Private Property SSOs

Sewering agencies and their contractors will respond to all SSOs within their service area. If a private property is the source of an SSO, agencies and their contractors shall assist in the control and containment to ensure that the sewage does not enter the MS4. If the SSO was a result of a private lateral, the private property owner will be informed of the blockage, and will be responsible to remove the blockage. If the SSO was a result of the sewer trunk line blockage, the response crew will correct the problem.

Glossary

Note: With the exception of the following, most terms used in this document are defined in the Glossary to the JRMP.

Sanitary Sewer Overflow (SSO) - A sanitary sewer overflow is any overflow, spill, release, discharge or diversion of wastewater from a sanitary sewer system. SSOs include:

(i) Overflows or releases of wastewater that reach Waters of the U.S.;
(ii) Overflows or releases of wastewater that do not reach Waters of the U.S.; and
(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions in a sanitary sewer, other than a building lateral. Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned is an SSO when sewage is discharged off private property into streets, stormdrains, or Waters of the U.S.

Sanitary Sewer System - Any system of pipes, pump stations, sewer lines, or other conveyances upstream of a wastewater treatment plant headworks used to collect and convey sewage to a treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, highlines, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not SSOs.

Sewage - The waste and wastewater produced by residential and commercial establishments and discharged into sewers.

Waters of the State – Any water, surface or underground, including saline waters within the boundaries of the State.

Attachment A

Sewering Agency Contact Roster

Unified Sanitary Sewer Spill Response Procedure

Attachment A (Sewering Agency Contact Roster)

Eastern Municipal Water District
Integrated Operations Center or
Mr. Mark Chamberlin
Post Office Box 8300
Perris, CA 92572
951.928.3777 ext. 6265 (During & After Work Hours)
Fax: 951.928.6177
chamberm@emwd.org

Rancho California Water District
42135 Winchester Road
Temecula, CA 92590
951.296.6953, Fax: 951.296.6868
951.296.6900 (emergency)

Elsinore Valley Municipal Water District
Ms. Susan Halpin
Post Office Box 3000
Lake Elsinore, CA 925310-3000
951.674.3146 ext. 8203, After hours: 951.258.9299
Fax: 951.245.5946
shalpin@evmwd.net

Attachment B

MS4 Copermittee Contact Roster

Unified Sanitary Sewer Spill Response Procedure

Attachment B (MS4 Copermittee Contact Roster)

City of Menifee
Mr. Don Allison
29683 New Hub Drive, Suite C
Menifee, CA 92586
951.672.6777
dallison@cityofmenifee.us

City of Murrieta
Mr. Bill Woolsey
1 Town Center
24601 Jefferson Avenue
951.461.6073, Fax: 951.698.4509
wwoolsey@murrieta.org

Rancho California Water District
42135 Winchester Road
Temecula, CA 92590
951.296.6953, Fax: 951.296.6868
951.296.6900 (emergency)

Riverside County Environmental Health
Mr. John Watkins
4080 Lemon Street, 9th Floor
Riverside, CA 92501
951.955.3915, Fax: 951.781.9653
Jwatkins@co.riverside.ca.us

Riverside County Executive Office
Mr. Mike Shetler
4080 Lemon Street, 5th Floor
Riverside, CA 92501
951.955.1110, Fax: 951.955.1105
mshetler@rceo.org

Riverside County Flood Control District
Ms. Arlene Chun
1995 Market Street
Riverside, CA 92501
951.955.1330, Fax: 951.788.9965
abchun@rcflood.org

Mark Biloki, Maintenance Superintendent
mbiloki@rcflood.org
951.955.1310, Cell: 951.288.5254, Home: 909.877.2716

Zully Smith, Operations & Maint. Division Manager
zsmith@rcflood.org
951.955.1280, Cell: 951.318.1445

City of Temecula
Mr. Aldo Licitra
43200 Business Park Drive, Temecula, CA 92589-9033
951.308.6387, Field: 951.541.7850, Fax: 951.694.6475
Aldo.licitra@cityoftemecula.org

After Hours: Rodney Tidwell,
Public Works Maint. Supervisor
951.302.4102, Field: 951.303.5497
Rodney.tidwell@cityoftemecula.org

City of Wildomar
Mr. Tim D'Zmura
23873 Clinton Keith Road, Suite 201
Wildomar, CA 92595
951.677.7751, Fax: 951.698.1463
tdzmura@cityofwildomar.org

Attachment C

Sample SSO Reporting Form

SANITARY SEWER OVERFLOW REPORT FORM

This report is: ☐ Preliminary ☐ Final ☐ Revised Final

Sanitary Sewer Overflow Sequential Tracking Number: _____

Reported to: _____
(Enter Fax #, Voicemail #, or Name of Regional Board Staff)

Date Reported: ____/____/_____ (MM/DD/YY)

SANITARY SEWER OVERFLOW REPORT FORM

Sanitary Sewer Overflow Correction - - Description of all Preventative and Corrective Measures Taken or Planned:

_____

Was there measurable precipitation during 72-hour period prior to the overflow?

☐ Yes ☐ No

Initial and Secondary Receiving Waters:

Did the sanitary sewer overflow enter a storm drain?

☐ Yes ☐ No

Did the sanitary sewer overflow reach surface waters other than a storm drain?

☐ Yes ☐ No

Name or description of secondary receiving waters. (If none, state such)

_____

If the sanitary sewer overflow did not reach surface waters, describe the final destination of sewage.

_____

Notification:

Was the local health services agency notified?

☐ Yes ☐ No

If the overflow was over 1,000 gallons, was the Office of Emergency Services (OES) notified?

☐ Yes ☐ No ☐ Not applicable

Affected Area Posting:

Were signs posted to warn of contamination?

☐ Yes ☐ No

Location of Posting (if Posted): _____

How many days were the warning signs posted?: _____

Remarks:

_____

APPENDIX - D

DEVELOPMENT PLANNING

APPENDIX D-1
STANDARD CONDITIONS OF APPROVAL FOR PRIVATE DEVELOPMENT CONSTRUCTION ACTIVITIES

Appendix A – Standard List of Approval for Development Construction Activities

Note: The following standard list of approvals is not applicable to every project and is applied on a case-by-case basis.

5. SERIES – CORRECTIONS PRIOR TO ISSUANCE OF CONDITIONS

1. DRT Compl Resubmit A Pre WQMP (SMR)

In compliance with the currently effective Municipal Stormwater Permit issued by the San Diego Regional Water Quality Control Board [Order No. R9-2010-16, et seq.], and beginning January 1, 2005, all projects that 1) are located within the drainage boundary (watershed) of the Santa Margarita River; and 2) require discretionary approval by the County of Riverside must comply with the Water Quality Management Plan (WQMP) for Urban Runoff. The WQMP addresses post-development water quality impacts from new development and significant redevelopment projects within the priority development category. The WQMP addresses post-development water quality impacts from new development and significant redevelopment projects. The WQMP provides detailed guidelines and templates to assist the applicant in completing the necessary documentation and calculations. These documents are available on-line at: www.rcflood.org/npdes.

To comply with the WQMP, applicants must prepare and submit a "Project Specific" WQMP. At a minimum, the WQMP must: a) identify the post-project pollutants associated with the development proposal together with any adverse hydrologic impacts to receiving waters; b) identify site-specific mitigation measures or Best Management Practices (BMPs) for the identified impacts including site design, source control and treatment control post-development BMPs; and c) identify a sustainable funding and maintenance mechanism for the aforementioned BMPs. A template for this report is included as 'Exhibit A' in the WQMP. A final Project Specific WQMP must be approved by the District prior to issuance of building or grading permits.

Projects that require a Project Specific WQMP are required to submit a PRELIMINARY Project Specific WQMP along with the land-use application package. The format of the PRELIMINARY report shall mimic the format/template of the final report but may contain less detailed information. For example, each of the points, "a", "b" and "c" (above), must be addressed, rough calculations supporting preliminary BMP sizing must be included, and the footprint/locations for the BMPs must be identified on the tentative exhibit. Detailed drawings are not required at the PRELIMINARY stage.

THE APPLICANT HAS SUBMITTED A REPORT THAT DOES NOT MEET THE CRITERIA FOR A PRELIMINARY PROJECT SPECIFIC WQMP. A REVISED REPORT THAT MEETS THE ABOVE CRITERIA SHALL BE SUBMITTED TO THE DISTRICT. THIS PRELIMINARY PROJECT SPECIFIC WQMP MUST BE APPROVED BY THE DISTRICT PRIOR TO ISSUANCE OF RECOMMENDED CONDITIONS OF APPROVAL

2. CORRECTION FOR NO SUBMITTAL

A PRELIMINARY PROJECT SPECIFIC WQMP MUST BE APPROVED BY THE DISTRICT PRIOR TO ISSUANCE OF RECOMMENDED CONDITIONS OF APPROVAL.

In compliance with the currently effective Municipal Stormwater Permit issued by the San Diego Regional Water Quality Control Board [Order No. R9-2010-16, et seq.], and beginning January 1, 2005, all projects that 1) are located within the drainage boundary (watershed) of the Santa Margarita River; and 2) require discretionary approval by the County of Riverside must comply with the Water Quality Management Plan (WQMP) for Urban Runoff. The WQMP addresses post-development water quality impacts from new development and significant redevelopment projects within the priority development category. The WQMP addresses post-development water quality impacts from new development and significant redevelopment projects. The WQMP provides detailed guidelines and templates to assist the applicant in completing the necessary documentation and calculations. These documents are available on-line at: www.rcflood.org/npdes.

To comply with the WQMP, applicants must prepare and submit a "Project Specific" WQMP. At a minimum, the WQMP must: a) identify the post-project pollutants associated with the development proposal together with any adverse hydrologic impacts to receiving waters; b) identify site-specific mitigation measures or Best Management Practices (BMPs) for the identified impacts including site design, source control and treatment control post-development BMPs; and c) identify a sustainable funding and maintenance mechanism for the aforementioned BMPs. A template for this report is included as 'Exhibit A' in the WQMP. A final Project Specific WQMP must be approved by the District prior to issuance of building or grading permits.

Projects that require a Project Specific WQMP are required to submit a PRELIMINARY Project Specific WQMP along with the land-use application package. The format of the PRELIMINARY report shall mimic the format/template of the final report but may contain less detailed information. For example, each of the points, "a", "b" and "c" (above), must be addressed, rough calculations supporting preliminary BMP sizing must be included, and the footprint/locations for the BMPs must be identified on the tentative exhibit. Detailed drawings are not required at the PRELIMINARY stage.

10. SERIES – GENERAL CONDITIONS

10. MAP* UNIT PHASING

This is a proposal to develop the [_____] phase of Tract [_____]. The conditions of approval for Tract [_____] shall also apply to this phase. This phase shall be fully protected from the one-

percent annual chance flood flow and shall mitigate its water quality impacts. The necessary water quality features to mitigate impacts due to this phase shall be constructed. The construction of all necessary improvements along with easements and/or permission from affected property owners to safely discharge the concentrated or diverted 100-year tributary flows of this phase shall be required prior to its final map recordation.

10. MAP SUBMIT FINAL WQMP =PRELIM (SMR)

In compliance with the currently effective Municipal Stormwater Permit issued by the San Diego Regional Water Quality Control Board [Order No. R9-2010-16, et seq.], and beginning January 1, 2005, all projects that 1) are located within the drainage boundary (watershed) of the Santa Margarita River; and 2) require discretionary approval by the County of Riverside must comply with the Water Quality Management Plan (WQMP) for Urban Runoff. The WQMP addresses post-development water quality impacts from new development and significant redevelopment projects within the priority development category. The WQMP addresses post-development water quality impacts from new development and significant redevelopment projects. The WQMP provides detailed guidelines and templates to assist the applicant in completing the necessary documentation and calculations. These documents are available on-line at: www.rcflood.org/npdes.

To comply with the WQMP, applicants must prepare and submit a "Project Specific" WQMP. At a minimum, the WQMP must: a) identify the post-project pollutants associated with the development proposal together with any adverse hydrologic impacts to receiving waters; b) identify site-specific mitigation measures or Best Management Practices (BMPs) for the identified impacts including site design, source control and treatment control post-development BMPs; and c) identify a sustainable funding and maintenance mechanism for the aforementioned BMPs. A template for this report is included as 'Exhibit A' in the WQMP.

The applicant has submitted a report that meets the criteria for a Preliminary Project Specific WQMP (see Flood Hazard Report). However, in order to meet the requirements of a Final Project Specific WQMP, it shall be prepared in substantial conformance to the Preliminary Project Specific WQMP. Also, the applicant should note that, if the project requires a Section 401 Water Quality certification, the Regional Water Quality Control Board may require additional water quality impact mitigation measures.

10. MAP FINAL WQMP ONLY (SMR)

In compliance with the currently effective Municipal Stormwater Permit issued by the San Diego Regional Water Quality Control Board [Order No. R9-2010-16, et seq.], and beginning January 1, 2005, all projects that 1) are located within the drainage boundary (watershed) of the Santa Margarita River; and 2) require discretionary approval by the County of Riverside must comply with the Water Quality Management Plan (WQMP) for Urban Runoff. The WQMP addresses post-development water quality impacts from new development and significant redevelopment projects within the priority development category. The WQMP addresses post-development water quality impacts from new development and significant redevelopment projects. The WQMP provides detailed guidelines and templates to assist the applicant in completing the necessary documentation and calculations. These documents are available on-line at: www.rcflood.org/npdes.

To comply with the WQMP, applicants must prepare and submit a "Project Specific" WQMP. At a minimum, the WQMP must: a) identify the post-project pollutants associated with the development proposal together with any adverse hydrologic impacts to receiving waters; b) identify site-specific mitigation measures or Best Management Practices (BMPs) for the identified impacts including site design, source control and treatment control post-development BMPs; and c) identify a sustainable funding and maintenance mechanism for the aforementioned BMPs. A template for this report is included as 'Exhibit A' in the WQMP.

The applicant shall submit a report that meets the requirements of a Final Project Specific WQMP (see Flood Hazard Report). Also, the applicant should note that, if the project requires a Section 401 Water Quality certification, the Regional Water Quality Control Board may require additional water quality measures.

10. MAP FINAL WQMP ONLY MAINT.

The BMP facilities proposed with this project will require maintenance by a public agency or homeowners association. To ensure that the public is not unduly burdened with future costs, prior to final approval or recordation of this case, the District will require an acceptable financial mechanism be implemented that provides for maintenance of the BMP facilities in perpetuity. This may consist of a mechanism to assess individual benefiting property owners, or other means as approved by the District.

10. MAP SUBMIT FINAL WQMP>PRELIM (SMR)

In compliance with the currently effective Municipal Stormwater Permit issued by the San Diego Regional Water Quality Control Board [Order No. R9-2010-16, et seq.], and beginning January 1, 2005, all projects that 1) are located within the drainage boundary (watershed) of the Santa Margarita River; and 2) require discretionary approval by the County of Riverside must comply with the Water Quality Management Plan (WQMP) for Urban Runoff. The WQMP addresses post-development water quality impacts from new development and significant redevelopment projects within the priority development category. The WQMP addresses post-development water quality impacts from new development and significant redevelopment projects. The WQMP provides detailed guidelines and templates to assist the applicant in completing the necessary documentation and calculations. These documents are available on-line at: www.rcflood.org/npdes.

To comply with the WQMP, applicants must prepare and submit a "Project Specific" WQMP. At a minimum, the WQMP must: a) identify the post-project pollutants associated with the development proposal together with any adverse hydrologic impacts to receiving waters; b) identify site-specific mitigation measures or Best Management Practices (BMPs) for the identified impacts including site design, source control and treatment control post-development BMPs; and c) identify a sustainable funding and maintenance mechanism for the aforementioned BMPs. A template for this report is included as 'Exhibit A' in the WQMP.

The applicant has previously submitted a report that minimally meets the criteria for a Preliminary Project Specific WQMP addressing points a), b) and c), above. While the Preliminary Project Specific WQMP (see Flood Hazard Report) was adequate at the tentative stage, the Preliminary WQMP will need significant revisions at the improvement plan check phase of the development. In order to meet the requirements of a Final Project Specific WQMP, the applicant's engineer shall

submit supporting calculations and detailed drawings for all BMPs to the District for review and approval. Also, the applicant should note that, if the project requires a Section 401 Water Quality certification, the Regional Water Quality Control Board may require additional water quality measures.

10. MAP BMP MAINTENANCE & INSPECT (is CC&R enforceable)

Unless an alternate viable maintenance entity is established, the Covenants, Conditions and Restrictions (CC&Rs) for the development's Home/Property Owners Association (HOA/POA) shall contain provisions for all structural best management practices (BMPs) to be inspected, and if required, cleaned no later than October 15 each year. The CC&Rs shall identify the entity that will inspect and maintain all structural BMPs within the project boundaries. A copy of the CC&Rs shall be submitted to the District for review and approval prior to the recordation of the map.

- OR -

The BMP maintenance plan shall contain provisions for all treatment control BMPs to be inspected, and if required, cleaned no later than October 15 each year. Required documentation shall identify the entity that will inspect and maintain all structural BMPs within the project boundaries. A copy of all necessary documentation shall be submitted to the District for review and approval prior to the issuance of occupancy permits.

10. MAP WQMP ESTABL MAINT ENTITY

This project proposes BMP facilities that will require maintenance by a public agency or homeowners association. To ensure that the public is not unduly burdened with future costs, prior to final approval or recordation of this subdivision, the District will require an acceptable financial mechanism to be implemented to provide for maintenance of the project's site design, source control and treatment control BMPs in perpetuity. This may consist of a mechanism to assess individual benefiting property owners, or other means as approved by the District. The BMPs must be shown on the project's grading plans and any other improvement plans the selected maintenance entity may require.

10. MAP SITE DSGN & SOURCE CTRL BMPS

Development of this project may adversely impact water quality. To mitigate for the potential water quality impacts, the applicant must incorporate site design Best Management Practices (BMPs) and source control BMPs, as applicable and feasible, into the project plans. Site design BMPs include minimizing urban runoff, minimizing impervious footprint, conserving natural areas, and minimizing directly connected impervious areas. Source control BMPs include but are not limited to education, activity restrictions and proper maintenance (non-structural) as well as proper landscape/irrigation design and the protection of slopes and channels (structural). Additional information can be found in Sections V.1 and V.2 of the WQMP template.

10. MAP WQMP REQMT ON ECS/FINAL MAP SAR/SMR (consult county counsel)

A notice of the WQMP requirements shall be placed on the Environmental Constraint Sheet and final map. The exact wording of the note shall be as follows:

NOTICE OF WQMP REQUIREMENTS:

"A final project specific Water Quality Management Plan (WQMP) may be required prior to issuance of a grading or building permit. If required, the WQMP shall be consistent with the requirements of the County of Riverside's Municipal Stormwater Permit which are in effect at the time the grading or building permit is issued. The WQMP shall be submitted to the Flood Control District for review and approval on a fee for service basis." Ask County Counsel/NPDES

50. SERIES – CONDITIONS PRIOR TO MAP RECORDATION

50. MAP* WQMP REQMT ON ECS

A notice of the WQMP requirements shall be placed on the Environmental Constraint Sheet and final map. The exact wording of the note shall be as follows:

NOTICE OF WQMP REQUIREMENTS:

"A final project specific Water Quality Management Plan (WQMP) may be required prior to issuance of a grading or building permit. If required, the WQMP shall be consistent with the requirements of the County of Riverside's Municipal Stormwater Permit which are in effect at the time the grading or building permit is issued. The WQMP shall be submitted to the Flood Control District for review and approval on a fee for service basis." Ask County Counsel/NPDES

50. MAP PHASING

If the tract is built or recorded in phases, each phase must be protected from the one-percent annual chance (100-year) tributary flows and shall mitigate its water quality impacts. Additionally, the water quality features necessary to mitigate impacts associated with each phase shall be constructed. The construction of all necessary improvements along with easements and/or permission from affected property owners to safely discharge the concentrated or diverted one-percent annual chance (100-year) tributary flows of each phase shall be required prior to its final map recordation. (ADDed 50. Series condition?)

50. MAP WQMP ESTABL MAINT ENTITY

This project proposes BMP facilities that will require maintenance by a public agency or homeowners association. To ensure that the public is not unduly burdened with future costs, prior to final approval or recordation of this subdivision, the District will require an acceptable financial mechanism to be implemented to provide for maintenance of the project's site design, source control and treatment control BMPs in perpetuity. This may consist of a mechanism to assess individual benefiting property owners, or other means as approved by the District. The BMPs must be shown on the project's grading plans and any other improvement plans the selected maintenance entity may require.

50. MAP SUBMIT PLANS MINOR REVIEW

The scope of the District's review will be limited to verification that this project has met its obligation under the County's municipal stormwater permit. A copy of the project specific WQMP /BMP improvement plans along with any necessary documentation shall be submitted to the District's Plan Check Section for review and approval. A copy of the improvement and grading plans shall be included for reference. The plans must receive the District's approval prior to issuance of permits. All submittals shall be date stamped by the engineer and include a completed Flood Control Deposit Based Fee Worksheet and the appropriate plan check fee deposit.

50. MAP SUBMIT PLANS

A copy of the project specific WQMP, improvement plans, grading plans, final map, Environmental Constraint Sheet, BMP improvement plans, and any other necessary documentation along with supporting hydrologic and hydraulic calculations shall be submitted to the District for review and approval. All submittals shall be date stamped by the engineer and include a completed Flood Control Deposit Based Fee Worksheet and the appropriate plan check fee deposit.

50. MAP ONSITE BMP EASEMENT ON FINAL MAP

Onsite BMP facilities located outside of road right-of-way shall be contained within BMP easements shown on the final map. A note shall be added to the final map stating, "BMP EASEMENT: To be maintained in accordance with the final project-specific WQMP ".

60. SERIES – PRIOR TO GRADING PERMIT ISSUANCE

60. MAP PHASING

If the tract is to be built in phases, each phase shall be protected from the one-percent annual chance flood (1 in 100-year tributary flows) and shall mitigate its water quality impacts. The necessary BMPs to mitigate water quality impacts due to this phase shall be constructed. The construction of all necessary improvements together with all required easements and/or permission

from affected property owners to safely discharge the concentrated or diverted 100-year tributary flows from this phase shall be required prior to recording the final map. (ADD 50. Series condition?)

60. MAP SUBMIT FINAL WQMP

A copy of the project specific WQMP shall be submitted to the District for review and approval.

60. MAP SUBMIT PLANS

A copy of the project specific WQMP, improvement plans, grading plans, final map, Environmental Constraint Sheet, BMP improvement plans and any other necessary documentation along with supporting hydrologic and hydraulic calculations shall be submitted to the District for review and approval. The plans must receive District approval prior to the issuance of grading permits. All submittals shall be date stamped by the engineer and include a completed Flood Control Deposit Based Fee Worksheet and the appropriate plan check fee deposit.

80. SERIES – PRIOR TO BUILDING PERMIT ISSUANCE

80. MAP SUBMIT PLANS MINOR REVIEW

The scope of the District review will be limited to verification that this proposal has met its obligation under the County's municipal stormwater permit. A copy of the project specific WQMP /BMP improvement plans along with any necessary documentation shall be submitted to the Districts Plan Check Section for review and approval. A copy of the improvement and grading plans shall be included for reference. The plans must receive the District's approval prior to issuance of permits. All plan submittals shall be date stamped by the engineer and include a completed Flood Control Deposit Based Fee Worksheet and the appropriate plan check fee deposit.

80. MAP SUBMIT PLANS

A copy of the project specific WQMP, improvement plans, grading plans, final map, Environmental Constraint Sheet, BMP improvement plans and any other necessary documentation along with supporting hydrologic and hydraulic calculations shall be submitted to the District for review and approval. The plans must receive District approval prior to the issuance of building permits. All submittals shall be date stamped by the engineer and include a completed Flood Control Deposit Based Fee Worksheet and the appropriate plan check fee deposit.

90. SERIES – PRIOR TO BUILDING FINAL INSPECTION

90. MAP BMP - EDUCATION

The Applicant shall distribute environmental awareness education materials on general good housekeeping practices that contribute to protection of stormwater quality to all initial residents. The Applicant may obtain NPDES Public Educational Program materials from the District's NPDES Section by either the District's website www.rcflood.org/npdes, e-mail flood.fcnpdes@rcflood.org, or the toll free number 1-800-506-2555. Please provide Project number, number of units and location of development. Note that there is a five-day minimum processing period requested for all orders. The Applicant must provide to the District's PLAN CHECK Department a notarized affidavit stating that the distribution of educational materials to the tenants is assured prior to the issuance of occupancy permits.

90. MAP IMPLEMENT WQMP

All structural BMPs described in the project-specific WQMP shall be constructed and installed in conformance with approved plans and specifications. It shall be demonstrated that the applicant is prepared to implement all non-structural BMPs described in the approved project specific WQMP and that copies of the approved project-specific WQMP are available for the future owners/occupants. The District will not release occupancy permits for any portion of the project exceeding 80% of the total recorded residential lots within the map or phase within the map prior to the completion of these tasks. (this was removed in 90. USE)

90. MAP BMP MAINTENANCE & INSPECT

Unless an alternate viable maintenance entity is established, the CC&R's for the development's Home/Property Owners Association (HOA/POA) shall contain provisions for all structural best management practices (BMPs) to be inspected, and if required, cleaned no later than October 15 each year. The CC&R's shall identify the entity that will inspect and maintain all structural BMPs within the project boundaries. A copy of the CC&R's shall be submitted to the District for review and approval prior to the recordation of the map.

Or

The BMP maintenance plan shall contain provisions for all treatment controlled BMPs to be inspected, and if required, cleaned no later than October 15 each year. Required documentation shall identify the entity that will inspect and maintain all structural BMPs within the project boundaries. A copy of all necessary documentation shall be submitted to the District for review and approval prior to the issuance of occupancy permits.

90. MAP AS-BUILT BMP

All structural BMPs described in the project-specific WQMP shall be constructed and installed in conformance with approved plans and specifications. As-built plans certified by a registered Civil Engineer shall be submitted.

90. ONSITE BMP EASEMENT ON FINAL MAP

Onsite BMP facilities located outside of road right-of-way shall be contained within BMP easements shown on the final map. A note shall be added to the final map stating, "BMP EASEMENT: To be maintained in accordance with the final project-specific WQMP ".

APPENDIX - E

CONSTRUCTION ACTIVITIES

APPENDIX E-1
CONSTRUCTION SITE INSPECTION FORM

RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

PROJECT IDENTIFICATION

_____

_____

_____

REPORT NO. _____

DATE _____

M T W T F S S (circle day)

Working Day No. _____

Weather _____

RESIDENT ENGINEER'S DAILY REPORT

_____

Resident Engineer

RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

WEEKLY STATEMENT OF WORKING DAYS

PROJECT IDENTIFICATION

_____ REPORT NO. _____

_____

To _____, Contractor

The following statement shows the number of working days charged to your contract for the week ending _____, 19 ____

Date	Day	Weather, Weather Conditions or other Conditions	Working Day	Unworkable Days Caused by Weather	Days Not Worked Conditions Other than Weather
	Mon.				
	Tue.				
	Wed.				
	Thur.				
	Fri.				
Days this week					
Days previously reported					
Total days to date					

COMPUTATION OF EXTENDED DATE FOR COMPLETION	No. of Days	Numbered Day	Date
1. Date of receipt of Notice to Proceed			
2. Working days specified in contract			
3. COMPUTED DATE FOR COMPLETION			
4. Total time extension days approved to date			
5. Total unworkable days to date			
6. Sub Total			
7. REVISED DATE FOR COMPLETION (3 plus 6)			
8. Revised working days for contract (2 plus 4)			
9. Total working days to date			
10. PROBABLE WORKING DAYS REMAINING			
11. EXTENDED DATE FOR COMPLETION			

REMARKS:

_____
Resident Engineer

The Contractor will be allowed one week in which to protest in writing, the correctness of the statement; otherwise the statement shall be deemed to have been accepted by the Contractor as correct.

C-3 (12/84)

DISTRIBUTION: White-INSPECTOR, Canary-CONTRACTOR, Pink-OFFICE

0002995

WARREN D. WILLIAMS
General Manager-Chief Engineer

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RIVERSIDE, CA 92501
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123267

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

January 15, 2009

Mr. John Robertus, Executive Officer
California Regional Water Quality
Control Board – San Diego Region
9174 Sky Park Court, Suite 100
San Diego, California 92123

Dear Mr. Robertus:

Re: Report of Waste Discharge for the Santa Margarita River Region of Riverside County Order No. R9-2004-001, NPDES No. CAS0108766

This letter and the enclosures comprise the Report of Waste Discharge (ROWD) for the area-wide municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108766, San Diego Regional Water Quality Control Board Order No. R9-2004-001. This ROWD is an application for renewal of the area-wide MS4 NPDES Permit for Riverside County Flood Control and Water Conservation District (RCFC&WCD), the County of Riverside (County), and the incorporated cities of Riverside County within the upper Santa Margarita River watershed (Menifee, Murrieta, Temecula, and Wildomar) collectively referred to herein as "Permittees."

Order No R9-2004-001 does not specify the requirements of the ROWD. However, the attached ROWD includes the following information:

- Applicant information, including Permittee contacts, legal authorities, description of the Permit Area, and funding sources;
- Overview of the upper Santa Margarita River watershed, including population, land use, Receiving Waters, and the MS4;
- Changes in land use and/or population over the 2004 MS4 Permit term and projections for changes over the next MS4 Permit term;
- Highlights of the Permittee compliance programs over the 2004 MS4 Permit term;
- Evaluations of the Permittees existing compliance programs based on water quality data collected to date; and

- Activities the Permittees propose to undertake during the next MS4 Permit term, including implementation of Low Impact Development (LID) requirements and compliance assessments and targets.

In addition, the ROWD includes an assessment of the economic conditions and the projected impact of these conditions on sources of compliance program funding. Based on this assessment, it appears that the major challenge facing the Permittees over the next MS4 Permit term will be maintaining existing compliance programs. In 2004 both the Permittees and the San Diego Regional Water Quality Control Board (Regional Board) staff invested significant time and resources in the development of the current MS4 NPDES Permit (hereinafter referred to as the 2004 MS4 Permit) which define the current compliance program. The Permittees believe, with exceptions outlined in the ROWD, that the existing Permit is protective of water quality and should be reissued as is.

Permittee representatives met with Regional Board staff on September 8, 2008 to obtain guidance for preparation of the ROWD. In that meeting, Regional Board staff provided their expectations regarding the ROWD. Based on the Permittee internal discussions and discussions with Regional Board staff, the Permittees propose to maintain the provisions of the 2004 MS4 Permit and DAMP with limited modifications to reflect:

- Updated references to related orders by the San Diego Regional Board and State Water Resources Control Board (State Board);
- Identification of impairments to Receiving Waters in the Santa Margarita Region;
- Evolution of compliance programs;
- Further standardization and definition of terms;
- Deletion of requirements in the 2004 MS4 Permit that described the development of compliance program elements which were incorporated into the 2005 DAMP;
- Implementation of LID/Hydromodification requirements for New Development projects;
- Implementation of compliance assessments and action levels;
- Necessary modifications to the Watershed SWMP and Individual SWMPs for the 2004 - 2009 MS4 Permit term; and
- Regional Board staff comments made during the term of the 2004 MS4 Permit, including comments received during the September 8th ROWD coordination meeting.

Re: Report of Waste Discharge for Santa Margarita
River Region of Riverside County
Order No. R9-2004-001,
NPDES No. CAS0108766

Especially given the existing and projected economic conditions, the Permittees goal is to work with the Regional Board staff to further refine the provisions of the 2004 MS4 Permit to enhance the effectiveness of existing compliance programs within available funding. In addition, the Permittees will work with the Regional Board staff to ensure that the requirements and expectations of the fourth term MS4 NPDES Permit are clear and unambiguous and that the focus is on addressing identified water quality problems in the Receiving Waters

We look forward to working with the Regional Board staff in the renewal of the area-wide MS4 NPDES Permit. If you have any questions, please call Jason Uhley at 951.955.1273 or Claudio Padres at 951.955.8602.

Very truly yours,

WARREN D. WILLIAMS
General Manager-Chief Engineer

Enclosures: ROWD (one hard copy and one CD)

c: Santa Margarita River Region MS4 Permittees, w/CD
Eugene Bromley, USEPA Region IX, w/CD
James Smith, CRWQCB – San Diego Region
Ben Neill, CRWQCB – San Diego Region
David Huff, Riverside County Office of Legal Counsel, w/CD
Robert Collacott, URS, w/CD

CP:JU:bjp

REPORT OF WASTE DISCHARGE

Submitted To

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD
(Order No. R9-2004-001)

and

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY – REGION IX
(NPDES No. CAS0108766)

JANUARY 15, 2009

SANTA MARGARITA RIVER REGION

RIVERSIDE COUNTY

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT,
COUNTY OF RIVERSIDE, CITY of MENIFEE, CITY of MURRIETA,
CITY of TEMECULA, and CITY of WILDOMAR

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1.0 Executive Summary

On July 14, 2004 the San Diego Regional Water Quality Control Board (Regional Board) adopted Order No. R9-2004-001, an area-wide National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit (2004 MS4 Permit); this permit expires on July 14, 2009. A Report of Waste Discharge (ROWD) for renewal of the 2004 MS4 Permit must be submitted no later than 180 days in advance of the expiration date (i.e., by January 15, 2009).

This ROWD is an application for renewal of the 2004 MS4 Permit (NPDES No. CAS0108766) for the MS4 owned and operated by the Riverside County Flood Control and Water Conservation District (District), the County of Riverside (County), and the incorporated cities of Riverside County within the upper Santa Margarita River watershed (collectively, the Permittees). The newly incorporated cities of Menifee and Wildomar are included in this application as a Notice of Intent to participate in the updated MS4 Permit.

The content of this document is structured to identify:

- Information about the applicants (Section 3.0),
- Information on the area to be covered under the MS4 Permit (Section 4.0),
- An overall evaluation of the Permittees' existing programs based on water quality trends (Section 5.0),
- Accomplishments and recommendations for the Permittees' regionally implemented programs (Section 6.0) and
- Accomplishments and recommendations for the programs implemented as part of the Individual Stormwater Management Plans (SWMPs) (Section 7.0).

The Riverside County Drainage Area Management Plan (DAMP) documents the model implementation plan from which each of the existing Permittees has developed their respective Individual SWMP to implement the DAMP. In addition a Watershed SWMP has been developed to describe the programs that will be implemented regionally. The Annual Reports submitted to date describe the implementation of these SWMPs and document how they have evolved over time.

This ROWD builds on these Annual Reports by highlighting the major accomplishments of these programs, evaluating the long-term effectiveness of the programs and recommending revisions to the programs to enhance the efficiency and effectiveness of the programs to manage Urban Runoff to protect Receiving Water quality. To promote clarity of intent, terms defined in the 2004 MS4 Permit are capitalized in this ROWD.

Due to the impacts of the current economic recession on Permittee budgets and the effectiveness of existing Urban Runoff management programs, the Permittees' primary focus during the next MS4 Permit term will be on maintaining existing compliance programs in the face of significant cuts in basic municipal programs and services. Riverside County is one of the areas most affected by the mortgage crisis and the Santa Margarita Region is one of the most impacted areas of Riverside County. This crisis is having significant impacts on Permittee resources and projections for a deepening recession promises to exacerbate these impacts. Further, monitoring data indicates that the existing compliance programs have been effective in maintaining water quality. This ROWD focuses on maintaining the fundamental

structure and content of the Riverside County DAMP and the Individual SWMPs. However, the Permittees have identified several enhancements and/or alterations to their programs that can be implemented to continue to increase the effectiveness of these programs, without increasing costs.

1.1 Highlights of Program Implementation

Sections 6 and 7 of this ROWD describe the numerous accomplishments of the Permittees programs during the 2004 MS4 Permit term. Some highlights of the major accomplishments for the Permittees include:

- Development and implementation of a Water Quality Management Plan (WQMP) that addresses post-construction Urban Runoff management for New and Significant Re-Development.
- Development and implementation of the Watershed SWMP and the Permittee's Individual SWMPs.
- Development of handbook to standardize post-construction Best Management Practice (BMP) selection and design in Riverside County. Ongoing updates to the handbook include a plan to incorporate and promote low impact development design concepts.
- Development and enhancements to the design template for developing project-specific WQMPs
- Development of a Frequently Asked Question (FAQ) document to assist developers and plan review staff in understanding WQMP requirements and expectations.
- Development of coordinated BMP manual for firefighting agencies.
- Development, implementation and maintenance of Permittee databases to track construction sites 1-acre or larger. In addition, the Permittees have standardized a construction reporting spreadsheet used for Annual Reports, updated inspection forms, and enhanced the construction outreach program.
- Creation of Permittee databases to track industrial and commercial facilities.
- Creation and maintenance of the Storm Water Protection website that offers educational resources and free brochures targeting residents, businesses, developers, contractors, and elementary school children.
- Partnership with the Mission Resource Conservation District to provide an educational outreach programs targeting both schools and adults.
- Continued participation in the Consolidated Program for Water Quality Monitoring (Consolidated Monitoring Program) that includes collection of water quality samples at MS4 outfalls and Receiving Waters.
- Participation in regional and statewide monitoring efforts such as the Southern California Monitoring Committee (SMC), Southern California Coastal Water Commission and National Water Resources Institute.
- Participation in the California Stormwater Quality Association (CASQA), including the leadership roles of Officer, Director, and Legislative Chair.
- Development of the Upper Santa Margarita Region Integrated Regional Watershed Management Plan

- Continued partnership and coordination with the Bureau of Reclamation on a watershed plan and water quality model for the Santa Margarita watershed
- Continued participation in the Santa Margarita Lagoon nutrient Total Maximum Daily Load (TMDL) development process
- Participated in a stakeholder workgroup process led by Regional Board staff to revise REC 1 Basin Plan requirements for TMDLs

1.2 Summary Evaluation of Program Implementation

The trend analysis presented in Section G-8.2 of the FY 2007/2008 Watershed Annual Report and reviewed in Section 5.3 of this ROWD indicates that after almost 14 years of active Permittee involvement in MS4 Permit related Urban Runoff management programs, the significant increase in population (over 300 percent) and associated rapid urbanization that the area has experienced has not resulted in any statistically significant increases in Pollutant concentrations in Receiving Waters in the Santa Margarita Region. This indicates that the Permittees MS4 programs are and have been protective of Receiving Water quality. Pyrethroid pesticides, the one Pollutant that does appear to be linked to urbanization, has been addressed through a Toxicity Reduction Evaluation process, outreach programs, and Permittee participation to address pyrethroid pesticides and other pesticide sources at the state and federal level.

To enhance the effectiveness of the MS4 Permit compliance programs, the Permittees have agreed to implement compliance program revisions as described in sections 6 and 7 of this ROWD.

1.3 Summary of Major Recommendations for Program Revision

As described in section 3.4 of this ROWD, the Permittees are facing unprecedented fiscal impacts resulting from the national and state economic crises. The impacts on the Permittees are especially severe due to the disproportionate impact of home foreclosures in the Santa Margarita Region coupled with plummeting sales tax revenue. Unfortunately, it is anticipated that the economic conditions will persist for a significant portion of the term of the next MS4 Permit. During this period, the Permittee's MS4 compliance programs will increasingly compete with more fundamental public services for finite and dwindling resources. The challenge and priority for the Permittees will be to maintain the existing compliance programs in the face of cuts in basic programs and services.

Nevertheless, and although the various programs implemented as part of the Watershed SWMP and the Riverside County DAMP have been determined to be effective overall, Sections 6 and 7 of this ROWD identify certain areas wherein the Permittees are proposing changes to improve the effectiveness, efficiency, and transparency of these programs.

The program revisions recommended in this ROWD reconfigure existing programs in a manner that will increase the Permittees' overall ability to protect Urban Runoff quality, while limiting additional costs that would make these revisions cost-prohibitive in light of the current and foreseeable economy. Some of the major recommendations include:

Enhance Program Effectiveness Assessments and Incorporate Action Levels (Section 6.1.2.1)

The Permittees have carefully evaluated their MS4 Permit compliance programs and annual reporting forms. Based on this review the Permittees determined that:

- The overarching goal of the program is to ensure that Urban Runoff does not cause or contribute to non-attainment of Beneficial Uses in the upper Santa Margarita River watershed;
- Permittee compliance programs are process based and, consistent with the Maximum Extent Practical (MEP) approach, are incrementally adjusted as part of the annual reports and comprehensively reevaluated and if necessary, revamped as part of each ROWD;
- Monitoring data should be used to drive long term program assessments and assess goal attainment as part of the ROWD; and
- Process based Municipal Action Levels (MALs) should be used to evaluate annual program implementation to ensure that programs are implemented to the MEP and identify the needs for incremental adjustments.

The Permittees have proposed revised Effectiveness Assessment metrics and MALs for use in Permittee Annual Reports consistent with the aforementioned findings and as described further in Section 6.1.2.1. The MALs are intended to function as triggers, or minimum bars that if breached, would require the Permittees to evaluate the appropriate program elements to determine if adjustments are necessary to attain the MEP standard. The Permittee proposal will not only add transparency to the Permittees compliance programs but assist Permittees in evaluating and adjusting their Permit compliance programs to assist in attaining Water Quality Standards. Further, the proposed effectiveness assessment metrics can be implemented without significantly increasing the Permittees' program costs.

Revisions to the IC/ID Program (Section 7.8.2)

During the 2007/2008 MS4 Program audits conducted by PG Environmental and Regional Board staff, several questions were raised regarding the Permittees existing Illicit Connection/Illegal Discharge(IC/ID) field monitoring programs. The Permittees have evaluated the Regional Board and PG Environmental staff's comments and proposed a revised IC/ID Program based on the following:

- Random selection of MS4 outfalls throughout the Santa Margarita Region;
- Rotating MS4 outfall sites annually to maximize coverage of the MS4;
- Partnering one District staff person with one city/county code enforcement officer for data collection to ensure consistency in sampling procedure/collection and quick response to detected IC/ID events.

Implementation of a Post-Construction Treatment Control BMP Inspection Program (Section 7.2.2.6)

Consistent with Regional Board staff's request to consider development of a post-construction Treatment Control BMP inspection program, the Permittees have developed a proposal that they plan to implement when economic conditions allow. This proposal would enhance the existing business and Permittee facility inspection programs described in the Riverside County DAMP by incorporating inspections and maintenance verification of Treatment Control BMPs. Treatment Control BMPs constructed as part of residential developments, or other developments not captured by the Permittees' existing business inspections would be addressed through an annual self-certification program.

Revisions to the Dry Weather Monitoring Program (Section 6.4.4.1)

The Permittees have committed to participating in the Regional Watershed Monitoring Program developed in conjunction with the Southern California Coastal Water Research Project (SCCWRP). Six annual monitoring events were scheduled for the upper Santa Margarita River watershed. Consistent with the agreement reached by SCCWRP, Permittee, and Regional Board staff, three of these sites would be collected by the Permittees and three through the Surface Water Ambient Monitoring Program (SWAMP). The costs for implementing the three sites to be implemented by the Permittees would be offset by reducing the Permittees existing dry weather triad monitoring events (three stations) from twice a year to annually.

Development of a LID Manual (Section 7.2.2.1)

The Permittees have committed to develop a Low Impact Development (LID) Implementation Manual based on the LID Manual currently being developed by the SMC and CASQA.

Hydromodification Management Plan (Section 7.2.2.2)

The Permittees have committed to develop a revised hydromodification management plan based on the findings of the final SCCWRP Hydromodification Management report currently under development.

Participate in a Watershed Based TMDL for the Santa Margarita Lagoon (Section 6.4.4.7)

The Permittees understand that, due to economic conditions, State funding for the Santa Margarita Lagoon watershed-based TMDL has been withdrawn. As described in Section 3.4, economic conditions are also impacting the Permittees' funding sources and the Permittees are struggling to maintain sufficient resources to fund their existing compliance programs. Therefore, the Permittees cannot currently support committing additional funds toward a third party TMDL effort. The Permittees are, however, agreeable to discussing with the Regional Board a elimination or reduction of various required compliance activities that are not measurably enhancing the their ability to attain Water Quality Standards, which in turn could allow the Permittees to redirect some of their existing resources into the third party TMDL effort. Some program elements that could be considered for discussion are described in Section 6.4.4.7.

Pyrethroid Pesticide BMP Implementation

The Permittees have committed to implementing several BMPs to address possible urban sources of pyrethroid pesticides. In addition the Permittees have committed to working through CASQA to facilitate regulatory change in pyrethroid pesticide use to curtail potential causes of receiving water impairment.

Adjustments to the Monitoring Program

The Permittees have proposed additional revisions to the monitoring program to streamline implementation and increase its utility.

2.0 Introduction

The Regional Board adopted Order No. R9-2004-001 (NPDES No. CAS0108766), an area-wide NPDES MS4 permit (2004 MS4 Permit) on July 14, 2004. This ROWD is a required component for renewal of the 2004 MS4 Permit. The 2004 MS4 Permit authorizes discharges of Urban Runoff from the MS4 owned and operated by the Permittees.

Capitalized terms used in this ROWD are defined in the glossary of the Riverside County DAMP. The Riverside County DAMP serves as the model compliance document used by the Permittees to develop the Watershed and Individual SWMPs. To save costs and increase the effectiveness of the MS4 Permit compliance programs, the Permittees will maintain the Riverside County DAMP as the primary document that describes Permittee compliance programs. The Permittees individual and regional compliance programs are then described in more detail in the Individual and Watershed SWMPs.

This ROWD has been written and formatted to address the requirements outlined in United States Environmental Protection Agency (USEPA) *Interpretative Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems* contained in the Federal Register, Volume 61, page 41698 (61 FR 41698), and to include commitments made in the various compliance documents, annual reports and in meetings with the Regional Board.

Additionally, as discussed in the meeting with Regional Board staff on September 9, 2008 and as supported by the above mentioned USEPA guidance, this ROWD relies on the fourth year Annual Reports to document the programs implemented by the Permittees. The fourth year Annual Report also includes a comprehensive evaluation of Permittee monitoring data to date and includes preliminary recommendations for Permittee compliance programs based on that data. As part of the ROWD process, the Permittees have reassessed their existing programs that are described in the Annual Reports, the monitoring conclusions and program recommendations contained in the fourth year Annual Reports, and in this ROWD, are making additional recommendations for revisions to improve the efficiency and effectiveness of these programs at improving and protecting the quality of our Receiving Waters.

The following sections of the ROWD are summarized as follows:

Section 3.0 - Information about the Permittees, their legal authority to implement the existing and proposed programs, the Permit Area, and the Permittee's funding sources and economic outlook relative to continued funding of the MS4 Permit compliance programs.

Section 4.0 – Information about the upper Santa Margarita River watershed, including physiography and geology, hydrology, climate, population, land use, surface water bodies and their Beneficial Uses and Impairments, and the MS4. This information provides context for the MS4 Permit compliance program in the Santa Margarita Region.

Section 5.0 – An overall evaluation of the Permittees existing programs based on water quality data collected to date and proposed compliance program modifications.

Section 6.0 – Evaluation of regional compliance programs, including a summary of accomplishments and proposed program revisions.

Section 7.0 – Evaluation of compliance programs individually implemented by the Permittees, including a summary of accomplishments and proposed program revisions.

3.0 Applicant Information

3.1 Permittee Contact Information

Table 1 provides the contact information for each of the Permittees in the Santa Margarita Region.

Table 1. Permittee Contact Information

	Primary Contact	Staff Contact	Address
District	Warren D. Williams General Manager, Chief Engineer 951.955.1275	Jason Uhley Engineering Project Manager 951.955.1273 juhley@rcflood.org	1995 Market Street Riverside, CA 92501
City of Menifee[1]	George Wentz City Manager 951.672.6777	Addison Smith Building Official 951.672.6777	29683 New Hub Drive, Suite C Menifee, CA 92586
City of Murrieta	Patrick A. Thomas Director of Public Works 951.304.2489	Bill Woolsey 951.461.6073 WWoolsey@murrieta.org	1 Town Center 24601 Jefferson Avenue Murrieta, CA 92562
City of Temecula	Daniel A. York City Engineer 951.694.6411	Aldo Licitra 951.694.6411 aldo.licitra@cityoftemecula.org	43200 Business Park Drive Temecula, CA 92589
City of Wildomar[1]	John Danielson City Manager 951.677.7751	Michael Kashiwagi, P.E. Director of Municipal Services (916) 683-3340 X 15 (Office) (916) 206-2238 (Cell) Local Cell 909.200.0523	23873 Clinton Keith Road, Suite 111 Wildomar, CA 92595
County of Riverside	Gary Christmas Chief Deputy County Executive Officer	Mike Shetler Senior Management Analyst 951.955.1110 mshetler@rceo.org	4080 Lemon Street, Suite 400 Riverside, CA 92501

3.2 Statement of Legal Authority

The Co-Permittees have adopted ordinances regarding the management of Urban Runoff. The ordinances provide the Permittees with the legal authority to implement the requirements of the 2004 MS4 Permit and 40 CFR Section 122.26(d)(2)(i)(A-F). The Permittees also provided certification of adequate legal authority to comply with the 2004 MS4 Permit and to implement the Riverside County DAMP to the

[1] As the Cities of Menifee and Wildomar are recently incorporated, the County of Riverside is currently handling their stormwater and MS4 permitting issues. Once these cities are fully established and staffed, updated contact information will be provided to the Board. The cities will assume responsibility for their programs on October 1, 2009.

Regional Board. However, it is noted that the newly incorporated cities of Menifee and Wildomar will submit their certifications following adoption of the updated MS4 Permit.

However, there are limitations to the authority the Permittees have for enforcement actions. The Permittees do not have legal authority over discharges into their respective MS4 facilities that originate from agricultural activities, state and federal facilities, utilities and special districts, Native American tribal lands, wastewater management agencies and other point and non-point source discharges otherwise permitted by, or under the jurisdiction of, the Regional Board or USEPA. Examples of non-point sources of Pollutants not under the control of the Permittees include materials from operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography.

Also, the Permittees do not have the authority to enforce the provisions of California's General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit-Industrial) or California's General Permit for Storm Water Discharges Associated with Construction Activity (General Permit-Construction). The State Water Resources Control Board (State Board) issues these NPDES permits, and neither the State Board nor the Regional Board has the authority under the Clean Water Act to delegate responsibility for administering these NPDES permit programs to the Permittees. However, the Permittees' local storm water and erosion control ordinances may address items similar to those identified in these statewide NPDES permits.

3.3 Permit Area

The Permit Area is defined as the urbanized area serviced by the Permittee's MS4 facilities. The Permit Area is located within the area delineated by the County boundary line on the south and the limits of the jurisdiction of the San Diego Regional Board on the north, east, and west. It is important to recognize that the Clean Water Act exempts agricultural activities from regulation under NPDES and the Permittees do not have legal jurisdiction over storm water discharges into their MS4 facilities from:

- California and federal facilities,
- Areas under the jurisdiction of San Diego County,
- Utilities and special districts, and
- Native American tribal lands.

These areas are not included in the Permit Area. In addition, other point and non-point source discharges otherwise permitted by or under the jurisdiction of the Regional Board or USEPA may affect water quality in the Murrieta and Temecula Creek watersheds.

The area of Riverside County under the jurisdiction of the Regional Board is less than 8 percent of the 7,300 square miles within Riverside County. Of the 27 municipalities within the whole of Riverside County, only five include areas under the jurisdiction of the Regional Board.

3.4 Funding Sources and Economic Projections

3.4.1 Funding Sources

The costs incurred by the Permittees in implementing the SWMPs fall into two broad categories:

- **Shared Costs**. These are costs that fund activities performed mostly by the District under the Implementation Agreements. These activities include coordinating the overall storm water program, coordinating other interagency cooperative efforts such as the Compliance Assistance Program (CAP), participating in CASQA activities, representing Permittees at meetings of the Regional Board or State Board and other public forums; preparing and submitting compliance reports and other reports required under the MS4 Permit, conducting Urban Runoff monitoring and public education outreach programs, responding to Water Code Section 13267 requests, providing other program documentation, and coordinating consultant studies, Permittee meetings, and training seminars.
- **Individual Permittee Costs for Individual SWMP Implementation**. These are costs incurred by each Permittee for implementing within its jurisdiction the BMPs (drainage facility inspections for illicit connections, drainage facility maintenance, drain inlet/catch basin stenciling, emergency spill response, street sweeping, litter control, public education, construction activity inspection, development of implementation plans, etc.) comprising the Individual SWMPs.

Historically, the Permittees have employed several funding methods to finance their MS4 Permit compliance activities. Unfortunately, the mortgage crisis, collapse of the housing market, and the economic recession has resulted in the cessation of virtually all development activity and has significantly reduced property and sales tax revenue. Property tax revenues have been reduced by the high level of foreclosure activity, reduced property values and a significant decline in assessed valuations. Property tax revenues have been further reduced by homeowner requests for reassessments to reflect the reduced property values. The impact of these economic conditions on the Permittees in the Santa Margarita Region has been particularly severe. As a result, the aggregate funding available to the Permittees has been severely reduced, and it is anticipated that this condition will continue well into and possibly throughout the next Permit term. The funding methods historically used and the effects of the economic situation on the availability of funds through these sources are summarized as follows:

- **Santa Margarita Watershed Benefit Assessment Area**. In 1991, the District established the Santa Margarita Watershed Benefit Assessment Area to fund its MS4 Permit compliance activities. Currently, the Benefit Assessment revenues fund the District's share of the area-wide MS4 Permit program activities and the District's individual compliance activities as a Permittee. Under the Benefit Assessment each parcel is taxed based on the impervious area of each parcel at a set rate established by District Ordinance 14. This rate has not been increased since 1991 due to Proposition 218. In 2007/08 the Santa Margarita Benefit Assessment generated approximately $410,000 dollars in revenue.

  Outlook: The District expects at best to maintain, if not see temporary reductions in Benefit Assessment revenues due to the significant number of homes that are not paying property tax due to foreclosure. Pursuant to Article 13.D of the California Constitution, an increase in the established Benefit Assessment rate to compensate for these reductions requires approval of 2/3

of the voters or 50 percent of the property owners and is highly unlikely given the current economic climate. Revenues will not increase until the development industry recovers.

- **General Fund /Other Revenues**. The County and the cities utilize general fund revenue to finance most of their MS4 Permit compliance activities. General fund revenue is generated by property tax, sales tax, and auto license taxes.

  Outlook: The Permittees expect a continued reduction in th**e funds** available through General Fund / Other Revenues through at least FY 2009 /2010. Although optimistic that conditions will begin to stabilize toward the end of 2009, the Permittees cannot speculate as to when revenues will recover to previous levels.

- **Fees**. Several Permittees charge fees for services such as inspections, plan check, and other recoverable costs related to compliance with the 2004 MS4 Permit. These fees cover both the direct and indirect costs associated with conducting these inspections/reviews including associated compliance tracking and reporting.

  Outlook: It is notable that, with the virtual collapse of the development industry in the Santa Margarita Region, the fees received by the Permittees have been significantly reduced. With this reduced level of fee-based income, maintenance of the existing inspection and plan review programs will place an increased burden on overall funding of the compliance programs. The Permittees do not expect revenues from fees to recover until the development industry recovers. Even with recovery of the development industry, it is anticipated that over the long-term, revenues from fees will be reduced for the City of Temecula and the County due to the reduced area remaining for development within their jurisdictions.

- **Grants.** The Permittees have actively pursued and, as available, used Grants to fund compliance programs.

  Outlook: In December the state's budget crisis resulted in a directive to state agencies from the Department of Finance to halt projects that rely on bond funds, including those funded by Prop 40, Prop 50, or Prop 84. The State of California is the primary source of grant funding for water quality projects. Future availability of funds to resume grant-funded projects is uncertain.

It is clear that the current economic climate and that of the foreseeable future is creating a significant burden upon the Permittees that will make the continuance of all existing MS4 Permit compliance programs increasingly difficult. New funding sources or alternative combinations of funding sources will likely be required to ensure continued funding of even the current MS4 Permit compliance programs.

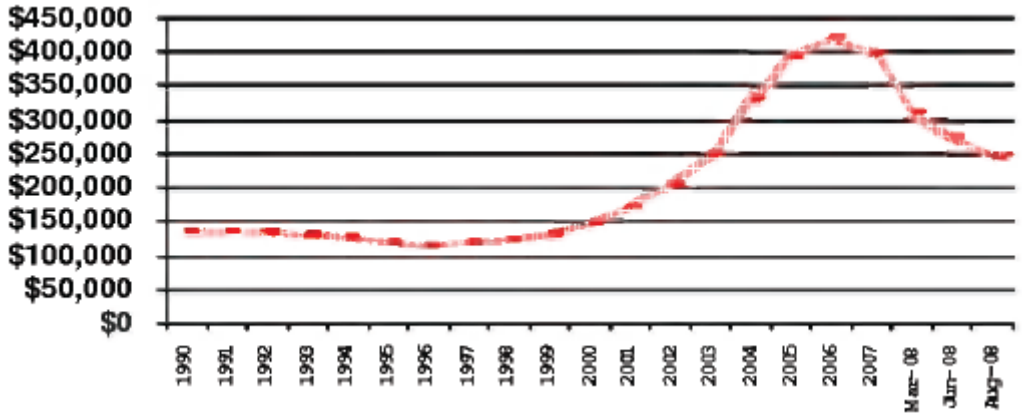
3.4.2 Economic Projections

According to Chicago Title, Southwest Riverside County has experienced a very significant increase in supply of single-family residential units on the market. As a result, housing price indicators are very negative. In the majority of the Southwest Riverside submarket, the pending price is less than the closing price indicating general price weakness. The October, 2008 count of bank owned (REO) properties for Riverside County as a whole was 12,078. The number of home in foreclosure was 23,480. The presence of high levels of REO properties will continue to negatively affect home prices. In addition, the level of foreclosures is increasing.

With regard to other sectors of the economy, Riverside County has taken a serious turn for the worst in 2008, with projections indicating that the severe downturn will continue through 2009 at the very least.

The economic difficulties being faced in the Southwest Riverside submarket is the result of the dramatic downturn in the housing market in this area, the national financial turmoil, the worldwide credit crisis, and the increasing consumer debt crisis. According to Beacon Economics, a respected economics consulting firm in Los Angeles, Inland Southern California is clearly at the epicenter of this economic turmoil, with extremely high rates of unemployment at present. Unemployment rates in Inland Southern California are expected to reach 12.4 percent before this deep recession is over. Housing prices are expected to continue their precipitous decline from their peak levels in the two Inland Southern California counties through at least 2011. According to Dataquick, median home prices in Riverside County peaked at $415,000 in January 2007. At the end of this cycle, the median home price in Riverside County is expected to be $198,000. Figure 1 depicts the median housing price in Riverside County over the period 1990 to August 2008.

Figure 1. Riverside County Median Housing Price (1990 – August 2008)

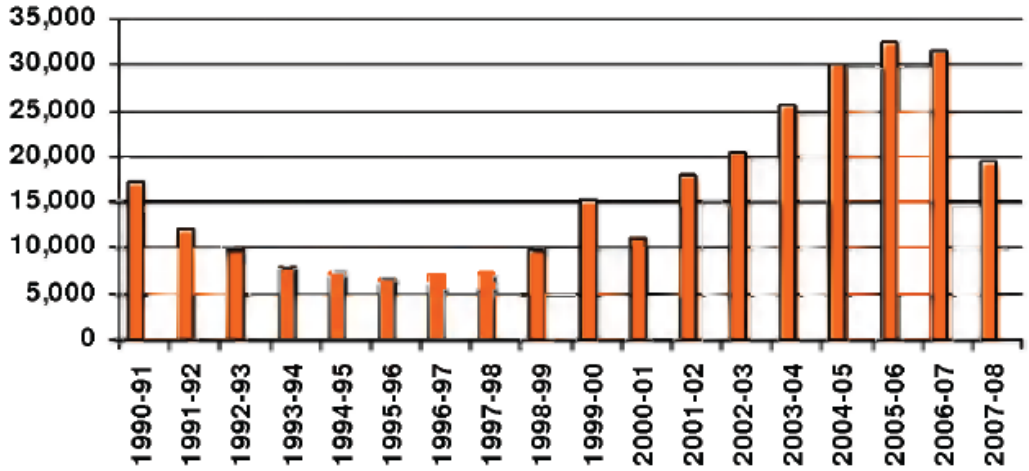


Source: Riverside County Center for Demographic Research. 2008. Riverside County Progress Report, pg 14.

Local Government sales tax revenues remained fairly stagnant through 2006 and began to decline in early 2007, according to Beacon. By the second quarter of 2008, taxable sales in Riverside County declined by 7.7 percent. The decline is expected to continue with taxable sales possibly bottoming out by 2010. Recovery of these reduced revenue streams will likely not occur within the next permit term.

As a direct outcome of the current economy and the economic outlook into the next MS4 Permit term, the number of New Developments proposals has plummeted and any significant rebound is not forecast. New and redevelopment projects will likely remain minimal. As shown in Figure 2, the number of housing units being added each year has dropped below the levels seen at any point in time during the 2004 MS4 Permit. These numbers will likely continue to decrease for a significant portion of the new MS4 Permit term.

Figure 2. Riverside County Housing Units Added (1990 – 2008)



Source: Riverside County Center for Demographic Research. 2008. Riverside County Progress Report, pg 12.

These economic issues and projections directly affect and limit both:

1. The need for including enhanced new and re-development requirements in the new MS4 Permit, and
2. The Permittees ability to fund, and even seek new funding sources for additional MS4 Permit requirements for new and re-development projects.

Therefore, as described in Section 7.2, the Permittees are not recommending and cannot financially support any significant increases to their Development Planning activities. Permittee specific projections are as follows:

3.4.2.1 County of Riverside

The County is operating with a structural deficit of $12 million and plans a 25 percent budget reduction from FY 2008/2009 through FY 2011/2012. The County's current budget of $4.7 billion represents a 5 percent reduction from the previous year and next year's budget is expected to be cut by 10 percent. These cuts are directly associated with the overall decline in property values and the high number of foreclosures. There are concerns about having to use discretionary funds to meet State mental health and social service mandates. In addition, the County is dependent on funds from federal and state sources. If during this time of economic crisis federal and state funding sources are reduced or eliminated, any unfunded State and Federal programs will be terminated. Only core County programs will continue.

The primary source of general fund revenue is from property taxes and sales tax. With the unprecedented number of foreclosures, reduced property values, and declining sales tax revenue, general fund revenue is in a downward spiral. Another source of funding is through the Solid Waste Tipping Fees paid at the County landfills. Volume is down 15 percent since 2006 with anticipated downward trend to 40 percent reduction in solid waste through 2014. Programs that are partially funded through tipping fee allotments will be impacted. Due to the declining economy the recycling market has collapsed. Virtually no recyclable materials are being shipped for reprocessing. This loss of revenue and increased disposal costs is further impacting the general fund.

Cuts of 25 percent for all Net County Cost general fund programs will translate into reduction of County services and elimination of unfunded state and federal programs. Only core value programs will be provided (including public safety and fee programs)

The County has instituted a hiring freeze and required each department to create a report outlining the projected effects of the budget cuts. The County currently employs over 20,000 people, and layoffs are expected to result from the findings of these departmental reports. It is anticipated that this will impact program delivery for stormwater related activities. No County department will be able to sustain current staffing levels as they try to meet the 25 percent budget reduction strategy.[2] [3]

3.4.2.2 City of Menifee

The newly incorporated City of Menifee FY 2008/2009 initial budget was estimated from their comprehensive fiscal analysis that was submitted to the Local Agency Formation Commission during the incorporation process. Because of the economic uncertainty, and the fact that the City is only now beginning to staff positions, it is unknown what the immediate impact of the fiscal crisis will be. The County is responsible for assisting the City in meeting its MS4 Permit compliance requirements during the first year of incorporation which expires October 1, 2009. Currently, the level of property tax revenue that will be available to the City is uncertain. Funding for MS4 Permit compliance requirements was not explicitly budgeted. A financial hardship currently exists because of the costs associated with incorporation.

3.4.2.3 City of Murrieta

The City of Murrieta's FY 2008/2009 budget did not increase compared to FY 2007/2008. Adjustments were made to reflect less revenue and to absorb any operating costs. However, budget cuts are anticipated for FY 2009/2010 because the immediate economic outlook is not good. There have been approximately 2,000 home foreclosures within the City. Sales tax revenue is estimated to drop 12.5 percent, property tax revenue will drop, and the State took approximately $525,000 out of redevelopment funds. Murrieta did not receive any vehicle licensing fees from the State and it appears likely that the State will take more revenue from the Cities to solve its budget problems. New NPDES requirements that increase compliance costs will create a financial hardship for the City.

3.4.2.4 City of Temecula

Various ongoing tax and investment revenues adopted in the City of Temecula's FY 2008-09 general fund revenues are projected to decrease from FY 2007-08. Sales and use tax revenues are expected to decrease in FY 2008-09 compared to FY 2007-08. This decrease is primarily the result of the decline in general consumer goods, electronic retail, and auto sales. Property tax revenue is also expected to decrease due to decreases in supplemental tax receipts attributed to the impact of the housing crisis. Investment interest revenue is also anticipated to decrease due to a decline in interest rates.

As a result of the 2008/2009 State budget, Temecula's redevelopment agency will have to shift existing funds from property taxes to the State's Education Revenue Augmentation Fund coffer for schools and

[2] "The Realities of Recession in California: A Statewide Report by U.S. Senator Barbara Boxer, December, 2008, p. 18.

[3] Riverside County Executive Office, January, 2008.

colleges. As such, the amount due from the Temecula Redevelopment Agency is expected to be $898,685. As the State of California continues to address its budget deficit, the City of Temecula faces the possibility of additional revenue shifts to State coffers, further losing future revenue streams and threatening existing service levels.

In addition, a Press-Enterprise article dated December 9, 2008, reported that "Between 25 and 30 part-time Temecula employees will be without work in the new year as City officials deal with a lack of revenue and less work to go around." Furthermore, "the city is not immune to the economic slowdown, which has forced its neighbors to lay off workers and slash spending to counter drops in sales tax receipts and building permit fees. In May, the City's Finance Director reported that revenues were down $3 million compared to two years ago."

With these current and projected reductions in revenue and staff, additional requirements in the MS4 Permit or upcoming TMDL-related requirements, without any corresponding cost-equivalent offsets, will exceed the City's ability to effectively implement these new requirements and will begin to compromise the City's existing efforts to manage the existing MS4 Permit requirements.

3.4.2.5 City of Wildomar

The newly incorporated City of Wildomar FY 2008/2009 initial budget was estimated from their comprehensive fiscal analysis that was submitted to the Local Agency Formation Commission during the incorporation process. Because of the economic uncertainty, and the fact that the City is only now beginning to staff positions, it is unknown what the immediate impact of the fiscal crisis will be. The County is responsible for assisting the City in meeting its MS4 Permit compliance requirements the first year of incorporation that expires July 1, 2009. Currently, the level of property tax revenue that will be available to the City is uncertain. Funding for MS4 Permit compliance requirements was not explicitly budgeted. A financial hardship currently exists because of the costs associated with incorporation.

4.0 Overview of the Upper Santa Margarita River Watershed

4.1 Physiography and Geology

The upper Santa Margarita River watershed is defined as that portion of the Santa Margarita River watershed above the confluence of Murrieta and Temecula Creeks and includes the City of Temecula and portions of the Cities of Menifee, Murrieta, Wildomar, unincorporated County areas, portions of the Cleveland and San Bernardino National Forests, the Cahuilla, Ramona, Pauma, and Pechanga Indian Reservations and properties under the jurisdiction of Caltrans and a variety of special districts. The watershed is bounded by several mountain ranges, including the Santa Ana and Santa Margarita mountains to the North and the Palomar Mountains to the South. The upper Santa Margarita watershed includes areas in Riverside and San Diego Counties and encompasses approximately 588 square miles.

The upper Santa Margarita watershed includes two major sub-basins, drained by Temecula and Murrieta Creeks. Temecula Creek has a drainage area of 366 square miles, with steep rugged topography in the Palomar and Thomas Mountain areas and rolling hills below. The upper 316 square miles of this basin is controlled by Vail Lake (completed in 1949). Murrieta Creek has a drainage area of 222 square miles, with over 50 square miles controlled by Skinner Reservoir (completed in 1974). Although the watershed area is somewhat smaller and less rugged than the Temecula Basin, flood flows have the potential to create greater damage as they flow through the Cities of Temecula and Murrieta.

Temecula and Murrieta Creeks join along the Elsinore fault zone at the head of Temecula Canyon to form the Santa Margarita River. The Temecula Canyon is approximately five miles long, and is a steep, narrow, and rocky canyon. The San Diego-Riverside county line crosses through the Temecula Canyon. From here, the river traverses 27 miles to the Pacific Ocean.[4]

4.1.1 Watershed Characteristics

Over 50 percent of the Santa Margarita watershed has been controlled by the construction of Vail Dam in 1949 and Skinner Reservoir in 1974, which created a significant storage capacity in the upper watershed.[5] [6] 52 percent of the upper Santa Margarita River watershed is controlled by the dams. Due to this storage capacity, peak flow rates during major flow events for both existing and future land use conditions will be lower than under natural conditions.[7] [8]

[4] Santa Margarita Watershed Study: Hydrologic and Watershed Processes, Phillips, Williams and Associates, Ltd., October 26, 1998, page 1.

[5] Santa Margarita Watershed Study: Hydrologic and Watershed Processes, Phillips, Williams and Associates, Ltd., October 26, 1998, page 14.

[6] Philip Williams & Associates, Santa Margarita Watershed Study: Hydrology and Watershed Processes, October 26, 1998, p. 14.

[7] Philip Williams & Associates, Santa Margarita Watershed Study: Hydrology and Watershed Processes, October 26, 1998, p. 20.

[8] Santa Margarita Watershed Study: Hydrologic and Watershed Processes, Phillips, Williams and Associates, Ltd., October 26, 1998, page 20.

4.1.2 Stream Flow Characteristics

Murrieta and Temecula Creeks are perennial interrupted streams, i.e., they include reaches in which the flow is continuous and others where flow is ephemeral. The areas of perennial flow are located in mountain area tributaries outside of the urbanized areas serviced by the MS4s. The perennial flows disappear by seepage into the sands and gravels and resurface upstream of the confluence of Murrieta and Temecula Creeks. The creeks in the urbanized areas of the watershed, located primarily in the valley, are ephemeral and flows are only observed during and immediately after significant storm events. During major storms, after initial wetting, periods of intense rainfall result in rapid increases in stream flow in steep foothill and mountain areas.[9] "Runoff in streams in the watershed is derived primarily from rainfall, and as a result, stream flows exhibit monthly and seasonal variations similar to those shown by the precipitation records. Absence of snow pack in the tributary watershed results in a rapid decrease in flow of streams at the conclusion of the winter precipitation season. Following severe storms, discharge in the larger streams often increases in a few hours time from practically no flow to a rate of thousands of cubic feet per second. Stream flows vary greatly from month to month and from season to season."[10]

Rising groundwater is currently observed in Murrieta Creek below its confluence with the Santa Gertrudis Channel. This is consistent with the observations with the rising groundwater conditions observed by the State of California in 1956.[11] Rising groundwater is also observed in Temecula Creek approximately one quarter mile upstream of the Interstate 15 bridge. In 1956, the State of California observed more extensive rising groundwater conditions occurring as far upstream as the Highway 79 bridge. Based on the virtual absence of non-storm water flows and the rising groundwater conditions in lower Murrieta and Temecula Creeks observed prior to development of the watershed, there is no evidence that the rising groundwater is due to Urban Runoff nor that Urban Runoff has affected the quality of rising groundwater. However, use and disposal of reclaimed water and agricultural and landscape irrigation in the watershed may affect groundwater quality. Until October 2002, the Rancho California Water District augmented the flow of the Santa Margarita River with reclaimed water at a point about five miles upstream from the Temecula gauging station. Since that time, the Rancho California Water District has diverted reclaimed water to the Santa Ana watershed and instead discharged imported water at a location downstream of the confluence of Murrieta and Temecula Creeks in order to meet water supply obligations to Camp Pendleton.

For the average annual event, it is estimated that approximately 89 percent of the volume of runoff in the Santa Margarita Region is due to non-urban land uses not regulated under the federal storm water program. For the 100-year 24-hour event, 93 percent of the volume of runoff will be due to non-urban land uses. These estimates are based on the assumption that precipitation is constant across the watershed. However, precipitation (and resultant runoff volumes) in the non-urbanized upland areas is as much as four times greater than that from the urbanized valley areas.[12]

[9] Riverside Flood Control and Water Conservation District, "Hydrologic Data for 1975-76 Season," March 1982, p. 49.

[10] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956, p. 48.

[11] State of California Department of Public Works Division of Water Resources, Bulletin No. 57, "Santa Margarita River Investigation," Volume I, June 1956, p. 48.

[12] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956, p. 11

4.2 Climate

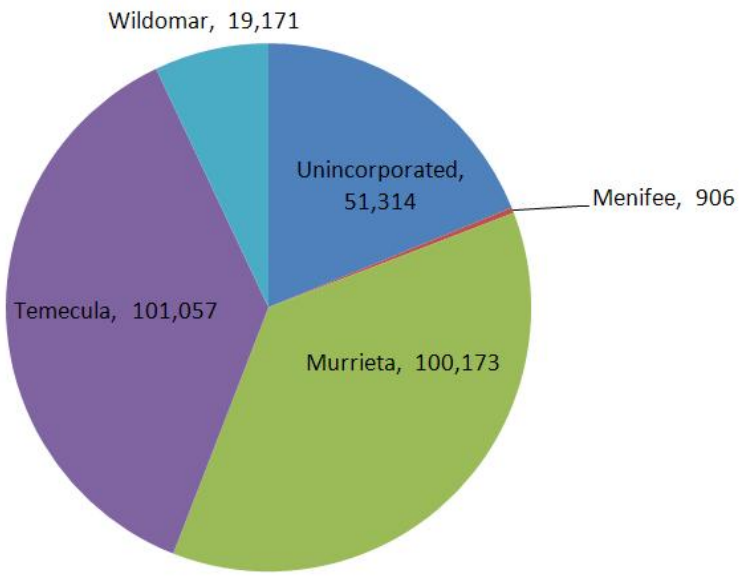
"The climate of the Santa Margarita River watershed is typically Mediterranean, being characterized by warm dry summers and cool rainy winters. About 75 percent of the precipitation occurs during the four-month period from December through March. Mean annual depth of precipitation ranges from less than 10 inches near Vail Reservoir to over 40 inches west of Palomar Observatory, varying with elevation and topographic influences."[13] Precipitation increases with increases in elevation to the summit of the Coastal range. Shading effects of the Coastal range lead to a marked decrease of precipitation throughout the lower portions of the Inland area. Precipitation increases again farther away from the Coastal range in the northeastern area of the Inland area.[14] The significant and varied orographic features also make rainfall prediction particularly challenging in the urbanized portion of the watershed.

4.3 Population and Land Use

4.3.1 Population

The California Department of Finance estimates that as of January 1, 2008, the total population of Riverside County was about 2,088,322. Of the 2.1 million people, approximately 272,621 persons (or 13 percent) reside within the portion of Riverside County under the jurisdiction of the San Diego Regional Board. As shown in Figure 3, approximately 51,314 persons[15] reside in the unincorporated area while approximately 221,307 persons reside within the cities of Menifee, Murrieta, Temecula and Wildomar.

Figure 3. Santa Margarita Region Population by Permittee (2008)



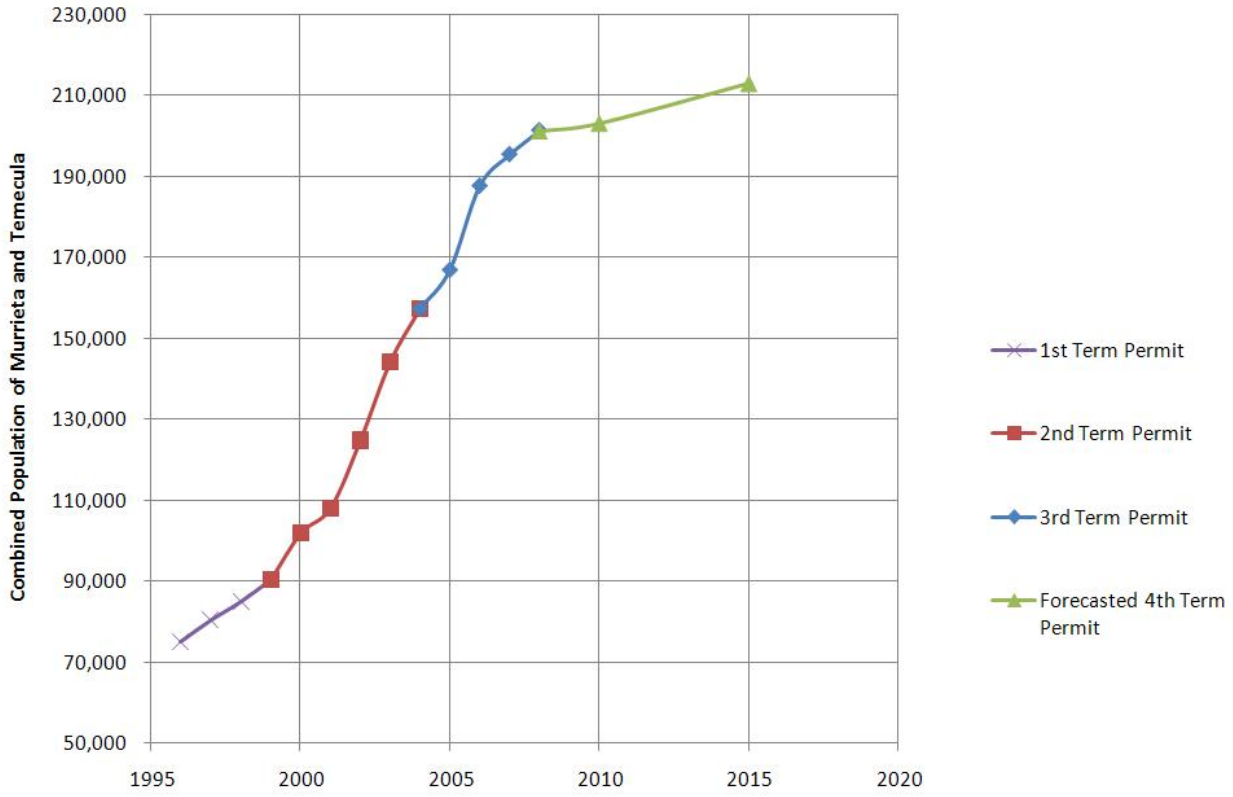
[13] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956, p. 11.

[14] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956, p. 38.

[15] Population estimate for the portion of unincorporated Riverside County within the Santa Margarita River watershed developed by the County TLMA GIS Demographics Unit based on the 2000 Census.

Although the second term and 2004 MS4 Permits covered a period of time that saw a significant amount of growth, due to the current and foreseeable economic conditions described in Section 3.4.2 of this report and decreasing areas available for development, growth during the next MS4 Permit term will be quite limited. In fact, the projected growth rate through 2015 will be significantly less than has been seen since the early 1990s. Figure 4 shows the combined populations of the Cities of Murrieta and Temecula since 1997 and projected through 2015. Similar trends are expected for the unincorporated areas and the portions of the cities of Wildomar and Menifee within the watershed.

Figure 4. Cities of Murrieta and Temecula Combined Population (1997 – 2015)



Source: Riverside County Center for Demographic Research. 2008. Riverside County Progress Report, pgs 92 & 124.

Figure 4 clearly demonstrates the dramatic reduction in growth that is expected for the term of the next MS4 Permit when compared to previous permit terms.[16] Establishing trend lines for the population in these cities further demonstrates that the growth rate (population added per year) will be lower than the previous growth rate by approximately 86 percent.

[16] 2008 Riverside County Progress Report

Table 2 shows population projections for the all of the Permittees into the year 2015.

Table 2. Population of Santa Margarita Region Co-Permittees

Co-Permittee	Year			Change (2009 to 2015)
	Estimate 2008 (a)	Estimate 2009 (b)	Projected 2015 (b)	
City of Menifee	906[c]	927[c]	5,232[c]	464%
City of Murrieta	100,173	102,277	109,715	7.3%
City of Temecula	101,057	101,356[d]	103,150	1.8%
City of Wildomar	19,171[c]	19,589[c]	20,127[c]	2.7%
Unincorporated County of Riverside	51,314[c]	52,436[c]	53,793[c]	2.6%
Total	272,621	276,585	292,017	5.6%

Notes:

(a) Unless otherwise noted, populations were obtained from the State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, May 2008.

(b) Unless otherwise noted, projected populations were obtained from Riverside County Center for Demographic Research. Riverside County Progress Report, 2008

(c) Data provided by County of Riverside, Executive Office.

(d) Data provided by City of Temecula.

Since the District is not a general purpose government, it is not included in this listing. Although the current population of the City of Menifee in the Permit Area is small, it is anticipated that the population will increase as it annexes unincorporated areas. Similarly, it is anticipated that the cities of Murrieta and Temecula will gain population as they annex unincorporated areas. It is not anticipated that Wildomar will see significant population increases as it is bounded on all sides by other cities and lands reserved under the MSHCP.

4.3.2 Land Use

Land uses in Riverside County within the Santa Margarita Region include open space, residential, commercial, light industrial, heavy industrial, and agriculture. The agricultural land uses include row crops, nurseries, citrus groves and vineyards, dairies, ranches, poultry and hog farms, and other agricultural related uses with one single-family residence allowed per 10 acres (County of Riverside General Plan, Land Use Element 2003). The conversion of agricultural lands and open space to other "developed" land uses has been ongoing and will continue, although at a much lower rate than previously experienced. Land uses in the Santa Margarita Region are shown in Table 3. These land uses are based on the County of Riverside Assessor Parcel Data, current as of February 2006. It should be noted that the land uses below represent ***zoned*** land uses rather than ***actual*** land uses. This overstates the actual area of urban land use in the Santa Margarita Region. Also, changes in zoning designations can cause odd fluctuations in year-to-year date.

A map of the zoned land uses is provided in Appendix A.

In 1956, only 0.3 percent of the Santa Margarita River watershed (less than two square miles) was urbanized.[17] Although there has been a significant rate of growth in population relative to the State and

[17] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956.

neighboring counties, half a century later, approximately 88 percent of the Santa Margarita River watershed remains as non-urban land uses (rural residential, agriculture, preserves and open space, state lands, federal lands, and tribal lands). Further, almost one-third of the upper Santa Margarita River watershed consists of federal, state, and tribal lands that are not under the jurisdiction of the Permittees' MS4 programs. It is projected that the population of Riverside County will increase approximately 5.6 percent by 2015. If the urbanized area increases proportional to population, 87 percent of the upper Santa Margarita River watershed would remain in non-urban land uses in 2015.

Table 3. 2009 Santa Margarita Region Land Uses

Urban Land Use	Acreage[(a)]	% of Land Use Subtotal	% of Total Land Use
Commercial	8,339	20.0%	2.5%
Industrial	963	2.3%	0.3%
Urban Residential (< 1 acre)	12,656	30.4%	3.7%
Parks & Recreation Facilities	4,291	10.3%	1.3%
Streets & Roads	15,439	37.0%	4.6%
Subtotal – Urban Land Use	41,688		12.3%
Non Urban Land Uses			
Preserves & Open Space	54,141	18.2%	16.0%
Rural Residential (> 1 acre)	106,773	35.9%	31.5%
Agriculture	36,389	12.2%	10.7%
Federal/State/Tribal Lands/Non-County Jurisdiction	100,076	33.7%	29.5%
Subtotal Non Urban Land Use	297,379		87.7%
Total Urban & Non Urban Land Use	339,067		100%

(a) As reported in the FY 2007/2008 Watershed Annual Report.

4.3.3 Conserved Lands

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) was adopted in June of 2003. It is a comprehensive, multi-jurisdictional Habitat Conservation Plan focusing on conservation of species and their associated habitats in western Riverside County. The MSHCP is one of several large, multi-jurisdictional habitat planning efforts in southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The MSHCP will allow Riverside County and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal Endangered Species Acts. Further, as floodplains and streams tend to support critical habitat, the MSHCP will preserve many of the remaining natural streams and establish significant buffer areas between those systems and urban land uses.

Much of the remaining non-urbanized lands in the Santa Margarita Region will ultimately be incorporated into the MSHCP. The MSHCP will result in a conserved area in excess of 500,000 acres and focuses on conservation of 146 species. The MSHCP Conservation Area includes approximately 347,000 acres on

existing Public/Quasi-Public Lands and approximately 153,000 acres of Additional Reserve Land. A large portion of the conserved lands are in the upper Santa Margarita watershed (at least 145,000 acres). There are approximately 72,318 acres of existing public or quasi-public lands preserved within the upper Santa Margarita River watershed area located in Riverside County.

4.3.4 Anticipated Development 2009-2015

Proposed development during the next MS4 Permit term is an important indicator of potential new Urban Runoff sources. To the extent possible, the Permittees have identified significant New Development projects that, if constructed, will result in the conversion of primarily undeveloped land to developed land. This section describes the expected development within Permittee cities. Consistent with the current and forecasted economic conditions and population estimates, and as supported by the population information and forecasts presented in Section 4.3.1, the Permittees anticipate that the term of the upcoming MS4 Permit will be a time of little development. Following are summaries of anticipated development during the upcoming MS4 Permit.

4.3.4.1 County of Riverside

Projected trends for the County of Riverside's land use can be referenced in the Riverside County General Plan. Maps depicting the areas of future development and type of land use can be found in the General Plan maps that are accessible at http://www.rctlma.org/generalplan/area_maps.html.

- With the incorporation of the cities of Wildomar and Menifee the remaining unincorporated County area to be built out in the Santa Margarita Region during the upcoming MS4 Permit term is going to be considerably smaller.
- It is anticipated that, over the next five years, additional annexations will occur in each of the four city areas (Temecula, Murrieta, Wildomar and Menifee) that will further reduce the unincorporated County area in the Santa Margarita Region.
- The unincorporated County area in the upper Santa Margarita River watershed (east of Temecula, Menifee and Murrieta) will remain in rural, open space and additional MSHCP land uses. In addition, due to drought conditions and depletion of aquifers the prospects of New Development is unlikely. Water districts in the region cannot offer "will serve" letters to provide for water resources they do not have. Infrastructure for water supply and municipal water treatment, MS4 and flood control facilities are virtually non-existent in this area.
- Due to downturn in economy, Development Impact Fees (DIF) and Transportation Uniform Mitigation Fees (TUMF) are and will continue to be significantly under funded. This reduction in transportation funding will result in fewer road and infrastructure projects during the term of the upcoming MS4 Permit. The Transportation Department has projected limited projects for the Santa Margarita Region. The Clinton Keith Road widening project is still in the planning stages. Due to budgetary constraints, unless projects are fully funded through County finance mechanisms (TUMF, DIF, state and federal pass through from bonds and grants) most projects will be put on hold through 2012.

4.3.4.2 City of Menifee

Projected development trends for the City of Menifee are unknown, sphere of influence and annexation opportunities will allow for limited growth once the economic uncertainty of the region is resolved.

4.3.4.3 City of Murrieta

The area north of Clinton Keith Road along the east side of the I-215 freeway should see some construction towards the end of the next MS4 Permit term. Grading for the construction of a hospital has started along the freeway and it is anticipated that supporting development will follow once the hospital is open. Overall the Planning Department is receiving few applications for New Development projects. For example, a Planning Commission meeting scheduled for January 2009 has been cancelled because there are no New Development items to discuss. In light of the current and foreseeable economic conditions, the City does not anticipate any substantial New Development activity for the next few years, with limited growth possibly resuming toward the end of the next MS4 Permit term.

4.3.4.4 City of Temecula

The City of Temecula is currently experiencing a significant leveling trend in development. Throughout 2008, fewer applications were being processed than in previous years. As such, Temecula does not anticipate processing any substantial number of New Development applications within the next MS4 Permit term. It is anticipated that applications from hereon will be limited to smaller in-fill and redevelopment projects. In addition, proposed annexation areas will be limited to areas that will be set aside mostly for conservation. As Temecula is on the verge of build-out, approximately 1 percent of developable land remains available throughout the City for New Development.

4.3.4.5 City of Wildomar

Projected trends for the City of Wildomar are unknown, sphere of influence opportunities will allow for limited growth once the economic uncertainty of the region is resolved.

4.4 Surface Water Bodies, Beneficial Uses, and Impairments

Approximately eight percent of Riverside County drains into surface water bodies within the jurisdiction of the Regional Board. Those surface water bodies (or portions thereof) are listed in Sections 4.4.1 and 4.4.2.

Rivers and Streams

Santa Margarita River (Hydrologic Unit Basin Number 2.22)
- Murrieta Creek
  - Slaughterhouse Canyon
- Cole Canyon
  - Warm Springs Creek
    - Diamond Valley Reservoir
- Santa Gertrudis Creek
  - Tucalota Creek
  - Lake Skinner
- Temecula Creek (Hydrologic Unit Basin Number 2.92)
  - Iron Spring Canyon
- Temecula Creek (Hydrologic Unit Basin Number 2.84)
  - Tule Creek
    - Million Dollar Canyon
  - Cottonwood Creek
- Vail Lake
  - Wilson Creek
    - Cahuilla Creek (Hydrologic Unit Basin Number 2.73)
      - Hamilton Creek
    - Cahuilla Creek (Hydrologic Unit Basin Number 2.71)
      - Elder Creek
  - Arroyo Seco Creek
  - Kolb Creek
- Temecula Creek (Hydrologic Unit Basin Number 2.52)
  - Pechanga Creek

Santa Margarita River (Hydrologic Unit Basin Number 2.21)
- DeLuz Creek

4.4.1 Beneficial Uses

The upper Santa Margarita River watershed supports a variety of ecosystems and provides many Beneficial Uses (Table 4)[18]. The ultimate goal of the Riverside County DAMP and the Watershed and Individual SWMPs is to manage Urban Runoff in a manner protective of the Beneficial Uses of these Receiving Waters.

Table 4. Beneficial Uses of Receiving Waters
Upper Santa Margarita River Watershed

Beneficial Use	Murrieta Creek	Cole Canyon	Warm Springs Creek	Santa Gertrudis Creek	Long Valley	Temecula Creek	Santa Margarita River
Municipal and Domestic Supply	X	X	X	X	X	X	X
Agricultural Supply	X	X	X	X	X	X	X
Industrial Service Supply	X	X	X	X	X	X	X
Industrial Process Supply	X	X	X	X	X	X	
Ground Water Recharge	X					X	
Contact Water Recreation				X	X	X	X
Non-contact Water Recreation	X	X	X	X	X	X	X
Warm Freshwater Habitat	X	X	X	X	X	X	X
Cold Freshwater Habitat							X
Wildlife Habitat	X	X	X	X	X	X	X
Rare, Threatened or Endangered Species							X

4.4.2 Current Water Quality Concerns and Issues

Urban Runoff discharged to MS4s in Riverside County ultimately flows to various surface water bodies (inland streams, lakes, and reservoirs) and typically carries Pollutants that originate from numerous dispersed and uncontrolled sources. Examples of Pollutants that may be present in Urban Runoff are fertilizer, heavy metals, nutrients, petroleum products, sediment, bacteria, chemicals, and litter.

Because the upper Santa Margarita River watershed is large and has many land uses, the water quality concerns in sub-watersheds vary. However, each land use can potentially contribute Pollutants to nearby streams, rivers, and lakes. The infrastructure that supports people's activities (e.g., roads, parks, MS4, and wastewater collection and treatment facilities) may contribute to water quality concerns if not properly managed. Other sources of stormwater runoff, including agricultural areas, are exempt from the requirements of the NPDES permitting program established under the Clean Water Act. In addition, some Pollutants, such as total suspended solids, may be found at elevated levels in runoff from non-urban land uses. Further, certain activities that generate Pollutants present in Urban Runoff are beyond the ability of the Permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography.

[18] www.waterboards.ca.gov/rwqcb9/programs/

As required by Section 303(d) of the Clean Water Act, the State Board maintains a list all waters in the State that do not meet the Water Quality Standards established in the Basin Plans prepared by the Regional Boards for protection of Beneficial Uses. This list, referred to as the "303(d) List," details the Pollutant or stressor on each named water body, the potential source of Pollution, estimated affected area, as well as a priority for development of the associated TMDL. A TMDL is a plan that identifies how much Pollutant load a specific Impaired Waterbody can sustain without impacts to its Beneficial Uses. In addition to identifying the maximum Pollutant load, a TMDL is used to develop implementation plans to meet Water Quality Standards for a designated water body. Table 5 summarizes the 2006 303(d) List of Impaired Waterbodies within the upper Santa Margarita River watershed, as well as the year in which a TMDL is proposed for approval. No TMDLs have been established for Receiving Waters in the upper Santa Margarita River watershed.

Table 5. 2006 303(d) Listings for the Santa Margarita Region

Water Body	Pollutant	Potential Sources	Area Affected	Proposed TMDL Completion
Santa Margarita River (Upper)	Phosphorus	Urban runoff/storm sewers Unknown nonpoint source Unknown point source	18 miles	2019
Murrieta Creek	Iron Manganese Nitrogen Phosphorous	Source unknown Source unknown Source unknown Urban runoff/storm sewers Unknown nonpoint source Unknown point source	12 miles 12 miles 12 miles 12 miles	2019 2019 2019 2019
Temecula Creek	Nitrogen Phosphorus Total dissolved solids	Source unknown Source unknown	44 miles 44 miles	2019 2019

Table G-35 of Appendix G to the Annual Report 2007-2008 additionally identifies pyrethroid pesticides (bifenthrin and permethrin), bacteria (E. coli and fecal coliform), lead, and sediment (turbidity) as Pollutants of Concern in the upper Santa Margarita River watershed that warrant focused attention by Permittee implementation programs. These constituents have been detected intermittently or persistently at Triad and Tributary monitoring stations.

4.5 Municipal Separate Storm Sewer System

A map depicting the MS4 facilities owned and operated by the Permittees is provided in Appendix B.

5.0 Program Evaluation Based on Water Quality Trends

The overall effectiveness of the Permittees programs is assessed based on the analysis of water quality data obtained as part of the Consolidated Monitoring Program. Approximately 14 years of data have been collected through this program and have been cumulatively analyzed in the fourth-year monitoring Annual Report.

5.1 Inherent Limitations to Analyzing Water Quality Data

There are inherent limitations to analyzing water quality data from storm water. Storm water runoff is very different from mechanical wastewater or water treatment processes that usually incorporate water quality monitoring. Discharges from mechanical processes such as treated wastewater effluent and industrial discharges usually:

- Come from a single or a few readily identifiable sources;
- Are generally consistent in flow rate and chemical character from day to day; and
- Can be easily instrumented.

Conversely, Urban Runoff non-point source flows, such as those collected and analyzed as part of the MS4 Permit monitoring programs usually:

- Come from multitudes of unidentifiable or hidden sources, many of which are non-Urban in nature:
  - State, federal or tribal lands
  - Natural leaching of soils
  - Wildlife
  - Aerial deposition
  - Wildfires
- Vary widely in flow rate in response to precipitation events
- Vary widely in chemical character at any given moment due to:
  - Unidentified episodic issues related to natural phenomena
  - Magnitude of rainfall and extent of contributing area
  - Potential one-time illicit discharges that were not identified at the time of sampling
  - Unforeseen or unidentified consequences of changes in numerous land use policies (fire management, development, etc)
- Are subject to significant natural random variation; and
- Cannot be easily instrumented due to the wide variation in depth and velocity and associated impacts of natural or unnatural aggradation and degredation of natural stream beds.

Because ephemeral storm water flows are, by their very nature, particularly random in character, it may take many years before monitoring data trends can be detected or to determine the effectiveness of an

Urban Runoff control measure. Power analyses were conducted for fecal coliform, metals, and nutrients at the stations monitored in the Santa Ana Region during the 2005/06 reporting period. Power analysis is used to determine how many years of monitoring would be required to detect a given trend in the data. This tool was developed by the SCCWRP. Based on the results, for biennial monitoring, and having an 80 percent chance of detecting a change in concentration, it would take about 5-10 years of data collection to detect a change of 50 percent in concentration, 10-15 years of data to detect a 25 percent change, and 15-30+ years of data to detect a 10 percent change. It is expected that results would be similar for other parameters measured in the monitoring program in the Santa Margarita Region.

5.2 Focus Area Constituents of Concern

During the 2004 MS4 Permit term, monitoring data indicated that one or more receiving water samples have been found to contain the following constituents at levels that exceeded Basin Plan Objectives (BPO). As such they have been identified as constituents of concern.

- Nutrients (Ammonia as N, Phosphorus
- Pyrethroid Pesticides (Permethrin, Bifenthrin)
- Pathogen Indicators (E.coli, Fecal Coliform)
- Lead
- Turbidity (lab)

5.3 Analysis of Water Quality Trends

As discussed in the 2008 Santa Margarita Region Annual Monitoring Report, the results of the trend analysis and regression calculations indicate that there are no statistically significant trends in the water quality monitoring data. The lack of trends in the data presented in the Annual Monitoring Report contrasts with the rapid population growth over the same time frame. As discussed in the Annual Monitoring Report, population growth from 1990 to 2008 was approximately 300 percent for the Santa Margarita Region. This significant growth in population and resulting urban land use area contrasts sharply with the lack of statistically significant increases in concentrations of constituents of concern that would otherwise be expected in stormwater runoff from urbanized areas.

These results demonstrate and can be attributed to the effectiveness of the Permittees' programs at addressing the Focus Area Constituents of Concern, which are targeted and designed to prevent the discharge of these constituents into the Receiving Waters.

5.3.1 Recommended Compliance Program Modifications to Address Focus Area Constituents of Concern

Based on the analysis described above and in Appendix G of the 2008 Watershed Annual Report, no significant program modifications are necessary to continue to protect and improve the quality of the Receiving Waters.

Although the Permittees programs have been shown to be protective of Receiving Water quality, through continual evaluation of the programs being implemented and on-going water quality monitoring, additional measures are being proposed as part of this ROWD to address changing conditions and ensure

the ongoing effectiveness of the programs. Recommended changes to ensure the ongoing effectiveness of the Permittees programs are described in Sections 6 and 7 of this report.

6.0 Evaluation and Recommendations for Regionally Implemented Programs

6.1 Program Management

The District is the Principal Permittee for each of the three MS4 permits issued by the three Regional Boards that have jurisdiction in Riverside County. As Principal Permittee, the District performs management functions including coordination with the Regional Boards, preparation of compliance documents and Annual Reports, participation in studies and external cooperative efforts and dissemination of information to the Permittees. The Permittees implement some compliance programs that are common to all of the Permittees and which are implemented on a Countywide or regional basis to increase cost effectiveness and efficiency. Typically, the District also manages Countywide and regional programs.

6.1.1 Program Management Accomplishments and Programmatic Improvements

During the term of the 2004 MS4 Permit the following accomplishments were achieved.

- Updated the Implementation Agreement that sets forth the responsibilities of the Principal Permittee and the Co-Permittees.
- Revised the Riverside County DAMP to reflect requirements in the 2004 MS4 Permit, which served as a model document for the Permittees Watershed and Individual SWMPs.
- Developed Santa Margarita Region Watershed SWMP
- Participated in the Santa Margarita River Executive Management Team (SMREMT) to identify and address the highest priority water quality concerns in the Santa Margarita watershed, including development of a watershed model to assist with land use planning and TMDL development, coordinating watershed monitoring, and developing formal agreements between interested stakeholders for the purposes of evaluating impairment listing and data gaps in the watershed.
- Continued progress with the SMREMT on a uniform watershed plan and model for the Santa Margarita Watershed through the Santa Margarita Watershed Supply Augmentation, Water Quality Protection, and Environmental Enhancement Program.
- Participated in the Santa Margarita Lagoon TMDL workgroup in funding and overseeing the development of a comprehensive program to collect data and model the various inputs to the lagoon to be used to develop a TMDL to address nutrients.
- Participated in the Santa Margarita Watershed Water Quality Monitoring Group to coordinate the monitoring efforts of various stakeholders in the Santa Margarita watershed.
- Participated in the SMC to improve stormwater monitoring science, coordinate data collection efforts, and evaluate the effects of stormwater discharges to receiving waters specific to Southern California.
- Participated actively in various efforts of CASQA.

- Participated in the completion of an Integrated Regional Water Management Plan for the upper Santa Margarita Watershed to help pave the way for greater watershed-wide coordination and management of water resources within the upper watershed as a whole, as well as adjoining watershed and regional planning efforts.
- Participated in the development and implementation of the MSHCP for Western Riverside County which contains a comprehensive land use plan that ultimately conserves the environmental resources and habitat of approximately half of the Santa Margarita Region.
- Participated in the development of a Special Area Management Plan (SAMP) to further manage receiving waters at a watershed scale for the upper Santa Margarita Watershed by identifying, prioritizing and protecting the highest priority Waters of the U.S., while considering the broader needs of growth and transportation improvements.
- Developed and updated methods to track program effectiveness such as resident surveys, tracking hotline inquiries, and web counters.
- Enhanced Public Education program through development of new outreach materials and programs.

6.1.2 Proposed Revisions to Regional Program Management

6.1.2.1 Enhanced Program Effectiveness Assessments and Municipal Action Levels

To ensure that the Permittee's programs continue to be effective at managing the effects of Urban Runoff on Receiving Water quality, the Permittees will revise the Program Effectiveness Assessments for both the Individual SWMP and the Watershed SWMP as part of their implementation of the new MS4 Permit. An assessment strategy based on the CASQA Municipal Stormwater Program Effectiveness Assessment Guidance has been established including the establishment of:

- Measurable goals for each component,
- Measurable metrics to assess progress toward those goals,
- CASQA Effectiveness Levels for each metric; to indicate the level at which each metric can demonstrate the effectiveness of the Permittee's programs at addressing each goal.
- Timeframes in which the Permittees expect to be able to assess effectiveness using each metric.
- Municipal Action Levels (MALs) for appropriate metrics to ensure a minimum level of program implementation and identify shortcomings that could affect the Permittee's progress toward the established goals. The MALs would not be permit compliance measures, but triggers for further Permittee evaluation of the affected compliance program.

If a MAL for a metric is exceeded, the Permittees will review implementation of that program component to identify the cause of the exceedance and identify needed adjustments to avoid future exceedances. The findings of these reviews and any recommended adjustments to the Permittees programs will be reported in the corresponding section of the Annual Report submitted the following year. Further research is particularly needed to establish appropriate Municipal Action Levels for the various program areas.

After a review of the stormwater program, the Permittees have established an initial Assessment Methodology for each component including preliminary goals, measurable metrics, effectiveness levels,

timeframes and MALs for each. These initial assessment methodologies are included in tabular format in Appendix C. Although the Permittees believe the basic proposal is viable, The Permittees will review and finalize these Assessment Methodologies and associated metrics within one year following adoption of the new MS4 Permit as additional data and analysis is necessary to support specific action levels.

6.1.2.2 Revised Reporting Format

The Permittees recommend substantial revisions to the MS4 Permit requirements for the layout of the Annual Report. The Permit requires substantial duplication of reporting, which either increases the volume of the Annual Report, or requires substantial cross-referencing. In either case, it is confusing to write, and most likely, confusing to read. The Permittees recommend a meeting with Regional Board staff in the development of the new MS4 Permit to discuss methods to streamline and clarify reporting requirements.

6.1.2.3 Maintain Enhanced Watershed / MS4 Map

The Permittees are in the process of collecting data to support an enhanced MS4 facilities map. Updates completed to date are provided in the map in Appendix B. This enhanced map demonstrates initial efforts to identify the locations of:

- Receiving Waters
- MS4 facilities
- Areas of historical perennial flows
- Known blow off locations
- Wastewater storage ponds
- Sub-drainage areas
- Known non-Permittee facilities
- 36-inch diameter and larger outfalls

This map will be used to help in the tracking of IC/ID events and issues and continued updates will be submitted with the Annual Reports. The Permittees will continue to enhance this map over the next MS4 Permit term. As described in the Annual Report, the District is in the process of upgrading their web page that offers public access the District's various NPDES activities. Along with these web site upgrades, additional layers will be added to the Web-based GIS map.

6.1.2.4 Elimination of the Watershed SWMP as a separate compliance document from the Riverside County DAMP

The Santa Margarita Region is comprised of only a single watershed. Further, the Permittees' regional compliance programs are described in the Riverside County DAMP. Maintenance of a separate and duplicative Watershed SWMP is confusing, cumbersome, and does not contribute to protection of Receiving Water quality. The Permittees request that the next MS4 Permit be drafted in a fashion that allows the Permittees to maintain the Riverside County DAMP as the primary document describing regional compliance programs for western Riverside County including the Santa Margarita Region. Any

necessary changes for requirements included in the new MS4 Permit will be updated /added to the Riverside County DAMP.

6.2 Permittee Training Programs

6.2.1 Summary

The Permittees jointly fund comprehensive training and education programs for Permittee staff. These training programs are designed to train Permittee employees on the proper use and implementation of BMPs appropriate for their field of work. There are four distinct training courses currently offered including Construction Inspection, Municipal Maintenance, Industrial-Commercial Facility Inspection, and New Development Planning.

6.2.2 NPDES Training Program Accomplishments and Programmatic Improvements

- Evaluated and tested various knowledge retention methods.
- Performed Training Enhancement Analysis study (2005-2006)
- Created an on-line training registration web page where attendees can also obtain training materials.
- Annually updated training materials to address Pollutants of Concern (2005-2007)
- Added component to training to address proper use, application and timing of application of Pesticides (2007-2008)
- Began developing a formalized testing and effectiveness analysis approach (2008)

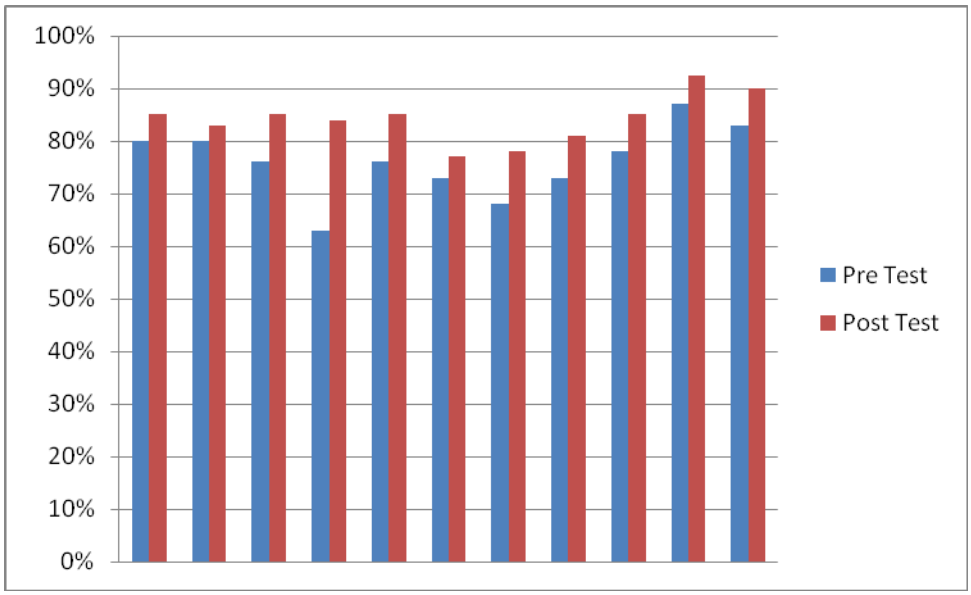
Highlights
Municipal Training: **14** Training Sessions; **900** Attendees
Construction Training: **22** Training Sessions; **626** Attendees
Industrial-Commercial Training: **11** Training Sessions; 426 Attendees
New Development Training: **13** Training Sessions; **345** Attendees

6.2.3 Long-Term Effectiveness Assessment

Throughout the term of the 2004 MS4 Permit the Permittees have evaluated and implemented various quizzes as part of the NPDES training courses. These efforts were intended to assess the retention of knowledge of the attendees and, as described in Provision K.2.m of the Watershed SWMP, serve as a component of the assessment of the long term effectiveness of the Watershed SWMP.

The quizzes used to assess employees' retention of knowledge have evolved over time as the Permittees found what worked and what did not. Quiz questions that were found to be confusing or misleading were refined or eliminated. Thus, a question-by-question analysis of the results is not possible. Instead, results from a number of the training courses with reasonably comparable quizzes were aggregated and an average score (percent correct) was established for each of these training sessions. The results of this analysis are presented in Figure 5.

Figure 5. Training Pre-Test and Post-Test Analysis



Although the required random-sample nature of this analysis is not conducive to the analysis of trends across time, two findings become evident from this analysis:

1. Permittee inspection, maintenance and planning staff generally have a high level of understanding of issues related to stormwater Pollution in their field of work.
2. Average scores on quizzes administered after the training sessions were always higher than scores on quizzes administered before the training session.

Finding 1 above can be attributed to the Permittee's proactive efforts to ensure that their employees are aware of the issues in their field of work that could contribute to stormwater Pollution. This includes annual attendance at the NPDES training courses, and on-the-job training, reminders and meetings. This fact alone is a strong indicator of the effectiveness of the Permittees training programs.

Finding 2 above demonstrates that after attending the NPDES training courses, the attendees have a higher level of understanding of the issues in their field of work related to stormwater Pollution. This indicates that the training materials, delivery and content were effective.

Based on these analyses, general feedback from the training programs, and the overall effectiveness of the Permittees' programs (as described in Section 5.3 herein) the Permittees believe their training programs to be effective. Nevertheless, the following revisions to the training programs have been identified and are proposed for implementation with the new permit to ensure ongoing effectiveness.

6.2.4 Proposed Revisions

6.2.4.1 Continued focus on Focus Area Pollutants of Concern

The Permittees commit to continue to revise the Permittee training programs to focus on Pollutants of Concern.

6.2.4.2 Standardized Effectiveness Quizzes

Over the course of the 2004 MS4 Permit, the Permittees have evaluated various methods of assessing the retention of knowledge and are now recommending a standardized approach to assessing the effectiveness of the training program.

The Permittees plan to create standardized quizzes to assess the retention of knowledge and increased understanding as a result of the Permittees' training sessions. This includes establishing core messages that the Permittees want to impart upon the attendees and, creating clear and understandable quiz questions for each core message.

This approach will help the Permittees identify if any core training messages are not being retained by attendees and to subsequently modify the training. The Permittees also hope that this approach will yield results that will, over time, demonstrate that the knowledge among Permittee staff of issues related to storm water Pollution is increasing, thus clearly demonstrating that the NPDES Training program is effective.

As a necessary part of this effort, a database to track responses will also be created.

6.2.4.3 Attendance Tracking Mechanism

At each training session a sign-in sheet is provided to track attendance to the session. Included in the sign-in sheet is an indication of the Permittee that each attendee is representing. After each training session, these sign-in sheets are scanned to PDF files and sent to each Permittee for their records. This approach requires that each Permittee manually review the sign-in sheets to determine who and how many of their staff attended the training.

The District, on behalf of the Permittees, is currently investigating various form scanning and recognition software packages to determine the feasibility of creating a sign-in sheet that, when scanned, will automatically transfer the attendance list into a database. This would facilitate tracking of staff attendance by each Permittee. At this time the District has not determined if a feasible and cost efficient program is available that will accomplish their needs.

6.3 Public Education

6.3.1 Summary

To leverage finite resources, the Permittees jointly fund a public education program. The District implements this program to disseminate information about Urban Runoff issues and to provide education on how activities may impact Receiving Waters.

The Permittees have established an ongoing watershed-based public education and outreach program known as the **Only Rain Down the Storm Drain** Pollution Prevention Program. The specific objectives of this program include:

- Fostering a broad public awareness of water Pollution concerns;
- Increasing public acceptance of Pollution Prevention activities to curtail everyday human behaviors that contribute to water quality problems;
- Educating/informing the general public, regulators and key local government and state decision makers on Urban Runoff conditions in Riverside County; and
- Promoting stewardship of local water resources.

The **Only Rain Down the Storm Drain** Program implements the public awareness objectives by focusing on three areas of Pollutant reduction/prevention:

- Public behavior;
- Proper management of Pollutants; and
- Business specific education outreach.

In addition, when attempting to make use of the finite resources available to the Public Education Program, the Permittees use these management goals to ensure that resources are used effectively:

- Focusing on Pollutants of Concern specific to each watershed region;
- Coordinating public education efforts with adjacent storm water management programs and other related education programs to share resources, coordinate outreach efforts, and avoid duplication of effort; and
- Adapt public education programs and objectives, based on effectiveness analysis, to address changing MS4 program requirements and objectives.

6.3.2 Public Education Program Accomplishments and Programmatic Improvements

The Public Education Program has developed and distributed the following educational materials during the 2004 MS4 Permit term:

- *After the Storm* – a citizen's guide to understanding MS4 Pollution in your neighborhood or when performing daily activities.
- *Automotive Maintenance & Car Care* – guidelines for keeping your auto shop or retail fuel facility in environmental shape.

- *Outdoor Cleaning Activities* – guideline for outdoor cleaning activities and wastewater disposal.
- *Pools, Spas and Fountains* –Environmental maintenance suggestions for pool, spa, and fountain owners.
- *What's the Scoop* – tips for a healthy pet and a healthier environment.
- *Household Hazardous Waste* – A schedule of collection locations for proper disposal of HHW.
- *Stormwater Pollution Found in Your Neighborhood* – door hanger.
- *Equestrian Management* – Recommendations for BMPs related to equestrian activities.
- *Spray Bottles* – Including directions to make environmental friendly recipes for pest control and household cleaning

The Permittees also initiated development of the following outreach materials

- *Landscaping and Gardening Brochure* – Initiated development a new brochure to address outdoor residential landscaping and gardening activities.
- *Septic System Management Brochure* – initiated development of a brochure to assist with septic system management.

In addition to the information provided on the Storm Water Protection website, the Public Education and Outreach Program has:

- Updated the Public Education and Outreach Program web page.
- Tested and/or implemented several new Public Education and Outreach Program effectiveness tracking mechanisms including call tracking, web counters, testing, and bilingual surveys.
- Enhanced the toll free storm water Pollution reporting hot line to include public education information and support for the public and other interested stakeholders.
- Obtained a trailer with "**Only Rain Down the Storm Drain**" graphics specifically designed for transporting materials to outreach events. It is also used as part of the booth at outreach events.
- Initiated billboard advertising within the Santa Margarita Region.
- Worked with the Mission Resource Conservation District to implement presentations to elementary and middle schools and staff to raise public awareness of Urban Runoff management issues and source control methods and to encourage volunteers, partners, and groups to gather annually for a trash and debris clean-up day in the Santa Margarita Region.
- Developed special newspaper and billing inserts, fliers and advertisements to raise public awareness of Urban Runoff management issues and source control methods. A radio advertising campaign was also developed and implemented for a time.
- Developed and presented workshops regarding household hazardous waste use and proper disposal at major home improvement stores throughout Riverside County.
- Placed advertisements in the Penny Saver and Bargain Bulletin to raise public awareness of Urban Runoff management.

- In cooperation with certain County Service Areas or other programs, pet waste signs with bag dispensers have been installed at various parks to help encourage the proper disposal of animal waste.
- Cooperated with the Western Riverside Council of Government in the Used Oil Block Cycle Grant that decreases the amount of illegally dumped motor oil by promoting the addition of new Certified Oil Collection Centers.
- Established a partnership with County Environmental Health whereby businesses cited by Environmental Health for violations of ordinances related to stormwater issues may be allowed to implement a Supplemental Environmental Project in conjunction with the **Only Rain Down the Storm Drain** program.

6.3.3 Long-Term Effectiveness Assessment

Effectiveness metrics of the Public Education and Outreach Program during the 2004 MS4 Permit term are presented in Section J.1.3 of the FY 2007/2008 Watershed Annual Report. The data indicates that overall impressions have continually exceeded the number of residents in the watershed, HHW/ABOP pounds of waste collected and pounds of waste collected per person have steadily increased over the term of the 2004 MS4 Permit.

In 2005, the **Only Rain Down the Storm Drain** program developed and implemented a survey to be distributed at Public Outreach events to assess the public's level of knowledge related to stormwater Pollution. This original "long" survey contained 13 questions in both English and Spanish as shown in Figure 6.

This survey was used for fiscal years 2005-06 and 2006-07. Through this period of implementation it was found that the survey took too much time to complete and reduced the level of response from event attendees. Therefore, the survey was subsequently revised to a shorter version with revised questions for the 2007-08 fiscal year. The revised "Short" survey that is currently used is shown in Figure 7.

Figure 6. Original "Long" Survey Utilized at Public Outreach Events

Zip Code_____ **Age**_____ **Sex F**__ **M**__ **Date:**_____

THINK YOU KNOW ABOUT STORM DRAIN POLLUTION PREVENTION?

1. Where do you think **storm drain** contents go or flow to? __Treatment Plant __Streams, rivers & lakes
2. Where do you think **sewer pipes** contents go or flow to? __Treatment Plant __Streams, rivers & lakes
3. Are storm drains and sewers part of the same or separate systems? __Same __Separate __Don't know
4. Have you ever been to a Household Hazardous Waste **(HHW)** Collection Event? __Yes __No
5. Did you know that **A.B.O.P.** Antifreeze, Batteries, Oil, and Latex Paint locations and mobile **HHW** Collection Events provide safe havens for the disposal of pollutants? __Yes __No
6. If you have a lawn or garden, where do you (or your gardener) dispose of the green waste (grass, clippings or other)? **(Check all that apply)**

   ☐Trash/garbage ☐Compost/Mulch pile ☐Take to compost facility
   ☐Leave on lawn ☐Removed by gardener ☐Other:_____

7. Where is the best location to wash your vehicles?
   (Check only one)

   ☐Pavement (driveway, street) ☐Dirt Area
   ☐Lawn or Grass ☐Other_____

8. Do you change the motor oil in your vehicle yourself? __Yes __No

   If **Yes**, where do you dispose of it? **(Check all that apply)**

   __in the garbage __at a curbside collection program
   __down the storm drain __collection center (Jiffy Lube, Kragen, etc.)
   __pour it on the ground __Other_____

9. If you have a pet, how often do you pick up after your pet?

   9. a) in your yard? ☐Always ☐Sometimes ☐Never

   9. b) when you walk the pet? ☐Always ☐Sometimes ☐Never

10. Do you think, anything ,other than rainwater, that flows into the storm drains (i.e., trash, chemicals, pet waste, etc.) considered a pollutant? __Yes __No
11. Have you seen or heard the slogans "Only Rain Down the Drain" or "Only Rain Down the Storm Drain"?
    __Yes __No If yes, where? __Radio __Newspaper __ Flier __Billboard __Street Fair, Festival, etc.
12. Are there State laws and local ordinances which STRICTLY PROHIBIT the dumping of pollutants **(EVERYTHING, EXCEPT RAIN WATER)** into the storm drain systems or waterways? ___Yes ___No
13. After this booth visit, have you increased your understanding of storm drain pollution prevention? __Yes __No

Thank you for your time and input… Remember, YOU can do your part by calling our Toll Free Line (1-800-506-2555) to report illegal storm drain pollutant disposal anywhere in Riverside County, or to get more information about storm drain pollution protection to help promote "ONLY RAIN DOWN THE STORM DRAIN".

Figure 7. Revised "Short" Survey Utilized at Public Outreach Events

DO YOU KNOW HOW TO PROTECT OUR STREAMS, RIVERS and LAKES?

City_____ Zip Code_____ Age____ Sex □ F □ M Date: _____

1) Water that leaves your lawn from **Irrigation (water sprinklers), Car washing** and **Rain** flows down streets and/or storm drains and then directly to…

☐ Sewage Treatment Plants ☐ Streams, rivers & lakes

2) Which of the following can LEGALLY be disposed into the storm drain? (*Circle all that apply*)

- **Useable Household Chemicals**
- **Yard waste/clippings/leaves**
- **Paint**
- **Cigarette butts**
- **Empty Household Chemicals containers**
- **Pet Waste**
- **Motor Oil / antifreeze**
- **None of these**

3) Do you feel you are well informed and aware of illegal dumping into the storm drain and its impact in your community or streams, rivers and lakes?

☐ Yes ☐ No

HOW DID YOU DO?

1) Water that leaves your lawn from irrigation, washing your car, or rainwater runoff can pickup motor oil and grease from vehicles, excess fertilizer from your lawn, bacteria from pet waste, and excess pesticides from your yard. These pollutants can be carried down streets and storm drains directly to our streams, lakes, and rivers without treatment! That is why we must take care to properly dispose of waste, maintain our vehicles, and use fertilizers, pesticides and other chemicals only as specified on their labels.

2) It is illegal to dispose of any chemical, constituent or waste into a storm drain! Report illegal disposal of chemicals, constituents, or waste to storm drains at **1(800) 506-2555.** You may properly dispose of many of the wastes listed above by doing the following things:

- **Usable and empty household chemicals, paint, motor oil** – Properly dispose these at Household Hazardous Waste and/or Antifreeze, Batteries, Oil and Paint disposal facilities and events. Call **1 (800) 506-2555** for information on disposal locations and special drop off events near you.
- **Pet waste** – Carefully pick up and dispose in the nearest trash receptacle.
- **Grass, clippings, leaves and yard waste** – Collect and dispose in green waste bins or composting areas that are designed to prevent the compost from mixing with excess irrigation water and/or rainwater runoff.

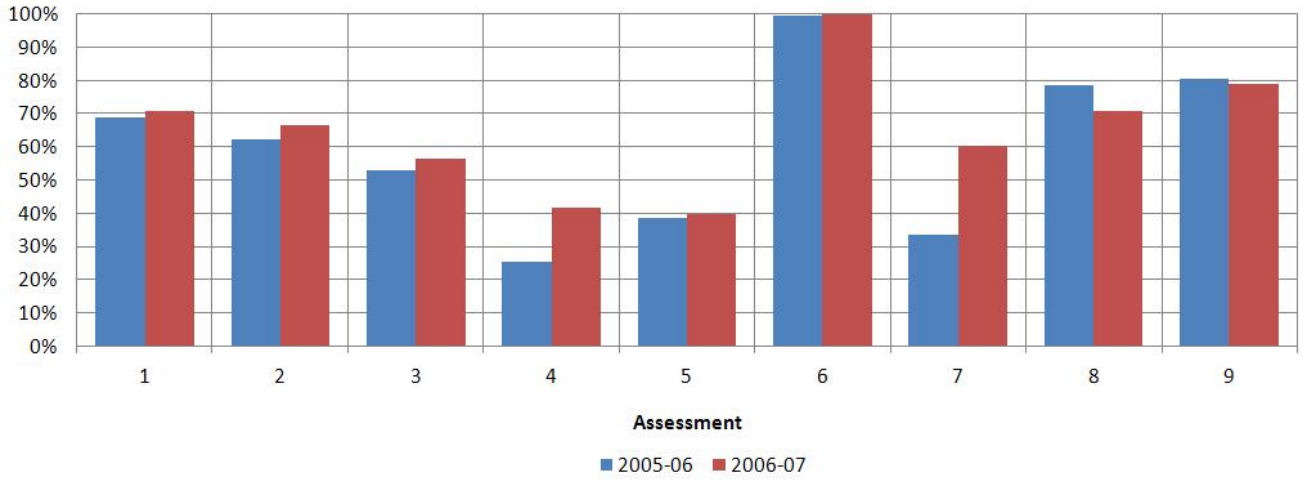
3) Would you like to learn more about protecting our streams, rivers and lakes or wish to report on a illegal storm drain disposal in your area or request a classroom or group demonstration……

Visit www.rcflood.org or call 1 (800) 506-2555.

Remember…Only Rain Down the Storm Drain!

Results have been tabulated for all of the "Long" surveys received and they have been analyzed to determine trends in public awareness. The "Short" survey has been used at two events to date, one of which was quite recent and its results have not yet been tabulated. Using the "Long" survey results, nine questions were used to assess any trends in public awareness. The remaining questions were determined to be either confusing or not applicable to the intent of the assessment. The results of this assessment of survey results are shown in Figure 8.

Figure 8. Assessment of Survey Results (2005-06 vs. 2006-07)



The results shown in the chart in Figure 8 are percent of survey takers that responded as described below:

- Assessment 1: Percent of respondents that understood that storm drains do not go to treatment plants.
- Assessment 2: Percent of respondents that understood that sewer lines go to treatment plants.
- Assessment 3: Percent of respondents that understood that sanitary sewers and storm drains are separate systems.
- Assessment 4: Percent of respondents that had attended a Household Hazardous Waste collection event.
- Assessment 5: Percent of respondents that understood that the best place to wash a car is on the lawn or grass.
- Assessment 6: Percent of respondents that change their own oil that reported that they properly dispose of it.
- Assessment 7: Percent of respondents that have heard of the "Only Rain Down the Storm Drain" program.
- Assessment 8: Percent of respondents that dumping of anything except storm water is a violation of laws and ordinances.
- Assessment 9: Percent of respondents that felt that visiting the Outreach Booth at the event increased their understanding of storm drain Pollution Prevention.

Although implementation of the "Long" survey was limited before it was modified to its current form, the results available do indicate an increase in understanding of these basic principles and can be attributed to the effectiveness of the Permittee's Public Education program. As additional survey results are collected and tabulated, further analysis will be performed to ensure the ongoing effectiveness of the program.

6.3.4 Proposed Revisions

To better address residential sources of pesticides, the Permittees are proposing to coordinate with the University of California Extension Program to enhance the implementation of the U.C. Extension's Master Gardener program in the Santa Margarita Region. Along with information regarding use of drought tolerant landscaping techniques and appropriate methods of fertilizer and irrigation application, the U.C. Master Gardeners also provide residents with information on integrated pest management techniques that minimize pesticide application. The Permittees are proposing to establish an agreement with the U.C. Extension's Master Gardener program in fiscal year 2010-2011 to support master gardener hotline staffing, local presentation and other outreach by the U.C. Master Gardeners.

In addition, through the Permittee's ongoing efforts to internally assess the efficiency and efficacy of their MS4 compliance programs, it was determined that an overhaul of the District's web site was needed. The District's web site contains the public education web site and a technical resource site with the various compliance documents for the program. It was found that information available through the site was often difficult to find and was not user friendly and sometimes was out of date. The Permittees are now reviewing this site to identify and implement needed changes

6.4 Receiving Water Monitoring Program

6.4.1 Summary

A Summary of the Monitoring Program is contained in Appendix G of the Watershed Monitoring Report.

6.4.2 Monitoring Program Accomplishments and Programmatic Improvements

The Monitoring Program accomplished the following goals during the term of the 2004 MS4 Permit:

- Subcontracted monitoring data collection and analysis to MACTEC, Inc. to enhance data collection and reporting capabilities.
- Developed and implemented a Triad Monitoring Program (bioassessment, Toxicity and chemical monitoring) consistent with the goals of the SMC Model Monitoring Program
- Developed watershed boundaries and land use information for all monitoring stations
- Updated the format and technical content of the monitoring Annual Report
- Added fire map information to assist with assessing potential Pollutant sources
- Enhanced monitoring data databases to be compatible with SCCWRP/SMC standard reporting protocols.
- Enhanced monitoring methods to incorporate use of automatic sampling equipment where appropriate

- Conducted several Toxicity Identification Evaluations that led to the identification of pyrethroid pesticides as a cause of wet weather Toxicity in Murrieta and Temecula Creeks and a Toxicity Reduction Evaluation that identified additional BMPs necessary to control sources of pyrethroid pesticides.
- Coordination with the CASQA Pesticide Committee on comments and presentations to California Department of Pesticide Regulation, UC Riverside and others regarding the impacts of pyrethroid pesticides and the need to change regulatory requirements regarding the use of pyrethroid pesticides.
- Participation in or coordination of several BMP studies, including coordination of new development BMP treatment studies (as required by conditions of approval) and the District's LID BMP Demonstration and Testing Facility.
- Continued to update and enhance the Consolidated Monitoring Program to incorporate new monitoring collection methods and data analysis protocols.

6.4.2.1 Participation in Regional Monitoring Efforts

- Participation in the monitoring programs to support development of the Santa Margarita Lagoon TMDL.
- Continued participation in regional and statewide Monitoring and Science efforts such as the Southern California Monitoring Committee to develop:
  - Lab inter-calibration of chemical, bioassessment and Toxicity testing methods
  - Testing methods for bioassessment and Toxicity in Southern California streams
  - Bacterial Reference Watershed Study
  - A storm water research needs report for southern California
- Partnered with SCCWRP on developing hydromodification guidance for Southern California including participation in a series of hydromodification workshops for a CASQA conference.
- Coordination with SCCWRP on the development of the Regional Watershed Monitoring Program for Southern California.

6.4.3 Effectiveness Assessment

The Watershed Monitoring Program was evaluated as part of the Regional Board audits in 2007-2008. As a result of those audits several enhancements were made to the monitoring program, including update of constituent lists, subcontracting of data collection to a monitoring consultant with automatic sampling capabilities, and updates to the Consolidated Monitoring Program and Monitoring Annual Report formats. The Permittees believe that as a result of these changes, the overall monitoring program is effective. However, the revisions presented in section 6.4.4 are recommended to increase monitoring data utility or overall program effectiveness.

6.4.4 Proposed Revisions to Monitoring Program

In updating the Monitoring and Reporting Program, the Permittees request that Regional Board staff meet with them to discuss the following proposed modifications to the monitoring program:

6.4.4.1 Revise Dry Weather Monitoring Program

As noted in Section G.7 (Special Studies) of Appendix G of the FY 2007-2008 Watershed Monitoring Annual Report, the Permittees participated in a SMC Study to develop a regional approach to watershed assessment. The Permittees, in conjunction with Regional Board staff, committed to participating in the resulting watershed monitoring program. The Permittees agreed to monitor three rotating dry weather stations identified for the Santa Margarita Region. Additionally, three stations are to be collected by Regional Board (or SCCWRP staff) using SWAMP funds, and the remaining three will be located in the Santa Ana Watershed region of Riverside County. In exchange for the commitment to participate in the program, the Regional Board staff agreed to reduce the current dry weather monitoring requirements in the new MS4 Permit from two (2) events annually to (1) event annually for each Triad monitoring stations. This would effectively eliminate three existing dry weather samples. The Permittees recommend a meeting with Regional Board staff to discuss these options prior to the release of the draft Permit.

6.4.4.2 Clarify Analyte List

As described in Section G-8.1.5 of the 2008 Monitoring Report (Appendix G of the FY 2007/2008 Watershed Annual Report), 168 analytes have never been detected in samples collected under the current program. The Permittees request that requirements to analyze for these constituents be eliminated unless or until a reason to believe they may be present in stormwater arises.

Basin Plan Objectives are expressed in terms of total metals, while California Toxics Rule (CTR) criteria are expressed in terms of dissolved metals. Although the Permittees do not support comparison of stormwater data to CTR values, the Permit requires it. The Permittees recommend deletion of this requirement. However, if this language is to remain, in order to properly compare results for metals to both sets of objectives, both total and dissolved fractions will be analyzed by the laboratory for the following metals: arsenic, cadmium, chromium (III), chromium (VI), copper, lead, mercury, nickel, selenium, silver, and zinc.

6.4.4.3 Clarify Mobilization Criteria

The District is proposing the following amendment to the monitoring mobilization criteria based on experience and the difficulties faced collecting the first storm and the analysis of the USEPA criteria specific to the Temecula National Weather Service weather station (Consolidated Monitoring Program, Section 4.C.2):

> "Note: If the QPF indicates that more than 0.3-inch is predicted for any 6-hour period, mobilization for sampling will occur."

The District's experience over the past three years indicates that intensities greater than 0.3" in six hours are likely to produce runoff and would warrant mobilization, even on a dry watershed. Further, these mobilization criteria are consistent with EPA-833-B-92-001 guidance regarding minimum depths/durations for storm sampling.

The Permittees recommend that the Regional Board amend the MS4 Permit to reflect these Mobilization Criteria. Due to issues with stream gauges operated by the United States Geological Survey (USGS), the Permittees have concluded that preparing post-storm forensics based on USGS data is not of significant value. A simple test of comparing Quantitative Precipitation Forecast (QPF) reports with actual rainfall and the mobilization criteria should be sufficient to determine compliance with the MS4 Permit.

Mobilization criteria should also reflect practical limitations to storm water monitoring by excluding national holiday periods (Thanksgiving, Christmas, and New Year's Day in particular) and quantifying the probability and the lead time between the forecast and actual rainfall that must be met in order to mobilize.

6.4.4.4 Reduce Wet Weather Events

As was noted in the audits, the Permittees have experienced consistent difficulty collecting three storm events in the upper Santa Margarita River watershed. The Permittees also noted that the San Diego County MS4 Permit only requires the collection of samples from two wet weather events. The Permittees request that the monitoring program for Riverside County be revised to require collection of two storm events. This would not only reduce opportunities for unavoidable non-compliance, it would also be a prudent cost saving measure that would not alter the overall effectiveness of the Permittees monitoring programs.

6.4.4.5 Clarify Triad Method and Follow-up Actions

The MS4 Permit included an early draft of the Triad method envisioned by the Model Monitoring Program (MMP) developed by the SMC. The result was a misapplication of the final Triad approach envisioned by the MMP. Toxicity is currently required to be sampled for at the Triad stations during wet weather events, but not during dry weather when the bioassessments occur. According to the SMC MMP, the three components of the Triad approach (chemistry, Toxicity, and bioassessment) should be conducted at the same time. Bioassessments cannot be conducted during wet weather due to safety concerns and the planning necessary. For this reason the MMP recommends the full triad for dry weather and only chemistry and Toxicity for wet weather.

In an effort to be proactive and supportive of good science, the Permittees have taken the following actions to ensure proper application of the Triad approach:

- Beginning with the 2007-2008 season, Toxicity sampling will be conducted during dry weather, at the same time as the bioassessments and dry weather chemistry sampling events are conducted. Thus, the full Triad approach will be conducted during dry weather. Wet weather monitoring will focus on Toxicity and chemistry. This action will modify the current program to be consistent with the MMP approach.
- The 2006-2007 Annual Report established the framework for proper application of the Triad method (full triad for dry weather, chemistry and Toxicity only for wet weather) by adding new tables (G-21 through G-27), in anticipation of properly applying the Triad method in the 2007-2008 Annual Report.

The Permittees further recommend clarifying the definitions of "persistent", "consistent", and "magnitude" as used in the MS4 Permit to be consistent with the intent of the MMP. In addition, the MS4 Permit inappropriately limits Triad analysis by defining a "fair" Index of Biological Integrity scores as automatically indicative of benthic alteration. This limitation needs to be corrected to prevent Permittee

resources from being inappropriately diverted to expensive source assessment studies. The MMP (and the SMC) envision that watersheds will be prioritized for follow up action based on their relative quality to one another. The envisioned analysis would compare watersheds from throughout southern California. The Permittees support this coordinated and comprehensive approach to addressing water quality.

6.4.4.6 Recognize Limitations of Laboratory Analysis of Bacteria

Babcock Labs prefers to accept bacteria samples between the hours of 7:00 a.m. and 4:00 p.m. during normal business days, and 9:00 a.m. and 12:00 p.m. on weekends. Although Babcock will accept bacteria samples outside those hours, acceptance is contingent upon payment of substantial overtime rates to ensure laboratory staff availability to receive and analyze the samples.

The timing of bacteria sample collection, particularly within the context of automatic sampling, will require consideration of the sample's four-hour holding time and available laboratory receiving hours. The Permittees request that the Permit be modified to only require collection of bacteria samples such that they can be delivered during the regular working hours of the lab to avoid excessive laboratory costs.

6.4.4.7 Participate in a Watershed Based TMDL for the Santa Margarita Lagoon

The Permittees understand that, due to economic conditions, State funding for the Santa Margarita Lagoon Watershed-Based TMDL has been withdrawn. As described in section 3.4, these economic conditions are also impacting the Permittee's funding sources and they are struggling to maintain resources to fund existing compliance programs. The Permittees currently cannot support additional expenditures associated with assisting in funding a watershed-based TMDL effort. However, the Permittees are agreeable to discussing a re-prioritization of compliance activities in order to reallocate existing Permittee resources for this purpose. For example, where current MS4 Permit compliance programs elements are not measurably enhancing attainment of Water Quality Standards, the Permittees would consider reduction or elimination of those requirements to support reallocation of the associated funding to the development of the watershed based TMDL. Program elements that may be considered for discussion include:

- Toxicity/Pyrethroid Monitoring – Under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) local regulation of pesticides, including pyrethroid pesticides is pre-empted. The Permittees are expending significant resources at the State and Federal level to facilitate regulatory changes in the allowable uses of pyrethroid pesticides, which have been implicated in causing toxicity in receiving waters throughout California. The Permittees have also recognized pyrethroid pesticides as a Pollutant of Concern for the upper Santa Margarita River watershed. The Permittees believe that public education and outreach regarding use and more stringent regulation/management of pesticides, including pyrethroid pesticides, represents the most effective means of controlling pesticides in Urban Runoff. However, continued Toxicity tests, Toxicity Identification Evaluations, and direct monitoring for pyrethroid pesticides are not likely to enhance the Permittee's ability to reduce/eliminate pyrethroid pesticides in Receiving Waters. Greater Receiving Water quality benefits may be realized by reallocating the resources currently allocated to these activities to the development of the watershed-based TMDL.
- Reduction in General Monitoring Requirements – The Permittees continue to expend significant resources on Receiving Water and outfall monitoring and the benefits of these monitoring activities are limited. Further, these costs have more than doubled over the term of the 2004 MS4

Permit due to audit findings recommending the implementation of automatic sampling equipment. Revised MS4 Permit requirements that provide for a simplified monitoring program may allow cost savings to be reallocated from data collection and processing to development of the watershed-based TMDL.

- Watershed/Individual Annual Reporting – The current Annual Reporting requirements are time, labor and cost-intensive exercises. Revised MS4 Permit requirements that provide for a simplified Annual Report requirements would not necessarily produce substantial cost savings (because is the reports are typically produced in-house); however, they would free up staff resources to assist with TMDL development.
- IC/ID Monitoring – Although the Permittees support regular visual inspection of MS4 facilities to identify IC/IDs, field measurements and sampling has not proven to be effective for this purpose. Although sampling of identified IC/IDs for later enforcement purposes may be appropriate, IC/IDs that have been identified and eliminated in the Santa Margarita Region typically result from visual observations and subsequent follow-up efforts by Permittee staff, not field measurements and water quality samples. Revised MS4 Permit requirements that provide for visual inspections of MS4 facilities to identify IC/IDs may yield cost savings that could be reallocated to development of the watershed-based TMDL.

There may be additional opportunities for modification of MS4 Permit requirements to focus the expenditure of Permittee funds on those activities that are most effective at protecting Receiving Water quality. Although the resources available for Permittee compliance activities are finite, the Permittees are supportive of modifications to the MS4 Permit that, while working within available funding limitations, enhance their ability to protect and enhance the quality of Receiving Waters.

7.0 Evaluation and Recommendations for Individual SWMP Programs

The Riverside County DAMP is a programmatic document developed by the Permittees in the Santa Ana and Santa Margarita Regions. It outlines the major programs and policies that the Permittees individually and/or collectively implement to manage Urban Runoff for the protection of Receiving Waters in Western Riverside County, including the Santa Margarita Region. The Riverside County DAMP provides a model for the development of a Permittees' Individual SWMPs in the Santa Margarita Region.

The Permittees continue to support a uniform approach to the implementation of MS4 Permit compliance programs in order to facilitate increased transparency and understanding for residents, regulated entities, and Permittee staff. For this reason, the discussions below focus on programmatic changes to the compliance programs that are necessary to maintain the effectiveness of the model compliance programs described in the Riverside County DAMP. Upon adoption of the new MS4 Permit, the Riverside County DAMP and Individual SWMPs will be revised accordingly.

7.1 Program Management

There are typically multiple Permittee departments that are responsible for implementing the elements of the Individual SWMPs. Each Permittee has designated an NPDES Coordinator who coordinates the overall Permittee compliance programs, collects and analyzes compliance program data, develops and maintains the Individual SWMPs, compiles and submits necessary reports, coordinates with other Permittees, stakeholders and Regional Board staff, and conducts other necessary duties as assigned.

To facilitate inter-Permittee coordination and funding of regional compliance activities such as the Public Education and Monitoring programs, the Permittees have entered into an Implementation Agreement that defines the roles and responsibilities of each Permittee and assigns cost shares for regional programs defined in the agreement. The Implementation Agreement also requires each Permittee to designate an NPDES Coordinator who is also responsible for representing the Permittee's interest at Permittee coordination meetings such as the monthly Santa Ana/Santa Margarita Technical Advisory Committee.

The Permittees in the Santa Margarita and Santa Ana Regions participate in a Management Steering Committee made up of the City Managers, County Executive Officer, and the District's Chief Engineer; or their assigned alternate. Participation in the Management Steering Committee is not mandatory; however, it provides a management-level forum to address Urban Runoff management policies for the Permit Area and coordination of the review, and necessary revisions to the Riverside County DAMP and Implementation Agreement. In addition, the Management Steering Committee promotes a higher level of awareness of the MS4 Permit compliance program by each Permittee's senior management staff.

7.1.1 Accomplishments and Programmatic Improvements

Collectively, the Permittees Program Management activities have achieved:

- Development of the Riverside County DAMP, WQMP and Individual SWMPs following adoption of the 2004 MS4 Permit.
- Revised the Implementation Agreement to account for necessary program enhancements resulting from the new MS4 Permit.

- Established and held monthly meetings of a Technical Advisory Committee comprising of each Permittee's NPDES coordinator, to discuss and coordinate response to issues that arise through the ongoing implementation of the Riverside County DAMP-based programs.
- Voluntarily participate in a Management Steering Committee comprised of Permittee upper management (City Manager or equivalent) to provide a forum to discuss major policy issues related to MS4 Permit compliance program implementation. This also helps the major decision makers within each organization to stay abreast of the status of the implementation of the Riverside County DAMP and aware of upcoming issues and approaches taken by other Permittees.
- Enhanced enforcement and compliance elements of the Riverside County DAMP.
- Developed the Integrated Regional Watershed Management Plan (IRWMP) for the Upper Santa Margarita Watershed.
- Continued progress with the Bureau of Reclamation, San Diego County and other stakeholders on a uniform watershed plan and model for the Santa Margarita River watershed.

7.1.2 Recommended Revisions and Enhancements to Program Management Efforts

7.1.2.1 Assessment Metrics and Municipal Action Levels

To ensure that the Permittee's programs continue to be effective at managing the impact of Urban Runoff on Receiving Water quality, the Permittees will revise the Program Effectiveness Assessments for both the Individual SWMP and the Watershed SWMP following adoption of the new MS4 Permit. These planned changes are further described in Section 6.1.2.1 of this ROWD. The Permittees also recommend streamlining of the reporting forms to focus on the revised Program Effectiveness Assessments.

7.1.2.2 Revised Reporting Format

As a result of continued program effectiveness assessment, following adoption of the new MS4 Permit, the Permittees will update annual reporting forms to incorporate specific reporting requirements for the effectiveness assessment metrics and to remove inappropriate, outdated, or ineffective reporting requirements.

7.2 Development Planning

This program element links each Permittee's General Plan, environmental review process, and development approval and permitting processes to the later phases of detailed design, construction and operation. The development approval and permitting processes carries forth project-specific requirements in the form of conditions of approval, project plans, and design specifications that support tracking, inspection, and enforcement actions.

7.2.1 Development Planning Program Element Accomplishments and Programmatic Improvements

During the term of the 2004 MS4 Permit, the development planning program accomplishments and programmatic improvements included:

- Developed the WQMP to address post construction stormwater runoff quality for New and Significant Re-Development Projects.
- Development of a FAQ for WQMP projects to assist with implementing the WQMP program.
- Developed and subsequently enhanced a BMP design guidance manual to standardize the construction of post construction BMPs.
- Participation in the SMC efforts to develop a LID manual.
- Participation in SCCWRP's hydromodification studies to develop scientifically based hydromodification design guidance for Southern California.
- Enhanced online watershed maps to assist developers and the public with identifying areas tributary to Impaired Waterbodies.
- Adopted and implemented a MSHCP to ensure the regional-scale protection of habitat and natural resources in the approval process for New Developments.

7.2.2 Proposed Revisions to the Development Planning Program Element

7.2.2.1 Low Impact Development

The Permittees will revise the Riverside County Storm Water Quality Best Management Practice Design Handbook to (1) better incorporate LID design concepts, and (2) incorporate guidance to describe how developments can offset Treatment Control and hydromodification impacts with LID concepts including infiltration, evapo-transpiration, reuse, and onsite stormwater management. These revisions will follow the completion of the SMC LID BMP Manual and SCCWRPs Hydromodification Study. See the FY 2007-2008 Watershed Annual Report, Appendix G, Section G.7.2 for additional detail.

7.2.2.2 Hydromodification

As committed to in the 2004 WQMP (now Appendix O to the Riverside County DAMP), the Permittees have developed numeric guidance for hydromodification and are now working with SCCWRP to develop enhanced hydromodification guidance for Southern California. The Permittees will use the completed guidance to update the WQMP, BMP Design Handbook and other guidance as necessary to effectively mitigate hydromodification impacts. See the FY 2007-2008 Watershed Annual Report, Appendix G, Section G.7.2 for additional detail.

7.2.2.3 BMP Design Criteria

The Permittees will revise the Riverside County Storm Water Quality Best Management Practice Design Handbook to incorporate additional design guidance to clarify those Treatment Control BMPs that are effective at removing sediment-bound pesticides such as pyrethroid pesticides (consistent with the recommendations of the Toxicity Reduction Evaluation contained in Appendix D.

7.2.2.4 TMDLs

The Permittees will revise the DAMP to identify and include BMPs that are necessary to mitigate the impacts of Urban Runoff on Impaired Waterbodies.

7.2.2.5 Roads

The Permittees believe that standard WQMP requirements for public works road projects create potential avenues for unavoidable non-compliance. The Permittees would like to review this priority development category with Regional Board Staff to develop a better system to manage public works road projects.

7.2.2.6 Inspect and Verify Maintenance of Post Construction Treatment Control BMPs to Ensure Ongoing Effectiveness

As economic conditions allow, the Permittees propose to implement the following approach to inspect and/or verify maintenance of Treatment Control BMPs implemented on Priority Development Projects to ensure their ongoing effectiveness. The development of the program described below will require the Permittee resources that are unavailable in the current economic climate, particularly considering that it would likely require the Permittees to abandon the CAP in lieu of a local Permittee inspection program. The resources that will be required to ramp up new inspection programs are unavailable and may not become available during the term of the new MS4 Permit; however when the economy recovers sufficiently the Permittees propose to implement the program described below.

Integrated Management Practice (IMP) Exemption:

For the purposes of this program, IMPs include BMPs that are landscape based or otherwise serve an additional purpose other than Treatment Control. IMPs will be exempted from Inspection and Maintenance Tracking / Certification requirements if solely through the regular maintenance of the feature's secondary (non-treatment) functions and with Permittee concurrence, it can reasonably be expected that the treatment efficacy of the IMP will be ensured in perpetuity. An example that may satisfy this exemption would be a grassy swale that is mowed as part of regular landscape maintenance, whereas a BMP with a media filter which requires periodic resetting or replacement to maintain treatment effectiveness would not be exempted.

Priority Development projects will be exempted from all Treatment Control BMP Inspection and Maintenance Tracking / Certification requirements if they completely meet their Treatment Control requirements by implementing only IMPs that meet these criteria.

Priority Industrial and Commercial

The following requirements will apply to new priority Commercial and Industrial developments subject to the Permit's Commercial and Industrial business inspection requirements.

- Inspection

  Sites will be inspected per the Individual SWMPs current inspection frequency requirements that are based on the potential of the site to contribute to water quality impairments. At these inspections, in addition to the normal inspection requirements, all Treatment Control BMPs at the site will be inspected. In other words, all Treatment Control BMPs at high-priority facilities will be inspected annually; Treatment Control BMPs at medium-priority facilities will inspected biennially and Treatment Control BMPs at low-priority facilities will be inspected once during the term of the MS4 Permit. Improperly maintained BMPs may subject the maintenance entity to license suspension or administrative citations.

- Proof of Maintenance

  Maintenance records demonstrating compliance with the O&M procedures in the WQMP must be available for review at the time of the inspection. Failure to demonstrate that the BMPs have been maintained appropriately may result in license suspension or other enforcement actions.

Other Priority Developments

The following requirements will apply to new priority residential developments and businesses not otherwise subject to the Permit's Commercial and Industrial business inspection requirements.

- Proof of Maintenance and Self Certification

  The maintenance entity identified in the WQMP will be required to submit maintenance records including a signed certification to the Co-Permittee. The frequency of these submittals will be based on the relative maintenance requirements of the Treatment Control BMPs implemented on that site. BMPs will be categorized into groups as having High, Medium or Low maintenance requirements. If a WQMP project utilizes high-maintenance Treatment Control BMPs it will be categorized as a High-priority residential development, etc. High-Priority residential developments will be required to submit records annually, Medium – biennially, and Low – once every five years. Failure to report will result in administrative citations against the maintenance entity.

Permittee Projects and Permittee Maintained Treatment Control BMPs

This requirement will be included as part of the existing Permittee facility inspection program and inspected per the frequency requirements specified in the Riverside County DAMP.

7.3 Private Development Construction Activities

The Permittees have reviewed their ordinances to ensure that they are adequate to control discharges to the MS4 from construction sites to the MEP. For construction projects that will disturb one acre or more, the Permittees require proof of compliance with the General Permit-Construction prior to issuance of building/grading permits (a copy of the Notice of Intent filed with the State Board). Each of the Co-Permittees provides training for their construction inspectors regarding the proper installation and

maintenance of erosion and sediment control BMPs. Education and outreach to the building industry (developers, construction contractors, engineering firms, etc.) regarding managing discharges from construction sites is also incorporated into the "**Only Rain Down the Storm Drain** Pollution Prevention Program," the Permittees' area-wide public education and outreach program.

7.3.1 Private Development Construction Activities Program Element Accomplishments and Programmatic Improvements

- The Permittees annually distribute construction activities posters to construction sites as part of construction outreach program.
- A standardized construction activity reporting spreadsheet was developed for the Annual Reports.
- The construction inspection forms were updated.
- The Co-Permittees developed and maintained inventory databases of construction sites 1-acre or larger for which they have issued a building or grading permit.
- Prioritized inspections to help target construction activities that present the highest risk to water quality.

Highlights
Conducted over **17,000** construction site inspections
Initiated over **3,800** enforcement actions to gain compliance
626 attendees to NPDES Construction training

7.3.2 Proposed Revisions to the Private Development Construction Activities Program Element

The Permittees are not proposing revisions to their existing construction inspection programs at this time. As previously described, the Permittees expect that development activity will be greatly reduced during the term of the new MS4 Permit. Regional Board staff has however raised the issue of abandoned construction sites. Regulation of abandoned construction sites has proven challenging due to bankruptcy of project proponents, non-responsiveness or inability to locate underlying investment banks that actually own the developments, and the practical limitations encountered by the Permittees in calling bonds. As the Regional Board has enforcement capabilities that often surpass those of the Permittees, to ensure that this issue is effectively addressed the Permittees ask for the close cooperation and support of the Regional Board. Nonetheless, the Permittees are committed to continuing the use of their IC/ID programs, code enforcement tools, and other ordinance authorities to control, to the extent allowable under law, abandoned parcels that are not properly stabilized.

7.4 Existing Development – Permittee Facilities and Activities

The Municipal Facilities Strategy which has been consolidated into Section 5 of the Riverside County DAMP provides guidance for identifying potential storm water Pollutant sources and for selecting appropriate BMPs for implementation at identified facilities of concern owned and operated by the Permittees. The Permittees are implementing the provisions of the Municipal Facilities Strategy within their respective jurisdictions via processes described in their Individual SWMPs. To assist the Permittees in implementing this program, training focused on storm water regulatory requirements and BMPs related

to Permittee maintenance facilities and roadway maintenance activities were conducted twice annually during the 2004 MS4 Permit term.

7.4.1 Permittee Facilities and Activities Program Element Accomplishments and Programmatic Improvements

- The District coordinated preparation of GIS-based maps for Permittee MS4 facilities. The MS4 maps are updated annually with new information provided by the Permittees as part of the Annual Reporting process.
- Development of a GIS Browser that allows interested parties to view MS4 Facilities from the District's website.
- Updated Model Facilities Pollution Prevention Plan for Permittee facilities not requiring coverage under the Industrial General Permit.

Highlights
900 attendees to Municipal NPDES training

7.4.2 Proposed Revisions to Permittee Facilities and Activities Program Element

7.4.2.1 FPPP Guidance

The Permittees commit to developing a revised WQMP template for Permittee projects that better facilitates translation of WQMP BMP requirements into Facility Pollution Prevention Plans, where appropriate.

7.4.2.2 Integrated Pest Management

The Permittees commit to including Ecowise's standardized language for contracted pesticide management services in Permittee pesticide management contracts.

7.5 Commercial and Industrial Sources

The Principal Permittee and the County have implemented the CAP through which the County Department of Environmental Health makes use of existing inspection programs to address storm water compliance survey/inspections of restaurants and facilities that must secure a hazardous materials permit for either storing, handling or generating hazardous materials. As the responsible Certified Unified Program Agency in Riverside County, the County Department of Environmental Health is responsible for regularly inspecting all sites within the County that handle hazardous waste. The CAP is implemented in those cities and unincorporated areas that do not maintain an individual industrial/commercial inspection program through other mechanisms such as POTW waste pre-treatment programs or business license inspection programs.

Revisions to the inspection program requirements contained within the 2004 MS4 Permit expanded the scope of the overall commercial/industrial inspection program beyond the ability of the CAP to address. Each Co-Permittee now implements a supplemental inspection program for facilities not covered by the CAP. In addition, the 2004 MS4 Permit required inventories/databases of facilities, prioritization of

industrial and commercial sources relative to the potential to impact water quality, and specified inspection frequencies based upon facility priority.

The revised industrial and commercial sources program continues to have both regional and local jurisdiction components. Although the overall industrial/commercial inspection program has grown beyond the CAP, the CAP still addresses most of the facilities identified in the 2004 MS4 Permit. With its low overhead cost, it remains a cost effective approach to mitigating the impacts of industrial and commercial facilities on the MS4 and Receiving Waters.

7.5.1 Commercial and Industrial Program Element Accomplishments and Programmatic Improvements

- Reviewed and updated several educational brochures for distribution to inspected facilities.
- Developed outreach posters for gas and automotive service stations.
- Developed standardized inspection reporting forms for Annual Reports.
- Updated food service surveys.
- Extended the agreement with the County's Department of Environmental Health executed in 1999 for the area-wide CAP for the inspection of commercial and industrial facilities through June 30, 2009.
- Created Permittee databases for the inspected commercial and industrial facilities.
- Revised the Riverside County DAMP to reflect development of the industrial and commercial facility database that contains the following information: facility name, address, city, zip code, and Standard Industrial Classification (SIC) codes.
- Provided public education information regarding NPDES storm water permits to any new businesses listed in the Press Enterprise.

Highlights
3,974 inspections of Industrial and Commercial facilities
Over **1000** enforcement actions taken
426 attendees to Municipal NPDES training

7.5.2 Proposed Revisions to Commercial and Industrial Sources Program Element

The expected future expansion of the Commercial and Industrial Inspection Program to address Treatment Control BMPs as described in Section 7.2.2.6 would likely result in an expansion of the CAP that is beyond the ability of Environmental Health staff to accommodate and still achieve their own mandated inspection requirements. The Permittees are therefore proposing to amend the Riverside County DAMP and Individual SWMPs to recognize not only the CAP inspection program but also Permittee specific alternative programs that may develop during the term of the next MS4 Permit.

7.6 Residential Sources

The residential program focuses on educating residents about activities that can potentially contribute to beneficial use impairment. The residential program outreach is focused on Pollutants of Concern. The residential program is primarily implemented through the Regional Public Education Program; however, each Permittee typically conducts additional outreach. In those cases where residential Illegal Discharges are identified, appropriate code enforcement actions are also taken.

7.6.1 Accomplishments and Programmatic Improvements

The residential program achieved the following accomplishments during the term of the 2004 MS4 Permit:

- Developed several new outreach brochures and tools to promote changes in knowledge and behavior regarding activities that potentially generated Pollutants of Concern including landscape and gardening brochure, spray bottles with non-toxic pest control or cleaner recipes, septic system management brochure, updated outdoor activities brochure, and pet waste brochure.
- Implemented billboard advertising promoting "**Only Rain Down the Storm Drain**" message
- Purchased a new trailer to transport public education materials. The trailer is wrapped in graphics supporting the "**Only Rain Down the Storm Drain**" message.
- Point of Sale Outreach Programs to customers of hardware stores regarding paint, pesticides and fertilizers.
- Partnership with Valley Greeters to deliver "**Only Rain Down the Storm Drain**" information to new residents in the Santa Margarita Region.
- Promotion and participation in the annual Santa Margarita Watershed Clean Up Day.
- Continued supplemental support of the HHW/ABOP waste collection programs
- Continued update and revision of the public education information page
- Continued implementation and enhancement of school outreach programs conducted by Mission Resource Conservation District
- Reproduction and distribution of the After the Storm poster

7.6.2 Recommended Revisions

Although the Permittees continue to annually assess and modify outreach materials and programs, the Permittees are not recommending any substantive revisions to this program element at this time.

7.7 Public Education and Outreach

Although the bulk of public education and outreach activities are conducted by the District on behalf of the Permittees, the Permittees also conduct outreach activities. These activities include providing informational pamphlets at counters, conducting presentations for local businesses or developers, maintaining a stormwater page or appropriate stormwater links on their individual websites, conducting employee training programs, and attending various public events.

7.7.1 Public Education and Outreach Program Element Accomplishments and Programmatic Improvements

The Public Education and Outreach Program Element had the following accomplishments and improvements over the term of the 2004 Permit (not including those identified in Section 7.6.1):

- Use of a CEQA-style public participation process to develop the Riverside County DAMP, SWMPs, and WQMP
- Duplication and use of the USEPA construction site poster to educate construction site operators
- Distribution of stormwater outreach information to various businesses and construction sites through code enforcement, and building and grading inspectors
- Development and distribution of a automotive shop BMP poster
- Advertisements in the Business Press
- Update of the outdoor activities brochure for mobile operators

7.7.2 Recommended Changes

Although the Permittees continue to annually assess and modify outreach materials and programs, the Permittees are not recommending any substantive revisions to this program element at this time.

7.8 Elimination of Illicit Connections and Illegal Discharges

The Riverside County DAMP describes the discharge limitations and prohibitions applicable to the Permittee's MS4 (Section 4.1), procedures to be implemented when persistent exceedances of Water Quality Standards are identified (Section 4.2), responding to and reporting Illegal Discharges (Section 4.4), enforcement measures for IC/IDs (Section 4.5), measures to control litter (Section 4.6), measures to manage sanitary wastes (Section 4.7), and programs to promote collection and proper disposal of hazardous waste (Section 4.8).

7.8.1 IC/ID Program Element Accomplishments and Programmatic Improvements

- Developed Sanitary Sewer Overflow Procedures in coordination with the sanitary sewer operators in the Santa Ana and Santa Margarita Regions and implemented annual updates to Sanitary Sewer Overflow Procedures to ensure proper contact information for outside agencies.
- Established an electronic tracking system for NPDES complaints received through the toll free "Report Storm Water Pollution" hotline, OES or otherwise reported to the District.
- Enhanced public outreach regarding illegal dumping including brochures for: Outdoor Activities, Fountains & Swimming Pools, and Pet Waste, establishment of a Santa Margarita watershed Clean-Up Day and coordination with the County of Riverside Trash Task Force.

- Initiated a cooperative program with the County Environmental Health Department to promote Environmental Enhancement Projects in lieu of fines for environmental crime cases. This initiative resulted in a billboard advertising campaign and BMP posters addressing appropriate BMPs for gas stations and garages.
- Established IC/ID Monitoring Program

Highlights
1,263 potential IC/ID reports received and responded to
Over **5,500** calls received on stormwater pollution hotlines
94 IC/ID Monitoring events
5 monitoring events where field screening exceeding criteria

7.8.2 Proposed Revisions to IC/ID Program Element

The Permittees re-evaluated their existing IC/ID monitoring programs as part of this ROWD. The Permittees believe that the overall monitoring program is effective. However, the Permittees plan to revise their approach to the implementation of the Illicit Discharge monitoring program to increase monitoring data utility or overall program effectiveness.

7.8.2.1 Revise IC/ID Monitoring Program

The Permittees plan to revise their approach to the implementation of the IC/ID monitoring program. The goals of the recommended revisions are to:

- Relocate the IC/ID monitoring sites at MS4 outfalls.
- Distribute the monitoring sites throughout the Santa Margarita Region to detect Illicit Discharges closer to their source before they become excessively diluted.
- Increase efficiency and consistency in sampling resulting in enhanced data quality.
- Enhance response time to identify IC/IDs.

A model Illicit Discharge monitoring plan that accomplishes these goals is described below; a final plan will be incorporated into updated compliance documents with the new MS4 Permit.

7.8.2.2 Model Illicit Discharge Monitoring Plan

The Municipal Permittees will identify MS4 outfalls that could be used for monitoring sites based on maps of the MS4 facilities. This list of preliminary sites will be then field checked to determine the accessibility of the sites and feasibility for inclusion in the IC/ID monitoring program. Inaccessible sites or sites determined to be otherwise infeasible will be removed from the list.

Each Municipal Permittee except Menifee will then divide the list of the viable sites within their jurisdiction into groups of four. As Menifee only has one MS4, it will only monitor that one site. Each group of four sites will be monitored for a period of one year, twice during the dry season. Once all sites have been monitored for a year, sites will be repeated.

A monitoring team will be formed including one District and one Municipal Permittee staff member. The District staff will perform all monitoring/screening activities. The Municipal Permittee staff will be available to assist and will be responsible for initiating any necessary follow-up actions. This approach will provide consistency in screening and monitoring data collection and will allow the Municipal Permittee with jurisdiction over the tributary land use to be immediately aware of exceedances and initiate appropriate follow-up actions.

REPORT OF WASTE DISCHARGE

Submitted To

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD
(Order No. R9-2004-001)

and

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY – REGION IX
(NPDES No. CAS0108766)

JANUARY 15, 2009

SANTA MARGARITA RIVER REGION

RIVERSIDE COUNTY

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT,
COUNTY OF RIVERSIDE, CITY of MENIFEE, CITY of MURRIETA,
CITY of TEMECULA, and CITY of WILDOMAR

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1.0 Executive Summary

On July 14, 2004 the San Diego Regional Water Quality Control Board (Regional Board) adopted Order No. R9-2004-001, an area-wide National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit (2004 MS4 Permit); this permit expires on July 14, 2009. A Report of Waste Discharge (ROWD) for renewal of the 2004 MS4 Permit must be submitted no later than 180 days in advance of the expiration date (i.e., by January 15, 2009).

This ROWD is an application for renewal of the 2004 MS4 Permit (NPDES No. CAS0108766) for the MS4 owned and operated by the Riverside County Flood Control and Water Conservation District (District), the County of Riverside (County), and the incorporated cities of Riverside County within the upper Santa Margarita River watershed (collectively, the Permittees). The newly incorporated cities of Menifee and Wildomar are included in this application as a Notice of Intent to participate in the updated MS4 Permit.

The content of this document is structured to identify:

- Information about the applicants (Section 3.0),
- Information on the area to be covered under the MS4 Permit (Section 4.0),
- An overall evaluation of the Permittees' existing programs based on water quality trends (Section 5.0),
- Accomplishments and recommendations for the Permittees' regionally implemented programs (Section 6.0) and
- Accomplishments and recommendations for the programs implemented as part of the Individual Stormwater Management Plans (SWMPs) (Section 7.0).

The Riverside County Drainage Area Management Plan (DAMP) documents the model implementation plan from which each of the existing Permittees has developed their respective Individual SWMP to implement the DAMP. In addition a Watershed SWMP has been developed to describe the programs that will be implemented regionally. The Annual Reports submitted to date describe the implementation of these SWMPs and document how they have evolved over time.

This ROWD builds on these Annual Reports by highlighting the major accomplishments of these programs, evaluating the long-term effectiveness of the programs and recommending revisions to the programs to enhance the efficiency and effectiveness of the programs to manage Urban Runoff to protect Receiving Water quality. To promote clarity of intent, terms defined in the 2004 MS4 Permit are capitalized in this ROWD.

Due to the impacts of the current economic recession on Permittee budgets and the effectiveness of existing Urban Runoff management programs, the Permittees' primary focus during the next MS4 Permit term will be on maintaining existing compliance programs in the face of significant cuts in basic municipal programs and services. Riverside County is one of the areas most affected by the mortgage crisis and the Santa Margarita Region is one of the most impacted areas of Riverside County. This crisis is having significant impacts on Permittee resources and projections for a deepening recession promises to exacerbate these impacts. Further, monitoring data indicates that the existing compliance programs have been effective in maintaining water quality. This ROWD focuses on maintaining the fundamental

structure and content of the Riverside County DAMP and the Individual SWMPs. However, the Permittees have identified several enhancements and/or alterations to their programs that can be implemented to continue to increase the effectiveness of these programs, without increasing costs.

1.1 Highlights of Program Implementation

Sections 6 and 7 of this ROWD describe the numerous accomplishments of the Permittees programs during the 2004 MS4 Permit term. Some highlights of the major accomplishments for the Permittees include:

- Development and implementation of a Water Quality Management Plan (WQMP) that addresses post-construction Urban Runoff management for New and Significant Re-Development.
- Development and implementation of the Watershed SWMP and the Permittee's Individual SWMPs.
- Development of handbook to standardize post-construction Best Management Practice (BMP) selection and design in Riverside County. Ongoing updates to the handbook include a plan to incorporate and promote low impact development design concepts.
- Development and enhancements to the design template for developing project-specific WQMPs
- Development of a Frequently Asked Question (FAQ) document to assist developers and plan review staff in understanding WQMP requirements and expectations.
- Development of coordinated BMP manual for firefighting agencies.
- Development, implementation and maintenance of Permittee databases to track construction sites 1-acre or larger. In addition, the Permittees have standardized a construction reporting spreadsheet used for Annual Reports, updated inspection forms, and enhanced the construction outreach program.
- Creation of Permittee databases to track industrial and commercial facilities.
- Creation and maintenance of the Storm Water Protection website that offers educational resources and free brochures targeting residents, businesses, developers, contractors, and elementary school children.
- Partnership with the Mission Resource Conservation District to provide an educational outreach programs targeting both schools and adults.
- Continued participation in the Consolidated Program for Water Quality Monitoring (Consolidated Monitoring Program) that includes collection of water quality samples at MS4 outfalls and Receiving Waters.
- Participation in regional and statewide monitoring efforts such as the Southern California Monitoring Committee (SMC), Southern California Coastal Water Commission and National Water Resources Institute.
- Participation in the California Stormwater Quality Association (CASQA), including the leadership roles of Officer, Director, and Legislative Chair.
- Development of the Upper Santa Margarita Region Integrated Regional Watershed Management Plan

- Continued partnership and coordination with the Bureau of Reclamation on a watershed plan and water quality model for the Santa Margarita watershed
- Continued participation in the Santa Margarita Lagoon nutrient Total Maximum Daily Load (TMDL) development process
- Participated in a stakeholder workgroup process led by Regional Board staff to revise REC 1 Basin Plan requirements for TMDLs

1.2 Summary Evaluation of Program Implementation

The trend analysis presented in Section G-8.2 of the FY 2007/2008 Watershed Annual Report and reviewed in Section 5.3 of this ROWD indicates that after almost 14 years of active Permittee involvement in MS4 Permit related Urban Runoff management programs, the significant increase in population (over 300 percent) and associated rapid urbanization that the area has experienced has not resulted in any statistically significant increases in Pollutant concentrations in Receiving Waters in the Santa Margarita Region. This indicates that the Permittees MS4 programs are and have been protective of Receiving Water quality. Pyrethroid pesticides, the one Pollutant that does appear to be linked to urbanization, has been addressed through a Toxicity Reduction Evaluation process, outreach programs, and Permittee participation to address pyrethroid pesticides and other pesticide sources at the state and federal level.

To enhance the effectiveness of the MS4 Permit compliance programs, the Permittees have agreed to implement compliance program revisions as described in sections 6 and 7 of this ROWD.

1.3 Summary of Major Recommendations for Program Revision

As described in section 3.4 of this ROWD, the Permittees are facing unprecedented fiscal impacts resulting from the national and state economic crises. The impacts on the Permittees are especially severe due to the disproportionate impact of home foreclosures in the Santa Margarita Region coupled with plummeting sales tax revenue. Unfortunately, it is anticipated that the economic conditions will persist for a significant portion of the term of the next MS4 Permit. During this period, the Permittee's MS4 compliance programs will increasingly compete with more fundamental public services for finite and dwindling resources. The challenge and priority for the Permittees will be to maintain the existing compliance programs in the face of cuts in basic programs and services.

Nevertheless, and although the various programs implemented as part of the Watershed SWMP and the Riverside County DAMP have been determined to be effective overall, Sections 6 and 7 of this ROWD identify certain areas wherein the Permittees are proposing changes to improve the effectiveness, efficiency, and transparency of these programs.

The program revisions recommended in this ROWD reconfigure existing programs in a manner that will increase the Permittees' overall ability to protect Urban Runoff quality, while limiting additional costs that would make these revisions cost-prohibitive in light of the current and foreseeable economy. Some of the major recommendations include:

Enhance Program Effectiveness Assessments and Incorporate Action Levels (Section 6.1.2.1)

The Permittees have carefully evaluated their MS4 Permit compliance programs and annual reporting forms. Based on this review the Permittees determined that:

- The overarching goal of the program is to ensure that Urban Runoff does not cause or contribute to non-attainment of Beneficial Uses in the upper Santa Margarita River watershed;
- Permittee compliance programs are process based and, consistent with the Maximum Extent Practical (MEP) approach, are incrementally adjusted as part of the annual reports and comprehensively reevaluated and if necessary, revamped as part of each ROWD;
- Monitoring data should be used to drive long term program assessments and assess goal attainment as part of the ROWD; and
- Process based Municipal Action Levels (MALs) should be used to evaluate annual program implementation to ensure that programs are implemented to the MEP and identify the needs for incremental adjustments.

The Permittees have proposed revised Effectiveness Assessment metrics and MALs for use in Permittee Annual Reports consistent with the aforementioned findings and as described further in Section 6.1.2.1. The MALs are intended to function as triggers, or minimum bars that if breached, would require the Permittees to evaluate the appropriate program elements to determine if adjustments are necessary to attain the MEP standard. The Permittee proposal will not only add transparency to the Permittees compliance programs but assist Permittees in evaluating and adjusting their Permit compliance programs to assist in attaining Water Quality Standards. Further, the proposed effectiveness assessment metrics can be implemented without significantly increasing the Permittees' program costs.

Revisions to the IC/ID Program (Section 7.8.2)

During the 2007/2008 MS4 Program audits conducted by PG Environmental and Regional Board staff, several questions were raised regarding the Permittees existing Illicit Connection/Illegal Discharge(IC/ID) field monitoring programs. The Permittees have evaluated the Regional Board and PG Environmental staff's comments and proposed a revised IC/ID Program based on the following:

- Random selection of MS4 outfalls throughout the Santa Margarita Region;
- Rotating MS4 outfall sites annually to maximize coverage of the MS4;
- Partnering one District staff person with one city/county code enforcement officer for data collection to ensure consistency in sampling procedure/collection and quick response to detected IC/ID events.

Implementation of a Post-Construction Treatment Control BMP Inspection Program (Section 7.2.2.6)

Consistent with Regional Board staff's request to consider development of a post-construction Treatment Control BMP inspection program, the Permittees have developed a proposal that they plan to implement when economic conditions allow. This proposal would enhance the existing business and Permittee facility inspection programs described in the Riverside County DAMP by incorporating inspections and maintenance verification of Treatment Control BMPs. Treatment Control BMPs constructed as part of residential developments, or other developments not captured by the Permittees' existing business inspections would be addressed through an annual self-certification program.

Revisions to the Dry Weather Monitoring Program (Section 6.4.4.1)

The Permittees have committed to participating in the Regional Watershed Monitoring Program developed in conjunction with the Southern California Coastal Water Research Project (SCCWRP). Six annual monitoring events were scheduled for the upper Santa Margarita River watershed. Consistent with the agreement reached by SCCWRP, Permittee, and Regional Board staff, three of these sites would be collected by the Permittees and three through the Surface Water Ambient Monitoring Program (SWAMP). The costs for implementing the three sites to be implemented by the Permittees would be offset by reducing the Permittees existing dry weather triad monitoring events (three stations) from twice a year to annually.

Development of a LID Manual (Section 7.2.2.1)

The Permittees have committed to develop a Low Impact Development (LID) Implementation Manual based on the LID Manual currently being developed by the SMC and CASQA.

Hydromodification Management Plan (Section 7.2.2.2)

The Permittees have committed to develop a revised hydromodification management plan based on the findings of the final SCCWRP Hydromodification Management report currently under development.

Participate in a Watershed Based TMDL for the Santa Margarita Lagoon (Section 6.4.4.7)

The Permittees understand that, due to economic conditions, State funding for the Santa Margarita Lagoon watershed-based TMDL has been withdrawn. As described in Section 3.4, economic conditions are also impacting the Permittees' funding sources and the Permittees are struggling to maintain sufficient resources to fund their existing compliance programs. Therefore, the Permittees cannot currently support committing additional funds toward a third party TMDL effort. The Permittees are, however, agreeable to discussing with the Regional Board a elimination or reduction of various required compliance activities that are not measurably enhancing the their ability to attain Water Quality Standards, which in turn could allow the Permittees to redirect some of their existing resources into the third party TMDL effort. Some program elements that could be considered for discussion are described in Section 6.4.4.7.

Pyrethroid Pesticide BMP Implementation

The Permittees have committed to implementing several BMPs to address possible urban sources of pyrethroid pesticides. In addition the Permittees have committed to working through CASQA to facilitate regulatory change in pyrethroid pesticide use to curtail potential causes of receiving water impairment.

Adjustments to the Monitoring Program

The Permittees have proposed additional revisions to the monitoring program to streamline implementation and increase its utility.

2.0 Introduction

The Regional Board adopted Order No. R9-2004-001 (NPDES No. CAS0108766), an area-wide NPDES MS4 permit (2004 MS4 Permit) on July 14, 2004. This ROWD is a required component for renewal of the 2004 MS4 Permit. The 2004 MS4 Permit authorizes discharges of Urban Runoff from the MS4 owned and operated by the Permittees.

Capitalized terms used in this ROWD are defined in the glossary of the Riverside County DAMP. The Riverside County DAMP serves as the model compliance document used by the Permittees to develop the Watershed and Individual SWMPs. To save costs and increase the effectiveness of the MS4 Permit compliance programs, the Permittees will maintain the Riverside County DAMP as the primary document that describes Permittee compliance programs. The Permittees individual and regional compliance programs are then described in more detail in the Individual and Watershed SWMPs.

This ROWD has been written and formatted to address the requirements outlined in United States Environmental Protection Agency (USEPA) *Interpretative Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems* contained in the Federal Register, Volume 61, page 41698 (61 FR 41698), and to include commitments made in the various compliance documents, annual reports and in meetings with the Regional Board.

Additionally, as discussed in the meeting with Regional Board staff on September 9, 2008 and as supported by the above mentioned USEPA guidance, this ROWD relies on the fourth year Annual Reports to document the programs implemented by the Permittees. The fourth year Annual Report also includes a comprehensive evaluation of Permittee monitoring data to date and includes preliminary recommendations for Permittee compliance programs based on that data. As part of the ROWD process, the Permittees have reassessed their existing programs that are described in the Annual Reports, the monitoring conclusions and program recommendations contained in the fourth year Annual Reports, and in this ROWD, are making additional recommendations for revisions to improve the efficiency and effectiveness of these programs at improving and protecting the quality of our Receiving Waters.

The following sections of the ROWD are summarized as follows:

Section 3.0 - Information about the Permittees, their legal authority to implement the existing and proposed programs, the Permit Area, and the Permittee's funding sources and economic outlook relative to continued funding of the MS4 Permit compliance programs.

Section 4.0 – Information about the upper Santa Margarita River watershed, including physiography and geology, hydrology, climate, population, land use, surface water bodies and their Beneficial Uses and Impairments, and the MS4. This information provides context for the MS4 Permit compliance program in the Santa Margarita Region.

Section 5.0 – An overall evaluation of the Permittees existing programs based on water quality data collected to date and proposed compliance program modifications.

Section 6.0 – Evaluation of regional compliance programs, including a summary of accomplishments and proposed program revisions.

Section 7.0 – Evaluation of compliance programs individually implemented by the Permittees, including a summary of accomplishments and proposed program revisions.

3.0 Applicant Information

3.1 Permittee Contact Information

Table 1 provides the contact information for each of the Permittees in the Santa Margarita Region.

Table 1. Permittee Contact Information

	Primary Contact	Staff Contact	Address
District	Warren D. Williams General Manager, Chief Engineer 951.955.1275	Jason Uhley Engineering Project Manager 951.955.1273 juhley@rcflood.org	1995 Market Street Riverside, CA 92501
City of Menifee[1]	George Wentz City Manager 951.672.6777	Addison Smith Building Official 951.672.6777	29683 New Hub Drive, Suite C Menifee, CA 92586
City of Murrieta	Patrick A. Thomas Director of Public Works 951.304.2489	Bill Woolsey 951.461.6073 WWoolsey@murrieta.org	1 Town Center 24601 Jefferson Avenue Murrieta, CA 92562
City of Temecula	Daniel A. York City Engineer 951.694.6411	Aldo Licitra 951.694.6411 aldo.licitra@cityoftemecula.org	43200 Business Park Drive Temecula, CA 92589
City of Wildomar[1]	John Danielson City Manager 951.677.7751	Michael Kashiwagi, P.E. Director of Municipal Services (916) 683-3340 X 15 (Office) (916) 206-2238 (Cell) Local Cell 909.200.0523	23873 Clinton Keith Road, Suite 111 Wildomar, CA 92595
County of Riverside	Gary Christmas Chief Deputy County Executive Officer	Mike Shetler Senior Management Analyst 951.955.1110 mshetler@rceo.org	4080 Lemon Street, Suite 400 Riverside, CA 92501

3.2 Statement of Legal Authority

The Co-Permittees have adopted ordinances regarding the management of Urban Runoff. The ordinances provide the Permittees with the legal authority to implement the requirements of the 2004 MS4 Permit and 40 CFR Section 122.26(d)(2)(i)(A-F). The Permittees also provided certification of adequate legal authority to comply with the 2004 MS4 Permit and to implement the Riverside County DAMP to the

[1] As the Cities of Menifee and Wildomar are recently incorporated, the County of Riverside is currently handling their stormwater and MS4 permitting issues. Once these cities are fully established and staffed, updated contact information will be provided to the Board. The cities will assume responsibility for their programs on October 1, 2009.

Regional Board. However, it is noted that the newly incorporated cities of Menifee and Wildomar will submit their certifications following adoption of the updated MS4 Permit.

However, there are limitations to the authority the Permittees have for enforcement actions. The Permittees do not have legal authority over discharges into their respective MS4 facilities that originate from agricultural activities, state and federal facilities, utilities and special districts, Native American tribal lands, wastewater management agencies and other point and non-point source discharges otherwise permitted by, or under the jurisdiction of, the Regional Board or USEPA. Examples of non-point sources of Pollutants not under the control of the Permittees include materials from operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography.

Also, the Permittees do not have the authority to enforce the provisions of California's General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit-Industrial) or California's General Permit for Storm Water Discharges Associated with Construction Activity (General Permit-Construction). The State Water Resources Control Board (State Board) issues these NPDES permits, and neither the State Board nor the Regional Board has the authority under the Clean Water Act to delegate responsibility for administering these NPDES permit programs to the Permittees. However, the Permittees' local storm water and erosion control ordinances may address items similar to those identified in these statewide NPDES permits.

3.3 Permit Area

The Permit Area is defined as the urbanized area serviced by the Permittee's MS4 facilities. The Permit Area is located within the area delineated by the County boundary line on the south and the limits of the jurisdiction of the San Diego Regional Board on the north, east, and west. It is important to recognize that the Clean Water Act exempts agricultural activities from regulation under NPDES and the Permittees do not have legal jurisdiction over storm water discharges into their MS4 facilities from:

- California and federal facilities,
- Areas under the jurisdiction of San Diego County,
- Utilities and special districts, and
- Native American tribal lands.

These areas are not included in the Permit Area. In addition, other point and non-point source discharges otherwise permitted by or under the jurisdiction of the Regional Board or USEPA may affect water quality in the Murrieta and Temecula Creek watersheds.

The area of Riverside County under the jurisdiction of the Regional Board is less than 8 percent of the 7,300 square miles within Riverside County. Of the 27 municipalities within the whole of Riverside County, only five include areas under the jurisdiction of the Regional Board.

3.4 Funding Sources and Economic Projections

3.4.1 Funding Sources

The costs incurred by the Permittees in implementing the SWMPs fall into two broad categories:

- **Shared Costs**. These are costs that fund activities performed mostly by the District under the Implementation Agreements. These activities include coordinating the overall storm water program, coordinating other interagency cooperative efforts such as the Compliance Assistance Program (CAP), participating in CASQA activities, representing Permittees at meetings of the Regional Board or State Board and other public forums; preparing and submitting compliance reports and other reports required under the MS4 Permit, conducting Urban Runoff monitoring and public education outreach programs, responding to Water Code Section 13267 requests, providing other program documentation, and coordinating consultant studies, Permittee meetings, and training seminars.
- **Individual Permittee Costs for Individual SWMP Implementation**. These are costs incurred by each Permittee for implementing within its jurisdiction the BMPs (drainage facility inspections for illicit connections, drainage facility maintenance, drain inlet/catch basin stenciling, emergency spill response, street sweeping, litter control, public education, construction activity inspection, development of implementation plans, etc.) comprising the Individual SWMPs.

Historically, the Permittees have employed several funding methods to finance their MS4 Permit compliance activities. Unfortunately, the mortgage crisis, collapse of the housing market, and the economic recession has resulted in the cessation of virtually all development activity and has significantly reduced property and sales tax revenue. Property tax revenues have been reduced by the high level of foreclosure activity, reduced property values and a significant decline in assessed valuations. Property tax revenues have been further reduced by homeowner requests for reassessments to reflect the reduced property values. The impact of these economic conditions on the Permittees in the Santa Margarita Region has been particularly severe. As a result, the aggregate funding available to the Permittees has been severely reduced, and it is anticipated that this condition will continue well into and possibly throughout the next Permit term. The funding methods historically used and the effects of the economic situation on the availability of funds through these sources are summarized as follows:

- **Santa Margarita Watershed Benefit Assessment Area**. In 1991, the District established the Santa Margarita Watershed Benefit Assessment Area to fund its MS4 Permit compliance activities. Currently, the Benefit Assessment revenues fund the District's share of the area-wide MS4 Permit program activities and the District's individual compliance activities as a Permittee. Under the Benefit Assessment each parcel is taxed based on the impervious area of each parcel at a set rate established by District Ordinance 14. This rate has not been increased since 1991 due to Proposition 218. In 2007/08 the Santa Margarita Benefit Assessment generated approximately $410,000 dollars in revenue.

  Outlook: The District expects at best to maintain, if not see temporary reductions in Benefit Assessment revenues due to the significant number of homes that are not paying property tax due to foreclosure. Pursuant to Article 13.D of the California Constitution, an increase in the established Benefit Assessment rate to compensate for these reductions requires approval of 2/3

of the voters or 50 percent of the property owners and is highly unlikely given the current economic climate. Revenues will not increase until the development industry recovers.

- **General Fund /Other Revenues**. The County and the cities utilize general fund revenue to finance most of their MS4 Permit compliance activities. General fund revenue is generated by property tax, sales tax, and auto license taxes.

  Outlook: The Permittees expect a continued reduction in th**e funds** available through General Fund / Other Revenues through at least FY 2009 /2010. Although optimistic that conditions will begin to stabilize toward the end of 2009, the Permittees cannot speculate as to when revenues will recover to previous levels.

- **Fees**. Several Permittees charge fees for services such as inspections, plan check, and other recoverable costs related to compliance with the 2004 MS4 Permit. These fees cover both the direct and indirect costs associated with conducting these inspections/reviews including associated compliance tracking and reporting.

  Outlook: It is notable that, with the virtual collapse of the development industry in the Santa Margarita Region, the fees received by the Permittees have been significantly reduced. With this reduced level of fee-based income, maintenance of the existing inspection and plan review programs will place an increased burden on overall funding of the compliance programs. The Permittees do not expect revenues from fees to recover until the development industry recovers. Even with recovery of the development industry, it is anticipated that over the long-term, revenues from fees will be reduced for the City of Temecula and the County due to the reduced area remaining for development within their jurisdictions.

- **Grants.** The Permittees have actively pursued and, as available, used Grants to fund compliance programs.

  Outlook: In December the state's budget crisis resulted in a directive to state agencies from the Department of Finance to halt projects that rely on bond funds, including those funded by Prop 40, Prop 50, or Prop 84. The State of California is the primary source of grant funding for water quality projects. Future availability of funds to resume grant-funded projects is uncertain.

It is clear that the current economic climate and that of the foreseeable future is creating a significant burden upon the Permittees that will make the continuance of all existing MS4 Permit compliance programs increasingly difficult. New funding sources or alternative combinations of funding sources will likely be required to ensure continued funding of even the current MS4 Permit compliance programs.

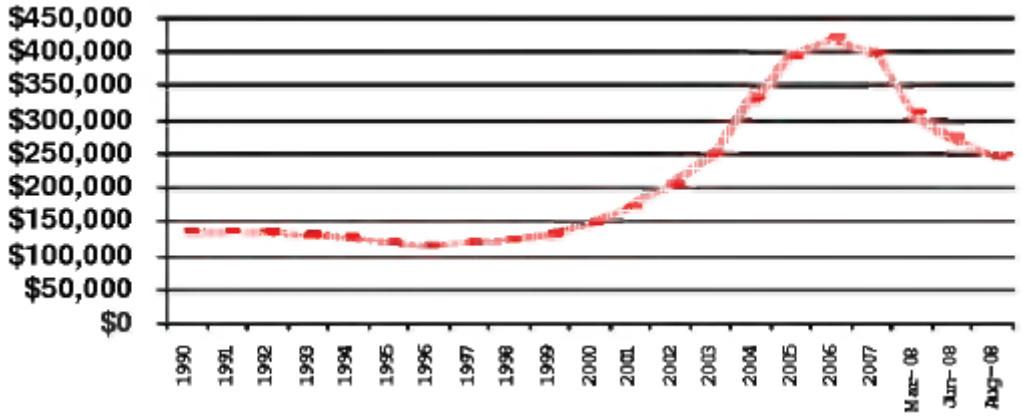
3.4.2 Economic Projections

According to Chicago Title, Southwest Riverside County has experienced a very significant increase in supply of single-family residential units on the market. As a result, housing price indicators are very negative. In the majority of the Southwest Riverside submarket, the pending price is less than the closing price indicating general price weakness. The October, 2008 count of bank owned (REO) properties for Riverside County as a whole was 12,078. The number of home in foreclosure was 23,480. The presence of high levels of REO properties will continue to negatively affect home prices. In addition, the level of foreclosures is increasing.

With regard to other sectors of the economy, Riverside County has taken a serious turn for the worst in 2008, with projections indicating that the severe downturn will continue through 2009 at the very least.

The economic difficulties being faced in the Southwest Riverside submarket is the result of the dramatic downturn in the housing market in this area, the national financial turmoil, the worldwide credit crisis, and the increasing consumer debt crisis. According to Beacon Economics, a respected economics consulting firm in Los Angeles, Inland Southern California is clearly at the epicenter of this economic turmoil, with extremely high rates of unemployment at present. Unemployment rates in Inland Southern California are expected to reach 12.4 percent before this deep recession is over. Housing prices are expected to continue their precipitous decline from their peak levels in the two Inland Southern California counties through at least 2011. According to Dataquick, median home prices in Riverside County peaked at $415,000 in January 2007. At the end of this cycle, the median home price in Riverside County is expected to be $198,000. Figure 1 depicts the median housing price in Riverside County over the period 1990 to August 2008.

Figure 1. Riverside County Median Housing Price (1990 – August 2008)

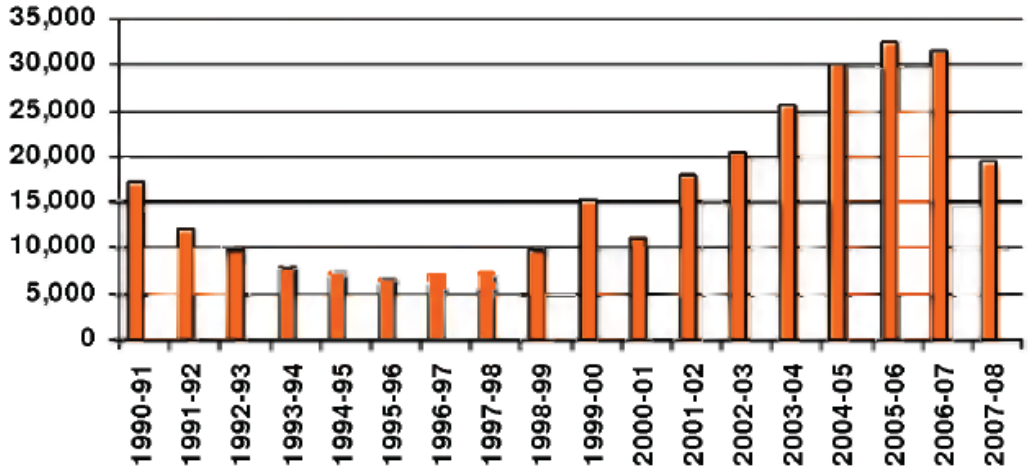


Source: Riverside County Center for Demographic Research. 2008. Riverside County Progress Report, pg 14.

Local Government sales tax revenues remained fairly stagnant through 2006 and began to decline in early 2007, according to Beacon. By the second quarter of 2008, taxable sales in Riverside County declined by 7.7 percent. The decline is expected to continue with taxable sales possibly bottoming out by 2010. Recovery of these reduced revenue streams will likely not occur within the next permit term.

As a direct outcome of the current economy and the economic outlook into the next MS4 Permit term, the number of New Developments proposals has plummeted and any significant rebound is not forecast. New and redevelopment projects will likely remain minimal. As shown in Figure 2, the number of housing units being added each year has dropped below the levels seen at any point in time during the 2004 MS4 Permit. These numbers will likely continue to decrease for a significant portion of the new MS4 Permit term.

Figure 2. Riverside County Housing Units Added (1990 – 2008)



Source: Riverside County Center for Demographic Research. 2008. Riverside County Progress Report, pg 12.

These economic issues and projections directly affect and limit both:

1. The need for including enhanced new and re-development requirements in the new MS4 Permit, and
2. The Permittees ability to fund, and even seek new funding sources for additional MS4 Permit requirements for new and re-development projects.

Therefore, as described in Section 7.2, the Permittees are not recommending and cannot financially support any significant increases to their Development Planning activities. Permittee specific projections are as follows:

3.4.2.1 County of Riverside

The County is operating with a structural deficit of $12 million and plans a 25 percent budget reduction from FY 2008/2009 through FY 2011/2012. The County's current budget of $4.7 billion represents a 5 percent reduction from the previous year and next year's budget is expected to be cut by 10 percent. These cuts are directly associated with the overall decline in property values and the high number of foreclosures. There are concerns about having to use discretionary funds to meet State mental health and social service mandates. In addition, the County is dependent on funds from federal and state sources. If during this time of economic crisis federal and state funding sources are reduced or eliminated, any unfunded State and Federal programs will be terminated. Only core County programs will continue.

The primary source of general fund revenue is from property taxes and sales tax. With the unprecedented number of foreclosures, reduced property values, and declining sales tax revenue, general fund revenue is in a downward spiral. Another source of funding is through the Solid Waste Tipping Fees paid at the County landfills. Volume is down 15 percent since 2006 with anticipated downward trend to 40 percent reduction in solid waste through 2014. Programs that are partially funded through tipping fee allotments will be impacted. Due to the declining economy the recycling market has collapsed. Virtually no recyclable materials are being shipped for reprocessing. This loss of revenue and increased disposal costs is further impacting the general fund.

Cuts of 25 percent for all Net County Cost general fund programs will translate into reduction of County services and elimination of unfunded state and federal programs. Only core value programs will be provided (including public safety and fee programs)

The County has instituted a hiring freeze and required each department to create a report outlining the projected effects of the budget cuts. The County currently employs over 20,000 people, and layoffs are expected to result from the findings of these departmental reports. It is anticipated that this will impact program delivery for stormwater related activities. No County department will be able to sustain current staffing levels as they try to meet the 25 percent budget reduction strategy.[2] [3]

3.4.2.2 City of Menifee

The newly incorporated City of Menifee FY 2008/2009 initial budget was estimated from their comprehensive fiscal analysis that was submitted to the Local Agency Formation Commission during the incorporation process. Because of the economic uncertainty, and the fact that the City is only now beginning to staff positions, it is unknown what the immediate impact of the fiscal crisis will be. The County is responsible for assisting the City in meeting its MS4 Permit compliance requirements during the first year of incorporation which expires October 1, 2009. Currently, the level of property tax revenue that will be available to the City is uncertain. Funding for MS4 Permit compliance requirements was not explicitly budgeted. A financial hardship currently exists because of the costs associated with incorporation.

3.4.2.3 City of Murrieta

The City of Murrieta's FY 2008/2009 budget did not increase compared to FY 2007/2008. Adjustments were made to reflect less revenue and to absorb any operating costs. However, budget cuts are anticipated for FY 2009/2010 because the immediate economic outlook is not good. There have been approximately 2,000 home foreclosures within the City. Sales tax revenue is estimated to drop 12.5 percent, property tax revenue will drop, and the State took approximately $525,000 out of redevelopment funds. Murrieta did not receive any vehicle licensing fees from the State and it appears likely that the State will take more revenue from the Cities to solve its budget problems. New NPDES requirements that increase compliance costs will create a financial hardship for the City.

3.4.2.4 City of Temecula

Various ongoing tax and investment revenues adopted in the City of Temecula's FY 2008-09 general fund revenues are projected to decrease from FY 2007-08. Sales and use tax revenues are expected to decrease in FY 2008-09 compared to FY 2007-08. This decrease is primarily the result of the decline in general consumer goods, electronic retail, and auto sales. Property tax revenue is also expected to decrease due to decreases in supplemental tax receipts attributed to the impact of the housing crisis. Investment interest revenue is also anticipated to decrease due to a decline in interest rates.

As a result of the 2008/2009 State budget, Temecula's redevelopment agency will have to shift existing funds from property taxes to the State's Education Revenue Augmentation Fund coffer for schools and

[2] "The Realities of Recession in California: A Statewide Report by U.S. Senator Barbara Boxer, December, 2008, p. 18.

[3] Riverside County Executive Office, January, 2008.

colleges. As such, the amount due from the Temecula Redevelopment Agency is expected to be $898,685. As the State of California continues to address its budget deficit, the City of Temecula faces the possibility of additional revenue shifts to State coffers, further losing future revenue streams and threatening existing service levels.

In addition, a Press-Enterprise article dated December 9, 2008, reported that "Between 25 and 30 part-time Temecula employees will be without work in the new year as City officials deal with a lack of revenue and less work to go around." Furthermore, "the city is not immune to the economic slowdown, which has forced its neighbors to lay off workers and slash spending to counter drops in sales tax receipts and building permit fees. In May, the City's Finance Director reported that revenues were down $3 million compared to two years ago."

With these current and projected reductions in revenue and staff, additional requirements in the MS4 Permit or upcoming TMDL-related requirements, without any corresponding cost-equivalent offsets, will exceed the City's ability to effectively implement these new requirements and will begin to compromise the City's existing efforts to manage the existing MS4 Permit requirements.

3.4.2.5 City of Wildomar

The newly incorporated City of Wildomar FY 2008/2009 initial budget was estimated from their comprehensive fiscal analysis that was submitted to the Local Agency Formation Commission during the incorporation process. Because of the economic uncertainty, and the fact that the City is only now beginning to staff positions, it is unknown what the immediate impact of the fiscal crisis will be. The County is responsible for assisting the City in meeting its MS4 Permit compliance requirements the first year of incorporation that expires July 1, 2009. Currently, the level of property tax revenue that will be available to the City is uncertain. Funding for MS4 Permit compliance requirements was not explicitly budgeted. A financial hardship currently exists because of the costs associated with incorporation.

4.0 Overview of the Upper Santa Margarita River Watershed

4.1 Physiography and Geology

The upper Santa Margarita River watershed is defined as that portion of the Santa Margarita River watershed above the confluence of Murrieta and Temecula Creeks and includes the City of Temecula and portions of the Cities of Menifee, Murrieta, Wildomar, unincorporated County areas, portions of the Cleveland and San Bernardino National Forests, the Cahuilla, Ramona, Pauma, and Pechanga Indian Reservations and properties under the jurisdiction of Caltrans and a variety of special districts. The watershed is bounded by several mountain ranges, including the Santa Ana and Santa Margarita mountains to the North and the Palomar Mountains to the South. The upper Santa Margarita watershed includes areas in Riverside and San Diego Counties and encompasses approximately 588 square miles.

The upper Santa Margarita watershed includes two major sub-basins, drained by Temecula and Murrieta Creeks. Temecula Creek has a drainage area of 366 square miles, with steep rugged topography in the Palomar and Thomas Mountain areas and rolling hills below. The upper 316 square miles of this basin is controlled by Vail Lake (completed in 1949). Murrieta Creek has a drainage area of 222 square miles, with over 50 square miles controlled by Skinner Reservoir (completed in 1974). Although the watershed area is somewhat smaller and less rugged than the Temecula Basin, flood flows have the potential to create greater damage as they flow through the Cities of Temecula and Murrieta.

Temecula and Murrieta Creeks join along the Elsinore fault zone at the head of Temecula Canyon to form the Santa Margarita River. The Temecula Canyon is approximately five miles long, and is a steep, narrow, and rocky canyon. The San Diego-Riverside county line crosses through the Temecula Canyon. From here, the river traverses 27 miles to the Pacific Ocean.[4]

4.1.1 Watershed Characteristics

Over 50 percent of the Santa Margarita watershed has been controlled by the construction of Vail Dam in 1949 and Skinner Reservoir in 1974, which created a significant storage capacity in the upper watershed.[5] [6] 52 percent of the upper Santa Margarita River watershed is controlled by the dams. Due to this storage capacity, peak flow rates during major flow events for both existing and future land use conditions will be lower than under natural conditions.[7] [8]

[4] Santa Margarita Watershed Study: Hydrologic and Watershed Processes, Phillips, Williams and Associates, Ltd., October 26, 1998, page 1.

[5] Santa Margarita Watershed Study: Hydrologic and Watershed Processes, Phillips, Williams and Associates, Ltd., October 26, 1998, page 14.

[6] Philip Williams & Associates, Santa Margarita Watershed Study: Hydrology and Watershed Processes, October 26, 1998, p. 14.

[7] Philip Williams & Associates, Santa Margarita Watershed Study: Hydrology and Watershed Processes, October 26, 1998, p. 20.

[8] Santa Margarita Watershed Study: Hydrologic and Watershed Processes, Phillips, Williams and Associates, Ltd., October 26, 1998, page 20.

4.1.2 Stream Flow Characteristics

Murrieta and Temecula Creeks are perennial interrupted streams, i.e., they include reaches in which the flow is continuous and others where flow is ephemeral. The areas of perennial flow are located in mountain area tributaries outside of the urbanized areas serviced by the MS4s. The perennial flows disappear by seepage into the sands and gravels and resurface upstream of the confluence of Murrieta and Temecula Creeks. The creeks in the urbanized areas of the watershed, located primarily in the valley, are ephemeral and flows are only observed during and immediately after significant storm events. During major storms, after initial wetting, periods of intense rainfall result in rapid increases in stream flow in steep foothill and mountain areas.[9] "Runoff in streams in the watershed is derived primarily from rainfall, and as a result, stream flows exhibit monthly and seasonal variations similar to those shown by the precipitation records. Absence of snow pack in the tributary watershed results in a rapid decrease in flow of streams at the conclusion of the winter precipitation season. Following severe storms, discharge in the larger streams often increases in a few hours time from practically no flow to a rate of thousands of cubic feet per second. Stream flows vary greatly from month to month and from season to season."[10]

Rising groundwater is currently observed in Murrieta Creek below its confluence with the Santa Gertrudis Channel. This is consistent with the observations with the rising groundwater conditions observed by the State of California in 1956.[11] Rising groundwater is also observed in Temecula Creek approximately one quarter mile upstream of the Interstate 15 bridge. In 1956, the State of California observed more extensive rising groundwater conditions occurring as far upstream as the Highway 79 bridge. Based on the virtual absence of non-storm water flows and the rising groundwater conditions in lower Murrieta and Temecula Creeks observed prior to development of the watershed, there is no evidence that the rising groundwater is due to Urban Runoff nor that Urban Runoff has affected the quality of rising groundwater. However, use and disposal of reclaimed water and agricultural and landscape irrigation in the watershed may affect groundwater quality. Until October 2002, the Rancho California Water District augmented the flow of the Santa Margarita River with reclaimed water at a point about five miles upstream from the Temecula gauging station. Since that time, the Rancho California Water District has diverted reclaimed water to the Santa Ana watershed and instead discharged imported water at a location downstream of the confluence of Murrieta and Temecula Creeks in order to meet water supply obligations to Camp Pendleton.

For the average annual event, it is estimated that approximately 89 percent of the volume of runoff in the Santa Margarita Region is due to non-urban land uses not regulated under the federal storm water program. For the 100-year 24-hour event, 93 percent of the volume of runoff will be due to non-urban land uses. These estimates are based on the assumption that precipitation is constant across the watershed. However, precipitation (and resultant runoff volumes) in the non-urbanized upland areas is as much as four times greater than that from the urbanized valley areas.[12]

[9] Riverside Flood Control and Water Conservation District, "Hydrologic Data for 1975-76 Season," March 1982, p. 49.

[10] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956, p. 48.

[11] State of California Department of Public Works Division of Water Resources, Bulletin No. 57, "Santa Margarita River Investigation," Volume I, June 1956, p. 48.

[12] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956, p. 11

4.2 Climate

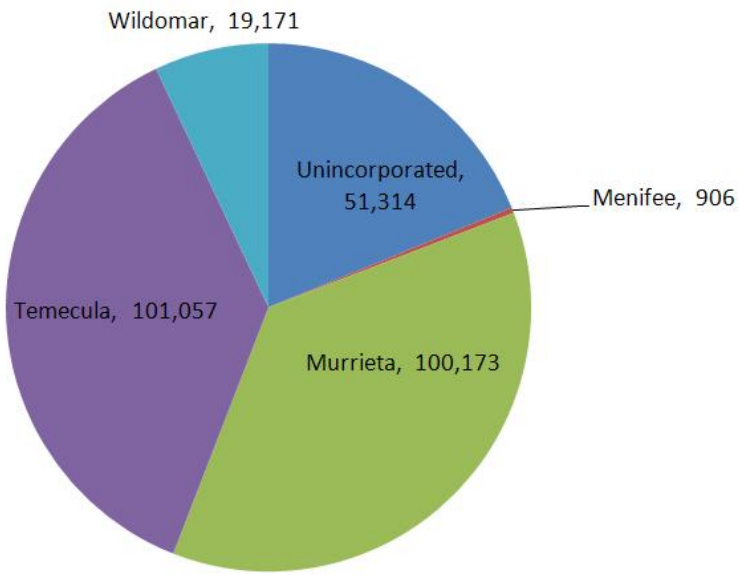
"The climate of the Santa Margarita River watershed is typically Mediterranean, being characterized by warm dry summers and cool rainy winters. About 75 percent of the precipitation occurs during the four-month period from December through March. Mean annual depth of precipitation ranges from less than 10 inches near Vail Reservoir to over 40 inches west of Palomar Observatory, varying with elevation and topographic influences."[13] Precipitation increases with increases in elevation to the summit of the Coastal range. Shading effects of the Coastal range lead to a marked decrease of precipitation throughout the lower portions of the Inland area. Precipitation increases again farther away from the Coastal range in the northeastern area of the Inland area.[14] The significant and varied orographic features also make rainfall prediction particularly challenging in the urbanized portion of the watershed.

4.3 Population and Land Use

4.3.1 Population

The California Department of Finance estimates that as of January 1, 2008, the total population of Riverside County was about 2,088,322. Of the 2.1 million people, approximately 272,621 persons (or 13 percent) reside within the portion of Riverside County under the jurisdiction of the San Diego Regional Board. As shown in Figure 3, approximately 51,314 persons[15] reside in the unincorporated area while approximately 221,307 persons reside within the cities of Menifee, Murrieta, Temecula and Wildomar.

Figure 3. Santa Margarita Region Population by Permittee (2008)



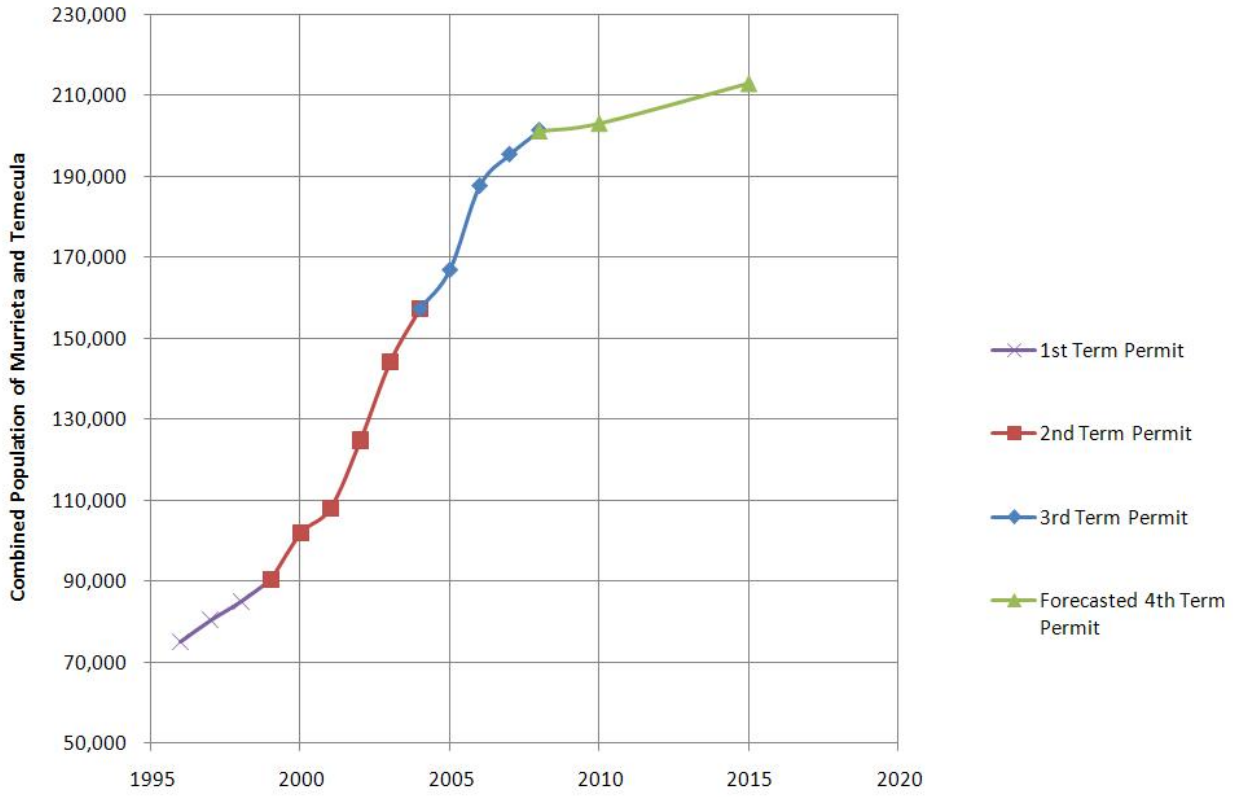
[13] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956, p. 11.

[14] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956, p. 38.

[15] Population estimate for the portion of unincorporated Riverside County within the Santa Margarita River watershed developed by the County TLMA GIS Demographics Unit based on the 2000 Census.

Although the second term and 2004 MS4 Permits covered a period of time that saw a significant amount of growth, due to the current and foreseeable economic conditions described in Section 3.4.2 of this report and decreasing areas available for development, growth during the next MS4 Permit term will be quite limited. In fact, the projected growth rate through 2015 will be significantly less than has been seen since the early 1990s. Figure 4 shows the combined populations of the Cities of Murrieta and Temecula since 1997 and projected through 2015. Similar trends are expected for the unincorporated areas and the portions of the cities of Wildomar and Menifee within the watershed.

Figure 4. Cities of Murrieta and Temecula Combined Population (1997 – 2015)



Source: Riverside County Center for Demographic Research. 2008. Riverside County Progress Report, pgs 92 & 124.

Figure 4 clearly demonstrates the dramatic reduction in growth that is expected for the term of the next MS4 Permit when compared to previous permit terms.[16] Establishing trend lines for the population in these cities further demonstrates that the growth rate (population added per year) will be lower than the previous growth rate by approximately 86 percent.

[16] 2008 Riverside County Progress Report

Table 2 shows population projections for the all of the Permittees into the year 2015.

Table 2. Population of Santa Margarita Region Co-Permittees

Co-Permittee	Year			Change (2009 to 2015)
	Estimate 2008 (a)	Estimate 2009 (b)	Projected 2015 (b)	
City of Menifee	906[c]	927[c]	5,232[c]	464%
City of Murrieta	100,173	102,277	109,715	7.3%
City of Temecula	101,057	101,356[d]	103,150	1.8%
City of Wildomar	19,171[c]	19,589[c]	20,127[c]	2.7%
Unincorporated County of Riverside	51,314[c]	52,436[c]	53,793[c]	2.6%
Total	272,621	276,585	292,017	5.6%

Notes:

(a) Unless otherwise noted, populations were obtained from the State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, May 2008.

(b) Unless otherwise noted, projected populations were obtained from Riverside County Center for Demographic Research. Riverside County Progress Report, 2008

(c) Data provided by County of Riverside, Executive Office.

(d) Data provided by City of Temecula.

Since the District is not a general purpose government, it is not included in this listing. Although the current population of the City of Menifee in the Permit Area is small, it is anticipated that the population will increase as it annexes unincorporated areas. Similarly, it is anticipated that the cities of Murrieta and Temecula will gain population as they annex unincorporated areas. It is not anticipated that Wildomar will see significant population increases as it is bounded on all sides by other cities and lands reserved under the MSHCP.

4.3.2 Land Use

Land uses in Riverside County within the Santa Margarita Region include open space, residential, commercial, light industrial, heavy industrial, and agriculture. The agricultural land uses include row crops, nurseries, citrus groves and vineyards, dairies, ranches, poultry and hog farms, and other agricultural related uses with one single-family residence allowed per 10 acres (County of Riverside General Plan, Land Use Element 2003). The conversion of agricultural lands and open space to other "developed" land uses has been ongoing and will continue, although at a much lower rate than previously experienced. Land uses in the Santa Margarita Region are shown in Table 3. These land uses are based on the County of Riverside Assessor Parcel Data, current as of February 2006. It should be noted that the land uses below represent ***zoned*** land uses rather than ***actual*** land uses. This overstates the actual area of urban land use in the Santa Margarita Region. Also, changes in zoning designations can cause odd fluctuations in year-to-year date.

A map of the zoned land uses is provided in Appendix A.

In 1956, only 0.3 percent of the Santa Margarita River watershed (less than two square miles) was urbanized.[17] Although there has been a significant rate of growth in population relative to the State and

[17] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956.

neighboring counties, half a century later, approximately 88 percent of the Santa Margarita River watershed remains as non-urban land uses (rural residential, agriculture, preserves and open space, state lands, federal lands, and tribal lands). Further, almost one-third of the upper Santa Margarita River watershed consists of federal, state, and tribal lands that are not under the jurisdiction of the Permittees' MS4 programs. It is projected that the population of Riverside County will increase approximately 5.6 percent by 2015. If the urbanized area increases proportional to population, 87 percent of the upper Santa Margarita River watershed would remain in non-urban land uses in 2015.

Table 3. 2009 Santa Margarita Region Land Uses

Urban Land Use	Acreage[(a)]	% of Land Use Subtotal	% of Total Land Use
Commercial	8,339	20.0%	2.5%
Industrial	963	2.3%	0.3%
Urban Residential (< 1 acre)	12,656	30.4%	3.7%
Parks & Recreation Facilities	4,291	10.3%	1.3%
Streets & Roads	15,439	37.0%	4.6%
Subtotal – Urban Land Use	41,688		12.3%
Non Urban Land Uses			
Preserves & Open Space	54,141	18.2%	16.0%
Rural Residential (> 1 acre)	106,773	35.9%	31.5%
Agriculture	36,389	12.2%	10.7%
Federal/State/Tribal Lands/Non-County Jurisdiction	100,076	33.7%	29.5%
Subtotal Non Urban Land Use	297,379		87.7%
Total Urban & Non Urban Land Use	339,067		100%

(a) As reported in the FY 2007/2008 Watershed Annual Report.

4.3.3 Conserved Lands

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) was adopted in June of 2003. It is a comprehensive, multi-jurisdictional Habitat Conservation Plan focusing on conservation of species and their associated habitats in western Riverside County. The MSHCP is one of several large, multi-jurisdictional habitat planning efforts in southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The MSHCP will allow Riverside County and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal Endangered Species Acts. Further, as floodplains and streams tend to support critical habitat, the MSHCP will preserve many of the remaining natural streams and establish significant buffer areas between those systems and urban land uses.

Much of the remaining non-urbanized lands in the Santa Margarita Region will ultimately be incorporated into the MSHCP. The MSHCP will result in a conserved area in excess of 500,000 acres and focuses on conservation of 146 species. The MSHCP Conservation Area includes approximately 347,000 acres on

existing Public/Quasi-Public Lands and approximately 153,000 acres of Additional Reserve Land. A large portion of the conserved lands are in the upper Santa Margarita watershed (at least 145,000 acres). There are approximately 72,318 acres of existing public or quasi-public lands preserved within the upper Santa Margarita River watershed area located in Riverside County.

4.3.4 Anticipated Development 2009-2015

Proposed development during the next MS4 Permit term is an important indicator of potential new Urban Runoff sources. To the extent possible, the Permittees have identified significant New Development projects that, if constructed, will result in the conversion of primarily undeveloped land to developed land. This section describes the expected development within Permittee cities. Consistent with the current and forecasted economic conditions and population estimates, and as supported by the population information and forecasts presented in Section 4.3.1, the Permittees anticipate that the term of the upcoming MS4 Permit will be a time of little development. Following are summaries of anticipated development during the upcoming MS4 Permit.

4.3.4.1 County of Riverside

Projected trends for the County of Riverside's land use can be referenced in the Riverside County General Plan. Maps depicting the areas of future development and type of land use can be found in the General Plan maps that are accessible at http://www.rctlma.org/generalplan/area_maps.html.

- With the incorporation of the cities of Wildomar and Menifee the remaining unincorporated County area to be built out in the Santa Margarita Region during the upcoming MS4 Permit term is going to be considerably smaller.
- It is anticipated that, over the next five years, additional annexations will occur in each of the four city areas (Temecula, Murrieta, Wildomar and Menifee) that will further reduce the unincorporated County area in the Santa Margarita Region.
- The unincorporated County area in the upper Santa Margarita River watershed (east of Temecula, Menifee and Murrieta) will remain in rural, open space and additional MSHCP land uses. In addition, due to drought conditions and depletion of aquifers the prospects of New Development is unlikely. Water districts in the region cannot offer "will serve" letters to provide for water resources they do not have. Infrastructure for water supply and municipal water treatment, MS4 and flood control facilities are virtually non-existent in this area.
- Due to downturn in economy, Development Impact Fees (DIF) and Transportation Uniform Mitigation Fees (TUMF) are and will continue to be significantly under funded. This reduction in transportation funding will result in fewer road and infrastructure projects during the term of the upcoming MS4 Permit. The Transportation Department has projected limited projects for the Santa Margarita Region. The Clinton Keith Road widening project is still in the planning stages. Due to budgetary constraints, unless projects are fully funded through County finance mechanisms (TUMF, DIF, state and federal pass through from bonds and grants) most projects will be put on hold through 2012.

4.3.4.2 City of Menifee

Projected development trends for the City of Menifee are unknown, sphere of influence and annexation opportunities will allow for limited growth once the economic uncertainty of the region is resolved.

4.3.4.3 City of Murrieta

The area north of Clinton Keith Road along the east side of the I-215 freeway should see some construction towards the end of the next MS4 Permit term. Grading for the construction of a hospital has started along the freeway and it is anticipated that supporting development will follow once the hospital is open. Overall the Planning Department is receiving few applications for New Development projects. For example, a Planning Commission meeting scheduled for January 2009 has been cancelled because there are no New Development items to discuss. In light of the current and foreseeable economic conditions, the City does not anticipate any substantial New Development activity for the next few years, with limited growth possibly resuming toward the end of the next MS4 Permit term.

4.3.4.4 City of Temecula

The City of Temecula is currently experiencing a significant leveling trend in development. Throughout 2008, fewer applications were being processed than in previous years. As such, Temecula does not anticipate processing any substantial number of New Development applications within the next MS4 Permit term. It is anticipated that applications from hereon will be limited to smaller in-fill and redevelopment projects. In addition, proposed annexation areas will be limited to areas that will be set aside mostly for conservation. As Temecula is on the verge of build-out, approximately 1 percent of developable land remains available throughout the City for New Development.

4.3.4.5 City of Wildomar

Projected trends for the City of Wildomar are unknown, sphere of influence opportunities will allow for limited growth once the economic uncertainty of the region is resolved.

4.4 Surface Water Bodies, Beneficial Uses, and Impairments

Approximately eight percent of Riverside County drains into surface water bodies within the jurisdiction of the Regional Board. Those surface water bodies (or portions thereof) are listed in Sections 4.4.1 and 4.4.2.

Rivers and Streams

Santa Margarita River (Hydrologic Unit Basin Number 2.22)
- Murrieta Creek
  - Slaughterhouse Canyon
- Cole Canyon
  - Warm Springs Creek
    - Diamond Valley Reservoir
- Santa Gertrudis Creek
  - Tucalota Creek
  - Lake Skinner
- Temecula Creek (Hydrologic Unit Basin Number 2.92)
  - Iron Spring Canyon
- Temecula Creek (Hydrologic Unit Basin Number 2.84)
  - Tule Creek
    - Million Dollar Canyon
  - Cottonwood Creek
- Vail Lake
  - Wilson Creek
    - Cahuilla Creek (Hydrologic Unit Basin Number 2.73)
      - Hamilton Creek
    - Cahuilla Creek (Hydrologic Unit Basin Number 2.71)
      - Elder Creek
  - Arroyo Seco Creek
  - Kolb Creek
- Temecula Creek (Hydrologic Unit Basin Number 2.52)
  - Pechanga Creek

Santa Margarita River (Hydrologic Unit Basin Number 2.21)
- DeLuz Creek

4.4.1 Beneficial Uses

The upper Santa Margarita River watershed supports a variety of ecosystems and provides many Beneficial Uses (Table 4)[18]. The ultimate goal of the Riverside County DAMP and the Watershed and Individual SWMPs is to manage Urban Runoff in a manner protective of the Beneficial Uses of these Receiving Waters.

Table 4. Beneficial Uses of Receiving Waters
Upper Santa Margarita River Watershed

Beneficial Use	Murrieta Creek	Cole Canyon	Warm Springs Creek	Santa Gertrudis Creek	Long Valley	Temecula Creek	Santa Margarita River
Municipal and Domestic Supply	X	X	X	X	X	X	X
Agricultural Supply	X	X	X	X	X	X	X
Industrial Service Supply	X	X	X	X	X	X	X
Industrial Process Supply	X	X	X	X	X	X	
Ground Water Recharge	X					X	
Contact Water Recreation				X	X	X	X
Non-contact Water Recreation	X	X	X	X	X	X	X
Warm Freshwater Habitat	X	X	X	X	X	X	X
Cold Freshwater Habitat							X
Wildlife Habitat	X	X	X	X	X	X	X
Rare, Threatened or Endangered Species							X

4.4.2 Current Water Quality Concerns and Issues

Urban Runoff discharged to MS4s in Riverside County ultimately flows to various surface water bodies (inland streams, lakes, and reservoirs) and typically carries Pollutants that originate from numerous dispersed and uncontrolled sources. Examples of Pollutants that may be present in Urban Runoff are fertilizer, heavy metals, nutrients, petroleum products, sediment, bacteria, chemicals, and litter.

Because the upper Santa Margarita River watershed is large and has many land uses, the water quality concerns in sub-watersheds vary. However, each land use can potentially contribute Pollutants to nearby streams, rivers, and lakes. The infrastructure that supports people's activities (e.g., roads, parks, MS4, and wastewater collection and treatment facilities) may contribute to water quality concerns if not properly managed. Other sources of stormwater runoff, including agricultural areas, are exempt from the requirements of the NPDES permitting program established under the Clean Water Act. In addition, some Pollutants, such as total suspended solids, may be found at elevated levels in runoff from non-urban land uses. Further, certain activities that generate Pollutants present in Urban Runoff are beyond the ability of the Permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography.

[18] www.waterboards.ca.gov/rwqcb9/programs/

As required by Section 303(d) of the Clean Water Act, the State Board maintains a list all waters in the State that do not meet the Water Quality Standards established in the Basin Plans prepared by the Regional Boards for protection of Beneficial Uses. This list, referred to as the "303(d) List," details the Pollutant or stressor on each named water body, the potential source of Pollution, estimated affected area, as well as a priority for development of the associated TMDL. A TMDL is a plan that identifies how much Pollutant load a specific Impaired Waterbody can sustain without impacts to its Beneficial Uses. In addition to identifying the maximum Pollutant load, a TMDL is used to develop implementation plans to meet Water Quality Standards for a designated water body. Table 5 summarizes the 2006 303(d) List of Impaired Waterbodies within the upper Santa Margarita River watershed, as well as the year in which a TMDL is proposed for approval. No TMDLs have been established for Receiving Waters in the upper Santa Margarita River watershed.

Table 5. 2006 303(d) Listings for the Santa Margarita Region

Water Body	Pollutant	Potential Sources	Area Affected	Proposed TMDL Completion
Santa Margarita River (Upper)	Phosphorus	Urban runoff/storm sewers Unknown nonpoint source Unknown point source	18 miles	2019
Murrieta Creek	Iron Manganese Nitrogen Phosphorous	Source unknown Source unknown Source unknown Urban runoff/storm sewers Unknown nonpoint source Unknown point source	12 miles 12 miles 12 miles 12 miles	2019 2019 2019 2019
Temecula Creek	Nitrogen Phosphorus Total dissolved solids	Source unknown Source unknown	44 miles 44 miles	2019 2019

Table G-35 of Appendix G to the Annual Report 2007-2008 additionally identifies pyrethroid pesticides (bifenthrin and permethrin), bacteria (E. coli and fecal coliform), lead, and sediment (turbidity) as Pollutants of Concern in the upper Santa Margarita River watershed that warrant focused attention by Permittee implementation programs. These constituents have been detected intermittently or persistently at Triad and Tributary monitoring stations.

4.5 Municipal Separate Storm Sewer System

A map depicting the MS4 facilities owned and operated by the Permittees is provided in Appendix B.

5.0 Program Evaluation Based on Water Quality Trends

The overall effectiveness of the Permittees programs is assessed based on the analysis of water quality data obtained as part of the Consolidated Monitoring Program. Approximately 14 years of data have been collected through this program and have been cumulatively analyzed in the fourth-year monitoring Annual Report.

5.1 Inherent Limitations to Analyzing Water Quality Data

There are inherent limitations to analyzing water quality data from storm water. Storm water runoff is very different from mechanical wastewater or water treatment processes that usually incorporate water quality monitoring. Discharges from mechanical processes such as treated wastewater effluent and industrial discharges usually:

- Come from a single or a few readily identifiable sources;
- Are generally consistent in flow rate and chemical character from day to day; and
- Can be easily instrumented.

Conversely, Urban Runoff non-point source flows, such as those collected and analyzed as part of the MS4 Permit monitoring programs usually:

- Come from multitudes of unidentifiable or hidden sources, many of which are non-Urban in nature:
  - State, federal or tribal lands
  - Natural leaching of soils
  - Wildlife
  - Aerial deposition
  - Wildfires
- Vary widely in flow rate in response to precipitation events
- Vary widely in chemical character at any given moment due to:
  - Unidentified episodic issues related to natural phenomena
  - Magnitude of rainfall and extent of contributing area
  - Potential one-time illicit discharges that were not identified at the time of sampling
  - Unforeseen or unidentified consequences of changes in numerous land use policies (fire management, development, etc)
- Are subject to significant natural random variation; and
- Cannot be easily instrumented due to the wide variation in depth and velocity and associated impacts of natural or unnatural aggradation and degredation of natural stream beds.

Because ephemeral storm water flows are, by their very nature, particularly random in character, it may take many years before monitoring data trends can be detected or to determine the effectiveness of an

Urban Runoff control measure. Power analyses were conducted for fecal coliform, metals, and nutrients at the stations monitored in the Santa Ana Region during the 2005/06 reporting period. Power analysis is used to determine how many years of monitoring would be required to detect a given trend in the data. This tool was developed by the SCCWRP. Based on the results, for biennial monitoring, and having an 80 percent chance of detecting a change in concentration, it would take about 5-10 years of data collection to detect a change of 50 percent in concentration, 10-15 years of data to detect a 25 percent change, and 15-30+ years of data to detect a 10 percent change. It is expected that results would be similar for other parameters measured in the monitoring program in the Santa Margarita Region.

5.2 Focus Area Constituents of Concern

During the 2004 MS4 Permit term, monitoring data indicated that one or more receiving water samples have been found to contain the following constituents at levels that exceeded Basin Plan Objectives (BPO). As such they have been identified as constituents of concern.

- Nutrients (Ammonia as N, Phosphorus
- Pyrethroid Pesticides (Permethrin, Bifenthrin)
- Pathogen Indicators (E.coli, Fecal Coliform)
- Lead
- Turbidity (lab)

5.3 Analysis of Water Quality Trends

As discussed in the 2008 Santa Margarita Region Annual Monitoring Report, the results of the trend analysis and regression calculations indicate that there are no statistically significant trends in the water quality monitoring data. The lack of trends in the data presented in the Annual Monitoring Report contrasts with the rapid population growth over the same time frame. As discussed in the Annual Monitoring Report, population growth from 1990 to 2008 was approximately 300 percent for the Santa Margarita Region. This significant growth in population and resulting urban land use area contrasts sharply with the lack of statistically significant increases in concentrations of constituents of concern that would otherwise be expected in stormwater runoff from urbanized areas.

These results demonstrate and can be attributed to the effectiveness of the Permittees' programs at addressing the Focus Area Constituents of Concern, which are targeted and designed to prevent the discharge of these constituents into the Receiving Waters.

5.3.1 Recommended Compliance Program Modifications to Address Focus Area Constituents of Concern

Based on the analysis described above and in Appendix G of the 2008 Watershed Annual Report, no significant program modifications are necessary to continue to protect and improve the quality of the Receiving Waters.

Although the Permittees programs have been shown to be protective of Receiving Water quality, through continual evaluation of the programs being implemented and on-going water quality monitoring, additional measures are being proposed as part of this ROWD to address changing conditions and ensure

the ongoing effectiveness of the programs. Recommended changes to ensure the ongoing effectiveness of the Permittees programs are described in Sections 6 and 7 of this report.

6.0 Evaluation and Recommendations for Regionally Implemented Programs

6.1 Program Management

The District is the Principal Permittee for each of the three MS4 permits issued by the three Regional Boards that have jurisdiction in Riverside County. As Principal Permittee, the District performs management functions including coordination with the Regional Boards, preparation of compliance documents and Annual Reports, participation in studies and external cooperative efforts and dissemination of information to the Permittees. The Permittees implement some compliance programs that are common to all of the Permittees and which are implemented on a Countywide or regional basis to increase cost effectiveness and efficiency. Typically, the District also manages Countywide and regional programs.

6.1.1 Program Management Accomplishments and Programmatic Improvements

During the term of the 2004 MS4 Permit the following accomplishments were achieved.

- Updated the Implementation Agreement that sets forth the responsibilities of the Principal Permittee and the Co-Permittees.
- Revised the Riverside County DAMP to reflect requirements in the 2004 MS4 Permit, which served as a model document for the Permittees Watershed and Individual SWMPs.
- Developed Santa Margarita Region Watershed SWMP
- Participated in the Santa Margarita River Executive Management Team (SMREMT) to identify and address the highest priority water quality concerns in the Santa Margarita watershed, including development of a watershed model to assist with land use planning and TMDL development, coordinating watershed monitoring, and developing formal agreements between interested stakeholders for the purposes of evaluating impairment listing and data gaps in the watershed.
- Continued progress with the SMREMT on a uniform watershed plan and model for the Santa Margarita Watershed through the Santa Margarita Watershed Supply Augmentation, Water Quality Protection, and Environmental Enhancement Program.
- Participated in the Santa Margarita Lagoon TMDL workgroup in funding and overseeing the development of a comprehensive program to collect data and model the various inputs to the lagoon to be used to develop a TMDL to address nutrients.
- Participated in the Santa Margarita Watershed Water Quality Monitoring Group to coordinate the monitoring efforts of various stakeholders in the Santa Margarita watershed.
- Participated in the SMC to improve stormwater monitoring science, coordinate data collection efforts, and evaluate the effects of stormwater discharges to receiving waters specific to Southern California.
- Participated actively in various efforts of CASQA.

- Participated in the completion of an Integrated Regional Water Management Plan for the upper Santa Margarita Watershed to help pave the way for greater watershed-wide coordination and management of water resources within the upper watershed as a whole, as well as adjoining watershed and regional planning efforts.
- Participated in the development and implementation of the MSHCP for Western Riverside County which contains a comprehensive land use plan that ultimately conserves the environmental resources and habitat of approximately half of the Santa Margarita Region.
- Participated in the development of a Special Area Management Plan (SAMP) to further manage receiving waters at a watershed scale for the upper Santa Margarita Watershed by identifying, prioritizing and protecting the highest priority Waters of the U.S., while considering the broader needs of growth and transportation improvements.
- Developed and updated methods to track program effectiveness such as resident surveys, tracking hotline inquiries, and web counters.
- Enhanced Public Education program through development of new outreach materials and programs.

6.1.2 Proposed Revisions to Regional Program Management

6.1.2.1 Enhanced Program Effectiveness Assessments and Municipal Action Levels

To ensure that the Permittee's programs continue to be effective at managing the effects of Urban Runoff on Receiving Water quality, the Permittees will revise the Program Effectiveness Assessments for both the Individual SWMP and the Watershed SWMP as part of their implementation of the new MS4 Permit. An assessment strategy based on the CASQA Municipal Stormwater Program Effectiveness Assessment Guidance has been established including the establishment of:

- Measurable goals for each component,
- Measurable metrics to assess progress toward those goals,
- CASQA Effectiveness Levels for each metric; to indicate the level at which each metric can demonstrate the effectiveness of the Permittee's programs at addressing each goal.
- Timeframes in which the Permittees expect to be able to assess effectiveness using each metric.
- Municipal Action Levels (MALs) for appropriate metrics to ensure a minimum level of program implementation and identify shortcomings that could affect the Permittee's progress toward the established goals. The MALs would not be permit compliance measures, but triggers for further Permittee evaluation of the affected compliance program.

If a MAL for a metric is exceeded, the Permittees will review implementation of that program component to identify the cause of the exceedance and identify needed adjustments to avoid future exceedances. The findings of these reviews and any recommended adjustments to the Permittees programs will be reported in the corresponding section of the Annual Report submitted the following year. Further research is particularly needed to establish appropriate Municipal Action Levels for the various program areas.

After a review of the stormwater program, the Permittees have established an initial Assessment Methodology for each component including preliminary goals, measurable metrics, effectiveness levels,

timeframes and MALs for each. These initial assessment methodologies are included in tabular format in Appendix C. Although the Permittees believe the basic proposal is viable, The Permittees will review and finalize these Assessment Methodologies and associated metrics within one year following adoption of the new MS4 Permit as additional data and analysis is necessary to support specific action levels.

6.1.2.2 Revised Reporting Format

The Permittees recommend substantial revisions to the MS4 Permit requirements for the layout of the Annual Report. The Permit requires substantial duplication of reporting, which either increases the volume of the Annual Report, or requires substantial cross-referencing. In either case, it is confusing to write, and most likely, confusing to read. The Permittees recommend a meeting with Regional Board staff in the development of the new MS4 Permit to discuss methods to streamline and clarify reporting requirements.

6.1.2.3 Maintain Enhanced Watershed / MS4 Map

The Permittees are in the process of collecting data to support an enhanced MS4 facilities map. Updates completed to date are provided in the map in Appendix B. This enhanced map demonstrates initial efforts to identify the locations of:

- Receiving Waters
- MS4 facilities
- Areas of historical perennial flows
- Known blow off locations
- Wastewater storage ponds
- Sub-drainage areas
- Known non-Permittee facilities
- 36-inch diameter and larger outfalls

This map will be used to help in the tracking of IC/ID events and issues and continued updates will be submitted with the Annual Reports. The Permittees will continue to enhance this map over the next MS4 Permit term. As described in the Annual Report, the District is in the process of upgrading their web page that offers public access the District's various NPDES activities. Along with these web site upgrades, additional layers will be added to the Web-based GIS map.

6.1.2.4 Elimination of the Watershed SWMP as a separate compliance document from the Riverside County DAMP

The Santa Margarita Region is comprised of only a single watershed. Further, the Permittees' regional compliance programs are described in the Riverside County DAMP. Maintenance of a separate and duplicative Watershed SWMP is confusing, cumbersome, and does not contribute to protection of Receiving Water quality. The Permittees request that the next MS4 Permit be drafted in a fashion that allows the Permittees to maintain the Riverside County DAMP as the primary document describing regional compliance programs for western Riverside County including the Santa Margarita Region. Any

necessary changes for requirements included in the new MS4 Permit will be updated /added to the Riverside County DAMP.

6.2 Permittee Training Programs

6.2.1 Summary

The Permittees jointly fund comprehensive training and education programs for Permittee staff. These training programs are designed to train Permittee employees on the proper use and implementation of BMPs appropriate for their field of work. There are four distinct training courses currently offered including Construction Inspection, Municipal Maintenance, Industrial-Commercial Facility Inspection, and New Development Planning.

6.2.2 NPDES Training Program Accomplishments and Programmatic Improvements

- Evaluated and tested various knowledge retention methods.
- Performed Training Enhancement Analysis study (2005-2006)
- Created an on-line training registration web page where attendees can also obtain training materials.
- Annually updated training materials to address Pollutants of Concern (2005-2007)
- Added component to training to address proper use, application and timing of application of Pesticides (2007-2008)
- Began developing a formalized testing and effectiveness analysis approach (2008)

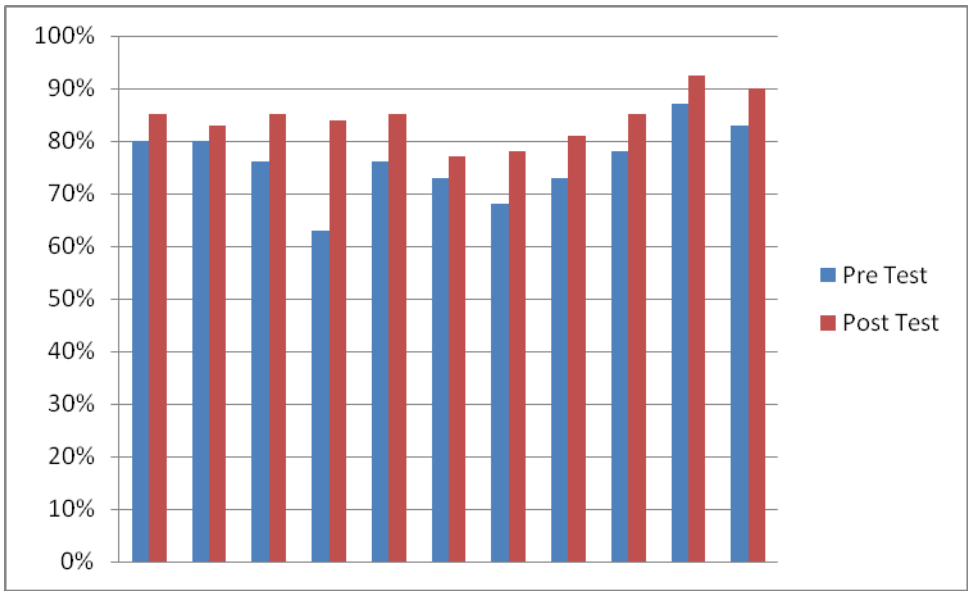
Highlights
Municipal Training: **14** Training Sessions; **900** Attendees
Construction Training: **22** Training Sessions; **626** Attendees
Industrial-Commercial Training: **11** Training Sessions; 426 Attendees
New Development Training: **13** Training Sessions; **345** Attendees

6.2.3 Long-Term Effectiveness Assessment

Throughout the term of the 2004 MS4 Permit the Permittees have evaluated and implemented various quizzes as part of the NPDES training courses. These efforts were intended to assess the retention of knowledge of the attendees and, as described in Provision K.2.m of the Watershed SWMP, serve as a component of the assessment of the long term effectiveness of the Watershed SWMP.

The quizzes used to assess employees' retention of knowledge have evolved over time as the Permittees found what worked and what did not. Quiz questions that were found to be confusing or misleading were refined or eliminated. Thus, a question-by-question analysis of the results is not possible. Instead, results from a number of the training courses with reasonably comparable quizzes were aggregated and an average score (percent correct) was established for each of these training sessions. The results of this analysis are presented in Figure 5.

Figure 5. Training Pre-Test and Post-Test Analysis



Although the required random-sample nature of this analysis is not conducive to the analysis of trends across time, two findings become evident from this analysis:

1. Permittee inspection, maintenance and planning staff generally have a high level of understanding of issues related to stormwater Pollution in their field of work.
2. Average scores on quizzes administered after the training sessions were always higher than scores on quizzes administered before the training session.

Finding 1 above can be attributed to the Permittee's proactive efforts to ensure that their employees are aware of the issues in their field of work that could contribute to stormwater Pollution. This includes annual attendance at the NPDES training courses, and on-the-job training, reminders and meetings. This fact alone is a strong indicator of the effectiveness of the Permittees training programs.

Finding 2 above demonstrates that after attending the NPDES training courses, the attendees have a higher level of understanding of the issues in their field of work related to stormwater Pollution. This indicates that the training materials, delivery and content were effective.

Based on these analyses, general feedback from the training programs, and the overall effectiveness of the Permittees' programs (as described in Section 5.3 herein) the Permittees believe their training programs to be effective. Nevertheless, the following revisions to the training programs have been identified and are proposed for implementation with the new permit to ensure ongoing effectiveness.

6.2.4 Proposed Revisions

6.2.4.1 Continued focus on Focus Area Pollutants of Concern

The Permittees commit to continue to revise the Permittee training programs to focus on Pollutants of Concern.

6.2.4.2 Standardized Effectiveness Quizzes

Over the course of the 2004 MS4 Permit, the Permittees have evaluated various methods of assessing the retention of knowledge and are now recommending a standardized approach to assessing the effectiveness of the training program.

The Permittees plan to create standardized quizzes to assess the retention of knowledge and increased understanding as a result of the Permittees' training sessions. This includes establishing core messages that the Permittees want to impart upon the attendees and, creating clear and understandable quiz questions for each core message.

This approach will help the Permittees identify if any core training messages are not being retained by attendees and to subsequently modify the training. The Permittees also hope that this approach will yield results that will, over time, demonstrate that the knowledge among Permittee staff of issues related to storm water Pollution is increasing, thus clearly demonstrating that the NPDES Training program is effective.

As a necessary part of this effort, a database to track responses will also be created.

6.2.4.3 Attendance Tracking Mechanism

At each training session a sign-in sheet is provided to track attendance to the session. Included in the sign-in sheet is an indication of the Permittee that each attendee is representing. After each training session, these sign-in sheets are scanned to PDF files and sent to each Permittee for their records. This approach requires that each Permittee manually review the sign-in sheets to determine who and how many of their staff attended the training.

The District, on behalf of the Permittees, is currently investigating various form scanning and recognition software packages to determine the feasibility of creating a sign-in sheet that, when scanned, will automatically transfer the attendance list into a database. This would facilitate tracking of staff attendance by each Permittee. At this time the District has not determined if a feasible and cost efficient program is available that will accomplish their needs.

6.3 Public Education

6.3.1 Summary

To leverage finite resources, the Permittees jointly fund a public education program. The District implements this program to disseminate information about Urban Runoff issues and to provide education on how activities may impact Receiving Waters.

The Permittees have established an ongoing watershed-based public education and outreach program known as the **Only Rain Down the Storm Drain** Pollution Prevention Program. The specific objectives of this program include:

- Fostering a broad public awareness of water Pollution concerns;
- Increasing public acceptance of Pollution Prevention activities to curtail everyday human behaviors that contribute to water quality problems;
- Educating/informing the general public, regulators and key local government and state decision makers on Urban Runoff conditions in Riverside County; and
- Promoting stewardship of local water resources.

The **Only Rain Down the Storm Drain** Program implements the public awareness objectives by focusing on three areas of Pollutant reduction/prevention:

- Public behavior;
- Proper management of Pollutants; and
- Business specific education outreach.

In addition, when attempting to make use of the finite resources available to the Public Education Program, the Permittees use these management goals to ensure that resources are used effectively:

- Focusing on Pollutants of Concern specific to each watershed region;
- Coordinating public education efforts with adjacent storm water management programs and other related education programs to share resources, coordinate outreach efforts, and avoid duplication of effort; and
- Adapt public education programs and objectives, based on effectiveness analysis, to address changing MS4 program requirements and objectives.

6.3.2 Public Education Program Accomplishments and Programmatic Improvements

The Public Education Program has developed and distributed the following educational materials during the 2004 MS4 Permit term:

- *After the Storm* – a citizen's guide to understanding MS4 Pollution in your neighborhood or when performing daily activities.
- *Automotive Maintenance & Car Care* – guidelines for keeping your auto shop or retail fuel facility in environmental shape.

- *Outdoor Cleaning Activities* – guideline for outdoor cleaning activities and wastewater disposal.
- *Pools, Spas and Fountains* –Environmental maintenance suggestions for pool, spa, and fountain owners.
- *What's the Scoop* – tips for a healthy pet and a healthier environment.
- *Household Hazardous Waste* – A schedule of collection locations for proper disposal of HHW.
- *Stormwater Pollution Found in Your Neighborhood* – door hanger.
- *Equestrian Management* – Recommendations for BMPs related to equestrian activities.
- *Spray Bottles* – Including directions to make environmental friendly recipes for pest control and household cleaning

The Permittees also initiated development of the following outreach materials

- *Landscaping and Gardening Brochure* – Initiated development a new brochure to address outdoor residential landscaping and gardening activities.
- *Septic System Management Brochure* – initiated development of a brochure to assist with septic system management.

In addition to the information provided on the Storm Water Protection website, the Public Education and Outreach Program has:

- Updated the Public Education and Outreach Program web page.
- Tested and/or implemented several new Public Education and Outreach Program effectiveness tracking mechanisms including call tracking, web counters, testing, and bilingual surveys.
- Enhanced the toll free storm water Pollution reporting hot line to include public education information and support for the public and other interested stakeholders.
- Obtained a trailer with "**Only Rain Down the Storm Drain**" graphics specifically designed for transporting materials to outreach events. It is also used as part of the booth at outreach events.
- Initiated billboard advertising within the Santa Margarita Region.
- Worked with the Mission Resource Conservation District to implement presentations to elementary and middle schools and staff to raise public awareness of Urban Runoff management issues and source control methods and to encourage volunteers, partners, and groups to gather annually for a trash and debris clean-up day in the Santa Margarita Region.
- Developed special newspaper and billing inserts, fliers and advertisements to raise public awareness of Urban Runoff management issues and source control methods. A radio advertising campaign was also developed and implemented for a time.
- Developed and presented workshops regarding household hazardous waste use and proper disposal at major home improvement stores throughout Riverside County.
- Placed advertisements in the Penny Saver and Bargain Bulletin to raise public awareness of Urban Runoff management.

- In cooperation with certain County Service Areas or other programs, pet waste signs with bag dispensers have been installed at various parks to help encourage the proper disposal of animal waste.
- Cooperated with the Western Riverside Council of Government in the Used Oil Block Cycle Grant that decreases the amount of illegally dumped motor oil by promoting the addition of new Certified Oil Collection Centers.
- Established a partnership with County Environmental Health whereby businesses cited by Environmental Health for violations of ordinances related to stormwater issues may be allowed to implement a Supplemental Environmental Project in conjunction with the **Only Rain Down the Storm Drain** program.

6.3.3 Long-Term Effectiveness Assessment

Effectiveness metrics of the Public Education and Outreach Program during the 2004 MS4 Permit term are presented in Section J.1.3 of the FY 2007/2008 Watershed Annual Report. The data indicates that overall impressions have continually exceeded the number of residents in the watershed, HHW/ABOP pounds of waste collected and pounds of waste collected per person have steadily increased over the term of the 2004 MS4 Permit.

In 2005, the **Only Rain Down the Storm Drain** program developed and implemented a survey to be distributed at Public Outreach events to assess the public's level of knowledge related to stormwater Pollution. This original "long" survey contained 13 questions in both English and Spanish as shown in Figure 6.

This survey was used for fiscal years 2005-06 and 2006-07. Through this period of implementation it was found that the survey took too much time to complete and reduced the level of response from event attendees. Therefore, the survey was subsequently revised to a shorter version with revised questions for the 2007-08 fiscal year. The revised "Short" survey that is currently used is shown in Figure 7.

Figure 6. Original "Long" Survey Utilized at Public Outreach Events

Zip Code_____ Age_____ Sex F__ M__ Date:_____

THINK YOU KNOW ABOUT STORM DRAIN POLLUTION PREVENTION?

1. Where do you think **storm drain** contents go or flow to? __Treatment Plant __Streams, rivers & lakes
2. Where do you think **sewer pipes** contents go or flow to? __Treatment Plant __Streams, rivers & lakes
3. Are storm drains and sewers part of the same or separate systems? __Same __Separate __Don't know
4. Have you ever been to a Household Hazardous Waste **(HHW)** Collection Event? __Yes __No
5. Did you know that **A.B.O.P.** Antifreeze, Batteries, Oil, and Latex Paint locations and mobile **HHW** Collection Events provide safe havens for the disposal of pollutants? __Yes __No
6. If you have a lawn or garden, where do you (or your gardener) dispose of the green waste (grass, clippings or other)? **(Check all that apply)**

   ☐Trash/garbage ☐Compost/Mulch pile ☐Take to compost facility
   ☐Leave on lawn ☐Removed by gardener ☐Other:_____

7. Where is the best location to wash your vehicles?
   (Check only one)

   ☐Pavement (driveway, street) ☐Dirt Area
   ☐Lawn or Grass ☐Other_____

8. Do you change the motor oil in your vehicle yourself? __Yes __No

   If **Yes**, where do you dispose of it? **(Check all that apply)**

   __in the garbage __at a curbside collection program
   __down the storm drain __collection center (Jiffy Lube, Kragen, etc.)
   __pour it on the ground __Other_____

9. If you have a pet, how often do you pick up after your pet?

   9. a) in your yard? ☐Always ☐Sometimes ☐Never

   9. b) when you walk the pet? ☐Always ☐Sometimes ☐Never

10. Do you think, anything ,other than rainwater, that flows into the storm drains (i.e., trash, chemicals, pet waste, etc.) considered a pollutant? __Yes __No
11. Have you seen or heard the slogans "Only Rain Down the Drain" or "Only Rain Down the Storm Drain"?
    __Yes __No If yes, where? __Radio __Newspaper __ Flier __Billboard __Street Fair, Festival, etc.
12. Are there State laws and local ordinances which STRICTLY PROHIBIT the dumping of pollutants **(EVERYTHING, EXCEPT RAIN WATER)** into the storm drain systems or waterways? ___Yes ___No
13. After this booth visit, have you increased your understanding of storm drain pollution prevention? __Yes __No

Thank you for your time and input… Remember, YOU can do your part by calling our Toll Free Line (1-800-506-2555) to report illegal storm drain pollutant disposal anywhere in Riverside County, or to get more information about storm drain pollution protection to help promote "ONLY RAIN DOWN THE STORM DRAIN".

Figure 7. Revised "Short" Survey Utilized at Public Outreach Events

DO YOU KNOW HOW TO PROTECT OUR STREAMS, RIVERS and LAKES?

City_____ Zip Code_____ Age____ Sex □ F □ M Date: _____

1) Water that leaves your lawn from **Irrigation (water sprinklers), Car washing** and **Rain** flows down streets and/or storm drains and then directly to…

☐ Sewage Treatment Plants ☐ Streams, rivers & lakes

2) Which of the following can LEGALLY be disposed into the storm drain? (*Circle all that apply*)

- **Useable Household Chemicals**
- **Yard waste/clippings/leaves**
- **Paint**
- **Cigarette butts**
- **Empty Household Chemicals containers**
- **Pet Waste**
- **Motor Oil / antifreeze**
- **None of these**

3) Do you feel you are well informed and aware of illegal dumping into the storm drain and its impact in your community or streams, rivers and lakes?

☐ Yes ☐ No

HOW DID YOU DO?

1) Water that leaves your lawn from irrigation, washing your car, or rainwater runoff can pickup motor oil and grease from vehicles, excess fertilizer from your lawn, bacteria from pet waste, and excess pesticides from your yard. These pollutants can be carried down streets and storm drains directly to our streams, lakes, and rivers without treatment! That is why we must take care to properly dispose of waste, maintain our vehicles, and use fertilizers, pesticides and other chemicals only as specified on their labels.

2) It is illegal to dispose of any chemical, constituent or waste into a storm drain! Report illegal disposal of chemicals, constituents, or waste to storm drains at **1(800) 506-2555.** You may properly dispose of many of the wastes listed above by doing the following things:

- **Usable and empty household chemicals, paint, motor oil** – Properly dispose these at Household Hazardous Waste and/or Antifreeze, Batteries, Oil and Paint disposal facilities and events. Call **1 (800) 506-2555** for information on disposal locations and special drop off events near you.
- **Pet waste** – Carefully pick up and dispose in the nearest trash receptacle.
- **Grass, clippings, leaves and yard waste** – Collect and dispose in green waste bins or composting areas that are designed to prevent the compost from mixing with excess irrigation water and/or rainwater runoff.

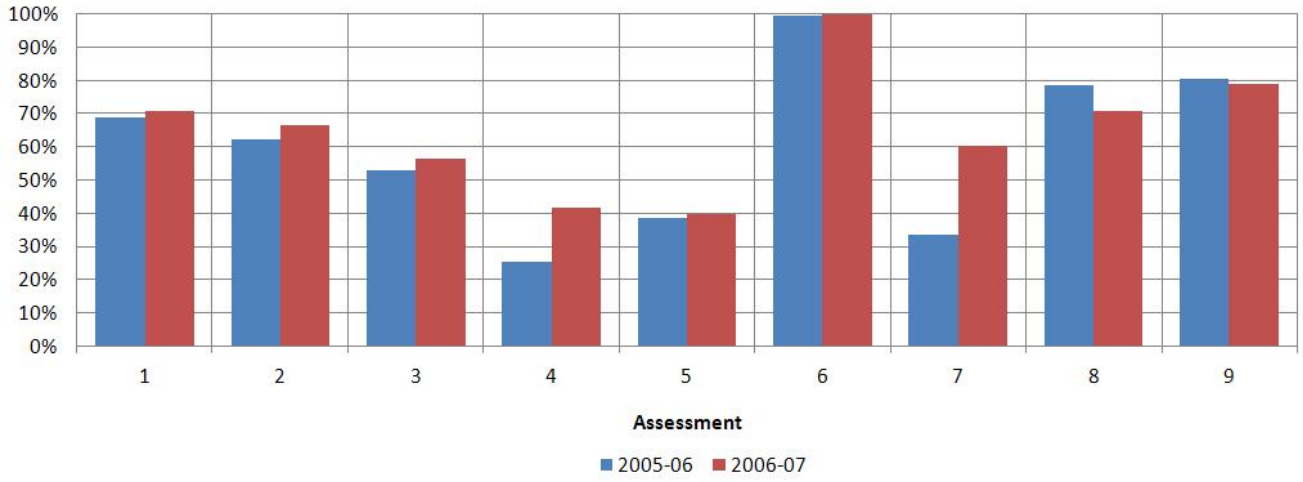
3) Would you like to learn more about protecting our streams, rivers and lakes or wish to report on a illegal storm drain disposal in your area or request a classroom or group demonstration……

Visit www.rcflood.org or call 1 (800) 506-2555.

Remember…Only Rain Down the Storm Drain!

Results have been tabulated for all of the "Long" surveys received and they have been analyzed to determine trends in public awareness. The "Short" survey has been used at two events to date, one of which was quite recent and its results have not yet been tabulated. Using the "Long" survey results, nine questions were used to assess any trends in public awareness. The remaining questions were determined to be either confusing or not applicable to the intent of the assessment. The results of this assessment of survey results are shown in Figure 8.

Figure 8. Assessment of Survey Results (2005-06 vs. 2006-07)



The results shown in the chart in Figure 8 are percent of survey takers that responded as described below:

- Assessment 1: Percent of respondents that understood that storm drains do not go to treatment plants.
- Assessment 2: Percent of respondents that understood that sewer lines go to treatment plants.
- Assessment 3: Percent of respondents that understood that sanitary sewers and storm drains are separate systems.
- Assessment 4: Percent of respondents that had attended a Household Hazardous Waste collection event.
- Assessment 5: Percent of respondents that understood that the best place to wash a car is on the lawn or grass.
- Assessment 6: Percent of respondents that change their own oil that reported that they properly dispose of it.
- Assessment 7: Percent of respondents that have heard of the "Only Rain Down the Storm Drain" program.
- Assessment 8: Percent of respondents that dumping of anything except storm water is a violation of laws and ordinances.
- Assessment 9: Percent of respondents that felt that visiting the Outreach Booth at the event increased their understanding of storm drain Pollution Prevention.

Although implementation of the "Long" survey was limited before it was modified to its current form, the results available do indicate an increase in understanding of these basic principles and can be attributed to the effectiveness of the Permittee's Public Education program. As additional survey results are collected and tabulated, further analysis will be performed to ensure the ongoing effectiveness of the program.

6.3.4 Proposed Revisions

To better address residential sources of pesticides, the Permittees are proposing to coordinate with the University of California Extension Program to enhance the implementation of the U.C. Extension's Master Gardener program in the Santa Margarita Region. Along with information regarding use of drought tolerant landscaping techniques and appropriate methods of fertilizer and irrigation application, the U.C. Master Gardeners also provide residents with information on integrated pest management techniques that minimize pesticide application. The Permittees are proposing to establish an agreement with the U.C. Extension's Master Gardener program in fiscal year 2010-2011 to support master gardener hotline staffing, local presentation and other outreach by the U.C. Master Gardeners.

In addition, through the Permittee's ongoing efforts to internally assess the efficiency and efficacy of their MS4 compliance programs, it was determined that an overhaul of the District's web site was needed. The District's web site contains the public education web site and a technical resource site with the various compliance documents for the program. It was found that information available through the site was often difficult to find and was not user friendly and sometimes was out of date. The Permittees are now reviewing this site to identify and implement needed changes

6.4 Receiving Water Monitoring Program

6.4.1 Summary

A Summary of the Monitoring Program is contained in Appendix G of the Watershed Monitoring Report.

6.4.2 Monitoring Program Accomplishments and Programmatic Improvements

The Monitoring Program accomplished the following goals during the term of the 2004 MS4 Permit:

- Subcontracted monitoring data collection and analysis to MACTEC, Inc. to enhance data collection and reporting capabilities.
- Developed and implemented a Triad Monitoring Program (bioassessment, Toxicity and chemical monitoring) consistent with the goals of the SMC Model Monitoring Program
- Developed watershed boundaries and land use information for all monitoring stations
- Updated the format and technical content of the monitoring Annual Report
- Added fire map information to assist with assessing potential Pollutant sources
- Enhanced monitoring data databases to be compatible with SCCWRP/SMC standard reporting protocols.
- Enhanced monitoring methods to incorporate use of automatic sampling equipment where appropriate

- Conducted several Toxicity Identification Evaluations that led to the identification of pyrethroid pesticides as a cause of wet weather Toxicity in Murrieta and Temecula Creeks and a Toxicity Reduction Evaluation that identified additional BMPs necessary to control sources of pyrethroid pesticides.
- Coordination with the CASQA Pesticide Committee on comments and presentations to California Department of Pesticide Regulation, UC Riverside and others regarding the impacts of pyrethroid pesticides and the need to change regulatory requirements regarding the use of pyrethroid pesticides.
- Participation in or coordination of several BMP studies, including coordination of new development BMP treatment studies (as required by conditions of approval) and the District's LID BMP Demonstration and Testing Facility.
- Continued to update and enhance the Consolidated Monitoring Program to incorporate new monitoring collection methods and data analysis protocols.

6.4.2.1 Participation in Regional Monitoring Efforts

- Participation in the monitoring programs to support development of the Santa Margarita Lagoon TMDL.
- Continued participation in regional and statewide Monitoring and Science efforts such as the Southern California Monitoring Committee to develop:
  - Lab inter-calibration of chemical, bioassessment and Toxicity testing methods
  - Testing methods for bioassessment and Toxicity in Southern California streams
  - Bacterial Reference Watershed Study
  - A storm water research needs report for southern California
- Partnered with SCCWRP on developing hydromodification guidance for Southern California including participation in a series of hydromodification workshops for a CASQA conference.
- Coordination with SCCWRP on the development of the Regional Watershed Monitoring Program for Southern California.

6.4.3 Effectiveness Assessment

The Watershed Monitoring Program was evaluated as part of the Regional Board audits in 2007-2008. As a result of those audits several enhancements were made to the monitoring program, including update of constituent lists, subcontracting of data collection to a monitoring consultant with automatic sampling capabilities, and updates to the Consolidated Monitoring Program and Monitoring Annual Report formats. The Permittees believe that as a result of these changes, the overall monitoring program is effective. However, the revisions presented in section 6.4.4 are recommended to increase monitoring data utility or overall program effectiveness.

6.4.4 Proposed Revisions to Monitoring Program

In updating the Monitoring and Reporting Program, the Permittees request that Regional Board staff meet with them to discuss the following proposed modifications to the monitoring program:

6.4.4.1 Revise Dry Weather Monitoring Program

As noted in Section G.7 (Special Studies) of Appendix G of the FY 2007-2008 Watershed Monitoring Annual Report, the Permittees participated in a SMC Study to develop a regional approach to watershed assessment. The Permittees, in conjunction with Regional Board staff, committed to participating in the resulting watershed monitoring program. The Permittees agreed to monitor three rotating dry weather stations identified for the Santa Margarita Region. Additionally, three stations are to be collected by Regional Board (or SCCWRP staff) using SWAMP funds, and the remaining three will be located in the Santa Ana Watershed region of Riverside County. In exchange for the commitment to participate in the program, the Regional Board staff agreed to reduce the current dry weather monitoring requirements in the new MS4 Permit from two (2) events annually to (1) event annually for each Triad monitoring stations. This would effectively eliminate three existing dry weather samples. The Permittees recommend a meeting with Regional Board staff to discuss these options prior to the release of the draft Permit.

6.4.4.2 Clarify Analyte List

As described in Section G-8.1.5 of the 2008 Monitoring Report (Appendix G of the FY 2007/2008 Watershed Annual Report), 168 analytes have never been detected in samples collected under the current program. The Permittees request that requirements to analyze for these constituents be eliminated unless or until a reason to believe they may be present in stormwater arises.

Basin Plan Objectives are expressed in terms of total metals, while California Toxics Rule (CTR) criteria are expressed in terms of dissolved metals. Although the Permittees do not support comparison of stormwater data to CTR values, the Permit requires it. The Permittees recommend deletion of this requirement. However, if this language is to remain, in order to properly compare results for metals to both sets of objectives, both total and dissolved fractions will be analyzed by the laboratory for the following metals: arsenic, cadmium, chromium (III), chromium (VI), copper, lead, mercury, nickel, selenium, silver, and zinc.

6.4.4.3 Clarify Mobilization Criteria

The District is proposing the following amendment to the monitoring mobilization criteria based on experience and the difficulties faced collecting the first storm and the analysis of the USEPA criteria specific to the Temecula National Weather Service weather station (Consolidated Monitoring Program, Section 4.C.2):

> "Note: If the QPF indicates that more than 0.3-inch is predicted for any 6-hour period, mobilization for sampling will occur."

The District's experience over the past three years indicates that intensities greater than 0.3" in six hours are likely to produce runoff and would warrant mobilization, even on a dry watershed. Further, these mobilization criteria are consistent with EPA-833-B-92-001 guidance regarding minimum depths/durations for storm sampling.

The Permittees recommend that the Regional Board amend the MS4 Permit to reflect these Mobilization Criteria. Due to issues with stream gauges operated by the United States Geological Survey (USGS), the Permittees have concluded that preparing post-storm forensics based on USGS data is not of significant value. A simple test of comparing Quantitative Precipitation Forecast (QPF) reports with actual rainfall and the mobilization criteria should be sufficient to determine compliance with the MS4 Permit.

Mobilization criteria should also reflect practical limitations to storm water monitoring by excluding national holiday periods (Thanksgiving, Christmas, and New Year's Day in particular) and quantifying the probability and the lead time between the forecast and actual rainfall that must be met in order to mobilize.

6.4.4.4 Reduce Wet Weather Events

As was noted in the audits, the Permittees have experienced consistent difficulty collecting three storm events in the upper Santa Margarita River watershed. The Permittees also noted that the San Diego County MS4 Permit only requires the collection of samples from two wet weather events. The Permittees request that the monitoring program for Riverside County be revised to require collection of two storm events. This would not only reduce opportunities for unavoidable non-compliance, it would also be a prudent cost saving measure that would not alter the overall effectiveness of the Permittees monitoring programs.

6.4.4.5 Clarify Triad Method and Follow-up Actions

The MS4 Permit included an early draft of the Triad method envisioned by the Model Monitoring Program (MMP) developed by the SMC. The result was a misapplication of the final Triad approach envisioned by the MMP. Toxicity is currently required to be sampled for at the Triad stations during wet weather events, but not during dry weather when the bioassessments occur. According to the SMC MMP, the three components of the Triad approach (chemistry, Toxicity, and bioassessment) should be conducted at the same time. Bioassessments cannot be conducted during wet weather due to safety concerns and the planning necessary. For this reason the MMP recommends the full triad for dry weather and only chemistry and Toxicity for wet weather.

In an effort to be proactive and supportive of good science, the Permittees have taken the following actions to ensure proper application of the Triad approach:

- Beginning with the 2007-2008 season, Toxicity sampling will be conducted during dry weather, at the same time as the bioassessments and dry weather chemistry sampling events are conducted. Thus, the full Triad approach will be conducted during dry weather. Wet weather monitoring will focus on Toxicity and chemistry. This action will modify the current program to be consistent with the MMP approach.
- The 2006-2007 Annual Report established the framework for proper application of the Triad method (full triad for dry weather, chemistry and Toxicity only for wet weather) by adding new tables (G-21 through G-27), in anticipation of properly applying the Triad method in the 2007-2008 Annual Report.

The Permittees further recommend clarifying the definitions of "persistent", "consistent", and "magnitude" as used in the MS4 Permit to be consistent with the intent of the MMP. In addition, the MS4 Permit inappropriately limits Triad analysis by defining a "fair" Index of Biological Integrity scores as automatically indicative of benthic alteration. This limitation needs to be corrected to prevent Permittee

resources from being inappropriately diverted to expensive source assessment studies. The MMP (and the SMC) envision that watersheds will be prioritized for follow up action based on their relative quality to one another. The envisioned analysis would compare watersheds from throughout southern California. The Permittees support this coordinated and comprehensive approach to addressing water quality.

6.4.4.6 Recognize Limitations of Laboratory Analysis of Bacteria

Babcock Labs prefers to accept bacteria samples between the hours of 7:00 a.m. and 4:00 p.m. during normal business days, and 9:00 a.m. and 12:00 p.m. on weekends. Although Babcock will accept bacteria samples outside those hours, acceptance is contingent upon payment of substantial overtime rates to ensure laboratory staff availability to receive and analyze the samples.

The timing of bacteria sample collection, particularly within the context of automatic sampling, will require consideration of the sample's four-hour holding time and available laboratory receiving hours. The Permittees request that the Permit be modified to only require collection of bacteria samples such that they can be delivered during the regular working hours of the lab to avoid excessive laboratory costs.

6.4.4.7 Participate in a Watershed Based TMDL for the Santa Margarita Lagoon

The Permittees understand that, due to economic conditions, State funding for the Santa Margarita Lagoon Watershed-Based TMDL has been withdrawn. As described in section 3.4, these economic conditions are also impacting the Permittee's funding sources and they are struggling to maintain resources to fund existing compliance programs. The Permittees currently cannot support additional expenditures associated with assisting in funding a watershed-based TMDL effort. However, the Permittees are agreeable to discussing a re-prioritization of compliance activities in order to reallocate existing Permittee resources for this purpose. For example, where current MS4 Permit compliance programs elements are not measurably enhancing attainment of Water Quality Standards, the Permittees would consider reduction or elimination of those requirements to support reallocation of the associated funding to the development of the watershed based TMDL. Program elements that may be considered for discussion include:

- Toxicity/Pyrethroid Monitoring – Under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) local regulation of pesticides, including pyrethroid pesticides is pre-empted. The Permittees are expending significant resources at the State and Federal level to facilitate regulatory changes in the allowable uses of pyrethroid pesticides, which have been implicated in causing toxicity in receiving waters throughout California. The Permittees have also recognized pyrethroid pesticides as a Pollutant of Concern for the upper Santa Margarita River watershed. The Permittees believe that public education and outreach regarding use and more stringent regulation/management of pesticides, including pyrethroid pesticides, represents the most effective means of controlling pesticides in Urban Runoff. However, continued Toxicity tests, Toxicity Identification Evaluations, and direct monitoring for pyrethroid pesticides are not likely to enhance the Permittee's ability to reduce/eliminate pyrethroid pesticides in Receiving Waters. Greater Receiving Water quality benefits may be realized by reallocating the resources currently allocated to these activities to the development of the watershed-based TMDL.
- Reduction in General Monitoring Requirements – The Permittees continue to expend significant resources on Receiving Water and outfall monitoring and the benefits of these monitoring activities are limited. Further, these costs have more than doubled over the term of the 2004 MS4

Permit due to audit findings recommending the implementation of automatic sampling equipment. Revised MS4 Permit requirements that provide for a simplified monitoring program may allow cost savings to be reallocated from data collection and processing to development of the watershed-based TMDL.

- Watershed/Individual Annual Reporting – The current Annual Reporting requirements are time, labor and cost-intensive exercises. Revised MS4 Permit requirements that provide for a simplified Annual Report requirements would not necessarily produce substantial cost savings (because is the reports are typically produced in-house); however, they would free up staff resources to assist with TMDL development.
- IC/ID Monitoring – Although the Permittees support regular visual inspection of MS4 facilities to identify IC/IDs, field measurements and sampling has not proven to be effective for this purpose. Although sampling of identified IC/IDs for later enforcement purposes may be appropriate, IC/IDs that have been identified and eliminated in the Santa Margarita Region typically result from visual observations and subsequent follow-up efforts by Permittee staff, not field measurements and water quality samples. Revised MS4 Permit requirements that provide for visual inspections of MS4 facilities to identify IC/IDs may yield cost savings that could be reallocated to development of the watershed-based TMDL.

There may be additional opportunities for modification of MS4 Permit requirements to focus the expenditure of Permittee funds on those activities that are most effective at protecting Receiving Water quality. Although the resources available for Permittee compliance activities are finite, the Permittees are supportive of modifications to the MS4 Permit that, while working within available funding limitations, enhance their ability to protect and enhance the quality of Receiving Waters.

7.0 Evaluation and Recommendations for Individual SWMP Programs

The Riverside County DAMP is a programmatic document developed by the Permittees in the Santa Ana and Santa Margarita Regions. It outlines the major programs and policies that the Permittees individually and/or collectively implement to manage Urban Runoff for the protection of Receiving Waters in Western Riverside County, including the Santa Margarita Region. The Riverside County DAMP provides a model for the development of a Permittees' Individual SWMPs in the Santa Margarita Region.

The Permittees continue to support a uniform approach to the implementation of MS4 Permit compliance programs in order to facilitate increased transparency and understanding for residents, regulated entities, and Permittee staff. For this reason, the discussions below focus on programmatic changes to the compliance programs that are necessary to maintain the effectiveness of the model compliance programs described in the Riverside County DAMP. Upon adoption of the new MS4 Permit, the Riverside County DAMP and Individual SWMPs will be revised accordingly.

7.1 Program Management

There are typically multiple Permittee departments that are responsible for implementing the elements of the Individual SWMPs. Each Permittee has designated an NPDES Coordinator who coordinates the overall Permittee compliance programs, collects and analyzes compliance program data, develops and maintains the Individual SWMPs, compiles and submits necessary reports, coordinates with other Permittees, stakeholders and Regional Board staff, and conducts other necessary duties as assigned.

To facilitate inter-Permittee coordination and funding of regional compliance activities such as the Public Education and Monitoring programs, the Permittees have entered into an Implementation Agreement that defines the roles and responsibilities of each Permittee and assigns cost shares for regional programs defined in the agreement. The Implementation Agreement also requires each Permittee to designate an NPDES Coordinator who is also responsible for representing the Permittee's interest at Permittee coordination meetings such as the monthly Santa Ana/Santa Margarita Technical Advisory Committee.

The Permittees in the Santa Margarita and Santa Ana Regions participate in a Management Steering Committee made up of the City Managers, County Executive Officer, and the District's Chief Engineer; or their assigned alternate. Participation in the Management Steering Committee is not mandatory; however, it provides a management-level forum to address Urban Runoff management policies for the Permit Area and coordination of the review, and necessary revisions to the Riverside County DAMP and Implementation Agreement. In addition, the Management Steering Committee promotes a higher level of awareness of the MS4 Permit compliance program by each Permittee's senior management staff.

7.1.1 Accomplishments and Programmatic Improvements

Collectively, the Permittees Program Management activities have achieved:

- Development of the Riverside County DAMP, WQMP and Individual SWMPs following adoption of the 2004 MS4 Permit.
- Revised the Implementation Agreement to account for necessary program enhancements resulting from the new MS4 Permit.

- Established and held monthly meetings of a Technical Advisory Committee comprising of each Permittee's NPDES coordinator, to discuss and coordinate response to issues that arise through the ongoing implementation of the Riverside County DAMP-based programs.
- Voluntarily participate in a Management Steering Committee comprised of Permittee upper management (City Manager or equivalent) to provide a forum to discuss major policy issues related to MS4 Permit compliance program implementation. This also helps the major decision makers within each organization to stay abreast of the status of the implementation of the Riverside County DAMP and aware of upcoming issues and approaches taken by other Permittees.
- Enhanced enforcement and compliance elements of the Riverside County DAMP.
- Developed the Integrated Regional Watershed Management Plan (IRWMP) for the Upper Santa Margarita Watershed.
- Continued progress with the Bureau of Reclamation, San Diego County and other stakeholders on a uniform watershed plan and model for the Santa Margarita River watershed.

7.1.2 Recommended Revisions and Enhancements to Program Management Efforts

7.1.2.1 Assessment Metrics and Municipal Action Levels

To ensure that the Permittee's programs continue to be effective at managing the impact of Urban Runoff on Receiving Water quality, the Permittees will revise the Program Effectiveness Assessments for both the Individual SWMP and the Watershed SWMP following adoption of the new MS4 Permit. These planned changes are further described in Section 6.1.2.1 of this ROWD. The Permittees also recommend streamlining of the reporting forms to focus on the revised Program Effectiveness Assessments.

7.1.2.2 Revised Reporting Format

As a result of continued program effectiveness assessment, following adoption of the new MS4 Permit, the Permittees will update annual reporting forms to incorporate specific reporting requirements for the effectiveness assessment metrics and to remove inappropriate, outdated, or ineffective reporting requirements.

7.2 Development Planning

This program element links each Permittee's General Plan, environmental review process, and development approval and permitting processes to the later phases of detailed design, construction and operation. The development approval and permitting processes carries forth project-specific requirements in the form of conditions of approval, project plans, and design specifications that support tracking, inspection, and enforcement actions.

7.2.1 Development Planning Program Element Accomplishments and Programmatic Improvements

During the term of the 2004 MS4 Permit, the development planning program accomplishments and programmatic improvements included:

- Developed the WQMP to address post construction stormwater runoff quality for New and Significant Re-Development Projects.
- Development of a FAQ for WQMP projects to assist with implementing the WQMP program.
- Developed and subsequently enhanced a BMP design guidance manual to standardize the construction of post construction BMPs.
- Participation in the SMC efforts to develop a LID manual.
- Participation in SCCWRP's hydromodification studies to develop scientifically based hydromodification design guidance for Southern California.
- Enhanced online watershed maps to assist developers and the public with identifying areas tributary to Impaired Waterbodies.
- Adopted and implemented a MSHCP to ensure the regional-scale protection of habitat and natural resources in the approval process for New Developments.

7.2.2 Proposed Revisions to the Development Planning Program Element

7.2.2.1 Low Impact Development

The Permittees will revise the Riverside County Storm Water Quality Best Management Practice Design Handbook to (1) better incorporate LID design concepts, and (2) incorporate guidance to describe how developments can offset Treatment Control and hydromodification impacts with LID concepts including infiltration, evapo-transpiration, reuse, and onsite stormwater management. These revisions will follow the completion of the SMC LID BMP Manual and SCCWRPs Hydromodification Study. See the FY 2007-2008 Watershed Annual Report, Appendix G, Section G.7.2 for additional detail.

7.2.2.2 Hydromodification

As committed to in the 2004 WQMP (now Appendix O to the Riverside County DAMP), the Permittees have developed numeric guidance for hydromodification and are now working with SCCWRP to develop enhanced hydromodification guidance for Southern California. The Permittees will use the completed guidance to update the WQMP, BMP Design Handbook and other guidance as necessary to effectively mitigate hydromodification impacts. See the FY 2007-2008 Watershed Annual Report, Appendix G, Section G.7.2 for additional detail.

7.2.2.3 BMP Design Criteria

The Permittees will revise the Riverside County Storm Water Quality Best Management Practice Design Handbook to incorporate additional design guidance to clarify those Treatment Control BMPs that are effective at removing sediment-bound pesticides such as pyrethroid pesticides (consistent with the recommendations of the Toxicity Reduction Evaluation contained in Appendix D.

7.2.2.4 TMDLs

The Permittees will revise the DAMP to identify and include BMPs that are necessary to mitigate the impacts of Urban Runoff on Impaired Waterbodies.

7.2.2.5 Roads

The Permittees believe that standard WQMP requirements for public works road projects create potential avenues for unavoidable non-compliance. The Permittees would like to review this priority development category with Regional Board Staff to develop a better system to manage public works road projects.

7.2.2.6 Inspect and Verify Maintenance of Post Construction Treatment Control BMPs to Ensure Ongoing Effectiveness

As economic conditions allow, the Permittees propose to implement the following approach to inspect and/or verify maintenance of Treatment Control BMPs implemented on Priority Development Projects to ensure their ongoing effectiveness. The development of the program described below will require the Permittee resources that are unavailable in the current economic climate, particularly considering that it would likely require the Permittees to abandon the CAP in lieu of a local Permittee inspection program. The resources that will be required to ramp up new inspection programs are unavailable and may not become available during the term of the new MS4 Permit; however when the economy recovers sufficiently the Permittees propose to implement the program described below.

Integrated Management Practice (IMP) Exemption:

For the purposes of this program, IMPs include BMPs that are landscape based or otherwise serve an additional purpose other than Treatment Control. IMPs will be exempted from Inspection and Maintenance Tracking / Certification requirements if solely through the regular maintenance of the feature's secondary (non-treatment) functions and with Permittee concurrence, it can reasonably be expected that the treatment efficacy of the IMP will be ensured in perpetuity. An example that may satisfy this exemption would be a grassy swale that is mowed as part of regular landscape maintenance, whereas a BMP with a media filter which requires periodic resetting or replacement to maintain treatment effectiveness would not be exempted.

Priority Development projects will be exempted from all Treatment Control BMP Inspection and Maintenance Tracking / Certification requirements if they completely meet their Treatment Control requirements by implementing only IMPs that meet these criteria.

Priority Industrial and Commercial

The following requirements will apply to new priority Commercial and Industrial developments subject to the Permit's Commercial and Industrial business inspection requirements.

- Inspection

  Sites will be inspected per the Individual SWMPs current inspection frequency requirements that are based on the potential of the site to contribute to water quality impairments. At these inspections, in addition to the normal inspection requirements, all Treatment Control BMPs at the site will be inspected. In other words, all Treatment Control BMPs at high-priority facilities will be inspected annually; Treatment Control BMPs at medium-priority facilities will inspected biennially and Treatment Control BMPs at low-priority facilities will be inspected once during the term of the MS4 Permit. Improperly maintained BMPs may subject the maintenance entity to license suspension or administrative citations.

- Proof of Maintenance

  Maintenance records demonstrating compliance with the O&M procedures in the WQMP must be available for review at the time of the inspection. Failure to demonstrate that the BMPs have been maintained appropriately may result in license suspension or other enforcement actions.

Other Priority Developments

The following requirements will apply to new priority residential developments and businesses not otherwise subject to the Permit's Commercial and Industrial business inspection requirements.

- Proof of Maintenance and Self Certification

  The maintenance entity identified in the WQMP will be required to submit maintenance records including a signed certification to the Co-Permittee. The frequency of these submittals will be based on the relative maintenance requirements of the Treatment Control BMPs implemented on that site. BMPs will be categorized into groups as having High, Medium or Low maintenance requirements. If a WQMP project utilizes high-maintenance Treatment Control BMPs it will be categorized as a High-priority residential development, etc. High-Priority residential developments will be required to submit records annually, Medium – biennially, and Low – once every five years. Failure to report will result in administrative citations against the maintenance entity.

Permittee Projects and Permittee Maintained Treatment Control BMPs

This requirement will be included as part of the existing Permittee facility inspection program and inspected per the frequency requirements specified in the Riverside County DAMP.

7.3 Private Development Construction Activities

The Permittees have reviewed their ordinances to ensure that they are adequate to control discharges to the MS4 from construction sites to the MEP. For construction projects that will disturb one acre or more, the Permittees require proof of compliance with the General Permit-Construction prior to issuance of building/grading permits (a copy of the Notice of Intent filed with the State Board). Each of the Co-Permittees provides training for their construction inspectors regarding the proper installation and

maintenance of erosion and sediment control BMPs. Education and outreach to the building industry (developers, construction contractors, engineering firms, etc.) regarding managing discharges from construction sites is also incorporated into the "**Only Rain Down the Storm Drain** Pollution Prevention Program," the Permittees' area-wide public education and outreach program.

7.3.1 Private Development Construction Activities Program Element Accomplishments and Programmatic Improvements

- The Permittees annually distribute construction activities posters to construction sites as part of construction outreach program.
- A standardized construction activity reporting spreadsheet was developed for the Annual Reports.
- The construction inspection forms were updated.
- The Co-Permittees developed and maintained inventory databases of construction sites 1-acre or larger for which they have issued a building or grading permit.
- Prioritized inspections to help target construction activities that present the highest risk to water quality.

Highlights
Conducted over **17,000** construction site inspections
Initiated over **3,800** enforcement actions to gain compliance
626 attendees to NPDES Construction training

7.3.2 Proposed Revisions to the Private Development Construction Activities Program Element

The Permittees are not proposing revisions to their existing construction inspection programs at this time. As previously described, the Permittees expect that development activity will be greatly reduced during the term of the new MS4 Permit. Regional Board staff has however raised the issue of abandoned construction sites. Regulation of abandoned construction sites has proven challenging due to bankruptcy of project proponents, non-responsiveness or inability to locate underlying investment banks that actually own the developments, and the practical limitations encountered by the Permittees in calling bonds. As the Regional Board has enforcement capabilities that often surpass those of the Permittees, to ensure that this issue is effectively addressed the Permittees ask for the close cooperation and support of the Regional Board. Nonetheless, the Permittees are committed to continuing the use of their IC/ID programs, code enforcement tools, and other ordinance authorities to control, to the extent allowable under law, abandoned parcels that are not properly stabilized.

7.4 Existing Development – Permittee Facilities and Activities

The Municipal Facilities Strategy which has been consolidated into Section 5 of the Riverside County DAMP provides guidance for identifying potential storm water Pollutant sources and for selecting appropriate BMPs for implementation at identified facilities of concern owned and operated by the Permittees. The Permittees are implementing the provisions of the Municipal Facilities Strategy within their respective jurisdictions via processes described in their Individual SWMPs. To assist the Permittees in implementing this program, training focused on storm water regulatory requirements and BMPs related

to Permittee maintenance facilities and roadway maintenance activities were conducted twice annually during the 2004 MS4 Permit term.

7.4.1 Permittee Facilities and Activities Program Element Accomplishments and Programmatic Improvements

- The District coordinated preparation of GIS-based maps for Permittee MS4 facilities. The MS4 maps are updated annually with new information provided by the Permittees as part of the Annual Reporting process.
- Development of a GIS Browser that allows interested parties to view MS4 Facilities from the District's website.
- Updated Model Facilities Pollution Prevention Plan for Permittee facilities not requiring coverage under the Industrial General Permit.

Highlights
900 attendees to Municipal NPDES training

7.4.2 Proposed Revisions to Permittee Facilities and Activities Program Element

7.4.2.1 FPPP Guidance

The Permittees commit to developing a revised WQMP template for Permittee projects that better facilitates translation of WQMP BMP requirements into Facility Pollution Prevention Plans, where appropriate.

7.4.2.2 Integrated Pest Management

The Permittees commit to including Ecowise's standardized language for contracted pesticide management services in Permittee pesticide management contracts.

7.5 Commercial and Industrial Sources

The Principal Permittee and the County have implemented the CAP through which the County Department of Environmental Health makes use of existing inspection programs to address storm water compliance survey/inspections of restaurants and facilities that must secure a hazardous materials permit for either storing, handling or generating hazardous materials. As the responsible Certified Unified Program Agency in Riverside County, the County Department of Environmental Health is responsible for regularly inspecting all sites within the County that handle hazardous waste. The CAP is implemented in those cities and unincorporated areas that do not maintain an individual industrial/commercial inspection program through other mechanisms such as POTW waste pre-treatment programs or business license inspection programs.

Revisions to the inspection program requirements contained within the 2004 MS4 Permit expanded the scope of the overall commercial/industrial inspection program beyond the ability of the CAP to address. Each Co-Permittee now implements a supplemental inspection program for facilities not covered by the CAP. In addition, the 2004 MS4 Permit required inventories/databases of facilities, prioritization of

industrial and commercial sources relative to the potential to impact water quality, and specified inspection frequencies based upon facility priority.

The revised industrial and commercial sources program continues to have both regional and local jurisdiction components. Although the overall industrial/commercial inspection program has grown beyond the CAP, the CAP still addresses most of the facilities identified in the 2004 MS4 Permit. With its low overhead cost, it remains a cost effective approach to mitigating the impacts of industrial and commercial facilities on the MS4 and Receiving Waters.

7.5.1 Commercial and Industrial Program Element Accomplishments and Programmatic Improvements

- Reviewed and updated several educational brochures for distribution to inspected facilities.
- Developed outreach posters for gas and automotive service stations.
- Developed standardized inspection reporting forms for Annual Reports.
- Updated food service surveys.
- Extended the agreement with the County's Department of Environmental Health executed in 1999 for the area-wide CAP for the inspection of commercial and industrial facilities through June 30, 2009.
- Created Permittee databases for the inspected commercial and industrial facilities.
- Revised the Riverside County DAMP to reflect development of the industrial and commercial facility database that contains the following information: facility name, address, city, zip code, and Standard Industrial Classification (SIC) codes.
- Provided public education information regarding NPDES storm water permits to any new businesses listed in the Press Enterprise.

Highlights
3,974 inspections of Industrial and Commercial facilities
Over **1000** enforcement actions taken
426 attendees to Municipal NPDES training

7.5.2 Proposed Revisions to Commercial and Industrial Sources Program Element

The expected future expansion of the Commercial and Industrial Inspection Program to address Treatment Control BMPs as described in Section 7.2.2.6 would likely result in an expansion of the CAP that is beyond the ability of Environmental Health staff to accommodate and still achieve their own mandated inspection requirements. The Permittees are therefore proposing to amend the Riverside County DAMP and Individual SWMPs to recognize not only the CAP inspection program but also Permittee specific alternative programs that may develop during the term of the next MS4 Permit.

7.6 Residential Sources

The residential program focuses on educating residents about activities that can potentially contribute to beneficial use impairment. The residential program outreach is focused on Pollutants of Concern. The residential program is primarily implemented through the Regional Public Education Program; however, each Permittee typically conducts additional outreach. In those cases where residential Illegal Discharges are identified, appropriate code enforcement actions are also taken.

7.6.1 Accomplishments and Programmatic Improvements

The residential program achieved the following accomplishments during the term of the 2004 MS4 Permit:

- Developed several new outreach brochures and tools to promote changes in knowledge and behavior regarding activities that potentially generated Pollutants of Concern including landscape and gardening brochure, spray bottles with non-toxic pest control or cleaner recipes, septic system management brochure, updated outdoor activities brochure, and pet waste brochure.
- Implemented billboard advertising promoting "**Only Rain Down the Storm Drain**" message
- Purchased a new trailer to transport public education materials. The trailer is wrapped in graphics supporting the "**Only Rain Down the Storm Drain**" message.
- Point of Sale Outreach Programs to customers of hardware stores regarding paint, pesticides and fertilizers.
- Partnership with Valley Greeters to deliver "**Only Rain Down the Storm Drain**" information to new residents in the Santa Margarita Region.
- Promotion and participation in the annual Santa Margarita Watershed Clean Up Day.
- Continued supplemental support of the HHW/ABOP waste collection programs
- Continued update and revision of the public education information page
- Continued implementation and enhancement of school outreach programs conducted by Mission Resource Conservation District
- Reproduction and distribution of the After the Storm poster

7.6.2 Recommended Revisions

Although the Permittees continue to annually assess and modify outreach materials and programs, the Permittees are not recommending any substantive revisions to this program element at this time.

7.7 Public Education and Outreach

Although the bulk of public education and outreach activities are conducted by the District on behalf of the Permittees, the Permittees also conduct outreach activities. These activities include providing informational pamphlets at counters, conducting presentations for local businesses or developers, maintaining a stormwater page or appropriate stormwater links on their individual websites, conducting employee training programs, and attending various public events.

7.7.1 Public Education and Outreach Program Element Accomplishments and Programmatic Improvements

The Public Education and Outreach Program Element had the following accomplishments and improvements over the term of the 2004 Permit (not including those identified in Section 7.6.1):

- Use of a CEQA-style public participation process to develop the Riverside County DAMP, SWMPs, and WQMP
- Duplication and use of the USEPA construction site poster to educate construction site operators
- Distribution of stormwater outreach information to various businesses and construction sites through code enforcement, and building and grading inspectors
- Development and distribution of a automotive shop BMP poster
- Advertisements in the Business Press
- Update of the outdoor activities brochure for mobile operators

7.7.2 Recommended Changes

Although the Permittees continue to annually assess and modify outreach materials and programs, the Permittees are not recommending any substantive revisions to this program element at this time.

7.8 Elimination of Illicit Connections and Illegal Discharges

The Riverside County DAMP describes the discharge limitations and prohibitions applicable to the Permittee's MS4 (Section 4.1), procedures to be implemented when persistent exceedances of Water Quality Standards are identified (Section 4.2), responding to and reporting Illegal Discharges (Section 4.4), enforcement measures for IC/IDs (Section 4.5), measures to control litter (Section 4.6), measures to manage sanitary wastes (Section 4.7), and programs to promote collection and proper disposal of hazardous waste (Section 4.8).

7.8.1 IC/ID Program Element Accomplishments and Programmatic Improvements

- Developed Sanitary Sewer Overflow Procedures in coordination with the sanitary sewer operators in the Santa Ana and Santa Margarita Regions and implemented annual updates to Sanitary Sewer Overflow Procedures to ensure proper contact information for outside agencies.
- Established an electronic tracking system for NPDES complaints received through the toll free "Report Storm Water Pollution" hotline, OES or otherwise reported to the District.
- Enhanced public outreach regarding illegal dumping including brochures for: Outdoor Activities, Fountains & Swimming Pools, and Pet Waste, establishment of a Santa Margarita watershed Clean-Up Day and coordination with the County of Riverside Trash Task Force.

- Initiated a cooperative program with the County Environmental Health Department to promote Environmental Enhancement Projects in lieu of fines for environmental crime cases. This initiative resulted in a billboard advertising campaign and BMP posters addressing appropriate BMPs for gas stations and garages.
- Established IC/ID Monitoring Program

Highlights
1,263 potential IC/ID reports received and responded to
Over **5,500** calls received on stormwater pollution hotlines
94 IC/ID Monitoring events
5 monitoring events where field screening exceeding criteria

7.8.2 Proposed Revisions to IC/ID Program Element

The Permittees re-evaluated their existing IC/ID monitoring programs as part of this ROWD. The Permittees believe that the overall monitoring program is effective. However, the Permittees plan to revise their approach to the implementation of the Illicit Discharge monitoring program to increase monitoring data utility or overall program effectiveness.

7.8.2.1 Revise IC/ID Monitoring Program

The Permittees plan to revise their approach to the implementation of the IC/ID monitoring program. The goals of the recommended revisions are to:

- Relocate the IC/ID monitoring sites at MS4 outfalls.
- Distribute the monitoring sites throughout the Santa Margarita Region to detect Illicit Discharges closer to their source before they become excessively diluted.
- Increase efficiency and consistency in sampling resulting in enhanced data quality.
- Enhance response time to identify IC/IDs.

A model Illicit Discharge monitoring plan that accomplishes these goals is described below; a final plan will be incorporated into updated compliance documents with the new MS4 Permit.

7.8.2.2 Model Illicit Discharge Monitoring Plan

The Municipal Permittees will identify MS4 outfalls that could be used for monitoring sites based on maps of the MS4 facilities. This list of preliminary sites will be then field checked to determine the accessibility of the sites and feasibility for inclusion in the IC/ID monitoring program. Inaccessible sites or sites determined to be otherwise infeasible will be removed from the list.

Each Municipal Permittee except Menifee will then divide the list of the viable sites within their jurisdiction into groups of four. As Menifee only has one MS4, it will only monitor that one site. Each group of four sites will be monitored for a period of one year, twice during the dry season. Once all sites have been monitored for a year, sites will be repeated.

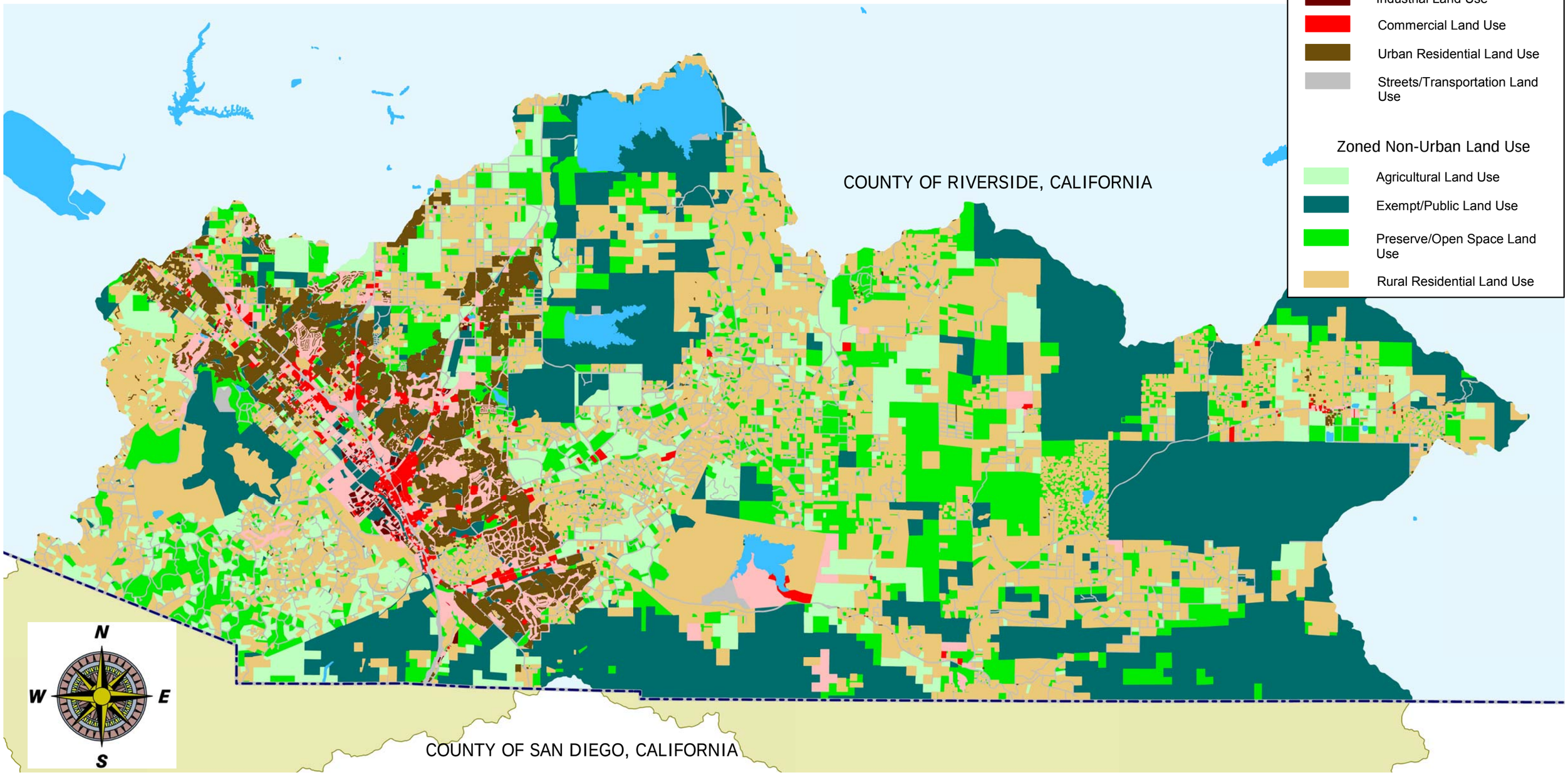
A monitoring team will be formed including one District and one Municipal Permittee staff member. The District staff will perform all monitoring/screening activities. The Municipal Permittee staff will be available to assist and will be responsible for initiating any necessary follow-up actions. This approach will provide consistency in screening and monitoring data collection and will allow the Municipal Permittee with jurisdiction over the tributary land use to be immediately aware of exceedances and initiate appropriate follow-up actions.

Appendix A
2008 Land Use Map

0003123

SANTA MARGARITA WATERSHED

COUNTY OF RIVERSIDE, CALIFORNIA



Legend

Zoned Urban Land Use

- Parks/Recreation Land Use
- Industrial Land Use
- Commercial Land Use
- Urban Residential Land Use
- Streets/Transportation Land Use

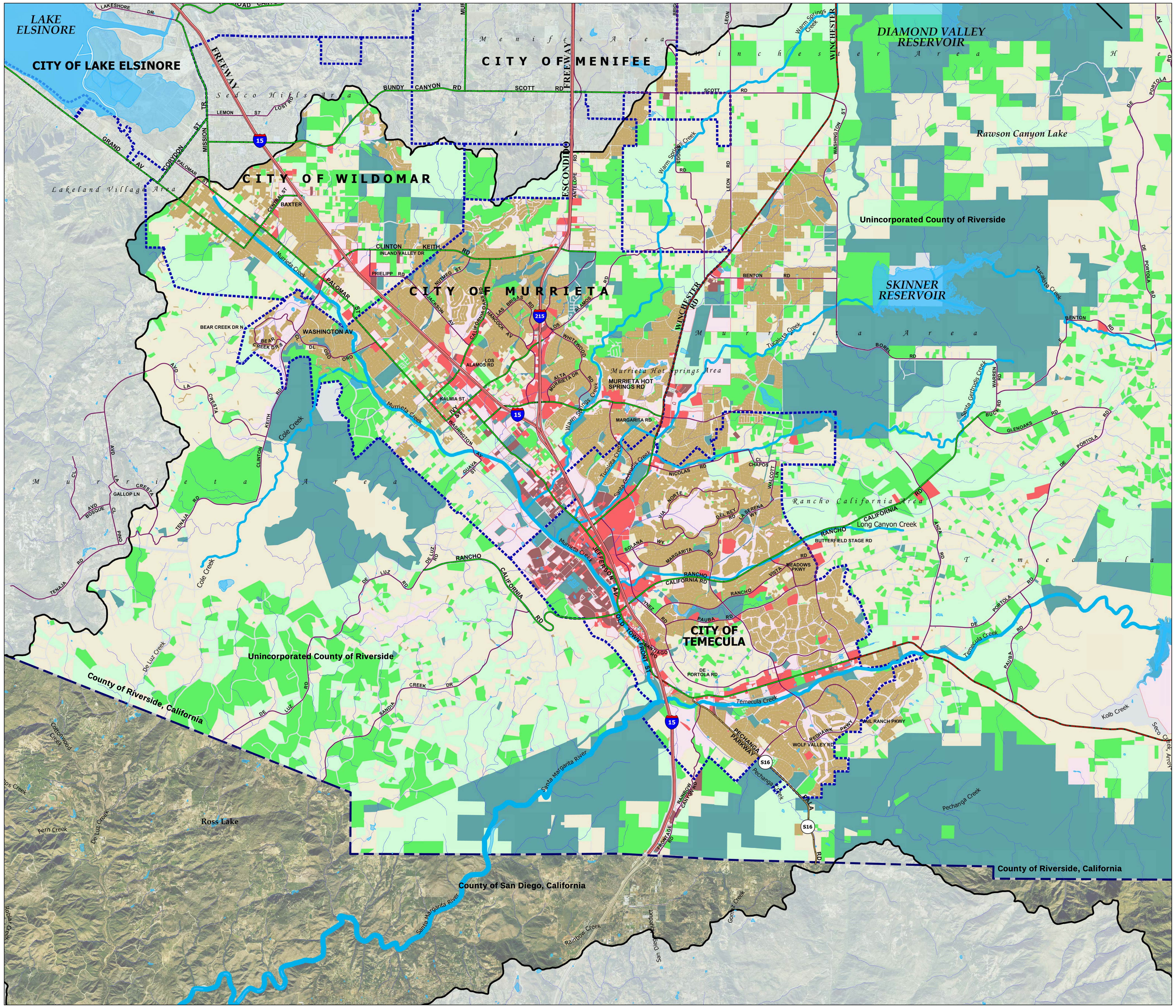
Zoned Non-Urban Land Use

- Agricultural Land Use
- Exempt/Public Land Use
- Preserve/Open Space Land Use
- Rural Residential Land Use

SANTA MARGARITA WATERSHED
WITH ZONED LAND USES
DELINEATED

(REVISED 14 JAN 09)

SANTA MARGARITA WATERSHED
WITHIN RIVERSIDE COUNTY, CALIFORNIA



Legend

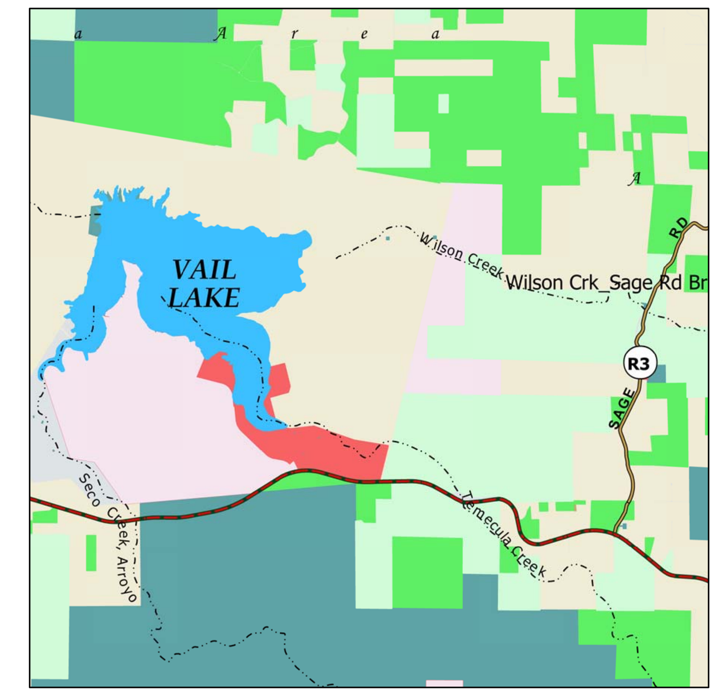
- US Freeways
- State Highways
- County Roads
- Primary Arterial Roads
- Secondary Collector Roads
- Waterbodies
- Watercourses
- Railroads
- Incorporated Areas
- Santa Margarita Watershed Boundary
- County of Riverside Boundary

Zoned Urban Land Use

- Commercial Land Use
- Industrial Land Use
- Parks/Recreation Land Use
- Urban Land Use
- Street/Roads Lands Use

Zoned Non-Urban Land Use

- Agricultural Land Use
- Exempt Land Use
- Preserve/Open Space Land Use
- Rural Residential Land Use

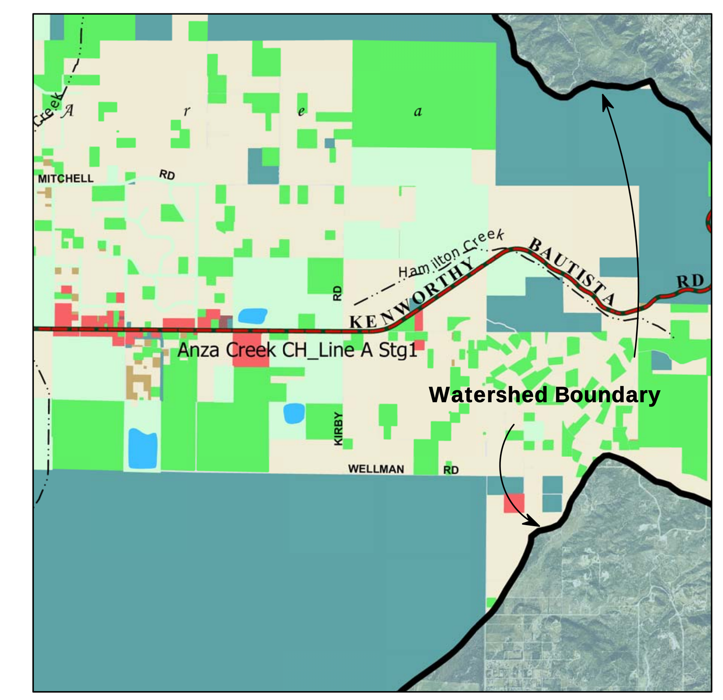


DETAIL 1

1:50,000

1 0 1 2 3 4 Statute Miles

1 0 1 2 3 4 5 Kilometers

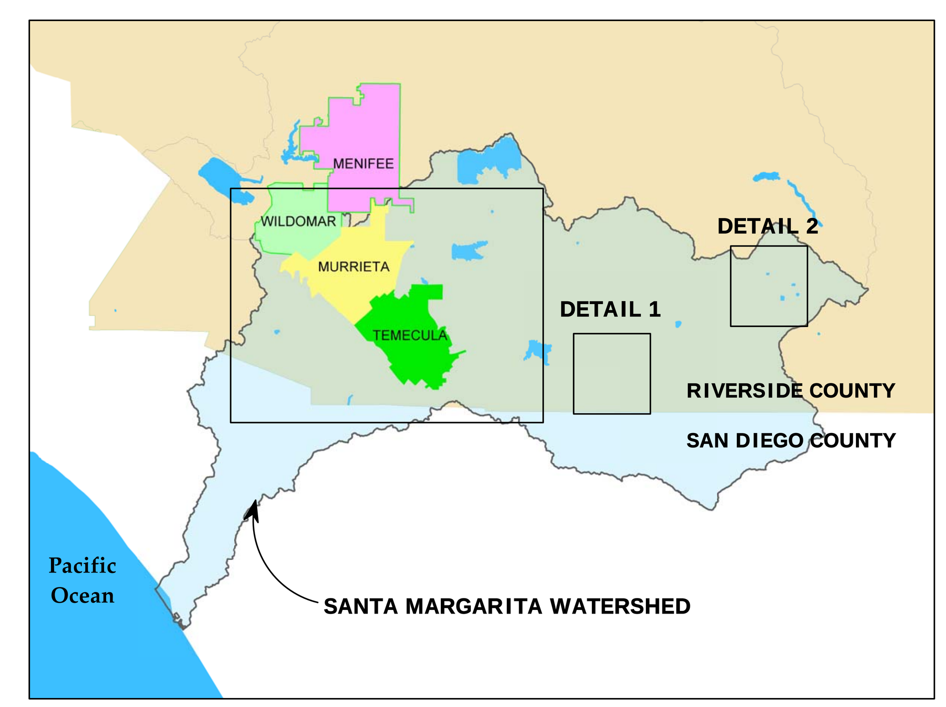


DETAIL 2

1:50,000

1 0 1 2 3 4 Statute Miles

1 0 1 2 3 4 5 Kilometers



VICINITY MAP

NOT TO SCALE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT GEOGRAPHIC INFORMATION SYSTEM

1:50,000

1 0 1 2 3 4 Statute Miles

1 0 1 2 3 4 5 Kilometers

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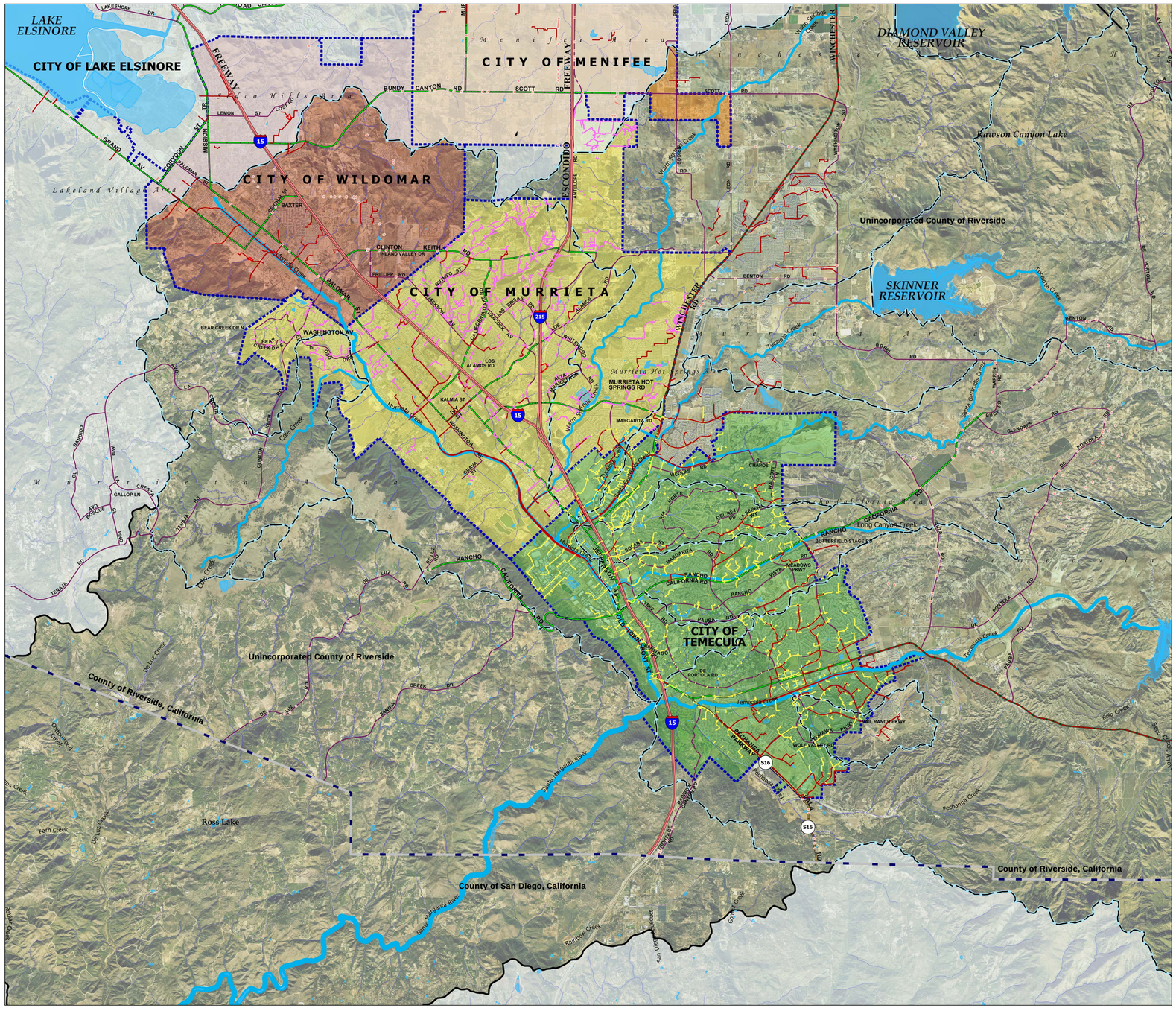
SANTA MARGARITA REGION OF RIVERSIDE COUNTY ZONED LAND USE

(REVISED 13JAN09)

Appendix B
Santa Margarita Region MS4 Facility Maps

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RIVERSIDE, CALIFORNIA



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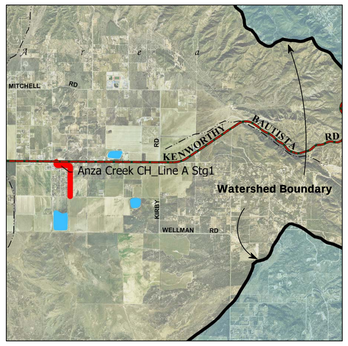

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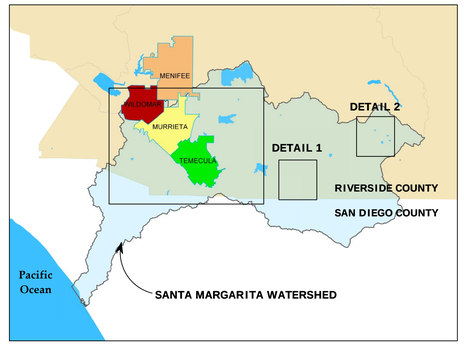

VICINITY MAP

NOT TO SCALE

Legend

- RCFC MS4 Facilities
- Riverside County MS4 Facilities
- City of Murrieta MS4 Facilities
- City of Temecula MS4 Facilities
- US Freeways
- State Highways
- County Roads
- Primary Arterial Roads
- Secondary Collector Roads
- Monitoring Drainage Boundaries
- Waterbodies
- Watercourses
- Railroads
- Incorporated Areas
- Santa Margarita Watershed
- County of Riverside Boundary

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
GEOGRAPHIC INFORMATION SYSTEM

1:50,000

1 0 1 2 3 4 Statute Miles

1 0 1 2 3 4 5 Kilometers

The graphical and tabular information shown on this document may be derived from a variety of public agency and/or private commercial sources such as Riverside County Transportation and Land Management Agency, Thomas Brothers Mapping, the Stephen P. Teale Data Center, GIS Technology Center, State of California, the United States Geologic Survey and the United States National Atlas. These sources may possess varying levels of accuracy and precision and this product is meant only as a guide to the relative position and scale of the depicted features. This GIS document is in no case to be interpreted as fundamental or decisive for purposes of land surveying, field engineering, plan drafting, code enforcement, land boundary determination and/or land acquisition.

SANTA MARGARITA WATERSHED FACILITIES MAP with Current MS4 Facilities Delineated

(REVISED 13JAN09)

Appendix C
Initial Assessment Methodologies based on CASQA approach

Construction Component Effectiveness Assessments

Goals

I Ensure that all Construction Sites have applicable permits from the Permittee.

II Increase the percentage of Construction Sites that are in compliance with Permittee building and grading permits

III Place additional focus on Construction Sites during Wet Season

IV Ensure that construction inspection staff are properly trained and informed of the issues related to stormwater quality

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Effectiveness Assessment Timeframe	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	% of active construction sites that are discovered without building/grading permits	2	Permit Term	Decreasing Trend or minimal %	Y
II	% of active High/Medium priority sites subjected to enforcement beyond verbal/written warnings	3	Permit Term	Decreasing Trend or minimal %	N
II, III	% of active High/Medium priority sites subjected to enforcement beyond verbal/written warnings **during wet season**	3	Permit Term	Decreasing Trend or minimal %	N
II	% of enforcement actions that reached each level of enforcement	3	Permit Term	Trend toward lower levels	N
III	% of active permitted construction sites provided wet weather reminders	2	Annually	N/A	Y
IV	% of construction inspectors receiving annual training	1	Annually	N/A	Y

Development Planning Component Effectiveness Assessments

Goals

I Develop Design Guidance for Low Impact Development (LID) BMPs

III Encourage the use of LID-Based Treatment Control BMPs

IV Ensure that appropriate planning staff are trained in WQMP requirements

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Effectiveness Assessment Timeframe	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	Status of SMC LID BMP Design Manual	1	Within Permit Term	Completion	Y
II	% of WQMP projects that met the exemption requirements for inspection and maintenance reporting by implementing only LID-Based Treatment Control BMPs	3	Permit Term	Increasing Trend	N
III	% of applicable planning staff that attended WQMP training.	1	Annually	N/A	Y

Permittee Facilities and Activities Program Effectiveness Assessments

Goals

I Ensure that Permittee Facilities have adequate BMPs implemented and that they are properly maintained
II Ensure that Channels and Inlets are kept free from trash and debris
III Encourage the use of Integrated Pest Management (IPM) on Permittee Facilities
IV Maintain an updated GIS map of the MS4 system
V Ensure the Permittee facility operators and maintenance workers are properly trained in issues related to water quality.

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Effectiveness Assessment Timeframe	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	% of facilities with appropriate BMPs identified	1	Annually	N/A	Y
I	% of Facilities provided reminders of appropriate BMPs	2	Annually	N/A	Y
I	% of annual facility inspections finding deficiencies in BMP implementation that require follow-up actions	3	Permit Term	Decreasing Trend or minimal %	Y
I	Average % of deficiencies identified in the previous year's inspections that were addressed.	3	Permit Term	Increasing Trend or high %	Y
II	Estimated Tons of Waste removed from Streets	4	Annually	N/A	N
II	Estimated Tons of Waste removed from Inlets	4	Annually	N/A	N
II	Estimated Tons of Waste removed from Open Channels	5	Annually	N/A	N
III	% of Pest Control Contracts that include language promoting or requiring IPM	1	Annually	N/A	N
IV	% of new Permittee-maintained MS4 facilities added to GIS Map	1	Annually	N/A	Y
V	% of Permittee Facility and MS4 operators and maintenance staff that attended training.	1	Annually	N/A	Y

Industrial-Commercial Facilities Program Effectiveness Assessments

Goals

I Maintain an updated and prioritized list of Industrial and Commercial Facilities

II Ensure the each Industrial and Commercial Facility has implemented BMPs that are appropriate for the activities and features at that facility

III Ensure that implemented BMPs are properly maintained to ensure their effective operation

IV Implement enforcement measures as necessary to reduce the occurance and recurrance of violations

V Ensure that inspectors are appropriately trained to identify problem areas and BMPs maintenance issues.

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Timeframe to Determine Effectiveness	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	% of new facilities added to database and prioritized	1	Annually	N/A	Y
II	% of inspected facilities with adequate Minimum BMPs in place at time of inspection	3	Permit Term	Increasing Trend or High %	N
III	% of inspected WQMP facilities subject to Post Construction Treatment Control BMP Inspection, with adequately maintained Treatment Control BMP	3	Permit Term	Increasing Trend or High %	N
IV	% of inspected High/Medium priority facilities that were subjected to enforcement beyond verbal/written warnings	3	Permit Term	Decreasing Trend or Low %	N
IV	% of enforced sites that are repeat offenders	3	Permit Term	Decreasing Trend or Low %	N
IV	% / Number of enforcement actions that reached each level of enforcement	3	Permit Term	Trend toward lower enforcement	N
V	Percent of applicable inspectors that attended training	1	Annually	N/A	Y

Residential Program Effectiveness Assessments

Goals

I Raise awareness among residents of activities that may be contributing to stormwater pollution
II Increase public awareness of BMPs for residential activities
III Increase public participation in hazardous material collection events
IV Increase public involvement in keeping the watershed clean
V Encourage the use of Alternative Pest Control Methods

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Timeframe to Determine Effectiveness	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	Number of outreach events to Schools	1	Annually	N/A	N
II	Number and type of educational materials distributed that target residential activities	1	Annually	N/A	Y
I, II	Results of Public Ed Surveys	2	Permit Term	Increasing or high level of Knowledge	Y
III	Gallons of Used Oil Collected through Used Oil Block Cycle Grant	4	Annually	N/A	Y
III	Total Pounds collected at HHW/ABOP events	4	Annually	N/A	Y
III	Total Number of participants at HHW/ABOP events	3	Annually	Increasing Trend	Y
IV	Pounds of trash removed through Watershed Cleanup Events	4	Annually (as events occur)	NA	N
V	Number of Home Improvement stores provided outreach and customer educational information for pesticide use	2	Annually	Increasing Trend	Y

Detection and Elimination of Illicit Discharges and Connections Effectiveness Assessments

I Revise and enhance IC/ID Monitoring Program
II Reduce the occurance of Illicit Connections and Discharges
III Increase public reporting of improper disposal into MS4
IV Ensure the IC/ID reports are reviewed and responded to in a timely manner
V Ensure the confirmed IC/ID events are eliminated as quickly as possible
VI Ensure the IC/ID response staff are trained to identify potential sources of Illicit Discharges and recommend BMPs to prevent such discharges

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Timeframe to Determine Effectiveness	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	Revise IC/ID Monitoring Program to screen random MS4 outfalls	1	N/A	N/A	N
II	% of IC/ID Monitoring events with sampleable flow	1	Permit Term	N/A	N
II	% of IC/ID Monitoring events that exceeded criteria and required follow-up	5	Permit Term	Decreasing Trend or low %	N
III	Number of IC/ID reports received	2	Annually	Increasing Trend	N
IV	% of IC/ID reports responded to within 1 business day of receipt	1	Annually	N/A	Y
V	% of confirmed and source-identified IC/ID incidents that required enforcement beyond verbal or written wardnings to eliminate	3	Permit Term	Decreasing Trend or minimal %	N
V	% of each type / level of enforcement	3	Permit Term	Trend toward lower levels	N
VI	% of IC/ID response staff receiving training	1	Annually	N/A	Y

Appendix D
Toxicity Reduction Evaluation for Pyrethroid Pesticides

Riverside County Flood Control and Water Conservation District

Riverside County – Santa Margarita Region Pyrethroid Source Identification Toxicity Reduction Evaluation

Final Phase II Report
January 2009

MACTEC
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San Diego, California 92123
858-278-3600 FAX 858-278-5300

Executive Summary

This document is the Phase II report for the Santa Margarita Region (SMR) Pyrethroid Source Identification Toxicity Reduction Evaluation (TRE) conducted by the SMR Permittees to identify the source(s) of toxicity in the SMR and develop a plan to reduce the toxicity. This report documents the Permittees' ongoing and proposed efforts to identify and reduce sources of pyrethroid pesticide toxicity associated with urban runoff.

Data gathered under this TRE was compared to data from neighboring counties. Based on available data, problems with pyrethroid-induced toxicity in urban runoff are common among municipalities in Southern California, and methods for addressing the problems are comparable.

A literature review was conducted to determine appropriate source control and treatment control BMPs for reducing the concentration and load of pyrethroids in storm water runoff. The literature source, the estimated potential for reducing pyrethroid-induced toxicity, and possible concerns about implementing the BMP are summarized.

Based on the results of the literature review, BMPs are evaluated for applicability and potential effectiveness in the SMR watershed. Many of the most effective and appropriate BMPs are currently being implemented by the Permittees.

A search for pending legislation did not identify any pending legislation pertaining to pyrethroid pesticides.

The most effective strategy to prevent water quality impacts from legal pesticide uses was identified as state or federal regulatory change involving effective labeling and use restrictions. The Permittees propose a five year plan to continue, review, and enhance current activities to reduce pyrethroid-induced toxicity.

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1.0 Introduction

This document is the Phase II report for the Santa Margarita Region (SMR) Pyrethroid Source Identification Toxicity Reduction Evaluation (TRE) conducted by the County of Riverside, the City of Murrieta, the City of Temecula, and the Riverside County Flood Control and Water Conservation District (District, collectively Permittees). The Phase I Status Report (RCFCWCD, 2008) contains the work plan for Phase II and an outline of the topics in this report, as well as additional background information. This Phase II report is divided into six sections.

Section 1 describes the purpose of the TRE and provides an overview of the approach taken by the Permittees. Section 1 also contains a discussion of the regulatory framework of the TRE, a brief project background, a description of the Santa Margarita watershed, pyrethroid pesticide background and usage, and management questions and objectives.

Section 2 describes available pyrethroid and toxicity data from other counties in Southern California, and compares the data to data from Riverside County. The data and comparisons are included to demonstrate that the problems and solutions relating to pyrethroid pesticides facing the Permittees are similar to those of neighboring counties in the region.

Section 3 presents the results of the literature review conducted for this study of pesticide reduction Best Management Practices (BMPs).

Section 4 discusses potential pesticide reduction BMPs, the status of the Permittees implementation of the BMPs, and, when applicable, examples of the implementation of the BMPs in other municipalities. Section 4 also contains a table summarizing the potential BMPs, their advantages and disadvantages, and relative cost.

Section 5 discusses pending legislation relating to pyrethroid pesticides.

Section 6 presents the five-year course of action the Permittees propose to follow to reduce pyrethroid-induced toxicity in the SMR.

1.1 Purpose and Overview of Approach

The purpose of the TRE is to identify the source(s) of toxicity in the SMR and develop a plan to reduce the toxicity. The results of Phase I of the TRE are contained in the TRE Status Report (Riverside, 2008). This Phase II report for the TRE study documents the Permittees' ongoing and proposed efforts to identify and reduce sources of pyrethroid pesticide toxicity associated with urban runoff. The goal of Phase II is to establish a course of action and develop modifications to the Permittee's Storm Water Management Plans (SWMPs) to more effectively control the sources of toxicity that were identified in Phase I of the TRE. The Permittees will incorporate the course of action and SWMP modifications into the Report of Waste Discharge (ROWD) that will be submitted to the RWQCB in January 2009.

Phase II activities included:

- A comparison of toxicity and chemistry results to data from adjacent Phase I municipal separate storm sewer system (MS4) permit areas, including San Diego County and Orange County.
- A literature review of current studies and a survey of pesticide reduction BMPs.
- A search for pending legislation regarding pyrethroid pesticides.
- Development of a proposed course of action for the Permittees.

A literature review was conducted of BMP information available from the Urban Pesticide Pollution Prevention (UP3) Project and other pesticide management programs and documents. Information on relevant BMPs was compiled and evaluated to identify potential BMPs that are available to mitigate urban sources of pyrethroids. Existing Permittee programs, such as outreach, regulation, and BMP implementation, were then evaluated for improvement opportunities.

The proposed course of action was determined with consideration of the adequacy of data collection (sufficient precipitation and runoff to collect adequate data) and pending

regulatory actions by California Department of Pesticide Regulation (DPR), and the United States Environmental Protection Agency (EPA).

Land uses in Riverside County are comparable to those in neighboring Orange County and San Diego County, and pyrethroid pesticide-induced toxicity has been observed in those counties. The Permittees are committed to identifying and addressing water quality issues with methods consistent with those used by other stakeholders in Southern California. To this end, data gathered under this TRE was compared to data from neighboring counties, and current pesticide reduction programs used by municipalities throughout California were reviewed.

Source control and treatment control BMPs were researched and evaluated for potential effectiveness in reducing pyrethroid pesticide-induced toxicity in the Santa Margarita watershed. Many of the most effective BMPs are currently implemented by the Permittees, and several have been implemented within the previous Permit term (2004-2008). A proposed five-year course of action for the Permittees was developed by combining the results of the research with the existing programs.

1.2 Regulatory Framework

At the federal level, the authority to regulate pesticide manufacture and use is assigned to the United States Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). In California, pesticide use is regulated at the state level by the DPR. In the SMR, the Permittees are required under the Clean Water Act to control discharges of pollutants, including pesticides that produce water toxicity, to and from their MS4 under the National Pollutant Discharge Elimination System (NPDES).

This TRE was performed as required by Monitoring and Reporting Program (MRP) R9-2004-001.

The MRP, Section II. A. I. 4, states:

> *"When results from the chemistry, toxicity, and bioassessment monitoring…indicate urban runoff-induced degradation, Permittees shall evaluate the extent and causes of urban runoff pollution in receiving waters and prioritize management actions to eliminate or reduce sources. Toxicity Identification Evaluations (TIEs) shall be used to determine the cause of the toxicity, and Toxicity Reduction Evaluations (TREs) shall be used to identify sources and implement management actions to reduce pollutants in urban runoff causing toxicity."*

As local regulation of pesticide use is generally preempted by federal and state law, the Permitttees' authorities are limited to addressing illegal disposal of pesticides, promoting public education, setting the example for minimum pesticide use, and coordinating with the federal and state agencies to facilitate regulatory changes at the state and federal level.

1.3 Project Background

Phase I of the TRE consisted of the toxicity monitoring begun in 2004 and the Toxicity Identification Evaluations (TIE) was initiated in the spring of 2007. The Phase I Status Report (RCFCWCD, 2008) provides a full project background. Toxicity monitoring at Temecula Creek and Murrieta Creek was initiated in 2004 using EPA protocol with the following indicator species: *Ceriodaphnia dubia*, *Selenastrum capricornutum*, and *Hyalella azteca*. Toxicity testing during the 2004-2008 reporting period indicated persistent wet weather toxicity to *Hyalella* in both Temecula Creek and Murrieta Creek. Toxicity was not observed to either *Ceriodaphnia* or *Selenastrum* in any of the samples collected over the four annual reporting periods beginning in the fall of 2004.

Toxicity Identification Evaluations (TIEs) were conducted on the wet weather samples collected from Temecula Creek and Murrieta Creek beginning in April 2007, in accordance with Table 2 of the MRP. The TIEs indicated that pyrethroids were the primary source of toxicity and biological degradation in both Murrieta Creek and Temecula Creek.

As a result of the toxicity and TIEs, storm water monitoring for pyrethroids was initiated in 2007-2008. Results indicate that the pyrethroids permethrin and/or bifenthrin are present in wet weather water samples taken at Murrieta Creek and Temecula Creek.

To further assess the impacts of pyrethroid pesticides the Permittees instituted Dry Weather Toxicity Testing and direct measurement of pyrethroid pesticide concentrations in dry weather water samples during the 2007-2008 reporting period. Toxicity and pyrethroid pesticides were not detected in dry weather water samples at either Murrieta Creek or Temecula Creek.

Phase I of the TRE concluded with the Phase I Status Report. The Phase I Status Report included studies to better characterize patterns and sources of toxicity and to evaluate the hypothesis that the *Hyalella* toxicity is due to pyrethroids.

Bifenthrin and permethrin appear to be the primary toxic elements in Temecula Creek and Murrieta Creek. While bifenthrin and permethrin were applied to both agricultural and non-agricultural land uses, the major sources of pyrethroid toxicity in the SMR are non-agricultural activities. Permethrin was applied more than any other pyrethroid pesticide in the urban landscape. Bifenthrin and permethrin application rates were one and three orders of magnitude higher for structural control applications than agricultural applications in Riverside County. Structural control appears to represent 93% of the total pyrethroids use for Riverside County.

The Status Report outlined the plan for Phase II of the TRE, and this report presents the results of Phase II.

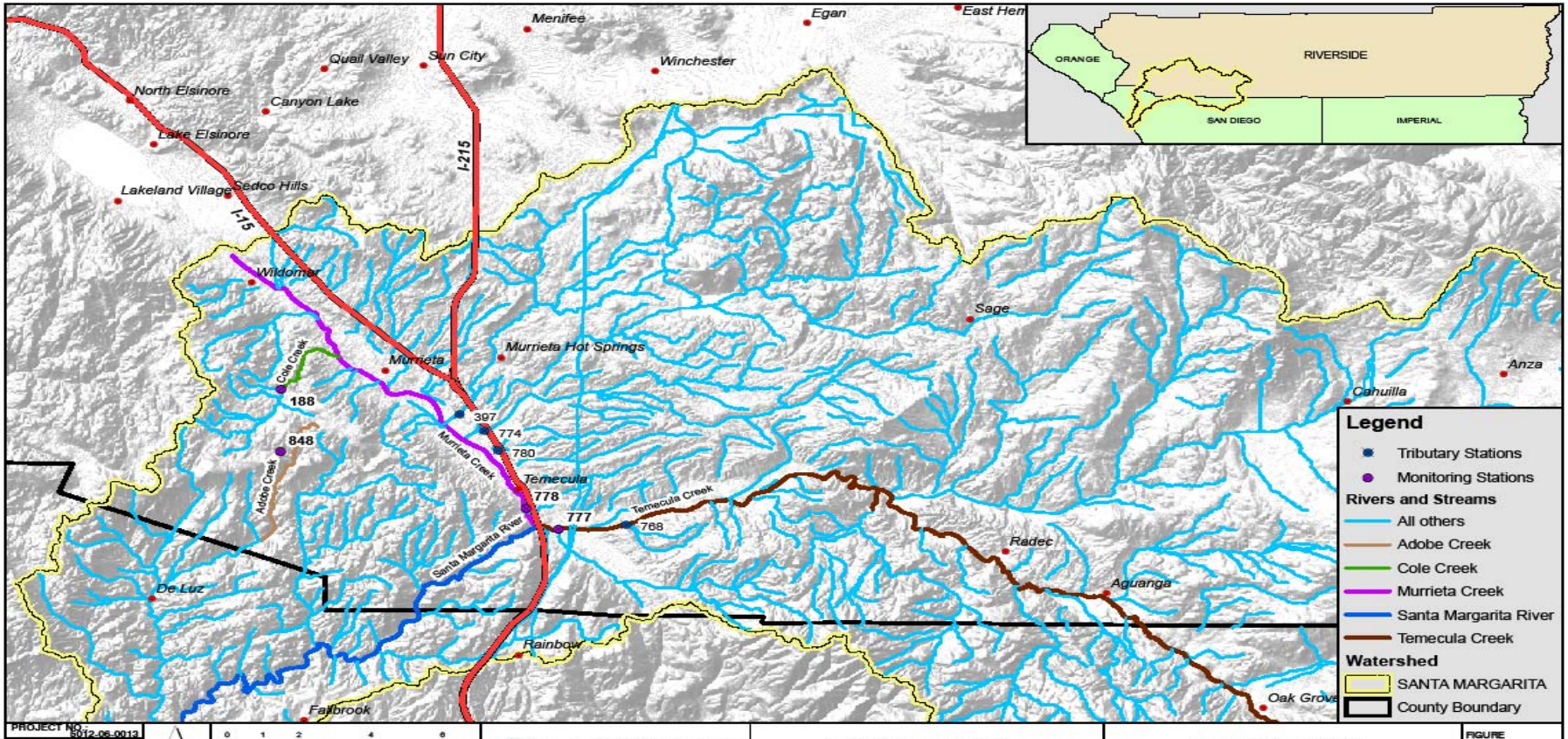
1.4 Watershed Description

The SMR encompasses approximately 750 square miles in southwestern Riverside and northern San Diego Counties (see Figure 1-1). The upper (northeast) portion of the SMR is in Riverside County with the remainder in San Diego County. The SMR is subdivided into the Temecula Creek and Murrieta Creek sub-watersheds and has an arid Mediterranean climate. Creeks in the SMR are ephemeral. Flow in Temecula Creek and in Murrieta Creek results almost exclusively from groundwater during the dry season. It is rare to find flow during dry weather at the tributary stations, and usually this flow infiltrates before reaching Temecula Creek or Murrieta Creek (2006-2007 Monitoring Annual Report). While the ephemeral streams in the SMR are technically receiving waters, the term "Receiving Waters" as used in this TRE Status Report refers exclusively to Murrieta Creek and Temecula Creek.

The Santa Margarita River is formed by the confluence of Murrieta Creek and Temecula Creek. The confluence is located in Riverside County, approximately five miles northeast of San Diego County. The Santa Margarita River flows from Riverside County into San Diego County through the community of Fallbrook and Marine Corps Base Camp Pendleton. The lower estuary and river are protected by Camp Pendleton and are much less developed than surrounding areas in Southern California. The Santa Margarita River is able to support a relative abundance of wildlife and habitats in part because of its undeveloped state.

Figure 1-1

Riverside County Santa Margarita Watershed



As presented in Table 1-1, the total population in the SMR of Riverside County is significantly less than adjacent watersheds covered under similar Phase I MS4 NPDES permits.

Table 1-1

San Diego Region Populations

Jurisdiction	Population
Orange County	3,002,048
San Diego County	2,941,454
SMR/Riverside County	250,483
Unincorporated	55,291
Murrieta	97,257
Temecula	97,935

1.5 Pyrethroid Pesticide Background and Usage

A statewide compilation of the presence and effects of pyrethroid pesticides in urban surface waters, prepared in July 2008 and presented at the 2008 California Association of Stormwater Quality Agencies (CASQA) Conference, outlined the rise in pyrethroid use and its increased presence in urban waterways (Ruby, 2008). A comprehensive survey of pesticide use in Sacramento, San Diego, and Orange Counties also concluded that, as the older pesticides chlorpyrifos and diazinon have been phased out, pyrethroid pesticides have seen increased usage (Wilen, 2005). The Urban Pesticide Pollution Prevention (UP3) Project confirms that pyrethroids are the cause of toxicity in numerous California waterways, particularly in urban waterways. The UP3 Project (www.up3project.org) publishes an annual review of new scientific findings on pesticides in urban surface water (TDC, 2007). Since 2005, the reviews have consistently indicated that pyrethroid use continues to increase and that pyrethroids are found to be the cause of toxicity in urban waterways. The pyrethroid use information is confirmed by data published by the DPR.

Pyrethrins are natural insecticides that are derived from an extract of chrysanthemum flowers. Pyrethroids are synthetic versions of pyrethrins. These chemicals act on the nervous system of insects. Commercial pyrethroid pesticides often contain a synergist that works by restricting the enzymes insects use to detoxify pyrethroids. While pyrethroids have been shown to be one of the least poisonous insecticides to mammals, the effects depend on the level of exposure, the health of the animal, and the environmental circumstances.

Pyrethroids applied in urban areas enter the storm drainage system of the MS4 by surface runoff and are transported directly to receiving waters. Other potential urban sources are runoff from irrigation with reclaimed water, application overspray, and atmospheric deposition. Pyrethroids transported via the MS4, from whatever source, are considered to be non-point discharges. Agriculture, nursery, and urban/suburban uses are the main categories of sources of pyrethroids in the receiving waters of the SMR.

Outdoor structural pest control is the predominant urban use of pyrethroids in most watersheds. However, in the SMR, the acreage dedicated to agricultural land use exceeds the urban land use area by approximately 2:1. Pyrethroid insecticides are applied to a variety of crops in the SMR and California throughout the year. According to the DPR, pyrethroids are commonly used on fruit and nut trees, row crops, and in nurseries. Six of the primary pyrethroids used in California agriculture, in order of decreasing amount applied in 2003, are permethrin, esfenvalerate, lambda-cyhalothrin, cyfluthrin, bifenthrin, and cypermethrin. Therefore, agricultural sources of pyrethroids were considered.

TIE methods for pyrethroids are still being developed. Effective methods require the ability to measure low concentrations of pyrethroids, and this remains a challenge. Fortunately, the development of TIE methods for pyrethroids is progressing and moving towards standardization (San Francisco Estuary Project, 2007). TIEs are planned for storm water samples collected during 2008-2009 when toxicity is evident.

1.6 Management Questions and Objectives

This TRE is designed to confirm the toxic element observed in the samples collected in the Santa Margarita Region, identify likely sources of the toxic element, and propose mitigation measures for those sources. TIEs identified pyrethroids pesticides as the likely toxic element. As the MRP specifies that a TRE must be conducted following toxicant identification through a TIE, Phase I of the TRE focused on the pyrethroids identified as the source of toxicity in the 2007 TIEs. To support this TRE, the Permittees commissioned additional wet and dry weather toxicity testing, water column pyrethroid testing, additional TIEs to verify the persistence of pyrethroids as the toxicant. Based on the resulting information, the TRE evaluates the specific sources of toxicity and likely mitigation.

This TRE study assumes that pyrethroid sources and resultant toxicity patterns in the SMR are similar to those in neighboring counties, in particular San Diego and Orange Counties. Under this assumption, the Permittees hypothesized that pyrethroids would be detected in samples at most if not all monitoring locations, that the samples would exhibit toxicity to *Hyalella*, and that TIEs would indicate pyrethroids as the cause of the toxicity. Unlike other regions, dry weather toxicity is not expected in the SMR, as dry weather flows are supported primarily by groundwater.

Based on this assumption, this TRE was designed to provide information to help answer the following five management questions related to the toxicity:

1) Is the pyrethroid toxicity persistent in Temecula Creek and Murrieta Creek?
2) Does the toxicity occur during dry weather?
3) Are there any obvious sources of illicit discharge of pyrethroids that can be abated?
4) What are the likely sources of pyrethroid toxicity in the SMR?
5) What potential management measures are available to the Permittees to mitigate the impacts of pyrethroid pesticide application?

Answers to the first four questions are detailed in the Phase I Status Report. Briefly, toxicity is persistent in the creeks during wet weather, but is not evident in dry weather samples. No

obvious sources of illicit discharge were found. The likely primary source of pyrethroids is structural control performed by pest control operators (PCOs). The final question is addressed during Phase II and is the focus of this report.

2.0 Data Comparison

An assumption of this TRE study is that pyrethroid sources and resultant toxicity patterns in the SMR are analogous to those in similar counties, in particular neighboring San Diego and Orange Counties. To verify this assumption, it was necessary to compare data collected in SMR to data collected in other locations. As part of the 2008 CASQA pyrethroids data compilation, monitoring results were summarized from studies that investigated the presence and effects of pyrethroid pesticides in urban areas of California (Ruby, 2008). The CASQA summary listed the frequency of detection of various pyrethroid pesticides and results of toxicity testing for different indicator species. Results from various northern and Southern California locations were detailed, including results of water column studies from Orange, San Diego and Sacramento Counties.

Pyrethroids, as a class of chemicals, have an affinity for particles and they are considered to be relatively hydrophobic; they are therefore commonly found in sediments of waterways downstream of their application sites. The initial toxicity studies leading to the identification of pyrethroids as pervasive environmental contaminants in California were performed on sediment samples by Don Weston and his colleagues at the University of California, Berkeley (Weston et al., 2005; Amweg et al., 2006). Recently, improvements in analytical methods for pyrethroids in water, and modification of toxicity studies to more effectively test for pyrethroid-based toxicity in water, have lead to increasing evidence of the presence of pyrethroids in water column samples, and toxic effects in the water matrix (see citations for Orange and San Diego County in Ruby, 2008).

Extensive work has been performed on the environmental presence and effects of pyrethroids in urban areas of the neighboring Orange and San Diego counties; however, much of this work has been performed on sediment samples. Although the sediment monitoring results do not correspond directly with the SMR water column test results, sediments are considered to be effective integrators of contaminants from the contributing storm water flows. The deposited sediments are produced as particles settle out from the passing water over some

period of time, and tend to accumulate until they are washed away by higher-velocity flows. Summaries of the relevant sediment study results are therefore included in the discussion that follows.

In Orange County, an ongoing study being performed by UC Davis, in conjunction with UC Riverside and the Orange County UC Cooperative Extension, has consistently found bifenthrin and permethrin in water column runoff samples from residential areas (Haver et al., 2007; Oki, personal communication). In samples from four residential sites they have detected bifenthrin in 100% of samples, with the number of samples varying from 48 to 57 per site (Oki, personal communication). In sediment samples collected in recent years from the Santa Ana Region of Orange County, bifenthrin is commonly detected (32 of 56 samples) and permethrin less frequently so (4 of 56 samples), with sediment toxicity to *Hyalella* common (39 of 54 samples tested were moderately or highly toxic; see summary in Ruby, 2008).

In a 2005 study of six Orange County residential storm drainages and seven tributary streams draining commercial/residential land uses, bifenthrin was detected in 95% of dry weather samples and 100% of wet weather samples (Budd et al., 2007). Because treatment of nursery products is mandatory to control Red Imported Fire Ants, an older DPR study, conducted in 1999-2002, found occasional detects of bifenthrin in urban runoff samples, along with frequent detects in nursery runoff from several Orange County sites.

In San Diego County, under NPDES Permit monitoring conducted since 2004, pyrethroids have been commonly detected in water samples from several receiving waters, and toxicity to *Hyalella* has been increasingly observed in water samples (see summary in Ruby, 2008). Bifenthrin was detected in 12 of 15 samples collected from 2005-2006 and 2006-2007; detection frequency was 100% in samples from Chollas Creek, Agua Hedionda, and Tecolote Creek. Toxicity to *Hyalella* was observed in 22 of 57 samples tested over the three year period, 2004-2007. In a TIE study performed on Chollas Creek samples during 2005-2006,

67% of samples were acutely toxic to *Hyalella*, and the toxicity was found to be likely due to pyrethroids.

In a 2004-2005 study performed by UC Davis and others, sediments from Switzer Creek at its outlet to San Diego Harbor were found to be highly toxic; bifenthrin and permethrin were detected at high concentrations, and a sediment TIE identified pyrethroids as the likely cause of the observed toxicity (Anderson et al., in press). As part of a statewide survey of urban waterways, sediments were tested from several receiving waters in San Diego County. All were found to be highly toxic to *Hyalella* (Holmes et al., in press).

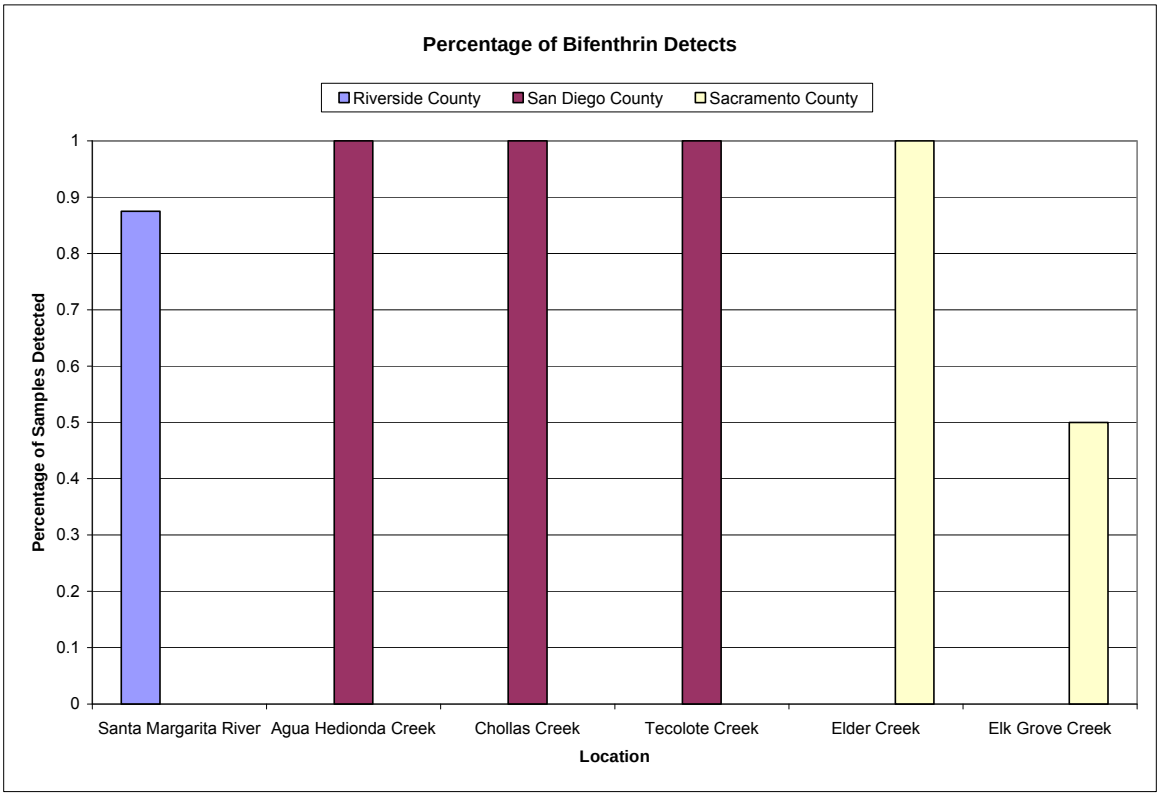
To further compare the pyrethroid sources and toxicity patterns in the SMR to other counties, the CASQA data summary was analyzed to select the studies which reported results for the same constituents and effects identified in the SMR, specifically permethrin, bifenthrin, and toxicity to *Hyalella.* The total number of detections for the different monitoring locations was divided by the total number of samples taken at the sites to calculate the percentage of samples with detectable concentrations of pyrethroids. This normalized metric allowed for comparison of the various datasets.

While permethrin is among the more commonly-used pyrethroids, it is much less toxic to aquatic life than bifenthrin (TDC, 2007). For the purposes of this assessment, bifenthrin detection frequency and frequency of toxic effects were used as the metrics for comparison.

Comparative results for bifenthrin are summarized in Figure 2-1. Data were available for two creeks in Sacramento County and three locations in San Diego County, in addition to the data collected for SMR. Two samples were taken at the Sacramento County sampling locations. For San Diego County, each creek was sampled three times except for Chollas Creek, which was sampled six times. The SMR was sampled a total of eight times. In most cases, bifenthrin was detected in over 80% of samples. Only at Elk Grove Creek in Sacramento County was bifenthrin detected at a notably lower percentage.

Figure 2-1

Percentage of Samples with Bifenthrin Detections

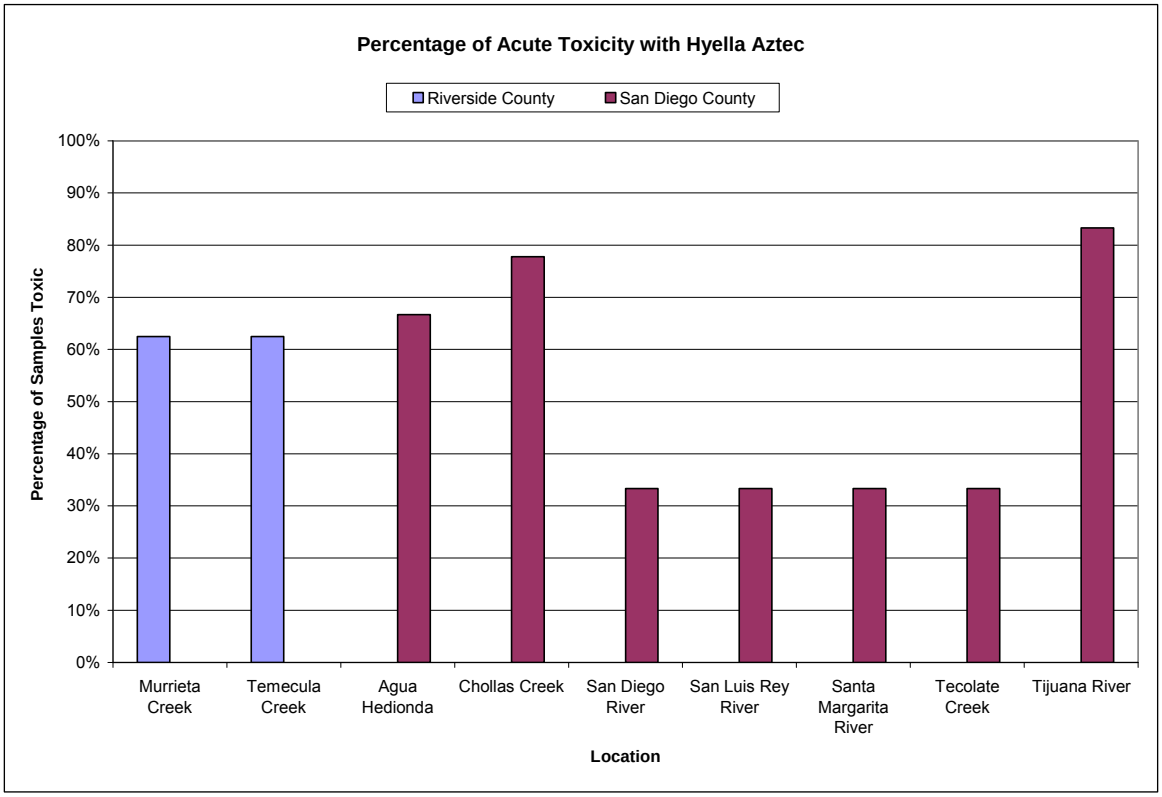


Toxicity to *Hyalella* was documented in water samples from San Diego County, along with the SMR. Toxicity testing was performed on samples from seven San Diego County water bodies. The sample sets ranged from three to nine toxicity tests (Aqua Hedionda, San Dieguito River, Tijuana River, and Chollas Creek). In the SMR, a total of eight toxicity tests were performed on samples from Murrieta Creek and Temecula Creek. The results for frequency of acute toxicity from the SMR were within the range of the results for similar sites in San Diego County (see Figure 2-2).

After comparing the results from different locations, the assumption that pyrethroid sources and resultant toxicity patterns in the SMR are similar to those in similar counties appears to be valid.

Figure 2-2

Percentage of Samples with Acute Toxicity to *Hyalella*



3.0 Literature Review

A literature review was conducted during December, 2008 to determine appropriate BMPs for reducing the concentration and load of pyrethroids in storm water runoff. An initial search was made of the Urban Pollution Prevention Program (UP3) website (www.up3program.org) for potential examples of BMP strategies implemented specifically for pyrethroids. The United States Environmental Protection Agency website and the CASQA website were also reviewed for pyrethroid specific BMPs. Widespread use of pyrethroids is relatively recent, and there has been little direct evaluation of BMPs for pyrethroids. Further research was conducted on general storm water BMPs, and their potential for pyrethroid reduction was evaluated based on the design of the BMP and the chemical behavior of pyrethroids.

To identify pending legislation that may be related to pyrethroid pesticides, web searches were conducted on the websites for DPR, the California legislature, the EPA, and the Library of Congress. However, no pending legislation was identified as relevant to pyrethroid pesticides.

Table 3-1 below presents the findings of the literature review. BMPs are categorized as either source control or treatment control, and within each category they are sorted by type. The literature source, a summary of the BMP, the estimated potential for reducing pyrethroid-induced toxicity, and possible concerns about implementing the BMP are provided. See Section 4 for further information about each type of BMP.

Table 3-1
Literature Review Matrix

Type of BMP	Literature Source	Summary	Ability to Reduce Toxicity Caused by Pyrethroids	Storm Water Concerns
Source Control				
Regulatory	Pesticides of Interest for Urban Surface Water Quality. Urban Pesticides Use Trends Annual Report. July 2008.	Suggests regulatory changes as a result of increased toxicity due to pyrethroid use	Potentially High	Supplementary to other BMPs, Will take years to show results
Regulatory	Improving Urban Pesticide Regulatory Activities to Protect Water Quality – Annual Update 2007. November 2007.	Discusses recent state and federal regulatory pesticide activities on an annual basis	Potentially High	Supplementary to other BMPs, Will take years to show results
Regulatory	California Department of Pesticide Regulation. http://www.cdpr.ca.gov/docs/registration/reevaluation/chemicals/pyrethroids.htm. 2007.	The reevaluation of the widespread presence of synthetic pyrethroid residues in the sediment of both agricultural and urban dominated California waterways at levels toxic to Hyalella azteca (H. azteca).	Potentially High	Supplementary to other BMPs, Will take years to show results
Integrated Pest Management (IPM)	Building Maintenance - Structural Integrated Pest Management. June 2008.	Promotes reduction in pesticide use through use of municipality IPM and hiring of PCO's trained in IPM	Potentially High	Does not eliminate all uses of pyrethroids
IPM	California Stormwater BMP Handbook. January 2003.	Promotes prevention of pesticide use through use hiring of PCOs that use IPM as an alternative	Potentially High	Does not eliminate all uses of pyrethroids
IPM	City of Santa Monica Toxics Use Reduction Program Integrated Pest Management. June 1997.	Overview of IPM program initiated by the City of Santa Monica	Potentially High	Does not eliminate all uses of pyrethroids
IPM	National Management Measures to Control Nonpoint Source Pollution from Urban Areas. November 2005.	EPA document discussing management practices to help reduce pesticide use	Potentially High	Does not eliminate all uses of pyrethroids
IPM	National Pollutant Discharge Elimination System (NPDES) Phase II BMP & Measureable Goal Examples. February 2008.	Provides examples and goals of good housekeeping BMPs	Potentially High	Does not eliminate all uses of pyrethroids
IPM	The Monterey Bay Green Gardener Program "sample curriculum". www.green-gardener.org/about. Accessed December 2008.	Informs the public and landscapers about the green gardener program and how to get involved	Potentially High	Does not eliminate all uses of pyrethroids

Table 3-1 (continued)
Literature Review Matrix

Type of BMP	Literature Source	Summary	Ability to Reduce Toxicity Caused by Pyrethroids	Storm Water Concerns
Source Control				
IPM	Western IPM Center. www.wripmc.org. Last updated 12/23/2008.	Pest management information specific to region, state, or territory.	Potentially High	Does not directly address pyrethroids
IPM	EcoWise Certified. www.ecowisecertified.com. Accessed December 2008.	Information on IPM program design, developing contracts for structural IPM, and pilot program aimed at developing IPM certification.	Potentially High	Does not directly address pyrethroids
IPM	Our Water Our World. www.ourwaterourworld.org. Copyright 2008.	Contains assorted fact sheets on specific pests and methods to manage them without using hazardous materials.	Potentially High	Addresses pyrethroids in water pollution fact sheet.
IPM	UP3 Project. www.up3project.org. November 2008.	Provides tools to municipalities to reduce municipal pesticide use and to conduct outreach to their communities on less-toxic methods of pest control	Potentially High	Addresses pyrethroids toxic impact on water bodies.
IPM	State of California Green California. www.green.ca.gov/EPP/building/structipm.htm. Accessed December 2008.	Provides information on structural IPM.	Potentially High	Addresses pyrethroids impact on storm water.
IPM	San Francisco Department of the Environment. http://www.sfenvironment.org/our_programs/topics.html?ti=1. Accessed December 2008.	Contains information regarding key components of integrated pest management.	Potentially High	Addresses pyrethroids impact on storm water.
Low Impact Development	Low-Impact Development Design Strategies: An Integrated Approach. June 1999.	Discusses LID design strategies and successes, including storm water controls	Potentially High	Does not directly address Pyrethroids
Low Impact Development	Low Impact Development Handbook: Stormwater Management Strategies. December 2007.	Reviews many LID techniques appropriate for Southern California's climate	Potentially High	Does not directly address Pyrethroids
Public Outreach	County of Los Angeles Department of Public WorksStorm Water/Urban Runoff Public Education Model Program. Fiscal Year 2002.	Provides Los Angeles specific examples of Public Outreach and Education	Potentially High	Change is up to individuals, needs cumulative effect

Table 3-1 (continued)
Literature Review Matrix

Type of BMP	Literature Source	Summary	Ability to Reduce Toxicity Caused by Pyrethroids	Storm Water Concerns
Source Control				
Public Outreach	Drainage Area Management Plan - Santa Ana and Santa Margarita Regions. July 2005.	Discusses local outreach actions conducted by the Permittees	Potentially High	Change is up to individuals, needs cumulative effect
Public Outreach	Environmental Justice Pilot Project Pest Management Assessment: Soil Fumigant and Organophosphate Insecticide Use and Alternatives - Parlier, Fresno County, California. October 2007.	Study of Agricultural pesticide use in Fresno area, including use of reduced risk pesticides	Potentially High	Unknown potential water quality and toxicity issues
Public Outreach	National Management Measures to Control Nonpoint Source Pollution from Urban Areas. November 2005.	EPA document discussing management practices to help reduce pesticide use	Potentially High	Change is up to individuals, needs cumulative effect
Public Outreach	National Pollutant Discharge Elimination System (NPDES) Phase II BMP & Measureable Goal Examples. February 2008.	Provides examples and goals of public outreach BMPs	Potentially High	Change is up to individuals, needs cumulative effect
Public Outreach	Pesticides of Interest for Urban Surface Water Quality. Urban Pesticides Use Trends Annual Report. July 2008.	Contains recommendations for public education based on analysis of pyrethroid use trends	Potentially High	Change is up to individuals, needs cumulative effect
Treatment Control				
Extended Detention Basin	Santa Clara Valley Urban Runoff Pollution Prevention Program Commercial Site Design Examples. February 2007.	Shows examples of different structural treatment methods and their effectiveness	Moderate	Improper maintenance could lead to other water quality issues
Extended Detention Basin	California Stormwater BMP Handbook. January 2003.	Reviews extended detention basin BMP methods, concerns, and goals	Moderate	Improper maintenance could lead to other water quality issues
Extended Detention Basin	Ventura Countywide Stormwater Quality Management Program Technical Guidance Manual for Stormwater Quality Control Measures. July 2002.	Reviews many BMP methods and contains information specific to Southern California	Moderate	Improper maintenance could lead to other water quality issues

Table 3-1 (continued)
Literature Review Matrix

Type of BMP	Literature Source	Summary	Ability to Reduce Toxicity Caused by Pyrethroids	Storm Water Concerns
Treatment Control				
Infiltration Basin	California Stormwater BMP Handbook. January 2003.	Reviews infiltration basin BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Infiltration Basin	Ventura Countywide Stormwater Quality Management Program Technical Guidance Manual for Stormwater Quality Control Measures. July 2002.	Reviews infiltration basin BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Infiltration Trench	California Stormwater BMP Handbook. January 2003.	Reviews infiltration trench methods of BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Infiltration Trench	Ventura Countywide Stormwater Quality Management Program Technical Guidance Manual for Stormwater Quality Control Measures. July 2002.	Reviews infiltration trench methods of BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Media Filter	California Stormwater BMP Handbook. January 2003.	Reviews media filter BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Media Filter	Ventura Countywide Stormwater Quality Management Program Technical Guidance Manual for Stormwater Quality Control Measures. July 2002.	Reviews many BMP methods and contains information specific to Southern California	Potentially High	Improper maintenance could lead to other water quality issues
Pervious Pavement	California Stormwater BMP Handbook. January 2003.	Reviews pervious pavement BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Pervious Pavement	Low Impact Development Handbook: Stormwater Management Strategies. December 2007.	Discusses LID strategies for assistance in storm water management	Potentially High	May contaminate groundwater

4.0 BMP Analysis

Based on the literature review and the findings of Phase I of the TRE, BMPs were evaluated for their applicability to the SMR. Because the toxicity appears to be principally a wet weather phenomenon, and because the Permittees' jurisdiction includes the urbanized area of the watershed, the analysis focused on BMPs designed to reduce the amount of storm water pollution caused by urban runoff.

The potentially applicable BMPs are divided into Source Control and Treatment Control BMPs and are discussed in detail below. Through the Permittee's proactive efforts to protect the quality of the receiving waters and their beneficial uses, many programs addressing these broad categories are either already in place or are actively being developed. The implementation status for each specific BMP is discussed. Examples of BMP implementation by other municipalities in the region are included as a tool for evaluating the consistency of the Permittees' program with other programs in the region.

4.1 Source Control BMPs

Source control BMPs are designed to curtail pollution at the source before it has the opportunity to enter the storm drain system and pollute waterways. They are generally the preferred type of BMP because reduction of pollution occurs at the source, before runoff has become contaminated (CASQA, 2003). The types of broad categories of source control BMPs that identified as most appropriate for the Santa Margarita watershed are: pursuing regulatory change, implementing IPM strategies including LID, and public outreach and education.

4.1.1 Regulatory Action

Status: Currently being implemented by the Permittees.

Pesticide manufacturers are required to receive approval by USEPA and California DPR for specific pesticide uses, and both agencies can impose use restrictions to prevent unwanted impacts on the environment and public health. At the federal level, a fundamental regulatory disconnect exists between pesticide approval (registration) under FIFRA and water pollution control programs under the Clean Water Act. This has resulted in a repeating pattern, in which a) pesticides are approved for use without sufficient consideration of potential environmental effects, b) water quality and other ecological impacts accrue, c) use restrictions are applied to the offending products (sometimes involving widespread bans on use), and d) new pesticides are approved for use, with subsequent environmental impacts.

In 1962 Rachel Carson published *Silent Spring*, documenting the widespread ecological consequences of pesticide applications. The federal government responded by banning the use of DDT and other organochlorine pesticides, based on extensive evidence of environmental impacts through the process of bioaccumulation. The ban has lead to dramatic recoveries in affected populations of bald eagles and other species; however, the legacy of these long-lasting pesticides near-shore dumping areas in Los Angeles County and elsewhere remains (IWS, 2007).

Eventually the organochlorine pesticides were replaced principally by organophosphate pesticides, especially in urban uses. In the mid-1990s municipal storm water monitoring programs began to document that commonly-used organophosphate pesticides, especially diazinon and chlorpyrifos, were present at toxic levels and causing toxicity to aquatic organisms, principally the common water flea, *Ceriodaphnia*. Although not bioaccumulative, diazinon and chlorpyrifos were discovered to cause widespread toxicity in urban runoff and local receiving waters (TDC, 2001). USEPA subsequently banned most urban uses of diazinon and chlorpyrifos, although EPA's main motivation involved human health effects

on the pesticide applicators, and water quality was not an important factor in those decisions. Again, the ban was also immediately effective, reflected in reduced concentrations of diazinon and chlorpyrifos in urban water samples, and fewer occurrences of organophosphate-based water column toxicity (c.f., references in Ruby, 2008 for San Diego County Municipal Copermittees Annual Urban Runoff Monitoring Reports). But pesticide manufacturers simply replaced the OP pesticides in their products with other active ingredients, principally pyrethroids. Shortly thereafter, researchers and municipal storm water programs began documenting toxic effects from the new pyrethroid products. The pyrethroid impacts were first documented in sediments, and the affected test organism shifted from *Ceriodaphnia* to the sediment-dwelling *Hyalella*.

In the cases of both organochlorine (DDT) and organophosphate (diazinon, chlorpyrifos) pesticides, federal limitations or bans on uses were effective in ameliorating the associated environmental impacts. In both cases, however, new pesticide products were approved for use that then caused related but different impacts to the environment. Therefore it is clear that the most effective strategy for preventing environmental impacts from pesticide use involves implementing an effective process of pesticide approval and registration that comprehensively accounts for and mitigates against such impacts.

For more than ten years CASQA and various other California state and local agencies have promoted better regulation of pesticides at the federal level, encouraging use restrictions as the most effective means of source control. California water quality agencies have sent comment letters to USEPA and DPR on guidance pertaining to the application of pesticides to surface waters and on recommended environmental hazard statements for residential outdoor pesticides (TDC, 2007). These efforts are beginning to show some modest signs of success. In a recent letter to stakeholders, EPA outlined an approach to provide better cooperation between the Office of Pesticide Programs (OPP) and the Office of Water (OW), to allow for “environmentally protective and scientifically defensible effects assessment judgments about contaminants that are or may be found in ambient water”. The Riverside County Permittees plan to continue their support of these efforts through ongoing

participation in the CASQA Pesticides Subcommittee, the Urban Pesticide Pollution Prevention (UP3) Project, and the Urban Pesticide Committee. The Permittees also plan to request that the RWQCB become involved in advocating for more effective pesticide regulation at the state and federal levels.

The Permittees are members of a CASQA subcommittee that addresses pesticide uses impacting stormwater discharges. Effort focuses on providing input to the USEPA and the California Department of Pesticide Regulation (DPR) to improve pesticides regulations so that they more fully protect water quality and are better aligned with the Clean Water Act and California Water Code. (RCFCWCD, 2008). CASQA has also been active in supporting DPR's ongoing reevaluation of allowable pyrethroid pesticide uses (TDC, 2007).

Increasingly, the regulatory response to the water quality impacts resulting from *legal uses of approved pesticides* has been for regional water boards to impose limitations on the allowable loadings of pesticides to impaired waters through the TMDL process. Local agencies have little or no jurisdiction over sales or use of these pesticide products, and therefore do not have the full authority needed to perform loading reductions in resulting TMDLs. An effective regulatory solution must occur at the state and federal levels, to regulate allowable pesticide uses to effectively prevent such water quality impacts.

Current legislation requires users of certain pesticides to be trained, often certified, in the use of those pesticides and to report the amounts applied (State of California, 2008). A similar regulatory approach could be used to promote pesticide alternatives, such as for PCOs to train and certify their technicians in the use of IPM methods (Quarles, 2002). The Permittees are considering supporting regulatory action by the state to include IPM training for PCOs in the requirements for certification and training on the use of pesticides.

Environmentally sensitive and flexible zoning ordinances may be adopted to facilitate the use of LID principles, thereby encouraging private developers to use LID principles (Prince Georges County, 1999). Additional land use restrictions or alternatives to present zoning

laws may help reduce urban storm water runoff, potentially reducing pyrethroid loadings in receiving waters. The Permittees plan to continue promoting LID implementation through interagency communications and cooperation.

4.1.2 Integrated Pest Management

Status: Currently being implemented by the Permittees.

IPM is "a decision-making process for managing pests that uses monitoring to determine pest injury levels, and combines biological, cultural, mechanical, physical, and chemical tools and other management practices to control pests in a safe, cost effective, and environmentally sound manner that contributes to the protection of public health" (Carlsen, 2008). IPM can further be described as an approach to solving pest problems by using information about the pest and landscape to eradicate the pest's habitat in a manner that poses the least risk to humans (Ecology Action, 2007). IPM has many different aspects that help to reduce pests and in turn cause a reduction in pesticide use, including green gardening and structurally integrated pest management (SIPM). BMPs that are typically used as part of an IPM strategy are described in the following sub-sections.

4.1.2.1 Green Gardening

Status: Not currently being implemented by the Permittees, program under consideration and will be enacted in the near future.

The Green Gardener program, implemented through landscapers, promotes environmentally responsible landscaping to reduce the use and need for pesticides. In general, education of gardening and landscape maintenance staff is beneficial for pest reduction as part of an IPM program. It provides alternative methods to landscapers, such as reducing outdoor sources of ants by elimination of their food and water sources through management of honeydew producing insects and plants associated with them (UC Davis, 2007). The Green Gardener

program encourages businesses to participate in environmentally sound landscape maintenance. Healthy landscapes are more resistant to pests (Ecology Action, 2007). Pests that do not have a suitable habitat will leave to find a more hospitable environment. When the pests leave, then there is a lessened need for pesticide applications and lower risk of pyrethroids entering storm water.

The County of Santa Barbara implemented a Green Gardener Program, in which landscapers are encouraged to take a class at the local city college, covering subjects such as IPM strategies and environmentally beneficial landscaping to obtain a "Green Gardener" card. They are then placed on the Green Gardener list, which is then promoted to the public by the County (County of Santa Barbara, 2008). The program benefits both parties; gardeners receive education and advertising at a nominal cost, and the County receives the benefit of more environmentally-friendly landscaping and a reduction in the use of pesticides. Municipalities may promote this type of program by contracting with landscaping companies that have their employees trained in green gardening practices.

Encouraged by the success of the Santa Barbara Green Gardener Program, the Monterey Bay area instituted a similar program. "The goal of the program was to educate and certify local gardeners in resource efficient and pollution prevention landscape management practices" (Ecology Action, 2007). With the support of the State of California Water Resources Control Board, more municipalities are likely to follow (Ecology Action, 2007).

4.1.2.2 Pest Control Contracting

Status: Currently partially implemented by the Permittees.

Many municipalities contract pesticide applications to professional PCOs. Contracting only with PCOs that have IPM training and certification can help realize IPM models and goals. The recently completed EcoWise Certified IPM Contracting Tool Kit (www.EcoWiseCertified.org), provides resources for municipal agencies to use in developing such a program. The EcoWise IPM Tool Kit includes:

- Elements to consider when developing an IPM policy
- Roles and responsibilities of the agency or business in an IPM program
- How to hire and work with a professional IPM service provider

The Took Kit also includes the EcoWise IPM Process along with a number of other helpful resources and sample documents.

Because PCOs are responsible for the majority of pesticides applied in urban areas, distribution of information regarding less-toxic alternatives, lower-use application techniques, and proper disposal, practices to professional applicators is an essential component of the Permitee's pesticide control effort. The Permittees currently distribute information to PCOs through the Public Outreach and Education Program (see Section 4.1.3).

The City of Palo Alto's Regional Water Quality Control Plant includes IPM requirements in their contracts with PCOs (City of Palo Alto, 2008). The City of Santa Monica, as a part of their SIPM program, specified IPM requirements in their PCO contracts (Raphael, 1997). Use of PCOs with IPM training and certification by municipalities encourages local PCOs to invest in IPM training and certification, which in turn, allows their expertise in IPM to expand beyond just the municipality itself (Quarles, 2002). Education of PCOs, hiring only PCOs that have IPM training, and contracting specifically for IPM by local agencies may

create more public awareness and reduce the use of pyrethroids in the Santa Margarita watershed.

4.1.2.3 Structurally Integrated Pest Management Program

Status: Currently being implemented by the Permittees, with additional programs under consideration.

SIPM is a program that controls the access of pests to buildings and the potential food sources within them by protecting the structure itself from pests, with minimal use of pesticides. The Permittees intend to lead by example, sharing success through public outreach programs and encouraging individuals and businesses to do the same. SIPM is a long term solution offering positive potential impacts on budget, reduction of pests and, reduction of pyrethroid pesticide use. Note that SIPM should not be confused with category of pesticide use referred to as structural pest control. SIPM is a BMP designed to reduce the use of pesticides in a structural pest control program.

The City of Santa Monica implemented an SIPM program and experienced a reduction in pests and in the use of pesticides. In addition, Santa Monica reduced pest management costs by 30% (State of California, 2008). California law requires a SIPM strategy for all state-owned buildings and schools (State of California, 2008). The three main aspects of a SIPM strategy are facility design and LID, monitoring, and facility maintenance.

<u>Facility Design</u>

Status: Currently being implemented by the Permittees.

Facility design can play a large role in the exclusion of potential pests. "A facility's planning, design, and construction provides an opportunity to incorporate features that help to exclude pests, minimize pest habitat, and promote proper sanitation" (NIH, 1999). It can also reduce

storm water runoff (NAHB, 2008). Exclusion of pests helps reduce pest infestations and in turn the need for pyrethroid pesticide use. For example, ensuring that the design holds plants and mulch several inches away from the foundation of a building may assist the reduction of ant populations immediately adjacent to the building (UC Davis, 2007). A reduction in storm water runoff may also reduce the amount of pyrethroids that enter receiving waters. Facility designs can incorporate aspects of LID, as discussed below. New development and redevelopment may incorporate designs that aid in the exclusion of pests and the reduction of urban runoff, which may contribute to a reduction of pollutant loads, including pyrethroids.

Pest Monitoring

Status: Currently in not use by the Permittees, program under consideration.

Monitoring structures and adjacent areas may help prevent pest infestations and quickly identify potential problems. Traps, visual inspections, and staff interviews assist in the identification of areas and conditions that may foster pest activity (NIH, 1999). Monitoring for ants, for example, may consist of simple inspections of facilities such as looking under sinks and along pipes and electrical wires (UC Davis, 2007). The City of Santa Monica, as a part of their SIPM, provided training to all general staff, purchasing, carpenters and custodial staff. Specific presentations were given to groups, such as the custodial staff, who learned about products used in control of ant and cockroach populations and general sanitation. The staff is trained in the identification of potential pest infestations and habitat conditions that may foster pest activity (Raphael, 1997). Early identification of pest infestations can increase the effectiveness of specific treatments and reduce the overall need for pesticide use.

Sanitation and Facility Maintenance

Status: Currently not being implemented by the Permittees, program under consideration.

Proper sanitation includes reducing clutter and pest habitat and incorporating proper facility and waste management practices. Records of maintenance and housekeeping conditions may help track pest problems and assist in the determination of whether corrective action is needed or has been taken in a timely manner (NIH, 1999). Sanitation and facility maintenance involves the housekeeping staff, the building maintenance staff, and the landscaping staff.

Improper storage of waste may affect urban runoff, and it may create a hospitable environment for pests, particularly ants. Initial, low-cost steps that municipalities may take to improve waste handling are: controlling litter, keeping waste collection areas clean, and insuring proper disposal of pyrethroid pesticide products, if used, and educating employees and the public. Simple solutions such as rinsing out soda bottles and emptying trash daily prove effective to reduce insect infestations, particularly ants (UC Davis, 2007). An important component of an SIPM monitoring program is regular inspections of solid waste containers for structural damage or leaks (CASQA, 2004).

Educating custodial staff, such as was done in the City of Santa Monica, can reduce the amount of improperly disposed pesticides (Raphael, 1997). Designating staff members to perform a daily checklist of areas around the structure to ensure cleanliness and proper storage of waste can assist the efforts to reduce potential pest infestations and leakage of hazardous waste (CASQA, 2004).

Building maintenance staff also benefit from education and acceptance of responsibility for pest management. Maintenance crews can contribute to an SIPM strategy by securing the structure, such as caulking holes and cracks, assisting in the removal of clutter, and installing

door sweeps (State of California, 2008). Caulking holes in structures can prove effective in keeping ants out of facilities (UC Davis, 2007). Upkeep on building maintenance helps reduce potential pest habitat, and thus may reduce the need for application of pyrethroid pesticides.

Reduction of pest habitat around structures may reduce pest populations in and around structures. Marin County, as part of its integrated pest management program, has reduced rat habitat around the local Civic Center and in turn has seen suppression of the rat population (Carlsen, 2008). Programs similarly tailored to ants may result in a positive effect of pest reduction within the SMR. For example, banding tree trunks with tanglefoot or similar sticky substances can keep ants away from trees (UC Davis, 2007). Education and training may be provided to Permittee landscaping crews to assist in proper vegetation removal and, when necessary, pesticide use. Landscaping crews may be informed that pyrethroid pesticides or any less toxic pesticides are to be used only when a pest problem arises to an intolerable level, that they are not administered when a wet weather event is expected and only when low wind speeds are present (CASQA, 2004). Education of landscaping crews to remove pest habitat may reduce the need for pyrethroid use thus reducing the potential risk of pyrethroids entering storm water runoff.

Also, utilizing low water using vegetation and alternative landscaping techniques such as xeriscaping or naturescaping are efforts that landscape crews can take to reduce pyrethroids in urban runoff. Landscaping crews may also help preserve the water efficiency of the landscape through properly timed fertilizing, weeding, pruning, and pest control. For example, proper collection and disposal of yard clippings can prevent loose vegetation that has possibly been treated with pyrethroid pesticides from entering waterways or storm water drainage systems such as MS4s (CASQA, 2004). Reduction in pest habitat and proper landscaping maintenance may help reduce pest problems, and thus the need for pyrethroid pesticides.

4.1.3 Public Outreach and Education

Status: Currently being implemented by the Permittees.

Public Outreach and Education programs inform the public about storm water issues, proper use and disposal of publically available chemicals, and alternatives to pyrethroid pesticides. Reaching out to the public and providing information about the dangers of pyrethroids pesticides encourages citizens to make educated decisions about pesticide use. It also may accelerate state and federal regulatory changes regarding pyrethroid use through public promotion of such changes. According to the EPA, public education and awareness can be a "key component" in any BMP program for storm water management (EPA, 2008).

The District has enacted a public outreach program to help reduce the potential for pyrethroid pesticides to contaminate receiving waters. This program has initiated: distribution of educational materials to hardware store employees, active participation and distribution of outreach for HHW/ABOP facilities to provide for free venues to dispose of excess pesticides, and distribution of EPA and CalEPA materials to the public. The District also promotes the use of less toxic pesticides, provides education on storm water issues in public schools, and has enacted a multimedia campaign to control urban sources of pyrethroid pesticides (RCFCWCD, 2005).

<u>Education and Outreach to Businesses</u>

Status: Currently being implemented by the Permittees.

Distribution of information regarding pesticides to businesses, particularly hardware stores, is crucial for reducing pyrethroid use and misuse at its source. Education on pyrethroid runoff to local hardware stores may assist local hardware store employees to educate their customers on alternative methods of pest control. An Orange County survey from 2001 found that 55% of pest control products were purchased at hardware stores (Wilen, 2001). In

2006, Riverside County had 177,562 pounds of reported non-agricultural usage of pyrethroid pesticides (RCFCWCD, 2008). Reduction in usage may lead to a reduction of pyrethroids in urban storm water runoff. Educating hardware store employees about urban water quality impacts of pyrethroid pesticides may help reduce the usage and thus the toxicity of runoff in the Santa Margarita Watershed resulting from pyrethroid use, as employees have the ability to recommend alternative methods of pest management to their customers.

Education of nursery employees about pyrethroid management and IPM techniques may also yield significant source control benefits. In general, nursery employees tend to be more knowledgeable about pesticides than employees at hardware stores (Wilen, 2001). Nurseries that use and sell pyrethroids offer the highest return on outreach resources, while those nurseries that have chosen alternate pest management methods serve as examples of IPM in practice. In a recent Riverside County survey, one nursery stated that they do not use pesticides and if their nursery does experience a pest infestation, it is treated naturally (RCFCWCD, 2008). Such nurseries are likely to encourage their clients and customers to use the same methods. Education and outreach can lead to cooperation and sharing of successful and unsuccessful methods of IPM and ultimately reduce pyrethroid pesticide use and toxicity of storm water runoff.

Businesses not in the industry of pesticide sales may also benefit from outreach. The District directs outreach efforts to all businesses; those in the business of selling or using pesticides, and those that are not. The District has coordinated with the County's Business License Department to include an educational insert of the "Only Rain Down the Storm Drain" program to new business license applicants and annual renewal reminders (CRWQCBSD, 2008). Informing companies on proper disposal of hazardous materials such as pesticides is crucial to prevent pyrethroid containers from being improperly disposed of, leaking, and then contributing to storm water pollution.

Several Southern California cities conduct general business outreach as well. Cities such as Carson, Gardena, Inglewood, and Lomita distribute informational pamphlets on storm water

pollution relating to landscaping and gardening practices to general businesses (DCWMAC, 2007). Such information informs businesses of alternate methods of pest control beyond pesticide use and imparts knowledge about storm water quality issues. Thus, dissemination of educational materials to local businesses is intended to help reduce pyrethroid runoff by ensuring proper disposal of pesticides and encouraging alternate methods of pest control.

Educational and Outreach to the General Public

Status: Currently being implemented by the Permittees.

The District distributes educational materials within the Santa Margarita Region such as EPA sponsored pamphlets in order to promote reduced use of pyrethroid pesticides and educate the public about alternate practices of pest management. The public purchases retail pesticides and uses them, presumably, according to the manufacturer's instructions and in compliance with regulations listed on the packaging, including proper disposal of empty containers in the municipal waste stream. However, even when used properly, retail pesticides have the potential to contaminate urban runoff, and homeowners may be unaware of the downstream consequences of pesticide use. Depending on the landscaping practices in a neighborhood, promoting alternative pest management strategies and educating the public on storm water quality and pesticide use may be the most beneficial way to reduce the source of pyrethroids in urban runoff (Wilen, 2005).

The District distributes educational materials within other public outreach programs and maintains pest management information on the internet. The District also distributes brochures to educate the public on lawn and garden maintenance, fertilization, and pesticide and household chemical use (RCFCWCD, 2005). These educational materials provide public education on alternative pest control methods, limiting individual use of pyrethroids, and proper disposal of pesticide containers.

Many municipalities perform storm water outreach at festivals and public events by participating in the events and by distributing brochures. The Cities of Lawndale and Torrance plan and attend public festivals and rent booth space to educate the public about storm water quality and the use of pyrethroids (DCWMAC, 2007). Cities including Carson, Gardena, Inglewood, and Lomita distribute informational pamphlets on storm water pollution relating to household activities and landscaping and gardening practices to the general public (DCWMAC, 2007). The District participates in events such as the Children's Groundwater Festival, the Southern California Fair, the Community Water Festival, and the Santa Margarita Watershed Clean Up (RCFCWCD, 2005). The Permittees, as well as other municipalities within California, participate in public events and distribute informative materials as a portion of their current public outreach programs.

Education on proper disposal of pesticides

Status: Currently being implemented by the Permittees.

Improper disposal of pesticides is a potential contributor to storm water contamination. Empty containers be disposed of in the municipal waste stream are not likely to contribute to storm water pollution, however, unused pesticides may enter the MS4 by leaking in transit. In Orange County in 2001, 54.5% of people surveyed claimed to have disposed of unwanted pesticides in the municipal waste stream, and 78.6% did not know the location of a household waste disposal site (Wilen, 2001). The District has created a partnership with Riverside County Waste Management to provide educational programs and materials on proper disposal of unwanted waste, including pesticide containers (RCFCWCD, 2005).

Multimedia Outreach

Status: Currently being implemented by the Permittees.

The EPA suggests using multiple media sources to promote and educate on storm water impacts, particularly through public service messages (EPA, 2007). Mass media has proven to be a key source of pollution prevention information for the general public (LADPW, 2002). The District currently participates in a multimedia advertising campaign including: maintaining a website that provides information, distributing mailing inserts regarding water quality issues through various county entities, and billboard advertising campaigns. Many other municipalities, such as the Cities of Palo Alto and Lawndale, also use the world wide web to provide information to the public (City of Palo Alto, 2008) (DCWMAC, 2007).

Public School Programs

Status: Currently being implemented by the Permittees.

A storm water education program for public schools is a concept supported by the EPA (EPA, 2007). The County of Los Angeles has incorporated public school educational programs into its outreach program (LADPW, 2002). The District focuses storm water education efforts on elementary school students (RCFCWCD, 2005). For example, sixth-grade students at Warm Springs Middle School were given an interactive presentation regarding storm water pollution with an enviroscape model that excited and engaged the students; a presentation that has been given over 150 times during the 2003-2004 school year (Jamescourie, 2004). Educational programs in public schools are intended to produce long-term benefits to storm water runoff quality.

Education on Lower Risk Alternative Pesticides

Status: Currently being implemented by the Permittees.

Part of Public outreach includes suggesting less toxic alternatives to pyrethroid pesticides, such as those listed on the Our Water Our World website (www.ourwaterourworld.org). Lower risk pesticides have reduced impacts on human health, lessened toxicity to non-target organisms, decreased potential for water contamination, and lower pest resistance potential (Matteson et al., 2007). The District distributes materials associated with the "Our Water Our World" organization (RCFCWCD, 2008).

However, some of the lower risk pesticides are toxic to beneficial arthropods and still have the potential to pollute surface and ground water (Matteson et al., 2007). Pyrethroids were developed as a less toxic alternative from organophosphate pesticides (Quarles, 2002). In the Santa Margarita Watershed, there was a decrease in water toxicity to *Ceriodaphnia* and an increase in toxicity to *Hyalella* as organophosphate pesticides such as chlorpyrifos and diazinon and were replaced by pyrethroids (RCFCWCD, 2008). The effects on storm water runoff of lower risk pesticides must be carefully evaluated before they are promoted as effective solutions to urban storm water runoff pollution.

4.1.4 Low Impact Development (LID)

Status: Currently being implemented by the Permittees.

LID involves environmentally-friendly building and development designs that mitigate impacts to land and water. LID functions by managing storm water at its source, incorporating a variety of runoff control techniques, using natural features as design features, and protecting natural resources (NAHB, 2008). Municipalities that promote LID have the potential to reduce municipal infrastructure and maintenance costs while balancing growth needs with environmental protection (NAHB, 2008). LID practices include "small scale,

decentralized treatment practices" that include conservation of open space, a reduction of impervious surfaces, and the incorporation of water controls (NAHB, 2008). Reduction of urban runoff volumes may reduce the loadings of pyrethroids to receiving waters in urban areas.

In 2007, EPA implemented a retrofit of the agency headquarters in Washington, D.C., incorporating LID designs to assist with storm water retention (EPA, 2007). Retention of storm water on the land helps prevent pollutants from entering streams and rivers (EPA, 2007). One of the main goals of the EPA LID retrofit was to demonstrate several LID techniques and encourage government agencies and developers to use them (EPA, 2007). LID may be used in conjunction with IPM programs, which would reduce the amount of pesticides used and minimize the urban storm water runoff of pyrethroids. The County of San Diego's most recent MS4 permit requires implementation of LID techniques (County of San Diego, 2007); this appears likely to continue as a trend with other permits in the region as they are renewed. The incorporation of LID principles into development regulations in the Santa Margarita watershed provides a potential solution to runoff of pyrethroids into receiving waters.

4.2 Treatment Control BMPs

Treatment Control BMPs are typically structural devices engineered with the intent to remove pollutants from storm water. Treatment BMPs require construction and long term maintenance, but can be extremely effective (CASQA, 2003). Although treatment BMP's have not been thoroughly investigated specifically for reduction of pyrethroids, some methods may be useful. Pyrethroids bind tightly to soil particles so there is a high probability that pyrethroids would be removed with suspended solids when they pass through treatment BMPs. In addition, pyrethroids degrade over time; permethrin, for example, has a half life in soil of about 30 days and about 10 days on certain plant life. Because pyrethroids have low mobility in soil, infiltration-based treatment BMPs have a low probability of contributing to groundwater contamination (NPTN, 1997).

From the list of available treatment BMP's identified in Table 3-1, the types of treatment BMPs feasible for pyrethroid treatment in the Santa Margarita Watershed, considering the climate, local vegetation, and soil types present are: pervious pavement, media filters, extended detention basins, infiltration basins, and infiltration trenches.

These BMPs and their potential to remove pyrethroids from storm water runoff are described below.

4.2.1 Pervious Pavement

Status: Currently being implemented by Permittees under LID program.

Pervious or porous pavement is "a system comprising a load-bearing, durable surface together with an underlying layered structure that temporarily stores water prior to infiltration or drainage to a controlled outlet" (CASQA, 2003). Pervious surfaces include grass, gravel, and porous concrete and asphalt (CASQA, 2003). The multi layer system assists in preventing pyrethroid pollution by providing a stable structure for pyrethroids to bind to and degrade, thus helping to prevent their transport in to receiving waters. Silts that are deposited within the pavement may need infrequent controlled waste disposal (CASQA, 2003).

The advantage of porous pavement is that urban runoff is reduced while treatment is provided and it is an effective drainage solution in confined urban areas. However, porous pavement is not a viable option on high traffic or high speed roads due to safety issues. There is a small chance that it may contaminate groundwater. It is fairly easy to replace, should there be a clog or damaged area, as small areas can individually be paved (CASQA, 2003). The use of pervious pavement appears to be a growing trend.

4.2.2 Media Filter

Status: Currently being implemented by Permittees via sand filters.

Storm water media filters are usually two-chambered including a pretreatment settling basin and a filter bed filled with sand or other absorptive filtering media. As storm water flows into the first chamber, large particles settle out, and then finer particles and other pollutants are removed as storm water flows through the filtering media in the second chamber. Media filters are highly effective at removing sediment from storm water flows (CASQA, 2003). They are appropriate in low flow areas, particularly with sandy soil. Washington D.C. and Austin, TX have both successfully implemented media filters to treat storm water (VCSQMP, 2002). They "are well suited to Southern California because they do not require vegetation and require less space than other treatment control measures with similar removal efficiencies when a partial treatment sedimentation basin is used" (VCSQMP, 2002).

However, media filters clog easily when exposed to high sediment loads and may decrease in effectiveness after being in use for a few years (CASQA, 2003). A media filter is not appropriate for areas with erosive soil upstream from the treatment filter (VCSQMP, 2002). The lack of abundant native vegetation in the Santa Margarita watershed contributes to a high potential for erosion, so media filters may not be effective in the long term due to clogging. When clogging does occur, media filters may become a nuisance due to mosquito or midge breeding in pooled waters (CASQA, 2003).

4.2.3 Extended Detention Basin

Status: Currently not being implemented by the Permittees for pyrethroid reduction.

An extended detention basin (EDB) is a permanent basin "formed by excavation and/or construction of embankments to temporarily detain the Stormwater Quality Design Volume

(SQDV) of storm water runoff to allow sedimentation of particulates to occur before the runoff is discharged"(VCSQMP, 2002). EDBs are constructed with an outlet at the bottom that allows for a slow, time-controlled release. The ultimate goal of EDBs is to level off peak storm water runoff rates (VCSQMP, 2002). Santa Clara Valley and the City of Palo Alto have noted that their detention basins have helped with the reduction of pollutants (EOA, 2004) (City of Palo Alto, 2008). Pyrethroids could be removed in the basin through settling of particulates.

Extended detention basins can serve multiple purposes as they provide for significant trash removal as well (CASQA, 2003). Maintenance is needed to ensure that the pond fully drains after large wet weather events, to avoid creation of standing pools causing mosquito or other vector habitats (CASQA, 2003). Extended detention basins are most effective when used in conjunction with other control measures, and are only moderately successful at removal of sediment. EDBs require relatively large amounts of land and therefore may not be feasible in urban areas of the Santa Margarita watershed (VCSQMP, 2002). There are no available examples of test results from municipalities using an extended detention basin for reduction of pyrethroid pesticides.

4.2.4 Infiltration Basin

Status: Currently not being implemented by the Permittees for pyrethroid reduction.

An infiltration basin is a shallow impoundment that is designed to infiltrate storm water and utilize the natural ability of soil to remove pollutants in storm water runoff (CASQA, 2003). Infiltration basins store runoff until it eventually enters the soil and infiltrates into the water table (CASQA, 2003). The soil present in the Santa Margarita Region is extremely pervious and may work well with an infiltration basin treatment structure.

Since pyrethroids adsorb onto soil, pyrethroids are likely to be removed from the storm water into the soil. However, there is a slight possibility that they may be resuspended into the

groundwater. Monitoring of pilot sites would be required to determine if there is transport of pyrethroids to the water table.

As with detention basins, maintenance is needed to ensure that the basin fully drains after large wet weather events to avoid creation of standing pools causing mosquito or other vector habitats. Infiltration basins may fail if the storm water volume is greater than the design volume (VCSQMP, 2002). Since infiltration basins require a large amount of open space, installation in urban areas is problematic. There are no available examples of test results from municipalities using infiltration basins for reduction of pyrethroid pesticides.

4.2.5 Infiltration Trench

Status: Currently not being implemented by the Permittees for pyrethroid reduction.

An infiltration trench is a long and narrow ditch that collects storm water runoff by storing it in the voids in a rock bed and allowing it to infiltrate to the soil matrix (CASQA, 2003). Infiltration trenches are extremely effective at removing fine sediment particles and associated pollutants (CASQA, 2003). Naturally pervious soils are required (VCSQMP, 2002). The Santa Margarita watershed has naturally pervious soils, which would allow for the removal of pyrethroids from the water and into the sandy soil.

Infiltration trenches are typically used in conjunction with grass lined channels or grass filter areas located upstream for maximum removal of sediment and larger particles (VCSQMP, 2002). Due to the arid environment in the Santa Margarita Region, grass lined channels, or even vegetated strips, would require irrigation to maintain the vegetation. If the infiltration trench clogs, it can become a source for mosquito breeding. There are no available examples of test results from municipalities using infiltration trenches for reduction of pyrethroid pesticides.

4.3 BMP Evaluation

A summary of the relative advantages, disadvantages and costs of the various BMPs identified in Sections 4.1 and 4.2 above is presented in Table 6.1 below. The table includes advantages, disadvantages, and the relative cost of implementing the BMPs.

Table 6.1
BMP Comparison Table

BMP Technology	Advantages	Disadvantages	Relative Cost*
Source Control			
Regulatory Change	Reduces the availability of pyrethroids on the market	May take years to achieve full effect	$
Integrated Pest Management	Engages businesses and the public in environmentally sound gardening practices	Need to ensure that employees are following protocols	$
	Has been implemented in various locations throughout CA and the US	Could have some resistance from employees who are use to standard practices	
	SIPM can be put in place directly by the Permittees	Some may find the organic methods of gardening to be too time consuming	
	SIPM can be incorporated directly into current maintenance activities		
	Includes LID aspects		
Public Outreach and Education	EPA states that Public Outreach is key for any BMP program	Cannot control the direct actions of public but only educate	$
	Copermittees have already implemented a public outreach program	Hard to measure the direct impact of pollutant reduction	
	Employees of business have direct impact on the buying choices of the general public		
	Programs have been implemented by many municipalities		

Table 6.1 (continued)
BMP Comparison Table

BMP Technology	Advantages	Disadvantages	Relative Cost*
Treatment Control			
Porous Pavement	Reduces runoff volume while reducing pollutant load as well	Requires ongoing minimal maintenance	$ to $$ depending on size
	Can be easily replaced depending on the size and location of design	No known measured reduction of pyrethroids.	
Media Filter	Do not require vegetation	No known measured reduction of pyrethroids.	$$$
	Highly effective in removal of sediments	Clogging is an issue because of the erosion potential in the watershed.	
	Requires less space than other treatment controls for sediment removal		
Extended Detention Basin	Known for significant trash	Large footprint Moderately successful at removing sediment	$$$
	Standard BMP with many years of maintenance and operational information available	Create an area with vector breeding potential	
		No known measured reduction of pyrethroids.	
Infiltration Basin and Trench	Uses natural ability of soil to remove pollutants.	Unknown if pyrethroids would be transported to the groundwater table.	$ to $$$
	Local soils would allow infiltration	Would require a pilot study to determine transport.	
		No known measured reduction of pyrethroids.	
		Clogging of outlet structure	
		Accumulation of metals in soil	

*Relative Cost: $ = $0 to $50,000, $$ = $50,001 to $100,000, $$$>100,000

5.0 Pending Legislation

There is no relevant pending state legislation relating to pyrethroid pesticides from the California Department of Pesticide Regulation or, in general, the State of California as of December, 2008 (State of California, 2008) (CDPR, 2008). In August 2006, the DPR put rules in place to control insecticide sprays during the dormant season. During winter, pesticides are applied to dormant tree and vine crops to kill overwintering pests and diseases. The new rules restrict the use of most dormant insecticides when residuals can run off into water (DPR 2007-08 Progress Report). However, there are no additional updates relating to pending pyrethroid legislation at this time.

There is no relevant pending federal legislation relating to pyrethroid pesticides from the United States Congress as of December, 2008 (Library of Congress, 2008). Although the EPA is working on proposed mitigation labeling for non-agricultural pyrethroids, there is no indication as to when this legislation may be enacted (TDC, 2007).

6.0 Proposed Course of Action

The Permittees intend to use a phased approach to address the identified sources of pyrethroid pesticides causing toxicity in surface waters of the SMR watershed. As described in Section 4, various source control BMPs and treatment control BMPs are available to address these sources. However, the use of pyrethroid pesticides can not be directly regulated by local governments. The most effective control strategy involves effective labeling and use restrictions via state or federal regulatory action, to prevent water quality impacts from legal pesticide uses. The proposed course of action involves an adaptive management approach with the following broad elements:

- Pursue state and federal regulatory change through CASQA
- Implement a set of source controls targeted specifically at urban pesticide use,
- Through the annual reporting process, monitor the implementation of those controls, assess effectiveness, and identify sources or areas where additional effort is needed,
- Evaluate whether additional controls, including treatment controls, may be needed to further reduce pyrethroid pollution,
- Implement additional controls as needed,
- Continue to monitor implementation, as well as conditions within the target receiving waters, assess effectiveness, and re-evaluate control program

The Permittees will continue to support CASQA and/or other agencies pursuing regulatory change in labeling or use limitations for pyrethroid pesticides. This support will include participation in the CASQA Pesticides Subcommittee and the Urban Pesticide Committee, and supporting the implementation of the Urban Pesticide Pollution Prevention (UP3) Project. Permittee staff will continue to provide staff time and resources necessary for the CASQA Pesticides Subcommittee to complete its negotiations with the California Department of Pesticide Regulation and USEPA regarding labeling and use limitations for pyrethroids.

Source control is generally a more cost-effective approach to pollution abatement than treatment control, as source controls do not involve the costly capital investments of treatment controls. As discussed previously, CASQA, EPA, and other agencies and experts

recommend a source control program as an essential component of a successful pollution reduction strategy.

The basis of source control involves preventing the entrance of the subject pollutant into the discharge stream. For pyrethroid pesticides, this means preventing the pesticide from entering the municipal storm drain system through urban runoff. This can take place by intervention at the various steps in the pest control process:

- Point of sale: reducing the purchase of pyrethroid products through education of PCOs and the public in consequences of pesticide use and alternative means of pest control, including integrated pest management (IPM)
- Application: reducing use of pyrethroids on site through education of PCOs and the public into the importance of proper application methods and the potential consequences of pesticide use, as well as pest control alternatives (IPM techniques)
- Off-site Transport: reducing movement of pyrethroids into municipal storm drain system via use of Green Gardener approaches, IPM, and LID building techniques to reduce irrigation water use, retain storm water runoff on-site, and provide on-site mitigation for runoff pollutants (via grassy swales, infiltration, etc.)

A five-year pyrethroid pollutant reduction program is proposed by the Permittees.

Year 1

- Continue to support state and federal efforts to improve pyrethroid pesticide regulation
- Continue to publicize/promote the services of IPM-certified PCOs, to encourage businesses and homeowners to choose their services
- Continue to implement local agency contracting rules to require contracting of IPM-certified PCOs for municipal pest control (through EcoWise Certified IPM Contracting Tool Kit, e.g.)
- Continue point-of-sale education effort providing instruction in pesticide alternatives and proper use/application (using materials available through Our Water Our World, UP3 Project, CASQA members, e.g.)
- Continue efforts to develop and implement LID guidance for planning and development

Year 2

- Coordinate with the University of California (UC) Extension Master Gardener Program to extend its services to the Temecula/Murrieta area to further promote and support the use of IPM by local residents
- Re-evaluate, enhance as needed, and continue measures implemented in Year 1

Year 3

- Conduct programmatic assessment as part of third-year annual report, evaluate successes and areas where additional efforts are needed and adjust program accordingly
- Re-evaluate, enhance as needed, and continue measures implemented in Years 1 and 2

Year 4

- Evaluate effectiveness of BMPs using water quality monitoring data as part of fourth year annual report
- Re-evaluate, enhance as needed, and continue implementation of revised program as defined in Year 3

Year 5

- Conduct programmatic assessment, evaluate successes and areas where additional efforts are needed as part of ROWD process
- Identify additional program elements, including source and/or treatment controls, as needed to effect required pollutant reductions; revise program accordingly
- Re-evaluate, enhance as needed, and continue implementation of revised program as defined in Year 3

Many of the source control materials and programs needed are readily available through existing programs such as EcoWise Certified, Green Gardener, Our Water Our World, the UP3 Project, and the Western IPM Center. The following websites provide further information on these and other programs:

Urban Pesticide Pollution Prevention (UP3) Project: www.up3project.org
Green Gardener Program: www.green-gardener.org/about
Western Integrated Pest Management Center: www.wripmc.org
EcoWise Certified Integrated Pest Management: www.ecowisecertified.com
Our Water Our World: www.ourwaterourworld.org
Green California: www.green.ca.gov/EPP/building/structipm.htm

City of San Francisco: http://www.sfenvironment.org/our_programs/topics.html?ti=1
DPR: http://www.cdpr.ca.gov/docs/registration/reevaluation/chemicals/pyrethroids.htm

As a practical measure, it will be necessary to evaluate individual Permittee capabilities and resources, and develop a specific work plan for implementation of the pyrethroid pollutant reduction program.

It is also essential to develop and implement the pyrethroid pollutant reduction program in coordination with other regulatory requirements, especially other pollutant reduction programs mandated under the storm water NPDES Permit and/or load allocations required by TMDLs within the SMR watershed.

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2009 REPORT OF WASTE DISCHARGE

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed _____

Warren D. Williams
General Manager - Chief Engineer
Riverside County Flood Control
and Water Conservation District

2009 REPORT OF WASTE DISCHARGE

CERTIFICATION

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Signed: Gary M. Christmas Date: 1/8/09

Gary M. Christmas
Chief Deputy County Executive Officer
Riverside County Executive Office

2009 REPORT OF WASTE DISCHARGE

CERTIFICATION

CITY
OF
MENIFEE

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Signed: _____

George A. Wentz, City Manager
City of Menifee

2009 REPORT OF WASTE DISCHARGE

RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Patrick A. Thomas

Signature

Mr. Patrick A. Thomas / Director of Public Works

Name & Title

January 8, 2009

Date

2009 REPORT OF WASTE DISCHARGE

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____

Bill Hughes
Director of Public Works
City of Temecula

CITY COUNCIL MEMBERS
BOB CASHMAN
BRIDGETTE MOORE
MARSHA SWANSON
SCOTT FARNAM
SHERYL ADE

2009 REPORT OF WASTE DISCHARGE

CERTIFICATION

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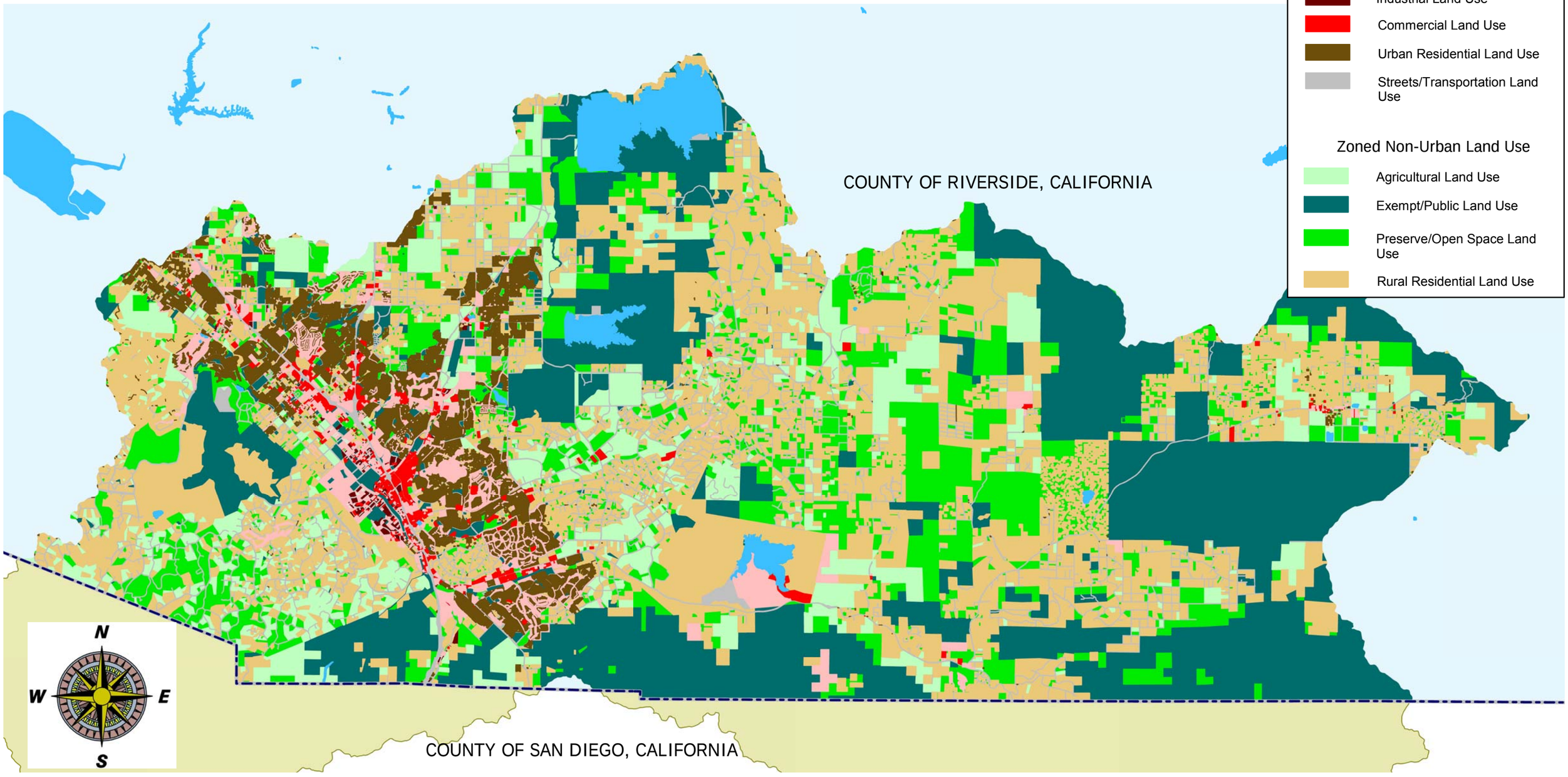
Signed: _____

John Danielson, City Manager
City of Wildomar

SANTA MARGARITA WATERSHED

COUNTY OF RIVERSIDE, CALIFORNIA



Legend

Zoned Urban Land Use

- Parks/Recreation Land Use
- Industrial Land Use
- Commercial Land Use
- Urban Residential Land Use
- Streets/Transportation Land Use

Zoned Non-Urban Land Use

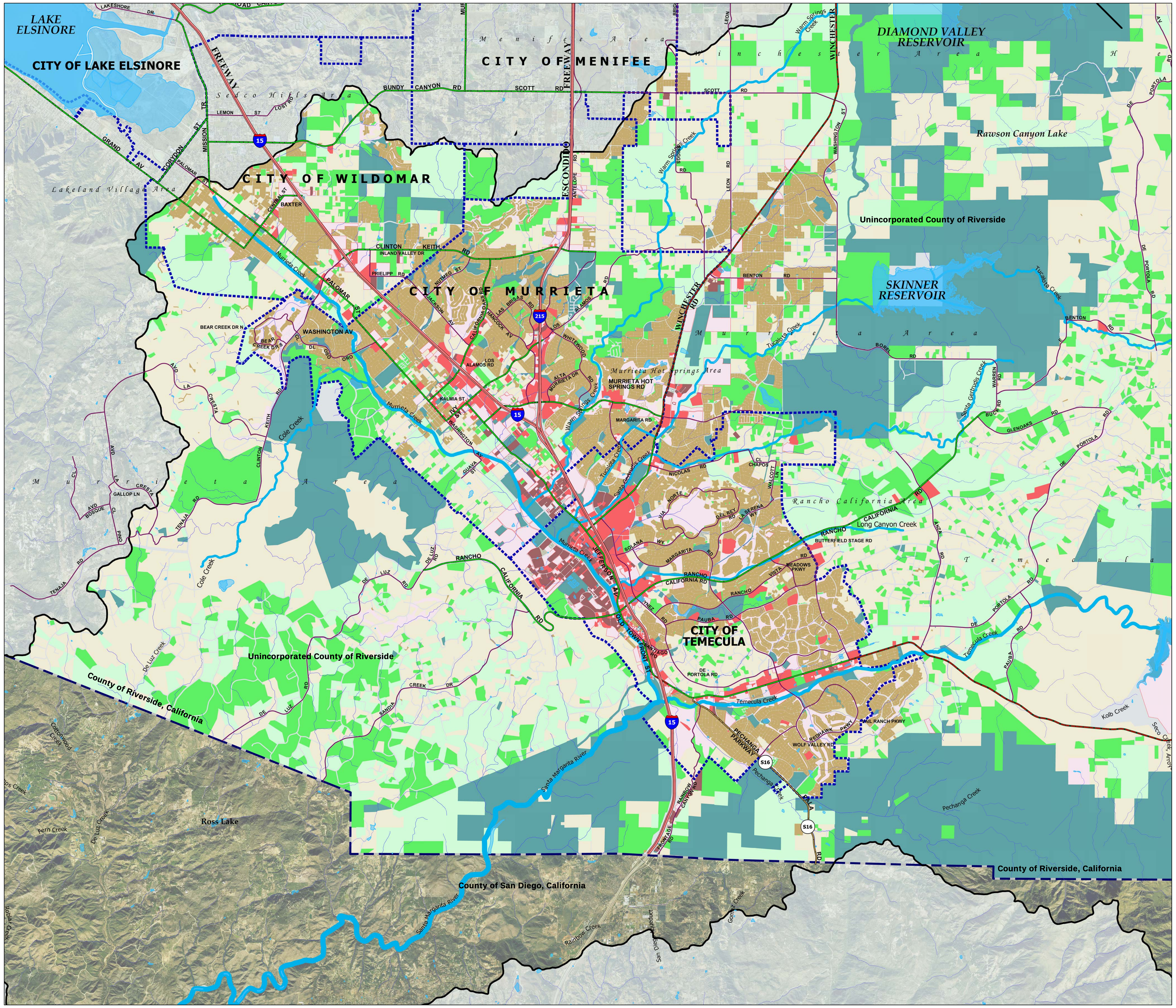
- Agricultural Land Use
- Exempt/Public Land Use
- Preserve/Open Space Land Use
- Rural Residential Land Use

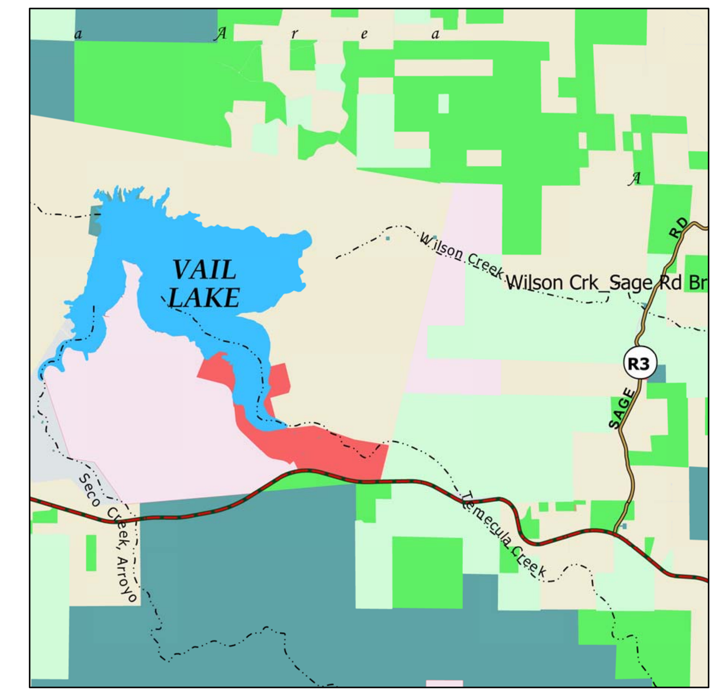
SANTA MARGARITA WATERSHED
WITH ZONED LAND USES
DELINEATED

(REVISED 14 JAN 09)

SANTA MARGARITA WATERSHED

WITHIN RIVERSIDE COUNTY, CALIFORNIA



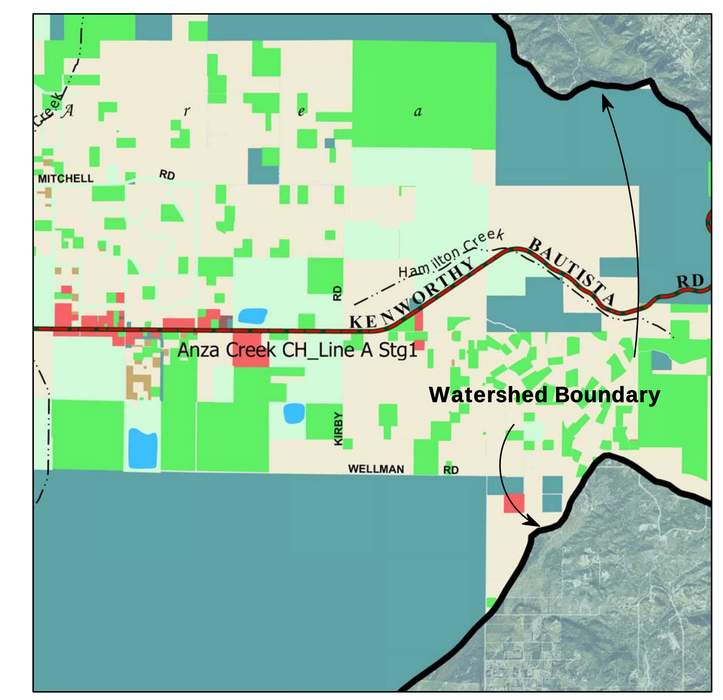


DETAIL 1

1:50,000

1 0 1 2 3 4 Statute Miles

1 0 1 2 3 4 5 Kilometers



DETAIL 2

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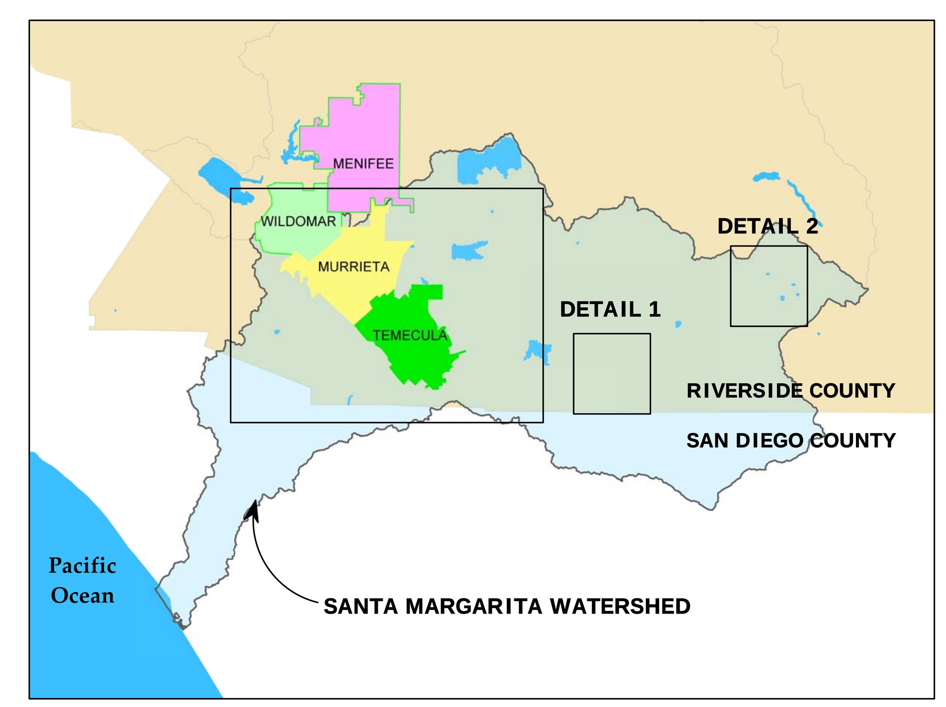
1 0 1 2 3 4 Statute Miles

1 0 1 2 3 4 5 Kilometers



VICINITY MAP

NOT TO SCALE

Legend

- US Freeways
- State Highways
- County Roads
- Primary Arterial Roads
- Secondary Collector Roads
- Waterbodies
- Watercourses
- Railroads
- Incorporated Areas
- Santa Margarita Watershed Boundary
- County of Riverside Boundary

Zoned Urban Land Use

- Commercial Land Use
- Industrial Land Use
- Parks/Recreation Land Use
- Urban Land Use
- Street/Roads Lands Use

Zoned Non-Urban Land Use

- Agricultural Land Use
- Exempt Land Use
- Preserve/Open Space Land Use
- Rural Residential Land Use

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT GEOGRAPHIC INFORMATION SYSTEM

1:50,000

1 0 1 2 3 4 Statute Miles

1 0 1 2 3 4 5 Kilometers

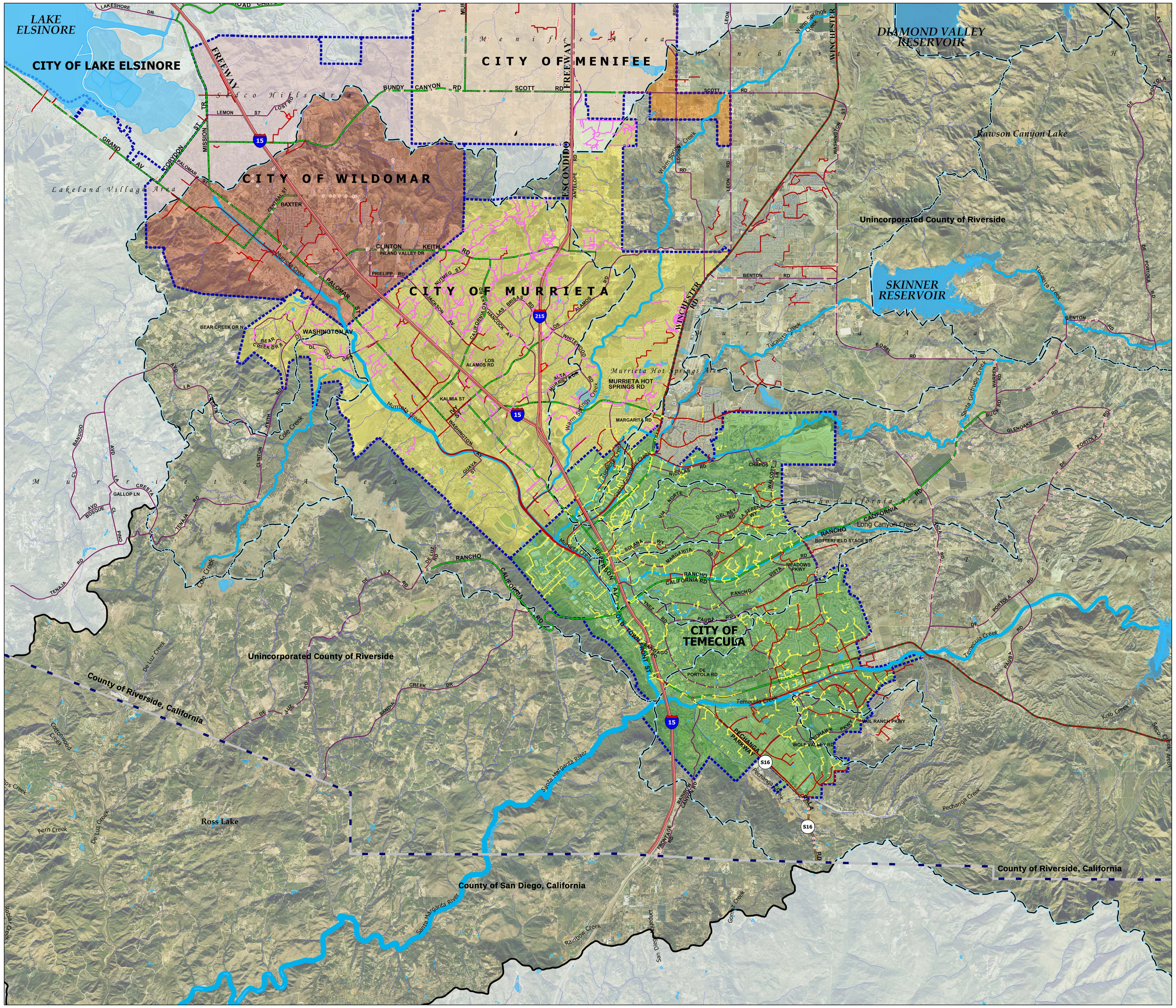
The graphical and tabular information shown on this document may be derived from a variety of public agency and/or private commercial sources such as Riverside County Transportation and Land Management Agency, Thomas Brothers Mapping, the Stephen P. Teale Data Center, GIS Technology Center, State of California, the United States Geologic Survey and the United States National Atlas. These sources may possess varying levels of accuracy and precision and this product is meant only as a guide to the relative position and scale of the depicted features. This GIS document is in no case to be interpreted as fundamental or decisive for purposes of land surveying, field engineering, plan drafting, code enforcement, land boundary determination and/or land acquisition.

SANTA MARGARITA REGION OF RIVERSIDE COUNTY ZONED LAND USE

(REVISED 13JAN09)

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RIVERSIDE, CALIFORNIA



Legend

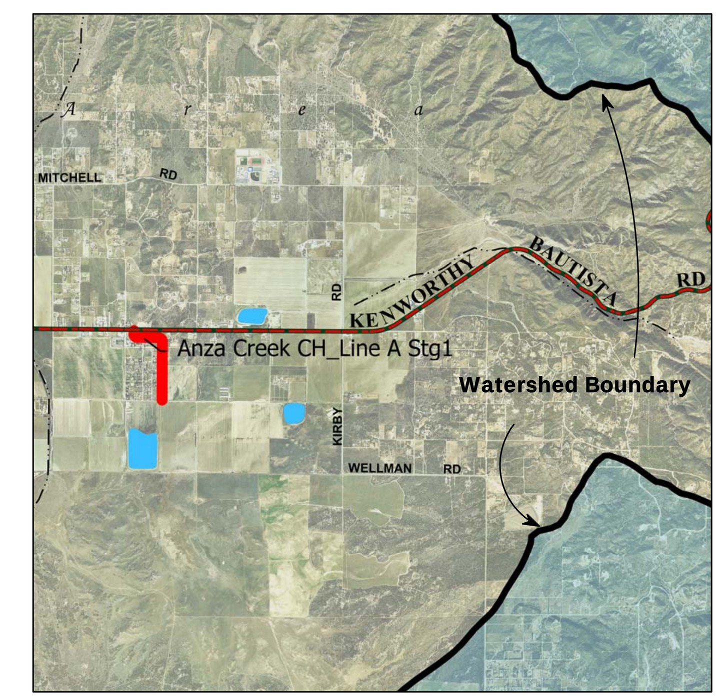
- RCFC MS4 Facilities
- Riverside County MS4 Facilities
- City of Murrieta MS4 Facilities
- City of Temecula MS4 Facilities
- US Freeways
- State Highways
- County Roads
- Primary Arterial Roads
- Secondary Collector Roads
- Monitoring Drainage Boundaries
- Waterbodies
- Watercourses
- Railroads
- Incorporated Areas
- Santa Margarita Watershed
- County of Riverside Boundary

DETAIL 1

1:50,000

1 0 1 2 3 4 Statute Miles

1 0 1 2 3 4 5 Kilometers



DETAIL 2

1:50,000

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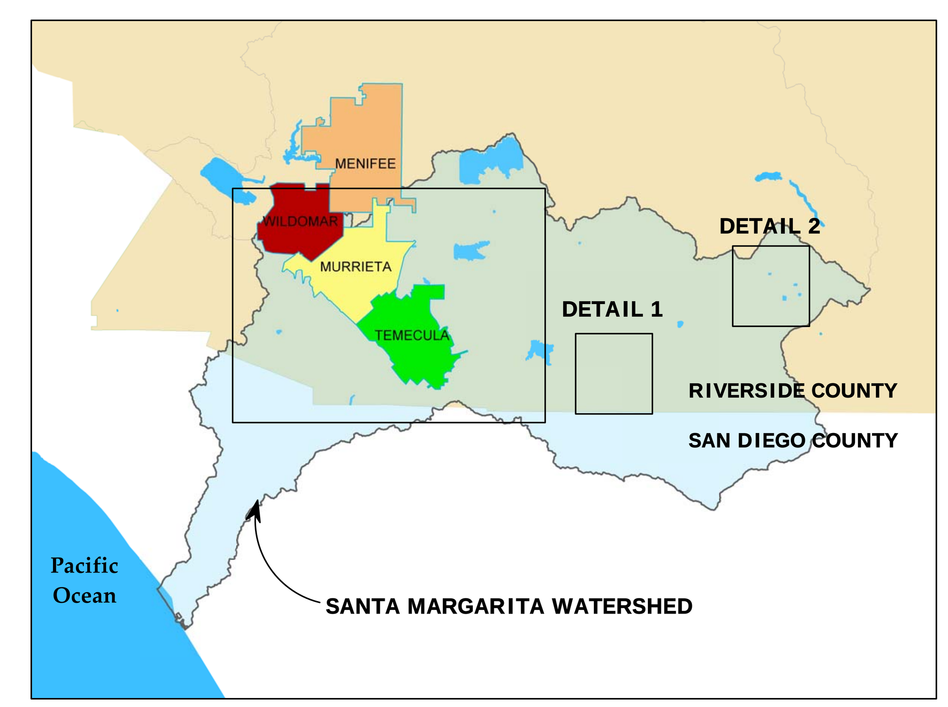
1 0 1 2 3 4 5 Kilometers



VICINITY MAP

NOT TO SCALE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT GEOGRAPHIC INFORMATION SYSTEM

1:50,000

1 0 1 2 3 4 Statute Miles

1 0 1 2 3 4 5 Kilometers

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SANTA MARGARITA WATERSHED FACILITIES MAP with Current MS4 Facilities Delineated

(REVISED 13JAN09)

Construction Component Effectiveness Assessments

Goals

I Ensure that all Construction Sites have applicable permits from the Permittee.

II Increase the percentage of Construction Sites that are in compliance with Permittee building and grading permits

III Place additional focus on Construction Sites during Wet Season

IV Ensure that construction inspection staff are properly trained and informed of the issues related to stormwater quality

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Effectiveness Assessment Timeframe	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	% of active construction sites that are discovered without building/grading permits	2	Permit Term	Decreasing Trend or minimal %	Y
II	% of active High/Medium priority sites subjected to enforcement beyond verbal/written warnings	3	Permit Term	Decreasing Trend or minimal %	N
II, III	% of active High/Medium priority sites subjected to enforcement beyond verbal/written warnings **during wet season**	3	Permit Term	Decreasing Trend or minimal %	N
II	% of enforcement actions that reached each level of enforcement	3	Permit Term	Trend toward lower levels	N
III	% of active permitted construction sites provided wet weather reminders	2	Annually	N/A	Y
IV	% of construction inspectors receiving annual training	1	Annually	N/A	Y

Development Planning Component Effectiveness Assessments

Goals

I Develop Design Guidance for Low Impact Development (LID) BMPs

III Encourage the use of LID-Based Treatment Control BMPs

IV Ensure that appropriate planning staff are trained in WQMP requirements

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Effectiveness Assessment Timeframe	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	Status of SMC LID BMP Design Manual	1	Within Permit Term	Completion	Y
II	% of WQMP projects that met the exemption requirements for inspection and maintenance reporting by implementing only LID-Based Treatment Control BMPs	3	Permit Term	Increasing Trend	N
III	% of applicable planning staff that attended WQMP training.	1	Annually	N/A	Y

Permittee Facilities and Activities Program Effectiveness Assessments

Goals

I Ensure that Permittee Facilities have adequate BMPs implemented and that they are properly maintained
II Ensure that Channels and Inlets are kept free from trash and debris
III Encourage the use of Integrated Pest Management (IPM) on Permittee Facilities
IV Maintain an updated GIS map of the MS4 system
V Ensure the Permittee facility operators and maintenance workers are properly trained in issues related to water quality.

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Effectiveness Assessment Timeframe	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	% of facilities with appropriate BMPs identified	1	Annually	N/A	Y
I	% of Facilities provided reminders of appropriate BMPs	2	Annually	N/A	Y
I	% of annual facility inspections finding deficiencies in BMP implementation that require follow-up actions	3	Permit Term	Decreasing Trend or minimal %	Y
I	Average % of deficiencies identified in the previous year's inspections that were addressed.	3	Permit Term	Increasing Trend or high %	Y
II	Estimated Tons of Waste removed from Streets	4	Annually	N/A	N
II	Estimated Tons of Waste removed from Inlets	4	Annually	N/A	N
II	Estimated Tons of Waste removed from Open Channels	5	Annually	N/A	N
III	% of Pest Control Contracts that include language promoting or requiring IPM	1	Annually	N/A	N
IV	% of new Permittee-maintained MS4 facilities added to GIS Map	1	Annually	N/A	Y
V	% of Permittee Facility and MS4 operators and maintenance staff that attended training.	1	Annually	N/A	Y

Industrial-Commercial Facilities Program Effectiveness Assessments

Goals

I Maintain an updated and prioritized list of Industrial and Commercial Facilities

II Ensure the each Industrial and Commercial Facility has implemented BMPs that are appropriate for the activities and features at that facility

III Ensure that implemented BMPs are properly maintained to ensure their effective operation

IV Implement enforcement measures as necessary to reduce the occurance and recurrance of violations

V Ensure that inspectors are appropriately trained to identify problem areas and BMPs maintenance issues.

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Timeframe to Determine Effectiveness	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	% of new facilities added to database and prioritized	1	Annually	N/A	Y
II	% of inspected facilities with adequate Minimum BMPs in place at time of inspection	3	Permit Term	Increasing Trend or High %	N
III	% of inspected WQMP facilities subject to Post Construction Treatment Control BMP Inspection, with adequately maintained Treatment Control BMP	3	Permit Term	Increasing Trend or High %	N
IV	% of inspected High/Medium priority facilities that were subjected to enforcement beyond verbal/written warnings	3	Permit Term	Decreasing Trend or Low %	N
IV	% of enforced sites that are repeat offenders	3	Permit Term	Decreasing Trend or Low %	N
IV	% / Number of enforcement actions that reached each level of enforcement	3	Permit Term	Trend toward lower enforcement	N
V	Percent of applicable inspectors that attended training	1	Annually	N/A	Y

Residential Program Effectiveness Assessments

Goals

I Raise awareness among residents of activities that may be contributing to stormwater pollution
II Increase public awareness of BMPs for residential activities
III Increase public participation in hazardous material collection events
IV Increase public involvement in keeping the watershed clean
V Encourage the use of Alternative Pest Control Methods

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Timeframe to Determine Effectiveness	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	Number of outreach events to Schools	1	Annually	N/A	N
II	Number and type of educational materials distributed that target residential activities	1	Annually	N/A	Y
I, II	Results of Public Ed Surveys	2	Permit Term	Increasing or high level of Knowledge	Y
III	Gallons of Used Oil Collected through Used Oil Block Cycle Grant	4	Annually	N/A	Y
III	Total Pounds collected at HHW/ABOP events	4	Annually	N/A	Y
III	Total Number of participants at HHW/ABOP events	3	Annually	Increasing Trend	Y
IV	Pounds of trash removed through Watershed Cleanup Events	4	Annually (as events occur)	NA	N
V	Number of Home Improvement stores provided outreach and customer educational information for pesticide use	2	Annually	Increasing Trend	Y

Detection and Elimination of Illicit Discharges and Connections Effectiveness Assessments

I Revise and enhance IC/ID Monitoring Program
II Reduce the occurance of Illicit Connections and Discharges
III Increase public reporting of improper disposal into MS4
IV Ensure the IC/ID reports are reviewed and responded to in a timely manner
V Ensure the confirmed IC/ID events are eliminated as quickly as possible
VI Ensure the IC/ID response staff are trained to identify potential sources of Illicit Discharges and recommend BMPs to prevent such discharges

Goal Addressed	Measureable Metrics Collected / Compiled Annually	Highest Potential CASQA Effectiveness Level	Timeframe to Determine Effectiveness	Outcome required to support Effectiveness Level	Can a Reasonable Municipal Action Level be developed?
I	Revise IC/ID Monitoring Program to screen random MS4 outfalls	1	N/A	N/A	N
II	% of IC/ID Monitoring events with sampleable flow	1	Permit Term	N/A	N
II	% of IC/ID Monitoring events that exceeded criteria and required follow-up	5	Permit Term	Decreasing Trend or low %	N
III	Number of IC/ID reports received	2	Annually	Increasing Trend	N
IV	% of IC/ID reports responded to within 1 business day of receipt	1	Annually	N/A	Y
V	% of confirmed and source-identified IC/ID incidents that required enforcement beyond verbal or written wardnings to eliminate	3	Permit Term	Decreasing Trend or minimal %	N
V	% of each type / level of enforcement	3	Permit Term	Trend toward lower levels	N
VI	% of IC/ID response staff receiving training	1	Annually	N/A	Y

Riverside County Flood Control and Water Conservation District

Riverside County – Santa Margarita Region Pyrethroid Source Identification Toxicity Reduction Evaluation

Final Phase II Report
January 2009

MACTEC
9177 Sky Park Court
San Diego, California 92123
858-278-3600 FAX 858-278-5300

Executive Summary

This document is the Phase II report for the Santa Margarita Region (SMR) Pyrethroid Source Identification Toxicity Reduction Evaluation (TRE) conducted by the SMR Permittees to identify the source(s) of toxicity in the SMR and develop a plan to reduce the toxicity. This report documents the Permittees' ongoing and proposed efforts to identify and reduce sources of pyrethroid pesticide toxicity associated with urban runoff.

Data gathered under this TRE was compared to data from neighboring counties. Based on available data, problems with pyrethroid-induced toxicity in urban runoff are common among municipalities in Southern California, and methods for addressing the problems are comparable.

A literature review was conducted to determine appropriate source control and treatment control BMPs for reducing the concentration and load of pyrethroids in storm water runoff. The literature source, the estimated potential for reducing pyrethroid-induced toxicity, and possible concerns about implementing the BMP are summarized.

Based on the results of the literature review, BMPs are evaluated for applicability and potential effectiveness in the SMR watershed. Many of the most effective and appropriate BMPs are currently being implemented by the Permittees.

A search for pending legislation did not identify any pending legislation pertaining to pyrethroid pesticides.

The most effective strategy to prevent water quality impacts from legal pesticide uses was identified as state or federal regulatory change involving effective labeling and use restrictions. The Permittees propose a five year plan to continue, review, and enhance current activities to reduce pyrethroid-induced toxicity.

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1.0 Introduction

This document is the Phase II report for the Santa Margarita Region (SMR) Pyrethroid Source Identification Toxicity Reduction Evaluation (TRE) conducted by the County of Riverside, the City of Murrieta, the City of Temecula, and the Riverside County Flood Control and Water Conservation District (District, collectively Permittees). The Phase I Status Report (RCFCWCD, 2008) contains the work plan for Phase II and an outline of the topics in this report, as well as additional background information. This Phase II report is divided into six sections.

Section 1 describes the purpose of the TRE and provides an overview of the approach taken by the Permittees. Section 1 also contains a discussion of the regulatory framework of the TRE, a brief project background, a description of the Santa Margarita watershed, pyrethroid pesticide background and usage, and management questions and objectives.

Section 2 describes available pyrethroid and toxicity data from other counties in Southern California, and compares the data to data from Riverside County. The data and comparisons are included to demonstrate that the problems and solutions relating to pyrethroid pesticides facing the Permittees are similar to those of neighboring counties in the region.

Section 3 presents the results of the literature review conducted for this study of pesticide reduction Best Management Practices (BMPs).

Section 4 discusses potential pesticide reduction BMPs, the status of the Permittees implementation of the BMPs, and, when applicable, examples of the implementation of the BMPs in other municipalities. Section 4 also contains a table summarizing the potential BMPs, their advantages and disadvantages, and relative cost.

Section 5 discusses pending legislation relating to pyrethroid pesticides.

Section 6 presents the five-year course of action the Permittees propose to follow to reduce pyrethroid-induced toxicity in the SMR.

1.1 Purpose and Overview of Approach

The purpose of the TRE is to identify the source(s) of toxicity in the SMR and develop a plan to reduce the toxicity. The results of Phase I of the TRE are contained in the TRE Status Report (Riverside, 2008). This Phase II report for the TRE study documents the Permittees' ongoing and proposed efforts to identify and reduce sources of pyrethroid pesticide toxicity associated with urban runoff. The goal of Phase II is to establish a course of action and develop modifications to the Permittee's Storm Water Management Plans (SWMPs) to more effectively control the sources of toxicity that were identified in Phase I of the TRE. The Permittees will incorporate the course of action and SWMP modifications into the Report of Waste Discharge (ROWD) that will be submitted to the RWQCB in January 2009.

Phase II activities included:

- A comparison of toxicity and chemistry results to data from adjacent Phase I municipal separate storm sewer system (MS4) permit areas, including San Diego County and Orange County.
- A literature review of current studies and a survey of pesticide reduction BMPs.
- A search for pending legislation regarding pyrethroid pesticides.
- Development of a proposed course of action for the Permittees.

A literature review was conducted of BMP information available from the Urban Pesticide Pollution Prevention (UP3) Project and other pesticide management programs and documents. Information on relevant BMPs was compiled and evaluated to identify potential BMPs that are available to mitigate urban sources of pyrethroids. Existing Permittee programs, such as outreach, regulation, and BMP implementation, were then evaluated for improvement opportunities.

The proposed course of action was determined with consideration of the adequacy of data collection (sufficient precipitation and runoff to collect adequate data) and pending

regulatory actions by California Department of Pesticide Regulation (DPR), and the United States Environmental Protection Agency (EPA).

Land uses in Riverside County are comparable to those in neighboring Orange County and San Diego County, and pyrethroid pesticide-induced toxicity has been observed in those counties. The Permittees are committed to identifying and addressing water quality issues with methods consistent with those used by other stakeholders in Southern California. To this end, data gathered under this TRE was compared to data from neighboring counties, and current pesticide reduction programs used by municipalities throughout California were reviewed.

Source control and treatment control BMPs were researched and evaluated for potential effectiveness in reducing pyrethroid pesticide-induced toxicity in the Santa Margarita watershed. Many of the most effective BMPs are currently implemented by the Permittees, and several have been implemented within the previous Permit term (2004-2008). A proposed five-year course of action for the Permittees was developed by combining the results of the research with the existing programs.

1.2 Regulatory Framework

At the federal level, the authority to regulate pesticide manufacture and use is assigned to the United States Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). In California, pesticide use is regulated at the state level by the DPR. In the SMR, the Permittees are required under the Clean Water Act to control discharges of pollutants, including pesticides that produce water toxicity, to and from their MS4 under the National Pollutant Discharge Elimination System (NPDES).

This TRE was performed as required by Monitoring and Reporting Program (MRP) R9-2004-001.

The MRP, Section II. A. I. 4, states:

> *"When results from the chemistry, toxicity, and bioassessment monitoring…indicate urban runoff-induced degradation, Permittees shall evaluate the extent and causes of urban runoff pollution in receiving waters and prioritize management actions to eliminate or reduce sources. Toxicity Identification Evaluations (TIEs) shall be used to determine the cause of the toxicity, and Toxicity Reduction Evaluations (TREs) shall be used to identify sources and implement management actions to reduce pollutants in urban runoff causing toxicity."*

As local regulation of pesticide use is generally preempted by federal and state law, the Permitttees' authorities are limited to addressing illegal disposal of pesticides, promoting public education, setting the example for minimum pesticide use, and coordinating with the federal and state agencies to facilitate regulatory changes at the state and federal level.

1.3 Project Background

Phase I of the TRE consisted of the toxicity monitoring begun in 2004 and the Toxicity Identification Evaluations (TIE) was initiated in the spring of 2007. The Phase I Status Report (RCFCWCD, 2008) provides a full project background. Toxicity monitoring at Temecula Creek and Murrieta Creek was initiated in 2004 using EPA protocol with the following indicator species: *Ceriodaphnia dubia*, *Selenastrum capricornutum*, and *Hyalella azteca*. Toxicity testing during the 2004-2008 reporting period indicated persistent wet weather toxicity to *Hyalella* in both Temecula Creek and Murrieta Creek. Toxicity was not observed to either *Ceriodaphnia* or *Selenastrum* in any of the samples collected over the four annual reporting periods beginning in the fall of 2004.

Toxicity Identification Evaluations (TIEs) were conducted on the wet weather samples collected from Temecula Creek and Murrieta Creek beginning in April 2007, in accordance with Table 2 of the MRP. The TIEs indicated that pyrethroids were the primary source of toxicity and biological degradation in both Murrieta Creek and Temecula Creek.

As a result of the toxicity and TIEs, storm water monitoring for pyrethroids was initiated in 2007-2008. Results indicate that the pyrethroids permethrin and/or bifenthrin are present in wet weather water samples taken at Murrieta Creek and Temecula Creek.

To further assess the impacts of pyrethroid pesticides the Permittees instituted Dry Weather Toxicity Testing and direct measurement of pyrethroid pesticide concentrations in dry weather water samples during the 2007-2008 reporting period. Toxicity and pyrethroid pesticides were not detected in dry weather water samples at either Murrieta Creek or Temecula Creek.

Phase I of the TRE concluded with the Phase I Status Report. The Phase I Status Report included studies to better characterize patterns and sources of toxicity and to evaluate the hypothesis that the *Hyalella* toxicity is due to pyrethroids.

Bifenthrin and permethrin appear to be the primary toxic elements in Temecula Creek and Murrieta Creek. While bifenthrin and permethrin were applied to both agricultural and non-agricultural land uses, the major sources of pyrethroid toxicity in the SMR are non-agricultural activities. Permethrin was applied more than any other pyrethroid pesticide in the urban landscape. Bifenthrin and permethrin application rates were one and three orders of magnitude higher for structural control applications than agricultural applications in Riverside County. Structural control appears to represent 93% of the total pyrethroids use for Riverside County.

The Status Report outlined the plan for Phase II of the TRE, and this report presents the results of Phase II.

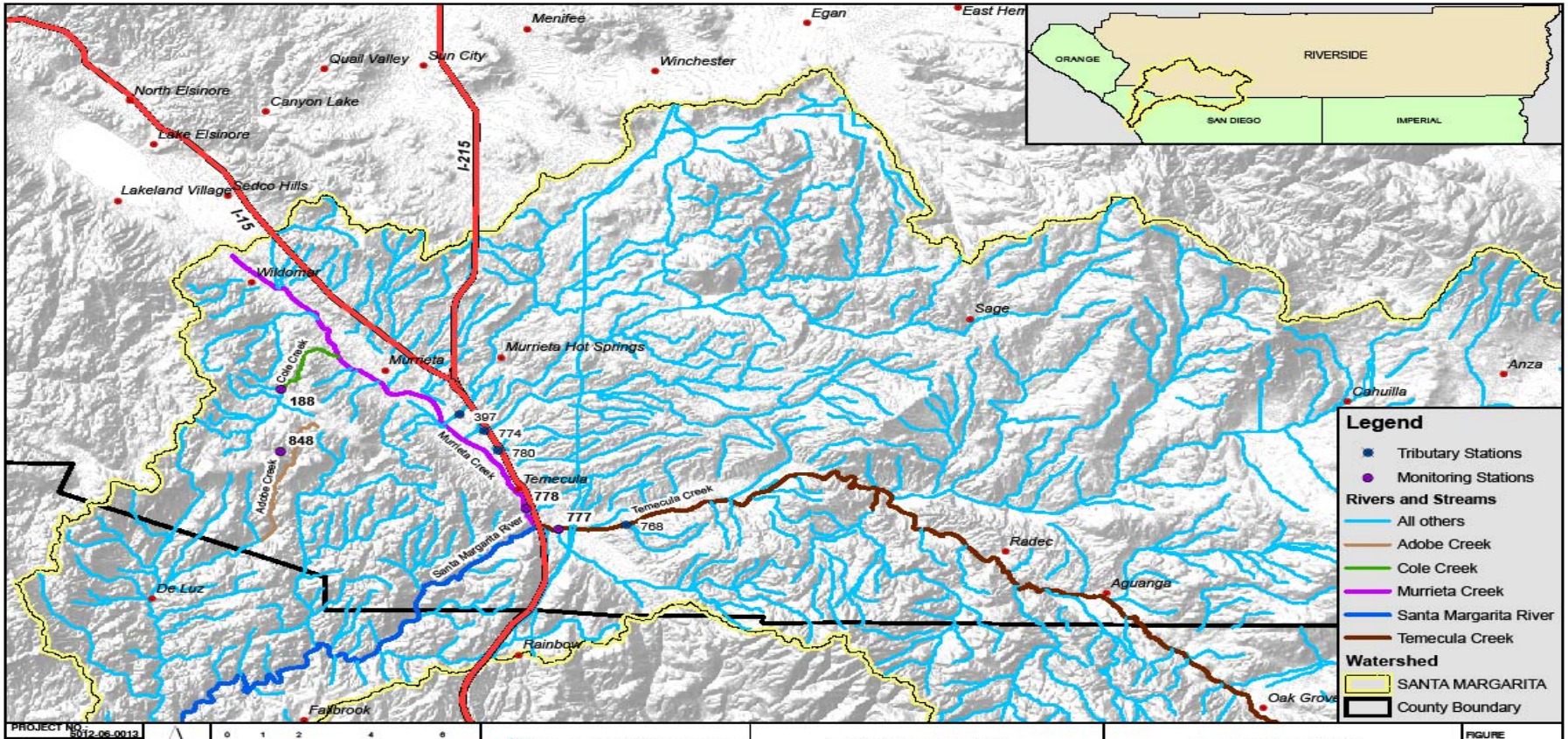
1.4 Watershed Description

The SMR encompasses approximately 750 square miles in southwestern Riverside and northern San Diego Counties (see Figure 1-1). The upper (northeast) portion of the SMR is in Riverside County with the remainder in San Diego County. The SMR is subdivided into the Temecula Creek and Murrieta Creek sub-watersheds and has an arid Mediterranean climate. Creeks in the SMR are ephemeral. Flow in Temecula Creek and in Murrieta Creek results almost exclusively from groundwater during the dry season. It is rare to find flow during dry weather at the tributary stations, and usually this flow infiltrates before reaching Temecula Creek or Murrieta Creek (2006-2007 Monitoring Annual Report). While the ephemeral streams in the SMR are technically receiving waters, the term "Receiving Waters" as used in this TRE Status Report refers exclusively to Murrieta Creek and Temecula Creek.

The Santa Margarita River is formed by the confluence of Murrieta Creek and Temecula Creek. The confluence is located in Riverside County, approximately five miles northeast of San Diego County. The Santa Margarita River flows from Riverside County into San Diego County through the community of Fallbrook and Marine Corps Base Camp Pendleton. The lower estuary and river are protected by Camp Pendleton and are much less developed than surrounding areas in Southern California. The Santa Margarita River is able to support a relative abundance of wildlife and habitats in part because of its undeveloped state.

Figure 1-1

Riverside County Santa Margarita Watershed



As presented in Table 1-1, the total population in the SMR of Riverside County is significantly less than adjacent watersheds covered under similar Phase I MS4 NPDES permits.

Table 1-1

San Diego Region Populations

Jurisdiction	Population
Orange County	3,002,048
San Diego County	2,941,454
SMR/Riverside County	250,483
Unincorporated	55,291
Murrieta	97,257
Temecula	97,935

1.5 Pyrethroid Pesticide Background and Usage

A statewide compilation of the presence and effects of pyrethroid pesticides in urban surface waters, prepared in July 2008 and presented at the 2008 California Association of Stormwater Quality Agencies (CASQA) Conference, outlined the rise in pyrethroid use and its increased presence in urban waterways (Ruby, 2008). A comprehensive survey of pesticide use in Sacramento, San Diego, and Orange Counties also concluded that, as the older pesticides chlorpyrifos and diazinon have been phased out, pyrethroid pesticides have seen increased usage (Wilen, 2005). The Urban Pesticide Pollution Prevention (UP3) Project confirms that pyrethroids are the cause of toxicity in numerous California waterways, particularly in urban waterways. The UP3 Project (www.up3project.org) publishes an annual review of new scientific findings on pesticides in urban surface water (TDC, 2007). Since 2005, the reviews have consistently indicated that pyrethroid use continues to increase and that pyrethroids are found to be the cause of toxicity in urban waterways. The pyrethroid use information is confirmed by data published by the DPR.

Pyrethrins are natural insecticides that are derived from an extract of chrysanthemum flowers. Pyrethroids are synthetic versions of pyrethrins. These chemicals act on the nervous system of insects. Commercial pyrethroid pesticides often contain a synergist that works by restricting the enzymes insects use to detoxify pyrethroids. While pyrethroids have been shown to be one of the least poisonous insecticides to mammals, the effects depend on the level of exposure, the health of the animal, and the environmental circumstances.

Pyrethroids applied in urban areas enter the storm drainage system of the MS4 by surface runoff and are transported directly to receiving waters. Other potential urban sources are runoff from irrigation with reclaimed water, application overspray, and atmospheric deposition. Pyrethroids transported via the MS4, from whatever source, are considered to be non-point discharges. Agriculture, nursery, and urban/suburban uses are the main categories of sources of pyrethroids in the receiving waters of the SMR.

Outdoor structural pest control is the predominant urban use of pyrethroids in most watersheds. However, in the SMR, the acreage dedicated to agricultural land use exceeds the urban land use area by approximately 2:1. Pyrethroid insecticides are applied to a variety of crops in the SMR and California throughout the year. According to the DPR, pyrethroids are commonly used on fruit and nut trees, row crops, and in nurseries. Six of the primary pyrethroids used in California agriculture, in order of decreasing amount applied in 2003, are permethrin, esfenvalerate, lambda-cyhalothrin, cyfluthrin, bifenthrin, and cypermethrin. Therefore, agricultural sources of pyrethroids were considered.

TIE methods for pyrethroids are still being developed. Effective methods require the ability to measure low concentrations of pyrethroids, and this remains a challenge. Fortunately, the development of TIE methods for pyrethroids is progressing and moving towards standardization (San Francisco Estuary Project, 2007). TIEs are planned for storm water samples collected during 2008-2009 when toxicity is evident.

1.6 Management Questions and Objectives

This TRE is designed to confirm the toxic element observed in the samples collected in the Santa Margarita Region, identify likely sources of the toxic element, and propose mitigation measures for those sources. TIEs identified pyrethroids pesticides as the likely toxic element. As the MRP specifies that a TRE must be conducted following toxicant identification through a TIE, Phase I of the TRE focused on the pyrethroids identified as the source of toxicity in the 2007 TIEs. To support this TRE, the Permittees commissioned additional wet and dry weather toxicity testing, water column pyrethroid testing, additional TIEs to verify the persistence of pyrethroids as the toxicant. Based on the resulting information, the TRE evaluates the specific sources of toxicity and likely mitigation.

This TRE study assumes that pyrethroid sources and resultant toxicity patterns in the SMR are similar to those in neighboring counties, in particular San Diego and Orange Counties. Under this assumption, the Permittees hypothesized that pyrethroids would be detected in samples at most if not all monitoring locations, that the samples would exhibit toxicity to *Hyalella*, and that TIEs would indicate pyrethroids as the cause of the toxicity. Unlike other regions, dry weather toxicity is not expected in the SMR, as dry weather flows are supported primarily by groundwater.

Based on this assumption, this TRE was designed to provide information to help answer the following five management questions related to the toxicity:

1) Is the pyrethroid toxicity persistent in Temecula Creek and Murrieta Creek?
2) Does the toxicity occur during dry weather?
3) Are there any obvious sources of illicit discharge of pyrethroids that can be abated?
4) What are the likely sources of pyrethroid toxicity in the SMR?
5) What potential management measures are available to the Permittees to mitigate the impacts of pyrethroid pesticide application?

Answers to the first four questions are detailed in the Phase I Status Report. Briefly, toxicity is persistent in the creeks during wet weather, but is not evident in dry weather samples. No

obvious sources of illicit discharge were found. The likely primary source of pyrethroids is structural control performed by pest control operators (PCOs). The final question is addressed during Phase II and is the focus of this report.

2.0 Data Comparison

An assumption of this TRE study is that pyrethroid sources and resultant toxicity patterns in the SMR are analogous to those in similar counties, in particular neighboring San Diego and Orange Counties. To verify this assumption, it was necessary to compare data collected in SMR to data collected in other locations. As part of the 2008 CASQA pyrethroids data compilation, monitoring results were summarized from studies that investigated the presence and effects of pyrethroid pesticides in urban areas of California (Ruby, 2008). The CASQA summary listed the frequency of detection of various pyrethroid pesticides and results of toxicity testing for different indicator species. Results from various northern and Southern California locations were detailed, including results of water column studies from Orange, San Diego and Sacramento Counties.

Pyrethroids, as a class of chemicals, have an affinity for particles and they are considered to be relatively hydrophobic; they are therefore commonly found in sediments of waterways downstream of their application sites. The initial toxicity studies leading to the identification of pyrethroids as pervasive environmental contaminants in California were performed on sediment samples by Don Weston and his colleagues at the University of California, Berkeley (Weston et al., 2005; Amweg et al., 2006). Recently, improvements in analytical methods for pyrethroids in water, and modification of toxicity studies to more effectively test for pyrethroid-based toxicity in water, have lead to increasing evidence of the presence of pyrethroids in water column samples, and toxic effects in the water matrix (see citations for Orange and San Diego County in Ruby, 2008).

Extensive work has been performed on the environmental presence and effects of pyrethroids in urban areas of the neighboring Orange and San Diego counties; however, much of this work has been performed on sediment samples. Although the sediment monitoring results do not correspond directly with the SMR water column test results, sediments are considered to be effective integrators of contaminants from the contributing storm water flows. The deposited sediments are produced as particles settle out from the passing water over some

period of time, and tend to accumulate until they are washed away by higher-velocity flows. Summaries of the relevant sediment study results are therefore included in the discussion that follows.

In Orange County, an ongoing study being performed by UC Davis, in conjunction with UC Riverside and the Orange County UC Cooperative Extension, has consistently found bifenthrin and permethrin in water column runoff samples from residential areas (Haver et al., 2007; Oki, personal communication). In samples from four residential sites they have detected bifenthrin in 100% of samples, with the number of samples varying from 48 to 57 per site (Oki, personal communication). In sediment samples collected in recent years from the Santa Ana Region of Orange County, bifenthrin is commonly detected (32 of 56 samples) and permethrin less frequently so (4 of 56 samples), with sediment toxicity to *Hyalella* common (39 of 54 samples tested were moderately or highly toxic; see summary in Ruby, 2008).

In a 2005 study of six Orange County residential storm drainages and seven tributary streams draining commercial/residential land uses, bifenthrin was detected in 95% of dry weather samples and 100% of wet weather samples (Budd et al., 2007). Because treatment of nursery products is mandatory to control Red Imported Fire Ants, an older DPR study, conducted in 1999-2002, found occasional detects of bifenthrin in urban runoff samples, along with frequent detects in nursery runoff from several Orange County sites.

In San Diego County, under NPDES Permit monitoring conducted since 2004, pyrethroids have been commonly detected in water samples from several receiving waters, and toxicity to *Hyalella* has been increasingly observed in water samples (see summary in Ruby, 2008). Bifenthrin was detected in 12 of 15 samples collected from 2005-2006 and 2006-2007; detection frequency was 100% in samples from Chollas Creek, Agua Hedionda, and Tecolote Creek. Toxicity to *Hyalella* was observed in 22 of 57 samples tested over the three year period, 2004-2007. In a TIE study performed on Chollas Creek samples during 2005-2006,

67% of samples were acutely toxic to *Hyalella*, and the toxicity was found to be likely due to pyrethroids.

In a 2004-2005 study performed by UC Davis and others, sediments from Switzer Creek at its outlet to San Diego Harbor were found to be highly toxic; bifenthrin and permethrin were detected at high concentrations, and a sediment TIE identified pyrethroids as the likely cause of the observed toxicity (Anderson et al., in press). As part of a statewide survey of urban waterways, sediments were tested from several receiving waters in San Diego County. All were found to be highly toxic to *Hyalella* (Holmes et al., in press).

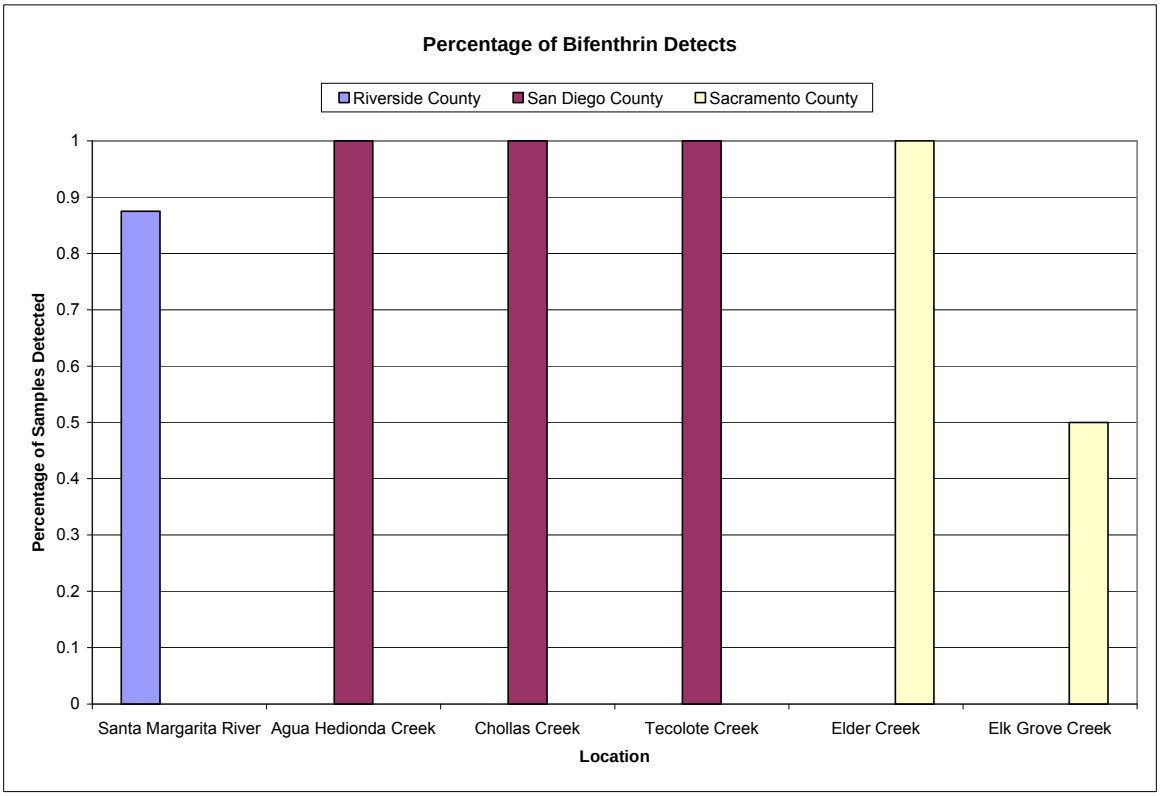
To further compare the pyrethroid sources and toxicity patterns in the SMR to other counties, the CASQA data summary was analyzed to select the studies which reported results for the same constituents and effects identified in the SMR, specifically permethrin, bifenthrin, and toxicity to *Hyalella.* The total number of detections for the different monitoring locations was divided by the total number of samples taken at the sites to calculate the percentage of samples with detectable concentrations of pyrethroids. This normalized metric allowed for comparison of the various datasets.

While permethrin is among the more commonly-used pyrethroids, it is much less toxic to aquatic life than bifenthrin (TDC, 2007). For the purposes of this assessment, bifenthrin detection frequency and frequency of toxic effects were used as the metrics for comparison.

Comparative results for bifenthrin are summarized in Figure 2-1. Data were available for two creeks in Sacramento County and three locations in San Diego County, in addition to the data collected for SMR. Two samples were taken at the Sacramento County sampling locations. For San Diego County, each creek was sampled three times except for Chollas Creek, which was sampled six times. The SMR was sampled a total of eight times. In most cases, bifenthrin was detected in over 80% of samples. Only at Elk Grove Creek in Sacramento County was bifenthrin detected at a notably lower percentage.

Figure 2-1

Percentage of Samples with Bifenthrin Detections

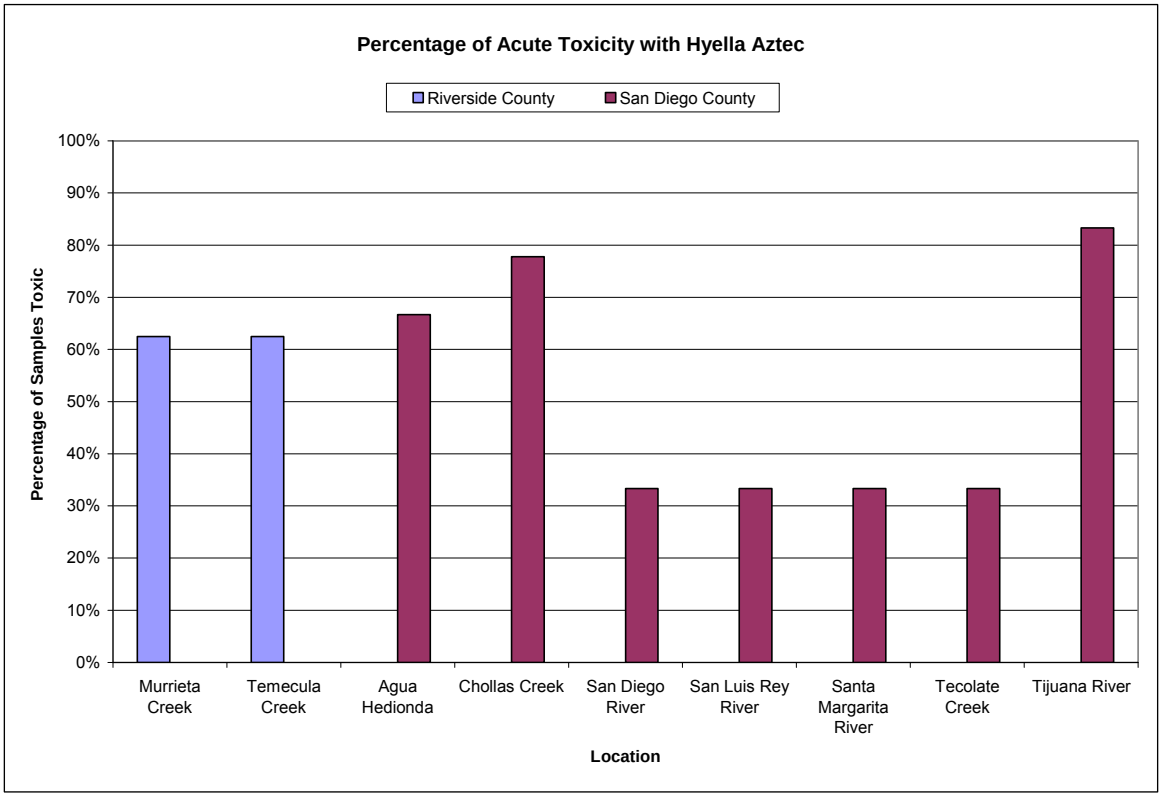


Toxicity to *Hyalella* was documented in water samples from San Diego County, along with the SMR. Toxicity testing was performed on samples from seven San Diego County water bodies. The sample sets ranged from three to nine toxicity tests (Aqua Hedionda, San Dieguito River, Tijuana River, and Chollas Creek). In the SMR, a total of eight toxicity tests were performed on samples from Murrieta Creek and Temecula Creek. The results for frequency of acute toxicity from the SMR were within the range of the results for similar sites in San Diego County (see Figure 2-2).

After comparing the results from different locations, the assumption that pyrethroid sources and resultant toxicity patterns in the SMR are similar to those in similar counties appears to be valid.

Figure 2-2

Percentage of Samples with Acute Toxicity to *Hyalella*



3.0 Literature Review

A literature review was conducted during December, 2008 to determine appropriate BMPs for reducing the concentration and load of pyrethroids in storm water runoff. An initial search was made of the Urban Pollution Prevention Program (UP3) website (www.up3program.org) for potential examples of BMP strategies implemented specifically for pyrethroids. The United States Environmental Protection Agency website and the CASQA website were also reviewed for pyrethroid specific BMPs. Widespread use of pyrethroids is relatively recent, and there has been little direct evaluation of BMPs for pyrethroids. Further research was conducted on general storm water BMPs, and their potential for pyrethroid reduction was evaluated based on the design of the BMP and the chemical behavior of pyrethroids.

To identify pending legislation that may be related to pyrethroid pesticides, web searches were conducted on the websites for DPR, the California legislature, the EPA, and the Library of Congress. However, no pending legislation was identified as relevant to pyrethroid pesticides.

Table 3-1 below presents the findings of the literature review. BMPs are categorized as either source control or treatment control, and within each category they are sorted by type. The literature source, a summary of the BMP, the estimated potential for reducing pyrethroid-induced toxicity, and possible concerns about implementing the BMP are provided. See Section 4 for further information about each type of BMP.

Table 3-1
Literature Review Matrix

Type of BMP	Literature Source	Summary	Ability to Reduce Toxicity Caused by Pyrethroids	Storm Water Concerns
Source Control				
Regulatory	Pesticides of Interest for Urban Surface Water Quality. Urban Pesticides Use Trends Annual Report. July 2008.	Suggests regulatory changes as a result of increased toxicity due to pyrethroid use	Potentially High	Supplementary to other BMPs, Will take years to show results
Regulatory	Improving Urban Pesticide Regulatory Activities to Protect Water Quality – Annual Update 2007. November 2007.	Discusses recent state and federal regulatory pesticide activities on an annual basis	Potentially High	Supplementary to other BMPs, Will take years to show results
Regulatory	California Department of Pesticide Regulation. http://www.cdpr.ca.gov/docs/registration/reevaluation/chemicals/pyrethroids.htm. 2007.	The reevaluation of the widespread presence of synthetic pyrethroid residues in the sediment of both agricultural and urban dominated California waterways at levels toxic to Hyalella azteca (H. azteca).	Potentially High	Supplementary to other BMPs, Will take years to show results
Integrated Pest Management (IPM)	Building Maintenance - Structural Integrated Pest Management. June 2008.	Promotes reduction in pesticide use through use of municipality IPM and hiring of PCO's trained in IPM	Potentially High	Does not eliminate all uses of pyrethroids
IPM	California Stormwater BMP Handbook. January 2003.	Promotes prevention of pesticide use through use hiring of PCOs that use IPM as an alternative	Potentially High	Does not eliminate all uses of pyrethroids
IPM	City of Santa Monica Toxics Use Reduction Program Integrated Pest Management. June 1997.	Overview of IPM program initiated by the City of Santa Monica	Potentially High	Does not eliminate all uses of pyrethroids
IPM	National Management Measures to Control Nonpoint Source Pollution from Urban Areas. November 2005.	EPA document discussing management practices to help reduce pesticide use	Potentially High	Does not eliminate all uses of pyrethroids
IPM	National Pollutant Discharge Elimination System (NPDES) Phase II BMP & Measureable Goal Examples. February 2008.	Provides examples and goals of good housekeeping BMPs	Potentially High	Does not eliminate all uses of pyrethroids
IPM	The Monterey Bay Green Gardener Program "sample curriculum". www.green-gardener.org/about. Accessed December 2008.	Informs the public and landscapers about the green gardener program and how to get involved	Potentially High	Does not eliminate all uses of pyrethroids

Table 3-1 (continued)
Literature Review Matrix

Type of BMP	Literature Source	Summary	Ability to Reduce Toxicity Caused by Pyrethroids	Storm Water Concerns
Source Control				
IPM	Western IPM Center. www.wripmc.org. Last updated 12/23/2008.	Pest management information specific to region, state, or territory.	Potentially High	Does not directly address pyrethroids
IPM	EcoWise Certified. www.ecowisecertified.com. Accessed December 2008.	Information on IPM program design, developing contracts for structural IPM, and pilot program aimed at developing IPM certification.	Potentially High	Does not directly address pyrethroids
IPM	Our Water Our World. www.ourwaterourworld.org. Copyright 2008.	Contains assorted fact sheets on specific pests and methods to manage them without using hazardous materials.	Potentially High	Addresses pyrethroids in water pollution fact sheet.
IPM	UP3 Project. www.up3project.org. November 2008.	Provides tools to municipalities to reduce municipal pesticide use and to conduct outreach to their communities on less-toxic methods of pest control	Potentially High	Addresses pyrethroids toxic impact on water bodies.
IPM	State of California Green California. www.green.ca.gov/EPP/building/structipm.htm. Accessed December 2008.	Provides information on structural IPM.	Potentially High	Addresses pyrethroids impact on storm water.
IPM	San Francisco Department of the Environment. http://www.sfenvironment.org/our_programs/topics.html?ti=1. Accessed December 2008.	Contains information regarding key components of integrated pest management.	Potentially High	Addresses pyrethroids impact on storm water.
Low Impact Development	Low-Impact Development Design Strategies: An Integrated Approach. June 1999.	Discusses LID design strategies and successes, including storm water controls	Potentially High	Does not directly address Pyrethroids
Low Impact Development	Low Impact Development Handbook: Stormwater Management Strategies. December 2007.	Reviews many LID techniques appropriate for Southern California's climate	Potentially High	Does not directly address Pyrethroids
Public Outreach	County of Los Angeles Department of Public WorksStorm Water/Urban Runoff Public Education Model Program. Fiscal Year 2002.	Provides Los Angeles specific examples of Public Outreach and Education	Potentially High	Change is up to individuals, needs cumulative effect

Table 3-1 (continued)
Literature Review Matrix

Type of BMP	Literature Source	Summary	Ability to Reduce Toxicity Caused by Pyrethroids	Storm Water Concerns
Source Control				
Public Outreach	Drainage Area Management Plan - Santa Ana and Santa Margarita Regions. July 2005.	Discusses local outreach actions conducted by the Permittees	Potentially High	Change is up to individuals, needs cumulative effect
Public Outreach	Environmental Justice Pilot Project Pest Management Assessment: Soil Fumigant and Organophosphate Insecticide Use and Alternatives - Parlier, Fresno County, California. October 2007.	Study of Agricultural pesticide use in Fresno area, including use of reduced risk pesticides	Potentially High	Unknown potential water quality and toxicity issues
Public Outreach	National Management Measures to Control Nonpoint Source Pollution from Urban Areas. November 2005.	EPA document discussing management practices to help reduce pesticide use	Potentially High	Change is up to individuals, needs cumulative effect
Public Outreach	National Pollutant Discharge Elimination System (NPDES) Phase II BMP & Measureable Goal Examples. February 2008.	Provides examples and goals of public outreach BMPs	Potentially High	Change is up to individuals, needs cumulative effect
Public Outreach	Pesticides of Interest for Urban Surface Water Quality. Urban Pesticides Use Trends Annual Report. July 2008.	Contains recommendations for public education based on analysis of pyrethroid use trends	Potentially High	Change is up to individuals, needs cumulative effect
Treatment Control				
Extended Detention Basin	Santa Clara Valley Urban Runoff Pollution Prevention Program Commercial Site Design Examples. February 2007.	Shows examples of different structural treatment methods and their effectiveness	Moderate	Improper maintenance could lead to other water quality issues
Extended Detention Basin	California Stormwater BMP Handbook. January 2003.	Reviews extended detention basin BMP methods, concerns, and goals	Moderate	Improper maintenance could lead to other water quality issues
Extended Detention Basin	Ventura Countywide Stormwater Quality Management Program Technical Guidance Manual for Stormwater Quality Control Measures. July 2002.	Reviews many BMP methods and contains information specific to Southern California	Moderate	Improper maintenance could lead to other water quality issues

Table 3-1 (continued)
Literature Review Matrix

Type of BMP	Literature Source	Summary	Ability to Reduce Toxicity Caused by Pyrethroids	Storm Water Concerns
Treatment Control				
Infiltration Basin	California Stormwater BMP Handbook. January 2003.	Reviews infiltration basin BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Infiltration Basin	Ventura Countywide Stormwater Quality Management Program Technical Guidance Manual for Stormwater Quality Control Measures. July 2002.	Reviews infiltration basin BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Infiltration Trench	California Stormwater BMP Handbook. January 2003.	Reviews infiltration trench methods of BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Infiltration Trench	Ventura Countywide Stormwater Quality Management Program Technical Guidance Manual for Stormwater Quality Control Measures. July 2002.	Reviews infiltration trench methods of BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Media Filter	California Stormwater BMP Handbook. January 2003.	Reviews media filter BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Media Filter	Ventura Countywide Stormwater Quality Management Program Technical Guidance Manual for Stormwater Quality Control Measures. July 2002.	Reviews many BMP methods and contains information specific to Southern California	Potentially High	Improper maintenance could lead to other water quality issues
Pervious Pavement	California Stormwater BMP Handbook. January 2003.	Reviews pervious pavement BMP methods, concerns, and goals	Potentially High	Improper maintenance could lead to other water quality issues
Pervious Pavement	Low Impact Development Handbook: Stormwater Management Strategies. December 2007.	Discusses LID strategies for assistance in storm water management	Potentially High	May contaminate groundwater

4.0 BMP Analysis

Based on the literature review and the findings of Phase I of the TRE, BMPs were evaluated for their applicability to the SMR. Because the toxicity appears to be principally a wet weather phenomenon, and because the Permittees' jurisdiction includes the urbanized area of the watershed, the analysis focused on BMPs designed to reduce the amount of storm water pollution caused by urban runoff.

The potentially applicable BMPs are divided into Source Control and Treatment Control BMPs and are discussed in detail below. Through the Permittee's proactive efforts to protect the quality of the receiving waters and their beneficial uses, many programs addressing these broad categories are either already in place or are actively being developed. The implementation status for each specific BMP is discussed. Examples of BMP implementation by other municipalities in the region are included as a tool for evaluating the consistency of the Permittees' program with other programs in the region.

4.1 Source Control BMPs

Source control BMPs are designed to curtail pollution at the source before it has the opportunity to enter the storm drain system and pollute waterways. They are generally the preferred type of BMP because reduction of pollution occurs at the source, before runoff has become contaminated (CASQA, 2003). The types of broad categories of source control BMPs that identified as most appropriate for the Santa Margarita watershed are: pursuing regulatory change, implementing IPM strategies including LID, and public outreach and education.

4.1.1 Regulatory Action

Status: Currently being implemented by the Permittees.

Pesticide manufacturers are required to receive approval by USEPA and California DPR for specific pesticide uses, and both agencies can impose use restrictions to prevent unwanted impacts on the environment and public health. At the federal level, a fundamental regulatory disconnect exists between pesticide approval (registration) under FIFRA and water pollution control programs under the Clean Water Act. This has resulted in a repeating pattern, in which a) pesticides are approved for use without sufficient consideration of potential environmental effects, b) water quality and other ecological impacts accrue, c) use restrictions are applied to the offending products (sometimes involving widespread bans on use), and d) new pesticides are approved for use, with subsequent environmental impacts.

In 1962 Rachel Carson published *Silent Spring*, documenting the widespread ecological consequences of pesticide applications. The federal government responded by banning the use of DDT and other organochlorine pesticides, based on extensive evidence of environmental impacts through the process of bioaccumulation. The ban has lead to dramatic recoveries in affected populations of bald eagles and other species; however, the legacy of these long-lasting pesticides near-shore dumping areas in Los Angeles County and elsewhere remains (IWS, 2007).

Eventually the organochlorine pesticides were replaced principally by organophosphate pesticides, especially in urban uses. In the mid-1990s municipal storm water monitoring programs began to document that commonly-used organophosphate pesticides, especially diazinon and chlorpyrifos, were present at toxic levels and causing toxicity to aquatic organisms, principally the common water flea, *Ceriodaphnia*. Although not bioaccumulative, diazinon and chlorpyrifos were discovered to cause widespread toxicity in urban runoff and local receiving waters (TDC, 2001). USEPA subsequently banned most urban uses of diazinon and chlorpyrifos, although EPA's main motivation involved human health effects

on the pesticide applicators, and water quality was not an important factor in those decisions. Again, the ban was also immediately effective, reflected in reduced concentrations of diazinon and chlorpyrifos in urban water samples, and fewer occurrences of organophosphate-based water column toxicity (c.f., references in Ruby, 2008 for San Diego County Municipal Copermittees Annual Urban Runoff Monitoring Reports). But pesticide manufacturers simply replaced the OP pesticides in their products with other active ingredients, principally pyrethroids. Shortly thereafter, researchers and municipal storm water programs began documenting toxic effects from the new pyrethroid products. The pyrethroid impacts were first documented in sediments, and the affected test organism shifted from *Ceriodaphnia* to the sediment-dwelling *Hyalella*.

In the cases of both organochlorine (DDT) and organophosphate (diazinon, chlorpyrifos) pesticides, federal limitations or bans on uses were effective in ameliorating the associated environmental impacts. In both cases, however, new pesticide products were approved for use that then caused related but different impacts to the environment. Therefore it is clear that the most effective strategy for preventing environmental impacts from pesticide use involves implementing an effective process of pesticide approval and registration that comprehensively accounts for and mitigates against such impacts.

For more than ten years CASQA and various other California state and local agencies have promoted better regulation of pesticides at the federal level, encouraging use restrictions as the most effective means of source control. California water quality agencies have sent comment letters to USEPA and DPR on guidance pertaining to the application of pesticides to surface waters and on recommended environmental hazard statements for residential outdoor pesticides (TDC, 2007). These efforts are beginning to show some modest signs of success. In a recent letter to stakeholders, EPA outlined an approach to provide better cooperation between the Office of Pesticide Programs (OPP) and the Office of Water (OW), to allow for “environmentally protective and scientifically defensible effects assessment judgments about contaminants that are or may be found in ambient water”. The Riverside County Permittees plan to continue their support of these efforts through ongoing

participation in the CASQA Pesticides Subcommittee, the Urban Pesticide Pollution Prevention (UP3) Project, and the Urban Pesticide Committee. The Permittees also plan to request that the RWQCB become involved in advocating for more effective pesticide regulation at the state and federal levels.

The Permittees are members of a CASQA subcommittee that addresses pesticide uses impacting stormwater discharges. Effort focuses on providing input to the USEPA and the California Department of Pesticide Regulation (DPR) to improve pesticides regulations so that they more fully protect water quality and are better aligned with the Clean Water Act and California Water Code. (RCFCWCD, 2008). CASQA has also been active in supporting DPR's ongoing reevaluation of allowable pyrethroid pesticide uses (TDC, 2007).

Increasingly, the regulatory response to the water quality impacts resulting from *legal uses of approved pesticides* has been for regional water boards to impose limitations on the allowable loadings of pesticides to impaired waters through the TMDL process. Local agencies have little or no jurisdiction over sales or use of these pesticide products, and therefore do not have the full authority needed to perform loading reductions in resulting TMDLs. An effective regulatory solution must occur at the state and federal levels, to regulate allowable pesticide uses to effectively prevent such water quality impacts.

Current legislation requires users of certain pesticides to be trained, often certified, in the use of those pesticides and to report the amounts applied (State of California, 2008). A similar regulatory approach could be used to promote pesticide alternatives, such as for PCOs to train and certify their technicians in the use of IPM methods (Quarles, 2002). The Permittees are considering supporting regulatory action by the state to include IPM training for PCOs in the requirements for certification and training on the use of pesticides.

Environmentally sensitive and flexible zoning ordinances may be adopted to facilitate the use of LID principles, thereby encouraging private developers to use LID principles (Prince Georges County, 1999). Additional land use restrictions or alternatives to present zoning

laws may help reduce urban storm water runoff, potentially reducing pyrethroid loadings in receiving waters. The Permittees plan to continue promoting LID implementation through interagency communications and cooperation.

4.1.2 Integrated Pest Management

Status: Currently being implemented by the Permittees.

IPM is "a decision-making process for managing pests that uses monitoring to determine pest injury levels, and combines biological, cultural, mechanical, physical, and chemical tools and other management practices to control pests in a safe, cost effective, and environmentally sound manner that contributes to the protection of public health" (Carlsen, 2008). IPM can further be described as an approach to solving pest problems by using information about the pest and landscape to eradicate the pest's habitat in a manner that poses the least risk to humans (Ecology Action, 2007). IPM has many different aspects that help to reduce pests and in turn cause a reduction in pesticide use, including green gardening and structurally integrated pest management (SIPM). BMPs that are typically used as part of an IPM strategy are described in the following sub-sections.

4.1.2.1 Green Gardening

Status: Not currently being implemented by the Permittees, program under consideration and will be enacted in the near future.

The Green Gardener program, implemented through landscapers, promotes environmentally responsible landscaping to reduce the use and need for pesticides. In general, education of gardening and landscape maintenance staff is beneficial for pest reduction as part of an IPM program. It provides alternative methods to landscapers, such as reducing outdoor sources of ants by elimination of their food and water sources through management of honeydew producing insects and plants associated with them (UC Davis, 2007). The Green Gardener

program encourages businesses to participate in environmentally sound landscape maintenance. Healthy landscapes are more resistant to pests (Ecology Action, 2007). Pests that do not have a suitable habitat will leave to find a more hospitable environment. When the pests leave, then there is a lessened need for pesticide applications and lower risk of pyrethroids entering storm water.

The County of Santa Barbara implemented a Green Gardener Program, in which landscapers are encouraged to take a class at the local city college, covering subjects such as IPM strategies and environmentally beneficial landscaping to obtain a "Green Gardener" card. They are then placed on the Green Gardener list, which is then promoted to the public by the County (County of Santa Barbara, 2008). The program benefits both parties; gardeners receive education and advertising at a nominal cost, and the County receives the benefit of more environmentally-friendly landscaping and a reduction in the use of pesticides. Municipalities may promote this type of program by contracting with landscaping companies that have their employees trained in green gardening practices.

Encouraged by the success of the Santa Barbara Green Gardener Program, the Monterey Bay area instituted a similar program. "The goal of the program was to educate and certify local gardeners in resource efficient and pollution prevention landscape management practices" (Ecology Action, 2007). With the support of the State of California Water Resources Control Board, more municipalities are likely to follow (Ecology Action, 2007).

4.1.2.2 Pest Control Contracting

Status: Currently partially implemented by the Permittees.

Many municipalities contract pesticide applications to professional PCOs. Contracting only with PCOs that have IPM training and certification can help realize IPM models and goals. The recently completed EcoWise Certified IPM Contracting Tool Kit (www.EcoWiseCertified.org), provides resources for municipal agencies to use in developing such a program. The EcoWise IPM Tool Kit includes:

- Elements to consider when developing an IPM policy
- Roles and responsibilities of the agency or business in an IPM program
- How to hire and work with a professional IPM service provider

The Took Kit also includes the EcoWise IPM Process along with a number of other helpful resources and sample documents.

Because PCOs are responsible for the majority of pesticides applied in urban areas, distribution of information regarding less-toxic alternatives, lower-use application techniques, and proper disposal, practices to professional applicators is an essential component of the Permitee's pesticide control effort. The Permittees currently distribute information to PCOs through the Public Outreach and Education Program (see Section 4.1.3).

The City of Palo Alto's Regional Water Quality Control Plant includes IPM requirements in their contracts with PCOs (City of Palo Alto, 2008). The City of Santa Monica, as a part of their SIPM program, specified IPM requirements in their PCO contracts (Raphael, 1997). Use of PCOs with IPM training and certification by municipalities encourages local PCOs to invest in IPM training and certification, which in turn, allows their expertise in IPM to expand beyond just the municipality itself (Quarles, 2002). Education of PCOs, hiring only PCOs that have IPM training, and contracting specifically for IPM by local agencies may

create more public awareness and reduce the use of pyrethroids in the Santa Margarita watershed.

4.1.2.3 Structurally Integrated Pest Management Program

Status: Currently being implemented by the Permittees, with additional programs under consideration.

SIPM is a program that controls the access of pests to buildings and the potential food sources within them by protecting the structure itself from pests, with minimal use of pesticides. The Permittees intend to lead by example, sharing success through public outreach programs and encouraging individuals and businesses to do the same. SIPM is a long term solution offering positive potential impacts on budget, reduction of pests and, reduction of pyrethroid pesticide use. Note that SIPM should not be confused with category of pesticide use referred to as structural pest control. SIPM is a BMP designed to reduce the use of pesticides in a structural pest control program.

The City of Santa Monica implemented an SIPM program and experienced a reduction in pests and in the use of pesticides. In addition, Santa Monica reduced pest management costs by 30% (State of California, 2008). California law requires a SIPM strategy for all state-owned buildings and schools (State of California, 2008). The three main aspects of a SIPM strategy are facility design and LID, monitoring, and facility maintenance.

<u>Facility Design</u>

Status: Currently being implemented by the Permittees.

Facility design can play a large role in the exclusion of potential pests. "A facility's planning, design, and construction provides an opportunity to incorporate features that help to exclude pests, minimize pest habitat, and promote proper sanitation" (NIH, 1999). It can also reduce

storm water runoff (NAHB, 2008). Exclusion of pests helps reduce pest infestations and in turn the need for pyrethroid pesticide use. For example, ensuring that the design holds plants and mulch several inches away from the foundation of a building may assist the reduction of ant populations immediately adjacent to the building (UC Davis, 2007). A reduction in storm water runoff may also reduce the amount of pyrethroids that enter receiving waters. Facility designs can incorporate aspects of LID, as discussed below. New development and redevelopment may incorporate designs that aid in the exclusion of pests and the reduction of urban runoff, which may contribute to a reduction of pollutant loads, including pyrethroids.

Pest Monitoring

Status: Currently in not use by the Permittees, program under consideration.

Monitoring structures and adjacent areas may help prevent pest infestations and quickly identify potential problems. Traps, visual inspections, and staff interviews assist in the identification of areas and conditions that may foster pest activity (NIH, 1999). Monitoring for ants, for example, may consist of simple inspections of facilities such as looking under sinks and along pipes and electrical wires (UC Davis, 2007). The City of Santa Monica, as a part of their SIPM, provided training to all general staff, purchasing, carpenters and custodial staff. Specific presentations were given to groups, such as the custodial staff, who learned about products used in control of ant and cockroach populations and general sanitation. The staff is trained in the identification of potential pest infestations and habitat conditions that may foster pest activity (Raphael, 1997). Early identification of pest infestations can increase the effectiveness of specific treatments and reduce the overall need for pesticide use.

Sanitation and Facility Maintenance

Status: Currently not being implemented by the Permittees, program under consideration.

Proper sanitation includes reducing clutter and pest habitat and incorporating proper facility and waste management practices. Records of maintenance and housekeeping conditions may help track pest problems and assist in the determination of whether corrective action is needed or has been taken in a timely manner (NIH, 1999). Sanitation and facility maintenance involves the housekeeping staff, the building maintenance staff, and the landscaping staff.

Improper storage of waste may affect urban runoff, and it may create a hospitable environment for pests, particularly ants. Initial, low-cost steps that municipalities may take to improve waste handling are: controlling litter, keeping waste collection areas clean, and insuring proper disposal of pyrethroid pesticide products, if used, and educating employees and the public. Simple solutions such as rinsing out soda bottles and emptying trash daily prove effective to reduce insect infestations, particularly ants (UC Davis, 2007). An important component of an SIPM monitoring program is regular inspections of solid waste containers for structural damage or leaks (CASQA, 2004).

Educating custodial staff, such as was done in the City of Santa Monica, can reduce the amount of improperly disposed pesticides (Raphael, 1997). Designating staff members to perform a daily checklist of areas around the structure to ensure cleanliness and proper storage of waste can assist the efforts to reduce potential pest infestations and leakage of hazardous waste (CASQA, 2004).

Building maintenance staff also benefit from education and acceptance of responsibility for pest management. Maintenance crews can contribute to an SIPM strategy by securing the structure, such as caulking holes and cracks, assisting in the removal of clutter, and installing

door sweeps (State of California, 2008). Caulking holes in structures can prove effective in keeping ants out of facilities (UC Davis, 2007). Upkeep on building maintenance helps reduce potential pest habitat, and thus may reduce the need for application of pyrethroid pesticides.

Reduction of pest habitat around structures may reduce pest populations in and around structures. Marin County, as part of its integrated pest management program, has reduced rat habitat around the local Civic Center and in turn has seen suppression of the rat population (Carlsen, 2008). Programs similarly tailored to ants may result in a positive effect of pest reduction within the SMR. For example, banding tree trunks with tanglefoot or similar sticky substances can keep ants away from trees (UC Davis, 2007). Education and training may be provided to Permittee landscaping crews to assist in proper vegetation removal and, when necessary, pesticide use. Landscaping crews may be informed that pyrethroid pesticides or any less toxic pesticides are to be used only when a pest problem arises to an intolerable level, that they are not administered when a wet weather event is expected and only when low wind speeds are present (CASQA, 2004). Education of landscaping crews to remove pest habitat may reduce the need for pyrethroid use thus reducing the potential risk of pyrethroids entering storm water runoff.

Also, utilizing low water using vegetation and alternative landscaping techniques such as xeriscaping or naturescaping are efforts that landscape crews can take to reduce pyrethroids in urban runoff. Landscaping crews may also help preserve the water efficiency of the landscape through properly timed fertilizing, weeding, pruning, and pest control. For example, proper collection and disposal of yard clippings can prevent loose vegetation that has possibly been treated with pyrethroid pesticides from entering waterways or storm water drainage systems such as MS4s (CASQA, 2004). Reduction in pest habitat and proper landscaping maintenance may help reduce pest problems, and thus the need for pyrethroid pesticides.

4.1.3 Public Outreach and Education

Status: Currently being implemented by the Permittees.

Public Outreach and Education programs inform the public about storm water issues, proper use and disposal of publically available chemicals, and alternatives to pyrethroid pesticides. Reaching out to the public and providing information about the dangers of pyrethroids pesticides encourages citizens to make educated decisions about pesticide use. It also may accelerate state and federal regulatory changes regarding pyrethroid use through public promotion of such changes. According to the EPA, public education and awareness can be a "key component" in any BMP program for storm water management (EPA, 2008).

The District has enacted a public outreach program to help reduce the potential for pyrethroid pesticides to contaminate receiving waters. This program has initiated: distribution of educational materials to hardware store employees, active participation and distribution of outreach for HHW/ABOP facilities to provide for free venues to dispose of excess pesticides, and distribution of EPA and CalEPA materials to the public. The District also promotes the use of less toxic pesticides, provides education on storm water issues in public schools, and has enacted a multimedia campaign to control urban sources of pyrethroid pesticides (RCFCWCD, 2005).

<u>Education and Outreach to Businesses</u>

Status: Currently being implemented by the Permittees.

Distribution of information regarding pesticides to businesses, particularly hardware stores, is crucial for reducing pyrethroid use and misuse at its source. Education on pyrethroid runoff to local hardware stores may assist local hardware store employees to educate their customers on alternative methods of pest control. An Orange County survey from 2001 found that 55% of pest control products were purchased at hardware stores (Wilen, 2001). In

2006, Riverside County had 177,562 pounds of reported non-agricultural usage of pyrethroid pesticides (RCFCWCD, 2008). Reduction in usage may lead to a reduction of pyrethroids in urban storm water runoff. Educating hardware store employees about urban water quality impacts of pyrethroid pesticides may help reduce the usage and thus the toxicity of runoff in the Santa Margarita Watershed resulting from pyrethroid use, as employees have the ability to recommend alternative methods of pest management to their customers.

Education of nursery employees about pyrethroid management and IPM techniques may also yield significant source control benefits. In general, nursery employees tend to be more knowledgeable about pesticides than employees at hardware stores (Wilen, 2001). Nurseries that use and sell pyrethroids offer the highest return on outreach resources, while those nurseries that have chosen alternate pest management methods serve as examples of IPM in practice. In a recent Riverside County survey, one nursery stated that they do not use pesticides and if their nursery does experience a pest infestation, it is treated naturally (RCFCWCD, 2008). Such nurseries are likely to encourage their clients and customers to use the same methods. Education and outreach can lead to cooperation and sharing of successful and unsuccessful methods of IPM and ultimately reduce pyrethroid pesticide use and toxicity of storm water runoff.

Businesses not in the industry of pesticide sales may also benefit from outreach. The District directs outreach efforts to all businesses; those in the business of selling or using pesticides, and those that are not. The District has coordinated with the County's Business License Department to include an educational insert of the "Only Rain Down the Storm Drain" program to new business license applicants and annual renewal reminders (CRWQCBSD, 2008). Informing companies on proper disposal of hazardous materials such as pesticides is crucial to prevent pyrethroid containers from being improperly disposed of, leaking, and then contributing to storm water pollution.

Several Southern California cities conduct general business outreach as well. Cities such as Carson, Gardena, Inglewood, and Lomita distribute informational pamphlets on storm water

pollution relating to landscaping and gardening practices to general businesses (DCWMAC, 2007). Such information informs businesses of alternate methods of pest control beyond pesticide use and imparts knowledge about storm water quality issues. Thus, dissemination of educational materials to local businesses is intended to help reduce pyrethroid runoff by ensuring proper disposal of pesticides and encouraging alternate methods of pest control.

Educational and Outreach to the General Public

Status: Currently being implemented by the Permittees.

The District distributes educational materials within the Santa Margarita Region such as EPA sponsored pamphlets in order to promote reduced use of pyrethroid pesticides and educate the public about alternate practices of pest management. The public purchases retail pesticides and uses them, presumably, according to the manufacturer's instructions and in compliance with regulations listed on the packaging, including proper disposal of empty containers in the municipal waste stream. However, even when used properly, retail pesticides have the potential to contaminate urban runoff, and homeowners may be unaware of the downstream consequences of pesticide use. Depending on the landscaping practices in a neighborhood, promoting alternative pest management strategies and educating the public on storm water quality and pesticide use may be the most beneficial way to reduce the source of pyrethroids in urban runoff (Wilen, 2005).

The District distributes educational materials within other public outreach programs and maintains pest management information on the internet. The District also distributes brochures to educate the public on lawn and garden maintenance, fertilization, and pesticide and household chemical use (RCFCWCD, 2005). These educational materials provide public education on alternative pest control methods, limiting individual use of pyrethroids, and proper disposal of pesticide containers.

Many municipalities perform storm water outreach at festivals and public events by participating in the events and by distributing brochures. The Cities of Lawndale and Torrance plan and attend public festivals and rent booth space to educate the public about storm water quality and the use of pyrethroids (DCWMAC, 2007). Cities including Carson, Gardena, Inglewood, and Lomita distribute informational pamphlets on storm water pollution relating to household activities and landscaping and gardening practices to the general public (DCWMAC, 2007). The District participates in events such as the Children's Groundwater Festival, the Southern California Fair, the Community Water Festival, and the Santa Margarita Watershed Clean Up (RCFCWCD, 2005). The Permittees, as well as other municipalities within California, participate in public events and distribute informative materials as a portion of their current public outreach programs.

Education on proper disposal of pesticides

Status: Currently being implemented by the Permittees.

Improper disposal of pesticides is a potential contributor to storm water contamination. Empty containers be disposed of in the municipal waste stream are not likely to contribute to storm water pollution, however, unused pesticides may enter the MS4 by leaking in transit. In Orange County in 2001, 54.5% of people surveyed claimed to have disposed of unwanted pesticides in the municipal waste stream, and 78.6% did not know the location of a household waste disposal site (Wilen, 2001). The District has created a partnership with Riverside County Waste Management to provide educational programs and materials on proper disposal of unwanted waste, including pesticide containers (RCFCWCD, 2005).

Multimedia Outreach

Status: Currently being implemented by the Permittees.

The EPA suggests using multiple media sources to promote and educate on storm water impacts, particularly through public service messages (EPA, 2007). Mass media has proven to be a key source of pollution prevention information for the general public (LADPW, 2002). The District currently participates in a multimedia advertising campaign including: maintaining a website that provides information, distributing mailing inserts regarding water quality issues through various county entities, and billboard advertising campaigns. Many other municipalities, such as the Cities of Palo Alto and Lawndale, also use the world wide web to provide information to the public (City of Palo Alto, 2008) (DCWMAC, 2007).

Public School Programs

Status: Currently being implemented by the Permittees.

A storm water education program for public schools is a concept supported by the EPA (EPA, 2007). The County of Los Angeles has incorporated public school educational programs into its outreach program (LADPW, 2002). The District focuses storm water education efforts on elementary school students (RCFCWCD, 2005). For example, sixth-grade students at Warm Springs Middle School were given an interactive presentation regarding storm water pollution with an enviroscape model that excited and engaged the students; a presentation that has been given over 150 times during the 2003-2004 school year (Jamescourie, 2004). Educational programs in public schools are intended to produce long-term benefits to storm water runoff quality.

Education on Lower Risk Alternative Pesticides

Status: Currently being implemented by the Permittees.

Part of Public outreach includes suggesting less toxic alternatives to pyrethroid pesticides, such as those listed on the Our Water Our World website (www.ourwaterourworld.org). Lower risk pesticides have reduced impacts on human health, lessened toxicity to non-target organisms, decreased potential for water contamination, and lower pest resistance potential (Matteson et al., 2007). The District distributes materials associated with the "Our Water Our World" organization (RCFCWCD, 2008).

However, some of the lower risk pesticides are toxic to beneficial arthropods and still have the potential to pollute surface and ground water (Matteson et al., 2007). Pyrethroids were developed as a less toxic alternative from organophosphate pesticides (Quarles, 2002). In the Santa Margarita Watershed, there was a decrease in water toxicity to *Ceriodaphnia* and an increase in toxicity to *Hyalella* as organophosphate pesticides such as chlorpyrifos and diazinon and were replaced by pyrethroids (RCFCWCD, 2008). The effects on storm water runoff of lower risk pesticides must be carefully evaluated before they are promoted as effective solutions to urban storm water runoff pollution.

4.1.4 Low Impact Development (LID)

Status: Currently being implemented by the Permittees.

LID involves environmentally-friendly building and development designs that mitigate impacts to land and water. LID functions by managing storm water at its source, incorporating a variety of runoff control techniques, using natural features as design features, and protecting natural resources (NAHB, 2008). Municipalities that promote LID have the potential to reduce municipal infrastructure and maintenance costs while balancing growth needs with environmental protection (NAHB, 2008). LID practices include "small scale,

decentralized treatment practices" that include conservation of open space, a reduction of impervious surfaces, and the incorporation of water controls (NAHB, 2008). Reduction of urban runoff volumes may reduce the loadings of pyrethroids to receiving waters in urban areas.

In 2007, EPA implemented a retrofit of the agency headquarters in Washington, D.C., incorporating LID designs to assist with storm water retention (EPA, 2007). Retention of storm water on the land helps prevent pollutants from entering streams and rivers (EPA, 2007). One of the main goals of the EPA LID retrofit was to demonstrate several LID techniques and encourage government agencies and developers to use them (EPA, 2007). LID may be used in conjunction with IPM programs, which would reduce the amount of pesticides used and minimize the urban storm water runoff of pyrethroids. The County of San Diego's most recent MS4 permit requires implementation of LID techniques (County of San Diego, 2007); this appears likely to continue as a trend with other permits in the region as they are renewed. The incorporation of LID principles into development regulations in the Santa Margarita watershed provides a potential solution to runoff of pyrethroids into receiving waters.

4.2 Treatment Control BMPs

Treatment Control BMPs are typically structural devices engineered with the intent to remove pollutants from storm water. Treatment BMPs require construction and long term maintenance, but can be extremely effective (CASQA, 2003). Although treatment BMP's have not been thoroughly investigated specifically for reduction of pyrethroids, some methods may be useful. Pyrethroids bind tightly to soil particles so there is a high probability that pyrethroids would be removed with suspended solids when they pass through treatment BMPs. In addition, pyrethroids degrade over time; permethrin, for example, has a half life in soil of about 30 days and about 10 days on certain plant life. Because pyrethroids have low mobility in soil, infiltration-based treatment BMPs have a low probability of contributing to groundwater contamination (NPTN, 1997).

From the list of available treatment BMP's identified in Table 3-1, the types of treatment BMPs feasible for pyrethroid treatment in the Santa Margarita Watershed, considering the climate, local vegetation, and soil types present are: pervious pavement, media filters, extended detention basins, infiltration basins, and infiltration trenches.

These BMPs and their potential to remove pyrethroids from storm water runoff are described below.

4.2.1 Pervious Pavement

Status: Currently being implemented by Permittees under LID program.

Pervious or porous pavement is "a system comprising a load-bearing, durable surface together with an underlying layered structure that temporarily stores water prior to infiltration or drainage to a controlled outlet" (CASQA, 2003). Pervious surfaces include grass, gravel, and porous concrete and asphalt (CASQA, 2003). The multi layer system assists in preventing pyrethroid pollution by providing a stable structure for pyrethroids to bind to and degrade, thus helping to prevent their transport in to receiving waters. Silts that are deposited within the pavement may need infrequent controlled waste disposal (CASQA, 2003).

The advantage of porous pavement is that urban runoff is reduced while treatment is provided and it is an effective drainage solution in confined urban areas. However, porous pavement is not a viable option on high traffic or high speed roads due to safety issues. There is a small chance that it may contaminate groundwater. It is fairly easy to replace, should there be a clog or damaged area, as small areas can individually be paved (CASQA, 2003). The use of pervious pavement appears to be a growing trend.

4.2.2 Media Filter

Status: Currently being implemented by Permittees via sand filters.

Storm water media filters are usually two-chambered including a pretreatment settling basin and a filter bed filled with sand or other absorptive filtering media. As storm water flows into the first chamber, large particles settle out, and then finer particles and other pollutants are removed as storm water flows through the filtering media in the second chamber. Media filters are highly effective at removing sediment from storm water flows (CASQA, 2003). They are appropriate in low flow areas, particularly with sandy soil. Washington D.C. and Austin, TX have both successfully implemented media filters to treat storm water (VCSQMP, 2002). They "are well suited to Southern California because they do not require vegetation and require less space than other treatment control measures with similar removal efficiencies when a partial treatment sedimentation basin is used" (VCSQMP, 2002).

However, media filters clog easily when exposed to high sediment loads and may decrease in effectiveness after being in use for a few years (CASQA, 2003). A media filter is not appropriate for areas with erosive soil upstream from the treatment filter (VCSQMP, 2002). The lack of abundant native vegetation in the Santa Margarita watershed contributes to a high potential for erosion, so media filters may not be effective in the long term due to clogging. When clogging does occur, media filters may become a nuisance due to mosquito or midge breeding in pooled waters (CASQA, 2003).

4.2.3 Extended Detention Basin

Status: Currently not being implemented by the Permittees for pyrethroid reduction.

An extended detention basin (EDB) is a permanent basin "formed by excavation and/or construction of embankments to temporarily detain the Stormwater Quality Design Volume

(SQDV) of storm water runoff to allow sedimentation of particulates to occur before the runoff is discharged"(VCSQMP, 2002). EDBs are constructed with an outlet at the bottom that allows for a slow, time-controlled release. The ultimate goal of EDBs is to level off peak storm water runoff rates (VCSQMP, 2002). Santa Clara Valley and the City of Palo Alto have noted that their detention basins have helped with the reduction of pollutants (EOA, 2004) (City of Palo Alto, 2008). Pyrethroids could be removed in the basin through settling of particulates.

Extended detention basins can serve multiple purposes as they provide for significant trash removal as well (CASQA, 2003). Maintenance is needed to ensure that the pond fully drains after large wet weather events, to avoid creation of standing pools causing mosquito or other vector habitats (CASQA, 2003). Extended detention basins are most effective when used in conjunction with other control measures, and are only moderately successful at removal of sediment. EDBs require relatively large amounts of land and therefore may not be feasible in urban areas of the Santa Margarita watershed (VCSQMP, 2002). There are no available examples of test results from municipalities using an extended detention basin for reduction of pyrethroid pesticides.

4.2.4 Infiltration Basin

Status: Currently not being implemented by the Permittees for pyrethroid reduction.

An infiltration basin is a shallow impoundment that is designed to infiltrate storm water and utilize the natural ability of soil to remove pollutants in storm water runoff (CASQA, 2003). Infiltration basins store runoff until it eventually enters the soil and infiltrates into the water table (CASQA, 2003). The soil present in the Santa Margarita Region is extremely pervious and may work well with an infiltration basin treatment structure.

Since pyrethroids adsorb onto soil, pyrethroids are likely to be removed from the storm water into the soil. However, there is a slight possibility that they may be resuspended into the

groundwater. Monitoring of pilot sites would be required to determine if there is transport of pyrethroids to the water table.

As with detention basins, maintenance is needed to ensure that the basin fully drains after large wet weather events to avoid creation of standing pools causing mosquito or other vector habitats. Infiltration basins may fail if the storm water volume is greater than the design volume (VCSQMP, 2002). Since infiltration basins require a large amount of open space, installation in urban areas is problematic. There are no available examples of test results from municipalities using infiltration basins for reduction of pyrethroid pesticides.

4.2.5 Infiltration Trench

Status: Currently not being implemented by the Permittees for pyrethroid reduction.

An infiltration trench is a long and narrow ditch that collects storm water runoff by storing it in the voids in a rock bed and allowing it to infiltrate to the soil matrix (CASQA, 2003). Infiltration trenches are extremely effective at removing fine sediment particles and associated pollutants (CASQA, 2003). Naturally pervious soils are required (VCSQMP, 2002). The Santa Margarita watershed has naturally pervious soils, which would allow for the removal of pyrethroids from the water and into the sandy soil.

Infiltration trenches are typically used in conjunction with grass lined channels or grass filter areas located upstream for maximum removal of sediment and larger particles (VCSQMP, 2002). Due to the arid environment in the Santa Margarita Region, grass lined channels, or even vegetated strips, would require irrigation to maintain the vegetation. If the infiltration trench clogs, it can become a source for mosquito breeding. There are no available examples of test results from municipalities using infiltration trenches for reduction of pyrethroid pesticides.

4.3 BMP Evaluation

A summary of the relative advantages, disadvantages and costs of the various BMPs identified in Sections 4.1 and 4.2 above is presented in Table 6.1 below. The table includes advantages, disadvantages, and the relative cost of implementing the BMPs.

Table 6.1
BMP Comparison Table

BMP Technology	Advantages	Disadvantages	Relative Cost*
Source Control			
Regulatory Change	Reduces the availability of pyrethroids on the market	May take years to achieve full effect	$
Integrated Pest Management	Engages businesses and the public in environmentally sound gardening practices	Need to ensure that employees are following protocols	$
	Has been implemented in various locations throughout CA and the US	Could have some resistance from employees who are use to standard practices	
	SIPM can be put in place directly by the Permittees	Some may find the organic methods of gardening to be too time consuming	
	SIPM can be incorporated directly into current maintenance activities		
	Includes LID aspects		
Public Outreach and Education	EPA states that Public Outreach is key for any BMP program	Cannot control the direct actions of public but only educate	$
	Copermittees have already implemented a public outreach program	Hard to measure the direct impact of pollutant reduction	
	Employees of business have direct impact on the buying choices of the general public		
	Programs have been implemented by many municipalities		

Table 6.1 (continued)
BMP Comparison Table

BMP Technology	Advantages	Disadvantages	Relative Cost*
Treatment Control			
Porous Pavement	Reduces runoff volume while reducing pollutant load as well	Requires ongoing minimal maintenance	$ to $$ depending on size
	Can be easily replaced depending on the size and location of design	No known measured reduction of pyrethroids.	
Media Filter	Do not require vegetation	No known measured reduction of pyrethroids.	$$$
	Highly effective in removal of sediments	Clogging is an issue because of the erosion potential in the watershed.	
	Requires less space than other treatment controls for sediment removal		
Extended Detention Basin	Known for significant trash	Large footprint Moderately successful at removing sediment	$$$
	Standard BMP with many years of maintenance and operational information available	Create an area with vector breeding potential	
		No known measured reduction of pyrethroids.	
Infiltration Basin and Trench	Uses natural ability of soil to remove pollutants.	Unknown if pyrethroids would be transported to the groundwater table.	$ to $$$
	Local soils would allow infiltration	Would require a pilot study to determine transport.	
		No known measured reduction of pyrethroids.	
		Clogging of outlet structure	
		Accumulation of metals in soil	

*Relative Cost: $ = $0 to $50,000, $$ = $50,001 to $100,000, $$$>100,000

5.0 Pending Legislation

There is no relevant pending state legislation relating to pyrethroid pesticides from the California Department of Pesticide Regulation or, in general, the State of California as of December, 2008 (State of California, 2008) (CDPR, 2008). In August 2006, the DPR put rules in place to control insecticide sprays during the dormant season. During winter, pesticides are applied to dormant tree and vine crops to kill overwintering pests and diseases. The new rules restrict the use of most dormant insecticides when residuals can run off into water (DPR 2007-08 Progress Report). However, there are no additional updates relating to pending pyrethroid legislation at this time.

There is no relevant pending federal legislation relating to pyrethroid pesticides from the United States Congress as of December, 2008 (Library of Congress, 2008). Although the EPA is working on proposed mitigation labeling for non-agricultural pyrethroids, there is no indication as to when this legislation may be enacted (TDC, 2007).

6.0 Proposed Course of Action

The Permittees intend to use a phased approach to address the identified sources of pyrethroid pesticides causing toxicity in surface waters of the SMR watershed. As described in Section 4, various source control BMPs and treatment control BMPs are available to address these sources. However, the use of pyrethroid pesticides can not be directly regulated by local governments. The most effective control strategy involves effective labeling and use restrictions via state or federal regulatory action, to prevent water quality impacts from legal pesticide uses. The proposed course of action involves an adaptive management approach with the following broad elements:

- Pursue state and federal regulatory change through CASQA
- Implement a set of source controls targeted specifically at urban pesticide use,
- Through the annual reporting process, monitor the implementation of those controls, assess effectiveness, and identify sources or areas where additional effort is needed,
- Evaluate whether additional controls, including treatment controls, may be needed to further reduce pyrethroid pollution,
- Implement additional controls as needed,
- Continue to monitor implementation, as well as conditions within the target receiving waters, assess effectiveness, and re-evaluate control program

The Permittees will continue to support CASQA and/or other agencies pursuing regulatory change in labeling or use limitations for pyrethroid pesticides. This support will include participation in the CASQA Pesticides Subcommittee and the Urban Pesticide Committee, and supporting the implementation of the Urban Pesticide Pollution Prevention (UP3) Project. Permittee staff will continue to provide staff time and resources necessary for the CASQA Pesticides Subcommittee to complete its negotiations with the California Department of Pesticide Regulation and USEPA regarding labeling and use limitations for pyrethroids.

Source control is generally a more cost-effective approach to pollution abatement than treatment control, as source controls do not involve the costly capital investments of treatment controls. As discussed previously, CASQA, EPA, and other agencies and experts

recommend a source control program as an essential component of a successful pollution reduction strategy.

The basis of source control involves preventing the entrance of the subject pollutant into the discharge stream. For pyrethroid pesticides, this means preventing the pesticide from entering the municipal storm drain system through urban runoff. This can take place by intervention at the various steps in the pest control process:

- Point of sale: reducing the purchase of pyrethroid products through education of PCOs and the public in consequences of pesticide use and alternative means of pest control, including integrated pest management (IPM)
- Application: reducing use of pyrethroids on site through education of PCOs and the public into the importance of proper application methods and the potential consequences of pesticide use, as well as pest control alternatives (IPM techniques)
- Off-site Transport: reducing movement of pyrethroids into municipal storm drain system via use of Green Gardener approaches, IPM, and LID building techniques to reduce irrigation water use, retain storm water runoff on-site, and provide on-site mitigation for runoff pollutants (via grassy swales, infiltration, etc.)

A five-year pyrethroid pollutant reduction program is proposed by the Permittees.

Year 1

- Continue to support state and federal efforts to improve pyrethroid pesticide regulation
- Continue to publicize/promote the services of IPM-certified PCOs, to encourage businesses and homeowners to choose their services
- Continue to implement local agency contracting rules to require contracting of IPM-certified PCOs for municipal pest control (through EcoWise Certified IPM Contracting Tool Kit, e.g.)
- Continue point-of-sale education effort providing instruction in pesticide alternatives and proper use/application (using materials available through Our Water Our World, UP3 Project, CASQA members, e.g.)
- Continue efforts to develop and implement LID guidance for planning and development

Year 2

- Coordinate with the University of California (UC) Extension Master Gardener Program to extend its services to the Temecula/Murrieta area to further promote and support the use of IPM by local residents
- Re-evaluate, enhance as needed, and continue measures implemented in Year 1

Year 3

- Conduct programmatic assessment as part of third-year annual report, evaluate successes and areas where additional efforts are needed and adjust program accordingly
- Re-evaluate, enhance as needed, and continue measures implemented in Years 1 and 2

Year 4

- Evaluate effectiveness of BMPs using water quality monitoring data as part of fourth year annual report
- Re-evaluate, enhance as needed, and continue implementation of revised program as defined in Year 3

Year 5

- Conduct programmatic assessment, evaluate successes and areas where additional efforts are needed as part of ROWD process
- Identify additional program elements, including source and/or treatment controls, as needed to effect required pollutant reductions; revise program accordingly
- Re-evaluate, enhance as needed, and continue implementation of revised program as defined in Year 3

Many of the source control materials and programs needed are readily available through existing programs such as EcoWise Certified, Green Gardener, Our Water Our World, the UP3 Project, and the Western IPM Center. The following websites provide further information on these and other programs:

Urban Pesticide Pollution Prevention (UP3) Project: www.up3project.org
Green Gardener Program: www.green-gardener.org/about
Western Integrated Pest Management Center: www.wripmc.org
EcoWise Certified Integrated Pest Management: www.ecowisecertified.com
Our Water Our World: www.ourwaterourworld.org
Green California: www.green.ca.gov/EPP/building/structipm.htm

City of San Francisco: http://www.sfenvironment.org/our_programs/topics.html?ti=1
DPR: http://www.cdpr.ca.gov/docs/registration/reevaluation/chemicals/pyrethroids.htm

As a practical measure, it will be necessary to evaluate individual Permittee capabilities and resources, and develop a specific work plan for implementation of the pyrethroid pollutant reduction program.

It is also essential to develop and implement the pyrethroid pollutant reduction program in coordination with other regulatory requirements, especially other pollutant reduction programs mandated under the storm water NPDES Permit and/or load allocations required by TMDLs within the SMR watershed.

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REPORT OF WASTE DISCHARGE

MAY 10, 2015

Submitted to:

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD
(Order No. R9-2010-0016)

and

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY – REGION IX
(NPDES No. CAS0108766)

RIVERSIDE COUNTY

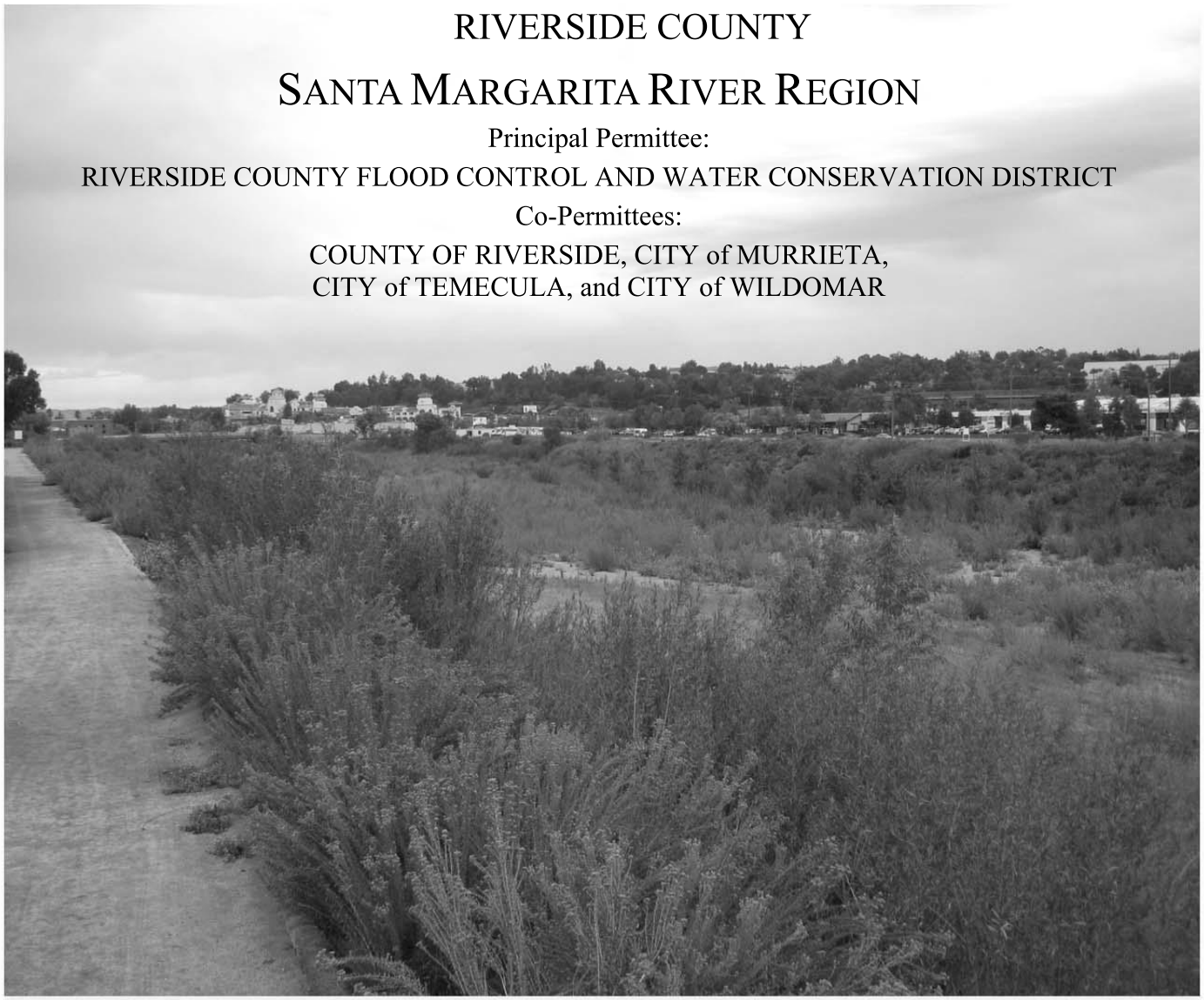
SANTA MARGARITA RIVER REGION

Principal Permittee:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Co-Permittees:

COUNTY OF RIVERSIDE, CITY of MURRIETA,
CITY of TEMECULA, and CITY of WILDOMAR



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1.0 Introduction

This Report of Waste Discharge (ROWD) is an application for renewal of Order No. R9-2010-0016, an area-wide National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit (2010 MS4 Permit). The MS4s covered under the 2010 MS4 Permit are owned and operated by the Riverside County Flood Control and Water Conservation District (District), the County of Riverside (County), and the Cities of Murrieta, Temecula and Wildomar (collectively, the Co-Permittees).

On November 10, 2010, the San Diego Regional Water Quality Control Board (Regional Board) adopted the 2010 MS4 Permit, which expires on November 10, 2015. Directive K.2.c of the 2010 MS4 Permit requires that a ROWD be submitted no later than 180 days prior to the expiration date. This ROWD has been prepared in consultation with the Co-Permittees and is submitted on their behalf. Table 1-2 lists the required elements for the ROWD and identifies where those elements can be found in the ROWD.

In order to protect lives and property and to prevent damage to the watershed, the Co-Permittees operate and maintain essential drainage infrastructure in the Santa Margarita Region (SMR). The County and the Cities maintain approximately 317 miles of drainage infrastructure in the SMR while the District maintains approximately 90 miles. Environmental stewardship and integrated water resource management continues to be an essential part of the Co-Permittees' responsibilities.

The diligent work performed by the Co-Permittees under the 2010 MS4 Permit has maintained Receiving Water quality and prevented new impairments despite continued growth in population and development within the region. As shown in Table 1-1, the population in the region is projected to have a steady growth rate and by 2020 the region's population is predicted to grow by 5.6%. The challenges posed by this growing population require the Co-Permittees to continue to adapt their BMPs and watershed programs to protect water quality.

Table 1-1 Santa Margarita Region Population Estimates

Co-Permittee	Year			
	Estimate 2015 (a)	Estimate 2016 (b)	Projected 2020 (b)	Change (2015 to 2020)
City of Murrieta	107,455	108,482	112,591	4.8%
City of Temecula	108,450 b	111,585b	119,422	10.1%
City of Wildomar	35,433	36,310	37,204	5.0%
Unincorporated County of Riverside	51,314	52,436	53,793	2.6%
Total	272,621	276,585	292,017	5.6%

Notes:

(a) Unless otherwise noted, populations were obtained from the State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, *2011-2014, with 2010 Census Benchmark*. Sacramento, California, May 2014.

(b) Data gathered from City of Temecula website, "Demographic Snapshot 2014 Report".

During the term of the 2010 MS4 Permit, the Co-Permittees developed and utilized various programs to help protect water quality. These programs include the development of the Individual Jurisdictional Runoff Management Plan (JRMP) that specifies management programs and activities required of each Co-Permittee, as well as the development of the SMR Monitoring and Reporting Program (MRP). The Upper Santa Margarita River Watershed Water Quality Workplan (Watershed Workplan) was also developed during the permit term to identify and prioritize water quality concerns.

The Co-Permittees have also developed new and improved ways to maximize finite resources to protect Receiving Waters more effectively. Such examples are creating a more efficient process to review priority development projects, WQMPs, and track inspections. The Co-Permittees continue to improve procedures to efficiently respond to spills and other illegal discharges. The Co-Permittees also continue to educate the public about improving water quality through different engagements such as hosting public education events, speaking to employees and customers at home improvement stores, and speaking to students at local schools. The Annual Reports submitted under the 2010 MS4 Permit (which are contained in Appendix C) describe the Co-Permittees' various water quality improvement programs in detail.

This ROWD builds on the discussion in the Annual Reports by highlighting the major accomplishments of the Co-Permittees' programs, describing the challenges that they face and discussing their continuing efforts to protect Receiving Water quality. To promote clarity, terms defined in the 2010 MS4 Permit are capitalized in this ROWD.

1.1 ROWD Required Elements Summary

Table 1-2 Location of Required ROWD Elements per Directive K.2.c of 2010 MS4 Permit

Required ROWD Element	ROWD Location
1) Proposed changes to the Co-Permittees' runoff management programs	Section 3.80, and Appendix C
2) Proposed changes to monitoring programs	Section 3.0 and Appendix C
3) Justification for proposed changes	Section 3.80 and Appendix C
4) Name and mailing addresses of the Co-Permittees	Section 1.2

1.2 Co-Permittee Contact Information

The table below provides the contact information for each of the Co-Permittees in the Santa Margarita Region that have either technical or administrative involvement in the MS4 Permit.

Table 1-3 Co-Permittee Contact Information

Co-Permittee	Primary Contact	Staff Contact	Address
District (Principal)	Warren D. Williams General Manager-Chief Engineer 951.955.1275	David Garcia Engineering Project Manager 951.955.1330 dhgarcia@rcflood.org	1995 Market Street Riverside, CA 92501
City of Murrieta	Bob Moehling City Engineer 951.461.6036. bmoehling@murrieta.org	Bill Woolsey Civil Engineer Associate 951.461.6073 wwoolsey@murrieta.org	1 Town Center 24601 Jefferson Avenue Murrieta, CA 92562
City of Temecula	Tom Garcia Director of Public Works 951.694.6411 tom.garcia@cityoftemecula.org	Aldo Licitra 951.694.6411 aldo.licitra@cityoftemecula.org	41000 Main Street Temecula, CA 92590
City of Wildomar	Dan York Public Works Director 951.677.7751 ext. 216 dyork@cityofwildomar.org	Matt Bennett Deputy City Engineer 951.677.7751 ext. 208 mbennett@cityofwildomar.org	23873 Clinton Keith Road, Suite 201 Wildomar, CA 92595
County of Riverside	Steve Horn Senior Management Analyst 951.955.1110 shorn@rceo.org	Claudia Steiding Senior Transportation Planner (Transportation Land Management Agency) 951.955.1694 csteiding@rctlma.org	4080 Lemon Street, 4th Floor Riverside, CA 92501

1.3 Regional Board Jurisdictional Area Exchange

- **City of Wildomar (San Diego Co-Permittee)** - The City of Wildomar requests that the San Diego Regional Board continue regulating all portions of the city, regardless of Regional Board jurisdictional boundaries, for matters pertaining to MS4 permitting.

- **City of Menifee (Santa Ana Co-Permittee)** - At this time during the SMR ROWD process, the City of Menifee request that the San Diego Regional Board continue designating the Santa Ana Regional Board as the sole regulator of the City of Menifee pertaining to MS4 permitting.

2.0 Santa Margarita Region Permit Area Overview

2.1 Physiography and Geology

The upper Santa Margarita River watershed is defined as that portion of the Santa Margarita River watershed above the confluence of Murrieta and Temecula Creeks, and includes the City of Temecula and portions of the Cities of Menifee, Murrieta, Wildomar, unincorporated County areas, portions of the Cleveland and San Bernardino National Forests, the Cahuilla, Ramona, Pauma, and Pechanga Indian Reservations and properties under the jurisdiction of Caltrans and a variety of special districts. The watershed is bounded by several mountain ranges, including the Santa Ana and Santa Margarita mountains to the North and the Palomar Mountains to the South. The upper Santa Margarita watershed includes areas in Riverside and San Diego Counties and encompasses approximately 588 square miles.

The upper Santa Margarita watershed includes two major sub-basins, drained by Temecula and Murrieta Creeks. Temecula Creek has a drainage area of 366 square miles, with steep rugged topography in the Palomar and Thomas Mountain areas and rolling hills below. The upper 316 square miles of this basin is controlled by Vail Lake (completed in 1949). Murrieta Creek has a drainage area of 222 square miles, with over 50 square miles controlled by Skinner Reservoir (completed in 1974). Approximately 13 square miles are tributary to Diamond Valley Lake. Although the watershed area is somewhat smaller and less rugged than the Temecula Basin, flood flows have the potential to create greater damage as they flow through the cities of Temecula and Murrieta.

Temecula and Murrieta Creeks join along the Elsinore fault zone at the head of Temecula Canyon to form the Santa Margarita River. The Temecula Canyon is approximately five miles long, and is a steep, narrow, and rocky canyon. The San Diego-Riverside county line crosses through the Temecula Canyon. From here, the river traverses 27 miles to the Pacific Ocean.[1]

2.2 Permit Area

The Permit Area is defined as the urbanized area served by the Co-Permittees' MS4 facilities. The Permit Area is located within the area delineated by the County boundary line on the south and the limits of the jurisdiction of the San Diego Regional Board on the north, east, and west. The area encompasses approximately 751 square miles, about 10 percent of the Riverside County. It may seem that with increased population growth within the region that urban land use should have increased, however, data shows that only approximately 9% of the region is designated as Urban Land Use. The remaining portion of the region consists of either: Open space, Preserves, Rural Residential (>1ac.), or Agriculture. The Santa Margarita River Watershed Area Land Use Map is attached as Appendix B.

[1] Santa Margarita Watershed Study: Hydrologic and Watershed Processes, Phillips, Williams and Associates, Ltd., October 26, 1998, page 1.

3.0 SMR Water Quality Data Efforts and Outcomes

3.1 Summary

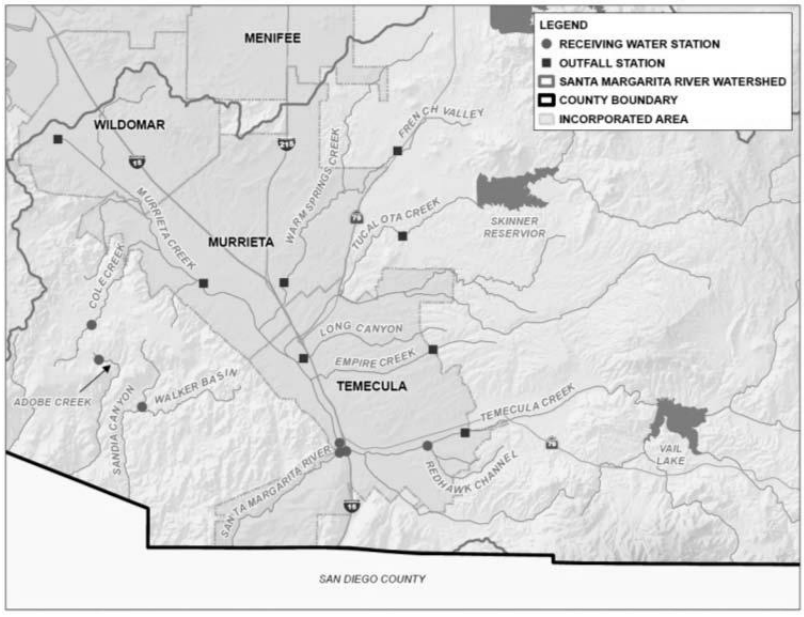
The SMR includes the portion of the Santa Margarita River Watershed within Riverside County. The monitoring station locations are shown in Figure 3-1 below, and are described in detail in the SMR Monitoring Report (see Appendix C). The SMR monitoring program has two general categories of monitoring stations: Receiving Water stations and MS4 outfall stations:

- Receiving Water monitoring stations are in waters of the U.S., and include reference streams and mass loading stations; and
- MS4 outfall stations are discharge points that are major outfalls.

While accomplishments from implementation of the SMR Monitoring and Reporting Program (MRP) are discussed in this section, the entire MRP is attached as Appendix C.

Each year, the Co-Permittees collect water quality samples at Receiving Water and MS4 outfall stations with various sampling frequencies, ultimately resulting in the collection of approximately 56 water quality samples. Anywhere from 80 to 243 constituents per sample undergo laboratory analysis for a full range of potential pollutants including pesticides, nutrients, metals and bacterial indicators. Only a small minority of the analytes were found to have exceeded federal and state Water Quality Standards. Although we only see a small group of constituents within the region having exceedances, the same class of constituents are seen statewide exceeding Water Quality Standards as evident from the CWA 303(d) list of waterbody impairments. The Co-Permittees are making strides in minimizing the exceedances of these particular constituents. The Co-Permittees' stormwater programs continue to adapt in order to protect Receiving Water quality. Accomplishments are highlighted in Section 3.5 below and in the Co-Permittee's individual JRMP annual reports.

Figure 3-1 SMR Monitoring Stations



3.2 Analysis Assessment of Water Quality Data

Figure 3-2 SMR Dry Weather Exceedances FYs 2012-2014

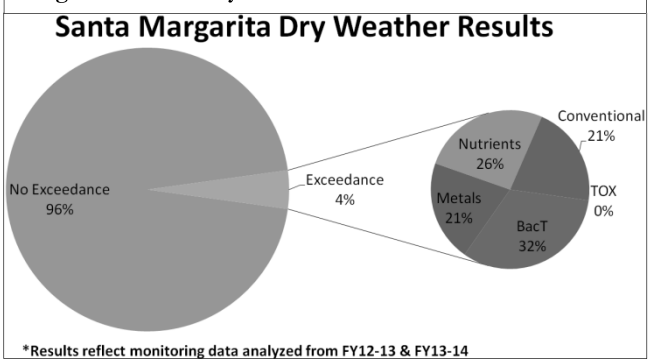
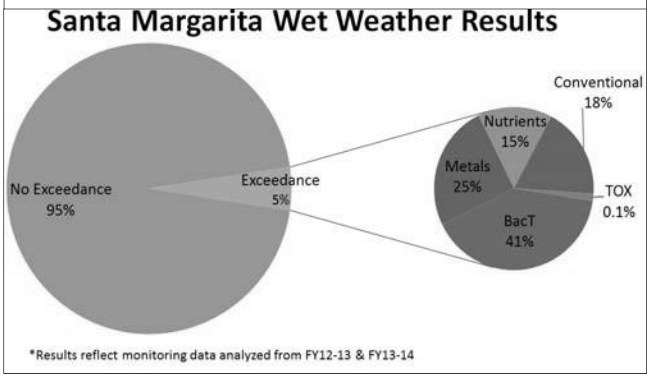


Figure 3-3 SMR Wet Weather Exceedances FYs 2012-2014



Overall, water quality conditions in SMR Receiving Waters are improving based on the number of waterbody-pollutant pairings in the upper Santa Margarita River watershed. Significant improvements are observed in the water quality sampling data sets. The results are discussed more fully in Section 3.6 (Effectiveness Assessment).

Under the Wet Weather monitoring program, approximately three water quality samples are collected at six Receiving Water stations, as well as one water quality sample from eight MS4 outfall stations. With additional sampling at the outfalls, 11 proximate Receiving Water locations are collected. This results in nearly 1,600 water quality data points.

Additionally, under the Dry Weather monitoring program, approximately two water quality samples are collected at six Receiving Water stations, as well as one water quality sample from eight MS4 outfall stations. With additional sampling at the outfalls, 11 proximate Receiving Water locations are collected. This results in over 1,300 water quality data points. As seen in Figures 3-2 and 3-3, out of the 2,900 water quality data points collected during the permit term, the SMR has only seen approximately 5% exceedances. Long-term trend data, as limited to the mass loading Receiving Water stations, are available in Attachment I (Long-Term Instantaneous Loads and Trends) of the 2013-2014 SMR Monitoring Annual Report attached as Appendix C.

The Co-Permittees have been working diligently to determine the sources of the high priority pollutants by conducting special studies (see Section 3.7.1) and engaging with special work groups (i.e. Nutrient Initiative Group).

3.3 Inherent Limitations to Analyzing Stormwater Quality Data

There are inherent limitations to analyzing water quality data from stormwater. Stormwater runoff greatly contrasts from the wastewater treatment and monitoring process. Discharges from mechanically treated wastewater effluent and industrial discharges usually:

- Come from a single or a few readily identifiable sources;
- Are generally consistent in flow rate and chemical character from day to day; and
- Can be easily instrumented.

Conversely, rain events producing urban runoff and non-point source flows are difficult to collect and analyze due to the fact that they:

- Come from multitudes of unidentifiable or hidden sources, many of which are non-urban in nature:
  - Natural leaching of soils
  - Wildlife
  - Aerial deposition
  - Wildfires
  - State, federal or tribal lands
- Vary widely in flow rate in response to precipitation events
- Vary widely in chemical character at any given moment due to:
  - Unidentified episodic issues related to natural phenomena
  - Magnitude of rainfall and extent of contributing area
  - Potential one-time illicit discharges that were not identified at the time of sampling
  - Unforeseen or unidentified consequences of land use changes
- Are subject to significant natural random variation; and
- Cannot be easily instrumented due to the variation in depth and velocity within water courses or natural stream beds.

Because ephemeral stormwater flows are particularly random in character, it may take many years before statistically significant trends can be identified from the outfall monitoring data in order to properly assess the overall effectiveness of an Urban Runoff water quality control measure.

3.4 Bioassessment Data

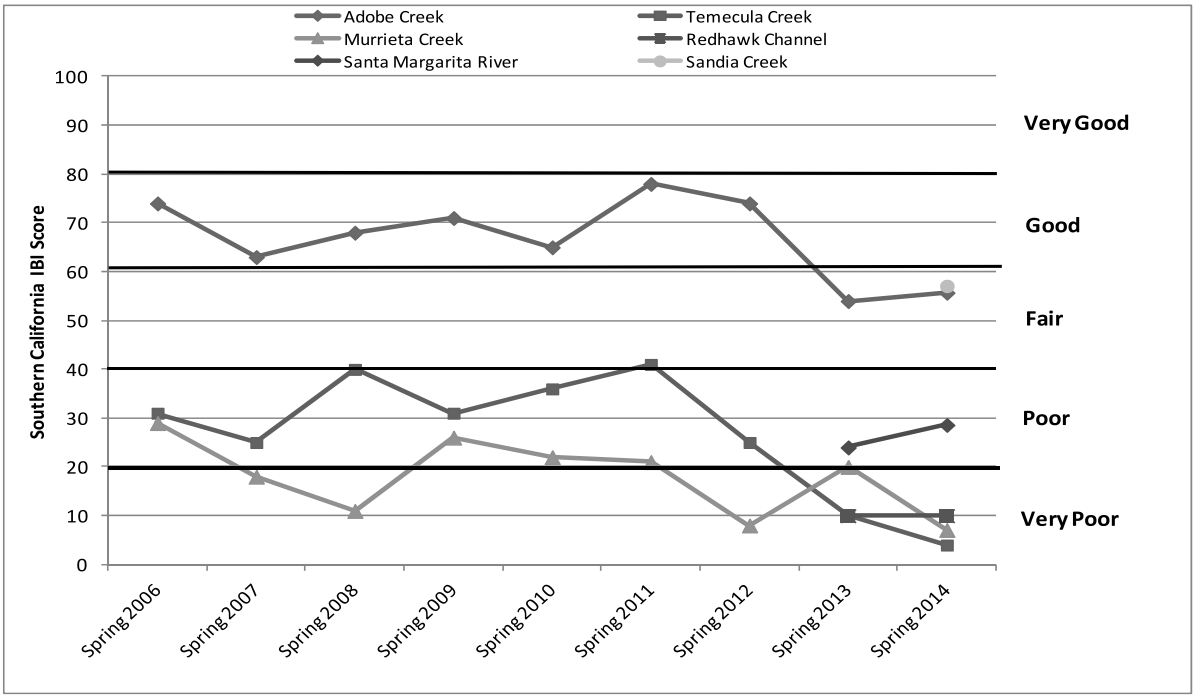
Bioassessment is a field collection method in which the health of a specific ecological population of interest is evaluated (e.g. aquatic insects, algae, fish, plants, etc.).

One population evaluated under this monitoring program were insects that live in the bottom substrate of the Receiving Waters. Where sufficient flows exist to support them, these organisms can provide a measure of water quality because they have a very diverse community structure, live a large portion of their lives in water as larvae or adults, have various sensitivities to natural and anthropogenic impacts, are easy to collect, and have life histories that are well studied. Similarly, algae populations were evaluated because they respond to increased stress due to natural and anthropogenic impacts in ways different than aquatic insects, and thereby together provide a picture of the water quality.

Dry weather bioassessments were performed according to the MRP at four designated Receiving Water stations (Lower Murrieta Creek, Lower Temecula Creek, Redhawk Channel, and Upper Santa Margarita River), as well as at two reference stations (Adobe Creek and Sandia Creek). All bioassessments were performed within the appropriate index period in Dry Weather (May 1st to July 30th).

During the Permit Term, the overall biological health, as determined by the SoCal IBI scores[2], was "Poor" or "Very Poor" for the lower watershed stations. Reference sites (e.g., sites higher in the watershed with limited, to no impacts from urbanization) were rated as "Fair". Figure 4-1 depicts the historical summary of SoCal IBI Scores for the SMR monitoring stations.

Figure 4-1: Summary of SoCal IBI Scores for All Monitoring Stations (Spring 2006–Spring 2014)



Several differences between the reference sites and the receiving water sites were identified. This affects the overall IBI score and examples of these differences include the following:

- Riparian vegetation differs among the stations monitored. The majority of the monitoring stations are located lower in the watershed and have very little canopy coverage as compared to the reference sites. This tends to impact the water temperatures at the sites.
- Water temperatures measured at the majority of the Receiving Water sites were higher than those recorded at the reference sites. Similar to the previous reporting year, these differences in temperature were most likely due to the amount of overhead tree canopy surrounding the creeks. This, coupled with smaller wetted width at the reference sites, can lead to a denser tree canopy directly overhead of a stream, resulting in lower instream temperatures.
- A large difference noted between stations was the percentage gradient (slope) of the stream. Both reference stations have very high gradients (~2-4%), while the lower watershed stations ranged

[2] The SoCal IBI was developed to assess the biological integrity of freshwater streams in the southern California coastal region. Methods described in the *Quantitative Tool for Assessing the Integrity of SoCal Coastal Streams* (Ode et al., 2005) were used to calculate the Southern California Index of Biological Integrity (SoCal IBI) to evaluate the overall health of the benthic macro invertebrate community, based on the counts of various species contained in the taxonomy results.

from very low to moderate (~0.7-1.5%). The steeper gradients create riffles and microhabitats that tend to yield higher IBI scores.

Overall the SMR is a dynamic system with large seasonal variations in flow, from dry streambeds to high-energy flows. This arid hydrological regime is typical in the southwestern region of California and can have significant impacts on bioassessment results.

Mediterranean climates, such as those in southern California, tend to have extremes in rainfall patterns, oscillating from periods of rainfall above normal to those very much below normal. As presented in Table 8 of the 2013-2014 Monitoring Annual Report (Attachment C), since the 1992-1993 reporting year, only three of the 21 periods have experienced at least "normal" (average) rainfall totals. Droughts influence the BMI community by decreasing overall base flows, increasing temperature, and potentially increasing algal growth. In a report on the patterns of BMI communities in non-perennial streams, Mazor et al. (2012)[3] found that as stream flow decreases, overall IBI scores tended to decrease. In general, data suggests that a historic drought period may negatively influence the IBI scores.

It seems likely that the biological community are more responsive to the amount of water present than they are to water quality. The drought appears to inhibit our ability to clearly isolate water quality as the sole cause of low IBI scores. The method used for bioassessment does not adequately distinguish between the effects of simply not having sufficient water present (e.g., arid or drought conditions) and the effects of poor water quality on the target populations. Therefore falling IBI scores are not necessarily an indicator of worsening water quality in an arid region.

3.5 Monitoring Program Accomplishments

- Updated and enhanced the Consolidated Monitoring Program to incorporate new monitoring collection methods and data analysis protocols.
- Developed watershed boundaries and land use information for all monitoring stations;
- Reorganized the technical content of the Monitoring Annual Report;
- Added fire map information to assist with assessing potential Pollutant sources;
- Enhanced monitoring databases to be compatible with SCCWRP/SMC standard reporting protocols;
- Enhanced monitoring methods to incorporate use of automatic sampling equipment where appropriate;
- Designed and constructed the District's LID BMP Demonstration and Testing Facility. The project acts as a laboratory for testing the water quality and water conservation benefits of LID features;

[3] Mazor, R.D., K. Schiff, P. Ode, and E. Stein. Final Report on Bioassessment in Nonperennial Streams. Report to the State Water Resources Control Board. Southern California Coastal Water Research Project Technical Report 695. June 2012.

- Implemented several programs to detect IC/IDs, including field and MS4 facility inspections, IC/ID based Dry Weather outfall monitoring. Performed annual mock storm event exercises that involve physical inspections of storm drains and Receiving Waters;

- Operating procedures for Non-Stormwater Action Levels was developed during the permit term to help with IC/ID follow-up and reporting procedures. This allowed for consistency between Co-Permittees within the region;

- Participated in the Santa Margarita Watershed Nutrient Initiative – Stakeholder Group. The group was formed to address nutrient issues in the Santa Margarita River watershed. The group hopes to set regulatory targets based on state of the science techniques to ensure the biological, chemical, and physical integrity of the Santa Margarita River and its tributaries;

- Continued participation in regional and statewide monitoring and science efforts such as the Southern California Monitoring Coalition (SMC) to develop:

  – Lab inter-calibration of chemical, bioassessment and Toxicity testing methods

  – Testing methods for bioassessment and Toxicity in Southern California streams

  – A stormwater research needs report for southern California

- Continued participation with SCCWRP on the development of the Regional Watershed Monitoring Program for Southern California. Co-Permittees have representatives on the SMC Executive Committee and the Bioassessment Technical Subcommittee.

3.6 Effectiveness Assessment

A cumulative analysis and evaluation of monitoring data indicate that the Co-Permittees' stormwater programs have been effective in preventing further impairment of SMR Receiving Waters even during a time of population growth in the region. The SMR water quality data is encouraging, and the Co-Permittees continue to assess their programs and adapt their efforts to improve water quality throughout the region.

As set forth in the SMR Monitoring Annual Reports, water quality conditions in Receiving Waters appear to be improving. This is based on a decreasing number of exceedances for 303(d)-listed constituents in the SMR. The pollutants with an increase of concentration are addressed through various programs and management activities. The following pollutant waterbody combinations at historically monitored mass loading stations have exhibited statistically significant long-term trends:

- TDS at Murrieta Creek during dry weather—decreasing concentrations
- Nitrogen (total) at Murrieta Creek during dry weather—decreasing concentrations
- Sulfate at Temecula Creek during wet and dry weather—decreasing concentrations
- Fecal coliform at Temecula Creek during wet and dry weather—decreasing counts
- *E. coli* at Temecula Creek during dry weather—decreasing counts
- Manganese at Murrieta Creek during dry weather—increasing concentrations

- The Co-Permittees initiated a Special Study to determine the cause(s) of the high concentrations of Iron and Manganese in the Region. The study is discussed briefly in Section 3.6.1.

The overall effectiveness of the Co-Permittees program is assessed based on the analysis of water quality data obtained as part of the MRP. The data has been collected and analyzed throughout the current permit term. However, the monitoring requirements of the 2010 MS4 Permit were not implemented until Fiscal Year 2012-2013. Although the initial Receiving Water quality data is encouraging, additional time and data is needed to fully assess the monitoring program results.

3.7 Watershed Program Highlights

The Co-Permittees can report the following accomplishments during the entire period of the 2010 MS4 Permit:

- Development of Best Management Practice (BMP) handbook to standardize post-construction selection and design in Riverside County. The handbook became effective September 2011.
- Development of the Upper Santa Margarita River Watershed Water Quality Workplan. Implementation began in June 2012, after submittal to Regional Board.
- Revised Co-Permittee monitoring programs to reflect new 2010 MS4 Permit changes. The changes were put into effect as of October 2012.
- Development of the Co-Permittees' Individual JRMPs. Implementation of JRMPs began in June 2012.
- Development of a Water Quality Management Plan (WQMP) that addresses post-construction stormwater runoff management for New Priority Development Projects and Redevelopment Projects. The WQMP became effective on July 11, 2014.
- Development and enhancements to the design template for developing project-specific WQMPs. The WQMP Template became effective on July 11, 2014.
- Development of the Santa Margarita Region (SMR) Hydromodification Management Plan (HMP). The Compliance plan became effective on July 11, 2014.
- Developed the Santa Margarita Region Hydrology Model (SMRHM) software to help developers analyze projects to meet the HMP requirements. The software became free to the public to download on July 11, 2014.
- Development of WQMP and HMP training and education courses. The courses were developed in 2014 to introduce the new development programs.
- Development of the Stormwater and Water Conservation Tracking Tool in collaboration with the Santa Ana Region Co-Permittees in Riverside County. The tracking tool became available to the public for use in 2014.
- Development and maintenance of Co-Permittee databases to track construction sites of 1-acre or larger in size. In addition, the Co-Permittees have standardized a construction reporting spreadsheet used for Annual Reports, updated inspection forms, and enhanced the construction outreach program.

- Creation of Co-Permittee databases to track industrial and commercial facilities.
- Continuation of the Riverside County Stormwater Pollution Prevention public education program which offers educational resources and free brochures targeting residents, businesses, developers, contractors, and elementary school children.
- Participation in regional and statewide monitoring efforts such as the Southern California Stormwater Monitoring Coalition (SMC), Southern California Coastal Water Commission and National Water Resources Institute.
- Participation in the California Stormwater Quality Association (CASQA), including various leadership roles.
- Continued partnership in the Upper Santa Margarita Region Integrated Regional Watershed Management Plan
- Performance of multiple special studies during the 2010 MS4 Permit term that have helped to identify causes of pollutants within the Santa Margarita Region. These studies are discussed further in Section 3.7.1

3.7.1 Special Studies Conducted

Sediment Toxicity – The goal of the study was to assess the quality of stream sediments and possible contamination from MS4 runoff in receiving waters. The workplan was finalized, based on approval of the Water Board, in May 2013. The results of monitoring metals, organochlorine pesticides, and synthetic pyrethroid pesticides in sediment indicated that the concentrations were generally below target threshold and effect levels.

Trash and Litter Investigation – The goal of the study was to provide information regarding BMP effectiveness for trash and to help guide management actions and BMP implementation for trash in the SMR. The study was submitted to the Regional Board in 2013 along with the Monitoring Annual Report. The report found that trash and litter was not a significant issue in the receiving waters within SMR.

Agricultural, Federal, Tribal and State Input Study – This study investigates the water quality of agricultural, federal, and tribal runoff that is discharged into the Co-Permittees' MS4. The goal of the study was to characterize stormwater flows that are not regulated by the Co-Permittees but have influence upstream of their MS4s. The preliminary findings have found that the highest levels of pollutant concentrations were measured from agriculture land use. The second year of required monitoring for the special study is currently being completed within FY 2014-2015. A final report is anticipated to be submitted with the 2014-2015 Monitoring Annual report.

Low-Impact Development (LID) Retention Impacts Study – The Co-Permittees participated in the development of the special study in order to assess the impacts of LID on surface flows, the potential relationship to beneficial uses, and the effects on water supply rights of down downstream jurisdictions. The LID Retention Impacts Study was prepared in lieu of the required "MS4 and Receiving Water Maintenance Study" (required under Attachment E, Section II.E.S of the 2010 Order) and the "Intermittent and Ephemeral Stream Perennial Conversion Study" (required under Attachment E, Section II.E.6 of the 2010 Order), as described in correspondence received from the Regional Board dated September 14, 2012.

Per agreements with Board staff, a study scope was prepared to evaluate whether or not LID requirements were likely to have a significant impact on storm flows and base flows to the Santa Margarita Gorge. The project team met with Regional Board staff and jointly developed a modeling approach that would provide an indication as to whether or not further assessment would be required. The study and findings were subject to a peer review conducted under the direction of the Southern California Coastal Watershed Research Project (SCCWRP).

The results of this study indicate that the retention of surface runoff will result in greater evaporation and less stormwater runoff to the Santa Margarita Gorge when LID is implemented, as compared to traditional stormwater BMPs only, but greater stormwater runoff then under current conditions. The reduced streamflow at the Gorge under future full build-out with LID for both new and existing development conditions may impact downstream beneficial uses**.**

The peer review comments reflect issues that may need to be addressed for a more comprehensive modeling exercise. However, given the results of this conceptual modeling study and considering the comments from the peer review panel, our preliminary conclusion is that the impacts from LID implementation in the Upper Santa Margarita River watershed would not be significant under likely development scenarios, and no further actions are recommended.

Source Assessment of Iron and Manganese Study – The Co-Permittees initiated a study investigating the persistent exceedances of iron and manganese water quality objectives (WQOs) within SMR. The Co-Permittees initiated a source analysis indicating that iron and manganese concentrations in Receiving Waters are strongly associated with the geology located throughout the SMR. Additional sources, including MS4 contributions were evaluated, but the weight of evidence suggests that iron and manganese concentrations are consistent with the local geology. High concentrations were also observed in reference streams from undeveloped watersheds of similar geological characteristic. The preliminary results are evidence that natural sources are the cause of elevated levels of iron and manganese in Receiving Waters.

3.8 Proposed Program Modifications and Revisions

3.8.1 SMR Monitoring Program

The Co-Permittees request several revisions and/or modifications to the monitoring program.

Removal of Carbamate Pesticides from Constituent List

In the upcoming 2015-2016 Monitoring Year, the Co-Permittees request that Carbamate Pesticides be removed from the constituent lists, based on the data collected during the Permit term. As evidenced by the results of the Monitoring Annual Reports (e.g., Attachment H, Detected Results located within Appendix C), the Carbamate Pesticides have not been detected in the water quality samples. Furthermore this list of Carbamate Pesticides includes many compounds that have been banned by EPA or are in process of cancelling registrations for use (e.g. Carbofuran). This request is in conformance with the requirements of 40 CFR 122.44. With the removal of these constituents, the Co-Permittees will focus on detected constituents that potentially threaten water quality.

Receiving Water Monitoring Revisions

The 2010 Permit focused on the correlation of the water quality chemistry, toxicity, and stream assessment findings to help identify water quality priorities. However, the data collected from outfalls and receiving water stations was limited due to the severe drought conditions. In several cases there was no

flow in the Receiving Water. In the case of the stream assessment program (see Section 3.4), results yielded low IBI scores induced by drought. The Co-Permittees recommend that the next Permit term refocus monitoring efforts towards reliable data collection such as:

- A detailed reconnaissance of region-wide outfalls to identify intermittent and persistent sources of urban runoff into receiving waters, prioritize those locations, and then relocate the outfall monitoring stations to the high priority outfall locations.
- Limit Receiving Water monitoring to the three mass loading stations (i.e., Adobe, Temecula, and Murrieta) as these locations have historical data available for long-term trend comparison. These long-term stations may provide better utility for data comparisons as programs are implemented.
- As described above in Section 3.4, the drought appears to inhibit the Co-Permittees' ability to use IBI scores to correlate the bioassessment results with water quality impacts. The method used for bioassessment does not adequately distinguish between the effects of simply not having sufficient water present and the effects of poor water quality on the target populations. We note that as the drought continues the IBI scores decrease; therefore, falling IBI scores may not be a reliable indicator of worsening water quality in an arid region. The arid conditions may mask an accurate assessment of the water quality impacts on a stream. The Co-Permittees request that the Regional Board suspend stream assessment until an appropriate protocol is developed for arid region.

Revision of the Definition of Wet/Rainy Season

The Co-Permittees request that the Wet/Rainy Season be modified from October 1st to April 30th, to October 1st to May 31st. The extension would more accurately reflect the watershed's precipitation season, and extend the period for successful Wet Weather sampling opportunities.

3.8.2 Proposed JRMP Revisions

The Co-Permittees do not foresee major changes to their JRMPs at this time. However, the City of Temecula and the County are in the process of a minor revision to their standards to emphasize erosion control as the most important measure for keeping sediment onsite during construction.

4.0 Additional Comments on Proposed Permit

- **Previous Comments** - The Co-Permittees previously have expressed concerns regarding inclusion in the San Diego Regional Board's Regional Permit (Order No. R9-2013-0001, as modified by Order No. R9-2015-0001). The Co-Permittees' concerns and legal objections to inclusion in a regional permit are set out more fully in our written comment letter dated January 10, 2013, in Order No. R9-2013-0001 and November 19, 2014 regarding Order R9-2015-0001. For your convenience, these comments are included as Appendix D.

- **Receiving Water Limitations Language -** The Riverside County Co-Permittees continue to believe strongly that every MS4 Permit should incorporate a clear and achievable path to compliance for Co-Permittees. The Co-Permittees are actively participating in the workshops held by Regional Board staff concerning this important topic.

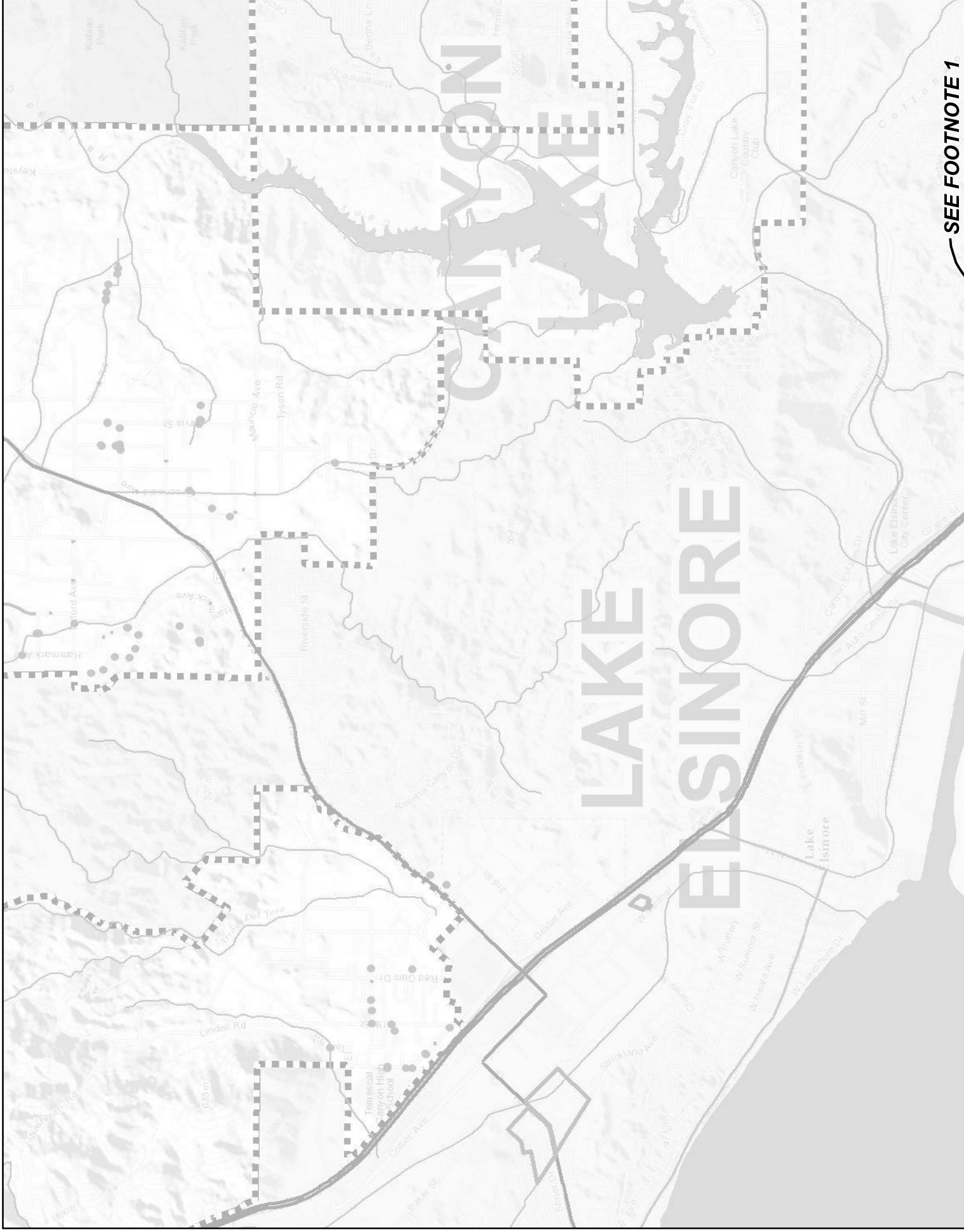
  The focus of the Watershed Workplan is on an iterative, flexible, and priority-setting approach that is intended to enable the Co-Permittees to focus on the most important water quality impairments in the SMR, and improve water quality. As we have previously commented, if the Co-Permittees have no protection from automatic liability for exceedances of water quality standards, they must address each such exceedance, even when that exceedance may be transitory or of minimal environmental or public health consequence. Stretching resources to address such issues diverts limited Co-Permittee resources from the most important threats to water quality and delays overall water quality improvement.

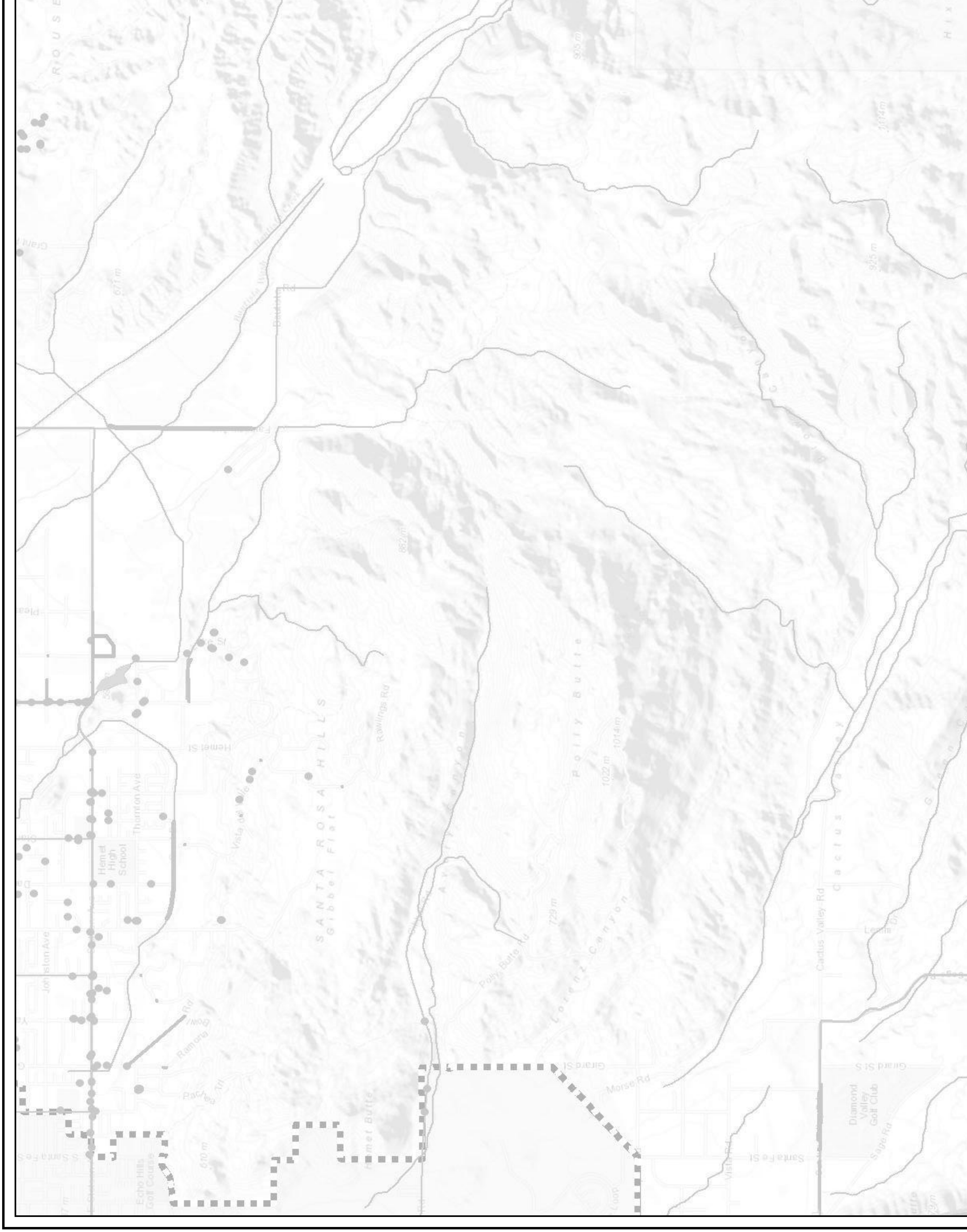
  State Board staff has already strongly signaled its support of alternative compliance language in MS4 permits, as set forth in the draft Order on the petitions challenging the 2012 Los Angeles County MS4 Permit. The Co-Permittees look forward to working with Regional Board staff, permittees from Orange and San Diego Counties, and the other stakeholders to develop appropriate alternative compliance language.

- **Prior Lawful Approval Language -** The Co-Permittees request language that allows each Co-Permittee to evaluate each project independently, in order to determine at their sole discretion, compliance as it relates to Prior Lawful Approval.

- **CEQA Processing Considerations** – Programmatic requirements that entail structural improvements such as retrofits and/or BMPs will trigger CEQA compliance. Future Permit language should discuss lead agency designation and consider CEQA processing in future workplan implementation timelines.

Appendix A
2015 SMR MS4 Facility Map


CANYON LAKE
LAKE ELSINORE
SEE FOOTNOTE 1


SANTA ROSA HILLS
Gibbel Flat
Hemet High School
Thornton Ave
Johnston Ave
Hemet St
Rawlings Rd
Polly Butte
Polly Butte Rd
Lorenz Canyon
Cactus Valley Rd
Diamond Valley Golf Club
Sage Rd
Girard St
Morse Rd
Santa Fe St
Vista Rd
Hemet Butte
Echo Hills Golf Course
Ramona
1022 m
1014 m
729 m
882 m
935 m

Appendix B
2015 SMR Land Use Map

CANYON LAKE
LAKE ELSINORE
SEE FOOTNOTE 1

SANTA ROSA HILLS
Gilbert Flat
Polly Butte
Lorenz Canyon
Hemet High School
Thornton Ave
Johnston Ave
Vista del Valle
Rawlings Rd
Ramona Rd
Pacheco Rd
Hemet St
Lake St
Cactus Valley Rd
Morse Rd
Sanborn Rd
Sanborn Ct
Sanborn Pl
Sanborn Ave
Sanborn Dr
Sanborn Way
Sanborn Cir
Sanborn Ln
Sanborn Loop
Sanborn Trl
Sanborn Pkwy
Sanborn Blvd
Sanborn Sq
Sanborn Ter
Sanborn Aly
Sanborn Path
Sanborn Walk
Sanborn Run
Sanborn Crossing
Sanborn Bridge
Sanborn Tunnel
Sanborn Overpass
Sanborn Underpass
Sanborn Interchange
Sanborn Junction
Sanborn Roundabout
Sanborn Circle
Sanborn Square
Sanborn Park
Sanborn Garden
Sanborn Plaza
Sanborn Mall
Sanborn Center
Sanborn Building
Sanborn Tower
Sanborn Monument
Sanborn Statue
Sanborn Fountain
Sanborn Bench
Sanborn Table
Sanborn Chair
Sanborn Lamp
Sanborn Sign
Sanborn Flag
Sanborn Banner
Sanborn Poster
Sanborn Billboard
Sanborn Graffiti
Sanborn Mural
Sanborn Painting
Sanborn Sculpture
Sanborn Installation
Sanborn Performance
Sanborn Exhibition
Sanborn Gallery
Sanborn Museum
Sanborn Library
Sanborn Archive
Sanborn Collection
Sanborn Artifact
Sanborn Specimen
Sanborn Sample
Sanborn Data
Sanborn Information
Sanborn Knowledge
Sanborn Wisdom
Sanborn Truth
Sanborn Beauty
Sanborn Love
Sanborn Peace
Sanborn Joy
Sanborn Hope
Sanborn Faith
Sanborn Courage
Sanborn Strength
Sanborn Power
Sanborn Energy
Sanborn Light
Sanborn Life
Sanborn Death
Sanborn Time
Sanborn Space
Sanborn Universe
Sanborn God
Sanborn Creation
Sanborn Destruction
Sanborn Evolution
Sanborn Revolution
Sanborn Change
Sanborn Transformation
Sanborn Transcendence
Sanborn Immanence
Sanborn Omnipotence
Sanborn Omniscience
Sanborn Omnipresence
Sanborn Eternity
Sanborn Infinity
Sanborn Nothingness
Sanborn Everything
Sanborn Something
Sanborn Anything
Sanborn Nothing
Sanborn Everything
Sanborn Something
Sanborn Anything
Sanborn Nothing
Diamond Valley Golf Club
Echo Hills Golf Course
Sky Rd
Sunset Rd
Sunrise Rd
Moonlight Rd
Starlight Rd
Daylight Rd
Twilight Rd
Midnight Rd
Noon Rd
Dawn Rd
Dusk Rd
Evening Rd
Morning Rd
Afternoon Rd
Night Rd
Day Rd
Week Rd
Month Rd
Year Rd
Decade Rd
Century Rd
Millennium Rd
Eon Rd
Era Rd
Epoch Rd
Period Rd
Age Rd
Stage Rd
Phase Rd
Cycle Rd
Season Rd
Spring Rd
Summer Rd
Autumn Rd
Winter Rd
Solstice Rd
Equinox Rd
Zenith Rd
Nadir Rd
Horizon Rd
Meridian Rd
Parallel Rd
Latitude Rd
Longitude Rd
Altitude Rd
Depth Rd
Width Rd
Length Rd
Height Rd
Volume Rd
Area Rd
Perimeter Rd
Circumference Rd
Diameter Rd
Radius Rd
Chord Rd
Arc Rd
Tangent Rd
Secant Rd
Cosecant Rd
Cotangent Rd
Sine Rd
Cosine Rd
Tangent Rd
Pi Rd
Tau Rd
Golden Ratio Rd
Fibonacci Rd
Prime Rd
Composite Rd
Even Rd
Odd Rd
Integer Rd
Rational Rd
Irrational Rd
Real Rd
Imaginary Rd
Complex Rd
Quaternion Rd
Octonion Rd
Sedenion Rd
Trigintaduonion Rd
Hexadecanion Rd
Pathion Rd
Chingon Rd
Routon Rd
Voudon Rd
Beyond Rd

Appendix C
FY13-14 JRMP / Monitoring Annual Report References

(Note: Due to its large size, this attachment is provided in electronic format only)

Appendix D
2013 Riverside County Co-Permittees Comments for San Diego Regional MS4 permit

WARREN D. WILLIAMS
General Manager-Chief Engineer

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RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

November 19, 2014

sent via email 11/19/14: Laurie.Walsh@waterboards.ca.gov

Ms. Laurie Walsh, P.E., WRC Engineer
CRWQCB - San Diego Region
2375 Northside Drive, Suite 100
San Diego, CA 92108

Dear Ms. Walsh:

Re: Comment - Tentative Order No. R9-2015-0001Place ID:65801LWalsh

This letter is written by the Riverside County Flood Control and Water Conservation District (District), on behalf of itself, the County of Riverside and the Cities of Murrieta, Temecula, and Wildomar (collectively, the Riverside County Co-Permittees) regarding Tentative Order No. R9-2015-0001 (Tentative Order). The Tentative Order proposes to add the County of Orange and other agencies located in South Orange County within the existing San Diego County Municipal Separate Storm Sewer System (MS4) Permit. The Riverside County Co-Permittees appreciate the opportunity provided by the San Diego Regional Water Quality Control Board (Regional Board) to offer its comments on the Tentative Order.

The Riverside County Co-Permittees wish to reiterate their concerns regarding a Regional MS4 Permit for San Diego, Orange, and Riverside Counties. Those concerns are set out more fully in our written comment letter dated January 10, 2013, on Order No. R9-2013-0001. The Riverside County Co-Permittees will be submitting a Report of Waste Discharge prior to the expiration of their current MS4 Permit, seeking either modification to the Regional Permit or an individual permit covering only those Co-Permittees. For your convenience, the January 10, 2013 comments are attached to this letter. The Co-Permittees request that this comment letter and attachments be added to the record for the Tentative Order, since most of the issues raised in those comments still pertain to the Tentative Order. The Co-Permittees also request that the oral testimony of Riverside County Co-Permittees on Order No. R9-2013-0001 be included in the record for the Tentative Order. The Riverside County Co-Permittees support the South Orange County Co-Permittees general approach to the issues raised by the Tentative Order.

Notwithstanding the Riverside County Co-Permittees' concerns to a Regional Permit, and subject to it, the Co-Permittees offer the following observations regarding the Tentative Order.

1. Need for Path to Compliance

As set forth in our written and oral comments on Order No. R9-2013-0001, the Riverside County Co-Permittees continue to believe strongly that every MS4 permit, including the Tentative Order, should

incorporate a clear and achievable path to compliance for Co-Permittees. As the Executive Officer and staff indicated in the hearings on Order No. R9-2013-0001, the San Diego County Co-Permittees will be out of compliance with the Permit's receiving water limitations (RWL) provisions for years. We agree with staff's assessment, and state further, that the lack of a provision to allow Co-Permittees to be considered in compliance with the RWL provisions leaves the Co-Permittees open to possible enforcement by third-parties and, as importantly, threatens the compliance approach that has been successfully employed by the Riverside County Co-Permittees to address water quality impairments in the Santa Margarita Region.

The Riverside County Co-Permittees agree with staff that a MS4 permit which allows the Permittees to adopt a "fail early and fail often" iterative approach to water quality is preferable to a permit which simply mandates certain actions. The Santa Margarita River Watershed Water Quality Workplan in Riverside County follows an iterative, flexible, and priority-setting approach that is intended to enable the Co-Permittees to focus on the most important water quality impairments in the Region, and make real, quantifiable improvements in water quality. As we have previously commented, if the Co-Permittees have no protection from liability for exceedances of water quality standards, they must address each such exceedance, even when that exceedance may be transitory or of minimal environmental or public health consequence. Stretching resources to address such issues diverts limited Co-Permittee resources from the most important threats to water quality and delays overall water quality improvement.

Recognizing this deficiency in the 2001 MS4 Permit for the Los Angeles County Co-Permittees, in its 2012 Permit, the Los Angeles Water Board adopted a path to compliance with RWLs through the development of adaptive and prioritized watershed management plans. The Riverside County Co-Permittees believe that a similar approach to RWL compliance should be included in the Tentative Order.

2. Hydromodification Provisions

While most of the substantive changes in the Tentative Order have specific application only to San Diego and/or South Orange Counties, the Riverside County Co-Permittees support exemptions for engineered channels and large river reaches in Provision E.3.c.(2)(e). This provision also provides an interim timeframe exemption for the implementation of hydromodification management BMP requirements for priority development projects.

The exemptions identified in Provision E.3.c.(2)(e) are appropriate and reasonable, and should be made permanent exemptions moving forward.

3. Basin Planning and Water Quality Improvement Plan (WQIP) General Comments

For the WQIPs to ultimately succeed, they need to be based upon regionally appropriate water quality standards. These water quality standards require review to ensure that they reflect sustainable conditions for beneficial uses, explicitly consider regulatory policy and environmental trade-offs

inherent in the protection of beneficial uses, and address the nature and impact of stormwater upon beneficial uses.

The Riverside County Co-Permittees would like to thank the Regional Board and staff for working with the Santa Margarita River Nutrient Initiative Group on such a review. This group, which includes dischargers, tribal interests, interested non-profits, scientists, and Regional Board staff, is using a scientifically based and rigorous approach to evaluate potential water quality targets for, and sources of, nutrients in the Santa Margarita Watershed. It is our belief that this effort will lead to more considered, effective, and appropriate management of local receiving waters, and thereby promote quicker and more effective environmental outcomes. It may also assist with the identification and development of innovative and alternative programs to manage nutrients within the Region. This effort will inform the development of the Santa Margarita River Watershed Water Quality Workplan and other regulatory programs.

The Co-Permittees request and encourage Regional Board staff to work with other stakeholders to consider, prioritize, and address other perceived constraints and inconsistencies within the San Diego Region Basin Plan. Such efforts will ultimately result in a better focus of local and regional compliance programs, including the WQIPs, on actions that are more likely to effectively and quickly address public health risks and environmental risks to receiving waters. Such an approach is exactly in line with staff's emphasis on workable solutions to these challenges.

The Riverside County Co-Permittees appreciate the opportunity to comment on the Tentative Order. Should you have any questions regarding these comments, please contact David Garcia at 951.955.1330/dhgarcia@rcflood.org.

Very truly yours,

for JASON E. UHLEY
Chief of Watershed Protection Division

Attachment

DHG:cw
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RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

January 10, 2013

Mr. Wayne Chiu, P.E.
California Regional Water Quality
Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, California 92123-4340

Dear Mr. Chiu:

Re: Tentative Order No. R9-2013-0001
Regional MS4 Permit
Place ID: 786088Wchiu

The Riverside County Flood Control and Water Conservation District (District) is submitting this comment letter on the above listed Tentative Draft Order on behalf of the Riverside County MS4 Copermittees within the San Diego Region (Riverside County Copermittees) which includes the District, the County of Riverside and the Cities of Murrieta, Temecula and Wildomar. Tentative Draft Order R9-2013-0001 (Draft Permit) was drafted by Board staff to cover Phase I municipal separate storm sewer system (MS4) Copermittees in San Diego County, southern Orange County, and the portion of southwestern Riverside County within the Santa Margarita Hydrologic Unit.

The Riverside County Copermittees have previously commented that the San Diego Water Board lacks authority to adopt a regional permit covering Orange and Riverside Counties, in addition to San Diego County; a comment which is discussed in further detail below and in the attached legal comments. Notwithstanding such objection, and subject to it, the Riverside County Copermittees are providing comments on the Draft Permit.

In the workshop on the Administrative Draft Order held on April 22, 2012 San Diego Water Board staff identified the following desired outcomes for the proposed permit:

- Improving the quality of water discharged from the MS4
- Restoring or enhancing Beneficial Uses and Receiving Water quality

It was further identified by Board staff that to be able to meet those goals, the proposed regional MS4 permit needed to be 1) Strategic, 2) Adaptive, and 3) Synergistic.

Notwithstanding the concerns of the Riverside County Copermittees with regard to the legal authority to issue a regional MS4 permit, the Copermittees agree that being able to adapt and direct resources toward specific water quality priorities in a given watershed, rather than all potential problems simultaneously, is more likely to result in actual and meaningful improvements in water quality. However, to be able to achieve those improvements the MS4 Permit must be crafted to provide the Copermittees with the ability to truly and fully

adaptively manage their programs to focus resources on those BMP strategies and monitoring efforts that are identified as being most effective, consistent with the MEP standard, at addressing watershed priorities.

Unfortunately, many provisions in the Draft Permit, including but not limited to the Receiving Water limitation provisions in Provision A and others discussed in this letter, still do not fully support the achievement of those outcomes. The Draft Permit does not provide the Copermittees with the flexibility to be fully strategic in managing their resources nor the ability to fully adapt their programs to focus on the highest priority water quality needs of the watershed. This comment letter and the other documents submitted herewith (a redline of the Draft Permit and Legal Comments) identify some suggestions which, if adopted by the San Diego Water Board, will help to address these limitations and facilitate the desired improvements.

This comment letter is organized as follows:

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As noted, the Riverside County Copermittees also are submitting a redline of the Draft Permit ("Redline") that proposes alternative language intended at achieving solutions to the various issues raised in this letter, and a Legal Comment document ("Legal Comments") that provides additional legal context for the various issues raised in this letter. The Riverside County Copermittees reserve their right, in the context of filing a Report of Waste Discharge ("ROWD") prior to the expiration of Order R9-2010-0016 (the 2010 MS4 Permit), to again address these issues and others relevant and appropriate to the SMR.

1 BACKGROUND

The Riverside County Copermittees were issued an extensive and prescriptive MS4 Permit in November 2010 which greatly expanded monitoring obligations, required special studies, a jurisdictional runoff management program, and Watershed Workplan requirements that were very different than the requirements set forth in the previous MS4 Permit issued to the Copermittees. Development and implementation of the 2010 MS4 Permit compliance requirements has been very expensive, especially in comparison to the relatively few demonstrated impairments of Beneficial Uses in the region and the Copermittees' resources. These requirements have left other important societal needs unfulfilled by the Riverside County Copermittees during a period of unprecedented and continuing economic distress. Further, the Riverside County Copermittees are still in the process of developing and implementing these 2010 MS4 Permit requirements, which is a serious concern given the very different compliance approach proposed in the Draft Permit. The Copermittees hope that the compliance efforts under the current MS4 Permit are taken into account when they submit their ROWD at the expiration of the 2010 MS4 Permit.

2 General Comments

2.1 Regional Permit

The Riverside County Copermittees respectfully submit that the San Diego Water Board is not authorized under the Clean Water Act or under its implementing regulations to issue a regional permit to Copermittees in San Diego County, South Orange County and the Santa Margarita Region (SMR) of Riverside County. As discussed more fully in the Legal Comments, the only circumstance under which the San Diego Water Board could issue such a permit would be if the Copermittees in these counties agreed to such a permit. Additionally, while the Draft Permit purports to affect the conduct of the Riverside County Copermittees upon expiration of the 2010 MS4 Permit in November 2015, the Riverside County Copermittees have not submitted a ROWD requesting coverage under a regional permit. Because no application has been made for the regional permit, which is a requirement set forth in the CWA regulations, the San Diego Water Board lacks jurisdiction to name the Riverside County Copermittees on the Draft Permit at this time.

Notwithstanding the above, the Riverside County Copermittees are submitting the comments in this letter based on:

- The San Diego Water Board staff's stated intent to enroll the Riverside County Copermittees in this permit upon expiration of the 2010 MS4 Permit.
- Statements made by San Diego Water Board staff that this comment period would serve as the primary opportunity for the Riverside County Copermittees to influence their next term MS4 Permit. The Riverside County Copermittees are entitled, as part of the ROWD process, to again raise relevant issues regarding permit provisions, but have undertaken in these comments to address major current concerns.

2.2 Outcome Focus

As mentioned above, the Copermittees agree that being able to adapt and direct resources toward addressing the specific water quality priorities in a given watershed, rather than all potential problems simultaneously, is more likely to result in actual/meaningful improvements in water quality. However, to be able to achieve those improvements, the MS4 Permit must fully integrate the following principles:

- **The Jurisdictional Program requirements must be fully flexible:** The Permit must be written in a way that allows the Copermittees to truly and adaptively manage their programs to fully focus their existing resources on those BMP strategies and monitoring efforts that are identified within the Water Quality Improvement Plan (WQIP) as being most effective, consistent with the Maximum Extent Practicable (MEP) standard, at addressing the watershed's priorities. We understand this to be the goal of the San Diego Water Board as well. While some elements of the Draft Permit embody this need, others do not and require dedication of resources to specific pre-defined efforts, regardless of the identified need for that effort in the watershed. The specific program areas that need more work to this end are:

    - The approach to addressing Non-stormwater discharges
    - Development Planning
    - Retrofitting
    - Channel Rehabilitation

These issues and proposed new language to address these issues are included throughout this letter and/or in the attached Redline.

- **Basin Plan updates need to be Prioritized by the San Diego Water Board:** For outcome-based permitting to be successful, the desired outcomes must be achievable by and appropriate to the Copermittee. To do that, the outcomes must take into account the background conditions in the watershed, and be appropriate for the attainment of Beneficial Uses in the specific waterbody, based on the specific conditions within and influencing that waterbody. The values in the Basin Plan should be comprehensively re-evaluated to ensure that water quality standards are scientifically justified to protect Beneficial Uses. Without updating the Basin Plan, the outcomes that the Copermittees target in the WQIPs would be arbitrary and not guaranteed to achieve the desired beneficial use improvements. Such an update should be pursued aggressively, led by and adequately funded by the San Diego Water Board, with participation by the MS4 Copermittees and other dischargers and stakeholders in the watershed.

- **Other Dischargers need to be Similarly Regulated by the San Diego Water Board:** The MS4 Copermittees are not the only dischargers of pollutants in the watershed. For example, the SMR of Riverside County includes State Lands (such as Caltrans), Tribal Lands, Agricultural Operators, Industrial Permit dischargers, Construction Permit dischargers, Phase II entities, Water Districts, and 'De Minimus' dischargers issued general permit coverage; all of which:

- Have separate regulatory programs (such as permits or waivers) implemented by the San Diego Water Board;
- May discharge pollutants, including non-stormwater, that can affect the quantity and quality of runoff, both directly within Receiving Waters, and in runoff discharges that may enter into and be discharged from the MS4; and
- Cannot be regulated by the Copermittees for the quantity and quality of their runoff because of their separate permits or waivers granted by the NPDES Program Administrator.

As such, while MS4 Copermittees can implement programs to reduce pollutants in discharges that are within their legal jurisdiction, no amount of effort by the MS4 Copermittees can be expected to fully attain water quality standards in the Receiving Waters. The only way to achieve that outcome will be for the NPDES Program Administrator (the San Diego Water Board in most cases) to directly regulate each of these entities to similar levels and standards as set forth by this Permit.

2.3 Responsibility for meeting goals of CWA

The CWA requires Copermittees subject to any MS4 permit, including the Draft Permit, only to address discharges from their MS4s. 33 U.S.C. § 1342(p)(3)(B). The Copermittees are not required to restore Beneficial Uses in any Receiving Water, or to address sources of pollution to those Receiving Waters that are not being discharged into or from those MS4s. However, in various provisions in the Draft Permit, there is a suggestion that the Copermittees are solely responsible for attaining water quality standards in their respective Receiving Waters. The San Diego Water Board must make clear in the Draft Permit that the responsibilities of the Copermittees are limited to their MS4s and the requirements of the CWA for municipal stormwater dischargers. Redline changes have been proposed in the above referenced portions of the Draft Permit to address this issue.

3 Specific Comments

The following comments represent specific high level concerns that the Riverside County Copermittees have identified at this time. Additional comments on the Draft Permit can be found in the Redline, as well as in the attached Legal Comments.

3.1 Findings

The Riverside County Copermittees have two separate sets of comments on the Findings. The first addresses the need for additional findings, with respect to aspects of California law and the physical setting of the SMR. The second set of comments focuses on existing Findings in the Draft Permit.

3.1.1 Needed Additional Findings

The Findings in the Draft Permit fail to fully address the context and conditions under which the proposed permit requirements are to be applied. A more complete explanation of this background is necessary to ensure that the Provisions ultimately included in the Draft Permit are credible, appropriate and legally required, and that the Permit Provisions (which must stem from the Findings) reflect the

context of the broader issues that affect MS4s within the region. The Riverside County Copermittees request that San Diego Water Board staff work with the MS4 Copermittees to expand the Findings, including the addition of findings to address the following:

California Water Law

California law requires that downstream entities must accept runoff from up-gradient properties. Owners and operators of MS4s are not exempt from this legal mandate, even if that runoff contains pollutants. Moreover, flood control districts, including the District, are mandated by the California Legislature (Legislature) to protect the lives and property of residents from floodwaters. The Riverside County Copermittees request that a finding, in the form set forth in the Redlines, be added to the Draft Permit.

Flooding

Many areas that would be under the jurisdiction of the Draft Permit are subject to periodic catastrophic flooding, which results from natural conditions, specifically the presence of mountains and hilly areas in close proximity to development, along with the effect of strong Pacific storms. This flooding would occur even in the absence of development. The Legislature recognized the importance of this issue in the early 20th Century, when it established flood control districts across the state, including in Riverside, Orange and San Diego Counties. Such flooding has, and if not controlled, could result in loss of life and widespread property damage. Further, the flooding can mobilize significant amounts of pollutants from industrial, commercial, residential and agricultural lands, damaging watercourses, habitat, and the Beneficial Uses therein. MS4 systems are designed and constructed to mitigate these impacts. The Riverside County Copermittees request that a finding in the form set forth in the Redline be added to the Draft Permit.

Flood Control District Acts

As noted above, the Legislature established Flood Control Districts in Orange, Riverside, and San Diego Counties through a series of Flood Control Acts. The Legislature determined that protection of life and property from the effects of flooding through the implementation of flood control improvements was a priority, and assigned those Districts with the sole responsibility to design, construct and maintain those improvements necessary to manage and contain floodwaters to prevent such negative impacts, as well as to conserve floodwaters for beneficial use. As noted above, these improvements represent fundamental water quality BMPs inasmuch as they reduce the widespread exposure of runoff to pollutants. The Flood Control Districts, while owners and operators of MS4s, have no authority or powers beyond those granted by the Legislature. The Legislature did not provide the Flood Control Districts, for example, the authority to regulate land uses within the municipal jurisdictions of Riverside County, nor to control the volume or quality of runoff discharged by those land uses. Findings describing the legislative priority for flood control and the limitations on the governing power of the Flood Control Districts should be added to set forth the appropriate role of the Flood Control Districts as MS4 Copermittees. The Riverside County Copermittees request that a finding, in the form set forth in the Redline, be added to the Draft Permit.

Limits on Extent of Permittee Legal Authority

The MS4 Copermittees lack the authority to regulate many significant sources of pollutants that may impact Receiving Waters. For example, the Copermittees cannot regulate pollutants discharged from federal and state lands, facilities, tribal lands, special districts, utilities, agricultural lands, or railroads. Moreover, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) preclude local regulation of pesticides. The Riverside County Copermittees request that a finding in the form set forth in the Redline be added to the Draft Permit.

3.1.2 Comments on Existing Findings

Findings 3 and 15 (and elsewhere in Draft Permit)

In Findings 3 and 15 (and throughout the Draft Permit), it is stated that the CWA requires controls to reduce the discharge of pollutants "in stormwater" to the MEP. Finding 15, moreover, states that non-stormwater discharges from the MS4 are "not considered stormwater discharges and therefore are not subject to the MEP standard, stating that the MEP standard "is explicitly for 'Municipal . . . Stormwater Discharges" from the MS4s.

These conclusions are directly contrary to the plain language of the CWA, as set forth in the November 16, 1990 preamble accompanying the CWA stormwater regulations. Those authorities provide that the MEP standard applies to *all* pollutants discharged from the MS4, notwithstanding that some may be transported by non-stormwater. Additionally, the Redline reflects deletion of the limitation of the MEP standard to stormwater discharges in multiple locations, reflecting federal law. For a further discussion of this issue, please see the Legal Comments. The Riverside County Copermittees also request deletion of Finding 15.

Finding 11

This Finding states that "[r]ivers, streams and creeks in developed areas used [to convey runoff] . . . are part of the Copermittees' MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the rivers, streams and creeks in the developed areas of the Copermittees' jurisdictions are both an MS4 and Receiving Water." This statement is incorrect and must be deleted (as reflected in the Redline). For reasons more fully set forth in the Legal Comments, natural streams cannot be considered MS4; there is no MS4 "outfall" from a channelized river or stream to a natural stream; and, USEPA itself requires a distinction between MS4s and Receiving Waters.

Finding 12

This Finding states that as operators of MS4s, "Copermittees cannot passively receive and discharge pollutants from third parties." By providing free and open access to an MS4 that conveys discharges to Waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or otherwise control. This statement is incorrect and must be deleted (as set forth in the Redline). As the discussion in the Legal Comments indicates, municipalities must maintain the MS4 to protect the lives and property of their citizens and to prevent nuisance. Flood Control Districts have a statutory obligation to operate and maintain such MS4, an obligation which is not affected by

either the CWA or the terms of the Draft Permit. While an MS4 operator has the obligation to effectively prohibit the entry of non-stormwater into the MS4, it does not have legal responsibility for such discharges, which are the responsibility of the discharger itself and subject to the jurisdiction of the San Diego Water Board, pursuant to Water Code section 13260 *et seq.*

Finding 28

This Finding recites that the San Diego Water Board finds that the requirements of the Draft Permit "are not more stringent than the minimum federal requirements." The Riverside County Copermittees disagree with this finding, as it is not supported by the evidence, *i.e.,* the many requirements in the Draft Permit which exceed the federal MEP standard. Moreover, any decision by the San Diego Water Board to adopt "other provisions" going beyond MEP is not a federal requirement, but rather a discretionary decision taken by a state agency under authorization in the CWA. *See Defenders of Wildlife v. Browner,* 191 F.3d 1159, 1164-65 (9th Cir. 1999). Please see discussion in the Legal Comments. The Finding also indicates that the San Diego Water Board has developed an economic analysis of the Draft Permit. As set forth in the Legal Comments, the Riverside County Copermittees challenge the adequacy of that analysis.

Finding 29

This finding purports to find that the Draft Permit does not constitute an unfunded state mandate. The Riverside County Copermittees disagree with the conclusions set forth in this finding. More importantly, the finding is without legal effect because exclusive jurisdiction as to whether a state mandate exists, and whether it is unfunded lies with the Commission on State Mandates. Government Code §§ 17751 and 17552; *Lucia Mar Unified School District v. Honig* (1988) 44 Cal.3d 830, 837; *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1546, 1596-97. The finding of an agency that has no jurisdiction to make that finding is entitled to no weight and should be deleted, as shown in the Redline. For an additional discussion of these issues, please see the Legal Comments.

Finding 31

The Riverside County Copermittees believe that the Receiving Water Limitation ("RWL") language set forth in the Draft Permit renders compliance with the permit impossible, since exceedances of water quality standards occur routinely through no fault of the MS4 Permittees. Thus, unless the RWL is modified to provide the Copermittees with a means to be in compliance, those Copermittees risk the threat of arbitrary San Diego Water Board enforcement or the bringing of citizen suit lawsuits under the CWA, which could nullify compliance with all other terms set forth in the Draft Permit, as discussed more fully in the Legal Comments. The exposure to third party litigation from the proposed RWL language is one of the most significant threats to an otherwise collaborative approach to achieving long term water quality improvement. This threat was emphasized by the recent bringing of a citizen suit lawsuit against the City of Malibu, the County of Los Angeles and the Los Angeles County Flood Control District based on similar language in the 2001 Los Angeles County MS4 Permit. The Riverside County Copermittees have suggested modifications to Provision A in the Redline and as discussed below and in the Legal Comments that are intended to better support the Iterative Process for compliance authorized by the State Water Resources Control Board in Order No.

2001-15, through the WQIP process. The Copermittees also note that the State Board considered the problems with the RWL language at a recent workshop, which may eventually result in modifications which should, if applicable, be reflected in the Draft Permit. Other requested changes to the Findings are set forth in the Redline.

3.2 Provision A, Prohibitions and Limitations

As noted above, the requirements set forth in Provision A are of great concern to the Riverside County Copermittees. The Copermittees generally support an approach to compliance that utilizes WIQPs as the implementing mechanism for the 'Iterative Process' described in Provision A.4, and that by implementing that iterative process in accordance with A.4, that the Copermittee should be in compliance with Provisions A.1 and A.2. The Redline reflects edits of Provision A to clarify the linkage between the prohibitions and limitations in Provisions A.1. through A.3. and Provision A.4 – which is described as the method for complying with the prohibitions and limitations. It must be noted, however, that the Riverside County Copermittees do not agree with the approach suggested, that any WQIP-based compliance approach be necessarily accompanied by a Reasonable Assurance Analysis. Such analyses can be extremely complex, expensive and time-intensive to develop, and similar analyses are commonly developed within TMDL models; taking a number of years to develop and refine. Given that the Santa Margarita Watershed has no adopted TMDLs; thus, comprehensive pollutant transport and BMP models are not available for the suite of constituents that might be considered for prioritization within a WQIP for the Santa Margarita Watershed. In the context of a TMDL, such models would be developed by the combined resources of the San Diego Water Board and a range of stakeholders and dischargers. Undertaking such an exercise solely with the public resources of the 275,000 residents of the SMR is beyond the financial ability of the Copermittees and would shift the responsibility for development of TMDLs from the San Diego Water Board to the Copermittees. Comments on Provision A can be found below, in the Redline and in the Legal Comments.

3.2.1 Overview of Key Issues

As noted above, an overriding issue for the Riverside County Copermittees is having a permit that, while being appropriately proactive and aggressive at addressing the prioritized water quality conditions with the Receiving Waters, is one that all Copermittees can remain in compliance with while implementing those requirements. As presently drafted (and as made clear by statements in the Fact Sheet), Provision A imposes immediate potential liability on every Copermittee if monitoring in the Receiving Waters reflects exceedances of water quality standards that may have been caused or contributed to by MS4 discharges. San Diego Water Board staff has repeatedly indicated in workshop presentations that they expect that Copermittees will not be able to comply with the Receiving Water Limitations and Discharge Prohibitions for some time. Staff has separately indicated that they are interested in having the Copermittees undertake bold initiatives in trying to address urban runoff pollution, and that the Copermittees have actually been encouraged to "fail early and fail often" as this would reflect such progress in refining these initiatives. The iterative, flexible and priority-setting approach reflected in the WQIP is intended to allow the Copermittees to focus on the most important problems in their watershed. The entire approach is endangered, however, by RWL provisions which would allow either the San Diego Water Board or a citizen plaintiff to sue the Copermittees for any individual exceedance of the

RWLs. Under the current version of Provision A, the unmitigated risk of such actions leads not to bold initiatives but rather to attempts to minimize liability.

As set forth in the Legal Comments, this approach is not mandated by the CWA, State Board orders or the opinion of the Ninth Circuit Court of Appeals in *Natural Resources Defense Council v. County of Los Angeles,* 673 F.3d 880 (9th Cir. 2011), *reversed,* 568 U.S. __ (January 8, 2013). As importantly, the threat of immediate potential noncompliance actually interferes with the ability of the Copermittees, including the Riverside County Copermittees, to comply with the Draft Permit. Instead of being able to focus on pollutants of highest concern in the watershed, as called for in the WQIP, the Copermittees will be forced to try to address every pollutant monitored, since the exceedance of any water quality standard leads to immediate potential liability. Moreover, because citizen plaintiffs are entitled to injunctive relief under Section 505(a) of the CWA, a federal judge could order the Copermittees to undertake steps completely independent of the WQIP or other compliance provisions in the Draft Permit.

The Riverside County Copermittees do not object to compliance provisions that will provide a means to achieve real improvement in water quality. The Copermittees are willing to undertake these Provisions, because the success or failure is in their control. Compliance with the requirements of Provision A, however, is beyond the control of the Copermittees. Based on the statements made during the workshop process, the Riverside County Copermittees believe that the San Diego Water Board is serious about working with the Copermittees on a permit that provides flexibility and problem solving approaches. To ensure that this flexibility is not lost, the Draft Permit must tie in compliance with Provisions A.1 through A.3 to a process set forth in Provision A.4. This approach is shown in the Redline and is discussed further below.

3.2.2 Comments in support of specific changes

Provision A, Introduction

The introduction notes that pollutants "in stormwater discharges" from the MS4 must be controlled to the MEP. As discussed above, the CWA does not differentiate between stormwater and non-stormwater discharges from the MS4; both must be controlled to the MEP standard. The Riverside County Copermittees have requested revised language in the Redline. Additionally, the linkage between compliance with Discharge Prohibitions (Provision A.1), Receiving Water Limitations (Provision A.2) and Effluent Limitations (Provision A.3) should be noted as being defined by Provision A.4. This change is reflected in the Redline.

A.1.a

First, language must be added providing that compliance may be addressed through the process set forth in Provision A.4. This language is provided in the Redline. Second, the Provision prohibiting discharges which are "threatening to cause" a condition of pollution, etc., is unenforceable, because it prohibits an action that, with respect to MS4 operators, is beyond their control. Moreover, there is no authority for such provisions in the Porter-Cologne Act. The Riverside County Copermittees request

deletion of this phrase, as shown in the Redline. Additionally, as set forth in the Legal Comments, the Provision improperly expands the Discharge Prohibitions to Waters of the State.

A.1.b

40 CFR § 122.26(d)(2)(iv)(B)(1) clarifies that the requirement for an MS4 Copermittee to "effectively prohibit" the discharge of Non-stormwater/illegal discharges into its MS4s is to be accomplished through "a program, including inspections, to implement and enforce an ordinance, orders or similar means…". The language of this Provision should reflect federal law in this respect. The Redline reflects this change.

A.1.c

First, this Provision requires the Copermittees to comply with the Basin Plan prohibitions listed in Attachment A. This list is over-inclusive, as it contains requirements that are not applicable to some or all of the Copermittees' MS4 discharges, or to the Riverside County Copermittees in particular. The Riverside County Copermittees request that this Provision be amended to read as follows: "Discharges from MS4s are subject to all applicable waste Discharge Prohibitions in the Basin Plan." This change is noted in the Redline. Second, language must be added providing that compliance with this restriction can be obtained through the process set forth in Provision A.4. This language is provided in the Redline.

A.2.a

First, this Provision and Provisions A.1. and A.3 should be linked to the iterative process described in A.4. Please see the Redline.

Second, not all plans, policies, etc. set forth in Provision A.2.a.(1)-(4) may qualify as "water quality standards" or be applicable to all the MS4 Copermittees. These subsections should be deleted, and replaced with a reference to "Water Quality Standards," which is a defined term in the Draft Permit (This change is reflected in the Redline). Otherwise, the MS4 Permit would become over inclusive with respect to what is considered a water quality standard. Such standards must be established in accordance with federal and state law. If this process has not been followed for a particular requirement, it is not a "water quality standard."

A.3.a

As discussed above, this Provision erroneously states that pollutants "in stormwater discharges" from MS4s must be reduced to the MEP. Please see the Redline.

A.3.b

This Provision should also provide that compliance with a TMDL constitutes compliance with Provisions A.1 and A.2, for those pollutants/waterbodies subject to the TMDL.

A.4.a

The Riverside County Copermittees support an approach whereby compliance with Provisions A.1 through A.3 are achieved through a truly iterative approach, one which reflects the intent of the

precedential State Water Board Order Nos. 99-05 and 2001-015. As set forth in the Redline, the Riverside County Copermittees believe that they and the other Copermittees under the Draft Permit should be considered in compliance with Provisions A.1, A.2 and A.3, as applicable, through development of the WQIP, unless the San Diego Water Board denies approval of a WQIP or amendment thereof. This ensures that the Iterative Process which is the focus of the WQIP, is utilized to provide a means to be in compliance for the Copermittees.

A.4.c

This Provision should be deleted, as is reflected in the Redline. Again, this Provision defeats the purpose of an iterative approach to compliance with the Provisions A.1 through A.3, because it allows the San Diego Water Board to enforce any provision of the Draft Permit, including those provisions at any time. The San Diego Water Board obviously retains full ability to enforce the provisions of the Draft Permit, including with respect to the failure of the Copermittees to carry out required provisions. To short circuit the WQIP/JRMP process, however, is to defeat the entire intent of the Draft Permit.

3.3 Provision B, Water Quality Improvement Plans

3.3.1 Overview of Key Issues

- The goals and requirements of the WQIP need to be aligned with the requirements of the CWA that were established specifically for MS4 permits, and not impose the restoration of Receiving Waters entirely upon MS4 Copermittees.
- The WQIP should focus on addressing sources of pollutants within the jurisdiction of the respective Copermittees.
- The BMP strategies identified in the WQIP should fully inform the selection and design of programs identified in the JRMP. Some minor edits were proposed in Provision B, with additional edits as warranted in Provisions D and E.

3.3.2 Comments in support of specific changes

Introductory paragraph

The introductory language implies that the WQIP should be designed to unilaterally protect, preserve, enhance, and restore water quality and Beneficial Uses in waters of the state. As noted in Section 2.3 above, MS4 Copermittees are responsible only for discharges from their MS4s, not the unilateral protection of Beneficial Uses within their watersheds.

Redline edits were provided to:

- Tie the goals of the WQIP to the requirements of the CWA applicable to MS4 Permits.
- Replace 'waters of the state' with 'Receiving Waters' to be consistent with federal law.
- Clarify the linkage between Provision A and Provision B.

Additionally, Redline edits were provided to clarify that the strategies identified in the WQIP are intended to guide the specific actions that will be implemented by the Copermittees pursuant to Provision E.

B.1

The Riverside Copermittees support the redlines of the San Diego County Copermittees with regard to setting forth that the WQIP for the Santa Margarita Watershed Management Area (WMA) would commence upon enrollment of the Riverside County Copermittees into the Order.

B.2.e.

Two changes have been proposed, as shown in the Redline:

- The introductory paragraph includes language that clarifies that the Numeric Goals are not enforceable compliance standards, effluent limitations, or Receiving Water limitations. This clarification is consistent with San Diego Water Board staffs' verbally stated intent.
- Provision B.2.e.(1) as written requires that the final Numeric Goals be "capable of demonstrating the achievement of the restoration and/or protection of water quality standards in Receiving Waters". As discussed in Provision 2.3 above, meeting WQS in Receiving Waters is a goal of the overall NPDES regulatory programs under the CWA and not as a requirement to be accomplished alone by MS4 Copermittees. Redline edits have been provided to clarify that such goals are only required to be for MS4 discharges.

B.3.

In the Redline, edits were made to the introductory paragraph to ensure that the requirements are consistent with federal law. The CWA requires the 'effective prohibition' of non-stormwater discharges, not 'preventing' or 'eliminating' them.

Edits were also made to Provision B.3.a. to link the strategies more clearly to the Numeric Goals developed pursuant to Provision B.2.e, as well as to link them to the JRMP programs in Provision E.

B.5

In the Redline, edits were made to the introductory paragraph to clarify that the WQIP (and by extension the JRMP and Monitoring programs) are intended to meet the requirements of Provisions A.1, A.2, and A.3. The Tentative Order particularly excluded Provision A.1.b. (dealing with non-stormwater discharges). However, as discussed in the attached Legal Comments, the CWA requires that illegal discharges must be addressed via a program (as included in Provision E.2), and it is appropriate that the program be guided by the priorities and strategies included in the WQIP.

Other edits were made to clearly link Provision B.5 to the applicable requirements of Provision F.

3.4 Provision C, Action Levels

3.4.1 Overview of Key Issues

- The Action Levels (non-stormwater, and stormwater) applicable within each watershed should only be those that are associated with the priority water quality conditions in that watershed, or that are 303(d) listed for that watershed. For example, if Zinc is not a priority pollutant for a watershed, and is not 303(d) listed, there should not be a Zinc action level. This change is needed because Provision D requires analysis for all 'action level' parameters. Analysis for pollutants that are not a priority for a watershed is a waste of Copermittee resources.
- The Copermittees should be able to establish alternative action levels that are appropriate to the WMA within their WQIP. Such alternative action levels would be subject to Executive Officer approval as part of the WQIP approval process.
- Footnote 8 and 10 need to clarify that the NALs and SALs are not enforceable limitations.
- Various references to 'waters of the state' need to be changed to Receiving Waters for consistency with the Draft Order and the CWA.

Please see the Redline for further detailed comments and language changes.

3.5 Provision D, Monitoring and Assessment

The Riverside County Copermittees appreciate the changes in the monitoring program reflected in the Draft Permit, as compared to the Administrative Draft. However, elements of the revised requirements are still infeasible for the Riverside County Copermittees. The comments below identify modifications of areas of the monitoring requirement's which can significantly improve the Copermittees' ability to implement and comply with the requirements, while still maintaining appropriate jurisdictional accountability and assessment requirements to guide the implementation of the WQIPs and JRMP programs. The Redline provides further detailed comments and language changes.

3.5.1 Overview of Key Issues

- Dry Weather MS4 Outfall Monitoring
    - The level of effort dedicated to monitoring and addressing outfalls with non-stormwater discharges should be commensurate with the potential impact that discharge has on a Receiving Water. If a discharge, whether persistent or transient, has no or little potential for impacting a flowing Receiving Water, (e.g. due to infiltration, evaporation, or treatment of the flows), the outfall should be de-emphasized relative to other outfalls that have discharges that have connectivity to a flowing Receiving Water.
    - Outfall Dry Weather Field Screening – As currently drafted, the number of required visual inspections of outfalls during dry weather required per Provision D.2.a.(2)(a) and Provision D.2.b.(1) is both excessive and disproportionate. This will particularly impact smaller jurisdictions, which may be required to do more visual inspections of MS4 outfalls than would larger jurisdictions with more outfalls and more resources.
    - Similarly, as written, the Persistent Flow Outfall Monitoring requirements of Provision D.2.b.(2)(b) are excessive and also will disproportionately impact smaller jurisdictions.

Jurisdictions with several hundred outfalls will likely have significantly more resources to perform the required monitoring than smaller jurisdictions with fewer outfalls, yet both are required to implement the same level of persistent flow monitoring.

- Assessment Requirements
  - The assessment requirements require modeled extrapolation of monitored outfall data to non-monitored outfalls for the purposes of calculating loads from each outfall in each jurisdiction. Such extrapolations though modeling or other calculations will not accurately reflect actual jurisdictional loads, and have no benefit that directly analyzing the monitored data cannot more accurately provide.

3.5.2 Other Global Issues

- As currently drafted, MS4s operated by a flood control district within a city or county would be effectively double-counted for identification of outfalls in each jurisdiction and for performance of the load calculations from each jurisdiction. Additionally, Flood Control Districts have no land use or enforcement authorities outside of the MS4 and rely on the local Copermittee to address pollutant sources and discharges to their MS4. Redline edits have been included to clarify the relationship between districts and the municipal jurisdictions they serve for the purposes of outfall monitoring and the assessment requirements.
- Timelines for monitoring and assessments were clarified throughout and linked to specific reporting requirements of Provision F in the Redline.

3.5.3 Comments in support of specific changes

D.1.a.(3) and D.1.e.

The Redline clarifies that the Receiving Water monitoring described in these sections must be conducted as applicable to the WMA and the Copermittees' MS4 discharges, because some of the monitoring requirements only apply to MS4 discharges to certain waterbodies. Not all Copermittees within a WMA will have discharges to that waterbody.

D.1.b.

The Redline proposes language to allow for alternative long-term monitoring stations to be identified. Using the SMR as an example, the Copermittees might wish to utilize a location other than the existing stations due to the influence of groundwater during dry weather and/or the general lack of MS4 contributions in dry weather to those locations.

Table D-1 and D-6

The Redline proposes an addition to the list of field observations, an assessment for flow connectivity of any MS4 discharges to the sampled Receiving Water. It is important to know whether the sampled Receiving Water included a contribution of flows from MS4 discharges, or whether the data reflect conditions in the absence of an apparent MS4 discharge contribution.

D.2.a.(2)

The Redline clarifies that the identification of annual outfall monitoring requirements is based on municipal Copermittee boundaries, inclusive of Flood Control District MS4 outfalls within their jurisdiction.

The Redline clarifies that the field screening requirements apply to those outfalls in the Copermittee's inventory that are 'accessible'. If an outfall is inaccessible for safety reasons or due to habitat restrictions, it would not need to be field screened.

The Redline simplifies the 'tiers' in Provision D.2.a.(2)(a) by removing the lower tier (i), and expanding the second tier (ii) to cover all Copermittees with 500 or less outfalls. This resolves the disproportionality that occurs for Copermittees with a number of outfalls near the current 125 outfall threshold. For example, as currently drafted, a city with 150 outfalls would be required to do 150 visual inspections per year, but a smaller city with 120 outfalls would be required to do 192 visual inspections per year. The Redline also maintains the 80% requirement from the first tier to help smaller Copermittees manage their workload for meeting the field screening requirements while also conducting the additional source identifications that are required under the Draft Permit.

The Redline includes edits to Footnote 19 to clarify that persistent flow should effectively be a discharge that is hydraulically connected to a flowing Receiving Water. Any other discharges that are not affecting a flowing Receiving Water (such as pooled or ponded water) would be addressed as a Transient Discharge, with source IDs any time an obvious illegal discharge (i.e. color or odor) is identified.

D.2.a.(3)

The Redline incorporates edits proposed by the San Diego County Copermittees to require 10% of the samples in each WMA to be from a first storm event. As described in the comments of the San Diego County Copermittees, this will help avoid overly skewing of the data to 'first flush' data, while still incorporating such data into the data and analyses.

D.2.b.(1)

The Redline removes the requirement that the number of visual inspections performed be equivalent to the number of inspections required under Provision D.2.a.(2)(a).

As areas within a jurisdiction are confirmed not to have non-stormwater discharges, inspections of other outfalls would have to be perpetually (and unnecessarily) increased to maintain compliance with this requirement. For example, if a Copermittee had 150 outfalls, but after the transitional period it confirmed that 100 of those outfalls had no evidence of non-stormwater discharges to flowing Receiving Waters, it would have to visit the remaining 50 outfalls for up to three times a year to meet the requirement in this Provision. As the Copermittee got closer to eliminating non-stormwater flows at more outfalls, inspections at the remaining outfalls would quickly become excessive and unreasonable. Removing this requirement will better incentivize the elimination of non-stormwater

flows, as a Copermittee can look forward to reducing its workload in areas confirmed to not have non-stormwater flows.

D.2.b.(2)(b)

While the Riverside County Copermittees support the San Diego County Copermittees' proposal to reduce the number of required outfalls from 10 to 5 persistently flowing outfalls per WMA, the Riverside County Copermittees believe that applying the same minimum bar to all Copermittees is inappropriate and disproportionately affects smaller Copermittees that have commensurately less staff and resources.

The Riverside County Copermittees propose requiring monitoring of the top 10% of the prioritized persistent flow outfalls, with a lower and upper limit of 1 and 5 respectively, as shown in the redlines. With this change, the level of effort required of any individual Copermittee would scale consistent with the number of persistent flow outfalls within each Copermittees' jurisdiction.

Additionally, the Riverside County Copermittees request changing the requirement of Provision D.2.b.(2)(b)(ii) to require annual monitoring rather than semi-annual monitoring. With this change, a Copermittee could focus more of their annual budget on conduction Source ID efforts – which can result in eliminating problematic non-stormwater flows, rather than on a second monitoring event. Copermittees would still have the option to conduct a second monitoring event if they have more resources available and want to remove the outfall from their monitoring list sooner in accordance with Sub-Provisions [a] through [d].

D.2.b.(2)(e)

The Riverside County Copermittees support the San Diego County Copermittees' comments regarding allowing for a tailored list of constituents to be developed for each WMA. The Redline incorporates those edits.

D.3.

The Riverside County Copermittees support the changes recommended by the San Diego County Copermittees to this section, and these changes are reflected in the Redline.

D.4.a.(2)

This Provision as drafted would require the MS4 Copermittees to make comprehensive evaluations of Beneficial Uses that are beyond their expertise or the scope of an MS4 permit. Such evaluations and determinations would require advanced studies and cannot be answered with the monitoring data collected through this permit. This Provision should either be deleted or, alternatively the Riverside County Copermittees request that the assessments be focused on determining the status and progress toward addressing any Numeric Goals established for those Receiving Waters in the WQIP. Please see the Redline.

D.4.b.(1)

The Redline clarifies that outfall assessments are to be done for the area covered by each Municipal Copermittee (consistent with the proposed definition), and that the data to be used by each Municipal Copermittee would include the data collected from any Flood Control District Copermittee operated MS4s within its jurisdiction. This ensures that jurisdictional data is not double reported for Flood Control District MS4s within a city or county.

For Sub-Provision D.4.b.(1)(c)(iv) three key changes are requested in the Redline:

1) Annual volumes and pollutant loads should only be calculated from the monitored outfalls with persistent discharge to a flowing Receiving Water. This is directly applicable to the purpose of the Draft Permit and an important change, because volume and pollutant data extrapolated to non-monitored MS4 outfalls would be inaccurate and potentially misused if taken out of context. It is understood that San Diego Water Board staff want to ensure that jurisdictional accountability is maintained. However, since MS4 outfall monitoring will be conducted within each jurisdiction, inter-jurisdiction comparisons and accountability can be accomplished using the monitoring data directly without such extrapolations.
2) Added language to require a Copermittee to include in its jurisdictional load calculations any discharge that was demonstrated to have entered another Copermittees' MS4 before being discharged into the flowing Receiving Waters. This is important to ensure that each Copermittee maintains accountability for pollutants discharged to flowing Receiving Waters from within its jurisdiction.
3) The Redline proposes that the calculations of pollutant loads be only for the priority water quality constituents identified in the WQIP.

D.4.b.(2)(b)

Two key changes are recommended in the Redline:

1) Annual volumes and pollutant loads should only be calculated from the monitored outfalls for the monitored storm events. This is an important change because volume and pollutant data extrapolated to non-monitored events would be inaccurate and potentially misused if taken out of context. It is understood that San Diego Water Board staff want to ensure that jurisdictional accountability is maintained, so the Redline proposes that data from the monitored outfalls be extrapolated to identify loads for each jurisdiction during each monitored event. With this information, inter-jurisdiction comparisons and the desired 'accountability' can be accomplished using the monitoring data directly without such extrapolations to non-monitored events.
2) The Redline requests that calculations of pollutant loads be performed only for the priority water quality constituents identified in the WQIP.

D.4.b.(2)(c)

The Redline edits are consistent with those proposed by the San Diego County Copermittees, with minor modifications for clarity.

D.4.d.(2)(c)

It would be difficult to proactively determine the pollutant load reductions that *would* be necessary to demonstrate that discharges *are not* causing or contributing to exceedances of Receiving Water Limitations. Instead it would make more sense to calculate the necessary pollutant load reductions where the discharge has been demonstrated to be causing or contributing to such exceedances. In such circumstances, the necessary parameters would be known to calculate the needed load reduction. These changes are set forth in the Redline.

3.6 Provision E.1, Legal Authority

3.6.1 Overview of Key Issues

The Riverside County Copermittees note that Provision E.1, relating to the establishment of adequately legal authority, exceeds the requirements of federal CWA regulations in several respects. The federal regulations at 40 CFR 122.26(d)(2)(i)(A)-(F), provide explicit guidance for the Copermittees in developing the necessary legal authority to control MS4 discharges within its jurisdiction. However, several of the subsections of Provision E.1 go beyond these federal requirements, with respect to areas not within the responsibility of MS4 dischargers, such as negotiating with non-Copermittee entities. The Riverside County Copermittees have provided requested changes in the Redline, which are explained briefly below.

3.6.2 Comments in support of specific changes

E.1.a(1)

Changes in the Redline to accurately reflect the language of 40 CFR 122.26(d)(2)(i)(B).

E.1.a(2)

Changes in the Redline to accurately reflect the language of 40 CFR 122.26(d)(2)(i)(A). In addition, the Provision as written improperly requires the Copermittees to control the quality of runoff from sites covered by the state general permits for industrial activity and construction. These general permits are enforced by the State Board and the regional boards, and it is a state responsibility which cannot be handed off to the Municipal Copermittees.

E.1.a(3)

Changes in the Redline to accurately reflect the language of 40 CFR 122.26(d)(2)(i)(C).

E.1.a(5)

The Redline requests deletion of this Provision, which is not a requirement for municipal stormwater dischargers set forth in the CWA regulations. The Provision also improperly requests the Municipal Copermittees to attempt to negotiate with third parties the contribution of pollutants to the Copermittees' MS4. The Copermittees have no jurisdiction over such parties. The San Diego Water

Board has such jurisdiction, and should take responsibility for addressing non-MS4 sources of pollutants that may ultimately enter the MS4.

E.1.a(6)

Changes in the Redline to reflect accurately the language of 40 CFR 122.26(d)(2)(i)(E).

E.1.a(7)

The Redline requests deletion of this Provision, which is not a requirement for municipal stormwater dischargers set forth in the CWA regulations.

E.1.a(8)

The Redline requests deletion of this Provision, which is not a requirement for municipal stormwater dischargers set forth in the CWA regulations.

E.1.a(9)

The Redline requests deletion of this Provision, which is not a requirement for municipal stormwater dischargers set forth in the CWA regulations.

E.1.a(10)

The Redline requests both correction of the language in this Provision to comport with the federal regulations in 40 CFR 122.26(d)(2)(i)(F) and deletion of the second clause of this Provision, which is not found in 40 CFR 122.26(d)(2)(i)(F). Moreover, the requirement to inspect and monitor in the first clause of this Provision covers the issues set forth in the second clause. It is therefore unnecessary.

3.7 Provision E.2, IDDE

3.7.1 Overview of Key Issues

- The Draft Permit requires the Copermittees to address all non-stormwater discharges from the MS4 as illegal discharges, and then describes certain sources that need not be prohibited. This is effectively a 'guilty until proven innocent' provision, where a Copermittee will be required to expend potentially significant resources conducting source identification efforts any time non-stormwater is observed discharging from the MS4. In addition to the issues discussed in the Legal Comments, the Provision raises two practical and logistical problems:
    - This requirement is entirely independent of the determination that there are in fact any significant pollutants in such a discharge. A Copermittee could be spending substantial sums tracking (and then potentially enforcing upon) the source of a discharge that is not negatively impacting Receiving Waters. This not only is a waste of public resources, but would undermine the credibility of stormwater programs.
    - The San Diego Water Board and the State Water Board do not treat non-stormwater flows in the same manner across all of their regulatory mechanisms. For example, Order

> No. R9-2008-0002 allows non-stormwater discharges to occur, POTWs are issued permits for their discharges and agricultural operators can discharge irrigation water. The Copermittees should not be forced to conduct an expensive source investigation, only to find that the discharge complies with a permit or a waiver granted by the Water Board. The Copermittee would have no ability to address such a discharge as an 'illegal discharge', and further would have no ability to recuperate their costs for the source identification.

The best way to address these issues, is to require the Copermittee to have and enforce an effective prohibition of illegal discharges of *pollutants* (through statutes, ordinances, permits, contracts, orders or similar means), and then allow the Copermittee full discretion to determine which non-stormwater discharges have the potential to negatively impact Receiving Waters, consistent with the WQIP priorities – and address those as illegal discharges.

- Several categories of non-stormwater discharge that were previously conditionally exempt consistent with the CWA, are required by the Draft Permit to be treated as illegal discharges, unless they have coverage under another order issued by the San Diego Water Board. In addition to the problems identified above for conducting enforcement in the absence of a pollutant discharge, the San Diego Water Board, not the Copermittees, is responsible for evaluating coverage, need for coverage, and compliance with other orders issued by the Water Board. The Copermittees have neither authority nor jurisdiction. Please see the Redline.
- Several categories of non-stormwater discharge that were previously conditionally exempt consistent with the CWA, are required by the draft permit to be 'controlled' or otherwise prohibited by the Copermittees. The Fact Sheet further describes that such controls are warranted because they could potentially contain pollutants. However, the CWA only requires controls where the discharges are determined to be a significant source of pollutants. Please see Legal Comments for a further discussion of this issue as well as the Redline.
- The Draft Permit eliminates the conditional exemptions for Landscape Irrigation, Irrigation Water, and Lawn Watering (collectively 'irrigation runoff'). The San Diego Water Board has provided no data demonstrating that these discharge categories have contributed a significant pollutant load to Receiving Waters within Riverside County. Information discussed in the Fact Ssheet focuses on data from other counties. The only data from Riverside County is public educational material referring to irrigation runoff; this material, however, was adapted from public education material from other counties. That public educational material was intended to help prevent such discharges from becoming a significant source of impact on the Receiving Waters, and did not constitute a determination that such discharges are in fact, actually a significant source that needs to be subject to a prohibition. See the discussion in the Legal Comments as well as the Redline.
- The Draft Permit, in Provision E.2.a.(7) requires efforts to minimize or eliminate all non-stormwater flows, including those that are natural, conditionally exempt, or otherwise permitted by the San Diego Water Board, regardless of whether or not such discharges are not contributing pollutants to the MS4. Such a requirement conflicts with the prior Provisions E.2.a.(1) through

(5), which state conditions where such discharges need not be prohibited. The requirement should therefore be removed, as set forth in the Redline.

3.7.2 Comments in support of specific changes

E.2.a.(1) and (3)

The Riverside County Copermittees request that this Provision be deleted (as shown in the Redline) and the categories of non-stormwater discharges be re-incorporated into Provision E.2.a.(3). The apparent premise of Provision E.2.a(1) as drafted is that since the San Diego Water Board requires those discharges to have coverage under a separate order, they are illegal if they lack such coverage. The MS4 Copermittees, however, are not responsible for enforcing discharge coverage under separate San Diego Water Board orders; that is the responsibility of the San Diego Water Board itself. Requiring the Copermittees to enforce such entities for their lack of coverage under a separate San Diego Order shifts that responsibility from the Board to Copermittees. This is not authorized by the CWA or the Porter-Cologne Water Quality Act. The Copermittees are, under the CWA, only required to address such discharges as illegal discharges if the discharge is found to be contributing a significant pollutant load to the MS4. By moving those categories to Provision E.2.a.(3), as shown in the Redline, the Copermittees will still be required to treat such discharges as illegal discharges if and when they are found to be contributing significant pollutants to the MS4. This proposed approach is consistent with other MS4 permits in the state, including prior San Diego Water Board orders, and is further consistent with the approach taken for the WQIP, which is intended to allow the Copermittees to focus resources on addressing the specific impacts that MS4 discharges are having on Receiving Water quality.

E.2.a.(2)

This Provision requires the Copermittees to treat water line breaks as illegal discharges, which in turn requires the Copermittee to conduct enforcement measures. Water main breaks are accidental occurrences, or may be the result of acts of nature. It is no more appropriate to treat accidents as illegal and subject to enforcement than it would be for a city to declare vehicular accidents as illegal, and conduct enforcement against those involved. This language needs to be removed as shown in the Redline. Additionally, as discussed in the Legal Comments, a recent case from the federal district court in Virginia suggests that the regulation of mere flow may exceed the authority of the CWA.

E.2.a.(4)

The Redline clarifies that if the 'statues, ordinances, permits, contracts, orders or similar means' are enacted/adopted by a Copermittee, the categories of non-stormwater discharges listed do not need to be treated as illegal discharges. Otherwise, the language could be read to imply that, for example, if it was infeasible for a particular resident to direct wash water to landscaped areas, that the Copermittee would be required to treat that residents' discharge as illegal and enforce upon them.

E.2.a.(5)

Contrary to the provisions of the CWA regulations, prior MS4 permits issued by the San Diego Water Board and other permits in the state, the Draft Permit requires implementation of BMPs, where

feasible, during emergency firefighting activities. During such emergencies, all focus of public resources must appropriately be dedicated to protecting life and property. Any diversions from that mission would only serve to diminish and potentially compromise that mission. The Redline proposes language consistent with that adopted by the San Diego Water Board in 2010 for the Riverside County MS4 Permit (Order R9-2010-0016).

E.2.a.(7)

Provisions E.2.a.(1) through E.2.a.(6) describe circumstances where non-stormwater discharges need not be prohibited. This Provision then requires the Copermittees to minimize such 'conditionally allowed' flows anyway. This requirement exceeds the scope of the CWA and its implementing regulations and makes no sense. The Redline requests deletion of these Provisions.

E.2.b.(1)(d)

This Provision requires the MS4 Copermittees to map all known private outfalls to Receiving Waters. Such a requirement is beyond the scope of an MS4 permit and should be removed, as shown in the Redline. The Draft Permit does not require a Copermittee to address private outfalls to Receiving Waters; this is the responsibility of the San Diego Water Board, which governs all waste dischargers under the authority of the CWA or the Porter-Cologne Act.

E.2.b.(4)

This Provision requires the Copermittees, in conjunction with a spill, to 'prevent contamination of surface water, groundwater, and soil.'This requirement is clearly beyond the scope of an MS4 permit issued under the CWA (which regulates only discharges of water containing pollutants *from* the MS4 to Receiving Waters) and must be removed, as shown in the Redline. The Draft Permit could more appropriately require the Copermittees to 'coordinate, to the extent possible, with spill response teams to prevent entry of spills into the MS4.'

E.2.d.(2)(e)

The Redline requests edits to clarify that the intent of this Provision is to document and attempt to quantify any obvious sources of non-stormwater illegal discharges in response to the outfall monitoring, and that it is not necessary to conduct a full source identification any time there is evidence of water near an outfall.

New Provisions E.2.d.(3)(e)-(f)

The Redline adds two new provisions to this section to address a gap in potential outcomes from a source identification effort. These Provisions address scenarios where a Copermittee identifies A) the illegal discharge is coming from another upstream Copermittees' MS4, or B) that the discharge has been authorized by the San Diego Water Board, either through an order or waiver of WDRs. In the first scenario, the responsibility to continue the source identification, and conduct enforcement, would be transferred to the upstream Copermittee. In the second scenario, the responsibility for follow-up would fall on the San Diego Water Board, after receiving relevant information from the Copermittee. This Provision also provides for reimbursement to the Copermittee for the cost of the source identification, since the San Diego Water Board required the Copermittee to conduct the investigation,

while not commensurately prohibiting all non-storm water discharges from all other sources regulated by the Water Boards.

3.8 Provision E.3, Development Planning

3.8.1 Overview of Key Issues

- Priority Development Projects - The Tentative Order identifies categories of projects that are to be defined as 'Priority Development Projects' (PDPs), which in turn will be required to comply with specific water quality and Hydromodification mitigation and quantitative requirements. The criteria for PDPs is quite broad and would include the majority of development projects, from small convenience stores and residences, to mega malls and specific plan developments. The Fact Sheet describes that while some smaller project types may not have significant pollutant loads, they may have a hydrologic impact upon Receiving Waters. However, it is important to recognize that pursuant to Provision E.3.a., All projects are required to implement a variety of LID principles such as disconnecting impervious surfaces, draining impervious surfaces to landscaped areas, and minimization of soil compaction in landscaped areas. Since such LID principles will be implemented wherever feasible consistent with the MEP standard, these smaller development projects are unlikely to create a pollutant or hydrologic impact. Additionally, the Fact Sheet advocates incentivizing LID design concepts and green infrastructure and building principles. Accordingly, the Redline requests changes to Provision E.3.b.(3) as described in Provision 3.8.2 below. The Legal Comments further note the potential impact of the Virginia case (*Virginia Dept. of Transp. v. U.S. Environmental Protection* Agency) holding that the CWA does not regulate stormwater as a pollutant.
- Design Capture Volume – There are two problems with how the Draft Permit defines the Design Capture Volume:
    - The Draft Permit changes the 'design capture volume' from previous permits by eliminating the term 'runoff'. Prior permits described that the design capture volume is the volume of stormwater runoff from the 24-hour 85th percentile storm event. This permit changes that to be the volume of stormwater produced from a 24-hour 85th percentile storm event. The elimination of the term 'runoff' means that BMPs would need to be sized potentially much larger than previously. For example, if the 85th percentile storm is 1" and a BMP is designed to treat 1 acre of residential land with a coefficient of runoff of 0.6, then under the current permits the BMP must be sized to hold 2,178 cubic feet of water. However, under the language of the Draft Permit, the BMP treating the same area would be required to hold 3,630 cubic feet of water, a 70% increase in BMP size. Accordingly, the Redline restores the term 'runoff'.
    - Additionally, the Draft Permit defines the Design Capture Volume alternatively as: *"the volume of storm water that would be retained onsite if the site was fully undeveloped and naturally vegetated, as determined using continuous simulation modeling techniques based on site-specific soil conditions and typical native vegetative cover."* In addition, to the problem identified above regarding the volume of storm water runoff, this language does not provide a temporal standard for determining which volume to

calculate from a continuous simulation model. Additionally, such models are not commonly used among general practitioners in the civil engineering community. The Redlines propose an alternative and simpler approach for this second definition: "The volume of stormwater runoff produced from a 24-hour 85th percentile storm event, that would be retained onsite in the pre-project condition." This definition is advantageous for several reasons: 1) it is simple for any civil engineer to understand, calculate, and comply with and is based on the same storm and hydrologic calculations as the first option, 2) it respects natural hydrology for the site, which may have had runoff in the pre-project condition, and as such, is more compatible with the intent of LID to mimic natural hydrology, and 3) as a result it is less likely to result in potential degradation of Beneficial Uses downstream, from reductions in flows beyond the pre-project condition.

- Pre-Project vs Pre-Development – Both the Storm Water Pollutant Control BMP requirements and the Hydromodification Management BMP requirements in the Draft Permit specify a 'pre-development' condition as the mitigation standard for all PDPs. In addition to the legal problems with such a standard as set forth in the Legal Comments, there are practical problems with the standard.
    - The presumption made in the discussions in the Fact Sheet are that all Receiving Waters can, and will, be restored to a fully natural condition - effectively to a natural floodplain. This presumption does not address reality, which is that development has occurred in those floodplains over many generations. The San Diego Water Board obviously lacks the authority to force homeowners and businesses to vacate such floodplains to effectuate restored natural conditions. Such an action would represent an unconstitutional taking. Moreover, the Legislature, in the Flood Control Acts covering all three counties proposed to be covered by the Draft Permit, has specifically authorized Flood Control Districts to construct flood control structures required to protect the lives and properties of the citizens.
    - Mitigation to a pre-development condition also may not be necessary to protect Receiving Waters from the effects of Hydromodification. If, for example a Receiving Water with existing development tributary to it, has not experienced increased erosion due to that existing development, there is no reason to require Hydromodification mitigation to anything more than the existing condition. In the counter-example, if under the existing condition the Receiving Water has experienced increased erosion due to that existing development, then, legal issues aside, there would be technical benefit to mitigating to that pre-development condition.

  The Redline proposes alternative language that requires mitigation to a pre-development standard only where it is legal and technically justified based on the conditions of the Receiving Water.
- Alternative Compliance – The alternative compliance project options as set forth in the Draft Permit pose two key problems:

- Several statements are conflicting and thus confusing as to what the required standard is for the various alternative compliance projects. For example, throughout Provision E.3.c. it is stated that 'a PDP may be allowed to comply with Provision E.3.c.(1)(a) and/or Provision E.3.c.(2) if they …'. This language can be mis-read to imply that the project must comply both with Provisions E.3.c.(1)(a) and E.3.c.(2) *and* implement the alternative compliance project (thus negating the benefit of alternative compliance). The Redline clarifies this language.
- The Biofiltration option set forth in the Draft Permit arbitrarily, and without technical basis or justification, **doubles** the sizing standard for biofiltration BMPs from 0.75 times the design capture volume (as set forth in the 2010 MS4 Permit and the 2009 Orange County Permit) to 1.5 times the design capture volume. The existing 0.75 standard was set due to the fact that 1) the 85th percentile 24-hour storm occurs over a period of time, and 2) such BMPs have outflows and will regain some capacity during the storm event, and as such, do not need to instantaneously hold the entire 'Design Capture Volume' to have fully treated that volume. In fact, studies have shown that in addition to yielding excellent pollutant concentration reductions, LID Biofiltration BMPs are excellent at reducing the volume of runoff similar to retention BMPs. According to the ASCE International BMP database 60% or more of the long-term volume of runoff from a site can be retained within a Bioretention BMP (Bioretention BMPs are the primary 'biofiltration' BMP now allowed in Riverside County). In comparison, a Retention BMP sized to hold the runoff from the 85th percentile storm event (the Design Capture Volume) will end up retaining approximately 80% of the long-term volume of runoff. Thus, by simple proportions, a Bioretention BMP sized to 'hold' 100% of the Design Capture Volume may also be able to retain 80% of the long-term volume of runoff. $\left(\frac{0.75\times DCV}{60\%\ retained} = \frac{1.0\times DCV}{80\%\ retained}\right)$. This is being validated through Bioretention BMPs that have been constructed and are being monitored for such volume reductions at the Riverside County Flood Control District's headquarters in Riverside. Further, Biofiltration BMPs have the added benefit of providing better overall treatment of back to back storms. Where a Retention BMP would be full after the first storm, fully bypassing the second storm without treatment, a Biofiltration BMP will have restored some capacity after the first storm, providing for treatment of some or all of the second of the back to back storms. Thus, the attached redlines propose changing the sizing factor for Biofiltration BMPs to 1.0 times the Design Capture Volume. The Redline proposes changes consistent with these comments.

3.8.2 Comments in support of specific changes

Introduction

Provision E.3.g (Strategies to address the highest priority water quality conditions) was moved to the beginning to support and better integrate the development planning programs in the JRMP with the strategies developed in the WQIP.

E.3.a.(3)

The Redline changes the title of this section (and other appropriate references to this Provision) to refer to LID Principles, as identified in the CASQA LID Manual for Southern California (https://www.casqa.org/LIDDemo/LowImpactDevelopmentManual/tabid/242/Default.aspx)

E.3.b.(1)(c) (New Provision)

This Provision was added to clarify the requirements if a project that was already subjected to SSMP requirements redevelops a portion of the site.

E.3.b.(2)

The Redline edits shown for this Provision are primarily to simplify this Provision, by grouping various categories by their applicable square footage threshold and including some of the specifics in the definitions (Attachment C). Other changes (beyond reorganization) include:

- Removing the addition of 'driveways' from subsection (g) as described in Provision 3.8.1 of this letter.
- Adding a footnote for parking lots, to clarify that the trigger would not include parking lots that are not exposed to runoff, such as subterranean or covered parking lots. It is beneficial to not have parking lots exposed to runoff; excluding such parking lots from being defined as a PDP is a good way to encourage such practices.
- Hillside development projects were not included as it is not believed to be necessary anymore with the relatively low threshold (10,000 square feet) identified for other categories included in this and other recent MS4 permits.
- The definition for "Environmentally Sensitive Areas" from existing MS4 permits was restored to include the language referring to discharges that are not commingled with flows from adjacent or other upstream lands (note that the change is shown in the definitions per the re-organization suggested above).

E.3.b.(3)

- The PDP exemption for sidewalks, bicycle lanes, or trails, [E.3.b.(3)(a)] has been expanded to as shown in the Redline to include driveways and parking lots. If those projects implement criteria already described in that section, they are also unlikely to create an impact to Receiving Waters. Further, including those project types in that exemption will further incentivize developers to utilize those LID Principles.
- The exemption described in Provision E.3.b(3)(b), was modified as shown in the Redline, and as discussed in the comment letter submitted by the Riverside County Transportation Department. Please see that letter for a justification for the requested changes.
- As shown in the Redline, the exemptions for new and redeveloped single family residences [E.3.b.(3)(c) and (d)] were consolidated into a new provision [E.3.b.(3)(c)], covering all single family residential projects (both new and redeveloped). The key difference is that such projects would be considered exempt if they are both 1) not part of a larger common plan of development or planned subdivision, and 2) successfully incorporate each of the applicable source control and LID Principles identified in Provision E.2.a.(2)-(3) to the MEP.

- A new Provision-E.3.b.(3)(d), titled 'Watershed Protection Projects' was added in the Redline. The project types described therein are all projects that are undertaken to rehabilitate or prevent environmental, social, and economic damage within the watershed, including Receiving Waters. These projects, while they may in some cases require some level of impervious surfaces to be constructed, are 1) not designed for human use or activity that would generate pollutants, or are designed specifically to mitigate such pollutants; and 2) will implement each of the applicable source control and LID Principles identified in Provision E.2.a.(2)-(3) to the MEP.

E.3.c.(1)

In addition to the edits discussed in Provision 3.8.1 of this letter, the Redline removed subprovision E.3.c.(1)(c) , for two reasons:

- The requirements that must be met to when implementing an alternative compliance project are more fully described in Provision E.3.c.(3).
- The language, as drafted, appeared to require double-mitigation. It requires that: 1) conventional treatment is required to treat the entire volume not retained onsite, and 2) the pollutant load discharged must also be mitigated with an alternative compliance project. Such a scenario would be requiring double-mitigation. The Redline provides a clearer and more simple mitigation standard.

E.3.c.(2)

The Riverside County Copermittees have two concerns with this Provision:

- The first concern is the universal requirement to mitigate to the 'pre-development' standard, as discussed above in section 3.8.1 of this letter. The Copermittees in the Redline propose that this language be changed to the 'pre-project' condition. For new development projects, the 'pre-project' condition will be equivalent to the 'pre-development' condition. For redevelopment projects, the standard would be the conditions that exist onsite prior to the construction of the project. This is appropriate, because in many areas, particularly in areas of existing development that would be subject to 'redevelopment', Receiving Waters are engineered and maintained to 1) provide flood protection for the public, 2) ensure that floodwaters don't comingle with pollutants on adjacent private properties and 3) to ensure that the existing development draining to that system does not cause erosion. In cases where the Receiving Waters are not engineered and maintained, and erosion problems caused by existing development are observed, language has been added to the Redline to provide for additional standards to be developed in the WQIP, based on the WQIP priorities.
- Additionally, the Redline proposes an additional exemption from HMP requirements for projects that discharge into conveyance channels that are engineered and maintained for the build-out condition all the way from the project to a waterbody that is sufficiently resistant to Hydromodification. This language is consistent with the above discussions, and ensures the PDPs are not required to mitigate for non-existent impacts. Please see the specific language in the Redline. The engineered channel exemption can be found in other recent MS4 permits, including the recently adopted Los Angeles County MS4 Permit.

E.3.c.(3)(a) and (b)

These two Provisions were re-written in the Redline to be simpler and clearer on what BMPs, criteria, sizing standards are required for what type of project. This alternative language still meets the intent of the Draft Permit, while being easier to understand and comply with. Aside from simplifying the language, the following other changes were made in the Redline:

- The alternative compliance options must be determined to provide an equal or greater overall water quality benefit for the WMA.
- Additional options were provided for who can design the alternative compliance projects
- All alternative compliance projects are required to be consistent with the strategies in the WQIP. While the specific alternative compliance project would not be required to be identified in the WQIP, the goal of this language is to ensure that allowing the alternative compliance project would not in any way be detrimental to or contrary to the strategies in the WQIP.
- Requirements E.3.c.(3)(a)(iv) and (v) were removed entirely, as they conflict with E.3.c.(3)(a)(iii) which allowed the projects to be in the same WMA (preferably the same HSA)
- Changed the sizing factor for Biofiltration BMPs to 1.0 as discussed in section 3.8.1 of this letter, and deleted the option [d] which required triple mitigation by requiring Biofiltration + Conventional Treatment + Alternative Compliance projects.
- Added Conventional Treatment Control BMPs as an alternative compliance option, only where it has been shown to be technically infeasible to meet E.3.c.(1) and technically infeasible to implement LID Biofiltration Treatment Control BMPs.

E.3.c.(3)(c)

Redline edits in this section are primarily to simplify and consolidate the requirements. Sub-Provision [C] was removed, as it was duplicative of the mitigation standards for the alternative compliance project are specified in E.3.c.(3)(b) and E.3.c.(3)(c)(i)[a].

3.9 Provision E.4, Construction

3.9.1 Overview of Key Issues

This Riverside County Copermittees' comments and edits are set forth in the Redline.

- One key issue for the Copermittees is the edit shown in the Redline to Provision E.4.c, which clarifies that the Copermittees are responsible for *requiring* BMPs at private construction sites, and *implementing* BMPs at Copermittee construction sites.

3.9.2 Comments in support of specific changes

The Redline edits include comments supporting the requested edits.

3.10 Provision E.5., Existing Development

3.10.1 Overview of Key Issues

The Draft Permit includes requirements for advanced programs to identify opportunities and implement programs to facilitate the construction of Retrofit and Stream/Channel/Habitat Rehabilitation projects on private properties. Such requirements are clearly beyond the requirements of the CWA for a management plan to be implemented by an MS4 Copermittee. The Riverside County Copermittees request deletion of these requirements.

Alternatively, the Riverside County Copermittees have the following comments:

While these retrofitting and rehabilitation approaches can be helpful and/or needed in some circumstances, they are not required in all circumstances, nor are required to address all pollutants that may be identified in a WQIP as the highest priority water quality conditions. For example, some pollutants are best addressed with regulatory source controls at the state or federal level, such as the removal of copper from brake pads, and controls on pesticides, while other pollutants can be adequately addressed through inspections and enforcement. There are several problems with requiring Copermittee resources to be invested in such Retrofit and/or Rehabilitation strategies (collectively referred to as 'retrofit'):

- Land Ownership: The land that could potentially be identified for retrofit would likely not be owned by a Copermittee. The Copermittee therefore has no ability to force the property owner to retrofit their property. Although the Copermittee could potentially implement programs to "facilitate" implementation, such a program would still be limited by the rights of the individual property owner. Even if a Copermittee were to attempt to purchase a privately owned existing development for the purposes of retrofit (a step going far beyond any requirements in the CWA or the Porter-Cologne Act), such a process can take many years, and if the owner is unwilling to sell, the retrofit project could never be realized. In any scenario, the process to facilitate such "retrofits" is extremely costly and lengthy, with no guarantee of a benefit to water quality. Retrofits should only be undertaken where the Copermittee identifies it as a necessary step to addressing the MS4 contributions to Receiving Water problems to the MEP. Otherwise, it forces the Copermittee to utilize resources very ineffectively, which is contrary to the goals of the WQIP and may actually be detrimental to water quality.
- Permitting: Aside from the limitations discussed above, stream/channel/habitat restorations have the additional complexities of requiring other regulatory permits that are not the discretion of the San Diego Water Board nor the Copermittees to issue. Such projects can take many decades to implement, and thus, are not expected to be highly effective at addressing the goals of the WQIP, except in rare circumstances.

Redline edits have been provided to clarify that these strategies and programs should only be used when, and to the extent directed by the strategies developed in the WQIP.

3.10.2 Comments in support of specific changes

E.5.b.(1)(b) and (d)

BMP implementation requirements of Provision E.5.b.(1)(b) and (d) have been clarified in the Redline to require the Copermittee to implement BMPs on their existing development, and require implementation of BMPs on private existing development.

E.5.c.(1)(a)(iv)

The Riverside County Copermittees request deletion of this Provision. The Copermittees should be provided the flexibility to schedule inspections as they see fit, provided that the schedules they establish pursuant to E.5.c.(1)(a), and the minimum frequency in E.5.c.(1)(a)(i) are met. Requiring 20% every year will be difficult to track as businesses may be opened or closed throughout the year and throughout the permit term.

Additionally, the Riverside Copermittees understand that other Copermittees may be recommending that E.5.c.(1)(a)(i) be changed to 'once per permit term'. The Riverside Copermittees believe that the current language of 'once every five years' is more appropriate for two reasons: 1) not all Copermittees (i.e. OC and Riverside) will be enrolled into the permit at the beginning of the 'permit term', and 2) not all businesses will be in existence at the beginning of the permit term. Accordingly it is more appropriate to simply require the minimum to be once every five years, that way a program manager can simply look at the last time a facility was inspected, and use that date to schedule the next inspection.

3.11 Provision E.6, Enforcement Response Plans

3.11.1 Overview of Key Issues

The Riverside County Copermittees' edits and comments are shown in the Redline and discussed below.

3.11.2 Comments in support of specific changes

E.6.d.

The terminology in this Provision was changed in the Redline from 'escalated' enforcement to 'progressive' enforcement. The proposed language better reflects the nature of enforcement actions, which are not simply 'escalated' or 'not escalated', as implied by Provision E.6.d.(2), but are progressive as needed in response to the severity of the violation. Since every violation comes with a unique set of circumstances, it is not reasonable to presume that a single set of 'triggers' will universally result in the same level of enforcement.

3.12 Provision E.7, Public Education

3.12.1 Overview of Key Issues

The Riverside County Copermittees' edits and comments are shown in the Redline.

3.13 Provision, E.8 Fiscal Analysis

3.13.1 Overview of Key Issues

The requirement that the Copermittees "must secure all the resources necessary to comply with this Order" exceeds the requirements of the CWA and illegally intrudes on the home rule authority of municipalities to govern themselves. This must be deleted. Please also see Legal Comments.

With regard to other provisions, the Riverside County Copermittees' edits and comments are shown in the Redline.

3.14 Provision F

3.14.1 Overview of Key Issues

- F.1 – WQIP Submittal
  - Based on the schedule for the initial submittal of the Priority Water Quality Conditions and Numeric Goals, and the subsequent 60-day public review, only one month would be left for the Copermittees to finalize strategies based on those conditions and goals and the public input received. This is an insufficient amount of time. The Redline requests modifications to the schedule that would provide for the submittal of the final WQIP within 24 months (instead of 18), to provide additional time for the development of strategies.
- F.1 and F.2.
  - The schedules for submittals should be linked to the receipt of comments on prior submittals, or the approval of prior submittals, rather than the permit adoption date. If it is tied to the permit adoption date, the submittal dates could become out of sync with the comment periods or San Diego Water Board approvals if any unexpected delays occur (for example if the San Diego Water Board is delayed in approving a document, or posting a document online for public comment). The Redline requests appropriate modifications.
  - Implementation dates for the plans are unclear / undefined. The Redline clarifies this issue.
- F.3. Progress Reports
  - The reporting requirements across the transitional period were unclear. Redlines are provided to clarify and consolidate.
  - The Regional Monitoring and Assessment Report language was revised to be consistent with the requirements of the Integrated Assessment of the Water Quality Improvement Plan, rather than an additional, slightly different report, due at the same time.

3.15 Attachments B and C

Comments and edits to Attachments B and C are shown in the Redline.

Very truly yours,

for JASON E. UHLEY
Chief of Watershed Protection Division

CP:cw
P8/

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

TENTATIVE
ORDER NO. R9-2013-0001
NPDES NO. CAS0109266

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION

The San Diego County Copermittees in Table 1a are subject to waste discharge requirements set forth in this Order.

Table 1a. San Diego County Copermittees

Municipal Copermittees	
City of Carlsbad	City of Oceanside
City of Chula Vista	City of Poway
City of Coronado	City of San Diego
City of Del Mar	City of San Marcos
City of El Cajon	City of Santee
City of Encinitas	City of Solana Beach
City of Escondido	City of Vista
City of Imperial Beach	County of San Diego
City of La Mesa	San Diego County Regional Airport Authority
City of Lemon Grove	San Diego Unified Port District
City of National City	

After the San Diego Water Board receives and considers the Orange County Copermittees' Report of Waste Discharge and makes any necessary changes to the Order, the Orange County Copermittees in Table 1b will become subject to waste discharge requirements set forth in this Order after expiration of Order No. R9-2009-0002, NPDES No. CAS0108740 on or after December 16, 2014.

Table 1b. Orange County Copermittees

Municipal Copermittees	
City of Aliso Viejo	City of Rancho Santa Margarita
City of Dana Point	City of San Clemente
City of Laguna Beach	City of San Juan Capistrano
City of Laguna Hills	City of Laguna Woods
City of Laguna Niguel	County of Orange
City of Lake Forest	~~Orange County Flood Control District~~

City of Mission Viejo	
Special District Copermittee	
Orange County Flood Control District	

After the San Diego Water Board receives and considers the Riverside County Copermittees' Report of Waste Discharge and makes any necessary changes to this Order, the Riverside County Copermittees in Table 1c will become subject to waste discharge requirements set forth in this Order after expiration of Order No. R9-2010-0016, NPDES No. CAS0108766 on or after November 10, 2015.

Table 1c. Riverside County Copermittees

Municipal Copermittee	
City of Murrieta	County of Riverside
City of Temecula	~~Riverside County Flood Control and Water Conservation District~~
City of Wildomar	
Special District Copermittee	
Riverside County Flood Control and Water Conservation District	

The Orange County Copermittees and Riverside County Copermittees may become subject to the requirements of this Order at a date earlier than the expiration date of their current Orders subject to the conditions described in Provision F.6 of this Order if the Copermittees in the respective county receive a notification of coverage from the San Diego Water Board.

The term Copermittee in this Order refers to any San Diego County, Orange County, or Riverside County Copermittee covered under this Order, unless specified otherwise.

This Order provides permit coverage for the Copermittee discharges described in Table 2.

Table 2. Discharge Locations and Receiving Waters

Discharge Points	Locations throughout San Diego Region
Discharge Description	Municipal Separate Storm Sewer System (MS4) Discharges
Receiving Waters	Inland Surface Waters, Enclosed Bays and Estuaries, and Coastal Ocean Waters of the San Diego Region

Table 3. Administrative Information

This Order was adopted by the San Diego Water Board on:	**Month Day, 2013**
This Order will become effective on:	**Month Day, 2013**
This Order will expire on:	**Month Day, 2018**
The Copermittees must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than 180 days in advance of the Order expiration date.	

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on Month Day, 2013.

TENTATIVE

David W. Gibson
Executive Officer

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ATTACHMENTS
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Attachment B - Standard Permit Provisions and General Provisions B-1
Attachment C - Acronyms, Abbreviations and Definitions C-1
Attachment D - Jurisdictional Runoff Management Program Annual Report Form D-1
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Attachment F - Fact Sheet / Technical Report for Order No. R9-2013-0001 ..... F-1

I. FINDINGS

Comment [A1]: See discussions in section 3.1 of the comment letter

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds that:

JURISDICTION

1. **MS4 Ownership or Operation.** Each of the Copermittees owns or operates an MS4, through which it discharges storm water and non-storm water into waters of the U.S. within the San Diego Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the U.S.

Many geographical areas subject to this Order are subject to the threat of periodic catastrophic flooding resulting from natural conditions, specifically the presence of mountains and hilly areas in close proximity to urban development and the effect of period strong Pacific Ocean storms. Such flooding would occur in the absence of development. The Legislature recognized the importance of this issue when it established flood control districts across the state, including in Orange, Riverside and San Diego Counties. Such flooding has in the past, and if not controlled, could in the future result in loss of life and property damage. Such flooding can also mobilize significant Pollutants from industrial, commercial, residential and agricultural lands, damaging watercourses and the beneficial uses thereof, including habitat. MS4s are designed and constructed to mitigate such impacts.

2. Riverside County Flood Control and Water Conservation District.

Comment [A2]: See discussion in section 3.1.1 of the comment letter.

In 1945, the California Legislature enacted the Riverside County Flood Control and Water Conservation District Act, establishing the Riverside County Flood Control and Water Conservation District (District). The objects and purposes of the Act are to provide for the control and conservation of flood and storm waters and for the protection of watercourses, watersheds, public highways, life and property within the District from damage or destruction from flood waters. Among its other powers, the District also has the power to conserve, reclaim and save such waters for beneficial use. However the Act does not provide the District with the power to control the volume or quality of discharges that runs off of private property, which may end up in the District's flood control system. The District is governed by the District's Board of Supervisors as a separate legal entity from the County of Riverside.

Many of the flood management systems that the District operates are defined by the Clean Water Act as an MS4, and include many of the larger MS4s within the Santa Margarita watershed region of Riverside County (SMR). District does not however

own or operate streets, catch basins or storm drains smaller than 36 inches that collect runoff from the incorporated and unincorporated jurisdictions within the SMR, and commonly connect into the District's flood management system. Such systems are typically owned and operated by either the County of Riverside or the incorporated Cities within the SMR.

The waters and pollutants that may enter the regional receiving waters and/or the District's flood management systems come from various sources. These sources can include storm water and non-storm water from the Municipal Copermittees under this permit as well as from other NPDES and non-NPDES permittees, including industrial waste water dischargers, waste water treatment facilities, industrial and construction stormwater dischargers, water suppliers, tribal lands, other state and federal government entities, and Caltrans. Sources can also include discharges from Phase II entities such as school districts and discharges from entities that have been granted waste discharge requirements or waivers of waste discharge requirements, including agricultural operations.

The District does not own or operate any municipal sanitary sewer systems, public streets, roads, or highways. The District has no planning, zoning, development permitting or other land use authority, thus, it has no permitting or governing authority over industrial or commercial facilities, residents, new developments or re-development projects, and development construction sites located in any incorporated or unincorporated areas within its service area, including the SMR. The Copermittees that have such authority are responsible for implementing a storm water management program to address pollutants discharged from such industrial and commercial facilities, residential areas, new development and re-development projects, and development construction sites within their jurisdictional boundaries. Nonetheless, as an owner and operator of an MS4, the District is required to control pollutant discharges into and from its MS4, such as through interagency agreements among Copermittees and other owners of a MS4, the contribution of pollutants from one portion of the MS4 to another portion of the MS4 within their jurisdiction.

2. **Legal and Regulatory Authority.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations (Code of Federal Regulations [CFR] Title 40, Part 122 [40 CFR 122]) adopted by the United States Environmental Protection Agency (USEPA), and chapter 5.5, division 7 of the California Water Code (CWC) (commencing with section 13370). This Order serves as an NPDES permit for discharges from MS4s to surface waters. This Order also serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

   The San Diego Water Board has the legal authority to issue a regional MS4 permit pursuant to its authority under CWA section 402(p)(3)(B) and 40 CFR 122.26(a)(1)(v). The USEPA also made it clear that the permitting authority, in this case the San Diego Water Board, has the flexibility to establish system- or region-wide permits (55 Federal Register [FR] 47990, 48039-48042). The regional nature of this Order will ensure consistency of regulation within watersheds and is expected

to result in overall cost savings for the Copermittees and San Diego Water Board.

The federal regulations make it clear that the Copermittees need only comply with permit conditions relating to discharges from the MS4s for which they are operators (40 CFR 122.26(a)(3)(vi)). This Order does not require the Copermittees to manage storm water outside of their jurisdictional boundaries, but rather to work collectively to improve storm water management within watersheds.

3. **CWA NPDES Permit Conditions.** Pursuant to CWA section 402(p)(3)(B), NPDES permits for storm water discharges from MS4s must include requirements to effectively prohibit non-storm water discharges into MS4s, and require controls to reduce the discharge of pollutants from the MS4s ~~in storm water~~ to the maximum extent practicable (MEP), and to require other provisions as the San Diego Water Board determines are appropriate to control such pollutants. This Order prescribes conditions to assure compliance with the CWA requirements for owners and operators of MS4s to effectively prohibit non-storm water discharges in to the MS4s, and require controls to reduce the discharge of pollutants ~~in storm water~~ from the MS4s to the MEP.

Comment [A3]: See discussion in section 3.1.2 of the comment letter.

4. **CWA and CWC Monitoring Requirements.** CWA section 308(a) and 40 CFR 122.41(h),(j)-(l) and 122.48 require that NPDES permits must specify monitoring and reporting requirements. Federal regulations applicable to large and medium MS4s also specify additional monitoring and reporting requirements in 40 CFR 122.26(d)(1)(iv)(D), 122.26(d)(1)(v)(B), 122.26(d)(2)(i)(F), 122.26(d)(2)(iii)(D), 122.26(d)(2)(iv)(B)(2) and 122.42(c). CWC section 13383 authorizes the San Diego Water Board to establish monitoring, inspection, entry, reporting and recordkeeping requirements. This Order establishes monitoring and reporting requirements to implement federal and State requirements.

5. **Total Maximum Daily Loads.** CWA section 303(d)(1)(A) requires that "[e]ach state shall identify those waters within its boundaries for which the effluent limitations…are not stringent enough to implement any water quality standard applicable to such waters." The CWA also requires states to establish a priority ranking of impaired water bodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired water bodies is called the Clean Water Act Section 303(d) List of Water Quality Limited Segments, commonly referred to as the 303(d) List. The CWA requires the 303(d) List to be updated every two years.

   TMDLs are numerical calculations of the maximum amount of a pollutant that a water body can assimilate and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (waste load allocations or WLAs) and non-point sources (load allocations or LAs), background contribution, plus a margin of safety. Discharges from MS4s are point source discharges. The federal regulations (40 CFR 122.44(d)(1)(vii)(B)) require that NPDES permits to incorporate water quality based effluent limitations (WQBELs) developed to protect a narrative water quality criterion, a numeric water

quality criterion, or both, consistent with the assumptions and requirements of any available WLA for the discharge. Requirements of this Order implement the TMDLs adopted by the San Diego Water Board and approved by USEPA.

6. **Non-Storm Water Discharges.** Pursuant to CWA section 402(p)(3)(B)(ii), this Order requires each Copermittee to effectively prohibit discharges of non-storm water into its MS4. Nevertheless, non-storm water discharges into and from the MS4s continue to be reported to the San Diego Water Board by the Copermittees and other persons. Monitoring conducted by the Copermittees, as well as the 303(d) List, have identified dry weather, non-storm water discharges from the MS4s as a source of pollutants causing or contributing to receiving water quality impairments in the San Diego Region. The federal regulations (40 CFR 122.26(d)(2)(iv)(B)(1)) require the Copermittees to have a program to prevent illicit discharges to the MS4. The federal regulations, however, allow for specific categories of non-storm water discharges or flows to be addressed as illicit discharges only where such discharges are identified as sources of pollutants to waters of the U.S.

7. **In-Stream Treatment Systems.** Pursuant to federal regulations (40 CFR 131.10(a)), in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of a runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Runoff treatment must occur prior to the discharge of runoff into receiving waters. Treatment control best management practices (BMPs) must not be constructed in waters of the U.S. Construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body.

DISCHARGE CHARACTERISTICS AND RUNOFF MANAGEMENT

8. **Point Source Discharges of Pollutants.** Discharges from the MS4s may contain waste, as defined in the CWC, and pollutants that adversely affect the quality of the waters of the state. A discharge from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA. Storm water and non-storm water discharges from the MS4s may contain pollutants that cause or threaten to cause a violation of surface water quality standards, as outlined in the Water Quality Control Plan for the San Diego Basin (Basin Plan). ~~Storm water and non-storm water discharges from the MS4s are subject to the conditions and requirements established in the Basin Plan for point source discharges.~~

9. **Potential Beneficial Use Impairment.** The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses or which may result~~ing~~ in a condition of pollution, contamination, or nuisance. In addition, the reduction of flows below the

existing condition may impact negatively impact beneficial uses.

10. **Pollutants Generated by Land Development.** Land development has created and continues to create new sources of non-storm water discharges and pollutants in storm water discharges as human population density increases. This brings higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, and trash. Pollutants from these sources are dumped or washed off the surface by non-storm water or storm water flows into and from the MS4s. When development converts natural vegetated pervious ground cover to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed area without BMPs that can maintain pre-development conditions will contain greater pollutant loads and have significantly greater runoff volume, velocity, and peak flow rate than pre-development runoff from the same area.

11. **Runoff Discharges to Receiving Waters.** The MS4s discharge runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within the eleven hydrologic units comprising the San Diego Region. ~~Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Rivers, streams and creeks in developed areas used in this manner are part of the Copermittees' MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the rivers, streams and creeks in the developed areas of the Copermittees' jurisdictions are both an MS4 and receiving water.~~ Numerous receiving water bodies and water body segments have been designated as impaired by the San Diego Water Board pursuant to CWA section 303(d).

Comment [A4]: See discussion in section 3.1.2 of the comment letter.

Pollutants in Runoff. The most common pollutants in runoff discharged from the MS4s include total suspended solids, sediment, pathogens (e.g., bacteria, viruses, protozoa), heavy metals (e.g., cadmium, copper, lead, and zinc), petroleum products and polynuclear aromatic hydrocarbons, synthetic organics (e.g., pesticides, herbicides, and PCBs), nutrients (e.g., nitrogen and phosphorus), oxygen-demanding substances (e.g., decaying vegetation, animal waste), detergents, and trash. ~~As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not effectively prohibit or otherwise control.~~ These discharges may cause or contribute to a condition of pollution or a violation of water quality standards. California law requires downstream landowners, including owners and operators of MS4, to accept upstream flows, even if that flow contains Pollutants. Failure to do can create conditions.

Comment [A5]: See discussion in section 3.1.2 of the comment letter.

Limitation on Powers of Copermittees. This Order regulates the discharge of non-stormwater into and Pollutants from non-agricultural Anthropogenic sources from the MS4s owned and/or operated by the Copermittees. The Copermittees lack legal

Comment [A6]: This finding is based on Findings I.B and I.C in Order R8-2010-33, applicable to portions of Riverside County within the Santa Ana region.

jurisdiction over discharges into their MS4 from agricultural activities, State and federal facilities, public schools and hospitals, utilities, railroads, special districts, Native American tribal lands, wastewater management agencies and other point and non-point source discharges otherwise permitted by the Water Board. The Water Board recognizes that the Copermittees should not be held responsible for discharges from such facilities or Pollutants in those discharges. Also, certain activities and sources that generate pollutants present in urban runoff may be beyond the ability of the Copermittees to prevent or eliminate. Examples of these activities and sources include, but are not limited to: emissions from internal combustion engines, brake pad wear and tear, atmospheric deposition, non-Anthropogenic sources of bacteria (including wildlife and feral cats and dogs), the regulation of pesticides and leaching of naturally occurring nutrients and minerals from local soils. This Order is not intended to address background or naturally occurring Pollutants or flows.

12.

13. **Human Health and Aquatic Life Impairment.** Pollutants in runoff discharged from the MS4s can threaten and adversely affect human health and aquatic organisms. Adverse responses of organisms to chemicals or physical agents in runoff range from physiological responses such as impaired reproduction or growth anomalies to mortality. Increased volume, velocity, rate, and duration of storm water runoff greatly accelerate the erosion of downstream natural channels. This alters stream channels and habitats and can adversely affect aquatic and terrestrial organisms.

14. **Water Quality Effects.** The Copermittees' water quality monitoring data submitted to date documents various persistent exceedances of Basin Plan water quality objectives for runoff-related pollutants at various watershed monitoring stations. Persistent toxicity has also been observed at several watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have Poor to Very Poor Index of Biological Integrity (IBI) ratings. ~~These findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in the San Diego Region. Non-storm water discharges from the MS4s have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds, and contribute significantly to exceedances of applicable receiving water quality objectives.~~

Comment [A7]: These statements are completely unsubstantiated.

15. **~~Non-Storm Water and Storm Water Discharges.~~** ~~Non-storm water discharges from the MS4s are not considered storm water discharges and therefore are not subject to the MEP standard of CWA section 402(p)(3)(B)(iii), which is explicitly for "Municipal … *Stormwater Discharges* (emphasis added)" from the MS4s. Pursuant to CWA 402(p)(3)(B)(ii), non-storm water discharges into the MS4s must be effectively prohibited.~~

Comment [A8]: See discussion in section 3.1.2 of the comment letter.

16. **Best Management Practices.** Waste and pollutants which are deposited and accumulate in MS4 drainage structures may~~will~~ be discharged from these structures

to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutants in storm water discharges from the MS4s can be and must be effectively reduced in runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and runoff, therefore keeping pollutants onsite and out of receiving waters. Treatment control BMPs remove pollutants that have been mobilized by storm water or non-storm water flows.

17. **BMP Implementation.** Runoff needs to be addressed during the three major phases of development (planning, construction, and use) in order to reduce the discharge of storm water pollutants to the MEP, effectively prohibit non-storm water discharges, and protect receiving waters. Development which is not guided by water quality planning policies and principles can result in increased pollutant load discharges, flow rates, and flow durations which can negatively affect receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development can generate substantial pollutant loads which are discharged in runoff to receiving waters. Retrofitting areas of existing development with storm water pollutant control and hydromodification management BMPs may in many cases be ~~is~~ necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards.

Comment [A9]: It is not necessary in all cases.

18. **Long Term Planning and Implementation.** Federal regulations require municipal storm water permits to expire 5 years from adoption, after which the permit must be renewed and reissued. The San Diego Water Board recognizes that the degradation of water quality and impacts to beneficial uses of the waters in the San Diego Region occurred over several decades. The San Diego Water Board further recognizes that a decade or more may be necessary to realize demonstrable improvement to the quality of waters in the Region. This Order includes a long term planning and implementation approach that will require more than a single permit term to complete.

WATER QUALITY STANDARDS

19. **Basin Plan.** The San Diego Water Board adopted the Water Quality Control Plan for the San Diego Basin (Basin Plan) on September 8, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters addressed through the plan. The Basin Plan was subsequently approved by the State Water

Resources Control Board (State Water Board) on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Board. Requirements of this Order implement the Basin Plan.

The Basin Plan identifies the following existing and potential beneficial uses for inland surface waters in the San Diego Region: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Freshwater Replenishment (FRSH), Hydropower Generation (POW), and Preservation of Biological Habitats of Special Significance (BIOL). The following additional existing and potential beneficial uses are identified for coastal waters of the San Diego Region: Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).

20. **Ocean Plan.** The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on April 21, 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. Requirements of this Order implement the Ocean Plan.

    The Ocean Plan identifies the following beneficial uses of ocean waters of the state to be protected: Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance; rare and endangered species; marine habitat; fish spawning and shellfish harvesting

21. **Sediment Quality Control Plan**. On September 16, 2008, the State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Sediment Quality Control Plan). The Sediment Quality Control Plan became effective on August 25, 2009. The Sediment Quality Control Plan establishes: 1) narrative sediment quality objectives for benthic community protection from exposure to contaminants in sediment and to protect human health, and 2) a program of implementation using a multiple lines of evidence approach to interpret the narrative sediment quality objectives. Requirements of this Order implement the Sediment Quality Control Plan.

22. **National Toxics Rule and California Toxics Rule.** USEPA adopted the National Toxics Rule (NTR) on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the California Toxics Rule (CTR). The CTR promulgated

new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

23. **Antidegradation Policy.** This Order is in conformance with the federal Antidegradation Policy described in 40 CFR 131.12, and State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*. Federal regulations at 40 CFR 131.12 require that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. State Water Board Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. State Water Board Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

CONSIDERATIONS UNDER FEDERAL AND STATE LAW

24. **Coastal Zone Act Reauthorization Amendments.** Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point source pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point source pollution: agriculture, silviculture, urban, marinas, and hydromodification. This Order addresses the management measures required for the urban category, with the exception of septic systems. The runoff management programs developed pursuant to this Order fulfills the need for coastal cities to develop a runoff non-point source plan identified in the Non-Point Source Program Strategy and Implementation Plan. The San Diego Water Board addresses septic systems through the administration of other programs.

25. **Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 USC sections 1531 to 1544). This Order requires compliance with receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Copermittees are responsible for meeting all requirements of the applicable Endangered Species Act.

26. **Report of Waste Discharge Process.** The waste discharge requirements set forth in this Order are based upon the Report of Waste Discharge submitted by the San Diego County Copermittees prior to the expiration of Order No. R9-2007-0001 (NPDES No. CAS0109266). The Orange County and Riverside County Copermittees are not immediately covered by the waste discharge requirements in this Order. The San Diego Water Board understands that each municipality is

unique although the Counties share watersheds and geographical boundaries. The Order will continue to use the Report of Waste Discharge process prior to initially making Orange County or Riverside County Copermittees subject to the requirements of this Order.

The federal regulations (40 CFR 122.21(d)(2)) and CWC section 13376 impose a duty on the Copermittees to reapply for continued coverage through submittal of a Report of Waste Discharge no later than 180 days prior to expiration of a currently effective permit. This requirement is set forth in the Orange County Copermittees' and Riverside County Copermittees' currently effective permits at Provisions K.2.b and K.2.c, respectively. The Orange County Permit, Order No. R9-2009-0002 (NPDES No. CAS0108740) expires on December 16, 2014 and the Riverside County MS4 Permit, Order No. R9-2010-0016 (NPDES No. CAS0108766) expires on November 10, 2015.

Unless the Orange County or Riverside County Copermittees apply for and receive early coverage under this Order, the Orange County Copermittees' and the Riverside County Copermittees' respective permits will be superseded by this Order upon expiration of their respective permits, subject to any necessary revisions to the requirements of this Order made after the San Diego Water Board considers their respective Reports of Waste Discharge through the public process provided in 40 CFR 124.

Comment [A10]: Please see Comment Letter and Legal Comments regarding regional permit authority,

27. **Integrated Report and Clean Water Act Section 303(d) List.** The San Diego Water Board and State Water Board submit an Integrated Report to USEPA to comply with the reporting requirements of CWA sections 303(d), 305(b) and 314, which lists the attainment status of water quality standards for water bodies in the San Diego Region. USEPA issued its *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* on July 29, 2005, which advocates the use of a five category approach for classifying the attainment status of water quality standards for water bodies in the Integrated Report. Water bodies included in Category 5 in the Integrated Report indicate at least one beneficial use is not being supported or is threatened, and a TMDL is required. Water bodies included in Category 5 in the Integrated Report are placed on the 303(d) List.

Water bodies with available data and/or information that indicate at least one beneficial use is not being supported or is threatened, but a TMDL is not required, are included in Category 4 in the Integrated Report. Impaired surface water bodies may be included in Category 4 if a TMDL has been adopted and approved (Category 4a); if other pollution control requirements required by a local, state or federal authority are stringent enough to implement applicable water quality standards within a reasonable period of time (Category 4b); or, if the failure to meet an applicable water quality standard is not caused by a pollutant, but caused by other types of pollution (Category 4c).

Implementation of the requirements of this Order may allow the San Diego Water Board to include surface waters impaired by discharges from the Copermittees'

MS4s in Category 4 in the Integrated Report for consideration during the next 303(d) List submittal by the State to USEPA.

28. **Economic Considerations.** The California Supreme Court has ruled that although CWC section 13263 requires the State and Regional Water Boards (collectively Water Boards) to consider factors set forth in CWC section 13241 when issuing an NPDES permit, the Water Board may not consider the factors to justify imposing pollutant restrictions that are less stringent than the applicable federal regulations require. (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 618, 626-627.) However, when pollutant restrictions in an NPDES permit are more stringent than federal law requires, CWC section 13263 requires that the Water Boards consider the factors described in CWC section 13241 as they apply to those specific restrictions.

    As noted in the following finding, the San Diego Water Board finds that the requirements in this permit are not more stringent than the minimum federal requirements. Therefore, a CWC section 13241 analysis is not required for permit requirements that implement the effective prohibition on the discharge of non-storm water into the MS4 or for controls to reduce the discharge of pollutants ~~in storm water~~ to the MEP, or other provisions that the San Diego Water Board has determined appropriate to control such pollutants, as those requirements are mandated by federal law. Notwithstanding the above, the San Diego Water Board has developed an economic analysis of the requirements in this Order. The economic analysis is provided in the Fact Sheet.

Comment [A11]: See discussion in section 3.1.2 of the Comment Letter and also Legal Comments..

29. ~~**Unfunded Mandates.** This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following:~~

    ~~**a.** This Order implements federally mandated requirements under CWA section 402 (33 USC section 1342(p)(3)(B)).~~

    ~~**b.** The local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges.~~

    ~~**c.** The local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order.~~

    ~~**d.** The Copermittees have requested permit coverage in lieu of compliance with the complete effective prohibition against the discharge of pollutants contained in CWA section 301(a) (33 USC section 1311(a)) and in lieu of numeric restrictions on their MS4 discharges (i.e. effluent limitations).~~

    ~~**e.** The local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under State law predates the enactment of Article XIIIB, Section (6) of the California Constitution.~~

Comment [A12]: See discussion in section 3.1.2 of the comment letter and in the Legal Comments.

~~f. The provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards (33 USC section 1313(d)). Once the USEPA or a state develops a TMDL, federal law requires that permits must contain water quality based effluent limitations consistent with the assumptions and requirements of any applicable wasteload allocation (40 CFR 122.44(d)(1)(vii)(B)).~~

~~See the Fact Sheet for further discussion of unfunded mandates.~~

30. **California Environmental Quality Act.** The issuance of waste discharge requirements and an NPDES permit for the discharge of runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with CWC section 13389.

STATE WATER BOARD DECISIONS

31. **Compliance with Prohibitions and Limitations.** The receiving water limitation language specified in this Order is consistent with language recommended by the USEPA and established in State Water Board Order WQ 99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Water Board on June 17, 1999. The receiving water limitation language in this Order requires storm water discharges from MS4s to not cause or contribute to a violation of water quality standards, which is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Implementation of the iterative approach to comply with receiving water limitations based on applicable water quality standards is necessary to ensure that Pollutant ~~storm water~~ discharges from the MS4 will not ultimately cause or contribute to violations of water quality standards and will not create conditions of pollution, contamination, or nuisance.

Comment [A13]: See discussion in section 3.1.2 of the comment letter.

Comment [A14]: Please see discussion in section 3.1.2 of the Comment Letter and Legal Comments.

32. **Special Conditions for Areas of Special Biological Significance.** On March 20, 2012, the State Water Board approved Resolution No. 2012-0012 approving an exception to the Ocean Plan effective prohibition against discharges to Areas of Special Biological Significance (ASBS) for certain nonpoint source discharges and NPDES permitted municipal storm water discharges. State Water Board Resolution No. 2012-0012 requires monitoring and testing of marine aquatic life and water quality in several ASBS to protect California's coastline during storms when rain water overflows into coastal waters. Specific terms, effective prohibitions, and special conditions were adopted to provide special protections for marine aquatic life and natural water quality in ASBS. The City of San Diego's municipal storm water discharges to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's municipal storm water discharges to the Heisler Park ASBS are subject terms and conditions of State Water Board Resolution No. 2012-0012. The Special

Protections contained in Attachment B to Resolution No. 2012-0012, applicable to these discharges, are hereby incorporated into this Order as if fully set forth herein.

ADMINISTRATIVE FINDINGS

33. **Executive Officer Delegation of Authority.** The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to CWC section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC section 13223 or this Order explicitly states otherwise.

34. **Standard Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment B to this Order.

35. **Fact Sheet.** The Fact Sheet for this Order contains background information, regulatory and legal citations, references and additional explanatory information and data in support of the requirements of this Order. The Fact Sheet is hereby incorporated into this Order and constitutes part of the Findings of this Order.

36. **Public Notice.** In accordance with State and federal laws and regulations, the San Diego Water Board notified the Copermittees, and interested agencies and persons of its intent to prescribe waste discharge requirements for the control of discharges into and from the MS4s to waters of the U.S. and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet.

37. **Public Hearing.** The San Diego Water Board held a public hearing on Month Day, 2013 and heard and considered all comments pertaining to the terms and conditions of this Order. Details of the public hearing are provided in the Fact Sheet.

38. **Effective Date.** This Order serves as an NPDES permit pursuant to CWA section 401 or amendments thereto, and becomes effective fifty (50) days after the date of its adoption, provided that the Regional Administrator, USEPA, Region IX, does not object to this Order.

39. **Review by the State Water Board.** Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050, et seq. The State Water Board must receive the petition by 5:00 p.m., 30 days after the San Diego Water Board action, except that if the thirtieth day following the action falls on a Saturday, Sunday or State holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the

Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

THEREFORE, IT IS HEREBY ORDERED that the Copermittees, in order to meet the provisions contained in division 7 of the CWC and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, must each comply with the following:

II. PROVISIONS

A. PROHIBITIONS AND LIMITATIONS

The purpose of this provision is to describe the conditions under which storm water and non-storm water discharges into and from MS4s are to be effectively prohibited or limited. The goal of the prohibitions and limitations is to protect the water quality and designated beneficial uses of waters of the state from adverse impacts caused or contributed to by MS4 discharges. This goal will be accomplished through the implementation of water quality improvement strategies and runoff management programs that effectively prohibit non-storm water discharges into the Copermittees' MS4s, and reduce pollutants in ~~storm water~~ discharges from the Copermittees' MS4s to the MEP. The process for determination of compliance with the Discharge Prohibitions (A.1), Receiving Water Limitations (A.2), and Effluent Limitations (A.3) is defined in Provisions A.3.b and A.4.

1. Discharge Prohibitions

a. Discharges from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance in receiving waters ~~of the state~~ are to be ~~prohibited.~~ effectively prohibited, unless the Regional Board determines such discharges are addressed by the Copermittee through A.3.b or A.4, including any modifications.~~prohibited.~~

b. Non-storm water discharges into MS4s are to be effectively prohibited through a program consistent with the requirements of provision E.2. of this order, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the MS4, unless such discharges are either authorized by a separate NPDES permit, or the discharge is a category of non-storm water discharges or flows that must be addressed pursuant to Provisions E.2.a.(1)-(5) of this Order.

c. Discharges from MS4s are subject to all applicable waste discharge prohibitions in the Basin Plan, included in Attachment A to this Order, unless the Regional Board determines such discharges are addressed by the Copermittee through A.3.b or A.4, including any modifications.

d. Storm water discharges from the City of San Diego's MS4 to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's MS4 to the Heisler Park ASBS are authorized under this Order subject to the Special Protections contained in Attachment B to State Water Board Resolution No.

Comment [A15]: See discussion in section 3.2 of the comment letter.

Comment [A16]: See discussion in section 3.2.2 of the comment letter.

Comment [A17]: See discussion in section 3.2.2 of the comment letter.

Comment [A18]: See discussion in section 3.2.2 of the comment letter.

2012-0012 applicable to these discharges, included in Attachment A to this Order. All other discharges from the Copermittees' MS4s to ASBS are ~~to be effectively~~ prohibited.

2. Receiving Water Limitations

Comment [A19]: See discussion in section 3.2.2 of the comment letter.

a. Discharges from MS4s must not cause or contribute to the violation of water quality standards in any receiving waters, including but not limited to all applicable provisions ~~contained in:~~below, unless the Regional Board determines such discharges are addressed by the Copermittee through A.3.b or A.4::~~contained in:~~

(1) The San Diego Water Board's Basin Plan, including beneficial uses, water quality objectives, and implementation plans;

(2) State Water Board plans for water quality control including the following:

(a) Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries (Thermal Plan), and

(b) The Ocean Plan, including beneficial uses, water quality objectives, and implementation plans;

(3) State Water Board policies for water and sediment quality control including the following:

(a) Water Quality Control Policy for the Enclosed Bays and Estuaries of California,

(b) Sediment Quality Control Plan which includes the following narrative objectives for bays and estuaries:

(i) Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities, and

(ii) Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health,

(c) The Statement of Policy with Respect to Maintaining High Quality of Waters in California;[1]

(4) Priority pollutant criteria promulgated by the USEPA through the following:

[1] State Water Board Resolution No. 68-16

(a) National Toxics Rule (NTR)[2] (promulgated on December 22, 1992 and amended on May 4, 1995), and

(b) California Toxics Rule (CTR).[3,4]

b. Discharges from MS4s composed of storm water runoff must not alter natural ocean water quality in an ASBS.

[2] 40 CFR 131.36
[3] 65 Federal Register 31682-31719 (May 18, 2000), adding Section 131.38 to 40 CFR
[4] If a water quality objective and a CTR criterion are in effect for the same priority pollutant, the more stringent of the two applies.

3. **Effluent Limitations**

   a. **TECHNOLOGY BASED EFFLUENT LIMITATIONS**

   Pollutants in ~~storm water~~ discharges from MS4s must be reduced to the MEP.[5]

   b. **WATER QUALITY BASED EFFLUENT LIMITATIONS**

   This Order establishes water quality based effluent limitations (WQBELs) consistent with the assumptions and requirements of all available TMDL waste load allocations (WLAs) assigned to discharges from the Copermittees' MS4s. Each Copermittee must comply with applicable WQBELs established for the TMDLs in Attachment E to this Order, pursuant to the applicable TMDL compliance schedules.

4. **Compliance with Discharge Prohibitions and Receiving Water Limitations**

Each Copermittee must achieve compliance with Provisions A.1.a~~,~~ through A.1.c and A.2.a of this Order through timely implementation of control measures and other actions as specified in Provisions B and E of this Order, including any modifications. The Water Quality Improvement Plans required under Provision B must be designed and adapted to ultimately achieve compliance with Provisions A.1.a~~,~~ through A.1.c and A.2.a~~.~~, as described in Provision B.2.~~.~~

   a. If exceedance(s) of water quality standards persist in receiving waters notwithstanding implementation of this Order, the Copermittees must comply with the following procedures:

      (1) For exceedance(s) of a water quality standard in the process of being addressed by the Water Quality Improvement Plan, the Copermittee(s) must implement the Water Quality Improvement Plan as accepted by the San Diego Water Board, and update the Water Quality Improvement Plan, as necessary, pursuant to Provision F.2.c;

      (2) Upon a determination by either the Copermittees or the San Diego Water Board that discharges from the MS4 are causing or contributing to a new exceedance of an applicable water quality standard not addressed by the Water Quality Improvement Plan, the Copermittees must submit the following updates to the Water Quality Improvement Plan pursuant to Provision F.2.c or as part of the Annual Report required under Provision F.3.b, unless the San

[5] This does not apply to MS4 discharges which receive subsequent treatment to reduce pollutants in storm water discharges to the MEP prior to entering receiving waters (e.g., low flow diversions to the sanitary sewer). Runoff treatment must occur prior to the discharge of runoff into receiving waters per Finding 7.

Comment [A20]: See discussion in section 3.2.2 of the comment letter.

Comment [A21]: See discussion in section 3.2.2 of the comment letter.

Diego Water Board directs an earlier submittal:

(a) The water quality improvement strategies being implemented that are effective and will continue to be implemented,

(b) Water quality improvement strategies (i.e. BMPs, retrofitting projects, stream and/or habitat rehabilitation or restoration projects, adjustments to jurisdictional runoff management programs, etc.) that will be implemented to reduce or eliminate any pollutants or conditions that are causing or contributing to the exceedance of water quality standards,

(c) Updates to the schedule for implementation of the existing and additional water quality improvement strategies, and

(d) Updates to the monitoring and assessment program to track progress toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a of this Order;

(3) The San Diego Water Board may require the incorporation of additional modifications to the Water Quality Improvement Plan required under Provision B. The applicable Copermittees must submit any modifications to the update to the Water Quality Improvement Plan within 90 days of notification that additional modifications are required by the San Diego Water Board, or as otherwise directed;

(4) Within 90 days of the San Diego Water Board determination that the update to the Water Quality Improvement Plan meets the requirements of this Order, the applicable Copermittees must revise the jurisdictional runoff management program documents to incorporate the updated water quality improvement strategies that have been and will be implemented, the implementation schedule, and any additional monitoring required; and

(5) Each Copermittee must implement the updated Water Quality Improvement Plan.

b. The procedure set forth above to achieve compliance with Provisions A.1.a, A.1.c and A.2.a of this Order do not have to be repeated for continuing or recurring exceedances of the same water quality standard(s) following implementation of scheduled actions unless directed to do otherwise by the San Diego Water Board.

c. Nothing in Provisions A.4.a and A.4.b prevents the San Diego Water Board from enforcing any of provisions B through I of this Order while the applicable Copermittees prepare and implement the above update to the Water Quality Improvement Plan and jurisdictional runoff management programs.

B. WATER QUALITY IMPROVEMENT PLANS

The purpose of this provision is to develop Water Quality Improvement Plans (WQIPs) that guide the Copermittees' jurisdictional runoff management programs towards achieving the outcome of improved water quality in MS4 discharges and receiving waters. The goal of the Water Quality Improvement Plans is to ~~protect, preserve, enhance, and restorerestore the~~address the impacts of MS4 discharges so that such discharges do not impair water quality and designated beneficial uses of receiving waters~~. of the state.~~ Therefore, implementation of the WQIPs also provides the basis for complying with Provisions II.A.1, II.A.2, and II.A.3, as described in Provision II.A.4. This goal will be accomplished through an adaptive planning and management process that identifies the highest priority water quality conditions within a watershed and implements strategies through the jurisdictional runoff management programs to achieve improvements in the quality of discharges from the MS4s ~~and~~ to receiving waters. As such, the requirements outlined in Provision E may be modified for consistency with the WQIP priorities for the applicable Watershed Management Area, if appropriate justification is provided approved within the WQIP.

Comment [A22]: See section 3.3 of the comment letter for discussions of the changes requested herein.

Comment [A23]: See discussion in section 3.3.2 of the comment letter.

1. Watershed Management Areas

Comment [A24]: See discussion in section 3.3.2 of the comment letter.

The Copermittees must develop a Water Quality Improvement Plan for each of the Watershed Management Areas in Table B-1. A total of ten Water Quality Improvement Plans must be developed for the San Diego Region.

Development of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area shall commence upon notification of coverage of the Riverside County Copermittees under this Order. Until this time, the County of San Diego shall use the water quality priorities in the Santa Margarita River Watershed Urban Runoff Management Plan, developed pursuant to Order No. R9-2007-0001, to guide implementation of Provisions D and E within its jurisdiction

Table B-1. Watershed Management Areas

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible Copermittees
San Juan (901.00)	South Orange County	- Aliso Creek - San Juan Creek - San Mateo Creek - Pacific Ocean - Heisler Park ASBS	- City of Aliso Viejo[1] - City of Dana Point[1] - City of Laguna Beach[1] - City of Laguna Hills[1] - City of Laguna Niguel[1] - City of Laguna Woods[1] - City of Lake Forest[1] - City of Mission Viejo[1] - City of Rancho Santa Margarita[1] - City of San Clemente[1] - City of San Juan Capistrano[1] - County of Orange[1] - Orange County Flood Control District[1]

Table B-1. Watershed Management Areas

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible Copermittees
Santa Margarita (902.00)	Santa Margarita River	- Murrieta Creek - Temecula Creek - Santa Margarita River - Santa Margarita Lagoon - Pacific Ocean	- City of Murrieta[2] - City of Temecula[2] - City of Wildomar[2] - County of Riverside[2] - County of San Diego[3] - Riverside County Flood Control and Water Conservation District[2]
San Luis Rey (903.00)	San Luis Rey River	- San Luis Rey River - San Luis Rey Estuary - Pacific Ocean	- City of Oceanside - City of Vista - County of San Diego
Carlsbad (904.00)	Carlsbad	- Loma Alta Slough - Buena Vista Lagoon - Agua Hedionda Lagoon - Batiquitos Lagoon - San Elijo Lagoon - Pacific Ocean	- City of Carlsbad - City of Encinitas - City of Escondido - City of Oceanside - City of San Marcos - City of Solana Beach - City of Vista - County of San Diego
San Dieguito (905.00)	San Dieguito River	- San Dieguito River - San Dieguito Lagoon - Pacific Ocean	- City of Del Mar - City of Escondido - City of Poway - City of San Diego - City of Solana Beach - County of San Diego
Penasquitos (906.00)	Penasquitos	- Los Penasquitos Lagoon - Pacific Ocean	- City of Del Mar - City of Poway - City of San Diego - County of San Diego
	Mission Bay	- Mission Bay - Pacific Ocean - San Diego Marine Life Refuge ASBS	- City of San Diego
San Diego (907.00)	San Diego River	- San Diego River - Pacific Ocean	- City of El Cajon - City of La Mesa - City of San Diego - City of Santee - County of San Diego
Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay	- Sweetwater River - Otay River - San Diego Bay - Pacific Ocean	- City of Chula Vista - City of Coronado - City of Imperial Beach - City of La Mesa - City of Lemon Grove - City of National City - City of San Diego - County of San Diego - San Diego County Regional Airport Authority - San Diego Unified Port District
Tijuana (911.00)	Tijuana River	- Tijuana River - Tijuana Estuary - Pacific Ocean	- City of Imperial Beach - City of San Diego - County of San Diego

Notes:
1. The Orange County Copermittees will be covered under this Order after expiration of Order No. R9-2009-0002, or earlier if the Orange County Copermittees meet the conditions in Provision F.6.
2. The Riverside County Copermittees will be covered under this Order after expiration of Order No. R9-2010-0016, or earlier if the Riverside County Copermittees meet the conditions in Provision F.6.
3. The County of San Diego is required to implement the requirements of Provision B for its jurisdiction within the Santa

Margarita River Watershed Management Area until the Riverside County Copermittees have been notified of coverage under this Order.

2. Priority Water Quality Conditions

The Copermittees must identify the water quality priorities within each Watershed Management Area that will be addressed by the Water Quality Improvement Plan. Where appropriate, Watershed Management Areas may be separated into subwatersheds to focus water quality prioritization and jurisdictional runoff management program implementation efforts by receiving water.

a. ASSESSMENT OF RECEIVING WATER CONDITIONS

The Copermittees must consider the following, at a minimum, to identify water quality priorities based on impacts of MS4 discharges on receiving water beneficial uses:

(1) Receiving waters listed as impaired on the CWA Section 303(d) List of Water Quality Limited Segments (303(d) List);

(2) TMDLs adopted and under development by the San Diego Water Board;

(3) Receiving waters recognized as sensitive or highly valued by the Copermittees, including estuaries designated under the National Estuary Program under CWA section 320, wetlands defined by the State or U.S. Fish and Wildlife Service's National Wetlands Inventory as wetlands, and receiving waters identified as ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012 (Attachment A);

(4) The receiving water limitations of Provision A.2;

(5) Known historical versus current physical, chemical, and biological water quality conditions;

(6) Available, relevant, and appropriately collected and analyzed physical, chemical, and biological receiving water monitoring data, including, but not limited to, data describing:

(a) Chemical constituents,

(b) Water quality parameters (i.e. pH, temperature, conductivity, etc.),

(c) Toxicity Identification Evaluations for both receiving water column and sediment,

(d) Trash impacts,

(e) Bioassessments, and

(f) Physical habitat;

(7) Available evidence of erosional impacts in receiving waters due to accelerated flows (i.e. hydromodification);

(8) Available evidence of adverse impacts to the chemical, physical, and biological integrity of receiving waters; and

(9) The potential improvements in the overall condition of the Watershed Management Area that can be achieved.

b. ASSESSMENT OF IMPACTS FROM MS4 DISCHARGES

The Copermittees must consider the following, at a minimum, to identify the potential impacts to receiving waters that may be caused or contributed to by discharges from the Copermittees' MS4s:

(1) The discharge prohibitions of Provision A.1 and effluent limitations of Provision A.3; and

(2) Available, relevant, and appropriately collected and analyzed storm water and non-storm water monitoring data from the Copermittees' MS4 outfalls;

(3) Locations of each Copermittee's MS4 outfalls that discharge to receiving waters;

(4) Locations of MS4 outfalls that are known to persistently discharge non-storm water to receiving waters likely causing or contributing to impacts on receiving water beneficial uses;

(5) Locations of MS4 outfalls that are known to discharge pollutants in storm water causing or contributing to impacts on receiving water beneficial uses; and

(6) The potential improvements in the quality of discharges from the MS4 that can be achieved.

c. IDENTIFICATION OF PRIORITY WATER QUALITY CONDITIONS

(1) The Copermittees must use the information gathered for Provisions B.2.a and B.2.b to develop a list of priority water quality conditions as pollutants, stressors and/or receiving water conditions that are the highest threat to receiving water quality or that most adversely affect the physical, chemical, and biological integrity of receiving waters. The list must include the following information for each priority water quality condition:

(a) The beneficial use(s) associated with the priority water quality condition;

(b) The geographic extent of the priority water quality condition within the Watershed Management Area, if known;

(c) The temporal extent of the priority water quality condition (e.g., dry weather and/or wet weather);

(d) The Copermittees with MS4s discharges that may cause or contribute to the priority water quality condition; and

(e) An assessment of the adequacy of and data gaps in the monitoring data to characterize the conditions causing or contributing to the priority water quality condition, including a consideration of spatial and temporal variation.

(2) The Copermittees must identify the highest priority water quality conditions to be addressed by the Water Quality Improvement Plan, and provide a rationale for selecting a subset of the water quality conditions identified pursuant to Provision B.2.c.(1) as the highest priorities.

d. IDENTIFICATION OF MS4 SOURCES OF POLLUTANTS AND/OR STRESSORS

The Copermittees must identify and prioritize known and suspected sources of storm water and non-storm water pollutants and/or other stressors within their jurisdiction, associated with MS4 discharges that cause or contribute to the highest priority water quality conditions identified under Provision B.2.c. ~~The identification of known and suspected sources of pollutants and/or stressors that cause or contribute to the highest priority water quality conditions as identified for Provision B.2.c must~~ considering the following:

(1) Pollutant generating facilities, areas, and/or activities within the Watershed Management Area, including:

(a) Each Copermittee's inventory of construction sites, commercial facilities or areas, industrial facilities, municipal facilities, and residential areas,

(b) Publicly owned parks and/or recreational areas,

(c) Open space areas,

(d) All currently operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste,,, and

(e) Areas not within the Copermittees' jurisdictions (e.g., Phase II MS4s, tribal lands, state lands, federal lands) that are known or suspected to be discharging to the Copermittees' MS4s;

(2) Locations of the Copermittees' MS4s, including the following:

(a) All major MS4 outfalls [per 40CFR 122.26 (b)(5)] that discharge to receiving waters, and

(b) Locations of major structural controls for storm water and non-storm water (e.g., retention basins, detention basins, major infiltration devices, etc.);

(3) Other known and suspected sources of non-storm water or pollutants in storm water discharges to receiving waters within the Watershed Management Area, including the following:

(a) Other MS4 outfalls (e.g., Phase II Municipal and Caltrans),

(b) Other NPDES permitted discharges,

(c) Any other discharges that may be considered point sources (e.g., private outfalls), and

(d) Any other discharges that may be considered non-point sources (e.g., agriculture, wildlife or other natural sources);

(4) Review of available data, including but not limited to:

(a) Findings from the Copermittees' illicit discharge detection and elimination programs,

(b) Findings from the Copermittees' MS4 outfall discharge monitoring,

(c) Findings from the Copermittees' receiving water monitoring,

(d) Findings from the Copermittees' MS4 outfall discharge and receiving water assessments, and

(e) Other available, relevant, and appropriately collected data, information, or studies related to pollutant sources and/or stressors that contribute to the highest priority water quality conditions as identified for Provision B.2.c.

(5) The adequacy of the available data to identify and prioritize sources and/or stressors associated with MS4 discharges that cause or contribute to the highest priority water quality conditions identified under Provision B.2.c.

e. NUMERIC GOALS AND SCHEDULES

Comment [A25]: See discussion in section 3.3.2 of the comment letter.

The Copermittees must develop and incorporate action levels, interim and final numeric goals[6] and schedules into the Water Quality Improvement Plan. Numeric goals must be used to support Water Quality Improvement Plan implementation and measure progress towards addressing the highest priority water quality conditions identified under Provision B.2.c. . Action Levels, Numeric goals are not enforceable compliance standards, effluent limitations, or receiving water limitations. When establishing numeric goals and corresponding schedules, the Copermittees must consider the following:

(1) Final numeric goals must be based on measureable criteria or indicators, to be achieved in ~~the receiving waters and/or~~ MS4 discharges for the highest priority water quality conditions which will ~~be capable of demonstrating the achievement of the restoration and/or protection~~ comply with the Receiving Water Limitations (A.2) of this Order; ~~water quality standards in receiving waters;~~

(2) Interim numeric goals must be based on measureable criteria or indicators capable of demonstrating incremental progress toward achieving the final numeric goals in the receiving waters and/or MS4 discharges; and

(3) Schedules must be adequate for measuring progress toward achieving the interim and final numeric goals required for Provisions B.2.e.(1) and B.2.e.(2). Schedules must incorporate the following:

(a) Interim dates for achieving the interim numeric goals,

(b) Compliance schedules for any applicable TMDLs in Attachment E to this Order,

(c) Compliance schedules for any ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A),

(d) Achievement of the final numeric goals in the receiving waters and/or MS4 discharges for the highest water quality priorities must be as soon as possible, and

[6] Interim and final numeric goals may take a variety of forms such as TMDL established WQBELs, action levels, pollutant concentration, load reductions, number of impaired water bodies delisted from the List of Water Quality Impaired Segments, Index of Biotic Integrity (IBI) scores, or other appropriate metrics. Interim and final numeric goals are not necessarily limited to one criterion or indicator, but may include multiple criteria and/or indicators. Except for TMDL established WQBELs, interim and final numeric goals and corresponding schedules may be revised through the adaptive management process under Provision B.5.

(e) Final dates for achieving the final numeric goals must not initially extend more than 10 years beyond the effective date of this Order, unless a longer period of time is authorized by the San Diego Water Board Executive Officer through an approved WQIP or the schedule includes an applicable TMDL in Attachment E to this Order[7].

Comment [A26]: Clarify that a longer period can be granted through the WQIP process.

[7] Achievement of final numeric goals within 10 years represents progress towards attainment of water quality standards, but is not a requirement to fully attain all applicable water quality standards or all priority receiving water conditions within 10 years.

3. Water Quality Improvement Strategies and Schedules

Comment [A27]: See discussion in section 3.3.2 of the comment letter.

The Copermittees must develop specific water quality improvement strategies to address the highest priority water quality conditions identified within a Watershed Management Area. The water quality improvement strategies must address the highest priority water quality conditions by ensuring the effective prohibition of~~preventing or eliminating~~ non-storm water discharges to and from the MS4, reducing pollutants in ~~storm water~~ discharges from the MS4 to the MEP, as applicable to the priority water quality conditions established per provision B.2. ~~and restoring and/or protecting the water quality standards of receiving waters~~.

a. WATER QUALITY IMPROVEMENT STRATEGIES

The Copermittees must identify and prioritize water quality improvement strategies based on their likely effectiveness and efficiency, and design the JRMP programs to focus resources on those strategies to~~implement strategies to effectively prohibit non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the MEP, improve the physical, chemical, and biological receiving water conditions, and~~ achieve the interim and final numeric goals in accordance with the schedules required for Provision B.2.e.(3). The following water quality improvement strategies must be included and described in the Water Quality Improvement Plan:

(1) Specific strategies and/or activities that may be implemented by one or more Copermittees within their jurisdictions through the jurisdictional runoff management programs that will address the highest priority water quality conditions within the Watershed Management Area, in accordance with the following requirements:

(a) Strategies and/or activities must, at a minimum, be described for each jurisdictional runoff management program component where strategies to address the highest priority water quality conditions are required under Provision E;

(b) The Water Quality Improvement Plan must describe the circumstances or conditions when and where the strategies or/activities should be or will be implemented, but specific details about how each Copermittee will implement the strategies and/or activities within its jurisdiction are not required; and

(c) Descriptions of strategies and/or activities must include any monitoring, information collection, special studies, and/or data analysis that is necessary to assess the effectiveness of the strategy and/or activity toward addressing the highest priority water quality conditions.

(2) Additional strategies and/or activities that may be implemented within the Watershed Management Area on a jurisdictional, sub-watershed, or watershed scale by one or more Copermittees, not specifically required under

Provision E, which are designed to achieve the interim and final numeric goals identified in Provisions B.2.e.(1) and B.2.e.(2);

b. IMPLEMENTATION SCHEDULES

(1) The Copermittees must develop schedules for implementing the water quality improvement strategies identified under Provision B.3.a to achieve the interim and final numeric goals identified under Provision B.2.e.(1) and B.2.e.(2). Schedules must be developed for both the water quality improvement strategies implemented by each Copermittee within its jurisdiction and for strategies that the Copermittees choose to implement on a collaborative basis.

(2) The Copermittees must incorporate the implementation compliance schedules for any ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A).

4. Water Quality Improvement Monitoring and Assessment Program

a. The Copermittees in each Watershed Management Area must develop and incorporate an integrated monitoring and assessment program into the Water Quality Improvement Plan that assesses: 1) the progress toward achieving the numeric goals and schedules, 2) the progress toward addressing the highest priority water quality conditions for each Watershed Management Area, and 3) each Copermittee's overall efforts to implement the Water Quality Improvement Plan.

b. The monitoring and assessment program must incorporate the monitoring and assessment requirements of Provision D, which may allow the Copermittees to modify the program to be consistent with and focus on the highest priority water quality conditions for each Watershed Management Area.

c. For Watershed Management Areas with applicable TMDLs, the monitoring and assessment program must incorporate the specific monitoring and assessment requirements of Attachment E.

d. For Watershed Management Areas with any ASBS, the water quality monitoring and assessment program must incorporate the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A).

5. Iterative Approach and Adaptive Management Process

Comment [A28]: See discussion in section 3.3.2 of the comment letter.

The Copermittees in each Watershed Management Area must implement the iterative approach pursuant to Provision A.4 to adapt the Water Quality Improvement Plan, monitoring and assessment program, and jurisdictional runoff management

programs to become more effective toward achieving compliance with Provisions A.1, A.2, and A.3.~~A.1.a, A.1.c and A.2.a~~, and must include the following:

a. RE-EVALUATION OF PRIORITY WATER QUALITY CONDITIONS

The priority receiving water quality conditions, and numeric goals and corresponding schedules, included in the Water Quality Improvement Plan pursuant to Provisions B.2.c and B.2.e, may be re-evaluated by the Copermittees as needed during the term of this Order as part of the Annual Report. Re-evaluation and recommendations for modifications to the priority water quality conditions, and numeric goals and corresponding schedules must be provided in the Regional Monitoring and Assessment Report pursuant to F.3.c~~Report of Waste Discharge~~, and must consider the following:

(1) Achieving the outcome of improved water quality in MS4 discharges and receiving waters through implementation of the water quality improvement strategies identified in the Water Quality Improvement Plan;

(2) Progress toward achieving interim and final numeric goals in receiving waters and/or MS4 discharges for the highest priority water quality conditions in the Watershed Management Area,

(3) Progress toward achieving outcomes according to established schedules;

(4) New information developed when the requirements of Provisions B.2.a-c have been re-evaluated;

(5) New policies or regulations that may affect identified numeric goals;

(6) Spatial and temporal accuracy of monitoring data collected to inform prioritization of water quality conditions and implementation strategies to address the highest priority water quality conditions;

(7) Availability of new information and data from sources other than the jurisdictional runoff management programs within the Watershed Management Area that informs the effectiveness of the actions implemented by the Copermittees;

(8) San Diego Water Board recommendations; and

(9) Recommendations for modifications solicited through a public participation process.

b. ADAPTATION OF STRATEGIES AND SCHEDULES

The water quality improvement strategies and schedules, included in the Water Quality Improvement Plan pursuant to Provisions B.3, must be re-evaluated and adapted as new information becomes available to result in more effective and efficient measures to achieve the numeric goals established pursuant to

Provision B.2.e. Re-evaluation of and modifications to the water quality improvement strategies, if determined to be necessary, must be provided in the applicable Annual Report per F.3.b.(3)., and must consider the following:

(1) Modifications to the priority water quality conditions, and numeric goals and corresponding schedules based on Provision B.5.a;

(2) Measurable or demonstrable reductions of non-storm water discharges to and from each Copermittee's MS4;

(3) Measurable or demonstrable reductions of pollutants in ~~storm water~~ discharges from each Copermittee's MS4 to the MEP;

(4) New information developed when the requirements of Provisions B.2.b and B.2.d have been re-evaluated;

(5) Efficiency in implementing the Water Quality Improvement Plan;

(6) San Diego Water Board recommendations; and

(7) Recommendations for modifications solicited through a public participation process.

c. ADAPTATION OF MONITORING AND ASSESSMENT PROGRAM

The water quality improvement monitoring and assessment program, included in the Water Quality Improvement Plan pursuant to Provisions B.4, must be re-evaluated and adapted when new information becomes available. Re-evaluation and recommendations for modifications to the monitoring and assessment program, pursuant to the requirements of Provision D, may be provided in the Annual Report, but must be provided in the Report of Waste Discharge.

6. Water Quality Improvement Plan Submittal, Updates, and Implementation

a. The Copermittees must submit the Water Quality Improvement Plans in accordance with the requirements of Provision F.1.

b. The Copermittees must submit proposed updates to the Water Quality Improvement Plan for acceptance by the San Diego Water Board Executive Officer in accordance with the requirements of Provision F.2.c.

c. The Copermittees must commence with implementation of the Water Quality Improvement Plans ~~immediately after acceptance by the San Diego Water Board, in accordance with the schedules, or subsequently updated schedules, within the Water Quality Improvement Plan.~~in accordance with Provision F.1.b.(5).

C. ACTION LEVELS

Comment [A29]: See comment letter section 3.4 for a discussion of the redlines shown herein.

The purpose of this provision is for the Copermittees to incorporate numeric non-stormwater action levels (NALs) and stormwater action levels (SALs) in the Water Quality Improvement Plans (Provision B), and numeric non-stormwater action levels (NALs) in the Illicit Discharge Detection and Elimination (IDDE) program (Provision E.2.).

- For the purposes of the WQIPs, ~~T~~the goal of the action levels is to guide ~~Water Quality Improvement Plan~~ the implementation efforts and measure progress towards the protection of the identified high priority water quality conditions and associated designated beneficial uses of waters of the state from adverse impacts caused or contributed to by MS4 discharges. This goal will be accomplished through monitoring and assessing the quality of the MS4 discharges during the implementation of the Water Quality Improvement Plans.

- For the purposes of the IDDE program, the goal of the non-stormwater action levels is to assist in determining whether a persistent non-stormwater discharge into or from the MS4 contains pollutants at levels that have the potential to negatively affect the identified high priority water quality conditions.

Action levels will be developed and incorporated into the WQIP (Provision B) and the IDDE Program (Provision E). Depending upon the goals/objectives for the use of the action levels and the priority receiving water conditions, the constituents and values at which they are set may differ between watersheds. Copermittees may develop Watershed Management Area specific numeric action levels for non-stormwater and stormwater MS4 discharges using an approach approved by the Regional Board or use the default non-stormwater and stormwater action levels prescribed in C.1 and C.2 below.

The Copermittees will submit the action levels as a part of the WQIP and JRMP submittals. The action levels currently established will serve as the interim action levels until revised action levels are completed and approved. Exceedances of the action levels are not subject to enforcement or non-compliance actions under this Order.

1. Default Non-Storm Water Action Levels[8]

~~The Copermittees must develop and incorporate numeric non-storm water action levels (NALs) into the Water Quality Improvement Plan to: 1) support the development and prioritization of water quality improvement strategies for addressing non-storm water discharges to and from the MS4s, 2) assess the effectiveness of the water quality improvement strategies toward addressing MS4~~

Comment [A30]: As discussed in section 2.4 of the Riverside comment letter.

[8] NALs are not ~~considered by the San Diego Water Board to be~~ enforceable limitations under this Order.

~~non-storm water discharges, required pursuant to Provision D.4.b.(1), and 3) support the detection and elimination of non-storm water and illicit discharges to and from the MS4, required pursuant to Provision E.2.~~[9]

a. The following NALs must be incorporated as applicable to the WMA and the Copermittees' MS4 discharges,~~:~~ if the Copermittees do not establish numeric action levels within the WQIP based on watershed priorities:

(1) Non-Storm Water Discharges from MS4s to Ocean Surf Zone

Table C-1. Non-Storm Water Action Levels for Discharges from MS4s to Ocean Surf Zone

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Total Coliform	MPN/100 ml	1,000	-	10,000/1,000[1]	OP
Fecal Coliform	MPN/100 ml	200[2]	-	400	OP
Enterococci	MPN/100 ml	35	-	104[3]	OP

Abbreviations/Acronyms
AMAL – average monthly action level
MDAL – maximum daily action level
OP – Ocean Plan water quality objective
MPN/100 ml – most probable number per 100 milliliters

Notes:
1. Total coliform density NAL is 1,000 MPN/100 ml when the fecal/total coliform ratio exceeds 0.1.
2. Fecal coliform density NAL is 200 MPN per 100 ml during any 30 day period.
3. This value has been set to the Basin Plan water quality objective for saltwater "designated beach areas."

[9] ~~The Copermittees may utilize NALs or other benchmarks currently established by the Copermittees as interim NALs until the Water Quality Improvement Plans are accepted by the San Diego Water Board Executive Officer.~~

(2) Non-Storm Water Discharges from MS4s to Bays, Harbors, and Lagoons/Estuaries

Table C-2. Non-Storm Water Action Levels for Discharges from MS4s to Bays, Harbors, and Lagoons/Estuaries

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Turbidity	NTU	75	-	225	OP
pH	Units	Within limit of 6.0 to 9.0 at all times			OP
Fecal Coliform	MPN/100 ml	200[1]	-	400[2]	BP
Enterococci	MPN/100 ml	35	-	104[3]	BP
Priority Pollutants	ug/L	See Table C-3			

Abbreviations/Acronyms:
AMAL – average monthly action level
MDAL – maximum daily action level
OP – Ocean Plan water quality objective
BP – Basin Plan water quality objective
NTU – Nephelometric Turbidity Units
MPN/100 ml – most probable number per 100 milliliters
ug/L – micrograms per liter

Notes:
1. Based on a minimum of not less than five samples for any 30-day period.
2. The NAL is reached if more than 10 percent of total samples exceed 400 MPN per 100 ml during any 30 day period.
3. This value has been set to the Basin Plan water quality objective for saltwater "designated beach areas" and is not applicable to waterbodies that are not designated with the water contact recreation (REC-1) beneficial use.

Table C-3. Non-Storm Water Action Levels for Priority Pollutants

		Freshwater (CTR)		Saltwater (CTR)	
Parameter	Units	MDAL	AMAL	MDAL	AMAL
Cadmium	ug/L	**	**	16	8
Copper	ug/L	*	*	5.8	2.9
Chromium III	ug/L	**	**	-	-
Chromium VI	ug/L	16	8.1	83	41
Lead	ug/L	*	*	14	2.9
Nickel	ug/L	**	**	14	6.8
Silver	ug/L	*	*	2.2	1.1
Zinc	ug/L	*	*	95	47

Abbreviations/Acronyms:
CTR – California Toxic Rule
ug/L – micrograms per liter
AMAL – average monthly action level
MDAL – maximum daily action level

Notes:
* Action levels developed on a case-by-case basis (see below)
** Action levels developed on a case-by-case basis (see below), but calculated criteria are not to exceed Maximum Contaminant Levels (MCLs) under the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431

The Cadmium, Copper, Chromium (III), Lead, Nickel, Silver and Zinc NALs for MS4 discharges to freshwater receiving waters will be developed on a case-by-case basis because the freshwater criteria are based on site-specific water quality data (receiving water hardness). For these priority pollutants, refer to ~~the following equations (~~40 CFR 131.38.b.2 for details~~) will be required:~~

~~Cadmium (Total Recoverable) = exp(0.7852[ln(hardness)] - 2.715)~~
~~Chromium III (Total Recoverable) = exp(0.8190[ln(hardness)] + 0.6848)~~
~~Copper (Total Recoverable) = exp(0.8545[ln(hardness)] - 1.702)~~
~~Lead (Total Recoverable) = exp(1.273[ln(hardness)] - 4.705)~~
~~Nickel (Total Recoverable) = exp(.8460[ln(hardness)] + 0.0584)~~
~~Silver (Total Recoverable) = exp(1.72[ln(hardness)] - 6.52)~~
~~Zinc (Total Recoverable) = exp(0.8473[ln(hardness)] + 0.884)~~

Comment [A31]: Consistent with SD Permittee recommendations.

(3) Non-Storm Water Discharges from MS4s to Inland Surface Waters

Table C-4. Non-Storm Water Action Levels for Discharges from MS4s to Inland Surface Waters

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Dissolved Oxygen	mg/L	Not less than 5.0 in WARM waters and not less than 6.0 in COLD waters			BP
Turbidity	NTU	-	20	See MDAL	BP
pH	Units	Within limit of 6.5 to 8.5 at all times			BP
Fecal Coliform	MPN/100 ml	200[1]	-	400[2]	BP
Enterococci	MPN/100 ml	33	-	61[3]	BP
Total Nitrogen	mg/L	-	1.0	See MDAL	BP
Total Phosphorus	mg/L	-	0.1	See MDAL	BP
MBAS	mg/L	-	0.5	See MDAL	BP
Iron	mg/L	-	0.3	See MDAL	BP
Manganese	mg/L	-	0.05	See MDAL	BP
Priority Pollutants	ug/L	See Table C-3			

Abbreviations/Acronyms:
AMAL – average monthly action level
BP – Basin Plan water quality objective
COLD – cold freshwater habitat beneficial use
NTU – Nephelometric Turbidity Units
mg/L – milligrams per liter
MDAL – maximum daily action level
WARM – warm freshwater habitat beneficial use
MBAS – Methylene Blue Active Substances
MPN/100 ml – most probable number per 100 milliliters
ug/L – micrograms per liter

Notes:
1. Based on a minimum of not less than five samples for any 30-day period.
2. The NAL is reached if more than 10 percent of total samples exceed 400 MPN per 100 ml during any 30 day period.
3. This value has been set to the Basin Plan water quality objective for freshwater "designated beach areas" and is not applicable to waterbodies that are not designated with the water contact recreation (REC-1) beneficial use.

b. NALs must be identified, developed and incorporated in the Water Quality Improvement Plan for any pollutants or waste constituents that cause or contribute, or are threatening to cause or contribute to a condition of pollution or nuisance in Receiving waters ~~of the state~~ associated with the highest priority water quality conditions related to non-storm water discharges from the MS4s. NALs must be based on:

(1) Applicable water quality standards which may be dependent upon site-specific or receiving water-specific conditions or assumptions to be identified by the Copermittees; or

(2) Applicable numeric WQBELs required to meet the WLAs established for the TMDLs in Attachment E to this Order.

c. ~~For the NALs incorporated into the Water Quality Improvement Plan, the Copermittees may develop and incorporate secondary NALs specific to the Watershed Management Area at levels greater than the NALs required by Provisions C.1.a and C.1.b which can be utilized to further refine the prioritization and assessment of water quality improvement strategies for addressing non-~~

~~storm water discharges to and from the MS4s, as well as the detection and elimination of non-storm water and illicit discharges to and from the MS4. The secondary NALs may be developed using an approach acceptable to the San Diego Water Board.~~

d. Dry weather monitoring data from MS4 outfalls collected in accordance with Provision D.2.b may be utilized to develop or revise NALs based on watershed-specific data, subject to San Diego Water Board Executive Officer approval.

2. Default Storm Water Action Levels[10]

The Copermittees must develop and incorporate numeric storm water action levels (SALs) in the Water Quality Improvement Plans to: 1) support the development and prioritization of water quality improvement strategies for reducing pollutants in storm water discharges from the MS4s, and 2) assess the effectiveness of the water quality improvement strategies toward reducing pollutants in storm water discharges, required pursuant to Provision D.4.b.(2).[11]

a. The following SALs for discharges of storm water from the MS4 must be incorporated~~:~~ if the Copermittees do not establish stormwater action levels within the WQIP based on watershed priorities::~~:~~

Table C-5. Storm Water Action Levels for Discharges from MS4s to Receiving Waters

Parameter	Units	Action Level
Turbidity	NTU	126
Nitrate & Nitrite (Total)	mg/L	2.6
Phosphorus (Total P)	mg/L	1.46
Cadmium (Total Cd)*	µg/L	3.0
Copper (Total Cu)*	µg/L	127
Lead (Total Pb)*	µg/L	250
Zinc (Total Zn)*	µg/L	976

Abbreviations/Acronyms:
NTU – Nephelometric Turbidity Units
mg/L – milligrams per liter
ug/L – micrograms per liter

Notes:
* The sampling must include a measure of receiving water hardness at each MS4 outfall. If a total metal concentration exceeds the corresponding metals SAL in Table C-5, that concentration must be compared to the California Toxics Rule criteria and the USEPA 1-hour maximum concentration for the detected level of receiving water hardness associated with that sample. If it is determined that the sample's total metal concentration for that specific metal exceeds that SAL, but does not exceed the applicable USEPA 1-hour maximum concentration criterion for the measured level of hardness, then the sample result will not be considered above the SAL for that measurement.

[10] SALs are not ~~considered by the San Diego Water Board to be~~ enforceable limitations under this Order.
[11] The Copermittees may utilize SALs or other benchmarks currently established by the Copermittees as interim SALs until the Water Quality Improvement Plans are accepted by the San Diego Water Board Executive Officer.

b. SALs must be identified, developed and incorporated in the Water Quality Improvement Plan for pollutants or waste constituents that cause or contribute, or are threatening to cause or contribute to a condition of pollution or nuisance in Receiving waters ~~of the state~~ associated with the highest water quality priorities related to storm water discharges from the MS4s. SALs must be based on:

(1) Federal and State water quality guidance and/or water quality standards; and

(2) Site-specific or receiving water-specific conditions; or

(3) Applicable numeric WQBELs required to meet the WLAs established for the TMDLs in Attachment E to this Order.

c. ~~For the SALs incorporated into the Water Quality Improvement Plan, the Copermittees may develop and incorporate secondary SALs specific to the Watershed Management Area at levels greater than the SALs required by Provisions C.2.a and C.2.b which can be utilized to further refine the prioritization and assessment of water quality improvement strategies for reducing pollutants in storm water discharges from the MS4s. The secondary SALs may be developed based on the approaches recommended by the State Water Board's Storm Water Panel[12] or using an approach acceptable to the San Diego Water Board.~~

d. Wet weather monitoring data from MS4 outfalls collected in accordance with Provision D.2.c may be used to develop or revise SALs based upon watershed-specific data, subject to San Diego Water Board Executive Officer approval.

[12] ~~Storm Water Panel Recommendations to the California State Water Resources Control Board: The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006)~~

D. MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS

Comment [A32]: See discussion in section 3.5 of the comment letter.

The purpose of this provision is for the Copermittees to monitor and assess the impact on the chemical, physical, and biological conditions of receiving waters caused by discharges from the Copermittees' MS4s under wet weather and dry weather conditions. The goal of the monitoring and assessment program is to inform the Copermittees about the nexus between the health of receiving waters and the water quality condition of the discharges from their MS4s to those receiving waters. ~~.~~ This goal will be accomplished through monitoring and assessing the conditions of the receiving waters, discharges from the MS4s to those receiving waters, pollutant sources and/or stressors, and effectiveness of the water quality improvement strategies implemented as part of the Water Quality Improvement Plans.

1. Receiving Water Monitoring Requirements

The Copermittees must develop and conduct a program to monitor the condition of the receiving waters in each Watershed Management Area during dry weather and wet weather. Following acceptance of the Water Quality Improvement Plans for each Watershed Management Area, the Copermittees must conduct long-term receiving water monitoring during implementation of the Water Quality Improvement Plan to assess the long term trends and determine if water quality conditions in receiving waters are improving. Any available monitoring data not collected specifically for this Order that meet the quality assurance criteria of the Copermittees and the monitoring requirements of this Order may be utilized by the Copermittees. The Copermittees must conduct the following receiving water monitoring procedures:

a. TRANSITIONAL RECEIVING WATER MONITORING

Beginning October 1st or May 1st (whichever is sooner) following enrollment under this order and until ~~Until~~ the monitoring requirements of Provisions D.1.b-e are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1, the Copermittees must conduct the following receiving water monitoring in the Watershed Management Area:

(1) Continue the receiving water monitoring programs required in Order Nos. R9-2007-0001~~,~~ (Attachment A, Section II. A. 1-5)~~,~~ R9-2009-0002, and R9-2010-0016;

(2) Continue the monitoring in the Hydromodification Management Plans approved by the San Diego Water Board;

(3) Participate in the following regional receiving water monitoring programs, as applicable to the Watershed Management Area and each Copermittees' MS4 discharges:

Comment [A33]: See discussion in section 3.5.3 of the comment letter.

(a) Storm Water Monitoring Coalition Regional Monitoring,

(b) Southern California Bight Regional Monitoring, and

(c) Sediment Quality Monitoring;

(4) Implement the monitoring programs developed as part of any implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) for the TMDLs in Attachment E to this Order; and

(5) For Watershed Management Areas with ASBS, implement the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012, included in Attachment A to this Order.

b. LONG-TERM RECEIVING WATER MONITORING STATIONS

The Copermittees must select at least one long-term receiving water monitoring station from among the existing mass loading stations, temporary watershed assessment stations, bioassessment stations, and stream assessment stations previously established by the Copermittees to be representative of the receiving water quality in the Watershed Management Area. Additional or alternative long-term receiving water monitoring stations may~~must~~ be selected where necessary to support the implementation and adaptation of the Water Quality Improvement Plan.

Comment [A34]: See discussion in section 3.5.3 of the comment letter.

c. DRY WEATHER RECEIVING WATER MONITORING

During the term of the Order, the Copermittees must perform monitoring during at least three dry weather monitoring events at each of the long-term receiving water monitoring stations. At least one monitoring event must be conducted during the dry season (May 1 – September 30) and at least one monitoring event must be conducted during a dry weather period during the wet season (October 1 – April 30), after the first wet weather event of the season, with an antecedent dry period of at least 72 hours following a storm event producing measureable rainfall of greater than 0.1 inch.

(1) Dry Weather Receiving Water Field Observations

For each dry weather monitoring event, the Copermittees must record field observations consistent with Table D-1 at each long-term receiving water monitoring station.

Table D-1. Field Observations for Receiving Water Monitoring Stations

Field Observations
• Station identification and location
• Presence of flow, or pooled or ponded water
• If flow is present:
- Flow estimation (i.e. width of water surface, approximate depth of water, approximate flow velocity, flow rate)
- Flow characteristics (i.e. presence of floatables, surface scum, sheens, odor, color)
• If pooled or ponded water is present:
- Characteristics of pooled or ponded water (i.e. presence of floatables, surface scum, sheens, odor, color)
• Assessment of any observed connectivity of MS4 discharges to a flowing receiving water.
• Station description (i.e. deposits or stains, vegetation condition, structural condition, and observable biology)
• Presence and assessment of trash in and around station

Comment [A35]: See discussion in section 3.5.3 of the comment letter.

(2) Dry Weather Receiving Water Field Monitoring

For each dry weather monitoring event, if conditions allow the collection of the data, the Copermittees must monitor and record the parameters in Table D-2 at each long-term receiving water monitoring station.

Table D-2. Field Monitoring Parameters for Receiving Water Monitoring Stations

Parameters
• pH
• Temperature
• Specific conductivity
• Dissolved oxygen
• Turbidity

(3) Dry Weather Receiving Water Analytical Monitoring

For each dry weather monitoring event, the Copermittees must collect and analyze samples from each long-term receiving water monitoring station as follows:

(a) Analytes that are field measured are not required to be analyzed by a laboratory;

(b) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;

(c) Grab samples may be collected for pH, temperature, specific conductivity,

dissolved oxygen, turbidity, hardness, and indicator bacteria Grab samples may also be collected for the analyses described in (f) where MS4 discharge runoff constitutes less than ten percent of the flow;

Comment [A36]: The receiving water stations in Riverside County either do not receive runoff from MS4 discharges or receive deminimus flows during dry weather conditions. The flow at these stations during dry weather consists virtually entirely of rising groundwater. Background receiving water quality conditions In such cases composite samples of receiving waters not affected by MS4 discharges is not warranted.

(d) For all other constituents where runoff constitutes more than ten percent of the flow, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:

(i) Time-weighted composites composed of 24 discrete hourly samples, which may be collected through the use of automated equipment, or

(ii) Flow-weighted composites collected over a typical 24-hour period, which may be collected through the use of automated equipment;

(e) Only one analysis of the composite of aliquots is required;

(f) Analysis for the following constituents is required:

(i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,

(ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,

(iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order,

(iv) Applicable NAL constituents, and

(v) Constituents listed in Table D-3.

Table D-3. Analytical Monitoring Constituents for Receiving Water Monitoring Stations

Conventionals, Nutrients	Metals (Total and Dissolved)	Pesticides	Indicator Bacteria
• Total Dissolved Solids • Total Suspended Solids • Turbidity • Total Hardness • Total Organic Carbon • Dissolved Organic Carbon • Sulfate • Methylene Blue Active Substances (MBAS) • Total Phosphorus • Orthophosphate • Nitrite[1]	• Arsenic • Cadmium • Chromium • Copper • Iron • Lead • Mercury • Nickel • Selenium • Thallium • Zinc	• Organophosphate Pesticides • Pyrethroid Pesticides	• Total Coliform • Fecal Coliform[2] • *Enterococcus*

• Nitrate[1] • Total Kjeldhal Nitrogen • Ammonia			

Notes:
1. Nitrite and nitrate may be combined and reported as nitrite+nitrate.
2. *E. Coli* may be substituted for Fecal Coliform.

(4) Dry Weather Receiving Water Toxicity Monitoring

For each dry weather monitoring event, the Copermittees must collect grab or composite samples from each long-term receiving water monitoring station to be analyzed for toxicity in accordance with Table D-4:

Table D-4. Dry Weather Toxicity Testing for Receiving Water Monitoring Stations

Freshwater Organism	Test Approach	USEPA Protocol[2]
Pimephales promelas	1 acute 1 chronic[1]	EPA-821-R-02-012
Hyalella Azteca	1 acute 1 chronic[1]	EPA-821-R-02-012
Psuedokirchneriella subcapitata	1 acute 1 chronic[1]	EPA-821-R-02-013

Notes:
1. Chronic toxicity testing is not required at receiving water monitoring stations located at mass loading stations if the channel flows are diverted year-round during dry weather conditions to the sanitary sewer for treatment.
2. USEPA protocols must be utilized for toxicity testing unless alternate toxicity testing protocols have been approved by the San Diego Water Board.

(5) Dry Weather Receiving Water Bioassessment Monitoring

Bioassessment monitoring for each long-term receiving water monitoring station is required at least once during the term of this Order. The Copermittees must conduct bioassessment monitoring during at least one dry weather monitoring event at each long-term receiving water monitoring station as follows:

(a) The following bioassessment samples and measurements must be collected:

(i) Macroinvertebrate samples must be collected in accordance with the "Reachwide Benthos (Multihabitat) Procedure" in the most current Surface Water Ambient Monitoring Program (SWAMP) Bioassessment Standard Operating Procedures (SOP), and amendments, as applicable;[13]

(ii) The "Full" suite of physical habitat characterization measurements

[13] Ode, P.R.. 2007. Standard operating procedures for collecting macroinvertebrate samples and associated physical and chemical data for ambient bioassessments in California. California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP) Bioassessment SOP 001. http://www.swrcb.ca.gov/water_issues/programs/swamp/tools.shtml#monitoring

must be collected in accordance with the most current SWAMP Bioassessment SOP, and as summarized in the SWAMP Stream Habitat Characterization Form – Full Version;[14] and

(iii) Freshwater algae samples must be collected in accordance with the SWAMP Standard Operating Procedures for Collecting Algae Samples.[15] Analysis of samples must include algal taxonomic composition (diatoms and soft algae) and algal biomass.

(b) The bioassessment samples, measurements, and appropriate water chemistry data must be used to calculate the following:

(i) An Index of Biological Integrity (IBI) for macroinvertebrates for each monitoring station where bioassessment monitoring was conducted, based on the most current calculation method;[16] and

(ii) An IBI for algae for each monitoring station where bioassessment monitoring was conducted, when a calculation method is developed.[17]

(c) In lieu of the requirements of Provision D.1.c.(5)(a), the Copermittees may conduct the bioassessment monitoring in accordance with the "Triad" assessment approach[18] to calculate the IBIs required for Provision D.1.c.(5)(b). The Copermittees must conduct sampling, analysis, and reporting of specified in-stream biological and habitat data according to the protocols specified in the SCCWRP Technical Report No. 539, or subsequent protocols, if developed.

(6) Dry Weather Receiving Water Hydromodification Monitoring

In addition to the hydromodification monitoring conducted as part of the Copermittees' Hydromodification Management Plans, hydromodification monitoring for each long-term receiving water monitoring station is required at least once during the term of this Order. The Copermittees must collect the

[14] Available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf

[15] Fetscher et al. 2009. Standard Operating Procedures for Collecting Stream Algae Samples and Associated Physical Habitat and Chemical Data for Ambient Bioassessments in California.

[16] The most current calculation method at the time the Order was adopted is outlined in "A Quantitative Tool for Assessing the Integrity of Southern California Coastal Streams" (Ode, et al. 2005. Environmental Management. Vol. 35, No. 1, pp. 1-13). If an updated or new calculation method is developed, either both (i.e. current and updated/new) methods must be used, or historical IBIs must be recalculated with the updated or new calculation method.

[17] When a calculation method is developed, IBIs must be calculated for all available and appropriate historical data.

[18] Stormwater Monitoring Coalition Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Technical Report #419. August 2004.

following hydromodification monitoring observations and measurements within an appropriate domain of analysis during at least one dry weather monitoring event for each long-term receiving water monitoring station:

(a) Channel conditions, including:

(i) Channel dimensions,

(ii) Hydrologic and geomorphic conditions, and

(iii) Presence and condition of vegetation and habitat;

(b) Location of discharge points;

(c) Habitat integrity;

(d) Photo documentation of existing erosion and habitat impacts, with location (i.e. latitude and longitude coordinates) where photos were taken;

(e) Measurement or estimate of dimensions of any existing channel bed or bank eroded areas, including length, width, and depth of any incisions; and

(f) Known or suspected cause(s) of existing downstream erosion or habitat impact, including flow, soil, slope, and vegetation conditions, as well as upstream land uses and contributing new and existing development.

d. WET WEATHER RECEIVING WATER MONITORING

During the term of the Order, the Copermittees must perform monitoring during at least three wet weather monitoring events at each long-term receiving water monitoring station. At least one wet weather monitoring event must be conducted during the first wet weather event of the wet season (October 1 – April 30), and at least one wet weather monitoring event during a wet weather event that occurs after February 1.

(1) Wet Weather Receiving Water Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each long-term receiving water monitoring station:

(a) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event;

(b) The flow rates and volumes measured or estimated (data from nearby

USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermittees that is acceptable to the San Diego Water Board);

(c) Station condition (i.e. deposits or stains, vegetation condition, structural condition, observable biology); and

(d) Presence and assessment of trash in and around station.

(2) Wet Weather Receiving Water Field Monitoring

For each wet weather monitoring event, the Copermittees must monitor and record the parameters in Table D-2 at each long-term receiving water monitoring station.

(3) Wet Weather Receiving Water Analytical Monitoring

For each wet weather monitoring event, the Copermittees must collect and analyze samples from each long-term receiving water monitoring station as follows:

(a) Analytes that are field measured are not required to be analyzed by a laboratory;

(b) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;

(c) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, hardness, and indicator bacteria;

(d) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:

(i) Time-weighted composites composed of 24 discrete hourly samples, which may be collected through the use of automated equipment, or

(ii) Flow-weighted composites collected over the length of the storm event or a typical 24-hour period, which may be collected through the use of automated equipment;

(e) Only one analysis of the composite of aliquots is required;

(f) Analysis for the following constituents is required:

(i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,

(ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,

(iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order,

(iv) Applicable SAL constituents, and

(v) Constituents listed in Table D-3.

(4) Wet Weather Receiving Water Toxicity Monitoring

For each wet weather monitoring event, the Copermittees must collect grab or composite samples from each long-term receiving water monitoring station to be analyzed for toxicity in accordance with Table D-5:

Table D-5. Wet Weather Toxicity Testing for Receiving Water Monitoring Stations

Freshwater Organism	Test Approach	USEPA Protocol[1]
Pimephales promelas	1 acute	EPA-821-R-02-012
Hyalella Azteca	1 acute	EPA-821-R-02-012
Psuedokirchneriella subcapitata	1 acute	EPA-821-R-02-013

Notes:
1. USEPA protocols must be utilized for toxicity testing unless alternate toxicity testing protocols have been approved by the San Diego Water Board.

e. OTHER RECEIVING WATER MONITORING REQUIREMENTS

(1) Regional Monitoring

The Copermittees must participate in the following regional receiving waters monitoring programs, as applicable to the Watershed Management Area and the Copermittee's MS4 discharges:

(a) Storm Water Monitoring Coalition Regional Monitoring; and

(b) Southern California Bight Regional Monitoring.

(2) Sediment Quality Monitoring

The applicable Copermittees must perform sediment monitoring to assess compliance with sediment quality receiving water limits applicable to MS4

discharges to enclosed bays and estuaries. The monitoring may be performed either by individual or multiple affected Copermittees to assess compliance with receiving water limits, or through participation in a water body monitoring coalition. The Copermittees must identify sediment sampling stations that are spatially representative of the sediment within the water body segment or region of interest. Sediment quality monitoring must be conducted in conformance with the monitoring requirements set forth in the State Water Board Sediment Quality Control Plan.

(3) ASBS Monitoring

For Watershed Management Areas with ASBS, the applicable Copermittees must implement the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012, included in Attachment A to this Order.

f. ALTERNATIVE WATERSHED MONITORING REQUIREMENTS

The San Diego Water Board may direct the Copermittees to participate in an effort to develop alternative watershed monitoring with other regulated entities, other interested parties, and the San Diego Water Board to refine, coordinate, and implement regional monitoring and assessment programs to determine the status and trends of water quality conditions in 1) coastal waters, 2) enclosed bays, harbors, estuaries, and lagoons, and/or 3) streams. As directed by the San Diego Water Board, such alternative watershed monitoring would be done in place and stead of the commensurate requirements set forth in Provision D.1.

2. MS4 Outfall Discharge Monitoring Requirements

The Copermittees must develop and conduct a program to monitor the discharges from the major MS4 outfalls to receiving waters in each Watershed Management Area during dry weather and wet weather. Following acceptance of the Water Quality Improvement Plans and schedule for implementation of monitoring for each Watershed Management Area, the Copermittees must conduct MS4 outfall discharge monitoring during implementation of the Water Quality Improvement Plan to assess the effectiveness of their jurisdictional runoff management programs toward effectively prohibiting non-storm water discharges into the MS4 and reducing pollutants in ~~storm water~~ discharges ~~to and~~ from their MS4s to the MEP. Any available monitoring data not collected specifically for this Order that meet the quality assurance criteria of the Copermittees and the monitoring requirements of this Order may be utilized by the Copermittees. The Copermittees must conduct the following MS4 outfall monitoring procedures:

Comment [A37]: Suggest same edits for SD and OC.

a. TRANSITIONAL MS4 OUTFALL DISCHARGE MONITORING

Beginning October 1st or May 1st (whichever is sooner) following enrollment under this order and until~~Until~~ the monitoring requirements of Provisions D.2.b-c

are incorporated into a Water Quality Improvement Plan and schedule for implementation of monitoring that is accepted by the San Diego Water Board pursuant to Provision F.1, the Copermittees must conduct the following monitoring of MS4 outfall discharges to flowing receiving waters ~~monitoring~~ in the Watershed Management Area:

(1) MS4 Outfall Discharge Monitoring Station Inventory

Each Municipal Copermittee must identify all major MS4 outfalls (including those operated by a Special District Copermittee) that discharge directly to receiving waters within its jurisdiction and geo-locate those outfalls on a map of the MS4 pursuant to Provision E.2.b.(1). This information must be compiled into a MS4 outfall discharge monitoring station inventory, and must include the following information:

(a) Latitude and longitude of MS4 outfall point of discharge;

(b) Watershed Management Area;

(c) Hydrologic subarea;

(d) Outlet size;

(e) Accessibility (i.e. safety and without disturbance of critical habitat);

(f) Approximate drainage area; and

(g) Classification of whether the MS4 outfall is known to have persistent dry weather flows, transient dry weather flows, no dry weather flows, or unknown dry weather flows.

(2) Transitional Dry Weather MS4 Outfall ~~Discharge~~ Field Screening ~~Monitoring~~

Until the monitoring requirements of Provision D.2.b are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1, each Municipal Copermittee must perform the following dry weather MS4 outfall field screening monitoring to identify non-storm water and illicit discharges being discharged from MS4s within its jurisdiction in accordance with Provision E.2.c, to determine which discharges are transient ~~flows~~ and which are persistent discharges to flowing receiving waters~~flows~~, and prioritize the dry weather MS4 discharges that will be investigated and eliminated in accordance with Provision E.2.d. ~~Each Copermittee must conduct the following dry weather MS4 outfall discharge field screening monitoring within its jurisdiction:~~

Comment [A38]: Suggested change of title to better characterize the requirements of this section, compared to that of D.2.b.

Comments in this section are discussed in section 3.5.3 of the comment letter.

Comment [A39]: Duplicative of previous sentence

(a) Transitional Dry Weather MS4 Outfall Discharge Field Screening Monitoring Frequency

Each Municipal Copermittee must field screen the accessible MS4 outfalls in its inventory developed pursuant to Provision D.2.a.(1) as follows:

(i) ~~For Copermittees with less than 125 major MS4 outfalls that discharge to receiving waters within a Watershed Management Area, at least 80 percent of the outfalls must be visually inspected two times per year during dry weather conditions.~~

(ii) For Municipal Copermittees with ~~125 major MS4 outfalls or more, but~~ less than or equal to 500 MS4 outfalls~~,~~ that discharge to receiving waters within a Watershed Management Area, ~~all~~ at least 80 percent of the accessible outfalls must be visually inspected at least annually during dry weather conditions.

(iii) For Municipal Copermittees with more than 500 major MS4 outfalls that discharge to receiving waters within a Watershed Management Area, at least 500 outfalls must be visually inspected at least annually during dry weather conditions. Copermittees with more than 500 major MS4 outfalls within a Watershed Management Area must identify and prioritize at least 500 outfalls to be inspected considering the following:

[a] Assessment of connectivity of the discharge to a flowing receiving water;
[b] Reported exceedances of NALs in water quality monitoring data;
[c] Surrounding land uses;
[d] Presence of constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List; and
[e] Flow rate.

(iv) Municipal Copermittees with more than 500 major MS4 outfalls within its jurisdiction that are located in more than one Watershed Management Area, at least 500 major MS4 outfalls within its inventory must be visually inspected at least annually during dry weather conditions. Copermittees with more than 500 major MS4 outfalls in more than one Watershed Management Area must identify and prioritize at least 500 outfalls to be inspected considering the following:

[a] Assessment of connectivity of the discharge to a flowing receiving water;
[b] Reported exceedances of NALs in water quality monitoring data;
[c] Surrounding land uses;

[d] Presence of constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List; and
[e] Flow rate.

(v) Inspections of major MS4 outfalls conducted in response to public reports and staff or contractor reports and notifications may count toward the required visual inspections of MS4 outfall discharge monitoring stations.

(b) Transitional Dry Weather MS4 Outfall Discharge Field Screening Visual Observations

(i) An antecedent dry period of at least 72 hours following any storm event producing measurable rainfall greater than 0.1 inch is required prior to conducting field screening visual observations during a field screening monitoring event.

(ii) During the field screening monitoring event, each Municipal Copermittee must record visual observations consistent with Table D-6 at each MS4 outfall discharge monitoring station inspected.

Table D-6. Field Screening Visual Observations for MS4 Outfall Discharge Monitoring Stations

Field Observations
• Station identification and location • Presence of flow, or pooled or ponded water • If flow is present: - Flow estimation (i.e. width of water surface, approximate depth of water, approximate flow velocity, flow rate) - Flow characteristics (i.e. presence of floatables, surface scum, sheens, odor, color) - Flow source(s) suspected or identified from non-storm water source investigation - Flow source(s) eliminated during non-storm water source identification • If pooled or ponded water is present: - Characteristics of pooled or ponded water (i.e. presence of floatables, surface scum, sheens, odor, color) - Known or suspected source(s) of pooled or ponded water • Assessment of any observed MS4 discharge ~~with~~ to a flowing receiving water. • Station description (i.e. deposits or stains, vegetation condition, structural condition, observable biology) • Presence and assessment of trash in and around station • Evidence or signs of illicit connections or illegal dumping

(iii) Each Municipal Copermittee must implement the requirements of Provisions E.2.d.(2)(c)-(e) based on the field observations.

(iv) Each Copermittee must evaluate field observations together with existing information available from prior reports, inspections and monitoring results to determine whether any observed flowing,

pooled, or ponded waters are likely to be transient or persistent flow.[19]

Comment [A40]: See footnote edits

(c) Transitional Dry Weather MS4 Outfall Discharge Field Screening ~~Monitoring~~ Records

Based upon the results of the transitional dry weather MS4 outfall discharge field screening monitoring conducted pursuant to Provisions D.2.a.(2)(a)-(b), each Municipal Copermittee must update its MS4 outfall discharge monitoring station inventory, compiled pursuant to Provision D.2.a.(1), with any new information on the classification of whether the MS4 outfall produces persistent flow, transient flow, or no dry weather flow.

(3) Transitional Wet Weather MS4 Outfall Discharge Monitoring

Comment [A41]: See discussion in section 3.5.3 of the comment letter.

Until the monitoring requirements of Provision D.2.c are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1, the Copermittees must conduct the following wet weather MS4 outfall discharge monitoring within the Watershed Management Area:

(a) Transitional Wet Weather MS4 Outfall Discharge Monitoring Stations

The Copermittees must select at least five wet weather MS4 outfall discharge monitoring stations from the inventories developed pursuant to Provision D.2.a.(1) that are representative of storm water discharges from areas consisting primarily of residential, commercial, industrial, and typical mixed-use land uses present within the Watershed Management Area.

(b) Transitional Wet Weather MS4 Outfall Discharge Monitoring Frequency

Each wet weather MS4 outfall discharge monitoring station selected pursuant to Provision D.2.a.(3)(a) must be monitored twice during the wet season (October 1 – April 30~~)~~.) in the transitional period. The~~). One~~ wet weather monitoring ~~event~~events shall be selected to be representative of the range of hydrologic conditions experienced in the region. At least 10% of samples~~event~~ must be conducted during the first wet weather event of the wet season, ~~and~~to include~~and one wet weather monitoring event~~ at least one such sample in each Watershed Management Area~~, a month after the first wet weather event of the wet season.~~

[19] Persistent flow, for the purposes of provision II.D.2.b.(2) is defined as the presence of an MS4 discharge that is hydraulically connected to a flowing receiving~~, pooled, or ponded~~ water more than 72 hours after a measureable rainfall event of 0.1 inch or greater, during three consecutive monitoring and/or inspection events. All other flowing, pooled, or ponded water is considered transient.

(c) Transitional Wet Weather MS4 Outfall Discharge Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded of the flow from~~at~~ each wet weather MS4 outfall discharge monitoring station:

(i) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and

(ii) The flow rates and volumes measured or estimated from the outfall (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermittees that is acceptable to the San Diego Water Board);

(iii) ~~Station condition (i.e. deposits or stains, vegetation condition, structural condition, observable biology); and~~

(iv) Presence ~~and assessment~~ of trash in and around station.

Comment [A42]: This isn't appropriate for a wet weather event.

Comment [A43]: This isn't appropriate for a wet weather event.

(d) Transitional Wet Weather MS4 Outfall Discharge Field Monitoring

For each wet weather monitoring event, the Copermittees must monitor and record the parameters in Table D-2 at each wet weather MS4 outfall discharge monitoring station.

(e) Transitional Wet Weather MS4 Outfall Discharge Analytical Monitoring

For each wet weather monitoring event, the Copermittees must collect and analyze samples from each wet weather MS4 outfall discharge monitoring station as follows:

(i) Analytes that are field measured are not required to be analyzed by a laboratory;

(ii) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;

(iii) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, and indicator bacteria;

(iv) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant

concentrations and runoff flows using one of the following techniques:

[a] Time-weighted composites composed of 24 discrete hourly samples, which may be collected through the use of automated equipment, or
[b] Flow-weighted composites collected over the length of the storm event or a typical 24 hour period, whichever is shorter, which may be collected through the use of automated equipment, or
[c] If automated compositing is not feasible, a composite sample may be collected using a minimum of 4 grab samples, collected during the first 24 hours of the storm water discharge, or for the entire storm water discharge if the storm event is less than 24 hours;

(v) Only one analysis of the composite of aliquots is required;

(vi) The samples must be analyzed for the following constituents:

[a] Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
[b] Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order, and
[c] Constituents listed in in Table D-7.

Table D-7. Analytical Monitoring Constituents for Wet Weather MS4 Outfall Discharge Monitoring Stations

Conventionals, Nutrients	Metals (Total and Dissolved)	Indicator Bacteria
• Total Dissolved Solids • Total Suspended Solids • Turbidity • Total Hardness • Total Organic Carbon • Dissolved Organic Carbon • Sulfate • Methylene Blue Active Substances (MBAS) • Total Phosphorus • Orthophosphate • Nitrite[1] • Nitrate[1] • Total Kjeldhal Nitrogen • Ammonia	• Arsenic • Cadmium • Chromium • Copper • Iron • Lead • Nickel • Selenium • Thallium • Zinc	• Total Coliform • Fecal Coliform[2] • *Enterococcus*

Notes:
1. Nitrite and nitrate may be combined and reported as nitrite+nitrate.
2. *E. Coli* may be substituted for Fecal Coliform.

(f) Other Transitional Wet Weather MS4 Outfall Discharge Monitoring

The San Diego County Copermittees must continue the wet weather MS4 outfall monitoring program developed under Order No. R9-2007-0001, as approved by the San Diego Water Board, through its planned completion.

b. DRY WEATHER MS4 OUTFALL DISCHARGE MONITORING

Each Municipal Copermittee must perform the following dry weather MS4 outfall monitoring within its jurisdiction to identify non-storm water and illicit discharges within its jurisdiction pursuant to Provision E.2.c, and to prioritize the dry weather MS4 discharges that will be investigated and eliminated pursuant to Provision E.2.d. ~~Each Copermittee must conduct the following dry weather MS4 outfall discharge monitoring within its jurisdiction:~~

Comment [A44]: Repetitive of previous sentence

(1) Dry Weather MS4 Outfall Discharge Field Screening Monitoring

Comment [A45]: See discussion in section 3.5.3 of the comment letter.

Each Municipal Copermittee must continue to perform the dry weather MS4 outfall discharge field screening monitoring in accordance with the requirements of Provision D.2.a.(2)., ~~The~~ however the Municipal Copermittee may adjust the field screening monitoring frequencies and locations for the MS4 outfalls in its inventory, as needed, to identify and eliminate sources of persistent ~~flow~~ non-storm water illegal discharges from the MS4 to flowing receiving waters in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan., ~~provided the~~

~~number of visual inspections performed is equivalent to the number of visual inspections required under Provision D.2.a.(2)(a).~~

Comment [A46]: See comments in comment letter

(2) Non-Storm Water Persistent Flow MS4 Outfall Discharge Monitoring

Each Municipal Copermittee must perform the following non-storm water monitoring of MS4 outfalls that persistently ~~flow MS4 outfall~~ discharge to flowing receiving waters ~~monitoring~~ to determine which persistent non-storm water discharges contain concentrations of pollutants below NALs, and which persistent non-storm water discharges impact receiving water quality during dry weather. ~~Each Copermittee must conduct the following non-storm water persistent flow MS4 outfall discharge monitoring within its jurisdiction:~~

Comment [A47]: Repetitive of previous sentence.

(a) Prioritization of Non-Storm Water Persistent Flow MS4 Outfalls

Based upon the dry weather MS4 outfall discharge field screening monitoring records developed pursuant to Provision D.2.a.(2)(c), each Municipal Copermittee must identify and prioritize the MS4 outfalls within its jurisdiction that have~~with~~ persistent discharges to flowing receiving waters ~~flows~~ based on the highest priority water quality conditions identified in the Water Quality Improvement Plan and any additional criteria developed by the Copermittee, which may include historical data and data from sources other than what the Copermittee collects.

(b) Non-Storm Water Persistent Flow MS4 Outfall Discharge Monitoring Frequency

Comment [A48]: See comment letter section 3.5.3

(i) Based on the prioritization of major MS4 outfalls developed under Provision D.2.b.(2)(a), each Municipal Copermittee must identify, at a minimum, the top 10 percent of the~~10~~ highest priority major MS4 outfalls with non-storm water persistent flows that the Copermittee will monitor within each Watershed Management Area within its jurisdiction, with a minimum of one persistent ~~flow~~discharge outfall, and a maximum of 5 required per WMA. The location of the selected highest priority non-storm water persistent ~~flow~~ discharge MS4 outfall monitoring stations must be identified on the map required pursuant to Provision E.2.b.(1).

(ii) Each of the highest priority non-storm water persistent flow MS4 outfall monitoring stations identified pursuant to Provision D.2.b.(2)(b)(i) must be monitored under dry weather conditions at least ~~semi~~ annually until one of the following occurs:

[a] The non-storm water discharges have been effectively eliminated (i.e. no flowing, pooled, or ponded water) for three consecutive dry weather monitoring events; or

[b] The source(s) of the persistent flows has been identified as a category of non-storm water discharges that does not require an NPDES permit and does not have to be addressed as an illicit discharge because it was not identified as a source of pollutants (i.e. constituents in non-storm water discharge do not exceed NALs), and the persistent flow can be re-prioritized to a lower priority; or

[c] The constituents in the persistent flow non-storm water discharge do not exceed NALs, and the persistent flow can be re-prioritized to a lower priority; or

[d] The source(s) of the persistent flows has been identified as a non-storm water discharge authorized by a separate NPDES permit.

(iii) Where the criteria under Provision D.2.b.(2)(c)(ii) are not met, but the threat to water quality has been reduced by the Copermittee, the highest priority persistent flow MS4 outfall monitoring stations may be reprioritized accordingly for continued dry weather MS4 outfall discharge field screening monitoring required pursuant to Provision D.2.b.(1).

(iv) Each Municipal Copermittee must document removal or re-prioritization of the highest priority persistent flow MS4 outfall monitoring stations identified under Provision D.2.b.(2)(b) in the Annual Report. Persistent flow MS4 outfall monitoring stations that have been removed must be replaced with the next highest prioritized MS4 major outfall in the Watershed Management Area within its jurisdiction, unless there are no remaining qualifying major MS4 outfalls within the Copermittee's jurisdiction in the Watershed Management Area.

(c) Non-Storm Water Persistent Flow MS4 Outfall Discharge Field Observations

During each semi-annual monitoring event, each Municipal Copermittee must record field observations consistent with Table D-6 at each of the highest priority persistent flow MS4 outfall monitoring stations within its jurisdiction.

(d) Non-Storm Water Persistent Flow MS4 Outfall Discharge Field Monitoring

During each ~~semi-annual~~ monitoring event, if conditions allow the collection of the data, each Municipal Copermittee must monitor and record the parameters in Table D-2 at each of the highest priority persistent flow MS4 outfall monitoring stations within its jurisdiction.

(e) Non-Storm Water Persistent Flow MS4 Outfall Discharge Analytical Monitoring

Comment [A49]: See discussion in section 3.5.3 of the comment letter.

During each semi-annual monitoring event in which measurable flow from the MS4 outfall to a flowing receiving water is present, each Municipal Copermittee must collect and analyze samples from each of the highest priority persistent flow MS4 outfall monitoring stations within its jurisdiction as follows:

(i) Analytes that are field measured are not required to be analyzed by a laboratory;

(ii) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;

(iii) During development of the WQIP, for each WMA, consider the following sources to select constituents for collection of~~Collect~~ grab or composite samples to be analyzed at a qualified analytical laboratory:~~for the following constituents:~~

[a] Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
[b] Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
[c] Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order,
[d] Applicable NAL constituents, and
[e] Constituents listed in Table D-8, unless the Copermittee has historical data that can demonstrate or provide justification that the analysis of the constituent is not necessary.

(iv) Copermittees may adjust the analytical list for a given WMA in successive monitoring events to add or eliminate constituents based on data that can demonstrate or provide justification regarding need or lack of need for the analysis of specific constituents.

Table D-8. Analytical Monitoring Constituents for Persistent Flow MS4 Outfall Discharge Monitoring Stations

Conventionals, Nutrients	Metals (Total and Dissolved)	Indicator Bacteria
• Total Dissolved Solids • Total Suspended Solids • Total Hardness • Total Phosphorus • Orthophosphate • Nitrite[1] • Nitrate[1] • Total Kjeldhal Nitrogen	• Cadmium • Copper • Lead • Zinc	• Total Coliform • Fecal Coliform[2] • *Enterococcus*

• Ammonia		

Notes:
1. Nitrite and nitrate may be combined and reported as nitrite+nitrate.
2. *E. Coli* may be substituted for Fecal Coliform.

~~(iv)~~(v) If the Copermittee identifies and eliminates the source of the persistent flow non-storm water discharge, analysis of the sample is not required.

c. WET WEATHER MS4 OUTFALL DISCHARGE MONITORING

The Copermittees must perform wet weather MS4 outfall monitoring to identify sources areas of pollutants in ~~storm water~~ discharges from the MS4s in the Watershed Management Area. The Copermittees must conduct the following wet weather MS4 outfall discharge monitoring within the Watershed Management Area:

(1) Wet Weather MS4 Outfall Discharge Monitoring Stations

The Copermittees may adjust the wet weather MS4 outfall discharge monitoring locations and frequencies in the Watershed Management Area, as needed, to identify sources of pollutants in storm water discharges from MS4s in the Watershed Management Area in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan, provided the number of stations is at least equivalent to the number of stations required under Provision D.2.a.(3)(a).

(2) Wet Weather MS4 Outfall Discharge Monitoring Frequency

The Copermittees must monitor the wet weather MS4 outfall discharge monitoring stations in the Watershed Management Area at an appropriate frequency to identify source areas of pollutants in ~~storm water~~ discharges from the MS4s causing or contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan.

(3) Wet Weather MS4 Outfall Discharge Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each wet weather MS4 outfall discharge monitoring station:

(a) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and

(b) The flow rates and volumes measured or estimated (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or

estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermittees that is acceptable to the San Diego Water Board);

~~(c) Station condition (i.e. deposits or stains, vegetation condition, structural condition, observable biology); and~~

~~(d) Presence and assessment of trash in and around station.~~

Comment [A50]: These are inappropriate for wet weather observations.

(4) Wet Weather MS4 Outfall Discharge Field Monitoring

For each wet weather monitoring event, the Copermittees must monitor and record the parameters in Table D-2 at each wet weather MS4 outfall discharge monitoring station.

(5) Wet Weather MS4 Outfall Discharge Analytical Monitoring

For each wet weather monitoring event, the Copermittees must collect and analyze samples from each wet weather MS4 outfall discharge monitoring station as follows:

(a) Analytes that are field measured are not required to be analyzed by a laboratory;

(b) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;

(c) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, hardness, and indicator bacteria;

(d) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:

(i) Time-weighted composites composed of 24 discrete hourly samples, which may be collected through the use of automated equipment, or

(ii) Flow-weighted composites collected over the length of the storm event or a typical 24 hour period, whichever is shorter, which may be collected through the use of automated equipment, or

(iii) If automated compositing is not feasible, a composite sample may be collected using a minimum of 4 grab samples, collected during the first 24 hours of the storm water discharge, or for the entire storm water discharge if the storm event is less than 24 hours.

(e) Only one analysis of the composite of aliquots is required;

(f) Analysis for the following constituents is required:

(i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,

(ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,

(iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order, and

(iv) Applicable SAL constituents.

3. Special Studies

Comment [A51]: See discussion in section 3.5.3 of the comment letter.

a. Within the term of this Order, the Copermittees must initiate~~develop and implement~~ the following special studies:

(1) At least two~~three~~ special studies in each Watershed Management Area to address pollutant and/or stressor data gaps and/or develop information necessary to more effectively address the pollutants and/or stressors that cause or contribute to highest priority water quality conditions identified in the Water Quality Improvement Plan.

(2) At least one~~two~~ special study~~studies~~ for the San Diego Region to address pollutant and/or stressor data gaps and/or develop information necessary to more effectively address the pollutants and/or stressors that are impacting receiving waters on a regional basis in the San Diego Region.

(3) One of the two~~three~~ special studies in each Watershed Management Area may be replaced by a special study implemented pursuant to Provision D.3.a.(2).

b. The special studies must, at a minimum, be in conformance with the following criteria:

(1) The special studies must be related to the highest priority water quality conditions identified by the Copermittees in the Watershed Management Area and/or for the entire San Diego Region;

(2) The special studies developed pursuant to Provision D.3.a.(1) must:

(a) Be implemented within the applicable Watershed Management Area, and

(b) Require some form of participation by all the Copermittees within the Watershed Management Area;

(3) The special studies developed pursuant to Provision D.3.a.(2) must:

(a) Be implemented within the San Diego Region, and

(b) Require some form of participation by all Copermittees covered under the requirements of this Order.

c. Special studies developed to identify sources of pollutants and/or stressors should be pollutant and/or stressor specific and based on historical monitoring data and monitoring performed pursuant to Provisions D.1 and D.2. Development of source identification special studies should include the following:

(1) A compilation of known information on the specific pollutant and/or stressor, including data on potential sources and movement of the pollutant and/or stressor within the watershed. Data generated by the Copermittees and others, as well as information available from a literature research on the pollutant and/or stressor should be compiled and analyzed as appropriate.

(2) An identification of data gaps, based on the compiled information generated on the specific pollutant and/or stressor in Provision D.3.d.(1). Source identification special studies should be developed to fill identified data gaps.

(3) A monitoring plan that will collect and provide data the Copermittees can utilize to do the following:

(a) Quantify the relative loading or impact of a pollutant and/or stressor from a particular source or pollutant generating activity;

(b) Improve understanding of the fate of a pollutant and/or stressor in the environment;

(c) Develop an inventory of known and suspected sources of a pollutant and/or stressor in the Watershed Management Area; and/or

(d) Prioritize known and suspected sources of a pollutant and/or stressor based on relative magnitude in discharges, geographical distribution (i.e.,

regional or localized), frequency of occurrence in discharges, human health risk, and controllability.

d. Special studies initiated prior to the termacceptance of thethis Orderthe Water Quality Improvement Plan that meet the requirements of Provision D.3.b and are implementedcompleted during the term of this Order may be utilized to fulfill the special study requirements of Provision D.3.a.

e. The Copermittees must submit the monitoring plans for the special studies in the Water Quality Improvement Plans required pursuant to Provision F.1.

f. The Copermittees are encouraged to share the results of the special studies regionally among the Copermittees to provide information useful in improving and adapting the management of non-storm water and storm water runoff through the implementation of the Water Quality Improvement Plans.

4. Assessment Requirements

Each Copermittee must evaluate the data collected pursuant to Provisions D.1, D.2 and D.3, and information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision E, to assess the progress of the water quality improvement strategies in the Water Quality Improvement Plan toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a. Assessments must be performed as described in the following provisions:

a. RECEIVING WATERS ASSESSMENTS

(1) The Copermittees must assess and report the conditions of the receiving waters in the Watershed Management Area as follows:

(a) Based on data collected pursuant to Provision D.1.a, the assessments under Provision D.4.a.(2) must be included in the transitionalfirst Annual Report required pursuant to Provision F.3.b.(21).

(b) Based on the data collected pursuant to Provisions D.1.a-e, the assessments required under Provision D.4.a.(2) must be included in the Report of Waste Discharge required pursuant to Provision F.5.b.

(2) The Copermittees must assess the status and trends of receiving water quality conditions in 1) coastal waters, 2) enclosed bays, harbors, estuaries, and lagoons, and 3) streams under dry weather and wet weather conditions, as those conditions are affected by discharges from the Copermittees' MS4, to determine the progress towards meeting interim or final goals of the Water Quality Implementation Plan for the Watershed Management Area. For each of the three types of receiving waters that are present in each Watershed Management Area the applicable Copermittees must:

Comment [A52]: See our edits to that section

Comment [A53]: See discussion in section 3.5.3 of the comment letter.

(a) Determine whether or not the conditions of the receiving waters are meeting any applicable numeric goals established pursuant to provision B.2.e.~~protective of the designated beneficial uses~~;

~~(b) Identify the most critical beneficial uses that must be protected or restored to ensure overall health of the receiving water;~~

~~(c) Determine whether or not those critical beneficial uses are being protected and where those beneficial used must be restored;~~

~~(d)~~(b) Identify short-term and/or long-term improvements or degradation of Receiving Water conditions related to those numeric goals~~those critical beneficial uses~~;

~~(e)~~(c) Identify data gaps in the monitoring data necessary to assess Provisions D.4.a.(2)(a)-(d).

b. MS4 OUTFALL DISCHARGES ASSESSMENTS

(1) Non-Storm Water Discharges Reduction Assessments

(a) ~~Each Copermittee must assess and report the progress of its illicit discharge detection and elimination program, required to be implemented pursuant to Provision E.2, toward reducing and effectively prohibiting non-storm water and illicit discharges into the MS4 within its jurisdiction as follows:~~

~~(i) Based on data collected pursuant to Provisions D.2.a.(2), the assessments under Provision D.4.b.(1)(b) must be included when complete in the Annual Report required pursuant to Provision F.3.b.(1).~~

~~(ii) Based on the data collected pursuant to Provisions D.2.b, the assessments required under Provision D.4.b.(1)(c) must be included in the first Annual Report required pursuant to Provision F.3.b.(1), and annually thereafter.~~

~~(iii) Based on the data collected pursuant to Provisions D.2.b, the assessment required under Provision D.4.b.(1)(c) must be included in the Report of Waste Discharge required pursuant to F.5.b.~~

(b) Based on the transitional dry weather MS4 outfall discharge field screening monitoring required pursuant to Provision D.2.a.(2), each

Comment [A54]: See discussion in section 3.5.3 of the comment letter for key changes. Other changes are described in comments below.

Comment [A55]: For clarity and simplicity, these timelines were integrated into the following sections.

Municipal Copermittee must assess and report the following, as applicable to discharges from the MS4 (including Special District Copermittee MS4s) to flowing receiving waters within their jurisdiction, in the Annual Report required pursuant to Provision F.3.b.(2):~~:~~

Comment [A56]: Per edits to that section

(i) Identify the known and suspected controllable sources (e.g. facilities, areas, land uses, pollutant generating activities) of transient and persistent flow discharges to flowing receiving waters~~flows~~ within the Copermittee's jurisdiction in the Watershed Management Area;

(ii) Identify sources of transient and persistent flow discharges to flowing receiving waters~~flows~~ within the Copermittee's jurisdiction in the Watershed Management Area that have been reduced or eliminated; and

(iii) Identify modifications to the field screening monitoring locations and frequencies for the MS4 outfalls in its inventory necessary to identify and eliminate sources of persistent flow non-storm water discharges to flowing receiving waters, pursuant to Provision D.2.b.(1).

(c) Based on the dry weather MS4 outfall discharge field screening monitoring required pursuant to Provision D.2.b, each Municipal Copermittee must assess and report the following, as applicable to discharges from the MS4 (including Special District Copermittee MS4s) within their jurisdiction, in each Annual Report required pursuant to F.3.b.(3) and in the Report of Waste Discharge required pursuant to Provision F.5.b.:~~:~~

Comment [A57]: Per edits to that section

(i) The assessments required pursuant to Provision D.4.b.(1)(a~~b~~);

Comment [A58]: Per edits above

(ii) Based on the data collected and applicable NALs in the Water Quality Improvement Plan, rank the MS4 outfalls in the Copermittee's jurisdiction according to potential threat to receiving water quality, and produce a prioritized list of major MS4 outfalls for follow-up action to update the Water Quality Improvement Plan, with the goal of eliminating persistent flow non-storm water discharges to flowing receiving waters and/or pollutant loads in order of the ranked priority list through targeted programmatic actions and source investigations;

(iii) For the highest priority major MS4 outfalls with persistent flow discharges to a flowing receiving water~~flows~~ that are in exceedance of NALs, identify the known and suspected sources within the Copermittee's jurisdiction in the Watershed Management Area that may cause or contribute to the NAL exceedances;

(iv) Each Copermittee must analyze the data collected pursuant to Provision D.2.b.(2), and: ~~utilize a model or other method, to calculate or estimate the non-storm water volumes and pollutant loads collectively discharged from all the major MS4s outfalls in its jurisdiction identified as having persistent dry weather flows during~~

Comment [A59]: Edits to this section (and sub-sections) is different than SD edits.

~~the monitoring year. These calculations or estimates must be updated annually. Each Copermittee must calculate or estimate:~~

[a] Calculate or estimate annual non-storm water volumes and pollutant loads (associated with the priority constituents identified in the WQIP) collectively discharged from the monitored persistently flowing ~~Copermittee's~~ major MS4 outfalls discharging to flowing receiving waters within the Copermittee's jurisdiction, or discharged into another Copermittee's MS4 as demonstrated through provision E.2.d.~~with an estimate of the percent contribution from each known and suspected source for each MS4 outfall~~;

[b] Identify ~~identify~~ and quantify, where feasible, known sources of non-stormwater flows not ~~[b] Annual non-storm water volumes and pollutant loads from areas or facilities~~ subject to the Copermittee's legal authority that are discharged from the Copermittee's major MS4 outfalls to downstream receiving waters.

(v) Each Copermittee must review the data collected pursuant to Provision D.2.b and findings from the assessments required pursuant to Provision D.4.b.(1)(c)(i)-(iv) ~~once per Permit term~~on an annual ~~basis, and then report~~ within the Regional Monitoring and Assessment Report per Provision F.3.c., the following ~~to~~:

[a] Identify reductions and progress in achieving reductions in non-storm water and illicit discharges to the Copermittee's MS4 in the Watershed Management Area;

[b] Assess the effectiveness of water quality improvement strategies being implemented by the Copermittees within the Watershed Management Area toward reducing or eliminating non-storm water and pollutant loads discharging from the MS4 to receiving waters within its jurisdiction, with an estimate, if possible, of the non-storm water volume and/or pollutant load reductions attributable to specific water quality strategies implemented by the Copermittee; and

[c] Identify modifications necessary to increase the effectiveness of the water quality improvement strategies implemented by the Copermittee in the Watershed Management Area toward reducing or eliminating non-storm water and pollutant loads discharging from the MS4 to receiving waters within its jurisdiction.

(vi) Identify data gaps in the monitoring data necessary to assess Provisions D.4.b.(2)(c)(i)-(v).

(2) Storm Water Pollutant Discharges Reduction Assessments

(a) ~~The Copermittees must assess and report the progress of the water quality improvement strategies, required to be implemented pursuant to~~

Comment [A60]: This is to help ensure jurisdictional accountability for what is being discharged from their jurisdiction.

~~Provisions B and E, toward reducing pollutants in storm water discharges from the MS4s within the Watershed Management Area as follows:~~

~~(i) Based on data collected pursuant to Provisions D.2.a.(3), the assessments under Provision D.4.b.(2)(b) must be included in the first Annual Report required pursuant to Provision F.3.b.(1).~~

~~Based on the data collected pursuant to Provisions D.2.c, the assessments required under ProvisionProvision first Annual Report required pursuant to Provision F.3.b.(1), and annually thereafter.~~

~~Based on the data collected pursuant to Provisions D.2.c, the assessment required under Provisions D.4.b.(2)(c)-(d) must be included in the Report of Waste Discharge required pursuant to F.5.b.~~

(b) Based on the transitional wet weather MS4 outfall discharge monitoring required pursuant to Provision D.2.a.(3) the Copermittees must assess and report the following in the Transitional Period Monitoring Report required pursuant to Provision F.3.b.(2):

(i) The Copermittees must analyze the monitoring data collected pursuant to Provision D.2.a.(3), and utilize a watershed model or other method, to calculate or estimate: ~~storm water volumes and pollutant loads discharged from the MS4s in each Copermittee's jurisdiction within the Watershed Management Area. The Copermittees must calculate or estimate the following for each monitoring year:~~

[a] The average storm water runoff coefficient for each land use type within the Watershed Management Area;

[b] The volume of storm water and pollutant loads discharged from each of the Copermittee's monitored major MS4 outfalls in its jurisdiction to receiving waters within the Watershed Management Area for each monitored storm event with measurable rainfall greater than 0.1 inch, for each of the priority water quality constituents identified in the WQIP;

[c] The total volume and pollutant loads potentially discharged from each Municipal Copermittee's jurisdiction within the watershed management area, for each monitored event, extrapolated from the data produced from the monitored outfalls.

~~The pollutant loads discharged from each of the Copermittee's major MS4 outfalls in its jurisdiction to receiving waters within the Watershed Management Area for each storm event with measurable rainfall greater than 0.1 inch; and~~

~~[d] The percent contribution of storm water volumes and pollutant loads discharged from each land use type within the drainage basin to each of the Copermittee's major MS4 outfalls in its~~

Comment [A61]: See discussion in section 3.5.3 of the comment letter.

Comment [A62]: Removed as this was confusing as it was duplicative of the subsections below.

Comment [A63]: There is no need to perform this analysis for other pollutants not identified as priorities in the WQIP.

~~jurisdiction to receiving waters within the Watershed Management Area for each storm event with measurable rainfall greater than 0.1 inch.~~

(ii) Identify modifications to the wet weather MS4 outfall discharge monitoring locations and frequencies necessary to identify ~~sources~~ pollutants in storm water discharges from the MS4s in the Watershed Management Area pursuant to Provision D.2.c.(1).

(c) Based on the wet weather MS4 outfall discharge monitoring required pursuant to Provision D.2.c the Copermittees must assess and report (i) and (ii) below in the annual reports required per F.3.b.(3), and (i) through (iv) below in the Regional Monitoring and Assessment Report required per F.3.c. ~~the following~~:

(i) The assessments required pursuant to Provision D.4.b.(2)(a~~b~~);

(ii) Based on the data collected and applicable SALs in the Water Quality Improvement Plan, analyze and compare the monitoring data to the analyses and assumptions used to develop the Water Quality Improvement Plans, including strategies developed per Provision B.3, and evaluate whether ~~,rank the MS4 outfalls in the Watershed Management Area according to potential threat to receiving water quality, and produce a prioritized list of major MS4~~ there is a need to update the Water Quality Improvement Plan;

(iii) The Copermittees must review the data collected pursuant to Provision D.2.c and findings from the assessments required pursuant to Provisions D.4.b.(2)(c)(i)-(ii) ~~on an annual basis~~ to:

[a] Identify reductions and progress in achieving reductions in pollutant concentrations and/or pollutant loads from different land uses and/or drainage areas discharging from the Copermittees' MS4s in the Watershed Management Area;

[b] Assess the effectiveness of water quality improvement strategies being implemented by the Copermittees within the Watershed Management Area toward reducing pollutants in ~~storm water~~ discharges from the MS4s to receiving waters within the Watershed Management Area to the MEP, with an estimate, if possible, of the pollutant load reductions attributable to specific water quality strategies implemented by the Copermittees; and

[c] Identify modifications necessary to increase the effectiveness of the water quality improvement strategies implemented by the Copermittees in the Watershed Management Area toward reducing pollutants in ~~storm water~~ discharges from the MS4s to receiving waters in the Watershed Management Area to the MEP.

(iv) Identify data gaps in the monitoring data necessary to assess Provisions D.4.b.(2)(c)(i)-(iii).

Comment [A64]: See discussion in section 3.5.3 of the comment letter.

Comment [A65]: Per edits to that section

Comment [A66]: Per edits above

(d) Within the Regional Monitoring and Assessment report required pursuant to F.3.c. ~~The~~ Copermittees must evaluate all the data collected pursuant to Provision D.2.c, and incorporate new outfall monitoring data into time series plots for each long-term monitoring constituent for the Watershed Management Area, and perform statistical trends analysis on the cumulative long-term wet weather MS4 outfall discharge water quality data set.

c. SPECIAL STUDIES ASSESSMENTS

The Copermittees must in the applicable annual report required pursuant to F.3.b., ~~annually~~ evaluate the results and findings from the special studies developed and implemented pursuant to Provision D.3, and assess their relevance to the Copermittees' efforts to characterize receiving water conditions, understand sources of pollutants and/or stressors, and control and reduce the discharges of pollutants from the MS4 outfalls to receiving waters in the Watershed Management Area. The Copermittees must report the results of the special studies assessments applicable to the Watershed Management Area, and identify any necessary modifications or updates to the Water Quality Improvement Plan based on the results in the Annual Reports required pursuant to Provision F.3.b.

d. INTEGRATED ASSESSMENT OF WATER QUALITY IMPROVEMENT PLAN

As part of the iterative approach and adaptive management process required for the Water Quality Improvement Plan pursuant to Provision B.5, the Copermittees in each Watershed Management Area must integrate the data collected pursuant to Provisions D.1-D.3, the findings from the assessments required pursuant to Provisions D.4.a-c, and information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision E to assess the effectiveness of, and identify necessary modifications to, the Water Quality Improvement Plan as follows:

(1) The Copermittees must re-evaluate the priority water quality conditions and numeric goals for the Watershed Management Area, as needed, during the term of this Order pursuant to Provision B.5.a. The re-evaluation and recommendations for modifications to the priority water quality conditions, and/or numeric goals and corresponding schedules may be provided in the Annual Reports required pursuant to Provision F.3.b, but must at least be provided in the Regional Monitoring and Assessment Report ~~of Waste Discharge~~ pursuant to Provision F.3.c ~~5.b~~. The priority water quality conditions and numeric goals for the Watershed Management Area must be re-evaluated as follows:

(a) Re-evaluate the receiving water conditions in the Watershed Management Area in accordance with Provision B.2.a;

(b) Re-evaluate the impacts on receiving waters in the Watershed Management Area from MS4 discharges in accordance with Provision B.2.b;

(c) Re-evaluate the identification of MS4 sources of pollutants and/or stressors in accordance with Provision B.2.d;

(d) Identify beneficial uses of the receiving waters that are protected or must be restored in accordance with Provision D.4.a;

(e) Evaluate the progress toward achieving the interim and final numeric goals for restoring impacted beneficial uses in the receiving waters.

(2) The Copermittees must re-evaluate the water quality improvement strategies for the Watershed Management Area during the term of this Order pursuant to Provision B.5.b. The re-evaluation and recommendations for modifications to the water quality improvement strategies and schedules may be provided in the Annual Reports required pursuant to Provision F.3.b, but must at least be provided in the Regional Monitoring and Assessment Report pursuant to Provision F.3.c~~must be provided in the Annual Reports required pursuant to Provision F.3.b, and provided in the Report of Waste Discharge pursuant to Provision F.5.b~~. The water quality improvement strategies for the Watershed Management Area must be re-evaluated as follows:

(a) Identify the non-storm water and storm water pollutant loads from the Copermittees' MS4 outfalls in the Watershed Management Area, calculated or estimated pursuant to Provisions D.4.b;

(b) Identify the non-storm water and storm water pollutant load reductions, or other improvements to receiving water or water quality conditions, that are necessary to attain the interim and final numeric goals identified in the WQIP~~for restoring impacted beneficial uses in the receiving waters~~;

(c) Identify any~~the~~ non-storm water and storm water pollutant load reductions, or other improvements to the quality of MS4 discharges, that are necessary for the Copermittees to ~~demonstrate that non-storm water and storm water~~ reduce discharges of pollutants from their MS4s that have been demonstrated to be~~are not~~ causing or contributing to exceedances of receiving water limitations;

Comment [A67]: See discussion in section 3.5.3 of the comment letter.

(d) Evaluate the progress of the water quality improvement strategies toward achieving the interim and final numeric goals identified in the WQIP~~for restoring impacted beneficial uses in the receiving waters~~.

(3) The Copermittees must re-evaluate and adapt the water quality monitoring and assessment program for the Watershed Management Area when new information becomes available to improve the monitoring and assessment

program pursuant to Provision B.5.c. The re-evaluation and recommendations for modifications to the monitoring and assessment program may be provided in the Annual Reports required pursuant to Provision F.3.b, but must at least be provided in the Regional Monitoring and Assessment Report ~~of Waste Discharge~~ pursuant to Provision F.3.c~~5.b~~. Modifications to the water quality monitoring and assessment program must be consistent with the requirements of Provision D.1-D.3. The re-evaluation of the water quality monitoring and assessment program for the Watershed Management Area must consider the data gaps identified by the assessments required pursuant to Provisions D.4.a-b, and results of the special studies implemented pursuant to Provision D.4.c.

5. Monitoring Provisions

Each Copermittee must comply with all the monitoring, reporting, and recordkeeping provisions of the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

E. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS

The purpose of this provision is for each Copermittee to implement a program to control the contribution of pollutants to and the discharges from the MS4 within its jurisdiction. The goal of the jurisdictional runoff management programs is to implement strategies that effectively prohibit non-storm water discharges to the MS4 and reduce the discharge of pollutants in ~~storm water~~ to the MEP. This goal will be accomplished through implementing the jurisdictional runoff management programs in accordance with the strategies identified in the Water Quality Improvement Plans.

Each Copermittee must update its jurisdictional runoff management program document, in accordance with Provision F.2.a, to incorporate all the requirements of Provision E, consistent with their legal authority. Until the Copermittee has updated its jurisdictional runoff management program document with the applicable requirements of Provision E, the Copermittee must continue implementing its current jurisdictional runoff management program.

Modification of Jurisdictional Runoff Management Program Requirements

Modifications shall be considered and where selected, proposed according to the process in Provision B.5. Proposed modifications may increase, decrease, and/or replace minimum requirements identified in Provision E.

1. Legal Authority Establishment and Enforcement

Comment [A68]: See discussion in section 3.6 of the comment letter.

a. Each Copermittee must establish, maintain, and enforce adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 through statute, ordinance, permit, or series of contracts, ~~order, or similar means~~ which~~.~~ ~~This legal authority must~~, at a minimum, authorize the Copermittee to:

(1) Effectively prohibit through ordinance, order or other similar means~~Prohibit and eliminate all~~ illicit discharges ~~and illicit connections~~ to its MS4;

(2) Control, through ordinance, permit, contract, order or similar means the contribution of pollutants in discharges to the MS4 by storm water discharges ~~of runoff~~ associated with industrial and construction activity ~~to its MS4~~, and ~~control~~ the quality of storm water discharges ~~runoff~~ from sites of industrial and construction activity~~sites~~, whose discharges have not been separately authorized through ~~that do not, including industrial and construction sites which~~ have coverage under the statewide General Permit for Discharges of Storm Water Associated with Industrial Activities (Industrial General Permit) or General Permit for Discharges of Storm Water Associated with Construction Activities (Construction General Permit)~~, as well as to those sites which do not;~~

Comment [A69]: See discussion in section 3.6.2 of the comment letter.

(3) Control, through ordinance, order or similar means the discharge to the MS4 of spills, dumping, or disposal of materials other than storm water ~~into its~~

Comment [A70]: See discussion in section 3.6.2 of the comment letter.

~~MS4~~;

(4) Control through interagency agreements among Copermittees the contribution of pollutants from one portion of the MS4 to another portion of the MS4;

(5) ~~Control, by coordinating and cooperating with other owners of the MS4 such as Caltrans, the U.S. federal government, or sovereign Native American Tribes through interagency agreements, where possible, the contribution of from their portion of the MS4 to the portion of the MS4 within the Copermittee's jurisdiction;~~

Comment [A71]: See discussion in section 3.6.2 of the comment letter.

(6) Require compliance with conditions in its ~~statutes,~~ ordinances, permits, contracts, or orders~~, or similar means to hold dischargers to its MS4 accountable for their contributions of pollutants and flows~~;

Comment [A72]: See discussion in section 3.6.2 of the comment letter.

(7) ~~Require the use of BMPs to prevent or reduce the discharge of pollutants in storm water from its MS4 to the MEP;~~

(8) ~~Require documentation on the effectiveness of BMPs implemented to prevent or reduce the discharge of pollutants in storm water from its MS4 to the MEP;~~

(9) ~~Utilize enforcement mechanisms to require compliance with its statutes, ordinances, permits, contracts, orders, or similar means; and~~

Comment [A73]: See discussion in section 3.6.2 of the comment letter.

(10) Carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with permit conditions~~its statutes, ordinances, permits, contracts, orders, or similar means and with the requirements of this Order~~, including the prohibition of illicit discharges and connections to its MS4; ~~the Copermittee must also have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities, including construction sites, discharging into its MS4.~~

Comment [A74]: See discussion in section 3.6.2 of the comment letter.

b. With the first Annual Report required pursuant to Provision F.3.b, each Copermittee must submit a statement certified by its Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative that the Copermittee has taken the necessary steps to obtain and maintain full legal authority within its jurisdiction to implement and enforce each of the requirements contained in this Order.

2. Illicit Discharge Detection and Elimination

Comment [A75]: See discussion in section 3.7 of the comment letter.

Each Copermittee must implement a program to actively detect and eliminate illicit discharges and improper disposal into the MS4, or otherwise require the discharger

to apply for and obtain a separate NPDES permit. The illicit discharge detection and elimination program must be implemented in accordance with the strategies identified in the Water Quality Improvement Plan and include, at a minimum, the following requirements:

STRATEGIES TO ADDRESS THE HIGHEST PRIORITY WATER QUALITY CONDITIONS

Each Copermittee must describe in its jurisdictional runoff management program document the strategies and/or activities that will be implemented as part of the illicit discharge detection and elimination program to address ~~non-storm water and~~ illicit discharges and connections that the Copermittee has identified as potential sources of pollutants and/or stressors that contribute to the highest priority water quality conditions in the Watershed Management Area as follows:

(1) Provide specific details about how the strategies and/or activities will be implemented (e.g. designate ~~additional~~ BMPs, focus education, and/or increase/decrease frequency of inspections in specific areas); and

(2) The strategies and/or activities ~~must~~ may be modified from ~~consistent with~~ the default requirements of Provisions E.2.b-e~~a-d and~~ to be consistent with the strategies identified in the Water Quality Improvement Plan;

(3) The requirements of the programs as outlined in the following sub-provisions may be modified and prioritized as appropriate for consistency with the highest water quality priorities and strategies as identified in the corresponding Water Quality improvement Plan(s).

a. NON-STORM WATER DISCHARGES

To the extent allowable by law, each~~Each~~ Copermittee must address all non-storm water discharges ~~from~~into the MS4 as illicit discharges, where the likelihood exists that they are a source of pollutants to the Receiving Waters, unless ~~a non-storm water~~the discharge is either identified as a discharge authorized by a separate NPDES permit, or identified as a category of non-storm water discharges or flows that is consistent with~~must be addressed pursuant to~~ the following requirements:

(1) ~~Discharges of non-storm water to the MS4 from the following categories must be addressed as illicit dischargeunless the discharge has coverage under NPDES Permit No. CAG919001 (Order No. R9-2007-0034, or subsequent order) for discharges to San Diego Bay, or NPDES Permit No. CAG919002 (Order No. R9-2008-0002, or subsequent order) for discharges to surface waters other than San Diego Bay.~~

Comment [A76]: See discussion in section 3.7.2 of the comment letter.

~~(a) Uncontaminated pumped ground water;~~

~~(b) Discharges from foundation drains;~~[20]

~~(c) Water from crawl space pumps; and~~

~~(d) Water from footing drains.~~[19]

(2) Discharges of non-storm water from water line flushing and water main breaks to the MS4 must be addressed as illicit discharges unless the discharge has coverage under a valid NPDES Permit, ~~No. CAG 679001~~ (Order No. R9-2010-0003, or a subsequent order). This category includes potable water line flushing ~~and water main break~~ discharges from water purveyors issued a water supply permit by the California Department of Public Health or federal military installations. Discharges from recycled or reclaimed water lines to the MS4 must be addressed as illicit discharges, unless the discharges have coverage under a separate NPDES permit.

Comment [A77]: See discussion in section 3.7.2 of the comment letter.

(3) Discharges of non-storm water into the MS4 from the following categories must be addressed by the Copermittee as illicit discharges only if the Copermittee or the San Diego Water Board identifies the individual discharge as a source of pollutants to receiving waters:

Comment [A78]: See discussion in section 3.7.2 of the comment letter.

(a) Diverted stream flows;

(b) Rising ground waters;

(c) Uncontaminated ground water infiltration to MS4s;

(d) Uncontaminated pumped ground water;

(e) Springs;

(f) Water from crawl space pumps;

~~(c)~~(g) Flows from riparian habitats and wetlands;

(h) Landscape irrigation;

(i) Irrigation water;

(j) Lawn watering;

Comment [A79]: See Legal Comments discussion.

[20] ~~Provision E.2.a.(1) only applies to this category on non-storm water if the system is designed to be located at or below the highest historical groundwater table to actively or passively extract groundwater during any part of the year.~~

~~(d)~~(k) Discharges from potable water sources;

~~(e)~~(l) Discharges from foundation drains;[21] ~~and~~

(m)Discharges from footing drains. .[21]

(4) Discharges of non-storm water into the MS4 from the following categories must be controlled by the requirements given below through statute, ordinance, permit, contract, order, or similar means. ~~Discharges of non-storm water to the MS4 from the following categories not controlled by the requirements given below through~~ If such statutes, ordinances, permits, contracts, orders, or similar means have not been enacted by the Copermittee, the applicable categories below must be addressed by the Copermittee as illicit discharges.

Comment [A80]: See discussion in section 3.7.2 of the comment letter.

(a) Air conditioning condensation

The discharge of air conditioning condensation should~~must~~ be directed to landscaped areas or other pervious surfaces where feasible.

(b) Individual residential vehicle washing

(i) The discharge of wash water ~~must~~ should be directed to landscaped areas or other pervious surfaces where feasible; and

(ii) Minimize the use of water for vehicle washing, use as little washing detergent and other vehicle wash products as possible, wash vehicles at commercial wash facilities, and implement other practices or behaviors that will prevent the discharge of pollutants associated with individual residential vehicle washing from entering the MS4.

(c) Dechlorinated swimming pool discharges

(i) Eliminate residual chlorine, algaecide, filter backwash, or other pollutants from swimming pools prior to discharging to the MS4; and

(ii) The discharge of saline swimming pool water must be directed to the sanitary sewer, landscaped areas, or other pervious surfaces that can accommodate the volume of water, unless the saline swimming pool water can be discharged via a pipe or concrete channel directly to a naturally saline water body (e.g. Pacific Ocean).

(5) Firefighting discharges to the MS4 must be addressed by the Copermittee as

Comment [A81]: See discussion in section 3.7.2 of the comment letter.

[21] ~~Provision E.2.a.(3) only applies to this category of non-storm water discharge if the system is designed to be located above the highest historical groundwater table at all times of the year, and the system is only expected to discharge non-storm water under unusual circumstances.~~

follows:~~illicit discharges only if the Copermittee or the San Diego Water Board identifies the discharge as a significant source of pollutants to receiving waters. Firefighting discharges to the MS4 not identified as a significant source of pollutants to receiving waters, must be addressed, at a minimum, as follows:~~

(a) Non-emergency firefighting discharges

(i) Building fire suppression system maintenance discharges (e.g.~~,~~ sprinkler line flushing) to the MS4 must be addressed as illicit discharges unless appropriate BMPs are implemented.

(ii) Non-emergency firefighting discharges (i.e., discharges from controlled or practice blazes, firefighting training, and maintenance activities not associated with building fire suppression systems) must be addressed by a program, to be developed and implemented by the Copermittee in conjunction with the local Fire Authority/District, to reduce or eliminate pollutants in such discharges from entering the MS4.

(b) Emergency firefighting discharges (i.e., flows necessary for the protection of life or property) do not require BMPs and need not be prohibited.

~~Each Copermittee should develop and encourage implementation of BMPs to reduce or eliminate pollutants in emergency firefighting discharges to the MS4s and receiving waters within its jurisdiction. During emergency situations, priority of efforts should be directed toward life, property, and the environment (in descending order). BMPs should not interfere with immediate emergency response operations or impact public health and safety.~~

(6) If the Copermittee or San Diego Water Board identifies any category of non-storm water discharges listed under Provisions E.2.a.(1)-(4) as a source of pollutants to receiving waters, the category must be effectively prohibited through ordinance, order, or similar means and addressed as an illicit discharge.

(7) ~~Each Copermittee must, where feasible, reduce or eliminate non-storm water discharges listed under Provisions E.2.a.(1)-(4) into its MS4 whether or not the non-storm water discharge has been identified as an illicit discharge, unless a non-storm water discharge is identified as a discharge authorized by a separate NPDES permit.~~

Comment [A82]: See discussion in section 3.7.2 of the comment letter.

b. PREVENT AND DETECT ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee must include the following measures within its program to prevent and detect illicit discharges to the MS4:

(1) Each Copermittee must maintain an updated map of its entire MS4 and the corresponding drainage areas. The accuracy of the MS4 map must be confirmed during the field screening required pursuant to Provision E.2.c. The MS4 map must be included as part of the jurisdictional runoff management program document. Any geographic information system (GIS) layers or files used by the Copermittee to maintain the MS4 map must be made available to the San Diego Water Board upon request. The MS4 map must identify the following:

(a) All segments of the MS4 owned, operated, and maintained by the Copermittee;

(b) All known locations of inlets that discharge and/or collect runoff into the Copermittee's MS4;

(c) All known locations of connections with other MS4s not owned or operated by the Copermittee (e.g. Caltrans MS4s);

(d) All known locations of major MS4 outfalls as defined by 40 CFR §122.26(b)(5-6) ~~and private outfalls,~~ that discharge runoff collected from areas within the Copermittee's jurisdiction;

Comment [A83]: See discussion in section 3.7.2 of the comment letter.

(e) All segments of receiving waters within the Copermittee's jurisdiction that receive and convey runoff discharged from the Copermittee's MS4 outfalls;

(f) Locations of the MS4 outfalls, identified pursuant to Provision D.2.a.(1), within its jurisdiction; and

(g) Locations of the non-storm water persistent flow MS4 outfall discharge monitoring stations, identified pursuant to Provision D.2.b.(2)(b), within its jurisdiction.

(2) Each Copermittee must use Copermittee personnel and contractors to assist in identifying and reporting illicit discharges and connections during their daily employment activities.

(3) Each Copermittee must promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges to or from the MS4, including the following methods for public reporting:

(a) Operate a public hotline, which can be Copermittee-specific or shared by the Copermittees, and must be capable of receiving reports in both English and Spanish 24 hours per day and seven days per week; and

(b) Designate an e-mail address for receiving electronic reports from the public, which can be Copermittee-specific or shared by the Copermittees, and must be prominently displayed on the Copermittee's webpage and the Regional Clearinghouse required pursuant to Provision F.4.

(4) Each Copermittee must implement practices and procedures (including a notification mechanism) to prevent, respond to, contain, and clean up any spills that may discharge into the MS4 within its jurisdiction from any source. Such practices and procedures may include the coordination with other parties, such as sanitary sewer operators. The Copermittee must coordinate, to the extent possible, with spill response teams to prevent entry of spills into the MS4~~, and prevent contamination of surface water, ground water, and soil.~~ The Copermittee must coordinate spill prevention, containment, and response activities throughout all appropriate internal~~Copermittee~~ departments, programs, and agencies.

Comment [A84]: See discussion in section 3.7.2 of the comment letter.

(5) Each Copermittee must implement practices and procedures to ~~prevent~~ control and limit infiltration of seepage from sanitary sewers owned by a Copermittee agency (including private laterals and failing septic systems) to the MS4.

(6) Each Copermittee shall~~must~~ coordinate, when necessary, with upstream Copermittees and/or entities to prevent illicit discharges from upstream sources into the MS4 within its jurisdiction.

c. FIELD SCREENING

Each Copermittee must conduct field screening (i.e. visual observations, field testing, and/or analytical testing) of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect non-storm water and illicit discharges and connections to the MS4 in accordance with the dry weather MS4 outfall discharge monitoring requirements in Provisions D.2.a.(2) and D.2.b.(1).

d. INVESTIGATE AND ELIMINATE ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee must include the following measures within its program to investigate and eliminate illicit discharges to the MS4 to comply with provision A.1.b:

(1) Each Copermittee must prioritize and determine when follow-up investigations will be performed in response to visual observations and/or water quality monitoring data collected during an investigation of a detected non-storm water ~~or~~ illicit discharge into or from the MS4. The criteria for prioritizing investigations must consider the following:

(a) Pollutants identified as causing or contributing to the highest water quality

priorities identified in the Water Quality Improvement Plan;

(b) Pollutants identified as causing or contributing, or threatening to cause or contribute to impairments in water bodies on the 303(d) List and/or in environmentally sensitive areas (ESAs), located within its jurisdiction;

(c) Pollutants identified from sources or land uses known to exist within the area, drainage basin, or watershed that discharges to the portion of the MS4 within its jurisdiction included in the investigation;

(d) Pollutants identified as causing or contributing to an exceedance of a NAL in the Water Quality Improvement Plan, where the source has not been identified as natural or otherwise permitted; and

(e) Pollutants identified as an immediate and significant threat to human health or the environment.

(2) Each Copermittee must implement procedures to investigate and inspect portions of its MS4 that, based on reports or notifications, field screening, or other appropriate information, indicate a reasonable potential of receiving, containing, or discharging pollutants due to illicit discharges, or illicit connections~~, or other sources of non-storm water~~. The procedures must include the following:

(a) Each Copermittee must develop criteria to:

(i) Assess the validity of each report or notification received; and

(ii) Prioritize the response to each report or notification received.

(b) Each Copermittee must prioritize and respond to each valid report or notification (e.g., public reports, staff or contractor reports and notifications, etc.) of an incident in a timely manner.

(c) ~~Each~~In accordance with the procedures defined in Provision E.2.d.(1), each~~Each~~ Copermittee must investigate and seek to identify the source(s) of discharges of non-storm water illicit discharges or illicit connections ~~where flows are~~ observed into and from the MS4 during the field screening required pursuant to Provision D.2.b.(1) as follows:

(i) Obvious illicit discharges (i.e., unusual color or odor) must be immediately investigated to identify the source(s) of non-storm water illegal discharges;

(ii) The investigation must include field investigations to identify sources or potential sources for the discharge, unless the source or potential source has already been identified during previous investigations; and

(iii) The investigation may include follow-up field investigations and/or reviewing Copermittee inventories and other land use data to identify potential sources of the discharge.

(d) Each Copermittee must maintain records and a database of the following information:

(i) Location of incident, including hydrologic subarea, portion of MS4 receiving the non-storm water ~~or~~ illicit discharge, and point of discharge or potential discharge from MS4 to receiving water;

(ii) Source of information initiating the investigation (e.g., public reports, staff or contractor reports and notifications, field screening, etc.);

(iii) Date the information used to initiate the investigation was received;

(iv) Date the investigation was initiated;

(v) Dates of follow-up investigations;

(vi) Identified or suspected source of the illicit discharge or connection, if determined;

(vii) Known or suspected related incidents, if any;

(viii) Result of the investigation; and

(ix) If a source cannot be identified and the investigation is not continued, a rationale for why a discharge does not pose a threat to water quality and/or does not require additional investigation.

(e) Each Copermittee must ~~track~~ document, and where feasible quantify, any readily~~and seek to~~ identifiable~~y~~ the source(s) of non-storm water illegal discharges from the MS4 where there is evidence of non-storm water ~~having been discharged~~illegal discharges or connections into or from the MS4 (e.g., pooled water), in accordance with MS4 outfall discharge monitoring requirements in Provisions D.2.a.(2) and D.2.b.

Comment [A85]: See discussion in section 3.7.2 of the comment letter.

(3) Each Copermittee must initiate the implementation of procedures, in a timely manner, to eliminate all detected and identified illicit discharges and connections within its jurisdiction. The procedures must include the following responses:

(a) Each Copermittee must enforce its legal authority, as required under Provision E.1, to eliminate illicit discharges and connections to the MS4.

(b) If the Copermittee identifies the source as a controllable source of non-storm water ~~or~~ illicit discharge or connection, the Copermittee must implement its Enforcement Response Plan pursuant to Provision E.6 and enforce its legal authority to effectively prohibit and with the goal of eliminati~~n~~ng~~e~~ illicit discharges and connections to its MS4.

(c) If the Copermittee identifies the source of the discharge as a category of non-storm water discharges in Provision E.2.a, and the discharge is in exceedance of NALs in the Water Quality Improvement Plan, then the Copermittee must determine if: (1) this is an isolated incident or set of circumstances that will be addressed through its Enforcement Response Plan pursuant to Provision E.6, or (2) the category of discharge must be addressed through the effective prohibition of that category of discharge as an illicit discharge pursuant to Provision E.2.a.(6).

(d) If the Copermittee suspects the source of the non-storm water discharge as natural in origin (i.e. non-anthropogenically influenced) and in conveyance into the MS4, then the Copermittee must document and provide the data and evidence necessary to demonstrate to the San Diego Water Board that it is natural in origin and does not require further investigation.

(e) If the Copermittee identifies that the discharge is coming from another Copermittees' jurisdiction, the receiving Copermittee must document and provide the findings to the upstream Copermittee. The obligation to implement the requirements of provision E.2.d.(3) are thenceforth the responsibility of the upstream Copermittee.

(f) If the Copermittee identifies the source as a non-storm water discharge that has been separately authorized by the San Diego Water Board, or that is contributing pollutants to the MS4 and that may require coverage under a WDR from the San Diego Water Board, the Copermittee shall provide all relevant findings to the San Diego Water Board and may back charge the Regional Board for the entire cost of conducting the source investigation.

Comment [A86]: See discussion in section 3.7.2 of the comment letter.

~~(e)~~(g) If the Copermittee is unable to identify and document the source of a recurring non-storm water discharge to or from the MS4, then the Copermittee must ~~address the discharge as an illicit discharge and~~ update its jurisdictional runoff management program to address the common and suspected sources of the non-storm water discharge within its jurisdiction in accordance with the Copermittee's priorities.

(4) Each Copermittee must submit a summary of the non-storm water discharges and illicit discharges and connections investigated and eliminated within its jurisdiction with each Annual Report required under Provision F.3.b of this Order.

3. Development Planning

Comment [A87]: See discussion in section 3.8 of the comment letter.

Each Copermittee must, within their jurisdiction, use their land use and planning

authorities, to the extent that they may lawfully impose requirements, to implement a development planning program in accordance with the strategies identified in the Water Quality Improvement Plan and includes, at a minimum, the following requirements:

STRATEGIES TO ADDRESS THE HIGHEST PRIORITY WATER QUALITY CONDITIONS

Comment [A88]: See discussion in section 3.8.2 of the comment letter.

Each Copermittee must describe in its jurisdictional runoff management program document the strategies and/or activities that will be implemented as part of the development planning program to address development and redevelopment projects that may become sources of pollutants and/or stressors that contribute to the highest priority water quality conditions in the Watershed Management Area as follows:

(1) Provide specific details about how the strategies and/or activities will be implemented (e.g. designate additional or alternative BMPs, focus education, increase frequency of verifications and/or inspections, alternative compliance options);

(2) Each Copermittee must identify areas within its jurisdiction where Priority Development Projects may be allowed or should be encouraged to implement or contribute toward the implementation of alternative compliance retrofitting and/or stream, channel, or habitat rehabilitation projects;

(3) Each Copermittee should collaborate and cooperate with other Copermittees and/or entities in the Watershed Management Area to identify regional alternative compliance projects that Priority Development Projects may be allowed or should be encouraged to implement or participate in implementing; and

(4) The requirements of the programs as outlined in the following sub-provisions may be modified and prioritized as appropriate for consistency with the highest water quality priorities and strategies as identified in the corresponding Water Quality improvement Plan(s). ~~The strategies and/or activities must be consistent with the requirements of Provisions E.3.a-c and E.3.e-f and the strategies identified in the Water Quality Improvement Plan.~~

a. BMP REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS

Each Copermittee, as practical and feasible, must prescribe the following BMP requirements during the planning process (i.e. prior to project approval and issuance of local permits) for all development projects (regardless of project type or size), where local permits are issued, including unpaved roads and flood management projects, except emergency / public safety projects implemented for the protection of persons and property:

(1) General Requirements

(a) Onsite BMPs must be located so as to remove pollutants from runoff prior to its discharge to any receiving waters, and as close to the source as possible; and

(b) Structural BMPs must not be constructed within a waters of the U.S.. ~~. or waters of the state.~~

(2) Source Control BMP Requirements

The following source control BMPs must be implemented at all development projects where applicable and feasible:

(a) Prevention of illicit discharges into the MS4;

(b) Storm drain system stenciling or signage;

(c) Properly designed outdoor material storage areas;

(d) Properly designed outdoor work areas;

(e) Properly designed trash storage areas; and

(f) Any additional BMPs determined necessary by the Copermittee to minimize pollutant generation at each project.

(3) Low Impact Development (LID) ~~BMP Requirements~~Principles

Comment [A89]: See discussion in section 3.8.2 of the comment letter.

The following LID ~~BMPs~~ Principles must be implemented at all development projects where applicable and feasible:

(a) Maintenance or restoration of natural storage reservoirs and drainage corridors (including topographic depressions, areas of permeable soils, natural swales, and ephemeral and intermittent streams);[22]

(b) Buffer zones for natural water bodies (where buffer zones are technically infeasible, require project applicant to include other buffers such as trees, access restrictions, etc.);

(c) Conservation of natural areas within the project footprint including existing trees, other vegetation, and soils;

[22] Development projects proposing to dredge or fill materials in waters of the U.S. must obtain a CWA Section 401 Water Quality Certification. Projects proposing to dredge or fill waters of the state must obtain waste discharge requirements.

(d) Construction of streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided public safety is not compromised;

(e) Minimization of the impervious footprint of the project;

(f) Minimization of soil compaction to landscaped areas;

(g) Disconnection of impervious surfaces through distributed pervious areas;

(h) Landscaped or other pervious areas designed and constructed to effectively receive and infiltrate, retain and/or treat runoff from impervious areas, prior to discharging to the MS4;

(i) Small collection strategies located at, or as close as possible to, the source (i.e. the point where storm water initially meets the ground) to minimize the transport of runoff and pollutants to the MS4 and receiving waters;

(j) Use of permeable materials for projects with low traffic areas and appropriate soil conditions;

(k) Landscaping with native or drought tolerant species; and

(l) Harvesting and using precipitation.

b. PRIORITY DEVELOPMENT PROJECTS

(1) Definition of Priority Development Project

Priority Development Projects include the following:

(a) All new development projects that fall under the Priority Development Project categories listed under Provision E.3.b.(2) (where a new development project feature, such as a parking lot, falls into a Priority Development Project category, the entire project footprint is subject to Priority Development Project requirements); and

(b) Those redevelopment projects that create, add, or replace at least 5,000 square feet of impervious surfaces on an already developed site, and the redevelopment project is a Priority Development Project category listed under Provision E.3.b.(2) (where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to Priority Development Project requirements, the performance requirements of Provisions E.3.c.(1) and E.3.c.(2) apply only to the addition or replacement, and not to the entire development; where redevelopment

results in an increase of more than fifty percent of the impervious surfaces of a previously existing development, the performance requirements of Provisions E.3.c.(1) and E.3.c.(2) apply to the entire development).

(c) Projects where redevelopment results in an increase of more than fifty percent of impervious surfaces of a previously existing development, and the existing development *was* subject to previous Priority Project Development Requirements, only the altered portion of development is subject to the new Priority Development Project requirements.

Comment [A90]: See discussion in section 3.8.2 of the comment letter.

(2) Priority Development Project Categories

Comment [A91]: See discussion in section 3.8.2 of the comment letter.

(a) New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This category includes commercial, industrial, residential, mixed-use, and public development projects on public or private land which fall under the planning and building authority of the Copermittee.

(b) New development projects that create 5,000 square feet or more of impervious surfaces (collectively over the entire project site), and are designed for support one or more of the following uses (see Appendix for definitions):

(i) Automotive repair shop
(ii) Restaurant
(iii) Parking lot[23]
(iv) Street, road, highway, freeway
(v) Retail gasoline outlet (RGO)

Comment [A92]: See footnote

~~(b) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.~~

~~(c) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is 5,000 square feet or more.~~

~~(d) Hillside development projects. This category includes any development which creates 5,000 square feet or more of impervious surface which is~~

[23] Excluding parking lots that are not subject to runoff, such as but not limited to covered or subterranean parking lots

~~located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.~~

~~(e)~~(c) New development projects that create 2,500 square feet or more of impervious surfaces (collectively over the entire project site), and are ~~Environmentally sensitive areas (ESAs). This category includes any development~~ located within, directly adjacent to, or discharging directly to an ESA, ~~which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10 percent or more of its naturally occurring condition.~~ "Directly adjacent to" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that collects runoff from the subject development or redevelopment site and terminates at or in receiving waters within the ESA and is not commingled with flows from adjacent or other upstream lands.

~~(f) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce that has 5,000 square feet or more of impervious surface.~~

~~(g) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface that is 5,000 square feet or more used for the transportation of automobiles, trucks, motorcycles, and other vehicles.~~

~~(h) Retail gasoline outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.~~

~~(i)~~(d) Large development projects. This category includes any post-construction pollutant-generating new development projects that result in the permanent disturbance of one acre or more of land.

(3) Priority Development Project Exemptions

Comment [A93]: See discussion in section 3.8.2 of the comment letter.

Each Copermittee has the discretion to exempt the following projects from being defined as Priority Development Projects:

(a) New paved sidewalks, driveways, parking lots, bicycle lanes, or trails that meet the following criteria:

(i) Designed and constructed to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas; OR

(ii) Designed and constructed to be hydraulically disconnected from paved streets or roads; OR

(iii) Designed and constructed with permeable pavements or surfaces in accordance with USEPA Green Streets guidance.[24]

(b) Any impervious surface that is 5,000 square feet or more used for the transportation of automobiles, trucks, motorcycles, and other vehicles that is designed and constructed to the Maximum Extent Practicable in accordance with the USEPA Green Streets Guidance "Managing Wet Weather with Green Infrastructure: Green Streets"[25]. ~~Retrofitting of existing paved alleys, streets or roads that meet the following criteria:~~

~~(i) Must be two lanes or less; AND~~

~~(ii) Must be a retrofitting project implemented as part of an alternative compliance project option under Provision E.3.c.(3)(b)(v) to achieve the performance requirements of Provisions E.3.c.(1) and/or E.3.c.(2) for a Priority Development Project; AND~~

~~(iii) Designed and constructed in accordance with the USEPA Green Streets guidance.[26]~~

(c) Single-family residential projects that meet the following criteria:

(i) Must not be constructed as part of a larger development or proposed subdivision;

(ii) Successfully incorporate and document that they have incorporated, each of the applicable Source Control and LID BMP strategies identified in provisions E.3.a.(2)-(3) to the MEP.

~~(c) New single family residences that meet the following criteria:~~

~~(i) Must not be constructed as part of a larger development or proposed subdivision; AND~~

~~(ii) Designed and constructed to be certified under the U.S. Green Building Council (USGCB) Leadership in Energy and Environmental Design (LEED) for Homes green building certification program, receiving at least four (4) Surface Water Management credits under the Sustainable Sites category[27] OR~~

~~Designed and constructed with structural BMPs that will achieve the~~

[24] USEPA. 2008. http://water.epa.gov/infrastructure/greeninfrastructure/upload/gi_munichandbook_green_streets.pdf and http://water.epa.gov/infrastructure/greeninfrastructure/gi_policy.cfm#municipalhandbook ~~See "Managing Wet Weather with Green Infrastructure – Municipal Handbook: Green Streets" (USEPA, 2008).~~

~~[26] Ibid.~~

~~[27] See LEED for Homes rating system at http://www.usgbc.org~~

~~performance requirements of Provisions E.3.c.(1) and E.3.c.(2) onsite~~

~~(d) Redevelopment of existing single family residences that meet the following criteria:~~

~~(i) Designed and constructed to be certified under the USGCB LEED for Homes green building certification program, receiving at least four (4) Surface Water Management credits under the Sustainable Sites category;[28] OR~~

~~(ii) Designed and constructed with structural BMPs that will achieve the performance requirements of Provisions E.3.c.(1) and E.3.c.(2) onsite.~~

(d) Watershed Protection Projects that meet the following criteria:

(i) Projects undertaken to rehabilitate or prevent environmental, social, and economic damage to the watershed, including receiving waters, by providing one or more of the following:

- Water quality protection by the proper management of stormwater and floodplains
- Flood risk reduction to adjacent land uses, stored matter and stockpiled material
- Elimination of the comingling of stormwater and hazardous materials
- Erosion Mitigation
- Restoration of Rivers and Ecosystems
- Groundwater Recharge
- Creation of new open space and wetlands
- Programs for water conservation, stormwater capture and management
- Retrofit projects constructed to improve water quality or address hydromodification.

(ii) AND are not expected to be pollutant generating or are designed to reduce existing pollutant loads

(iii) AND incorporate and document that they have incorporated, each of the applicable Source Control and LID BMP strategies identified in provisions E.3.a.(2)-(3) to the MEP.

(e) Emergency public safety projects in any of the Priority Development Categories may be excluded if the delay caused due to the requirement for a SSMP compromises public safety, public health and/or environmental protection

[28] ~~See LEED for Homes rating system at http://www.usgbc.org~~

c. PRIORITY DEVELOPMENT PROJECT STRUCTURAL BMP PERFORMANCE REQUIREMENTS

In addition to the BMP requirements listed for all development projects under Provision E.3.a, Priority Development Projects must also implement structural BMPs that conform to performance requirements below. If watershed-specific performance requirements are ~~may be~~ developed as part of a Water Quality Improvement Plan; these requirements would take precedence over the general performance requirements below. The watershed-specific requirement must provide at least equal protection as the general performance requirements below.

(1) Storm Water Pollutant Control BMP Requirements

Each Copermittee must require each Priority Development Project to implement onsite structural BMPs to control pollutants in storm water that may be discharged from a project as follows:

(a) Each Priority Development Project must be required to implement LID BMPs that are designed to retain (i.e. intercept, store, infiltrate, evaporate, and evapotranspire) onsite the pollutants contained in the design capture volume. The design capture volume is equivalent to:

(i) The volume of storm water runoff produced from a 24-hour 85th percentile storm event;[29] OR

(ii) The volume of storm water runoff produced from a 24-hour 85th percentile storm event, that would be retained onsite ~~if~~ in the pre-project condition. ~~site was fully undeveloped and naturally vegetated, as determined using continuous simulation modeling techniques based on site-specific soil conditions and typical native vegetative cover.~~

(b) A Priority Development Project may be allowed to utilize alternative compliance under Provision E.3.c.(3) in lieu of~~to~~ complying with the storm water pollutant control BMP performance requirements of Provision E.3.c.(1)(a).

~~(c) If a Priority Development project is allowed to utilize alternative compliance pursuant to Provisions E.3.c.(1)(b), flow-thru conventional~~

[29] This volume is not a single volume to be applied to all areas covered by this Order. The size of the 85th percentile storm event is different for various parts of the San Diego Region. The Copermittees are encouraged to calculate the 85th percentile storm event for each of its jurisdictions using local rain data pertinent to its particular jurisdiction. In addition, isopluvial maps may be used to extrapolate rainfall data to areas where insufficient data exists in order to determine the volume of the local 85th percentile storm event in such areas. Where the Copermittees will use isopluvial maps to determine the 85th percentile storm event in areas lacking rain data, the Copermittees must describe their method for using isopluvial maps in its BMP Design Manuals. The volume is a single event-based volume that occurs after an extended dry period.

Comment [A94]: See discussion in section 3.8.2 of the comment letter.

~~treatment control BMPs must be implemented to treat the portion of the design capture volume that is not retained onsite. Additionally, project applicants must mitigate for the portion of the pollutant load in the design capture volume that is not retained onsite through one or more alternative compliance options under Provision E.3.c.(3). Conventional treatment control BMPs must be sized and designed to:~~

~~(i) Remove pollutants from storm water to the MEP;~~

~~(ii) Filter or treat either: 1) the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event, or 2) the maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two;~~

~~(iii) Be ranked with high or medium pollutant removal efficiency for the Priority Development Project's most significant pollutants of concern. Conventional treatment control BMPs with a low removal efficiency ranking must only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of conventional treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.~~

(2) Hydromodification Management BMP Requirements

Comment [A95]: See discussion in section 3.8.2 of the comment letter.

Each Copermittee must require each Priority Development Project disturbing greater than one acre to implement management measures~~onsite structural BMPs~~ to ensure ~~manage hydromodification~~ that ~~may be caused by~~ storm water runoff discharged from the~~a~~ project won't cause adverse Hydromodification impacts in the downstream receiving waters as follows:

The Copermittees in each Watershed Management Area may establish within the WQIP, watershed specific mitigation requirements that will apply to priority development projects, based on the susceptibility of the receiving waters to Hydromodification impacts caused by the project, and consistent with the priorities and strategies identified in the WQIP. Such requirements may be uniform across a Hydrologic Unit, or identified at an appropriate smaller scale to ensure that receiving waters are properly protected.

(a) Post-project runoff flow rates and durations must not exceed pre-project ~~development (naturally occurring)~~ runoff flow rates and durations by more than 10 percent (for the range of flows that result in increased potential for erosion, or degraded instream habitat conditions downstream of Priority Development Projects~~)~~.

(i) In evaluating the range of flows that results in increased potential for

erosion of natural (non-hardened) channels, the lower boundary must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks.

~~(ii) For artificially hardened channels, analysis to identify the lower boundary must use characteristics of a natural stream segment similar to that found in the watershed. The lower boundary must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or erodes the toe of the channel banks.~~

~~(iii)~~(ii) The Copermittees may use monitoring results collected pursuant to Provision D.1.a.(2) to re-define the range of flows resulting in increased potential for erosion, or degraded instream habitat conditions, as warranted by the data.

(b) Priority Development Projects ~~Post-project runoff flow rates and durations~~ must implement appropriate measures to minimize the ~~compensate for~~ the loss of sediment supply delivered ~~due~~ to the Receiving Waters, consistent with WQIP priorities, ~~development project,~~ should loss of sediment supply be anticipated to occur as a result of the development project.

(c) A Priority Development Project may be allowed to utilize alternative compliance under Provision E.3.c.(3) in lieu of~~to comply with~~ the performance requirements of Provisions E.3.c.(2)(a)-(b).

(d) Exemptions

Each Copermittee has the discretion to exempt a Priority Development Project from the hydromodification management BMP performance requirements of Provisions E.3.c.(2)(a)-(b) where the project:

(i) Discharges storm water runoff into existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean;

(ii) Discharges of storm water into conveyance channels whose bed and bank are engineered and maintained for the 10-year ultimate development flow rate all the way from the point of discharge from the project to an water body that is sufficiently resistant to hydromodification (water storage reservoirs, lakes, enclosed embayments, pacific ocean, or other water bodies identified in the WQIP);

~~(ii)~~(iii) Is a redevelopment Priority Development Project that meets the alternative compliance requirements of Provision E.3.c.(3)(b)(ii); or

~~(iii)~~(iv) Discharges storm water runoff into other areas identified by the San Diego Water Board as exempt from the requirements of Provisions E.3.c.(2)(a)-(b), through an approved WQIP.

(3) Alternative Compliance to Onsite Structural BMP Performance Requirements

Comment [A96]: See discussion in section 3.8.2 of the comment letter.

(a) Applicability

At the discretion of each Copermittee, Priority Development Projects may be allowed to implement one or more of the alternative compliance project options described in E.3.c.(3)(b) below, in lieu of complying with the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2), under the following conditions:

(i) The Copermittee must determine that implementation of the alternative compliance option will have an equal or greater overall water quality benefit for the Watershed Management Area than fully complying with the performance requirements of Provisions E.3.c.(1) and E.3.c.(2) onsite;

(ii) The alternative compliance options must be designed by a registered professional engineer, geologist, architect, biologist, hydrologist, landscape architect, or other appropriate certified professional;

(iii) The alternative compliance option must be consistent with the strategies developed within the WQIP, for the highest priority water quality conditions.

(iv) The alternative compliance options must be implemented within the same Watershed Management Area as the Priority Development Project, and preferably within the same hydrologic subarea;

(v) The alternative compliance options must have reliable sources of funding for operation and maintenance.

(b) Alternative Compliance Options

(i) *LID Biofiltration Treatment Control BMPs*

LID biofiltration treatment control BMPs may be used as an alternative compliance option if the BMPs are sized and designed to:

[a] Remove pollutants from storm water to the MEP; AND
[b] Have an appropriate surface loading rate to prevent erosion, scour and channeling; AND
[c] Biofilter at least 1.0 times the design capture volume that is not reliably retained onsite

(ii) *LEED Certified Redevelopment Projects*

Priority Development Projects that are designed and constructed to be certified under the USGCB LEED for New Construction and Major Renovations green building certification program, or other locally accepted certification of equivalent effectiveness, may be considered as an acceptable alternative compliance option if the project meets the following criteria:

[a] The project is designed to receive at least: One (1) Site Design credit, and Two (2) Stormwater Design credits under the Sustainable Sites category.[30], and

[b] The existing and future configuration of the receiving water must not be unnaturally altered or adversely impacted by the project.

(iii) *Watershed-Based Planned Development Projects*

Priority Development Projects greater than 100 acres in total project size (or smaller than 100 acres in size yet part of a larger common plan of development that is over 100 acres) may be considered as an acceptable alternative compliance option if the project meets the following conditions:

[a] The Priority Development Project was planned utilizing watershed and/or subwatershed based water quality, hydrologic, and fluvial geomorphologic planning principles that implement regional LID BMPs in accordance with the performance and location criteria of this Order and acceptable to the San Diego Water Board;

[b] Regional LID BMPs may be used provided that the BMPs capture and retain the volume of runoff produced from the design capture volume defined in Provision E.3.c.(1)(a)(i) and that such controls are located upstream of receiving waters;

[c] Regional LID BMPs must clearly exhibit that they will not result in a net impact from pollutant loadings over and above the impact caused by capture and retention of the design capture volume;

[d] Any portion of the design capture volume that is not retained by the regional LID BMPs must be treated using biofiltration BMPs; and

[e] Where regional LID BMPs are demonstrated to the Copermittee as technically infeasible to retain the entire design capture volume, any volume up to and including the design capture volume not retained by regional LID BMPs, nor treated by biofiltration BMPs, must be treated using conventional treatment control BMPs and the project applicant must implement additional alternative compliance project, in-lieu fee and/or water quality

[30] See LEED for New Construction and Major Renovations rating system at http://www.usgbc.org

credit system options below.

(iv) *Offsite Projects*

Offsite Projects, such as but not limited to Regional BMPs; Retrofitting Projects; Channel, Stream or Habitat Rehabilitation Projects; Water Supply Augmentation Projects; or other Offsite Projects proposed by a project proponent, may be considered as an acceptable alternative compliance option if the offsite project meets the following requirements:

- The project must provide a net result of at least the same level of pollutant removal, and/or protection from potential downstream and upstream erosion in the receiving water as would be required to meet the performance requirements of Provision E.3.c.(1) and E.3.c.(2), as applicable.
- The project must be consistent with the strategies identified in the WQIP.
- The project must be constructed and operational prior to occupancy being granted for the PDP.

(v) *Conventional Treatment Control BMPs*

Onsite Conventional Treatment Control BMPs may be used as an alternative compliance option, only if the following criteria have been met:

[a] It has been demonstrated to the satisfaction of the Copermittee that it is technically infeasible to comply with the onsite requirements of E.3.c.(1), AND

[b] It has been demonstrated to the satisfaction of the Copermittee that it is technically infeasible to implement onsite Biofiltration Treatment Control BMPs, AND

[c] The Conventional Treatment Control BMPs will remove pollutants from storm water to the MEP; AND

[d] The Conventional Treatment Control BMPs will filter or treat either: 1) the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event, or 2) the maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two; AND

[e] The Conventional Treatment Control BMPs are ranked with high or medium pollutant removal efficiency for the Priority Development Project's most significant pollutants of concern. Conventional treatment control BMPs with a low removal

efficiency ranking must only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of conventional treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.

~~(a) Applicability~~

~~At the discretion of each Copermittee, Priority Development Projects may be allowed to utilize an alternative option to comply with the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2) under the following conditions:~~

~~(i) The Copermittee must determine that implementation of the alternative compliance option will have a greater overall water quality benefit for the Watershed Management Area than fully complying with the performance requirements of Provisions E.3.c.(1) and E.3.c.(2) onsite;~~

~~(ii) The alternative compliance options must be designed by a registered professional engineer, geologist, architector landscape architect;~~

~~(iii) The alternative compliance options must be implemented within the same hydrologichydrologic unit as the Priority Development Project, and preferably within the same hydrologic subarea;~~

~~(iv) Receiving waters must not be utilized to convey storm water runoff to the alternative compliance options;~~

~~(v) The pollutants in storm water runoff from the Priority Development Project must be treated to the MEP by the alternative compliance options prior to being discharged to receiving waters;~~

~~(vi) Unless otherwise allowed by Provision E.3.c.(3)(b), the alternative compliance options must have a net result of at least the same level of pollutant removal as would have been achieved if the Priority Development Project had fully complied with the storm water pollutant control BMP performance requirements of Provision E.3.c.(1) onsite;~~

~~(vii) Unless otherwise allowed by Provision E.3.c.(3)(b), the alternative compliance options must have a net result of at least the same level of protection from potential downstream and upstream erosion in the receiving water as would have been achieved if the Priority Development Project had fully complied with the hydromodification management BMP performance requirements of Provision E.3.c.(2) onsite; and~~

~~(viii) The alternative compliance options utilized by the Priority Development Project must have reliable sources of funding for operation and maintenance.~~

(b) Alternative Compliance Project Options

The Copermittee may allow implementation of one or more of the following project options as part of an alternative approach to complying with the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2):

(i) *Onsite LID Biofiltration Treatment Control BMPs*

The Copermittee may allow Priority Development Projects to utilize onsite LID biofiltration treatment control BMPs to comply with the storm water pollutant control BMP performance requirements of Provision E.3.c.(1). Onsite LID biofiltration treatment control BMPs must be sized and designed to:

[a] Remove pollutants from storm water to the MEP; AND
[b] Have an appropriate surface loading rate to prevent erosion, scour and channeling within the BMP; AND
[c] Biofilter at least 1.5 times the design capture volume that is not reliably retained onsite; OR
[d] Biofilter up to the design capture volume that is not reliably retained onsite, AND 1) treat the remaining portion of the design capture volume not retained onsite with conventional treatment control BMPs in accordance with Provision E.3.c.(1)(c), and 2) if necessary, mitigate for the portion of the pollutant load in the design capture volume not retained onsite through one or more alternative compliance project, in-lieu fee and/or water quality credit system options below.

(ii) *LEED Certified Redevelopment Projects*

The Copermittee may allow redevelopment Priority Development Projects to comply with designed and constructed to be certified under the USGCB LEED for New Construction and Major Renovations green building certification program. The Priority Development Project must receive at least one (1) Site Design credit and two (2) Stormwater Design credits under the Sustainable Sites category.[31] In addition, the existing and future configuration of the receiving water must not be unnaturally altered or adversely impacted by storm water flow rates and durations discharged from the site.

(iii) *Watershed-Based Planned Development Projects*

The Copermittee may allow Priority Development Projects greater than 100 acres in total project size (or smaller than 100 acres in size

[31] See LEED for New Construction and Major Renovations rating system at http://www.usgbc.org

~~yet part of a larger common plan of development that is over 100 acres) to comply with the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2). The Priority Development Project must comply with the following conditions:~~

~~[a] The Priority Development Project was planned utilizing watershed and/or subwatershed based water quality, hydrologic, and fluvial geomorphologic planning principles that implement regional LID BMPs in accordance with the performance and location criteria of this Order and acceptable to the San Diego Water Board;~~
~~[b] Regional LID BMPs may be used provided that the BMPs capture and retain the volume of runoff produced from the design capture volume defined in Provision E.3.c.(1)(a)(i) and that such controls are located upstream of receiving waters;~~
~~[c] Regional LID BMPs must clearly exhibit that they will not result in a net impact from pollutant loadings over and above the impact caused by capture and retention of the design capture volume;~~
~~[d] Any portion of the design capture volume that is not retained by the regional LID BMPs must be treated using biofiltration BMPs; and~~
~~[e] Where regional LID BMPs are demonstrated to the Copermittee as technically infeasible to retain the entire design capture volume, any volume up to and including the design capture volume not retained by regional LID BMPs, nor treated by biofiltration BMPs, must be treated using conventional treatment control BMPs and the project applicant must implement additional alternative compliance project, in-lieu fee and/or water quality credit system options below.~~

~~(iv) *Offsite Regional BMPs*~~

~~[a] The Copermittee may allow Priority Development Projects to utilize offsite regional BMPs to comply with the storm water pollutant control BMP performance requirements of Provision E.3.c.(1) if the offsite regional BMPs have the capacity to receive and retain at least 1.1 times the design capture volume that is not reliably retained onsite.~~
~~[b] The Copermittee may allow Priority Development Projects to utilize offsite regional BMPs to comply with the hydromodification management BMP performance requirements of Provision E.3.c.(2) if the offsite regional BMPs have the capacity to manage the storm water flows rates and durations from the site such that the receiving waters are protected from the potential for increased erosion that would be caused if the unmanaged portion of the runoff was discharged from the site.~~

~~(v) *Offsite Retrofitting Projects*~~

~~The Copermittee may allow Priority Development Projects to utilize offsite retrofitting projects to comply with the storm water pollutant control and hydromodification management BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2) if the retrofitting projects have been identified within the strategies included in the Water Quality Improvement Plan, or identified as potential retrofitting projects by the Copermittee pursuant to Provision E.5.~~

~~(vi) *Offsite Channel, Stream, or Habitat Rehabilitation Projects*~~

~~The Copermittee may allow Priority Development Projects to utilize offsite channel, stream, or habitat rehabilitation projects to comply with the hydromodification management BMP performance requirements of Provision E.3.c.(2) if the rehabilitation projects have been identified within the strategies included in the Water Quality Improvement Plan, or identified as potential channel rehabilitation projects by the Copermittee pursuant to Provision E.5. The channel, stream, or habitat rehabilitation project cannot be utilized for pollutant treatmentexcept where artificial wetlands areand located upstream of receiving waters.~~

~~(vii) *Offsite Regional Water Supply Augmentation Projects*~~

~~The Copermittee may allow Priority Development Projects to utilize offsite regional water supply augmentation projects (i.e. groundwater recharge, recycled water, storm water harvesting) to comply with the storm water pollutant control and hydromodification management BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2) if the projects have been identified within the strategies included in the Water Quality Improvement Plan.~~

~~(viii) *Project Applicant Proposed Alternative Compliance Projects*~~

~~The Copermittee may allow one or more Priority Development Project applicant(s) to propose and implement alternative compliance projects to comply with the storm water pollutant control and hydromodification management BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2) if the alternative compliance projects are consistent with, and will address the highest water quality priorities of the Water Quality Improvement Plan, and comply with the requirements of Provision E.3.c.(3)(a).~~

(c) Alternative Compliance In-Lieu Fee Option

The Copermittee may develop and implement an alternative compliance in-lieu fee option, individually or with other Copermittees and/or entities, as a means for designing, developing, constructing, operating and/or maintaining offsite alternative compliance projects under Provision E.3.c.(3)(b). Priority Development Projects allowed to utilize the

alternative compliance in-lieu fee option must comply with the following conditions:

(i) The in-lieu fee must be collected and held in accordance with the Mitigation Fee Act and all other applicable development fee laws. ~~transferred to the Copermittee (for public projects) or an escrow account (for private projects) prior to the date construction of the Priority Development Project is initiated~~.

Comment [A97]: Please see Legal Comments.

(ii) If the in-lieu fee is applied to the development, design, ~~and~~ construction, operation and maintenance of offsite alternative compliance projects, the following conditions must be met:

[a] The offsite alternative compliance projects must meet ~~allow~~ the criteria identified within E.3.c.(3)(b)-, for each Priority Development Project relying on~~to comply with~~ the alternative compliance project;~~onsite BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2);~~

[b] The offsite alternative compliance projects must be constructed as soon as possible, but no later than 4 years after the certificate of occupancy is granted for the first Priority Development Project that contributed funds toward the construction of the offsite alternative compliance projects, unless a longer period of time is provided for in an approved WQIP~~authorized by the San Diego Water Board Executive Officer~~;

~~[c] The in-lieu fee for the Priority Development Project must include mitigation of the pollutant loads and increased storm water flow rates and durations that are allowed to discharge from the site before the offsite alternative compliance projects are constructed; and~~

[d] The in-lieu fee must also include the cost to operate and maintain the offsite alternative compliance projects for the anticipated life of the constructed priority development project.

(iii) If the in-lieu fee applies only~~is applied~~ to the operation and maintenance of offsite alternative compliance projects that have already been constructed, the offsite alternative compliance projects must meet~~allow~~ the requirements of E.3.c.(3)(a)(iv) and (v) as applicable, for each Priority Development Project relying on~~to comply with~~ the alternative compliance project..~~onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2).~~

(d) Alternative Compliance Water Quality Credit System Option

The Copermittee may develop and implement an alternative compliance water quality credit system option, individually or with other Copermittees

and/or entities, provided that such a credit system clearly exhibits that it will not allow discharges from Priority Development Projects to cause or contribute to a net impact over and above the impact caused by projects meeting the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2). Any credit system that a Copermittee chooses to implement must be submitted to the San Diego Water Board Executive Officer for review and acceptance as part of the Water Quality Improvement Plan.

(4) Long-Term Structural BMP Maintenance

Each Copermittee must require the project applicant to submit proof of the mechanism under which ongoing long-term maintenance of all structural BMPs will be conducted.

(5) Infiltration and Groundwater Protection

(a) Structural BMPs designed to primarily function as large, centralized infiltration devices (such as large infiltration trenches and infiltration basins) must not cause or contribute to an exceedance of an applicable groundwater quality objective. At a minimum, such infiltration BMPs must be in conformance with the design criteria listed below, unless the development project applicant demonstrates to the Copermittee that one or more of the specific design criteria listed below are not necessary to protect groundwater quality. The design criteria listed below do not apply to small infiltration systems dispersed throughout a development project.

(i) Runoff must undergo pretreatment such as sedimentation or filtration prior to infiltration;

(ii) Pollution prevention and source control BMPs must be implemented at a level appropriate to protect groundwater quality at sites where infiltration BMPs are to be used;

(iii) Infiltration BMPs must be adequately maintained to remove pollutants in storm water to the MEP;

(iv) The vertical distance from the base of any infiltration BMP to the seasonal high groundwater mark must be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;

(v) The soil through which infiltration is to occur must have physical and chemical characteristics (e.g., appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of runoff for the protection of groundwater beneficial uses;

(vi) Infiltration BMPs must not be used for areas of industrial or light

industrial activity, and other high threat to water quality land uses and activities as designated by each Copermittee, unless first treated or filtered to remove pollutants prior to infiltration; and

(vii) Infiltration BMPs must be located a minimum of 100 feet horizontally from any water supply wells.

(b) The Copermittee may develop, individually or with other Copermittees, alternative mandatory design criteria to that listed above for infiltration BMPs which are designed to primarily function as centralized infiltration devices. Before implementing the alternative design criteria in the development planning process the Copermitee(s) must:

(i) Notify the San Diego Water Board of the intent to implement the alternative design criteria submitted; and

(ii) Comply with any conditions set by the San Diego Water Board.

d. BMP DESIGN MANUAL UPDATE

Each Copermittee must update and implement its BMP Design Manual[32] pursuant to Provision F.2.b. ~~Until the Copermittee has updated its BMP Design Manual with the requirements of Provisions E.3.a-c, the Copermittee must continue implementing its current BMP Design Manual. Unless directed otherwise by the San Diego Water Board, the Copermittee must implement the BMP Design Manual within 180 days of completing the update.~~ The update of the BMP Design Manual must include the following:

Comment [A98]: This info was incorporated into F.2.b.

(1) Updated procedures to determine the nature and extent of storm water requirements applicable to a potential development or redevelopment projects. These procedures must inform project applicants of the storm water management requirements applicable to their project including, but not limited to, general requirements for all development projects, structural BMP design procedures and requirements, hydromodification management requirements, requirements specific to phased projects, and procedures specific to private developments and public improvement projects;

(2) Updated procedures to identify ~~pollutants and conditions of concern for selecting~~ the most appropriate structural BMPs that consider, at a minimum, the following:

(a) The requirements of E.3.c.(1) and (2)

~~(a)~~(b) Receiving water quality (including pollutants for which receiving waters are listed as impaired under the CWA section 303(d) List);

[32] The BMP Design Manual was formerly known as the Standard Storm Water Mitigation Plan under Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016.

~~(b)~~(c) Pollutants, stressors, and/or receiving water conditions that cause or contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;

~~(c)~~(d) Land use type of the project and pollutants associated with that land use type; and

~~(d)~~(e) Pollutants expected to be present onsite.

(3) Updated procedures for designing structural BMPs, including any updated performance requirements to be consistent with the requirements of Provision E.3.c for all structural BMPs listed in the BMP Design Manual;

(4) Long-term maintenance criteria for each structural BMP listed in the BMP Design Manual; and

(5) Alternative compliance criteria, in accordance with the requirements under Provision E.3.c.(3), if the Copermittee elects to allow Priority Development Projects within its jurisdiction to utilize alternative compliance.

e. PRIORITY DEVELOPMENT PROJECT BMP IMPLEMENTATION AND OVERSIGHT

Each Copermittee must implement a program that requires and confirms structural BMPs on all Priority Development Projects are designed, constructed, and maintained to remove pollutants in storm water to the MEP.

(1) Structural BMP Approval and Verification Process

(a) Each Copermittee must require and confirm that for all Priority Development Project applications that have not received prior lawful approval by the Copermittee by 18 months after the commencement of coverage under this Order, the requirements of Provision E.3 are implemented. For project applications that have received prior lawful approval by 18 months after the commencement of coverage under this Order, the Copermittee may allow previous land development requirements to apply.

(b) Each Copermittee must identify the roles and responsibilities of their various municipal departments in implementing the structural BMP requirements, including each stage of a project from application review and approval through BMP maintenance and inspections.

(c) Each Copermittee must require and confirm that appropriate easements and ownerships are properly recorded in public records and the information is conveyed to all appropriate parties when there is a change in project or site ownership.

(d) Each Copermittee must require and confirm that prior to occupancy and/or intended use of any portion of the Priority Development Project, each structural BMP is inspected to verify that it has been constructed and is operating in compliance with all of its specifications, plans, permits, ordinances, and the requirements of this Order.

(2) Priority Development Project Inventory and Prioritization

(a) Each Copermittee must develop, maintain, and update ~~at~~regularly~~at least annually~~, a watershed-based database to track and inventory all constructed Priority Development Projects and associated structural BMPs within its jurisdiction. Inventories must be accurate and complete beginning from January 2002 for the San Diego County Copermittees, February 2003 for the Orange County Copermittees, and July 2005 for the Riverside County Copermittees~~.~~, where data is available.~~.~~ The use of an automated database system, such as GIS, is highly recommended. The database must include, at a minimum, the following information:

(i) Priority Development Project location (address and hydrologic subarea);

(ii) Descriptions of structural BMP type(s);

(iii) Date(s) of construction;

(iv) Party responsible for structural BMP maintenance;

(v) Dates and findings of structural BMP maintenance verifications; and

(vi) Corrective actions and/or resolutions when applicable.

(b) Each Copermittee must prioritize the Priority Development Projects with structural BMPs within its jurisdiction. The designation of Priority Development Projects as high priority must consider the following:

(i) The highest water quality priorities identified in the Water Quality Improvement Plan;

(ii) Receiving water quality;

(iii) Number and sizes of structural BMPs;

(iv) Recommended maintenance frequency of structural BMPs;

(v) Likelihood of operation and maintenance issues of structural BMPs;

(vi) Land use and expected pollutants generated; and

(vii) Compliance record.

(3) Structural BMP Maintenance Verifications and Inspections

Each Copermittee is required to verify that structural BMPs on each Priority

Development Project are adequately maintained, and continue to operate effectively to remove pollutants in storm water to the MEP through inspections, self-certifications, surveys, or other equally effective approaches.

(a) All (100 percent) of the structural BMPs at Priority Development Projects that are designated as high priority must be inspected directly by the Copermittee annually prior to each rainy season;

(b) For verifications performed through a means other than direct Copermittee inspection, adequate documentation must be required by the Copermittee to provide assurance that the required maintenance of structural BMPs at each Priority Development Project has been completed; and

(c) Appropriate follow-up measures (including re-inspections, enforcement, etc.) must be conducted to ensure that structural BMPs at each Priority Development Project continue to reduce pollutants in storm water to the MEP as originally designed.

f. DEVELOPMENT PROJECT ENFORCEMENT

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all development projects, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

g. ~~STRATEGIES TO ADDRESS THE HIGHEST PRIORITY WATER QUALITY CONDITIONS~~

Comment [A99]: This section was moved to the beginning of provision E.3.

~~Each Copermittee must describe in its jurisdictional runoff management program document the strategies and/or activities that will be implemented as part of the development planning program to address development and redevelopment projects that may become sources of pollutants and/or stressors that contribute to the highest priority water quality conditions in the Watershed Management Area as follows:~~

~~(5) Provide specific details about how the strategies and/or activities will be implemented (e.g. designate additional BMPs, focus education, increase frequency of verifications and/or inspections, alternative compliance options);~~

~~(6) Each Copermittee must identify areas within its jurisdiction where Priority Development Projects may be allowed or should be encouraged to implement or contribute toward the implementation of alternative compliance retrofitting and/or stream, channel, or habitat rehabilitation projects;~~

~~(7) Each Copermittee should collaborate and cooperate with other Copermittees and/or entities in the Watershed Management Area to identify regional alternative compliance projects that Priority Development Projects may be allowed or should be encouraged to implement or participate in implementing; and~~

~~(8) The strategies and/or activities must be consistent with the requirements of Provisions E.3.a-c and E.3.e-f and the strategies identified in the Water Quality Improvement Plan.~~

4. Construction Management

Each Copermittee must implement a construction management program in accordance with the strategies identified in the Water Quality Improvement Plan and includes, at a minimum, the following requirements:

STRATEGIES TO ADDRESS THE HIGHEST PRIORITY WATER QUALITY CONDITIONS

Comment [A100]: This section was moved from provision E.4.f, Changes are shown in Redline

Each Copermittee must describe in its jurisdictional runoff management program document the strategies and/or activities that will be implemented as part of the construction management program to address construction sites that the Copermittee has identified as potential sources of pollutants and/or stressors that contribute to the highest priority water quality conditions in the Watershed Management Area as follows:

(1) Provide specific details about how the strategies and/or activities will be implemented (e.g. designate additional BMPs, focus education, and/or increase/decrease frequency of inspections for specific types of sites and/or activities); and

(2) The strategies and/or activities must be consistent with the requirements of Provisions E.4.c-e and the strategies identified in the Water Quality Improvement Plan.

(3) The requirements of the programs as outlined in the following sub-provisions may be modified and prioritized as appropriate for consistency with the highest water quality priorities and strategies as identified in the corresponding Water Quality improvement Plan(s).

a. PROJECT APPROVAL PROCESS

Prior to issuance of any local permit(s) that allows the commencement of construction projects that involve ground disturbance or soil disturbing activities that has the reasonable potential to discharge a pollutant load to and from the MS4, as defined in each Copermittees' JRMP~~can potentially generate pollutants in storm water runoff~~, each Copermittee must:

(1) Require a ~~site-specific~~ Pollution Control Plan~~pollution control~~, construction BMP, and/or erosion and sediment control plan, to be submitted by the project applicant to the Copermittee;

(2) Confirm the Pollution Control Plan~~pollution control~~, construction BMP, and/or erosion and sediment control plan, complies with the local grading ordinance, other applicable local ordinances, and the requirements of this Order;

(3) Confirm the Pollution Control Plan~~pollution control~~, construction BMP, and/or erosion and sediment control plan, includes seasonally appropriate and effective BMPs and management measures described in Provision E.4.c, as applicable to the project; and

(4) Verify that the project applicant has obtained coverage under ~~applicable permits, including, but not limited to~~ the Construction General Permit~~, Clean Water Act Section 401 Water Quality Certification and Section 404 Permit, and California Department of Fish and Game Streambed Alteration Agreement~~.

b. CONSTRUCTION SITE INVENTORY AND TRACKING

(1) Each Copermittee must maintain, and update ~~at least monthly~~regularly, a watershed-based inventory of all construction projects issued a local permit that allows ground disturbance or soil disturbing activities that can potentially generate pollutants in storm water runoff. The use of an automated database system, such as GIS, is highly recommended. The inventory must include:

(a) Relevant contact information for each site (e.g., name, address, phone, and email for the owner and contractor);

(b) The basic site information including location (address and hydrologic subarea), Waste Discharge Identification (WDID) number (if applicable), size of the site, and approximate area of disturbance;

(c) Whether or not the site is considered a high threat to water quality, as defined in Provision E.4.b.(2) below;

(d) The project start and ~~anticipated~~ completion dates;

~~(e) Current construction phase;~~

~~(f)~~(e) The required inspection frequency, as defined in the Copermittee's jurisdictional runoff management program document;

~~(g)~~(f) The date the Copermittee accepted and/or approved the ~~site-specific~~ pollution control plan, construction BMP, and/or erosion and sediment control plan; and

~~(h)~~(g) Whether or not there are ongoing enforcement actions administered to the site.

Comment [A101]: Some of the info can only be updated based on an inspection, which may or may not be monthly year round for all sites.

Comment [A102]: The anticipated completion date is often unknown and can fluctuate based on unpredictable and unforeseen circumstances. Keeping track of accurate dates in an inventory would be difficult and would not add significant value to the database. Construction Inspectors keep a close eye on the progress of projects and would not need to rely on inventory data to achieve effective stormwater management and oversight. Once a project is completed, the date can be entered into the database,.

(2) Each Copermittee must identify all construction sites within its jurisdiction that represent a high threat to downstream surface water quality. The designation of construction sites as high threat to water quality must consider the following:

(a) Sites located within a hydrologic subarea where sediment is known or suspected to contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;

(b) Sites located within the same hydrologic subarea and tributary to a water body segment listed as impaired for sediment on the CWA section 303(d) List;

(c) Sites located within, directly adjacent to, or discharging directly to a receiving water within an ESA; and

(d) Other sites determined by the Copermittees or the San Diego Water Board as a high threat to water quality.

c. CONSTRUCTION SITE BMP IMPLEMENTATION

Comment [A103]: See discussion in section 3.9.1 of the comment letter.

Each Copermittee must implement, or require the implementation of effective BMPs (for Copermittee construction sites and private construction sites, respectively) to reduce discharges of pollutants in ~~storm water~~ runoff from construction sites to the MEP, and effectively prohibit~~prevent~~ non-storm water discharges from construction sites into the MS4. These BMPs must be site specific, seasonally appropriate, and construction phase appropriate. BMPs must be implemented at each construction site year round. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season (May 1 through September 30). Copermittees must implement, or require the implementation of, BMPs in the following categories:

(1) Project Planning;

(2) Good Site Management “Housekeeping”, including waste management;

(3) Non-storm Water Management;

(4) Erosion Control;

(5) Sediment Control;

(6) Run-on and Run-off Control; and

(7) Active/Passive Sediment Treatment Systems, where applicable.

d. CONSTRUCTION SITE INSPECTIONS

Each Copermittee must conduct construction site inspections to require and confirm compliance with its local permits and applicable local ordinances, and the requirements of this Order. Priority for site inspections must consider threat to water quality pursuant to Provision E.4.b as well as the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.

(1) Inspection Frequency

(a) Each Copermittee must conduct inspections at all inventoried sites, including high threat to water quality sites, at an appropriate frequency for each phase of construction to confirm~~ensure~~ the site reduces the discharge of pollutants in runoff~~storm water~~ from construction sites to the MEP, and effectively prevents non-storm water discharges from entering the MS4.

(b) Each Copermittee must establish appropriate inspection frequencies for high threat to water quality sites, and all other sites, for each phase of construction. Inspection frequencies appropriate for addressing the highest water quality priorities identified in the Water Quality Improvement Plan, and for complying with the requirements of this Order must be identified in each Copermittee's jurisdictional runoff management program document.

(c) Based upon inspection findings, each Copermittee must implement all follow-up actions (i.e., re-inspection, enforcement) necessary to require and confirm site compliance with its local permits and applicable local ordinances, and the requirements of this Order.

(2) Inspection Content

Inspections of construction sites by the Copermittee must include, at a minimum:

(a) Verification of coverage under the Construction General Permit (Notice of Intent (NOI) and/or WDID number) during initial inspections, when applicable;

(b) Assessment of compliance with its local permits and applicable local ordinances related to pollution prevention, including the implementation and maintenance of applicable BMPs;

(c) Assessment of BMP adequacy and effectiveness;

(d) Visual observations of actual non-storm water discharges;

(e) Visual observations of actual or potential discharge of sediment and/or construction related materials from the site;

(f) Visual observations of actual or potential illicit connections; and

(g) If any violations are found and BMP corrections are needed, inspectors must take and document appropriate actions in accordance with the Enforcement Response Plan pursuant to Provision E.6.

(3) Inspection Tracking and Records

Each Copermittee must track all inspections and re-inspections at all inventoried construction sites. The Copermittee must retain all inspection records in an electronic database or tabular format, which must be made available to the San Diego Water Board upon request. Inspection records must include, at a minimum:

(a) Site name, location (address and hydrologic subarea), and WDID number (if applicable);

(b) Inspection date;

(c) Weather condition during~~Approximate amount of rainfall since last~~ inspection;

(d) Description of problems observed with BMPs and indication of need for BMP addition/repair/replacement and any scheduled re-inspection, and date of re-inspection;

(e) Descriptions of any other specific inspection comments which must, at a minimum, include rationales for longer compliance time;

(f) Description of enforcement actions issued in accordance with the Enforcement Response Plan pursuant to Provision E.6; and

(g) Resolution of problems noted and date problems fixed.

e. CONSTRUCTION SITE ENFORCEMENT

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all its inventoried construction sites, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

5. Existing Development Management

Comment [A104]: See discussion in section 3.10 of the comment letter.

Each Copermittee must implement an existing development management program in accordance with the strategies identified in the Water Quality Improvement Plan. and includes, at a minimum, the following requirements:

STRATEGIES TO ADDRESS THE HIGHEST PRIORITY WATER QUALITY CONDITIONS

Comment [A105]: Moved from sub-provision e. Changes shown in redline

Each Copermittee must implement the water quality improvement strategies, where necessary, to address areas of existing development within its jurisdiction that are identified as sources of pollutants and/or stressors contributing to the highest priority water quality conditions in the Watershed Management Area. For the existing development management program, the following strategies must be implemented:

(1) Specific Existing Development Management Program Strategies

Each Copermittee must describe in its jurisdictional runoff management program document the strategies and/or activities that will be implemented within its jurisdiction to address areas of existing development that the Copermittee has identified as sources of pollutants and/or stressors that contribute to the highest priority water quality conditions in the Watershed Management Area as follows:

(a) Provide specific details about how the strategies and/or activities will be implemented (e.g. designate additional BMPs, focus education, and/or increase/decrease frequency of inspections for specific types of facilities, areas and/or activities);

(b) The facilities and/or areas within the Copermittee's jurisdiction where the strategies and/or activities will be implemented; and

(2) The requirements of the programs as outlined in the following sub-provisions may be modified and prioritized as appropriate for consistency with the highest water quality priorities and strategies as identified in the corresponding Water Quality improvement Plan(s).~~The strategies and/or activities must be consistent with the requirements of Provisions E.5.b-d and the strategies identified in the Water Quality Improvement Plan.~~

a. EXISTING DEVELOPMENT INVENTORY AND TRACKING

Each Copermittee must maintain, and update at least annually, a watershed-based inventory of the existing development within its jurisdiction that ~~may~~has the reasonable potential to~~may~~ discharge a high priority pollutant load to and from the MS4, as defined in the Copermittee's JRMP. The use of an automated database system, such as GIS, is highly recommended. The inventory must, at a minimum, evaluate and include the following if identified as a source of a high priority pollutant~~include~~:

(1) Name, location (hydrological subarea and address, if applicable) of the following types of existing development with its jurisdiction:

(a) Commercial facilities or areas;

(b) Industrial facilities;

(c) Copermittee owned Municipal facilities, including:

(i) MS4 and related structures,[33]

(ii) Roads, streets, and highways,

(iii) Parking facilities,

(iv) Municipal airfields,

(v) Parks and recreation facilities,

(vi) Flood management projects and flood control devices and structures,

(vii) Operating or closed municipal landfills,

(viii) Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewer collection systems,

(ix) Corporate yards, including maintenance and storage yards for materials, waste, equipment, and vehicles,

(x) Hazardous waste collection facilities,

(xi) Other treatment, storage or disposal facilities for municipal waste, and

(xii) Other Copermittee owned municipal facilities that the Copermittee determines may contribute a significant high priority pollutant load to the MS4; and

(d) Residential areas, which may be designated by one or more of the following:

(i) Residential management area,

(ii) Drainage basin or area,

(iii) Land use (e.g., single family, multi-family, rural),

(iv) Neighborhood,

[33] The inventory may refer to the MS4 map required to be maintained pursuant to Provision E.2.b.(1).

(v) Common Interest Area,

(vi) Home Owner Association,

(vii) Mobile home park, and/or

(viii) Other designations accepted by the San Diego Water Board Executive Officer.

(2) A description of the facility or area, including the following information:

(a) Classification as commercial, industrial, municipal, or residential;

(b) Status of facility or area as active or inactive;

(c) Identification if a business is a mobile business;

(d) SIC Code or NAICS Code, if applicable;

(e) Industrial General Permit NOI and/or WDID number, if applicable;

(f) Identification if a residential area is or includes a Common Interest Area / Home Owner Association, or mobile home park;

(g) Identification of pollutants generated and potentially generated by the facility or area;

(h) Whether the facility or area is adjacent to an ESA;

(i) Whether the facility or area is tributary to and within the same hydrologic subarea as a water body segment listed as impaired on the CWA section 303(d) List and generates pollutants for which the water body segment is impaired; and

(j) Whether the facility or area contributes or potentially contributes to the highest priority water quality conditions identified in the Water Quality Improvement Plan.

(3) An annually updated map showing the location of inventoried existing development, watershed boundaries, and water bodies.

b. EXISTING DEVELOPMENT BMP IMPLEMENTATION AND MAINTENANCE

Each Copermittee must designate a minimum set of BMPs required for all inventoried existing development, including special event venues. The designated minimum BMPs must be specific to facility or area types and pollutant generating activities, as appropriate.

(1) Commercial, Industrial, and Municipal Facilities and Areas

(a) Pollution Prevention

Each Copermittee must require the use of appropriate pollution prevention methods by the commercial, industrial, and municipal facilities and areas in its inventoried existing development, as determined necessary by the Copermittee to address the priorities and strategies addressed in the WQIP.

(b) BMP Implementation

Each Copermittee must ~~implement, or~~ require the implementation of, designated BMPs at commercial facilities and areas, industrial facilities, and implement designated BMPs at municipal facilities in its inventoried existing development, as determined necessary by the Copermittee to address the priorities and strategies addressed in the WQIP.

(c) BMP Operation and Maintenance

(i) Each Copermittee must properly operate and maintain, or require the proper operation and maintenance of designated BMPs at commercial facilities and areas, industrial facilities, and municipal facilities in its inventoried existing development.

(ii) Each Copermittee must implement a schedule of operation and maintenance activities for its MS4 and related structures (including but not limited to catch basins, storm drain inlets, detention basins, etc.), and verify proper operation of all its municipal structural treatment controls designed to reduce pollutants (including floatables) in storm water discharges to or from its MS4s and related drainage structures. Operation and maintenance activities may include, but is not limited to, the following:

[a] Inspections of the MS4 and related structures;
[b] Cleaning of the MS4 and related structures; and
[c] Proper disposal of materials removed from cleaning of the MS4 and related structures.

(iii) Each Copermittee must implement a schedule of operation and maintenance for public streets, unpaved roads, paved roads, and paved highways and freeways within its jurisdiction to minimize pollutants that can be discharged in storm water.

(iv) Each Copermittee must implement the following controls to prevent infiltration of sewage into the MS4 from leaking sanitary sewers:

[a]. Copermittees that operate both a municipal sanitary sewer system and a MS4 must implement controls and measures to

Comment [A106]: See discussion in section 3.10.2 of the comment letter.

prevent and eliminate seeping sewage from infiltrating the MS4.

[b]- Copermittees that do not operate both a municipal sanitary sewer system and a MS4 must coordinate with sewering agencies to keep themselves informed of relevant and appropriate maintenance activities and sanitary sewage projects in their jurisdiction that may cause or contribute to seepage of sewage into the MS4.

(d) Pesticides, Herbicides, and Fertilizers BMPs

Comment [A107]: See discussion in section 3.10.2 of the comment letter.

Each Copermittee must ~~implement BMPs, or~~ require the implementation of BMPs, to reduce pollutants in runoff~~storm water~~ discharges to the MEP and effectively prohibit non-storm water discharges associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from commercial facilities and areas, industrial facilities;~~,~~ and implement such BMPs at municipal facilities in its inventoried existing development. Such BMPs must include, as appropriate, educational activities, permits, certifications and other measures for applicators and distributors.

(2) Residential Areas

(a) Pollution Prevention

Each Copermittee must promote and encourage the use of pollution prevention methods, where appropriate, by the residential areas in its inventoried existing development.

(b) BMP Implementation

Each Copermittee must promote and encourage the implementation of designated BMPs at residential areas in its inventoried existing development.

(c) BMP Operation and Maintenance

Each Copermittee must properly operate and maintain, or require the proper operation and maintenance of designated BMPs at residential areas in its inventoried existing development.

(d) Pesticides, Herbicides, and Fertilizers BMPs

Each Copermittee must promote and encourage the implementation of BMPs to reduce pollutants in runoff~~storm water~~ discharges to the MEP and effectively prohibit non-storm water discharges associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from residential areas in its inventoried existing development.

c. EXISTING DEVELOPMENT INSPECTIONS

Each Copermittee must conduct inspections of inventoried existing development that have been identified by the Copermittee as having the reasonable potential to discharge pollutant loads from their MS4, to ensure compliance with applicable local ordinances and permits, and the requirements of this Order.

(1) Inspection Frequency

(a) Each Copermittee must establish appropriate inspection frequencies for inventoried existing development in accordance with the following requirements:

(i) At a minimum, inventoried existing development must be inspected once every five years utilizing one or more of the following methods:

[a] Drive-by inspections by Copermittee municipal and contract staff,
[b] Onsite inspections by Copermittee municipal and contract staff, and/or
[c] Inspections by volunteer monitoring or patrol programs trained by the Copermittee;

(ii) The frequency of inspections must be appropriate to confirm that BMPs are being implemented to reduce the discharge of pollutants in runoff~~storm water~~ from the MS4 to the MEP and effectively prohibit non-storm water discharges to the MS4;

(iii) The frequency of inspections must be based on the potential for a facility or area to discharge non-storm water and pollutants in storm water, and should reflect the priorities set forth in the Water Quality Improvement Plan;

~~(iv) Each Copermittee must annually perform onsite inspections of an equivalent of at least 20 percent of the commercial facilities and areas, industrial facilities, and municipal facilities in its inventoried existing development;[34] and~~

~~(v)~~(iv) Inventoried existing development must be inspected by the Copermittee, as needed, in response to valid public complaints and findings from the Copermittee's municipal and contract staff or volunteer monitoring or patrol program inspections.

(b) Based upon inspection findings, each Copermittee must implement all follow-up actions (i.e. education and outreach, re-inspection, enforcement) necessary to require and confirm compliance with its applicable local

Comment [A108]: Recommend keeping this instead of SD proposed 'during the permit term'. The 'during the permit term' language is problematic for businesses that are added to the inventory during the permit term. For example, if a business is added to the inventory one month before the expiration of the permit, it may not be reasonable to expect it to be immediately inspected. It is also problematic for Riverside (and OC?), who may be added to the permit less than two years before the end of the permit term.

Comment [A109]: See discussion in section 3.10.2 of the comment letter.

~~[34] If any commercial, industrial, or municipal facilities or areas require multiple onsite inspections during any given year, those additional inspection may count toward the total annual inspection requirement. This requirement excludes linear municipal facilities (i.e., MS4, streets, roads and highways).~~

ordinances and permits and the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

(2) Inspection Content

(a) Inspections of existing development by the Copermittee or volunteer monitoring or patrol programs must include, at a minimum:

(i) Visual inspections for actual non-storm water discharges, if present;

(ii) Visual inspections for actual or potential discharge of pollutants, if present;

(iii) Visual inspections for actual or potential illicit connections, if present; and

(iv) Verification that the description of the facility or area in the inventory, required pursuant to Provision E.5.a.(2), has not changed.

(b) Onsite inspections of existing development by the Copermittee must include, at a minimum:

(i) Assessment of compliance with its applicable local ordinances and permits related to non-storm water and storm water discharges and runoff;

(ii) Assessment of the implementation of the designated BMPs;

(iii) Verification of coverage under the Industrial General Permit, when applicable; and

(iv) If any problems or violations are found, inspectors must take and document appropriate actions in accordance with the Enforcement Response Plan pursuant to Provision E.6.

(3) Inspection Tracking and Records

Each Copermittee must track all inspections and re-inspections at all inventoried existing development. The Copermittee must retain all inspection records in an electronic database or tabular format, which must be made available to the San Diego Water Board upon request. Inspection records must include, at a minimum:

(a) Name and location of facility or area (address and hydrologic subarea) consistent with the inventory name and location, pursuant to Provision E.5.a.(1);

(b) Inspection and re-inspection date(s);

(c) Inspection method(s) (i.e. drive-by, onsite);

(d) Observations and findings from the inspection(s);

(e) For onsite inspections of existing development by Copermittee municipal or contract staff, the records must also include, as applicable:

(i) Description of any problems or violations found during the inspection(s),

(ii) Description of enforcement actions issued in accordance with the Enforcement Response Plan pursuant to Provision E.6, and

(iii) The date problems or violations were resolved.

d. EXISTING DEVELOPMENT ENFORCEMENT

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all its inventoried existing development, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

e. RETROFITTING AND REHABILITATION~~STRATEGIES TO ADDRESS THE HIGHEST PRIORITY WATER QUALITY CONDITIONS~~

~~Each Copermittee must implement the water quality improvement strategies, where necessary, to address areas of existing development within its jurisdiction that are identified as sources of pollutants and/or stressors contributing to the highest priority water quality conditions in the Watershed Management Area. For the existing development management program, the following strategies must be implemented:~~

~~(3) Specific Existing Development Management Program Strategies~~

~~Each Copermittee must describe in its jurisdictional runoff management program document the strategies and/or activities that will be implemented within its jurisdiction to address areas of existing development that the Copermittee has identified as sources of pollutants and/or stressors that contribute to the highest priority water quality conditions in the Watershed Management Area as follows:~~

~~(a) Provide specific details about how the strategies and/or activities will be implemented (e.g. designate additional BMPs, focus education, and/or increase/decrease frequency of inspections for specific types of facilities, areas and/or activities);~~

~~(b) The facilities and/or areas within the Copermittee's jurisdiction where the strategies and/or activities will be implemented; and~~

~~(c)~~(a) ~~The strategies and/or activities must be consistent with the requirements of Provisions E.5.b-d and the strategies identified in the Water Quality Improvement Plan.~~

~~(4)~~(3) Retrofitting Areas of Existing Development

Where identified in the WQIP as a required strategy to address the highest priority water quality conditions, each~~Each~~ Copermittee must describe in its jurisdictional runoff management program document, a program to retrofit areas of existing development within its jurisdiction to address identified sources of pollutants and/or stressors that contribute to the highest priority water quality conditions in the Watershed Management Area. The program must be implemented as follows:

(a) Each Copermittee must, where necessary pursuant to the strategies identified in the WQIP, identify areas of existing development as candidates for retrofitting, focusing on areas where retrofitting will address pollutants and/or stressors that contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;

(b) Candidates for retrofitting projects may be utilized to reduce pollutants that may be discharged in storm water from areas of existing development, and/or address storm water runoff flows and durations from areas of existing development that cause or contribute to hydromodification in receiving waters;

(c) Each Copermittee must develop a strategy to facilitate the implementation of retrofitting projects, where needed in areas of existing development identified as candidates;

(d) Each Copermittee should identify areas of existing development where Priority Development Projects may be allowed or should be encouraged to implement or contribute toward the implementation of alternative compliance retrofitting projects; and

(e) Where retrofitting projects within specific areas of existing development are determined to be infeasible to address the highest priority water quality conditions in the Water Quality Improvement Plan, the Copermittee should collaborate and cooperate with other Copermittees and/or entities in the Watershed Management Area to identify, develop, and implement regional retrofitting projects (i.e. projects that can receive and/or treat storm water from one or more areas of existing development and will result in a net benefit to water quality and the environment) adjacent to and/or downstream of the areas of existing development.

~~(5)~~(4) Stream, Channel and/or Habitat Rehabilitation in Areas of Existing Development

Where identified in the WQIP as a required strategy to address the highest priority water quality conditions, each~~Each~~ Copermittee must describe in its jurisdictional runoff management program document, a program to rehabilitate streams, channels, and/or habitats in areas of existing development within its jurisdiction to address the highest priority water quality conditions in the Watershed Management Area. The program must be implemented as follows:

(a) Each Copermittee must, where necessary pursuant to the strategies identified in the WQIP, identify streams, channels, and/or habitats in areas of existing development as candidates for rehabilitation, focusing on areas where stream, channel, and/or habitat rehabilitation projects will address the highest priority water quality conditions identified in the Water Quality Improvement Plan;

(b) Candidates for stream, channel, and/or habitat rehabilitation projects may be utilized to address storm water runoff flows and durations from areas of existing development that cause or contribute to hydromodification in receiving waters, rehabilitate channelized or hydromodified streams, restore wetland and riparian habitat, restore watershed functions, and/or ~~restore~~ protect beneficial uses of receiving waters;

(c) Each Copermittee must develop a strategy to facilitate the implementation of stream, channel, and/or habitat rehabilitation projects, where needed, in areas of existing development identified as candidates;

(d) Each Copermittee should identify areas of existing development where Priority Development Projects may be allowed or should be encouraged to implement or contribute toward the implementation of alternative compliance stream, channel, and/or habitat rehabilitation projects; and

(e) Where stream, channel, and/or habitat rehabilitation projects within specific areas of existing development are determined to be infeasible to address the highest priority water quality conditions in the Water Quality Improvement Plan, the Copermittee should collaborate and cooperate with other Copermittees and/or entities in the Watershed Management Area to identify, develop, and implement regional stream, channel, and/or habitat rehabilitation projects (i.e. projects that can receive storm water from one or more areas of existing development and will result in a net benefit to water quality and the environment).

(5) Upon Regional Board Executive Officer approval the Copermittees may reallocate resources in the WQIPs for retrofit and rehabilitation project(s).

6. Enforcement Response Plans

Each Copermittee must develop and implement an Enforcement Response Plan as part of its jurisdictional runoff management program document. The Enforcement Response Plan must describe the applicable approaches and options to enforce its legal authority established pursuant to Provision E.1, as necessary, to achieve compliance with the requirements of this Order. Copermittees may continue to utilize and implement established, equivalent guidelines and procedures for enforcement. If such equivalent guidelines and procedures have not been developed, ~~T~~the Enforcement Response Plan must include the following:

a. ENFORCEMENT RESPONSE PLAN COMPONENTS

The Enforcement Response Plan must include the following individual components:

(1) Illicit Discharge Detection and Elimination Enforcement Component;

(2) Development Planning Enforcement Component;

(3) Construction Management Enforcement Component; and

(4) Existing Development Enforcement Component.

b. ENFORCEMENT RESPONSE APPROACHES AND OPTIONS

Each component of the Enforcement Response Plan must describe the enforcement response approaches that the Copermittee will implement to compel compliance with its statutes, ordinances, permits, contracts, orders, or similar means, and the requirements of this Order. The description must include the protocols for implementing progressively stricter enforcement responses. The enforcement response approaches must include appropriate sanctions, as legally appropriate, to compel compliance, including, at a minimum, the following tools or their equivalent:

(1) Verbal and written notices of violation;

(2) Cleanup requirements;

(3) Fines;

(4) Bonding requirements;

(5) Administrative and criminal (if intentional or criminally negligent) penalties;

(6) Liens;

(7) Stop work orders; and

(8) Permit and occupancy denials.

c. CORRECTION OF VIOLATIONS

(1) Violations must be corrected in a timely manner with the goal of correcting the violations within 30 calendar days after the violations are discovered, or prior to the next predicted rain event, whichever is sooner.

(2) The status of the enforcement actions ~~If more than 30 calendar days are required to achieve compliance, then a rationale~~ must be recorded and updated in the applicable electronic database or tabular system used to track violations.

d. ~~ESCALATED~~ PROGRESSIVE ENFORCEMENT

(1) The Enforcement Response Plan must include a definition of "~~escalated~~ progressive enforcement." ~~Escalated~~ Progressive enforcement must include a series of enforcement actions that match the severity of the violations and include distinct, progressive steps. ~~any enforcement scenario where a violation or other non-compliance is determined to cause or contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan~~. ~~Escalated~~ Progressive enforcement may be defined differently for development planning, construction sites, commercial facilities or areas, industrial facilities, municipal facilities, and/or residential areas.

(2) Where the Copermittee determines ~~escalated~~ the identified progressive enforcement steps ~~is~~are not required, a rationale must be recorded in the applicable electronic database or tabular system used to track violations.

(3) ~~Escalated~~ Progressive enforcement actions must continue to increase in severity, as necessary, to compel compliance as soon as possible.

e. REPORTING OF NON-COMPLIANT SITES

(1) Each Copermittee must notify the San Diego Water Board in writing within ~~22~~5 calendar~~2 working~~ days of issuing escalated enforcement (as defined in the Copermittee's Enforcement Response Plan) to a construction site that poses a significant threat to water quality as a result of violations or other non-compliance with its permits and applicable local ordinances, and the requirements of this Order. Written notification may be provided electronically by email.

Comment [A110]: This is just asking for paperwork violations if someone forgets to write a specific justification – even if all appropriate steps are being diligently pursued. Request alternatively to simply require that the status be updated as appropriate.

Comment [A111]: See discussion in section 3.11.2 of the comment letter.

(2) Each Copermittee must notify the San Diego Water Board of non-filers under the Industrial General Permit and Construction General Permit by email to Nonfilers_R9@waterboards.ca.gov.

7. Public Education and Participation

Each Copermittee must implement, individually or with other Copermittees, a public education and participation program in accordance with the strategies identified in the Water Quality Improvement Plan to promote and encourage the development of programs, management practices, and behaviors that reduce the discharge of pollutants in runoff~~storm water~~ to the MEP, prevent controllable non-storm water discharges from entering the MS4, and protect water quality standards in receiving waters.

STRATEGIES TO ADDRESS THE HIGHEST PRIORITY WATER QUALITY CONDITIONS

Comment [A112]: Recommended move from (c)

Each Copermittee must describe in its jurisdictional runoff management program document the strategies and/or activities that will be implemented within its jurisdiction, as applicable, to educate the public and encourage public participation to address potential sources of pollutants and/or stressors that contribute to the highest priority water quality conditions in the Watershed Management Area as follows:

(1) The target audiences and/or areas within the Copermittee's jurisdiction where the strategies and/or activities will be implemented;

(2) Provide specific details about how the strategies and/or activities will be implemented (e.g. educational topics, materials and/or activities, public outreach and participation programs and/or opportunities);

(3) Each Copermittee should collaborate and cooperate with other Copermittees and/or entities in the Watershed Management Area to identify and implement regional public education and participation activities, programs and opportunities;

(4) Each Copermittee must incorporate a mechanism for evaluating and assessing educational and other public outreach activities, as needed, to identify progress and incorporate modifications necessary to increase the effectiveness of the public education and participation program.

(5) The requirements of the programs as outlined in the following sub-provisions

may be modified and prioritized as appropriate for consistency with the highest water quality priorities and strategies as identified in the corresponding Water Quality improvement Plan(s).

a. PUBLIC EDUCATION

The public education program component implemented within the Copermittee's jurisdiction must include, at a minimum, the following:

(1) Educational activities, public information activities, and other appropriate outreach activities intended to reduce pollutants associated with the ~~application of pesticides, herbicides and fertilizer and other pollutants of concern in storm water discharges to and from its MS4 to the MEP, as determined and prioritized by the Copermittee(s) by jurisdiction and/or watershed to address the~~ highest priority water quality conditions identified in the Water Quality Improvement Plan;

(2) Educational activities, public information activities, and other appropriate outreach activities to facilitate the proper management and disposal of used oil and toxic materials; and

(3) Appropriate education and training measures for specific target audiences, such as construction site operators, residents, underserved target audiences and school-aged children, as determined and prioritized by the Copermittee(s) by jurisdiction and/or watershed, based on high risk behaviors and pollutants of concern.

b. PUBLIC PARTICIPATION

The public participation program component implemented within the Copermittee's jurisdiction must include, at a minimum, the following:

(1) A process for members of the public to participate in updating the highest priority water quality conditions, numeric goals, and water quality improvement strategies in the Water Quality Improvement Plan.

(2) Opportunities for members of the public to participate in providing the Copermittee recommendations for improving the effectiveness of the water quality improvement strategies implemented within its jurisdiction.

(3) Opportunities for members of the public to participate in programs and/or activities that can result in the prevention or elimination of non-storm water discharges to the MS4, reduction of pollutants in ~~storm water~~ discharges from

the MS4, and/or ~~restoration and~~ protection of the quality of receiving waters.

8. Fiscal Analysis

a. ~~Each Copermittee must secure the resources necessary to meet all the requirements of this Order~~.

b. Each Copermittee must conduct an annual fiscal analysis of its jurisdictional runoff management program in its entirety. The fiscal analysis must include the following:

(1) Identification of the various categories of expenditures necessary to implement the requirements of this Order, including a description of the specific capital, operation and maintenance, and other expenditure items to be accounted for in each category of expenditures;

(2) The staff resources needed and allocated to meet the requirements of this Order, including any development, implementation, and enforcement activities required;

(3) The estimated expenditures for Provisions E.8.b.(1) and E.8.b.(2) for the current fiscal year; and

(4) The source(s) of funds that are proposed to meet the necessary expenditures described in Provisions E.8.b.(1) and E.8.b.(2), including legal restrictions on the use of such funds, for the current fiscal year and next fiscal year.

c. Each Copermittee must submit a summary of the annual fiscal analysis with each Annual Report required pursuant to Provision F.3.b.

d. Each Copermittee must provide the documentation used to develop the summary of the annual fiscal analysis upon request by the San Diego Water Board.

Comment [A113]: Since the monitoring period is different than a fiscal year, we won't be able to consistently and accurately report monitoring costs incurred by the Copermittees. (which are a big part of overall budgets)

Comment [A114]: Please see Legal Comments.

F. REPORTING

Comment [A115]: See discussion in section 3.14 of the comment letter.

The purpose of this provision is to determine and document compliance with the requirements set forth in this Order. The goal of reporting is to communicate to the San Diego Water Board and the people of the State of California the implementation status of each jurisdictional runoff management program and compliance with the requirements of this Order. This goal is to be accomplished through the submittal of specific deliverables to the San Diego Water Board by the Copermittees.

1. Water Quality Improvement Plans

Comment [A116]: See discussion in section 3.14.1 of the comment letter.

The Copermittees for each Watershed Management Area must develop and submit the Water Quality Improvement Plan in accordance with the following requirements:

a. WATER QUALITY IMPROVEMENT PLAN DEVELOPMENT

Each Water Quality Improvement Plan must be developed in accordance with the following process:

(1) Priority Water Quality Conditions and Numeric Goals

(a) The Copermittees must implement a public participation process to solicit data and information to be utilized in the development and identification of the priority water quality conditions for the Watershed Management Area.

(b) The Copermittees are encouraged to involve the public and key stakeholders as early and often as possible during the development of the priority water quality conditions and numeric goals to be included in the Water Quality Improvement Plan.

(c) Within 6 months after the commencement of coverage under this Order, the Copermittees must develop and submit the Water Quality Improvement Plan requirements of Provision B.2 to the San Diego Water Board. The San Diego Water Board will issue a public notice and solicit public comments on the Water Quality Improvement Plan for a minimum of 60 days.

(d) The Copermittees must revise the priority water quality conditions and numeric goals based on comments received and/or recommendations or direction from the San Diego Water Board Executive Officer.

(2) Water Quality Improvement Strategies and Schedules

(a) The Copermittees are encouraged to involve the public and key stakeholders as early and often as possible during the development of the water quality improvement strategies and schedules to be included in the Water Quality Improvement Plan.

(b) Within 9 months after receiptthe commencement of public comments and/or recommendations from the Executive Officer per (1)(c) abovecoverage under this Order, the Copermittees must develop and submit the Water Quality Improvement Plan requirements of Provision B.3 to the San Diego Water Board. The San Diego Water Board will issue a public notice and solicit public comments on the Water Quality Improvement Plan for a minimum of 60 days.

(c) The Copermittees must revise the water quality improvement strategies and schedules based on comments received and/or recommendations or direction from the San Diego Water Board Executive Officer.

b. WATER QUALITY IMPROVEMENT PLAN SUBMITTAL

(1) Within 618 months after receiptthe commencement of public comments and/or recommendations from the Executive Officer per (2)(c) abovecoverage under this Order, the Copermittees for each Watershed Management Area must submit a complete Water Quality Improvement Plan in accordance with the requirements of Provision B to the San Diego Water Board. The San Diego Water Board will issue a public notice and solicit public comments on the Water Quality Improvement Plan for a minimum of 30 days.

(2) Based on the comments received, the San Diego Water Board will determine whether to hold a public hearing or to limit public input to submittal of written comments. If no hearing is held the San Diego Water Board will notify the Copermittees within 6 months that the Water Quality Improvement Plan has been accepted as complete following its review and determination that the Water Quality Improvement Plan meets the requirements of this Order.

(3) The Copermittees must revise the Water Quality Improvement Plan based on comments received and/or recommendations or direction from the San Diego Water Board Executive Officer.

(4) The Water Quality Improvement Plan must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of acceptance by the San Diego Water Board.

(5) Copermittees must commence with implementation of the BMP strategies identified in the Water Quality Improvement Plan no later than the fiscal year (July 1) following San Diego Water Board approval of the Water Quality Improvement Plan, and the monitoring strategies identified in the Water Quality Improvement Plan no later than October 1st (or May 1st, whichever is sooner) following the San Diego Water Board approval of the Water Quality Improvement Plan.

2. Updates

Comment [A117]: See discussion in section 3.14.1 of the comment letter.

a. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATES

Each Copermittee must update its jurisdictional runoff management program document in accordance with the following requirements:

(1) Each Copermittee is encouraged to involve the public and key stakeholders as early and often as possible to solicit recommendations for updates to its jurisdictional runoff management program document.

(2) Each Copermittee must update its jurisdictional runoff management program document to incorporate the requirements of Provision E and the strategies identified in the applicable WQIPs no later than 6~~18~~ months after approval~~the commencement~~ of the applicable Water Quality Improvement Plans (or updates thereto).~~coverage under this Order.~~

(3) The updated JRMP document must be implemented beginning July 1st following completion of the update, unless directed otherwise by the Executive Officer.

~~(3)~~(4) Each Copermittee must submit any subsequent updates to its jurisdictional runoff management program, with a rationale for the modifications, either in the Annual Report required pursuant to Provision F.3.b, or as part of the Report of Waste Discharge required pursuant to Provision F.5.b.

~~(4)~~(5) The Copermittee must revise the modifications as directed by the San Diego Water Board Executive Officer.

~~(5)~~(6) Updated jurisdictional runoff management program documents must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of submitting the Annual Report.

b. BMP DESIGN MANUAL UPDATES

Each Copermittee must update its BMP Design Manual in accordance with the following requirements:

(1) Each Copermittee must update its BMP Design Manual to incorporate the requirements of Provisions E.3.a-d, and E.3.g. no later than 6~~18~~ months after approval~~the commencement~~ of the applicable Water Quality Improvement Plans..

Comment [A118]: This is necessary for the WQIP strategies to inform the Development Planning process

(2) Unless directed otherwise by the San Diego Water Board, the Copermittee must implement the updated BMP Design Manual within 180 days of

Comment [A119]: An implementation date was missing from the Tentative Order

completing updates to the BMP Design Manual.

~~(1)~~(3) Until the Copermittee begins implementation of its updated BMP Design Manual, the Copermittee must continue implementing its current BMP Design Manual~~coverage under this Order~~.

Comment [A120]: This was moved to here

~~(2)~~(4) Subsequent updates must be consistent with the requirements of Provisions E.3.a-d and must be submitted as part of the Annual Reports required pursuant to Provision F.3.b, or as part of the Report of Waste Discharge required pursuant to Provision F.5.b.

~~(3)~~(5) Updated BMP Design Manuals must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of completing the update.

c. WATER QUALITY IMPROVEMENT PLAN UPDATES

The Water Quality Improvement Plans must be updated in accordance with the following process:

(1) The Copermittees must implement a public participation process to solicit data and information to be utilized in updating the Water Quality Improvement Plan.

(2) The Copermittees are encouraged to involve the public and key stakeholders as early and often as possible during the updates to the Water Quality Improvement Plan.

(3) The Copermittees for each Watershed Management Area must submit requested updates to the Water Quality Improvement Plan, with the public input received and the rationale for the requested updates, either in the Annual Reports required pursuant to Provision F.3.b, or as part of the Report of Waste Discharge required pursuant to Provision F.5.b. The requested updates are considered accepted by the San Diego Water Board if no response is provided to the Copermittee after 3 months of submitting the request.

(4) The Copermittees must revise the requested updates as directed by the San Diego Water Board Executive Officer.

(5) Updated Water Quality Improvement Plans must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of acceptance of the requested updates by the San Diego Water Board.

3. Progress Reporting

Comment [A121]: See discussion in section 3.14.1 of the comment letter.

a. PROGRESS REPORT PRESENTATIONS

The Copermittees for each Watershed Management Area must appear before the San Diego Water Board, as requested by the San Diego Water Board, to provide progress reports on the implementation of the Water Quality Improvement Plan and jurisdictional runoff management programs.

b. ANNUAL REPORTS

Comment [A122]: See discussion in section 3.14.1 of the comment letter.

(1) Transitional Period JRMP Reports: Each Copermittee must complete and submit a Jurisdictional Runoff Management Program Annual Report Form (Attachment D or accepted revision) no later than October 31 of each year prior to the implementation of updated JRMP programs pursuant to F.2.a. Each Copermittee must submit the information on the Jurisdictional Runoff Management Program Annual Report Form specific to the area within its jurisdiction in each Watershed Management Area.

(2) Transitional Period Monitoring Report: The transitional period monitoring conducted pursuant to D.1.a and D.2.a. shall be reported in a single report that covers the entire reporting period from the initiation of the transitional period monitoring (as described in D.1.a and D.2.a.), through September 30th following approval of the Water Quality Improvement Plan. The Transitional Period Monitoring Report shall include the assessments required per D.4.a.(1)(a), D.4.b.(1)(a) and D.4.b.(2)(a); and be submitted by January 31st following completion of the above mentioned transitional period.

~~(1)~~(3) Post-Transitional Annual Reports – Following the initial transitional period after enrollment into this Order, the~~The~~ Copermittees for each Watershed Management Area must submit an combined Annual Report for each reporting period no later than January 31 of the following year. The annual reporting period consists of two periods: 1) July 1 to June 30 of the following year for the jurisdictional runoff management programs, 2) October 1 to September 30 of the following year for the monitoring and assessment programs~~. The first Annual Report must be prepared for the reporting period beginning July 1 after commencement of coverage under this Order, and upon San Diego Water Board determination that the Water Quality Improvement Plan meets the requirements of this Order to June 30 in the following year for the jurisdictional runoff management programs, and September 30 in the following year for the monitoring and assessment programs.~~ Annual Reports must be made available on the Regional Clearinghouse required pursuant to Provision F.4. Each Annual Report must include the following:

(a) The receiving water and MS4 outfall discharge monitoring data collected pursuant to Provisions D.1 and D.2, summarized and presented in tabular and graphical form;

(b) Progress of the special studies required pursuant to Provision D.3, and the results or findings when a special study, or each phase of a special study, is completed;

(c) The findings from the applicable assessments required pursuant to Provision D.4;

Comment [A123]: Not all are required annually.

(d) The progress of implementing the Water Quality Improvement Plan, including, but not limited to, the following:

(i) The progress toward achieving the interim and final numeric goals for the highest water quality priorities for the Watershed Management Area,

(ii) The water quality improvement strategies that were implemented and/or no longer implemented by each of the Copermittees during the reporting period and previous reporting periods, and are planned to be implemented during the next reporting period,

(iii) Proposed modifications to the water quality improvement strategies, with public input received and rationale for the proposed modifications,

(iv) Previously proposed modifications or updates incorporated into the Water Quality Improvement Plan and/or each Copermittee's jurisdictional runoff management program document and implemented by the Copermittees in the Watershed Management Area, and

(v) Proposed modifications or updates to the Water Quality Improvement Plan and/or each Copermittee's jurisdictional runoff management program document;

(e) A completed Jurisdictional Runoff Management Program Annual Report Form (Attachment D or accepted revision) for each Copermittee in the Watershed Management Area, certified by a Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative.

~~(2) Each Copermittee must complete and submit a Jurisdictional Runoff Management Program Annual Report Form (Attachment D or accepted revision) no later than October 31 of each year until the first Annual Report is required to be submitted. Each Copermittee must submit the information on the Jurisdictional Runoff Management Program Annual Report Form specific to the area within its jurisdiction in each Watershed Management Area.~~

Comment [A124]: Adapted into new section (1)

~~(3)~~(4) Each Copermittee must provide any data or documentation utilized in

developing the Annual Report upon request by the San Diego Water Board. ~~AnyAny~~Copermittee~~Any~~ monitoring data utilized in developing the Annual Report must be uploaded to the California Environmental Data Exchange Network (CEDEN).[35] Any Copermittee monitoring and assessment data utilized in developing the Annual Report must be provided on the Regional Clearinghouse required pursuant to Provision F.4.

c. Regional Monitoring and Assessment Report

(1) The Copermittees must submit a Regional Monitoring and Assessment Report no later than 180 days in advance of the expiration date of this Order. The Regional Monitoring and Assessment Report may be submitted as part of the Report of Waste Discharge required pursuant to Provision F.5.b. The Regional Monitoring and Assessment Report shall incorporate the Integrated Assessment of the Water Quality Improvement Plan per D.4.d.

~~(1) The Copermittees must review the receiving water and MS4 outfall discharge monitoring data collected pursuant to Provisions D.1 and D.2, and findings from the assessments required pursuant to Provision D.4, to assess the following:~~

~~(2)~~

~~(3) The beneficial uses of the receiving waters within the San Diego Region that are protected or must be restored;~~

~~(4)~~

~~(5) The progress toward restoring impacted beneficial uses in the receiving waters within the San Diego Region; and~~

~~(6)~~

~~(7) Pollutants or conditions of emerging concern that may impact beneficial uses in the receiving waters within the San Diego Region.~~

~~(8)~~

~~(9) The Regional Monitoring and Assessment Report must include recommendations for improving the implementation and assessment of the Water Quality Improvement Plans and jurisdictional runoff management programs.~~

(2) Each Copermittee must provide any data or documentation utilized in developing the Regional Monitoring and Assessment Report upon request by the San Diego Water Board. Any monitoring and assessment data utilized in developing the Regional Monitoring and Assessment Report must be provided on the Regional Clearinghouse required pursuant to Provision F.4.

[35] Data must be uploaded to CEDEN Southern California Regional Data Center (http://www.sccwrp.org/Data/DataSubmission/SouthernCaliforniaRegionalDataCenter.aspx) using the templates provided on the CEDEN website.

4. Regional Clearinghouse

The Copermittees must develop, update, and maintain an internet-based Regional Clearinghouse that is made available to the public no later than 18 months after the effective date of this Order.[36]

a. The Copermittees, through the Regional Clearinghouse, must make the following documents and data available, organized by Watershed Management Area, which may be linked to other internet-based data portals and databases where the original documents are stored:

(1) Water Quality Improvement Plan for the Watershed Management Area, and all updated versions with date of update;

(2) Annual Reports for the Watershed Management Area;

(3) Jurisdictional Runoff Management Program document for each Copermittee within the Watershed Management Area, and all updated versions with date of update;

(4) BMP Design Manual for each Copermittee within the Watershed Management Area, and all updated versions with date of update;

(5) Reports from special studies (e.g. source identification, BMP effectiveness assessment) conducted in the Watershed Management Area;

(6) Monitoring data collected pursuant to Provision D for each Watershed Management Area must be uploaded to CEDEN,[37] with links to the uploaded data; and

(7) Available GIS data, layers, and/or shapefiles used to develop the maps generated and maintained by the Copermittees for the Water Quality Improvement Plans, Annual Reports, and jurisdictional runoff management program documents.

b. The Copermittees, through the Regional Clearinghouse, must make the following information and documents available:

(1) Contact information (point of contact, phone number, email address, and mailing address) for each Copermittee;

[36] The Copermittee may elect to develop and maintain the clearinghouse(s) provided by other Copermittees or agencies.

[37] Data must be uploaded to CEDEN Southern California Regional Data Center (http://www.sccwrp.org/Data/DataSubmission/SouthernCaliforniaRegionalDataCenter.aspx) using the templates provided on the CEDEN website.

(2) Public hotline number for reporting non-storm water and illicit discharges for each Copermittee;

(3) Email address for reporting non-storm water and illicit discharges for each Copermittee;

(4) Link to each Copermittee's website, if available, where the public may find additional information about the Copermittee's storm water management program and for requesting records for the implementation of its program;

(5) Information about opportunities for the public to participate in programs and/or activities that can result in the prevention or elimination of non-storm water discharges to the MS4, reduction of pollutants in ~~storm water~~ discharges from the MS4, and/or restoration and protection of the quality of receiving waters; and

(6) Reports from regional monitoring programs in which the Copermittees participate (e.g. Southern California Monitoring Coalition, Southern California Coastal Water Research Project Bight Monitoring);

(7) Regional Monitoring and Assessment Reports; and

(8) Any other information, data, and documents the Copermittees determine as appropriate for making available to the public.

5. Report of Waste Discharge

a. The Orange County Copermittees and the Riverside County Copermittees are required to submit a complete Report of Waste Discharge pursuant to the requirements of their current Orders. The San Diego Water Board will review and consider the Reports of Waste Discharge to determine whether modification to this Order, pursuant to the requirements of Provision H, will be required prior the Orange County Copermittees and/or Riverside County Copermittees becoming covered under this Order. The current Orders for the Orange County Copermittees and Riverside County Copermittees are rescinded upon notification of coverage under this Order except for enforcement purposes.

b. The Copermittees subject to the requirements of this Order must submit to the San Diego Water Board a complete Report of Waste Discharge as an application for the re-issuance of this Order and NPDES permit. The Report of Waste Discharge must be submitted no later than 180 days in advance of the expiration date of this Order. The Report of Waste Discharge must contain the following minimum information:

(1) Names and addresses of the Copermittees;

(2) Names and titles of the primary contacts of the Copermittees;

(3) Proposed changes to the Copermittees' Water Quality Improvement Plans and the supporting justification;

(4) Proposed changes to the Copermittees' jurisdictional runoff management programs and the supporting justification;

(5) Any other information necessary for the re-issuance of this Order;

(6) Any information to be included as part of the Report of Waste Discharge pursuant to the requirements of this Order; and

(7) Any other information required by federal regulations for NPDES permit reissuance.

6. Application for Early Coverage

a. The Orange County Copermittees, collectively, or Riverside County Copermittees, collectively, may apply for early coverage under this Order by submitting a Report of Waste Discharge Form 200 with a written request for early coverage under this Order.

Comment [A125]: This form requests information that is not applicable to MS4s.

b. The San Diego Water Board will review the application for early coverage. A notification of coverage under this Order will be issued to the Copermittees in the respective county by the San Diego Water Board upon completion of the early coverage application requirements. The effective coverage date will be specified in the notification of coverage. The Copermittees in the respective county are authorized to have MS4 discharges pursuant to the requirements of this Order starting on the effective coverage date specified in the notification of coverage. The existing Order for the respective county is rescinded upon the effective coverage date specified in the notification of coverage except for enforcement purposes.

7. Reporting Provisions

Each Copermittee must comply with all the reporting and recordkeeping provisions of the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

G. PRINCIPAL WATERSHED COPERMITTEE RESPONSIBILITIES

1. The Copermittees within each Watershed Management Area must designate a Principal Watershed Copermittee and notify the San Diego Water Board of the name of the Principal Watershed Copermittee. ~~An individual Copermittee should not be designated a Principal Watershed Copermittee for more than two Watershed Management Areas.~~ The notification may be submitted with the Water Quality Improvement Plan required pursuant to Provision F.1 of this Order.

2. The Principal Watershed Copermittee is responsible for, at a minimum, the following:

a. Serving as liaison between the Copermittees in the Watershed Management Area and the San Diego Water Board on general permit issues, and when necessary and appropriate, representing the Copermittees in the Watershed Management Area before the San Diego Water Board.

b. Facilitating the development of the Water Quality Improvement Plan in accordance with the requirements of Provision B of this Order

c. Coordinating the submittal of the deliverables required by Provisions F.1, F.2, F.3.a, and F.3.b of this Order.

d. Coordinating the development of~~and developing~~, with the other Principal Watershed Copermittees, the requirements of Provisions F.3.c, F.4, and F.5.b of this Order.

H. MODIFICATION OF PROGRAMS

1. Modifications of the Order may be initiated by the San Diego Water Board or by the Copermittees, including as part of the ROWD process applicable to the Orange County and Riverside County Copermittees. Requests by Copermittees must be made to the San Diego Water Board.

2. Minor modifications to the Order may be made by the San Diego Water Board Executive Officer, where the proposed modification complies with all the effective prohibitions and limitations, and other requirements of this Order.

3. Proposed modifications to the Order outside of the WQIP process that are not minor require amendment of this Order in accordance with this Order's rules, policies, and procedures.

4. The San Diego Water Board may re-open and modify this Order at any time prior to its expiration, after opportunity for public comment and a public hearing, if the State Water Board determines that revisions are warranted to those provisions of the Order addressing compliance with water quality standards in the receiving water and/or those provisions of the Order establishing an iterative process for implementation of management practices to assure compliance with water quality standards in the receiving water.

I. STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS

Each Copermittee must comply with all the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

ATTACHMENT A

DISCHARGE PROHIBITIONS AND SPECIAL PROTECTIONS

1. Basin Plan Waste Discharge Prohibitions

California Water Code Section 13243 provides that a Regional Water Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste or certain types of waste is not permitted. The following waste discharge effective prohibitions in the Water Quality Control Plan for the San Diego Basin (Basin Plan) are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.

2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.

3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by a National Pollutant Discharge Elimination System (NPDES) permit or a dredged or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.

4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this San Diego Water Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services (DHS) and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the San Diego Water Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the San Diego Water Board.

7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the San Diego Water Board.

8. Any discharge to a storm water conveyance system that is not composed entirely of "*storm water*" is effectively prohibited unless authorized by the San Diego Water Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities.] [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.

10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.

11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.

12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.

13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the San Diego Water Board.

14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.

17. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.

18. The discharge of treated sewage from vessels, which do not have a properly functioning US Coast Guard certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at mean lower low water (MLLW) is prohibited.

2. Attachment B to State Water Board Resolution 2012-0012

Special Protections for Areas of Special Biological Significance, Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges

I. PROVISIONS FOR POINT SOURCE DISCHARGES OF STORM WATER AND NONPOINT SOURCE WASTE DISCHARGES

The following terms, effective prohibitions, and special conditions (hereafter collectively referred to as special conditions) are established as limitations on point source storm water and nonpoint source discharges. These special conditions provide Special Protections for marine aquatic life and natural water quality in Areas of Special Biological Significance (ASBS), as required for State Water Quality Protection Areas pursuant to California Public Resources Code Sections 36700(f) and 36710(f). These Special Protections are adopted by the State Water Board as part of the California Ocean Plan (Ocean Plan) General Exception.

The special conditions are organized by category of discharge. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) will determine categories and the means of regulation for those categories [e.g., Point Source Storm Water National Pollutant Discharge Elimination System (NPDES) or Nonpoint Source].

A. PERMITTED POINT SOURCE DISCHARGES OF STORM WATER

1. General Provisions for Permitted Point Source Discharges of Storm Water

   a. Existing storm water discharges into an ASBS are allowed only under the following conditions:

      (1) The discharges are authorized by an NPDES permit issued by the State Water Board or Regional Water Board;

      (2) The discharges comply with all of the applicable terms, effective prohibitions, and special conditions contained in these Special Protections; and

      (3) The discharges:

         (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;

         (ii) Are designed to prevent soil erosion;

         (iii) Occur only during wet weather;

         (iv) Are composed of only storm water runoff.

   b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.

   c. The discharge of trash is effectively prohibited.

d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no additional pollutant loading). “Existing storm water outfalls” are those that were constructed or under construction prior to January 1, 2005. “New contribution of waste” is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.

e. Non-storm water discharges are effectively prohibited except as provided below:

(1) The term “non-storm water discharges” means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not composed entirely of storm water.

(2) (i) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

(a) Discharges associated with emergency fire fighting operations.

(b) Foundation and footing drains.

(c) Water from crawl space or basement pumps.

(d) Hillside dewatering.

(e) Naturally occurring groundwater seepage via a storm drain.

(f) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

(ii) An NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS only to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS.

(3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.

2. Compliance Plans for Inclusion in Storm Water Management Plans (SWMP) and Storm Water Pollution Prevention Plans (SWPPP).

The discharger shall specifically address the effective prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to an ASBS in an ASBS Compliance Plan to be included in its SWMP or a SWPPP, as appropriate to permit type. If a statewide permit includes a SWMP, then the discharger shall prepare a stand-alone compliance plan for ASBS discharges. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board (statewide permits) or

Executive Officer of the Regional Water Board (for permits issued by Regional Water Boards).

a. The Compliance Plan shall include a map of surface drainage of storm water runoff, showing areas of sheet runoff, prioritize discharges, and describe any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified to require installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable. The SWMP or SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.

b. The ASBS Compliance Plan shall describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.

c. For Municipal Separate Storm Sewer System (MS4s), the ASBS Compliance Plan shall require minimum inspection frequencies as follows:

   (1) The minimum inspection frequency for construction sites shall be weekly during rainy season;

   (2) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season;

   (3) The minimum inspection frequency for commercial facilities (e.g., restaurants) shall be twice during the rainy season; and

   (4) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season and maintained to remove trash and other anthropogenic debris.

d. The ASBS Compliance Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:

   (1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or

   (2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges. The baseline for the reduction is the effective date of the Exception. The

baseline for these determinations is the effective date of the Exception, and the reductions must be achieved and documented within four (4) years of the effective date.

e. The ASBS Compliance Plan shall address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.

f. The ASBS Compliance Plan shall describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. Education and outreach efforts must adequately inform the public that direct discharges of pollutants from private property not entering an MS4 are effectively prohibited. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, permittees must first consider using LID practices to infiltrate, use, or evapotranspirate storm water runoff on-site.

g. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.

h. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.

(1) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.

(2) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWMP or SWPPP for future implementation, and any additional BMPs that may be added to the SWMP or SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.

(3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits), the discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.

(4) As long as the discharger has complied with the procedures described above and is implementing the revised SWMP or SWPPP, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

(5) Compliance with this section does not excuse violations of any term, effective prohibition, or condition contained in these Special Protections.

3. Compliance Schedule

a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.

b. Within one year from the effective date of the Exception, the discharger shall submit a written ASBS Compliance Plan to the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that describes its strategy to comply with these special conditions, including the requirement to maintain natural water quality in the affected ASBS. The ASBS Compliance Plan shall include a time schedule to implement appropriate non-structural and structural controls (implementation schedule) to comply with these special conditions for inclusion in the discharger's SWMP or SWPPP, as appropriate to permit type.

c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these special conditions shall be implemented.

d. Within four (4) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.

e. Within four (4) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the discharger must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart.

f. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in d. or e. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

(1) for municipalities, a demonstration of significant hardship to discharger ratepayers, by showing the relationship of storm water fees to annual household income for residents within the discharger's jurisdictional area, and the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
(2) for other governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process.

B. NONPOINT SOURCE DISCHARGES

[NOT INCLUDED]
[PROVISIONS FOR NONPOINT SOURCE DISCHARGES NOT APPLICABLE]

II. ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES

[NOT INCLUDED]
[ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES NOT APPLICABLE]

III. ADDITIONAL REQUIREMENTS – WATERFRONT AND MARINE OPERATIONS

[NOT INCLUDED]
[ADDITIONAL REQUIREMENTS FOR WATERFRONT AND MARINE OPERATIONS NOT APPLICABLE]

IV. MONITORING REQUIREMENTS

Monitoring is mandatory for all dischargers to assure compliance with the Ocean Plan. Monitoring requirements include both: (A) core discharge monitoring, and (B) ocean receiving water monitoring. The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions prevail.

Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

A. CORE DISCHARGE MONITORING PROGRAM

1. General sampling requirements for timing and storm size:

   Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples (see section IV B) as described below.

2. Runoff flow measurements

   a. For municipal/industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State and Regional Water Boards.
   b. This will be reported annually for each precipitation season to the State and Regional Water Boards.

3. Runoff samples – storm events

   a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width:

      (1) samples of storm water runoff shall be analyzed during the same storm as receiving water samples for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination, ; and

      (2) samples of storm water runoff shall be analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS

      (3) If an applicant has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further analyzed during the same storm as receiving water samples for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).

   b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:

      (1) samples of storm water runoff shall be analyzed during the same storm as receiving water samples for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and

      (2) samples of storm water runoff shall be further analyzed during the same storm as receiving water samples for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides

(pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates) and

(3) samples of storm water runoff shall be analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

c. For an applicant not participating in a regional monitoring program [see below in Section IV (B)] in addition to (a.) and (b.) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

4. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

B. OCEAN RECEIVING WATER AND REFERENCE AREA MONITORING PROGRAM

In addition to performing the Core Discharge Monitoring Program in Section II.A above, all applicants having authorized discharges must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, dischargers may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.

1. Individual Monitoring Program: The requirements listed below are for those dischargers who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:

   a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in section (IV)(A)(3)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

      The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled at approximately the same time prior to (pre-storm) and during (or immediately after) the same storm (post storm). Reference water quality shall also be sampled and analyzed for the same constituents pre-storm and post-storm, during the same storms when receiving water is sampled. Reference stations will be

determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod Eohaustorius estuarius must be performed.

c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.

d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (Mytilus californianus) and/or sand crabs (Emerita analoga or Blepharipoda occidentalis). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.

e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.

f. The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board (statewide permits) or Executive officer of the Regional Water Board (Regional Water Board permits) may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

2. Regional Integrated Monitoring Program: Dischargers may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual

monitoring approach (in Section IV.B.1) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.

a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non-storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected when annual storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS dischargers that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.

d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

3. Waterfront and Marine Operations: In addition to the above requirements for ocean receiving water monitoring, additional monitoring must be performed for marinas and boat launch and pier facilities:

a. For all marina or mooring field operators, in mooring fields with 10 or more occupied moorings, the ocean receiving water must be sampled for Ocean Plan indicator bacteria, residual chlorine, copper, zinc, grease and oil, methylene blue active substances (MBAS), and ammonia nitrogen.

   (1) For mooring field operators opting for an individual monitoring program (Section IV.B.1 above), this sampling must occur weekly (on the weekend) from May through October.

   (2) For mooring field operators opting to participate in a regional integrated monitoring program (Section IV.B.2 above), this sampling must occur monthly from May through October on a high use weekend in each month. The Water Boards may allow a reduction in the frequency of sampling, through the regional monitoring program, after the first year of monitoring.

b. For all mooring field operators, the subtidal sediment (sand or finer, if present) within mooring fields and below piers shall be sampled and analyzed for Ocean Plan Table B metals (for marine aquatic life beneficial use), acute toxicity, PAHs, and tributyltin. For sediment toxicity testing, only an acute toxicity test using the amphipod Eohaustorius estuarius must be performed. This sampling shall occur at least three times during a five (5) year period. For mooring field operators opting to participate in a regional integrated monitoring program, the Water Boards may allow a reduction in the frequency of sampling after the first sampling effort's results are assessed.

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ATTACHMENT B

STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS

1. Standard Permit Provisions

Code of Federal Regulations Title 40 Section 122.41 (40 CFR 122.41) includes conditions, or provisions, that apply to all National Pollutant Discharge Elimination System (NPDES) permits. Additional provisions applicable to NPDES permits are in 40 CFR 122.42. All applicable provisions in 40 CFR 122.41 and 40 CFR 122.42 must be incorporated into this Order and NPDES permit. The applicable 40 CFR 122.41 and 40 CFR 122.42 provisions are as follows:

a. DUTY TO COMPLY [40 CFR 122.41(a)]

The Copermittee must comply with all of the provisions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(1) The Copermittee must comply with effluent standards or effective prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or effective prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement. [40 CFR 122.41(a)(1)]

(2) The CWA provides that any person who violates Section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the CWA, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who *negligently* violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates Section 301, 302, 303, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of

not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.
[40 CFR 122.41(a)(2)]

(3) Any person may be assessed an administrative penalty by the San Diego Regional Water Quality Control Board (San Diego Water Board), State Water Resources Control Board (State Water Board), or United States Environmental Protection Agency (USEPA) for violating Section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.
[40 CFR 122.41(a)(3)]

b. DUTY TO REAPPLY [40 CFR 122.41(b)]

If a Copermittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Copermittee must apply for and obtain a new permit.

c. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE [40 CFR 122.41(c)]

It shall not be a defense for a Copermittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

d. DUTY TO MITIGATE [40 CFR 122.41(d)]

The Copermittee must take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

e. PROPER OPERATION AND MAINTENANCE [40 CFR 122.41(e)]

The Copermittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Copermittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a Copermittee only when the operation is necessary to achieve compliance with the conditions of this permit.

f. PERMIT ACTIONS [40 CFR 122.41(f)]

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Copermittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

g. PROPERTY RIGHTS [40 CFR 122.41(g)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

h. DUTY TO PROVIDE INFORMATION [40 CFR 122.41(h)]

The Copermittee must furnish to the San Diego Water Board, State Water Board, or USEPA within a reasonable time, any information which the San Diego Water Board, State Water Board, or USPEA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Copermittee must also furnish to the San Diego Water Board, State Water Board, or USPEA upon request, copies of records required to be kept by this permit.

i. INSPECTION AND ENTRY [40 CFR 122.41(i)]

The Copermittee must allow the San Diego Water Board, State Water Board, USEPA, and/or their authorized representative (including an authorized contractor acting as their representative), upon presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the Copermittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; [40 CFR 122.41(i)(1)]

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; [40 CFR 122.41(i)(2)]

(3) Inspect and photograph at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; [40 CFR 122.41(i)(3)] and

(4) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location. [40 CFR 122.41(i)(4)]

j. MONITORING AND RECORDS [40 CFR 122.41(j)]

(1) Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity. [40 CFR 122.41(j)(1)]

(2) Except for records of monitoring information required by this permit related to the Copermittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR Part 503), the

Copermittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the San Diego Water Board at any time. [40 CFR 122.41(j)(2)]

(3) Records for monitoring information must include: [40 CFR 122.41(j)(3)]

(a) The date, exact place, and time of sampling or measurements; [40 CFR 122.41(j)(3)(i)]
(b) The individual(s) who performed the sampling or measurements; [40 CFR 122.41(j)(3)(ii)]
(c) The date(s) analyses were performed; [40 CFR 122.41(j)(3)(iii)]
(d) The individual(s) who performed the analyses; [40 CFR 122.41(j)(3)(iv)]
(e) The analytical techniques or methods used; [40 CFR 122.41(j)(3)(v)] and
(f) The results of such analyses. [40 CFR 122.41(j)(3)(vi)]

(4) Monitoring must be conducted according to test procedures under 40 CFR Part 136 unless another method is required under 40 CFR Subchapters N or O. [40 CFR 122.41(j)(4)]

In the case of pollutants for which there are no approved methods under 40 CFR Part 136 or otherwise required under 40 CFR Subchapters N and O, monitoring must be conducted according to a test procedure specified in the permit for such pollutants. [40 CFR 122.44(i)(1)(iv)]

(5) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. [40 CFR 122.41(j)(5)]

k. SIGNATORY REQUIREMENT [40 CFR 122.41(k)]

(1) All applications, reports, or information submitted to the San Diego Water Board, State Water Board, or USEPA must be signed and certified. (See 40 CFR 122.22) [40 CFR 122.41(k)(1)]

(a) *For a municipality, State, Federal, or other public agency.* [All applications must be signed] [b]y either a principal executive officer or ranking elected official. [40 CFR 122.22(a)(3)]

(b) All reports required by permits, and other information requested by the San Diego Water Board, State Water Board, or USEPA must be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if: [40 CFR 122.22(b)]

(i) The authorization is made in writing by a person described in paragraph (a) of this section; [40 CFR 122.22(b)(1)]

(ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) [40 CFR 122.22(b)(2)] and,

(iii) The written authorization is submitted to the San Diego Water Board and State Water Board. [40 CFR 122.22(b)(3)]

(c) *Changes to authorization.* If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative. [40 CFR 122.22(c)]

(d) *Certification.* Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." [40 CFR 122.22(d)]

(2) The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. [40 CFR 122.41(k)(2)]

I. REPORTING REQUIREMENTS [40 CFR 122.41(l)]

(1) *Planned changes.* The Copermittee must give notice to the San Diego Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when: [40 CFR 122.41(l)(1)]

(a) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); [40 CFR 122.41(l)(1)(i)] or

(b) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which

are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1). [40 CFR 122.41(l)(1)(ii)]

(c) The alteration or addition results in a significant change in the Copermittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. [40 CFR 122.41(l)(1)(iii)]

(2) *Anticipated noncompliance*. The Copermittee must give advance notice to the San Diego Water Board or State Water Board of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. [40 CFR 122.41(l)(2)]

(3) *Transfers*. This permit is not transferable to any person except after notice to the San Diego Water Board. The San Diego Water Board may require modification or revocation and reissuance of the permit to change the name of the Copermittee and incorporate such other requirements as may be necessary under the CWA. [40 CFR 122.41(l)(3)]

(4) *Monitoring reports.* Monitoring results must be reported at the intervals specified elsewhere in this permit. [40 CFR 122.41(l)(4)]

(a) Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the San Diego Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. [40 CFR 122.41(l)(4)(i)]

(b) If the Copermittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or another method required for an industry-specific waste stream under 40 CFR Subchapters N or O, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the San Diego Water Board or State Water Board. [40 CFR 122.41(l)(4)(ii)]

(c) Calculations for all limitations which require averaging of measurements must utilize an arithmetic mean unless otherwise specified in the permit. [40 CFR 122.41(l)(4)(iii)]

(5) *Compliance schedules*. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date. [40 CFR 122.41(l)(5)]

(6) *Twenty-four hour reporting.*

(a) The Copermittee must report any noncompliance that may endanger health or the environment. Any information must be provided orally within 24 hours from the time the Copermittee becomes aware of the circumstances. A written submission must also be provided within five (5) days of the time the Copermittee becomes aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6)(i)]

(b) The following must be included as information which must be reported within 24 hours under this paragraph: [40 CFR 122.41(l)(6)(ii)]

(i) Any unanticipated bypass that exceeds any effluent limitation in the permit (See 40 CFR 122.41(g)). [40 CFR 122.41(l)(6)(ii)(A)]
(ii) Any upset which exceeds any effluent limitation in the permit. [40 CFR 122.41(l)(6)(ii)(B)] and,
(iii) Violation of a maximum daily discharge limitation for any of the pollutants listed by the San Diego Water Board in the permit to be reported within 24 hours. (See 40 CFR 122.44(g)) [40 CFR 122.41(l)(6)(ii)(C)]

(c) The San Diego Water Board may waive the above-required written report on a case-by-case basis if the oral report has been received within 24 hours. [40 CFR 122.41(l)(6)(iii)]

(7) *Other noncompliance.* The Copermittee must report all instances of noncompliance not reported in accordance with the standard provisions required under 40 CFR 122.41(l)(4), (5), and (6), at the time monitoring reports are submitted. The reports must contain the information listed in the standard provisions required under 40 CFR 122.41(l)(6). [40 CFR 122.41(l)(7))]

(8) *Other information.* When the Copermittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the San Diego Water Board, State Water Board, or USEPA, the Copermittee must promptly submit such facts or information. [40 CFR 122.41(l)(8)]

~~**m. BYPASS** [40 CFR 122.41(m)]~~

~~(1) *Definitions.*~~

~~(a) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. [40 CFR 122.41(m)(1)(i)] or~~

~~(b) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be~~

Comment [A126]: While this is a standard condition for NPDES permits, it is manifestly inapplicable to MS4 permits. Since BMPs constructed to comply with the Order include bypass provisions to protect their entirety, the Copermittees would have to notify the Regional Board whenever a storm was predicted. This provision should be deleted.

~~expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.~~
~~[40 CFR 122.41(m)(1)(ii)]~~

~~(2) *Bypass not exceeding limitations.* The Copermittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the standard provisions required under 40 CFR 122.41(m)(3) and (4).~~
~~[40 CFR 122.41(m)(2)]~~

~~(3) *Notice.*~~

~~(a) *Anticipated bypass.* If the Copermittee knows in advance of the need for a bypass, it must submit a notice, if possible at least ten days before the date of the bypass. [40 CFR 122.41(m)(3)(i)] or~~

~~(b) *Unanticipated bypass.* The Copermittee must submit notice of an unanticipated bypass in accordance with the standard provisions required under 40 CFR 122.41(l)(6) (24-hour notice).~~
~~[40 CFR 122.41(m)(3)(ii)]~~

~~(4) *Prohibition of Bypass.*~~

~~(a) Bypass is prohibited, and the San Diego Water Board may take enforcement action against a Copermittee for bypass, unless:~~
~~[40 CFR 122.41(m)(4)(i)]~~

~~(i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; [40 CFR 122.41(m)(4)(i)(A)]~~
~~(ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance;~~
~~[40 CFR 122.41(m)(4)(i)(B)] and,~~
~~(iii) The Copermittee submitted notice in accordance with the standard provisions required under 40 CFR 122.41(m)(3).~~
~~[40 CFR 122.41(m)(4)(i)(C)]~~

~~(b) The San Diego Water Board may approve an anticipated bypass, after considering its adverse effects, if the San Diego Water Board determines that it will meet the three conditions listed above.~~
~~[40 CFR 122.41(m)(4)(ii)]~~

~~n.~~m. **UPSET** [40 CFR 122.41(n)]

(1) *Definition.* "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Copermittee. An upset does not

include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. [40 CFR 122.41(n)(1)]

(2) *Effect of an upset*. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the standard provisions required under 40 CFR 122.41(n)(3) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. [40 CFR 122.41(n)(2)]

(3) *Conditions necessary for a demonstration of upset*. A Copermittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that: [40 CFR 122.41(n)(3)]

(a) An upset occurred and that the Copermittee can identify the cause(s) of the upset; [40 CFR 122.41(n)(3)(i)]
(b) The permitted facility was at the time being properly operated; [40 CFR 122.41(n)(3)(ii)] and
(c) The Copermittee submitted notice of the upset in accordance with the standard provisions required under 40 CFR 122.41(l)(6)(ii)(B) (24-hour notice). [40 CFR 122.41(n)(3)(iii)]
(d) The Copermittee complied with any remedial measures pursuant to the standard provisions required under 40 CFR 122.41(d). [40 CFR 122.41(n)(3)(iii)]

(4) *Burden of proof*. In any enforcement proceeding, the Copermittee seeking to establish the occurrence of an upset has the burden of proof. [40 CFR 122.41(n)(4)]

~~o.~~ n. **STANDARD PERMIT PROVISIONS FOR MUNICIPAL SEPARATE STORM SEWER SYSTEMS**
[40 CFR 122.42(c)]

The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the San Diego Water Board or State Water Board under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report must include:

(1) The status of implementing the components of the storm water management program that are established as permit conditions; [40 CFR 122.42(c)(1)]

(2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes must be consistent with 40 CFR 122.26(d)(2)(iii); [40 CFR 122.42(c)(2)] and

(3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and (v); [40 CFR 122.42(c)(3)]

(4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; [40 CFR 122.42(c)(4)]

(5) Annual expenditures and budget for year following each annual report; [40 CFR 122.42(c)(5)]

(6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; [40 CFR 122.42(c)(6)]

(7) Identification of water quality improvements or degradation. [40 CFR 122.42(c)(7)]

~~p.~~o. **STANDARD PERMIT PROVISIONS FOR STORM WATER DISCHARGES** [40 CFR 122.42(d)]

The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) must require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.

2. General Provisions

In addition to the standard provisions required to be incorporated into the Order and NPDES permit pursuant to 40 CFR 122.41 and 40 CFR 122.42, several other general provisions apply to this Order. The general provisions applicable to this Order and NPDES permit are as follows:

a. DISCHARGE OF WASTE IS A PRIVILEGE

No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights. [CWC Section 13263(g)]

b. DURATION OF ORDER AND NPDES PERMIT

(1) *Effective date*. This Order and NPDES permit becomes effective on the 50th day after its adoption provided the USEPA has no objection. If the USEPA objects to its issuance, this Order shall not become effective until such objection is withdrawn. This Order supersedes Order No. R9-2007-0001 upon the effective date of this Order, and supersedes Order Nos. R9-2009-0002 and R9-2010-0016 upon their expiration or earlier notice of coverage.

(2) *Expiration*. This Order and NPDES permit expires five years after its effective date. [40 CFR 122.46(a)]

(3) *Continuation of expired order*. After this Order and NPDES permit expires, the terms and conditions of this Order and NPDES permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.

c. AVAILABILITY

A copy of this Order must be kept at a readily accessible location and must be available to on-site personnel at all times.

d. CONFIDENTIALITY OF INFORMATION

Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the San Diego Water Board office.

Claims of confidentiality for the following information will be denied: [40 CFR 122.7(b)]

(1) The name and address of any permit applicant or Copermittee; [40 CFR 122.7(b)(1)] and

(2) Permit applications and attachments, permits, and effluent data. [40 CFR 122.7(b)(2)]

e. EFFLUENT LIMITATIONS

(1) *Interim effluent limitations*. The Copermittee must comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by the San Diego Water Board.

(2) *Other effluent limitations and standards*. If any applicable toxic effluent standard or effective prohibition (including any schedule of compliance specified in such effluent standard or effective prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant and that standard or effective prohibition is more stringent than any limitation on the pollutant in the permit, the San Diego Water Board shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or effective prohibition. [40 CFR 122.44(b)(1~~)}}}]~~.~~)}~~

f. DUTY TO MINIMIZE OR CORRECT ADVERSE IMPACTS

The Copermittee must take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

g. PERMIT ACTIONS

The filing of a request by the Copermittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated

noncompliance with this Order does not stay any condition of this Order. (See 40 CFR 122.41(f)) In addition, the following provisions apply to this Order:

(1) Upon application by any affected person, or on its own motion, the San Diego Water Board may review and revise the requirements in this Order. All requirements must be reviewed periodically. [CWC Section 13263(e)]

(2) This Order may be terminated or modified for cause, including, but not limited to, all of the following: [CWC Section 13381]

(a) Violation of any condition contained in the requirements of this Order. [CWC Section 13381(a)]

(b) Obtaining the requirements in this Order by misrepresentation, or failure to disclose fully all relevant facts. [CWC Section 13381(b)]

(c) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge. [CWC Section 13381(c)]

(3) When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.

h. NPDES PERMITTED NON-STORM WATER DISCHARGES

The San Diego Water Board has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The San Diego Water Board or State Water Board may in the future, upon prior notice to the Copermittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to an MS4. A Copermittee will not be held responsible for pollutants in its MS4 discharge originating from an NPDES-permitted non-storm water discharge.

Comment [A127]: This comment reflects the appropriate responsibility between NPDES dischargers.

i. MONITORING

In addition to the standard provisions required under 40 CFR 122.41(j) and (l)(4), the following general monitoring provisions apply to this Order:

(1) Where procedures are not otherwise specified in Order, sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board (State Water Board).

(2) Pursuant to 40 CFR 122.41(j)(2) and CWC Section 13383(a), each Copermittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five (5) years from the date of the sample, measurement, report or application. This period may be extended by request of the San Diego Water Board at any time.

Comment [A128]: This provision and the provision in Attachment B 1.j(2) conflict. The Water Board should reconcile these provisions or delete one.

(3) All chemical, bacteriological, and toxicity analyses must be conducted at a laboratory certified for such analyses by the California Department of Public Health or a laboratory approved by the San Diego Water Board.

(4) For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Copermittees must instruct their laboratories to establish calibration standards that are equivalent to or lower than the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). If a Copermittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR Part 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Copermittee must submit documentation from the laboratory to the San Diego Water Board for approval prior to raising the ML for any priority toxic pollutant.

j. ENFORCEMENT

(1) The San Diego Water Board is authorized to enforce the terms of this Order under several provisions of the CWC, including, but not limited to, CWC Sections 13385, 13386, and 13387.

(2) Nothing in this Order shall be construed to protect the Copermittee from its liabilities under federal, state, or local laws.

(3) The CWC provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.

(4) Except as provided in the standard conditions required under 40 CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Copermittee from civil or criminal penalties for noncompliance.

(5) Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties to which the Copermittee is or may be subject to under Section 311 of the CWA.

(6) Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

k. SEVERABILITY

The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

l. APPLICATIONS

Any application submitted by a Copermittee for reissuance or modification of this Order must satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the California Code of Regulations.

m. IMPLEMENTATION

All plans, reports and subsequent amendments submitted in compliance with this Order must be implemented immediately (or as otherwise specified). All submittals by Copermittees must be adequate to implement the requirements of this Order.

n. REPORT SUBMITTALS

(1) All report submittals must include an executive summary, introduction, conclusion, recommendations, and signed certified statement.

(2) Each Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal.

(3) The Principal Watershed Copermittee(s) must submit a signed certified statement covering its responsibilities for each applicable submittal and the sections of the submittals for which it is responsible.

(4) Unless otherwise directed, the Copermittees must submit one hard copy and one electronic copy of each report required under this Order to the San Diego Water Board, and one electronic copy to the USEPA.

(5) The Copermittees must submit reports and provide notifications as required by this Order to the following:

EXECUTIVE OFFICER
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
9174 SKY PARK COURT, SUITE 100
SAN DIEGO CA 92123-4340
Telephone: (858) 467-2952 Fax: (858) 571-6972

EUGENE BROMLEY
US ENVIRONMENTAL PROTECTION AGENCY
REGION IX
PERMITS ISSUANCE SECTION (W-5-1)
75 HAWTHORNE STREET
SAN FRANCISCO CA 94105

ATTACHMENT C

ACRONYMS AND ABBREVIATIONS

AMAL	Average Monthly Action Level
ASBS	Area(s) of Special Biological Significance
BMP	Best Management Practice
Basin Plan	Water Quality Control Plan for the San Diego Basin
CEQA	California Environmental Quality Act
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWC	California Water Code
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
ESAs	Environmentally Sensitive Areas
GIS	Geographic Information System
IBI	Index of Biological Integrity
LID	Low Impact Development
MDAL	Maximum Daily Action Level
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NAL	Non-Storm Water Action Level
NAICS	North American Industry Classification System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
ROWD	Report of Waste Discharge (application for NPDES reissuance)
SAL	Storm Water Action Level
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SIC	Standard Industrial Classification Code
State Water Board	State Water Resources Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
WDID	Waste Discharge Identification Number
WLA	Waste Load Allocation
WQBEL	Water Quality Based Effluent Limitation

DEFINITIONS

Active/Passive Sediment Treatment - Using mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge.

Anthropogenic Litter – Trash generated from human activities, not including sediment.

Automotive Repair Shop – a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539 or equivalent NAICS code.

Average Monthly Action Level – The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month, or the geometric mean for bacteria, as applicable.

Beneficial Uses - The uses of water necessary for the survival or wellbeing of man, plants, and wildlife. These uses of water serve to promote tangible and intangible economic, social, and environmental goals. "Beneficial Uses" ~~of the waters of the State~~ that may be protected include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. [California Water Code Section 13050(f)].

Best Management Practices (BMPs) - Defined in 40 CFR 122.2 as schedules of activities, effective prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. In the case of municipal discharge permits, BMPs may be used in the place of numeric effluent limits.

Bioassessment - The use of biological community information to evaluate the biological integrity of a water body and its watershed. With respect to aquatic ecosystems, bioassessment is the collection and analysis of samples of the benthic macroinvertebrate community together with physical/habitat quality measurements associated with the sampling site and the watershed to evaluate the biological condition (i.e. biotic integrity) of a water body.

Biofiltration - Practices that use vegetation and amended soils to detain and treat runoff from impervious areas. Treatment is through filtration, infiltration, adsorption, ion exchange, and biological uptake of pollutants.

Biological Integrity - Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. *Environmental Management* 5:55-68 as: "A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region." Also referred to as ecosystem health.

BMP Design Manual – A plan developed to eliminate, reduce, or mitigate the impacts of runoff from development projects, including Priority Development Projects.

Channel Rehabilitation and Improvement – Remedial measures or activities for the purpose of improving or restoring the environmental health of streams, channels or river systems. Techniques may vary from in-stream restoration techniques to off-line stormwater management practices installed in the system corridor or upland areas. Rehabilitation techniques may include, but are not limited to the following: riparian zone restoration, constructed wetlands, bank stabilization, channel modifications, and day lighting of drainage systems.

Comment [A129]: This term should be defined in Attachment C given its use in the Order.

Clean Water Act Section 303(d) Water Body - An impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology based pollution controls required by the CWA. The discharge of runoff to these water bodies by the Copermittees is significant because these discharges can cause or contribute to violations of applicable water quality standards.

Construction Site – Any project, including projects requiring coverage under the Construction General Permit, that involves soil disturbing activities greater than 10,000 square feet including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation. This does not include interior construction activities such as interior remodeling, plumbing, electrical, or mechanical work.

Contamination - As defined in the Porter-Cologne Water Quality Control Act, contamination is "an impairment of the quality of waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. 'Contamination' includes any equivalent effect resulting from the disposal of waste whether or not waters of the State are affected."

Copermittee – An incorporated city within the County of Orange, County of Riverside, or County of San Diego in the San Diego Region~~,~~ (Region 9),~~,~~ the County of Orange, the County of Riverside, the County of San Diego, the Orange County Flood Control District, the Riverside County Water Conservation and Flood Control District, the San Diego Regional Airport Authority, or the San Diego Unified Port District. See also "Municipal Copermittee" and "Special District Copermittee".

Comment [A130]: As set forth above, the Riverside County Copermittees make a distinction in these classes of Copermittees based on their respective legal authorities.

Copermittees – All of the individual Copermittees, collectively, unless the obligation in question is directed to one or a sub-group of Copermittees.

Comment [A131]: This clarifies that not all obligations in the Order directed to "Copermittees" are in fact applicable to all Copermittees.

Critical Channel Flow (Qc) – The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.

Daily Discharge – Defined as either: (1) the total mass of the constituent discharged over the calendar day or any 24 hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g. concentration.)

The Daily Discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day, or other 24 hour period other than a day), or by the arithmetic mean of analytical results from one or more grab samples taken over the course of a

day.

Development Projects - Construction, rehabilitation, redevelopment, or reconstruction of any public or private residential project, industrial~~,~~ or commercial facility, or any other projects designed for post-construction human activity or occupation and involving land disturbance activities.

Comment [A132]: This definition clarifies the nature of Development Projects covered under the Order.

Direct Discharge to an Environmentally Sensitive Area – refers to outflow from a drainage conveyance system that collects runoff from the subject development or redevelopment site and terminates at or in receiving waters within the ESA, and is not commingled with flows from adjacent or other upstream lands.

Dry Season –May 1 to September 30.

Dry Weather – Weather is considered dry if the preceding 72 hours has been without measurable precipitation (>0.1 inch).

Enclosed Bays – Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost bay works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays do not include inland surface waters or ocean waters.

Erosion – When land is diminished or worn away due to wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via storm water runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building, and timber harvesting. This permit is concerned particularly with non-naturally occurring Erosion that eventually results in a Sediment discharge from MS4s into Receiving Waters.

Environmentally Sensitive Areas (ESAs) - Areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Board and San Diego Water Board; State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Board and San Diego Water Board; areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Orange; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees.

Estuaries – Waters, including coastal lagoons, located at the mouth of streams that serve as areas of mixing fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and ocean water. Estuaries do not include inland surface waters or ocean waters.

Existing Development – Any area that has been developed and exists for municipal, commercial, industrial, or residential purposes, uses, or activities. May include areas that are not actively used for its originally developed purpose, but may be re-purposed or redeveloped

for another use or activity.

Flow Duration – The long-term period of time that flows occur above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams (not a single storm event duration). The simplest way to visualize this is to consider a histogram of pre- and post-project flows using long-term records of hourly data. To maintain pre-development flow duration means that the total number of hours (counts) within each range of flows in a flow-duration histogram cannot increase between the pre- and post-development condition. Flow duration within the range of geomorphologically significant flows is important for managing erosion.

Grading - The cutting and/or filling of the land surface to a desired slope or elevation.

Hazardous Material – Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by the USEPA in 40 CFR 116 to be reported if a designated quantity of the material is spilled into the waters of the U.S. or emitted into the environment.

Hazardous Waste - Hazardous waste is defined as "any waste which, under Section 600 of Title 22 of this code, is required to be managed according to Chapter 30 of Division 4.5 of Title 22 of this code" [CCR Title 22, Division 4.5, Chapter 11, Article 1].

Household Hazardous Waste – Paints, cleaning products, and other hazardous wastes generated during home improvement or maintenance activities.

Hydromodification – The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, such as stream channelization, concrete lining, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes.

Illicit Connection – Any connection to the MS4 that conveys an illicit discharge.

Illicit Discharge - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities [40 CFR 122.26(b)(2)]. Discharges from natural sources or from conditionally exempt sources described in this Order are not considered Illicit Discharges.

Inactive Areas – Areas of construction activity that are not active and those that have been active and are not scheduled to be re-disturbed for at least 14 days.

Infiltration – Water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow [40 CFR 35.2005(20)].

Comment [A133]: Wrong definition. Should be defining infiltration (of stormwater into soil)

Inland Surface Waters – Includes all surface waters of the U.S.~~State~~ that do not include the ocean, enclosed bays, or estuaries.

Jurisdictional Runoff Management Program Document – A written description of the specific jurisdictional runoff management measures and programs that each Copermittee will implement to comply with this Order and ensure that illicit discharges are effectively prohibited, and storm water pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

Low Impact Development (LID) – A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.

Low Impact Development Best Management Practices (LID BMPs) – LID BMPs include schedules of activities, effective prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States through storm water management and land development strategies that emphasize conservation ~~s~~and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. LID BMPs include retention practices that do not allow runoff, such as infiltration, rain water harvesting and reuse, and evapotranspiration. LID BMPs also include flow-through practices such as biofiltration that may have some discharge of storm water following pollutant reduction.

Major Outfall – As defined in the Code of Federal Regulations, a major outfall is a MS4 outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (i.e. discharge from a single conveyance other than a circular pipe which is associated with a drainage area of more than 50 acres); or, for MS4s that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or equivalent), a MS4 outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (i.e. discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

Maximum Daily Action Level (MDAL) –The highest allowable daily discharge of a pollutant, over a calendar day (or 24 hour period). For pollutants with action levels expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with action levels expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Maximum Extent Practicable (MEP) – The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) ~~for storm water~~ that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment control BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT. A definition for MEP is not provided either in the statute or in the regulations. Instead the definition of MEP is dynamic and will be defined by the following process over time: municipalities propose their definition of MEP by way of their runoff management programs. Their total collective and individual activities conducted pursuant to the runoff management programs becomes their proposal for MEP as it applies both to their overall effort, as well as to specific activities (e.g., MEP for street sweeping, or MEP for MS4 maintenance). In the absence of a proposal acceptable to the San Diego Water Board, the San Diego Water Board

defines MEP.

In a memo dated February 11, 1993, entitled "Definition of Maximum Extent Practicable," Elizabeth Jennings, Senior Staff Counsel, SWRCB addressed the achievement of the MEP standard as follows:

> "*To achieve the MEP standard, municipalities must employ whatever Best Management Practices (BMPs) are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive. In selecting BMPs to achieve the MEP standard, the following factors may be useful to consider:*
>
> a. *Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?*
> b. *Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?*
> c. *Public Acceptance: Does the BMP have public support?*
> d. *Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?*
> e. *Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc.?*
>
> *The final determination regarding whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the Regional or State Water Boards, and not by the municipal discharger. If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive, it is likely that MEP has not been met. On the other hand, if a municipal discharger employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit derived, it would have met the standard. Where a choice may be made between two BMPs that should provide generally comparable effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs that would address a pollutant source, or to pick a BMP based solely on cost, which would be clearly less effective. In selecting BMPs the municipality must make a serious attempt to comply and practical solutions may not be lightly rejected. In any case, the burden would be on the municipal discharger to show compliance with its permit. After selecting a menu of BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented."*

Monitoring Year – October 1 to September 30

Municipal Copermittee – Any Copermittee, exclusive of Special District Copermittees.

Comment [A134]: This definition clarifies distinction between municipal and special district copermittees.

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designated or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.226. Copermittees need only comply with permit conditions relating to "discharges from the municipal separate storm sewers for which they are operators." 40 CFR 122.26(a)(vi).

Comment [A135]: These changes correct a citation and clarifies the responsibility of the copermittees as to other MS4s.

National Pollutant Discharge Elimination System (NPDES) - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

Non-Storm Water - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). ~~Non-storm water includes illicit discharges and NPDES permitted discharges.~~

Comment [A136]: This is overly limiting, There are other types of Non-storm discharges that do not fit these two categories (e.g. irrigated agriculture, natural flows, conditionally exempt flows, others). Rather than trying to identify all types of non-stormwater discharges, suggest just deleting this sentence.

Nuisance - As defined in the Porter-Cologne Water Quality Control Act, a nuisance is "anything which meets all of the following requirements: 1) Is injurious to health, or is indecent, or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. 2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. 3) Occurs during, or as a result of, the treatment or disposal of wastes."

Ocean Waters – the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Board's California Ocean Plan.

Order – Unless otherwise specified, refers to this Order, Order No. R9-2013-0001 (NPDES No. CAS0109266)

Outfall – *Outfall* means a *point source* as defined by 40 CFR 122.2 at the point where a MS4 discharges to waters of the United States and does not include open conveyances connecting two MS4s, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United. 40 CFR 122.26(b)(9).

Comment [A137]: This federal regulatory definition clarifies the nature of an outfall.

Parking Lot – a land area or facility for the tempraory parking or storage of motor vehicles used personally, for business, or for commerce.

Comment [A138]: Definition placed in Attachment C for consistency.

Persistent Flow - Persistent flow is defined as the presence of an MS4 discharge that is hydraulically connected to a flowing~~, pooled, or ponded~~ receiving water more than 72 hours after a measureable rainfall event of 0.1 inch or greater during three consecutive monitoring and/or inspection events. All other flowing, pooled, or ponded water is considered transient.

Comment [A139]: Changes reflect the necessity of a connection to flowing receiving waters. Discharges that are pooled are not discharges to waters of the United States. Please see Comment Letter section 3.5.3.

Person - A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof [40 CFR 122.2].

Point Source - Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return

flows from irrigated agriculture or agricultural storm water runoff.

Pollutant - Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated.

Pollution - As defined in the Porter-Cologne Water Quality Control Act, pollution is "the alteration of the quality of the waters of the State by waste, to a degree that unreasonably affects the either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses." Pollution may include contamination.

Pollution Prevention - Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control BMPs, treatment control BMPs, or disposal.

Pre-Project~~Development~~ Runoff Conditions – Runoff conditions that exist~~existed~~ onsite immediately before the ~~existing development was constructed, or exists onsite before~~ planned development activities occur. Pre-development is not intended to be interpreted as that period before any human-induced land disturbance has occurred. 64 FR 68761.

Comment [A140]: This definition reflects the exact language used by U.S. EPA in the Federal Register. Moreover, it avoids the constitutional and statutory problems with requiring developers to mitigate for impacts not attributable to their project. It also is consistent with the CEQA standard for project impact mitigation.

Priority Development Projects - New development and redevelopment projects defined under Provision E.3.b of Order No. R9-2012-0011.

Properly Designed – Designed in accordance with the Copermittee's BMP Design Manual and/or any appropriate design requirements set forth by the Copermittee and based on widely accepted design criteria and in accordance with this Order.

Comment [A141]: This definition is required to address this standard, which is mentioned in the Order but not defined.

Rainy Season (aka Wet Season) –October 1 to April 30

Receiving Waters – Waters of the United States.

Receiving Water Limitations - Waste discharge requirements issued by the San Diego Water Board typically include both: (1) "Effluent Limitations" (or "Discharge Limitations") that specify the technology-based or water-quality-based effluent limitations; and (2) "Receiving Water Limitations" that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the "Receiving Water Limitations" provision is the provision used to implement the requirements of CWA section 402(p)(3)(B).

Redevelopment - The creation, addition, and or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; parking lots; resurfacing existing roadways; cutting and reconfiguring of surface parking lots; new sidewalk construction, pedestrian ramps, or bike lane on existing roads; and routine replacement of damaged pavement, such as pothole repair and emergency restoration and public safety projects.

Comment [A142]: The changes requested in this definition appropriately exempts de minimis or emergency/public safety projects.

Reporting Period – The period of information that is reported in the Annual Report. The reporting period consists of two components: 1) July 1 to June 30, consistent with the fiscal

year, for the implementation of the jurisdictional runoff management programs, and 2) October 1 to September 30, consistent with the monitoring year for the monitoring and assessment programs. Together, these two time periods constitute the reporting year for the Annual Report due January 31 following the end of the monitoring year.

Restaurant – a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812).

Comment [A143]: Relocation of definition to Attachment C.

Retail gasoline outlet (RGO) – a business that sells automotive or truck fuel to the general public with a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

Comment [A144]: Definition added for clarity and consistency with prior redlines

Retain –Keep or hold in a particular place, condition, or position without discharge to ~~surface~~ Receiving W~~w~~aters.

Retrofitting – Storm water management practices put into place after development has occurred in watersheds where the practices previously did not exist~~.~~ or are ineffective.~~.~~ Retrofitting of developed areas is intended to improve water quality, protect downstream channels, reduce flooding, or meet other specific objectives. Retrofitting developed areas may include, but is not limited to replacing roofs with green roofs, disconnecting downspouts or impervious surfaces to drain to pervious surfaces, replacing impervious surfaces with pervious surfaces, installing rain barrels, installing rain gardens, and trash area enclosures.

Comment [A145]: Edit clarifies intent of definition.

Runoff - All flows in a storm water conveyance system that consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water including dry weather flows.

San Diego Water Board – As used in this document the term "San Diego Water Board" is synonymous with the term "Regional Board" as defined in Water Code section 13050(b) and is intended to refer to the California Regional Water Quality Control Board for the San Diego Region as specified in Water Code Section 13200.

Sediment - Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) that is discharged into Receiving Waters is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources into Receiving Waters and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

Special District Copermittee – A separate legal entity that may own or operate MS4 systems, but has no land use authorities outside of their MS4. The Riverside County Flood Control and Water Conservation District [and Orange County Flood Control District?] is a [are] Special District Copermittee[s].

Source Control BMP – Land use or site planning practices, or structural or nonstructural measures that aim to prevent runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and runoff.

Storm Water – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage. ~~Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.~~

Stream, Channel, or Habitat Rehabilitation – Measures or activities for the purpose of improving or restoring the environmental health (i.e. physical, chemical and biological integrity) of streams, channels, or river systems. Rehabilitation techniques may include, but are not limited to, riparian zone restoration, constructed wetlands, bank stabilization, channel reconfiguration, and daylighting drainage systems.

Street, Road, Highway, Freeway– Any paved impervious surface that is used for the transportation of automobiles, trucks, motorcycles, and other vehicles, with an ADT of at least 100 vehicles per day.

Comment [A146]: Definition relocated to Attachment C.

Comment [A147]: Consistent with RGO definition.

Structural BMPs - A subset of BMPs which detains, retains, filters, removes, or prevents the release of pollutants to surface waters from development projects in perpetuity, after construction of a project is completed.

Total Maximum Daily Load (TMDL) - The maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under CWA section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

Toxicity - Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). The water quality objectives for toxicity provided in the Basin Plan, state in part…"All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life….The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge".

Treatment Control BMP – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

Unpaved Road – Any long, narrow stretch without pavement used for traveling by motor passenger vehicles between two or more points. Unpaved roads are generally constructed of dirt, gravel, aggregate or macadam and may be improved or unimproved.

Waste - As defined in CWC Section 13050(d), "waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal."

Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system that applies to solid and semi-solid waste, which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, non-hazardous solid waste, and inert waste.

Water Quality Objective - Numerical or narrative limits on constituents or characteristics of

water designated to protect designated beneficial uses of the water. [California Water Code Section 13050 (h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans. Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a receiving water and still generally ensure that the beneficial uses of the receiving water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne's definition of pollution. A condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are the reason why all waste discharge requirements implementing the federal NPDES regulations require compliance with water quality objectives. (Water quality objectives are also called water quality criteria in the CWA.)

Water Quality Standards - Water quality standards, as defined in Clean Water Act section 303(c) consist of the beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.,) of a water body and criteria (referred to as water quality objectives in the California Water Code) necessary to protect those uses. Under the Water Code, the water boards establish beneficial uses and water quality objectives in water quality control or basin plans. Together with an anti-degradation policy, these beneficial uses and water quality objectives serve as water quality standards under the Clean Water Act. In Clean Water Act parlance, state beneficial uses are called "designated uses" and state water quality objectives are called "criteria." Throughout this Order, the relevant term is used depending on the statutory scheme.

Waters of the State - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State. ~~regardless of circumstances or condition.~~

Comment [A148]: The intent of the definition is to cover natural water sources, and not anthropogenic structures that collect runoff to reduce volume/velocity or pollutants.

Waters of the United States - As defined in the 40 CFR 122.2, the Waters of the U.S. are defined as: "(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA."

Watershed - That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as drainage area, catchment, or river basin).

Wet Season (aka Rainy Season) –October 1 to April 30

Wet Weather – Weather is considered wet if there is a storm event of 0.1 inches and greater and the following 72 hours, unless otherwise defined by the Copermittee for the purposes of monitoring consistent with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), or developed pursuant to another regulatory mechanism.

Comment [A149]: This is important as the monitoring requirements require you to sample the first 'Wet Weather' event. 0.1" of rainfall doesn't result in runoff in all watersheds. Copermittees should be able to define mobilization criteria to identify storms that are likely to produce runoff in that drainage area consistent with this EPA guidance.

LEGAL AND FACT SHEET COMMENTS ON TENTATIVE ORDER R9-2013-0001 MADE ON BEHALF OF THE RIVERSIDE COUNTY COPERMITTEES

This document provides comments on various legal issues raised by Tentative Order No. R9-2013-0001 (the "Draft Permit") and associated attachments, including Attachment F, the Fact Sheet/Technical Report ("Fact Sheet"), and are made on behalf of the Riverside County Flood Control & Water Conservation District ("District"), the County of Riverside and the Cities of Murrieta, Temecula and Wildomar (collectively, the "Riverside County Copermittees").

These legal comments are in addition to the other comments on the Draft Permit and attachments made by the Riverside County Copermittees (including the Comment Letter dated January 10, 2013 and signed by Jason E. Uhley, Chief of the District's Watershed Protection Division) and the redline attachment ("Redline"), as well as any comments or testimony which may be offered at the public hearing(s) on the Draft Permit. The Comment Letter and Redline also discuss legal issues. The Riverside County Copermittees appreciate this opportunity to comment and welcome any questions that Water Board staff may have.

These comments are submitted subject to the same reservations set forth in the Comment Letter regarding the Water Board's lack of authority, in the absence of agreement by the Riverside County Copermittees or the filing of a Report of Waste Discharge ("ROWD"), to issue a regional municipal separate storm sewer system ("MS4") permit to the Riverside County Copermittees. Submission of these comments does not waive this objection.

Request for Additional Public Comment

Before turning to comments on the Draft Permit, the Riverside County Copermittees wish to note that in view of the extensive comments made by them, as well as what we anticipate will be extensive comments by the South Orange County and San Diego County Copermittees, as well as from other stakeholders, it would greatly facilitate the permit adoption process if the Water Board were to release a revised Tentative Order for further review and comment prior to final adoption of the Permit. This will enable the Water Board staff to address the comments in a more orderly fashion and provide all parties with the opportunity to see how staff proposes to incorporate the comments in the Draft Permit.

Comments on Findings

Finding 2 and Fact Sheet Section VII.B: This finding recites that the Water Board "has the legal authority to issue a regional MS4 permit pursuant to its authority under Clean Water Act ("CWA") section 402(p)(3)(B) and 40 CFR 122.26(a)(i)(v)." Section VII.B of the Fact Sheet provides a more detailed rationale for this finding (at pages F-22-23).

The Riverside County Copermittees respectfully disagree with this finding and the analysis provided in the Fact Sheet. We do not believe that a regional MS4 permit is authorized under the CWA or the implementing regulations, absent agreement by the copermittees to be bound by such a MS4 permit (as is the case with the Bay Area MS4 permit covering discharges into the Bay).

The CWA itself does not explicitly authorize MS4 permits that, like the Draft Permit, cross county lines. CWA section 402(p)(3)(B) provides only that "[p]ermits for discharges from municipal storm sewers . . . may be issued on a system- or jurisdiction-wide basis." This language, contrary to the conclusion in Finding 2, indicates that a multi-county permit, covering several distinct non-interconnected municipal stormwater "systems" in multiple watersheds with multiple receiving waters, is not one issued on a "system-wide" basis and that an MS4 permit covering multiple jurisdictions in three different counties is not one issued on a "jurisdiction-wide basis." Because neither "system-wide" nor "jurisdiction-wide" are defined in the CWA, however, the CWA regulations must also be reviewed.

The regulatory provision cited in Finding 2, 40 CFR § 122.26(a)(1)(v), does not add clarity, since it merely repeats the "system-wide" and "jurisdiction-wide" language of the Act and the regulations define neither term. The regulations do, however, suggest that "system-wide" is not intended to cover multiple large MS4s in different jurisdictions. The regulations, at 40 CFR § 122.26(a)(1)(v) state that in making the determination to designate a system-wide or jurisdiction-wide basis" the permitting authority should consider the location of the "discharge" with respect to waters of the United States, the size of the discharge, the quantity and nature of the pollutants discharge and other relevant factors.

The Draft Permit covers multiple "discharges" into receiving waters located in three separate counties and the size, quality and nature of the discharges vary widely, due to varying hydrologic and climatic conditions in the three areas.

The Fact Sheet cites 40 CFR § 122.26(a)(3)(iv), which provides, in relevant part, that the Water Board "may issue one systemwide permit covering all, or a portion of all municipal separate storm systems in adjacent or interconnected large or medium municipal separate storm sewer systems." This provision does not, however, authorize issuance of a regional MS4 permit covering multiple counties and multiple watersheds that are not interconnected and which do not share a common receiving water. In fact, the only common fact uniting the various MS4s in the three counties under the Water Board's jurisdiction is that common jurisdiction.

First, even if the subject MS4 facilities otherwise met the criteria specified in the federal regulations (which, as noted below, they do not), the prospective permittees must apply for such a MS4 permit, as set forth in the first sentence of 40 CFR § 122.26(a)(3)(iv): "*One permit application may be submitted for all or a portion of all* municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems." (emphasis supplied). No such application has been filed with respect to the Draft Permit. Only the San Diego County copermittees submitted a ROWD for MS4 facilities within that county.[1]

[1] Moreover, the fact that permittees have the ability to determine the geographic scope of the permit is reinforced by the language in 40 CFR § 122.26(a)(3)(iii)(B), which allows an individual municipality to submit "a distinct permit application which only covers discharges from the [MS4] for which the owner is responsible . . ." If a permittee can "opt out" of a multi-MS4 permit by submitting a individual permit application, a permitting authority such as a water board cannot impose a multi-MS4 permit on that permittee.

Second, this provision requires that the MS4s to be covered in the permit be "adjacent or interconnected." This is not true with respect to the MS4s proposed to be included within the Draft Permit. For example, the MS4 within the Santa Margarita Region of Riverside County is not "interconnected" with any other MS4s except those within that region. This is true also of the MS4s within South Orange County and San Diego County, which are not interconnected. Additionally, none of the MS4s in the three counties is "adjacent" to each other – each is separated by miles of non-urban area. In the SMR for example, the confluence of Temecula and Murrieta Creeks to form the Santa Margarita River is miles upstream of Rainbow Creek, the first discharge from San Diego County to the River. And, the confluence of Temecula and Murrieta Creeks is over 30 miles from the discharge of the Santa Margarita River to the Pacific Ocean.

The next inquiry is whether the three separate county MS4s could be considered, together, to form a single "large municipal separate storm sewer system." The federal MS4 regulations define this term as follows:

> *Large municipal separate storm sewer system* means all municipal separate storm sewers that are either:
>
> (i) Located in an incorporated place with a population of 250,000 or more . . . ."
>
> (ii) Located in the counties listed in Appendix H, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or
>
> (iii) Owned or operated by a municipality other than those described [in paragraphs (i) and (ii)] . . . and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described [in paragraphs (i) and (ii)]. In making this determination the Director may consider the following factors:
>
> (A) Physical interconnections between the municipal separate storm sewers;
>
> (B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in [paragraph (i)];
>
> (C) The quantity and nature of pollutants discharged to waters of the United States;
>
> (D) The nature of the receiving waters; and
>
> (E) Other relevant factors, or
>
> (iv) The Director may, upon petition, designate as a large municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region

> defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described [in paragraphs (i), (ii) or (iii)].

40 CFR § 122.26(b)(4).

None of paragraphs (i), (ii) or (iii) authorizes a regional MS4 permit such as that envisioned in the Draft Permit. The Draft Permit applies beyond a single incorporated place, County or municipality. Of these paragraphs, only paragraph (iv) could arguably be used to define the MS4s in the three Counties as a single MS4 and thus authorize a regional permit. The key limiting language is, however, "within the boundaries of a region **defined by a storm water management regional authority,** based on a jurisdictional, watershed, or other appropriate basis . . . ." A regional water board is not a stormwater management regional authority. This is clear from the MS4 regulations, which provide that a "**regional authority may be responsible for submitting a permit application"** under certain conditions. 40 CFR § 122.26(a)(3)(iii)(C). Clearly, a Water Board is not responsible for submitting MS4 permit applications.

U.S. EPA, in the Preamble to the final Phase I MS4 regulations (55 Fed Reg. 47990, November 16, 1990), further illuminated the meaning of the regulatory language. The Preamble indicates that commenters proposed eight different MS4 permitting options:

> Option 1 – systems owned or operated by incorporated places augmented by integrated discharges; Option 2 – systems owned or operated by incorporated places augmented with significant other municipal discharges; Option 3 – systems owned or operated by counties; Option 4 – systems owned and operated by States or State departments of transportation; Option 5 – systems within the boundaries of an incorporated place; Option 6 – systems within the boundaries of counties; Option 7 – systems in census designated urbanized areas; and Option 8 – systems defined by watershed boundaries.

55 Fed Reg. at 48039. None of these options encompasses the fact pattern presented by the Draft Permit, which covers multiple counties and multiple watersheds, are not interconnected, do not share common receiving waters and are located in separate census designated urbanized areas.

In explaining the derivation of 40 CFR 122.26(b)(4)(iv), U.S. EPA noted that it was "an outgrowth of comments on all options, especially Option 4 (State owned systems/State highways) and Option 8 (watersheds)." 55 Fed. Reg. at 48040. Thus, the Caltrans MS4 permit (which applies statewide) is authorized under paragraph (iv), since the "storm water management regional authority" defining the region to be covered is Caltrans itself. No such single authority exists for the three-county area proposed to be included in the Draft Permit, which also would encompass multiple watersheds.

Moreover, paragraph (iv) provides that the regional authority must "petition" the U.S. EPA Director to have a single MS4 designated within the boundaries of the region defined by the regional authority. Because California has been delegated NPDES permitting authority, a regional authority would presumably need to petition its Water Board to authorize such a regional permit. Since no such regional authority exists to establish the geographical basis for a

three-county MS4 permit, there is no such entity to "petition" the Water Board to establish a regional permit. This is clear from the Preamble to the Phase I regulations, which indicate that "regional storm water authorities" established by "some States or counties" may "petition the Director [or its state designee] to assume a regional role. 55 Fed. Reg. at 48042. It is clear from the Preamble that it is not the Water Board that has the authority to make such a petition, but rather the "storm water authorities" (i.e., municipalities, districts and Caltrans).

It should be noted that the Bay Area Regional MS4 Permit was a joint Bay Area Water Board and copermittee effort, coordinated by the Bay Area Stormwater Agencies Management Association ("BASMAA"). It is not the case that the Bay Area Water Board imposed this regional MS4 permit. The copermittees, coordinated by BASMAA, themselves determined to develop a regional MS4 permit. Further, all of the copermittees to the Bay Area Regional MS4 Permit discharge to a common receiving water, San Francisco Bay. Also, an Alaska MS4 permit cited in a letter from the Office of Chief Counsel to county counsel for Orange and Riverside Counties was issued to several municipalities and entities within a single "borough," which is equivalent in Alaska to a county.

Additionally, neither the Riverside County Copermittees nor those in South Orange County have filed ROWDs with the San Diego Water Board, which serve as the application for an NPDES MS4 permit in California. Water Code § 13260. The current Riverside County MS4 permit for the Santa Margarita Region provides that the ROWD is not required to be filed until May 2015, 180 days prior to the November 10, 2015 expiration date of that permit. Order R9-2010-0016, Part II.K.2.c.

> This ROWD must include:
>
> (1) Proposed changes to the Copermittees' runoff management programs; (2) Proposed changes to monitoring programs; (3) Justification for proposed changes; (4) Name and mailing addresses of the Copermittees; (5) Names and titles of primary contacts of the Copermittees; (6) Any other information necessary for the reissuance of this Order and (7) Any other information required by federal regulations for permit reapplications.

Id. It should be noted that several items of this ROWD are specifically intended to assist in the formulation of a new, SMR-specific MS4 permit, including proposed changes to the runoff management and monitoring programs, as well as justification for such changes, information necessary for "reissuance" of the SMR MS4 permit and information required by the federal regulations for MS4 permit reapplications.

As a simple jurisdictional matter, the Water Board cannot issue a regional MS4 permit to MS4 dischargers that have not applied for it. Moreover, as noted above, the SMR copermittees are entitled to apply for an MS4 permit applicable to their jurisdiction. Further, each individual copermittee has the right to apply for a MS4 permit covering only its discharges, as has the City of Long Beach in the Los Angeles Region.

Finding 3, Finding 15, in Fact Sheet Section VII.A and in Multiple Locations Throughout Draft Permit: In Finding 3, the Fact Sheet and in multiple locations throughout the Draft Permit (which are identified in the redline of the Draft Permit submitted with these comments by the Riverside County Copermittees ("Redline")), it is stated that the maximum extent practicable ("MEP") applies only to "storm water" discharges from the MS4. This is not correct.[2]

In fact, the Clean Water Act does not distinguish between non-stormwater and stormwater in terms of MS4 discharges which must be controlled to the MEP standard. *See* 33 U.S.C. § 1342(p)(3)(B)(iii)(the MS4 permit "shall require controls to reduce the discharge of pollutants to the maximum extent practicable . . . ." While the heading of 33 U.S.C. § 1342(p) refers to "Municipal and industrial stormwater discharges," this is not dispositive, as 33 U.S.C. § 1342(p)(3)(B)(ii), which requires the effective prohibition of "non-stormwater discharges" into the MS4. Thus, the language of this heading does not in fact support the argument that the MEP standard applies only to pollutants in stormwater discharges.

That both non-stormwater and stormwater must be controlled to the MEP standard was made clear by U.S. EPA itself in the preamble to the final Phase I stormwater regulations. In that preamble, U.S. EPA made it clear that "MEP control measures" would be implemented to address not only pollutants in "storm water" but also from "non-storm water discharges." As the preamble states:

> "Permittees are required to develop management programs for four types of pollutant sources which discharge to large and medium municipal storm sewer systems. Discharges from [such systems] are usually expected to be composed primarily of: (1) Runoff from commercial and residential areas; (2) storm water runoff from industrial areas; (3) runoff from construction sites; and (4) *non-storm water discharges*. Part 2 of the permit application has been designed to allow [permittees] the opportunity to propose *MEP control measures for each* of these components of the discharge."

55 Fed. Reg. at 48052 (emphasis supplied).

This language sets forth USEPA's understanding of the plain language of the CWA: "pollutants" must be controlled to the MEP from any MS4 "discharge," not merely pollutants in stormwater.

Finding 11: This finding, in relevant part, states that "[h]istoric and current development makes use of natural drainage patterns and features as conveyances for runoff. Rivers, streams and creeks in developed areas used in this manner are part of the Copermittees' MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the rivers, streams and creeks in the developed areas of the Copermittees' jurisdictions are both an MS4 and receiving water." This conclusion is legally incorrect.

First, under no circumstance can a natural stream constitute an MS4. The definition of "MS4" in the CWA regulations (a definition found in Attachment C of the Draft Permit) refers to a

[2] Finding 15 also states, erroneously, that the MEP standard "is explicitly for "Municipal . . . *Stormwater Discharges* (emphasis added)" from the MS4.

"conveyance or system of conveyances" "owned or operated" by a municipality. 40 CFR §122.26(b)(8). In California, natural rivers and streams are not "owned" nor "operated" by the municipality through which they flow. Moreover, a municipality obviously cannot "operate" a natural creek or stream. In further support of the point that a MS4 is an artificial, not natural, watercourse, the types of "conveyances" identified in the regulation ("roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains") all refer to anthropogenic structures, not natural streams. 40 CFR § 122.26(b)(8).

Second, a "receiving water" cannot also be an MS4, as is plain from the CWA regulations. An MS4 is itself defined as discharging to waters of the United States. 40 C.F.R. §122.26(b)(8). An MS4 cannot, in essence, discharge to itself. Moreover, an "outfall" from an MS4 (the point at which the discharge enters a receiving water) does not, pursuant to 40 C.F.R §122.26 (b)(9), include conveyances connecting "segments of the same stream or other waters of the United States and are used to convey waters of the United States."

Moreover, U.S. EPA, in the Preamble to the initial version of the MS4 regulations (53 Fed. Reg. 49416 (Dec. 7, 1988)) expressly determined that "streams, wetlands and other water bodies that are waters of the United States are not storm sewers for the purposes of this rule" and that "stream channelization, and stream bed stabilization, which occur in waters of the United States" were not subject to National Pollutant Discharge Elimination System ("NPDES") permits under Section 402 of the CWA. 53 Fed. Reg. at 49442.

Additionally, the United States Supreme Court recently reversed the Ninth Circuit Court of Appeals and ruled that flows from sections of the Los Angeles and San Gabriel Rivers that are comprised of concrete flood control channels are not a "discharge" under the CWA, confirming that such rivers, even if improved, are "receiving waters" along with any natural portions of those rivers. *Los Angeles County Flood Control Dist. v. Natural Resources Defense Council,* 568 U.S. __(January 8, 2013) (slip op.).

The above-cited statement in the finding is incorrect and should be stricken, as recommended in the Redline.

Finding 12: This finding states, in relevant part, that "[a]s operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or otherwise control." This statement is legally incorrect, and ignores the salient point that the "discharger" of a pollutant is primarily responsible for controlling/permitting that discharge, under both the CWA and the Porter-Cologne Act. For example, under the Porter-Cologne Act, any persons discharging or proposing to discharge "waste" into waters of the state must file a report of waste discharge and obtain a waste discharge requirement. Water Code §§ 13260, 13263. The operator of the MS4 into which that water eventually flows is not "essentially accepting" responsibility for the discharge. The responsibility of the MS4 operator is established under the CWA, and that is to effectively prohibit non-stormwater discharges into [the MS4] and to control the discharge of pollutants from the MS4 to the MEP.

Moreover, the statement ignores the fact that in California, downstream property owners (including municipalities owning and operating MS4 facilities) must accept the flow of upstream waters. In fact, for a downstream municipality to block such flow would constitute an inverse condemnation or the creation of a nuisance under California law. *See Arreola v. County of Monterey* (2002) 99 Cal.App.4th 722 (obstruction of flood waters by improperly designed highway constituted inverse condemnation and nuisance).

Finding 28 and Fact Sheet Section VI: In the Finding, it is stated that the Water Board "finds that the requirements in this permit are not more stringent than the minimum federal requirements" and that therefore "a CWC section 13241 analysis is not required." The Finding further recites that notwithstanding this fact, "the San Diego Water Board has developed an economic analysis of the requirements in this Order."

For the reasons set forth in the comments of the Riverside County Copermittees, numerous provisions in the Draft Permit are in fact more stringent than the requirements of the CWA and its implementing regulations and therefore require an adequate Water Code § 13241 analysis. Unfortunately, this analysis is not provided in the Fact Sheet.

First, the economic analysis set forth in the Fact Sheet does not meet the requirements of Section 13241, as it does not analyze the six specific factors required to be analyzed under the section. Second, the analysis uses cost data from other sources, only a few of which were from the municipalities proposed to be included under the Draft Permit. These data are also a number of years old; the most recent study referenced in the Fact Sheet, the one done for the State Board by Cal State Sacramento, was dated January 2005 and included decade-old cost data from the City of Encinitas that dated from 2002-2003.

Third, the section of the Fact Sheet discussing the benefits of water quality notes that "there have been no studies for the San Diego Region to quantify the added value that surface waters with healthy water quality can provide." Thus, the Water Board has no evidence with which to compare the costs and benefits of the programs set forth in the Draft Permit. Moreover, the discussion makes the incorrect assumption that the alternative to the programs in the Draft Permit would be no controls on pollutants in urban runoff. As the Fact Sheet correctly notes, the Draft Permit is the fifth term MS4 permit for the copermittees. The previous four permits all contained increasingly complex and expensive control requirements, both structural and non-structural, designed to improve the quality of MS4 discharges. Thus, an appropriate cost analysis must compare the incremental costs of the programs set forth in the Draft Permit and the incremental benefits attributable to that permit. This has not been done in the Fact Sheet. Finally, the analysis does not recognize that the receiving waters provided economic benefits to residents of the San Diego Region long before issuance of the first MS4 permits in 1990. It is thus illogical to suggest that these pre-existing economic benefits would be lost if the Draft Permit is not adopted.

Finding 29 and Fact Sheet Section VII.F: The finding and the supporting argument in the Fact Sheet represents an attempt by Water Board staff to address whether the requirements of the Draft Permit represent an unfunded state mandate. That attempt, however, is beyond the scope of the Water Board's powers, since the *only* agency charged by the Legislature with determining

the presence of a state mandate, and whether that mandate is unfunded, is the Commission on State Mandates. Govt. Code § 17552; *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 333. The Water Board has no jurisdiction to make a legal finding or discuss in the Fact Sheet that the Draft Permit, in whole or in part, does not constitute an unfunded state mandate.

Additionally fact sheets are required, under the CWA regulations, to provide the legal authority and reasons for each substantive permit provision (40 CFR § 124.8(a)(4); 40 CFR § 124.56(a)). *See also City of Rancho Cucamonga v. Regional Water Quality Control Board-Santa Ana Region* (2006), 135 Cal.App.4th 1377, 1382 (stating that fact sheets contains "the legal and factual grounds for the Water Board's recommendation to adopt the . . . permit"). Finding 29 and the discussion in Section VII.F of the Fact Sheet do not relate to any Draft Permit provision, nor provide legal authority or justification for the Draft Permit's adoption. As such, the finding and Fact Sheet discussion are surplussage and should be deleted.

The Riverside County Copermittees disagree with each of the arguments set forth in the Finding and Fact Sheet as to why the Draft Permit does not constitute an unfunded state mandate. Nevertheless, because the exclusive arena for such disagreements is the Commission on State Mandates, whose jurisdiction does not commence unless and until a test claim is filed before the Commission, the Copermittees need not and will not address those arguments.

Comments on Provisions in Draft Permit

Provision A and Fact Sheet Section VIII.A:

Lack of True Iterative Compliance Process

As set forth in the Redline and in the Comment Letter, the Riverside County Copermittees believe that to effectuate the iterative approach to compliance with water quality standards and other discharge prohibitions in the Draft Permit, the copermittees must be provided with the means to be in compliance. Based on monitoring, exceedances of water quality standards are occurring in the receiving waters subject to the Draft Permit, as set forth in Table G-14 to the latest 2011-2012 monitoring report submitted by the Riverside County Copermittees. Thus, if the copermittees are not provided an iterative means to be in compliance, which was contemplated by State Board's Order No. 2001-15, the copermittees will be issued an illegal MS4 permit, since it is a permit with which they cannot comply. This violates the intent of Congress in the CWA, which "is presumed not to have intended absurd (impossible) results." *Hughey v. JMS Development Corp.,* 78 F.3d 1523, 1529 (11th Cir. 1996); *accord, Mississippi River Revival v. City of Minneapolis,* 319 F.3d 1013, 1017-1018 (8th Cir. 2003).

With regard to the iterative process, Water Board staff has indicated numerous times during the workshop process that achievement of water quality standards is expected to take many years. The entire WQIP approach is aimed at the eventual attainment of such standards, as are the TMDLs issued to other copermittees, which have final compliance dates years into the future.

This approach is, however, put into jeopardy by the requirement, as expressed in the Fact Sheet at F-39, that the discharge prohibition and receiving water limitation provisions are

"independently applicable, meaning that compliance with one provision does not provide a 'safe harbor' where there is non-compliance with another provision (i.e., compliance with Provision A.4 does not shield a Copermittee who may have violated Provision A.1.a, A.1.c, or A.2.a from an enforcement action." While the Fact Sheet appropriately notes how this process should work through Provision A.4 (which "essentially requires the Copermittees to implement additional BMPs until MS4 discharges no longer cause or contribute to a violation of water quality standards") it also states that despite this iterative process, "the San Diego Water Board retains the discretion to take other appropriate enforcement and the iterative process does not shield dischargers from citizen suits under the CWA." Fact Sheet at F-40.

The consequences of this approach cannot be overemphasized. Despite the copermittees' good faith undertaking to follow the iterative process outlined in Provision A.4, a Water Board enforcement proceeding or a citizen suit can be brought for violations of water quality standards and, if the citizen plaintiff is successful, a federal judge is empowered to use his/her injunctive powers under Section 505(a) of the CWA to throw out the WQIP, JRMP or other compliance efforts of the copermittees and require other efforts. In such a case, the time and money spent by the copermittees in trying to comply with the Draft Permit, as well as the effort spent by the copermittees and Water Board staff in developing the Draft Permit's terms, are completely wasted.

Thus, the essential conundrum of Provision A, as presently drafted, is clearly exposed. Even though a copermittee may spend significant sums and undertake significant tasks under its WQIP or JRMP, be conducting expensive monitoring and special studies, and be in *full compliance* with all of the programmatic requirements of the Draft Permit, it would still face either a Water Board enforcement action or a citizen suit under Section 505 of the CWA. And, such a suit would allege exceedances of water quality standards (some of which are hardly capable of laboratory detection, much less control) that the Water Board acknowledges cannot be achieved for years.

Provision A is not, however, required by the CWA, as held by the Ninth Circuit in *Defenders of Wildlife v. Browner,* 191 F.3d 1159 (9th Cir. 1999). The holding in *Browner* is further reflected in State Board Order WQ 2001-15 (which the Fact Sheet acknowledges incorporates an "iterative process") which states:

> [O]ur [receiving water limitation] language, similar to the U.S. EPA's permit language discussed in the Browner case, **does not require strict compliance with water quality standards.** Our language requires that **storm water management plans be designed to achieve compliance with water quality standards**. **Compliance is to be achieved over time, through an iterative approach requiring improved BMPs**. As pointed out by the Browner court, there is nothing inconsistent between this approach and the determination that the Clean Water Act does not mandate strict compliance with water quality standards.

Order WQ 2001-15 at 7 (emphasis added). Thus, Provision A is inconsistent with the State Board's own precedential order, which requires the iterative approach effectuated by the suggested Redline changes.[3]

In further support, it may be noted that the U.S. EPA-drafted MS4 permit for the District of Columbia does not contain the type of language found in Provision A, but rather requires "an iterative and an adaptive management process for pollutant reduction and for achieving applicable water quality standard and/or total maximum daily load (TMDL) compliance." DC MS4 Permit Fact Sheet, page 5 (attached as Exhibit A).

Also, despite the assertion in the Fact Sheet that the copermittees are seeking a "safe harbor" from liability, this is incorrect. Every provision of an MS4 permit is subject to enforcement; given the complexity of the Draft Permit, the failure by a copermittee to comply with any provision could lead to such enforcement.

As noted above, MS4 discharges may not be achieving compliance with strict water quality standards, as recognized by the Issue Paper released by State Board staff in preparation for a November 20, 2012 workshop on receiving water limitation issues raised by *NRDC v. County of Los Angeles*. That Issue Paper stated that as "the storm water management programs of municipalities have matured, **an increasing body of monitoring data indicates that water quality standards are in fact not being met by many MS4s.**" (State Board Issue Paper, Page 2, emphasis supplied) (*see* Exhibit B.)

Perhaps most importantly, requiring strict and immediate compliance with discharge prohibition and receiving water limitations inhibits, not supports, the philosophy of the Draft Permit, which is to encourage the copermittees to focus on the most significant problems in their watersheds and to prioritize their resources to address those problems. Provision A, by contrast, discourages innovative approaches or prioritization, since all pollutants exceeding water quality standards create liability. Moreover, as discussed above, in the event of a citizen suit being brought such as that in the *NRDC* case, a federal judge could award injunctive relief to a successful plaintiff that could completely ignore or supplant the WQIP and other permit terms.

For additional discussion of receiving water limitations issues, please see Exhibit C, a letter submitted by the District to the State Board in connection with the recent workshop held by the State Board on receiving water limitations language. The Riverside County Copermittees hereby reference and incorporate this Exhibit into these comments.

The Riverside County Copermittees support a true iterative process that requires refinement and amendment of the WQIP and associated BMPs when receiving water limitation violations are recorded. That is the essence of the iterative process; the identification of problems and the development of BMPs to attempt to address those problems.

[3] While the Fact Sheet cites as authority *Natural Resources Defense Council v. County of Los Angeles,* discussed above, the Ninth Circuit was simply responding to language in the former Los Angeles County MS4 permit, and did not determine that such non-iterative language was required by the CWA.

The Redline proposes a means to achieve compliance using the WQIPs, which are intended to bring the copermittees into compliance with the discharge prohibition and receiving water limitation provisions of the Draft Permit over time. The Redline links compliance with Provisions A.1, A.2 and A.3 to A.4, which indicates that compliance is obtained through the preparation and updating of the WQIPs.

It must be noted, however, that the Riverside County Copermittees do not agree with the approach suggested by others, that any WQIP-based compliance approach be necessarily accompanied by a "Reasonable Assurance Analysis." Such an analysis could be extremely complex, expensive and time intensive to develop. Generally, such analyses are developed in the preparation of TMDLs and take a number of years to develop and refine. Given that the Santa Margarita Watershed has no adopted TMDLs, there are no comprehensive pollutant transport or BMP models available for the suite of constituents that might be considered for prioritization within a WQIP for that watershed. In the context of a TMDL, such models would be developed by the combined resources of the Water Board, stakeholders and dischargers. Requiring such an exercise to be undertaken solely with the public resources of the residents of the SMR is beyond the Copermittees' financial ability and would shift responsibility for development of TMDLs from the Water Board to the Copermittees.

Discussion in Fact Sheet

The Fact Sheet discussion also contains a number of legal and factual errors. First, the statement on page F-34 that non-stormwater discharges from the MS4 are subject to NPDES permitting requirements is unsupported by the plain language of the CWA, which (as noted above) applies the MEP standard to *all* discharges of pollutants from the MS4, not just those in stormwater. Also, such discharges are not subject to separate requirements under the NPDES program, as suggested on F-34, and non-storm water discharges are not the same, legally, as "illicit discharges." Please see discussion below.

Similarly, the Fact Sheet's conclusion that "Regional Water Boards are not limited by the iterative MEP approach to storm water regulation in crafting appropriate regulations for non-storm water discharges" is incorrect. The Fact Sheet correctly states that MEP has not been defined in the CWA or by U.S. EPA in the CWA regulations. However, the Fact Sheet incorrectly concludes that MEP is "ultimately defined" by the Water Boards or the State Board. What constitutes "MEP" is a question of federal law under the CWA, not a matter for definition by agencies which merely have been delegated the authority to enforce the CWA in California. The only source for such a finding is a memorandum from a State Board attorney, not case authority.

Moreover, Provisions B-E of the Draft Permit, far from establishing a "minimum framework" for the copermittees to achieve the MEP standard, sets forth in many cases requirements that far exceed the plain requirements of the CWA, the implementing regulations and in some cases even state law, or which require the copermittees to undertake steps that are not "practicable." These requirements are identified in the comments of the Riverside County Copermittees. In such respects, those requirements do not represent a "minimum framework" for MEP.

Other Issues

The Riverside County Copermittees also object to the provision in A.1.a and other portions of the Draft Permit that prohibit certain discharges into "waters of the state." The CWA regulates discharges into waters of the United States, which are surface waters. Expanding the prohibition to cover waters of the state expands the scope of the Draft Permit to protect groundwater, as a matter of state law. It should be noted that the recent Los Angeles County MS4 Permit appropriately applies this prohibition to waters of the United States.

Provision B.5: As noted in the Comment Letter, the CWA requires that illegal discharges into the MS4 be addressed by a program of steps taken to address such discharges. The Redline emphasizes that this program be guided by WQIP priorities, which is consistent with the overall intent of the Draft Program.

Provision E.2.a and E.2.a.(7): These provisions require the Copermittees to, as a part of their Illicit Discharge Detection and Elimination (IDDE) program, address all non-stormwater discharges as "illicit discharges," thus requiring the copermittees to "reduce or eliminate non-stormwater discharges" whether or not the discharges have been identified as "illicit."

The Fact Sheet asserts that "Provision E.2.a.(7) is consistent with the requirements of the CWA section 402(p)(3)(B)(ii) and 40CFR 122.26(d)(1)(v)(B). That assertion is not correct. Section 402(p)(3)(B)(ii) of the CWA states that MS4 permits "shall include a requirement to *effectively prohibit* non-stormwater discharges into the storm sewers" (emphasis supplied). The CWA regulations include two provisions designed to begin implementation of the "effective prohibition." The first provision requires MS4 permittees to perform a screening analysis, intended to provide sufficient information to develop priorities for a program to detect and remove illicit discharges. 40 CFR 122.26(d)(1)(iv)(D). The second requires MS4 permittees to develop a recommended site-specific management plan to detect and remove illicit discharges (or ensure they are covered by an NPDES permit) and to control improper disposal to MS4s. 40 CFR 122.26(d)(1)(iv)(D) and 122.26(d)(2)(B). The MS4 permittees are required to identify the non-stormwater discharge as an illicit discharge prior to having an obligation to effectively prohibit it. There is not otherwise a presumption to reduce or eliminate it.

40 CFR 122.26(d)(1)(v)(B), cited in the Fact Sheet, requires "[a] description of the existing program to identify illicit connections to the municipal storm sewer system. The description should include inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented."

The provision and rationale within the Fact Sheet blur the distinction between the copermittees' need to "effectively" prohibit non-stormwater discharges and to detect and eliminate illicit discharges.

- The requirement is "effectively prohibit" non-stormwater discharges, not "reduce or eliminate" non-stormwater discharges.
- Although copermittees are required to have a program to prevent illicit discharges to the MS4, non-stormwater discharges should only be addressed as illicit discharges where

such discharges are identified as sources of pollutants that may cause or contribute to an exceedance of a water quality objective.

- The IDDE program is established to detect and eliminate "illicit discharges", not non-stormwater discharges in general.

Please see the Redline for modifications to Provision E.2 addressing these issues.

Provision E.2.a.(3): In the Redline, the Riverside County Copermittees request that categories of irrigation runoff discharges (landscape irrigation, irrigation water and lawn watering) be considered as conditionally exempt discharges (not subject to treatment as illicit discharges).

The rationale for not including irrigation runoff discharges lacks a legal and factual basis. As noted in the Comment Letter, the only factual basis for this provision with respect to the Riverside County Copermittees is discussion in a public information informational brochure, which was itself based on a similar document from Orange County. Fact Sheet F-76. Despite assertions to the contrary in the Fact Sheet, this brochure does not represent a determination by the Riverside County Copermittees that irrigation runoff is a category of non-stormwater discharge that must be effectively prohibited. The other evidence in support of prohibiting the conditional exemption for irrigation runoff is entirely from different areas of the region, with different urban development patterns, lithology and hydrology. No specific determination has been made by the Copermittees (or the Water Board) that irrigation runoff in the Santa Margarita Region has actually been shown to be significant source of pollutants to receiving waters in the SMR.

EPA, in the preamble to the federal MS4 regulations, required that a *permittee* must make a finding that the "irrigation water" discharges must be a "source of pollutants to waters of the United States . . . ." 55 Fed. Reg. 48037. Moreover, such discharges must represent a "significant" source of pollutants to waters of the United States "under certain conditions." U.S. EPA, *Guidance Manual for the Preparation of Part 2 of the NPDES Permit Application for Discharges from Municipal Separate Storm Sewer Systems,* November 1992 ("EPA Part 2 Guidance Manual"), at p. 6-33. These conditions require a focus not on an entire category of discharges, but rather a discharger-by-discharger examination.

In the MS4 regulatory preamble, EPA stated that "[i]n general, municipalities will not be held responsible for prohibited some specific components of discharges or flows listed below through their [MS4], even though such components may be considered non-storm water discharges, unless such discharges *are specifically identified on a case-by-case basis as needing to be addressed."* 55 Fed. Reg. 47995 (emphasis supplied). In the Guidance Manual, EPA states:

> If an applicant knows . . . that landscape irrigation water from a ***particular site*** flows through and picks up pesticides **or *excess*** nutrients from fertilizer applications, there may be a reasonable potential for a storm water discharge to result in a water quality impact. In such an event, the applicant should contact the NPDES permitting authority to request that the authority order ***the discharger*** . . . to obtain a separate NPDES permit (or in this case, the discharge could be controlled through the storm water management program of the MS4).

EPA Part 2 Guidance Manual, p. 6-33 (emphasis added). Read in this context of this language, the Water Board has no power greater than a municipality in terms of its ability to identify non-stormwater discharges as "illicit" and thus required to be regulated, and must identify specific discharges, and not entire categories of discharges. *See* 55 Fed. Reg. 48037. This has not been done in the Fact Sheet.

Provision E.3(c): This provision requires the Copermittees to compel development projects that may not result in a hydromodification impact to the applicable receiving waters, to implement on-site or "alternative compliance" hydromodification mitigation measures and to use using "pre-development (naturally occurring)" runoff reference condition as applied to sites that are, in fact, developed.

The Riverside County Copermittees are concerned that implementing these requirements would subject the Copermittees to liability under the takings clauses of the U.S. and California Constitutions as well as under the Mitigation Fee Act because of the questionable nexus between such a project's lack of actual hydromodification impacts upon the receiving waters, and the hydromodification management measures required in the Draft Permit.

When imposing a condition on a development permit, a local government is required under the federal and state constitutions to establish that the condition bears a reasonable relationship to the impacts of the development project. This rule applies even to legislatively enacted requirements and impact fees or exactions.[4] Moreover, fees imposed on a discretionary ad hoc basis are subject to heightened scrutiny under a two-part test. First, local governments must show that there is a substantial relationship between the burden created by the impact of development and any fee or exaction.[5] Second, a development project's impacts must bear a "rough proportionality" to any development fee or exaction.[6] Under California law, the *Nollan/Dolan* heightened scrutiny test also applies to in-lieu fees.[7]

The Legislature has memorialized these requirements in the Mitigation Fee Act, which establishes procedures that local governments must follow to impose impact fees.[8] Irrespective of whether the hydromodification management requirements are implemented by legislative act or on an ad hoc basis, the copermittees' attempt to enforce them as proposed in the Draft Permit would likely result in claims by developers and property owners alleging unconstitutional takings of private property and violations of the Mitigation Fee Act. This is because a developer could argue that limiting hydromodification impacts of already developed property to its "naturally occurring" state, or requiring hydromodification mitigation measures for impacts not imposed by the project, would not have a legally sufficient nexus to the impact of the development project.

In addition, the Copermittees wish to bring the Water Board's attention to a recent case, *Virginia Dept. of Transportation v. United States Environmental Protection Agency,* Civ. Action No.

[4] *Building Indus. Ass'n v. City of Patterson* (2009)171 Cal. App. 4th 886, 898.
[5] *Nollan v. California Coastal Comm'n*, 483 U.S. 825, 837 (1987).
[6] *Dolan v. City of Tigard*, 512 U.S. 374, 391 (1994).
[7] *Ehrlich v. City of Culver City* (1996) 12 Cal. 4th 854, 876.
[8] Cal. Gov't Code §§ 66000-66025.

1:12-CV-775 (E.D. Va. January 3, 2013) (slip op.), which is attached for the Water Board's convenience as Exhibit D. In this case, a federal district judge found that the CWA did not authorize U.S. EPA to regulate stormwater itself as a pollutant. The impact of this case is not known at this time, as it will probably be appealed to the Fourth Circuit Court of Appeals. Still, any approach to hydromodification which focuses on flows *per se*, as opposed to pollutants, may not withstand legal scrutiny.

Provision E.3.c.(3)(c)(i): This provision requires the entire alternative compliance in-lieu fee to be transferred to the copermittee or an escrow account prior to construction of a Priority Development Project (PDP). This provision is problematic, as development fees (which would include the in-lieu fees) are collected at the time of building permit issuance. In large-scale projects, permits may be issued (and development fees collected) in phases. Further, for master-planned developments, fees are generally negotiated through a development agreement to be collected based on certain development milestones. Therefore, collecting and holding the entire in-lieu fee prior to construction interferes with the development practice and may violate the Mitigation Fee Act and local development ordinances. The Redline requests that in-lieu fees be collected in accordance with state and local law.

Provision E.5: In addition to other comments on this provision and others in the Draft Permit relating to retrofitting, any requirements in Draft Permit relating to the retrofitting of engineered channels and other structures employed for flood control purposes must be consistent with the judgment of the flood control districts, to which the Legislature has assigned sole authority for the protection of the lives and property of their citizens from flooding. (Please see Comment Letter and proposed new findings in Redline for further discussion). Due to the urbanization of the counties over the past 150 years, as well as the particular topography and weather conditions found in Southern California, there is a great risk of flooding and hence the need for flood control structures and channels. The flood control districts have both the expertise and the sole legal authority to determine whether retrofitting of flood control structures can be accomplished in light of their statutory obligations, and that expertise and authority must be recognized in the Draft Permit.

Provision E.8: As noted in the Redline, the first requirement under Fiscal Analysis, that each "Copermittee must secure the resources necessary to meet all the requirements of this Order" has been deleted. This requirement is not found in the CWA regulations, which require only the conduct of a fiscal analysis. Moreover, this requirement intrudes on the home rule power of cities and counties by requiring, in essence, that municipal budgets must reflect the priority of compliance with the Order over any competing obligation, including police, fire protection and public health. A key issue in complying with stormwater and MS4 obligations is the ability of municipalities to afford the increasing costs associated with those obligations. In California, of course, the ability to raise taxes to pay for such obligations has been severely curtailed through several voter-approved propositions.

The Riverside County Copermittees request that Provision E.8.a be deleted.

EXHIBIT A

NPDES Permit No. DC0000221

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MUNICIPAL SEPARATE STORM SEWER SYSTEM PERMIT

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*

Government of the District of Columbia
The John A. Wilson Building
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

is authorized to discharge from all portions of the municipal separate storm sewer system owned and operated by the District of Columbia to receiving waters named:

Potomac River, Anacostia River, Rock Creek and stream segments tributary to each such water body

in accordance with the Stormwater Management Program(s) dated February 19, 2009, subsequent updates, and related reports, strategies, effluent limitations, monitoring requirements and other conditions set forth in Parts I through IX herein.

The effective issuance date of this permit is: October 7, 2011.

This permit and the authorization to discharge shall expire at midnight, on: October 7, 2016.

Signed this 30th day of September, 2011.

Jon M. Capacasa, Director
Water Protection Division
U.S. Environmental Protection Agency
Region III

1. DISCHARGES AUTHORIZED UNDER THIS PERMIT

1.1 Permit Area

This permit covers all areas within the jurisdictional boundary of the District of Columbia served by, or otherwise contributing to discharges from, the Municipal Separate Storm Sewer System (MS4) owned or operated by the District of Columbia. This permit also covers all areas served by or contributing to discharges from MS4s owned or operated by other entities within the jurisdictional boundaries of the District of Columbia unless those areas have separate NPDES MS4 permit coverage or are specifically excluded herein from authorization under the District's stormwater program. Hereinafter these areas collectively are referred to as "MS4 Permit Area".

1.2 Authorized Discharges

This permit authorizes all stormwater point source discharges to waters of the United States from the District of Columbia's MS4 that comply with the requirements of this permit. This permit also authorizes the discharge of stormwater commingled with flows contributed by process wastewater, non-process wastewater, or stormwater associated with industrial activity provided such discharges are authorized under separate NPDES permits.

This permit authorizes the following non-stormwater discharges to the MS4 when appropriate stormwater activities and controls required through this permit have been applied and which are: (1) discharges resulting from clear water flows, roof drainage, dechlorinated water line flushing, landscape irrigation, ornamental fountains, diverted stream flows, rising ground waters, uncontaminated ground water infiltration to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation waters, springs, footing drains, lawn watering, individual resident car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, wash water, fire fighting activities, and similar types of activities; and (2) which are managed so that water quality is not further impaired and that the requirements of the federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*, and EPA regulations are met.

1.3 Limitations to Coverage

1.3.1 Non-stormwater Discharges

The permittee, as defined herein, shall effectively prohibit non-stormwater discharges into the MS4, except to the extent such discharges are regulated with an NPDES permit.

1.3.2 Waivers and Exemptions

This permit does not authorize the discharge of any pollutant from the MS4 which arises from or is based on any existing waivers and exemptions that may otherwise apply and are not consistent with the Federal Clean Water Act and other pertinent guidance, policies, and regulations. This narrative prohibition on the applicability of such waivers and exemptions extends to any activity that would otherwise be authorized under District law, regulations or

ordinance but which impedes the reduction or control of pollutants through the use of stormwater control measures and/or prevents compliance with the narrative /numeric effluent limits of this permit. Any such discharge not otherwise authorized may constitute a violation of this permit.

1.4 Discharge Limitations

The permittee must manage, implement and enforce a stormwater management program (SWMP) in accordance with the Clean Water Act and corresponding stormwater NPDES regulations, 40 C.F.R. Part 122, to meet the following requirements:

1.4.1. Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 as necessary to comply with existing District of Columbia Water Quality Standards (DCWQS);

1.4.2. Attain applicable wasteload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body, consistent with 33 U.S.C. § 1342(p)(3)(B)(iii); 40 C.F.R. § 122.44(k)(2) and (3); and

1.4.3. Comply with all other provisions and requirements contained in this permit, and in plans and schedules developed in fulfillment of this permit.

Compliance with the performance standards and provisions contained in Parts 2 through 8 of this permit shall constitute adequate progress toward compliance with DCWQS and WLAs for this permit term.

2. LEGAL AUTHORITY, RESOURCES AND STORMWATER PROGRAM ADMINSTRATION

2.1 Legal Authority

2.1.1 The permittee shall use its existing legal authority to control discharges to and from the Municipal Separate Storm Sewer System in order to prevent or reduce the discharge of pollutants to achieve water quality objectives, including but not limited to applicable water quality standards. To the extent deficiencies can be addressed through regulation or other Executive Branch action, the permittee shall remedy such deficiencies within 120 days. Deficiencies that can only be addressed through legislative action shall be remedied within 2 years of the effective date of this permit, except where otherwise stipulated, in accordance with the District's legislative process. Any changes to or deficiencies in the legal authority shall be explained in each Annual Report.

2.1.2 No later than 18 months following the effective date of this permit, the District shall update and implement Chapter 5 of Title 21 of District of Columbia Municipal Regulations (Water Quality and Pollution) ("updated DC Stormwater Regulations"), to address the control of stormwater throughout the MS4 Permit Area. Such regulations shall be consistent with this

FACT SHEET

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4)
Permit No. DC0000221 (Government of the District of Columbia)

NPDES PERMIT NUMBER: DC0000221 (Reissuance)

FACILITY NAME AND MAILING ADDRESS:

Government of the District of Columbia
The John A. Wilson Building
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

MS4 ADMINISTRATOR NAME AND MAILING ADDRESS:

Director, District Department of the Environment
1200 First Street, N.E., 6th Floor
Washington, D.C. 20002

FACILITY LOCATION:

District of Columbia's Municipal Separate Storm Sewer System (MS4)

RECEIVING WATERS:

Potomac River, Anacostia River, Rock Creek, and Stream Segments Tributary
To Each Such Water Body

INTRODUCTION:

Today's action finalizes reissuance of the District of Columbia Municipal Separate Storm Sewer System (MS4) Permit. In the Final Permit EPA has continued to integrate the adaptive management approach with enhanced control measures to address the complex issues associated with urban stormwater runoff within the corporate boundaries of the District of Columbia, where stormwater discharges via the Municipal Separate Storm Sewer System (MS4).

Since the United States Environmental Protection Agency, Region III (EPA) issued the District of Columbia (the District) its first MS4 Permit in 2000, the Agency has responded to a number of legal challenges involving both that Permit (as well as amendments thereto) and the second-round MS4 Permit issued in 2004. For the better part of ten years, the Agency has worked with various parties in the litigation, including the District and two non-governmental organizations, Defenders of Wildlife and Friends of the Earth, to address the concerns of the various parties. The Agency has engaged in both litigation and negotiation, including formal

mediation.[1] These activities ultimately led to an enhanced stormwater management strategy in the District, consisting of measurable outputs for addressing the issues raised during the litigation and mediation process.

FACILITY BACKGROUND AND DESCRIPTION:

The Government of the District of Columbia owns and operates its own MS4, which discharges stormwater from various outfall locations throughout the District into its waterways.[2]

On April 21, 2010 EPA public noticed the Draft Permit. The Draft Fact Sheet published with that Draft Permit contains more extensive permit background information, and the reader is referred to that document for the history of the District of Columbia MS4 permit.

The public comment period closed on June 4, 2010. EPA received comments from 21 individual commenters and an additional 53 form letters. The Draft Permit, Draft Fact Sheet, and comments received on those documents are all available at: http://www.epa.gov/reg3wapd/npdes/draft_permits.html. The Final Permit reflects many of the comments received. EPA is simultaneously releasing a responsiveness summary responding to these comments.

ACTION TO BE TAKEN:

EPA is today reissuing the District of Columbia NPDES MS4 Permit. The Final Permit replaces the 2004 Permit, which expired on August 18, 2009 and has been administratively extended since that time. The Final Permit incorporates concepts and approaches developed from studies and pilot projects that were planned and implemented by the District under the 2000 and 2004 MS4 permits and modifying Letters of Agreement, and implements Total Maximum Daily Loads (TMDLs) that have been finalized since the prior permit was issued, including the Chesapeake Bay TMDL. A number of applicable measurable performance standards have been incorporated into the Final Permit. These and other changes between the 2004 Permit and today's Final Permit are reflected in a Comparison Document that is part of today's Permit issuance.

WATER QUALITY IN DISTRICT RECEIVING WATERS:

The District's *2008 Integrated Report to the Environmental Protection Agency and U.S. Congress Pursuant to Sections 305(b) and 303(d) Clean Water Act*[3] documents the serious water

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1 A procedural history of Permit appeals can be viewed at the EPA Environmental Appeals Board web: http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/77355bee1a56a5aa8525711400542d23/b5e5b68e89edabe98525714f00731c6f!OpenDocument&Highlight=2,municipal.

2 Portions of the District are served by a combined sanitary and storm sewer system. The discharges from the combined sewer system are not subject to the MS4 permit, but are covered under NPDES Permit No. xxxx issued to the District of Columbia Water and Sewer Authority.

3 District Department of the Environment, *The District of Columbia Water Quality Assessment, 2008 Integrated Report to the Environmental Protection Agency and U.S. Congress Pursuant to Sections 305(b) and 303(d) Clean Water Act* (hereinafter "2008 Integrated Report").

quality impairments in the surface waters in and around the District. A number of the relevant designated uses are not being met, *e.g.*, aquatic life, fish consumption, and full body contact, and there are a number of specific pollutants of concern that have been identified (for additional discussion on relevant TMDLs *see* Section 4.10 of this Final Fact Sheet).

Commenters on the Draft Permit expressed some frustration over very slow progress or even lack of progress after a decade of implementation of the MS4 program and even longer for other water quality programs. EPA appreciates this concern. Although the District's receiving waters are affected by a range of discharge sources, discharges from the MS4 are a significant contributor of pollutants and cause of stream degradation. EPA also recognizes, however, that stormwater management efforts that achieve a reversal of the ongoing degradation of water quality caused by urban stormwater discharges entail a long term, multi-faceted approach.

Consistent with the federal stormwater regulations for characterizing discharges from the MS4 (40 C.F.R. §122.26(d)(2)(iii)), the first two permit terms for the District's MS4 program required end-of-pipe monitoring to determine the type and severity of pollutants discharging via the system. The monitoring program was not designed to evaluate receiving water quality *per se*, therefore detection of trends or patterns was not reasonably possible. Today's Final Permit includes requirements for a Revised Monitoring Program, and one of the objectives for the program is to use a suite of approaches and indicators to evaluate and track water quality over the long-term (*see* discussion of Section 5.1 in this Final Fact Sheet).
There have been identified improvements in some areas. For example the *2008 Integrated Report* noted improvements in the diversity of submerged aquatic vegetation in the Potomac River, as well as improvements in fish species richness in Rock Creek. Biota metrics are often the best indicators of the integrity of any aquatic system.

EPA also notes that there are a variety of indirect measures indicative of improvement. The federal stormwater regulations foresaw the difficulty, especially in the near-term, of detecting measurable improvement in receiving waters, and relied instead on indirect measures, such as estimates of pollutant load reductions (40 C.F.R. §122.26(d)(2)(v)). The District documents these types of indirect measures in its annual reports, *e.g.*, tons of solids collected from catch basin clean-outs, amount of household hazardous waste collected, number of trees planted, square footage of green roofs installed, and many other measures of success.[4]

EPA believes that documenting trends in water quality, whether improvements, no change, or even further degradation, is an important element of a municipal water quality program. Today's Final Permit recognizes this principle, both in the types of robust measures required as well as the transition to new monitoring paradigms. EPA encourages all interested parties to provide the District with input during the development of these program elements.

THIS FACT SHEET:

(http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/information2/water.reg.leg/DC_IR_2008_Revised_9-9-2008.pdf)

4 District MS4 Annual Reports can be found at: http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,495855.asp

This Final Fact Sheet is organized to correspond with the chronological organization and numbering in today's Final Permit. Where descriptions or discussions may be relevant to more than one element of the Final Permit the reader will be referred to the relevant section(s).

To keep today's Final Fact Sheet of readable length, many of the elements included in the fact sheet published with the Draft Permit (Draft Fact Sheet) on April 21, 2010 have not been repeated, but are referenced. Readers are referred to the Draft Fact Sheet published with the Draft Permit for additional discussion on provisions that have been finalized as proposed.[5] The Final Fact Sheet does discuss significant changes since the 2004 Permit (even if discussed in the Draft Fact Sheet). The Final Fact Sheet also contains additional explanation of the Final Permit where commenters requested additional clarification. In addition, this Final Fact Sheet explains modifications to the Final Permit where provisions were changed in response to comments.

In many cases EPA made a number of very simple modifications to the Final Permit, *e.g.*, a word, phrase, or minor reorganization, simply for purposes of clarification. These modifications were not intended to change the substance of the permit provisions, only to clarify them. Most of those types of edits are not discussed in this Final Fact Sheet, but EPA has provided a Comparison Document of the Draft and Final Permits for readers who would like that level of detail.

Many commenters noted that the Draft Permit was not logically organized. EPA agrees. The major reorganization principles include:

1) There is a new Section 3, Stormwater Management Program (SWMP) Plan consolidating the various plans, strategies and other documents developed in fulfillment of permit requirements.
2) All implementation measures, *i.e.*, those stipulating management measures and implementation policies, are included in Section 4 of today's Final Permit. This includes "Source Identification" elements (Section 3 in the Draft Permit) and "Other Applicable Provisions" elements (Section 8 in the Draft Permit), which included TMDL requirements.
3) All monitoring requirements are consolidated in Section 5 of the Final Permit.
4) All reporting requirements are consolidated in Section 6 of the Final Permit.

EPA also refers readers to the Responsiveness Summary released today along with the Final Permit and Final Fact Sheet, for responses to comments and questions received on the Draft Permit. That document contains additional detailed explanations of the rationale for changes made to the Draft Permit in the Final Permit.

Finally, EPA made significant effort to avoid appending or incorporating by reference other documents containing permit requirements into the Final Permit. In the interest of clarity

5 The Permit and Fact Sheet proposed on April 21, 2010 can be viewed at: http://www.epa.gov/reg3wapd/npdes/draft_permits.html

and transparency EPA, to the extent possible, has included all requirements directly in the permit. Thus, EPA reviewed a variety of documents with relevant implementation measures, *e.g.*, TMDL Implementation Plans and the 2008 Modified Letter of Agreement to the 2004 permit[6], and translated elements of those plans and strategies into specific permit requirements that are now contained in the Final Permit. This Fact Sheet provides an explanation of the sources of provisions that are significant and are a direct result of one of those strategies.

1. DISCHARGES AUTHORIZED UNDER THIS PERMIT

(1.2 Authorized Discharges): The Final Permit authorizes certain non-stormwater discharges, including discharges from water line flushing. One commenter noted that many of these discharges, especially from potable water systems, contain concentrations of chlorine that may exceed water quality standards. EPA agrees, and has therefore clarified that dechlorinated water line flushing is authorized to be discharged under the Final Permit.

(1.4 Discharge Limitations): Comments on the language in Part 1.4 varied widely. Some commenters did not believe it was reasonable to require discharges to meet water quality standards. Other commenters believed this to be an unambiguous requirement of the Clean Water Act.

Today's Final Permit is premised upon EPA's longstanding view that the MS4 NPDES permit program is both an iterative and an adaptive management process for pollutant reduction and for achieving applicable water quality standard and/or total maximum daily load (TMDL) compliance. *See generally,* "National Pollutant Discharge Elimination System Permit Application Regulations for Stormwater Discharges," 55 F.R. 47990 (Nov. 16, 1990).

EPA is aware that many permittees, especially those in highly urbanized areas such as the District, likely will be unable to attain all applicable water quality standards within one or more MS4 permit cycles. Rather the attainment of applicable water quality standards as an incremental process is authorized under section 402(p)(3)(B)(iii) of the Clean Water Act, 33 U.S.C. § 1342(p)(3)(B)(iii), which requires an MS4 permit "to reduce the discharge of pollutants to the maximum extent practicable" (MEP) "and such other provisions" deemed appropriate to control pollutants in municipal stormwater discharges. To be clear, the goal of EPA's stormwater program is attainment of applicable water quality standards, but Congress expected that many municipal stormwater dischargers would need several permit cycles to achieve that goal.

Specifically, the Agency expects that attainment of applicable water quality standards in waters to which the District's MS4 discharges, requires staged implementation and increasingly more stringent requirements over several permitting cycles. During each cycle, EPA will continue to review deliverables from the District to ensure that its activities constitute sufficient progress toward standards attainment. With each permit reissuance EPA will continue to increase

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6 District Department of the Environment, *Modification to the Letter of Agreement dated November 27, 2007 for the NPDES Municipal Separate Storm Sewer (MS4) Permit DC0000222* (2008) http://www.epa.gov/reg3wapd/npdes/pdf/DCMS4/Letter.PDF

stringency until such time as standards are met in all receiving waters. Therefore today's Final Permit is clear that attainment of applicable water quality standards and consistency with the assumptions and requirements of any applicable WLA are requirements of the Permit, but, given the iterative nature of this requirement under CWA Section 402(p)(3)(B)(iii), the Final Permit is also clear that "compliance with all performance standards and provisions contained in the Final Permit shall constitute adequate progress toward compliance with DCWQS and WLAs for this permit term" (Section 1.4).

EPA believes that permitting authorities have the obligation to write permits with clear and enforceable provisions and thus the determination of what is the "maximum extent practicable" under a permit is one that must be made by the permitting authority and translated into provisions that are understandable and measurable. In this Final Permit EPA has carefully evaluated the maturity of the District stormwater program and the water quality status of the receiving waters, including TMDL wasteload allocations. In determining whether certain measures, actions and performance standards are practicable, EPA has also looked at other programs and measures around the country for feasibility of implementation. Therefore today's Final Permit does not qualify any provision with MEP thus leaving this determination to the discretion of the District. Instead each provision has already been determined to be the maximum extent practicable for this permit term for this discharger.

EPA modified the language in the Final Permit to provide clarity on the expectations consistent with the preceding explanation. Specifically Section 1.4.2 of the Final Permit requires that discharges 'attain' applicable wasteload allocations rather than just 'be consistent' with them, since the latter term is somewhat ambiguous.

In addition, the general discharge limitation 'no increase in pollutant loadings from discharges from the MS4 may occur to receiving waters' was removed because of the difficulty in measuring, demonstrating and enforcing this provision. Instead, consistent with EPA's belief that the Final Permit must include all of the enforceable requirements that would achieve this principle, the following discharge limitation is substituted: "comply with all other provisions and requirements contained in this permit, and in plans and schedules developed in fulfillment of this permit."

In addition, EPA made the following modifications: "Compliance with <u>the</u> performance standards and provisions contained in <u>Parts 2 through 8 of</u> this permit shall constitute adequate progress towards compliance with DCWQS <u>and WLAs for this permit term</u>" (*<u>underlined text added</u>*) (Section 1.4 of the Final Permit). EPA eliminated circularity with the addition of "Parts 2 through 8", clarifying that this requirement does not circle back to include the statements in 1.4.1 and 1.4.2, but rather interprets them. Also, although WLAs are a mechanism for attainment of water quality standards, EPA added the specific language "and WLAs" to make this concept explicit rather than just implicit. In addition this revised language emphasizes that the specific measures contained in the Final Permit, while appropriate for this permit term, will not necessarily constitute full compliance in subsequent permit terms. It is the expectation that with each permit reissuance, additional or enhanced requirements will be included with the objective

of ensuring that MS4 discharges do not cause or contribute to an exceedance of applicable water quality standards, including attainment of relevant WLAs.

2. LEGAL AUTHORITY, RESOURCES, AND STORMWATER PROGRAM ADMINISTRATION

(2.1 Legal Authority): Several commenters pointed out that there were a number of requirements in the Draft Permit without clear compliance schedules or deadlines, or with deadlines that did not correspond well to others in the permit. In the Final Permit, EPA has made several revisions to address these comments. For example, EPA changed a requirement that deficiencies in legal authority must be remedied "as soon as possible" to a 120-day requirement for deficiencies that can be addressed through regulation, and two years for deficiencies that require legislative action (Section 2.1.1). Also, EPA increased the compliance schedule for updating the District's stormwater regulation from twelve months to eighteen months, *id.*, so that this action could be adequately coordinated with the development of the District's new offsite mitigation/payment-in-lieu program (for more discussion see Section 4.1.3 below).

(2.2 Fiscal Resources): One commenter suggested eliminating the reference to the District's Enterprise Fund since funding was likely to come from a number of different budgets within the District. EPA agrees with this comment and has removed this reference.

On the other hand, many commenters noted that the implementation costs of the District's stormwater program will be significant. EPA agrees. The federal stormwater regulations identify the importance of adequate financial resources [40 C.F.R. §122.26(d)(1)(vi) and (d)(2)(vi)]. In addition, after seeing notable differences in the caliber of stormwater programs across the country, EPA recognizes that dedicated funding is critical for implementation of effective MS4 programs.[7,8,9] In 2009 the District established, and in 2010 revised, an impervious-based surface area fee for service to provide core funding to the stormwater program[10] (understanding that stormwater-related financing may still come from other sources as they fulfill multiple purposes, *e.g.*, street and public right-of-way retrofits). In conjunction with the 2010 rule-making to revise the fee the District issued a Frequently Asked Questions document[11] that indicates the intent to restrict this fee to its original purpose, *i.e.*, dedicated funding to implement the stormwater program and comply with MS4 permit requirements. EPA believes this action is essential, and he expects that the District will maintain a dedicated source of funding for the stormwater program.

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7 National Research Council, *Urban Stormwater Management in the United States* (2009) National Academy of Sciences http://www.nap.edu/catalog.php?record_id=12465

8 National Association of Flood and Stormwater Agencies, Funded by EPA, *Guidance for Municipal Stormwater Funding* (2006) http://www.nafsma.org/Guidance%20Manual%20Version%202X.pdf

9 EPA, *Funding Stormwater Programs* (2008) http://www.epa.gov/npdes/pubs/region3_factsheet_funding.pdf

10 District of Columbia, Rule 21-566 Stormwater Fees, http://www.dcregs.dc.gov/Gateway/RuleHome.aspx?RuleID=474056

11 District of Columbia, FAQ Document *Changes to the District's Stormwater Fee* (2010) http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/information2/water_reg_leg/Stormwater_Fee_FAQ_10-5-10_-final.pdf

EXHIBIT B

State Water Resources Control Board

Issue Paper
Municipal Storm Water Permit Receiving Water Limitations
Board Workshop
November 20, 2012

ISSUE:

The State Water Resources Control Board (State Water Board) has been asked, in public comments received on National Pollutant Discharge Elimination System (NPDES) permits for Municipal Separate Storm Sewer Systems (MS4s), to adopt permit provisions that create a partial or complete exemption from enforcement for violations of water quality standards while a discharger engages in an iterative process of improving controls (commonly referred to as a "safe harbor" provision). The State Water Board has scheduled a public workshop to consider the issue.

DISCUSSION:

Background:

The Clean Water Act generally requires NPDES permits to include technology-based effluent limitations and any more stringent limitations necessary to meet water quality standards. In the context of NPDES permits for MS4s, however, the Clean Water Act does not reference the requirement to meet water quality standards. MS4 discharges must meet a technology-based standard of reducing pollutants in the discharge to the Maximum Extent Practicable (MEP), but requirements to meet water quality standards are at the discretion of the permitting agency.[1] Further, under the Porter-Cologne Water Quality Control Act, waste discharge requirements must implement applicable water quality control plans, including water quality objectives; however, the Porter-Cologne Act also affords the State Water Board and regional water quality control boards (collectively, Water Boards) flexibility to consider other factors, such as economics, when establishing any NPDES permit requirements that are more stringent than required by the Clean Water Act.[2]

The State Water Board has exercised its discretion with regard to requiring compliance with water quality standards in MS4 permits by directing, in precedential orders, that MS4 permits contain provisions requiring discharges to be controlled so as not to cause or contribute to exceedances of water quality standards in receiving waters.[3] However, consistent with federal

[1] 33 U.S.C. § 1342(p); *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.

[2] Wat. Code, §§ 13241, 13263; *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613.

[3] SWRCB Order WQ 98-01 (*Environmental Health Coalition*), WQ 99-05 (*Environmental Health Coalition)*.

law, the State Water Board has found it appropriate to implement Best Management Practices (BMPs) in lieu of numeric water quality-based effluent limitations to meet water quality standards.[4] Additionally, in lieu of "strict compliance" with water quality standards, the State Water Board has prescribed an iterative process whereby an exceedance of a water quality standard triggers a process of BMP improvements: reporting of the violation, submission of a report describing proposed improvements to BMPs expected to better meet water quality standards, and implementation of these new BMPs.

While the Water Boards have generally directed dischargers to achieve compliance with water quality standards by improving control measures through the iterative process, the iterative process does not provide a "safe harbor" to MS4 permittees: that is, when a discharger is shown to be causing or contributing to an exceedance of water quality standards, that discharger is in violation of the relevant discharge prohibitions and receiving water limitations of the permit and potentially subject to enforcement by the Water Boards or through a citizen suit, even if the discharger is actively engaged in the iterative process. Despite the lack of a safe harbor provision, however, the Water Boards have, as a matter of practice, declined to initiate enforcement actions against MS4 permittees who have been actively engaged in the iterative process. The Water Boards' decisions to decline to include a safe harbor in MS4 permits have been upheld by courts of appeal.[5]

Need for and Purpose of Workshop:

The lack of a safe harbor in the iterative process was recently highlighted by the Ninth Circuit's decision in a citizen suit brought by the Natural Resources Defense Council (NRDC) against the County of Los Angeles and the Los Angeles County Flood Control District for violations of the receiving water limitations of their MS4 permit. The Ninth Circuit confirmed that, as the receiving water limitations of the Water Boards' MS4 permits are currently drafted, engagement in the iterative process does not excuse liability for violations of water quality standards.[6]

As the storm water management programs of municipalities have matured, an increasing body of monitoring data indicates that water quality standards are in fact not being met by many MS4s. MS4s accordingly assert that the receiving water limitations and iterative process provisions of the Water Boards' permits do not afford them with a viable path to compliance for these violations, which may take years of technical efforts to correct, especially for wet weather discharges. MS4s argue that they are increasingly vulnerable to citizen suits and/or Water Board enforcement. This concern has been raised by the California Stormwater Quality Association (CASQA) in comments on the proposed Phase II MS4 permit and by the California Department of Transportation (Caltrans) in comments on the Caltrans MS4 permit adopted

[4] *See* SWRCB Orders WQ 91-03 (*Citizens for a Better Environment)*, WQ 98-01 (*Environmental Health Coalition*), WQ 2001-15 (*Building Industry Association of San Diego County*); *See also* 40 C.F.R. § 122.44(k); Interim Permitting Approach for Water Quality-Based Effluent Limitations In Storm Water Permits, USEPA, September 1995. In such orders and guidance, the State Water Board and Environmental Protection Agency acknowledge that the storm water program may evolve over time to incorporate stricter limitations, including improved BMPs to meet water quality standards or numeric water quality based effluent limitations.

[5] *Building Industry Assn. of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866; *City of Rancho Cucamonga v. Regional Water Quality Control Bd.* (2006) 135 Cal.App.4th 1377; see also *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2011) 673 F.3d 880, 897, n.7.

[6] *Natural Resources Defense Council v. County of Los Angeles, supra*, 673 F.3d at p. 897. On July 13, 2012, the United States Supreme Court granted review of this case on other grounds.

September 19, 2012, as well as by numerous MS4s and interested persons in comments on both permits. The issue is additionally relevant to the Phase I MS4 permits issued by the regional water quality control boards.[7]

At the same time, the environmental community has commented that the iterative process has been underutilized and ineffective to date in bringing MS4 discharges into compliance with water quality standards. Environmental parties argue that direct enforcement of water quality standards is necessary to protect water quality, especially in such second- or third-generation permits where dischargers have already had a number of years to come into compliance.

Because of the broad applicability of any policy decisions regarding the receiving water limitations and iterative process provisions, the State Water Board is holding a public workshop to consider several alternatives in addressing the issue and to seek public input on these alternatives. Following the workshop, the State Water Board may propose revisions to the receiving water limitations in the Caltrans MS4 and Phase II MS4 permits, and as necessary, re-open those permits after public review and comment, to make the revisions.

ALTERNATIVES FOR CONSIDERATION:

The State Water Board may consider the alternatives below, individually or in combination, to address concerns with the receiving water limitations in the Caltrans or Phase II MS4 permits. While the listed alternatives attempt to capture the range of alternatives before the State Water Board, the Board welcomes comments proposing other options and will not be limiting its consideration to the alternatives as listed in this issue paper.

The receiving water limitations language prescribed by State Water Board Order WQ 99-05 is attached as Attachment 1 and forms the basis of Alternative 1. CASQA has submitted specific proposed language for the Receiving Water Limitations provision of the proposed Phase II MS4 permit (CASQA Proposal). The CASQA Proposal is attached as Attachment 2 and is referenced as appropriate in the discussion of the alternatives below.

Alternative 1: Keep the status quo of no safe harbor.

This alternative makes no changes to the existing State Water Board approach or to the current language of the adopted Caltrans MS4 permit or the proposed Phase II MS4 permit. As stated previously, the current MS4 permit provisions laying out the iterative process are based on language set forth in precedential State Water Board orders. (See Attachment 1.) Alternative 1 adheres to the prescribed language. Under this alternative, the Water Boards may choose to exercise their enforcement discretion to refrain from taking action against dischargers engaged in good faith implementation of the iterative process; however, they would not be constrained from enforcing the receiving water limitations when an MS4 causes or contributes to exceedances of water quality standards. As a limitation within an NPDES permit, dischargers who cause or contribute to an exceedance of water quality standards could be subject to citizen suits.

[7] Note that the issue is not relevant to any other NPDES permits, including permits for storm water discharges associated with industrial activity, because all other NPDES permits must include technology-based effluent limitations and any more stringent limitations necessary to meet water quality standards. (33 U.S.C. § 1311(b)(1)(C).)

Alternative 2: No safe harbor, but provide greater clarity and specificity for iterative process implementation and wet weather data analysis.

Greater clarity and specificity in the MS4 permits as to the iterative process requirements may result in increased efforts to improve controls and achieve compliance. Such clarity and specificity may include:

1. Clarification on how compliance with the relevant discharge prohibitions and receiving water limitations is determined, including type and frequency of monitoring;
2. Clarification that dischargers must begin the iterative process after documentation of violations without waiting to be directed to do so by the Water Boards;
3. Specification of the minimum efforts that will constitute meaningful compliance with the iterative process;
4. Specification of the scope of any corrective action, including whether it applies only at the location where exceedances are measured or throughout the relevant watershed;
5. Specification of additional wet weather data analysis to better define and assess the impact of municipal storm water discharges on receiving waters, as well as the efficacy of specific best management practices.

As the MS4 program continues to mature and more data becomes available, this alternative may be enhanced by the development of water quality-based effluent limitations for pollutants, as appropriate, as a means of determining compliance with receiving water limitations. In addition, the enhanced wet weather data could be used to identify surrogates that could be used as a measure of protecting beneficial uses. In time, the data could be used to develop actual wet weather water quality standards or wet weather implementation provisions for existing water quality standards that could be applied consistently on a statewide basis.

Given the nature of storm water discharges and of MS4s, questions such as where and how compliance with water quality standards should be measured and how narrowly or broadly corrective actions should be applied, pose complicated technical issues that require careful study and consideration. These challenges notwithstanding, water quality improvements are more likely to be achieved as the iterative process becomes automatic and dischargers follow clear guidelines for determining and addressing non-compliance with permit terms. Such improvements may dissuade the Water Boards and the public from bringing enforcement actions/citizen suits for all except the most egregious and repeated violations.

In addition to being a stand-alone alternative, Alternative 2 may be considered in combination with Alternatives 3 through 5. The CASQA Proposal incorporates some greater specificity in the iterative process requirements as a component of its proposed receiving water limitations.

Alternative 3: Safe harbor that applies only if a discharger is in compliance with the implementation provisions of an approved TMDL.

Under Alternative 3, the receiving water limitations would be amended to provide a safe harbor for permittees that are in compliance with the implementation provisions of a TMDL. In effect, as long as the permittee is in compliance with the TMDL (including any compliance schedule) the terms of the TMDL would replace the requirement to comply with water quality standards for the pollutants that are covered by the TMDL.

The CASQA Proposal contemplates a safe harbor for dischargers in compliance with a TMDL as a component of the receiving water limitations.

Alternative 4: Safe harbor that applies if a discharger is in compliance with the implementation provisions of an approved TMDL, as in Alternative 3, and, in addition, that applies when the discharger engages in good faith compliance with the iterative process for exceedances caused by wet weather discharges.

In addition to the safe harbor for TMDL implementation, Alternative 4 would provide a safe harbor when dischargers engage in the iterative process in good faith to address violations of permit terms caused by wet weather discharges. Thus, if a storm water discharge from an MS4 is causing or contributing to an exceedance of a water quality standard in the receiving water, the exceedance would not constitute a violation of the permit as long as the discharger was engaged in good faith efforts to address the exceedance through improved controls. Alternative 4 recognizes that wet weather discharges from MS4s frequently cause or contribute to violations of water quality standards and allows the MS4s time to address these violations by improving control measures.

However, the safe harbor would not extend to dry weather discharges. Non-storm water discharges are generally prohibited in MS4 permits and only a few categories of non-storm water discharges are exempted from the prohibition, with the condition that these exempted discharges also be prohibited if they are identified as sources of pollutants to receiving waters.

Alternative 5: Full safe harbor.

This alternative would provide a full safe harbor to dischargers complying with the implementation provisions of a TMDL or engaging in the iterative process to address exceedances caused by wet or dry weather discharges.

The CASQA Proposal attached provides for a full safe harbor.

Attachments Removed

EXHIBIT C

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RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

November 13, 2012

Honorable Members of the State Water Resources Control Board
Attn: Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Dear Honorable Board Members and Ms. Townsend: Re: Comment Letter – Receiving Water Limitations Language Workshop

I am writing on behalf of the Riverside County Flood Control and Water Conservation District ("District") regarding the State Water Resources Control Board's consideration of Receiving Water Limitations ("RWL") language in MS4 permits. This review was triggered by a decision of the Ninth Circuit United States Court of Appeals in *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2011) 673 F.3d 880, *cert granted,* __ U.S. __ (June 25, 2012) ("*NRDC*"). This letter is being submitted in advance of the State Board's November 20, 2012 workshop on reform of the RWL language to be incorporated into MS4 permits as a matter of statewide policy.

The District is the Principal Permittee for three Phase I MS4 permits applicable to municipalities across Riverside County: Order R8-2010-0033, issued by the Santa Ana Regional Water Board to municipalities within the Santa Ana River Region of Riverside County; Order R9-2010-016, issued by the San Diego Regional Water Board to municipalities within the Santa Margarita Region of Riverside County; and Order R7-2008-0001, issued by the Colorado River Regional Water Board to municipalities within the Whitewater River Region of Riverside County. Given our unique perspective as the manager of three Phase 1 MS4 permits, the District and its staff thus, have considerable experience and expertise in developing and administering MS4 permits, and a keen understanding of the issues that the above mentioned court case creates.

The District strongly supports reform of the RWL language to make clear the State Board's often-expressed intention that MS4 Permittees' compliance with RWL be effectuated through an iterative process. However, under the Ninth Circuit's interpretation, any MS4 discharge that causes or contributes to an exceedance of a Water Quality Standard subjects the MS4 Permittee to civil penalty liability, injunctive relief and the payment of attorneys' fees in an action brought by a citizen plaintiff, even where the Permittee is fully implementing the programmatic requirements of their MS4 Permit.

The District supports the California Stormwater Quality Association's ("CASQA") efforts to obtain RWL language that ensures that the iterative process favored by the State Board is honored. The District also supports the comments of the California State Association of Counties, and believes the proposed RWL language attached to those comments is a step in the right direction.

This letter contains additional District comments about the RWL language and the iterative process. We believe that they are best expressed in terms of correcting misperceptions regarding the current RWL language, as interpreted by the Ninth Circuit.

Misperception Number One: Strict compliance with Water Quality Standards is required of MS4 Permittees by the Clean Water Act.

The Clean Water Act provides that MS4 discharges must control pollutants in discharges from the MS4 to the "Maximum Extent Practicable" (33 U.S.C. § 1342(p)(3)(B)(iii)). Unlike the case with other NPDES Permittees, the Clean Water Act does not require that municipalities strictly comply with Water Quality Standards, as determined by the Ninth Circuit in *Browner v. Defenders of Wildlife*. The State Board's own precedential Order WQ 2001-15 recognizes this fact and states that the RWL language was intended to be consistent with the *Browner* case. In that Order, which interpreted RWL language similar to that in *NRDC*, the Board stated:

> *[O]ur language, similar to the U.S. EPA's permit language discussed in the Browner case, does not require strict compliance with water quality standards. Our language requires that storm water management plans be designed to achieve compliance with water quality standards. Compliance is to be achieved over time, through an iterative approach requiring improved BMPs. As pointed out by the Browner court, there is nothing inconsistent between this approach and the determination that the Clean Water Act does not mandate strict compliance with water quality standards.* [*Order WQ 2001-15 at 7 (emphasis added)].*

Unfortunately, the Ninth Circuit completely disregarded this language, and the Order, in holding that strict compliance was required of MS4 Permittees.

USEPA itself has issued MS4 permits (in non-delegated states) that do not contain RWL language requiring strict compliance with Water Quality Standards. Therefore, it is clear that such compliance is not required by the Clean Water Act nor is such compliance established by USEPA policy. The most prominent example of a recent MS4 permit promulgated by USEPA is that for the District of Columbia ("DC Permit") (relevant portions of which are attached as Exhibit A), which was adopted in 2011.

Part 1.4 of the DC Permit contains the requirements relating to Water Quality Standards and provides, in relevant part: "Compliance with the performance standards and provisions contained in Parts 2 through 8 of the permit shall constitute adequate progress towards compliance with DCWQS [water quality standards] and WLAs [established under TMDLs] for this permit term." The DC Permit Fact Sheet explains the rationale for that language as follows [DC Permit Fact Sheet, Pages 5-6, emphasis added, attached as Exhibit B]:

> *Comments on the language in Part 1.4 varied widely. Some commenters did not believe it was reasonable to require discharges to meet water quality standards. Other commenters believed this to be an unambiguous requirement of the Clean Water Act.*

Today's Final Permit is premised upon **EPA's longstanding view that the MS4 NPDES permit program is both an iterative and an adaptive management process for pollutant reduction and for achieving applicable water quality standard and/or total maximum daily load (TMDL) compliance.** *See generally, "National Pollutant Discharge Elimination System Permit Application Regulations for Stormwater Discharges," 55 F.R. 47990 (Nov. 16, 1990).*

EPA is aware that many Permittees, especially those in highly urbanized areas such as the District, likely will be unable to attain all applicable water quality standards within one or more MS4 permit cycles. *Rather the attainment of applicable water quality standards* **as an incremental process** *is authorized under section 402(p)(3)(B)(iii) of the Clean Water Act, 33 U.S.C. § 1342(p)(3)(B)(iii), which requires an MS4 permit "to reduce the discharge of pollutants to the maximum extent practicable" (MEP) "and such other provisions" deemed appropriate to control pollutants in municipal stormwater discharges.* **To be clear, the goal of EPA's stormwater program is attainment of applicable water quality standards, but Congress expected that many municipal stormwater dischargers would need several permit cycles to achieve that goal.**

Specifically, the Agency expects that attainment of applicable water quality standards in waters to which the District's MS4 discharges, requires staged implementation and increasingly more stringent requirements over several permitting cycles. During each cycle, EPA will continue to review deliverables from the District to ensure that its activities constitute sufficient progress toward standards attainment. With each permit reissuance EPA will continue to increase stringency until such time as standards are met in all receiving waters. **Therefore today's Final Permit is clear that attainment of applicable water quality standards and consistency with the assumptions and requirements of any applicable WLA are requirements of the Permit, but, given the iterative nature of this requirement under CWA Section 402(p)(3)(B)(iii), the Final Permit is also clear that "compliance with all performance standards and provisions contained in the Final Permit shall constitute adequate progress toward compliance with DCWQS and WLAs for this permit term" (Section 1.4).**

USEPA is now proposing clarifying changes to this language and to other sections of the DC Permit as the result of a settlement with various parties. However, those changes do not require strict compliance with Water Quality Standards, but rather compliance through the programs developed under the Permit.

The State Board is thus, free to adopt new RWL language that effectuates its previously expressed intent that MS4 permits not require strict compliance with Water Quality Standards with regard to contributions from discharges from MS4s.

Misperception Number Two: The MS4 Permittees are Seeking a "Safe Harbor" that would Insulate them from Responsibility Under the Clean Water Act.

While State Board staff's "Issue Paper" uses the term "safe harbor" in describing the iterative process, the District believes that this is fundamentally misleading. Even a cursory review of the terms of a typical MS4 permit in California reveals that it is full of compliance points. In the three MS4 Permits in which the District serves as Principal Permittee, literally every sentence is a separate point of compliance.

This fact is supported by the language of the Permits themselves. For example, in Order R8-2010-0033 Part XX.G provides: **"The Permittees must comply with all terms, requirements, and conditions of this Order. Any violation of this Order constitutes a violation of the CWA, its regulations and the California Water Code, and is grounds for enforcement action . . . ."** (emphasis added). Similar provisions are contained in the other two Riverside County MS4 Permits. Even without the strict Water Quality Standard language imposed under the Ninth Circuit's opinion, there is no "safe harbor" from liability under the Clean Water Act or, where applicable, the California Water Code, for any Permittee that fails to fully implement each the detailed and prescriptive requirements of its MS4 Permit.

There is a fundamental difference however, between fully complying with activities within the control and responsibility of the Permittees, such as monitoring, implementing BMPs and performing other programmatic requirements of the MS4 Permit; and being forced to guarantee that MS4 discharges will not cause or contribute to exceedances of Water Quality Standards in Receiving Waters, a guarantee that the Permittees' have no ability to make.

What the District and other MS4 Permittees seek is relief from what is essentially "guaranteed non-compliance" where a Permittee can be found in violation of their MS4 Permit even if the exceedance occurs at no fault of or failure by the Permittee, or put another way, even in circumstances where there is nothing a Permittee could have done to prevent that exceedance from occurring. In such a case, the Permittee can be held liable for potentially millions of dollars in legal costs, penalties and other expenses. We note that the City of Malibu, a city of only 13,000 residents, spent more than $2 million in defending against a citizen suit filed with respect to its MS4 Permit and more than $6 million to settle the case, including payment of $750,000 in attorney fees to plaintiffs. Given the tremendous financial challenges faced by every California municipality, including the District, the County of Riverside and the Permittee cities within the County, such a diversion of resources that otherwise would be directed at clean water programs or other vital municipal programs is a poor policy choice. And, as noted, it is not a policy choice that is required by the Clean Water Act, nor is it required by USEPA in their own Permits.

The District recognizes that regulatory enforcement actions and citizen suits are authorized by the Clean Water Act and that such suits may be an appropriate remedy where, for example, a Permittee has failed to comply with the programmatic requirements of its MS4 Permit. Where, however, the Permittees are complying with those requirements in good faith but, due to circumstances beyond

their control, their MS4 discharge causes or contributes to a Water Quality Standard exceedance in Receiving Waters, a citizen suit based on those exceedances potentially throws away the work done by the Permittees and the Water Boards under the MS4 Permit, as discussed below.

Misperception Number Three: MS4 can achieve compliance with strict Water Quality Standards.

MS4 Permittees cannot guarantee that discharges from their MS4s will in fact, not cause or contribute to an exceedance of Water Quality Standards in a Receiving Water. The monitoring conducted under our MS4 Permits reflects exceedances of various Water Quality Standards in Receiving Waters, and we understand that such results are typical for MS4 discharges around the state (please see Pages 2-3 of the CASQA comment letter dated November 2, 2012). The extreme variability of stormwater quality and quantity itself (which, in Southern California, arrives infrequently and from widely varying storm sizes) combined with a multitude of potential pollutant sources beyond a Permittee's ability to truly "control", make it impossible for a municipality to ensure that no discharges from its MS4 will ever cause or contribute to exceedances of Water Quality Standards in Receiving Waters. This was recognized by the Issue Paper released by State Board staff in preparation for the November 20th workshop, which found that as "the storm water management programs of municipalities have matured, **an increasing body of monitoring data indicates that water quality standards are in fact not being met by many MS4s**" (Issue Paper, Page 2 (emphasis supplied)).

Thus, even if municipal Permittees are to be held strictly liable for the ensuring that no discharges from their MS4s cause or contribute to an exceedance of Water Quality Standards, as the Ninth Circuit has interpreted the current RWL language, those Permittees have no ability to attain those standards. The reasons are several-fold and include the following:

1) Unlike an industrial NPDES Permittee, a municipal Permittee is not typically the source of the pollutants in the MS4 discharge (whether wet or dry). The municipality can regulate sources to some degree (through, for example, the operation of structural and non-structural BMPs and implementation of an Illegal Connection/Illicit Discharge program), but the municipality cannot guarantee that pollutants will not enter the MS4 and then be discharged into the Receiving Waters.

2) Municipalities cannot control natural sources of pollutants that are discharged through the MS4. Monitoring has indicated that many pollutants are likely from natural and not anthropogenic sources.

3) While Permittees conduct extensive public education programs as part of their MS4 programs, municipalities cannot "control" human behavior, or "prevent" an individual from taking an action that might cause pollution to enter the MS4. As an example, a resident may, despite all ordinances, regulations, potential penalties or enforcement, public outreach, available BMPs, etc., choose not to pick up after their pets, and

stormwater may, through no fault of the Permittee, pick up animal waste and deposit into the MS4.

4) MS4 Permittees cannot "prevent" flows from entering their MS4. To protect the health and property of their residents, MS4 operators must allow the legitimate flows of water into their drains. This is especially true for the District, which is charged directly by the Legislature [in Water Code App. §48-9] with the task of taking necessary steps to protect the people, properties and watersheds of Riverside County from the negative impacts of flooding. The District cannot, in effect, cause flooding by preventing flows from entering their storm drain, simply because such flows may contain pollutants that cause a violation of the Receiving Waters Limitation provisions of their MS4 Permits. In fact, California law requires downstream property owners (such as MS4 operators) to accept flows from upstream property owners.

5) Further, the authorities granted to flood control districts, such as this District, by the Legislature are narrow and do not include the authority to condition or regulate the quality or nature of stormwater runoff discharged from up gradient properties. This responsibility is appropriately assigned by the Legislature to the Regional Boards.

Similarly, MS4 Permittees cannot guarantee compliance with Water Quality Standards in dry weather. "Alternative 4" in the staff's Issue Paper suggests an alternative RWL approach that would not extend the iterative approach to dry weather discharges. The District submits that this alternative does not reflect the reality of urban runoff. Monitoring conducted under the Riverside County MS4 Permits reflects exceedances of Water Quality Standards during dry weather as well as wet weather. There is no justification for imposition of strict liability for exceedances during such conditions, for the following reasons:

1) During dry weather, other NPDES-permitted discharges continue to flow into the Receiving Waters. For example, much of the flow in the Santa Ana River during dry weather conditions is from non-MS4 sources, such as publicly owned treatment works. Additionally, numerous other separate NPDES-permitted discharges will occur, potentially at concentrations of pollutants that exceed Water Quality Standards. Evidence generated during the *NRDC* case involving the County of Los Angeles, for example, indicated that NPDES permits covering hundreds of these dischargers, including POTWs allowed the discharge of pollutants at concentrations *greater* than Water Quality Standards. Because of these discharges, which are legal and authorized by the Regional Boards, the MS4 Permittees have essentially no more control over compliance with Water Quality Standards in dry weather than they would have during wet weather conditions.

2) Accidental or even intentional illicit discharges by third parties into the MS4 obviously can occur during dry weather as well as wet weather. Such discharges would potentially have an even greater impact on sampling, since they are not diluted by large volumes of stormwater. For example, a vehicular accident recently caused hundreds of gallons of

asphalt tar to enter Sandia Creek, a Receiving Water in Riverside County. While this spill was not discharged through an MS4, if the vehicular accident had occurred in another portion of the watershed, the spill could feasibly have entered into and been discharged from an MS4. Similarly in many places throughout the State, sanitary sewer systems are owned and operated by special districts that have no relation to the MS4 Permittees that own or operate the MS4 systems. Nevertheless, an overflow of such sanitary sewer systems may cause an unavoidable discharge into, and from a Permittee-owned MS4. Such accidental or illicit discharges cannot be "prevented" or "controlled" by the Permittees except to the extent that they can be cleaned up or blocked if promptly reported. However, if the discharge has reached Receiving Waters and caused a measured exceedance of Water Quality Standards, under the Ninth Circuit's interpretation, liability for civil penalties, injunctive relief and attorneys fees will attach to the MS4 Permittee.

3) Enforcing strict Water Quality Standard limits in dry or wet weather is counter-productive to the watershed planning-based MS4 Permits currently being promulgated by many regional water boards. Enforcing such limits will divert Permittee attention and resources from watershed-based, monitoring-heavy compliance programs, as will be discussed in greater detail below.

In essence, under the Ninth Circuit's interpretation of the current RWL language, the District, and potentially every other MS4 Permittee in the state, is in violation of its Permit any time that an exceedance of a Water Quality Standard is recorded and attributed to a discharge from its MS4. This means that the Regional Water Boards have issued, and continue to adopt permits that include RWL language **which cannot be complied with**. The Clean Water Act, however, does not require Permittees to achieve the impossible. *See, e.g., Hughey v. JMS Development Corp.* (11th Cir. 1996) 78 F.3d 1523, 1530 ("In interpreting the liability provisions of the CWA, we realize that Congress is presumed not to have intended absurd (impossible) results.").

Misperception Number Four: The Current RWL Language is more Protective of Receiving Water Quality.

This statement is not only untrue but maintaining the current RWL language actually **impedes** efforts to protect Receiving Water Quality.

We understand that some stakeholders believe that there should be Numeric Effluent Limitations (NELs) contained in the MS4 Permits for purposes of accountability. In response, we note that many MS4 permits now contain numeric Stormwater and Non-stormwater Action Levels ("SALs" and "NALs") or other numeric targets or goals, the exceedance of which trigger specific compliance responses by the Permittees. It is these action levels (which were advocated by the Blue Ribbon Panel established by the State Board to investigate the appropriateness of NELs in MS4 permits) which provide such "numeric" accountability. This is in addition to the numerous other compliance documentation and reporting provisions required of MS4 Permittees that also provide measures of accountability.

More importantly, the current RWL language as interpreted by the Ninth Circuit actually impedes efforts by municipalities to protect water quality. First, by requiring immediate compliance, the language undermines efforts to bring Water Quality Standard-impaired waterbodies into compliance through the Total Maximum Daily Load ("TMDL") program. TMDLs are designed with the recognition that, due to the complexity of the issues causing the waterbody to be impaired in the first place, meeting these requirements cannot be achieved immediately. Therefore, TMDL compliance plans include timelines to achieve such compliance over periods of years and sometimes decades.

Second, most MS4 permits have begun incorporating sophisticated watershed management plans, which prioritize pollutants by waterbody and attempt, through aggressive monitoring and source identification efforts, to identify and address the sources of those prioritized pollutants. Municipalities subject to strict RWL language will have no ability to prioritize pollutants, since they must address any pollutant that exceeds a Water Quality Standard, irrespective of the relative impact that that discharge may have had upon the environment or beneficial uses. Moreover, these watershed management plan approaches employ cooperative monitoring and other watershed-based approaches. Permittees faced with potential liability for any exceedance of Water Quality Standards in Receiving Waters that may be caused or contributed to by discharges of their MS4s, will not likely volunteer to cooperate on any watershed-based approach, if cooperation could subject them to additional unnecessary liability.

Third, in a citizen suit brought under the Clean Water Act, a federal judge is free to impose any appropriate injunctive relief to enforce a permit (33 U.S.C. § 1365(a)). Thus, for example, a court could ignore the provisions of a MS4 permit in ordering municipal defendants to address Water Quality Standard exceedances in Receiving Water. This means that the thousands of people-hours invested in the Permit's development, implementation and oversight by municipalities, the Regional Water Boards and other stakeholders would be wasted. In essence, under the Ninth Circuit's reading of the RWL language, all other language in an MS4 permit appears to be superfluous, since the RWL language would control all compliance efforts. This result, of course, is not required by plain language of the Clean Water Act.

Fourth, if a municipality is in unavoidable and automatic non-compliance with the requirements of its MS4 Permit, it will be unable to justify budgeting for water quality management programs and BMPs otherwise required by the Permit as the municipality will simply receive no benefit from making compliance investments. To gain public support for stormwater programs, a municipality must demonstrate to its residents that such investments will constitute compliance with the Permit.

Discussion of Alternatives

The State Board staff's Issue Paper sets forth five alternatives for consideration. Alternative 1, no change in the current RWL language, is completely unacceptable to the District (and, we believe, to other municipalities across the state) because it fails to address the "guaranteed non-compliance" problem of the current language.

Alternative 2, which proposes to maintain the language that puts the MS4 Permittees in a situation of unavoidable and potentially "guaranteed" non-compliance, but would add greater specification as to how the iterative process might be carried out, is also unacceptable as the MS4 Permittees will still have no viable means to ensure their compliance with the RWL language. While the District does not object in principle to RWL language that spells out clearly, and in achievable terms, what is required of MS4 Permittees when exceedances are recorded, such a change alone does not address the fundamental issues identified in this letter.

Alternative 3, which proposes to provide an iterative process for compliance with the RWL only for pollutants being addressed by dischargers in compliance with an approved TMDL, is better than the first two alternatives, but is still entirely insufficient. By failing to provide a viable means for compliance with the RWL language for non-TMDL pollutants, this alternative language would force Permittees into unavoidable non-compliance, and require them to redirect their efforts and resources away from the TMDL activities, to those other pollutants, due to the strict liability attached to those exceedances. This would be a poor policy choice, as pollutants that are not subject to a TMDL may have significantly less, or even no impact on beneficial uses in the Receiving Waters, as noted in the CASQA comment letter.

Alternative 4, which excludes dry weather discharges from the iterative process to comply with the RWL, is unacceptable for the reasons previously set forth regarding an MS4 Permittees inability to truly "prevent" or "control" accidental or illegal dry weather discharges.

Alternative 5, which provides viable means for compliance with the RWL, for all types of MS4 discharges, is the only viable solution among the alternatives presented by State Board staff. In an era of limited budgets, the only and best way to make progress toward improving the quality our Receiving Waters, is to provide MS4 Permittees the ability to prioritize their efforts, as required in the Watershed Management Plan provisions contained in the most recent MS4 Permits, including the Los Angeles County Permit and the proposed Regional Permit for the San Diego Regional Water Board. As previously discussed, such prioritization cannot occur in the context of strict liability for the exceedance of Water Quality Standards in the Receiving Waters. For all of the reasons set forth in this letter, no other alternative makes policy sense or is congruent with the Maximum Extent Practicable standard in the Clean Water Act.

The District would add that Alternative 5 should additionally incorporate the concept of achieving RWL compliance through watershed management plans, and requests the Board to direct staff to work with stakeholders to ensure that any revised RWL language does not force intermittent or minor exceedances of Water Quality Standards to become de-facto higher priorities than those set by the watershed stakeholders.

In summary, the District supports CASQA, the California State Association of Counties and other municipal stakeholders in advocating for a fully iterative and viable approach to compliance with RWL language in both wet and dry weather conditions. Only when such an approach is in place and endorsed by the State Board will Permittees, including the District, feel confident that they can focus

fully on efforts to address pollutants in discharges into and from their MS4s, and not on preparing for costly and pointless litigation.

The District therefore, respectfully requests the State Board direct its staff to commence development of new language providing for an enforceable, iterative and viable process for MS4 Permittees to comply with the RWL language included in MS4 permits.

We wish to thank you and State Board staff for your consideration of these comments and any further comments, written or oral, that the District may make on these important issues.

Very truly yours,

Steve Thomas

for WARREN D. WILLIAMS
General Manager-Chief Engineer

CP:cw
P8/150189

EXHIBIT D

FILED
JAN - 3 2013
CLERK, U.S. DISTRICT COURT
ALEXANDRIA, VIRGINIA

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division

VIRGINIA DEPARTMENT OF TRANSPORTATION, ET AL, Plaintiffs, -v- UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, ET AL, Defendants.	Civil Action No. 1:12-CV-775

Memorandum Opinion

Before the Court is the Plaintiffs' motion for judgment on the pleadings under Federal Rule of Civil Procedure 12(c). The Defendants opposed the motion, and the Plaintiffs replied. The Court heard oral arguments on December 14, 2012 and now issues this memorandum opinion and accompanying order granting the Plaintiffs' motion.

Background

The Clean Water Act, 33 U.S.C. § 1251 et seq., establishes the basic structure for regulating discharge of pollutants into the waters of the United States, and provides certain mechanisms to improve and maintain the quality of surface waters.

One such mechanism is the requirement that states identify "designated uses" for each body of water within their borders, as well as "water quality criteria" sufficient to support those uses. 33 U.S.C. § 1313(c)(2)(A). The Environmental Protection Agency ("EPA") evaluates the uses and criteria developed by the states, and either approves them or else proposes and

promulgates its own set of standards. § 1313(c)(3).

Once the standards are in place, each state is required to maintain a list—also subject to approval or modification by EPA—of its waterbodies that are "impaired" because they do not meet their respective water quality criteria. 33 U.S.C. § 1313(d)(1)(A). For each waterbody on the impaired list, the state is required to establish a set of total maximum daily loads ("TMDLs") sufficient to bring the body back into compliance with its water quality criteria. § 1313(d)(1)(C). Each TMDL establishes the maximum amount of a pollutant that may be added to the waterbody daily from all sources (runoff, point sources, etc.). EPA is required to publish a list of pollutants suitable for maximum daily load measurement, § 1314(a)(2)(D), and it has determined that *all* pollutants are suitable for TMDLs, *see* Total Maximum Daily Loads Under Clean Water Act, 43 Fed. Reg. 60,662. Therefore, any pollutant that falls within the relatively broad definition of "pollutant" set forth in § 1362(6) may be regulated via TMDL. EPA can approve or modify as it sees fit TMDLs proposed by the states. § 1313(d)(2).

Here the state in question is Virginia, and the waterbody is a 25-mile long tributary of the Potomac River, located in Fairfax County, called Accotink Creek. The creek has been the subject of litigation in the past that is not relevant to this matter except the result: EPA was required to set TMDLs for Accotink Creek once Virginia failed to do so by a certain date. Specifically, the creek had been identified as having "benthic impairments," which is to say the community of organisms that live on or near the bottom of the creek were not as numerous or healthy as they should be. EPA was to set appropriate TMDLs to improve the health of the benthic community in Accotink Creek.

On April 18, 2011, EPA established a TMDL for Accotink Creek which limited the flow rate of stormwater into Accotink Creek to 681.8 ft^3/acre-day. The TMDL was designed to

regulate the amount of sediment in the Accotink, because EPA believed sediment was a primary cause of the benthic impairment. Both parties agree that sediment is a pollutant, and that stormwater is not. EPA refers to stormwater flow rate as a "surrogate" for sediment.

The Plaintiffs are now challenging the TMDL on multiple grounds, but presently before the Court is a single issue: Does the Clean Water Act authorize the EPA to regulate the level of a pollutant in Accotink Creek by establishing a TMDL for the flow of a nonpollutant into the creek?

Analysis

I. Standard of Review

Count I of the complaint, at issue here, is brought under the Administrative Procedures Act. *See* Comp. ¶ 169. The APA "confines judicial review of executive branch decisions to the administrative record of proceedings before the pertinent agency." *Shipbuilders Council of Am. V. U.S. Dept. of Homeland Sec.*, 770 F. Supp. 2d 793, 802 (E.D. Va. 2011). As such, the district court "sits as an appellate tribunal," and APA claims can be resolved equally well in the context of Rule 12 or Rule 56. *Univ. Med. Ctr. Of S. Nev. V. Shalala*, 173 F.3d 438, 441 n. 3 (D.C. Cir. 1999).

Because Count I presents a question of statutory interpretation, the Court reviews EPA's decision using the two-step analysis set forth in *Chevron, U.S.A., Inc. v. NRDC, Inc.*, 467 U.S. 837 (1984). For a given question of statutory interpretation, the first step under *Chevron* is to determine whether Congress addressed the "precise question at issue." 467 U.S. at 842. "If the intent of Congress is clear, that is the end of the matter . . . ." *Id.* If the Court cannot find that Congress has squarely addressed the question, the Court must move to Chevron's second step. In

the second step of statutory construction under *Chevron*, the Court must determine whether the agency's interpretation of the statute is "permissible." *Id.* at 843. The agency's construction is permissible if it is reasonable, but it need not be what the Court considers the *best* or *most reasonable* construction. *See id.* at 845. The Court is not to simply impose its own construction on the statute, but instead it gives deference to any reasonable statutory construction by the agency. *Id.* at 843.

II. Chevron Step One

Whether statutory ambiguity exists so that the issue cannot be settled at *Chevron's* first step is for the Court to decide, and the Court "owe[s] the agency no deference on the existence of ambiguity." *Am. Bar Ass'n v. FTC*, 430 F.3d 457, 468 (D.C. Cir. 2005). The Court begins the inquiry by "employing traditional tools of statutory construction." *Chevron*, 467 U.S. at 843 n.9. As always, the analysis begins with the text of the statute. *Nat'l Elec. Mfrs. Ass'n v. U.S. Dept't of Energy*, 654 F.3d 496, 504 (4th Cir. 2011).

The text of the statute that requires states to establish their own TMDLs, 33 U.S.C. § 1313(d)(1)(C), is:

> Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, **the total maximum daily load, for those pollutants which the Administrator identifies** under section 1314(a)(2) of this title as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. (emphasis added)

The next subsection, § 1313(d)(2), grants EPA the authority to set TMDLs when the state

has not done so adequately. "Pollutant" is a statutorily defined term. 33 U.S.C. § 1362(6).

The Court sees no ambiguity in the wording of this statute. EPA is charged with establishing TMDLs for the appropriate pollutants; that does not give them authority to regulate nonpollutants. The parties agree that sediment is a pollutant under 33 U.S.C. § 1362(6), and stormwater is not. Then how does EPA claim jurisdiction over setting TMDLs for stormwater?

EPA frames the stormwater TMDL as a surrogate. EPA's research apparently indicates that the "[sediment] load in Accotink Creek is a function of the amount of stormwater runoff generated within the watershed." Def. Opp. at 8. And EPA believes that framing the TMDL in terms of stormwater flow rate is superior to simply expressing it in terms of maximum sediment load.

The DC Circuit has considered and rejected a similar attempt by EPA to take liberties with the way Congress intended it to express its TMDLs. In *Friends of the Earth, Inc. v. Env. Protection Agency*, EPA had promulgated TMDLs for the Anacostia River that expressed the maximum load of certain pollutants in terms of annual and seasonal amounts. 446 F.3d 140, 143 (D.C. Cir. 2006). The court found that expressing a TMDL in terms of annual or seasonal maximums was not allowed, because the statute granted authority only for daily loads. *Id.* at 148. The court reached its conclusion even though EPA apparently made a strong argument that expressing TMDLs in terms of annual or seasonal loads was an effective and reasonable approach. *See id.* Presumably a daily load could have been derived by simply dividing the annual load by 365, yet the court still required expression in the terms dictated by Congress.

Here too, EPA hopes to express a TMDL in terms other than those contemplated by the statute, arguing that such an expression is the most effective method. But, as *Friends of the Earth* illustrates, EPA may not regulate something over which it has no statutorily granted power—

annual loads or nonpollutants—as a proxy for something over which it *is* granted power—daily loads or pollutants.

EPA's argument that its surrogate approach should be allowed because the statute does not specifically forbid it fails. EPA is not explicitly forbidden from establishing total maximum *annual* loads any more than they are explicitly barred from establishing TMDLs for nonpollutants. The question is whether the statute grants the agency the authority it is claiming, not whether the statute explicitly withholds that authority. And in this case, as in *Friends of the Earth*, the statute simply does not grant EPA the authority it claims.

The dicta in *Weyerhaeuser Co. v. Costle* is not as helpful to EPA's case as it would like. 590 F.2d 1011, 1022 n.6 (D.C. Cir. 1978). It is true that the court said in a footnote "[i]t is well recognized that EPA can use pollution parameters that are not harmful in themselves, but act as indicators of harm." *Id.* But in that case, the non-harmful pollution parameters the EPA sought to regulate were components of the effluent commonly discharged from paper mills, *id.* at 1022, making them effluents themselves. And power to regulate effluents is expressly granted to the EPA in the relevant statutory section. *See* 33 U.S.C. § 1314(b).

EPA would like to create the impression that Congress has given it loose rein to determine exactly what it could and could not regulate. On page 16 of its opposition to this motion, EPA points out that "Congress authorized EPA to determine which pollutants were suitable for TMDL calculation and measurement." (Internal quotes removed). While this may be true, EPA glosses over the fact that 33 U.S.C. § 1314(a)(2)(D) only gives EPA the power to regulate pollutants as that term is defined—by Congress—elsewhere in the statute. And, as discussed above, sediment is a pollutant for these purposes, but stormwater is not.

In a similar vein, EPA regulations which imply that the agency has discretion to set the

TMDL as it sees fit do not bear on the question now before the Court. EPA has promulgated a regulation allowing TMDLs to be "expressed in terms of either mass per time, toxicity, or other appropriate measure," 40 C.F.R. § 130.2(i), and another that allows TMDLs to be expressed as a "property of pollution," 50 Fed. Reg. 1774, 1776 (Jan. 11, 1985). But, EPA citing these regulations to demonstrate that the surrogate TMDL approach is permissible is mere bootstrapping. To the extent the regulations allow EPA to set TMDLs for nonpollutants, they exceed the statutory authority of EPA.

The plain language of the statute trumps all, but legislative history also supports Plaintiffs' argument. Congress's intent to limit EPA's discretion in this context is evidenced by the committee record cited by Plaintiffs, which has also been used by the Ninth Circuit, in which Senator Randolph, Chairman of the Senate committee that amended the act in 1972, explained, "We have written into law precise standards and definite guidelines on how the environment should be protected. We have done more than just provide broad directives [for] administrators to follow." Pl. Mot. 7, *citing Nw. Envtl. Def. Ctr. v. Brown*, 640 F.3d 1063, 1072 (9th Cir. 2011). Congress created a statutory scheme that included a precise definition of the word "pollutant," and then gave EPA authority to set TMDLs for those pollutants. Senator Randolph's comments strongly imply that Congress did not intend anything more or less than what is written in the statute.

The Court considers the language of 33 U.S.C. § 1313(d)(1)(C) to be unambiguous. Congress has spoken directly on the question at issue, and its answer is that EPA's authority does not extend to establishing TMDLs for nonpollutants as surrogates for pollutants. The legislative history of the CWA is consistent with this reading. Therefore, this Court finds EPA's interpretation of § 1313 and the related provisions to be impermissibly broad based on analysis

under the first step of *Chevron* analysis.

III. Chevron Step Two

Because the Court considers Congress's intent to be clear and unambiguously expressed by the language of the statute, it need not move to the second step of *Chevron* analysis. But the Court notes that there is substantial reason to believe EPA's motives go beyond "permissible gap-filling."

Page 9 of EPA's opposition says, "stormwater flow rates as a surrogate would more effectively address the process by which sediment impairs aquatic life in Accontink Creek." If the sediment levels in Accotink Creek have become dangerously high, what better way to address the problem than by limiting the amount of sediment permitted in the creek? If sediment level is truly "a function of" the amount of stormwater runoff, as EPA claims, then the TMDL could just as easily be expressed in terms of sediment load.

In fact, the Board of Supervisors of Fairfax County argued at the December 14th hearing (without objection from EPA) that EPA has approved 3,700 TMDLs for sediment nationwide, and in Virginia has addressed 111 benthic impairments with TMDLs. None of them regulated the flow rate of stormwater. By comparison, EPA has tried out its novel approach of regulating sediment via flow in only four instances nationwide, and all four attempts were challenged in court. One has settled, the other three are still pending.

The Court suspects that the decision to regulate stormwater flow as a surrogate for sediment load would not constitute a permissible construction of § 1313(d)(1)(C), even given the deference due at *Chevron's* second step. This is especially likely because EPA is attempting to increase the extent of its own authority via flow TMDLs, which courts must examine carefully.

See Brown & Williamson Tobacco Corp. v. Food & Drug Admin., 153 F.3d 155, 161-62 (4th Cir. 1998). EPA's attempt to set TMDLs for nonpollutants probably goes beyond "permissible gap-filling" and is instead an impermissible construction of the statute.

Conclusion

The language of § 1313(d)(1)(C) is clear. EPA is authorized to set TMDLs to regulate pollutants, and pollutants are carefully defined. Stormwater runoff is not a pollutant, so EPA is not authorized to regulate it via TMDL. Claiming that the stormwater maximum load is a surrogate for sediment, which is a pollutant and therefore regulable, does not bring stormwater within the ambit of EPA's TMDL authority. Whatever reason EPA has for thinking that a stormwater flow rate TMDL is a better way of limiting sediment load than a sediment load TMDL, EPA cannot be allowed to exceed its clearly limited statutory authority. For these reasons, the Plaintiffs' motion for Rule 12(c) judgment on the pleadings on Count I of their complaint is granted.

January 3, 2013
Alexandria, Virginia

/s/ LOG
Liam O'Grady
United States District Judge

FILED
JAN - 3 2013
CLERK, U.S. DISTRICT COURT
ALEXANDRIA, VIRGINIA

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division

VIRGINIA DEPARTMENT OF TRANSPORTATION, ET AL, Plaintiffs, -v- UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, ET AL, Defendants.	Civil Action No. 1:12-CV-775

Order

In accordance with the memorandum opinion that accompanies this order, it is now **ORDERED**:

1. Plaintiffs' motion (Dkt. No. 29) for judgment on the pleadings as to Count I of the complaint is **GRANTED**.
2. The clerk shall enter judgment in favor of the Plaintiffs.
3. The Accotink Creek TMDL is remanded to EPA for reconsideration consistent with this order.

January 3, 2013
Alexandria, Virginia

/s/
Liam O'Grady
United States District Judge

SANTA MARGARITA WATERSHED NPDES MUNICIPAL STORMWATER PERMIT

(NPDES No. CAS0108766)

JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP) ANNUAL REPORT

FOR

CITY/COUNTY/DISTRICT
FISCAL YEAR 2013 – 2014

October 31, 2014

Certification

I. Executive Summary

II. Introduction

1. Development Planning
2. Construction
3. Municipal
4. Industrial/Commercial
5. Residential
6. Retrofitting Existing Development
7. Illicit Discharge Detection and Elimination
8. Workplans
9. Non-Stormwater Discharges
10. Receiving Water Limitations
11. Fiscal Analysis
12. Assessment and Response Reporting
13. Recommendations

Attachment A - GPA 960 Update
Attachment B – Post-Construction BMP Database
Attachment C – IC/ID Database
Attachment D – Construction Database
Attachment E – Municipal Databases and Info
Attachment F – Industrial Commercial Database
Attachment G – NAL/SAL Response and Outreach
Attachment H – Ord. 859 and DWR Letter
Attachment I – Training Records

ORDER NO. R9-2010-0016

Submitted to

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____

George Johnson
Chief Assistant County Executive Officer

[Note: per Attachment B: Standard Provisions, Reporting Requirements and Notifications, provision 5.(b)(2) of the 2010 SMR MS4 Permit: [Applications [40CFR 122.22(a)(3)] All permit applications shall be signed by either a principal executive officer or ranking elected official.]

I. EXECUTIVE SUMMARY

Executive Summary FY 2013-2014

The County of Riverside (County), the Riverside County Flood Control and Water Conservation District (District), Coachella Valley Water District (CVWD) and the twenty-nine cities of Riverside County including Banning, Beaumont, Blythe, Calimesa, Canyon Lake, Cathedral City, Coachella, Corona, Desert Hot Springs, Eastvale, Hemet, Indian Wells, Indio, Jurupa Valley (July 2011), La Quinta, Lake Elsinore, Menifee, Moreno Valley, Murrieta, Norco, Palm Desert, Palm Springs, Perris ,Rancho Mirage, Riverside, San Jacinto, Temecula and Wildomar (Cities) are regulated pursuant to the Federal Clean Water Act and the California Water Code through the following National Pollution Discharge Elimination System (NPDES) and Municipal Separate Storm Sewer System (MS4) permits depending on location:

- Whitewater River Basin, NPDES Permit No. CAS617002 and California Regional Water Quality Control Board, Colorado River Region, Board Order R7-2013-0011;

- Santa Ana River Watershed, NPDES Permit No. CAS601833 and California Regional Water Quality Control Board, Santa Ana River Region, Board Order R8-2010-0033; and

- Santa Margarita River Watershed, NPDES Permit No. CAS0108766 and California Regional Water Quality Control Board, San Diego Region, Board Order R-9-2010-016.

The District serves as the Principle Permittee within the three watersheds described above, with the unincorporated County areas, Cities (depending on geography) and CVWD (Whitewater River Basin only) designated as the Co-Permittees. Collectively the Permittees are required as part of the NPDES and MS4 permit process to adopt, develop and implement adaptable stormwater management programs to protect surface water quality to the maximum extent practicable (MEP) and to report annually on their progress with respect to specific compliance activities.

Executive Office

The County Executive Officer and his staff provide for management and administrative oversight for County activities including long range planning, budget, internal and inter-governmental affairs. The Executive Office coordinates all National Pollution Discharge Elimination System (NPDES) and Municipal Separate Storm Sewer System (MS4) activities with County departments to ensure consistency and regulatory compliance with applicable laws and regulations.

Capital Improvement Projects

To ensure that all municipal construction projects have adequate funding and that all environmental requirements including CEQA, NPDES/stormwater and air quality criteria is considered, the County Executive Office formed the Capital Improvement Project Oversight and Review Committee. The makeup of the committee includes representatives from the Executive Office with finance, NPDES and construction expertise, Director of Economic

Development Agency and management staff, County Information Technology staff. All proposed projects must have adequate funding, be reviewed for various project requirements and approved prior to commencement of work.

Economic Development Agency
The Riverside County Economic Development Agency (EDA) includes various divisions made up of Community Development (Aviation, County Service Areas, and Housing) Economic Development, Work Force Development, Life Style & Leisure (County Fair and National Date Festival) and Facilities Management including Capital Improvement Projects (CIP). The inclusion of Facilities Management Department within the Economic Development Agency was due to the fact that CIPs are managed from the conceptual idea, environmental study, project design, construction, and then maintained by Facilities Management. Economic and Redevelopment projects go through the same process as CIP. Within this region, EDA expects to construct one new municipal facility in the coming years.

Leadership in Energy and Environmental Design (LEED™) Certification
The LEED™ "green building rating is a nationally accepted benchmark for the design, construction and operation of green buildings. LEED™ gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance in five key areas:
• Sustainable site development
• Water conservation
• Energy efficiency
• Materials selection, and
• Indoor air quality.

The County of Riverside EDA is on the cutting edge as it has incorporated LEED™ criteria into CIP per Board Policy H-29.

County Service Area 152 (CSA 152)
The Economic Development Agency assumed control of County Service Area's (CSAs) in July of 2002. CSAs are an alternative method of providing governmental services by the County within unincorporated areas to provide extended services such as sheriff protection, fire protection, local park maintenance services, water and sewer services, ambulance services, streetlight energy services, landscape services and street sweeping. CSA 152 is designated as the mechanism to provide limited street-sweeping maintenance for MS4 within the service area.

Transportation Land Management Agency
The Riverside County Transportation Land Management Agency (TLMA) is made up of the following departments: Transportation, Building & Safety, Code Enforcement, Planning, Environmental Programs, Administrative Services which includes Geographic Information System (GIS) and database management.

New Development construction has come to a complete standstill as builders and developers reacted to an unexpected severe drop-off in buying. The spiraling decline in permit activity has caused the county to take steps to reduce the number of inspectors and engineers that perform plan review and field work. This exodus of qualified staff through early retirement and layoffs has caused a loss of institutional knowledge and experience.

I. EXECUTIVE SUMMARY

Building and Safety Department – In 2007, the County established a business registration and licensing ordinance. Ordinance 857, Section 13 provides for water quality inspections and enforcement of the MS4 permit requirements. Over 10,000 establishments have been registered within the unincorporated portion of the County. For those businesses that meet the criteria for a water quality inspection an additional inspection fee is charged. This is a revenue neutral program and the fee only covers the cost of registration and the time required to perform the water quality inspections.

Code Enforcement Department- The Code Enforcement Department is the investigatory unit that does follow-up investigations on land use complaints. This includes illegal connections and illicit discharges (IC/ID) investigations. The Code Enforcement Department has taken a more proactive approach to community policing and outreach by implementing a community improvement planning process in the economically underserved communities throughout the County. The community improvement plan is used to address conditions that otherwise lead to blighted conditions. "The Posting" a monthly newsletter provides success stories throughout the area. Over the past few years during the recession, the Code Enforcement Department has been the hardest hit when it comes to layoffs. They have been reduced from a staff of 80 to approximately 40 to service one of the largest counties in the state.

Planning Department/Counter Services – The Planning Department/Counter Servives is the entry portal for private residential and commercial development review for the unincorporated county areas. A checklist is utilized to ensure that projects conform to the MS4 permit requirements. Projects that meet specified criteria are subject to the submission of a Water Quality Management Plan (WQMP) which is synonymous with the Standard Urban Stormwater Mitigation Plan (SUSMP). Previously, the WQMP was reviewed by the Riverside County Flood Control and Water Conservation District for substantial conformity, with recommended conditions of approval forwarded to TLMA. This process is now being modified to provide better internal consistency and better customer service. The WQMP is required to address post construction best management practices (BMPs), long term maintenance and monitoring.

Transportation Department- The County Transportation Department provides design specifications, construction, monitoring, and maintenance of publicly owned roads, right of way and some MS4 facilities. One of the tools utilized by the Transportation Department to ensure compliance of the MS4 facilities is through the formation of Landscape and Lighting Maintenance Districts (LLMDs). Each LLMD is responsible for ensuring that MS4 facilities and structural (fossil filter) BMPs in their right of way are routinely cleaned and maintained. County Service Area (CSA) 152 provides for street sweeping in the annexed areas. Another function of the Transportation Department is the mapping of MS4 facilities that are owned and operated by the department. GIS mapping is a fluid process and continues to grow as new areas in the county are developed. The Department's Environmental Compliance staff is responsible for inspections of existing and new businesses, new residential and industrial/commercial development for MS4 compliance measures. Referrals are made to the Regional Board for observed non-compliance issues associated with the Statewide General Construction Permit and/or MS4 Permit.

Department of Environmental Health

The DEH responds to hazardous materials emergency spills and large sewage discharges (greater than 1000 gallons) that have the potential of entering the MS4. The DEH also

performs complaint investigations for some IC/ID. The DEH also is part of the District Attorney's Environmental Crimes Task Force where some misdemeanor and felony environmental crimes investigations are handled. DEH acts as the Local Enforcement Agency (LEA) for solid waste issues. As part of the franchise trash haulers agreement some jurisdictions in the unincorporated portions of the county require mandatory trash pickup and street sweeping.

Special Districts

Flood Control and Water Conservation District (District)

The Control and Water Conservation District (District) operates and maintains major flood control facilities such as dams, flood basins, levees, open channels and major underground storm drains. In most cases, the District does not maintain storm drain inlets or pipes less than 36 inches in diameter. These smaller facilities are typically maintained by City or County Transportation Department crews. The engineering design of all projects constructed by the District is performed under the direct supervision of one of the District's two design teams. They are responsible for coordinating all activities involved in moving projects forward from the conceptual planning phase to the actual start of construction.
The construction section administers all District construction contracts and inspects the construction of all flood control projects to be accepted for operation and maintenance by the District. Further, the District is the Principal Permittee for all three MS4 permits within the County. The County's MS4 facility map is included with the District's annual report as Appendix E.

Regional Parks and Open Space District

The Riverside County Regional Park and Open-Space District was created by the electorate in November 1990 by a 64% vote and formed on January 29, 1991. The District is an independent agency governed by the Board of Supervisors, which sits as the District Board of Directors. The Park District presently employs approximately 100 staff who bring to their jobs a high degree of dedication to the public and wide variety of skills and abilities.
At the present time, the district manages and operates more than 44,000 acres, which includes forty parks, reserves, historic or archaeological sites and ninety miles of regional trails. The staff includes professionals in the fields of accounting and finance, biology, building and grounds maintenance, carpentry and construction, ecology, as well as environmental restoration.
Additional fields include historic preservation, interpretation, landscape architecture, museum and curatorial management, park planning, personnel administration, recreation, security, trails planning and construction, weddings and special events, wildlife habitat management, and a host of other disciplines.

Waste Resources Management Department

The mission of the Riverside County Waste Management Department is to provide for the protection of the general public health and welfare by efficient management of Riverside County's solid waste system through:

- Provision of facilities and programs which meet or exceed all applicable local, State,

Federal and land use regulation;

- Utilization of up-to-date technological improvements;
- Development and maintenance of a system that is balanced economically, socially and politically; and
- Economically feasible recovery of waste materials.

The Waste Management Department currently operates six landfills; an additional privately owned and operated landfill is located ifn Western Riverside County. In addition to the landfills, there are eight privately owned and operated transfer stations.

Recycling and Specialty Programs

Household Hazardous Waste (HHW) – Residential Program

The County of Riverside established the Household Hazardous Waste Program in October 1988 with the formation of a mobile community HHW collection program. This HHW program has evolved and is comprised of a combination of three permanent HHW collection centers, two Antifreeze, Battery, Oil and Paint (latex only) ABOP collection centers and temporary collection events at 16 locations throughout the County.

Conditionally Exempt Small Quantity Generator (CESQG) – Business Program

As an enhancement to the HHW program and to encourage small businesses to properly handle their hazardous waste, the County provides the CESQG program as an affordable and legal solution for the proper disposal of hazardous waste. The program is on an appointment only basis; a hazardous waste disposal contractor comes to the business to ensure proper labeling, and documentation is provided.

Universal and e-Waste

Universal Wastes are hazardous wastes that are generated by several sectors of society, rather than a single industry or type of business. Universal Wastes contain harmful chemicals, which, if put in the trash may harm people or the environment. E-waste includes:

- Common Batteries – AA, AAA, C and D cell and button batteries (e.g. hearing aid and watch batteries). Automotive type batteries are not Universal Waste. When they become waste, they are regulated under a different law.
- Fluorescent Tubes, Bulbs and Other Mercury Containing Lamps – Fluorescent light tubes and bulbs, Hi Intensity discharge (HID), metal halide, sodium and neon bulbs.
- Electronic Devices – Televisions, computer monitors, computers, printers, VCR’s, cell phones, telephones, radios, and microwave ovens.
- Mercury-Containing Devices – Thermostats, switches, thermometers, dental amalgam, pressure and vacuum gauges, novelty items, counterweights and dampers,

and medical devices known as dilators.

• Non-Empty Aerosol Cans that Contain Hazardous Materials - Labeled Toxic, Flammable, or Corrosive.

Riverside County's Backyard Composting Program

This program has been developed to aid the residents of Riverside County in composting their organic material, so that we can all recycle more and discard less.

Composting harnesses the natural process of decomposition by turning organic matter (such as fruit and vegetable wastes, grass clippings, leaves, and some animal manures) into a useful product for your landscape or garden. Composting can also improve hard, depleted soils, so that flowers, vegetables, and fruit trees can thrive in a nutrient-rich environment. Composting also improves the soil by boosting its fertility, its moisture-holding capabilities, and its texture.

Composted material is actually rather expensive to buy. But anyone with a little extra room in a garden, a little extra time, and a good source of compostable materials can produce good, high quality compost in as little as four weeks – absolutely free! By composting, you return the earth's nutrients back to the soil, where your plants absorb them, thereby becoming healthier. Healthy plants are far more resistant to diseases and pests. Instead of throwing away your organic waste, compost them! You will cut down your trash collection service, and you will be prolonging the life of Riverside County's rapidly depleting landfill space!

Sharps

Hypodermic needles, lances, and other sharp material associated with medical treatment can be collected in sharps containers and brought to the HHW collection centers for proper disposal. Sharps containers can be obtained from your HHW collection center or local pharmacy.

Construction Activities

The Waste Management Department's construction and industrial activities include maintenance of County operated landfills and stabilization of closed landfills. This includes the requirement to prevent and mitigate stormwater or other discharges including sediment, solid waste and liquids from entering an MS4 system.

Pharmaceuticals and Outdated Medicines

The County has instituted as part of their Household Hazardous Waste Collection Program the ability for residents to bring outdated prescription drugs and other medications to the collection center for proper disposal.

Concluding Remarks

The County is just beginning to rise out of what was dubbed the Great Recession by economists. Revenue is expected to continue to grow slowly during FY 14/15 as a result of increased assessments. However, these gains are not expected to materialize into any

tangible savings as there are critical programs being mandated from the state and federal level, which will require future additional general fund support.

As mentioned in the previous years' annual report, the AB109 jail realignment program has caused significant consternation with local governments, including the County of Riverside (County); due to the fact that high level offenders are being exported from more permanent high security overcrowded state prisons to relatively low security, temporary county facilities (jails). This has had a profound impact on County resources as the County is now required to begin construction of newer, higher security facilities throughout the County. Additionally, the County is required to dedicate new sheriff's and corrections personnel to staff these new facilities when operational at a substantial cost to the general fund.

Second, the County is continuing to navigate the unknown as it relates to the Affordable Care Act or "Obamacare". As a county that operates public health clinics and a regional hospital to serve the indigent population, this may have potential to increase costs for the County than it would have otherwise. As this Act was implemented during FY 13/14, the County will be monitoring costs associated with the Act's implementation.

II. INTRODUCTION

Due to the fact that Riverside County does not have a centralized public works agency, the County Executive Office provides management and administrative oversight for County departmental NPDES program activities. This includes coordination of the following Departments:

- Economic Development Agency/Facilities Management
- Transportation Land Management Agency (TLMA), which includes:
    - o Building and Safety
    - o Code Enforcement
    - o Planning
    - o Transportation
- Environmental Health
- Parks District
- Waste Management Department

During FY 13/14 a few program modifications were implemented to help streamline the program, provide better customer service to the public, and try to reduce administrative costs and overhead where feasible.

The first change involved modifying the way Project-Specific Water Quality Management Plans (WQMP) are processed in the County. Previously, Riverside County Flood Control and Water Conservation District (District) performed all WQMP review. The comments on a WQMP were then forwarded to TLMA for inclusion in the conditioning process. This added an intermediate step for customers that was not necessarily conducive to good business practices. Thus, most WQMP review is now processed by the Transportation Department as they, like the District, have consultants and Civil Engineers on staff to perform this review and subsequent approval. The small remainder of WQMPs that are proposed to tie into the District's Master Drainage Plan facilities will still fall under the purview of the District. The applicable sections in the JRMP were updated to reflect the modification in WQMP/SSMP processing and approval.

The second change in the program relates to the use of new web-based database software to help County department's track and catalog construction, industrial/commercial facilities, and public facilities.

2. CONSTRUCTION
SECTION F.2. of ORDER NO. R9-2010-0016)

New Development

1) General Plan/Environmental Review K.3.c.(4)1

a) Description of any amendments/updates to the General Plan as required by Section F.1.a. of the 2010 SMR MS4 Permit:

A comprehensive update to the County of Riverside General Plan (GPA No. 960) is currently underway. A list of the proposed updated/added Water Quality Policies pursuant to the 2010 SMR MS4 Permit is contained in Attachment A. It is expected that GPA No. 960 will go to the Riverside County Planning Commission in early 2015 and to the Board of Supervisors in the spring of 2015.

b) Description of any amendments/updates to the environmental review process as required by Section F.1.b. of the 2010 SMR MS4 Permit.

As previously mentioned, the County has modified the way Project-Specific Water Quality Management Plans (WQMP) are reviewed. Previously, Riverside County Flood Control and Water Conservation District (District) performed all WQMP review. The comments on a WQMP were then forwarded to TLMA for inclusion in the conditioning process. This added an intermediate step for customers that was not necessarily conducive to good business practices. Thus, most WQMP review is now processed by the Transportation Department. The small remainder of WQMPs that are proposed to tie into the District's Master Drainage Plan facilities will still fall under the purview of the District. The applicable sections in the JRMP were updated to reflect the modification in WQMP/SSMP processing and approval.

c) Description of any planned updates to the General Plan or the environmental review process within the next Annual Reporting period as required by Sections F.1.a.&b of the 2010 SMR MS4 Permit.

As noted above, the General Plan Update (GPA No. 960) is currently underway. A list of the proposed updated/added Water Quality Policies pursuant to the 2010 SMR MS4 Permit is contained in Attachment A. It is expected that GPA No. 960 will go to the Riverside County Planning Commission in early 2015 and to the Board of Supervisors in the spring of 2015.

2. CONSTRUCTION
(SECTION F.2. of ORDER NO. R9-2010-0016), CONT

2) SSMP status as required under Section F.1.d. of the 2010 SMR MS4 Permit K.3.c.(4)2.

Description of all revisions to the SSMP, including where applicable:

a) Identification and summary of where the SSMP fails to meet the requirements of the 2010 SMR MS4 Permit as required under Section F.1.d. of the 2010 SMR MS4 Permit:

As noted in the letter from SDRWQCB Executive Officer David Gibson to the SMR Copermittees (reference CW-749045:wchiu), the Final SMR HMP required implementation on July 11, 2014. In an effort to ensure effective compliance, the Regional Board allowed the SMR Copermittees to simultaneously implement the SSMP (WQMP) on the same date as the HMP. This ensured that project applicants were utilizing the approved HMP within the approved SSMP (WQMP) document. Consequently, applicable PDPs during this annual reporting period utilized the 2009 WQMP guidance to implement their projects.

The approved 2014 SSMP meets the requirements of the 2010 SMR Permit.

b) Updated procedures for identifying Pollutants of Concern for each Priority Development Project as required under Section F.1.d.(3) of the 2010 SMR MS4 Permit:

Updated procedures for identifying POCs are included in the approved 2014 SSMP.

c) Updated Treatment Control BMP ranking matrix as required by Section F.1.d.(6)(b)(i) of the 2010 SMR MS4 Permit:

Updated procedures for identifying POCs are included in the approved 2014 SSMP

d) Updated site design and Treatment Control BMP design standards as required by Sections F.1.d.(4)(c)(i) and F.1.d.(6)(b)(ii) of the 2010 SMR MS4 Permit.

Updated procedures for identifying POCs are included in the approved 2014 SSMP

3) Priority Development Projects K.3.c.(4)3

a) The County of Riverside reviewed and approved 3 Priority Development Projects during the reporting period.

b) The following LID and Source Control BMPs were required as applicable approved Priority Development Projects as required by the 2010 SMR MS4 Permit:

Reference	LID BMP Requirements
F.1c.(2)(a)	**Conserve natural areas, including existing trees, other native vegetation, and soils.**
F.1c.(2)(b)	**Construct streets, sidewalks, or parking lots aisles to the minimum widths necessary, provided that public safety is not compromised.**
F.1c.(2)(c)	**Minimize the impervious footprint of the project**
F.1c.(2)(d)	**Minimize soil compaction to landscaped areas**
F.1c.(2)(e)	**Minimize disturbances to natural drainages**
F.1c.(2)(f)	**Disconnect impervious surfaces through distributed pervious areas**
F.1c.(2)(b)(i)	**Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and ephemeral and intermittent streams)**
F.1c.(2)(b)(ii)	**Construct pervious areas to effectively receive and infiltrate, retain and/or treat Runoff from Pervious areas, and to minimize soil compaction in these areas**
F.1c.(2)(b)(iii)	**Construct low-traffic areas with permeable surfaces, where appropriate soil conditions exist**
F.1c.(2)(c)(i)	**Structural Infiltration BMPs**
F.1c.(2)(c)(i)	**Structural Harvest and Use BMPs**
F.1c.(2)(c)(ii)	**Structural Bioretention BMPs**

	Source Control BMP Requirements
F.1.d.(5)(a)	**Prevent illicit discharges into the MS4**
F.1.d.(5)(b)	**Minimize storm water pollutants of concern in runoff**
F.1.d.(5)(c)	**Eliminate irrigation runoff**
F.1.d.(5)(d)	**Include storm drain system stenciling or signage**
F.1.d.(5)(e)	**Include properly designed outdoor material storage areas**
F.1.d.(5)(f)	**Include properly designed outdoor work areas**
F.1.d.(5)(g)	**Include properly designed trash storage areas**
F.1.d.(5)(h)	**Include water quality protection requirements applicable to individual priority project categories**

c) The following process was implemented to verify that Site Design, Source Control, and Treatment Control BMPs were required on all applicable Priority Development Projects as required under Section F.1.d.(9) of the 2010 SMR MS4 Permit:

The approved 2014 SSMP includes an updated guidance manual and template that all applicable Priority Development Projects must complete. In addition, a review checklist was created for plan check staff to utilize. These documents are available on the Flood Control District's website here: http://www.floodcontrol.co.riverside.ca.us/NPDES/SantaMargaritaWS.aspx#SMmember

2. CONSTRUCTION
(SECTION F.2. of ORDER NO. R9-2010-0016), CONT

4) **Following are the names and locations of all Priority Development Projects that were granted a waiver from implementing LID BMPs pursuant to Section F.1.d.(4) of the 2010 SMR MS4 Permit K.3.c.(4)4:** None

5) **Treatment Control BMPs K.3.c.(4)5**

   a) **A current copy of the Riverside County's BMP maintenance tracking database of approved Treatment Control BMPs and Treatment Control BMP maintenance required under F.1.f.(1) of the 2010 SMR MS4 Permit is** attached**. This database includes an identification of all high-priority Priority Development Projects that have a final approved Project-Specific WQMP and their structural post-construction BMPs implemented since July 2005.**

   A copy of the database is located in Attachment B.

   b) **The County of Riverside verifies that the following structural post-construction BMPs on the inventoried WQMP projects have been implemented, are maintained, and are operating effectively through inspections, self-certifications, surveys, or other equally effective approaches as required under the 2010 SMR MS4 Permit:**

Reference	LID BMP Requirements
F.1c.(2)(a)	**The implementation, operation, and maintenance of all (100 percent) approved and inventoried final public and private Project-Specific WQMPs are verified every five years**
F.1c.(2)(b)	**All (100 percent) projects with BMPs that are high priority are inspected annually prior to each Rainy Season**
F.1c.(2)(c)	**All (100 percent) of the Priority Development Projects with BMPs are inspected annually**
F.1c.(2)(d)	**As appropriate, the County of Riverside coordinates its inspections with the facility inspections implemented pursuant to Section F.3 of the 2010 SMR MS4 Permit**
F.1c.(2)(e)	**For verifications performed through a means other than direct inspection by the County of Riverside, adequate documentation is required to provide assurance that the required maintenance has been completed**
F.1c.(2)(f)	**Appropriate follow-up measures (including re-inspections, enforcement, maintenance. Etc.) are conducted to ensure the Treatment Control BMPs continue to reduce Storm Water Pollutants as originally designed**
F.1c.(2)(b)(i)	**Inspections note observations of vector conditions, such as mosquitoes. Where conditions are identified as contributing to mosquito production, the County of Riverside notifies its local vector control agency.**

6) The following Priority Development Projects have been required to implement hydrologic control measures to protect downstream Beneficial Uses and prevent adverse physical changes to downstream channels in compliance with Section F.1.h of the 2010 SMR MS4 Permit K.3.c.(4)6:

As noted in the letter from SDRWQCB Executive Officer David Gibson to the SMR Copermittees (reference CW-749045:wchiu), the Final SMR HMP required implementation on July 11, 2014. Any previously approved HCOCs for PDPs were completed under the requirements of the updated 2009 Riverside County WQMP, in compliance with provision F.1.h.(6) *Interim Hydromodification Criteria*. The FY 14/15 annual progress report will provide details on which PDPs have subsequently been approved with the new HMP criteria.

7) The following table provides a description of all activities related to the enforcement of the Stormwater Ordinance in New Development and Redevelopment Projects in the County of Riverside jurisdiction as required under Section F.1.g. of the 2010 SMR MS4 Permit during the reporting period and a summary of the effectiveness of the enforcement activities K.3.c.(4)7:

See database in Attachment C. In addition, the Code Enforcement Department provides outreach via a newsletter called “The Posting” which highlights its achievements and recent abatement cases. Issues of The Posting, training information, and narrative summary of activities are located in Attachment C as well.

2. CONSTRUCTION
(SECTION F.2. of ORDER NO. R9-2010-0016), CONT

1) Ordinances K.3.c.(4)1

a) Describe updated relevant ordinances as required under Section F.2.a. of the 2010 SMR MS4 Permit (attach copies)

No new updates for this reporting period.

b) **Describe planned ordinance updates within the next Annual Reporting period, if applicable**

Ordinance 754 contains conflicting language regarding irrigation discharges. The Executive Office is working with County Counsel to get this resolved. Updates will be reporting in the FY 14/15 annual progress report**.**

2) Describe any changes to procedures used for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality as required by Section F.2.e of the 2010 SMR MS4 Permit K.3.c.(4)2.

No changes to procedures used for identifying priorities for inspecting sites have been identified during this reporting period.

3) Describe any changes to the designated minimum and enhanced BMPs as described in Section F.2.d.(1) of the 2010 SMR MS4 Permit K.3.c.(4)3:

No changes to designated minimum and enhanced BMPs have been identified during this reporting period.

4) Summarize the finding of the Construction Inspection Program specified in Section F.2.e. of the 2010 MS4 Permit K.3.c.(4)4:

a) Total number and date of inspection conducted at each Construction Site

Please see database in Attachment D.

b) Number, date, and types of enforcement actions by Construction Site

Please see database in Attachment D.

c) Brief description of each high-level enforcement action at Construction Sites including the effectiveness of the enforcement:

Currently, all Transportation Department Construction Projects with one (1) or more acres of new disturbance are uploaded to the the Storm Water Multiple Application and Report Tracking System (SMARTS). The Transportation Department will continue this practice for tracking Capital construction projects in FY14/15.

Please see Attachment E titled "Santa Margarita River Watershed Reportable Construction Sites" for a list of all active construction sites in FY13/14. The Department's Resident Engineer/Inspector conducts a site walk each day which includes a visual check of construction site BMPs. The Project QSP conducts and documents inspections in accordance with the Construction General Permit requirements.

The Department currently has an NPDES Coordinator who comprehensively administers the Department's NPDES Program. The NPDES Coordinator works closely with the Planning, Design, Construction and Operations and Maintenance Divisions. The NPDES Coordinator is also responsible to disseminate NPDES compliance information to Department staff. Monthly "Stormwater Pollution Prevention Bulletins" were emailed to appropriate employees in the Transportation Department to keep staff up to date on NPDES MS4 and Construction General Permit regulations. The NPDES Coordinator regularly attends the SMR TAC meetings.

Additionally, the Department is very supportive of NPDES training. A total of 33 staff received training in "NPDES Construction Site Inspection" for the FY13/14. Please see document titled "Santa Margarita River Watershed Transportation Department NPDES Program Attachment E" for further information. The Transportation Department ensures that its contractors have received the appropriate NPDES training as well.

NPDES training records for the other County Departments are also contained in Attachment I.

For private development construction projects, the County issues NOVs when appropriate. However, the environmental compliance inspectors lack the authority to issue monetary citations if corrections are not made pursuant to the NOV. Designation of this authority to the inspectors is currently being investigated. In the meantime, Code Enforcement officers will be utilized to issue monetary penalties, when needed. For construction sites where there is a Construction General Permit correction or deficiency, we will forward the report to the Regional Board with the deficiency outlined within the County of Riverside's report form.

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

1) **Attachment E contains the current inventory of all County of Riverside facilities and activities that have the potential to generate Pollutants as required under F.3.a.(1) of the 2010 SMR MS4 Permit [K.3.c.(4)1]**

The Transportation Department owns and operates a total of 889 Inlets, 109 Outlets, 704 Culverts, 22 Swales, 7 Channels and 1 Basin in the Santa Margarita River Watershed. The Transportation Department owns and operates a total of 2 Maintenance Yards and 2 Material Sites in the Santa margarita River Watershed. Please see Transportation Inventory Attachment E titled "Santa Margarita River Watershed Transportation Department Facility Inspections" for an inventory of the facilities and inspections results.

2) **Following is the current list of minimum BMPs for the County of Riverside facilities included in the inventory addressed in item 1) above K.3.c.(4)2**

BMP Code	Description	Used
SC-10	Non-Stormwater Discharges	☒ Yes ☐ No
SC-11	Spill Prevention, Control and Clean-up	☒ Yes ☐ No
SC-20	Vehicle and Equipment Fueling	☒ Yes ☐ No
SC-21	Vehicle and Equipment Cleaning	☒ Yes ☐ No
SC-22	Vehicle and Equipment Repair	☒ Yes ☐ No
SC-30	Outdoor Loading/Unloading of Materials	☒ Yes ☐ No
SC-31	Outdoor Liquid Container Storage	☒ Yes ☐ No
SC-32	Outdoor Equipment Maintenance	☒ Yes ☐ No
SC-33	Outdoor Storage of Raw Materials	☒ Yes ☐ No
SC-34	Waste Handling and Disposal	☒ Yes ☐ No
SC-35	Safe Alternative Products	☒ Yes ☐ No
SC-40	Contaminated or Erodible Areas	☒ Yes ☐ No
SC-41	Building and Grounds Maintenance	☒ Yes ☐ No
SC-42	Building Repair and Construction	☒ Yes ☐ No
SC-43	Parking/Storage Area Maintenance	☒ Yes ☐ No
SC-44	Drainage System Maintenance	☒ Yes ☐ No
SC-60	Housekeeping Practices	☒ Yes ☐ No
SC-61	Safe Alternative Products	☒ Yes ☐ No
SC-70	Road and Street Maintenance	☒ Yes ☐ No
SC-73	Landscape Maintenance	☒ Yes ☐ No
SC-74	Drainage System Maintenance	☒ Yes ☐ No
SC-75	Waste Handling and Disposal	☒ Yes ☐ No
SC-76	Water and Sewer Utility Maintenance	☐ Yes ☒ No

3) Describe any changes to procedures to assure that flood management projects assess the impacts on the water quality of Receiving Waters as required under Section F.3.a.(4) of the 2010 SMR MS4 Permit [K.3.c.(4)3]

Please see the Flood Control and Water Conservation District's Annual Report.

4) Following is a summary and assessment of BMP retrofit projects implemented at flood control structures as specified in Section F.3.a.(4)(c) and F.3.d of the 2010 SMR MS4 Permit [K.3.c.(4)4]:

a) Listing of flood control facilities retrofitted:

Please see the Flood Control and Water Conservation District's Annual Report.

b) Listing and description of flood control structures evaluated for retrofitting:

Please see the Flood Control and Water Conservation District's Annual Report.

c) Listing of flood control structures still needing to be evaluated and the schedule for evaluation:

Please see the Flood Control and Water Conservation District's Annual Report.

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

5) Following is a summary of the municipal structural Treatment Control BMP operations and maintenance activities as specified in F.3.a.(6) of the 2010 SMR MS4 Permit [K.3.c.(4)5]:

The County implements a schedule of inspection and maintenance activities to verify proper operation of all its Municipal Structural Treatment Controls BMPs designed to reduce storm water pollutant discharges to/or from its MS4 facilities..

Type of Structural Treatment Control BMP	Number of Inspections	Findings
Detention Basin (Rancho California Rd & Anza Rd Roundabout WQMP)	2	Basin is operating properly.
Infiltration Trench (Scott Rd Improvements WQMP)	2	Infiltration Trench is operating properly
Fossil Filter Inlet Inserts in Landscaping and Lighting Maintenance District 89-1.	150	Inspected 3 times annually. Fossil Filters needing replacement were replaced promptly. Litter and debris are removed from filters during each inspection to ensure they are operating properly.
Glenoaks Fire Station Swales	1	Operating properly and free of trash and debris.
French Valley Airport Parking Lot Landscape Basins	24	Basins are clean and clear of debris.
Lake Skinner Recreation Area	1	Swales and filters are operating effectively

6) Summary of the MS4 facilities operations and maintenance activities, including amount material removed from, including justification for less than annual inspection as required under Section F.3.a.(6)(b) of the 2010 SMR MS4 Permit [K.3.c.(4)(6)]:

MS4 Facility Type	Number of Facilities Maintained	Amount of Material Removed (tons)	Facilities Planned for Bi-Annual Inspections and Justification
MS4 Inspection & Cleaning Program	**Inspected Cleaned**		The Transportation Department owns and operates a total of 889 Inlets, 109 Outlets, 704 Culverts, 22 Swales, 7 Channels and 1 Basin in the Santa Margarita River Watershed.
Inlets	889 303		
Outlets	109 38		
Culverts	704 415		The Transportation Department inspect and remove accumulated waste from all MS4 facilities at least once a year between May 1 and September 30 (dry season) of each year; and additional MS4 facilities cleaning performed as necessary between October 1 and April 30 as specified in the MS4 permit.
Swales	22 10		
Channels	7 2		
Basins	1 0		See document titled "Santa Margarita River Watershed Attachment E" for inspections and maintenance information.
Total	**1732 768**	**66.77 tons (wet weight)**	See document titled "Santa Margarita River Watershed Attachment E" for additional inspection schedule information
Roadside Litter Removal Program	53 Road Miles	**42 tons (wet weight)**	
Street Sweeping CSA-152	5,326 Curb Miles Santa Margarita River 18,804 Curb Miles Countywide	**845.61 tons Countywide (wet weight)**	
Cumulative Total		**945.38 tons (wet weight)**	

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

7) The following table contains a Summary of municipal areas/programs inspection activities as specified by Section F.3.a.(8)(a&b) of the 2010 SMR MS4 Permit [K.3.c.(4)6] including:

a) Number and date of inspections conducted at each facility [K.3.c.(4)7.(a)].

b) BMP violations identified during each facility inspection [K.3.c.(4)7.(b)].

c) The number, date and types of enforcement actions received at each facility [K.3.c.(4)7.(c)]

d) Summary of inspection findings and follow-up activities for each inspected facility [K3.c.(4)7.(d)]

The Transportation Department owns and operates 2 Corporate Yards and 2 Material Sites for the storage of its materials, waste, equipment and vehicles in the Santa Margarita River Watershed. See Attachment E for further information.

Facility	Inspections		BMP Violation	Enforcement			Summary of Inspection	
	#	Date		#	Date	Type	Findings	Follow-up
Murrieta Yard	2	10/11/2013 2/27/2014	No		N/A		Site is Compliant	One follow up inspection was conducted (2/27/14)
Anza Yard	1	10/10/2013	No		N/A		Site is Compliant	N/A
East Benton Material Site	1	10/11/2013	No		N/A		Site is Compliant	N/A
Terwilliger Material Site	1	10/4/2013	No		N/A		Site is Compliant	N/A

3. MUNICIPAL
(SECTION F.3 of ORDER NO. R9-2010-0016), CONT

Anza Landfill	1	FY 13/14	No		N/A		Site is Compliant (IGP Coverage)	N/A
French Valley Airport	1	FY 13/14	No		N/A		Site is Compliant (IGP Coverage)	N/A
Lake Skinner Recreation Area	1	6/25/13	No		N/A		Site is Compliant	N/A
Glenoaks Fire Station	1	9/17/2013	No		N/A		Site is Compliant	N/A

The County inspects these sites annually, at minimum. Those sites requiring additional attention are revisited to ensure suggested improvements were followed. Operations of concern include: leak and spill clean-up, vehicle and equipment parking and storage, loading, unloading, handling and/or storing materials (e.g., asphalt, concrete, oil, paint, scrap metal, solvents, trash, debris) and general maintenance and cleaning. Note, the Anza landfill, French valley Airport, Lake Skinner Recreation Area, and Glenoaks Fire Station were inadvertently left out of last year's annual report.

8) The following activities implemented to address sewage infiltration into the MS4 as specified in F.3.a.(7) of the 2010 SM4 MS4 Permit [K.3.c.(4)8]

The County does not own any sanitary sewer facilities or infrastructure.

9) Describe BMPs and their implementation for unpaved roads construction and maintenance as specified in F.3.a.(10) of the 2010 SMR MS4 [K.3.c.(4)8]:

Description of Unpaved Road Construction and Maintenance BMPs	Used
See narrative below.	☐ Yes ☐ No
	☐ Yes ☐ No
	☐ Yes ☐ No
	☐ Yes ☐ No

Transportation Department Unpaved Roads Maintenance

The Transportation Department implements erosion and sediment control BMPs when conducting maintenance of unpaved roads. Whenever possible, unpaved roads that require maintenance are graded to direct runoff from unpaved roads onto adjacent flat, vegetated areas. When runoff must be direct onto a slope, the spacing of over side drains is reduced to minimize the volume and velocity of the runoff in any one location. Additionally, appropriate energy dissipation materials (gravel, bags, straw bales, riprap, fiber rolls, etc.) are used to reduce the velocity of flows and promote infiltration. Maintenance of County- owned unpaved roads that are directly adjacent to creeks and riparian habitat are maintained only when absolutely necessary to protect public safety. When re-grading and maintenance of unpaved roads is necessary, roads are graded with consideration of road safety and minimizing the potential for erosion and sedimentation. When major maintenance requires the replacement of culverts, the natural stream geomorphology is considered in order to minimize future maintenance and to reduce the potential for failure.

For unpaved roads crossing jurisdictional drainages, the Transportation Department has entered into a “Long Term Routine Maintenance Lake and Streambed Alteration Agreement” with the California Department of Fish and Wildlife (CDFW) for the operation and maintenance of its roads and related drainage improvements within unincorporated Riverside County. The County-maintained system includes hundreds of miles of roads with various drainage improvements, some of which may encroach onto areas under the jurisdiction of the CDFW. The agreement requires the Transportation Department to implement measures (BMPs) to avoid, minimize, and/or mitigate potential impacts associated with the maintenance activity. An annual report detailing all the maintenance activities within or affecting

jurisdictional areas of the CDFW is prepared and submitted to the CDFW. Additionally, for maintenance activities beyond those described in the agreement and for a single maintenance activity affecting 0.5 acre or more, the Transportation Department must make a pre-notification for review and comment by CDFW.

The Transportation Department no longer constructs new unpaved roads. Further, the Transportation Department no longer accepts new unpaved roads into their system of County maintained roads.

4. INDUSTRIAL / COMMERICIAL
(SECTION F.3.b. of ORDER NO. R9-2010-0016)

1) Attachment F contains the updated inventory of Industrial and Commercial Facilities as required under Section F.3.b.(1) of the 2010 SMR Permit [K.3.c.(4)1&2]. This inventory includes the following information by facility or mobile business:

a) Number and date of inspections conducted at each facility or mobile business.

b) BMP violations identified during the inspection.

c) Number, date, and type of enforcement actions.

d) Brief description of each high-level enforcement action at Industrial/Commercial sites including the effectiveness of the enforcement and follow-up activities.

See database contained in Attachment F.

2) All changes to the designated minimum and enhanced BMPs required under Section F.3.b.(2)b&c of the 2010 SMR MS4 Permit [K.3.c.(4)3]

Minimum BMP	CASQA BMP Fact Sheet	Used
Hazardous Waste/Materials storage areas are clean, no signs of leakage, and protected from rainfall and Runoff;	SC-34	☒ Yes ☐ No
Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and no signs of leakage from the trash bins	SC-34	☒ Yes ☐ No
Aboveground tanks have been properly maintained including no signs of leakage, and secondary containment in good condition	SC-11, SC-31, SC-33	☒ Yes ☐ No
Onsite storm drain inlets are protect from inappropriate non-storm water discharges	SC-44	☒ Yes ☐ No
Oil/water separators are connected to sanitary sewer	NA	☐ Yes ☒ No
Wash water from wash pads (steam cleaning or high pressure cleaning) is directed to the sanitary sewer and does not discharge to the MS4	SC-10	☒ Yes ☐ No
Mop bucket wash water is discharged to sanitary sewer via clarifier	SC-10	☒ Yes ☐ No
Parking lot areas are free of trash, debris, and fluids other than water	SC-43	☒ Yes ☐ No
Facility has coverage under the Industrial General Permit, if appropriate	NA	☐ Yes ☒ No
Minimum BMP	CASQA	☒ Yes ☐ No
Oil and grease Wastes are not discharged onto a parking lot, street or adjacent catch basin	SC-10	☒ Yes ☐ No

4. INDUSTRIAL / COMMERICIAL
(SECTION F.3.b of ORDER NO. R9-2010-0016), CONT.

Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and the bins have not been washed out into the MS4	SC-43	☒ Yes ☐ No
Floor mats, filters and garbage containers are not washed in adjacent parking lots, alleys, sidewalks, or streets and that no wash water is discharged to MS4S	SC-10	☒ Yes ☐ No
Parking lot areas are cleaned by sweeping, not by hosing down, and that facility operator uses dry methods for spill cleanup	SC-43	☒ Yes ☐ No

3) Provide a list of Industrial Facilities, including each name, address, and SIC code in the County of Riverside's jurisdiction, that may require coverage under the General Industrial Permit, but has not submitted an NOI [K.3.c.(4)4]

See Database (column titled "referred to RWQCB") contained in Attachment F.

5. RESIDENTIAL
(SECTION F.3.c. of ORDER NO. R9-2010-0016)

1) Provide an updated list of minimum BMPs required for residential areas and activities as required by Section F.3.c.(2)(b) of the 2010 SMR SM4 Permit [K.3.c.(4)1]

Area of Activity		Designated BMPs	Reference Material
A	Automobile repair, maintenance, washing and parking	• Collect and properly dispose of automotive fluids and other waste • Clean up spills using dry cleanup methods where possible • Store Hazardous Materials away from rain and runoff • Avoid hosing down parking areas. • Prevent all wash water, leaks and/or spills from entering the street or MS4	**Brochures[1]** Automotive Maintenance and Car Care Brochure • Outdoor Cleaning **CASQA BMP Fact Sheets:** • SC-20, • SC-21, • SC-22, • SC-43
B	Home and garden care activities and product use (pesticides, herbicides and fertilizers)	• Prevent irrigation runoff • Store and apply pesticides, fertilizers and other chemicals in accordance with their labeling • Avoid applying pesticides, herbicides and fertilizers before forecasted rain	**Brochures[1]** • Landscape and Garden • 10 Ways to Save Water Outdoors **CASQA BMP Fact Sheets:** • SC-73, • SD-10, • SD-12
C	Disposal of trash, pet waste, green waste, and Household Hazardous Waste (e.g., paints, cleaning products)	• Properly dispose of pet waste • Collect green waste and never blow such waste into the street, gutter or MS4 • Never dispose of waste in a street, gutter or MS4 • Take Household Hazardous Waste to a designated collection center	**Brochures[1]** • After the Storm • What's the Scoop • Tips for Horse Care • Landscape and Garden • Pools, Spas and Fountains **HHW and ABOP Collection Events** http://www.rivcowm.org/opencms/hhw/schedule.html **Videos:** • Animal Care • Household Hazardous Waste • Managing your Lawn and Garden • Outdoor Activities http://rcflood.org/stormwater/ (Videos found in the Media Library)

Brochures[1]: Brochures available at http://rcflood.org/Stormwater/

5. RESIDENTIAL
(SECTION F.3.c of ORDER NO. R9-2010-0016) CONT.

2) Provide a summary of the number and type of applicable runoff and stormwater enforcement actions taken within residential areas and activities as required under Section F.3.c.(3) of the 2010 SMR MS4 Permit [K.3.c.(4)2]:

Number by Area or Activity			Enforcement and Compliance Responses
A	B	C	
2		**32**	Education and information
2		**59**	Verbal Warning
2		**29**	Written Warning
		2	Notice of Non-Compliance
		0	Administrative Compliance Order
		0	Misdemeanor
		0	Infraction
		8	Citation
		0	Referral to SDRWQCB
			Total

3) Describe the County of Riverside's efforts to manage runoff and Stormwater Pollution in common interest areas and mobile home parks as required under Section F.3.c.(4) of the 2010 SMR MS4 Permit [K.3.c.(4)2]:

The County responds to and investigates citizen complaints. If issues are verified and/or discovered by County staff, the Code Enforcement Department will open a case against the proposed violator and bring the situation to remedy in conformance with the JRMP Enforcement and Compliance strategy.

6. RETROFITTING EXISTING DEVELOPMENT (SECTION F.3.d. of ORDER NO. R9-2010-0016)

1) **Provide an updated inventory and prioritization of existing developments identified as candidates for retrofitting as required under Section F.3.d.(2) of the 2010 SMR MS4 Permit [K.3.d.(4)1]:**

   APN: 964-450-030 Rancho Bella Vista Community Association and associated catch basins.

2) **Describe the County of Riverside's efforts to retrofit existing developments during the reporting period as required under Section F.3.d.(2) of the 2010 SMR MS4 Permit [K.3.d.(4)2]:**

   The County's ability to retrofit existing development is extremely constrained. The elimination of redevelopment agencies in 2011 has significantly affected the County's ability to enhance or restore properties with structural BMPs. However, the County is vigilant in identifying potential opportunities that could result in a public-public partnership, or private-public partnership. The county is currently seeking grant opportunities to retrofit several catch basins with connector pipe screens.

3) **Describe the County of Riverside's efforts taken to encourage private landowners to retrofit existing development as required under Section F.3.d.(4) of the 2010 SMR MS4 Permit [K.3.d.(4)3]:**

   As problem areas are identified, the County works with associated landowners to identify cost-effective solutions to retrofit those portions of their property that are known to produce pollutants of concern that impact receiving waters. The water districts, in conjunction with a recently awarded grant, are increasing the monetary value of their turf conversion rebate program.

   Exceedances of nutrients and pathogens were reported at the County Monitoring Station located at APN: 964-450-030 which drains the Rancho Bella Vista Community.

   Please see Attachment G for Investigation and Public Outreach responses conducted by the County of Riverside concerning the Dry Weather Monitoring Results. Additional detailed information can be found in the separately submitted SMR 2014 Monitoring Report.

4) **Provide a list of all retrofit projects that have been implemented including site location, a description of the retrofit project pollutants expected to be treated, and the tributary acreage of runoff that will be treated as required under Section F.3.d.(5) of the 2010 SMR MS4 Permit [K.3.d.(4)4]:**

6. RETROFITTING EXISTING DEVELOPMENT (SECTION F.3.d. of ORDER NO. R9-2010-0016)

The County is still in the process of identifying sites that have negative impacts to receiving water quality**.**

5) Describe any proposed retrofit or regional mitigation projects and timelines for future implementation [K.3.d.(4)5]:

Please see Attachment G for Investigation and Public Outreach responses conducted by the County of Riverside associated with the established community named Rancho Bella Vista.

6) Describe any proposed changes to the County of Riverside's overall retrofitting program [K.3.d.(4)6]:

The County is continually striving for success in an economic environment that is still difficult to navigate. Therefore, the County will continue to seek out partnerships (such as with the Eastern Municipal Water District) with those entities that it identifies as leading to successful retrofit of sites that have been previously identified as negatively impacting receiving water quality.

7. ILLICIT DISCHARGE DETECTION AND ELIMINATION (SECTION F.4 of ORDER NO. R9-2010-0016) CONT.

1) Describe any changes to the legal authority to implement Illicit Discharge Detection and Elimination (IDDE) activities as required under Section F.4.a.(1) of the 2010 SMR MS4 Permit [K.3.d.(4)1]:

No changes to legal authority during the reporting period.

2) Describe any changes to the established IDDE investigation procedures as specified under Section F.4.e. of the 2010 SMR MS4 permit [K.3.d.(4)2]:

No changes to the established IDDE investigation procedures have been noted during this reporting period. However, the County is identifying methods of how departments can provide their reporting data to the Department of Environmental Health to ensure consistent response and tracking. The results of this identification will be reported in FY 14/15 annual report.

3) Describe any changes to public reporting mechanisms, including phone numbers and web pages as required under Section F.4.c of the 2010 SMR MS4 Permit [K.3.d.(4)3]

None noted. See the Flood Control District's report for information regarding the telephone hotline and web pages. It was noted in a recent USEPA audit the representatives from USEPA could not call into the hotline due to recent telecom changes within the county. This problem has since been rectified.

4) Summarize Illicit Discharges (including spills and water quality data events) and how each significant case was resolved [K.3.d.(4)4]:

See database in Attachment C and Outfall Follow up Report in Attachment G. The Department of Environmental Health in conjunction with CalFire responds to significant spill cases and reports them per OES guidelines.

5) Describe any instances when field screening and analytical data exceeded Action Levels, including those instances for which no investigation was conducted [K.3.d.(4)5]:

On June 2, 2014 the Flood Control District sampled outfall No. 902MS4263 as part of the dry and wet weather screening. The results from the laboratory indicated that nutrient and pathogen constituents were exceeded as ponded water was sampled. The report and follow up actions are located in Attachment G.

7. ILLICIT DISCHARGE DETECTION AND ELIMINATION (SECTION F.4 of ORDER NO. R9-2010-0016) CONT.

6) Describe the follow-up and enforcement actions taken in response to investigations of Illicit Discharges and a description of the outcome of the investigation/enforcement actions as required under Section F.4.e,f, & g. [K.3.d.(4)6]:

Illicit Discharge Incident	Follow-up and Enforcement Action	Outcome
6/2/14 – N. 902MS4263	**Inspection Conducted by the County of Riverside Executive Office and Transportation Department – See Report in Attachment G.**	**The source of non-storm water discharge was due to irrigation overflow from Rancho Bella Vista residential properties.**

8. WORKPLANS

1) Provide a summary of workplans including priorities, strategy, implementation schedule and effectiveness evaluations.

The Upper Santa Margarita Watershed Water Quality Workplan (Watershed Workplan) was developed in compliance with Directive G of the San Diego Regional Water Quality Control Board's Order No. R9-2010-0016.

The purpose of the Watershed Workplan is to:

1) Characterize the Receiving Water quality in the Upper Santa Margarita River Watershed's Receiving Waters

2) Identify and prioritize water quality problem(s) in terms of constituents by location in the Upper Santa Margarita River Watershed's Receiving Waters.

3) Identify the likely sources of the highest priority water quality problem(s) within the Upper Santa Margarita River Watershed.

4) Develop a watershed Best Management Practice (BMP) implementation strategy to attain Receiving Water Quality Objectives for the highest priority water quality problem(s).

5) Develop a strategy to monitor improvements in Receiving Water quality directly resulting from implementation of the BMP implementation strategy described in this Watershed Workplan.

6) Establish a schedule for development and implementation of the BMP and monitoring strategies outlined in this Watershed Workplan.

The Watershed Workplan is reviewed annually and updated to identify needed changes to prioritize water quality problem(s) listed in the Workplan.

Throughout Fiscal Year 2013-2014, the SMR Copermittees have been assessing the Watershed Workplan programs based upon the criteria set forth by CASQA. Section 12 of this JRMP Annual Report discusses the effectiveness of the implementation of the Watershed Workplan and the CASQA outcome levels achieved. The District and the Copermittees continue to implement the schedule as seen in Figure 1 of the Watershed Workplan that outlines implementation of various storm water programs.

8. WORKPLANS

9. NON-STORMWATER DISCHARGES

1) Identify any non-stormwater discharge category listed in Requirement B.2 of Order No. R9-2010-0016 that was identified as a source of Pollutants to Waters of the U.S. during the reporting period. For each identified category, the Copermittee must report whether it elected to prohibit the discharge or to require BMPs to reduce Pollutants in the discharge to the MEP. If the discharge is not prohibited, the BMPs that will be implemented, or required to be implemented, are described below:

Non-Stormwater Discharge Categories (per Requirement B.2)	Source of Pollutant	Prohibited	Required BMPs
Diverted stream flows	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☐ No
Rising ground waters	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Uncontaminated pumped ground water	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Foundation drains	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Springs	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Water from crawl space pumps	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Footing drains	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Air conditioning condensation	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Flows from riparian habitats and wetlands	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Water line flushing	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Individual residential car washing	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Dechlorinated swimming pool discharges	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No

9. NON-STORMWATER DISCHARGES CONT.

2) Provide a description of any updates to ordinances, orders, or similar means to prohibit non-storm water discharge categories identified under Section B.2 of the 2010 SMR MS4 Permit.

No planned updates at this time. The County's storm water ordinance effectively prohibits applicable non-stormwater discharge categories as required by the permit. Upon enrollment into the Regional Permit, the County will revise its storm water ordinance as required and applicable.

3) Identify any control measures to be required and implemented for non-stormwater discharge categories identified as needing controls by the San Diego Water Board.

In compliance with AB1881, the County adopted Ordinance 859, which stipulates stringent requirements for development with regard to water efficient landscaping. A copy of the Ordinance and submittal letter to the Department of Water Resources is located in Attachment H.

4) Provide a description of a program to address Pollutants from non-emergency firefighting flows identified by the County of Riverside to be significant sources of Pollutants:

As part of preparation of the County's JRMP, the County has prepared and submitted with its JRMP the "Best Management Practices Plan for Firefighting Activities" as Appendix C.1 to the JRMP. The purpose of this plan is to identify Best Management Practices (BMPs) used by firefighting agencies for Runoff management in the Santa Margarita Region of Riverside County. Section B.3 of the 2010 SMR MS4 Permit adopted by the San Diego Regional Water Quality Control Board (Regional Board) requires each Copermittee to develop and implement a program to address Pollutants from non-emergency firefighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified as significant sources of Pollutants to Waters of the U.S.

The Riverside County MS4 Permittees in cooperation with the Riverside County Fire Agencies have developed fire department activity procedures to provide guidance to Fire Prevention and Firefighting personnel for management of Runoff. Guidance is provided in the form of recommended BMPs that are incorporated as part of the individual Jurisdictional Runoff Management Plans (JRMP), and as applicable into Facility Pollution Prevention Plans. When followed, implementation of the BMPs will minimize discharges of Runoff to the municipal separate storm sewer system (MS4) associated with non-emergency firefighting activities.

9. NON-STORMWATER DISCHARGES CONT.

10. RECEIVING WATER LIMITATIONS

This section includes the report required pursuant to Requirement A.3.a.(1) of Order No. R9-2010-0016, if applicable.

Requirement A.3.a.(1) states:

"Upon a determination by either a Copermittee or the San Diego Regional Board that storm water MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee must notify the San Diego Regional Board within 30 days and thereafter submit a report to the San Diego Regional Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any Pollutants that are causing or contributing to the exceedance of Water Quality Standards. The report may be incorporated in the Annual Report unless the San Diego Regional Board directs an earlier submittal. The report must include an implementation schedule. The San Diego Regional Board may require modifications to the report;"

The County provides funding in support of the Flood Control District's regional water quality monitoring program through the Implementation Agreement funding mechanism. The District provides notification to the County, where applicable, of any exceedances of an applicable water quality standard. In addition, the District has retained the services of a consultant to provide monitoring support within the upper SMR.

11. FISCAL ANALYSIS

1) **The following table provides estimated expenditures for the current reporting period, the preceding reporting period, and the next reporting period. This table identifies the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities described in the County of Riverside's JRMP as required under Section H.2 of the 2010 SMR MS4 Permit.**

Program Element	Fiscal Year 2013-2014		Fiscal Year 2014-2015	
	Capital Expenditures	O&M/Admin Expenditures	Capital Expenditures	O&M/Admin Expenditures
Program Management	0	$125,000	**$0**	$135,000
Annual Fee for MS4 NPDES Permit	0	$63,956	**$0**	$65,000
Implementation Agreement Shared Cost	0	$137,841	**$0**	$402,000
Construction Inspections	0	$80,000	**$0**	$80,000
Development Planning	0	$5000	**$0**	$5000
Industrial and Commercial Inspections	0	$80,000	**$0**	$80,000
Illicit Connections & Illegal Discharges Program	0	$78000	**$0**	$78000
Municipal Facilities and Activities	0	$10,000	**$0**	$25,000
Public Education & Outreach	0	Part of IA Cost	**$0**	Part of IA Cost
Monitoring Program	0	Part of IA Cost	**$0**	Part of IA Cost
Retrofit Program	0	IA/Grant	**$0**	IA/Grant

Other	0		**0**	
	0			
Z5508000 - NPDES Program Administration	0	**$88,471**	**$0**	
Z5508000 - NPDES Watershed	0	**$87,569**	**$0**	
Z5506000 - MS4 Mapping	0	**$88,471**	**$0**	
Z5502000 - Santa Margarita River Watershed Activity MS4 Facilities Inspection & Cleaning Program	0	**$77,007**	**$0**	
Z5502001 – Volcano Fire Stabilization	0	**$1,147**	**$0**	
Z5509000 – NPDES Municipal Inspections	0	**$8,837**	**$0**	
Z5509001 – NPDES Inspections Transportation Yard	0	**$33,368**	**$0**	
Street Sweeping CSA 152	0	**$403,929**	**$0**	
Servicing Catch Basin Fossil Filter Inserts – Santa	0	**$7,050**	**$0**	

Margarita River				
Roadside Litter Removal Program	0	**$317,319**	**$0**	
***Overlay, Sealing**	0	**$5,030,376**	**-**	
Total		**$6,723,341**	**$0**	**$870,000**

***Not part of the overall NPDES Program; however, considered a significant NPDES-related activity which reduces pollutants from comingling with storm water runoff caused by deteriorated road surfaces.**

ATTACHMENT A: ANNUAL REPORT CHECKLIST

A description of the source(s) of funds that are proposed to meet the necessary expenditures for the subsequent year.

11. FISCAL ANALYSIS

Source of Funds	Capital Expenditures	Percent of Total Program Funding	Restrictions on Use (if applicable)
Gas Tax		100%	Revenues are utilized to fund the MS4 Facilities Inspections & Cleaning Program, Roadside Litter Removal Program, road BMP maintenance activities within the County Maintained Road System, and enhancement of the MS4 Mapping & GIS databases
County Service Area (CSA 152)		100%	Revenues are utilized for CSA 152 benefit area for Street Sweeping.
Landscape and Lighting Maintenance Districts (L&LMD)		100%	Revenues are utilized for designated areas within L&LMDs to maintain fossil filter catch basin inserts
Transportation Improvement Projects (TIP)		100%	Revenues are provided to fund Transportation Projects including NPDES compliance activities during and post construction (e.g., SWPPP implementation, construction of permanent BMPs)
Measure A		100%	Revenues are provided to fund Transportation Projects including NPDES compliance activities during and post construction (e.g., SWPPP implementation, construction of permanent BMPs)
Developer Fees	100%		Revenues are to be utilized for NPDES compliance on a project specific basis

11. FISCAL ANALYSIS

Capital Projects	2%		Revenues are to be utilized for NPDES compliance on a project specific basis.
General Fund			Program Management

2) Provide a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line item.

N/A

1) **The following is the *County of Riverside's* summary of its effectiveness assessments as required under Section J.3 of the 2010 SMR MS4 Permit. *The Program Effectiveness reporting must include:***

a) ***The results of each of the effectiveness assessments performed pursuant to J.1.b, including the demonstrated CASQA effectiveness level(s);***

12.1.a.1 Illicit Discharge Detection and Elimination Effectiveness Assessment

Table 12-1: Illicit Discharge Detection and Elimination Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Number of IC/ID reports received (F.4.e.(3))	61	Level 1
Percentage/Number of Dry Weather Source ID	1	Level 5

Efforts that were completed and Findings		
Estimated volume of anthropogenic trash removed from County of Riverside MS4 facilities (tons) (F.3.a.(6)(b)(vi))	133.96	Level 4

12.1.a.2 Municipal Areas and Activities Effectiveness Assessment

Table 12-2: Municipal Areas and Activities Program Effectiveness

See document titled "Santa Margarita River Watershed Attachment E" for a description of the inspections and maintenance of MS4 Facilities.

Measureable Metrics Collected	Data	CASQA Outcome Level
Percent/Number of County of Riverside facilities with appropriate BMPs identified (F.3.a.(2)(b))	8	Level 2
Number of County of Riverside facility and MS4 operators and maintenance staff that attended Municipal training (F.6.b.(1))	17	Level 1
Estimated tons of Waste removed by County of Riverside street sweeping, (F.3.a.(5))	845.6	Level 4
Estimated tons of Waste removed from County of Riverside Open Channels (F.3.a.(6)(b))	.3	Level 4
Estimated tons of Waste removed from County of Riverside storm drain inlets (and culverts) (F.3.a.(6)(b))	6.5	Level 4

12.1.a.3 Development Planning Effectiveness Assessment

Table 12-3: Development Planning Program Effectiveness

Measureable Metric Collected	Data	CASQA Outcome Level
Number of acres of Redevelopment projects that incorporated LID-based BMPs that are built and completed (F.1.f.(1))	0	Level 5
Number of applicable planning staff that	15 – Planning	Level 1

attended WQMP training (F.6.b.(1))	9- RCTD	

12.1.a.4 Private Development Construction Activity Effectiveness Assessment

Table 12-4: Private Development Construction Activity Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Construction Site inventory updated (F.2.b.)	Up to Date	Level 1
Number of construction inspection staff that attended Construction training (F.6.b.(b))	33-RCTD	Level 1

12.1.a.5 Industrial and Commercial Effectiveness Assessment

Table 12-5: Industrial and Commercial Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Industrial and Commercial Facilities inventory updated (F.3.b.(1)(a))	Up to Date	Level 1
Number of applicable Industrial and Commercial Facility inspection staff that attended Industrial-Commercial training (F.6.b.(1)(c))	16- Code Enf. 7-RCTD	Level 1

12.1.a.6 Residential Effectiveness Assessment

Table 12-6: Residential Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Gallons of used oil collected at collection events (F.3.c.(2)(c))	50049	Level 4
Total pounds collected at HHW/ABOP events (F.3.c.(2)(c))	1,465,788	Level 4

*SMR data, not Copermittee specific

12.1.a.7 Retrofit Program Effectiveness Assessment

Table 12-7: Retrofit Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Number of times the Retrofit Program has identified a potential solution to a specific identified problem	1	Level 1

11. FISCAL ANALYSIS

12.1.a.8 Public Education Effectiveness Assessment

Table 12-8: Public Education Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Number of outreach events to schools	See District Report	Level 1
Number of Public Events where outreach was conducted	See District Report	Level 1
Pounds of trash removed through watershed cleanup events	See District Report	Level 4
Number of home improvement stores provided outreach / customer education information for pesticide use	See District Report	Level 1
Number of E-Newsletters signups	See District Report	Level 2
% of E-Newsletters clicked	See District Report	Level 2

12.1.a.9 Watershed Workplan Effectiveness Assessment

Table 12-9: Watershed Workplan Program Effectiveness

Measureable Metrics Collected	Data	CASQA Outcome Level
Annual Public Review Meeting conducted	1	Level 1
Updated Characterization of Receiving Water Quality	(See Below)	Level 1
Updated prioritization of water quality problems	(Refer to SMR Annual Monitoring Report, Table 41)	Level 1
Descriptions of likely sources updated	(Refer to SMR Monitoring Annual Report, Section 5.3)	Level 1
Updated BMP Implementation Strategy	(See Below)	Level 1
BMPs implemented according to schedule	(See Below)	Level 1
Number of Collaborative Meetings Attended	See footnote	Level 1

The County participates with the TAC, Executive Office Water Quality Committee meetings, and NNE meetings.

Updated Characterization of Receiving Water Quality:

11. FISCAL ANALYSIS

The overall water quality conditions of Receiving Waters within SMR appear to be getting better, based on the number of 303(d) listed constituents in the upper SMR watershed with statistically significant downward trends. Fiscal Year 2013-2014 was the second year of implementing the new JRMP and monitoring requirements for the 2010 MS4 Permit Order (R9-2010-0016). The monitoring results and follow up investigation indicated that water quality can substantially be improved upon with an effective landscape irrigation outreach and enforcement program to area residents and HOAs. Business and commercial landscape irrigations should also be evaluated in 2014-2015 for added efforts to improve water quality in Receiving Waters within SMR Watershed.

The SMR Copermittees expect that future monitoring and the associated data will foster a better understanding of Pollutants and their impacts to Receiving Waters. Results from monitoring activities/studies will continue to guide the Copermittees in assessing and managing their programs to protect Receiving Waters in the SMR to the maximum extent practicable.

Updated BMP Implementation Strategy:

The County is still implementing the current BMP Implementation Strategy per Section 4 of the Upper Santa Margarita River Watershed Workplan.

BMPs Implemented According to Schedule:

N/A

b) Response to effectiveness assessments:

See below for further information.

c) A description of any steps to be implemented to improve the Copermittees' ability to assess program effectiveness.

As previously discussed in last year's annual report, County continues its commitment toward effective and efficient program management that delivers exceptional value to the taxpayer while ensuring that receiving water quality is of the highest priority. The Department of Building & Safety, the Code Enforcement and Transportation Departments, continue to work collaboratively amongst themselves and with Regional Board staff to find creative solutions to problems out in the field. Furthermore, the County is eager to look for joint funding opportunities with other municipalities, the Flood Control District and area Water Districts, and the Development Community to bring to fruition those potential locations identified as possible retrofit opportunities. Because the County's gas tax funding is restricted, and the General Fund obligations for public safety are paramount, the joint funding of projects is crucial.

11. FISCAL ANALYSIS

This section includes proposed revisions to the Copermittees JRMP, including areas in need of improvement based on the assessment of effectiveness of each program component.

Revision to the JRMP for FY 14/15 will be as follows:

- **More clearly delineate departmental procedures in terms of IC/ID response and reporting to the Department of Environmental Health.**

- **The Executive Office is spearheading the formation of a program whereby the Transportation Department Environmental Compliance Inspectors perform inspections county-wide for all departments, both public and private facilities. It is expected to begin FY 15/16. The purpose is to ensure consistency in inspections and reporting throughout the county. The current approach whereby each individual department is responsible for its own inspections is not yielding efficient and effective results. Upon rollout, the JRMP will be updated accordingly.**

11. FISCAL ANALYSIS

Annual Report Summary Checklist	
Order Requirements	
Were All Requirements of Order No. R9-2010-0016 met?	☒ Yes ☐ No
Construction	
Number of Active Sites	206
Number of Inactive Sites	40
Number of Sites Inspected	246
Number of Violations	54
Number of Construction Enforcement Actions Taken	0
New Development	
Number of Development Plan Reviews	269
Number of Grading Permits Issued	310
Number of Projects Exempted from Interim/Final Hydromodification Requirements	0
Post Construction Development	
Number of Priority Development Projects	3
Number of SUSMP Required Post-Construction BMP Inspections	15
Number of SUSMP Required Post-Construction BMP Violations	0
Number of SUSMP Required Post-Construction BMP Enforcement Actions Taken	0
Illicit Discharges and Connections	
Number of IC/IC Inspections	23
Number of IC/ID Detections by Staff	23
Number of IC/ID Detections from the Public	7
Number of IC/ID Eliminations	16
Number of IC/ID Violations	15
Number of IC/ID Enforcement Actions Taken	8
MS4 Maintenance	

11. FISCAL ANALYSIS

Number of Inspections Conducted	1732
Amount of Waste Removed	66.77T
Total Miles of MS4 Inspected	299

ATTACHMENT A: ANNUAL REPORT CHECKLIST CONT.

Annual Report Summary Checklist (cont.)	
Municipal/Commercial/Industrial	See databases
Number of Facilities	
Number of Inspections Conducted	
Number of Facilities Inspected	
Number of Violations	
Number of Enforcement Actions Taken	

I certify under penalty of law that this Annual Report Summary Checklist was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed:

Steven Horn, Senior Management Analyst

State of California

STATE WATER RESOURCES CONTROL BOARD
`IFORNIA REGIONAL WATER QUALITY CONTROL BOARD

ADMINISTRATIVE PROCEDURES UPDATE

TO	SUBJECT	
REGIONAL BOARD STAFF WQ MANUAL HOLDERS WQ PROGRAM MANAGERS	ANTIDEGRADATION POLICY IMPLEMENTATION FOR NPDES PERMITTING	
	APU NUMBER 90-004	SUPERSEDES APU
APPROVED, EXECUTIVE DIRECTOR James F. Dodge		EFFECTIVE DATE 7-2-90

INTENT

This Administrative Procedures Update provides guidance for the Regional Boards for implementing State Board Resolution No. 68-16, "Statement of Policy With Respect to Maintaining High Quality of Waters in California" (Appendix I-1), and the Federal Antidegradation Policy, as set forth in 40 CFR 131.12 (Appendix I-2), as applied to the NPDES permitting process. Additional guidance for interpreting State Board Resolution No. 68-16 and the federal antidegradation regulation may be found in Appendices I-3 (EPA's Questions and Answers on Antidegradation), I-4 (State Board legal memo entitled "Federal Antidegradation Policy") and I-5 (EPA Region 9's Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12).

WHEN IS AN ANTIDEGRADATION ANALYSIS REQUIRED

To implement the antidegradation policy, the Regional Boards must consider the need to include a finding that specifies that water quality degradation is permissible when balanced against benefit to the public of the activity in question. The determination as to whether a finding is needed must be made when issuing, reissuing, amending, or revising an NPDES permit. The Regional Board should also make this finding when an existing discharge has reduced water quality, since the facility was last permitted and the reduction is not authorized by the permit. The findings should specifically state that the Regional Board has considered antidegradation pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16 and finds that the permitted discharge is consistent with those provisions. If the Regional Board finds that lowering of water quality is consistent with the conditions established in the State policy and the federal regulation, the findings should indicate:

1. The pollutants that will lower water quality;

2. The socioeconomic and public benefits that result from lowered water quality; and

3. The beneficial uses that will be affected.

   Potential beneficial uses are not protected by the federal regulation. Regional Board staff should only apply the State policy when permitting a discharge that solely impacts potential beneficial uses.

ANTIDEGRADATION FINDING NOT REQUIRED

A Regional Board may decide that an antidegradation finding is not required because the proposed discharge is prohibited under either the State or federal policies. For example, if the proposed discharge would violate water quality objectives in the receiving water, no discharge will be allowed and therefore no antidegradation analysis is required. Alternatively, if the Regional Board has no reason to believe that existing water quality will be reduced due to the proposed action, no antidegradation analysis is required.

SIMPLE ANTIDEGRADATION ANALYSIS SUFFICIENT

A Regional Board may determine that it is not necessary to do a complete antidegradation analysis. The Regional Board may reach this determination if, using its best professional judgement and all available pertinent information, the Regional Board decides that the discharge will not be adverse to the intent and purpose of the State and federal antidegradation policies.

Based on information available to the Regional Board and any other background material the Regional Board believes is necessary, a complete antidegradation analysis will not be required if:

1. A Regional Board determines that the reduction of water quality will be spatially localized or limited with respect to the waterbody; e.g., confined to the mixing zone; or

2. A Regional Board determines the reduction in water quality is temporally limited and will not result in any long-term deleterious effects on water quality; e.g., will cease after a storm event is over; or

3. A Regional Board determines the proposed action will produce minor effects which will not result in a significant reduction of water quality; e.g., a POTW has a minor increase in the volume of discharge subject to secondary treatment; or

4. The Regional Board determines that the proposed activity, which may potentially reduce water quality, has been approved in the General Plan of a political subdivision and has been adequately subjected to the environmental and economic analyses in an environmental impact report (EIR) required under the California Environmental Quality Act (CEQA). If the Regional Board finds that the EIR is inadequate, the Regional Board must supplement this information to support the decision.

The above criteria may vary with the types of pollutants. Some pollutants are believed to elicit an effect at a certain concentration (threshold pollutants). Others (non-threshold pollutants) have no safe level. Non-threshold pollutants include carcinogens, mutagens, and teratogens. Regional Boards are urged to apply stricter scrutiny to non-threshold pollutants, and to note that repeated or

multiple small changes in water quality (which would otherwise not require detailed analysis) can result in significant water quality degradation if non-threshold pollutants are involved. The Regional Boards must still make the necessary findings regardless of the nature of pollutants involved, and summarize them in the Fact Sheet for major NPDES permits or in the Statement of Basis for minor NPDES permits.

COMPLETE ANTIDEGRADATION ANALYSIS REQUIRED

The Regional Board may determine that antidegradation provisions must be evaluated in making its decision. In general, an antidegradation analysis is needed to support all regulatory actions that, in the Regional Board's judgement, will result in a significant increase in pollutant loadings. The Regional Boards must consider antidegradation effects and conduct an antidegradation analysis when the proposed activity results in:

1. A substantial increase in mass emissions of a pollutant, even if there is no other indication that the receiving waters are polluted; or

2. Mortality or significant growth or reproductive impairment of resident species.

In particular, an antidegradation finding should be made and, if necessary, an analysis should be conducted when performing the following permit activities:

1. Issuance of a permit for any new discharge, including Section 401 certifications; or

2. Material and substantial alterations to the permitted facility, such as relocation of an existing discharge; or

3. Reissuance or modification of permits which would allow a significant increase in the concentration or mass emission of any pollutant in the discharge.

IMPLEMENTATION OF ANTIDEGRADATION POLICIES

If the Regional Board finds the proposed activity does not warrant a complete antidegradation analysis; e.g., one of the criteria listed above is satisfied, such findings should be documented in the Fact Sheet of the proposed permit action or Regional Board order, along with the basis for those findings.

If the Regional Board determines that a complete antidegradation analysis is necessary to support a finding under State or federal antidegradation policies, the Regional Board shall ensure that sufficient evidence is analyzed to support this decision and that this evidence is summarized in an appropriate finding. When a discharge is included in a project requiring CEQA documentation, the antidegradation analysis should be integrated in the environmental review process. If the Regional Board is not the lead agency on a project requiring an antidegradation finding, the Regional Board should ensure that the lead agency includes the antidegradation information in the EIR. The Regional Board shall make such a request to the lead agency no later than 30 days after the Regional Board receives a Notice of Preparation from the lead agency [CEQA, Section 15096(b)(2)].

PROCEDURE FOR COMPLETE ANTIDEGRADATION ANALYSIS

When undertaking an antidegradation analysis, the Regional Board should proceed as follows:

1. Compare receiving water quality to the water quality objectives established to protect designated beneficial uses.

   The baseline quality of the receiving water determines the level of water quality protection. Baseline quality is defined as the best quality of the receiving water that has existed since 1968 when considering Resolution No. 68-16, or since 1975 under the federal policy, unless subsequent lowering was due to regulatory action consistent with State and federal antidegradation policies. If poorer water quality was permitted, the most recent water quality resulting from permitted action is the baseline water quality to be considered in any antidegradation analysis. Baseline quality is pollutant specific, not waterbody specific. Baseline quality should be determined for each constituent in the discharge which is likely to degrade water quality. The baseline water quality should be representative of the water body, accounting for temporal and spatial variability. Water quality protection depends on the baseline receiving water, as follows:

   a. If baseline water quality is equal to or less than the quality as defined by the water quality objective, water quality shall be maintained or improved to a level that achieves the objectives. Baseline water quality should be compared to all numerical and narrative objectives that protect the actual and potential beneficial uses which would be affected by the proposed discharge. The discharge may be prohibited or allowed as described under 40 CFR 130.7.

   b. If baseline water quality is better than the water quality as defined by the water quality objective, the baseline water quality shall be maintained unless poorer water quality is necessary to accommodate important economic or social development and is considered to be of maximum benefit to the people of the State.

If the receiving water has been designated as an outstanding national resource water in the Region's Basin Plan, or if it can be argued that the waterbody in question deserves the same treatment (for example a wild and scenic river, an area of special biological significance, etc.), no discharge which will lower existing water quality shall be allowed. Lake Tahoe is the only water body in the State presently designated as an outstanding national resource water.

2. Balancing the proposed action against the public interest.

   Ensure that a discharge to high quality water, which is likely to reduce water quality, is not permitted unless the reduction in water quality is offset by maximum public benefit to the people of the State. This step should be performed if a finding of reduced water quality is made. Regional Board staff shall not recommend that the activity be permitted unless all of the following conditions are met:

   a. The proposed action is necessary to accommodate important economic or social development in the area. (Factors to be considered when determining important economic or social development follow.)

b. The reduction in water quality is consistent with maximum public benefit.

c. The reduction in water quality will not unreasonably affect actual or potential beneficial uses.

d. Water quality will not fall below water quality objectives prescribed in the Basin Plan.

The severity and extent of water quality reduction should be weighed when evaluating the benefits required to compensate for that degradation. The magnitude of the proposed project and potential reduction should also determine the scope of impact assessment. The Regional Board should ensure that a systematic impact assessment is conducted.

Factors that should be considered when determining whether the discharge is necessary to accommodate social or economic development and is consistent with maximum public benefit, include:

a. Past, present, and probable beneficial uses of the water.

b. Economic and social costs, tangible and intangible, of the proposed discharge compared to benefits. The economic impacts to be considered are those incurred in order to maintain existing water quality. The financial impact analysis should focus on the ability of the facility to pay for the necessary treatment. The ability to pay depends on the facility's source of funds. In addition to demonstrating a financial impact on the publicly-or privately-owned facility, the analysis must show a significant adverse impact on the community. The long-term and short-term socioeconomic impacts of maintaining existing water quality must be considered. Examples of social and economic parameters that could be affected are employment, housing, community services, income, tax revenues, and land value. To accurately assess the impact of the proposed project, the projected baseline socioeconomic profile of the affected community without the project should be compared to the projected profile with the project.

c. The environmental aspects of the proposed discharge must be evaluated. The proposed discharge--while actually causing a reduction in water quality in a given water body--may be simultaneously causing an increase in water quality in a more environmentally sensitive body of water from which the discharge in question is being diverted; e.g., changing the location of San Francisco's outfall from the Bay to the ocean.

d. The implementation of feasible alternative control measures which might reduce, eliminate, or compensate for negative impacts of the proposed action.

The Regional Board should encourage the participation of the public and appropriate government agencies in the public interest balancing process so that the environmental, social, and economic impacts of the project are accurately assessed. EPA's Water Quality Standards Handbook (Chapter 5) provides additional guidance in assessing financial and socioeconomic impacts.

3. Report on the antidegradation analysis.

The Regional Board must ensure full intergovernmental coordination and public participation in the permitting process. The antidegradation analysis should be summarized in the Fact Sheet for major NPDES permits or the Statement of Basis for minor NPDES permits.

The summary should include all the following information:

a. The water quality parameters and beneficial uses which will be affected by the proposed action and the extent of the impact.

b. The scientific rationale for determining that the proposed action will or will not lower water quality.

c. A description of the alternative measures that were considered.

d. A description of the socioeconomic evaluation.

e. The rationale for determining that the proposed action is or is not justified by socioeconomic considerations.

The findings should specifically state that the Regional Board has considered antidegradation pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16 and finds that the permitted discharge is consistent with those provisions.

cc: All Regional Board Staff
WQ Program Managers

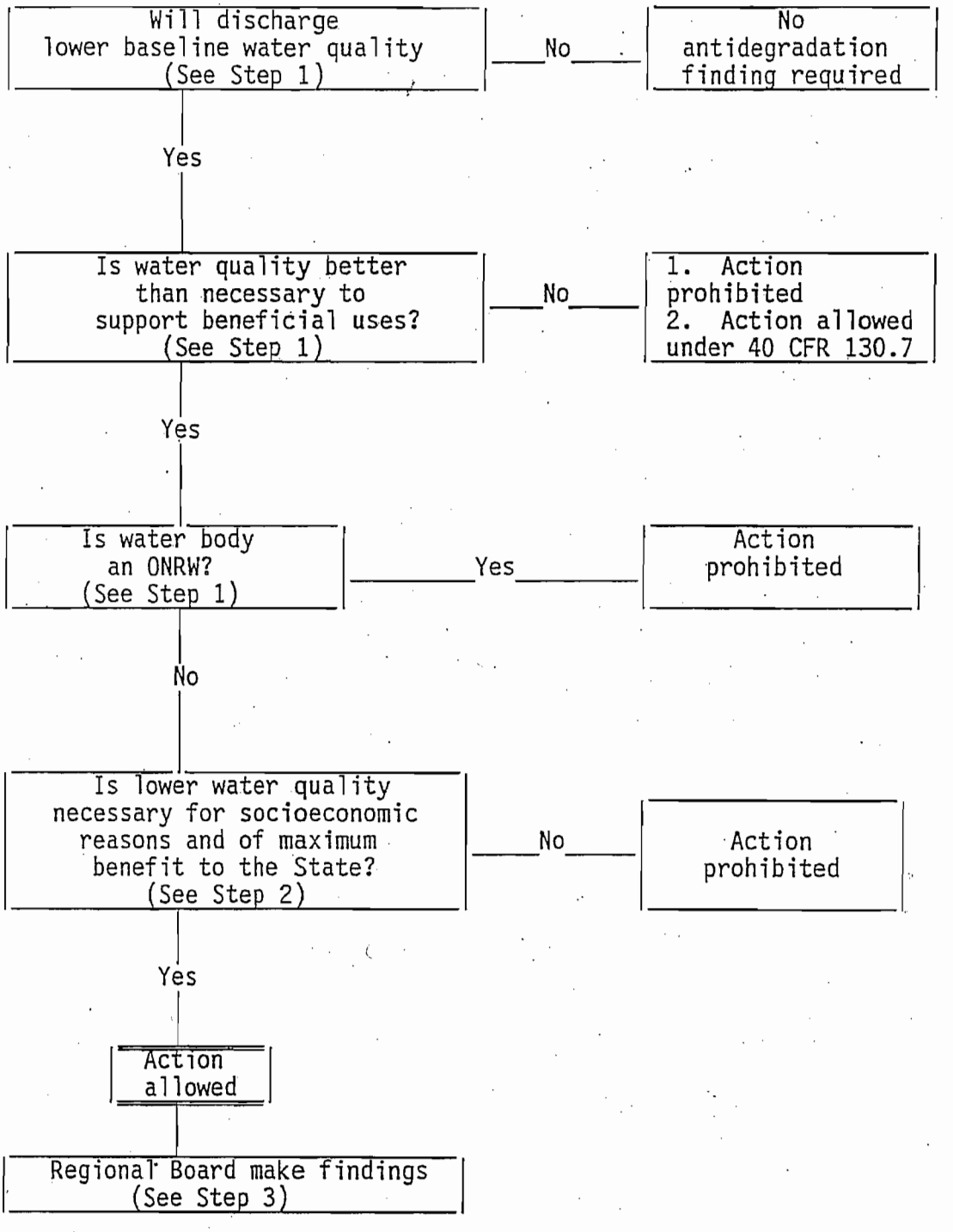

Figure 1 - Decision making flow chart.

STATE WATER RESOURCES CONTROL BOARD

RESOLUTION NO. 68-16

STATEMENT OF POLICY WITH RESPECT TO
MAINTAINING HIGH QUALITY OF WATERS IN CALIFORNIA

WHEREAS the California Legislature has declared that it is the policy of the State that the granting of permits and licenses for unappropriated water and the disposal of wastes into the water of the State shall be so regulated as to achieve highest water quality consistent with maximum benefit to the people of the State and shall be controlled so as to promote the peace, health, safety, and welfare of the people of the State; and

WHEREAS water quality control policies have been and are being adopted for waters of the State; and

WHEREAS the quality of some waters of the State is higher than that established by the adopted policies and it is the intent and purpose of this Board that such higher quality shall be maintained to the maximum extent possible consistent with the declaration of the Legislature;

NOW, THEREFORE, BE IT RESOLVED:

1. Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in the policies.

2. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

3. In implementing this policy, the Secretary of the Interior will be kept advised and will be provided with such information as he will need to discharge his responsibilities under the Federal Water Pollution Control Act.

BE IT FURTHER RESOLVED that a copy of this resolution be forwarded to the Secretary of the Interior as part of California's water quality control policy submission.

CERTIFICATION

The undersigned, Executive Officer of the State Water Resources Control Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on October 24, 1968.

Dated: October 28, 1968

/s/
Kerry W. Mulligan
Executive Officer
State Water Resources
Control Board

The federal antidegradation regulation 40 CFR 131.12, initially adopted in 1975, establishes requirements for protection of high quality waters. To wit:

"Section 131.12 Antidegradation Policy.

(a) The State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation method shall, at a minimum, be consistent with the following:

(1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

(2) Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

(3) Where high quality waters constitute an outstanding national resource, such as waters of national and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

(4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Act.1/"

1/ Section 316(a) of the Clean Water Act states that the thermal component of an effluent limitation need only be stringent enough to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of the receiving water. Section 316(c), in effect, allows thermal discharges from a point source to meet standards imposed by Sections 301 or 303 (balanced indigenous populations) only for a fixed period as noted in Section 316(c). The federal antidegradation regulation is a more-stringent limitation and, thus, cannot be applied to these discharges.

From: Water Quality Standards Handbook, Second Draft, USEPA, June 1989

4.9 Questions and Answers on Antidegradation

This section uses a question and answer format to present information about the origin of the policy, the meaning of various terms, and its application in both general terms and in specific examples. A number of the questions and answers are closely related; the reader is advised to consider the section in its entirety ... rather than to focus on particular answers in isolation. While this section obviously does not address every question which could arise concerning the policy, we hope that the principles it set out will aid the reader in applying the policy in other situations.

These following questions and answers are substantially the same as those in the document entitled Questions and Answers on Antidegradation, August 1985, (designated as Appendix A to Chapter 2 of the Water Quality Standards Handbook, December 1983.) The questions have been renumbered and separated into sections. Minor changes in the answers to question #2 in 4.12.1 have been made to reflect the Clean Water Act Amendments of 1987 or changes in the reference document citations.

4.9.1 General Policy Questions

4.9.1.1 WHAT IS THE ORIGIN OF THE ANTIDEGRADATION POLICY?

The basic policy was established on February 8, 1968, by the Secretary of the U.S. Department of the Interior. It was included in EPA's first water quality standards regulation (40 CFR 130.17, 40 FR 55340-41, November 28, 1975). It was slightly refined and repromulgated as part of the current program regulation published on November 8, 1983 (48 FR 51400, 40 CFR 131.12). An antidegradation policy is one of the minimum elements required to be included in a state's water quality standards.

4.9.1.2 WHERE IN THE CLEAN WATER ACT (CWA) IS THERE A REQUIREMENT FOR ANTIDEGRADATION POLICY OR SUCH A POLICY EXPRESSED?

There is no explicit requirement for such a policy in the Act. However, the policy is consistent with the spirit, intent, and goals of the Act, especially the clause "... restore and maintain the chemical, physical and biological integrity of the Nation's waters" (Section 101(a)) and arguably is covered by the provision of Section 303(a) which made water quality standard requirements under prior law the "starting point" for CWA water quality requirements. In addition, Section 303(d)(4)(B) of the Clean Water Act Amendments of 1987 explicitly refers to satisfaction of the antidegradation requirements of 40 CFR 131.12 prior to taking various actions which would lower water quality. This demonstrates that the antidegradation policy is clearly recognized by Congress and is expected to be implemented to meet the goals of the Clean Water Act.

4.9.1.3 CAN A STATE JUSTIFY NOT HAVING AN ANTIDEGRADATION POLICY IN ITS WATER QUALITY STANDARDS?

EPA's water quality standards regulation requires each state to adopt an antidegradation policy and specifies the minimum requirements for a policy. If not included in the standards regulation of a state, the policy must be specifically referenced in the water quality standards so that the functional relationship between the policy and the standards is clear. Regardless of the location of the policy, it must meet all applicable requirements.

4.9.1.4 WHAT HAPPENS IF A STATE'S ANTIDEGRADATION POLICY DOES NOT MEET THE REGULATORY REQUIREMENTS?

If this occurs either through State action to revise its policy or through revised federal requirements, the state would be given an opportunity to make its policy consistent with the regulation. If this is not done, EPA has the authority to promulgate the policy for the state pursuant to Section 303(c)(4) of the Clean Water Act.

4.9.1.5 WHAT COULD HAPPEN IF A STATE FAILED TO IMPLEMENT ITS ANTIDEGRADATION POLICY PROPERLY?

If a state issues an NPDES permit which violates the required antidegradation policy, it would be subject to a discretionary EPA veto under Section 402(d) or to a citizen challenge. In addition to actions on permits, any wasteload allocations and total maximum daily loads violating the antidegradation policy are subject to EPA disapproval and EPA promulgation of a new wasteload allocation/total maximum daily load under Section 303(d) of the Act. If a significant pattern of violation was evident, EPA could constrain the award of grants or possibly revoke any federal permitting capability that had been delegated to the state. If the state issues a Section 401 certification (for an EPA issued NPDES permit) which fails to reflect the requirements of the antidegradation policy, EPA will, on its own initiative, add any additional or more stringent effluent limitations required to ensure compliance with Section 301(b)(1)(C). If the faulty Section 401 certification related to permits issued by other federal agencies (e.g., a Corp of Engineers Section 404 permit), EPA could comment unfavorably upon permit issuance. The public, of course, could bring pressure upon the permit issuing agency.

4.9.1.6 WILL THE APPLICATION OF THE ANTIDEGRADATION POLICY ADVERSELY IMPACT ECONOMIC DEVELOPMENT?

This concern has been raised since the inception of the antidegradation policy. The answer remains the same. The policy has been carefully structured to minimize adverse effects on economic development while protecting the water quality goals of the Act. As Secretary Udall put it in 1968, the policy serves "...the dual purpose of carrying out the letter and spirit of the Act without interfering unduly with further economic development" (Secretary Udall, February, 1968). Application of the policy could affect the levels and/or kinds of waste treatment necessary or result in the use of alternate sites where the environmental impact would be less damaging. These effects could have economic implications as do all other environmental controls.

4.9.1.7 HOW MAY THE PUBLIC PARTICIPATION REQUIREMENTS BE SATISFIED?

This requirement may be satisfied in several ways. The state may obviously hold a public hearing or hearings. The state may also satisfy the requirement by providing the opportunity for the public to request a hearing. Activities which may affect several water bodies in a river basin or sub-basin may be considered in a single hearing. To ease the resource burden on both the state and public, standards issues may be combined with hearings on environmental impact statements, water management plans, or permits. However, if this is done, the public must be clearly informed that possible changes in water quality standards are being considered along with other activities. In other words, it is inconsistent with the water quality standards regulation to "back-door" changes in standards through actions on EIS's wasteload allocations, plans, or permits.

4.9.1.8 IS POLLUTION RESULTING FROM NONPOINT SOURCE ACTIVITIES SUBJECT TO PROVISIONS OF THE ANTIDEGRADATION POLICY?

Nonpoint source activities are not exempt from the provisions of the antidegradation policy. The language of Section 131.12 (a)(2) of the regulation: "Further, the state shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control" reflects statutory provisions of the Clean Water Act. While it is true that the Act does not establish a regulatory program for nonpoint sources, it clearly intends that the BMPs developed and approved under Sections 205(j), 208 and 303(e) be aggressively implemented by the states.

4.9.1.9 WHAT IS MEANT BY THE REQUIREMENT THAT WHERE A THERMAL DISCHARGE IS INCLUDED, THE ANTIDEGRADATION POLICY SHALL BE CONSISTENT WITH SECTION 316 OF THE ACT?

This requirement is contained in Section 131.12 (a)(4) of the regulation and is intended to coordinate the requirements and procedures of the antidegradation policy with those established in the Act for setting thermal discharge limitations. Regulations implementing Section 316 may be found at 40 CFR 124.66. The statutory scheme and legislative history indicate that limitations developed under Section 316 take precedence over other requirements of the Act.

4.9.1.10 WHAT IS THE RELATIONSHIP BETWEEN THE ANTIDEGRADATION POLICY, STATE WATER RIGHTS USE LAWS AND SECTION 101(g) OF THE CLEAN WATER ACT WHICH DEALS WITH STATE AUTHORITY TO ALLOCATE WATER QUANTITIES?

The exact limitations imposed by section 101(g) are unclear, however, the legislative history and the courts interpreting it do indicate that it does not nullify water quality measures authorized by CWA (such as water quality standards and their upgrading, and NPDES and 402 permits) even if such measures incidentally affect individual water rights. Those authorities also indicate that if there is a way to reconcile water quality needs and water quantity allocations, such accommodation should be pursued. In other words, where there are alternate ways

to meet the water quality requirements of the Act, the one with least disruption to water quantity allocations should be chosen. Where a planned diversion would lead to a violation of water quality standards (either the antidegradation policy or a criterion), a 404 permit associated with the diversion should be suitably conditioned if possible and/or additional nonpoint and/or point source controls should be imposed to compensate.

4.9.1.11 AFTER READING THE REGULATION, THE PREAMBLE, AND ALL THESE QUESTIONS AND ANSWERS, I STILL DON'T UNDERSTAND ANTIDEGRADATION, WHOM CAN I TALK TO?

Call Mr. Dave Sabeck at the Standards Branch at: (202) 475-7315, or Mr. Phil Woods, Water Quality Standards Coordinator, at EPA Region 9 at (415) 351-8653.

4.9.2 Protection of Existing Uses

4.9.2.1 WHAT IS THE PROPER INTERPRETATION OF THE TERM "AN EXISTING USE"?

An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur (unless there are physical problems which prevent the use regardless of water quality). An example of the latter is an area where shellfish are propagating and surviving in a biologically suitable habitat and are available and suitable for harvesting. Such facts clearly establish that shellfish harvesting is an "existing" use, not one dependent on improvements in water quality. To argue otherwise would be to say that the only time an aquatic protection use "exists" is if someone succeeds in catching fish.

4.9.2.2 THE WATER QUALITY STANDARDS REGULATION STATES THAT "EXISTING USES AND THE LEVEL OF WATER QUALITY NECESSARY TO PROTECT THE EXISTING USES SHALL BE MAINTAINED AND PROTECTED." HOW FULLY AND AT WHAT LEVEL OF PROTECTION IS AN EXISTING USE TO BE PROTECTED IN ORDER TO SATISFY THE ABOVE REQUIREMENT?

No activity is allowable under the antidegradation policy which would partially or completely eliminate any existing use whether or not that use is designated in a state's water quality standards. The aquatic protection use is a broad category requiring further explanation. Species that are in the water body and which are consistent with the designated use (i.e., not aberrational) must be protected, even if not prevalent in number or importance. Nor can activity be allowed which would render the species unfit for maintaining the use. Water quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species. (See Section 4.9.2.9 for situation where an aberrant sensitive species may exist.) Any lowering of water quality below this full level of protection is not allowed. A state may develop subcategories of aquatic protection uses but cannot choose different levels of protection for like uses. The fact that sport or commercial fish are not present does not mean that the water may not be supporting an aquatic life protection function. An existing aquatic community composed entirely of invertebrates and plants, such as may be found in a pristine alpine tributary stream should still be protected whether or not such a stream supports a fishery. Even though the

shorthand expression "fishable/swimmable" is often used, the actual objective of the act is to "restore and maintain the chemical, physical, and biological integrity of our Nation's waters" (Section 101(a)). The term "aquatic life" would more accurately reflect the protection of the aquatic community that was intended in Section 101(a)(2) of the Act.

4.9.2.3 IS THERE ANY SITUATION WHERE AN EXISTING USE CAN BE REMOVED?

In general, no. Water quality may sometimes be affected, but an existing use, and the level of water quality to protect it must be maintained (Section 131.12(a)(1) and (2) of the regulation). However, the state may limit or not designate such a use if the reason for such action is non-water quality related. For example, a state may wish to impose a temporary shellfishing ban to prevent over-harvesting and ensure an abundant population over the long run, or may wish to restrict swimming from heavily trafficked areas. If the state chooses, for non-water quality reasons, to limit use designations, it must still adopt criteria to protect the use if there is a reasonable likelihood it will actually occur (e.g., swimming in a prohibited water). However, if the state's action is based on a recognition that water quality is likely to be lowered to the point that it no longer is sufficient to protect and maintain an existing use, then such action is inconsistent with the antidegradation policy.

4.9.2.4 HOW DOES THE REQUIREMENT THAT THE LEVEL OF WATER QUALITY NECESSARY TO PROTECT THE EXISTING USE(S) BE MAINTAINED AND PROTECTED, WHICH APPEARS IN SECTIONS 131.12(a)(1), (2), AND (3) OF THE WATER QUALITY STANDARDS REGULATION, ACTUALLY WORK?

Section 131.12(a)(1), as described in the Preamble to the regulation, provides the absolute floor of water quality in all waters of the United States. This paragraph applies a minimum level of protection to all waters, however, it is most pertinent to waters having beneficial uses that are less than the Section 101(a)(2) goals of the Act. If it can be proven, in that situation, that water quality exceeds that necessary to fully protect the existing use(s) and exceeds water quality standards but is not of sufficient quality to cause a better use to be achieved, then that water quality may be lowered to the level required to fully protect the existing use as long as existing water quality standards and downstream water quality standards are not affected. If this does not involve a change in standards, no public hearing would be required under Section 303(c). However, public participation would still be provided in connection with the issuance of an NPDES permit or amendment of a 208 plan. If, however, analysis indicates that the higher water quality does result in a better use, even if not up to the Section 101(a)(2) goals, then the water quality standards must be upgraded to reflect the uses presently being attained (Section 131.10(i)). Section 131.12(a)(2) applies to waters whose quality exceeds that necessary to protect the Section 101(a)(2) goals of the Act. In this case, water quality may not be lowered to less than the level necessary to fully protect the "fishable /swimmable" uses and other existing uses and may be lowered even to those levels only after following all the provisions described in Section 131.12(a)(2). This requirement applies to individual water quality parameters. Section 131.12(a)(3) applies to Outstanding National Resource Waters (ONRW) where the ordinary use classifications and supporting criteria are not appropriate. As described in the Preamble to the water quality standards regulation "States may allow some limited

activities which result in temporary and short-term changes in water quality," but such changes in water quality should not alter the essential character or special use which makes the water an ONRW. Any one or a combination of several activities may trigger the antidegradation policy analysis as discussed above. Such activities include a scheduled water quality standards review, the establishment of new or revised wasteload allocations NPDES permits, the demonstration of need for advanced treatment or request by private or public agencies or individuals for a special study of the water body.

4.9.2.5 WILL AN ACTIVITY WHICH WILL DEGRADE WATER QUALITY, AND PRECLUDE AN EXISTING USE IN ONLY A PORTION OF A WATER BODY (BUT ALLOW IT TO REMAIN IN OTHER PARTS OF THE WATER BODY) SATISFY THE ANTIDEGRADATION REQUIREMENT THAT EXISTING USES SHALL BE MAINTAINED AND PROTECTED?

No. Existing uses must be maintained in all parts of the water body segment in question other than in restricted mixing zones. For example, an activity which lowers water quality such that a buffer zone must be established within a previous shellfish harvesting area is inconsistent with the antidegradation policy. (However, a slightly different approach is taken for fills in wetlands, as explained in Question 4.9.2.7.)

4.9.2.6 DOES ANTIDEGRADATION APPLY TO POTENTIAL USES?

No. The focus of the antidegradation policy is on protecting existing uses. Of course, insofar as existing uses and water quality are protected and maintained by the policy, the eventual improvement of water quality and attainment of new uses may be facilitated. The use attainability requirements of Section 131.10 also help ensure that attainable potential uses are actually attained. (See also sections 4.9.2.1 and 4.9.2.4)

4.9.2.7 FILL OPERATIONS IN WETLANDS AUTOMATICALLY ELIMINATE ANY EXISTING USE IN THE FILLED AREA. HOW IS THE ANTIDEGRADATION POLICY APPLIED IN THAT SITUATION?

Since a literal interpretation of the antidegradation policy could result in preventing the issuance of any wetland fill permit under Section 404 of the Clean Water Act, and it is logical to assume that Congress intended some such permits to be granted within the framework of the Act, EPA interprets Section 131.12 (a)(1) of the antidegradation policy to be satisfied with regard to fills in wetlands if the discharge did not result in "significant degradation" to the aquatic ecosystem as defined under Section 230.10(c) of the Section 404(b)(1) guidelines. If any wetlands were found to have better water quality than "fishable/swimmable", the state would be allowed to lower water quality to the no significant degradation level as long as the requirements of Section 131.12(a)(2) were followed. As for the ONRW provision of antidegradation (131.12(a)(3)), there is no difference in the way it applies to wetlands and other water bodies.

4.9.2.9 A STREAM, DESIGNATED AS A WARM WATER FISHERY, HAS BEEN FOUND TO CONTAIN A SMALL, APPARENTLY NATURALLY OCCURRING POPULATION OF A COLD-WATER GAME FISH. THESE FISH APPEAR TO HAVE ADAPTED TO THE NATURAL WARM WATER TEMPERATURES OF THE STREAM WHICH WOULD NOT NORMALLY ALLOW THEIR GROWTH AND REPRODUCTION. WHAT IS THE EXISTING USE WHICH MUST BE PROTECTED UNDER SECTION 131.12(a)(1)?

Section 131.12(a)(1) states that "Existing instream water uses and level of water quality necessary to protect the existing uses shall be maintained and protected." While sustaining a small cold-water fish population, the stream does not support an existing use of a "cold-water fishery." The existing stream temperatures are unsuitable for a thriving cold-water fishery. The small marginal population is an artifact and should not be employed to mandate a more stringent use (true cold-water fishery) where natural conditions are not suitable for that use. A use attainability analysis or other scientific assessment should be used to determine whether the aquatic life population is in fact an artifact or is a stable population requiring water quality protection. Where species appear in areas not normally expected, some adaptation may have occurred and site specific criteria may be appropriately developed. Should the cold-water fish population consist of a threatened or endangered species, it may require protection under the Endangered Species Act. Otherwise the stream need only be protected as a warm water fishery.

4.9.2.10 HOW DOES EPA'S ANTIDEGRADATION POLICY APPLY TO A WATERBODY WHERE A CHANGE IN MAN'S ACTIVITIES IN OR AROUND THAT WATERBODY WILL PRECLUDE AN EXISTING USE FROM BEING FULLY MAINTAINED?

If a planned activity will foreseeably lower water quality to the extent that it no longer is sufficient to protect and maintain the existing uses in that waterbody, such an activity is inconsistent with EPA's antidegradation policy which requires that existing uses are to be maintained. In such a circumstance, the planned activity must be avoided or adequate mitigation or preventive measures must be taken to ensure that the existing uses and the water quality to protect them will be maintained. In addition, in "high quality waters" under Section 131.12(a)(2), before any lowering of water quality occurs, there must be: 1) a finding that it is necessary in order to accommodate important economical or social development in the area in which the waters are located, (2) full satisfaction of all intergovernmental coordination and public participation provisions, and (3) assurance that the highest statutory and regulatory requirements and best management practices for pollutant controls are achieved. This provision can normally be satisfied by the completion of Water Quality Management Plan updates or by a similar process that allows for public participation and intergovernmental coordination. This provision is intended to provide relief only in a few extraordinary circumstances where the economic and social need for the activity clearly outweighs the benefit of maintaining water quality above that required for "fishable/swimmable" water, and the two cannot both be achieved. The burden of demonstration on the individual proposing such activity will be very high. In any case, moreover, the existing use must be maintained and the activity shall not preclude the maintenance of a "fishable/swimmable" level of water quality protection.

4.9.2.11 IF A WATER BODY WITH A PUBLIC WATER SUPPLY DESIGNATED USE IS, FOR NON-WATER QUALITY REASONS, NO LONGER USED FOR DRINKING WATER MUST THE STATE RETAIN THE PUBLIC WATER SUPPLY USE AND CRITERIA IN ITS STANDARDS?

Under 40 CFR 131.10(h)(1), the state may delete the public water supply use designation and criteria if the state adds or retains other use designations for the waterbodies which have more stringent criteria. The state may also delete the use and criteria if the public water supply is not an "existing use" as defined in Section 131.3 (i.e., achieved on or after November 1975), as long as one of the Section 131.10(g) justifications for removal is met. Otherwise, the state must maintain the criteria even if it restricts the actual use on non-water quality grounds, as long as there is any possibility the water could actually be used for drinking. (This is analogous to the swimming example in the preamble.)

4.9.3 Protection of Water Quality in High Quality Waters

4.9.3.1 IN HIGH QUALITY WATERS, ARE NEW DISCHARGERS OR EXPANSION OF EXISTING FACILITIES SUBJECT TO THE PROVISIONS OF ANTIDEGRADATION?

Yes. Since such activities would presumably lower water quality, they would not be permissible unless the state finds that it is necessary to accommodate important economic or social development (Section 131.12(a)(2)). In addition the minimum technology based requirements must be met, including new source performance standards. This standard would be implemented through the wasteload and NPDES permit process for such new or expanded sources.

4.9.3.2 WHAT DOES EPA MEAN BY "...THE STATE SHALL ENSURE THAT THERE SHALL BE ACHIEVED THE HIGHEST STATUTORY AND REGULATORY REQUIREMENTS FOR ALL NEW AND EXISTING POINT SOURCES AND ALL COST EFFECTIVE AND REASONABLE BEST MANAGEMENT PRACTICES FOR NONPOINT SOURCE CONTROL" (SECTION 131.12(a)(2)?

This requirement ensures that the limited provision for lowering water quality of high quality waters down to "fishable/swimmable" levels will not be used to undercut the Clean Water Act requirements for point source and nonpoint source pollution control. Furthermore, by ensuring compliance with such statutory and regulatory controls, there is less chance that a lowering of water quality will be sought in order to accommodate new economic and social development.

4.9.3.3 WHAT DOES EPA MEAN BY "...IMPORTANT ECONOMIC OR SOCIAL DEVELOPMENT IN THE AREA IN WHICH THE WATERS ARE LOCATED" IN SECTION 131.12(a)(2)?

This phrase is simply intended to convey a general concept regarding what level of social and economic development could be used to justify a change in high quality waters. Any more exact meaning will evolve through case-by-case application under the state's continuing planning process. Although EPA has issued suggestions on what might be considered in determining economic or social impacts, the Agency has no predetermined level of activity that is defined as "important" (see Section 4.4.3.3).

4.9.4 Wasteload Allocations

4.9.4.1 WHAT IS THE RELATIONSHIP BETWEEN WASTELOAD ALLOCATIONS, TOTAL MAXIMUM DAILY LOADS, AND THE ANTIDEGRADATION POLICY?

Wasteload allocations distribute the allowable pollutant loadings to a stream between dischargers. Such allocations also consider the contribution to pollutant loadings from nonpoint sources. Wasteload allocations must reflect applicable state water quality standards including the antidegradation policy. No wasteload allocation can be developed or NPDES permit issued that would result in a standard being violated, or, in the case of waters whose quality exceeds that necessary for the Section 101(a)(2) goals of the Act, can result in a lowering of water quality unless the applicable public participation, intergovernmental review and baseline control requirements of the antidegradation policy have been met.

4.9.4.2 DO THE INTERGOVERNMENTAL COORDINATION AND PUBLIC PARTICIPATION REQUIREMENTS WHICH ESTABLISH THE PROCEDURES FOR DETERMINING THAT WATER QUALITY WHICH EXCEEDS THAT NECESSARY TO SUPPORT THE SECTION 101(a)(2) GOAL OF THE ACT MAY BE LOWERED APPLY TO CONSIDERING ADJUSTMENTS TO THE WASTELOAD ALLOCATIONS DEVELOPED FOR THE DISCHARGERS IN THE AREA?

Yes. Section 131.12(a)(2) of the water quality standards regulation is directed towards changes in water quality per se, not just toward changes in standards. The intent is to ensure that no activity which will cause water quality to decline in existing high quality waters is undertaken without adequate public review. Therefore, if a change in wasteload allocation could alter water quality in high quality waters, the public participation and coordination requirements apply.

4.9.4.3 IS THE ANSWER TO THE ABOVE QUESTION DIFFERENT IF THE WATER QUALITY IS LESS THAN THAT NEEDED TO SUPPORT "FISHABLE/SWIMMABLE" USES?

Yes. Nothing in either the water quality standards or the wasteload allocation regulations requires the same degree of public participation or intergovernmental coordination for such waters as is required for high quality waters. However, as discussed in Section 4.9.1.7, public participation would still be provided in connection with the issuance of a NPDES permit or amendment of a 208 plan. Also, if the action which causes reconsideration of the existing wasteloads (such as dischargers withdrawing from the area) will result in an improvement in water quality which makes a better use attainable, even if not up to the "fishable/swimmable" goal, then the water quality standards must be upgraded and full public review is required for any action affecting changes in standards. Although not specifically required by the standards regulation between the triennial reviews, we recommend that the state conduct a use attainability analysis to determine if water quality improvement will result in attaining higher uses than currently designated in situations where significant changes in wasteloads are expected.

4.9.4.4 SEVERAL FACILITIES ON A STREAM SEGMENT DISCHARGE PHOSPHORUS CONTAINING WASTES. AMBIENT PHOSPHORUS CONCENTRATIONS MEET CLASS B STANDARDS, BUT BARELY. THREE DISCHARGERS ACHIEVE ELIMINATION OF DISCHARGE BY DEVELOPING A LAND TREATMENT SYSTEM. AS A RESULT, ACTUAL WATER QUALITY IMPROVES (I.E., PHOSPHORUS LEVELS DECLINE) BUT NOT QUITE TO THE LEVEL NEEDED TO MEET CLASS A (FISHABLE/S WIMMABLE) STANDARDS. CAN THE THREE REMAINING DISCHARGERS NOW INCREASE THEIR PHOSPHORUS DISCHARGE WITH THE RESULT THAT WATER QUALITY DECLINES (PHOSPHORUS LEVELS INCREASE) TO PREVIOUS LEVELS?

Nothing in the water quality standards regulation explicitly prohibits this (see Sections 4.9.2.4 and 4.9.4.3). Of course, changes in their NPDES permit limits may be subject to non-water quality constraints, such as BPT or BAT, which may restrict this.

4.9.4.5 SUPPOSE IN THE ABOVE SITUATION WATER QUALITY IMPROVES TO THE POINT THAT ACTUAL WATER QUALITY NOW MEETS CLASS A REQUIREMENTS. IS THE ANSWER DIFFERENT?

Yes. The standards must be upgraded (see Section 4.9.2.4).

4.9.4.6 AS AN ALTERNATIVE CASE, SUPPOSE PHOSPHORUS LOADINGS GO DOWN AND WATER QUALITY IMPROVES BECAUSE OF A CHANGE IN FARMING PRACTICES, E.G., INITIATION OF A SUCCESSFUL NONPOINT PROGRAM. ARE THE ABOVE ANSWERS THE SAME?

Yes. Whether the improvement results from a change in point or nonpoint source activity is immaterial to how any aspect of the standards regulation operates. Section 131.10(d) clearly indicates that uses are deemed attainable if they can be achieved by "... cost-effective and reasonable best management practices for nonpoint source control". Section 131.12(a)(2) of the antidegradation policy contains essentially the same wording.

4.9.4.7 WHEN A POLLUTANT DISCHARGE CEASES FOR ANY REASON, MAY THE WASTELOAD ALLOCATIONS FOR THE OTHER DISCHARGES IN THE AREA BE ADJUSTED TO REFLECT THE ADDITIONAL LOADING AVAILABLE?

This may be done consistent with the antidegradation policy only under two circumstances: (1) in "high quality waters" where after the full satisfaction of all public participation and intergovernmental review requirements, such adjustments are considered necessary to accommodate important economic or social development and the "threshold" level requirements are met; or (2) in less than "high quality waters", when the expected improvement in water quality will not cause a better use to be achieved, the adjusted loads still meet water quality standards, and the new wasteload allocations are at least as stringent as technology-based limitations. Of course, all applicable requirements of the Section 402 permit regulations would have to be satisfied before a permittee could increase its discharge.

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region 9

Guidance on

Implementing the Antidegradation Provisions

of 40 CFR 131.12

/s/
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June 3, 1987
Date

PURPOSE

This document provides general program guidance for the States of Region 9 on the development of procedures for implementing State antidegradation policies. The focus of this guidance is on 40 CFR 131.12 of the water quality standards regulation (promulgated in 48 FR 51407, dated November 8, 1983) which sets out requirements to be met before any action is taken that would lower the quality of the nation's waters.

BACKGROUND

Section 101(a) of the Clean Water Act defines the national goal of restoring and maintaining the chemical, physical and biological integrity of the Nation's waters. Section 303(a)(4) of the Clean Water Act explicitly refers to satisfaction of the antidegradation requirements of 40 CFR 131.12 prior to taking various actions which would lower water quality. 40 CFR 131.12 requires that antidegradation provisions at least as stringent as those specified in that regulation be adopted by States as part of their water quality standards.

This guidance identifies the tasks to be performed by States to implement Section 131.12 of the water quality standards regulation. Those tasks that need the development of decision criteria by the States are identified. Such criteria are necessary to define those actions which require detailed economic or water quality impact analyses. The Agency expects States to develop and document these criteria in their antidegradation implementation procedures, for review and approval by EPA regional offices. The Agency's objective is to achieve the goals of the Act through an integrated approach to eliminating water pollution which includes the consistent application of State antidegradation policies. Figure 1 lays out the decision making process of an antidegradation analysis.

Many of the procedures identified herein are already performed by States as part of their regulatory programs. Consequently, this document primarily serves to delineate, in a consistent manner, the criteria EPA Region 9 will be using to evaluate both State and EPA decisions, for compliance with 40 CFR 131.12.

TIER III WATERS - Outstanding National Resource Waters

40 CFR 131.12(a)(3) prohibits any action which would lower water quality in waters designated as Outstanding National Resource Waters (ONRWs). Examples of such waters include, but are not limited to, waters of National and State parks and wildlife refuges, and waters of exceptional recreational or ecological significance.

TIER I WATERS

40 CFR 131.12(a)(1) prohibits any action which would lower water quality below that necessary to maintain and protect existing uses. In cases where

water quality is just adequate to support the propagation of fish, shell fish and wildlife and recreation in and on the water, such water quality must be maintained and protected. In cases where water quality is lower than necessary to support these uses, the requirements in Section 303(d) of the Act, 40 CFR 131.10 and other pertinent regulations must be satisfied. Guidance concerning actions affecting these waters has been published elsewhere and will not be repeated here.

TIER II WATERS - High Quality Waters

Applicability

40 CFR 131.12 establishes certain minimum requirements for States to adopt regulating actions which would lower water quality in high quality waters. These waters are defined as those in which water quality exceeds that necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water. Any action which would result in, or which would permit, a lowering of water quality, must be addressed in State implementation procedures. Actions covered by antidegradation provisions include, but are not limited to the following:

Permit Actions

1. Issuance/Re-issuance/Modification of NPDES permits.
2. Issuance of variances (e.g. 301(h), 301(m), etc.).
3. Issuance of permits for urban runoff.
4. Issuance of Section 404 permits.
5. Adoption of or alteration of mixing zones.
6. Relocation of discharge.
7. Commencement of discharge from a new source.
8. Increases in the discharge of pollutants from point sources due to:
   a. Industrial production increases.
   b. Municipal growth.
   c. New sources.
   d. Etc.

Standards/Load Allocation Actions

1. Water quality standards revisions.
2. Revision of wasteload allocations.

3. Reallocation of abandoned loads.

4. Section 401 certifications (for example; concerning FERC licenses, Corps' actions, etc.).

5. Section 208 or Section 303(e) approvals.

6. WQM plan approvals.

"Nonpoint Source" Actions

1. Changes in BMPs.

2. Resource management plan approvals.

3. Land Management (e.g. Forest) plan adoptions, certifications or approvals.

4. Changes in regulated agricultural activities.

5. Changes in regulated silvicultural activities.

6. Changes in regulated mining activities.

7. Construction and operation of roads, dams, etc.

Other Actions

1. RCRA/CERCLA actions.

2. Construction grant activities.

3. Other "major Federal actions" (pursuant to NEPA and the Endangered Species Act).

4. Water quantity/water rights actions which affect water quality.

5. Federal actions regulated by Section 313 of the Clean Water Act.

Prior to proceeding with a detailed analysis of these or similar actions, the affected water body should be assessed to determine whether or not it falls into either Tier I or Tier III. If so, actions which would lower water quality in such waters are prohibited. Otherwise, the water body should be assessed to determine the adequacy of the beneficial uses and water quality criteria designated for that water body. Adequate water quality standards must be adopted and approved for an affected water body, pursuant to 40 CFR 131 prior to allowing any action to proceed which would lower water quality in that water body.

The first step in any antidegradation analysis is to determine whether or not the proposed action will lower water quality (see Figure 1). If the action will not lower water quality, no further analysis is needed and EPA

considers 40 CFR 131.12 to be satisfied. If the action could or will lower water quality, and the affected water is not a Tier I or Tier III water, then the steps to be followed to determine whether or not 40 CFR 131.12 is satisfied are described in the following sections of this guidance.

Both point and nonpoint sources of pollution are subject to antidegradation requirements. While point sources are generally well regulated, procedures for controlling nonpoint source pollution have not been as extensively defined. Cost-effective and reasonable best management practices for nonpoint source controls must be designed to meet water quality standards. EPA policy, first issued as SAM-32 on November 14, 1978, states that where applicable water quality standards are not met, revised or additional best management practices (BMPs) should be applied in an iterative process to improve water quality to the point that standards are attained, and that designated uses are maintained and protected. In Region 9, States generally have broad authority to regulate nonpoint sources. As part of their implementation methodologies, States must adopt procedures which adequately assure that nonpoint sources of water pollution will comply with the antidegradation requirements of 40 CFR 131.12.

Implementation Procedures

Four basic elements should be included in State implementation procedures to ensure that actions affecting water quality are consistent with the provisions of 40 CFR 131.12. They are:

- Task A - Identify Actions that Require Detailed Water Quality and Economic Impact Analyses
- Task B - Determine that Lower Water Quality Will Fully Protect Designated Uses
- Task C - Determine That Lower Water Quality is Necessary to Accommodate Important Economic or Social Development in the Area in which the Waters are Located
- Task D - Complete Intergovernmental Coordination and Public Participation

Task A - Identify Actions that Require Detailed Water Quality and Economic Impact Analyses

This task established the types of analyses required for all actions that lower water quality in Tier II waters and decision criteria that define the degree of water quality and economic analysis required.

State procedures should include three parts. First, the State should develop procedures to document the degree to which water quality exceeds that necessary to protect the uses. Ambient monitoring data can be used to provide this documentation. States must adopt procedures to assure that, where little or no data exists, adequate information will be available to determine the existing quality of the water body or bodies, which could be adversely affected by the proposed action. Such procedures should include

both an assessment of existing water quality and a determination of which water quality parameters and beneficial uses are likely to be affected. These assessments and determinations could be performed either by the State or the party proposing the action in question.

Second, the State should develop procedures that quantify the extent to which water quality will be lowered as a result of the proposed action. Simple mass balance calculations or more detailed mathematics modeling, such as that contained in wasteload allocations, can provide this information.

Third, the State should develop decision criteria to define the degree of water quality change that warrants detailed water quality and economic impact analyses. Decision criteria could be based on direct measures, such as an absolute or percent change in ambient concentrations of the affected parameter or indirect measures such as changes in primary productivity caused by nutrients or changes in diurnal dissolved oxygen fluctuations.

Repeated or multiple small changes in water quality (such as those resulting from actions which do not require detailed analyses) can result in significant water quality degradation. To prevent such cumulative adverse impacts, a baseline of water quality must be established for each potentially affected water body, prior to allowing any action which would lower the quality of that water. This baseline should remain fixed unless some action improves water quality. At such time, the baseline should be adjusted accordingly.

Proposed actions to lower water quality should then be evaluated with respect to the baseline and the resultant water quality change should be determined. This determination should include the cumulative impacts of all previous and proposed actions and reasonably foreseeable actions which would lower water quality below the established baseline. Should the cumulative impact of actions significantly degrade water quality, more detailed water quality and economic impact analyses would be necessary.

In any case, whether or not water quality is significantly lowered (thus leading to an economic analysis), the State must find that any action which would lower water quality is necessary to accommodate important economic and social development. Such a finding must include, at a minimum, the following determinations:

1. That economic and social development will occur, e.g., there will be new or increased production of goods or services by the party proposing the change, population will grow in the service area of a sewage treatment plant, etc.

2. That this economic or social development requires the lowering of water quality which cannot be mitigated through reasonable means.

3. That the lower water quality does not result from inadequate wastewater treatment facilities, less-than-optimal operation of adequate treatment facilities, or failure to implement or comply with methodologies to reduce or eliminate nonpoint source pollution.

Task B - Determine that Lower Water Quality Will Fully Maintain and Protect Designated Uses

All actions that could lower water quality in Tier II waters require a determination that existing uses will be fully maintained and protected. States should develop methodologies for making this determination.

Tier II waters, by definition, are those in which the water quality is better than necessary to support and maintain the biota and beneficial uses of the water. In most cases, specific numerical standards do not exist to protect these uses. Where such standards do exist, they are generally established to provide the minimum acceptable quality to protect the beneficial uses of the water. Often, such standards are established on a statewide or drainage basin-wide basis and thus may not adequately protect the biota or the uses of specific reaches. Consequently, comparing existing or projected water quality with adopted standards may not adequately define whether or not beneficial uses will be fully maintained and protected.

Water quality must also meet any applicable public health standards as well as maintain and protect the existing growth and reproduction of resident species. The water quality criteria guidance developed by EPA per Section 304(a) of the Clean Water Act provides a basis for this assessment. However, national water quality criteria (such as those contained in the "Gold Book") may not fully protect resident species. The criteria may not protect locally occurring species that either may not have been tested, or that have been tested, but require greater protection than the criteria provide. This determination involves a comparison of the species upon which biological testing has been completed in the criteria development documents with the species resident to the water body where water quality may be lowered. If the resident species are not adequately represented in the database, additional testing should be completed before lower water quality is allowed. Implementation methods should include procedures for making this comparison and define the circumstances (e.g., in terms of water quality change or extent of the biological testing database) that would require additional biological testing before water quality can be lowered.

Water quality criteria for dissolved oxygen or conventional and non-conventional pollutants may be subject to the same limitations and should be considered in the same way. For parameters for which no criteria guidance has been developed, biological testing or acceptable site-specific criteria may be used to determine that lower water quality will fully maintain and protect designated uses.

The lowering of water quality through the discharge of conservative or persistent pollutants merits more intensive consideration by States, due to the bioaccumulative potential of these pollutants. These pollutants, particularly carcinogens, which are considered to have no safe "threshold" concentration, should have more stringent antidegradation requirements established for their analysis.

Other methods of determining whether or not beneficial uses are being maintained and protected include biological assessments, such as the aquatic ecoregions procedure, or ambient toxicity testing using standardized species. In some cases, assessing the quality of water bodies on a pollutant-specific basis could prove costly, particularly for waters in which a number of discharges are located or for complex effluents. EPA's recently developed acute and chronic toxicity methodologies for assessing the toxicity of effluents or receiving waters could provide a more comprehensive and affordable alternative.

Task C - Determine that Lower Water Quality is Necessary to Accommodate Important Economic or Social Development

Actions which the State determines in Task A to significantly lower water quality require a determination that such actions are necessary for important economic or social development. 40 CFR 131.12(a)(2) and the August 1985 "Questions and Answers on Antidegradation", give general guidance on how to make this determination. Explicit criteria defining "important economic or social development" have purposely not been developed by EPA headquarters, because of the varying environmental, economic and social conditions of localities throughout the country. Further explication of EPA Region 9's expectation concerning these determinations is appropriate and is presented below.

The fundamental requirement of this task is to establish a strong tie between the proposed lower water quality level and "important" economic or social development. If the party seeking the change in water quality cannot demonstrate the relationship between such development and water quality, then the proposed action is prohibited.

Demonstration of important economic or social development entails two steps. First, the party should describe and analyze the current state of economic and social development in the area that would be affected. The purpose of this step is to determine the "baseline" economic and social status of the affected community, i.e., the measure against which the effect of the water quality downgrade is judged. The area's use or dependence upon the water resource affected by the proposed action should be described in the analysis. The following factors should normally be included in the baseline analysis:

- Population;
- Area employment (numbers employed, earnings, major employers);
- Area income (earnings from employment and transfer payments, if known);
- Manufacturing profile: types, value, employment, trends;
- Government fiscal base: revenues by source (employment and sales taxes, etc.).

Second, the party seeking the change in water quality should then demonstrate the extent to which the sought for level of water quality would create an incremental increase in the rate of economic or social development and why the change in water quality is necessary to achieve such development. The party should provide analysis, along with the supporting data used in its preparation, showing the extent to which the factors listed above will benefit from the change in water quality requested. The analysis should demonstrate why such economic and social development requires the lower water quality. Other alternatives or changes in the project or other mitigation measures which would prevent degradation of water quality should be identified in this analysis. The following factors may be included in the analysis of incremental effects expected to result from the degradation in water quality:

- o Expected plant expansion;
- o Employment growth;
- o Direct and indirect income effects;
- o Increases in the community tax base.

Other components of this analysis could include an assessment of the overall environmental benefits to be achieved by the proposed action and the tradeoffs to be considered among the various media. The relative costs of various alternatives to the proposed action could also be analyzed.

The requirements for a given analysis will be site-specific, depending upon factors such as data availability, conditions specific to the relevant water body, the area of impact (city, county, State-wide), etc. The economic analysis may include estimation of the treatment costs necessary to maintain existing water quality; e.g. land treatment or advanced treatment. Staff of the EPA Regional office are available to assist States in determining the exact requirements of an analysis of specific proposals to lower water quality. In addition, the Economic Analysis Branch in EPA Headquarters' Office of Water can assist State and Regional staff, when necessary.

Task D - Complete Intergovernmental Coordination and Public Participation

Public notification pursuant to 40 CFR 131.12 is required for all actions that lower water quality in Tier II waters. EPA requires that proposed actions which degrade water quality be reviewed by other appropriate agencies and that the public be given an opportunity to comment.

Documentation and public notification under antidegradation need not be a lengthy process in many cases and can be combined with other actions that require public notification. The public participation requirement may be met by holding a public hearing, e.g., as part of the adoption of an NPDES permit, as long as proper notice of a standards action is provided to the public (see WQS Handbook). Intergovernmental coordination consists of requests for review of proposed actions by affected local, State and federal agencies, such as area-wide planning agencies, fish and wildlife agencies, etc.

The following is a summary of the public notification required to comply with the antidegradation provisions of the WQS regulation:

- o A statement that the action must comply with the State's antidegradation policy and a description of the policy.
- o A determination that existing uses will be maintained and protected. This will require an assessment and documentation for public review of (a) the amount the water quality currently exceeds that necessary to protect the existing and designated uses, and (b) the amount that water quality will be lowered as a result of the proposed action (see Task A).
- o A summary of other actions, if any, that have lowered water quality and a determination of any cumulative impacts.
- o A determination that lower water quality is necessary to accommodate important economic or social development. This will require a detailed analysis or the rationale used to determine that a detailed analysis is not required (see Tasks A and C).
- o A description of the intergovernmental coordination that has taken place.
- o A determination that there has been achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint sources.

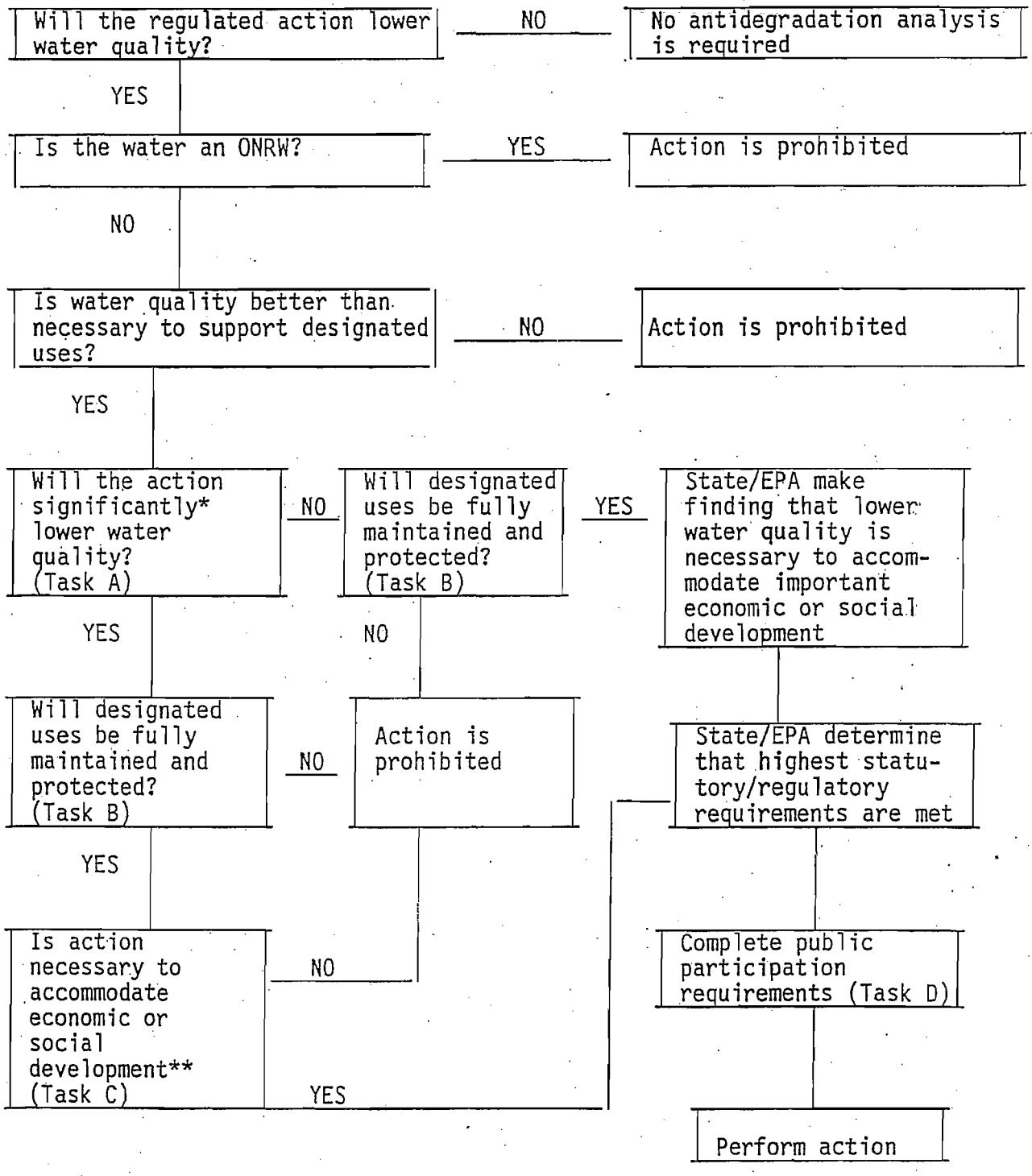
OTHER CONSIDERATIONS

1. The decision criteria for determining that detailed water quality and economic analyses are needed may vary with the types of chemical pollutants. Some chemicals are believed to elicit an effect at a certain concentration (i.e., threshold chemicals). Other chemicals (i.e., non-threshold chemicals) have no safe level. Non-threshold chemicals include carcinogens, mutagens and teratogens. States are urged to apply more stringent review procedures to non-threshold chemicals.

2. NPDES permits do not routinely contain numerical limits for all of the substances found in a discharger's effluent. Nevertheless, all substances are subject to antidegradation policy implementation, whether or not they are specifically limited in the permit. To apply antidegradation to substances not currently limited in the permit, the State can utilize the notification procedures specified in 40 CFR 122.42, requiring dischargers to notify the State pollution control agency of any actual or anticipated change in effluent characteristics, as compared with those existing at the time the permit was issued.

FIGURE 1

Antidegradation Flow Chart



* Significance level and effect of cumulative impacts as defined by State.

** Based on criteria defined by State.

ATTACHMENT 3

State of California

Memorandum

To : Regional Board Executive Officers
Jim Baetge
Ray Walsh

Date : OCT 07 1987

/s/ W. R. Attwater
William R. Attwater
Chief Counsel
From : STATE WATER RESOURCES CONTROL BOARD

Subject: FEDERAL ANTIDEGRADATION POLICY

This memorandum is intended to provide guidance on the application of the federal antidegradation policy to actions by the State Water Resources Control Board (State Board) and the California Regional Water Quality Control Boards (Regional Boards).

OVERVIEW

Environmental Protection Agency (EPA) Water Quality Standards regulations require that each state have an "antidegradation policy." 40 C.F.R. §§131.6(d), 131.12. Each state's policy must, at a minimum, be consistent with the principles set forth in 40 C.F.R. §131.12 (hereinafter referred to as the "federal antidegradation policy"). This regulation establishes a three-part test for determining when increases in pollutant loadings or other adverse changes in surface water quality may be permitted:

> "(1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
> (2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Furtner, the State shall assure that there shall be achieved the highest statutory and

regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

(3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected." 40 C.F.R. §131.12(a).

State Board Resolution No. 68-16, the "Statement of Policy with Respect to Maintaining High Quality of Waters in California", satisfies the requirement that the State have a policy which, at a minimum, is consistent with the federal antidegradation policy. The State Board has interpreted State Board Resolution No. 68-16 to incorporate the federal antidegradation policy in situations where the federal antidegradation policy is applicable. State Board Order No. WQ 86-17 at 16-19. State Board Resolution No. 68-16 is part of state policy for water quality control, which guides the regulatory programs for the State and Regional Boards and is binding on all state agencies. See Cal. Water Code §13140 et seq.

The State Board has interpreted State Board Resolution No. 68-16 to incorporate the federal antidegradation policy in order to ensure consistency with federal Clean Water Act requirements. See State Board Order No. WQ 86-17 at 17-18.

Attached are copies of EPA's Questions and Answers on: Antidegradation and EPA Region 9's Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12. These documents can be used as guidance in applying the federal antidegradation policy.

Also attached is a copy of State Board Order No. WQ 86-17. The order discusses the federal antidegradation policy at pages 16-24. EPA provided comments on the proposed order, stating that EPA concurred in the State Board's analysis.

As indicated by the attached material, application of the federal antidegradation policy often will hinge on the specific facts of the case. Thus, it is not possible to provide a definitive exposition as to how the policy should be applied.

The federal antidegradation policy serves as a "catchall" water quality standard, to be applied where other water quality standards are not specific enough for a particular water body or portion of that water body, or where other water quality standards do not address a particular pollutant. The test also serves to provide guidance for standard setting and for other regulatory decisions, to determine when additional control measures should be required to maintain instream beneficial uses or to maintain high quality waters.

The federal antidegradation policy emphasizes protection of instream beneficial uses, especially protection of aquatic organisms. In most cases, where instream beneficial uses will not be impaired and no outstanding National

resource waters will be affected, the federal antidegradation policy is not an absolute bar to reductions in water quality. Rather, the policy requires that reductions in water quality be justified as necessary to accommodate important social and economic development. The outcome will often depend upon a balancing of competing interests, the decision resting in the sound judgment of the State and Regional Boards.

This memorandum provides general guidance as to where the federal antidegradation policy applies, and how the three-part test established by the antidegradation policy should be applied.

I. Applicability of the Federal Antidegradation Policy

The three-part test set forth in the federal antidegradation policy is triggered by reduction in surface water quality. The first step in analyzing the requirements of the federal antidegradation policy as applied to a particular activity is to determine if the activity will lower surface water quality; only if there is reduction in water quality must the three-part test be applied to determine if the activity may be permitted. See EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 4.

A. Waters of the United States

The federal antidegradation policy is part of EPA's Water Quality Standards regulations. Each State's water quality standards must include a policy consistent with the federal antidegradation policy. 40 C.F.R. §131.6(d). Thus, the State and Regional Boards must apply the federal antidegradation policy to all "waters of the United States" within the State of California. See generally Clean Water Act §§303(e)(3), 502(7), 33 U.S.C. §1313(e)(3), 1362(7); Kentucky v. Train, 9 E.R.C. 1281 (E.D. Ky. 1976).

The term "waters of the United States" is broadly defined, to include essentially all surface waters. See, e.g., Quivara Mining Co. v. United States Environmental Protection Agency, 765 F.2d 126 (10th Cir. 1985) cert. denied ___ U.S. ___, 106 S.Ct. 761 (1986). "Waters of the United States" do not include ground waters. See Exxon v. Train, 554 F.2d 1310 (5th Cir. 1977). Where only ground waters are affected, State Board Resolution No. 68-16 still applies, but does not incorporate the federal antidegradation policy; the State and Regional Boards must apply the general policies set for the State Board Resolution No. 68-16 to changes in ground water quality, but need not address the specific, three-part test established by the federal antidegradation policy. See State Board Order No. WQ 86-17 at 19.

The boundaries of the State of California extend three miles seaward from the coast line. People v. Weeren, 26 Cal.3d 654, 660-61, 607 P.2d 1279, 1281-82, 163 Cal.Rptr. 255, 257-258, cert. denied 440

U.S. 839, 101 S.Ct. 115 (1980); see id. at 622, 607 P.2d 1282-83, 183 Cal.Rptr. at 258-59 (coast line is defined as the ordinary low water mark or the seaward limit of inland waters). See generally United States v. California, 381 U.S. 139, 164, 169-70, 85 S.Ct. 1401, 1415, 1418 (1965) (establishing test for identifying inland waters, a test satisfied by Monterey Bay but not by the Santa Barbara Channel, Santa Monica Bay, or San Pedro Bay); 44 Ops.Cal.Atty.Gen. 135 (1966). Compare Cal. Water Code §13200 with Clean Water Act §502, 33 U.S.C.A. §1362 ("boundaries of the state," for purposes of defining those areas for which water quality standards are required under the Porter-Cologne Water Quality Control Act, include the waters of the "territorial sea," as defined in the Clean Water Act, but do not include waters beyond the three-mile limit, defined as waters of the "contiguous zone" and the "ocean" under the Clean Water Act).

The State may exercise authority over activities beyond its boundaries in order to protect the State's legitimate interests. People v. Weeren, 26 Cal.3d at 666, 607 P.2d at 1285, 163 Cal.Rptr. at 261; see Cal. Water Code §13260(a)(2). But the State's water quality standards, including the state policy incorporating the federal antidegradation policy, extend only to waters within the boundaries of the State. See Clean Water Act §§303(e)(3), 507(7), 507(8), 33 U.S.C. §§1313(e)(3), 1367(7), 1367(8); Cal. Water Code §§13050(e); 13200.

Thus, for offshore discharges, application of the federal antidegradation policy by the State and Regional Boards is triggered only by changes in water quality within the three-mile limit. If there is a change within the three-mile limit triggering application of the federal antidegradation policy by the State and Regional Boards, however, the State and Regional Boards should take into consideration changes in water quality beyond the three-mile limit as part of the public interest balancing required to determine if the three-part test established by the federal antidegradation policy has been satisfied. Cf. State Board Resolution No. 68-16 (requiring that changes in water quality be consistent with the "maximum benefit to the people of the State." In determining what constitutes the maximum benefit to the people of the State, when regulating activities within their jurisdiction, the State and Regional Boards may take into consideration associated impacts on water quality outside the State's boundaries, and how those changes in water quality may affect the legitimate interests of the State.)

Of course, EPA may apply the federal antidegradation policy to offshore discharges, even where there is no change in water quality within the State's boundaries triggering application of the federal antidegradation policy by the State and Regional Boards. See generally Clean Water Act §402(a), 33 U.S.C. §1342(a). When EPA issues a permit for a discharge to the contiguous zone or ocean waters, the permit must apply "the same terms, conditions, and

requirements as apply to a State permit program and permits issued thereunder...." Id. §402(a)(3), 33 U.S.C. §1342(a)(3). States assuming responsibility for the National Pollutant Discharge Elimination System (NPDES) permit program must have and apply a policy consistent with the federal antidegradation policy. See 40 C.F.R. §§122.44(d), 123.25(b), 130.5(b)(1), 130.5(b)(6), 131.6(d). Accordingly, EPA should apply the federal antidegradation policy to any change in surface water quality resulting from any EPA issued NPDES permit.

B. Changes in Water Quality

Application of the federal antidegradation policy is triggered by a lowering of surface water quality. The critical issue in determining whether the three-part test established by the policy must be applied is not the level of treatment provided, but whether receiving waters will be affected.

Thus, the federal antidegradation policy ordinarily is triggered by new discharges or expansion of existing facilities, "[s]ince such activities would presumably lower water quality." EPA, Questions & Answers on: Antidegradation, 6. But an increase in the volume of discharge would not trigger application of the federal antidegradation policy where the increased volume is offset by an increase in the level of treatment, so that there is no lowering of receiving water quality.

Similarly, application of the federal antidegradation policy would be triggered by a reduction in the level of treatment of an existing discharge. See State Board Order No. WQ 86-17 at 20-21.

Substantial relocation of an existing outfall would also trigger application of the federal antidegradation policy since, like a new discharge, water quality presumably will be lowered in the vicinity of the new outfall. See EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 3.

The requirement that the federal antidegradation policy be applied does not depend upon identification of any discernible impact on beneficial uses. It may be most convenient to think in terms of mass emissions. A substantial increase in mass emissions of a pollutant ordinarily triggers application of the federal antidegradation policy, even if there is no other indication that the waters are polluted. See State Board Order No. WQ 86-17 at 21.

The federal antidegradation policy was promulgated on November 28, 1975. It does not apply to reductions in water quality which occurred before that date. Thus, the federal antidegradation policy ordinarily does not apply to continuation of existing discharges, even if exceptions or variances from other applicable water quality

objectives or effluent guidelines are required to permit the discharge to continue.

The federal antidegradation policy is applicable to changes in water quality resulting from either point source or nonpoint source discharges. EPA, Questions & Answers on: Antidegradation 6.

In general, the federal antidegradation policy will also apply to changes in water quality resulting from water diversions. See id. at 11; EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 4. EPA guidance suggests that in the case of an irreconcilable conflict between a State's water quantity allocations and the federal antidegradation policy, the State's water rights law would prevail. But the two should be reconciled where possible. EPA, Questions & Answers on: Antidegradation 11. For example, it may be possible to offset decreases in water quality resulting from decreases in instream flows by imposing stricter controls on other factors affecting water quality. Id.

Under California water rights law, flow requirements for insteam beneficial uses and effects on water quality are considered as part of water right decisions. See Cal. Water Code §§174, 1243, 1243.5. See generally United States v. State Water Resources Control Board, 182 Cal.App.3d 82, 227 Cal.Rptr. 161 (1986). In particular, the federal antidegradation policy, which has been incorporated into the State's water quality objectives, should be considered as part of water right decisions. See Cal. Water Code §1258; State Board Order No. WQ 86-17 at 17-18 (State Board Resolution No. 68-16, which incorporates federal antidegradation policy, has been adopted as a water quality objective in all sixteen regional water quality control plans.) The public trust doctrine, with its emphasis on protection of instream beneficial uses and public interest balancing, also requires consideration of factors like those set forth in the federal antidegradation policy. See generally National Audubon Society v. Superior Court, 33 Cal.3d 419, 658 P.2d 709, 189 Cal.Rptr. 346, cert. denied, 464 U.S. 977, 104 S.Ct. 413 (1983). In some respects, the public trust doctrine may require even greater protection of instream beneficial uses than would be required to satisfy the federal antidegradation policy. The federal antidegradation policy does not apply to changes in water quality which occurred before the policy took effect in 1975; such changes in water quality can be considered in applying the public trust doctrine.

Thus, it should be possible to harmonize California water rights law and the federal antidegradation policy. State water rights law would prevail if achieving the requirements of the federal antidegradation policy would require a waste or unreasonable use of water. Cf. United States v. State Water Resources Control Board, 182 Cal.App.3d 82, 143-44, 227 Cal.Rptr. 161, 197 (1986) (State Board need not set

standards to maintain the water quality of a water body at a level sufficient for existing offstream use where substitute water supply is provided and maintaining that level of water quality in the water body would require a waste of water.) See generally Cal. Const. Art. X, §2. But California water rights law assigns a high value to protection of water quality and instream beneficial uses. See Cal. Water Code §§243, 1243.5, 1258. Indeed, a diversion may itself be unreasonable, in violation of constitutional prohibition of waste, unreasonable use, or unreasonable method of diversion, if it results in an impairment of instream beneficial uses. See Environmental Defense Fund v. East Bay Municipal Utility District, 26 Cal.3d 183, 605 P.2d 1, 161 Cal.Rptr. 466 (1983). The social and economic benefits of water development may be taken into account as part of the balancing of interests contemplated by the federal antidegradation policy. See 40 C.F.R. §130.12(a)(2).

A conflict between the federal antidegradation policy and the State's proscription of waste or unreasonable use, or between the federal policy and other requirements of California water rights law, appears unlikely. The State Board should apply the federal antidegradation policy as part of its water right decisions.

In summary, the applicability of the federal antidegradation test depends upon whether there is a change in surface water quality. If there is a lowering of water quality, the antidegradation policy applies to all factors which are affecting that water quality. On the other hand, the federal antidegradation policy has no applicability, no matter how degraded a body of water may be, absent some lowering of water quality after the effective date of the policy.

C. Proceedings

The federal antidegradation policy has the potential to be applied to virtually every kind of proceeding where water quality standards are established or where activities which affect receiving water quality are permitted. The policy may apply to either planning activities or to actions on permits for individual discharges. See EPA, Questions & Answers on: Antidegradation 4-5. The federal antidegradation policy is intended to serve both as a guideline for the preparation of water quality standards and as a general water quality standard applicable to other regulatory decisions. See State Board Order No. WQ 86-17 at 19.

1. Planning

The State and Regional Boards have followed the federal antidegradation policy in establishing water quality objectives as part of adoption or approval of water quality control plans. See, e.g., State Board, Lake Tahoe Basin Water Quality Control Plan 37 (1980).

Because the federal antidegradation policy focuses on changes in water quality, applicability of the test may not necessarily be triggered by a proposed relaxation of water quality objectives. For example, if a water quality objective adopted in 1975 has never been achieved, and a new standard is proposed based upon the highest level of water quality actually achieved since 1975, the federal antidegradation policy would not apply. No actual reduction in water quality would be authorized.

On the other hand, if water quality has declined since 1975, and a new water quality objective is based upon the existing, lower level of water quality, the federal antidegradation policy would be applicable. Applicability of the federal antidegradation policy does not depend upon the type of proceeding involved, and therefore does not depend upon whether changes in water quality are authorized beforehand or accepted after the fact.

Basin planning decisions may trigger the applicability of the federal antidegradation policy, even if no change in water quality objectives is proposed. For example, changes in discharge prohibitions or other changes in implementation measures may cause a reduction in water quality. EPA guidance on the federal antidegradation policy indicates that the requirements of the policy must be satisfied if changes in wasteload allocations would result in a lowering of water quality. EPA, Questions & Answers on: Antidegradation 8.

EPA regulations do not specify the precise method by which a state must implement the federal antidegradation policy. See 40 C.F.R. §131.12(a). The State should seek to integrate the policy into its own procedures. In California, where state law emphasizes comprehensive planning and coordination of all factors that affect water quality, the federal antidegradation policy should be considered as part of planning decisions to the extent possible. See generally, Recommended Changes in Water Quality Control, Final Report of the Study Panel to the California State Water Resources Control Board, Study Project, Water Quality Control Program 4-5 (1969). In many cases, however, it would not be possible to apply the federal antidegradation policy, except as the most general guidance, as part of basin planning decisions.

Water quality control plans must establish water quality objectives which are generally applicable to a body of water or to segments of that body of water. For large bodies of water such as the waters of the Pacific Ocean within the boundaries of the State, or for streams with numerous tributaries, it is not possible to identify, as part of water quality planning, all

areas where existing water quality may be higher than a proposed water quality objective. Moveover, the potential social and economic benefits of discharges which might reduce water quality often will be too speculative to be given consideration as part of water quality planning for large areas. The State and Regional Boards can and should focus their attention on establishing objectives for those situations where objectives are most needed to assure protection of beneficial uses, postponing until later site-specific approvals the determination whether discharges in a particular area should be allowed to reduce water quality to the level set by these objectives. For example, new objectives could be adopted for toxic pollutants that apply throughout a region, or even statewide, even though many areas will have better water quality than that required by those objectives. The new objectives would establish a floor, but water quality would not be permitted to be reduced to the level set by the new objectives without a site-specific application of the federal antidegradation policy.

If the State and Regional Boards are aware that a change in water quality standards or implementation measures would permit specific projects, the applicability of the federal antidegradation policy to the changes in water quality caused by those projects should be considered. The State and Regional Boards should pay particularly close attention to the requirements of the federal antidegradation policy when water quality control plan amendments are sought in order to permit a particular discharge, a reduced level of treatment, or development within a particular area.

2. Permitting

The federal antidegradation policy will most frequently be applied in individual permitting decisions, including issuance of waste discharge requirements and NPDES permits. A proposed waiver of waste discharge requirements would also be subject to the federal antidegradation policy if the waiver would result in a lowering of surface water quality.

For example, waste discharge requirements for new discharges or expansion of existing discharges ordinarily will require preparation of an anlysis applying the federal antidegradation policy. EPA, Questions & Answers on: Antidegradation 6. Of course, if the issures have already been analyzed in detail as part of a water quality control plan amendment, it will not be necessary to prepare a new analysis for issuance of waste discharge requirements.

The federal antidegradation policy will also apply to some cleanup and abatement orders and remedial action plans. Where

cleanup order is issued in response to changes in surface water quality, which occurred after the 1975 effective date of the federal antidegradation policy, but the board issuing the order decides not to require a return to the preexisting water quality, the decision to allow lower cleanup levels should be justified in accordance with the federal antidegradation policy. Where a cleanup order is directed towards immediate or short-term cleanup operations, postponing until later any determination of the ultimate cleanup level required, application of the federal antidegradation policy may also be postponed.

The federal antidegradation policy should also be addressed in water right proceedings, including issuance of water right permits, if the result of those proceedings would be to allow a lowering of surface water quality which existed after the 1975 effective date of tne federal antidegradation policy. See EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 4.

3. Waivers and Exceptions

The federal antidegradation policy is also applicable to special proceedings concerning proposed waivers or exceptions from otherwise applicable water quality objectives or control measures. Examples include proposed Ocean Plan exceptions. See generally, State Board, Water Quality Control Plan, Ocean Waters of California 11 (1983).

Ordinarily, provisions of the Clean Water Act which allow for variances of treatment requirements should not be interpreted to exempt the discharge from the federal antidegradation policy. See, e.g., State Board Order No. WQ 86-17 at 19-20; EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 2. The only exception is for waivers of effluent limitations for thermal discharges, pursuant to Section 316(a) of the Clean Water Act. 33 U.S.C. §1326(a). EPA guidance indicates that limitations developed under Section 316 of the Clean Water Act take precedence over any requirements of the federal antidegradation policy that would otherwise apply. EPA, Questions & Answers on: Antidegradation 11; see 40 C.F.R. §131.12(a)(4).

II. The Three-Part Test

Where the federal antidegradation policy applies, it does not absolutely prohibit any changes in water quality. The policy requires that any reductions in water quality be justified consistent with the three-part test established by the policy. State Board Order No. WQ 86-17 at 20.

Whether reductions in receiving water quality may be permitted consistent with the federal antidegradation policy often will depend upon the conditions existing in the specific waters affected, and the benefits of the proposed discharge. This site-specific balancing is consistent with the scheme established under the Porter-Cologne Water Quality Control Act for setting water quality objectives in issuing waste discharge requirements, or setting cleanup levels in cleanup and abatement orders. See Cal. Water Code §§13263, 13304. "Judicious action by the regional boards, based on the facts of different cases and different areas, is the key to establishment of water quality objectives and waste discharge requirements." Recommended Changes in Water Quality Control, Final Report of the Study Panel to the California State Water Resources Control Board, Study Project, Water Quality Control Program, Appendix A at 30. Similar considerations govern when pollution is established and hence govern determination of appropriate cleanup levels. See id. (note on definition of "pollution").

A. Instream Uses

The first part of the test established by the federal antidegradation policy requires that: "Existing instream water uses, and the level of water quality necessary to protect the existing uses shall be maintained and protected." 40 C.F.R. §131.12(a)(1). This part of the test is intended to establish an "absolute requirement that uses attained must be maintained." 48 Fed. Reg. 51409 (Nov. 8, 1983).

EPA has provided more guidance on the requirement for protection of instream beneficial uses than on any other aspect of the federal antidegradation policy. See EPA, Questions & Answers on: Antidegradation 2-7. In large measure, this part of the federal antidegradation policy serves to reinforce the requirements of other applicable EPA Water Quality Standards regulations. See 40 C.F.R. §§131.2, 131.10, 131.11.

In general, the State must assure full protection of existing instream beneficial uses, including the health and diversity of aquatic life. Reductions in water quality should not be permitted if the change in water quality would seriously harm any species found in the water, other than a species whose presence is aberrational. EPA, Questions & Answers on: Antidegradation 3.

In general, the requirement that existing instream uses be protected is not satisfied if existing instream beneficial uses will be impaired, even for a portion of a water body. Id. at 5. EPA recognizes an exception for fill operations, which necessarily will preclude continued use of the filled area by aquatic species. The other two parts of the three-part test established by the federal antidegradation policy still apply to fill operations. Id. Similar considerations may require some flexibility in applying the federal antidegradation policy to areas flooded by new reservoirs. While it may be possible to protect a cold water fishery in a portion of the

reservoir, maintaining conditions for a cold water fishery throughout the reservoir, including its snallowest waters, may not be feasible. The water quality necessary to fully protect instream beneficial uses should still be protected in other portions of the waterway downstream of the reservoir.

B. Public Interest Balancing

Where water quality is higher than necessary to protect existing instream beneficial uses, the second part of the test applies. This part of the test allows reductions in water quality, so long as existing instream uses are protected, if the State finds "that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located." 40 C.F.R. §131.12(a)(2).

EPA has provided relatively little guidance on how this part of the test should be applied, except to indicate that the meaning of the test "will evolve through case-by-case application" by the State. EPA, Questions & Answers on: Antidegradation 8.

This part of the federal antidegradation policy may best be viewed as a balancing test. The greater the impact on water quality, the greater the justification in terms of economic or social development necessary to justify the change. The burden of proof, to demonstrate that the change in water quality is justified, should be on the project proponent. See State Board Resolution No. 68-16; EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. §131.12 at 9.

The requirement that the change be justified based upon "important economic or social development in the area" is intended to convey the level of justification required. EPA, Questions & Answers on: Antidegradation 8. Cost savings to the discharger, standing alone, absent a demonstration of how these savings are necessary to accommodate important social and economic development, are not adequate justification. State Board Order No. WQ 86-17 at 22 n. 10.

The requirement that the development accommodated by a change in water quality be important "in the area in which the waters are located" is intended to assure that development be important within the general area, not just to a small segment of the local population. The analysis used to determine whether the change in water quality is justified therefore should focus on impacts on the community; if the justification offered for a change in water quality is that it makes a particular development proposal feasible, the importance of that development within the general area should also be analyzed. The reference to economic development "in the area" should not be read to preclude consideration of important development at locations that are far away from the affected waters, so long as it

is demonstrated that the change in water quality is in fact necessary to accommodate that development.

The State has some flexibility to determine what kinds of impacts constitute "important economic or social development" that may justify changes in water quality. For example:

- Accommodating existing development may be used as a justification for changes in water quality. If major employer within the community could not afford to keep its plant in operation without a relaxation of treatment requirements, that may justify a lowering of receiving water quality.

- Important water development and water conservation projects may be considered to be important social and economic development that justify a lowering of water quality. See generally Cal. Water Code §13000.

- Environmental protection may constitute important social development, justifying a change in water quality, even if no other social or economic benefits to the community are demonstrated. If a discharge point is moved to less sensitive waters, the improvement in water quality at the original discharge point may justify the reduction in water quality at the new discharge point.

Of course, the degree to which development must be important in order to justify a change in water quality will depend on the extent to which water quality will be lowered. Thus, even where a new, expanded or relocated discharge is clearly justified, the balancing required by the second part of the federal antidegradation policy's three-part test may require a higher level of treatment than would otherwise be required by applicable Clean Water Act requirements. Conversely, relatively small changes in water quality should not require the level of justification needed for greater changes. EPA intends that the federal antidegradation policy be applied so as to require that development have a relatively high level of importance in order to justify a lowering of water quality. But the policy should not be interpreted to require that a project provide a major source of new housing or employment if only a very small discharge or a minor increase in an existing discharge is proposed.

Obviously, the information needed to apply this part of the federal antidegradation policy will vary according to the particular case. See EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 10. Detailed water quality and economic analyses should be required only if the degree of water quality change is significant. Id. at 6. EPA Region 9 has issued guidance indicating the information it expects to be provided in cases requiring detailed analyses, but the information requirements

will vary according to the type of project, receiving water impacts, and the nature of the social or economic development made possible by the project. Id. at 9-11. The analyses should include consideration of alternatives that would reduce water quality impacts. Id. at 10. Ordinarily, the information necessary to apply the federal antidegradation policy will be provided as part of the environmental documentation prepared for a project. See generally 14 Cal. Admin. Code §§ 15064, 15125, 15126, 15252. Where the State and Regional Boards participate in determining the scope of environmental documentation, and the federal antidegradation policy applies to a project, the Boards should seek to ensure that the requirements of the federal antidegradation policy will be analyzed. See, e.g., id. §15082(b)(1). Where changes in water quality are proposed to accommodate changes in land use, the State and Regional Boards should take into consideration the policies established under the appliable general plan, prepared by the local city or county pursuant to the State Planning and Zoning Law, Cal. Gov't Code §65000 et seq., and the plans of any regional, state or interstate agency with responsibility for land use planning in the area.

The federal antidegradation policy specifies that reductions in water quality may be permitted only after compliance with all applicable requirements for public participation and intergovernmental coordination. 40 C.F.R. §131.12(a)(2). The policy also specifies that all other applicable Clean Water Act requirements for point source discharges, and "all cost-effective and reasonable best management practices for nonpoint source control" shall be achieved. Id. These requirements are implicit in the requirement that changes in water quality must be "necessary to accommodate important economic or social development." Id. The necessity for a change in water quality has not been demonstrated to the extent that other applicable Clean Water Act requirements have not been followed. Nor has the necessity for a change in water quality been demonstrated to the extent that reductions in water quality could be avoided by reasonable and cost-effective control measures.

C. Outstanding National Resource Waters

The third part of the test established by the federal antidegradation policy requires that the water quality of waters which constitute an outstanding National resource be maintained and protected. 40 C.F.R. §131.12(a)(3). This part of the test has only limited applicability, but where it is applicable, it is very restrictive. No permanent or long-term reduction in water quality is allowable in areas given special protection as outstanding National resource waters. 48 Fed. Reg. 51402 (Nov. 8, 1983).

To date, only a small number of water bodies have been formally designated as outstanding National resource waters. The only California water so designated is Lake Tahoe. But other California waters almost certainly qualify.

Outstanding National resource waters are "waters of exceptional recreational or ecological significance." Id. The category may include waters of exceptionally high quality. 48 Fed. Reg. 51402 (Nov. 8, 1983). Outstanding National resource waters may also include:

> "water bodies which are important, unique, or sensitive ecologically, but whose water quality as measured by traditional parameters (dissolved oxygen, pH, etc.) may not be particularly high or whose character cannot be adequately described by these parameters." Id.

The most obvious candidates for designation as outstanding National resource waters are Pacific Ocean waters designated as areas of special biological significance. The Ocean Plan already sets requirements for protection of these areas that are consistent with the strict requirements for protection of outstanding National resource waters. See State Board, Water Quality Control Plan, Ocean Waters of California 9 (1983).

Other possible candidates for designation as outstanding National resource waters include state and federally designated wild and scenic rivers, and the waters of state and federal wilderness areas, parks, and wildlife refuges. Waters are not necessarily outstanding National resource waters simply because they are in one of these categories. Nor should waters outside these areas be excluded from consideration. But waters in these areas should be given special consideration to determine whether they should be designated as outstanding National resource waters.

Outstanding National resource waters may be designated as part of adoption or amendment of water quality control plans. See, e.g., State Board, Lake Tahoe Basin Water Quality Plan 37. See generally Cal. Water Code §13241(b).

Even if no formal designation has been made, individual permit decisions should not allow any lowering of water quality for waters which, because of the exceptional recreational and ecological significance, should be given the special protection assigned to outstanding National resource waters. See generally id. §13263(a) (water quality standards may be set when waste discharge requirements are issued, so long as those standards are no less stringent than any standards set by the applicable water quality control plan). Accordingly, the State and Regional Boards should consider, as part

of individual permit decisions, whether the affected waters should be designated as outstanding National resource waters.

III. Related Doctrines

The federal antidegradation policy applies in addition to any other applicable requirements of state and federal law. Even where a lower level of treatment would be consistent with the federal antidegradation policy, all other applicable regulatory requirements still must be satisfied. See, EPA, Questions & Answers on: Antidegradation 7-9.

In particular, the anti-backsliding requirements of the federal Clean Water Act often will apply in cases where the federal antidegradation policy is applicable.

State Board Resolution No. 68-16, which incorporates the federal antidegradation policy, may provide the basis for additional requirements in specific cases.

A. Anti-backsliding

"Backsliding" refers to reductions in treatment levels required by NPDES permits. EPA regulations limit the circumstances under which modified or reissued permits may set less stringent effluent limitations than required by previous permits. 40 C.F.R. §§122.44(l), 122.62. The Water Quality Act of 1987 includes provisions intended to clarify the Clean Water Act's anti-backsliding requirements. See Clean Water Act §402(o), 33 U.S.C. §1342(o).

The new anti-backsliding provisions generally prohibit relaxation of effluent limitations previously established on the basis of best professional judgment. Id. §402(o)(1), 33 U.S.C. §1342(o)(1). But the prohibition does not apply if any of five listed exceptions is applicable. Id. §402(o)(2), 33 U.S.C. §1342(o)(2).

The anti-backsliding requirements of the Clean Water Act are triggered by changes in the effluent limitations required by the discharger's NPDES permit, not by changes in the level of treatment actually achieved or by changes in receiving water quality. For example, an industrial discharger who failed to install and operate treatment systems required by the discharger's NPDES permit ordinarily could not obtain a relaxation of effluent limitations, even though the federal antidegradation policy would not apply. See id. §402(o)(2)(E), 33 U.S.C. §1342(o)(2)(E). On the other hand, new or expanded discharges ordinarily will not be subject to the anti-backsliding provisions.

The new anti-backsliding provisions also specify limitations on when water quality based effluent limitations may be relaxed. See id. §402(o), 33 U.S.C. §1342(o). If applicable water standards are not being achieved, a relaxation of water quality based effluent

limitations may be permitted if the new effluent limitations are consistent with a revised waste load allocation which will achieve water quality standards. See id. §303(d)(4)(A), 33 U.S.C. §1313(d)(4)(A). If all other applicable water quality standards are being achieved, water quality based effluent limitations may be relaxed if the relaxation is consistent with the federal antidegradation policy. Id. §303(d)(4)(B), 33 U.S.C. §1313(d)(4)(B).

B. State Board Resolution No. 68-16

State Board Resolution No. 68-16 establishes similar requirements to the federal antidegradation policy. The State Board adopted Resolution No. 68-16, as part of state policy for water quality control, in response to a 1968 Department of Interior directive calling for adoption of state policies. See generally Zener, The Federal Law of Water Pollution Control, published in E. Dolgin & T. Guilbert, Federal Environmental Law 721-23 (1974). That Interior Department directive later became the basis of the federal antidegradation policy promulgated by EPA in 1975. EPA, Questions & Answers on: Antidegradation 1.

Like the federal antidegradation policy, State Board Resolution No. 68-16 is triggered by changes in water quality. But the state policy has broader applicability. It applies to all waters of the State, not just waters of the United States. See State Board Resolution No. 68-16; State Board Order No. WQ 86-8. State Board Resolution No. 68-16 also applies to changes in water quality which occurred after its 1968 adoption date, not just to changes which occurred after the federal antidegradation policy took effect in 1975.

Where the federal antidegradation policy does not apply, the requirements of State Board Order No. 68-16 are less specific than the three-part test set by the federal antidegradation policy. See State Board Order No. WQ 86-17 at 19.

Where the federal antidegradation policy does apply, both the three-part test established by the federal antidegradation policy and the express requirements of State Board Resolution No. 68-16 should be considered. Id. at 23 n. 11. In some cases, application of the three-part test established by the federal policy may not fully satisfy the requirements of State Board Resolution No. 68-16. For example, the State's policy expressly provides for reasonable protection of potential beneficial uses; the federal antidegradation policy does not. See State Board Resolution No. 68-16; EPA, Questions & Answers on: Antidegradation 12. But cf. 40 C.F.R. §131.10(j) (requirement, independent of the federal antidegradation policy, for analysis of the attainability of instream beneficial uses). In all cases where the federal antidegradation policy is applicable, State Board Resolution No. 68-16 requires that, at a minimum, the three-part test established by the federal

antidegradation policy must be satisfied. State Board Order No. WQ 86-17 at 17-18.

Attachments

cc: Fresno, Redding and Victorville
Regional Board Offices

Dale Claypoole,
Program Control Unit

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of RIMMON C. FAY To Review Order No. 85-56 of the California Regional Water Quality Control Board, Los Angeles Region, NPDES Permit No. CA0054097. Our File No. A-411.	ORDER NO. WQ 86-17

BY THE BOARD:

Petitioner, Rimmon C. Fay, filed a timely petition to review Order No. 85-56 of the California Regional Water Quality Control Board, Los Angeles Region (Regional Board).[1] Order No. 85-56 issues waste discharge requirements for the ocean discharge of treated effluent from the City of Oxnard's publicly owned treatment works. In issuing these waste discharge requirements, the Regional Board concurred in the issuance of a waiver of secondary treatment requirements by the Environmental Protection Agency. A waiver of secondary treatment requirements is authorized under Section 301(h) of the Clean Water Act. The petition contends that the requirements for a waiver of secondary treatment requirements have not been satisfied. The petition also contends that the waste discharge requirements are not consistent

[1] After being informed that the original petition was incomplete, the petitioner submitted an amendment to the petition. On January 13, 1986, the petitioner and interested parties were notified that the petition was complete. The petitioner has agreed in writing to extend the period for consideration of this petition to permit consideration of this order at the State Water Resources Control Board's November, 1986 workshop session and Board meeting. See 23 Cal. Admin. Code §2052(d).

with state and federal requirements for the protection of high quality waters, and state requirements intended to encourage wastewater reclamation.

I. BACKGROUND

The federal Clean Water Act establishes programs to protect water quality through the application of nationwide, technology-based effluent limitations to point source discharges to surface waters. For publicly owned treatment works, the Clean Water Act established a requirement for achievement of effluent limitations based upon secondary treatment. Clean Water Act Section 301(b)(1)(B), 33 U.S.C. §1311(b)(1)(B). Environmental Protection Agency regulations implementing this requirement include requirements that, on a 30-day average, the discharge of suspended solids shall not exceed 30 mg/l, and at least 85 percent of the suspended solids in the influent shall be removed. 40 C.F.R. §132.102(b).

The requirements of the Clean Water Act for point source discharges to surface waters are applied through National Pollutant Discharge Elimination System (NPDES) permits. In addition to applying the nationwide, technology-based effluent limitations established under the Clean Water Act, NPDES permits must apply any more stringent limitations necessary to assure compliance with receiving water standards and other applicable state and federal requirements. Clean Water Act Section 301(b)(1)(C), 33 U.S.C. §1311(b)(1)(C). The water quality standards for ocean waters include a standard set by the State's Ocean Plan, which generally requires 75 percent suspended solids removal,[2] a level

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[2] State Water Resources Control Board, Water Quality Control Plan, Ocean Waters of California (Ocean Plan) at 5 (1983). If the concentration of

(CONTINUED)

of treatment which may be referred to as "advanced primary." The Ocean Plan also sets other applicable objectives.

NPDES permits may be issued by states with adequate authority to implement Clean Water Act requirements. In California, both point and non-point sources are subject to waste discharge requirements, issued pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). Cal. Water Code §13000 et seq. In order to ensure that these requirements would be adequate for a state NPDES program, the Legislature added Chapter 5.5 (commencing with Water Code Section 13370 of the Water Code) to the Porter-Cologne Act in 1972. For point source discharges to surface waters, waste discharge requirements must apply and ensure compliance with all applicable requirements of the Clean Water Act and federal laws which amend or supplement the Clean Water Act, together with any more stringent requirements necessary to implement water quality control plans, for the protection of beneficial uses, or to prevent nuisance. Cal. Water Code §13377. California has an approved state NPDES program. NPDES permits are issued by the State Water Resources Control Board (State Board) and the nine California Regional Water Quality

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2 (FOOTNOTE CONTINUED)

suspended solids in the influent is less than 240 mg/l, 75 percent removal is not required so long as the effluent does not exceed 60 mg/l. Id. The Environmental Protection Agency approved water quality standards for ocean waters include those established by the Ocean Plan, standards established in applicable regional water quality control plans which are not inconsistent with the Ocean Plan, and the requirements of State Water Resources Control Board Resolution No. 68-16 and the State Water Resources Control Board's Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California. Letter of May 2, 1984 from Judith E. Ayers, Regional Administrator, Environmental Protection Agency, Region IX, to Carole Onorato, Chairwoman, California State Water Resources Control Board.

Control Boards (Regional Boards), instead of by the federal Environmental Protection Agency.

As part of the 1977 amendments to the Clean Water Act, Congress added Section 301(h). 33 U.S.C. §1311(h). Section 301(h) authorizes a waiver of the technology-based requirement of secondary treatment, for publicly owned treatment works discharging into marine waters, if the applicant demonstrates that the following conditions are met:

> "(1) there is an applicable water quality standard specific to the pollutant for which the modification is requested, which has been identified under section 304(a)(6) of this Act;
> (2) such modified requirements will not interfere with the attainment or maintenance of that water quality which assures protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife, and allows recreational activities, in and on the water;
> (3) the applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota, to the extent practicable;
> (4) such modified requirements will not result in any additional requirements on any other point or nonpoint source;
> (5) all applicable pretreatment requirements for sources introducing waste into such treatment works will be enforced;
> (6) to the extent practicable, the applicant has established a schedule of activities designed to eliminate the entrance of toxic pollutants from nonindustrial sources into such treatment works;
> (7) there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit." Id.

If the Environmental Protection Agency approves a waiver of secondary treatment (301(h) waiver), the discharge still must comply with all other applicable state and federal water quality requirements, including water quality standards. See id.; Clean Water Act Sections 301(b)(1)(C), 510, 33 U.S.C. §§1311(b)(1)(C), 1370.

NPDES permits incorporating 301(h) waivers are issued by the Environmental Protection Agency, with the concurrence of the state. Thus, for 301(h) waivers, the discharger needs both waste discharge requirements issued by the Regional Board and an NPDES permit issued by the Environmental Protection Agency. In issuing waste discharge requirements, the Regional Board applies all applicable requirements of the Clean Water Act, together with any more stringent requirements established under the Porter-Cologne Act. See Cal. Water Code §§13372, 13377. Waste discharge requirements authorizing a discharge at less than secondary treatment constitute the State's concurrence in the issuance of a 301(h) waiver.

The Oxnard Wastewater Treatment Plant has a design capacity of 25 million gallons per day. Average dry weather flow for 1984 was about 18.9 million gallons per day. In 1977, the Regional Board issued waste discharge requirements (serving as the City of Oxnard's NPDES permit) based upon secondary treatment. The plant, which had previously discharged primary effluent, was converted to secondary treatment in 1981. Existing secondary capacity at the Oxnard facility is 22.6 million gallons per day. The discharge was not in full compliance with secondary treatment requirements at the time the Regional Board issued Order No. 85-56. The outfall line extends approximately one mile offshore, discharging at a depth of about fifty feet.

The Ventura Regional Sanitation District, on behalf of the City of Oxnard, applied for a 301(h) waiver. The District submitted an application on August 23, 1979, and submitted a revised application on September 21, 1983. An Environmental Protection Agency 301(h) Review Team reviewed information submitted as part of the applications, retained a consultant, Tetra Tech, Inc., to prepare a Technical Review Report, and required some additional analysis by

the applicant. Based upon the 301(h) Review Team's recommendation, the Environmental Protection Agency tentatively approved the waiver on November 28, 1984.

On the basis of the Environmental Protection Agency's tentative approval of the 301(h) waiver, Regional Board staff and Environmental Protection Agency staff jointly prepared a draft permit, to serve as both the waste discharge requirements issued by the Regional Board and the NPDES permit issued by the Environmental Protection Agency. The Regional Board and the Environmental Protection Agency conducted a joint hearing on May 20, 1985. An order setting waste discharge requirements for the Oxnard Wastewater Treatment Plant was adopted by the Regional Board, as Order No. 85-56, on September 16, 1985, and by the Environmental Protection Agency, as NPDES Permit No. CA0054097, on September 27, 1985. The order waives secondary treatment requirements for two constituents of the effluent, suspended solids and biochemical oxygen demand. The effluent limitations set for these constituents are based upon the Ocean Plan standards for suspended solids and dissolved oxygen, in lieu of the limitations set by Environmental Protection Agency regulations for secondary treatment.

Regional Board Order No. 85-56 is the subject of this petition. The NPDES permit issued by the Environmental Protection Agency has been stayed pending the outcome of a separate appeal process within the Environmental Protection Agency. Any changes in the waste discharge requirements issued as Order No. 85-56 that are required by the State Board's decision upon review of this petition constitute a modification of the State's concurrence in the 301(h) waiver, and must be taken into account in the Environmental Protection Agency's final decision.

II. CONTENTIONS AND FINDINGS

1. Contention: Petitioner contends that Regional Board Order No. 85-56 will not assure the protection of a balanced, indigenous population of shellfish, fish and wildlife, and that marine waters will be degraded.

Finding: The Ocean Plan and Section 301(h) of the Clean Water Act set similar requirements for the protection of marine communities.

The Ocean Plan sets a water quality objectives requiring that:

> "Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.
>
> . . . .
>
> Degradation shall be determined by analysis of the effects of waste discharge on species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species." Ocean Plan at 3, 12.

Section 301(h) of the Clean Water Act requires that the applicant for a 301(h) waiver demonstrate to the satisfaction of the Environmental Protection Agency that the discharge will not interfere with the attainment and maintenance of a balanced, indigenous population of shellfish, fish and wildlife. 33 U.S.C. §1311(h)(2). Environmental Protection Agency regulations define a balanced indigenous population as an "ecological community" which:

> "(1) Exhibits characteristics similar to those of nearby, healthy communities existing under comparable but unpolluted environmental conditions; or
>
> (2) May reasonably be expected to become re-established in the polluted water body segment from adjacent waters if sources of pollution were removed." 40 C.F.R. §125.58(f).

For a 301(h) waiver to be granted, a balanced indigenous population must exist, with the discharge as modified by the 301(h) waiver, immediately

beyond the discharge's zone of initial dilution and in all other areas outside the zone of initial dilution potentially affected by the discharge. Id. §125.61(c).

In the context of the City of Oxnard's request for waste discharge requirements authorizing a reduction in treatment levels to advanced primary, the Ocean Plan objective and the 301(h) test establish essentially the same requirement for protection of marine communities.

Whether marine communities will be protected is a factual issue which must be decided by the Regional Board when it issues waste discharge requirements authorizing a reduction in treatment levels. See Cal. Water Code §§13263(a), 13377. This factual issue was clearly raised by the comments presented in the proceedings before the Regional Board. The Regional Board should have adopted findings setting forth the basis of its decision. See Topanga Association for a Scenic Community v. County of Los Angeles, 11 Cal.3d 506, 522 P.2d 12, 113 Cal.Rptr. 836 (1974). Regional Board Order No. 85-86 does not include any findings with respect to maintenance of marine communities. Adoption of the order, without findings applying the requirement for protection of marine communities, was improper.[3]

Where the State Board finds that a Regional Board's action was inappropriate or improper, the State Board may direct that the appropriate

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[3] Because the Ocean Plan objective and the Section 301(h) test establish essentially the same requirement, findings applying either test would have been adequate. But Order No. 85-56 contains no findings specifying whether the discharge is in compliance with the Ocean Plan objective, whether the 301(h) balanced indigenous population test has been satisfied, or otherwise setting forth a specific determination that protection of marine communities has been demonstrated.

action be taken by the Regional Board, or the State Board may take appropriate action itself. Cal. Water Code §13320(c). As set forth below, in the discussion of the 301(h) Review Team Conclusions, we are not convinced that protection of marine communities has been demonstrated. On the other hand, as set forth below in the discussion of Petitioner's Claims, we are not convinced the petitioner has demonstrated that marine communities will be degraded. Because the burden of proof is on the applicant, the Regional Board's action must be set aside, insofar as it authorizes a discharge at an advanced primary level of treatment.

Accordingly, we remand to the Regional Board, which should consider any additional evidence which may be offered. The Regional Board must issue waste discharge requirements based upon secondary treatment unless the Regional Board makes appropriate findings, based upon substantial evidence in the record, supporting a decision that the requirement for protection of marine communities has been satisfied.

a. 301(h) Review Team Conclusions

The evidence before the Regional Board concerning impacts on Marine Communities is reviewed in an analysis of the 301(h) waiver application for the Oxnard facility prepared by the Environmental Protection Agency's 301(h) Review Team.

The 301(h) Review Team analyzed potential impacts on plankton (floating microorganisms), benthic macrofauna (bottom dwelling larger than microscopic organisms), and demersal fish (bottom fish) species.

With respect to plankton, the 301(h) Review Team analysis points out that "no sampling has ever been conducted to directly evaluate discharge related effects around the outfall." (p. 19.) The analysis discusses a study

of the effects of the Hyperion outfall on Santa Monica Bay. The analysis does not indicate whether the plankton in Santa Monica Bay exhibit the characteristics of a marine community which has not been degraded. The Santa Monica Bay study shows no difference in phytoplankton (floating algae) abundance, distribution or composition related to the outfall location; zooplankton (floating microscopic animals) abundance increases near the outfall. The 301(h) Review Team analysis concludes that, taking into account the different sizes of the Oxnard and Los Angeles discharges "it appears likely that the natural plankton population will not be significantly affected" by the Oxnard discharge. In contrast, the Technical Review Report prepared for the 301(h) Review Team concludes that "it is impossible to evaluate whether a BIP [balanced indigenous population] of phytoplankton exists at the ZID [zone of initial dilution] boundary." Tetra Tech, Inc., Technical Evaluation of the Ventura Regional County Sanitation District, City of Oxnard Wastewater Treatment Plant Section 301(h) Application for Modification of Secondary Treatment Requirements for Discharge into Marine Waters [hereinafter cited as "Tetra Tech"] at 132 (1981).

The applicant performed field measurements and analyses of sediments and infauna community structure in 1984 indicating that there was no significant trend with respect to distance from the Oxnard outfall. These analyses support the 301(h) Review Team's conclusion that a balanced indigenous population exists for benthic infauna (organisms living in bottom sediments).

The applicant provided very little data with respect to demersal fish and epibentnic macroinvertibrates (larger than microscopic organisms, other than backboned animals such as fish, living on the bottom). The 301(h) Review Team concluded that there "is insufficient data upon which to directly

determine whether or not Oxnard's discharge is adversely affecting the local community of demersal fishes and epibenthic macroinvertibrates...." (page 27.)

The 301(h) Review Team also observed that "available data on bioaccumulation of toxic pollutants and pesticides by organisms in the vicinity of the Oxnard outfall are insufficient to draw definite conclusions" but concluded that the absence of water quality standards violations "suggests that adverse levels of bioaccumulation would not be expected." (p. 30.)

From the above, it appears that the protection of marine communities has been demonstrated for benthic infauna, but not for the other communities considered. In the absence of a demonstration that these marine communities have not been degraded by the existing discharge, it has not been demonstrated that the proposed discharge, at a lower level of treatment, would not degrade marine communities.

Nevertheless, the 301(h) Review Team concludes that, if infauna are not adversely affected, one may infer that other organisms will be protected:

> "It seems likely, therefore, that a balanced indigenous population of fish, shellfish, and wildlife exists at present and should be maintained with the proposed discharge." (pp. 30-31).

We are not prepared to assume that because one community apparently has not been affected, protection of the other communities has been demonstrated. Protection of marine communities has not been demonstrated, as is required to permit the reduced level of treatment allowable under Regional Board Order No. 85-56, absent adequate data on the impacts of the Oxnard discharge on plankton, epibenthic macroinvertibrates, and demersal fish species.

b. Petitioner's Claims

The petitioner claims that calculations submitted as part of the petition show that a balanced, indigenous population will not exist at the edge of the Oxnard outfall's zone of initial dilution. The calculations rely on published equations forecasting changes in benthic communities based upon suspended solids mass emissions.

As petitioner recognizes, the calculations submitted in the petition have not been verified by appropriate benthic surveys in the vicinity of the Oxnard discharge. The equations relied upon were based primarily on discharges of suspended solids an order of magnitude higher than the Oxnard discharge, and to much deeper waters.[4] As with the plankton study discussed in the previous section, we cannot determine the impacts of the Oxnard discharge, based upon extrapolation of results from other significantly different discharges, absent confirming data measuring the impacts of the Oxnard discharge.

2. Contention: Petitioner contends that the Oxnard discharge is not deep enough to permit a discharge at less than secondary treatment.

Finding: The Ocean Plan and Section 301(h) of the Clean Water Act do not set any specific minimum depth requirement, but the depth of outfall must be considered in determining whether requirements for protection of beneficial uses have been satisfied.[5]

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[4] Although the study included information from the Oxnard outfall, the authors recognize that the equations may not accurately reflect conditions at the Oxnard outfall because differences between the Oxnard discharge and other discharges studied. A. Mearns and J. Word, Forecasting Effects of Sewage Solids on Marine Benthic Communities, published in G. Mayer, ed., Ecological Stress and the New York Bight: Science and Management at 495, 509 (1982).

[5] Section 301(h) of the Clean Water Act authorizes a waiver of secondary treatment requirements for municipal discharges into "deep" offshore waters, or (CONTINUED)

Considering tne depth of tne Oxnard discharge, and the circulation patterns in the area, the evidence in the record indicates that a relaxation of treatment requirements may add to violations of Ocean Plan objectives for bacteriological characteristics. Absent a demonstration that the discharge will not cause or contribute to tnese violations, issuance of waste discharge requirements authorizing a reduction in treatment is inappropriate.

The Oxnard plume can reach the ocean surface during tne fall and winter months. Tetra Tech at 40. Onshore winds tend to move this waste towards shore. Id. at 60. In the late spring and summer a portion of the plume rises to a level sufficiently snallow to be transported by wind driven currents. Only during the spring is the discharge plume trapped deep enough not to be influenced by the wind caused currents. Id. at 40.

Data collected as part of the monitoring program for the Oxnard discharge show that Ocean Plan bacteriological standards for body contact sports and shellfish harvesting have been exceeded on a number of occasions. The 301(h) Review Team suggests that: "Many of these violations may be caused by non-point source pollution and urban runoff from storm drains near the outfall." (p. 31.) In view of the seasonal shoreward transport and surfacing

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5 (FOOTNOTE CONTINUED)

into estuarine waters with specified cnaracteristics. 33 U.S.C. §1311(n). Tne legislative history of Section 301(h) indicates that depth is a key factor in determining wnetner a waiver of secondary treatment is appropriate. S. Rep. No. 95-370, 95th Cong. 1st Sess. 45, reprinted in [1977] U.S. Code Cong. & Ad. News 4326, 4370. There is no absolute minimum depth requirement. Rather, tne depth of the discharge must be taken account in determining whether protection of fish, shellfish, wildlife and recreation will be assured. See 40 Fed. Reg. 34802 (June 15, 1979); Natural Resources Defense Council, Inc. v. Environmental Protection Agency, 565 F.2d 768, 777-78 (D.C. Cir. 1981).

of the Oxnard effluent plume, however, the relative contribution of the Oxnard discharge and other sources is unclear. (p. 32.)

Order No. 85-56 would allow a substantial increase in the discharge of suspended solids, with concurrent increases in bacteria concentrations, from the Oxnard outfall. Even assuming that the Oxnard discharge is only part of the problem, this increased discharge would contribute to further violations of Ocean Plan standards.

In issuing waste discharge requirements for the Oxnard discharge, the Regional Board must assure compliance with Ocean Plan standards set for the protection of body contact sports and shellfish harvesting. Cal. Water Code §§13263, 13377; see Cal. Water Code §13142.5(a). Arguably, compliance could be achieved through stricter controls on other discharges. Absent a demonstration of the relative contribution of the Oxnard discharge, however, it has not been demonstrated that the relaxation of treatment authorized by Regional Board Order No. 85-56 would not interfere with attainment of Ocean Plan standards.[6]

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[6] This does not necessarily require that the applicant demonstrate that any existing Ocean Plan violations are completely independent of the discharge in order to permit a waiver of secondary treatment requirements. For example, it may be possible to demonstrate that the proposed discharge will meet Ocean Plan requirements if the effluent will be disinfected.

The 301(h) Review Team concluded that the requirement of Section 301(h)(2) that the discharge attain the level of water quality which allows for recreational activities has been satisfied. The basis for this conclusion is not entirely clear, but appears to be based on the absence of any beach or shellfish closures. (p. 32) We do not believe that protection of recreational activities has been adequately demonstrated unless it is demonstrated that the discharge will not interfere with attainment of Ocean Plan bacteriological objectives. Moreover, a 301(h) waiver cannot be issued unless the waiver "will not result in any additional requirements on any other point or non-point source." Clean Water Act Section 301(h)(4), 33 U.S.C. §1311(h)(4). If suspended sediment and associated bacteria from the Oxnard discharge contribute to standards violations, in combination with non-point sources and urban

(CONTINUED)

3. Contention: Petitioner contends tnat Order No. 85-56 fails to establish an adequate system for monitoring impacts on aquatic biota.

Finding: Tne monitoring program for the Oxnard discharge, adopted by Regional Board Order No. 85-56, is adequate.

Tne monitoring program includes analysis of adequate numbers of influent and effluent samples to determine compliance with Ocean Plan water quality objectives and to measure the effectiveness of Oxnard's pretreatment program.

The monitoring program also provides a comprehensive system to observe receiving water impacts. Chemical analyses of sediments and important organisms to assess bioaccumulation, collection of bentnic and mid-water organisms for community analysis, and measurement of coliform bacteria at several surfzone, nearshore and offshore sites will ensure that any large scale changes on the marine environment around the outfall will be observed.

The analysis of the marine community structure will be performed with adequate sample replication and representative sample locations. The sampling frequency limits the detection of short term or small impacts, but environmental changes that are substantially greater than natural variability should be observed.[7]

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[6] (FOOTNOTE CONTINUED)

runoff, allowing a 301(n) waiver would require additional controls on those other sources. In any event, the requirement for consistency with Ocean Plan standards applies independent of the statutory criteria for Section 301(h) waivers. See Clean Water Act Section 301(b)(1)(C), 33 U.S.C. §1311(b)(1)(C).

[7] The monitoring program is capable of identifying differences in communities from those at control stations if those differences are above the 95 percent (CONTINUED)

The monitoring program includes both reference sites unaffected by the Oxnard discharge and baseline monitoring, to provide comparisons that would indicate the effect of the proposed discharge.

In summary, the proposed monitoring program is sufficient to determine large scale, chronic impacts on biota. As such, it constitutes an adequate monitoring programs.

Had the monitoring program been conducted for a period before the Regional Board issued Order No. 85-56, it probably would have provided the information necessary to determine whether a balanced indigenous population of shellfish, fish and wildlife exists in the area of the Oxnard discharge. We recommend that, if the City of Oxnard chooses to continue to pursue its request for a waiver of secondary treatment requirements, the City should carry out the monitoring program established in Order No. 85-56 to help provide the Regional Board with the information necessary for the Regional Board's decision.

4. Contention: Petitioner contends that the Regional Board's action was not consistent with State Water Resources Control Board Resolution No. 68-16 and the federal "Antidegradation Policy."

Finding: The State Water Resources Control Board and the Environmental Protection Agency have adopted similar policies intended to protect the high quality of state and federal waters. The State Board has adopted Resolution No. 68-16, the "Statement of Policy with Respect to

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[7] (FOOTNOTE CONTINUED)

confidence limits of the control stations. The monitoring program should also identify any seasonal variations that might require modification of the monitoring program.

Maintaining High Quality of Waters in California," as part of state policy for water quality control. See Cal. Water Code §13140 et seq. Resolution No. 68-16 has also been adopted, as a general water quality objective, in all sixteen regional water quality control plans. The Environmental Protection Agency has adopted a federal antidegradation policy as part of the agency's water quality standards regulations. 40 C.F.R. §131.12. Before approving any reduction in water quality, or any activity that would result in a reduction in water quality, the Regional Board must first determine that the change in water quality would not be in violation of State Board Resolution No. 68-16 or the federal antidegradation policy. Because the Regional Board did not make the required determination, as part of waste discharge requirements permitting a significant increase in receiving water pollutant levels, the Regional Board's action was improper.

State Board Resolution No. 68-16 requires that:

> "...the existing quality of water...will be maintained until it is demonstrated to the State that any change will be consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of water and will not result in water quality less than that prescribed [by other applicable water quality objectives]."

In determining whether changes in water quality will be consistent with "the maximum benefit to the people of the State," the State and Regional Boards are guided by the policies of the Porter-Cologne Act. The Porter-Cologne Act evinces a policy of ensuring consistency with federal Clean Water Act requirements. To take maximum advantage of federal programs, and to avoid direct regulation by the Environmental Protection Agency of activities already subject to regulation by the State and Regional Boards, the state's standard setting and waste discharge control programs must ensure that, at a minimum,

all applicable Clean Water Act requirements are satisfied. See Cal. Water Code §§13160, 13170, 13370; Recommended Changes in Water Quality Control, Final Report of the Study Panel to the California State Water Resources Control Board, Study Project: Water Quality Control Program 31 (1969).

Clearly, it is in the maximum benefit of the people of the State that the State and Regional Boards ensure that the State's water quality programs are consistent with the federal antidegradation policy. The State and Regional Boards have routinely followed the federal antidegradation policy. See, e.g., State Water Resources Control Board, Lake Tahoe Basin Water Quality Plan 37 (1980).

The federal antidegradation policy requires that each state have a policy providing that changes in water quality will be consistent with the following three-part test:

> "(1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
> (2) Where the quality of the waters exceed levels necessary to support propogation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds...that allowing lower water quality is necessary to accommodate important economic or social development....
> (3) Where high quality waters constitute an outstanding National resource...that water quality shall be maintained and protected." 40 C.F.R. §131.12.

Where this test is applicable under federal law, State Board Resolution No. 68-16 incorporates this test in determining whether changes in water quality are consistent with the maximum benefit to the people of the State.[8]

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[8] Independent of State Board Resolution No. 68-16, the Porter-Cologne Act requires the State and Regional Boards to apply the federal antidegradation policy when they issue waste discharge requirements for point source discharges (CONTINUED)

State Board Resolution No. 68-16 clearly applies to Regional Board Order No. 85-56, which permits both an increase in the volume of discharge and a reduction in the level of treatment. But State Board Resolution No. 68-16 incorporates the test set forth in the federal antidegradation policy only as applied to situations where the federal antidegradation policy is applicable. Where the federal antidegradation policy does not apply, the State and Regional Boards have applied the general test set forth in State Board Resolution No. 68-16, without addressing the specific, three-part test established by the federal antidegradation policy. See, e.g. State Board Order No. WQ 86-8 at 30-31. Accordingly, we must determine whether the federal antidegradation policy applies to 301(h) waivers.

On its face, the federal antidegradation policy is applicable. It is clearly intended to apply to individual permit decisions, not just changes in water quality control plan objectives. See 40 C.F.R. §131.12; Environmental Protection Agency, Questions and Answers on: Antidegradation 2, 6. The Environmental Protection Agency regulation setting out the antidegradation policy singles out thermal discharges for different treatment, consistent with the procedures established for thermal discharges under Section 316 of the Clean Water Act (40 C.F.R. §131.12(a)(4)). By implication, if the Environmental Protection Agency intended to exempt 301(h) waivers from the antidegradation policy, it would have done so expressly.

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8 (FOOTNOTE CONTINUED)

to surface waters, as the policy is an applicable requirement of the federal Clean Water Act and implementing regulations. See Cal. Water Code §§13370, 13377; 23 Cal. Admin. Code §§2235.1, 2235.2. See generally Clean Water Act Section 301(b)(1)(C), 33 U.S.C. §1311(b)(1)(C); 40 C.F.R. §§123.25(b); 130.5; 131.6.

Section 301(h) of the Clean Water Act provides that treatment works which already provide secondary treatment are eligible for 301(h) waivers. 33 U.S.C. §1311(n). This provision was enacted in response to an Environmental Protection Agency regulation which would have prohibited any discharger which had already achieved secondary treatment from applying for a 301(h) waiver. H.R. Rep. No. 97-270, 97th Cong., 1st Sess. 17, reprinted in [1981] U.S. Cong. & Ad. News 2629, 2645.

We do not read this provision to exempt 301(h) waivers from the federal antidegradation policy, a policy which does not absolutely prohibit relaxation of treatment levels, but requires that any reductions in water quality be justified. Section 301(h) provides a basis for waiver of the technology-based requirements of Section 301(b)(1)(B) of the Clean Water Act. See 33 U.S.C. §§1311(b)(1)(B), 1311(h). It does not provide a basis for waiver of the water quality based requirements of Section 301(b)(1)(C). See 33 U.S.C. §1311(b)(1)(C). The federal antidegradation policy is part of the Environmental Protection Agency's water quality standards regulations, and has been incorporated into the state's water quality protection requirements. "The purpose of section [301(h)] is to permit some coastal municipal sewage treatment plants to avoid costs associated with secondary treatment so long as environmental standards can be maintained." Natural Resources Defense Council, Inc. v. Environmental Protection Agency, 656 F.2d 768, 784 (D.C. Cir. 1981). The requirements of state and federal water quality standards, including the requirements of the federal antidegradation policy and State Board Resolution No. 68-16, are among the environmental standards that must be maintained.

If the level of treatment at the Oxnard facility is reduced, as allowed by Regional Board Order No. 85-56, there will be a substantial increase

in mass emission rates of suspended solids. For the period from 1982 through 1984, the plant discharged approximately 900 metric tons per year of suspended solids. With an increase in the volume of the discharge from 18.3 to 25 million gallons per day, mass emissions would increase to approximately 1,000 metric tons per year. Regional Board Order No. 85-56 would allow this discharge to more than double, to over over 2,400 metric tons per year. This increase in suspended solids will be accompanied by an increase in associated bacteria in the receiving waters. To permit these changes in water quality, it must be demonstrated that the change is justified in accordance with the three-part test established by the federal antidegradation policy.

The Regional Board made no finding with respect to either the federal antidegradation policy or State Board Resolution No. 68-16. On the record before us, we cannot make the required findings.

As discussed earlier, it has not been demonstrated that advanced primary treatment will assure protection of marine communities. The increase in suspended solids and associated bacteria may also contribute to a violation of water quality objectives for bacteriological characteristics in an area used for body-contact sports. As such, the increase in suspended solids and associated bacteria is inconsistent with the requirement that "[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." 40 C.F.R. §131.12(a)(1).

Even assuming that instream beneficial uses will be maintained and protected, it must be demonstrated, under the second part of the federal antidegradation policy, that any reduction in water quality is "necessary to

accommodate important economic or social development." 40 C.F.R. §131.12(a)(2).[9] The record is devoid of any evidence that would support such a determination.

The record does indicate that the waiver of secondary treatment requirements will reduce treatment costs, and will therefore reduce charges for sewer service.[10] But there is no evidence as to how much, if any additional development would be attracted to the area by lower sewer service costs, or how important that development would be to the community.

The only testimony presented to the Regional Board concerning impacts on economic or social development was testimony by the Oxnard Port District that an Environmental Protection Agency grant for a utility project would not be released unless the Oxnard treatment plant achieved compliance with its requirements, either by improving its treatment or obtaining a 301(h) waiver. This testimony is insufficient to establish that the waiver is necessary to

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[9] The third part of the federal antidegradation policy, which applies only to outstanding National resource waters, is not at issue in this case.

[10] The staff report prepared for the May 20, 1985 hearing stated that current residential service charges are $13.64 per month, and that service charges at full secondary treatment would be $14.55 per month. The waiver of secondary treatment requirements would reduce service charges to $13.41 per month. There was conflicting testimony as to how much charges would be at secondary treatment. The supplemental staff report, prepared before the Regional Board adopted Order No. 85-86, estimates residential service charges at $15.61 per month will full secondary treatment and $13.41 with the 301(h) waiver. Savings for commercial and industrial users would be considerably greater. The supplemental staff report lists the impact on service fees, and the absence of an assurance that there will not be significant impacts resulting from an increase in suspended solids, as bases for the alternative of denying a 301(h) waiver. The supplemental staff report does not list the impact on service fees as a basis for granting a 301(h) waiver. We need not decide whether we would assign greater economic importance to the savings in service fees than did the supplemental staff report. Cost savings alone, absent any demonstration as to how these cost savings are necessary to accommodate important social and economic development, are not a sufficient basis for determining consistency with the federal antidegradation policy.

accommodate important economic or social development. First, there was no testimony concerning the economic or social importance of the utility project. Second, the full waiver was not necessary for the utility project. The grant would be released upon achievement of secondary treatment standards. At most, all that would be necessary was a partial waiver, to the level of treatment currently being achieved, and then only for as long as it would take to upgrade the treatment facilities to fully comply with secondary treatment requirements.

Third, we do not believe that the potential adverse economic impacts of sanctions are a valid basis for determining that a reduction in water quality is justified. The determination should be based upon the economic and social costs of achieving compliance, not on the sanctions for violation. Otherwise, the sanctions provided for under the Clean Water Act and the Porter-Cologne Act would be self-defeating; instead of ensuring compliance with applicable water quality objectives the threat of sanctions would provide a basis for their relaxation.

In summary, the record before us does not provide an adequate basis for determining whether the changes in water quality resulting from Order No. 85-56 are consistent with the federal antidegradation policy or State Board Resolution No. 68-16.[11] We also believe that the Regional Board is better situated to determine, in the first instance, whether changes in water quality

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[11] For waters subject to the federal antidegradation policy, both the requirements of the federal antidegradation policy and the express requirements of State Board Resolution No. 68-16 should be satisfied. Because we conclude that the requirements of the federal antidegradation policy have not been satisfied, we need not address what State Board Resolution No. 68-16 might require, independent of the incorporation of the federal antidegradation policy into State Board Resolution No. 68-16.

are necessary to accommodate important social and economic development in the area. We therefore conclude that, independent of the requirements of Section 301(h) of the Clean Water Act, Order No. 85-56 must be remanded to the Regional Board for the consideration of additional evidence concerning the necessity for any reduction in receiving water quality. Before approving waste discharge requirements which would result in a reduction in receiving water quality, the Regional Board must make appropriate findings applying the requirements of State Board Resolution No. 68-16 and the federal antidegradation policy.

5. Contention: Petitioner contends that the Regional Board failed to consider the alternative of wastewater reclamation.

Finding: The Regional Board did not consider potential impacts on wastewater reclamation. Water Code Section 13510 declares:

> "...that the people of the state have a primary interest in the development of facilities to reclaim water containing waste to supplement existing surface and underground water supplies and to assist in meeting the future water requirements of the state."

By reducing the level of treatment required before discharge to the ocean, a waiver of secondary treatment requirements may significantly increase the incremental cost of providing the level of treatment required for wastewater reclamation. This has the potential to reduce incentives for wastewater reclamation. Accordingly, potential impacts on wastewater reclamation should be considered when waste discharge requirements are issued based upon a waiver of secondary treatment requirements. See Cal. Water Code §§174; 13142.5(e).

On the record before us, we cannot determine what impact, if any, Regional Board Order No. 85-56 will have on wastewater reclamation. We cannot make this determination without additional information concerning the realistic

market for reclaimed water in the area and the economic feasibility of additional wastewater reclamation. See State Water Resources Control Board Order No. WQ 84-7 at 11.

Recognizing the need for the Regional Board to have sufficient information before it concerning impacts on wastewater reclamation, State Board Order No. 84-7 provides:

> "...in this case and in all cases where an applicant in a water-short area proposes a discharge of once-used wastewater to the ocean, the report of waste discharge should include an explanation as to why the effluent is not being reclaimed for further beneficial use." Id. at 11-12.

Oxnard is in a water-short area. See, e.g. State Board Resolution No. 81-17 at 11; State Board Resolution No. 78-35.

The application for a 301(h) waiver for the Oxnard discharge was pending when State Water Resources Control Board Order No. WQ 84-7 was decided. For projects which had reports of waste discharge already pending when the State Board issued Order No. 84-7 was decided, the Regional Boards should have some flexibility in determining when the discharger should be required to submit a report on wastewater reclamation. Where possible without delaying action on the project, the report on wastewater reclamation should be submitted before the Regional Board acts on waste discharge requirements.

In other cases, requiring preparation and submission of a report on wastewater reclamation, before the Regional Board issues waste discharge requirements, would delay project approval. We do not believe such delays are necessary. In appropriate cases, where the report of waste discharge was submitted before State Board Order No. 84-7, and issuance of waste discharge requirements would not result in any irreversible commitments of resources that

would hinder later efforts to promote wastewater reclamation, the Regional Boards may require submission of a report on wastewater reclamation within a reasonable period after the waste discharge requirements are issued. If the Regional Board determines, after review of the reclamation report, that the waste discharge requirements should be modified or conditions imposed to promote wastewater reclamation, the waste discharge requirements may be amended at that time.

The Oxnard facility has been previously converted to a secondary treatment facility. If secondary treatment requirements are waived for the facility, a portion of the effluent would be given secondary treatment, and blended with primary effluent, to meet the Ocean Plan objective for suspended solids. When the total discharge reaches 25 million gallons per day, which is not projected to occur until 1990, the facility would still have about 10 million gallons per day of reserve secondary treatment capacity which would not be needed to meet the Ocean Plan suspended solids objective and could be used for reclamation. Thus, it does not appear that authorizing a waiver of secondary treatment requirements at this time would result in any irreversible commitments of resources that would prevent the Regional Board from modifying treatment requirements, or imposing other conditions to promote wastewater reclamation, within a reasonable period after a 301(n) waiver is issued.

The Regional Board will be required to reissue waste discharge requirements for the Oxnard facility, to address the issues discussed in other portions of this order. If possible, the Regional Board should require submission of a report on wastewater reclamation early enough to permit the Regional Board to review the report and consider impacts on reclamation when the waste discharge requirements are reissued. If the report cannot be

completed within that period, however, the Regional Board may require submission of the report as a condition of waste discharge requirements. If such a condition is imposed, the waste discharge requirements should also specify that the waste discharge requirements may be amended, based upon information provided in the report or which becomes available as part of the Regional Board's review of the report.

In its response to the petition, the City of Oxnard states that it prepared a report on the feasibility of wastewater reclamation in 1979. This report may well provide information necessary to satisfy State Board Order No. WQ 84-7. But analyses on wastewater reclamation must be periodically updated, not just provided on a one-time basis. State Water Resources Control Board Order No. WQ 84-7 at 11. We also believe that, in the context of a proposed 301(h) waiver, the impacts of allowing a discharge at less than secondary treatment should be specifically addressed.

Although it is arguable that adequate information was available, the Regional Board did not adequately consider that information when it issued Order No. 85-56. The Regional Board did not address impacts on wastewater reclamation, or consider alternatives or mitigation measures that would avoid or reduce any impacts on reclamation. Issuing waste discharge requirements for the Oxnard discharge, without adequate consideration of wastewater reclamation alternatives, was improper. On remand, the Regional Board should require submission of the information it needs to review impacts on wastewater reclamation, and take that information into consideration as part of its decisions affecting the Oxnard discharge, consistent with the direction provided by this Order.

III. SUMMARY AND CONCLUSIONS

1. The Regional Board's issuance of waste discharge requirements authorizing a relaxation of treatment requirements to advanced primary was inappropriate and improper for the following reasons:

a. It has not been demonstrated that the modified discharge will be consistent with the Ocean Plan requirement for protection of marine communities.

b. It has not been demonstrated that the modified discharge will be consistent with Ocean Plan objectives set to protect shellfish harvesting and body-contact recreation.

c. It has not been demonstrated that changes in water quality resulting from the proposed discharge will be consistent with the federal antidegradation policy.

Unless and until the facts necessary to support issuance of waste discharge requirements authorizing a reduced level of treatment are demonstrated, the State cannot concur in the proposed waiver of secondary treatment requirements.

2. The monitoring program adopted by the Regional Board as part of the waste discharge requirements for the Oxnard facility is adequate.

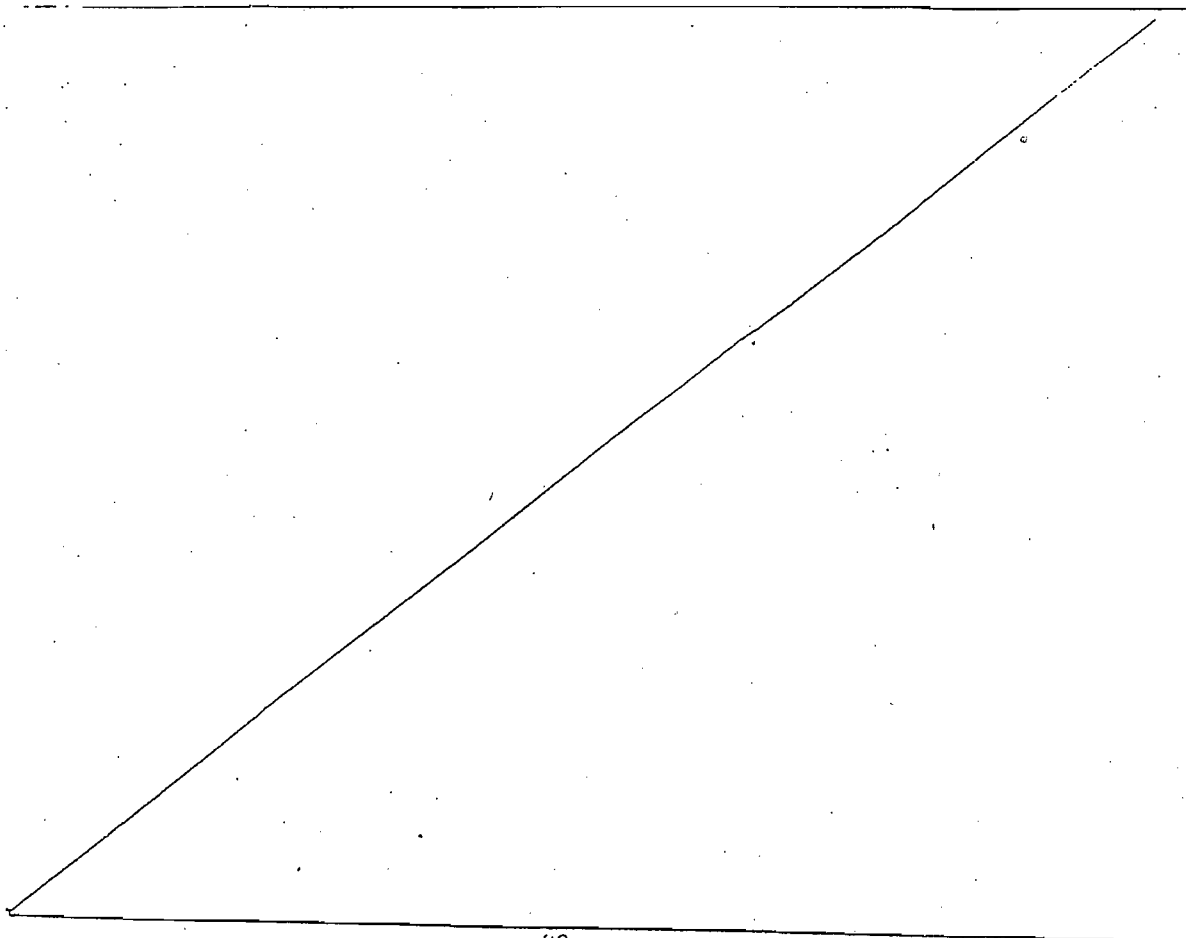
3. The Regional Board should consider the potential for wastewater reclamation, based upon a report submitted by the discharger and any other information which becomes available to the Regional Board, as part of the waste discharge requirements for the Oxnard facility.

IV. ORDER

IT IS HEREBY ORDERED THAT the California Regional Water Quality Control Board, Los Angeles Region, shall issue new waste discharge require-

ments, or amend Order No. 85-56, for the Oxnard facility. The waste discharge requirements shall include effluent limitations based upon secondary treatment unless it is demonstrated, consistent with this Order, that the requirements for authorization of a reduced level of treatment have been satisfied. The Regional Board shall take into consideration potential impacts on wastewater reclamation.

IT IS FURTHER ORDERED THAT pending issuance of new waste discharge requirements or amendment of Order No. 85-56, the discharger shall comply with the previously issued waste discharge requirements for the facility, together with any more stringent requirements necessary to comply with the 1983 Ocean Plan and the pretreatment requirements adopted as part of Regional Board Order



No. 85-56. The previously issued waste discharge requirements, Regional Board Order No. 77-82, snall be deemed to have been amended by this Order to include the requirements of the 1983 Ocean Plan and the pretreatment program adopted as part of Regional Board Order No. 85-56.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that tne foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of tne State Water Resources Control Board held on November 20, 1986.

AYE: W.D. Maughan, Chairman
Darlene E. Ruiz, Vice Chairwoman
Eliseo M. Samaniego, Member

NO: Edwin H. Finster, Member

ABSENT: Danny Walsh, Member

ABSTAIN: None

Maureen Marche
Administrative Assistant to the Board

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Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

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I. BACKGROUND

A. History

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that established storm water permit application requirements for specified categories of industries. The regulations provide that discharges of storm water to waters of the United States from construction projects that encompass five or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. Regulations (Phase II Rule) that became final on December 8, 1999 lowered the permitting threshold from five acres to one acre.

While federal regulations allow two permitting options for storm water discharges (Individual Permits and General Permits), the State Water Board has elected to adopt only one statewide General Permit at this time that will apply to most storm water discharges associated with construction activity.

On August 19, 1999, the State Water Board reissued the General Construction Storm Water Permit (Water Quality Order 99-08-DWQ). On December 8, 1999 the State Water Board amended Order 99-08-DWQ to apply to sites as small as one acre.

The General Permit accompanying this fact sheet regulates storm water runoff from construction sites. Regulating many storm water discharges under one permit will greatly reduce the administrative burden associated with permitting individual storm water discharges. To obtain coverage under this General Permit, dischargers shall electronically file the Permit Registration Documents (PRDs), which includes a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other compliance related documents required by this General Permit and mail the appropriate permit fee to the State Water Board. It is expected that as the storm water program develops, the Regional Water Quality Control Boards (Regional Water Boards) may issue General Permits or Individual Permits containing more specific permit provisions. When this occurs, this General Permit will no longer regulate those dischargers.

B. Legal Challenges and Court Decisions

1. Early Court Decisions

Shortly after the passage of the CWA, the USEPA promulgated regulations exempting most storm water discharges from the NPDES permit requirements. (See 40 C.F.R. § 125.4 (1975); see also *Natural Resources Defense Council v. Costle* (D.C. Cir. 1977) 568 F.2d 1369, 1372 (*Costle*); *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1163 (*Defenders of Wildlife*).) When environmental groups challenged this exemption in federal court, the District of Columbia Court of Appeals invalidated the regulation, holding that the USEPA "does not have authority to exempt categories of point sources from the permit requirements of [CWA] § 402." (*Costle*, 568 F.2d at 1377.) The *Costle* court rejected the USEPA's argument that effluent-based storm sewer regulation was administratively infeasible because of the variable nature of storm water pollution and the number of affected storm sewers throughout the country. (*Id.* at 1377-82.) Although the court acknowledged the practical problems relating to storm sewer regulation, the court found the USEPA had the flexibility under the CWA to design regulations that would overcome these problems. (*Id.* at 1379-83.) In particular, the court pointed to general permits and permits based on requiring best management practices (BMPs).

During the next 15 years, the USEPA made numerous attempts to reconcile the statutory requirement of point source regulation with the practical problem of regulating possibly millions of diverse point source discharges of storm water. (See *Defenders of Wildlife*, 191 F.3d at 1163; see also Gallagher, Clean Water Act in Environmental Law Handbook (Sullivan, edit., 2003)
p. 300 (Environmental Law Handbook); Eisen, *Toward a Sustainable Urbanism: Lessons from Federal Regulation of Urban Storm Water Runoff* (1995) 48 Wash. U.J. Urb. & Contemp. L.1, 40-41 [Regulation of Urban Storm Water Runoff].)

In 1987, Congress amended the CWA to require NPDES permits for storm water discharges. (See CWA § 402(p), 33 U.S.C. § 1342(p); *Defenders of Wildlife,* 191 F.3d at 1163; *Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1296.) In these amendments, enacted as part of the Water Quality Act of 1987, Congress distinguished between industrial and municipal storm water discharges. With respect to industrial storm water discharges, Congress provided that NPDES permits "shall meet all applicable provisions of this section and section 1311 [requiring the USEPA to establish effluent limitations under specific timetables]." (CWA § 402(p)(3)(A), 33 U.S.C. § 1342(p)(3)(A); see also *Defenders of Wildlife,* 191 F.3d at 1163-64.)

In 1990, USEPA adopted regulations specifying what activities were considered "industrial" and thus required discharges of storm water associated with those activities to obtain coverage under NPDES permits. (55 Fed. Reg. 47,990 (1990); 40 C.F.R. § 122.26(b)(14).) Construction activities, deemed a subset of the industrial activities category, must also be regulated by an NPDES permit. (40 C.F.R. § 122.26(b)(14)(x)). In 1999, USEPA issued regulations for "Phase II" of storm water regulation, which required most small construction sites (1-5 acres) to be regulated under the NPDES program. (64 Fed. Reg. 68,722; 40 C.F.R. § 122.26(b)(15)(i).)

2. Court Decisions on Public Participation

Two recent federal court opinions have vacated USEPA rules that denied meaningful public review of NPDES permit conditions. On January 14, 2003, the Ninth Circuit Court of Appeals held that certain aspects of USEPA's Phase II regulations governing MS4s were invalid primarily because the general permit did not contain express requirements for public participation. (*Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832.) Specifically, the court determined that applications for general permit coverage (including the Notice of Intent (NOI) and Storm Water Management Program (SWMP)) must be made available to the public, the applications must be reviewed and determined to meet the applicable standard by the permitting authority before coverage commences, and there must be a process to accommodate public hearings. (*Id.* at 852-54.) Similarly, on February 28, 2005, the Second Circuit Court of Appeals held that the USEPA's confined animal feeding operation (CAFO) rule violated the CWA because it allowed dischargers to write their own nutrient management plans without public review. (*Waterkeeper Alliance v. USEPA* (2d Cir. 2005) 399 F.3d 486.) Although neither decision involved the issuance of construction storm water permits, the State Water Board's Office of Chief Counsel has recommended that the new General Permit address the courts' rulings where feasible[1].

[1] In *Texas Independent Producers and Royalty Owners Assn. v. USEPA* (7th Cir. 2005) 410 F.3d 964, the Seventh Circuit Court of Appeals held that the USEPA's construction general permit was not required to provide the public with the opportunity for a public hearing on the Notice of Intent or Storm Water Pollution Prevention Plan. The Seventh Circuit briefly discussed why it agreed with the Ninth Circuit's dissent in *Environmental Defense Center*, but

The CWA and the USEPA's regulations provide states with the discretion to formulate permit terms, including specifying best management practices (BMPs), to achieve strict compliance with federal technology-based and water quality-based standards. (*Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308.) Accordingly, this General Permit has developed specific BMPs as well as numeric action levels (NALs) in order to achieve these minimum federal standards. In addition, the General Permit requires a SWPPP and REAP (another dynamic, site-specific plan) to be developed but has removed all language requiring the discharger to implement these plans – instead, the discharger is required to comply with specific requirements. By requiring the dischargers to implement these specific BMPs and NALs, this General Permit ensures that the dischargers do not "write their own permits." As a result this General Permit does not require each discharger's SWPPP and REAP to be reviewed and approved by the Regional Water Boards.

This General Permit also requires dischargers to electronically file all permit-related compliance documents. These documents include, but are not limited to, NOIs, SWPPPs, annual reports, Notice of Terminations (NOTs), and numeric action level (NAL) exceedance reports. Electronically submitted compliance information is immediately available to the public, as well as the Regional Water Quality Control Board (Regional Water Board) offices, via the Internet. In addition, this General Permit enables public review and hearings on permit applications when appropriate. Under this General Permit, the public clearly has a meaningful opportunity to participate in the permitting process.

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generally did not discuss the substantive holdings in *Environmental Defense Center* and *Waterkeeper Alliance*, because neither court addressed the initial question of whether the plaintiffs had standing to challenge the permits at issue. However, notwithstanding the Seventh Circuit's decision, it is not binding or controlling on the State Water Board because California is located within the Ninth Circuit.

C. Blue Ribbon Panel of Experts and Feasibility of Numeric Effluent Limitations

In 2005 and 2006, the State Water Board convened an expert panel (panel) to address the feasibility of numeric effluent limitations (NELs) in California's storm water permits. Specifically, the panel was asked to address:

"Is it technically feasible to establish numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits? How would such limitations or criteria be established, and what information and data would be required?"

"The answers should address industrial general permits, construction general permits, and area-wide municipal permits. The answers should also address both technology-based limitations or criteria and water quality-based limitations or criteria. In evaluating establishment of any objective criteria, the panel should address all of the following:

The ability of the State Water Board to establish appropriate objective limitations or criteria;

How compliance determinations would be made;

The ability of dischargers and inspectors to monitor for compliance; and

The technical and financial ability of dischargers to comply with the limitations or criteria."

Through a series of public participation processes (State Water Board meetings, State Water Board workshops, and the solicitation of written comments), a number of water quality, public process and overall program effectiveness problems were identified. Some of these problems are addressed through this General Permit.

D. Summary of Panel Findings on Construction Activities

The panel's final report can be downloaded and viewed through links at www.waterboards.ca.gov or by clicking here[2].

The panel made the following observations:

"Limited field studies indicate that traditional erosion and sediment controls are highly variable in performance, resulting in highly variable turbidity levels in the site discharge."

"Site-to-site variability in runoff turbidity from undeveloped sites can also be quite large in many areas of California, particularly in more arid regions with less natural vegetative cover and steep slopes."

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[2] http://www.waterboards.ca.gov/stormwtr/docs/numeric/swpanel_final_report.pdf

"Active treatment technologies involving the use of polymers with relatively large storage systems now exist that can provide much more consistent and very low discharge turbidity. However, these technologies have as yet only been applied to larger construction sites, generally five acres or greater. Furthermore, toxicity has been observed at some locations, although at the vast majority of sites, toxicity has not occurred. There is also the potential for an accidental large release of such chemicals with their use."

"To date most of the construction permits have focused on TSS and turbidity, but have not addressed other, potentially significant pollutants such as phosphorus and an assortment of chemicals used at construction sites."

"Currently, there is no required training or certification program for contractors, preparers of soil erosion and sediment control Storm Water Pollution Prevention Plans, or field inspectors."

"The quality of storm water discharges from construction sites that effectively employ BMPs likely varies due to site conditions such as climate, soil, and topography."

"The States of Oregon and Washington have recently adopted similar concepts to the Action Levels described earlier."

In addition, the panel made the following conclusions:

"It is the consensus of the Panel that active treatment technologies make Numeric Limits technically feasible for pollutants commonly associated with storm water discharges from construction sites (e.g. TSS and turbidity) for larger construction sites. Technical practicalities and cost-effectiveness may make these technologies less feasible for smaller sites, including small drainages within a larger site, as these technologies have seen limited use at small construction sites. If chemical addition is not permitted, then Numeric Limits are not likely feasible."

"The Board should consider Numeric Limits or Action Levels for other pollutants of relevance to construction sites, but in particular pH. It is of particular concern where fresh concrete or wash water from cement mixers/equipment is exposed to storm water."

"The Board should consider the phased implementation of Numeric Limits and Action Levels, commensurate with the capacity of the dischargers and support industry to respond."

E. How the Panel's Findings are Used in this General Permit

The State Water Board carefully considered the findings of the panel and related public comments. The State Water Board also reviewed and considered the comments regarding statewide storm water policy and the reissuance of the Industrial General Permit. From the input received the State Water Board identified some permit and program performance gaps that are addressed in this General Permit. The Summary of Significant Changes (below) in this General Permit are a direct result of this process.

F. Summary of Significant Changes in This General Permit

The State Water Board has significant changes to Order 99-08-DWQ. This General Permit differs from Order 99-08-DWQ in the following significant ways:

Rainfall Erosivity Waiver: this General Permit includes the option allowing a small construction site (>1 and <5 acres) to self-certify if the rainfall erosivity value (R value) for their site's given location and time frame compute to be less than or equal to 5.

Technology-Based Numeric Action Levels: this General Permit includes NALs for pH and turbidity.

Risk-Based Permitting Approach: this General Permit establishes three levels of risk possible for a construction site. Risk is calculated in two parts: 1) Project Sediment Risk, and 2) Receiving Water Risk.

Minimum Requirements Specified: this General Permit imposes more minimum BMPs and requirements that were previously only required as elements of the SWPPP or were suggested by guidance.

Project Site Soil Characteristics Monitoring and Reporting: this General Permit provides the option for dischargers to monitor and report the soil characteristics at their project location. The primary purpose of this requirement is to provide better risk determination and eventually better program evaluation.

Effluent Monitoring and Reporting: this General Permit requires effluent monitoring and reporting for pH and turbidity in storm water discharges. The purpose of this monitoring is to evaluate whether NALs and NELs for Active Treatment Systems included in this General Permit are exceeded.

Receiving Water Monitoring and Reporting: this General Permit requires some Risk Level 3 and LUP Type 3 dischargers to monitor receiving waters and conduct bioassessments.

Post-Construction Storm Water Performance Standards: this General Permit specifies runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 NPDES permit, to avoid, minimize and/or mitigate post-construction storm water runoff impacts.

Rain Event Action Plan: this General Permit requires certain sites to develop and implement a Rain Event Action Plan (REAP) that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.

Annual Reporting: this General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and pubic information.

Certification/Training Requirements for Key Project Personnel: this General Permit requires that key personnel (e.g., SWPPP preparers, inspectors, etc.) have specific training or certifications to ensure their level of knowledge and skills are adequate to ensure their ability to design and evaluate project specifications that will comply with General Permit requirements.

Linear Underground/Overhead Projects: this General Permit includes requirements for all Linear Underground/Overhead Projects (LUPs).

II. RATIONALE

A. General Permit Approach

A general permit for construction activities is an appropriate permitting approach for the following reasons:

1. A general permit is an efficient method to establish the essential regulatory requirements for a broad range of construction activities under differing site conditions;

2. A general permit is the most efficient method to handle the large number of construction storm water permit applications;

3. The application process for coverage under a general permit is far less onerous than that for individual permit and hence more cost effective;

4. A general permit is consistent with USEPA's four-tier permitting strategy, the purpose of which is to use the flexibility provided by the CWA in designing a workable and efficient permitting system; and

5. A general permit is designed to provide coverage for a group of related facilities or operations of a specific industry type or group of industries. It is appropriate when the discharge characteristics are sufficiently similar, and a standard set of permit requirements can effectively provide environmental protection and comply with water quality standards for discharges. In most cases, the general permit will provide sufficient and appropriate management requirements to protect the quality of receiving waters from discharges of storm water from construction sites.

There may be instances where a general permit is not appropriate for a specific construction project. A Regional Water Board may require any discharger otherwise covered under the General Permit to apply for and obtain an Individual Permit or apply for coverage under a more specific General Permit. The Regional Water Board must determine that this General Permit does not provide adequate assurance that water quality will be protected, or that there is a site-specific reason why an individual permit should be required.

B. Construction Activities Covered

1. **Construction activity subject to this General Permit:**

Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.

Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or sale of one or more acres of disturbed land surface.

Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to USEPA regulations, such as dairy barns or food processing facilities.

Construction activity associated with LUPs including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete

and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.[3]

Storm water discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction[4] (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. Construction projects that intend to disturb one or more acres of land within the jurisdictional boundaries of a CWA § 404 permit should contact the appropriate Regional Water Board to determine whether this permit applies to the project.

2. Linear Underground/Overhead Projects (LUPs) subject to this General Permit:

Underground/overhead facilities typically constructed as LUPs include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

Water Quality Order 2003-0007-DWQ regulated construction activities associated with small LUPs that resulted in land disturbances greater than one acre, but less than five acres. These projects were considered non-traditional construction projects. Attachment A of this Order now regulates all construction activities from LUPs resulting in land disturbances greater than one acre.

3. Common Plan of Development or Sale

USEPA regulations include the term “common plan of development or sale” to ensure that acreage within a common project does not artificially escape the permit requirements because construction activities are phased, split among smaller parcels, or completed by different owners/developers. In the absence of an

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[3] Pursuant to the Ninth Circuit Court of Appeals’ decision in *NRDC v. EPA* (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the USEPA’s petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

[4] A construction site that includes a dredge and/or fill discharge to any water of the United States (e.g., wetland, channel, pond, or marine water) requires a CWA Section 404 permit from the U.S. Army Corps of Engineers and a CWA Section 401 Water Quality Certification from the Regional Water Board or State Water Board.

exact definition of “common plan of development or sale,” the State Water Board is required to exercise its regulatory discretion in providing a common sense interpretation of the term as it applies to construction projects and permit coverage. An overbroad interpretation of the term would render meaningless the clear “one acre” federal permitting threshold and would potentially trigger permitting of almost any construction activity that occurs within an area that had previously received area-wide utility or road improvements.

Construction projects generally receive grading and/or building permits (Local Permits) from local authorities prior to initiating construction activity. These Local Permits spell out the scope of the project, the parcels involved, the type of construction approved, etc. Referring to the Local Permit helps define “common plan of development or sale.” In cases such as tract home development, a Local Permit will include all phases of the construction project including rough grading, utility and road installation, and vertical construction. All construction activities approved in the Local Permit are part of the common plan and must remain under the General Permit until construction is completed. For custom home construction, Local Permits typically only approve vertical construction as the rough grading, utilities, and road improvements were already independently completed under the a previous Local Permit. In the case of a custom home site, the homeowner must submit plans and obtain a distinct and separate Local Permit from the local authority in order to proceed. It is not the intent of the State Water Board to require permitting for an individual homeowner building a custom home on a private lot of less than one acre if it is subject to a separate Local Permit. Similarly, the installation of a swimming pool, deck, or landscaping that disturbs less than one acre that was not part of any previous Local Permit are not required to be permitted.

The following are several examples of construction activity of less than one acre that would require permit coverage:

a. A landowner receives a building permit(s) to build tract homes on a 100-acre site split into 200 one-third acre parcels, (the remaining acreage consists of streets and parkways) which are sold to individual homeowners as they are completed. The landowner completes and sells all the parcels except for two. Although the remaining two parcels combined are less than one acre, the landowner must continue permit coverage for the two parcels.

b. One of the parcels discussed above is sold to another owner who intends to complete the construction as already approved in the Local Permit. The new landowner must file Permit Registration Documents (PRDs) to complete the construction even if the new landowner is required to obtain a separate Local Permit.

c. Landowner in (1) above purchases 50 additional one half-acre parcels adjacent to the original 200-acre project. The landowner seeks a Local Permit (or amendment to existing Local permit) to build on 20 parcels while leaving the remaining 30 parcels for future development. The landowner must amend PRDs to include the 20 parcels 14 days prior to commencement of construction activity on those parcels.

C. Construction Activities Not Covered

1. Traditional Construction Projects Not Covered

This General Permit does not apply to the following construction activity:

a. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

b. Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.

c. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.

d. Discharges of storm water within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Board has adopted its own permit to regulate storm water discharges from construction activity in the Lake Tahoe Hydrologic Unit (Regional Water Board 6SLT). Owners of construction projects in this watershed must apply for the Lahontan Regional Water Board permit rather than the statewide Construction General Permit. Construction projects within the Lahontan region must also comply with the Lahontan Region Project Guideline for Erosion Control (R6T-2005-0007 Section), which can be found at **http://www.waterboards.ca.gov/lahontan/Adopted_Orders/2005/r6t_2005_0007.pdf**

e. Construction activity that disturbs less than one acre of land surface, unless part of a larger common plan of development or the sale of one or more acres of disturbed land surface.

f. Construction activity covered by an individual NPDES Permit for storm water discharges.

g. Landfill construction activity that is subject to the Industrial General Permit.

h. Construction activity that discharges to Combined Sewer Systems.

i. Conveyances that discharge storm water runoff combined with municipal sewage.

j. Discharges of storm water identified in CWA § 402(*l*)(2), 33 U.S.C. § 1342(*l*)(2).

2. **Linear Projects Not Covered**

a. LUP construction activity does not include linear routine maintenance projects. Routine maintenance projects are projects associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-way, easements, franchise agreements, or other legally binding agreements of the discharger. Routine maintenance projects include, but are not limited to projects that are conducted to:

i. Maintain the original purpose of the facility or hydraulic capacity.

ii. Update existing lines[5] and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.

iii. Repairing leaks.

[5]Update existing lines includes replacing existing lines with new materials or pipes.

Routine maintenance does not include construction of new[6] lines or facilities resulting from compliance with applicable codes, standards, and regulations.

Routine maintenance projects do not include those areas of maintenance projects that are outside of an existing right-of-way, franchise, easements, or agreements. When a project must secure new areas, those areas may be subject to this General Permit based on the area of disturbed land outside the original right-of-way, easement, or agreement.

b. LUP construction activity does not include field activities associated with the planning and design of a project (e.g., activities associated with route selection).

c. Tie-ins conducted immediately adjacent to "energized" or "pressurized" facilities by the discharger are not considered construction activities where all other LUP construction activities associated with the tie-in are covered by an NOI and SWPPP of a third party or municipal agency.

3. **EPA's Small Construction Rainfall Erosivity Waiver**

EPA's Storm Water Phase II Final Rule provides the option for a Small Construction Rainfall Erosivity Waiver. This waiver applies to small construction sites between 1 and 5 acres, and allows permitting authorities to waive those sites that do not have adverse water quality impacts.

Dischargers eligible for this waiver are exempt from Construction General Permit Coverage. In order to obtain the waiver, the discharger must certify to the State Water Board that small construction activity will occur only when the rainfall erosivity factor is less than 5 ("R" in the Revised Universal Soil Loss Equation). The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a practice that provides interim non-vegetative stabilization can be used for the end of the construction period. The operator must agree (as a condition waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization as defined in the General Permit have been met. If use of this interim stabilization eligibility condition was relied on to qualify for the waiver, signature on the waiver with a certification statement constitutes acceptance of and commitment to complete the final stabilization process. The discharger must submit a waiver certification to the State Board prior to commencing construction activities.

USEPA funded a cooperative agreement with Texas A&M University to develop an online rainfall erosivity calculator. Dischargers can access the calculator from EPA's website at: www.epa.gov/npdes/stormwater/cgp. Use of the calculator allows the discharger to determine potential eligibility for the rainfall erosivity waiver. It may also be useful in determining the time periods during which construction activity could be waived from permit coverage.

[6]New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

D. Obtaining and Terminating Permit Coverage

The appropriate Legally Responsible Person (LRP) must obtain coverage under this General Permit. To obtain coverage, the LRP or the LRP's Approved Signatory must file Permit Registration Documents (PRDs) prior to the commencement of construction activity. Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the CWA and the California Water Code.

To obtain coverage under this General Permit, LRPs must electronically file the PRDs, which include a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other documents required by this General Permit, and mail the appropriate permit fee to the State Water Board. It is expected that as the storm water program develops, the Regional Water Boards may issue General Permits or Individual Permits that contain more specific permit provisions. When this occurs, this General Permit will no longer regulate those dischargers that obtain coverage under Individual Permits.

Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

The application requirements of the General Permit establish a mechanism to clearly identify the responsible parties, locations, and scope of operations of dischargers covered by the General Permit and to document the discharger's knowledge of the General Permit's requirements.

This General Permit provides a grandfathering exception to existing dischargers subject to Water Quality Order No. 99-08-DWQ. Construction projects covered under Water Quality Order No. 99-08-DWQ shall obtain permit coverage at Risk Level 1. LUP projects covered under Water Quality Order No. 2003-0007-DWQ shall obtain permit coverage at LUP Type 1. The Regional Water Boards have the authority to require Risk Determination to be performed on projects currently covered under Water Quality Order No. 99-08-DWQ and 2003-0007-DWQ where they deem necessary.

LRPs must file a Notice of Termination (NOT) with the Regional Water Board when construction is complete and final stabilization has been reached or ownership has been transferred. The discharger must certify that all State and local requirements have been met in accordance with this General Permit. In order for construction to be found complete, the discharger must install post-construction storm water management measures and establish a long-term maintenance plan. This requirement is intended to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream and downstream. Specifically, the discharger must demonstrate compliance with the post-construction standards set forth in this General Permit (Section XIII). The discharger is responsible for all compliance issues including all annual fees until the NOT has been filed and approved by the local Regional Water Board.

E. Discharge Prohibitions

This General Permit authorizes the discharge of storm water to surface waters from construction activities that result in the disturbance of one or more acres of land, provided that the discharger satisfies all permit conditions set forth in the Order. This General Permit prohibits the discharge of pollutants other than storm water and non-storm water discharges authorized by this General Permit or another NPDES permit. This General Permit also prohibits all discharges which contain a hazardous substance in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges. In addition, this General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the nine Regional Water Boards. Discharges to Areas of Special Biological Significance (ASBS) are prohibited unless covered by an exception that the State Water Board has approved.

Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction must be addressed through structural as well as non-structural BMPs. The State Water Board recognizes, however, that certain non-storm water discharges may be necessary for the completion of construction projects. Authorized non-storm water discharges may include those from de-chlorinated potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, uncontaminated ground water dewatering, and other discharges not subject to a separate general NPDES permit adopted by a region. Therefore this General Permit authorizes such discharges provided they meet the following conditions.

These authorized non-storm water discharges must:

1. be infeasible to eliminate;
2. comply with BMPs as described in the SWPPP;
3. filter or treat, using appropriate technology, all dewatering discharges from sedimentation basins;
4. meet the NALs for pH and turbidity; and
5. not cause or contribute to a violation of water quality standards.

Additionally, authorized non-storm water discharges must not be used to clean up failed or inadequate construction or post-construction BMPs designed to keep materials onsite. Authorized non-storm water dewatering discharges may require a permit because some Regional Water Boards have adopted General Permits for dewatering discharges.

This General Permit prohibits the discharge of storm water that causes or threatens to cause pollution, contamination, or nuisance.

F. Effluent Standards for All Types of Discharges

1. Technology-Based Effluent Limitations

Permits for storm water discharges associated with construction activity must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require controls of pollutant discharges that utilize best available technology economically achievable (BAT) for toxic pollutants and non conventional pollutants and best conventional pollutant control technology (BCT) for conventional pollutants. Additionally, these provisions require controls of pollutant discharges to reduce pollutants and any more stringent controls necessary to meet water quality standards. The USEPA has already established such limitations, known as effluent limitation guidelines (ELGs), for some industrial categories. This is not the case with construction discharges. In instances where there are no ELGs the permit writer is to use best professional judgment (BPJ) to establish requirements that the discharger must meet using BAT/BCT technology. This General Permit contains only narrative effluent limitations and does not contain numeric effluent limitations, except for Active Treatment Systems (ATS).

Order No. 2009-0009-DWQ, as originally adopted by the State Water Board on September 2, 2009, contained numeric effluent limitations for pH (within the range of 6.0 and 9.0 pH units) and turbidity (500 NTU) that applied only to Risk Level 3 and LUP Type 3 construction sites. The State Water Board adopted the numeric effluent limitations as technology-based effluent limitations based upon its best professional judgment. The California Building Industry Association, the Building Industry Legal Defense

Foundation, and the California Business Properties Association (petitioners) challenged Order No. 2009-0009-DWQ in *California Building Industry Association et al. v. State Water Resources Control Board*. On December 27, 2011, the Superior Court issued a judgment and writ of mandamus. The Superior Court ruled in favor of the State Water Board on almost all of the issues the petitioners raised, but the Superior Court invalidated the numeric effluent limitations for pH and turbidity for Risk Level 3 and LUP Type 3 sites because it determined that the State Water Board did not have sufficient BMP performance data to support those numeric effluent limitations. Therefore, the Superior Court concluded that the State Water Board did not comply with the federal regulations that apply to the use of best professional judgment. In invalidating the numeric effluent limitations, the Superior Court also suspended two ancillary requirements (a compliance storm event provision and receiving water monitoring at Risk Level 3 and LUP Type 3 sites that violated the numeric effluent limitations) that related solely to the invalidated numeric effluent limitations.

As a result of the Superior Court's writ of mandamus, this Order no longer contains numeric effluent limitations for pH and turbidity, except for ATS. In addition, as a result of the Superior Court's writ of mandamus, the receiving water monitoring requirements for Risk Level 3 and LUP Type 3 sites were suspended until the State Water Board amended this Order to restore the receiving water monitoring requirements. As amended, this Order now requires Risk Level 3 and LUP Type 3 Dischargers with direct discharges to surface waters to conduct receiving water monitoring whenever their effluent exceeds specified receiving water monitoring triggers. The receiving water monitoring triggers were established at the same levels as the previous numeric effluent limitations (effluent pH outside the range of 6.0 and 9.0 pH units or turbidity exceeding 500 NTU). In restoring the receiving water monitoring requirements, the State Water Board determined that it was appropriate to require receiving water monitoring for these types of sites with direct discharges to surface waters that exceeded the receiving water monitoring triggers under any storm event scenarios, because these sites represent the highest threat to receiving water quality. An exceedance of a receiving water monitoring trigger does not constitute a violation of this General Permit. These receiving water monitoring requirements take effect on the effective date of the amendment to this Order.

BAT/BCT technologies not only include passive systems such as conventional runoff and sediment control, but also treatment systems such as coagulation/flocculation using sand filtration, when appropriate. Such technologies allow for effective treatment of soil particles less 0.02 mm (medium silt) in diameter. The discharger must install structural controls, as necessary, such as erosion and sediment controls that meet BAT and BCT to achieve compliance with water quality standards. The narrative effluent limitations constitute compliance with the requirements of the CWA.

Because the permit is an NPDES permit, there is no legal requirement to address the factors set forth in Water Code sections 13241 and 13263, unless the permit is more stringent than what federal law requires. (See *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 618, 627.) None of the requirements in this permit are more stringent than the minimum federal requirements, which include technology-based requirements achieving BAT/BCT and strict compliance with water quality standards. The inclusion of numeric effluent limitations (NELs) in the permit for Active Treatment Systems does not cause the permit to be more stringent than current federal law. NELs and best management practices are simply two different methods of achieving the same federal requirement: strict compliance with state water quality standards. Federal law authorizes both narrative and numeric effluent limitations to meet state water quality standards. The use of NELs to achieve compliance with water quality standards is not a more stringent requirement than the use of BMPs. (State Water Board Order No. WQ 2006-0012 (*Boeing*).) Accordingly, the State Water Board does not need to take into account the factors in Water Code sections 13241 and 13263.

The State Water Board has concluded that the establishment of BAT/BCT will not create or aggravate other environmental problems through increases in air pollution, solid waste generation, or energy consumption. While there may be a slight increase in non-water quality impacts due to the implementation of additional monitoring or the construction of additional BMPs, these impacts will be negligible in comparison with the construction activities taking place on site and would be justified by the water quality benefits associated with compliance.

pH Receiving Water Monitoring Trigger

Given the potential contaminants, the minimum standard method for control of pH in runoff requires the use of preventive measures such as avoiding concrete pours during rainy weather, covering concrete and directing flow away from fresh concrete if a pour occurs during rain, covering scrap drywall and stucco materials when stored outside and potentially exposed to rain, and other housekeeping measures. If necessary, pH-impaired storm water from construction sites can be treated in a filter or settling pond or basin, with additional natural or chemical treatment required to meet pH limits set forth in this permit. The basin or pond acts as a collection point and holds storm water for a sufficient period for the contaminants to be settled out, either naturally or artificially, and allows any additional treatment to take place. The State Water Board considers these techniques to be equivalent to BCT. In determining the pH concentration trigger for discharges, the State Water Board used BPJ to set these limitations.

The chosen trigger was established by calculating three standard deviations above and below the mean pH of runoff from highway construction sites[7] in California. Proper implementation of BMPs should result in discharges that are within the range of 6.0 to 9.0 pH Units.

Turbidity Receiving Water Monitoring Trigger

The Turbidity receiving water monitoring trigger of 500 NTU is a technology-based trigger and was developed using three different analyses aimed at finding the appropriate threshold to set the technology-based limit to ensure environmental protection, effluent quality and cost-effectiveness. The analyses fell into three, main types: (1) an ecoregion-specific dataset developed by Simon et. al. (2004) [8]; (2) Statewide Regional Water Quality Control Board enforcement data; and (3) published, peer-reviewed studies and reports on in-situ performance of best management practices in terms of erosion and sediment control on active construction sites.

A 1:3 relationship between turbidity (expressed as NTU) and suspended sediment concentration (expressed as mg/L) is assumed based on a review of suspended sediment and turbidity data from three gages used in the USGS National Water Quality Assessment Program:

USGS 11074000 SANTA ANA R BL PRADO DAM CA
USGS 11447650 SACRAMENTO R A FREEPORT CA
USGS 11303500 SAN JOAQUIN R NR VERNALIS CA

The receiving water monitoring trigger represents staff determination that the trigger value is the most practicable based on available data. The turbidity receiving water monitoring trigger represents a bridge between the narrative effluent limitations and receiving water limitations. To support this receiving water monitoring trigger, State Water Board staff analyzed construction site discharge information (monitoring data, estimates) and receiving water monitoring information.

Since the turbidity receiving water monitoring trigger represents an appropriate threshold level expected at a site, compliance with this value does not necessarily represent compliance with either the narrative effluent limitations (as enforced through the BAT/BCT standard) or the receiving water limitations. In the San Diego region, some inland surface waters have a receiving water objective for turbidity equal to 20 NTU. Obviously a discharge up to, but not exceeding, the turbidity receiving water monitoring trigger of

[7] Caltrans Construction Sites Runoff Characterization Study, 2002. Available at: http://www.dot.ca.gov/hq/env/stormwater/pdf/CTSW-RT-02-055.pdf.

500 NTU may still cause or contribute to the exceedance of the 20 NTU standard. Most of the waters of the State are protected by turbidity objectives based on background conditions**.**

Table 1 - Regional Water Board Basin Plans, Water Quality Objectives for Turbidity

REGIONAL WATER BOARD	WQ Objective	Background/Natural Turbidity	Maximum Increase
1	Based on background	All levels	20%
2	Based on background	> 50 NTU	10%
3	Based on background	0-50 JTU 50-100 JTU > 100 JTU	20% 10 NTU 10%
4	Based on background	0-50 NTU > 50 NTU	20% 10%
5	Based on background	0-5 NTU 5-50 NTU 50-100 NTU >100 NTU	1 NTU 20% 10 NTU 10%
6	Based on background	All levels	10%
7	Based on background	N/A	N/A
8	Based on background	0-50 NTU 50-100 NTU >100 NTU	20% 10 NTU 10%
9	Inland Surface Waters, 20 NTU All others, based on background	 0-50 NTU 50-100 NTU >100 NTU	 20% 10 NTU 10%

Table 2 shows the suspended sediment concentrations at the 1.5 year flow recurrence interval for the 12 ecoregions in California from Simon et. al (2004).

Table 2 - Results of Ecoregion Analysis

Ecoregion	Percent of California Land Area	Median Suspended Sediment Concentration (mg/L)
1	9.1	874
4	0.2	120
5	8.8	35.6
6	20.7	1530
7	7.7	122
8	3.0	47.4
9	9.4	284
13	5.2	143
14	21.7	5150
78	8.1	581
80	2.4	199
81	3.7	503
Area-weighted average		1633

If a 1:3 relationship between turbidity and suspended sediment is assumed, the median turbidity is 544 NTU.

The following table is composed of turbidity readings measured in NTUs from administrative civil liability (ACL) actions for construction sites from 2003 - 2009. This data was derived from the complete listing of construction-related ACLs for the six year period. All ACLs were reviewed and those that included turbidimeter readings at the point of storm water discharge were selected for this dataset.

Table 3 – ACL Sampling Data taken by Regional Water Board Staff

WDID#	Region	Discharger	Turbidity (NTU)
5S34C331884	5S	Bradshaw Interceptor Section 6B	1800
5S05C325110	5S	Bridalwood Subdivision	1670
5S48C336297	5S	Cheyenne at Browns Valley	1629
5R32C314271	5R	Grizzly Ranch Construction	1400
6A090406008	6T	El Dorado County Department of Transportation, Angora Creek	97.4
5S03C346861	5S	TML Development, LLC	1600
6A31C325917	6T	Northstar Village	See Subdata Set

Subdata Set - Turbidity for point of storm water runoff discharge at Northstar Village

Date	Turbidity (NTU)	Location
10/5/2006	900	Middle Martis Creek
11/2/2006	190	Middle Martis Creek
01/04/2007	36	West Fork, West Martis Creek
02/08/2007	180	Middle Martis Creek
02/09/2007	130	Middle Martis Creek
02/09/2007	290	Middle Martis Creek
02/09/2007	100	West Fork, West Martis Creek
02/10/2007	28	Middle Martis Creek
02/10/2007	23	Middle Martis Creek
02/10/2007	32	Middle Martis Creek
02/10/2007	12	Middle Martis Creek
02/10/2007	60	West Fork, West Martis Creek
02/10/2007	34	West Fork, West Martis Creek

A 95% confidence interval for mean turbidity in an ACL order was constructed. The data set used was a small sample size, so the 500 NTU (the value derived as the receiving water monitoring trigger for this General Permit) needed to be verified as a possible population mean. In this case, the population refers to a hypothetical population of turbidity measurements of which our sample of 20 represents. A t-distribution was assumed due to the small sample size:

Mean: 512.23 NTU
Standard Deviation: 686.85
Margin of Error: 321.45
Confidence Interval: 190.78 NTU (Low)
833.68 NTU (High)

Based on a constructed 95% confidence interval, an ACL order turbidity measurement will be between 190.78 – 833.68 NTU. 500 NTU falls within this range. Using the same data set, a small-sample hypothesis test was also performed to test if the ACL turbidity data set contains enough information to cast doubt on choosing a 500 NTU as a mean. 500 NTU was again chosen due to its proposed use as an acceptable value. The test was carried out using a 95% confidence interval. Results indicated that the ACL turbidity data set *does not* contain significant sample evidence to reject the claim of 500 NTU as an acceptable mean for the ACL turbidity population.

There are not many published, peer-reviewed studies and reports on in-situ performance of best management practices in terms of erosion and sediment control on active construction sites. The most often cited study is a report titled, "Improving the Cost Effectiveness of Highway Construction Site Erosion and Pollution Control" (Horner, Guedry, and Kortenhof 1990, http://www.wsdot.wa.gov/Research/Reports/200/200.1.htm). In a comment letter summarizing this report sent to the State Water Board, the primary author, Dr. Horner, states:

"The most effective erosion control product was wood fiber mulch applied at two different rates along with a bonding agent and grass seed in sufficient time before the tests to achieve germination. Plots treated in this way reduced influent turbidity by more than 97 percent and discharged effluent exhibiting mean and maximum turbidity values of 21 and 73 NTU, respectively. Some other mulch and blanket materials performed nearly as well. These tests demonstrated the control ability of widely available BMPs over a very broad range of erosion potential."

Other technologies studied in this report produced effluent quality at or near 100 NTU. It is the BPJ of the State Water Board staff that erosion control, while preferred, is not always an option on construction sites and that technology performance in a controlled study showing effluent quality directly leaving a BMP is always easier and cheaper to control than effluent being discharged from the project (edge of property, etc.). As a result, it is the BPJ of the State Water Board staff that it is not cost effective or feasible, at this time, for all risk level and type 3 sites in California to achieve effluent discharges with turbidity values that are less than 100 NTU.

To summarize, the analysis showed that: (1) results of the Simon et. al dataset reveals turbidity values in background receiving water in California's ecoregions range from 16 NTU to 1716 NTU (with a mean of 544 NTU); (2) based on a constructed 95% confidence interval, construction sites will be subject to administrative civil liability (ACL) when their turbidity measurement falls between 190.78 – 833.68 NTU; and (3) sites with highly controlled discharges employing and maintaining good erosion control practices can discharge effluent from the BMP with turbidity values less than 100 NTU. State Water Board staff has determined, using its BPJ, that it is most cost effective to set the receiving water monitoring trigger for turbidity at 500 NTU.

i. ***Compliance Storm Event***

While this General Permit no longer contains "compliance storm event" exceptions from technology-based NELs, the "compliance storm event" exception from the ATS NELs remain in effect. See Section K of this Fact Sheet, and Attachment F of this General Permit for more information.

a. **TMDLs and Waste Load Allocations**

Dischargers located within the watershed of a CWA § 303(d) impaired water body, for which a TMDL for sediment has been adopted by the Regional Water Board or USEPA, must comply with the approved TMDL if it identifies "construction activity" or land disturbance as a source of sediment. If it does, the

TMDL should include a specific waste load allocation for this activity/source. The discharger, in this case, may be required by a separate Regional Water Board order to implement additional BMPs, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule. If a specific waste load allocation has been established that would apply to a specific discharge, the Regional Water Board may adopt an order requiring specific implementation actions necessary to meet that allocation. In the instance where an approved TMDL has specified a general waste load allocation to construction storm water discharges, but no specific requirements for construction sites have been identified in the TMDL, dischargers must consult with the state TMDL authority[9] to confirm that adherence to a SWPPP that meets the requirements of the General Permit will be consistent with the approved TMDL.

2. Determining Compliance with Effluent Standards

a. Technology-Based Numeric Action Levels (NALs)

This General Permit contains technology-based NALs for pH and turbidity, and requirements for effluent monitoring at all Risk level 2 & 3, and LUP Type 2 & 3 sites. Numeric action levels are essentially numeric benchmark values for certain parameters that, if exceeded in effluent sampling, trigger the discharger to take actions. Exceedance of an NAL does not itself constitute a violation of the General Permit. If the discharger fails to take the corrective action required by the General Permit, though, that may consititute a violation.

The primary purpose of NALs is to assist dischargers in evaluating the effectiveness of their on-site measures. Construction sites need to employ many different systems that must work together to achieve compliance with the permit's requirements. The NALs chosen should indicate whether the systems are working as intended.

Another purpose of NALs is to provide information regarding construction activities and water quality impacts. This data will provide the State and Regional Water Boards and the rest of the storm water community with more information about levels and types of pollutants present in runoff and how effective the dischargers BMPs are at reducing pollutants in effluent. The State Water Board also hopes to learn more about the linkage between effluent and receiving water quality. In addition, these requirements will provide information on the mechanics needed to establish compliance monitoring programs at construction sites in future permit deliberations.

i. *pH*

The chosen limits were established by calculating one standard deviation above and below the mean pH of runoff from highway construction sites[10] in California. Proper implementation of BMPs should result in discharges that are within the range of 6.5 to 8.5 pH Units.

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[9] http://www.waterboards.ca.gov/tmdl/tmdl.html.

[10] Caltrans Construction Sites Runoff Characterization Study, 2002. Available at: http://www.dot.ca.gov/hq/env/stormwater/pdf/CTSW-RT-02-055.pdf.

The Caltrans study included 33 highway construction sites throughout California over a period of four years, which included 120 storm events. All of these sites had BMPs in place that would be generally implemented at all types of construction sites in California.

ii. ***Turbidity***

BPJ was used to develop an NAL that can be used as a learning tool to help dischargers improve their site controls, and to provide meaningful information on the effectiveness of storm water controls. A statewide turbidity NAL has been set at 250 NTU.

G. Receiving Water Limitations

Construction-related activities that cause or contribute to an exceedance of water quality standards must be addressed. The dynamic nature of construction activity gives the discharger the ability to quickly identify and monitor the source of the exceedances. This is because when storm water mobilizes sediment, it provides visual cues as to where corrective actions should take place and how effective they are once implemented.

This General Permit requires that storm water discharges and authorized non-storm water discharges must not contain pollutants that cause or contribute to an exceedance of any applicable water quality objective or water quality standards. The monitoring requirements in this General Permit for sampling and analysis procedures will help determine whether BMPs installed and maintained are preventing pollutants in discharges from the construction site that may cause or contribute to an exceedance of water quality standards.

Water quality standards consist of designated beneficial uses of surface waters and the adoption of ambient criteria necessary to protect those uses. When adopted by the State Water Board or a Regional Water Board, the ambient criteria are termed "water quality objectives." If storm water runoff from construction sites contains pollutants, there is a risk that those pollutants could enter surface waters and cause or contribute to an exceedance of water quality standards. For that reason, dischargers should be aware of the applicable water quality standards in their receiving waters. (The best method to ensure compliance with receiving water limitations is to implement BMPs that prevent pollutants from contact with storm water or from leaving the construction site in runoff.)

In California, water quality standards are published in the Basin Plans adopted by each Regional Water Board, the California Toxics Rule (CTR), the National Toxics Rule (NTR), and the Ocean Plan.

Dischargers can determine the applicable water quality standards by contacting Regional Water Board staff or by consulting one of the following sources. The actual Basin Plans that contain the water quality standards can be viewed at the website of the appropriate Regional Water Board. (http://www.waterboards.ca.gov/regions.html), the State Water Board site for statewide plans (http://www.waterboards.ca.gov/plnspols/index.html), or the USEPA regulations for the NTR and CTR (40 C.F.R. §§ 131.36-38). Basin Plans and statewide plans are also available by mail from the appropriate Regional Water Board or the State Water Board. The USEPA regulations are available at http://www.epa.gov/. Additional information concerning water quality standards can be accessed through http://www.waterboards.ca.gov/stormwtr/gen_const.html.

H. Training Qualifications and Requirements

The Blue Ribbon Panel (BRP) made the following observation about the lack of industry-specific training requirements:

"Currently, there is no required training or certification program for contractors, preparers of soil erosion and sediment control Storm Water Pollution Prevention Plans, or field inspectors."

Order 99-08-DWQ required that all dischargers train their employees on how to comply with the permit, but it did not specificy a curriculum or certification program. This has resulted in inconsistent implementation by all affected parties - the dischargers, the local governments where the construction activity occurs, and the regulators required to enforce 99-08-DWQ. This General Permit requires Qualified SWPPP Developers and practitioners to obtain appropriate training, and makes this curriculum mandatory two years after adoption, to allow time for course completion. The State and Regional Water Board are working with many stakeholders to develop the curriculum and mechanisms needed to develop and deliver the courses.

To ensure that the preparation, implementation, and oversight of the SWPPP is sufficient for effective pollution prevention, the Qualified SWPPP Developer and Qualified SWPPP Practitioners responsible for creating, revising, overseeing, and implementing the SWPPP must attend a State Water Board-sponsored or approved Qualified SWPPP Developer and Qualified SWPPP Practitioner training course.

I. Sampling, Monitoring, Reporting and Record Keeping

1. Traditional Construction Monitoring Requirements

This General Permit requires visual monitoring at all sites, and effluent water quality at all Risk Level 2 & 3 sites. It requires receiving water monitoring at some Risk Level 3 sites. All sites are required to submit annual reports, which contain various types of information, depending on the site characteristics and events. A summary of the monitoring and reporting requirements is found in Table 4.

Table 4 - Required Monitoring Elements for Risk Levels

	Visual	Non-visible Pollutant	Effluent	Receiving Water
Risk Level 1	three types required for all Risk Levels: non-storm water, pre-rain and post-rain	As needed for all Risk Levels (see below)	where applicable	not required
Risk Level 2			pH, turbidity	not required
Risk Level 3			pH, turbidity	(if Receiving Water Monitoring Trigger exceeded) pH, turbidity and SSC. Bioassessment for sites 30 acres or larger.

a. Visual

All dischargers are required to conduct quarterly, non-storm water visual inspections. For these inspections, the discharger must visually observe each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources. For storm-related inspections, dischargers must visually observe storm water discharges at all discharge locations within two business days after a qualifying event. For this requirement, a qualifying rain event is one producing precipitation of ½ inch or more of discharge. Dischargers must conduct a post-storm event inspection to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify any additional BMPs necessary and revise the SWPPP accordingly. Dischargers must maintain on-site records of all visual observations, personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

b. Non-Visible Pollutant Monitoring

This General Permit requires that all dischargers develop a sampling and analysis strategy for monitoring pollutants that are not visually detectable in storm water. Monitoring for non-visible pollutants must be required at any construction site when the exposure of construction materials occurs and where a discharge can cause or contribute to an exceedance of a water quality objective.

Of significant concern for construction discharges are the pollutants found in materials used in large quantities at construction sites throughout California and exposed throughout the rainy season, such as cement, flyash, and other recycled materials or by-products of combustion. The water quality standards that apply to these materials will depend on their composition. Some of the more common storm water pollutants from construction activity are not CTR pollutants. Examples of non-visible pollutants include glyphosate (herbicides), diazinon and chlorpyrifos (pesticides), nutrients (fertilizers), and molybdenum (lubricants). The use of diazinon and chlorpyrifos is a common practice among landscaping professionals and may trigger sampling and analysis requirements if these materials come into contact with storm water. High pH values from cement and gypsum, high pH and SSC from wash waters, and chemical/fecal contamination from portable toilets, also are not CTR pollutants. Although some of these constituents do have numeric water quality objectives in individual Basin Plans, many do not and are subject only to narrative water quality standards (i.e. not causing toxicity). Dischargers are encouraged to discuss these issues with Regional Water Board staff and other storm water quality professionals.

The most effective way to avoid the sampling and analysis requirements, and to ensure permit compliance, is to avoid the exposure of construction materials to precipitation and storm water runoff. Materials that are not exposed do not have the potential to enter storm water runoff, and therefore receiving waters sampling is not required. Preventing contact between storm water and construction materials is one of the most important BMPs at any construction site.

Preventing or eliminating the exposure of pollutants at construction sites is not always possible. Some materials, such as soil amendments, are designed to be used in a manner that will result in exposure to storm water. In these cases, it is important to make sure that these materials are applied according to the manufacturer's instructions and at a time when they are unlikely to be washed away. Other construction materials can be exposed when storage, waste disposal or the application of the material is done in a manner not protective of water quality. For these situations, sampling is required unless there is capture and containment of all storm water that has been exposed. In cases where construction materials may be exposed to storm water, but the storm water is contained and is not allowed to run off the site, sampling will only be required when inspections show that the containment failed or is breached, resulting in potential exposure or discharge to receiving waters.

The discharger must develop a list of potential pollutants based on a review of potential sources, which will include construction materials soil amendments, soil treatments, and historic contamination at the site. The discharger must review existing environmental and real estate documentation to determine the potential for pollutants that could be present on the construction site as a result of past land use activities.

Good sources of information on previously existing pollution and past land uses include:

i. Environmental Assessments;

ii. Initial Studies;

iii. Phase 1 Assessments prepared for property transfers; and

iv. Environmental Impact Reports or Environmental Impact Statements prepared under the requirements of the National Environmental Policy Act or the California Environmental Quality Act.

In some instances, the results of soil chemical analyses may be available and can provide additional information on potential contamination.

The potential pollutant list must include all non-visible pollutants that are known or should be known to occur on the construction site including, but not limited to, materials that:

i. are being used in construction activities;

ii. are stored on the construction site;

iii. were spilled during construction operations and not cleaned up;

iv. were stored (or used) in a manner that created the potential for a release of the materials during past land use activities;

v. were spilled during previous land use activities and not cleaned up; or

vi. were applied to the soil as part of past land use activities.

C. Effluent Monitoring

Federal regulations[11] require effluent monitoring for discharges subject to NALs. Subsequently, all Risk Level 2 and 3 dischargers must perform sampling and analysis of effluent discharges to characterize discharges associated with construction activity from the entire area disturbed by the project. Dischargers must collect samples of stored or contained storm water that is discharged subsequent to a storm event producing precipitation of ½ inch or more at the time of discharge.

Table 5 - Storm Water Effluent Monitoring Requirements by Risk Level

	Frequency	Effluent Monitoring (Section E, below)
Risk Level 1	when applicable	non-visible pollutant parameters (if applicable)
Risk Level 2	Minimum of 3 samples per day during qualifying rain event characterizing discharges associated with construction activity from the entire project disturbed area.	pH, turbidity, and non-visible pollutant parameters (if applicable)
Risk Level 3	Minimum of 3 samples per day during qualifying rain event characterizing discharges associated with construction activity from the entire project disturbed area.	pH, turbidity, and non-visible pollutant parameters if applicable

Risk Level 1 dischargers must analyze samples for:

i. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment C contained in the General Permit.

[11] 40 C.F.R. § 122.44.

Risk Level 2 dischargers must analyze samples for:

i. pH and turbidity;

ii. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment D contained in the General Permit, and

iii. any additional parameters for which monitoring is required by the Regional Water Board.

Risk Level 3 dischargers must analyze samples for:

i. pH, turbidity;

ii. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment E contained in the General Permit, and

iii. any additional parameters for which monitoring is required by the Regional Water Board.

2. **Linear Monitoring and Sampling Requirements**

Attachment A, establishes minimum monitoring and reporting requirements for all LUPs. It establishes different monitoring requirements depending on project complexity and risk to water quality. The monitoring requirements for Type 1 LUPs are less than Type 2 & 3 projects because Type 1 projects have a lower potential to impact water quality.

A discharger shall prepare a monitoring program prior to the start of construction and immediately implement the program at the start of construction for LUPs. The monitoring program must be implemented at the appropriate level to protect water quality at all times throughout the life of the project.

a. **Type 1 LUP Monitoring Requirements**

A discharger must conduct daily visual inspections of Type 1 LUPs during working hours while construction activities are occurring. Inspections are to be conducted by qualified personnel and can be conducted in conjunction with other daily activities. Inspections will be conducted to ensure the BMPs are adequate, maintained, and in place at the end of the construction day. The discharger will revise the SWPPP, as appropriate, based on the results of the daily inspections. Inspections can be discontinued in non-active construction areas where soil disturbing activities have been completed and final stabilization has been achieved (e.g., trench has been paved, substructures have been installed, and successful final vegetative cover or other stabilization criteria have been met).

A discharger shall implement the monitoring program for inspecting Type 1 LUPs. This program requires temporary and permanent stabilization BMPs after active construction is completed. Inspection activities will continue until adequate permanent stabilization has been established and will continue in areas where re-vegetation is chosen until minimum vegetative coverage has been established. Photographs shall be taken during site inspections and submitted to the State Water Board.

b. **Type 2 & 3 LUP Monitoring Requirements**

A discharger must conduct daily visual inspections of Type 2 & 3 LUPs during working hours while construction activities are occurring. Inspections are to be conducted by qualified personnel and can be in conjunction with other daily activities.

All dischargers of Type 2 & 3 LUPs are required to conduct inspections by qualified personnel of the construction site during normal working hours prior to all anticipated storm events and after actual storm events. During extended storm events, the discharger shall conduct inspections during normal working hours for each 24-hour period. Inspections can be discontinued in non-active construction areas where soil disturbing activities have been completed and final stabilization has been achieved (e.g., trench has been paved, substructures installed, and successful vegetative cover or other stabilization criteria have been met).

The goals of these inspections are (1) to identify areas contributing to a storm water discharge; (2) to evaluate whether measures to reduce pollutant loadings identified in the SWPPP are adequate and properly installed and functioning in accordance with the terms of the General Permit; and (3) to determine whether additional control practices or corrective maintenance activities are needed. Equipment, materials, and workers must be available for rapid response to failures and emergencies. All corrective maintenance to BMPs shall be performed as soon as possible, depending upon worker safety.

All dischargers shall develop and implement a monitoring program for inspecting Type 2 & 3 LUPs that require temporary and permanent stabilization BMPs after active construction is completed. Inspections will be conducted to ensure the BMPs are adequate and maintained. Inspection activities will continue until adequate permanent stabilization has been established and will continue in areas where revegetation is chosen until minimum vegetative coverage has been established.

A log of inspections conducted before, during, and after the storm events must be maintained in the SWPPP. The log will provide the date and time of the inspection and who conducted the inspection. Photographs must be taken during site inspections and submitted to the State Water Board.

C. Sampling Requirements for all LUP Project Types

LUPs are also subject to sampling and analysis requirements for visible pollutants (i.e., sedimentation/siltation, turbidity) and for non-visible pollutants.

Sampling for visible pollutants is required for Type 2 & 3 LUPs.

Non-visible pollutant monitoring is required for pollutants associated with construction sites and activities that (1) are not visually detectable in storm water discharges, and (2) are known or should be known to occur on the construction site, and (3) could cause or contribute to an exceedance of water quality objectives in the receiving waters. Sample collection for non-visible pollutants must only be required (1) during a storm event when pollutants associated with construction activities may be discharged with storm water runoff due to a spill, or in the event there was a breach, malfunction, failure, and/or leak of any BMP, and (2) when the discharger has failed to adequately clean the area of material and pollutants. Failure to implement appropriate BMPs will trigger the same sampling requirements as those required for a breach, malfunction and/or leak, or when the discharger has failed to implement appropriate BMPs prior to the next storm event.

Additional monitoring parameters may be required by the Regional Water Boards.

It is not anticipated that many LUPs will be required to collect samples for pollutants not visually detected in runoff due to the nature and character of the construction site and activities as previously described in this fact sheet. Most LUPs are constructed in urban areas with public access (e.g., existing roadways, road shoulders, parking areas, etc.). This raises a concern regarding the potential contribution of pollutants from vehicle use and/or from normal activities of the public (e.g., vehicle washing, landscape fertilization, pest spraying, etc.) in runoff from the project site. Since the dischargers are not the land owners of the project area and are not able to control the presence of these pollutants in the storm water that runs through their projects, it is not the intent of this General Permit to require dischargers to sample for these pollutants. This General Permit does not require the discharger to sample for these types of pollutants except where the discharger has brought materials onsite that contain these pollutants and when a condition (e.g., breach, failure, etc.) described above occurs.

3. Receiving Water Monitoring

In order to ensure that receiving water limitations are met, discharges subject to receiving water monitoring triggers (i.e., Risk Level 3 and LUP Type 3 sites) or numeric effluent limitations (i.e., Risk Level 3 and LUP Type 3 sites utilizing ATS with direct discharges into receiving waters) must also monitor the downstream receiving water(s) for turbidity, SSC, and pH (if applicable) when a receiving water monitoring trigger or NEL is exceeded.

a. Bioassessment Monitoring

This General Permit requires a bioassessment of receiving waters for dischargers of Risk Level 3 or LUP Type 3 construction projects equal to or larger than 30 acres with direct discharges into receiving waters. Benthic macroinvertebrate samples will be taken upstream and downstream of the site's discharge point in the receiving water. Bioassessments measure the quality of the stream by analyzing the aquatic life present. Higher levels of appropriate aquatic species tend to indicate a healthy stream; whereas low levels of organisms can indicate stream degradation. Active construction sites have the potential to discharge large amounts of sediment and pollutants into receiving waters. Requiring a bioassessment for large project sites, with the most potential to impact water quality, provides a snapshot of the health of the receiving water prior to initiation of construction activities. This snapshot can be used in comparison to the health of the receiving water after construction has commenced.

Each ecoregion (biologically and geographically related area) in the State has a specific yearly peak time where stream biota is in a stable and abundant state. This time of year is called an Index Period. The bioassessment requirements in this General Permit, requires benthic macroinvertebrate sampling within a sites index period. The State Water Board has developed a map designating index periods for the ecoregions in the State (see State Water Board Website).

This General Permit requires the bioassessment methods to be in accordance with the Surface Water Ambient Monitoring Program (SWAMP) in order to provide data consistency within the state as well as generate useable biological stream data.

Table 6 - Receiving Water Monitoring Requirements

	Receiving Water Monitoring Parameters
Risk Level 1 /LUP Type 1	not required
Risk Level 2 / LUP Type 2	not required
Risk Level 3 / LUP Type 3	If Receiving Water Monitoring Trigger exceeded: pH (if applicable), turbidity, and SSC. Bioassessment for sites 30 acres or larger.

4. Reporting Requirements

a. NAL Exceedance Report

All Risk Level 3 and LUP Type 3 dischargers must electronically submit all storm event sampling results to the State And Regional Boards, via the electronic data system, no later than 10 days after the conclusion of the storm event.

b. Annual Report

All dischargers must prepare and electronically submit an annual report no later than September 1 of each year using the Storm water Multi-Application Reporting and Tracking System (SMARTS). The

Annual Report must include a summary and evaluation of all sampling and analysis results, original laboratory reports, chain of custody forms, a summary of all corrective actions taken during the compliance year, and identification of any compliance activities or corrective actions that were not implemented.

5. Record Keeping

According to 40 C.F.R. Parts 122.21(p) and 122.41(j), the discharger is required to retain paper or electronic copies of all records required by this General Permit for a period of at least three years from the date generated or the date submitted to the State Water Board or Regional Water Boards. A discharger must retain records for a period beyond three years as directed by Regional Water Board.

J. Risk Determination

1. Traditional Projects

a. Overall Risk Determination

There are two major requirements related to site planning and risk determination in this General Permit. The project's overall risk is broken up into two elements – (1) project sediment risk (the relative amount of sediment that can be discharged, given the project and location details) and (2) receiving water risk (the risk sediment discharges pose to the receiving waters).

Project Sediment Risk:
Project Sediment Risk is determined by multiplying the R, K, and LS factors from the Revised Universal Soil Loss Equation (RUSLE) to obtain an estimate of project-related bare ground soil loss expressed in tons/acre. The RUSLE equation is as follows:

A = (R)(K)(LS)(C)(P)

Where: A = the rate of sheet and rill erosion
R = rainfall-runoff erosivity factor
K = soil erodibility factor
LS = length-slope factor
C = cover factor (erosion controls)
P = management operations and support practices (sediment controls)

The C and P factors are given values of 1.0 to simulate bare ground conditions.

There is a map option and a manual calculation option for determining soil loss. For the map option, the R factor for the project is calculated using the online calculator at http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm. The product of K and LS are shown on Figure 1. To determine soil loss in tons per acre, the discharger multiplies the R factor times the value for K times LS from the map.

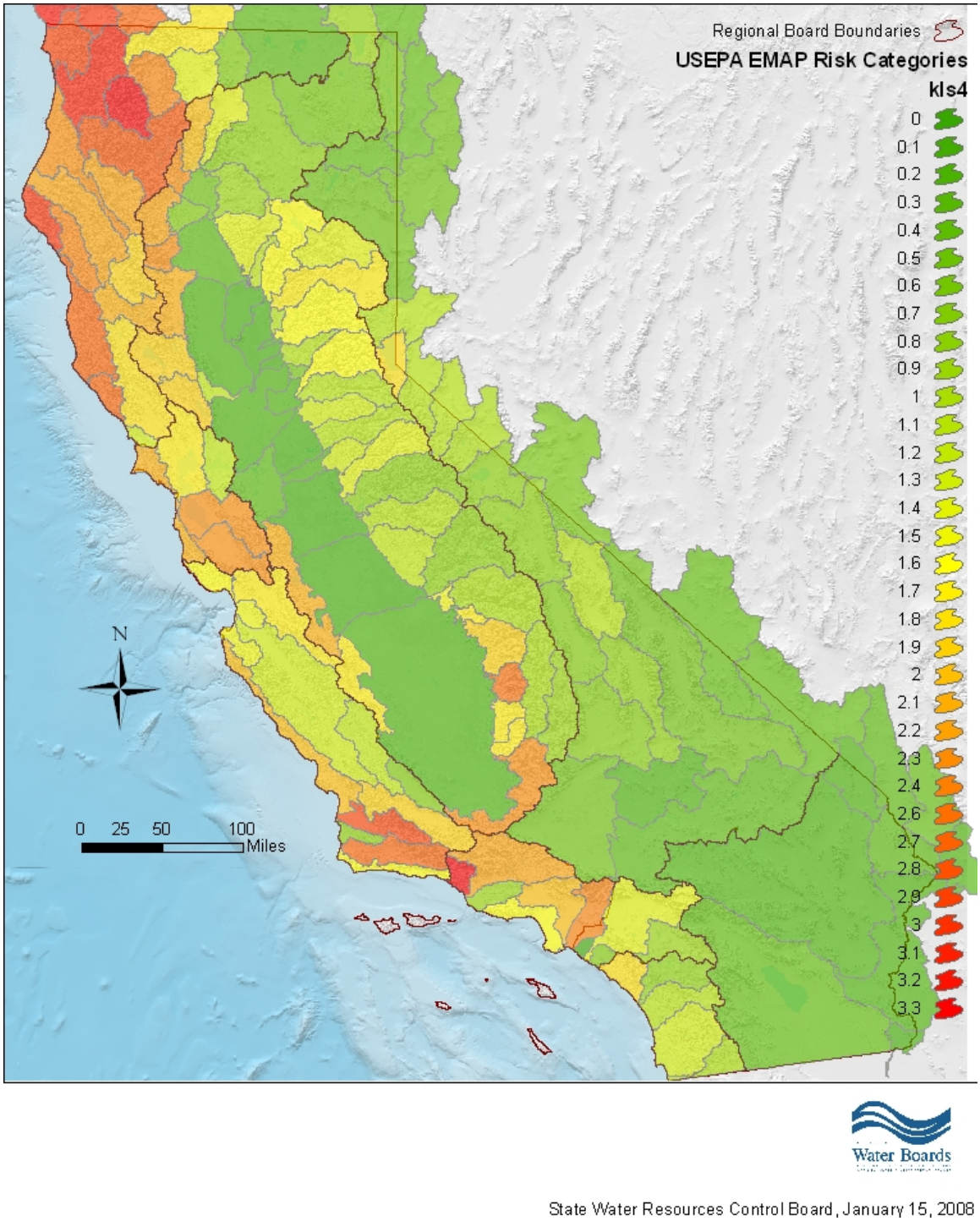

Figure 1 -Statewide Map of K * LS

For the manual calculation option, the R factor for the project is calculated using the online calculator at http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm. The K and LS factors are determined using Appendix 1.

Soil loss of less than 15 tons/acre is considered **low** sediment risk.
Soil loss between 15 and 75 tons/acre is **medium** sediment risk.
Soil loss over 75 tons/acre is considered **high** sediment risk.

The soil loss values and risk categories were obtained from mean and standard deviation RKLS values from the USEPA EMAP program. High risk is the mean RKLS value plus two standard deviations. Low risk is the mean RKLS value minus two standard deviations.

Receiving Water Risk:
Receiving water risk is based on whether a project drains to a sediment-sensitive waterbody. A sediment-sensitive waterbody is either

on the most recent 303d list for waterbodies impaired for sediment;
has a USEPA-approved Total Maximum Daily Load implementation plan for sediment; **or**
has the beneficial uses of COLD, SPAWN, and MIGRATORY.

A project that meets at least one of the three criteria has a high receiving water risk. A list of sediment-sensitive waterbodies will be posted on the State Water Board's website. It is anticipated that an interactive map of sediment sensitive water bodies in California will be available in the future.

The Risk Levels have been altered by eliminating the possibility of a Risk Level 4, and expanding the constraints for Risk Levels 1, 2, and 3. Therefore, projects with high receiving water risk and high sediment risk will be considered a Risk Level 3 risk to water quality.

In response to public comments, the Risk Level requirements have also been changed such that Risk Level 1 projects will be subject to minimum BMP and visual monitoring requirements, Risk Level 2 projects will be subject to NALs and some additional monitoring requirements, and Risk Level 3 projects will be subject to NALs, and more rigorous monitoring requirements such as receiving water monitoring and in some cases bioassessment.

Table 7 - Combined Risk Level Matrix

Combined Risk Level Matrix				
Receiving Water Risk		Sediment Risk		
		Low	Medium	High
	Low	Level 1	Level 2	
	High	Level 2		Level 3

b. **Effluent Standards**

All dischargers are subject to the narrative effluent limitations specified in the General Permit. The narrative effluent limitations require storm water discharges associated with construction activity to meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require controls of pollutant discharges that utilize BAT and BCT to reduce pollutants and any more stringent controls necessary to meet water quality standards.

Risk Level 2 dischargers that pose a medium risk to water quality are subject to technology-based NALs for pH and turbidity. Risk Level 3 dischargers that pose a high risk to water quality are also subject to technology-based NALs for pH and turbidity.

c. Good Housekeeping

Proper handling and managing of construction materials can help minimize threats to water quality. The discharger must consider good housekeeping measures for: construction materials, waste management, vehicle storage & maintenance, landscape materials, and potential pollutant sources. Examples include; conducting an inventory of products used, implementing proper storage & containment, and properly cleaning all leaks from equipment and vehicles.

d. Non-Storm Water Management

Non-storm water discharges directly connected to receiving waters or the storm drain system have the potential to negatively impact water quality. The discharger must implement measures to control all non-storm water discharges during construction, and from dewatering activities associated with construction. Examples include; properly washing vehicles in contained areas, cleaning streets, and minimizing irrigation runoff.

e. Erosion Control

The best way to minimize the risk of creating erosion and sedimentation problems during construction is to disturb as little of the land surface as possible by fitting the development to the terrain. When development is tailored to the natural contours of the land, little grading is necessary and, consequently, erosion potential is lower.[14] Other effective erosion control measures include: preserving existing vegetation where feasible, limiting disturbance, and stabilizing and re-vegetating disturbed areas as soon as possible after grading or construction activities. Particular attention must be paid to large, mass-graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing storm water contamination, and sediment control techniques should be used to capture any soil that becomes eroded.[12]

Risk Level 3 dischargers pose a higher risk to water quality and are therefore additionally required to ensure that post-construction soil loss is equivalent to or less than the pre-construction levels.

f. Sediment Control

Sediment control BMPs should be the secondary means of preventing storm water contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only

[12] U.S. Environmental Protection Agency. 2007. Developing Your Storm Water Pollution Prevention Plan: A Guide for Construction Sites.

examples of what should be considered and should not preclude new or innovative approaches currently available or being developed.

Because Risk Level 2 and 3 dischargers pose a higher risk to water quality, additional requirements for the application of sediment controls are imposed on these projects. This General Permit also authorizes the Regional Water Boards to require Risk Level 3 dischargers to implement additional site-specific sediment control requirements if the implementation of other erosion or sediment controls are not adequately protecting the receiving waters.

g. Run-on and Runoff Control

Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions.

Risk Level 1 dischargers with lower risks to impact water quality are not subject to the run-on and runoff control requirements unless an evaluation deems them necessary or visual inspections show that such controls are required.

h. Inspection, Maintenance and Repair

All measures must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended.

i. Rain Event Action Plan (REAP)

A Rain Event Action Plan (REAP) is a written document, specific for each rain event. A REAP should be designed that when implemented it protects all exposed portions of the site within 48 hours of any likely precipitation event forecast of 50% or greater probability.

This General Permit requires Risk Level 2 and 3 dischargers to develop and implement a REAP designed to protect all exposed portions of their sites within 48 hours prior to any likely precipitation event. The REAP requirement is designed to ensure that the discharger has adequate materials, staff, and time to implement erosion and sediment control measures that are intended to reduce the amount of sediment and other pollutants generated from the active site. A REAP must be developed when there is likely a forecast of 50% or greater probability of precipitation in the project area. (The National Oceanic and Atmospheric Administration (NOAA) defines a chance of precipitation as a probability of precipitation of 30% to 50% chance of producing precipitation in the project area.[13] NOAA defines the probability of precipitation (PoP) as the likelihood of occurrence (expressed as a percent) of a measurable amount (0.01 inch or more) of liquid precipitation (or the water equivalent of frozen precipitation) during a specified period of time at any given point in the forecast area.) Forecasts are normally issued for 12-hour time periods. Descriptive terms for uncertainty and aerial coverage are used as follows:

Table 8 -National Oceanic and Atmospheric Administration (NOAA) Definition of Probability of Precipitation (PoP)

[13] http://www.crh.noaa.gov/lot/severe/wxterms.php.

PoP	Expressions of Uncertainty	Aerial Coverage
0%	none used	none used
10%	none used	isolated
20%	slight chance	isolated
30-50%	chance	scattered
60-70%	likely	numerous
80-100%	none used	none used

The discharger must obtain the precipitation forecast information from the National Weather Service Forecast Office (http://www.srh.noaa.gov/).

2. **Linear Projects**

a. **Linear Risk Determination**

LUPs vary in complexity and water quality concerns based on the type of project. This General Permit has varying application requirements based on the project's risk to water quality. Factors that lead to the characterization of the project include location, sediment risk, and receiving water risk.

Based on the location and complexity of a project area or project section area, LUPs are separated into project types. As described below, LUPs have been categorized into three project types.

i. ***Type 1 LUPs***

Type 1 LUPs are those construction projects where:

(1) 70 percent or more of the construction activity occurs on a paved surface and where areas disturbed during construction will be returned to preconstruction conditions or equivalent protection established at the end of the construction activities for the day, or

(2) greater than 30 percent of construction activities occur within the non-paved shoulders or land immediately adjacent to paved surfaces, or where construction occurs on unpaved improved roads, including their shoulders or land immediately adjacent to them where:

Areas disturbed during construction will be returned to pre-construction conditions or equivalent protection established at the end of the construction activities for the day to minimize the potential for erosion and sediment deposition, and

Areas where established vegetation was disturbed during construction will be stabilized and re-vegetated by the end of project. When required, adequate temporary stabilization Best Management Practices (BMPs) will be installed and maintained until vegetation is established to meet minimum cover requirements established in this General Permit for final stabilization.

Type 1 LUPs typically do not have a high potential to impact storm water quality because (1) these construction activities are not typically conducted during a rain event, (2) these projects are normally constructed over a short period of time[14], minimizing the duration that pollutants could potentially be exposed to rainfall; and (3) disturbed soils such as those from trench excavation are required to be hauled away, backfilled into the trench, and/or covered (e.g., metal plates, pavement, plastic covers over spoil piles) at the end of the construction day.

Type 1 LUPs are determined during the risk assessment found in Attachment A.1 to be 1) low sediment risk and low receiving water risk; 2) low sediment risk and medium receiving water risk; and 3) medium sediment risk and low receiving water risk.

This General Permit requires the discharger to ensure a SWPPP is developed for these construction activities that is specific to project type, location and characteristics.

ii. ***Type 2 LUPs:***

Type 2 projects are determined to have a combination of High, Medium, and Low project sediment risk along with High, Medium, and Low receiving water risk. Like Type 1 projects, Type 2 projects are typically constructed over a short period of time. However, these projects have a higher potential to impact water quality because they:

(1) typically occur outside the more urban/developed areas;

(2) have larger areas of soil disturbance that are not closed or restored at the end of the day;

(3) may have onsite stockpiles of soil, spoil and other materials;

(4) cross or occur in close proximity to a wide variety of sensitive resources that may include, but are not limited to, steep topography and/or water bodies; and

(5) have larger areas of disturbed soils that may be exposed for a longer time interval before final stabilization, cleanup and/or reclamation occurs.

This General Permit requires the discharger to develop and implement a SWPPP for these construction activities that are specific for project type, location and characteristics.

iii. ***Type 3 LUPs:***

[14] Short period of time refers to a project duration of weeks to months, but typically less than one year in duration.

Type 3 projects are determined to have a combination of High and Medium project sediment risk along with High and Medium receiving water risk. Similar to Type 2 projects, Type 3 projects have a higher potential to impact water quality because they:

(1) typically occur outside of the more urban/developed areas;

(2) have larger areas of soil disturbance that are not closed or restored at the end of the day;

(3) may have onsite stockpiles of soil, spoil and other materials;

(4) cross or occur in close proximity to a wide variety of sensitive resources that may include, but are not limited to, steep topography and/or water bodies; and

(5) have larger areas of disturbed soils that may be exposed for a longer time interval before final stabilization, cleanup and/or reclamation occurs.

This General Permit requires the discharger to develop and implement a SWPPP for these construction activities that are specific for project type, location, and characteristics.

b. Linear Effluent Standards

All LUPs are subject to the narrative effluent limitations specified in the General Permit.

Type 2 and Type 3 projects are subject to technology-based NALs for pH and turbidity.

c. Linear Good Housekeeping

Improper use and handling of construction materials could potentially cause a threat to water quality. In order to ensure proper site management of these construction materials, all LUP dischargers must comply with a minimum set of Good Housekeeping measures specified in Attachment A of this General Permit.

d. Linear Non-Storm Water Management

In order to ensure control of all non-storm water discharges during construction, all LUP dischargers must comply with the Non-Storm Water Management measures specified in Attachment A of this General Permit.

e. Linear Erosion Control

This General Permit requires all LUP dischargers to implement effective wind erosion control measures, and soil cover for inactive areas. Type 3 LUPs posing a higher risk to water quality are additionally required to ensure the post-construction soil loss is equivalent to or less than the pre-construction levels.

f. Linear Sediment Control

In order to ensure control and containment of all sediment discharges, all LUP dischargers must comply with the general Sediment Control measures specified in Attachment A or this General Permit. Additional requirements for sediment controls are imposed on Type 2 & 3 LUPs due to their higher risk to water quality.

g. Linear Run-on and Runoff Control

Discharges originating outside of a project's perimeter and flowing onto the property can adversely affect the quantity and quality of discharges originating from a project site. In order to ensure proper management of run-on and runoff, all LUPs must comply with the run-on and runoff control measures specified in Attachment A of this General Permit. Due to the lower risk of impacting water quality, Type 1 LUPs are not required to implement run-on and runoff controls unless deemed necessary by the discharger.

h. Linear Inspection, Maintenance and Repair

Proper inspection, maintenance, and repair activities are important to ensure the effectiveness of on-site measures to control water quality. In order to ensure that inspection, maintenance, and repair activities are adequately performed, the all LUP dischargers a re required to comply with the Inspection, Maintenance, and Repair requirements specified in Attachment A of this General Permit.

K. ATS[15] Requirements

There are instances on construction sites where traditional erosion and sediment controls do not effectively control accelerated erosion. Under such circumstances, or under circumstances where storm water discharges leaving the site may cause or contribute to an exceedance of a water quality standard, the use of an Active Treatment System (ATS) may be necessary. Additionally, it may be appropriate to use an ATS when site constraints inhibit the ability to construct a correctly sized sediment basin, when clay and/or highly erosive soils are present, or when the site has very steep or long slope lengths.[16]

Although treatment systems have been in use in some form since the mid-1990s, the ATS industry in California is relatively young, and detailed regulatory standards have not yet been developed. Many developers are using these systems to treat storm water discharges from their construction sites. The new ATS requirements set forth in this General Permit are based on those in place for small wastewater treatment systems, ATS regulations from the Central Valley Regional Water Quality Control Board (September 2005 memorandum "2005/2006 Rainy Season – Monitoring Requirements for Storm Water Treatment Systems that Utilize Chemical Additives to Enhance Sedimentation"), the Construction Storm Water Program at the State of Washington's Department of Ecology, as well as recent advances in technology and knowledge of coagulant performance and aquatic safety.

The effective design of an ATS requires a detailed survey and analysis of site conditions. With proper planning, ATS performance can provide exceptional water quality discharge and prevent significant impacts to surface water quality, even under extreme environmental conditions.

These systems can be very effective in reducing the sediment in storm water runoff, but the systems that use additives/polymers to enhance sedimentation also pose a potential risk to water quality (e.g., operational failure, equipment failure, additive/polymer release, etc.). The State Water Board is concerned about the potential acute and chronic impacts that the polymers and other chemical additives may have on fish and aquatic organisms if released in sufficient quantities or concentrations. In addition

[15] An ATS is a treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation in order to reduce turbidity caused by fine suspended sediment.
[16] Pitt, R., S. Clark, and D. Lake. 2006. Construction Site Erosion and Sediment Controls: Planning, Design, and Performance. DEStech Publications. Lancaster, PA. 370pp.

to anecdotal evidence of polymer releases causing aquatic toxicity in California, the literature supports this concern.[17] For example, cationic polymers have been shown to bind with the negatively charged gills of fish, resulting in mechanical suffocation.[18] Due to the potential toxicity impacts, which may be caused by the release of additives/polymers into receiving waters, this General Permit establishes residual polymer monitoring and toxicity testing requirements have been established in this General Permit for discharges from construction sites that utilize an ATS in order to protect receiving water quality and beneficial uses.

The primary treatment process in an ATS is coagulation/flocculation. ATS's operate on the principle that the added coagulant is bound to suspended sediment, forming floc, which is gravitationally settled in tanks or a basin, or removed by sand filters. A typical installation utilizes an injection pump upstream from the clarifier tank, basin, or sand filters, which is electronically metered to both flow rate and suspended solids level of the influent, assuring a constant dose. The coagulant mixes and reacts with the influent, forming a dense floc. The floc may be removed by gravitational setting in a clarifier tank or basin, or by filtration. Water from the clarifier tank, basin, or sand filters may be routed through cartridge(s) and/or bag filters for final polishing. Vendor-specific systems use various methods of dose control, sediment/floc removal, filtration, etc., that are detailed in project-specific documentation. The particular coagulant/flocculant to be used for a given project is determined based on the water chemistry of the site because the coagulants are specific in their reactions with various types of sediments. Appropriate selection of dosage must be carefully matched to the characteristics of each site.

ATS's are operated in two differing modes, either Batch or Flow-Through. Batch treatment can be defined as Pump-Treat-Hold-Test-Release. In Batch treatment, water is held in a basin or tank, and is not discharged until treatment is complete. Batch treatment involves holding or recirculating the treated water in a holding basin or tank(s) until treatment is complete or the basin or storage tank(s) is full. In Flow-Through treatment, water is pumped into the ATS directly from the runoff collection system or storm water holding pond, where it is treated and filtered as it flows through the system, and is then directly discharged. "Flow-Through Treatment" is also referred to as "Continuous Treatment."

1. Effluent Standards

This General Permit establishes NELs for discharges from construction sites that utilize an ATS. These systems lend themselves to NELs for turbidity and pH because of their known reliable treatment. Advanced systems have been in use in some form since the mid-1990s. An ATS is considered reliable, can consistently produce a discharge of less than 10 NTU, and has been used successfully at many sites in several states since 1995 to reduce turbidity to very low levels.[19]

This General Permit contains "compliance storm event" exceptions from the technology-based NELs for ATS discharges. The rationale is that technology-based requirements are developed assuming a certain design storm. In the case of ATS the industry-standard design storm is 10-year, 24-hour (as stated in

[17] RomØen, K., B. Thu, and Ø. Evensen. 2002. Immersion delivery of plasmid DNA II. A study of the potentials of a chitosan based delivery system in rainbow trout (*Oncorhynchus mykiss*) fry. *Journal of Controlled Release* **85**: 215-225.
[18] Bullock, G., V. Blazer, S. Tsukuda, and S. Summerfelt. 2000. Toxicity of acidified chitosan for cultured rainbow trout (*Oncorhynchus mykiss*). *Aquaculture* **185**:273-280.
[19] Currier, B., G. Minton, R. Pitt, L. Roesner, K. Schiff, M. Stenstrom, E. Strassler, and E. Strecker. 2006. The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.

Attachment F of this General Permit), so the compliance storm event has been established as the 10-year 24-hour event as well to provide consistency.

2. **Training**

Operator training is critical to the safe and efficient operation and maintenance of the ATS, and to ensure that all State Water Board monitoring and sampling requirements are met. The General Permit requires that all ATS operators have training specific to using ATS's liquid coagulants.

L. Post-Construction Requirements

Under past practices, new and redevelopment construction activities have resulted in modified natural watershed and stream processes. This is caused by altering the terrain, modifying the vegetation and soil characteristics, introducing impervious surfaces such as pavement and buildings, increasing drainage density through pipes and channels, and altering the condition of stream channels through straightening, deepening, and armoring. These changes result in a drainage system where sediment transport capacity is increased and sediment supply is decreased. A receiving channel's response is dependent on dominant channel materials and its stage of adjustment.

Construction activity can lead to impairment of beneficial uses in two main ways. First, during the actual construction process, storm water discharges can negatively affect the chemical, biological, and physical properties of downstream receiving waters. Due to the disturbance of the landscape, the most likely pollutant is sediment, however pH and other non-visible pollutants are also of great concern. Second, after most construction activities are completed at a construction site, the finished project may result in significant modification of the site's response to precipitation. New development and redevelopment projects have almost always resulted in permanent post-construction water quality impacts because more precipitation ends up as runoff and less precipitation is intercepted, evapotranspired, and infiltrated.

General Permit 99-08-DWQ required the SWPPP to include a description of all post-construction BMPs on a site and a maintenance schedule. An effective storm water management strategy must address the full suite of storm events (water quality, channel protection, overbank flood protection, extreme flood protection) (Figure 2).

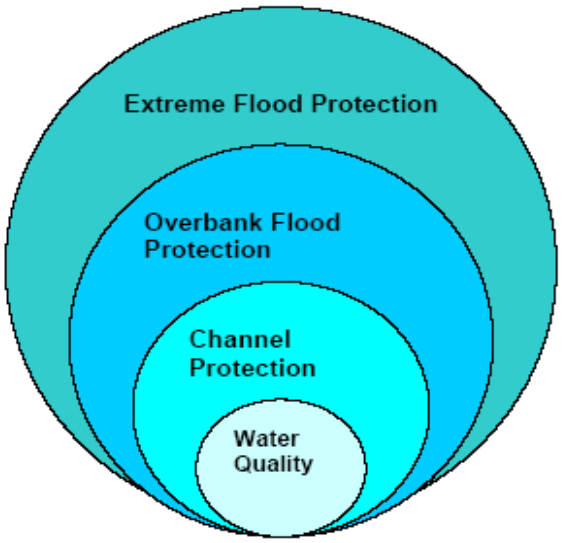

Figure 2 - Suite of Storm Events

The post-construction storm water performance standards in this General Permit specifically address water quality and channel protection events. Overbank flood protection and extreme flood protection events are traditionally dealt with in local drainage and flood protection ordinances. However, measures in this General Permit to address water quality and channel protection also reduce overbank and extreme flooding impacts. This General Permit aims to match post-construction runoff to pre-construction runoff for the 85th percentile storm event, which not only reduces the risk of impact to the receiving water's channel morphology but also provides some protection of water quality.

This General Permit clarifies that its runoff reduction requirements only apply to projects that lie outside of jurisdictions covered by a Standard Urban Storm water Management Plan (SUSMP) (or other more protective) post-construction requirements in either Phase I or Phase II permits.

Figures 3 and 4, below, show the General Permit enrollees (to Order 99-08-DWQ, as of March 10, 2008) overlaid upon a map with SUSMP (or more protective) areas in blue and purple. Areas without blue or purple indicate where the General Permit's runoff reduction requirements would actually apply.

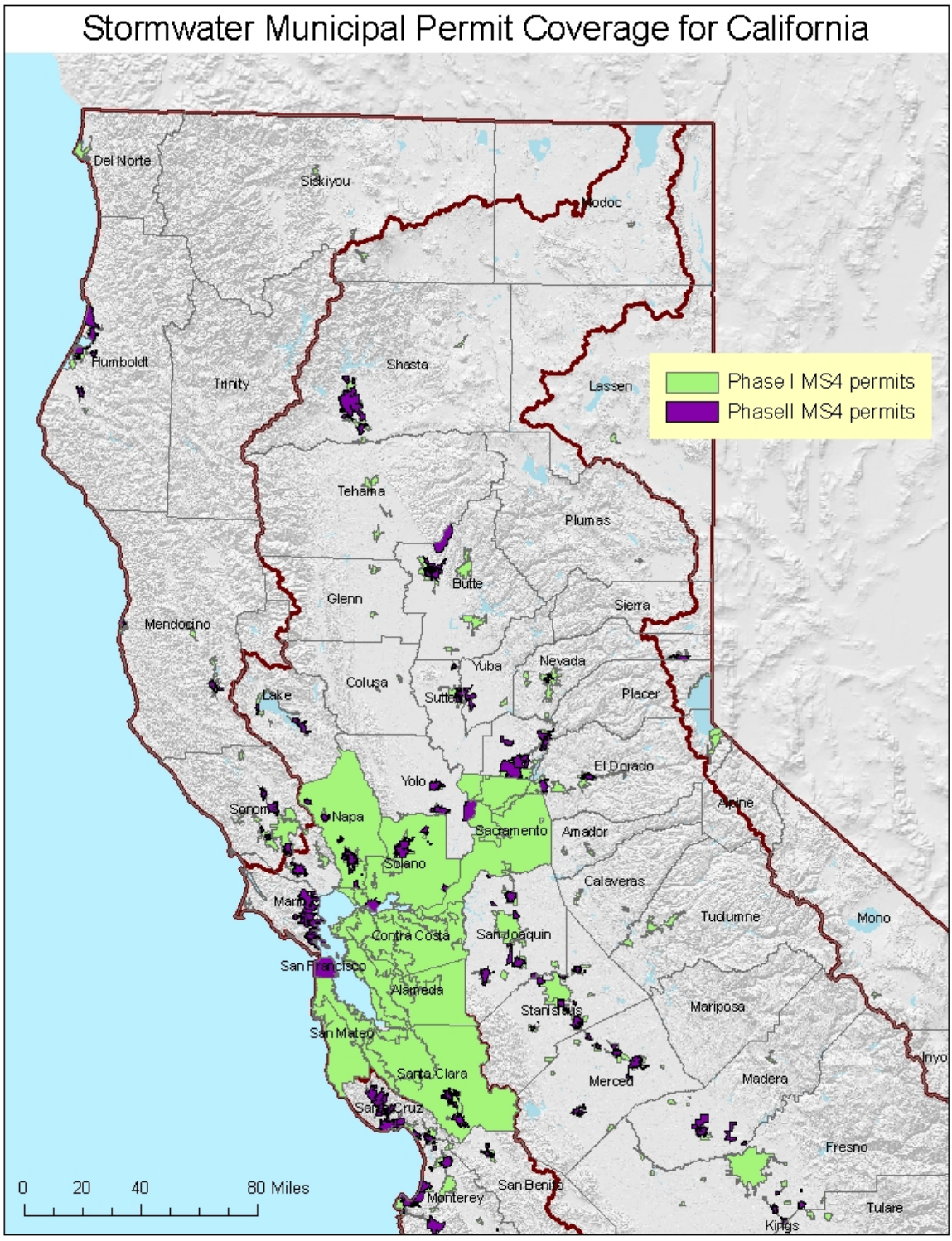

Figure 3 - Northern CA (2009) Counties / Cities With SUSMP-Plus Coverage

Stormwater Municipal Permit Coverage for California

Figure 4 - Southern CA (2009) Counties / Cities With SUSMP-Plus Coverage

Water Quality:
This General Permit requires dischargers to replicate the pre-project runoff water balance (defined as the amount of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event, or the smallest storm event that generates runoff, whichever is larger. Contemporary storm water management generally routes these flows directly to the drainage system, increasing pollutant loads and potentially causing adverse effects on receiving waters. These smaller water quality events happen much more frequently than larger events and generate much higher pollutant loads on an annual basis. There are other adverse hydrological impacts that result from not designing according to the site's pre-construction water balance. In Maryland, Klein[20] noted that baseflow decreases as the extent of urbanization increases. Ferguson and Suckling[21] noted a similar relation in watersheds in Georgia. On Long Island, Spinello and Simmons[22] noted substantial decreases in base flow in intensely urbanized watersheds.

The permit emphasizes runoff reduction through on-site storm water reuse, interception, evapo-transpiration and infiltration through non-structural controls and conservation design measures (e.g., downspout disconnection, soil quality preservation/enhancement, interceptor trees). Employing these measures close to the source of runoff generation is the easiest and most cost-effective way to comply with the pre-construction water balance standard. Using low-tech runoff reduction techniques close to the source is consistent with a number of recommendations in the literature.[23] In many cases, BMPs implemented close to the source of runoff generation cost less than end-of the pipe measures.[24] Dischargers are given the option of using Appendix 2 to calculate the required runoff volume or a watershed process-based, continuous simulation model such as the EPA's Storm Water Management Model (SWMMM) or Hydrologic Simulation Program Fortran (HSPF). Such methods used by the discharger will be reviewed by the Regional Water Board upon NOT application.

Channel Protection:
In order to address channel protection, a basic understanding of fluvial geomorphic concepts is necessary. A dominant paradigm in fluvial geomorphology holds that streams adjust their channel dimensions (width and depth) in response to long-term changes in sediment supply and bankfull discharge (1.5 to 2 year recurrence interval). The bankfull stage corresponds to the discharge at which channel maintenance is the most effective, that is, the discharge at which the moving sediment, forming or removing bars, forming or changing bends and meanders, and generally doing work that results in the average morphologic characteristics of channels.[25] Lane (1955 as cited in Rosgen 1996[26]) showed the generalized relationship between sediment load, sediment size, stream discharge and stream slope in

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[20] Klein 1979 as cited in Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.
[21] Ferguson and Suckling 1990 as cited Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.
[22] Center for Watershed Protection (CWP). 2000. The Practice of Watershed Protection: Techniques for protecting our nation's streams, lakes, rivers, and estuaries. Ellicott City, MD. 741 pp.
[23] Bay Area Storm Water Management Agencies Association (BASMAA). 1997. Start at the Source: Residential Site Planning and Design Guidance Manual for Storm Water Quality Protection. Palo Alto, CA;
McCuen, R.H. 2003 Smart Growth: hydrologic perspective. Journal of Professional Issues in Engineering Education and Practice. Vol (129), pp.151-154;
Moglen, G.E. and S. Kim. 2007. Impervious imperviousness-are threshold based policies a good idea? Journal of the American Planning Association, Vol 73 No. 2. pp 161-171.
[24] Delaware Department of natural Resources (DDNR). 2004. Green technology: The Delaware urban Runoff Management Approcah. Dover, DE. 117 pp.
[25] Dunne, T and L.B. Leopold. 1978. Water in Environmental Planning. San Francisco W.H. Freeman and Company
[26] Rosgen. D.L. 1996. Applied River Morphology. Pagosa Springs. Wildland Hydrology

Figure 5. A change in any one of these variables sets up a series of mutual adjustments in the companion variables with a resulting direct change in the physical characteristics of the stream channel.

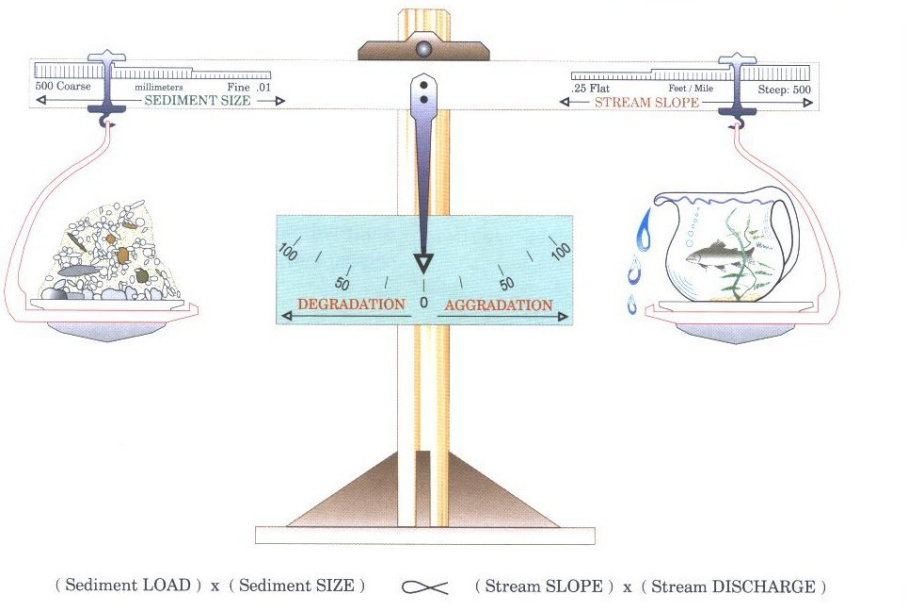

Figure 5 - Schematic of the Lane Relationship

After Lane (1955) as cited in Rosgen (1996)

Stream slope multiplied by stream discharge (the right side of the scale) is essentially an approximation of stream power, a unifying concept in fluvial geomorphology (Bledsoe 1999). Urbanization generally increases stream power and affects the resisting forces in a channel (sediment load and sediment size represented on the left side of the scale).

During construction, sediment loads can increase from 2 to 40,000 times over pre-construction levels.[27] Most of this sediment is delivered to stream channels during large, episodic rain events.[28] This increased sediment load leads to an initial aggradation phase where stream depths may decrease as sediment fills the channel, leading to a decrease in channel capacity and increase in flooding and overbank deposition. A degradation phase initiates after construction is completed.

Schumm et. al (1984) developed a channel evolution model that describes the series of adjustments from initial downcutting, to widening, to establishing new floodplains at lower elevations (Figure 6).

[27] Goldman S.J., K. Jackson, and T.A. Bursztynsky. 1986. Erosion and Sediment Control Handbook. McGraw Hill. San Francisco.
[28] Wolman 1967 as cited in Paul, M.P. and J.L. Meyer. 2001. Streams in the Urban Landscape. *Annu. Rev.Ecol. Syst.* 32: 333-365.

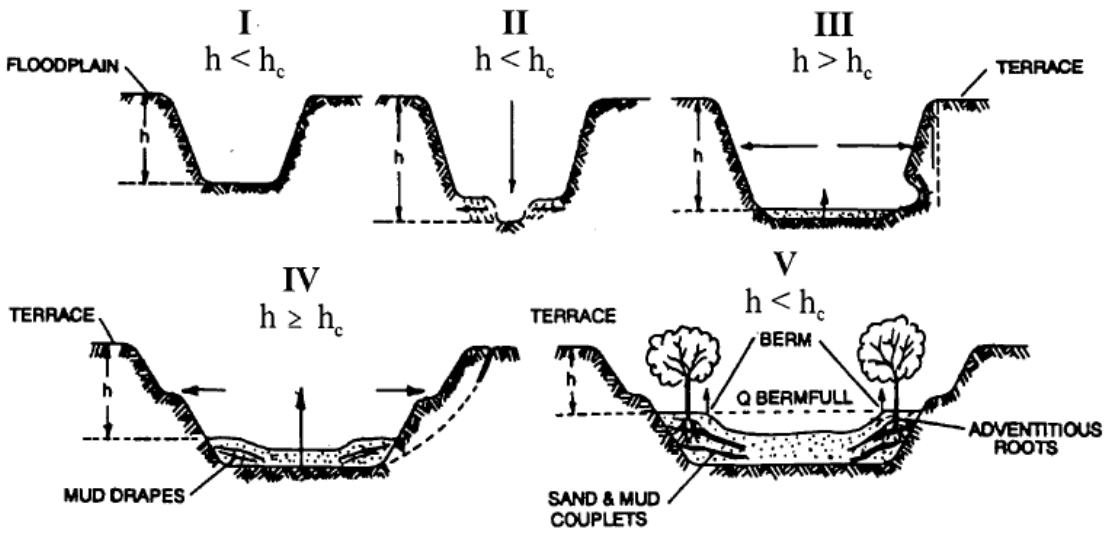

Figure 6 - Channel Changes Associated with Urbanization

After Incised Channel Evolution Sequence in Schumm et. al 1984

Channel incision (Stage II) and widening (Stages III and to a lesser degree, Stage IV) are due to a number of fundamental changes on the landscape. Connected impervious area and compaction of pervious surfaces increase the frequency and volume of bankfull discharges.[29] Increased drainage density (miles of stream length per square mile of watershed) also negatively impacts receiving stream channels.[30] Increased drainage density and hydraulic efficiency leads to an increase in the frequency and volume of bankfull discharges because the time of concentration is shortened. Flows from engineered pipes and channels are also often "sediment starved" and seek to replenish their sediment supply from the channel.

Encroachment of stream channels can also lead to an increase in stream slope, which leads to an increase in stream power. In addition, watershed sediment loads and sediment size (with size generally represented as the median bed and bank particle size, or d_{50}) decrease during urbanization.[31] This means

[29] Booth, D. B. and C. R. Jackson. 1997. Urbanization of Aquatic Systems: Degradation Thresholds, Storm Water Detection, and the Limits of Mitigation. Journal of the American Water Resources Association Vol. 33, No.5, pp. 1077-1089.

[30] May, C.W. 1998. Cumulative effects of urbanization on small streams in the Puget Sound Lowland ecoregion. Conference proceedings from Puget Sound Research '98 held March 12, 13 1998 in Seattle, WA;
Santa Clara Valley Urban Runoff Pollution Prevention Program. 2002. Hydromodification Management Plan Literature Review. 80 pp.

[31] Finkenbine, J.K., D.S. Atwater, and D.S. Mavinic. 2000. Stream health after urbanization. *J. Am. Water Resour. Assoc.* 36:1149-60;

that even if pre- and post-development stream power are the same, more erosion will occur in the post-development stage because the smaller particles are less resistant (provided they are non-cohesive).

As shown in Stages II and III, the channel deepens and widens to accommodate the increased stream power [32]and decrease in sediment load and sediment size. Channels may actually narrow as entrained sediment from incision is deposited laterally in the channel. After incised channels begin to migrate laterally (Stage III), bank erosion begins, which leads to general channel widening.[33] At this point, a majority of the sediment that leaves a drainage area comes from within the channel, as opposed to the background and construction related hillslope contribution. Stage IV is characterized by more aggradation and localized bank instability. Stage V represents a new quasi-equilibrium channel morphology in balance with the new flow and sediment supply regime. In other words, stream power is in balance with sediment load and sediment size.

The magnitude of the channel morphology changes discussed above varies along a stream network as well as with the age of development, slope, geology (sand-bedded channels may cycle through the evolution sequence in a matter of decades whereas clay-dominated channels may take much longer), watershed sediment load and size, type of urbanization, and land use history. It is also dependent on a channel's stage in the channel evolution sequence when urbanization occurs. Management strategies

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Pizzuto, J.E. W.S. Hession, and M. McBride. 2000. Comparing gravel-bed rivers in paired urban and rural catchments of southeastern Pennsylvania. *Geology* 28:79-82.

[32] Hammer 1973 as cited in Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp;
Booth, D.B. 1990. Stream Channel Incision Following Drainage Basin Urbanization. *Water Resour. Bull.* 26:407-417.

[33] Trimble, S.W. 1997. Contribution of Stream Channel Erosion to Sediment Yield from an Urbanizing Watershed. *Science*: Vol. 278 (21), pp. 1442-1444.

must take into account a channel's stage of adjustment and account for future changes in the evolution of channel form (Stein and Zaleski 2005). [34]

Traditional structural water quality BMPs (e.g. detention basins and other devices used to store volumes of runoff) unless they are highly engineered to provide adequate flow duration control, do not adequately protect receiving waters from accelerated channel bed and bank erosion, do not address post-development increases in runoff volume, and do not mitigate the decline in benthic macroinvertebrate communities in the receiving waters[35] suggest that structural BMPs are not as effective in protecting aquatic communities as a continuous riparian buffer of native vegetation. This is supported by the findings of Zucker and White[36], where instream biological metrics were correlated with the extent of forested buffers.

This General Permit requires dischargers to maintain pre-development drainage densities and times of concentration in order to protect channels and encourages dischargers to implement setbacks to reduce channel slope and velocity changes that can lead to aquatic habitat degradation.

There are a number of other approaches for modeling fluvial systems, including statistical and physical models and simpler stream power models.[37] The use of these models in California is described in Stein and Zaleski (2005).[38] Rather than prescribe a specific one-size-fits-all modeling method in this permit, the State Water Board intends to develop a stream power and channel evolution model-based framework to assess channels and develop a hierarchy of suitable analysis methods and management strategies. In time, this framework may become a State Water Board water quality control policy.

Permit Linkage to Overbank and Extreme Flood Protection
Site design BMPs (e.g. rooftop and impervious disconnection, vegetated swales, setbacks and buffers) filter and settle out pollutants and provide for more infiltration than is possible for traditional centralized structural BMPs placed at the lowest point in a site. They provide source control for runoff and lead to a reduction in pollutant loads. When implemented, they also help reduce the magnitude and volume of larger, less frequent storm events (e.g., 10-yr, 24-hour storm and larger), thereby reducing the need for expensive flood control infrastructure. Nonstructural BMPs can also be a landscape amenity, instead of a large isolated structure requiring substantial area for ancillary access, buffering, screening and maintenance facilities.[25] The multiple benefits of using non-structural benefits will be critically important as the state's population increases and imposes strains upon our existing water resources.

Maintaining predevelopment drainage densities and times of concentration will help reduce post-development peak flows and volumes in areas not covered under a municipal permit. The most effective way to preserve drainage areas and maximize time of concentration is to implement landform grading,

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[34] Stein, E.S. and S. Zaleski. 2005.Managing runoff to protect natural stream: the latest developments on investigation and management of hydromodification in California. Southern California Coastal Water Research Project Technical Report 475. 26 pp.
[35] Horner, R.R. 2006. Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices (LID) for the San Diego Region. Available at: http://www.projectcleanwater.org/pdf/permit/case-study_lid.pdf.
[36] Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.
[37] Finlayson, D.P. and D.R. Montgomery. 2003. Modeling large-scale fluvial erosion in geographic information systems. Geomorphology (53), pp. 147-164).
[38] Stein, E.S. and S. Zaleski. 2005.Managing runoff to protect natural stream: the latest developments on investigation and management of hydromodification in California. Southern California Coastal Water Research Project Technical Report 475. 26 pp.

incorporate site design BMPs and implement distributed structural BMPs (e.g., bioretention cells, rain gardens, rain cisterns).

M. Storm Water Pollution Prevention Plans

USEPA's Construction General Permit requires that qualified personnel conduct inspections. USEPA defines qualified personnel as "a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity."[39] USEPA also suggests that qualified personnel prepare SWPPPs and points to numerous states that require certified professionals to be on construction sites at all times. States that currently have certification programs are Washington, Georgia, Florida, Delaware, Maryland, and New Jersey. The Permit 99-08-DWQ did not require that qualified personnel prepare SWPPPs or conduct inspections. However, to ensure that water quality is being protected, this General Permit requires that all SWPPPs be written, amended, and certified by a Qualified SWPPP Developer. A Qualified SWPPP Developer must possess one of the eight certifications and or registrations specified in this General Permit and effective two years after the adoption date of this General Permit, must have attended a State Water Board-sponsored or approved Qualified SWPPP Developer training course. Table 9 provides an overview of the criteria used in determining qualified certification titles for a QSD and QSP.

39 US Environmental Protection Agency. Stormwater Pollution Prevention Plans for Construction Activities. <http://cfpub.epa.gov/npdes/stormwater/swppp.cfm> and <http://www.epa.gov/npdes/pubs/sw_swppp_guide.pdf>.

Table 9 - Qualified SWPPP Developer/ Qualified SWPPP Practitioner Certification Criteria

Certification/ Title	Registered By	QSD/QSP	Certification Criteria
Professional Civil Engineer	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Professional Geologist or Engineering Geologist	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Landscape Architect	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Professional Hydrologist	American Institute of Hydrology	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Certified Professional in Erosion and Sediment Control™ (CPESC)	Enviro Cert International Inc.	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Inspector of Sediment and Erosion Control™ (CISEC)	Certified Inspector of Sediment and Erosion Control, Inc.	QSP	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Erosion, Sediment and Storm Water Inspector™ (CESSWI)	Enviro Cert International Inc.	QSP	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Professional in Storm Water Quality™ (CPSWQ)	Enviro Cert International Inc.	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education

The previous versions of the General Permit required development and implementation of a SWPPP as the primary compliance mechanism. The SWPPP has two major objectives: (1) to help identify the sources of sediment and other pollutants that affect the quality of storm water discharges; and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in storm water and non-storm water discharges. The SWPPP must include BMPs that address source control, BMPs that address pollutant control, and BMPs that address treatment control.

This General Permit shifts some of the measures that were covered by this general requirement to specific permit requirements, each individually enforceable as a permit term. This General Permit emphasizes the use of appropriately selected, correctly installed and maintained pollution reduction BMPs. This approach provides the flexibility necessary to establish BMPs that can effectively address source control of pollutants during changing construction activities. These specific requirements also improve both the clarity and the enforceability of the General Permit so that the dischargers understand, and the public can determine whether the discharges are in compliance with, permit requirements.

The SWPPP must be implemented at the appropriate level to protect water quality at all times throughout the life of the project. The SWPPP must remain on the site during construction activities, commencing with the initial mobilization and ending with the termination of coverage under the General Permit. For LUPs the discharger shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio or telephone. Once construction activities are complete, until stabilization is achieved, the SWPPP shall be available from the SWPPP contact listed in the PRDs

A SWPPP must be appropriate for the type and complexity of a project and will be developed and implemented to address project specific conditions. Some projects may have similarities or complexities, yet each project is unique in its progressive state that requires specific description and selection of BMPs needed to address all possible generated pollutants

N. Regional Water Board Authorities

Because this General Permit will be issued to thousands of construction sites across the State, the Regional Water Boards retain discretionary authority over certain issues that may arise from the discharges in their respective regions. This General Permit does not grant the Regional Water Boards any authority they do not otherwise have; rather, it merely emphasizes that the Regional Water Boards can take specific actions related to this General Permit. For example, the Regional Water Boards will be enforcing this General Permit and may need to adjust some requirements for a discharger based on the discharger's compliance history.

Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Water Quality
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Arnold Schwarzenegger
Governor

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE
ACTIVITIES

ORDER NO. 2009-0009-DWQ
NPDES NO**. CAS000002**

This Order was adopted by the State Water Resources Control Board on:	**September 2, 2009**
This Order shall become effective on:	**July 1, 2010**
This Order shall expire on:	**September 2, 2014**

IT IS HEREBY ORDERED, that this Order supersedes Order No. 99-08-DWQ [as amended by Order No. 2010-0014-DWQ] except for enforcement purposes. The Discharger shall comply with the requirements in this Order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on September 2, 2009.

AYE: Vice Chair Frances Spivy-Weber
Board Member Arthur G. Baggett, Jr.
Board Member Tam M. Doduc

NAY: Chairman Charles R. Hoppin

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board

Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Water Quality
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Arnold Schwarzenegger
Governor

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES

ORDER NO. 2010-0014-DWQ
NPDES NO. CAS000002

Order No. 2009-0009-DWQ was adopted by the State Water Resources Control Board on:	**September 2, 2009**
Order No. 2009-0009-DWQ became effective on:	**July 1, 2010**
Order No. 2009-0009-DWQ shall expire on:	**September 2, 2014**
This Order, which amends Order No. 2009-0009-DWQ, was adopted by the State Water Resources Control Board on:	**November 16, 2010**
This Order shall become effective on:	**February 14, 2011**

IT IS HEREBY ORDERED that this Order amends Order No. 2009-0009-DWQ. Additions to Order No. 2009-0009-DWQ are reflected in blue-underline text and deletions are reflected in red-strikeout text.

IT IS FURTHER ORDERED that staff are directed to prepare and post a conformed copy of Order No. 2009-0009-DWQ incorporating the revisions made by this Order.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on **November 16, 2010.**

AYE: Chairman Charles R. Hoppin
Vice Chair Frances Spivy-Weber
Board Member Arthur G. Baggett, Jr.
Board Member Tam M. Doduc

NAY: None

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board

State Water Resources Control Board

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES

ORDER NO. 2012-0006-DWQ
NPDES NO. **CAS000002**

Order No. 2009-0009-DWQ was adopted by the State Water Resources Control Board on:	**September 2, 2009**
Order No. 2009-0009-DWQ became effective on:	**July 1, 2010**
Order No. 2010-0014-DWQ became effective on:	**February 14, 2011**
Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ shall expire on:	**September 2, 2014**
This Order, which amends Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ, was adopted by the State Water Resources Control Board on:	**July 17, 2012**
This Order No. 2012-0006-DWQ shall become effective on:	**July 17, 2012**

IT IS HEREBY ORDERED that this Order amends Order No. 2009-0009-DWQ. Additions to Order No. 2009-0009-DWQ are reflected in blue-underline text and deletions are reflected in red-strikeout text.

IT IS FURTHER ORDERED that staff are directed to prepare and post a conformed copy of Order No. 2009-000-DWQ incorporating the revisions made by this Order.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on July 17, 2012.

AYE:	Chairman Charles R. Hoppin Vice Chair Frances Spivy-Weber Board Member Tam M. Doduc Board Member Steven Moore Board Member Felicia Marcus
NAY:	None
ABSENT:	None
ABSTAIN:	None

Jeanine Townsend
Clerk to the Board

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LIST OF APPENDICES

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STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2009-0009-DWQ
[AS AMENDED BY ORDER NO. 2010-0014-DWQ]
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
GENERAL PERMIT NO. CAS000002

WASTE DISCHARGE REQUIREMENTS
FOR
DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES

I. FINDINGS

A. General Findings

The State Water Resources Control Board (State Water Board) finds that:

1. The federal Clean Water Act (CWA) prohibits certain discharges of storm water containing pollutants except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit (Title 33 United States Code (U.S.C.) §§ 1311 and 1342(p); also referred to as Clean Water Act (CWA) §§ 301 and 402(p)). The U.S. Environmental Protection Agency (U.S. EPA) promulgates federal regulations to implement the CWA's mandate to control pollutants in storm water runoff discharges. (Title 40 Code of Federal Regulations (C.F.R.) Parts 122, 123, and 124). The federal statutes and regulations require discharges to surface waters comprised of storm water associated with construction activity, including demolition, clearing, grading, and excavation, and other land disturbance activities (except operations that result in disturbance of less than one acre of total land area and which are not part of a larger common plan of development or sale), to obtain coverage under an NPDES permit. The NPDES permit must require implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate pollutants in storm water runoff. The NPDES permit must also include additional requirements necessary to implement applicable water quality standards.

2. This General Permit authorizes discharges of storm water associated with construction activity so long as the dischargers comply with all requirements, provisions, limitations and prohibitions in the permit. In addition, this General Permit regulates the discharges of storm water associated with construction activities from all Linear

Underground/Overhead Projects resulting in the disturbance of greater than or equal to one acre (Attachment A).

3. This General Permit regulates discharges of pollutants in storm water associated with construction activity (storm water discharges) to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface.

4. This General Permit does not preempt or supersede the authority of local storm water management agencies to prohibit, restrict, or control storm water discharges to municipal separate storm sewer systems or other watercourses within their jurisdictions.

5. This action to adopt a general NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21100, et seq.), pursuant to Section 13389 of the California Water Code.

6. Pursuant to 40 C.F.R. § 131.12 and State Water Board Resolution No. 68-16,[1] which incorporates the requirements of § 131.12 where applicable, the State Water Board finds that discharges in compliance with this General Permit will not result in the lowering of water quality standards, and are therefore consistent with those provisions. Compliance with this General Permit will result in improvements in water quality.

7. This General Permit serves as an NPDES permit in compliance with CWA § 402 and will take effect on July 1, 2010 by the State Water Board provided the Regional Administrator of the U.S. EPA has no objection. If the U.S. EPA Regional Administrator objects to its issuance, the General Permit will not become effective until such objection is withdrawn.

8. Following adoption and upon the effective date of this General Permit, the Regional Water Quality Control Boards (Regional Water Boards) shall enforce the provisions herein.

9. Regional Water Boards establish water quality standards in Basin Plans. The State Water Board establishes water quality standards in various statewide plans, including the California Ocean Plan. U.S. EPA establishes water quality standards in the National Toxic Rule (NTR) and the California Toxic Rule (CTR).

[1] Resolution No. 68-16 generally requires that existing water quality be maintained unless degradation is justified based on specific findings.

10. This General Permit does not authorize discharges of fill or dredged material regulated by the U.S. Army Corps of Engineers under CWA § 404 and does not constitute a waiver of water quality certification under CWA § 401.

11. The primary storm water pollutant at construction sites is excess sediment. Excess sediment can cloud the water, which reduces the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas, and impede navigation in our waterways. Sediment also transports other pollutants such as nutrients, metals, and oils and greases.

12. Construction activities can impact a construction site's runoff sediment supply and transport characteristics. These modifications, which can occur both during and after the construction phase, are a significant cause of degradation of the beneficial uses established for water bodies in California. Dischargers can avoid these effects through better construction site design and activity practices.

13. This General Permit recognizes four distinct phases of construction activities. The phases are Grading and Land Development Phase, Streets and Utilities Phase, Vertical Construction Phase, and Final Landscaping and Site Stabilization Phase. Each phase has activities that can result in different water quality effects from different water quality pollutants. This General Permit also recognizes inactive construction as a category of construction site type.

14. Compliance with any specific limits or requirements contained in this General Permit does not constitute compliance with any other applicable requirements.

15. Following public notice in accordance with State and Federal laws and regulations, the State Water Board heard and considered all comments and testimony in a public hearing on 06/03/2009. The State Water Board has prepared written responses to all significant comments.

16. Construction activities obtaining coverage under the General Permit may have multiple discharges subject to requirements that are specific to general, linear, and/or active treatment system discharge types.

17. The State Water Board may reopen the permit if the U.S. EPA adopts a final effluent limitation guideline for construction activities.

B. Activities Covered Under the General Permit

18. Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.

19. Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or the sale of one or more acres of disturbed land surface.

20. Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to U.S. EPA regulations, such as dairy barns or food processing facilities.

21. Construction activity associated with Linear Underground/Overhead Utility Projects (LUPs) including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

22. Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.[2]

23. Storm water discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. Construction sites that intend to disturb one or more acres of land within the jurisdictional boundaries of

[2] Pursuant to the Ninth Circuit Court of Appeals' decision in *NRDC v. EPA* (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the U.S. EPA's petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

a CWA § 404 permit should contact the appropriate Regional Water Board to determine whether this permit applies to the site.

C. Activities Not Covered Under the General Permit

24. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

25. Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.

26. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.

27. Construction activity and land disturbance involving discharges of storm water within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Board has adopted its own permit to regulate storm water discharges from construction activity in the Lake Tahoe Hydrologic Unit (Regional Water Board 6SLT). Owners of construction sites in this watershed must apply for the Lahontan Regional Water Board permit rather than the statewide Construction General Permit.

28. Construction activity that disturbs less than one acre of land surface, and that is not part of a larger common plan of development or the sale of one or more acres of disturbed land surface.

29. Construction activity covered by an individual NPDES Permit for storm water discharges.

30. Discharges from small (1 to 5 acre) construction activities with an approved Rainfall Erosivity Waiver authorized by U.S. EPA Phase II regulations certifying to the State Board that small construction activity will occur only when the Rainfall Erosivity Factor is less than 5 (“R” in the Revised Universal Soil Loss Equation).

31. Landfill construction activity that is subject to the Industrial General Permit.

32. Construction activity that discharges to Combined Sewer Systems.

33. Conveyances that discharge storm water runoff combined with municipal sewage.

34. Discharges of storm water identified in CWA § 402(*l*)(2), 33 U.S.C. § 1342(*l*)(2).

35. Discharges occurring in basins that are not tributary or hydrologically connected to waters of the United States (for more information contact your Regional Water Board).

D. Obtaining and Modifying General Permit Coverage

36. This General Permit requires all dischargers to electronically file all Permit Registration Documents (PRDs), Notices of Termination (NOT), changes of information, annual reporting, and other compliance documents required by this General Permit through the State Water Board's Storm water Multi-Application and Report Tracking System (SMARTS) website.

37. Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

38. This General Permit grants an exception from the Risk Determination requirements for existing sites covered under Water Quality Orders No. 99-08-DWQ, and No. 2003-0007-DWQ. For certain sites, adding additional requirements may not be cost effective. Construction sites covered under Water Quality Order No. 99-08-DWQ shall obtain permit coverage at the Risk Level 1. LUPs covered under Water Quality Order No. 2003-0007-DWQ shall obtain permit coverage as a Type 1 LUP. The Regional Water Boards have the authority to require Risk Determination to be performed on sites currently covered under Water Quality Orders No. 99-08-DWQ and No. 2003-0007-DWQ where they deem it necessary. The State Water Board finds that there are two circumstances when it may be appropriate for the Regional Water Boards to require a discharger that had filed an NOI under State Water Board Order No. 99-08-DWQ to recalculate the site's risk level. These circumstances are: (1) when the discharger has a demonstrated history of noncompliance with State Water Board Order No. 99-08-DWQ or; (2) when the discharger's site poses a significant risk of causing or contributing to an exceedance of a water quality standard without the implementation of the additional Risk Level 2 or 3 requirements.

E. Prohibitions

39. All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit. Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may

contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction must be addressed through structural as well as non-structural Best Management Practices (BMPs)[3]. The State Water Board recognizes, however, that certain non-storm water discharges may be necessary for the completion of construction.

40. This General Permit prohibits all discharges which contain a hazardous substance in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

41. This General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the State Water Board and the nine Regional Water Boards.

42. Pursuant to the Ocean Plan, discharges to Areas of Special Biological Significance (ASBS) are prohibited unless covered by an exception that the State Water Board has approved.

43. This General Permit prohibits the discharge of any debris[4] from construction sites. Plastic and other trash materials can cause negative impacts to receiving water beneficial uses. The State Water Board encourages the use of more environmentally safe, biodegradable materials on construction sites to minimize the potential risk to water quality.

F. Training

44. In order to improve compliance with and to maintain consistent enforcement of this General Permit, all dischargers are required to appoint two positions - the Qualified SWPPP Developer (QSD) and the Qualified SWPPP Practitioner (QSP) - who must obtain appropriate training. Together with the key stakeholders, the State and Regional Water Boards are leading the development of this curriculum through a collaborative organization called The Construction General Permit (CGP) Training Team.

45. The Professional Engineers Act (Bus. & Prof. Code section 6700, et seq.) requires that all engineering work must be performed by a California licensed engineer.

[3] BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

[4] Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

G. Determining and Reducing Risk

46. The risk of accelerated erosion and sedimentation from wind and water depends on a number of factors, including proximity to receiving water bodies, climate, topography, and soil type.

47. This General Permit requires dischargers to assess the risk level of a site based on both sediment transport and receiving water risk. This General Permit contains requirements for Risk Levels 1, 2 and 3, and LUP Risk Type 1, 2, and 3 (Attachment A). Risk levels are established by determining two factors: first, calculating the site's sediment risk; and second, receiving water risk during periods of soil exposure (i.e. grading and site stabilization). Both factors are used to determine the site-specific Risk Level(s). LUPs can be determined to be Type 1 based on the flowchart in Attachment A.1.

48. Although this General Permit does not mandate specific setback distances, dischargers are encouraged to set back their construction activities from streams and wetlands whenever feasible to reduce the risk of impacting water quality (e.g., natural stream stability and habitat function). Because there is a reduced risk to receiving waters when setbacks are used, this General Permit gives credit to setbacks in the risk determination and post-construction storm water performance standards. The risk calculation and runoff reduction mechanisms in this General Permit are expected to facilitate compliance with any Regional Water Board and local agency setback requirements, and to encourage voluntary setbacks wherever practicable.

49. Rain events can occur at any time of the year in California. Therefore, a Rain Event Action Plan (REAP) is necessary for Risk Level 2 and 3 traditional construction projects (LUPs exempt) to ensure that active construction sites have adequate erosion and sediment controls implemented prior to the onset of a storm event, even if construction is planned only during the dry season.

50. Soil particles smaller than 0.02 millimeters (mm) (i.e., finer than medium silt) do not settle easily using conventional measures for sediment control (i.e., sediment basins). Given their long settling time, dislodging these soils results in a significant risk that fine particles will be released into surface waters and cause unacceptable downstream impacts. If operated correctly, an Active Treatment System (ATS[5]) can prevent or reduce the release of fine particles from construction sites.

[5] An ATS is a treatment system that employs chemical coagulation, chemical flocculation, or electro coagulation in order to reduce turbidity caused by fine suspended sediment.

Use of an ATS can effectively reduce a site's risk of impacting receiving waters.

51. Dischargers located in a watershed area where a Total Maximum Daily Load (TMDL) has been adopted or approved by the Regional Water Board or U.S. EPA may be required by a separate Regional Water Board action to implement additional BMPs, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule. Such dischargers may also be required to obtain an individual Regional Water Board permit specific to the area.

H. Effluent Standards

52. The State Water Board convened a blue ribbon panel of storm water experts that submitted a report entitled, "The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities," dated June 19, 2006. The panel concluded that numeric limits or action levels are technically feasible to control construction storm water discharges, provided that certain conditions are considered. The panel also concluded that numeric effluent limitations (NELs) are feasible for discharges from construction sites that utilize an ATS. The State Water Board has incorporated the expert panel's suggestions into this General Permit, which includes numeric action levels (NALs) for pH and turbidity, and special numeric limits for ATS discharges.

Determining Compliance with Numeric Limitations

53. This General Permit sets a pH NAL of 6.5 to 8.5, and a turbidity NAL of 250 NTU. The purpose of the NAL and its associated monitoring requirement is to provide operational information regarding the performance of the measures used at the site to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges. An exceedance of a NAL does not constitute a violation of this General Permit.

54. This General Permit requires dischargers with NAL exceedances to immediately implement additional BMPs and revise their Storm Water Pollution Prevention Plans (SWPPPs) accordingly to either prevent pollutants and authorized non-storm water discharges from contaminating storm water, or to substantially reduce the pollutants to levels consistently below the NALs. NAL exceedances are reported in the State Water Boards SMARTS system, and the discharger is

required to provide an NAL Exceedance Report when requested by a Regional Water Board.

I. Receiving Water Limitations

55. This General Permit requires all enrolled dischargers to determine the receiving waters potentially affected by their discharges and to comply with all applicable water quality standards, including any more stringent standards applicable to a water body.

J. Sampling, Monitoring, Reporting and Record Keeping

56. Visual monitoring of storm water and non-storm water discharges is required for all sites subject to this General Permit.

57. Records of all visual monitoring inspections are required to remain on-site during the construction period and for a minimum of three years.

58. For all Risk Level 3/LUP Type 3 and Risk Level 2/LUP Type 2 sites, this General Permit requires effluent monitoring for pH and turbidity. Sampling, analysis and monitoring requirements for effluent monitoring for pH and turbidity are contained in this General Permit.

59. Risk Level 3 and LUP Type 3 sites with effluent that exceeds the Receiving Water Monitoring Triggers contained in this General Permit and with direct discharges to receiving water are required to conduct receiving water monitoring. An exceedance of a Receiving Water Monitoring Trigger does not constitute a violation of this General Permit.

60. This General Permit establishes a 5 year, 24 hour (expressed in inches of rainfall) as an exemptions to the receiving water monitoring requirements for Risk Level 3 and LUP Type 3 dischargers.

61. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

62. For Risk Level 3 and LUP Type 3 sites larger than 30 acres and with direct discharges to receiving waters, this General Permit requires bioassessment sampling before and after site completion to determine if significant degradation to the receiving water's biota has occurred. Bioassessment sampling guidelines are contained in this General Permit.

63. A summary and evaluation of the sampling and analysis results will be submitted in the Annual Reports.

64. This General Permit contains sampling, analysis and monitoring requirements for non-visible pollutants at all sites subject to this General Permit.

65. Compliance with the General Permit relies upon dischargers to electronically self-report any discharge violations and to comply with any Regional Water Board enforcement actions.

66. This General Permit requires that all dischargers maintain a paper or electronic copy of all required records for three years from the date generated or date submitted, whichever is last. These records must be available at the construction site until construction is completed. For LUPs, these documents may be retained in a crew member's vehicle and made available upon request.

K. Active Treatment System (ATS) Requirements

67. Active treatment systems add chemicals to facilitate flocculation, coagulation and filtration of suspended sediment particles. The uncontrolled release of these chemicals to the environment can negatively affect the beneficial uses of receiving waters and/or degrade water quality (e.g., acute and chronic toxicity). Additionally, the batch storage and treatment of storm water through an ATS' can potentially cause physical impacts on receiving waters if storage volume is inadequate or due to sudden releases of the ATS batches and improperly designed outfalls.

68. If designed, operated and maintained properly an ATS can achieve very high removal rates of suspended sediment (measured as turbidity), albeit at sometimes significantly higher costs than traditional erosion/sediment control practices. As a result, this General Permit establishes NELs consistent with the expected level of typical ATS performance.

69. This General Permit requires discharges of storm water associated with construction activity that undergo active treatment to comply with special operational and effluent limitations to ensure that these discharges do not adversely affect the beneficial uses of the receiving waters or cause degradation of their water quality.

70. For ATS discharges, this General Permit establishes technology-based NELs for turbidity.

71. This General Permit establishes a 10 year, 24 hour (expressed in inches of rainfall) Compliance Storm Event exemption from the technology-based numeric effluent limitations for ATS discharges. Exceedances of the ATS turbidity NEL constitutes a violation of this General Permit.

L. Post-Construction Requirements

72. This General Permit includes performance standards for post-construction that are consistent with State Water Board Resolution No. 2005-0006, "Resolution Adopting the Concept of Sustainability as a Core Value for State Water Board Programs and Directing Its Incorporation," and 2008-0030, "Requiring Sustainable Water Resources Management." The requirement for all construction sites to match pre-project hydrology will help ensure that the physical and biological integrity of aquatic ecosystems are sustained. This "runoff reduction" approach is analogous in principle to Low Impact Development (LID) and will serve to protect related watersheds and waterbodies from both hydrologic-based and pollution impacts associated with the post-construction landscape.

73. LUP projects are not subject to post-construction requirements due to the nature of their construction to return project sites to pre-construction conditions.

M. Storm Water Pollution Prevention Plan Requirements

74. This General Permit requires the development of a site-specific SWPPP. The SWPPP must include the information needed to demonstrate compliance with all requirements of this General Permit, and must be kept on the construction site and be available for review. The discharger shall ensure that a QSD develops the SWPPP.

75. To ensure proper site oversight, this General Permit requires a Qualified SWPPP Practitioner to oversee implementation of the BMPs required to comply with this General Permit.

N. Regional Water Board Authorities

76. Regional Water Boards are responsible for implementation and enforcement of this General Permit. A general approach to permitting is not always suitable for every construction site and environmental circumstances. Therefore, this General Permit recognizes that Regional Water Boards must have some flexibility and authority to alter, approve, exempt, or rescind permit authority granted under this

General Permit in order to protect the beneficial uses of our receiving waters and prevent degradation of water quality.

IT IS HEREBY ORDERED that all dischargers subject to this General Permit shall comply with the following conditions and requirements (including all conditions and requirements as set forth in Attachments A, B, C, D, E and F)[6]:

II. CONDITIONS FOR PERMIT COVERAGE

A. Linear Underground/Overhead Projects (LUPs)

1. Linear Underground/Overhead Projects (LUPs) include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g. telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to, (b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.

2. The Legally Responsible Person is responsible for obtaining coverage under the General Permit where the construction of pipelines, utility lines, fiber-optic cables, or other linear underground/overhead projects will occur across several properties unless the LUP construction activities are covered under another construction storm water permit.

3. Only LUPs shall comply with the conditions and requirements in Attachment A, A.1 & A.2 of this Order. The balance of this Order is not applicable to LUPs except as indicated in Attachment A.

[6] These attachments are part of the General Permit itself and are not separate documents that are capable of being updated independently by the State Water Board.

B. Obtaining Permit Coverage Traditional Construction Sites

1. The Legally Responsible Person (LRP) (see Special Provisions, Electronic Signature and Certification Requirements, Section IV.I.1) must obtain coverage under this General Permit.

2. To obtain coverage, the LRP must electronically file Permit Registration Documents (PRDs) prior to the commencement of construction activity. Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the CWA and the California Water Code.

3. PRDs shall consist of:

   a. Notice of Intent (NOI)
   b. Risk Assessment (Section VIII)
   c. Site Map
   d. Storm Water Pollution Prevention Plan (Section XIV)
   e. Annual Fee
   f. Signed Certification Statement

   Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

   Attachment B contains additional PRD information. Dischargers must electronically file the PRDs, and mail the appropriate annual fee to the State Water Board.

4. This permit is effective on July 1, 2010.

   a. **Dischargers Obtaining Coverage On or After July 1, 2010:** All dischargers requiring coverage on or after July 1, 2010, shall electronically file their PRDs prior to the commencement of construction activities, and mail the appropriate annual fee no later than seven days prior to the commencement of construction activities. Permit coverage shall not commence until the PRDs and the annual fee are received by the State Water Board, and a WDID number is assigned and sent by SMARTS.

   b. **Dischargers Covered Under 99-08-DWQ and 2003-0007-DWQ:** Existing dischargers subject to State Water Board Order No. 99-08-DWQ (existing dischargers) will continue coverage under 99-08-DWQ until July 1, 2010. After July 1, 2010, all NOIs subject to State Water Board Order No. 99-08-DWQ will be terminated.

Existing dischargers shall electronically file their PRDs no later than July 1, 2010. If an existing discharger's site acreage subject to the annual fee has changed, it shall mail a revised annual fee no less than seven days after receiving the revised annual fee notification, **or else lose permit coverage**. All existing dischargers shall be exempt from the risk determination requirements in Section VIII of this General Permit until two years after permit adoption. All existing dischargers are therefore subject to Risk Level 1 requirements regardless of their site's sediment and receiving water risks. However, a Regional Board retains the authority to require an existing discharger to comply with the Section VIII risk determination requirements.

5. The discharger is only considered covered by this General Permit upon receipt of a Waste Discharger Identification (WDID) number assigned and sent by the State Water Board Storm water Multi-Application and Report Tracking System (SMARTS). In order to demonstrate compliance with this General Permit, the discharger must obtain a WDID number and must present documentation of a valid WDID upon demand.

6. During the period this permit is subject to review by the U.S. EPA, the prior permit (State Water Board Order No. 99-08-DWQ) remains in effect. Existing dischargers under the prior permit will continue to have coverage under State Water Board Order No. 99-08-DWQ until this General Permit takes effect on July 1, 2010. Dischargers who complete their projects and electronically file an NOT prior to July 1, 2010, are not required to obtain coverage under this General Permit.

7. Small Construction Rainfall Erosivity Waiver

   EPA's Small Construction Erosivity Waiver applies to sites between one and five acres demonstrating that there are no adverse water quality impacts.

   Dischargers eligible for a Rainfall Erosivity Waiver based on low erosivity potential shall complete the electronic Notice of Intent (NOI) and Sediment Risk form through the State Water Board's SMARTS system, certifying that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five. Where the LRP changes or another LRP is added during construction, the new LRP must also submit a waiver certification through the SMARTS system.

   If a small construction site continues beyond the projected completion date given on the waiver certification, the LRP shall recalculate the

rainfall erosivity factor for the new project duration and submit this information through the SMARTS system. If the new R factor is below five (5), the discharger shall update through SMARTS all applicable information on the waiver certification and retain a copy of the revised waiver onsite. The LRP shall submit the new waiver certification 30 days prior to the projected completion date listed on the original waiver form to assure exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, the LRP shall be required to apply for coverage under this Order.

8. In the case of a public emergency that requires immediate construction activities, a discharger shall submit a brief description of the emergency construction activity within five days of the onset of construction, and then shall submit all PRDs within thirty days.

C. Revising Permit Coverage for Change of Acreage or New Ownership

1. The discharger may reduce or increase the total acreage covered under this General Permit when a portion of the site is complete and/or conditions for termination of coverage have been met (See Section II.D Conditions for Termination of Coverage); when ownership of a portion of the site is sold to a different entity; or when new acreage, subject to this General Permit, is added to the site.

2. Within 30 days of a reduction or increase in total disturbed acreage, the discharger shall electronically file revisions to the PRDs that include:

   a. A revised NOI indicating the new project size;

   b. A revised site map showing the acreage of the site completed, acreage currently under construction, acreage sold/transferred or added, and acreage currently stabilized in accordance with the Conditions for Termination of Coverage in Section II.D below.

   c. SWPPP revisions, as appropriate; and

   d. Certification that any new landowners have been notified of applicable requirements to obtain General Permit coverage. The certification shall include the name, address, telephone number, and e-mail address of the new landowner.

   e. If the project acreage has increased, dischargers shall mail payment of revised annual fees within 14 days of receiving the revised annual fee notification.

3. The discharger shall continue coverage under the General Permit for any parcel that has not achieved "Final Stabilization" as defined in Section II.D.

4. When an LRP with active General Permit coverage transfers its LRP status to another person or entity that qualifies as an LRP, the existing LRP shall inform the new LRP of the General Permit's requirements. In order for the new LRP to continue the construction activity on its parcel of property, the new LRP, or the new LRP's approved signatory, must submit PRDs in accordance with this General Permit's requirements.

D. Conditions for Termination of Coverage

1. Within 90 days of when construction is complete or ownership has been transferred, the discharger shall electronically file a Notice of Termination (NOT), a final site map, and photos through the State Water Boards SMARTS system. Filing a NOT certifies that all General Permit requirements have been met. The Regional Water Board will consider a construction site complete only when all portions of the site have been transferred to a new owner, or all of the following conditions have been met:

   a. For purposes of "final stabilization," the site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity;

   b. There is no potential for construction-related storm water pollutants to be discharged into site runoff;

   c. Final stabilization has been reached;

   d. Construction materials and wastes have been disposed of properly;

   e. Compliance with the Post-Construction Standards in Section XIII of this General Permit has been demonstrated;

   f. Post-construction storm water management measures have been installed and a long-term maintenance plan[7] has been established; and

   g. All construction-related equipment, materials and any temporary BMPs no longer needed are removed from the site.

[7] For the purposes of this requirement a long-term maintenance plan will be designed for a minimum of five years, and will describe the procedures to ensure that the post-construction storm water management measures are adequately maintained.

2. The discharger shall certify that final stabilization conditions are satisfied in their NOT. Failure to certify shall result in continuation of permit coverage and annual billing.

3. The NOT must demonstrate through photos, RUSLE or RUSLE2, or results of testing and analysis that the site meets all of the conditions above (Section II.D.1) and the final stabilization condition (Section II.D.1.a) is attained by one of the following methods:

   a. "70% final cover method," no computational proof required

      OR:

   b. "RUSLE or RUSLE2 method," computational proof required

      OR:

   c. "Custom method", the discharger shall demonstrate in some other manner than a or b, above, that the site complies with the "final stabilization" requirement in Section II.D.1.a.

III. DISCHARGE PROHIBITIONS

A. Dischargers shall not violate any discharge prohibitions contained in applicable Basin Plans or statewide water quality control plans. Waste discharges to Areas of Special Biological Significance (ASBS) are prohibited by the California Ocean Plan, unless granted an exception issued by the State Water Board.

B. All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit.

C. Authorized non-storm water discharges may include those from de-chlorinated potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, uncontaminated ground water from dewatering, and other discharges not subject to a separate general NPDES permit adopted by a Regional Water Board. The discharge of non-storm water is authorized under the following conditions:

1. The discharge does not cause or contribute to a violation of any water quality standard;

2. The discharge does not violate any other provision of this General Permit;

3. The discharge is not prohibited by the applicable Basin Plan;

4. The discharger has included and implemented specific BMPs required by this General Permit to prevent or reduce the contact of the non-storm water discharge with construction materials or equipment.

5. The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;

6. The discharge is monitored and meets the applicable NALs; and

7. The discharger reports the sampling information in the Annual Report.

If any of the above conditions are not satisfied, the discharge is not authorized by this General Permit. The discharger shall notify the Regional Water Board of any anticipated non-storm water discharges not already authorized by this General Permit or another NPDES permit, to determine whether a separate NPDES permit is necessary.

D. Debris resulting from construction activities are prohibited from being discharged from construction sites.

E. When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the discharger shall have those soils sampled and tested to ensure proper handling and public safety measures are implemented. The discharger shall notify the appropriate local, State, and federal agency(ies) when contaminated soil is found at a construction site, and will notify the appropriate Regional Water Board.

IV. SPECIAL PROVISIONS

A. Duty to Comply

1. The discharger shall comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action and/or removal from General Permit coverage.

2. The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

B. General Permit Actions

1. This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.

2. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the dischargers so notified.

C. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

D. Duty to Mitigate

The discharger shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit, which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance

The discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this General Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a discharger when necessary to achieve compliance with the conditions of this General Permit.

F. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

G. Duty to Maintain Records and Provide Information

1. The discharger shall maintain a paper or electronic copy of all required records, including a copy of this General Permit, for three years from the date generated or date submitted, whichever is last. These records shall be available at the construction site until construction is completed.

2. The discharger shall furnish the Regional Water Board, State Water Board, or U.S. EPA, within a reasonable time, any requested information to determine compliance with this General Permit. The discharger shall also furnish, upon request, copies of records that are required to be kept by this General Permit.

H. Inspection and Entry

The discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or, in the case of construction sites which discharge through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the discharger's premises at reasonable times where a regulated construction activity is being conducted or where records must be kept under the conditions of this General Permit;

2. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;

3. Inspect at reasonable times the complete construction site, including any off-site staging areas or material storage areas, and the erosion/sediment controls; and

4. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

I. Electronic Signature and Certification Requirements

1. All Permit Registration Documents (PRDs) and Notices of Termination (NOTs) shall be electronically signed, certified, and submitted via SMARTS to the State Water Board. Either the Legally Responsible Person (LRP), as defined in Appendix 5 – Glossary, or a person legally authorized to sign and certify PRDs and NOTs on behalf of the LRP (the LRP's Approved Signatory, as defined in Appendix 5 - Glossary) must submit all information electronically via SMARTS.

2. Changes to Authorization. If an Approved Signatory's authorization is no longer accurate, a new authorization satisfying the requirements of paragraph (a) of this section must be submitted via SMARTS prior to or together with any reports, information or applications to be signed by an Approved Signatory.

3. All Annual Reports, or other information required by the General Permit (other than PRDs and NOTs) or requested by the Regional Water Board, State Water Board, U.S. EPA, or local storm water management agency shall be certified and submitted by the LRP or the LRP's Approved Signatory.

J. Certification

Any person signing documents under Section IV.I above, shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

K. Anticipated Noncompliance

The discharger shall give advance notice to the Regional Water Board and local storm water management agency of any planned changes in the construction activity, which may result in noncompliance with General Permit requirements.

L. Bypass

Bypass[8] is prohibited. The Regional Water Board may take enforcement action against the discharger for bypass unless:

1. Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;[9]

2. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventative maintenance;

3. The discharger submitted a notice at least ten days in advance of the need for a bypass to the Regional Water Board; or

4. The discharger may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable. The discharger shall submit notice of an unanticipated bypass as required.

M. Upset

1. A discharger that wishes to establish the affirmative defense of an upset[10] in an action brought for noncompliance shall demonstrate,

[8] The intentional diversion of waste streams from any portion of a treatment facility

[9] Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

[10] An exceptional incident in which there is unintentional and temporary noncompliance the technology based numeric effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the discharger can identify the cause(s) of the upset

b. The treatment facility was being properly operated by the time of the upset

c. The discharger submitted notice of the upset as required; and

d. The discharger complied with any remedial measures required

2. No determination made before an action of noncompliance occurs, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review.

3. In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof

N. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

O. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

P. Severability

The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

Q. Reopener Clause

This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations (CFR) 122.62, 122.63, 122.64, and 124.5.

R. Penalties for Violations of Permit Conditions

1. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed $37,500[11] per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

2. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA.

S. Transfers

This General Permit is not transferable.

T. Continuation of Expired Permit

This General Permit continues in force and effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those dischargers authorized to discharge under the expiring General Permit are covered by the continued General Permit.

[11] May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act.

V. EFFLUENT STANDARDS & RECEIVING WATER MONITORING

A. Narrative Effluent Limitations

1. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

2. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

Table 1- Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level
pH	Field test with calibrated portable instrument	Risk Level 2	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5
		Risk Level 3			lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 2	1	NTU	250 NTU
		Risk Level 3			250 NTU

B. Numeric Action Levels (NALs)

1. For Risk Level 2 and 3 dischargers, the lower storm event average NAL for pH is 6.5 pH units and the upper storm event average NAL for

pH is 8.5 pH units. The discharger shall take actions as described below if the discharge is outside of this range of pH values.

2. For Risk Level 2 and 3 dischargers, the NAL storm event daily average for turbidity is 250 NTU. The discharger shall take actions as described below if the discharge is outside of this range of turbidity values.

3. Whenever the results from a storm event daily average indicate that the discharge is below the lower NAL for pH, exceeds the upper NAL for pH, or exceeds the turbidity NAL (as listed in Table 1), the discharger shall conduct a construction site and run-on evaluation to determine whether pollutant source(s) associated with the site's construction activity may have caused or contributed to the NAL exceedance and shall immediately implement corrective actions if they are needed.

4. The site evaluation shall be documented in the SWPPP and specifically address whether the source(s) of the pollutants causing the exceedance of the NAL:

   a. Are related to the construction activities and whether additional BMPs are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) determine what corrective action(s) were taken or will be taken and with a description of the schedule for completion.

      AND/OR:

   b. Are related to the run-on associated with the construction site location and whether additional BMPs measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) what corrective action(s) were taken or will be taken with a description of the schedule for completion.

C. Receiving Water Monitoring Triggers

1. The receiving water monitoring triggers for Risk Level 3 dischargers with direct discharges to surface waters are triggered when the daily average effluent pH values during any site phase when there is a high risk of pH discharge[12] fall outside of the range of 6.0 and 9.0 pH units, or when the daily average effluent turbidity exceeds 500 NTU.

2. Risk Level 3 dischargers with with direct discharges to surface waters shall conduct receiving water monitoring whenever their effluent monitoring results exceed the receiving water monitoring triggers. If the pH trigger is exceeded, the receiving water shall be monitored for pH for the duration of coverage under this General Permit. If the turbidity trigger is exceeded, the receiving water shall be monitored for turbidity and SSC for the duration of coverage under this general permit.

3. Risk Level 3 dischargers with direct discharges to surfaces waters shall initiate receiving water monitoring when the triggers are exceeded unless the storm event causing the exceedance is determined after the fact to equal to or greater than the 5-year 24-hour storm (expressed in inches of rainfall) as determined by using these maps:

   http://www.wrcc.dri.edu/pcpnfreq/nca5y24.gif
   http://www.wrcc.dri.edu/pcpnfreq/sca5y24.gif

   Verification of the 5-year 24-hour storm event shall be done by reporting on-site rain gauge readings as well as nearby governmental rain gauge readings.

4. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

[12] A period of high risk of pH discharge is defined as a project's complete utilities phase, complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations of the background pH of the discharges.

VI. RECEIVING WATER LIMITATIONS

A. The discharger shall ensure that storm water discharges and authorized non-storm water discharges to any surface or ground water will not adversely affect human health or the environment.

B. The discharger shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

C. The discharger shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards (collectively, WQS) contained in a Statewide Water Quality Control Plan, the California Toxics Rule, the National Toxics Rule, or the applicable Regional Water Board's Water Quality Control Plan (Basin Plan).

D. Dischargers located within the watershed of a CWA § 303(d) impaired water body, for which a TMDL has been approved by the U.S. EPA, shall comply with the approved TMDL if it identifies "construction activity" or land disturbance as a source of the pollution.

VII. TRAINING QUALIFICATIONS AND CERTIFICATION REQUIREMENTS

A. General

The discharger shall ensure that all persons responsible for implementing requirements of this General Permit shall be appropriately trained in accordance with this Section. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. Those responsible for preparing and amending SWPPPs shall comply with the requirements in this Section VII.

The discharger shall provide documentation of all training for persons responsible for implementing the requirements of this General Permit in the Annual Reports.

B. SWPPP Certification Requirements

1. **Qualified SWPPP Developer:** The discharger shall ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:

   a. A California registered professional civil engineer;

   b. A California registered professional geologist or engineering geologist;

   c. A California registered landscape architect;

   d. A professional hydrologist registered through the American Institute of Hydrology;

   e. A Certified Professional in Erosion and Sediment Control (CPESC) ™ registered through Enviro Cert International, Inc.;

   f. A Certified Professional in Storm Water Quality (CPSWQ) ™ registered through Enviro Cert International, Inc.; or

   g. A professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

2. The discharger shall list the name and telephone number of the currently designated Qualified SWPPP Developer(s) in the SWPPP.

3. **Qualified SWPPP Practitioner:** The discharger shall ensure that all BMPs required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:

   a. A certified erosion, sediment and storm water inspector registered through Enviro Cert International, Inc.; or

   b. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

   Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

4. The LRP shall list in the SWPPP, the name of any Approved Signatory, and provide a copy of the written agreement or other mechanism that provides this authority from the LRP in the SWPPP.

5. The discharger shall include, in the SWPPP, a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.

6. The discharger shall ensure that the SWPPP and each amendment will be signed by the Qualified SWPPP Developer. The discharger shall include a listing of the date of initial preparation and the date of each amendment in the SWPPP.

VIII. RISK DETERMINATION

The discharger shall calculate the site's sediment risk and receiving water risk during periods of soil exposure (i.e. grading and site stabilization) and use the calculated risks to determine a Risk Level(s) using the methodology in

Appendix 1. For any site that spans two or more planning watersheds,[13] the discharger shall calculate a separate Risk Level for each planning watershed. The discharger shall notify the State Water Board of the site's Risk Level determination(s) and shall include this determination as a part of submitting the PRDs. If a discharger ends up with more than one Risk Level determination, the Regional Water Board may choose to break the project into separate levels of implementation.

IX. RISK LEVEL 1 REQUIREMENTS

Risk Level 1 Dischargers shall comply with the requirements included in Attachment C of this General Permit.

X. RISK LEVEL 2 REQUIREMENTS

Risk Level 2 Dischargers shall comply with the requirements included in Attachment D of this General Permit.

XI. RISK LEVEL 3 REQUIREMENTS

Risk Level 3 Dischargers shall comply with the requirements included in Attachment E of this General Permit.

XII. ACTIVE TREATMENT SYSTEMS (ATS)

Dischargers choosing to implement an ATS on their site shall comply with all of the requirements in Attachment F of this General Permit.

[13] Planning watershed: defined by the Calwater Watershed documents as a watershed that ranges in size from approximately 3,000 to 10,000 acres http://cain.ice.ucdavis.edu/calwater/calwfaq.html, http://gis.ca.gov/catalog/BrowseRecord.epl?id=22175 .

XIII. POST-CONSTRUCTION STANDARDS

A. All dischargers shall comply with the following runoff reduction requirements unless they are located within an area subject to post-construction standards of an active Phase I or II municipal separate storm sewer system (MS4) permit that has an approved Storm Water Management Plan.

1. This provision shall take effect three years from the adoption date of this permit, or later at the discretion of the Executive Officer of the Regional Board.

2. The discharger shall demonstrate compliance with the requirements of this section by submitting with their NOI a map and worksheets in accordance with the instructions in Appendix 2. The discharger shall use non-structural controls unless the discharger demonstrates that non-structural controls are infeasible or that structural controls will produce greater reduction in water quality impacts.

3. The discharger shall, through the use of non-structural and structural measures as described in Appendix 2, replicate the pre-project water balance (for this permit, defined as the volume of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event (or the smallest storm event that generates runoff, whichever is larger). Dischargers shall inform Regional Water Board staff at least 30 days prior to the use of any structural control measure used to comply with this requirement. Volume that cannot be addressed using non-structural practices shall be captured in structural practices and approved by the Regional Water Board. When seeking Regional Board approval for the use of structural practices, dischargers shall document the infeasibility of using non-structural practices on the project site, or document that there will be fewer water quality impacts through the use of structural practices.

4. For sites whose disturbed area exceeds two acres, the discharger shall preserve the pre-construction drainage density (miles of stream length per square mile of drainage area) for all drainage areas within the area serving a first order stream[14] or larger stream and ensure that post-project time of runoff concentration is equal or greater than pre-project time of concentration.

[14] A first order stream is defined as a stream with no tributaries.

B. All dischargers shall implement BMPs to reduce pollutants in storm water discharges that are reasonably foreseeable after all construction phases have been completed at the site (Post-construction BMPs).

XIV. SWPPP REQUIREMENTS

A. The discharger shall ensure that the Storm Water Pollution Prevention Plans (SWPPPs) for all traditional project sites are developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:

1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;

2. Where not otherwise required to be under a Regional Water Board permit, all non-storm water discharges are identified and either eliminated, controlled, or treated;

3. Site BMPs are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from construction activity to the BAT/BCT standard;

4. Calculations and design details as well as BMP controls for site run-on are complete and correct, and

5. Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.

B. To demonstrate compliance with requirements of this General Permit, the QSD shall include information in the SWPPP that supports the conclusions, selections, use, and maintenance of BMPs.

C. The discharger shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

XV. REGIONAL WATER BOARD AUTHORITIES

A. In the case where the Regional Water Board does not agree with the discharger's self-reported risk level (e.g., they determine themselves to be a Level 1 Risk when they are actually a Level 2 Risk site), Regional Water Boards may either direct the discharger to reevaluate the Risk Level(s) for their site or terminate coverage under this General Permit.

B. Regional Water Boards may terminate coverage under this General Permit for dischargers who fail to comply with its requirements or where they determine that an individual NPDES permit is appropriate.

C. Regional Water Boards may require dischargers to submit a Report of Waste Discharge / NPDES permit application for Regional Water Board consideration of individual requirements.

D. Regional Water Boards may require additional Monitoring and Reporting Program Requirements, including sampling and analysis of discharges to sediment-impaired water bodies.

E. Regional Water Boards may require dischargers to retain records for more than the three years required by this General Permit.

XVI. ANNUAL REPORTING REQUIREMENTS

A. All dischargers shall prepare and electronically submit an Annual Report no later than September 1 of each year.

B. The discharger shall certify each Annual Report in accordance with the Special Provisions.

C. The discharger shall retain an electronic or paper copy of each Annual Report for a minimum of three years after the date the annual report is filed.

D. The discharger shall include storm water monitoring information in the Annual Report consisting of:

1. a summary and evaluation of all sampling and analysis results, including copies of laboratory reports;

2. the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit");

3. a summary of all corrective actions taken during the compliance year;

4. identification of any compliance activities or corrective actions that were not implemented;

5. a summary of all violations of the General Permit;

6. the names of individual(s) who performed the facility inspections, sampling, visual observation (inspections), and/or measurements;

7. the date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge); and

8. the visual observation and sample collection exception records and reports specified in Attachments C, D, and E.

E. The discharger shall provide training information in the Annual Report consisting of:

1. documentation of all training for individuals responsible for all activities associated with compliance with this General Permit;

2. documentation of all training for individuals responsible for BMP installation, inspection, maintenance, and repair; and

3. documentation of all training for individuals responsible for overseeing, revising, and amending the SWPPP.

ATTACHMENT A
Linear Underground/ Overhead Requirements

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All Linear Underground/Overhead project dischargers who submit permit registration documents (PRDs) indicating their intention to be regulated under the provisions of this General Permit shall comply with the following:

A. DEFINITION OF LINEAR UNDERGROUND/OVERHEAD PROJECTS

1. Linear Underground/Overhead Projects (LUPs) include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquiescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio, or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to, (b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.

2. LUP evaluation shall consist of two tasks:

a. Confirm that the project or project section(s) qualifies as an LUP. The State Water Board website contains a project determination guidance flowchart. http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

b. Identify which Type(s) (1, 2 or 3 described in Section I below) are applicable to the project or project sections based on project sediment and receiving water risk. (See Attachment A.1)

3. A Legally Responsible Person (LRP) for a Linear Underground/Overhead project is required to obtain CGP coverage under one or more permit registration document (PRD) electronic submittals to the State Water Board's Storm Water Multi-Application and Report Tracking (SMARTs) system. Attachment A.1 contains a flow chart to be used when determining if a linear project qualifies for coverage and to determine LUP Types. Since a LUP may be constructed within both developed and undeveloped locations and portions of LUPs may be constructed by different contractors, LUPs may be broken into logical permit sections. Sections may be determined based on portions of a project conducted by one contractor. Other situations may also occur, such as the time period in which the sections of a project will be constructed (e.g. project phases), for which separate permit coverage is possible. For projects that are broken into separate sections, a description of how each section relates to the overall project and the definition of the boundaries between sections shall be clearly stated.

4. Where construction activities transverse or enter into different Regional Water Board jurisdictions, LRPs shall obtain permit coverage for each Regional Water Board area involved prior to the commencement of construction activities.

5. Small Construction Rainfall Erosivity Waiver

EPA's Small Construction Erosivity Waiver applies to sites between one and five acres demonstrating that there are no adverse water quality impacts.

Dischargers eligible for a Rainfall Erosivity Waiver based on low erosivity potential shall complete the electronic Notice of Intent (NOI) and Sediment Risk form through the State Water Board's SMARTS system, certifying that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five. Where the LRP changes or another LRP is added during construction, the new LRP must also submit a waiver certification through the SMARTS system.

If a small linear construction site continues beyond the projected completion date given on the waiver certification, the LRP shall recalculate the rainfall erosivity factor for the new project duration and submit this information through the SMARTS system. If the new R factor is below five (5), the discharger shall update through SMARTS all applicable information on the waiver certification and retain a copy of the revised waiver onsite. The LRP shall submit the new waiver certification 30 days prior to the projected completion date listed on the original waiver form to assure exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, the LRP shall be required to apply for coverage under this Order.

B. LINEAR PROJECT PERMIT REGISTRATION DOCUMENTS (PRDs)

Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted. PRDs shall consist of the following:

1. Notice of Intent (NOI)

Prior to construction activities, the LRP of a proposed linear underground/overhead project shall utilize the processes and methods provided in Attachment A.2, Permit Registration Documents (PRDs) – General Instructions for Linear Underground/Overhead Projects to comply with the Construction General Permit.

2. Site Maps

LRPs submitting PRDs shall include at least 3 maps. The first map will be a zoomed[1] 1000-1500 ft vicinity map that shows the starting point of the project. The second will be a zoomed map of 1000-1500 ft showing the ending location of the project. The third will be a larger view vicinity map, 1000 ft to 2000 ft, displaying the entire project location depending on the project size, and indicating the LUP type (1, 2 or 3) areas within the total project footprint.

3. Drawings

LRPs submitting PRDs shall include a construction drawing(s) or other appropriate drawing(s) or map(s) that shows the locations of storm drain

[1] An image with a close-up/enhanced detailed view of site features that show minute details such as streets and neighboring structures.
Or: An image with a close-up/enhanced detailed view of the site's surrounding infrastructure.
Or: An image with a close up detailed view of the project and its surroundings.

inlets and waterbodies[2] that may receive discharges from the construction activities and that shows the locations of BMPs to be installed for all those BMPs that can be illustrated on the revisable drawing(s) or map(s). If storm drain inlets, waterbodies, and/or BMPs cannot be adequately shown on the drawing(s) or map(s) they should be described in detail within the SWPPP.

4. Storm Water Pollution Prevention Plan (SWPPP)

LUP dischargers shall comply with the SWPPP Preparation, Implementation, and Oversight requirements in Section K of this Attachment.

5. Contact information

LUP dischargers shall include contact information for all contractors (or subcontractors) responsible for each area of an LUP project. This should include the names, telephone numbers, and addresses of contact personnel. Specific areas of responsibility of each contact, and emergency contact numbers should also be included.

6. In the case of a public emergency that requires immediate construction activities, a discharger shall submit a brief description of the emergency construction activity within five days of the onset of construction, and then shall submit all PRDs within thirty days.

C. LINEAR PROJECT TERMINATION OF COVERAGE REQUIREMENTS

The LRP may terminate coverage of an LUP when construction activities are completed by submitting an electronic notice of termination (NOT) through the State Water Board's SMARTS system. Termination requirements are different depending on the complexity of the LUP. An LUP is considered complete when: (a) there is no potential for construction-related storm water pollution; (b) all elements of the SWPPP have been completed; (c) construction materials and waste have been disposed of properly; (d) the site is in compliance with all local storm water management requirements; and (e) the LRP submits a notice of termination (NOT) and has received approval for termination from the appropriate Regional Water Board office.

1. LUP Stabilization Requirements

The LUP discharger shall ensure that all disturbed areas of the construction site are stabilized prior to termination of coverage under this General Permit. Final stabilization for the purposes of submitting an NOT

[2] Includes basin(s) that the MS4 storm sewer systems may drain to for Hydromodification or Hydrological Conditional of Concerns under the MS4 permits.

is satisfied when all soil disturbing activities are completed and one of the following criteria is met:

a. In disturbed areas that were vegetated prior to construction activities of the LUP, the area disturbed must be re-established to a uniform vegetative cover equivalent to 70 percent coverage of the preconstruction vegetative conditions. Where preconstruction vegetation covers less than 100 percent of the surface, such as in arid areas, the 70 percent coverage criteria is adjusted as follows: if the preconstruction vegetation covers 50 percent of the ground surface, 70 percent of 50 percent (.70 X .50=.35) would require 35 percent total uniform surface coverage; or

b. Where no vegetation is present prior to construction, the site is returned to its original line and grade and/or compacted to achieve stabilization; or

c. Equivalent stabilization measures have been employed. These measures include, but are not limited to, the use of such BMPs as blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, or other erosion resistant soil coverings or treatments.

2. LUP Termination of Coverage Requirements

The LRP shall file an NOT through the State Water Board's SMARTS system. By submitting an NOT, the LRP is certifying that construction activities for an LUP are complete and that the project is in full compliance with requirements of this General Permit and that it is now compliant with soil stabilization requirements where appropriate. Upon approval by the appropriate Regional Water Board office, permit coverage will be terminated.

3. Revising Coverage for Change of Acreage

When the LRP of a portion of an LUP construction project changes, or when a phase within a multi-phase project is completed, the LRP may reduce the total acreage covered by this General Permit. In reducing the acreage covered by this General Permit, the LRP shall electronically file revisions to the PRDs that include:

a. a revised NOI indicating the new project size;

b. a revised site map showing the acreage of the project completed, acreage currently under construction, acreage sold, transferred or added, and acreage currently stabilized.

c. SWPPP revisions, as appropriate; and

d. certification that any new LRPs have been notified of applicable requirements to obtain General Permit coverage. The certification shall include the name, address, telephone number, and e-mail address (if known) of the new LRP.

If the project acreage has increased, dischargers shall mail payment of revised annual fees within 14 days of receiving the revised annual fee notification.

D. DISCHARGE PROHIBITIONS

1. LUP dischargers shall not violate any discharge prohibitions contained in applicable Basin Plans or statewide water quality control plans. Waste discharges to Areas of Special Biological Significance (ASBS) are prohibited by the California Ocean Plan, unless granted an exception issued by the State Water Board.

2. LUP dischargers are prohibited from discharging non-storm water that is not otherwise authorized by this General Permit. Non-storm water discharges authorized by this General Permit[3] may include, fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, street cleaning, dewatering,[4] uncontaminated groundwater from dewatering, and other discharges not subject to a separate general NPDES permit adopted by a Regional Water Board. Such discharges are allowed by this General Permit provided they are not relied upon to clean up failed or inadequate construction or post-construction BMPs designed to keep materials on site. These authorized non-storm water discharges:

[3] Dischargers must identify all authorized non-storm water discharges in the LUP's SWPPP and identify BMPs that will be implemented to either eliminate or reduce pollutants in non-storm water discharges. Regional Water Boards may direct the discharger to discontinue discharging such non-storm water discharges if determined that such discharges discharge significant pollutants or threaten water quality.
[4] Dewatering activities may be prohibited or need coverage under a separate permit issued by the Regional Water Boards. Dischargers shall check with the appropriate Regional Water Boards for any required permit or basin plan conditions prior to initial dewatering activities to land, storm drains, or waterbodies.

a. Shall not cause or contribute to a violation of any water quality standard;

b. Shall not violate any other provision of this General Permit;

c. Shall not violate any applicable Basin Plan;

d. Shall comply with BMPs as described in the SWPPP;

e. Shall not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;

f. Shall be monitored and meets the applicable NALs; and

g. Shall be reported by the discharger in the Annual Report.

If any of the above conditions are not satisfied, the discharge is not authorized by this General Permit. The discharger shall notify the Regional Water Board of any anticipated non-storm water discharges not authorized by this General Permit to determine the need for a separate NPDES permit.

Additionally, some LUP dischargers may be required to obtain a separate permit if the applicable Regional Water Board has adopted a General Permit for dewatering discharges. Wherever feasible, alternatives, that do not result in the discharge of non-storm water, shall be implemented in accordance with this Attachment's Section K.2 - SWPPP Implementation Schedule.

3. LUP dischargers shall ensure that trench spoils or any other soils disturbed during construction activities that are contaminated[5] are not discharged with storm water or non-storm water discharges into any storm drain or water body except pursuant to an NPDES permit.

When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the LUP discharger shall have those soils sampled and tested to ensure that proper handling and public safety measures are

[5] Contaminated soil contains pollutants in concentrations that exceed the appropriate thresholds that various regulatory agencies set for those substances. Preliminary testing of potentially contaminated soils will be based on odor, soil discoloration, or prior history of the site's chemical use and storage and other similar factors. When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the discharger shall have those soils sampled and tested to ensure proper handling and public safety measures are implemented. The legally responsible person will notify the appropriate local, State, or federal agency(ies) when contaminated soil is found at a construction site, and will notify the Regional Water Board by submitting an NOT at the completion of the project.

implemented. The LUP discharger shall notify the appropriate local, State, and federal agency(ies) when contaminated soil is found at a construction site, and will notify the appropriate Regional Water Board.

4. Discharging any pollutant-laden water that will cause or contribute to an exceedance of the applicable Regional Water Board's Basin Plan from a dewatering site or sediment basin into any receiving water or storm drain is prohibited.

5. Debris[6] resulting from construction activities are prohibited from being discharged from construction project sites.

E. SPECIAL PROVISIONS

1. Duty to Comply

a. The LUP discharger must comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action and/or removal from General Permit coverage.

b. The LUP discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

2. General Permit Actions

a. This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.

[6] Litter, rubble, discarded refuse, and remains of something destroyed.

b. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the dischargers so notified.

3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an LUP discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

4. Duty to Mitigate

The LUP discharger shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit, which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

The LUP discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this General Permit and with the requirements of the Storm Water Pollution Prevention Plan (SWPPP). Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a discharger when necessary to achieve compliance with the conditions of this General Permit.

6. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

7. Duty to Maintain Records and Provide Information

a. The LUP discharger shall maintain a paper or electronic copy of all required records, including a copy of this General Permit, for three years from the date generated or date submitted, whichever is last. These records shall be kept at the construction site or in a crew

member's vehicle until construction is completed, and shall be made available upon request.

b. The LUP discharger shall furnish the Regional Water Board, State Water Board, or USEPA, within a reasonable time, any requested information to determine compliance with this General Permit. The LUP discharger shall also furnish, upon request, copies of records that are required to be kept by this General Permit.

8. Inspection and Entry

The LUP discharger shall allow the Regional Water Board, State Water Board, USEPA, and/or, in the case of construction sites which discharge through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the discharger's premises at reasonable times where a regulated construction activity is being conducted or where records must be kept under the conditions of this General Permit;

b. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;

c. Inspect at reasonable times the complete construction site, including any off-site staging areas or material storage areas, and the erosion/sediment controls; and

d. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

9. Electronic Signature and Certification Requirements

a. All Permit Registration Documents (PRDs) and Notices of Termination (NOTs) shall be electronically signed, certified, and submitted via SMARTS to the State Water Board. Either the Legally Responsible Person (LRP), as defined in Appendix 5 – Glossary, or a person legally authorized to sign and certify PRDs and NOTs on behalf of the LRP (the LRP's Approved Signatory, as defined in Appendix 5 - Glossary) must submit all information electronically via SMARTS.

b. Changes to Authorization. If an Approved Signatory's authorization is no longer accurate, a new authorization satisfying the requirements of paragraph (a) of this section must be submitted via SMARTS prior to or

together with any reports, information or applications to be signed by an Approved Signatory.

c. All SWPPP revisions, annual reports, or other information required by the General Permit (other than PRDs and NOTs) or requested by the Regional Water Board, State Water Board, USEPA, or local storm water management agency shall be certified and submitted by the LRP or the LRP's Approved Signatory.

10. Certification

Any person signing documents under Section E.9 above, shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. Anticipated Noncompliance

The LUP discharger shall give advance notice to the Regional Water Board and local storm water management agency of any planned changes in the construction activity, which may result in noncompliance with General Permit requirements.

12. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

13. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the LUP discharger is or may be subject to under Section 311 of the CWA.

14. Severability

The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

15. Reopener Clause

This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of USEPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations (CFR) 122.62, 122.63, 122.64, and 124.5.

16. Penalties for Violations of Permit Conditions

a. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed $37,500[7] per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

b. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA.

17. Transfers

This General Permit is not transferable. A new LRP of an ongoing construction activity must submit PRDs in accordance with the requirements of this General Permit to be authorized to discharge under this General Permit. An LRP who is a property owner with active General Permit coverage who sells a fraction or all the land shall inform the new property owner(s) of the requirements of this General Permit.

18. Continuation of Expired Permit

This General Permit continues in force and effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those

[7] May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act

dischargers authorized to discharge under the expiring General Permit are covered by the continued General Permit.

F. EFFLUENT STANDARDS & RECEIVING WATER MONITORING

1. Narrative Effluent Limitations

a. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges regulated by this General Permit do not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

b. LUP dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of structural or non-structural controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

Table 1. Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level
pH	Field test with calibrated portable instrument	LUP Type 2	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5
		LUP Type 3			lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	LUP Type 2	1	NTU	250 NTU
		LUP Type 3			250 NTU

2. Numeric Action Levels (NALs)

a. For LUP Type 2 and 3 dischargers, the lower storm event daily average NAL for pH is 6.5 pH units and the upper storm event daily average NAL for pH is 8.5 pH units. The LUP discharger shall take actions as described below if the storm event daily average discharge is outside of this range of pH values.

b. For LUP Type 2 and 3 dischargers, the storm event daily average NAL for turbidity is 250 NTU. The discharger shall take actions as described below if the storm event daily average discharge is outside of this range of turbidity values.

c. Whenever daily average analytical effluent monitoring results indicate that the discharge is below the lower NAL for pH, exceeds the upper NAL for pH, or exceeds the turbidity NAL (as listed in Table 1), the LUP discharger shall conduct a construction site and run-on evaluation to determine whether pollutant source(s) associated with the site's construction activity may have caused or contributed to the NAL exceedance and shall immediately implement corrective actions if they are needed.

d. The site evaluation will be documented in the SWPPP and specifically address whether the source(s) of the pollutants causing the exceedance of the NAL:

i Are related to the construction activities and whether additional BMPs or SWPPP implementation measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) determine what corrective action(s) were taken or will be taken and with a description of the schedule for completion.

AND/OR:

ii Are related to the run-on associated with the construction site location and whether additional BMPs or SWPPP implementation measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) decide what corrective action(s) were taken or will be taken, including a description of the schedule for completion.

3. Receiving Water Monitoring Triggers

a. The receiving water monitoring triggers for LUP Type 3 dischargers with direct discharges to surface waters are triggered when the daily average effluent pH values during any site phase when there is a high risk of pH discharge[8] fall outside of the range of 6.0 and 9.0 pH units, or when the daily average effluent turbidity exceeds 500 NTU.

b. LUP Type 3 dischargers with direct discharges to surface waters shall conduct receiving water monitoring whenever their effluent monitoring results exceed the receiving water monitoring triggers. If the pH trigger is exceeded, the receiving water shall be monitored for pH for the duration of coverage under this General Permit. If the turbidity trigger is exceeded, the receiving water shall be monitored for turbidity and SSC for the duration of coverage under this General Permit.

c. LUP Type 3 dischargers with direct discharges to surfaces waters shall initiate receiving water monitoring when the triggers are exceeded unless the storm event causing the exceedance is determined after the fact to equal to or greater than the 5-year 24-hour storm (expressed in inches of rainfall) as determined by using these maps:

   http://www.wrcc.dri.edu/pcpnfreq/nca5y24.gif
   http://www.wrcc.dri.edu/pcpnfreq/sca5y24.gif

   Verification of the 5-year 24-hour storm event shall be done by reporting on-site rain gauge readings as well as nearby governmental rain gauge readings.

d. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

G. RECEIVING WATER LIMITATIONS

1. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges to any surface or ground water will not adversely affect human health or the environment.

2. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

3. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants that cause or

[8] A period of high risk of pH discharge is defined as a project's complete utilities phase, complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations of the background pH of the discharges.

contribute to an exceedance of any applicable water quality objectives or water quality standards (collectively, WQS) contained in a Statewide Water Quality Control Plan, the California Toxics Rule, the National Toxics Rule, or the applicable Regional Water Board's Water Quality Control Plan (Basin Plan).

H. TRAINING QUALIFICATIONS

1. General

All persons responsible for implementing requirements of this General Permit shall be appropriately trained. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. Persons responsible for preparing, amending and certifying SWPPPs shall comply with the requirements in this Section H.

2. SWPPP Certification Requirements

a. **Qualified SWPPP Developer:** The LUP discharger shall ensure that all SWPPPs be written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:

i A California registered professional civil engineer;

ii A California registered professional geologist or engineering geologist;

iii A California registered landscape architect;

iv A professional hydrologist registered through the American Institute of Hydrology;

v A certified professional in erosion and sediment control (CPESC) ™ registered through Enviro Cert International, Inc;

vi A certified professional in storm water quality (CPSWQ)™ registered through Enviro Cert International, Inc.; or

vii A certified professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

b. The LUP discharger shall ensure that the SWPPP is written and amended, as needed, to address the specific circumstances for each construction site covered by this General Permit prior to commencement of construction activity for any stage.

c. The LUP discharger shall list the name and telephone number of the currently designated Qualified SWPPP Developer(s) in the SWPPP.

d. **Qualified SWPPP Practitioner:** The LUP discharger shall ensure that all elements of any SWPPP for each project will be implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis, and for ensuring full compliance with the permit and implementation of all elements of the SWPPP. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:

   i A certified erosion, sediment and storm water inspector registered through Certified Professional in Erosion and Sediment Control, Inc.; or

   ii A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

   Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

e. The LUP discharger shall ensure that the SWPPP include a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner, and who is ultimately responsible for implementation of the SWPPP. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.

f. The LUP discharger shall ensure that the SWPPP and each amendment be signed by the Qualified SWPPP Developer. The LUP discharger shall include a listing of the date of initial preparation and the dates of each amendment in the SWPPP.

I. TYPES OF LINEAR PROJECTS

This attachment establishes three types (Type 1, 2 & 3) of complexity for areas within an LUP or project section based on threat to water quality. Project area Types are determined through Attachment A.1.

The Type 1 requirements below establish the baseline requirements for all LUPs subject to this General Permit. Additional requirements for Type 2 and Type 3 LUPs are labeled.

1. Type 1 LUPs*:*

LUP dischargers with areas of a LUP designated as Type 1 shall comply with the requirements in this Attachment. Type 1 LUPs are:

a. Those construction areas where 70 percent or more of the construction activity occurs on a paved surface and where areas disturbed during construction will be returned to preconstruction conditions or equivalent protection established at the end of the construction activities for the day; or

b. Where greater than 30 percent of construction activities occur within the non-paved shoulders or land immediately adjacent to paved surfaces, or where construction occurs on unpaved improved roads, including their shoulders or land immediately adjacent to them where:

   i Areas disturbed during construction will be returned to preconstruction conditions or equivalent protection is established at the end of the construction activities for the day to minimize the potential for erosion and sediment deposition, and

   ii Areas where established vegetation was disturbed during construction will be stabilized and re-vegetated by the end of project. When required, adequate temporary stabilization BMPs will be installed and maintained until vegetation is established to meet minimum cover requirements established in this General Permit for final stabilization.

c. Where the risk determination is as follows:

   i Low sediment risk, low receiving water risk, or

   ii Low sediment risk, medium receiving water risk, or

   iii Medium sediment risk, low receiving water risk

2. Type 2 LUPs:

Type 2 LUPs are determined by the Combined Risk Matrix in Attachment A.1. Type 2 LUPs have the specified combination of risk:

d. High sediment risk, low receiving water risk, or

e. Medium sediment risk, medium receiving water risk, or

f. Low sediment risk, high receiving water risk

Receiving water risk is either considered "Low" for those areas of the project that are not in close proximity to a sensitive receiving watershed, "Medium" for those areas of the project within a sensitive receiving watershed yet outside of the flood plain of a sensitive receiving water body, and "High" where the soil disturbance is within close proximity to a sensitive receiving water body. Project sediment risk is calculated based on the Risk Factor Worksheet in Attachment C of this General Permit.

3. Type 3 LUPs:

Type 3 LUPs are determined by the Combined Risk Matrix in Attachment A.1. Type 3 LUPs have the specified combination of risk:

a. High sediment risk, high receiving water risk, or

b. High sediment risk, medium receiving water risk, or

c. Medium sediment risk, high receiving water risk

Receiving water risk is either considered "Medium" for those areas of the project within a sensitive receiving watershed yet outside of the flood plain of a sensitive receiving water body, or "High" where the soil disturbance is within close proximity to a sensitive receiving water body. Project sediment risk is calculated based on the Risk Factor Worksheet in Attachment C.

J. LUP TYPE-SPECIFIC REQUIREMENTS

1. Effluent Standards

a. Narrative – LUP dischargers shall comply with the narrative effluent standards below.

i Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

ii LUP dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

b. Numeric – LUP Type 1 dischargers are not subject to a numeric effluent standard

c. Numeric –LUP Type 2 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

d. Numeric – LUP Type 3 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

2. Good Site Management "Housekeeping"

a. LUP dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, the good housekeeping measures shall consist of the following:

i Identify the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

ii Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

iii Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

iv Minimize exposure of construction materials to precipitation (not applicable to materials designed to be outdoors and exposed to the environment).

v Implement BMPs to control the off-site tracking of loose construction and landscape materials.

b. LUP dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

i Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

ii Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

iii Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

iv Cover waste disposal containers at the end of every business day and during a rain event.

v Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

vi Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

vii Implement procedures that effectively address hazardous and non-hazardous spills.

viii Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:

(1) Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

(2) Appropriate spill response personnel are assigned and trained.

ix Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

c. LUP dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   i Prevent oil, grease, or fuel from leaking into the ground, storm drains or surface waters.

   ii Implement appropriate BMPs whenever equipment or vehicles are fueled, maintained or stored.

   iii Clean leaks immediately and disposing of leaked materials properly.

d. LUP dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   i Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   ii Contain fertilizers and other landscape materials when they are not actively being used.

   iii Discontinue the application of any erodible landscape material at least 2 days before a forecasted rain event[9] or during periods of precipitation.

   iv Applying erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   v Stacking erodible landscape material on pallets and covering or storing such materials when not being used or applied.

e. LUP dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, LUP dischargers shall do the following:

[9] 50% or greater chance of producing precipitation.

i Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

ii Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

iii Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

iv Ensure retention of sampling, visual observation, and inspection records.

v Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

f. LUP dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations.

3. Non-Storm Water Management

a. LUP dischargers shall implement measures to control all non-storm water discharges during construction.

b. LUP dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

c. LUP dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

4. Erosion Control

a. LUP dischargers shall implement effective wind erosion control.

b. LUP dischargers shall provide effective soil cover for inactive[10] areas and all finished slopes, and utility backfill.

[10] Areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days

c. LUP dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

5. Sediment Controls

a. LUP dischargers shall establish and maintain effective perimeter controls as needed, and implement effective BMPs for all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

b. On sites where sediment basins are to be used, LUP dischargers shall, at minimum, design sediment basins according to the guidance provided in CASQA's Construction BMP Handbook.

c. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths[11] in accordance with Table 2 below.

Table 2 – Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet flow length not to exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

d. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent off-site tracking of sediment.

e. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

f. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall inspect all immediate access roads. At a minimum daily and prior to any rain event, the discharger shall remove any

[11] Sheet flow length is the length that shallow, low velocity flow travels across a site.

sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

g. **Additional LUP Type 3 Requirement:** The Regional Water Board may require LUP Type 3 dischargers to implement additional site-specific sediment control requirements if the implementation of the other requirements in this section are not adequately protecting the receiving waters.

6. Run-on and Run-off Controls

a. LUP dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site-shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this Attachment.

b. Run-on and runoff controls are not required for Type 1 LUPs unless the evaluation of quantity and quality of run-on and runoff deems them necessary or visual inspections show that the site requires such controls.

7. Inspection, Maintenance and Repair

a. All inspection, maintenance repair and sampling activities at the discharger's LUP location shall be performed or supervised by a QSP representing the discharger. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.

b. LUP dischargers shall conduct visual inspections and observations daily during working hours (not recorded). At least once each 24-hour period during extended storm events, **LUP Type 2 & 3 dischargers** shall conduct visual inspections to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

c. Upon identifying failures or other shortcomings, as directed by the QSP, LUP dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

d. For each pre- and post-rain event inspection required, LUP dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format that includes the information described below.

e. The LUP discharger shall ensure that the checklist remains on-site or with the SWPPP. At a minimum, an inspection checklist should include:

i Inspection date and date the inspection report was written.

ii Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

iii Site information, including stage of construction, activities completed, and approximate area of the site exposed.

iv A description of any BMPs evaluated and any deficiencies noted.

v If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

vi Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

vii Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

viii Photographs taken during the inspection, if any.

ix Inspector's name, title, and signature.

K. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

1. Objectives

SWPPPs for all LUPs shall be developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:

a. All pollutants and their sources, including sources of sediment, associated with construction activities associated with LUP activity are controlled;

b. All non-storm water discharges are identified and either eliminated, controlled, or treated;

c. BMPs are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from LUPs during construction; and

d. Stabilization BMPs installed to reduce or eliminate pollutants after construction is completed are effective and maintained.

2. SWPPP Implementation Schedule

a. LUPs for which PRDs have been submitted to the State Water Board shall develop a site/project location SWPPP prior to the start of land-disturbing activity in accordance with this Section and shall implement the SWPPP concurrently with commencement of soil-disturbing activities.

b. For an ongoing LUP involving a change in the LRP, the new LRP shall review the existing SWPPP and amend it, if necessary, or develop a new SWPPP within 15 calendar days to conform to the requirements set forth in this General Permit.

3. Availability

The SWPPP shall be available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

L. REGIONAL WATER BOARD AUTHORITIES

1. Regional Water Boards shall administer the provisions of this General Permit. Administration of this General Permit may include, but is not limited to, requesting the submittal of SWPPPs, reviewing SWPPPs, reviewing monitoring and sampling and analysis reports, conducting compliance inspections, gathering site information by any medium including sampling, photo and video documentation, and taking enforcement actions.

2. Regional Water Boards may terminate coverage under this General Permit for dischargers who fail to comply with its requirements or where they determine that an individual NPDES permit is appropriate.

3. Regional Water Boards may issue separate permits for discharges of storm water associated with construction activity to individual dischargers, categories of dischargers, or dischargers in a geographic area. Upon issuance of such permits by a Regional Water Board, dischargers subject to those permits shall no longer be regulated by this General Permit.

4. Regional Water Boards may direct the discharger to reevaluate the LUP Type(s) for the project (or elements/areas of the project) and impose the appropriate level of requirements.

5. Regional Water Boards may terminate coverage under this General Permit for dischargers who negligently or with willful intent incorrectly determine or report their LUP Type (e.g., they determine themselves to be a LUP Type 1 when they are actually a Type 2).

6. Regional Water Boards may review PRDs and reject or accept applications for permit coverage or may require dischargers to submit a Report of Waste Discharge / NPDES permit application for Regional Water Board consideration of individual requirements.

7. Regional Water Boards may impose additional requirements on dischargers to satisfy TMDL implementation requirements or to satisfy provisions in their Basin Plans.

8. Regional Water Boards may require additional Monitoring and Reporting Program Requirements, including sampling and analysis of discharges to sediment-impaired water bodies.

9. Regional Water Boards may require dischargers to retain records for more than the three years required by this General Permit.

10. Based on an LUP's threat to water quality and complexity, the Regional Water Board may determine on a case-by-case basis that an LUP, or a portion of an LUP, is not eligible for the linear project requirements contained in this Attachment, and require that the discharger comply with all standard requirements in this General Permit.

11. The Regional Water Board may require additional monitoring and reporting program requirements including sampling and analysis of discharges to CWA § 303(d)-listed water bodies. Additional requirements imposed by the Regional Water Board shall be consistent with the overall monitoring effort in the receiving waters.

M. MONITORING AND REPORTING REQUIREMENTS

Table 3. LUP Summary of Monitoring Requirements

LUP Type	Visual Inspections				Sample Collection		
	Daily Site BMP	Pre-storm Event / Baseline	Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water	Non-Visible (when applicable)
1	X						X
2	X	X	X	X	X		X
3	X	X	X	X	X	X	X

1. Objectives

LUP dischargers shall prepare a monitoring and reporting program (M&RP) prior to the start of construction and immediately implement the program at the start of construction for LUPs. The monitoring program must be implemented at the appropriate level to protect water quality at all times throughout the life of the project. The M&RP must be a part of the SWPPP, included as an appendix or separate SWPPP chapter.

2. M&RP Implementation Schedule

a. LUP dischargers shall implement the requirements of this Section at the time of commencement of construction activity. LUP dischargers are responsible for implementing these requirements until construction activity is complete and the site is stabilized.

b. LUP dischargers shall revise the M&RP when:

i Site conditions or construction activities change such that a change in monitoring is required to comply with the requirements and intent of this General Permit.

ii The Regional Water Board requires the discharger to revise its M&RP based on its review of the document. Revisions may include, but not be limited to, conducting additional site inspections, submitting reports, and certifications. Revisions shall be submitted via postal mail or electronic e-mail.

iii The Regional Water Board may require additional monitoring and reporting program requirements including sampling and analysis of discharges to CWA § 303(d)-listed water bodies. Additional requirements imposed by the Regional Water Board shall be consistent with the overall monitoring effort in the receiving waters.

3. LUP Type 1 Monitoring and Reporting Requirements

a. LUP Type 1 Inspection Requirements

i LUP Type 1 dischargers shall ensure that all inspections are conducted by trained personnel. The name(s) and contact number(s) of the assigned inspection personnel should be listed in the SWPPP.

ii LUP Type 1 dischargers shall ensure that all visual inspections are conducted daily during working hours and in conjunction with other daily activities in areas where active construction is occurring.

iii LUP Type 1 dischargers shall ensure that photographs of the site taken before, during, and after storm events are taken during inspections, and submitted through the State Water Board's SMARTS website once every three rain events.

iv LUP Type 1 dischargers shall conduct daily visual inspections to verify that:

(1) Appropriate BMPs for storm water and non-storm water are being implemented in areas where active construction is occurring (including staging areas);

(2) Project excavations are closed, with properly protected spoils, and that road surfaces are cleaned of excavated material and construction materials such as chemicals by either removing or storing the material in protective storage containers at the end of every construction day;

(3) Land areas disturbed during construction are returned to pre-construction conditions or an equivalent protection is used at the end of each workday to eliminate or minimize erosion and the possible discharge of sediment or other pollutants during a rain event.

v Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures

are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met).

vi Inspection programs are required for LUP Type 1 projects where temporary and permanent stabilization BMPs are installed and are to be monitored after active construction is completed. Inspection activities shall continue until adequate permanent stabilization is established and, in areas where re-vegetation is chosen, until minimum vegetative coverage is established in accordance with Section C.1 of this Attachment.

b. LUP Type 1 Monitoring Requirements for Non-Visible Pollutants

LUP Type 1 dischargers shall implement sampling and analysis requirements to monitor non-visible pollutants associated with (1) construction sites; (2) activities producing pollutants that are not visually detectable in storm water discharges; and (3) activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters.

i Sampling and analysis for non-visible pollutants is only required where the LUP Type 1 discharger believes pollutants associated with construction activities have the potential to be discharged with storm water runoff due to a spill or in the event there was a breach, malfunction, failure and/or leak of any BMP. Also, failure to implement BMPs may require sample collection.

(1) Visual observations made during the monitoring program described above will help the LUP Type 1 discharger determine when to collect samples.

(2) The LUP Type 1 discharger is not required to sample if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.

ii LUP Type 1 dischargers shall collect samples down-gradient from all discharge locations where the visual observations were made triggering the monitoring, and which can be safely accessed. For sites where sampling and analysis is required, personnel trained in water quality sampling procedures shall collect storm water samples.

iii If sampling for non-visible pollutant parameters is required, LUP Type 1 dischargers shall ensure that samples be analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment required in Section J.2.a.i.

iv LUP Type 1 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

v LUP Type 1 dischargers shall ensure that a sufficiently large sample of storm water that has not come into contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample[12]) will be collected for comparison with the discharge sample. Samples shall be collected during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.

vi LUP Type 1 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS).

vii For laboratory analyses, all sampling, sample preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136. LUP Type 1 dischargers shall ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed. Portable meters shall be calibrated according to manufacturer's specification.

viii LUP Type 1 dischargers shall ensure that all field and/or analytical data are kept in the SWPPP document.

c. LUP Type 1 Visual Observation Exceptions

i LUP Type 1 dischargers shall be prepared to collect samples and conduct visual observation (inspections) to meet the minimum visual observation requirements of this Attachment. The Type 1 LUP discharger is not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

(1) During dangerous weather conditions such as flooding and electrical storms;

(2) Outside of scheduled site business hours.

(3) When access to the site is unsafe due to storm events.

[12] Sample collected at a location unaffected by contruction activities.

ii If the LUP Type 1 discharger does not collect the required samples or visual observation (inspections) due to these exceptions, an explanation why the sampling or visual observation (inspections) were not conducted shall be included in both the SWPPP and the Annual Report.

d. Particle Size Analysis for Risk Justification

LUP Type 1 dischargers utilizing justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

4. LUP Type 2 & 3 Monitoring and Reporting Requirements

a. LUP Type 2 & 3 Inspection Requirements

i LUP Type 2 & 3 dischargers shall ensure that all inspections are conducted by trained personnel. The name(s) and contact number(s) of the assigned inspection personnel should be listed in the SWPPP.

ii LUP Type 2 & 3 dischargers shall ensure that all visual inspections are conducted daily during working hours and in conjunction with other daily activities in areas where active construction is occurring.

iii LUP Type 2 & 3 dischargers shall ensure that photographs of the site taken before, during, and after storm events are taken during inspections, and submitted through the State Water Board's SMARTS website once every three rain events.

iv LUP Type 2 & 3 dischargers shall conduct daily visual inspections to verify that appropriate BMPs for storm water and non-storm water are being implemented and in place in areas where active construction is occurring (including staging areas).

v LUP Type 2 & 3 dischargers shall conduct inspections of the construction site prior to anticipated storm events, during extended storm events, and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity. Pre-storm inspections are to ensure that BMPs are properly installed and maintained; post-storm inspections are to assure that BMPs have functioned adequately. During

extended storm events, inspections shall be required during normal working hours for each 24-hour period.

vi Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met).

vii LUP Type 2 & 3 dischargers shall implement a monitoring program for inspecting projects that require temporary and permanent stabilization BMPs after active construction is complete. Inspections shall ensure that the BMPs are adequate and maintained. Inspection activities shall continue until adequate permanent stabilization is established and, in vegetated areas, until minimum vegetative coverage is established in accordance with Section C.1 of this Attachment.

viii If possible, LUP Type 2 & 3 dischargers shall install a rain gauge on-site at an accessible and secure location with readings made during all storm event inspections. When readings are unavailable, data from the closest rain gauge with publically available data may be used.

ix LUP Type 2 & 3 dischargers shall Include and maintain a log of the inspections conducted in the SWPPP. The log will provide the date and time of the inspection and who conducted the inspection.

b. LUP Type 2 & 3 Storm Water Effluent Monitoring Requirements

Table 4. LUP Type 2 & 3 Effluent Monitoring Requirements

LUP Type	Frequency	Effluent Monitoring
2	Minimum of 3 samples per day characterizing discharges associated with construction activity from the project active areas of construction.	Turbidity, pH, and non-visible pollutant parameters (if applicable)
3	Minimum of 3 samples per day characterizing discharges associated with construction activity from the project active areas of construction.	turbidity, pH, and non-visible pollutant parameters (if applicable)

i LUP Type 2 & 3 dischargers shall collect storm water grab samples from sampling locations characterizing discharges associated with activity from the LUP active areas of construction. At a minimum, 3 samples shall be collected per day of discharge.

ii LUP Type 2 & 3 dischargers shall collect samples of stored or contained storm water that is discharged subsequent to a storm event producing precipitation of ½ inch or more at the time of discharge.

iii LUP Type 2 & 3 dischargers shall ensure that storm water grab sample(s) obtained be representative of the flow and characteristics of the discharge.

iv LUP Type 2 & 3 dischargers shall analyze their effluent samples for:

(1) pH and turbidity
(2) Any additional parameter for which monitoring is required by the Regional Water Board.

c. LUP Type 2 & 3 Storm Water Effluent Sampling Locations

i LUP Type 2 & 3 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire disturbed project or area.

ii LUP Type 2 & 3 dischargers may monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to exceedance of NALs.

iii LUP Type 2 & 3 dischargers shall select analytical test methods from the list provided in Table 5 below.

iv LUP Type 2 & 3 dischargers shall ensure that all storm water sample collection preservation and handling shall be conducted in accordance with the “Storm Water Sample Collection and Handling Instructions” below.

d. LUP Type 3 Receiving Water Monitoring Requirements

i In the event that an LUP Type 3 discharger’s effluent exceeds the receiving water monitoring triggers of 500 NTU turbidity or pH range of 6.0-9.0, contained in this General Permit and has a direct discharge to receiving waters, the LUP discharger shall subsequently sample Receiving Waters (RWs) for turbidity, pH (if applicable) and SSC for the duration of coverage under this General Permit. In the event that an LUP Tupe 3 discharger utilizing ATS with direct discharges into receiving waters discharges effluent that exceeds the NELs in this permit, the discharger shall

subsequently sample RWs for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit.

ii LUP Type 3 dischargers that meet the project criteria in Appendix 3 of this General Permit and have more than 30 acres of soil disturbance in the project area or project section area designated as Type 3, shall comply with the Bioassessment requirements prior to commencement of construction activity.

iii LUP Type 3 dischargers shall obtain RW samples in accordance with the requirements of the Receiving Water Sampling Locations section (Section M.4.c. of this Attachment).

e. LUP Type 3 Receiving Water Sampling Locations

i **Upstream/up-gradient RW samples**: LUP Type 3 dischargers shall obtain any required upstream/up-gradient receiving water samples from a representative and accessible location as close as possible to and upstream from the effluent discharge point.

ii **Downstream/down-gradient RW samples**: LUP Type 3 dischargers shall obtain any required downstream/down-gradient receiving water samples from a representative and accessible location as close as possible to and downstream from the effluent discharge point.

iii If two or more discharge locations discharge to the same receiving water, LUP Type 3 dischargers may sample the receiving water at a single upstream and downstream location.

f. LUP Type 2 & 3 Monitoring Requirements for Non-Visible Pollutants

LUP Type 2 & 3 dischargers shall implement sampling and analysis requirements to monitor non-visible pollutants associated with (1) construction sites; (2) activities producing pollutants that are not visually detectable in storm water discharges; and (3) activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters.

i Sampling and analysis for non-visible pollutants is only required where LUP Type 2 & 3 dischargers believe pollutants associated with construction activities have the potential to be discharged with storm water runoff due to a spill or in the event there was a breach, malfunction, failure and/or leak of any BMP. Also, failure to implement BMPs may require sample collection.

(1) Visual observations made during the monitoring program described above will help LUP Type 2 & 3 dischargers determine when to collect samples.

(2) LUP Type 2 & 3 dischargers are not required to sample if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.

ii LUP Type 2 & 3 dischargers shall collect samples down-gradient from the discharge locations where the visual observations were made triggering the monitoring and which can be safely accessed. For sites where sampling and analysis is required, personnel trained in water quality sampling procedures shall collect storm water samples.

iii If sampling for non-visible pollutant parameters is required, LUP Type 2 & 3 dischargers shall ensure that samples be analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment required in Section J.2.a.i.

iv LUP Type 2 & 3 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

v LUP Type 2 & 3 dischargers shall ensure that a sufficiently large sample of storm water that has not come into contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample[13]) will be collected for comparison with the discharge sample. Samples shall be collected during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.

vi LUP Type 2 & 3 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS).

vii For laboratory analyses, all sampling, sample preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136. LUP Type 2 & 3 dischargers shall ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed.

[13] Sample collected at a location unaffected by construction activities

Portable meters shall be calibrated according to manufacturer's specification.

viii LUP Type 2 & 3 dischargers shall ensure that all field and/or analytical data are kept in the SWPPP document.

g. LUP Type 2 & 3 Visual Observation and Sample Collection Exceptions

i LUP Type 2 & 3 dischargers shall be prepared to collect samples and conduct visual observation (inspections) to meet the minimum visual observation requirements of this Attachment. Type 2 & 3 LUP dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

(1) During dangerous weather conditions such as flooding and electrical storms;

(2) Outside of scheduled site business hours.

(3) When access to the site is unsafe due to storm events.

ii If the LUP Type 2 or 3 discharger does not collect the required samples or visual observation (inspections) due to these exceptions, an explanation why the sampling or visual observation (inspections) were not conducted shall be included in both the SWPPP and the Annual Report.

h. LUP Type 2 & 3 Storm Water Sample Collection and Handling Instructions

LUP Type 2 & 3 dischargers shall refer to Table 5 below for test Methods, detection Limits, and reporting Units. During storm water sample collection and handling, the LUP Type 2 & 3 discharger shall:

i Identify the parameters required for testing and the number of storm water discharge points that will be sampled. Request the laboratory to provide the appropriate number of sample containers, types of containers, sample container labels, blank chain of custody forms, and sample preservation instructions.

ii Determine how to ship the samples to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The options are to either deliver the samples to the laboratory, arrange to have the laboratory pick them up, or ship them overnight to the laboratory.

iii Use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers could contaminate your samples.

iv Prevent sample contamination, by not touching, or putting anything into the sample containers before collecting storm water samples.

v Not overfilling sample containers. Overfilling can change the analytical results.

vi Tightly screw the cap of each sample container without stripping the threads of the cap.

vii Complete and attach a label to each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.

viii Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into the shipping container. Samples should be kept as close to 4° C (39° F) as possible until arriving at the laboratory. Do not freeze samples.

ix Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.

x Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers.

xi Designate and train personnel to collect, maintain, and ship samples in accordance with the above sample protocols and good laboratory practices.

xii Refer to the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP) for more

information on sampling collection and analysis. See http://www.waterboards.ca.gov/water_issues/programs/swamp/[14]

Table 5. Test Methods, Detection Limits, Reporting Units and Applicable NALs

Parameter	Test Method	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Levels	(LUP Type 3) Receiving Water Monitoring Trigger
pH	Field test with calibrated portable instrument	Type 2 & 3	0.2	pH units	Lower = 6.5 upper = 8.5	Lower = 6.0 upper = 9.0
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Type 2 & 3	1	NTU	250 NTU	500 NTU
SSC	ASTM Method D 3977-97[15]	Type 3 if Receiving Water Monitoring Trigger is exceeded	5	Mg/L	N/A	N/A
Bioassessment	(STE) Level I of (SAFIT),[16] fixed-count of 600 org/sample	Type 3 LUPs > 30 acres	N/A	N/A	N/A	N/A

i. LUP Type 2 & 3 Monitoring Methods

i The LUP Type 2 or 3 discharger's project M&RP shall include a description of the following items:

(1) Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

[14] Additional information regarding SWAMP's QAPrP can be found at: http://www.waterboards.ca.gov/water_issues/programs/swamp/.

[15] ASTM, 1999, Standard Test Method for Determining Sediment Concentration in Water Samples: American Society of Testing and Materials, D 3977-97, Vol. 11.02, pp. 389-394

[16] The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

(2) Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program a copy of the Chain of Custody form used when handling and shipping samples.

(3) Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section M.4.f above.

ii LUP Type 2 & 3 dischargers shall ensure that all sampling and sample preservation be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses shall be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses shall be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services (SSC exception). The LUP discharger shall conduct its own field analysis of pH and may conduct its own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

j. LUP Type 2 & 3 Analytical Methods

LUP Type 2 & 3 dischargers shall refer to Table 5 above for test Methods, detection Limits, and reporting Units.

i **pH**: LUP Type 2 & 3 dischargers shall perform pH analysis on-site with a calibrated pH meter or pH test kit. The LUP discharger shall record pH monitoring results on paper and retain these records in accordance with Section M.4.o, below.

ii **Turbidity**: LUP Type 2 & 3 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results shall

be recorded in the site log book in Nephelometric Turbidity Units (NTU).

iii **Suspended sediment concentration (SSC)**: LUP Type 3 dischargers exceeding the turbidity Receiving Water Monitoring Trigger, shall perform SSC analysis using ASTM Method D3977-97.

iv **Bioassessment**: LUP Type 3 dischargers shall perform bioassessment sampling and analysis according to Appendix 3 of this General Permit.

k. Watershed Monitoring Option

If an LUP Type 2 or 3 discharger is part of a qualified regional watershed-based monitoring program the LUP Type 2 or 3 discharger may be eligible for relief from the monitoring requirements in this Attachment. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program if it determines that the watershed-based monitoring program will provide information to determine each discharger's compliance with the requirements of this General Permit.

l. Particle Size Analysis for Risk Justification

LUP Type 2 & 3 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

m. NAL Exceedance Report

i In the event that any effluent sample exceeds an applicable NAL, the Regional Water Boards may require LUP Type 2 & 3 dischargers to submit NAL Exceedance Reports.

ii LUP Type 2 & 3 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.

iii LUP Type 2 & 3 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the exceedance report is filed.

iv LUP Type 2 & 3 dischargers shall include in the NAL Exceedance Report:

(1) the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit"); and
(2) the date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.
(3) Description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

n. Monitoring Records

LUP Type 2 & 3 dischargers shall ensure that records of all storm water monitoring information and copies of all reports (including Annual Reports) required by this General Permit be retained for a period of at least three years. LUP Type 2 & 3 dischargers may retain records off-site and make them available upon request. These records shall include:

i The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge);

ii The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements;

iii The date and approximate time of analyses;

iv The individual(s) who performed the analyses;

v A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and all chain of custody forms;

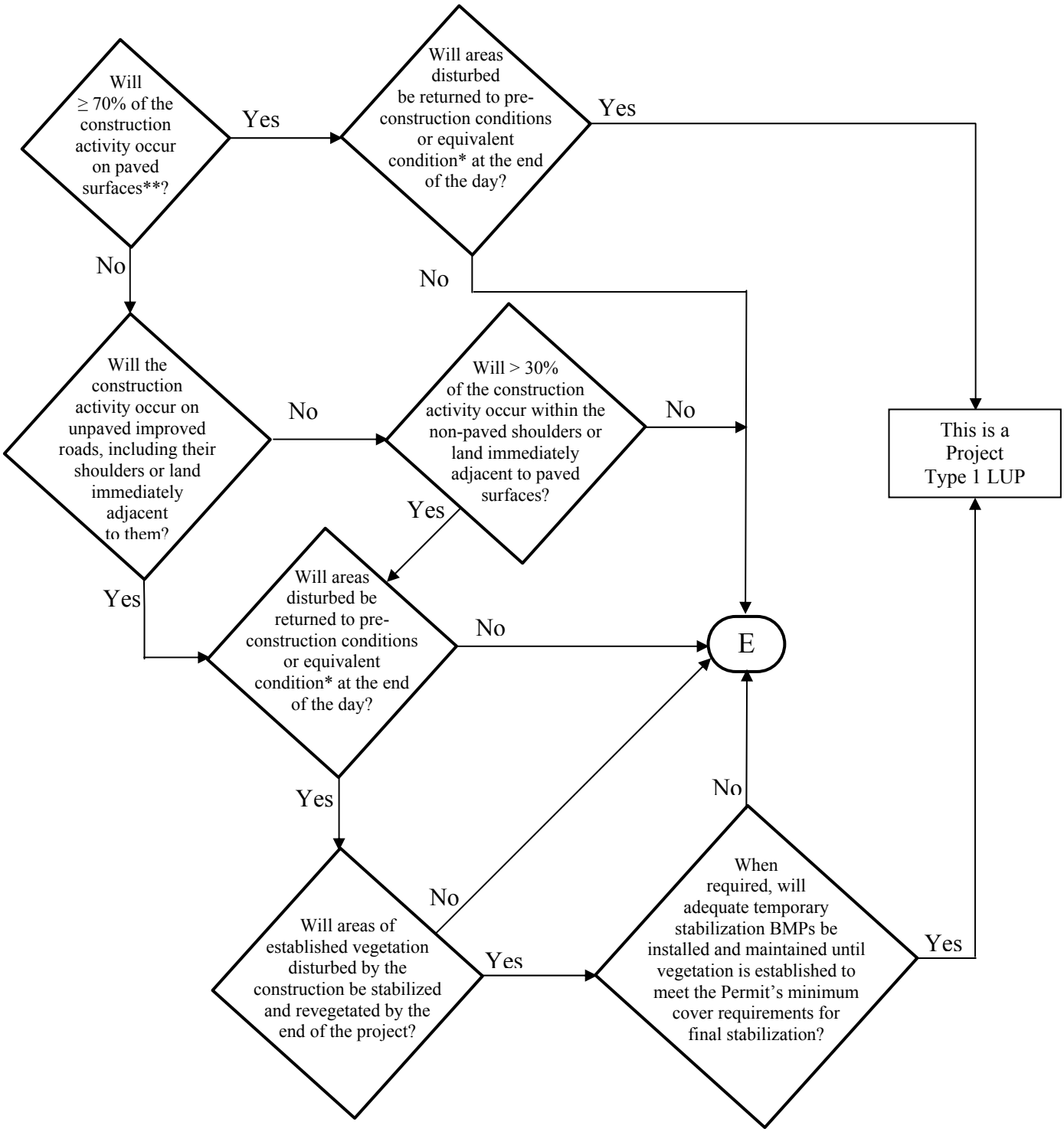
vi Quality assurance/quality control records and results;

vii Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Section M.4.a above);

viii Visual observation and sample collection exception records (see Section M.4.g above); and

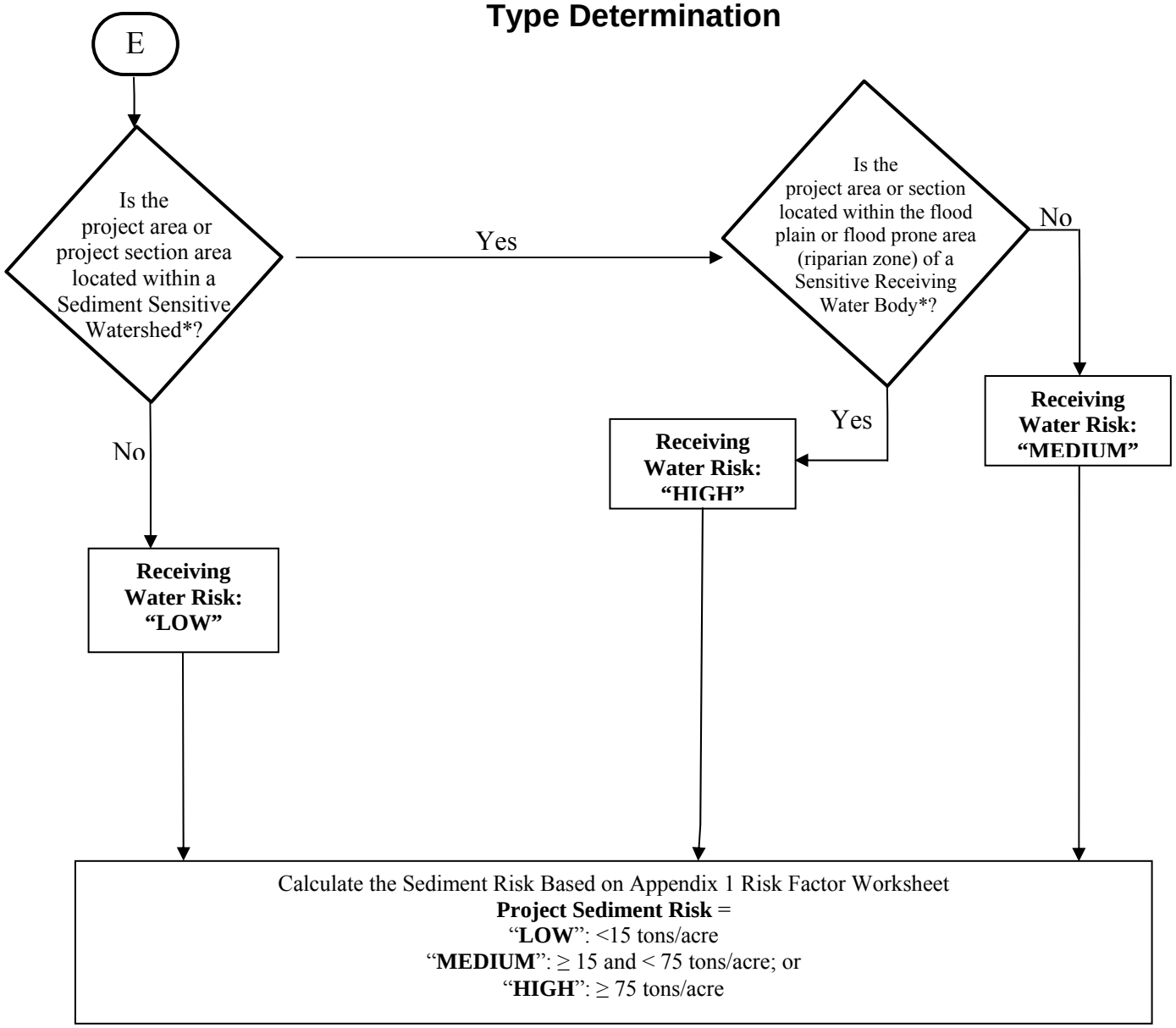
ix The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

ATTACHMENT A.1
LUP Project Area or Project Section Area Type Determination



*See Definition of Terms
** Or: "Will < 30% of the soil disturbance occur on unpaved surfaces?

ATTACHMENT A.1
LUP Project Area or Project Section Area Type Determination



* See Definition of Terms

PROJECT SEDIMENT RISK

RECEIVING WATER RISK	LOW	MEDIUM	HIGH
LOW	Type 1	Type 1	Type 2
MEDIUM	Type 1	Type 2	Type 3
HIGH	Type 2	Type 3	Type 3

ATTACHMENT A.1
Definition of Terms

1. **Equivalent Condition** – Means disturbed soils such as those from trench excavation are required to be hauled away, backfilled into the trench, and/or covered (e.g., metal plates, pavement, plastic covers over spoil piles) at the end of the construction day.
2. **Linear Construction Activity** – Linear construction activity consists of underground/ overhead facilities that typically include, but are not limited to, any conveyance, pipe or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/ tower pad and cable/ wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/ borrow locations.
3. **Sediment Sensitive Receiving Water Body –** Defined as a water body segment that is listed on EPA's approved CWA 303(d) list for sedimentation/siltation, turbidity, or is designated with beneficial uses of SPAWN, MIGRATORY, and COLD.
4. **Sediment Sensitive Watershed –** Defined as a watershed draining into a receiving water body listed on EPA's approved CWA 303(d) list for sedimentation/siltation, turbidity, or a water body designated with beneficial uses of SPAWN, MIGRATORY, and COLD.

ATTACHMENT A.2
PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS FOR LINEAR UNDERGROUND/OVERHEAD PROJECTS TO COMPLY WITH THE CONSTRUCTION GENERAL PERMIT

GENERAL INSTRUCTIONS

Who Must Submit

This permit is effective on July 1, 2010.

The Legally Responsible Person (LRP) for construction activities associated with linear underground/overhead project (LUP) must electronically apply for coverage under this General Permit on or after July 1, 2010. If it is determined that the LUP construction activities require an NPDES permit, the Legally Responsible Person[1] (LRP) shall submit PRDs for this General Permit in accordance with the following:

LUPs associated with Private or Municipal Development Projects

1. For LUPs associated with pre-development and pre-redevelopment construction activities:

   The LRP must obtain coverage[2] under this General Permit for its pre-development and pre-redevelopment construction activities where the total disturbed land area of these construction activities is greater than 1 acre.

2. For LUPs associated with new development and redevelopment construction projects:

   The LRP must obtain coverage under this General Permit for LUP construction activities associated with new development and redevelopment projects where the total disturbed land area of the LUP is greater than 1 acre. Coverage under this permit is not required where the same LUP construction activities are covered by another NPDES permit.

LUPs not associated with private or municipal new development or redevelopment projects:

The LRP must obtain coverage under this General Permit on or after July 1, 2010 for its LUP construction activities where the total disturbed land area is greater than 1 acre.

PRD Submittal Requirements

Prior to the start of construction activities a LRP must submit PRDs and fees to the State Water Board for each LUP.

New and Ongoing LUPs

Dischargers of new LUPs that commence construction activities after the adoption date of this General Permit shall file PRDs prior to the commencement of construction and implement the SWPPP upon the start of construction.

[1] person possessing the title of the land on which the construction activities will occur for the regulated site
[2] obtain coverage means filing PRDs for the project.

PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS (CONTINUED)

Dischargers of ongoing LUPs that are currently covered under State Water Board Order No. 2003-0007 (Small LUP General Permit) shall electronically file Permit Registration Documents no later than July 1, 2010. After July 1, 2010, all NOIs subject to State Water Board Order No. 2003-0007-DWQ will be terminated. All existing dischargers shall be exempt from the risk determination requirements in Attachment A. All existing dischargers are therefore subject to LUP Type 1 requirements regardless of their project's sediment and receiving water risks. However, a Regional Board retains the authority to require an existing discharger to comply with the risk determination requirements in Attachment A.

Where to Apply

The Permit Registration Documents (PRDs) can be found at www.waterboards.ca.gov/water_issues/programs/stormwater/

Fees

The annual fee for storm water permits are established through the State of California Code of Regulations.

When Permit Coverage Commences

To obtain coverage under the General Permit, the LRP must include the complete PRDs and the annual fee. All PRDs deemed incomplete will be rejected with an explanation as to what is required to complete submittal. Upon receipt of complete PRDs and associated fee, each discharger will be sent a waste discharger's identification (WDID) number.

Projects and Activities Not Defined As Construction Activity

1. LUP construction activity does not include routine maintenance projects to maintain original line and grade, hydraulic capacity, or original purpose of the facility. Routine maintenance projects are projects associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-way, easements, franchise agreements or other legally binding agreements of the discharger. Routine maintenance projects include, but are not limited to projects that are conducted to:

    - Maintain the original purpose of the facility, or hydraulic capacity.
    - Update existing lines[3] and facilities to comply with applicable codes, standards and regulations regardless if such projects result in increased capacity.
    - Repairing leaks.

    Routine maintenance does not include construction of new[4] lines or facilities resulting from compliance with applicable codes, standards and regulations.

[3] Update existing lines includes replacing existing lines with new materials or pipes.
[4] New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS (CONTINUED)

Routine maintenance projects do not include those areas of maintenance projects that are outside of an existing right-of-way, franchise, easements, or agreements. When a project must acquire new areas, those areas may be subject to this General Permit based on the area of disturbed land outside the original right-of-way, easement, or agreement.

2. LUP construction activity does not include field activities associated with the planning and design of a project (e.g., activities associated with route selection).

3. Tie-ins conducted immediately adjacent to "energized" or "pressurized" facilities by the discharger are not considered small construction activities where all other LUP construction activities associated with the tie-in are covered by a NOI and SWPPP of a third party or municipal agency.

Calculating Land Disturbance Areas of LUPs

The total land area disturbed for LUPs is the sum of the:

- Surface areas of trenches, laterals and ancillary facilities, plus
- Area of the base of stockpiles on unpaved surfaces, plus
- Surface area of the borrow area, plus
- Areas of paved surfaces constructed for the project, plus
- Areas of new roads constructed or areas of major reconstruction to existing roads (e.g. improvements to two-track surfaces or road widening) for the sole purpose of accessing construction activities or as part of the final project, plus
- Equipment and material storage, staging, and preparation areas (laydown areas) not on paved surfaces, plus
- Soil areas outside the surface area of trenches, laterals and ancillary facilities that will be graded, and/or disturbed by the use of construction equipment, vehicles and machinery during construction activities.

Stockpiling Areas

Stockpiling areas, borrow areas and the removal of soils from a construction site may or may not be included when calculating the area of disturbed soil for a site depending on the following conditions:

- For stockpiling of soils onsite or immediately adjacent to a LUP site and the stockpile is not on a paved surface, the area of the base of the stockpile is to be included in the disturbed area calculation.

- The surface area of borrow areas that are onsite or immediately adjacent to a project site are to be included in the disturbed area calculation.

- For soil that is hauled offsite to a location owned or operated by the discharger that is not a paved surface, the area of the base of the stockpile is to be included in the disturbed area calculation except when the offsite location is already subject to a separate storm water permit.

PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS (CONTINUED)

- For soil that is brought to the project from an off-site location owned or operated by the discharger the surface area of the borrow pit is to be included in the disturbed area calculation except when the offsite location is already subject to a separate storm water permit.

- Trench spoils on a paved surface that are either returned to the trench or excavation or hauled away from the project daily for disposal or reuse will not be included in the disturbed area calculation.

If you have any questions concerning submittal of PRDs, please call the State Water Board at (866) 563-3107.

ATTACHMENT B
PERMIT REGISTRATION DOCUMENTS (PRDs) TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY

GENERAL INSTRUCTIONS

A. All Linear Construction Projects shall comply with the PRD requirements in Attachment A.2 of this Order.

B. Who Must Submit

Discharges of storm water associated with construction that results in the disturbance of one acre or more of land must apply for coverage under the General Construction Storm Water Permit (General Permit). Any construction activity that is a part of a larger common plan of development or sale must also be permitted, regardless of size. (For example, if 0.5 acre of a 20-acre subdivision is disturbed by the construction activities of discharger A and the remaining 19.5 acres is to be developed by discharger B, discharger A must obtain a General Storm Water Permit for the 0.5 acre project).

Other discharges from construction activities that are covered under this General Permit can be found in the General Permit Section II.B.

It is the LRP's responsibility to obtain coverage under this General Permit by electronically submitting complete PRDs (Permit Registration Documents).

In all cases, the proper procedures for submitting the PRDs must be completed before construction can commence.

C. Construction Activity Not Covered By This General Permit

Discharges from construction that are not covered under this General Permit can be found in the General Permit Sections II.A &B..

D. Annual Fees and Fee Calculation

Annual fees are calculated based upon the total area of land to be disturbed not the total size of the acreage owned. However, the calculation includes all acres to be disturbed during the duration of the project. For example, if 10 acres are scheduled to be disturbed the first year and 10 in each subsequent year for 5 years, the annual fees would be based upon 50 acres of disturbance. The State Water Board will evaluate adding acreage to an existing Permit Waste Discharge Identification (WDID) number on a case-by-case basis. In general, any acreage to be considered must be contiguous to the permitted land area and the existing

SWPPP must be appropriate for the construction activity and topography of the acreage under consideration. As acreage is built out and stabilized or sold, the Change of Information (COI) form enables the applicant to remove those acres from inclusion in the annual fee calculation. Checks should be made payable to: State Water Board.

The Annual fees are established through regulations adopted by the State Water Board. The total annual fee is the current base fee plus applicable surcharges for all construction sites submitting an NOI, based on the total acreage to be disturbed during the life of the project. Annual fees are subject to change by regulation.

Dischargers that apply for and satisfy the Small Construction Erosivity Wavier requirements shall pay a fee of $200.00 plus an applicable surcharge, see the General Permit Section II.B.7.

E. When to Apply

LRP's proposing to conduct construction activities subject to this General Permit must submit their PRDs prior to the commencement of construction activity.

F. Requirements for Completing Permit Registration Documents (PRDs)

All dischargers required to comply with this General Permit shall electronically submit the required PRDs for their type of construction as defined below.

G. Standard PRD Requirements (All Dischargers)

1. Notice of Intent
2. Risk Assessment (Standard or Site-Specific)
3. Site Map
4. SWPPP
5. Annual Fee
6. Certification

H. Additional PRD Requirements Related to Construction Type

1. Discharger in unincorporated areas of the State (not covered under an adopted Phase I or II SUSMP requirements) and that are not a linear project shall also submit a completed:
   a. Post-Construction Water Balance Calculator (Appendix 2).

2. Dischargers who are proposing to implement ATS shall submit:
   a. Complete ATS Plan in accordance with Attachment F at least 14 days prior to the planned operation of the ATS and a paper copy shall be available onsite during ATS operation.

b. Certification proof that design done by a professional in accordance with Attachment F.

3. Dischargers who are proposing an alternate Risk Justification:
   a. Particle Size Analysis.

I. Exceptions to Standard PRD Requirements

Construction sites with an R value less than 5 as determined in the Risk Assessment are not required to submit a SWPPP.

J. Description of PRDs

1. Notice of Intent (NOI)

2. Site Map(s) Includes:
   a. The project's surrounding area (vicinity)
   b. Site layout
   c. Construction site boundaries
   d. Drainage areas
   e. Discharge locations
   f. Sampling locations
   g. Areas of soil disturbance (temporary or permanent)
   h. Active areas of soil disturbance (cut or fill)
   i. Locations of all runoff BMPs
   j. Locations of all erosion control BMPs
   k. Locations of all sediment control BMPs
   l. ATS location (if applicable)
   m. Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
   n. Locations of all post-construction BMPs
   o. Locations of storage areas for waste, vehicles, service, loading/unloading of materials, access (entrance/exits) points to construction site, fueling, and water storage, water transfer for dust control and compaction practices

3. **SWPPPs**
   A site-specific SWPPP shall be developed by each discharger and shall be submitted with the PRDs.

4. **Risk Assessment**
   All dischargers shall use the Risk Assessment procedure as describe in the General Permit Appendix 1.

   a. The Standard Risk Assessment includes utilization of the following:
      i. Receiving water Risk Assessment interactive map

ii. EPA Rainfall Erosivity Factor Calculator Website
iii. Sediment Risk interactive map
iv. Sediment sensitive water bodies list

b. The Site-Specific Risk Assessment includes the completion of the hand calculated R value Risk Calculator

5. **Post-Construction Water Balance Calculator**
All dischargers subject to this requirement shall complete the Water Balance Calculator (in Appendix 2) in accordance with the instructions.

6. **ATS Design Document and Certification**
All dischargers using ATS must submit electronically their system design (as well as any supporting documentation) and proof that the system was designed by a qualified ATS design professional (See Attachment F).

To obtain coverage under the General Permit PRDs must be included and completed. If any of the required items are missing, the PRD submittal is considered incomplete and will be rejected. Upon receipt of a complete PRD submittal, the State Water Board will process the application package in the order received and assign a (WDID) number.

Questions?

If you have any questions on completing the PRDs please email stormwater@waterboards.ca.gov or call (866) 563-3107.

ATTACHMENT C
RISK LEVEL 1 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 1 dischargers shall comply with the narrative effluent standards listed below:

   a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

   b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

2. Numeric – Risk Level 1 dischargers are not subject to a numeric effluent standard.

B. Good Site Management "Housekeeping"

1. Risk Level 1 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 1 dischargers shall implement the following good housekeeping measures:

   a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

   b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.

2. Risk Level 1 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

d. Cover waste disposal containers at the end of every business day and during a rain event.

e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

g. Implement procedures that effectively address hazardous and non-hazardous spills.

h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:

i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

ii. Appropriate spill response personnel are assigned and trained.

i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

3. Risk Level 1 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.

   b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.

   c. Clean leaks immediately and disposing of leaked materials properly.

4. Risk Level 1 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   b. Contain fertilizers and other landscape materials when they are not actively being used.

   c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

   d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.

5. Risk Level 1 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 1 dischargers shall do the following:

a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

d. Ensure retention of sampling, visual observation, and inspection records.

e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

6. Risk Level 1 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

C. Non-Storm Water Management

1. Risk Level 1 dischargers shall implement measures to control all non-storm water discharges during construction.

2. Risk Level 1 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 1 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 1 dischargers shall implement effective wind erosion control.

2. Risk Level 1 dischargers shall provide effective soil cover for inactive[1] areas and all finished slopes, open space, utility backfill, and completed lots.

3. Risk Level 1 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 1 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

2. On sites where sediment basins are to be used, Risk Level 1 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

F. Run-on and Runoff Controls

Risk Level 1 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 1 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.

2. Risk Level 1 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended

[1] Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.

storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 1 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

4. For each inspection required, Risk Level 1 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.

5. Risk Level 1 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:

   a. Inspection date and date the inspection report was written.

   b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

   c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.

   d. A description of any BMPs evaluated and any deficiencies noted.

   e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

   f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

   g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

   h. Photographs taken during the inspection, if any.

   i. Inspector's name, title, and signature.

H. Rain Event Action Plan

Not required for Risk Level 1 dischargers.

I. Risk Level 1 Monitoring and Reporting Requirements

Table 1- Summary of Monitoring Requirements

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-storm Water Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
1	X	X		X	X		

1. **Construction Site Monitoring Program Requirements**

   a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.

   b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Programs to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.

   c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. **Objectives**

   The CSMP shall be developed and implemented to address the following objectives:

   a. To demonstrate that the site is in compliance with the Discharge Prohibitions;

b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;

c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges; and

d. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

3. **Risk Level 1 - Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

a. Risk Level 1 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

b. Risk Level 1 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.

c. Risk Level 1 dischargers shall conduct visual observations (inspections) during business hours only.

d. Risk Level 1 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.

e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 1 dischargers shall visually observe (inspect):

i. All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

ii. All BMPs to identify whether they have been properly implemented in accordance with the SWPPP. If needed, the discharger shall implement appropriate corrective actions.

iii. Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

f. For the visual observations (inspections) described in e.i and e.iii above, Risk Level 1 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

g. Within two business days (48 hours) after each qualifying rain event, Risk Level 1 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.

h. Risk Level 1 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. **Risk Level 1 – Visual Observation Exemptions**

a. Risk Level 1 dischargers shall be prepared to conduct visual observation (inspections) until the minimum requirements of Section I.3 above are completed. Risk Level 1 dischargers are not required to conduct visual observation (inspections) under the following conditions:

i. During dangerous weather conditions such as flooding and electrical storms.

ii. Outside of scheduled site business hours.

b. If no required visual observations (inspections) are collected due to these exceptions, Risk Level 1 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the visual observations (inspections) were not conducted.

5. **Risk Level 1 – Monitoring Methods**

Risk Level 1 dischargers shall include a description of the visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures in the CSMP.

6. **Risk Level 1 – Non-Storm Water Discharge Monitoring Requirements**

a. Visual Monitoring Requirements:

   i. Risk Level 1 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

   ii. Risk Level 1 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).

   iii. Risk Level 1 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 1 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

7. **Risk Level 1 – Non-Visible Pollutant Monitoring Requirements**

   a. Risk Level 1 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

   b. Risk Level 1 dischargers shall ensure that water samples are large enough to characterize the site conditions.

   c. Risk Level 1 dischargers shall collect samples at all discharge locations that can be safely accessed.

   d. Risk Level 1 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

   e. Risk Level 1 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the

presence of pollutants identified in the pollutant source assessment required (Risk Level 1 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

f. Risk Level 1 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

g. Risk Level 1 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.[2]

h. Risk Level 1 dischargers shall keep all field /or analytical data in the SWPPP document.

8. **Risk Level 1 – Particle Size Analysis for Project Risk Justification**

Risk Level 1 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

9. **Risk Level 1 – Records**

Risk Level 1 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 1 dischargers shall retain all records on-site while construction is ongoing. These records include:

a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.

b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.

c. The date and approximate time of analyses.

d. The individual(s) who performed the analyses.

[2] For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

e. A summary of all analytical results from the last three years, the method detection limits and reporting units, and the analytical techniques or methods used.

f. Rain gauge readings from site inspections.

g. Quality assurance/quality control records and results.

h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.6 above).

i. Visual observation and sample collection exception records (see Section I.4 above).

j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

ATTACHMENT D
RISK LEVEL 2 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 2 dischargers shall comply with the narrative effluent standards listed below:

   a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

   b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

2. Numeric – Risk level 2 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

B. Good Site Management "Housekeeping"

1. Risk Level 2 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 2 dischargers shall implement the following good housekeeping measures:

   a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

   b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.

2. Risk Level 2 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

d. Cover waste disposal containers at the end of every business day and during a rain event.

e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

g. Implement procedures that effectively address hazardous and non-hazardous spills.

h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require:

i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly.

ii. Appropriate spill response personnel are assigned and trained.

i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

3. Risk Level 2 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.

   b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.

   c. Clean leaks immediately and disposing of leaked materials properly.

4. Risk Level 2 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   b. Contain all fertilizers and other landscape materials when they are not actively being used.

   c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

   d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.

5. Risk Level 2 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 2 dischargers shall do the following:

a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

d. Ensure retention of sampling, visual observation, and inspection records.

e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

6. Risk Level 2 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

7. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall document all housekeeping BMPs in the SWPPP and REAP(s) in accordance with the nature and phase of the construction project. Construction phases at traditional land development projects include Grading and Land Development Phase, Streets and Utilities, or Vertical Construction for traditional land development projects.

C. Non-Storm Water Management

1. Risk Level 2 dischargers shall implement measures to control all non-storm water discharges during construction.

2. Risk Level 2 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 2 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 2 dischargers shall implement effective wind erosion control.

2. Risk Level 2 dischargers shall provide effective soil cover for inactive[1] areas and all finished slopes, open space, utility backfill, and completed lots.

3. Risk Level 2 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 2 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

2. On sites where sediment basins are to be used, Risk Level 2 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

3. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active[2] construction.

4. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths[3] in accordance with Table 1.

[1] Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.
[2] Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage.
[3] Sheet flow length is the length that shallow, low velocity flow travels across a site.

Table 1 - Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet flow length not to exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

5. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.

6. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

7. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall inspect on a daily basis all immediate access roads daily. At a minimum daily (when necessary) and prior to any rain event, the discharger shall remove any sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

F. Run-on and Run-off Controls

Risk Level 2 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 2 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee appropriately trained to do the task(s).

2. Risk Level 2 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 2 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

4. For each inspection required, Risk Level 2 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.

5. Risk Level 2 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:

   a. Inspection date and date the inspection report was written.

   b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

   c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.

   d. A description of any BMPs evaluated and any deficiencies noted.

   e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

   f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

   g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

   h. Photographs taken during the inspection, if any.

   i. Inspector's name, title, and signature.

H. Rain Event Action Plan

1. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop a Rain Event Action Plan (REAP) 48 hours prior to any

likely precipitation event. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The discharger shall ensure a QSP obtain a printed copy of precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at http://www.srh.noaa.gov/forecast).

2. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop the REAPs for all phases of construction (i.e., Grading and Land Development, Streets and Utilities, Vertical Construction, Final Landscaping and Site Stabilization).

3. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP ensure that the REAP include, at a minimum, the following site information:

   a. Site Address
   b. Calculated Risk Level (2 or 3)
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number
   d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number
   e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number

4. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP include in the REAP, at a minimum, the following project phase information:

   a. Activities associated with each construction phase
   b. Trades active on the construction site during each construction phase
   c. Trade contractor information
   d. Suggested actions for each project phase

5. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop additional REAPs for project sites where construction activities are indefinitely halted or postponed (Inactive Construction). At a minimum, Inactive Construction REAPs must include:

   a. Site Address
   b. Calculated Risk Level (2 or 3)
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number

d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number
e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number
f. Trades active on site during Inactive Construction
g. Trade contractor information
h. Suggested actions for inactive construction sites

6. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP begin implementation and make the REAP available onsite no later than 24 hours prior to the likely precipitation event.

7. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP maintain onsite a paper copy of each REAP onsite in compliance with the record retention requirements of the Special Provisions in this General Permit.

I. Risk Level 2 Monitoring and Reporting Requirements

Table 2- Summary of Monitoring Requirements

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-storm Water Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
2	X	X	X	X	X	X	

1. Construction Site Monitoring Program Requirements

   a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.

   b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Program to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.

   c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. **Objectives**

   The CSMP shall be developed and implemented to address the following objectives:

   a. To demonstrate that the site is in compliance with the Discharge Prohibitions and applicable Numeric Action Levels (NALs).

b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.

c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.

d. To determine whether BMPs included in the SWPPP/Rain Event Action Plan (REAP) are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

3. **Risk Level 2 – Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

a. Risk Level 2 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

b. Risk Level 2 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.

c. Risk Level 2 dischargers shall conduct visual observations (inspections) during business hours only.

d. Risk Level 2 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.

e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 2 dischargers shall visually observe (inspect):

i. all storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

ii. all BMPs to identify whether they have been properly implemented in accordance with the SWPPP/REAP. If needed, the discharger shall implement appropriate corrective actions.

iii. any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

f. For the visual observations (inspections) described in c.i and c.iii above, Risk Level 2 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

g. Within two business days (48 hours) after each qualifying rain event, Risk Level 2 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.

h. Risk Level 2 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. **Risk Level 2 – Water Quality Sampling and Analysis**

a. Risk Level 2 dischargers shall collect storm water grab samples from sampling locations, as defined in Section I.5. The storm water grab sample(s) obtained shall be representative of the flow and characteristics of the discharge.

b. At minimum, Risk Level 2 dischargers shall collect 3 samples per day of the qualifying event.

c. Risk Level 2 dischargers shall ensure that the grab samples collected of stored or contained storm water are from discharges subsequent to a qualifying rain event (producing precipitation of ½ inch or more at the time of discharge).

<u>Storm Water Effluent Monitoring Requirements</u>

d. Risk Level 2 dischargers shall analyze their effluent samples for:

i. pH and turbidity.

ii. Any additional parameters for which monitoring is required by the Regional Water Board.

5. **Risk Level 2 – Storm Water Discharge Water Quality Sampling Locations**

Effluent Sampling Locations

a. Risk Level 2 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.

b. Risk Level 2 dischargers shall collect effluent samples at all discharge points where storm water is discharged off-site.

c. Risk Level 2 dischargers shall ensure that storm water discharge collected and observed represent[4] the effluent in each drainage area based on visual observation of the water and upstream conditions.

d. Risk Level 2 dischargers shall monitor and report site run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

e. Risk Level 2 dischargers who deploy an ATS on their site, or a portion on their site, shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.

f. Risk Level 2 dischargers shall select analytical test methods from the list provided in Table 3 below.

g. All storm water sample collection preservation and handling shall be conducted in accordance with Section I.7 “Storm Water Sample Collection and Handling Instructions” below.

6. **Risk Level 2 – Visual Observation and Sample Collection Exemptions**

a. Risk Level 2 dischargers shall be prepared to collect samples and conduct visual observation (inspections) until the minimum requirements of Sections I.3 and I.4 above are completed. Risk Level 2 dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

[4] For example, if there has been concrete work recently in an area, or drywall scrap is exposed to the rain, a pH sample shall be taken of drainage from the relevant work area. Similarly, if sediment laden water is flowing through some parts of a silt fence, samples shall be taken of the sediment-laden water even if most water flowing through the fence is clear.

i. During dangerous weather conditions such as flooding and electrical storms.

ii. Outside of scheduled site business hours.

b. If no required samples or visual observation (inspections) are collected due to these exceptions, Risk Level 2 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the sampling or visual observation (inspections) were not conducted.

7. **Risk Level 2 – Storm Water Sample Collection and Handling Instructions**

a. Risk Level 2 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. Risk Level 2 dischargers shall ensure that testing laboratories will receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory), and shall use only the sample containers provided by the laboratory to collect and store samples.

c. Risk Level 2 dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP).[5]

8. **Risk Level 2 – Monitoring Methods**

a. Risk Level 2 dischargers shall include a description of the following items in the CSMP:

i. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

ii. Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program

[5] Additional information regarding SWAMP's QAPrP can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/. QAPrP:http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/swamp_qapp_master090108a.pdf.

an example Chain of Custody form used when handling and shipping samples.

iii. Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section I.4 above.

b. Risk Level 2 dischargers shall ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. Risk Level 2 dischargers shall ensure that all laboratory analyses are conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services. Risk Level 2 dischargers shall conduct their own field analysis of pH and may conduct their own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

9. **Risk Level 2 – Analytical Methods**

a. Risk Level 2 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. **pH**: Risk Level 2 dischargers shall perform pH analysis on-site with a calibrated pH meter or a pH test kit. Risk Level 2 dischargers shall record pH monitoring results on paper and retain these records in accordance with Section I.14, below.

c. **Turbidity**: Risk Level 2 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results will be recorded in the site log book in Nephelometric Turbidity Units (NTU).

10. **Risk Level 2 - Non-Storm Water Discharge Monitoring Requirements**

a. Visual Monitoring Requirements:

   i. Risk Level 2 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

   ii. Risk Level 2 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).

   iii. Risk Level 2 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 2 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

b. Effluent Sampling Locations:

   i. Risk Level 2 dischargers shall sample effluent at all discharge points where non-storm water and/or authorized non-storm water is discharged off-site.

   ii. Risk Level 2 dischargers shall send all non-storm water sample analyses to a laboratory certified for such analyses by the State Department of Health Services.

   iii. Risk Level 2 dischargers shall monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

11. **Risk Level 2 – Non-Visible Pollutant Monitoring Requirements**

a. Risk Level 2 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual

inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

b. Risk Level 2 dischargers shall ensure that water samples are large enough to characterize the site conditions.

c. Risk Level 2 dischargers shall collect samples at all discharge locations that can be safely accessed.

d. Risk Level 2 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

e. Risk Level 2 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the presence of pollutants identified in the pollutant source assessment required (Risk Level 2 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

f. Risk Level 2 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

g. Risk Level 2 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.[6]

h. Risk Level 2 dischargers shall keep all field /or analytical data in the SWPPP document.

12. **Risk Level 2 – Watershed Monitoring Option**

Risk Level 2 dischargers who are part of a qualified regional watershed-based monitoring program may be eligible for relief from the requirements in Sections I.5. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program by determining if the watershed-based monitoring program will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of this General Permit.

[6] For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

13. **Risk Level 2 – Particle Size Analysis for Project Risk Justification**

    Risk Level 2 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

14. **Risk Level 2 – Records**

    Risk Level 2 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 2 dischargers shall retain all records on-site while construction is ongoing. These records include:

    a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.

    b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.

    c. The date and approximate time of analyses.

    d. The individual(s) who performed the analyses.

    e. A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and the chain of custody forms.

    f. Rain gauge readings from site inspections;

    g. Quality assurance/quality control records and results.

    h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.10 above).

    i. Visual observation and sample collection exception records (see Section I.6 above).

    j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

15. **Risk Level 2 – NAL Exceedance Report**

a. In the event that any effluent sample exceeds an applicable NAL, Risk Level 2 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event. The Regional Boards have the authority to require the submittal of an NAL Exceedance Report.

b. Risk Level 2 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.

c. Risk Level 2 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the annual report is filed.

d. Risk Level 2 dischargers shall include in the NAL Exceedance Report:

i. The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”).

ii. The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.

iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

Table 3 – Risk Level 2 Test Methods, Detection Limits, Reporting Units and Applicable NALs/NELs

Parameter	Test Method / Protocol	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Level
pH	Field test with calibrated portable instrument	Risk Level 2 Discharges	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 2 Discharges other than ATS	1	NTU	250 NTU
		For ATS discharges	1	NTU	N/A

ATTACHMENT E
RISK LEVEL 3 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 3 dischargers shall comply with the narrative effluent standards listed below:

   a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

   b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

2. Numeric –Risk Level 3 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

B. Good Site Management "Housekeeping"

1. Risk Level 3 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 3 dischargers shall implement the following good housekeeping measures:

   a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

   b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.

2. Risk Level 3 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

d. Cover waste disposal containers at the end of every business day and during a rain event.

e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

f. Contain and securely protecting stockpiled waste material from wind and rain at all times unless actively being used.

g. Implement procedures that effectively address hazardous and non-hazardous spills.

h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:

i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

ii. Appropriate spill response personnel are assigned and trained.

i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

3. Risk Level 3 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.

   b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.

   c. Clean leaks immediately and disposing of leaked materials properly.

4. Risk Level 3 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   b. Contain fertilizers and other landscape materials when they are not actively being used.

   c. Discontinuing the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

   d. Applying erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   e. Stacking erodible landscape material on pallets and covering or storing such materials when not being used or applied.

5. Risk Level 3 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 3 dischargers shall do the following:

a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

d. Ensure retention of sampling, visual observation, and inspection records.

e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

6. Risk Level 3 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

7. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall document all housekeeping BMPs in the SWPPP and REAP(s) in accordance with the nature and phase of the construction project. Construction phases at traditional land development projects include Grading and Land Development Phase, Streets and Utilities, or Vertical Construction for traditional land development projects.

C. Non-Storm Water Management

1. Risk Level 3 dischargers shall implement measures to control all non-storm water discharges during construction.

2. Risk Level 3 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 3 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 3 dischargers shall implement effective wind erosion control.

2. Risk Level 3 dischargers shall provide effective soil cover for inactive[1] areas and all finished slopes, open space, utility backfill, and completed lots.

3. Dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 3 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

2. On sites where sediment basins are to be used, Risk Level 3 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

3. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active[2] construction.

4. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths[3] in accordance with Table 1.

[1] Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.
[2] Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage
[3] Sheet flow length is the length that shallow, low velocity flow travels across a site.

Table 1 - Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet flow length not to exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

5. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.

6. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

7. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall inspect on a daily basis all immediate access roads daily. At a minimum daily (when necessary) and prior to any rain event, the discharger shall remove any sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

8. **Additional Risk Level 3 Requirement:** The Regional Water Board may require Risk Level 3 dischargers to implement additional site-specific sediment control requirements if the implementation of the other requirements in this section are not adequately protecting the receiving waters.

F. Run-on and Run-off Controls

Risk Level 3 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 3 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee appropriately trained to do the task(s).

2. Risk Level 3 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 3 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

4. For each inspection required, Risk Level 3 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.

5. Risk Level 3 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:

    a. Inspection date and date the inspection report was written.

    b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

    c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.

    d. A description of any BMPs evaluated and any deficiencies noted.

    e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

    f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

    g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

    h. Photographs taken during the inspection, if any.

i. Inspector's name, title, and signature.

H. Rain Event Action Plan

1. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP develop a Rain Event Action Plan (REAP) 48 hours prior to any likely precipitation event. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The QSP shall obtain a printed copy of precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at http://www.srh.noaa.gov/forecast).

2. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP develop the REAPs for all phases of construction (i.e., Grading and Land Development, Streets and Utilities, Vertical Construction, Final Landscaping and Site Stabilization).

3. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP ensure that the REAP include, at a minimum, the following site information:

   a. Site Address.
   b. Calculated Risk Level (2 or 3).
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number.
   d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number.
   e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number.

4. **Additional Risk Level 3 Requirement:** The QSP shall include in the REAP, at a minimum, the following project phase information:

   a. Activities associated with each construction phase.
   b. Trades active on the construction site during each construction phase.
   c. Trade contractor information.
   d. Suggested actions for each project phase.

5. **Additional Risk Level 3 Requirement:** The QSP shall develop additional REAPs for project sites where construction activities are indefinitely halted or postponed (Inactive Construction). At a minimum, Inactive Construction REAPs must include:

a. Site Address.
b. Calculated Risk Level (2 or 3).
c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number.
d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number.
e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number.
f. Trades active on site during Inactive Construction.
g. Trade contractor information.
h. Suggested actions for inactive construction sites.

6. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP begin implementation and make the REAP available onsite no later than 24 hours prior to the likely precipitation event.

7. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP maintain onsite a paper copy of each REAP onsite in compliance with the record retention requirements of the Special Provisions in this General Permit.

I. Risk Level 3 Monitoring and Reporting Requirements

Table 2- Summary of Monitoring Requirements

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-storm Water Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
3	X	X	X	X	X	X	X[4]

1. Construction Site Monitoring Program Requirements

   a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.

   b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Program to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Program in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.

   c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. **Objectives**

   The CSMP shall be developed and implemented to address the following objectives:

[4] When receiving water monitoring trigger is exceeded

a. To demonstrate that the site is in compliance with the Discharge Prohibitions and applicable Numeric Action Levels (NALs) of this General Permit.

b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.

c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.

d. To determine whether BMPs included in the SWPPP/Rain Event Action Plan (REAP) are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

3. **Risk Level 3 – Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

a. Risk Level 3 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

b. Risk Level 3 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.

c. Risk Level 3 dischargers shall conduct visual observations (inspections) during business hours only.

d. Risk Level 3 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.

e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 3 dischargers shall visually observe (inspect):

i. all storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

ii. all BMPs to identify whether they have been properly implemented in accordance with the SWPPP/REAP. If needed, the discharger shall implement appropriate corrective actions.

iii. any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

f. For the visual observations (inspections) described in c.i. and c.iii above, Risk Level 3 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

g. Within two business days (48 hours) after each qualifying rain event, Risk Level 3 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.

h. Risk Level 3 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. **Risk Level 3 – Water Quality Sampling and Analysis**

a. Risk Level 3 dischargers shall collect storm water grab samples from sampling locations, as defined in Section I.5. The storm water grab sample(s) obtained shall be representative of the flow and characteristics of the discharge.

b. At minimum, Risk Level 3 dischargers shall collect 3 samples per day of the qualifying event.

c. Risk Level 3 dischargers shall ensure that the grab samples collected of stored or contained storm water are from discharges subsequent to a qualifying rain event (producing precipitation of ½ inch or more at the time of discharge).

<u>Storm Water Effluent Monitoring Requirements</u>

d. Risk Level 3 dischargers shall analyze their effluent samples for:

i. pH and turbidity.

ii. Any additional parameters for which monitoring is required by the Regional Water Board.

e. Risk 3 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event.

Receiving Water Monitoring Requirements

f. In the event that a Risk Level 3 discharger's effluent exceeds the daily average receiving water monitoring trigger of 500 NTU turbidity or the daily average pH range 6.0-9.0 contained in this General Permit and has a direct discharge into receiving waters, the Risk Level 3 discharger shall subsequently sample receiving waters (RWs) for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit. If a Risk Level 3 discharger utilizing ATS with direct discharges into receiving waters discharges effluent that exceeds the NELs in this permit, the discharger shall subsequently sample RWs for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit.

g. Risk Level 3 dischargers disturbing 30 acres or more of the landscape and with direct discharges into receiving waters shall conduct or participate in benthic macroinvertebrate bioassessment of RWs prior to commencement of construction activity (See Appendix 3).

h. Risk Level 3 dischargers shall obtain RW samples in accordance with the Receiving Water sampling location section (Section I.5), below.

5. **Risk Level 3 – Storm Water Discharge Water Quality Sampling Locations**

Effluent Sampling Locations

a. Risk Level 3 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.

b. Risk Level 3 dischargers shall collect effluent samples at all discharge points where storm water is discharged off-site.

c. Risk Level 3 dischargers shall ensure that storm water discharge collected and observed represent[5] the effluent in each drainage area based on visual observation of the water and upstream conditions.

d. Risk Level 3 dischargers shall monitor and report site run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

e. Risk Level 3 dischargers who deploy an ATS on their site, or a portion on their site, shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.

f. Risk Level 3 dischargers shall select analytical test methods from the list provided in Table 3 below.

g. All storm water sample collection preservation and handling shall be conducted in accordance with Section I.7 "Storm Water Sample Collection and Handling Instructions" below.

Receiving Water Sampling Locations

h. **Upstream/up-gradient RW samples**: Risk Level 3 dischargers shall obtain any required upstream/up-gradient receiving water samples from a representative and accessible location as close as possible and upstream from the effluent discharge point.

i. **Downstream/down-gradient RW samples**: Risk Level 3 dischargers shall obtain any required downstream/down-gradient receiving water samples from a representative and accessible location as close as possible and downstream from the effluent discharge point.

j. If two or more discharge locations discharge to the same receiving water, Risk Level 3 dischargers may sample the receiving water at a single upstream and downstream location.

[5] For example, if there has been concrete work recently in an area, or drywall scrap is exposed to the rain, a pH sample shall be taken of drainage from the relevant work area. Similarly, if sediment-laden water is flowing through some parts of a silt fence, samples shall be taken of the sediment laden water even if most water flowing through the fence is clear.

6. **Risk Level 3 – Visual Observation and Sample Collection Exemptions**

   a. Risk Level 3 dischargers shall be prepared to collect samples and conduct visual observation (inspections) until the minimum requirements of Sections I.3 and I.4 above are completed. Risk Level 3 dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

      i. During dangerous weather conditions such as flooding and electrical storms.

      ii. Outside of scheduled site business hours.

   b. If no required samples or visual observation (inspections) are collected due to these exceptions, Risk Level 3 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the sampling or visual observation (inspections) were not conducted.

7. **Risk Level 3 – Storm Water Sample Collection and Handling Instructions**

   a. Risk Level 3 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

   b. Risk Level 3 dischargers shall ensure that testing laboratories will receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory), and shall use only the sample containers provided by the laboratory to collect and store samples.

   c. Risk Level 3 dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP).[6]

[6] Additional information regarding SWAMP's QAPrP can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/.
QAPrP:http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/swamp_qapp_master090108a.pdf

8. **Risk Level 3 – Monitoring Methods**

   a. Risk Level 3 dischargers shall include a description of the following items in the CSMP:

      i. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

      ii. Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program an example Chain of Custody form used when handling and shipping samples.

      iii. Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section I.4 above.

   b. Risk Level 3 dischargers shall ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. Risk Level 3 dischargers shall ensure that all laboratory analyses are conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services (SSC exception). Risk Level 3 dischargers shall conduct their own field analysis of pH and may conduct their own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

9. **Risk Level 3 – Analytical Methods**

   a. Risk Level 3 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. **pH**: Risk Level 3 dischargers shall perform pH analysis on-site with a calibrated pH meter or a pH test kit. Risk Level 3 dischargers shall record pH monitoring results on paper and retain these records in accordance with Section I.14, below.

c. **Turbidity**: Risk Level 3 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results will be recorded in the site log book in Nephelometric Turbidity Units (NTU).

d. **Suspended sediment concentration (SSC)**: Risk Level 3 dischargers that exceed the turbidity Receiving Water Monitoring Trigger shall perform SSC analysis using ASTM Method D3977-97.

e. **Bioassessment**: Risk Level 3 dischargers shall perform bioassessment sampling and analysis according to Appendix 3 of this General Permit.

10. **Risk Level 3 - Non-Storm Water Discharge Monitoring Requirements**

a. Visual Monitoring Requirements:

i. Risk Level 3 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

ii. Risk Level 3 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).

iii. Risk Level 3 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 3 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to

reduce or prevent pollutants from contacting non-storm water discharges.

b. Effluent Sampling Locations:

i. Risk Level 3 dischargers shall sample effluent at all discharge points where non-storm water and/or authorized non-storm water is discharged off-site.

ii. Risk Level 3 dischargers shall send all non-storm water sample analyses to a laboratory certified for such analyses by the State Department of Health Services.

iii. Risk Level 3 dischargers shall monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

11. **Risk Level 3 – Non-Visible Pollutant Monitoring Requirements**

a. Risk Level 3 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

b. Risk Level 3 dischargers shall ensure that water samples are large enough to characterize the site conditions.

c. Risk Level 3 dischargers shall collect samples at all discharge locations that can be safely accessed.

d. Risk Level 3 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

e. Risk Level 3 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the presence of pollutants identified in the pollutant source assessment required (Risk Level 3 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

f. Risk Level 3 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

g. Risk Level 3 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.[7]

h. Risk Level 3 dischargers shall keep all field /or analytical data in the SWPPP document.

12. **Risk Level 3 – Watershed Monitoring Option**

Risk Level 3 dischargers who are part of a qualified regional watershed-based monitoring program may be eligible for relief from the requirements in Sections I.5. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program by determining if the watershed-based monitoring program will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of this General Permit.

13. **Risk Level 3 – Particle Size Analysis for Project Risk Justification**

Risk Level 3 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

14. **Risk Level 3 – Records**

Risk Level 3 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 3 dischargers shall retain all records on-site while construction is ongoing. These records include:

a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.

b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.

c. The date and approximate time of analyses.

[7] For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

d. The individual(s) who performed the analyses.

e. A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and the chain of custody forms.

f. Rain gauge readings from site inspections.

g. Quality assurance/quality control records and results.

h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.10 above).

i. Visual observation and sample collection exception records (see Section I.6 above).

j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

15. **Risk Level 3 – NAL Exceedance Report**

a. Risk Level 3 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event. The Regional Boards have the authority to require the submittal of an NAL Exceedance Report.

b. Risk Level 3 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity In this General Permit.

c. Risk Level 3 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the annual report is filed.

d. Risk Level 3 dischargers shall include in the NAL Exceedance Report:

i. The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”).

ii. The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.

iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

16. **Risk Level 3 – Bioassessment**

a. Risk Level 3 dischargers with a total project-related ground disturbance exceeding 30 acres shall:

i. Conduct bioassessment monitoring, as described in Appendix 3.

ii. Include the collection and reporting of specified in stream biological data and physical habitat.

iii. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California's Surface Water Ambient Monitoring Program (SWAMP).[8]

b. Risk Level 3 dischargers qualifying for bioassessment, where construction commences out of an index period for the site location shall:

i. Receive Regional Board approval for the sampling exception.

ii. Conduct bioassessment monitoring, as described in Appendix 3.

iii. Include the collection and reporting of specified instream biological data and physical habitat.

iv. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California's Surface Water Ambient Monitoring Program (SWAMP).

OR

v. Make a check payable to: Cal State Chico Foundation (SWAMP Bank Account) or San Jose State Foundation (SWAMP Bank Account) and include the WDID# on the check for the amount calculated for the exempted project.

[8] http://www.waterboards.ca.gov/water_issues/programs/swamp/.

vi. Send a copy of the check to the Regional Water Board office for the site's region.

vii. Invest $**7,500.00 X The number of samples required** into the SWAMP program as compensation (upon regional board approval).

Table 3 – Risk Level 3 Test Methods, Detection Limits, Reporting Units and Applicable NALs

Parameter	Test Method / Protocol	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Level	Numeric Effluent Limitation	Receiving Water Monitoring Trigger
pH	Field test with calibrated portable instrument	Risk Level 3 Discharges	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5	N/A	lower limit = 6.0 upper limit = 9.0
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 3 Discharges other than ATS	1	NTU	250 NTU	N/A	500 NTU
		For ATS discharges	1	NTU	N/A	10 NTU for Daily Weighted Average & 20 NTU for Any Single Sample	10 NTU for Daily Weighted Average & 20 NTU for Any Single Sample
SSC	ASTM Method D 3977-97[9]	Risk Level 3 (if Receiving Water Monitoring Trigger exceeded)	5	mg/L	N/A	N/A	N/A
Bioassessment	(STE) Level I of (SAFIT),[10] fixed-count of 600 org/sample	Risk Level 3 projects> 30 acres	N/A	N/A	N/A	N/A	N/A

[9] ASTM, 1999, Standard Test Method for Determining Sediment Concentration in Water Samples: American Society of Testing and Materials, D 3977-97, Vol. 11.02, pp. 389-394.

[10] The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

ATTACHMENT F:
Active Treatment System (ATS) Requirements

Table 1 – Numeric Effluent Limitations, Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level	Numeric Effluent Limitation
Turbidity	EPA 0180.1 and/or field test with a calibrated portable instrument	For ATS discharges	1	NTU	N/A	10 NTU for Daily Flow-Weighted Average & 20 NTU for Any Single Sample

A. Dischargers choosing to implement an Active Treatment System (ATS) on their site shall comply with all of the requirements in this Attachment.

B. The discharger shall maintain a paper copy of each ATS specification onsite in compliance with the record retention requirements in the Special Provisions of this General Permit.

C. ATS Design, Operation and Submittals

1. The ATS shall be designed and approved by a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Storm Water Quality (CPSWQ); a California registered civil engineer; or any other California registered engineer.

2. The discharger shall ensure that the ATS is designed in a manner to preclude the accidental discharge of settled floc[1] during floc pumping or related operations.

3. The discharger shall design outlets to dissipate energy from concentrated flows.

4. The discharger shall install and operate an ATS by assigning a lead person (or project manager) who has either a minimum of five years construction storm

[1] Floc is defined as a clump of solids formed by the chemical action in ATS systems.

water experience or who is a licensed contractors specifically holding a California Class A Contractors license.[2]

5. The discharger shall prepare an ATS Plan that combines the site-specific data and treatment system information required to safely and efficiently operate an ATS. The ATS Plan shall be electronically submitted to the State Water Board at least 14 days prior to the planned operation of the ATS and a paper copy shall be available onsite during ATS operation. At a minimum, the ATS Plan shall include:

   a. ATS Operation and Maintenance Manual for All Equipment.

   b. ATS Monitoring, Sampling & Reporting Plan, including Quality Assurance/Quality Control (QA/QC).

   c. ATS Health and Safety Plan.

   d. ATS Spill Prevention Plan.

6. The ATS shall be designed to capture and treat (within a 72-hour period) a volume equivalent to the runoff from a 10-year, 24-hour storm event using a watershed runoff coefficient of 1.0.

D. Treatment – Chemical Coagulation/Flocculation

1. Jar tests shall be conducted using water samples selected to represent typical site conditions and in accordance with ASTM D2035-08 (2003).

2. The discharger shall conduct, at minimum, six site-specific jar tests (per polymer with one test serving as a control) for each project to determine the proper polymer and dosage levels for their ATS.

3. Single field jar tests may also be conducted during a project if conditions warrant, for example if construction activities disturb changing types of soils, which consequently cause change in storm water and runoff characteristics.

E. Residual Chemical and Toxicity Requirements

1. The discharger shall utilize a residual chemical test method that has a method detection limit (MDL) of 10% or less than the maximum allowable threshold

[2] Business and Professions Code Division 3, Chapter 9, Article 4, Class A Contractor: A general engineering contractor is a contractor whose principal contracting business is in connection with fixed works requiring specialized engineering knowledge and skill. [http://www.cslb.ca.gov/General-Information/library/licensing-classifications.asp].

concentration[3] (MATC) for the specific coagulant in use and for the most sensitive species of the chemical used.

2. The discharger shall utilize a residual chemical test method that produces a result within one hour of sampling.

3. The discharger shall have a California State certified laboratory validate the selected residual chemical test. Specifically the lab will review the test protocol, test parameters, and the detection limit of the coagulant. The discharger shall electronically submit this documentation as part of the ATS Plan.

4. If the discharger cannot utilize a residual chemical test method that meets the requirements above, the discharger shall operate the ATS in Batch Treatment[4] mode.

5. A discharger planning to operate in Batch Treatment mode shall perform toxicity testing in accordance with the following:

   a. The discharger shall initiate acute toxicity testing on effluent samples representing effluent from each batch prior to discharge[5]. All bioassays shall be sent to a laboratory certified by the Department of Health Services (DHS) Environmental Laboratory Accreditation Program (ELAP). The required field of testing number for Whole Effluent Toxicity (WET) testing is E113.[6]

   b. Acute toxicity tests shall be conducted with the following species and protocols. The methods to be used in the acute toxicity testing shall be those outlined for a 96-hour acute test in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, USEPA-841-R-02-012" for Fathead minnow, *Pimephales promelas* (fathead minnow). Acute toxicity for *Oncorhynchus mykiss* (Rainbow Trout) may be used as a substitute for testing fathead minnows.

   c. All toxicity tests shall meet quality assurance criteria and test acceptability criteria in the most recent versions of the EPA test method for WET testing.

   d. The discharger shall electronically report all acute toxicity testing.

[3] The Maximum Allowable Threshold Concentration (MATC) is the allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity testing conducted by an independent, third-party laboratory. A typical MATC would be:
The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.
[4] Batch Treatment mode is defined as holding or recirculating the treated water in a holding basin or tank(s) until treatment is complete or the basin or storage tank(s) is full.
[5] This requirement only requires that the test be initiated prior to discharge.
[6] http://www.dhs.ca.gov/ps/ls/elap/pdf/FOT_Desc.pdf.

F. Filtration

1. The ATS shall include a filtration step between the coagulant treatment train and the effluent discharge. This is commonly provided by sand, bag, or cartridge filters, which are sized to capture suspended material that might pass through the clarifier tanks.

2. Differential pressure measurements shall be taken to monitor filter loading and confirm that the final filter stage is functioning properly.

G. Residuals Management

1. Sediment shall be removed from the storage or treatment cells as necessary to ensure that the cells maintain their required water storage (i.e., volume) capability.

2. Handling and disposal of all solids generated during ATS operations shall be done in accordance with all local, state, and federal laws and regulations.

H. ATS Instrumentation

1. The ATS shall be equipped with instrumentation that automatically measures and records effluent water quality data and flow rate.

2. The minimum data recorded shall be consistent with the Monitoring and Reporting requirements below, and shall include:

   a. Influent Turbidity

   b. Effluent Turbidity

   c. Influent pH

   d. Effluent pH

   e. Residual Chemical

   f. Effluent Flow rate

   g. Effluent Flow volume

3. Systems shall be equipped with a data recording system, such as data loggers or webserver-based systems, which records each measurement on a frequency no longer than once every 15 minutes.

4. Cumulative flow volume shall be recorded daily. The data recording system shall have the capacity to record a minimum of seven days continuous data.

5. Instrumentation systems shall be interfaced with system control to provide auto shutoff or recirculation in the event that effluent measurements exceed turbidity or pH.

6. The system shall also assure that upon system upset, power failure, or other catastrophic event, the ATS will default to a recirculation mode or safe shut down.

7. Instrumentation (flow meters, probes, valves, streaming current detectors, controlling computers, etc.) shall be installed and maintained per manufacturer's recommendations, which shall be included in the QA/QC plan.

8. The QA/QC plan shall also specify calibration procedures and frequencies, instrument method detection limit or sensitivity verification, laboratory duplicate procedures, and other pertinent procedures.

9. The instrumentation system shall include a method for controlling coagulant dose, to prevent potential overdosing. Available technologies include flow/turbidity proportional metering, periodic jar testing and metering pump adjustment, and ionic charge measurement controlling the metering pump.

I. ATS Effluent Discharge

1. ATS effluent shall comply with all provisions and prohibitions in this General Permit, specifically the NELs.

2. NELs for discharges from an ATS:

   a. Turbidity of all ATS discharges shall be less than 10 NTU for daily flow-weighted average of all samples and 20 NTU for any single sample.

   b. Residual Chemical shall be < 10% of MATC[7] for the most sensitive species of the chemical used.

[7] The Maximum Allowable Threshold Concentration (MATC) is the allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity testing conducted by an independent, third-party laboratory. The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

3. If an analytical effluent sampling result exceeds the turbidity NEL (as listed in Table 1), the discharger is in violation of this General Permit and shall electronically file the results in violation within 24-hours of obtaining the results.

4. If ATS effluent is authorized to discharge into a sanitary sewer system, the discharger shall comply with any pre-treatment requirements applicable for that system. The discharger shall include any specific criteria required by the municipality in the ATS Plan.

5. Compliance Storm Event:

   Discharges of storm water from ATS shall comply with applicable NELs (above) unless the storm event causing the discharges is determined after the fact to be equal to or larger than the Compliance Storm Event (expressed in inches of rainfall). The Compliance Storm Event for ATS discharges is the 10 year, 24 hour storm, as determined using these maps:

   http://www.wrcc.dri.edu/pcpnfreq/nca10y24.gif
   http://www.wrcc.dri.edu/pcpnfreq/sca10y24.gif

   This exemption is dependent on the submission of rain gauge data verifying the storm event is equal to or larger than the Compliance Storm.

J. Operation and Maintenance Plan

1. Each Project shall have a site-specific Operation and Maintenance (O&M) Manual covering the procedures required to install, operate and maintain the ATS.[8]

2. The O&M Manual shall only be used in conjunction with appropriate project-specific design specifications that describe the system configuration and operating parameters.

3. The O&M Manual shall have operating manuals for specific pumps, generators, control systems,and other equipment.

K. Sampling and Reporting Quality Assurance/ Quality Check (QA/QC) Plan

4. A project-specific QA/QC Plan shall be developed for each project. The QA/QC Plan shall include at a minimum:

   a. Calibration – Calibration methods and frequencies for all system and field instruments shall be specified.

[8] The manual is typically in a modular format covering generalized procedures for each component that is utilized in a particular system.

b. Method Detection Limits (MDLs) – The methods for determining MDLs shall be specified for each residual coagulant measurement method. Acceptable minimum MDLs for each method, specific to individual coagulants, shall be specified.

c. Laboratory Duplicates – Requirements for monthly laboratory duplicates for residual coagulant analysis shall be specified.

L. Personnel Training

1. Operators shall have training specific to using an ATS and liquid coagulants for storm water discharges in California.

2. The training shall be in the form of a formal class with a certificate and requirements for testing and certificate renewal.

3. Training shall include a minimum of eight hours classroom and 32 hours field training. The course shall cover the following topics:

   a. Coagulation Basics –Chemistry and physical processes

   b. ATS System Design and Operating Principles

   c. ATS Control Systems

   d. Coagulant Selection – Jar testing, dose determination, etc.

   e. Aquatic Safety/Toxicity of Coagulants, proper handling and safety

   f. Monitoring, Sampling, and Analysis

   g. Reporting and Recordkeeping

   h. Emergency Response

M. Active Treatment System (ATS) Monitoring Requirements

Any discharger who deploys an ATS on their site shall conduct the following:

1. Visual Monitoring

   a. A designated responsible person shall be on site daily at all times during treatment operations.

b. Daily on-site visual monitoring of the system for proper performance shall be conducted and recorded in the project data log.

   i. The log shall include the name and phone number of the person responsible for system operation and monitoring.

   ii. The log shall include documentation of the responsible person's training.

2. Operational and Compliance Monitoring

   a. Flow shall be continuously monitored and recorded at not greater than 15-minute intervals for total volume treated and discharged.

   b. Influent and effluent pH must be continuously monitored and recorded at not greater than 15-minute intervals.

   c. Influent and effluent turbidity (expressed in NTU) must be continuously monitored and recorded at not greater than 15-minute intervals.

   d. The type and amount of chemical used for pH adjustment, if any, shall be monitored and recorded.

   e. Dose rate of chemical used in the ATS system (expressed in mg/L) shall be monitored and reported 15-minutes after startup and every 8 hours of operation.

   f. Laboratory duplicates – monthly laboratory duplicates for residual coagulant analysis must be performed and records shall be maintained onsite.

   g. Effluent shall be monitored and recorded for residual chemical/additive levels.

   h. If a residual chemical/additive test does not exist and the ATS is operating in a batch treatment mode of operation refer to the toxicity monitoring requirements below.

3. Toxicity Monitoring

   A discharger operating in batch treatment mode shall perform toxicity testing in accordance with the following:

   a. The discharger shall initiate acute toxicity testing on effluent samples representing effluent from each batch prior to discharge.[9] All bioassays shall be sent to a laboratory certified by the Department of Health Services (DHS)

[9] This requirement only requires that the test be initiated prior to discharge.

Environmental Laboratory Accreditation Program (ELAP). The required field of testing number for Whole Effluent Toxicity (WET) testing is E113.[10]

b. Acute toxicity tests shall be conducted with the following species and protocols. The methods to be used in the acute toxicity testing shall be those outlined for a 96-hour acute test in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, USEPA-841-R-02-012" for Fathead minnow, *Pimephales promelas or* Rainbow trout *Oncorhynchus mykiss* may be used as a substitute for fathead minnow.

c. All toxicity tests shall meet quality assurance criteria and test acceptability criteria in the most recent versions of the EPA test method for WET testing.[11]

4. Reporting and Recordkeeping

At a minimum, every 30 days a LRP representing the discharger shall access the State Water Boards Storm Water Mulit-Application and Report Tracking system (SMARTS) and electronically upload field data from the ATS. Records must be kept for three years after the project is completed .

5. Non-compliance Reporting

a. Any indications of toxicity or other violations of water quality objectives shall be reported to the appropriate regulatory agency as required by this General Permit.

b. Upon any measurements that exceed water quality standards, the system operator shall immediately notify his supervisor or other responsible parties, who shall notify the Regional Water Board.

c. If any monitoring data exceeds any applicable NEL in this General Permit, the discharger shall electronically submit a NEL Violation Report to the State Water Board within 24 hours after the NEL exceedance has been identified.

i. ATS dischargers shall certify each NEL Violation Report in accordance with the Special Provisions for Construction Activity in this General Permit.

ii. ATS dischargers shall retain an electronic or paper copy of each NEL Violation Report for a minimum of three years after the date the annual report is filed.

iii. ATS dischargers shall include in the NEL Violation Report:

[10] http://www.dhs.ca.gov/ps/ls/elap/pdf/FOT_Desc.pdf.
[11] http://www.epa.gov/waterscience/methods/wet/.

(1) The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit");

(2) The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation; and

(3) A description of the current onsite BMPs, and the proposed corrective actions taken to manage the NEL exceedance.

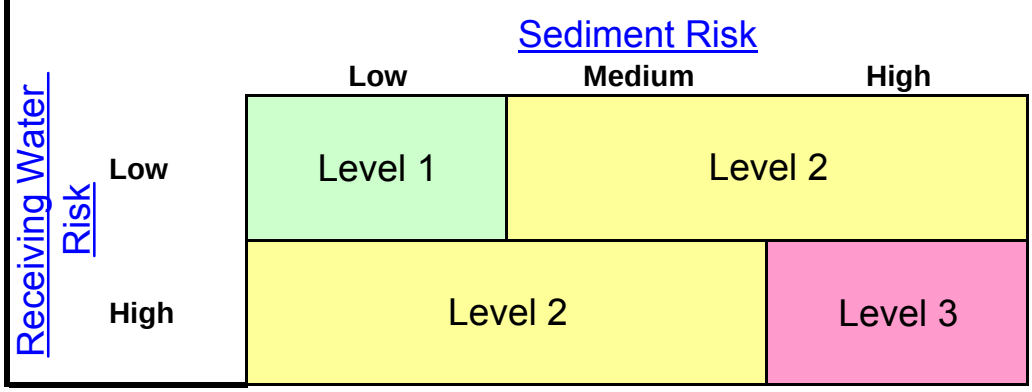
iv. Compliance Storm Exemption - In the event that an applicable NEL has been exceeded during a storm event equal to or larger than the Compliance Storm Event, ATS dischargers shall report the on-site rain gauge reading and nearby governmental rain gauge readings for verification.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Version 8/17/2011												
2		**Risk Determination Worksheet**											
3													
4			**Step 1**	Determine Sediment Risk via one of the options listed:									
5				1. GIS Map Method - EPA Rainfall Erosivity Calculator & GIS map									
6				2. Individual Method - EPA Rainfall Erosivity Calculator & Individual Data									
7			**Step 2**	Determine Receiving Water Risk via one of the options listed:									
8				1. GIS map of Sediment Sensitive Watersheds provided									
9				2. Site Specific Analysis (support documentation required)									
10			**Step 3**	Determine Combined Risk Level									
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

	A	B	C
1	**Sediment Risk Factor Worksheet**		**Entry**
2	**A) R Factor**		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
5	**R Factor Value**		0
6	**B) K Factor (weighted average, by area, for all site soils)**		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.		
8	Site-specific K factor guidance		
9	**K Factor Value**		0
10	**C) LS Factor (weighted average, by area, for all slopes)**		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	LS Table		
13	**LS Factor Value**		0
14			
15	**Watershed Erosion Estimate (=RxKxLS) in tons/acre**	0	
16	**Site Sediment Risk Factor**	**Low**	
17	Low Sediment Risk: < 15 tons/acre		
18	Medium Sediment Risk: >=15 and <75 tons/acre		
19	High Sediment Risk: >= 75 tons/acre		
20			
21			
22			
23	**GIS Map Method:**		
24	**1.** The R factor for the project is calculated using the online calculator at:		
25	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
26			
27	**2.** The K and LS factors may be obtained by accessing the GIS maps located on the State Water Board FTP website at:		
28	ftp://swrcb2a.waterboards.ca.gov/pub/swrcb/dwq/cgp/Risk/		
29			

Receiving Water (RW) Risk Factor Worksheet	Entry	Score
A. Watershed Characteristics	**yes/no**	
A.1. Does the disturbed area discharge (either directly or indirectly) to a **303(d)-listed waterbody impaired by sediment** (For help with impaired waterbodies please visit the link below) or has a **USEPA approved TMDL implementation plan for sediment**?: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml **OR** A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan) http://www.waterboards.ca.gov/waterboards_map.shtml	**no**	**Low**
Region 1 Basin Plan Region 2 Basin Plan Region 3 Basin Plan Region 4 Basin Plan Region 5 Basin Plan Region 6 Basin Plan Region 7 Basin Plan Region 8 Basin Plan Region 9 Basin Plan		

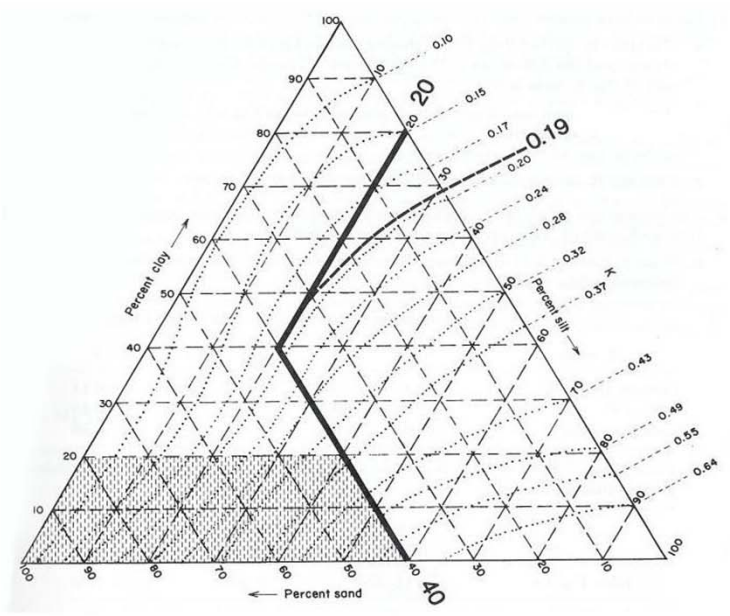
Combined Risk Level Matrix



Project Sediment Risk:	**Low**
Project RW Risk:	**Low**
Project Combined Risk:	**Level 1**

Soil Erodibility Factor (K)

The K factor can be determined by using the nomograph method, which requires that a particle size analysis (ASTM D-422) be done to determine the percentages of sand, very fine sand, silt and clay. Use the figure below to determine appropriate K value.



Erickson triangular nomograph used to estimate soil erodibility (K) factor.
The figure above is the USDA nomograph used to determine the K factor for a soil, based on its texture (% silt plus very fine sand, % sand, % organic matter, soil structure, and permeability). *Nomograph from Erickson 1977 as referenced in Goldman et. al., 1986.*

Sheet Flow Length (ft)	Average Watershed Slope (%)																		
	0.2	**0.5**	**1.0**	**2.0**	**3.0**	**4.0**	**5.0**	**6.0**	**8.0**	**10.0**	**12.0**	**14.0**	**16.0**	**20.0**	**25.0**	**30.0**	**40.0**	**50.0**	**60.0**
<3	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.35	0.36	0.38	0.39	0.41	0.45	0.48	0.53	0.58	0.63
6	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.37	0.41	0.45	0.49	0.56	0.64	0.72	0.85	0.97	1.07
9	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.38	0.45	0.51	0.56	0.67	0.80	0.91	1.13	1.31	1.47
12	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.39	0.47	0.55	0.62	0.76	0.93	1.08	1.37	1.62	1.84
15	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.40	0.49	0.58	0.67	0.84	1.04	1.24	1.59	1.91	2.19
25	0.05	0.07	0.10	0.16	0.21	0.26	0.31	0.36	0.45	0.57	0.71	0.85	0.98	1.24	1.56	1.86	2.41	2.91	3.36
50	0.05	0.08	0.13	0.21	0.30	0.38	0.46	0.54	0.70	0.91	1.15	1.40	1.64	2.10	2.67	3.22	4.24	5.16	5.97
75	0.05	0.08	0.14	0.25	0.36	0.47	0.58	0.69	0.91	1.20	1.54	1.87	2.21	2.86	3.67	4.44	5.89	7.20	8.37
100	0.05	0.09	0.15	0.28	0.41	0.55	0.68	0.82	1.10	1.46	1.88	2.31	2.73	3.57	4.59	5.58	7.44	9.13	10.63
150	0.05	0.09	0.17	0.33	0.50	0.68	0.86	1.05	1.43	1.92	2.51	3.09	3.68	4.85	6.30	7.70	10.35	12.75	14.89
200	0.06	0.10	0.18	0.37	0.57	0.79	1.02	1.25	1.72	2.34	3.07	3.81	4.56	6.04	7.88	9.67	13.07	16.16	18.92
250	0.06	0.10	0.19	0.40	0.64	0.89	1.16	1.43	1.99	2.72	3.60	4.48	5.37	7.16	9.38	11.55	15.67	19.42	22.78
300	0.06	0.10	0.20	0.43	0.69	0.98	1.28	1.60	2.24	3.09	4.09	5.11	6.15	8.23	10.81	13.35	18.17	22.57	26.51
400	0.06	0.11	0.22	0.48	0.80	1.14	1.51	1.90	2.70	3.75	5.01	6.30	7.60	10.24	13.53	16.77	22.95	28.60	33.67
600	0.06	0.12	0.24	0.56	0.96	1.42	1.91	2.43	3.52	4.95	6.67	8.45	10.26	13.94	18.57	23.14	31.89	39.95	47.18
800	0.06	0.12	0.26	0.63	1.10	1.65	2.25	2.89	4.24	6.03	8.17	10.40	12.69	17.35	23.24	29.07	40.29	50.63	59.93
1000	0.06	0.13	0.27	0.69	1.23	1.86	2.55	3.30	4.91	7.02	9.57	12.23	14.96	20.57	27.66	34.71	48.29	60.84	72.15

LS Factors for Construction Sites. *Table from Renard et. al., 1997.*

APPENDIX 2:
Post-Construction Water Balance Performance Standard Spreadsheet

The discharger shall submit with their Notice of Intent (NOI) the following information to demonstrate compliance with the New and Re-Development Water Balance Performance Standard.

Map Instructions

The discharger must submit a small-scale topographic map of the site to show the existing contour elevations, pre- and post-construction drainage divides, and the total length of stream in each watershed area. Recommended scales include 1 in. = 20 ft., 1 in. = 30 ft., 1 in. = 40 ft., or 1 in = 50 ft. The suggested contour interval is usually 1 to 5 feet, depending upon the slope of the terrain. The contour interval may be increased on steep slopes. Other contour intervals and scales may be appropriate given the magnitude of land disturbance.

Spreadsheet Instructions

The intent of the spreadsheet is to help dischargers calculate the project-related increase in runoff volume and select impervious area and runoff reduction credits to reduce the project-related increase in runoff volume to pre-project levels.

The discharger has the option of using the spreadsheet (**Appendix 2.1)** or a more sophisticated, watershed process-based model (e.g. Storm Water Management Model, Hydrological Simulation Program Fortran) to determine the project-related increase in runoff volume.

In* Appendix 4.1**, ***you must complete the worksheet for each land use/soil type combination for each project sub-watershed.

Steps 1 through 9 pertain specifically to the Runoff Volume Calculator:

Step 1: Enter the county where the project is located in cell H3.

Step 2: Enter the soil type in cell H6.

Step 3: Enter the existing pervious (dominant) land use type in cell H7.

Step 4: Enter the proposed pervious (dominant) land use type in cell H8.

Step 5: Enter the total project site area in cell H11 or J11.

Step 6: Enter the sub-watershed area in cell H12 or J12.

Step 7: Enter the existing rooftop area in cell H17 or J17, the existing non-rooftop impervious area in cell H18 or J18, the proposed rooftop area in cell H19 or J19, and the proposed non-rooftop impervious area in cell H20 or J20

Step 8: Work through each of the impervious area reduction credits and claim credits where applicable. Volume that cannot be addressed using non-structural practices must be captured in structural practices and approved by the Regional Water Board.

Step 9: Work through each of the impervious volume reduction credits and claim credits where applicable. Volume that cannot be addressed using non-structural practices must be captured in structural practices and approved by the Regional Water Board.

Non-structural Practices Available for Crediting

- ***Porous Pavement***
- ***Tree Planting***
- ***Downspout Disconnection***
- ***Impervious Area Disconnection***
- ***Green Roof***
- ***Stream Buffer***
- ***Vegetated Swales***
- ***Rain Barrels and Cisterns***
- ***Landscaping Soil Quality***

Post-Construction Water Balance Calculator

User may make changes from any cell that is orange or brown in color (similar to the cells to the immediate right). Cells in green are calculated for you.

(Step 1a) If you know the 85th percentile storm event for your location enter it in the box below

(Step 1b) If you can not answer 1a then select the county where the project is located (click on the cell to the right for drop-down): This will determine the average 85th percentile 24 hr. storm event for your site, which will appear under precipitation to left. — *SACRAMENTO*

(Step 1c) If you would like a more percise value select the location closest to your site. If you do not recgonize any of these locations, leave this drop-down menu at location. The average value for the County will be used. — **SACRAMENTO FAA ARPT**

Project Information	
Project Name:	*Optional*
Waste Discharge Identification (WDID):	*Optional*
Date:	*Optional*
Sub Drainage Area Name (from map):	*Optional*

Runoff Calculations		
(Step 2) Indicate the Soil Type (dropdown menu to right):	*Group C Soils*	**Low infiltration. Sandy clay loam. Infiltration rate 0.05 to 0.15 inch/hr when wet.**
(Step 3) Indicate the existing **dominant** non-built land Use Type (dropdown menu to right):	***Wood & Grass: <50% ground cover***	
(Step 4) Indicate the proposed **dominant** non-built land Use Type (dropdown menu to right):	***Lawn, Grass, or Pasture covering more than 75% of the open space***	

Runoff Curve Numbers	
Existing Pervious Runoff Curve Number	**82**
Proposed Development Pervious Runoff Curve Number	**74**

	Complete Either		
	Sq Ft	**Acres**	**Acres**
(Step 5) Total Project Site Area:		**5.00**	**5.00**
(Step 6) Sub-watershed Area:		**5.00**	**5.00**
Percent of total project :	**100%**		

Design Storm		
Based on the County you indicated above, we have included the 85 percentile average 24 hr event - P85 (in)^ for your area.	**0.62**	**in**
The Amount of rainfall needed for runoff to occur (Existing runoff curve number -P from existing RCN (in)^)	**0.44**	**In**
P used for calculations (in) (the greater of the above two criteria)	**0.62**	**In**
^Available at www.cabmphandbooks.com		

(Step 7) Sub-watershed Conditions	**Complete Either**		**Calculated Acres**
Sub-watershed Area (acres)	**Sq Ft**	**Acres**	**5.00**
Existing Rooftop Impervious Coverage		**0**	**0.00**
Existing Non-Rooftop Impervious Coverage		**0**	**0.00**
Proposed Rooftop Impervious Coverage		**0**	**0.00**
Proposed Non-Rooftop Impervious Coverage		**0**	**0.00**

Credits	**Acres**	**Square Feet**
Porous Pavement	**0.00**	**0**
Tree Planting	**0.00**	**0**
Downspout Disconnection	**0.00**	**0**
Impervious Area Disconnection	**0.00**	**0**
Green Roof	**0.00**	**0**
Stream Buffer	**0.00**	**0**
Vegetated Swales	**0.00**	**0**
Subtotal	**0.00**	**0**
Subtotal Runoff Volume Reduction Credit	**0 Cu. Ft.**	

Pre-Project Runoff Volume (cu ft)	**247**	**Cu.Ft.**
Project-Related Runoff Volume Increase w/o credits (cu ft)	**0**	**Cu.Ft.**
Project-Related Volume Increase with Credits (cu ft)	**0**	**Cu.Ft.**

You have achieved your minimum requirements

(Step 9) Impervious Volume Reduction Credits	**Volume (cubic feet)**
Rain Barrels/Cisterns	**0 Cu. Ft.**
Soil Quality	**0 Cu. Ft.**
Subtotal Runoff Volume Reduction	**0 Cu. Ft.**
Total Runoff Volume Reduction Credit	**0 Cu. Ft.**

Porous Pavement Credit Worksheet

Please fill out a porous pavement credit worksheet for each project sub-watershed.

For the PROPOSED Development:

Proposed Porous Pavement	Runoff Reduction*	Fill in either Acres or SqFt		Equivalent Acres
		In SqFt.	In Acres	
Area of **Brick without Grout** on less than 12 inches of base with at least 20% void space over soil	0.45			0.00
Area of **Brick without Grout** on more than 12 inches of base with at least 20% void space over soil	0.90			0.00
Area of **Cobbles** less than 12 inches deep and over soil	0.30			0.00
Area of **Cobbles** less than 12 inches deep and over soil	0.60			0.00
Area of **Reinforced Grass Pavement** on less than 12 inches of base with at least 20% void space over soil	0.45			0.00
Area of **Reinforced Grass Pavement** on at least 12 inches of base with at least 20% void space over soil	0.90			0.00
Area of **Porous Gravel Pavement** on less than 12 inches of base with at least 20% void space over soil	0.38			0.00
Area of **Porous Gravel Pavement** on at least 12 inches of base with at least 20% void space over soil	0.75			0.00
Area of **Poured Porous Concrete or Asphalt Pavement** with less than 4 inches of gravel base (washed stone)	0.40			0.00
Area of **Poured Porous Concrete or Asphalt Pavement** with 4 to 8 inches of gravel base (washed stone)	0.60			0.00
Area of **Poured Porous Concrete or Asphalt Pavement** with 8 to 12 inches of gravel base (washed stone)	0.80			0.00
Area of **Poured Porous Concrete or Asphalt Pavement** with 12 or more inches of gravel base (washed stone)	1.00			0.00

*=1-Rv** Return to Calculator

**Using Site Design Techniques to meet Development Standards for Stormwater Quality (BASMAA 2003)

**NCDENR Stormwater BMP Manual (2007)

Tree Planting Credit Worksheet
Please fill out a tree canopy credit worksheet for each project sub-watershed.

Tree Canopy Credit Criteria	Number of Trees Planted	Credit (acres)
Number of proposed evergreen trees to be planted (credit = number of trees x 0.005)*	0	0.00
Number of proposed deciduous trees to be planted (credit = number of trees x 0.0025)*		0.00
	Square feet Under Canopy	
Square feet under an existing tree canopy, that will remain on the property, with an average diameter at 4.5 ft above grade (i.e., diameter at breast height or DBH) is LESS than 12 in diameter.		0.00
Square feet under an existing tree canopy that will remain on the property, with an average diameter at 4.5 ft above grade (i.e., diameter at breast height or DBH) is 12 in diameter or GREATER.		0.00
Please describe below how the project will ensure that these trees will be maintained.		

0

Return to Calculator

* credit amount based on credits from Stormwater Quality Design Manual for the Sacramento and South Placer Regions

Downspout Disconnection Credit Worksheet

Please fill out a downspout disconnection credit worksheet for each project subwatershed. If you answer yes to all questions, all rooftop area draining to each downspout will be subtracted from your proposed rooftop impervious coverage.

Downspout Disconnection Credit Criteria					
Do downspouts and any extensions extend at least six feet from a basement and two feet from a crawl space or concrete slab?				○ Yes	◉ No
Is the area of rooftop connecting to each disconnected downspout 600 square feet or less?				○ Yes	◉ No
Is the roof runoff from the design storm event fully contained in a raised bed or planter box or does it drain as sheet flow to a landscaped area large enough to contain the roof runoff from the design storm event?				○ Yes	◉ No
The Stream Buffer and/or Vegetated Swale credits **will not** be taken in this sub-watershed area?				○ Yes	◉ No
Percentage of existing	0.00	Acres	of rooftop surface has disconnected downspouts		
Percentage of the proposed	0.00	Acres	of rooftop surface has disconnected downspouts	50	
				Return to Calculator	

Impervious Area Disconnection Credit Worksheet

Please fill out an impervious area disconnection credit worksheet for each project sub-watershed. If you answer yes to all questions, all non-rooftop impervious surface area will be subtracted from your proposed non-rooftop impervious coverage.

Non-Rooftop Disconnection Credit Criteria	Response
Is the maximum contributing impervious flow path length less than 75 feet or, if equal or greater than 75 feet, is a storage device (e.g. French drain, bioretention area, gravel trench) implemented to achieve the required disconnection length?	◉ Yes ○ No
Is the impervious area to any one discharge location less than 5,000 square feet?	◉ Yes ○ No
The Stream Buffer credit **will not** be taken in this sub-watershed area?	◉ Yes ○ No

Percentage of existing	0.00	Acres non-rooftop surface area disconnected	
Percentage of the proposed	0.00	Acres non-rooftop surface area disconnected	70

Return to Calculator

Green Roof Credit Worksheet

Please fill out a greenroof credit worksheet for each project sub-watershed. If you answer yes to all questions, 70% of the greenroof area will be subtracted from your proposed rooftop impervious coverage.

Green Roof Credit Criteria				Response
Is the roof slope less than 15% or does it have a grid to hold the substrate in place until it forms a thick vegetation mat?				◉ Yes ○ No
Has a professional engineer assessed the necessary load reserves and designed a roof structure to meet state and local codes?				◉ Yes ○ No
Is the irrigation needed for plant establishment and/or to sustain the green roof during extended dry periods, is the source from stored, recycled, reclaimed, or reused water?				◉ Yes ○ No
Percentage of existing	0.00	Acres	rooftop surface area in greenroof	
Percentage of the proposed	0.00	Acres	rooftop surface area in greenroof	

Return to Calculator

Stream Buffer Credit Worksheet

Please fill out a stream buffer credit worksheet for each project sub-watershed. If you answer yes to all questions, you may subtract all impervious surface draining to each stream buffer that has not been addressed using the Downspout and/or Impervious Area Disconnection credits.

Stream Buffer Credit Criteria				Response
Does runoff enter the floodprone width* or within 500 feet (whichever is larger) of a stream channel as sheet flow**?				○ Yes ◉ No
Is the contributing overland slope 5% or less, or if greater than 5%, is a level spreader used?				○ Yes ◉ No
Is the buffer area protected from vehicle or other traffic barriers to reduce compaction?				○ Yes ◉ No
Will the stream buffer be maintained in an ungraded and uncompacted condition and will the vegetation be maintained in a natural condition?				○ Yes ◉ No
Percentage of existing	0.00	Acres	impervious surface area draining into a stream buffer:	
Percentage of the proposed	0.00	Acres	impervious surface area that will drain into a stream buffer:	
Please describe below how the project will ensure that the buffer areas will remain in ungraded and uncompacted condition and that the vegetation will be maintained in a natural condition.				

Return to Calculator

* floodprone width is the width at twice the bankfull depth.
** the maximum contributing length shall be 75 feet for impervious area

Vegetated Swale Credit Worksheet

Please fill out a vegetated swale worksheet for each project subwatershed. If you answer yes to all questions, you may subtract all impervious surface draining to each stream buffer that has not been addressed using the Downspout Disconnection credit.

Vegetated Swale Credit Criteria

Have all vegetated swales been designed in accordance with Treatment Control BMP 30 (TC-30 - Vegetated Swale) from the California Stormwater BMP Handbook, New Development and Redevelopment (available at www.cabmphandbooks.com)?	○ Yes ◉ No
Is the maximum flow velocity for runoff from the design storm event less than or equal to 1.0 foot per second?	○ Yes ◉ No

Percentage of existing	0.00	Acres of impervious area draining to a vegetated swale	
Percentage of the proposed	0.00	Acres of impervious area draining to a vegetated swale	

Return to Calculator

Rain Barrel/Cistern Credit Worksheet

Please fill out a rain barrel/cistern worksheet for each project sub-watershed.

Rain Barrel/Cistern Credit Criteria	Response
Total number of rain barrel(s)/cisterns	
Average capacity of rain barrel(s)/cistern(s) (in gallons)	
Total capacity rain barrel(s)/cistern(s) (in cu ft) [1]	0

[1] accounts for 10% loss

Return to Calculator

Please fill out a soil quality worksheet for each project sub-watershed.

	Response
Will the landscaped area be lined with an impervious membrane?	
Will the soils used for landscaping meet the ideal bulk densities listed in Table 1 below? [1]	○ Yes ◉ No
If you answered yes to the question above, and you know the area-weighted bulk density within the top 12 inches for soils used for landscaping (in g/cm^3)* , fill in the cell to the right and skip to cell G11. If not select from the drop-down menu in G10.	1.3
If you answered yes to the question above, but you do not know the exact bulk density, which of the soil types in the drop down menu to the right best describes the top 12 inches for soils used for landscaping (in g/cm^3).	Sandy loams, loams
What is the average depth of your landscaped soil media meeting the above criteria (inches)?	12
What is the total area of the landscaped areas meeting the above criteria (in acres)?	2.97

Return to Calculator

Table 1

Sands, loamy sands	<1.6
Sandy loams, loams	<1.4
Sandy clay loams, loams, clay loams	<1.4
Silts, silt loams	<1.3
Silt loams, silty clay loams	<1.1
Sandy clays, silty clays, some clay loams (35-45% clay)	<1.1
Clays (>45% clay)	<1.1

[1] USDA NRCS. "Soil Quality Urban Technical Note No.2-Urban Soil Compaction". March 2000. http://soils.usda.gov/sqi/management/files/sq_utn_2.pdf

* To determine how to calculate density see: http://www.globe.gov/tctg/bulkden.pdf?sectionID=94

Porosity (%) 50.94%

Mineral grains in many soils are mainly quartz and feldspar, so 2.65 a good average for particle density. To determine percent porosity, use the formula: Porosity (%) = (1-Bulk Density/2.65) X 100

APPENDIX 3
Bioassessment Monitoring Guidelines

Bioassessment monitoring is required for projects that meet all of the following criteria:

1. The project is rated Risk Level 3 or LUP Type 3
2. The project directly discharges runoff to a freshwater wadeable stream (or streams) that is either: (a) listed by the State Water Board or USEPA as impaired due to sediment, and/or (b) tributary to any downstream water body that is listed for sediment; and/or have the beneficial use SPAWN & COLD & MIGRATORY
3. Total project-related ground disturbance exceeds 30 acres.

For all such projects, the discharger shall conduct bioassessment monitoring, as described in this section, to assess the effect of the project on the biological integrity of receiving waters.
Bioassessment shall include:

1. The collection and reporting of specified instream biological data
2. The collection and reporting of specified instream physical habitat data

<u>Bioassessment Exception</u>
If a site qualifies for bioassessment, but construction commences out of an index period for the site location, the discharger shall:

1. Receive Regional Water Board approval for the sampling exception
2. Make a check payable to: Cal State Chico Foundation (SWAMP Bank Account) or San Jose State Foundation (SWAMP Bank Account) and include the WDID# on the check for the amount calculated for the exempted project.
3. Send a copy of the check to the Regional Water Board office for the site's region
4. Invest **7,500.00 X The number of samples required** into the SWAMP program as compensation (upon Regional Water Board approval).
5. Conduct bioassessment monitoring, as described in Appendix 4
6. Include the collection and reporting of specified instream biological data and physical habitat
7. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California's Surface Water Ambient Monitoring Program (SWAMP)

<u>Site Locations and Frequency</u>
Macroinvertebrate samples shall be collected both before ground disturbance is initiated and after the project is completed. The "after" sample(s) shall be collected after at least one winter season resulting in surface runoff has transpired after project-related ground disturbance has ceased. "Before" and "after" samples shall be collected both upstream and downstream of the project's

discharge. Upstream samples should be taken immediately before the sites outfall and downstream samples should be taken immediately after the outfall (when safe to collect the samples). Samples should be collected for each freshwater wadeable stream that is listed as impaired due to sediment, or tributary to a water body that is listed for sediment. Habitat assessment data shall be collected concurrently with all required macroinvertebrate samples.

Index Period (Timing of Sample Collection)
Macroinvertebrate sampling shall be conducted during the time of year (i.e., the "index period") most appropriate for bioassessment sampling, depending on ecoregion. This map is posted on the State Water Board's Website: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml

Field Methods for Macroinvertebrate Collections
In collecting macroinvertebrate samples, the discharger shall use the "Reachwide Benthos (Multi-habitat) Procedure" specified in *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California* (Ode 2007).[1]

Physical - Habitat Assessment Methods
The discharger shall conduct, concurrently with all required macroinvertebrate collections, the "Full" suite of physical habitat characterization measurements as specified in *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California* (Ode 2007), and as summarized in the Surface Water Ambient Monitoring Program's *Stream Habitat Characterization Form — Full Version*.

Laboratory Methods
Macroinvertebrates shall be identified and classified according to the Standard Taxonomic Effort (STE) Level I of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT),[2] and using a fixed-count of 600 organisms per sample.

Quality Assurance
The discharger or its consultant(s) shall have and follow a quality assurance (QA) plan that covers the required bioassessment monitoring. The QA plan shall include, or be supplemented to include, a specific requirement for external QA checks (i.e., verification of taxonomic identifications and correction of data where

[1] This document is available on the Internet at: ~~http://www.swrcb.ca.gov/swamp/docs/phab_sopr6.pdf~~. http://swamp.mpsl.mlml.calstate.edu/wp-content/uploads/2009/04/swamp_sop_bioassessment_collection_020107.pdf.

[2] The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: ~~http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf~~ http://www.safit.org/Docs/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

errors are identified). External QA checks shall be performed on one of the discharger's macroinvertebrate samples collected per calendar year, or ten percent of the samples per year (whichever is greater). QA samples shall be randomly selected. The external QA checks shall be paid for by the discharger, and performed by the California Department of Fish and Game's Aquatic Bioassessment Laboratory. An alternate laboratory with equivalent or better expertise and performance may be used if approved in writing by State Water Board staff.

Sample Preservation and Archiving

The original sample material shall be stored in 70 percent ethanol and retained by the discharger until: 1) all QA analyses specified herein and in the relevant QA plan are completed; and 2) any data corrections and/or re-analyses recommended by the external QA laboratory have been implemented. The remaining subsampled material shall be stored in 70 percent ethanol and retained until completeness checks have been performed according to the relevant QA plan. The identified organisms shall be stored in 70 percent ethanol, in separate glass vials for each final ID taxon. (For example, a sample with 45 identified taxa would be archived in a minimum of 45 vials, each containing all individuals of the identified taxon.) Each of the vials containing identified organisms shall be labeled with taxonomic information (i.e., taxon name, organism count) and collection information (i.e., site name/site code, waterbody name, date collected, method of collection). The identified organisms shall be archived (i.e., retained) by the discharger for a period of not less than three years from the date that all QA steps are completed, and shall be checked at least once per year and "topped off" with ethanol to prevent desiccation. The identified organisms shall be relinquished to the State Water Board upon request by any State Water Board staff.

Data Submittal

The macroinvertebrate results (i.e., taxonomic identifications consistent with the specified SAFIT STEs, and number of organisms within each taxa) shall be submitted to the State Water Board in electronic format. The State Water Board's Surface Water Ambient Monitoring Program (SWAMP) is currently developing standardized formats for reporting bioassessment data. All bioassessment data collected after those formats become available shall be submitted using the SWAMP formats. Until those formats are available, the biological data shall be submitted in MS-Excel (or equivalent) format.[3]

The physical/habitat data shall be reported using the standard format titled *SWAMP Stream Habitat Characterization Form — Full Version*.[4]

[3] Any version of Excel, 2000 or later, may be used.
[4] Available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf

Invasive Species Prevention

In conducting the required bioassessment monitoring, the discharger and its consultants shall take precautions to prevent the introduction or spread of aquatic invasive species. At minimum, the discharger and its consultants shall follow the recommendations of the California Department of Fish and Game to minimize the introduction or spread of the New Zealand mudsnail.[5]

[5] Instructions for controlling the spread of NZ mudsnails, including decontamination methods, can be found at: http://www.dfg.ca.gov/invasives/mudsnail/
More information on AIS More information on AIS
http://www.waterboards.ca.gov/water_issues/programs/swamp/ais/

Appendix 4 Non Sediment TMDLs

Region 1 Lost River-DIN and CBOD

Region 1 Source: Cal Trans Construction TMDL Completion Date: 12 30 2008 TMDL Type: River, Lake Watershed Area= 2996 mi^2	**Pollutant Stressors/WLA**	
	Dissolved inorganic nitrogen (DIN) (metric tons/yr)	**Carbonaceous biochemical oxygen demand (CBOD) (metric tons/yr)**
Lost River from the Oregon border to Tule Lake	.1	.2
Tule Lake Refuge	.1	.2
Lower Klamath Refuge	.1	.2

Region 2 San Francisco Bay-Mercury

Region 2 Source:Non-Urban Stormwater Runoff TMDL Type: Bay	**Name**	**Pollutant Stressor/WLA**	**TMDL Completion Date**
	San Francisco Bay	Mercury 25 kg/year	08 09 2006

Region 4 Ballona Creek-Metals and Selenium

Region 4 Source: NPDES General Construction TMDL Completion Date: 12 22 2005 TMDL Type: Creek	**Pollutant Stressors/WLA**							
	Copper (Cu)		**Lead (Pb)**		**Selenium (Se)**		**Zinc (Zn)**	
	g/day	g/day/acre	g/day	g/day/acre	g/day	g/day/acre	g/day	g/day/acre
Ballona Creek	4.94E-07 x Daily storm volume (L)	2.20E-10 x Daily storm volume (L)	1.62E-06 x Daily storm volume (L)	7.20E-10 x Daily storm volume (L)	1.37E-07 x Daily storm volume (L)	6.10E-11 x Daily storm volume (L)	3.27E-06 x Daily storm volume (L)	1.45E-09 x Daily storm volume (L)

General Construction Storm Water Permits:
Waste load allocations will be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board.

- Dry-weather Implementation Non-storm water flows authorized by the General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order No. 99-08 DWQ), or any successor order, are exempt from the dry-weather waste load allocation equal to zero as long as they comply with the provisions of sections C.3 and A.9 of the Order No. 99-08 DWQ, which state that these authorized non-storm discharges shall be:
  (1) infeasible to eliminate
  (2) comply with BMPs as described in the Storm Water Pollution Prevention Plan prepared by the permittee, and
  (3) not cause or contribute to a violation of water quality standards, or comparable provisions in any successor order.
  Unauthorized non-storm water flows are already prohibited by Order No. 99-08 DWQ.
- Wet-weather Implementation Within seven years of the effective date of the TMDL, the construction industry will submit the results of BMP effectiveness studies to determine BMPs that will achieve compliance with the final waste load allocations assigned to construction storm water permittees.
- Regional Board staff will bring the recommended BMPs before the Regional Board for consideration within eight years of the effective date of the TMDL.
- General construction storm water permittees will be considered in compliance with final waste load allocations if they implement these Regional Board approved BMPs. All permittees must implement the approved BMPs within nine years of the effective date of the TMDL. If no effectiveness studies are conducted and no BMPs are approved by the Regional Board within eight years of the effective date of the TMDL, each general construction storm water permit holder will be subject to site-specific BMPs and monitoring requirements to demonstrate compliance with final waste load allocations.

Region 4 Calleaguas Creek-OC Pesticides, PCBs, and Siltation

Interim Requirements

Region 4 Calleaguas Creek Source: Minor NPDES point sources/WDRs TMDL Completion Date: 3 14 2006 TMDL Type:Creek	**Pollutant Stressor**	**WLA Daily Max (µg/L)**	**WLA Monthly Ave (µg/L)**
	Chlordane	1.2	0.59
	4,4-DDD	1.7	0.84
	4,4-DDE	1.2	0.59
	4,4-DDT	1.2	0.59
	Dieldrin	0.28	0.14
	PCB's	0.34	0.17
	Toxaphene	0.33	0.16

Final WLA (ng/g)							
Region 4 Calleaguas Creek Source: Stormwater Permittees TMDL Completion Date: 3 14 2006 TMDL Type:Creek	Chlordane	4,4-DDD	4,4-DDE	4,4-DDT	Dieldrin	PCB's	Toxaphene
Mugu Lagoon*	3.3	2.0	2.2	0.3	4.3	180.0	360.0
Callegaus Creek	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Revolon Slough (SW)*	0.9	2.0	1.4	0.3	0.1	130.0	1.0
Arroyo Las posas(SW)*	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Arroyo Simi	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Conejo Creek	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Interim Requirements (ng/g)							
Mugu Lagoon*	25.0	69.0	300.0	39.0	19.0	180.	22900.0
Callegaus Creek	17.0	66.0	470.0	110.0	3.0	3800.0	260.0
Revolon Slough (SW)*	48.0	400.0	1600.0	690.0	5.7	7600.0	790.0
Arroyo Las posas(SW)*	3.3	290.0	950.0	670.0	1.1	25700.0	230.0
Arroyo Simi	3.3	14.0	170.0	25.0	1.1	25700.0	230.0
Conejo Creek	3.4	5.3	20.0	2.0	3.0	3800.0	260.0

*(SW)=Subwatershed

*Mugu Lagoon includes Duck pond/Agricultural Drain/Mugu/Oxnard Drain #2

Compliance with sediment based WLAs is measured as an instream annual average at the base of each subwatershed where the discharges are located.

Region 4 Calleguas Creek-Salts

Final Dry Weather Pollutant WLA (mg/L)					
Region 4 Calleaguas Creek Source Permitted Stormwater Dischargers TMDL Completion Date: 12 2 2008 TMDL Type:Creek	**Critical Condition Flow Rate (mgd)**	**Chloride (lb/day)**	**TDS (lb/day)**	**Sulfate (lb/day)**	**Boron (lb/day)**
Simi	1.39	1738.0	9849.0	2897.0	12.0
Las Posas	0.13	157.0	887.0	261.0	N/A
Conejo	1.26	1576.0	8931.0	2627.0	N/A

Camarillo	0.06	72.0	406.0	119.0	N/A
Pleasant Valley (Calleguas)	0.12	150.0	850.0	250.0	N/A
Pleasant Valley (Revolon)	0.25	314.0	1778.0	523.0	2.0

Dry Weather Interim Pollutant WLA (mg/L)				
	Chloride (mg/L)	**TDS (mg/L)**	**Sulfate (mg/L)**	**Boron (mg/L)**
Simi	230.0	1720.0	1289.0	1.3
Las Posas	230.0	1720.0	1289.0	1.3
Conejo	230.0	1720.0	1289.0	1.3
Camarillo	230.0	1720.0	1289.0	1.3
Pleasant Valley (Calleguas)	230.0	1720.0	1289.0	1.3
Pleasant Valley (Revolon)	230.0	1720.0	1289.0	1.3

- General Construction permittees are assigned a dry weather wasteload allocation equal to the average dry weather critical condition flow rate multiplied by the numeric target for each constituent. Waste load allocations apply in the receiving water at the base of each subwatershed. Dry weather allocations apply when instream flow rates are below the 86th percentile flow and there has been no measurable precipitation in the previous 24 hours.
- Because wet weather flows transport a large mass of salts at low concentrations, these dischargers meet water quality objectives during wet weather.
- Interim limits are assigned for dry weather discharges from areas covered by NPDES stormwater permits to allow time to implement appropriate actions. The interim limits are assigned as concentration based receiving water limits set to the 95th percentile of the discharger data as a monthly average limit except for chloride. The 95th percentile for chloride was 267 mg/L which is higher than the recommended criteria set forth in the Basin Plan for protection of sensitive beneficial uses including aquatic life. Therefore, the interim limit for chloride for Permitted Stormwater Dischargers is set equal to 230 mg/L to ensure protection of sensitive beneficial uses in the Calleguas Creek watershed.

Region 4 San Gabriel River and Tributaries-Metals and Selenium

Region 4 San Gabriel River and Tributaries Source: Construction Stormwater Dischargers TMDL Completion Date: 3 2007 TMDL Type: Creek	**Pollutant Stressor**	**Wet weather Allocations**	**Dry Weather Allocations**	**% of Watershed**

San Gabriel Reach 2	Lead (Pb)	0.7% * 166 µg/l * Daily Storm Vol	N/A	0.7%
San Gabriel Reach 2	Lead (Pb) Mass based	0.8 kg/d	N/A	0.7%
Coyote Creek	Copper (Cu)	0.285 kg/d	0	5.0%
Coyote Creek	Lead (Pb)	1.70 kg/d	N/A	5.0%
Coyote Creek	Zinc (Zn)	2.4 kg/d	N/A	5.0%
San Jose Creek Reach 1 and 2	Selenium	5 µg/L	5 µg/L	5.0%

Wet-weather allocations for lead in San Gabriel River Reach 2. Concentration-based allocations apply to non-stormwater NPDES discharges. Stormwater allocations are expressed as a percent of load duration curve. Mass-based values presented in table are based on a flow of 260 cfs (daily storm volume = 6.4 $x10^{8}$ liters).

There are 1555 acres of water in the entire watershed, 37.4 acres of water in the Reach 1 subwatershed (2.4%), and 269 acres in the Coyote Creek subwatershed (17%).

General Construction Storm Water Permits

Waste load allocations for the general construction storm water permits may be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board. An estimate of direct atmospheric deposition is developed based on the percent area of surface water in the watershed. Approximately 0.4% of the watershed area draining to San Gabriel River Reach 2 is comprised of water and approximately 0.2% of the watershed area draining to Coyote Creek is comprised of water.

Region 4 The Harbor Beaches of Ventura County-Bacteria

The TMDL has a multi-part numeric target based on the bacteriological water quality objectives for marine water to protect the water contact recreation use. These targets are the most appropriate indicators of public health risk in recreational waters. Bacteriological objectives are set forth in Chapter 3 of the Basin Plan. The objectives are based on four bacteria indicators and include both geometric mean limits and single sample limits. The Basin Plan objectives that serve as the numeric targets for this TMDL are:

The General NPDES Construction permit is seen as a minor contributor and is given no allocation

General NPDES permits, individual NPDES permits, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, and WDR permittees in the Channel Islands Harbor subwatershed are assigned WLAs of zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean. Any future enrollees under a general NPDES permit, individual NPDES permit, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, and WDR will also be subject to a WLA of zero (0) days of allowable exceedances.

Region 4 Resolution No. 03-009 Los Angeles River and Tributaries-Nutrients

Minor Point Sources
Waste loads are allocated to minor point sources enrolled under NPDES or WDR permits including but not limited to Tapia WRP, Whittier Narrows WRP, Los Angeles Zoo WRP, industrial and construction stormwater, and municipal storm water and urban runoff from municipal separate storm sewer systems (MS4s)

Region 4 Minor Point Sources for NPDES/WDR Permits TMDL Completion Date: 7 10 2003 TMDL Type: River	Pollutant Stressor/WLA				
	Total Ammonia (NH_3)		**Nitrate-nitrogen (NO_3-N)**	**Nitrite-nitrogen (NO_2-N)**	**NO_3-N + NO_3-N**
	1 Hr Ave mg/l	30 Day Ave mg/l	30 Day Ave mg/l		30 Day Ave mg/l
LA River Above Los Angeles-Glendale WRP (LAG)	4.7	1.6	8.0	1.0	8.0
LA River Below LAG	8.7	2.4	8.0	1.0	8.0
Los Angeles Tributaries	10.1	2.3	8.0	1.0	8.0

Malibu Creek Attachment A to Resolution No. 2004-019R-Bacteria

12 13 2004 The WLAs for permittees under the NPDES General Stormwater Construction Permit are zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean.

Region 4 Marina del Rey Harbor, Mothers' Beach and Back Basins

Attachment A to Resolution No. 2003-012-Bacteria

8 7 2003 As discussed in "Source Analysis", discharges from general NPDES permits, general industrial storm water permits and general construction storm water permits are not expected to be a significant source of bacteria. Therefore, the WLAs for these discharges are zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean. Any future enrollees under a general NPDES permit, general industrial storm water permit or general construction storm water permit within the MdR Watershed will also be subject to a WLA of zero days of allowable exceedances.

Region 4 San Gabriel River and Tributaries-Metals and Selenium

Dry Weather Selenium WLA
A zero WLA is assigned to the industrial and construction stormwater permits during dry weather. Non-storm water discharges are already prohibited or restricted by existing general permits.

Region 4 General Construction Permittees TMDL Completion Date: 7 13 2006 TMDL Type: River	**Total Recoverable Metals (kg/day)**		
	Copper (Cu) Kg/day	**Lead (Pb) Kg/day**	**Zinc (Zn) Kg/day**
San Gabriel River Reach 2 and upstream reaches/tributaries	**XXXX**	Daily storm volume x 1.24 µg/L	**XXXX**
Coyote Creek and Tributaries	Daily storm volume x 0.7 µg/L	Daily storm volume x 4.3 µg/L	Daily storm volume x 6.2 µg/L

Each enrollee under the general construction stormwater permit receives a WLA on a per acre basis

Region 4 General Construction Permittees TMDL Completion Date: 7 13 2006 TMDL Type: River	**Total Recoverable Metals (kg/day/acre)**		
	Copper (Cu) Kg/acre/day	**Lead (Pb) Kg/acre/day**	**Zinc (Zn) Kg/acre/day**
San Gabriel River Reach 2 and upstream reaches/tributaries	**XXXX**	Daily storm volume x 0.56 µg/L	**XXXX**

Coyote Creek and Tributaries	Daily storm volume x 0.12 µg/L	Daily storm volume x 0.70 µg/L	Daily storm volume x 1.01 µg/L

For the general industrial and construction storm water permits, the daily storm volume is measured at USGS station 11085000 for discharges to Reach 2 and above and at LACDPW flow gauge station F354-R for discharges to Coyote Creek.

General construction storm water permits
WLAs will be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board.

Dry-weather implementation
Non-storm water flows authorized by the General Permit for Storm Water Discharges Associated with Construction Activity (NPDES Permit No. CAS000002), or any successor permit, are exempt from the dry-weather WLA equal to zero as long as they comply with the provisions of sections C.3.and A.9 of the Order No. 99-08 DWQ, which state that these authorized non-storm discharges shall be (1) infeasible to eliminate (2) comply with BMPs as described in the Storm Water Pollution Prevention Plan prepared by the permittee, and (3) not cause or contribute to a violation of water quality standards, or comparable provisions in any successor order. Unauthorized non-storm water flows are already prohibited by Permit No. CAS000002.

Upon permit issuance, renewal, or re-opener
Non-storm water flows not authorized by Order No. 99-08 DWQ, or any successor order, shall achieve dry-weather WLAs. WLAs shall be expressed as NPDES water quality-based effluent limitations specified in accordance with federal regulations and state policy on water quality control. Effluent limitations may be expressed as permit conditions, such as the installation, maintenance, and monitoring of Regional Board-approved BMPs.

Six years from the effective date of the TMDL
The construction industry will submit the results of wet-weather BMP effectiveness studies to the Los Angeles Regional Board for consideration. In the event that no effectiveness studies are conducted and no BMPs are approved, permittees shall be subject to site-specific BMPs and monitoring to demonstrate BMP effectiveness.

Seven years from the effective date of the TMDL
The Los Angeles Regional Board will consider results of the wet weather BMP effectiveness studies and consider approval of BMPs.

Eight years from the effective date of the TMDL
All general construction storm water permittees shall implement Regional Board-approved BMPs.

Total Maximum Daily Loads (TMDLs) for San Diego Creek,
Upper and Lower Newport Bay, Orange County, California

Region 8 NPDES Construction Permit TMDL Completion Date: 1 24 1995 TMDL Type: River. Cr, Bay	Organochlorine Compounds							
	Total DDT		**Chlordane**		**Total PCBs**		**Toxaphene**	
	g/day	g/yr	g/day	g/yr	g/day	g/yr	g/day	g/yr
San Diego Creek	.27	99.8	**.18***	**64.3***	**.09***	**31.5***	.004	1.5
Upper Newport Bay	.11	40.3	.06	23.4	.06	23.2	**X**	**X**
Lower Newport Bay	.04	14.9	.02	8.6	.17	60.7	**X**	**X**

*Red= Informational WLA only, not for enforcement purposes

Organochlorine Compounds TMDLs Implementation Tasks and Schedule

Regional Board staff shall develop a SWPPP Improvement Program that identifies the Regional Board's expectations with respect to the content of SWPPPs, including documentation regarding the selection and implementation of BMPs, and a sampling and analysis plan. The Improvement Program shall include specific guidance regarding the development and implementation of monitoring plans, including the constituents to be monitored, sampling frequency and analytical protocols. The SWPPP Improvement Program shall be completed by (*the date of OAL approval of this BPA*). ***No later than two months*** from completion of the Improvement Program, Board staff shall assure that the requirements of the Program are communicated to interested parties, including dischargers with existing authorizations under the General Construction Permit. Existing, authorized dischargers shall revise their project SWPPPs as needed to address the Program requirements as soon as possible but ***no later than (three months of completion of the SWPPP Improvement Program)***. Applicable SWPPPs that do not adequately address the Program requirements shall be considered inadequate and enforcement by the Regional Board shall proceed accordingly. The Caltrans and Orange County MS4 permits shall be revised as needed to assure that the permittees communicate the Regional Board's SWPPP expectations, based on the SWPPP Improvement Program, with the Standard Conditions of Approval.

Appendix 4 Sediment TMDLs

Implemented Sediment TMDLs in California. Construction was listed as a source in all fo these TMDLs in relation to road construction. Although construction was mentioned as a source, it was not given a specific allocation amount. The closest allocation amount would be for the road activity management WLA. **Implementation Phase** – Adoption process by the Regional Board, the State Water Resources Control Board, the Office of Administrative Law, and the US Environmental Protection Agency completed and TMDL being implemented.

A. Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi^2 yr
1 R1.epa.albionfinaltmdl	R	Albion River	Sedimentation	Road Construction	2001	43 acres	See A (table 6)

B Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi^2 yr
1 R1.epa.EelR-middle.mainSed.temp	R	Middle Main Eel River and Tributaries (from Dos Rios to the South Fork)	Sedimentation	Road Construction	2005-2006	521 mi^2	100

C Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi^2 yr
1 R1.epa.EelRsouth.sed.temp	R	South Fork Eel River	Sedimentation	Road Construction	12 1999	See chart	473

D Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi^2 yr
1 R1.epa.bigfinaltmdl	R	Big River	Sedimentation	Road Construction	12 2001	181 mi^2 watershed drainage	TMDL = loading capacity = nonpoint sources + background =

							393 t mi2 yr

E Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi^2 yr
1 R1.epa.EelR-lower.Sed.temp-121807-signed	R	Lower Eel River	Sedimentation	Road Construction	12 2007	300 square-mile watershed	898

F Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi^2 yr
1 R1.epa.EelR-middle.Sed.temp-	R	Middle Fork Eel River	Sedimentation	Road Construction	12 2003	753 mi^2 (approx. 482,000 acres)	82

G Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres Mi^2	WLA tons mi^2 yr
1 R1.epa.EelRnorth-Sed.temp.final-121807-signed	R	North Fork Eel River	Sedimentation	Road Construction	12 30 2002	289 (180,020 acres)	20

H Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres Mi^2	WLA tons mi^2 yr
1 R1.epa.EelR-upper.mainSed.temp-	R	Upper Main Eel River and Tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury)	Sedimentation	Road Construction	12 29 2004	688 (approx. 440,384 acres)	14

I Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi^2 yr
1 R1.epa.gualalafinaltmdl	R	Gualala River	Sedimentation	Road Construction	Not sure	300 (191,145 acres)	7

J Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi^2	WLA tons mi^2 yr
1 R1.epa.Mad-sed.turbidity	R	Mad River	Sedimentation	Road Construction	12 21 2007	480	174

K Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi^2	WLA tons mi^2 yr
1 R1.epa.mattole.sediment	R	Mattole River	Sedimentation	Road Construction	12 30 2003	296	27 or 520+27 = 547

L Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi^2	WLA tons mi^2 yr
1 R1.epa.navarro.sed.temp	R	Navarro River	Sedimentation	Road Construction	Not sure	315 (201,600 acres).	50

M Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi^2	WLA tons mi^2 yr
1 R1.epa.noyo.sediment	R	Noyo River	Sedimentation	Road Construction	12 16 1999	113 (72,323 acres)	68 (three areas measured) Table 16 in the TMDL

N Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA** tons mi^2 yr
1 R1.epa.RedwoodCk.sed	Cr	Redwood Creek	Sedimentation	Road Construction	12 30 1998	278	1900 Total allocation

O Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA – Roads** tons mi^2 yr
1 R1.epa.tenmile.sed	R	Ten Mile River	Sedimentation	Road Construction	2000	120	9

P Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA management** tons mi^2 yr
1 R1.epa.trinity.sed	R	Trinity River	Sedimentation	Road Construction	12 20 2001	2000 of 3000 covered in this TMDL	See rows below
1	Cr	Horse Linto Creek	Sedimentation	Road Construction	12 20 2001	64	528
1	Cr	Mill creek and Tish Tang	Sedimentation	Road Construction	12 20 2001	39	210
1	Cr	Willow Creek	Sedimentation	Road Construction	12 20 2001	43	94
1	Cr	Campbell Creek and Supply Creek	Sedimentation	Road Construction	12 20 2001	11	1961
1	Cr	Lower Mainstem and Coon Creek	Sedimentation	Road Construction	12 20 2001	32	63
1	R	Reference	Sedimentation	Road	12 20 2001	434	24

		Subwatershed [1]		Construction			
1	Cr	Canyon Creek	Sedimentation	Road Construction	12 20 2001	64	326
1	R	Upper Tributaries[2]	Sedimentation	Road Construction	12 20 2001	72	67
1	R	Middle Tributaries[3]	Sedimentation	Road Construction	12 20 2001	54	53
1	R	Lower Tributaries[4]	Sedimentation	Road Construction	12 20 2001	96	55
1	Cr	Weaver and Rush Creeks	Sedimentation	Road Construction	12 20 2001	72	169
1	Cr	Deadwood Creek Hoadley Gulch Poker Bar	Sedimentation	Road Construction	12 20 2001	47	68
1	L	Lewiston Lake	Sedimentation	Road Construction	12 20 2001	25	49
1	Cr	Grassvalley Creek	Sedimentation	Road Construction	12 20 2001	37	44
1	Cr	Indian Creek	Sedimentation	Road Construction	12 20 2001	34	81
1	Cr	Reading and Browns Creek	Sedimentation	Road Construction	12 20 2001	104	66
1	Cr	Reference Subwatersheds[5]	Sedimentation	Road Construction	12 20 2001	235	281
1	L, Cr	Westside tributaries[6]	Sedimentation	Road Construction	12 20 2001	93	105
1	R, Cr, G	Upper trinity[7]	Sedimentation	Road Construction	12 20 2001	161	690
1	R, Cr, G	East Fork Tributaries[8]	Sedimentation	Road Construction	12 20 2001	115	65

1
2
3
4
5
6
7
8

1	R, L	Eastside Tributaries[9]	Sedimentation	Road Construction	12 20 2001	89	60

1 New River, Big French, Manzanita, North Fork, East Fork, North Fork
2 Dutch, Soldier, Oregon gulch, Conner Creek
3 Big Bar, Prairie Creek, Little French Creek
4 Swede, Italian, Canadian, Cedar Flat, Mill, McDonald, Hennessy, Quimby, Hawkins, Sharber
5 Stuarts Fork, Swift Creek, Coffee Creek
6 Stuart Arm, Stoney Creek, Mule Creek, East Fork, Stuart Fork, West Side Trinity Lake, Hatchet Creek, Buckeye Creek,
7 Upper Trinity River, Tangle Blue, Sunflower, Graves, Bear Upper Trinity Mainstream, Ramshorn Creek, Ripple Creek, Minnehaha Creek, Snowslide Gulch, Scorpion Creek
8 East Fork Trinity, Cedar Creek, Squirrel Gulch
9 East Side Tributaries, Trinity Lake

Q Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA** tons mi^2 yr
1 R1.epa.trinity.so.sed	R, Cr	South Fork Trinity River and Hayfork Creek	Sedimentation	Road Construction	12 1998	Not given, 19 miles long	33 (road total)

R Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA** tons mi^2 yr
1 R1.epa.vanduzen.sed	R, Cr	Van Duzen River and Yager Creek	Sedimentation	Various	12 16 1999	429	1353 total allocation
1		Upper Basin	Sedimentation	Road Construction			7
1		Middle Basin	Sedimentation	Road Construction			22
1		Lower Basin	Sedimentation	Road Construction			20

S Region	**Type**	**Name**	**Pollutant Stressor**	**Potential**	**TMDL**	**Watershed**	**WLA** tons mi^2

[9] 2009-0009-DWQ as amended by 2010-0014-DWQ & 2012-0006-DWQ

				Sources	**Completion Date**	**Acres** mi^2	yr
6 R6.blackwood.sed	Cr	Blackwood Creek (Placer County)	Bedded Sediment	Various	9 2007	11	17272 total

T Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA** tons mi^2 yr
6 R6.SquawCk.sed	R	Squaw Creek (Placer County)	Sedimentation /controllable sources	Various – basin plan amendment	4 13 2006	8.2	10,900

Adopted TMDLs for Construction Sediment Sources

Region	Type	Name	Pollutant Stressor	Potential Sources	**TMDL Completion Date**	**Watershed Area** mi^2	Waste load Allocation tons mi^2 yr
8	R	Newport Bay San Diego Creek Watershed	Sedimentation	Construction Land Development	1999	2.24 (1432 acres)	125,000 tons per Year (no more than 13,000 tons per year from construction sites)

APPENDIX 5:
Glossary

Active Areas of Construction
All areas subject to land surface disturbance activities related to the project including, but not limited to, project staging areas, immediate access areas and storage areas. All previously active areas are still considered active areas until final stabilization is complete. [The construction activity Phases used in this General Permit are the Preliminary Phase, Grading and Land Development Phase, Streets and Utilities Phase, and the Vertical Construction Phase.]

Active Treatment System (ATS)
A treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation to aid in the reduction of turbidity caused by fine suspended sediment.

Acute Toxicity Test
A chemical stimulus severe enough to rapidly induce a negative effect; in aquatic toxicity tests, an effect observed within 96 hours or less is considered acute.

Air Deposition
Airborne particulates from construction activities.

Approved Signatory
A person who has been authorized by the Legally Responsible Person to sign, certify, and electronically submit Permit Registration Documents, Notices of Termination, and any other documents, reports, or information required by the General Permit, the State or Regional Water Board, or U.S. EPA. The Approved Signatory must be one of the following:

1. For a corporation or limited liability company: a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation or limited liability company; or (b) the manager of the facility if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

2. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

3. For a municipality, State, Federal, or other public agency: a principal executive officer, ranking elected official, city manager, council president, or any other authorized public employee with managerial responsibility over the

construction or land disturbance project (including, but not limited to, project manager, project superintendent, or resident engineer);

4. For the military: any military officer or Department of Defense civilian, acting in an equivalent capacity to a military officer, who has been designated;

5. For a public university: an authorized university official;

6. For an individual: the individual, because the individual acts as both the Legally Responsible Person and the Approved Signatory; or

7. For any type of entity not listed above (e.g. trusts, estates, receivers): an authorized person with managerial authority over the construction or land disturbance project.

Beneficial Uses
As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Available Technology Economically Achievable (BAT)
As defined by USEPA, BAT is a technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. The BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT)
As defined by USEPA, BCT is a technology-based standard for the discharge from existing industrial point sources of conventional pollutants including biochemical oxygen demand (BOD), total suspended sediment (TSS), fecal coliform, pH, oil and grease.

Best Professional Judgment (BPJ)
The method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data.

Best Management Practices (BMPs)
BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures,

and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Chain of Custody (COC)
Form used to track sample handling as samples progress from sample collection to the analytical laboratory. The COC is then used to track the resulting analytical data from the laboratory to the client. COC forms can be obtained from an analytical laboratory upon request.

Coagulation
The clumping of particles in a discharge to settle out impurities, often induced by chemicals such as lime, alum, and iron salts.

Common Plan of Development
Generally a contiguous area where multiple, distinct construction activities may be taking place at different times under one plan. A plan is generally defined as any piece of documentation or physical demarcation that indicates that construction activities may occur on a common plot. Such documentation could consist of a tract map, parcel map, demolition plans, grading plans or contract documents. Any of these documents could delineate the boundaries of a common plan area. However, broad planning documents, such as land use master plans, conceptual master plans, or broad-based CEQA or NEPA documents that identify potential projects for an agency or facility are not considered common plans of development.

Daily Average Discharge
The discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limitations expressed in other units of measurement (e.g., concentration) the daily discharge is calculated as the average measurement of the pollutant throughout the day (40 CFR 122.2). In the case of pH, the pH must first be converted from a log scale.

Debris
Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

Direct Discharge
A discharge that is routed directly to waters of the United States by means of a pipe, channel, or ditch (including a municipal storm sewer system), or through surface runoff.

Discharger
The Legally Responsible Person (see definition) or entity subject to this General Permit.

Dose Rate (for ATS)
In exposure assessment, dose (e.g. of a chemical) per time unit (e.g. mg/day), sometimes also called dosage.

Drainage Area
The area of land that drains water, sediment, pollutants, and dissolved materials to a common outlet.

Effluent
Any discharge of water by a discharger either to the receiving water or beyond the property boundary controlled by the discharger.

Effluent Limitation
Any numeric or narrative restriction imposed on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean.

Erosion
The process, by which soil particles are detached and transported by the actions of wind, water, or gravity.

Erosion Control BMPs
Vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc., placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution.

Field Measurements
Testing procedures performed in the field with portable field-testing kits or meters.

Final Stabilization
All soil disturbing activities at each individual parcel within the site have been completed in a manner consistent with the requirements in this General Permit.

First Order Stream
Stream with no tributaries.

Flocculants
Substances that interact with suspended particles and bind them together to form flocs.

Good Housekeeping BMPs
BMPs designed to reduce or eliminate the addition of pollutants to construction site runoff through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

Grading Phase (part of the Grading and Land Development Phase)
Includes reconfiguring the topography and slope including; alluvium removals; canyon cleanouts; rock undercuts; keyway excavations; land form grading; and stockpiling of select material for capping operations.

Hydromodification
Hydromodification is the alteration of the hydrologic characteristics of coastal and non-coastal waters, which in turn could cause degradation of water resources. Hydromodification can cause excessive erosion and/or sedimentation rates, causing excessive turbidity, channel aggradation and/or degradation.

Identified Organisms
Organisms within a sub-sample that is specifically identified and counted.

Inactive Areas of Construction
Areas of construction activity that are not active and those that have been active and are not scheduled to be re-disturbed for at least 14 days.

Index Period
The period of time during which bioassessment samples must be collected to produce results suitable for assessing the biological integrity of streams and rivers. Instream communities naturally vary over the course of a year,and sampling during the index period ensures that samples are collected during a time frame when communities are stable so that year-to-year consistency is obtained. The index period approach provides a cost-effective alternative to year-round sampling. Furthermore, sampling within the appropriate index period will yield results that are comparable to the assessment thresholds or criteria for a given region, which are established for the same index period. Because index periods differ for different parts of the state, it is essential to know the index period for your area.

K Factor
The soil erodibility factor used in the Revised Universal Soil Loss Equation (RUSLE). It represents the combination of detachability of the soil, runoff potential of the soil, and the transportability of the sediment eroded from the soil.

Legally Responsible Person
The Legally Responsible Person (LRP) will typically be the project proponent. The categories of persons or entities that are eligible to serve as the LRP are set forth below. For any construction or land disturbance project where multiple persons or entities are eligible to serve as the LRP, those persons or entities

shall select a single LRP. In exceptional circumstances, a person or entity that qualifies as the LRP may provide written authorization to another person or entity to serve as the LRP. In such a circumstance, the person or entity that provides the authorization retains all responsibility for compliance with the General Permit. Except as provided in category 2(d), a contractor who does not satisfy the requirements of any of the categories below is not qualified to be an LRP.

The following persons or entities may serve as an LRP:

1. A person, company, agency, or other entity that possesses a real property interest (including, but not limited to, fee simple ownership, easement, leasehold, or other rights of way) in the land upon which the construction or land disturbance activities will occur for the regulated site.

2. In addition to the above, the following persons or entities may also serve as an LRP:

    a. For linear underground/overhead projects, the utility company, municipality, or other public or private company or agency that owns or operates the LUP;

    b. For land controlled by an estate or similar entity, the person who has day-to-day control over the land (including, but not limited to, a bankruptcy trustee, receiver, or conservator);

    c. For pollution investigation and remediation projects, any potentially responsible party that has received permission to conduct the project from the holder of a real property interest in the land; or

    d. For U.S. Army Corp of Engineers projects, the U.S. Army Corps of Engineers may provide written authorization to its bonded contractor to serve as the LRP, provided, however, that the U.S. Army Corps of Engineers is also responsible for compliance with the general permit, as authorized by the Clean Water Act or the Federal Facilities Compliance Act.

Likely Precipitation Event
Any weather pattern that is forecasted to have a 50% or greater chance of producing precipitation in the project area. The discharger shall obtain likely precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at http://www.srh.noaa.gov/forecast).

Maximum Allowable Threshold Concentration (MATC)
The allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity

testing conducted by an independent, third-party laboratory. A typical MATC would be:

The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

Natural Channel Evolution
The physical trend in channel adjustments following a disturbance that causes the river to have more energy and degrade or aggrade more sediment. Channels have been observed to pass through 5 to 9 evolution types. Once they pass though the suite of evolution stages, they will rest in a new state of equilibrium.

Non-Storm Water Discharges
Discharges are discharges that do not originate from precipitation events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

Non-Visible Pollutants
Pollutants associated with a specific site or activity that can have a negative impact on water quality, but cannot be seen though observation (ex: chlorine). Such pollutants being discharged are not authorized.

Numeric Action Level (NAL)
Level is used as a warning to evaluate if best management practices are effective and take necessary corrective actions. Not an effluent limit.

Original Sample Material
The material (i.e., macroinvertebrates, organic material, gravel, etc.) remaining after the subsample has been removed for identification.

pH
Unit universally used to express the intensity of the acid or alkaline condition of a water sample. The pH of natural waters tends to range between 6 and 9, with neutral being 7. Extremes of pH can have deleterious effects on aquatic systems.

Post-Construction BMPs
Structural and non-structural controls which detain, retain, or filter the release of pollutants to receiving waters after final stabilization is attained.

Preliminary Phase (Pre-Construction Phase - Part of the Grading and Land Development Phase)
Construction stage including rough grading and/or disking, clearing and grubbing operations, or any soil disturbance prior to mass grading.

Project

Qualified SWPPP Developer
Individual who is authorized to develop and revise SWPPPs.

Qualified SWPPP Practitioner
Individual assigned responsibility for non-storm water and storm water visual observations, sampling and analysis, and responsibility to ensure full compliance with the permit and implementation of all elements of the SWPPP, including the preparation of the annual compliance evaluation and the elimination of all unauthorized discharges.

Qualifying Rain Event
Any event that produces 0.5 inches or more precipitation with a 48 hour or greater period between rain events.

R Factor
Erosivity factor used in the Revised Universal Soil Loss Equation (RUSLE). The R factor represents the erosivity of the climate at a particular location. An average annual value of R is determined from historical weather records using erosivity values determined for individual storms. The erosivity of an individual storm is computed as the product of the storm's total energy, which is closely related to storm amount, and the storm's maximum 30-minute intensity.

Rain Event Action Plan (REAP)
Written document, specific for each rain event, that when implemented is designed to protect all exposed portions of the site within 48 hours of any likely precipitation event.

Remaining Sub sampled Material
The material (e.g., organic material, gravel, etc.) that remains after the organisms to be identified have been removed from the subsample for identification. (Generally, no macroinvertebrates are present in the remaining subsampled material, but the sample needs to be checked and verified using a complete Quality Assurance (QA) plan)

Routine Maintenance
Activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Runoff Control BMPs
Measures used to divert runon from offsite and runoff within the site.

Run-on
Discharges that originate offsite and flow onto the property of a separate project site.

Revised Universal Soil Loss Equation (RUSLE)
Empirical model that calculates average annual soil loss as a function of rainfall and runoff erosivity, soil erodibility, topography, erosion controls, and sediment controls.

Sampling and Analysis Plan
Document that describes how the samples will be collected, under what conditions, where and when the samples will be collected, what the sample will be tested for, what test methods and detection limits will be used, and what methods/procedures will be maintained to ensure the integrity of the sample during collection, storage, shipping and testing (i.e., quality assurance/quality control protocols).

Sediment
Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

Sedimentation
Process of deposition of suspended matter carried by water, wastewater, or other liquids, by gravity. It is usually accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material.

Sediment Control BMPs
Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. They include those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (e.g., silt fence, sediment basin, fiber rolls, etc.).

Settleable Solids (SS)
Solid material that can be settled within a water column during a specified time frame. It is typically tested by placing a water sample into an Imhoff settling cone and then allowing the solids to settle by gravity for a given length of time. Results are reported either as a volume (mL/L) or a mass (mg/L) concentration.

Sheet Flow
Flow of water that occurs overland in areas where there are no defined channels where the water spreads out over a large area at a uniform depth.

Site

Soil Amendment
Any material that is added to the soil to change its chemical properties, engineering properties, or erosion resistance that could become mobilized by storm water.

Streets and Utilities Phase
Construction stage including excavation and street paving, lot grading, curbs, gutters and sidewalks, public utilities, public water facilities including fire hydrants, public sanitary sewer systems, storm sewer system and/or other drainage improvements.

Structural Controls
Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution

Suspended Sediment Concentration (SSC)
The measure of the concentration of suspended solid material in a water sample by measuring the dry weight of all of the solid material from a known volume of a collected water sample. Results are reported in mg/L.

Total Suspended Solids (TSS)
The measure of the suspended solids in a water sample includes inorganic substances, such as soil particles and organic substances, such as algae, aquatic plant/animal waste, particles related to industrial/sewage waste, etc. The TSS test measures the concentration of suspended solids in water by measuring the dry weight of a solid material contained in a known volume of a sub-sample of a collected water sample. Results are reported in mg/L.

Toxicity
The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Turbidity
The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU).

Vertical Construction Phase
The Build out of structures from foundations to roofing, including rough landscaping.

Waters of the United States
Generally refers to surface waters, as defined by the federal Environmental Protection Agency in 40 C.F.R. § 122.2.[1]

Water Quality Objectives (WQO)
Water quality objectives are defined in the California Water Code as limits or levels of water quality constituents or characteristics, which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

[1] The application of the definition of "waters of the United States" may be difficult to determine; there are currently several judicial decisions that create some confusion. If a landowner is unsure whether the discharge must be covered by this General Permit, the landowner may wish to seek legal advice.

APPENDIX 6:
Acronym List

ASBS	Areas of Special Biological Significance
ASTM	American Society of Testing and Materials; Standard Test Method for Particle-Size Analysis of Soils
ATS	Active Treatment System
BASMAA	Bay Area Storm water Management Agencies Association
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BPJ	Best Professional Judgment
CAFO	Confined Animal Feeding Operation
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	NPDES General Permit for Storm Water Discharges Associated with Construction Activities
CIWQS	California Integrated Water Quality System
CKD	Cement Kiln Dust
COC	Chain of Custody
CPESC	Certified Professional in Erosion and Sediment Control
CPSWQ	Certified Professional in Storm Water Quality
CSMP	Construction Site Monitoring Program
CTB	Cement Treated Base
CTR	California Toxics Rule
CWA	Clean Water Act
CWC	California Water Code
CWP	Center for Watershed Protection
DADMAC	Diallyldimethyl-ammonium chloride
DDNR	Delaware Department of Natural Resources
DFG	Department of Fish and Game
DHS	Department of Health Services
DWQ	Division of Water Quality
EC	Electrical Conductivity
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
ESC	Erosion and Sediment Control
HSPF	Hydrologic Simulation Program Fortran
JTU	Jackson Turbidity Units
LID	Low Impact Development
LOEC	Lowest Observed Effect Concentration
LRP	Legally Responsible Person
LUP	Linear Underground/Overhead Projects

MATC	Maximum Allowable Threshold Concentration
MDL	Method Detection Limits
MRR	Monitoring and Reporting Requirements
MS4	Municipal Separate Storm Sewer System
MUSLE	Modified Universal Soil Loss Equation
NAL	Numeric Action Level
NEL	Numeric Effluent Limitation
NICET	National Institute for Certification in Engineering Technologies
NOAA	National Oceanic and Atmospheric Administration
NOEC	No Observed Effect Concentration
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NTR	National Toxics Rule
NTU	Nephelometric Turbidity Units
O&M	Operation and Maintenance
PAC	Polyaluminum chloride
PAM	Polyacrylamide
PASS	Polyaluminum chloride Silica/sulfate
POC	Pollutants of Concern
PoP	Probability of Precipitation
POTW	Publicly Owned Treatment Works
PRDs	Permit Registration Documents
PWS	Planning Watershed
QAMP	Quality Assurance Management Plan
QA/QC	Quality Assurance/Quality Control
REAP	Rain Event Action Plan
Regional Board	Regional Water Quality Control Board
ROWD	Report of Waste Discharge
RUSLE	Revised Universal Soil Loss Equation
RW	Receiving Water
SMARTS	Storm water Multi Application Reporting and Tracking System
SS	Settleable Solids
SSC	Suspended Sediment Concentration
SUSMP	Standard Urban Storm Water Mitigation Plan
SW	Storm Water
SWARM	Storm Water Annual Report Module
SWAMP	Surface Water Ambient Monitoring Program
SWMM	Storm Water Management Model
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
TC	Treatment Control
TDS	Total Dissolved Solids

TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
USACOE	U.S. Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WDID	Waste Discharge Identification Number
WDR	Waste Discharge Requirements
WLA	Waste Load Allocation
WET	Whole Effluent Toxicity
WRCC	Western Regional Climate Center
WQBEL	Water Quality Based Effluent Limitation
WQO	Water Quality Objective
WQS	Water Quality Standard

APPENDIX 7:
State and Regional Water Resources Control Board Contacts

NORTH COAST REGION (1)
5550 Skylane Blvd, Ste. A
Santa Rose, CA 95403
(707) 576-2220 FAX: (707)523-0135

SAN FRANCISCO BAY REGION (2)
1515 Clay Street, Ste. 1400
Oakland, CA 94612
(510) 622-2300 FAX: (510) 622-2640

CENTRAL COAST REGION (3)
895 Aerovista Place, Ste 101
San Luis Obispo, CA 93401
(805) 549-3147 FAX: (805) 543-0397

LOS ANGELES REGION (4)
320 W. 4th Street, Ste. 200
Los Angeles, CA 90013
(213) 576-6600 FAX: (213) 576-6640

CENTRAL VALLEY REGION (5S)
11020 Sun Center Dr., #200
Rancho Cordova, CA 95670-6114
(916) 464-3291 FAX: (916) 464-4645

FRESNO BRANCH OFFICE (5F)
1685 E St.
Fresno, CA 93706
(559) 445-5116 FAX: (559) 445-5910

REDDING BRANCH OFFICE (5R)
364 Knollcrest Drive, Ste. 205
Redding, CA 96002
(530) 224-4845 FAX: (530) 224-4857

LAHONTAN REGION (6 SLT)
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
(530) 542-5400 FAX: (530) 544-2271

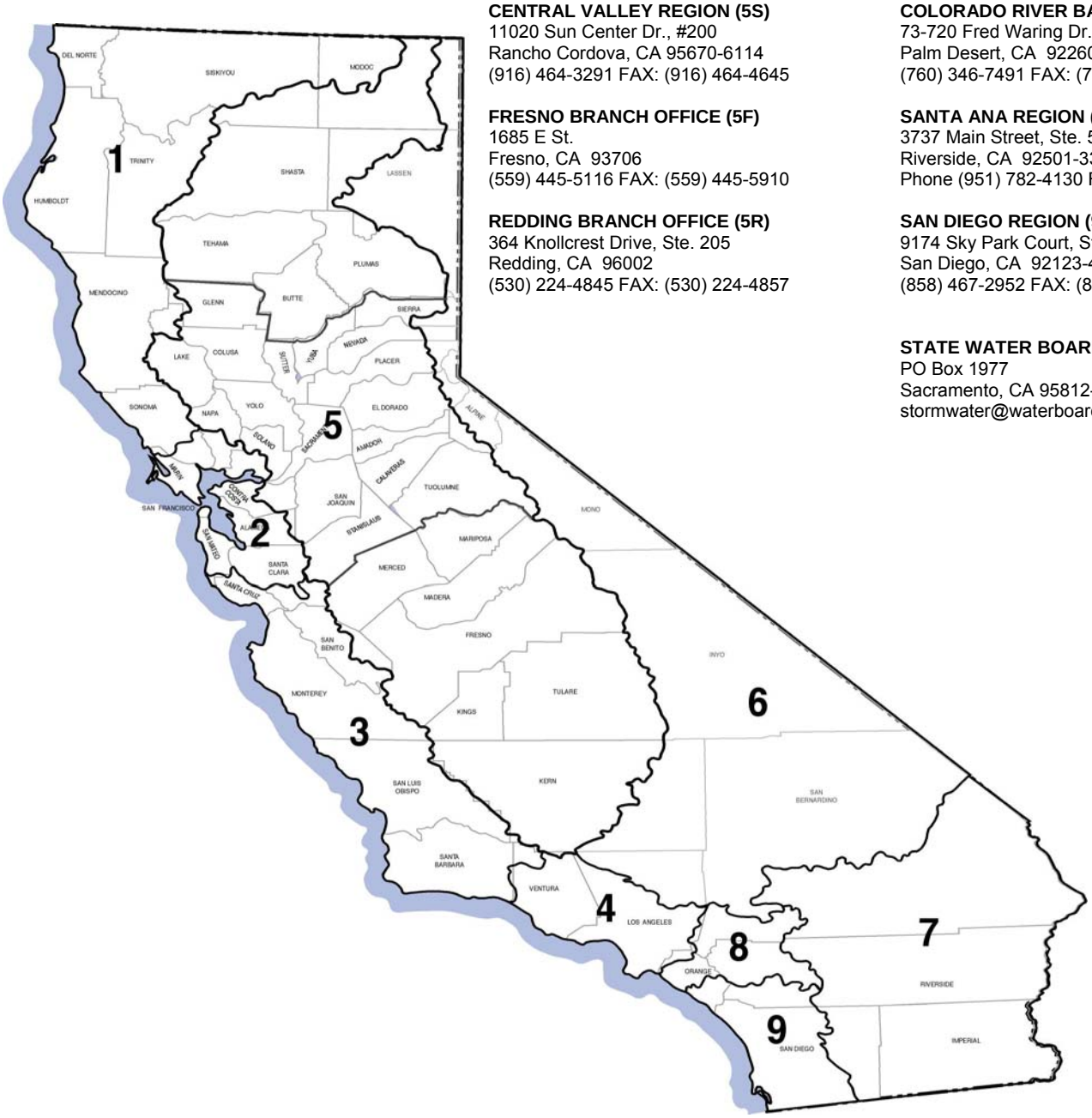
VICTORVILLE OFFICE (6V)
14440 Civic Drive, Ste. 200
Victorville, CA 92392-2383
(760) 241-6583 FAX: (760) 241-7308

COLORADO RIVER BASIN REGION (7)
73-720 Fred Waring Dr., Ste. 100
Palm Desert, CA 92260
(760) 346-7491 FAX: (760) 341-6820

SANTA ANA REGION (8)
3737 Main Street, Ste. 500
Riverside, CA 92501-3339
Phone (951) 782-4130 FAX: (951) 781-6288

SAN DIEGO REGION (9)
9174 Sky Park Court, Ste. 100
San Diego, CA 92123-4340
(858) 467-2952 FAX: (858) 571-6972

STATE WATER BOARD
PO Box 1977
Sacramento, CA 95812-1977
stormwater@waterboards.ca.gov



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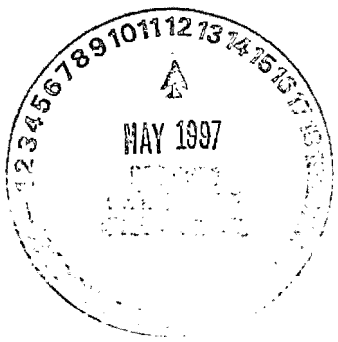

Pete Wilson
Governor

/EPA

MAY 1 1997

State Water Resources Control Board

Mailing Address:
P.O. Box 100
Sacramento, CA
95812-0100

901 P Street
Sacramento, CA
95814
(916) 657-0919
FAX (916) 657-1011

TO: Current Facility Operators

REISSUED INDUSTRIAL ACTIVITIES STORM WATER GENERAL PERMIT

Enclosed are the Industrial Activities Storm Water General Permit (General Permit) adopted by the State Water Resources Control Board (SWRCB) on April 17, 1997 and a facility specific Notice of Intent (NOI) that must be reviewed, signed, and returned within 45 days of receipt. An addressed return envelope is also enclosed for your convenience. As a facility operator that had previously submitted an NOI for the now expired General Permit, you are not required to submit a fee or site map with this NOI.

The reissued General Permit contains many revisions as compared to the expired General Permit. The reverse side of this letter lists some of the important changes that may effect your Storm Water Pollution Prevention Plan (SWPPP) and Monitoring Program. You are required to review, and revise, as necessary, your SWPPP and Monitoring Program by August 1, 1997 to ensure that they comply with the reissued General Permit.

Please note that the reissued General Permit requires you to complete all your remaining 1996-97 activities required by the expired General Permit. For example, you must submit an Annual Report to the local Regional Water Quality Control Board (RWQCB) by July 1, 1997.

You should discuss any questions or issues related to this reissued General Permit with the appropriate RWQCB staff. Attachment 2 of the General Permit lists the RWQCB addresses, telephone numbers, and staff contacts.

If you have any questions for SWRCB staff, please call our industrial activities message line at 916/657-0919.

Sincerely,

for Walt Pettit
Executive Director

Enclosures

Our mission is to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

SUMMARY OF IMPORTANT REVISION

EXPIRED PERMIT	NEW PERMIT
Non-Storm Water Discharges	
Distinction between authorized and unauthorized non-storm water discharges unclear. Fact Sheet Guidance and Permit Language not entirely consistent.	Provides a specific list of non-storm water discharges that are authorized when certain conditions are met (see pages 5-6, D. Special Conditions).
Storm Water Pollution Prevention Plan (SWPPP)	
- Provided basic description of steps necessary to develop an effective SWPPP. - Authorized non-storm water discharges are not addressed. - No deadline to implement SWPPP revisions in response to violations.	- Provides a better description of the steps necessary to develop an effective SWPPP. - Requires BMPs for authorized non-storm water discharges. - Requires SWPPP revisions within 90 days after a violation is found. - Requires an Annual Comprehensive Site Compliance Evaluation (formerly called an annual site inspection that was included in the Monitoring Program).
Monitoring Program and Reporting Requirements	
- Visual observation for the presence of unauthorized non-storm water discharges twice/year during dry season. - No requirement to observe authorized non-storm water discharges. - Wet Season October 1-April 30. - Sampling required in first 1/2 hour. - Sampling of storms that produce 1 hour of discharge. - Analyze from basic parameters and toxic chemicals and other pollutants. - Sample two storm events/year.	- Visual observation for the presence of unauthorized non-storm water discharges quarterly. - Visual observations of authorized non-storm water discharges quarterly. - Wet Season October 1-May 31. - Sampling required in first hour. - Sampling of a storm event that produces discharge. - In addition, analyze listed Table D parameters. - Sample two storm events/year. Facility operators who have sampled six storm events are eligible for reduced sampling.

* There are various revisions to the Group Monitoring requirements. Group monitoring participants should contact their group leaders for more details.

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BACKGROUND

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is effectively prohibited unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added Section 402(p) which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (U.S. EPA) published final regulations that establish application requirements for storm water permits. The regulations require that storm water associated with industrial activity (storm water) that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

U.S. EPA developed a four-tier permit issuance strategy for storm water discharges associated with industrial activity as follows:

Tier I, Baseline Permitting--One or more general permits will be developed to initially cover the majority of storm water discharges associated with industrial activity.

Tier II, Watershed Permitting--Facilities within watersheds shown to be adversely impacted by storm water discharges associated with industrial activity will be targeted for individual or watershed-specific general permits.

Tier III, Industry-Specific Permitting--Specific industry categories will be targeted for individual or industry-specific general permits.

Tier IV, Facility-Specific Permitting--A variety of factors will be used to target specific facilities for individual permits.

The regulations allow authorized states to issue general permits or individual permits to regulate storm water discharges.

Consistent with Tier I, Baseline Permitting, of the U.S. EPA permitting strategy, the State Water Board issued a statewide General Permit on November 19, 1991 that applied to all storm water discharges requiring a permit except construction activity. The monitoring requirements of this General Permit were amended September 17, 1992. A separate statewide general permit has been issued for construction activity.

To obtain authorization for continued and future storm water discharge under this General Permit, each facility operator must submit a Notice of Intent (NOI). This approach is consistent with the four-tier permitting strategy described in Federal regulations, i.e., Tier 1, Baseline Permitting. Tier 1, Baseline Permitting, enables the State to begin reducing pollutants in industrial storm water in the most efficient manner possible.

This General Permit generally requires facility operators to:

1. Eliminate unauthorized non-storm water discharges;
2. Develop and implement a storm water pollution prevention plan (SWPPP); and
3. Perform monitoring of storm water discharges and authorized non-storm water discharges.

TYPES OF STORM WATER DISCHARGES COVERED BY THIS GENERAL PERMIT

This General Permit is intended to cover all new or existing storm water discharges and authorized non-storm water discharges from facilities required by Federal regulations to obtain a permit including those (1) facilities previously covered by the San Francisco Bay Regional Water Quality Control Board Order No. 92-011 (as amended by Order No. 92-116), (2) facilities designated by the Regional Water Quality Control Boards (Regional Water Boards), (3) facilities whose operators seek coverage under this General Permit, (4) and facilities required by future U.S. EPA storm water regulations.

The General Permit is intended to cover all facilities described in Attachment 1, whether the facility is primary or is auxiliary to the facility operator's function. For example, even though a school district's primary function is education, a facility which it operates for vehicle maintenance of school buses is a transportation facility which is covered by this General Permit.

The definition of "storm water associated with industrial activity" is provided in Attachment 4, Definition 9, of this General Permit. Facilities that discharge storm water associated with industrial activity requiring a General Permit are listed by category in 40 Code of Federal Regulations (CFR) Section 122.26(b)(14) (Federal Register, Volume 55 on

Pages 48065-66) and in Attachment 1 of this General Permit. The facilities can be publicly or privately owned. A general description of these categories are:

1. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR Subchapter N);
2. Manufacturing facilities;
3. Mining/oil and gas facilities;
4. Hazardous waste treatment, storage, or disposal facilities;
5. Landfills, land application sites, and open dumps that receive industrial waste;
6. Recycling facilities such as metal scrap yards, battery reclaimers, salvage yards, automobile yards;
7. Steam electric generating facilities;
8. Transportation facilities that conduct any type of vehicle maintenance such as fueling, cleaning, repairing, etc.;
9. Sewage treatment plants;
10. Construction activity (covered by a separate general permit); and
11. Certain facilities (often referred to as "light industry") where industrial materials, equipment, or activities are exposed to storm water.

For the most part, these facilities are identified in the Federal regulations by a Standard Industrial Classification (SIC).

Category 1 Dischargers

The following categories of facilities currently have storm water effluent limitation guidelines for at least one of their subcategories. They are cement manufacturing (40 CFR Part 411); feedlots (40 CFR Part 412); fertilizer manufacturing (40 CFR Part 418); petroleum refining (40 CFR Part 419); phosphate manufacturing (40 CFR Part 422); steam electric power generation (40 CFR Part 423); coal mining (40 CFR Part 434); mineral mining and processing (40 CFR Part 436); ore mining and dressing (40 CFR Part 440); and asphalt emulsion (40 CFR Part 443). A facility operator whose facility falls into one of these general categories should examine the effluent guidelines to determine if the facility is categorized in one of the subcategories that have storm water effluent guidelines. If

a facility is classified as one of those subcategories, that facility is subject to the standards listed in the CFR for that category and is subject to this General Permit. This General Permit contains additional requirements (see Section B.6.) for facilities with storm water effluent limitations guidelines.

Category 5 Dischargers

Inactive or closed landfills, land application sites, and open dumps that have received industrial wastes (Category 5) may be subject to this General Permit unless the storm water discharges from the sites are already regulated by an NPDES permit issued by the appropriate Regional Water Board. Facility operators of closed landfills that are regulated by waste discharge requirements (WDRs) may be required to comply with this General Permit. In some cases, it may be appropriate for closed landfills to be covered by the State Water Board's General Permit during closure activities. New landfill construction should be covered by the Construction Activities General Permit. Facility operators should contact their Regional Water Board to determine the appropriate permit coverage.

Category 11 Dischargers

Facility operators of Category 11 (light industry) facilities are not subject to this General Permit if they can certify that the following minimum conditions at their facilities are met:

1. All prohibited non-storm water discharges have been eliminated or otherwise permitted.

2. All areas of past exposure have been inspected and cleaned, as appropriate.

3. All materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.

4. All industrial activities and industrial equipment are not exposed to storm water or authorized non-storm water discharges.

5. There is no exposure of materials associated with industrial activity through other direct or indirect pathways such as particulates from stacks and exhaust systems.

6. There is periodic re-evaluation of the facility to ensure Conditions 1, 3, 4, and 5 are continuously met.

Currently, facility operators that can certify that the above conditions are met are not required to notify the State Water

Board or Regional Water Board. These facility operators are advised to retain such certification documentation on site.

The Ninth Circuit Court of Appeals invalidated the exemption granted by U.S. EPA for storm water discharges from facilities in Category 11 that do not have exposure and remanded the regulation to U.S. EPA for further action. The State Water Board, at this time, is not requiring storm water discharges from facilities in Category 11 that do not have exposure to be covered by this General Permit. Instead, the State Water Board will await future U.S. EPA or court action clarifying the types of storm water discharges that must be permitted. If necessary, the State Water Board will reopen the General Permit to accommodate such a clarification.

Section 1068 of the Intermodel Surface Transportation Act of 1991 exempts municipal agencies serving populations of less than 100,000 from Phase I permit requirements for most facilities they operate (uncontrolled sanitary landfills, power plants, and airports are still required to be permitted in Phase I). Phase II of the Permit Program scheduled to begin August 7, 2001 will cover the facilities that are exempt from Phase I permit requirements.

TYPES OF DISCHARGES NOT COVERED BY THIS GENERAL PERMIT

1. CONSTRUCTION ACTIVITY: Discharges from construction activity of five acres or more, including clearing, grading, and excavation. A separate general permit was adopted on August 20, 1992 for this industrial category.

2. FACILITIES WHICH HAVE NPDES PERMITS CONTAINING STORM WATER PROVISIONS: Some storm water discharges may be regulated by other individual or general NPDES permits issued by the State Water Board or the Regional Water Boards. These discharges shall not be regulated by this General Permit. When the individual or general NPDES permits for such discharges expire, the State Water Board or Regional Water Board may authorize coverage under this General Permit or another general NPDES permit, or may issue a new individual NPDES permit consistent with the Federal and State storm water regulations. Interested parties may petition the State Water Board or appropriate Regional Water Board to issue individual or General NPDES Permits. General Permits may be issued for a particular industrial group or watershed area.

3. FACILITIES DETERMINED INELIGIBLE BY REGIONAL WATER BOARDS: Regional Water Boards may determine that discharges from a facility or groups of facilities, otherwise eligible for coverage under this General Permit, have potential water quality impacts that may not be appropriately addressed by

this General Permit. In such cases, a Regional Water Board may require such discharges to be covered by an individual or general NPDES permit. Interested persons may petition the appropriate Regional Water Board to issue individual NPDES permits. The applicability of this General Permit to such discharges will be terminated upon adoption of an individual NPDES permit or a different general NPDES permit.

4. FACILITIES WHICH DO NOT DISCHARGE STORM WATER TO WATERS OF THE UNITED STATES: The discharges from the following facilities are not required to be permitted:

   a. FACILITIES THAT DISCHARGE STORM WATER TO MUNICIPAL SANITARY SEWER SYSTEMS: Facilities that discharge storm water to municipal sanitary sewer systems or combined sewer systems are not required by Federal regulations to be covered by an NPDES storm water permit or to submit an NOI to comply with this General Permit. (It should be noted that many municipalities have sewer use ordinances that prohibit storm drain connections to their sanitary sewers.)

   b. FACILITIES THAT DO NOT DISCHARGE STORM WATER TO SURFACE WATERS OR SEPARATE STORM SEWERS: Storm water that is captured and treated and/or disposed of with the facility's NPDES permitted process wastewater and storm water that is disposed of to evaporation ponds, percolation ponds, or combined sewer systems are not required to obtain a storm water permit. To avoid liability, the facility operator should be certain that no discharge of storm water to surface waters will occur under any circumstances.

5. MOST SILVICULTURAL ACTIVITIES: Storm water discharges from most silvicultural activities such as thinning, harvesting operations, surface drainage, or road construction and maintenance are exempt from this permit. Log sorting or log storage facilities that fall within SIC 2411 are required to be permitted.

6. MINING AND OIL AND GAS FACILITIES: Oil and gas facilities that have not released storm water resulting in a discharge of a reportable quantity (RQ) for which notification is or was required pursuant to 40 CFR Parts 110, 117, and 302 at any time after November 19, 1987 are not required to be permitted unless the industrial storm water discharge contributed to a violation of a water quality standard. Mining facilities that discharge storm water that does not come into contact with any overburden, raw materials, intermediate product, finished product, by-product, or waste

product located at the facility are not required to be permitted. These facilities must be permitted if they have a new release of storm water resulting in a discharge of an RQ.

7. FACILITIES ON INDIAN LANDS: Discharges from facilities on Indian lands will be regulated by the U.S. EPA.

NOTIFICATION REQUIREMENTS

Storm water discharges from facilities described in the section titled "Types of Storm Water Discharges Covered by This General Permit" must be covered by an NPDES permit. An NOI must be submitted by the facility operator for each individual facility to obtain coverage. Certification of the NOI signifies that the facility operator intends to comply with the provisions of the General Permit. Facility operators who have filed NOIs for the State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-011 (as amended by Order No. 92-116) will be sent an abbreviated NOI soon after adopting this General Permit that must be completed and returned within 45 days of receipt. Where operations have discontinued and significant materials remain on site (such as at closed landfills), the landowner may be responsible for filing an NOI and complying with this General Permit. A landowner may also file an NOI for a facility if the landowner, rather than the facility operator(s), is responsible for compliance with this General Permit.

A facility operator that does not submit an NOI for a facility must submit an application for an individual NPDES permit. U.S. EPA's regulations [40 CFR 122.21 (a)] exclude facility operators covered by a general permit from requirements to submit an individual permit application unless required by the Regional Water Board. The NOI requirements of this General Permit are intended to establish a mechanism which can be used to establish a clear accounting of the number of facility operators complying with the General Permit, their identities, the nature of operations at the facilities, and location.

All facility operators filing an NOI after the adoption of this General Permit must comply with this General Permit. Existing facility operators who have filed NOIs prior to the adoption of this General Permit shall continue to complete the requirements of the previous General Permit through June 30, 1997 including submitting annual reports to the Regional Water Boards by July 1, 1997. Group Leaders are required to submit an 1996-97 Group Evaluation Report by August 1, 1997.

DESCRIPTION OF GENERAL PERMIT CONDITIONS

Prohibitions

This General Permit authorizes storm water and authorized non-storm water discharges from facilities that are required to be covered by a storm water permit. This General Permit prohibits discharges of material other than storm water (non-storm water discharges) that are not authorized by the General Permit and discharges containing hazardous substances in storm water in excess of reportable quantities established at 40 CFR 117.3 and 40 CFR 302.4. Authorized non-storm water discharges are addressed in the Special Conditions of the General Permit.

Effluent Limitations

NPDES Permits for storm water discharges must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require control of pollutant discharges using best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards.

U.S. EPA regulations (40 CFR Subchapter N) establish effluent limitation guidelines for storm water discharges from facilities in ten industrial categories. For these facilities, compliance with the effluent limitation guidelines constitutes compliance with BAT and BCT for the specified pollutants and must be met to comply with this General Permit.

For storm water discharges from facilities not among the ten industrial categories listed in 40 CFR Subchapter N, it is not feasible at this time to establish numeric effluent limitations. The reasons why establishment of numeric effluent limitations is not feasible are discussed in detail in State Water Board Orders No. WQ 91-03 and WQ 91-04. Therefore, this General Permit allows the facility operator to implement best management practices (BMPs) to comply with the requirements of this General Permit. This approach is consistent with the U.S. EPA's August 1, 1996 "Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits".

Receiving Water Limitations

Storm water discharges shall not cause or contribute to a violation of an applicable water quality standard. The General Permit requires facility operators to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges through the development and implementation of BMPs which constitutes compliance with BAT and BCT and, in most cases, compliance with water quality standards. If receiving

water quality standards are exceeded, facility operators are required to submit a written report providing additional BMPs that will be implemented to achieve water quality standards.

Storm Water Pollution Prevention Plans (SWPPPs)

All facility operators must prepare, retain on site, and implement an SWPPP. The SWPPP has two major objectives: (1) to help identify the sources of pollution that affect the quality of industrial storm water discharges and authorized non-storm water discharges, and (2) to describe and ensure the implementation of BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized non-storm water discharges.

This General Permit requires development and implementation of an SWPPP emphasizing BMPs. This approach provides the flexibility necessary to establish appropriate BMPs for different types of industrial activities and pollutant sources. As this General Permit covers vastly different types of facilities, the State Water Board recognizes that there is no single best way of developing or organizing an SWPPP. The SWPPP requirements contain the essential elements that all facility operators must consider and address in the SWPPP. This General Permit's SWPPP requirements are more detailed than the previous general permit's SWPPP requirements, and the suggested order of the SWPPP elements have been rearranged (1) to correspond more closely with other storm water permits in effect throughout the country, and (2) to generally follow a more logical path. Facility operators that have already developed and implemented SWPPPs under previous general permits are required to review the SWPPP's requirements contained in this General Permit and then review their existing SWPPP for adequacy. If the existing SWPPP adequately identifies and assesses all potential sources of pollutants and describes the appropriate BMPs necessary to reduce or prevent pollutants, the facility operator is not required to revise the existing SWPPP.

One of the major elements of the SWPPP is the elimination of unauthorized non-storm water discharges to the facility's storm drain system. Unauthorized non-storm water discharges can be generated from a wide variety of potential pollutant sources. They include waters from the rinsing or washing of vehicles, equipment, buildings, or pavement; materials that have been improperly disposed of or dumped, and spilled; or leaked materials. Unauthorized non-storm water discharges can contribute a significant pollutant load to receiving waters. Measures to control spills, leakage, and dumping can often be addressed through BMPs. Unauthorized non-storm water discharges may enter the storm drain system via conveyances such as floor drains. All conveyances should be evaluated to determine whether they convey unauthorized non-storm water discharges to the storm

drain system. Unauthorized non-storm water discharges (even when commingled with storm water) shall be eliminated or covered by a separate NPDES Permit.

There are many non-storm water discharges that, under certain conditions, should not contain pollutants associated with industrial activity (i.e., air conditioning condensate, potable water line testing, landscaping overflow, etc.). Item D, Special Conditions, provides the conditions where certain listed non-storm water discharges are authorized by this General Permit.

Monitoring Program

The General Permit requires development and implementation of a monitoring program. The objectives of the monitoring program are to (1) demonstrate compliance with the General Permit, (2) aid in the implementation of the SWPPP, and (3) measure the effectiveness of the BMPs in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges.

All facility operators (with the exception of inactive mining operations) are required to:

1. Perform visual observations of storm water discharges and authorized storm water discharges.

2. Collect and analyze samples of storm water discharges. Analysis must include pH, total suspended solids (TSS), total organic carbon (TOC), specific conductance, toxic chemicals, and other pollutants which are likely to be present in storm water discharges in significant quantities, and those parameters listed in Table D of this General Permit. The Table D parameters are those listed in the U.S. EPA Multi-Sector General Permit. Facility operators subject to Federal storm water effluent limitation guidelines in 40 CFR Subchapter N must also sample and analyze for any pollutant specified in the appropriate category of 40 CFR Subchapter N.

Facility operators are not required to collect samples or perform visual observations during adverse climatic conditions. Sample collection and visual observations are required only during scheduled facility operating hours. Visual observations are required only during daylight hours. Facility operators that are unable to collect any of the required samples or visual observations because of the above circumstances must provide documentation to the Regional Water Board in their annual report.

Facility operators may be exempt from performing sampling and analysis if they: (1) do not have areas of industrial activity exposed to storm water, (2) receive an exemption from a local agency which has jurisdiction over the storm sewer system, or (3) receive an exemption from the appropriate Regional Water

Board. Facility operators must always perform sampling and analysis for any pollutant specified in storm water effluent limitation guidelines.

This General Permit contains a new procedure where facility operators, if they meet certain minimum conditions, may certify compliance with the General Permit and reduce the number of sampling events required to be sampled for the remaining term of the General Permit. Each Regional Water Board may develop instructions, guidance, and checklists to assist facility operators to complete sampling reduction requests.

Local agencies that wish to provide sampling and analysis exemptions or reductions to facility operators within their jurisdiction shall develop a certification program that clearly indicates the certification procedures and criteria used by the local agency. At a minimum, these programs should include site inspections, a review of the facility operator's SWPPP, and a review of other records such as monitoring data, receiving water data, etc. The certification program shall be approved by the local Regional Water Board prior to implementation.

Alternative Monitoring

Facility operators are required to develop a facility-specific monitoring program that satisfies both the minimum monitoring program requirements and the objectives of the monitoring program. Some facility operators have indicated that cost-effective alternative monitoring programs can be developed that provide equivalent or more accurate indicators of pollutants and/or BMP performance than a monitoring program based upon the minimum monitoring program requirements. An example of such an alternative monitoring program would be one that identifies sample locations at or near pollutant sources rather than sampling an entire drainage area where the storm water discharge has been diluted with storm water from areas with little or no industrial activity.

The State Water Board does not want to preclude facility operators from developing better, and perhaps more cost-effective, monitoring programs. This General Permit allows facility operators to submit alternative monitoring programs for approval by the Regional Water Board. For individual facilities, these proposals must be facility specific and demonstrate how the alternative monitoring program will result in an equivalent or more accurate indicator of pollutants and/or BMP effectiveness. Facility operators with similar industrial activities may also propose alternative monitoring programs for approval by the Regional Water Boards. These proposals must demonstrate how the alternative monitoring program will result in an equivalent or more accurate indicator of pollutants and/or BMP effectiveness for all of the participating facilities.

Facility operators shall continue to comply with the existing monitoring program requirements until receiving approval by the Regional Water Board.

Group Monitoring

Each facility operator may either perform sampling and analysis individually or participate in a group monitoring program. A group monitoring program may be developed either by a group leader representing a group of similar facilities or by a local agency which holds a storm water permit for a municipal separate storm sewer system for industrial facilities within its jurisdiction. The group leader or local agency responsible for the group monitoring program must schedule all participating facilities to sample two storm events over the life of this General Permit. Facility operators subject to Federal effluent limitations guidelines in 40 CFR Subchapter N must individually sample and analyze for pollutants listed in the appropriate Federal regulations.

Participants within a group may be located within the jurisdiction of more than one Regional Water Board. Multi-Regional Water Board groups must receive the approval of the State Water Board Executive Director (with the concurrence of the appropriate Regional Water Boards).

Each group leader or local agency responsible for group sampling must: (1) provide guidance or training so that the monitoring is done correctly, (2) recommend appropriate BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges from group participants, (3) evaluate and report the monitoring data to the State Water Board and/or the appropriate Regional Water Board(s), and (4) conduct two on-site inspections at each facility over the five year term of this General Permit to evaluate facility compliance and recommend BMPs to achieve compliance with this General Permit. The group leader or local agency may designate, hire, or train inspectors to conduct these inspections that are or are not directly affiliated with the group leader or local agency. It is the group leader's or local agency's responsibility to select inspectors that are capable of evaluating each facility's compliance with the General Permit and can recommend appropriate BMPs. All group monitoring plans are subject to State Water Board and/or Regional Water Board(s) review. Consistent with the four-tier permitting strategy described in the Federal regulations, the Regional Water Board(s) may evaluate the data and results from group monitoring to establish future permitting decisions. As appropriate, the State Water Board and/or the Regional Water Board(s) may terminate or require substantial amendment to the group monitoring plans. The State Water Board and/or the Regional Water Board(s) may terminate a facility's participation in group monitoring or require additional monitoring activities.

Retention of Records

The facility operator is required to retain records of all monitoring information, copies of all reports required by this General Permit, and records of all data used to complete the NOI for a period of five years from the date of measurement, report, or monitoring activity. This period may be extended by the State and/or Regional Water Boards. All records are public documents and must be provided to the Regional Water Boards on request.

Watershed Management

The State and Regional Water Boards are undertaking a focussed effort in watershed management throughout the State. In reissuing this General Permit, the State Water Board recognizes both the evolving nature of watershed management and the long-term desirability of structuring monitoring programs to support the Watershed Management Initiative. Therefore, the amended monitoring and reporting provisions provide flexibility for individual facility operators or groups of facility operators to propose and participate in, subject to Regional Water Board approval, watershed monitoring programs in lieu of some or all of the monitoring requirements contained in this General Permit.

Facility Operator Compliance Responsibilities

This General Permit has been written to encourage individual facility operators to develop their own SWPPP and monitoring programs. Many facility operators, however, choose to obtain compliance assistance either by hiring a consultant on an individual basis or by participating in a group monitoring plan. Regardless of how a facility operator chooses to pursue compliance, it is the facility operator that is responsible for compliance with this General Permit.

The State Water Board recognizes that industrial activities and operating conditions at many facilities change over time. In addition, new and more effective BMPs are being developed by various facility operators and by industrial groups. The SWPPP and monitoring program requirements include various inspections, reviews, and observations all of which recognize, encourage, and mandate an iterative self-evaluation process that is necessary to consistently comply with this General Permit. In general, facility operators that develop and implement SWPPPs that comply with this General Permit should not be penalized when discovering minor violations through this iterative self-evaluation process. The General Permit provides facility operators up to 90 days to revise and implement the SWPPP to correct such violations.

STATE WATER RESOURCES CONTROL BOARD (STATE WATER BOARD)
WATER QUALITY ORDER NO. 97-03-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000001 (GENERAL PERMIT)

WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES EXCLUDING CONSTRUCTION ACTIVITIES

The State Water Board finds that:

1. Federal regulations for storm water discharges were issued by the U.S. Environmental Protection Agency (U.S. EPA) on November 16, 1990 (40 Code of Federal Regulations [CFR] Parts 122, 123, and 124). The regulations require operators of specific categories of facilities where discharges of storm water associated with industrial activity (storm water) occur to obtain an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm discharges.

2. This General Permit shall regulate storm water discharges and authorized non-storm water discharges from specific categories of industrial facilities identified in Attachment 1, storm water discharges and authorized non-storm water discharges from facilities as designated by the Regional Water Quality Control Boards (Regional Water Boards), and storm water discharges and authorized non-storm water discharges from other facilities seeking General Permit coverage. This General Permit may also regulate storm water discharges and authorized non-storm water discharges from facilities as required by U.S. EPA regulations. This General Permit shall regulate storm water discharges and authorized non-storm water discharges previously regulated by San Francisco Bay Regional Water Board Order, No.92-11 (as amended by Order No. 92-116). This General Permit excludes storm water discharges and non-storm water discharges that are regulated by other individual or general NPDES permits, storm water discharges and non-storm water discharges from construction activities, and storm water discharges and non-storm water discharges excluded by the Regional Water Boards for coverage by this General Permit. Attachment 2 contains the addresses and telephone numbers of each Regional Water Board office.

3. To obtain coverage for storm water discharges and authorized non-storm water discharges pursuant to this General Permit, operators of facilities (facility operators) must submit a Notice of Intent (NOI), in accordance with the Attachment 3

instructions, and appropriate annual fee to the State Water Board. This includes facility operators that have participated in U.S. EPA's group application process.

4. This General Permit does not preempt or supersede the authority of local agencies to prohibit, restrict, or control storm water discharges and authorized non-storm water discharges to storm drain systems or other water-courses within their jurisdictions as allowed by State and Federal law.

5. If an individual NPDES permit is issued to a facility operator otherwise subject to this General Permit or an alternative NPDES general permit is subsequently adopted which covers storm water discharges and/or authorized non-storm water discharges regulated by this General Permit, the applicability of this General Permit to such discharges is automatically terminated on the effective date of the individual NPDES permit or the date of approval for coverage under the subsequent NPDES general permit.

6. Effluent limitations and toxic and effluent standards established in Sections 208(b), 301, 302, 303(d), 304, 306, 307, and 403 of the Federal Clean Water Act (CWA), as amended, are applicable to storm water discharges and authorized non-storm water discharges regulated by this General Permit.

7. This action to adopt an NPDES general permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the California Water Code.

8. Federal regulations (40 CFR Subchapter N) establish effluent limitations guidelines for storm water discharges from some facilities in ten industrial categories.

9. For facilities which do not have established effluent limitation guidelines for storm water discharges in 40 CFR Subchapter N, it is not feasible at this time to establish numeric effluent limitations. This is due to the large number of discharges and the complex nature of storm water discharges. This is also consistent with the U.S. EPA's August 1, 1996 "Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits."

10. Facility operators are required to comply with the terms and conditions of this General Permit. Compliance with the terms and conditions of this General Permit constitutes compliance with BAT/BCT requirements and with requirements to achieve water quality standards. This includes the development and implementation of an effective Storm Water

Pollution Prevention Plan (SWPPP) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges.

11. Best Management Practices (BMPs) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges are appropriate where numeric effluent limitations are infeasible, and the implementation of BMPs is adequate to achieve compliance with BAT/BCT and with water quality standards.

12. The State Water Board has adopted a Watershed Management Initiative that encourages watershed management throughout the State. This General Permit recognizes the Watershed Management Initiative by supporting the development of watershed monitoring programs authorized by the Regional Water Boards.

13. Following adoption of this General Permit, the Regional Water Boards shall enforce its provisions.

14. Following public notice in accordance with State and Federal laws and regulations, the State Water Board held a public hearing on November 12, 1996 and heard and considered all comments pertaining to this General Permit. A response to all significant comments has been prepared and is available for public review.

15. This Order is an NPDES General Permit in compliance with Section 402 of the CWA and shall take effect upon adoption by the State Water Board.

16. All terms that are defined in the CWA, U.S. EPA storm water regulations and the Porter-Cologne Water Quality Control Act will have the same definition in this General Permit unless otherwise stated.

IT IS HEREBY ORDERED that all facility operators required to be regulated by this General Permit shall comply with the following:

A. DISCHARGE PROHIBITIONS:

1. Except as allowed in Special Conditions (D.1.) of this General Permit, materials other than storm water (non-storm water discharges) that discharge either directly or indirectly to waters of the United States are prohibited. Prohibited non-storm water discharges must be either eliminated or permitted by a separate NPDES permit.

2. Storm water discharges and authorized non-storm water discharges shall not cause or threaten to cause pollution, contamination, or nuisance.

B. EFFLUENT LIMITATIONS:

1. Storm water discharges from facilities subject to storm water effluent limitation guidelines in Federal regulations (40 CFR Subchapter N) shall not exceed the specified effluent limitations.

2. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.

3. Facility operators covered by this General Permit must reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges through implementation of BAT for toxic and non-conventional pollutants and BCT for conventional pollutants. Development and implementation of an SWPPP that complies with the requirements in Section A of the General Permit and that includes BMPs that achieve BAT/BCT constitutes compliance with this requirement.

C. RECEIVING WATER LIMITATIONS:

1. Storm water discharges and authorized non-storm water discharges to any surface or ground water shall not adversely impact human health or the environment.

2. Storm water discharges and authorized non-storm water discharges shall not cause or contribute to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan.

3. A facility operator will not be in violation of Receiving Water Limitation C.2. as long as the facility operator has implemented BMPs that achieve BAT/BCT and the following procedure is followed:

a. The facility operator shall submit a report to the appropriate Regional Water Board that describes the BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality

standards. The report shall include an implementation schedule. The Regional Water Board may require modifications to the report.

b. Following approval of the report described above by the Regional Water Board, the facility operator shall revise its SWPPP and monitoring program to incorporate the additional BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.

4. A facility operator shall be in violation of this General Permit if he/she fails to do any of the following:

a. Submit the report described above within 60 days after either the facility operator or the Regional Water Board determines that discharges are causing or contributing to an exceedance of an applicable water quality standard;

b. Submit a report that is approved by the Regional Water Board; or

c. Revise its SWPPP and monitoring program as required by the approved report.

D. SPECIAL CONDITIONS

1. Non-Storm Water Discharges

a. The following non-storm water discharges are authorized by this General Permit provided that they satisfy the conditions specified in Paragraph b. below: fire hydrant flushing; potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems; drinking fountain water; atmospheric condensates including refrigeration, air conditioning, and compressor condensate; irrigation drainage; landscape watering; springs; ground water; foundation or footing drainage; and sea water infiltration where the sea waters are discharged back into the sea water source.

b. The non-storm water discharges as provided in Paragraph a. above are authorized by this General Permit if all the following conditions are met:

i. The non-storm water discharges are in compliance with Regional Water Board requirements.

ii. The non-storm water discharges are in compliance with local agency ordinances and/or requirements.

iii. BMPs are spe
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E. PROVISIONS

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abbreviated NOI for
The abbreviated NOI
45 days of receipt.

2. Facility operators
State Water Board O
Order No. 92-12-DWQ
Board Order No. 92-
shall continue to ir
shall implement any
in accordance with
timely manner, but
Facility operators

adoption of this General Permit must develop and implement an SWPPP in accordance with Section A of this General Permit when the industrial activities begin.

3. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-116) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing Monitoring Program and shall implement any necessary revisions to their Monitoring Program in accordance with Section B of the General Permit in a timely manner, but in no case later than August 1, 1997. Facility operators beginning industrial activities after adoption of this General Permit must develop and implement a Monitoring Program in accordance with Section B of this General Permit when industrial activities begin.

4. Facility operators of feedlots as defined in 40 CFR Part 412 that are in full compliance with Section 2560 to Section 2565, Title 23, California Code of Regulations (Chapter 15) will be in compliance with all effluent limitations and prohibitions contained in this General Permit. Facility operators of feedlots that comply with Chapter 15, however, must perform monitoring in compliance with the requirements of Section B.4.d. and B.14. of this General Permit. Facility operators of feedlots must also comply with any Regional Water Board WDRs or NPDES general permit regulating their storm water discharges.

5. All facility operators must comply with lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding storm water discharges and non-storm water discharges entering storm drain systems or other watercourses under their jurisdiction, including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Boards to local agencies.

6. All facility operators must comply with the standard provisions and reporting requirements for each facility covered by this General Permit contained in Section C, Standard Provisions.

7. Facility operators that operate facilities with co-located industrial activities (facilities that have industrial activities that meet more than one of the descriptions in Attachment 1) that are contiguous to one another are authorized to file a single NOI to comply with the General Permit. Storm water discharges

and authorized non-storm water discharges from the co-located industrial activities are authorized provided that the SWPPP and Monitoring Program addresses each co-located industrial activity.

8. Upon reissuance of a successor NPDES general permit by the State Water Board, the facility operators subject to this reissued General Permit may be required to file an NOI.

9. Facility operators may request to terminate their coverage under this General Permit by filing a Notice of Termination (NOT) with the Regional Water Board. The NOT shall provide all documentation requested by the Regional Water Board. The facility operator will be notified when the NOT has been approved. Should the NOT be denied, facility operators are responsible for continued compliance with the requirements of this General Permit.

10. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116) shall:

    a. Complete the 1996-97 activities required by those general permits. These include, but are not limited to, conducting any remaining visual observations, sample collection, annual site inspection, annual report submittal, and (for group monitoring leaders) Group Evaluation Reports; and

    b. Comply with the requirements of this General Permit no later than August 1, 1997.

11. If the Regional Water Board determines that a discharge may be causing or contributing to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan, the Regional Water Board may order the facility operator to comply with the requirements described in Receiving Water Limitation C.3. The facility operator shall comply with the requirements within the time schedule established by the Regional Water Board.

12. If the facility operator determines that its storm water discharges or authorized non-storm water discharges are causing or contributing to an exceedance of any

applicable water quality standards, the facility operator shall comply with the requirements described in Receiving Water Limitation C.3.

13. State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) and San Francisco Bay Regional Water Board Order No. 91-011 (as amended by Order No. 92-116) are hereby rescinded.

F. REGIONAL WATER BOARD AUTHORITIES

1. Following adoption of this General Permit, Regional Water Boards shall:

   a. Implement the provisions of this General Permit, including, but not limited to, reviewing SWPPPs, reviewing annual reports, conducting compliance inspections, and taking enforcement actions.

   b. Issue other NPDES general permits or individual NPDES storm water permits as they deem appropriate to individual facility operators, facility operators of specific categories of industrial activities, or facility operators in a watershed or geographic area. Upon issuance of such NPDES permits by a Regional Water Board, the affected facility operator shall no longer be regulated by this General Permit. Any new NPDES permit issued by the Regional Water Board may contain different requirements than the requirements of this General Permit.

2. Regional Water Boards may provide guidance to facility operators on the SWPPP and the Monitoring Program and reporting implementation.

3. Regional Water Boards may require facility operators to conduct additional SWPPP and Monitoring Program and reporting activities necessary to achieve compliance with this General Permit.

4. Regional Water Boards may approve requests from facility operators whose facilities include co-located industrial activities that are not contiguous within the facilities (e.g., some military bases) to comply with this General Permit under a single NOI. Storm water discharges and authorized non-storm water discharges from the co-located industrial activities and from other sources within the facility that may generate significant quantities of pollutants are authorized provided the SWPPP and

Monitoring Program addresses each co-located industrial activity and other sources that may generate significant quantities of pollutants.

CERTIFICATION

The undersigned, Administrative Assistant to the State Water Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 17, 1997.

AYE: John P. Caffrey
John W. Brown
James M. Stubchaer
Marc Del Piero
Mary Jane Forster

NO: None

ABSENT: None

ABSTAIN: None

4/25/97

Maureen Marché
Administrative Assistant to the Board

SECTION A: STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. *Implementation Schedule*

A storm water pollution prevention plan (SWPPP) shall be developed and implemented for each facility covered by this General Permit in accordance with the following schedule.

a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement the SWPPP no later than October 1, 1992. Facility operators beginning industrial activities after October 1, 1992 shall develop and implement the SWPPP when industrial activities begin.

b. Existing facility operators that submitted a Notice of Intent (NOI), pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in a timely manner, but in no case later than August 1, 1997.

2. *Objectives*

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

3. *Planning and Organization*

a. *Pollution Prevention Team*

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Section B of this General Permit. The SWPPP shall clearly identify the General Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

b. *Review Other Requirements and Existing Facility Plans*

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General Permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this General Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

4. *Site Map*

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

TABLE A

FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION

*Form Pollution Prevention Team
*Review other plans

↓

ASSESSMENT PHASE

*Develop a site map
*Identify potential pollutant sources
*Inventory of materials and chemicals
*List significant spills and leaks
*Identify non-storm water discharges
*Assess pollutant Risks

↓

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE

*Non-structural BMPs
*Structural BMPs
*Select activity and site-specific BMPs

↓

IMPLEMENTATION PHASE

*Train employees
*Implement BMPs
*Conduct recordkeeping and reporting

↓

EVALUATION / MONITORING

*Conduct annual site evaluation
*Review monitoring information
*Evaluate BMPs
*Review and revise SWPPP

The following information shall be included on the site map:

a. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

b. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

c. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

d. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section A.6.a.iv. below have occurred.

e. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

5. *List of Significant Materials*

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

6. *Description of Potential Pollutant Sources*

a. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

i. Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302)

that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this General Permit.

v. Non-Storm Water Discharges

Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D. are prohibited by this General Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, boiler blowdown, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Condition D. are authorized by this General Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

vi. Soil Erosion

Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

b. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and

potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with Section A.8. below.

7. *Assessment of Potential Pollutant Sources*

a. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in A.6. above to determine:

i. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

ii. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

b. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 8 below.

8. *Storm Water Best Management Practices*

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections A.6. and 7. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

TABLE B

EXAMPLE

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery	fuel oil	- Use spill and overflow protection - Minimize run-on of storm water into the fueling area - Cover fueling area - Use dry cleanup methods rather than hosing down area - Implement proper spill prevention control program - Implement adequate preventative maintenance program to preventive tank and line leaks - Inspect fueling areas regularly to detect problems before they occur - Train employees on proper fueling, cleanup, and spill response techniques.
		Spills caused by topping off fuel tanks	fuel oil	
		Hosing or washing down fuel area	fuel oil	
		Leaking storage tanks	fuel oil	
		Rainfall running off fueling area, and rainfall running onto and off fueling area	fuel oil	

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

a. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

i. Good Housekeeping

Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

ii. Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

iii. Spill Response

This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

iv. Material Handling and Storage

This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

v. Employee Training

This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

vi. Waste Handling/Recycling

This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

vii. Recordkeeping and Internal Reporting

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

viii. Erosion Control and Site Stabilization

This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

ix. Inspections

This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

x. Quality Assurance

This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

b. Structural BMPs

Where non-structural BMPs as identified in Section A.8.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

i. Overhead Coverage

This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

ii. Retention Ponds

This includes basins, ponds, surface impoundments, bermed areas, etc., that do not allow storm water to discharge from the facility.

iii. Control Devices

This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

iv. Secondary Containment Structures

This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

v. Treatment

This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc., that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

9. Annual Comprehensive Site Compliance Evaluation

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

a. A review of all visual observation records, inspection records, and sampling and analysis results.

b. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

c. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

d. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in Section A.10.e, for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this General Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions 9. and 10. of Section C. of this General Permit.

10. *SWPPP General Requirements*

a. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

b. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

d. Other than as provided in Provisions B.11, B.12, and E.2 of the General Permit, the SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this General Permit.

e. When any part of the SWPPP is infeasible to implement by the deadlines specified in Provision E.2 or Sections A.1, A.9, A.10.c, and A.10.d of this General Permit due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

f. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

SECTION B. MONITORING PROGRAM AND REPORTING REQUIREMENTS

1. *Implementation Schedule*

Each facility operator shall develop a written monitoring program for each facility covered by this General Permit in accordance with the following schedule:

a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement a monitoring program no later than October 1, 1992. Facility operators beginning operations after October 1, 1992 shall develop and implement a monitoring program when the industrial activities begin.

b. Facility operators that submitted a Notice Of Intent (NOI) pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing monitoring program and implement any necessary revisions to their monitoring program in a timely manner, but in no case later than August 1, 1997. These facility operators may use the monitoring results conducted in accordance with those expired general permits to satisfy the pollutant/parameter reduction requirements in Section B.5.c., Sampling and Analysis Exemptions and Reduction certifications in Section B.12., and Group Monitoring Sampling credits in B.15.k. For facilities beginning industrial activities after the adoption of this General Permit, the monitoring program shall be developed and implemented when the facility begins the industrial activities.

2. *Objectives*

The objectives of the monitoring program are to:

a. Ensure that storm water discharges are in compliance with the Discharge Prohibitions, Effluent Limitations, and Receiving Water Limitations specified in this General Permit.

b. Ensure practices at the facility to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges are evaluated and revised to meet changing conditions.

c. Aid in the implementation and revision of the SWPPP required by Section A of this General Permit.

d. Measure the effectiveness of best management practices (BMPs) to prevent or reduce pollutants in storm water discharges and authorized non-storm water discharges. Much of the information necessary to develop the monitoring program, such as discharge locations, drainage areas, pollutant sources, etc., should be found in the Storm Water Pollution Prevention Plan (SWPPP). The facility's monitoring program shall be a written, site-specific document that shall be revised whenever appropriate and be readily available for review by employees or Regional Water Board inspectors.

3. *Non-storm Water Discharge Visual Observations*

a. Facility operators shall visually observe all drainage areas within their facilities for the presence of unauthorized non-storm water discharges;

b. Facility operators shall visually observe the facility's authorized non-storm water discharges and their sources;

c. The visual observations required above shall occur quarterly, during daylight hours, on days with no storm water discharges, and during scheduled facility operating hours[1]. Quarterly visual observations shall be conducted in each of the following periods: January-March, April-June, July-September, and October-December. Facility operators shall conduct quarterly visual observations within 6-18 weeks of each other.

d. Visual observations shall document the presence of any discolorations, stains, odors, floating materials, etc., as well as the source of any discharge. Records shall be maintained of the visual observation dates, locations observed, observations, and response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Section A of this General Permit.

[1] "Scheduled facility operating hours" are the time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

4. *Storm Water Discharge Visual Observations*

a. With the exception of those facilities described in Section B.4.d. below, facility operators shall visually observe storm water discharges from one storm event per month during the wet season (October 1-May 30). These visual observations shall occur during the first hour of discharge and at all discharge locations. Visual observations of stored or contained storm water shall occur at the time of release.

b. Visual observations are only required of storm water discharges that occur during daylight hours that are preceded by at least three (3) working days[2] without storm water discharges and that occur during scheduled facility operating hours.

c. Visual observations shall document the presence of any floating and suspended material, oil and grease, discolorations, turbidity, odor, and source of any pollutants. Records shall be maintained of observation dates, locations observed, observations, and response taken to reduce or prevent pollutants in storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Section A of this General Permit.

d. Feedlots (subject to Federal effluent limitations guidelines in 40 Code of Federal Regulations [CFR] Part 412) that are in compliance with Sections 2560 to 2565, Article 6, Chapter 15, Title 23, California Code of Regulations, and facility operators with storm water containment facilities shall conduct monthly inspections of their containment areas to detect leaks and ensure maintenance of adequate freeboard. Records shall be maintained of the inspection dates, observations, and any response taken to eliminate leaks and to maintain adequate freeboard.

5. *Sampling and Analysis*

a. Facility operators shall collect storm water samples during the first hour of discharge from (1) the first storm event of the wet season, and (2) at least one other storm event in the wet season. All storm water discharge locations shall be sampled. Sampling of stored or contained storm water shall occur at the time the stored

[2] Three (3) working days may be separated by non-working days such as weekends and holidays provided that no storm water discharges occur during the three (3) working days and the non-working days.

or contained storm water is released. Facility operators that do not collect samples from the first storm event of the wet season are still required to collect samples from two other storm events of the wet season and shall explain in the Annual Report why the first storm event was not sampled.

b. Sample collection is only required of storm water discharges that occur during scheduled facility operating hours and that are preceded by at least (3) three working days without storm water discharge.

c. The samples shall be analyzed for:

i. Total suspended solids (TSS) pH, specific conductance, and total organic carbon (TOC). Oil and grease (O&G) may be substituted for TOC; and

ii. Toxic chemicals and other pollutants that are likely to be present in storm water discharges in significant quantities. If these pollutants are not detected in significant quantities after two consecutive sampling events, the facility operator may eliminate the pollutant from future sample analysis until the pollutant is likely to be present again; and

iii. Other analytical parameters as listed in Table D (located at the end of this Section). These parameters are dependent on the facility's standard industrial classification (SIC) code. Facility operators are not required to analyze a parameter listed in Table D when the parameter is not already required to be analyzed pursuant to Section B.5.c.i. and ii. or B.6 of this General Permit, and either of the two following conditions are met: (1) the parameter has not been detected in significant quantities from the last two consecutive sampling events, or (2) the parameter is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation of the facilities industrial activities, potential pollutant sources, and SWPPP. Facility operators that do not analyze for the applicable Table D parameters shall certify in the Annual Report that the above conditions have been satisfied.

iv. Other parameters as required by the Regional Water Board.

6. *Facilities Subject to Federal Storm Water Effluent Limitation Guidelines*

Facility operators with facilities subject to Federal storm water effluent limitation guidelines, in addition to the requirements in Section B.5. above, must complete the following:

a. Collect and analyze two samples for any pollutant specified in the appropriate category of 40 CFR Subchapter N. The sampling and analysis exemptions and reductions described in Section B.12. of this General Permit do not apply to these pollutants.

b. Estimate or calculate the volume of storm water discharges from each drainage area;

c. Estimate or calculate the mass of each regulated pollutant as defined in the appropriate category of 40 CFR Subchapter N; and

d. Identify the individual(s) performing the estimates or calculations in accordance with Subsections b. and c. above.

7. *Sample Storm Water Discharge Locations*

a. Facility operators shall visually observe and collect samples of storm water discharges from all drainage areas that represent the quality and quantity of the facility's storm water discharges from the storm event.

b. If the facility's storm water discharges are commingled with run-on from surrounding areas, the facility operator should identify other visual observation and sample collection locations that have not been commingled by run-on and that represent the quality and quantity of the facility's storm water discharges from the storm event.

c. If visual observation and sample collection locations are difficult to observe or sample (e.g., sheet flow, submerged outfalls), facility operators shall identify and collect samples from other locations that represent the quality and quantity of the facility's storm water discharges from the storm event.

d. Facility operators that determine that the industrial activities and BMPs within two or more drainage areas are substantially identical may either (i) collect samples from a reduced number of substantially identical

drainage areas, or (ii) collect samples from each substantially identical drainage area and analyze a combined sample from each substantially identical drainage area. Facility operators must document such a determination in the annual report.

8. *Visual Observation and Sample Collection Exceptions*

Facility operators are required to be prepared to collect samples and conduct visual observations at the beginning of the wet season (October 1) and throughout the wet season until the minimum requirements of Sections B.4. and B.5. are completed with the following exceptions:

a. A facility operator is not required to collect a sample and conduct visual observations in accordance with Section B.4 and Section B.5 due to dangerous weather conditions, such as flooding, electrical storm, etc., when storm water discharges begin after scheduled facility operating hours or when storm water discharges are not preceded by three working days without discharge. Visual observations are only required during daylight hours. Facility operators that do not collect the required samples or visual observations during a wet season due to these exceptions shall include an explanation in the Annual Report why the sampling or visual observations could not be conducted.

b. A facility operator may conduct visual observations and sample collection more than one hour after discharge begins if the facility operator determines that the objectives of this Section will be better satisfied. The facility operator shall include an explanation in the Annual Report why the visual observations and sample collection should be conducted after the first hour of discharge.

9. *Alternative Monitoring Procedures*

Facility operators may propose an alternative monitoring program that meets Section B.2 monitoring program objectives for approval by the Regional Water Board. Facility operators shall continue to comply with the monitoring requirements of this Section and may not implement an alternative monitoring plan until the alternative monitoring plan is approved by the Regional Water Board. Alternative monitoring plans are subject to modification by the Regional Water Boards.

10. *Monitoring Methods*

a. Facility operators shall explain how the facility's monitoring program will satisfy the monitoring program objectives of Section B.2. This shall include:

   i. Rationale and description of the visual observation methods, location, and frequency.

   ii. Rationale and description of the sampling methods, location, and frequency; and

   iii. Identification of the analytical methods and corresponding method detection limits used to detect pollutants in storm water discharges. This shall include justification that the method detection limits are adequate to satisfy the objectives of the monitoring program.

b. All sampling and sample preservation shall be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a facility operator's own field instruments for measuring pH and Electro Conductivity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. All metals shall be reported as total metals. With the exception of analysis conducted by facility operators, all laboratory analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. Facility operators may conduct their own sample analyses if the facility operator has sufficient capability (qualified employees, laboratory equipment, etc.) to adequately perform the test procedures.

11. *Inactive Mining Operations*

Inactive mining operations are defined in Attachment 1 of this General Permit. Where comprehensive site compliance evaluations, non-storm water discharge visual observations, storm water discharge visual observations, and storm water sampling are impracticable, facility operators of inactive mining operations may instead obtain certification once every three years by a Registered Professional Engineer that an SWPPP has been prepared for the facility and is being implemented in accordance with the requirements of this General Permit. By means of these certifications, the

Registered Professional Engineer having examined the facility and being familiar with the provisions of this General Permit shall attest that the SWPPP has been prepared in accordance with good engineering practices. Facility operators of mining operations who cannot obtain a certification because of noncompliance must notify the appropriate Regional Water Board and, upon request, the local agency which receives the storm water discharge.

12. *Sampling and Analysis* Exemptions and Reductions

A facility operator who qualifies for sampling and analysis exemptions, as described below in Section B.12.a.i., or who qualifies for reduced sampling and analysis, as described below in Section B.12.b., must submit the appropriate certifications and required documentation to the Regional Water Boards prior to the wet season (October 1) and recertify as part of the Annual Report submittal. A facility operator that qualifies for either the Regional Water Board or local agency certification programs, as described below in Section B.12.a.ii. and iii., shall submit certification and documentation in accordance with the requirements of those programs. Facility operators who provide certifications in accordance with this Section are still required to comply with all other monitoring program and reporting requirements. Facility operators shall prepare and submit their certifications using forms and instructions provided by the State Water Board, Regional Water Board, or local agency or shall submit their information on a form that contains equivalent information. Facility operators whose facility no longer meets the certification conditions must notify the Regional Water Boards (and local agency) within 30 days and immediately comply with the Section B.5. sampling and analysis requirements. Should a Regional Water Board (or local agency) determine that a certification does not meet the conditions set forth below, facility operators must immediately comply with the Section B.5. sampling and analysis requirements.

a. Sampling and Analysis Exemptions

A facility operator is not required to collect and analyze samples in accordance with Section B.5. if the facility operator meets all of the conditions of one of the following certification programs:

i. No Exposure Certification (NEC)

This exemption is designed primarily for those facilities where all industrial activities are conducted inside buildings and where all materials stored and handled are not exposed to storm water.

To qualify for this exemption, facility operators must certify that their facilities meet all of the following conditions:

(1) All prohibited non-storm water discharges have been eliminated or otherwise permitted.

(2) All authorized non-storm water discharges have been identified and addressed in the SWPPP.

(3) All areas of past exposure have been inspected and cleaned, as appropriate.

(4) All significant materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.

(5) All industrial activities and industrial equipment are not exposed to storm water or authorized non-storm water discharges.

(6) There is no exposure of storm water to significant materials associated with industrial activity through other direct or indirect pathways such as from industrial activities that generate dust and particulates.

(7) There is periodic re-evaluation of the facility to ensure conditions (1), (2), (4), (5), and (6) above are continuously met. At a minimum, re-evaluation shall be conducted once a year.

ii. Regional Water Board Certification Programs

The Regional Water Board may grant an exemption to the Section B.5. Sampling and Analysis Requirements if it determines a facility operator has met the conditions set forth in a Regional Water Board certification program. Regional Water Board certification programs may include conditions to (1) exempt facility operators whose facilities infrequently discharge storm water to waters of the United States, and (2) exempt facility operators that demonstrate compliance with the terms and conditions of this General Permit.

iii. Local Agency Certifications

A local agency may develop a local agency certification program. Such programs must be approved by the Regional Water Board. An approved local agency program may either grant an exemption

from the Section B.5. Sampling and Analysis Requirements or reduce the frequency of sampling if it determines that a facility operator has demonstrated compliance with the terms and conditions of this General Permit.

b. Sampling and Analysis Reduction

i. A facility operator may reduce the number of sampling events required to be sampled for the remaining term of this General Permit if the facility operator provides certification that the following conditions have been met:

(1) The facility operator has collected and analyzed samples from a minimum of six storm events from all required drainage areas;

(2) All prohibited non-storm water discharges have been eliminated or otherwise permitted;

(3) The facility operator demonstrates compliance with the terms and conditions of the General Permit for the previous two years (i.e., completed Annual Reports, performed visual observations, implemented appropriate BMPs, etc.);

(4) The facility operator demonstrates that the facility's storm water discharges and authorized non-storm water discharges do not contain significant quantities of pollutants; and

(5) Conditions (2), (3), and (4) above are expected to remain in effect for a minimum of one year after filing the certification.

ii. Unless otherwise instructed by the Regional Water Board, facility operators shall collect and analyze samples from two additional storm events during the remaining term of this General Permit in accordance with Table C below. Facility operators shall collect samples of the first storm event of the wet season. Facility operators that do not collect samples from the first storm event of the wet season shall collect samples from another storm event during the same wet season. Facility operators that do not collect a sample in a required wet season shall collect the sample from another storm event in the next wet season. Facility operators shall explain in the Annual Report why the first storm

event of a wet season was not sampled or a sample was not taken from any storm event in accordance with the Table C schedule.

Table C
REDUCED MONITORING SAMPLING SCHEDULE

Facility Operator Filing Sampling Reduction Certification By	Samples Shall be Collected and Analyzed in These Wet Seasons	
	Sample 1	Sample 2
Sept. 1, 1997	Oct. 1, 1997-May 31, 1998	Oct. 1, 1999-May 31, 2000
Sept. 1, 1998	Oct. 1, 1998-May 31, 1999	Oct. 1, 2000-May 31, 2001
Sept. 1, 1999	Oct. 1, 1999-May 31, 2000	Oct. 1, 2001-May 31, 2002
Sept. 1, 2000	Oct. 1, 2000-May 31, 2001	Oct. 1, 2002-May 31, 2003
Sept. 1, 2001	Oct. 1, 2001-May 31, 2002	Oct. 1, 2003-May 31, 2004

13. *Records*

Records of all storm water monitoring information and copies of all reports (including the Annual Reports) required by this General Permit shall be retained for a period of at least five years. These records shall include:

a. The date, place, and time of site inspections, sampling, visual observations, and/or measurements;

b. The individual(s) who performed the site inspections, sampling, visual observations, and or measurements;

c. Flow measurements or estimates (if required by Section B.6);

d. The date and approximate time of analyses;

e. The individual(s) who performed the analyses;

f. Analytical results, method detection limits, and the analytical techniques or methods used;

g. Quality assurance/quality control records and results;

h. Non-storm water discharge inspections and visual observations and storm water discharge visual observation records (see Sections B.3. and 4.);

i. Visual observation and sample collection exception records (see Section B.5.a, 7.d, 8, and 12.b.ii.);

j. All calibration and maintenance records of on-site instruments used;

k. All Sampling and Analysis Exemption and Reduction certifications and supporting documentation (see Section B.12);

l. The records of any corrective actions and follow-up activities that resulted from the visual observations.

14. *Annual Report*

All facility operators shall submit an Annual Report by July 1 of each year to the Executive Officer of the Regional Water Board responsible for the area in which the facility is located and to the local agency (if requested).

The report shall include a summary of visual observations and sampling results, an evaluation of the visual observation and sampling and analysis results, laboratory reports, the Annual Comprehensive Site Compliance Evaluation Report required in Section A.9., an explanation of why a facility did not implement any activities required by the General Permit (if not already included in the Evaluation Report), and records specified in Section B.13.i. The method detection limit of each analytical parameter shall be included. Analytical results that are less than the method detection limit shall be reported as "less than the method detection limit." The Annual Report shall be signed and certified in accordance with Standard Provisions 9. and 10. of Section C of this General Permit. Facility operators shall prepare and submit their Annual Reports using the annual report forms provided by the State Water Board or Regional Water Board or shall submit their information on a form that contains equivalent information.

15. *Group Monitoring*

Facility operators may participate in group monitoring as described below. A facility operator that participates in group monitoring shall develop and implement a written site-specific SWPPP and monitoring program in accordance with the General Permit and must satisfy any group monitoring requirements. Group monitoring shall be subject to the following requirements:

a. A group monitoring plan (GMP) shall be developed and implemented by a group leader representing a group of similar facility operators regulated by this General Permit or by a local agency which holds an NPDES permit (local agency permittee) for a municipal separate storm sewer system. GMPs with participants that discharge

storm water within the boundaries of a single Regional Water Board shall be approved by that Regional Water Board. GMPs with participants that discharge storm water within the boundaries of multiple Regional Water Boards shall be approved by the State Water Board. The State Water Board and/or Regional Water Board(s) may disapprove a facility's participation in a GMP or require a GMP participant to conduct additional monitoring activities.

b. At least two samples from each GMP participant shall be collected and analyzed in accordance with Section B.5. over the five-year period of this General Permit. The two sample minimum applies to new and existing members. The group leader or local agency permittee shall schedule sampling to meet the following conditions: (i) to evenly distribute the sample collection over the five-year term of this General Permit, and (ii) to collect the two samples at each participant's facility in different and non-consecutive wet seasons. New participants who join in Years 4 and 5 of this General Permit are not subject to Condition (ii) above. Group leaders shall explain in the annual Group Evaluation Report why any scheduled samples were not collected and reschedule the sampling so that all required samples are collected during the term of this General Permit.

c. The group leader or local agency permittee must have the appropriate resources to develop and implement the GMP. The group leader or local agency permittee must also have the authority to terminate any participant who is not complying with this General Permit and the GMP.

d. The group leader or local agency permittee is responsible for:

i. Developing, implementing, and revising the GMP;

ii. Developing and submitting an annual Group Evaluation Report to the State Water Board and/or Regional Water Board by August 1 of each year that includes:

(1) An evaluation and summary of all group monitoring data,

(2) An evaluation of the overall performance of the GMP participants in complying with this General Permit and the GMP,

(3) Recommended baseline and site-specific BMPs that should be considered by each participant based upon Items (1) and (2) above, and

(4) A copy of each evaluation report and recommended BMPs as required in Section B.15.d.v. below.

iii. Recommending appropriate BMPs to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges;

iv. Assisting each participant in completing their Annual Comprehensive Site Compliance Evaluation and Annual Report;

v. Conducting a minimum of two on-site inspections of each participant's facility (it is recommended that these inspections be scheduled during the Annual Comprehensive Site Compliance Evaluation) during the term of this General Permit to evaluate the participant's compliance with this General Permit and the GMP, and to recommend any additional BMPs necessary to achieve compliance with this General Permit. Participants that join in Years 4 and 5 shall be scheduled for one evaluation. A copy of the evaluation and recommended BMPs shall be provided to the participants;

vi. Submitting a GMP (or revisions, as necessary), to the appropriate Regional Water Board(s) and State Water Board no later than September 1, 1997 (or August 1 in subsequent years). Once approved, a group leader or local agency permittee shall submit a letter of intent by August 1 of each year to continue the approved GMP. The letter of intent must include a roster of participants, participant's Waste Discharge Identification number (WDID#), updated sampling schedules, and any other revisions to the GMP;

vii. Revising the GMP as instructed by the Regional Water Board or the State Water Board; and

viii. Providing the State Water Board and/or Regional Water Board with quarterly updates of any new or deleted participants and corresponding changes in the sampling and inspection schedule.

e. The GMP shall:

i. Identify the participants of the GMP by name, location, and WDID number;

ii. Include a narrative description summarizing the industrial activities of participants of the GMP and

explain why the participants, as a whole, have sufficiently similar industrial activities and BMPs to be covered by a group monitoring plan;

iii. Include a list of typical potential pollutant sources associated with the group participant's facilities and recommended baseline BMPs to prevent or reduce pollutants associated with industrial activity in the storm water discharges and authorized non-storm water discharges;

iv Provide a five-year sampling and inspection schedule in accordance with Subsections b. and d.v. above.

v. Identify the pollutants associated with industrial activity that shall be analyzed at each participant's facility in accordance with Section B.5. The selection of these pollutants shall be based upon an assessment of each facility's potential pollutant sources and likelihood that pollutants associated with industrial activity will be present in storm water discharges and authorized non-storm water discharges in significant quantities.

f. Sampling and analysis shall be conducted in accordance with the applicable requirements of this Section.

g. Unless otherwise instructed by the Regional Water Board or the State Water Board Executive Director, the GMPs shall be implemented at the beginning of the wet season (October 1).

h. All participants in an approved GMP that have not been selected to sample in a particular wet season are required to comply with all other monitoring program and reporting requirements of this Section including the submittal of an Annual Report by July 1 of each year to the appropriate Regional Water Board.

i. If any GMP includes participants which are subject to Federal storm water effluent limitation guidelines, each of those participants must perform the monitoring described in Section B.6. and submit the results of the monitoring to the appropriate Regional Water Board in the facility operator's Annual Report.

j. GMPs and Group Evaluation Reports should be prepared in accordance with State Water Board (or Regional Water Board) guidance.

k. GMP participants may receive sampling credits in accordance with the following conditions:

i. Current or prior participants (group participants) of approved GMPs, who have not collected and analyzed the six samples necessary to qualify for the Section B.7.b.i.(1) Sampling and Analysis Reduction, may substitute credit earned through participation in a GMP for up to four of the six required samples. Credits for GMP participation shall be calculated as follows:

(1) Credits may only be earned in years of participation where the GMP participant was not scheduled to sample and the GMP was approved.

(2) One credit will be earned for each year of valid GMP participation.

(3) One additional credit may be earned for each year the overall GMP sample collection performance is greater than 75 percent.

ii. GMP participants substituting credit as calculated above shall provide proof of GMP participation and certification that all the conditions in Section B.12.b.i. have been met. GMP participants substituting credits in accordance with Section B.15.k.i.(3) shall also provide GMP sample collection performance documentation.

iii. GMP participants that qualify for Sampling and Analysis Reduction and have collected and analyzed one or more samples after October 1, 1997 shall only be required to collect one additional sample during the remainder of this General Permit. The sample shall be collected in accordance with the "Sample 2" schedule in Table C of this Section.

n. Group leaders shall furnish, within 60 days of receiving a request from the State Water Board or Regional Water Board, any GMP information and documentation necessary to verify the Section B.15.k. sampling credits. Group leaders may also provide this information and documentation to the group participants.

16. *Watershed Monitoring Option*

Regional Water Boards may approve proposals to substitute watershed monitoring for some or all of the requirements of this Section if the Regional Water Board finds that the watershed monitoring will provide substantially similar monitoring information in evaluating facility operator compliance with the requirements of this General Permit.

TABLE D
ADDITIONAL ANALYTICAL PARAMETERS

Subsector	SIC	Activity Represented	Parameters
SECTOR A. TIMBER PRODUCTS			
A1	2421	General Sawmills and Planing Mills	COD;TSS;Zn
A2	2491	Wood Preserving	As;Cu
A3	2411	Log Storage and Handling	TSS
A4	2426	Hardwood Dimension and Flooring Mills	COD;TSS
A4	2429	Special Product Sawmills, Not Elsewhere Classified	COD;TSS
A4	243X	Millwork, Veneer, Plywood, and Structural Wood	COD;TSS
A4		(except 2434--Wood Kitchen Cabinet Manufacturers)	
A4	244X	Wood Containers	COD;TSS
A4	245X	Wood Buildings and Mobile Homes	COD;TSS
A4	2493	Reconstituted Wood Products	COD;TSS
A4	2499	Wood Products, Not Elsewhere Classified	
SECTOR B. PAPER AND ALLIED PRODUCTS MANUFACTURING			
B1	261X	Pulp Mills	
B2	262X	Paper Mills	
B3	263X	Paperboard Mills	COD
B4	265X	Paperboard Containers and Boxes	
B5	267X	Converted Paper and Paperboard Products, Except Containers and Boxes	
SECTOR C. CHEMICAL AND ALLIED PRODUCTS MANUFACTURING			
C1	281X	Industrial Inorganic Chemicals	Al;Fe;N+N
C2	282X	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic, and Other Manmade Fibers Except Glass	Zn
C4	284X	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations	N+N;Zn
C5	285X	Paints, Varnishes, Lacquers, Enamels, and Allied Products	
C6	286X	Industrial Organic Chemicals	
C7	287X	Nitrogenous and Phosphatic Basic Fertilizers, Mixed Fertilizer, Pesticides, and Other Agricultural Chemicals	Fe;N+N;Pb;Zn:P
C8	289X	Miscellaneous Chemical Products	
	3952	Inks and Paints, Including China Painting Enamels, India Ink, (limited to list) Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints, and Artist's Watercolors	
SECTOR D. ASPHALT PAVING/ROOFING MATERIALS MANUFACTURERS AND LUBRICANT MANUFACTURERS			
D1	X	Asphalt Paving and Roofing Materials	TSS
D2	2992	Lubricating Oils and Greases	

Parameter Names

Al - Aluminum; As - Arsenic; NH_3- Ammonia; Zn - Zinc; Cd - Cadmium; CN - Cyanide; Hg - Mercury; TSS -Total Suspended Solids; Cu - Copper; Fe - Iron; P - Phosphorus; COD - Chemical Oxygen Demand; Mg - Magnesium; Ag - Silver; Se - Selenium; BOD - Biochemical Oxygen Demand; N + N - Nitrate & Nitrite Nitrogen; Pb - Lead

Subsector	SIC	Activity Represented	Parameters
SECTOR E. GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCT MANUFACTURING			
E1	3211	Flat Glass	
E1	322X	Glass and Glassware, Pressed or Blown	
E1	323X	Glass Products Made of Purchased Glass	
E2	3241	Hydraulic Cement	
E3	325X	Structural Clay Products	Al
E3	326X	Pottery and Related Products	Al
E3	3297	Non-Clay Refractories	Al
E4	327X	Concrete, Gypsum, and Plaster Products (Except Lime) (except 3274).	TSS;Fe
E4	3295	Minerals and Earths, Ground, or Otherwise Treated	TSS;Fe
SECTOR F. PRIMARY METALS			
F1	331X	Steel Works, Blast Furnaces, Rolling & Finishing Mill	Al;Zn
F2	332X	Iron and Steel Foundries	Al;TSS;Cu;Fe;Zn
F3	333X	Primary Smelting and Refining of Nonferrous Metals	
F4	334X	Secondary Smelting and Refining of Nonferrous Metals	
F5	335X	Rolling, Drawing, and Extruding of Nonferrous Metals	Cu;Zn
F6	336X	Nonferrous Foundries (Castings)	Cu;Zn
F7	339X	Miscellaneous Primary Metal Products	
SECTOR G. METAL MINING (ORE MINING AND DRESSING) EXCEPT INACTIVE METAL MINING ACTIVITIES ON FEDERAL LANDS WHERE AN OPERATOR CANNOT BE IDENTIFIED			
G1	101X	Iron Ores	
G2	102X	Copper Ores	TSS;COD;N+N
G3	103X	Lead and Zinc Ores	
G4	104X	Gold and Silver Ores	
G5	106X	Ferroalloy Ores, Except Vanadium	
G6	108X	Metal Mining Services	
G7	109X	Miscellaneous Metal Ores	
SECTOR H. COAL MINES AND COAL MINING-RELATED FACILITIES			
NA	12XX	Coal Mines and Coal Mining-Related Facilities	TSS;Al;Fe
SECTOR I. COAL MINES AND COAL MINING-RELATED FACILITIES			
I1	131X	Crude Petroleum and Natural Gas	
I2	132X	Natural Gas Liquids	
I3	138X	Oil and Gas Field Services	
SECTOR J. MINERAL MINING AND DRESSING EXCEPT INACTIVE MINERAL MINING ACTIVITIES OCCURRING ON FEDERAL LANDS WHERE AN OPERATOR CANNOT BE IDENTIFIED			
J1	141X	Dimension Stone	TSS
J1	142X	Crushed and Broken Stone, Including Rip Rap	TSS
J1	148X	Nonmetallic Minerals, Except Fuels	TSS
J2	144X	Sand and Gravel	TSS;N+N
J3	145X	Clay, Ceramic, and Refractory Materials	
J4	147X	Chemical and Fertilizer Mineral Mining	
J4	149X	Miscellaneous Nonmetallic Minerals, Except Fuels	

Subsector	SIC	Activity Represented	Parameters
SECTOR K. HAZARDOUS WASTE TREATMENT STORAGE OR DISPOSAL FACILITIES			
NA	4953	Hazardous Waste Treatment Storage or Disposal	NH_3;Mg;COD;As Cd;CN;Pb Hg;Se;Ag
SECTOR L. LANDFILLS AND LAND APPLICATION SITES			
NA	4953	Landfills and Land Application Sites That Receive or Have Received Industrial Wastes, Except Inactive Landfills or Land Applications Sites Occurring on Federal Lands Where an Operator Cannot be Identified	TSS;Fe
SECTOR M. AUTOMOBILE SALVAGE YARDS			
NA	5015	Facilities Engaged in Dismantling or Wrecking Used Motor Vehicles for Parts Recycling or Resale and for Scrap	TSS;Fe;Pb;Al
SECTOR N. SCRAP RECYCLING FACILITIES			
NA	5093	Processing, Reclaiming, and Wholesale Distribution of Scrap and Waste Materials	TSS;Fe;Pb Al;Cu;Zn;COD
SECTOR O. STEAM ELECTRIC GENERATING FACILITIES			
NA	4911	Steam Electric Power Generating Facilities	Fe
SECTOR P. LAND TRANSPORTATION FACILITIES THAT HAVE VEHICLE AND EQUIPMENT MAINTENANCE SHOPS AND/OR EQUIPMENT CLEANING OPERATIONS			
P1	40XX	Railroad Transportation	
P2	41XX	Local and Highway Passenger Transportation	
P3	42XX	Motor Freight Transportation and Warehousing	
P4	43XX	United States Postal Service	
P5	5171	Petroleum Bulk Stations and Terminals	
SECTOR Q. WATER TRANSPORTATION FACILITIES THAT HAVE VEHICLE (VESSEL) & EQUIPMENT MAINTENANCE SHOPS AND/OR EQUIPMENT CLEANING OPERATIONS			
NA	44XX	Water Transportation	Al;Fe;Pb;Zn
SECTOR R. SHIP AND BOAT BUILDING OR REPAIRING YARDS			
NA	373X	Ship and Boat Building or Repairing Yards	
SECTOR S. AIR TRANSPORTATION FACILITIES			
NA	45XX	Air Transportation Facilities That Have Vehicle Maintenance Ships, Material Handing Facilities, Equipment Cleaning Operations, or Airport and/or Aircraft Deicing/Anti-icing Operations	BOD;COD;NH_3;pH

Subsector	SIC	Activity Represented	Parameters
SECTOR T. TREATMENT WORKS			
NA	4952	Treatment Works Treating Domestic Sewage or Any Other Sewage Sludge or Wastewater Treatment Device or System Used in the Storage, treatment, recycling, or Reclamation of Municipal or Domestic Sewage with a Design Flow of 1.0 MGD or More or Required to Have an Approved Pretreatment Program	
SECTOR U. FOOD AND KINDRED PRODUCTS			
U1	201X	Meat Products	
U2	202X	Dairy Products	
U3	203X	Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties	
U4	204X	Grain Mill Products	TSS
U5	205X	Bakery Products	
U6	206X	Sugar and Confectionery Products	
U7	207X	Fats and Oils	BOD;COD;TSS;N+N
U8	208X	Beverages	
U9	209X	Miscellaneous Food Preparations and Kindred Products	
NA	21XX	Tobacco Products	
SECTOR V. TEXTILE MILLS, APPAREL, AND OTHER FABRIC PRODUCT MANUFACTURING			
V1	22XX	Textile Mill Products	
V2	23XX	Apparel and Other Finished Products Made From Fabrics and Similar Materials	
SECTOR W. FURNITURE AND FIXTURES			
NA	25XX	Furniture and Fixtures	
NA	2434	Wood Kitchen Cabinets	
SECTOR X. PRINTING AND PUBLISHING			
NA	2732	Book Printing	
NA	2752	Commercial Printing, Lithographic	
NA	2754	Commercial Printing, Gravure	
NA	2759	Commercial Printing, Nor Elsewhere Classified	
NA	2796	Platemaking and Related Services	
SECTOR Y. RUBBER, MISCELLANEOUS PLASTIC PRODUCTS, AND MISC. MANUFACTURING INDUSTRIES			
Y1	301X	Tires and Inner Tubes	Zn
Y1	302X	Rubber and Plastics Footwear	Zn
Y1	305X	Gaskets, Packing, and Sealing Devices and Rubber and Plastics Hose and Belting	Zn
Y1	306X	Fabricated Rubber Products, Not Elsewhere Classified	Zn
Y2	308X	Miscellaneous Plastics Products	

Subsector	SIC	Activity Represented	Parameters
Y2	393X	Musical Instruments	
Y2	394X	Dolls, Toys, Games, and Sporting and Athletic Goods	
Y2	395X	Pens, Pencils, and Other Artists' Materials	
Y2	396X	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal	
Y2	399X	Miscellaneous Manufacturing Industries	
SECTOR Z. LEATHER TANNING AND FINISHING			
NA	311X	Leather Tanning and Finishing	
NA	NA	Facilities that Make Fertilizer Solely From Leather Scraps and Leather Dust	
SECTOR AA. FABRICATED METAL PRODUCTS			
AA1	3429	Hardware, Not Elsewhere Classified	Zn;N+N;Fe;Al
AA1	3441	Fabricated Structural Metal	Zn;N+N;Fe;Al
AA1	3442	Metal Doors, Sash, Frames, Molding, and Trim	Zn;N+N;Fe;Al
AA1	3443	Fabricated Plate Work (Boiler Shops)	Zn;N+N;Fe;Al
AA1	3444	Sheet Metal Work	Zn;N+N;Fe;Al
AA1	3451	Screw Machine Products	Zn;N+N;Fe;Al
AA1	3452	Bolts, Nuts, Screws, Rivets, and Washers	Zn;N+N;Fe;Al
AA1	3462	Iron and Steel Forgings	Zn;N+N;Fe;Al
AA1	3471	Electroplating, Plating, Polishing, Anodizing, and Coloring	Zn;N+N;Fe;Al
	3494	Valves and Pipe Fittings, Not Elsewhere Classified	Zn;N+N;Fe;Al
AA1	3496	Miscellaneous Fabricated Wire Products	Zn;N+N;Fe;Al
AA1	3499	Fabricated Metal Products, Not Elsewhere Classified	Zn;N+N;Fe;Al
AA1	391X	Jewelry, Silverware, and Plated Ware	Zn;N+N
AA2	3479	Coating, Engraving, and Allied Services	Zn;N+N
SECTOR AB. TRANSPORTATION EQUIPMENT, INDUSTRIAL OR COMMERCIAL MACHINERY			
NA	35XX	Industrial and Commercial Machinery (except Computer and (except 357X) Office Equipment)	
NA	37XX	Transportation Equipment (except Ship and Boat Building and (except 373X) Repairing	
SECTOR AC. ELECTRONIC, ELECTRICAL, PHOTOGRAPHIC, AND OPTICAL GOODS			
NA	36XX	Electronic and Other Electrical Equipment and Components, Except Computer Equipment	
NA	38XX	Measuring, Analyzing, and Controlling Instruments; Photographic, Medical, and Optical Goods; Watches and Clocks	
NA	357X	Computer and Office Equipment	

Section C: STANDARD PROVISIONS

1. Duty to Comply

The facility operator must comply with all of the conditions of this General Permit. Any General Permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for (a) enforcement action for (b) General Permit termination, revocation and reissuance, or modification or (c) denial of a General Permit renewal application.

The facility operator shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

2. General Permit Actions

This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the facility operator for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any General Permit condition.

If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition, and the facility operator so notified.

3. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a facility operator in an enforcement action that it would have been necessary to halt or reduce the general permitted activity in order to maintain compliance with the conditions of this General Permit.

4. Duty to Mitigate

The facility operator shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

The facility operator at all times shall properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the facility operator to achieve compliance with the conditions of this General Permit and with the requirements of storm water pollution prevention plans (SWPPPs). Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a facility operator when necessary to achieve compliance with the conditions of this General Permit.

6. Property Rights

This General Permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

7. Duty to Provide Information

The facility operator shall furnish the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (State Water Board), U.S. Environmental Protection Agency (U.S. EPA), or local storm water management agency, within a reasonable time specified by the agencies, any requested information to determine compliance with this General Permit. The facility operator shall also furnish, upon request, copies of records required to be kept by this General Permit.

8. Inspection and Entry

The facility operator shall allow the Regional Water Board, State Water Board, U.S. EPA, and local storm water management agency, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the facility operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this General Permit;

b. Have access to and copy at reasonable times any records that must be kept under the conditions of this General Permit;

c. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) that are related to or may impact storm water discharge or authorized non-storm water discharge; and

d. Conduct monitoring activities at reasonable times for the purpose of ensuring General Permit compliance.

9. Signatory Requirements

a. All Notices of Intent (NOIs) submitted to the State Water Board shall be signed as follows:

(1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (b) the manager of the facility if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. The principal executive officer of a Federal agency includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).

b. All reports, certifications, or other information required by the General Permit or requested by the Regional Water Board, State Water Board, U.S. EPA, or local storm water management agency shall be signed by a person described above or by a duly authorized representative. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above and retained as part of the SWPPP.

(2) The authorization specifies either an individual or a position having responsibility for the

overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

(3) If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be attached to the SWPPP prior to submittal of any reports, certifications, or information signed by the authorized representative.

10. Certification

Any person signing documents under Provision 9. above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. Reporting Requirements

a. Planned changes: The facility operator shall give advance notice to the Regional Water Board and local storm water management agency of any planned physical alteration or additions to the general permitted facility. Notice is required under this provision only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged.

b. Anticipated noncompliance: The facility operator will give advance notice to the Regional Water Board and local storm water management agency of any planned changes at the permitted facility which may result in noncompliance with General Permit requirements.

c. Compliance schedules: Reports of compliance or noncompliance with or any progress reports on interim and final requirements contained in any compliance schedule of this General Permit shall be submitted no later than 14 days following each scheduled date.

d. Noncompliance reporting: The facility operator shall report any noncompliance at the time monitoring reports are submitted. The written submission shall contain (1) a description of the noncompliance and its cause; (2) the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and (3) steps taken or planned to reduce and prevent recurrence of the noncompliance.

12. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the facility operator from any responsibilities, liabilities, or penalties to which the facility operator is or may be subject under Section 311 of the CWA.

13. Severability

The provisions of this General Permit are severable; and if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

14. Reopener Clause

This General Permit may be modified, revoked, and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 CFR 122.62, 122.63, 122.64, and 124.5. This General Permit may be reopened to modify the provisions regarding authorized non-storm water discharges specified in Section D. Special Conditions.

15. Penalties for Violations of General Permit Conditions.

a. Section 309 of the CWA provides significant penalties for any person who violates a General Permit condition implementing Sections 301, 302, 306, 307 308, 318, or 405 of the CWA, or any General Permit condition or limitation implementing any such section in a General Permit issued under Section 402. Any person who

violates any General Permit condition of this General Permit is subject to a civil penalty not to exceed $25,000 per day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

b. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties in some cases greater than those under the CWA.

16. Availability

A copy of this General Permit shall be maintained at the facility and be available at all times to the appropriate facility personnel and to Regional Water Board and local agency inspectors.

17. Transfers

This General Permit is not transferable from one facility operator to another facility operator nor may it be transferred from one location to another location. A new facility operator of an existing facility must submit an NOI in accordance with the requirements of this General Permit to be authorized to discharge under this General Permit.

18. Continuation of Expired General Permit

This General Permit continues in force and effect until a new general permit is issued or the State Water Board rescinds the General Permit. Facility operators authorized to discharge under the expiring general permit are required to file an NOI to be covered by the reissued General Permit.

19. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years, or by both.

FACILITIES COVERED BY THIS GENERAL PERMIT

Industrial facilities include Federal, State, municipally owned, and private facilities from the following categories:

1. FACILITIES SUBJECT TO STORM WATER EFFLUENT LIMITATIONS GUIDELINES, NEW SOURCE PERFORMANCE STANDARDS, OR TOXIC POLLUTANT EFFLUENT STANDARDS (40 Code of Federal Regulations (CFR) SUBCHAPTER N). Currently, categories of facilities subject to storm water effluent limitations guidelines are Cement Manufacturing (40 CFR Part 411), Feedlots (40 CFR Part 412), Fertilizer Manufacturing (40 CFR Part 418), Petroleum Refining (40 CFR Part 419), Phosphate Manufacturing (40 CFR Part 422), Steam Electric (40 CFR Part 423), Coal Mining (40 CFR Part 434), Mineral Mining and Processing (40 CFR Part 436), Ore Mining and Dressing (40 CFR Part 440), and Asphalt Emulsion (40 CFR Part 443).

2. MANUFACTURING FACILITIES: Standard Industrial Classifications (SICs) 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285) 29, 311, 32 (except 323), 33, 3441, and 373.

3. OIL AND GAS/MINING FACILITIES: SICs 10 through 14 including active or inactive mining operations (except for areas of coal mining operations meeting the definition of a reclamation area under 40 CFR 434.11(l) because of performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Act (SMCRA) authority has been released, or except for area of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990); oil and gas exploration, production, processing, or treatment operations; or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations. Inactive mining operations are mined sites that are not being actively mined but which have an identifiable facility operator. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined material; or sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim.

4. HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES: Includes those operating under interim status or a general permit under Subtitle C of the Federal Resource, Conservation, and Recovery Act (RCRA).

5. LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS: Sites that receive or have received industrial waste from any of the facilities covered by this General Permit, sites subject to regulation under Subtitle D of RCRA, and sites that have accepted wastes from construction activities (construction activities include any clearing, grading, or excavation that results in disturbance of five acres or more).

6. RECYCLING FACILITIES: SICs 5015 and 5093. These codes include metal scrapyards, battery reclaimers, salvage yards, motor vehicle dismantlers and wreckers, and recycling facilities that are engaged in assembling, breaking up, sorting, and wholesale distribution of scrap and waste material such as bottles, wastepaper, textile wastes, oil waste, etc.

7. STEAM ELECTRIC POWER GENERATING FACILITIES: Includes any facility that generates steam for electric power through the combustion of coal, oil, wood, etc.

8. TRANSPORTATION FACILITIES: SICs 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or other operations identified herein that are associated with industrial activity.

9. SEWAGE OR WASTEWATER TREATMENT WORKS: Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of one million gallons per day or more or required to have an approved pretreatment program under 40 CFR Part 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the Clean Water Act.

10. MANUFACTURING FACILITIES WHERE INDUSTRIAL MATERIALS, EQUIPMENT, OR ACTIVITIES ARE EXPOSED TO STORM WATER: SICs 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221-4225.

STORM WATER CONTACTS FOR THE STATE AND REGIONAL WATER BOARDS

STATE WATER RESOURCES CONTROL BOARD
Division of Water Quality
Attention: Storm Water Permit Unit
P.O. Box 1977
Sacramento, CA 95812-1977
(916) 657-0919 FAX:(916) 657-1011
Contact: Bruce Fujimoto

1)NORTH COAST REGION
Benjamin D. Kor, Executive Officer
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403
(707) 576-2220 FAX:(707) 523-0135
Contact: Nathan Quarles

2)SAN FRANCISCO BAY REGION
Loretta Kahn Barsamian, Executive Officer
2101 Webster Street, Suite 500
Oakland, CA 94612
(510) 286-1255 FAX:(510) 286-1380
Contact: Tom Mumley

3)CENTRAL COAST REGION
Roger W. Briggs, Executive Officer
81 Higuera Street, Suite 200
San Luis Obispo, CA 93401-5427
(805) 549-3147 FAX:(805) 543-0397
Contact: Matt Fabry

4)LOS ANGELES REGION
Lawrence P. Kolb, Acting Executive Officer
101 Centre Plaza Drive
Monterey Park, CA 91754-2156
(213) 266-7500 FAX:(213) 266-7600
Contact: Xavier Swamikannu

5S)CENTRAL VALLEY REGION
Sacramento Office
Gary M. Carlton, Executive Officer
3443 Routier Road, Suite A
Sacramento, CA 95827-3098
(916) 255-3000 FAX:(916) 255-3015
Contact: Pamela Barksdale

5R)CENTRAL VALLEY REGION
Redding Branch Office
James C. Pedri, Supervising Engineer
415 Knollcrest Drive
Redding, CA 96002
(916) 224-4849 FAX:(916) 224-4857
Contact: Carole Crowe

5f)CENTRAL VALLEY REGION
Fresno Branch Office
Loren J. Harlow, Assistant Executive Officer
3614 East Ashlan Avenue
Fresno, CA 93726
(209) 445-5116 FAX:(209) 445-5910
Contact: Darrell Evensen

6SLT) LAHONTAN REGION
South Lake Tahoe Office
Harold J. Singer, Executive Officer
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150
(916) 542-5400 FAX:(916) 544-2271
Contact: John Short

6V)LAHONTAN REGION
Victorville Office
Hisam Basqai, Supervising Engineer
15428 Civic Drive, Suite 100
Victorville, CA 92392
(760) 241-6583 FAX:(760) 241-7308
Contact: Tom Rheiner

7)COLORADO RIVER BASIN REGION
Philip Gruenberg, Executive Officer
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260
(760) 346-7491 FAX:(760) 341-6820
Contact: Orlando Gonzalez

8)SANTA ANA REGION
Gerard J. Thibeault, Executive Officer
3737 Main Street, Suite 500
Riverside, CA 92501-3339
(909) 782-4130 FAX:(909) 781-6288
Contact: Michael Adackapara

9)SAN DIEGO REGION
John H. Robertus, Executive Officer
9771 Clairmont Mesa Boulevard, Suite A
San Diego, CA 92124
(619) 467-2952 FAX:(619) 571-6972
Contact: Gloria Fulton

NOTICE OF INTENT (NOI) INSTRUCTIONS

TO COMPLY WITH STATE WATER RESOURCES CONTROL BOARD WATER QUALITY ORDER NO. 97-03-DWQ NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT NO. CAS000001

Who Must Submit

The facility operator must submit an NOI for each industrial facility that is required by U.S. Environmental Protection Agency (U.S.EPA) regulations to obtain a storm water permit. The required industrial facilities are listed in Attachment 1 of the General Permit and are also listed in 40 Code of Federal Regulations Section 122.26(b)(14).

The facility operator is typically the owner of the business or operation where the industrial activities requiring a storm water permit occur. The facility operator is responsible for all permit related activities at the facility.

Where operations have discontinued and significant materials remain on site (such as at closed landfills), the landowner may be responsible for filing an NOI and complying with this General Permit. Landowners may also file an NOI for a facility if the landowner, rather than the facility operator, is responsible for compliance with this General Permit.

How and Where to Apply

The completed NOI form, a site map, and appropriate fee must be mailed to the State Water Resources Control Board (State Water Board) at the following address:

State Water Resources Control Board
Division of Water Quality
P.O. Box 1977
Sacramento, CA 95812-1977
Attn: Storm Water Permitting Unit

Please Note: Do not send the original or copies of the NOI submittal to the Regional Water Quality Control Board (Regional Water Board). The original NOI will be forwarded to the Regional Water Board after processing.

Do not send a copy of your Storm Water Pollution Prevention Plan (SWPPP) with your NOI submittal. Your SWPPP is to be kept on site and made available for review upon request.

When to Apply

Facility operators of existing facilities must file an NOI in accordance with these instructions by March 30, 1992. Facility

operators of new facilities (those beginning operations after March 30, 1992) must file an NOI in accordance with these instructions at least 14 days prior to the beginning of operations.

Once the completed NOI, site map, and appropriate fee have been submitted to the State Water Board, your NOI will be processed and you will be issued a receipt letter with a Waste Discharge Identification (WDID) Number. Please refer to this number when you contact either the State or Regional Water Boards.

Fees

The annual fee is either $250 or $500 depending on the facility location. See page 7 of these directions to determine your fee. Feedlots pay a one time fee of $2,000 for their discharge permit. Checks should be made payable to: SWRCB

The permit fee is waived for facilities that currently pay an annual fee for a National Pollutant Discharge Elimination System (NPDES) permit or Waste Discharge Requirement (WDR) permit (see Section XIII of the NOI).

Change of Information

If the information provided on the NOI or site map changes, you should report the changes to the State Water Board using an NOI form. Section I of the line-by-line instructions includes information regarding changes to the NOI.

Questions

If you have any questions completing the NOI, please call the appropriate Regional Water Board (Attachment 2) or the State Water Board at (916) 657-0919.

NOI LINE-BY-LINE INSTRUCTIONS

Please type or print your responses on the NOI. Please complete the NOI form in its entirety and sign the certification.

Section I--NOI STATUS

Check box "A" if this is a new NOI registration.

Check box "B" if you are reporting changes to the NOI (e.g., new contact person, phone number, mailing address). Include the facility WDID #. Highlight all the information that has been changed.

Please note that a change of information **does not** apply to a change of facility operator or a change in the location of the facility. These changes require a Notice of Termination (NOT) and submittal of a new NOI and annual fee. Contact the State Water Board or Regional Water Boards for more information on the NOT Form and instructions.

Regardless of whether you are submitting a new or revised NOI, you must complete the NOI in its entirety and the NOI must be signed.

Section II--Facility Operator Information

Part A: The facility operator is the legal entity that is responsible for all permit related compliance activities at the facility. In most cases, the facility operator is the owner of the business or operation where the industrial activity occurs. Give the legal name and the address of the person, firm, public organization, or any other entity that is responsible for complying with the General Permit.

Part B: Check the box that indicates the type of operation.

Section III--Facility Site Information

Part A: Enter the facility's official or legal name and provide the address. Facilities that do not have a street address must provide cross-streets or parcel numbers. Do not include a P.O. Box address in Part A.

Part B: Enter the mailing address of the facility if different than Part A. This address may be a P.O. Box.

The contact person should be the plant or site manager who is familiar with the facility and responsible for overseeing compliance of the General Permit requirements.

Part C: Enter the total size of the facility in either acres or square feet. Also include the percentage

of the site that is impervious (areas that water cannot soak into the ground, such as concrete, asphalt, and rooftops).

Part D: Determine the Standard Industrial Classification (SIC) code which best identifies the industrial activity that is taking place at the facility. This information can be obtained by referring to the Standard Industrial Classification Manual prepared by the Federal Office of Management and Budget which is available at public libraries. The code you determine should identify the industrial activity that requires you to submit the NOI. (For example, if the business is high school education and the activity is school bus maintenance, the code you choose would be bus maintenance, not education.) Most facilities have only one code; however, additional spaces are provided for those facilities that have more than one activity.

Part E: Identify the title of the industrial activity that requires you to submit the NOI (e.g., the title of SIC Code 2421 is Sawmills and Planing Mills, General). If you cannot identify the title, provide a description of the regulated activity(s).

Section IV--Address for Correspondence

Correspondence relative to the permit will be mailed occasionally. Check the box which indicates where you would like such correspondence delivered. If you want correspondence sent to another contact person or address different than indicated in Section II or Section III then include the information on an extra sheet of paper.

Section V--Billing Address Information

To continue coverage under the General Permit, the annual fee must be paid. Use this section to indicate where the annual fee invoices should be mailed. Enter the billing address if different than the address given in Sections II or III.

Section VI--Receiving Water Information

Provide the name of the receiving water where storm water discharge flows from your facility. A description of each option is included below.

1. Directly to waters of the United States: Storm water discharges directly from the facility to a river, creek, lake, ocean, etc. Enter the name of the receiving water (e.g., Boulder Creek).

2. Indirectly to waters of the United States: Storm water discharges over adjacent properties or right-of-ways prior to discharging to waters of the United States. Enter the name of the closest receiving water (e.g., Clear Creek).

Section VII--Implementation of Permit Requirements

Parts A and B: Check the boxes that best describe the status of the *Storm Water Pollution Prevention Plan* (SWPPP) and the Monitoring Program.

Part C: Check yes or no to questions 1 through 4. If you answer no to any question, you need to assign a person to these tasks immediately.

As a permit holder you are required to have an SWPPP and Monitoring Program in place prior to the beginning of facility operations. Failure to do so is in direct violation of the General Permit. Do not send a copy of your SWPPP with your NOI submittal.

Please refer to Sections A and B of the General Permit for additional information regarding the SWPPP and Monitoring Program.

Section VIII--Regulatory Status

In some instances, the facility may be covered under another permit from the State Water Board. If there is a current NPDES or WDR permit for the facility, list the permit number in the space provided (e.g., NPDES Permit CA0000123, WDR No. 96-960). You will not be required to pay the annual fee for the General Permit if you are already paying a fee for an NPDES or WDR permit. If the facility is not covered under a State Water Board permit, then skip to Section IX.

Section IX--Site Map

Provide a "to scale" drawing of the facility and its immediate surroundings. Include as much detail about the site as possible. At a minimum, indicate buildings, material handling and storage areas, roads, names of adjacent streets, storm water discharge points, sample collection points, and a north arrow. Whenever possible limit the map to a standard size sheet of paper (8.5" x 11" or 11" x 17"). **Do not send blueprints** unless you are sending one page and it meets the size limits as defined above.

A location map may also be included, especially in cases where the facility is difficult to find, but are not to be submitted as a substitute for the site map. The location map can be created from local street maps and U.S. Geological Survey (USGS) quadrangle maps, etc.

A revised site map must be submitted whenever there is a significant change in the facility layout (e.g., new building, change in storage locations, boundary change, etc.).

Section X--Certification

This section should be read by the facility operator. The certification provides assurances that the NOI and site map were completed by the facility operator in an accurate and complete fashion and with the knowledge that penalties exist for providing false information. It also requires the Responsible Party to certify that the provisions in the General Permit will be complied with.

The NOI must be signed by:

For a Corporation: a responsible corporate officer (or authorized individual).

For a Partnership or Sole Proprietorship: a general partner or the proprietor, respectively.

For a Municipality, State, or other non-Federal Public Agency: either a principal executive officer or ranking elected official.

For a Federal Agency: either the chief or senior executive officer of the agency.

AREAS OF THE STATE IN WHICH THE $250.00 ANNUAL FEE APPLIES

Alameda County: Except *MIDWAY*

Contra Costa County: Except for the city of *BRENTWOOD*

El Dorado County: The area which drains into LAKE TAHOE

Fresno County: The cities of *CLOVIS* and *FRESNO* (and incorporated islands within the Fresno/Clovis area)

Kern County: The city of *BAKERSFIELD*

Los Angeles County: Except the cities of *AVALON, LANCASTER, PALMDALE; and areas with zip codes 93523, 93534, 93535, 93536, 93543, 93544, 93550, 93551, 93553, 93560, and 93563*

Orange County

Placer County: The area which drains into *Lake Tahoe*

Riverside County: The cities of *AGUANGA, ALBERHILL, ANZA, BANNING, BEAUMONT, CAHUILLA, CALIMESA, CANYON LAKE, CATHEDRAL CITY, CHERRY VALLEY, CHINO, COACHELLA, COLTON, CORONA, DESERT HOT SPRINGS, EDGEMONT, ELSINORE, GILMAN HOT SPRINGS, HEMET, HIGHGROVE, HOMELAND, IDYLLWILD, INDIAN WELLS, INDIO, LA QUINTA, LAKE ELSINORE, LAKELAND VILLAGE, LAKEVIEW, MENIFEE, MIRA LOMA, MORENO, MORENO VALLEY, MOUNTAIN CENTER, MURRIETA, NORCO, NUEVO, PALM DESERT, PALM SPRINGS, PEDLEY, PERRIS, RANCHO MIRAGE, REDLANDS, RIVERSIDE, ROMOLAND, RUBIDOUX, SAGE, SAN JACINTO, SUN CITY, SUNNYMEAD, TEMECULA, THOMAS MTN, WILDOMAR, WINCHESTER, WOODCREST, and VALLE VISTA*

Sacramento County: Except for the city of *ISLETON*

San Bernardino County: The cities of *ALTA LOMA, ANGELUS OAKS, BIG BEAR CITY, BIG BEAR LAKE, BLOOMINGTON, CAJON JUNCTION, CAMP ANGELUS, CHINO, CHINO HILLS, COLTON, CORONA, CUCAMONGA, DEVORE, EAST HIGHLANDS, ETIWANDA, FAWNSKIN, FONTANA, FOREST FALLS, GRAND TERRACE, GUASTI, HIGHLAND, LOMA LINDA, LOS SERRANOS, LYTLE CREEK, MENTONE, MONTCLAIR, MT. BALDY, MUSCOY, NORCO, ONTARIO, POMONA, RANCHO CUCAMONGA, REDLANDS, RIALTO, RUNNING SPRINGS, SAN BERNARDINO, SEVEN OAKS, UPLAND, and YUCAIPA*

San Diego County: Except for the cities of *AGUA CALIENTE SPRINGS, BORREGO, BORREGO SPRINGS, BOULEVARD, DESERT SHORES, DOS CABEZAS, JACUMBA, JULIAN, MOUNTAIN SPRING, OCOTILLO WELLS, and SAN FELIPE*

San Joaquin County: The city of *STOCKTON*

San Mateo County

Santa Clara County: Except for the cities of *BELL STATION, BOLDER CREEK, GILROY, HOLLISTER, MORGAN HILL, SAN FELIPE, SAN MARTIN, SARGENT, and SVEADAL*

Solano County: The cities of *FAIRFIELD and SUISUN CITY*

Stanislaus County: The city of *MODESTO*

Ventura County: The cities of *CAMARILLO, FILLMORE, MOORPARK, OJAI, OXNARD, PORT HUENEME, SAN BUENAVENTURA, SANTA PAULA, SIMI VALLEY, and THOUSAND OAKS*

State of California
State Water Resources Control Board

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH **INDUSTRIAL ACTIVITY** (WQ ORDER No. 97-03-DWQ)
(*Excluding Construction Activities*)

SECTION I. NOI STATUS (please check only one box)

A. [ ] New Permittee   B. [ ] Change of Information   WDID # |_|_|_|_|_|_|_|_|_|_|_|

SECTION II. FACILITY OPERATOR INFORMATION (See instructions)

A. NAME: ______________________   Phone: ___--___--____

Mailing Address: ______________________

City: ______________________   State: ___   Zip Code: _____--____

Contact Person: ______________________

B. OPERATOR TYPE:
(*check one*) 1.[ ] Private 2.[ ]City 3.[ ]County 4.[ ]State 5.[ ]Federal 6.[ ]Special District 7.[ ]Gov. Combo

SECTION III. FACILITY SITE INFORMATION

A. FACILITY NAME ______________________   Phone: ___--___--____

Facility Location: ______________________   County: ______________

City: ______________________   State: C A   Zip Code: _____--____

B. MAILING ADDRESS: ______________________

City: ______________________   State: ___   Zip Code: _____--____

Contact Person: ______________________

C. FACILITY INFORMATION
Total Size of Site: ________   (check one) Acres [ ]   Sq. Ft. [ ]

Percent of Site Impervious (*including rooftops*) ____ %

D. SIC CODE(S) OF REGULATED ACTIVITY: E. REGULATED ACTIVITY (*describe each SIC code*):

1. |_|_|_|_| ______________________
2. |_|_|_|_| ______________________
3. |_|_|_|_| ______________________

SECTION IV. ADDRESS FOR CORRESPONDENCE

|_| Facility Operator Address |_| Facility Mailing Address |_| Both

SECTION V. BILLING ADDRESS INFORMATION

SEND BILL TO: [ ]Facility Operator (Section II) [ ]Facility (Section III) [ ]Other (*enter information below*)

Name: Phone:

Mailing Address:

City: State: Zip Code:

Contact Person:

SECTION VI. RECEIVING WATER INFORMATION

Your facility's storm water discharges flow (*check one*) [ ] Directly OR [ ] Indirectly to waters of the United States.

Name of receiving water: _____
(river, lake, stream, ocean, etc.)

SECTION VII. IMPLEMENTATION OF PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (*check one*)
[ ] A SWPPP has been prepared for this facility and is available for review.
[ ] A SWPPP will be prepared and ready for review by (enter date): ____/____/____.

B. MONITORING PROGRAM (check one)
[ ] A Monitoring Program has been prepared for this facility and is available for review.
[ ] A Monitoring Program will be prepared and ready for review by (enter date): ____/____/____.

C. PERMIT COMPLIANCE RESPONSIBILITY
Has a person been assigned responsibility for:
1. Inspecting the facility throughout the year to identify any potential pollution problems? ____YES ____NO
2. Collecting storm water samples and having them analyzed? ____YES ____NO
3. Preparing and submitting an annual report by July 1 of each year? ____YES ____NO
4. Eliminating discharges other than storm water (*such as equipment or vehicle wash-water*) into the storm drain? ____YES ____NO

SECTION VIII. REGULATORY STATUS (*Go to Section IX if not applicable*)

A. WASTE DISCHARGE REQUIREMENT ORDER NUMBER: _____ B. NPDES PERMIT CA: _____

SECTION IX. SITE MAP

I HAVE ENCLOSED A SITE MAP YES[ ] A new NOI submitted without a site map will be rejected.

SECTION X. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name: _____

Signature: _____ Date _____

Title: _____

DEFINITIONS

1. "Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment measures, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may include any type of pollution prevention and pollution control measure necessary to achieve compliance with this General Permit.

2. Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500 as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; 33 USC. 1251 et seq.

3. "Facility" is a collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.

4. "Non-Storm Water Discharge" means any discharge to storm sewer systems that is not composed entirely of storm water.

5. "Significant Materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERLCA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

6. "Significant Quantities" is the volume, concentrations, or mass of a pollutant that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standards for the receiving water.

7. "Significant Spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 CFR 110.10 and 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).

8. "Storm water" means storm water runoff, snow melt runoff, and storm water surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

9. "Storm Water Associated with Industrial Activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program. For the facilities identified in Categories 1 through 9 of Attachment 1 of this General Permit, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials; manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined at 40 CFR Part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

   For the facilities identified in Category 10 of Attachment 1 of this General Permit, the term only includes storm water discharges from all areas listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery <u>are exposed to storm water</u>.

   Material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph) include those facilities designated under 40 CFR 122.26(a)(1)(v).

Attachment 5

ACRONYM LIST

BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMPs	Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Federal Superfund)
CFR	Code of Federal Regulations
CWA	Clean Water Act
General Permit	General Industrial Activities Storm Water Permit
GMP	Group Monitoring Plan
NEC	No Exposure Certification
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
O&G	Oil and Grease
RCRA	Resource, Conservation, and Recovery Act
Regional Water Board	Regional Water Quality Control Board
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act of 1986
SIC	Standard Industrial Classification
SMCRA	Surface Mining Control and Reclamation Act
SPCC	Spill Prevention Control and Countermeasures
State Water Board	State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
TOC	Total Organic Carbon
TSS	Total Suspended Solids
U.S. EPA	U.S. Environmental Protection Agency
WDID	Waste Discharger Identification
WDRs	Waste Discharge Requirements

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER: WQ 99 - 05

Own Motion Review of the Petition of
Environmental Health Coalition
to Review Waste Discharge Requirements Order No. 96-03,
NPDES Permit No. CAS0108740
for Storm Water and Urban Runoff from the
Orange County Flood Control District
and the
Incorporated Cities of Orange County
Within the San Diego Region,
Issued by the
California Regional Water Quality Control Board,
San Diego Region.

SWRCB/OCC File A-1041

BY THE BOARD:

In Order WQ 98-01, the State Water Resources Control Board (State Water Board) ordered that certain receiving water limitation language be included in future municipal storm water permits. Following inclusion of that language in permits issued by the San Francisco Bay and San Diego Regional Water Quality Control Boards (Regional Water Boards) for Vallejo and Riverside respectively, the United States Environmental Protection Agency (EPA) objected to the permits. The EPA objection was based on the receiving water limitation language. The EPA has now issued those permits itself and has included receiving water limitation language it deems appropriate.

In light of EPA's objection to the receiving water limitation language in Order WQ 98-01 and its adoption of alternative language, the State Water Board is revising its instructions regarding receiving water limitation language for municipal storm water permits. It is hereby ordered that Order WQ 98-01 will be amended to remove the receiving water limitation language contained therein and to substitute the EPA language. Based on the reasons stated here, and as a precedent decision,[1] the following receiving water limitation language shall be included in future municipal storm water permits.[2]

RECEVING WATER LIMITATIONS

The permittees shall comply with Discharge Prohibitions [ ][3] and Receiving Water Limitations [ ] through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SWMP and other requirements of this permit including any modifications. The SWMP shall be designed to achieve compliance with Receiving Water Limitations [ ]. If exceedance(s) of water quality objectives or water quality standards (collectively, WQS) persist notwithstanding implementation of the SWMP and other requirements of this permit, the permittees shall assure compliance with Discharge Prohibitions [ ] and Receiving Water Limitations [ ] by complying with the following procedure:

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[1] In SWRCB Order WR 96-1, the State Water Board determined that water quality orders are precedent decisions. (See Gov. Code §11425.60.)

[2] This language may be revised as necessary to ensure that terminology conforms with the rest of the permit.

[3] Insert appropriate numbers for prohibitions and limitations that implement water quality objectives and water quality standards.

a. Upon a determination by either the permittees or the Regional Water Board that discharges are causing or contributing to an exceedance of an applicable WQS, the permittees shall promptly notify and thereafter submit a report to the Regional Water Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be incorporated in the annual update to the SWMP unless the Regional Water Board directs an earlier submittal. The report shall include an implementation schedule. The Regional Water Board may require modifications to the report.

b. Submit any modifications to the report required by the Regional Water Board within 30 days of notification.

c. Within 30 days following approval of the report described above by the Regional Water Board, the permittees shall revise the SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, implementation schedule, and any additional monitoring required.

d. Implement the revised SWMP and monitoring program in accordance with the approved schedule.

So long as the permittees have complied with the procedures set forth above and are implementing the revised SWMP, the permittees do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Regional Water Board to develop additional BMPs.

///

///

ORDER

IT IS ORDERED that Order WQ 98-01 is revised as discussed above.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on June 17, 1999.

AYE: James M. Stubchaer
Mary Jane Forster
John W. Brown
Arthur G. Baggett, Jr.

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché
Administrative Assistant to the Board

International Headquarters & Laboratory
Phone 630 505 0160

WWW.WQA.ORG
A not-for-profit organization

NITRATE/ NITRITE FACT SHEET

Contaminant	In Water As	Maximum Contaminant Level
Nitrate	NO_3^{-1}	**US EPA:** MCL* = 10.0 mg/L (as N) MCLG** (goal) = 10.0 mg/L (as N) **Health Canada** MAC*** = 10 mg/L (as N) **WHO† Guideline:** 11.3 mg/L (as N) 50 mg/L (as NO_3^{-1})
Nitrite	NO_2^{-1}	**US EPA:** MCL* = 1.0 mg/L (as N) MCLG** (goal) = 1.0 mg/L (as N) **Health Canada** MAC*** = 1 mg/L (as N) **WHO† Guideline** = 1 mg/L (as N)
Sources of Contaminant	Human sewage and livestock manure Fertilizers Erosion of natural deposits	
Potential Health Effects	Methemoglobinemia (blue baby syndrome) Most potential health effects are seen in infants under the age of 6 months	
Treatment Methods **Point-of-Entry** **Point-of-Use**	Reverse Osmosis with thin film composite membrane Anion Exchange (Type I and II, Cl^- form, subject to competing sulfates) Nitrate "Selective" Anion Exchange resins Distillation Electrodialysis	

*Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.

**Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.

***MAC - Maximum Acceptable Concentration

WHO† - World Health Organization

Most nitrogenous materials in natural waters tend to be converted to nitrate, so all sources of combined nitrogen, particularly organic nitrogen and ammonia, should be considered as potential nitrate sources. Primary sources of organic nitrates include human sewage and livestock manure, especially from feedlots.

The primary inorganic nitrates which may contaminate drinking water are potassium nitrate and ammonium nitrate both of which are widely used as fertilizers. According to the Toxics Release Inventory, releases to water and land totaled over 253 million pounds in 2012. The US EPA conducted a 6-year review for selected drinking water contaminants, and from 1998-2005 the largest releases of nitrates occurred in California by far. In 2005 alone, of the data collected for the review, California had 320 systems above the MCL.

The principle sources of nitrate contamination in water are thus fertilizers, animal waste, and septic tank wastes. The water supplies most vulnerable to nitrate contamination are in agricultural areas and in well waters having a close or hydraulic relationship to septic tanks. In 2005, the US EPA found 1,062 public water systems were in violation of the MCL. A more recent intensive study of 19,000 wells in two counties in California showed median levels of 20 to 23 mg/L of NO_3^{-1} with 1 in 10 wells showing higher than regulated values. An analysis of these numbers over three decades indicated that nitrate levels increased about 2.5 mg/L NO_3^{-1} per each decade due to ongoing agricultural activities.

The US Geological Survey (USGS) released results of studies on about 2,100 private wells (2009) and 932 public wells (2010). The report on private wells states: "*Nitrate was the most common inorganic contaminant derived from man-made sources – such as from fertilizer applications and septic tanks – that was found at concentrations greater than the Federal drinking water standard for public water supplies (10 mg/L).* A 2006 USGS study suggests more than 1 million private well owners are located in areas with groundwater risk above the 10 mg/l MCL (see Figure 1 for occurrence map). Factors that contribute to the risk of nitrate groundwater contamination include fertilizers, population density, soil drainage, and woodland to cropland ratio, depth to the seasonally high water table, and presence of sand or gravel aquifers. For more information on how the risk analysis study was conducted, review the report on the USGS website: http://water.usgs.gov/nawqa/nutrients/pubs/est_v36_no10/.

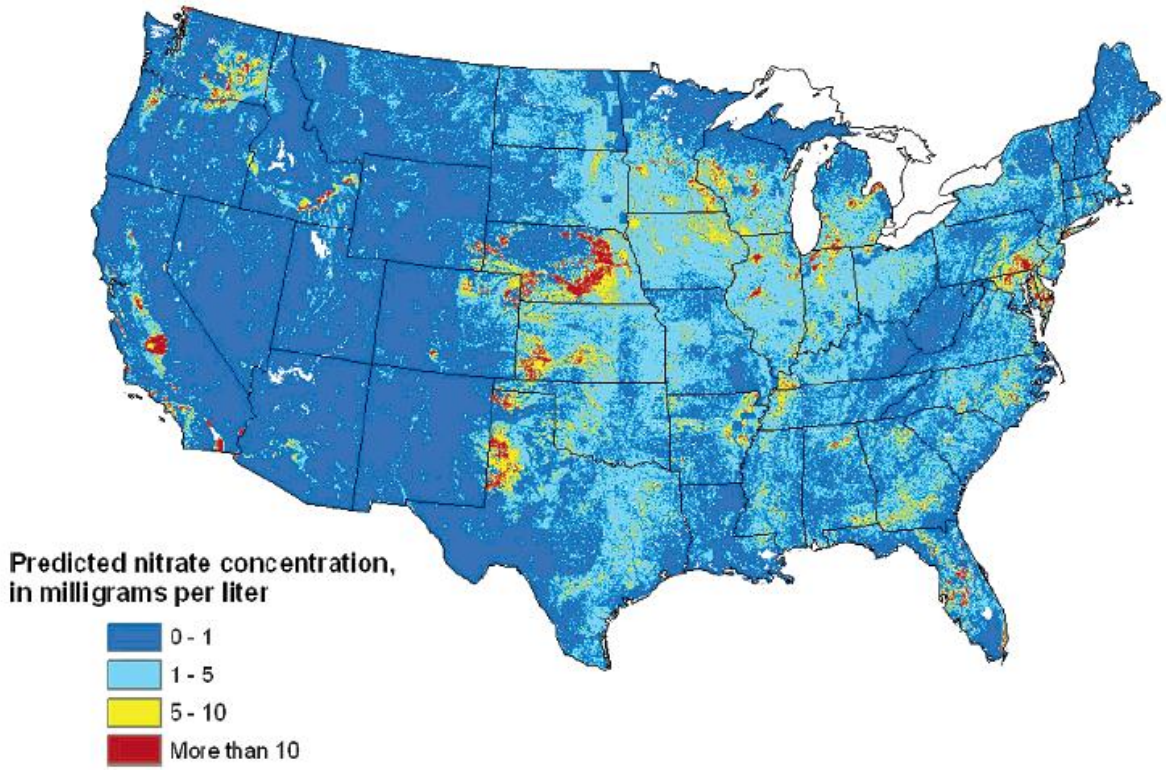

FIGURE 1: NITRATE CONCENTRATION US GROUNDWATER AS PREDICTED BY THE USGS RISK MODEL (2006).

HEALTH EFFECTS

Nitrate in drinking water can be responsible for a temporary blood disorder in infants called methemoglobinemia (blue baby syndrome). In infants less than six months old, a condition exists in their digestive systems which allows for the chemical reduction of nitrate to nitrite. The nitrite absorbs through the stomach and reacts with hemoglobin to form methemoglobin, which does not have the oxygen carrying capacity of hemoglobin. Thus, the oxygen deficiency in the infant's blood results in the "blue baby" syndrome. When the nitrate-contaminating source is removed, the effects are reversible. Since ingestion of water containing high nitrate concentrations can be fatal to infants and livestock, the U.S. EPA has established a level of 10 mg/L total nitrate (measured as nitrogen) as the Maximum Contaminant Level Goal (MCLG) and Maximum Contaminant Level (MCL) in drinking water. This is equivalent to 44.2 mg/L when measured as nitrate ion, NO_3^{-1}. The Agency has also established an MCLG and an MCL of 1 mg/L for nitrite (measured as nitrogen) as well as the 10 mg/L MCL for total nitrate plus nitrite (measured as nitrogen). Although extreme levels of nitrate can be associated with central nervous disorders in adults, it should be noted that nitrates and nitrites are rarely a problem in drinking water for humans older than six months of age.

TREATMENT METHODS

Residential **Point-of-Entry (POE)** **Point-of-Use (POU)**	Reverse Osmosis with thin film composite (TFC) membrane Anion Exchange (Type I and II, Cl^- form, subject to sulfates competitive ion exchange) Nitrate "Selective" Anion Exchange resins Distillation
Municipal	Blending Disinfection with chlorine, chloramine and ozone will oxidize nitrite to less hazardous nitrate Anion Exchange
Visit WQA.org or NSF.org to search for products certified to NSF/ANSI 58, 53, and WQA S-300 for nitrate/nitrite reduction.	

Current technology suggests that several techniques may be used for removing nitrate from drinking water including chemical reduction, ion exchange, reverse osmosis, electrodialysis, and distillation. At the present time, it appears that three methods, ion exchange, distillation, and reverse osmosis, are considered to be practical and economically feasible for nitrate removal when considering POU or POE devices. It must be recognized that devices that remove nitrates may have varying effectiveness based on the amount of nitrate in the water supply and the balance of other ions in the water. The ion exchange process, for example, is sensitive to waters containing high TDS, high sulfate, and high hardness levels **(**which can cause hardness precipitation during regeneration)**.** Effective anion exchange removal of inorganic nitrate requires softening pretreatment ahead of the anion exchanger. Care must be taken in the choice of anion resin to avoid "dumping" of nitrates—a condition where effluent nitrate levels can exceed influent levels due to selectivity of sulfates over nitrates. Nitrate dumping can result in effluent concentrations of nitrate equaling the equivalent sum of nitrates plus sulfates and other preferred anions in the incoming water supply. The use of nitrate "selective" resins can avoid this and is recommended in systems that are unmonitored or for POU cartridge applications. Brine reclaim should be avoided because excess nitrates in the recycled brine can lead to excessive nitrate leakage in the subsequent run. Anion resins are lower in density than softener resins and are backwashed at lower rates.

Commercially available line pressure and pump driven reverse osmosis membranes systems reduce nitrates from water by 60-95%, even at nominal 50 pounds per square inch (psi) pressure and at 45° to 70° F. Cellulosic membranes should not be used for nitrate reduction in line pressure applications. Thin film composite (TFC) membranes are more effective for nitrate reduction especially in household line pressure applications where feed pressure to the RO membrane may fall below 60 psi. For effective reduction of nitrates with RO treatment using a line pressure unit, the RO feed pressure should be always maintained above 40 psi and maximum nitrate influent concentration should not exceed 30 mg/L measured as nitrogen. For back up on POU systems, nitrate selective ion exchange cartridges can be used as polishers.

The treatment methods listed herein are generally recognized as techniques that can effectively reduce the listed contaminants sufficiently to meet or exceed the relevant MCL. However, this list does not reflect the fact that point-of-use/point-of-entry (POU/POE) devices and systems currently on the market may differ widely in their effectiveness in treating specific contaminants, and performance may vary from application to application. Therefore, selection of a particular device or system for health contaminant reduction should be made only after careful investigation of its performance capabilities based on results from competent equipment validation testing for the specific contaminant to be reduced.

As part of point-of-entry treatment system installation procedures, system performance characteristics should be verified by tests conducted under established test procedures and water analysis. Thereafter, the resulting water should be monitored periodically to verify continued performance. The application of the water treatment equipment must be controlled diligently to ensure that acceptable feed water conditions and equipment capacity are not exceeded.

Visit WQA.org to locate water professionals in your area. Note that Certified Water Specialists have passed the water treatment educational program with the Water Quality Association and continue their education with recertification every 3 years.

REGULATIONS

In the United States the EPA, under the authority of the Safe Drinking Water Act (SDWA), has set the Maximum Contaminant Level Goal (MCLG) for total nitrate/nitrite at 10.0 mg/L and for nitrite at 1.0 mg/L (measured as nitrogen, N). This is the health-based goal at which no known or anticipated adverse effects on human health occur and for which an adequate margin of safety exists. The US EPA has set these levels of protection based on the best available science to prevent potential health problems. Based on the MCLG, EPA has set an enforceable regulation for total nitrate/nitrite, the Maximum Contaminant Level (MCL), at 10 mg/L (10 ppm)(as N) and for nitrite at 1 mg/L (1 ppm)(as N). MCLs are set as close to the MCLG as possible, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies.

REFERENCES/SOURCES

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Tomorrow." Dept. of Civil, Environmental, and Sustainable Engineering, Arizona State University. Retrieved from: http://www.swhydro.arizona.edu/archive/V8_N4/feature6.pdf

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US EPA, "Basic Information on Nitrite in Drinking Water," http://water.epa.gov/drink/contaminants/basicinformation/nitrite.cfm

US Geological Survey, 2009, "Water Quality of Potential Concern in US Private Wells" http://water.usgs.gov/nawqa/studies/domestic wells/

US Geological Survey, 2010, "Quality of Water from Public Supply Wells in the United States" http://water.usgs.gov/nawqa/studies/public wells/

US Geological Survey, 1998, "A National Look at Nitrate Contamination in Groundwater." http://water.usgs.gov/nawqa/nutrients/pubs/wcp_v39_no12/

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

SUPPLEMENTAL FACT SHEET

FOR

TENTATIVE ORDER NO. R9-2009-0002
NPDES NO. CAS0108740

WASTE DISCHARGE REQUIREMENTS

FOR

DISCHARGES OF RUNOFF FROM
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4S)
DRAINING THE WATERSHEDS OF THE
COUNTY OF ORANGE, THE INCORPORATED CITIES OF ORANGE COUNTY, AND THE ORANGE COUNTY FLOOD CONTROL DISTRICT
WITHIN THE SAN DIEGO REGION

April 15, 2009

DISCUSSION:

Revised Tentative Order No. R9-2009-0002, the Orange County Storm Water Permit, (formerly known as Tentative Orders Nos. R9-2007-0002 and R9-2008-0001) was distributed for review on March 13, 2009 by the California Regional Water Quality Control Board, San Diego Region (Regional Board). This is the fourth draft of the Orange County MS4 permit intended to replace Order No. R9-2002-001, which was adopted on February 13, 2002. A public hearing is scheduled to be held on July 1, 2009 at the Ocean Institute in Dana Point. Written comments received by May 15, 2009 will be provided with a written response prior to the public hearing. Written comments or testimony received by 5:00 PM, on June 19, 2009 will be provided to the Regional Board members for their review prior to the July 1, 2009 public hearing. The Regional Board will also consider oral statements at the public hearing. The Regional Board has the option of closing the public comment period at the July 1, 2009 meeting or within a specified time period following the meeting.

CHANGES:

This document summarizes the significant changes found in Revised Tentative Order R9-2009-0002 when compared to the previous Revised Tentative Order R9-2008-0001 and provides a basis for those changes. This Supplemental Fact Sheet has been released to provide a basis for changes and is not intended to replace the Tentative Fact Sheet for Order R9-2009-0002, of which a redline/strikeout version will be released.

I. GENERAL CHANGES

Removal of "Urban": The term urban runoff has been removed throughout Tentative Order R9-2009-002 and replaced with storm water (wet weather) or non-storm water (dry weather) runoff. This clarification is necessary to prevent the misunderstanding that regulation under this permit is subject only to urbanized areas. The term "urban runoff" is not defined in the Code of Federal Regulations or Federal Register in the regulation of phase 1 MS4 discharges.

The discharge of runoff from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the Clean Water Act (CWA). The Permit defines runoff as all flows in a storm water conveyance system (MS4 defined below) and consists of the following components:

(1) storm water (wet weather flows) and
(2) non-storm water discharges (dry weather flows).

The Permit defines an MS4 as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designated or used for collecting or conveying storm water;

(iii) Which is not a combined sewer;

(iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.26.

Permit finding D.3.c. includes natural streams that convey runoff as part of the MS4. The presence of an MS4 system is not limited to areas considered to be "urban" in nature. Though the term urban is often referred to specifically as pertaining to cities, runoff means all flows in a storm water conveyance system, regardless of the location of the conveyance system. A conveyance system owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law), may be located in a setting (e.g. unincorporated area, low density residential) that is not considered by the public to be "urban" in nature. These areas are contributing pollutants to the MS4 system that must be addressed. The term runoff applies to all flows in an MS4 system, no matter where the MS4 may be located in regards to incorporated or unincorporated property.

II. FINDINGS

Findings of Tentative Order R9-2009-0002 have been modified from Tentative Order R9-2008-0001 to provide clarification and address new requirements. New and significantly modified findings of the Tentative Order are provided and discussed below.

New Finding C.2. Municipal storm water (wet weather) and non-storm water (dry weather) discharges are likely to contain pollutants that cause or threaten to cause an exceedance of the water quality standards, as outlined in the Regional Board's Water Quality Control Plan for the San Diego Basin (Basin Plan). Wet weather and dry weather discharges are subject to the conditions and requirements established in the Basin Plan for point source discharges. These water quality standards must be complied with at all times, irrespective of the source and manner of discharge.

Discussion of Finding C.2. This finding is a clarification regarding the potential for discharges of storm water and non-storm water to impact the Beneficial Uses as described in the Basin Plan. As such these discharges require Waste Discharge Requirements (WDRs) to ensure that water quality standards are met. Furthermore, since discharges require WDRs, the discharges are subject to the prohibitions, conditions and requirements of the Basin Plan.

In addition, municipal discharges have been split into storm water and non-storm water discharges to represent the differing regulations applicable to storm water and non-storm water, though both types of discharges are likely to contain pollutants.

New Finding C.8. Trash is a persistent pollutant which can enter receiving waters from the MS4 resulting in accumulation and transport in receiving waters over time. Trash poses a serious threat to the Beneficial Uses of the receiving waters, including, but not limited to, human health, rare and endangered species, navigation and human recreation.

Discussion of Finding C.8. The Copermittees to date have documented high volumes of trash coming from the MS4 system and in receiving waters.[1]

The Basin Plan specifies the following narrative Water Quality Objective (WQO) for Floating Material:

> *"Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses.*"

The Basin Plan specifies the following narrative WQO for Suspended and Settleable Solids: Material:

> *"Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses.*"

Additionally, high density urban areas in Southern California have been shown to be responsible for up to 60 percent of the trash that enters receiving waters from the MS4.[2] The retrofitting of existing MS4 systems, such as catch basins, in targeted high trash areas can result in significant reductions in the amount of trash entering receiving waters from the MS4.

Trash, as litter in both solid and liquid form, is consistently found on and adjacent to roadways. A California Department of Transportation Litter Management Pilot Study found that of roadway trash, plastics and Styrofoam accounted for 33

[1] Aliso Creek Watershed 27th, 28th, 29th and 30th Quarterly Progress Reports. 2007-2008.
[2] The City of Los Angeles Meets Trash TMDLs Compliance with CB Inserts and Opening Covers. August 06, 2008.

percent of trash by weight, and 43 percent by volume. Further, the study found that approximately 80 percent of the litter associated with roadways was floatable, indicating that, without capture, this litter would enter Waters of the State after a storm event, resulting in the impairment of Beneficial Uses.[3] The study, however, relied upon a mesh capture size of 0.25 inches (6.35 millimeters). This size is too large to effectively capture plastic pre-production pellets (aka "nurdles"), which are roughly 3 mm in size, and likely underestimated the total contribution of plastics. Plastics, including pre-production pellets, have been found to be the dominant pollutant on beaches in the County of Orange.[4] Furthermore, pre-production plastic pellets, which are small enough to be easily digested, have been found to carry persistent organic pollutants, including PCBs and DDT.[5]

New Finding C.14. Non-storm water (dry weather) discharges are not considered storm water (wet weather) discharges and therefore are not subject to regulation to the Maximum Extent Practicable (MEP) from CWA 402(p)(3)(B)(iii), which is explicitly for "Municipal and Industrial *Stormwater Discharges* (emphasis added)." Non-storm water discharges, per CWA 402(p)(3)(B)(ii) are to be effectively prohibited unless specifically exempted. Exempted discharges identified as a source of pollutants are required to be *addressed* (emphasis added) through prohibition. Dry weather non-storm water discharges have been shown to contribute significant levels of pollutants and flow in arid, urban Southern California watersheds. The Copermittees have identified landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the United States.

Discussion of Finding C.14. The federal Clean Water Act (CWA) generally prohibits the "*discharge of any pollutant*" [33 U.S.C. § 1311(a)] from a "*point source*" into the navigable waters of the United States [33 U.S.C. § 1362(12)(A)]. A National Pollutant Discharge Elimination System (NPDES) permit can be obtained that allows conditionally for the discharge of some pollutants [33 U.S.C. § 1342(a)(1)]. The CWA defines point sources as

> "*discernible, confined and discrete conveyances, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure" such as a pipe, ditch, container, rolling stock, concentrated animal feeding operation, landfill leachate collections system, vessel or other floating craft from which pollutants are or may be discharged*." 33 U.S.C. § 1362; 40 CFR 122.2.

[3] California Department of Transportation District 7 Litter Management Pilot Study. June 26, 2000.
[4] Moore, S.L., Gregorio, D., Carreon, M., Weisberg, S.B. and M. K. Leecaster. 1998. Composition and Distribution of Beach Debris in Orange County, California. *Marine Pollution Bulletin*. Vol. 42
[5] Rios, L.M., Moore, C. and Patrick R. Jones. 2007. Persistent organic pollutants carried by synthetic polymers in the ocean environment. *Marine Pollution Bulletin.* Vol. 54.

The CWA and the California Water Code (CWC) contain specific provisions on how wastewater discharges from point sources are to be permitted. The discharge of runoff from a Municipal Separate Storm Sewer System (MS4) is a "*discharge of pollutants from a point source*" into waters of the U.S. as defined in CWA Section 402. The permit defines MS4 Runoff as all flows in a storm water conveyance system and consists of storm water (wet weather flows) and non-storm water discharges (dry weather flows). Furthermore, storm water and non-storm water discharges contain waste, as defined in the CWC, and pollutants that adversely affect the quality of the waters of the State. The U.S. EPA defines storm water as "*storm water runoff, snow melt runoff and surface runoff and drainage*" related to storm events or snow melt (40 CFR 122.26(b)(13); 55 Fed. Reg. 47990, 47995).

Federal regulations specifically identify non-storm water discharges as not relating to precipitation events and include runoff from fire fighting flows, landscape irrigation and rising ground water. Initial comments to the federal regulations felt that these types of non-storm water discharges were originally viewed as not likely to have any significant environmental impacts and thus requested to be included as storm water (see Federal Register, Vol. 55, No. 222, pgs. 47995 and 48037). To the contrary, the USEPA did not agree with the comments and the Federal Register states that "*Congress did not intend that the term storm water be used to describe any discharge that has a de minimis amount of pollutants, nor did it intend for section 402(p) to be used to provide a moratorium from permitting other non-storm water discharges*" [55 Fed. Reg. 47995-96) Instead, non-storm water discharges are Illicit Discharges except for specific discharges identified under 40 CFR 122.26(b) that are not thought to be causing or contributing to a condition of pollution and are therefore exempted from prohibition.

Under CWA 402(p) for Municipal and Industrial *Stormwater* (emphasis added) Discharges, the CWA states that for (B) Municipal Discharge: permits for discharges from municipal storm sewers – (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. To "*effectively prohibit*" means that the Permittee is to eliminate discharges into and from the MS4 unless specifically authorized under an NPDES permit independent of the MS4 permit (55 Fed. Reg. 47995).

Non-storm water (dry weather) discharges are not considered a storm water (wet weather) discharges and therefore are not subject to regulation to the Maximum Extent Practicable (MEP) from CWA 402(p)(3)(B)(iii), which is explicitly for "Municipal and Industrial *Stormwater Discharges* (emphasis added)". Non-storm water discharges, per CWA 402(p)(3)(B)(ii) are to be effectively prohibited unless

specifically exempted (see below). Further, 40 CFR 122.26(d)(2)(iv)(B)(1) requires this prohibition of illicit non-storm water discharges be *addressed* (emphasis added) by:

> "*implementing and enforcing an ordinance, order or similar means to prevent illicit discharges to the municipal separate storm sewer system ."*

Furthermore, under 40 CFR 122.44: for establishing limitations, standards and other permit conditions applicable to NPDES programs administered by the State, 40 CFR 122.44(k) addresses the use of Best Management Practices (BMPs) to control or abate the discharge of pollutants. Non-numerical limitations such as BMPs to control or abate the discharge of pollutants may be authorized only where (2) authorized under section 402(p) of the CWA for control of *storm water discharges* (emphasis added); or where (3) numeric limits are infeasible or where (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

Best Management Practices (BMPs) are defined in 40 CFR 122.2 as "schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States." As described, the prohibition of illicit non-storm water discharges is a BMP prohibitive practice to prevent the discharge of pollution from the MS4 into waters of the United States. In addition, the identification of an exempted non-storm water discharge as a source of pollutants and subsequent mechanism of prohibition of that discharge would be classified as a BMP.

Municipal Separate Storm Sewer Conveyance System permits are required to effectively prohibit non-storm water discharges into the MS4. For the past 4 permit cycles (19 years), non-numerical limitations (BMPs), including Illicit Discharge Detection and Elimination, have been used to control and abate the discharge of any pollutants in non-storm water discharges.

In 1987, the United States Clean Water Act was amended to include Section 402(p)(3)(B)(iii) which is explicitly for Municipal and Industrial *Stormwater* Discharges:

> "Permits for discharges from municipal Storm sewers … shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers;"

Order 90-38, adopted on July 16, 1990 was the first MS4 permit for southern Orange County. This permit required the elimination of non-stormwater discharges in the shortest time practicable, and in no case later than July 16, 1995.

> Order 90-38, Section V.C "The Permittees shall effectively eliminate all identified illegal/illicit discharges in the shortest time practicable, and in no

> case later [than] July 16, 1995 … The following discharges shall not be considered illegal/illicit discharges provided the discharges do not cause or contribute to violations of water quality standards and are not significant contributors of pollutants to waters of the United States: discharges composed entirely of stormwater, discharges covered under an NPDES permit, …"

Although stormwater discharges are listed as not being considered a illegal/illicit discharge, non-stormwater discharges are not listed and therefore are considered an illegal/illicit discharge under Order 90-38.

Order 96-03, adopted on August 8, 1996, replaced Order 90-38 and prohibited non-storm water discharges in slightly different language:

> Order 96-03 Section III.5 "Non-storm water discharges from public agency activities into waters of the U.S. are prohibited unless the non-storm water discharges are permitted by an NPDES permit or are included in item 3, above…"

Order R9-2002-0001, adopted on February 13 2002, replaced Order 96-03. While numeric effluent limits on non-stormwater dry weather discharges were not required in R9-2002-001, the previous order did require prohibition of non-storm water discharges in almost identical language to the current revision of the tentative Order:

> R9-2002-0001 Section B.1 "Each Copermittee shall effectively prohibit **all** types of non-storm water discharges into its Municipal Separate Storm Sewer System (MS4) unless such discharges are either authorized by a separate NPDES permit; or not prohibited in accordance with B.2 and B.3 below."

Copermittees have been accorded ample opportunity to eliminate unauthorized non-storm water discharges from the MS4 that are causing or contributing to the exceedance(s) of WQOs, including the identification of any exempted discharges as a source of pollutants. To date, however, dry weather receiving water monitoring conducted by Copermittees has shown consistent exceedances of Basin Plan Objectives (BPOs) and the California Toxic Rule (CTR) for pollutants consistently found to be present in runoff from MS4 systems. Furthermore, multiple receiving waters within the Copermittees jurisdiction are 303(d) listed for pollutants whose known source includes wet and dry weather runoff. Those pollutants include: Indicator Bacteria, Phosphorous, Toxicity and Turbidity. Additional 303(d) listings within the Copermittees jurisdiction for Benzo(b)fluoranthene, Dieldrin, Sediment Toxicity, Chlorides, Sulfates and DDE have a source that has yet to be determined.

Given the ineffectiveness to date of BMPs in controlling and abating 303(d) listed

pollutants in non-storm water discharges (see above), numeric effluent limitations on those pollutants are necessary to protect the Beneficial Uses of Waters of the State from point source dry weather non-storm water runoff as established by 40 CFR 122.44(k). Furthermore, imposition of non-storm water NELs provide a quantitative assessment of the assumption that exempted non-storm water discharges are not causing or contributing to a condition of pollution or an exceedance of water quality standards. USEPA guidance[6] on water quality based effluent limitations in storm water permits states:

> "Numeric water quality-based effluent limitations provide a greater degree of confidence that a discharge will not cause or contribute to an exceedance of the water quality standards, because numeric water quality-based effluent limitations are derived directly from the numeric component of those standards. In addition, numeric water quality-based effluent limitations can avoid the expense associated with overly protective treatment technologies because numeric water quality-based effluent limitations provide a more precisely quantified target for Permittees."

Non-storm water NELs also can provide a greater degree of confidence for the Copermittee that they are in compliance with the Permit requirements rather than the current resource intensive and judgement based determination of compliance with the current narrative effluent limitations. The 303(d) listing of those pollutants and the subsequent identification of MS4 runoff as a source of pollutants has established reasonable potential and the necessity for water quality based effluent limits (WQBELs) to be developed. Per 40 CFR 122.44(d)(1), WQBELS apply when there is reasonable potential for Water Quality Standards (WQS) to be exceeded.

Additionally, dry weather loading of pollutants from natural, undeveloped areas in Southern California has been shown to typically be one to two orders of magnitude lower than the contribution from developed areas.[7] Dry weather flows have been shown to account for 10 to 57 percent of total annual volume in arid, developed Southern California watersheds.[8,9] Dry weather runoff from developed areas (i.e. streets, parking lots and irrigated landscapes) is likely to contain pesticides, persistent organic pollutants, heavy metals, nutrients, bacteria and sediments.[6,7,10] In arid, developed watersheds dry weather loading can contribute a significant percentage of the total annual pollutant load for metals and

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[6] United States Environmental Protection Agency, "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits", 61 FR 43761, August 1996.

[7] Stein E.D. and V.K. Yoon 2007. Dry Weather Flow Contribution of Metals, Nutrients, and Solids from Natural Catchments. *Water, Air, & Soil Pollution*. Vol. 190.

[8] McPherson, T.N., Burian, S.J., Turin, H.J., Stenstrom, M.K. and I.H. Suffet. 2002. Comparison of the pollutant loads in dry wet weather runoff in a Southern California urban watershed. *Water Science and Technology*. Vol. 45, no. 9.

[9] Stein E.D. and D. Ackerman 2007. Dry Weather Water Quality Loadings in Arid, Urban Watersheds of the Los Angeles Basin, California, USA. *Journal of the American Water Resources Association.* Vol. 43, Iss. 2.

[10] Hipp, B., Alexander, S. and T. Knowles. 1993. Use of resource-efficient plants to reduce nitrogen, phosphorus, and pesticide runoff in residential and commercial landscapes. *Water Science and Technology*. Vol. 28, no. 3-5.

nutrients. Dry weather loading has been shown to contribute 20 to 50 percent of total trace metals and up to 24 percent of total nutrients annually.[7,8] Dry weather non-storm water loading of trace metals occurs predominately in the dissolved form, which has a higher bioavailability to organisms than wet weather metals, which are predominantly particle-bound. Consequently, BMPs implemented that focus on removal of suspended solids and prevention of sediment runoff during storm flows are likely to have little effect on removing dry weather trace metals.[7,8]

Current Region-wide Bioassessment data indicates roughly 75 percent of streams have impaired (poor or very poor) Index of Biotic Integrity (IBI) scores, which is in part due to water chemistry.[11] Bioassessment monitoring from Fall 2006/Spring 2007, done by Copermittees as required under Order R9-2002-001, showed all sites, excluding reference sites, as having "Poor" or "Very Poor" IBI scores. Reference sites were either "Fair" or "Good." [12] However, Southern California studies indicate that 10 percent of storm drains contribute up to 85 percent of dry weather loads.[13] This indicates that a relatively small level of effort can result in significant improvements in water quality.

40 CFR 122.26(d)(2)(iv)(B)(1) allows for certain exempted non-storm water discharges into and from the MS4 (e.g. rising ground water). If any exempted discharges, however, are identified as a source of pollutants, they are required to be *addressed* (emphasis added) through prohibition. Non-storm water discharges are not subject to MEP, and should either be prohibited and addressed via ordinance, order or similar means or exempted under the 40 CFR 122.26(d)(2)(iv)(B)(1) exemption list if not identified as a source of pollutants. The prohibition of previously exempted discharges of non-storm water to waters of the United States from an MS4, conforms with United States Code requirements for standards and enforcement for effluent limitations to meet water quality standards (33 U.S.C. 1311(b)(1)(C)).

The Federal Register (Vol. 55, No. 222, pg. 48037) makes it clear that municipalities are to have a management system in place that addresses exempted non-storm water discharges found to be a source of pollutants to waters of the United States. Furthermore, the Director (in California the State acts as Director) may include permit conditions that either require municipalities to prohibit or otherwise control any exempted non-storm water discharges where appropriate.

To date the Copermittees have identified overspray and drainage from potable and reclaimed water landscape irrigation as a substantial source and conveyance mechanism for pollutants into waters of the United States. Irrigation runoff into the

[11] Busse, L. , Gibson, D., Pohlman, A. and K. A. Voss. Biotic Integrity of streams in San Diego since 1998. FOURTH BIENNIAL CALIFORNIA NONPOINT SOURCE POLLUTION CONFERENCE, MAY 5-7, 2008.
[12] November 15, 2007. 2006-2007 Unified Annual Progress Report Program Effectiveness Assessment (San Diego Region).
[13] Stein E.D. and L.L. Tiefenthaler 2005. Dry-Weather Metals and Bacteria Loading in an Arid, Urban Watershed: Ballona Creek, California. *Water, Air, & Soil Pollution*. Vol. 164.

MS4, as identified by the Copermittees, is a source of pollutants to waters of the United States, and is required to be *addressed* (emphasis added) as an illicit discharge per 40 CFR 122.26(d)(2)(iv)(B)(1) by prohibition through implementing and enforcing an ordinance, order or similar means. The Copermittees have identified irrigation water as a source of pollutants and conveyance of pollutants to waters of the United States, when applied improperly in excess and therefore enters the MS4, in the following documents:

- Per requirements of 401 Water Quality Certification 02C-055, the County of Orange conducted a **Drainage Area Reconnaissance and Urban Runoff Characterization study**. From the reconnaissance and characterization, the County of Orange determined that:

  "…*water quality results provided two important findings*." First, "*analytical data strongly indicates that irrigation overspray and drainage constitutes a very substantial source and conveyance mechanism for fecal indicator bacteria into Aliso Creek, and suggests that reduction measures for this source of urban runoff could provide meaningful reduction in bacteria loading to the stream*."

- Aliso Creek, currently 303(d) listed as impaired for Indicator Bacteria, is included in the Bacteria Project I TMDL adopted by the Regional Board on December 12, 2007. Secondly, reclaimed water high in electrical conductivity and Nitrate was indicated as:

  "…*the source water at three of the excessive runoff locations (P1,P2,J01). These dissolved nitrogen concentration and flow rates create relatively high nitrogen loadings, which have the potential to contribute to undesirable levels of periphytic algal growth in Aliso Creek.*"

- On November 15, 2007 the **Unified Annual Progress Report Program Effectiveness Assessment** for the 2006-2007 reporting period was submitted by the Copermittees. Within the report, the Copermittees demonstrate that a "*wide range of constituents exceeded the tolerance interval bounds*", including orthophosphate. Tolerance interval bounds are pollutant levels set by the Copermittees that represent when a problem may be occurring. These tolerance levels sometimes equate with Basin Plan Objectives (BPOs) and California Toxic Rules (CTR) and USEPA Criteria. The report states that "*high levels of orthophosphate concentration are most likely the result of fertilizer runoff or reclaimed water runoff*". Aliso Creek is currently 303(d) listed as impaired for phosphorous.

- On November 15, 2007 the **Watershed Action Plan Annual Report**(s) for the 2006-2007 reporting period was submitted by the County of Orange, Orange County Flood Control District and Copermittees within the

San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds. San Juan Creek, Laguna Coastal Streams, Aliso Creek and Dana Point Coastal Streams are all currently 303(d) listed as impaired for Indicator Bacteria within their watersheds and/or in the Pacific Ocean at the discharge points of their watersheds. These locations are included in the Bacteria Project I TMDL adopted by the Regional Board on December 12, 2007. The Copermittees, within their Watershed Action Strategy Table for Fecal Indicator Bacteria

> "*Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the […] watershed. Dry weather flow is the transport medium for bacteria and other 303(d) constituents of concern*". Additionally, they state that "*conditions in the MS4 contribute to high seasonal bacteria propagation in-pipe during warm weather. Landscape irrigation is a major contributor to dry weather flow, both as surface runoff due to over-irrigation and overspray onto pavements; and as subsurface seepage that finds its way into the MS4*."

- In 2006, the State Water Quality Control Board (State Board) allocated Grant funding to the **SmartTimer/Edgescape Evaluation Program (SEEP)**. Project partners include the following Copermittees: the Cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, Laguna Nigel, Laguna Woods, Lake Forest, Mission Viejo, Rancho Santa Margarita and San Juan Capistrano. Also included in the study were the Metropolitan Water District of Southern California, the Department of Agriculture and ten south Orange County water districts. The project targets irrigation runoff by retrofitting existing development and documenting the conservation and runoff improvements. The Grant Application states that:

  > "*Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators.*"

  Furthermore, the grant application states:

  > "*Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the San Diego Basin Plan and Bacteria TMDL over the long term.*"

  This is reinforced in the project descriptions and objectives:

  > "*Elevated dry-weather storm drain flows, composed primarily in the South Orange County Region of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California's urbanized coastline. Storm drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and*

warm, unseasonal contaminated freshwater plumes in the near-shore marine environment".

The basis of this grant project, conducted by the Copermittees and additional water use partners, is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, they indicate that this alteration of natural flows is impacting the Beneficial Uses of Waters of the State and U.S.

Revised Finding D.1.f. Runoff needs to be addressed during the three major phases of urban development (planning, construction, and use) in order to reduce the discharge of pollutants from storm water to the MEP, eliminate pollutants in dry weather flows and protect receiving waters. Urban development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can negatively impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing urban development generates substantial pollutant loads which are discharged in urban runoff to receiving waters.

Discussion of Finding D1.f. This Finding has been changed to reflect storm water and non-storm water regulations. See discussion of Finding C.14 above.

New Finding D.1.h. This Order establishes Municipal Action Levels (MALs) for selected pollutants based on nationwide Phase I MS4 monitoring data for pollutants in storm water. The MALs were computed using the statistical based population approach, one of three approaches recommended by the State Board's Storm Water Panel in its report, "The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006)." MALs are identified in Section D of this Order. Copermittees shall implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water from the permitted areas so as not to exceed the MALs. MALs express an integration of the adequacy/inadequacy of programmatic measures and BMPs required in this Order. The exceedance of an MAL will create a presumption that MEP control requirements are not being met.

Discussion of Finding D.1.h. Section 402(p) of the CWA states MS4 permits for storm water shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. This includes requiring numeric effluent limits for storm water. MALs have been determined to be the appropriate regulatory measurement of achieving the Maximum Extent Practicable for reduction of

pollutants in storm water discharges.

MALs represent the lowest 10 percent of pollutant reduction for all MS4 Phase I programs discharging to waters of the United States. For the past 4 permit cycles (19 years), Copermittees have utilized non-numerical limitations (BMPs) to control and abate the discharge of any pollutants in storm water discharges to the MEP. Copermittees have been accorded 19 years to research, develop, and deploy BMPs that are capable of reducing storm water discharges from the MS4 to levels represented in MALs. Municipal Action Levels are set at such a level that any violations of MALs will be causing or contributing to the exceedance(s) of WQOs (California Toxic Rule and Basin Plan Objectives) and are impairing the Beneficial Uses of waters of the State.

Compliance with MAL levels is considered at least compliant with the Maximum Extent Practicable (MEP) regulation for storm water. Compliance with set MALs is considered MEP as 90 percent of all Phase I MS4 samples are in compliance with the numeric MALs, including those MS4 programs which may not be in their 4th permit term. Therefore, it is feasible for Copermittees to meet MALs as the MEP.

Copermittees are required to implement ordinances to prohibit the discharge of pollutants into and from the MS4, as well as to actively enforce those existing ordinances [both of which are considered Best Management Practices (BMPs)]. Enforcement actions (e.g. stop work orders) and the enacting of new and revised ordinances can be taken by any of the Copermittees to ensure the reduction of pollutants to the MEP. Exceedance of MALs for pollutants from the MS4 indicates that the BMPs are not being implemented to the MEP.

Revised Finding D.2.c. Use of Low-Impact Development (LID) site design BMPs at new development, redevelopment and retrofit projects can be an effective means for minimizing the impact of runoff discharges from the development projects on receiving waters. LID is a site design strategy with a goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques. LID site design BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of runoff. Current runoff management, knowledge, practice and technology has resulted in the use of LID BMPs as an acceptable means of meeting the MEP standard.

Discussion of Finding D.2.c. The Clean Water Act (CWA) is the cornerstone of surface water quality protection in the United States. (The Act does not deal directly with ground water nor with water quantity issues.) The statute employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support

the protection and propagation of fish, shellfish, wildlife and recreation in and on the water.

Increasing the volume, velocity, frequency and discharge duration of storm water runoff from developed areas will eventually greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume while simultaneously increasing impervious area. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by naturally vegetated soil. Furthermore, impervious surfaces tend to concentrate pollutants on the top of the surface that are then washed off into the MS4 and waters of the State in a concentrated manner. The use of Low-Impact Development (LID) site design BMPs can be an effective means of minimizing the impact of runoff discharges on receiving waters. By reducing water pollution, reducing runoff and increasing groundwater recharge, LID helps to improve the quality of receiving surface waters, stabilize the flow rates of receiving waters (preventing downstream hydromodification), reduce downstream flooding and protect and enhance water supply sources. Current runoff management, knowledge, practice and technology has resulted in the use of LID BMPs as an acceptable means of meeting the MEP standard for storm water treatment.

Effective Impervious Area (EIA) is the portion of the impervious area or pervious area incapable of retaining, infiltrating or evaporating design storm flow that is hydrologically connected via sheet flow or a discrete hardened conveyance to a drainage system or a receiving water body. In the interim, EIA has been added as a metric to protect the Beneficial Uses of waters of the State.

Current municipal codes may oppose or hinder the design, use and implementation of specific elements of LID. These codes include, but are not limited to, emergency services access requirements, building landscape ordinances, building height limits and parking space requirements. It is essential for Copermittees to work with other responsible agencies and/or update codes that have the potential to impact the use of LID.

The Local Government Commission, a non-profit organization working to build livable communities, developed a set of principles known as the *Ahwahnee Water Principles for Resource-Efficient Land Use*[14] that provide the opportunity to reduce costs and improve the reliability and quality of our water resources. Implementation of LID incorporates several of the Ahwahnee principles such as:

> 1. "Community Design should be compact, mixed use, walkable and transit-oriented so that urban runoff pollutants are minimized and the open lands that absorb water are preserved to the maximum extent possible."

[14] Local Government Commission, "The Ahwahnee Water Principles – A Blueprint for Regional Sustainability", http://water.lgc.org/Members/tony/docs/lgc_water_guide.pdf

3. "Water holding areas such as creek beds, recessed athletic fields, ponds, cisterns, and other features that serve to recharge groundwater, reduce runoff, improve water quality and decrease flooding should be incorporated into the urban landscape."
4. "All aspects of landscaping from the selection of plants to soil preparation and the installation of irrigation systems should be designed to reduce water demand, retain runoff, decrease flooding, and recharge groundwater."
5. "Permeable surfaces should be used for hardscape. Impervious surfaces such as driveways, streets, and parking lots should be minimized so that land is available to absorb storm water, reduce polluted urban runoff, recharge groundwater and reduce flooding."

New Finding D.2.g. The increased volume, velocity, frequency and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by naturally vegetated soil.

Discussion of Finding D.2.g. Increasing the volume, velocity, frequency and discharge duration of storm water runoff from developed areas will eventually greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume while simultaneously increasing impervious area. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by naturally vegetated soil.

Historic hydromodification impacts, such as concrete lining and channelization, have impacted the natural physical habitat of urban streams resulting in low Index of Biotic Integrity (IBI) scores. The Copermittee's 2006-2007 monitoring indicated decreased IBI scores in the urbanized watersheds. In the absence of water chemistry and toxicity impacts, these low scores were attributed to be a result of poor physical habitat conditions.[15]

Hydromodification impacts result in poor physical habitat conditions through streambed scour, erosion, vegetation displacement, sediment deposition, channelization and channel modifications. Increased sediment loads from hydromodification causes other impacts to physical habitats including increased turbidity which then may cause increased temperatures. In addition, an increased sediment load may have an increased biological content thereby increasing the sediment oxygen demand and lowering the dissolved oxygen

[15] Orange County Copermittees, Novemeber 15, 2007. 2006-2007 Unified Annual Progress Report Program Effectiveness Assessment (San Diego Region).

available for aquatic life.[16]

A waiver of any hydromodification control requirements due to modified (e.g. concrete, rip rap, etc…) natural channels does not fully protect the Beneficial Uses of Waters of the State. Future restoration, stream re-naturalization, and the reduction of 303(d) listed pollutants are dependent on preventing and reducing physical impacts from hydromodification. The objective of the CWA is "to restore and maintain the chemical, *physical,* and biological integrity of the Nation's waters (emphasis added)." Furthermore, detention basins are a common BMP but behave hydrologically differently than distributed systems used in LID. Using LID, including the storage of flows for future re-use during dry weather (e.g. landscape irrigation), is an easier method to match pre-project hydrographs, while providing for storm water pollutant load reductions.

The goal of hydromodification requirements is to restore natural flow regimes and to restore habitats not meeting Beneficial Uses. The restoration of natural flow regimes is a major component necessary to protect and restore the physical, chemical and biological integrity of Waters of the State. One storm water metric, however, is not sufficient to fully protect the Beneficial Uses of waters of the State.[17] A Hydromodification Management Plan (HMP) will supplant the use of Effective Impervious Area as a singular metric, and must be developed incorporating LID as the main component in storm water flow control and pollutant reduction.

New Finding D.3.i. Retrofitting existing development with storm water treatment controls including LID, is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards. Although SSMP BMPs are required for redevelopment, the current rate of redevelopment will not address water quality problems caused by hydromodification in a timely manner. Cooperation with private landowners is necessary to effectively identify, implement and maintain retrofit projects for the preservation, restoration, and enhancement of water quality.

Discussion of Finding D.3.i. Existing BMPs are not sufficient, as evidenced by 303(d) listings and exceedances of Water Quality Objectives from the Copermittees monitoring reports. More advanced BMPs, including the retrofitting of existing development with LID, are part of the iterative process. Based on the current rate of redevelopment compared to existing BMPs, the use of LID only on new and redevelopment will not adequately address current water quality problems, including downstream hydromodification. Retrofitting existing

[16] USEPA, National Management Measures to Control Nonpoint Source Pollution from Hydromodification, EPA 841-B-07-002, July 2007.
[17] Brian Bledsoe, Robert Hawley and Eric D. Stein. 2008. Stream channel classification and mapping systems: implications for assessing susceptibility to hydromodification effects in southern California. Southern California Coastal Water Research Project. Costa Mesa, CA.

development is practicable for a municipality through a systematic evaluation, prioritization and implementation plan focused on impaired water bodies, pollutants of concern, areas of downstream hydromodification, feasibility and effective communication and cooperation with private property owners.

New Finding E.9. Copermittees have operated and have proposed to continue developing and operating facilities that extract water from waters of the U.S., subject such extracted water to treatment, then discharge the treated water back to waters of the U.S. Without sufficient treatment processes, facilities that extract, treat, and discharge (FETDs) to waters of the U.S. may discharge effluent that does not support all designated beneficial uses. This Order does not regulate the discharge of said facilities.

Discussion of Finding E.9. It is more appropriate to regulate FETDs through an individual or regional permit. This does not, however, preclude these facilities from any enrollment requirements under the Statewide Industrial Storm Water permit for storm water runoff, from obtaining a CWA Section 401 Water Quality Certification, or consideration as a municipal or industrial facility under the requirements of this Order. The intake and subsequent discharge from FETDs will require a separate NPDES permit.

New Finding E.10. Multiple water bodies in Orange County have been identified as impaired and placed on the 303(d) list. On December 12, 2007, the Regional Board adopted a Basin Plan amendment to incorporate 19 TMDLs developed in *Bacteria Impaired Waters TMDL Project I for Beaches and Creeks* in the San Diego Region. This action meets requirements of section 303(d) of the Clean Water Act (CWA). The Basin Plan amendment process is authorized under section 13240 of the California Water Code. In 2004, the Bacteria Impaired Waters TMDL Project II included six bacteria impaired shorelines in Dana Point Harbor and San Diego Bay: Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park, B Street, G Street Pier, Tidelands Park, and Chula Vista Marina in San Diego Bay. Since then, only Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay can be confirmed as still impaired by indicator bacteria. On June 11, 2008 the Regional Board adopted a Basin Plan amendment to incorporate *Bacteria Impaired Waters TMDL Project II for San Diego Bay and Dana Point Harbor Shorelines*.

New Finding E.11. The San Diego Regional Board (Regional Board) finds storm water discharges from urban and developing areas in Orange County to be significant sources of certain pollutants that cause, may be causing, threatening to cause or contributing to water quality impairment in the waters of Orange County. Furthermore, as delineated in the CWA section 303(d) list, the Regional Board has found that there is a reasonable potential that municipal storm water and dry weather discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria, Phosphorous, Toxicity and Turbidity. In accordance with CWA section

303(d), the Regional Board is required to establish Total Maximum Daily Loads (TMDLs) for these pollutants to these waters to eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Copermittees are warranted and required pursuant to this Order.

New Finding E.12. This Order incorporates MS4 WLAs developed in TMDLs that have been adopted by the Regional Water Board and have been approved by the State Board, Office of Administrative Law and U.S. EPA. The TMDL WLAs in the Order are addressed using water quality-based numeric effluent limits (WQBELs) calculated at end-of-pipe. Water quality-based effluent limits for storm water discharges have been included within this Order. Non-storm water dry weather TMDLs have been included in this Order as water quality-based effluent limits. Adopted TMDLs will be addressed as Cleanup and Abatement Orders (CAOs) subject to approval and adoption by the Regional Board. Storm water compliance date(s), schedules and monitoring to assess compliance will be included within each adopted TMDL CAO, even if said date(s) do not fall within the term of this Order.

Discussion of Finding E.10, E.11, E.12. Section 303(d)(1)(A) of the Clean Water Act (CWA) requires that:

> "*Each state must identify those waters within its boundaries for which the effluent limitations…are not stringent enough to implement any water quality standard (WQS) applicable to such waters.*"

The CWA also requires states to establish a priority ranking of impaired waterbodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired waterbodies is called the Section 303(d) List. The current Section 303(d) List was approved by the State Water Resources Control Board (State Board) on October 25, 2006. On June 28, 2007 the 2006 303(d) list for California was given final approval by the United States Environmental Protection Agency (USEPA). Every two years the State of California is required by CWA section 303(d) and 40 CFR(130.7) to develop and submit to the USEPA for approval an updated 303(d) list of impaired waterbodies. The Regional Board is currently undergoing the required 2 year (2008) update for submittal to the State Board.

Multiple water bodies in Orange County have been identified as impaired and placed on the Section 303(d) list. The Regional Board has 78 current 303(d) listings for which TMDLs must be prioritized and subsequently developed. The 303(d) listing of a waterbody and subsequent TMDL development is required when regulations under current permits, such as Technology Based Effluent Limitations (TBELS), are not stringent enough to meet Water Quality Standards and protect the Beneficial Uses of Waters of the State. Table 1, below, describes the status of developed Total Maximum Daily Loads in Southern Orange County, Region 9. On December 12, 2007, the Regional Board adopted a Basin Plan

amendment to incorporate 19 TMDLs developed in *TMDLs for Indicator Bacteria Project I - Beaches and Creeks in the San Diego Region*. In 2004, the *Bacteria Impaired Waters TMDL Project II* addressed six bacteria impaired shorelines including Baby Beach in Dana Point Harbor. On June 11, 2008 the Regional Board adopted a Basin Plan amendment to incorporate *TMDLs for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*. The *TMDLs for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay* are pending approval by the State Board, State Office of Administrative Law (OAL) and USEPA. The *TMDLs for Indicator Bacteria Project I - Beaches and Creeks in the San Diego Region* have been withdrawn by the Regional Board and are tentatively scheduled to reappear before the Regional Board in June, 2009.

Table 1. Status of Developed Total Maximum Daily Loads in Southern Orange County, Region 9.

TMDL	Regional Board Approval	State Board Approval	State OAL Approval	USEPA Approval
TMDLs for Indicator Bacteria Project I - Beaches and Creeks in the San Diego Region	Adopted 12/12/2007	Withdrawn by Regional Board	n/a	n/a
TMDLs for Indicator Bacteria Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay	Adopted 06/11/2008	Pending	Pending	Pending

Storm water discharges from developed and developing areas in Orange County are a significant source of certain pollutants that cause, may be causing, threatening to cause or contributing to water quality impairment in the waters of Orange County. Furthermore, the CWA section 303(d) list indicates that there is a reasonable potential that municipal storm water and dry weather discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria, Phosphorous, Toxicity and Turbidity. In accordance with CWA section 303(d), the Regional Board is required to establish TMDLs for these pollutants in these waters to eliminate impairment and attain water quality standards. Per 40 CFR(130.7), WLAs are required for all point sources, including storm water and non-storm water discharges from MS4s. Therefore, focused pollutant control actions and further pollutant impact assessments by the Copermittees are warranted and required pursuant to this Order.

This Order addresses MS4 WLAs that have been adopted by the Regional Board and have been approved by the State Board, OAL and USEPA. WLAs are portions of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. The TMDL WLAs in the Order are addressed using water quality-based numeric effluent limits (WQBELs) calculated at end-of-pipe. WQBELs must be consistent with the assumptions and requirements of the WLAs.[18] Water quality-based effluent limits for storm

[18] Per 40 CFR 122.44(d)(1)(vii)(B)

water discharges have been included within this Order if the TMDL has received all necessary approvals. Non-storm water dry weather TMDLs have been included in this Order as WQBELs under Section C of the Tentative Order: Non-Storm Water Dry Weather Numeric Effluent Limits. Adopted TMDL WLAs and LAs will be addressed by Cease and Desist Orders (CDOs) approved by the Regional Board in a public process. Storm water compliance date(s), interim goals, schedules and monitoring to assess compliance will be included within each adopted TMDL CDO, even if said date(s) do not fall within the term of this Order. This Order will reference and require compliance with those CDOs and their included time schedules.

Assessment of compliance with WLAs is to be assessed at the point of discharge to the receiving water. TMDL WLAs evaluated end-of-pipe will be assessed using WQBELs. Determination of compliance may also be assessed within the receiving waters to evaluate program effectiveness and to assess overall water quality.

Cease and Desist Orders (CDOs) are adopted pursuant to CWC Sections 13301-13303. CDOs may be issued to dischargers violating or threatening to violate Waste Discharge Requirements (WDRs) or prohibitions prescribed by the Regional Board or the State Board. CDOs may be issued to dischargers with chronic non-compliance problems that are rarely amenable via a short-term solution. Compliance may involve extensive capital improvements and/or operational changes. The CDO will contain a compliance schedule, including interim deadlines, interim effluent limits, and a final compliance date.

Please note that the version of the Tentative Order released on March 13, 2009 stated that Clean-up and Abatement Orders (CAOs) will be the primary regulatory tool containing the majority of TMDL Implementation information. While CAOs may be used, Cease and Desist Orders (CDOs) with time schedules are expected to be the central regulatory instrument for TMDL Implementation.

New Finding E.13. Basin Plan Prohibition 5 in Attachment A of the Permit states "The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited." Taken together with Finding C.1 and Discharge Prohibition 4, the Copermittees discharge from the MS4 is required to meet receiving water limitations.

Discussion of Finding E.13. Since runoff from an MS4 contains waste, as defined in the CWC, and pollutants that adversely affect the quality of the waters of the State, the discharge of MS4 runoff is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA. Under the San Diego Region Basin Plan, the discharge of waste to inland surface waters is prohibited unless the discharge meets the water quality objectives of the receiving waters. Thus, pursuant to the Basin Plan, MS4 discharges are required to meet water

quality objectives as outlined in the Basin Plan for the receiving water of the discharge.

III. DIRECTIVES

This section discusses significant changes which have been made to the requirements of the Tentative Order from the requirements which were previously included in Tentative Order No. R9-2008-0001. For each section of the Order than has been changed there is a discussion which describes the change that was made and provides the rationale and/or description of the change.

Prohibitions and Receiving Water Limitations

A.3: The State Policy with respect to maintaining high quality waters has been added to clarify that discharges from the MS4 that cause or contribute to a violation of the Policy for high quality waters is prohibited.

A.3.a: Section removed for clarity.

A.3.a.1: Section modified for clarity.

A.3.b: Section modified to ensure the iterative process for storm water discharges is being met.

A.5: Section has been added to ensure that MS4 prohibitions are in compliance with the regulations of the California Ocean Plan for the portion of the MS4 that discharges directly to the Pacific Ocean.

Non-Storm Water Discharges

B.2: Section has been modified by the removal of landscape irrigation, irrigation water and lawn watering from the list of non-storm water discharges that are not prohibited, i.e. landscape irrigation, irrigation water and lawn watering discharges into and from the MS4 are now prohibited. Saline swimming pool discharges have been added to the list provided the discharge is directly to a saline water body (see Finding C.14 and Discussion).

B.5: Section has been removed (see Finding E.9)

B.5: Section has been added to ensure that MS4 prohibitions are in compliance with the regulations of the California Ocean Plan.

Non-Storm Water Dry Weather Numeric Effluent Limits

C: Section has been added to establish non-storm water dry weather numeric effluent limitations (see Finding C.14 and Discussion).

Non-exempted, non-storm water discharges are to be effectively prohibited from entering the MS4 or become subject to another NPDES permit (see Federal

Register, Vol. 55, No. 222, pg. 47995). Conveyances which continue to accept non-exempt, non-storm water discharges do not meet the definition of MS4 and are not subject to section 402(p)(3)(B) of the CWA unless the discharges are issued separate NPDES permits. Instead, conveyances that continue to accept non-exempt, non-storm water discharges that do not have a separate NPDES permit are subject to sections 301 and 402 of the CWA (see Federal Register, Vol. 55, No. 222, pg. 48037).

Municipal Action Levels
D: Section has been added to establish municipal action levels (see Finding D.1.h and Discussion).

Legal Authority
E.1.b: Duplicative language has been removed.

Development Planning Component
F.1.a: Section has been modified to include redevelopment projects in the General Plan. This change requires Copermittees to update their General Plan to include water quality and watershed protection for all new development and redevelopment projects.

F.1.c: Section has been modified to reflect the prohibition of over-irrigation runoff to the MS4, as well as LID requirements. Additionally, this section requires the use of native and/or low water use plants for landscaping, where feasible.

F.1.d(4): This Section has been modified to clarify some elements of low impact development.

F.1.h: This Section has been extensively modified. The waiver for discharges into degraded stream channels has been removed. If requirements for currently degraded channels are removed, there will be a diminished opportunity for future restoration of Beneficial Uses of that receiving water due to the lack of hydromodification controls.

The Hydromodification Criteria section has been modified to require a Hydromodification Plan, which is consistent with other Southern California MS4 permits. This is in direct response to comments from the USEPA on Tentative Order R9-2008-001.

For interim projects, a limit on the effective impervious area of 5 percent has been added. This is in direct response to comments from the USEPA on Tentative Order R9-2008-001. Additionally, the size of interim projects has been changed to include all Priority Development Projects. This has been modified to reflect the scale of development and redevelopment that occurs in Orange County.

Construction
F.2: This section has additions to ensure the protection of threatened and endangered species and requires the consideration of potential impacts from the use of Active Treatment Systems. These requirements were added to ensure additional protection of the Beneficial Uses of waters of the State.

An additional requirement for notification to the Regional Board regarding construction sites has been added to this section. Copermittees are required to annually notify the Regional Board of construction sites that have potential violations. This was added to enhance Regional Board and Permittee communication and coordination in regulating construction sites.

Existing Development
F.3: This Section has been modified with changes clarifying storm water and non-storm water discharges for all existing development and an additional reporting requirement for existing facilities subject to the General State Industrial Storm Water Permit or an individual NPDES permit.

A section has been added to require the retrofit of existing development (see Finding D.3.i and Discussion). This section contains specific requirements for the retrofit process.

An additional notification to the Regional Board regarding industrial sites has been added. Copermittees are required to annually notify the Regional Board of construction sites that have potential violations. This was added to enhance Regional Board and Permittee communication and coordination in regulating construction sites.

Illicit Discharge Detection and Elimination
F.4: A requirement has been added requiring submittal of the GIS layers of the MS4 map within 365 days of Order adoption.

Watershed Runoff Management Program (WRMP)
G.1: Multiple changes have been made to the WRMP Section. Section G.1.b has added requirements that Environmentally Sensitive Areas (ESAs) be added to the WRMP map, and that GIS layers of the map be provided to the Regional Board. The addition of ESAs is required to ensure WRMP planning and activities do not just consider receiving waters that are 303(d) listed when making decisions. Note that ESAs are inclusive of all 303(d) listed waters.

Section G.1.c: This section has been modified so that Copermittees are required to use the watershed assessment to set priorities and to provide BMP implementation and updates that are effective and in response to assessment results. The assessment protocol has been updated so Copermittees are required to consider degraded biological conditions, violations of permit prohibitions, and significant exceedances of the State Policy for maintaining high

quality waters. This has been added to ensure that the assessment considers additional potentially significant water quality problems when setting priorities. These annual assessments must also now consider monitoring, modeling and source identification.

Section G.1.d.(3): Section has been removed because it is unnecessary.

Section G.1.e.: Education activities have been removed as a Watershed Activity. While education is considered a vital component in improving water quality, measurable improvements from education are often difficult to ascertain. A requirement has been added to this section so that the Watershed Water Quality Activity must be put into effect as part of the iterative process for reducing storm water pollutants to the MEP and/or eliminating non-storm water runoff and pollutants. Results from Watershed Activities are now required to be used in the design and implementation of future Watershed Activities as part of the iterative process. Except for retrofitting existing development sites, Watershed Activities do not include projects that are otherwise required by the Regional Board. These requirements have been added to ensure the MEP standard for storm water is being met.

G.2: The annual water quality assessment must be reported with inclusion of the following additional requirements: 1) the identification of highest priorities, 2) a record of watershed meetings and collaborative progress, 3) the timeframe on selected WRMP activities and 4) the estimated pollutant reductions from proposed and implemented Watershed Activities. Additional reporting requirements have been added to articulate what is necessary in the iterative process.

Section G.2.h-k: requires that the Copermittees describe BMP implementation, analysis and documented pollutant reduction, as well as a schedule for adding or modifying BMPs. These requirements have been added to assess Permittee compliance with the iterative process and addressing storm water pollutants to the MEP.

G.3: The section includes a requirement for the Watershed Copermittees to develop and implement a workplan identifying and addressing the highest priority issues in the watershed identified in the water quality assessment. The workplan requirement has been added to ensure Copermittees are allocating resources and effort to address priority problems and document measurable gains in reducing storm water pollution to the MEP and in prohibiting illicit non-storm water discharges.

Total Maximum Daily Loads

I: This section has been added to address any TMDLs that are adopted by the Regional Board. See Finding E.10 and Discussion.

Program Effectiveness Assessment and Reporting
J: This section includes a requirement for the Copermittees to develop and implement a workplan identifying and addressing the highest priority issues in the watershed. The workplan requirement in the JRMP section has been added to ensure Copermittees are allocating resources and effort to address priority problems and pollutants identified in the watershed analysis. This section has been added to ensure Copermittees use the annual watershed water quality assessment to asses, adjust and tailor their JRMP programs.

Reporting
K: The reporting requirements include two significant additions. The first addition is a summary reporting checklist which has been added to the reporting requirements. The checklist has been added to ensure that Copermittees evaluate and demonstrate compliance with all requirements in the Order. The second addition is that the table of annual reporting requirements is now required on a watershed basis. This is consistent with WRMP requirements in which assessment is done on a watershed basis. The table has been modified to include more specific reporting requirements.

IV. ATTACHMENTS

Attachment C
An additional section which includes acronyms and abbreviations has been added. This is to ensure clarity and prevent confusion of terms. Definitions have been added for new terms used in the permit to provide a clear understanding of their meaning and use.

Attachment D
A Jurisdictional Runoff Management Program (JRMP) Annual Report Checklist has been added to the reporting requirements. This addition is to determine and ensure that all requirements of the permit are being met.

Attachment E
Changes in the Monitoring and Reporting section have been made to provide additional information on improvement of runoff management efforts as required in this Order or through voluntary efforts by the Copermittees.

Mass Loading Stations: The frequency of monitoring has been modified with the removal of the Bight 2008-2009 exception year.

Urban Stream Bioassessment: Requirements for conducting bioassessment must now use SWAMP guidelines. This change is required to provide quality assurance and control when comparing MS4 required monitoring to SWAMP data. Bioassessment must now include algal taxonomic composition and

biomass. Additionally, future bioassessment must include IBI scores that incorporate algae. This addition has been made to improve assessment of the environmental response to pollutants and impacts to Beneficial Uses of waters of the State. Algal species can be used as an indicator of degraded or changes in water quality.

Dry Weather Non-Storm Water Numeric Effluent Limits Monitoring: This section has been changed by removal of the Dry Weather Field Screening and Analytical Monitoring and subsequent replacement with Dry Weather Non-Storm Water Numeric Effluent Limits Monitoring. This change is required to assess compliance with numeric limits for non-storm water discharges from the MS4 into receiving waters.

Bight '08 Special Study: Study has been removed. All other Bight '08 references have been removed.

Facilities that Extract Treat and Discharge (FETDs) Special Study: Study has been removed (see Finding E.9 and Discussion).

Sediment Toxicity Special Study: This study has been added to the Monitoring and Reporting requirements to assess the quality of urban stream sediments and possible contamination due to runoff from the MS4. Toxicity tests focusing on aqueous toxicity may not account for the full toxicity of receiving waters if constituents, such as heavy metals or pesticides, are bound to sediments. Southern California studies have shown that stream sediments can exhibit significant levels of toxic metals and pesticides.[19,20]

Trash and Litter Special Study: A Trash and Litter Impairment Investigation has been added to the Monitoring requirements (see Finding C.8 and Discussion).

[19] Holmes, R.W., Anderson, B.S., Phillips, B.M., Hunt, J.W., Crane, D.B., Mekebri, A. and V. Connor. 2008. Statewide Investigation of the Role of Pyrethroid Pesticides in Sediment Toxicity in California's Urban Waterways. *Environmental Science Technology* 42: 7003-7009..

[20] Crane, D.B. and C. Younghans-Haug. 1992. Oxadiazon residue concentrations in sediment, fish, and shellfish from a combined residential/agricultural area in Southern California. *Bulletin of Environmental Contamination and Toxicology.* Volume 48, no. 4.

State of California
California Regional Water Quality Control Board
Santa Ana Region

Order No. R8-2013-0024

Amending Order No. R8-2010-0033, NPDES No. CAS 618033

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter, Regional Board), finds that:

1. On January 29, 2010, the Regional Board adopted Order No. R8-2010-0033, NPDES No. CAS 618033, prescribing Waste Discharge Requirements for Area-wide Urban Storm Water Runoff for the County of Riverside, Riverside County Flood Control and Water Conservation District, and the incorporated cities of Riverside County within the Santa Ana Region. This Order is commonly referred to as the Riverside County Municipal Separate Storm Sewer System (MS4) Permit.

2. Order No. R8-2010-0033 is amended: (1) to add the newly incorporated cities of Eastvale and Jurupa Valley to the list of Permittees; (2) to remove two cities, Murrieta and Wildomar from the list of Permittees; and (3) to add all portions of the City of Menifee under this Order, including those portions that are under the jurisdiction of the San Diego Regional Board.

3. Title 40 of the Code of Federal Regulations, section 122.62, provides that NPDES permits may be modified if new information that was not available at the time of permit issuance becomes available, and that the information would have justified different permit conditions at the time of permit issuance. (40 CFR § 122.62(a)(2)). In this case, the incorporation of the Cities of Eastvale and Jurupa Valley and the designation agreements under Water Code 13228 were not available at the time of adoption of Order No. R8-2010-0033.

4. In accordance with Water Code Section 13389, amending wastewater discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.

5. The Board has notified the discharger and other interested agencies and persons of its intent to amend waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.

6. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HERBY ORDERED that Order No. R8-2010-0033 be amended as follows:

1. Order No. R8-2010-0033, page 1 of 117, revise Table 1 to read:

Table 1. Municipal Permittees (Dischargers)

Principal Permittee	Riverside County Flood Control and Water Conservation District (RCFC&WCD)*	
Co-Permittees	1. Beaumont	10. Menifee
	2. Calimesa	11. Moreno Valley
	3. Canyon Lake	12. Norco
	4. Corona	13. Perris
	5. County of Riverside (County)	14. Riverside
	6. Eastvale	15. San Jacinto
	7. Hemet	
	8. Jurupa Valley	
	9. Lake Elsinore	

2. Order No. R8-2010-0033, page 7 of 117, revise Section I.E. as follows:

On February 5, 2008 Wildomar residents voted for cityhood and the city incorporated on July 1, 2008. Menifee residents voted for cityhood on June 3, 2008 and the city incorporated on October 1, 2008. Both cities in letters dated May 5 and May 6, 2009, respectively, have expressed their intent to be a Co-Permittee in this Order and for the purposes of this Order shall be considered as such. Urban Runoff from the cities of Menifee, Murrieta and Wildomar discharges into watersheds within the Santa Ana Regional Board and the San Diego Regional Board jurisdictions.

On July 20, 2010 and July 21, 2010, the Cities of Murrieta and Wildomar, respectively, pursuant to California Water Code section 13228, requested that the Santa Ana Regional Board designate the San Diego Regional Board as the regulating authority for all portions of these cities, regardless of Regional Board jurisdictional boundaries for matters pertaining to MS4 permitting. In addition, on July 22, 2010, the City of Menifee requested that the San Diego Regional Board designate the Santa Ana Regional Board as the regulating authority for all portions of the city, regardless of Regional Board jurisdictional boundaries for matters pertaining to MS4 permitting.

On September 28, 2010, the Executive Officers of the Santa Ana and San Diego Regional Water Quality Control Boards signed Designation Agreements, pursuant to Water Code section 13228(a), providing: (1) the San Diego Regional Board the authority to regulate municipal storm water runoff from the Cities of Murrieta and Wildomar, including those portions of the cities that fall within the Santa Ana Regional Board's geographic jurisdiction; and (2) the Santa Ana Regional Board the authority to regulate municipal storm water runoff from all portions of the City of Menifee, including those portions that are within the San Diego Regional Board's jurisdiction.

In accordance with the San Diego MS4 Permit, Order No. R9-2010-0016, the cities of Murrieta and Wildomar are required to comply with the applicable provisions of the Santa Ana MS4 Permit, Order R8-2010-0033, pertaining to implementation of the nutrient total maximum daily loads pertaining to Lake Elsinore and Canyon Lake. Similarly, Order R8-2010-0033 requires the City of Menifee to comply with any TMDLs and associated MS4 permit requirements issued by the San Diego Regional Board which include the City of Menifee as a responsible party.

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